



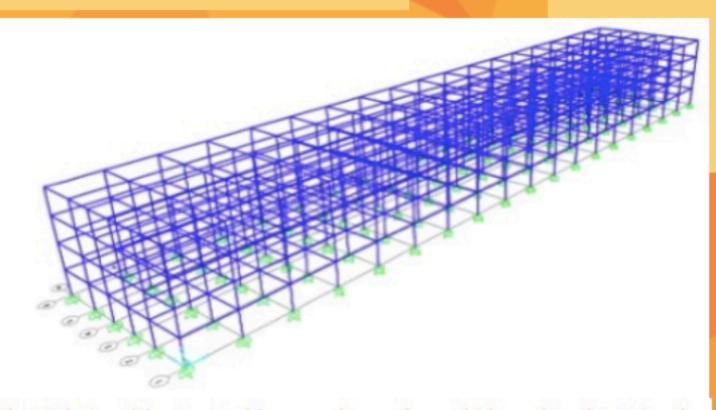
"We take the risk You reap the reward"

# **Urban Resort**

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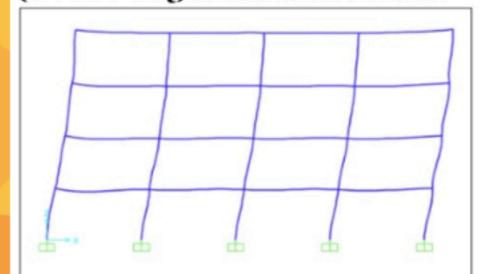


# **Structural Analysis** Structural frame



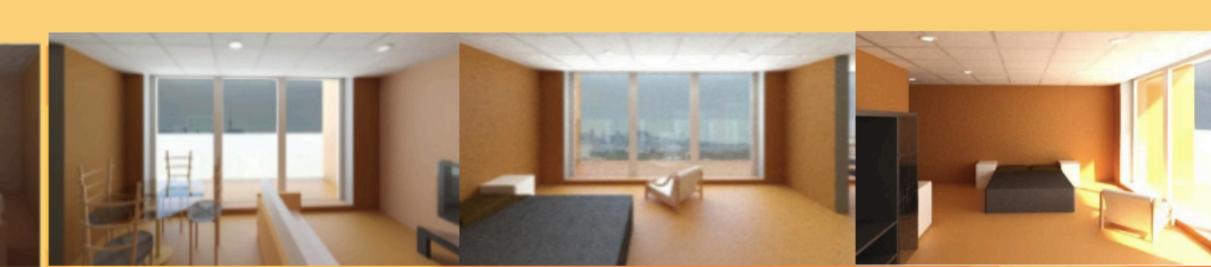
The 3D design of the structural frame can be seen here, which consists of 4 stories of beams and columns with symmetrical spacing, made from Laminated Veneer Lumber (LVL). The lateral loading system of this frame is a moment resisting frame, which is a new type of system when involving LVL timber as the main structural material.

# (G + Eu + ΨcQ) structural deformation



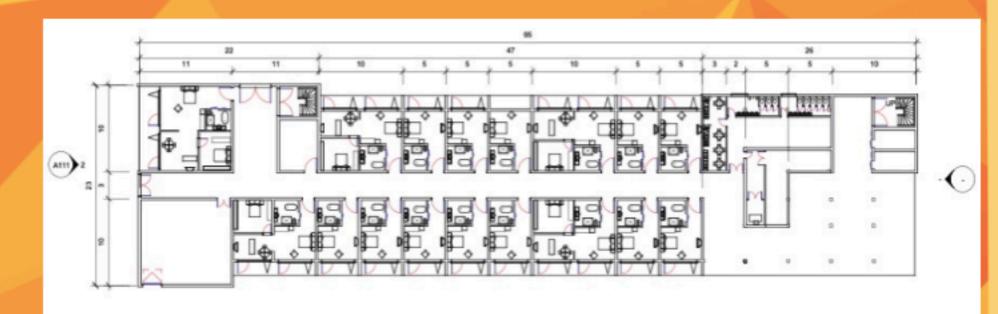
Here is the structural deformation of earthquake loadings which are imposed into the buildings frame in the X direction only. The figure displays the building's maximum deflection

# **Hotel Interior**



1st floor layout of the 4 story hotel

**Amenities Tower Interior** 



caused by an earthquake.

# **Detailed Costing Element**

Here is the structural deformation from the dead and live

largest amount of deflection caused by the load.

load combinations which are imposed onto the buildings frame.

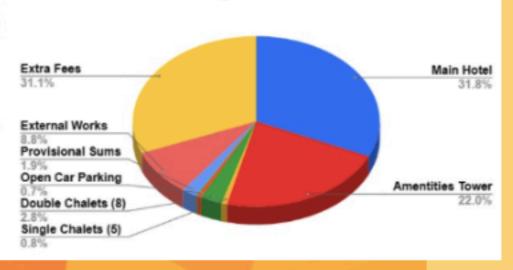
It can be seen that the outer columns and beams undergo the

(1.2G+1.5Q) structural deformation

Element	Total Cost				
Main Hotel	\$	24,394,182.97			
Amentities Tower	S	16,899,833.29			
Single Chalets (5)	\$	580,568.13			
Double Chalets (8)	S	2,149,744.09			
Open Car Parking	S	501,652.15			
Playground	\$	156,180.00			
Provisional Sums	S	1,442,955.00			
External Works	\$	6,771,974.10			
Extra Fees	S	23,862,847.28			
7	\$	76,759,937.01			

This Pie chart displays the distribution of total construction costs involved with the resort. It can be seen that the main hotel is the largest portion of the total cost, with extra fees (contingencies, preliminaries, margins, tax, etc) not being far behind. All other sections of the resort are compared together. The original total construction cost of the resort came to be \$76,759,937.01.

# **Costing Distribution**



Site Layout

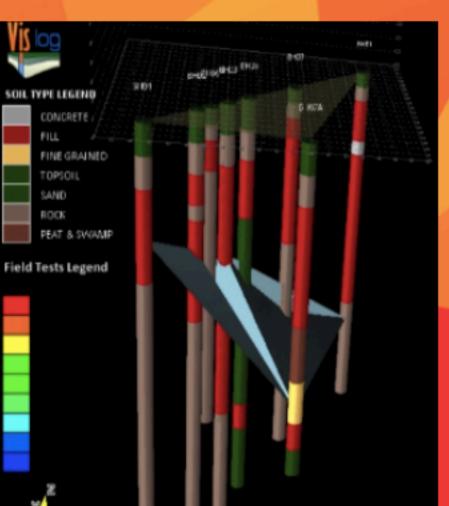




### Construction planning

-	O Task	- 10.	Took Name	· Ounter	- Stat - State -	7 SE A S	H 1 1 A 5 D	N D 1 F	 1 A S	0 0 0	7 F N	A 80 1	Maria, 2022
3		1.	≠ Urban Hotel	660 days	Mon 34/03/20 Wed 3/H/22								
2	*	1.1	≠ Design Stage	52 days	Mon 36/63/20 Tur 5/65/20								
1	*	1.1.1	Conceptual	24 days	Mon 34/63/30 The 35/63/30	-							
4	*	1.1.2	Betailed	28-days	Fri 20/80/20 Tex 5/85/20								
5		1.2	4 Procurement Stage	63-days	West 6/85/20 Fri 31/67/20								
6	*	1.2.1	Biding And Subsentractor Process	63-days	Weeks/85/20 Fri 35/67/20								
7	*	1.1	→ Preconstruction Stage	17 days	Mon 1/86/20 Tue 22/89/20								
	*	1.11	General	8 days	Mon t/86/20 Wed 12/86/20								
1	*	1.12	Project Management	20 days	The 15/86/20 Wed 5/95/20								
16	*	1.1.3	Possession To Site	9 days	Thu 50/89/20 Tue 22/89/20								
		1.4	# Construction Stage	484 days	Wed 25/09/20 Mon 5/09/22								_
N	*	1.4.1	Site Establishment	17 days	Wed 21/09/20 The 15/50/20								
10.		1.4.2	General Earthwork	40 days	Worl 25/55/39 Tue 55/52/39		-						
16	*	143	Road	18 days	Word 36/52/20 Fri 6/65/25								
		1.4.4	Noted Building	385 days	Mon 55/85/25 Pri 5/85/22								-
56	*	1.45	Amenities Tower	14t days	Thu 6/99/25 Tue 35/99/25								
17		1.4.6	Challets	230 days	Thu 6/94/25 Mon 26/00/22								
10.	*	1.4.7	Other Construction Processes	21 days	Mon-4/07/22 Mon-1/06/22								
10	*	1.5	* Project Closure	27 days	Tue 3/88/32 Wed 3/89/32								
20		1.54	Meet Project Specifications	6 days	Tue 3/98/22 Tue 9/98/22								
20	*	1.5.2	000	20 days	Weed 30/10/22 Tue 6/89/22								
20		153	Project Sign Off	1 day	Weed 1/99/22 Weed 1/99/22								

From looking at the master schedule, the Urban Hotel will take 663 days to fully complete. The start date is 24th February 2020 and the end date is 7th September 2022. The major milestones are design phase, procurement phase, pre construction phase, construction phase and project closure. Each one of those milestones have sub tasks related to it which shows the project completion in more depth.



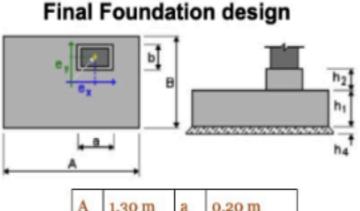
This is the site geotechnical model, the site investigation results were used was the borehole information. The software used to make the model was Vislog from Novotech Software. The borehole that is on the main building of a 4 story hotel is BH07 and BH07-A.

> The final foundation for the 4-story the hotel is square pad footing with a quantity of 28.



•	Construction area		Changing room and locker
	Parking		Facility for rest
	Washing facilities		Training and induction facility
	On-site toilet		Heavy vehicle entrance/exit
	Crane positions	-	Light vehicle entrance/exit
	Wheel washing facility	-	Pedestrian entrance/exit
	Off-loading facilities	1	Exit
	Waste management and recycling facilities	1	Entry
	Storage area	×	Warning signs
	Mock-ups testing facility	(6)	Emergency evacuation
	Sub-contractor facility	_	Road
	Site office	_	Plants
	Site canteen		Pedestrian walkway

## Final Foundation design



	-		
A	1.30 m	a	0.20 m
В	1.30 m	b	0.20 m
hı	0.30 m	$e_x$	0.00 m
h2	0.16 m	ey	0.00 m
h4	0.05 m		

# **Chalets Interior**

Whole site layout

