

# 范例分析作业



IVY STRUCTURE 2

常春藤结构 2

指导老师:秦丹妮

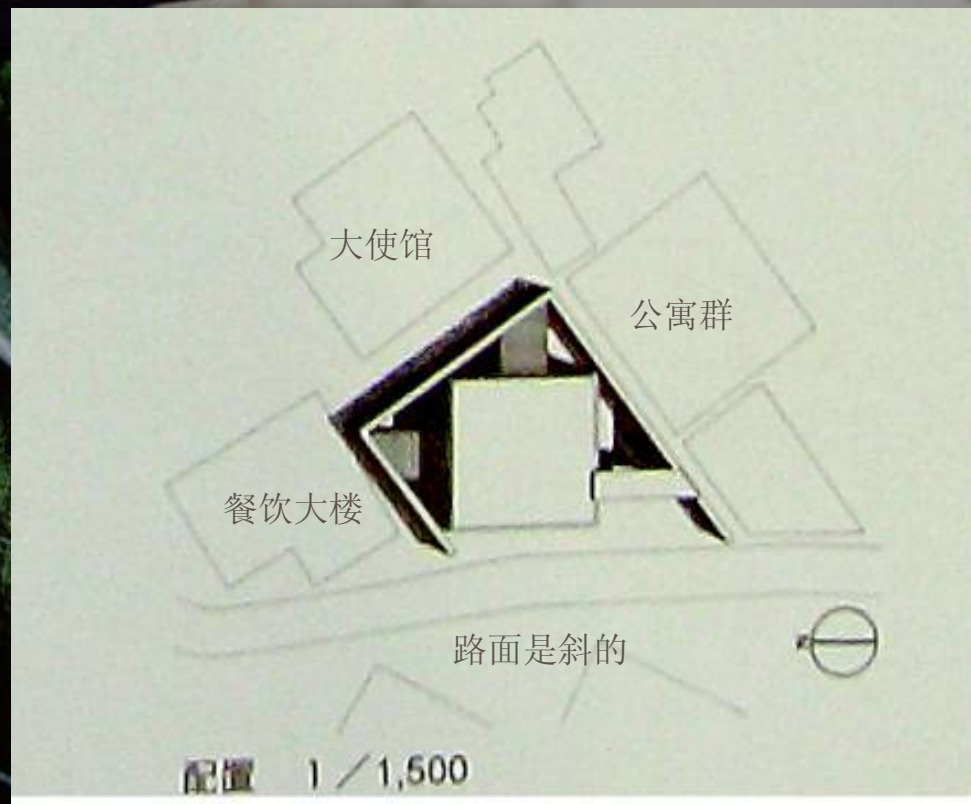
学生:黄金发 李睿

# 坂茂简介

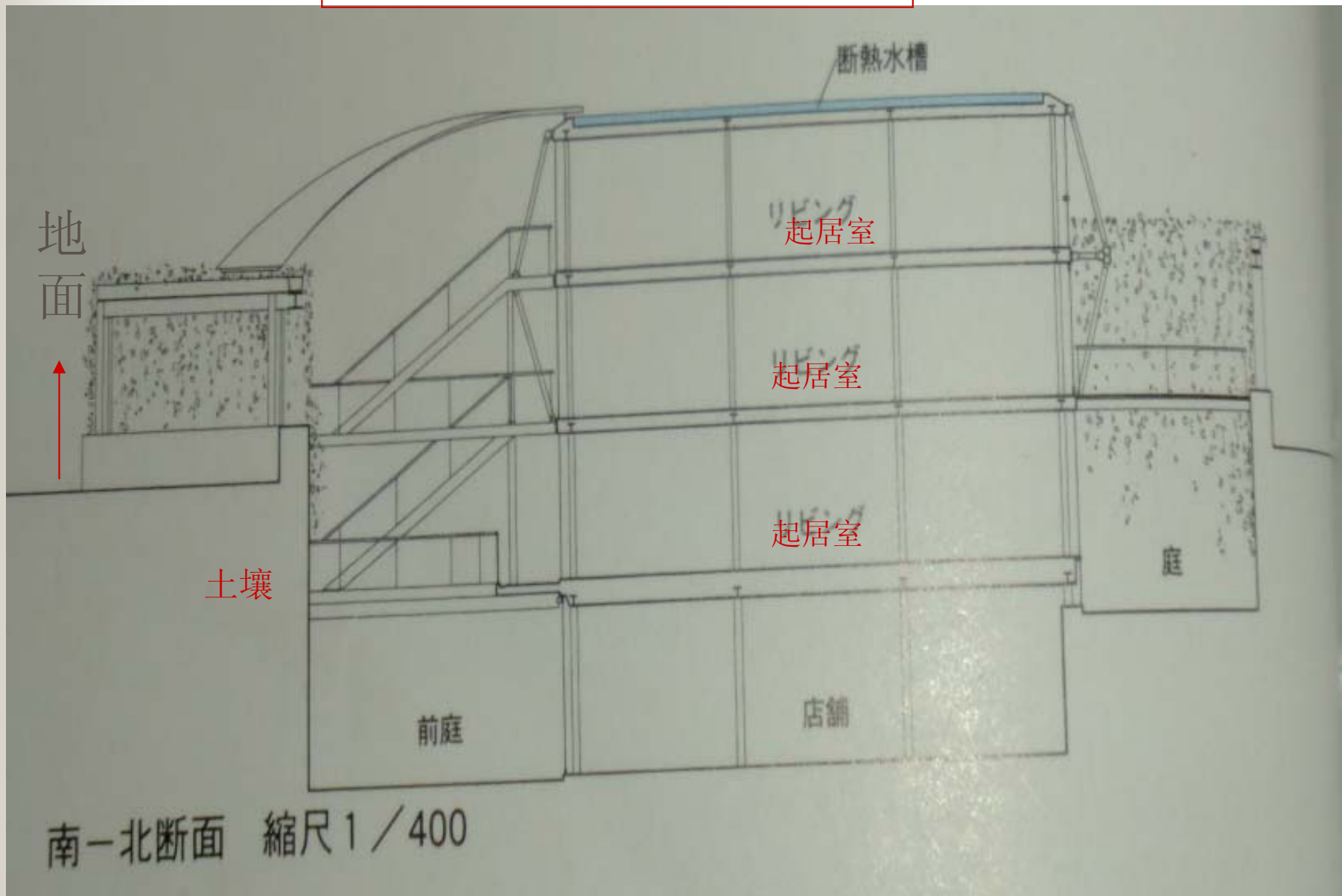


- 1957出生于日本东京
- 1977-1980就读于美国南加利福尼亚建筑学院
- 1980-1982就读于美国库珀艺术建筑联合学院建筑系，获学士学位
- 1982与矶崎新合作
- 1984毕业于库珀艺术建筑联合学院建筑系，获学士学位
- 1985成立坂茂工作室
- 2001至今，担任应庆义塾大学教授
- 目前在日本生活和工作
- 曾任联合国难民署高级专员
- 第40届托马斯·杰弗逊建筑奖章获得者
- 国际建筑界有影响的建筑大师之一
- “材料大王”
- 绿色建筑师

# 第一眼看IVY

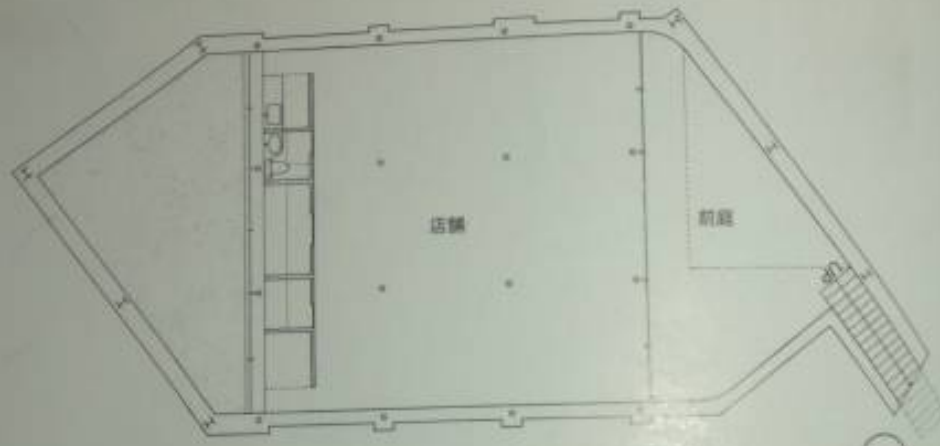


# 最感兴趣的一张图





1階平面



地階平面 縮尺 1/400

3階平面

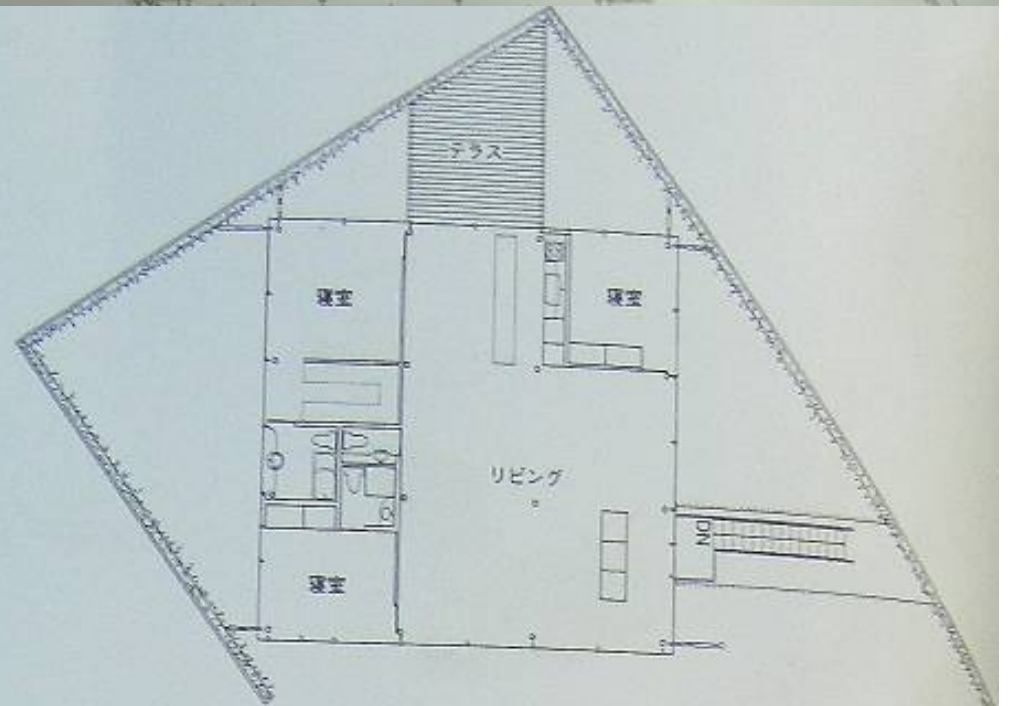


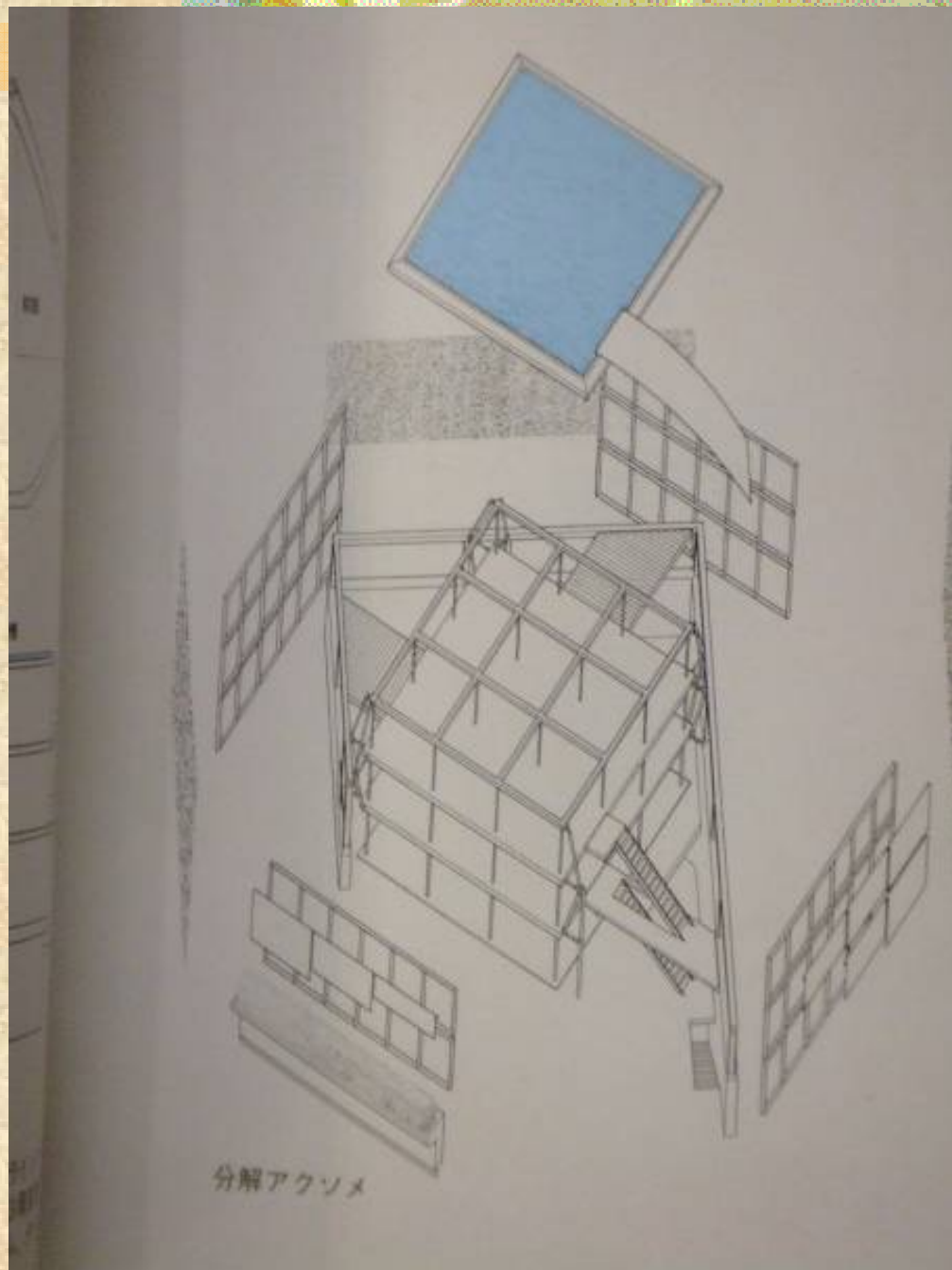
2階平面



1階平面

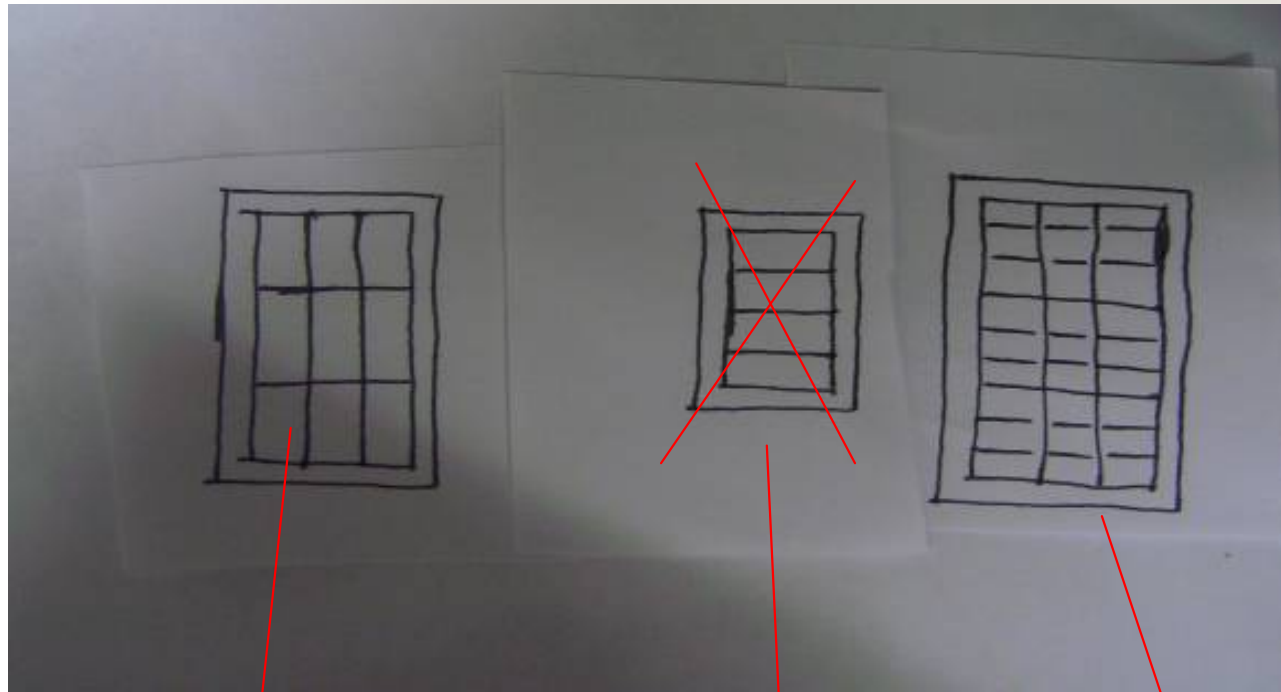
3階平面





## 结构分析

- 1: 没有粗大的支柱和承重墙
- 2: 轻巧的玻璃墙
- 3: 把楼梯放在外面, 增加内部空间的灵活性
- 4: 内部空间简洁, 可根据功能划分

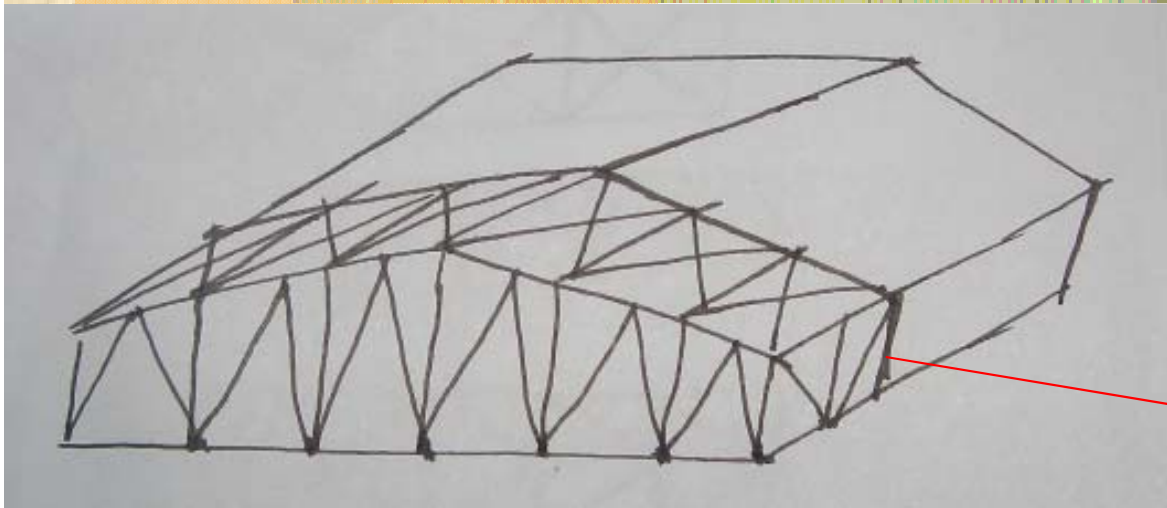


普通式梁格

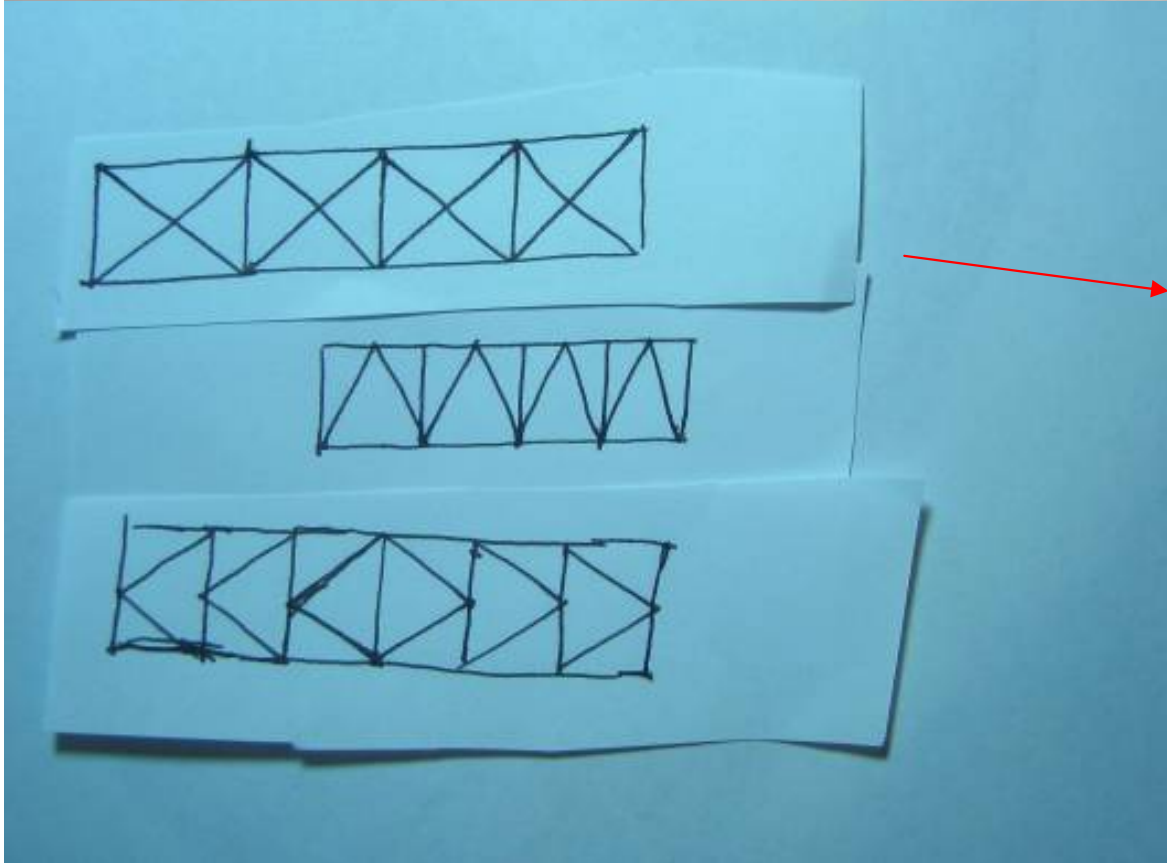
简式梁格  
跨度小

复式梁格

跨度大



无檩屋盖体系  
费材料，所以建筑师  
没有采用



矩形屋盖  
容易标准化工业化，  
造价便宜，抗震能力  
与上面相似，平顶屋  
面方便了建筑师使用  
隔热材料



## 结构中的特殊性



由于日本是一个多地震的国度所以Ivy structure2  
采用了轻型刚结——空心薄壁钢管结构  
它具有抗地震，可移动，易拆装，重量轻，强度高，  
施工快且方便的特点。最重要的就是便宜。



这和坂茂曾任联合国难民署高级专员有着高度社会责任感是分不开的。



临窗而立，窗外  
风景一览无余。

玻璃墙面的通透和  
柚木地板的反光，  
使光线富有节奏  
感，也使得室内分  
外明亮，加强了空  
间的纵深感。






# IVY 夜景



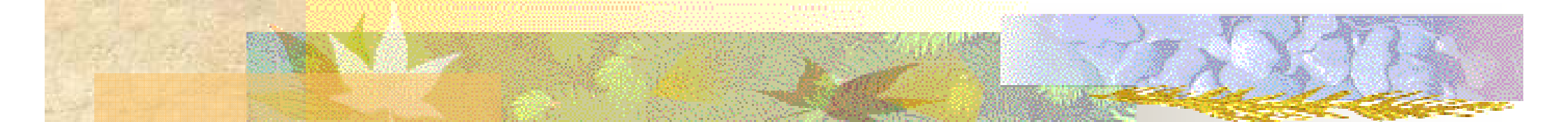




There are two meanings inherent in Ivy Structure 2. The first and direct meaning is that of the surrounding ivy wall, which functions both as an exterior screen and as an important structural unit for the main architecture itself. The second and very special characteristic of this architecture is that it is elicited by depending on the usage of an entirely different structure, that of the ivy plant itself.

As an introduction to previous steps leading to this work, there is “Ivy Structure 1”. The interior space on the first floor has no columns, freeing the whole of a lengthy yard to have a spacious feeling. Half of the two-layered, gate-shaped steel frame was composed to structure the frame for the ivy screen, while the second floor was thought to be structurally hung from that point.

The site for our plan for Ivy Structure 2 is adjacent to a large restaurant building on one side and a condominium block on the other. There is an embassy at the rear, and the road in front of the site runs along a slope at an angle that creates a special form for the site. At this location, a simple 13m equilateral glass cube structure (170 square meters) from the basement to the third floor was placed parallel to the road. By placing the ivy screens around the three sides in the line of sight, other buildings that are not meant to be seen are shut out, and privacy is thus secured to a certain degree.



As a simple four-layered cube, **this structure can have various uses, such as a residential house, office, or gallery. This was intended because there was a demand for a plan that did not have structural regulations, thereby allowing for future changes.** Hence, to equally distribute the space metal-framed circular columns were first placed in a grid pattern by dividing the 13m equilateral square into 9 smaller equilateral squares. In order to increase the freedom of the plan, the brace and the bearing walls were abolished. To avoid the usage of a thick rigid frame that would decide the grid, and to avoid as much stress on the round columns from lateral forces as possible, the four corners of the terrace and the frame from the 9-square-grid were connected by the ivy screen's frame in a flying buttress fashion derived from Gothic architecture. Because of this, the radii of the round columns were minimized, becoming thinner as the column grew higher. Pair-glass was used as the standard on all surfaces, and an Italian cladding with a simple section was used for the glass cube. The southern and western side has exterior blinds to block sunlight, and water is stored in a shallow pool on the roof to create insulation during the summer.

# 人性化的雨篷

