



ARCHITECTURE

EHLINGER & ASSOCIATES

FIRST QUARTER 1990

WELCOME ABOARD

Welcome aboard to E&A's two new employees in our Huntsville office. Belinda Milam comes aboard as Office Administrator from a background of running a contractor's office, and R.J. "Hap" Habisreiteringer as a Civil/Structural Engineer with 30+ years experience in Huntsville and New Orleans, licensed in 7 states.

THE CASTILLO, CHICHEN ITZA', YUCATAN, MEXICO

This issue's signed limited edition print is of The Castillo, a temple pyramid at Chichen Itza' in Yucatan, Mexico. The Itza's were a Toltec tribe that migrated from Tula in central Mexico to the Yucatan peninsula in the late ninth or early tenth century A.D. They took over the sacred city of Chichen from the Mayas, and blended their culture and its architectural expression with that of the Maya Puuc and Chenes architectural styles.

The union of the architectural style of the newcomer Itza' (Toltecs) with that of the Maya was such a perfect synthesis that it has led to much confusion among the experts in dating the various structures at Chichen Itza'. However, it is fairly certain that the Castillo is the first of the merged style buildings built in its entirety by the Itzas'. These buildings mimic those of the previous Itza' capital at Tula.

The construction of the Castillo dates from the tenth and eleventh centuries A.D. It is a great step pyramid flanked by four staircases bordered by ramps, and surmounted by a perfectly preserved upper temple. The shape of the temple resembles that of a European castle, hence the name. The structure is radially symmetrical, and the view shown is that of the minor elevation. The two elevations to either side have larger, more prominent openings in the temple facade, and lead to a spacious vaulted inner chamber, while the smaller

opening shown merely leads to a dead end corridor, which seems to justify the opening.

The construction of the vaulted inner chamber of the temple is what positively marks the construction as that of the Itzas', along with the serpent columns, the stepped pyramidal shapes, and the frieze decoration. The vaults built by the Itzas' were more structural in character than those of the Maya. Neither were arches, but were of the corbeled type. The Castillo vaults have a greater span than those of the earlier Maya buildings. The Itzas' would also place these same vaults on top of hypostyle halls, (buildings composed of multiple colonnades), something the Maya never did.

Two of the facades of the Castillo have been restored, the other two facades have been left in rubble. In the process of doing so, the archeologists discovered that the Castillo is actually a superimposition over an earlier, smaller pyramid. Superimpositions of this type occurred frequently in the Maya world, and create a problem of choosing which period to restore for the archeologists. Today, it is common to make trial bores to determine whether the building is a superimposition.

Another inner temple was discovered by investigators just under the visible one, left just as the priests had left it after their last ceremony, before the Castillo was superimposed over it. The sanctuary contained a Chac-Mool figure (a strange reclining figure in a 'sit-up' position, whose stomach was used as an altar), and behind it the throne of the red jaguar. This stone statue represented a life-size jaguar, and is decorated with 73 pieces of jade inlay, simulating the beasts speckled hide. Real animal teeth are set in his threatening, open jaws and his eyes are represented by two jade balls.

Chichen Itza', along with many other Maya ruins, can be reached from Merida or Cancun in a very short drive. Merida and Cancun make great vacations from the southern U.S. From New Orleans, it is a short flight, about 1-1/2 hours.

POST-MORTEM ON POST-MODERNISM

The so-called Post-Modernism movement in architecture, which came into being in the late 70's and early 80's is beginning to breathe its death rattle as it never was a viable aesthetic, much less a school of form for buildings with integrity.

This is the architectural style of the "yuppie" generation of architects. It is characterized by allusion to historical styles, usually portrayed by abstracted Greek or Roman temple gable fronts and columns, frequently with abstracted half-moon caricatures of fan lights in the field of the gables. Simplified unnecessary historic mouldings; arches for the sake of arches, with no structural reason to exist; cute juxtapositioning of diverse, non-related building components, supposedly with humor; are other themes which run through these 'creations'. Post-Modernism is simply re-hashed eclecticism with a new name, but without the skill that previous eclectic movements exhibited in their buildings. It is the borrowing of historic styles for buildings for today, wherein the forms have no functional reason to exist, and as such are inappropriate. It is aesthetic bankruptcy, the result of the poor education of this generation of architects that subscribe to it and perhaps even their professors that taught it.

What has initiated the death rattle is the fact that buildings built in this milieu are frequently incorrect with respect to application of technology in their waterproofing and structure. These buildings frequently leak from the roofs and the walls, some shake and deflect too much in their structures, both a result of poor training of their creators. There are often building code and fire code violations, which with the structural problems, affect Life Safety. Because of the foregoing, there has been an explosion of litigation in the past few years involving these types of buildings, and we expect that as the results appear in the next few years of those most recently built Post-Modern buildings, there will be

even more litigation.

Finally, most of these buildings are just simply ugly.

ARCHITRIVIA

Can you correctly match these terms and definitions? There are more definitions than terms, so not all definitions are correct. Clue: The answer to F. is not no. 9., and G. is not no.7.

- A. Splat
- B. Sphaeristerium
- C. Baignoire
- D. Rookery
- E. Tease
- F. Zwinger
- G. Clout

1. A tenement or dilapidated group of buildings or a building with many diverse occupants.
2. To work out a surface defect, as on a varnished surface.
3. The sound a poor painter makes.
4. The protective fortress of a city.
5. A Roman racquetball facility.
6. A box in a theater at the lowest tier.
7. The kind of power an architect uses to procure commissions.
8. A metal plate attached to a moving wood member to protect it from abrasion.
9. A German architect party goer.
10. Strip covering joints of sheets of building board.
11. An archaic beignet kitchen.
12. What romantic architects do with the opposite sex.
13. A home for bird watcher architects.
14. A building rounded in all directions.

A-10, B-5, C-6, D-1, E-2, F-4, G-8

IVY STREET OFFICE BUILDING

The rendering of the Ivy Street Office Building shown in this issue is an example of design that is decidedly not Post-Modern. None of the Post-Modern visual clichés appear in this building.

The site is a rectangle, with its long axis in the north/south direction, and slopes down approximately 3' from the front to the rear, where the building is placed to

render efficient off-street parking. The building was designed as a rectangle with its long axis in the east/west direction, so that the opaque, unglazed, narrow ends of the building face east and west, to accommodate the rising and setting sun, and provide energy efficiency. These walls also act as shear walls, to transfer the wind forces into the foundation.

Private offices are placed on the north and south sides for the best light that is available there, while spaces for computer terminals, rest rooms, and secretarial areas are placed in the middle and use borrowed light or artificial light.

All glass is thus placed on the north and south sides, for orientation and exposure reasons. The roof has no overhangs on the east/west sides, and it has a 4' overhang on the north/south sides, to provide shelter to the glazing, to reduce sky glare on the north, and to provide spring, summer, and fall shading on the southern exposure. Projecting fins are designed on the sides of the glazing to screen sunlight in the morning and late afternoon, protecting the north side in the summer, and the south side in the spring and fall. The glass is the insulated, tinted type of energy efficiency.

The building is raised to provide for ease of installation of future mechanical services under the floor, to reduce chances of flooding, and to give architectural prominence to the building by compensating for the downward slope of the site.

The structure of the building is

engineered wood frame, with the exterior skin being an Exterior Insulation and Finish System (EIFS). The EIFS is used to provide additional insulation for energy efficiency, and because it is compatible with the wood framing being used for its support. The EIFS also lends itself to plastic forms like the fins by the glazing.

The floor joist structure spans from the foundation chain wall to the middle of the building where a center beam supports them, and they cantilever over their foundation chain wall support to support the glazed walls. By doing so, the joists are more efficient structurally due to counterbalancing moments. Smaller members can be used than if it were a simple span. This also produces a lighter appearing building that seems to float above the ground.

The roof is clear spanned by trusses which cantilever 4' on the north and south to allow for freedom in placement of interior partitions in the rentable space. The trusses are sloped to give positive reef drainage. Even though the roof appears to be flat, the slope is masked by the parapet. The attraction that many clients have for the Post-Modern gable roofs is probably due to bad experiences with leaking flat roofs. But, the slope of the roof can be handled many different ways, as the Ivy Street Office Building demonstrates.

Thus the form of this building is at one with its function, and was created in response to its function and its immediate environment.

