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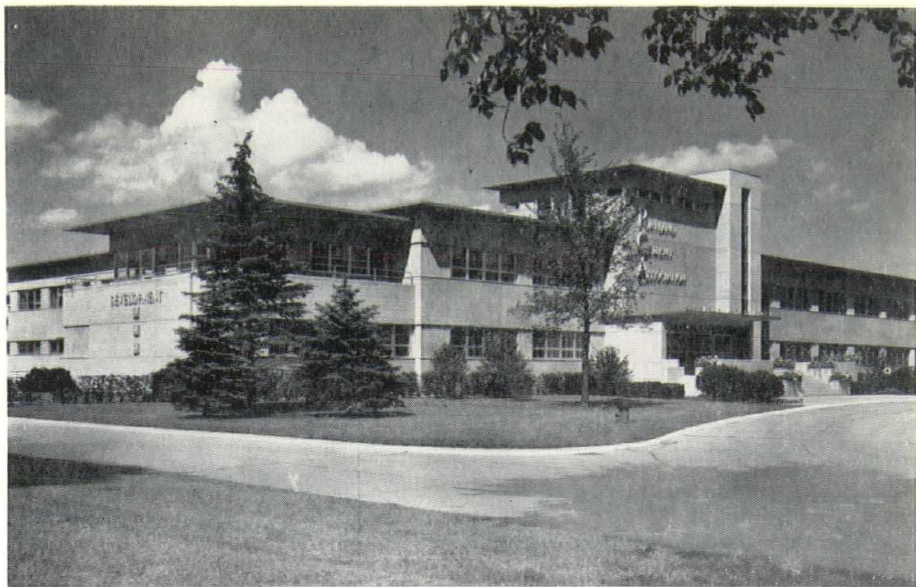
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TABLE OF CONTENTS

	Page
EDITORIAL	3
UTAH LOSES A FRIEND.....	3
NOTES AND QUOTES.....	3
THE CORPORATE SPLURGE IN ABSTRACT ART	7
UTAH POWER & LIGHT ARCHITECTS.....	11
PHOTOGRAPH	13
FAILURES: TOO OFTEN, TOO SIMILAR.....	15

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Aerial view of Salt Lake City.

Architects planning project.

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—Photo: Hal Rumel

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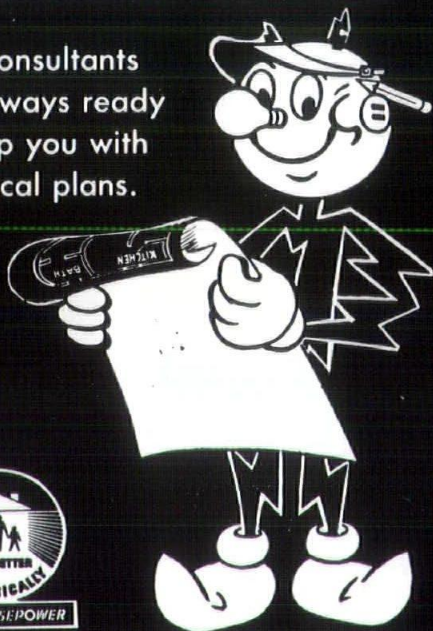
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EDITORIAL

WHAT HAPPENED TO THE NEW ARCHITECTURE?

Lest we forget, the object of the profession of architecture is to create better architecture and all is for naught unless we wring from every piece of work its full potential.

A hospital designed by Pfüeghard, Haefeli and Maillart, Davos, Switzerland in 1907 with Robert Maillart responsible for its construction is so oriented to catch all available sunlight. Its construction is an open concrete skeleton with maximum wall opening to insure the rapid recovery of the tubercular patients housed within the structure. While all hospitals are not constructed for tubercular patients, the healing affects of sunlight and a healthy environment upon the patient cannot be seriously denied. But look around, are not our new Salt Lake City hospitals seriously deficient in this respect?

Most are, it is true, designed with open frames usually concrete, but the walls are closed. Minute windows, small even by conservative standards, reinforce the prison-like atmosphere thus imposed. The planning is what might very well be called introverted. Everything seems to be done for the convenience of the doctor, the nurse, or that failing the equipment necessary to administer to the patient. The patient, it seems, and his well being, is forgotten and architecture has come 180% around, right back to that against which those with spirit and a bit of the rebel locked in their nature produced a new architecture. The most important and perhaps the only valid new concept introduced into the architectural plan within the last 100 years has been the opening up, or the unfolding of space within the landscape or physical surrounding with an emphasis upon the unity of architectural space and space around it.

We might with some justification ask a few questions about hospitals. Why shouldn't they be in the mountain? Could they not be decentralized, situated in space with trees and air and quiet. Why not locate them where people are instead of where they work? How nice a hospital is in the country. If this is not possible then a new environment must be created, a vertical vista instead of a horizontal vista, but a vista and openness or the new architecture is lost.

NOTES AND QUOTES

THE GRAND PRIVILEGE

A Scholar's Appreciation

By NORBERT WIENER

From *Saturday Review of Literature*

I am not interested primarily in increased financial rewards for intellectual work nor even that the names and faces of intellectuals be presented more to the public. I am very strongly interested that the function of the intellectual as well as his motivation and his responsibility be better understood by the public. In my opinion it is the lack of this awareness of motivation and responsibility which is the largest factor in that other crisis on which President Eisenhower has recently commented, and which plays a large role in the somewhat unfortunate position under which a great sector of our scientific work and the development of our scientific personnel now occupies — both absolutely and in comparison with some work done elsewhere.

My main point is that the intellectual — and I include in the class the scientist, the man of letters, and the man of arts — has a very specific function to fulfill which goes far beyond the other important functions of the citizen at large. He is the custodian of a tradition of honesty and sincerity on which the future and the honor of his country and his age depend.

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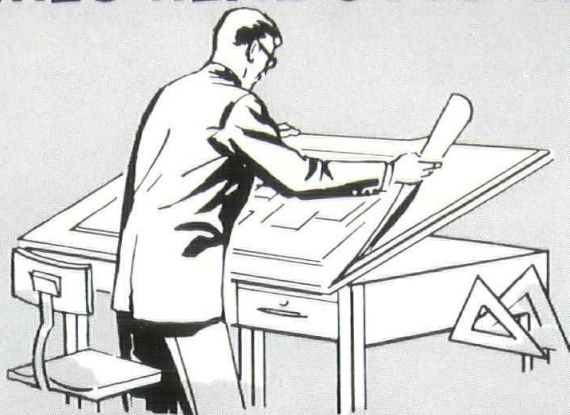
UTAH LOSES A FRIEND

The death of George M. Gadsby, chairman of the board of the Utah Power & Light Company, is a grievous loss to Utah and particularly to Salt Lake City. His industrial statesmanship was acknowledged nationwide. His generous contributions of time and energy to community affairs won him the distinction of an eminent citizen.

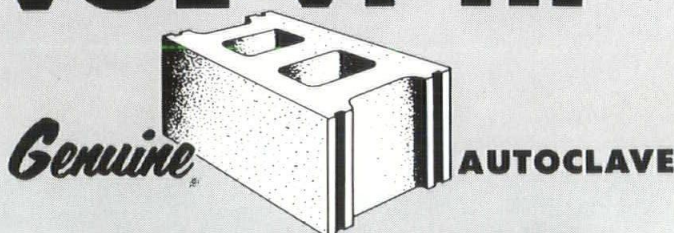
Just a week before his death he had given counsel to the Chapter's Downtown Planning Committee and had shown a progressive enthusiasm that characterized his life as an outstanding citizen.

His devoted and inspirational leadership will be greatly missed by the entire community.

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THE GRAND PRIVILEGE

(Continued From Page 3)

In assuming this function he has accepted very considerable rewards and advantages which are quite independent of his rate of pay and even of his individual good living and personal qualities. Those rewards are the privilege of participating in a grand undertaking of all humanity.

He has a position in which he is not so immediately pressed by other responsibilities that he is unable to sit back a little and take a larger view of the world about him that pulls to the general mores of the time. Thus he is to some extent free to enjoy a good life and the companionship of those motivated by the same purposes and congenial to him and to his way of thinking. In order to merit these privileges he must accept a responsibility for the priesthood of truth and intellectual honor well beyond what belongs to the citizen at large.

It is a commonplace that every profession, every function in life, involves its own peculiar responsibilities. The civilian will not be greatly censured if he runs away from a stricken battlefield. The soldier has accepted a very special responsibility for physical bravery and moral bravery as well, and above all the officer in charge of troops. I do not think that any honest man looks forward with any pleasure at the prospect not merely of dying in action but of having to face a situation in which the only honorable thing for him to do is to die in action. Nevertheless, in becoming a soldier, and especially in becoming an officer, he must accept the contemplation of this possibility.

You or I, not being doctors or nurses, could leave a plague-stricken city without reproach. The doctor or nurse must remain until the last moment at which his or her services have any possibility of usefulness. Whatever our legal duties are, nobody would make too much of it against us if we refused to aid in the capture of a dangerous and armed criminal. The risk of being killed in such an encounter is implicit and accepted, however, by every policeman no matter how honorable or important his status. Similarly, the fireman knowingly and willingly assumes the risk of being crushed or burned to death in the flames of a falling building.

These responsibilities are of the same order as that of the early Christian in accepting death in the arena rather than undergoing the disgrace and humility of burning a pinch of incense before the gods.

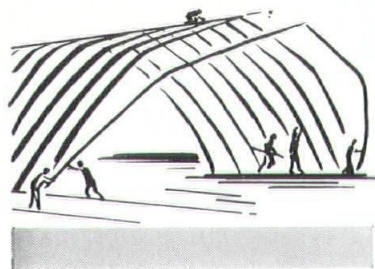
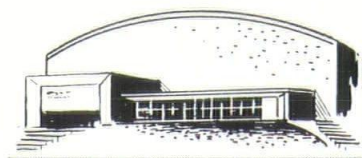
The scholar and the teacher have a function to perform which is absolutely essential for the continuance of the development of our society and even for its prolonged existence. The scholar is the custodian of the intellectual development of this society, of the understanding of truths already known, and of the development of new truths and concepts. The teacher in his turn is the guardian of the task of passing down these new truths and discoveries, as well as the truths and discoveries already known, to a new generation. The prosperity and the very existence of humanity depend on their integrity and conscientious devotion to truth.

In accepting these responsibilities, and in accepting the rewards of their position — and these rewards, although perhaps limited from a monetary point of view are very great and create a mode of life which is very well worth living — they accept certain duties which belong with these rewards. These duties involve a very special relation to the truth. They must not pay in false coin and lie to the public at large, and even beyond this, they must not lie to themselves. Yet, even this passive honesty is not enough. They must exert themselves at all costs to discover truths where none has been observed before, and they will not live up to this duty if they do not devote to it every effort of which they are capable.

This is a very severe responsibility. It cannot be satisfied by merely selecting for their studies those regions in which exploration is easy, nor can they protect their records of success by refusing to entertain tentative ideas which on further investigation prove to be erroneous. Indeed, the man who has never gone beyond his obvious capabilities and has an unbroken record of intellectual successes, without some failures to set against them, has in all probability not worked to the limit of his powers and is to be blamed rather than praised, for preferring security to the discharge of his intellectual function.

If even this limited failure in his respon-

(Continued on Page 7)



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THE CORPORATE SPLURGE IN ABSTRACT ART

From *Fortune*, April, 1960

Has the American business community begun to "dig" abstract art? A number of businessmen for some years now have been more or less privately collecting it. And, more recently, others have begun to hang things in their offices that they wouldn't dream of putting up on the wall at home. A whole spectrum of abstract art is now appearing in big corporations, public banking areas, apartment-house lobbies.

The corporate executive sometimes leaves the choice of art to museum directors or all-too-willing art galleries. The most potent influence, however, is turning out to be the architect, who, having created his modular, glass-walled office structures, has been able to persuade matter-of-fact businessmen of the desirability of warming up the spaces with something more attention-getting than a philodendron plant. Architects like Philip Johnson (who collaborated with Ludwig Mies van der Rohe on the Seagram Building) and Skidmore, Owings and Merrill's Gordon Bunshaft (who designed the Reynolds Metals Richmond headquarters) have seen to it that modern art comes along with modern architecture as part of the package.

That collectors, decorators, and architects should light on abstract art is not altogether surprising. Abstract art has been gaining momentum for more than half a century. The American version, known variously as action painting and abstract expressionism, dates back fifteen years. Not only is abstract art thus in vast supply, but it happens to fulfill a good many needs of modern architecture. It is big, colorful, often highly decorative. The very slapdash ebullience of the paintings creates a welcome contrast to severe, rigorously detailed interiors.

The first plunge into this world of swirling abstractions is apt to be an unnerving experience for a businessman. He is going to have a lot of explaining to do to his friends, who begin, "Why my seven-year-old can . . ." What is he going to say to all those who still harbor the suspicion that most abstract art is a giant hoax, actually devoid of meaning? The advice of collectors is not to bother

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THE GRAND PRIVILEGE

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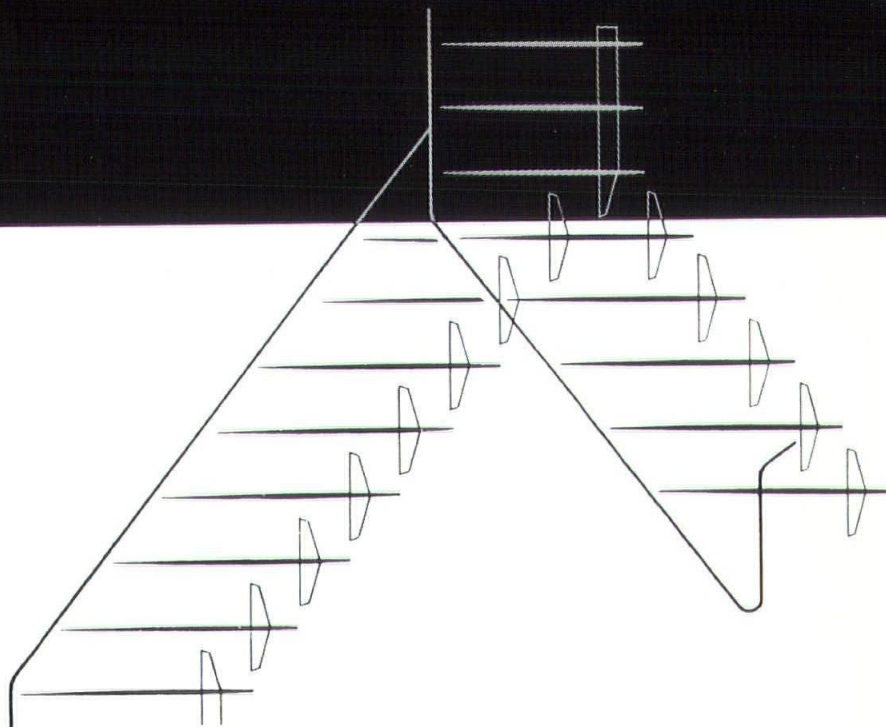
sibility is to be reproved, how much more are we to blame the scholar who for money or other bribes tells deliberate lies and still holds himself out to be a scholar or a teacher? Worst of all, what are we to say of the man who does this and yet speaks sententiously in the name of education or scholarship? If his other activity brings him into a situation inconsistent with his teaching and scholarly duties, or if the standing code of his other activities involve permissions or duties which are inconsistent therewith, let him cast his other activities or scholarship aside.

Yet even without an explicit lie, the combination of pseudoscholarship and showmanship which goes into our quiz programs and similar forms of commercialized scholarship is bad in itself. The type of purely attentive learning which has a market in quiz programs has nothing to do either with the creative learning of the scholar or the evocative learning of the teacher. It is perhaps true that the great public does not understand this difference and confounds the one with the other. This is a dangerous weakness on the part of the public, and pandering to it is a dangerous vice on the part of the showman-scholar.

It is for all these reasons that the tampering with the truth on the part of the man normally devoted to it is a dereliction of duty quite comparable with the dereliction of an officer who runs away from his own soldiers in the face of the enemy, or who sells the enemy the plans of fortification. Because the code of the soldier visits his dereliction with dire penalties, whereas the false scholar can walk the streets without fear of danger to his life or liberty, his betrayal is if anything the worse act of the two. At the very least, he should meet with the contempt and ignominy which are the part of the cashiered officer.

Apparently, there is a large element of our public which is not prepared to recognize this and which will excuse the treason of the false scholar by saying "he has committed no crime." Frankly, I doubt if Judas Iscariot committed any crime against the laws of the kingdom of Heaven.

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UP&L, ARCHITECTS TO COOPERATE ON POWER NEEDS

By WAYNE L. SHAW

A recent survey of architects pointed up the need for closer cooperation with the power company.

Since almost 80 per cent of the architects are located in the Salt Lake area, W. Reid Dunbar, consultant in the Salt Lake Division, Utah Power & Light Company, is assigned to represent the company to architects.

Architects now will know where and whom to call to obtain the electrical data they need to serve customers.

Mr. Dunbar will provide architects and engineers with new ideas and information on what's new in electrical applications, as well as complete data regarding the electric service the power company has available or can make available at any given location.

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THE CORPORATE SPLURGE IN ABSTRACT ART

(Continued From Page 7)

too much about what an abstract painting means. (That may take twenty years to find out.") As Mark Rothko, one of the leading U. S. abstractionists, has declared, "A painting is not a picture of an experience; it IS an experience."

Business men willing to settle for color (often gobs of it), texture (ranging all the way from paste-ups to stitched burlap), movement, and light have found that abstract paintings can, in fact, provide a sense of emotional release, and may give the beholder a thin grip on humanity in a business-machine world.

As speculative venture, abstract art has proved to be an unexpected bonanza both in prestige and in new business. Horace C. Flanigan, board chairman of Manufacturers Trust, found that the modern art in the bank's new Fifth Avenue branch pulled customers right in off the street. An even happier discovery for "Hap" Flanigan was that the bank's modern art in the first three years had appreciated by 300 per cent.

The Chase Manhattan Bank made a similar experiment with its new Park Avenue branch last October, found its \$45,000 investment in modern abstract art such a drawing card that Vice Chairman David Rockefeller has now decided to go ahead with an even more ambitious project. The new sixty-story Chase Manhattan headquarters will have a handsome \$500,000 budget for art, including rotating exhibitions, a permanent collection, the services of a full-time curator, and an advisory board of such experts as the Museum of Modern Art's Alfred Barr Jr. and the Guggenheim Museum's Director James Johnson Sweeney.

Not all of Chase Manhattan's art will be modern, but a good deal of it certainly will be. "We're proud of the fact that this country is producing fine art," Rockefeller explains. "Business should support the art of today as the Medici of Florence did. This is not a new idea, but I think it's a sound one."



GOING CUCKOO

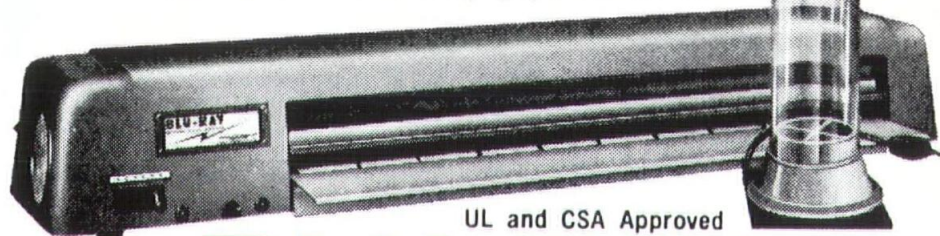
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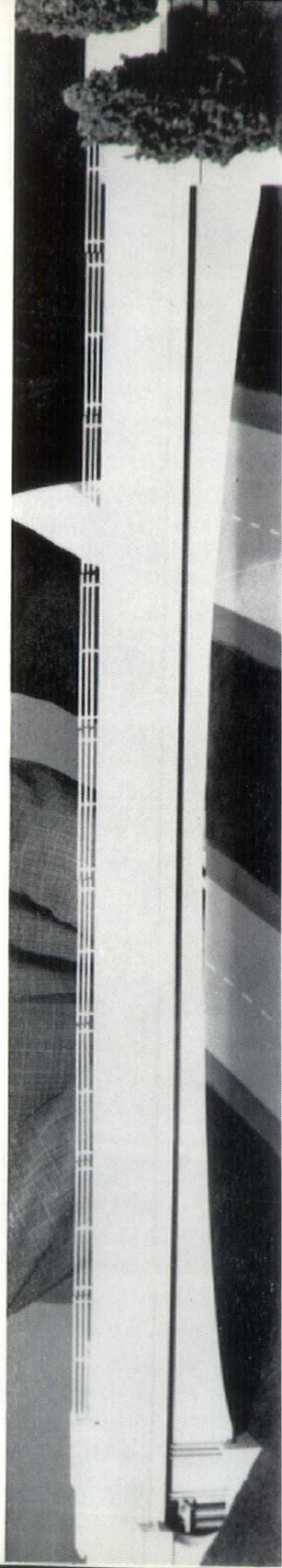
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Allan M. Beesing won the \$15,000 top professional award in the Steel Highway Bridge Design Competition sponsored by American Bridge Division, U. S. Steel. Mr. Beesing is a registered professional engineer associated with James J. MacDonald, a consulting engineer of Buffalo, New York.

The competition offered 15 professional and student awards totaling \$44,000 and attracted 300 entries from this nation and abroad. It was conducted and judged under the auspices of the American Institute of Steel Construction.

Object of the competition was "to stimulate more imaginative, effective and economical use of modern, high strength steels in overpass structures." It is estimated that more than 41,000 bridges will be needed for the network of interstate and defense highways the nation will build in the next 15 years.

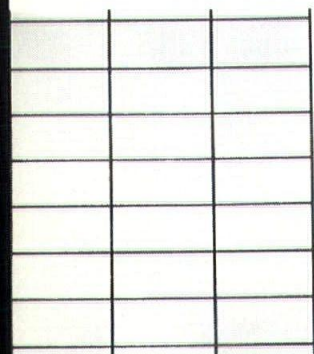
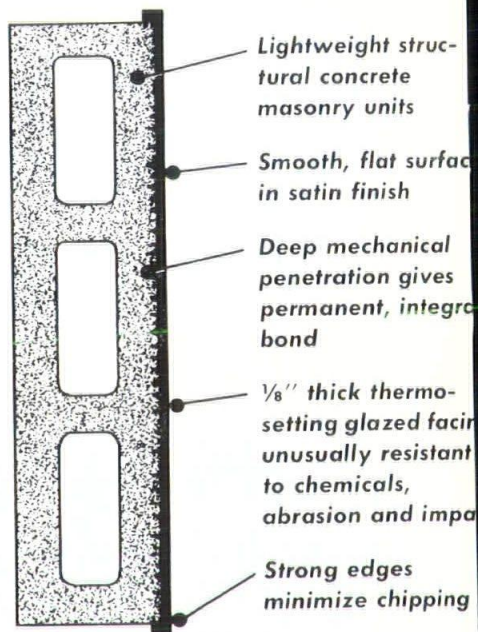


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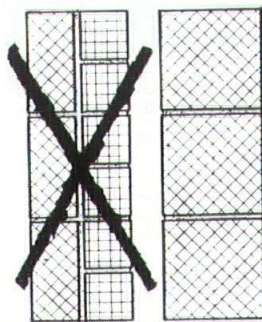
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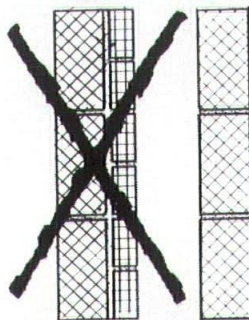
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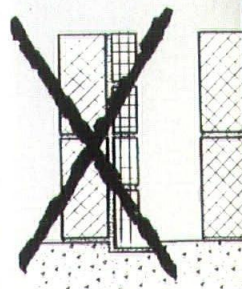
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FAILURES:

TOO OFTEN, TOO SIMILAR

From *Engineering News-Record*, March 3, 1960

Structural failures, both during construction and in completed buildings, continue to plague the construction industry. Yet the same mistakes crop up again and again — and almost invariably they can be attributed to one of these four categories of causes: faulty design practice; oversight in design; faulty construction; faulty bracing (so common it forms a category of its own).

That was the major point of a panel of three noted engineers, which discussed failures at a technical meeting of the New York Chapter of the American Institute of Architects last week. On the panel were Jacob Feld, consulting engineer; Boyd G. Anderson, partner in Ammann & Whitney, consulting engineers, and ENR Senior Editor Frederick S. Merritt.

A frequent faulty design practice is changing the design without the knowledge of the original designer. This often occurs after the original design has been completed. Design agreements or contracts between owners and architects and engineers should always include a clause requiring all plan changes to be approved by the original designer.

Another faulty design practice leading to failures is poor drafting and insufficient checking of drawings. In one failure — a collapsed retaining wall — investigators found that 1/4-in.-dia bars were the main vertical reinforcing. The bars should have been 1 1/4 in. dia. but on the drawing the 1 was obscured by a dimension line drawn over it.

Thorough checking for errors is an added design expense, but worth every cent it costs. This is a step-by-step process — design, design check, drafting, drafting check, detailing, detailing check.

The cost of this work can run up to 20% of design cost for a building, according to Mr. Anderson. Services provided in this phase of the work should be set down in clear-cut terms between architect and owner, and architect and engineer before work begins. In short, areas of responsibility should be decided before the start of a project and the procedure followed through to the end of the job.

Too often, design contracts do not include provisions for supervision of construction. It is not only important that the designer also supervise the field work, but the extent of the supervision should be spelled out in the architect-engineer agreement. Is supervision to be continuous throughout the life of the job? Will it cover all parts of the project or only specified stages and parts of the work? Those questions should be answered in the contract.

Should the engineer alone be responsible for the integrity of a completed structure? Mr. Anderson maintained that at the end of the job the contractor must be the one to certify that the work is in accordance with plans and specifications. He said that while the engineer, through inspection, will try to protect the owner's interest and will call to the architect's attention any errors observed in erection, the engineer cannot assume any of the contractor's responsibility.

"Transplant" designs of plans made for another site or quick redesign of standardized plans provide too many opportunities to overlook changes. And also in the area of design practice, care should be taken to include design checks and approval by an engineer when construction bids include design as well as fabrication and erection.

Design oversight includes a number of errors that recur frequently:

- Inadequate attention to thermal effects is one. Exterior walls may crack if roof slabs contain no expansion joints or provision to resist thrust from temperature rises. Another error is ignoring the effects of shape changes due to loads; for example, corner curling and the lift produced by this slab action.

- Insufficient bearing by framing on walls and wall or lintel failure can cause collapse in wall-bearing structures.

- Short reinforcing steel and insufficient or badly placed laps cause too many beam failures. The condition is particularly bad if a surface can be passed through a beam section without cutting reinforcing steel. And even where there is continuity in reinforcing, plains of weaknesses will follow a lap. Short laps or steel cut short at or near haunches of concrete bents have given considerable trouble in recent years.

- **Shear and flexure reinforcing omitted from beams** is another fault. Inadequate analysis of both concrete and steel designs accounts for some failures not only during construction but in completed structures. Analyzing complex concrete shapes on the basis of simplified formulas for lack of accurate criteria has also led to trouble, particularly with thin shells.

Unequal building settlement is often caused by a wrong "guess" on the type of foundation for the ground and load conditions. Foundation designs are often based on widely spaced test borings. During excavation and construction, the engineer should check to confirm the assumptions he used in designing, and modify or change the foundation design where soil conditions change suddenly across the site:

There are cases where failures occurred at footings actually "suspended" in soil without any bearing. Instead of providing support, the footing and the column above it acted in reverse, adding a load to the structure and increasing loads in the surrounding bays and columns.

Faulty construction practices cover sins of commission as well as omission. Responsibility is often split between engineer and builder. Here are a number of recurring examples:

- **Too many holes** — sometimes designers call for too many openings for pipes and ducts. Collapse of a four-story concrete structure during construction probably was caused by excessive punching shear — holes were specified along two sides of the columns, and the reinforcing was made discontinuous. Mechanical, electrical, heating and plumbing drawings should be compared carefully with structural and architectural plans to avoid opening concentrations in floors or structural members.

- **Completed frame erection without permanent connections or installation of floor systems** is another source of trouble. Often in the interest of speeding field operations, contractors leave frames with temporary connections until erection has been completed. Wind, or an inadvertent blow from construction equipment, or force fitting a single member may cause collapse.

- **Faulty bracing** — both in design and

during construction — accounts for a sizable proportion of recent building failures.

In construction, merely tying members together with temporary bracing may only insure that more members collapse when a failure occurs. Bracing should transmit lateral loads imposed on the superstructure down to suitable foundations in the ground.

"Adequate" temporary bracing sometimes is not enough. There are numerous collapses that were triggered when a single guy was loosened during construction to make way for equipment or for an erection operation. Often that guy was the one that made the whole system "adequate."

Designers cannot rely on walls for bracing during erection of the frame — the walls may not be in place at the time they are needed. Complete bracing in both directions between beams and girders and girders and columns is a must.

High-strength steel members require careful attention to bracing. Such members may be more unstable laterally than members of ordinary structural-grade steel. This is because they are subject to high stress and are comparatively small in section but have about the same modulus of elasticity as structural-grade steel. Mr. Merritt pointed out that resistance to buckling is generally more dependent on modulus of elasticity than on strength in steel.

Shoring for concrete formwork has collapsed on a few occasions because of inadequate bracing. It is difficult to avoid lateral forces on a form while placing concrete. These forces must be carried to the ground. Diagonal bracing is preferable for the job. And on high formwork, safe practice is to top off shores with a complete intermediate level at 16 ft. and begin shoring a second time.

Mr. Feld commented that the best way to avoid failures is to encourage a wide dissemination of complete reports on all that occur. "No cures can be developed," he said, "or preventive rules standardized, unless information on what has caused prior failures is known."

He said it was discouraging that so many of the failures over a period of many years appear so similar, though they have taken place in all parts of the country.



Photographed in the Engineering Center University of Utah Campus

Herman Miller's Executive Office Group was designed by architect George Nelson to match the grand module of fine buildings. The Executive Desk with chair continues the structural elements of lines, planes and function; makes handsome and efficient provision for the five basic factors of business activity: comfortable seating, broad clear work areas, well organized storage within sight or reach, conference space and room for a moment of relaxation during a busy day.

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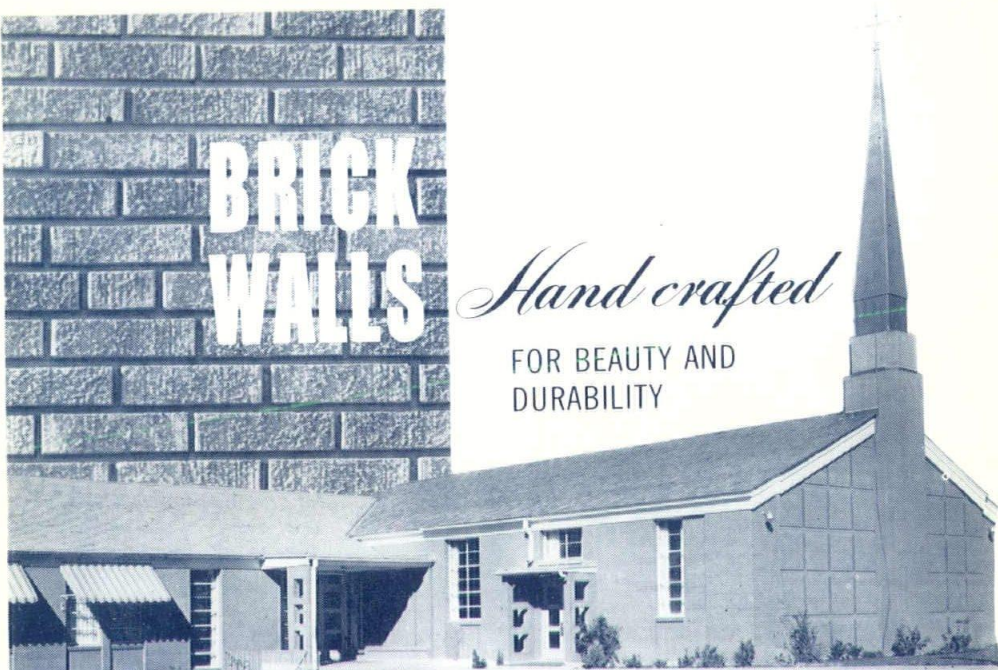
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