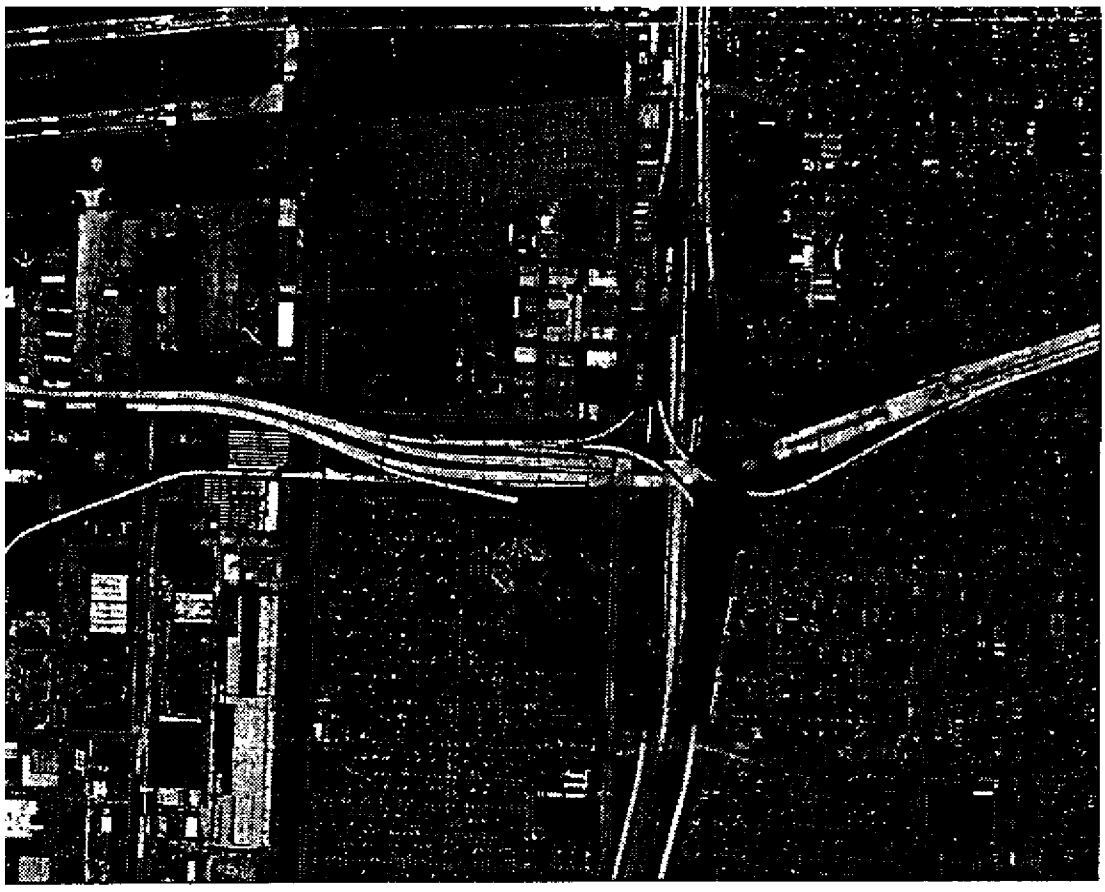
Nota: En el siguiente documento aparecen fotos que son irreconociles por el mal estado del documento original



Aerial view of I-405, I-105 intersection at LAX (note 12 acres of vacant land below highway)

PROJECT SUMMARY

BASIC OVERVIEW

I. The Proposal

Create private sector network for emergency operations in Los Angeles to foster private sector collaboration regarding preparation for and recovery from natural and social disasters. Identify sites and develop plans for this network of satellite stations throughout the entire city. Develop this physical and communicative emergency management infrastructure for private sector activities, utilizing previously neglected municipal lands surrounding the highway system. These activities will facilitate a direct channel of communication between local authorities and the private sector during all phases of emergency management, creating plans with social, economic and environmental benefits. An effort initiated by the private sector along these lines has benefits that stretch well beyond altruism. Catapulting Los Angeles into the forefront of the global arena as a role model for both public-private partnership and emergency management in this manner will receive international attention. The activities that the network will address; create jobs, support existing business and industry, spawn other profitable initiatives and address physical urban issues of sustainability in a manner that is unprecedented in modern culture.

II. The Purposes

The private sector network for emergency operations is necessary for effective collaboration of the private sector in partnership with the public sector for dealing with all aspects of emergency management. Presently, there is no coordinated effort among private sector agencies to supplement the work of the county E.O.C. in the public realm. The county EOC, created for public agencies, should not and cannot shoulder the added responsibility of monitoring private sector activities.

Preparation

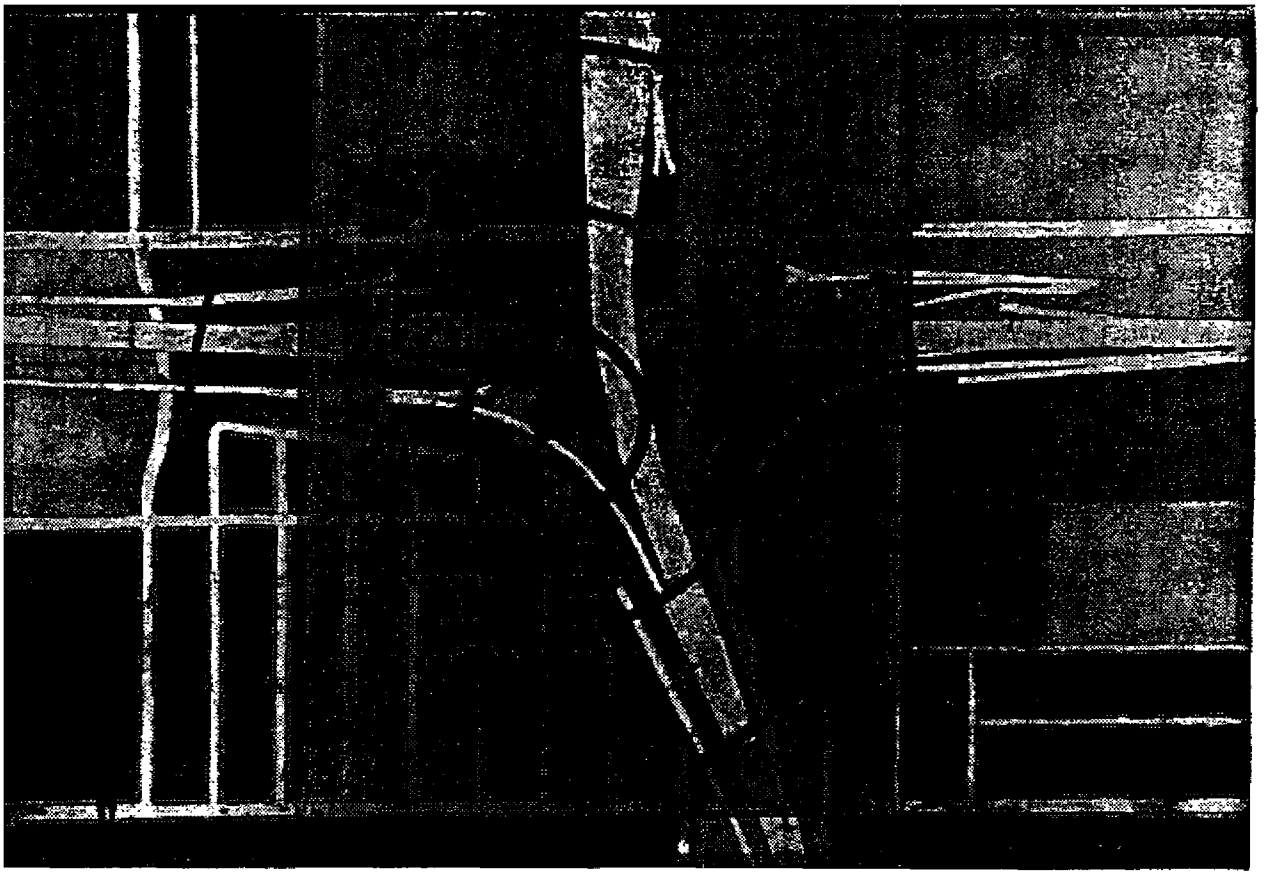
- The collaborative effort of pre-disaster planning for post-disaster private sector activities.
- Provide a *central point of inquiry* for the public to access information from all relevant sources.
- Designate and control pre-disaster storage sites.
- The creation and consumption of constantly updated educational material, technological innovations and consulting services preparing citi zens' homes, businesses and communities.

Recovery

- Provide a *command center* for the private sector to respond with post-disaster plans, marshalling materials, in tandem with the public sector EOC efforts.
- Provide basic services in satellite communi ies during the initial and long term recovery efforts.
- Designate and control staging areas for all materials the public needs to absorb or dispose of.
- Facilitate long term goals of (re)development that focus on improving emergency management infrastructure.

III. The Process

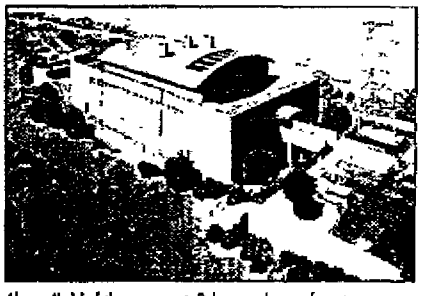
Currently seeking funding for 12-18 months of viability analysis and design development. This work will answer questions of technical and political feasibility, complete the initial planning stages of the project, identify potential contributing partners, and recommend specific public/private partnerships regarding emergency management and infrastructure development in Los Angeles. The model that this funding can generate will set a precedent for sustainable urban (re)development for many geographies prone to crisis, both domestically and internationally.



THE CONCEPT

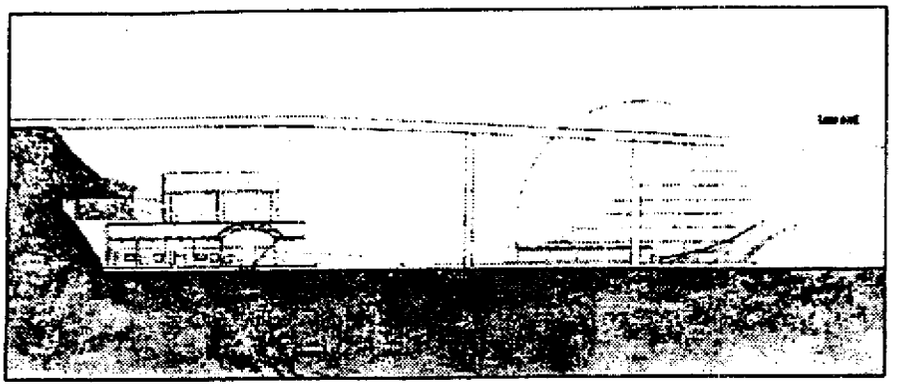
CONDITIONS AND OPPORTUNITIES

IV. The Los Angeles County Emergency Operations Center



Above; Model of thesis concept Below, rendering of existing County EOC.

Many efforts are being made to improve the methods of preparation for and recovery from disasters. The LA County Emergency Operations Center (for public sector activities) has set an international standard for coordination of people and technologies dedicated to timely and effective response to the needs of LA County residents. Issues of security, safety and efficiency, however, permit only the media room to be accessible to the public. This condition allowed the concept for a private sector network for emergency operations to be responsible for engaging LA County citizens directly. This begins to shift citizens' attention away from repeatedly looking to government and public agencies for solutions. The private sector will inherently assume greater responsibility for many state and local issues regarding emergency management in the future. As the manufacturers and distributors of the materials needed in response to crisis; private sector companies are better prepared than municipalities to develop plans, under the guidance of state and local officials, to prepare and repair the communities they serve.



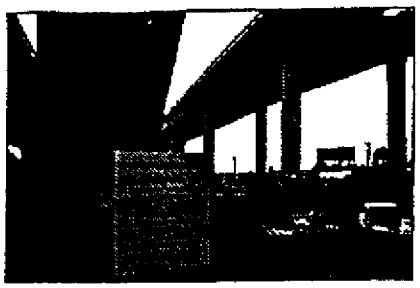
Above; Rendering of thesis concept. Below; House for rent, a typical highway site.

Innovative features of the private sector network for emergency operations:

- establishes public-private partnership regarding emergency management *not* complete privatization of municipal services;
- focuses investment specifically on services that impact people directly;
- provides local communities access to a *city-wide network* of expertise and services;
- participating agencies cooperate on all aspects of emergency management producing greater efficiency and integration;
- stimulates participation and responsibility for urban problem-solving among all sectors;
- fosters environmentally sustainable (re)development;
- provides a replicable model for all geographies prone to crisis;
- brings all active participants to the table for the first time, planning and responding in alliance towards the common goal of effective emergency management.

V. Infrastructure

Often the physical presence of a cities' infrastructure can be terrifying. In Los Angeles many communities have been devastated due to the physical proximity of the highway system. The NIMBY (not in my back yard) syndrome has inevitably victimized communities standing in the way of necessary development that accompanies the ever growing needs of expanding city populations. The condition that is created by the highway system leaves frayed edges in what were once cohesive communities. These lands, generally owned by Cal Trans and local municipalities, are usually unused and remain void of functional or aesthetic value. The accompanying photographs were taken at the intersection of the I-405 (Santa Monica freeway) and the newly constructed I-105 adjacent to LAX. This site was identified as the preeminent location for a private sector E.O.C. during thesis development. This site should still be considered an example for potential sites in a private sector emergency operations network.



Benefits to using the highway system as a framework for private sector network for emergency operations functions:

- using public land reinforces public-private partnership;
- intersections occur inherently with all modes of transport providing direct access to: marinas, airports, train yards, and surface roads;
- hundreds of acres of unused state land provide potential storage sites and staging areas for materials needed in emergencies;
- materials are already on the way to where they want to go;
- focuses attention on the frayed edges of the urban fabric, giving function and aesthetic back to the communities previously destroyed by the presence of infrastructure
- ensures that this network reaches all areas of the city thus, providing direct access to emergency management facilities and instilling a sense of safety, preparedness, and confidence.

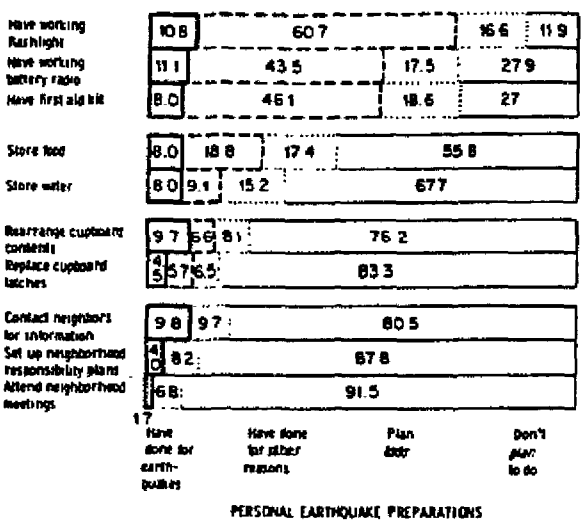
"At the intersection, great turnarounds for intersecting traffic could be recipients of many public services. . . Certainly they could be places for the fire department and the police department. They shouldn't be buildings at all they should simply be station points from which you are immediately on the road to where you have to go"

-Louis I. Kahn

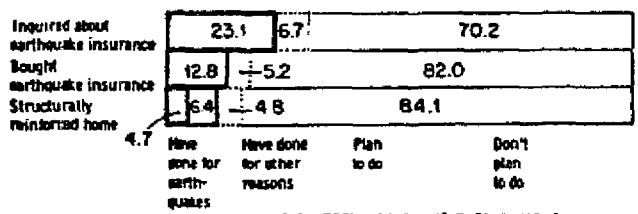
All pictures indicate frayed urban fabric or potential storage sites.

VI. Public Awareness

The level of public awareness and preparedness in LA County, whose citizens are more well informed than in most vulnerable urban areas, has consistently floundered below a level of 40%. Although the media is unanimously identified as being the most powerful agent for informing the public, it is clear that this is not enough. The effects of disasters will be severely reduced when citizens are made aware of the conditions they face and prepare their homes and businesses accordingly. The proposed private sector network for emergency operations will address individual concerns of citizens and communities by making education seemingly effortless and preparedness activity pervasive.



PERSONAL EARTHQUAKE PREPARATIONS

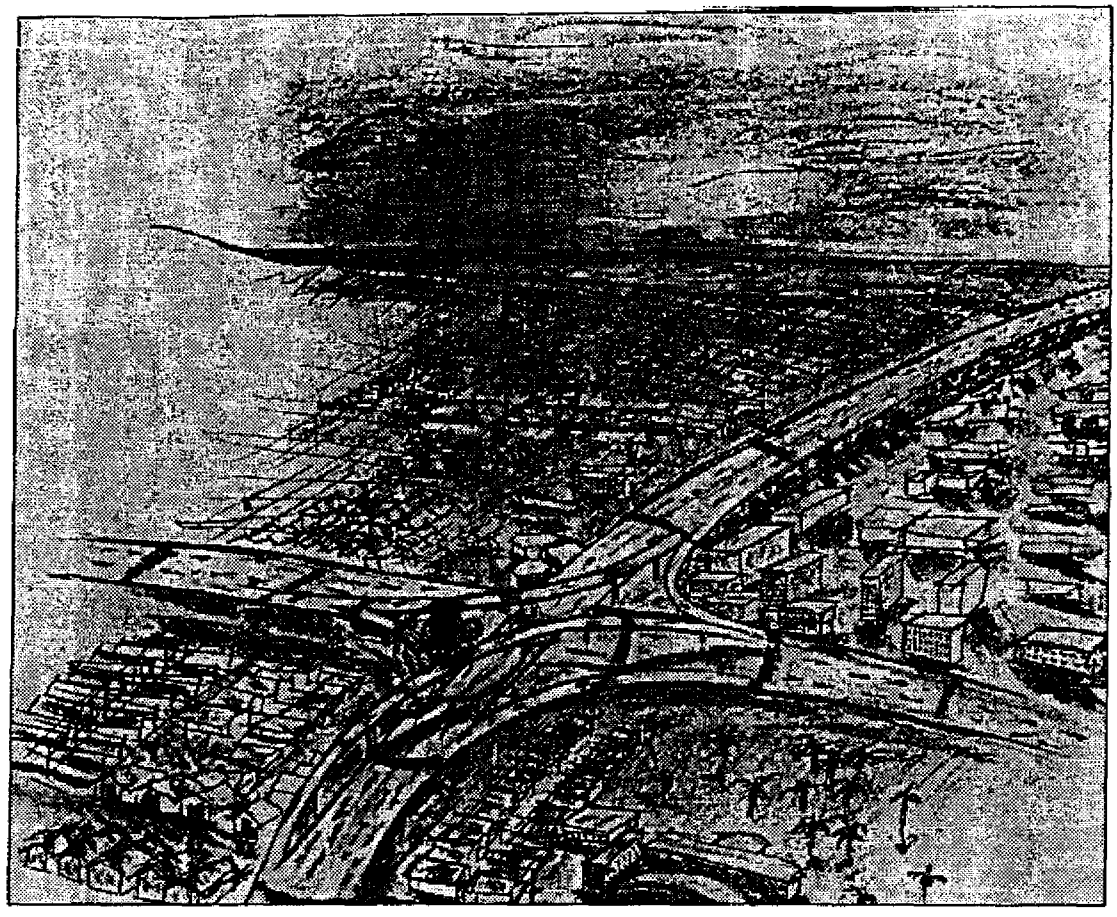


HOME OWNERS' EARTHQUAKE PREPARATIONS

Graphs taken from: *Earthquake Threat, the human response in Southern California*. by Turner, Nigg, Paz, and Young. Institute for Social Science Research UCLA.

How the private sector network of emergency operations will raise public consciousness:

- provide interactive museum spaces for education;
- encourage public consumption of disaster preparedness material in market spaces;
- continually create and disseminate updated printed matter;
- offer consulting services to businesses and industries for creating disaster action plans;
- provide single resource for emergency related inquires, making access to information simple;
- serve as communications link for radio and telecommunication networks;
- strive with community groups on producing localized plans that meet their individual needs and fit within the larger *city-wide context.*



Pastel rendering of thesis concept

THIS PROPOSAL

THE PLAN

VII. History

This investigation began in October of 1992. In the months following hurricane Andrew, I physically dealt with the problems South Dade encountered due to lack of preparedness. As a participant in "The New South Dade Planning Charrette" I began thinking about ways to approach issues of emergency management before, during and after crisis. For the next two years, as a student of architecture and urban planning, I watched disasters continue to bombard other regions of the country and the world. I had become aware of the extent to which existing infrastructure lacks specific considerations concerning geographical hazards. I became physically involved as a volunteer, carpenter, roofer, and planner in many of the rehabilitation efforts of these disasters. This seemingly unending need in response to crises led me to take significant action in the preparation for crisis. As an academic thesis project I proposed an action plan for the city of Los Angeles, the key-stone to which, was an Emergency Operations Center for the private sector.

When the project was complete, this body of work was positively recognized by the students and faculty at Tulane University School of Architecture, with an invitation for me to speak at the commencement ceremony. In the year that has followed I have won the support of many persons dealing on a daily basis with issues of emergency management and sustainable development. I have discussed this project with members of: FEMA, USAID, UNDP, The World Bank, USGS, GeoHazards International, The LA County Sheriff's

Dept., The LA County Emergency Management Office, The Urban Assembly, The Red Cross, LAAN (LA Access Network), INFOLINE and The LA Community Development Dept. Each inquiry has led me a step closer to understanding the possible reality for these concepts.

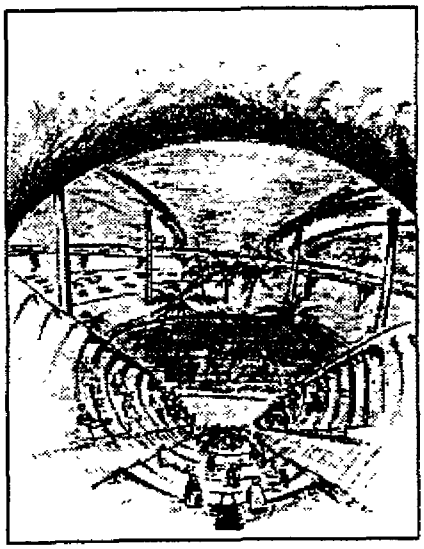
VIII. Potential

After one year of viability and design development, all of the issues regarding this proposal should be met. At that time, a comprehensive publication will exist that will be presentable to the city of Los Angeles as well as other vulnerable geographies. If Los Angeles were to accept this proposal, all aspects of future technical analysis, financial analysis, design development and construction costs will have already been identified. Even in the event that Los Angeles is not willing to accept this proposal at that time, this document will remain as a viable model for development of this nature elsewhere. It would in fact be recommended that these findings be implemented in a smaller urban environment first, to test their feasibility and set a concrete precedent.

In an economy driven by demand, many businesses profit from the unfortunate event of disaster. Often local businesses are unable to recover in time to capitalize on this demand. This plan focuses on allowing for local business to resume operation, even if temporarily relocated in order to most effectively recover the local economy. This plan also anticipates the number of jobs that are lost in the event of crisis, and will concentrate on providing training programs that allow the countless tasks needed in the recovery effort, to provide the local population with incomes necessary for their personal recovery. Although it is impossible to know what will be devastated in the event of a disaster, long range sustainable urban plans, legislation and building codes should be in place so that development is productive, not ad-hoc. Plans like these only have the potential to be developed and realized in the collaborative atmosphere that a private sector network for emegency operations could provide.

Los Angeles and other urban geographies prone to crisis are in a perpetual state of fear. Modern Cities in general do not reflect the quality of life that our technology would indicate. This process of regeneration that we label "disaster" can eventually serve as a catalyst for positive redevelopment. Eventually creating a human environment that no longer indicates the primacy of survival. It is important however, that we recognize this now and take the initiative before impending crisis. Only then can we capitalize on the many positive ways we can change the current situation of helplessnes.

Above, Personal sketch: Homestead, FL. Oct. 1992 (note Home Depot became a site for debris after Hurricane Andrew due to lack of planning) Below; View from situation room for proposed thesis concept.



THE ACTION PLAN

ONE YEAR'S TIME

IX. Projected Needs

A. Project Development

Proposed personnel: One project manager, two persons for research, three persons for drafting/computer design.

Timetable: One year

This is the heart of production for the project, persons will: contact potential investors, research obstacles, identify private sector participants, draw/plot potential plans for an EOC and network of satellite sites, and pull all information together eventually producing a complete body of work.

B. Design Development

Proposal: Create a design platform at Texas A&M School of Architecture's Hazard Reduction and Recovery Center.

Timetable: One semester.

One faculty member will lead a class of students through an exercise in designing potential satellite sites throughout the city of Los Angeles The final result will be a collection of proposals that give the public and investors an understanding of design possibilities.

C. Urban Planning Analysis

Proposed Consultant: William Spangle Associates.

Timetable: 140 hours

This service includes identifying plans currently in place, studying traffic patterns, and discussing future development. As well as an on going analysis of plans, proposals and designs being done in project development.

D. Technical Analysis

Proposed Consultant: Maximum Potential Building Systems Development Inc.

Timetable: 140 hours

The services provided by this organization will investigate: technological possibilities concerning seismic design and construction, innovative highway construction/retrofit materials, and geological factors influencing overall design. As well as an ongoing analysis of plans, proposals and designs being done in project development.

E. Replicability Analysis

Proposed Consultant: GeoHazards International.

Timetable: 140 Hours

This organization will make recommendations regarding Replicability of the design, functions, siting, economics and politics of the project at all stages of development.

F. Publication

Proposed Publisher: Natural Hazards Research and Applications Center.

This document will present all material gathered and produced in one years time, as a cohesive approach to emergency management infrastructure development on behalf of the private sector. Focusing on Los Angeles, this document will outline a way of approaching all geographies prone to natural and social crisis.

THE BUDGET PROPOSAL

SUMMARY: The need for this emergency operations network is obvious. A plan such as this can adequately prepare businesses and communities, saving lives and money The business community would be able to avoid substantial hardships due to future crisises. The creation of new jobs would be a small factor in comparison to the excellent public relations vehicle this project represents. These concepts allow the private sector to directly aid the communities it serves. The concept for this network can act as a model domestically and globally, bringing well deserved exposure for the leading participants as civic-minded business-persons providing vision for, and investment in the future of their markets.
Providing the private sector with a command center to act efficiently in the event of disaster, and an environment during preparation that is devoted to planning and education ensures a level of operations among private and volunteer agencies that is on par, and therefore can work in tandem, with the County EOC. The network itself will produce revenues to help sustain its operations by selling disaster preparedness materials and providing consulting services. The atmosphere created represents a public-private partnership that allows consumers, businesses and municipalities to share responsibility for their interdependent future. The concepts expressed in this document are both necessary and inevitable. It is simply a matter of *when* action will be taken. The leaders with the foresight and courage to pave the way for Los Angeles, will provide the world with a stellar example of how democratic communities can work together for a sustainable future

One year operational costs for the project development office; Los Angeles, CA.

Project manager: Christopher Arnold, Architect: Systems Development, Inc.:	$35,000
A staff of 2 persons for research:	$45,000
A planning team of 3 producing computer generated drawings and hand drawn urban planning documents:	$60,000
Computer (CAD)/office supplies:	$30,000
My Role (one year): Coordinating all efforts regarding this project. Linking participating organizations and information. Maintaining a vision and direction to all design and research work:	$30,000
Consulting fee; William Spangle Associates, Urban Planners:	$20,000
Consulting fee; Maximum Potential Building Systems Development:	$20,000
Consulting fee GeoHazards International:	$15,000
Political consultant fees:	$10,000
Travel expenses for all persons involved (one year):	$25,000
Legal and Accounting fees:	$10,000
Bottom Line:	**$300,000**

for further information contact:

Michael A. Fishman;
178 7th Ave New York, NY 10011 USA, Phone/fax: (212) 675-7969.
E-mail: Fishman@ixnetcom.com,

July 14, 1995

Michael A. Fishman
178 7th Avenue Apt D3
New York, New York 10011

Dear Michael,

It is a rare occasion when I find someone who is not an emergency manager that has so much insight into critical problems that always occur during a disaster. I was impressed with your work, not only because you proposed possible solutions, but because your work will always cause people to think.

Your specific proposal to locate community resource centers upon existing public lands was outstanding. You addressed easy access for volunteer workers, the delivery, storage and organization of life sustaining resources (food, water, clothing and medical supplies), and ultimately the distribution of those supplies within the community. Your work, while focusing the attention of architects and engineers on design issues, is most appropriate for review by the people in government and private industry who are directly responsible for planning, crisis response and long term recovery from an emergency or disaster.

You addressed community awareness with the idea of special building markings and recognized that the preparation citizens should have done may not have been their top priority. Therefore, some type of community resource center must be established to reinforce the need to be prepared. At first view, one might easily say that with the current economy, the architectural solutions you proposed could never be funded. However, if land is available and the commitment of business, industry, government and community volunteers is strong enough, your solutions merit consideration, even if tents are used.

Again, the most critical aspect of your proposal is that you make people think. Crisis response specialists who have not dealt with long-term recovery issues will benefit as they project themselves into a new problem solving role. Recovery specialists will see potential solutions and people who have never lived through a disaster will ask, "If a disaster occurred tomorrow, what would we do? What would I do?"

Thanks for caring about the safety of others. Since your last tour of the Los Angeles County Emergency Operations Center, we have completed construction and have become operational. I look forward to giving you another tour so that you can see the building and its systems in operation.

Sincerely,

Stephen T. Gatti, Lieutenant
Los Angeles County Sheriff's Department
Emergency Operations Bureau
Los Angeles County
Emergency Operations Center

United Nations Development Programme

New York, 26 July 1995

Dear Mr. Fishmann,

The purpose of this message is to thank you for your visit to our offices and for your presentation on proposed emergency preparedness centres.

As you know, the United Nations Development Programme works primarily with developing countries. It is part of our mandate to contribute to technological interchanges and capacity building initiatives that represent an improvement to the standard of living of people in developing countries.

UNDP regularly undertakes the replicability of successfull initiatives throughout the developing world, naturally taking into account the financial constraints, the administrative and human conditions existing in each one of the countries in which we operate. At the moment UNDP is assisting some 5.000 projects through 136 Country Offices worldwide.

We would therefore express a potential interest in any successful demonstration that could represent an affordable alternative to emergency preparedness in developing countries, including both public and private agents. The formation of partnerships between the public and private sectors is one of the most promising of the newly emerging forms of cooperation in developing countries.

I look forward to being kept informed on the advancement and materialization of your ideas, wishing you every possible success in your endeavours.

Yours sincerely,

Jonas Rabinovitch
Senior Urban Environment Advisor
Co-ordinator Public-Private Partnerships
Sustainable Energy and Environment Division

Michael A. Fishman
178, 7th Avenue Ap 3D
New York NY 10011

Michael A. Fishman
178 7th Ave Apt #D3
New York, NY 10011

Phone: (212) 675-7969 (call first to fax)
E-mail: Fishman@ix.netcom.com
Aug 7, 1995

PRIVATE SECTOR NETWORK FOR EMERGENCY OPERATIONS: ADDENDUM

During the week of July 31 - August 4, I was privileged to meet with board members of the following organizations: BICEPP (Business and Industry Council for Emergency Preparedness and Planning), ENLA (Emergency Network Los Angeles), FEAT (Franchise Emergency Action Team), Los Angeles Community Development Dept, and CARS (Community Arts Resources).

This addendum is to accompany the original proposal document distributed at these meetings. It reflects basic changes I now view as necessary, to meet the needs of prospective participants as well as the communities they are serving.

- **"Identify necessary participants"**

It is clear that there *are* coordinated efforts for private sector activities regarding emergency management already in place. I would identify; BICEPP (representing business and industry), ENLA (representing community based organizations), and the Southern California VOAD (representing volunteer agencies) as the three primary organizations capable of coordinating to form a tripod on which this private sector initiative could firmly stand.

"The Virtual EOC":

I was first introduced to the concept of a "Virtual EOC" during this most recent trip to Los Angeles. I am convinced that the inevitable reality of a communicative networking effort such as this, will aid all private sector response activities during both initial and long term recovery efforts of all crisis situations. Adopting this method of communication forces me to *retract* the notion of a "Command Center" from my proposal, originally modeled after the County EOC. Although the most efficient method for public agencies to react to disaster is the incident command center, diversity within the private sector regarding location and responsibilities warrants the decentralized approach epitomized by a virtual EOC.

I am also convinced that, during preparation, this Virtual EOC must manifest itself in the physical world as a series of locations. These locations will engage in developing plans among private sector participants and community organizations, as well as meet the public directly for purposes of education, preparation and raising consciousness. This network of sites can be designed to change its functions, in response to crisis, to meet the physical needs of a Virtual EOC. As loading docks, convenient station points, and nodes of communication located throughout the city, these facilities remind us that no matter how advanced our technology may be, our goal is still to *physically* provide people with what they need to prepare for and recover from disaster in the most efficient manner possible.

- **"Lose the site":**

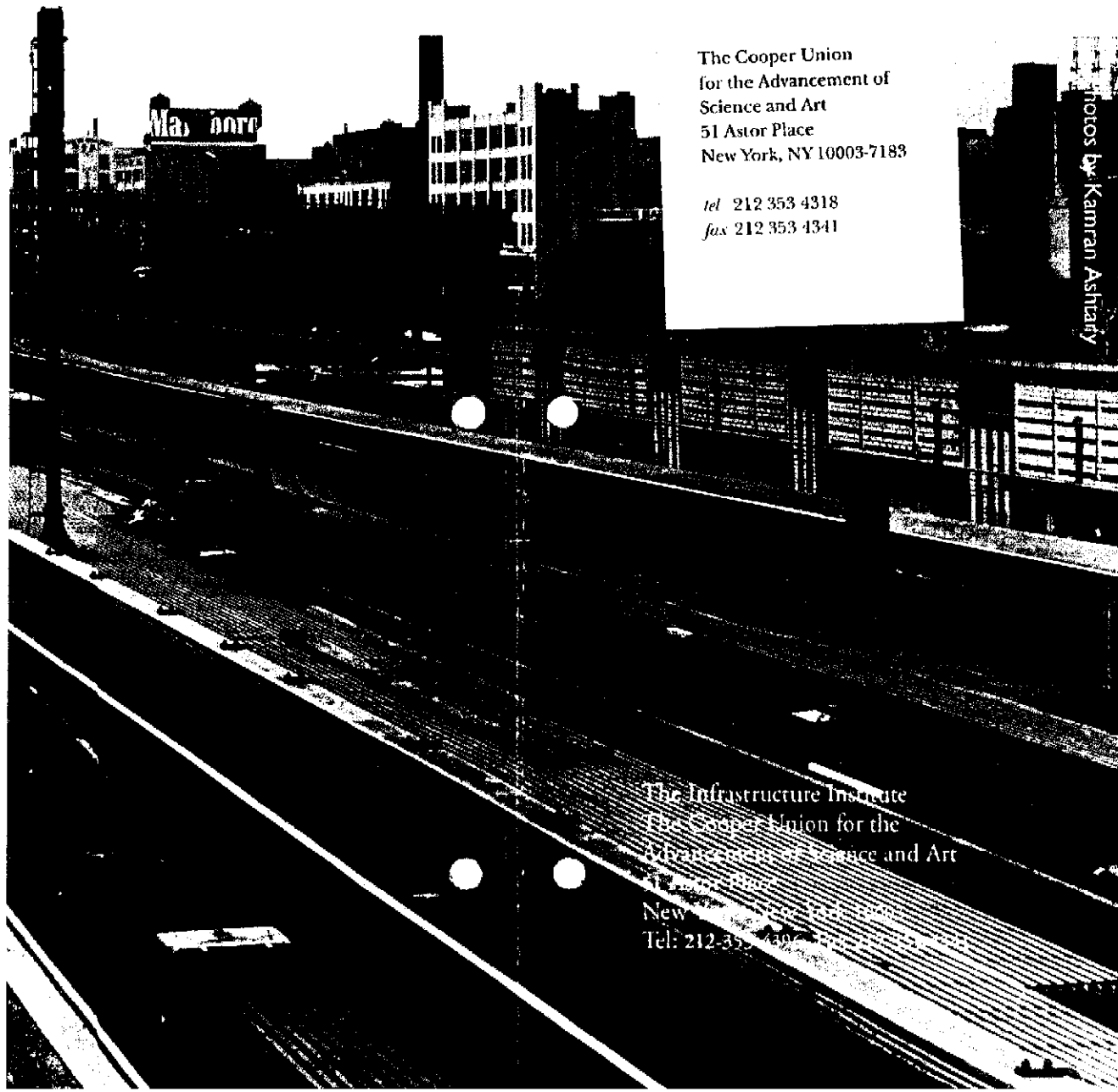
The site identified in the original proposal was provided as an *example*. This proposal was never intended as an answer, rather, it asks the question, "What can we do?". Targeting the existing infrastructure of the metropolitan area as a life line for added sustainability keeps us from reinventing the wheel. As an architect my process is visual. It is my intention that this aspect of the work is thought provoking, *not* threatening. One year of design development and viability analysis will identify and incorporate existing plans as well as research appropriate sites for a network of this nature. I will emphasize that this proposal is a beginning, not a solution.

- **"City/County clarification"**

In regards to emergency management I found a consensus that political boundaries are of little consequence. The Emergency Operations Network proposal should not be regarded as serving only the city of Los Angeles but the entire metropolitan area. I am under the impression that Southern California can set a precedent for the world, proving that entire geographies can share responsibilities among all sectors in working towards a sustainable future.

THE SAM SCHWARTZ COMPANY

23 EAST 4TH STREET, 5TH FLOOR
NEW YORK, NY 10003
MICHAEL FISHMAN TEL (212) 598-9010
PLANNER-ARCHITECT FAX (212) 598-9148



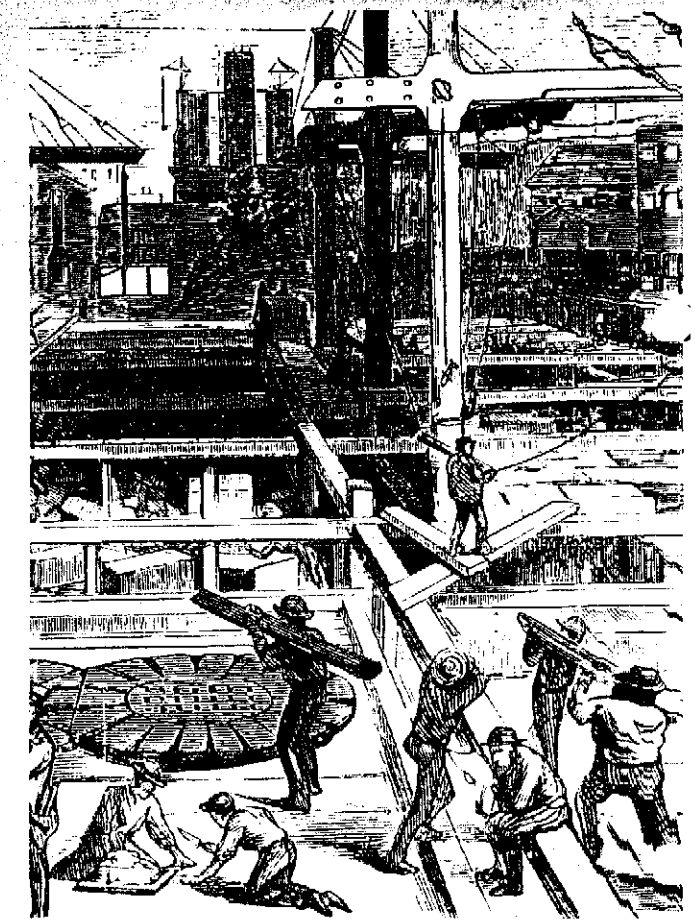
The Cooper Union
for the Advancement of
Science and Art
51 Astor Place
New York, NY 10003-7183

tel 212 353 4318
fax 212 353 4341

Photos by Kamran Ashtary

The Infrastructure Institute
The Cooper Union for the
Advancement of Science and Art
New
Tel: 212-35

Infrastructure Institute at the Cooper Union



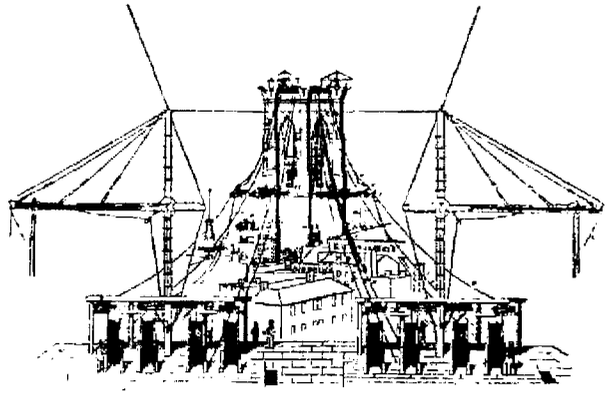
The Infrastructure Institute

Imagine a city where the roads are smooth, the bridges sparkle, the water is clean and plentiful and transit is efficient. Recyclable wastes are reprocessed into usable goods and the remainder converted to energy for millions of homes. Air and noise pollution are textbook topics neither seen nor heard. Goods and people are transported quickly and efficiently at low cost.

The vision, according to experts, is achievable. To reach it we need to know more about the current condition of our infrastructure, learn how we got here, and the prognosis for the future. We need to develop long term plans, insure that we are using the best technology, and apply our funds wisely. We must involve the public, enlist the support of major businesses, and share the findings. The Cooper Union Infrastructure Institute was created as a catalyst in this process.

The region's infrastructure is in a state of disrepair. Roads are crumbling, bridges are closed, water mains are breaking at unprecedented rates. Despite the commitment of $100 billion for capital rehabilitation over the next decade, no organization has emerged as a champion on behalf of the physical region. Ten year plans are announced one day and shelved the next. We are always in Year One of a ten year plan.

Currently, management of our region's infrastructure falls under the jurisdiction of a score of government agencies, utilities, and authorities who are responsible for an estimated $1 trillion worth of public works.* Yet they ha no cooperative plan, and no agency to turn to for guidance. There is no region-wide needs document and little or no discussion between agencies competing for employees, consultants, and contractors. Caught in perpetual crisis management,public agencies have no time for long-term planning.



The lack of public education on the physic city and an aggressive lobbying effort o behalf of infrastructure is contributing to th slow destruction of these invaluable resource

Cooper Union's Infrastructure Institute plar to be the advocate for the New York Cit region. Problems will be researched and solu tions will be offered.

State of the Region's Infrastructure Report

Each spring, timed to follow the City executive budget and precede th adopted budget, a report on the sta of the region's infrastructure is published. includes trends and projections and establis es future goals. Proposals, recommendation praise, and criticism is offered when appropr ate. Topics covered will include:

- Age distribution
- Bridge ratings
- Trends in waste
- Condition of subway tunnels and stations
- Roadway conditions

A financial section with suggestions f increasing efficiency and reducing costs wi be included in each report. Innovative ways caring for the physical city will be investigate and presented.

Managers

The Council of Infrastructure Managers meets regularly to discuss improvements that can be made in : region's infrastructure. Design modifica- ns, procedural facilitation, and overall goals · discussed. The council includes govern- nt representatives, the public authorities, or, contractors, and other private sector ticipants.

Training Future Infrastructure Managers

t is imperative that infrastructure man- agers be trained in current technologies. They will also need real world manage- nt skills, and the confidence that comes m exposure to actual working situations d projects.

e Cooper Union Infrastructure Institute ll connect students with research projects t address urban infrastructure problems to y agencies. As it develops, the progra mises to tap the energy and idealism of ung engineers, to build confidence and dership abilities, and to encourage stu- nts to pursue careers dedicated to public vice.

Educating Public Works Engineers

Several generations of municipal engineers were educated during the *Robert Moses Era.* As designers, they rebuilt streets to accommodate cars and trucks and they widened roads and narrowed sidewalks. Trolleys and elevated rail lines were removed to make way for the automobile. Bridges were odernized by removing rail and pedestrian ways and converting them to car lanes. The accepted thinking of the time embraced this type of modernization.

To a major extent, this policy continues. It can be confronted most effectively not only by changing the minds of transient commissioners but by influencing career engineers and planners. The Institute will assist the City in establishing guidelines and in holding seminars for municipal engineers and planners.

Researching the Best Solution

Cooper Union is nationally recognized as a leading engineering and architectural university. In September 1990, *U.S. News and World Report* ranked Cooper

Union among the top three engineering schools in the nation. Through the Institute, and in response to the needs of government, the talent at the university would be unleashed.

The New Physical City

A report, *Moving Toward a More Livable City*, will be a modular plan with the goals of reducing air and noise pollution, energy consumption, promoting tranist, and transforming hundreds of acres of asphalt into green space. A major design goal will be to find areas that can be reborn as parks, gardens, and public spaces. The report will be modular in the sense that elements will be able to stand alone and be gradually introduced.

Examples of environmentally friendly design are Sheridan Square, Restaurant Row, and at Prospect Park. Working with the community, the City Department of Transportation designed and constructed a garden of exotic plants and trees. Along lower Sixth Avenue, traffic islands were connected to sidewalks adding park-like pockets of tranquility to the street. At Prospect Park, a little used exit ramp to Parkside Avenue was closed and replaced with grass providing a nice wide field that had been two narrow strips. We at Cooper Union have the goal of institutional-

Conclusion

Rarely do we have an opportunity to solve a serious urban problem and reduce expenditures at the same time. This attractive combination is especially relevant today with soaring budget deficits and an increasing demand for human services. Pursuit of this goal requires coordinated long-term planning for wise management of available funds. American society is suffering because of the infrastructure crisis. Solving it can save billions of dollars, create jobs and ultimately revitalize the economy.

The New York City region can lead the way.