Diversions and Dislocations: California’s Owens Valley was on view at the CLUI April 9 to May 9, 2004, and presented several perspectives of this fabled “backspace” of California. From the preparation for the first Los Angeles aqueduct a hundred years ago to the recreational urban tourists of today, the Owens Valley has been an extension of the city, a fact physically asserted on the ground, as more than 95% of the private land in the valley is owned by the Los Angeles Department of Water and Power.

The exhibit featured images of the area by four artists. Eva Castrignus, a German photographer who has worked extensively in California, photographed the aqueduct as it moves through the valley, on its 250-mile journey to Los Angeles. Delving into the complexities of this engineering marvel, Aaron Forrest displayed his epic Los Angeles Aqueduct Landscape Atlas as a large format bound book, viewable on a table in the exhibit. The photographer David Maisel showed his aerial images of the chaotic, dried up surface of Owens Lake as projections on the gallery wall, in front of which visitors could listen on headphones to a narrative and musical soundtrack he made for the exhibit. Also included was previously unseen work by Andy Freeman, a photographer who has been researching and photographing buildings that were relocated from the Manzanar Japanese-American Internment camp, which was built in the Owens Valley during World War II (one of ten such internment camps built in remote areas of the western United States). After the war, the buildings were sold and removed for scrap or reuse elsewhere. As a result, parts of this surprising chapter of American history are scattered around the Owens Valley, in the form of transformed architectural artifacts, that have been absorbed by and integrated with the social and architectural context of the valley.

In addition, the Center published a new guidebook, titled Points of Interest in the Owens River Valley, written and researched in association with Kazys Varnelis, an architectural historian and frequent contributor to CLUI programs. And a tour was conducted by the Center, taking a busload of interested people on a two day odyssey up and down the valley.

See the center insert of this newsletter for an account of the tour.

Emergency State: First Responder and Law Enforcement Training Architecture was on display at the CLUI Los Angeles Exhibition Hall this summer. The exhibit, about police and emergency training structures, featured images taken by CLUI photographers depicting ten representative locations in Southern California. As with several recent exhibits at the Center, this was a digitally created and displayed production, with each of the sites described on a LCD or projection screen, along with printed text panels, enhanced by video and ambient sound.

Southern California’s training villages and emergency props range from the typical to the state of the art, as one would imagine they might in this place where movies are made and theme parks originated. The training sites depicted in this exhibit showed different characteristics of this unusual form of architecture, a form which is increasing in its sophistication and occurrence across the country, as this era of preparedness progresses.

The Police Academy
One of the earliest training towns still in use in the Los Angeles area is the situation simulation village at the Los Angeles Police Department Academy in Elysian Park. The Police Academy is the LAPD’s historic classroom and firearms training area. It was established in the late 1920s as a private shooting range for officers, and evolved into the LAPD’s main training campus for over fifty years. Though it has long been staffed by LAPD employees, the grounds and the buildings are still owned by the private Los Angeles Police Revolver and Athletic Club. Several years ago most recruit training moved to the new Ahmanson Recruit Training Center in Westchester, and now the Academy is used just for continuing police education, officer training, and graduations.

The Academy grounds have a swimming pool, café, dining club, rock garden, gymnasium, athletic field, classrooms, three firing ranges, two electronic simulation training rooms, and two outdoor tactical training areas. The situation simulation (“SIT SIM”) village is on a hillside near the Rock Garden. It was built in 1975, with help from Universal

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Sheinds of landscapes. There are structures a broken hole in the densest state in New Jersey Meadowlands are a broken hole in the densest state in the nation, with two distinct kinds of landscapes. There are structures built for movement, like traffic flowing along linear turnpikes, goods through railways and container yards, energy through electrical wires, and planes along runways. Then there are the static places, the eddies and stagnant pools between these areas of flow. These include the cul-de-sacs for burnt stolen cars, the closed dumps, and industrial relics, tangled in terminal litigation. The economic precipitate of the big city next door.

Meanwhile, a project focusing on the New Jersey Meadowlands is area, and discussions with various owners and agencies are ongoing. The search continues for an interpretive park site in the Hudson River keep control of their old buildings so that a competing retailer doesn’t usually shut its stores to move into another even bigger one nearby, superstore retailer, but it seems that companies like Wal-Mart, which example, one of the most logical uses of an empty big box is another keeping face of small towns in America are emerging from her study. For one evening in April, Julia Christensen, a graduate student at Rensselaer Polytechnic University, gave a talk at the CLUI Northeast Office called Default Architecture: America’s Reuse of the Big Box. She discussed the ways in which communities deal with the empty “superstore” buildings that often get left behind when retailers like Super Kmart or Wal-Mart vacate them, as is happening with greater frequency throughout the country. These monolithic, nearly windowless structures are too large for most other single tenant uses, so the reuse of them often requires some serious “outside the box” thinking.

Christensen has been travelling the country, visiting communities where the local empty big box has found interesting new uses. She has found them converted into churches, indoor flea markets, town offices, and recreation centers. Curious notions about business and the changing face of small towns in America are emerging from her study. For example, one of the most logical uses of an empty big box is another superstore retailer, but it seems that companies like Wal-Mart, which usually shuts its stores to move into another even bigger one nearby, keep control of their old buildings so that a competing retailer doesn’t move in. As a result, when they are not torn down, old Wal-Marts often end up with nonprofits like churches and municipal offices and services moving in. We look forward to seeing her completed study at the end of the next academic year.

The search continues for an interpretive park site in the Hudson River area, and discussions with various owners and agencies are ongoing. Meanwhile, a project focusing on the New Jersey Meadowlands is gaining ground.

These two worlds are networked and mutually dependent, antithetical and divided. For every overpass there is an area passed over. Though bordered by high volume corridors, these static zones can be nearly impossible to reach by conventional methods. You may momentarily be within a few feet of something on the edge of turnpike, and it could take you an hour to get to it on the ground. The Meadowlands are either a place to get through without being there, or a place to end up for good.

It is a place made from of other places. Artificial islands of solid ground amidst the transformed marsh are composed of concrete rubble, broken glass, and ground up architecture, including even parts of bombed London, brought as ballast on the return trip of WWII supply ships, and the fragments of the romantic ruin of the neoclassical Penn Station, exposed on the edges of muddy truck yards.

Once the Hackensack River, the spine of the Meadowlands, was an open sewer of the byproducts of industry, and two dozen garbage dumps, with underground fires from the heat of decay, emitted spires of smoke and zones of haze. It was a landscape at the distant end of civilization, where the frayed edge of the Great City was turning back into the organic muck from whence it came.

Today, most of the 2,500 acres of smoldering dumps have been extinguished and closed. In some cases moats constructed at their bases collect the billion gallons of leachate ooze they collectively excrete each year, pumped out by trucks and redeposited in the sewers for treatment. Methane from the decomposition is collected to heat homes and businesses in the area. The New Jersey Meadowlands Commission, established at the peak of the chaos in the late 1960’s, has indeed been busy.

But all is far from lost for the Meadowlands. In the future, as it simultaneously gets paved over in some places and broken into protected wildlife marshland elsewhere, the contrast of the landscape may increase, but the grey zones will prevail. Waste is stubborn, archeology remains longer when buried, and not everything can be put back the way it was before you found it. The Pulaski Skyway, called the Nation's first superhighway, will continue to soar through the Meadowlands, providing furtive, tense and fleeting panoramic views for those heading elsewhere, while providing shelter, isolation, and fodder for the layers of accumulated wastes in the limited access land below.
EDISON'S MENLO PARK LAB
THE ORIGINAL MODERN R&D COMPLEX

This is one in a series of reports about interpretive sites related to Thomas Edison, the inventor and industrialist whose work established the basis for much of the industrialization of the world that followed, and continues today. While much about how he did things is debated, the manner in which the sites related to his life are preserved instructs us about how his legacy continues to influence the story of the creation of the modern world.

At a hilltop in New Jersey, within sight of New York City, is the site where the Great Inventor established his first major laboratory, the famous Menlo Park. He selected this site because it was far enough from New York to work undisturbed, but close enough that its capital and investors could come on the day train. Menlo Park was the name of an undeveloped housing development, part of the Raritan Township that would later have its name changed to Edison. In 1875, with financial help from his father, Edison bought the single model home (which was all of Menlo Park that had been constructed) and 34 acres of empty farmland around it, on which he built a few other structures, including the 100-foot long, 25-foot wide wooden lab building, where most of the work of his “invention factory” would take place over the next eight years.

While so much about Edison is hyped, due largely to his own mastery of showmanship and legend making, the significance of what transpired on this site is hard to overstate. In the few years that this place served as the main lab for Edison’s enterprises, from 1876-1884, he, along with just a couple dozen employees, developed new technologies related to electromagnetics and sound, including the dynamic microphone mouthpiece for telephones, new wire and voice transmission technologies, and the phonograph, the first instrument to capture and play back sound.

It was here too that he developed the first constant voltage generators, and what would become the standard systems for distributing electricity, such as underground wires, junction boxes, fuses, switches, and outlets (though it was, of course, all in DC current). And it was on this site in 1879, that he used an electrically charged carbonized cotton thread filament in a vacuum bulb to produce electric light for a sustained duration (it glowed for 40 hours), in a manner that would soon be perfected and mass-produced, spurring the electrification and illumination of the planet.

The phonograph was the most immediately famous and popular invention to come out of Menlo Park, and it led to Edison being referred to as the “Wizard of Menlo Park.” People came on a special train from New York City to gaze at the lab, hoping to catch a glimpse of the famous inventor walking between buildings. It was here that J.P. Morgan and other financial backers and industrialists consulted with Edison about their partnerships to change the world. And it was here that the most famous actress of the day, Sarah Bernhardt, visited him, later referring to him as the “Napoleon of Invention.” As one of the interpretive plaques on site asserts today, “he was perhaps the nation’s first superstar.”

In 1886, much of Menlo Park lab’s contents and function was moved to the new, larger facility in Orange, New Jersey, which became the main invention and production center for Edison until his death in 1931. The lab complex there churned out ideas and prototypes, and was surrounded by factory buildings that mass produced them into products, such as phonographs and movie cameras, employing ten thousand people by 1920. The lab is now a historic site preserved by the National Park Service, and is undergoing a two-year, $12 million rehabilitation.

As the Orange lab thrived and expanded, the old Menlo Park lab buildings fell into disuse, disrepair, and eventually disappearance. The main lab building was used as a dance hall, then a chicken farm, and mostly collapsed in 1913. The two story office and library structure Edison built burned down in 1919. The brick machine shop slowly was taken apart by scavengers for its bricks. Its physical dissolution however, marked its shift in importance, from a material production site, to a historic, cultural site.

In 1929, its significance was acknowledged by Henry Ford, a friend of Edison, who was moving historic structures from several places in the United States, to his American history park at Greenfield Village, in Dearborn, Michigan. With the buildings at Menlo Park already gone, burned down, or looted to nonexistence, just a few bricks and planks were all that could be taken to Dearborn. Ford instead built reconstructions of the lab, the machine shop, and the office and library, all of which are still visible at Greenfield Village. (In addition, the small glass shop at Menlo Park, which had been removed by General Electric years before, was relocated to Dearborn, as was the old boarding house, which was located near the lab, where lab workers and visitors stayed).

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As part of the recognition of the significance of Menlo Park, and to promote its reconstruction at Greenfield Village, a simultaneous ceremony, held to commemorate the 50th anniversary of electric light, was staged at Menlo Park and Dearborn. A metal tower built on the old lab site was topped by a giant light bulb, called the “Eternal Light,” that was supposed to burn forever. It was symbolically lit, remotely, by Thomas Edison himself, from a ceremoniously–but otherwise un–connected switch in Dearborn.

Eight years later, the tower was destroyed in a storm. A new, more permanent tower was finished in 1938, a 131 feet tall Art Deco spire, made of Portland cement (which was one of Edison’s patents). This new tower was a gift to the Thomas Alva Edison Foundation, from William Slo-cum Barstow, the Foundation’s president. The Eternal Light atop the new tower was a 13-foot diameter replica of the incandescent lamp, made of three tons of amber tinted Pyrex, two inches thick, and consuming 9500 watts of electricity, which was donated by the local electrical utility. A gate house was constructed near the base of the tower, where an admission charge to the site was levied.

The Eternal Light, which some historic newspaper accounts say stays on continuously, running on battery power during occasional power outages, has, in fact been off most of the time since the dedication of the new tower. The bulbs have burned out and been replaced many times. The current non-emitting light source is four burned out automobile headlights.

Today, the only structure left from what is called the “first organized research lab in the world,” is a buried underground vault, now empty, which Edison built under his office, to keep his most important papers safe from harm. The site is surrounded by a typical New Jersey residential neighborhood. Much of the site is wooded, and a new walking trail, the “Thomas Alva Edison Information Trail,” makes a loop through the woods, with the occasional modest interpretive plaque. There is a small museum building, occupying the old gatehouse, with two cramped rooms, full of images and devices related to his inventions. Outside, the cement tower, with its burned out Eternal Light, is crumbling. ♦

Since the day the U.N. opened in 1952, accommodations have been made for visiting tourists with an interest in the architecture of international diplomacy. Reaching a peak of 1.2 million visitors in 1964, U.N. tour attendance is now down to around 400,000 a year. Tour groups are led by an international crew of guides, a job which used to be limited to women between the age of 20 and 30, but now includes a few men. Since the 1950s the guides have always sported uniforms resembling those worn by airline stewardesses. After diversions into mini-skirts in the 1960s and a Benetton designed 1980s outfit, the U.N. tour guide look is back to vintage air-travel chic with a blazer/skirt combo designed by the Italian fashion house Mondrian and accompanied by Italian shoes by Valleverde.

Continuing the air-travel vibe, to visit the international territory of the U.N. one must first go through airport style security in a tent just outside the conference building. After purchasing a ticket, one can wander the General Assembly Lobby, which hosts changing exhibits. During a visit in April the displays included large photographs about the United Nations Food Program sponsored by Benetton and a number of smaller exhibits including a gift from the Islamic Republic of Iran of silk carpet portraits of the Secretary-Generals.

After meeting my guide, a young Brazilian woman fluent in five languages, our small group stepped through a glass door and into the architectural wonderworld of utopian modernism that is the U.N. compound. Guides receive daily briefings on the current activities of the various U.N. divisions, and the tour consists mostly of discussion of the U.N.’s current policies and goals. It is a tour not so much of a place as of an idea, a “tomorrowland” of international cooperation enveloped in a bubble of 50s modernism. It’s an optimistic architecture meant to evoke a new beginning after the horrors of World War II and fated to serve as a backdrop for the cold war. At once horribly dated and retro-hip, the place evades a utopian ambiance that seems quaint considering its recent troubled history.

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Most of the large chambers are part of the tour with the exception of the Security Council, which is closed due to security. On our visit we passed through the Economic and Social Council chambers and the Trusteeship Council, both of which were in session. After quickly traversing exhibits on weapons of mass destruction, decolonization, land mines, and U.N. peacekeeping efforts, the guided tour ended with a question and answer session with our guide in the empty General Assembly Hall.

Once the Q & A concluded our guide dropped us off in the expansive public concourse, which includes a bookstore, post office, coffee shop, and souvenir shop selling U.N. logo coffee mugs, shot glasses, t-shirts, ties and key chains with the flags of each of the 191 U.N. member nations among many other novelties. A visit to the bookstore provides next summer’s beach reading for the policy wonk; Disarming Iraq by Hans Blix, Human Development Report 2003, or on the lighter side, The United Nations Women’s Guild Cookbook.

The international style U.N. building was designed by an international team of 11 architects (led by the American Wallace K. Harrison), and though it seems so, well, modern, it is now over 50 years old. The U.N. plans on temporarily relocating in 2007 while the 39 story secretariat building is upgraded. A recent New York Times story profiled the somewhat dilapidated condition of much of this modernist landmark. Asbestos, a lack of sprinklers, and outdated heating and air conditioning systems plague the complex, which will be refurbished with a proposed $1.2 billion loan in Bush’s 2005 budget. The Times story also noted “East River water is pumped into the building as a coolant and . . . workers had collected eels, blue claw crabs and bluefish from the basement filters to take home to cook.” Just think about that the next time Kofi Annan invites you to dinner.

THE CENTER CELEBRATED TRAFFIC last March, in an exhibit called Loop Feedback Loop: The Big Picture of Traffic Control in Los Angeles, as part of an ongoing exploration of Los Angeles’ infrastructure. The exhibit included a public presentation one evening by a representative from the City of Los Angeles’ Automated Traffic Surveillance and Control Center (ATSAC), the agency that controls most of the City’s traffic flow, helping to keep the six million registered cars in the county from becoming just a big pile in Diamond Bar. Steve Rostam, the ATSAC engineer in charge of instrumentation and maintenance for the west side of Los Angeles, spoke to a capacity CLUI audience, and wowed the crowd with his intimate, detailed knowledge of how it all works, from the minutest detail such as the frequency of the inductive loops, to how the city’s underground traffic management center is used to control the flow on Oscar Night, when the lines of limos have to arrive with carefully orchestrated precision - (or else!).

The exhibit, produced by the CLUI’s Transportation Systems Program, in association with the Institute for Advanced Architecture, was on view from March 5 to April 4, 2004, at the Center’s exhibit space on the west side of Los Angeles. It featured displays about the hardware and software of the city’s traffic management systems, from the inductive loops embedded in the road surface, to the centralized traffic control rooms.

To keep things moving, the highway and surface street network of Los Angeles has become the most instrumented and managed of any American city. Sensors embedded in the ground and on poles measure rates and volumes, and deliver their data to control centers where it is assembled into a dynamic image of the collective traffic picture. Increasingly automated, signals also flow out from these control rooms, adjusting timings of lights at intersections and freeway metering ramps, dispatching incident response teams, and updating traffic reports, including live maps on the web. These in turn effect the flow, feeding back into the system and changing its form, as indicated by the sensors that send their signals to the control rooms: the loops feeding back to the loops.

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TRAFFIC continued

Inductive loops, one of the basic components of traffic control systems, can get very messy. CLUI photo by Fiona Whitton

Inductive loops are the electronic bedrock of the traffic management system, with more than fifty thousand of them in the metropolitan area. Loops are generally composed of an insulated wire, set into a shallow trough cut into the pavement to form a square or circular “loop” approximately six feet wide. Each loop is usually visibly linked to a connection point at the curb, and then wired to the traffic control system. The magnetic field generated by low voltage running through the loop is altered by large metal objects passing over it, and this disturbance is detected by the loop and registered by the electronics connected to it on the curb. Each vehicle passing over a loop is a click in the system. Complex intersections can have dozens of loops, and major streets and highways are dotted with them. A series of loops can measure the speed at which cars travel, as well as how many are on the road. Intersections can count the cars that line up before automatically triggering the signal.

Many traffic signals can be changed by approaching emergency vehicles. The city of Los Angeles favors a technology that uses secure radio signals, as the emergency vehicle light-detecting sensors that are commonly used (pictured above), can be activated with an inexpensive and illegal device. CLUI photo by Steve Rowell

The basic timing cycle for traffic lights, called the background cycle, is generally determined by the width of the road multiplied by a pedestrian walking time of 3.2 feet per second. If no pedestrians are present, the cycle may be accelerated or reduced. Before the integration of signalized intersections to a central control point, all intersections functioned autonomously, with loop counting circuitry and timers located in a pole box at the base of a traffic signal pole, or in a metal cabinet on the sidewalk. Though most intersections still possess the ability to operate in this manner, they are increasingly becoming connected by phone lines and dedicated copper wire to the computers at traffic management centers. In the City of Los Angeles, 3,000 of the 4,200 signalized intersections in the city are connected to the Automated Traffic Surveillance and Control Center.

Video cameras are increasingly being deployed by traffic managers and are an important element in the feedback loop. Caltrans (the California Department of Transportation) has 350 cameras, of a planned 500, installed at the moment along the freeway system in Los Angeles. The City’s own Department of Transportation started installing them at high points all over the city, including the roof of City Hall and Patriotic Hall, and now has over 250, out of a planned 500, all of which are connected to the traffic control center. Though expensive, at almost $100,000 per installation, cameras provide a real-time image of the roadway, often providing visual evidence of the source of slowing at trouble spots of the area. New software enables cameras to be read by computers, counting cars and calculating flow. In this way, cameras are doing the job of loops, especially on bridges and overpasses where loops are more difficult to install.

Each municipality in the Los Angeles area has a system for controlling its traffic intersections, or allows another regional authority to do so for them. As the circuitry in the control boxes at intersections gets connected to hubs on a network, these systems become controllable from a central point, and can add their data to the big picture of the regional traffic system. Small local city control centers can be as simple as a networked computer workstation. However the larger systems have a Traffic Management Center (TMC), characterized by rows of workstations facing a video wall. There are around a dozen TMCs in the region, operated by cities like Beverly Hills and Pasadena, transportation agencies such as the MTA and LAX, and regional authorities such as Orange County. In Los Angeles, two major TMCs monitor and control the traffic: the City’s ATSAC for streets, and Caltrans’ TMC for highways.

ATSAC Control Room. CLUI photo by Steve Rowell

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TRAFFIC continued

Four levels under City Hall, next to the Emergency Operations Center for the city government, the City Department of Transportation’s Automated Traffic Surveillance and Control Center, ATSAC, was created to manage traffic around the Coliseum during the 1984 Olympics. It has evolved into the centralized control point for the city’s traffic management systems, run by 20 or so engineers, which develop new and innovative software that they apply to their task.

A few blocks from ATSAC, at the California Department of Transportation building at 120 South Spring Street, Caltrans District 7, which manages the highways in Los Angeles and Ventura counties, has their Traffic Management Center. About 20 people work inside it, including dispatchers for freeway service patrols, signal management personnel, highway maintenance, and a few uniformed California Highway Patrol officers, serving primarily as liaisons to the media. Within a year or two this TMC, and the rest of the Art Deco building that houses the District 7 headquarters, will be torn down, as the new Caltrans headquarters a block away is nearing completion. A new 88,000 square foot TMC will be collocated with the CHP’s Los Angeles Communications Center, at another new facility, called the Los Angeles Regional Transportation Management Center, which will be mounted on earthquake shock-absorbing springs, and is under construction in Glendale. The current CHP Los Angeles Communications Center, where among other things all 911 calls made from cell phones in the region are received, is in a highly secure building on Rosewood Boulevard, near Vermont and the 101 Freeway.

The county of Los Angeles is building a traffic management center at the County Department of Public Works headquarters in Alhambra. The 9,000 square foot TMC will be located in an existing annex building on the property, and should open by 2005. It will contain fifteen consoles as well as the requisite video wall, with sixteen 50 inch monitors. The County is responsible for around 2,000 of the 10,000 intersections in Los Angeles County, including around 800 that are in unincorporated county areas. They are currently preparing to connect 750 of these intersections to the new TMC.

Predictable, cyclical events like rush hours, and even traffic surges brought on by large sporting events, can be controlled automatically, however unpredictable, “non-recurrent” events are the main cause of interruptions to normal traffic flow. Incidents and incident response is therefore one of the most important elements of traffic management. This is why the state police (CHP) are involved so heavily in traffic control, with monitors and dispatchers at the Caltrans TMC and at the CHP Communications Center (there are no police at ATSAC). With over ten million people moving on 650 miles of freeway and 6,400 miles of surface streets in the region, incidents include nearly everything imaginable.

Simplified and brief radio traffic reports have long been the primary way in which the picture of traffic flow is distributed to the public, with only a small percentage of drivers responding in a way that helps to alleviate the stress on the system. As the physical landscape of traffic nears complete instrumentation and digitization, the picture of traffic flow can be easily distributed, and the methods for visualizing the picture can be altered by and for specific end users. Real-time, detailed and complete information on traffic, as it relates to the individual driver’s needs, will soon be available on the web, cell phones, and, eventually, onboard navigation systems, completing the informational feedback loop. The big picture will be integrated with the digits that compose it.
A CLUI VIDEO TEAM was dispatched recently to interview the workers at an obscured construction site in the Baldwin Hills, near the Center's main office in Culver City, California. The site, it turned out, was an access shaft above a connection point in the City of Los Angeles' new main sewer line, a massive and complex construction project that has been going on underneath the city for over ten years.

Though sometimes obscured by opaque sound absorbing material attached to 20 foot tall fencing (such as at the corner of La Brea and Jefferson Boulevards), vertical shafts like this one are visible at several sites around the city. They allow workers, materials, and equipment - including large tunnel boring machines - to descend the 50-100 feet into the ground to the level of the new sewer tunnel.

The tunnel is being built in three stages, and together each section will comprise a 30 mile long sewer pipe that runs from Glendale to the Hyperion Treatment plant, on the coast next to Los Angeles Airport (where the waste is treated in one of the nation’s largest treatment facilities, then is pumped out to sea and dissipated through a series of shower head like diffusers). Once complete, this new main sewer line for the city, averaging 10-12 feet in diameter, will replace the old system of smaller pipes, some of which are brick lined tunnels made in the 1920s. The old system is so overwhelmed that in some areas, during storms, the city has parked trucks on the manhole covers, to keep raw sewage from spilling onto the streets.

The first section of the new pipe to be built was a 12 mile long, 14 foot wide shaft called the North Outfall Replacement Sewer (NORS) pipe. Completed in 1993, this section of the pipe, between the Hyperion Plant and the Baldwin Hills, is already in use. The next phase, nearly complete, runs for 12 miles from the Baldwin Hills to the Los Angeles River, near downtown. This is a 12 foot diameter, steel lined pipe called the East Central Interceptor Sewer (ECIS). Over the past two years, ECIS was bored through the saturated soils, gassy oilfields, and superfund plumes along a course averaging 80 feet below the surface of the city. Phase three is a tunnel currently under construction, that runs alongside the Los Angeles River, from downtown to Glendale. Together the three phases of the project will have cost over a half a billion dollars.

The hole in the hills of Culver City is the connection point for the already built and partially in use NORS tunnel (the first phase of the project), and the nearly completed ECIS tunnel (the second phase). At the bottom of the 70-foot deep rectangular shaft, with walls held in place by I-beams, sheet piling, and shotcrete, the two pipes are being joined with a valve installed between them. Like the other access portals, this one will be filled in once the pipe is complete, and the surface grade will be restored. Little will remain visible on the surface to indicate the buried highway of liquid waste flowing under the city.

At the Culver City portal, workers for the primary contractor on the ECIS project, a consortium called Kenny-Shea-Traylor-Frontier Joint Venture, met the CLUI video team, and led them into a metal cage that was picked up by a crane, and lowered into the pit. Once inside, the interview was conducted some distance down the gleaming ECIS pipe, to avoid the noise of jackhammers.

The video and photographs obtained on this and subsequent visits were presented at the CLUI’s exhibit hall in February as an exhibit called East Central Interceptor Sewer: A View Into The Pipe, sponsored by the Center for Land Use Interpretation Underground Program, in association with the Waste Programs division. The video was first of a proposed series of video programs called “What Is This Place?”

The 12 foot diameter tunnel, looking east - upstream, in the future. CLUI photo

Descending into the pit in the cage. CLUI photo

The access portal, behind a soundwall. CLUI photo

Waste Programs division. The video was the first of a proposed series of

A View Into The Pipe, sponsored by the Center for Land Use Interpretation Underground Program, in association with the Waste Programs division. The video was the first of a proposed series of video programs called “What Is This Place?”

The 12 foot diameter tunnel, looking east - upstream, in the future. CLUI photo

Descending into the pit in the cage. CLUI photo

The access portal, behind a soundwall. CLUI photo

Waste Programs division. The video was the first of a proposed series of video programs called “What Is This Place?”
A VISIT TO THE HOUSTON Ship Channel is a compelling activity, highly recommended for anyone interested in current events. Here, in this petrochemical Mecca, the largest petrochemical complex in the United States, the full extent of our saturation in the oil economy can be seen, felt, smelled, and fathomed. From Houston, a tour can easily be done in a day, and there are numerous interpretive areas, monuments, markers and museums that help visitors understand this most complex complex.

The ship channel is an expanded version of an old muddy creek called the Buffalo Bayou, which connects downtown Houston to Galveston Bay and the Gulf. It was enlarged for shipping in stages over the past two centuries, initially to bring Southern cotton to the coast. It wasn’t until the US Congress officially declared Houston, fifty miles inland, a Port City, in 1870, that the dredging and widening projects really took off. With the work of the Army Corps of Engineers and the resources of the investor Charles Morgan, a shipping magnate eager to avoid Galveston’s dockage fees, the first ocean going vessel made it up the channel in 1876 (an event that no doubt rivaled the local celebration of the nation’s centennial in importance that year).

Today, the Port of Houston, which manages many of the ship channel’s terminal facilities, and includes the petrochemical plants of the area in its figures, is the one of the busiest ports in the country, handling more foreign tonnage than any other port in the U.S., primarily in the form of bulk materials, and most of it petrochemical. Approximately one quarter of the refining capacity of the United States is located along the ship channel, at over 20 petrochemical plants in the channel area. They are linked by pipelines, selling streams of liquid product to one another, and bringing in crude from hundreds of platforms in the Gulf, as well as heavier, cheaper crude from Mexico.

Some of this superlative industrial land and seascape can be viewed on the Port of Houston’s free public boat tour aboard the M/V Sam Houston. The 90 minute tour leaves from the port’s Sam Houston Pavilion, and accommodates up to 100 people. It is often crowded with school kids. The tour covers the turning basin area, the most inland portion of the navigable ship channel, and passes the 610 highway bridge. A few petrochemical plants are visible along the way, but the most impressive sights may be a large U.S. Gypsum shed full of Mexican gypsum, the old Deepwater Power Plant, and the massive Public Grain Elevator #2.

The boat turns around soon after passing the first major refinery on the ship channel, the Lyondell-Citgo refinery, a medium sized plant that processes crude from Venezuela. Though based in Tulsa Oklahoma, Citgo is owned by the government of Venezuela, through its national oil company Petroleos de Venezuela (PDVSA). The Houston refinery is one of two that are mostly owned by the company in Texas (the other is at Corpus Christie) and one of four mostly owned by the company in the USA (the other two are in Lake Charles, Louisiana and Lemont Illinois). With a capacity of around 270,000 barrels per day, it is the fourth largest in the Ship Channel area, and the 11th largest refinery in the nation.

To get into the heart of ship channels’ petrochemical countryside, land is the preferred route, and there are several spectacular viewing opportunities and interpretive facilities provided by the state historical and transportation agencies.

From the 610 loop, south of the channel, head east on La Port Freeway (Highway 225) through the town of Pasadena, where you can see the Crown Central Petroleum Corporation’s refinery (one of two in the country owned by this small, independent oil company) off Shaver Street, and numerous industrial parks and pipeline facilities, until you reach the monumental Shell Deer Park facility. Shell Deer Park is a 1,500-acre complex located in Deer Park, comprised of an oil refinery and a chemical plant. The refinery employs around 1,000 people, and is the sixth largest in the nation, with a capacity of 340,000 barrels per day. The refinery is half owned by Pemex, the Mexican state oil company, and approximately 70% of the crude processed at the refinery

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PETROCHEMICAL WONDERLAND continued

is Maya and Olmeca crude oil imported from Mexico. The balance is
domestic crude oil, mostly from Texas and Louisiana. The chemical
plant employs 800, and is a major national supplier of base chemicals
for plastics, paints, and other products. North off the 225 on Route
134, visitors will pass the Rhom and Haas Deer Park Chemical Plant
which makes acrylic adhesives, plastics, and paint. This is the way to
the finest viewing site in the Ship Channel area: the Battle of San
Jacinto Monument.

This state historic monument is an Art Deco obelisk that is the tall-
est free-standing column in the world. It is located on the battle-
grounds, which happen to be, now, on the edge of the Ship Channel.
Built in 1939, it is 570 feet tall (15 feet higher than the Washington
Monument, due to a large Texas star at its top). It has an elevator
that takes visitors to an observation deck near the tip, from which a
dramatic 360 degree view can be had, albeit through fairly small win-
dows, of the low flat land of eastern Texas.

Visible to the east of the Monument, further down the Ship Channel,
is the largest oil refinery in the country, ExxonMobil's Baytown com-
plex. Of the 150 or so oil refineries in the USA, the average processing
capacity is less than 150,000 barrels of crude oil per day. The Baytown
refinery's capacity is 525,000 barrels per day. In addition, the plant has
two research centers and two chemical production facilities making plas-
tics such as polypropylene and synthetic rubber, and specialty fluids for
paint and household cleaners. It employs nearly 6,000 people.

After Baytown, the ship channel passes the DuPont's La Porte plant,
which since the mid-1950's has been making weed killers, formalde-
hyde, and other biochemicals, and is the world's largest polyvinyl alco-
hol plant, a substance that is used in the clothing industry for weaving
cotton blends into synthetic fabrics like Lycra and Spandex, and for acetates
that are used in things like car windshields. The plant employs
around 1,000 people.

Highway 225 ends at DuPont, at the intersection of Highway 146,
where a great view can be had off the Fred Hartman Bridge, whose eight
lanes of roadway soar over the Ship Channel. The bridge is the larg-
est cable-stayed span in the country (though the Dame Point bridge in
Jacksonville, Florida is 50 feet longer, it is not as wide as this one). It
opened in 1995, replacing the narrow Baytown Tunnel, which had been
constructed fifty years ago, and had become an obstruction for the effort to
deepen the ship channel to accommodate larger ships. After the bridge
opened, the middle section of the tubular tunnel was removed by flo-
tation, and barged to the Gulf, where it was sunk, joining numerous
sunken oil rigs as an "artificial reef." The two end sections of the tunnel,
closer to the shore, were flooded and left in place.

At this point, the Ship Channel now flows in a dredged channel of the
San Jacinto River, Buffalo Bayou having drained into San Jacinto Bay
near the monument. The river winds through a series of small islands
and bays, rounds Morgan's Point, with the Port of Houston's large con-
tainer facility at Barbours Cut, then it spills into Galveston Bay. The oil
industry picks up again dramatically at Texas City, and Highway 146
takes you there.

Texas City has three refineries: Valero's, which is of mid to large size at
215,000 barrels per day capacity; Marathon Ashland Petroleum LLC,
a joint venture between Marathon Oil Corp., and Ashland Inc., which
operates a smallish refinery with a 76,000 barrels per day capacity; and
British Petroleum (BP) which has its largest refinery here, with a capacity
of over 450,000 barrels per day, making it the third largest in the nation.

Across from the Valero and Marathon refineries at the entrance to the
port of Texas City is one of two monuments that discuss the thing Texas
City is most famous for: blowing up. In 1947, a French ship filled with
ammonium nitrate (which had been converted from explosives to fertil-
izer at chemical plants in the area for shipment to Europe), caught fire in
the harbor and soon exploded. The shockwaves from the explosion dam-
eged the industrial plants and refineries in the region, many of which,
since they deal with extremely volatile material, also caught fire and
had their own cascading series of explosions, lasting for days. 15 foot high
water waves generated by the explosion washed through town, and later
that night, another ammonium nitrate ship in the harbor, that had been
on fire all day, exploded, sending the worst of the shockwaves across the
ruined city. It took a week to put out all the fires. One third of the homes
in the town of 16,000 were condemned. A total of nearly 600 people
were killed.

The main memorial for the disaster is located at the cemetery, just east of
Highway 146, on the north side of Loop 197. Continue down loop 197

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through town to the refineries and the port on the south side of town, then back on to Highway 146, and to Interstate 45, the Gulf Freeway, which leads to the last interpretive site on this remarkable chain of petrochemical production, the Ocean Star Museum.

The Galveston Channel usually has a few oil rigs tied up along its shores. This one was used as a film location, for the the meteor-blown-up-with-a-nuclear-bomb movie Armageddon. CLUI photo

The refineries of the Ship Channel are referred to by the oil industry as the “downstream” end of the industry, where the raw material is processed into saleable products. As we flow downstream on the Ship Channel, we get to the “upstream” end of the industry, at Galveston and the adjacent Gulf of Mexico, where the crude oil is extracted from the earth. The Galveston Channel, the sheltered inland side of the Island, is littered with oil rigs, towed in from the gulf for repair or scrap. Some are used for parts, some are reconstructions, and some seem to remain for use as movie locations. One has been turned into the Ocean Star Offshore Drilling Rig and Museum, a most remarkable and unique museum about this startlingly complex and dramatic part of the petrochemical industry.

One of the dozens of impressive displays, models, and artifacts at the Ocean Star Offshore Oil Museum. CLUI photo

After a visit to the Ocean Star, visitors to the petrochemical corridor around the Houston Ship Channel will have completed their immersion in the land of oil. The return trip to Houston via Interstate 45 takes only an hour. Back in Houston, a tour of oil, oil services, and energy company headquarters shows another aspect of the industry. But that will have to wait for another day. ♦

IN CERTAIN PARTS OF THE COUNTRY, strains of the American identity align themselves into a partially coincidental confluence that creates a cohesive and evocative portrait of the whole. These regions become a gallery of material landscape artifacts that express more than the sum of their parts. Such is the case in western South Dakota, where topography, geology, and history have provided a platform for an intensified manifestation of prevailing characteristics of our culture. This is a place where America visits itself, in virtual isolation, on a grand scale. This is a place created to attract, and to draw attention to the great issues of the American past and present.

Some of the regional attractions include the annual motorcycle meet at Sturgis, which started in the 1930s as a local racing event and has evolved into the largest gathering of motorcyclists on the planet, where literally hundreds of thousands of bikers descend on one small South Dakota town. The truly strange-looking volcanic plug called Devil’s Tower, just over the line in Wyoming, attracts thousands of native Americans (to whom it is a sacred place), foreign tourists, and extraterrestrial watchers. The KOA campground at its base screens Close Encounters of the Third Kind every night. In the other direction, on Interstate 90 near the Badlands, is Wall Drug, one of the ultimate American roadside attractions, established by the aggressive advertising of itself, primarily with the placement of hundreds of billboards on the Interstate, and ads that have spread from London buses to the Taj Majal and the South Pole (thousands of its billboards were removed from the highways following the Highway Beautification Act of 1965, established by Lady Bird Johnson. The owner of Wall Drug, Bill Hustead, responded by becoming the Chairman of the South Dakota Transportation Commission). And though it is not visited too much anymore, the geographic center of the USA (if you include all 50 states) is located 17 miles north of Belle Fourche, and was ceremoniously marked with a lighted flagpole when Alaska and Hawaii joined the union in 1959.

A Park Service Ranger shows Sarah Simons of the CLUI the ICBM inside a glass canopy-covered silo. CLUI photo

Another national attraction developing in the region once attracted attention of a different sort. The Park Service is slowly transforming an ICBM missile silo and launch control center into a visitable park, the only contemporary (Minuteman) missile silo that is open to the public. Once the target of their Russian counterparts, all the South Dakota mis-
WESTERN SOUTH DAKOTA continued

Missile silos have been decommissioned (though hundreds remain on alert in North Dakota, presumably pointing at the Russians, who, presumably, still have some of theirs pointed at North Dakota). Nearby, another target, Ellsworth Air Force Base, houses the nation's fleet of B1 bombers, and has a museum and base tours.

But it is in western South Dakota's Black Hills where one of the most famous of all American attraction-for-attraction's-sake lies, second perhaps only to the Washington Monument: Mount Rushmore. The massive carving of the four presidential heads out of solid rock was declared complete on Halloween, 1941, as America's involvement in the war deepened. After the war and into the 1950s and '60s, as newly prosperous and mobile Americans took to the nation's highways for recreation, visiting Mount Rushmore became a right of passage and a patriotic duty. As a result, attractions attracted to this attraction sprang up all over the Black Hills, which today are full of western-themed fun towns, gift shops, and natural feature enhancements. Exaggerated, constructed, and distorted history and geography is enjoyed at the classic American tourist sites that include petrified forests, historic railroad rides, Flintstone Bedrock City, dinosaur park, miniature golf, reptile gardens, aerial tramways, eight tourist caves, water parks, wax museums, scenic loops, mine tours, and the requisite gravitational anomaly attraction the Cosmos Mystery Area. In Rapid City, there is a Berlin wall memorial with a recreation of the wall, as the real thing was too full of asbestos to be used. A passion play is performed daily in Spearfish, where 150 volunteer actors play out the last days of Jesus on the “largest outdoor stage in the nation.”

And then there is Crazy Horse, the world’s largest mountain carving, under construction since 1948, and likely to continue to be under construction by 2048. The sculptor Korczak Ziolkowski was invited to make the Crazy Horse sculpture by the Lakota Indians, as a counterpoint to Mount Rushmore. Ziolkowski visited the area in 1939, working for a summer with Borghlum on Rushmore. He moved to the Crazy Horse site after serving in the war, and made it his life’s work. He died at 74 in 1982, and his wife and children have been carrying on the work. Crazy Horse’s face, the only really recognizable part so far, was completed in 1998. It is 87 feet tall. Currently, work is focused on the horse’s head which will be 22 stories tall. When completed the Crazy Horse mountain carving will be 641 feet long by 563 feet high.

An extensive tourist complex has been built near the work site, including an Indian Museum of North America, a Native American Cultural Center, and a new 40,000 square foot Orientation Center, with a theater, gift shop and restaurant. The project, a nonprofit corporation, has refused all federal financial support, and is supported by donations and the $20 per carload charged to the million people who visit the site each year. ♦

In Deadwood, the classic western town where Wild Bill was shot and buried, versions of western history are played out in gunfights and reenactments. The town has been fixing itself up as a tourist attraction since the 1980's, shuttering the last legal brothel in 1980, and legalizing gambling in 1989. Its identity is increasingly effected by the legends it promotes, through films like Dances With Wolves, shot in the area (now Kevin Costner owns a casino and restaurant downtown, and Tatanka, a “story of the bison” attraction he built nearby), and recently with the HBO television series Deadwood, which has tripled visitation to the town, according to several reports.

A welcome counterpart to the loud and crowded Mount Rushmore (above), is the quiet and contemplative President's Park (below), a new Black Hills attraction, where visitors can stroll through a grove of twenty-foot tall busts of all the presidents, in chronological order.

One of the many faces of Deadwood, South Dakota. This reconstruction for tourists, with its freshly milled unpainted wood, is probably closer to the way Deadwood looked at its peak in 1876, than either the rest of downtown, or the Melody Ranch, the western movie set in Southern California where HBO's Deadwood is shot.
DIVERSIONS AND DISLOCATIONS
AN ACCOUNT OF THE CLUI BUS TOUR OF THE OWENS VALLEY

In late April, 2004, the Center organized a public tour to examine the fabled “back-space” of California, the remote, isolated, and notorious Owens Valley. The tour was part of a month-long exploration of the Valley, which featured an exhibit and the publication of a tour book. Because the valley is narrow and has only one road running its length, and because it takes a few hours just to get there from Los Angeles, the tour was divided into two parts, split evenly by time, space, and theme. Day one, going from south to north, Los Angeles to Bishop, looked at the valley as a displaced place. In other words, as a place where its materials and resources are removed and relocated elsewhere, such as water to Los Angeles, mineral resources mined and shipped away, and fish extracted by fishermen/tourists. The second day, heading south from Bishop, we looked at the Owens Valley as a place in itself, a place of the displaced.

DAY ONE 9:05 am - Culver City
The gleaming white luxury tour bus, provided by California Excursions and piloted by driver Larry Hansen, leaves from the Center’s main office in Culver City, after tour participants have a moment to browse the Owens Valley exhibit. After a brief welcoming and introductory address by the tour guide for the duration, CLUI program manager Matthew Coolidge, the tour begins, long before reaching the Owens Valley itself. The extensions of the valley are clear even in the city. Just up Interstate 405, the bus passes the Budweiser brewery that supplies most of Los Angeles with product from the “King of Beers.” Anheuser-Busch, the world’s largest brewer, has 12 such breweries in the United States, each of which is a major consumer of water. In L.A., the water that is converted into the millions of bottles of beer comes, of course, from the Owens Valley.

A few minutes up the highway, after the 405 joins the 5, the bus passes the Van Norman Complex, where the city of L.A. filters and stores water from Owens Valley, where electricity from the power plants along the aqueduct enters the city’s grid, and where the Department of Water and Power bases their fleet of helicopters that daily scan the length of the aqueduct for potential problems. On the other side of the highway are the Cascades, where the first and second Owens Valley aqueducts emerge from the hills, and spill into the city. It was here, in 1913, that William Mulholland turned the valve that brought the water to the city, saying “Here it is. Take it.”

At this point, a half hour into the tour, the bus transitions onto the 14 freeway, leaving the city, and the first element of the video program for the tour begins. A selection from the PBS series “Cadillac Desert” is shown which tells the Los Angeles aqueduct story. The author of the book on which the series is based, Mark Reisner, describes the turning of the valve at the Cascades, and we see interviews with William Mulholland’s daughter, and ample appropriate moments from the film “Chinatown,” discussed by screenwriter Robert Towne.

A brief stop at the Lamont Odette Vista Point offers a remarkable view of the Antelope Valley, including Palmdale Lake, the city’s water supply, built in a depression in the San Andreas Fault. Beyond, Plant 42 and even Edwards Air Force Base are visible, as the bus continues to the desert town of Mojave. At the north end of town is the DWP Aqueduct Division’s Southern District headquarters, where approximately 65 employees operate and maintain the 160 miles of the aqueduct system between Los Angeles and the Hahwee Reservoir, at the south end of the Owens Valley. The maintenance station is built on the site of one of the original aqueduct construction camps, established in 1907.

11:15 am - Jawbone Canyon
North of Mojave, after over two hours on the bus, passengers disembark at Jawbone Canyon, where the massive pipes of the two parallel Owens Valley aqueducts, the 1913 and the 1970 system, dramatically dip down and up the sides of the canyon. This is a moment to physically interact with the pipe, to touch it, to listen to the water inside, walk on it. This is the point on the aqueduct where the water pressure is at its greatest, and where, in 1988, the pipeline burst after a prolonged freeze. Jawbone has been dynamited a few times by protesters of the aqueduct.

Back on Highway 14, heading north, the highway is soon absorbed by Highway 395, the main road through the Owens Valley, merging from the east. The hills too begin to converge here, indicating that the land is coming together to form the valley. At Pearsonville - the “Hubcap Capitol of the World” - and home of the “No Name Trailer Park” the highway crosses into Inyo County. This is an area that is larger than Vermont, and home to the lower 48’s highest and lowest points (Mt Whitney, over 14,000 feet tall is less than 70 miles from Badwater, which is 200 feet below sea level), and the “world’s oldest living thing” (the Methuselah Tree, a 7,000 year old bristlecone pine in the White Mountains). 92% of Inyo County is federal land. The Owens Valley is the only developed area in the county, and is a narrow strip, just a few miles wide, with nearly inaccessible mountains as high as 14,000 feet on either side. Most of the 19,000 people here live in the four towns along the main road through the valley, Highway 395. Of the 6% of the land that isn’t owned by a state or federal entity, only 1.7% is in private hands. Of the rest, 4% is owned by the Los Angeles Department of Water and Power.

North of Pearsonville, the bus, running next to the Aqueduct, passes under high voltage transmission lines, another linear element exporting resources from the valley to Los Angeles - the “P” of LADWP. There are two primary sets of lines running the length of the valley, the Owens Gorge Transmission Line and the Pacific Intertie. The 230,000 volt Owens Gorge Transmission line delivers electricity generated at three hydroelectric plants in the Owens River Gorge to Los Angeles. The Pacific Intertie, a DC line, distinct as having two main cables instead of three of its anthropomorphic towers, carries a million volts for 846 miles, the world’s longest distance and highest voltage transmission line, bringing power from the hydroelectric plants of the Columbia River area in Washington state to Southern California. It uses the Owens Valley as a highway, one without any exits.

Besides being one of the deepest valleys in the world, Owens Valley is full of active vulcanism, and as we approach the valley, the bus seems to be heading directly towards a volcanic cindercone. This is Red Hill, which has been mined since the 1950s. Its lava rock is valued for its porous, lightweight characteristics, and is generally used as an aggregate for making cinder blocks. One of the largest uses of the material from this hill is for blocks used to construct sound barrier walls along the freeways of Los Angeles. Another displacement of the Owens Valley. A few miles up the valley, the bus passes the road to Coso, a geothermally active area, with a geothermal electric power plant and an abandoned hot springs resort from the 1920’s. The hot springs are located entirely within China Lake Naval Weapons Center, a million acre Navy landscape where, among other things, the Sidewinder missile was developed. At the rest stop at Coso Junction is information about the Native Americans first displaced from the valley in the 1860’s, and again when the City of Los Angeles bought much of their land. The Indians now live on small reservations in the valley.

12:30 pm - Hahwee Reservoir
The bus heads down a dirt road to the Hahwee Reservoir, one of three reservoirs built by the DWP to manage the Owens River water. The water emerges at the base of the Hahwee’s south dam, contained inside two tubes for its journey south. As a spokesman for the DWP has said, this is where the double barrels are loaded. The passengers disembark at the edge of the reservoir, and are asked to consider the function it serves. At the seven mile long, double reservoir at Hahwee, Owens Valley water slows and pauses for the last time. Sediment drops out, and it is exposed to sunlight and air, a natural purification process, before entering the pipes, tunnels and conduits which convoy it to the City. The reservoirs also serve a regulatory function since they can retain inflow during shutdowns of the aqueducts downstream, or sustain flows into these aqueducts if the canal north of Hahwee is out of service.

The Hahwee Reservoir is actually two reservoirs - the North Hahwee and the South Hahwee - that are separated by an earthen dam called the Merritt Cut. At the Cut, a bypass channel can divert the water around the south reservoir through a channel. At the north end of the South Hahwee Reservoir is a dam and a hydroelectric power plant. That can use the drop in elevation to generate electricity, one of five similar plants...
built by the DWP in the valley. At the north end of the North Haiwee Reservoir is another dam, next to the channel where the aqueduct water enters the reservoir. Swimming is not allowed in the Haiwee, though fishing with rubberized waders is permitted.

Back on the highway heading north, Owens Lake comes into view, and we approach the settlements of Olancha and Cartago. We pass the Cabin Bar Ranch, which looks abandoned. It was bought by Anheuser-Busch in 1986 for the water rights, during a drought. Apparently, by not pumping water from the wells it owns in the valley, the company has been able to negotiate with the DWP for a water credit that allows it to use more of the Aqueduct water downstream, at the big beer plant we passed in Van Nuys. Some local residents talk bitterly about other stealthy corporate land purchases like this, for companies that bottle water from municipal sources in Los Angeles. One company that still bottles water at its spring source, for the most part, is Crystal Geyser, the most popular bottled brand in Southern California. In Olancha, the bus passes the sprawling blue plant on the east side of the highway, which sits on top of the captured spring, near the shore of the dried up Owens Lake. Truckloads of Crystal Geyser water drive south on the 395, carrying water from this plant, parcelling up the Aqueduct.

Chow line set up on a slab of the ruins at Cartago. CLUI photo by Steve Rowell

1:10 pm - Cartago

Cartago, 130 years ago, was a port on the west side of Owens Lake, where steamships, such as the “Bessie Brady” and the “Molly Stevens” docked, unloading silver from the Cerro Gordo mines, in the mountains across the lake, to be transferred to the roads and rails leading to Los Angeles. When the 100 square mile lake dried up after the aqueduct was built, soda ash plants processed brine at Cartago. The American Potash company plant, which once had a 600 foot tall stack, is now enigmatic walls, blocks, and stepped slabs of concrete, next to a gleaming mountain of unused soda. The bus lumbers through these ruins and stops for a picnic lunch. Sandwiches, prepared by the Ranch House restaurant in Olancha, are laid out in a chow line on the edge of an empty slab.

After we have lunch, the bus heads out onto the lakebed itself. This side of the lake surface is dominated by its history as an extractive resource. DWP diversion of the sources of water that fed the lake, starting in 1910 or so, accompanied by a severe drought in the early 1920s, caused Owens Lake to desiccate completely by 1928. By this time, companies had already established mining processes on the lake bed, using the dry air to evaporate water and concentrate material in evaporation ponds. With the entire lake bed exposed, the job of mining it just became easier.

 Sodium carbonate mined from the lake has been used in the production of fiberglass, in powdered detergents, in medicine, as a food additive, in photographic chemicals, for pH control of water, and in a host of chemical industry applications from scrubbing sulfur from smokestack emissions to explosives. The primary use of the material has been to make glass, and a large abandoned Pittsburgh Plate Glass Company plant, between the highway and the lake, is the most scenic ruin in the valley. The active mining areas of the lake are now operated by the US Borax Company, which leases over 16,000 acres on the west side of the lake, and has an extensive network of ponds, dikes, roads, and storage pans. The owner of the 100 or so square miles of the lake surface is the State of California, which owns all navigable waterways within the state. Owens Lake of course was one, in 1913, when the lake area was surveyed before its disappearance.

2:00 pm - US Borax Owens Lake Operations

At the gate of the US Borax property, we are met by Paul Lamos, who boards the bus to guide us through the startling landforms of the mining operation, where pools of bright red water enclosed by crystalline crusts and accreted salt cones create a landscape of severe desiccation. Back on 395 North, the bus passes the Cottonwood Hydroelectric Power Station, the oldest DWP power station in service today. The first of two turbine generators there went “on line” November 13, 1908, to power the electric dredges building the aqueduct, and is still producing energy for the DWP’s Owens Valley electric system. As at other remote hydroelectric plants and pumping stations, the DWP has a small village of a few houses for the maintenance crew of the plant and their families. At Cottonwood, the old wooden houses and the tree lined street is illuminated at night by the same old lamp posts that have long since been removed from most neighborhoods in Los Angeles.

Three miles further up the road the ruins of the Pittsburgh Plate Glass plant appear, with its low slung modernist lab and administration building near the road, and its Sheeler-esque metal sheds and silo complex behind. The number of disabled RVs at the plant has increased dramatically in recent years, hinting at a change in tenants, and the emergence of a new chapter in the intriguing and unformed history of this place. For most of the time since its closure in 1968, it was owned by a Dr. McCabe, who invented some sort of heart valve, and who had some connection to a community of Hollywood actors, who seemed to use the buildings as a place for interesting parties. Since his passing, the buildings, which by now have been disconnected from any utilities, have changed hands a few times, but have continued to be a residence for some remnants of this social circle.

Upstairs in the old lab building is an unpacked museum of the accomplishments of Dr. McCabe. As we pass the plant, we leave its mysteries intact, and now Owens Lake is behind us. We look forward to the rest of the sites of displacement in the valley ahead.

One of the most famous sites of the ongoing battle between Owens Valley residents and the Department of Water and Power is the Alabama Gates. A set of valves on the aqueduct with the ability to divert the flow of the aqueduct into a spillway that leads to the old Owens River channel. Located next to the highway, they still look as they did in 1924 when a few dozen locals took control of the site, and opened the gates. The local occupation of the site was well publicized, and as the crowds swelled, it became a festive period lasting for days. The film star Tom Mix sent a band to entertain the crowd. Eventually, of course, order was restored, and the gates were closed. With the construction of Crowley Lake, above the north end of the valley, which can hold large amounts of water, the function of the gates, to remove water from the aqueduct in times of over abundance, has ended. But someone still lives on the premises for security and maintenance.

3:15 pm - Mount Whitney Fish Hatchery

Continuing up the road of displacement, we arrive at the next subject of the tour, and a major resource extracted from the Owens Valley - fish. While no figures exist for the Owens Valley itself, state-wide the sport fishing industry is a three billion dollar per year activity. Our tour was held on the opening of the trout fishing season, and people could be seen wading in streams and floating on reservoirs throughout the valley. The bus pulls up to the Mount Whitney Fish Hatchery, a stone institutional building with a three story tower, built in 1917, the grandest and the oldest of the three state run fish hatcheries in the valley. However, we meet with the only employee on site, who shows us around the cavernous hatchery room, with rows of tanks and tables, only a few of which were in use. In fact, this hatchery hasn’t hatched any fish in over a decade, and will not ever again, as in the late 1980s it tested positive for whirling disease, a parasite that attacks the nervous system of fish and makes them swim in spirals. Though it still manages unhatched eggs, the echoing, hatchless hatchery feels more like a mausoleum than a nursery.

Not that there ever was any trout in the Owens Valley to begin with. All the game fish here were created by the state run Department of Fish and Game to generate a recreational industry, which is now supported largely through fees collected for fishing licenses. The Owens Valley, while it drains the snowy eastern Sierra, is dry, and has been connected to the ocean for less than a hundred years, through the plumbing constructed by the DWP. Its drainage channel, the Owens River, historically terminated at Owens Lake, or in the desert beyond. Fish that are indigenous are more like those found in desert waterways, small pup fish and suckers, left over from the larger lakes and rivers of the last ice age. Trout, and other game fish now in the streams and lakes of the valley were artificially introduced to the watershed in the 1870s, brought over from the western Sierras or elsewhere. The golden trout, for example, the official State Fish of California, was said to have been introduced to the eastern Sierra from the Kern River, which used to connect to the ocean, via the Golden Gate, but which now discharges into the industrial agriculture of the San Joaquin Valley. Like other game fish here, the golden trout has its eggs collected from pregnant females in the lakes, then the eggs are fertilized at the Mount Whitney Hatchery, then moved to other hatcheries to hatch and be raised into fingerlings that are loaded on board a tanker airplane that takes off from Mammoth Lakes Airport and dumps the fish back into lakes in the Sierras. If this cycle were to stop, all game fish in the eastern Sierra would soon disappear.

The tour continues on, while contemplating the implications of this artificially created and maintained system, and the assumption by many that it is a natural phenomenon. Further evidence, as if more were needed, of the involvement of humans in the “natural” order.

5:00 pm - Los Angeles Aqueduct Intake

The bus arrives at the last stop for the day, at perhaps the most iconic landmark of displacement in the valley: the Los Angeles Aqueduct Intake gate. It is here that the Owens River, coming in from the north, is diverted towards this structure and officially enters the original Los Angeles Aqueduct system. Now, by the system has been extended to the Mono Basin in the north, and second intakes have been built. But this isolated concrete structure still looks, feels and is, significant. The Owens River rounds an artificial structure, to connect to the ocean, via the Golden Gate, which now discharges into the industrial agricultural valley. Like other game fish here, the golden trout has its eggs collected from pregnant females in the lakes, then the eggs are fertilized at the Mount Whitney Hatchery, then moved to other hatcheries to hatch and be raised into fingerlings that are loaded on board a tanker airplane that takes off from Mammoth Lakes Airport and dumps the fish back into lakes in the Sierras. If this cycle were to stop, all game fish in the eastern Sierra would soon disappear.

The tour continues on, while contemplating the implications of this artificially created and maintained system, and the assumption by many that it is a natural phenomenon. Further evidence, as if more were needed, of the involvement of humans in the “natural” order.

5:00 pm - Los Angeles Aqueduct Intake
flat and reedy, and there are no other structures in the area. Its a lonely place, with the aqueduct quietly, perpetually, at work, whether anyone is there to see it or not. From here the water flows by gravity 233 miles, through power plants, siphons, tunnels, and reservoirs, until it spills out of the hillside in the north end of the San Fernando Valley, next to the new Cascades office park.

The bus pulls into the visitor center parking lot in Bishop, in the middle of the main (and only) drag in the largest and northernmost town in the Owens Valley. The passengers disembark for the brief walk to their motels, where despite the quantity of rooms in this relatively small town, reservations had to be made in advance, because this was, after all, the opening weekend of fishing season.

**DAY TWO 9:00 am - Bishop**

On the morning of the next day, after loading up with baked goods from Schats, everyone is back on the bus for the return journey. Though we travel on the same road we came in on, we now look, figuratively, at another side of the Owens Valley. Instead of focusing on the things removed from it - the valley as source and resource - we now examine the things that came to it - its constituents, its places, communities, and history - and we see how much of the valley is made from things that have their origins elsewhere. Isolated by geography and topography, the valley serves as an away place for the distant cities. As such, a culture of relocation and isolation is in evidence here. On the way back, we look at Owens Valley as a Place of the Displaced.

**Lay of the Land**

**Summer 2004            Owens Tour Insert Page 3**

**3**
2,000 people do every year. While reservations are required, and the mountain is often officially booked up all season, there is no fence surrounding the peak.

1:00 pm - Movie Flats

But without a road big enough for the bus, we stop along the road long before the portal, at what we came to see - an area known as “Movie Flats.” This part of the Alabama Hills, just west of Lone Pine, has been used as a location for hundreds of movies and television shows. The boulder mounds, with snow capped mountains in the background, play either a generic, Western American, or is filmed to look like somewhere entirely else. It has been used in hundreds of Westerns and British-army-in-India films, featuring stars from John Wayne to Clint Eastwood, and was the location for more recent films such as “Tremors,” which featured an underground, tube-like monster menacing the local population, which could be interpreted as a metaphor of the conflict between the Los Angeles Aqueduct and residents of the Owens Valley.

While idling at a dirt turnout we watch part of a video called “On Location in Lone Pine” made by Dave Holland, an energetic promoter of the cinematic history of the Alabama Hills, as we contemplate this landscape. In a number of remarkable moments, the video shows scenes from Western films, cross-faded with scenes of the same view of the valley today, merging with the views out the windows of the bus. Back in Lone Pine, we pass the site where a sign promises the coming of the “Lone Pine Film History Museum,” and also pass the site of a tribal office of the local Native Americans, housed in a relocated Manzanar building. We pick up a picnic lunch, prepared for us by the Totem Cafe, then head to a nearby roadside regional information center, operated by the Forest Service and others, with outdoor tables, to feed on lunch, and on the information available inside.

After lunch, we head south on Highway 136, to look at the east side of Owens Lake. Unlike the extractive activities of US Borax and Crystal Geyser on the west side, the east and south ends of the lake have a more accumulative nature. Once, however, the mines above the lake were a major producer of silver, lead, zinc, and other minerals, and the east shore of the lake had several large processing centers for this material. An aerial tramway operated for a few decades, bringing ore from the mines at Cerro Gordo, as high up as 9,000 feet, down to the shores of Owens Lake, where it was transported across the lake by steamships to the landing at Cartago. Later, the railroad was brought around the lake to Keeler and Swansea, which had smelters and processing facilities for the mine. Now Cerro Gordo is a privately owned, partially restored historic site, reachable on a treacherous dirt road, and the shoreline processing sites are low ruins, slabs and piles, though there is some minor activity at the base of the mountains on Dolomite Road.

2:30 pm - Keeler

But it is the legacy of the DWP that reigns on the east side of the lake. Storms of dust blown from the exposed sediment of the lake can cause blizzard-like conditions here, and the lake has been called the largest point source of particulate air pollution in the United States. In addition to accumulating in drifts and mounds, the particles of dust are aspirable, and thus enter the lungs when breathed. After listening to a recorded radio program of interviews with some of the residents of Keeler, the only town on the east side of the lake, and watching a video about the dust problem, we pick up our local brief for Keeler, who is waiting for us, standing next to his pickup truck. His name is Mike Patterson, and he has been around this area for some time. He owns the ruins of the town of Swansea, and has a residence and office there. Mike guides the bus around the town, pointing out the old buildings, and the curious habitations, some of which though obscured by bushes, are carefully ornamented with clutter and sculptures formed with found objects, as Keeler is a town of colorful characters and hardy desert rats. Though few of the couple of hundred inhabitants were born and raised here, and thus arrived here mostly by choice long after the dusty winds started blowing, there is still a lot of bitterness about the DWP, and questions about the efficacy of their dust mitigation projects.

After saying goodbye to Mr. Patterson, whose insights into the history and current conditions here were vivid and articulate, we leave Keeler (pointing out a picturesque trailer for sale on a small lot, in case anybody wants to stay), and pass the cluster of office trailers and equipment of the Keeler Research Center, run by the company CH2M Hill, the owners of the ruins of the town of Swansea, and has a residence and office there. Mike guides the bus around the town, pointing out the old buildings, and the curious habitations, some of which though obscured by bushes, are carefully ornamented with clutter and sculptures formed with found objects, as Keeler is a town of colorful characters and hardy desert rats. Though few of the couple of hundred inhabitants were born and raised here, and thus arrived here mostly by choice long after the dusty winds started blowing, there is still a lot of bitterness about the DWP, and questions about the efficacy of their dust mitigation projects.

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As part of his efforts to boost civic pride and a sense of community, and celebrate the wonders of the region, Father Crowley staged a remarkable public event in 1937, at the opening of the highway (which we were just on), that connects Lone Pine with Death Valley. Known as the “Wedding of the Waters,” the pageant started by filling a gourd with water at Lake Tulainyo, a lake on Mount Whitney, the highest point of the region (and at that point, in all of the USA), and pouring it out after a three day journey, ending it out in the lowest point in the nation, at Badwater in Death Valley. Along the way, the gourd was carried by a series of modes of travel - foot, pony, burro, oxcart, 20-mule team, stagecoach, train, car, and airplane - representing the development of different transportation technologies over time, and symbolizing the settlement and development of the West (Indian scout on foot, pony express, miner, pioneer, industrial mining, etc.). Each leg of this symbolic spatiotemporal performance was carried out by local historical figures and dignitaries that included the Governor of the State of California and Hopalong Cassidy. It seems to have been a great success.

This story of the Wedding of the Waters was rediscovered by the Los Angeles area public television personality Huell Howser, whose popular “California’s Gold” series of upbeat explorations throughout the state has made him the modern equivalent of the Desert Pahner of the early 20th century. In a story told by Huell Howser, and perhaps not as many of the original participants, or their relatives, as he could, interviewing everyone the whole time for the production of a video, called Wedding of the Waters, funded by the US Borax Corporation, who in addition to profiting from the exposed bottom of Owens Lake, sponsored the 1950s TV series of pioneers and miners called “Death Valley Days,” hosted by Ronald Reagan, the future booster of all of America.

Through the establishment of scenic corridors, interpretive driving tours, overlooks, museums and visitor centers, and newly staffed and managed attractions, the selling of the wonders of the Owens Valley is now coming into the tourist age. Like much of America, the valley is set to become a version of itself. Tragically and ironically, Father Crowley, the fabled promoter of tourism and roads, died in a car accident.

5:30 pm - Indian Wells Brewery

Outside the southern reaches of the valley now, the bus stops at Indian Wells, a natural spring on the hillside overlooking the desert of Inyokern, Ridgecrest and China Lake Naval Weapons Center. The spring has recently been developed into a source for a micro-brewery, situated on the site of a disabiled former local police officer. The brewery makes Sidewinder Missile Ale, Lobotomy Stout, and Mountain Boy, which is sold by Trader Joe’s. The owner shows us around, and tells us about how Anheuser-Busch has tried to buy him out, not for the beer, but for the water. We eat dinner at the steakhouse next door, after sitting in front of plate glass windows, and watch the desert fade from view. Then, heading back to Los Angeles, we watch Race with the Devil, where Peter Fonda and Warren Oates pilot a RV through the plains of Texas, lurching and veering wildly throughout, in an ultimately unsuccessful attempt to escape an encroaching Satanist conspiracy. The rectilinear interior of the screeching and careening RV seems metabolically connected to the tour bus, sensorially emphasizing our empathetic connection with the protagonists on screen.
THE DIXIE VALLEY is a remote part of northern Nevada that is a rare example of a simulated hostile nation on American soil, open to the public. Military equipment, both functional and not, is scattered among the ruins of old homesteads and ranches, a landscape that represents an integrated air defense system comprised of 37 real or simulated radars, the defenses of a generic hostile land.

It is part of a network of training ranges used primarily by the Navy, that includes five closed and fenced ranges totaling over 80,000 acres (Bravo 16, 17, 19, 20, and the Wilson Electronic Combat Range), under a military airspace of over 6 million acres. Unlike these closed ranges, however, the Dixie Valley is still accessible to the public, though it is so remote few make the journey.

The Valley is more than fifty miles from the nearest town, and that town is Fallon, home of the Fallon Naval Air Station, with the Navy’s Top Gun pilot school, and one of the busiest military aviation training bases in the country. Fallon has been using ranges in the area since the 1940s, including Bravo 20, photographed and described by the photographer Richard Misrach and his wife Myriam in the 1980s, who proposed turning the blasted range into a National Park of bombing, in their book *Bravo 20*. When the Navy’s use of Bravo 20 was up for Congressional review in 1999, Misrach made one more heroic, quixotic, and failed attempt to get his proposal seriously considered. Instead, the Navy has increased its use of Bravo 20, and the four other ranges around Fallon, and has been authorized to expand their terrestrial holdings in the area by over 100,000 acres.

Some of this acreage is made up of piece-meal purchases of land in the Dixie Valley. Starting in the 1980s, the Navy was making so many sonic booms and low supersonic flights over the Dixie Valley that the residents of the small community of around 100 people protested, and finally brought national attention to their plight. Stories appeared in the *Wall Street Journal*, and locals went on the national television news (PBS). Eventually though, they gave up, selling their ranches and farms to the Navy, if they were lucky, for what most people now say was far less than the land was worth. The Navy began burning down the homesteads it bought, replacing them with Soviet radar and military equipment to simulate an enemy landscape.

Because their use of this range includes electronic warfare and training, without the use of live bombs, the Navy has been able to construct a new type of range, with a few dozen fenced off “islands” containing critical infrastructure such as live radar and other clusters of hardware. The rest of the land, somewhere around 85,000 acres of it, designated as “Category B” type, is open for mining, grazing, and transit by the public, making for an open air gallery of active warfare props within a simulated enemy landscape (used, in the Navy’s words, for “integrated Combat Search and Rescue, Close Air Support training, visual cueing, integrated ground forces support, and the installation of Electronic Warfare and tracking systems.”)

Today the Dixie Valley is quite a sight. No one lives here, yet the land is irrigated. The valley has such good groundwater that spigots coming out of the ground are left to flow continuously creating accidental marshlands. The Navy hasn’t bothered posting most of its ranches, so they just sit there, enigmatically empty. Burned homestead sites are marked by a cluster of damaged trees that once shaded the house. Outbuildings, farm equipment and old vehicles spared from destruction are spray painted with the letters “TCT” designating that they should remain for visual target and prop purposes.

It is unlikely that Misrach’s Bravo 20 park plan will be realized any time soon. But at least we have the nearby Dixie Valley, the nation’s only Drive-Thru Electronic Warfare Park. ♦
REPORT FROM THE GREAT BASIN
CLUI WENDOVER REPORTS MORE VISITORS TO “NOWHERE”

WITH THE SPIRAL JETTY currently above water, there have been several CLUI-led visits to the site, which is four hours from the CLUI interpretive center in Wendover -in the neighborhood, by Great Salt Lake standards. (Park Service staff at the Golden Spike National Historic Site, which most people stop at on their way to the Jetty, say that Jetty visitation peaked a few months ago at fifty people a day). In April, Matthew Coolidge led a group from the University of Utah on an excursion to some unusual sites on the eastern side of the Great Salt Lake, including the Westinghouse Zirconium Plant, the Little Mountain Test Annex, and Trestlewood, on the tip of Promontory Point, where the wooden piles from the railroad's defunct part of the Lucin Cutoff are being salvaged for use as a construction material. Then it was out to the Spiral Jetty, to begin a project examining the history of the objects that surround the Jetty, such as the abandoned oil jetty, the old wrecked trailer, and the immobile amphibious vehicle. Due to the increased visitation and heightened attention of the visitors to the Jetty, these once functional objects are becoming iconic cultural artifacts as well. This is an example of a perceptual phenomenon we call the “land art spill-over effect.”

It’s been another busy spring at the Center’s compound in Wendover, with residents coming by from near and far. Cathy Ward and Eric Wright, artists from England, visited for a few weeks, and retraced some of the Donner-Reed party’s trek across the flats, as part of their study of folklore and American mythology. Elizabeth Withstandley and Patrick Ford worked on a film in the area, and Vicky Sambunaris, a photographer from New York, spent a few weeks photographing. Other visitors and users of the facility this summer include Christian Stayner, a graduate student from Harvard’s Graduate School of Design, William Wylie, from the University of Virginia, Paula Poole and Brett Stalbaum from UC San Diego, and an inventive German group known as e-rocker, which works on Utah land it buys off of eBay.

This Fall will be busy too, with classes and more residents visiting Wendover, straight through until the beginning of November. The Land Arts of the American West class will be stopping by for a week long visit, as they did last year. This remarkable field session takes students in art and design from the University of Texas and University of New Mexico on a semester-long field trip, looking at art and cultural sites in the landscape. They use the CLUI facilities at Wendover as a base to look at sites of note in the region, and to work on individual interpretive projects. A graduate class from the California College of the Arts will use Wendover as a base for a week in September, as part of a course on landscape curating being taught by CLUI Program Director Matthew Coolidge.

Upcoming Events at Wendover:
There will be an open house for CLUI Wendover, scheduled for Saturday September 18th, the same day as the always entertaining Wendover Airfield Airshow. Look for new exhibits by CLUI Wendover Residence Program alumni Wayne Barrar, Jessica Sowles, and Catherine Harris, as well as several permanent installations and ongoing projects, like the Wendover Airbase Autotour, Deborah Stratman’s radio tower, and Simparch’s Southbase project.

REPORT FROM THE CLUI MOJAVE DESERT OUTPOST
ACTIVITIES IN THE HIGH DESERT CONTINUE TO ASTOUND

THE SKY ABOVE THE Center’s Desert Research Station is blossoming with sonic booms and exotic military birds of prey, such as V-22 Ospreys and F-16 Falcons. Events out here in the high desert continue to challenge our imaginations and compromise our preconceptions. Down the road, the Army is in full swing on a simulated middle eastern battlescape at Fort Irwin. To the west, at Mojave Airport, Burt Rutan’s Scaled Composites just sent a private aircraft into space for the first time, a rocket powered winged egg that went 100 kilometers up, apogeed, and glided back down to a safe landing back on the runway. The right stuff redux. But one recent event out here stands out as being particularly spectacular, in all senses of the word.

In the old days, before the desert tortoise was elected as ruler of the land, dirt bikes could race from Barstow to Vegas, and did so quite

continued on next page
often (just ask Hunter S. Thompson- he might remember). In a futur-
istic flashback worthy of the fearsome and loathsome gonzoist himself, a race of robots, guided by machines in space (GPS satellites), took off across the desert last March, from Barstow (more or less) to Las Vegas (more or less). This was the notorious media feeding frenzy called the Grand Challenge, conceived and funded by the Defense Advanced Research Projects Agency (DARPA), and executed, primarily, by the subcontractor hired to run the event, Southern California Off Road Enthusiasts (SCORE) International, an off-road racing events organizer and promoting company.

This historic, histrionic event, officially subtitled the Autonomous Robotic Ground Vehicle Field Test, started with the full and unchal-
lenged takeover of the off-road oasis known as the Slash X Ranch, a dirtbiker bar on highway 247 between Lucerne and Barstow, at the crossroads of the paved and unpaved Mojave. The grounds around the Slash X were turned into hi-tech pit areas and parking lots, with event tents, rows of portapotties, a press pit, and grandstands. On event day, as the sun rose over the 6am kickoff ceremony, helicopters with gyrocams buzzed overhead, and cammo-clad military personnel mingled with the government and corporate administrators in customized Grand Challenge golf jackets. The public crammed the roadside grandstands, and the press, from all over the world, and all forced to wear plastic don't hit me day-glow vests, pointed their lenses towards the starting line, and they were off.

One at a time, one every five or ten minutes, or however long it took to clear the track of the stalled, stuck, or broken 'bot that preceded. In a few hours, all of the 15 entrants that qualified for the race had given it their best shot, and failed. Some went for several miles through the 142 mile long winding course, such as the Red Team from Carnegie Mellon, which had a half million dollars of gear in a converted Humvee, and contractors like SAIC backing them up. Their vehicle, Sandstorm, went for 7.4 miles before a wheel caught fire after steering off course. Others leapt out of the starting area and headed straight for the k-rail in front of the press pit, or hesitated terminally in front of a bush. One flipped over on the first turn, and one - the only two-wheeled entrant - simply fell over without leaving the starting gate.

Of course, building and fielding, without any military funding, a totally autonomous vehicle - no remote control - that can drive an unknown course of rough and varied terrain, is a difficult, indeed a grand, chal-
lenge. It’s amazing that some made it as far as they did.

But there was a finish line all set up with grandstands and press pits, ready to go, though not in Las Vegas, but instead in the parking lot of Buffalo Bills Casino in Primm Nevada, just a few feet over the state line. So most of the vehicles were trucked out there on trailers and flatbeds, and set up in a roped off corner of the lot, on display to whomever wanted to look and whatever was left of the press. Meanwhile, as the sun gave out to the flashing casino signs, a curiously innocuous trailer was seen, by just a few, being towed around the streets of Primm, leaving a digital-looking text on the pavement behind it, with six-foot white let-
tering, spelling out a simple, repeated phrase that seemed to evoke the science fiction writer Isaac Asimov’s law of robotics: “Robots must not kill.”
The SIT SIM village at the LAPD's Police Academy is one of the earliest police training villages still in use in Southern California.

Studios volunteers. It consists of a series of connected facades with individual doors. The interior rooms are all connected by inside doorways, enabling a continuous search scenario to be played out from one end of the complex to the other. Props inside are minimal, and the building is fairly simply constructed. Only "simunition" rounds - high velocity mini-paintball bullets - are used in this facility.

Another tactical training area at the Police Academy, located between two shooting ranges, is the Practical Combat Range at the Tactical Training Center. This is a small "Hogan's Alley" - type facility (a name which comes from the FBI's training town in Virginia), with a number of corridors that terminate at fixed and moving targets. Unlike SIT SIM village, this is a live fire range, with a large bullet trap consisting of piles of shredded tires, faced by a painted rubber mat. It was improved and modified following the notorious 1999 North Hollywood shootout involving heavily armed and armored bank robbers that alarmed police with their firepower.

One of only two large EVOCs in Southern California, the Ed Davis facility has two skid pans, a collision avoidance simulator, an inner city street grid, and a high speed track with blind driveways, sharp turns, and elevation changes. The 137,000 square foot main building has electronic driving simulators, offices, classrooms, firing ranges, and a maintenance garage for EVOC vehicles.

Located between the main building and the EVOC is the most post-modern civilian tactical training village in Southern California. The "Simulation-Simulator Village," as it is also called, has a gas station, bank, bar, convenience store, hotel, house, and coffee shop. The village is used by recruits, by officers for advanced training, and for the production of training videos. Trainees use simunition rounds and are fully protected with face shields and vests. The interior walls of the buildings are coated with vinyl, making it easier to wipe off the multicolored simunition splatter.

The roof training prop at the Fire Department's Hotchkin Training Center.  CLUI photo

Hotchkin Training Center

The Los Angeles City Fire Department's main training center for "In-service" training (training for fire department personnel, not new recruits) is in a grand Art Deco building near Dodger Stadium that once housed a Naval and Marine Corps Reserve Center. In 1995, the building was vacated by the military, and transferred to the Fire Department. It is named the Frank Hotchkin Memorial Training Center, after a firefighter who died while fighting a fire there in 1980, after falling through a fire-weakened roof.
Among the props in the training areas outside the building is what may be the largest rooftop training prop in Southern California. It is a structural skeleton of a building, with a large flat roof area, and a tall pitched roof area. Firefighters practice shoring and cutting through roofing and flooring material, something often done in fighting structural fires in order to vent gases and smoke, and to prevent potential flashovers. Also on site is a five story metal drill tower, which was recently ordered from a company that premanufactures them and then assembles them on site. This drill tower has “hot house” capability, meaning that portions of it can ignite with propane in order to create more realistic training conditions.

The village consists of a shopping plaza-type structure, with a second floor and balcony, and an adjacent home and garage. The main building was constructed in the 1980’s for this purpose, and rests on the asphalt without any foundation. Though it is still in use, it was recently officially condemned by county building inspectors for being structurally unsound. The building has a simulated bar, liquor store, escrow company office, check cashing store, hotel, drive up ATM, and women’s medical clinic.

**Del Valle Training Center**

The Fire Department of Los Angeles County has five training sites: the department headquarters and command center on Eastern Avenue, known as “the Hill” (next to the Sheriff’s complex); an east county training center in Pomona, used for recruit training; a north county training site in Lancaster, with the county’s only active live fire tower; a classroom site in La Quinta; and the Del Valle Training Center, near Castaic, the largest and most diversified fire training prop site in the LA region.

Del Valle is located on a hill top and uses 160 acres of land that the county bought from Unocal in 1984. Much of the focus of Del Valle is technical rescue training. There are industrial props (including a portion of an oil refinery), vehicle accident props (including propane-powered bus collisions), construction site accident props, confined space rescue props, and other urban search and rescue facilities. There is also a hazmat training area with railcars and a chemical storage building, and a fire extinguisher training area.

**Los Angeles County Laser Village**

The Los Angeles County Sheriff Department is the largest Sheriff’s department in the world, with over 14,000 employees (8,500 sworn, 5,800 civilian). One of the major locations for the Sheriff’s Department is at City Terrace, a former garbage mound east of downtown Los Angeles, later developed into a county complex. In addition to shooting ranges, fire training facilities, correctional facilities, and emergency command centers, the County operates their only active training simulation village, which is still referred to as “Laser Village,” though the laser-based training weapons were replaced with simunition-firing weapons several years ago.
Orange County Tactical Training Center
The Sheriff’s Department of Orange County operates the Tactical Training Center, in the City of Orange, one of the most realistic simulated police training villages in the state, and trains thousands of officers, agents, and private security company employees from the western United States. Like the Los Angeles County Sheriff’s tactical village at City Terrace, Orange County’s Tactical Training Center was built as a “laser village” in the 1980’s, when practice weapons emitted a laser light, and “victims” wore vests that electronically detected the approximate strike of the beam. Now small dye-filled simunitions are used.

The village has eight buildings: three residences, a convenience store, a bank, a bar, a fast food restaurant, and a service station. Though the buildings are smaller in area than their real counterparts, realism is heightened by the use of actual commercial signs and props. In scenarios involving building searches, ambush survival, bomb squad training, bank robberies, hostage situations, and sniper confrontations, live actors play roles such as store clerks and customers. The five simulated businesses are in fact sponsored by the companies themselves, which support their maintenance through donations to police community foundations.

North Net Fire Training Center
The Orange County Fire Authority (OCFA) has nearly finished its new Regional Fire Operations and Training Center in Irvine, a 16.5-acre classroom and training prop facility that will be the largest fire training site in the County. After it opens, training will continue at most of the other regional fire training sites, like the North Net Fire Training Center in Anaheim. North Net is operated by a consortium of northern Orange County cities, and is used by fire departments from Southern California, and from out of state as well. North Net, built in 1978, is the most elaborate fire training center in Orange County, until the Regional Fire Operations and Training Center in Irvine goes online later this year.

The main feature of North Net is a five story concrete training tower with propane-fueled fire capability, also used for ladder and rope rescue training. The tower is surrounded by basic fire training props such as door breach props, roof ventilation props, and wood for shore construction training. South of the tower is an area for concrete cutting and heavy object lifting and moving training, and some tunnels and tubes for confined space rescue training. Junked cars are regularly delivered to the site to be used for cutting and for victim extraction training.

Ventura County Fire Training Center
Next to Los Angeles County in the northwest is the increasingly urbanized Ventura County, which has an elaborate regional training center on the edge of Camarillo Airport, formerly a Cold War era coastal defense Air Force Base. The site, mostly operated by the Ventura County Fire Department, has several significant structures for rescue training, fire-
fighting training, and hazardous material response training. These facilities include several climbing and rappelling props, including a five story tower (for urban search and rescue); an elaborate confined space rescue tunnel network; two simulated roof structures; and an electrical transmission system prop.

The hazardous material training area is especially advanced, and is used for training by fire departments and law enforcement agencies from within and from outside Ventura County. There are several hazardous tanker and rail car accident and spill props; an industrial tank farm leak prop area; and a simulated methamphetamine lab, built inside a shipping container, and situated in a miniature orange grove.

San Bernardino County EVOC

The Sheriff’s Department of San Bernardino County, east of Los Angeles County, operates what may be the largest dedicated Emergency Vehicle Operations Center (EVOC) in the nation, a 78 acre site which opened in 1991. In California, the only EVOC approaching it in size and diversity is the 43 acre California Highway Patrol EVOC at their training site outside Sacramento. Unlike the CHP and the EVOC at the LAPD’s Ed Davis Center, the San Bernardino County EVOC is a single purpose facility, not part of a larger training site. It sits in a dusty plain, next to a wash and an off-highway vehicle recreation area, south of Glen Helen.

In California, perhaps suitably in this car-oriented state, the state police department is the California Highway Patrol. The CHP Academy, in West Sacramento, is the main driving training site for the agency. It has a 2.3 mile EVOC, and outdoor ranges with mechanical targets.

Police departments from all over the country send their training officers here for instruction.

This EVOC has a mile long high speed track, a large skid pan made of polished concrete that, when watered, becomes as slick as ice. A large asphalt lot in the middle of the track is primarily used as a motorcycle obstacle course. It also has a residential street grid with numerous intersections, a few 4 wheel drive obstacle courses, and a simulated rail crossing. Overseeing it all is an observation tower atop the administration and classroom building. The EVOC has a fleet of several dozen cars, including some that have been especially modified to practice the PIT maneuver, a police tactic for nudging cars into a skid.

CSTI

In addition to city and county agencies, the state operates a number of training sites for emergency personnel and police. The Office of Emergency Services of the State of California operates a multifaceted training site called the California Specialized Training Institute (CSTI). It exists to train law enforcement, emergency management, and other first responders in emergency procedures and tactics, including responses to earthquakes, terrorism, and hazmat spills. It is located on the grounds

continued on next page
of Camp San Luis Obispo, a large National Guard training base in the mid coast of California. CSTI has several training areas with different functions, and has the only “mock emergency operations center” in the state, where disaster scenarios are played out in a town called Santa Luisa Del Mar, a fictional disaster town modeled after Santa Barbara, but with the addition of a harbor.

A portion of Santa Luisa Del Mar has been assembled in three dimensions for police scenario training using simunitions, out of buildings relocated from other parts of the base. Other training areas at CSTI include a large and scattered hazmat training yard, with prop rail cars brought in from actual derailment sites. The Criminal Justice Program at CSTI has developed one of the open shooting ranges on base with some structural props, used for live fire weapons training. The Department of Toxics and Substance Patrol has created what is probably the most elaborate mock clandestine drug lab in the state. Also referred to as a “clan lab” or “meth lab,” prisoners from the state penitentiary across the highway were brought in to decorate it.

An abandoned school in Huntington Beach (at 16940 B Street) was recently used for a training program developed for law enforcement by the JS Training Institute, involving “bus interdiction, command post operations, ground tactics course, knife defense, patrol defensive tactics, school shooting first responder, SWAT defense tactics, terrorism preparedness, and WMD force protection.”

Private and Federal Training Sites

Private companies also provide training for public law enforcement officers, as well as for private security, and even for interested members of the public. These companies are sometimes hired to run programs at existing police training sites, or to run training programs for police at rented classroom spaces, or at public shooting ranges, such as Burro Canyon Shooting Park in Azusa, where high risk entry training, warrant serving, and close quarter battle training classes are held. Full scale realistic scenario training by private companies can also take place at unused or soon to be demolished buildings, wherever they may be. Though not in California, Thunder Ranch, with locations in Texas and Oregon, may have the most sophisticated private weapons and tactics training sites in the country. Private companies and educational institutions also run fire and hazmat training sites, such as the Fire Science Academy in Carlin, Nevada, and at many larger chemical plants, like Chevron’s Live Fire Training Center at its refinery in El Segundo, next to LAX.

Southern California’s history of creating superlative simulated environments is poetically emphasized by the fact that when the first SWAT team in the USA was established (in Los Angeles by a young LAPD inspector named Daryl Gates, in response to the 1965 Watts riots) their first training site was at the back lot of Universal Studios. These days SWAT trains at a number of places, including an abandoned military housing area near San Pedro. SWAT also uses some of the elaborate mock towns at the Marine Corps’ Camp Pendleton, which are among the most sophisticated in the country. These defense department training towns, sometimes called “MOUT” facilities (Military Operations in Urban Terrain) usually consist of a large, “European-style” row building or even several city blocks of buildings that evoke a generic international war torn city. Though built by and for military training, sometimes civilian law enforcement agencies, especially those that employ military tactics like SWAT, are permitted to use them. A new MOUT facility to be built for the SEALs on the Navy’s San Clemente Island, off the coast of California, will be based on “European and Third World urban patterns,” and will include features like an embassy, international hotel, and a soccer field.

Of course, the DoD isn’t the only federal agency operating mock towns for training purposes. The FBI’s mock town in Quantico, Virginia, perhaps the original Hogan’s Alley, is a nearly complete North American...
small town, with three storey brick houses, a bank (the “Bank of Hogan” called the “most robbed bank in America”), the “Biograph” movie theater, Honest Jim’s Used Cars (“We Stand Behind Our Cars,” says the sign), a courthouse, and a post office. And the Federal Law enforcement Training Center in Glynco, Georgia, has a 34-building “practical exercise complex,” used by federal agencies of all kinds.

These state and federal training facilities will be the subject of future exhibits at the CLUI, as we continue to examine the expanding landscape of preparedness. By doing so, we learn more about how modeling our communities in this manner is an incidental, complex, and compelling expression of an institutional interpretation of public and architectural space. ♦

CLUI TALKS AND EXHIBITS ON THE ROAD

VARIOUS EXISTING CLUI EXHIBITS were displayed here and there this spring and summer. The Nellis Range Complex: A Global Bombing Microcosm exhibit, recently updated with the help of the Royal College of Art in London, was shown at the PhotoEspana exhibit in Madrid, Spain in June and July. Formations of Erasure: Earthworks and Entropy, an exhibit about the transformation of land art, recently returned from being displayed at the Princeton School of Architecture, and is being serviced before its next deployment.

Some new commissioned projects for other venues include an automatic digital presentation about some of the American Land Museum artifacts on display at Southbase, in Wendover, Utah, organized for an exhibition called The End of the End of the Line, at the Soap Factory in Minneapolis. Also, for the University of the Pacific in Stockton, California, as part of an exhibit called Aquatopia, the Center created a digital display about water-related sites in the Central Valley of California. In Denver, Colorado, the Center devised an underground tour system for a new urbanist community called Bel Mar, being built in the suburbs in Lakewood, on the site of a formerly dead mall.

In addition to addressing visiting groups and classes at the Center’s main office in Los Angeles, members of the CLUI administrative staff are often asked to talk about the Center at schools, universities, to sit on panels, and participate in symposia.

Erik Knutzen, for example, has addressed audiences in New York City, Los Angeles, and Holland, where he is making another visit this summer. In the past few months, Matthew Coolidge has lectured at the University of the Pacific in Stockton, California, the Vancouver Art Gallery in Vancouver, Canada, the University of Utah Art Department, the Aurora Picture Show in Houston, (as part of Houston’s Photofest), San Diego State University’s Art Department, the University of California, Irvine, the University of California, Santa Barbara, the Architecture Department at the federal academy in Zurich, Switzerland, and at the Princeton School of Architecture and Harvard’s Graduate School of Design, as part of a bushwhack through the Ivy League. He was very sorry to have missed his talk at the Walker Art Center in Minneapolis in July, however. The plane he was in had an engine failure while flying over the Rocky Mountains (though it was described by the flight attendant at the time as a “minor maintenance problem”). After an immediate and steep descent, the plane landed safely and quickly at the small airport at Colorado Springs, too far to make it to Minneapolis on time. ♦

THE BLACK HILLS TOWN of Rockerville is listed for sale. It is a ghost town ghost town tourist attraction, abandoned after its last owners finally gave up on the business several years ago. It has fallen into disrepair, and is awaiting its third incarnation.

Like nearby Deadwood, Rockerville was a boomtown in the 1870’s. Gold was discovered in 1876, and by 1880 it had 100 buildings and around 1,000 people. Scandals, bad infrastructure schemes, and a general lack of gold led to the town’s demise. By 1930, the town was in ruins.

In the 1950s, Rockerville was born again with the new Black Hills economy of tourism. Highway 16, which goes from Rapid City, on the Interstate, to Mount Rushmore, passes right through town. The historic mining town was resurrected as a version of itself for tourists, with shootouts, gift shops, and old time relics. Two rows of western town façade were built next to the ruins of the original mining town, which by then were just a few buildings, a shack, the jail, and the old school house. A wooden sidewalk out front connected the dozens of buildings, labeled and decorated as things like Saloon, Bank, Casino, and Company Store.

The Black Hills filled up to the brim with attractions, and Rockerville failed to keep up with the times. To deal with the increased flow of visitors going up the hill, Highway 16 was enlarged and rerouted, and the new alignment passed around Rockerville, leaving it off the main drag. The tourists stopped coming and kept on going.

Today, Rockerville is abandoned again. The property includes 26 acres of the old town, all the buildings, the remaining relics, and camping grounds in the woods. It includes a few hundred yards of frontage with false fronts on either side of the road, but it is still the road less traveled. Each store is platted and can be separately leased, though the roofs may or may not make it through the next winter. And the new owners will have to deal with the ghosts of Rockerville, who are are now tourists, as well as miners.

 Asking price: $1,100,000.

Call Pat Hall, Coldwell Banker (605) 719-9787.
A few months ago, we learned of the tragic and untimely death of a remarkable man named Charles Barrett, a longtime friend of this organization, who contributed to this newsletter on occasion, and graced us with his charming presence at every single public event we held in Los Angeles. While still in shock after learning why we hadn’t seen him recently, we were told that he had honored us by considering the Center in his last will and testament: He had left us his library. Charles had far reaching interests, and many of the titles were signed by their authors (Charles worked in the entertainment industry and knew a lot of creative people). The majority of the books, we thought, would be better off in the hands of his loving family, or in more broadminded libraries or collections where they would be properly cared for. However, when it came to a few of his favorite subjects, there was some overlap with the CLUI library of land use. We now have a substantially augmented collection of books on aerospace technology and atomic history, to name a few subjects with a direct impact on the ground, in one way or another. Everyday we look up at a jet soaring into the sky above Edwards Air Force Base, or down into the radioactive waste tombs of the Southwestern desert, we will be reminded of Charles and his kindness to us.

Lots of Parking: Land Use in a Car Culture, John A. Jakle and Keith A. Sculle, Center for American Places/University of Virginia Press, 2004
A great title, a great subject, and a great book. Just the other day we were saying “why aren’t there more books about parking?” Well now there are.

Window Seat: Reading the Landscape from the Air, Gregory Dicum, Chronicle Books, 2004
Another one of those “Geez, we should have thought of that” titles. But there is room for more, as this is a very basic overview, and dwells much on reading the natural topographic features. We recommend that the author does a sequel: “Guide to Using Your GPS Receiver to Figure Out The Exact Location of the Places You See Out the Window of the Airplane.”

One of the best publications to come out of any press in 2003 is this self-published textbook about the freeway system of the nation’s fourth largest city. The author, a Houstonian in his mid thirties, worked in the energy industry, then the software industry, started a website on Houston highways in 2000, and after being let go in the dotcom bust, set to work on this epic work of stunning clarity, modesty, and honesty.

The Lake Project, David Maisel, Nazraeli Press, 2004
A big square flat thin book, like we have come to expect from Nazraeli, with 77 images of the multicolored phantasmaric swirls, ponds, puddles, pools, and piles of Owens Lake, as seen through the lens of David Maisel’s camera, while flying above the lakebed. This work was featured as part of a digital projection in the CLUI exhibit Diversions and Dislocations: California’s Owens Valley.

The overdressed hipsters behind the infiltrative Jinx Project discuss some of their urban and infrastructural spelunking and surmountings, as if they were doing us a favor, which they are, of course – saving the rest of us the trouble of having to climb on to the roof of the Tweed Courthouse and such. The value of the research, thought-styling, and ground-truthing inherent in the project would be a lot easier to ingest without the faux-secret-government-speak and the conquering attitude.

Killing Ground, John Huddleston, Center for American Places/Johns Hopkins, 2002
Historical images from the Civil War are juxtaposed with contemporary color photographs of the same places by the author. Not a repphotographic project, but rather a site selection project, where the images reveal the ghosts that lurk in everyday areas, the residential streets, strip malls, playing fields, parking lots, and places in between these places, that are now, still and will always be those same killing fields.

Face to Face with the Bomb: Nuclear Reality After the Cold War, Paul Shambrino, Center for American Places/Johns Hopkins University Press, 2003
Like Robert Del Tredici’s mid 1980’s books like At Work in the Field of the Bombs, this new book shows the state of the nuclear warfare landscape of the US today – in 2003. Big clear photos in vivid color, just as they should be. Another great book from the Center for American Places’ Creating the North American Landscape series, published by Johns Hopkins.

This elusive and mysterious part of California is perfectly captured in this unusual publication, which presents the Delta as a set of playing cards, each describing a feature of the region for consideration.

The Vatican to Vegas: A History of Special Effects, Norman Klein, The New Press, 2004
Norman Klein’s new masterwork is a freefalling epic. The 73 pages of notes make for a bonus enumerated book within a book. Our only complaint about this book is the linearity of the format - it’s a book.

Ant Farm 1968-1978, Constance M. Lewallen and Steve Seid, University of California Press, 2004
Ant Farm somehow possessed the commendable post-hippie characteristics of activist pranksterism, mock corporeity, optimistic modernism, innovative design, and pragmatic utopianism, without seeming conflicted about it. This is the catalog of the retrospective of the work of Ant Farm that is currently traveling around the country.

Urban Forest: Images of Trees in the Human Landscape, David Paul Bayles, Sierra Club
Occasionally the Sierra Club puts out a real winner, like Dead Tech, or this one. The trees photographed in this book - contorted, pruned, truncated, and mutated - are absurd, humorous, tragic, resilient, dignified and heroic - living, incidental sculptures of characteristics we humans usually ascribe to ourselves.

Unknown Quantity, Paul Virilio, Thames & Hudson, 2004
Pictures and words of death and destruction from the French philosopher. A voyeuristic harangue that is totally savant and au courant.

Lab 257: The Disturbing Story of the Government’s Secret Plum Island Germ Laboratory, Michael Christopher Carroll, William Morrow, 2004
The extremities of Long Island contain extremes of human behavior, pushed to the edge, but still, it seems, too close to everyone else. Just off Orient Point at the northeast tip is 840 acre Plum Island, a US Department of Agriculture animal disease research center which has been involved in bacterial and viral projects that are capable of escaping to the outside world, and may have done so already.

The interiors of bomb shelters of the world are explored in this photo book, from the still maintained public shelters in Zurich to the de-radicalized Church Universal and Triumphant in Montana. One impression that lingers after reading this book is how small this underground world is, even though it is spread out around the globe.

Baja to Vancouver: The West Coast and Contemporary Art, CCA Wattis Institute, 2004
The catalog of the exhibit of the same name, which is now traveling up and down the coast, would have been great, except for that CLUI “essay” in the back.
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CLUI PUBLICATIONS

The Nellis Range Complex: Landscape of Conjecture
CD-ROM of the CLUI exhibit.
Includes “clickable map” of range.
Works on Mac and PC’s

$12.50

Antarctic 1:
Views Along Antarctica’s First Highway
CD-ROM of the CLUI exhibit, with text by Bill Fox.
Includes “clickable map” of McMurdo Station.
Works on Mac and PC’s

$12.50

Back to the Bay:
Exploring the Margins of the San Francisco Bay Region
A catalog and guidebook of the 2001 CLUI exhibit, at the Yerba Buena Center for the Arts in San Francisco.

110 pp, illustrated.

$15.00

The Chesapeake Bay Hydraulic Model
An illustrated history of this remarkable engineering accomplishment, the largest indoor hydraulic model in the world, now abandoned.

50pp, illustrated.

$5.00

5th Avenue Peninsula Tour
An inexhaustive investigation of urban content. Self-guided tour of a portion of Oakland, California’s industrial waterfront.

24pp, illustrated.

$5.00

Nuclear Proving Grounds of the World
A report on the primary nuclear test sites across the globe, and the hundreds of other sites where single nuclear blasts took place on, under, and above the earth, in the former USSR, USA, Africa, Australia, Pacific Ocean and elsewhere.

30pp, illustrated.

$7.50

One Hundred Places in Washington
100 exemplary land use sites in Washington state. From the 1999 exhibition presented at the Center on Contemporary Art in Seattle.

102pp, illustrated.

$15.00

NEW FOR FALL 2004 Points of Interest in the Owens River Valley
Dozens of interesting places in the Owens River Valley region, the scenic and compelling back space of California.

56pp, illustrated.

$15.00

Points of Interest in the California Desert Region
With Visitation Information
Over 100 interesting places in the California desert.

60pp, illustrated.

$7.50

Route 58: A Cross-Section of California
Illustrated tourbook to this remarkable, 210-mile roadway. A perfect weekend-long trip from Los Angeles. *Revised Edition.*

80pp, illustrated.

$15.00

Subterranean Renovations: The Unique Architectural Spaces of Show Caves
Examines underground built structures and depicts some of the best tourist cave environments in the United States, with contact and visitation information. From the CLUI exhibit.

50pp, illustrated.

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This is our largest issue yet, not because we are getting increasingly verbose (though that may be), but to make up for the fact that it is coming out later than we had hoped (which is something we now have come to expect). Some of the themes that run through a number of the stories in this issue are about international lands in the United States, and about how we see America seeing itself, in a general way, as expressed on the ground, at least. There is a report on an internationally significant part of the country, the Houston Ship Channel, especially linked to current events in two ways, by being about oil, and about Texas. You will find reports from the Center's offices in the Great Basin, Northeast, and from the Mojave Desert. And because our main office is located there - and because it is an amazingly interesting place - you will find articles about Los Angeles, a city we continue to examine through projects that look at the city’s infrastructure, and impact on a wider scale, through its industries such as defense and entertainment, still two of the Nation’s largest exports. Currently on view at the CLUI’s Los Angeles Exhibit Hall is an exhibit about emergency training architecture in Southern California, discussed in this newsletter. This form of stylized, representational building is a combination of set-building and disaster preparedness, another reflection of these times. Los Angeles, like it or not, is increasingly everyone’s city.

-Lay of the Land Editors