



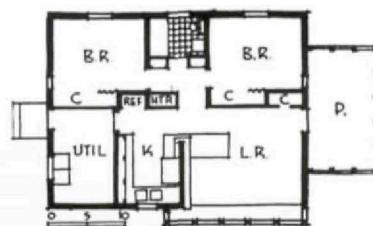
Alden B. Dow's work in Freeport, clockwise from top, this page: Dow Hotel, 1940; House Type J, 1941; House Type J interior; House Type G interior, 1941; House Type G. All photos this page by Elwood M. Payne for *Architectural Record*, May 1942.



# Dow By the Sea

## Modern Architecture's Moment in Brazoria County

BY BEN KOUSH

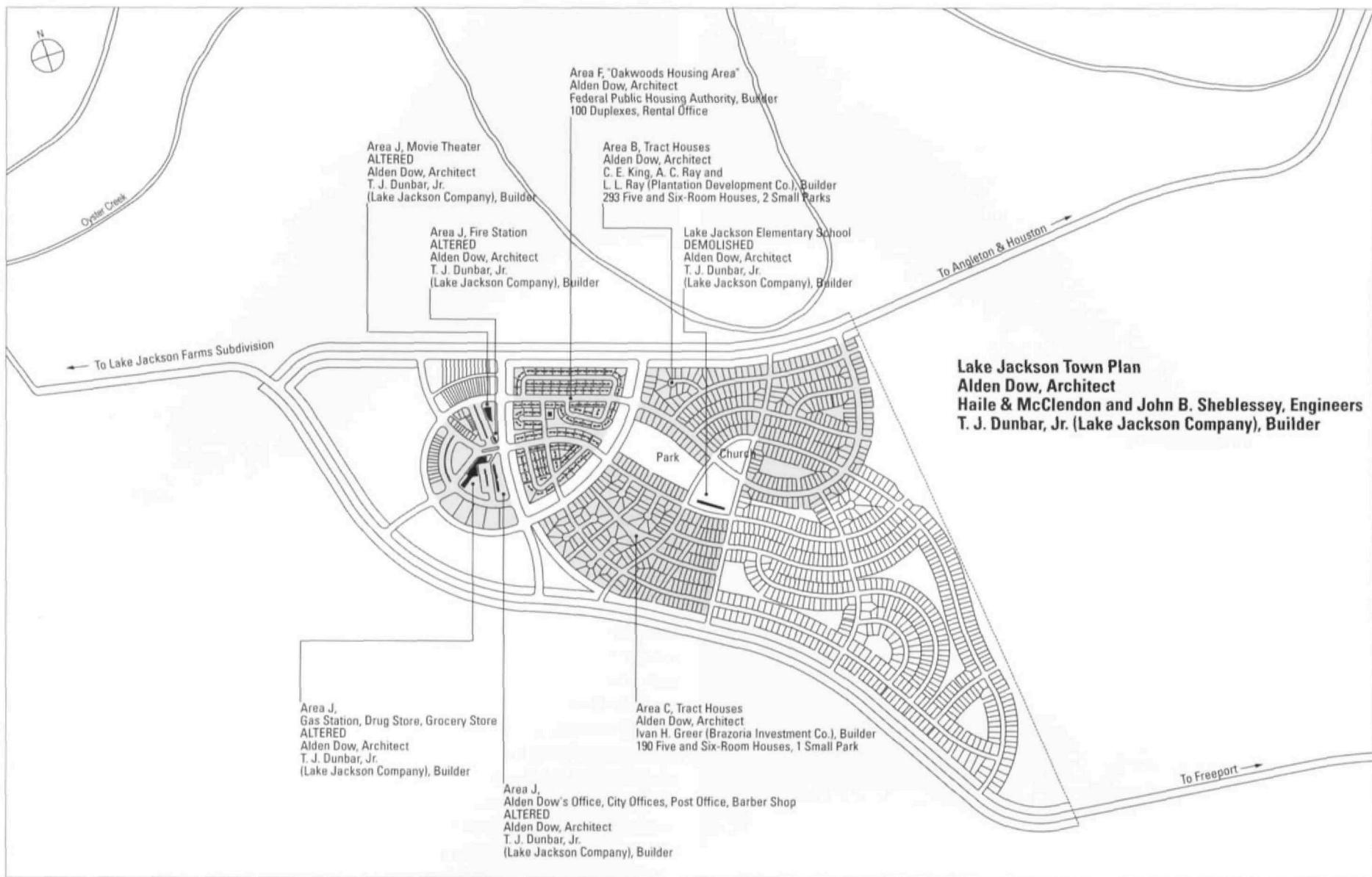


Alden B. Dow's plans for Freeport house types G (left) and J (right). Reproduced from *Architectural Record*, May 1942.

**FOR A FEW HEADY YEARS** during World War II, now-sleepy Brazoria County was one of the most frenetic, crowded, and energetic places in Texas. At its heart was Freeport, one of the country's first wartime company towns. There the Dow Chemical Company, based in Midland, Michigan, launched modern town-building on a scale never before seen in Texas, and rarely anywhere else. Luckily, this massive architectural opportunity was handed to Alden B. Dow, a Frank Lloyd Wright disciple who also happened to be the son of the chemical company's founder.

Dow Chemical Company's construction of two magnesium-processing plants in 1941 and 1942 (see, "The Riches of Brazoria County," p. 27) brought large numbers of people to the area. Freeport's population ballooned from 3,126 in 1939 to nearly 21,000 in 1942.<sup>1</sup>

Anticipating a dramatic need for new housing, the company called upon the services of Alden Dow immediately. The founder's son was an accomplished architect. His older brother, Willard, had taken over the family company after the death of their father, Herbert, in 1930, freeing Alden to pursue his passion for architecture. In 1933 Alden signed up for an apprenticeship-fellowship at Frank Lloyd Wright's Taliesin in Wisconsin. Though he stayed less than a year, his experience there affected him profoundly. For the



Map showing Alden Dow's building activity in Lake Jackson.

remainder of his career Dow would be known as one of the foremost disciples of Wright's organic architecture.

His first project, the 23-room Dow Hotel at 211 East Broad Street in Freeport, was built in three weeks in May 1940. The hotel was a long, low building clad in white asbestos shingles and surmounted by a shallow gable roof with wide overhanging eaves. The peculiar eaves, made of the exposed roof rafters and not covered, provided no shade. And they had another drawback: The exposed rafters soon rotted in the humid coastal climate and had to be replaced periodically.<sup>2</sup> But they evidently pleased the architect, who used them on nearly every building he designed in Freeport. After a dining hall addition was completed, The Dow Hotel became the social hot spot for Freeport's elite.

Dow next designed a series of handsome houses for company executives. Fifty-four full-sized houses, 22 one-room houses (since demolished), and one six-unit apartment block were built along Second, Broad, and Fourth streets, bounded on either end by Arbutus (now Dixie) and Mesquite streets. "The Alden Dow houses, completed in Freeport in the summer of 1941, were quite controversial," recalled Bill Colegrove, one of the first Dow employees to move to Freeport. "They had central heating and were on

a concrete slab. He had them painted in California shades of orange and apple green."<sup>3</sup> (When the houses were featured in *Architectural Record* in May 1942, neither their "controversial" nature nor their paint colors was mentioned.)

These houses and apartments remain one of the most attractive groups of buildings in Brazoria County. They are notable not only for their exterior appearance but also for their ingenious floor plans, which used built-in furniture and storage units to great advantage. Their remarkable state of preservation shows that they have been appreciated by later generations.

The 54 full-sized houses Dow designed consisted of eight types, which varied by size and cost. The two largest, Types G and H, were built on Second Street facing the golf course. They were clad in stucco and had three and four bedrooms. Though their exteriors were very simple, the interiors were as well developed as Dow's much more costly Midland, Michigan, houses of the same period, which were designed mainly for upper-level employees of the company. The next-largest houses, Types B, D, and E, were built along Broad Street, and were also clad in stucco. The smallest houses, Types A, J, and K, built along Fourth Street, were clad in a mixture of stucco and wood clapboards. (Types C, F, and I were never built, and no record remains

of their design.) The house types were further differentiated by lot size. The two largest house types were built on properties comprising three lots; the others sat on properties of two lots.

Dow also designed the Freeport Primary School, which was built in late 1941 or 1942 at Fourth and Magnolia and has since been demolished. Of this building only plans remain, but it was probably similar to the school he built in Lake Jackson—a long, low building like the nearby Dow Hotel. Plans for the Freeport Primary School show four wings of classrooms radiating from a central core. The core was to contain a large auditorium, but was never built.

Dow was not the only architect active in Freeport at this time. Several prominent Houston architects were also working there, primarily on housing projects for company workers. Alfred C. Finn designed 48 duplexes; Hedrick & Lindsley designed 44 duplexes and 11 houses; and Hermon Lloyd designed 209 houses and a medical clinic. The Alfred C. Finn-designed duplexes were the best of this group, with the units arranged in an interlocking pattern on the L-shaped site.

With the huge influx of Dow workers, it soon became apparent that these mostly privately funded efforts to build housing were inadequate. Many workers lived in appalling conditions on the outskirts of

Freeport, setting up camp in their cars or in makeshift tents, with no sewage or running water. Additional temporary emergency housing was built closer to the plants, in part to ease the horrific traffic congestion. Dow arranged to build its own trailer park with space for 600 trailers just outside Velasco in September 1942. But its major housing push was called Camp Chemical.

Alden Dow was the architect of the giant Camp Chemical project, which covered some 900 acres adjacent to one of Dow's plants, about halfway between Freeport and what would later be Lake Jackson. Construction proceeded at an astonishing pace: Between February 21 and April 23, 1942, workers erected 2,300 prefabricated "vest pocket bungalows," 164 toilet buildings, 46 barracks, 23 laundries, 14 administration buildings, a 1,000-seat cafeteria, and an "old fashioned general store," along with the necessary electrical hookups and water and sewer lines.<sup>4</sup> The 16-foot-square houses were made of unpainted wood and set in rows across the site, 14 feet apart with 30-foot-wide access roads for cars. The result was described by *Houston Post* columnist Ed Kilman as a "cubist's victory garden."<sup>5</sup> Longtime Brazoria County residents disparagingly called it Camp Criminal. But Camp Chemical served its purpose, and at its peak housed some



Courtesy Lake Jackson Historical Museum



Courtesy Lake Jackson Historical Museum

Top and above: Gas station-drug store-grocery, Area J, Lake Jackson, Alden B. Dow, 1943.



Courtesy Lake Jackson Historical Museum

Lake Jackson house, Area C, Lake Jackson, Alden B. Dow, 1943.

7,100 people.<sup>6</sup> It was shut down and completely demolished in late 1944 or early 1945.

Since Dow had made a huge investment in its Texas plants and had no intention of abandoning them after the war, the company planned a permanent settlement for its employees. The company's first proposal was to build 1,200 houses in Velasco, the nearly deserted town across the Old Brazos River from Freeport. But the Velasco city council rejected the plan on the grounds that it would overwhelm the town's meager infrastructure. Rebuffed, Dow purchased raw land and built its own community from scratch.<sup>7</sup>

The property selected by Dow because of its relatively high elevation was a 6,500-acre tract owned by Dr. Ernst W. (Bill) Bertner of Houston, best known for his role in the creation of the Texas Medical Center. Dow purchased the property on August 23, 1941, for \$400,000.<sup>8</sup> Alden Dow largely completed his design for the town of Lake Jackson by October, and a crew of 380 African-American, Mexican, and white workers began clearing the site on December 8. The first buildings were under way by August 1942, and the first residents moved in on January 26, 1943.<sup>9</sup>

Alden Dow's curvilinear street layout for Lake Jackson reflects then-current urban planning theories concerning traffic safety and aesthetics. In a speech he gave at Lake Jackson in honor of its first year of existence, Dow noted,

*Traffic hazards have been avoided as much as possible in the street layout. Through traffic by-passes all areas used by pedestrians and no residences face these through streets. They are lined with 100-foot parkways on each side. These park-bordered through streets also separate our commercial area from our residential area.... Newcomers and visitors to Lake*

*Jackson may sometimes find our winding streets confusing. However, they will always find them interesting in that they give individuality to each piece of property. They will also notice that these streets are named in such a way as to help guide them through the town. All streets leading to the commercial area are called ways, such as Winding Way, Center Way and Circle Way. All through traffic streets are called drives, such as Oyster Creek Drive, Oak Drive, out here in front of us, and Plantation Drive, which will be the new entrance to our town. In short, dead end streets are called courts.<sup>10</sup>*

Observers have noted that the streets' names indicated their relative status. According to Brazoria County historian James A. Creighton, "The naming pattern was interesting also: hardwood tree names for the more opulent residence streets, on down through to shrubs and vines for small courts, duplexes, and apartments."<sup>11</sup> The most exclusive tracts, however, were outside the town proper. Lake Jackson Farms, an unincorporated subdivision platted in 1944 around the lake that gives the town its name, is where the local elite, such as company director Dr. A. P. Beutel, built their houses.

In addition to the winding roads, another novel feature of Lake Jackson was the series of pocket parks formed using the leftover space at the center of the largest blocks. The parks were linked to one another by pathways laid out along continuous drainage rights-of-way. (When other developers expanded Lake Jackson in the late 1940s, neither the 100-foot parkways nor the interior parks were continued.) The plan of Lake Jackson received national recognition for its merit when it was published in *American City* magazine in August 1944. It was also



Camp Chemical, Freeport-Lake Jackson area, 1942.

featured as the best American example of privately financed war housing in the British book *Homes by the Millions*, published by Penguin in 1946.

The architecture that lined the meritorious streets, however, was not nearly so innovative. The privately built tract houses in Areas B and C and the Federal Public Housing Authority-built duplexes were unexceptional. The most interesting buildings were the quirky office Dow built for himself on South Parking Place, the combination gas station-drugstore-grocery store across the street, and the movie theater on Circle Way. These commercial and residential buildings still stand but are in a uniformly poor state of repair. The near-ruinous condition of Dow's office is particularly distressing, considering that its owner has repeatedly offered it to the city to be used as a historic site. (According to Lake Jackson Assistant City Manager Modesto Mundo, the offer came with the stipulation that the building be moved to another site. Currently there is no empty site owned by the city large enough to accommodate it.<sup>12</sup>)

Alden Dow's last project in the initial phase of development was an addition to the Freeport Primary School in June 1947. He was asked to provide a scheme for rehabilitating the Lake Jackson commercial area in early 1963 after returning to the city for its 20th anniversary celebration and making critical comments on its run-down appearance in a speech. His plan, dated February 7, 1963, does not seem to have been fully developed, as no drawings exist. The plan that was adopted in July 1964 by the Central Business District Committee—a steering committee comprising seven Lake Jackson businessmen—proposed to remake the buildings in a “Plantation style of architecture...to recapture this Plantation environment... typified by the moss-laden trees and heavy greenery which was a characteristic of the

Stephen F. Austin era in the early days of the Texas Republic...completely independent of Federal subsidy.”<sup>13</sup>

Fortunately, after some 40 years this anti-modern remodel is being put right with a new plan to remove the worst of the plantation-style excesses and return the buildings to a semblance of their original appearance.<sup>14</sup> The City of Lake Jackson has surveyed its residents—many of whom cited the Rice Village shopping area in Houston as a source of inspiration—and hired outside consultants to produce a Downtown Revitalization Plan. The \$17 million project will be funded through a half-cent sales tax, which voters approved last year. (The catch is that the funding won't be released until the 2008–2009 fiscal year.<sup>15</sup>) The intent to restore suggests that the citizens of Lake Jackson and Freeport have finally begun to recognize the buried architectural treasure in their midst. ■

1. “21,000 Increase in Population Booms Building.” *Houston Post*. July 16, 1942. Section 2, page 8.

2. Chester, Susan, ed. *The Lake Jackson Chronicles: A History of Lake Jackson, Texas*. Lake Jackson, Texas: Lake Jackson Historical Society. 1993. Page 61.

3. Colegrove, Bill. *Episodes: Texas Dow 1940-1976*. Houston: Larksdale Press. 1989. Page 43.

4. Kilman, Ed. “\$3,000,000 Camp Chemical is World's Only Federal Community for Workers.” *Houston Post*. July 16, 1942. Section 2, page 18.

5. *Ibid.*

6. Frank, Morris. “600 Trailers House Dow Workers.” *Houston Post*. Sunday, April 18, 1943. Section 1, page 13.

7. Chester, Susan, ed. *The Lake Jackson Chronicles*. Pages 15-16.

8. *Ibid.*, page 10.

9. *Ibid.*, pages 281, 283.

10. Text of speech by Alden Dow. 1944. Courtesy Lake Jackson Historical Museum.

11. Creighton, James A. *A Narrative History of Brazoria County*. Waco, TX: Texian Press. 1975. Page 370.

12. Phone conversation with Modesto Mundo. June 22, 2004.

13. “Lake Jackson Central Business Plan,” July 1964. Courtesy Lake Jackson Historical Museum.

14. Phone conversation with Modesto Mundo. June 22, 2004. See also: <http://www.ci.lake-jackson.tx.us/downtown.html>

15. Phone conversation with Modesto Mundo. June 22, 2004.

16. Creighton, James A. *A Narrative History of Brazoria County*. Pages 333-339.

17. *Ibid.*, page 324.

18. Haynes, Williams. *The Stone That Burns: The Story of the American Sulphur Industry*. New York: D. Van Nostrand Co., Inc. 1942. Pages 130, 257, 315.

19. “Dow Goes Down to the Sea.” *Fortune*. Volume 26, December 1942. Page 192.

20. Colegrove, Bill. *Episodes: Texas Dow 1940-1976*. Houston: Larksdale Press. 1989. Pages 17-18.

## The Riches of Brazoria County

The extent of Brazoria County's mineral resources began to become apparent at the beginning of the 20th century. Oil was discovered in January 1902 on Governor James Hogg's property, Patton Place, just outside the town of West Columbia. Large-scale production began on January 15, 1918, when the Tyndall-Hogg No. 2 well came in.<sup>16</sup>

Though oil is synonymous with modern Texas, the history of Freeport and Dow Chemical Company's Texas Division, and ultimately of Lake Jackson, depends on another less celebrated resource: sulfur. Also known as brimstone, the yellow mineral has a myriad of uses. It is a key component in fertilizers, insecticides, newsprint, paint, rayon, rubber and steel production, and is also frequently converted into sulfuric acid, which has many uses in the petrochemical industry. Sulfur was discovered in 1901 at Bryanmound, just southwest of present-day Freeport.<sup>17</sup> The Freeport Sulphur Company was incorporated by New York investors on July 12, 1912, and the first loads of sulfur were ready by November the next year.

Bryanmound was active from November 12, 1913, to November 30, 1935.<sup>18</sup> When Bryanmound ran out of sulfur, and production at the plant was curtailed, it appeared that Freeport might wither like so many other historic towns in Brazoria County. But in the summer and fall of 1939 a small, mysterious delegation of chemists from Michigan began snooping about town, taking water samples from the river and the Gulf. As a result of their findings, the Dow Chemical Company, headquartered in Midland, Michigan, bought 800 acres along the Freeport Harbor on March 7, 1940, for the production of magnesium from seawater.

Magnesium, which is substantially lighter than aluminum, was used primarily in the manufacture of aircraft. By the early 1940s each American plane was incorporating some 1,000 pounds in wheels, engine parts, gasoline tanks, cowlings and trim.<sup>19</sup> The Office of Production Management (later the War Production Board) decided that expanded production was needed with the imminent approach of American involvement in World War II, so Dow chemists began scouting across the country for a new plant location.

Freeport was ideal because of its unlimited supply of Gulf seawater, which through a fairly simple process of electrolysis could provide up to ten pounds of pure magnesium per each 1,000 gallons. The freshwater Brazos River provided a natural waste discharge completely separate from the intake, to prevent dilution. Additional natural resources necessary for the extraction of magnesium—sulfur, salt domes, oyster-shell lime, and oil and natural gas—were also nearby.<sup>20</sup>

The U.S. government's Defense Plant Corporation, headed by Houston's Jesse H. Jones, authorized construction of the magnesium plant. The Austin Company of Cleveland, Ohio, began construction of Plant A on March 15, 1940. The first magnesium ingots were produced on January 21, 1941. Plant B was built soon after in the astonishing span of six months, from January 1 to June 26, 1941. Later in 1941 bromine, caustic soda, ethylene, ethylene dichloride, ethylene glycol, and propylene dichloride were being produced at Plants A and B as useful by-products in the process to extract magnesium. — Ben Koush