

North Freeway, Interstate 45 North

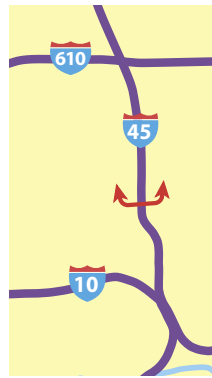
Most Houston freeways have developed a distinguishing characteristic over the years. The West Loop has its impressive and ritzy Uptown Houston skyline. The Katy Freeway is the Energy Corridor. The La Porte Freeway has its industrial complex. When most Houstonians think of a freeway, something comes to mind, whether it is the Astrodome on the South Loop or the perennial construction on the Gulf Freeway. So what do Houstonians think of when the North Freeway is mentioned? In 2003, that honor goes to “Gallery Furniture, 6006 I-45 North between Tidwell and Parker,” a retailer with a fast-talking owner who saturates Houston’s media with advertisements, always including the North Freeway location in his sales pitches. Aside from Gallery Furniture, Houstonians are apt to think of billboards, commercial clutter, and lower-tier commercial establishments. No one has ever called the North Freeway glamorous or scenic. The most notable structure along the North Freeway, a Goodyear blimp hangar, was dismantled in 1994 and replaced with “big box” retail structures. Perhaps a 1999 *Houston Chronicle* article on the North Freeway found the right word for the freeway, calling it a “workhorse.”⁹⁰

But in terms of transportation, the North Freeway has always been one of Houston’s most important freeways. It is one of the main routes to Bush Intercontinental Airport and serves as the link to Houston’s fast-growing northern suburbs. It connects Houston to its cross-state rival, Dallas. It served as the location for Houston’s contraflow lane transit experiment which launched Houston’s transitway system. A major reconstruction and expansion of the freeway began in the early 1980s, and the freeway north of Beltway 8 is among the widest and most modern in Houston. The North Freeway also has an asset that motorists on every freeway would love to have: a traffic relief valve running parallel to it. The Hardy Toll Road, completed in 1988, runs parallel to the North Freeway for 21 miles (34 km), helping keep the North Freeway free-flowing and preventing severe traffic congestion. Still, the North Freeway ranks as one of Houston’s busiest, with a traffic volume of 281,000 vehicles per day just outside Loop 610 in 2001.

North Freeway

Previous designation	US 75
Designated as freeway	1945, 1950, 1952
First freeway section open	1959
Freeway complete	1963
Reconstruction	1982–ongoing
Max traffic volume, 2001	281,000 vehicles per day
Future construction	Continued expansion north of Houston; long-term upgrade inside Beltway 8





Pre-freeway: This view looks north along the North Freeway corridor in 1960 with the Loop 610 interchange construction zone in the upper part of the image. The path of the North Freeway is indicated by the dashed lines. Relatively few displacements were required for the freeway since its alignment followed Little White Oak Bayou. (Photo: The Positive Image)

Origins

A short section of the North Freeway was in the first group of Houston freeways to be approved by the Texas Transportation Commission in May 1945. The approved section of the North Freeway was a segment from downtown northward to the present-day intersection with North Main Street. At the time, the route was designated as US 75. In October 1946, the commission authorized route determination from North Main to the north city limit, which at the time was about two miles (3.2 km) north of the present-day Loop 610. That section was authorized for full freeway status in March 1950. From the north city limit to the Harris County line, route determination and right-of-way maps were authorized in February 1949. In June 1952, the commission designated all of US 75 between Houston and Dallas as a full freeway.⁹¹

The entire North Freeway was built in a remarkably short time—faster than any other freeway in Houston. The first 2.8-mile (4.5 km) section of freeway opened in December 1959, and the entire freeway to Spring in far north Harris County was complete by February 1963.

In its early years the North Freeway corridor remained largely devoid of any major commercial developments or landmarks. Up until the early 1970s it served a mostly lower- and middle-income area of northside Houston, and Northline Mall, opened in 1963, was the only notable commercial development. The Greenspoint office and retail complex began to take shape in the mid-1970s at the intersection with Beltway 8, but the office structures were not immediately adjacent to the North Freeway and seemed to be more closely associated with the Beltway.

The 1970s brought the oil boom to Houston, and the forests along the North Freeway became very active with residential development. As the FM 1960 corridor was urbanized and other large developments such as the Woodlands got underway, the North Freeway became overwhelmed by traffic. By the mid-1970s the North Freeway had succumbed to severe traffic congestion, setting the stage for the unique experiment that would heavily influence the future of Houston's freeways and transit.

The Contraflow Lane

As Houston descended into its traffic crisis in the 1970s, political leaders were under pressure to do something. But there was a problem. No money was available,



Loop 610 interchange construction: This view looks north at the three-level interchange with the North Loop in May 1961. The North Freeway north of Loop 610 had opened a month earlier, and the interchange was partially open to traffic. The North Freeway and the full interchange were opened in July 1962. (Photo: TxDOT)

and the prospects for increased highway funding in the future were slim. Officials knew that transit needed to play a role in any solution, but the defeat of the Houston Area Rapid Transit Authority in 1973 by Houston voters eliminated the possibility of any big programs.

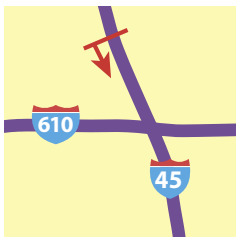
Something fast and cheap was needed, and the contraflow lane met both those requirements. It took away the inside traffic lane from the non-peak traffic direction, using it for buses and vanpools travelling in the peak direction. The contraflow lane was separated from oncoming traffic only by pylons spaced at 40-foot (12 m) intervals. There was no barrier.

In November 1974 Houston Mayor Fred Hofheinz asked the Houston office of TxDOT to evaluate the feasibility of a contraflow lane on the North Freeway. The project looked feasible, and authorities worked as quickly as possible within the regulatory environment to move it forward. With approvals required from the Urban Mass Transit Administration, Federal Highway Administration,

and TxDOT headquarters in Austin, pulling the project together was no small task. Finally in November 1977, after three years of effort, bids were received for the \$2.1 million project. Construction began in February 1978 and the 9.6-mile (15 km) contraflow lane from downtown to Shepherd Drive was officially opened on August 28, 1979. Two park-and-ride lots were also included in the project, bringing the total project cost to \$6.8 million, roughly 15.6 million in 2003 dollars.⁹²

Contraflow operation was successful, and usage began to increase after a modest 1,458 passenger-trips, 27 bus trips, and 96 vanpool trips the first day. After one year, daily usage had increased to 8,724 passenger-trips, 125 bus trips, and 412 vanpool trips. The facility overcame concerns that it would be unsafe, in spite of a collision that occurred on April 25, 1980, when an automobile lost control, slid into the contraflow lane, and was broadsided by a van. The automobile driver was killed. Three years after its opening, the contraflow lane was serving 15,600

June 2005 Update: In 2004 TxDOT presented preliminary plans for the freeway improvements from downtown to Beltway 8, calling for the addition of four managed lanes for high-occupancy vehicles and toll-paying single occupant vehicles. By early 2005 organized opposition had developed in the neighborhoods along the freeway inside Loop 610. No final recommendation has been made as of June 2005.



The North Freeway contraflow lane: One lane from the off-peak direction was marked off with pylons and opened to buses and vanpools travelling in the peak direction. This view looks south, just north of Loop 610. The contraflow lane operated from 1979 to 1984, when it was replaced by a barrier-separated transitway in the center of the freeway. The success of the contraflow lane accelerated the implementation of transitway lanes on most of Houston's radial freeways. (Photo: Metropolitan Transit Authority)

passenger-trips per day. The contraflow lane ended its five-year run on November 23, 1984, when traffic was shifted to a central barrier-separated lane. By that time, planning was well underway for an extensive transitway system on Houston's freeways—a system that was inspired and influenced by the success of the North Freeway contraflow lane.⁹³

Rebuilding the Freeway

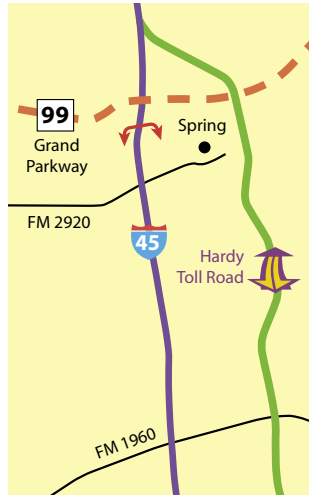
As one of Houston's early freeways, the North Freeway was built to 1950s standards and was soon hopelessly inadequate to meet the needs of the rapidly expanding suburbs north of Houston. Between 1970 and 1980 the population in the North Freeway corridor north of Beltway 8 and within Harris County increased by 302%. The freeway had only 6 main traffic lanes between Loop 610 and FM 1960, and only 4 main lanes in its northern section near Spring and the Woodlands. Frontage roads typically had only 2 lanes in each direction. In the early 1980s freeway reconstruction began, increasing lane capacity to 8 and 10 general purpose lanes with 1 central barrier-separated transitway lane. Whereas the original construction

of the freeway occurred within a very short time period, the reconstruction would play out over more than 20 years as funding became available. Work began just north of downtown Houston in 1982 and proceeded northward, segment by segment. By 1990 the expansion had been completed to Beltway 8. The freeway expansion between downtown and Beltway 8 did not involve any substantial right-of-way acquisition, and the freeway section between Loop 610 and Shepherd Drive remained on an unusually narrow right-of-way. That section still does not meet the standards of modern 1980s freeway design due to the constraints imposed by the narrow right-of-way.⁹⁴

In 1986 TxDOT finalized plans for the expansion north of Beltway 8. After considering elevated express lanes, an at-grade plan was recommended. The plan called for expanding the main lanes from 6 to 10 from Beltway 8 to FM 1960; from 4 to 8 from FM 1960 to the Hardy Toll Road; from 4 to 10 from the Hardy Toll Road to the Woodlands Parkway; and from 4 to 8 from the Woodlands Parkway to the south edge of Conroe. The entire length would have a central barrier-separated transitway lane and 3 continuous frontage road lanes in each direction. The

Houston still far away:

This 1967 view looks south along the North Freeway at the community of Spring, north of Houston. This view shows that FM 1960, in the upper part of the photo, was still truly a farm-to-market road. Suburbanization of this part of north Harris County began in the 1970s. Expansion of the foreground section of freeway was completed in 2003. (Photo: The Positive Image)



existing freeway corridor ranged from 256 to 276 feet (78-84 m) wide. The expanded freeway right-of-way would be increased to 377 feet (115 m) for the 10-lane sections and 353 feet (108 m) for the 8-lane sections. Since most of the land along the freeway was undeveloped, only 102 businesses and 9 residences were displaced.⁹⁵

Work north of Beltway 8 began in 1993 and will continue through approximately 2005 to reach the south end of Conroe. With the completion of the freeway expansion from Beltway 8 to FM 1960 in 1998, north Houston finally had its first section of the long-awaited wide, modern freeway. The first phase of the stack interchange at Beltway 8 was finished in 1997, and the interchange was fully completed in early 2003. Initial work at the interchange, consisting of two connector ramps, was completed in 1970 to serve traffic going to Houston Intercontinental Airport, which opened in June 1969. In 2003 a study was in progress to determine future improvements from downtown to the Woodlands. Preliminary options emphasized transit and using all available capacity of the Hardy Toll Road. The study is expected to recommend freeway expansion to accommodate future demand that cannot be served by transit or the Hardy Toll Road.

The Ultimate Freeway Suburb?

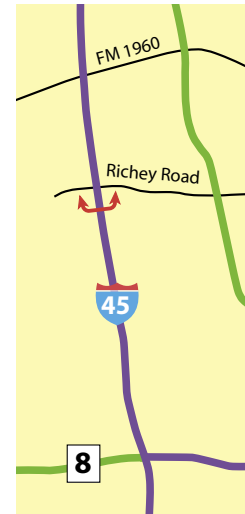
In 1972, architect Robert Heineman began to sketch out a plan for a large new community directly adjacent to the North Freeway on 27,000 acres of forest in far north Houston. The community he designed would be way ahead of its time. It would incorporate design features that would later be promoted as essential to sustainable development and the goal of better urban design and “livable” communities. Harmony with the natural environment. The concept of putting shops, services, and jobs close together in one community. Shared and efficient infrastructure. In today’s terminology, it would be called smart growth.⁹⁶

Originally opened in 1974, the Woodlands received numerous national and international awards for its responsible and innovative design. Suburban home buyers have made the Woodlands Houston’s perennial leader in new home starts through most of the 1980s and 1990s, and continuing through 2003. The Hardy Toll Road was





Typical view: This view looks north along the freeway at Richey Road. Expansion of this section of the freeway was completed in 1998. (Photo: November 2002)

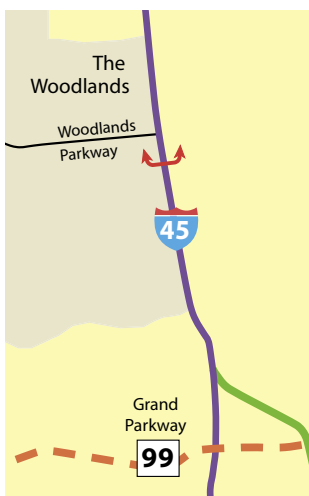


completed in 1988 and ended practically at the doorstep of the Woodlands, providing quick transportation access to Houston and further accelerating development.

When the major expansion of the North Freeway adjacent to the Woodlands was completed in 2001, the Woodlands had reached a sufficient population base to support the fully integrated community that Heineman envisioned 29 years earlier. Approximately 17,600 acres of the 27,000

acres had been developed, and 24,055 new homes had been built. The area's 1,000 businesses employed 27,000 people, and the population reached 70,000. Completion of the Woodlands is projected to occur around 2012.⁹⁷

When the freeway era arrived in the 1950s, the concept of freeway suburbia came along with it. Developer Frank Sharp launched his Sharpstown community on the Southwest Freeway in 1955, bringing large, freeway-driven



The North Freeway at the Woodlands: Expansion of this section of freeway was completed in 2001 and features a direct connector ramp to the Woodlands Parkway. The Anadarko Petroleum building, completed in 2002, towers over the Woodlands Town Center and nearby Woodlands Mall. The 27,000-acre Woodlands master-planned community was started in 1974 and was about 65% developed in 2002. (Photo: May 2002)

suburban development to Houston. A succession of bigger and better communities followed. But the Woodlands will almost surely go down in Houston's history as the largest and most successful suburb, and one of the more notable suburban developments in the United States. And it took a freeway to make it all happen.

Key dates in the history of the North Freeway

1945	First designation as a freeway. Other sections are designated in 1950 and 1952.
1959	First freeway section opens.
1963	Freeway complete.
1974	The Woodlands real estate development is launched.
1979	Contraflow lane operation begins and continues until 1984.
1982	Reconstruction and expansion begins.
1988	The Hardy Toll Road is completed from Loop 610 to near the Woodlands.
2003	The interchange at Beltway 8 is completed.
Future	Expansion north of Houston, upgrades inside Beltway 8.



Airship base: The Goodyear Blimp hangar was a fixture on the North Freeway for 25 years from 1969 to 1994. When this photo was taken in September 1991, commercial development and strip shopping centers were encroaching on the blimp base. The base was closed in April 1992 when the airship *America* was relocated to Akron, Ohio. In March 1994 the hangar was dismantled and relocated to San Diego, California. Two large retail establishments, a Home Depot and Lowe's Home Improvement Center, were subsequently constructed on the blimp base land.⁹⁸ (Photo: The Positive Image)



No slouch for construction: Although IH 45 South, the Gulf Freeway, has the reputation for being Houston's most construction-affected freeway, the North Freeway has had its share of construction. Since 1982 there has been construction in progress nearly continuously. This view looks north from the Louetta Road overpass in March 2003, with construction on the freeway expansion nearing completion. Construction continues further north on IH 45. (Photo: March 2003)



Dallas Freeway? No way! In 1965 there was an effort to rename several Houston freeways to eliminate compass-point names. The North Freeway was proposed to be renamed the Dallas Freeway. A *Houston Chronicle* editorial came out against the change, saying, "Why advertise Dallas, for goodness sake?" The North Freeway name change was rejected, as well as all the other proposed changes except a renaming of the West Freeway to become the Katy Freeway. This view is on the northbound lanes just north of Beltway 8, with the Rankin Road overpass just ahead.⁹⁹ (Photo: November 2002)



North Belt interchange: This view looks north along the North Freeway at the North Belt interchange, which was completed in early 2003. (Photo: September 2002)