

The Magic
Kingdom

UTILIDORS

The Secret Behind
(and Under)
the Magic
by Jamie Hecker

What does it take to bring Walt Disney World's Magic Kingdom to life every day? Dozens of rides and shows delight Guests, multitudes of restaurants satisfy their appetites, and a wide variety of shops in all corners of the park beckon. It takes thousands of Cast Members, many unseen, to run the park so smoothly. And of course a little bit of pixie dust. In a way, there really is magic at work in the Magic Kingdom. Underneath the wide expanses of sidewalks, pathways, and finely manicured greens lies a vast system of tunnels that allow Cast Members and supplies to easily move from one corner of the park to another, all without inconveniencing Guests. The tunnels serve another purpose as well, hosting the necessary infrastructure utilities of plumbing, electrical lines, and trash tubes. In the classic Disney sense of merged words, such as "Imagineer" from imagination and engineering, these tunnels were dubbed "Utilidors," representing their dual purposes of utility use and personnel corridors.



To better understand how the Utilidors came about, let's review some Disney history. Walt Disney reinvented the theme park and set the bar high for others to follow when he opened Disneyland in 1955. To say that it's a success is an understatement, but in the beginning there were some people inside the Walt Disney Company, as well as outside financial partners, who were somewhat skeptical. Walt scaled back his grand ambition for Disneyland to allow for what the budget could accommodate. One casualty was the acreage Disney purchased for the park. Although the park was planned meticulously, the size constraints provided a number of logistical challenges. For example, the story goes that in Disneyland's early days, Walt encountered a cowboy—in Tomorrowland. The cowboy Cast Member, assigned to Frontierland, was returning from the employee cafeteria behind Tomorrowland. The Cast Member had no choice, but for Walt, this ruined the show.

With the success of Disneyland came the desire to replicate the park on the East Coast, to tap into the vast population that wasn't flocking to Anaheim. In a parallel move, Walt and his Imagineers forged ahead with their grand plans for a city of tomorrow, a project so large that it would require vast amounts of land. The

Walt Disney Company surreptitiously purchased 43 square miles of land in central Florida for Walt's ambitious goals. The Magic Kingdom would of course be on the drawing board, but that was just part of the story. Walt's real desire for his "Florida Project" was the idea for an experimental prototype community of tomorrow: EPCOT. Walt passed away in 1966, after the public announcements of his plans but before any construction began. His brother and lifelong business partner, Roy Disney, championed the development of Walt Disney World. And it was here that the lessons learned from Disneyland could be applied.

Clever Construction

To address the logistical concerns of running a theme

park and keeping the backstage elements away from the Guests' eyes, Imagineers conceived of an elaborate series of tunnels to be created beneath the Magic Kingdom. However, there was a serious problem with this approach. The high water table of central Florida precluded digging much below ground level. However, proving that no problem was insurmountable, Imagineers came up with a clever solution. They simply raised the park itself above ground level. The Utilidors were constructed on the present site of the Magic Kingdom, consisting primarily of a ring around the park with a major branch underneath Main Street and a central corridor that bisects the ring running directly underneath Cinderella Castle. This corridor takes a noticeable dip in the middle to accommodate the moat around the castle. The tunnels average 14 feet in height, and they run for more than a mile and a half in length. They were constructed of



poured concrete and meticulously laid out to house the entire necessary infrastructure necessary to operate a Disney park. Imagineers then created the Seven Seas Lagoon, excavating more than 7 million cubic yards of soil and placing it on top of the Utilidors, hiding the tunnels from public view. The end result is that the Utilidors

form the ground level of the Magic Kingdom, and the park itself is on the second floor. Parts of Fantasyland are higher still and can be considered the third floor.

The City Beneath Our Feet

Cast Members arrive at the Magic Kingdom via the north entrance of the Utilidors, out of sight from Guests, directly underneath the Pinocchio Village Haus restaurant. From here, they can easily reach their work destinations while remaining offstage. The lands of the park are color coded on the hallways so Cast Members can easily recognize their locations. For example, Main Street, U.S.A. is burgundy, Liberty Square is blue, and Fantasyland is purple. More than 20 stairways serve as entrance points into the park itself.

However, Mickey's Toontown Fair, now being incorporated into the Fantasyland expansion, didn't exist when the Magic Kingdom and the Utilidors were constructed, so Cast Members accessed that area of the park via an out-of-sight bus stop.

The Utilidors are a mini-city, providing Cast Members with break rooms, restaurants, and Kingdom Cutters, a hair salon. Some of the busier restaurants in the Magic Kingdom have additional prep kitchens deep within the tunnels.

The Utilidors transport more than just personnel. Park merchandise to be stocked on the shelves of gift stores and food to be consumed in the restaurants arrive at their destination via the tunnels.

To assist with the movement of thousands of Cast Members, bicycles and electric carts are available. Gas powered vehicles are not permitted in the Utilidors because the carbon monoxide exhaust from the vehicle would present a safety risk. The exception to this rule is a specially modified armored truck, which is necessary to transfer cash out of the park. The truck can barely pass through the narrowest sections of the Utilidors with only four inches of clearance on either side.

Onstage in the Magic Kingdom, Guests are entertained by Audio-Animatronic performers, such as those in the Country Bear Jamboree and Pirates of the Caribbean. To manage this sophisticated technology, Walt Disney World relies on the Digital Animation Control System (DACS). Located in the Utilidors in a climate-controlled computer room, DACS maintains the show for Guests by operating theater doors, controlling lighting, and directing the complicated movements of the Audio-Animatronic performers. DACS even controls the flow of parades on the computer chip-embedded streets of the Magic Kingdom.

Another innovative use of technology under the Magic Kingdom is the Automated Vacuum Assisted Collection (AVAC). All the trash collected from the bins in the park is whisked away via AVAC's 20-inch diameter pneumatic

tubes located in the Utilidors to a central processing point outside of Frontierland where it's sorted for recycling and waste. The trash reaches speeds of 60 miles per hour within the tubes, making this the fastest "attraction" at the Magic Kingdom. Space Mountain and Big Thunder Mountain Railroad's top speeds pale in comparison to AVAC!

The use of technology within the Utilidors has evolved over time. Presently, the Magic Kingdom has a new Disney Operational Command Center, located beneath Cinderella Castle. A high-tech room outfitted with oversized flat screen monitors and live camera feeds show the crowd levels in the park and the wait times for attractions, coding the crowd levels red, yellow, or green. The goal is to recognize crowd patterns and to reduce gridlock before it can

happen. For example, if "it's a small world" changes from green to yellow, ride managers can be alerted to launch more boats to address the increasing number of Guests. On the other hand, the Command Center can recognize when an area of the park is underserved. They can then dispatch a musical act or Disney character to draw Guests into that section of the park. Crowd levels in the restaurants are also monitored, alerting managers to the need of opening additional registers at the counter service restaurants if necessary.

Although the Utilidors are functional in purpose and out of sight, you can check them out. The Keys to the Kingdom tour is available to Guests ages 16 and older. It offers a walking tour of the park, including several backstage elements and even a portion of the Utilidors. To inquire about tour availability, call 407-WDW-TOUR.

Walt Disney and the Walt Disney Company always believed in leveraging technology to improve the final product. Steamboat Willie was the first animated short to feature sound, and the multiplane camera was created to add depth to Snow White and the Seven Dwarfs. The Utilidors are another innovation in the long list of Disney technological marvels and milestones.

