LACMTA Celebrates Black History Month

African Americans in Transportation







1791 Benjamin Banneker- Surveyor Washington DC



•A portrait of Benjamin Banneker on the cover of his Farmers Almanac - circa 1795

Benjamin Banneker reached national acclaim for his scientific work in the 1791 survey of the Federal Territory (now Washington, D.C.). In 1753, he built one of the first watches made in America, a wooden pocket watch. Twenty years later, Thomas Jefferson commissioned Banneker to perform the surveying & mapping lay out of Washington D. C. after receiving a recommendation from George Elliot.



African Americans in Transportation 1935 (WPA) B Works Progress Administration

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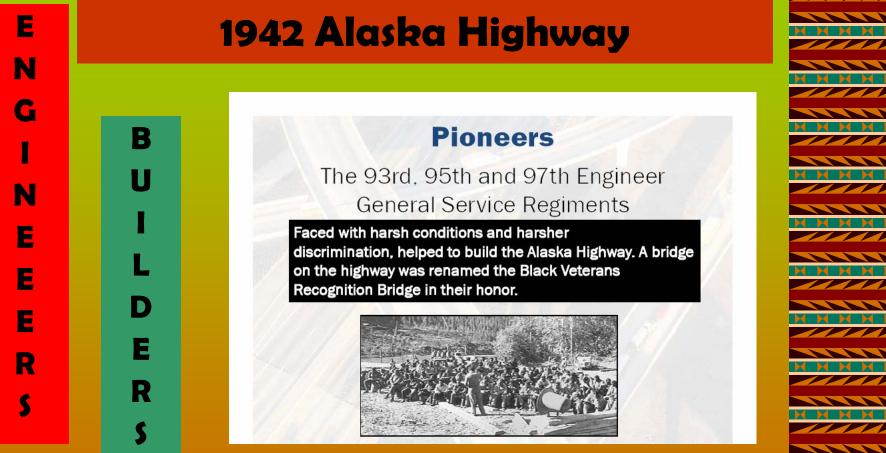
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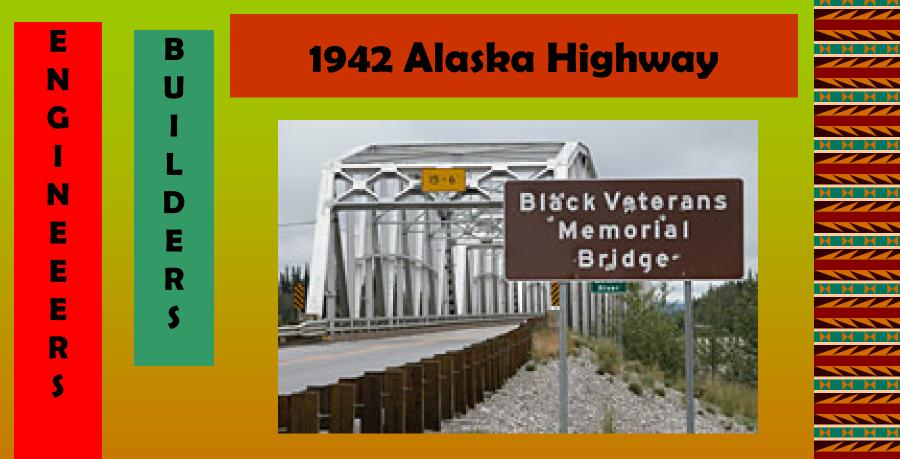
In 1935 President Theodore Roosevelt formed the Works Progress Administration which was later renamed the Work Projects Administration (WPA). This program helped provide economic relief to the all citizens of the United States who were suffering through the Great Depression. The depression, while imposing hardships of people of all races and ethnic backgrounds, struck blacks particularly hard. The WPA came at a time of critical need for African-Americans. Jobs formed by the WPA included a variety of construction of bridges, highways, dams, hospitals, along with providing training and work in the clerical, professional and arts endeavors. By the time the program ended in February 1943, it had allocated \$11 billion dollars and employed more than 8 million people.

The WPA not only hired African-Americans, its projects contributed to their wellbeing. WPA construction crews built and renovated hospitals, housing projects, schools, parks, playgrounds, and swimming pools in Black communities





President Franklin Roosevelt authorized the building of the Alaska Highway in February 1942 with black engineers and builders.



Memorials for the veterans are scattered in spots throughout the highway, including the Black Veterans Memorial Bridge, dedicated in 1993.

1944 Los Angeles' First African American Motor Women



In August of 1944, and without much fanfare, Los Angeles Railway hired its first *African-American motorman, a motormanette, Mrs. Arcola Philpott.*



1945 Los Angeles' First African American Motormen



Nathaniel Lewis, third from left, with fellow operators in 1958. Los Angeles Railway initially hired 10 black motormen who did not show up due to weather conditions. LA **Railway then hired** two more black motormen who completed training but were never given assignments.



1987-1991 First African American Women Director Southern California Rapid Transit District (RTD)



Leilia M. Bailey-Leahy

Leilia Bailey-Leahy started her transportation career in July, 1971 when she was hired by the Southern California Rapid Transit District (RTD) as an Operator. She worked at Division 5 (now known as the Arthur Winston Division) for a number of years. Mrs. Bailey-Leahy worked her way up through the ranks to become the Assistant Director of Transportation (1986 to 1987) and then Director of Transportation (1987 to 1991).



1933-1964 Los Angeles Bus and Rail Operators

In 1964, the Southern California Rapid Transit **District merged with the Los Angeles County Transportation Commission to form the** current Metropolitan Transportation Authority in 1993. Today, bus and rail operator workforce of Metro employs of nearly 5,000 employees includes 32 percent women, 49 percent **African-American men, and twenty-three** percent African-American women.





1892-1926 Tuskegee Airmen



The **Tuskegee Airmen** is the popular name of a group of African-American pilots who fought in World War II. Formally, they formed the 332nd Fighter Group and the 477th Bombardment Group of the United States Army Air Corps (United States Army Air Forces after 20 June 1941).





The Tuskegee Airmen were the first African-American military aviators in the United States armed forces. During World War II, African Americans in many U.S. states were still subject to the Jim Crow lawsThe American military was racially segregated, as was much of the federal government. The Tuskegee Airmen were subjected to racial discrimination, both within and outside the army. Despite these adversities, they trained and flew with distinction. All black military pilots who trained in the United States trained at Tuskegee, including five Haitians.



1864-1922 Patent and Electrical Lighting Engineer

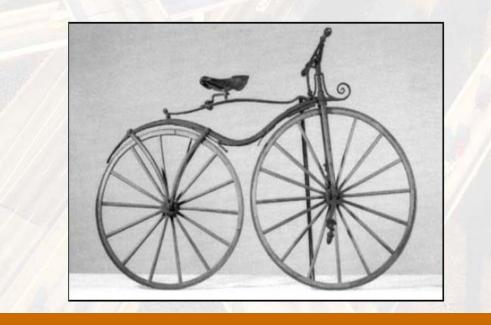
- Drafting and his creative genius led him to invent a method of making carbon filaments for the Maxim electric incandescent lamp.
- 1881, <u>supervised the installation of the electric lights</u> in New York, Philadelphia, Montreal, and London.
- Worked for Thomas Edison
- Lewis Latimer was the original draftsman for Thomas Edison (who he started working for in 1884) and as such was the star witness in Edison's infringement suits. Lewis Latimer was the only African American member of the twenty-four "Edison Principles",
- Thomas Edison's engineering division of the Edison Company. Latimer also co-authored a book on electricity published in 1890 called, "Incandescent Electric Lighting: A Practical Description of the Edison System."



1888 Black Inventor Tri Cycle & Street Car Fender

M. A. Cherry

Developed a device called a Velocipede, which consisted of a metal frame with two or three attached wheels.





1888 Washington DC Designer- Planner

Archibald Alexander 1888 - 1958

Designed the Tidal Basin Bridge and the Whitehurst Freeway in Washington D.C.





Whitehurst Freeway

Tidal Basin Bridge

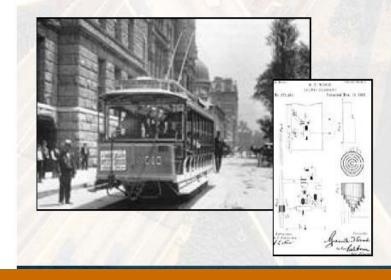




1865-1910 Inventor – Train Communications Systems

Granville T. Woods 1865 - 1910

Invented the multiplex telegraph, which allowed for the tracking and communication of moving trains.





- In 1887 he patented the Synchronous Multiplex Railway Telegraph, which allowed communications between train stations and moving trains.
- In 1888 developed a system for overhead electric conducting lines for railroads



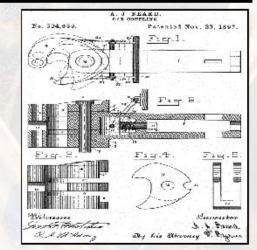
1849 Inventor Rail Coupler

Andrew Beard

1849 - 1921

On November 27, 1897 Beard received a patent for the railroad car-coupler called the "Jenny Coupler". This device automatically joined trains cars by allowing them to bump each other. He also developed the rotary engine in 1892.

 This device eliminated the dangerous job of manually connecting train cars, in which a train worker's arms and legs could be crushed.



1875-1963 Designer of the Automatic Traffic Signals

Garrett A. Morgan 1875 - 1963

Designed the Automatic Traffic Signal, a precursor to today's traffic light.









1892-1926 Aerospace Pilot

Bessie Coleman 1892 - 1926

First African American Female Pilot

- She earned her license on June 15, 1921 from the Federation Aeronautique Internationale
- Taught other black women to fly, gave lectures and performed at flying exhibitions



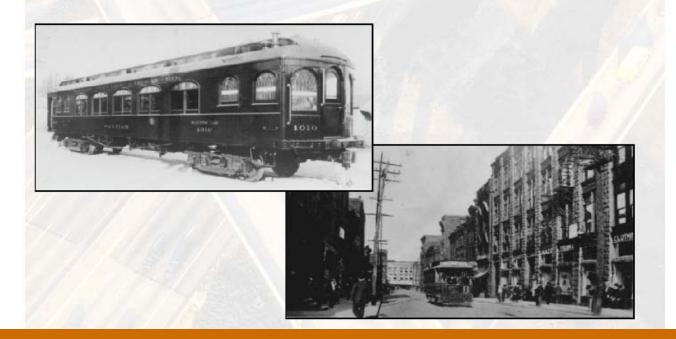




1893 Black creator of the Electric Railway Trolley

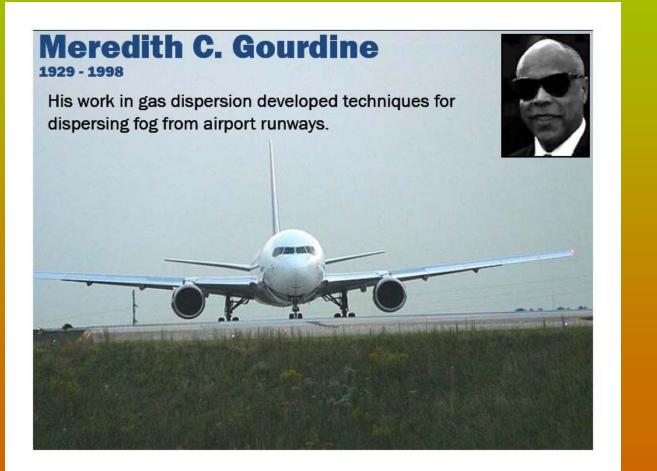
Elbert R. Robinson

Created the Electric Railway Trolley in 1893.





1929-1998 Engineer Designer-Airport Runway Defogging Methodology

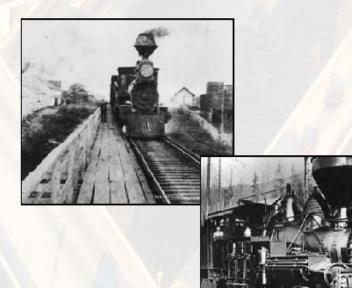


1871 Inventor- Rail Safety Devices

Landrow Bell

Landrow Bell invented a safer smokestack for steam train engines in 1871.

 Bell's invention helped to prevent fires caused by flying sparks and cinders from small smoke stacks, making train travel much safer.



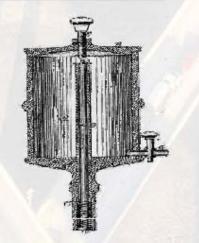


1872 Engineer & Inventor Rail Engine Lubricator

Elijah McCoy 1844 - 1929

A mechanical engineer and inventor, McCoy's highquality industrial inventions (especially his steam engine lubricator) were the basis for the expression "the real McCoy," meaning the real, authentic, or high-quality thing.

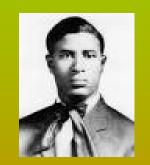
 McCoy's first invention (1872) was a revolutionary way of lubricating steam engines without having to shut them down - this automatic lubricator saved an enormous amount of time and effort in transportation and in industrial production.

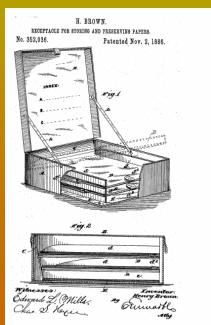






1886 Henry Brown Black Inventor – Fire Proof Box





Henry Brown patented a "receptacle for storing and preserving papers on November 2, 1886" This was a fire and accident safe container made of forged metal, which could be sealed with a lock and key. It was special in that it kept the papers separated. Perhaps an early forerunner to the filofax?





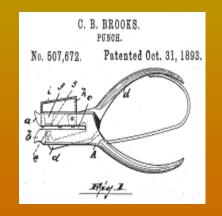
1849-1921 Andrew Jackson Beard Inventor – Rail Couplers

Andrew Beard (1849-1921) In 1892, he patented a rotary engine. In 1897, Andrew Beard patented an improvement to railroad car couplers commonly called the <u>Jenny Coupler</u> (not to be mistaken for the Janney coupler). It did the dangerous job of hooking railroad cars together,. Andrew Beard received \$50,000 for the patent rights to his Jenny coupler.



1896 Charles Brooks Black Inventor - Paper Punch





Charles Brooks - Street Sweeper Truck Charles Brooks of Newark, **New Jersey invented** improvements to street sweeper trucks that he patented on March 17, 1896. Charles Brooks also patented an early paper punch, also called a ticket punch. It was a ticket punch that had a built-in receptacle on one of the jars to collect the round pieces of waste paper and prevent littering.



Black Astronauts





Black Astronauts



Guion Bluford November 22, First African-American astronaut in space <u>STS-8</u> (August 30, 1983) <u>STS-61-A</u> (October 30, 1985) <u>STS-39</u> (April 28, 1991) <u>STS 53</u> (December 2, 1992)



Ronald McNair October 21, 1950 January 28, 1986 disaster

950 Killed in the <u>Space Shuttle Challenger</u> <u>disaster</u>



Frederick D. Gregory January 7, 1941

First African-American to pilot and command a Space Shuttle mission Acting <u>Administrator of NASA</u>, 2005 <u>STS-41-B</u> (February 3, 1984) <u>STS-51-L</u> (January 28, 1986)

<u>STS-51-B</u> (April 29, 1985) <u>STS-33</u> (November 22, 1989) <u>STS-44</u> (November 24, 1991)



Black Astronauts



Charles F. Bolden Jr. Admini August 19, 1946 present

Administrator of NASA, July 17, 2009 -

Ma Oct

<u>Mae Jemison</u> October 17, 1956 First African-American woman in space

August 6, 1950 Veteran of 3 spacewalks

B H Jt



Winston E. Scott

First African-American to walk in space

1986) <u>STS-31</u> (April 24, 1990) <u>STS-45</u> (March 24, 1992) <u>STS-60</u> (February 3, 1994)

STS-47 (September 12, 1992)

STS-55 (April 26, 1993) STS-63 (February 3, 1995)

<u>STS-72</u> (January 11, 1996) <u>STS-87</u> (November 19, 1997)



Black Astronauts



Robert Curbeam March 5, 1962 Veteran of 7 spacewalks



Michael P. Anderson December 25. 1959 †February 1, 2003

Killed in the Space Shuttle Columbia disaster



Stephanie Wilson September 27, 1966



oan Higginbotham August 3, 1964 STS-85 (August 7, 1997) STS-98 (February 7, 2001) STS-116 (December 9, 2006)

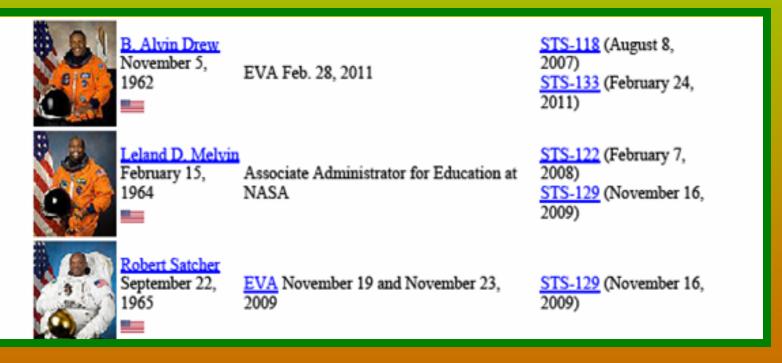
STS-89 (January 22, 1998) STS-107 (January 16, 2003)

STS-121 (July 4, 2006) STS-120 (October 23, 2007) STS-131 (April 5, 2010)

STS-116 (December 9, 2006)



Black Astronauts





Black Astronauts

African-American astronauts who have not traveled into space.

Birth date



First African-American selected for astronaut training (1967) for the <u>MOL</u> program. Died in an aircraft accident.

Livingston Holder September 29, 1956 USAF Astronaut

Michael E. Belt September 9, 1957

Astronaut; retired January 12, 1991



Astronaut



• • •

Astronaut

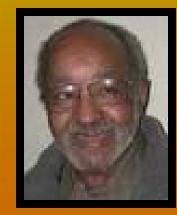


1958 Aerospace Engineer Designer Emmett W. Chappelle



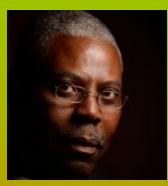
In 1958 Chappelle joined the Research Institute in Baltimore, a division of the Martin Marietta Corporation which was famous for designing airplanes and spacecraft.

While designing instruments for the Mars Viking spacecraft,. He also showed how satellites can monitor luminescence levels to monitor crops (growth rates, water conditions and harvest timing).





Inventor & Technology



Dr. Michel Molaire

Molaire, holder of 58 American patents and 120 foreign patents. Originally from Haiti, Michel Molaire was a research associate at the Office Imaging Research and Development Group of Eastman Kodak now a Principal for **MOLAIRE CONSULTING** LLC. Michel Molaire received his B.S. degree in chemistry, M.S. degree in chemical engineering, and M.B.A. degree from the University of Rochester. He has been with Kodak since 1974. After receiving more than 20 patents, Molaire was inducted into Eastman Kodak's Distinguished Inventor's Gallery in 1994. Senior Research Associate Chemist Senior materials, <u>formulation and coating</u> scientist. You can thank him for some of your most treasured Kodak Moments.

•INVENTED AND DEVELOPED AN ELECTROGRAPHIC IMAGING PROCESS AND MATERIALS USEFUL FOR COLOR FILTER ARRAY FABRICATION AND XEROGRAPHIC MASTER APPLICATIONS. •DEVELOPED AND STUDIED HIGH-TEMPERATURE RESISTANT PHOTOPOLYMERIZABLE COMPOSITIONS USEFUL FOR MACRORESIST, ABRASION RESISTANT COATINGS, PRINTED <u>CIRCUIT BOARD</u> AND AUTOMATED TAPE BONDING APPLICATIONS



Sensor for High Speed Rail



Ken Coleman, Chairman, Accelyris, MIPS Technologies

Ken Coleman, Chairman, Accelyris, MIPS Technologies

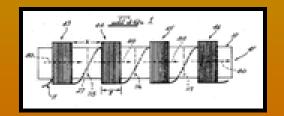
SAN JOSE -- Biometric <u>sensors for high speed rail</u>, bringing the sense of smell to gaming devices, new medicines, new advances in online couponing, mobile communications, environmentally-friendly building materials, clean energy and batteries which can power electric cars for a thousand miles are some of the discoveries in the pipeline among African-American cutting edge firms which will be showcased at The Tech Museum of Innovation Saturday, June 18.

Ken Coleman, chairman of two publicly-traded companies, Accelrys and MIPS Technologies, is among the dynamic technology leaders of the future African-American technological discoveries.



1920 Invented the Electrical Resistor





Otis Boykin is best known for inventing an improved electrical resistor used in computers, radios, television sets and a variety of electronic devices. His resistor helped reduce the cost of those products. Otis Boykin also invented a variable resistor used in guided missile parts, a control unit for heart stimulators, a burglar-proof cash register and a chemical air filter. In total, Otis Boykin patented twentyeight electronic devices Otis Boykin was born on August 29, 1920 in Dallas, Texas. In 1941, after graduating from Fisk University, Otis Boykin was employed as a laboratory assistant for the Majestic Radio and TV Corporation of Chicago, testing automatic controls for airplanes. Boykin-Fruth, Incorp.





1994 Engineering Aerospace Robert Bryant NASA's Langley Institute.

Chemical engineer, Doctor Robert G Bryant works for NASA's Langley Research Center and has patented numerous inventions. Highlighted below are just two of the award winning products that Robert G Bryant has helped invent at Langley. LaRC-SILaRC-SI. Robert Bryant headed the team that invented Soluble Imide (LaRC-SI) the self-bonding thermoplastic that received an R&D 100 award for being one of the most significant new technical products of 1994. While researching resins and adhesives for advanced composites for high-speed aircraft,. According to a NasaTech report LaRC-SI proved to be a moldable, soluble, strong, crack-resistant polymer that could withstand high temperatures and pressures, unlikely to burn, and was resistant to hydrocarbons, lubricants, antifreeze, hydraulic fluid, and detergents. Applications for LaRC-SI have included use with mechanical parts, magnetic components, ceramics, adhesives, composites, flexible circuits, multilayer printed circuits, and coatings on fiber optics, wires, and metals.



1962 Aerospace Engineering



George Edward Alcorn, Jr. received a fouryear academic scholarship to Occidental College in Los Angeles, where he graduated with a Bachelor of Science in **Physics. George Edward Alcorn received his** degree with honors while earning eight letters in basketball and football. George Edward Alcorn earned a Master of Science in Nuclear Physics in 1963 from Howard University, after nine months of study. During the summers of 1962 and 1963, George Alcorn worked as a research engineer for the Space Division of North **America Rockwell. He was involved with** the computer analysis of launch trajectories and orbital mechanics for **Rockwell missiles, including the Titan I and** II, Saturn IV, and the Nova.



2012 Smart Cars –Black Inventor Revolutionizes Transportation CityCar







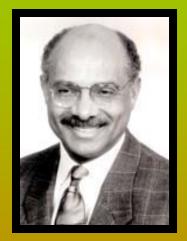
William Lark, Jr., an **African American** PhD. Candidate at MIT, is the chief designer for the CityCar, a stackable small car that folds .

The cars, which are smaller than Smart Cars, are battery-electric, so they don't cause tailpipe emissions. They also weigh less than a 1,000 pounds and are intended to "meet the demand for enclosed personal mobility."

The two-passenger vehicle will be available for use around different cities and allow drivers to pick up and drop off the vehicles at different locations. According to MIT, the car will be available in a city somewhere in Asia as a pilot program within the next five



LEADERS



Franklin White

March 1, 1993-1995 Franklin E. White Chief Executive Officer Los Angeles County Metropolitan

Transit Authority,

Franklin E. White is named MTA's first CEO on February 4 after the merger of Southern California Rapid Transit District (RTD) &Los Angeles County Transportation (LACTC). MTA officially takes over policy-making, bus and rail operations and construction on April 1. 1993. MTA adopts \$3.4 billion budget, the agency's first spending plan. A total of 246 positions and 21 vacancies are eliminated during the merger.
First and only Black METRO CEO

Mr. White had served in 1985 as commissioner of the New York State Department of Transportation.

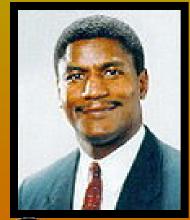




LEADERS



1975 William Thaddeus Coleman Secretary of Transportation





1997 Rodney Slater Secretary of Transportation



LEADERS

1996 - LA Mayor Tom Bradley & RTD Board Member Nate Holden





At 1st and Hill streets, participants at groundbreaking ceremony for Metro Red Line subway on Sept. 29, 1986 included LA Mayor Tom Bradley, LA City Councilmembers John Ferraro and Richard Alatorre, LA County Supervisor Kenneth Hahn, Southern California Rapid Transit District (RTD) Director Nick Patsaouras, RTD Board Member Nate Holden, RTD director of systems design and analysis Joel Sandberg, Los Angeles County Transportation (LACTC) Executive Director Neil Peterson and LACTC Commissioner Ray Grabinski.





LEADERS

1974-1983 Nate Holden



California State Senator 1974-1978 where he authored and co-authored more than 70 bills that became law.
Los Angeles City Council (1987 to 2003).

- •Chairman of the Air Quality and Waste Management Committee
- Chairman of the Transportation Committee.
 Chairman of the Inter-Government Relations Committee
- •Vice-Chairman of the Public Safety Committee.
- Vice-Chairman of the Rapid Transit District (RTD)
 Public Utilities Transit and Energy Committee.

•Member of the LA County Transportation Committee (LACTC)

•Member of the LA Metropolitan Transit Authority (LAMTA).







LEADERS

1973-1993 Thomas "Tom" Bradley Mayor of Los Angeles, California – Five Terms

On January 29, 1993, former Los Angeles Mayor Tom Bradley stood among a swarm of public officials and transit agency staffers on the cramped Pershing Square subway platform. Standing shoulders above everyone else, including then-California Gov. Pete Wilson, Bradley proudly inaugurated the opening of the first modern subway in Los Angeles.

"Twenty years is a long time. That's how long we have been pushing on this dream, this vision of what we should do in Los Angeles County," Bradley said, referring to the subway's quixotic path to reality in '93. "I made a promise when I ran for mayor in 1973 that in 18 months, we'd deliver by breaking ground for <u>rapid transit. Well, I missed by only a few months...</u>"





LEADERS



1972-Present Former MTA Board Chair Yvonne Brathwaite Burke



March 29, 2012, nominated by President Barach Obama to serve as Director of the Amtrak Board of Directors.

- •1967-1972 California State Assemblymember, 63rd District
- •1972-1978 California's First Black Congresswoman
- •1979-1980 Los Angeles County Board of Supervisors 4th District
- •1972-2008 Los Angeles County Board of Supervisors 2nd District



LEADERS



2013- MARK RIDLEY-THOMAS, Los Angeles County Board of Supervisors Supervisor District 2nd

MRT vision to connect the Crenshaw public transit rail line to the airport. "This would link airport terminals to Metro's Crenshaw and Green lines with an "automated people mover" similar to those used in airports such as San Francisco and Newark, New Jersey. "The Crenshaw rail line is scheduled to open in 2019"

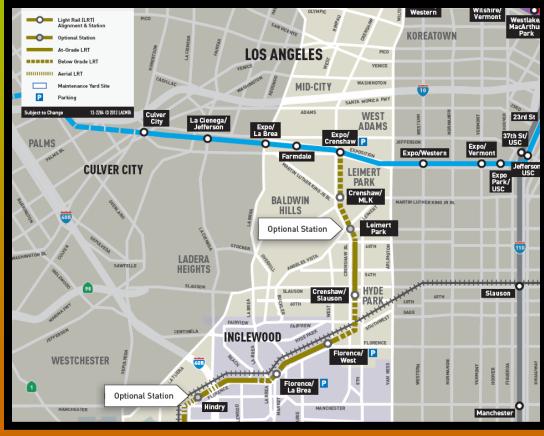


•2008 – Present Los Angeles County Board of Supervisors
•2006-2008 California State Assemblymember, 26th District
•2002-2006 California State Assemblymember, 48th District
•1991-2002 Los Angeles City Council
•1972-1978 California State Assembleman



LEADERS

Crenshaw & Exposition Metro Line Construction





LEADERS



2007 & 2011 City of Los Angeles Council member Herb J. Wesson, Jr. President of Los Angeles City Council Member of the Exposition Metro Line Construction

District boundaries include the Crenshaw District & the Lemert historically black neighborhood.

•2007 – Present of City of Los Angeles

- •Council District of the 10th
- •Chair of the Arts, Parks and Neighborhoods Committee
- •Chairs the Rules and Elections Committee.
- •Member of the Housing, Community and Economic Development (HCED)
- •1998-2004 State Assembly District 47th



Chief of Staff to 2nd District Supervisor Yvonne Burke
Chief of Staff to former 10th District Councilmember Nate Holden
Metro



African Americans in Transportation 1979 - 2000 U. S. Representative & Congressman Julian C. Dixon





Plaque honoring the late Congressman Julian Dixon. This special bronze plaque signifies the tremendous gratitude MTA and the region owe to Congressman Julian Dixon for the accomplishments he made in improving transportation for Los Angeles County," said MTA Board Chairman John Fasana. "Not only a champion of rail, Congressman Dixon also helped secure funding to revamp MTA's bus service and provide funding for more than a dozen municipal bus operators in Los Angeles County." The Metro Red Line Seventh Street Metro Center station was selected to honor the late Congressman Dixon because the station brings together two important rail lines, both of

which Dixon was key in assisting with funding.

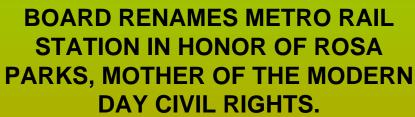
The 7th Street Metro Center Station, the junction of the Metro Red Line subway system and the Metro Blue Line light rail system, has been renamed the 7th Street/Metro Center/Julian Dixon Metro Rail Station. The plaque unveiled today will be placed in a prominent location within the station. He was 'The Voice' of Los Angeles County transportation in Washington, leading the effort to secure federal funding for Metro Rail and, together with the late Tom Bradley and Kenny Hahn, put together the combination of federal, state and local funding that established this critical component of Los Angeles' mass transit system," said Burke.



He was elected to the California State Assembly as a Democrat in 1972, and served in that body for three terms. Dixon was elected to the House of Representatives in 1978. He chaired the rules committee at the 1984 Democratic National Convention and the ethics probe into Speaker Jim Wright. Dixon won re-election to the 107th United States Congress, but died of a heart attack in December 2000.



April 23, 1998 METRO Rosa Parks Station









Parks' refusal to give up her seat on a Montgomery, Alabama bus in1955 was a milestone in the modern day civil rights movement. "Rosa Parks is clearly a symbol of civil rights in the 20th Century, said Los Angeles Mayor and MTA Board Chairman Richard J. Riordan. "We are honored to recognize her contributions to American history in this public way. I hope MTA's passengers will recall her actions when passing through the Rosa Parks Station. Parks was arrested as the result of her quiet protest. Her defiance touched off a wave of other non-violent civil rights demonstrations throughout the South and the rest of country, and led to a boycott of Montgomery's city bus system which lasted 381 days. The renaming follows a celebration on March 20, 1998 when officials unveiled an artist's rendering of a bronze plaque to be installed at the station in Parks' honor.











Other Black Transportation Inventors

African American Inventors

James S. Adams: Airplane Propeller (1920)

Edmond Berger: Spark Plug (1839)

William F. Burr: Railroad Switch Device (1899)

Richard A. Butler: Train Alarm (1897)

Issac R. Johnson: Bicycle Frame (1899)

Alexander Miles: Elevator (1887)

William B. Purvis: Magnetic Car Balancing Device (1895)





Other Black Transportation Inventors

African American Inventors

Humphrey Reynolds: Safety Gate for Bridges (1890)

Charles M. Banks: Jack/Hydraulic Jack (1930)

Richard Spikes: Automatic Gear Shift (1932)

Robert L. Campbell: Valve Gear for Steam Engines (1903)

Walter N. McClennan: Automatic Railway Car Door (1920)

Samuel Moore: Locomotive Headlight (1928)

John F. Pickering: Airship (1900)





February 12, 2013

Black History Month Celebration

METRO

(A.A.E.A)African American Employees Association



