

# **MISSION ZERO CORRIDOR**

## **EXECUTIVE SUMMARY**

**THE FUTURE OF HIGHWAYS**  
**A BLUEPRINTS FOR SUCCESSFUL COMMUNITIES PROJECT OF THE GEORGIA CONSERVANCY**  
**WITH THE SCHOOL OF ARCHITECTURE, GEORGIA INSTITUTE OF TECHNOLOGY**  
**FALL 2014**



Our mission is to protect and conserve Georgia's natural resources through advocacy, engagement and collaboration.

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**WE ARE GRATEFUL TO THE GENEROUS DONORS WHO SUPPORTED THE  
MISSION ZERO CORRIDOR BLUEPRINTS:**



**Interface<sup>®</sup>**

**THE FUTURE OF HIGHWAYS PROJECT IS THE RESULT OF A  
DESIGN + RESEARCH STUDIO IN THE SCHOOL OF ARCHITECTURE,  
FALL 2014**

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# THE GEORGIA CONSERVANCY BLUEPRINTS PROGRAM

Highways everywhere connect our communities but also create critical divides. This pervasive infrastructure is continuously maintained, rebuilt and expanded, yet thoughtful dialogue on highway impacts and detriments has not occurred. This Mission Zero® Corridor *Blueprints* project examines possible reinvention for the future of highways to have only positive impacts on our communities and our environments.

The Georgia Conservancy's *Blueprints for Successful Communities* program, in partnership with faculty and graduate students in the School of Architecture at the Georgia Institute of Technology and a studio instruction team from Perkins+Will, Architects, in Atlanta, examined

the potential that may exist to transform highway corridors to roadways that have far less degrading environmental impacts. This Georgia Conservancy-sponsored *Blueprints* study focuses on the Ray C. Anderson Memorial Highway, from exits 2 to 18 on Interstate 85 in West Georgia. The project is named Mission Zero Corridor, adopting the namesake of Interface's Mission Zero® initiative to become a zero footprint company by 2020.

Ray Anderson inspired others through his methods of attracting by demonstration and catalyzing change by inspiration. This is the spirit and legacy that live on through the business and philanthropy of his company, Interface, and through the philanthropy of the Ray C. Anderson Foundation.



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### VIEW OF RAY C. ANDERSON MEMORIAL HIGHWAY FROM EXIT 6

Essentially, the Mission Zero Corridor project provides the opportunity to show the world what is possible along a travel corridor, and to elevate the identity of West Georgia by creating brand new economic development and tourism activities through a reinvented corridor.

#### *Blueprints* Process

*Blueprints for Successful Communities (Blueprints)* is a 20-year-old sustainable community design effort within the Sustainable Growth program of the Georgia Conservancy. The *Blueprints* model (completed in 38 communities around the state) focuses on local needs, challenges and assets informed by stakeholder engagement. This Design + Research *Blueprints* concentrates on sustainable highway

design and a framework that enables this design. This *Blueprints* process did not involve stakeholder engagement beyond interactions with local experts, the Ray C. Anderson Foundation, and select Interface staff, to inform them of the effort and gather their feedback. Instead, this *Blueprints* serves as a research endeavor whose results will inform future traditional *Blueprints*, as highways and roads impact all of our communities, and the lessons learned can be applied to community design across the State of Georgia and nationally.

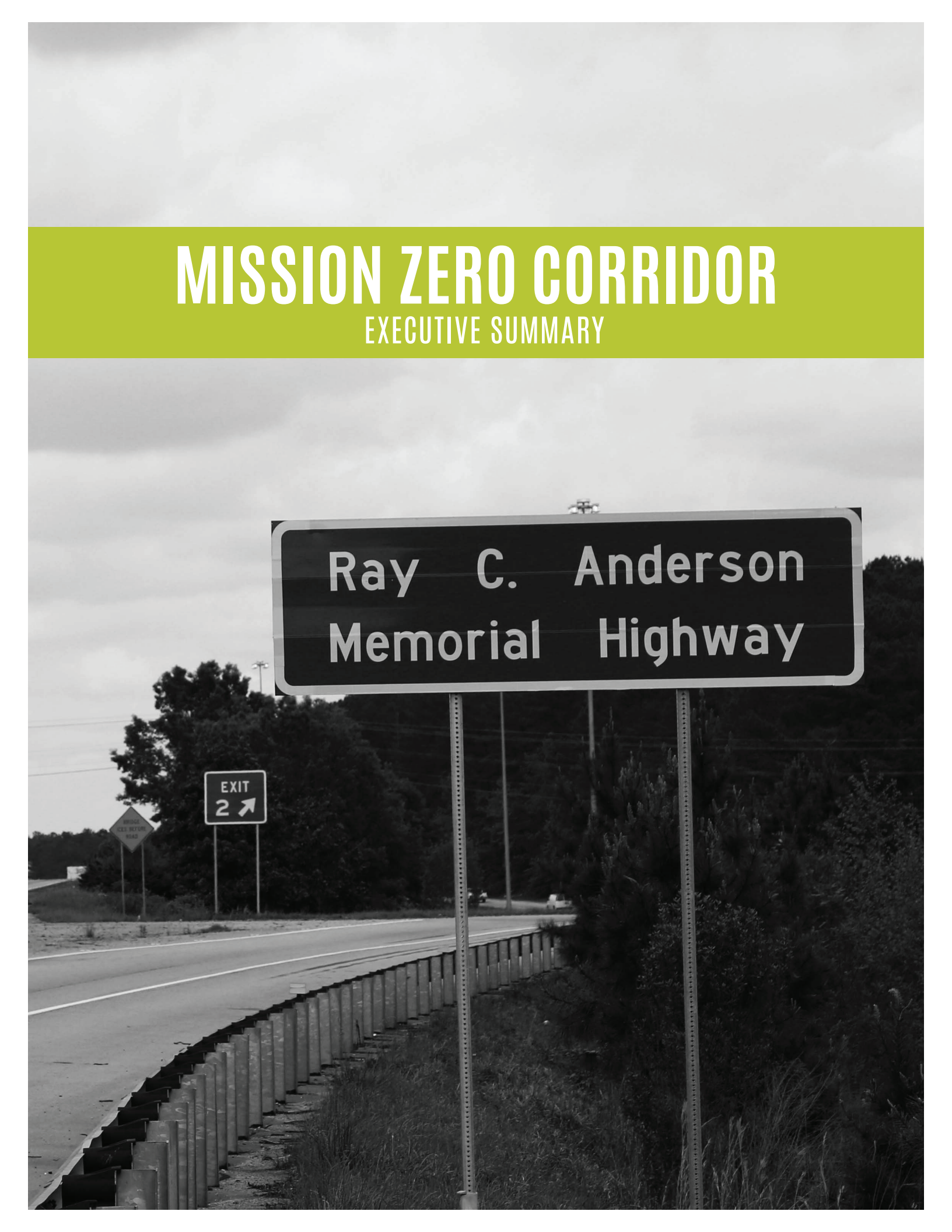
THROUGH A FOCUS ON PEOPLE,  
PLACE AND TECHNOLOGY, THE  
HIGHWAY OF THE FUTURE WILL  
BE NET ZERO, RESTORATIVE,  
GENERATIVE, RESPONSIBLE,  
RESPECTFUL AND INFORMATIVE  
BY 2040.

IN DOING SO, IT WILL SET A NEW  
STANDARD THROUGH  
THE POWER OF ITS IMPACT.



# MISSION ZERO CORRIDOR

## EXECUTIVE SUMMARY



Ray C. Anderson  
Memorial Highway

# WHAT DOES A REGENERATIVE, RESTORATIVE, & SUSTAINABLE HIGHWAY LOOK LIKE?

The *Blueprints* team was asked to examine the 16-mile stretch of Interstate 85 in Troup County, Georgia dedicated to Ray C. Anderson in 2014, in honor of his outstanding achievement and the legacy he left for his hometown of West Point, and for the rest of the world. An interstate highway was used to honor a true environmentalist. But, how can a piece of infrastructure, that is inherently unsustainable and a large catalyst for environmental pollution and degradation, truly begin to commemorate Ray's legacy and his pursuit of sustainability?

That question serves as the design challenge presented to the faculty and students in the Georgia Tech School of Architecture Design + Research studio by the Georgia Conservancy and the Ray C. Anderson Foundation in the fall of 2014. Designing a highway and rethinking the purpose and function of a highway corridor is a tremendous task, in addition to the goal of honoring Ray's legacy and vision. The idea that it should be sustainable, with regenerative and restorative properties, helped to guide the discussion and studio process. Additionally, by narrowing the study area in focus (the 16-mile section of I-85), the team could begin to work on a framework and test its application, before recommending the solutions globally.



INTERSTATE 85 / RAY C. ANDERSON MEMORIAL HIGHWAY

Throughout the course of an academic semester, the students were asked to explore these questions and address the problems through the lens of urban design. This required interim presentations to the Ray C. Anderson Foundation and selected Interface staff, to integrate their ideas and more intimate knowledge of Ray with the class findings. The studio familiarized themselves with Interface Inc.'s initiative to be environmentally neutral (net zero) by the year 2020, known as Mission Zero 2020. The Mission Zero 2020 framework provides a proven methodology to develop an action plan to tackle the challenge of a sustainable highway vision while injecting a piece of Ray's legacy into his highway.

The Mission Zero 2020 plan served as a model but was modified to address the problems on highways and then determine appropriate solutions and goals that would define the success of the corridor. To understand the depth of the issues, the students were required to holistically examine the varying influences (ecology, culture, and infrastructure) and overlay these with each other to identify conflict points, opportunities, and then to inform a plan of action. The established framework can then direct locations for employing specific technology tactics for improving environmental sustainability, allowing these to change over time through the rapid pace of innovations.



# THE ARCHEOLOGISTS OF SOME FUTURE AGE WILL STUDY THE FREEWAY TO UNDERSTAND WHO WE WERE.

DAVID BRODSKY, L.A. FREEWAY (1981)

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## A New National Network

The development of the highway offered opportunities for an intelligent, multi-performative system with national breadth. Innovative ideas emerged, basing the new network on landscapes, watersheds, regional topographies, national resources and existing infrastructure networks.

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## The Federal-Aid Highway Act of 1956

The Interstate Highway system, instead of incorporating innovative solutions, was designed to be a frozen, dumb network - driven by standardization, efficiency and cost. The process excluded any information that did not fit into the internal engineering equations, such as the real cost of the automobile transportation and the ramifications it would bring.

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## The Outcome + Potential

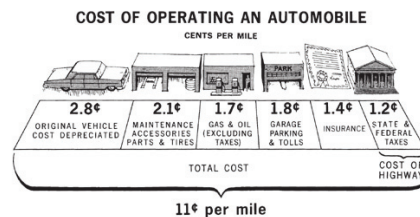
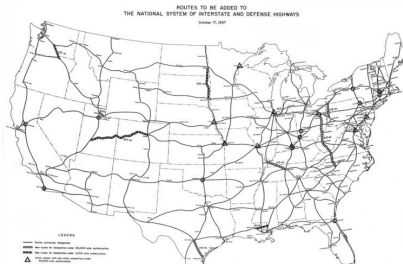
The result was a system entirely segregated from its surroundings. This segregation, meant to insulate the system and protect the surroundings, created a sprawling barrier between habitats and communities. Though highways have created insurmountable problems, they now provide a national-scale platform for reinvention and positive change.

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# THE HIGHWAY WAS ENGINEERED AS AN INFLEXIBLE, TOTALIZING AND NEUTRALIZING SYSTEM: COMPLETELY SEGREGATED FROM INTERACTION WITH ITS SURROUNDINGS.

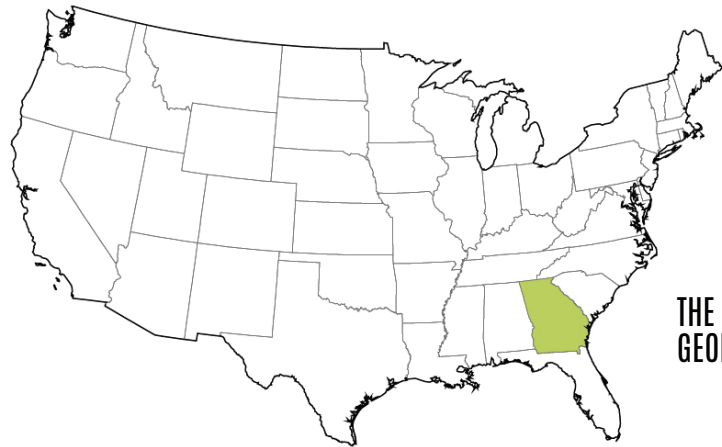


**Highways for National Defense**  
By C. H. PURCELL, State Highway Engineer

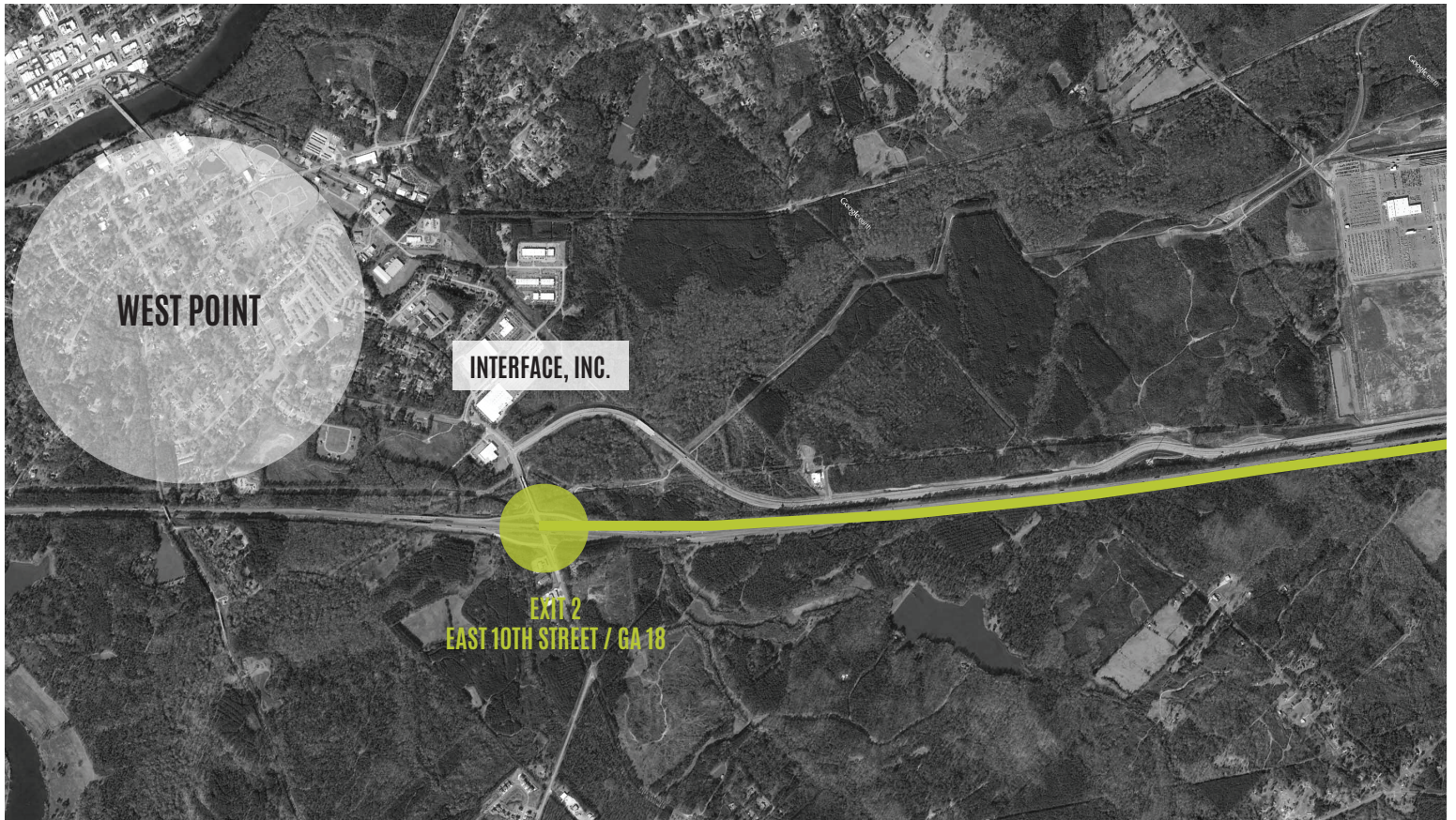


# THE STUDY AREA IN FOCUS

# THE RAY C. ANDERSON MEMORIAL HIGHWAY MILES 1-6

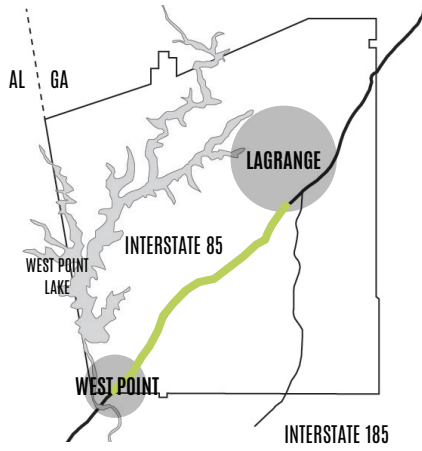


THE STATE OF  
GEORGIA

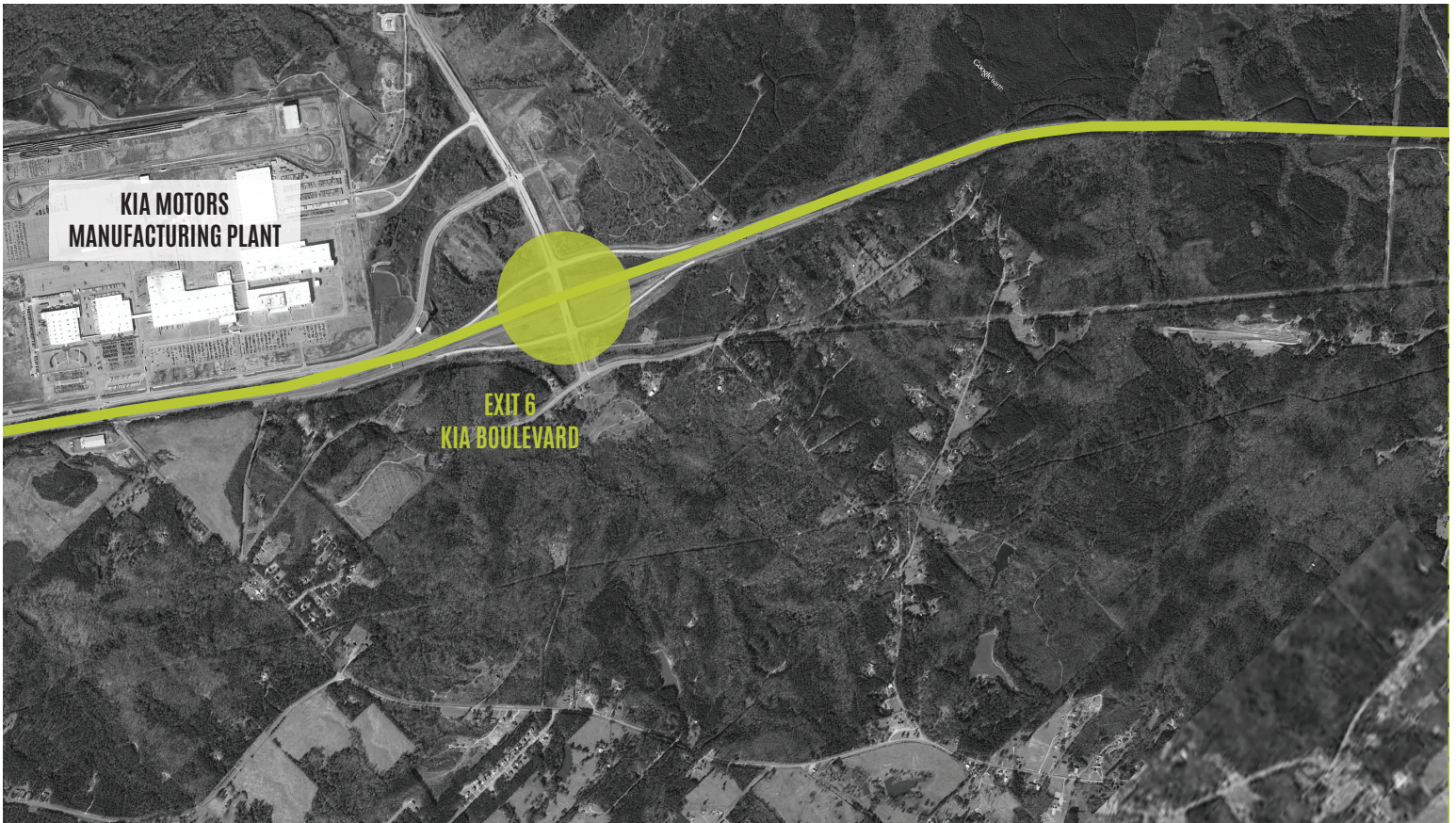




**TROUP  
COUNTY**

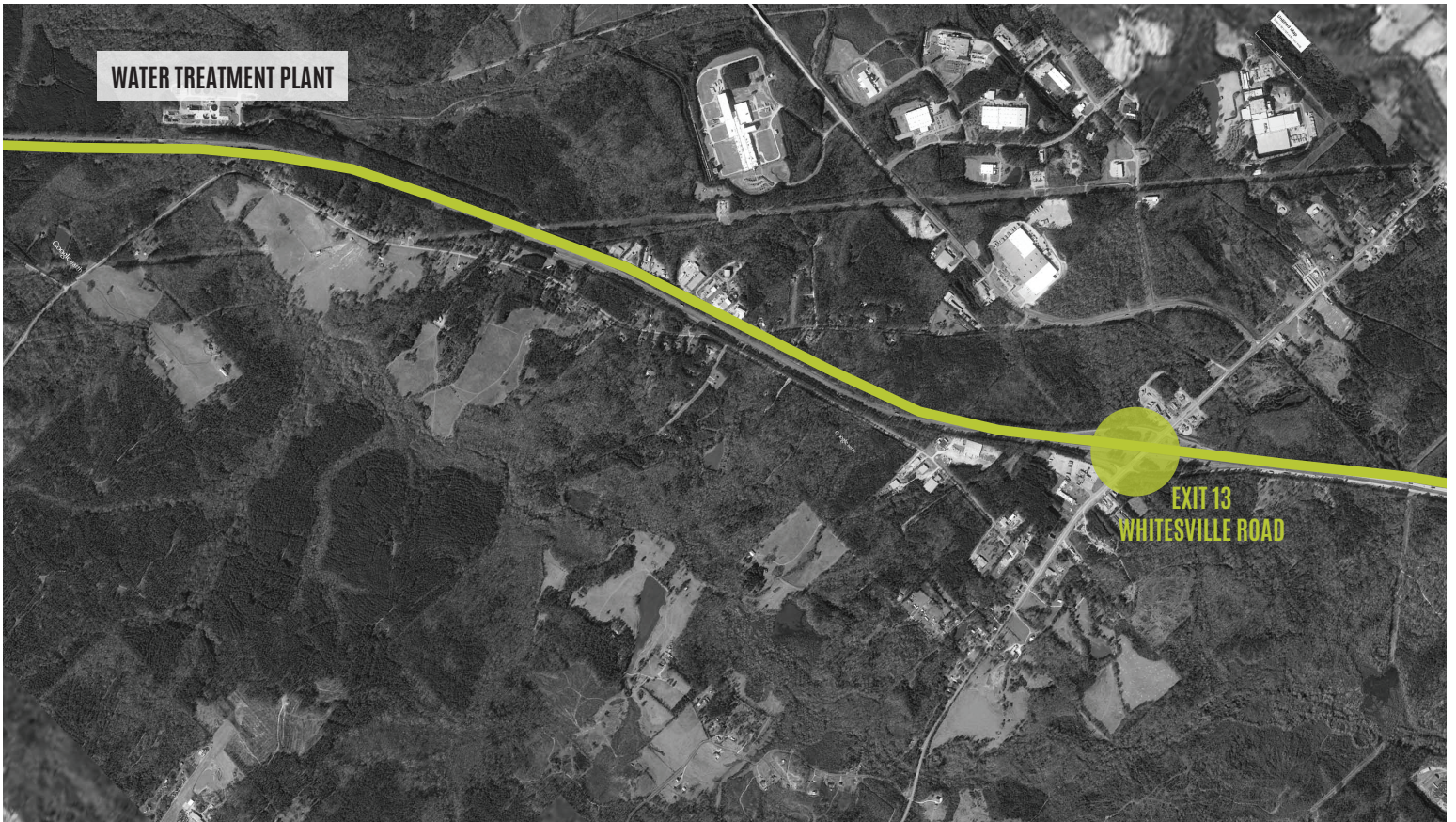


**RAY C. ANDERSON  
MEMORIAL HIGHWAY  
(EXITS 2-18)**



## THE STUDY AREA IN FOCUS

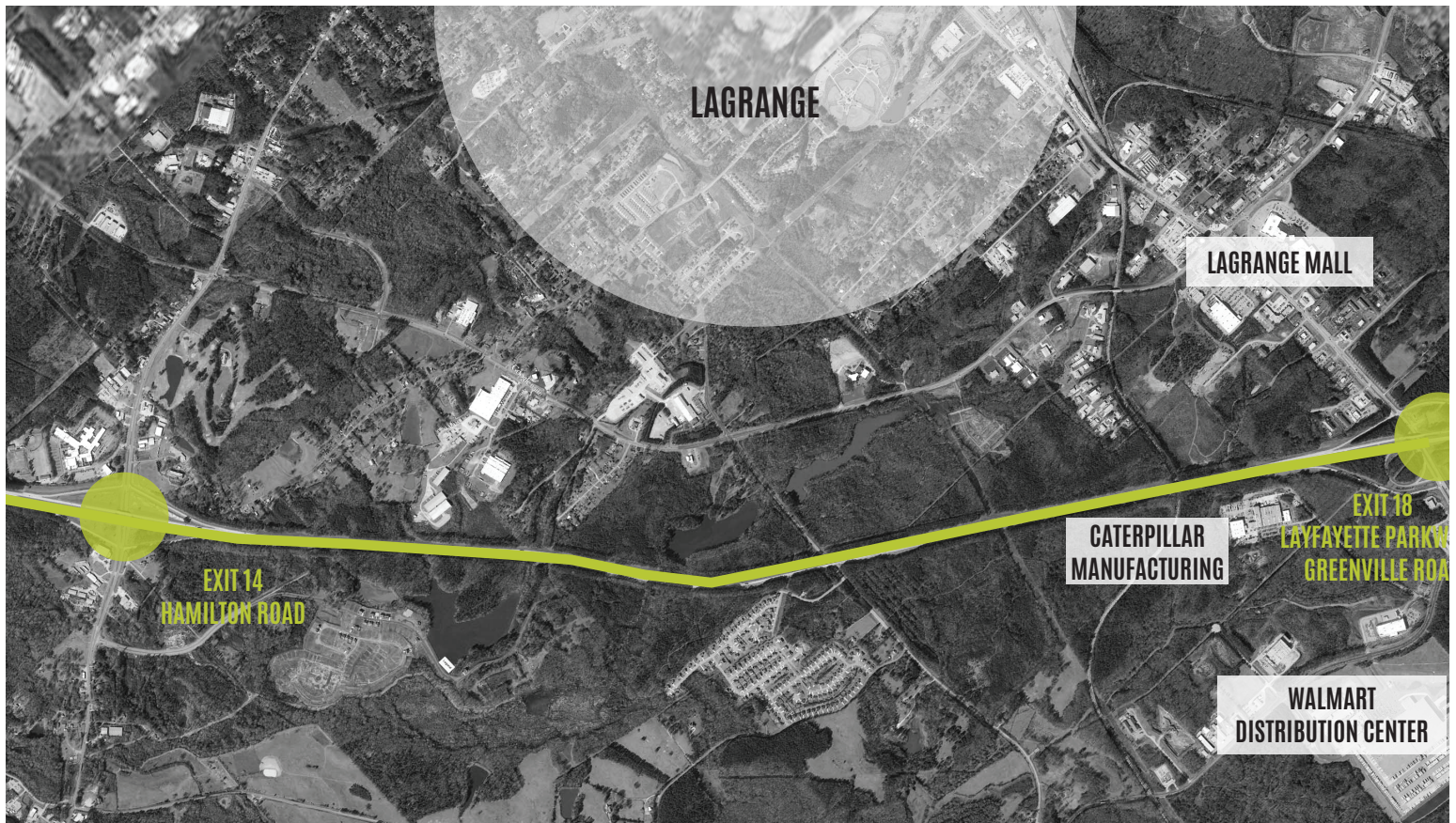
# THE RAY C. ANDERSON MEMORIAL HIGHWAY MILES 7-16



# TROUP COUNTY IS A SMALL PLACE WITH BIG INDUSTRY AND AN ABUNDANCE OF OPPORTUNITIES.

**\$2,470,774,000**  
**IN MANUFACTURER SHIPMENTS IN TROUP COUNTY IN 2007**

Troup County was settled in 1827 with LaGrange incorporated as the county seat. After the turn of the century, Troup County was a center for the textile industry, a strong economic force that has continued to sustain the area. The county is now home to a variety of industries, primarily manufacturing and distribution, and continues to grow this commerce. This industry demanded better transportation, and Interstate 85 was constructed to better enable the transport of the various goods from Troup County. Not only is the county within close proximity to some of the fastest growing cities in the southeast, but it is also within a network of railroads and interstate highways and near an international airport. Notably, KIA Motors located a manufacturing plant in West Point in 2009 and is a large employer of nearby residents. Shipments of new automobiles reinforces the importance of railroad and highway transportation infrastructures.



# 1 | MISSION ZERO 2020





# AN INDUSTRIALIST TURNED ENVIRONMENTALIST CHAMPIONED THE IDEA OF ECONOMIC PROSPERITY IN HARMONY WITH NATURE

Ray C. Anderson was born and raised in West Point, Georgia. In 1969 he was first introduced to carpet tiles and understood the necessity for this type of modular design in the work place. In 1973, he established the first American, and the world's largest carpet tile manufacturing company, Interface, Inc.

Unfortunately, the carpet industry is particularly hard on natural resources and the environment because of its consumption of water and use of chemical dyes and petroleum. Ray was questioned on the environmental impact of Interface's industrial practices, a thought he hadn't previously considered, but knew he needed to take responsibility for. Ray established a task force within Interface to address the environmental questions put forth by customers, and this group sought to find answers that are not merely related to "compliance."

Finding a way to internalize the environmental costs of his company wouldn't be easy; the industry had functioned in similar ways for many decades. Ray and Interface developed a framework to eliminate their environmental impact but maintain productivity and still turn a profit. This seven-pronged, closed loop system holistically addresses the various components of the manufacturing process without damage to the environment. This Mission Zero framework is a "promise to eliminate any negative impact our company may have on the environment by the year 2020."



## MISSION ZERO 2020 INSPIRATION

# THE POWER OF ONE CHANGE BEGINS WITH EVERY INDIVIDUAL.



**RAY C. ANDERSON**  
(1934-2011)

Ray's focus was on building Interface and making great products, and he was extremely successful at this. Interface became the world's largest carpet tile manufacturing company by 1987 with his leadership.

In 1994, Ray found a book on his desk, *The Ecology of Commerce*, and something clicked. With his company's global reach and manufacturing footprint, he was in a leading position to do something very real and very important towards building a more sustainable world. Corporate sustainability has been realized as an integral part of a business plan, because of Ray's vision. What Ray did seems commonplace now, but 20 years ago it was truly revolutionary.

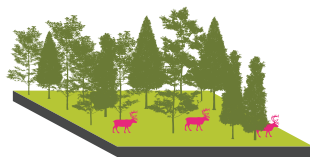
## Paul Hawken's *The Ecology of Commerce* was Ray's wake up call.

While reading *The Ecology of Commerce*, Ray encountered a life-changing metaphor. In the book, Hawken recounts a situation during World War Two, when the U.S. Coast Guard populated St. Matthew Island in the Bering Sea with 29 reindeer for an emergency food resource. After the war, the

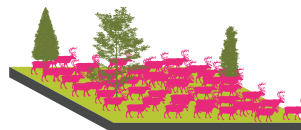
island was abandoned. In the next 19 years, the population exploded to over 6,000 reindeer. Three years later, the population had decreased to only 42 reindeer. The island could not sustain continuous increase in demand by the reindeer, ending in death for a majority of the population.



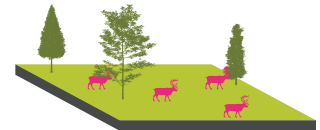
**ST. MATTHEW ISLAND,  
BERING SEA**



**1944  
29 REINDEER**



**1963  
6000+ REINDEER**



**1966  
42 REINDEER**

**(PRE-EPIPHANY) | (POST-EPIPHANY)**

EARLY YEARS	GEORGIA TECH	YOUNG PROFESSIONAL	INTERFACE INC.	MISSION ZERO	AFTER RAY
<p>July 28, 1934, Ray is born to William &amp; Ruth Anderson</p>	<p>1956, Ray graduates from Georgia Tech with highest honors and a degree in industrial engineering</p>	<p>1969, Ray is first introduced to carpet tiles. This would be the innovation to drive his future flooring company, Interface</p>	<p>1973, Interface Inc. is officially established</p> <p>1983, Interface Inc. goes public &amp; expands its market internationally</p> <p>1994, Customers begin asking about Interface's environmental policies</p>	<p><b>1994,</b> Mission Zero is born, the 2020 deadline comes soon after</p> <p><b>1998,</b> <u>Mid-Course Correction</u> is published, chronicling Ray's journey to establishing a sustainable company</p> <p><b>2009,</b> <u>Confessions of a Radical Industrialist</u> is published, telling Ray's story of building Interface into a net zero company</p>	<p>August 8, 2011, At the age of 77, Ray passes away from cancer</p> <p>July 30, 2014, Georgia Gov. Nathan Deal signs legislation creating the Ray C. Anderson Memorial Highway in Troup County</p> <p>August 18, 2014, Mission Zero Corridor Design + Research Studio begins at Georgia Tech</p>

**1994**

**Ray reads Ecology Of Commerce and has a spear in the chest moment, a moment when everything became clear**

Ray took the St. Matthew Island situations as a metaphor for our planet and mankind's ever growing need for resources to heart. He often referred to this epiphany as his "spear in the chest" moment.

**PAST**

The earth was home to balanced ecosystems with closed loops allowing all species to thrive.

**PRESENT**

Continuous increase in the use of natural resources has endangered many species and created unbalanced ecosystems.

**FUTURE**

An earth devoid of its vital resources leads to dangerous changes in its climate, habitats and ability to sustain life.

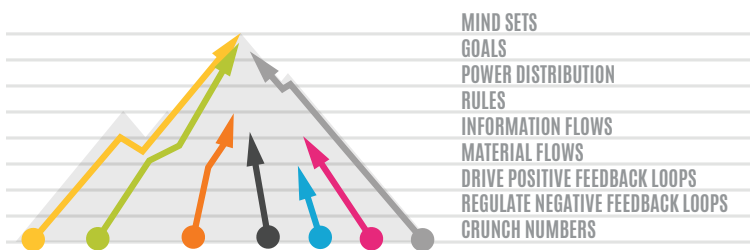
## MISSION ZERO 2020 & INTERFACE

**RAY WAS A REVOLUTIONARY: HE MADE A FRAMEWORK FOR INDUSTRY TO BEGIN A PATH OF NEUTRAL IMPACT TO THE ENVIRONMENT.**

Mission Zero is a collection of programs developed to move Interface towards a net zero impact on the environment by 2020. The seven framework areas (at right) focus on specific tasks that will help reduce Interface's environmental footprint and create a more sustainable method of business. These areas are constantly reevaluated to ensure constant success by using the Mount Sustainability chart.





To Interface, Mission Zero means taking the time to understand the natural world and all of its species, and to understand how everything we do, take, make and waste affects nature's balance and, ultimately, our children. From this knowledge, they build processes throughout the business that mimic nature and support the environment, while consistently providing beautiful, high performing products.

**The quest for Mount Sustainability was about systems thinking, using various leverage points, pathways and timelines to achieve net-zero.**



These nine leverage points provide incremental tasks to keep constant movement to net zero. Ray knew this would be a hard task and Interface would need a consistent means to measure their success. The leverage points are ordered from the easiest to achieve to the most difficult task at the peak.

## Interface's Mission Zero 2020 Framework

PATH	GOAL / ACTION AS OF YEAR END 2014
 <b>ZERO WASTE</b>	<p>Interface defined waste as any cost that doesn't improve value, including misdirected orders and bad debts.</p> <p><b>WASTE SENT TO LANDFILL DOWN 91% SINCE 1996</b></p>
 <b>BENIGN EMISSIONS</b>	<p>The goal is to release increasingly benign emissions, working up the supply chain.</p> <p><b>NET GREENHOUSE GAS EMISSIONS PER UNIT OF PRODUCT ARE DOWN 73% SINCE 1996</b></p>
 <b>EFFICIENCY &amp; RENEWABLES</b>	<p>Increasing efficiency is like lightening your backpack for the climb up the mountain.</p> <p><b>WATER USED PER UNIT OF PRODUCTION DOWN 87%</b>  <b>RENEWABLE ENERGY SOURCES USED: 45%</b></p>
 <b>CLOSED-LOOP RECYCLING</b>	<p>Facilities should function like plants; Interface imitated nature's way of turning waste into useful material.</p> <p><b>RECYCLED &amp; BIO-BASED MATERIALS: 50%</b></p>
 <b>RESOURCE-EFFICIENT TRANSPORT</b>	<p>For Interface, this meant commuting logistics, facility siting, and working with truckers.</p> <p><b>18,044 TREES PLANTED IN 2010 TO OFFSET EMISSIONS FROM BUSINESS AIR TRAVEL AND CAR COMMUTING FOR 540 EMPLOYEES</b></p>
 <b>CHANGING ATTITUDES</b>	<p>Interface defined stakeholders broadly. This aimed to sensitize both customers and employees.</p>
 <b>SPREADING THE WORD</b>	<p>Interface sought to redesign commerce, whether by changing the company, contractors and suppliers, or other businesses.</p>

**INTERFACE'S SUCCESSFUL DRIVE TOWARDS SUSTAINABILITY CHANGED THE WAY INDUSTRIES OPERATED ON A GLOBAL SCALE. RAY PIONEERED THE IDEA THAT BUSINESS COULD THRIVE IN HARMONY WITH THE ENVIRONMENT.**

# MISSION ZERO CORRIDOR

**MISSION ZERO 2020  
CREATED A FRAMEWORK  
FOR TRANSFORMING  
INTERFACE INTO A NET-ZERO,  
RESTORATIVE COMPANY.**

**MISSION ZERO CORRIDOR  
IS A FRAMEWORK FOR  
HIGHWAYS TO REACH THE  
SAME GOALS.**

## Mission Zero Corridor 2040 Framework for Highways Everywhere

### PATH

### GOAL



#### POLLUTION REMEDIATION

The highway of the future will not only reverse pollution, but will make the world a cleaner, more beautiful place.



#### RESOURCE EFFICIENCY

The highway of the future will not only save resources, but generate new resources.



#### WILDLIFE CONSERVATION

The highway of the future will not only restore degraded ecosystems, but create new and improved habitats.



#### LIFE SAFETY

The highway of the future will not only reduce the number of fatalities associated with them, but become the safest mode of transportation.



#### CULTURAL EXCHANGE

The highway of the future will not only reconnect communities, it will become a new venue for social interaction.



#### CHANGING ATTITUDES

The highway of the future will not only instill moral awareness, but empower people to be symbiotic with our environment.

**IN THE SAME WAY THAT INTERFACE'S LOCAL MISSION ZERO 2020 IMPACTED INDUSTRY ON A GLOBAL SCALE, MISSION ZERO CORRIDOR AIMS TO BE A LOCAL MODEL FOR SUSTAINABLE HIGHWAYS WITH GLOBAL IMPACTS. BUT FIRST, WE MUST UNDERSTAND HIGHWAYS.**

**The framework is a platform for employing strategies at the global and local levels.**

## **LEVEL 1: GLOBAL**

### **INTERSTATE HIGHWAYS EVERYWHERE**

1. Understand the issues
2. Create an ideal vision
3. Establish a platform for change

## **LEVEL 2: LOCAL**

### **RAY C. ANDERSON MEMORIAL HIGHWAY**

1. Understand the place
2. Create a vision for this place
3. Determine the best solutions for this place

**MISSION ZERO.  
GLOBAL FUNCTION.  
LOCAL IMPACT.**

# MISSION ZERO CORRIDOR TODAY

## HIGHWAYS TODAY CAN BE DESCRIBED IN THREE FUNDAMENTAL SYSTEMS.

1. ECOLOGICAL
2. SOCIAL
3. INFRASTRUCTURAL

Ray's legacy was honored in the State of Georgia through the dedication of exits 2 through 18 of Interstate 85 in his name, the Ray C. Anderson Memorial Highway. After accomplishing so much in environmental stewardship, Ray has left all the appropriate tools and impetus to begin a new challenge, redeveloping the highway, starting with this 16-mile stretch. Ray's method requires a deep understanding of all the mechanisms and issues surrounding a problem. The primary function of highways is to connect - people, goods, services. This affects the local infrastructure and communities in between as well as the surrounding ecologies. Sustainability exists when these ecosystems work together harmoniously.

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### Ecological System

Defined by the geography of water and the ecosystems it creates

Highways will eradicate all negative impacts on people and the environment through corridor wide tactical solutions. The highway of the future will, mile by mile, produce more energy than it consumes and provide for the infrastructure of sustainable transportation to secure the longevity of our

resources. The highway of the future will, mile by mile, sequester all forms of pollution it creates and reuse all of the resources it interacts with to ensure the survival of our ecosystems.

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### Social System

Defined by the communities and economies along the highway

Highways will heal the wrongs of the past while building a better tomorrow through the restoration of social and ecological systems. The highway of the future will, mile by mile, reconnect, enhance and restore our existing communities to stimulate cultural exchange, economic

productivity and local identity. The highway of the future will, mile by mile, replenish and revive our natural habitats, replant native varieties and generate new ecosystems to safeguard our plant and animal species.

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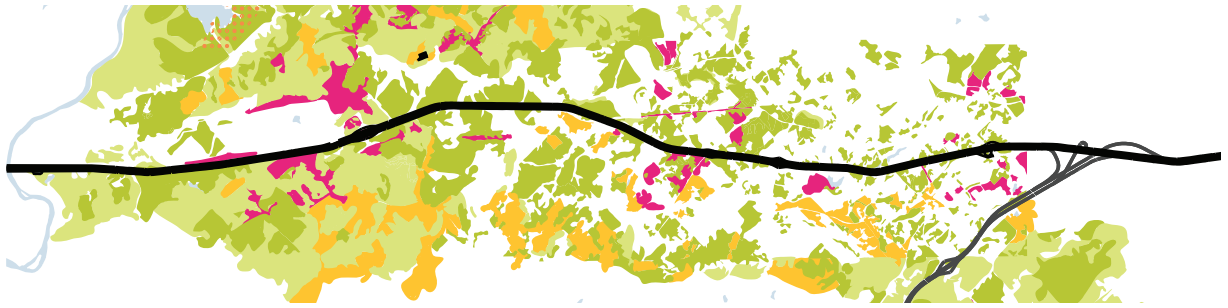
### Infrastructural System

Defined by the opportunity to divide or connect the existing frameworks

Highways will create new, positive impacts for people and the environment by promoting responsible development. The highway of the future will, mile by mile, allow for new development patterns that cultivate reciprocity between natural, social and built environments to ensure responsible

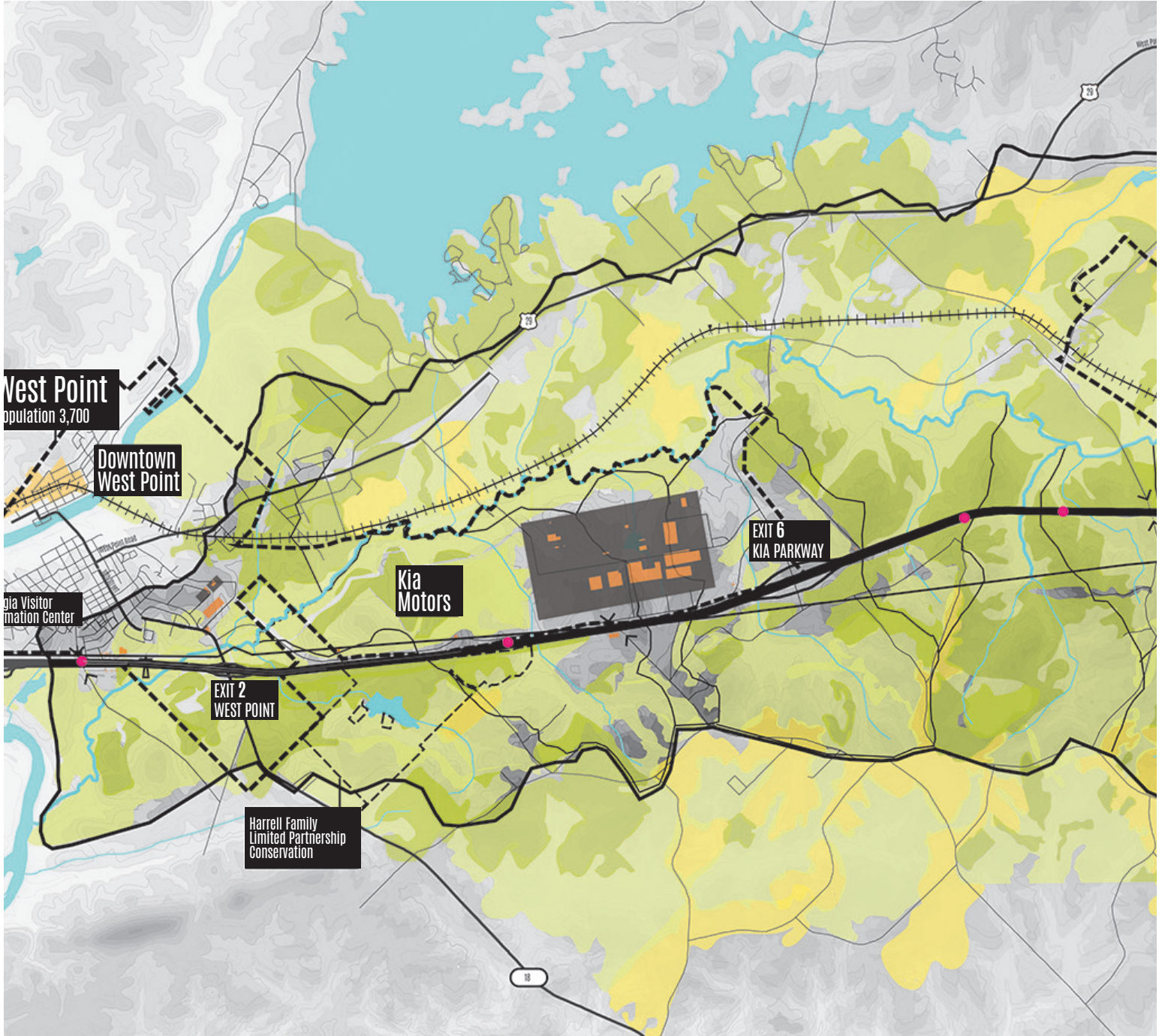
growth patterns. The highway of the future will, mile by mile create vital connections within communities to turn spaces into places.

# MISSION ZERO CORRIDOR TODAY IS A TYPICAL EXAMPLE OF HIGHWAYS EVERYWHERE.

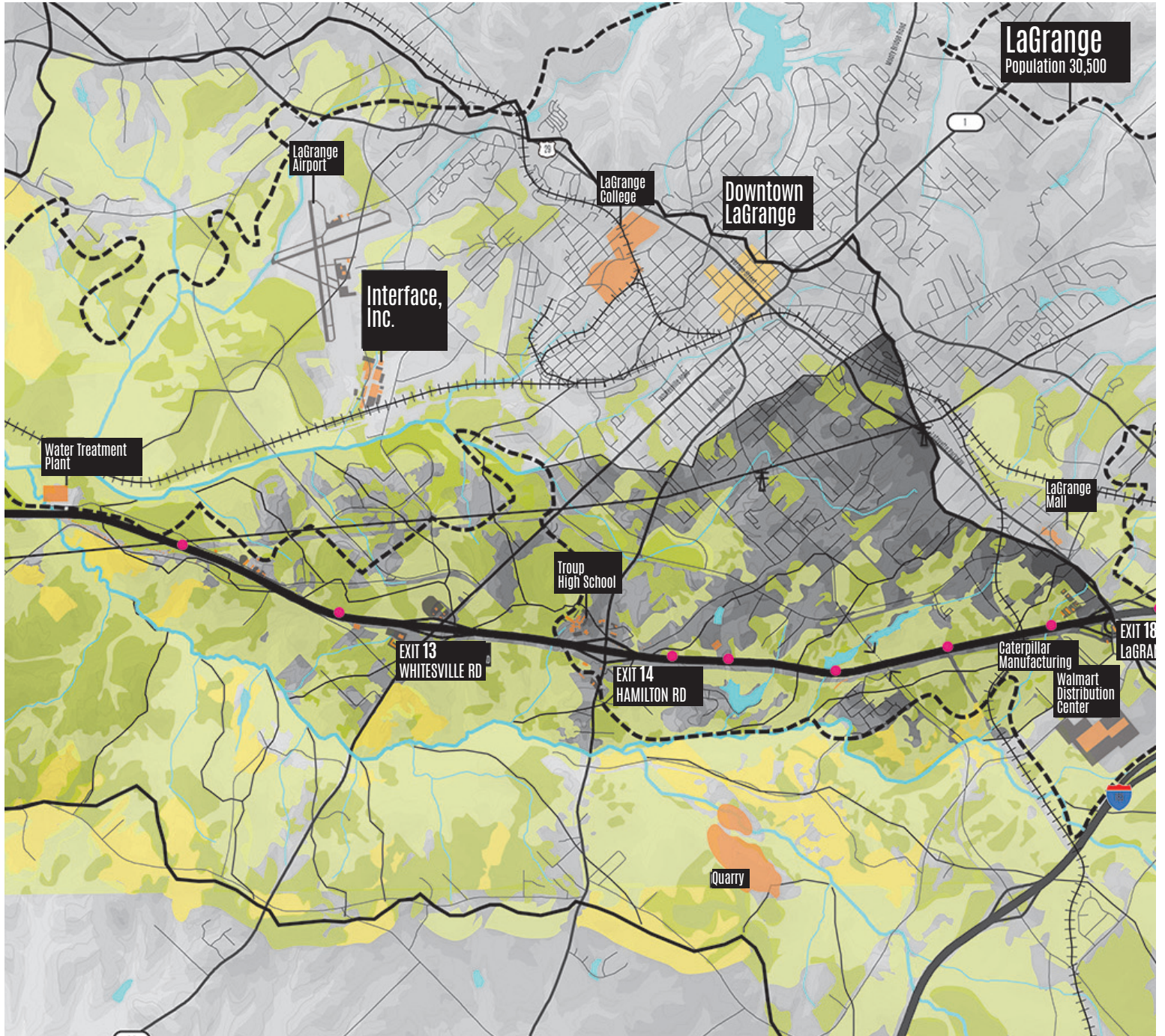




# RAY C. ANDERSON MEMORIAL HIGHWAY



FRAMEWORK MAP: LOCAL ECOSYSTEM, HIGHWAY INFRASTRUCTURE, EXISTING DEVELOPMENT





# 2 | HIGHWAYS TODAY



HIGHWAY NETWORK IN LOS ANGELES



# A NUMBER OF FLAWS PROVES HIGHWAYS TO BE AN OUTDATED FORM OF TRANSPORTATION, RIPE FOR REDEVELOPMENT.

Some say the last major, widespread innovation in highways was President Dwight D. Eisenhower's enactment of the Federal Highway Administration in 1956. The Federal-Aid Highway Act of 1956 laid the foundation for over 40,000 miles of roads that would link the United States together, allowing for easy transportation of goods and people. As the years have passed, more roads have been built and almost every aspect of life and culture has somehow been affected by highways. The ability to buy Florida oranges in Washington State for a reasonable price or to travel from Atlanta to New York City in less than a day has tremendous impacts on how we live and function.

Nearly 60 years later, some signs may have changed and traffic lanes have been added, but highways look virtually the same. The same flaws that have plagued highways from the beginning have been exacerbated by increased populations and traffic flows. Problem mitigation has only been resolved through the thinking that highways will always look and function as they do now, but this thinking needs to be reevaluated. How can the highway be reimagined to be a safe, sustainable, restorative and a more efficient conduit for transportation?

# ENVIRONMENTAL POLLUTION

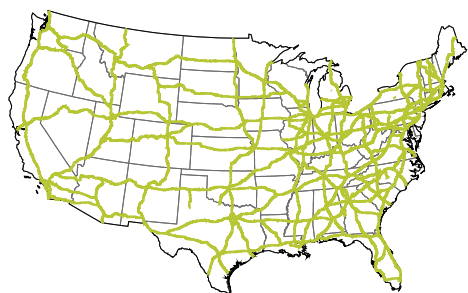
## OF ALL THE UNINTENDED CONSEQUENCES OF THE HIGHWAY SYSTEM, POLLUTION IS THE MOST DETRIMENTAL TO HUMAN HEALTH AND ENVIRONMENTAL SUSTAINABILITY.

THE ISSUE	HIGHWAYS	RAY C. ANDERSON MEMORIAL HIGHWAY
<p><b>ATMOSPHERE</b></p> <p>Highways pollute the atmosphere through harmful emissions from vehicles and toxic road materials.</p>	<p><b>5,424 MILLION</b> TONS OF CO<sub>2</sub> FROM THE U.S. DURING 2009</p>	<p><b>318 TONS</b> OF EXHAUST ARE EMITTED FROM VEHICLES DAILY ON THE 16 MILE STRETCH OF HIGHWAY</p>
<p><b>WATER</b></p> <p>Highways pollute ground water through storm water runoff mixed with toxic chemicals from vehicles, road materials and litter.</p>	<p><b>64%</b> OF ALL LAKE ACRES IN THE U.S. ARE NOT SAFE FOR FISHING OR SWIMMING</p>	<p><b>60/100</b> WATER QUALITY RATING IN TROUP COUNTY BY THE U.S. HEALTH INDEX</p>
<p><b>NOISE</b></p> <p>Highways emit unhealthy levels of noise and light pollution through the vehicles that travel upon them. (dBA refers to A-weighting of noise levels. Typical speech falls at 60 dBA).</p>	<p><b>104 MILLION</b> AMERICANS ARE EXPOSED TO OVER 70 dBA OF CONSTANT NOISE DAILY FROM HIGHWAYS</p>	<p><b>8%</b> HIGHER CHANCE OF HEART DISEASE WITH CONSTANT EXPOSURE TO 70 dBA OF NOISE</p>
<p><b>WASTE</b></p> <p>Highways pollute the land through litter and road debris left behind from the people that use them.</p>	<p><b>\$11.5 BILLION</b> SPENT ON LITTER ABATEMENT IN THE U.S. ANNUALLY</p>	<p><b>6,729</b> PIECES OF TRASH PER ROADWAY MILE ON AVERAGE IN THE U.S.</p>

Data sourced from the Environmental Protection Agency and Keep America Beautiful

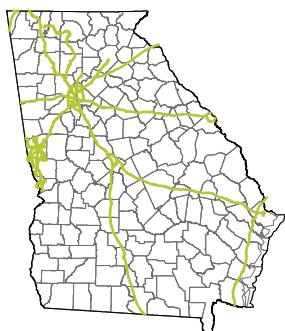
## Though highways enable a variety of pollutants, emissions from vehicle exhaust have the most significant impact on the surrounding environment.

Since 1956, emissions have increased by a factor of five, but the number of cars has barely tripled. The same percentage of Americans are releasing progressively more pollution. (Figures below are based on yearly averages).



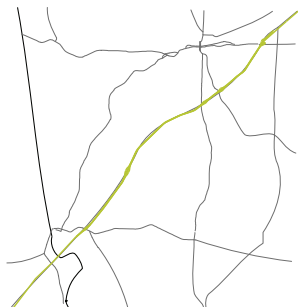
### UNITED STATES OF AMERICA

Emissions	1,696 MILLION TONS CO2
Miles of Road Built	4,092,730
Vehicle Miles Traveled	2,968 BILLION
Gallons Consumed	169 BILLION



### STATE OF GEORGIA

Emissions	46 MILLION TONS CO2
Miles of Road Built	125,532
Vehicle Miles Traveled	126 BILLION
Gallons Consumed	4.61 BILLION



### RAY C. ANDERSON MEMORIAL HIGHWAY

Emissions	116,342 TONS CO2
Miles of Road Built	16
Vehicle Miles Traveled	184 MILLION
Gallons Consumed	9.24 MILLION

Data sourced from the Environmental Protection Agency

## RESOURCE SQUANDERING

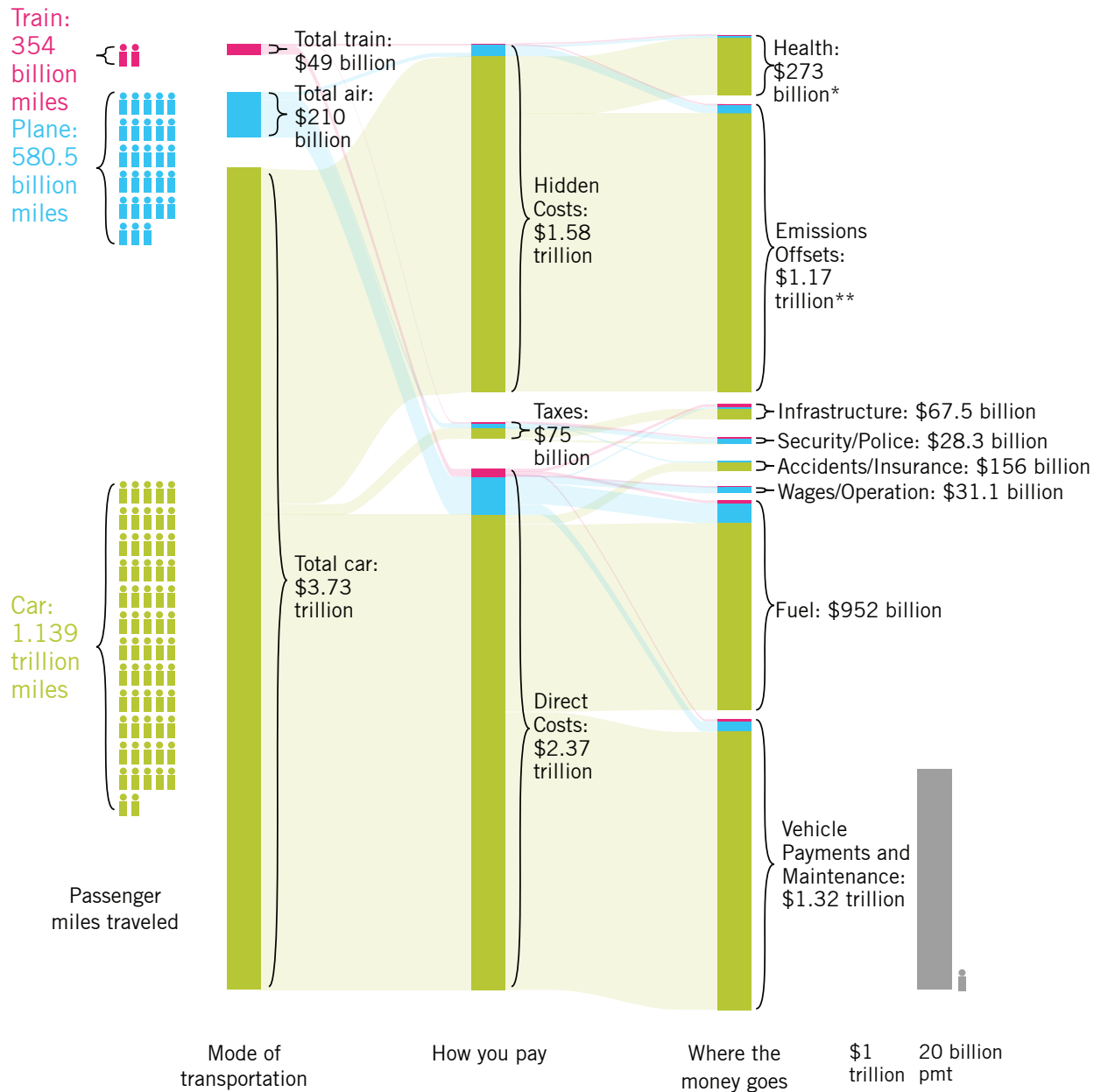
**HIGHWAYS ARE WASTEFUL OF TIME, SPACE, AND NATURAL RESOURCES. IN PARTICULAR, THE WORLD'S FINITE PETROLEUM RESOURCES ARE SIGNIFICANTLY EXPENDED ON HIGHWAYS, FROM ASPHALT ROAD SURFACES TO FUEL FOR VEHICLES.**

THE ISSUE	HIGHWAYS	RAY C. ANDERSON MEMORIAL HIGHWAY
<p><b>MAINTENANCE &amp; CONGESTION</b></p> <p>Highways squander our time &amp; money through road operations &amp; maintenance requirements, traffic congestion and prolonged travel times to destinations.</p> <p>How can highways be re-imagined so that they are free from intensive maintenance while also better serving their users with less traffic delays?</p>	<p><b>\$29 BILLION</b> SPENT BY THE U.S. IN ROAD MAINTENANCE DURING 2011</p> <p><b>5.5 BILLION</b> HOURS COLLECTIVELY LOST IN THE U.S. DUE TO TRAFFIC DELAYS ANNUALLY</p>	<p><b>\$105 MILLION</b> TO ADD ANOTHER LANE OF TRAFFIC TO THE 16 MILE STRETCH OF HIGHWAY</p> <p><b>\$37.6 MILLION</b> WORTH OF FUEL IS SPENT ON THE 16 MILE STRETCH OF HIGHWAY ANNUALLY</p>
<p><b>ENERGY &amp; RESOURCES</b></p> <p>Highways squander natural resources through over utilization of non-renewable sources of energy.</p> <p>The future fuel sources for transportation are slowly changing. What if highways not only provided the route of travel, but also the energy to move people and goods from point A to point B?</p>	<p><b>93%</b> OF ALL ENERGY USED IN TRANSPORTATION IS PROVIDED BY FOSSIL FUELS</p> <p><b>67%</b> OF ALL PETROLEUM CONSUMED BY THE U.S. IS IN THE TRANSPORTATION SECTOR</p>	<p><b>9.24 MILLION</b> GALLONS OF FUEL ARE BURNED ON THE 16 MILE STRETCH OF HIGHWAY ANNUALLY</p> <p><b>3.2%</b> OF THE TOTAL U.S. PETROLEUM CONSUMPTION IS USED IN GEORGIA</p>

Data sourced from the U.S. Department of Transportation, the Georgia Department of Transportation, the Federal Highway Administration, the 2012 Urban Mobility Report, the U.S. Energy Information Administration

# Highways and automobile use do not account for the true cost of transportation.

On average, cars cost nine times more than air travel and twenty-three times more than trains. A high proportion of car costs are buried within the indirect, hidden costs.



\*Hidden costs to health were calculated assuming that car travel is responsible for 10% of the per-capita health care cost increase since 1960. Since the leading causes of death in the US are obesity-related, this may be a conservative estimate.

\*\*Emissions are priced at the current rate of carbon offsets, which is roughly \$15 per ton. As with everything, however, there is a law of diminishing returns for taking carbon out of the air. The last ton of carbon will cost much more than \$15 dollars to remove from the environment.



## HABITAT DEGRADATION

# HIGHWAYS FUNDAMENTALLY ALTER LANDSCAPES AND HABITATS. ECOSYSTEM AND HABITAT DEGRADATION HAVE HARMFUL EFFECTS ON BOTH HUMANS AND ANIMALS.

### THE ISSUE

#### ECOSYSTEMS & HABITATS

Highways degrade habitats and disrupt ecosystems through dividing and removing local flora and fauna.

Ecosystems function with the ability to replenish the resources that have been used. This is achieved through closed loop systems that do not require outside inputs to exist. A food chain is part of an ecosystem, where herbivores consume plants to survive and the carnivores prey on the herbivores; which, keeps populations in check and prevents deforestation of vegetation. How can highways become more sensitive to the natural environment by restoring lost ecosystems and maintaining existing ones?

### HIGHWAYS

**NO. 1**  
THREAT TO ANIMAL MORTALITY IS  
MOTOR VEHICLE COLLISIONS

**1 IN 100,000**  
SPECIES OF ORGANISMS BECOME  
EXTINCT EVERY YEAR DUE TO  
HUMANS

### RAY C. ANDERSON MEMORIAL HIGHWAY

**130**  
VEHICLE COLLISIONS WITH DEER IN  
TROUP COUNTY ANNUALLY

**6**  
ENDANGERED ANIMAL SPECIES  
RESIDE ALONG THE 16 MILE STRETCH  
OF HIGHWAY

Data sourced from the Federal Highway Administration and the U.S. Fish and Wildlife Service

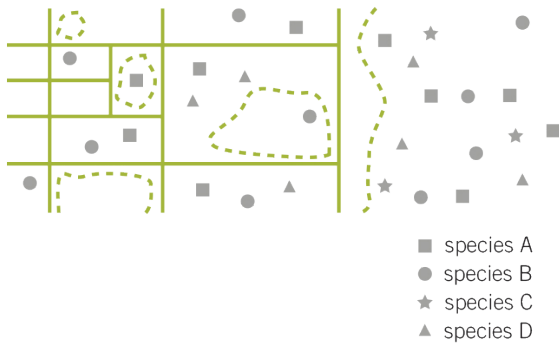
# Dividing ecosystems results in fragmented and endangered species.

All species and habitats are important to maintain healthy ecosystems, which is the basis of sustainability.



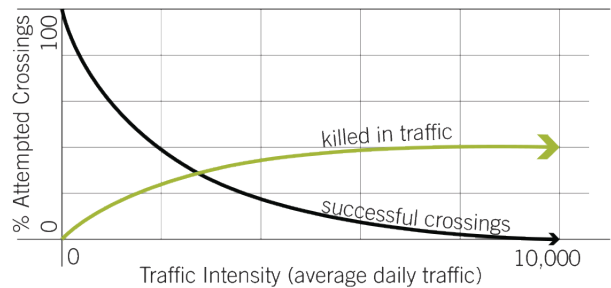
fragmentation

As more and more roads are added, habitats become increasingly fragmented. This limits species diversity and species health. As habitats get smaller, species that are isolated have a weaker gene pool and limited resources.



mortality

Traffic causes the deaths of many animals, whether they live in nearby habitats or are attempting to migrate. As the roads increase in size and traffic, the number of animal fatalities increases.



Data sourced from the Federal Highway Administration and the U.S. Fish and Wildlife Service

## SAFETY HAZARDS

# HIGHWAYS HAVE BEEN ENGINEERED FOR THE SAFETY AND EFFICIENCY OF THE USER, YET THE MAJORITY OF FATAL VEHICULAR ACCIDENTS OCCUR ON THESE ROADWAYS.

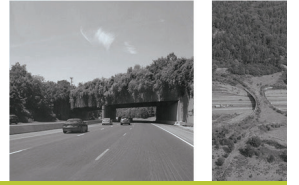
THE ISSUE	HIGHWAYS	RAY C. ANDERSON MEMORIAL HIGHWAY
<p><b>BEHAVIORS</b></p> <p>Highways threaten life through influencing behaviors such as speeding, sleeping, reckless driving and loss of concentration.</p> <p>The way a highway is designed can affect its perception by motorists. Long straight stretches of road promote speeding and boredom. How can highway design be influenced to provide the right ratio of interest while keeping drivers focused on the task at hand?</p>	<p><b>5.3%</b> INCREASE OF ROADWAY FATALITIES IN THE U.S. SINCE 2011</p> <p><b>33,561</b> FATALITIES DUE TO MOTOR VEHICLE ACCIDENTS DURING 2012 IN THE U.S.</p>	<p><b>16</b> FATALITIES IN MOTOR VEHICLE ACCIDENTS ON THE 16 MILE STRETCH OF HIGHWAY IN 2006</p> <p><b>1,192</b> FATALITIES IN MOTOR VEHICLE ACCIDENTS DURING 2012 IN GEORGIA</p>
<p><b>ROAD CONDITIONS</b></p> <p>Highways threaten life by having dangerous driving conditions like road debris, standing water, insufficient lighting and inadequate information.</p> <p>A safe road is free of obstacles and is easily navigable to all its users. Ensuring that these qualities apply to all roads is another challenge. How can highways be designed to easily eliminate obstacles and provide consistent navigability with safety?</p>	<p><b>\$277 BILLION</b> WORTH OF PROPERTY DAMAGE ANNUALLY IN THE U.S. DUE TO MOTOR VEHICLE ACCIDENTS</p> <p><b>14%</b> OF ALL FATAL ACCIDENTS INVOLVING FIXED OBJECTS OCCUR ON HIGHWAYS</p>	<p><b>6,847</b> MOTOR VEHICLE ACCIDENTS IN TROUP COUNTY DURING 2006</p> <p><b>2,111</b> PEOPLE INJURED IN TROUP COUNTY MOTOR VEHICLE ACCIDENTS DURING 2006</p>

Data sourced from the U.S. Department of Transportation, the Georgia Department of Transportation, and the Federal Highway Administration

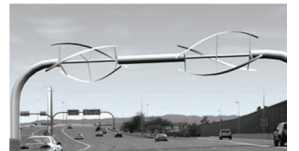
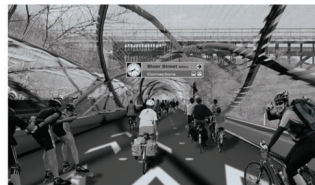
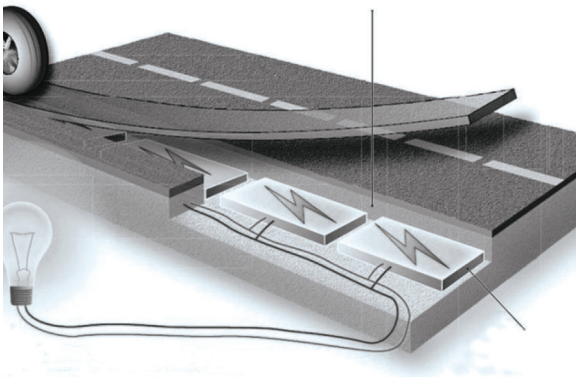
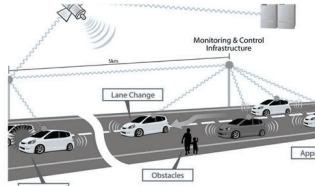
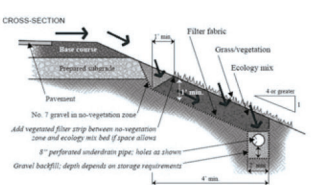
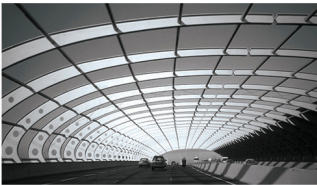
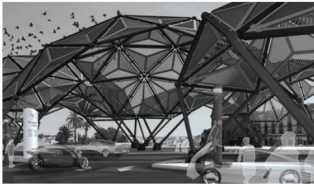
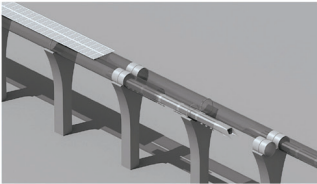
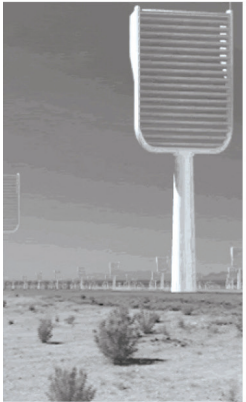
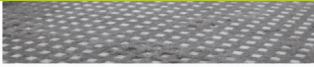
# HIGHWAYS DISCONNECT COMMUNITIES AND STRIP PLACES OF CULTURE. SOCIAL INTERACTIONS ARE CRITICAL TO OUR HAPPINESS AND ECONOMIC WELL-BEING.

THE ISSUE	HIGHWAYS	RAY C. ANDERSON MEMORIAL HIGHWAY
<p><b>PLACE-LESSNESS</b></p> <p>Highways dampen social interactions by disregarding local culture and contributing to the place-lessness of our communities.</p> <p>Social interactions are key to instilling and maintaining culture. Efforts to become more efficient have put culture &amp; place in the back seat. How can a highway reinvigorate local culture while maintaining efficient transportation?</p>	<p><b>37.3/100</b> US RANK ON THE HAPPINESS INDEX CONDUCTED BY THE HAPPY PLANET INDEX</p> <p><b>34TH</b> IS GEORGIA'S RANK AMONG OTHER U.S. STATES IN HAPPINESS</p>	<p><b>MOST</b> CARS TRAVEL ON THE 16 MILE STRETCH OF HIGHWAY WITHOUT STOPPING</p> <p><b>A FEW</b> MOTORISTS MAKE IT PAST A GAS STATION OR FAST FOOD RESTAURANT</p>
<p><b>SELECTIVENESS</b></p> <p>Highways dampen social interactions through prioritization of automotive users.</p> <p>Everyone pays taxes but not everyone can use the highway. For those without the ability to travel on it, how can the highway be designed to allow equal access?</p>	<p><b>MOST</b> CYCLISTS &amp; PEDESTRIANS FEEL THREATENED BY MOTORISTS</p> <p><b>12%</b> OF ALL TRIPS IN THE U.S. ARE TRAVELED BY WALKING OR BICYCLING</p>	<p><b>6%</b> OF TROUP COUNTY DOES NOT HAVE A REGISTERED MOTOR VEHICLE</p> <p><b>16%</b> OF TROUP COUNTY RESIDENTS CARPOOL TO WORK</p>

Data sourced from the Happy Planet Happiness Index, the Georgia Department of Transportation, Wallet Hub, and the National Highway Traffic Safety Administration



# 3 | VISION FOR THE FUTURE



# THE POTENTIAL FOR HIGHWAYS IS FAR GREATER THAN SIMPLY THE CONDUIT OF CARS & TRUCKS THEY HAVE BECOME THUS FAR

Highways may have problems associated with them but it is important to recognize the role they have played in growing local economies, allowing for the trade of goods and services, giving people individual mobility all in the connecting of places far and near. In essence, they provide a backbone for much of our infrastructure and our reliance on them is critical.

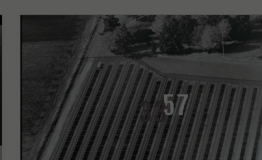
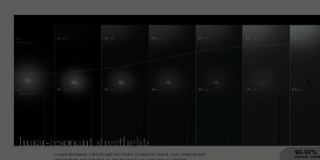
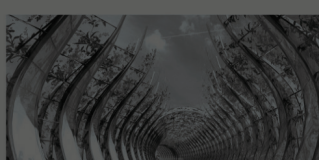
However, we should be concerned about the future of our infrastructural systems, how they are conceived and how they are built. The aforementioned challenges of highways also provide room for distinct and unique solutions to envision a different and better future for the infrastructure. Our first goal is to address highway improvements that serve the vehicles and people traveling on them, the surrounding communities, and the natural environment. This vision for highways suggests a global series of solutions and tactics that can be applied locally, on any corridor worldwide. This is the path to the highway of the future: highways that will seek to understand, restore and positively influence their context to enhance our quality of life.

The Internet of Everything is changing everything.

66+ MPH

The Internet of Everything is changing the billboard based on your speed. So you see only what you have seen or need.

30-66 MPH



## THE GOAL

# IT IS THE ASPIRATION OF MISSION ZERO CORRIDOR TO USE HIGHWAYS AS A TOOL FOR CHANGE.







When we look at the legacy that Ray Anderson left for us, we can see a vision, a powerful vision that changed his business, Interface, and his entire industry. Mission Zero strives to bring human activities and natural systems into a balance on which future generations can thrive.

The Mission Zero Corridor allows us to see highways, and infrastructure in general, through Ray Anderson's lens. A lens that can see highways operating at their full potential, well beyond the prevalent view that highways are simply conduits of cars and trucks.

Mission Zero Corridor will be the first sustainable highway, serving as a replicable model worldwide through a focus on people, place and technology. The sustainable highway will be restorative, generative, responsible, respectful, informative and net zero.



**MISSION ZERO 2020 CREATED A FRAMEWORK THAT CATALYZED POWERFUL CHANGES IN THE BUSINESS INDUSTRY AT A GLOBAL SCALE.**  
**MISSION ZERO CORRIDOR IS A FRAMEWORK FOR HIGHWAYS TO REACH THE SAME GOALS.**

PROBLEM		PATH
ENVIRONMENTAL POLLUTION	→	 POLLUTION REMEDIATION
RESOURCE SQUANDERING	→	 RESOURCE EFFICIENCY
HABITAT DEGRADATION	→	 WILDLIFE CONSERVATION
SAFETY HAZARDS	→	 LIFE SAFETY
SOCIAL RAMIFICATIONS	→	 CULTURAL EXCHANGE
LACK OF AWARENESS	→	 CHANGING ATTITUDES



## THE VISION

# A VISION TOWARDS THE HIGHWAY OF THE FUTURE.

Highways should not be merely connectors of distant places, they should reconnect the very systems they have fragmented – the social and ecological frameworks that they sit within. In the future, highways will not only be more efficient and safer, they will also play a vital role to unify and improve our communities and our natural environments.

## Global Vision This Vision Can Be Applied to Highways Everywhere

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### Unify

#### Reconnecting people and natural systems

Highways will heal the wrongs of the past while building a better tomorrow through the restoration of social and ecological systems. The highway of the future will, mile by mile, reconnect, enhance and restore our existing communities to stimulate cultural exchange, economic

productivity and local identity. The highway of the future will, mile by mile, replenish and revive our natural habitats, replant native varieties and generate new ecosystems to safeguard our plant and animal species.

### Restore

#### Achieving net-zero

Highways will eradicate all negative impacts on people and the environment through corridor wide tactical solutions. The highway of the future will, mile by mile, produce more energy than it consumes, and provide for the infrastructure of sustainable transportation to secure the longevity of our

resources. The highway of the future will, mile by mile, sequester all forms of pollution it creates, and reuse all of the resources it interacts with to ensure the survival of our ecosystems.

### Catalyze

#### Catalyzing local and global change

Highways will create new, positive impacts for people and the environment by promoting responsible development. The highway of the future will, mile by mile, allow for new development patterns that cultivate reciprocity between natural, social and built environments to ensure responsible

growth patterns. The highway of the future will, mile by mile create vital connections within communities to turn space into place.

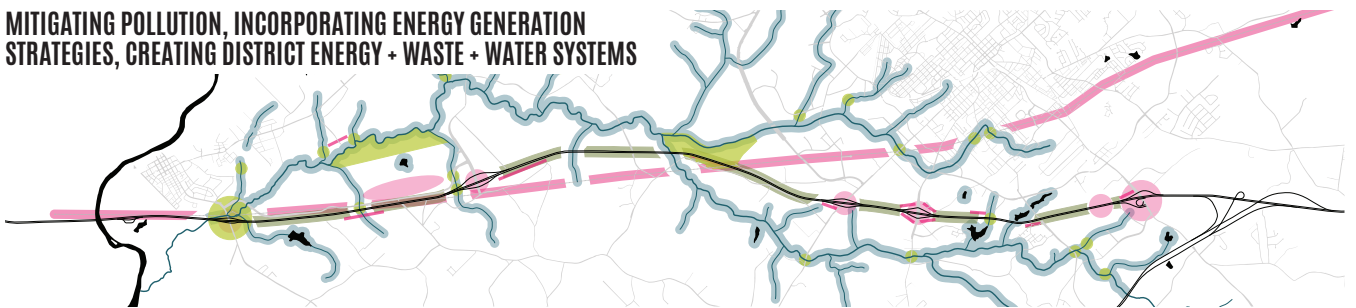
**WE STRIVE TO ACHIEVE THIS  
VISION BY WEAVING DYNAMIC  
RELATIONSHIPS BETWEEN THE  
INFRASTRUCTURAL, ECOLOGICAL  
AND SOCIAL SYSTEMS.**

## **Local Vision** **Applying The Global Vision To This Corridor**

**CREEK RESTORATION, PROTECTING HABITAT, RECONNECTING FRAGMENTED AREAS,  
DEVELOPING PARKS & GREENSPACES, INCORPORATING WILDLIFE CROSSINGS**



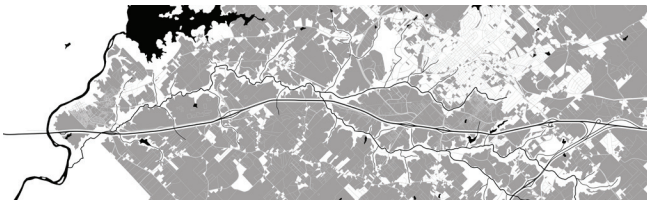
**MITIGATING POLLUTION, INCORPORATING ENERGY GENERATION  
STRATEGIES, CREATING DISTRICT ENERGY + WASTE + WATER SYSTEMS**



**IDENTIFYING NON-SENSITIVE DEVELOPABLE PARCELS, REPURPOSING WASTE SPACE,  
CREATING DISTRICT NETWORKS, ENHANCING CORRIDORS, CREATING IDENTITY & PLACE**

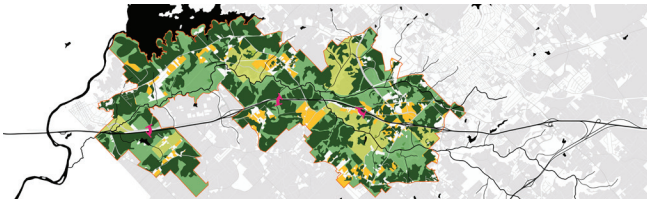


## GLOBAL STRATEGIES APPLIED TO THE MISSION ZERO CORRIDOR SHOW HOW HIGHWAYS CAN BE A TOOL FOR CHANGE.



### [1] Responsible Development

Highways everywhere divide communities and promote sprawling, unsustainable land development patterns. Mission Zero Corridor reconnects communities by promoting responsible development patterns.



### [3] Conservation and Ecologically Sensitive Development

Highways everywhere destroy natural habitats and fragment and endanger local species. Mission Zero Corridor conserves and protects special habitats and reconnects fragmented areas.

The Mission Zero Corridor *Blueprints* team determined specific areas to leverage these eight opportunities to solve problems. It was important to test these ideas, so the team calculated how much space could be reclaimed for sustainable uses, how much algae it would take to offset highway emissions, the shapes of swales that will collect and clean polluted runoff, and where to plant trees to make the pedestrian experience of the surrounding roads more friendly.



### [2] Repurpose Waste Space

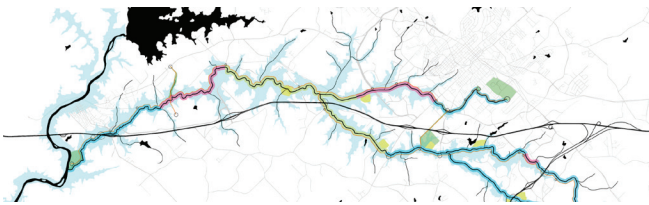
Highways everywhere create inaccessible and underutilized spaces, while simultaneously wasting enormous amounts of resources. Mission Zero Corridor repurposes wasted spaces into places for new forms of resource generation and social interaction.



### [4] Responsible Industrial Development

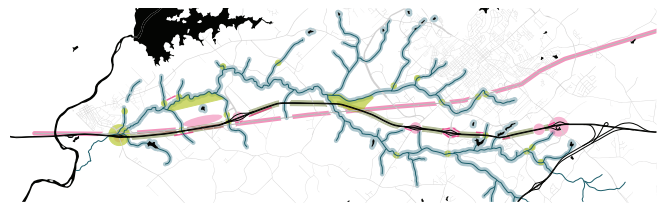
Highways everywhere enable sprawling industrial development patterns. Mission Zero Corridor promotes responsible and sustainable industrial development patterns.

# THE HIGHWAY OF THE FUTURE WILL INSTILL RESPONSIBLE AND SENSITIVE LAND DEVELOPMENT PATTERNS, RESTORE DEGRADED ECOSYSTEMS, AND LEVERAGE LOCAL IDENTITY.



## [5] Ecosystem Restoration

Highways everywhere degrade and divide local ecosystems. Mission Zero Corridor restores and enhances degraded ecosystems.



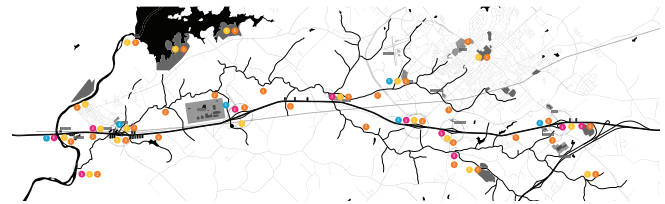
## [6] Pollution Remediation

Highways everywhere pollute and defile land, air and water. Mission Zero Corridor will mitigate and reverse the negative effects of pollutants.



## [7] Corridors

Highways everywhere use local corridors to connect to local communities. Mission Zero Corridor promotes thoroughfares that encourage connectivity and responsible development patterns.



## [8] Identity

Highways everywhere promote place-lessness as well as degrade the identities and cultures of local communities. Mission Zero Corridor celebrates local identity, culture and fosters a new sense of place.

# GLOBAL TACTICS

**THE APPLIED FRAMEWORK SHOULD BE RESPONSIVE TO LOCAL ENVIRONMENTS. EXAMPLE TACTICS WILL WORK BEST WHEN CONTEXTUALLY APPLIED.**

The Mission Zero Corridor exemplifies how a highway can achieve sustainability by fully addressing every area of the designed framework. The application of this framework can be across highways and road networks globally. This catalog of global tactics can assist in efforts to address the various framework categories.

The next few pages contain example technologies developed by designers, scientists, engineers, and others around the world. We do not take credit for these ideas, but want to showcase the possibilities that may exist for furthering the Mission Zero Corridor goals. More information on these sources can be found on the Georgia Conservancy website at [www.gaconservancy.org](http://www.gaconservancy.org).



## Pollution Remediation

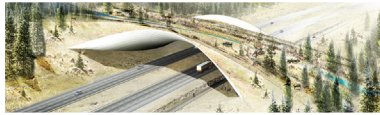


## Resource Efficiency





## Wildlife Conservation



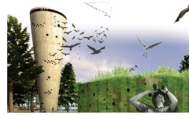
Wildlife bridges



Park Infill



Interstate Planting



Habitat for Urban Wildlife



Ningbo Eco-Corridor



Earth Berms



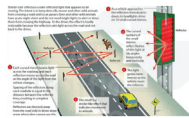
Wildlife Detectors



Highway Storm Water



Eco Storm Water Runoff



Wildlife Reflectors



Earth Berms



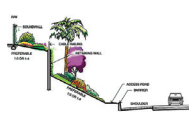
Wildlife Detectors



Repurposed Billboards



Interstate Landscapes



Smart Landscaping



## Life Safety



Smart Lane Markers



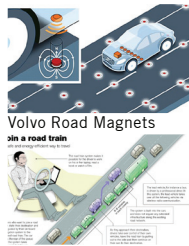
Driverless Cars



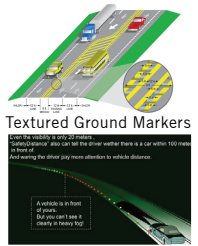
Changing Road Appearance



Glowing Traffic Lines



Volvo Road Magnets



Textured Ground Markers



Information Systems



Elevated Walkways



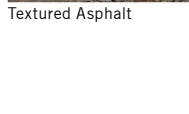
Pedestrian Cross Walk



Interactive Ambient Light



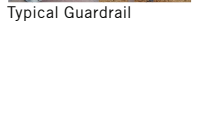
Road Train



Textured Asphalt



Guardrail Car Sensors



Typical Guardrail



## Cultural Exchange



Park + Jog



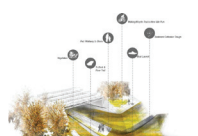
Art Installations



ChonGae Canal



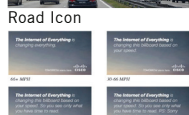
Bridging the Divide



Ferrari Experience



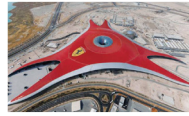
Velo-City



Smart Billboards



Art Installations



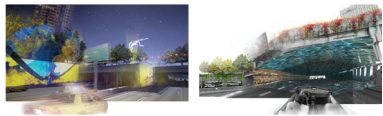
Pedestrian Bridge



Cultural Greenway



Green Walls



Art Infrastructure

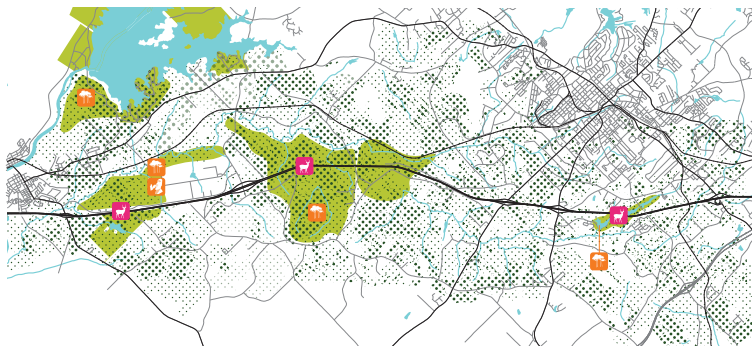
# LOCAL TACTICS

**EACH TACTIC SHOULD BE MAPPED ONTO THE SITE APPROPRIATELY.**

The Mission Zero Corridor *Blueprints* team mapped tactics from the catalog onto the Ray C. Anderson Memorial Highway in a way that is sensitive to the hydrological, biological, social, and infrastructural frameworks.



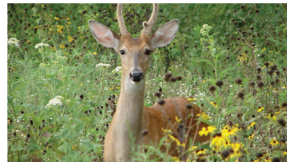
## Habitat Restoration



Freshkills Park | New York City



Freshkills Park | New York City



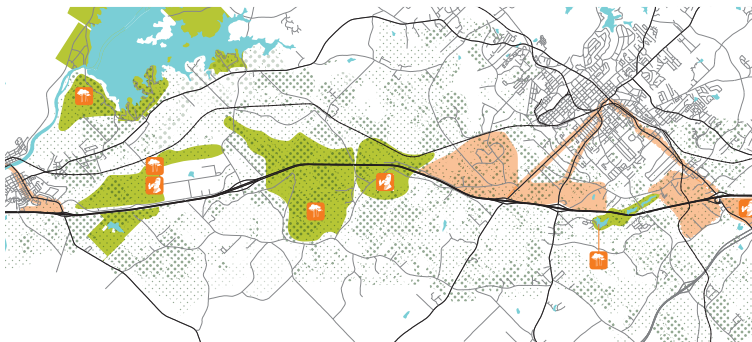
Deer Habitat | South Georgia



Habitat for All | South Georgia



## Parks



Randall's Island Park | Manhattan



Fuji Hakone Izu National Park | Japan

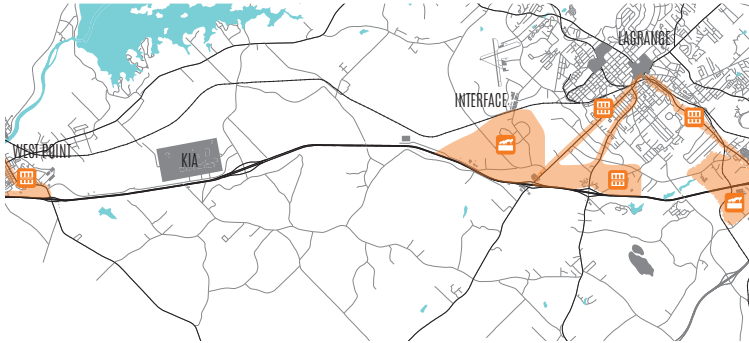


Sculptural Art Garden | Seattle



Energy Gardening | Abu Dhabi

## Responsible Development



Serenbe | Georgia



Sustainable City - Freiburg



PECO Office Building | Philadelphia



Centra Metropark | New Jersey

## Kia Opportunity



Spectrum Solar Energy Education | TN



Pocono Env Center, BCJ | PA

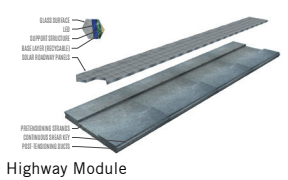
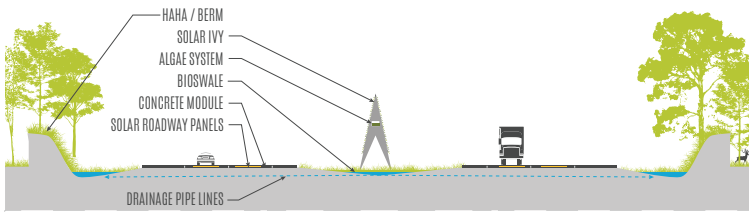


Kia Ecology Center | San Juan, PR

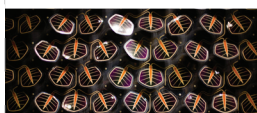


Whitney Water Facility, Steven Holl | CT

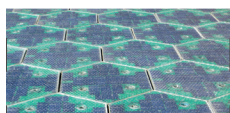
## Modular Highway



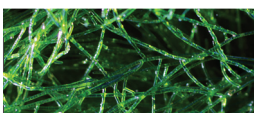
Highway Module



Solar Ivy



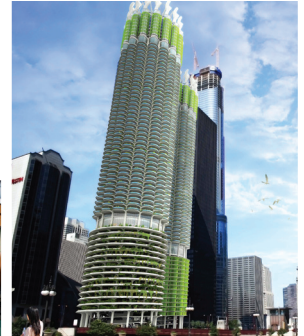
Solar Roadway



Algae



Solar Road Development



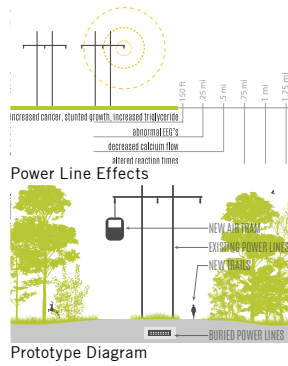
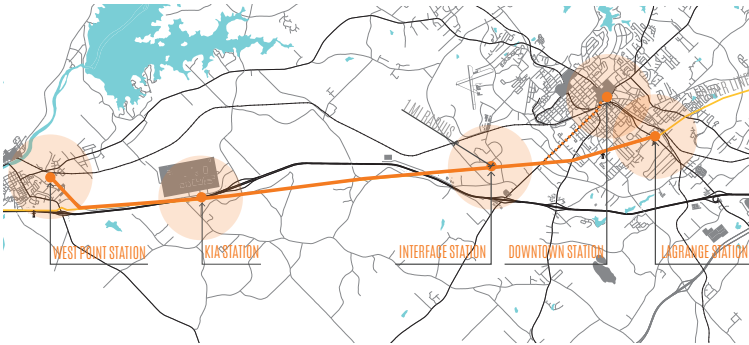
Marina Towers Proposal | Chicago



# LOCAL TACTICS



## Tram Trail



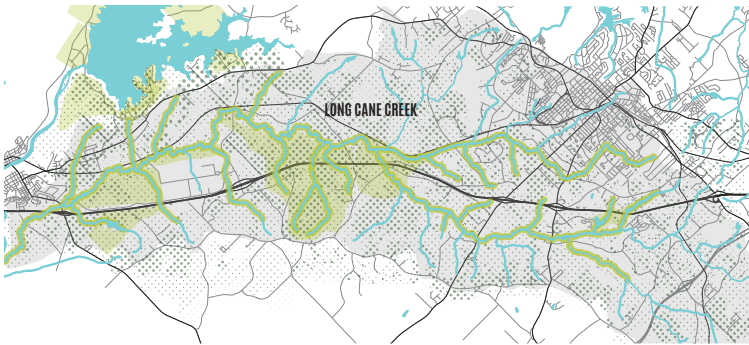
Emirates Air Line | London



Bike / Pedestrian Trail | Israel



## Stream Restoration and Phytoremediation



Little Sugar Creek Greenway | Charlotte



Green Wall | SOM



Storm Sewer under KIA Parkway



BioSwales | Iowa



## Legacy Center and Ray Gates



Memorial Park | SAGRA Proposal

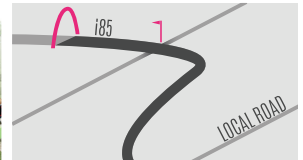


Diagram of Ray Gate Locations



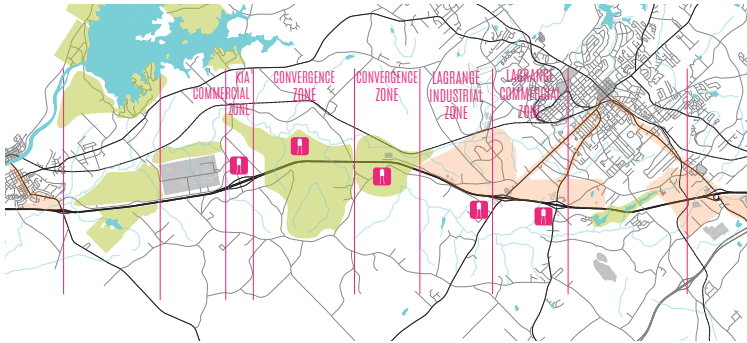
Existing Corridor Recognition



Prototype Ray Gates



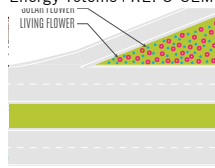
## Landmarks



Energy Totems | RE: U-SEM



Solar Flower Field | Seoul



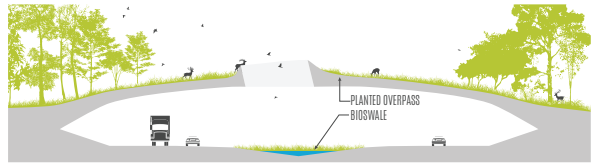
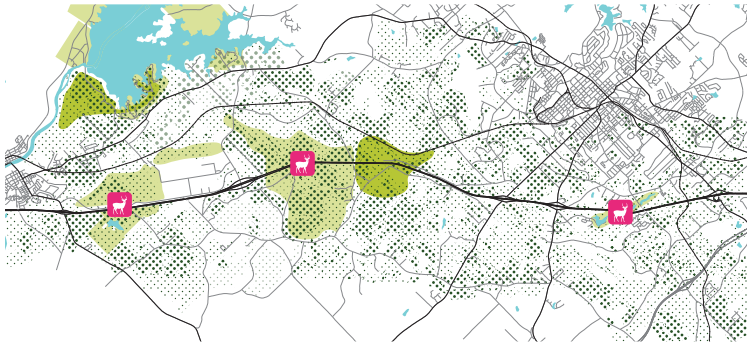
Solar Flower Exit Diagram



After the Chaos by Verschueren | Malga Costa



## Wildlife Connection



Wildlife Crossing Diagram



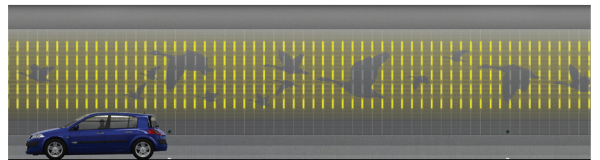
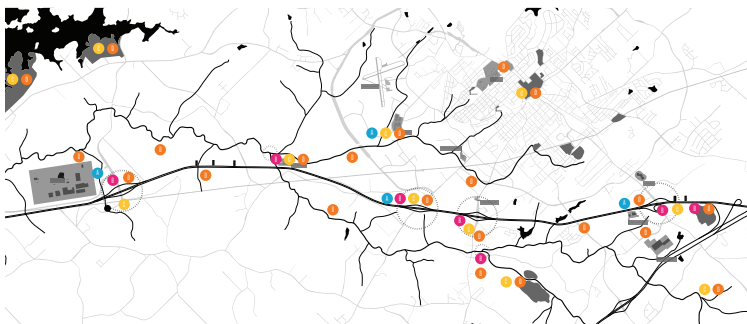
Wildlife Underpass at Banff National Park | Alberta



Wildlife Bridge Proposal | IARC Competition



## Media and Communication



Toyota Smart Billboard

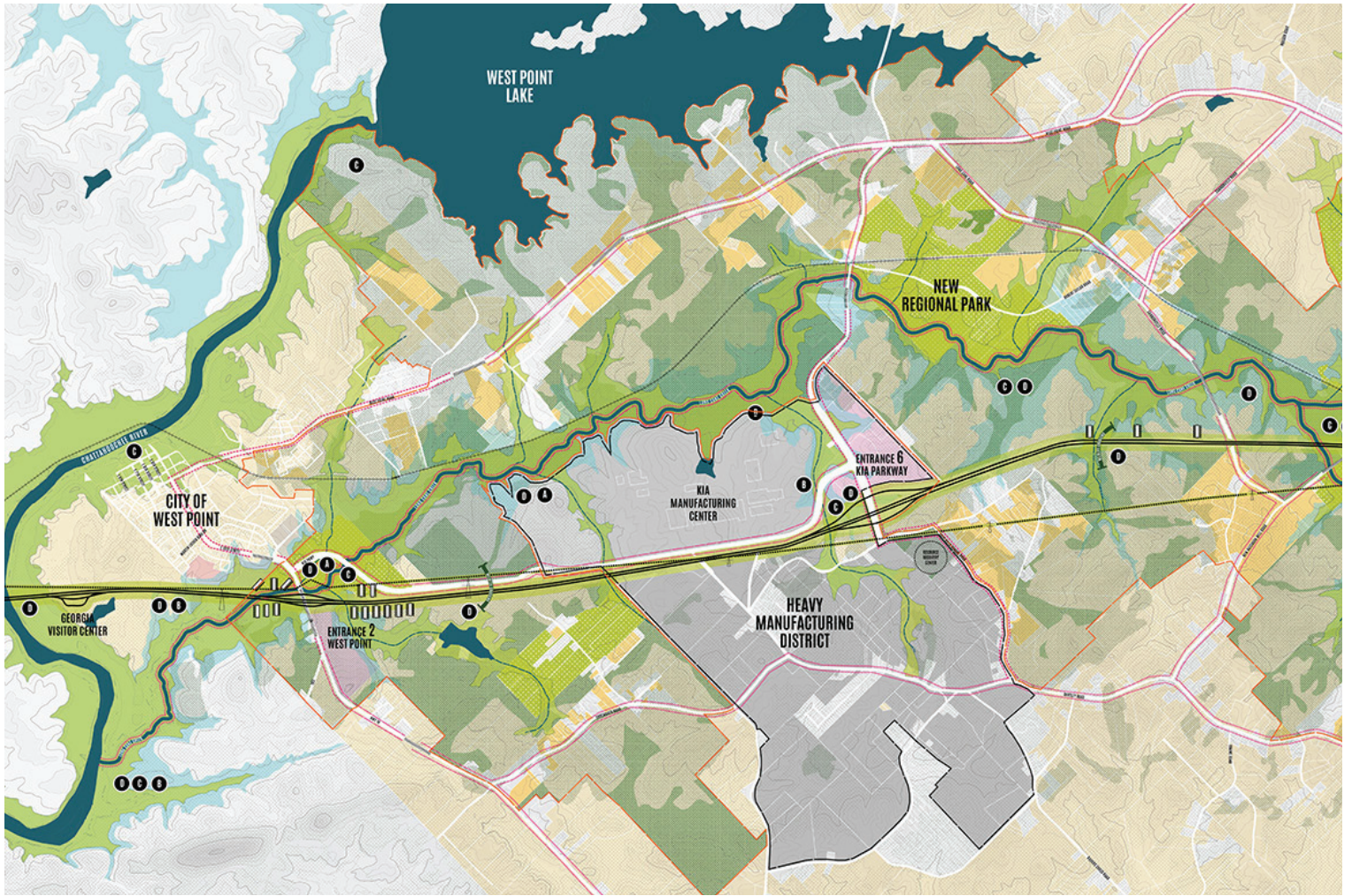


Gallons Saved. And Counting.

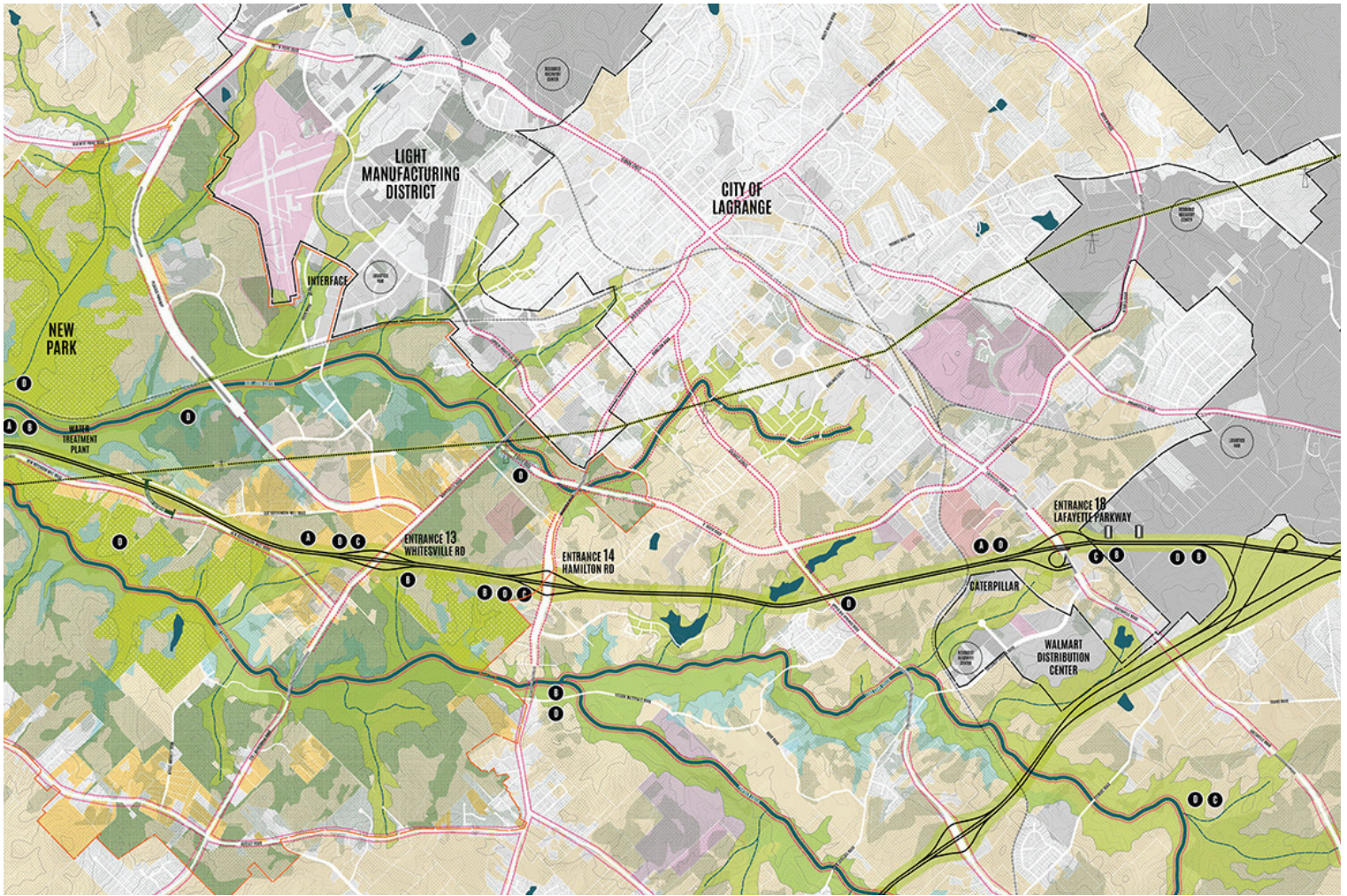


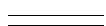






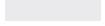











Fehmarn Belt | Denmark to Germany

# RAY C. ANDERSON VISION FRAMEWORK MAP



- A** Centers
- B** Ray Gates
- C** Landmarks
- D** Signs
- Existing Signs
- R** Resource Recovery Center
- L** Logistics Hub



- |   |                              |   |                               |
|---|------------------------------|---|-------------------------------|
|  | Local Roads                  |  | Developable Land - General    |
|  | Rural Corridors              |  | Developable Land - Sensitive  |
|  | Elastic Corridors            |  | Developable Land - Industrial |
|  | Resilient Corridors          |  | Existing Industrial Land      |
|  | Creek / Local Road Interface |  | Wasted Space                  |
|  | Wildlife Crossings           |  | Parks                         |
|  | Highways                     |  | Conservation Forest           |
|  | Railroad                     |  | Existing Tree Canopy          |
|  | Creeks                       |  | Water                         |
|   |                              |  | Floodplain                    |

# THE WAY FORWARD

## WHERE WE'RE GOING

The Mission Zero Corridor *Blueprints* project has already begun implementation in the form of bringing education and awareness to the local stakeholders in Troup County, the City of West Point and the City of LaGrange. The community is very supportive and understands the potential this type of project can bring to the area. It will be important to capitalize on the gained momentum and make incremental changes to the highway, based on the designed framework, maintenance schedule, and funding. The highway will become a showcase for sustainability and ecological experimentation.

**This is just the first step in a long journey towards Mission Zero Corridor. This studio established a vision and a framework for others to carry this project forward.**

### EDUCATE ON PATHS TO SOLUTIONS

### DEVELOP PARTNERSHIPS AND BUY-IN



#### POLLUTION REMEDIATION



#### RESOURCE EFFICIENCY



#### WILDLIFE CONSERVATION



#### LIFE SAFETY



#### CULTURAL EXCHANGE



#### CHANGING ATTITUDES

#### LOCAL INFRASTRUCTURE

County and Local Governments  
Civic offices  
Utilities

#### ECOLOGICAL SYSTEMS

Wildlife Management  
Forestry Divisions  
Environmental Protection

#### SOCIAL SYSTEMS

Public Opinion  
Community Use  
Future Goals

**LET'S BEGIN A NEW HISTORY.  
LET'S BUILD A BETTER WORLD  
FOR TOMORROW'S CHILD.**

**APPLY STRATEGIES**

**[1] RESPONSIBLE DEVELOPMENT**

**[2] REPURPOSE WASTE SPACE**

**[3] CONSERVATION & ECOLOGICALLY SENSITIVE DEVELOPMENT**

**[4] RESPONSIBLE INDUSTRIAL DEVELOPMENT**

**[5] ECOSYSTEM RESTORATION**

**[6] POLLUTION REMEDIATION**

**[7] CORRIDORS**

**[8] IDENTITY**

**ACHIEVE GOAL**

**RESTORATIVE**

●  
**GENERATIVE**

●  
**RESPONSIBLE**

●  
**RESPECTFUL**

●  
**INFORMATIVE**

●  
**NET-ZERO**



**2040**

**IT IS THE ASPIRATION  
OF MISSION ZERO®  
CORRIDOR TO CREATE  
A HIGHWAY THAT  
IS ONE WITH ITS  
ENVIRONMENT.**

## THE TEAM:

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Katherine Moore

### School of Architecture, Georgia Tech Design + Research Studio

Richard Dagenhart, RA, Professor Emeritus  
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Cassie Branum, Perkins + Will  
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## Special Thanks To:

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Jorge delAngel, Interface  
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Allie Kelly, Georgia Conservancy  
Steve Nygren, Serenbe  
Bill Wright, Georgia Dept. of Transportation

The City of LaGrange  
The City of West Point  
Troup County



Pictured left to right:  
Jeff Williams, Ryan Gravel, Sammy Shams,  
Imeri Kelly, Elizabeth Carroll,  
Melissa Tertichny, Lindsay Brown,  
Cierra McClary, Rebecca Duncan,  
Sarthak Dhingra, Will Cioffi,  
Elizabeth Ward, Cassie Branum,  
Richard Dagenhart



# IF NOT NOW, WHEN? IF NOT YOU, WHO?

## MISSION ZERO CORRIDOR

Highways everywhere connect our communities but also create critical divides. This pervasive infrastructure is continuously maintained, rebuilt and expanded, yet thoughtful dialogue on highway impacts and detriments have not been addressed. This Mission Zero® Corridor *Blueprints* project examines possible reinvention for the future of highways to have only positive impacts on our communities and our environments.

The Georgia Conservancy's *Blueprints for Successful Communities* program, in partnership with graduate students from the College of Architecture at Georgia Institute of Technology and urban designers from Perkins+Will, examined the potential that may exist to transform highway corridors to roadways that have far less degrading environmental impacts. This Georgia Conservancy-sponsored *Blueprints* study focuses on the Ray C. Anderson Memorial Highway, from exits 2 to 18 on Interstate 85 in West Georgia. This project is named Mission Zero Corridor, adopting the namesake of Interface's Mission Zero® initiative to become a zero footprint company by 2020.

Ray Anderson inspired others through his methods of attracting by demonstration and catalyzing change by inspiration. This is the spirit and legacy that live on through the business and philanthropy of his company, Interface, and through the philanthropy of the Ray C. Anderson Foundation. Essentially, the Mission Zero Corridor project provides the opportunity to show the world what is possible along a travel corridor, and to elevate the identity of West Georgia by creating brand new economic development and tourism activities through a reinvented corridor.

This Design + Research *Blueprints* concentrates on sustainable highway design and a framework that enables this design. This *Blueprints* serves as a research endeavor whose results will inform future traditional *Blueprints*, as highways and roads impact all of our communities and the lessons learned can be applied to community design.