



**GDC'S
SUSTAINABILITY
PLAN**

A Road Map
FOR THE

**HUDSON TUNNEL
PROJECT**

**GATEWAY DEVELOPMENT
COMMISSION**



GDC'S HOLISTIC APPROACH TO SUSTAINABILITY

Rail infrastructure within the bustling Northeast Corridor (NEC) inherently integrates environmental, social and economic sustainability. This sustainable mode of transportation not only connects individuals to vital social and economic activities but also significantly reduces the dependency on single-occupancy vehicles, thereby reducing congestion, lowering greenhouse gas emissions, and fostering more livable, connected communities. Beyond the ecological benefits, rail infrastructure catalyzes economic advancement, creating jobs, stimulating local economies, and providing access to markets and opportunities.

THE GATEWAY PROGRAM IS THE MOST URGENT INFRASTRUCTURE PROGRAM IN AMERICA

Gateway is a comprehensive rail investment program that will improve reliability, resiliency and redundancy while creating new capacity for a critical section of the Northeast Corridor (NEC) – the most heavily used passenger rail line in the country.

The Gateway Program, a pivotal rail investment initiative, is designed to boost the Northeast Corridor's (NEC) reliability, resiliency, and redundancy. At its heart, the Hudson Tunnel Project (HTP) is focused on maintaining the vital services of Amtrak's NEC and NJ TRANSIT's commuter rail by renovating the aging North River Tunnel and bolstering the corridor's resilience. This includes introducing redundant pathways beneath the Hudson River to ensure consistent service, all while leveraging existing infrastructure.



The Gateway program's focus on resilience represents a proactive approach to the challenges posed by climate change, with strategic planning for future adaptability.

At the Gateway Development Commission (GDC), our holistic approach to sustainability acknowledges that true sustainable infrastructure transcends environmental benefits to encompass economic and social advantages.

*The HTP is projected to create over **95,000** jobs—direct, indirect, and induced—throughout its construction phase, catalyzing **\$19.6 billion** in economic activity and injecting an average of over **\$87 million per month** into materials and labor. Furthermore, the project is expected to reduce more than **2 million tons of greenhouse gas emissions** by alleviating congestion in the **NEC** area, illustrating the substantial environmental and economic impacts of the project.*



GDC'S SUSTAINABILITY PLAN ROAD MAP FOR THE HUDSON TUNNEL PROJECT

At the Gateway Development Commission (GDC), we are acutely aware of the multifaceted impacts construction can have on our environment, society, and economy.

Our sustainability team has adopted a life cycle perspective, integrating sustainability considerations into every phase of our project packages. This dynamic approach allows us to weave environmental, social, and economic sustainability deeply into the fabric of the HTP, embodying a truly holistic sustainability approach. Our evolving Sustainability Plan is crafted to be more than just a set of guidelines; it serves as a strategic blueprint to ensure the HTP not only meets but strives to exceed the sustainability commitments outlined in the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD).

Emphasizing environmental justice, the Sustainability Plan seeks to ensure equitable benefits and minimize adverse impacts across communities, fostering community participation and enhancing collaboration between multidisciplinary teams to optimize synergies across project disciplines. The incorporation of sustainable criteria will minimize and/or mitigate environmental impacts, conserve natural resources, protect historic resources, reduce carbon emissions, and enhance the well-being and accessibility for construction teams, the community, and the traveling public.

The HTP has adopted the Envision framework as a guiding principle for sustainability and resilience, with its comprehensive approach informing the development of specific sustainability criteria and performance targets in the, FEIS, ROD, HTP Sustainability Guidelines, and the Checklist for individual projects. The Envision Sustainable Infrastructure Rating System provides a robust framework for evaluating the sustainability and resilience of infrastructure projects across all sectors. Developed by the ISI, Envision assesses projects based on five major categories:

Quality of Life (QL), Leadership (LD), Resource Allocation (RA), Natural World (NW), and Climate and Resilience (CR). These categories collectively aim to enhance community wellbeing, promote sustainable use and protection of natural resources, encourage innovative leadership and collaboration, and ensure preparedness and resilience against climate change impacts.

The graphic presented below captures the key steps and prominent features that the sustainability team has strategically mapped out across the project lifecycle, integrating the Envision framework to guide and measure our sustainability endeavors across the HTP.

THE HUDSON TUNNEL PROJECT - SUSTAINABILITY MANAGEMENT PLAN





SUSTAINABILITY BEST MANAGEMENT PRACTICES

The HTP is divided into various design and construction packages, each presenting unique sustainability challenges and opportunities. In addition to the pivotal roles played by the design and construction teams, GDC's sustainability plan recognizes the critical importance of synergistic collaboration across all project disciplines. These include, but are not limited to, the Sustainability, Design, Construction, Environmental, Project Safety, Community Outreach, Communications, Procurement, Risk, Financial, and Diversity Teams.

*By actively seeking alignment and integration within these key areas, we aim to leverage every opportunity for synergy, thereby maximizing the positive impacts of our sustainability practices across the **HTP**.*

Below, we outline the sustainability best management practices (BMPs) to be implemented by these teams. These BMPs, refined and adapted for each package, will be integrated alongside Envision framework credits for implementation across the project life cycle.



Life Cycle Evaluation: The FEIS captures the project scope and establishes a benchmark for all packages within the HTP. Project teams utilize the FEIS to assess financial, environmental, and social benefits, to compare the alternatives for major project components.



Sustainability Education & Communication: The Core Sustainability Team hosts Sustainability Charrettes and periodic workshops for all stakeholders, from design through construction. These educational and interactive sessions are designed to clearly communicate the project's sustainability goals, individual responsibilities and foster a culture of sustainability within all packages within the HTP.



Sustainable Material Resources: Our commitment to sustainability is deeply rooted in the principles of the circular economy, an approach that minimizes waste and maximizes the reuse, recycling, and recovery of resources. By embracing these principles and the Envision guidelines, our design teams ensure that material selection and utilization foster a regenerative lifecycle. We incorporate sustainability criteria and performance thresholds within package specifications prioritizing recycled content, lowcarbon options, and locally sourced materials. This strategic approach ensures that our use of concrete, steel, and other primary materials does not compromise their essential strength and durability while supporting our overarching goal of reducing the project's carbon footprint.



Energy and Water Conservation: The Sustainability Team actively collaborates with the design and construction teams to integrate energy and water efficiency into the core of the project. During the design phase, optimization strategies for energy and water use are a priority. Throughout the construction process, contractors are required to adopt effective means and methods to conserve energy and water, aligning our day-to-day operations with our long-term sustainability goals.



Technology and Innovation in Sustainability: Our teams across the Hudson Tunnel Project utilize software programs for Life Cycle Assessments (LCA), embodied carbon calculations, and energy modeling, alongside Building Information Modeling (BIM). These technological tools empower our team to make informed, data-driven decisions, optimizing the project's sustainability outcomes including more precise planning, minimize waste, and improve resource efficiency.



Construction Staging & Interface Management: To manage the HTP's interdependent project packages, our interface teams work closely with Design and Construction Teams, to ensure that staging areas are optimized, resources are efficiently utilized, and inter-package dependencies are meticulously managed. This collaborative approach not only streamlines construction activities but also mitigates risks associated with overlapping or interdependent tasks.



Construction Safety & Wellbeing: Prioritizing the health and safety of our workforce, GDC's Safety Officer monitors the development and implementation of our comprehensive construction health and safety plans across all HTP packages. This approach includes regular monitoring, training and orientation, tracking, and reporting of safety metrics and incidents, benchmarking our performance against industry standards and Bureau of Labor Statistics (BLS) averages.

Construction Activity Pollution Prevention: Contractors are tasked with preparing and implementing several plans to minimize the environmental footprint of construction activities. These plans are designed to protect the environment, local biodiversity, historical resources, and nearby communities. Key strategies include:

Sedimentation and Erosion Control: Establishes protocols to manage soil erosion and sedimentation, incorporating silt fences (All packages), the use of turbidity curtains to mitigate silt dispersion (Hudson River Ground Stabilization package).

Dust Control Measures: Methods to minimize airborne dust and particulate matter, thereby protecting air quality and reducing the impact on local communities and ecosystems.

Environmental Management Plan: A broad strategy detailing the protective measures for the environment and local wildlife to ensure responsible construction practices in compliance with NEPA.

Noise and Vibration Control: Methods to reduce noise and vibration effects on the local environment and communities.



Stormwater Management: Strategies to manage stormwater runoff effectively, aiming to lessen the impact on local waterways.

Historical Resource Protection: Utilizing controlled construction techniques to reduce the impact on the construction site and its surroundings, with a particular focus on preserving historical resources as identified within the FEIS and considering potential additions to the National Historic Registry.

Cofferdam Erection and Removal: Cofferdam construction and removal are carefully timed and executed using methods that protect aquatic life, following NMFS BMPs and employing vibratory hammers for pile installation and removal to minimize underwater noise. Activities are scheduled to avoid the critical period from January 21 to June 30, protecting migrating and overwintering species like the striped bass. (Hudson River Ground Stabilization package).

Community Engagement and Impact Mitigation: The GDC's Community Outreach Team collaborates with construction teams and engages with neighboring communities to address their concerns and proactively minimize disruptions. Key strategies include:

Community Information Center: A dedicated trailer serves as a community hub, offering a space for meetings, presentations, and open dialogues with residents and local stakeholders, fostering transparency and collaboration.

24/7 Community Hotline: To ensure continuous communication and address any concerns or inquiries from the community promptly, a round-the-clock hotline is set up.


Traffic Disturbance Minimization: Implement strategies to lessen traffic disruptions, including the development of comprehensive traffic management plans, the utilization of temporary traffic lights for efficient rerouting, strategic lane shifts, and the placement of clear signage to guide community members and reduce inconvenience.

Construction Waste Management and Recycling:

Waste Management Plan: Contractors are required to develop a comprehensive waste management plan that prioritizes reuse and recycling to significantly reduce waste sent to landfill. The project is committed to achieving a 75% waste diversion rate, channeling materials towards recycling, repurposing, or beneficial reuse, thereby minimizing the environmental impact of construction activities.


Soil and Spoil Waste Management: In collaboration with Licensed Site Remediation Professionals (LSRPs), construction teams conduct soil testing to determine the presence of any hazardous substances in soil or spoil waste. This ensures that any contaminated materials are identified and handled appropriately, adhering to environmental safety standards and regulations.

Construction Powered Equipment:




Emission Reduction: Contractors are required to adopt strategies to reduce Green House Gas (GHG) emission across all project stages. This includes utilizing cleaner fuel options and optimizing transportation logistics to ensure efficiency and environmental responsibility.

Electrically Powered Machinery: To further minimize our carbon footprint and reduce noise pollution, the project advocates for the use of electrically powered construction machinery wherever feasible.




Construction Trailers: Contractors are required to ensure that construction trailers exemplify efficiency and sustainability in daily operations. This includes adopting measures to optimize energy and water usage, along with implementing waste reduction practices. Our goal is to create a model of sustainability within these temporary workspaces, reflecting our project-wide commitment to sustainability.



DBE (Disadvantaged Business Enterprise) Participation Goals: The HTP is dedicated to fostering diversity and inclusion within its contracting processes. GDC's Director of Diversity and Inclusion works with procurement to assist Contractors to exceed established DBE participation goals. This commitment ensures that businesses owned by socially and economically disadvantaged individuals have ample opportunities to contribute to the project, promoting equitable economic growth and community empowerment.

Monitoring and Reporting Sustainability Performance:

KPI Dashboards and Progress Meetings: The project will utilize comprehensive KPI dashboards to continuously monitor and report on sustainability performance across all stages. Regular progress meetings will be conducted to review these KPIs, ensuring all team members are aligned and informed about the project's sustainability status including Envision verification and documentation status.



Corrective Actions: The KPI dashboards will serve as a dynamic tool, not just for monitoring but also for identifying areas where performance may deviate from the set sustainability goals. Prompt corrective actions will be initiated based on real-time data, allowing for immediate adjustments to practices or strategies as needed.

Lessons Learned and Continuous Improvement: This process of monitoring, reviewing, and adjusting is integral to our commitment to continuous improvement. It ensures that our sustainability objectives are not just met but are continually advanced, reflecting our dedication to setting new standards in sustainable construction.

*Your Input on Sustainability Best
Management Practices is Valued:*

As we continuously strive for improvement and innovation in our sustainability practices, the insights and suggestions from our community are invaluable. If you have a sustainability tip or tool that could benefit our project, we're eager to hear from you. Please share your ideas with us at sustainability@gatewayprogram.org. Together, we can pave the way to a greener, more resilient infrastructure.

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