



***3D Global Solutions, INC***

Architectural, Engineering &  
Environmental Services  
Capabilities for Infrastructure  
Projects

## Office Locations:

New Jersey ~ New York ~  
Pennsylvania ~ Puerto Rico



- Nationwide firm established in 2005
- Total design and consulting services for site planning, buildings, energy projects and infrastructure
- Extensive and diverse clientele including many Fortune 500 Companies

# Business Sectors and Locations

## Business Sectors

- Infrastructure, Waterfront and Energy
- Real Estate
- Education
- Hospitality
- Science and Technology

## Office Locations

- New Jersey
  - Warren
  - Newark
  - Galloway
- New York
  - Manhattan
  - Garden City
  - Yonkers
- Pennsylvania
  - Philadelphia
- Puerto Rico (local affiliate)

# Strong Customer Service

- Customer-first
- Quality-based, on-time delivery
- Product excellence and continuous improvement
- Value-added service



# Business Sectors and Significant Clients

## Science & Technology

- Novartis
- Hoffmann-La Roche
- Lucent
- Genzyme
- Becton Dickinson

## Education

- SUNY
- Ramapo College
- Rutgers University
- UMDNJ
- Kean University

## Energy/Authorities

- PSE&G
- National Grid
- JCP&L
- Connectiv/Atlantic
- Electric
- US Dept of Defense

## Hospitality

- Borgata
- Harrah's
- Bally's
- NY/NJ Red Bull
- NJ Motorsports

## Real Estate

- National Resources
- K. Hovnanian
- Roseland Properties
- Atlantic Realty
- Pliskin Realty

## Public Sector

- RVSA
- Essex County
- Union County
- NJSEA
- NJ Turnpike

..and many others

# An Integrated Design Resource

## Building Design

- Structural
- Mechanical
- Electrical
- Geotechnical
- Process Design/  
Pharmaceutical
- BIM
- Energy Management
- Architecture and  
Interior Design

## Infrastructure, Energy and the Environment

- Water / Wastewater
- Energy Generation
- Infrastructure
- Public Facilities
- General Services  
Contracts
- Sustainable /  
Renewable Design

## Site Development

- Civil / Site
- Survey
- GIS
- Environmental
- Natural Resources
- Brownfields
- Community Planning

# An Integrated Design Resource

## Land Services Group:

- Environmental engineering
- GIS and information management
- Civil/site engineering and survey
- Landscape architecture
- Sanitary and wastewater engineering

## Building Services Group:

- Geotechnical engineering
- Structural engineering
- Electrical and mechanical engineering
- Architecture/interiors\*
- Waterfront engineering and design
- Energy planning and renewable energy



# Environmental Engineering Services

## Land Use Approval and Permitting Services:

- Wetland Assessments Delineations, and Mitigation Design
- Environmental Permitting & Documentation
- Regulatory Compliance and Permitting
- EIS Document Preparation
- ACOE Permitting Expertise
- Land Use Permitting
- Air and Noise Sampling, Monitoring and Mitigation Design





# Environmental Engineering Services, cont.

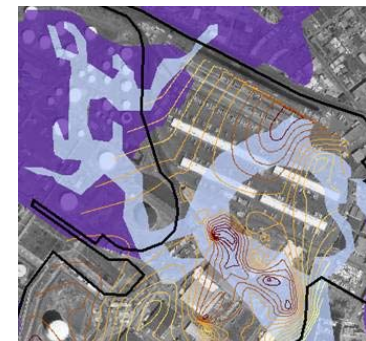
## Site Remediation and Compliance Services:

- Solid Waste Management
- Contaminant Delineation
- Hydro-geologic and Groundwater Studies
- Environmental Assessment
- Environmental Audits
- Spill Prevention and Compliance
- Underground Storage Tank Analyses
- Alternative Treatment Technologies
- Waste Management/Alternative Technologies



# GIS and Information Management

- Environmental constraints analysis
- Digital aerial interpretation
- Demographic analysis
- 3D visualization
- Bulk mapping requests, tree trimming and special mapping
- Mapping of overhead, underground, land use and facility attribute data
- Chemical data management



# GIS and Information Management, cont.

## Photo-Realistic Visual Simulations:

- Visualize proposed changes on the local landscape

## View shed Analysis:

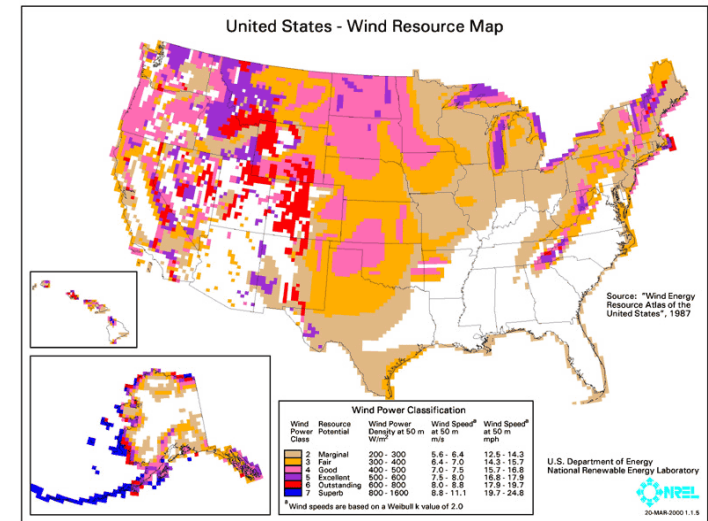
- Determining the visibility from a local road or nearby community using existing terrain and features



# GIS and Information Management, cont.

## GIS Wind Assessment Models:

- Identify areas of high potential for wind energy projects
- Correlate to locations of existing transmission lines, density of population, natural features and endangered species, and surface terrain



# Civil/Site Engineering and Survey Services

- Floodplain Analysis
- Land Use Analysis
- Regulatory Compliance and Permitting
- Site Feasibility Analysis
- Site Plan and Site Master Planning
- Boundary, Title and Topographic Surveys
- Storm water Management
- Stream Encroachment Analysis
- Expert Testimony
- Storm Piping Design
- Landscape Planning and Design



# Water Resources Engineering Services

- Sanitary and Chemical Sewage Systems
- Wastewater Collection/Conveyance Systems
- Wastewater Treatment and Industrial
- Pretreatment Systems
- Sludge/Solid Waste Management
- Water Quality Services
- Odor Control and Air Permitting
- Regulatory Relations - Permitting/NJEIT Funding



# Geotechnical Engineering Services

- Hydro-geologic and Soil Characterization Studies
- Surface and Subsurface Investigations
- Foundation and Slope Stability Analysis and Design
- Foundation/Earthwork Construction Inspections
- Preparation of Bids and Specifications
- Landfill Site Investigations, Analysis and LFG Studies
- Design of Excavation and Retaining Structures
- Laboratory Testing of Soil



# Structural Engineering Services

- Structural analysis and design
- Existing building investigation/analysis
- Rehabilitations/renovations
- Waterfront structures/piers
- Bridge analysis/design
- High-rise tower design
- Foundation design
- Field and construction investigations
- Seismic/vibration analysis
- Value engineering



## Example projects:

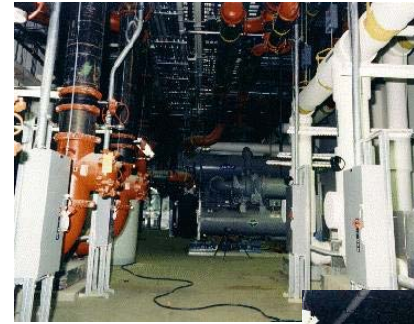
- Community Energy's Jersey Atlantic – Atlantic City, NJ
- Lake Nelson Substation (PSE&G) – Parsippany, NJ
- First Energy Substation – Morristown, NJ
- KeySpan Woodbury Substation – Woodbury, NY
- KeySpan E.F. Barrett Power Station – Oceanside, NY





# Mechanical and Electrical Engineering Services

- Energy Studies
- Existing Conditions Surveys
- Equipment Environmental Analysis
- Maintenance Survey and Recommendations
- Life Cycle Costing for Major Systems
- Functional Space Planning and Facility Layout
- Analysis of System Performance
- Evaluation of Candidate Sites and Facilities
- Example Projects:
  - Security system upgrades for eight substations
  - Ravenswood Power Plant fuel oil piping and screen wash upgrades
  - Certification of “as-built” drawings
  - Hot reheat system
  - Hicksville boiler renovation project
- Heating, Ventilating, AC
- Humidification/Dehumidification
- Power Distribution
- Monitoring and Controls (P&IDs)
- Grounding
- Data/Signal
- Lighting, Fire Protection



# Architectural/Interiors, Facilities Planning Services

## Architectural Planning and Design

- Master Planning & Programming
- Architectural Design
- Feasibility Studies
- Site Evaluation/Selection/Planning
- Zoning Assistance
- Value Engineering
- Construction Contract Documents Preparation
- Construction Phase Services
- Code Compliance

## Interior Design and Facilities Planning

- Interior Design
- Development Programs & Master Planning
- Space Analysis and Programming
- Facilities Planning and Management
- Project Budget and Scheduling
- CADD/Computer Design
- Lighting Design
- Signage Programs
- Americans with Disabilities Act (ADA) Design

# Waterfront Services

- Waterfront Master Planning
- Waterfront Permitting and Licensing
- Dredging Analysis
- Design of Waterfront Structures
- Design of Berthing and Fendering Systems
- Marina Design



# Energy Services

- Energy Audits
- Energy Master Planning
- Energy Alternative Analysis
- Design Services
- Commissioning and Start-up



# Housing and Dormitories



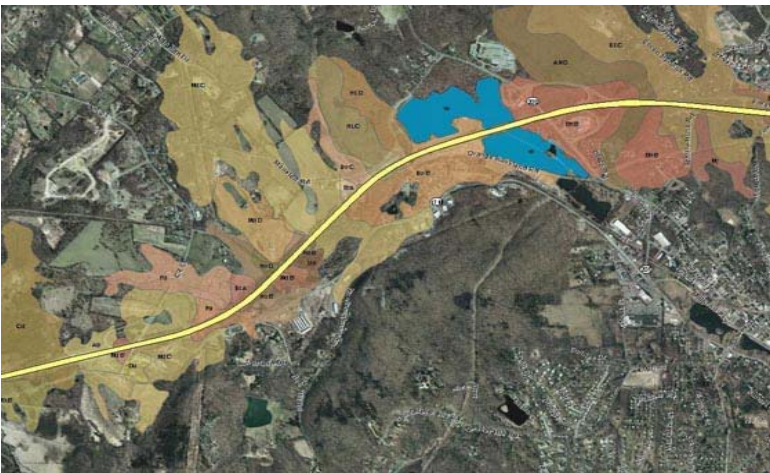
# Roadways



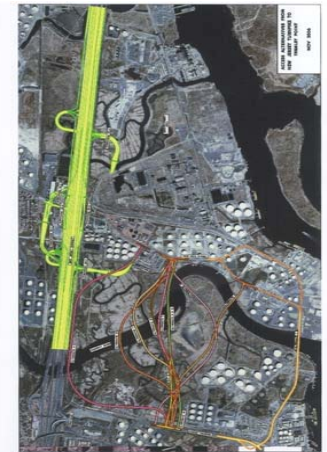
< Secaucus Interchange



NJ Turnpike Interchange >



< Rt. 17 Improvement Project



Tremley Point Connector >

# Bridges



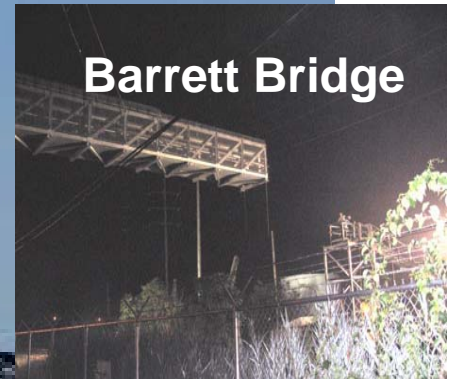
Milton Ave.



Milton Ave.



Witt Penn Bridge



Barrett Bridge



Coney Island Creek

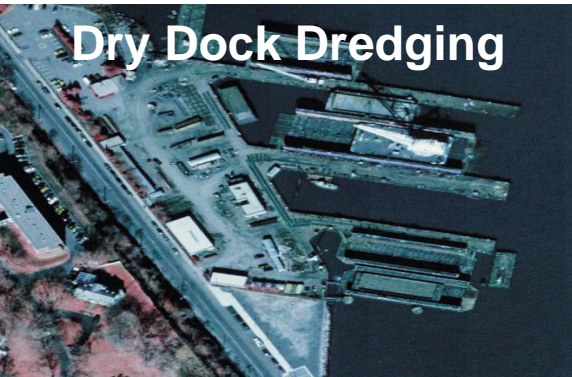


Paerdegat Basin Bridge

# Waterfront and Berthing Facilities



Marinas



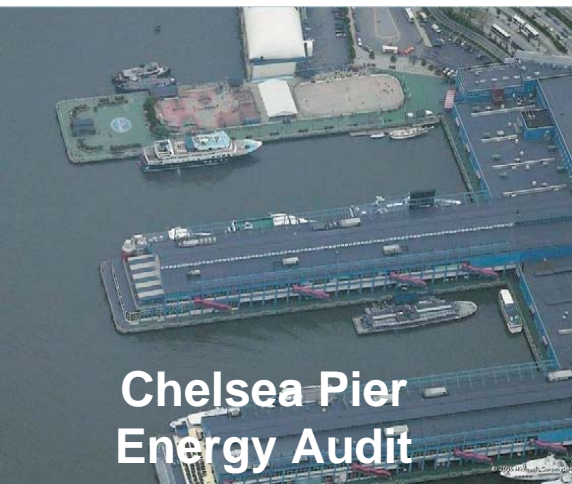
Dry Dock Dredging



Ferry Slips and Docking



Submarine Base



Chelsea Pier Energy Audit



Visy Paper

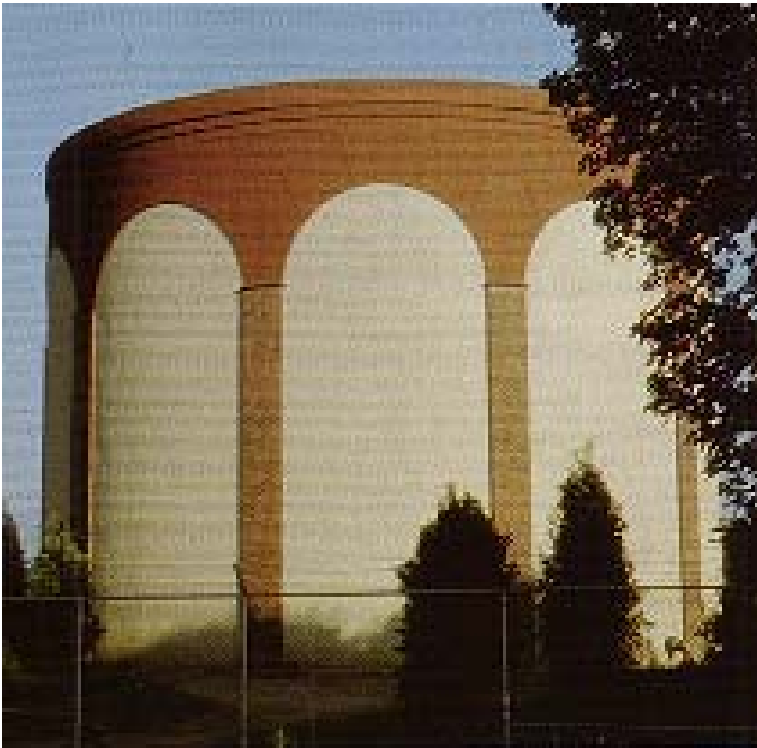


Submarine Quay Wall

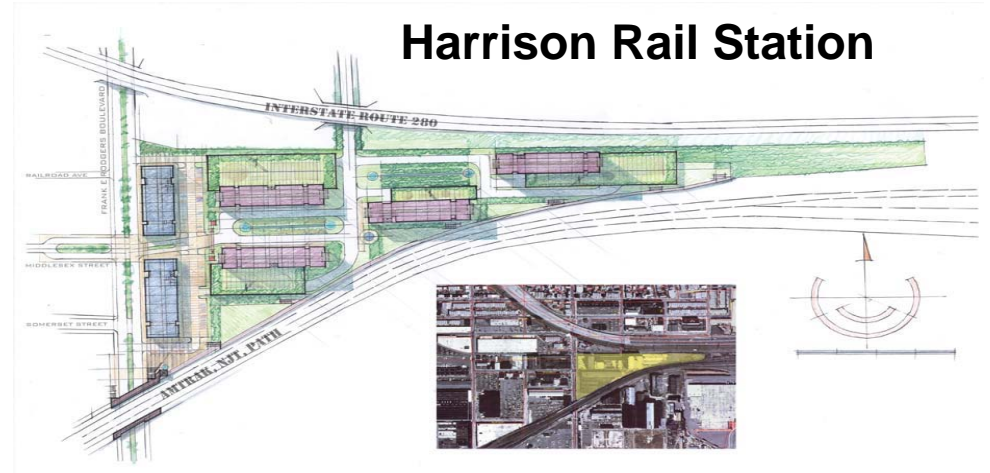
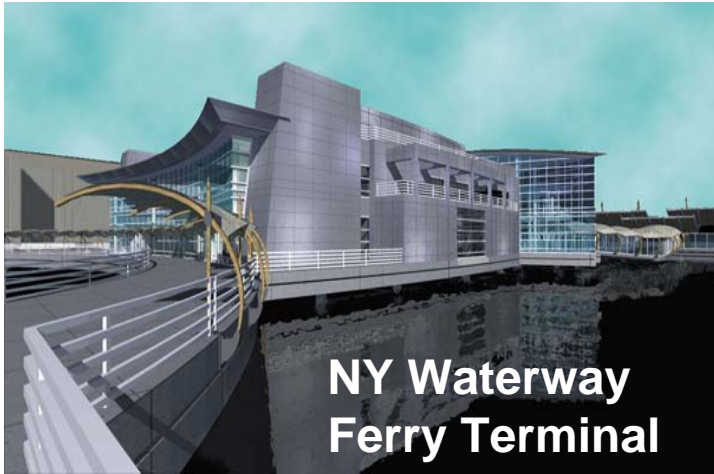




# Water Supply



# Transportation Facilities



# Airports

**Continental Cargo**



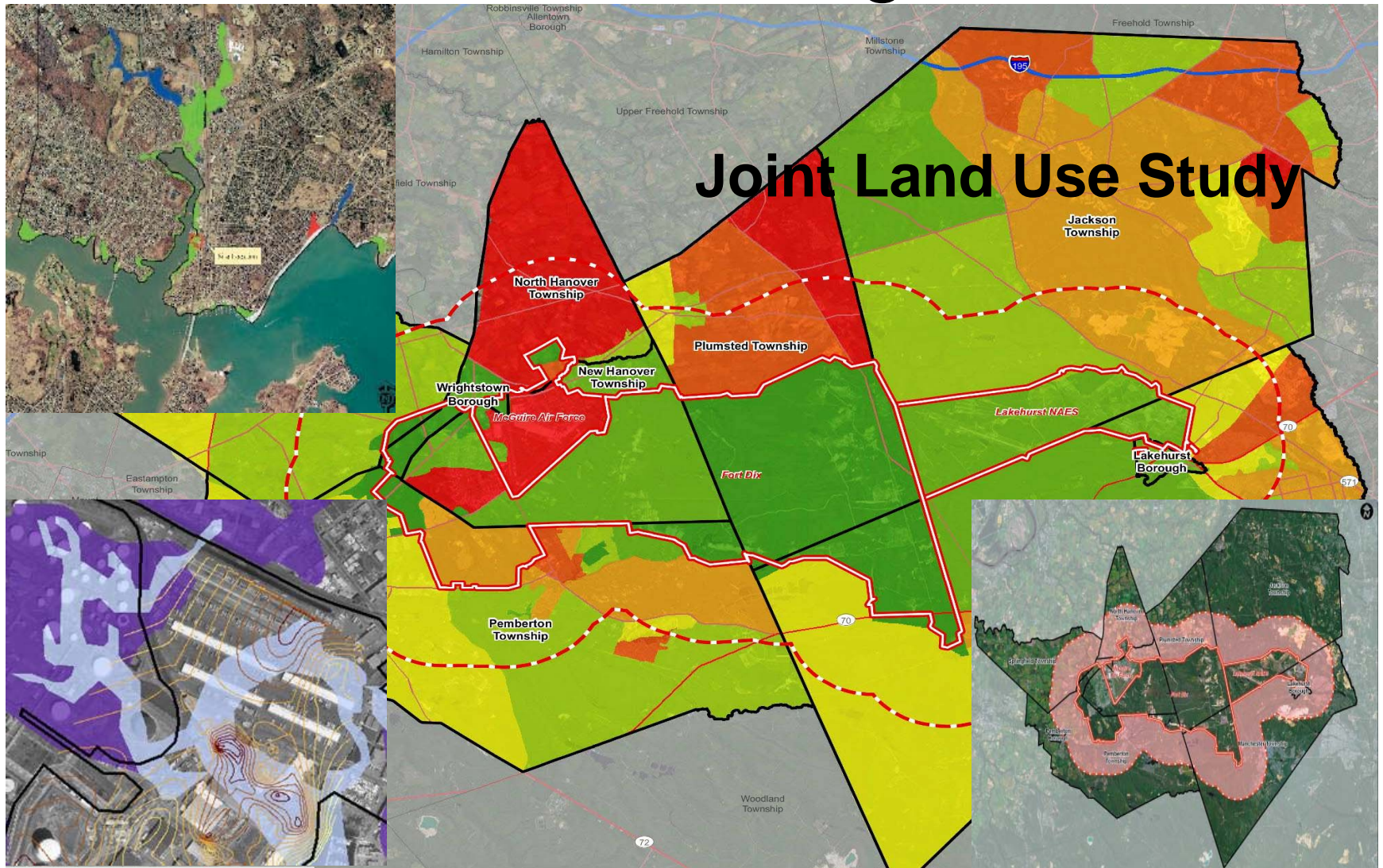
**Morristown Hangar**



**Newark Liberty**

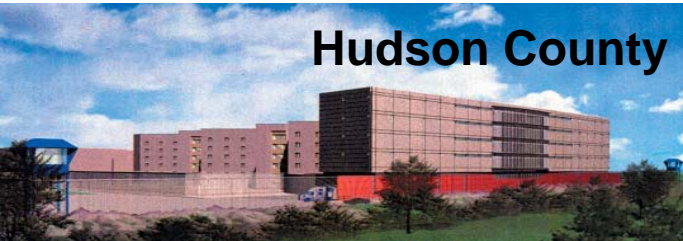


# Defense Base Planning and Reuse

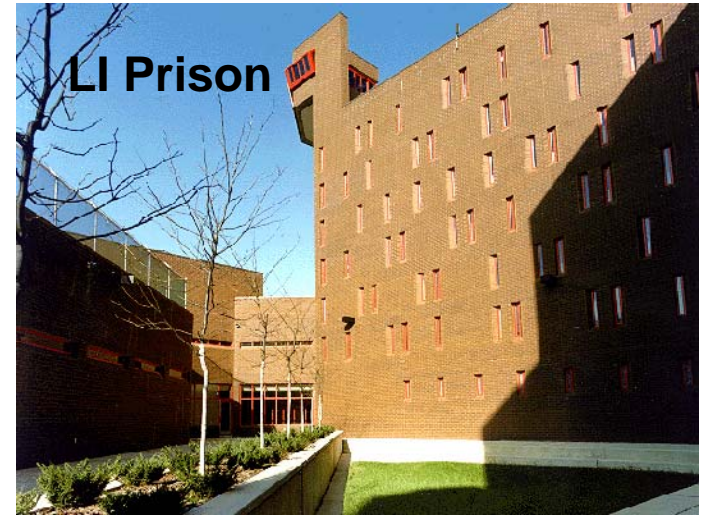


# Prisons and Detention Facilities

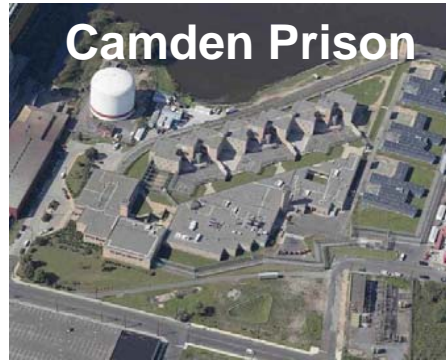
Hudson County



LI Prison



Camden Prison

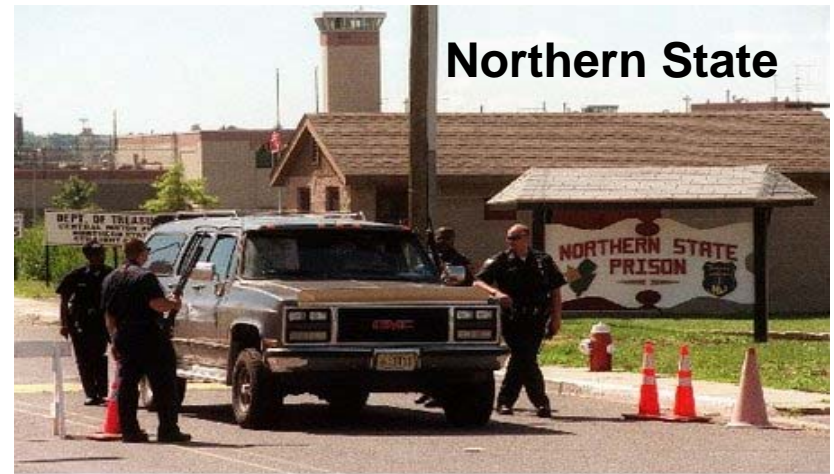


Essex County Jail

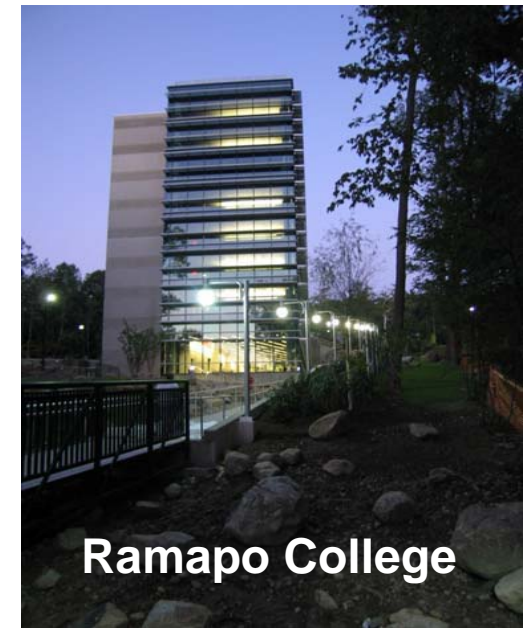
Rahway



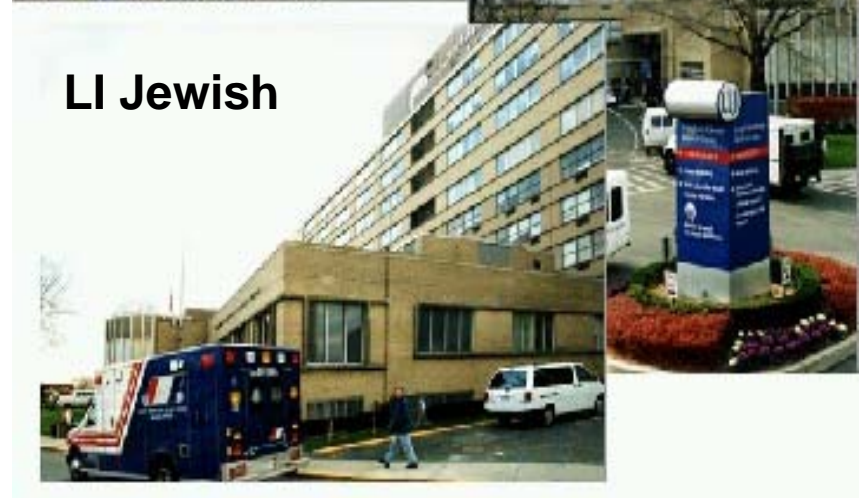
Northern State



# Educational and Training Facilities



# Hospitals and Medical Centers





# Energy and Power Generation



# Renewable Solar and Wind Power

3DGS helping to pave the way to renewable energy:

- Completed the only wind to energy project operating in New Jersey
- Engineering and permitting a second wind-to-energy; secured \$3,850,000 in stimulus funding
- Assisted PSEG with a 2MW photovoltaic project at the Mars facility in Hackettstown

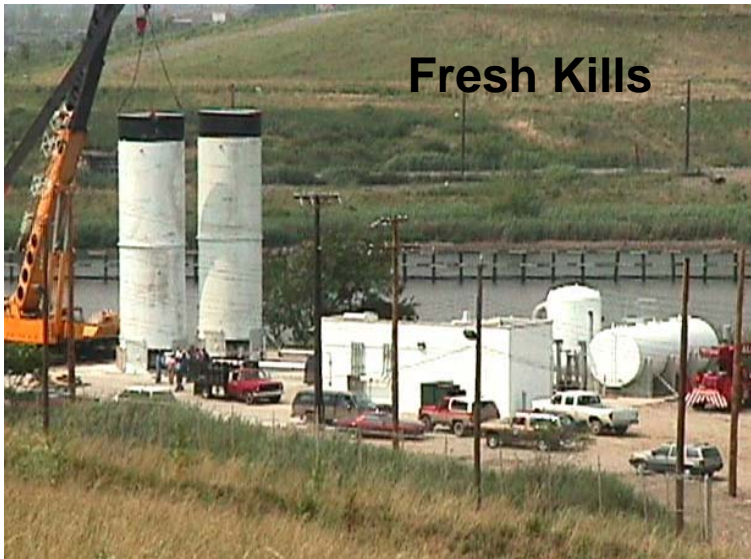


# Utilizing Alternative Fuels

UCUA RRF

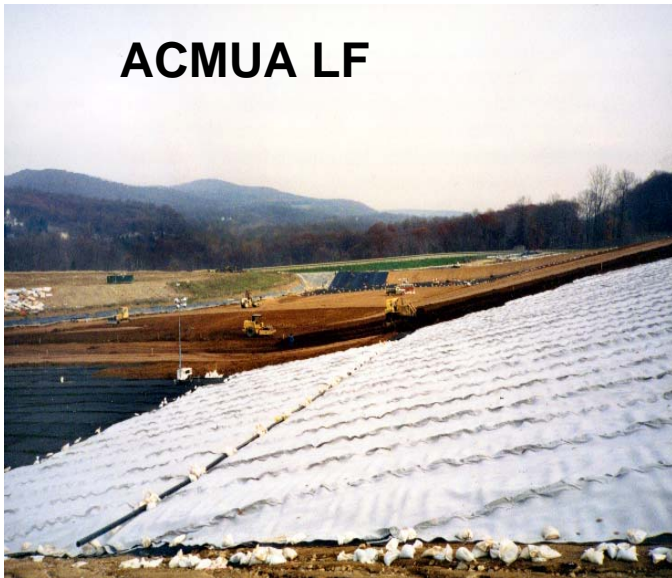


Fresh Kills



# Landfills and Solid Waste Facilities

**ACMUA LF**



**UCUA RRF**



**Munisport LF**



**Warren County LF**



**Fresh Kills LF**



**Transfer Station**



# Why Use 3D Global Solutions?

- Full service / integrated services
- Experienced in the design of Infrastructure
- Experienced in Maximizing Site Density
- Experienced in Wind and Solar Farm Permitting
- Understand Renewable and Alternative Energy Design
- Well Versed in “State of the Art” Techniques
- Coverage throughout New York, New Jersey, New England and Eastern Seaboard
- Expertise with Experience and Efficiency