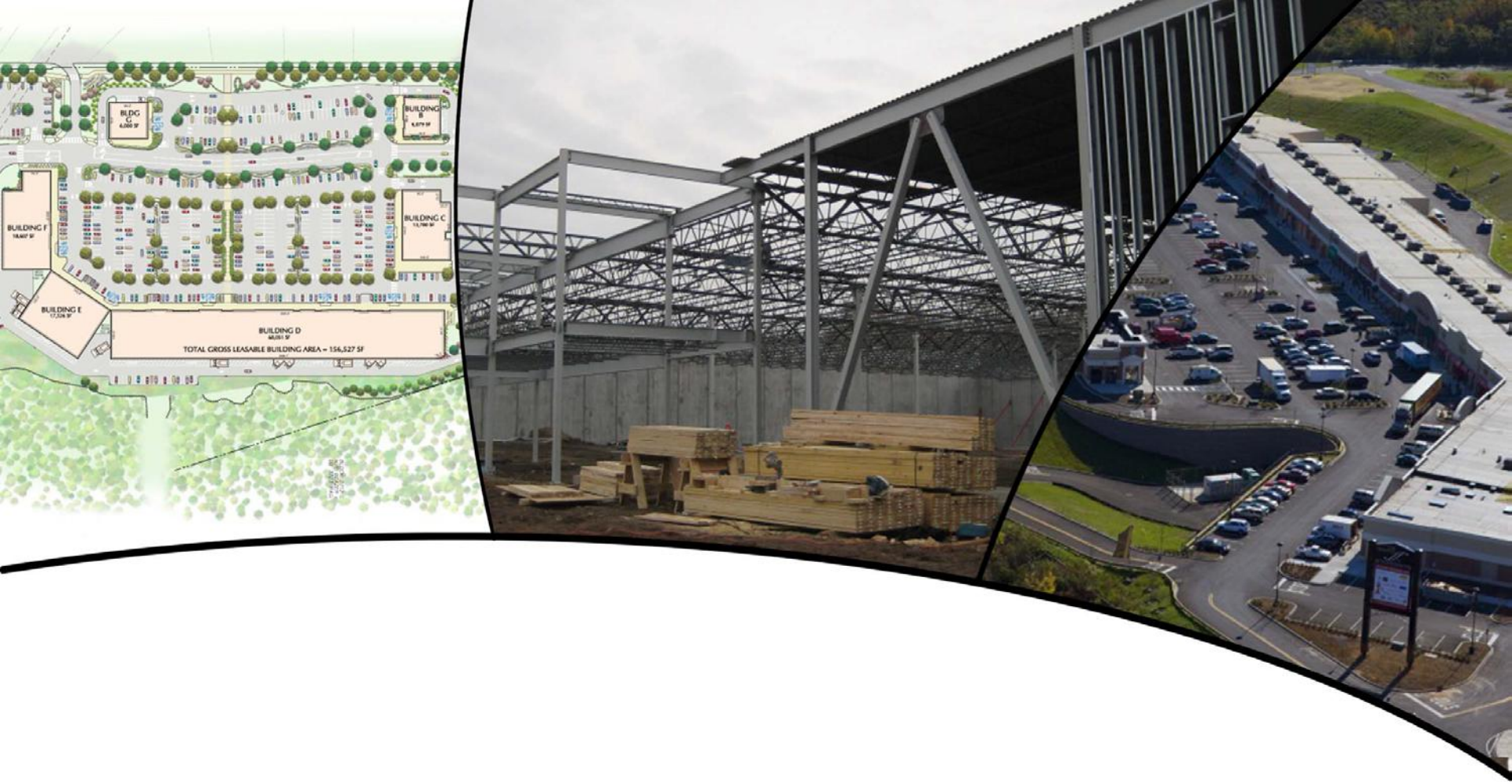

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Technical Excellence Practical Experience Client Responsiveness

About Langan

Privately-Owned, Multi-Discipline Engineering Consulting Firm

30 Offices Worldwide 1,000+ Employees

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Services

Site/Civil Engineering
Geotechnical Engineering
Environmental Engineering
Natural Resource Permitting
Cultural Resource Permitting
Surveying & 3D Scanning/BIM
Mobile Mapping
Traffic & Transportation
Data Management & Visualization
Landscape Architecture & Planning
Earthquake & Seismic Engineering
Sustainable Design
GIS Services
Oil & Gas Services

Markets

Brownfield Redevelopment
Colleges & Universities
Design-Build
Energy & Utilities
Environmental Compliance
Environmental Remediation
Federal & Public Works
High Rise
Hospitals & Healthcare
Infrastructure
Industrial, Manufacturing & Warehouse
K-12 Schools
Master Planning
Mission Critical & Datacenters
Mixed-Use
Petroleum & Chemical
Pharmaceutical
Residential
Resorts, Hospitality & Casinos
Retail and Shopping Centers
Stadium & Arena
Traffic & Transportation
Waterfront & Marine

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Focus on Redevelopment

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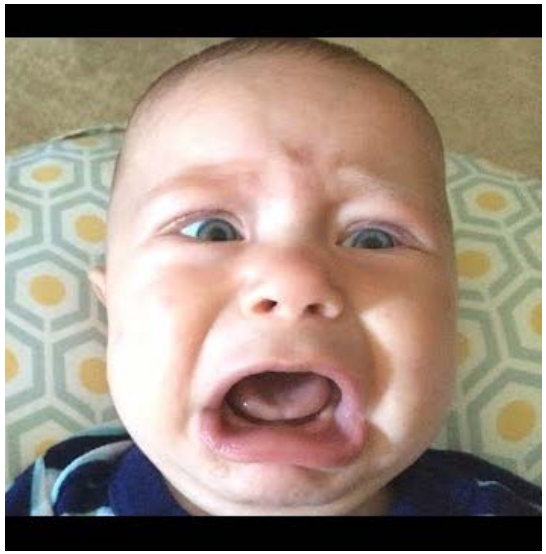
Addressing the fear of Impacted Sites



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What is a "Brownfield"

EPA's Definition of Brownfields sites are defined as "real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant."

*Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, §101(39))

"The cleanup of brownfields sites improves and protects the environment and may result in many benefits for the local community."

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Brownfields Redevelopment

Langan has been working at Brownfield sites before the term “Brownfield” was coined.

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Brownfields Redevelopment

Federal Grant Programs

- Available Annually
- Nation wide competition
- Money is set aside each fiscal year for Brownfield grants
- 1 in 4 grants are awarded

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Brownfields Redevelopment

State-Specific Programs

- Pennsylvania – PADEP Land Recycling Program
- New Jersey - Site Remediation Program's Office of Brownfield Reuse (OBR)
- New York - State Brownfield Program (BCP) and The New York City Brownfield Cleanup Program (NYC BCP)

pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

NEW YORK STATE

NYC BCP

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Three Crossings

- In the oven…

Existing

Redevelopment Concept

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Ambler Crossings

- In the oven…

Existing

Redevelopment Concept

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Ambler Boiler House

- Baked…

Before

After

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55 Bank Street

- Phase 1 - 16-story, 288-unit residential building with ground retail space and 381 parking spaces.
- Phase 2 – Second 16-story building with 273 residences and retail space.

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Bronx Terminal Market
Bronx, NY

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Columbus Commons
Philadelphia, PA

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Metroplex Mall
Plymouth Meeting, PA

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Courtesy of Looney Ricks Kiss Architects, Inc. Copyright Mignatti

Waterside
Bensalem, PA

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Blue Black Square
West Hartford, CT

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American Airlines Arena
Miami, FL

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Prudential Center
Newark, NJ

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Scovill Brass Factory
Waterbury, CT

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Liberty Science Center
Jersey City, NJ

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Grants and Funding for Brownfields

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Federal and State Programs

Grant funding opportunities are also available at the state level for;

- Environmental Assessment and Cleanup
- Site Design / Planning
- Site Clearing / Demolition
- Parks and Recreation Design and Construction
- Site and Infrastructure Design and Construction

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Recent Track Record

- 2016 – Philadelphia, PA $300,000
- 2016 – Norristown, PA $100,000
- 2015 – Philadelphia, PA $400,000
- 2015 – Greene County, PA - $250,000
- 2015 – Lackawanna County, PA $500,000
- 2015 – Norristown, PA - $500,000
- 2015 – Roselle Park, NJ $185,000
- 2013 – Bucks County, PA $175,000
- 2013 – Bucks County, PA $4.5 million
- 2012 – Norristown, PA $400,000
- 2011 – Allentown, PA $130,000
- 2011 – Bristol Township, PA - $500,000
- 2010 – Taylor Borough, PA $500,000

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Taylor Borough, PA

Former Taylor Colliery

- 150 Acres of vacant mine scarred land
- Redeveloped into commercial and residential

US EPA Brownfields Grants - $750,000
Pennsylvania Department of Community and Economic Development Grant $100,000

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Allentown, PA

Revitalization/Environmental Project

JACKSON STREET PARK REDEVELOPMENT PROJECT
CITY OF ALLENTOWN

WITH LANGAN ENGINEERING & ENVIRONMENTAL SERVICES INC, PA DEPT OF ENVIRONMENTAL PROTECTION, PA DEPT OF COMMUNITY & ECONOMIC DEVELOPMENT, PA DEPT OF CONSERVATION & ENVIRONMENTAL RESOURCES, ST. PAUL'S PARK NEIGHBORHOOD GROUP, ENVIRONMENTAL SERVICES INC + BROWN DESIGN GROUP

Lehigh Valley Award
HONOREE

Pennsylvania Department of Community and Economic Development Grant $100,000

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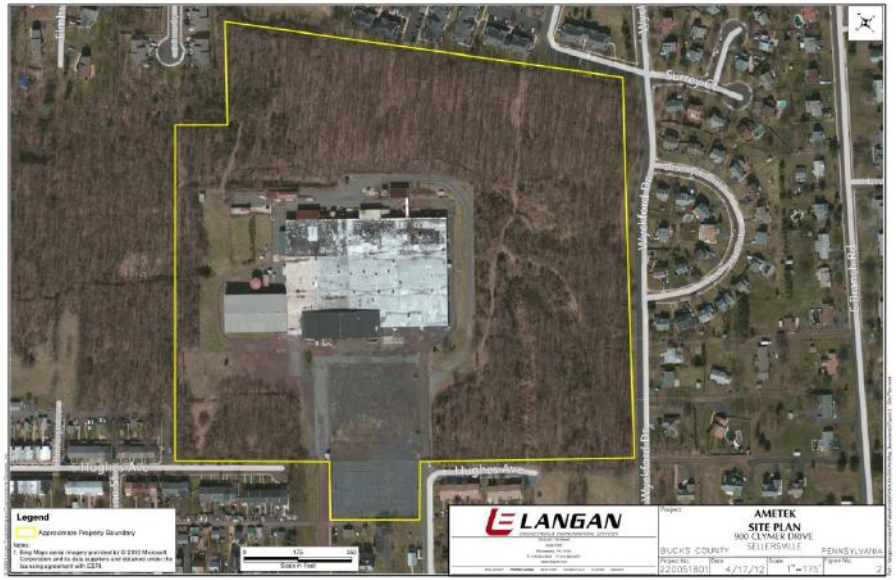
Sellersville Business Campus, PA



Pennsylvania Department of Community and Economic Development $4.5 million with LERTA

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Roselle Park, NJ

ROSELLE PARK DPW SITE
REDEVELOPMENT PLAN

Figure 2: Aerial View of DPW Site Redevelopment Plan Area

New Jersey Hazardous Discharge Site Remediation Fund - $500,000

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Norristown, PA

Time Line

2012 – Norristown Awarded $400,000 US EPA Brownfields Grant, written by Langan

2013-2014 – Langan Creates Brownfields Inventory, begins Assessments

2014 – Langan introduces Site Civil / Landscape Architecture Services

2015 – Norristown Awarded $400,000 US EPA Brownfields Grant, written by Langan

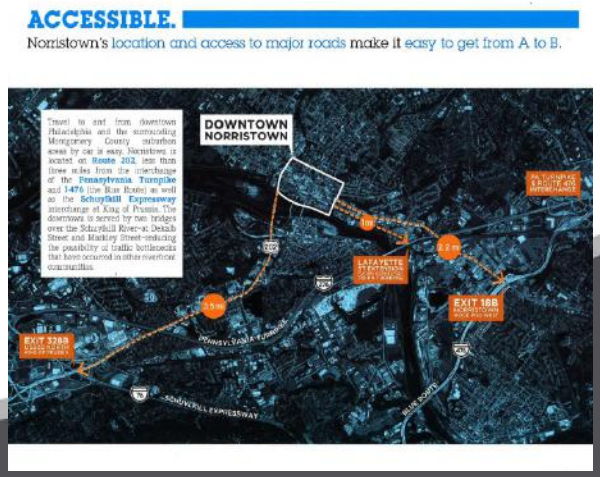
2015 – Langan continues brownfields assessment activities

2015 – Norristown Planning Developers Tour in Conjunction with Langan

2016 – Norristown Awarded $100,000 Pennsylvania State Planning, written by Langan

2017 – Langan begins Landscape Architecture and Planning services

2017 and beyond – Langan Introducing Developers to Land Owners for Redevelopment



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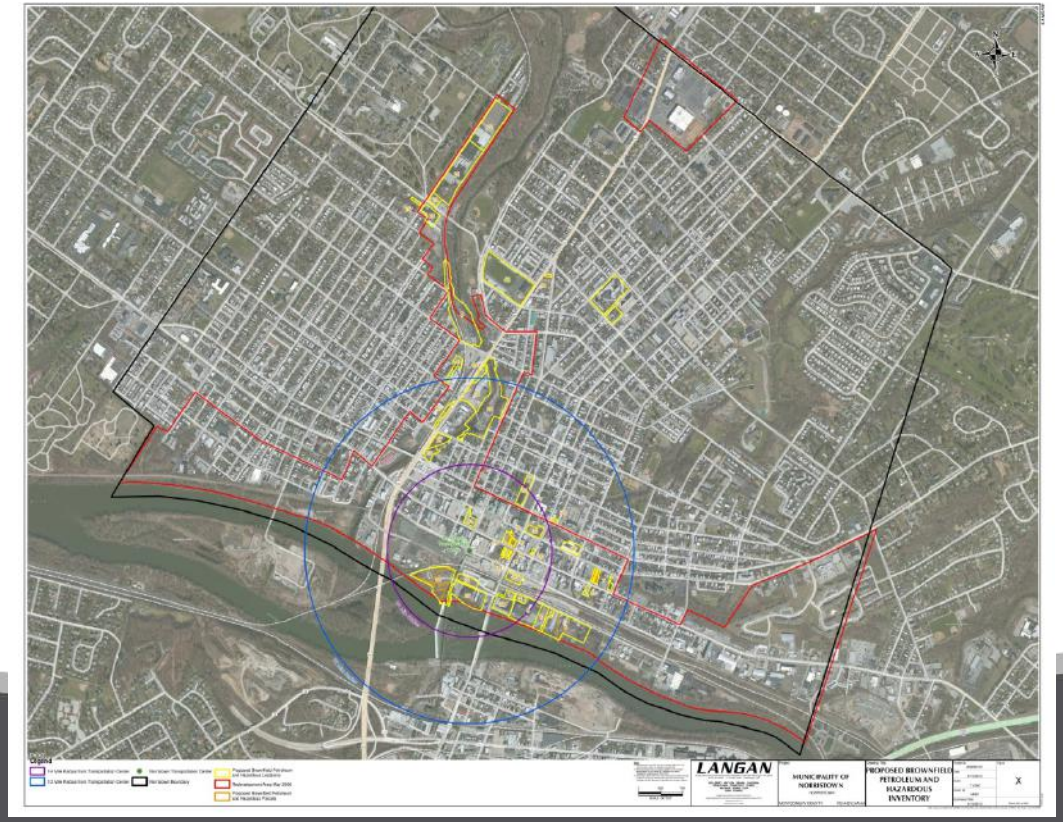
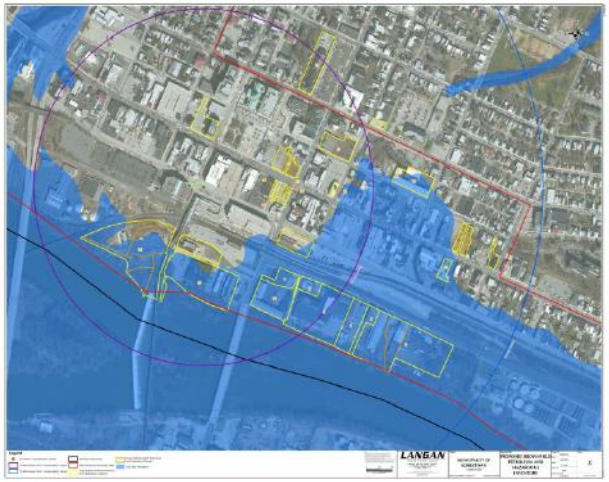
Site Inventory Centered on Norristown Transportation Center



Future Planning / Redevelopment Area



Norristown Marketing Materials

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Take Away Message

- There is likely funding available at the Federal, State and Local level for every Brownfield.
- Langan has capabilities and expertise in obtaining grants or other Brownfield funding.

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Thinking About Renovating?
Site Considerations

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Site Renovation Considerations

- Types of Renovations Considered
  - Façade Only
  - In-Line Tenant Space Only
  - Parking Lot Modifications
  - Building Expansions

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Façade Only Improvements

- Municipal requirements:
  - Definition of “Building Area”
    - Vestibules
    - Awnings / overhangs
  - Trigger ADA improvements?
  - Signage requirements
  - Building lighting requirements

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In-Line Tenant Space Improvements

- Need to consider "USE"
  - Municipal definitions for a "USE":
    - Same or similar uses – generally not an issue
      - Still need to check definitions
      - "Restaurant" for example:
        - "Restaurant"
        - "Family Restaurant"
        - "Counter Service Restaurant"
        - "Fast Food Restaurant"
        - "Drive-In Restaurant"
        - "Drive-Through Restaurant"
        - "Coffee Shop"
    - Different Uses
      - Check list of "Permitted" Uses
      - Some may require "Special" Permission

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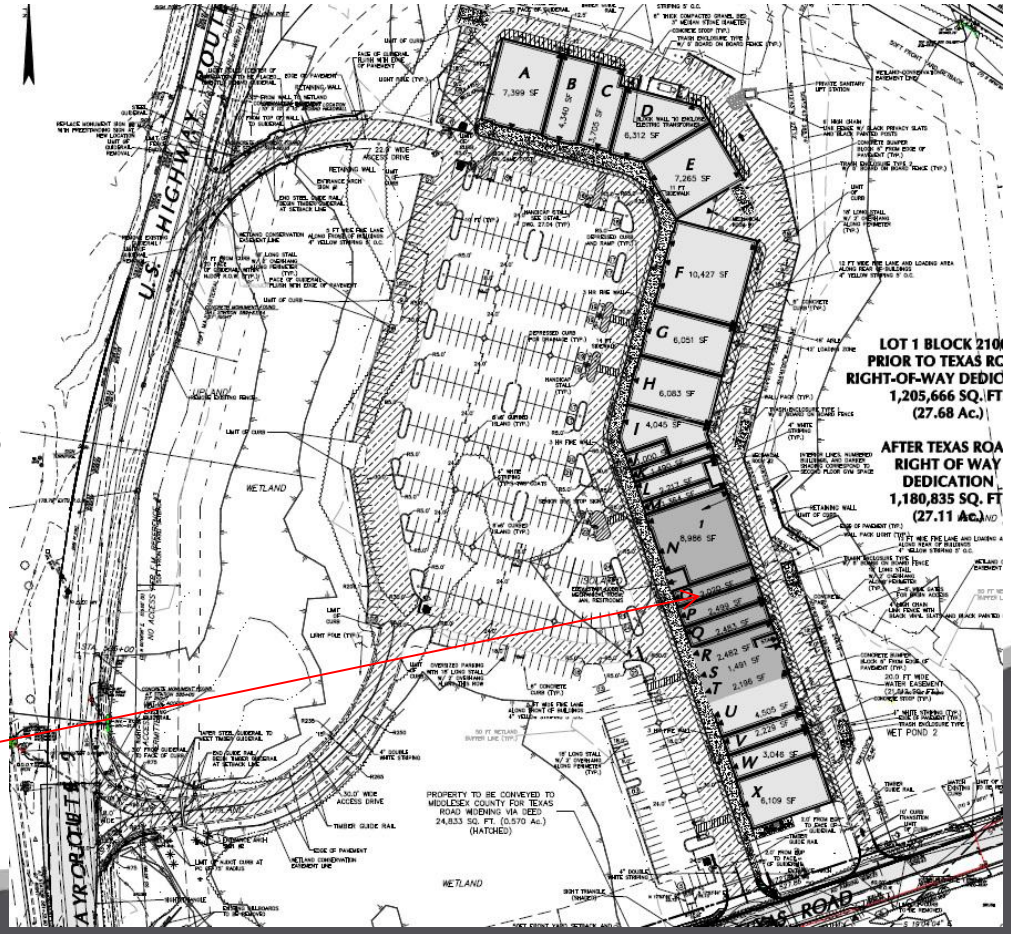
In-Line Tenant Space Improvements

- Other USE considerations (continued)…
  - Different USES have different
    - Parking requirements
    - Delivery truck types
    - Water usage
    - Sewage generation
    - Hours of operation
    - Trash generation
    - Fire protection requirements
    - Signage requirements
  - Tenant-specific requirements

Second Floor Gym



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Parking Lot Modifications

- Number of Spaces Increasing or Decreasing?

- Expansions of Parking Lots
  - Increase in impervious coverage – trigger stormwater requirements
  - Increase required number of handicap spaces
  - Increase required site lighting coverage
  - May require “fixes” to other site features
    - Clean up of stormwater basins
    - Corrections to storm conveyance pipes
    - Corrections to inadequate accessible routes
    - Repair / replace failing pavement areas

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Parking Lot Modifications (cont'd)

- Restriping only?
  - Check municipal requirements – larger stalls? ADA?
  - Type of striping ("hairpin"?)
  - Consider locations of site light poles
  - Shopping cart storage areas?

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Building Expansions

- Generally will require full land development design and approvals
- Suggested Due Diligence
  - Zoning requirements
    - Permitting / Non-Permitted Uses
    - Setbacks, buffers, parking, building coverage, impervious coverage
  - Utility Capacities
    - Water pressure, available capacity, utility services
    - Location of connections, relocation of existing utilities required?
  - Traffic generation
    - Access improvements, off-site improvements, signalization
  - Stormwater requirements
    - “Modernizing” and expanding stormwater facilities
    - Has the basin become a regulated wetland? (oh please no)

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Building Expansions (cont'd)

- Suggested Due Diligence (continued)…
  - Survey / Land Title Issues
    - Easements, restrictions, covenants, subdivision vs. condominium
  - Signage requirement
    - Number, location, setbacks
  - Environmental Considerations
    - Phase 1 ESA, bldg condition assessments
  - Potential CAM Issues
    - Responsibilities, trash, lighting, snow removal
- Understanding the Permitting Process
  - Municipal, County, State, Federal

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Why Do You Need Site Engineering?

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FEMA Maps

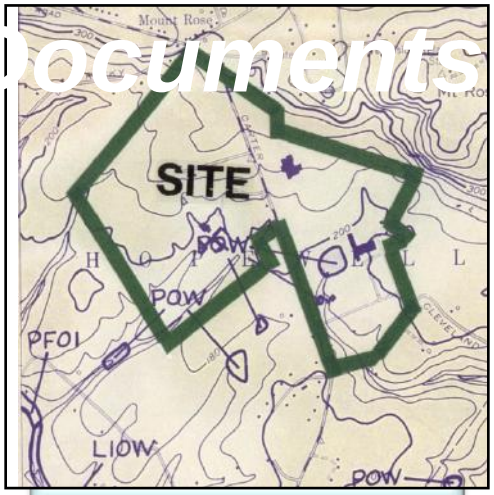
FLOODING ZONES

WETLAND AREAS

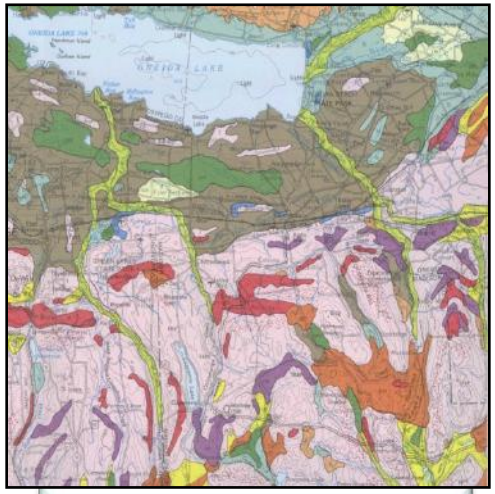
PERMITTING POTENTIALS

FOUNDATION THOUGHTS

DEVELOPMENT RESTRICTIONS



Wetland Maps



Geologic Maps

Tax Maps

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Perform a Site Visit

Items to look for:

- Existing topography
- Drainage patterns and drainage features
- Environmental concerns
- Natural resources (streams, wetlands, etc.)
- Existing structures
- Site access, signal locations, surrounding driveways

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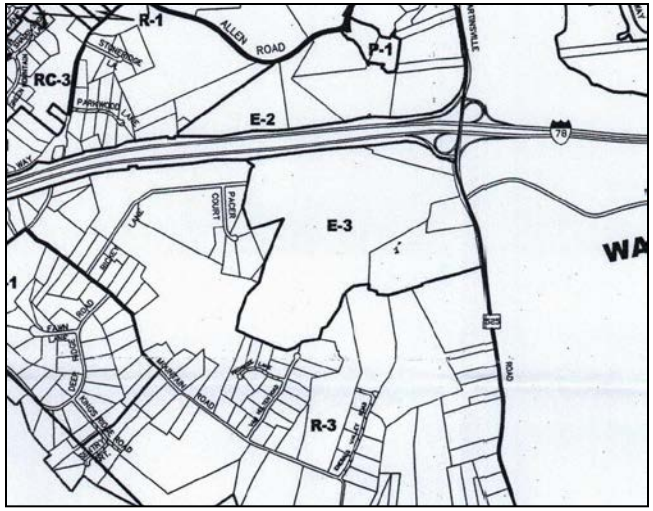
Perform a Preliminary Zoning Analysis



ZONING REQUIREMENTS							
ROW/ COL	ITEM	ORDINANCE SECTION	REQUIRED (HIGHWAY COMMERCIAL ZONE)	EXISTING	PROPOSED	EXISTING NON-CONFORMANCE	PROPOSED VARIANCE/ WAIVER
1	PERMITTED USES	211-27.A	OFFICES, RETAIL SHOPPING CENTERS, RESTAURANTS, HOTELS AND MOTELS, FINANCIAL INSTITUTIONS	RETAIL, BANK, AND RESTAURANTS	RETAIL, BANK, AND RESTAURANTS		
2							
3	DIMENSIONAL REQUIREMENTS						
4	MIN. LOT AREA	211-27.F.1	43,650 SF	30.094 ACRES	30.094 ACRES		
5	MIN. LOT WIDTH	211-27.F.2	200 FT	957 FT (NOTE 1)	957 FT (NOTE 1)		
6	MIN. LOT DEPTH	211-27.F.3	200 FT	1382 FT (NOTE 2)	1382 FT (NOTE 2)		
7	MIN. LOT FRONTAGE	211-27.F.3	2/3 LOT WIDTH (638 FT)	957 FT	957 FT		
8	FRONT YARD SETBACK	211-27.F.4	90 FT FROM RT. 72 PAVED ROAD SURFACE 50 FT FUTURE R-O-W	26.8 FT (NOTE 3)	26.8 FT (NOTE 3)	V	V
9	SIDE YARD SETBACK	211-27.F.5	50 FT	N/A (NO SIDE LOT LINE)	N/A (NO SIDE LOT LINE)		
10	REAR YARD SETBACK	211-27.F.6	40 FT	N/A (NO REAR LOT LINE)	N/A (NO REAR LOT LINE)		
11	MAX. HEIGHT	211-27.F.7	50 FT	< 27 FT±	< 35 FT±		
12	MAX. LOT COV. (Impervious)	211-27.F.8	65%	67%	72%	V	V*
13	MIN. GREEN SPACE	211-27.F.9	35%	33%	28%	V	V*
14	MAX. GREEN SPACE (rear or side yard)	211-27.F.9	40%	N/A (NO SIDE OR REAR YARD)	N/A (NO SIDE OR REAR YARD)		

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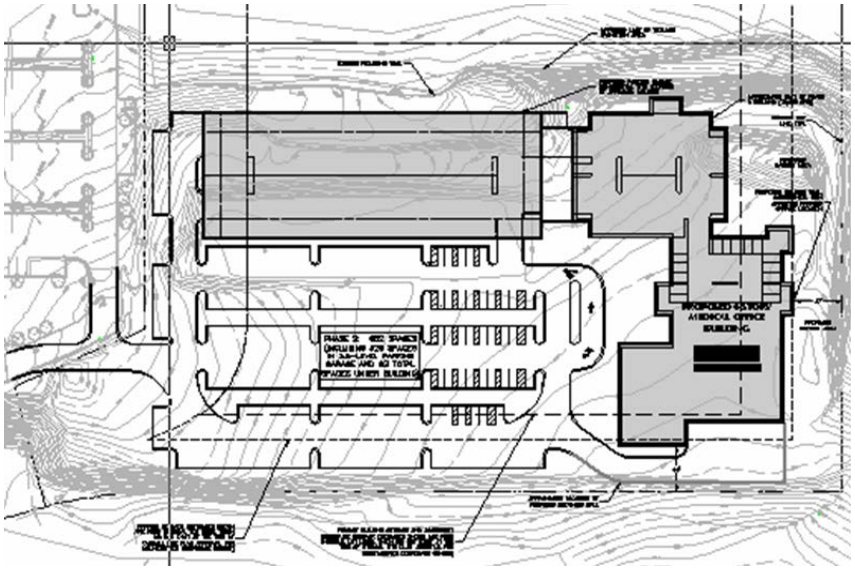
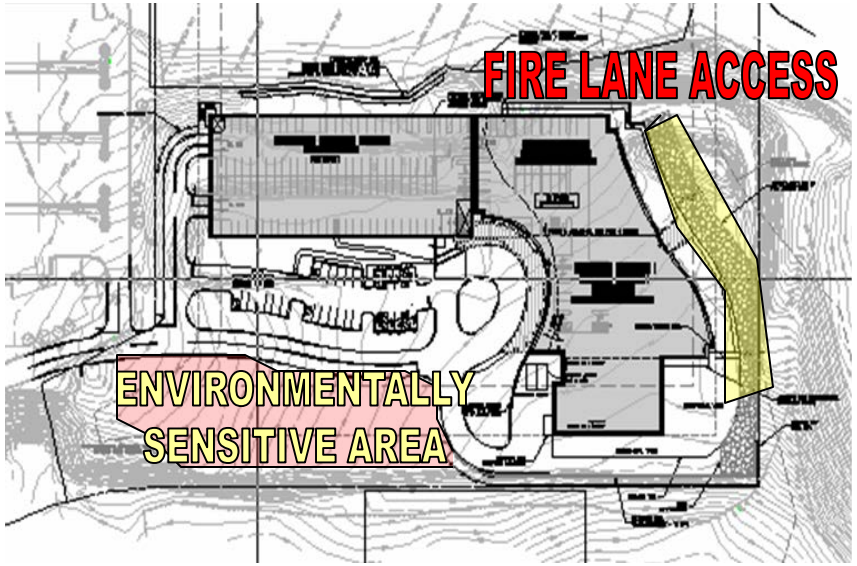
Review / Develop Conceptual Site Plans





ITERATION # 1
Prior to Site Homework

ITERATION # 2
With Homework Completed

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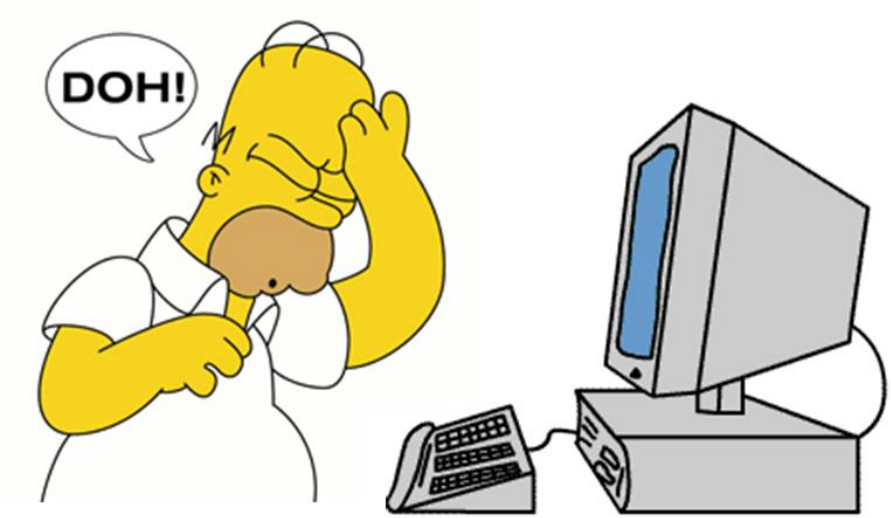
Common Issues Resulting from Substandard Designs…



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…And How to Avoid Them

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Underestimating Utilities

Resolutions: obtain records from utility companies, accurately map utilities using "soft dig" or other process.

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Oversizing Underground Structures

Resolution: select appropriate design storm, consider alternate drainage pathways to final discharge point.

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Putting Signs Where People Won't See Them

Resolution: put signs where people can SEE THEM!

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Landscaping Too Close to Windows

Resolution: provide adequate drainage near structures, consider ceiling-to-floor windows when selecting landscaping.

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Check your subsurface conditions early

Resolution: hire a geotechnical engineer…

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Actually Designing a Retaining Wall

Resolution: design the wall for site specific conditions, don't just pick "stock" designs out of a book.

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Designing Walls With Proper Drainage Components

Resolution: provide drainage facilities at the top and behind walls.

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Striping a Pathway That Actually Leads Somewhere

The crosswalk to nowhere

Resolution: consider pedestrian pathways to and from parking lots

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Locating Light Poles along Parking Stripes

Resolution: coordinate with other disciplines…

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Specifying Trees That Don't Block Traffic Signals

Resolution: consider landscaping when siting signs, traffic lights, sight distances and other above ground features.

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Specifying Signs that Don't Conflict with Lane Striping

Resolution: none, unless you don't want to turn…

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Utility Companies

Resolution: work with utility companies early in the process to avoid issues down the road…

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Accessible Routes

Resolution: plan accessible routes….

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Accessible Routes

Resolution: accessible routes need to accommodate everyone….

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Earthwork

Resolution: you may not be able to balance the site…

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QA/QC…

Resolution: Ouch! Someone gets fired first?

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