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JUST TRANSITION SITE REUSE PLANNING STUDY

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NEW YORK STATE OF OPPORTUNITY. NYSERDA

Project Background

- Seven re-use options were investigated

SUMMARY OF RE-USE ALTERNATIVES

	RE-USE	DESCRIPTION	OPPORTUNITIES	CONSTRAINTS
1	Power Plant Re-powering	Re-powering the NRG Power Plant from a fuel source of coal to natural gas.	N/A	+ Interconnection cost of approximately $114 million + Significant infrastructure upgrades needed + Conflicts with NYS energy and sustainability goals
2	Industrial Development	Adaptive re-use or demolition and rebuild of the existing facilities to advance an industrial distribution and logistics center, including potential packaging and shipment of goods, or an industrial business park.	+ Access to rail, water, and interstate + In proximity to multiple large distribution markets + Adaptive re-use of structures + Lower environmental remediation cost + Water piers are in good condition for re-use + Local job creation + Potential ACOE investment in waterside infrastructure	+ Electrical switchyard on site + High investment cost to build structure or adaptively re-use existing buildings + Would require private purchase by developer
3	Data Center	Re-use of the site for a data center that has the ability to process and host large quantities of data.	+ Reuse existing infrastructure + Lower environmental remediation cost + Renewable energy component + Successful comparable projects in NYS	+ High amount of power and investment cost is necessary
4	Battery Storage	Re-use of the site to facilitate the storage of renewable energy.	+ Could store more than 80 MW + Existing electrical infrastructure would allow for large energy transfers + Potential adaptive re-use of existing structures + Lower environmental remediation cost + Combination with renewable energy + Compatible with microgrid	+ Electrical interconnection required + High amount of power and investment cost is necessary + Low job creation
5	Off-shore Wind on Land Interconnect	Provide an offline interconnect to the off-shore wind turbines along the Lake Erie shoreline (if they become a reality)	+ Utilization of Lake Erie shoreline location + Existing electrical infrastructure and utilities + Lower environmental remediation cost	+ Electrical interconnection required + High amount of power and investment cost is necessary + Low job creation
6	Microgrid Development	Creation of a microgrid that has the ability to disconnect from the larger power grid.	+ Can source energy from renewables + Energy cost savings + Low environmental remediation cost	+ High investment cost + Financial feasibility is uncertain + Dunkirk does not have a compelling energy issue
7	Clean Slate	Demolition of the existing buildings and environmental remediation of the site to facilitate a range of re-use options (mixed use, open space, etc)	+ Public use and enjoyment + Revenue producing options + Combination of commercial and residential options + Job creation opportunities	+ Electrical switchyard location + Development partner required + Environmental remediation and building demolition is likely necessary + High environmental remediation costs

Preferred Uses

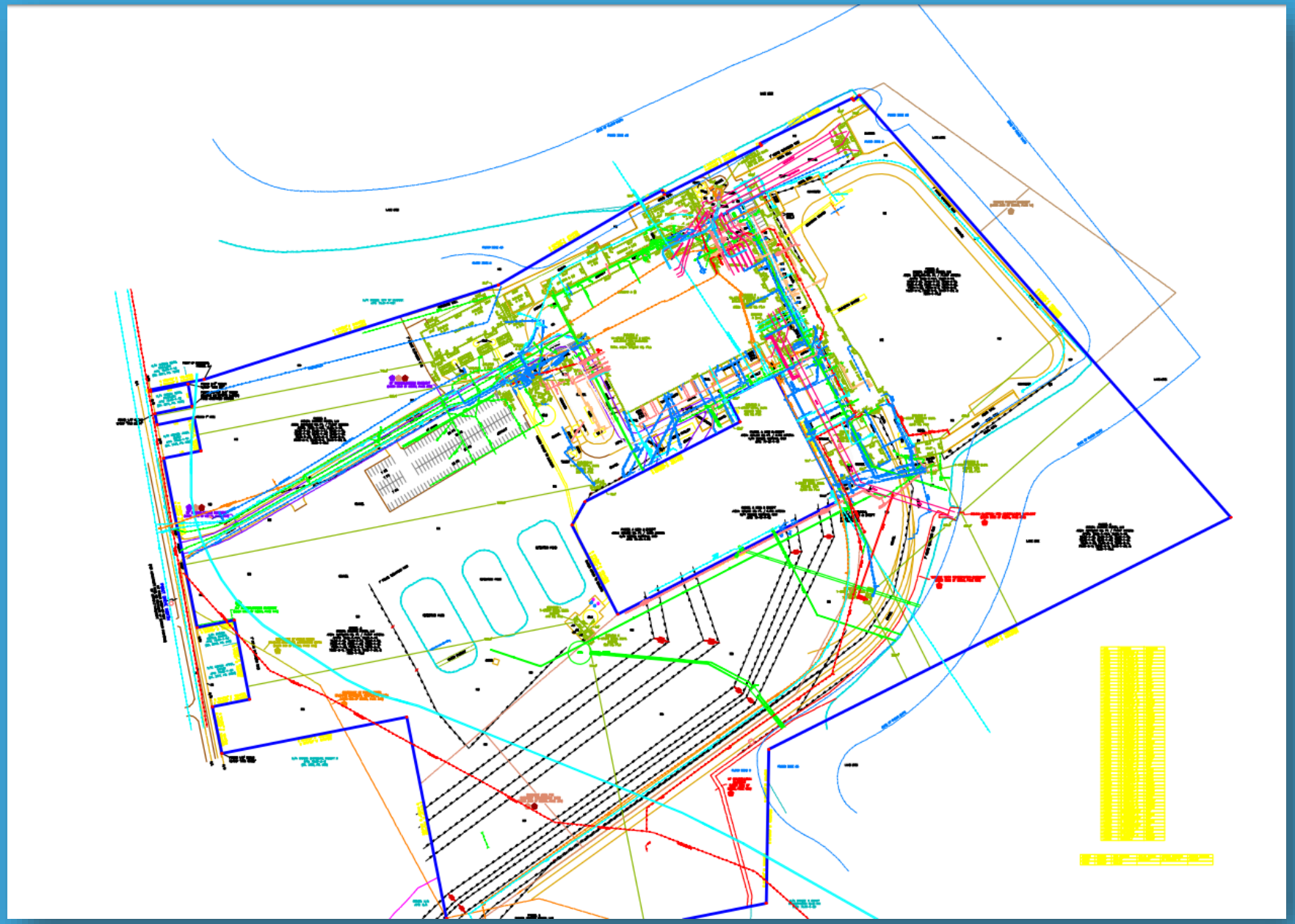
- Data Center
- Industrial Use / Data Center

PREFERRED RE-USE CONCEPTS:	KEY RE-USE ELEMENTS ON:	
	NRG POWER PLANT SITE	NRG AND DON FRAME LANDFILL SITE(S)
DATA CENTER	+ Adaptive re-use of existing facilities or new construction for a data center + Installation of a solar array + Potential installation of a complementary battery storage facility + Potential use of biomass + Integration of a waterfront trail connection with public access points as part of final design plan	+ Development of an industrial business park + Potential installation of a solar array + Potential development of a battery storage facility + Potential mining and re-use of fly ash
INDUSTRIAL USE / DATA CENTER	+ Adaptive re-use of existing facilities or new construction for industrial use (business park or data/logistics facility), which may or may not include a data center component + Installation of a solar array + Potential installation of battery storage facility + Integration of a waterfront trail connection with public access points as part of final design plan	+ Potential mining and re-use of fly ash + Potential installation of a solar array + Potential development of a battery storage facility


AIR HANDLING EQUIP
COAL STORAGE
POWERHOUSE
NATIONAL GRID
VACANT LAND
HOLDING PONDS
TRANSMISSION LINES
Dunkirk Beach
Cedar Beach
SCALE
Point Dr N
Niagara Mohawk Corp
W Oak St
Point Dr N

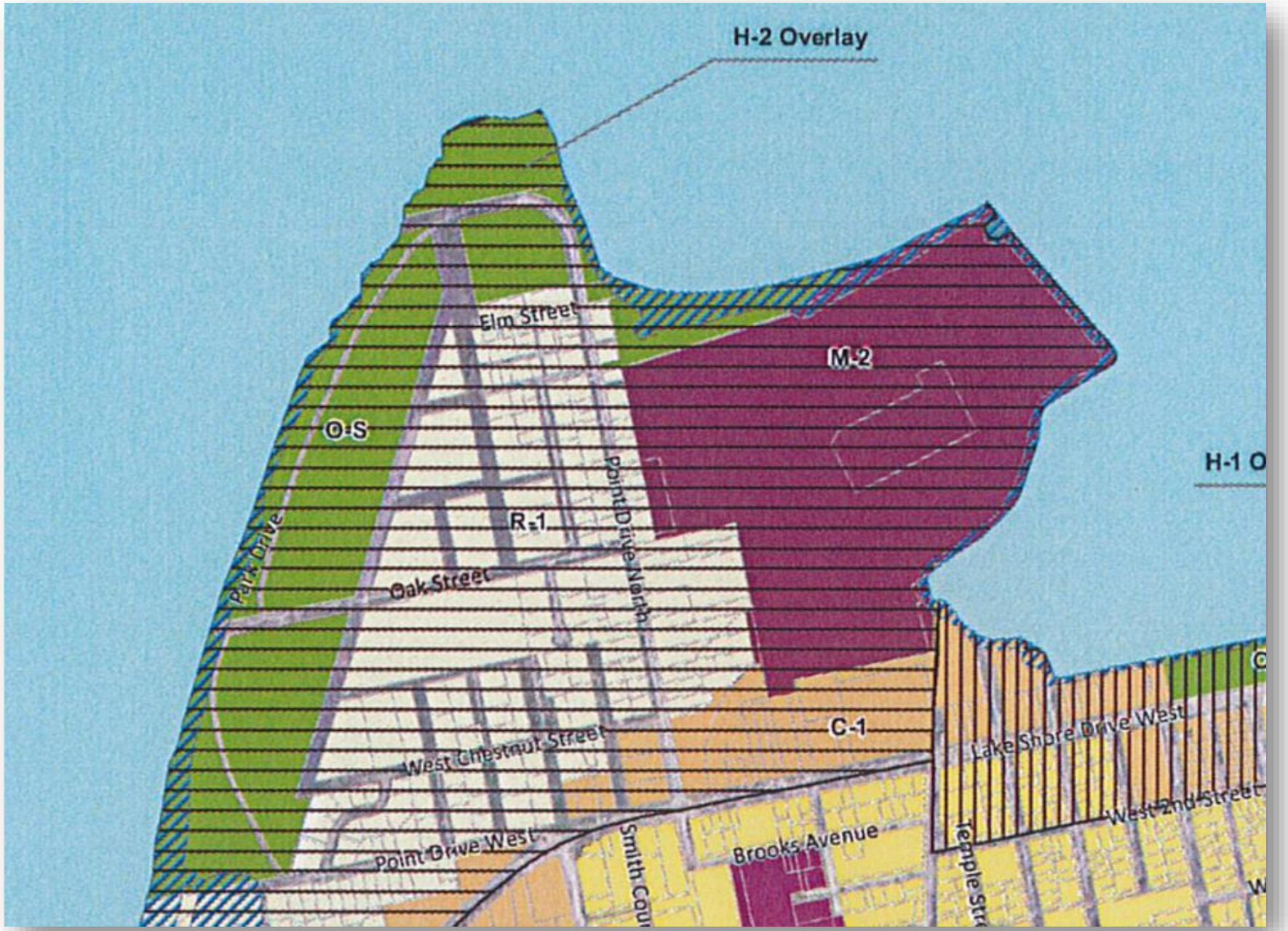
Site Constraints

- Water Service
- Storm & Sanitary Sewers
- National Grid Infrastructure
- Holding Ponds
- Coal Storage
- Etc



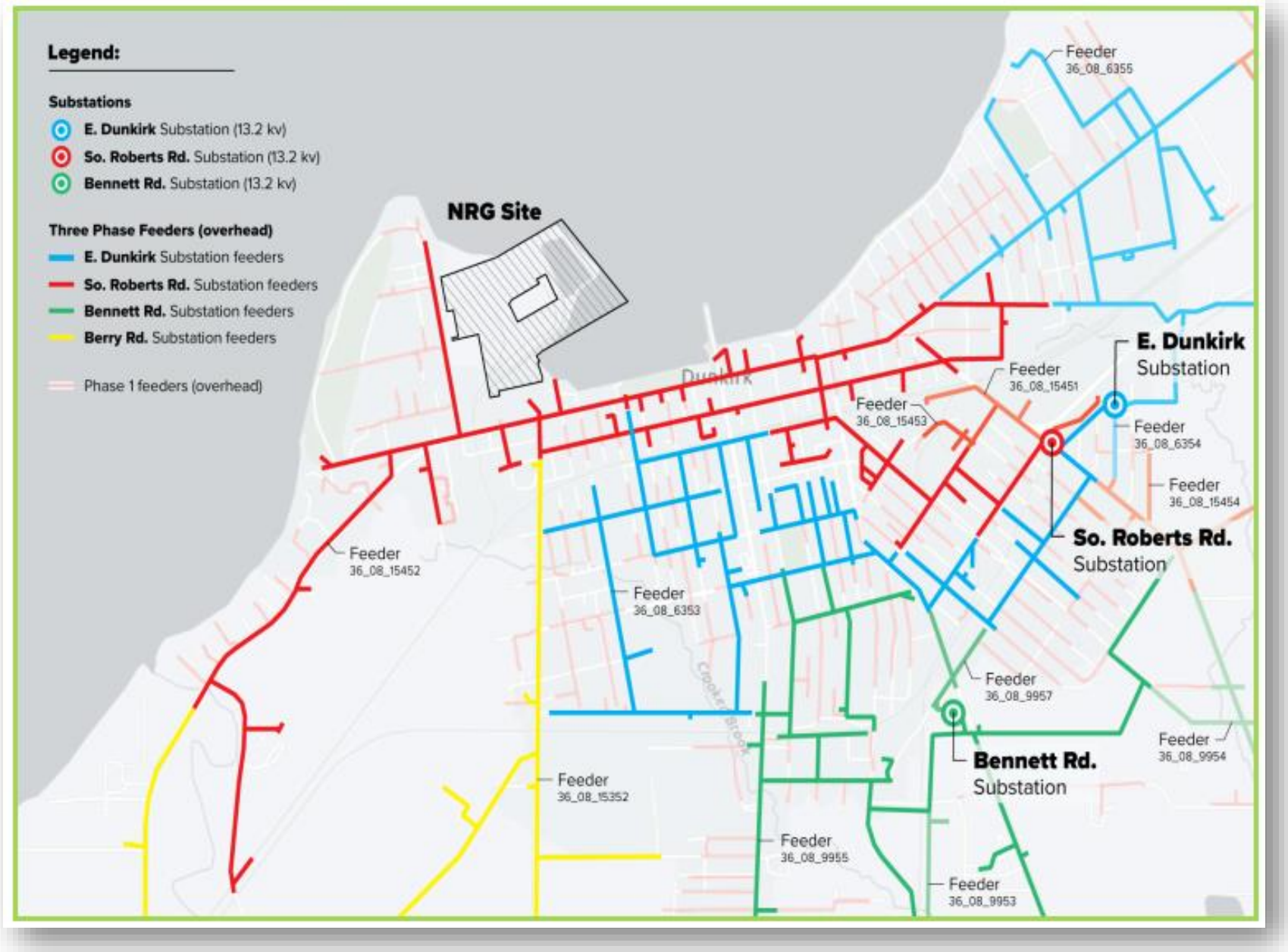
Existing Zoning Reqt's

- General Industrial (M-2)
- Mix of Permitted Uses
  - Foundries
  - Freight terminals
  - Recycling centers
  - Automobile wrecking
  - Etc
- Adult Uses by SP
- 80% lot coverage
- Maximum height = 40' (3 stories)



Re-electrification

- Generated 635 MW in 1959
- 1,500 MW for a 1 M person city
- Today the plant is capable of 33.38 MW with $1 M in upgrades
- 100 MW would require an additional $5 M in upgrades
- 100 MW would service a data center



04 SITE CONCEPTS

Site #1

- 4.5± acres
- Encumbrances: Abandoned utility line to lighthouse (now solar). Unknown environmental status from prior use.
- Features: Adjacent to waterfront and public beach, separate access to Point Drive.
- May be suitable for restricted residential/non-residential.
- Northern edge could be utilized for public walkway amenity.
- **100± multi-fam residential OR**
- **75,000 sf light industrial bldg(s)**

Site #2

- 8.6± acres
- Encumbrances: Sewer easement through southern section of site. Abandoned storm sewers in parking area. Unknown environmental status from prior use and adjacency to treatment ponds (Environmental investigation required).
- Features: Large area with road access.
- Western area may support restricted residential/non-residential.
- **105,000 sf light industrial bldg(s)**

Site #3

- Building Area = 246,067 sf, 10 floor height with 3/4 usable floors. Top floor has large open area above with 100 ton crane.
- Encumbrances: Abandoned coal plant equipment throughout building with asbestos and unknown environmental status from prior use.
- Features: Art Deco style interior built for industrial use. Large open floor plates with room for several floors above existing top floor based on structural review.
- **250,000 sf light industrial re-use**

Site #4

- 3.8± acres
- Encumbrances: Former coal and coal ash treatment facilities have no alternative uses, asbestos inside existing buildings would raise cost of demolition. Unknown environmental status from prior use.
- Features: Adjacent to waterfront and public beach.
- Northern edge could be utilized for public walkway amenity.

Site #5

- 10.0± acres
- Encumbrances: Contaminated subsurface environmental status from prior use
- Features: Large area suitable for solar array and passive recreation (walkways).
- Northern edge could be utilized for public walkway amenity.

04 SITE CONCEPT #1

04 SITE CONCEPT #2