NJ TRANSIT CAPITAL PLANNING RESILIENCY PROGRAM

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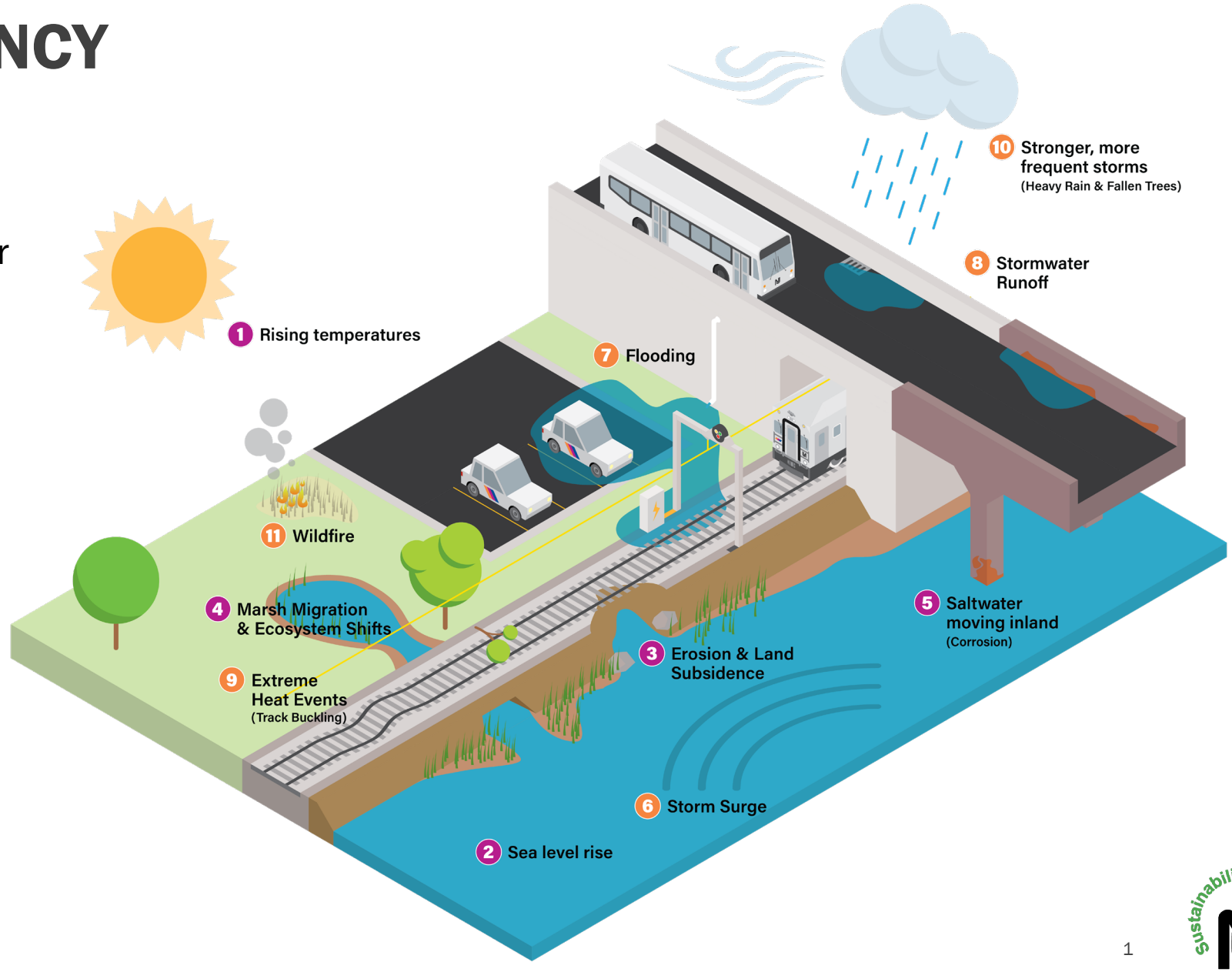
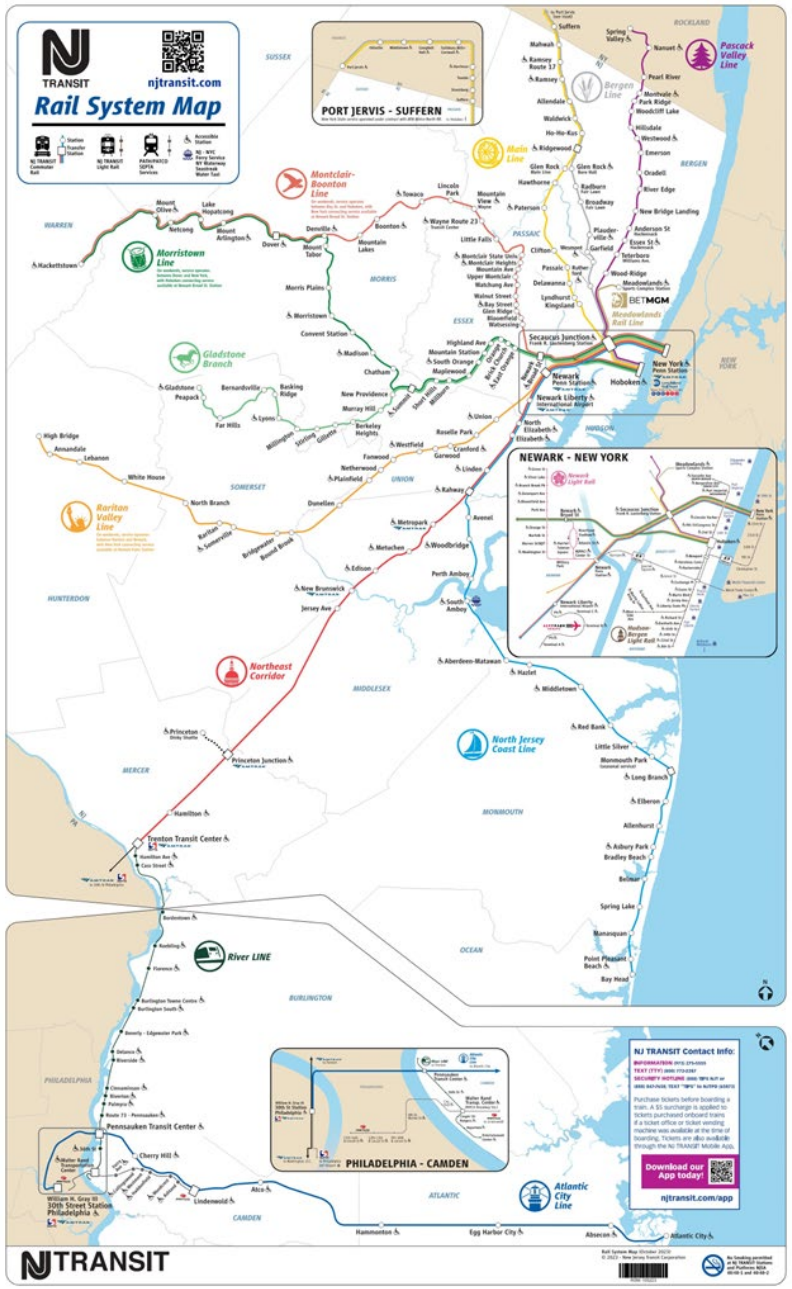


AGENDA

- NJ TRANSIT Climate Concerns
- Complete Resiliency Projects
- Long-Term Resiliency Strategy
- Questions

ABOUT NJ TRANSIT

- **Our Mission:** Move New Jersey and the region by providing safe, reliable and affordable public transportation that connects people to their everyday lives, one trip at a time.
- Largest statewide public transit agency
- Third largest provider of bus, rail, and light rail transit
- Provide more than 517,000 weekday trips on 253 bus routes, 3 light rail lines, 12 commuter rail lines, and NJ TRANSIT Access Link (paratransit service)
- Our fleet consists of 2,258 Buses, 171 Locomotives, 1,040 Cars, 73 Light Rail Cars, and 583 Access Link vehicles



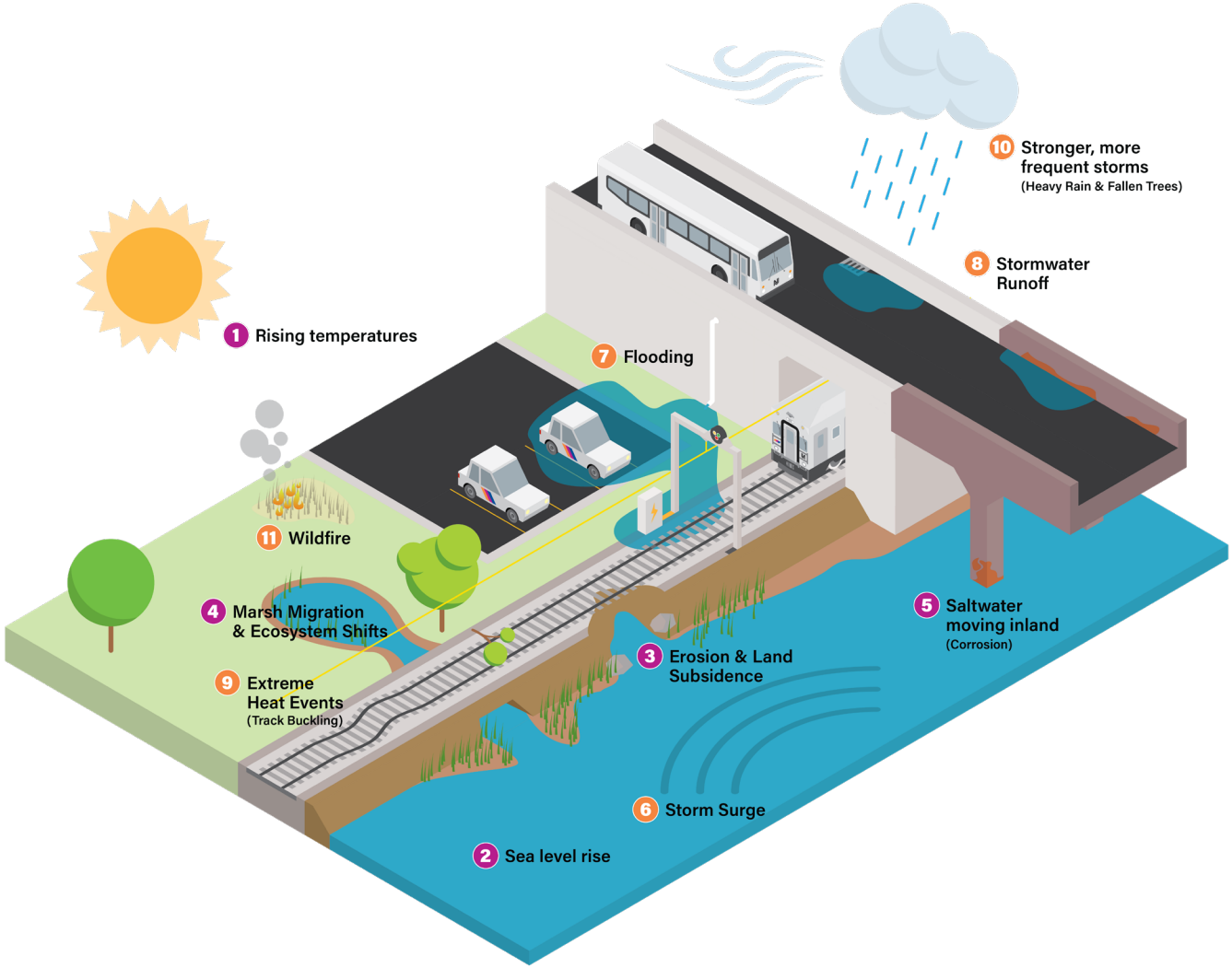
CLIMATE CHANGE CONCERNS

Gradual Processes

1. Rising Temperatures
2. Sea Level Rise
3. Erosion & Land Subsidence
4. Marsh Migration & Ecosystem Shifts
5. Saltwater Moving Inland

Intermittent Events

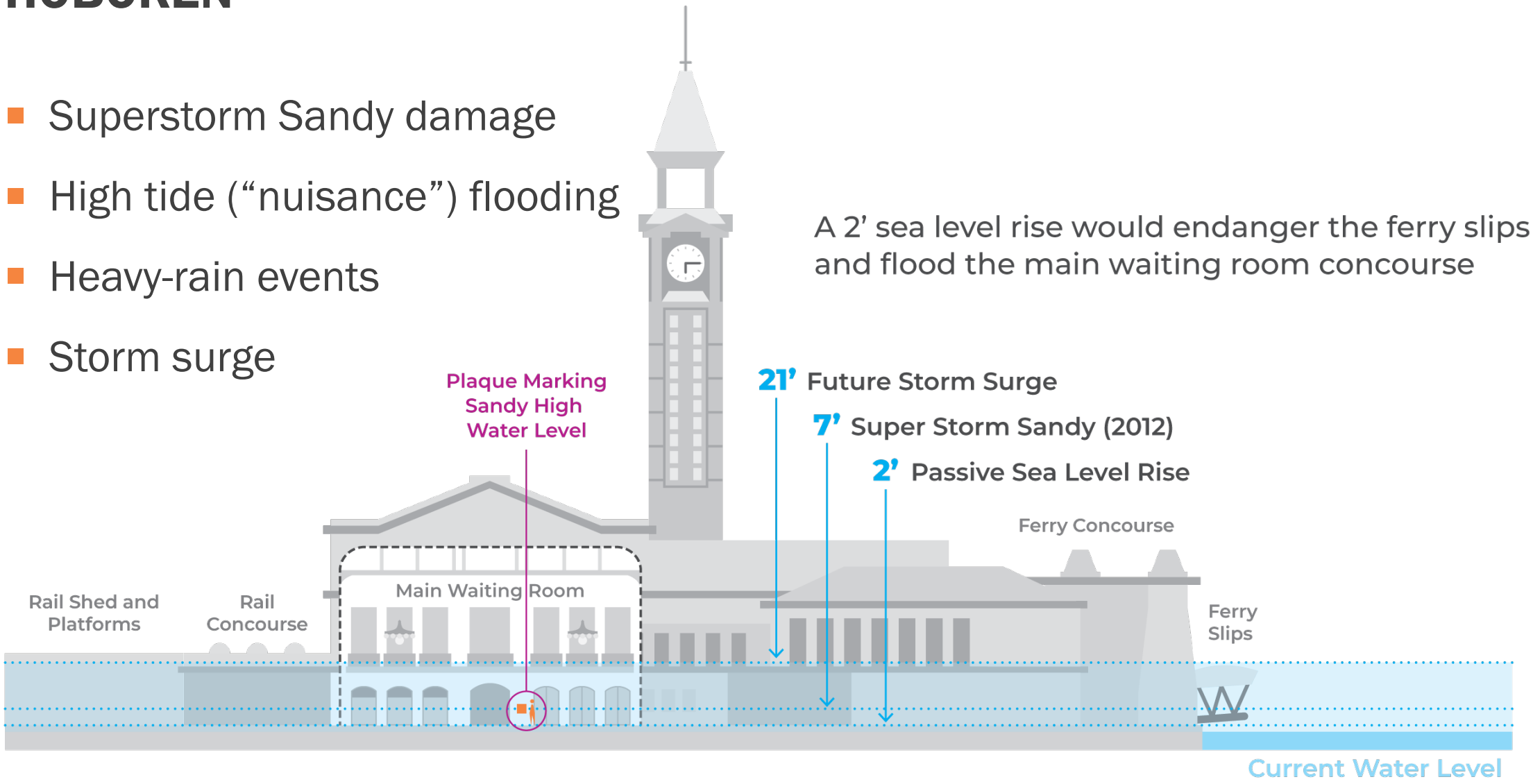
6. Storm Surge
7. Flooding
8. Stormwater Runoff
9. Extreme Heat Events
10. Stronger, More Frequent Storms
11. Wildfire



HOBOKEN

- Superstorm Sandy damage
- High tide (“nuisance”) flooding
- Heavy-rain events
- Storm surge

A 2’ sea level rise would endanger the ferry slips and flood the main waiting room concourse



COMPLETED RESILIENCY PROGRAM PROJECTS

SUPERSTORM SANDY PROJECTS

GLADSTONE CATENARY POLE RESILIENCY PROJECT

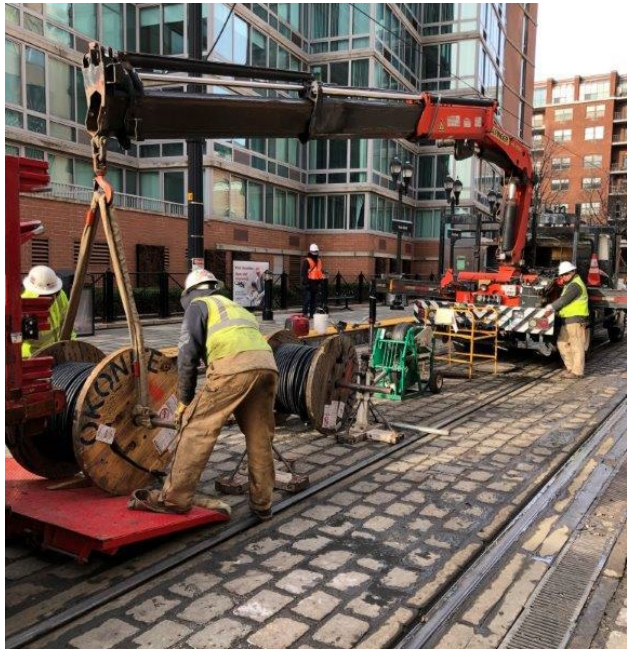
- Wind, rain during Sandy caused structural failure of several wooden catenary poles along Gladstone Branch right-of-way.
- Project Scope:
  - Replaced 163 wooden catenary poles along Gladstone Branch with new steel catenary poles
  - 155 locations between New Providence Station and Gladstone Rail Yard
- Construction duration: ~3 years

Fig. 1. Damage from Superstorm Sandy to catenary polls along Gladstone Branch commuter line.

Fig. 2. New steel catenary polls installed along Gladstone ROW.

HUDSON-BERGEN LIGHT RAIL TRACTION POWER & SIGNAL

- Sections of Hudson-Bergen Light Rail (HBLR) inundated with storm surge during Sandy
- Damaged cabling, catenary poles, switches, signal houses, and HBLR maintenance facility
- Project Scope:
  - Raised Traction Power Substations and Communication Information Huts; repaired damaged facilities
  - Raised 14 Central Instrument Houses (CIH); built a floodwall around 1 (raising not feasible)
  - Components vulnerable to inland fluvial flooding or coastal storm surge raised above FEMA BFE



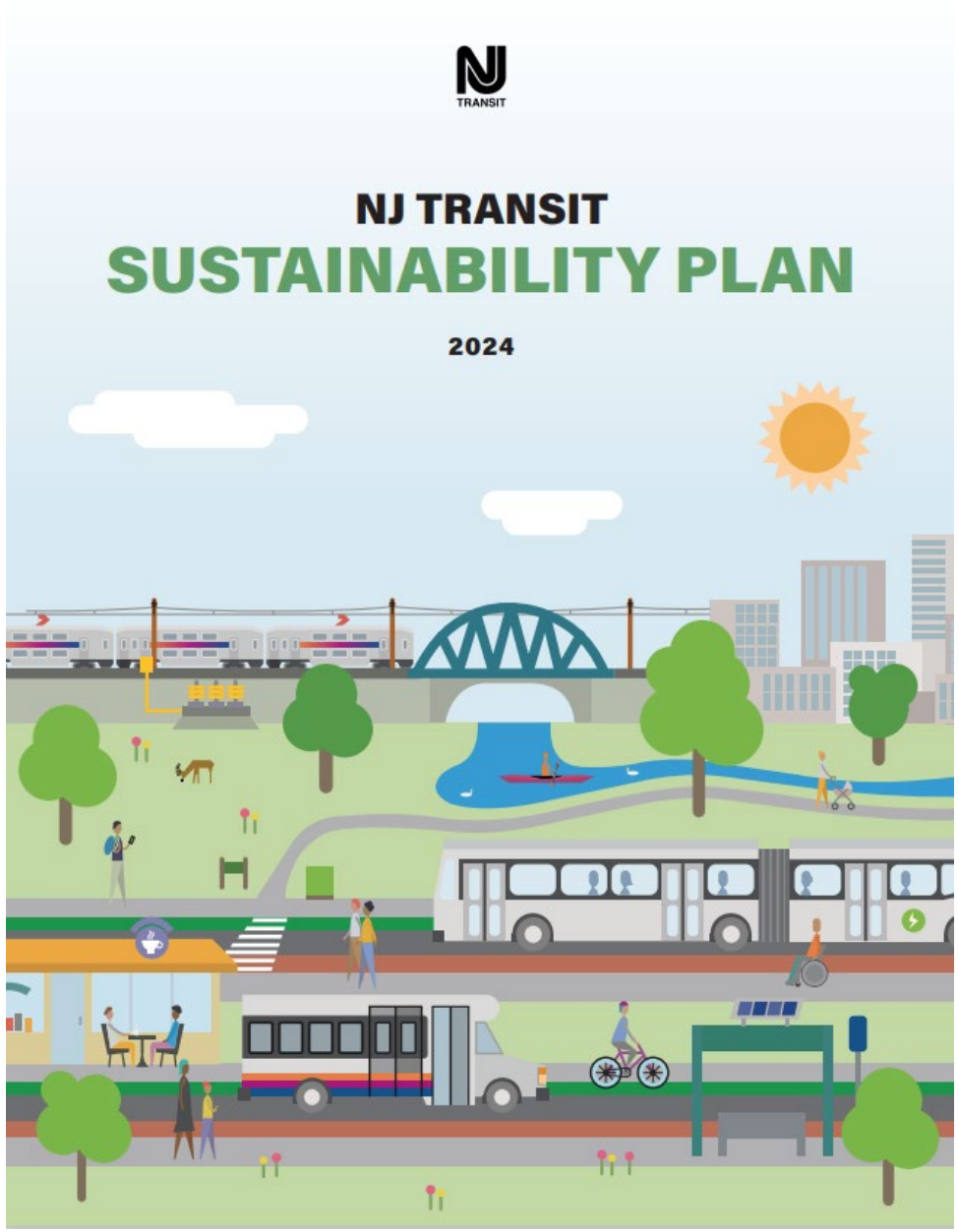
HOBOKEN SUBSTATION PROJECTS

- Impacts 3 substations that power different components of Hoboken Terminal Complex
- Project Scope:
  - **Depot** - relocated above design flood elevation to the second floor of the Pullman & Immigrant building
  - **Observer** - partially relocated to the second floor of the Immigrant / Pullman Building; modifications and repairs to the building structure/envelope necessary to accommodate installation of substation equipment
  - **Henderson** – new substation elevated to DFE, built to withstand contact with salt water where elements couldn't be raised

Fig. 3 (TOP): Depot Substation West Elevation. Fig. 4 (BELOW): Depot Substation 13.2Kv Switchgear

LONG-TERM RESILIENCY STRATEGY

njtransit.com/sustainability/sustainabilityplan



SUSTAINABILITY PLAN

4 Resilient Strategies, Initiatives, and Investments

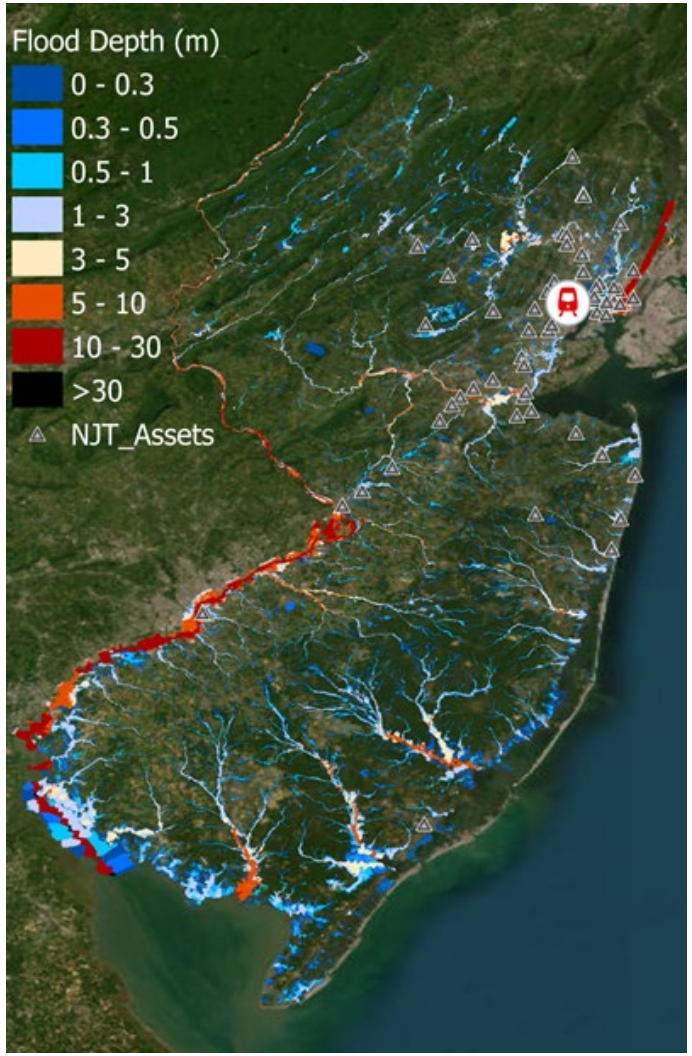
- 4.1 Defining Resiliency for NJ TRANSIT
- 4.2 Operational Practices that Promote Resiliency
- 4.3 Capital Investments that Promote Resiliency
- 4.4 Partnerships and Initiatives

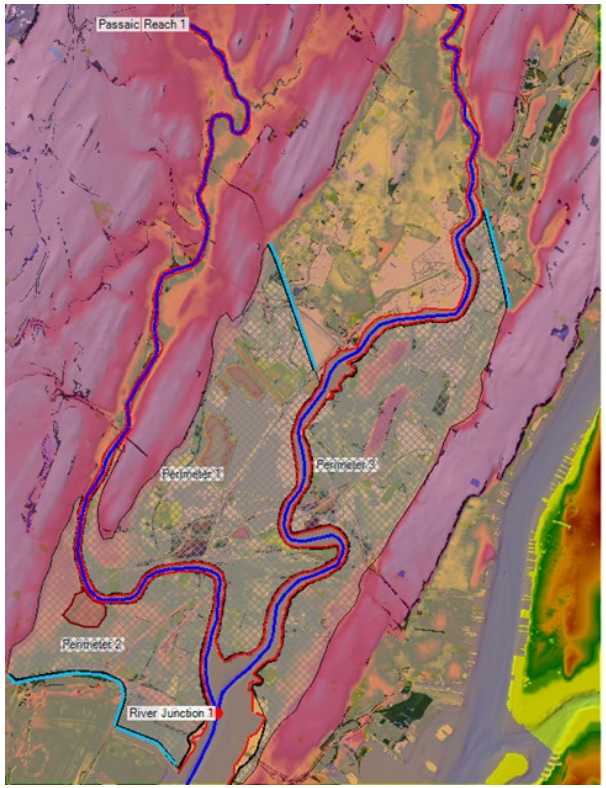
RESILIENCY PLANNING GOALS

- Incorporate long term resiliency planning in the capital planning process.
- Manage complex risk modelling for climate vulnerabilities.
- Identify, gather, and develop global best practices in strategies, standards and practices for NJ TRANSIT to adopt.
- Manage the agency's development and planning activities for capital projects and programs focused on resiliency.
- Coordinate between Capital Programs and the Office of Emergency Management.
- Support the agency's ability to win resiliency-focused grant opportunities.

RESILIENCY PLANNING DEVELOPMENT APPROACH

- Leveraging partnership with Rutgers CAIT to perform the agency's first statewide climate Resiliency Assessments
  - Facility specific modeling
  - Site specific climate risk assessments
  - Identify vulnerabilities, potential mitigation strategies.
- Develop the agency's first Resilient Design Standards and Guidelines



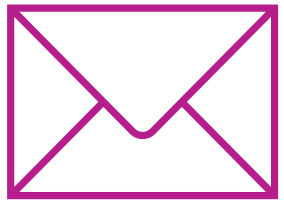


RESILIENCY PLANNING WINS + NEXT STEPS

- Sustainability Plan is NJ TRANSIT's first comprehensive sustainability and resiliency roadmap
- Contributed to the 2024 State Hazard Mitigation Plan Update, NJTPA Resilience Improvement Plan
- Continuing coordination with NJT Office of Emergency Management
- Scoping line-specific vulnerability assessments + long-term infrastructure investments
- Develop a long-term resiliency investment plan for NJ TRANSIT

QUESTIONS?

Website:
njtransit.com/sustainability



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