

MD 333 AT OXFORD  
CAUSEWAY PARK  
DRAINAGE  
INVESTIGATION  
FINDINGS

John Martin, P.E. Water Resources Engineer  
Office of Highway Development – Highway Hydraulics Division

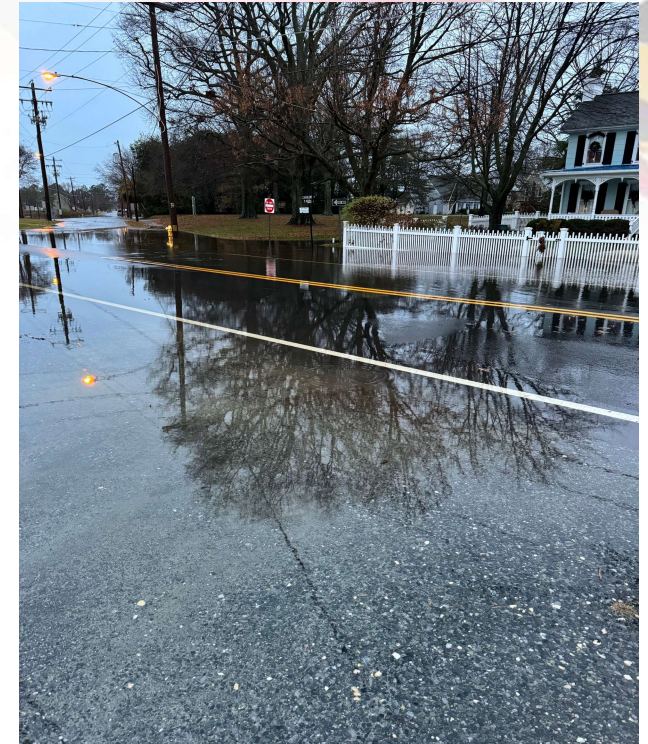
# CURRENT CHALLENGES IN THE TOWN OF OXFORD

- Sea Level Rise and Tidal Flooding has worsened over time.
- Existing roadway infrastructure is not currently equipped to handle projected increases to tidal elevations and will not be able to prevent inundation of MD 333 (Oxford Road) or flooding of local streets and parking lots.



# CURRENT CHALLENGES IN THE TOWN OF OXFORD

- MD 333 (Oxford Road) serves as the primary evacuation route for the Town of Oxford during major storm events. Inundation of this roadway creates major challenges and difficulties for the town population.
- Although the Town of Oxford has made significant efforts to put infrastructure in place (stormwater retention areas, living shorelines) to protect the town and mitigate rises in sea levels and flooding, they do not have the funding or resources to do any further resilience projects without receiving further assistance from outside sources.



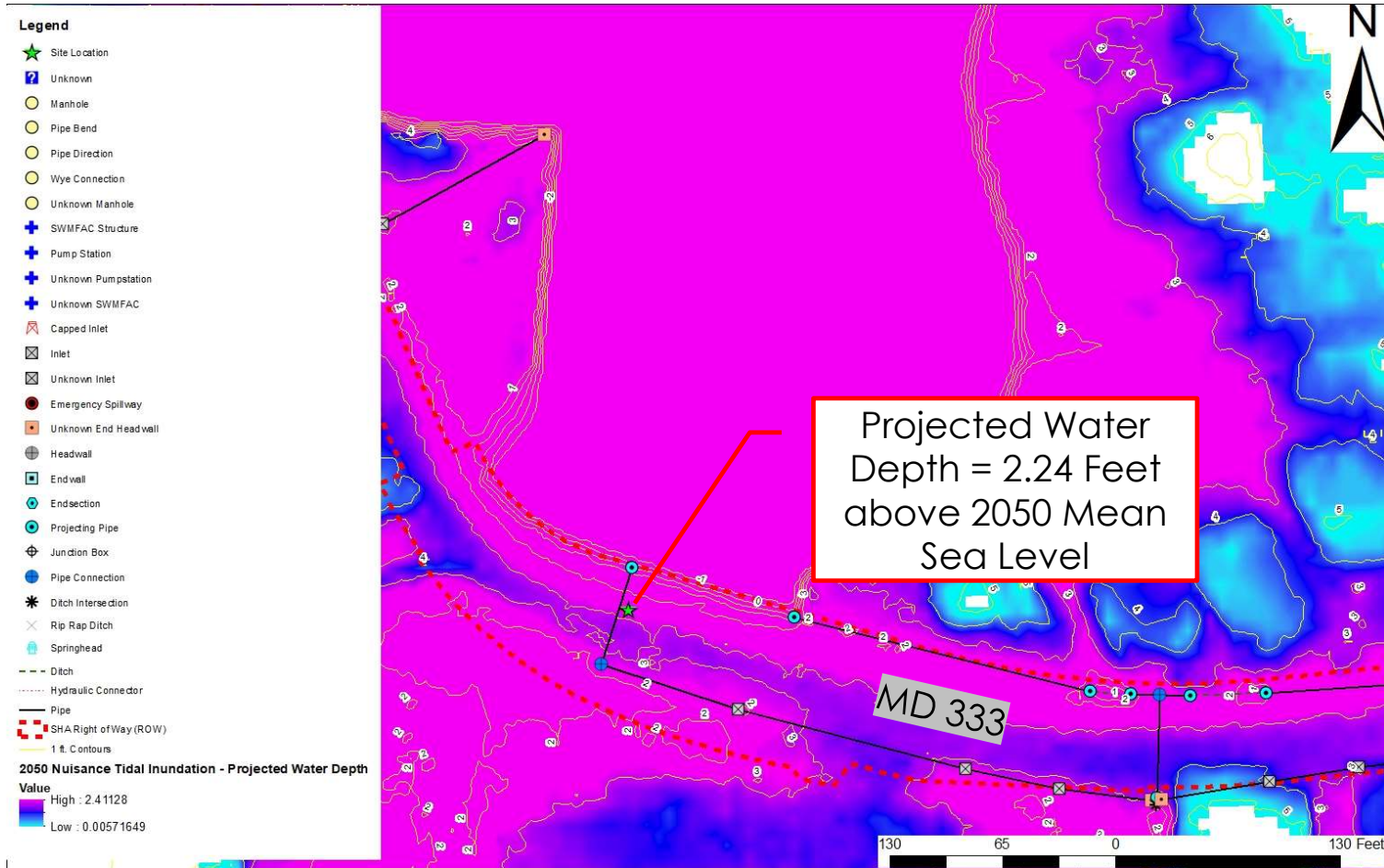
# CURRENT CHALLENGES IN THE TOWN OF OXFORD



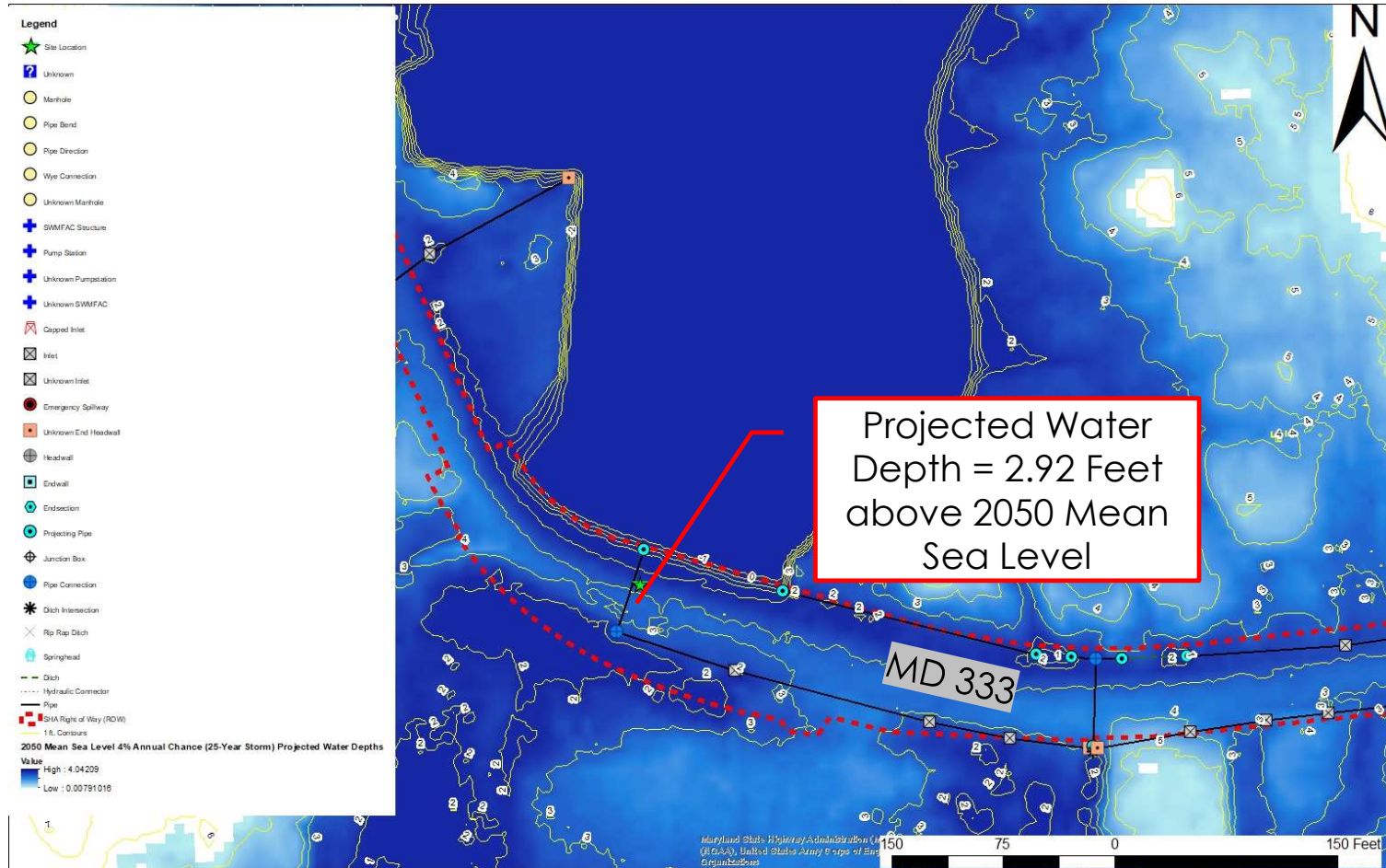
# MD 333 at Oxford Causeway Park - Contour Map



# MD 333 at Oxford Causeway Park - 2050 Nuisance Tidal Inundation



## MD 333 at Oxford Causeway Park 2050 Mean Sea Level 4% Annual Chance (25-Year Storm)



# DRAINAGE INVESTIGATION FINDINGS AND RECOMMENDATIONS

- Due to ongoing sea level rise and roadway flooding projected to increase over time, SHA is interested in partnering to evaluate strategies and solutions.
- The recommendation from the Drainage Investigation was to perform a feasibility study which would evaluate alternative means of addressing the drainage conditions on MD 333.
- The task would require that SHA evaluate the existing drainage infrastructure that is currently present, evaluate all existing flooding conditions/sources, identify up to three different design alternatives to mitigate sea level rise and the flooding conditions, develop cost estimates for all three design alternatives, and make an ultimate recommendation for a preferred alternative.



# DRAINAGE INVESTIGATION FINDINGS AND RECOMMENDATIONS

- In order for the planning study to kickoff, SHA needs to secure and allocate funding. As of May 2024, SHA has submitted an application applying for funding through a Climate Focused Funding Portal that identifies and prioritizes projects that are impacted from Climate Change. The purpose of this portal is to identify and accelerate the implementation of transportation projects that can help reduce concerns related to rail service delays due to increased temperatures, increased flooding on roadways and bridges, and damages to transportation infrastructure and services caused by severe storms.
- As of today, SHA has not heard any updates on the status of the funding application submitted.

# MD 333 at Oxford Causeway Park - Proposed Drainage Remediation Concept

## Legend

- ★ Site Location
- Proposed SHA End Section
- Proposed SHA Inlet
- HESCO Barrier Location
- Proposed SHA Pipe
- ⓧ Unknown
- Manhole
- Pipe Bend
- Pipe Direction
- Wye Connection
- Unknown Manhole
- ⊕ SWMFAC Structure
- ⊕ Pump Station
- ⊕ Unknown Pumpstation
- ⊕ Unknown SWMFAC
- ⓧ Capped Inlet
- ⓧ Inlet
- ⓧ Unknown Inlet
- Emergency Spillway
- ⓧ Unknown End Head wall
- ⓧ Headwall
- ⓧ End wall
- ⓧ Endsection
- ⓧ Projecting Pipe
- ⓧ Junction Box
- ⓧ Pipe Connection
- ⓧ Ditch Intersection
- ⓧ Rip Rap Ditch
- ⓧ Springhead
- Ditch
- Hydraulic Connector
- Pipe
- ▭ Maryland Property/Parcel Boundaries
- ▭ SHA Right of Way (ROW)
- ▭ 1 ft. Contours

