

Walk Bridge Project

Norwalk Harbor Management
Commission

Permit Pre-application Coordination

February 27, 2019



www.walkbridgect.com



Meeting Agenda

1. Introductions & Meeting Purpose
2. Project Overview and Update
3. Overview of Permit Plates and Construction Activities
4. Dredging Permit Plates
5. Dredging Protective Measures
6. Water Quality Monitoring Program
7. Sediment Dewatering Program
8. Marine Safety - Vessel Relocation
9. Wetland Mitigation
10. Wetland Mitigation Protective Measures
11. Preliminary Barge Mooring
12. Next Steps
13. Questions & Comments





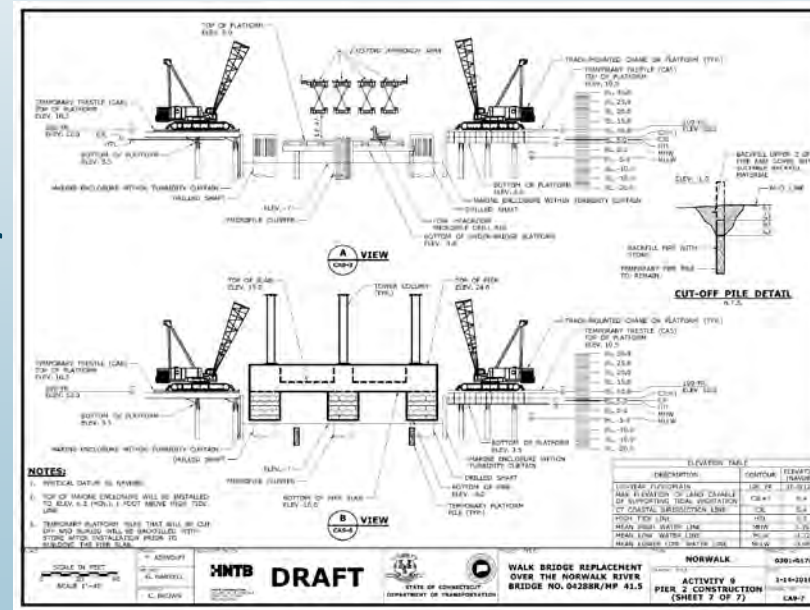
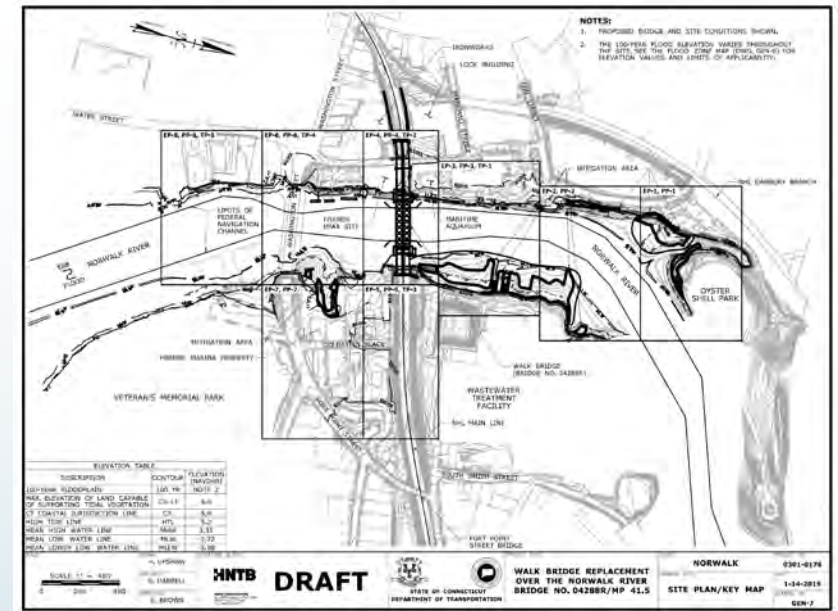
Project Update

- Advancing project design
- Advancing preparation of permit applications including plates, impact quantities, narratives and mitigation
- Ongoing coordination with U.S. Army Corps of Engineers, U.S. Coast Guard, and CT DEEP
- Ongoing coordination with Norwalk Shellfish Commission and Harbor Management Commission
- Ongoing coordination with City



Permit Plates

- Overview Plates
 - Existing & Proposed Conditions
 - Temporary Conditions
 - Tidal Wetland Mitigation
- Construction Activity Plates
 - Representation of construction activity within resource areas
 - Step by step details for 18 Major Activities
 - Plan views
 - Elevation/Section Views



Construction Activity Overview



NUMBER	CONSTRUCTION ACTIVITY
1	IMAX REMOVAL
2	DUCT BANK INSTALLATION
3	VESSEL DOCK RELOCATION
4	MARINE STAGING YARD
5	NORTHWEST TRESTLE
6	SOUTHWEST TRESTLE
7	NORTHEAST TRESTLE
8	SOUTHEAST TRESTLE
9	PIER 2
10	PIER 3
11	SUBMARINE CABLE INSTALLATION
12	SUBMARINE CABLE REMOVAL
13	SWING SPAN REMOVAL
14	EXISTING PIER REMOVAL
15	FENDER INSTALLATION
16	WETLAND MITIGATION
17	DREDGING
18	LIFT SPAN INSTALLATION



Dredging

- Bridge/Channel Areas
- Vessel Relocation Area
- Marine Staging Yard
Submarine Cables
- Dredging in main channel
will occur over multiple
construction seasons

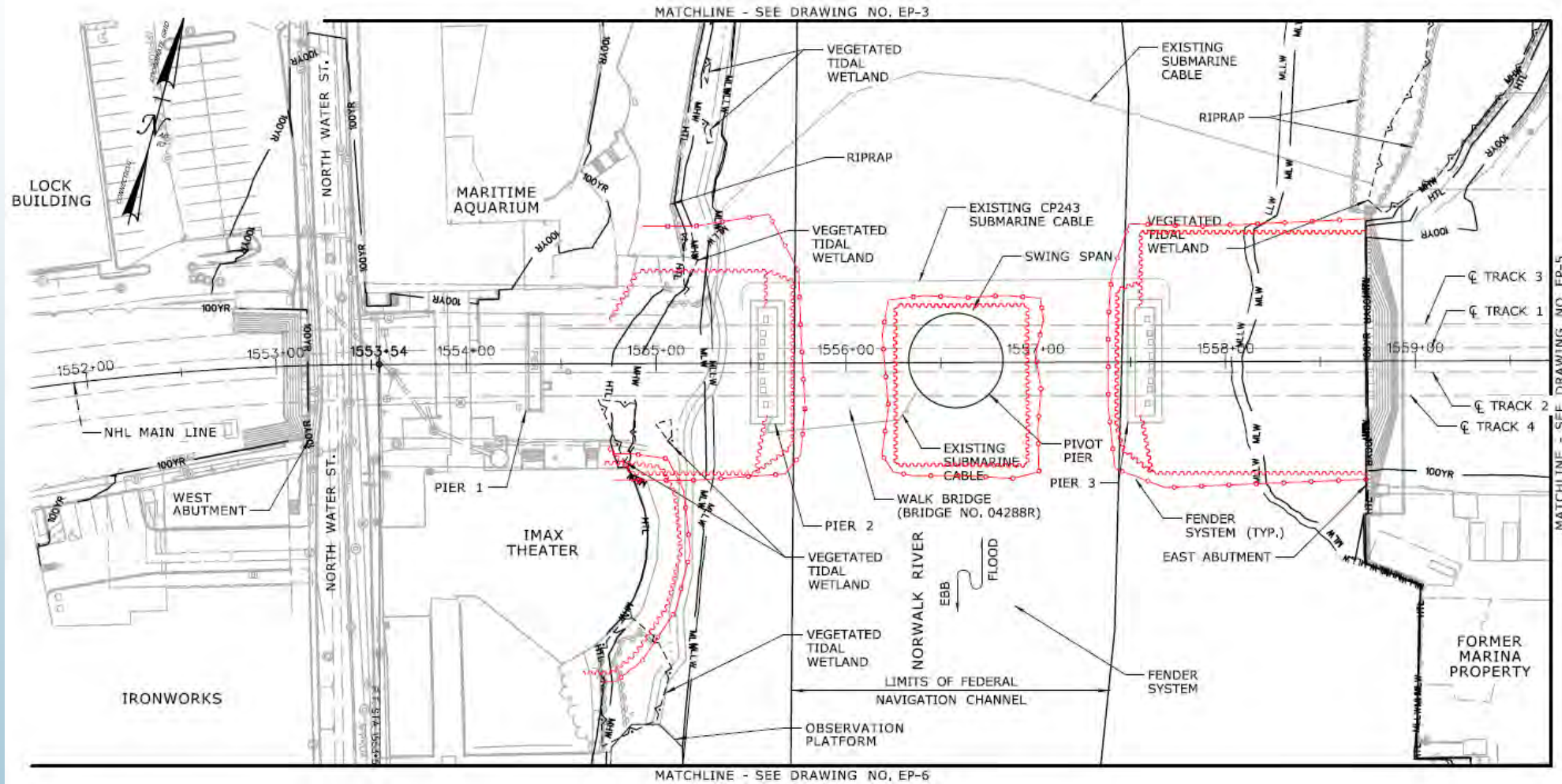


Resource Areas and Impacts

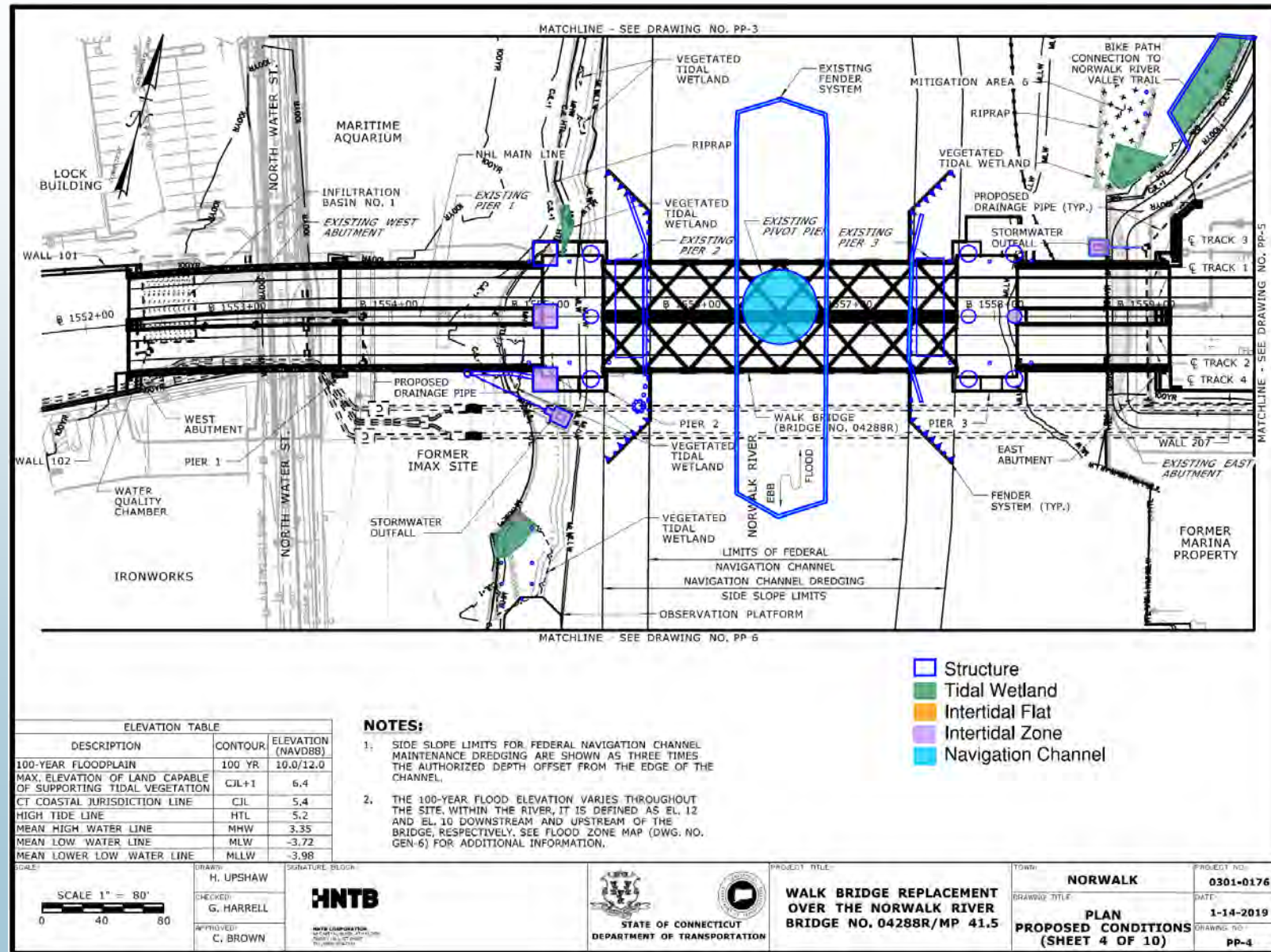
- Tidal Wetlands
- Intertidal Flats
- Intertidal Zone
- Below Coastal Jurisdictional Line (CJL)
- Below High Tide Line (HTL)
- Federal Channel



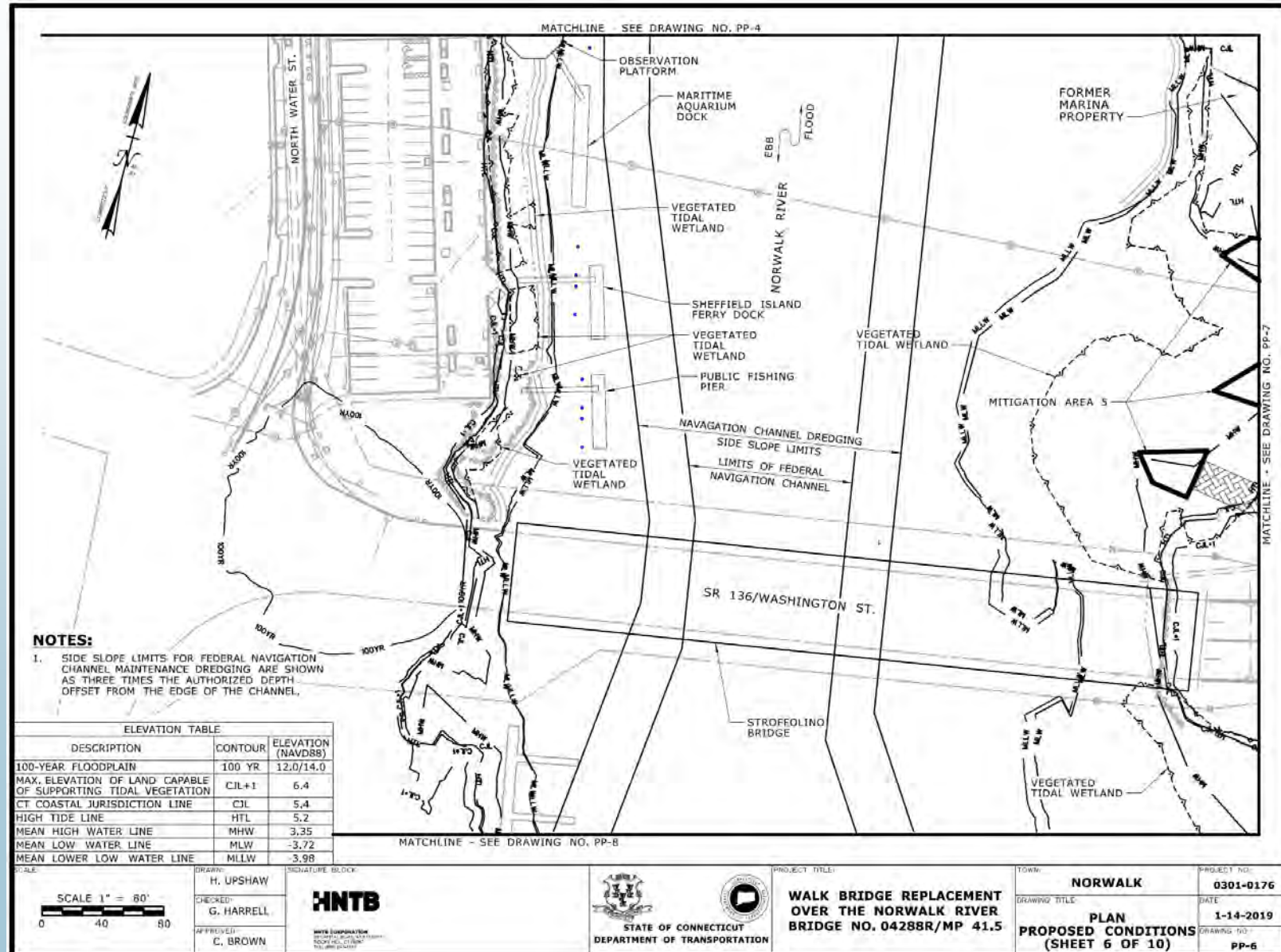
Containment at Bridge



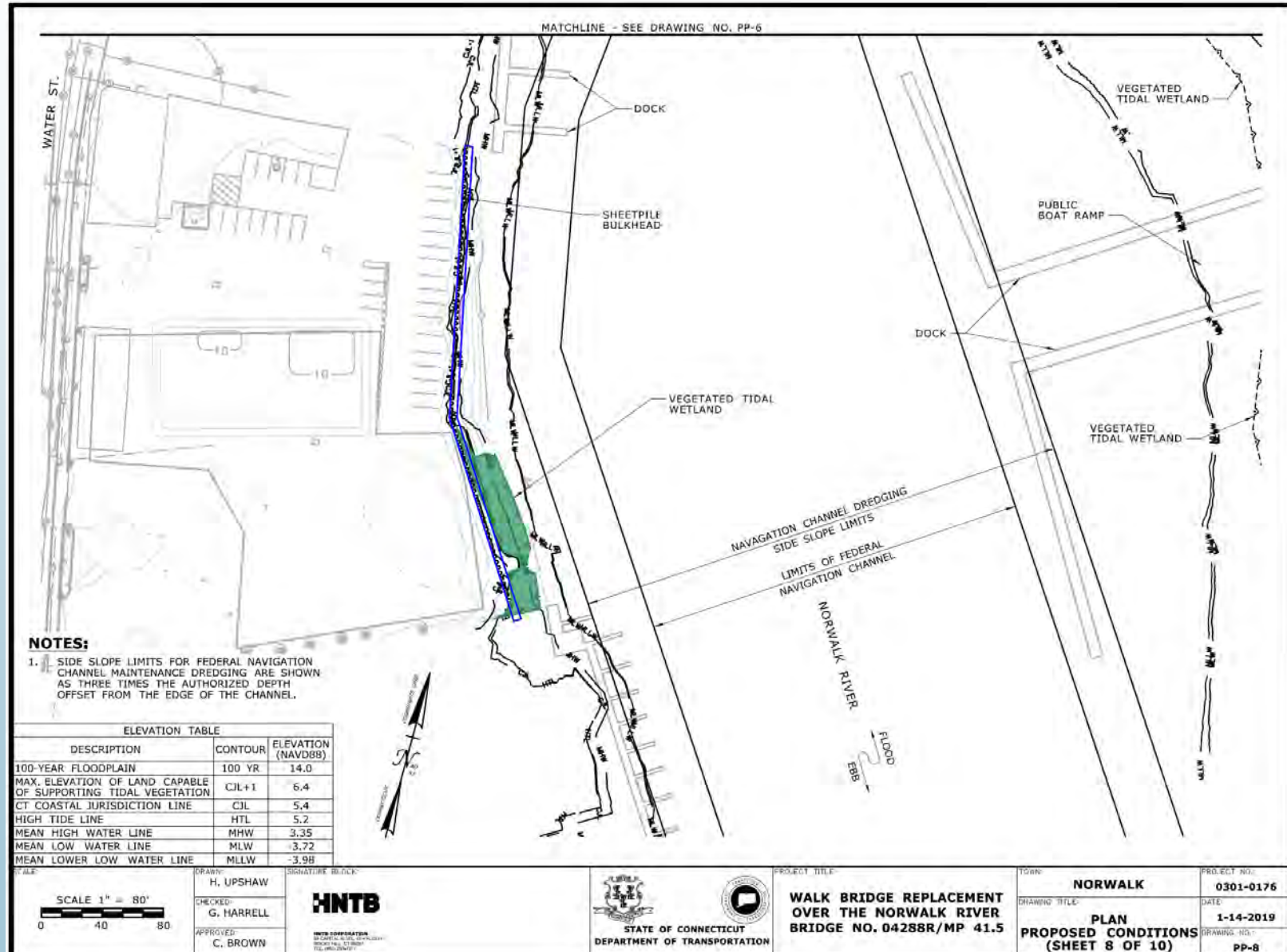
Permanent Impacts - - Bridge



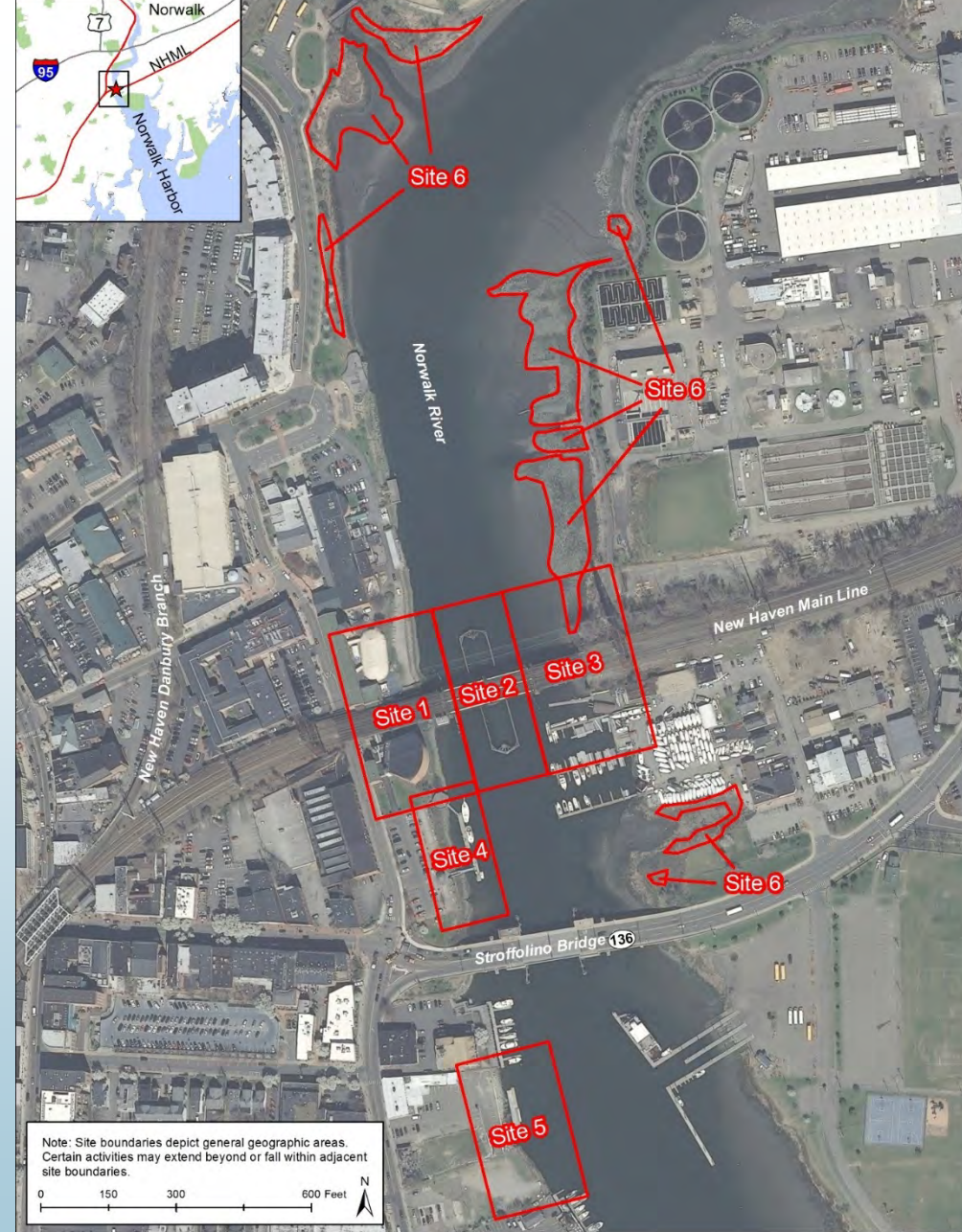
Permanent Impacts - - Vessel Relocation



Permanent Impacts - - Marine Staging Yard



Site Location Map



Permanent Impacts Summary

Site	Permanent Impacts (sf)					
	Tidal Wetland	Intertidal Flat	Intertidal Zone*	Below CJL (State)	Below HTL (Federal)	Federal Navigation Channel
Site 1	1,100	0	4,320	7,140	7,140	0
Site 2	0	0	0	52,730	52,730	52,730
Site 3	2,010	0	7,200	13,710	13,710	0
Site 4	0	0	800	8,010	8,010	0
Site 5	1,790	0	1,820	15,710	15,710	0
Site 6	0	0	0	0	0	0
Project Totals	4,900	0	14,140	97,300	97,300	52,730

*Areas between MLW and MHW that do not meet the definition of a tidal wetland or intertidal flat.



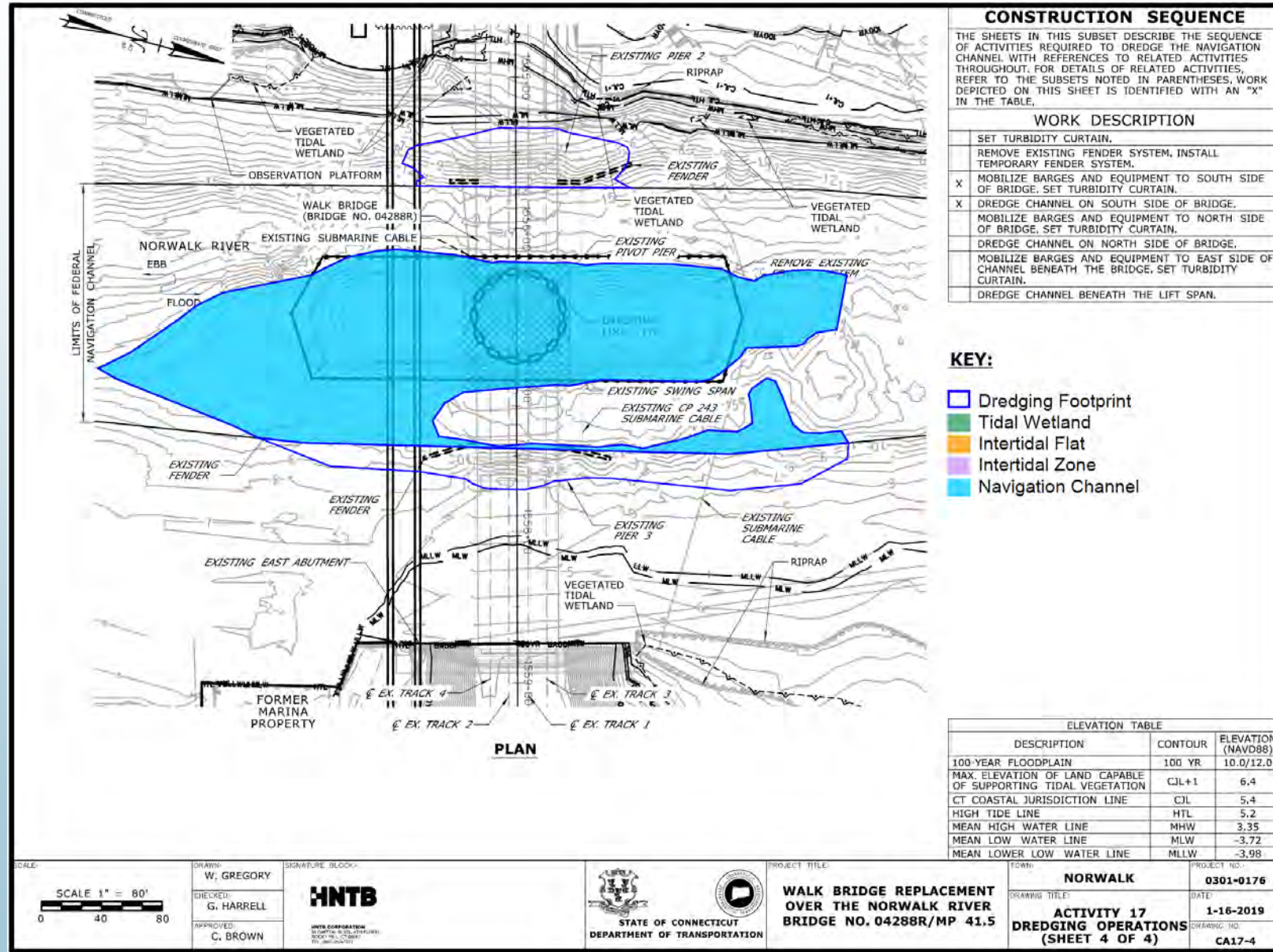
Temporary Impacts Summary

Site	Temporary Impacts (sf)					
	Tidal Wetland	Intertidal Flat	Intertidal Zone*	Below CJL (State)	Below HTL (Federal)	Federal Navigation Channel
Site 1	2,760	0	1,780	8,020	8,020	0
Site 2	0	0	0	29,850	29,850	29,850
Site 3	2,030	2,880	1,060	8,090	8,090	0
Site 4	0	0	0	10	10	0
Site 5	1,380	0	70	180	180	0
Site 6	21,430	0	64,280	85,700	85,700	0
Project Totals	27,600	2,880	67,190	131,850	131,850	29,850

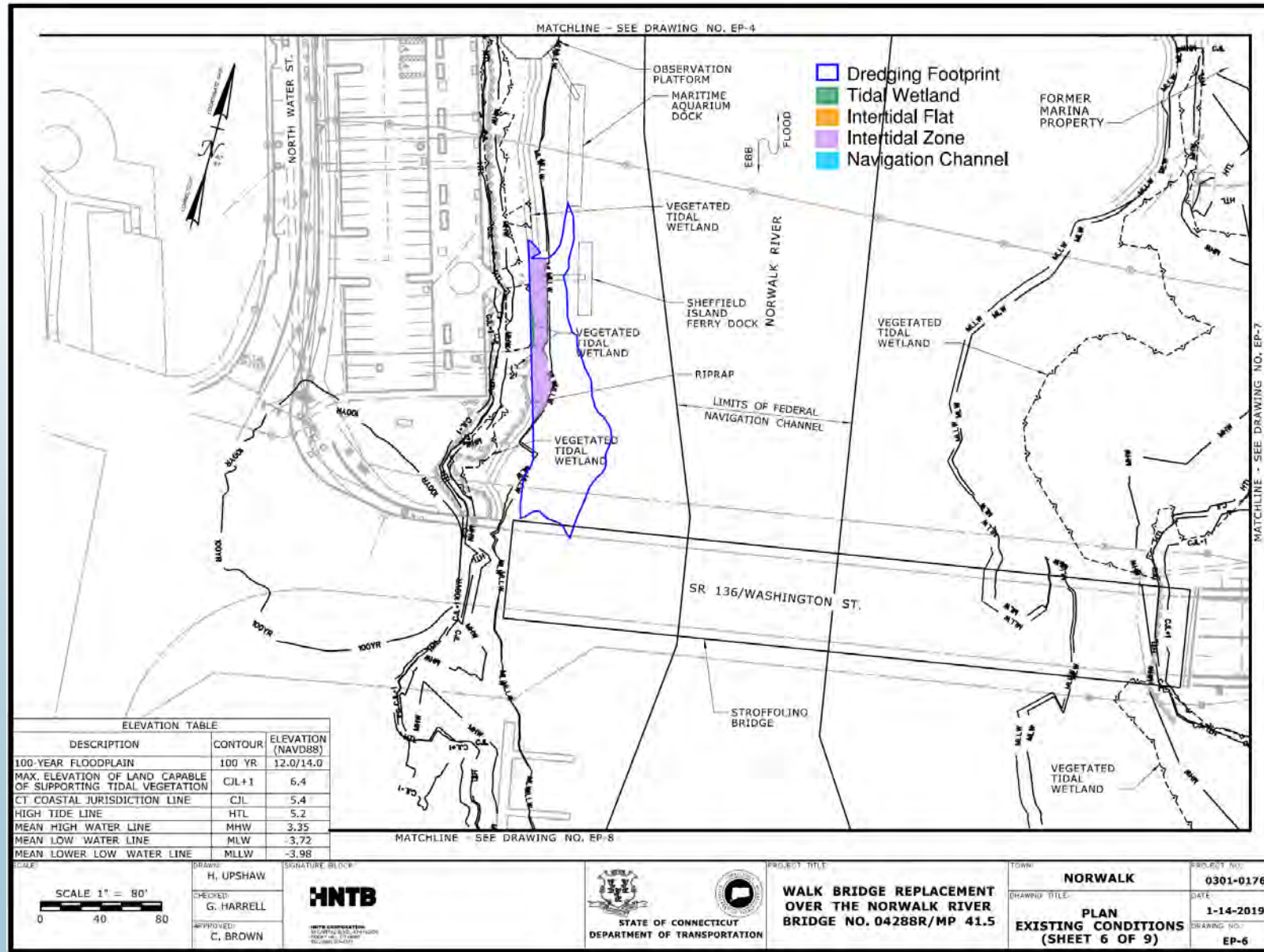
*Areas between MLW and MHW that do not meet the definition of a tidal wetland or intertidal flat.



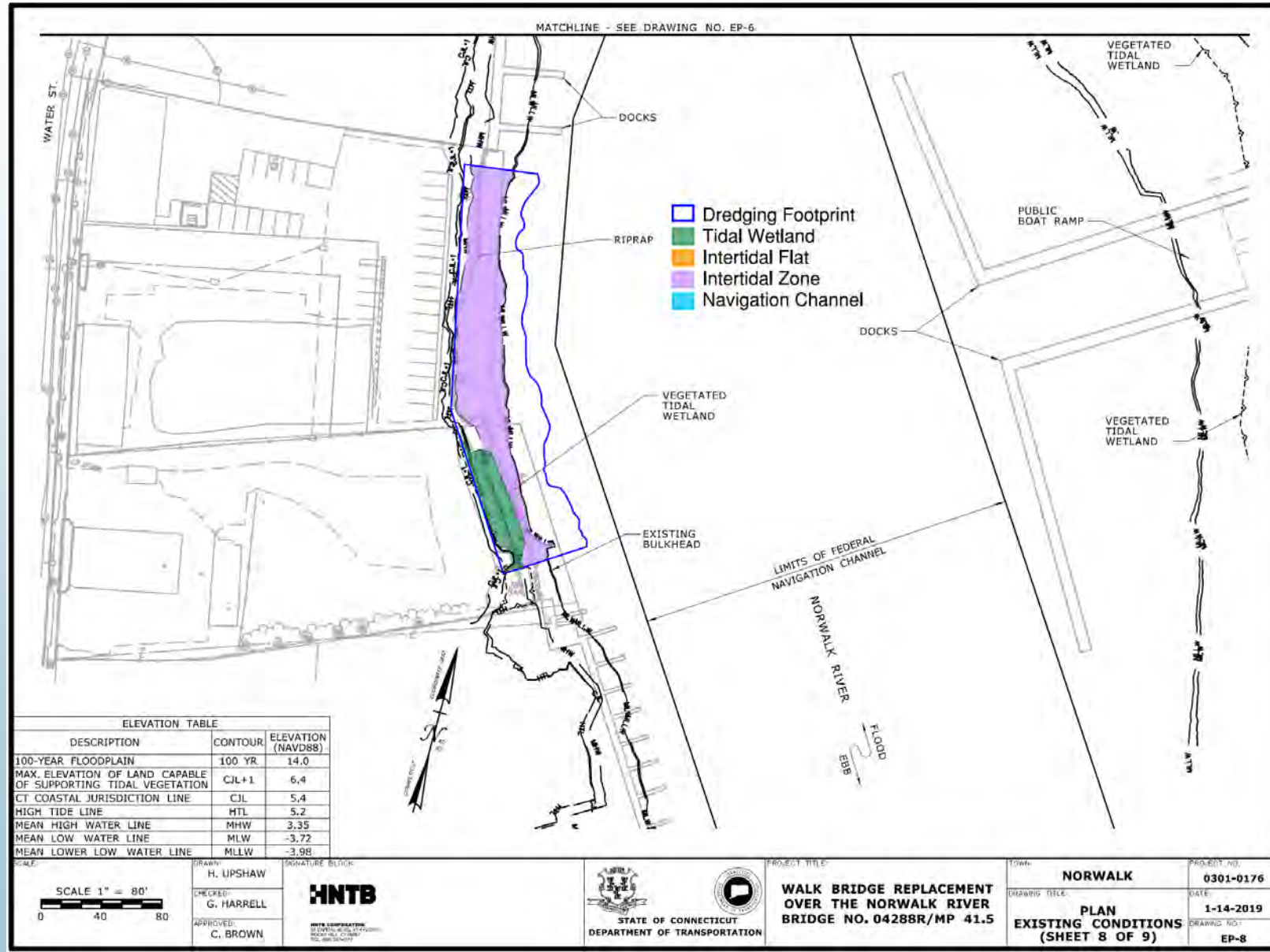
Dredging - - Walk Bridge



Dredging - - Vessel Relocation



Dredging - - Marine Staging Yard



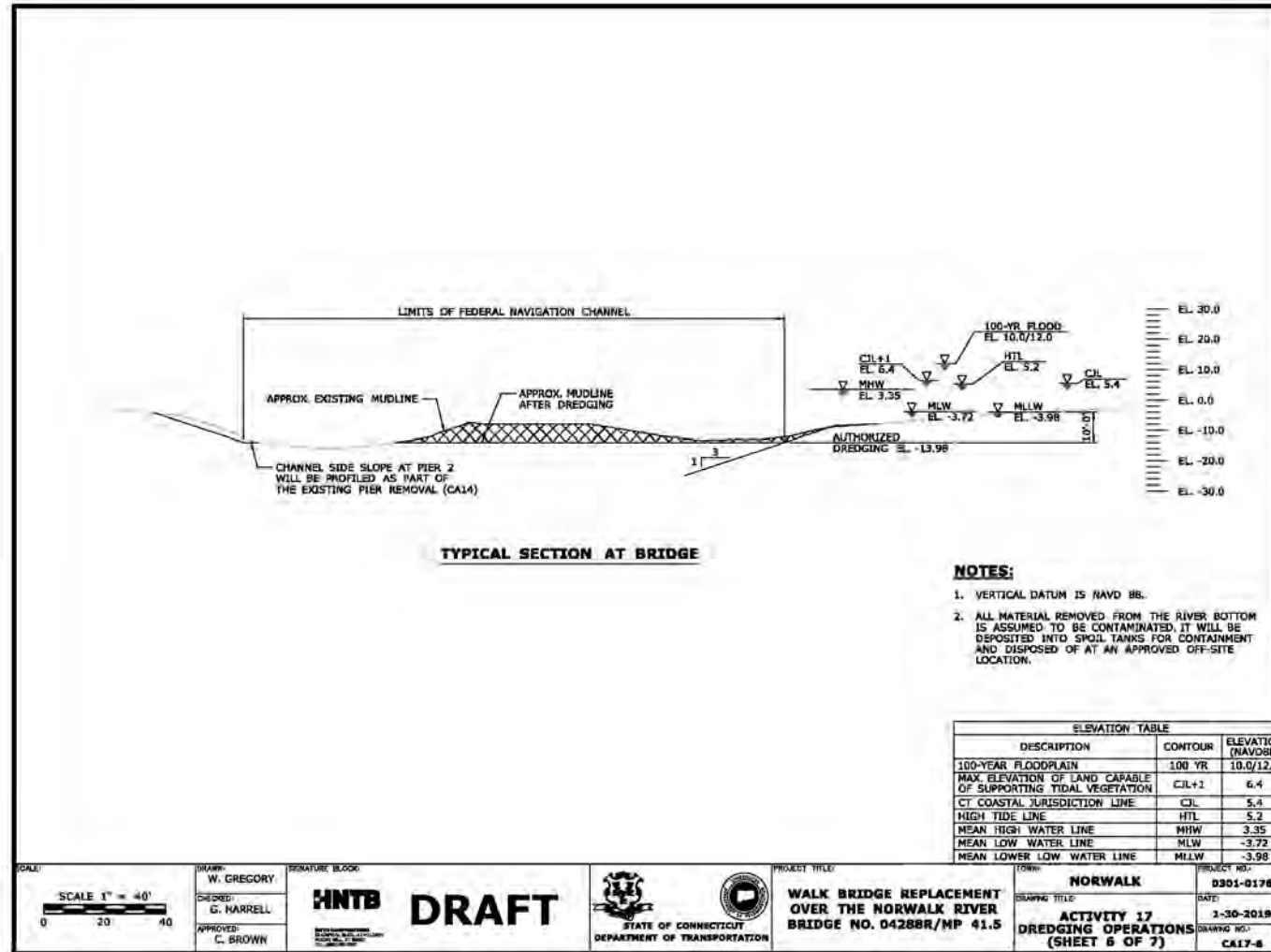
Dredging Impacts Summary

Site	Removal (cy)			Total Backfill (cy)	Total Net Removal (cy)
	Total	Suitable for Re-use**	Unsuitable for Re-use		
Site 1	4,820	930	3,890	2,640	2,180
Site 2	9,620	1,270	8,350	4,490	5,130
Site 3	2,970	650	2,320	1,840	1,130
Site 4	550	0	0	0	550
Site 5	4,300	0	0	0	4,300
Site 6	7,220	0	7,220	3,820	3,410
Project Totals	29,480	2,850	21,780	12,790	16,700

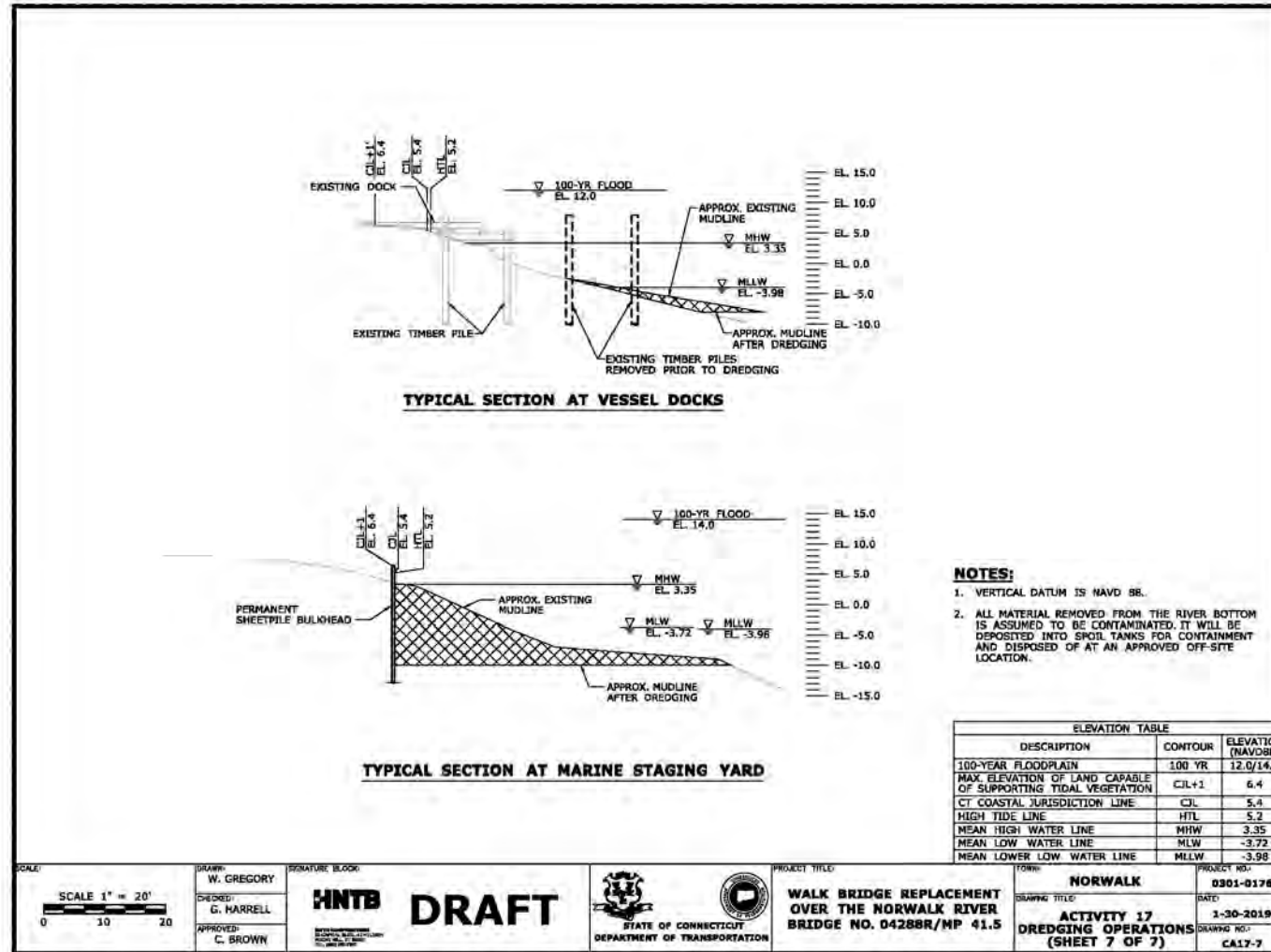
**Sediment below the top 4 feet is considered clean and suitable for re-use for activities requiring backfill.



Dredging - Typical Section at Bridge Area

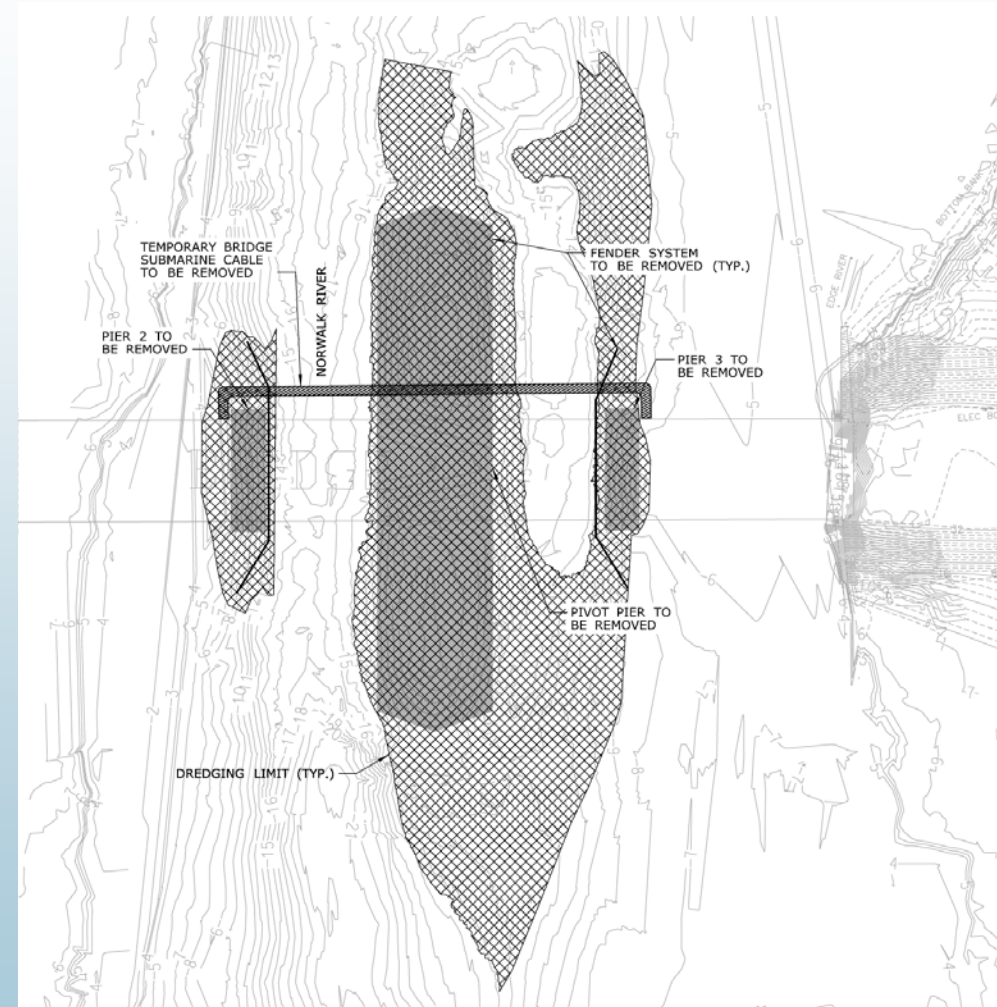


Dredging – Typical Sections at Vessel Docks & Staging Yard



Dredging Protective Measures

- Turbidity Curtains
- Turbidity Monitoring
- Time of Year Restrictions
 - Dredging will occur between Dec. 1 – Jan. 31



Water Quality Monitoring Program

- DOT will develop a program
 - Pre-Construction Baseline monitoring
 - ~ 3 locations in vicinity of Walk Bridge
 - Monitoring Parameters (Turbidity, Dissolved Oxygen, Conductivity, pH)
 - Camera monitoring
 - Construction Monitoring
 - Upstream Locations (North & South of Bridge) to serve as Background
 - In the vicinity of the work activity
 - Action Levels
 - Corrective Actions/Investigation Process
 - Reporting
 - Who is performing the monitoring
 - Equipment specification & maintenance



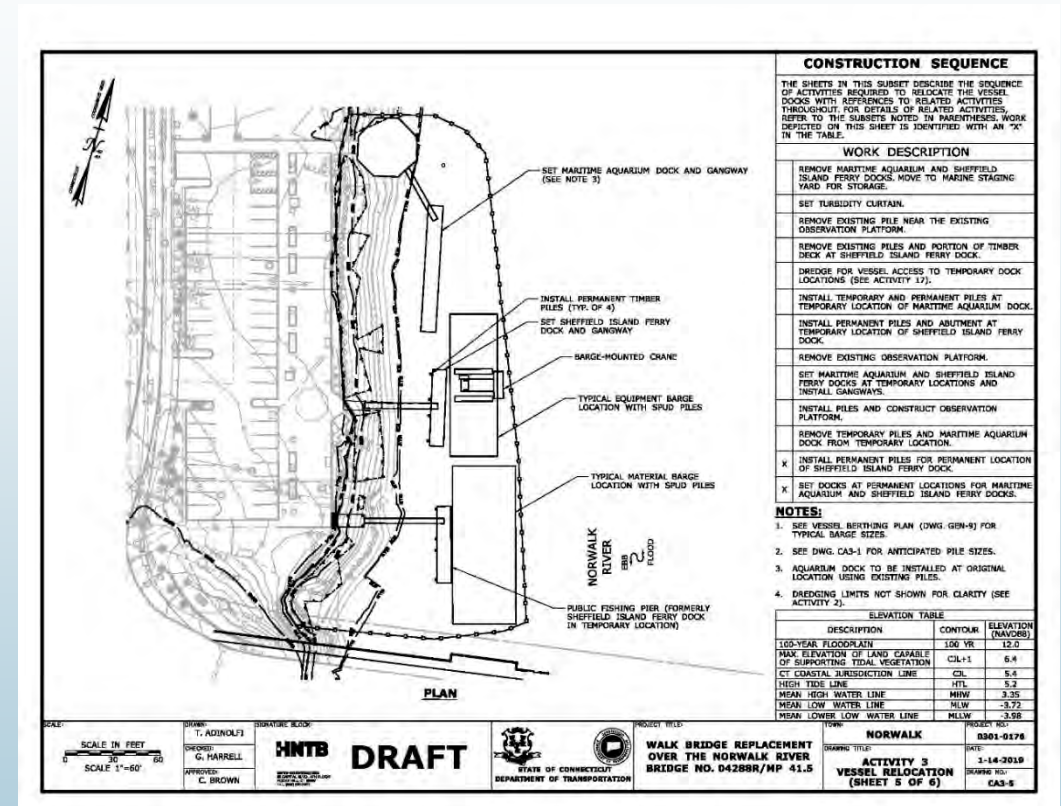
Sediment Dewatering Program

- CTDEEP General Permit for the Discharge of Groundwater Remediation Wastewater
 - Applies to all similar discharges in the State
 - Screening – Initial Sampling
 - DOT Performance Specification -> Treatment system must meet effluent limitations
 - Effluent Limitations
 - Monitoring Frequency
 - < 5,000 gallons per day – Quarterly
 - > 5,000 gallons per day - Monthly

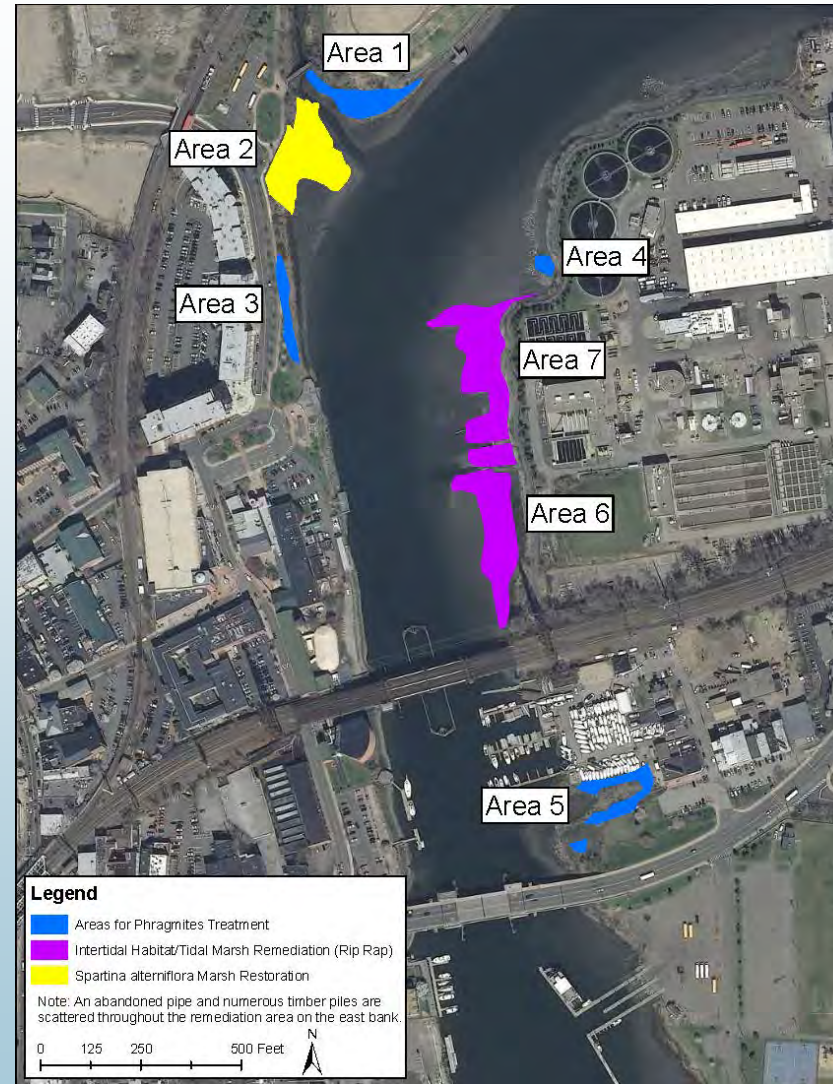


Marine Safety - Vessel Relocation

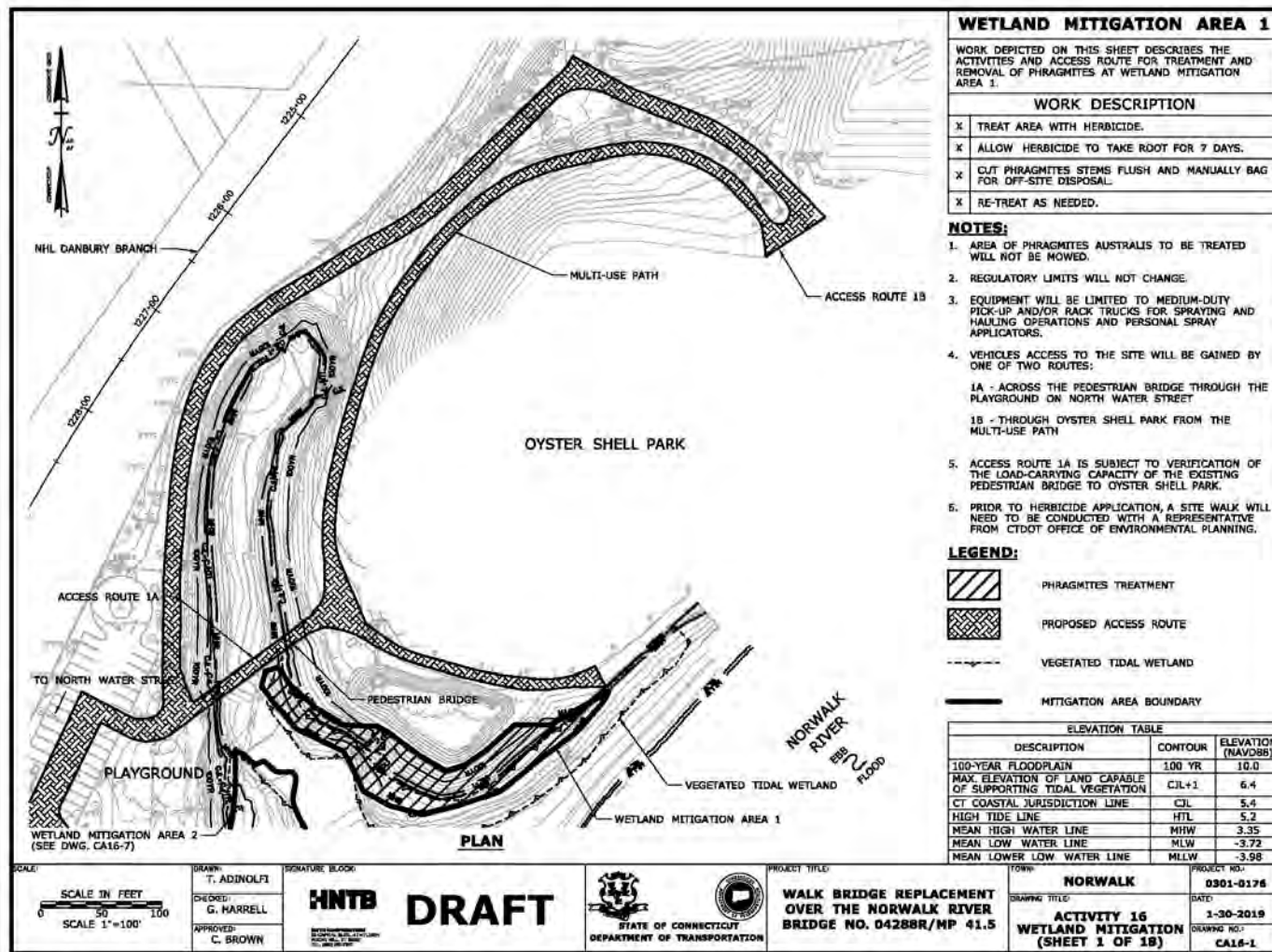
- Marine Use Coordination Plan
 - Identify marine users
 - Identify construction activities that will have impact
- Mitigation Strategies
 - Communication/Coordination Plan
 - 3D/4D Digital Modeling/Visualization
 - Signage
 - Lighting
 - Marine Police for specific activities
 - Time of Day/Time of Year Restrictions



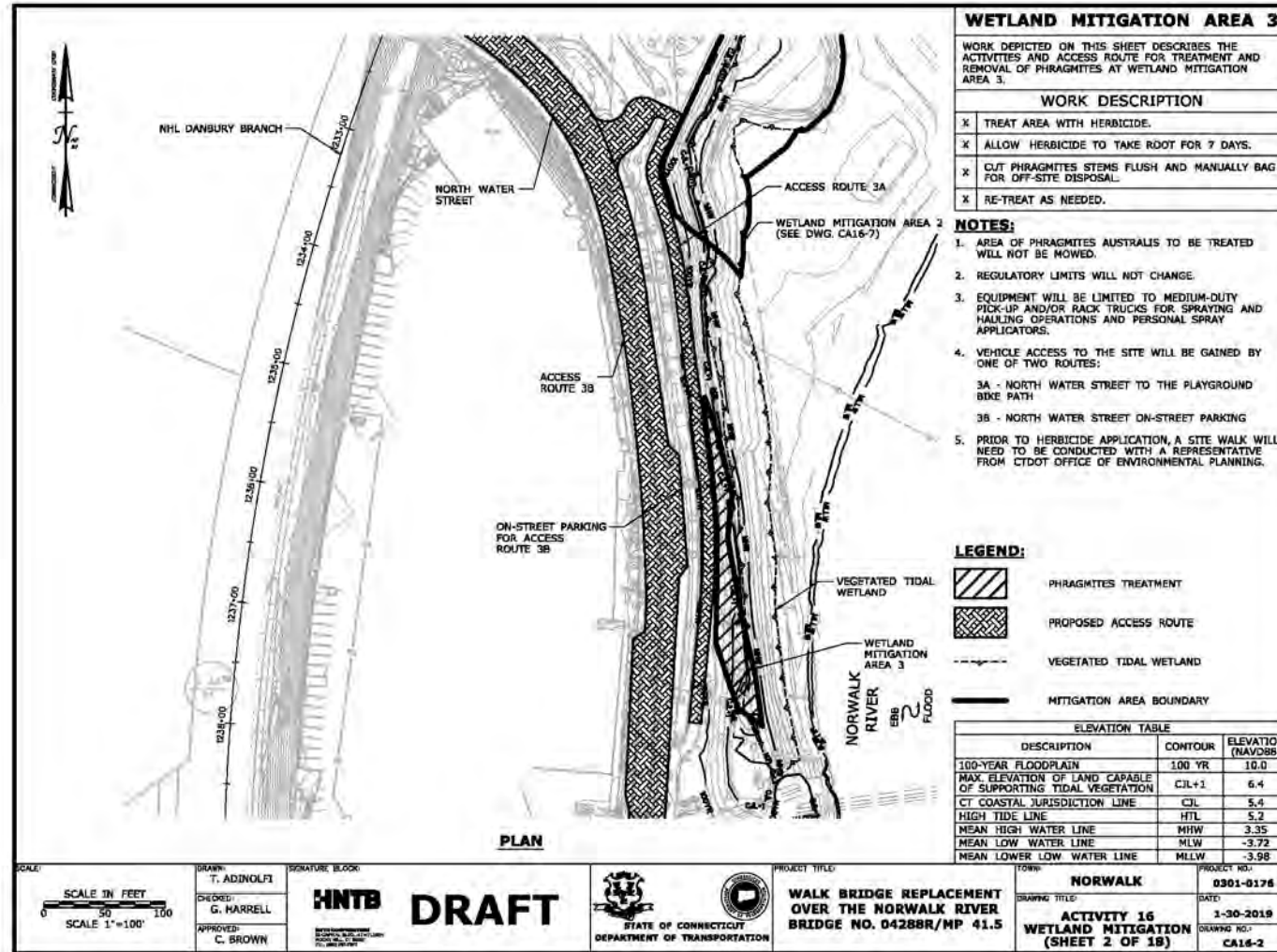
Wetland Mitigation Locations



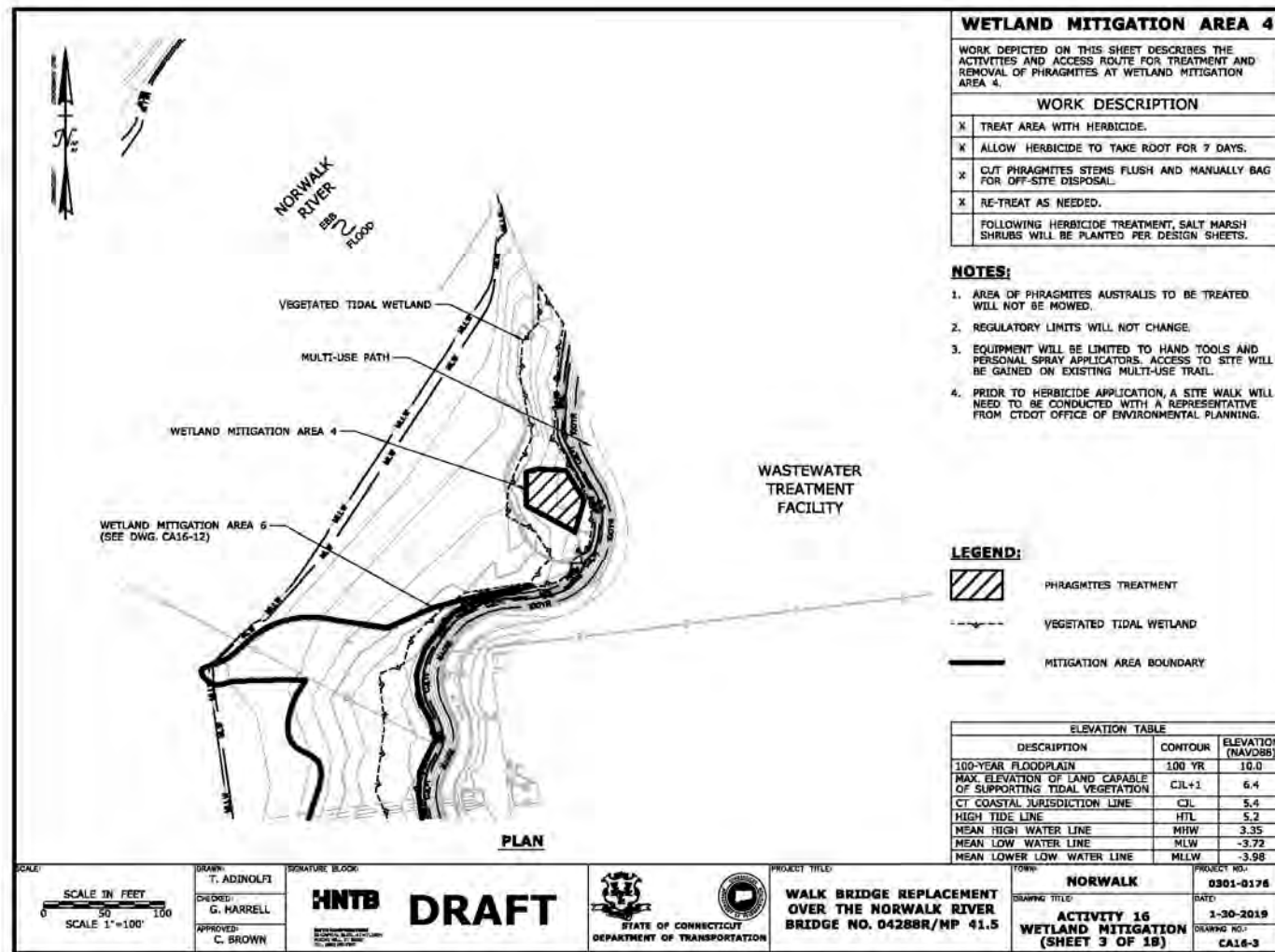
Wetland Mitigation – Area 1



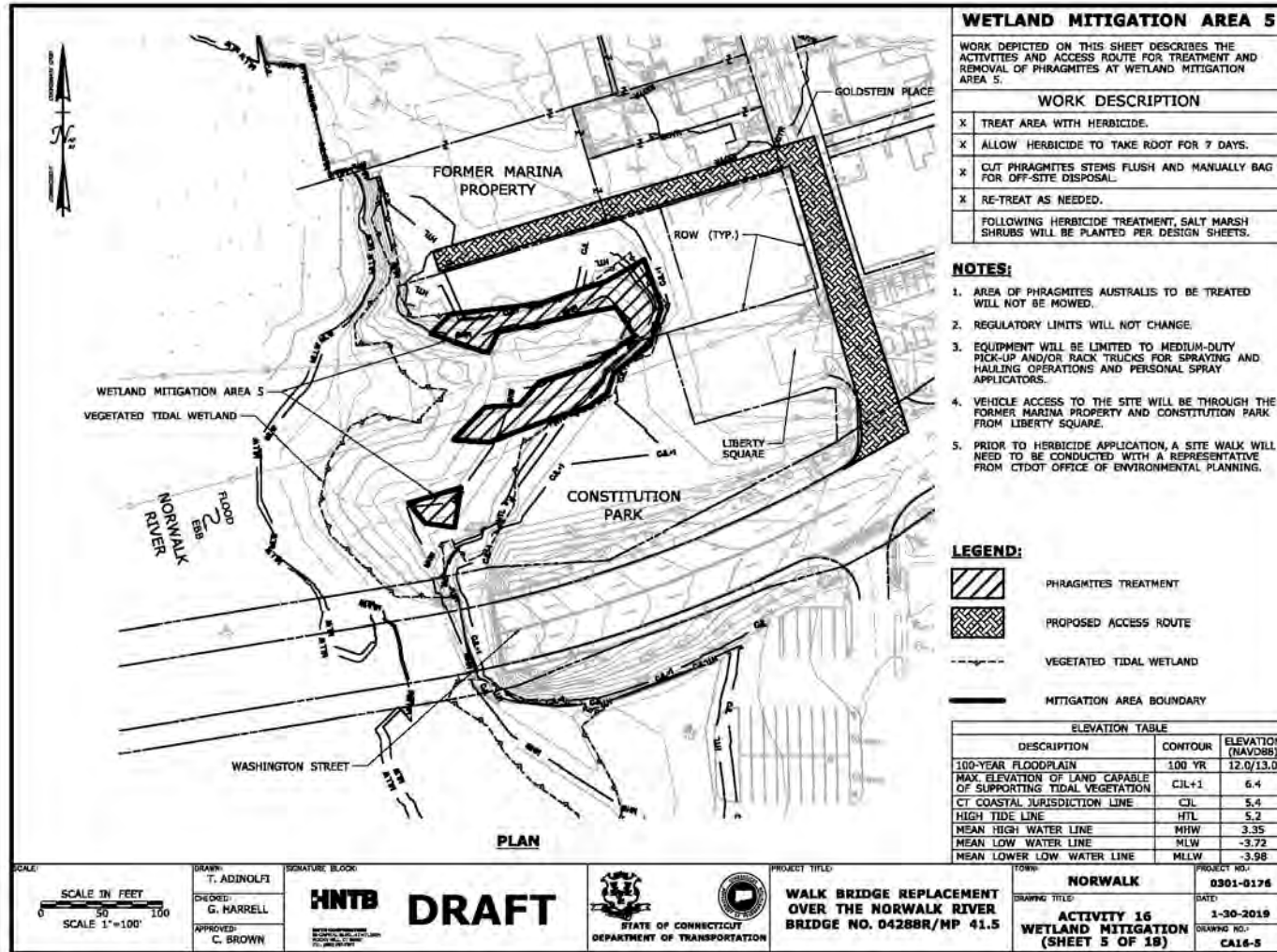
Wetland Mitigation – Area 3



Wetland Mitigation – Area 4



Wetland Mitigation – Area 5



Wetland Mitigation Protective Measures

- Turbidity curtains around sites requiring grading or excavation
- Turbidity Monitoring
- Work only above tide cycle
- All temporary construction access restored to pre-construction conditions



Representative Restoration/Creation



Representative Restoration/Creation



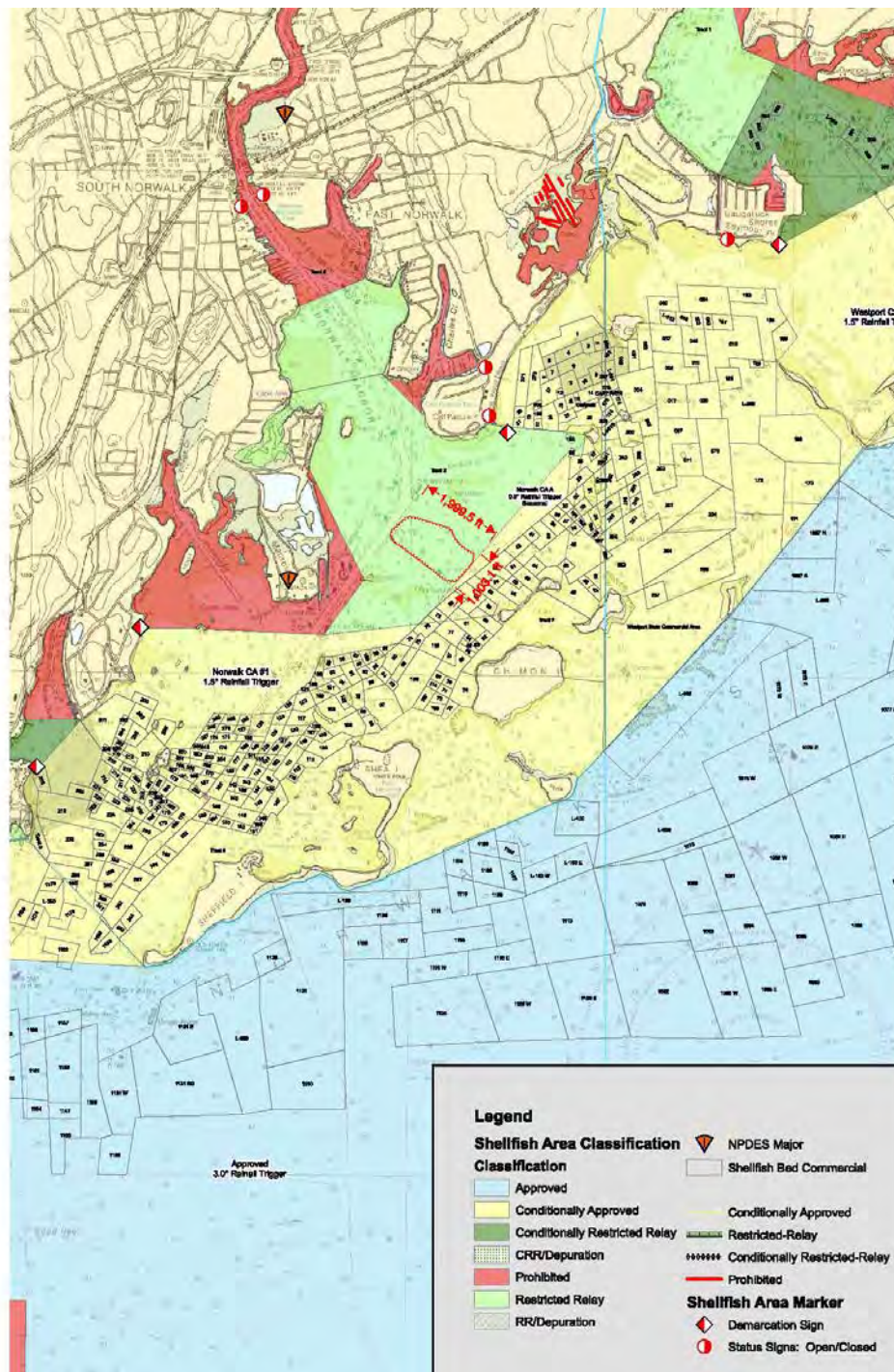
Representative Restoration/Creation



Representative Restoration/Creation



Preliminary Barge Mooring



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Next Steps

- Submit Permit Plates in groups to Commission – next group is planned as a complete set in April based on refinements in 4 areas
- Commission Meetings – to discuss construction methodologies, activities, and protective measures and other topics
- Full understanding of construction activities and mitigation measures
- Permit Filing – Spring 2019





Questions & Comments

