NEW PIER, RAMP & FLOAT

Kipp Kollar

7 Connecticut River Rd

Middlesex County

East Haddam, Connecticut

Engineer or Surveyor:

Permitting Agent: John B. Lust

GENERAL NOTES:

1. BASE MAP COMPILED FROM THE FOLLOWING REFERENCE MAPS:

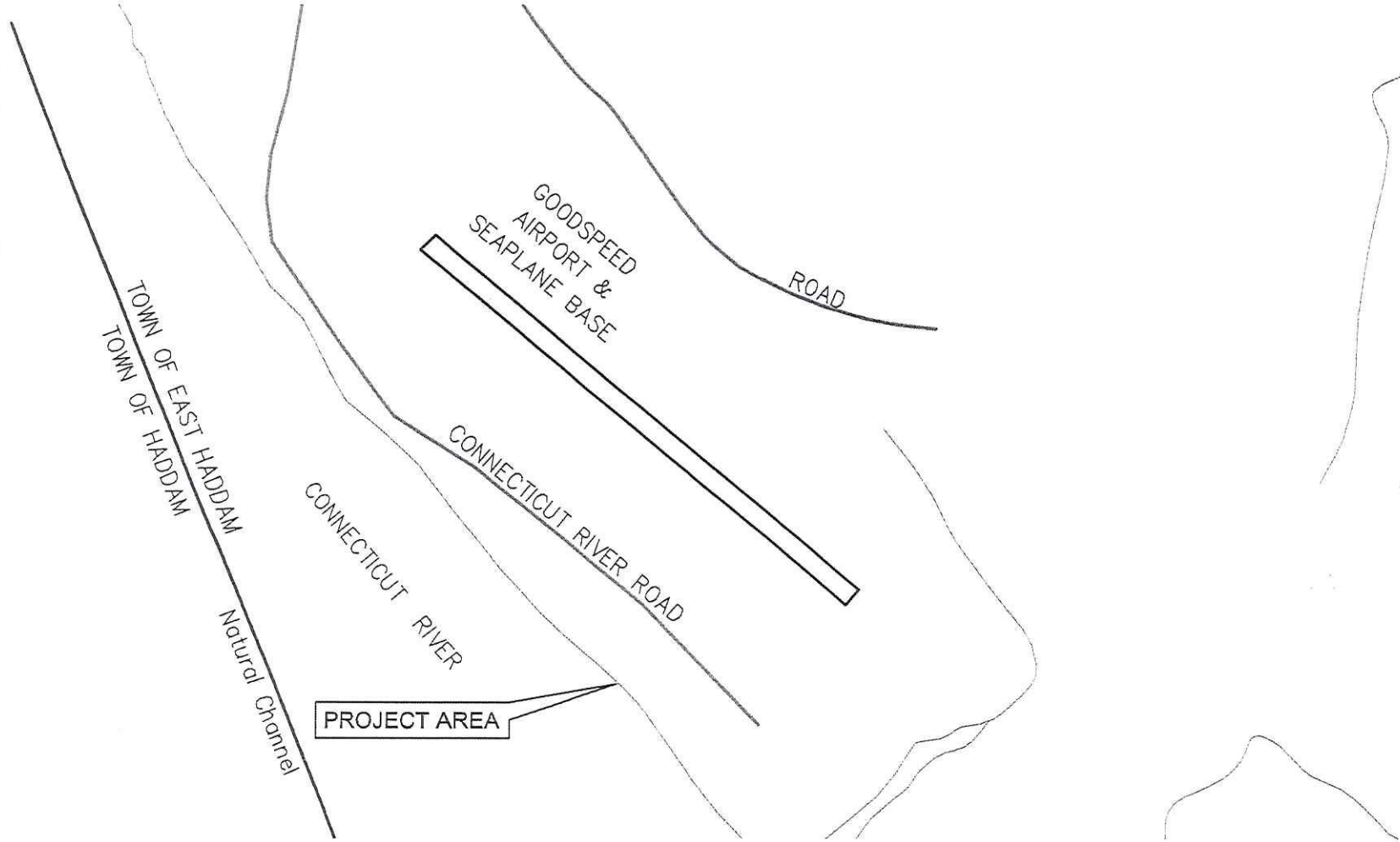
 1.1. "IMPROVEMENT LOCATION SURVEY PREPARED FOR MARY L. & KIPP K. KOLLAR – 7 CONNECTICUT RIVER ROAD, EAST HADDAM, CONNECTICUT", SCALE: 1"=10'; DATED: 11-05-2014 AND PREPARED BY ROCHARD F. MIHOK, P.E.

2. THIS PLAN SHOULD ONLY BE USED FOR GENERAL PRESENTATION AND NOT FOR CONSTRUCTION PURPOSES. ALL STRUCTURES, UTILITIES AND ELEVATIONS SHOULD BE FIELD VERIFIED PRIOR TO THE START OF ANY WORK.

3. THE ENGINEERING SEAL AND SIGNATURE IS PROVIDED TO INDICATE GENERAL CONFORMANCE WITH COASTAL ENGINEERING PRACTICE. THE ATTACHED DESIGNS ARE CONCEPTUAL AND FOR THE PURPOSE OF PERMITTING ONLY. THEY DO NOT INCLUDE A STRUCTURAL ENGINEERING ANALYSIS.

Drawing List

Date: August 24, 2015 Revised:



SITE LOCATION MAP

Scale: 1" = 500'

NORTH

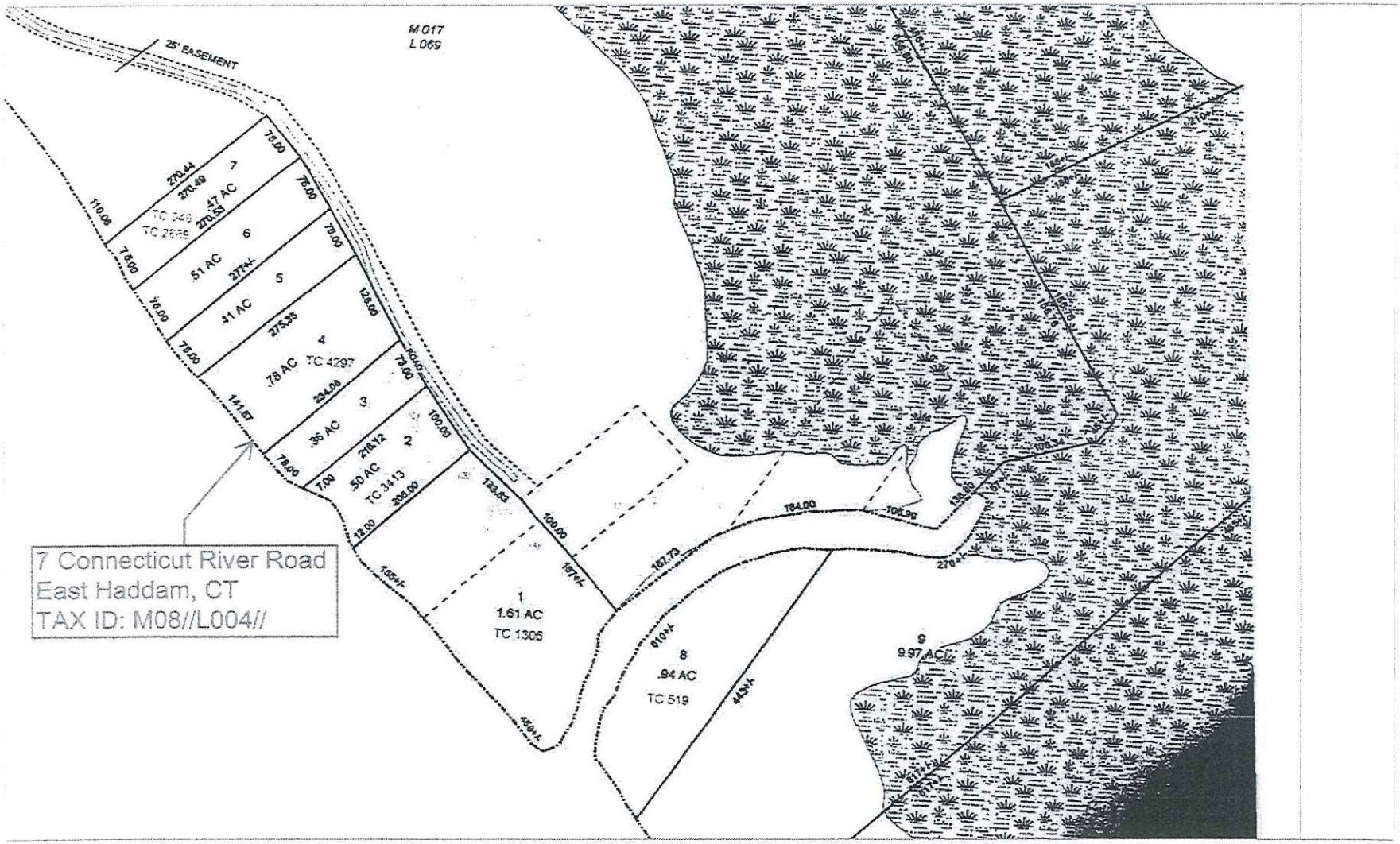
0 SCALE REF. 1"

PROJECT LOCATION MAP TAKEN FROM CT D.O.T. ELECTRONIC ROAD (TRU) MAPS.

Applicant

KIPP KOLLAR
7 CONNECTICUT RIVER RD
MIDDLESEX COUNTY
EAST HADDAM, CONNECTICUT

SITE LOCATION MAP Sheet: 2 of 6



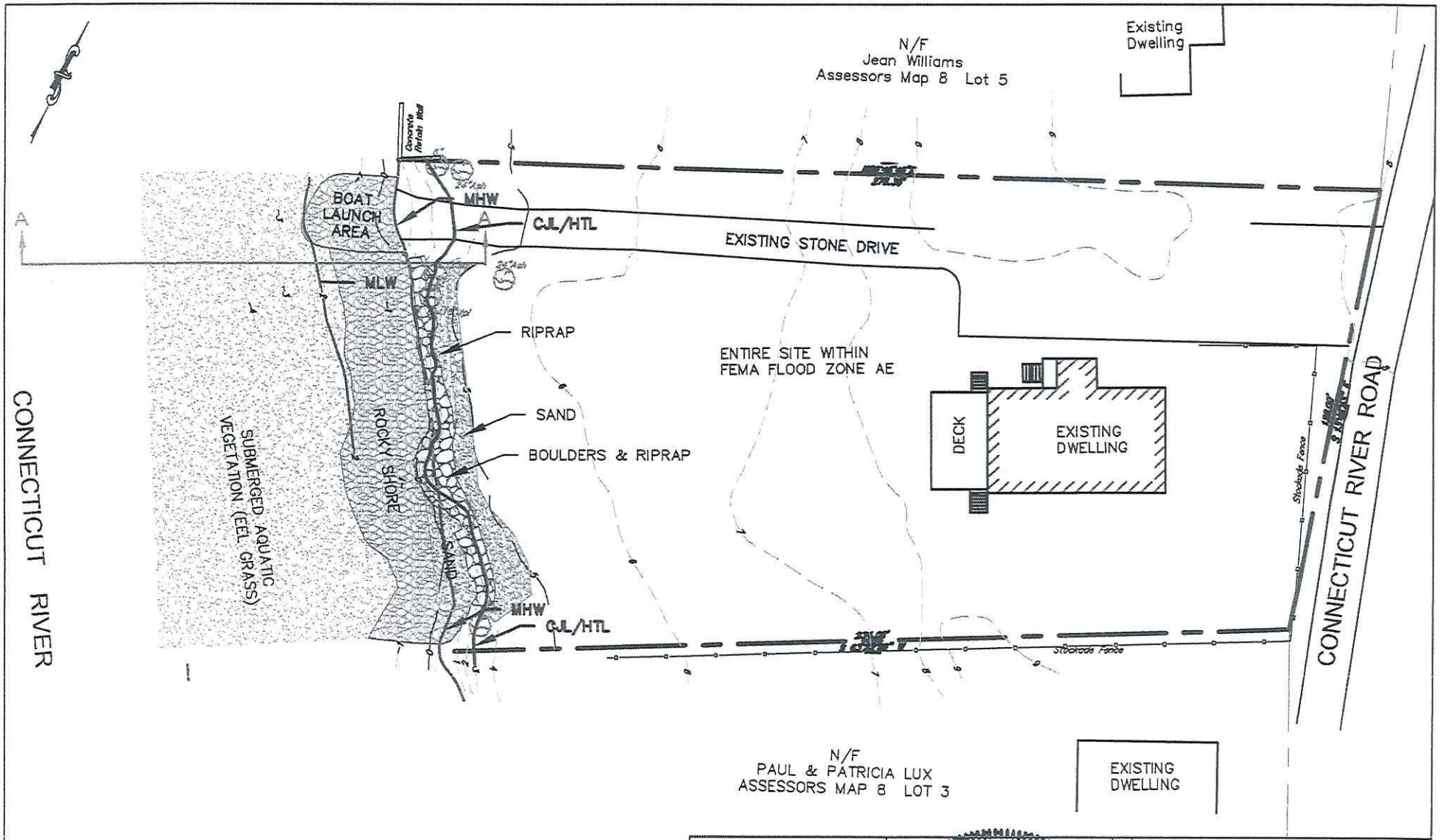
ASSESSOR MAP

Scale: 1" = 200'

NORTH

0 SCALE REF. 1"

Applicant	KIPP KOLLAR 7 CONNECTICUT RIVER RD MIDDLESEX COUNTY EAST HADDAM, CONNECTICUT
ASSESSOR MAP	Sheet: 3 of 6



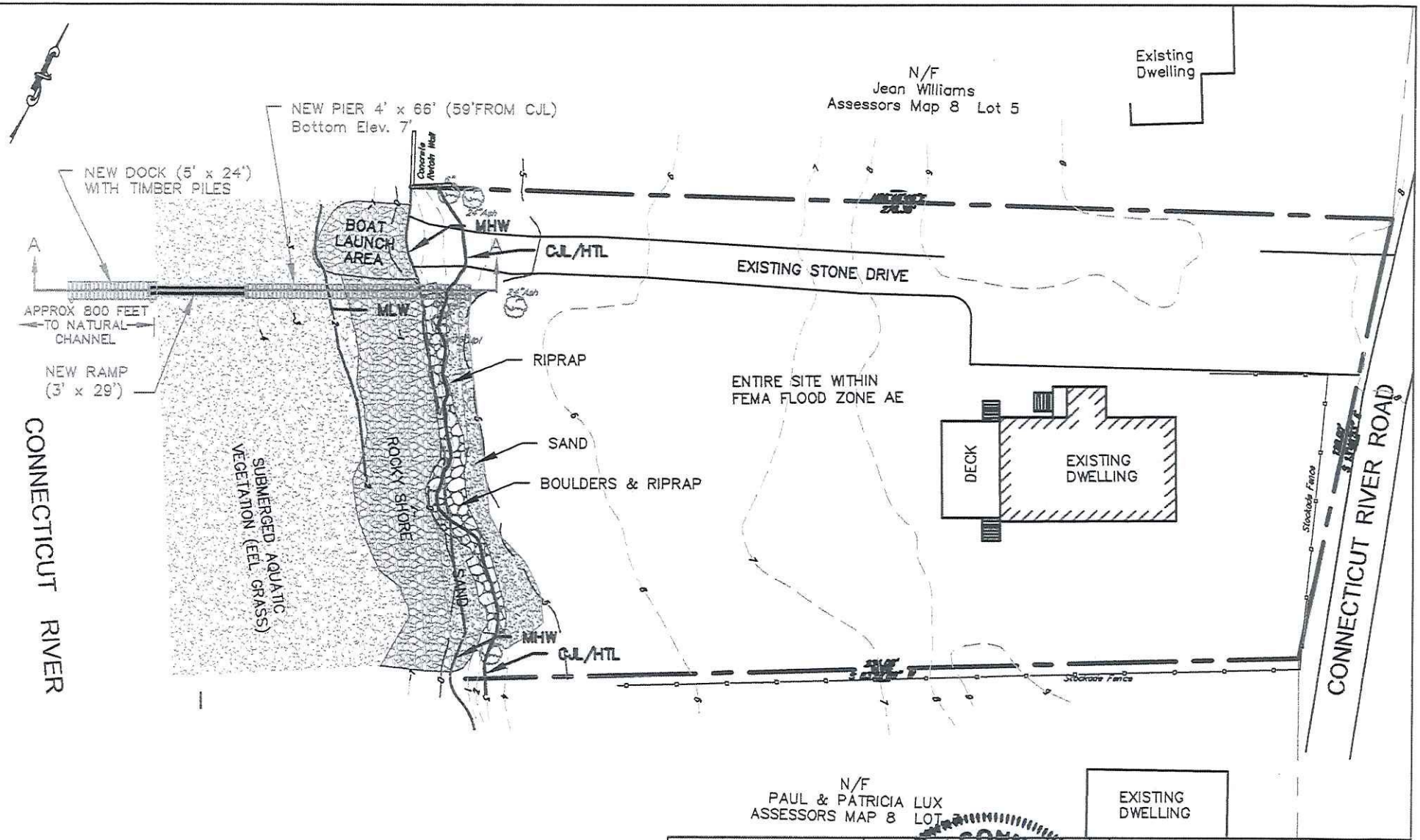
GRAPHIC SCALE
0 20 40
(IN FEET)

Permitting Agent: John B. Lust	
Drawn By: W.M.	
Checked By: R.S.	
Date: August 24, 2015	
Revised:	
DATUM = NAVD 88 HTL/CJL = 3.0 MHW = 1.3 MLW = -2.2	

STATE OF CONNECTICUT
ROBERT E. SONNICHSEN
#14596
LICENSED PROFESSIONAL ENGINEER
Seal

Applicant	KIPP KOLLAR 7 CONNECTICUT RIVER RD MIDDLESEX COUNTY EAST HADDAM, CONNECTICUT
Project	NEW PIER, RAMP & FLOAT EXISTING CONDITIONS PLAN VIEW

Sheet: 4 of 6



GRAPHIC SCALE
0 20 40
(IN FEET)

Permitting Agent: John B. Lust	
Drawn By:	W.M.
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ROBERT E. SONNICHSEN
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LICENSED PROFESSIONAL ENGINEER
Seal

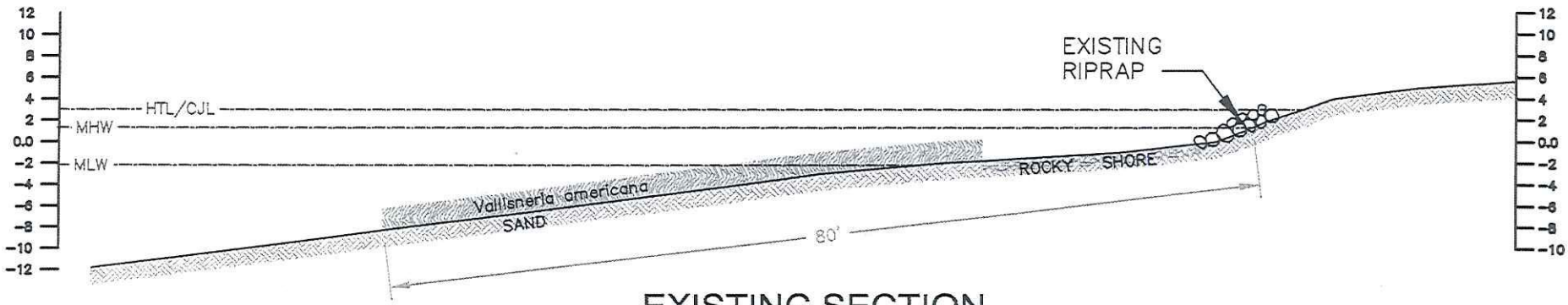
Project / Applicant

KIPP KOLLAR
7 CONNECTICUT RIVER RD
MIDDLESEX COUNTY
EAST HADDAM, CONNECTICUT

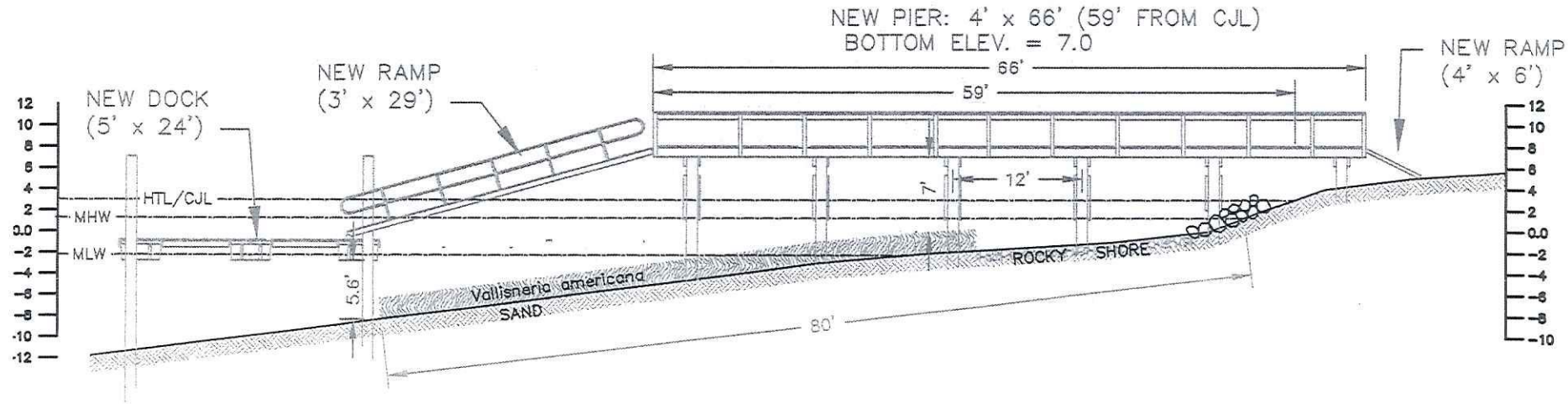
NEW PIER, RAMP & FLOAT

PROPOSED IMPROVEMENTS

PLAN VIEW



EXISTING SECTION



PROPOSED SECTION

GRAPHIC SCALE
0 7.5 15
(IN FEET)

Permitting Agent: John B. Lust	
Drawn By: W.M.	
Checked By: R.S.	
Date: AUGUST 24, 2015	
Revised:	
DATUM = NAVD 88 HTL/CJL = 3.0 MHW = 1.3 MLW = -2.2	

STATE OF CONNECTICUT
ROBERT E. SONNICHSEN
#14596
LICENSED
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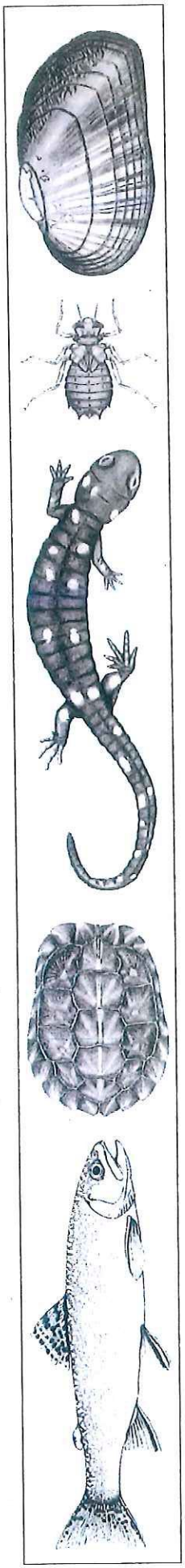
Seal

Applicant	KIPP KOLLAR 7 CONNECTICUT RIVER RD MIDDLESEX COUNTY EAST HADDAM, CONNECTICUT
Project	NEW PIER, RAMP & FLOAT
	CROSS SECTION A-A
SECTION VIEW	Sheet: 6 of 6



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biodrawversity
ecological consulting
and communications

August 21, 2015

REPORT

Freshwater Mussel Survey in the Connecticut River for a Proposed Pier, Ramp, and Dock at 7 Connecticut River Road, East Haddam, Connecticut

Biodrawversity LLC conducted a freshwater mussel survey in the Connecticut River in the footprint of a proposed pier, ramp, and dock at 7 Connecticut River Road in East Haddam, Connecticut (Figures 1 and 2). Target mussel species included the Tidewater Mucket (*Leptodea ochracea*) and Eastern Pondmussel (*Ligumia nasuta*), both of which are listed as Special Concern in Connecticut. The survey was conducted as part of the environmental review and permitting for the proposed pier, ramp, and dock. The survey was intended to document the presence, distribution, and habitat use of the two mussel species in areas that would be affected by construction, to identify a mussel relocation site a safe distance away from the project area, and to recommend a mussel relocation plan if necessary.

METHODS

The mussel survey was conducted on July 29, 2015, when water level and water clarity were conducive for finding mussels with visual searches by SCUBA diving. The survey was conducted at high tide. The survey was conducted in all areas where the river bottom might be affected by project-related construction, including a buffer on each side, and beyond, the proposed pier, ramp, and dock. Subtidal areas, out to a depth of approximately 6-8 feet and ~80 ft from shore, were densely vegetated with submerged aquatic vegetation (primarily *Vallisneria americana*), which made it difficult to survey these areas. Each state-listed mussel observed was measured, photographed, and returned to their original locations.

Riverfront at 7 Connecticut River Road, East Haddam, CT.

Figure 1. Mussel survey area in the Connecticut River near a proposed dock at 7 Connecticut River Road, East Haddam, CT.

RESULTS

Two live Tidewater mucket were found. One was at a depth of seven feet, a short distance beyond the submerged aquatic vegetation in silt/sand substrate. The second was at a depth of only three feet, and was among the dense aquatic vegetation. These mussels were 105 and 107 mm in length, and exhibited very light shell erosion. In addition, one Tidewater Mucket shell (length = 61 mm) and one Eastern Pondmussel shell (length = 93 mm) were also observed among the dense vegetation. Other mussel species observed included Eastern Elliptio, Eastern Lampmussel, and Alewife Floater. The non-native Asian Clam was common.

Tidewater Mucket in its natural position in the substrate, photographed in the project area.

RECOMMENDATION

Both the Tidewater Mucket and Eastern Pondmussel were documented in the survey area. Due to the dense submerged aquatic vegetation, it was difficult to survey the entire area thoroughly, and it is likely that more individuals of these two species are present than what was documented during the survey. Prior to construction, a qualified mussel biolo-

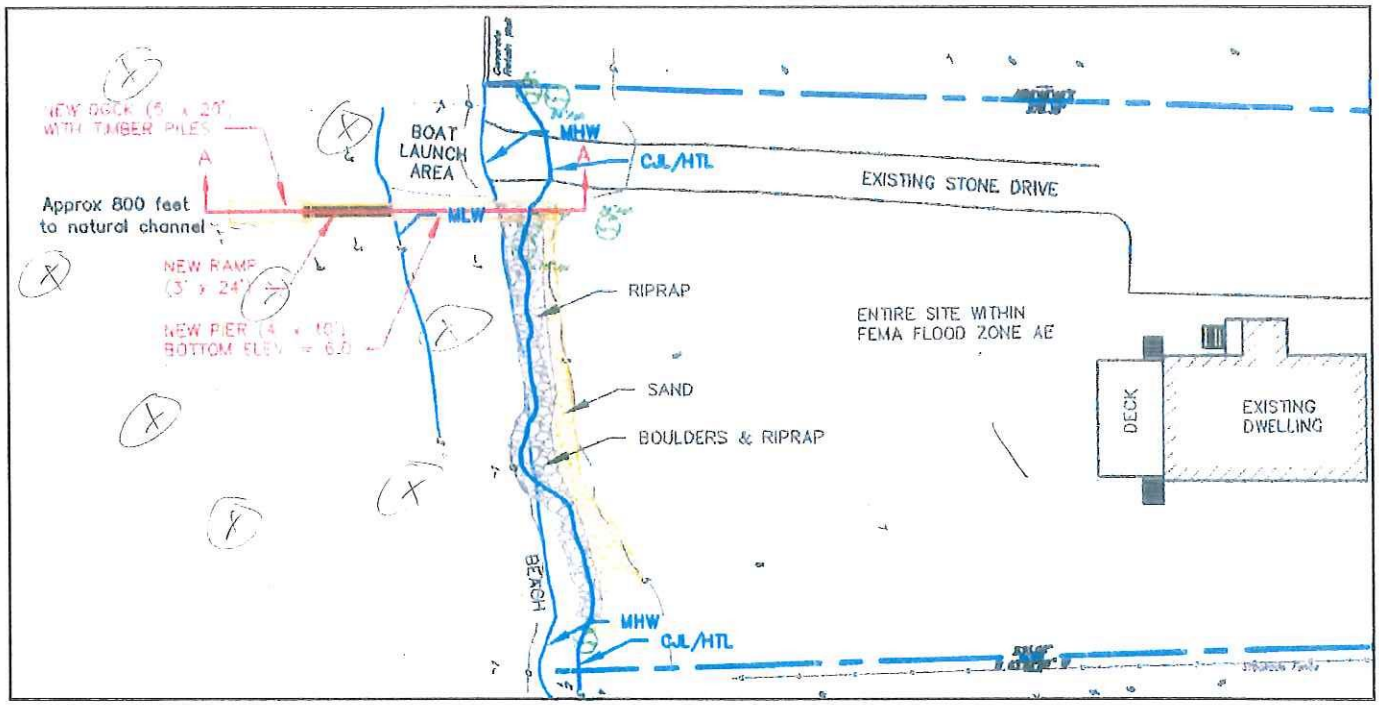
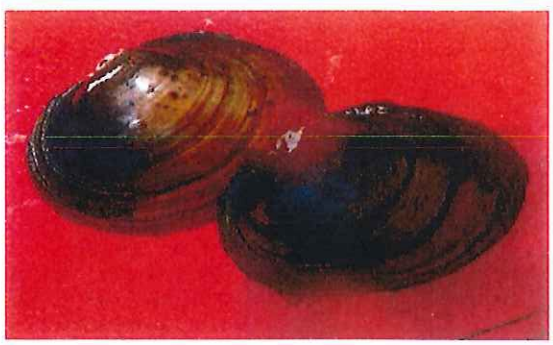


Figure 2. Proposed pier, ramp, and dock at 7 Connecticut River Road, East Haddam, CT.

gist with a permit from the CT DEEP should collect mussels from within the footprint of proposed construction plus a 10-meter buffer upstream, downstream, and beyond the project's footprint. The survey should target both adult mussels and juveniles; the latter are typically buried and would need to be collected by sieving the silt and sand substrates that they prefer to burrow in. All state-listed mussels that are collected in these areas should be tagged and relocated 50-100 meters upstream and placed into similar habitat. These should be checked one month and one year following relocation to ensure that they survived.

Eastern Pondmussel shell observed in the project area.



Two live Tidewater Muckets observed in the project area.