

17. DIRECTIONS TO THE SITE

ST RT. 90 West to ST RT. 83. North to Lake Rd. Turn West, site is on North side of Road.

18. Nature of Activity (Description of project, include all features)

Install Ready Rock interlocking block at edge of existing crib. Place clean, compacted fill between Ready Rock wall and existing concrete wall. Cap with new 8" thick concrete pad as shown on plans.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Repair of existing structure for Erosion Control.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
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22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

Project is the restoration of existing concrete structures, no new work has begun. The prior work was done by a contractor many years ago.

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- 32850 Lake Road

City - Avon Lake State - Ohio Zip - 44012

b. Address- 32822 Lake Road

City - Avon Lake State - Ohio Zip - 44012

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

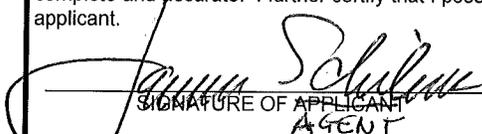
City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
ODNR	SHORE STRUCTURE LAND LEASE	15-LOR-03 SUB-2419-LO	4-1-15		
AVON LAKE, OHIO CITY	RESOLUTION		3-19-15		

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.


5-6-15
 SIGNATURE OF APPLICANT/AGENT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

JOHN & BROOKE COSTIN
32842 Lake Road
Avon lake, Ohio

March 15, 2015

SEAWALL DESIGN

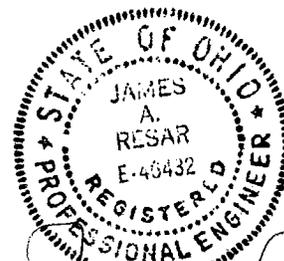
- A. Design Water Level - 30 year design water level = 574.9 ft. IGLD 1985
- B. Design Wave Height
Lake bottom - 569.4 ft. IGLD 1985
Structure depth - d - 5.50 ft,
Breaking wave height - $H_b = (0.78)(d) = 4.29$ ft.
- C. Concrete Cap Height Overtopping
Wave crest elev. = $DWL + 0.7H_b = 574.9 + (0.7)(4.29) = 577.9$ ft.
Note: top of conc. cap elev. = 578.42 ft.
- D. External Stability
Concrete blocks & cap = 5,733#/lf
Concrete rubble fill = 8,798#/lf

Weight per lineal foot = 14,531#/lf
- E. Wave Forces
 P_1 = Wave pressure at DWL = 170.24#/sf
 P_2 = Wave pressure at crest = 40.9#/sf
 P_3 = Wave pressure at base = 147.1#/sf

Horizontal wave force = 1,243.4#/ft
Wave uplift force = 503#/ft

Overturning force from wave action = 1.35K
Stabilization force from blocks = 7.99K

$7.66/1.35 = 5.92$ safety factor without adding in the concrete slab and the rubble.



James A. Resar
3/19/15



JAMES A. SCHILENS & ASSOCIATES
 Land Planning · Landscape Architecture
 27330 Center Ridge Road Phone: (440) 899-1840
 Westlake, Ohio 44145 Fax: (440) 899-0930



**J.A.R. Engineering
& Surveying, Inc.**

P.O. Box 450808, WESTLAKE, OHIO 44145
 Phone: (440)-871-8345

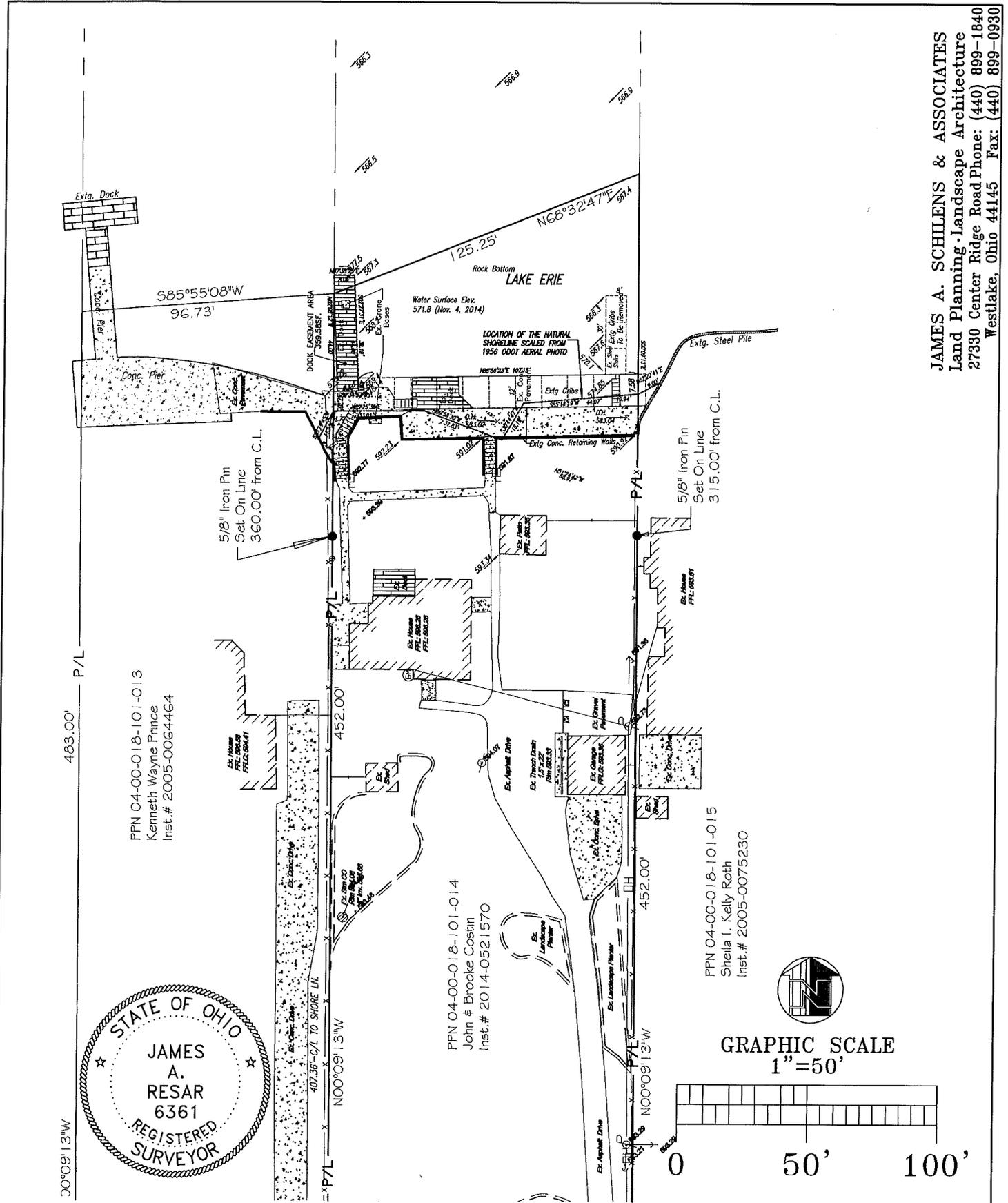
SITE LOCATION MAP

PROJECT: COSTIN RESIDENCE SCALE: N.T.S.
 LOCATION 32842 LAKE ROAD DATE: 3-5-15
AVON LAKE, OH 44012 DRAWN BY: P.A.S.
 CHECKED BY: J.R.

REVISIONS:

REVISIONS:	
2-2-15	
2-11-15	
2-18-15	
2-25-15	
3-5-15	
DWG. NO.:	1 OF

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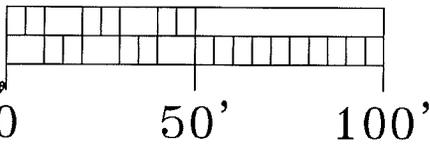
PPN 04-00-018-101-013
 Kenneth Wayne Prince
 Inst. # 2005-0064464

PPN 04-00-018-101-014
 John & Brooke Costin
 Inst. # 2014-0521570

PPN 04-00-018-101-015
 Sheila I. Kelly Roth
 Inst. # 2005-0075230



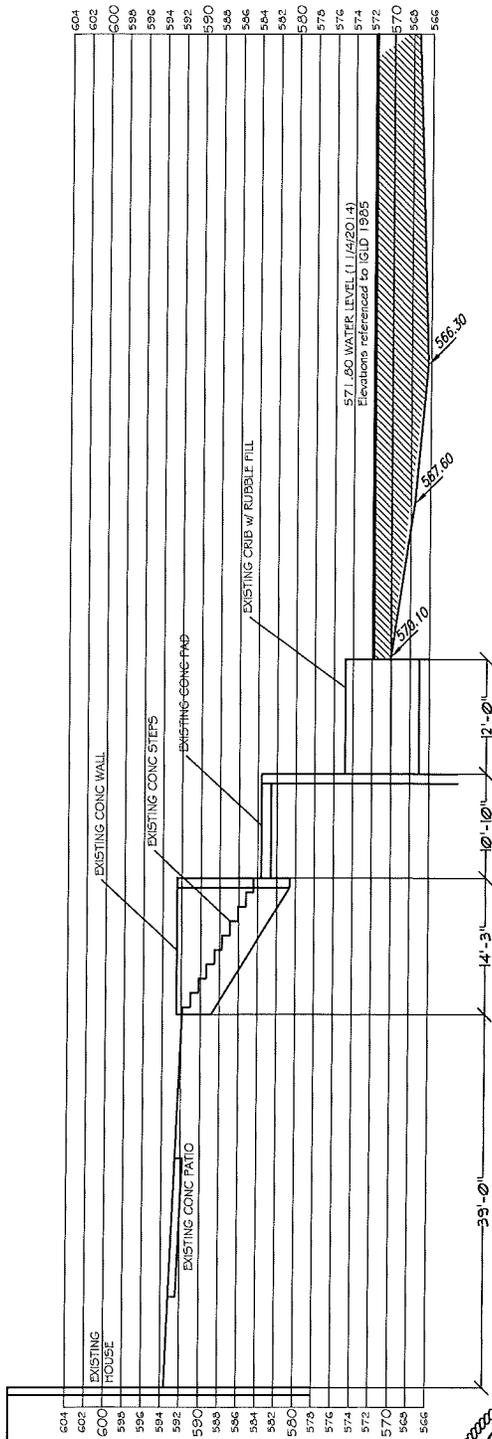
GRAPHIC SCALE
 1"=50'



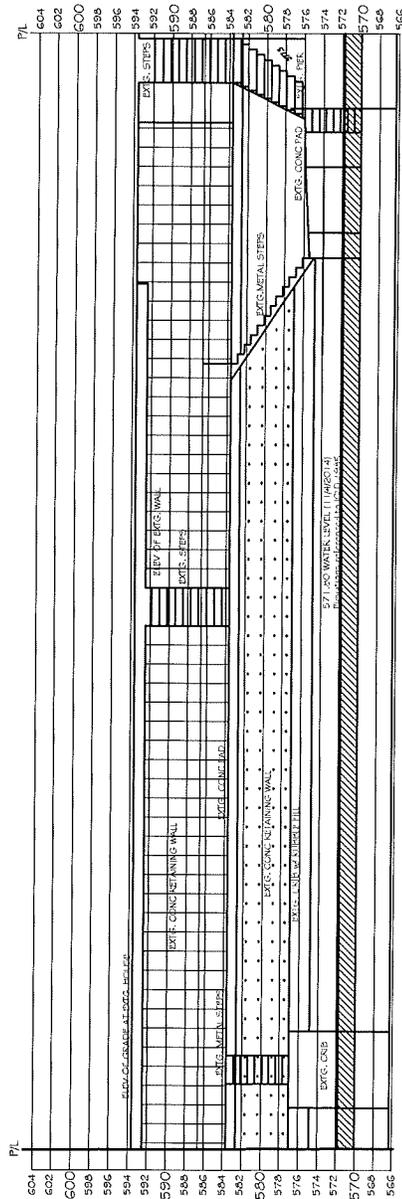
J.A.R. Engineering & Surveying, Inc.
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 Phone: (440)-871-8345

EXISTING PLAN VIEW	
PROJECT:	COSTIN RESIDENCE
LOCATION:	32842 LAKE ROAD AVON LAKE, OH 44012
SCALE:	1"=50'
DATE:	3-5-15
DRAWN BY:	P.A.S.
CHECKED BY:	J.R.

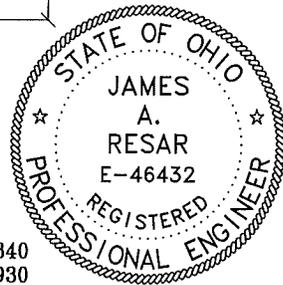
REVISIONS:	
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2-18-15	
2-25-15	
3-5-15	
DWG. NO.:	2 OF 8



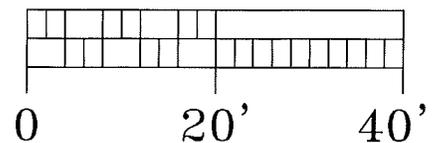
Existing Section A-A'
Scale: 1"=20'



Existing North Elevation
Scale: 1"=20'



GRAPHIC SCALE
1"=20'



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Phone: (440)-871-8345

EXISTING SECTION A-A' & NORTH ELEVATION

PROJECT:
COSTIN RESIDENCE

SCALE: 1"=20'

LOCATION
32842 LAKE ROAD

DATE: 3-5-15

AVON LAKE, OH 44012

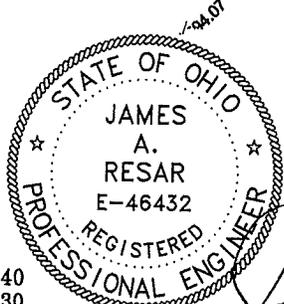
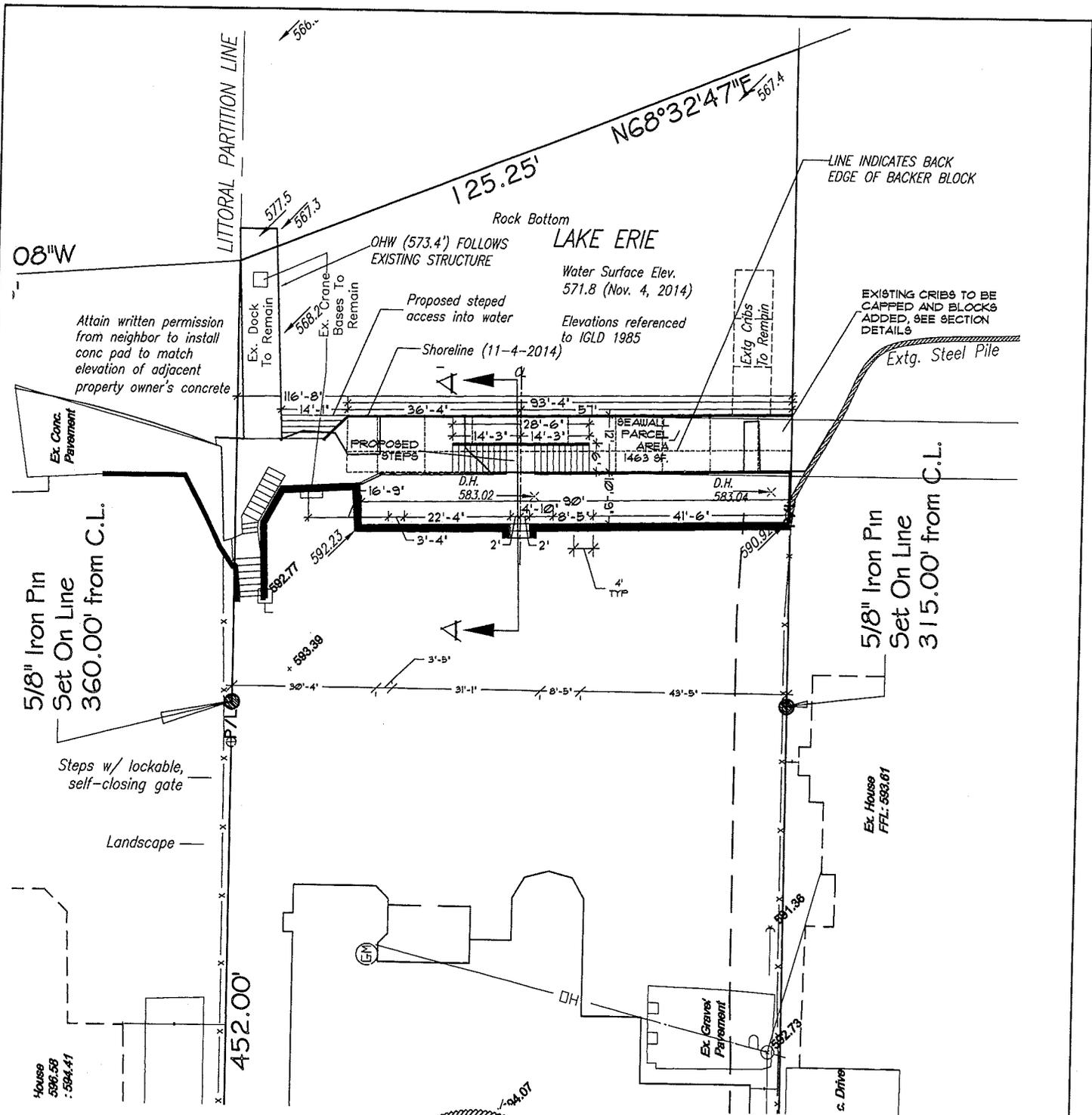
DRAWN BY: P.A.S.

CHECKED BY: J.R.

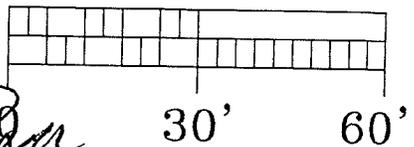
REVISIONS:

2-2-15	
2-11-15	
2-18-15	
2-25-15	
3-5-15	

DWG. NO.: 3 OF 8



GRAPHIC SCALE
1" = 30'

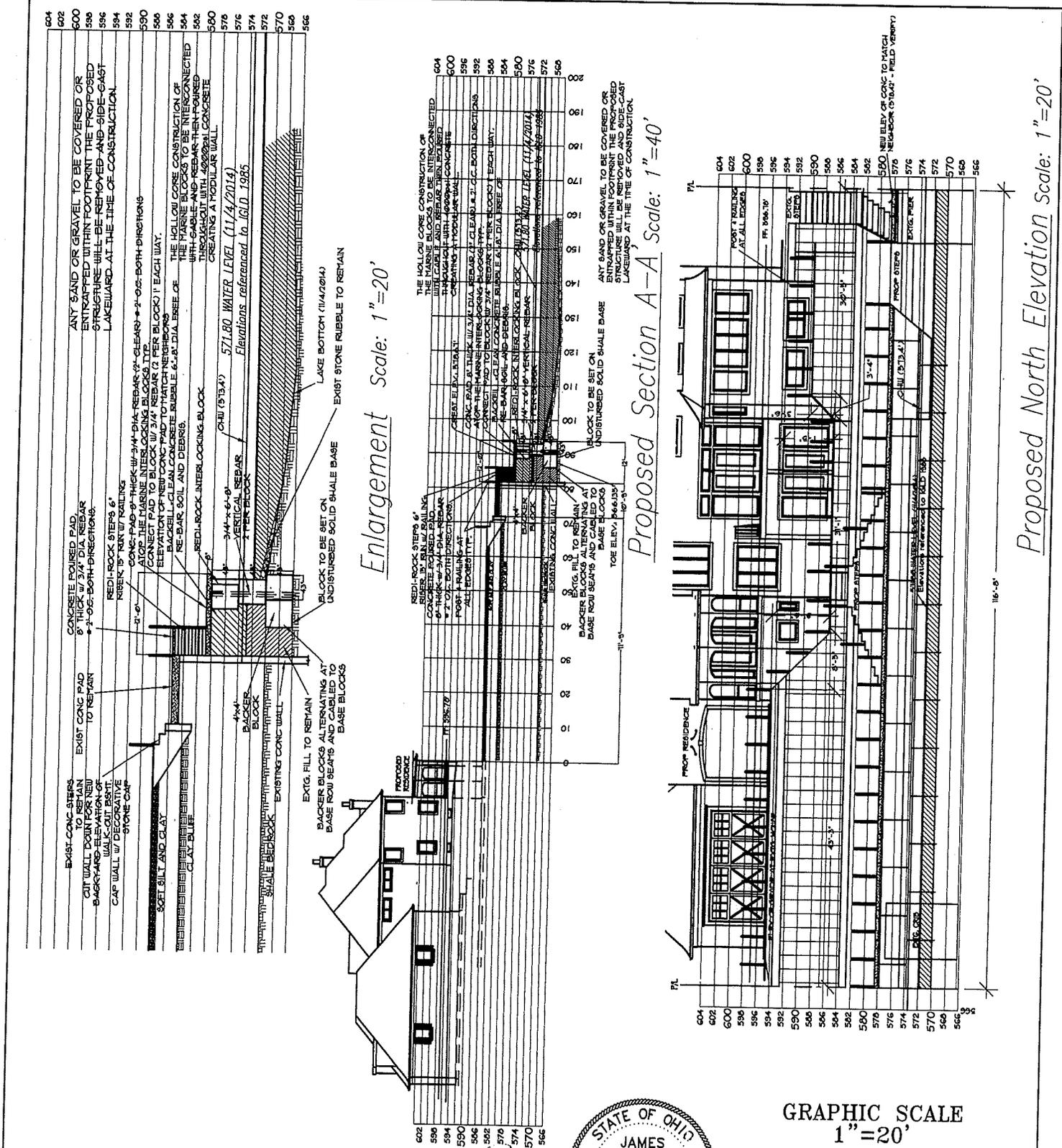


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PROPOSED SITE PLAN - PLAN VIEW	
PROJECT:	COSTIN RESIDENCE
LOCATION	32842 LAKE ROAD AVON LAKE, OH 44012
DATE:	7-22-15
DRAWN BY:	P.A.S.
CHECKED BY:	J.R.

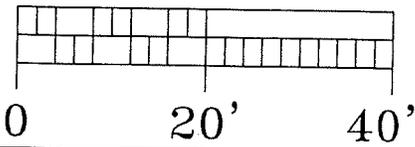
REVISIONS:	
2-2-15	5-14-15
2-11-15	7-22-15
2-18-15	
2-25-15	
3-5-15	
DWG. NO.: 4 OF 8	



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GRAPHIC SCALE
 1"=20'



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PROPOSED SECTION A-A' & NORTH ELEVATION
 PROJECT: COSTIN RESIDENCE 7-22-15
 LOCATION: 32842 LAKE ROAD
 AVON LAKE, OH 44012
 SCALE: 1"=20'
 DATE: 7-22-15
 DRAWN BY: P.A.S.
 CHECKED BY: J.R.

REVISIONS:	
2-2-15	5-14-15
2-11-15	7-22-15
2-18-15	
2-25-15	
3-5-15	
DWG. NO.:	5 OF 8



Ohio Coastal Management Program Consistency Certification Statement



I, JOHN & BROOKE COSTIN, do certify that the proposed activity complies with the enforceable policies of Ohio's approved coastal management program and will be conducted in a manner consistent with such program (16 U.S.C. § 1456 and O.R.C. §1506.03).

Address: 32842 LAKE ROAD

City: AVON LAKE State: OHIO Zip Code: 44012

Telephone Number: 440-241-3918

Applicant's Signature: John & Brooke Costin Date: 7/27/15

Project Name/Description: Install Ready Rock interlocking block at edge of existing crib. Place clean, compacted fill between Ready Rock wall and existing concrete wall. Cap with new 8" thick concrete pad as shown on plans.

Please list all local, State, and Federal permits, licenses, leases, and/or other authorizations required for this project:

- 1) ODNR SHORE STRUCTURE PERMIT: 15-LOR-03
- 2) ODNR/SUBMERGED LANDS LEASE: SUB-2419-LO
- 3) CITY OF AVON LAKE RESOLUTION
- 4)
- 5)

Please submit an original copy of this document signed by the applicant (not an agent or representative) with your Federal permit application or submit to:

Federal Consistency Coordinator
 Ohio Department of Natural Resources
 Office of Coastal Management
 105 West Shoreline Drive
 Sandusky, Ohio 44870

*Copy sent to O.D.N.R. &
 A.C.E 7-29-15*