

# Acton Arboretum ADA Bog Boardwalk 2015

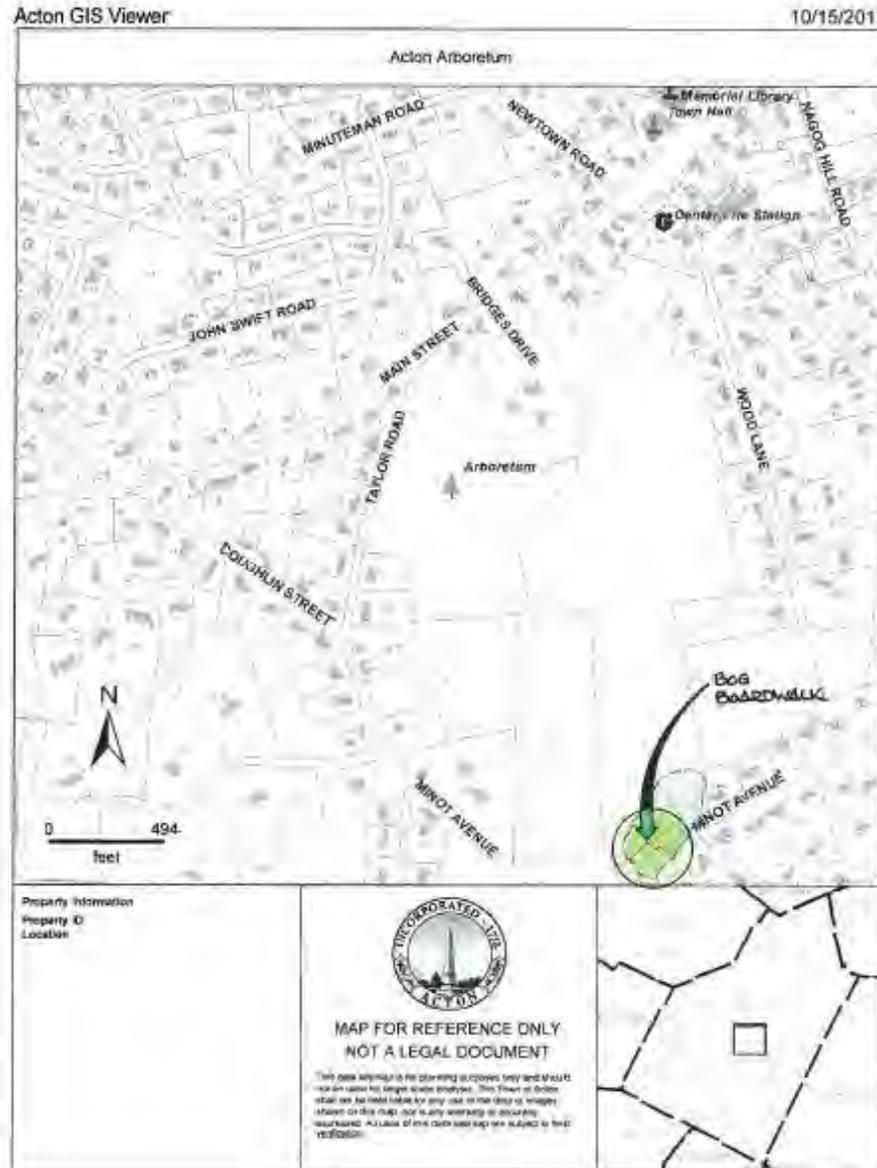


# Acton Arboretum

## ACTON ARBORETUM



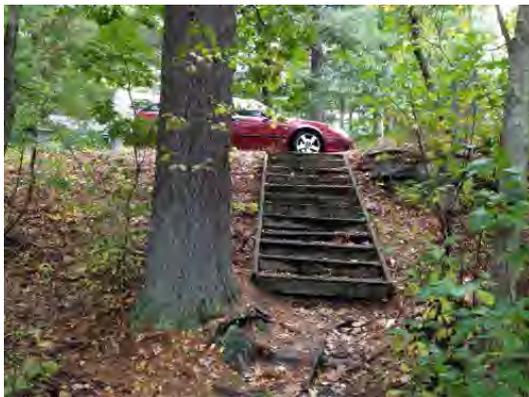
# Locus map required for NOI



# Old bog boardwalk and stairs built 1990 with recycled telephone pole parts by 2 Eagle Scouts



**Lumber rests on  
top of vegetation**



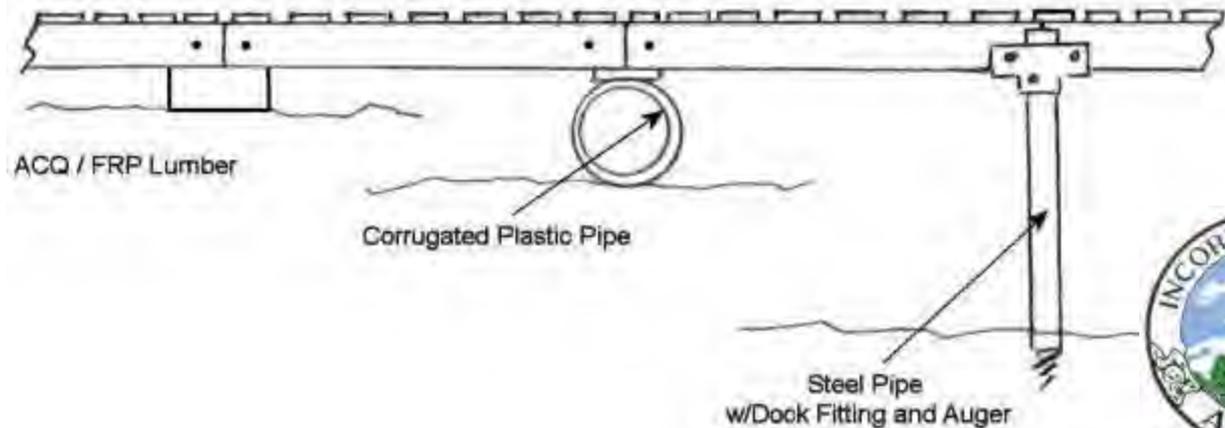
**This public trail-  
head  
entrance is not  
Universally  
Designed**



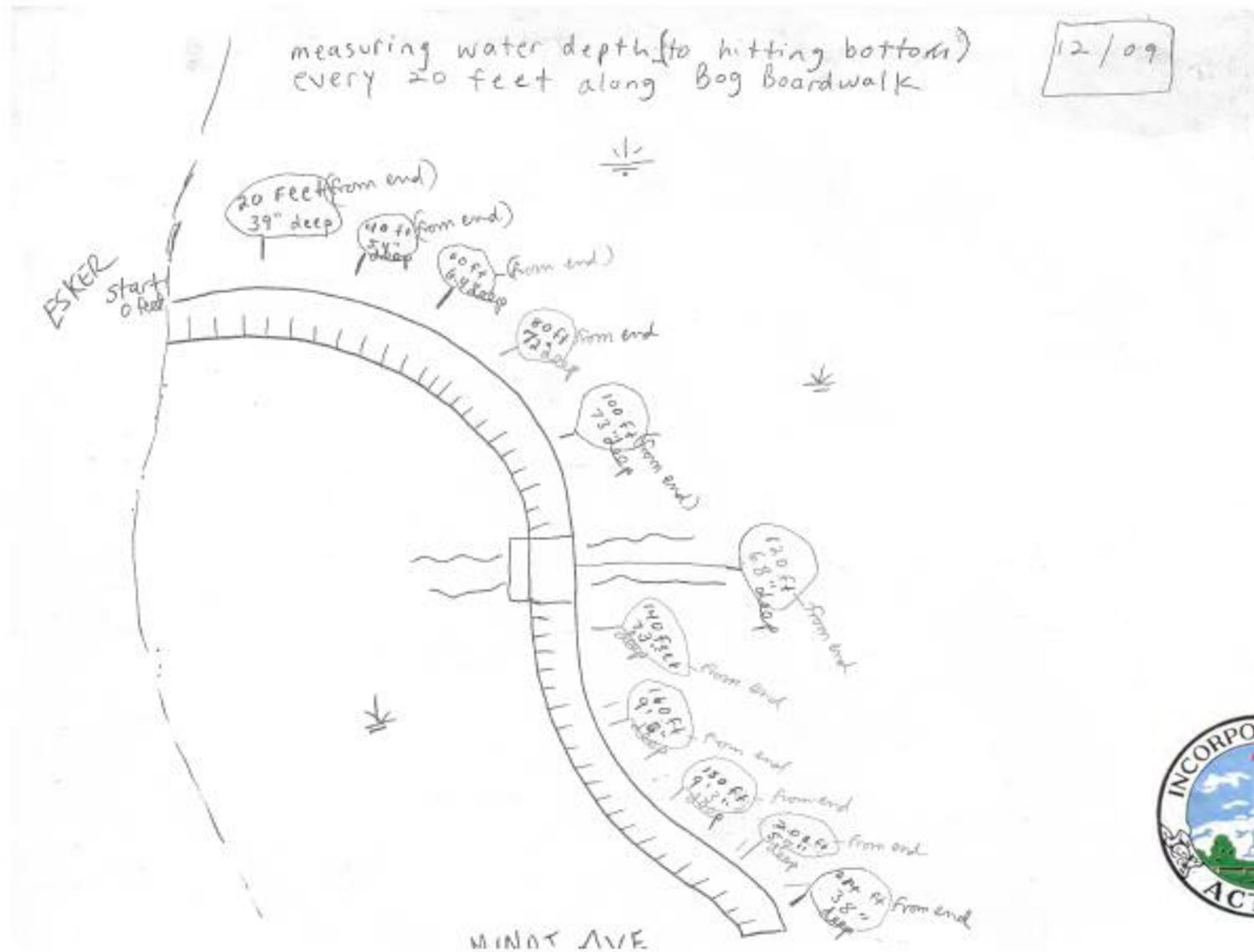


# Our prototype : Grassy Pond Conservation Land, Acton

## Boardwalk and Viewing Platform



# Bog Depths



# How did we go about this project?

- A lot of imagining; did not want wood planks
- Researched many docks, pre-fab walkways, bridges
- Researched fiberglass decking products & companies
- Met with building inspector
- Met with carpenter
- Solicited donations from the public
- Applied for CPA grant
- Filed NOI under the WPA
- PR with worried neighbors
- Calculated everything again and again
- Started buying materials
- Planned staging areas for materials
- Started building!

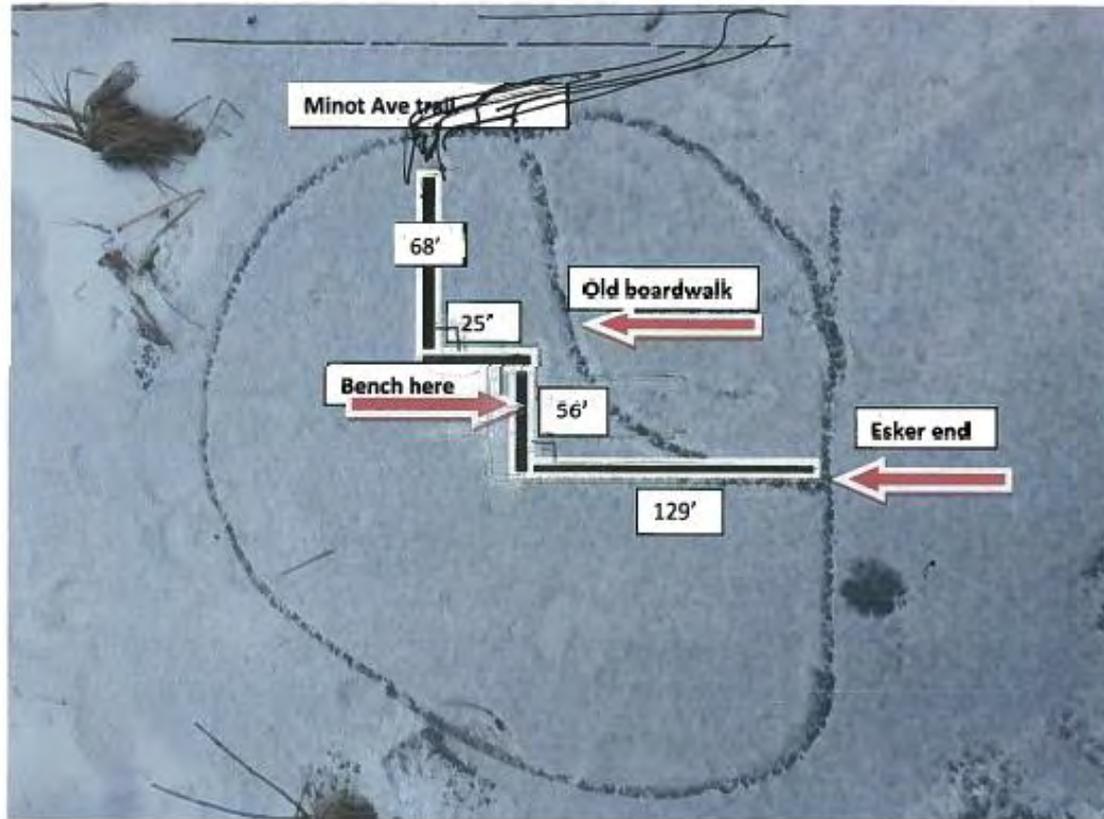


# A drawing in the snow



# Adding Scale to Drawing in the Snow

Acton Interpretive bog boardwalk



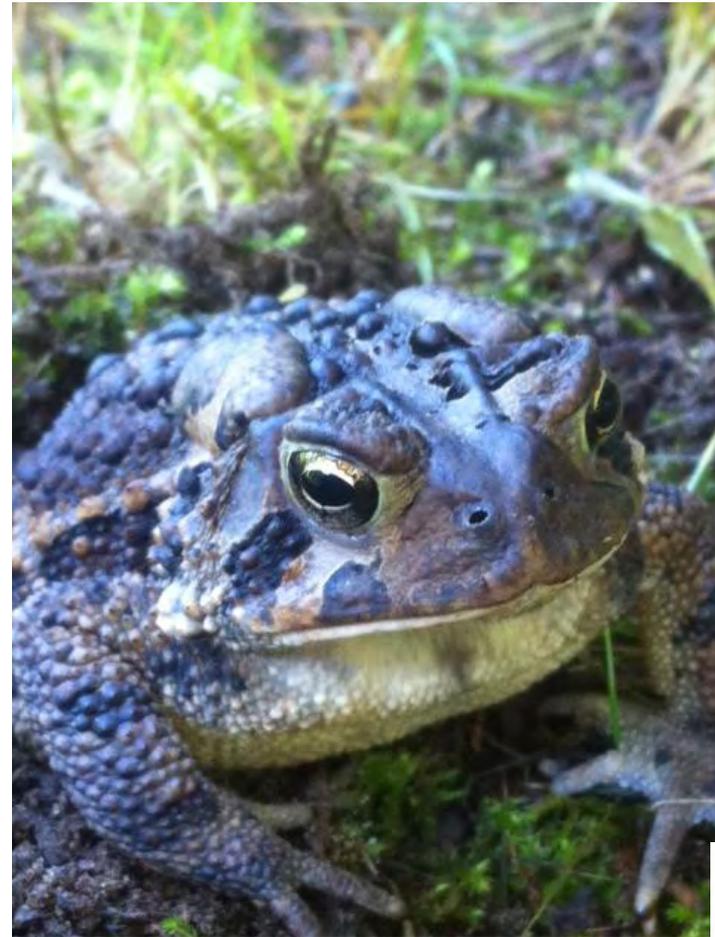
4' wide  
8' long sections

three 8' long  
2" thick  
6" wide

then  
fiberglass  
on top



**We designed the new boardwalk to be elevated 18" above the surface of the bog, so plants and animals could grow, get light and move freely underneath.**





# Pole detail

## Acton Arboretum Bog Boardwalk

\*2 Aluminum poles placed every 8 feet:

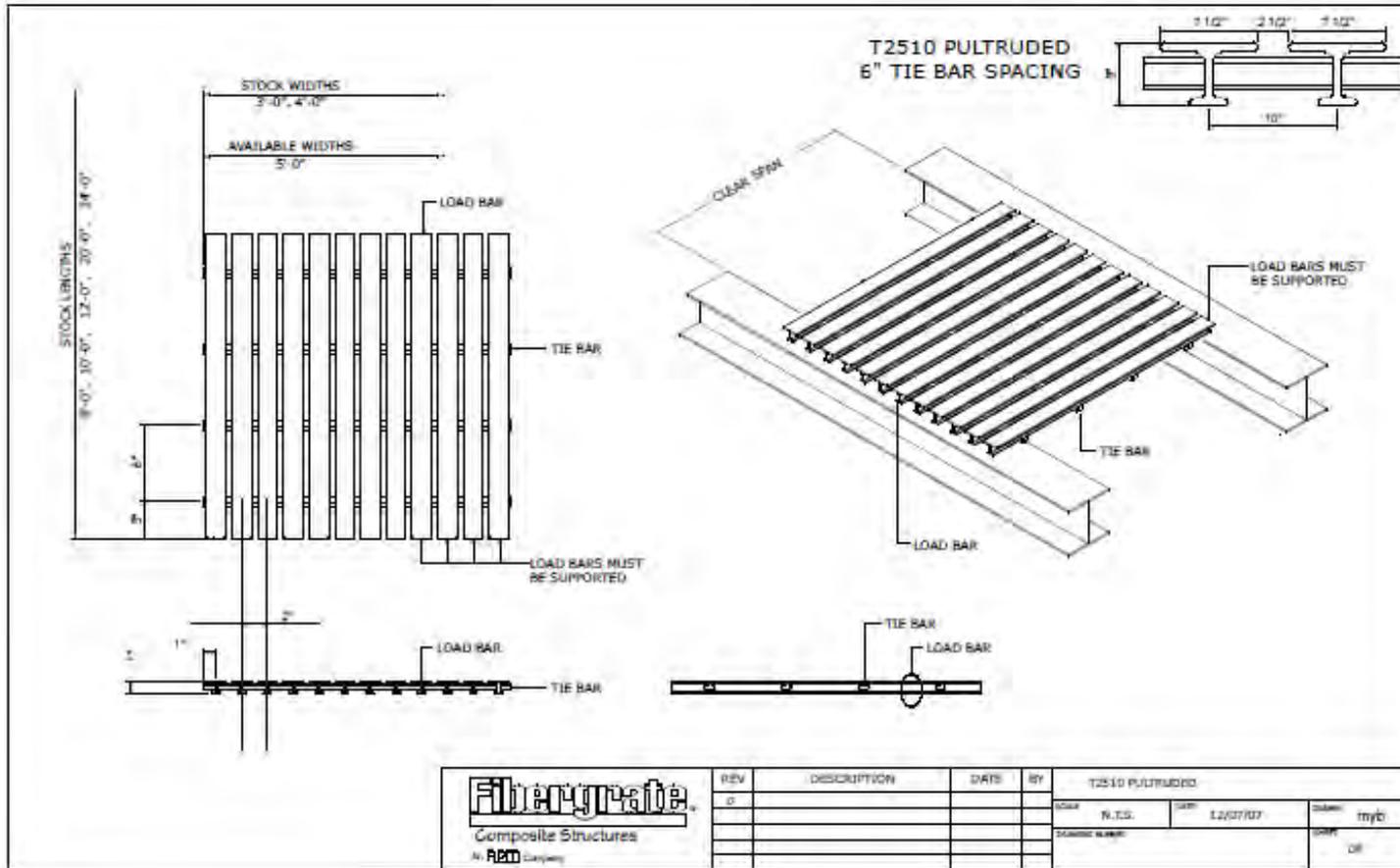
- 68' section:
- 4 poles 6'
- 4 poles 10'
- 4 poles 12'
- 4 poles 14'
- 4 poles 18'
- For this section there will be 8.5 eight-foot panels or (17) 4 ft. fiberglass panels
  
- 25' section:
- 8 poles 16'
- For this section there will be 3.125 eight-foot panels or (6.25) 4 ft. fiberglass panels
- 
  
- 56' section
- 14 poles 16'
- For this section there will be 7 eight-foot panels or (14) 4 ft. fiberglass panels
- 
  
- 129' section:
- 6 poles 16'
- 6 poles 12'
- 12 poles 10'
- 4 poles 8'
- 4 poles 6'
- For this section there will be 16.125 eight-foot panels or (32.25) 4 ft. fiberglass panels
- 
  
- Wide are in middle
- 3 poles 16'
  
- Total of 77 poles



# RDS Dock Hardware and Patriot Foundry, NH Aluminum Pipes and Brackets



# Fiberglass "Pultruded" Grating



# Arboretum Bog Boardwalk Rehabilitation

## Project Overview

### Costs

Lumber/hardware	\$10,000
Tree removal	\$3,128
Fiberglass decking	\$20,000
Educational Panels	\$1,500
Labor	\$20,000
Teak bench	\$905
<b>Total Costs:</b>	<b>\$55,533</b>
-Total cash donations:	\$33,000
+Contingencies:	\$7,467

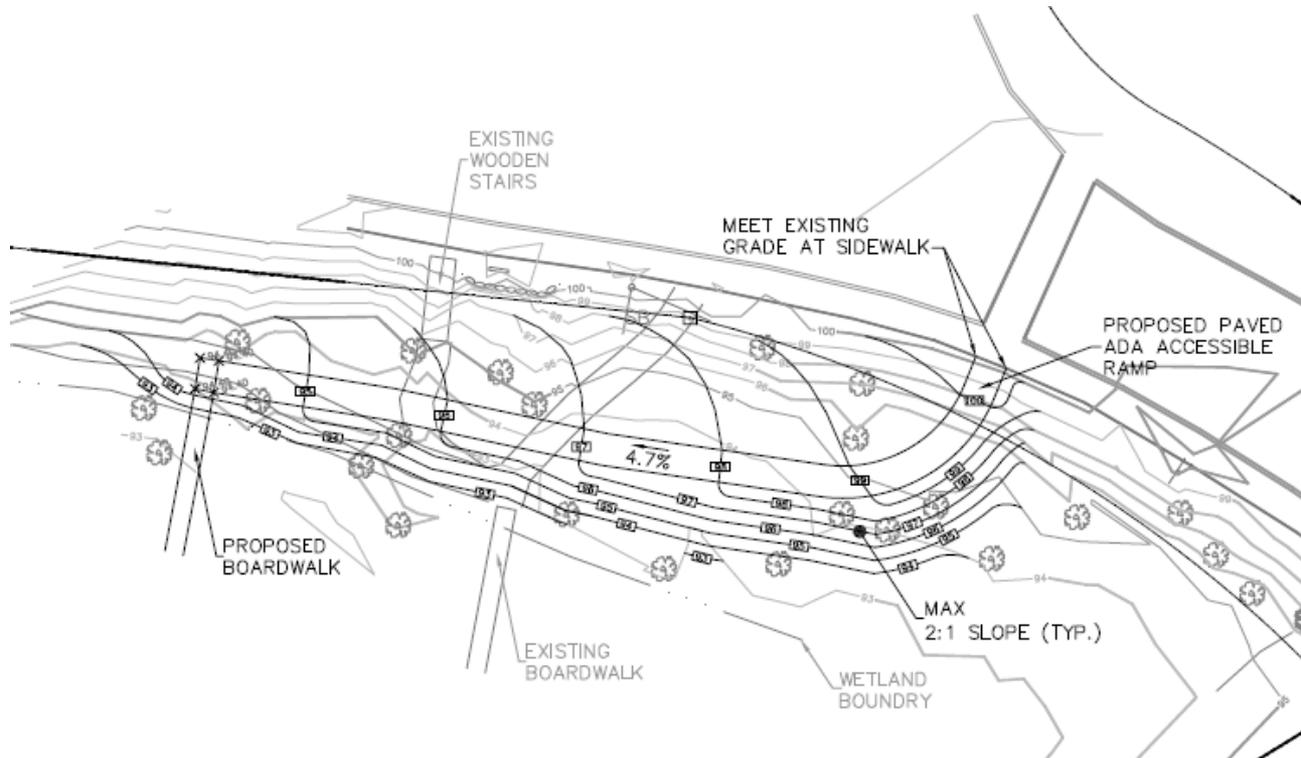
**= Total Requested CPA Funds: \$30,000**

### Assets

- Friends of the Acton Arboretum \$3,000
- Private Donor \$30,000
- Accessible sidewalk ramp from Minot Ave.
  - Survey & Design
  - Materials – Ramp Construction
  - 130' paving



# Engineered Plans for Paved Ramp from Minot Ave.



SURVEY: PC/QRP	TOWN OF ACTON ENGINEERING DEPARTMENT	
DESIGN: PC	ACTON ARBORETUM BOARDWALK	
DRAFTING: QRP		
CHECKED: PC	PROPOSED BOARDWALK	
SCALE: 1" = 20'	DRAWING NO: 1	DATE: 11/04/2013



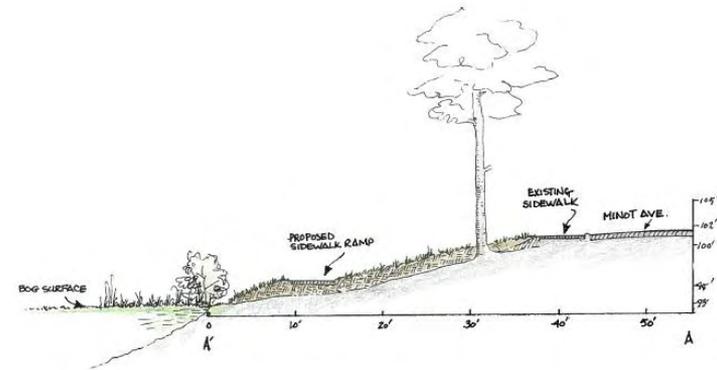
# Accessibility

“Universal design is simply designing programs and facilities to be usable by all people, to the greatest extent possible, without separate or segregated access for people with disabilities.” – U.S. Forest Service

- **Massachusetts Architectural Access Board**
- **United States Access Board**
- **The Americans with Disabilities Act**
- **FSTAG – Forest Service Trail Accessibility Guidelines**
- **Federal Highway Administration “Designing Sidewalks and Trails for Access”**



# Notice of Intent – Wetlands Protection Act Sidewalk Ramp to Boardwalk



Previous sidewalk approved  
by Conservation Commission  
for Highway and Engineering Dept.

Orders of Conditions  
require BMP's during sidewalk  
construction; and yearly  
Monitoring of invasive plants  
that may grow in disturbed area after  
old boardwalk is removed.

- 7,145 cubic ft. fill under pavement
- 5 trees removed
- 0 sq. ft. wetlands fill
- 0' distance from crosswalk
- 128' long sidewalk



# Slideshow

















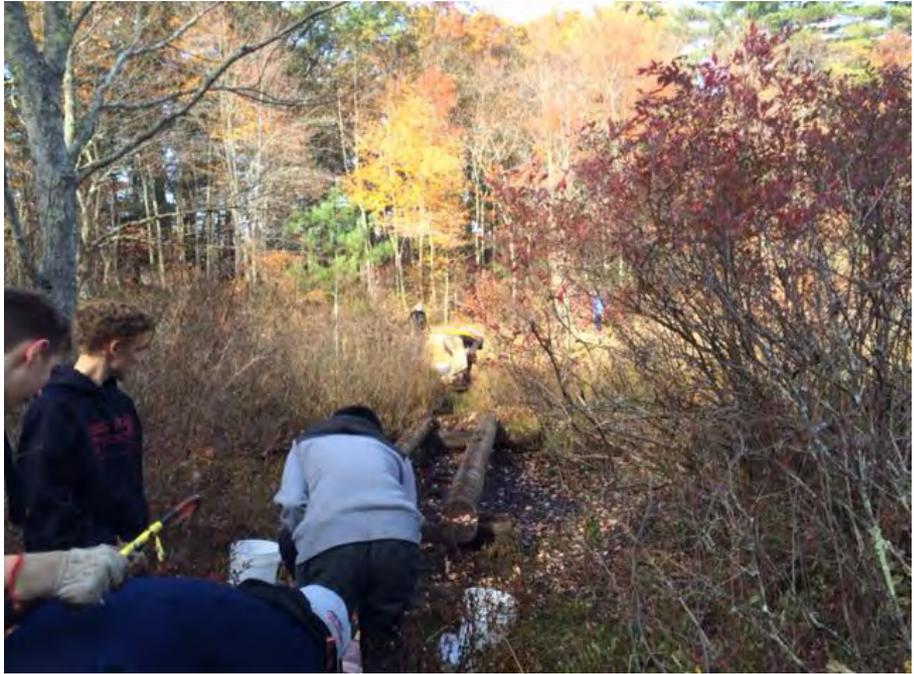
















Thank you



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