



FROM THE FILE CABINET TO THE ATTRIBUTE TABLE:  
INTRODUCING OLD PHOTOGRAPHS TO GIS TECHNOLOGY

Jon Schmidt, Senior Architectural Historian

# Hughes Photography Co.

- A Baltimore-based commercial photography studio
- Founded by James F. Hughes c. 1877
- In business through late 1970s
- Collection held at Maryland Historical Society
  - Studio Work, 1940 - 1956: 36,000 negatives
  - Public Life, 1910 - 1946: 1400 images
- State Highway Administration (SHA) Collection
  - 2295 photographs of 367 bridge locations
  - Primarily medium-format 8 x 10 prints
  - State Roads Commission hired the company to document bridge construction, c. 1929 – 1940
  - Documents construction methods and equipment from the time period
  - Provides detailed visual information about the bridges and surrounding communities
  - Provides a rare glimpse of early twentieth century bridges that were demolished decades ago



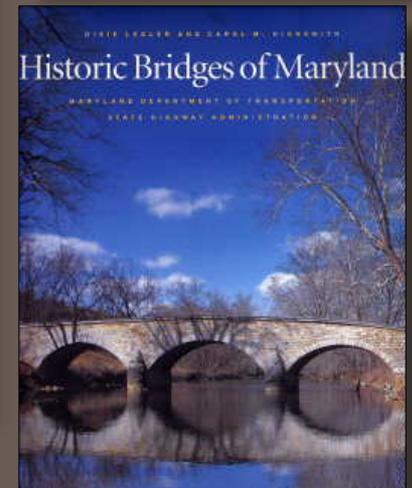
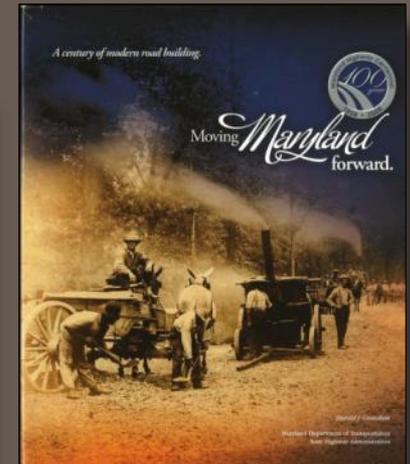
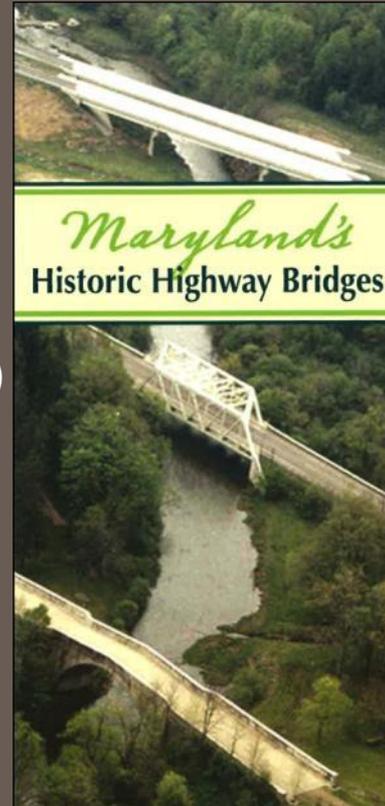
# Long Term Storage



- Photos were stored in a 2<sup>nd</sup> story closet at SHA
  - Unclear for how long (30+ years)
- Index created by intern during early 2000s
  - Folders labeled by bridge location
  - Simple spreadsheet with many inaccuracies
- Disadvantages
  - Loosely organized by district and location
  - No archival material controls
  - No procedure for keeping track of location
  - Few at SHA knew of collection's existence
  - Serving no public good
- Advantages
  - Rarely circulated or handled
  - Restricted access to the collection

# Past Use in Print Media

- Books
  - Historic Bridges of Maryland (2002)
  - Moving Maryland Forward: A century of modern road building (2008)
- Pamphlets
  - Maryland's Historic Highway Bridges (2013)
- Interpretive Panels
- National Register Nominations
- Cultural Resource Bulletin newsletter
- Mitigation for Section 106 Adverse Effects



# Transition to Digital Media



## FY 2013 Accomplishments

- Images indexed, categorized, and labeled
- Images scanned by reproduction consultant
- Utilized Maryland Historical Trust (SHPO) digital photography standards
  - 3000 x 2000 pixel array
  - 300 ppi resolution
- Scanned as .JPG and .TIF format
- Images returned to SHA on four archival DVDs
  - Saved locally on two redundant network drives, backed up monthly
- RFP required consultant to return photos in archival storage cartons

# Data Collection

## FY 2014 Accomplishments

- Tracked down accurate location data for bridges on Maryland's Eastern Shore
- Collaborated with SHA GIS staff to develop attribute table that organizes data about each collection of images by the following:
  - Inventory Number
  - District
  - County
  - Route Prefix
  - Route Number
  - Road Name
  - Road Type
  - Feature Crossed
  - Type of Feature
  - Bridge ID Number
  - Cultural Resource #
  - NR Eligibility Status
  - Preservation Priority
  - Demolished/Extant
  - Photo Date
  - Number of Photos

	G	H	I	J	K
	Current Route Number	Road Name	Road Type	Name of Feature Crossed	Type
1					
2	335	Golden Hill	Road	Blackwater	
3	363	Deal Island	Road	Upper	
4	335	Hoopers Island	Road	Honga	
5	335	Hoopers Island	Road	Great Marsh	
6		Hoopers Island	Road	Honga	
7		Hoopers Island	Road	Honga	
8	335	Hoopers Island	Road	Honga	
9		Isabella	Street	Wicomico	
10	012	Snow Hill	Road	Pocomoke	
11	014	Eldorado-Federalburg	Road	Marshy Hope	
12	MD 014	Eldorado-Federalburg	Road	Marshy Hope	
13	795	Maryland	Ave	Cambridge	
14	346	Old Ocean City	Road	Pocomoke	
15	363	Deal Island	Road	South Branch of Rock	
16	363	Deal Island	Road	East Branch of Rock	
17		Pennsylvania	Railroad	Assawoman	
18	013BU	Salisbury	Boulevard	Penn Central	
19	313	Sharptown	Road	Nanticoke	
20	016	Taylor's Island	Road	Slaughter	
21	349	Nanticoke	Road	Tyaskin	

# Putting the Photos to Work

## FY 2014 Accomplishments

- Captions written for 450 photographs of 76 bridges by in-house cultural resource staff and consultant Parsons Brinckerhoff
- Partnered with SHA GIS staff and consultant JMT to develop a new searchable user interface (UI) for SHA's internal eGIS app
  - Defined prioritized search parameters
  - Created and populated related tables in consistent, uniquely identifiable manner
  - Geo-located bridges in Districts 1 and 2 for which archival photos exist
    - 37 of 76 bridges are demolished
  - Developed new photo viewer app
- New UI design will be applied to additional eGIS applications



# A New GIS User Interface

SHA Enterprise GIS Portal (eGIS Version 1.5 Beta)

In Out Pan Full Back Forward Basemap Content Feedback Print Help Active Map Content: Historic Bridge Viewer

Searchable through parameters or by selecting a geographic area on map of MD

Geographic representation of bridge location

**Bridge Search**

District: 2

County: Queen Anne's

Facility Carried: MD 018

Feature Crossed: Kent Narrows

**National Register Eligibility Status:**

Eligible  Not Eligible  Not Evaluated

**Structure Status:**

Existing  Demolished

**Preservation Priority Status:**

Priority  Eligible

Non-Priority  Unknown

None

Search Reset

**Bridge Details**

**Kent Narrows Bridge**

[View Photos](#)

**Location:** MD 018 over Kent Island Narrows  
**Bridge Type:** Timber and Bascule  
**County:** Queen Anne's  
**MIHP #:** [None](#)

**Structure Status:** Existing  
**National Register Eligibility Status:** Eligible  
**Preservation Priority Status:** Eligible

**Description:**  
The Waterman's Memorial Bridge, formally known as the Old Kent Narrows Bridge Drawbridge, is part of Maryland Route 18 as well as the American Discovery Trail and serves local traffic, both automobiles and pedestrians. It once carried US 50 as the main bridge across the Kent Narrows until the newer bridge was built.

Point Rectangle Polygon Circle  Append Selection Identify Clear Export

Bridge Search  
Bridge Details  
Layers  
Route Search

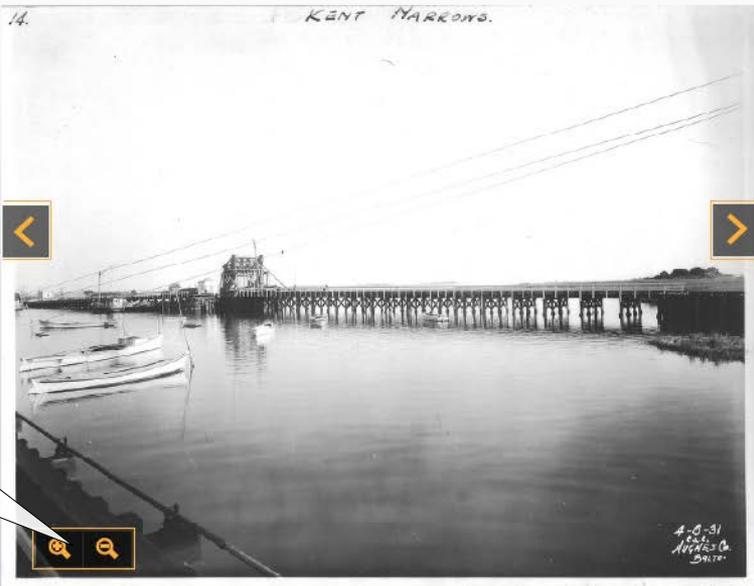
Link to Maryland Inventory of Historic Property form

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## Photo Viewer

### Kent Narrows Bridge



Location: MD 018 over Kent Island Narrows | Photo Date: April 8, 1931

The Waterman's Memorial Bridge, formally known as the Old Kent Narrows Bridge Drawbridge, is part of Maryland Route 18 as well as the American Discovery Trail and serves local traffic, both automobiles and pedestrians. It once carried US 50 as the main bridge across the Kent Narrows until the newer bridge was built. Several bridges, both part of roads and the Queen Anne's Railroad, have crossed the Kent Narrows in the past.

1 of 5 2 of 5 3 of 5 4 of 5 5 of 5

**Download Photo:**

[Small | .JPG](#) [Large | .JPG](#)  
[Medium | .JPG](#) [Hi-Resolution | .TIF](#)

Point Rectangle Polygon Circle  Append Selection Identify Clear Export

Can zoom in and pan across images

Thumbnails allow user to select desired image

Photos can be downloaded in multiple resolutions

# Next Steps

## FY 2015 Goals

- Upload images and data for Western MD
- Identify a secure funding source for future

## Long Term Goals

- Fully populate GIS layer with archival images
- Make application available to public
- Develop additional contextual material on:
  - Construction methods
  - Bridge types and terminology
- Re-photograph one image at each bridge



# Thank you

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