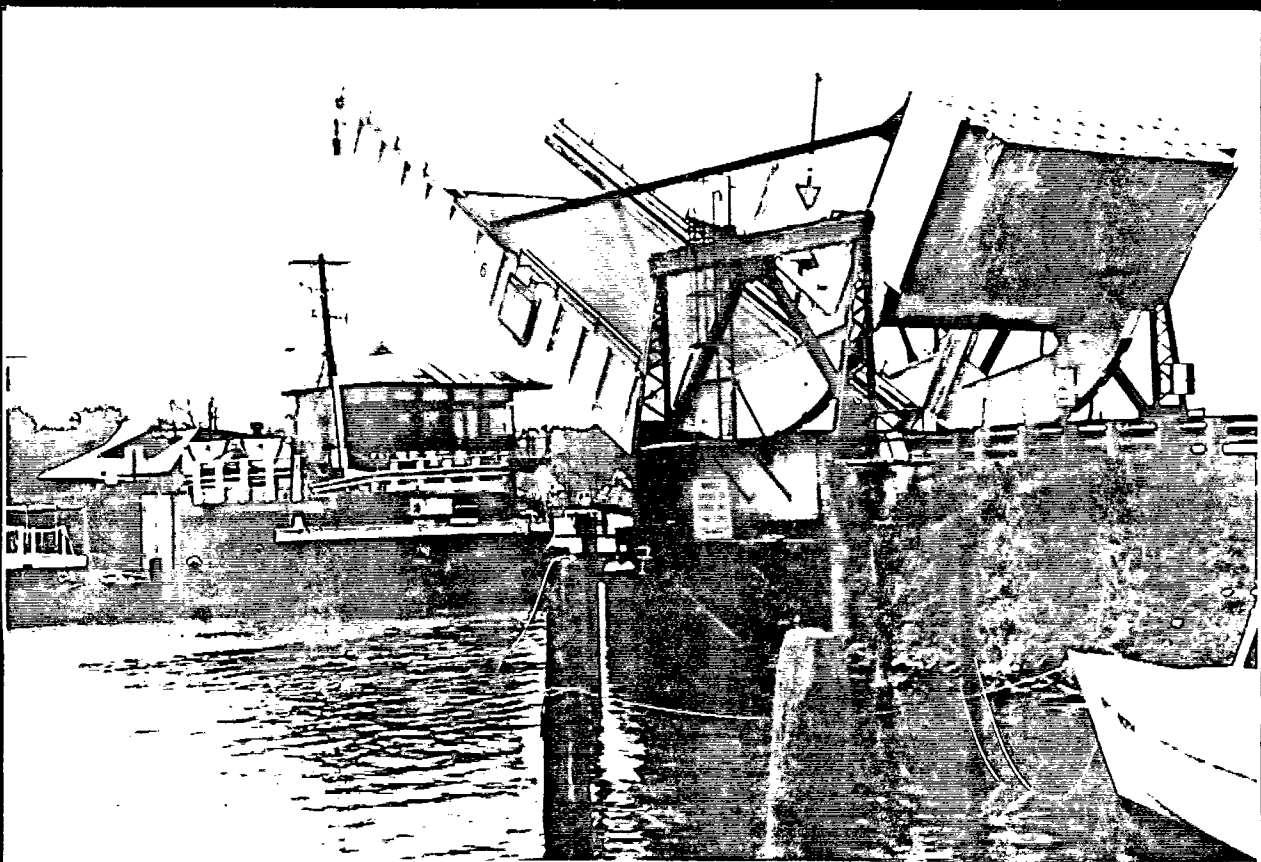


# SECTION 4(f) EVALUATION



for  
CONTRACT NO. T 369-101-271  
**Maryland Route 33**  
Replacement of Bridge No. 20001  
over Knapps Narrows



prepared by

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

and

MARYLAND DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

Report Number: FHWA MD-4-f-93-01-D

Federal Highway Administration  
Region III

MD 33 Replacement of Bridge No. 20001  
over Knapps Narrows  
Talbot County, Maryland

ADMINISTRATIVE ACTION

Draft Section 4(f) Evaluation

U.S. Department of Transportation  
Federal Highway Administration  
and  
State of Maryland  
Department of Transportation  
State Highway Administration

SUBMITTED PURSUANT TO: 49 U.S.C. 303(c) and 16 U.S.C. 470(f)

HAL KASSOFF  
ADMINISTRATOR

4/20/93  
Date

Neil J. Pedersen  
Neil J. Pedersen, Director  
Office of Planning and  
Preliminary Engineering

4-23-93  
Date

David P. Lantz  
for the Federal Highway Administration  
Division Administrator

Table of Contents

I. Introduction.....1

II. Description of Proposed Action.....1

    Alternatives Dropped from Consideration.....7

    Alternatives Retained for Detailed Study

        No-Build Alternative.....9

        Build Alternatives.....10

            The Rehabilitation Alternative.....10

            The Replacement Alternatives  
            (low-level build options).....12

III. Description of 4(f) Property.....14

    Tilghman Island Bridge.....14

    Tilghman Island Historic District.....15

IV. Description of Impacts.....17

V. Avoidance Alternative (No-Build).....25

VI. Measures to Minimize Harm.....25

VII. Coordination.....26

VIII. Correspondence.....29

Appendix A - History of Repairs

Appendix B - Summary of Public Responses

**FIGURES**

<b><u>Figure</u></b>	<b><u>Title</u></b>	<b><u>Follows Page</u></b>
1	Location Map	1
2	Study Area	1
3	Photograph - Tilghman Island Bridge	2
4	Typical Section (Existing & Rehabilitation Alternatives)	2
5	Tilghman Island Historic District	8
6 - 8	Build Alternatives	10
9	Typical Sections (New Bridge Alternatives)	12
10	Photograph - Harrison Oyster Company	18
11	Photograph - Bridge Restaurant	18

Section 4(f) Evaluation

MD 33 at Knapps Narrows

Talbot County, Maryland

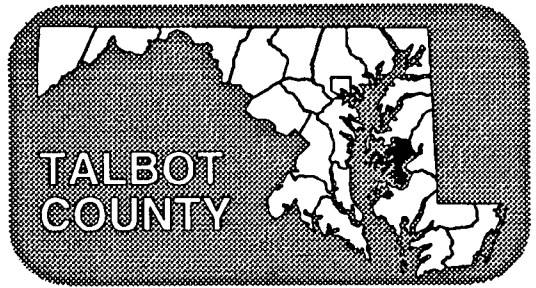
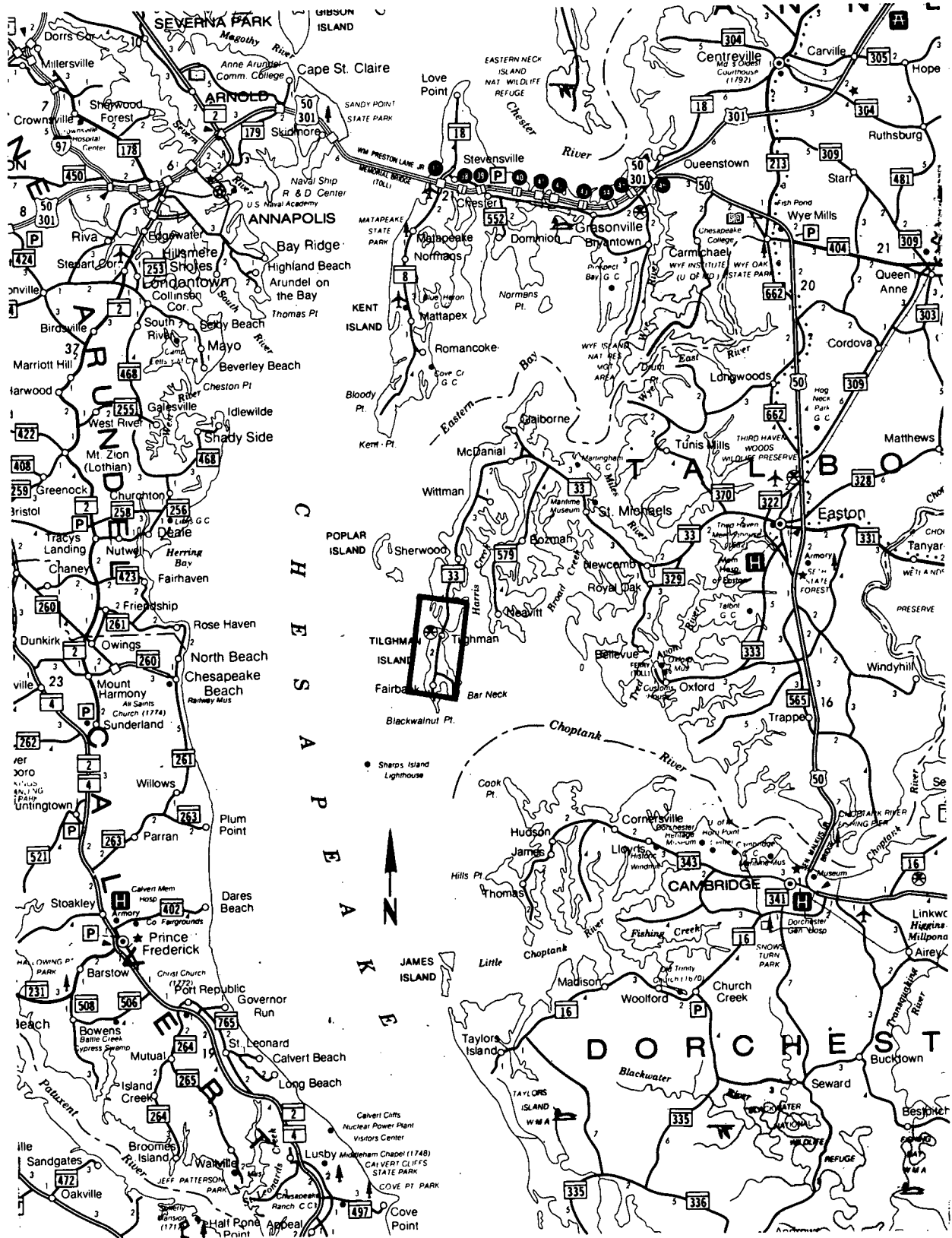
I. INTRODUCTION

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. 303[c]) permits the use of publicly owned public parkland or recreation areas, wildlife and waterfowl refuges, or land from a significant historic site (as determined by the officials having jurisdiction over the park, recreation area, refuge or site) only if there is no prudent and feasible alternative to using that land; and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

The Federal Highway Administration approved this project as a Categorical Exclusion with the preparation of a Section 4 (f) Evaluation on January 6, 1993. An Alternates Public Meeting was held on May 6, 1992 at Tilghman Elementary School on Tilghman Island. Approximately 70 citizens attended with 33 citizens ultimately favoring replacement of the bridge, 9 supporting rehabilitation of the bridge and 1 citizen endorsing the no-build option.

II. DESCRIPTION OF PROPOSED ACTION

The purpose of the proposed project, which is located in Talbot County, Maryland, (See Figures 1 and 2.) is to replace the



**MARYLAND STATE HIGHWAY ADMINISTRATION**

**Maryland Route 33  
Over Knapps Narrows**

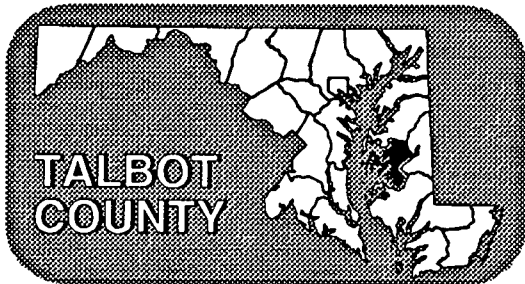
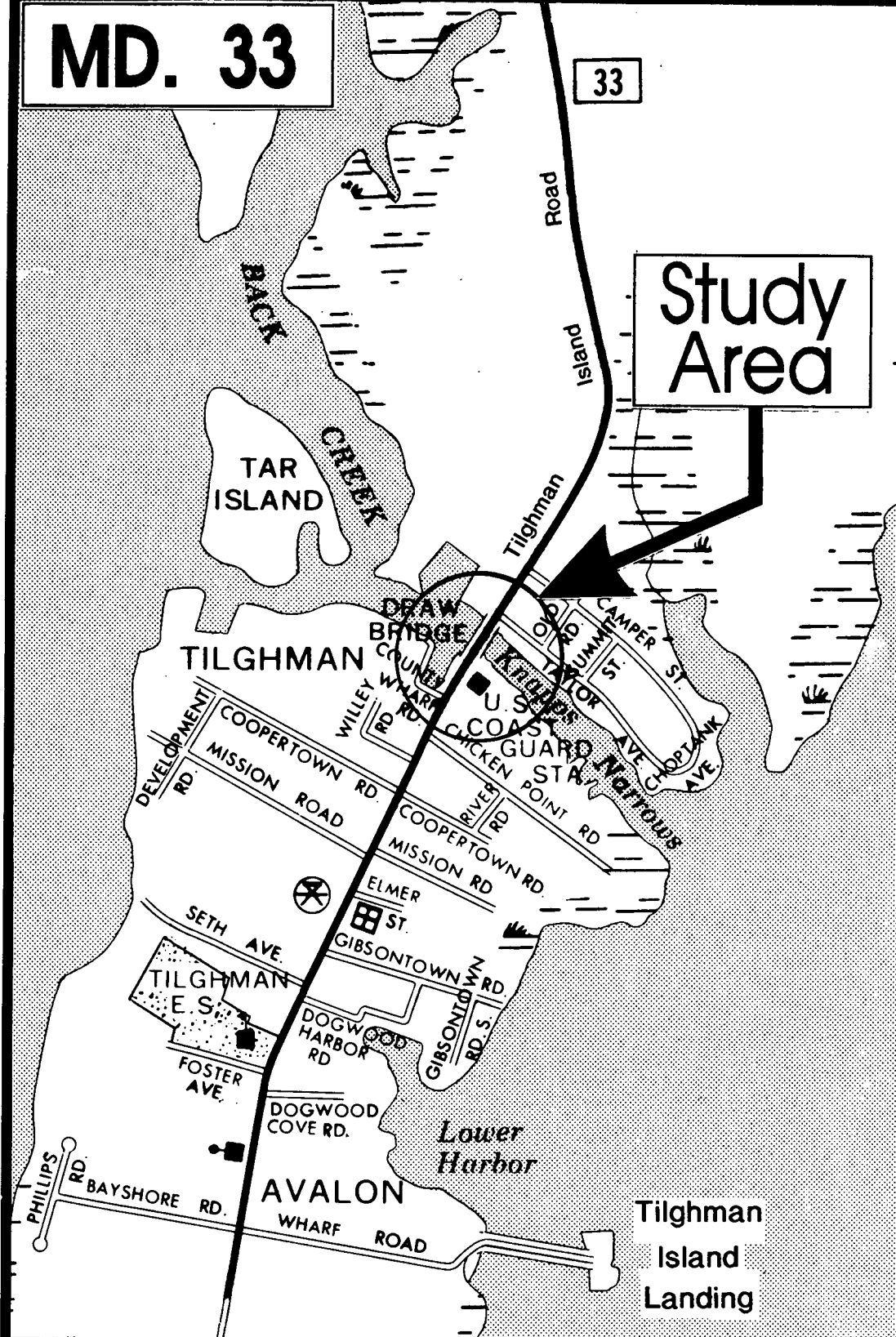
**PROJECT LOCATION**

DATE	NOT TO SCALE	FIGURE 1
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**MD. 33**

**33**

**Study Area**



MARYLAND STATE HIGHWAY ADMINISTRATION

Maryland Route 33  
Over Knapps Narrows

**STUDY AREA**

DATE

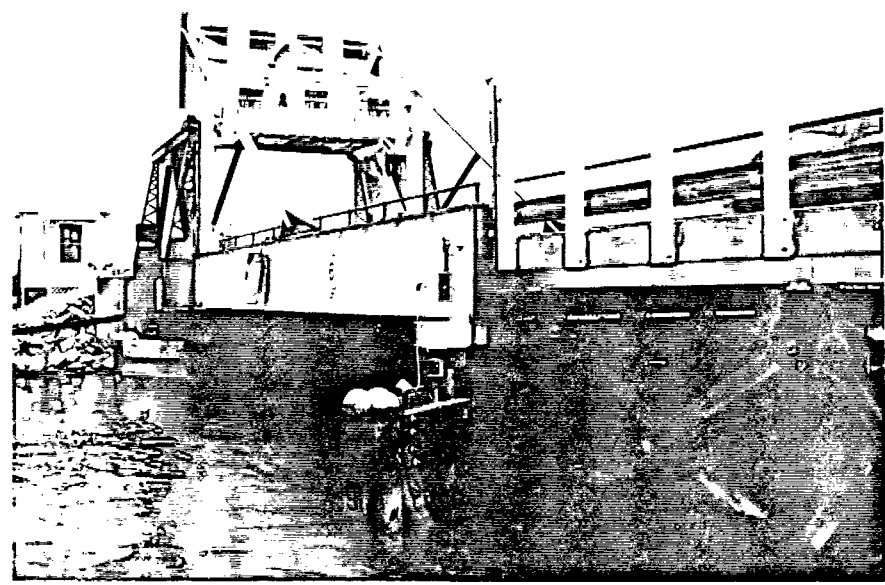
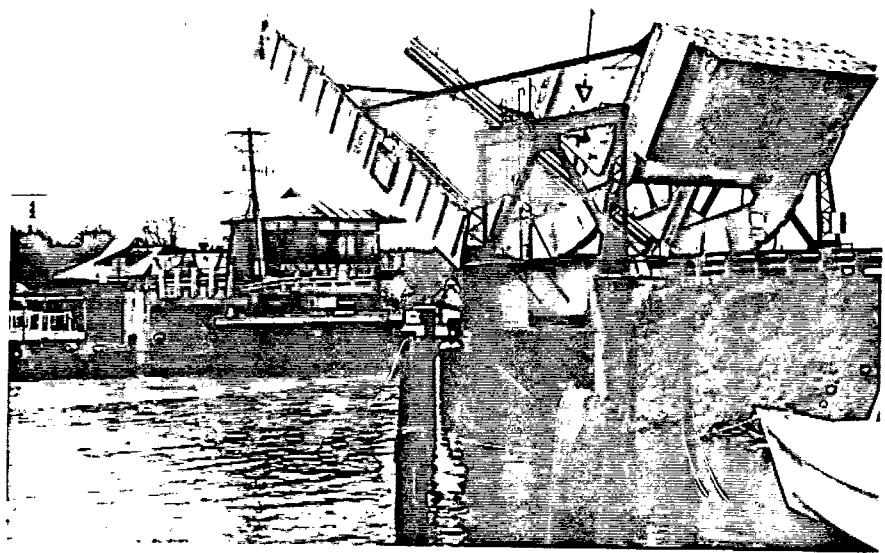
NOT TO SCALE FIGURE 2

4

existing, deteriorated MD 33 bridge over Knapps Narrows in order to eliminate existing pedestrian and vehicular safety problems associated with the bridge, and to eliminate the restricted clearance over the roadway. This bridge provides the only land access between the Tilghman Island community and the mainland and must be frequently raised and lowered to accommodate the demands of boating traffic which uses Knapps Narrows as a shortcut to avoid the ten mile trip around the island.

The existing 95 foot long structure, built in 1934, consists of a 50 foot single leaf, overhead counterweight bascule span and four short steel beam approach spans, all supported on timber piles (See Figure 3.). The bridge has a narrow 20 foot wide roadway (See Figure 4.) and no shoulders or sidewalks. Height restrictions (10'-8") are required near the guardrail due to knee braces (corner brackets used to stabilize the overhead counterweight) and (13'-9") in the center of the roadway due to the overhead counterweight support girder. The bridge was originally designed to accommodate an H-20 vehicle (a 2-axle, 20 ton gross weight truck). The capacity of the bridge has been analyzed and rated for today's legal vehicle (an HS-20 tractor-trailer truck with a 36 ton gross weight) and is rated in the "Operating range", the maximum permissible load level to which the structure may be subjected. The desirable rating for bridges is the "Inventory range", which provides a load level at which the structure can safely be used for an indefinite period of time. Use of the "Operating range" rating eliminates the need to

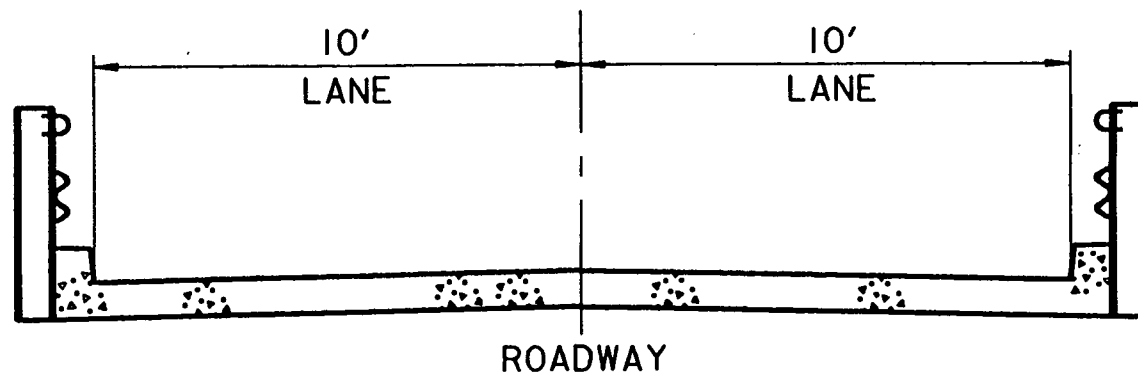




MD 33 Bridge Over Knapps Narrows  
Tilghman Island Bridge  
National Register Eligible

(Contributing element to Tilghman Island Historic District)

EXISTING TYPICAL SECTION &  
REHABILITATED BRIDGE ALTERNATE  
MD 33 OVER KNAPPS NARROWS



NOT TO SCALE

THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS, AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

11

post the bridge for a weight limit, but requires more frequent inspection and monitoring than an "Inventory range" rated bridge.

The Federal Sufficiency Rating which is an index to the condition and functionality of the bridge is 32.07%. (By comparison, a new bridge would have a rating of 100%.) The rating of the Knapps Narrows Bridge, which is based on structural condition, bridge and roadway geometry, length of detour, etc., far exceeds the rating of 50% needed to qualify for a federally funded bridge replacement. The SHA priority rating, which is based on detour length, structural condition, traffic, age, etc., is "D-" (on a scale of "A-E" with "A" being best and "E" being the worst). The bridge is, also, fast approaching a level of service that may require weight restrictions. This is a major concern, because weight restrictions are not allowed by law on a bridge such as this which provides sole access to the island.

The timber piles which support the existing structure are the major safety concern. The piles are approximately twenty years beyond their expected life span. Although the rating of the timber piles presently indicates a satisfactory load carrying capacity, the exposed portions of the timber piles have splits and delaminations. This deterioration, once it starts, generally accelerates rapidly. Underwater inspection indicates the piles are in fair condition from the mudline to the waterline. However, at the waterline, where the piles are exposed to alternating wet/dry conditions, there is a substantial amount of staining (indicating fungus), very heavy plant growth and

12

barnacles within the splits. The exterior 1 to 2 inches of most piles are deteriorating, which means the 12 inch diameter piles have lost up to 30% of their original section. No remedial action can preserve these 58-year-old piles. Since the further life expectancy of this bridge cannot accurately be projected, they must be replaced in the very near future. Any viable option must include replacement of these piles.

Height restrictions force many trucks to cross the bridge in the center of the roadway due to the combination of the narrow 10 foot lanes and protruding knee braces. When this occurs the bridge functions as a single lane structure which impedes the flow of traffic. As a result, traffic must stop at the opposite end of the bridge, sometimes needing to back up to allow the adequate truck clearance. This creates a capacity problem which, although temporary in nature, is inconvenient at best. This problem is compounded by accompanying structural problems of the existing bridge. Despite the fact that these trucks utilize the center of the roadway, the protruding knee braces and overhead counterweight support girder are repeatedly struck by these trucks. The maintenance work required by the repeated blows by the trucks, in turn, creates safety problems resulting from impediments to traffic.

In addition to its being an impediment to the flow of traffic, the bridge's narrow 20 foot wide roadway section which provides no sidewalks is extremely unsafe for pedestrian and bicycle traffic. Being the sole access to and from the island,

it is used daily by cars, trucks, pedestrians, and bicyclists on route to homes, schools, churches, play areas, scenic places, restaurants, stores, businesses, and places of employment. Because the bridge provides the only overland connection to the mainland, the need for a bridge which includes a separate pedestrian walkway is a primary concern expressed by a majority of community residents.

MD 33 and this bridge are also part of a Bicycle Tour route that encompasses the St. Michaels - Easton - Oxford area. Bicyclists utilize 8 foot shoulders on MD 33 north of the bridge and, prior to the bridge, bicyclists are warned by signs to stay on shoulders. However, upon reaching the bridge, they have no shoulders for safe crossing and are required to mingle with the vehicular traffic. This unsafe condition could be rectified by a new bridge that has shoulders and sidewalks to accommodate the bicycle and pedestrian traffic.

The Knapps Narrows bridge opens approximately 12,000 times a year, which is more often than any other bridge in Maryland and more often than most bridges on the East Coast. This is due to its low clearance to the water (8 to 10 feet depending on the tide) and the numerous workboats and pleasure boats which navigate the channel. Approximately 10 miles of travel is saved by using the channel as a short cut between the Chesapeake Bay and points along the Choptank River, such as Oxford and Cambridge, in lieu of traveling around the island.

14

Considerable repair work on this bridge, which has been ongoing for the last ten years, results in inconvenience and compromises safety for the residents of the island. The bridge is the only access to the mainland where many vital services such as hospitals and fire stations are located. For most repairs only one-half of the bridge needs to be closed at any one time. However, for one repair, it was necessary to close the bridge completely for several nights; SHA was required to provide emergency vehicles on the island and have emergency boats ready for transport. A history of these repairs is shown in the Appendix A.

Due to heavy reliance on Knapps Narrows as a short cut for boaters, as evidenced by the frequency of bridge openings and as the only link to the mainland for residents and businesses, a bridge is needed which provides dependable service with a known life expectancy of respectable duration. The present bridge is too old and deteriorated to be depended upon for reliable service and if rendered unusable would result in a severe hardship not only for community residents but also for area watermen.

The problems caused by the frequency of use for boating, vehicular and pedestrian traffic, the lack of sidewalks for safe pedestrian crossings, the truck crossing damage and temporary constriction of traffic, and the frequent repair work necessary to maintain this deteriorating but vital bridge clearly show the safety problems involved with this bridge. Based on the State Highway Administration's evaluation of the feasibility and cost

effectiveness of rehabilitating the existing MD 33 bridge over Knapps Narrows (Alternate A), two alternatives to rehabilitation of the existing bridge (Alternates B & C) have been developed which improve safety and enhance the capacity of the bridge and approach roadway by removing obstructions and providing wider travel lanes and sidewalks. These alternatives both propose replacement of the existing structure. Alternative B proposes the removal of the existing bridge and construction of a new, low-level bascule span at the existing site. Alternative C proposes construction of a new, low-level bascule span on relocation approximately 50 feet east of the existing site and removal of the existing bridge.

Alternatives Dropped from Consideration

Preliminary studies were developed to study the feasibility and impacts of several bridge replacement options which were ultimately dropped from further consideration. These options were:

◆fixed bridge with a 50 foot underclearance -- on relocation at Old Bridge Road (located approximately 350 feet east of existing MD 33)

◆bascule span bridge with a 25 foot underclearance -- at existing location

18

◆bascule span bridge with a 25 foot underclearance --  
on relocation at Old Bridge Road.

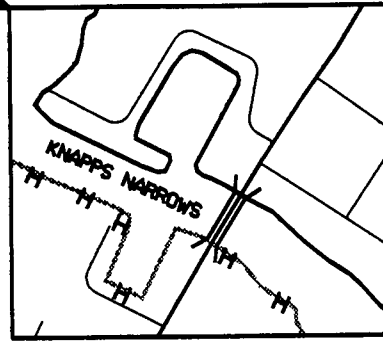
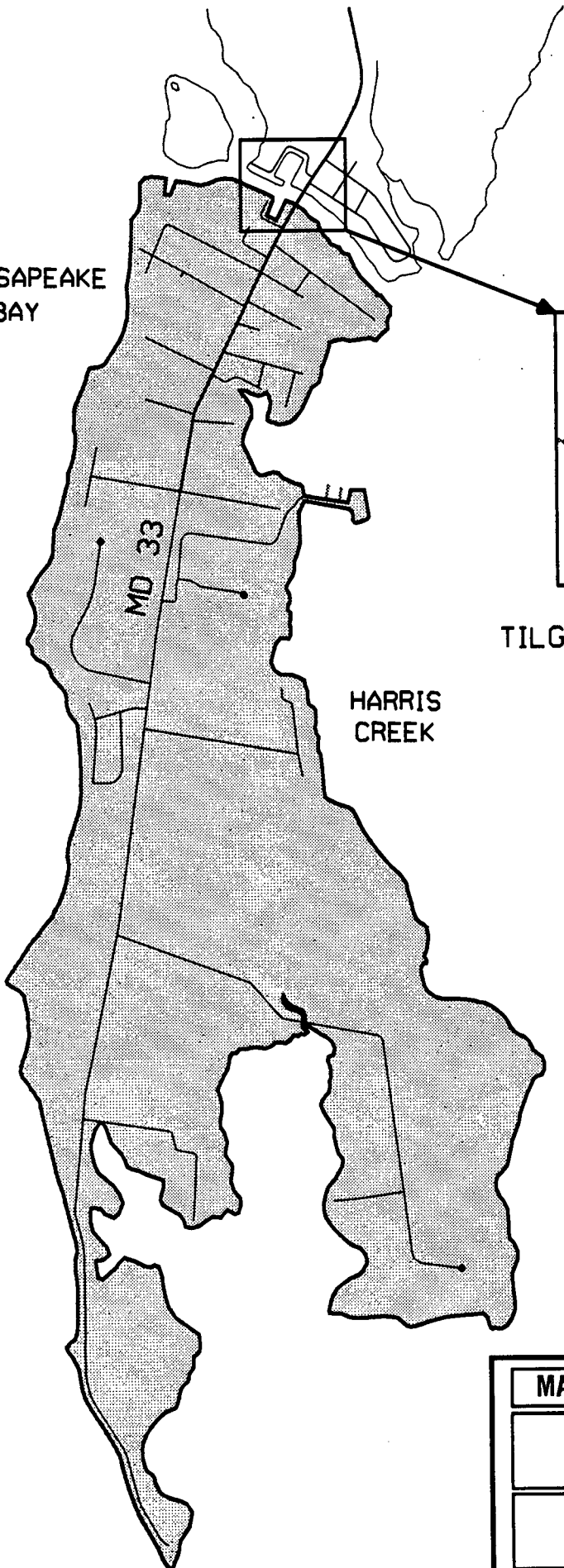
Although these high level bridge alternates would meet the criteria for purpose and need, they provided no substantial safety benefits over the low-level bridges and they required more right-of-way from both the Tilghman Island historic district (National Register Eligible) and from the mainland side of the bridge. The high level bridges also required an inconveniently steep grade for pedestrians and bicyclists and they provided no advantage in cost of construction over low level bridges. The high level bridge options were, therefore, rejected for further consideration.

The 50 foot fixed bridge would be about 1500 feet long and result in much greater right-of-way impacts to the Tilghman Island Historic District (See Figure 5.) and mainland than low level bridges. A bridge of this height and length would impose an impediment to pedestrians and bicyclists by its length and steepness of slope. Additionally this fixed bridge would prevent boats with masts over 50 feet tall from using Knapps Narrows (5% of boats using the bridge). This option was, therefore, dropped from further consideration.

Both options for a bascule span bridge with a 25 foot underclearance would be about 1200' long. A greater amount of right-of-way would also be required from the historic district



CHESAPEAKE  
BAY



TILGHMAN ISLAND BRIDGE (NRE)

HARRIS  
CREEK

MD 33



LEGEND	
	Historical Boundary
	Historic District

MARYLAND STATE HIGHWAY ADMINISTRATION

Maryland Route 33  
Over Knapps Narrows

**Tilghman Island  
Historic District (NRE)**

DATE

NOT TO SCALE

FIGURE

5

14

for these options, in comparison to low level bridges retained for detailed study. A 25 foot structure would allow clearance for all of the workboats but very few of the pleasure boats. Additionally, bridge openings, though less frequent than required with the lower level alternatives retained, would still be required, still resulting in some degree of inconvenience to vehicular and pedestrian traffic. The costs of operating and maintaining a higher bascule bridge would be similar to that of a lower span. Because the 25 foot underclearance options would require much additional right-of-way, and yet provide little improvement in vehicle and pedestrian convenience, and no economy in operation and maintenance costs, these alternatives were dropped from further consideration and only low-level bascule options were retained.

#### Alternatives Retained for Detailed Study

##### No-Build (Avoidance)

Under the No-build Alternative, only normal maintenance, which does not address the safety issues associated with the structural deterioration or low overhead clearance of the bridge and the narrow bridge roadway, would be performed. An important old bridge would remain as a contributing element to the Tilghman Island Historic District, but, ultimately, the bridge would be closed for safety reasons due to continued deterioration. This alternative would impact the potential of the bridge to provide safe and efficient service to the community and in time would

19




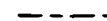




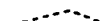


result in secondary impacts upon the Island and the district. It would not meet the purpose and need for the project. Since this is the only access to Tilghman Island, the State Highway Administration does not consider the No-build Alternate to be a prudent alternative.

### Build-Alternatives

#### Alternative A (Rehabilitation Alternative) - See Figures 4 & 6

Alternative A ("Alternative 2" in MHT correspondence) proposes repairs to the existing bascule leaf span and requires removal and extensive replacement of deteriorated parts of the bridge, including the total replacement of the timber pile substructure on existing location. More specifically, the entire bridge superstructure (approach and bascule spans) would have to be removed to provide access to the deteriorating timber piles. The existing piles would be cut-off or removed and new piles and substructure elements installed. The bascule span would then be shipped to a work site for repairs which would take 3 to 4 months. Although, the bridge was partially reconstructed in 1970 and the bridge operating machinery was replaced in 1980 (See Appendix A -- History of Repairs.), the bascule machinery would have to be replaced due to settlement of the span which has caused the parts and gears to become misaligned and worn in that position. The bridge would be strengthened by replacing deficient parts (main girders and floor beams), increasing its

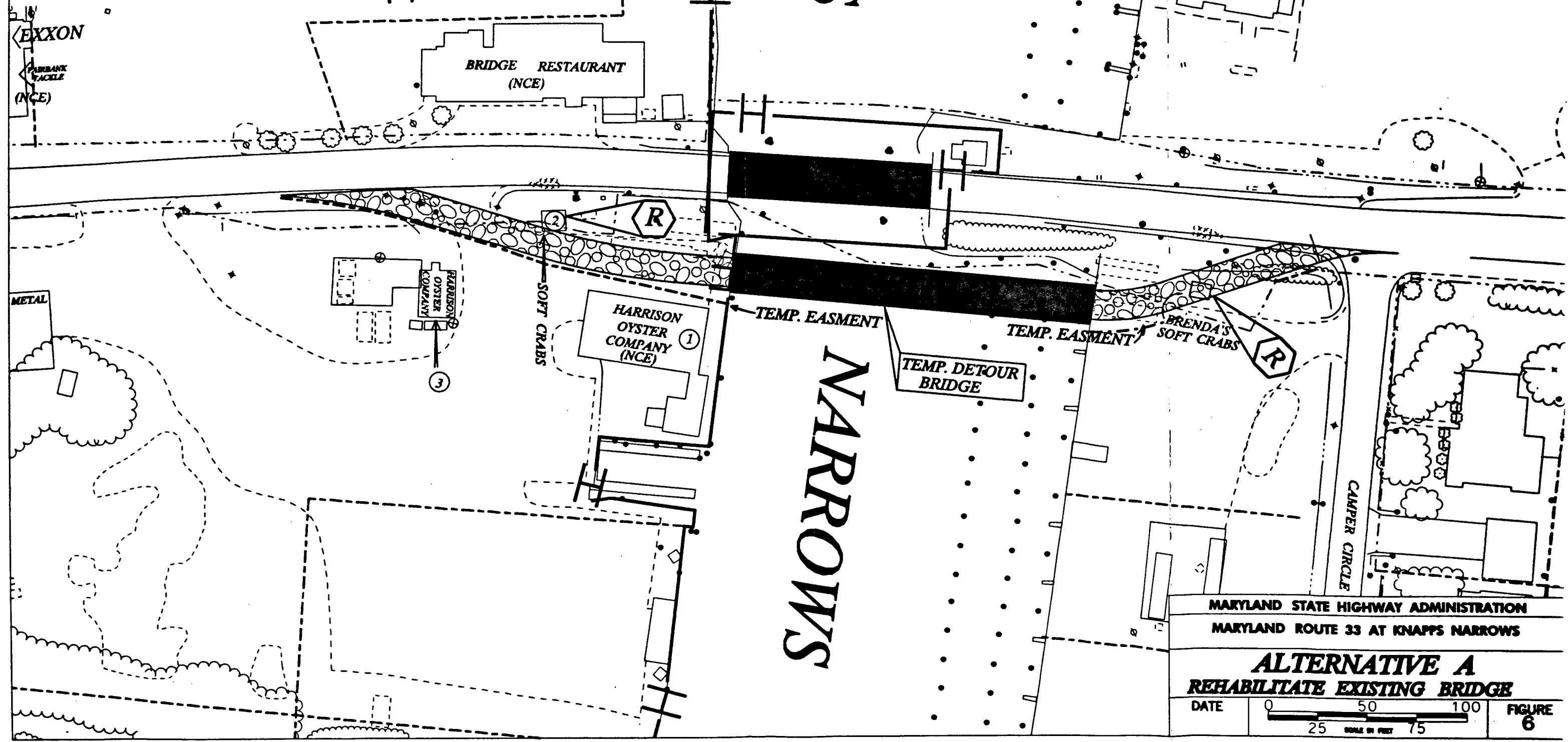
**LEGEND**

-  PROPOSED ROADWAY
-  PROPOSED RIGHT-OF-WAY LINE
-  EXISTING RIGHT-OF-WAY LINE
-  PROPERTY LINE
-  HISTORIC BOUNDARY
-  REQUIRED RELOCATIONS
-  NONCONTRIBUTING ELEMENT WITHIN HISTORIC DISTRICT
-  SLOPE LIMITS
-  PAVEMENT TO BE REMOVED
-  BUILDING ON HARRISON OYSTER PROPERTY (BY NUMBER)
-  TEMPORARY DETOUR

**NORTH**

**KNAPPS**

**NARROWS**



MARYLAND STATE HIGHWAY ADMINISTRATION  
 MARYLAND ROUTE 33 AT KNAPPS NARROWS




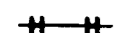



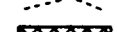
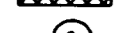

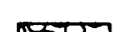
**ALTERNATIVE A**  
**REHABILITATE EXISTING BRIDGE**

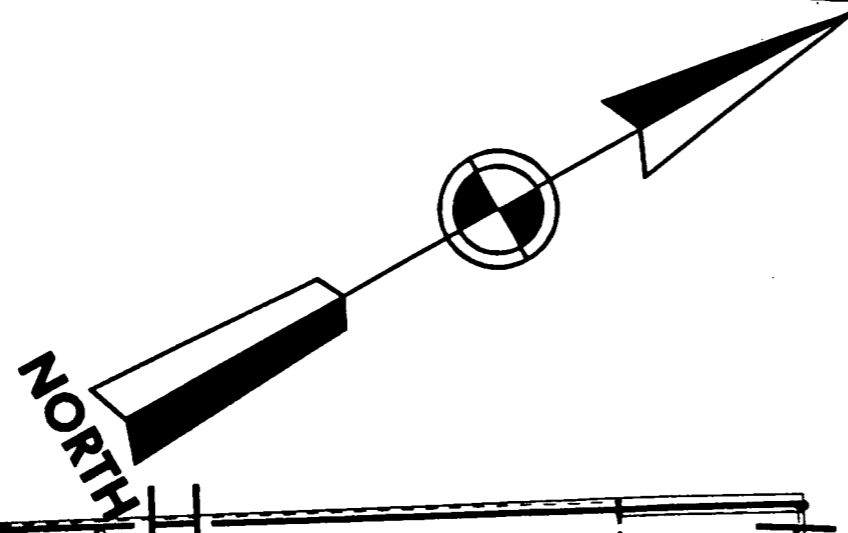
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 25 75  
 SCALE IN FEET

FIGURE 6

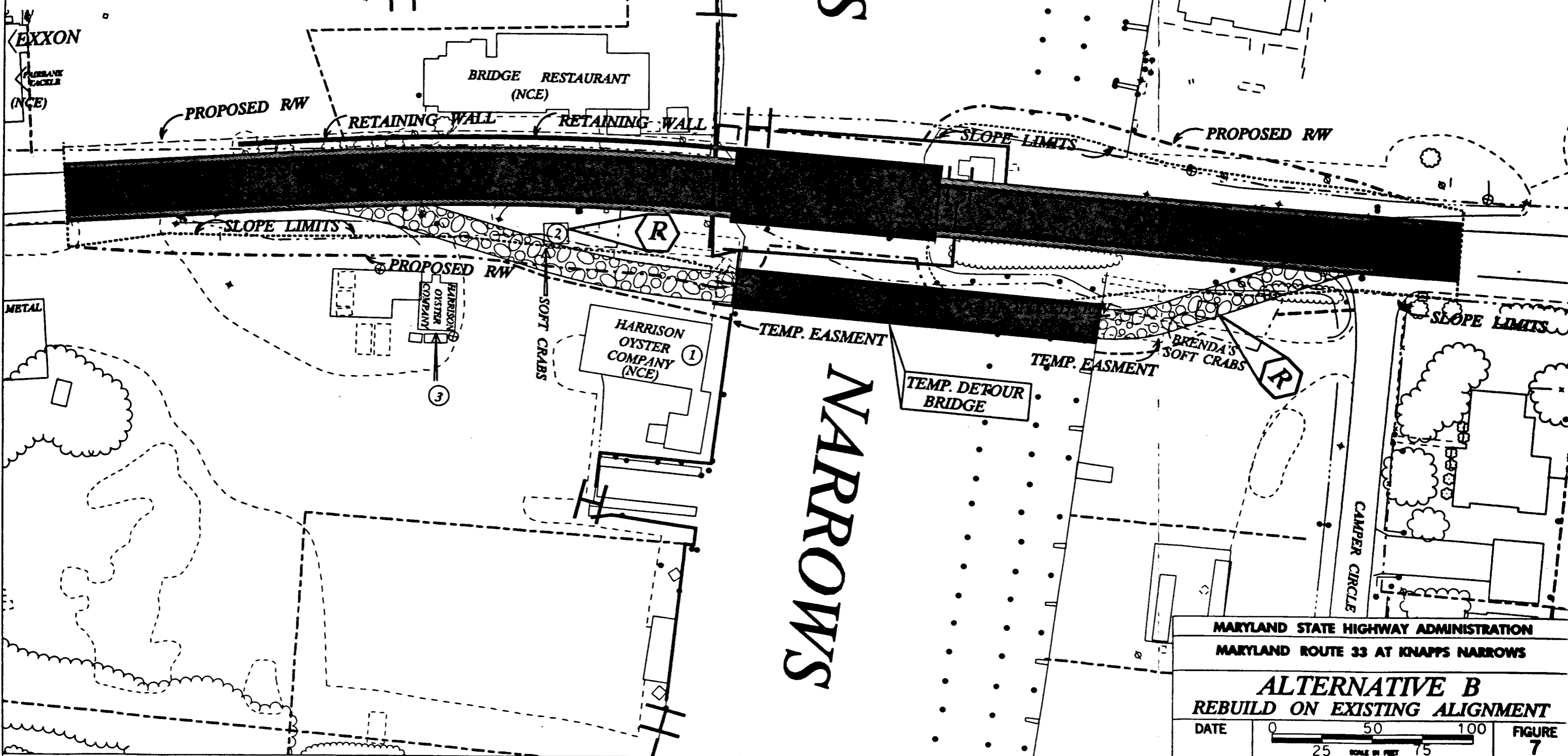
**LEGEND**

-  PROPOSED ROADWAY
-  PROPOSED RIGHT-OF-WAY LINE
-  EXISTING RIGHT-OF-WAY LINE
-  PROPERTY LINE
-  HISTORIC BOUNDARY
-  REQUIRED RELOCATIONS
-  (NCE) NONCONTRIBUTING ELEMENT WITHIN HISTORIC DISTRICT
-  SLOPE LIMITS
-  PAVEMENT TO BE REMOVED
-  ① BUILDING ON HARRISON OYSTER PROPERTY (BY NUMBER)
-  TEMPORARY DETOUR



KNAPPS

NARROWS



MARYLAND STATE HIGHWAY ADMINISTRATION  
 MARYLAND ROUTE 33 AT KNAPPS NARROWS












**ALTERNATIVE B**  
**REBUILD ON EXISTING ALIGNMENT**

DATE \_\_\_\_\_

0 50 100  
 25 75  
 SCALE IN FEET

FIGURE  
**7**

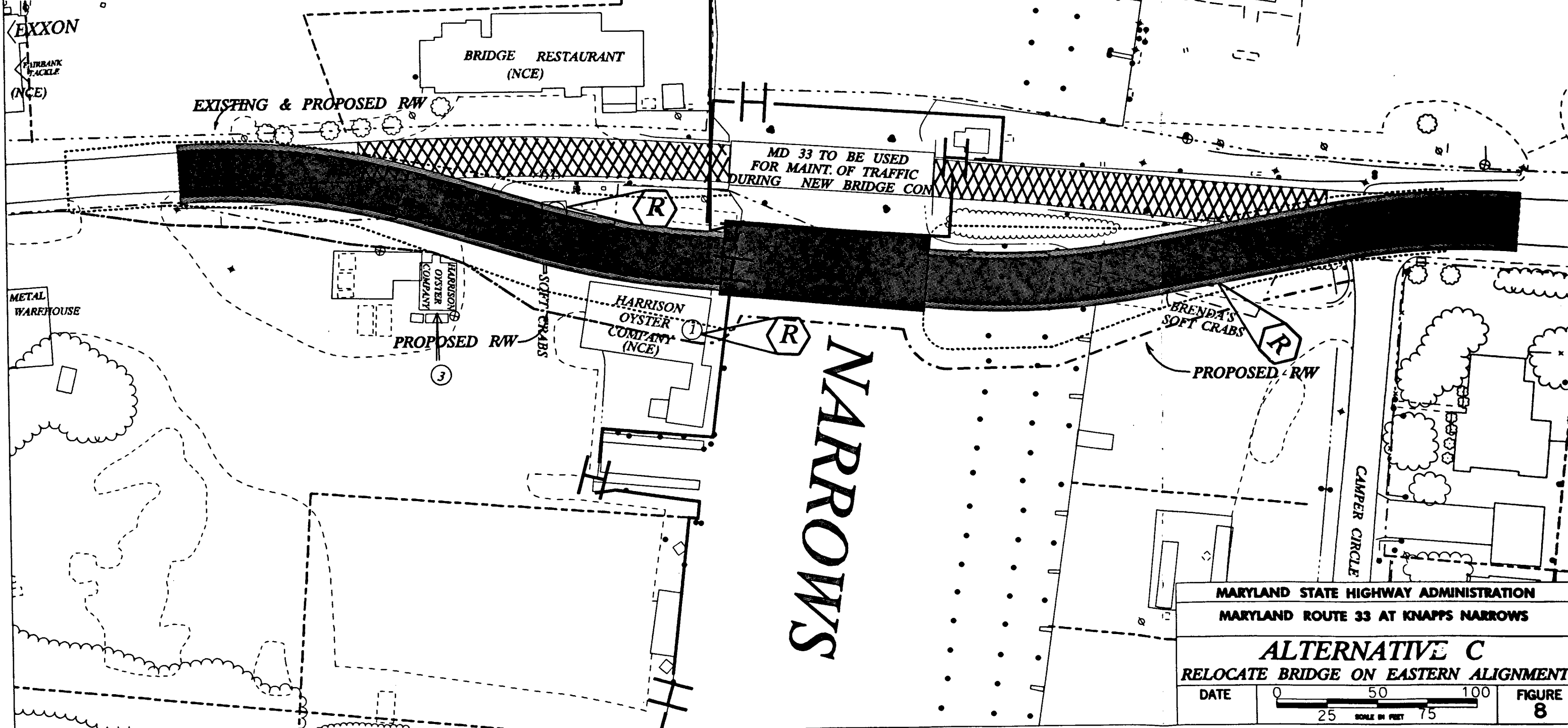
**LEGEND**

-  PROPOSED ROADWAY
-  PROPOSED RIGHT-OF-WAY LINE
-  EXISTING RIGHT-OF-WAY LINE
-  PROPERTY LINE
-  HISTORIC BOUNDARY
-  REQUIRED RELOCATIONS
-  (NCE) NONCONTRIBUTING ELEMENT WITHIN HISTORIC DISTRICT
-  SLOPE LIMITS
-  PAVEMENT TO BE REMOVED
-  ① BUILDING ON HARRISON OYSTER PROPERTY (BY NUMBER)
-  TEMPORARY DETOUR

**NORTH**

**KNAPPS**

**NARROWS**



MD 33 TO BE USED FOR MAINT. OF TRAFFIC DURING NEW BRIDGE CONSTRUCTION

MARYLAND STATE HIGHWAY ADMINISTRATION  
MARYLAND ROUTE 33 AT KNAPPS NARROWS

**ALTERNATIVE C**  
RELOCATE BRIDGE ON EASTERN ALIGNMENT

DATE	0	50	100	FIGURE
	25	SCALE IN FEET	75	8

capacity to an "Inventory" rating. A temporary moveable bridge and detour approach roads would be required to maintain traffic during the rehabilitation.

Much work would also be needed to bring the bridge tender's house to an acceptable condition. It has been repaired in the past to improve the safety and comfort of the facility. However, deteriorated and insect-damaged wood is present throughout, the wiring is old and outdated, the room is cramped and bathroom facilities are at the bare minimum.

With Alternative A the bridge would be in relatively good structural condition after rehabilitation and would have a remaining life of 15 to 20 years at a cost of approximately 7.4 million dollars. However, whenever maintenance work would be required, two lanes of traffic could not be maintained because of the narrow roadway width. Certainly, with the frequency of openings and the number of times that the overhead supports are hit, ongoing maintenance repairs are anticipated.

In summary, a rehabilitated structure would consist of all new approach spans (almost 50% of the length of bridge), all new substructure for the bascule span, a bridge tender's house, all new machinery and reworking of many of the elements in the bascule span.

However, the rehabilitation would not drastically change the appearance or the dimensions of the bridge which would retain the

24

existing, narrow, 20 foot roadway with restricted overhead clearance which currently impedes the flow of traffic and does not provide safe pedestrian access. Based on these limitations, and a cost/life expectancy ratio of approximately 7.4 million dollars / 15 to 20 years, the State Highway Administration does not consider the Rehabilitation Alternative to be a reasonable or feasible solution.

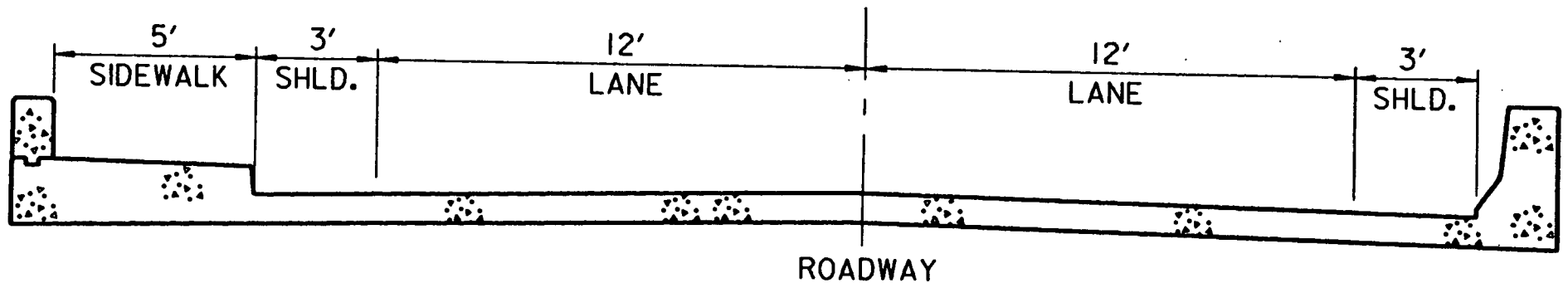
Alternatives B & C -- (Low-Level Replacement Alternatives) - See Figures 7, 8, & 9

Alternative B ("Alternative 3" in MHT correspondence) proposes the removal of the existing bridge and construction of a new, low-level bascule bridge at the existing site. The new bridge would provide a 30 foot wide roadway with a 5 foot sidewalk and would have no overhead structure to restrict vertical clearance over the roadway. The bridge's low profile and low clearance to the water (8 to 10 feet) would be essentially the same.

A 2' 8" retaining wall has been added to the original Alternative B plans in the southwest quadrant of the bridge to minimize impact to non-contributing elements of the Tilghman Island Historic District. The retaining wall reduces the property required from the historic district by 5535 sq. ft. (from 13,345 sq. ft. or 0.31 acre to 7810 sq. ft. or 0.18 acre). However,



PROPOSED TYPICAL SECTION  
NEW BRIDGE ALTERNATES  
MD 33 OVER KNAPPS NARROWS



NOT TO SCALE

THE DIMENSIONS SHOWN ARE FOR THE PURPOSE OF DETERMINING COST ESTIMATES AND ENVIRONMENTAL IMPACTS, AND ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PHASE.

26

approximately 0.027 acre of temporary easement is still required from the district for Alternative B.

Alternative C ("Alternative 4" in MHT correspondence) proposes construction of a new, low-level bascule on relocation approximately 50 feet east of the existing site and removal of the existing bridge. The new bridge would have the same typical section and clearances as Alternative B and would require approximately 0.25 acre of right-of-way from a non-contributing element of the Tilghman Island Historic District.

#### General

Alternatives A and B would require closing the existing bridge for approximately 6 months and the construction of a temporary moveable bridge and detour road for the maintenance of highway and pedestrian traffic. Alternative C would allow highway and pedestrian traffic to be maintained on the existing bridge while the replacement span was constructed. Marine traffic would be maintained but with a reduced number of openings under Alternatives A & B. Under Alternative C, there would be no change in openings for marine traffic.

A new low-level bascule structure has an anticipated life expectancy of 70 years with significantly lower maintenance costs compared with rehabilitation of the existing bridge.

Construction costs would be approximately 9.6 million dollars for Alternative B and 9.2 million dollars for Alternative C, which is

only about 25% more than the 7.4 million dollar cost to rehabilitate the existing bridge. The .4 million dollar cost difference between Alternative B and Alternative C is roughly the cost of the temporary detour road and bridge. A new bridge would provide a 30 foot roadway with a 5 foot sidewalk and unrestricted vertical clearance over the roadway to safely convey both pedestrian and vehicular traffic. Alternatives B and C both address the purpose and need for the project.

III. DESCRIPTION OF 4(f) PROPERTY

Tilghman Island Bridge (See Figures 3 & 4.)

The Knapps Narrows Bridge, (# 20001), built in 1934, has the distinction of being the only overhead counterweight bascule span bridge in the state of Maryland. The 95 foot long/ 20 foot wide bridge opens for boats more often than any other moveable bridge in Maryland and more often than most bridges on the East Coast. As a moveable bridge, it is also significant as a relatively rare structure, designed to accommodate both vehicular and water-borne traffic. It represents one of two historic moveable bridges which are part of Maryland's state road system in Talbot County, and one of 15 historic moveable bridges throughout the state road network, identified by the Maryland Historical Trust (MHT) for the Maryland Department of Transportation in a jointly conducted survey which took place during 1980-81.

28

This structure, which carries MD 33 over Knapps Narrows onto Tilghman Island, is a heel trunion rolling lift bridge with the counterweight suspended above the roadway. The moveable span is approached by bridge spans supported on timber pilings. There is a small wood frame bridge tender's house on the west side of the road at the north end of the bridge, square in plan with one room. Unlike other similar arrangements with moveable bridges, this building is not physically connected to the bridge. (See photograph #2 of Figure 3 for bridge tender's house.)

The bridge is extremely important to the State and Tilghman Island, both as a unique engineering type (Criteria C) and for its historical and aesthetic relationship to the island (Criteria A). Despite the bridge's history of repair and replacement work detailed in Appendix A of this document, the State Historic Preservation Officer (SHPO) determined that the bridge was eligible for the National Register of Historic Places based on Criterion C for engineering and Criterion A for its association with the unique maritime heritage of the island. The SHPO has also determined that the bridge is a significant contributing resource to the Tilghman Island Historic District, which is also eligible for the National Register of Historic Places.

**Tilghman Island Historic District** (See Figure 5.)

The Tilghman Island Historic District, which is eligible for the National Register of Historic Places, is significant under

28

Criteria A and C as perhaps the best remaining example of the Chesapeake island community. Tilghman was one of several small islands, including Deale, Smith, Hooper and Sharp's Islands, which began as large plantations in the 18th century, developed into agricultural communities in the mid-19th century and, at the turn-of-the century, blossomed with the advent of the seafood and tourist industries. Most of these islands have experienced considerable change in recent decades and some, like Sharp's Island have been lost to erosion. Although there are mid-and late-20th century houses scattered throughout the island as well as several concentrations of new development, Tilghman is still characterized by its 19th and early 20th century frame houses and still consists of four distinct villages surrounded by open fields and ever-present views of the water. Moreover, Tilghman remains a community of watermen and home to a large number of skipjacks. Therefore, Tilghman offers the best opportunity in Maryland for the study of the development of these islands and the lifeways of the Chesapeake.

In the 1700s Tilghman Island was divided into several large plantations owned by Matthew Tilghman. By the mid-19th century much of the land had been subdivided into smaller farms and by the last quarter of the 19th century four small communities had grown up: Tilghman, Avalon, Fairbank and Barneck. Although mostly residential, these villages also contained stores, churches and schools. In the 1880s and 1890s, with improvements in shipping and food preservation, the seafood industry developed and the island flourished. Packing houses for oysters, crabs, fish, and

3

roe as well as for tomatoes, corn, and other vegetables were found on the island. Boatbuilding and repair was another important industry. Tilghman was known for several boat types indigenous to the Chesapeake: log canoes, bug-eyes, and skipjacks. Improvements in rail and steamboat transportation in the 1890s brought tourists from Baltimore and other areas. Many private homes were converted to boarding houses in the summer and several hotels were constructed. Resources representing all of these industries remain on the island today.

The architecture of Tilghman Island dates from the mid-19th through the 20th century and is nearly all frame construction and modest, vernacular design. However, there are several houses of more elaborate design along Wharf Road in Tilghman and, scattered throughout the island, a number of houses of an unusual pie shape formed by two equal, diagonally-placed wings and a projecting entrance bay. The building was done by local carpenters, some of whom also worked as boat builders.

The boundaries of the island itself form the most appropriate boundaries for the historic district. The period of significance extends to World War II.

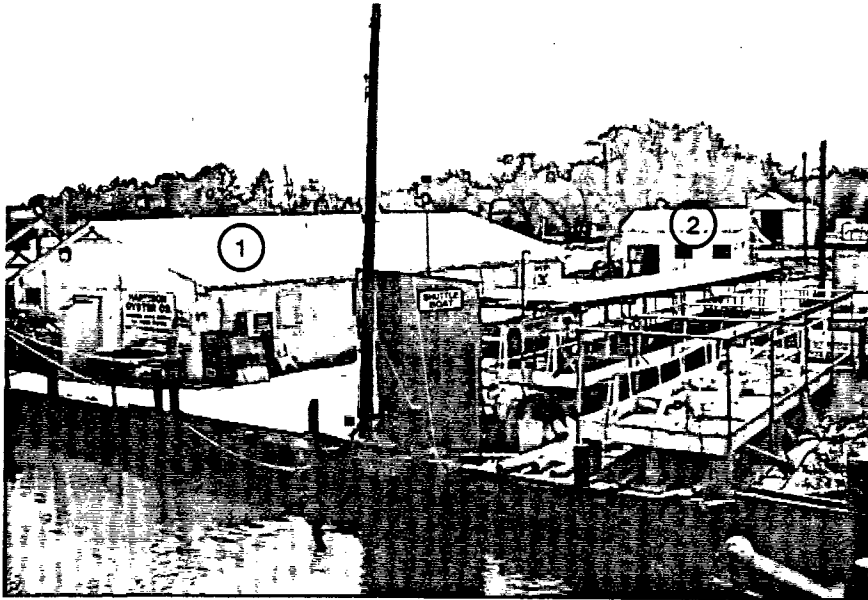
#### IV. DESCRIPTION OF IMPACTS

Alternative A, which proposes rehabilitation of the existing bridge, will impact the historic integrity of the structure,

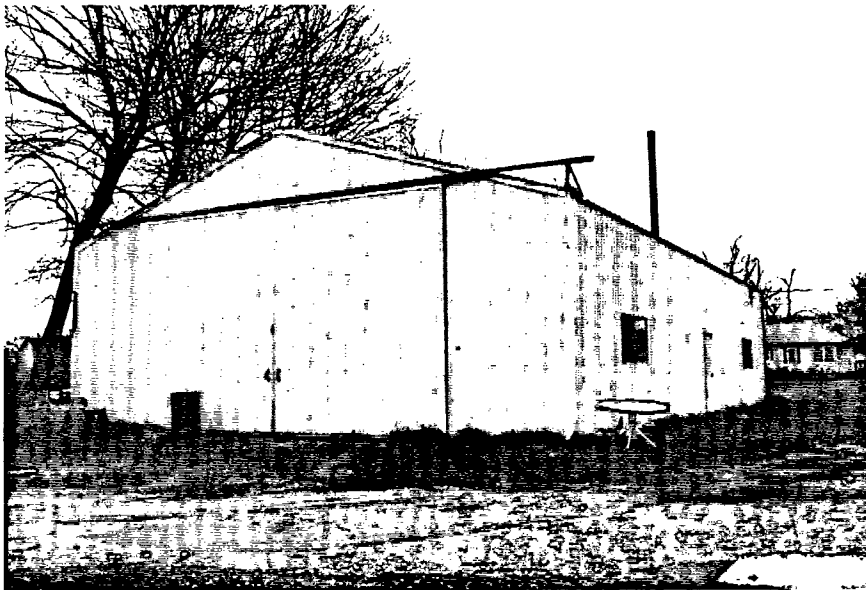
31

rendering it no longer individually eligible for the National Register of Historic Places under Criterion C, although it will remain eligible under Criterion A and as a contributing resource in the Tilghman Island Historic District. (See Correspondence Section, letter from MHT dated August 4, 1992.)

Alternative A would also require 0.10 acre of temporary easement from a non-contributing element of the historic district and the temporary relocation of two structures (belonging to two separate businesses) and the displacement of approximately two boat slips (from a third business) required for construction of the temporary detour road and bridge. These businesses are: Harrison's soft crabs, Miss Brenda's Soft Crabs, and Fairbank's boat slip rentals. These are all viable businesses, none of which are owned by minority or elderly people. All but the boat slips can be temporarily relocated on or moved to another portion of the same properties on which they are now located. The crab sluffing equipment associated with Harrison's would also be moved. Because no additional waterfrontage exists to create new boat slips on the Fairbank's property, the business owner would be compensated for the temporary loss of rent during construction; other boat slips are available to the boat owners elsewhere in the area. Consequently the businesses will be allowed to continue operations during construction. No loss of business is expected. The two soft crab businesses are operative only in the summer; the boat slip rental operation is a year round operation. Harrison's soft crab employs 9 people each summer; the other two businesses are one person operations. The



HARRISON OYSTER COMPANY  
View from bridge of northern end of property  
Structures (1) & (2)  
Non-contributing element (NCE)



HARRISON OYSTER COMPANY  
Structure (3)





BRIDGE RESTAURANT  
Non-contributing element (NCE)

owners have not objected to temporary relocations and have not indicated that the project would be an interruption to their respective businesses provided they remain in business along the detour route. The businesses will be restored to their original location, if desired by the owner, following construction.

The entire project area is also in a Limited Development Area of the Chesapeake Bay Critical Area. See Figure 6 of Alternative A and Figure 10 of impacted property. Although no impacts to wetlands are required, construction would occur in "waters of the U.S." under jurisdiction by the Army Corps of Engineers (6,780 sq. ft or 0.156 acre) requiring a Section 404 permit. Coordination regarding this project has been initiated with the Corps. (See letter received January 14, 1993 from the Corps in Correspondence section.) A permit from the U.S. Coast Guard would also be required. Additionally, a 6 month closure of the bridge for repairs and construction of a temporary bridge would be required.

Two alternatives to the rehabilitation of the existing bridge have been developed. Alternative B proposes the removal of the existing bridge and construction of a new, low-level bascule span at the existing site. A 2' 8" retaining wall has been added to the original Alternative B plans in the southwest quadrant of the bridge to minimize impact to non-contributing elements of the Tilghman Island Historic District. The retaining wall reduces the property required from the historic district by

35

5535 sq. ft., from 13,345 sq. ft. or 0.31 acre to 7810 sq. ft. or 0.18 acre.

Alternative B would require a small strip of right-of-way (0.027 acre) for temporary easements from non-contributing elements of the Tilghman Island Historic District and the temporary relocation of two structures (belonging to two businesses) and two boat slips (from a third business). These businesses are the same as those required under Alternative A. As with Alternative A, these businesses (excepting the boat slips) can be temporarily moved to other portions of the same properties on which they are located while the temporary detour road is in operation and provided the operators have no objections. The businesses will be allowed to continue to operate during construction and their original locations could be restored following construction. No loss of business, except for the temporary loss of rent from the two boat slips, is expected.

Additionally, the small parking area (five spaces, approximately 1100 square feet) in front of the Bridge Restaurant (closed at present for renovation) would be permanently impacted as it currently encroaches on existing SHA right-of-way. The restaurant has adequate parking (6100 square feet) in the rear of the property and the loss of parking in front of the building should not create a hardship for this business. SHA is planning to acquire an additional 0.05 acre strip from the restaurant outside existing SHA right-of-way in this area for construction of a retaining wall.

36

Across the channel, an even smaller strip of property from the Bay Hundred Restaurant would be temporarily impacted by this alternative. For the construction of slopes for the new bridge, a 0.03 acre strip is required from the restaurant's parking area (perhaps not voiding any parking spaces) and one boat slip would be impacted. A permanent easement for the maintenance of the slope would be sought. The boat slip at the Bay Hundred Restaurant would not be replaceable; however, no substantial loss of business is expected there, either, as the restaurant has considerable area for parking and at least 12 other boat slips for restaurant patronage.

Because a gas station formerly existed on this property, there is the possibility that underground storage tanks may remain there. The specific location of these underground tanks has not been determined. Due to the minor amount of property required in this area for placement of fill material, the likelihood of encountering hazardous waste materials was determined to be minimal. This is the only site in the study area which showed evidence of any potential for hazardous waste contamination.

This alternative's entire project area is also in a Limited Development Area of the Chesapeake Bay Critical Area. Although no impacts to wetlands are required, construction would occur in "waters of the U.S." under jurisdiction by the Army Corps of Engineers (4,975 sq. ft or 0.01 acre) requiring a Section 404 permit. A permit from the U.S. Coast Guard would also be

37

required. The cost for this alternative is estimated at 9.6 million dollars; however, the life expectancy of the bridge increases to 70 years. See Figure 7 of Alternative B and Figures 10 & 11 (photographs of impacted properties). This alternative would also require closure of the existing span and construction of a temporary detour bridge and roadway for a period of approximately 6 months.

Alternative C, which proposes construction of a new, low-level bascule on relocation approximately 50 feet east of the existing site and proposes removal of the existing bridge, also impacts, excepting the bridge, only non-contributing elements to the historic district. See Figure 8 of Alternative C and Figures 10 (photographs of impacted property). Approximately 10,010 sq. ft. or 0.23 acre of right-of-way is required, as well as the permanent relocation of three structures belonging to three businesses and five boat slips belonging to a fourth business. The affected businesses are the same three as with Alternatives A & B, plus Harrison's Oysters which is open only during the winter and employs 26 people. Harrison's oyster business is the only oyster business in the area and the owner will maintain operations during construction. The three crab and oyster businesses can be permanently relocated on the same property on which they now reside with little or no interruption to business. The boat slips cannot be replaced on the same property due to the location of the new bridge under Alternative C; however, there is a possibility that the boat slips could be replaced in the location left vacant by the removal of the fill for the existing

36

bridge. The owners have not objected to relocation and have not indicated that the project would be an interruption to their respective businesses.

This alternative's entire project area is also in a Limited Development Area of the Chesapeake Bay Critical Area. Although no impacts to wetlands are required, construction would occur in "waters of the U.S." under jurisdiction by the Army Corps of Engineers (9,425 sq. ft or 0.22 acre) requiring a Section 404 permit. A permit from the U.S. Coast Guard would also be required. The cost for this alternative is estimated at 9.2 million dollars, and it, too, has a life expectancy of 70 years.

Alternative B and Alternative C, both of which require permanent removal of the Knapps Narrows Bridge, result in an adverse effect to both the Tilghman Island Historic District and to the bridge itself. Alternative A, the rehabilitation alternative would consist of all new approach spans (almost 50% of length of bridge), all new substructure for the bascule span, all new operator's house, refurbishing of machinery and reworking of many of the elements in the bascule span. These changes alter the integrity of the bridge by making it no longer eligible under Criterion C for engineering, although it would remain eligible under Criterion A for its association with the unique maritime heritage of the island. Because the bridge is a contributing element to the historic district, this impact is considered an adverse effect to the Tilghman Island Historic District as well as the Knapps Narrows Bridge. Both of these resources are

31

considered eligible for the National Register of Historic Places. The rehabilitation alternatives (Alt A) would negate the potential of the bridge to provide safe and efficient service to the community because the bridge would remain narrow (precluding the installation of sidewalks) and restricted with regards to clearance over the roadway (eliminating the possibility of two-way traffic during truck crossings), continuing both the vehicular and pedestrian safety problems.

Coordination with MHT has been initiated in accordance with Section 106 of the National Historic Preservation Act of 1966. To address the adverse effects that all of the proposed build alternatives (A,B & C) will have on the Tilghman Island Historic District due to removal or modification of the bridge. A preliminary Memorandum of Agreement (summarized in Section VII COORDINATION and included in draft form in Section VIII CORRESPONDENCE) is in the process of being modified and will, subsequently, be coordinated with the Advisory Council of Historic Preservation.

MHT has concurred that no further terrestrial or underwater archeological study is required. See letter of February 8, 1993 in Correspondence Section.

## V. Avoidance Alternative

The No-build Alternative is the only alternative which avoids impacts to the Tilghman Island Historic District (NRE) and the Knapps Narrows Bridge (NRE). Under the No-build Alternative, only normal maintenance, which does not address the safety issues associated with the structural deterioration or low overhead clearance of the bridge and the narrow bridge roadway, would be performed. The No-build Alternative would not replace the existing structure or improve its major deficiencies (i.e. deteriorating timber piles, girders and floor beams which need strengthening, low overhead clearance, narrow bridge roadway, etc.) and, therefore, avoids impacts to the MD 33 bridge and the Tilghman Island Historic District. Ultimately, the bridge would be closed for safety reasons due to continued deterioration. Since this is the only access to Tilghman Island, the State Highway Administration does not consider the No-build Alternative to be a prudent alternative. The No-build Alternative does not adequately address the purpose and need of this study which is to provide a structurally sound bridge and to eliminate limited vehicle capacity and safety issues due to typical section and geometrical deficiencies and structural deterioration.

## VI. MEASURES TO MINIMIZE HARM

To minimize the impact of this project to the Tilghman Island Historic District, a 2' 8" retaining wall has been added



41

to the original Alternative B plans in the southwest quadrant of the bridge to minimize impact to non-contributing elements of the Tilghman Island Historic District. The retaining wall reduces the property required from the historic district by 5535 sq. ft. (from 13,345 sq. ft. or 0.31 acre to 7810 sq. ft. or 0.17 acre).

## VII. COORDINATION

A public meeting was held on May 6, 1992, for the purpose of presenting various options for the MD 33/Knapps Narrows Bridge project. Those who spoke at the public meeting indicated a preference for the rehabilitation alternative (Alternate A). Comments from community members who did not speak publicly but discussed the project with SHA personnel expressed concern regarding the risk of pedestrian crossings of the existing bridge and felt that sidewalks were needed. Written correspondence received following the meeting showed that 33 correspondents preferred a new low-level bridge, 9 preferred rehabilitation, and 1 correspondent wanted no change whatsoever.

Prior to the public meeting, the project team met first with the Talbot County Council members and later with Mr. Levin (Buddy) Harrison, a local businessman. The Council voiced concern over closing the waterway to boat traffic during construction, but generally favored a new bridge. Mr. Harrison owns several businesses on the Island, including an oyster company adjacent to the bridge, which would be impacted by any

42

construction. Nevertheless, he was strongly in favor of a new bridge, on either alignment (Alternates B of C).

This project has been coordinated with the Maryland Historical Trust (MHT) regarding historic sites. MHT has concurred with an adverse effect determination for Alternatives B and C, and has conceded that, due to the comparable costs and longevity of the rehabilitation alternative (Alternative A), replacing the bridge is the preferred option. February 8, 1993 in Correspondence Section.)

To address the adverse effects that all of the proposed build alternatives (A,B & C) will have on the Tilghman Island Historic District due to removal or modification of the bridge, a preliminary Memorandum of Agreement has been developed and coordinated with the State Historic Preservation Officer (SHPO). This Memorandum of Agreement includes a provision that the bridge be documented to the standards of the Historic American Engineering Record (HAER). (See letter dated February 8, 1993 in Section VIII CORRESPONDENCE.) This agreement also calls for an effort to market the bridge, a cultural documentation project, and completion of a statewide Historic Bridge Survey. Additionally, the MHT will be offered the opportunity to salvage and store any portion of the bridge it chooses and replacement plans will be submitted to SHPO for his review and comment.

Coordination with MHT has been initiated in accordance with Section 106 of the National Historic Preservation Act of 1966.

The MOA is in the process of being modified and will be coordinated with the Advisory Council of Historic Preservation.

The proposed project is in accordance with the Talbot County Comprehensive Plan adopted August 28, 1990.

The project was presented at an Interagency Review on May 20, 1992 and will continue to be presented as needed.

The entire project area lies in a Limited Development Area of the Chesapeake Bay Critical Area. Coordination with the Chesapeake Bay Critical Area Commission regarding project consistency with their goals and objectives is presently being prepared and will be completed prior to construction of the project.

VIII. CORRESPONDENCE



Maryland Department of Transportation  
State Highway Administration

RECEIVED

PROJECT DEVELOPMENT TEAM

F  
SHA

JE 45

O. James Lighthizer  
Secretary  
Hal Kassoff  
Administrator

APR 1 2 05 PM 1993

February 24, 1993

MAR 8 1993

DIVISION OF  
AND CULTURAL RESOURCES

Re: Contract No. T 369-101-271  
MD 33 from Wiley Road  
to 2000' north of Knapps Narrows  
Talbot County, Maryland

Mr. J. Rodney Little  
State Historic Preservation Officer  
Maryland Historical Trust  
100 Community Place  
Crownsville MD 21032-2023

Dear Mr. Little:

In reviewing your February 8, 1993 letter concerning the effects of our project on the Tilghman Island Historic District, we have determined that we did not obtain your concurrence in an effect determination for Alternate 2, the rehabilitation alternate. Your office stated on August 4, 1992 that the proposed rehabilitation would disqualify the bridge from listing as an independent resource in the National Register under Criterion C, for engineering. However, it would qualify under Criterion A.

We request that you sign on the concurrence line documenting your agreement with our determination that Alternate 2 would have an adverse effect on historic resources. Once signed, please fax the letter to us by February 26, 1993, and call Ms. Suffness on 333-1183 or Ms. Strow on 333-1184 should you have any questions.

Very truly yours,

Louis H. Ege, Jr.  
Deputy Director  
Office of Planning and  
Preliminary Engineering

Tilghman Quad

by: Cynthia D. Simpson  
Cynthia D. Simpson  
Deputy Division Chief  
Project Planning Division

LHE:RMS:ih  
Enclosures

- cc: Mr. Tom Folse
- Mr. Earle Freedman
- Mr. Bruce Grey
- Mr. Ralph Manna
- Ms. Lorraine Strow


My telephone number is 333-1177

theo: IA BC 3/24/93

structures -

Mr. J. Rodney Little  
Page Two  
MD 33 from Wiley Road

Concurrence:

  
\_\_\_\_\_  
State Historic Preservation Office

3/26/93  
Date

MARYLAND  
HISTORICAL



TRUST

PROJECT  
DEVELOPMENT  
DIVISION

FEB 11 1 47 PM '93

William Donald Schaefer  
Governor

Jacqueline H. Rogers  
Secretary, DHCD

February 8, 1993

Office of Preservation Services

Ms. Cynthia D. Simpson  
Deputy Division Chief  
Project Planning Division  
State Highway Administration  
707 North Calvert Street  
Baltimore, Maryland 21203-0717

RE: Contract No. T 369-101-271  
MD 33 from Wiley Road to  
2000 Ft. north of Knapps Narrows  
Talbot County, Maryland

Dear Ms. Simpson:

Thank you for your recent letter and draft Memorandum of Agreement (MOA), dated 7 January 1993 and received by the Trust on 12 January 1993, requesting our comments on the above-referenced project. We subsequently received a copy of the draft report on the Phase Ib archeological survey conducted of the project area. In addition, Ms. Rita Suffness of your staff provided us with the most recent information available concerning the proposed design for Alternatives 3 and 4. We understand that the proposed new bridge would be only 2 feet higher than the existing bridge and that Alternatives 3 and 4 now include a low retaining wall (approximately 2 feet high) on the west side of the south approach to the bridge which will eliminate the need to remove the Exxon Bait and Tackle and the Bridge Restaurant.

Based on the information provided, we concur that the Exxon Bait and Tackle, the Bridge Restaurant and the Harrison Oyster Company are not contributing resources in the Tilghman Island Historic District. We concur that Alternatives 3 and 4 will adversely affect the Tilghman Island Historic District and Bridge No. 20001, the Knapps Narrows Bridge. Again, we wish to reiterate that we believe the Knapps Narrows Bridge is a unique and important resource and that rehabilitation is feasible. However, we concede that, from the standpoint of longevity and long term costs, replacing the bridge would be the preferred option. We have reviewed the proposed Memorandum of Agreement which would be required if either Alternatives 3 and 4 are selected and have suggested several minor alterations and additions (see enclosure 1).

*Maryland*

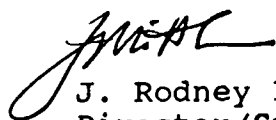
Ms. Cynthia D. Simpson  
February 8, 1993  
Page 2

Staff archeologists reviewed the following draft archeological report: "Phase IB Intensive Archeological Survey MD Route 33 Bridge at Knapps Narrows, Talbot County, Maryland." The report was prepared by Engineering Science, Chartered. The draft report presents succinct documentation of the survey's goals, methodology and results. The study included terrestrial and underwater components. The report is consistent with the standards of the "Guidelines for Archeological Investigations in Maryland" (McNamara 1981). The survey did not identify any intact archeological resources within the project area. We concur that additional terrestrial or underwater investigations are not warranted for this particular project.

The attached enclosure 2 lists the Trust's specific comments on the draft report itself. We ask SHA to have the consultant address these issues in the final document. We look forward to receiving a copy of the final report, and completed NADB form, when available.

If you have questions or require further information, please call Ms. Elizabeth Hannold (for structures), Ms. Beth Cole (for archeology) or Mr. Paul Hundley (for underwater archeology). Thank you for your assistance.

Sincerely,

  
J. Rodney Little  
Director/State Historic  
Preservation Officer

Enclosures  
JRL/EJC/EAH  
9203816

cc: Mr. Don Klima  
Ms. Rita Suffness  
Mr. Richard Ervin  
Mr. Thomas C. Williams  
Mr. Victor MacSorley



Ms. Cynthia D. Simpson  
February 8, 1993  
Enclosure 1

**MHT COMMENTS ON DRAFT MOA**

(The following should be substituted for or added to SHA's draft MOA in the locations marked on the attached copy of the MOA)

I. Documentation

A. HABS/HAER Recordation of Bridge

SHA will contact the Historic American Building Survey/Historic American Engineering Record (HABS/HAER) (Ms. Tina Le Coff, Mid-Atlantic Regional Office, National Park Service, Second and Chestnut Streets, Philadelphia, Pennsylvania, 19106) to determine what level and kind of recordation is required for Bridge #20001. SHA will ensure that all documentation is completed and accepted by HABS/HAER prior to demolition or removal and relocation of the bridge.

B. Cultural Documentation Project

SHA, in consultation with the Maryland Historical Trust's Cultural Conservation Program, will develop and implement a cultural documentation project to document the experience of the bridge tenders and the bridge users and to develop a context of the bridge's use and its place in the lives of the watermen, tenders, motorists, pedestrians, and the community. The project may include a search for historic photographs and documents, contemporary photography (color slides and black and white photographs), and taped oral and video interviews with bridge tenders and users.

C. Scheduling

The recordation component of the mitigation shall be initiated 9 months prior to the Advertisement Date and will be completed prior to the demolition or removal and relocation of Bridge #20001.

D. Reporting

SHA will submit draft reports and products for the HABS/HAER recordation and the cultural documentation project to the Maryland SHPO for review and approval. The SHPO will provide review comments within 30 working days after receipt. In addition to the copy of the bridge recordation submitted to HABS/HAER, SHA will provide two copies of all final reports and products to the SHPO and a copy to the Talbot County Library in Easton, Maryland.

II. Marketing Plan

In consultation with the SHPO, SHA will prepare and implement a marketing plan for Bridge #20001. The marketing plan shall include the following components:

- A. An information package on the bridge, containing photographs, plans, a description of the structures's historic and engineering significance, costs, and requirements regarding rehabilitation and maintenance. The brochure shall also include the Secretary of the Interior's Standards for the Treatment of Historic Properties.
- B. A distribution list of potential purchasers or transferees.
- C. An advertising plan and schedule.
- D. A schedule for receiving and reviewing offers.

III. Selection of Transferee

- A. SHA shall review all offers in consultation with the SHPO prior to acceptance. Transfer of the structure shall incorporate the appropriate rehabilitation requirements. If there is no acceptable offer which will conform to the rehabilitation and maintenance requirements, SHA with the approval of the SHPO may transfer the structure without preservation restrictions.
- B. SHA shall provide the SHPO 30 days to review and approve the proposed relocation of the structure. Before relocation, SHA will document the bridge as noted in Stipulation I.
- C. If no purchaser or transferee is identified as the result of the marketing effort, the bridge will be documented as noted in Stipulation I and demolished.

IV. Statewide Historic Bridge Survey

SHA will complete a statewide historic bridge survey by \_\_\_\_ 199\_\_ . SHA will coordinate with the SHPO regarding the content and design of the statewide historic bridge survey. The survey will include an inventory of and preservation plan for all bridges in Maryland on and off the Federal-aid system and will generally be in accordance with the outline provided by the SHPO in its August 20, 1991 letter to SHA (Appendix A).

V. New Construction

Plans for the replacement Bridge #20001 will be submitted to the SHPO for review and approval to ensure that the design of the new bridge is compatible with the Tilghman Island Historic District.

50

Ms. Cynthia D. Simpson  
February 8, 1993  
Enclosure 2

**MHT COMMENTS ON DRAFT REPORT**

- 1) The discussion of historic structures in the project vicinity (pages 18 and 20) should be corrected to reflect SHA's identification and evaluation of historic structures for this project and note the presence of the Tilghman Island Historic District and its contributing resources.
- 2) References to the Maryland Historic Sites Inventory (pages 18 and 19) should be corrected to read "Maryland Inventory of Historic Properties."
- 3) The Cultural Background/Paleoecological Setting and Previous Investigations sections should be followed by a brief discussion which employs this background data to develop an informed assessment of the project area's terrestrial and underwater archeological potential.
- 4) The Results chapter is very brief. The chapter does not appear to present the results of the literature search and historical research described in the Methods of Investigation. In addition, the chapter should provide a more thorough description and interpretation of the field results (particularly the identification of "old pilings" that may be related to the 1869 bridge). The chapter should also give an interpretation for the survey's negative results, in light of the area's considered high potential for containing underwater historic properties.
- 5) Finally, the report discussion (including recommendations) should clearly emphasize that the survey addressed both terrestrial and underwater archeological resources. The text should still reflect the different levels of survey intensity applied for the terrestrial and underwater project areas.

PRELIMINARY  
MEMORANDUM OF AGREEMENT

WHEREAS, the Federal Highway Administration (FHWA) proposes to assist the Maryland State Highway Administration (SHA) in the replacement of the Knapps Narrows Bridge (#20001) on MD 33 from Wiley Road to 2000 feet north of Knapps Narrows in Talbot County, Maryland; and

WHEREAS, the FHWA has determined that the undertaking will have an adverse effect upon the Knapps Narrows Bridge and the Tilghman Island Historic District, properties considered eligible for listing in the National Register of Historic Places, and has consulted with the Maryland State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act, as amended (16 U.S.C. 470f); and,

WHEREAS, the SHA participated in consultation, and has been invited to concur in this Memorandum of Agreement;

NOW, THEREFORE, the FHWA, the Maryland SHPO, the Council, and the SHA agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties. Execution of the actions and measures described in this Memorandum of Agreement constitutes adequate and acceptable mitigation of adverse effects on the historic properties.

Stipulations

FHWA will ensure that the following measures are carried out:

I. Recordation

SHA will provide recordation of the Knapps Narrows Bridge in accordance with Historic American Engineering Standards (HAER).

SHA, in consultation with MHT's Cultural Conservation Program Division, will develop and implement an oral history project which may include taped interviews with bridge tenders to document the structure in the context of its use and place in the lives and livelihoods of the boatmen and their families.

A. Scheduling

The recordation component of the mitigation shall be initiated 9 months prior to the Advertisement Date.

See  
IA-D  
of MHT's  
Revisions

**B. Reporting**

SHA will submit draft reports of the HAER recordation and oral history project to the Maryland SHPO for review and comment. Any comments made within 30 working days after receipt will be taken into account in the preparation of the final report. SHA will provide copies of all final reports to the Maryland SHPO, the Council, and the Talbot County Library in Easton, Maryland.

**II. Marketing**

In addition, SHA will attempt to market the structure and have it relocated to a terrain and situation approximating its current location.

**III. Statewide Historical Bridge Survey**

SHA will coordinate with the SHPO regarding the content and design of the statewide historical bridge survey.

**IV. Review**

Plans to replace the existing Knapps Narrows Bridge will be submitted to the SHPO for his review and comment.

**Performance Standards**

All work carried out pursuant to this agreement will be carried out by or under the direct supervision of individuals meeting, at a minimum, the appropriate federal qualifications presented in "Professional Qualifications" (36 CFR Part 66, Appendix C).

**VI. Dispute Resolution**

Should the Maryland SHPO or Council object within 30 days of the receipt of any plans or actions proposed pursuant to this agreement, the FHWA shall consult with the objecting party to resolve the objection. If the FHWA determines that the objection cannot be resolved, the FHWA shall request the further comments of the Council pursuant to 36 CFR Section 800.6(b). Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR Section 800.6(c)(2) with reference only to the subject of the dispute; the FHWA's responsibility to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged.

See II A-D  
+ ADD  
III A-C  
Revisions  
See IV  
V  
VI  
VII

Execution of the Memorandum of Agreement and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the replacement of the Knapps Narrows Bridge (#20001) on MD 33 from Wiley Road to 2000 feet north of Knapps Narrows in Talbot County, Maryland, and its effects on historic properties, and that FHWA has taken into account the effects of the undertaking on historic properties.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Robert D. Bush, Executive Director

FEDERAL HIGHWAY ADMINISTRATION

By: \_\_\_\_\_ Date: \_\_\_\_\_  
A. Porter Barrows, Division Administrator

MARYLAND STATE HISTORIC PRESERVATION OFFICER

By: \_\_\_\_\_ Date: \_\_\_\_\_  
J. Rodney Little, State Historic  
Preservation Officer

MARYLAND STATE HIGHWAY ADMINISTRATION

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Hal Kassoff, Administrator



REPLY TO  
ATTENTION OF

Operations Division

DEPARTMENT OF THE ARMY  
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
P.O. BOX 1715  
BALTIMORE, MD 21203-1715

PROJECT  
DEVELOPMENT  
PERMIT

JAN 14 1993

10 24 AM '93

Subject: MD 33 over Knapps Narrows, Talbot County,  
#T 369-101-271

Maryland State Highway Administration  
Attn: Mr. Louis H. Ege, Jr.  
707 North Calvert Street  
Baltimore, MD 21203-0717

Dear Mr. Ege:

I am replying to your letter of August 24, 1992, requesting clarification of our jurisdiction over areas classified under the Cowardin Classification System as open-water wetlands.

The Cowardin System is just one method of classifying wetlands. Under the Cowardin System, open water areas less than 2 meters deep are considered "open-water wetlands." This does not constitute a "jurisdictional wetland" as defined by the 1987 Corps of Engineer's Wetland Delineation Manual unless all three parameters (hydrology, soils, and vegetation) are satisfied.

According to your letter, the area in question is bulkheaded, and no vegetation exists. Therefore, this area cannot be classified as a "jurisdictional wetland" but would, nevertheless, be regulated by the Corps as "waters of the U.S." Pursuant to issuance of a Corps permit, mitigation can be required for impacts to "waters of the U.S." if determined necessary to offset the impacts of the project.

Because the Federal Highway Administration has approved this project for NEPA processing as a Categorical Exclusion with a 4(f), we understand that it will not follow the new procedure for merging NEPA and Section 404 since there will be no public distribution, or agency review, of the 4(f) document. We would appreciate, nevertheless, that you continue to present this project at the interagency meetings as it progresses through project development, so that we can identify any preference(s) we have regarding the alternatives in order to avoid extensive changes to the proposed project when you apply for a permit.

Sincerely,

Keith A. Harris  
Acting Chief, Special Projects  
Permit Section



Lorraine 57

MARYLAND  
HISTORICAL



TRUST

PROJECT  
DEVELOPMENT  
DIVISION  
DEC 22 1 50 PM '92

William Donald Schaefer  
Governor

Jacqueline H. Rogers  
Secretary, DHCD

December 17, 1992

Office of Preservation Services

Ms. Cynthia D. Simpson  
Deputy Division Chief  
Project Planning Division  
State Highway Administration  
707 North Calvert Street  
Baltimore, Maryland 21203-0717

Re: Contract No. T 369-101-271  
MD 33 from Wiley Road to  
2000' north of Knapps Narrows  
Talbot County, Maryland  
Section 106 Review

Dear Ms. Simpson:

The Maryland Historical Trust has received your recent request for concurrence that the following properties on which the project may have an impact are not contributing resources to the Tilghman Island Historic District:

- ◆ Harrison Oyster Company
- ◆ Bridge Restaurant
- ◆ Exxon Bait & Tackle/Fairbank Tackle

We are unable to concur with your determination of eligibility without additional information. Please provide a location map for these three properties, photographs of each building and a date of construction for each.

Should you have any questions, please contact me at (410) 514-7630.

Sincerely,

*Jo Ellen Freese*  
Jo Ellen Freese  
Administrator  
Project Review and Compliance

JEF/jef

cc: Ms. Rita Suffness  
Mr. Thomas C. Williams  
Mr. Victor MacSorley



MARYLAND  
HISTORICAL



TRUST

Office of Preservation Services

Ms. Cynthia D. Simpson  
Deputy Division Chief  
Project Planning Division  
State Highway Administration  
707 North Calvert Street  
Baltimore, Maryland 21203-0717

August 4, 1992

*Louise*  
58  
William Donald Schaefer  
Governor

Jacqueline H. Rogers  
Secretary, DHCD

Re: Contract No. T 369-101-271  
MD 33 over Knapps Narrows from  
Willey Road to 2000' north of  
Knapps Narrows  
Talbot County, Maryland  
Section 106 Review

Dear Ms. Simpson:

Thank you for arranging our July 16, 1992 site visit to the Knapps Narrows Bridge. The visit was most helpful and informative. We now have a better understanding of the existing condition of the bridge and the work which would be required to rehabilitate it. The visit also served to reconfirm our belief that the bridge is extremely important to the State and Tilghman Island, both as a unique engineering type and for its historical and aesthetic relationship to island. The bridge serves as a gateway to Tilghman Island. Its unusual appearance and mode of operation, which are completely visible due to the fully exposed, overhead counterweight design, make the experience of entering the island a special one. Its low profile and utilitarian appearance are aesthetically in keeping with the low-lying tidal landscape and the work-a-day atmosphere of the commercial fishing port. This unique experience would not be duplicated by the proposed concrete bridge with the mechanisms concealed under the bridge deck.

We believe that, despite the repair and replacement work over its nearly 60 year history, the Knapps Narrows Bridge retains sufficient integrity to be individually eligible for the National Register under Criterion C for engineering and Criterion A for its association with the unique maritime heritage of the island. We also believe that it is a significant contributing resource to the Tilghman Island Historic District, which is eligible for the National Register of Historic Places. While additional rehabilitation could render the bridge no longer individually

*Maryland*

Ms. Cynthia D. Simpson  
August 4, 1992  
Page 2

eligible under Criterion C, we believe that the bridge could remain eligible under Criterion A and as a contributing resource in the district after additional rehabilitation.

We strongly believe that a thorough and creative investigation of all possible approaches to rehabilitating and retaining the historic Knapps Narrows Bridge is warranted. In addition, it is our understanding that Section 123 (f) of the Surface Transportation and Uniform Assistance Act of 1987 encourages States to give special consideration to rehabilitating historic bridges and that Section 4(f) requires the State to demonstrate that there are no feasible and prudent alternatives to the demolition of an historic bridge. At this point, we continue to believe that rehabilitation may be a possibility and merits further consideration.

In this vein, our staff "brainstormed" to develop the questions below exploring the feasibility of retaining the bridge. Our discussion was based on the assumption that the stringers will be reinforced and the pilings replaced. These actions will serve to strengthen the bridge, reduce or eliminate racking, and lengthen the life of the bridge and would not necessarily destroy its integrity.

1. Vertical Clearance - If the knee braces were eliminated, the vertical clearance would be increased at the sides of the bridge, eliminating the tendency for taller trucks to move to the center of the roadway. In addition, this would eliminate the maintenance problem caused by trucks hitting the braces. Is there any way that the knee braces which support the counterweight could be redesigned or eliminated? We understand that the concrete counterweight itself may need to be replaced as it is spalling. Could this provide an opportunity to alter the counterweight in such a way that the need for knee braces is eliminated? Could the counterweight be braced in a different fashion? Is it at all possible to gain additional height by adjusting the bridge roadway surface?

2. Separation of pedestrian and vehicular traffic - The lack of separation between vehicular and pedestrian traffic has been cited as a problem. Would it be possible to regulate traffic through a system of lights, gates or other means, allowing pedestrians and cyclists to cross the bridge separately from cars and trucks? For example, pedestrians and cyclists only could be allowed to cross for 30 seconds or so at certain intervals or as determined by the bridge operator. Alternatively, would it be possible to construct a light-weight walk/bikeway which would be cantilevered from one side of the bridge and open with the bridge?

Ms. Cynthia D. Simpson  
August 4, 1992  
Page 3

3. Pilings - Replacing the existing timber pilings would eliminate the major safety concern and alleviate racking and settling problems. Could the pilings be replaced with timber pilings? We have noted a number of recent local government projects replacing 40- and 50-year old timber bridges with new timber bridges, leading us to wonder why the use of timber is considered feasible in these instances. Have there been improvements in the treatment of timber pilings which extend their life? How long could new timber pilings be expected to remain safe? Could concrete or metal pilings be designed to more closely approximate the appearance of wood pilings? Can they be produced in a dark color or in a cylindrical appearance?

We lack the technical expertise to fully explore these questions or to identify the full range of rehabilitation solutions and therefore rely on SHA's expertise and judgment to do so. As we mentioned in our previous letter, it may be appropriate and useful to utilize an outside expert in historic bridge engineering to examine the feasibility of rehabilitating the bridge.

In reexamining our July 13, 1992 letter we believe the following questions should be addressed by SHA for the record:

1) Comparable Resources - On the site visit, Ms. Rita Suffness mentioned that the Knapps Narrows Bridge is the only overhead counterweight highway bridge in the state. Please confirm this. How many other moveable bridges are there in Talbot County and in the State?

2) Rehabbed Integrity - Please provide a more detailed description of the repair and replacement work expected to be necessary to rehabilitate the bascule span (excluding the approaches and substructure). It might be useful to know the percentage of original material that would be replaced as a result of the rehabilitation. Please provide a cost breakdown of the expected repair and rehabilitation work.

Lastly we have several miscellaneous questions:

1) To what extent does the 13'9" maximum vertical clearance prevent vehicles from coming onto the island. We understand that this is 2'3" below the normal vertical clearance over State roads. What percentage of trucks on the road require a higher clearance? Are these types of trucks likely to be coming onto the island and with what frequency?

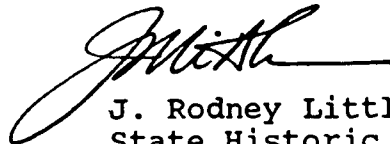
Ms. Cynthia D. Simpson  
August 4, 1992  
Page 4

- 2) Have any possible relocation sites been identified for the historic bridge if it is replaced? The small park at the north end of the island does not appear to provide an appropriate setting. A relocation site which allowed the use of the bridge as an operating lift bridge would be optimum.
- 3) Why was the wooden plank decking removed? If the bridge were rehabbed, would it be possible to replace the planking, if not on the approaches, at least on the bridge itself?
- 4) Does SHA still retain ownership of the previous bridge alignment (along Bridge Street)?
- 5) Please clarify why SHA included rehabilitation as an alternate for study. We assume that this means that rehabilitation was thought to be a feasible alternative. However, the June 9, 1992 memo from Earle Freedman to Hal Kassoff states that "we have consistently supported total replacement of the existing bridge with a new, low-level bascule."

We regret having to respond to the site visit with additional questions. We do feel it is important to examine the issues thoroughly and that this resource deserves the highest level of consideration. In addition, both Section 106 and Section 4(f) require SHA to address many of these same questions.

Should you have any questions or wish to meet again, please contact Ms. Elizabeth Hannold at (410) 514-7636.

Sincerely,



J. Rodney Little  
State Historic Preservation Officer

JRL/EAH

cc: Mr. Bruce Grey  
Ms. Rita Suffness  
Ms. Lorraine Strow  
Ms. Jerry Barkdoll  
Mr. Paul Wetlauffer  
Mr. Thomas C. Williams  
Mr. Victor MacSorely  
Mr. William J. Pencek  
Mr. Ronald Andrews

Talbot County - BD  
62



PROJECT DEVELOPMENT  
JUL 13 2 07 PM '92

William Donald Schaefer  
Governor  
Jacqueline H. Rogers  
Secretary, DHCD

Office of Preservation Services

July 13, 1992

Ms. Cynthia D. Simpson  
Deputy Division Chief  
Project Planning Division  
State Highway Administration  
707 North Calvert Street  
Baltimore, Maryland 21203-0717

Re: Contract No. T 369-101-271  
MD 33 over Knapps Narrows from  
Willey Road to 2000' north of  
Knapps Narrows  
Talbot County, Maryland  
Section 106 Review

Dear Ms. Simpson:

At the request of Bruce Grey of your staff we have reviewed the graphic and written materials relating to the feasibility of the rehabilitation of the existing Knapps Narrows bridge which were transmitted to the Maryland Historical Trust (Trust) on June 17, 1992, June 24, 1992 and July 8, 1992. Although we are pleased to have this opportunity to consult with State Highway Administration (SHA), we are reluctant at this time to take a position on the need for replacement, or to comment on technical engineering aspects of bridge rehabilitation. As I am sure you understand, these are not our areas of expertise. However, with SHA's assistance, we hope to gain a better understanding of these and other issues involved in this project.

After reviewing the materials which SHA provided, we have developed a number of questions which will guide us in examining this project. From the standpoint of the Section 106 review, the two most important questions at this time appear to be:

- ◆ the integrity of the bridge as it exists today
- ◆ the probable impact of rehabilitation on the integrity of the bridge

*Maryland*  
Division of Historical and Cultural Programs  
Department of Housing and Community Development  
100 Community Place, Crownsville, Maryland 21032-2023 (410) 514-7600

Guidance for evaluating integrity, is provided in National Register Bulletin #15: "How to Apply the National Register Criteria for Evaluation," (pp. 44-49). The steps in assessing integrity are:

- ◆ Define the **essential physical features** that must be present for a property to represent its significance.
- ◆ Determine whether the **essential physical features are visible** enough to convey their significance.
- ◆ Determine whether the property needs to be **compared with similar properties**. And,
- ◆ Determine, based on the significance and essential physical features, **which aspects of integrity** are particularly vital to the property being nominated and if they are present.

Using these guidelines, we have identified several areas where more specific information will be required.

- 1) Comparable Resources - How many other moveable bridges are there in Talbot County and in the state? Are there others of this type (heel trunion rolling lift bridges with overhead counterweight) or closely related types in the state? If so, please provide information on their location, construction date, current condition, and integrity.
- 2) Existing Integrity - Please provide a more detailed "History of Repairs." For example, most items in the history, such as "replaced machinery" or "replaced structural members," are too general to be of any use in evaluating integrity. They do not tell us how important these elements are or how many or how much was replaced. It might be useful to know the percentage of original material that has been replaced over the years, if that can be calculated.
- 3) Rehabbed Integrity - Please provide a more detailed description of the repair and replacement work expected to be necessary to rehabilitate the bascule span (excluding the approaches and substructure). Similarly, it might be useful to know the percentage of original material that would be replaced as a result of the rehabilitation.

64

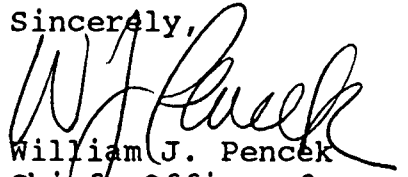
We believe the site visit with SHA bridge engineers and project planning staff which has been arranged for July 16, 1992 will be of assistance in assessing integrity and may help us to refine the last two questions. However, it may be that only an expert in historic bridge engineering will be able to satisfactorily answer these questions which turn on highly technical points of bridge engineering and National Register eligibility.

In addition to the questions above relating to significance and integrity, in reviewing the materials on the project, we find we have several questions relating to the proposed replacement bridge alternatives:

- 1) What would be the impact of the approaches on the island for Alternates B and C, which are 6 feet higher than the existing bridge? Where on the island would the approach begin to rise and at what slope? Are any graphics available which illustrate the approaches for Alternates B and C?
- 2) If the height of the bridge were raised 6 feet, what impact would that have on the number of openings required? In other words, what percentage of the boats passing through Knapps Narrows now require the bridge to open and what percentage would require opening under Alternates B and C?
- 3) In the various materials we were provided, the width of proposed Alternates B and C varies from 35 feet to 44 feet. What is accurate?

In conclusion, we are not convinced that rehabilitation is not a prudent and feasible alternative. We hope this letter is of some assistance to SHA in outlining our approach to examining the questions raised by the proposed project. The site visit should help Trust staff to better understand the existing condition of the bridge and rehabilitation requirements. If you wish to schedule another meeting following the site visit to further discuss the matter, we would be happy to meet with you. In the meantime, should you have any questions, please contact me or Elizabeth Hannold of my staff at (410) 514-7600.

Sincerely,

  
William J. Pencek  
Chief, Office of  
Preservation Services

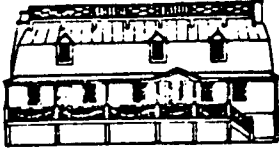
WJP/EAH

cc: Mr. Bruce Grey  
Ms. Rita Suffness  
Ms. Jerry Barkdoll

Ms. Lorraine Strow  
Mr. Paul Wetlauffer



MARYLAND  
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JUN 10 2 52 PM '92

William Donald Schaefer  
Governor

Jacqueline H. Rogers  
Secretary, DHCD

June 15, 1992

Office of Preservation Services

Ms. Cynthia D. Simpson  
Deputy Division Chief  
Project Planning Division  
State Highway Administration  
707 North Calvert Street  
Baltimore, Maryland 21203-0717

Re: Contract No. T 369-101-271  
MD 33 over Knapps Narrows from  
Willey Road to 2000' north of  
Knapps Narrows  
Talbot County, Maryland  
Section 106 Review

*Cynthia*  
Dear Ms. Simpson:

Thank you for your letter of April 13, 1992, received April 22, 1992, regarding the above-referenced project. Under the sponsorship of the Maryland Historical Trust and the Talbot County Historic District Commission, a reconnaissance-level survey was undertaken on Tilghman Island in 1990. The survey identified fifty contributing resources (see attached list of inventoried properties). Based on this survey and a site visit by Ron Andrews and Beth Hannold of my staff, we have determined that Tilghman Island is a National Register Historic District. The boundaries of the district are coterminous with the island.

The Tilghman Island Historic District is significant under Criteria A and C as perhaps the best remaining example of a Chesapeake island community. Tilghman was one of several small islands, including Deale, Smith, Hooper and Sharp's Islands, which began as large plantations in the 18th century, developed into agricultural communities in the mid-19th century and, at the turn-of-the century, blossomed with the advent of the seafood and tourist industries. Most of these islands have experienced considerable change in recent decades and some, like Sharp's Island have been lost to erosion. Although there are mid- and late-20th century houses scattered throughout the island and several concentrations of new development, Tilghman is still characterized by its 19th and early 20th century frame houses and still consists of four distinct villages surrounded by open fields and ever-present views of the water. Moreover, Tilghman remains a community of

*Maryland*

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Department of Housing and Community Development  
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66

watermen and home to a large number of skipjacks. Therefore, Tilghman offers the best opportunity in Maryland for the study of the development of these islands and the lifeways of the Chesapeake.

In the 1700s Tilghman Island was divided into several large plantations owned by Matthew Tilghman. By the mid-19th century much of the land had been subdivided into smaller farms and by the last quarter of the 19th century four small communities had grown up: Tilghman, Avalon, Fairbank and Barneck. Although mostly residential, these villages also contained stores, churches and schools. In the 1880s and 1890s, with improvements in shipping and food preservation, the seafood industry took off and the island burgeoned. Packing houses for oysters, crabs, fish, and roe as well as for tomatoes, corn, and other vegetables were found on the island. Boatbuilding and repair was another important industry. Tilghman was known for several boat types indigenous to the Chesapeake: log canoes, bug-eyes, and skipjacks. Improvements in rail and steamboat transportation in the 1890s brought tourists from Baltimore and other areas. Many private homes were converted to boarding houses in the summer and several hotels were constructed. Resources representing all of these industries remain on the island today.

The architecture of Tilghman Island dates from the mid-19th through the 20th century and is nearly all frame construction and modest, vernacular design. However, there are several houses of more elaborate design along Wharf Road in Tilghman and, scattered throughout the island, a number of houses of an unusual pie shape formed by two equal, diagonally-placed wings and a projecting entrance bay. The building was done by local carpenters, some of whom also worked as boat builders.

The boundaries of the island itself form the most appropriate boundaries for the historic district. The period of significance extends to World War II.

We hope you will agree with the above opinion. We will await your response to our determination. If you have any questions, please contact Beth Hannold at (410) 514-7600.

Sincerely,



J. Rodney Little  
State Historic Preservation Officer

JRL/EAH  
Enclosure

cc: Mr. Thomas C. Williams      Mrs. Polly Shannahan  
    Ms. Rita Suffness

67

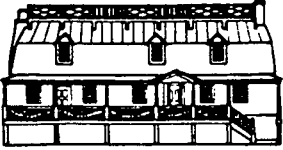
Tilghman Island Architectural Survey  
Talbot County, MD  
August 1990

Table of Contents-Numerical

T-815	Black Walnut Point Inn
T-816	Lewis Cummings House
T-817	Lewis Fluhart House
T-818	Weber House
T-819	George Taylor House
T-820	Gorman Cummings House
T-821	Kapisak Store
T-822	William James Dobson House
T-823	Swan Song
T-824	Tom Faulkner House
T-825	Nathan Parks House
T-826	Glendy Larrimore House
T-827	Frank Fairbanks House
T-828	Fairbank Methodist Church, or The Little Chapel
T-829	St. John's M.E. Church or The Southern Church
T-830	Bud Larrimore House
T-831	Charlie Faulkner House
T-832	Eddie Harrison House
T-833	Barneck School
T-834	Levin Harrison House
T-835	Dick Mason House
T-836	W.H.Cummings House
T-837	Tilghman M.E.Church
T-838	Ben Harrison House
T-839	The Gables
T-840	Wharf Road Bungalow
T-841	Frazier Covington House
T-842	Tilghman Covington House
T-843	Bayshore Cottage
T-844	Harry Howeth House
T-845	Howeth Department Store
T-846	Howeth Barber Shop

- T-847 Tilghman Bank
- T-848 Sinclair House
- T-849 Riverdale Hotel, or Harrison's Chesapeake House
- T-850 William Roe House
- T-851 J.C.Harrison House
- T-852 The Rest
- T-853 J.B.Harrison House
- T-854 Tilghman Country Store
- T-855 Red Men's Hall
- T-856 Jackson House
- T-857 The Mission, or Pilgrim's Holiness Church
- T-858 The Elms
- T-859 Lee House
- T-860 Andrew Birmingham House
- T-861 Mary McCarty Store
- T-862 Tilghman Pool Hall
- T-863 Joseph Jackson House
- T-864 Miss Hett's House
- T-865 Alex Cooper's House

MARYLAND  
HISTORICAL



TRUST

69  
William Donald Schaefer  
Governor

Jacqueline H. Rogers  
Secretary, DHCD

December 12, 1990

Ms. Cynthia D. Simpson  
Assistant Division Chief  
Project Planning Division  
State Highway Administration  
707 North Calvert Street  
Baltimore, Maryland 21203-0717

Re: Bridge No. 20001  
MD 33 over Knapps Narrows from  
Willey Road to 2000' north of  
Knapps Narrows, Tilghman Island  
Talbot County

Dear Ms. Simpson:

Thank you for your letter of October 17, 1990 informing us that State Highway Administration (SHA) is considering replacing Bridge No. 20001 over Knapps Narrows either in the existing location or on a new location nearby.

The Maryland Historical Trust (MHT) strongly recommends against any replacement of the Tilghman Island Bridge. Located just to the East of three National Register-listed skipjacks, this unusual, low drawbridge spanning the Narrows provides those entering Tilghman Island with a unique experience and vista. The island itself is of exceptional significance as a still active maritime community representative of Maryland's rich maritime heritage. Furthermore, replacement of the bridge seems unnecessary as the bridge appears to operate in an efficient manner. Any action which promotes increased traffic would, in our opinion, be inadvisable, given the character of the community and the size of the island.

To address your question regarding levels of significance for properties in the project area, we concur with the following:

<u>Name</u>	<u>Level of Significance</u>
Three Skipjacks (T534, T542, T544)	National Register
Jones House (Nicholas Residence, T365)	Maryland Inventory

*Maryland*

Division of Historical and Cultural Programs  
Department of Housing and Community Development  
Shaw House, 21 State Circle, Annapolis, Maryland 21401 (301) 974-5007

Ms. Cynthia D. Simpson  
December 12, 1990  
Page 2

Ed Lomax House and Cemetery  
(Cromwell Farm)

Maryland Inventory

Cooper-Cummings House

Maryland Inventory

However, we do not concur that the Tilghman Island Bridge (T486) and Cooper-Garvin House are Maryland Inventory Level. Despite the Maryland Inventory level designation of the bridge in the M/DOT Report, we believe it is eligible for the National Register for the following reasons:

The Tilghman Island Bridge is eligible under Criteria C for engineering and under Criteria A for association with the unique maritime history of Tilghman Island. Constructed in 1934, the bridge is over 50 years old. As a movable bridge it is relatively rare in the State of Maryland. As an overhead counterweight bridge, it is extremely rare, one of three in the state, according to the 1980-1981 M/DOT bridge survey. Aesthetically, the low profile of the bridge is in harmony with the low lying, marshy landscape. In addition, the bridge is indicative of the great importance of maritime activities to this community which developed around the harvesting and processing of shellfish and which serves as the home of the skipjack fleet. Still a center of fishing and boating, the bridge lifts many times a day to allow maritime traffic to pass.

We believe the Cooper-Garvin House is eligible for the National Register of Historic Places, either individually or as one of a group of related houses, for the following reasons:

The Cooper-Garvin House is eligible under Criteria C for architecture. One of a group of approximately nine remaining houses of a unique, quarter-circle plan found in a small area of Talbot County. These houses are believed to be the work of James H. Cooper, a local builder who was extremely active in the building boom which took place on Tilghman Island at the turn of the century. The inventive design utilizes simple materials and forms to create a house that has unusual presence. The Cooper-Garvin House is also of interest as apparently having been built for Alexander Cooper, the brother of James H. Cooper.

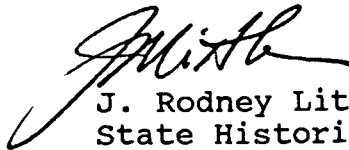
Ms. Cynthia D. Simpson  
December 12, 1990  
Page 3

You should be aware of a recent, MHT-sponsored survey of cultural resources on Tilghman Island which awaits evaluation, but may lead to the designation of a National Register Historic District on the Island. This district would probably include the project area and all the properties identified in your letter would be considered contributing resources.

Finally, our records do not indicate that we have corresponded with SHA concerning archeological resources on this project. Please send us a copy of the project's archeological assessment (including terrestrial and submerged resources), and keep us informed regarding the schedule for implementing Phase I archeological surveys.

We hope SHA will reevaluate its determinations of eligibility for the Tilghman Island Bridge and Cooper Garvin House so that we may concur. We would appreciate being kept abreast of any developments concerning the bridge replacement. The project would be of great interest to the Maryland Historical Trust, and certainly to the Tilghman Island community as well. If you should have any question, please contact Elizabeth Hannold (for structures) or Elizabeth Cole (for archeology) at (301) 974-5007.

Sincerely,



J. Rodney Little  
State Historic Preservation Officer

JRL/JEF/EH/EJC

cc: Ms. Rita Suffness  
Dr. Ira Beckerman  
Mr. Thomas C. Williams  
Mrs. Polly Shannahan

**APPENDIX A**



APPENDIX 1

History of Repairs to Bridge No. 20001  
MD 33 over Knapps Narrows

- 0 Replacement of existing timber deck with concrete on the approach roadways and open steel grid on the bascule span.
- 1970-71 Repaired all babbitt bearings (machinery has been replaced since then).
- 1979 Replaced 1 traffic gate on island side.
- 1981 Electrical repairs.
- 1981 Electrical repairs.
- 1981 Approximately this date, Whiting & Turner replaced machinery and segmental girder track portions.
- 1985 Replaced structural members.
- 1986 Electrical repairs.
- 1987 Electrical repairs.
- 1988 Electrical repairs.
- 1989 Replaced one (1) beam bearing seat under roadway on mainland side. plus modify and strengthen beams, six (6) each, under subcontract with Smith Bros., Inc.
- 1992 Replaced stringers grate system and wheel guard.

**APPENDIX B**

July 27, 1992

MD 33 @ KNAPPS NARROWS  
SUMMARY OF RESPONSES

DATE	NAME/AFFILIATION	PREFERRED ALTERNATIVE
4/28	H. Chaney/Chaney Services	C
None	Herman Salirs (Reply returned)	A
None	Robert Crowthers (Reply returned)	A
4/29	Jack & Eileen Wilson (Tilghman)	A
4/30	Jack & Eileen Wilson (Chalfont, PA)	A
4/30	R. Blount (Reply returned)	A
5/2	James Gilliece	None
5/4	Bart Wilson	A
5/8	Samuel Sherts/Charterboat Capt.	A
5/19	Rev. James Blaine/Church Pastor	A
5/22	Ann Marie Rutherford	C
5/26	Clyde Kelly, III/Pres. Dodd Distr.	B/C (New)
5/27	Levin (Buddy) Harrison, III/ Harrison's County Inn	B/C (New)
5/28	Jacob Schmidt, Jr/Hopkins Sales Co.	B/C (New)
5/28	Barry Schomberg/United Shellfish	B/C (New)
None	J. Wilson/Bus Contractor	C
None	W. Bradshaw/Bus Contractor	C
None	D. Bradshaw/Bus Contractor	C
None	Jean Wilson/Bus Contractor	C
None	W. Collins/Waterman	C
None	Michael Lipski/Waterman	C
None	F. Ernst/Waterman	C
None	Alan Faulkner/Waterman	C
6/1	Levin Harrison, IV/ Tilghman Vol. Fire Co.	C

July 27, 1992

MD 33 @ KNAPPS NARROWS  
SUMMARY OF RESPONSES

DATE	NAME/AFFILIATION	PREFERRED ALTERNATIVE
6/3	Edward Miller/Miller Corp.	C
6/4	W. Duncan/Pres. St. Michael's Bank	C
6/4	Edward Higgins/Owner Salty Oyster Restaurant	C
6/11	Norman Shannahan/Pres. Artesian Well Co.	C
6/17	Ronald Collier/Marine Repair	C
None	Thomas Sigler	C
None	John Harrison	C
None	Betty Whiting	C
None	Gordon Haegerich/Waterman	C
None	Dawn Motovidlak/Waterman	C
None	Alan Harrison/Waterman	C
None	Stanley Larrimore/Skipjack Capt.	C
None	John Motovidlak/Skipjack Capt.	C
None	Robert Massball/Skipjack Capt.	C
6/19	John Long, III/V.P. Talbot Co. Chamber of Commerce (Board unanimously supports)	C
6/19	David Lee/Avon-Dixon Insurance	C
None	Howard Romm/V.P. Reliable Liquors	C
7/8	Jeanette Glose (Baltimore)	A
7/9	Bernard Watko	C

Totals

Alt. A: 9  
 Alt. B/C (New): 4  
 Alt. C: 29  
 None: 1

42 letters