

1. SITE I.D. NO

## HAER INVENTORY

Historic American Engineering Record  
Department of the Interior, Washington, D.C. 20240

2. INDUSTRIAL CLASSIFICATION

Bridges, Trestles, and Aqueducts

3. PRIORITY

4. DANGER OF DEMOLITION?  
(SPECIFY THREAT) YES  NO  UNKNOWN

Tunnel

9 8 0 4

5. DATE

1940

6. GOVT SOURCE OF THREAT

OWNER

ADMIN

90/24 090000038700

7. OWNER/ADMIN

State Department of Transportation

8. NAME(S) OF STRUCTURE

Mount Baker Ridge Tunnel

9. OWNER'S ADDRESS

Highway Admin. Building, KF-01  
Olympia, WA 98504

10. STATE

WA

COUNTY NAME

King

CITY/VICINITY

Seattle

CONG.  
DIST.

0 3

STATE

COUNTY NAME

CITY/VICINITY

CONG.  
DIST.

11. SITE ADDRESS (STREET &amp; NO)

8 miles east of junction SR 900

12. EXISTING  
SURVEYS NR NHL HABS HAER-I HAER NPS CL6 CONF STATE COUNTY LOCAL OTHER DEL

13. SPECIAL FEATURES (DESCRIBE BELOW)

 INTERIOR INTACT EXTERIOR INTACT ENVIRONS INTACT

14. UTM ZONE

EASTING

NORTHING

SIGN

SCALE

 1:24 1:62.5QUAD  
NAME

Seattle South

UTM ZONE

EASTING

NORTHING

SIGN

SCALE

 1:24 1:62.5QUAD  
NAME

Seattle South

15. CONDITION.

70  EXCELLENT71  GOOD72  FAIR73  DETERIORATED74  RUINS75  UNEXPOSED76  ALTERED82  DESTROYED85  DEMOLISHED

16. INVENTORIED BY

Lisa Soderberg

AFFILIATION

HAER/Washington State Bridge Inventory

DATE

April 1980

17. DESCRIPTION AND BACKGROUND HISTORY, INCLUDING CONSTRUCTION DATE(S), HISTORICAL DATE(S), PHYSICAL DIMENSIONS,  
MATERIALS, EXTANT EQUIPMENT, AND IMPORTANT BUILDERS, ENGINEERS, ETC.

In 1940, the state highway department provided a direct link between the pontoon bridge and the city business center by penetrating the Mount Baker Ridge which rises to an elevation of 260 feet above the west shore of Lake Washington. The two identical tunnels are 1,466 feet long. They each carry a 24 foot wide roadway which enables one-way traffic to travel in each direction. A single three foot sidewalk enables pedestrians to pass through one tunnel.

The tunnels, which are spaced 60 feet apart on centers, were driven through tight, heavy blue clay of glacial origin, a material that is uncommon in the history of western tunnel driving. Because no rock was encountered in either tunnel, there was no need for drilling or for explosives. However, the soft material exerted a tremendous pressure on the structure which caused difficult construction problems, necessitating the installation of heavy timbers to support the overburden of the earth until the permanent concrete lining could be placed. The pioneer drifts were advanced by

(CONT OVER)

18. ORIGINAL USE

Tunnel

PRESENT USE

Tunnel

ADAPTIVE USE

19. REFERENCES—HISTORICAL REFERENCES, PERSONAL CONTACTS, AND/OR OTHER

"Twin Tunnels Driven Through Clay for Lake Washington Bridge Project," Western Construction News, July 1940, p. 246.  
State Department of Transportation files  
"Lake Washington Bridge," pamphlet.

(CONT OVER)

20. URBAN AREA 50,000  
POP. OR MORE? YES  NO

21. NPS REGION

N W

22. PUBLIC ACCESSIBILITY

 YES, LIMITED YES, UNLIMITED NO UNKNOWN

23. EDITOR

INDEXER

24. LOCATED IN AN HISTORIC DISTRICT?

 YES NO

NAME

DISTRICT I.D. NO

Description (continued)

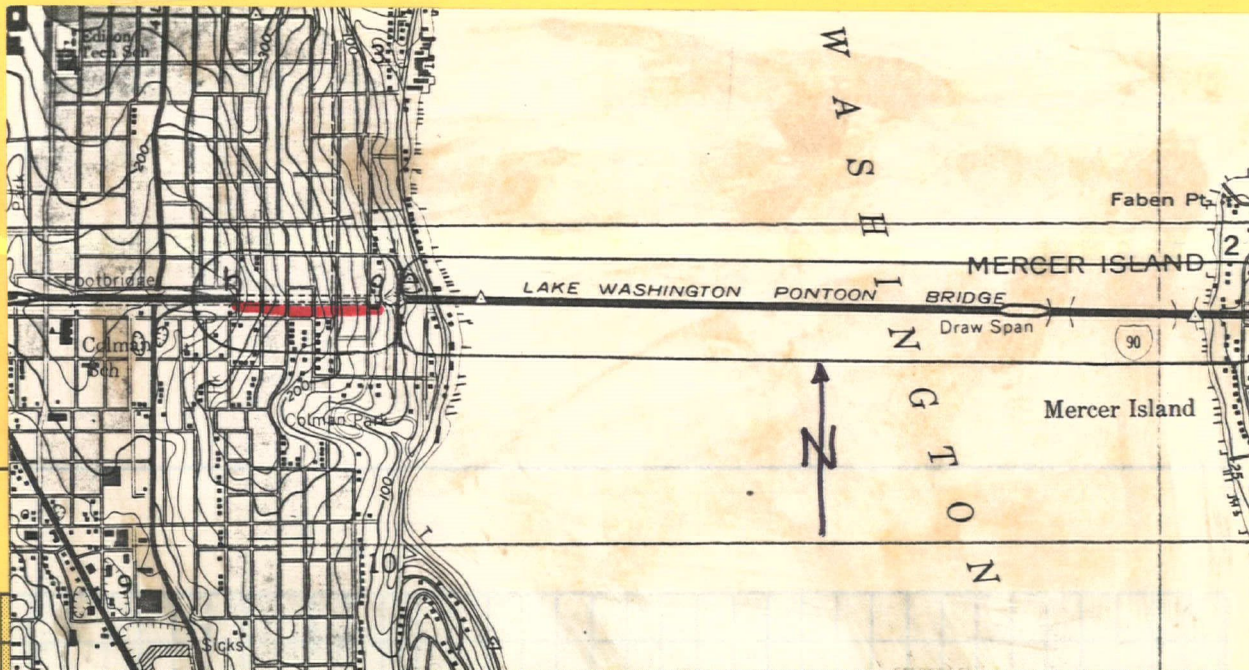
air-spading, while the main core section was excavated with an electric shovel.

In cross-section, each tunnel forms the shape of a modified horse-shoe. The bore is circular. However, the invert at the base of the tunnel is backfilled up to the grade of the concrete paving slab. The vertical clearance between the crown of the arch and the pavement is 23 feet. Extensive footings were used which facilitated the placing of the arch lining, and added stability to the final structure.

The specifications called for a tunnel lining that was heavily reinforced with steel and had a minimum thickness of ten inches. The design also specified that the timber sets should be 10 x 14 inches in size which resulted in a lining that was 24 inches thick between sets. The Bates and Rogers Construction Corporation of Oakland, California carried out the project for Washington Toll Bridge Authority at a cost of \$1,372,000.

The pair of tunnels formed a major part of the \$9,000,000 highway project that consisted of 6½ miles of roadway, and provided a new and modern entrance into Seattle from the east. The striking art deco detailing on the portals of the tunnels enshrine this entranceway into the city. The facade is tiered in a series of setbacks which echo and emphasize the arch form of the tunnel opening. Three pictorial scenes of swirling geometric shapes and figures portraying Seattle as the nation's gateway to Alaska and to the Orient, project from the smooth surface of the portal.

As one of the few tunnels within the State which has been driven through clay of glacial origin, the Mount Baker Ridge Tunnel is noteworthy from a structural perspective. However, the over-riding significance of the bridge lies in the handsome architectural treatment of the tunnel portal which demonstrates the way in which Art Deco or Modernistic Architecture was applied to engineering structures. The art deco ornament on the portals of the tunnels transforms this seemingly ordinary structure into a monumental entranceway into the city.



REFERENCES (CONTINUED)

ABSTRACT

HAER NO	LC	TECH REPORT	HIST REPORT	CONTEMP PHOTO	HIST PHOTO	CONTEMP DRWG	HIST DRWG	COLOR PLATE	PHOTOGRAM	SW	FILM
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United States Department of the Interior  
National Park Service

National Register of Historic Places  
Inventory—Nomination Form

For NPS use only  
received  
date entered

Continuation sheet

Item number

Page

Multiple Resource Area  
Thematic Group

Name Historic Bridges and Tunnels in Washington State Thematic Resources  
State Washington

Nomination/Type of Review

Date/Signature

41. <sup>NR</sup> Lacey V. Murrow Floating Bridge  
*Less than 50 yrs* **Substantive Review**

Keeper

*[Signature]* 4/29/82

Attest

42. <sup>NR</sup> Mount Baker Ridge Tunnel **Substantive Review**

Keeper

*Bruce W. Boyd* 7-16-82

Attest

*Emma Jane Saxe* 7-7-82

43. 12th Avenue South Bridge **Entered in the National Register**

Keeper

*Silvius Byers* 7/16/82

Attest

44. Ravenna Park Bridge **Substantive Review**

Keeper

*Bruce W. Boyd* 7-16-82

Attest

*Emma Jane Saxe* 7-7-82

45. Fairfax Bridge **Entered in the National Register**

Keeper

*Silvius Byers* 7/16/82

Attest

46. <sup>NR</sup> North Queen Anne <sup>DWV</sup> Bridge **Substantive Review**  
*Less than 50 yrs*

Keeper

*Pat* 5

Attest

47. Washington Street Bridge **Entered in the National Register**

Keeper

*Silvius Byers* 7/16/82

Attest

48. Arboretum Sewer Trestle **Entered in the National Register**

Keeper

*Silvius Byers* 7/16/82

Attest

49. Sunset Boulevard Bridge **Substantive Review**

Keeper

*Bruce W. Boyd* 7-16-82

Attest

*Emma Jane Saxe* 7-8-82

50. Rosalia Railroad Bridge **Entered in the National Register**

Keeper

*Silvius Byers* 7/16/82

Attest

NATIONAL REGISTER OF HISTORIC PLACES

EVALUATION / RETURN SHEET

82004243

Substantive Review

Working No. 4/3/82-1716  
Fed. Reg. Date: 2.1.83  
Date Due: 7/1/82 - 7/18/82  
Action:  ACCEPT 7/16/82  
 RETURN  
 REJECT

Mount Baker Ridge Tunnel (Historic Bridges/Tunnels in Washington State TR), King County, WASHINGTON,

- resubmission
- nomination by person or local government
- owner objection
- appeal

Federal Agency: \_\_\_\_\_

Substantive Review:  sample  request  appeal  NR decision

Reviewer's comments:

*Exception G is justified.*

Recom. / Criteria C+G, accept.  
Reviewer E. J. Saxe  
Discipline Arch history  
Date 7-7-82  
 see continuation sheet

Nomination returned for:  technical corrections cited below  
 substantive reasons discussed below

1. Name

2. Location

3. Classification

Category Ownership Status Present Use  
Public Acquisition Accessible

4. Owner of Property

5. Location of Legal Description

6. Representation in Existing Surveys

has this property been determined eligible?  yes  no

7. Description

*Please fill in blank*

Condition  excellent  deteriorated  good  fair  unexposed  
Check one  unaltered  altered  
Check one  original site  moved date \_\_\_\_\_

Describe the present and original (if known) physical appearance

- summary paragraph
- completeness
- clarity
- alterations/integrity
- dates
- boundary selection

United States Department of the Interior  
National Park Service

## 8. Significance

Period \_\_\_\_\_ Areas of Significance—Check and justify below

Specific dates \_\_\_\_\_ Builder/Architect \_\_\_\_\_

Statement of Significance (in one paragraph)

- summary paragraph
- completeness
- clarity
- applicable criteria
- justification of areas checked
- relating significance to the resource
- context
- relationship of integrity to significance
- justification of exception
- other

## 9. Major Bibliographical References

### X 10. Geographical Data

*Please provide VBD + coverage*

- Acreage of nominated property \_\_\_\_\_
- Quadrangle name \_\_\_\_\_
- USGS References \_\_\_\_\_

Verbal boundary description and justification

## 11. Form Prepared By

## 12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

\_\_\_\_\_ national \_\_\_\_\_ state \_\_\_\_\_ local

State Historic Preservation Officer signature \_\_\_\_\_

Site \_\_\_\_\_ date \_\_\_\_\_

## 13. Other

- \_\_\_\_\_ Maps
- \_\_\_\_\_ Photographs
- \_\_\_\_\_ Other

Questions concerning this nomination may be directed to \_\_\_\_\_

Signed \_\_\_\_\_ Date \_\_\_\_\_ Phone: 202 272-3504

Comments for any item may be continued on an attached sheet



THE  
POSTAL  
OFFICE  
OF THE  
FEDERAL  
BUREAU  
OF INVESTIGATION

THE  
POSTAL  
OFFICE  
OF THE  
FEDERAL  
BUREAU  
OF INVESTIGATION

DO NOT  
CHANGE  
LANES  
IN  
TUNNELS

EXIT 4A  
Empire Way S.  
1/4 MILE

Mt. Baker Ridge Tunnel  
East Portal

59

Please refer to the map in the  
Multiple Property Cover Sheet  
for this property

Multiple Property Cover Sheet Reference Number: 64000902