1. SITE I.D. NO

HAER INVENTORY

Department of the Interior, Washington, D.C. 20240

2. INDUSTRIAL CLASSIFICATION: Bridges, Trestles, and Aqueducts / Tunnel

3. PRIORITY: 9 8 0 4

5. DATE: 1940

90/24 090000038700

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

6. GOVT SOURCE OF THREAT: OWNER ADMIN

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 COUNTY: W A / 0 3 3 — COUNTY NAME: King — CITY/VICINITY: Seattle — CONG. DIST.: 0 3

STATE COUNTY — COUNTY NAME — CITY/VICINITY — CONG. DIST.

11. SITE ADDRESS (STREET & 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	QUAD NAME
g	10	553590	5270780		☒ 1:24 ☐ 1:62.5 ☐ OTHER	Seattle South
h	10	553140	5270780		☒ 1:24 ☐ 1:62.5 ☐ OTHER	Seattle South

15. CONDITION: 70 ☐ EXCELLENT 71 ☐ GOOD 72 ☐ FAIR 73 ☐ DETERIORATED 74 ☐ RUINS 75 ☐ UNEXPOSED 76 ☐ ALTERED 82 ☐ DESTROYED 85 ☐ 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

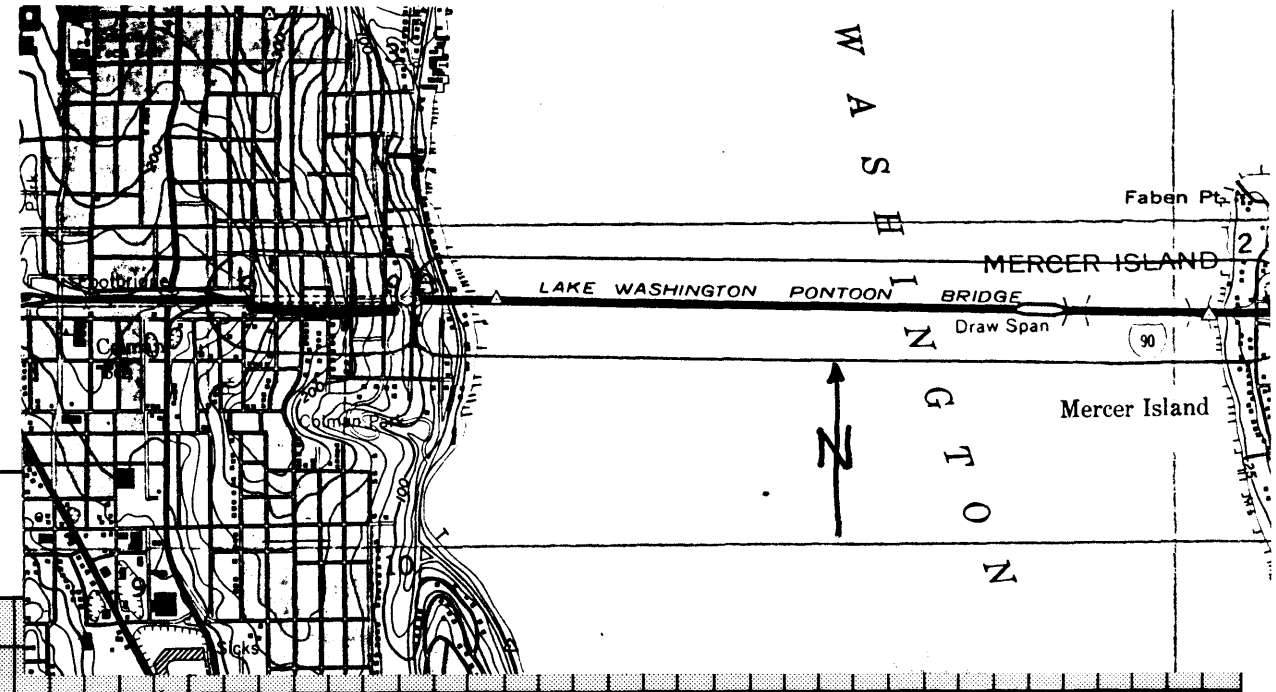
Description (continued)
air-spading, while the main core section was excavated with an electric shovel.

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