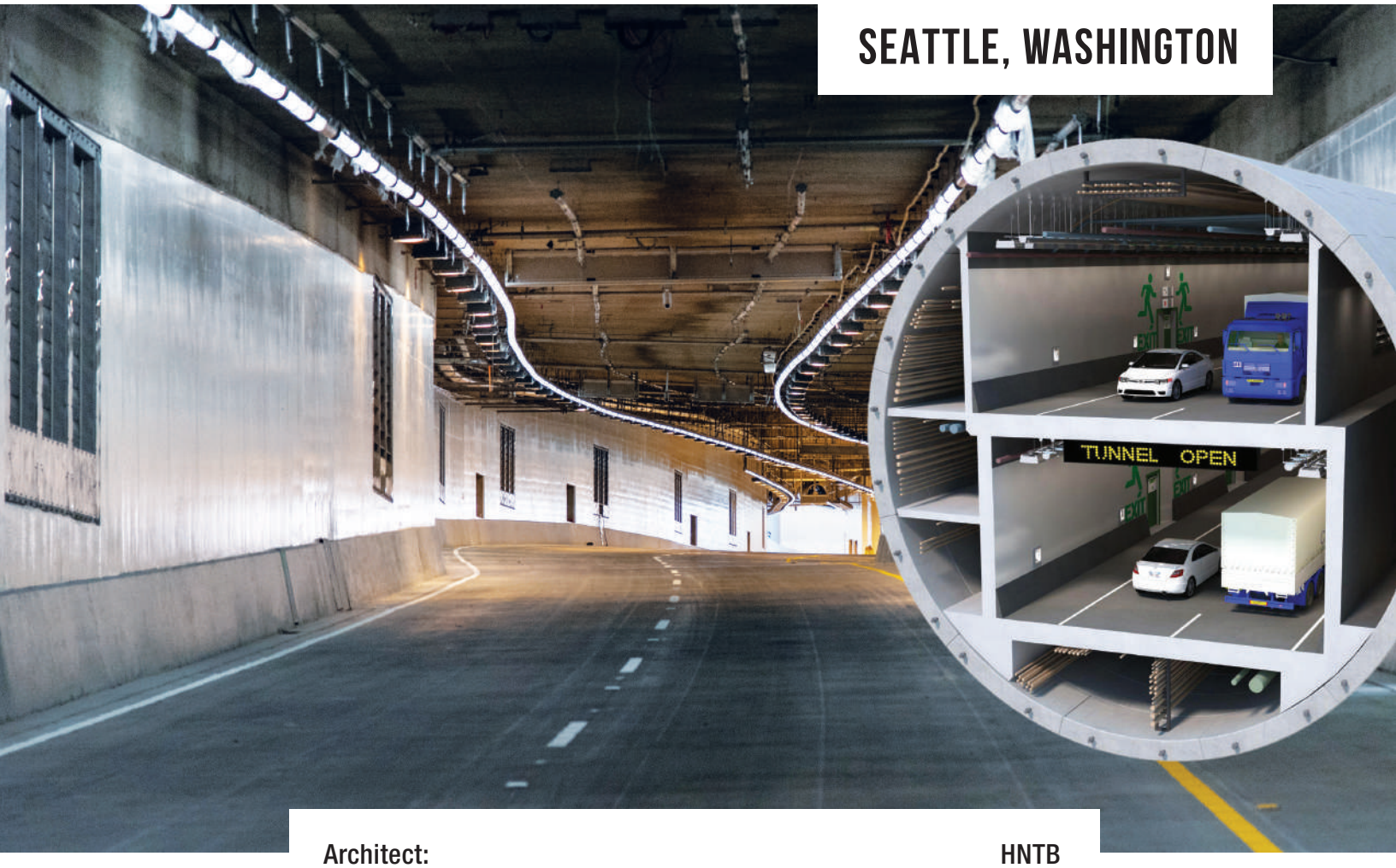
SR 99 TUNNEL

ALASKAN WAY VIADUCT REPLACEMENT PROJECT

SEATTLE, WASHINGTON



Architect:	HNTB
Design Build Contractor:	Tutor Perini
Civil Engineer:	Desert Mechanical, Inc.

The Alaskan Way Viaduct, an elevated section of State Route 99 in Seattle, was built in the 1950's. The age, wear and the viaduct's vulnerability to earthquakes made a replacement critical to public safety. The replacement program includes a new 1.7 mile tunnel running beneath downtown Seattle. This tunnel is built to current seismic standards and has better connections to thoroughfares. **Pottorff supplied industrial dampers and duct silencers for this project.**

5 year warranty

POTTORFF®

www.pottorrf.com

TUNNEL SYSTEM DAMPERS: TD-90 SERIES:

TD-93 and TD-94 industrial control dampers are specifically engineered and qualified for use in transit tunnel systems where tight shutoff at high velocity and/or pressure is required. The TD-93 and TD-94 meet the demanding requirements for strength, leakage, and operability in accordance with NFPA-130, NFPA-502, and UL-555S.

RATINGS:

DAMPER WIDTH	MAXIMUM SYSTEM PRESSURE	MAXIMUM SYSTEM VELOCITY
12"	32.0 in. wg	4000 fpm
24"	27.0 in. wg	4000 fpm
36"	22.0 in. wg	4000 fpm
48"	17.0 in. wg	4000 fpm

Leakage:

1.3 cfm/ft² @ 2.0 in. wg.
2.0 cfm/ft² @ 5.0 in. wg.
4.0 cfm/ft² @ 8.0 in. wg.
8.0 cfm/ft² @ 15.0 in. wg.
34.0 cfm/ft² @ 22.0 in. wg.

Results based upon a 36" × 48" damper.

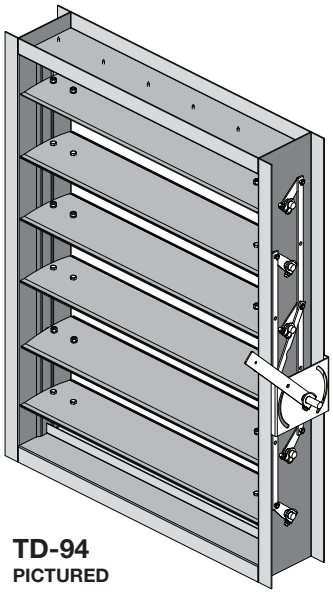
Temperature: 482°F for 1 hour per NFPA -130

Pressure Reversal Cycles: 3,000,000 simulated train pressure reversals @ 15 in. wg. of differential pressure with the standard aluminum airfoil blade.

Pressure Reversal Cycles: 8,000,000 simulated train pressure reversals @ 15 in. wg. of differential pressure with the optional steel airfoil blade.

STANDARD CONSTRUCTION:

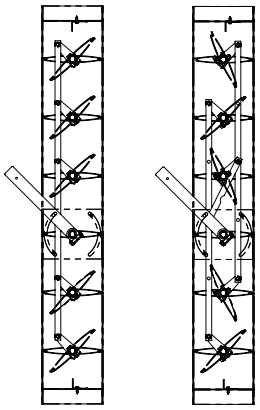
Frame:	8" × 2" × 12 gauge galvanized steel channel.
Blades:	14 gauge 6063-T5 extruded aluminum airfoil with metal-to-metal blade overlap. Parallel (model TD-93) or opposed (model TD-94) action.
Axles:	3/4" diameter stainless steel.
Linkage:	3/16" × 3/4"tie bars and 3/8" pivot pins concealed in frame. All components are stainless steel.
Bearings:	Oil impregnated sintered stainless steel sleeve pressed into frame.
Control Shaft:	3/4" × 10" round drive axle with shaft support bracket and bearing mounted to damper frame with factory mounted manual locking quadrant.
Blade Seal:	Silicone, mechanically locked into blade.
Jamb Seal:	Flexible stainless steel compression type.
Lifting Lugs:	7/8" diameter, one on each jamb of frame.
Minimum Size:	TD-93 (two blades): 12" × 12" TD-94 (two blades): 12" × 12"
Maximum Size: Multiple Sect:	Single section: 48" × 96" Unlimited



TD-94
PICTURED

OPTIONS:

- Factory mounted electric or pneumatic actuator
- Stainless steel construction
- 14 ga. galvanized steel blades
- Bolt holes in damper frame
- Outboard Bearings
- Extended perimeter mounting flange



TD-93
PARALLEL

TD-94
OPPOSED