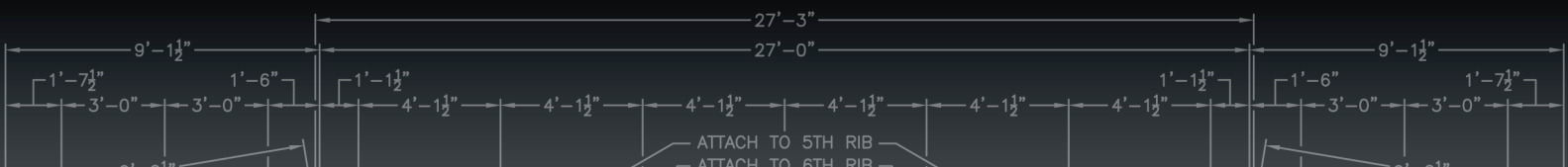




HEADWALL SOLUTIONS

Aluminum Structural Plate Welded Headwalls



ABOUT **ASPWH**

- Excellent strength and corrosive resistance properties
- Engineered as an anchored retaining wall, fully integrated with the culvert
- Flexible and lightweight materials can be managed with typical construction equipment
- Conducive to one-piece, drop-in installations to minimize road closures
- Especially suited to accommodate culverts skewed to the roadway
- An Accelerated Bridge Construction (ABC) Technology



BRIDGE **MAINTENANCE**

Lane's innovative bridge maintenance replacement program achieves desired economy by minimizing design and construction costs and employing a specialty bridge material virtually unknown by many of today's designers – aluminum structural plate.

ASPWH: An Accelerated Bridge Construction (ABC) Technology

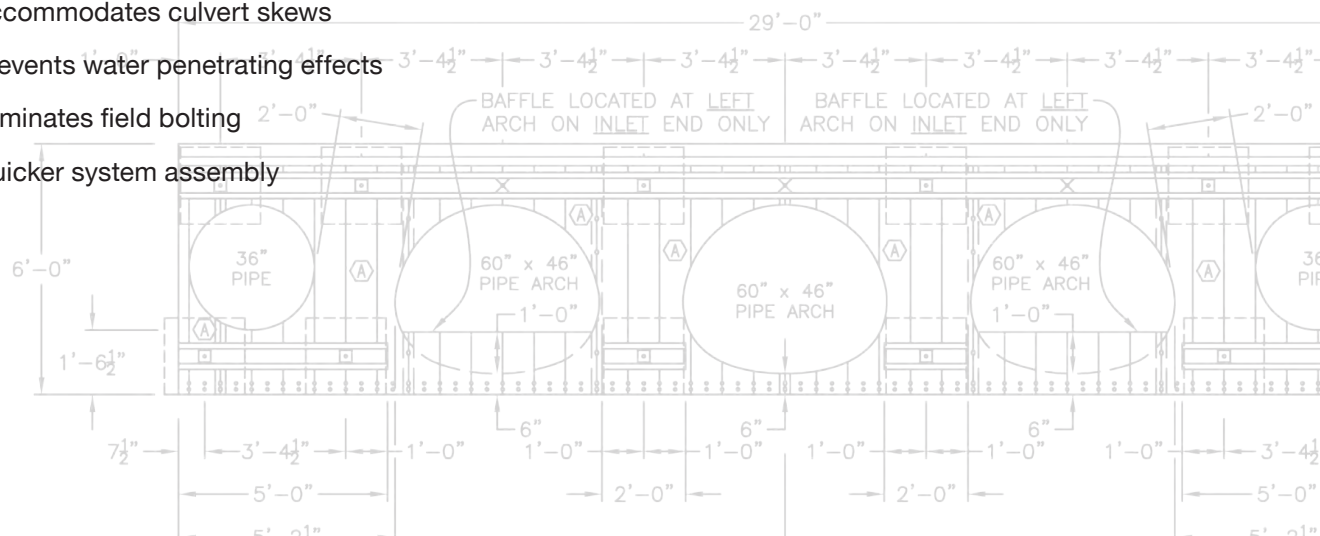
THE ALUMINUM HEADWALL **ADVANTAGE**

Lane's welded aluminum headwall structures are engineered for standard highway truck loadings (e.g., HS20, HS25, HL93), and the durability of pure aluminum also provides the ability to withstand harsh environments and site conditions. These systems, given the state-of-the-art manufacturing and professional fabrication, are engineered to exceed design expectations.

The headwall opening is fabricated to match the culvert shape and size and the pieces are fully welded together. In essence, the headwall is fully integrated with a culvert stub. The integrated headwall-culvert component becomes especially conducive to accommodating culvert crossings skewed to the roadway alignment.

WHY WELDED HEADWALLS VS BOLTED

- Increased structural rigidity
- Accommodates culvert skews
- Prevents water penetrating effects
- Eliminates field bolting
- Quicker system assembly

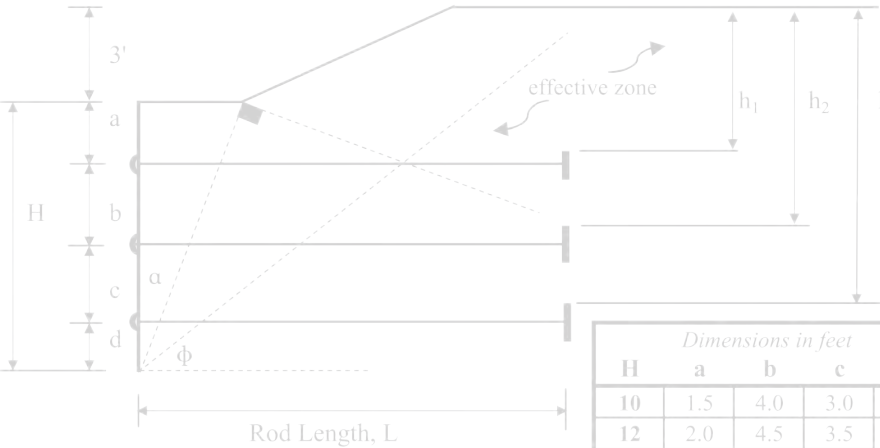


ANCHORING HEADWALLS

Aluminum structural plate headwalls are anchored from the wale beams into the effective zone as shown with deadman anchors. Active and passive lateral earth pressures are assessed to ensure sufficient pull-out resistance of the anchors and the wale beams are checked to ensure adequate capacity to support the deadman anchors without exceeding deflection limits. The structural plate check involves evaluating the moments developed from the active lateral earth pressure distributed along the height of the wall proper.

WHY CHOOSE ASPWH?

- Accommodates Skewed Alignments
- Manufacturer Designed
- Installation Supervision
- Minimized Road Closures
- Conducive to Municipal Forces/Equipment
- Rapid Installation



| <i>Dimensions in feet</i> | | | | | | | | | |
|---------------------------|-----|-----|-----|-----|------|----------------|----------------|----------------|--|
| H | a | b | c | d | L | h ₁ | h ₂ | h ₃ | |
| 10 | 1.5 | 4.0 | 3.0 | 1.5 | 14.0 | 3.67 | 7.33 | 10.33 | |
| 12 | 2.0 | 4.5 | 3.5 | 2.0 | 16.0 | 4.17 | 8.33 | 11.83 | |

THE **LANE** DIFFERENCE

- Utilizing trained and experienced craftsman for a first-rate fabrication
- Being completely involved in each phase of the project
- Providing professional engineering services and related drawings
- Performing installation supervision services
- Providing as-needed field services to ensure timely project completion



ABOUT **LANE**

As a full-line manufacturer of corrugated metal and plastic drainage products, Lane Enterprises, Inc. operates plants throughout the Northeastern, Mid-Atlantic, and South-Central states producing various types of buried structures for the construction industry.

LANE Enterprises, Inc.

3905 Hartzdale Drive, Suite 514

Camp Hill, PA 17011

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lane-enterprises.com

For nearly 90 years, Lane has partnered with contractors, engineers, and municipalities to supply reliable products that provide the highest levels of service life, strength, versatility, and economy. Our focus on quality products, responsive customer service, and technical expertise has established a long, proven history of successful partnerships within the industries we serve.

LANE Facilities

PENNSYLVANIA

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| Carlisle | 717.249.8342 |
| King of Prussia | 610.272.4531 |
| Pulaski | 724.652.7747 |
| Shippensburg | 717.532.5959 |

VIRGINIA

| | |
|------------|--------------|
| Bealeton | 540.439.3201 |
| Dublin | 540.674.4645 |
| Wytheville | 276.223.1051 |

NEW YORK

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|--------------|--------------|
| Ballston Spa | 518.885.4385 |
| Bath | 607.776.3366 |

NORTH CAROLINA

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|-------------|--------------|
| Statesville | 704.872.2471 |
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TEXAS

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|--------|--------------|
| Temple | 254.727.3346 |
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CORPORATE HEADQUARTERS

| | |
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| Camp Hill | 717.761.8175 |
|-----------|--------------|

LANE Products

- Corrugated Metal Pipe
- Spiral Rib Pipe
- Corrugated HDPE Pipe
- Corrugated Polypropylene Pipe
- Structural Plate Pipe and Arches
- Structural Plate Box Culverts
- Storm Water Collection Chambers
- Storm Water Management Systems
- Storm Water Filters
- CFT (HDPE) Water Quality Unit
- CMP Sandfilter
- Open Top Slotted Drain
- Welded Wire Mesh Gabions
- Structural Plate Headwall-Culvert Systems
- Custom Fabrications (Pond Kits, Trash Racks, etc.)
- Long Span Bridge & Culvert Services
- Rebar and Custom Powder Coatings



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