



Fort Washington Way District 8 and OSE Notes

Fans directly over traffic is a safety risk to impact, corrosion, maintenance workers, and the traveling public when inspection and maintenance is needed. Locate fans over shoulder areas. Multiple fans along the length of the shoulders may be necessary. A vertical clearance of 16.5 feet shall still be required. If the required NFPA design fire cannot be attained, provide a comparison of placing fans over only the shoulders versus over all lanes. ODOT will then discuss safety pros/cons with FHWA.

Fans will have vibration on the box beams/superstructure. This should be considered during design.

Lighting and utilities directly over traffic is a safety risk to impact, corrosion, maintenance workers, and the traveling public when inspection and maintenance is needed. Locate these items on the walls or over shoulders similar to Lytle Tunnel. Conduit transverse to interstate traffic can run on top of the structure.

Utilities in between box beams are not allowed. With an estimated 4' of fill, recommend having utilities through the fill on top and not attached to beams/superstructure. This also allows easier accessibility. If longitudinal attachment is necessary to the box beam over the shoulder, it should be similar to the fan attachment already described.

If placing soil/trees over the caps/box beams, waterproofing and/or isolation boxes to contain tree roots will likely be required.

Instead of supporting fans with a threaded rod between beams, locate the threaded rod at the center of the beam and using a PVC pipe and locate the anchor on top of the composite slab at an internal diaphragm location. Provide access to the anchor for inspection/rod replacement with a waterproof manhole/junction box. All loads shall be supported on superstructure members in bearing (i.e. supported from above and not below). Use of concrete anchors of any type will not be permitted. Stainless steel may be required. A similar detail may be utilized for conduits/uni-struts in the shoulder areas.

The deflection and life cycle of the roadway portions may be different than the green space areas and therefore an isolation joint shall be provided between the two areas.

During design, keep in mind how to allow access for rehab and replacement in the future. Consideration shall be given to replace the beams under Race, Vine, and Walnut Street separately to have minimal disruption to interstate traffic.

All designs shall be in accordance with the ODOT Bridge Design Manual. Meaning the governing specifications will be the AASHTO LRFD Bridge Design Specifications. The design loading for new bridges is in accordance with BDM Section 303 (i.e. HL-93 with a FWS allowance of 0.060 ksf), and the design loading for the existing bridges is in accordance with BDM Section 401.3 (i.e. HL-93 with a FWS allowance of 0.060 ksf or 0.00 ksf depending upon traffic speed and highway system designation). Design exceptions for rehabilitated structures will be considered according to BDM Section 401.4.

The roadway portions of the bridge shall be designed for HL93 loading. The other area shall be designed for their dead loads and the higher of the 90 psf pedestrian load or an H-15 truck.

Confirm all loading of existing foundations to be re-used with the proposed loading. Consider the anticipated proposed loading versus the loads used for design of the existing foundations, walls and other components to be re-used. Complete capacity analysis.

With anticipated greenspace on the proposed cap, they could be heavily loaded for fireworks, sporting events, concerts, festivals.

Shell: Oktoberfest Zinzinnati is held in September in downtown Cincinnati. Would music stages, foot booths, etc. be allowed to be set-up on the green-space. If so, that additional festival loading needs to be accounted for during design.

Fireproofing requirements for box beams in a tunnel situation is something we will need to discuss with FHWA during plan development.

Box beams, if significantly impacted, are often not repairable. Include provisions for easier removal or replacement if needed of the fascia beam.

No drainage off caps and local roads over FWW can drain onto FWW. Drainage or standpipes shall not go through the superstructure. All storm water will need to be collected and piped away.

The structure will need to meet seismic requirements per the BDM.

Comments provided are given the limited information available and without any details with regards to depth of fill, usage above, mechanical/electrical equipment requirements, etc. However, generally speaking, within the parameters of the comments above, it was generally thought that a tunnel with composite box beams is viable.

There are numerous design details that will need to be agreed upon between ODOT, FHWA, and local sponsors before final design.