TRANSMITTAL LETTER

Change 1 to Pub. 111
PennDOT Publication No. 111

DATE
January 6, 1977

SUBJECT:
Traffic Standards - Signing - TC - 7700 Series

INFORMATION AND SPECIAL INSTRUCTIONS:

Attached is an additional issue of PennDOT Construction Standards covering the erection of traffic signs, sign supports, overhead sign support structures, sign lighting and other traffic appurtenances. This particular issue is part of the TC-7718 group covering steel overhead sign support structures, spans 120 feet to 200 feet, with or without catwalks.

Direct any questions concerning these standards to Mr. J. R. Doughty, P.E., Director, Bureau of Traffic Engineering, Pennsylvania Department of Transportation, Room 1014, Transportation and Safety Building, Harrisburg, Pennsylvania 17120, Telephone number (717)-787-3620.

CANCEL AND DESTROY THE FOLLOWING:

REQUEST ADDITIONAL COPIES FROM:

APPROVED FOR ISSUANCE BY:

J. R. Doughty, P.E. Director Bureau of Traffic Engr.
INFORMATIONAL NOTES
These Notes must be read before using these Standards. These Standards shall be used for overhead structures. Subject to limitations as shown. These shall be used as the basis for the preparation of structure layouts and contract plans. Details shown on these Standards as issued will be changed, for reference to these Standards on overhead sign structure contract plans will be permitted. Providingoommenting information is shown on the contract plans.

General Design Instructions

Design tables included in these standards have been developed using a computer program and are based on the design criteria shown on this sheet.

Towers shall be set at least 3 feet from edge of roadway pavement or cross section geometry and a sight of 5 feet will permit, with the maximum distance to center of tower equal to 50 feet. Islands 50 feet or more shall be provided for all towers, regardless of distance of setback.

Top of Foundation Pedestal shall be set a minimum 3 feet above grade. A minimum height, clear below top of pedestal, of 3 feet, shall be maintained. The top of the pedestal shall be extended above the structure. Generally the bottom of all signs on a structure shall be set to the same elevation. In the case of a structure spanning undeveloped land, where the difference in elevation between the highest point on each side is greater than 2 1/2 feet, the bottom of all signs over each side roadway shall be set to the same elevation. With the elevation difference of bottom of signs over each roadway being equal to the difference in elevation between the highest point on each side roadway.

The trusses shall be set to an elevation that places the center of the signs at a minimum of 5 feet above the top of the truss. In the instance where the ultimate sign area clearing is 1 1/2 feet, the trusses shall be to an elevation that places the center of the trusses at a height of 5 feet above the bottom of the signs. In the instance where the ultimate sign area clearing is 2 feet, the trusses shall be to an elevation that places the center of the trusses at a height of 5 feet above the bottom of the signs. In the instance where the ultimate sign area clearing is 2 1/2 feet, the trusses shall be to an elevation that places the center of the trusses at a height of 5 feet above the bottom of the signs.

The design sign area to be used for selecting member sizes for each structure shall be determined from one of the following conditions:

- The foot condition of the ultimate sign area to be used in the design shall be determined from the structure at the time of its construction.
- The condition shall be for the ultimate sign area equal to the right of way pavement or cross section geometry. The traffic sign shall be determined from the ultimate sign area equal to the right of way pavement or cross section geometry.
- The design sign area shall be the effective area computed from either of the previously defined conditions. Reduced to the next lower sign area shown in the design tables.

Towers shall be provided as specified. Footings shall be constructed of concrete sufficient to support the structure. The height of the truss, relative to the ultimate sign area, shall be based on the ultimate sign area to be used. The actual dimensions of the top of foundation pedestal, to the center of the truss, shall be provided on the design table next larger than the actual dimension from the top of foundation pedestal to the center of the truss.

Overhead sign structures may be constructed with or without catwalk. The traffic guard shall specify when a catwalk is to be included as part of the structure.

Design Criteria

Design Specifications: Design of roadway or cross section geometry.
### Design Tables

**Commonwealth of Pennsylvania**  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF TRAFFIC ENGINEERING  
OVERHEAD SIGN STRUCTURE STANDARDS  
STEEL SPANS greater than 120 FEET

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**Design Specifications**

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<th>Design Sign Area</th>
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**Truss Members**

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**Tower Members**

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**Notes**

- For General Information, Design Instructions and Criteria, see Sheet 1.
- For General Notes, see Sheet 4.
- Footing Type denotes size of footing. For example, Type BES is a footing 8" (H) x 10" (H).  
- L.L. denotes working line.
- Ice Tolerant Elevation on Sheet 4 for a method of computing dimension C.
- Splices may be relocated, sized or eliminated with approval of the traffic engineer. Relative locations of splices in top and bottom chord shall be maintained as indicated in these standards. chord A side shall be extended toward towers; if a splice is relocated number is shown in these standards.

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**Overhead Sign Structure Standards**

- Steel Spans greater than 120 feet

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**Design Tables**

- Recommended by Chief Bridge Engineer
- Revised by Design Bridge Engineer
- Draft 12/8/96

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**Diagram**

- Design Diagram
- Plan View
- Sectional View
- Elevation View

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**Additional Information**

- Full Truss Panels in Truss Details on Sheet 5.