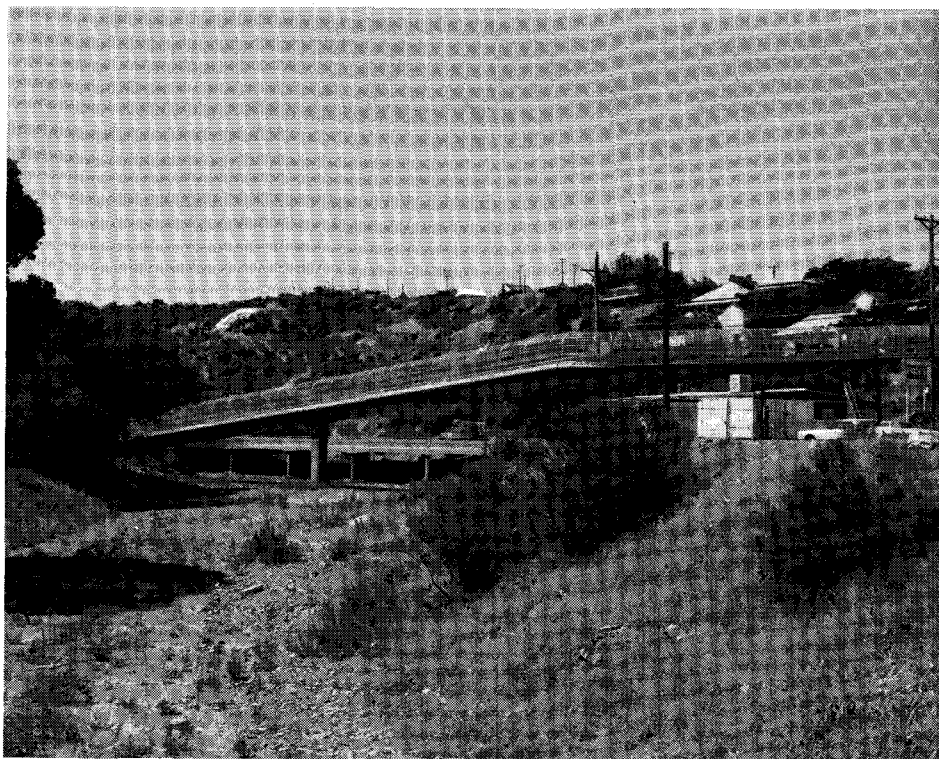


## Central School Pedestrian Overpass

**T**his four-span precast prestressed concrete box beam pedestrian overpass crosses Route 60 on the Phoenix-Globe Highway in Globe, Gila County, Arizona. The facility provides pedestrians with a safe crossing over both U.S. Highway 60 and Pinal Creek. The bridge connects the Central School parking lot with a convenient discharge point in the city.

The structure has four spans [33.0, 96.7, 96.7, 91 ft (10.1, 29.5, 29.5, 27.7 m)] and an overall length of about 338 ft (102 m). Four precast prestressed concrete box beams are used with a cantilevered top slab. Elevation and section details of the structure are given on the next spread pages. It will be noted that in the pretensioned girders some of the strands were debonded.



The following are the main dimensions of the box beams:

Depth: 4 ft (1.2 m); width: 4 ft (1.2 m).

Cantilevers: Two at 3 ft (0.91 m).

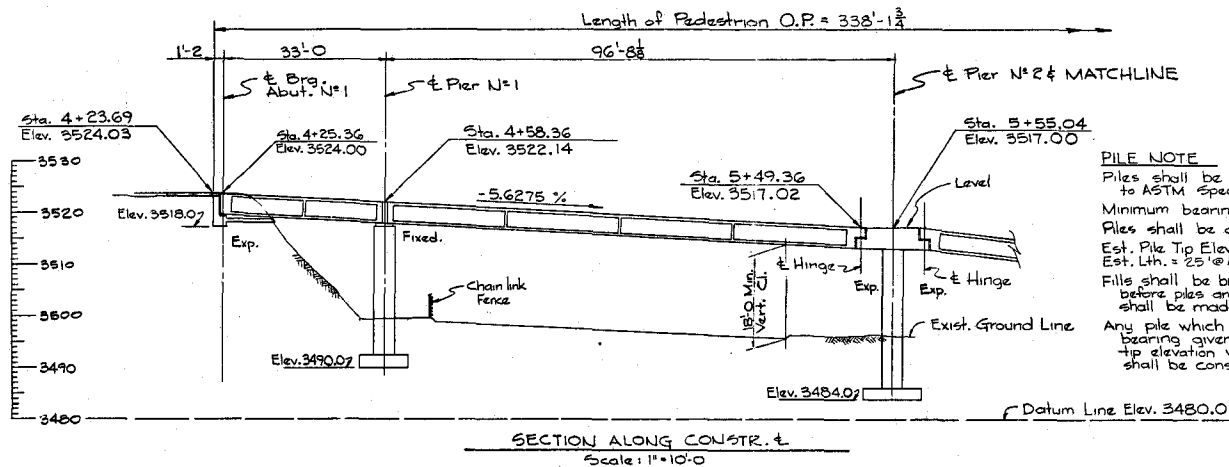
Surface width (total): 10 ft (3.05 m).

Length: 33.0, 90.92, 90.92, 91.0 ft (10.1, 27.7, 27.7, 27.8 m).

The precast elements are seated on a conventionally reinforced concrete cantilevered section at Pier No. 2. This section provides a 53-degree turn in the structure while maintaining the lines of the prestressed concrete components. The cantilevered top slab affords full composite action of the complete section for both dead load and live load, and minimized on-site forming requirements over traffic and the creek.

The precast prestressed superstructure elements provide a durable, maintenance-free bridge built with minimum traffic control and detour requirements, obviating the need for falsework within both the existing traffic pattern and Pinal Creek which frequently flows with ferocity.

The structure was completed on schedule in February 1981.



#### PILE NOTE

Piles shall be HP 10x42. Pile steel shall conform to ASTM Spec. A-36.

Minimum bearing shall be 55 Tons.

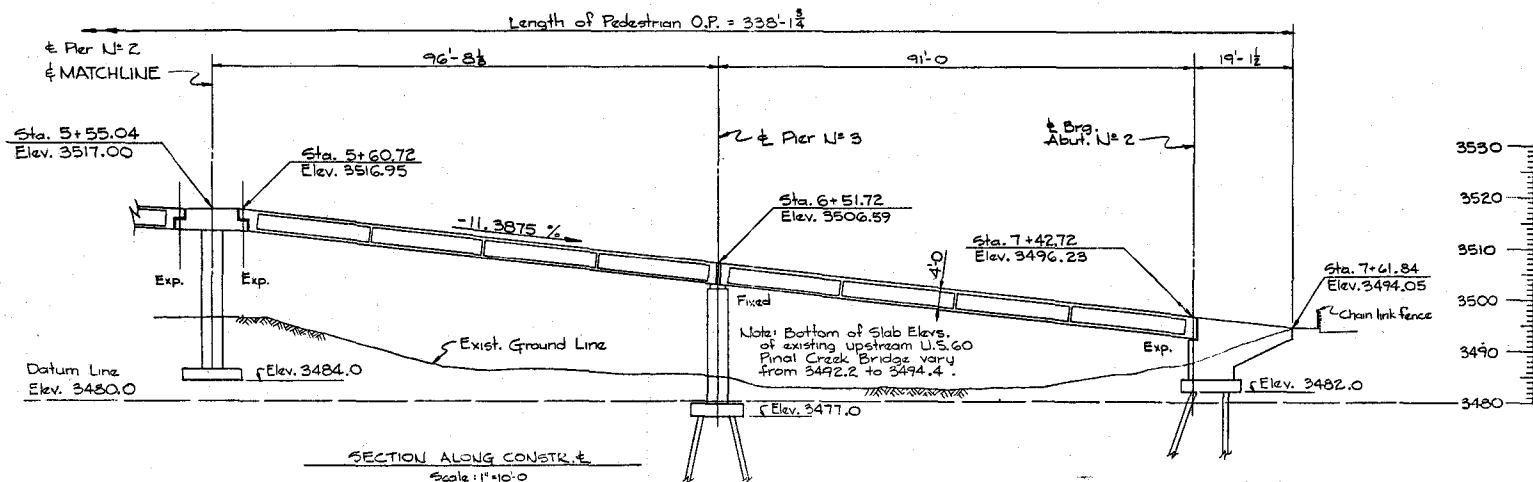
Piles shall be driven with cast steel points.

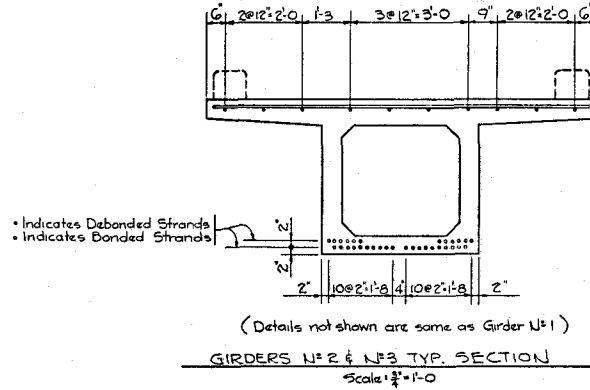
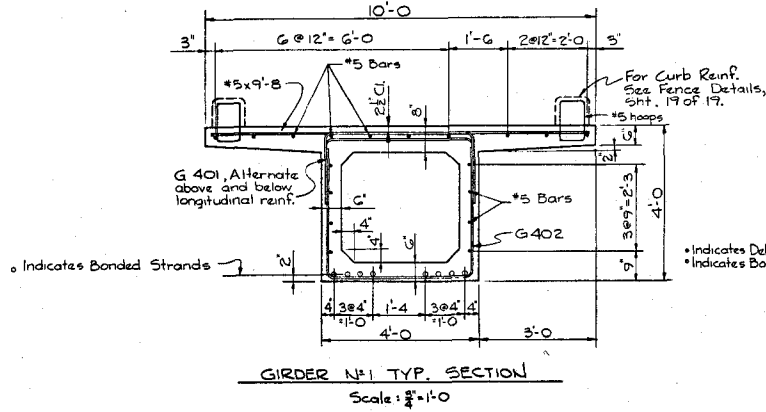
Est. Pile Tip Elev. = 3460.

Est. Lth. = 25' @ Abut. N°2, 20' @ Pier N°3.

Fills shall be built to top of pile elevation and compacted before piles are driven. Excavation for abutment concrete shall be made after piles are in place.

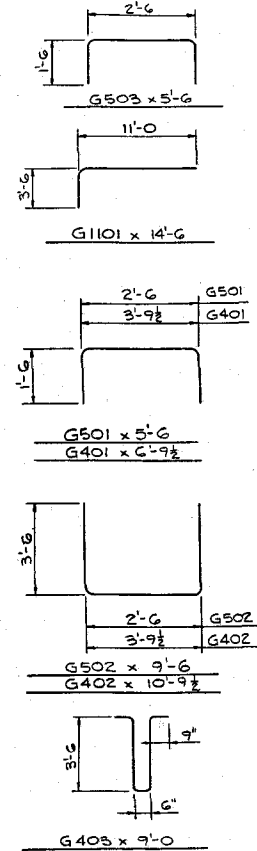
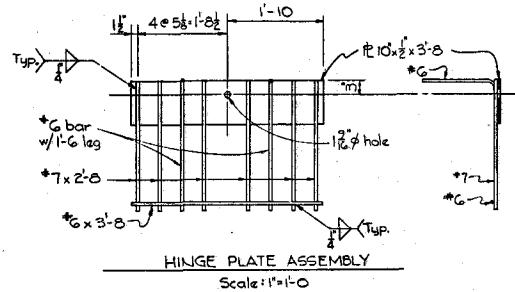
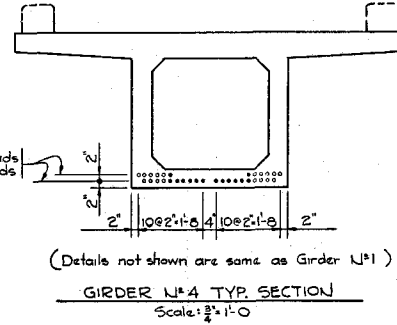
Any pile which is driven to a bearing of  $1\frac{1}{2}$  times the bearing given on the plans and which reaches a tip elevation within 3' of the estimated tip elevation shall be considered acceptable.

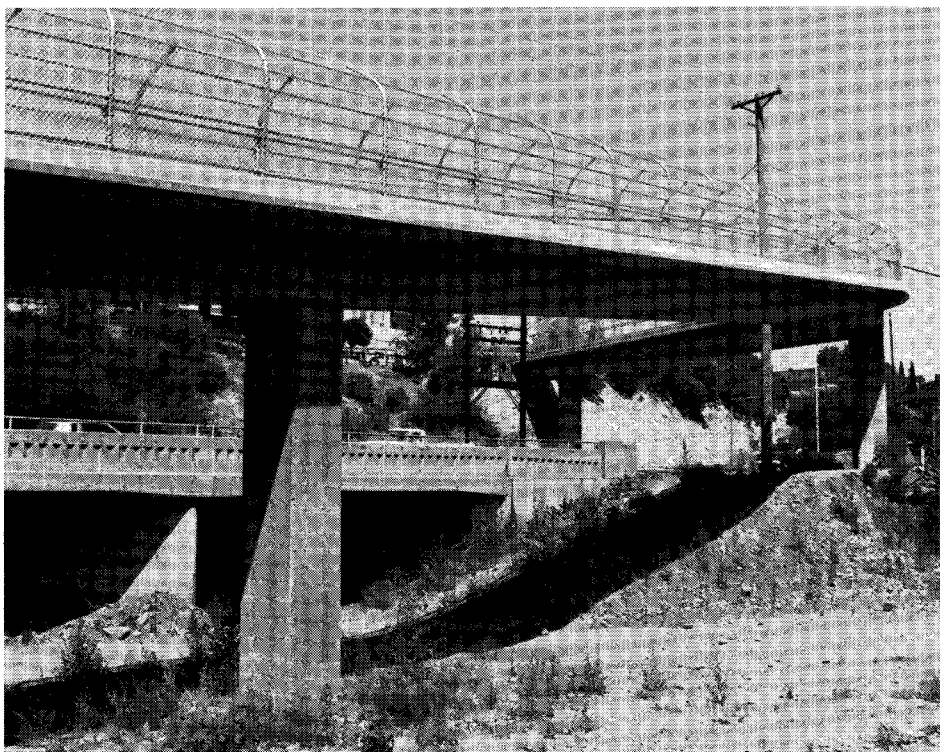




Note: Top slab longitudinal reinforcement in girders N°1 & N°4 is offset from that in girders N°2 & N°3.

Note: Debonded Strands to be debonded for 6'-0" from E. Eng. on each end of girders shown.





**CENTRAL SCHOOL PEDESTRIAN OVERPASS, Route 60 on Phoenix-Globe Highway, Globe, Arizona.**

\* \* \*

## **Credits**

**Engineer and Owner:** Structures Section, Arizona Department of Transportation, Phoenix, Arizona.

**Contractor:** C. S. McCrossan, Inc., Phoenix, Arizona.

**Precast Prestressed Concrete Manufacturer:** TPAC Division of the Tanner Companies, Phoenix, Arizona.

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