

# Product Information Bulletin 225

**Bridge Girder  
Void Forms  
(BW Photos)**

## Product Information Bulletin

### Bridge Girder Void Forms

#### Yellowhead Trail/Wayne Gretzky Drive Overpass, Edmonton, AB

Plasti-Fab® expanded polystyrene (EPS) products provide specifiers with superior performance solutions when used as a void form material within forms for concrete structures. Formwork can often be simplified and on-site construction time saved by using Plasti-Fab EPS cut shapes to replace form voids within structural concrete elements constructed from wood or other types of forming products.

Plasti-Fab EPS cut shapes were used as an alternative void forming material to form voids in site-cast concrete bridge girders on the Yellowhead Trail/Wayne Gretzky Drive (formerly named Capilano Drive) overpass project in 1993. EPS cut shapes provided an economical solution that saved significant on-site forming time for Alberco Construction. The complexity of the deck geometry was easily accommodated using Plasti-Fab EPS void material.

The bridge deck layout girder included sixty separate voids that were approximately 1.2 meter deep x 3.0 meter wide x 8 meter long within the bridge girders that made up the structure. Of these, thirty voids could be considered typical, with the remaining varying in dimensions. In addition, all voids had chamfered corners on their top and bottom edges.

The bridge deck was completely formed in six days using Plasti-Fab EPS void material. Completely formed means the spaces between voided areas and the top slab were completed in this period. The contractor utilized two crews of four men, with no special equipment required to complete installation of the voids made from Plasti-Fab EPS void material.

The contractor issued a letter to Plasti-Fab (see Appendix A) indicating complete satisfaction with the product supplied. Their letter indicates that the team effort on the project resulted in significant time savings that pushed this portion of the job ahead of schedule.

Appendix B of this bulletin provides a photographic review of the project as it progressed. Some of the points that can be noted are:

1. The method used to hold individual sections of Plasti-Fab EPS void forms in place vertically and to prevent flotation during concrete placing is critical.
2. The method used to support reinforcing cage in the formwork is critical, including the type and number of reinforcing support chairs used, in order ensure point loads on the Plasti-Fab void material do not exceed compressive resistance limitations.

Every product application benefits from the Plasti-Fab commitment to quality, service and expertise. By choosing Plasti-Fab EPS void material as a method to construct in situ concrete void, customers are assured of getting the right EPS product solution that will meet their technical specifications and installation requirements.



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**Appendix A**

## **Appendix A**

**Bridge Girder Void Form**  
**Yellowhead Trail/Capilano Drive Project**  
**Alberco Construction Letter (1 page)**



# ALBERCO

CONSTRUCTION LTD.

General Contractors

14 Rayborn Cres., Riel Business Park  
St. Albert, Alberta T8N 1N2

Ph. (403) 459-7110

Fax. (403) 459-7185

7 June 1994

File: 6/334

PLASTI-FAB LTD.  
16135 - 114 Avenue,  
Edmonton, AB  
T8M 2Z3

Attention: Marc Brisebois, Manager

RE: Yellowhead Trail/Capilano Drive  
Our Project No. J334/93

Dear Sir:

We wish to express our thanks and appreciation for the team effort approach in using your GeoVoid product in the construction of a bridge deck at the Capilano/Yellowhead Interchange.

Your product was instrumental in meeting the project schedule and provided, what we believe, a revolutionary method of construction to conventional forming techniques. The complexity of deck geometry was easily accommodated by your product and resulted in significant time savings.

We look forward to potential use of GeoVoid in future projects.

Sincerely,

ALBERCO CONSTRUCTION LTD.

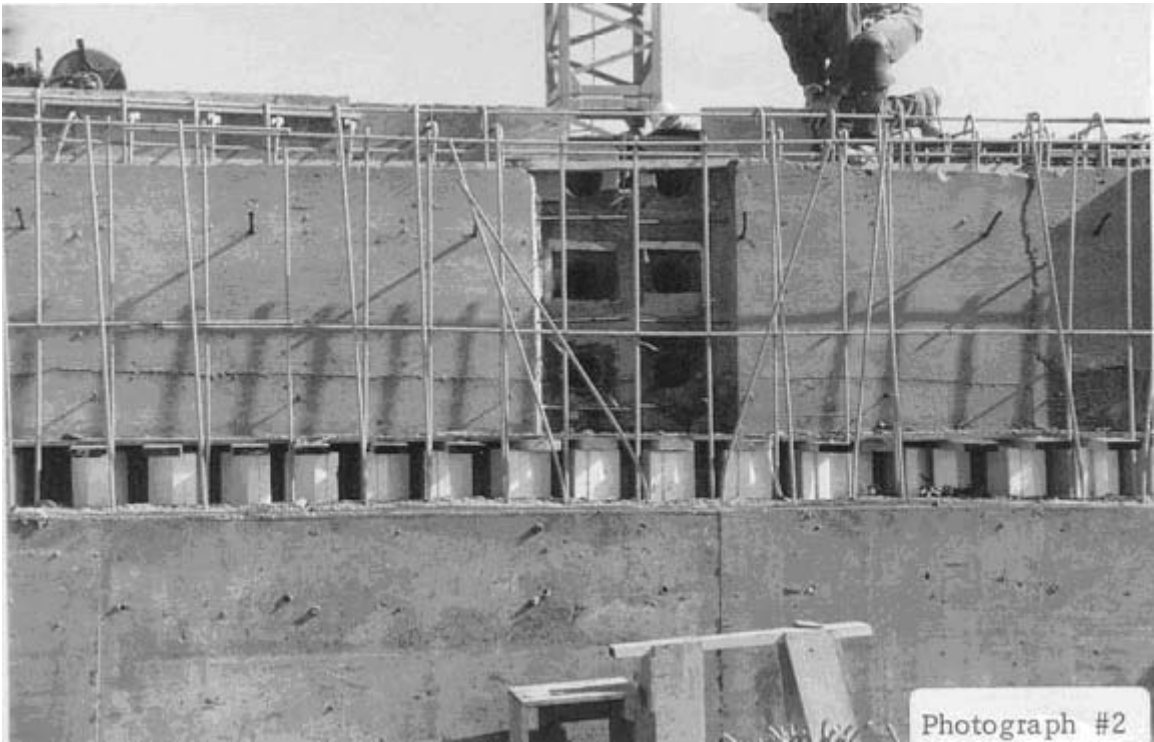
Ron Simonsmeier, P. Eng.  
President

x.c. National Concrete Association  
Atten: Len Denbraber

RS/lr

**Appendix B  
(30 pages attached)**

**Bridge Girder Void Form  
Yellowhead Trail/Wayne Gretzky Drive Project  
On-Site Construction Photos**





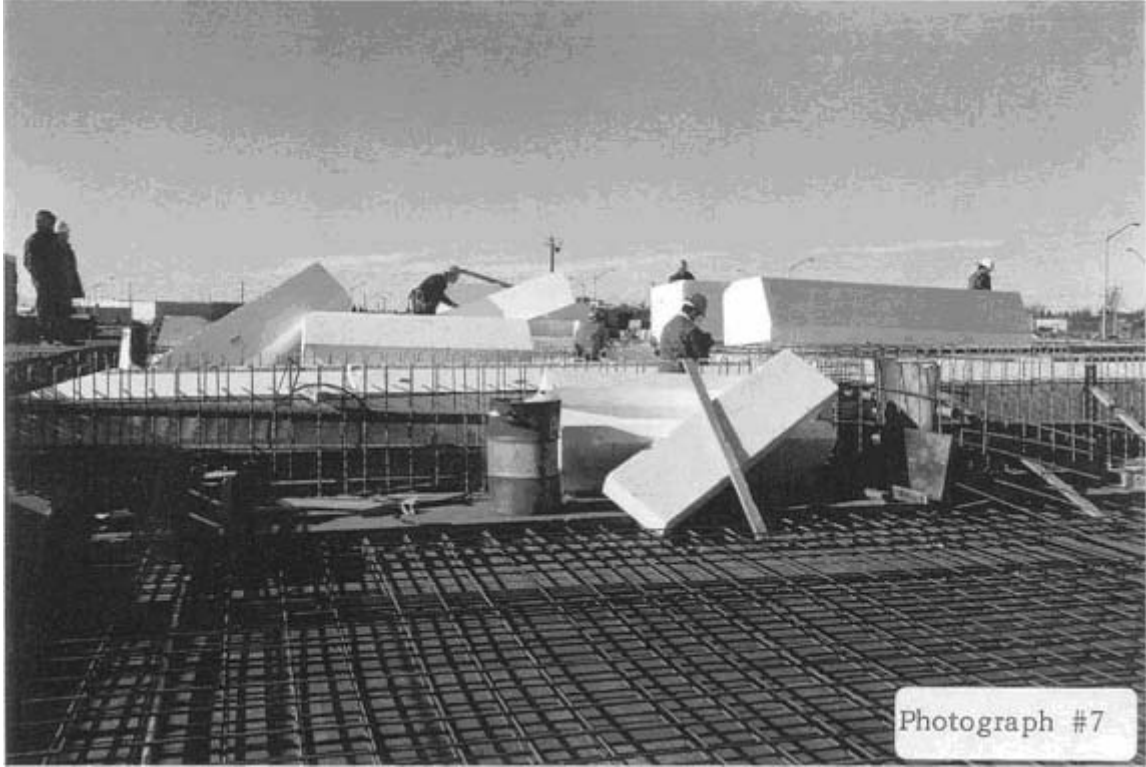


Photograph #5



Photograph #6

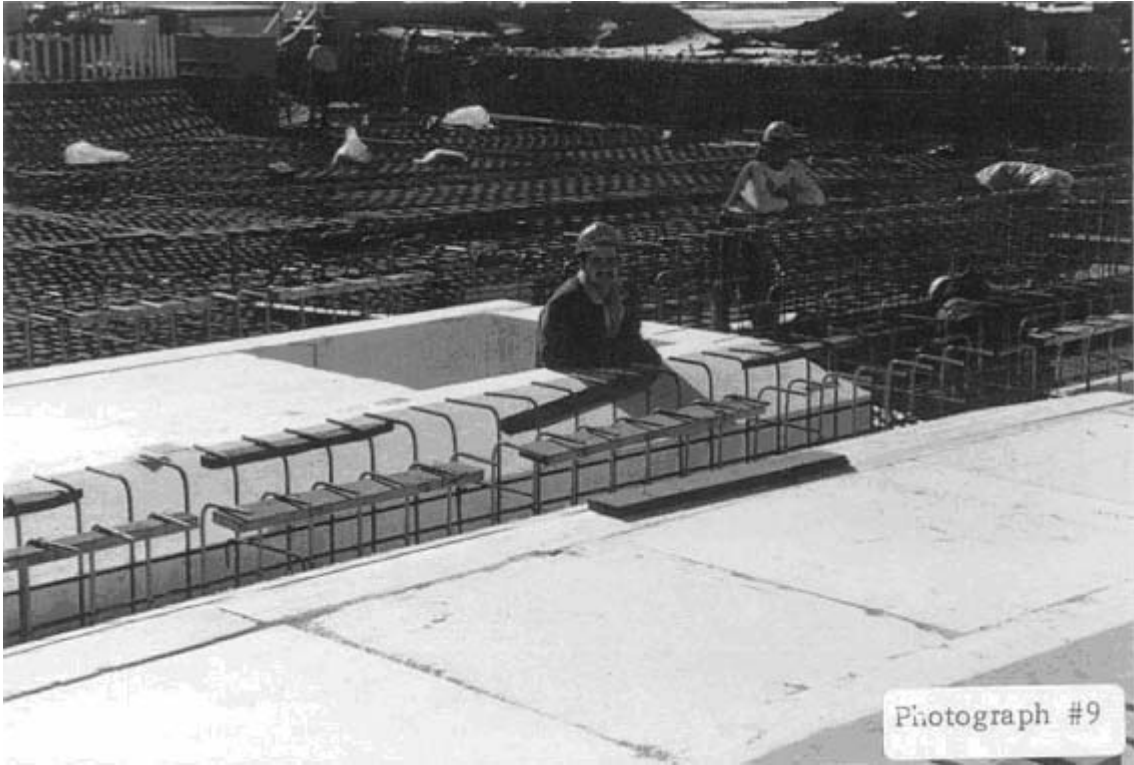




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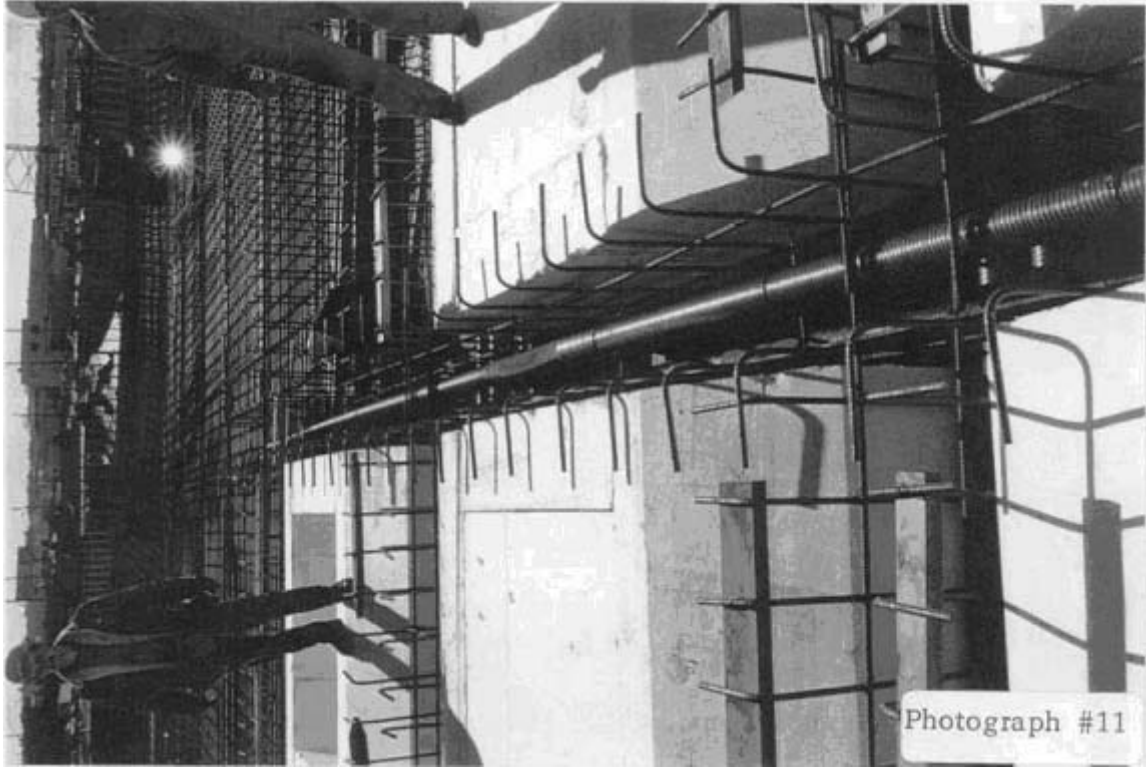
Photograph #8



Photograph #9



Photograph #10



Photograph #11



Photograph #12



Photograph #13



Photograph #14

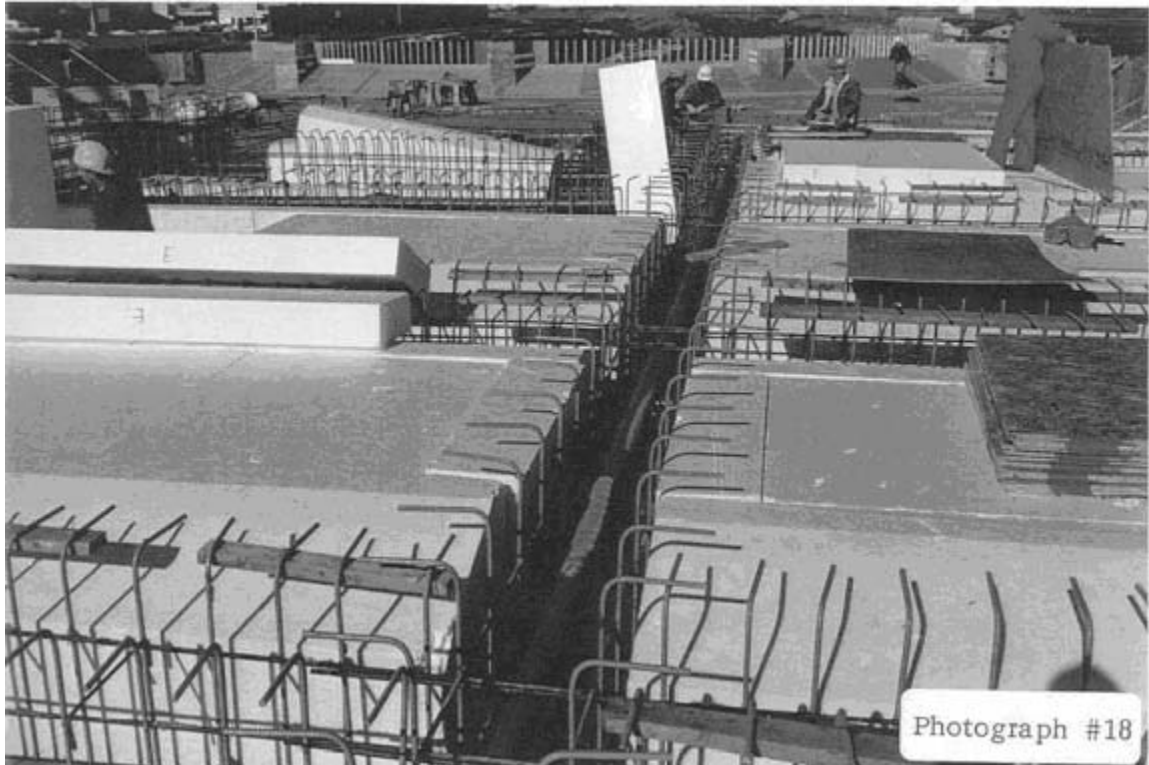


Photograph #15



Photograph #16



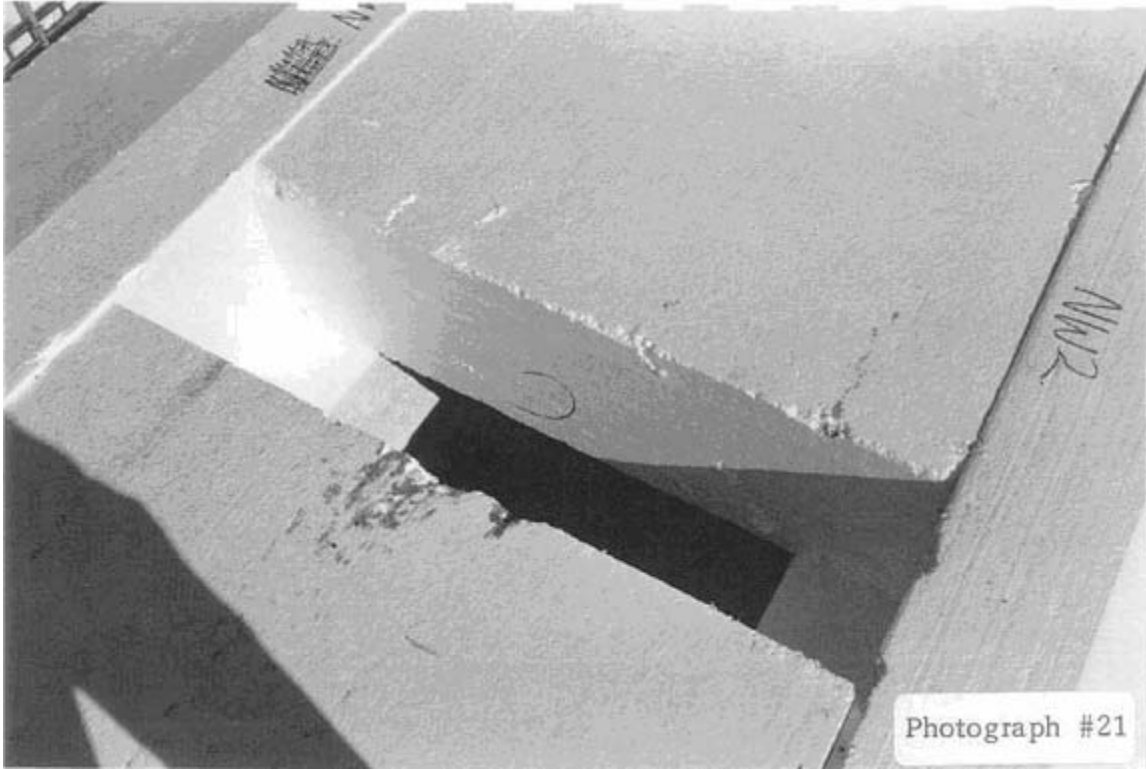




Photograph #19



Photograph #20



Photograph #21



Photograph #22

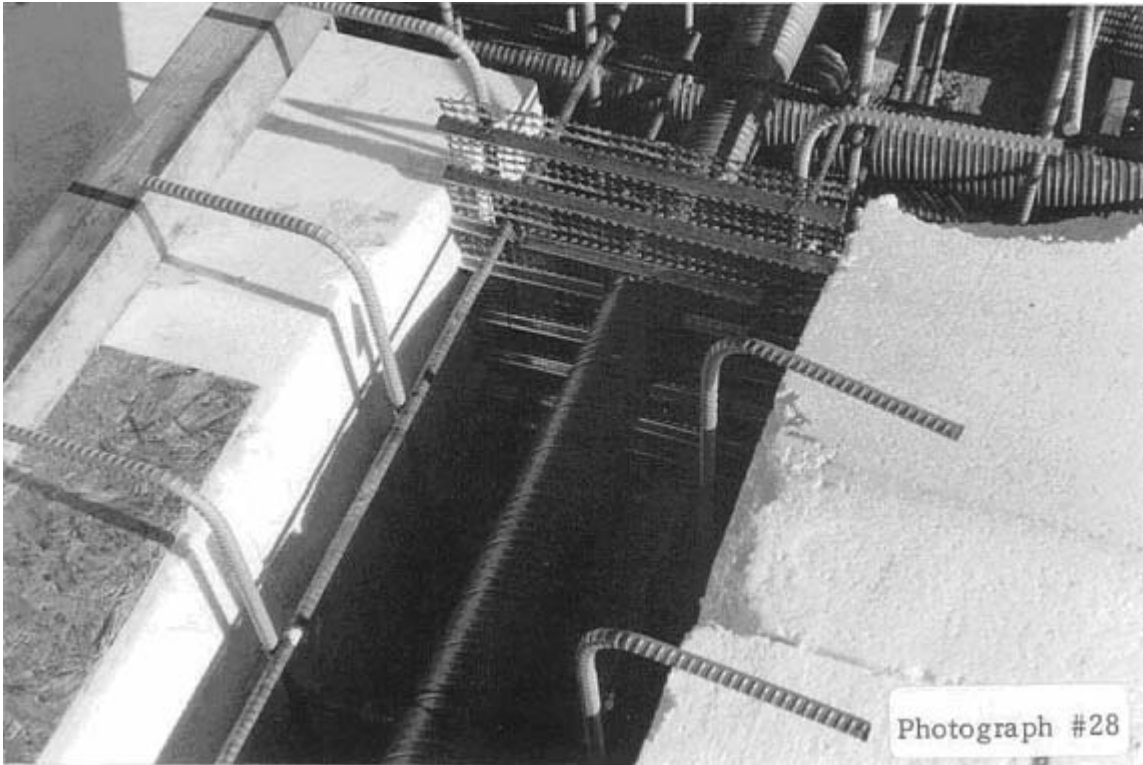




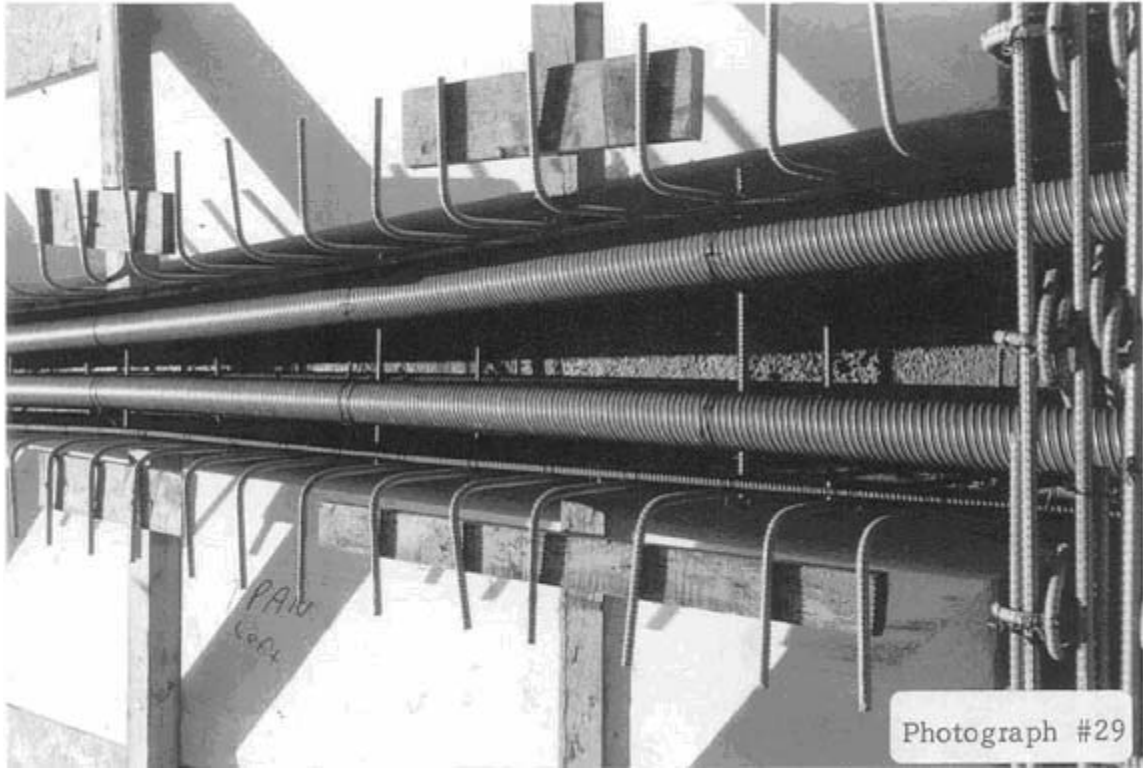




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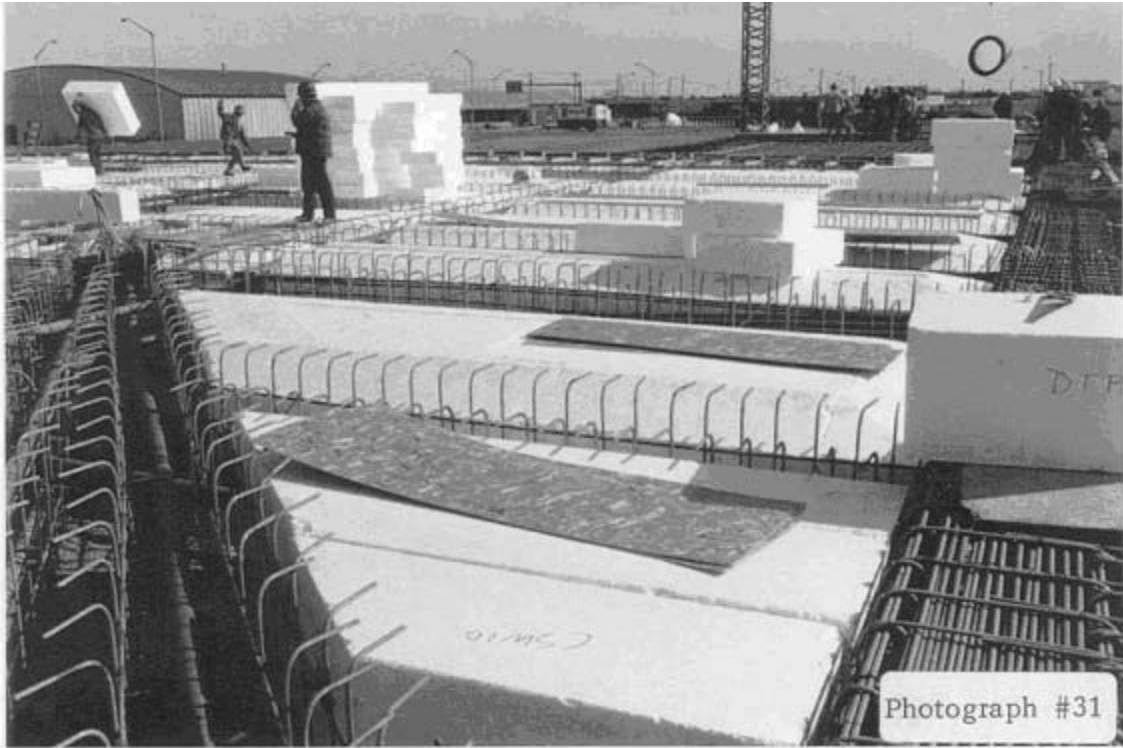
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Photograph #29



Photograph #30



Photograph #31



Photograph #32





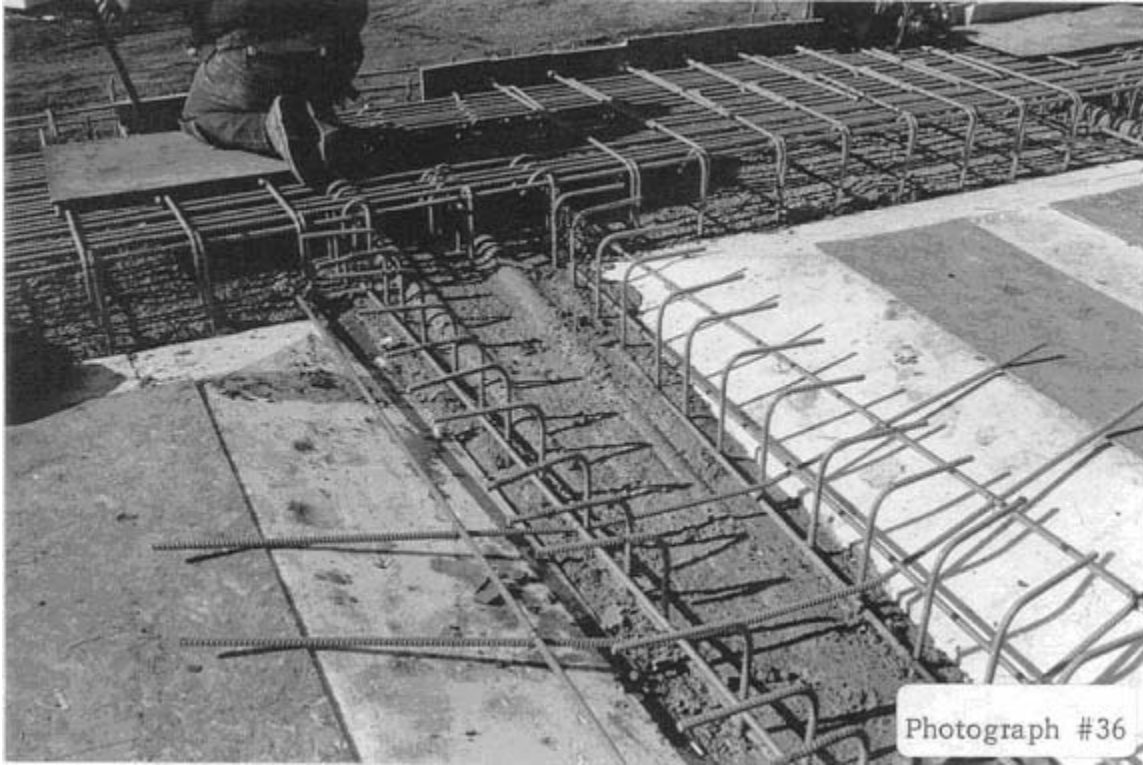
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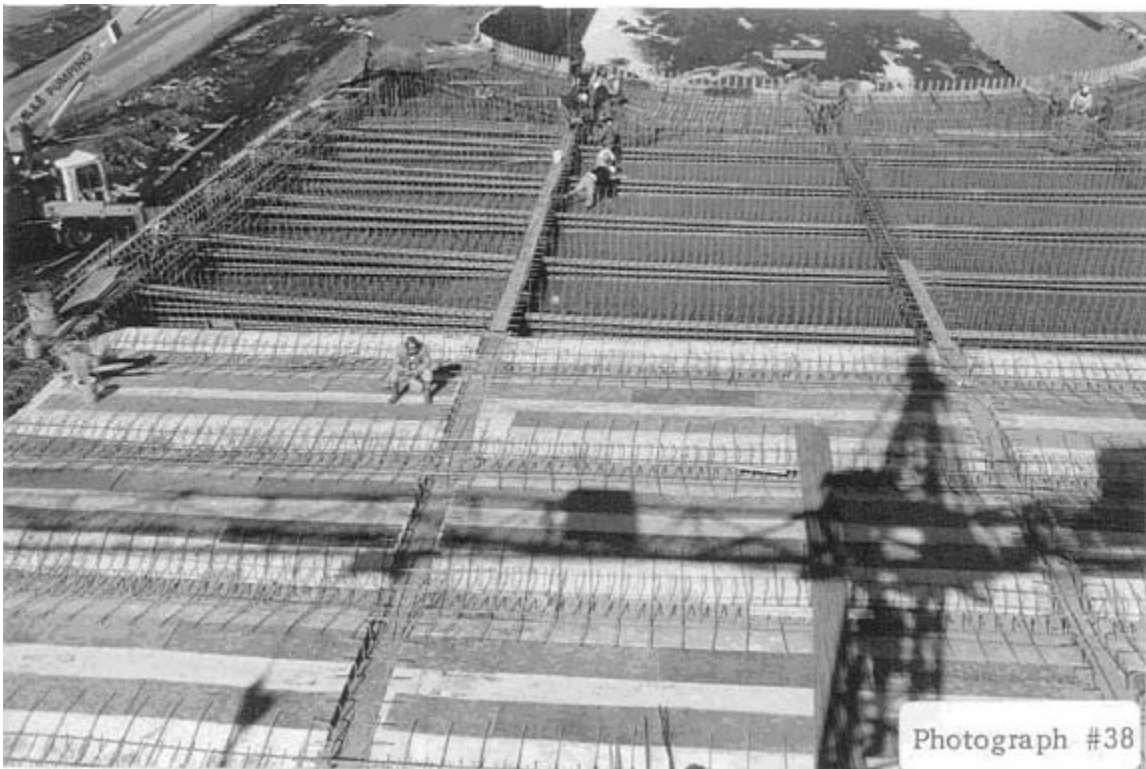
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Photograph #35



Photograph #36



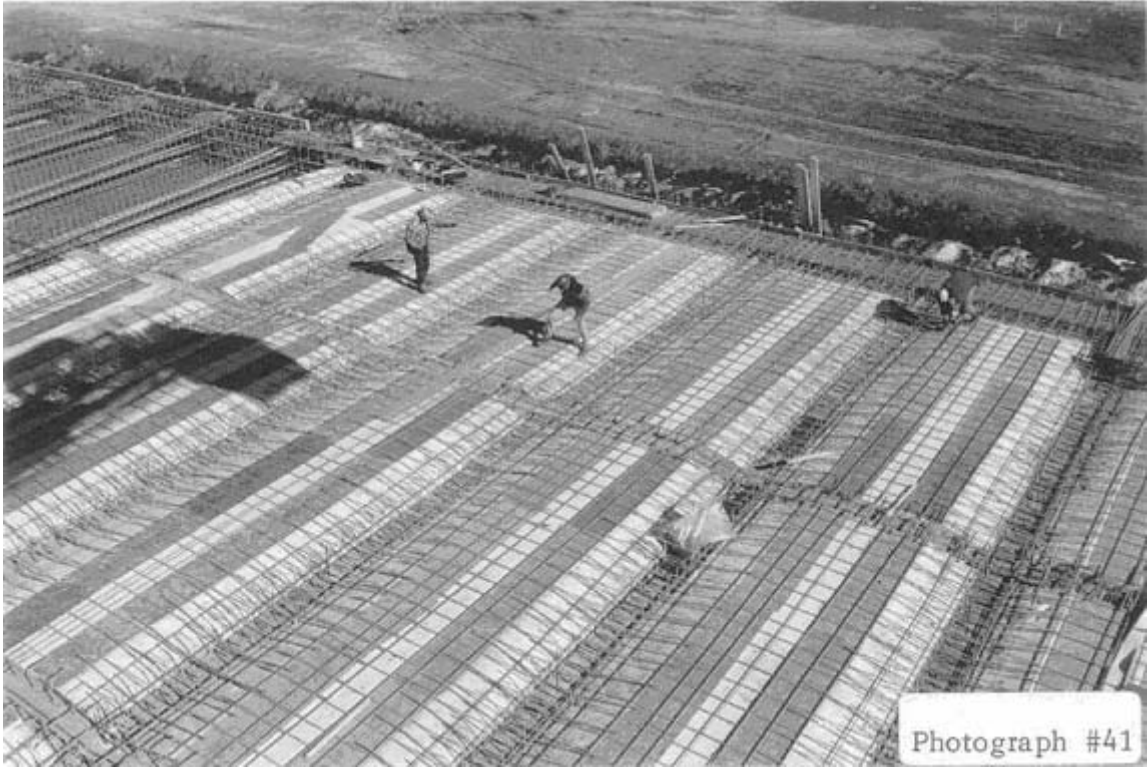




Photograph #39



Photograph #40



Photograph #41



Photograph #42



Photograph #43



Photograph #44



Photograph #45



Photograph #46





Photograph #47



Photograph #48





Photograph #51



Photograph #52



Photograph #53



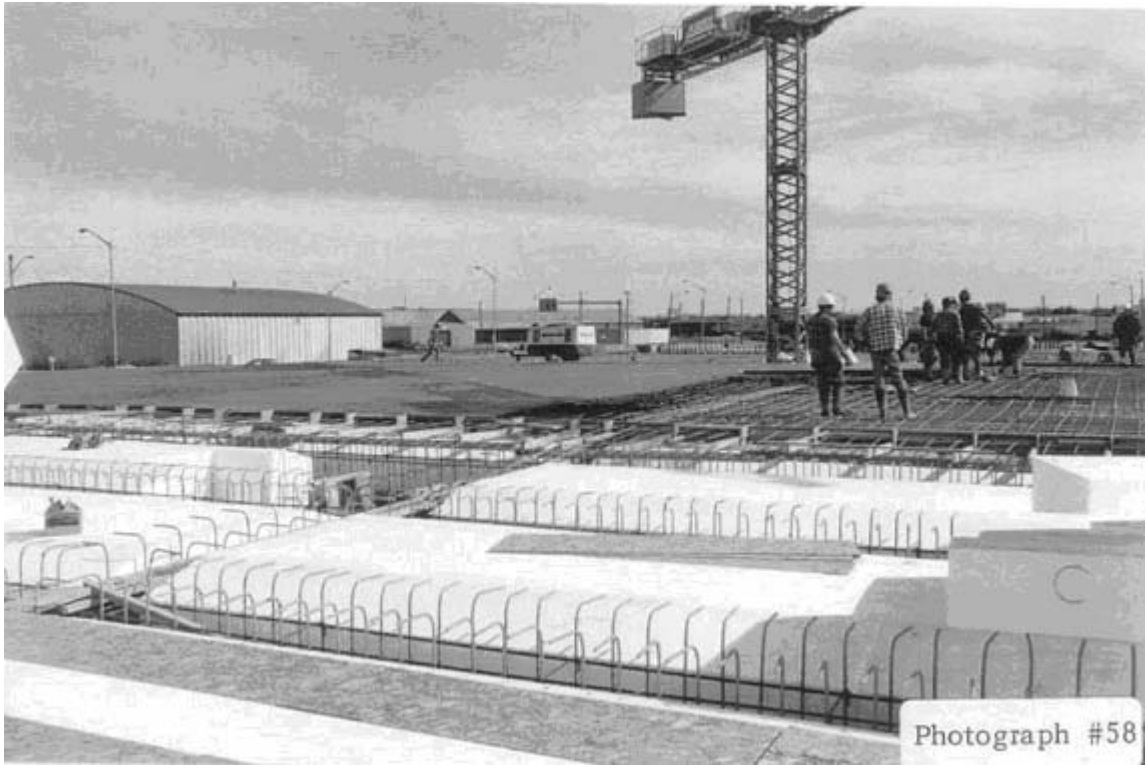
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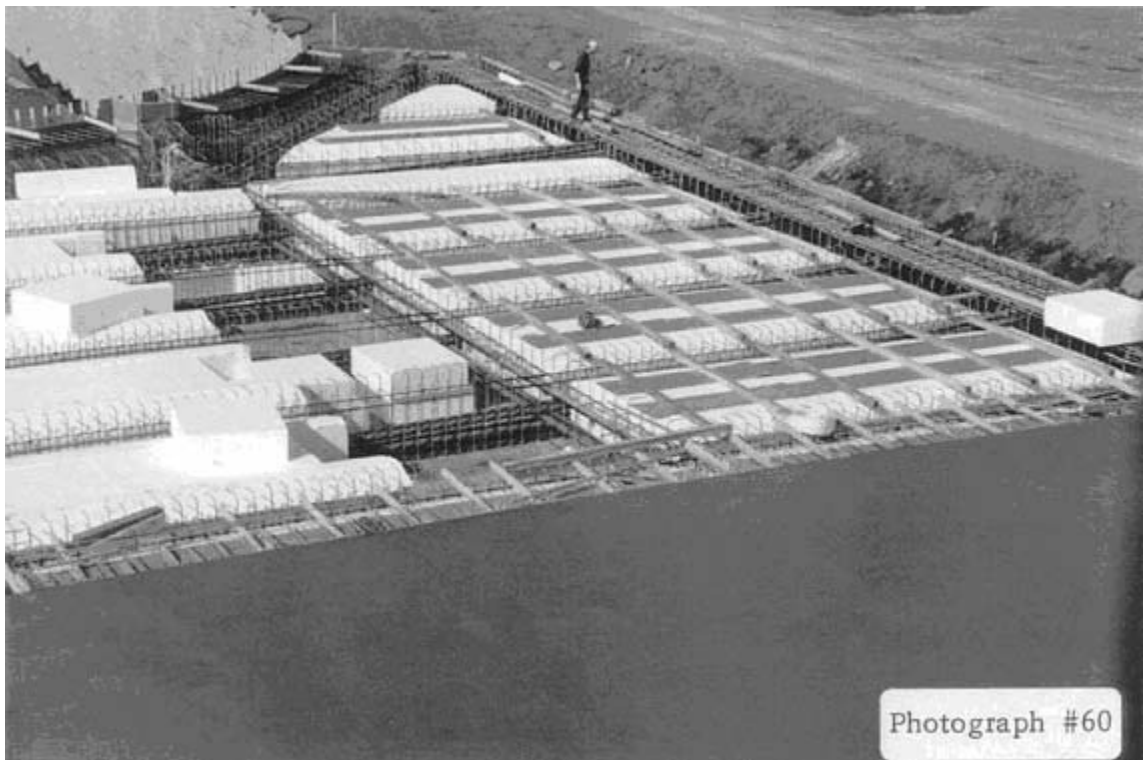
Photograph #57



Photograph #58



Photograph #59



Photograph #60