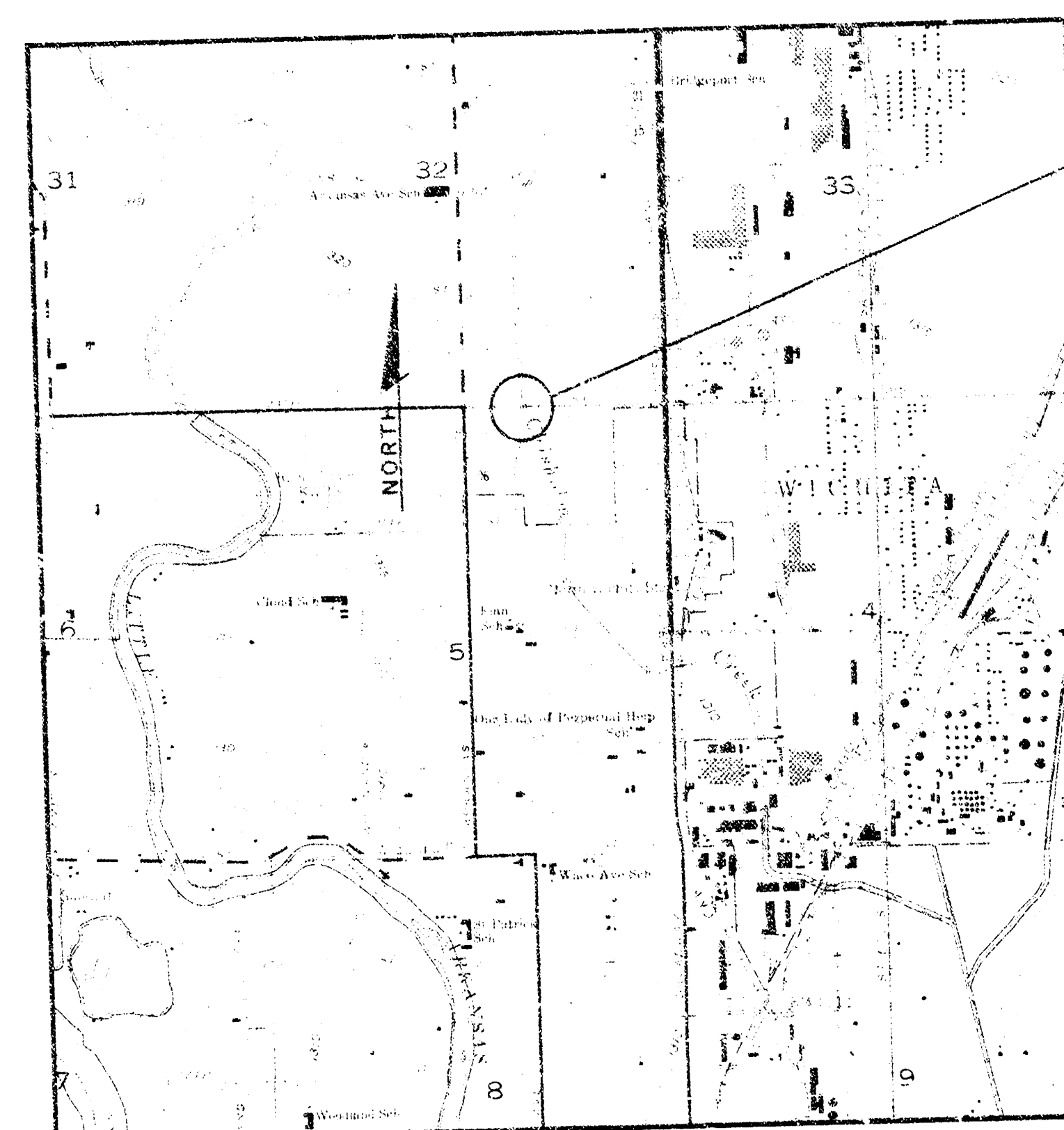


FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET TOTAL NO. SHEETS
7	KANSAS	87-0-0718-01	87	1 2

BRIDGE REPAIR

BRIDGE DECK RECONSTRUCTION
29TH STREET OVER CHISHOLM CREEK
WICHITA, KANSAS
SEDGWICK COUNTY



REPAIR EXISTING BRIDGE DECK,
26'-28'-26' PRESTRESSED GIRDER
SPANS

NOTE: TRAFFIC TO BE CARRIED THRU CONSTRUCTION.
CONTRACTOR WILL BE RESPONSIBLE FOR TRAFFIC CONTROL.

DESIGN DESIGNATION
AADT(1978) — 7,900
AADT(2000) — 10,000

VAN BOREN-HAZARD-STALLINGS
ARCHITECTS-ENGINEERS-PLANNERS
WICHITA, KANSAS

LOCATION MAP
SCALE: 1" = 2000'

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	CONSTRUCTION LAYOUT
3	DETAILS
4	APPROACH PAVING
5	TRAFFIC CONTROL
6	TRAFFIC CONTROL DEVICES

CITY OF WICHITA
PROJECT NUMBER 472-76-245-80549-000-000-001

GROSS LENGTH OF PROJECT	122.5 FT.	
EXCEPTIONS	0 FT.	
ADDITIONS	0 FT.	
NET LENGTH OF PROJECT	122.5 FT.	.023 MILES
NET LENGTH OF BRIDGES	82.5 FT.	.016 MILES
NET LENGTH OF ROAD	40.0 FT.	.007 MILES

RECOM. FOR APPROVAL - DATE	
ENGINEER OF URBAN HIGHWAYS KANSAS DEPARTMENT OF TRANSPORTATION	
APPROVED - DATE	
STATE TRANSPORTATION ENGINEER KANSAS DEPARTMENT OF TRANSPORTATION	

RECOM. FOR APPROVAL - DATE	
ENGINEER FEDERAL HIGHWAY ADMINISTRATION DEPARTMENT OF TRANSPORTATION	
APPROVED - DATE	
DIVISION ADMINISTRATOR FEDERAL HIGHWAY ADMINISTRATION DEPARTMENT OF TRANSPORTATION	

Reinforcing Steel : Care shall be exercised to prevent cutting, stretching, or damaging any exposed reinforcing steel. Extreme care shall be taken to avoid breaking the bond between existing reinforcing and concrete where bars are partially exposed but yet remain anchored in sound concrete or where more than 1/2 of the bar remains below the concrete removal line. Where 1/2 or more of the bar diameter is exposed (Fig. 2, Sheet 3) or where loss of bond has occurred (Fig. 1, Sheet 3), the concrete adjacent to the bar shall be removed to a depth that will permit concrete to bond to the entire periphery of the bar. A minimum clearance of 3" shall be provided. Reinforcing steel damaged, cut or deteriorated shall be replaced as directed by the Engineer. Replacement of any bar damaged by the Contractor shall be subsidiary to "Area Prepared for Patching". Existing reinforcing steel to be left in place shall be thoroughly cleaned. After removal of concrete, any bars in which more than 1/2 the cross sectional area of bar has been lost due to corrosion shall be replaced and paid for as Reinforcing Steel at the unit price shown on the proposal.

Area Prepared for Patching: This item shall consist of removing the loose and unbound weak concrete and bituminous patches as designated by the Engineer to whatever depth necessary to reach sound concrete. All removal shall not extend into the prestressed, double-tee girders. All patch areas which have de-bonded reinforcing steel, as shown in the patch areas on Sheet No. 3, shall be pre-poured (see sketch on Sheet No. 3). All concrete details on Sheet No. 3, shall be pre-poured (see sketch on Sheet No. 3). Concrete required to fill this area shall be either Class A-4 Concrete or Class AAA (AE) Concrete. Concrete for patches shall have a min. "mud slump of 2". This concrete shall be subsidiary to the Bid Item, "Area Prepared for Patching".

Grout: As a subsidiary item, all horizontal surfaces of pre-poured patches shall receive a grout coating just prior to placing concrete.

Sidewalks: Repair to the sidewalks and curb face shall be done in the same manner as repair to the roadway deck except that: Machine preparation (4") is not required, no bridge deck surfacing will be placed on the sidewalk surface, and all concrete that is replaced in areas prepared for patching will be finished flush with the existing sidewalk surface. Any form work required to repair the curb face shall be subsidiary to "Area Prepared for Patching". Sidewalk repair shall be paid for as square yards of "Area Prepared for Patching."

Epoxy: All near-vertical surfaces in patches where the top flange of the prestressed double-tee girder is exposed shall be coated with an epoxy resin bonding agent, except as noted on the Plans.

Edge Grout : Minimum of 24 hours after the curing of the overlay, the vertical joints abutting existing concrete and joints in the overlay shall be sealed by painting with thin grout. This work shall be done before placing Uniseal Oil Surface Treatment and shall be subsidiary to "Bridge Deck Surfacing (24")."

Linseed Oil Surface Treatment (Bridges): This item shall consist of sealing or waterproofing the bridge deck, sidewalks and concrete railings (see Typical Section on Sheet No. 3). The surface treatment shall extend from F.W.S. to F.W.S.

Dimensions and Elevations: Dimensions and elevations are from the original Plans and shall be verified in the field by the Contractor. The Contractor shall adjust the grade for the screed in such a manner as to create a smooth vertical curve or straight grade while maintaining the minimum thickness of bridge deck overlay.

Traffic: Traffic control shall be in accordance with Plan Sheet No. 5 or as directed by the Engineer. All signing and traffic control devices shall conform to the "Manual of Uniform Traffic Control Devices (1978 Edition)." The Contractor shall provide all signing and traffic control devices.

Epoxy Resin Girder Crack Repair: Epoxy injection of girders shall not begin until all concrete patching is completed on the bridge deck.
See note on Sheet Nr 5 for traffic control during injection operations.

Machine Preparation (1/4"): This item consists of scarifying the entire roadway surface to a minimum depth of 1/4" from E.W.S. Abutment #1 to E.W.S. Abutment #2.

SUMMARY OF QUANTITIES

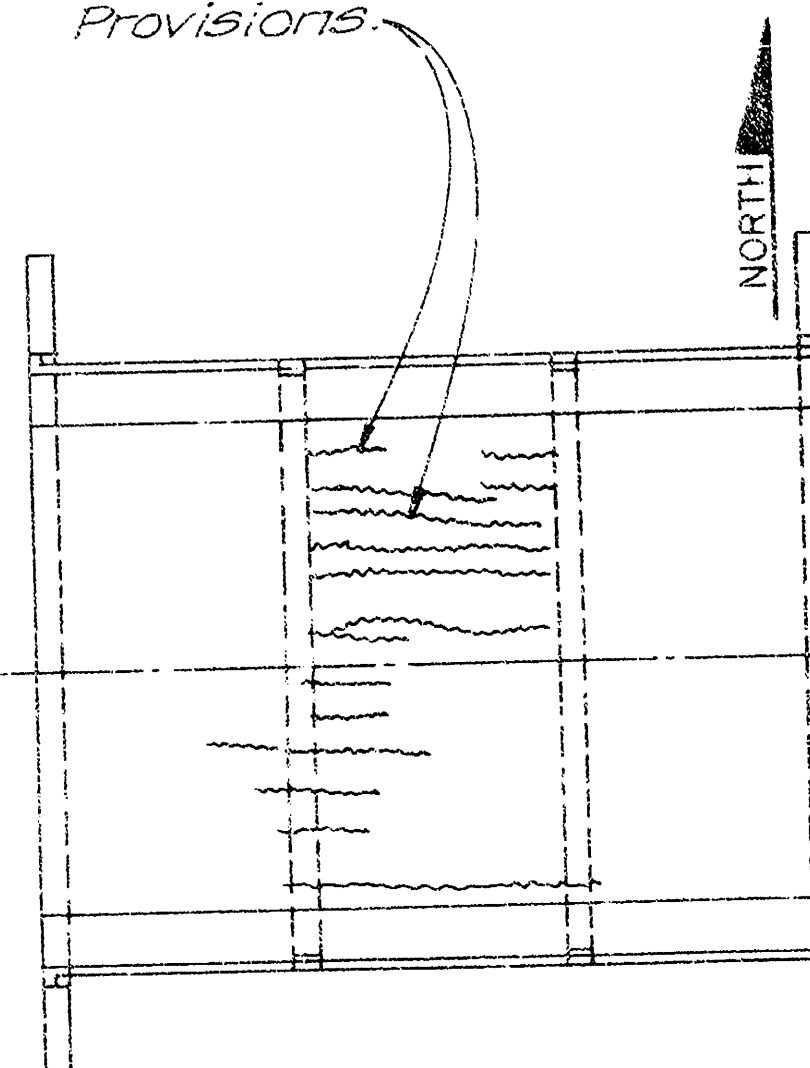
SUMMARY OF QUANTITIES		
Machine Preparation (1/4")	449	Sq. Yds.
† Area Prepared for Patching	101	S. Yds.
Field Office & Laboratory (Type C)	1	Each
Adjustment of Manhole	1	Each
Bridge Drainage System	520	Lbs.
Epoxy Resin Girder Crack Repair		Lump Sum
(Sidewalk; Soffit) Repair	1.7	Sq. Yds.
Concrete Pavement (B)	218	Sq. Yds.
Reinforcing Steel	1	Lb.
Curb (7)(Doweled)	80	Lin. Ft.
Mobilization		Lump Sum
ALTERNATE NO.1		
Bridge Deck Surfacing (2 1/4")	449	Sq. Yds.
Linseed Oil Surface Treatment (BR)	449	Sq. Yds.
ALTERNATE NO.2		
Latex Surface Course (1 1/4")	449	Sq. Yds.

Includes 18.6 Sq.Yds. of sidewalk repair.
For Traffic Control Quantities, see Sheet No.5.

NOTES: SIDEWALK SOFFIT REPAIR

1. Remove damaged and deteriorated concrete in the areas shown as directed by the Engineer (see sheet No.3 for longitudinal limits of repair areas).
2. An epoxy adhesive for bonding new concrete to old shall be applied to all old surfaces prior to placing new concrete.
3. Class AAA Concrete with a gradation approved by the Engineer to facilitate overhead application shall be placed and finished to conform to the original surface of the girder soffit.
4. Repairs shall be paid for by the square yard(s) of " (Sidewall Soffit) Repair " in accordance with the Special Provisions.

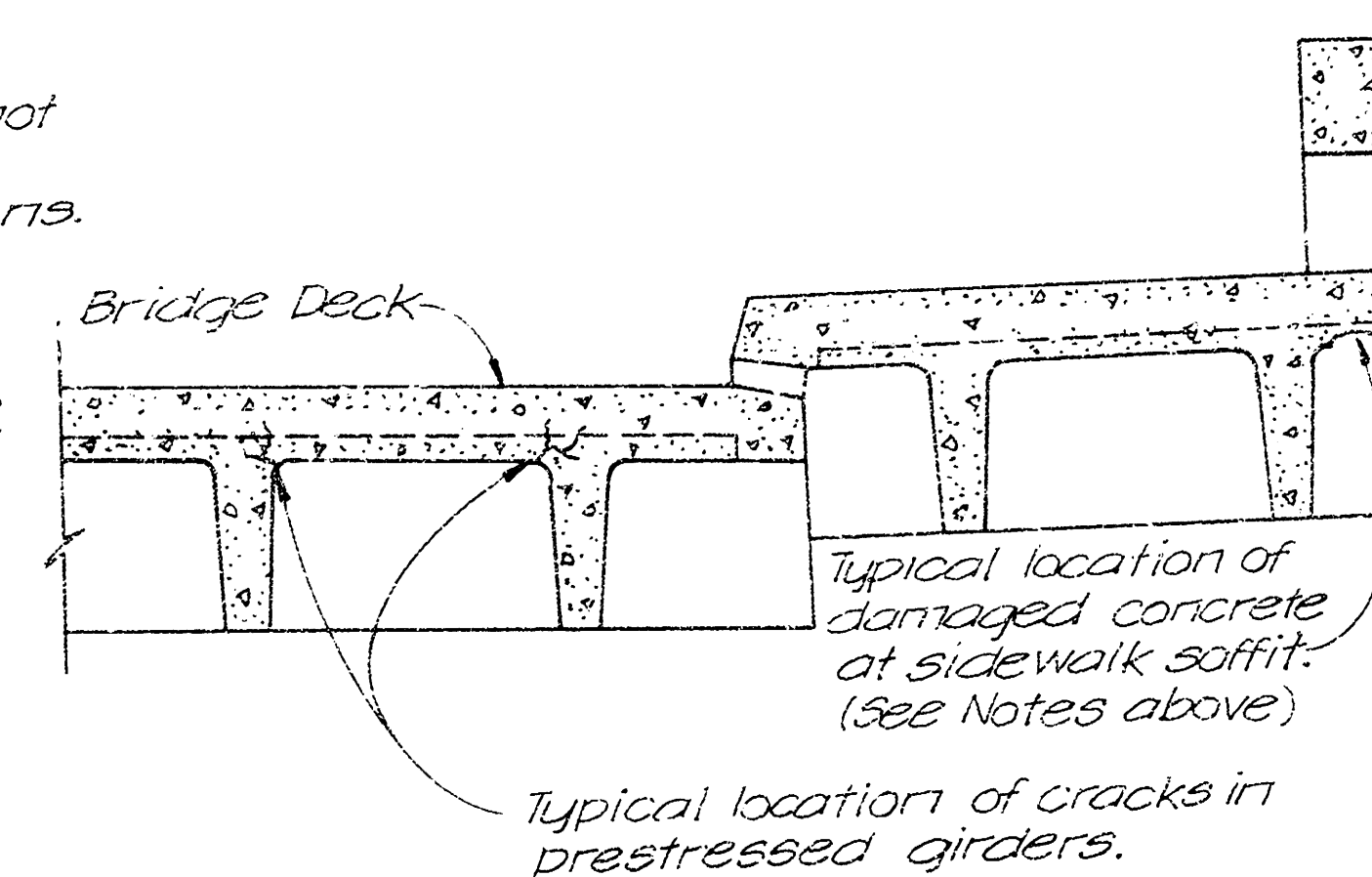
Typical location of cracks in Girders. Repair cracks by pressure grouting with an approved epoxy adhesive. See Special Provisions.



(showing approximate observed location of cracks on the underside of the prestressed girder flanges. Approximately 900 ft. of cracks.)

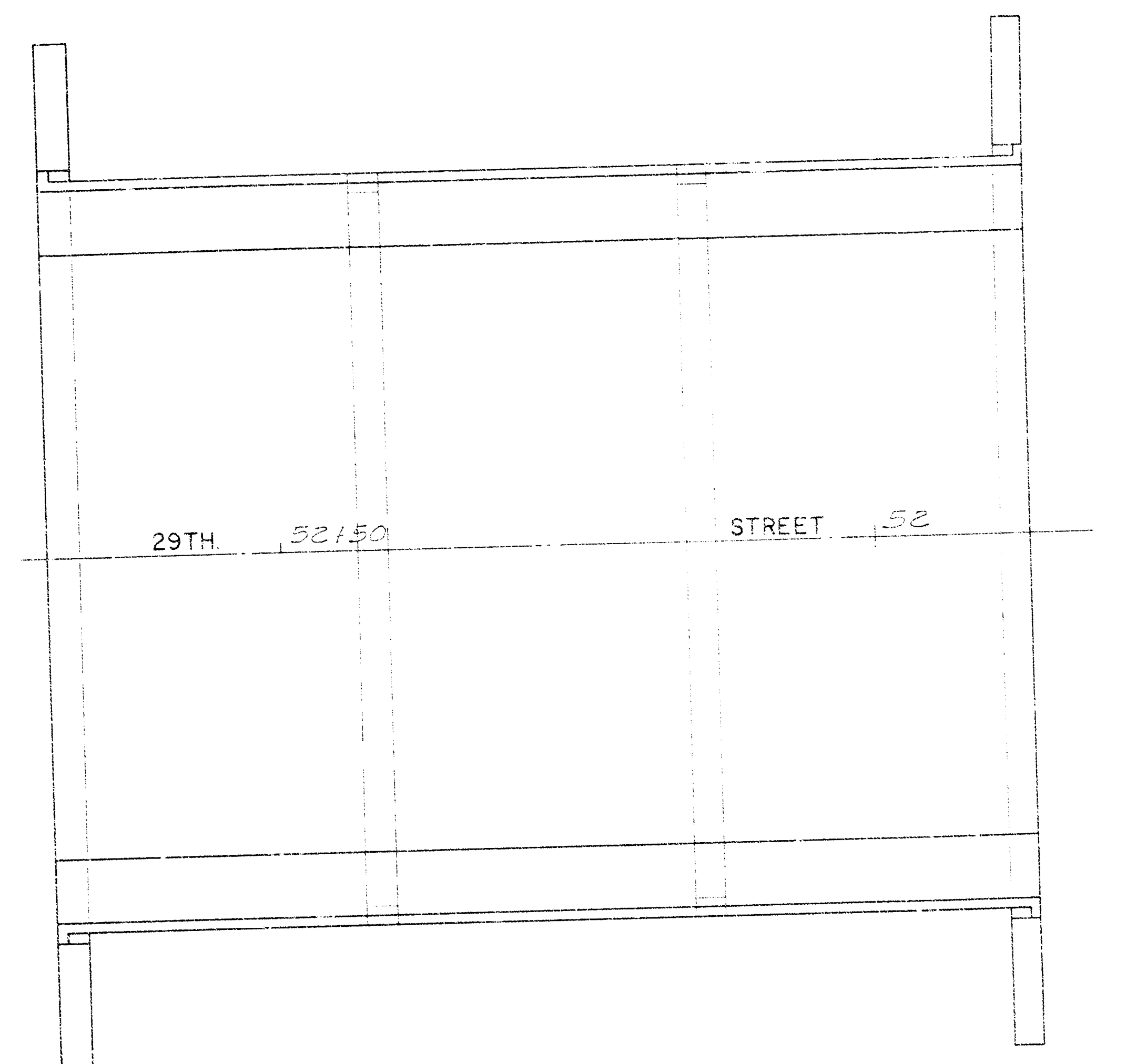
PLAN OF DECK

No Scale



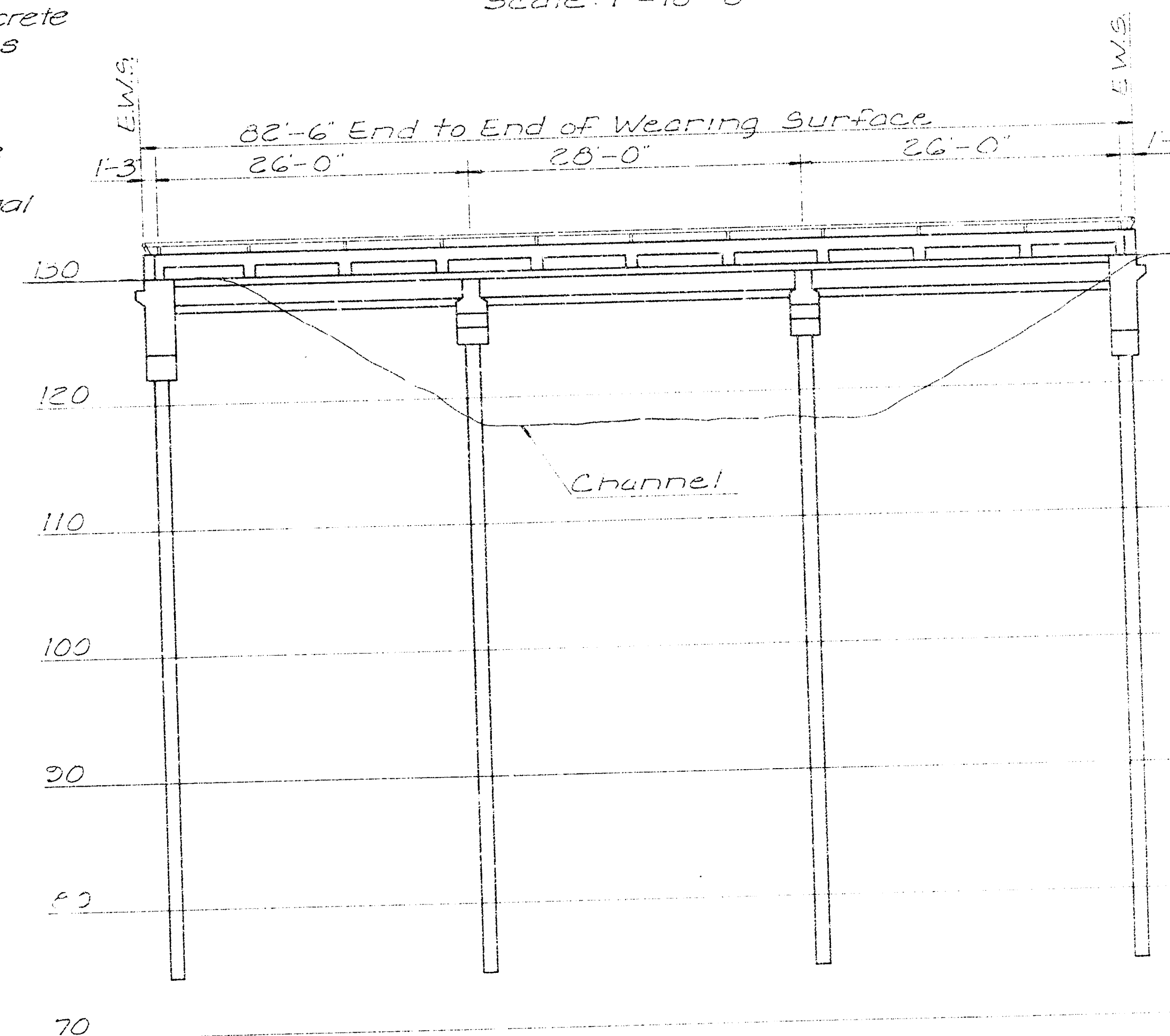
SECTION THRU DECK

No Scale



PLAN *

Scale: 1" = 10'-0"

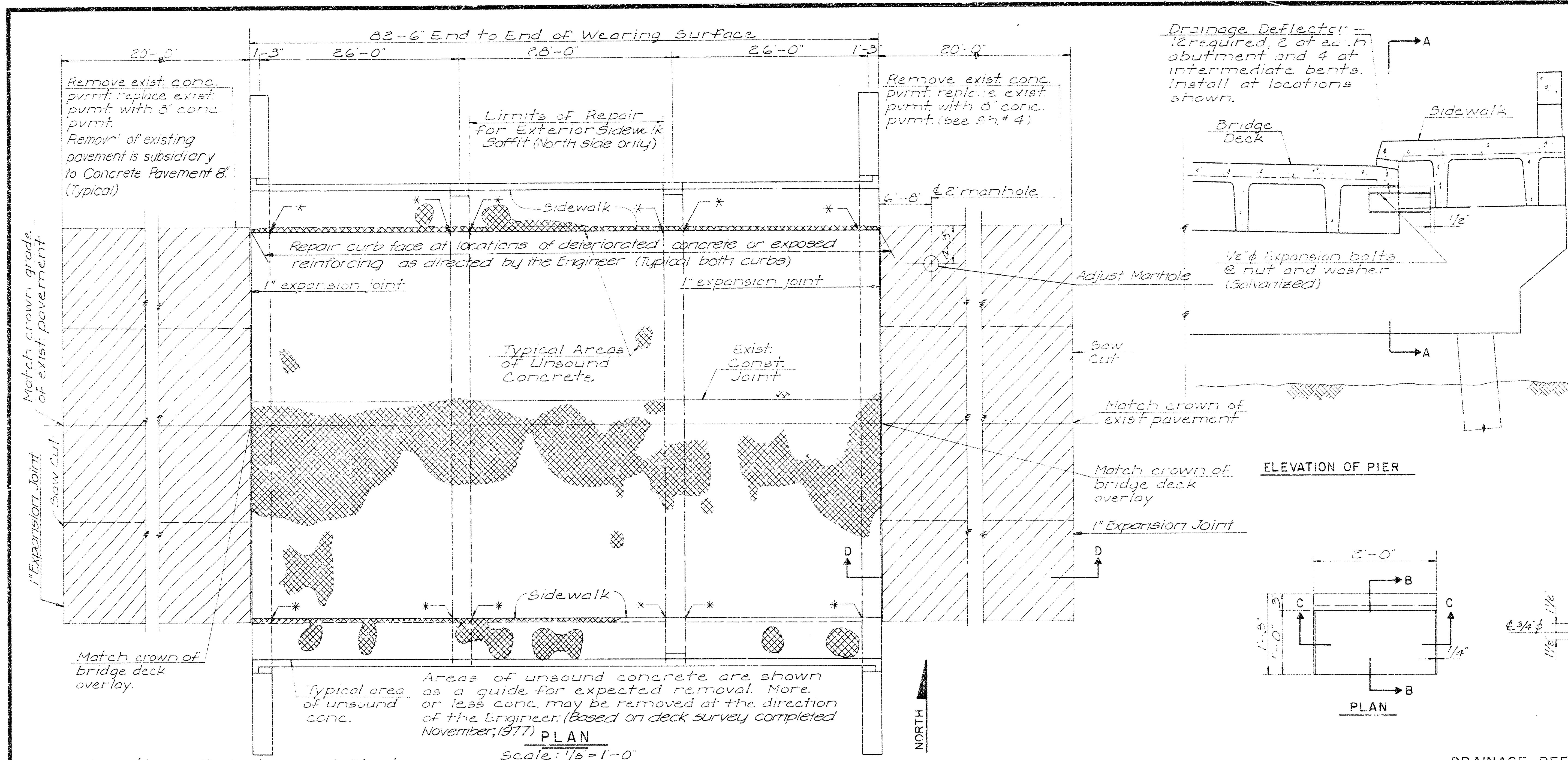


ELEVATION *

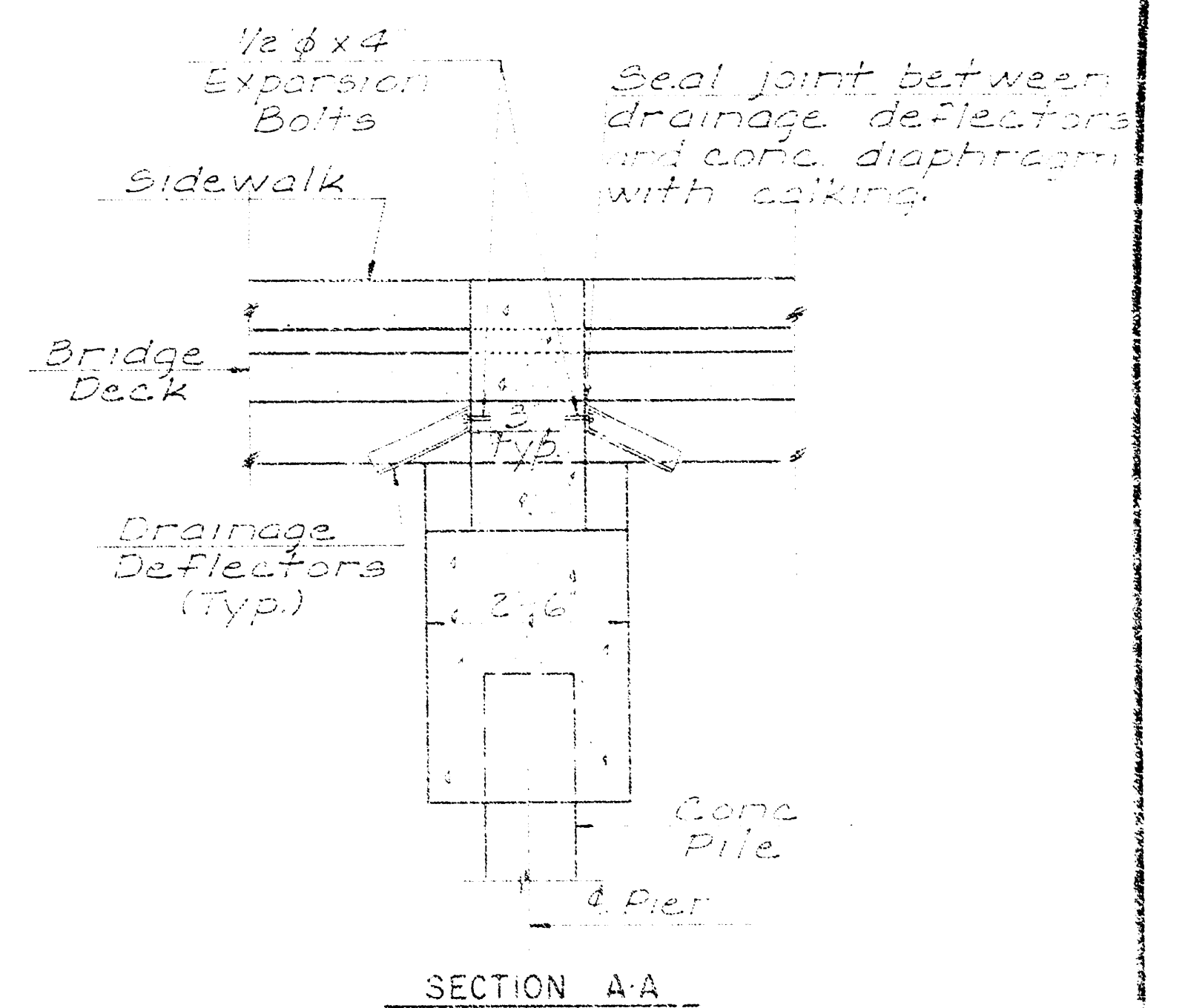
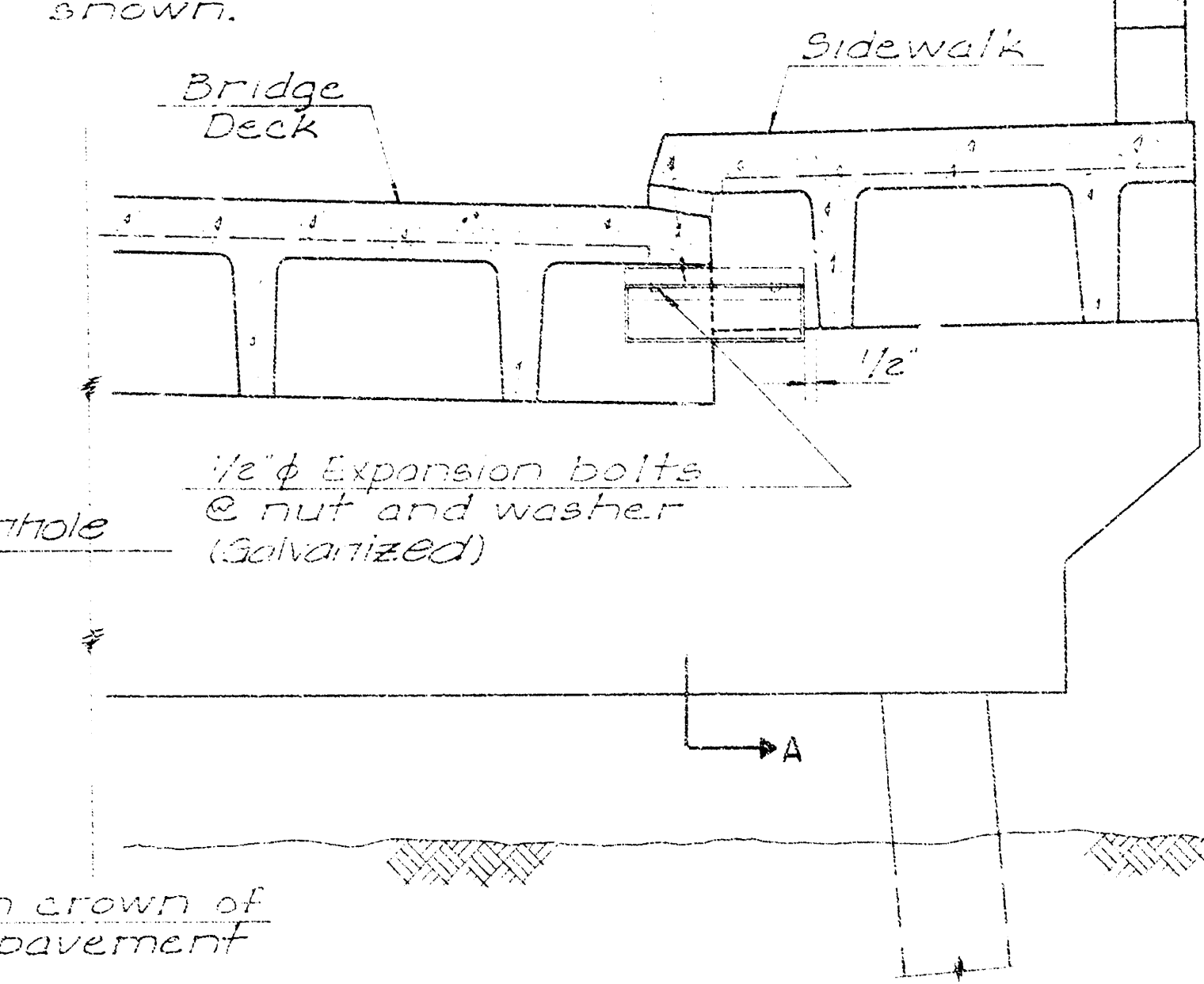
Scale: 1" = 10'-0"

* Dimensions, stations, and elevations shown are from original plans (See proj. no. C16-12).

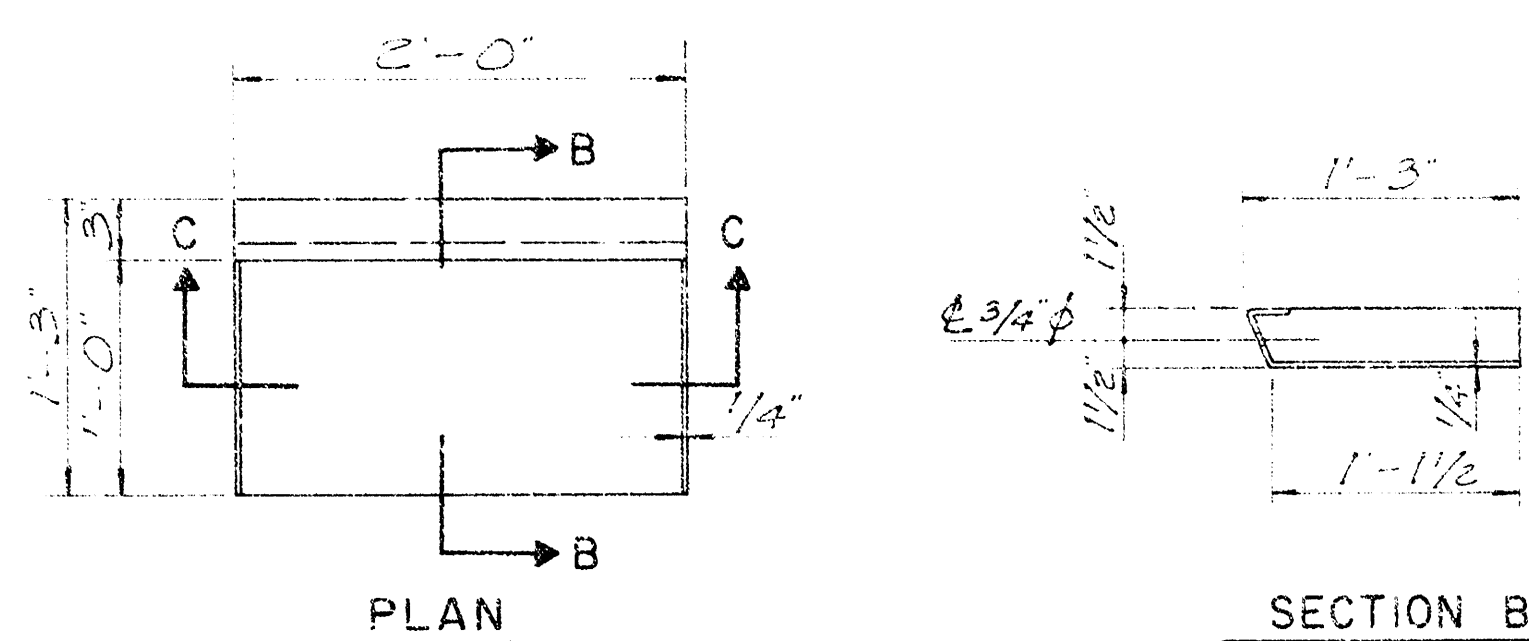
DESIGN BY DR. BY P.L.C. CK. BY R.W. DATE Mar 78 JOB NO.	BRIDGE DECK RECONSTRUCTION 25TH ST. OVER CHISHOLM CREEK
	CONSTRUCTION LAYOUT
VAN DOREN - HAZARD - STALLINGS ARCHITECTS - ENGINEERS - PLANNERS WICHITA, KANSAS	SHEET 1 OF 3



Drainage Deflector - 12 required, 2 at each abutment and 4 at intermediate bents. Install at locations shown.



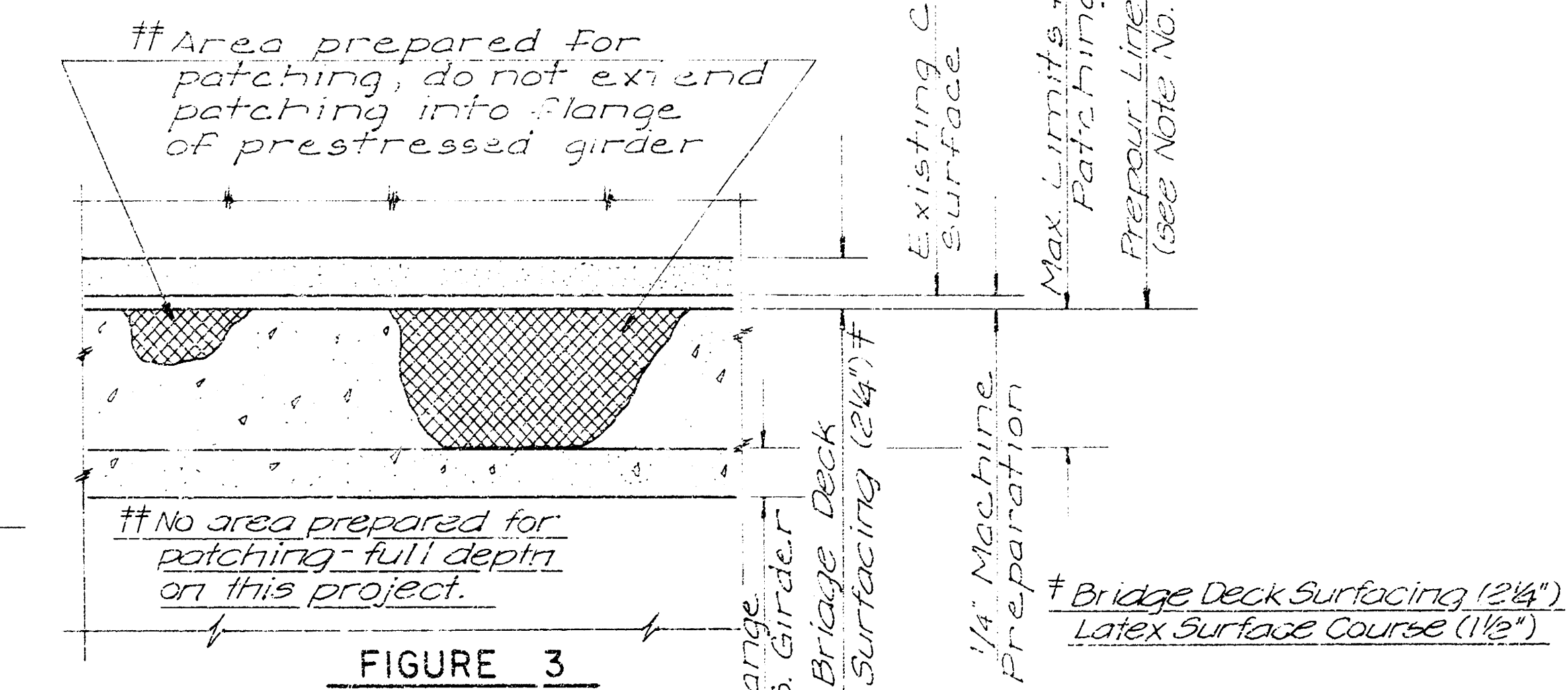
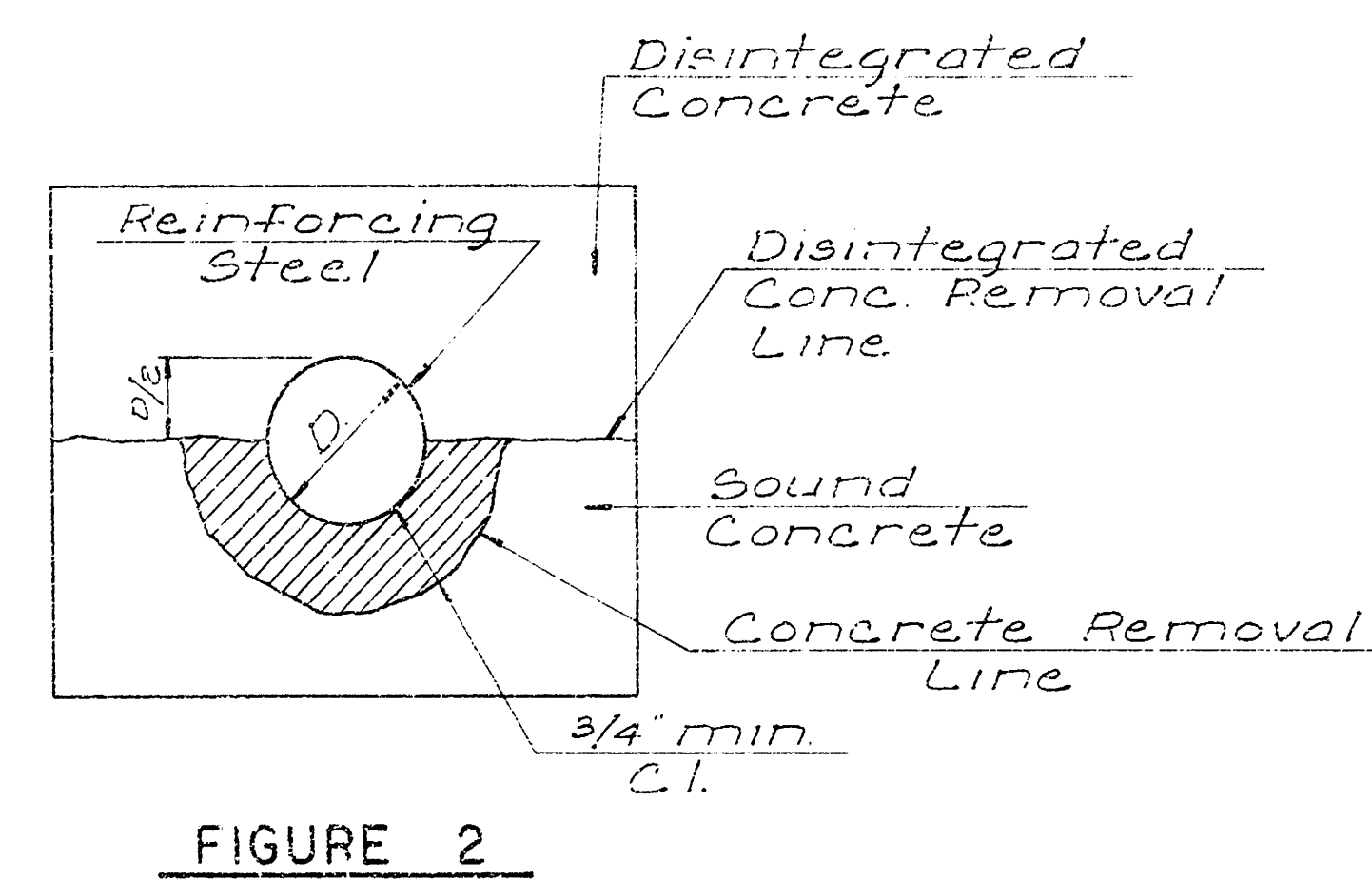
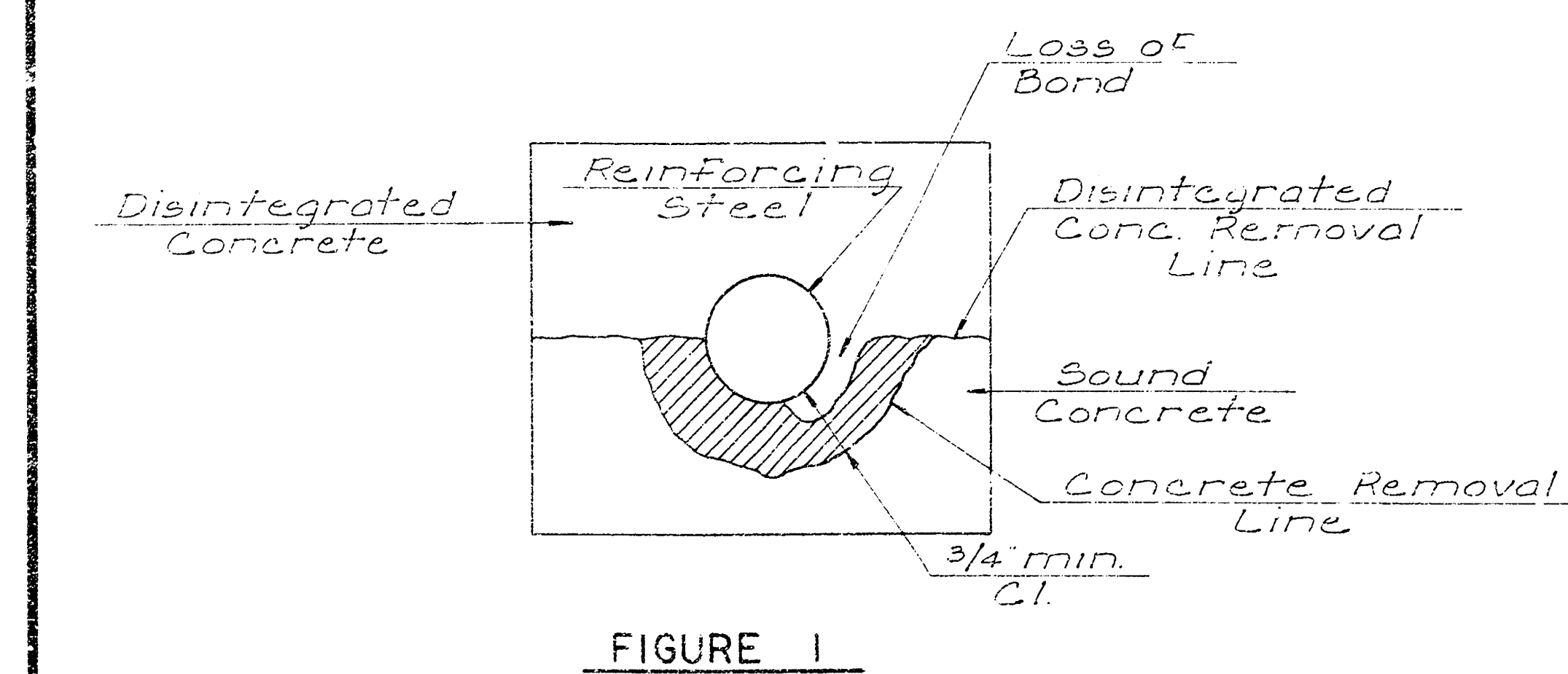
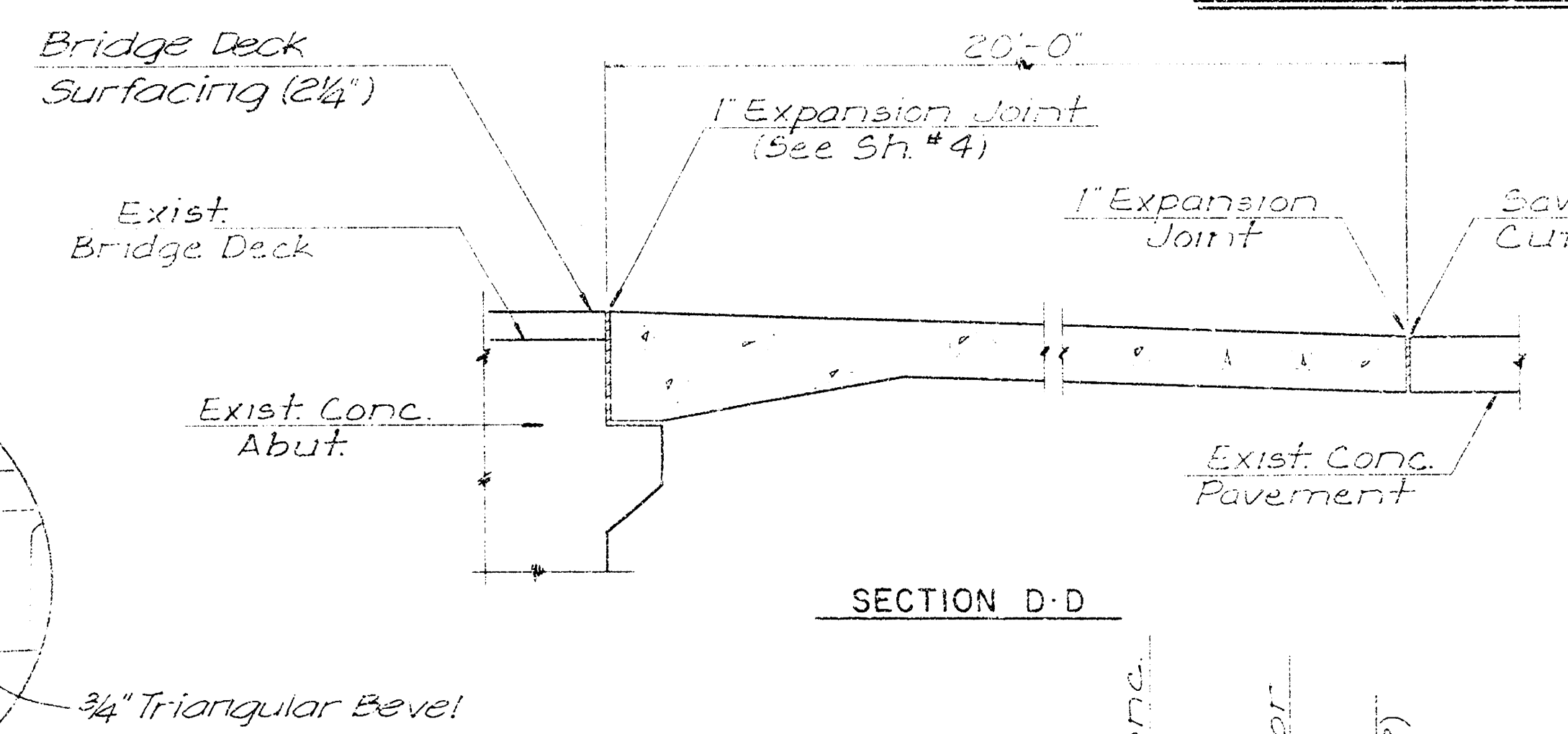
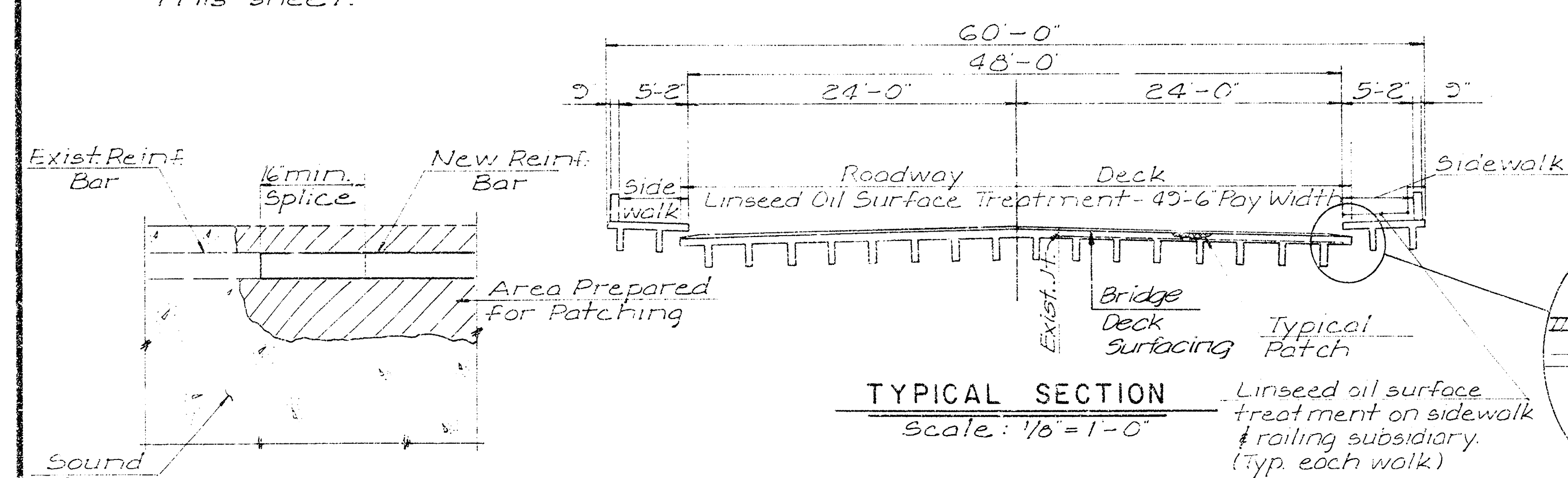
ELEVATION OF PIER



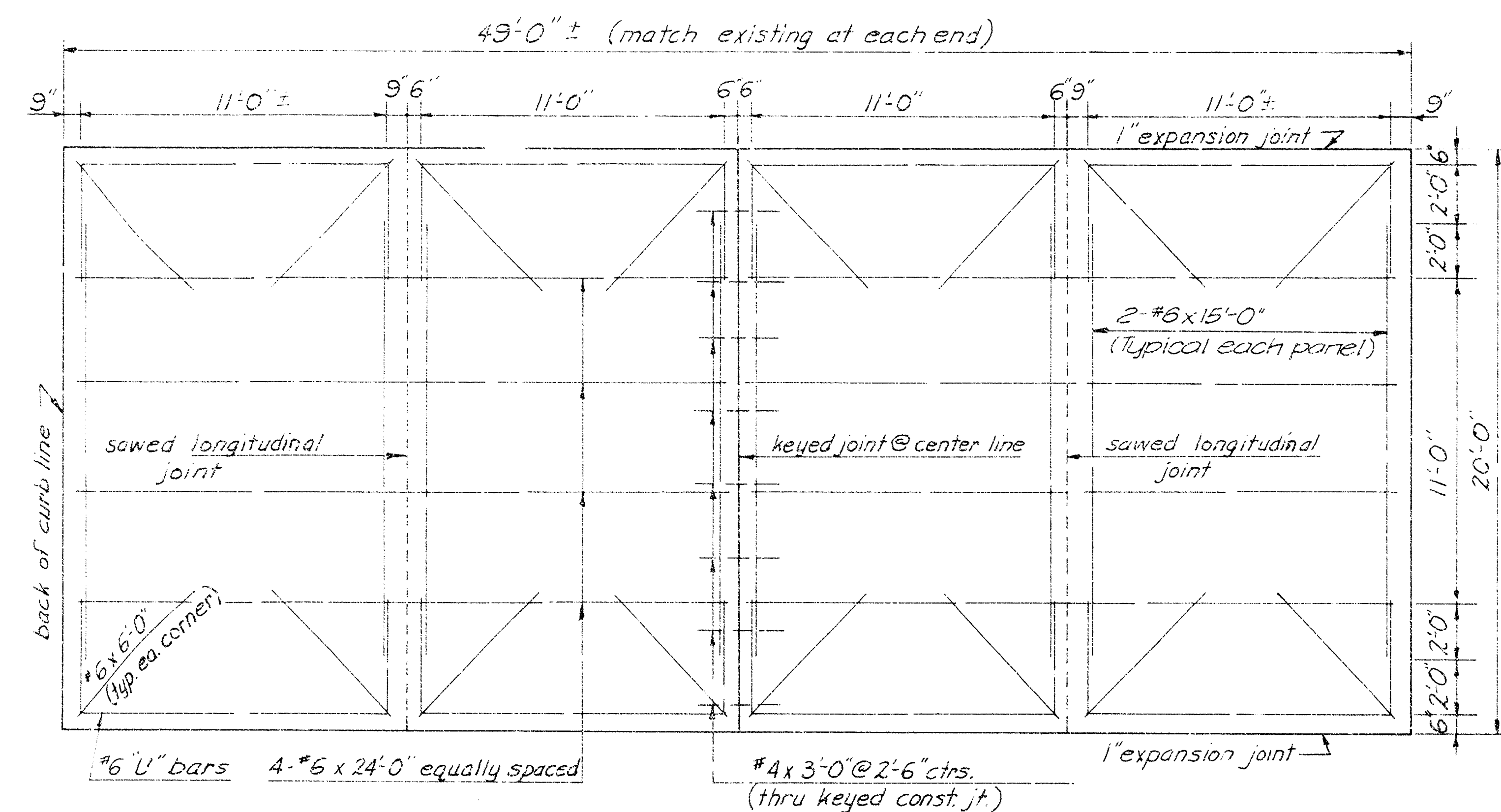
BRIDGE DRAINAGE DEFLECTOR(S) NOTES

- 12 Deflectors required, 43 pounds each.
- Drainage deflectors shall meet all requirements of steel for bridge drainage systems, Section 1608, K.D.O.T. Standard Specifications, Edition of 1980.
- Fabricate from 1/4" steel plate. Plate shall meet the requirements of A.S.T.M. A36.
- Drainage deflectors may be welded or a combination of cold formed and welded at the Contractor's option.
- All inside corners shall be cold formed or welded.
- Hot dip galvanize entire assembly.
- Attach drainage deflectors in locations shown with expansion bolts. Expansion bolts shall be hot dipped galvanized after fabrication to meet the requirements of A.S.T.M. A193.
- All drainage work shall be paid for by the bid item "Bridge Drainage System".

DRAINAGE DEFLECTOR DETAILS



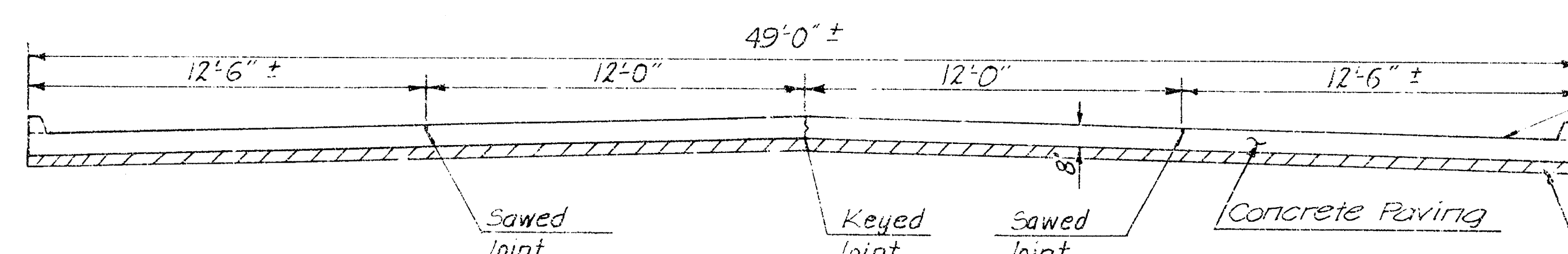
DESIGN NO. DR. BY 3-78 SK. BY P.A.M. DATE 3-78 JOB NO. 17-01	BRIDGE DECK RECONSTRUCTION 29TH ST. OVER CHISHOLM CREEK	SHEET 3/5 OF 5
DETAILS		
VAN DOREN-HAZARD-STALLINGS ARCHITECTS-ENGINEERS-PLANNERS MOBILE, ALABAMA		



STEEL PATTERN AT APPROACH SLAB

Scale: 1/4" = 1'-0"

Approximately 870 Lbs. of Reinforcing Steel is required at each approach slab. Reinforcing steel, expansion joint material and joint sealing compound shall be subsidiary to the Bid Item, "Concrete Pavement (B)".

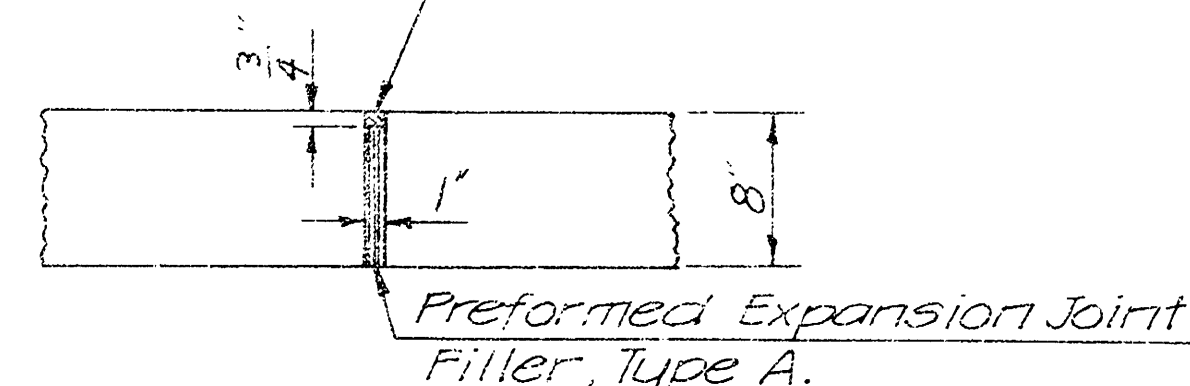


TYPICAL SECTION THRU PAVEMENT

1" = 1'-0"

Backfill with suitable material and compact to (Type B) (MR 90). Backfill and compaction shall be subsidiary to the Bid Item, "Concrete Pavement (B)".

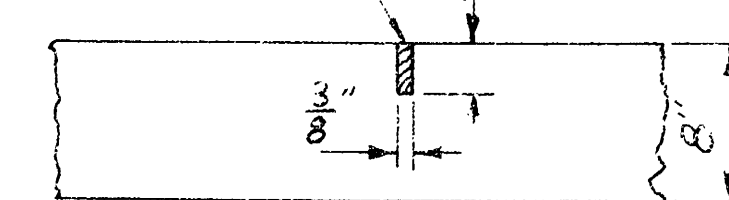
Seal with cold-type joint sealing compound.



DETAIL OF EXPANSION JOINT

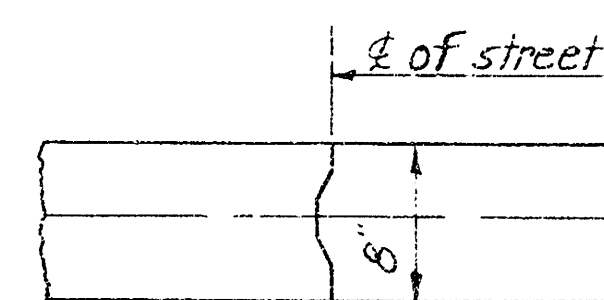
1" = 1'-0"

Seal with cold-type joint sealing compound.



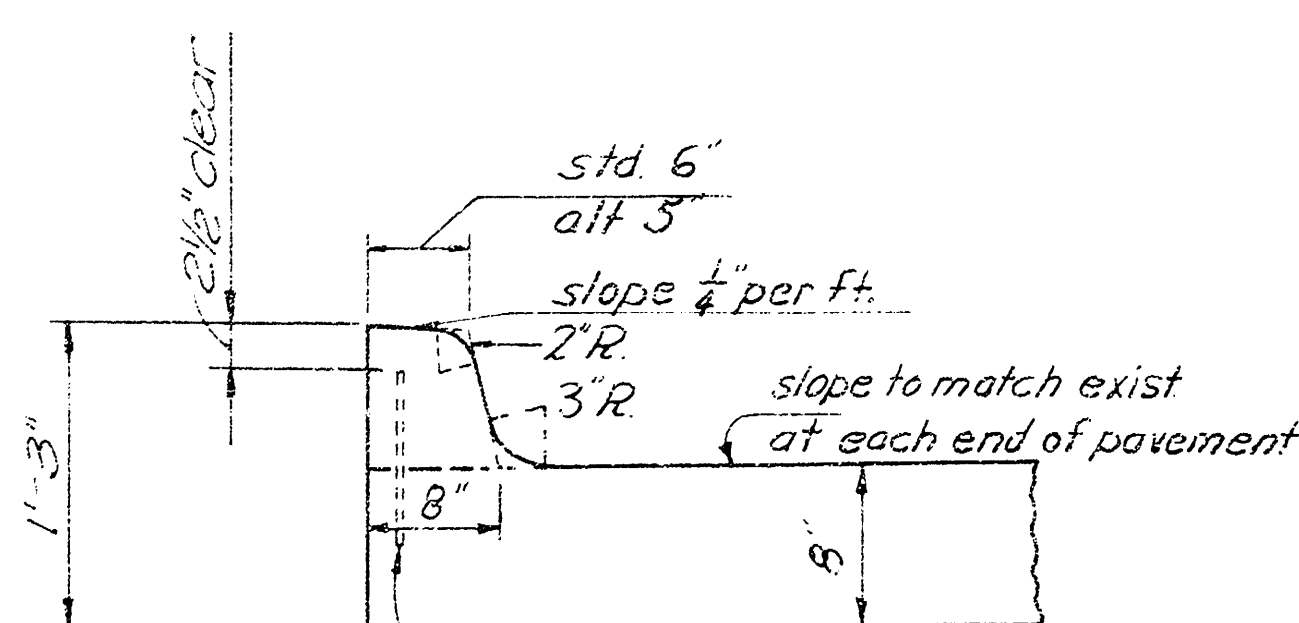
DETAIL OF SAWED LONGITUDINAL JOINT

1" = 1'-0"



DETAIL OF KEYED JOINT

1" = 1'-0"

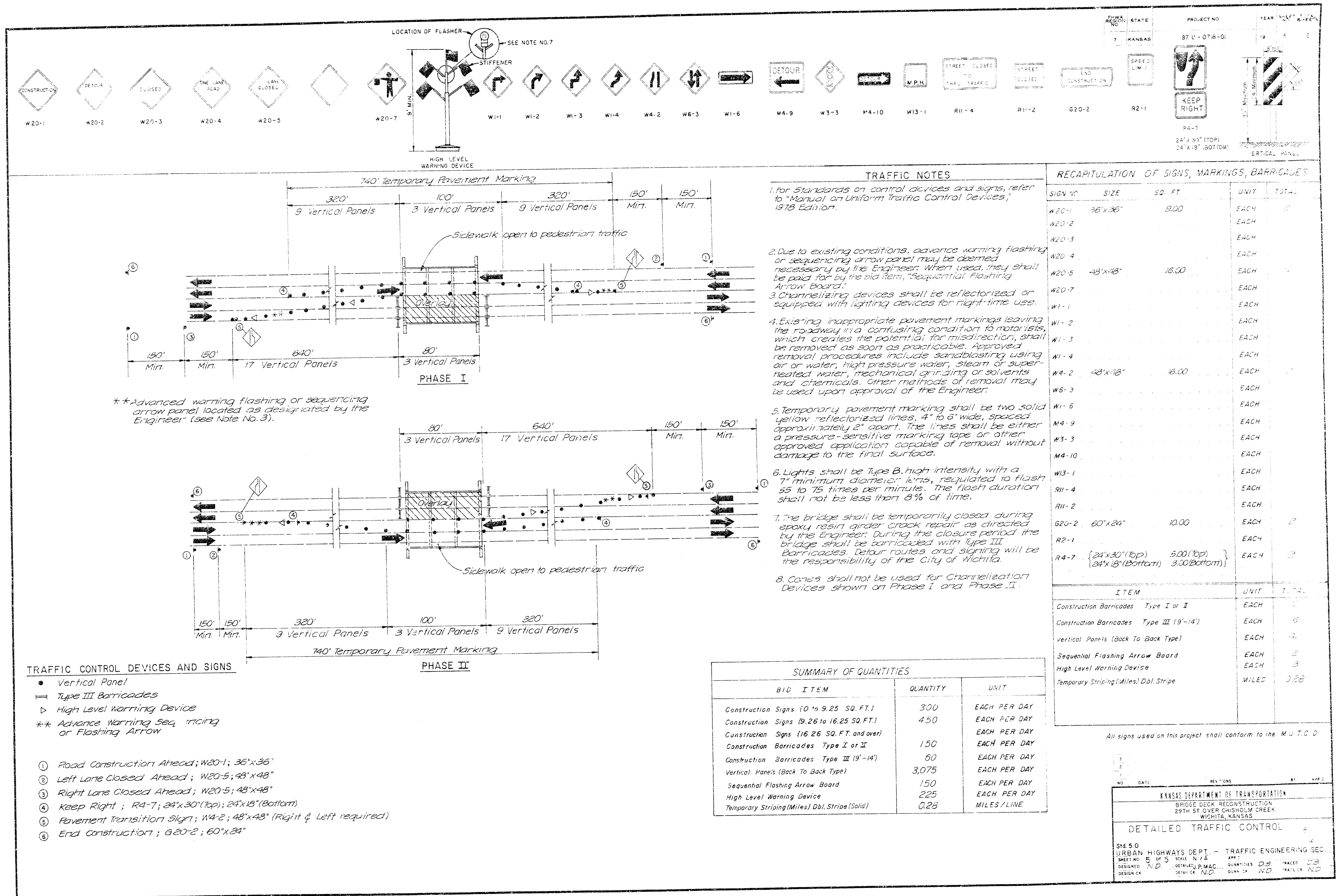


DETAIL OF INTEGRAL CURB

1" = 1'-0"

Integral curb shall be cut through to the pavement in uniform lengths of not more than ten foot intervals between expansion joints. Expansion joints having the same thickness as the expansion joints in the pavement shall be constructed in the integral curb at the specified locations. Number 4 dowels shall be installed in curb as shown on approximately 2'-6" centers.

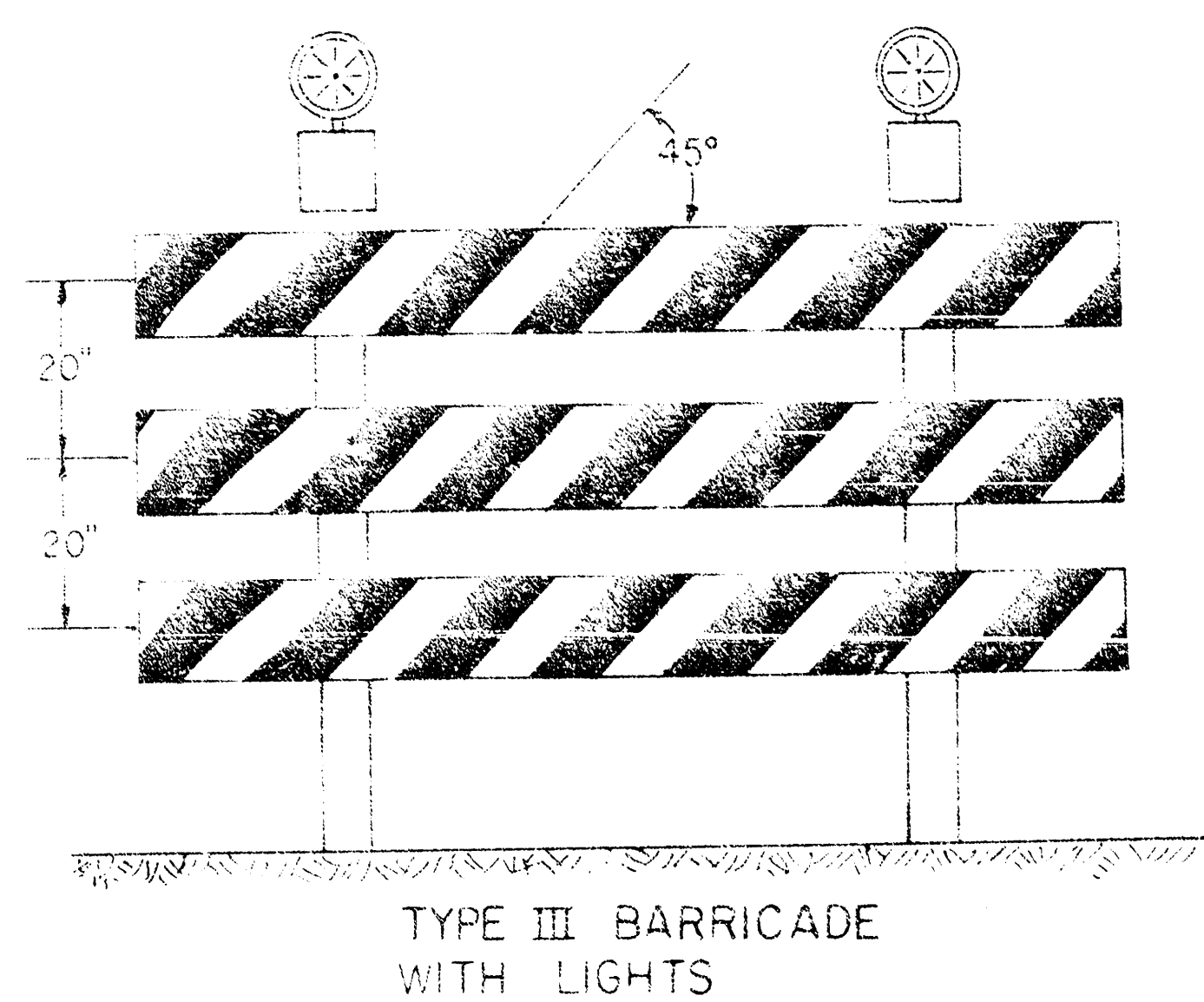
DESIGN I.V.D.	BRIDGE DECK RECONSTRUCTION
DR. BY PLC	29TH ST. OVER CHISHOLM CREEK
CK. BY RAW	
DATE Mar 78	APPROACH PAVING
7/7 1/2	
VAN DOREN-HAZARD-STALLINGS	SHEET
ARCHITECTS-ENGINEERS-PLANNERS	1/2
WICHITA, KANSAS	OF 1



TRAFFIC CONTROL DEVICES

F.W.A. REGION	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	87 U-0718-01	19	6	5

CHANNELIZING DEVICES



NOTE:

A MINIMUM OF TWO TYPE A LIGHTS SHALL BE USED AT EACH LOCATION WHERE A TYPE III BARRICADE OR BARRICADES ARE USED. A LIGHT SHALL BE MOUNTED ON THE OUTSIDE CORNER AT THE END BARRICADES WHEN MORE THAN ONE IS USED. THE LENS SHALL BE A MINIMUM OF 7" IN DIAMETER.

BARRICADE CHARACTERISTICS

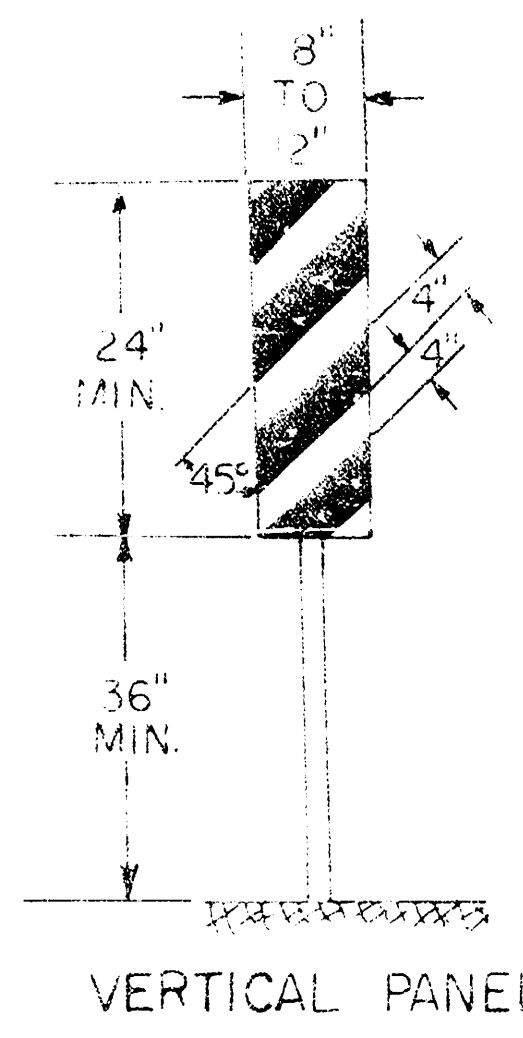
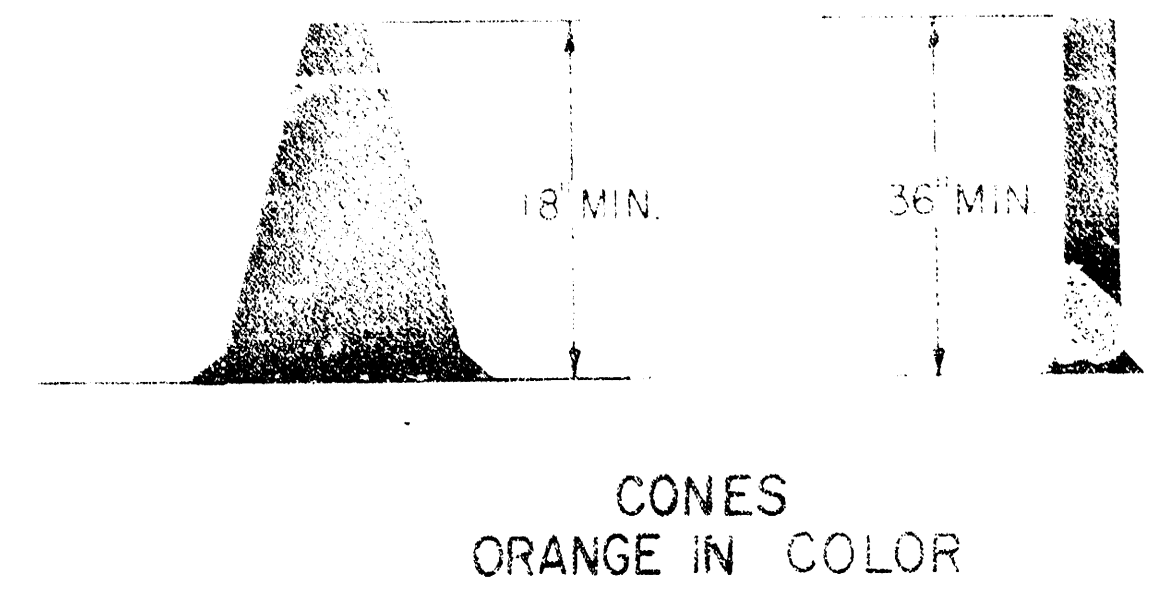
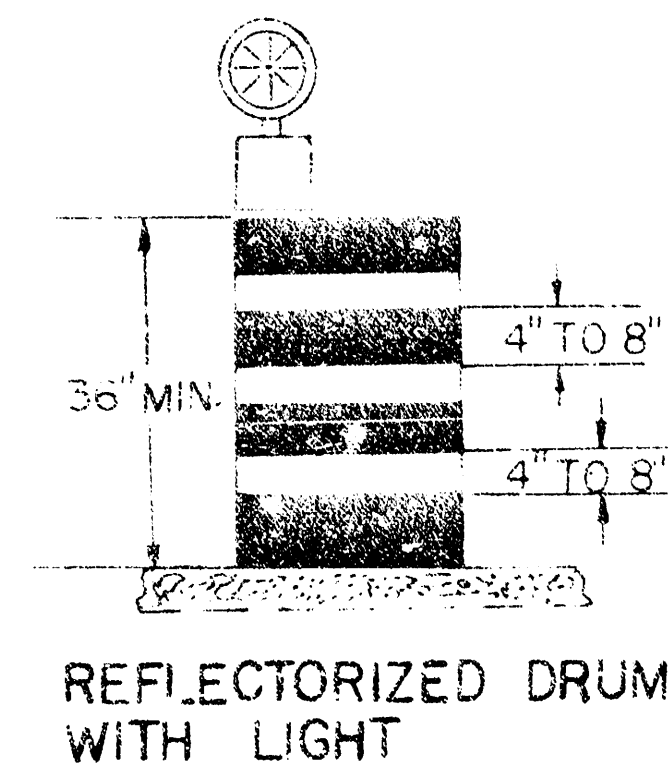
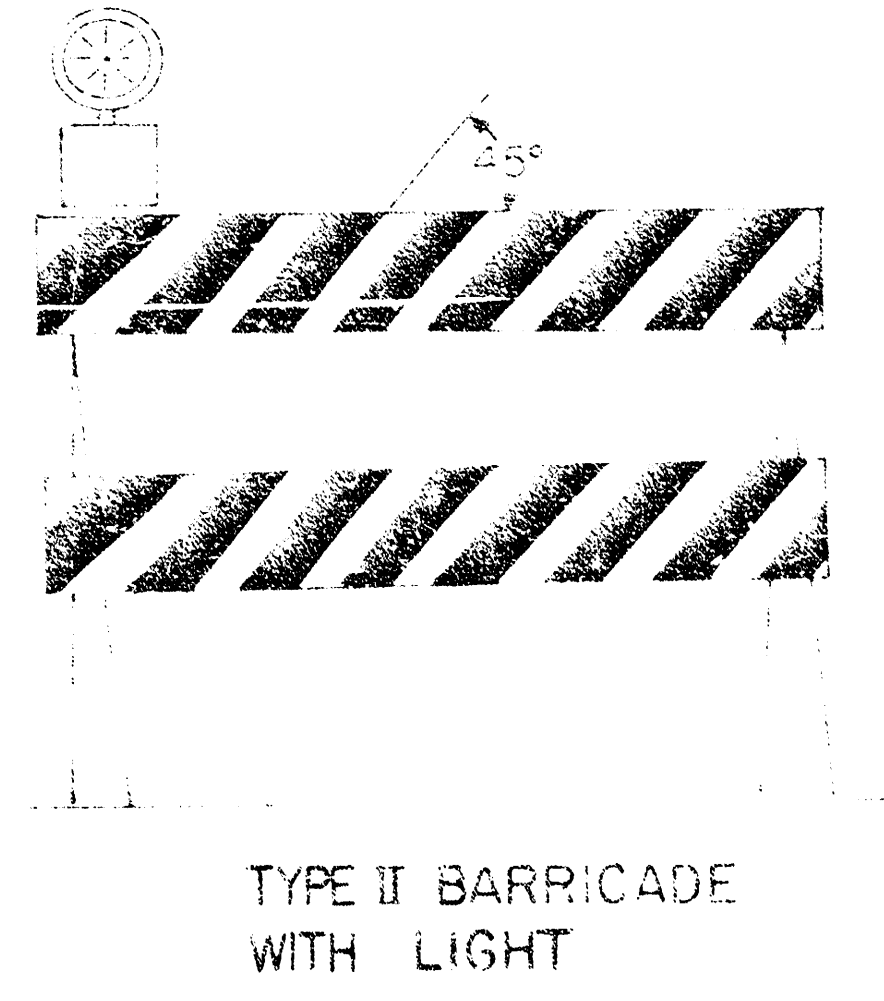
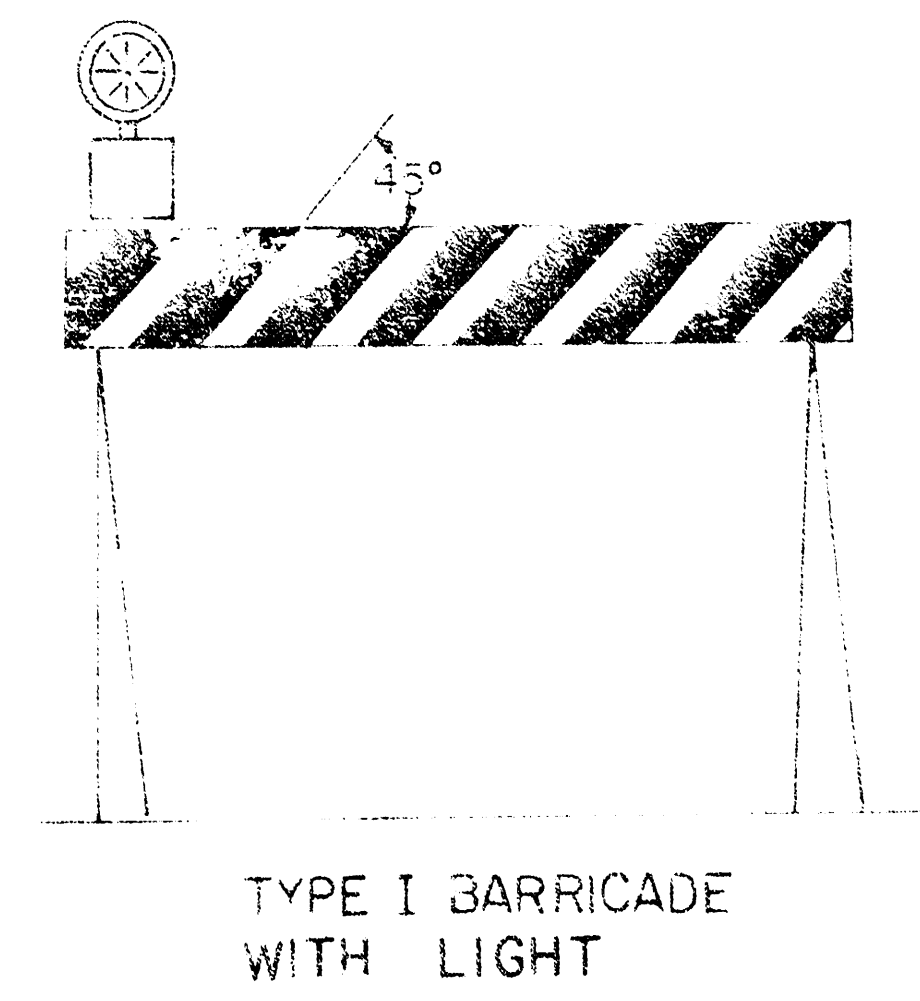
	TYPE I	TYPE II	TYPE III
WIDTH OF RAIL	8" MIN-12" MAX	8" MIN-12" MAX	3" MIN-12" MAX
LENGTH OF RAIL	2 FT. MIN	2 FT. MIN	4 FT. MIN
WIDTH OF STRIPES**	6 IN.	6 IN.	6 IN.
HEIGHT	3 FT. MIN	3 FT. MIN	5 FT. MIN
NUMBER OF REFLECTORIZED RAIL FACES	2 (ONE EACH DIRECTION)	4 (TWO EACH DIRECTION)	3 IF FACING TRAFFIC IN ONE DIRECTION 6 IF FACING TRAFFIC IN TWO DIRECTIONS

- * FOR WOODEN BARRICADES NOMINAL LUMBER DIMENSIONS WILL BE SATISFACTORY
- ** FOR RAILS LESS THAN 3 FEET LONG, 4 INCH WIDE STRIPES SHALL BE USED

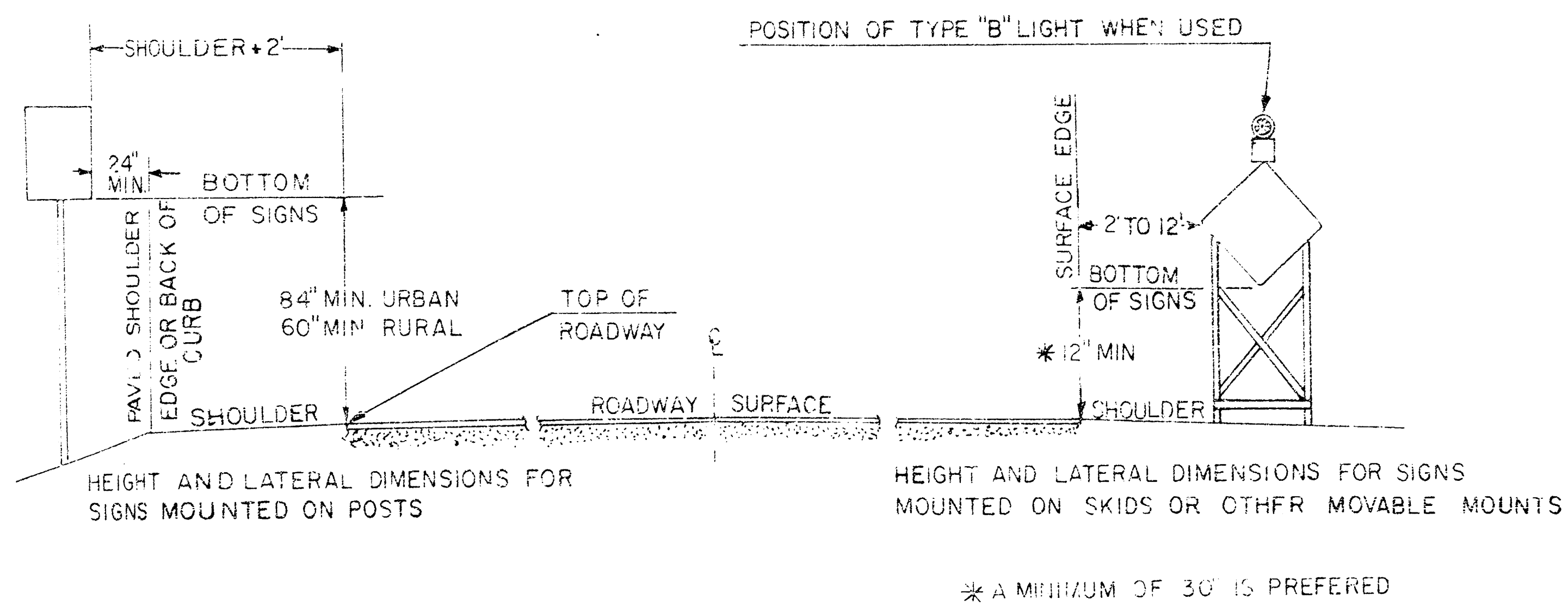
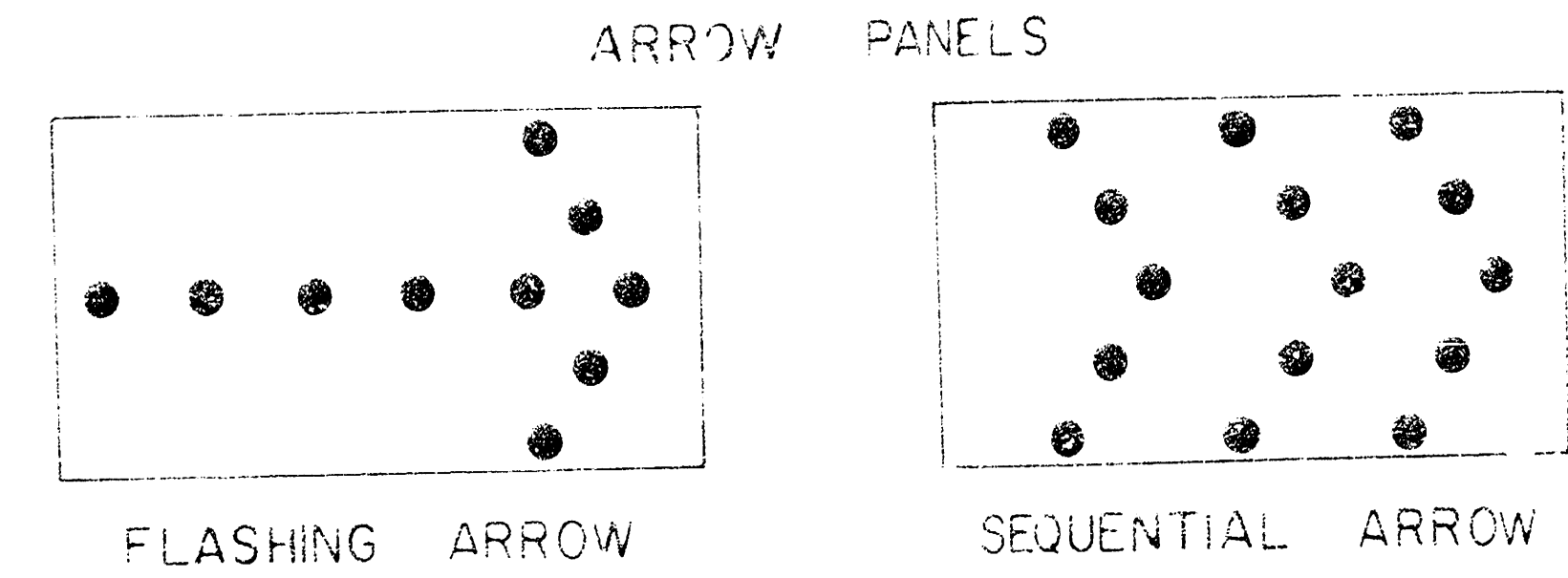
WARNING LIGHTS

	TYPE A LOW INTENSITY	TYPE B HIGH INTENSITY	TYPE C STEADY BURN
LENS DIRECTIONAL FACES	1 OR 2	1	1 OR 2
FLASHING RATE PER MINUTE	55 TO 75	55 TO 75	CONSTANT
FLASH DURATION ¹	10%	8%	CONSTANT
MINIMUM EFFECTIVE INTENSITY ²	4 CANDELAS	35 CANDELAS	
MINIMUM BEAM CANDLE POWER			2 CANDELAS
HOURS OF OPERATION	DUSK TO DAWN	24 HRS./DAY	DUSK TO DAWN

- 1 LENGTH OF TIME THAT INSTANTANEOUS INTENSITY IS EQUAL TO OR GREATER THAN EFFECTIVE INTENSITY
- 2 THESE VALUES MUST BE MAINTAINED WITHIN A SOLID ANGLE 90° ON EACH SIDE OF THE VERTICAL AXIS, AND 5° ABOVE AND 5° BELOW THE HORIZONTAL AXIS.



LIGHTS USED ON CHANNELIZING DEVICES
WHEN USED SINGLY TYPE "A" FLASHING
WHEN USED IN SERIES TYPE "C" STEADY BURN
THE LENS SHALL BE A MINIMUM OF 7" IN DIAMETER.



NOTE:

The colors of barricade rails, drums, and vertical panels shall be orange and white. The entire area of orange and white shall be reflectORIZED with reflective sheeting or other reflective processes as approved by the Engineer.

Channelizing Devices placed along shoulder edges or in dropoffs shall be a minimum of 24" from the top of the channelizing device to the top of the pavement.

NO.	DATE	REVISIONS	BY	APP'D.
1				
2				

DESIGN DETAILS FOR
BARRICADES, CHANNELIZING DEVICES
AND SIGN MOUNTING LOCATIONS

STD. 752.1

SHEET NO. OF SIGN
DESIGNED BY PR
DESIGNED BY ART

QUANTITY
QUANTITY

APPROVED
APPROVED

DATE
DATE