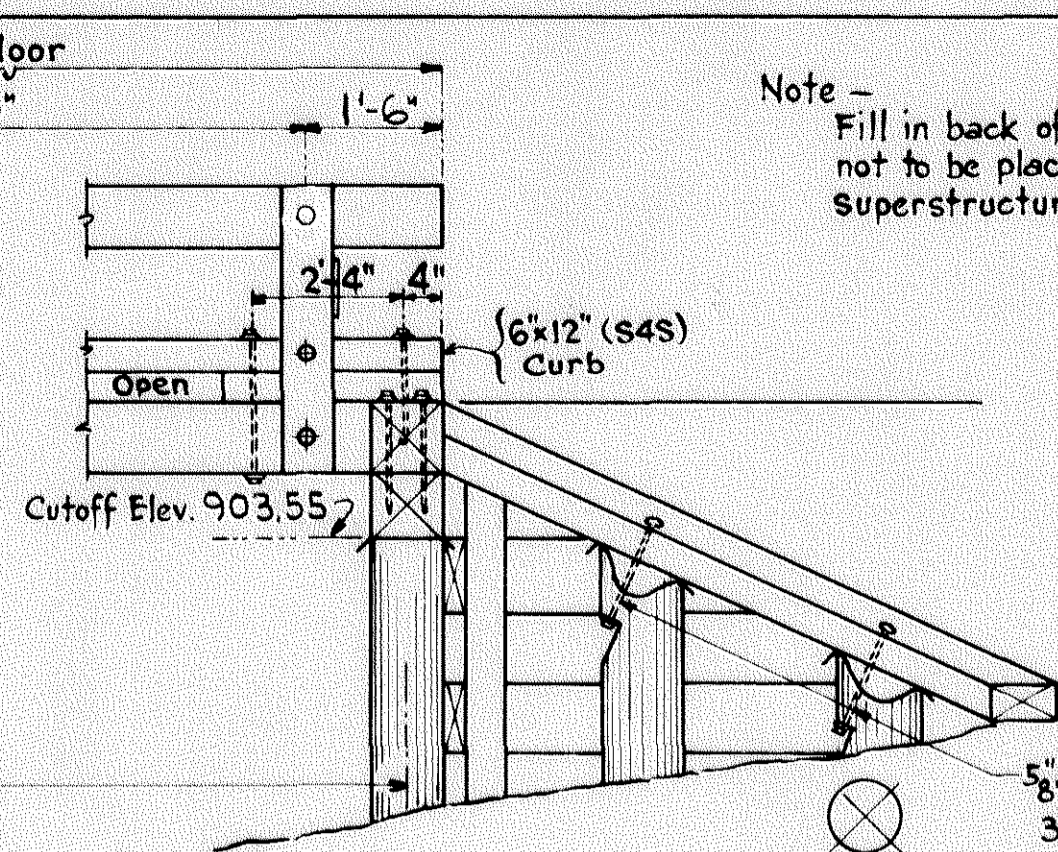


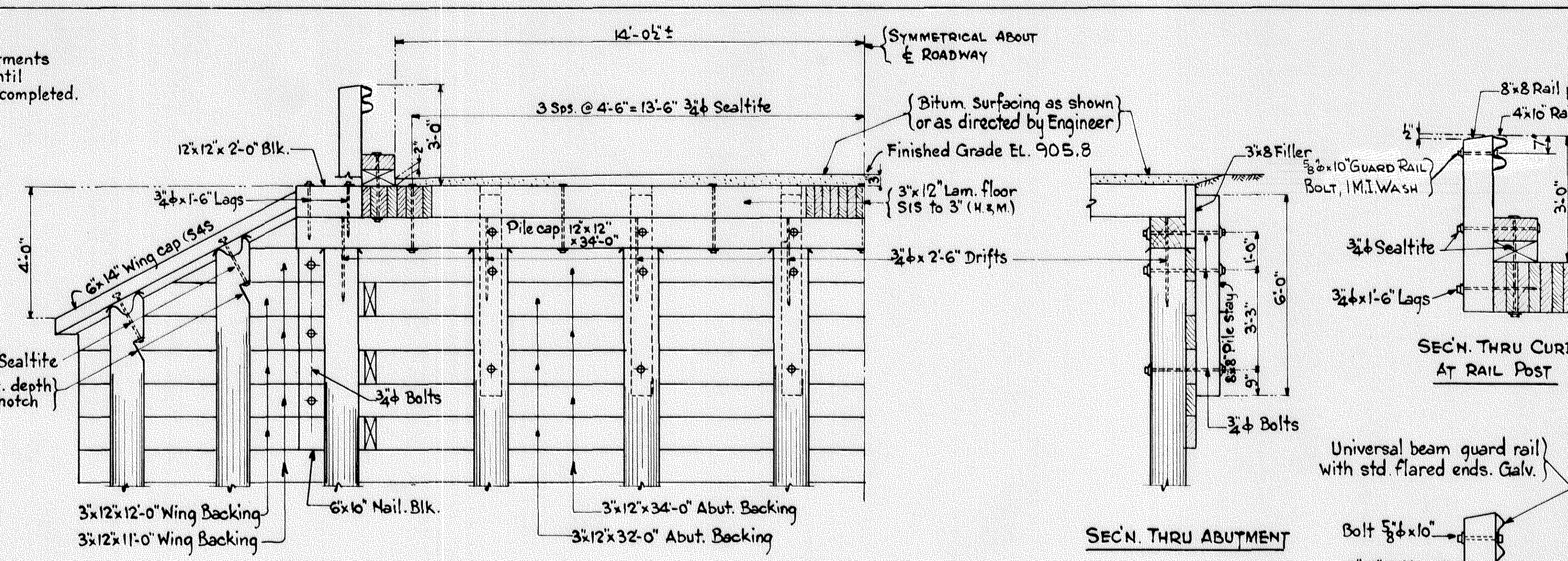
GENERAL ELEVATION

Note - Pile cutoffs shall be treated by impounding hot creosote an inch or more in depth over the untreated core of the cutoff end. Creosote shall be retained by using a mud dike around the circumference of pile.



Note -
Fill in back of abutments
not to be placed until
superstructure is completed.

Note: Abutment as shown to be used
with maximum 8 ft. of backing.
For higher abutments or for unusual
soil conditions - specially designed
abutments will be required.



HALF SECTION SHOWING ABUTMENT

Backings Note -
Secure backing to piles with
2-60# nails at each intersection.

SECTION THRU CURB
AT RAIL POST

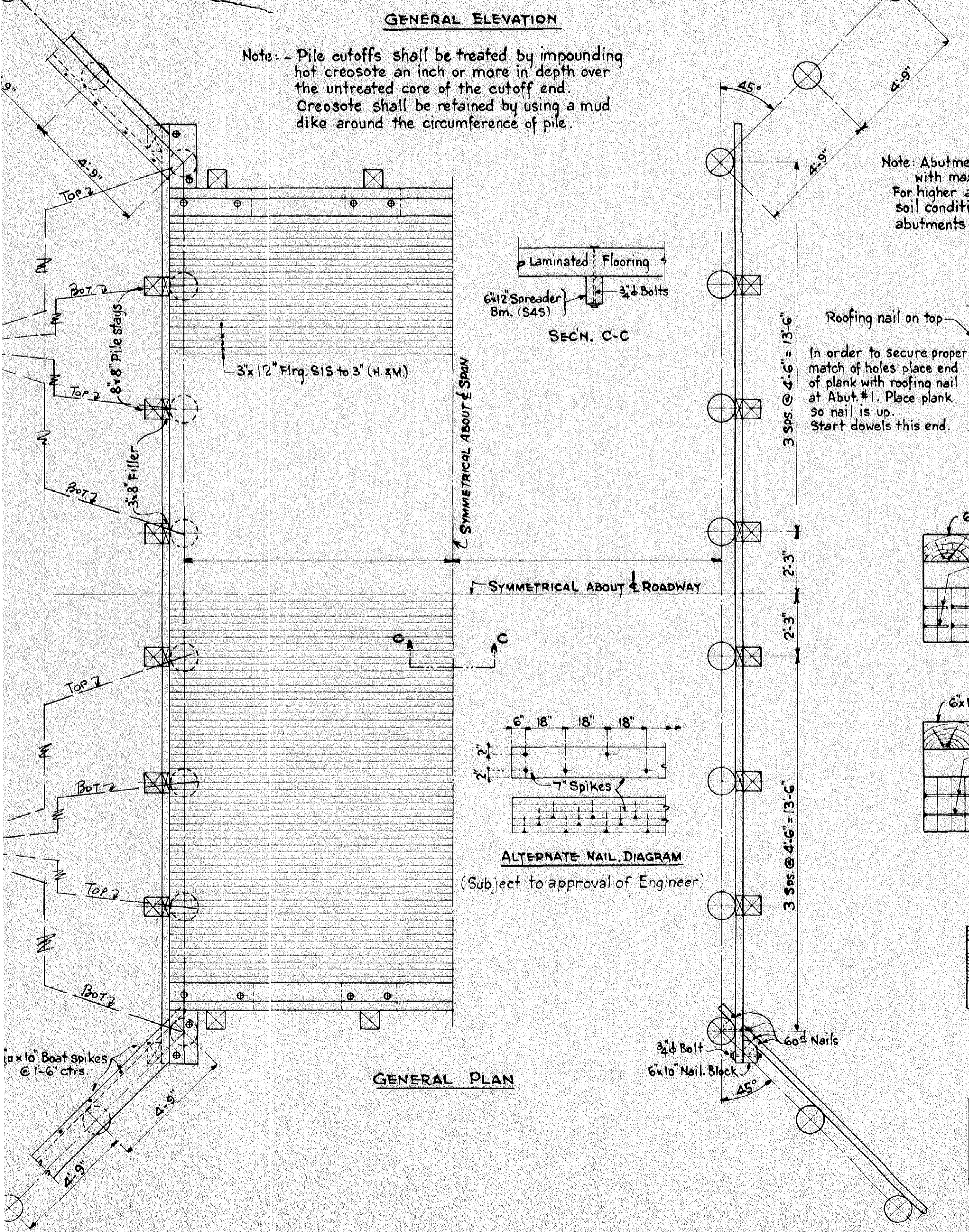
Universal beam guard rail
with std. flared ends. Galv.

RAILING

Design in accordance with 1957 A.A.S.H.O. Specifications
for H20 loading. No impact.

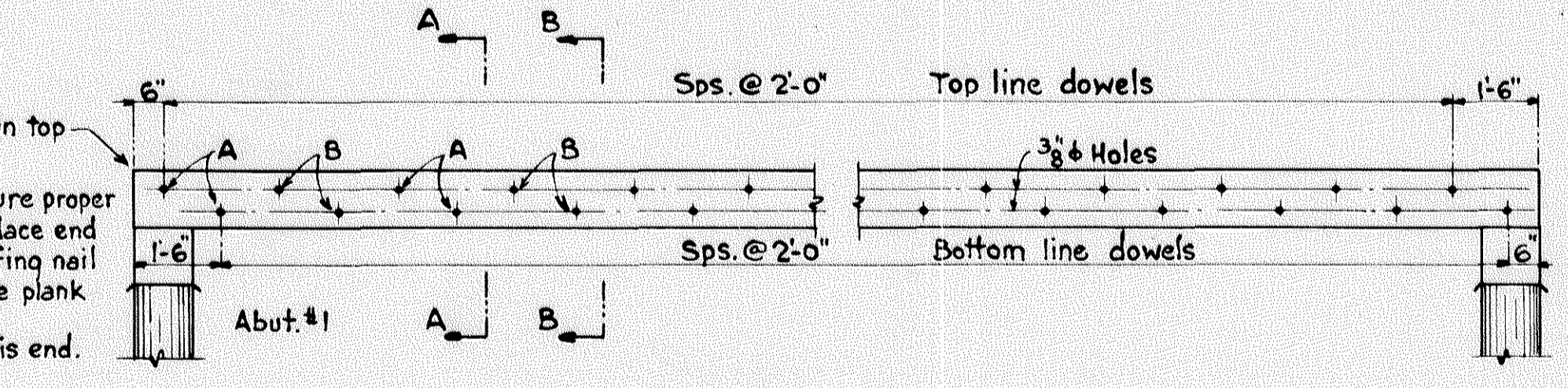
SPECIFICATIONS

All piling and timber shall be creosote pressure treated according to current State Specifications. Piling shall meet State Specifications. All timber to be Douglas Fir (Coast Region) and to be graded as per W.C.L.A. No. 15 effective Mar. 15, 1957. Hand rails shall be as per Par. 123 b-b 1750# f or Universal Beam Guard Rail as shown. Floor laminations shall be as per Par. 123 b. 1500# f shall be SIS to 3" H and M. Balance of timber shall be as follows: Thickness of timber 4" or less shall be as per Par. 123 b. Thickness of timber more than 4" shall be as per Par. 125. All timber is rough unless otherwise designated. All timber cut in field shall be treated with 3 coats hot creosote brushing oil. All holes shall be treated with an approved bolt hole treater. Dowels shall be "Stronghold Spikes" as supplied by Independent Nail Co. or an approved equal. An alternate using 7" spikes at alternate 18" ctrs. will be allowed. Every 3rd lamination to be toe nailed to with 30ds. See nailing diagrams. All hardware to be galvanized as per State Specifications. Construction requirements to conform to State Specifications. Flooring Note - Laminated 4 planks together using screw dowels in holes "B" and toe nail to cap so one is on each side of roadway. There after place planks in pairs for pairs on either side of the 4 planks drive dowel holes "A". For succeeding pairs on both sides of "B" & "A" alternately. Before driving screw dowels, planks must be spiked together with 60# nails so dowels are lined up and each plank is in contact with adjacent plank throughout its entire length. Laminations must be tight over entire roadway. All timbers to be cut to exact length, dressed, size required and all practical framing and to be done before treatment.

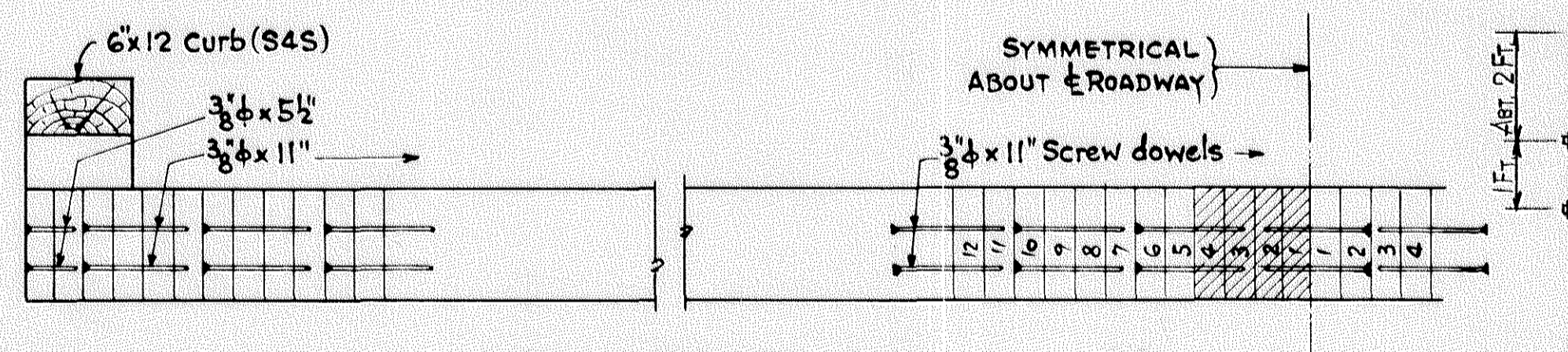


GENERAL PLAN

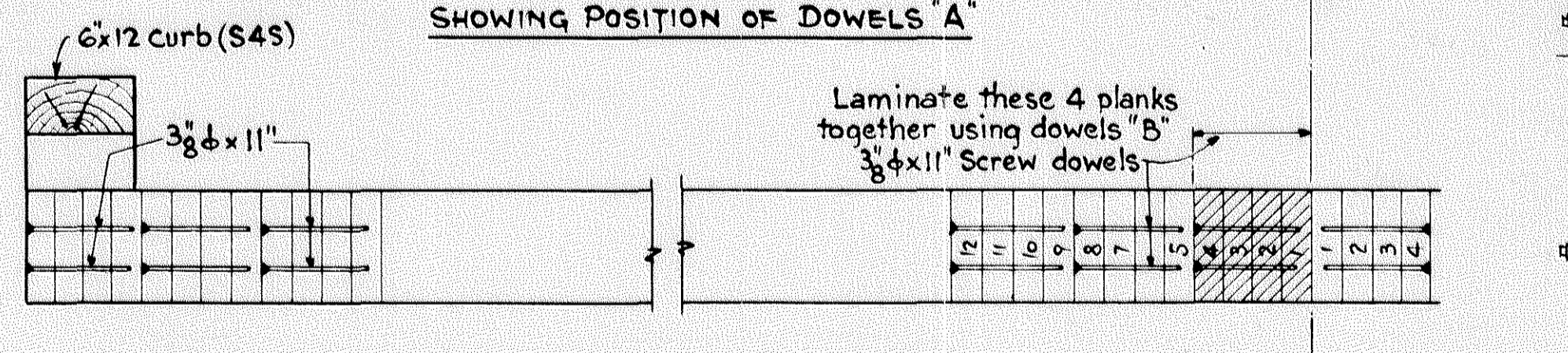
(Subject to approval of Engineer)



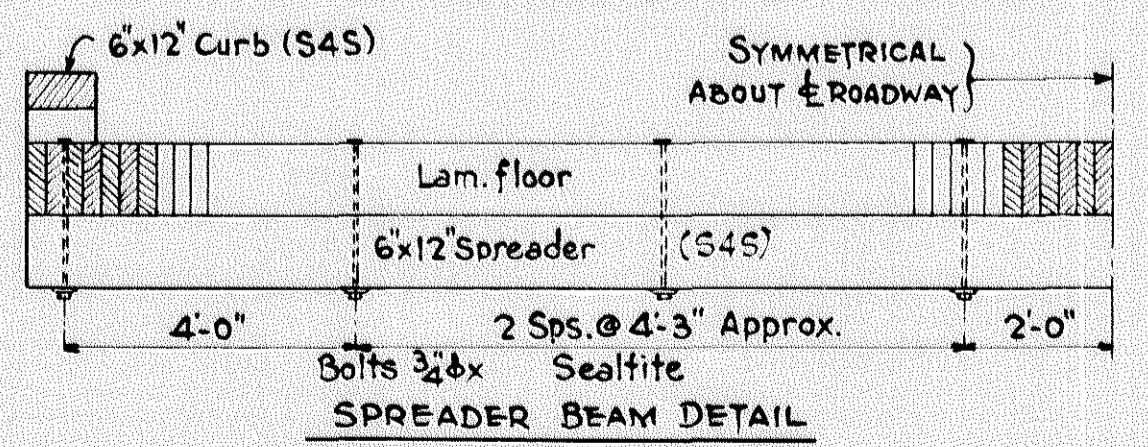
LONGITUDINAL SECTION SHOWING DOWEL SPACING



TRANSVERSE SECTION A-A
SHOWING POSITION OF DOWELS "A"



TRANSVERSE SECTION B-B
SHOWING POSITION OF DOWELS "B"



SPREADER BEAM DETAIL

PILE NOTE

- 2. Test piles 50 ft long
 - 22. Abutment piles Est. length 45 ft.
 - 4. DEAD MAN PILES Est. length 30 ft.
 - 28. Total piles reqd.
- Drive all piles to a minimum of 15 Tons each.
Est. penetration 2 ft. less than lengths given.

SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE								
ITEM No.	2403.502	2403.506	2452.503	2452.504	2452.517	2402.586	2442.501	2511.501
ITEM	TREATED TIMBER	HARDWARE	TREAT. TIMB. PILING DELIVERED	TREAT. TIMB. PILING DRIVEN	TREAT. TIMB. TEST PILES IN PL 50' LG	PLATE RAILING	REMOVE OLD BRIDGE	RANDOM RIP RAP CLASS A
UNIT	M.B.M.	LB.	LIN. FT.	LIN. FT.	PILE	LIN. FT.	BRIDGE	CU. YD.
QUANTITY	14,738	16,43	1110	1058	2	57	ONE	80

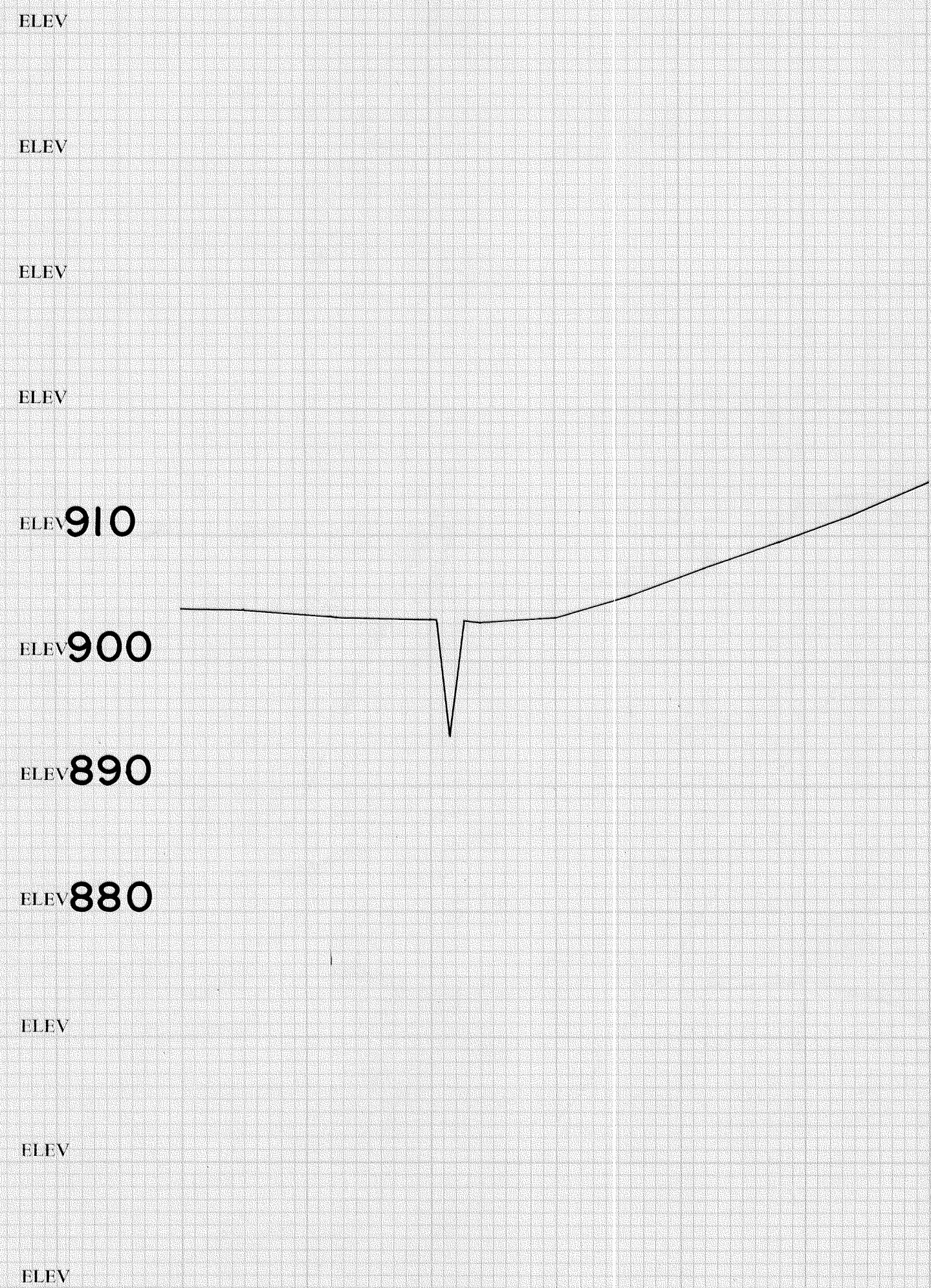
ANOKA COUNTY
ST. FRANCIS TWP

26 FOOT CREOSOTED TIMBER BR
28 FOOT ROADWAY
LONGITUDINAL LAMINATED FLOOR
SEC. 26 TWP 34 RANGE 25

APPROVED
DATE 11-21-61 COUNTY ENG

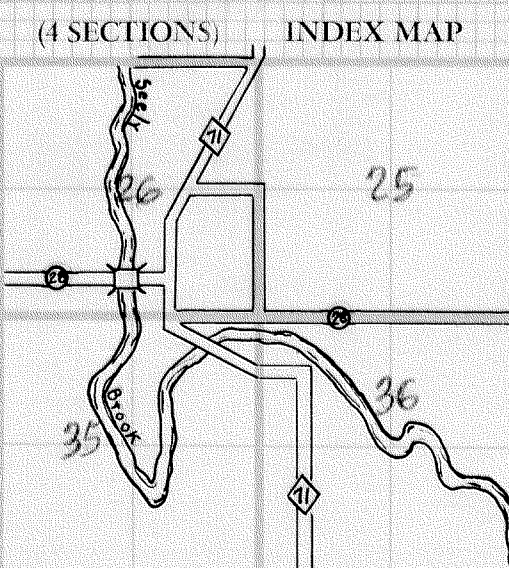
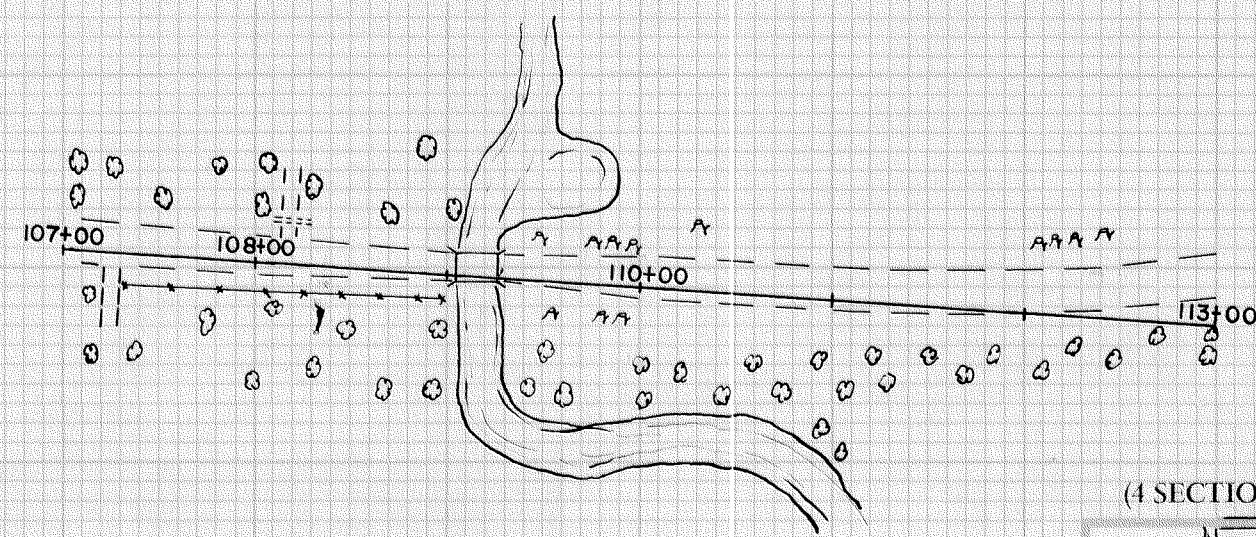
CONTRACTED PROFILE

SCALE: HOR. 1" = 100', VER. 1" = 10'



PLAT

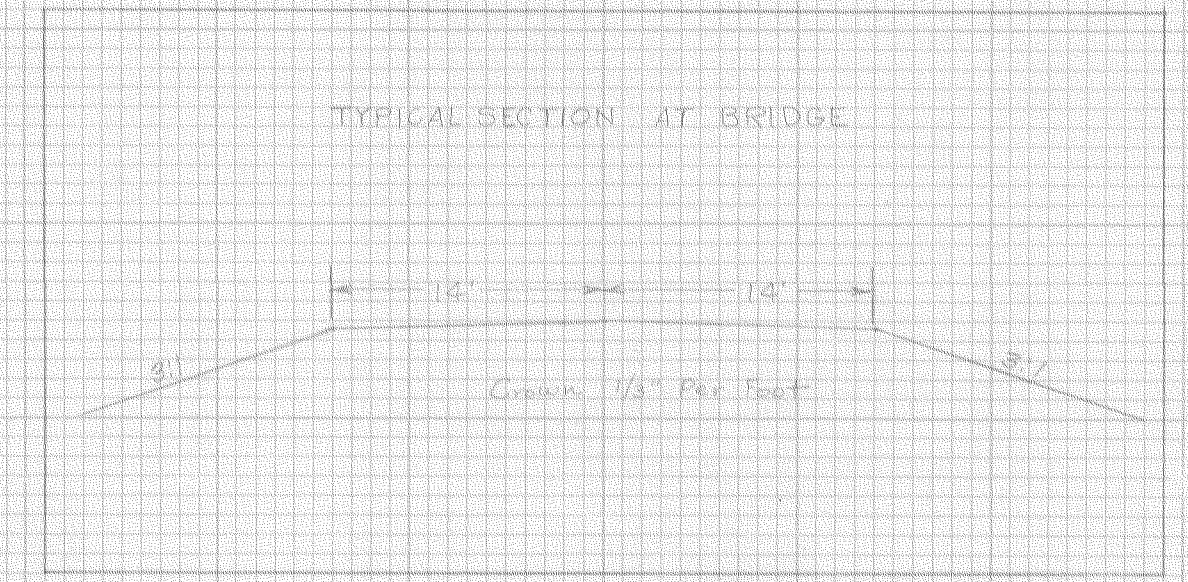
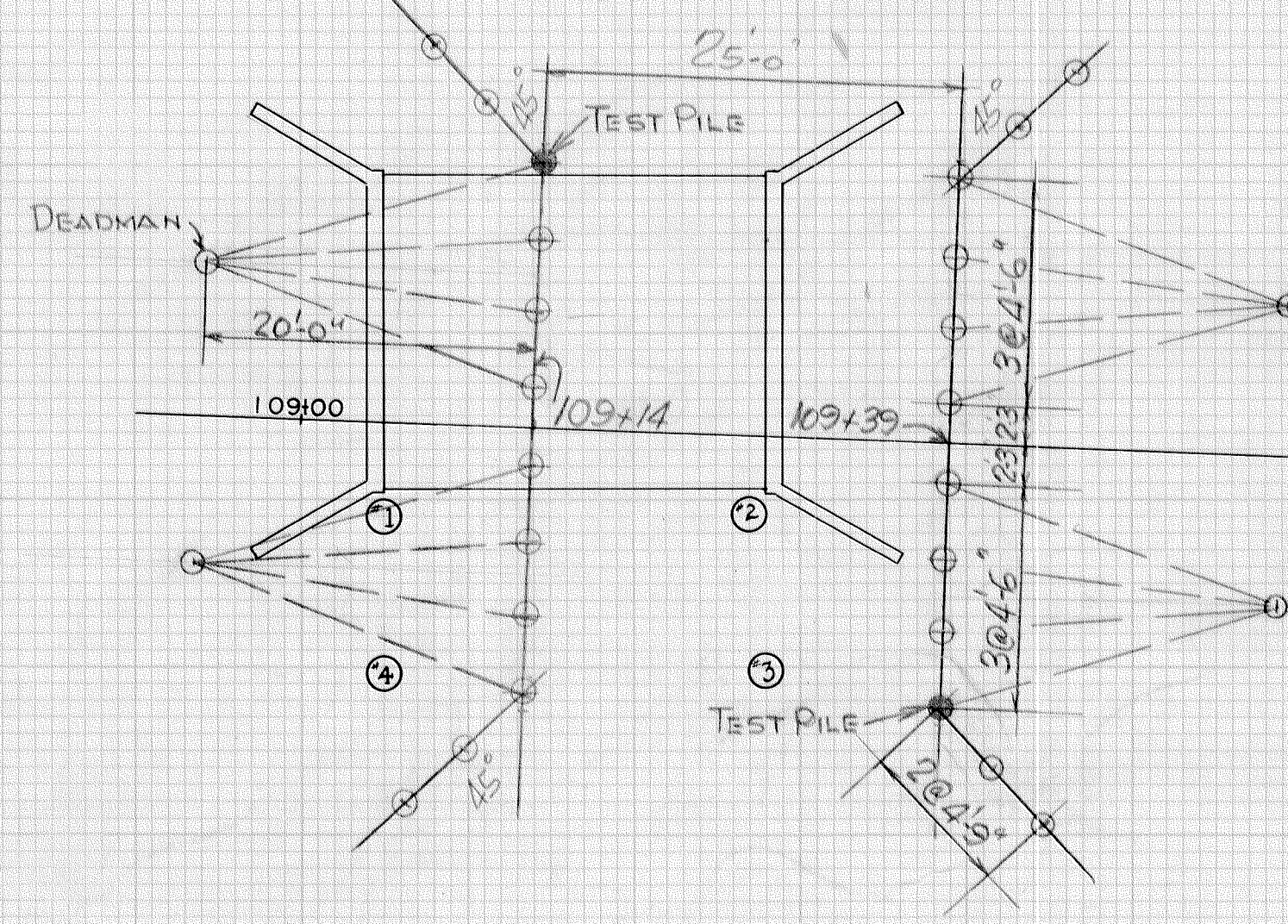
SCALE: 1" = 100'



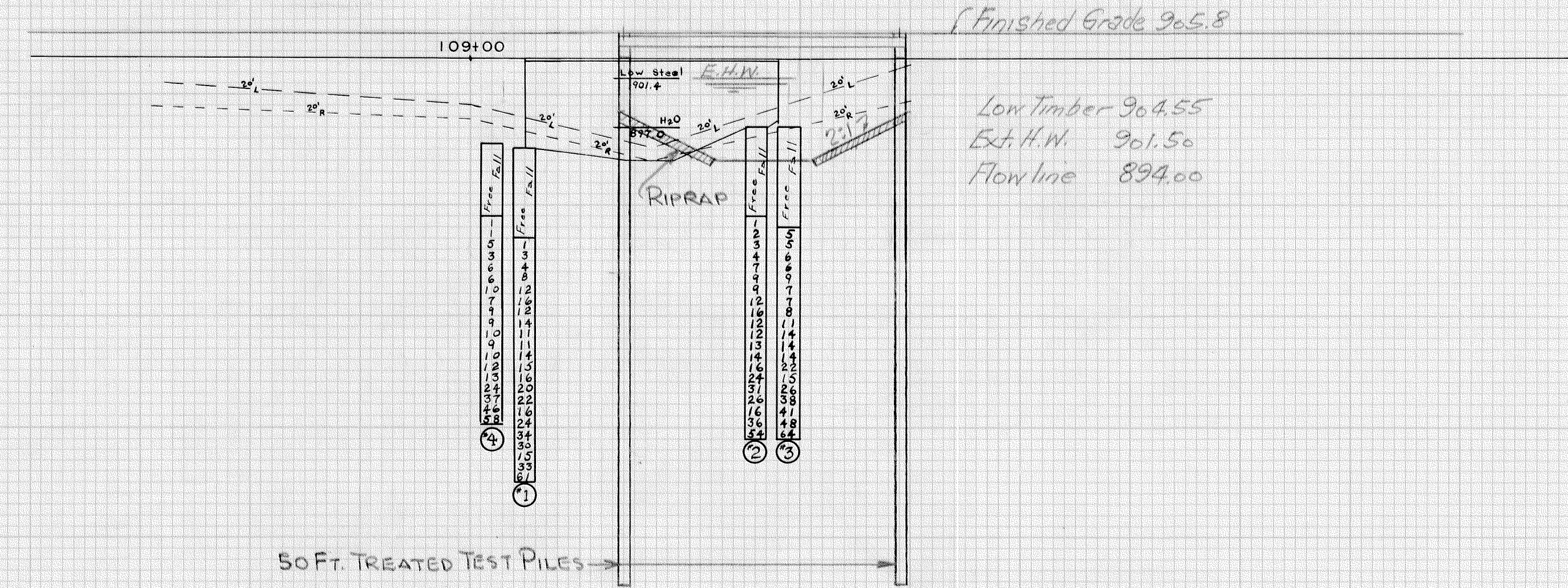
PLAN AND PROFILE

SCALE: 1" = 10'

CENTER LINE OF LAYOUT



ELEV 910
ELEV 900
ELEV 890
ELEV 880
ELEV 870



Water Elevations:
500' Upstream: 897.4
At Bridge: 897.0
500' Downstream: 896.5

FOLLOW SEPARATE "INSTRUCTIONS FOR PREPARATION OF BRIDGE SURVEYS" WHEN MAKING BRIDGE SURVEYS.

DATA

- Preliminary recommendations of Engineer in charge of Bridge Survey:
 - Net span length and type of bridge... *26' 00" Treated Timber Bridge*
 - Width of roadway on bridge... *25' 00" Clear*
 - Number and width of sidewalks, if any... *None*
 - Locate center of bridge at station... *109+26.5*
 - If a skew bridge is recommended, the angle of skew should be... *None*
 - Is piling required?... *No*
- Special features: Waterfalls, dams, exceptional floods, ice, driftwood, sliding banks, logging, etc.
None
- Changes: In height or length from that of old bridge, and reasons why...
Bridge raised to obtain better grade line

DATA (Contd.)

- Other bridges in vicinity:
 - Over same stream (particularly structures which carry high water without overflow of roadway); give location, length, height above water, net cross-sectional area at high water stage and estimated age...
None
 - Over or under same highway or railroad; give location, length, horizontal and vertical clearances and estimated age...
None
 - Reasons why these bridges are, or are not, fair indications of what length the proposed bridge should be...
None
- If structure is over a drainage ditch, is ditch gradient liable to be altered? *None*
- Navigation clearances required, if any... *None*
- Information and evidence in regard to high water stages was obtained as follows...
Local Resident
- Must contractor provide for traffic during construction of proposed bridge? *None*
If so, by what means? *None*

HIGH AND LOW WATER ELEVATIONS

Data obtained from *Local Resident* reflects highest water elevation in the area of this construction to be *901.5* and the lowest water elevation to be *895.0*. The above figures are for informational purposes only. The state neither warrants nor represents that these figures for high water and low water are in any way indicative of the high water or low water to be expected or encountered during this construction.

SHIPPING POINT

Proposed Bridge is _____ miles _____ of _____ which is the nearest Railroad shipping point.
*(Give name of town, station or siding)

Date _____ Project or County Engineer _____
Date _____ District Engineer _____

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE SURVEY
FOR
PROPOSED BRIDGE LOCATED 3 MILES N.W. OF St. Francis ON C.S.A.H. #28
(TOWN OR CITY) (T.H., S.A.R. OR C.A.R. NUMBER)

SEC. 26 TWP. 34 R. 25
TOWNSHIP St. Francis COUNTY Anoka
SURVEY MADE DURING MONTH OF Oct. 19 61
SURVEY MADE BY E.J. Lundheim

BRIDGE No. 02502