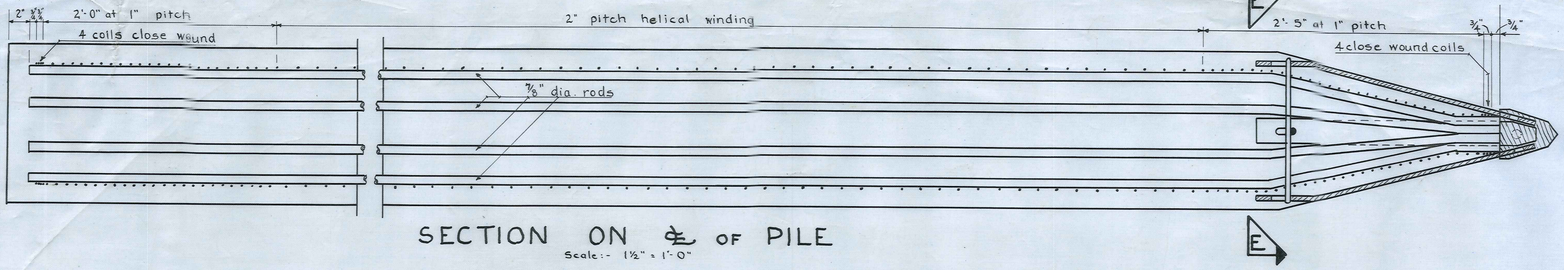
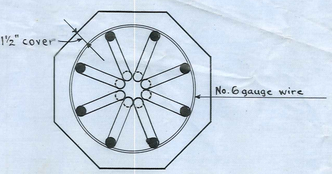


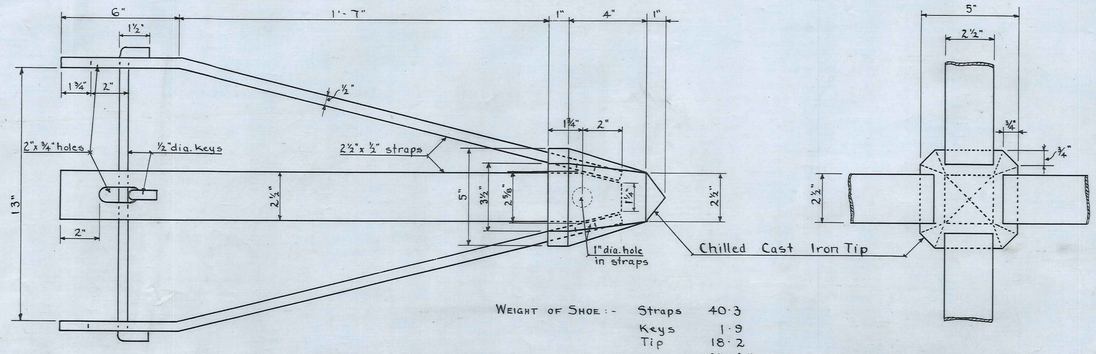
SECTION ON ℄ OF PILE

Scale:- 1½" = 1'-0"



SECTION E-E

Scale:- 1½" = 1'-0"



WEIGHT OF SHOE :-

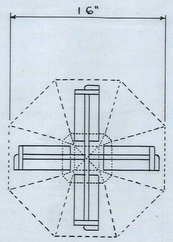
Straps	40·3
Keys	1·9
Tip	18·2
	60·4 lbs.

PILE SHOE

Scale:- 3" = 1'-0"

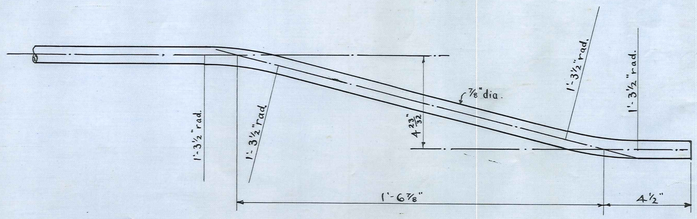
PLAN OF TIP

Scale:- 3" = 1'-0"



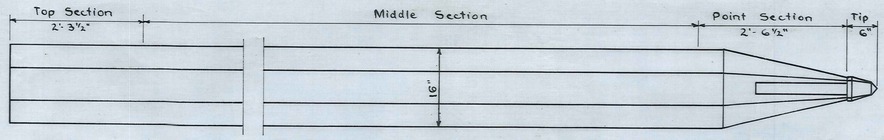
PLAN OF SHOE

Scale:- 1½" = 1'-0"



CRANKED END OF PILE ROD

Scale:- 3" = 1'-0"



PLAN OF PILE

Scale: ¾" = 1'-0"

16" Oct. Pile	Concrete (cub. ft.)	⅞" dia. Rods (lin. ft.)	No. 6g. Wire (lin. ft.)
Top Section 2'-3½" long	3·375	17	94
Middle Section per foot run	1·473	8	20·25
Point Section 2'-6½" long	2·229	20·66	75

QUANTITIES

Nominal length in ft.	10	15	20	25	30	35	40	45	50	55	60
Weight in Tons	0·87	1·37	1·86	2·35	2·84	3·34	3·83	4·32	4·82	5·31	5·80

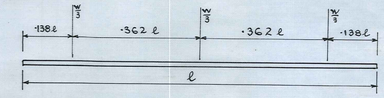
WEIGHTS OF PILES OF VARIOUS LENGTHS

NOTES:-

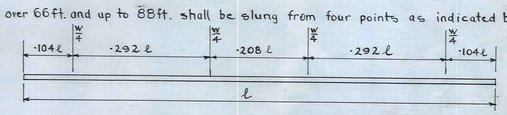
1. Nominal length of pile = Length of reinforcing steel.
2. Minimum weight of monkey for piles under 30 ft. long is 3 tons, provided specified bearing does not exceed 25 tons. If bearing exceeds 25 tons, a 4 ton monkey must be used, irrespective of length.

METHODS OF HANDLING AND LIFTING PILES

1. Piles under 20 ft. long may be slung from a single point anywhere along the pile.
2. Piles from 20 ft. to 31 ft. long may be slung from a single point located at a distance of 0·293ℓ. from the pile head.
3. Piles over 31 ft. and up to 45 ft. shall be slung from two points located a distance of 0·207ℓ from each end.
4. Piles over 45 ft. and up to 66 ft. shall be slung from three points as indicated below.



5. Piles over 66 ft. and up to 88 ft. shall be slung from four points as indicated below.



For arrangements involving more than two points of pick up, a suitable system of pulleys and/or beam must be used to give equal vertical reactions at each point.

NOTE:-

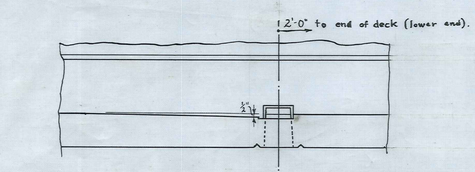
The above is based on a limiting stress of 12,000 lbs/sq. in. in the steel, assuming 100% impact during lifting.

STANDARD 16 IN. OCTAGONAL REINFORCED CONCRETE PILE

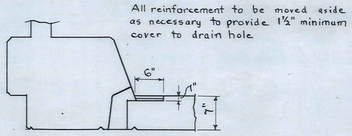
(FOR FRESH WATER)

PILES WOUND HELICALLY WITH N°6 GAUGE WIRE (S.W.G.)

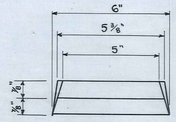
TAKEN FROM P.W.D. 127636



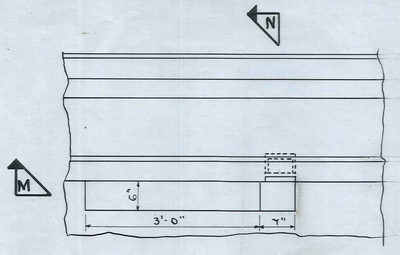
SECTION M-M



SECTION N-N

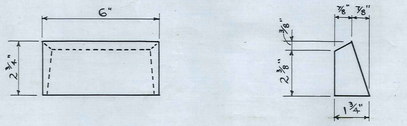


PLAN



PLAN

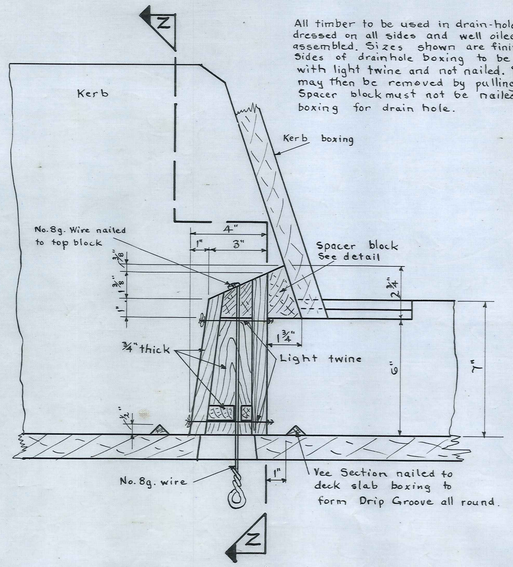
Scale:- ¾" = 1'-0"



ELEVATION END VIEW

SPACER BLOCK

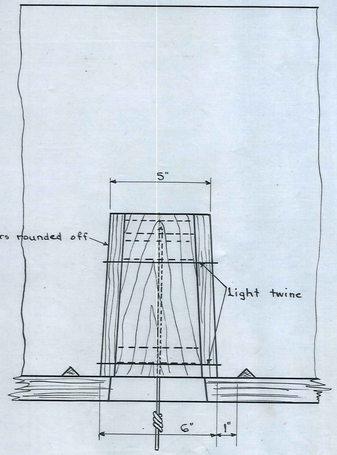
Scale:- 3" = 1'-0"



All timber to be used in drain-hole boxing to be dressed on all sides and well oiled before being assembled. Sizes shown are finished sizes. Sides of drainhole boxing to be tied together with light twine and not nailed. Spreader blocks may then be removed by pulling on wire loop. Spacer block must not be nailed to collapsible boxing for drain hole.

SECTION ON ℄ OF DRAIN

Scale:- 3" = 1'-0"



SECTION Z-Z

Scale:- 3" = 1'-0"

DRAINAGE HOLES IN REINFORCED CONCRETE BRIDGE DECKS

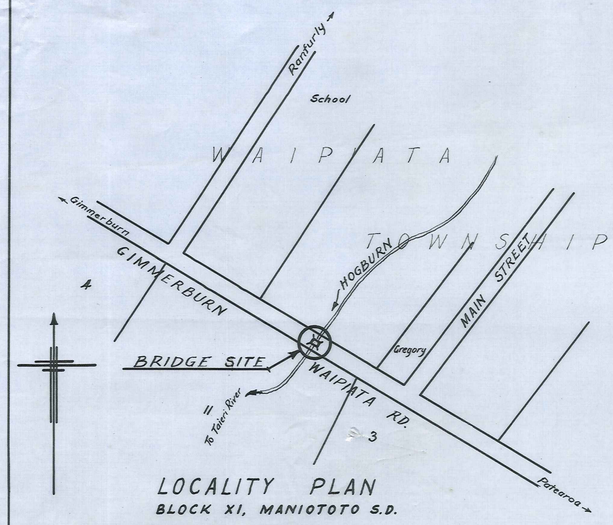
COLLAPSIBLE BOXING

TAKEN FROM P.W.D. 126853

DWK

2725/5

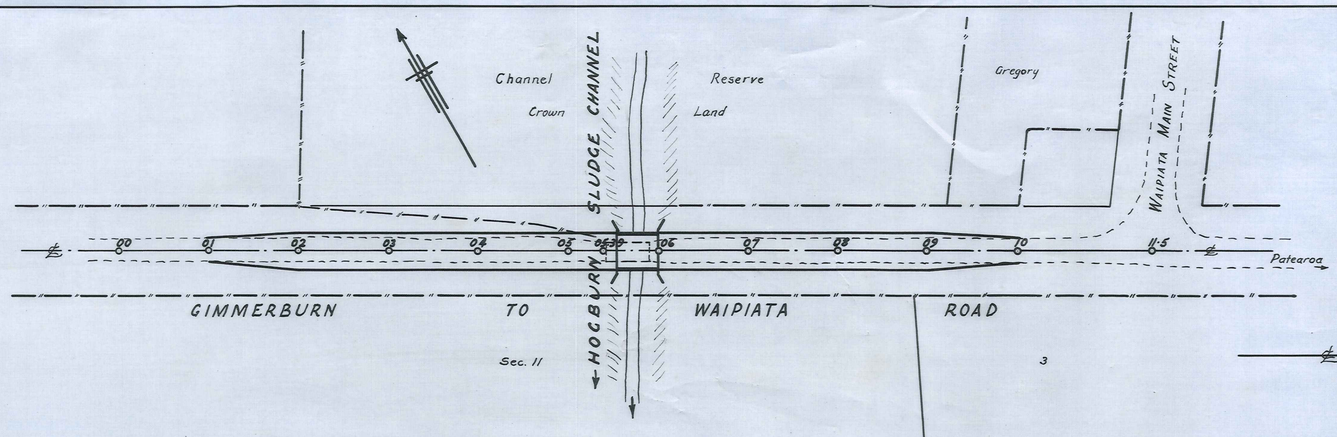
MANIOTOTO COUNTY		SCALES:- As shown
		M.C.C. 230
CONTRACT No.	DETAILS OF PILES DETAILS OF DRAINHOLES	SHEET 3 OF 4 SHEETS
		R.J. Black County Engineer May 1952



LOCALITY PLAN

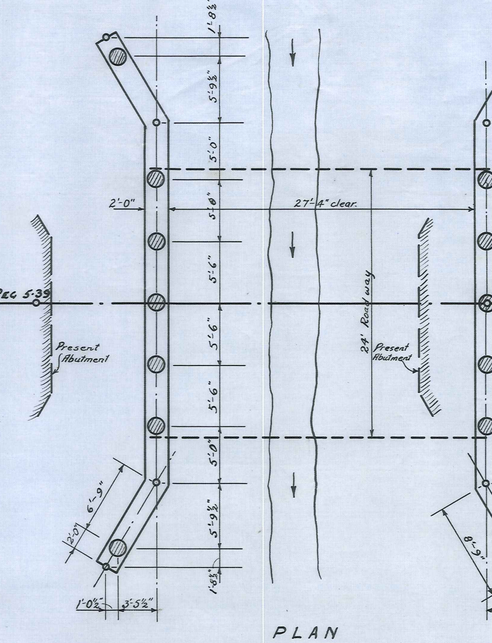
BLOCK XI, MANIOTOTO S.D.

Scale : 5 chains to 1 inch.

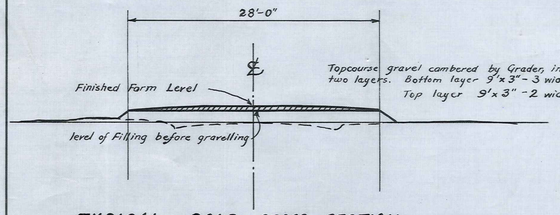


SITE PLAN

Scale: 1 chain to 1 inch.



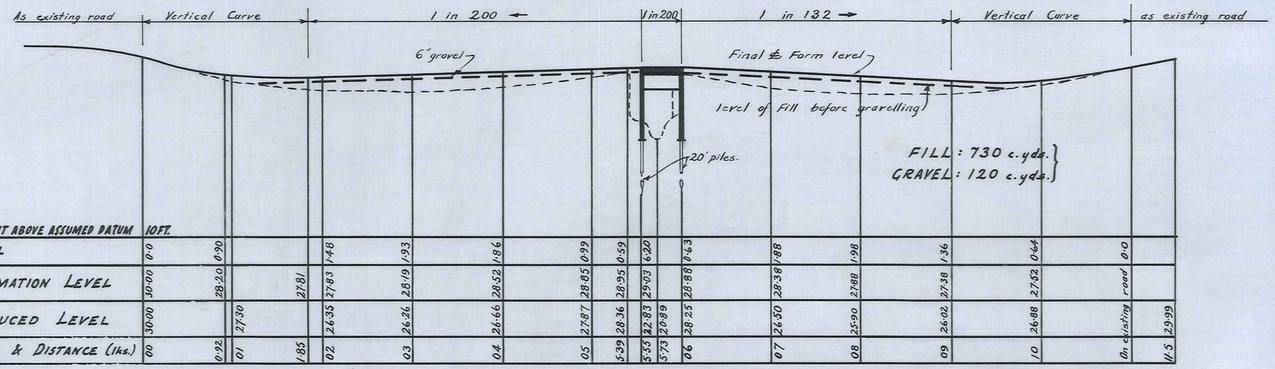
PLAN



TYPICAL ROAD CROSS SECTION

AS PEGS 03 & 08

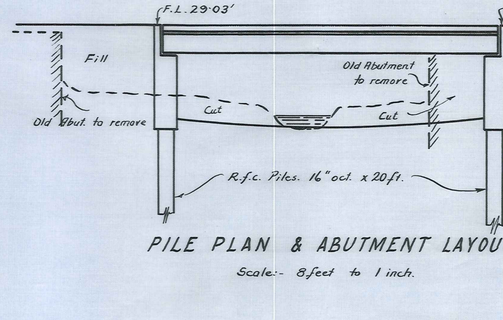
Scale: 10ft. to 1 inch.



HEIGHT ABOVE ASSUMED DATUM	10FT.																					
FILL	0·0		0·90																			
FORMATION LEVEL	30·00		28·20		27·81		27·83	1·48	28·19	1·93	28·52	1·86	28·85	0·99	28·95	0·59	29·03	0·20	28·88	0·63	28·38	1·88	27·88	1·98	27·38	1·36	27·32	0·64		0·0		
REDUCED LEVEL	30·00		27·30				26·35		26·26		26·66		27·67		28·36		28·83		28·25		26·30		25·90		26·02		26·68		On existing road		29·99	
PEG & DISTANCE (lks.)	00	0·92	01	1·85	02		03		04		05		5·39		5·55		5·73		06		07		08		09		10				11·5	

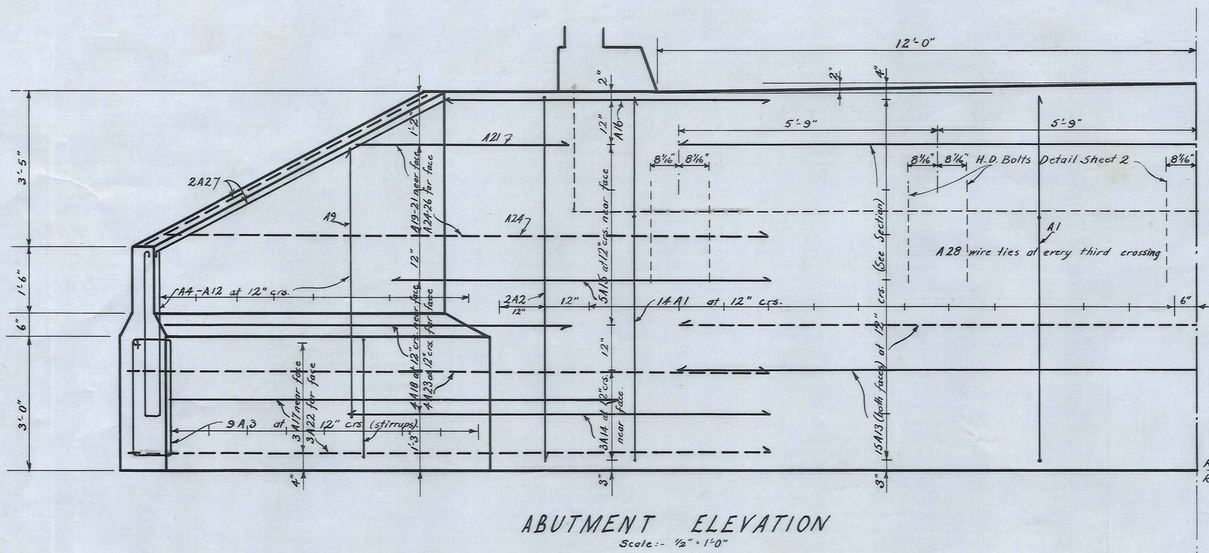
LONGITUDINAL SECTION of ROAD

Scales:- Vertical: 10 ft. / Horizontal: 1 ch. } to 1 inch.



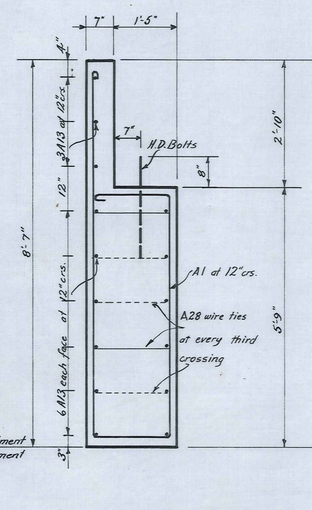
PILE PLAN & ABUTMENT LAYOU

Scale:- 8 feet to 1 inch.



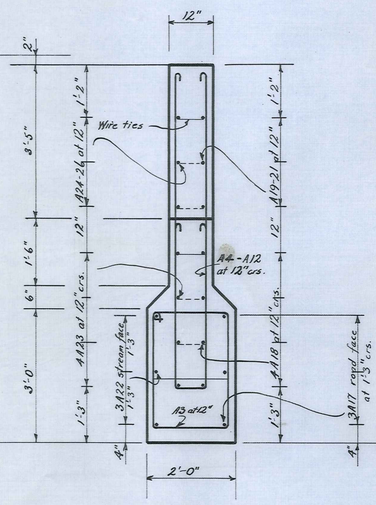
ABUTMENT ELEVATION

Scale:- ½" = 1'-0"



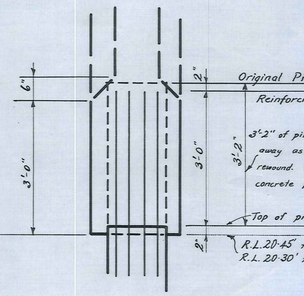
SECTION X-X

Scale:- ½" = 1'-0"



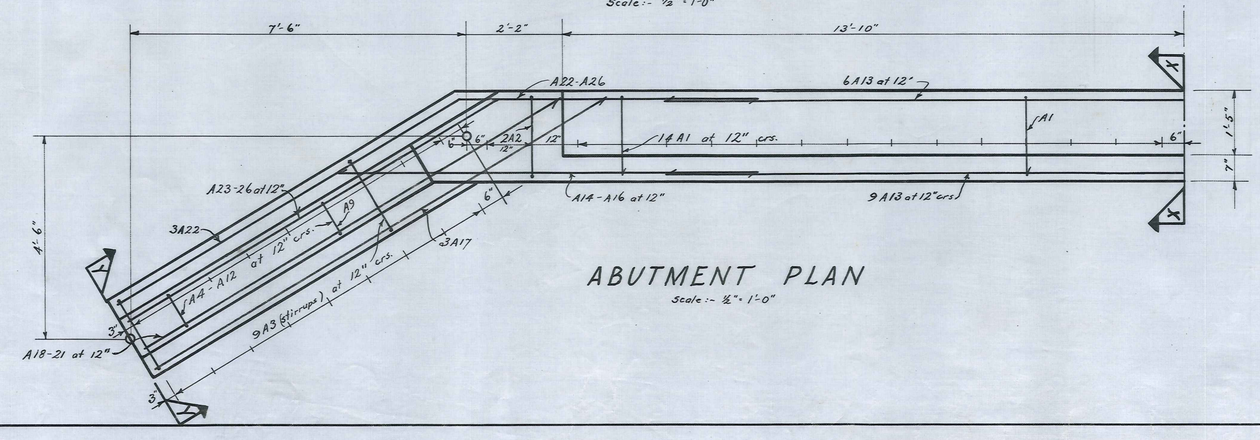
SECTION Y-Y

Scale:- ½" = 1'-0"



STRIPPING of PILE HEAD

Scale:- ½" = 1'-0"



ABUTMENT PLAN

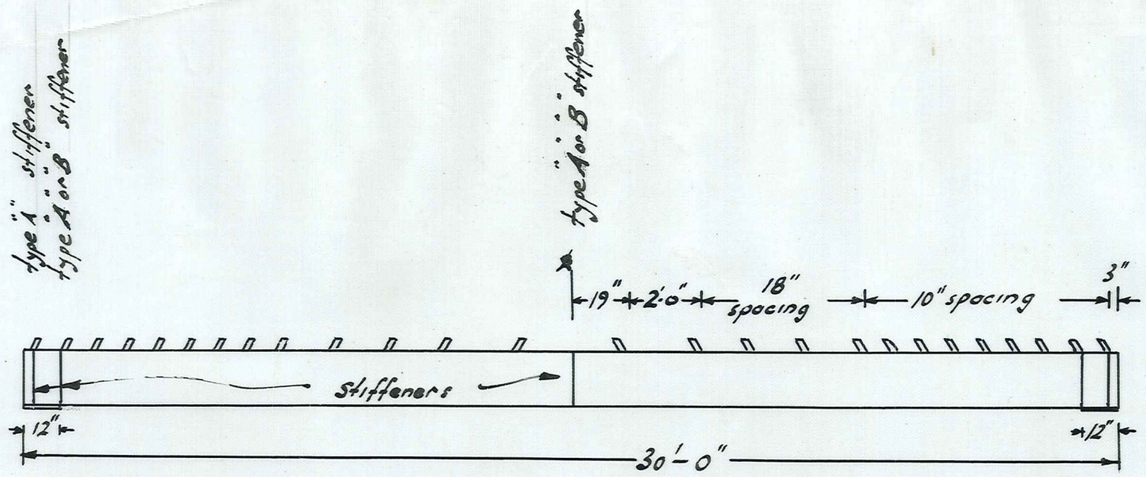
Scale:- ½" = 1'-0"

DESIGN LOADING H20-S16

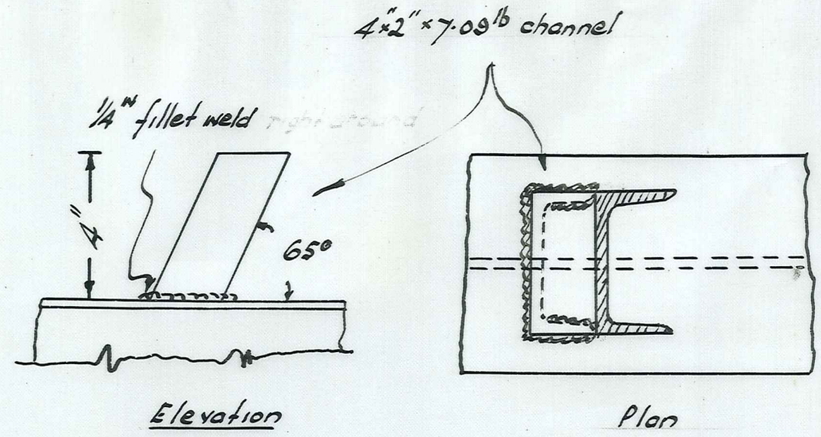
MINIMUM COVER TO OUTSIDE RODS TO BE 1½" UNLESS OTHERWISE SHOWN

DWK 27251/4

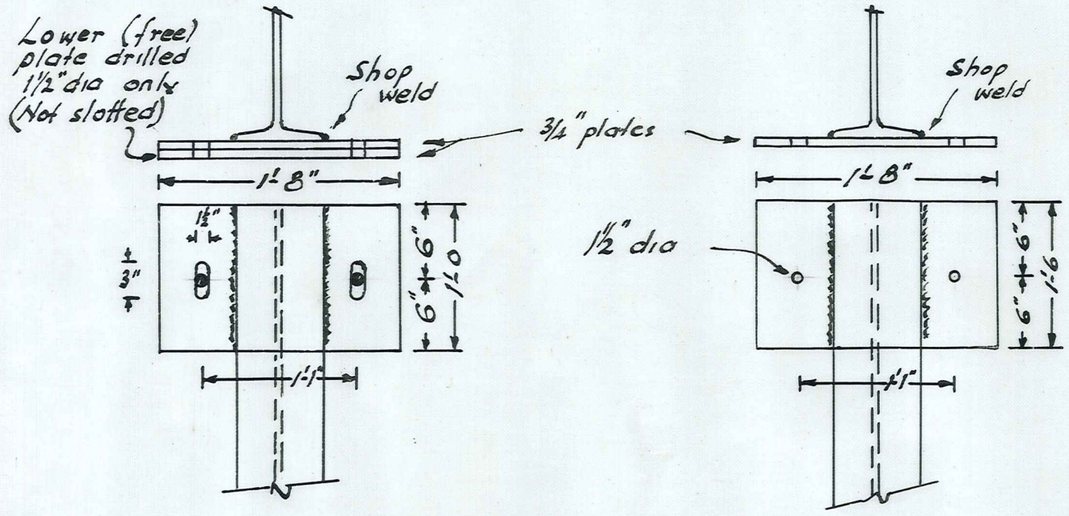
MANIOTOTO COUNTY R.J. Black, County Engineer 7:11:56. Drawn & Traced. G.A. Beamsley.	HOGBURN (GREGORY'S) BRIDGE GIMMERBURN - WAIPIATA ROAD	Scales File:-34
CONTRACT No. 422	30'SPAN - 24' ROAD - R.S.J. BEAMS SITE, PILE, ROAD & ABUTMENT DETAILS	M.C. Sheet No



Joist Layout
1/4" to 1ft



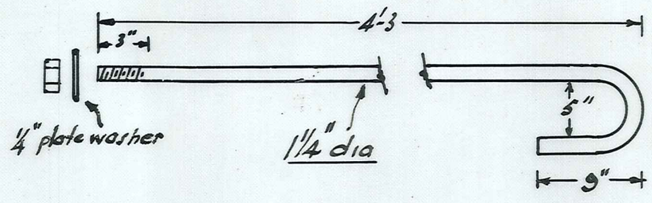
Shear Connector Detail
3in to 1ft



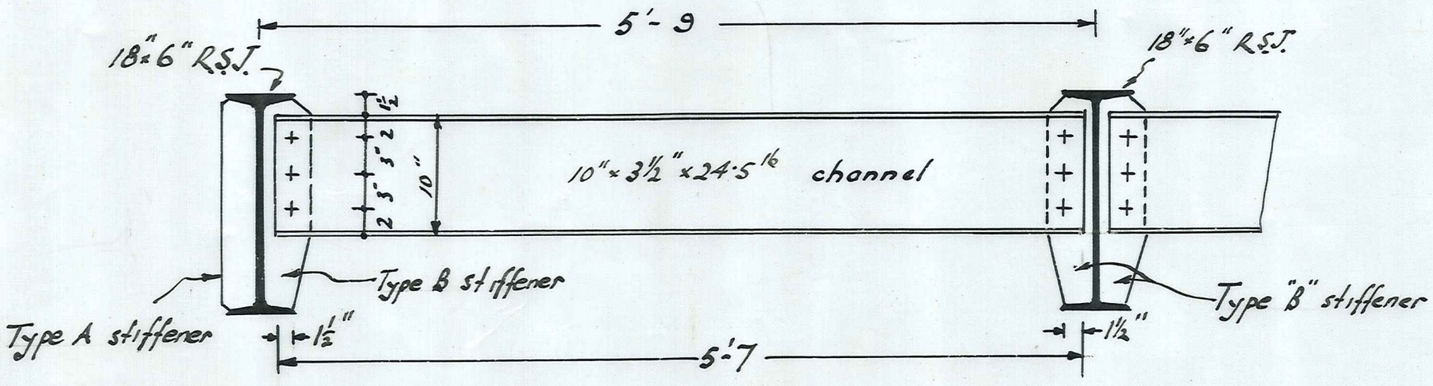
Sliding End
1in to 1ft

Fixed End
1in to 1ft

Base Plate Details
1in to 1ft

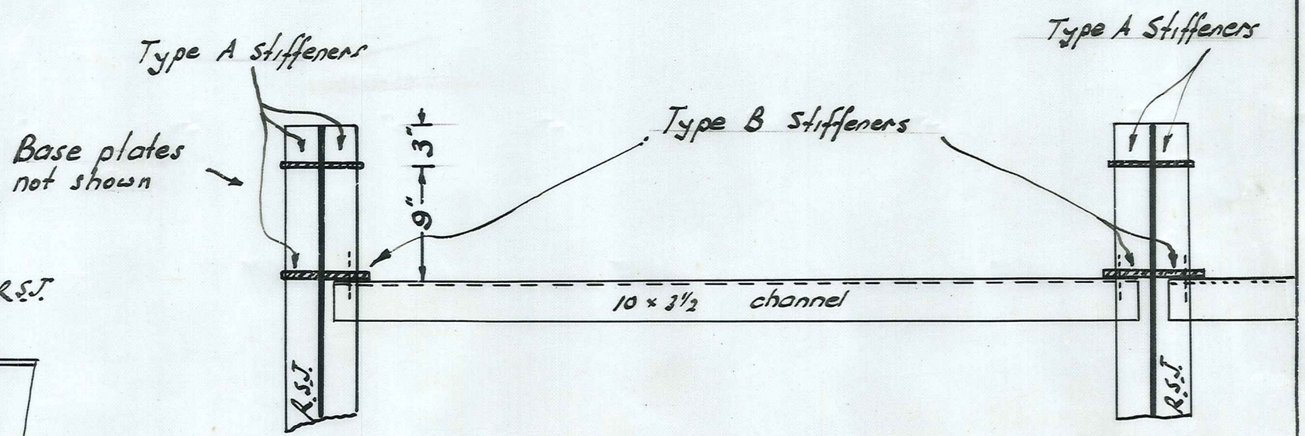


Holding Down Bolt Detail
20 off



Type A stiffeners out of 3"x½" flat.
Type B stiffeners out of 4"x½" flat.
Shop weld stiffeners to joists with ¼" fillet welds

Bolt holes in channels and stiffeners to be drilled 13/16 and reamered out to take 7/8" dia turned bolts to BSS 153 page 11. Bolts and nuts to be supplied by contractor supplying steelwork



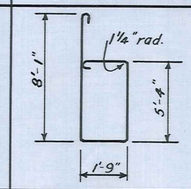
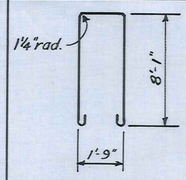
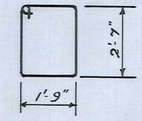
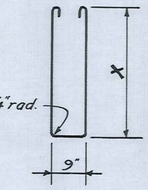
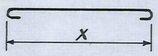
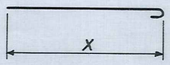
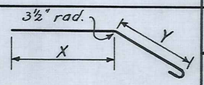
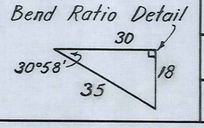
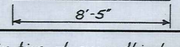
Detail of Cross Frames
Scale 1in to 1ft

Joist Schedule: One Left hand Outer
One Right hand Outer
Three Centre

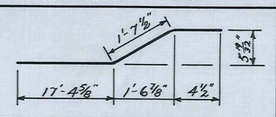
Maniototo County Council	Hogburn (Gregory's) Bridge Steelwork	DUFFILL, WATTS & KING CIVIL ENGINEERS AND SURVEYORS DUNEDIN and INVERCARGILL	JOB NO. 2725/1 F.BK. – FILE NO. S/25/4

	NAME	DATE
SURVEYED BY		
DRAWN "	W.	Dec '56
CALCULATIONS "		
CHECKED "		
TRACED "	W.	Dec '56

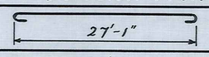
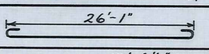
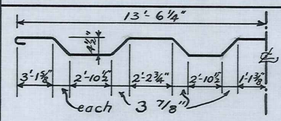
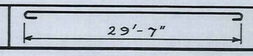
ABUTMENT STEEL

ROD	DESCRIPTION	LOCALITY	DIA.	N°. OF	LENGTH
A1		Vertical Rods in Main Abutment	5/8"	56	17'-7"
A2		Vertical Rods Main Abut. near junction with Wing. See Sheet N°.1.	5/8"	8	18'-8"
A3		Vertical Stirrups Wing Footings	3/8"	36	9'-0"
A4	 X = 3'-8"	Vertical Rods Wing Reinforcement. See Sheet 1	5/8"	4	8'-10"
A5	X = 4'-1"		5/8"	4	9'-8"
A6	X = 4'-7"		5/8"	4	10'-8"
A7	X = 5'-0"		5/8"	4	11'-6"
A8	X = 5'-6"		5/8"	4	12'-6"
A9	X = 5'-11"		5/8"	4	13'-4"
A10	X = 6'-4"		5/8"	4	14'-2"
A11	X = 6'-10"		5/8"	4	15'-2"
A12	X = 7'-0"		5/8"	4	15'-6"
A13	 X = 23'-1"	Horiz'tl. Rod Main Abut.	5/8"	30	24'-0"
A14	X = 12'-4"	Horiz'tl. Rods on Road face of Main Abutment	5/8"	12	13'-3"
A15	X = 11'-4"		5/8"	20	12'-3"
A16	X = 10'-5"		5/8"	4	11'-4"
A17	 X = 11'-5"	Horiz'tl. Rods on Road face of wing and wing footing. See Sheet 1.	3/4"	12	12'-0"
A18	X = 10'-7"		5/8"	16	11'-0"
A19	X = 9'-4"		5/8"	4	9'-9"
A20	X = 7'-1"		5/8"	4	7'-6"
A21	Y = 4'-10"		5/8"	4	5'-3"
A22	 Y = 6'-10" X = 8'-10"	Horiz'tl. Rods on Stream face of wing and footing turned into main Abut.	3/4"	12	16'-3"
A23	Y = 5'-10" X = 9'-8"		5/8"	16	16'-0"
A24	Bend Ratio Detail  Y = 5'-10" X = 8'-5"		5/8"	4	14'-9"
A25	Y = 1'-4" X = 7'-2"		5/8"	4	9'-0"
A26	Y = 1'-4" X = 5'-11"		5/8"	4	7'-9"
A27		Top slope of wing	½"	8	8'-5"
A28	Wire ties at every third crossing in abuts. and wings		N°6g.	250	3'-0"

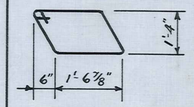
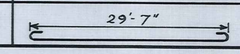
PILE STEEL

ROD	DESCRIPTION	LOCALITY	DIA.	N°. OF	LENGTH
P1		See Sheet N°.3	⅞"	112	19'-4½"
P2	Helical Winding.	See Sheet N°.3	N°6g.	14	476'-0"

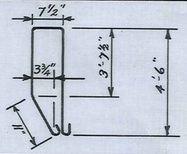
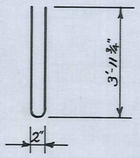
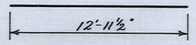
DECK STEEL

ROD	DESCRIPTION	LOCALITY	DIA.	N°. OF	LENGTH
D1		Transverse, top of slab	5/8"	26	28'-0"
D2		Transverse, top of slab	5/8"	26	27'-0"
D3		Transverse, deck slab See Sheet No. 2	5/8"	25	29'-0"
Rods D1, D2 & D3 sloped 2" from ℄ to allow for deck slab camber					
D4		Long'tdl. top and bottom of slab	5/8"	36	30'-6"

KERB STEEL

ROD	DESCRIPTION	LOCALITY	DIA.	N°. OF	LENGTH
K1		Kerb stirrups. See Sheet No. 2	3/8"	60	6'-6"
K2		Longit'dl Rods.	5/8"	8	30'-6"

RAIL STEEL

ROD	DESCRIPTION	LOCALITY	DIA.	N°. OF	LENGTH
R1		Vertical rods in end posts See Sheet N°.2	5/8"	12	10'-6"
R2	Wire ties. See Sheet N°. 2	Ties for R1	N°6g.	24	4'-6"
R3		Vertical rods in panels.	3/8"	132	8'-0"
R4		Horiz'tl. Rods, Top Rail. See Sheet 2	½"	8	12'-11½"
R5		Horiz'tl. Rods in Panel. See Sheet 2.	3/8"	8	12'-11½"
R6	Wire Winding. See Sheet 2	Winding to R4 at 6"	N°6g.	4	19'-0"

DIAM.	LENGTH	WEIGHT
⅞"	2170' - 0"	1·98 Tons
¾"	339' - 0"	0·23 "
⅝"	7018' - 8"	3·35 "
½"	171' - 0"	0·05 "
⅜"	1873' - 8"	0·31 "
N°6g.	7598' - 0"	0·33 "
TOTAL WEIGHT :-		6·25 Tons.

NOTES :-

1. Rod sketches are not to scale.
2. Dimensions on sketches are outside to outside.
3. Rods D1, D2 & D3 to be sloped 2" each side of ℄ to suit deck camber.
4. All hooks and laps are standard. See detail on Sheet 2.

DJK

2725/2

MANIOTOTO COUNTY R.J. Black, Engineer.	HOGBURN (GREGORY'S) BRIDGE GIMMERBURN - WAIPIATA ROAD	Not to scale
14:11:56 Drawn and Traced: B.R.Blackmore		FILE :- 34/1 FOLDER :- 1b.
CONTRACT N°. 422	REINFORCING SCHEDULE	M.C.C. 339b.
		Sheet 4 of 4 sheets.