SACRAMENTO NORTHERN RAILWAY

TIME



TABLE

In Effect 12:01 A. M. "Pacific" Time

SUNDAY, NOVEMBER 2, 1941

This Time Table is for the exclusive use and guidance of the employes concerned. The Company reserves the right to vary from it at pleasure.

Always have the revised Book of Rules of the Transportation Department at hand for reference.

J. B. ROWRAY,

General Manager

W. W. NELSON,

Superintendent of Transportation

2									11	DIVISION	1	Nestward	ī	East	ward	HOLLAND BRANCH	l We	stward
Fone, Scales yes, Bulletin, gister Station, andard Clocks, erlocking Plant	Eastward SECOND CLASS 292 Sacramento Local Freight	Distance from Oakland	Time Table No. 22 November 2, 1941	Distance from Pittsburg	SECOND GLASS 293 Oakland Local Freight	Dapacity of Sidings in Freight Cars	Fone, Scales Yes, Bulletin, tegister Station, trandard Clocks, trandard Plant	SECOND GLASS 292 Sacramento Local Freight	Distance from Oakland	Time Table No. 22 November 2, 1941	Distance from Sacramento	SECOND CLASS	Capacity of Sidings in Freight Cars	Fone, Scales Wyes, Bulletin, Register Station, Standard Clocks	Distance from Oakland	Time Table No. 22 November 2, 1941 STATIONS	Distance from Oxford	Capacity of Sidings in Freight Cars
Wy Reg Sta Inte	Leave Daily EX. SAT.	9	STATIONS	<u> </u>	Arrive Daily EX.SUNDAY	Oan	Lasi	Leave Daily EX. SUNDAY		STATIONS		Ex. Saturday					15 77	28 10 (8)
			2S OAKLAND	00.05			P. Y.	2.30AM	37.02	WEST PITTSBURG	47.83	11.00PM Ya	rd	P	79.13	RIVERVIEW	11,85	
BKIY	7.30PM	0.00	1.79	39.05	8.00AM		,		37.69	MALLARD	47.16	Ya	rd	P	83.05	ARGENTA 0.82	11.03	-
		1.79	ROCKRIDGE	37.26		38 (Spurs)			38.21	Suisun Bay Car Ferry	46.64	43	(Spur)	P	83.87	BERMUDA 1.15	9,88	-
		2,99	TEMESCAL	36.06		16 (Spur)	*			CHIPPS	45.58		(Spur)	P	85.02	CLARKSBURG	-	-
		5.50	HAVENS	33.55		10 11 (Spur)	Р		39.27	SPOONBILL 1.35			(Spur)	P	85.47	WILLOW POINT	9,43	
	-	8.80	PINEHURST	30.25		7	P	40.00	40.62		44.23	26		P	86.37	CONISTON 0.83	-	22 10 (
		10.93	MORAGA 0.91	28.12		30 (Spurs)	P		42.16	MONTEZUMA	42.69		i	P	87.20	NEWTOWN	7.70	
		11.84	ST. MARYS	27.21		17 (Spur)	P	798.7	44.15	MOLENA 4.45	40.70	69		P	87.79	CENTRAL 1.85		36 13 (8
	- 2011	13.74	BURTON 2,45	25.31		35	P		48.60	GARFIELD 1.36	36.25		(Spur)	P	89.64	GREENDALE 1.52	5.26	30
•		16.19	LAFAYETTE	22.86		11 8 (Spur	P	All the	49,96	RIO VISTA JCT.	34.89		(Spur)	P	91.16	SILVERDALE	3.74	18 (
	16.7	17.81	SARANAP	21.24		42	P.Y.	MATES.	53.19	OREED 2.68	31.66	71		P	92.33	SORROCA 1.06	2.57	
		19.54	D WALNUT CREEK	19.51		12 68 (Spurs	P		55.87	OLCOTT	28.98	13	(Spur)	P	93.39	VALDEZ 1.51		23 12 (
,		21.56	SPARKLE 0.10	17.49		10 (Spur	P	T. M. Carlot	56.73	DOZIER	28.12	11	(Spur)	Р	94.90	OXFORD	0.00	16
		21.66	LAS JUNTAS (S. P.R.R. Crsg.)	17.39		15 (Spur	P		59.67	VALE 2.61	25.18	16						
		22.21	BANCROFT	16.84		16 (Spurs	P	A Section	62.28	BUNKER 0.94	22.57	7	(Spur)	East	ward	WILLOTTA BRANCI	H We	estwa
		23.03	MEINERT	16.02		41 23 (Spurs)	P		63.22	BELLEAIR	21.63	47						1
		25.84	D CONCORD	13.21		6 68 (Spurs			66.30	LIBFARM	18.55	22	(Spur)	s, ns,		m: m-11- N- 00	E	Sidings
		29.31	OLYDE (B.P.&C.R.R.Crsg.)	9.74		26 (Spurs	<u> </u>		67.41	YOLANO	17.44	46		Scale Methostatic Cloc	Distance fror Oakland	Time Table No. 22	e from	Sid
		31.13	DN PORT CHICAGO	7.92		50 47 (Spurs			71.89	4.48 SAXON	12.96	13	(Spurs)	s, Bu ster S ster S ndard	tane Oakla	November 2, 1941	Stane	eity o
		34.56	McAVOY	4.49		19 16 (Spurs		Pacif	76.21	ARCADE	8.64	8	(Spur)	For Wye Regis Star	Dis		D	Capacity of 8
•		35.69	SHELL POINT	3.36		1 Aug 1	_		79.13	RIVERVIEW	5.72	28				STATIONS		
,		37.02	WEST PITTSBURG	2.03		2 (Spur	P		80.83	JEFFERSON	4.02	15		Y.P	53.19	CREED	17.32	71
Y	2.00	39.05	D PITTSBURG	0.00	11.30 11.20PM	Yard	P		83.74	WESTGATE	1.11		ard	P	58.30	5.11 CORDERO	12,21	20
•	2.10AM	38.00	PITIBUNG	0.00	11.201	Yard	P	16334		BRODERICK	0.30		ard	W.D.	60.45	2.15	10,06	-
	Arrive Daily EX. SUNDAY		(39.05)		Leave Daily EX. SAT.	1	P.I.		84.55	(Y.P.		VACAVILLE JCT.		18 (
			-	"			P.B.K.I.	9.00AM	84.85	Front St. S.P.R.R. Crsg.	0.00	7.00 PM Y	ard		63.16	ARMIJO 2.90 —	4,45	9
No	s. 292 and 293	have no time	e-table superiority.					Arrive Daily EX. SUNDAY		(47.83)		Leave Daily EX. SAT.			66.06	FAIRFIELD	7	18 (
110.	202 and 200	nave no ma	and a superior superi					EX. SUNDAY				EX. SAT.			68.00	OLIMA 0.18	2,51	
															68.18	SUVAL 0.36		
															68.54	CHADBOURNE 0.70	1.97	
							orli l	0.600	phi. 5	hore sau avia			is f	old	69.24	RUSSELL 0.95	1.27	15 (
															70.19	DANIELSON 0.32	0,32	4
										deasure.			YERY	OJ	70.51	WILLOTTA	0.00	21
					entra				DET T'S	Rules of the			V 57	East	tward	VACAVILLE BRANC	H We	estwa
														Fones, Scales, Wyes, Bulletins, Register Stations, Standard Clocks	Distance from Oakland	Time Table No. 22 November 2, 1941	Distance from Vacaville	The state of the s
														明を発出	A	U23 AU - U	A	1 2
														Wy Reg Sta	Ä	028 30 35		200
													90	Dd and	стело-О	STATIONS		
													900	T. P. W. W. Beg. Sta	60.45	STATIONS VACAVILLE JCT.	4,46	

	Eastwar	a			Westwa	rd
Fone, Scales, Wyes, Bulletin, Register Stations, Standard Clocks Interlocking Plant	CLASS 192 Chico-Oroville Local Freight Leave Daily Ex. Saturday	Distance from Oakland	Time Table No. 22 November 2, 1941	Distance from Marysville	SECOND GLASS 193 Sacramento Local Freight	pag u
.B.Y.K.	Ex. Saturday	00.60		10.10	Ex. Monday	
	10.00PM	90.68	SACRAMENTO, CST.	40.18	HNOTTA	Yard
2.0.	10.001	91.20	HAGGIN 0.99	39.66	7.00 AM	Yard
		92.19	GLOBE, W.P.R.R. Cross.	38.67	AROUSE	Yard
P.		92.87	NORTH SACRAMENTO	37.99		29 (Spurs)
		94.70	DEL PASO	36.16	AND VALUE	8 (Spur)
		96.50	ROBLA 2.31	34.36		8 (Spur)
<u>:</u>		98.81	RIO LINDA	32.05	1,17,1	38
P.	-	100.12	ELVERTA 2.93	30.74	ATTE TO	6 (Spur)
·		103.05	RIEGO 1.98	27.81	MATERIA S	9 (Spur)
P.I.	-	105.03	SANKEY, W.P.R.R. Cross.	25.83	110710	27 (Spur)
Ρ,		108.42	PLEASANT GROVE	22.44	THE	34 12 (Spur)
Р.		110.46	CATLETT 4.19	20.40	1,29,191	39 (Spurs)
Ρ.		114.65	EAST NICOLAUS	16.21		19 34 (Spurs)
₽.		118.06	RIO OSO	12.80		42 (Spurs)
·		122.09	LEWIS 0.95	8.77		12 (Spur)
Р.		123.04	PLUMAS	7.82		6 (Spur)
P.		124.94	ARBOGA	5.92		23 (Spur)
P.		125.41	REED JOT.	5.45		8 66 (Spurs)
P.		128.07	ALICIA	2.79		9 (Spur)
P.		129.64	SOUTH YUBA	1.22		52
P.I.		130.55	OLIVER, W.P.R.R. Cross.	0.31		
В. У.	1.00 AM	130.86	MARYSVILLE	0.00	2.00AM	Yard
	ArriveDaily Ex. Sunday		(40.18)		LeaveDaily Ex. Monday	
	ArriveDaily Ex. Sunday		(40.18)		LeaveDaily Ex. Monday	
Eas	stward		OROVILLE BRANCH		Westw	/ard
	SECOND		OROVILLE BRANCH			
		Distance from Oakland	OROVILLE BRANCH Time Table No. 22 November 2, 1941	Distance from Oroville	Westwood SECOND GLASS 195 Sacramento Local Freight	
Fone, Scales Wyes, Bulletin, Register Station, Standard Clocks	SECOND CLASS		Time Table No. 22	Distance from Oroville	SECOND CLASS 195	Capacity of sidings in Freight Cars
Fone, Scales Wyes, Bulletin, Register Station, Standard Clocks	SECOND CLASS 194 Thermalito Local Freight		Time Table No. 22 November 2, 1941 STATIONS OROVILLE JCT.	Distance from Oroville	SECOND CLASS 195 Sacramento Local Freight Arrive Daily Ex. Sunday 7.40 PM	Capacity of sidings in Freight Cars
Fone, Scales Wyes, Bulletin, Register Station, Standard Clocks	SECOND CLASS 194 Thermalito Local Freight Leave Daily Ex. Sunday	Distance from Oakland	Time Table No. 22 November 2, 1941 STATIONS OROVILLE JCT. 3.22 THERMALITO		SECOND CLASS 195 Sacramento Local Freight Arrive Daily Ex. Sunday 7.40 PM	Capacity of sidings in Freight Cars
Fone, Scales Wyes, Bulletin, Register Station, Standard Clocks	SECOND CLASS 194 Thermalito Local Freight Leave Daily Ex. Sunday 6.00 AM	Distance from Oakland	Time Table No. 22 November 2, 1941 STATIONS OROVILLE JGT. 3.22 THERMALITO 1.09 OROVILLE, Marysville Road	5.40	SECOND CLASS 195 Sacramento Local Freight Arrive Daily Ex. Sunday 7.40 PM	Capacity of sidings in Freight Cars
	SECOND CLASS 194 Thermalito Local Freight Leave Daily Ex. Sunday 6.00 AM	Distance from Oakland 189.88	Time Table No. 22 November 2, 1941 STATIONS OROVILLE JGT. 3.22 THERMALITO 1.09 OROVILLE, Marysville Road	5.40 2.18	SECOND CLASS 195 Sacramento Local Freight Arrive Daily Ex. Sunday 7.40 PM	Capacity of sidings in Freight Cars

h, h	SECONI	CLASS	нэил	WOODLAND BR	meuda	SECON	CLASS	ings
Fone, Scales, Wyes, Bulletin, Register Stations, Standard Clocks Interlocking Plant	190 Colusa Local Freight	Chico Oroville Local Freight	Distance from Oakland	Time Table No. 22 November 2, 1941	Distance from Chico	191 Marysville Local Freight	193 Sacramento Local Freight	Capacity of Sidings in Freight Cars
Reg Reg Into	Leave Daily Ex.Sundays	Leave Daily Ex.Sundays		STATIONS	•	Arrive Daily Ex. Sunday	Arrive Daily Ex. Monday	Og di
P.B.Y.	8.00AM	2.00AM	130.86	MARYSVILLE	48.35	3.30PM	1.00AM	Yard
P.O.K.	D 1 hole	101	132.12	YUBA CITY S.P.R.R. Cross.	47.09			Yard
	1-12	10,1- 11-23	133.42	PALORO	45.79	No or Part of		44 (Spur
P.	her	111.1	134.13	HARTER	45.08			31 (Spur
P. Y.	8.30AM	0.0.0	134.82	COLUSA JUNCTION	44.39	3.00PM		Yard
P.		O+-1	136.46	PEASE	42.75			24 10 (Spu
P.	115 100	0.4.0	137.17	NUESTRO	42.04	77.7		41
P.		177.0	138.48	SANDERS	40.73			7 (Spur
P.	P40 22	140.0	139.43	ENCINAL	39.78			25
P. I.		100.0	143.54	LIVE OAK S.P.R.R. Cross.	35.67	71.1		22 26 (Spur
P.	100 100	18.8	146.37	OHANDON	82.84			10 (Spur
P.	repti b	1201.0	147.52	MANZANITA	31.69			8 (Spur
P.		78,0	149.25	D EAST GRIDLEY	29.96	1911		24 65 (Spur
P.	PINT BEG	E / 00 /	150.92	PEACHTON	28.29	.7.9		6 (Spur
P.		u.v.	152.07	RICHLAND	27.14			3 (Spur
Р.			153.57	EAST BIGGS	25.64			17 (Spur
P.			154.13	RIO BONITO	25.08			13 (Spur
P.	El apli		155.68	HASELBUSCH	23.53			3 (Spur
P.			157.04	LORRAINE	22.17			10 (Spur
P.Y.			159.86	OROVILLE JCT.	19.35			Yard
P.			162.66	SHIPPEE	16.55			22 (Spurs
P.			164.33	RAMADA	14.88			20
P.			166.09	BLAVO	13.12			27
P.			169.09	ESQUON	10.12			25 (Spur
P.			172.14	DURHAM	7.07			27 (Spurs
P.			176.40	SPEEDWAY	2.81			13
P.			176.97	STIRLING JOT., S.P.R.R. Oros	2.24			Yard
P.Y.B.K.		7.00AM	177.88	MULBERRY	1.33		9.00PM	Yard
			178.22	CHICO 16TH ST.	0.99			
P. Y.			179.21	D CHICO	0.00			Yard
	Arrive Daily Ex. Sunday	Arrive Daily Ex. Sunday		(48.35)		Leave Daily Ex. Sunday	Leave Daily Ex. Sunday	

Westward

Nos. 190, 191, 192, 193, 194 and 195 have no timetable superiority.

SECOND SUBDIVISION

Eastward

SECOND SUBDIVISION

Ea	stward	WC	OODLAND BRANC	H	Westw	ard		Eastwar	d	(COLUSA BRANCE	I	We	stward	i
Scales fulletin, Station, I Clocks, ing Plant	SECOND CLASS	tie!	Time Table No. 00	E.T	SECOND CLASS	Sidings	ks,	SECONI	D CLASS	_	Est Statement II	8	SECOND	CLASS	ings rs
Fone, Scalwyes, Bulle Register Sta Standard Oll	196 Woodland Local Freight Leave Daily	Distance from Oakland	Time Table No. 22 November 2, 1941	Distance from Woodland	197 Sacramento Local Freight Ar. Daily	city of Freight	Fone, Scales Wyes, Bulledin, Begister Station, Standard Clocks, Interlocking Plant		190 Colusa Local Frt.	Distance from Oakland	Time Table No. 22 November 2, 1941	istance fror Colusa	191 Marysville Local Freight	ATO-	Capacity of Sidings in Freight Cars
102	Ex. Sunday		STATIONS		Ex. Sunday	Capa	Int. Int.		Lv. Daily Ex. Sunday		STATIONS	Q	Arrive Daily Ex. Sunday	MARGA	Cape
P. B.I.K.	9.00AM	84.85	SACRA MENTO Front St. S.P.R.R. Cross.	17.26	4.00PM	Yard	P.Y.		8.30AM	134.82	COLUSA JUNCTION	21.55		A.II	Yard
P.I.	No.	84.55	BRODERICK	16,96		Yard	P.			136.16	ALMENDRA	20.21	40 J.A.	W.AHO.	7 (Spur)
I.	1.44	86.07	MIKON. S.P.R.R. Cross.	15.44	BAG	8 (Spur)	P.			139.87	3.71	16.50	THE REAL PROPERTY.	OF REPRESENTA	15
P.	17.25	87.11	LOVDAL	14.40		17	P.			143.53	STOHLMANN	12.84			38 (Spurs) 18 (Spur)
P.	0.024	89.09	FOURNESS	12,42		17 (Spur)	P.			144.90	TARKE	11.47			1000
P.	7.0k	90.80	BEATRICE	10.71		14 (Spur)	P.		-	145.80	0.90 LIRA	10.57	8080	0.00	26
P.	Tu I	92.60	KIESEL	8,91		22 (Spur)	P.			146.75	BEET SPUR	9.62			24 (Spur)
P.	transfer of the	94.07	FREMONT	7.44		17	P.I.		-	148.14	MERIDIAN	8.23			25
P.	Logic III	96.20	CONAWAY	5.31		28 (Spur)	P.			149.82	SYCAMORE	6.55	NO A SEC	Y31215	62 (Spurs) 8 (Spur)
P.	2. 2.0.	99.19	HEBRON	2.82		6 (Spur)	P.			155.51	5.69 ARBEE	0.86	17000 7	AHAHA	17 (Spur)
I.P.		101.14	Woodland, S. P. R. R. Cross.	0.37			Y. P.		12.30PM	-	0.86	0.00	1.30PM		Yard
P.Y.	11.50AM	101.51	D WOODLAND	0,00	1.30 PM	Yard	P.		Ar. Daily Ex. Sunday		(21.55)	0.00	Leave Daily	144.1	Tard
	Arrive Daily Ex. Sunday		(17.26)		Lv. Daily Ex. Sunday				Ex. Sunday				Ex. Sunday	di -	

Nos. 190, 191, 196 and 197 have no Timetable superiority.

SPECIAL RULES

SPEED RESTRICTIONS GENERAL
Oakland, Shafter Avenue
Between Temescal and Rockridge—
Freight and work trains
West Portal Tunnel No. 1 to Rockridge, descend-
ing grade, Freight Engines operated as single unit
Concord—City limits
West Pittsburg—Under Pass Curve, Freight and work trains
Pittsburg—City limits
Pittsburg—All street crossings10 mi. per hr.
Pittsburg—Columbia StStop and flag
Mallard—Eastward TrainsStop
Ferry Ramon—All movements on and off Ferry 5 mi. per hr.
Chipps—Westward TrainsStop Between Chipps and Montezuma all long trestles.30 mi. per hr.
Drawbridge—Montezuma Slough10 mi. per hr.
Willotta Branch—Between Creed and Vacaville
Jet
Armijo and FairfieldStop
Arcade Trestle
Riverview Trestles
Holland Branch
Except—All curves
Tower Bridge
Sacramento city limits
Except between 8th & Capitol Ave. and 12th
& I streets
Except—Other points covered by special time
table instructions. Sacramento—Arterials—All trains, yard engines,
deadhead equipment and street carsStop
Exception—Except at 16th and D Streets, no stop need be made when traffic thereat is
directed or controlled by an officer, flagman,
semaphore or other traffic signal device (when such signal device is in operation).
Sacramento-Traffic Light Signals-All move-
ments governed by signal indication or traffic officer signal.
Sacramento, 19th and C streets, westward trains
and motors
Marysville—Highway crossing north end D St.
Bridge, yard enginesStop and flag
Marysville—Arterials—Trains, yard engines and street carsStop
Marysville, 4th and Orange streetsStop and flag
Yuba City, city limits12 mi. per hr.
Yuba City—Arterials—Trains, yard engines and street carsStop
NOTE: At Plumas and Bridge Streets stop must
be made even though a member of the train crew acts as a flagman.
Yuba City, Cooper Ave., eastward trains 6 mi. per hr.
Yuba City, Cooper Ave., westward trainsStop Yuba City, Cooper Ave., yard enginesSlow and flag
Live Oak, city limits
Edgar Slough highway crossing20 mi. per hr.
Chico city limits
Chico—Arterials—Trains and Yard EnginesStop Woodland city limits
Woodland—Arterials—Trains and yard engines. Stop
Road crossing, Shell Oil Plant, Woodland 6 mi. per hr.

ı	Fremont Trestle
	Rose Orchard—Trains must reduce to 20 m.p.h. 300 feet from the road crossing and speed must not exceed 15 m.p.h. when head end of train moves over the crossing
I	Oroville city limits
1	Highway crossing, Thermalito10 mi. per hr.
I	Meridian Bridge 6 mi. per hr.
ı	Rowena road crossing
I	Colusa city limits
I	Colusa—Arterials—Trains and yard enginesStop
I	Approaching spring switches 6 mi. per hr.
I	Light motors splitting spring switches, except oil
I	buffer switches 6 mi. per hr.
I	All trains splitting oil buffer switches10 mi. per hr.
ı	Birney cars-between Sacramento and Mulberry .20 mi. per hr.
١	Freight engines, running light or handling outfit
1	cars exclusively—Maximum Speed30 mi. per hr.

Speed restriction signs indicating speed of freight trains are located at various places where speed should be reduced. Maximum speeds permitted under city ordinance do not dispense with the observance of Rule 93.

MISCELLANEOUS

Westward freight and work trains must make air brake inspection and test at Pinehurst before train is moved over any portion of descending grade between Havens and Rockridge, comply with instructions on Test Card Form 182, and be governed by tonnage rating and car limit as shown in schedule of locomotive ratings. Stop must be made at Havens for the purpose of turning up the retainers on all cars and placing the test card in the box.

Locomotives 603 and 604 are equipped with transfer valves, power and control connections so that these two locomotives when coupled can be handled as a single unit by one Motorman.

Locomotives 660 and 661 are equipped with transfer valves but no power nor control connections so that these two locomotives when coupled will require two motormen for power operation but the motorman on the head locomotive will control the air brakes. This same method of operation will apply to locomotives 603 and 660 coupled, 604 and 660 coupled, 603 and 661 coupled and 604 and 661 coupled.

When two locomotives coupled are used in handling trains, not less than 3 air compressors must be in service.

When single locomotives are used both compressors must be in service.

Ninety (90) pounds brake pipe pressure must be carried at all times with main reservoir pressure setting of 110-130 pounds.

The A. A. R. recommended practice for air brake test and inspection must be observed, namely: that the cylinder condition and retaining valve be such that the brake would remain applied at least three minutes and that the piston travel on all cars be adjusted to nominally 7 inches.

Havens to Temescal.—Rock, Sand and Construction Material Service:

Trains not in excess of 10 cars with an average gross load not in excess of 85 tons per car may be handled by two locomotives coupled and equipped with transfer valves. Speed must not exceed 10 miles per hour, and the brake on each car in the train must be properly adjusted and in operative condition.

No attempt should be made to handle any cars down this grade in these heavy tonnage trains with the brake inoperative, either from the air brake failure or foundation rigging failure.

Retaining valves must be in service on all cars.

Havens to Rockridge:

Trains having not less than 85% of the air brakes operative and whose total tonnage does not exceed 50 tons per operative brake may be handled by either two locomotives coupled or by one locomotive, provided they do not exceed the car limit.

Speed must not exceed 20 miles per hour, Havens to Temescal, and 10 miles per hour, Temescal to Rockridge. Retaining valves must be used on all cars having operative brakes.

Trainmen on all westward freight and work trains, between Havens and Rockridge, must ride the cars when leaving Havens until it is known that the Motorman has control of the train, and when leaving Temescal must ride the front platform of the caboose and the rear end of the motor and be ready with their brake clubs to set hand brakes in case of an emergency.

No westward freight nor work train heavier than 50 tons per operative air brake will operate between Temescal and Rockridge unless permission is obtained from the proper officer.

Helper engine must be used on rear of all eastward freight and work trains between Oakland Yard and the summit of the grade east of Havens, except that when no helper is provided for an eastward freight or work train originating at Havens the Conductor must, after pulling out of the siding, see that the east switch of the siding is left open until rear of train passes the spur switch when it must be opened before lining the east switch of the siding back for the main track. The spur switch will then be left open until the rear of the train passes the summit of the grade. Motorman must then stop and sound the required whistle signal calling his flagman in from the west. The brakeman will then line the spur track switch for the main track and return to his train.

The same rule will apply when pulling off the spur instead of the siding.

Work trains in this territory not originating at Havens must not go west of the summit of the grade unless the locomotive is on the west end of the train.

The trolley or pantograph must be down before removing any jumpers, handling 600-1200 volt switches, or when the motorman is repairing electrical equipment.

The old type whistle must be blown approaching each street intersection in Oakland and blasts must be so spaced that the last blast will continue to the intersection. The air gong may be used, but the engine bell should be used only in an emergency.

The use of the pneuphonic air horn between Terrace and Oakland, is prohibited.

Within the city limits of Pittsburg the use of the pneuphonic air horn is prohibited. The old type whistle must be used and, if inoperative, the air gong shall be used.

Conductor or Brakeman must ride in cab with the Motorman on all westward trains between Rockridge and College Ave., and all eastward trains between 40th and Shafter and College Ave., to assist in checking clearances between trains and parked automobiles.

High cars when placed on the old Ice House spur at Concord must be left west of the sand bins, so that motormen will have a clear view of the highway crossing, switches and signals. Cars must not be left standing on Willow Pass road crossing just east of Concord station.

Cars set out at Clyde for loading or unloading must be spotted back from the West Road crossing as far as possible. Not more than six cars are to be spotted on the delivery track for the B. P. & C. R. R. at any one time.

Controls operated by selectors in the dispatcher's office have been installed on block signals 218-H and 219-H at Burton and light signals at Dozier and are used to stop trains for train orders. After the train has been cleared by the dispatcher, the conductor shall clear the signals by pressing a button which is located by the side of the telephone and must see that the signals are clear before leaving the station.

Signs reading—Cars must not be switched beyond this point by S. P. Co.-S. N. Ry.—are located on tracks 1 and 7 at the Shell Chemical Plant, Shell Point. A derail is located 30 feet east of the cement house on track 7 and is locked with a Shell Chemical Co. lock. When necessary to spot cars beyond the derail secure the key from the Yardmaster at the Plant.

The yard limits of Pittsburg include all tracks in Pittsburg, and between Pittsburg and the yard limit signs at West Pittsburg and Mallard. All movements between Pittsburg and West Pittsburg will be made in accordance with Rule 93.

Loaded cars in excess of 169,000 pounds, gross weight, must not be accepted from connecting lines nor handled in trains, unless permission is obtained from the proper officer, except between Las Juntas and Lafayette the gross weight must not exceed 200,000 pounds.

Motormen shall sound signal 14 (m) while approaching and before passing the Train Ferry Signs located one-half mile on either side of the ferry at Chipps and Mallard, and shall immediately reduce to 25 miles per hour preparatory to making the stop before moving onto the Ferry.

Should the motorman fail to give signal 14 (m) and reduce as herein prescribed, the conductor must take immediate action to stop the train.

All freight engine pantographs should be lowered and mechanical lever left in down position before going on apron of boat and kept in that position during any operation over aprons at the Chipps and Mallard slips. When tying up freight engine the pantograph must be securely locked in the down position.

Motormen must shut off power at all sectional insulators both in trolley and third rail except at places where insulators have been designed for pantograph operation.

The Captain, or his pilot, will have direct charge of train crews in loading and unloading the Ferry, and movements must be made in accordance with his instructions. 700 gross tons is the maximum load limit. Heavy and light cars must be placed on the Ferry so as to keep the load well balanced. Each track

on the Ferry is approximately 220 feet long, but, only 210 track feet may be used. When shoving cars on the Ferry ahead of Motor, no cars are to be coupled on to, or handled behind the motor.

Hand and air brakes must be set on all freight cars and air brakes set on freight engines. At night, all marker and classification lamps must be removed.

Blocks must not be removed until Ferry is against apron.

Motormen must move slowly and watch to the rear until entire train is moved off the Ferry.

The spur track which serves the packing house at Chadbourne crosses a State Highway. All trains, engines, motors or cars must come to a stop and no movement made over the crossing until a member of the train crew or other competent employee acting as a flagman has protected traffic on the highway.

The siding at Cordero and the siding at Belleair are crossed by County Roads. At such times as cars are allowed to stand on these sidings within a distance of one hundred (100) feet of either side of these county roads, a member of the train crew or other competent employee shall protect the traffic on said roads by acting as a human flagman for all trains, engines, motors or cars operating over the adjacent main line track. Cars which are stored on these sidings must not be left standing within 100 feet of either side of the road crossing.

Inside switches of both crossovers at Riverview must be left lined and locked for Holland Branch.

East switch of crossover, located just west of Westgate crossing, must be left lined and locked for storage track.

The W. P. tracks on Front and R Streets leading to the C. P. C. Plant and P Street Dock may be used by S. N. yard crews under yard rules. W. P. yard engines have preference on these tracks.

City Ordinances require all street cars, trains and yard engines within one hundred feet of an intersection to stop immediately on the approach of any police, ambulance, or fire apparatus sounding siren or signal gong except they be at the time on, or crossing an intersection, in which event crossing must be cleared and then stop.

Civil. Military or Funeral processions must not be obstructed.

When trains, street cars, yard engines or dead head equipment approach a street intersection simultaneously, except where traffic is controlled by traffic signals in service or traffic officer, the train, car, yard engine, or dead head equipment moving eastward must reduce speed, stopping if necessary, and must not enter the intersection until the train, car, yard engine, or dead head equipment, moving in the westward direction has passed entirely out of the intersection and the motorman has a clear and unobstructed view.

Trains and Yard Engines operating on X St. will assume time table directions of C. C. T. Co. trains as follows:

Eastward—Alhambra Blvd. to Front St. Westward—Front St. to Alhambra Blvd.

The tracks on "X" Street, Sacramento, are operated jointly with the C. C. T. Company.

Street cars of the C. C. T. Company have preference over Sacramento Northern yard engines.

Yard engines and street cars operated on tracks in Sacramento running Easterly and Westerly have precedence in the use of the crossing over other yard engines and street cars operated on tracks running Northerly and Southerly except that trains or yard engines in whatever direction they may be running, have the precedence in the use of such crossings over street cars operated in street railway service.

Street cars of the P. G. & E. Co. after stopping at any crossing with the S.N. Ry. will not move over the crossing if a train or yard engine of the S.N. Ry. is approaching within the distance of one city block, but as soon as the train or yard engine comes to a stop at the crossing the street car or cars of the P. G. & E. Co. may start to move over the crossing until such time as the motorman on the train or yard engine sounds his gong or whistle indicating that his train is to move over the crossing.

Motormen must not give a proceed signal to street car men to cross ahead of their trains while the train is standing at the street car crossing.

At crossings protected by traffic light signals or traffic officers all movements will be governed by signal indication or traffic officer signal.

The tracks in Haggin Yard are used by Western Pacific yard engines and crews when switching their cars to and from the Southern Pacific interchange. Crew must obtain a lineup of S.N. trains from the S.N. dispatcher before using the main track and obey yardmaster's instructions.

Yard engines when switching at Plant 11, C. P. C., must avoid delay to street cars.

Freight trains must not go west of 15th and D Sts., Sacramento.

Spring Switches, except tongue switches, are indicated by yellow lenses and targets on Sacramento Northern tracks. On the joint track at Marysville, all inside switches on the Western Pacific have yellow lenses and targets, but are not spring switches.

Trains entering or leaving the Swanston Branch, at Globe, must not stand on the Western Pacific crossing.

Switch point locking devices are installed on switch leading to American Packing Shed Meinert, switch leading to Standard Oil Plant Walnut Creek, west switch at Burton, west switch siding at Pease and east switch siding at Encinal. To operate these devices, push down on footlever when throwing the switch.

When throwing oil Buffer switches by hand, sufficient time must be allowed for the point to fit the traffic rail before movement is made over the switch.

Freight trains must not go west of 5th and G Streets, Marysville.

Trains and yard engines must not block Plumas Street, Yuba City.

Back-up movements from the west end of the yard at Yuba City on to Bridge Street must be protected by a member of the train or yard crew acting as a flagman. Back up movements over other street intersections or around sharp curves in switching service where the motorman's view is obstructed must be protected in the same manner. The conductor or foreman on the crew is jointly responsible with the motorman for this protection being given.

Back-up hose must be used by yard crews in Sacramento yard and Pittsburg yard when shoving cars ahead of motor over city streets.

Yard crews must be cleared by Dispatcher for movements between Haggin and Globe, and between Mulberry and Stirling Jct.

Cars of gasoline when spotted for unloading at any oil spur must be left between the insulated joints and the end of the spur. No cars are to be left standing over the insulated joints or coupled to cars spotted between the insulated joints and end of spur.

Where power switches are installed on gasoline unloading tracks, they must not be closed until it has first been ascertained by a member of the crew that all cars have been disconnected and are ready to move. The power switches must be left open after switching has been completed.

There is no third rail on the Diamond Match Spur at Live Oak, therefore when spotting or picking up cars it will be necessary to hold on to several cars so that the motor will not lose contact with the third rail on the main track.

Freight trains are limited to engine and three cars on Main Street. Chico.

Freight motors, but not freight cars may be moved around the North leg of the wye at 1st and Main Sts., Chico.

Color light signals which indicate red are installed on the train order masts at East Nicolaus and East Gridley, and are used for stopping trains for train orders when no operator is on duty. After receiving train order Conductor will clear the signal by pressing a button located near the telephone.

To reduce automobile accidents, special care should be used when approaching grade crossings known to be obscured or hazardous. Where vehicles are moving in public streets in the same direction as the train and are not clear of the track on which train is operating, speed should be so controlled as to permit train being stopped in case vehicle makes a sudden or unexpected stop or turn. When about to pass a vehicle moving in the same direction as train, the motorman should satisfy himself that the driver is aware of approach of the train.

Rule 10 (H). When a yellow signal is required it will be displayed to the right of track in the direction of approach, one-quarter mile from structure or track over which speed of trains must be restricted. Where two or more main tracks are affected the signal will be displayed on each track the same as if it were a single track.

A green signal will be displayed similarly on each track immediately beyond the structure or track affected.

Trains must not exceed the speed specified by train order or bulletin, or fifteen miles an hour if no different speed is specified, while passing over the structure or track affected, until the rear of train clears the limit, which shall be indicated by a green signal.

Slow boards, where used, will be similarly placed and observed.

Rule 14-L. Motormen will sound signal 14 (L) in such a manner so as to prolong the last blast of the whistle until the train enters the road crossing. On slow speed movements the signal 14 (L) should be repeated if necessary.

Rule 17 amended. The headlight will be displayed at the front of every train when the visibility is such that a dark object as large as a man of average size can not be seen at a distance of 1500 feet. The headlight must be concealed when a train turns out to meet another and has stopped clear of main track, or is standing to meet trains at the end of two or more tracks or at junctions.

Rule 17-C. Head lights must be dimmed while moving within city limits of Sacramento.

Rule 18—Modified. Yard engines when making a continuous movement along city streets will not display the headlight at the rear by night. A red light must be displayed to the rear.

Rule S-88—Fourth paragraph modified as follows: At meeting point when it is necessary for train which takes siding to back in, train will be brought to a stop before it proceeds over the switch, and in obscure places, or when other conditions require, flagman must precede train a sufficient distance to insure full protection before going over the switch to back in.

Rule S-88. At following stations the designated switches and tracks are the points where trains take siding. Train holding main track will remain clear until opposing train shall have cleared.

Havens—Eastward trains use the siding.
Westward trains use the spur.

Meinert-Siding.

Concord-Field track.

Westgate-All trains use west end long siding.

Sacramento-

Westward freight trains use Haggin switch west of American River Bridge.

North Sacramento-West Spur.

Marysville-

Eastward freight trains use west switch joint track siding. Westward trains use switch east end double track Yuba City.

Colusa Jct.-West switch of wye.

Colusa-All trains use switch west end double track.

Live Oak-Siding west of depot.

Oroville Jct.-West switch of big wye.

Mulberry-Shop siding.

Rules S-90 (A) and 104 (C) are abrogated and the following will govern:

Trainmen and other employes must not unlock derails or main track switches to enter main track until the trains which are to be met or passed have cleared the switch, and must not place themselves in the vicinity of a main track switch or between fouling point and main track switch until expected trains have been met or passed.

When a superior train arrives at a meeting point in advance of the opposing train a member of the crew may proceed to and throw switch for opposing train to enter the siding but must immediately return to a position at the head end of his train where he must remain until the train to be met has passed the switch. Proceed signal must not be given to approaching train.

When a switch is thrown, the employe using it must see that both points have moved to proper position. A switch must be fastened as soon as thrown either way and when locked, the chain pulled to insure that lock is securely fastened.

Both switches of a cross-over to or from main track must be kept closed and secured when there is a car or engine on or immediately approaching either switch, except for a direct crossover movement.

Rule 93. Second paragraph of Rule 93 is abrogated, and the following will govern:

Second and inferior class trains, extra trains and engines must approach and move with caution within yard limits.

When not protected by block signals or when moving against the current of traffic, first-class trains must approach and move with caution within yard limits.

Rule 99-A. The interpretation of this rule is that when a flagman is either sent to hold a train or is left at a point to hold a train, that his instructions must be in writing on Flagman's Hold Order, form 27.

Rule 104 (D) is abrogated and the following will govern:

Employes in alighting from trains to change switches must get off on opposite side of train from switch stand when to do so will not endanger their safety.

Unless there be ample time to do so without risk of accident, employes must not attempt to throw a switch until train has stopped, nor may a switch be closed until the last wheels have passed off the switch rails.

When a train backs in on a siding to be met or passed by another train, when his engine is clear, engineer must see that the switch is set for main track; but this does not relieve the trainmen from responsibility as to the proper position of the switch.

Rule 219—Amended. A Conductor taking a train order over the telephone circuit must not repeat or give the "X" response to a train order if the train has been cleared or of which the engine has passed the telephone booth or other point where the order is being received until he has obtained the signature of the Motorman.

Rule 509—Amended. On single track when a preceding train is seen in the block in which the signals are actuated by track circuits, and the intervening track is seen to be clear, train after stopping, will proceed at once with caution not exceeding 12 miles per hour.

Rule 509. The sending of a flagman ahead as prescribed by this rule does not apply to the operators of one-man street cars.

Rule 511—Amended. Both switches of a crossover between main tracks must be opened before a movement is started through the crossover, and one or both of the switches must be kept open until the movement is completed.

Rule 838. Cars must not be left standing on any spur or siding within 200 ft. of any highway crossing, if possible to avoid it.

Rule 890 is amended as follows:

When passing over long trestles in third rail territory conductor or brakeman must observe trestle from rear of train and be on lookout for fires which may start from third rail arcs.

When approaching and while passing over facing point spring switches, trainmen must be distributed over the train so as to observe the movement of the entire train over the spring switch and be prepared to stop it promptly in event of derailment.

The Conductor and Motorman are jointly responsible for the speed of trains which must not exceed six miles per hour during the movement of the entire train over a facing point spring switch

Motormen must not apply any power while going over spring switches unless it be to maintain the speed allowed.

Rule 970 must be observed by train crews before passing through tunnel No. 1, over ferry slips, and all long trestles and bridges.

Rule 1011. When wigwags or bells are found inoperative, train or engine must stop and be preceded over the crossing by a flagman. When a reverse movement is made on Main track or on siding or spur which is not in wigwag circuit a flagman must protect the crossing before the movement is made.

Some wigwag signals are set into operation by third rail shoe contacts and others by trolley contacts. Motormen must slow down at points where trolley and third rail overlap, and where wigwags are operated by trolley contacts so that the trolley can be put on the wire before reaching the "Brush Contacts."

When one train is following another closely in yard limits or closing up at stations where wigwag circuits are maintained the train in the rear must not enter the wigwag circuit before the leading train has passed the wigwag cutout when such circuit is not a track circuit.

Flasher signals which operate in conjunction with wigwag signals are installed in advance of all wigwags which swing parallel with the tracks.

Rule 1070. Applies to two or more freight motors coupled and operated as one unit. Air-brake test must be made before the unit is moved and when motorman changes his operating position from one motor to the other.

Rule 1089—Amended. In case of power or air brake failure and there exists the possibility of not being able to hold the train with the air brakes, sufficient hand brakes must be set to hold the train.

Air must be cut in, and air brakes in operation, on all yard cuts, and trains moving within yards, under the following conditions:

When movements are made through towns or cities or when crossing streets within city limits (except when switching).

When movements are made on grades where air brakes are necessary to keep cars under control.

INTERLOCKING AND BLOCK SIGNALS

The Interlocking Plant at 40th and Shafter governs all movements to and from the Key System tracks on 40th Street. Limits extend from Home Signal located 100 feet east of Manila Street to Home Signal located 15 feet west of Webster Street. Dwarf semaphore signals govern movements from tracks in Oakland Yard to 40th Street.

The standard color of the masts supporting home signals is white, and the masts supporting distant signals is yellow.

Trains finding a Home Block Signal Dark will make a test and if the Red Signal is working may proceed. In making this test train must be backed out of circuit after getting "Red" indication before proceeding.

At meeting points, the train taking the siding, may back out after the train has been met without waiting for the switch indicator to clear and if the facing Home Block Signal is clear may proceed.

Key System crossing College Avenue.

All cars, trains and yard engines must stop at College Avenue and no car, train or yard engine of either line shall proceed over this crossing if there is a car or train approaching on the other line at a distance, from same, that would not permit of safe passage.

Southern Pacific Crossing at Las Juntas is protected by Stop Boards. All trains, engines, motors and cars must stop at stop boards and signal 14-B sounded before proceeding over the crossing, providing that there is no locomotive, motor, train or car of the Southern Pacific approaching the crossing from either direction.

When view is obscured by fog or inclement weather, a member of the crew must go forward to the crossing and ascertain that no train is approaching on the Southern Pacific Railway before proceeding over the crossing.

Bay Point & Clayton Railroad crossing at Clyde, no signals.

All trains, engines, motors, and cars, must stop at stop boards and signal 14 (b) sounded before proceeding over the crossing.

When view is obscured by fog or inclement weather a member of the crew must go forward to the crossing and ascertain that no train is approaching on the B. P. & C. R. R. before proceeding over the crossing.

When trains, engines, motors, or cars of both companies approach the crossing simultaneously the train, engine, motor, or car of the B. P. & C. R. R. will have the right to pass first over the crossing.

The tracks at the Shell Chemical Company's plant at Shell Point are used jointly by the Sacramento Northern and Southern Pacific. All movements over these tracks must be made with caution. The tracks leading from the Sacramento Northern and from the Southern Pacific cross at grade. All trains, motors, engines or cars of the Sacramento Northern shall stop at the "STOP" signs located at each approach to the crossing, and shall not proceed over the crossing until it has been ascertained that it is safe to do so. Several derails, properly signed, are installed on the various tracks.

A. T. & S. Fe R. R., crossing at Pittsburg is protected by stop boards. All engines, trains, motors and cars must come to a stop at the "STOP" boards located on either side of the crossing and no movement made over this crossing until a flagman has preceded over the crossing and ascertained that it is safe to proceed. A. T. & S. Fe R. R. have the preference at this crossing.

Southern Pacific Railroad crossing at Front and Capitol Ave., Sacramento, is protected by flagman.

Southern Pacific trains moving on Front Street, Sacramento, and yard engines switching on Front Street, shall stop before reaching the crossing at Front and Capitol Ave., and will proceed on hand signals from flagman on the ground at the crossing, flagman using a green flag by day and green light by night.

Sacramento Northern trains and yard engines moving over the crossing shall stop before reaching the crossing at Front and Capitol Ave., and will proceed on hand signals from the flagman using a yellow flag by day and a yellow light by night.

All single track curves at 19th & C, 15th & D, 15th & I, and 8th & I Streets are protected by block signals operated by trolley contacts. The block signals are located on poles in advance

of the curves. The normal indication of the signals is dark. Yard engines and street cars entering the block limit will receive a yellow signal and will be protected by a red signal on the opposite end. Yard engines and street cars entering the block simultaneously will cause the signals to indicate both yellow and red, in which case stop must be made and the yard engine or car moving in the westward direction will proceed.

Track between 30th and C Sts., and Alhambra Blvd. and F Sts., Sacramento, is protected by block signals. All yard engine and street car movements must be governed by signal indication.

AUTOMATIC INTERLOCKER C & X STREETS, SACRAMENTO

Automatic Interlocking Color Light Signals governing movements of Western Pacific trains and Sacramento Northern trains are located at the crossings on "C" and "X" Streets, Sacramento.

MOVEMENT OF TRAINS OVER "C" STREET CROSSING, SACRAMENTO

WESTERN PACIFIC—Home signal located 480 feet east of crossing governs movement of trains over the crossing westward; Home signal located 450 feet west of crossing governs movement of trains over the crossing eastward. No distant signals.

MOVEMENT OF TRAINS OVER "X" STREET CROSSING, SACRAMENTO

WESTERN PACIFIC—Home signal located 450 feet east of crossing governs movement of trains over the crossing westward; Home signal located 450 feet west of crossing governs movement of trains over the crossing eastward. One distant signal 1480 feet west of home signal.

MOVEMENT OF TRAINS OVER "C" STREET CROSSING, SACRAMENTO

SACRAMENTO NORTHERN—Home signals governing movement of trains with the current of traffic over the crossing located at the curb line 72.5 feet on either side of crossing. Back-up signals governing reverse train movements over the crossing are located at the curb line 72.5 feet on either side of crossing. No distant signals.

Operators of street cars after passing the signal in PROCEED position will make a safety stop 25 feet from the crossing before moving over it. Cars must not be left standing between the home signals unless coupled to another car or an engine which is standing outside of the home signals.

MOVEMENT OF TRAINS OVER "X" STREET CROSSING, SACRAMENTO

CENTRAL CALIFORNIA TRACTION COMPANY - SACRAMENTO NORTHERN—Home signals governing movement of trains with the current of traffic over the crossing located at the curb line 72.5 feet on either side of crossing; back-up signals governing reverse train movements over the crossing are located at the curb line 72.5 feet on either side of crossing. No distant signals.

Cars must not be left standing between the home signals unless coupled to another car or an engine which is standing outside of the home signals.

Cars or trains finding the home signals at "STOP," will stop clear of signal to permit it to change to "PROCEED" position when train on the Western Pacific has passed out of home signal limits.

CLOCK WORK TIME RELEASE

If no cause for signals being at "STOP" is seen, or if there is a train on the Western Pacific tracks standing outside of the home signals with no indication that it is to immediately proceed, operator must be sent ahead to operate a release located in a box mounted on a post on the opposite side of the intersecting track, one release for each track. Box is provided with standard switch locks. Instructions for the operation of release are posted inside box. The instructions follow:

To operate clock work time release, turn knob to right about one-quarter (1/4) turn; hold knob to right about two (2) seconds, and then let go of knob, allowing release mechanism to run down, which will require sixty (60) seconds at "C" Street and forty-five (45) seconds at "X" Street.

After release has run down, a red pilot light located inside of the release box should light up. This pilot light indicates home signals on intersecting tracks are in "STOP" position. Sacramento Northern signal should then change to "PRO-CEED."

The release must not be operated when Western Pacific trains or engines are between the home signals, or seen to be approaching.

In case the operation of the release does not clear the signal, the car or train will then proceed slowly to a point within fifteen (15) feet of the crossing, and, after stopping, operator must again proceed, on foot, to the center of the crossing, and, after making sure that no Western Pacific trains are approaching within the limits of the home signals, may then proceed over the crossing.

Speed of cars or trains over automatic interlocker must not exceed ten (10) miles per hour.

Note: The word Trains includes Yard Engines, Street cars and Deadhead equipment.

AUTOMATIC INTERLOCKER, SANKEY

Sankey automatic interlocking plant crossing the Western Pacific tracks is located one-half mile west of Sankey.

Interlocking limits on the W. P. track extend from home light signal 600 feet east of crossing to home light signal 600 feet west of crossing, and on S. N. Ry. track between home light signals located 600 feet on both sides of crossing.

The distant signals are located 3000 feet in advance of the home signals, and the preliminary circuits extend 3000 feet in advance of the distant signals.

The instructions governing the operation of signals and the movement of trains through the interlocking plant at Live Oak will apply at Sankey interlocker.

AUTOMATIC INTERLOCKER, LIVE OAK

Live Oak automatic interlocking plant crossing the Southern Pacific tracks is located one-half mile east of Live Oak.

Interlocking limits on the S. P. track extend from home light signal SA-1522, 517 feet west of crossing, to home light signal

SA-1523, 523 feet east of crossing, and on S. N. Railway track between home light signals located 600 feet on both sides of crossing.

The westbound distant signal is located 3000 feet in advance of the home signal and the preliminary circuit begins at a point 4800 feet east of the home signal. The eastbound distant signal is located 1300 feet in advance of the home signal, and the preliminary circuit begins at a point 2500 feet west of the home signal.

Normal Indication of Interlocking Home Signals-"STOP":

When train approaches the crossing and enters approach circuit, the home and distant signals should change to "PRO-CEED."

Motormen operating single truck Birney cars, after receiving clear indication at home signal will bring the car to a stop not closer than 30 feet from the crossing. The Conductor will then close the Shunt Switch located in a box on the west side of the crossing. Closing this switch holds the signals on the intersecting track at stop. After the movement over the crossing has been made the Conductor will open the Shunt Switch and leave it open. The box must be left locked.

When home signal indicates "PROCEED" or "PROCEED WITH CAUTION" the speed of engine must not exceed thirty (30) miles per hour between the home signal and the crossing.

If no cause for signals being at "STOP" is seen or if there is a train on intersecting tracks standing outside of the home signals, with no indication that it is to immediately proceed, flagman must be sent ahead to operate a release located in box at the crossing. Box is provided with standard switch lock. Instructions for the operation of release will be posted inside box. The instructions follow:

CLOCK WORK TIME RELEASE

To Operate Clockwork Time Release:

- (a) The release must not be operated when trains or engines are between the home signals or seen to be approaching on the intersecting tracks.
- (b) To operate clockwork time release, turn knob to right to extreme position about one-quarter turn, then let go of knob and allow automatic release mechanism to run down, which will require four minutes. When knob is turned to extreme position and release mechanism has completed its operation, a red indicator light located near this clock release should light up immediately indicating that home signals on intersecting track are in "STOP" position. The home signal on S. N. Ry. should then change from "STOP" to "PROCEED WITH CAUTION."

Note: Where home signals are involved in automatic block signal territory, flagman, upon receiving a red indicator light, must lock box and proceed in accordance with automatic block system rules and where no automatic block signals are involved, flagman will remain at the crossing until train arrives.

In case indicator light fails to appear, the movement must be protected in each direction on the intersecting line.

(c) In case operation of release does not change the home signal indication from "STOP" to "PROCEED WITH CAUTION" after predetermined time has elapsed, a repeater red

indicator light located at home signal should then light up, indicating that home signals on intersecting line are in "STOP" position.

JOINT TRACK MARYSVILLE

Sacramento Northern trains operate over Western Pacific track between Sacramento Northern connection with Western Pacific main track, located 356 feet east and 355 feet west of bridge 178.18, Yuba River, Marysville. Sacramento Northern freight trains operate over Western Pacific passing siding between the west switch and the switch leading to the Sacramento Northern track opposite the Western Pacific passenger station at Marysville. These tracks are designated as Joint Tracks.

AUTOMATIC INTERLOCKING Signals governing the Joint Track are located as follows:

THE WESTERN PACIFIC RAILROAD COMPANY

EASTWARD—Home Signal 789 feet west of bridge 178.18;

Normal position stop.

Distant Signal 2,500 feet west of Home Signal;

Normal position caution.

WESTWARD—Home Signal 724 feet east of bridge 178.18; Normal position stop.

Eastward Signal located 789 feet west of bridge 178.18, will give clear indication when approaching train reaches a point within 3,500 feet from the signal, provided the block is clear, and will go to stop position when the forward wheels of an engine or car pass the signal.

Westward Signal located 724 feet east of bridge 178.18, will give a clear indication when approaching train reaches a point within 500 feet from the signal, provided the block is clear, and will go to stop position when the forward wheels of an engine or car pass the signal.

SWITCH INDICATORS are located as follows:

Junction switches 356 feet east and 355 feet west of bridge 178.18, west switch Interchange track and west siding switch.

Sacramento Northern Engines using Western Pacific tracks in joint switching territory will be governed by rules in current Western Pacific timetable.

SACRAMENTO NORTHERN RAILWAY

EASTWARD—Home Signal 542 feet west of bridge 178.18, located at left of track; Normal position stop.

WESTWARD—Home Signal 525 feet east of bridge 178.18; Normal position stop.

Home Signals located 542 feet west of bridge 178.18, and 525 feet east of bridge 178.18, will go to clear position when the junction switch and derails are lined up for the Sacramento Northern track, provided the block is clear, and will go to stop position when the forward wheels of an engine or car pass the signal.

SWITCH INDICATORS are located as follows:

Junction switches 356 feet east and 355 feet west of bridge 178.18 and west siding switch.

All trains and engines must have a clear indication by switch indicator before throwing the switch to enter the W. P. main track, or must proceed under flag protection.

DERAILS: Derailing switches, pipe connected and operated with the main track switches are located as follows:

On Western Pacific passing siding 193 feet east of west switch.

On Sacramento Northern track 182 feet west of Junction Switch west of bridge 178.18 and 157 feet east of Junction Switch east of bridge 178.18.

Care must be used in the handling of switches which are pipe connected to the derails to avoid a derailment. Employe opening main track switch that is pipe connected to derails, must lock the switch open and it must remain locked until train has cleared derailing switch.

Motorman must not start his train until home signal clears and brakeman has crossed over track to opposite side of switch stand.

NORMAL POSITION OF SWITCHES—Junction switches must be locked for Western Pacific main track when not in use.

MOVEMENT OF TRAINS—Movement of trains over the Joint Track will be made in accordance with the indication of signals, regardless of right or class. All trains of both companies must approach and pass through the limits of the Joint Track with caution, not exceeding a speed of fifteen (15) miles per hour.

If no cause for signals being at stop is seen or if there is a train on W. P. track outside of home signals with no indication that it is to immediately proceed, be governed by Rule 663.

In using the Joint Track, freight trains should avoid delays to other trains of either company.

No engine, car, or train of the Sacramento Northern shall be operated over the railroad crossing located 752 feet east of Bridge 178.18 where the Sacramento Northern passenger track crosses the Western Pacific house track, without being brought to a stop at the Stop Board and preceded over the crossing by a member of its crew who shall determine first that it is safe to proceed. The Stop Boards are located on each side of this crossing 100 feet from the crossing. Sacramento Northern trains and yard engines operating on the Western Pacific house track must approach this crossing with caution and not move onto or over the crossing until it shall be determined first that it is safe to proceed.

Note: WITH CAUTION, means—To run at restricted speed, according to conditions, prepared to stop short of a train, engine, car, misplaced switch or other obstruction, or before reaching a stop signal. Where circumstances require, train must be preceded by a flagman.

W. P.-S. P. crossing 9th Street, Marysville, interlocked. All movements over this crossing will be made in accordance with the rules in Western Pacific current time table.

The single track between Marysville and Yuba City is protected by Automatic Block Signals. Movement of Trains, Yard Engines, Deadhead equipment, and street cars will be made

over this track in accordance with the indication of signals regardless of right or class.

The single track between 9th Street, Chico, and Mulberry is protected by block signals operated as follows: Light signals are installed on poles at 9th Street, 16th Street and at Mulberry, the color indications being yellow and red. The track between 9th Street and 16th Street is protected by one set of signals and the track between 16th St. and Mulberry is protected by another set of signals. When the blocks are not occupied the signals will indicate dark. Yard Engines and Street Cars entering the block will receive a yellow signal and will be protected by a red signal on the opposite end. Only one Yard Engine or Street Car is permitted within the block limit at a time. Yard Engines and Street Cars entering the block simultaneously will cause the signals to indicate both yellow and red in which case stop must be made and the Yard Engine or Street Car moving in the westward direction will proceed with caution.

- S. P. Crossing—Mikon. Interlocked. Home signals and derails 300 feet east and west of crossing. No distant signals.
- S. P. Crossing-Woodland. Interlocked. Home signals and derails 300 feet east and west of crossing. No distant signals.

DRAWBRIDGE SIGNALS

Montezuma Slough Drawbridge has train stop arms. Home Signals located 659 feet east and 840 feet west indicate position of draw. Distant Signals 2119 feet east and 1740 feet west of Home Signals.

TOWER BRIDGE

Bridge Interlocking Signals and Derails:

Note: Directions used are those applicable to the Main Track to Oakland.

Signals and derails are located 413 feet east of Bridge on Capitol Ave., 285 feet east of Bridge on Front Street, and 350 feet west of Bridge. The switch leading to the River Spur serves as a derail west of the Bridge.

The interlocking home signal at River Spur derailing switch is a three-unit signal; the upper signal governs movements to Front Street, the middle signal governs movements to Capitol Ave., and the lower signal governs movements to the River Spur.

Signal No. 2 located at the east end of the Bridge governing eastward movements is a three-indication light signal. Green indication governs movements to Front Street. Yellow indication governs movements to Capitol Ave. The red indication is a stop signal.

The switch at the east end of the Bridge is electrically operated from the tower.

Broderick Junction Interlocking Plant:

Interlocking home signals are located 163 feet east of Junction switch on Woodland Branch, 712 feet west of Junction Switch on main track, and 13 feet east of Junction Switch on main track. The interlocking home signal located 13 feet east of Junction

Switch is a two-unit light signal. The upper signal governs movements to Oakland main track, and the lower signal governs movements to Woodland Branch. These interlocking signals are operated by remote control from the tower.

Dual Control Switch:

The dual control switch at Broderick Junction is operated by remote control from the tower and is so equipped that it may be operated by trainmen, when authorized to do so by the towerman. When trainmen are authorized by towerman to operate this dual control switch by hand, the selector lever must be kept in hand-throw position until all movements over the switch have been completed. All movements within the working limits must be made with caution and upon completion notify towerman.

Trainmen must notify motorman when the selector lever is in hand-throw position, and also notify him when it is returned to motor position, so he may know when to be governed by the interlocking signals governing movements over the switch.

The selector and hand-throw levers must not be forced. They will move easily when properly in mesh, although some manipulation of first one and then the other may be necessary to get them in proper mesh. If the switch was lined for Woodland Branch when dual control use was started it must be again lined for Woodland Branch before selector lever is restored to motor position.

Block Signal System:

That portion of the Automatic Block Signal system on the First Subdivision between Broderick and Riverview begins and ends at the home block signal located 350 feet west of Tower Bridge.

Switch Indicators:

The switches leading into the main track from Westside Spur and the drill track are protected by switch indicators. The switch leading from the River Spur to the main track is protected by light signals operated from the tower.

Movements of Trains and Yard Motors:

Movements through and between these two interlocking plants shall be made in accordance with signal indication. In case of signal failure at Tower Bridge Interlocking Plant, be governed by Rule 663 and failure at Broderick Junction Interlocking Plant, be governed by Rules 663 and 509.

Trains and yard motors must not exceed a speed of 15 miles per hour over the bridge and 10 miles per hour over the highway crossing west of the bridge.

Eastward trains and yard motors entering the main track from the drill track at east switch Westgate must have clear indication by switch indicator before opening the switch.

When the switch is opened an indicator light in the tower will light, indicating to the towerman that a train is approaching. When the interlocking home signal clears, train or yard motor may proceed.

When the interlocking home signal at east switch Westgate indicates "STOP" eastward trains of more than three cars on either the main track or drill track shall remain back of the County Road crossing until the signal clears.

Telephones:

Telephones are installed in the tower, at Interlocking Home Signal on Capitol Ave., Front Street, in the shelter house at Broderick Junction, and on a post half way between River Spur and Westside Spur for trainmen to communicate with the towerman. The telephones on Front Street and Broderick Junction have a double-throw switch to connect the phone on the dispatcher's line.

Whenever there is switching to be done on the River Spur or Westside Spur, which requires several movements from the main track to these spurs, or movements on the main track through or into the limits of the Interlocking Plant at Broderick Junction, the conductor shall communicate with the towerman and advise him so that there shall be no delay in the operation of signals or switches.

There is a signal box located on the interlocking home signal on Front Street which is operated by using a switch key. Operation of this signal box gives the towerman an indication in the tower that a train is on Front Street, and ready to move through the plant. This signal box is to be used when whistle signal cannot be heard.

Route Whistle Signals:

From Capitol Ave. or Front Street to Oakland o
From Capitol Ave. or Front Street to Woodland o ——— o
From Capitol Ave. to Front or in reverse direction o o o o
From Oakland or Woodland to Capitol Ave
From Oakland or Woodland to Front Streeto
From Oakland or Woodland to River Spur o
From River Spur to Main Track — o
From Oakland to Woodland or in reverse direction o o o o
From main track between inter- locking plants to Oakland o
From main track between inter- locking plants to Woodland o ——— o

Meridian Bridge. Interlocked. Home signals and derails 300 feet east and west of the bridge.

FIRST AID STATIONS

(Supplied with First Aid Cabinets and Stretchers)

Oakland Dozier
Eastport Riverview
Concord Vacaville Jct.
Ferry Ramon Colusa Jct.
Drawbridge Oroville Jct.

The following is a list of all Steam and Electric Railroad crossings and Junctions, protection provided for movements over them, and the name of the Railroad having prior right in the use of the crossing or Junction not protected by signals or flagman:

LOCATION	NAME OF RR.	PROTECTION	RESTRICTION	RIGHT
Oakland—40th & Shafter Oakland—College Ave	Key System	Interlocking Signals	5 ml. per hr Stop	Governed by Signal S. N. Ry.
Las Juntas	S. P. Co	No Signals	Stop	S. P. Co.
Clyde	B. P. & C. R. R	No Signals	Stop	B. P. & C. R. R.
Shell Point Shell Chem. Co	S. P. Co	No Signals		S. N. Ry.
Sacramento: Front St. & Capitol Ave	S. P. Co	Flagman	Stop.	Governed by Flagman
8th & "K" Sts	P. G. & E	Traffic Signals	THE R. P. LEWIS CO., LANSING MICH. S. P. LEWIS CO. L.	P. G. & E.
8th & "J" Sts	P. G. & E	Traffic Signals	Stop	P. G. & E.
Globe	AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IN COLUM	No Signals	Stop	W. P. R. R.
Sankey	W. P. R. R	Automatic Interlocking Signals	30 mi. per hr	Governed by Signal
Marysville—Joint Track Marysville—House Track	W. P. R. R	Interlocking Signals No Signals	15 mi. per hr Stop and Flag	Governed by Signal S. N. Ry.
head place of fame the same a	S. P. Co	No Signals	Stop—Except when pro- ceed signal is received from flagman	
		Automatic Interlocking Signals	30 mi. per hr	Governed by Signal
Stirling Jct	S. P. Co	No Signals	Stop	S. P. Co.
Pittsburg	A. T. & S. F. R. R.	PITTSBURG BRANCH No Signals	Stop and Flag	
Sacramento: Front St. N. to "Q" Inc{ Front & "R" Sts	S.P.Co.&W.P.R.R. Industrial Tracks S.P.Co. & W.P.R.R.	SACRAMENTO BELT LINE No Signals		S. P. Co. & W. P. R. R.
Front & "X" Sts	C. C. T. Co	No Signals. No Signals. Automatic Interlocking Signals Arterial Stop Sign. Arterial Stop Sign. No Signals	received from flagman. Caution. Stop. 10 mi. per hr. Stop—5 mi. per hr. Stop—5 mi. per hr.	S. P. Co. & W. P. R. R. Caution C. C. T. Co. Governed by Signal S. N. Rv.
Alhambra Blvd. & "R" St	S. P. Co	No Signals.	Stop	June Barris and area
Alhambra Blvd. & "J" St 19th & "C" Sts	P. G. & E W. P. R. R.	Arterial Stop Sign	Stop-5 mi. per hr	S. N. Ry. Governed by Signal
Mikon	S. P. Co S. P. Co	WOODLAND BRANCH Interlocking Signals	20 mi. per hr	Governed by Signal Governed by Signal
Swayne Lumber Co	W. P. R. R	OROVILLE YARD No Signals	Stop	W. P. R. R.
9th & Orange Sts D. M. Yard, all crossings	S. P. Co D. M. Co	CHICO YARD No Signals No Signals	Stop and Flag	S. P. Co. D. M. Co.

other trailer of all a contest taller

											LOC	OMOTIV	E RAT	ING IN	TONS											11
Engine	Working Voltage	Sacramento	Car Limit	Tons Per Operative Brake	Oakland to Temescal	Temescal to Havens	Havens to Concord	Concord to Las Juntas	Las Juntas to Havens	Concord and P. Chicago	P. Chicago and Sacramento	W. Pitts. to Pittsburg	Pittsburg to W. Pitts.	Riverview and Oxford	Front St. to Broderick	Creed and Cordero	Cordero and Vaca Jct.	Vacaville and Willotta	Sacramento to Chico	Chico to Yuba City	Yuba City to Alicia	Alicia to Sacramento	Summit to Oro. Jct.	Oro. Jet. to Oroville	Colusa Branch	Sycamore and Beet Spur
402 403 404 405 410 420 430 440 441 442 601 602 603 604 605 606 650 651	600 600 600 600 600 600 600 600 600 1200 600 1200 600 1200 600 1200 600 1200 600 1200 600 1200 600 1200 600 600 600 600 600 600 600 600 600	300 300 300 300 700 700 600 425 630 600 225 225 500 500 400 750 750	10 10 10 10 10 10 10 10 10 10 10 10 10 1	T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	75 75 75 150 150 200 170 300 300 300	75 75 200 200 200 170 400 400	225 225 500 500 400 750 750	450 450 450 1000 1000 1000 800 1650 1650	150 150 340 340 340 275 540 540	150 150 340 340 340 275 450 450	450 450 1000 1000 1650 1650	225 225 500 500 400 750 750	150 150 340 340 275 480 480	450 450 1000 1000 1000 1650 1650	150 150 340 340 340 275 450 450	450 450 1000 1000 1000 1650 1650	225 225 500 500 400 750 750	450 450 450 450 900 900 850 620 900 850 400 670 670 670 540 1065 1065	720 720 720 720 720 1400 1400 1300 950 1365 1300 450 450 1000 1000 800 1650 1650	720 720 720 720 720 1400 1400 1300 950 1365 1300 450 450 1000 1000 800 1650 1650	360 360 360 360 780 780 680 475 715 680 225 225 500 500 400 880 880 880	720 720 720 720 720 1400 1400 1300 950 1365 1300 450 450 1000 1000 800 1650 1650	720 720 720 720 720 1400 1400 1300 950 1365 1300 450 450 1000 1000 800 1650 1650	720 720 720 720 720 720 1400 1400 1300 950 1365 1300 450 450 1000 1000 800 1650 1650	720 720 720 720 720 1200 1200 1100 850 1155 1100 360 800 800 800 640 1300 1300	300 300 300 300 700 700 600 425 630 600 225 225 500 500 400 750 750
653 654	1200 600 1200	750 750	10	50 50	300 300	400 400	750 750	1650 1650	540 540	450 450	1650 1650	750 750	480 480	1650 1650	450 450	1650 1650	750 750	1065 1065	1650 1650	1650 1650	880 880	1650 1650	1650 1650	1650 1650	1300 1300	750 750
660	{ 600 } 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750
661	{ 600 1200	750	10	50	300	400	750	1650	540	450	1650	750	480	1650	450	1650	750	1065	1650	1650	880	1650	1650	1650	1300	750

Note: Between Havens and Oakland Engines 603 & 604 coupled, and Engines 660 & 661 coupled, car limit 20 cars. Engines 601 & 602 coupled, car limit 12 cars.

VADD	LIMITO	DEFINED	DV VADD	LIMIT SIGNS
IAND	LIMITIO	DEFINED	BY YARD	LIMIT SIGNS

South Yuba

Oakland

Walnut Creek Concord Port Chicago	Marysville Yuba City Paloro Harter	Marysville Yard
Pittsburg West Pittsburg Mallard Pittsburg Yard	Colusa Jct. Colusa Arbee	Colusa Yard
Chipps Creed Riverview Woodland	Live Oak East Gridley Oroville Jct.	5
Westgate Broderick	Oroville Marysville Road	Oroville Yard
Sacramento Haggin Globe N. Sacramento	Stirling Jct. Mulberry Chico	Chico Yard

STOCK CORRALS

Moraga	Garfield	Vale
Montezuma	Rio Vista Jct.	Bunker
Cordero	Saxon	Libfarm
Molena	Olcott	
Woodland	Colusa	Chico
Sankey	Sutter	Shippee
Arboga	Peethill	Swanston
Sycamore	Durham	

SIDE AND OVERHEAD OBSTRUCTIONS

(Not Standard Clearance)

Tunnel No. 1-Side and overhead. Protected by Signal Bell Tell Tale.

Concord-Hay Warehouse side and overhead.

Ohmer-Overhead highway bridge-overhead.

Clyde-Building-side.

Ferry Ramon-End towers outside tracks-side and overhead.

General-All loading platforms-side.

General-Receiving pipes at oil company spurs-side.

Chico-Chico Vecino, Trees, side.

Crane Spur-Marysville Road.

Marysville-Diamond Match Warehouse-side.

Marysville-Orange St. track-two dwellings-side.

Marysville-Marysville Wholesale Grocery Co.-side and overhead.

Marysville-Sand Bunkers Yuba River-side.

Clarksburg-Sugar plant eaves-side.

Haggin-Sand bunkers.

Sacramento-Subway, side and overhead.

Sacramento—Tracks serving Freight House, 2nd and Capitol Ave.-Side (when cars are standing on tracks which are adjacent.)

Sacramento-Libby McNeill & Libby Pkg. Plant-side.

Woodland-West Valley Lumber Spur, side.

Woodland-Old passenger depot-side and overhead.

Trainmen will at all times look out for low hanging trolley and span wires.

INTERCHANGE TRACKS

Oakland	-Key	system—40th and Shafter.	
Las Juntas	—S. P.	. R. R.	

Clyde —В. Р. & С. R. R.

Port Chicago -A. T. & S. Fe R. R.

McAvoy -S. P. R. R.

Sacramento -W. P. R. R. Haggin and 19th and X Sts.

S. P. R. R., B St. & Front & X Streets.

C. C. T. Co., Front & X Streets.

Chico -S. P. R. R., 9th and Orange Streets.

-W. P. R. R. Oroville

Marysville -W. P. R. R.

S. P. R. R.

ADDITIONAL COMMERCIAL STATIONS

Stations	Facilities for Handling	Distance from Oakland	Capacity in Freight Cars
Eastport	LCL	6.60	
Wilcox	LCL	7.09	
Redwood Inn	LCL	7.75	
Canyon	LCL	8.07	
Valle Vista	LCL	9.72	
Nichols	LCL	33.13	
Greenspot	CL	34.64	2
Honker	LCL	40.29	
Highway Jct	CL	64.65	5
Dudley	CL	84.01	23
West Sacramento	CL & LCL	84.42	Yard
Peethill	CL	85.02	15
Pencilwood	CL & LCL	93.49	30
Swanston	CL & LCL	93.71	9
Pearson	CL	126.08	38
Reed	CL & LCL	126.79	26
Barber	CL	178.22	10
. CL-Carload frei	ght.		

LCL-Less Carload Freight.

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Map of Sacramento Northern Railway and Connections

