



**Run 8 Train Simulator
BNSF Railway
Seligman, Needles, Cajon and San Bernardino
Subdivisions
SCRRA River Subdivision**

**Timetable No. 1
Effective June 1, 2026**

**Produced by
David M. Bernstein**

**Run 8 Train Simulator Use Only
Do Not Use For Real World Operation**

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Introduction

This timetable is authored as a companion to Run 8 Train Simulator. It is a simplified version of an employee timetable tailored for Run 8 operation. The territory covered in this publication is identical to territory covered in Run 8 Train Simulator. **The information contained is based on Run 8 Depot track maps and does not necessarily reflect real life operation. This timetable applies only to rail simulation and is not to be used for real life operation.**

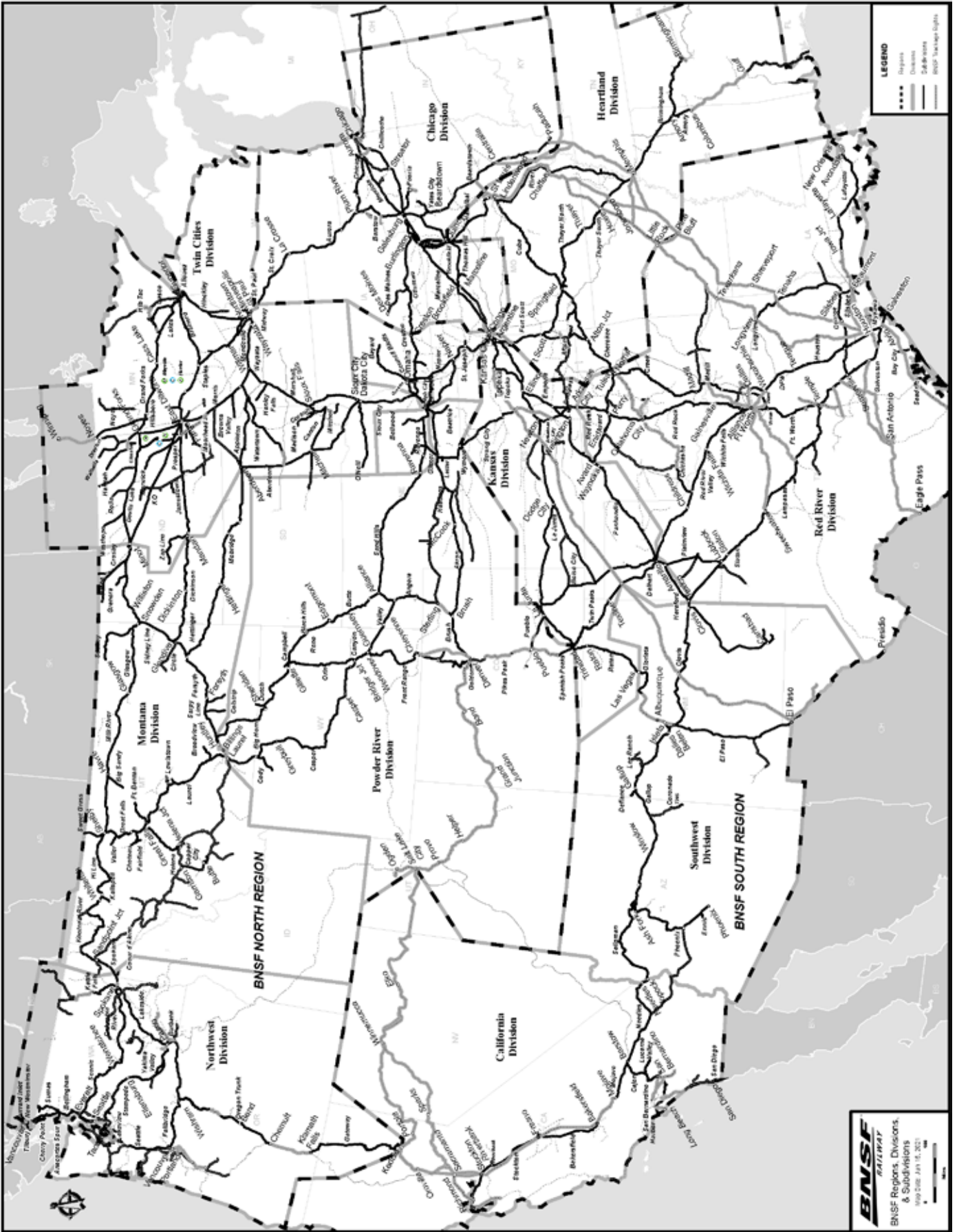
The author worked as a train dispatcher, chief dispatcher and rules consultant for the Southern Pacific Transportation Company, the Atchison, Topeka & Santa Fe Railway Company and the BNSF Railway Company from 1979 to 2015.

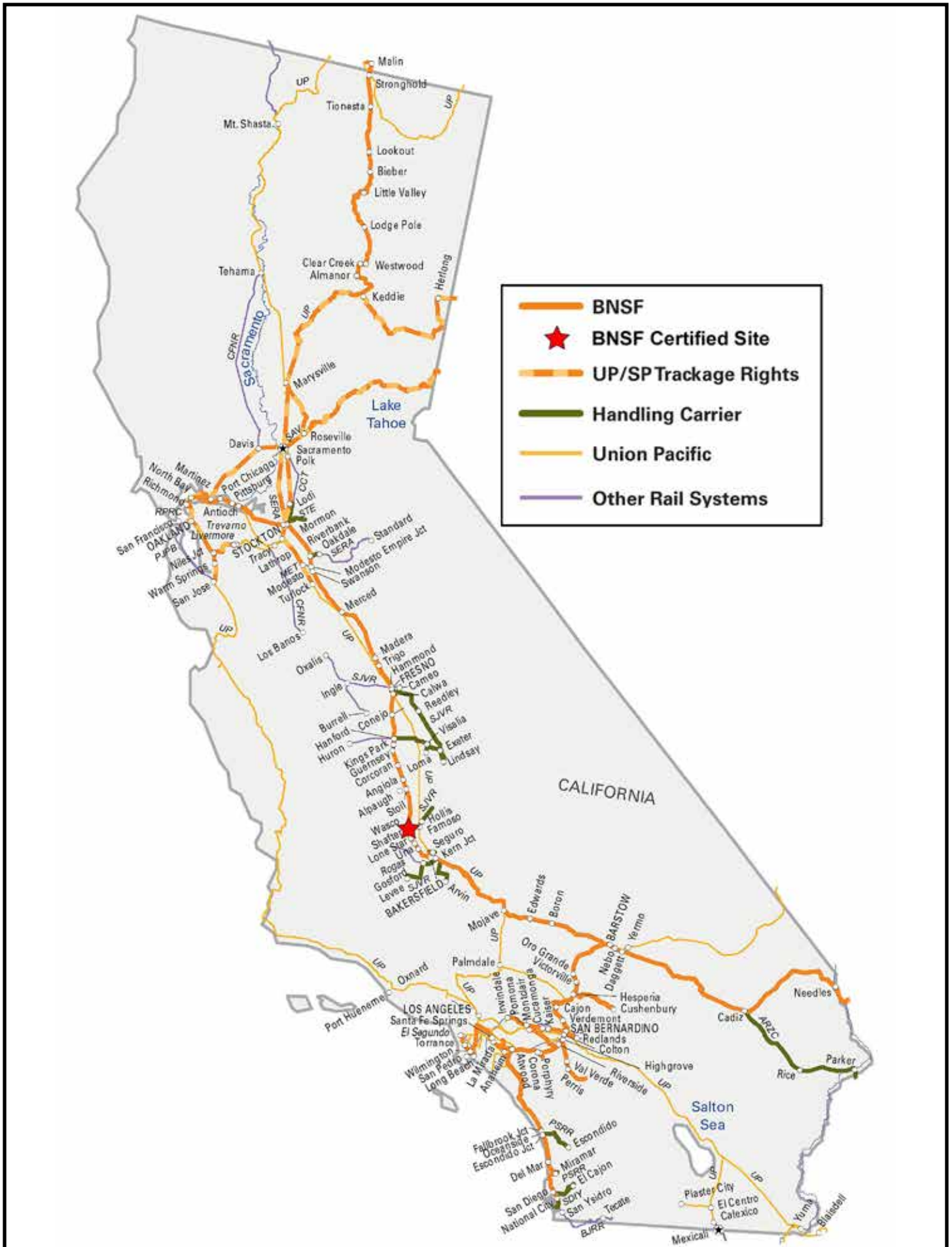
Published by David M. Bernstein
E-mail: davebernstein9@protonmail.com

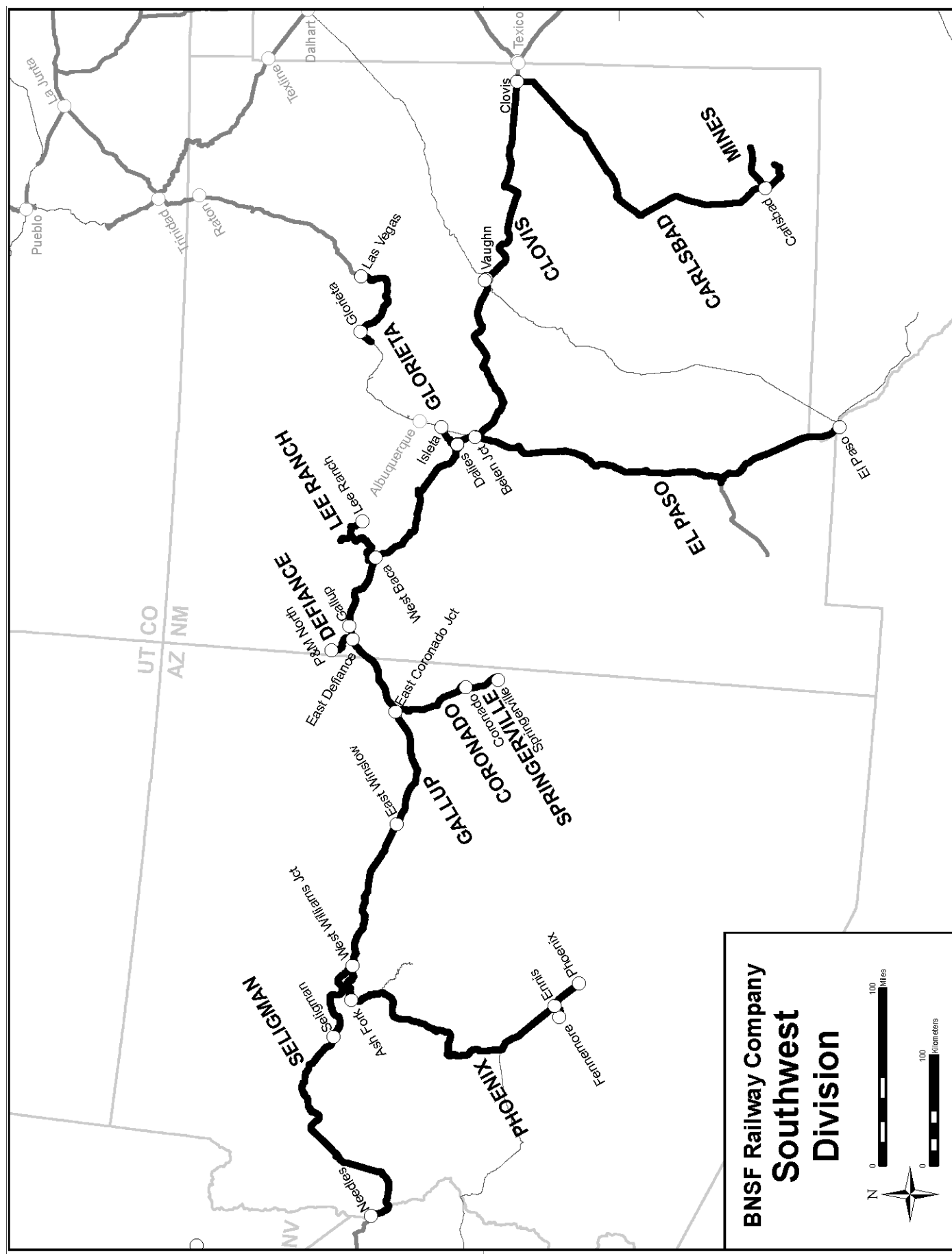
Front cover:
Westbound BNSF intermodal train leaving Kingman Canyon on December 15, 2018. (Mike Stupar photo).

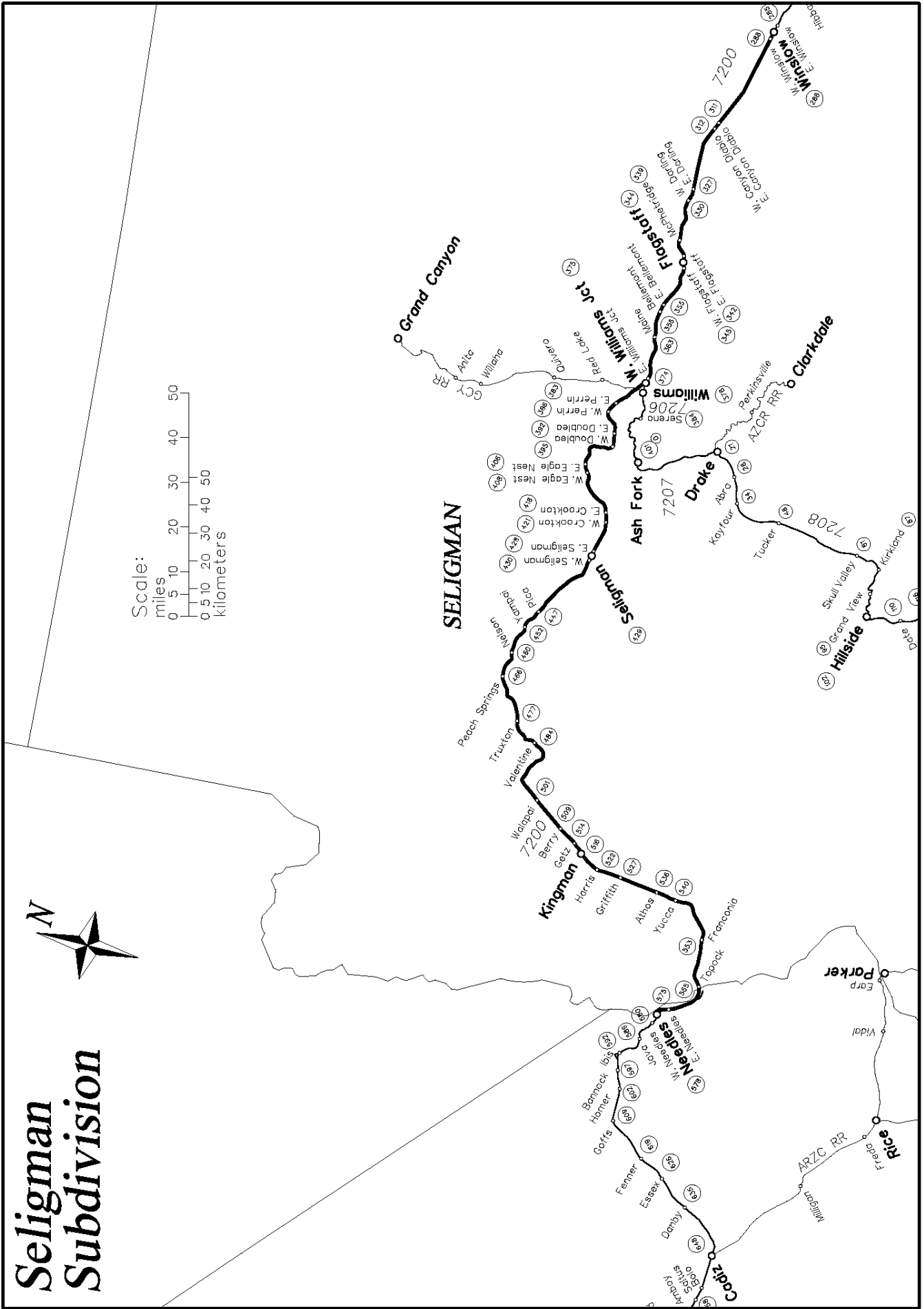
Abbreviations and Acronyms

ABS	Automatic Block Signal System
A&C	Arizona & California Railroad
AMTK	Amtrak
BO	Bad Order
C	Center
C & E	Conductor and Engineer
COFC	Container on Flat Car
CP	Control Point
CTC	Centralized Traffic Control
DISPR	Dispatcher (also DS)
DIV	Division
DT	Double Track
E	East
EBCS	East Bound Controlled Signal
EE	East End
ENG	Engine
ESS	East Siding Switch
EWD	Eastward
FRT	Freight
HER	Head End Restriction
JCT	Junction
MAX	Maximum
MMT	Multiple Main Track
MP	Mile Post
MPH	Miles Per Hour
MT	Main Track
MW	Maintenance of Way
N	North
NBCS	North Bound Controlled Signal
NE	North End
NO	Number
NSS	North Siding Switch
NWD	Northward
OK	Correct
OOS	Out of Service
OPR	Operator
ORIG	Originating
PSGR	Passenger
RL	Restricted Limits
S	South
SBCS	South Bound Controlled Signal
SCRRA	Southern California Regional Rail Auth. (Metrolink)
SDG	Siding
SE	South End
SJVR	San Joaquin Valley Railroad
SSS	South Siding Switch
SUBDIV	Subdivision
SW	Switch
SWD	Southward
TOB	Tons Per Operative Brake (Also TPOB)
TOFC	Trailer on Flat Car
TRK	Track
TRN	Train
TWD	Trackside Warning Detector
UP	Union Pacific Railroad
W	West
WBCS	West Bound Controlled Signal
WE	West End
WSS	West Siding Switch
WWD	Westward
XO	Crossover
YD	Yard
YM	Yardmaster









BNSF SELIGMAN SUBDIVISION

Radio Communication:

East Seligman to MP 566.2 Channel 036

Method of Operation:

East Seligman to MP 566.2 CTC 2MT

CTC is in effect on Track 1 between East Seligman and West Seligman (this track is designated as a siding in real world).

Maximum Speeds - Main Tracks:

Westward Trains			
Limit	Limit	Psg.	Frt.
MP 427.7 Main 1 & 2	MP 448.2 Main 1 & 2	79	70
MP 448.2 Main 1 & 2	MP 451.6 Main 1 & 2	60	55
MP 451.6 Main 1 & 2	MP 470.5 Main 1 & 2	55	45
MP 470.5 Main 1	MP 477.0 Main 1	90	70
MP 470.5 Main 2	MP 477.0 Main 2	79	70
MP 477.0 Main 1 & 2	MP 479.0 Main 1 & 2	70	60
MP 479.0 Main 1 & 2	MP 480.6 Main 1 & 2	30	25
MP 480.6 Main 1 & 2	MP 481.6 Main 1 & 2	45	40
MP 481.6 Main 1 & 2	MP 482.5 Main 1 & 2	60	55
MP 482.5 Main 1 & 2	MP 490.2 Main 1 & 2	80	70
MP 490.2 Main 1 & 2	MP 514.1 Main 1 & 2	90	70
MP 514.1 Main 1	MP 515.2 Main 1	60	55
MP 515.2 Main 1	MP 516.5 Main 1	45	40
MP 516.5 Main 1	MP 518.8 Main 1	40	35
MP 518.8 Main 1	MP 520.5 Main 1	70	60
MP 520.5 Main 1	MP 524.3 Main 1	80	70
MP 524.3 Main 1	MP 525.7 Main 1	85	70
MP 525.7 Main 1	MP 562.3 Main 1	90	70
MP 514.1 Main 2	MP 515.3X Main 2	75	60
MP 515.3X Main 2	MP 517.8X Main 2	40	35
MP 517.8X Main 2	MP 519.9X Main 2	35	30
MP 519.9X Main 2	MP 520.3X Main 2	30	30
MP 520.3X Main 2	MP 524.0X Main 2	60	55
MP 524.0X Main 2	MP 524.3X Main 2	50	45
MP 524.3X Main 2	MP 525.5X Main 2	55	50
MP 525.5X Main 2	MP 526.9X Main 2	79	65
MP 526.9 Main 2	MP 562.3 Main 2	79	70
MP 562.3 Main 1 & 2	MP 564.5 Main 1 & 2	60	55
MP 564.5 Main 1 & 2	MP 565.9 Main 1 & 2	50	45
MP 565.9 Main 1 & 2	MP 566.2 Main 1 & 2	55	55

Maximum Speeds - Main Tracks: (continued)

Eastward Trains			
Limit	Limit	Psg.	Frt.
MP 566.2 Main 1 & 2	MP 565.9 Main 1 & 2	55	55
MP 565.9 Main 1 & 2	MP 564.5 Main 1 & 2	50	45
MP 564.5 Main 1 & 2	MP 562.3 Main 1 & 2	60	55
MP 562.3 Main 1	MP 525.7 Main 1	90	70
MP 525.7 Main 1	MP 524.3 Main 1	85	70
MP 524.3 Main 1	MP 520.5 Main 1	80	70
MP 520.5 Main 1	MP 518.8 Main 1	70	60
MP 518.8 Main 1	MP 516.5 Main 1	40	35
MP 516.5 Main 1	MP 515.2 Main 1	45	40
MP 515.2 Main 1	MP 514.1 Main 1	60	55
MP 562.3 Main 2	MP 526.9X Main 2	79	70
MP 526.9X Main 2	MP 525.5X Main 2	79	65
MP 525.5X Main 2	MP 524.3X Main 2	55	50
MP 524.3X Main 2	MP 524.0X Main 2	50	45
MP 524.0X Main 2	MP 520.3X Main 2	60	55
MP 520.3X Main 2	MP 519.9X Main 2	30	30
MP 519.9X Main 2	MP 517.8X Main 2	35	35
MP 517.8X Main 2	MP 515.3X Main 2	40	35
MP 515.3X Main 2	MP 514.1 Main 2	75	60
MP 514.1 Main 1 & 2	MP 490.2 Main 1 & 2	90	70
MP 490.2 Main 1 & 2	MP 482.5 Main 1 & 2	80	70
MP 482.5 Main 1 & 2	MP 481.6 Main 1 & 2	60	55
MP 481.6 Main 1 & 2	MP 480.6 Main 1 & 2	45	40
MP 480.6 Main 1 & 2	MP 479.0 Main 1 & 2	30	25
MP 479.0 Main 1 & 2	MP 477.0 Main 1 & 2	70	60
MP 477.0 Main 1 & 2	MP 470.5 Main 1 & 2	79	70
MP 470.5 Main 1 & 2	MP 451.6 Main 1 & 2	55	45
MP 451.6 Main 1 & 2	MP 448.2 Main 1 & 2	60	55
MP 448.2 Main 1 & 2	MP 427.7 Main 1 & 2	79	70

Maximum Speeds - Other Tracks and Turnouts:

Track	Psg.	Frt.
Crossovers	50	50
Controlled Sidings	40	40
Seligman Yard Track 1	30	30
All other tracks and turnouts	15	15

BNSF SELIGMAN SUBDIVISION

Trackside Warning Detectors:

MP	Track(s)	Between
439.8	Main 1 & 2	Audley and East Pica
447.0	Main 1 & 2	West Pica and Yampai
456.4	Main 1 & 2	Yampai and Nelson
463.5	Main 1 & 2	Nelson and East Peach Springs
466.9	Main 1 & 2	E. Peach Springs - W. Peach Springs
481.7	Main 1 & 2	West Truxton and East Valentine
485.9	Main 1 & 2	West Valentine and Hackberry
493.3	Main 1 & 2	Hackberry and Walapai
512.5	Main 1 & 2	West Berry and Getz
516.1	Main 1	at Kingman
521.1	Main 1	at McConnico
521.4X	Main 2	at Harris
526.8	Main 1 & 2	at East Griffith
536.0	Main 1 & 2	Athos and Yucca
546.8	Main 1 & 2	Yucca and East Franconia
561.5	Main 1 & 2	Topock and Colorado River

Joint Operation:

Amtrak trains operate between East Seligman and MP 566.2. Kingman Terminal Railroad engines may operate on BNSF auxiliary tracks off Main 2 at Berry.

Multiple Main Tracks:

When using main tracks in westward timetable direction, they will be numbered consecutively from right to left beginning from Main 1. When using in eastward timetable direction, they will be numbered from left to right beginning with Main 1.

Truxton MP 477.1 the main tracks cross at the grade separation and are designated as prescribed above on either side of the crossing.

Maximum Tonnage:

- Trains without distributed power must not exceed
- Intermodal trains 9,600 tons
- All other train types 8,450 tons
- Trains with distributed power cut in must not exceed trailing tonnage below behind DP units. If tonnage exceeds the maximum listed, DP unit(s) must be added to the rear of the train
- Intermodal trains 9,600 tons
- All other train types 8,450 tons

Time Zone Change at MP 566.2:

Mountain to Pacific time for westward trains
Pacific to Mountain time for eastward trains

Notes:

Yard Track 1 at Seligman is designated as a controlled siding.

Quiet Zone is established at Kingman:

- Topeka Street MP 516.32 Main 2
- North 4th Street MP 516.47 Main 1 & 2
- North 2nd Street MP 516.65 Main 1 & 2

Tunnel:

Tunnel	East MP	West MP	Length	Tracks
---	456.5	456.7	414 ft.	1 & 2

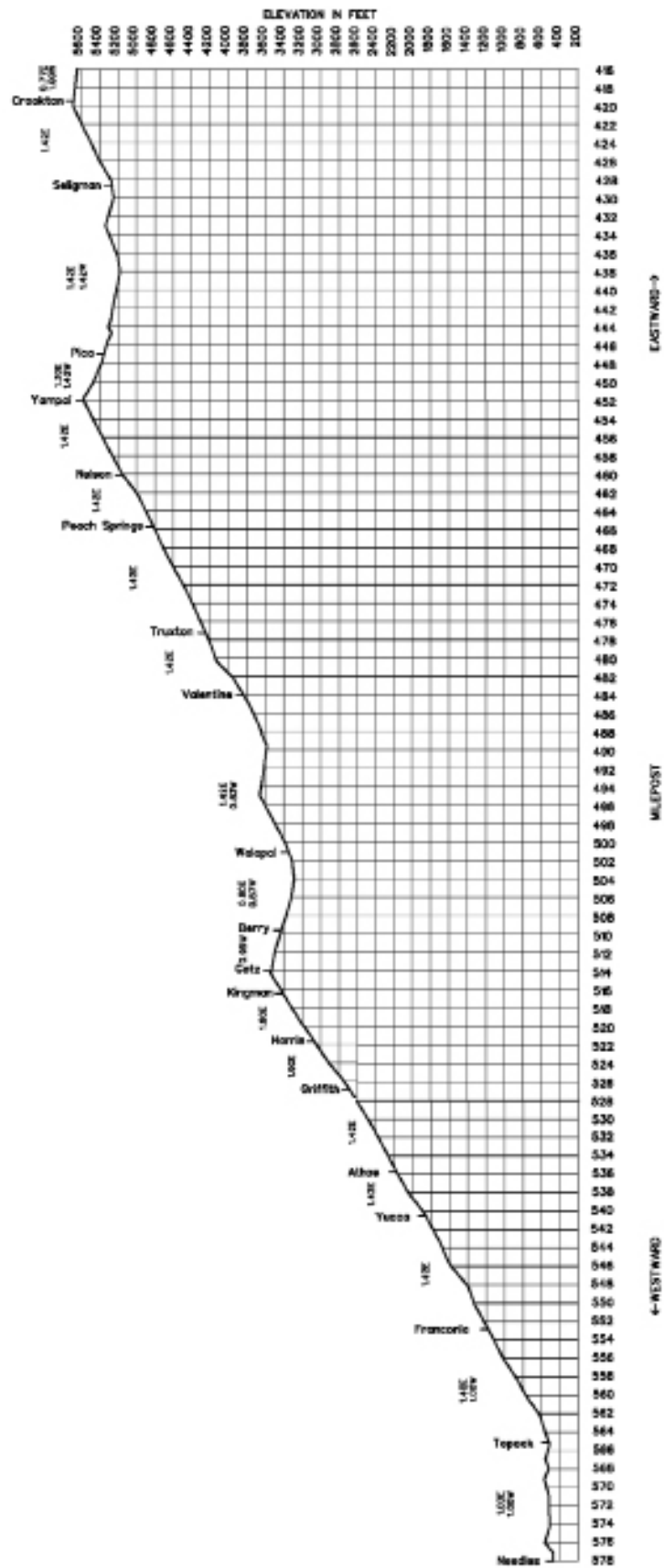
Other Location Information:

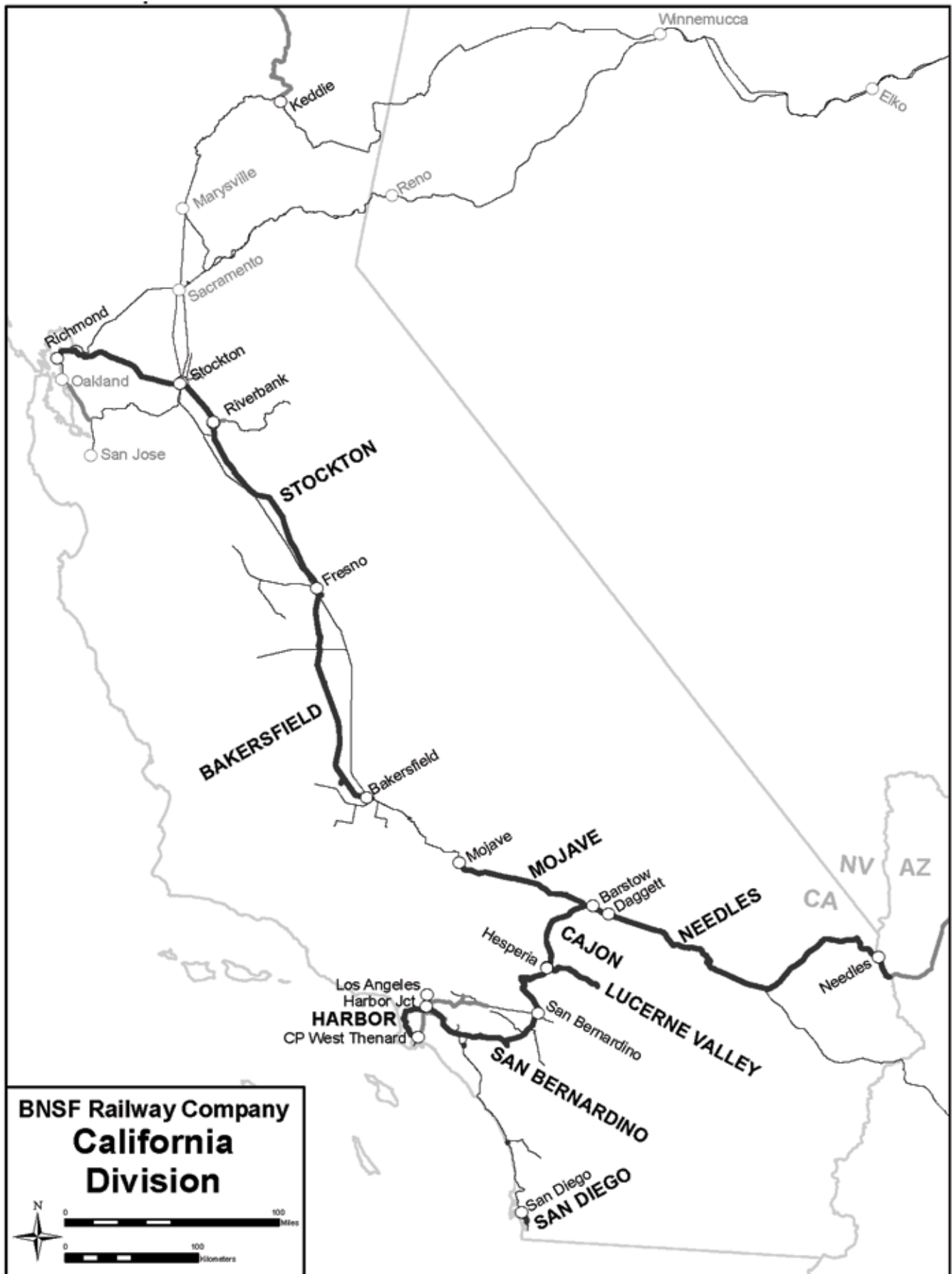
Name	Mile Post	Capacity (feet)	Switch Opens
Seligman Yard Track 1 (CTC)	427.7	6560	Both
Seligman Yard Track 2	427.7	6255	Both
Seligman Yard Track 3	427.7	5860	Both
Seligman Yard Track 4	427.7	5460	Both
Seligman Yard Track 5	427.7	5460	Both
Audley Set Out (MT 2)	438.8	1230	East
Pica - former Siding (MT 1)	446.9	4300	Both
Yampai - former South Siding (MT 2)	452.2	5342	Both
Yampai - former North Siding (MT 1)	452.2	6720	Both
Nelson - former North Siding (MT 1)	460.2	4426	Both
Nelson - former South Siding (MT 2)	461.2	5619	Both
Shipley - Outland Resources (MT 1)	461.4	1130	West
E. Peach Springs - former South Siding (MT 2)	465.6	2444	Both
W. Peach Springs - former North Siding (MT 1)	465.8	5762	Both
Truxton - North Set Out (off siding)	477.0	4997	Both
Hackberry - former North Siding (MT 1)	489.0	2745	West
Hackberry - South Set Out (MT 2)	489.8	2115	East
Valentine - Set Out (off Siding)	484.0	200	East
Walapai - former North Siding (MT 1)	501.3	5900	Both
Walapai - former South Siding (MT 2)	501.3	5210	Both
Berry - North Runaround (off Siding)	510.0	1125	Both
Berry - former South Siding (MT 2)	511.5	7100	Both
Getz - Lumber spur (MT 1)	513.9	614	West
Getz - Plastic Express (MT 2)	513.9	2463	East
Kingman - MW Spurs (2 tracks) (MT 2)	516.6	690	East
McConnico - former Siding (MT 1)	521.2	4635	Both
Harris - former Siding (MT 2)	521.5X	7108	Both
Griffith - former North Siding (MT 1)	526.9	4609	Both
Griffith - Runaround (off Siding)	526.9	462	Both
Athos - former Siding (MT 2)	535.6	7018	Both
Yucca - former North Siding (MT 1)	540.2	7012	Both
Yucca - former South Siding (MT 2)	540.2	5072	Both
Powell - North Set Out (MT 1)	558.8	710	East
Powell - South Set Out (MT 2)	558.8	1285	East
Topock - former North Siding (MT 1)	565.1	5342	Both
Topock - former South Siding (MT 2)	565.1	5356	Both

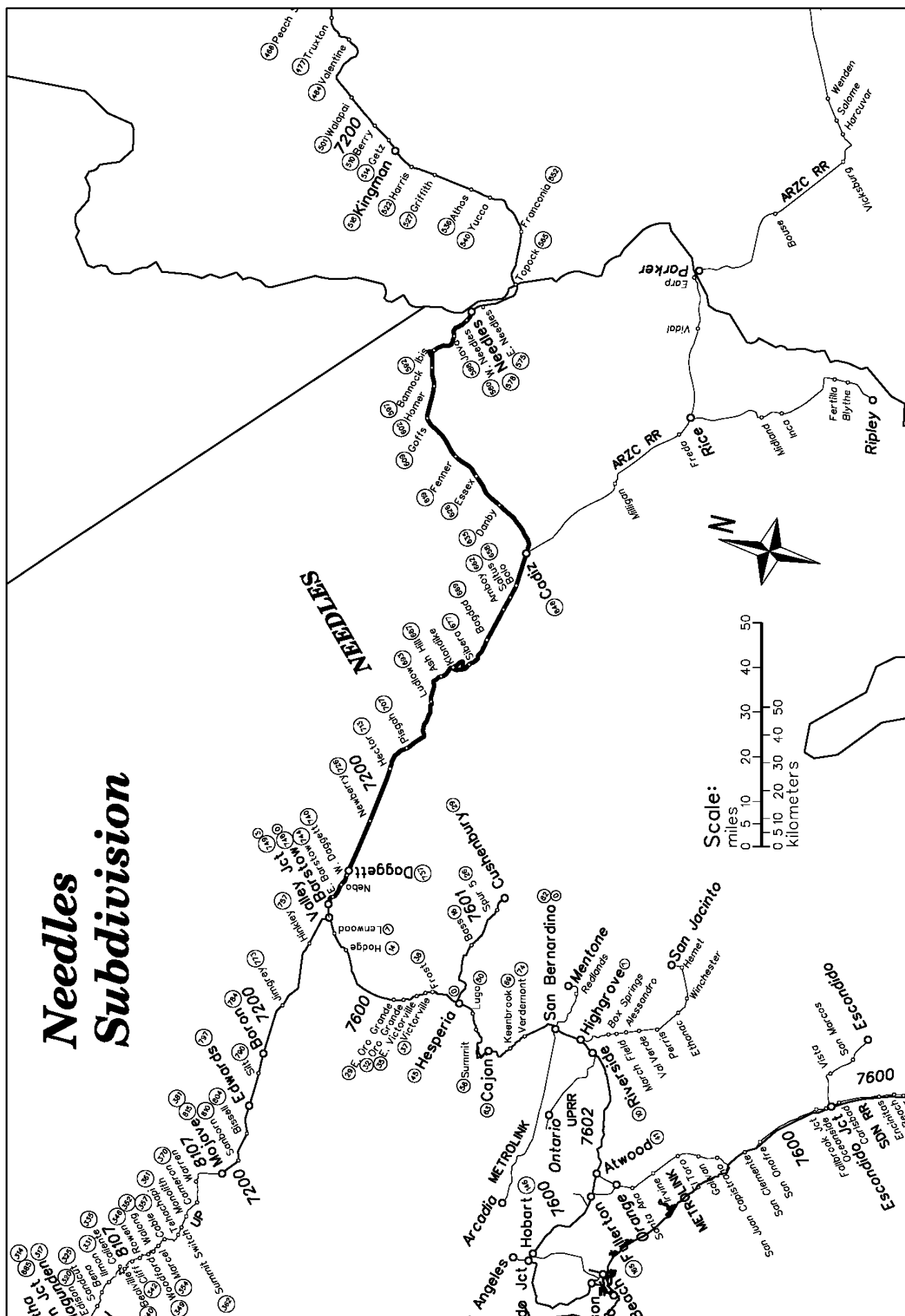
BNSF SELIGMAN SUBDIVISION

Seligman Subdivision Grade Schematic
Needles - Crookston

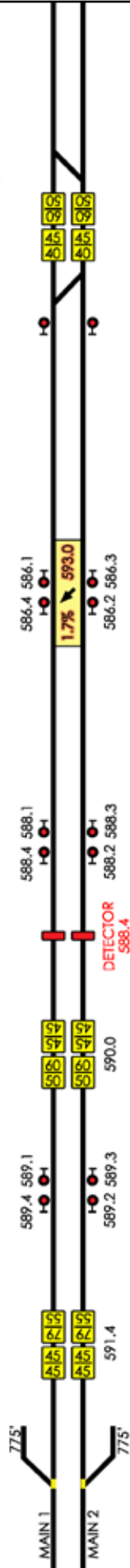
Yampai Summit MP 451.8 5630 feet







WEST NEEDLES
594.2
Crossover: 50mph



NEEDLES
582.2 YARD: 20
(NEE)



DISPATCHER TONE: *12



Westward ▼		BNSF NEEDLES SUBDIVISION						▲ Eastward
Mile Post	Oper- aton	CP	Siding MP	Stations		Speed (MPH)		Sidings (feet)
						XO	Sid- ing	
566.2	CTC 2MT		---	COLORADO RIVER (Seligman Subdivision)	---	---	---	---
574.7		●	---	EAST NEEDLES	X	50	---	Yard
582.2	CTC 3MT		---	NEEDLES	PTX	---	---	
584.2		●	---	WEST NEEDLES	X	50	---	
589.1	CTC 2MT		---	KLINEFELTER	---	---	---	---
595.8		●	---	IBIS	X	50	---	---
597.4			---	BANNOCK	---	---	---	---
604.1			---	HOMER	---	---	---	---
611.9		●	611.9	EAST GOFFS	X	50	25	12964 (1)
614.3		●	614.3	WEST GOFFS	X	50		
625.4		●	---	FENNER	X	50	---	---
628.2			---	ESSEX	---	---	---	---
637.6		●	---	EAST DANBY	X	50	---	---
639.7		●	---	WEST DANBY	X	50	---	---
649.8		●	---	EAST CADIZ (Arizona & California RR)	JTX	50	---	---
651.7		●	---	WEST CADIZ	X	50	---	---
660.7			---	SALTUS	---	---	---	---
662.6		●	662.6	EAST AMBOY	X	50	25	9175 (1)
664.4		●	664.4	WEST AMBOY	X	50		
671.8			---	BAGDAD	---	---	---	---
677.1		●	---	EAST SIBERIA	X	50	---	---
679.1		●	---	WEST SIBERIA	X	50	---	---
686.4		●	686.4	EAST ASH HILL	TX	50	25	10130 (1)
688.3		●	688.3	WEST ASH HILL	X	50		
693.5			---	LUDLOW	X	50	---	---
705.2		●	---	EAST PISGAH	X	50	---	---
707.3		●	---	WEST PISGAH	X	50	---	---
712.8			---	HECTOR	---	---	---	---
724.3			---	TROY	X	50	---	---
725.4		●	725.4	EAST NEWBERRY	---	---	10	7724 (1)
727.2		●	727.2	WEST NEWBERRY	---	---		
731.0		●	---	MINNEOLA	X	50	---	---
736.1			---	COOLWATER	---	---	---	---
737.2		CTC 4MT	●	---	DAGGETT (Union Pacific Railroad)	JX	50	---
739.4	●		---	WEST DAGGETT (Union Pacific Railroad)	J	---	---	---
741.6	CTC 3MT		---	NEBO	---	---	---	Yard
743.6		●	---	EAST BARSTOW (Auxiliary Lead)	X	50	---	---
745.8 0.0		●	---	BARSTOW (Cajon Subdivision) (Yard Entry / Amtrak Lead)	PX	50	---	Yard

BNSF NEEDLES SUBDIVISION

Radio Communication:

MP 566 to East Needles	Channel 036
East Needles to Minneola	Channel 055
Minneola to Barstow	Channel 065
Barstow Yard	Channel 032

Method of Operation:

MP 566 to East Needles	CTC 2MT
East Needles to West Needles	CTC 3MT
West Needles to Daggett	CTC 2MT
Daggett to West Daggett	CTC 4MT
West Daggett to Barstow	CTC 3MT

Between Daggett and West Daggett the north main track is UP Main Track 1 controlled by BNSF Train Dispatcher. There are three BNSF tracks south of the UP MT designated Main 1, 2 and 3.

Mileage Equation:

MP 745.8 Needles Subdivision = MP 0.0 Cajon Subdivision

Maximum Speeds - Main Tracks:

Westward Trains			
Limit	Limit	Psg.	Frt.
MP 566.2 MT 1 & 2	MP 574.7 MT 1 & 2	55	55
MP 574.7 MT 1, 2 & 3	MP 582.0 MT 1, 2 & 3	50	50
MP 582.0 MT 1, 2 & 3	MP 584.2 MT 1, 2 & 3	45	40
MP 584.2 MT 1 & 2	MP 590.0 MT 1 & 2	60	50
MP 590.0 MT 1 & 2	MP 591.4 MT 1 & 2	45	45
MP 591.4 MT 1	MP 596.9 MT 1	79	55
MP 596.9 MT 1	MP 597.4 MT 1	30	30
MP 591.4 MT 2	MP 597.4 MT 2	79	55
MP 597.4 MT 1 & 2	MP 648.9 MT 1 & 2	79	55
MP 648.9 MT 1 & 2	MP 672.4 MT 1 & 2	90	70
MP 672.4 MT 1 & 2	MP 673.4 MT 1 & 2	79	55
MP 673.4 MT 1	MP 680.2 MT 1	60	55
MP 680.2 MT 1	MP 680.5 MT 1	40	35
MP 680.5 MT 1	MP 685.1 MT 1	55	50
MP 673.4 MT 2	MP 685.1 MT 2	70	60
MP 685.1 MT 1 & 2	MP 688.4 MT 1 & 2	70	65
MP 688.4 MT 1 & 2	MP 693.5 MT 1 & 2	60	55
MP 693.5 MT 1 & 2	MP 695.0 MT 1 & 2	50	45
MP 695.0 MT 1 & 2	MP 702.1 MT 1 & 2	60	55
MP 702.1 MT 1 & 2	MP 707.9 MT 1 & 2	65	60
MP 707.9 MT 1 & 2	MP 711.5 MT 1 & 2	70	60
MP 711.5 MT 1 & 2	MP 737.3 MT 1 & 2	90	70
MP 737.3 MT 1, 2 & 3	MP 743.6 MT 1, 2 & 3	79	55
MP 737.3 UP MT 1	MP 739.4 UP MT 1	50	50
MP 743.6 MT 1, 2 & 3	MP 745.8 MT 1, 2 & 3	50	50

Maximum Speeds - Main Tracks: (continued)

Eastward Trains			
Limit	Limit	Psg.	Frt.
MP 745.8 MT 1, 2 & 3	MP 745.0 MT 1, 2 & 3	50	50
MP 745.0 MT 1 & 2	MP 743.6 MT 1 & 2	50	50
MP 745.0 MT 3	MP 743.6 MT 3	70	55
MP 743.6 MT 1, 2 & 3	MP 737.3 MT 1, 2 & 3	79	55
MP 739.4 UP MT 1	MP 737.2 UP MT 1	50	50
MP 737.3 MT 1 & 2	MP 711.5 MT 1 & 2	90	70
MP 711.5 MT 1 & 2	MP 707.9 MT 1 & 2	70	60
MP 707.9 MT 1 & 2	MP 702.1 MT 1 & 2	65	60
MP 702.1 MT 1 & 2	MP 695.0 MT 1 & 2	60	55
MP 695.0 MT 1 & 2	MP 693.5 MT 1 & 2	50	45
MP 693.5 MT 1 & 2	MP 688.4 MT 1 & 2	60	55
MP 688.4 MT 1 & 2	MP 685.1 MT 1 & 2	70	65
MP 685.1 MT 1	MP 680.5 MT 1	55	50
MP 680.5 MT 1	MP 680.2 MT 1	40	35
MP 680.2 MT 1	MP 673.4 MT 1	60	50
MP 685.1 MT 2	MP 673.4 MT 2	70	60
MP 673.4 MT 1 & 2	MP 672.4 MT 1 & 2	79	55
MP 672.4 MT 1 & 2	MP 648.9 MT 1 & 2	90	70
MP 648.9 MT 1 & 2	MP 597.4 MT 1 & 2	79	55
MP 597.4 MT 1	MP 596.9 MT 1	30	30
MP 597.4 MT 2	MP 596.9 MT 2	79	55
MP 596.9 MT 1 & 2	MP 591.4 MT 1 & 2	79	55
MP 591.4 MT 1 & 2	MP 590.0 MT 1 & 2	45	45
MP 590.0 MT 1 & 2	MP 584.2 MT 1 & 2	60	50
MP 584.2 MT 1, 2 & 3	MP 582.0 MT 1, 2 & 3	45	40
MP 582.0 MT 1, 2 & 3	MP 574.7 MT 1, 2 & 3	50	50
MP 574.7 MT 1 & 2	MP 566.2 MT 1 & 2	55	55

Maximum Speeds - Other Tracks and Turnouts:

Track	Psg.	Frt.
Crossovers	50	50
Sidings Goffs, Amboy, Ash Hill	25	25
Siding Newberry	10	10
East Needles turnout Main 1 to Main 1	45	40
West Needles turnout Main 1 to Main 1	45	40
Needles Yard Lead	25	25
Daggett Turnout Main 2 to Main 3	50	50
West Daggett turnout UP Main 1 to BNSF Main 1	50	50
All other tracks and turnouts	15	15

BNSF NEEDLES SUBDIVISION

Trackside Warning Detectors:

MP	Track(s)	Between
571.2	MT 1 & 2	Colorado River and East Needles
588.4	MT 1 & 2	West Needles and Ibis
593.1	MT 1	West Needles and Ibis
594.3	MT 2	West Needles and Ibis
603.5	MT 1 & MT 2	Ibis and East Goffs
617.1	MT 1 & 2	West Goffs and Fenner
668.0	MT 1 & 2	West Amboy and Bagdad
672.5	MT 1 & 2	Bagdad and East Siberia
702.7	MT 1 & 2	Ludlow and East Pisgah
711.1	MT 1 & 2	West Pisgah and Troy
732.9	MT 1 & 2	Minneola and Daggett

Joint Operation:

Amtrak trains operate between MP 566.2 and Barstow,.

BNSF trains may use A&C RR tracks at Cadiz for 1.4 miles under GCOR 6.28 (Movement on Other Than Main Track).

A&C RR trains may use BNSF MT2 auxiliary and yard tracks at Cadiz.

UP trains use BNSF tracks between Daggett and Barstow.

Maximum Tonnage Limits:

Trains operating without distributed power or manned helpers must not exceed:

• Westward

Intermodal trains 9,600 tons

All other train types 8,450 tons

• Eastward

Intermodal trains 13,500 tons

All other train types 10,200 tons

Needles Yard Lead:

East end to east yard switch = 9,090 feet.

East end to west yard switch = 15,400 feet.

Time Zone Change at MP 566.2:

Mountain to Pacific time for westward trains

Pacific to Mountain time for eastward trains

Notes:

Run 8 Depot Map - change CP Fenner to Fenner.

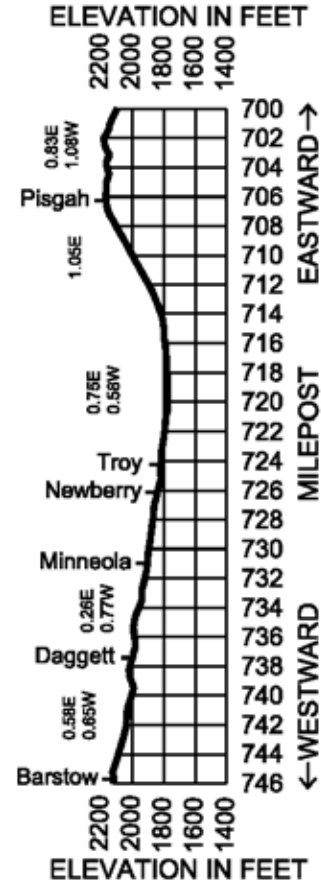
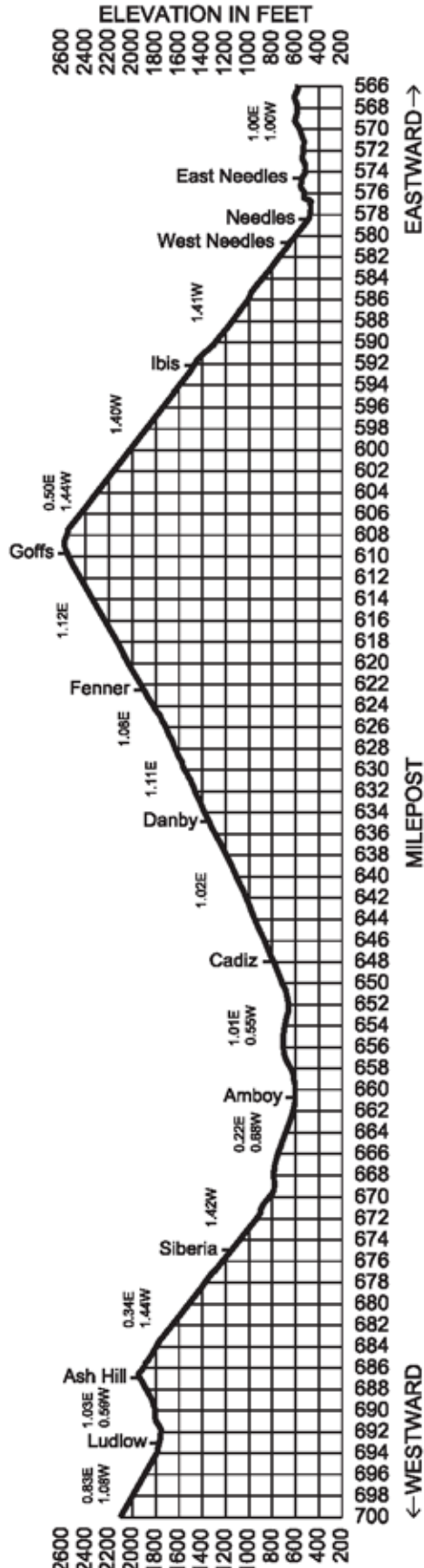
Run 8 Depot Map - MP 745.0 MT 3 change speed to 79/55.

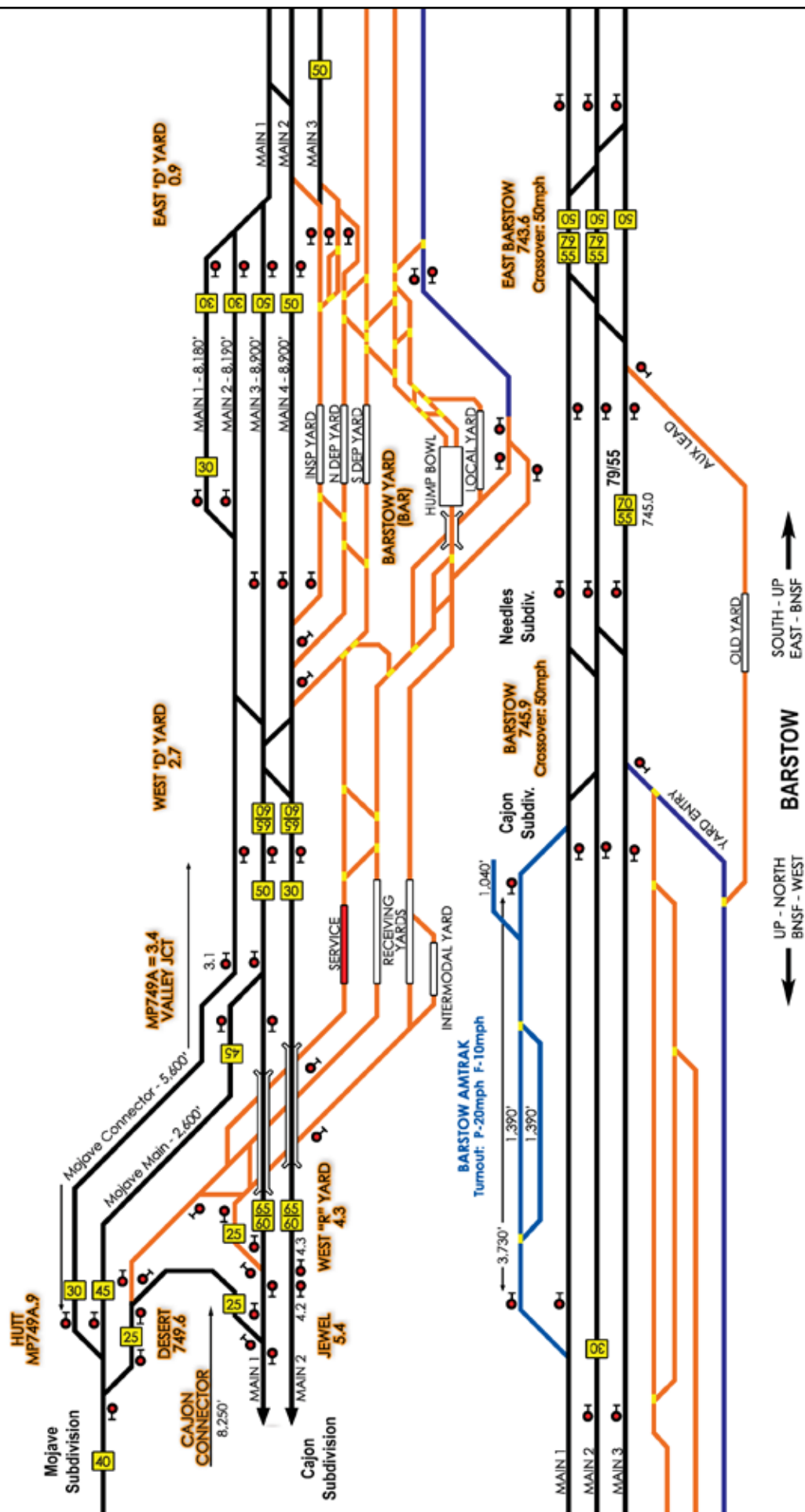
Run 8 Depot Map - change Barstow MP 745.9 to MP 745.8.

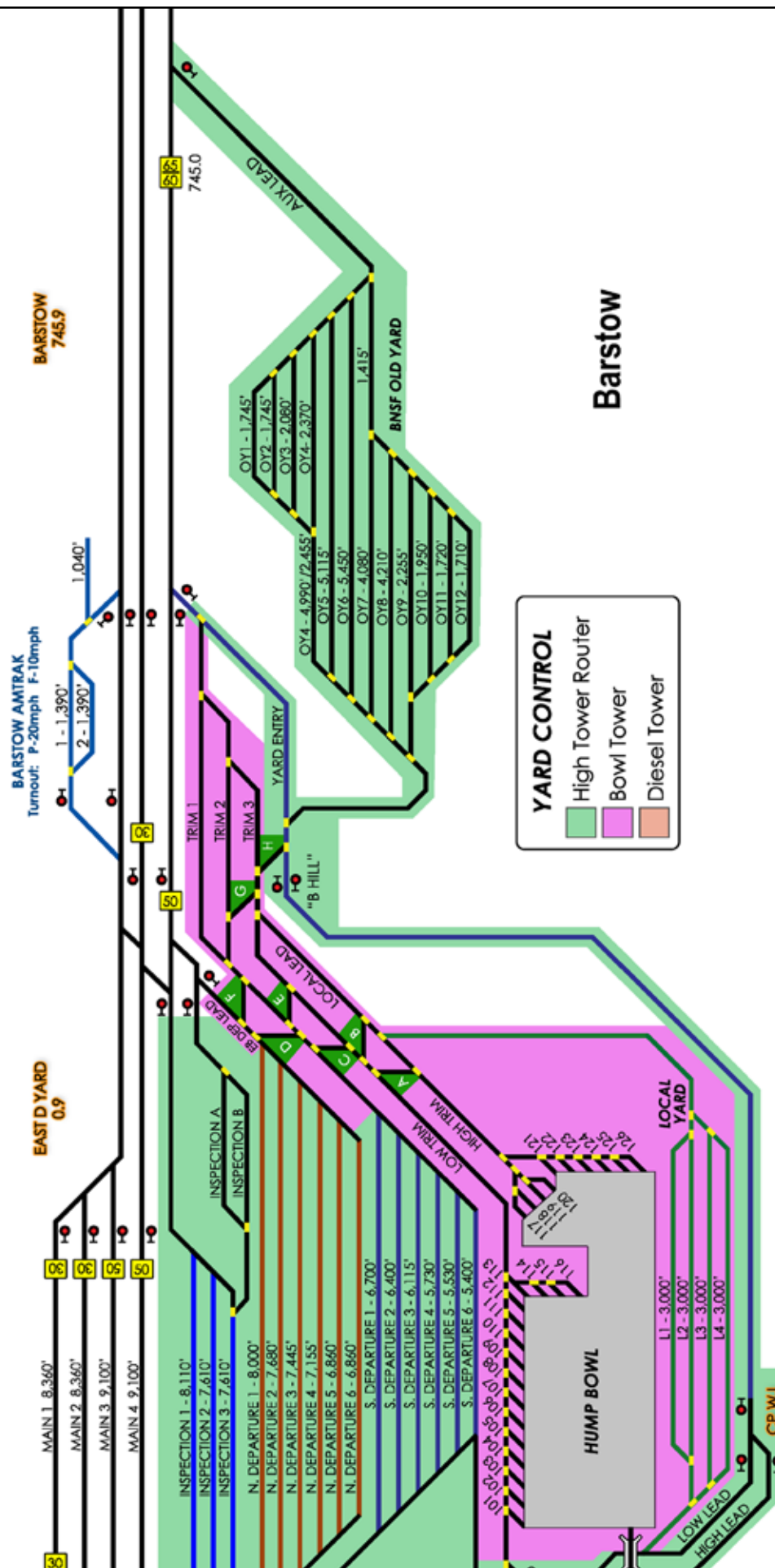
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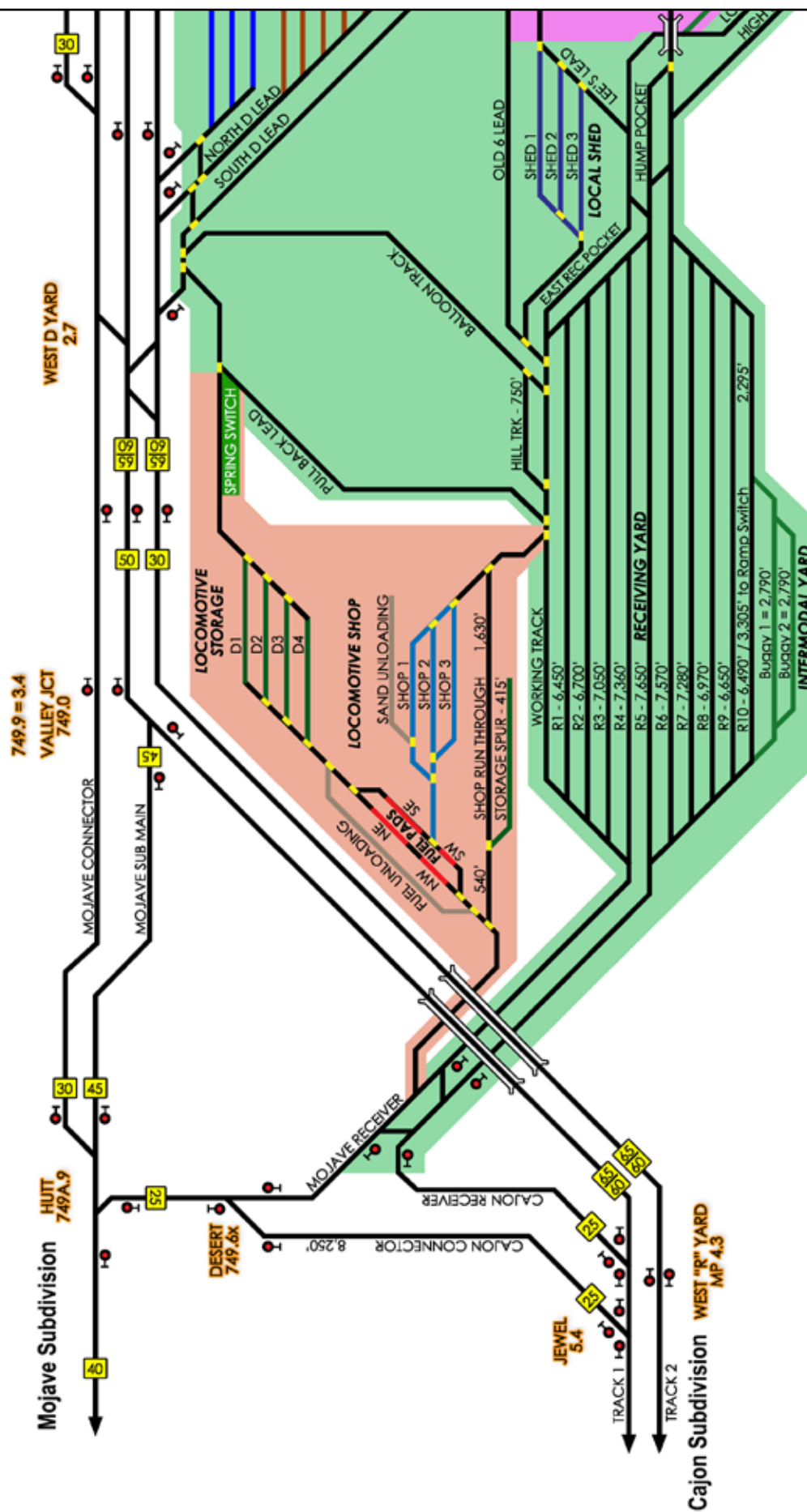
Name	Mile Post	Capacity (feet)	Switch Opens
Needles - Yard Lead (MT 1)	---	16650	Both
Needles - Yard 1	582.2	4595	Both
Needles - Yard 2	582.2	4303	Both
Needles - Yard 3	582.2	4017	Both
Needles - Yard 4	582.2	3865	Both
Klinefelter North Set Out (MT 1)	589.1	775	West
Klinefelter South Set Out (MT 2)	589.1	775	West
Ibis Set Out (MT 1)	595.7	1123	West
Bannock - North Set Out (MT 1)	600.0	1100	East
Bannock - South Set Out (MT 2)	600.0	1080	East
East Goffs Set Out (MT 2)	611.8	6275	East
Goffs - Runaround (off siding)	613.1	1313	Both
Essex - former siding (MT 2)	628.2	5500	Both
East Danby - former siding (MT 2)	637.6	5900	Both
West Danby - Set Out (MT 1)	638.7	730	Both
Cadiz - former South Siding (MT 2)	649.8	9300	Both
Cadiz - former North Siding (MT 1)	651.7	9100	Both
Cadiz - Yard 1 (off former South Siding)	651.0	1103	Both
Cadiz - Yard 2 (off former South Siding)	651.0	817	Both
Cadiz - Yard 3 (off former South Siding)	651.0	817	Both
Saltus - North Set Out (MT 1)	660.7	1025	West
Saltus - South Set Out (MT 2)	660.7	2870	Both
Saltus - Tetratotechnol Inc. (S Set Out)	660.7	950	East
Amboy - North Set Out (off siding)	664.2	210	West
Amboy - former South Siding (MT 2)	664.4	5200	Both
Amboy - Hill Bros. Chem. (S Siding)	664.4	865	West
Bagdad - former North Siding (MT 1)	671.8	3225	Both
Bagdad - former South Siding (MT 2)	671.8	5500	Both
West Siberia - former siding (MT 1)	679.2	4965	Both
Ash Hill - former South Siding (MT 2)	686.4	6980	Both
Ludlow - North Set Out (MT 1)	693.5	360	West
Ludlow - South Set Out (MT 2)	693.5	1295	Both
Pisgah - North Set Out (MT 1)	705.3	1425	East
Pisgah - former South Siding (MT 2)	707.3	8665	Both
Hector - Set Out (MT 2)	712.8	425	Both
Newberry - Water Tracks (2) off siding	725.4	1240	West
Newberry - former South Siding (MT 2)	725.4	5121	Both
Newberry - Ballast Pit (2 tracks) (MT 2)	725.3	4343	Both
Newberry - Energy Transportation (3 tracks) (MT 2)	727.2	6512	Both
Coolwater Spur (MT 1)	736.1	880	West
Daggett - Set Out (MT 3)	737.2	560	East
Nebo - Yard Track 1 (MT 3)	741.6	5649	Both
Where more than one track is noted the capacity is total for all tracks.			

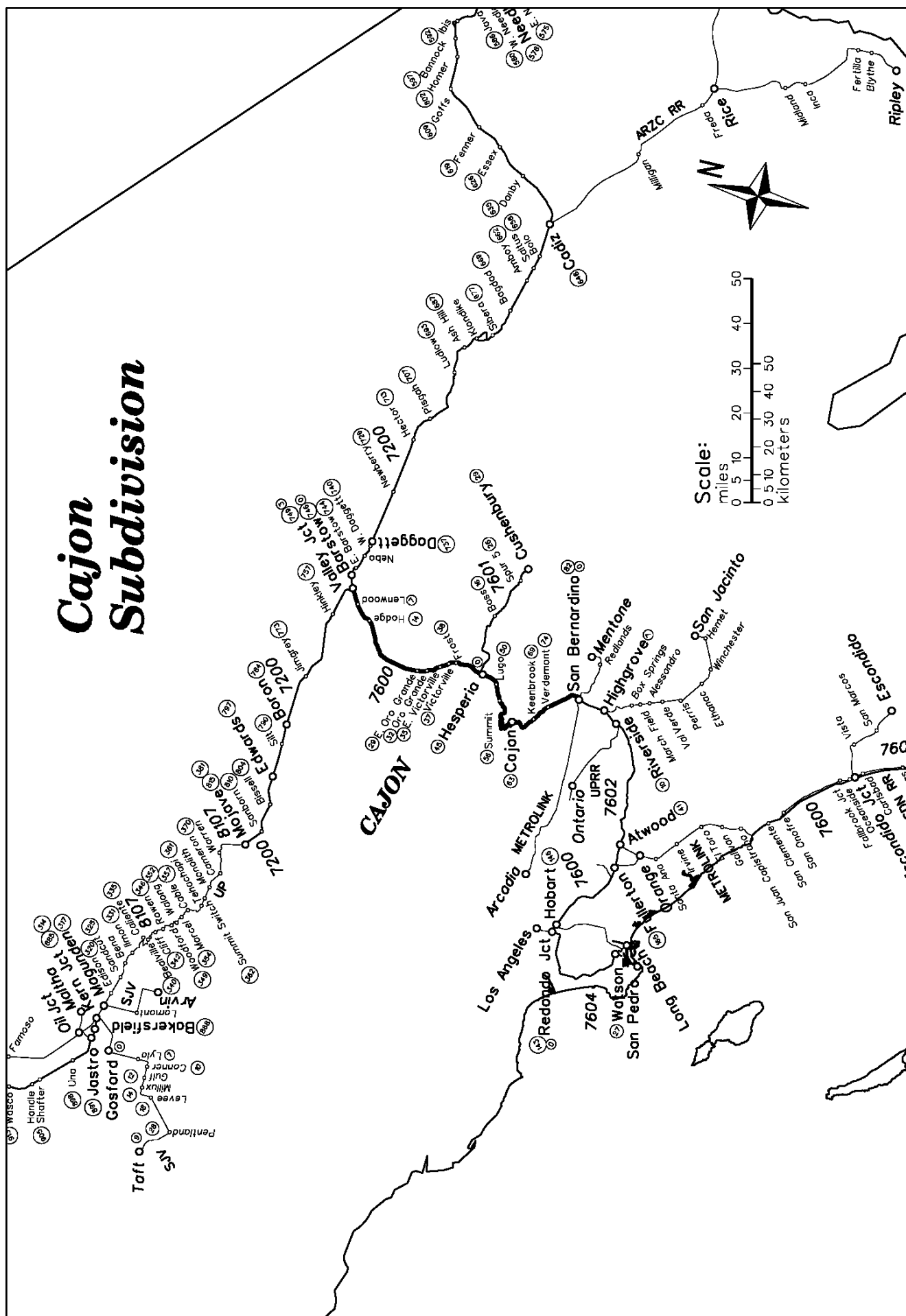
BNSF NEEDLES SUBDIVISION











Westward ▼		BNSF CAJON SUBDIVISION					▲ Eastward		
Mile Post	Oper-aton	CP	Siding MP	Stations		Speed (MPH)		Sidings (feet)	
						XO	Sid-ing		
0.0	CTC 3MT	●	---	BARSTOW (Needles Subdivision) (Yard Entry / Amtrak Lead)	X	50	---	Yard	
0.4		---	---	BARSTOW AMTRAK	P	---	---		
0.9		CTC 4MT	●	---	EAST D YARD	X	50		---
2.7			●	---	WEST D YARD	X	50		---
3.4	CTC 2MT	●	---	VALLEY JUNCTION (Mojave Subdivision)	J	---	---		
4.3		●	---	WEST R YARD	---	---	---		
5.4		●	---	JEWELL (Cajon Connector)	J	---	---	---	
6.7		●	---	LENWOOD	X	50	---	---	
13.6		●	---	HODGE	X	50	---	---	
21.6		---	---	HELLENDALE	---	---	---	---	
29.4		●	---	EAST ORO GRANDE	X	50	---	---	
31.3		---	---	ORO GRANDE	---	---	---	---	
34.4		●	---	EAST VICTORVILLE	X	50	---	Yard	
36.5		---	---	VICTORVILLE	P	---	---		
37.8		●	---	FROST	X	50	---	---	
41.1		---	---	THORN	---	---	---	---	
45.1		---	---	HESPERIA (Lucerne Valley Subdivision)	J	---	---	---	
49.7		●	---	LUGO	X	50	---	---	
52.5		●	52.5 55.3	MARTINEZ	---	---	40	14625	
55.6		●	---	SUMMIT	X	50	---	---	
56.3	●	---	SILVERWOOD (UP Connection)	J	---	---	---		
64.5	●	---	CAJON	X	50	---	---		
70.9	●	---	KEENBROOK	X	50	---	---		
73.1	---	---	DEVORE	---	---	---	---		
75.3	●	---	VERDEMONT	X	50	---	---		
78.1	---	---	ONO	---	---	---	---		
81.3	CTC 3MT	●	---	BASELINE	X	50	---	---	
82.0		●	---	SEVENTH STREET	X	40	---	Yard	
82.8 0.0		●	---	SAN BERNARDINO DEPOT (San Bernardino Subdivision)	P	---	---		
Mileage Equations: Barstow • Needles Subdivision MP 745.9 = Cajon Subdivision MP 0.0 San Bernardino • Cajon Subdivision MP 82.8 = San Bernardino Subdivision 0.0 West end Martinez Siding is part of the Summit control point.									

BNSF CAJON SUBDIVISION

Radio Communication:

Barstow Yard Channel 032
 Barstow to WBCS Hodge(Tone *13) Channel 065
 WBCS Hodge to San Bernardino (Tone *14) Channel 072

Method of Operation:

MP 0.0 (Barstow) to MP 1.0 (East D Yard) CTC 3MT
 MP 1.0 (East D Yard) to MP 2.4 (West D Yard) CTC 4MT
 MP 2.4 (West D Yard) to MP 82.0 (Baseline) CTC 2MT
 MP 82.0 (Baseline) to MP 82.8 (San Bernardino) CTC 3MT

CTC is in effect on main tracks and the following tracks:

- Mojave Connector MP 2.7 West D Yard to Hutt MP 3.3 Mojave Sub.
- Cajon Connector MP 5.3 Jewell to Desert MP 3.8 Mojave Subdiv.
- Martinez Controlled Siding MP 52.5 to MP 55.3
- Union Pacific Connection Silverwood MP 56.3

Maximum Speeds - Main Tracks:

Westward Trains			
Limit	Limit	Psg.	Frt.
MP 0.0 MT 1, 2 & 3	MP 1.0 MT 1, 2 & 3	50	50
MP 1.0 MT 1 & 2	MP 2.4 MT 1 & 2	30	30
MP 1.0 MT 3 & 4	MP 2.4 MT 3 & 4	50	50
MP 2.4 MT 1 & 2	MP 2.7 MT 1 & 2	30	30
MP 2.4 MT 1 & 2	MP 4.7 MT 1 & 2	65	60
MP 4.7 MT 1 & 2	MP 32.1 MT 1 & 2	79	70
MP 32.1 MT 1 & 2	MP 37.1 MT 1 & 2	45	35
MP 37.1 MT 1	MP 41.8 MT 1	50	45
MP 37.1 MT 2	MP 41.8 MT 2	45	40
MP 41.8 MT 1 & 2	MP 43.5 MT 1 & 2	55	50
MP 43.5 MT 1 & 2	MP 47.9 MT 1 & 2	79	70
MP 47.9 MT 1 & 2	MP 55.7 MT 1 & 2	55	50
MP 55.7 MT 1 & 2	MP 64.1 MT 1 & 2	40	30
MP 64.1 MT 1 & 2	MP 73.5 MT 1 & 2	40	35
MP 73.5 MT 1 & 2	MP 82.0 MT 1 & 2	50	35
MP 82.0 MT 1, 2 & 3	MP 82.8 MT 1, 2 & 3	30	30

Mileage Equations:

MP 745.8 Needles Subdivision = MP 0.0 Cajon Subdivision
 MP 82.8 Cajon Subdivision = MP 0.0 San Bernardino Subdivision

Multiple Main Tracks:

When using main tracks in westward timetable direction, they will be numbered consecutively from right to left beginning from Main 1. When using in eastward timetable direction, they will be numbered from left to right beginning with Main 1.

Frost MP 39.1 the main tracks cross at the grade separation and are designated as prescribed above on either side of the crossing.

Westward Freight Trains Additional Restrictions	
Train Consist	MPH
Main 1 between MP 56.3 and MP 79.9 Main 2 between MP 63.2 and MP 79.9 Without Helpers	
Less than 6,500 tons or 95 TOB	30
6,500 tons or more or 95 TOB or more	20
Light engine consists	35
Trains exceeding 16,000 tons or 135 TOB are prohibited	
Main 1 between MP 56.3 and MP 79.9 Main 2 between MP 63.2 and MP 79.9 With Helpers	
Less than 6,500 tons or 135 TOB	30
6,500 to 12,000 tons and less than 135 TOB	25
Less than 14,000 tons or 135 TOB	20
Less than 18,000 tons or 145 TOB	15
Trains exceeding 18,000 tons or 145 TOB are prohibited	
Main 2 between MP 56.3 and MP 63.2	
Less than 4,500 tons or 95 TOB	20
4,500 tons or more or 95 TOB or more	10
Trains exceeding 14,000 tons or 125 TOB are prohibited	

BNSF CAJON SUBDIVISION

Maximum Speeds - Main Tracks:

Eastward Trains			
Limit	Limit	Psg.	Frt.
MP 82.8 MT 1, 2 & 3	MP 82.0 MT 1, 2 & 3	30	30
MP 82.0 MT 1 & 2	MP 80.7 MT 1 & 2	30	30
MP 80.7 MT 1 & 2	MP 67.9 MT 1 & 2	70	55
MP 67.9 MT 1 & 2	MP 55.7 MT 1 & 2	40	35
MP 55.7 MT 1 & 2	MP 47.9 MT 1 & 2	55	50
MP 47.9 MT 1 & 2	MP 43.5 MT 1 & 2	79	70
MP 43.5 MT 1 & 2	MP 41.8 MT 1 & 2	55	50
MP 41.8 MT 1	MP 37.1 MT 1	45	40
MP 41.8 MT 2	MP 37.1 MT 2	50	45
MP 37.1 MT 1 & 2	MP 32.1 MT 1 & 2	45	35
MP 32.1 MT 1 & 2	MP 4.7 MT 1 & 2	79	70
MP 4.7 MT 1 & 2	MP 4.3 MT 1 & 2	50	50
MP 4.3 MT 1 & 2	MP 2.7 MT 1 & 2	65	60
MP 2.7 MT 1	MP 2.4 MT 1	50	50
MP 2.7 MT 2	MP 2.4 MT 2	30	30
MP 2.4 MT 1 & 2	MP 1.0 MT 1 & 2	30	30
MP 2.4 MT 3 & 4	MP 1.0 MT 3 & 4	50	50
MP 1.0 MT 1, 2 & 3	MP 0.0 MT 1, 2 & 3	50	50

Maximum Speeds - Other Tracks and Turnouts:

Track	Psg.	Frt.
West D Yard MP 2.4 Mojave Connector	30	30
Valley Jct.MP 3.4 Mojave Subdivision Main Track	45	45
Jewell MP 5.4 Cajon Connector	25	25
Silverwood MP 56.3 Union Pacific Connection	30	30
Crossovers (except below)	50	50
East D Yard MT 1 to MT 2	30	30
East D Yard MT 2 to MT 3	30	30
West D Yard	30	30
Seventh Street	40	40
San Bernardino MP 82.8	30	30
Barstow Inspection Tracks 1, 2, 3	20	20
East Victorville MT 2 to Yard 1	10	10
Hesperia MT 2 South Siding	20	20
All other tracks and turnouts	15	15

Trackside Warning Detectors:

MP	Track(s)	Between
28.2	MT 1 & 2	Hodge - East Oro Grande
37.7	MT 1 & 2	Victorville - Frost
42.6	MT 1 & 2	Frost - Hesperia
48.3	MT 1 & 2	Hesperia - Lugo
52.5	MT 1 & 2	Lugo - Martinez
58.6	MT 2	Silverwood - Cajon
66.5	MT 1 & 2	Cajon - Keenbrook
73.5	MT 1 & 2	Keenbrook - Verdemont

Joint Operation:

Amtrak trains operate between Barstow and San Bernardino.
UP trains use BNSF tracks between Barstow and San Bernardino..

Tunnel Locations				
Tunnel No.	Tracks	MP	Length (feet)	Note
1	Main 1	58.9	380	
2	Main 1	59.2	467	

Tonnage Restrictions	
Coupler capacity for trains without Distributed Power or Helpers on ascending grades:	
Eastward trains Baseline to Summit	
Solid intermodal and loaded coal trains	8,500 tons
All other trains	6,500 tons
Westward trains Frost to Summit	
Solid intermodal and loaded coal trains	11,500 tons
All other trains	8,500 tons

Minimum Horsepower Per Ton (HPT)	
Coupler capacity for trains without Distributed Power or Helpers on ascending grades:	
Eastward trains Baseline to Summit	
Trains without DP or helpers	2.5 HPT
Trains with DP or helpers	2.3 HPT
Westward trains Frost to Summit	
Trains without DP or helpers	2.0 HPT
Trains with DP or helpers	1.8 HPT

BNSF CAJON SUBDIVISION

Westward Freight Trains Between MP 56.5 and MP 78.9:

The total brake pipe reduction to control train's speed must not exceed 15 psi. If the total brake pipe reduction exceeds 15 psi, the train must be stopped immediately. To control train speed, a sufficient number of retainers (not less than 20) starting behind the lead locomotives, must be set in High-Pressure position before releasing the train brakes. Before proceeding, the brake system must be fully recharged. Excessive use of the engine brake is prohibited. If retainers are positioned before reaching Cajon, a 10-minute stop to cool wheels must be made at Verdemon. Trains operating with retainers must stop east of the controlled signal at Baseline and place the retainers in Direct Exhaust position before proceeding.

Freight trains that exceed the maximum authorized speed by 5 MPH, must stop by using an emergency application of the air brakes. Westward freight trains operating between MP 56.6 and MP 78.0 that are experiencing air brake problems MUST STOP immediately using an emergency air brake application, if necessary, and must secure the train. The train must not proceed until the air brake system is repaired. At Summit, freight trains required to stop before descending the grade must recharge the train brake system before proceeding.

Summit:

Westward passenger trains must make a running air test between MP 55 and MP 56.

Westward freight trains operating between Summit and Cajon must make a running air brake test between Lenwood and Lugo.

Other Location Information:

Location	Name	Capacity (feet)	Switch Opens
Barstow	Amtrak Lead (MT 1)	3730	Both
West D Yard	Mojave Connector (MT 1)	5600	West
Valley Jct.	Mojave Subdiv.Main (MT 1)	---	West
Jewell	Cajon Connector (MT 1)	8250	West
Hellendale MP 21.1	North Set Out (MT 1)	966	Both
	ANCON / WA Murphy	985	West
	South Set Out (MT 2)	966	Both
Orogrande	Riverside Cement (MT 2)	20725	Both
	North Storage (MT 1)	3300	West
Victorville	CEMEX (MT 2)	21265	Both
	North Siding (MT 1)	5412	Both
	South Siding (MT 2)	8319	Both
	Yard Tracks (MT 1)	1496	Both
	Yard Tracks (MT 2)	1903	Both
	Engine Stub (MT 1)	155	East

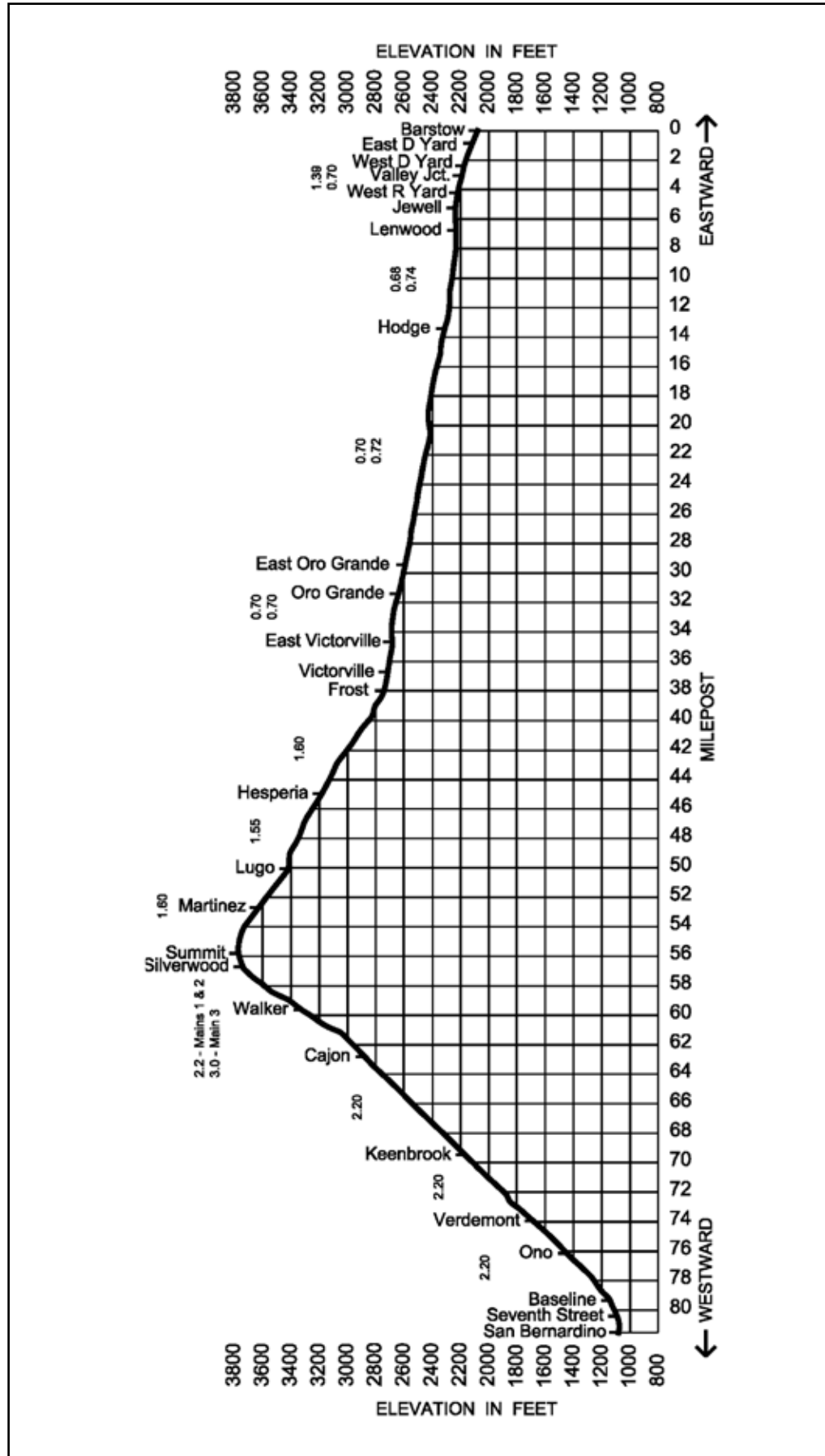
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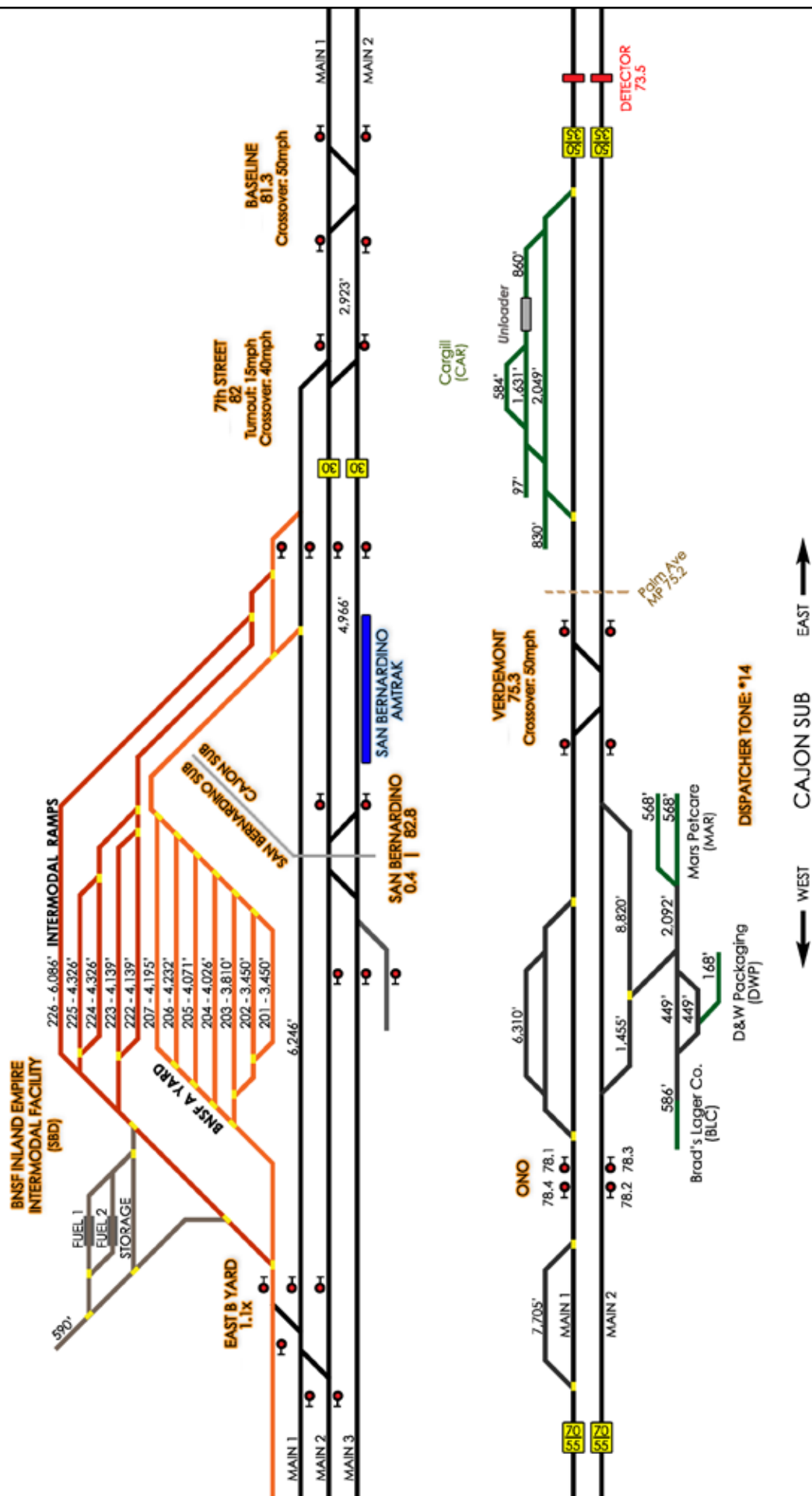
Location	Name	Capacity (feet)	Switch Opens
Thorn MP 41.1 MT 1	Siding	2707	Both
	Marspetus	1360	West
	Conagra Foods	1347	West
	Church & Dwight	657	West
	AFG Ind. (3 tracks)	3224	West
	Goodyear Tire	1071	West
Hesperia MP 45.1 MT 2	Siding	6811	Both
	Lucerne Valley Subdiv. MT	---	West
	Hesperian Lumber	489	West
	OMYA California	536	West
	So. Cal. Components	1095	West
	Mitsubishi Cement	2650	West
	Specialty Materials	2639	West
Martinez	Controlled Siding (MT 1)	14625	Both
	Set Out Track (MT 2)	180	Both
Silverwood	UP connection (MT 2)	2400	East
Cajon	Set Out Track (MT 1)	914	Both
	MW Spur (MT 1)	936	East
Keenbrook	Set Out Track (MT 1)	671	West
Devore	Set Out Track (MT 1)	544	West
Verdemon	Conagra (3 tracks) (MT 1)	6051	Both
	North Siding (MT 1)	7075	Both
	North Storage (MT 1)	6310	Both
	South Siding (MT 2)	10275	Both
	Mars Petcare 1 (MT 2)	568	West
	Mars Petcare 2 (MT 2)	568	West
	Runaround (MT 2)	449	Both
	D&W Packaging (MT 2)	168	West
	Brad's Lager Co. (MT 2)	586	East
Ono	Siding (MT 2)	7700	Both
Where more than one track is noted the capacity is total for all tracks.			

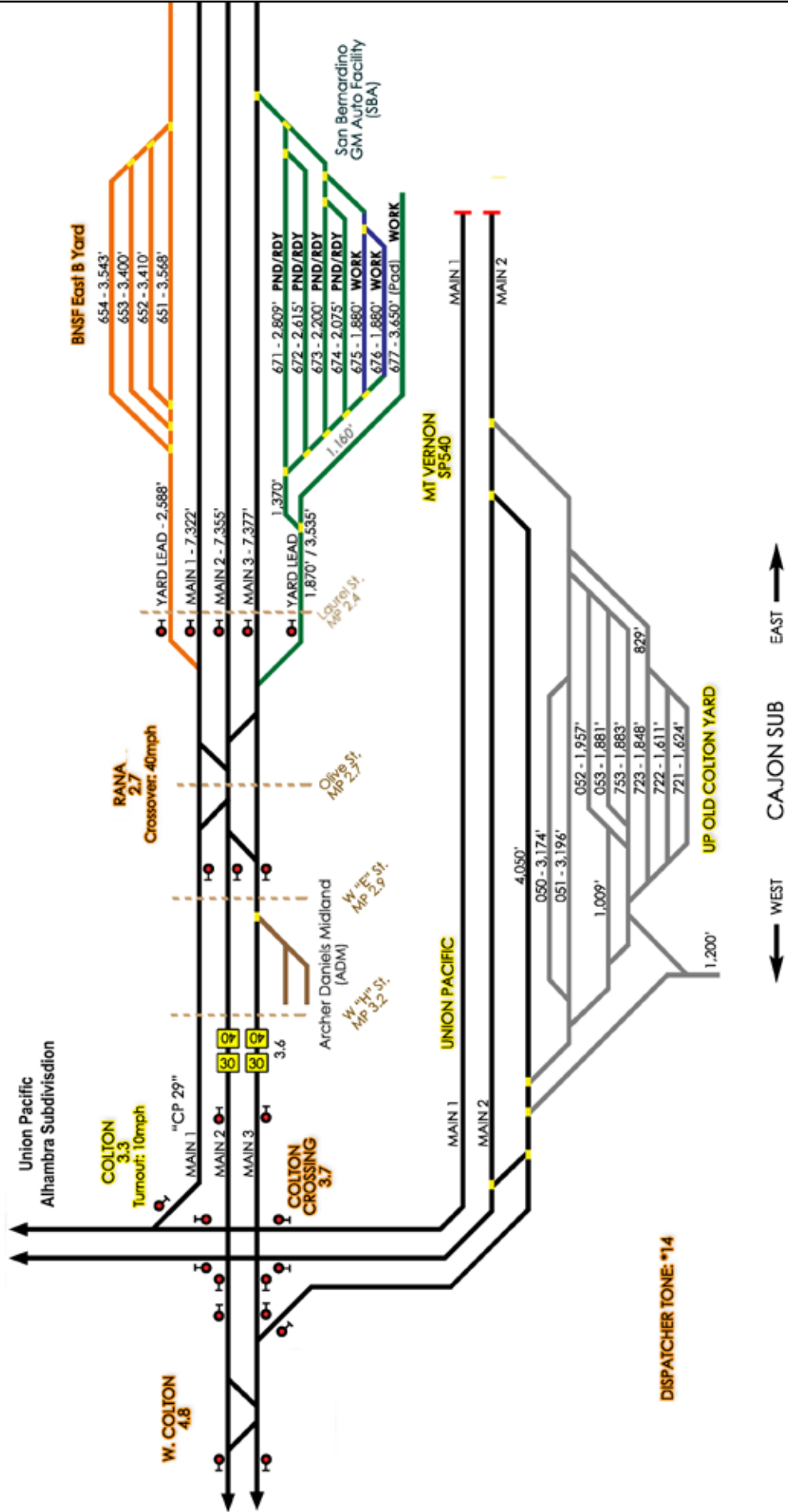
Notes:

1. There are three main tracks between Martinez and Baseline in the real world. The controlled siding at Martinez no longer exists.
2. Both tunnels no longer exist, retired in 2008.
3. The Union Pacific connection at Keenbrook MP 69.4 does not exist in Run 8 Simulator.

BNSF CAJON SUBDIVISION







Westward ▼		BNSF SAN BERNARDINO SUBDIVISION					▲ Eastward		
Mile Post	Oper- aton	CP	Siding MP	Stations		Speed (MPH)		Sidings (feet)	
						XO	Sid- ing		
0.0	CTC 3MT	---	---	SAN BERNARDINO DEPOT (Cajon Subdivision)	P	---	---	Yard	
0.3		●	---	SAN BERNARDINO	X	30	---		
1.1		●	---	EAST B YARD	TX	30	---		
2.7		●	---	RANA	X	40	---		---
3.3	CTC 2MT	●	---	COLTON CROSSING (Union Pacific Crossing)	JM	---	---	---	
4.8		●	---	WEST COLTON	JX	40	---	---	
6.3		●	---	HIGHGROVE (SCRRA San Jacinto Subdivision)	JX	40	---	---	
9.8		●	---	RIVERSIDE (Main 2)	---	---	---	---	
10.0		---	---	RIVERSIDE METROLINK	P	---	---	---	
10.6		●	---	WEST RIVERSIDE (Union Pacific Connection)	JX	50	---	---	
15.1		●	---	ARLINGTON	X	50	---	---	
18.5		---	---	LA SIERRA	P	---	---	---	
21.4		●	---	MAY	X	50	---	---	
22.8		---	---	PORPHYRY (Main 2)	T	---	---	Yard	
24.1		---	---	NORTH MAIN CORONA	P	---	---	---	
27.2		---	---	WEST CORONA	P	---	---	---	
29.4		CTC 3MT	●	---	PRADO DAM	X	50	---	---
35.8			●	---	ESPERANZA	X	50	---	---
40.6		CTC 2MT	●	---	ATWOOD (SCRRA Olive Subdivision)	JX	50	---	---
45.5 165.5		CTC 3MT	●	---	FULLERTON JUNCTION (SCRRA Orange Subdivision)	JX	50	---	---
165.3	---		---	FULLERTON	P	---	---	---	
163.0	CTC 2MT	●	---	BASTA	X	50	---	---	
160.7		---	---	BUENA PARK	P	---	---	---	
157.7		●	---	LA MIRADA	X	50	---	Yard	
156.1		---	---	NORWALK	P	---	---	---	
155.0	CTC 3MT	●	---	SANTA FE SPRINGS	X	50	---	---	
153.0		●	---	LOS NIETOS (Union Pacific Crossing)	M	---	---	---	
151.9		●	---	DT JUNCTION (Union Pacific Crossing)	M	---	---	---	
150.9		---	---	PICO RIVERA	---	---	---	Yard	
149.8		●	---	BANDINI	X	50	---	---	
148.5		●	---	COMMERCE	PTX	50	---	---	
147.5		●	---	EASTERN AVENUE	X	50	---	Yard	
145.1		●	---	HOBART	X	50	---		
144.7		●	---	WEST HOBART	X	50	---		
144.5	CTC 4MT	●	---	SAN PEDRO JCT. (Union Pacific Crossing)	JMX	40	---	---	
(continued)									

(continued)

BNSF SAN BERNARDINO SUBDIVISION								
Westward ▼				▲ Eastward				
Mile Post	Operation	CP	Siding MP	Stations		Speed (MPH)		Sidings (feet)
						XO	Sid-ing	
144.0	CTC 4MT	•	---	SOTO (SCRRA Connection)	J	---	---	---
143.2 0.0	CTC 2MT	•	---	WEST REDONDO (Alameda Corridor)	JX	25	---	---

Radio Communication:

San Bernardino to West Riverside Channel 072
 West Riverside to West Redondo Channel 036
 La Mirada Yard Channel 032
 Hobart Yard Channel 032
 Hobart Yard Channel 072

Method of Operation:

San Bernardino MP 0.0 to Colton Crossing MP 3.3 CTC 3MT
 Colton Crossing MP 3.3 to Prado Dam MP 29.4 CTC 2MT
 Prado Dam MP 29.4 to Esperanza MP 35.8 CTC 3MT
 Esperanza MP 35.8 to Fullerton Jct. MP 45.5 CTC 2MT
 Fullerton Jct. MP 165.5 to Basta MP 163.0 CTC 3MT
 Basta MP 163.0 to Santa Fe Springs MP 155.0 CTC 2MT
 Santa Fe Springs MP 155.0 to West Hobart MP 144.7 CTC 3MT
 West Hobart MP 144.7 to Soto MP 144.0 CTC 4MT
 Soto MP 144.0 to West Hobart MP 143.2 CTC 2MT

CTC is in effect on main tracks and the following tracks:

- Riverside Station Track MP 9.8 to MP 10.2

Manual Interlockings:

MP 3.3 Colton Crossing • Controlled by BNSF Train Dispatcher
 MP 153.0 Los Nietos • Controlled by BNSF Train Dispatcher
 MP 151.9 DT Junction • Controlled by BNSF Train Dispatcher
 MP 144.5 San Pedro Jct. • Controlled by BNSF Train Dispatcher

Multiple Main Tracks:

When using main tracks in westward timetable direction, they will be numbered consecutively from right to left beginning from Main 1. When using in eastward timetable direction, they will be numbered from left to right beginning with Main 1.

The Union Pacific Connection between Rana MP 3.7 and Colton Crossing is designated as BNSF Main Track 1 in Run 8 Simulator. There is no Main Track 1 between WBCS Colton Crossing and EBCS West Colton.

Between WBCS San Pedro Jct. and Soto there are four main tracks designated in Run 8 Simulator from north to south as BNSF Main 1, BNSF Main 2, River Main 1 and River Main 2.

SCRRA River Subdivision Main Track 1 is a continuation of BNSF Main Track 3 from the WBCS San Pedro Jct.

SCRRA River Subdivision Main Track 2 extends westward from MP 144.8 (West Hobart) where it joints BNSF Main Track 3.

Mileage Equations:

MP 82.8 Cajon Subdivision = MP 0.0 San Bernardino Subdivision
 Fullerton Jct. MP 45.5 = MP 165.5
 West Redondo MP 143.2 = Alameda Corridor MP 0.0

Maximum Speeds - Main Tracks:

Westward Trains			
Limit	Limit	Psg.	Frt.
MP 0.0 MT1, 2 & 3	MP 3.6 MT 1, 2 & 3	30	30
MP 3.6 MT 2 & 3	MP 4.8 MT 2 & 3	40	40
MP 4.8 MT 1 & 2	MP 6.9 MT 1 & 2	40	40
MP 6.9 MT 1 & 2	MP 9.4 MT 1 & 2	60	50
MP 9.4 MT 1 & 2	MP 9.5 MT 1 & 2	55	50
MP 9.5 MT 1 & 2	MP 11.9 MT 1 & 2	60	50
MP 11.9 MT 1 & 2	MP 12.5 MT 1 & 2	45	40
MP 12.5 MT 1 & 2	MP 15.4 MT 1 & 2	60	50
MP 15.4 MT 1 & 2	MP 16.7 MT 1 & 2	55	50
MP 16.7 MT 1 & 2	MP 29.4 MT 1 & 2	60	50
MP 29.4 MT 1, 2 & 3	MP 31.4 MT 1, 2 & 3	60	50
MP 31.4 MT 1, 2 & 3	MP 31.6 MT 1, 2 & 3	55	50
MP 31.6 MT 1, 2 & 3	MP 32.7 MT 1, 2 & 3	60	50
MP 32.7 MT 1, 2 & 3	MP 34.5 MT 1, 2 & 3	50	50
MP 34.5 MT 1, 2 & 3	MP 35.1 MT 1, 2 & 3	50	45
MP 35.1 MT 1, 2 & 3	MP 36.2 MT 1, 2 & 3	60	50
MP 36.2 MT 1, 2 & 3	MP 36.4 MT 1, 2 & 3	55	50
MP 36.4 MT 1, 2 & 3	MP 35.8 MT 1, 2 & 3	60	50
MP 35.8 MT 1 & 2	MP 45.1 MT 1 & 2	60	50
MP 45.1 MT 1 & 2	MP 45.5 MT 1 & 2	50	50
MP 166.5 MT 1, 2 & 3	MP 163.8 MT 1, 2 & 3	79	50
MP 163.8 MT 1, 2 & 3	MP 163.5 MT 1, 2 & 3	75	50
MP 163.5 MT 1, 2 & 3	MP 163.0 MT 1, 2 & 3	79	50
MP 163.0 MT 1 & 2	MP 161.2 MT 1 & 2	79	50
MP 161.2 MT 1 & 2	MP 160.8 MT 1 & 2	70	50
MP 160.8 MT 1 & 2	MP 156.5 MT 1 & 2	79	50
MP 156.5 MT 1 & 2	MP 155.9 MT 1 & 2	75	50
MP 155.9 MT 1 & 2	MP 155.0 MT 1 & 2	79	50
MP 155.0 MT 1, 2 & 3	MP 154.3 MT 1, 2 & 3	79	50
MP 154.3 MT 1, 2 & 3	MP 153.7 MT 1, 2 & 3	70	50
MP 153.7 MT 1, 2 & 3	MP 152.9 MT 1, 2 & 3	79	50
MP 152.9 MT 1, 2 & 3	MP 152.8 MT 1, 2 & 3	50	50
MP 152.8 MT 1, 2 & 3	MP 152.5 MT 1, 2 & 3	70	50
(continued)			

BNSF SAN BERNARDINO SUBDIVISION**Maximum Speeds - Main Tracks:**

Westward Trains			
Limit	Limit	Psg.	Frt.
MP 152.5 MT 1, 2 & 3	MP 151.6 MT 1, 2 & 3	79	50
MP 151.6 MT 1, 2 & 3	MP 151.4 MT 1, 2 & 3	65	50
MP 151.4 MT 1, 2 & 3	MP 147.4 MT 1, 2 & 3	79	50
MP 147.4 MT 1 & 3	MP 147.2 MT 1 & 3	79	50
MP 147.4 MT 2	MP 147.2 MT 2	60	50
MP 147.2 MT 1, 2 & 3	MP 144.6 MT 1, 2 & 3	79	50
MP 144.6 MT 1 & 2	MP 143.5 MT 1 & 2	40	40
MP 143.5 MT 1 & 2	MP 143.2 MT 1 & 2	25	25
West Redondo MP 0.0 Alameda Corridor		30	30
San Pedro Jct. MP 144.5 SCRRA River Main 1 & 2		65	40

Eastward Trains			
Limit	Limit	Psg.	Frt.
MP 143.2 MT 1 & 2	MP 143.5 MT 1 & 2	25	25
MP 143.5 MT 1 & 2	MP 144.6 MT 1 & 2	40	40
MP 144.6 MT 1, 2, 3, 4	MP 144.7 MT 1, 2, 3, 4	79	50
MP 144.7 MT 1, 2 & 3	MP 147.4 MT 1, 2 & 3	79	50
MP 147.4 MT 1 & 3	MP 147.2 MT 1 & 3	79	50
MP 147.4 MT 2	MP 147.2 MT 2	60	50
MP 147.2 MT 1, 2 & 3	MP 151.4 MT 1, 2 & 3	79	50
MP 151.4 MT 1, 2 & 3	MP 151.6 MT 1, 2 & 3	65	50
MP 151.6 MT 1, 2 & 3	MP 152.5 MT 1, 2 & 3	79	50
MP 152.5 MT 1, 2 & 3	MP 152.8 MT 1, 2 & 3	70	50
MP 152.8 MT 1, 2 & 3	MP 152.9 MT 1, 2 & 3	50	50
MP 152.9 MT 1, 2 & 3	MP 153.7 MT 1, 2 & 3	79	50
MP 153.7 MT 1, 2 & 3	MP 154/3 MT 1, 2 & 3	70	50
MP 154.3 MT 1, 2 & 3	MP 155.0 MT 1, 2 & 3	79	50
MP 155.0 MT 1 & 2	MP 155.9 MT 1 & 2	79	50
MP 155.9 MT 1 & 2	MP 156.5 MT 1 & 2	75	50
MP 156.5 MT 1 & 2	MP 160.8 MT 1 & 2	79	50
MP 160.8 MT 1 & 2	MP 161.2 MT 1 & 2	70	50
MP 161.2 MT 1 & 2	MP 163.0 MT 1 & 2	79	50
MP 163.0 MT 1, 2 & 3	MP 163.5 MT 1, 2 & 3	79	50
MP 163.5 MT 1, 2 & 3	MP 163.8 MT 1, 2 & 3	75	50
MP 163.8 MT 1, 2 & 3	MP 165.2 MT 1, 2 & 3	79	50
MP 165.2 MT 1, 2 & 3	MP 165.5 MT 1, 2 & 3	50	50
MP 45.5 MT 1 & 2	MP 45.1 MT 1 & 2	50	50
MP 45.1 MT 1 & 2	MP 35.8 MT 1 & 2	60	50
(continued)			

Maximum Speeds - Main Tracks:

Eastward Trains			
Limit	Limit	Psg.	Frt.
MP 35.8 MT 1, 2 & 3	MP 36.4 MT 1, 2 & 3	60	50
MP 36.4 MT 1, 2 & 3	MP 36.2 MT 1, 2 & 3	55	50
MP 36.2 MT 1, 2 & 3	MP 35.1 MT 1, 2 & 3	60	50
MP 35.1 MT 1, 2 & 3	MP 34.5 MT 1, 2 & 3	50	45
MP 34.5 MT 1, 2 & 3	MP 32.7 MT 1, 2 & 3	50	50
MP 32.7 MT 1, 2 & 3	MP 31.6 MT 1, 2 & 3	60	50
MP 31.6 MT 1, 2 & 3	MP 31.4 MT 1, 2 & 3	55	50
MP 31.4 MT 1, 2 & 3	MP 29.4 MT 1, 2 & 3	60	50
MP 29.4 MT 1 & 2	MP 16.7 MT 1 & 2	60	50
MP 16.7 MT 1 & 2	MP 15.4 MT 1 & 2	55	50
MP 15.4 MT 1 & 2	MP 12.6 MT 1 & 2	60	50
MP 12.6 MT 1 & 2	MP 11.9 MT 1 & 2	45	40
MP 11.9 MT 1 & 2	MP 9.5 MT 1 & 2	60	50
MP 9.5 MT 1 & 2	MP 9.4 MT 1 & 2	55	50
MP 9.4 MT 1 & 2	MP 6.9 MT 1 & 2	60	50
MP 6.9 MT 1 & 2	MP 4.8 MT 1 & 2	50	40
MP 4.8 MT 2 & 3	MP 3.7 MT 2 & 3	50	40
MP 3.7 MT 1, 2 & 3	MP 0.0 MT 1, 2 & 3	30	30

Maximum Speeds - Other Tracks and Turnouts:

Track	Psg.	Frt.
Crossovers, except below:	50	50
San Bernardino MP 0.0	30	30
East B Yard MP 1.1	20	20
Rana MP 2.7	40	40
West Colton MP 4.8	40	40
Highgrove MP 6.3	40	40
Fullerton Main 2 to Main 3	40	40
West Hobart MP 144.7 two crossovers	45	45
San Pedro Jct. MP 144.5 BNSF Main 1 to Main 2	40	40
West Redondo MP 143.2	25	25
Turnouts at Begin/End Multiple Main Trks.		
Prado Dam MP 29.4 Main 1 to Main 1	60	50
Esperanza MP 35.8 Main 1 to Main 1	50	50
Fullerton Jct. MP 165.5 Main 2 to Main 3 (crossover)	40	40
Basta MP 163.0 Main 3 to Main 2	40	40
Santa Fe Springs MP 155.0 Main 1 to Main 1	50	50
Colton MP 3.3 Main 1 to UP	10	10

BNSF SAN BERNARDINO SUBDIVISION

Maximum Speeds - Other Tracks and Turnouts:

Track	Psg.	Frt.
Colton Crossing UP connection MT 3	25	25
Highgrove MP 6.3 SCRRA connection	20	20
Riverside Station Track MP 9.8 - MP 10.2	25	25
West Riverside MP 10.6 UP connection	40	40
Atwood MP 40.6 SCRRA Olive Subdiv.	40	25
Fullerton Jct. Main 2 connection SCRRA Orange Subdivision	40	40
All other tracks except main tracks	15	15

Other Location Information:

Location	Name	Capacity (feet)	Switch Opens
Casablanca	Set Out Track (MT 2)	1980	Both
	Carpenter Co. (MT 2)	1675	East
Arlington	Broadhurst Mill (MT 2)	1275	East
Porphyry	Siding (MT 2)	5880	Both
	Yard (5 tracks) (MT 2)	11100	Both
	TRM Manufacturing (MT 2)	1455	West
	Nile Fiber Paper (MT 2)	520	West
	Ganahi Lumber (MT 2)	460	East
West Corona	Republic Bag Co. (MT 1)	1015	East
	Siding (MT 2)	2300	Both
	Set Out Track (MT 2)	1255	Both
	Dart Container (MT 2)	610	West
Atwood	Berry Plastics (MT 2)	570	West
	SCRRA connection (MT 2)	---	East
Basta	Baretable Storage (MT 1)	13560	Both
Buena Park	Baretable Storage (MT 1)	4730	Both
La Mirada	Yard (13 tracks) (MT 2)	21825	Both
	Industries (see map) (MT 2)	---	---
	Huff Lumber (MT 2)	590	West
	Univar Chemical (MT 2)	500	East
	Watkins Shephard (MT 2)	1390	East
Norwalk	Runaround (MT 1)	2740	Both
	Temple Inland Paper (MT 1)	880	East
Santa Fe Springs	Brenntag Chemical (MT 1)	1770	West
	Del Monte Foods (MT 1)	1310	West
Pico Rivera	Intermodal Storage (MT 1)	9630	Both
	Transload Yard (MT 1)	3800	East
Commerce	Storage 1 (MT 1)	1030	Both
	Storage 2 (MT 1)	1030	Both
	LAJ connection (MT 1)	---	West
	Veritiv Corp. (MT 1)	720	East
Soto	Air Products	610	West
Industry Lead Bandini to Hobart = 18,700 feet (off MT 1).			
San Bernardino and Hobart, refer to maps.			

Notes:

1. In real life there are three main tracks between Basta and Santa Fe Springs.
2. Metrolink trackage at San Bernardino is omitted in Run 8 Simulator.

Trackside Warning Detectors:

MP	Track(s)	Between
6.0	MT 1 & 2	West Colton - Highgrove
26.4	MT 1 & 2	North Main Corona - W. Corona
32.0	MT 2 & 3	Prado Dam - Esperanza
38.0	MT 1 & 2	Esperanza - Atwood
43.3	MT 1 & 2	Atwood - Fullerton Jct.
154.3	MT 1, 2 & 3	Santa Fe Springs - Los Nietos

Joint Operation:

Amtrak trains operate between San Bernardino Depot and Soto.

SCRRA (Metrolink) trains operate between San Bernardino and Soto.

Union Pacific trains operate between San Bernardino Depot and West Riverside.

Permanent Speed Signs:

Green permanent speed signs indicating resume maximum speed are used.

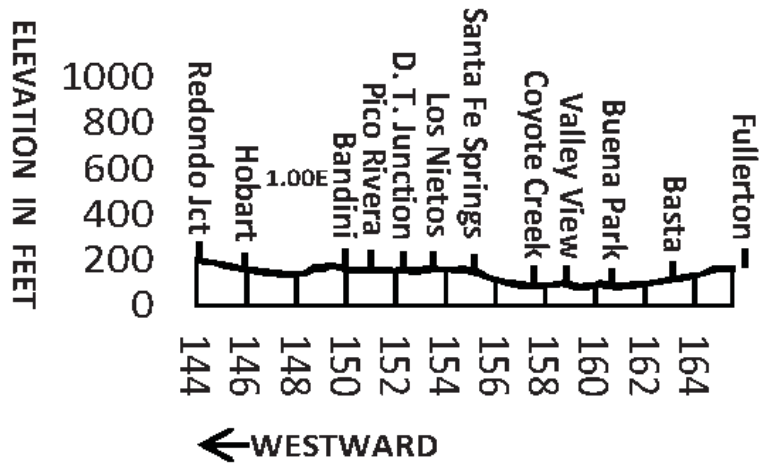
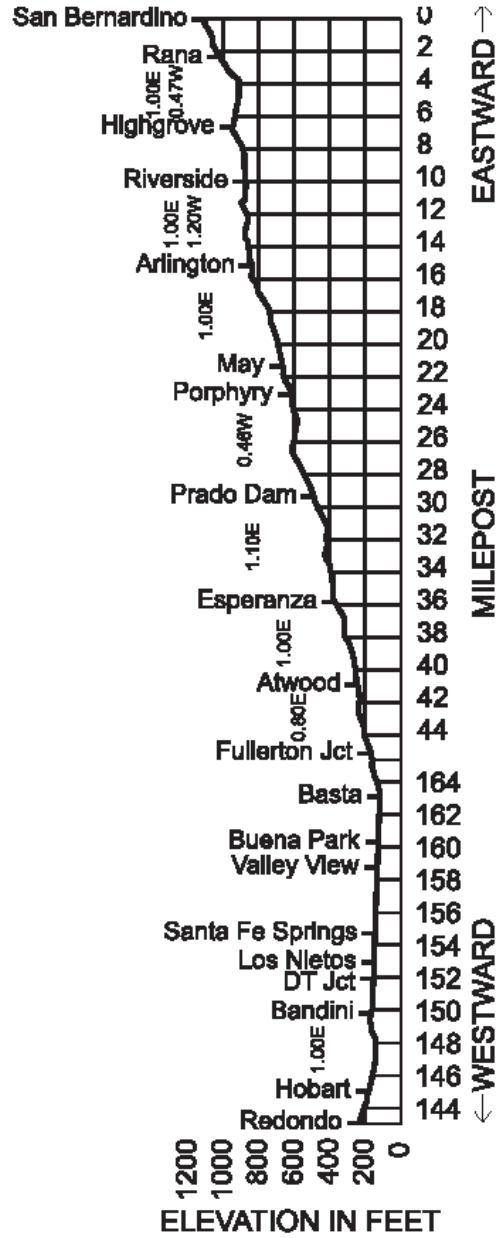
Between MP 0.0 and MP 45.5 they indicate passenger trains 60 MPH and freight trains 50 MPH.

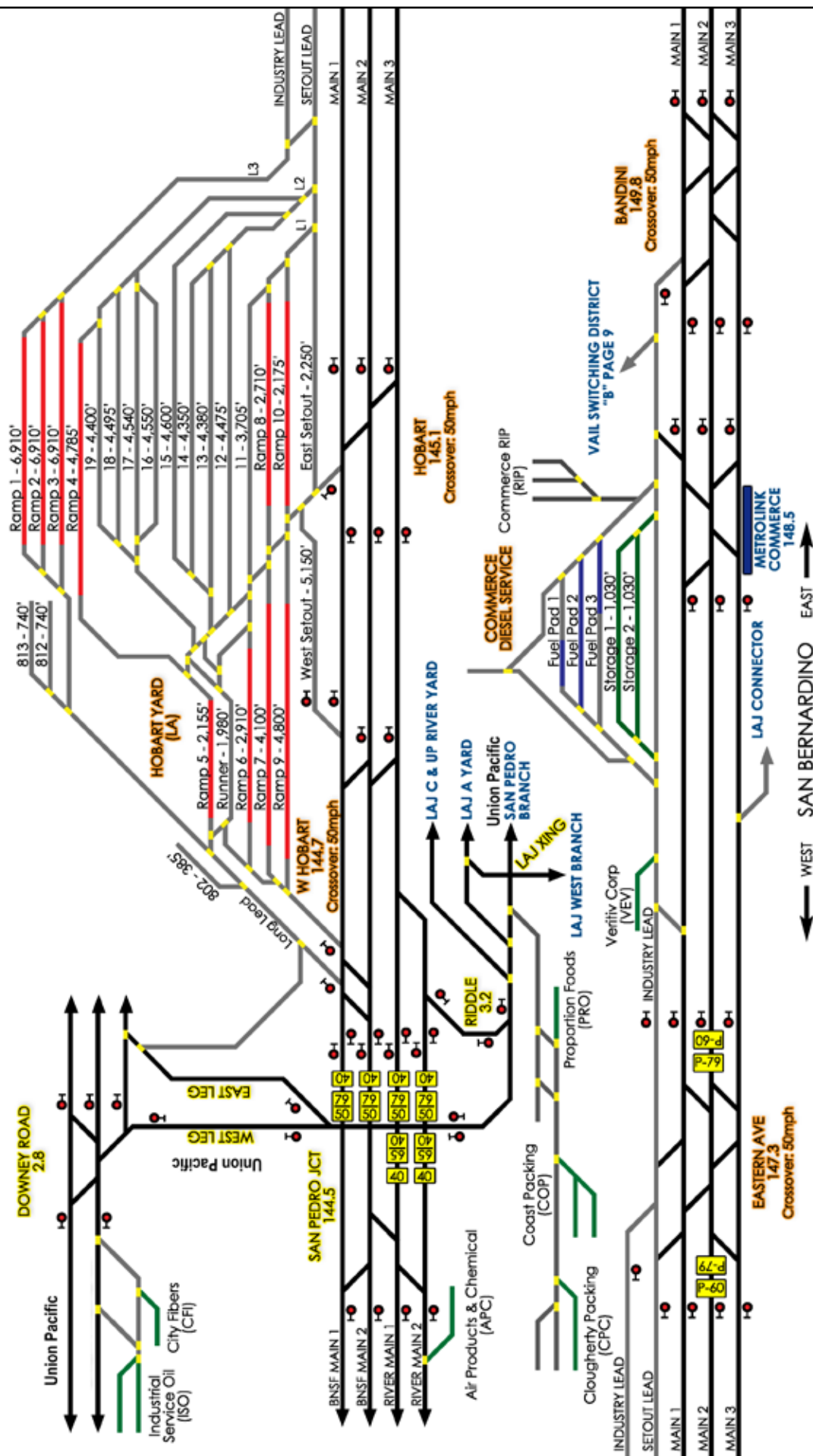
West of MP 45.5 / MP 165.5 they indicate passenger trains 79 MPH and freight trains 50 MPH,

Other Location Information:

Location	Name	Capacity (feet)	Switch Opens
Colton	Archer Daniels Midland (MT 3)	1430	East
West Colton	UP connection (MT 1)	5400	West
Highgrove	SCRRA connection (MT 2)	---	East
	Set Out Track (MT 1)	1725	Both
	Reliable Hardware (MT 1)	2225	East
	Champion Lumber East (MT 1)	655	East
	Champion Lumber West	525	West
Riverside	Riverside Station Track	3800	Both
	UP connection	---	East

BNSF SAN BERNARDINO SUBDIVISION





BNSF SPECIAL INSTRUCTIONS

1. Maximum Speeds

All speeds are subject to modification by speed restrictions indicated in timetable individual subdivision special instructions.

Passenger trains will be governed by freight train speed, including temporary speed restrictions governing freight trains, if passenger train speed is not specified under timetable individual subdivision special instructions.

All trains consisting entirely of passenger equipment as well as locomotives without cars (light engines) will be considered passenger trains and may operate at passenger speeds where provided. This includes Amtrak, commuter trains, business cars and passenger equipment modified to serve as track inspection, track geometry or similar test cars.

Unless defined differently in the timetable individual subdivision special instruction, tons per operative brake (TOB) is defined as the gross trailing tonnage of the train divided by the total number of control valves.

Train or Equipment	MPH
Freight trains under 100 TOB	60
Freight trains 100 TOB and over	45
Freight trains handling empty equipment	55
Exceptions:	
• Empty intermodal / automotive equipment	70
• Empty unit coal trains	60
Key Trains	50
Solid consists of military equipment	55
Non-signaled territory	49
Against the current of traffic (double track territory)	49
Through turnouts	15*
Freight trains are authorized to operate at 70 MPH if the following requirements are met:	
1. Train does not contain empty cars other than intermodal equipment.	
2. Train does not exceed 8,500 feet.	
Exception: Trains operating with distributed power equipment with remote DP automatic brake valve cut in may operate at 70 MPH up to 10,000 feet in length.	
3. Train does not average more than 80 TOB.	
Exceptions:	
a) Trains consisting entirely of intermodal equipment must not average more than 90 tons per operative brake.	
b) Trains consisting entirely of double stack equipment must not average more than 105 tons per operative brake.	
Intermodal equipment in Run 8 Simulator is defined as:	
• Autorack	
• Intermodal well car	
• Piggyback trailer	
• Smooth side well car	

2. Timetable Characters

A Automatic Interlocking
g Gate, normal position against conflicting route
G Gate, normal position against this subdivision
J Junction
M Manual interlocking
P Passenger station
R Restricted Limits
S Railroad crossing protected by permanent Stop sign
T Turning facility
U Railroad crossing not protected by signals or gates
X Crossover(s)
Y Yard Limits

3. Methods of Operation Column

ABS Automatic Block Signal System
CTC Centralized Traffic Control
DT Double Track
#MT Multiple Main Tracks (# is the number of main tracks)
6.28 Other Than Main Track

4. Sidings

Siding length in the timetable is distance in feet between fouling points. Sidings may be preceded by letters N (north), S (south), E (east), W (west) or C (center).

Sidings may be followed by numbers (1) MT 1, (2) MT 2, (3) MT 3

5. Multiple Main Tracks

Unless otherwise indicated in the individual subdivision special instructions, when using main tracks in westward or southward timetable direction, they will be numbered consecutively from right to left beginning from Main 1. When using in eastward or northward timetable direction, they will be numbered from left to right beginning with Main 1.

6. Duplicate Mile Posts

Duplicate mile posts on a subdivision are identified by an alpha suffix (e.g. MP 345X, MP 420Z). Timetable individual subdivision special instructions will list where duplicate mile posts are in effect.

7. Whistle Quiet Zone

Within designated whistle quiet zones, whistle signal (7) must not be sounded approaching public crossings at grade except when:

- Necessary to provide warning in an emergency.
- Notified automatic warning devices are malfunctioning.
- Notified automatic warning devices are out of service.

or

- The whistle quiet zone is not in effect during specified hours.

An employee may sound the train horn to provide warning to crews on other trains in an emergency situation, vehicle operators, pedestrians, trespassers or animals if, in the employee's sole judgment, such action is appropriate to prevent imminent injury, death, or property damage.

BNSF SPECIAL INSTRUCTIONS

8. Sounding Whistle

The whistle may be used at anytime as a warning regardless of any whistle prohibitions.

When other employees are working in the immediate area, sound the required whistle signal before moving.

The required whistle signals are illustrated by “o” for short sounds and “—” for longer sounds

Sound		Indication
(1)	Succession of short sounds	Use when persons or livestock are on the track at other than road crossings at grade. In addition, use to warn railroad employees when an emergency exists, such as a derailment. When crews on other trains hear this signal, they must stop until it is safe to proceed.
(2)	—	When stopped: air brakes are applied, pressure equalized.
(3)	— —	Release brakes. Proceed.
(4)	o o	Acknowledgment of any signal not otherwise provided for.
(5)	o o o	When stopped: back up. Acknowledgment of hand signal to back up.
(6)	o o o o	Request for signal to be given or repeated if not understood.
(7)	— — o —	When approaching public crossings at grade with the engine in front, sound signal as follows: A. At speeds in excess of 45 MPH, start signal at or about the crossing sign but not more than 1/4 mile before the crossing. B. At speeds of 45 MPH or less, start signal at least 15 seconds, but not more than 20 seconds, before entering the crossing. C. If no crossing sign start signal at least 15 seconds, but not more than 20 seconds before entering crossing but not more than 1/4 mile before the crossing. D. If movement starts less than 1/4 mile from a crossing, signal may be sounded less than 15 seconds before the crossing when it is clearly seen traffic is not approaching the crossing, traffic is not stopped at the crossing or when crossing gates are fully lowered. Prolong or repeat signal until the engine completely occupies the crossing(s).
(8)	— o	Regardless of any whistle prohibitions: Approaching men or equipment or other individuals on or near the track. After sounding initial warning for men or equipment or other individuals, sound whistle signal (4) intermittently until the head end of train has passed the men or equipment or other individuals. Whistle warning is not required: • When there is an adjacent track and men or equipment or other individuals are beyond the farthest rail of the adjacent track. • For members of the same crew associated with movement of their engine unless necessary to warn or alert a crew member Do not sound whistle in designated mechanical servicing and repair facilities, unless for an emergency or when approaching roadway workers.

BNSF SPECIAL INSTRUCTIONS

9. Restricted Limits (Rule 6.14)

Within restricted limits, trains or engines are authorized to use the main track not protecting against other trains or engines. All movements must be made at restricted speed.

10. Movement at Restricted Speed (Rule 6.27)

When required to move at restricted speed, movement must be made at a speed that allows stopping within half the range of vision short of:

- Train.
- Engine.
- Railroad car.
- Men or equipment fouling the track.
- Stop signal.
- or
- Derail or switch lined improperly.

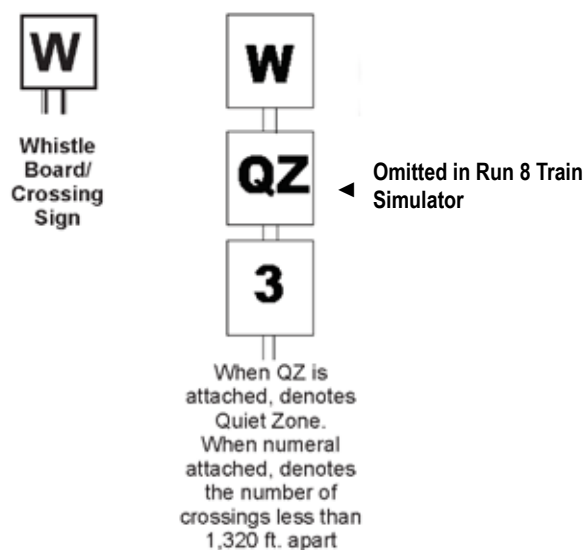
When a train or engine is required to move at restricted speed, the crew must keep a lookout for broken rail and not exceed 20 MPH. Comply with these requirements until the leading wheels reach a point where movement at restricted speed is no longer required.

11. Movement on Other Than Main Track (Rule 6.28)

Except when moving on a main track or on a track where a block system is in effect, trains or engines must move at a speed that allows them to stop within half the range of vision short of:

- Train.
- Engine.
- Railroad car.
- Men or equipment fouling the track.
- Stop signal.
- or
- Derail or switch lined improperly

12. Crossing Warning Signs



13. Permanent Speed Signs

Reduced speed limits may be designated by Advance Warning sign (diagonally upward), Reduce Speed sign (rectangle) and Resume Speed sign (vertical).

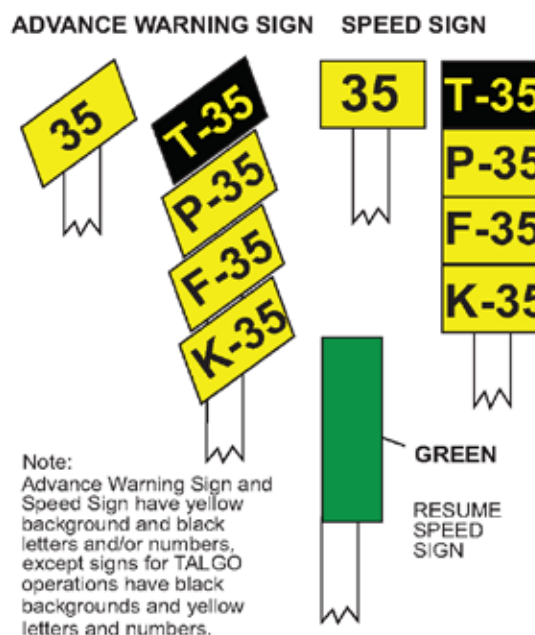
The Advance Warning sign will be placed two miles in advance of the location where the lower speed takes effect. At the point where the reduced speed applies, a speed sign will repeat the permissible speed. The lower speed will be in effect until a Resume Speed sign or another Speed sign is displayed.

At the end of a reduced speed zone, a train or engine will be governed by a Speed sign displaying a higher speed or a Resume Speed sign which will authorize the maximum permissible speed on that subdivision. In either case, the speed must not be increased until the entire train has passed the sign displayed or has cleared the limits of the restriction. Signs reading "K-END" indicate the end of Key Train municipal area limits. Resume speed signs are not displayed at the end of Key Train municipal area limits.

Locations where reduced speeds are required, but which are not indicated by signs, are listed in the special instructions for each subdivision.

Permanent speed signs will not be placed for trains moving against the current of traffic unless otherwise indicated.

These signs, as illustrated, apply to train and engine movements as follows:



Figures preceded by letter P apply to passenger trains, except TALGO, if there is a TALGO sign.

Figures preceded by letter F apply to freight trains.

Figures preceded by letter T apply to TALGO passenger trains.

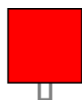
Figures preceded by the letter K apply to Key Trains.

Figures not preceded by a letter apply to all trains.

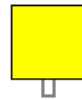
14. Track Flags



YELLOW-RED FLAG
PROTECTING MEN
OR EQUIPMENT



RED FLAG



YELLOW FLAG



GREEN FLAG

Flags for Temporary Track Conditions

5.4.1 Temporary Restrictions

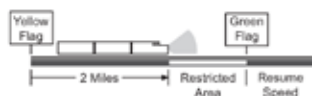
Track bulletins, track warrants, or general orders may restrict or stop train movements because of track conditions, structures or men or equipment. Yellow flags are used to indicate temporary speed restrictions. Yellow-red flags are used to indicate when a train may be required to stop. When flags are not displayed, that information will be included in the track bulletin, track warrant or general order.

When a restriction spans adjoining subdivisions, separate temporary restrictions may be in effect on each subdivision. Only one set of flags may be displayed in advance of the entire restriction in each direction.

5.4.2 Display of Yellow Flag

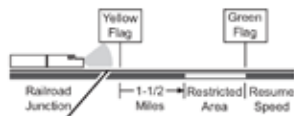
A. Restriction Is In Effect

Two Miles Ahead of Restricted Area. Yellow flags warn trains to restrict movement because of track conditions or structures. To make sure train movement is restricted at the right location, employees must display a yellow flag 2 miles before the restricted area.



[Diagram A.]

Less Than Two Miles Ahead of Restricted Area. When the restricted area is close to a terminal, junction, or another area, or if restriction is on a siding, employees will display a yellow flag less than 2 miles before the restricted area. This information will also be included in the track bulletin, track warrant, or general order.



[Diagram B.]

Once the Train Reaches the Restricted Area. The speed specified by track warrant, bulletin, general order, or radio speed restriction must not be exceeded until the rear of the train clears the restricted area.

When a yellow flag is displayed and no restriction is in effect as specified by a mandatory directive, once the train is 2 miles beyond the yellow flag, crew members must:

1. Continue moving the train not exceeding 10 MPH.
2. Resume speed only after:
 - a. The crew has received a mandatory directive associated with the yellow flag.
 - b. The rear of the train has passed a green flag.
 - or
 - c. The rear of the train has traveled 4 miles beyond the yellow flag and the train dispatcher has verified that no mandatory directive specifying a temporary speed restriction is in effect.



[Diagram C.]

5.4.3 Display of Yellow-Red Flag

Employees may display yellow-red flags from one hour before to one hour after a track bulletin Form B is in effect. During that time the employee in charge may provide a train instructions to proceed without restriction, specifying the Track Bulletin number (specifying line number when necessary) and advising no red flag displayed.

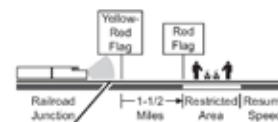
The display of yellow-red flags as described does not extend the authorized working time beyond the times listed on the track bulletin Form B.

A. Restriction Is In Effect

Two Miles Ahead of Restricted Area. Yellow-red flags warn a train to be prepared to stop because of men or equipment. To make sure the train is prepared to stop at the right location, employees must display a yellow-red flag 2 miles before the restricted area.



Less Than Two Miles Ahead of Restricted Area. When the restricted area is close to a terminal, junction, or another area, employees will display the yellow-red flag less than 2 miles before the restricted area. This information will also be included in the track bulletin track warrant, or general order.



[Diagram E.]

B. Restriction Is Not In Effect

When a yellow-red flag is displayed and no restriction is in effect as specified by a track bulletin, track warrant, or general order, a crew member must attempt to contact the employee in charge of the yellow-red flag. Crew members must be prepared to stop short of a red flag 2 miles beyond the yellow-red flag. If a red flag is displayed, proceed as outlined in Rule 5.4.7 (Display of Red Flag). If no red flag is displayed and no instructions have been provided by the employee in charge of the yellow-red flag:

1. Move at restricted speed.
2. Increase speed only after:
 - a. A crew member has received instructions from the employee in charge.
 - or
 - b. The leading wheels of movement are 4 miles beyond the yellow-red flag, and the train dispatcher has verified that no track bulletin or track warrant protecting men or equipment is in effect at that location.

5.4.5 Display of Green Flag

A green flag indicates the end of a temporary speed restriction. If a series of locations require reduced speeds, the green flags could overlap yellow flags. When this is the case, employees must:

- Place a yellow flag before each speed restriction.
- Place a green flag at the end of the last speed restriction.



[Diagram F.]

5.4.7 Display of Red Flag

A red flag is displayed where trains must stop. When approaching a red flag the train must stop short of the red flag and not proceed unless the employee in charge gives instructions, including the milepost location of the red flag. A crew member must attempt to contact the employee in charge to avoid delay, giving the location of the red flag and the track being used. If instructions to proceed are received before the train stops, the train may pass the red flag without stopping.

If track bulletin Form B is not in effect, instructions must include speed and distance. This speed must not be exceeded until the rear of the train has passed the specified distance from the red flag, unless otherwise instructed by the employee in charge.

Displayed Between Rails. When a red flag is displayed between the rails of a track, the train must stop and not proceed until the flag has been removed by an employee of the class that placed it.

5.4.8 Flag Location

Flags will be displayed on all main tracks and sidings leading to the track affected.

Flags must be displayed to the right of the track as viewed from an approaching train. In multiple main track territory or where sidings are adjacent to main track(s), they will be placed on the field side of outside tracks. Red flags may be displayed between the rails as outlined in Rule 5.4.7 (Display of Red Flag). Flags will be placed in this manner unless otherwise specified by track bulletin, track warrant, special instructions, or general order.

When flags are displayed beyond the first rail of an adjacent track, the flags will not apply to the track on which the train is moving.

Note: Rule 5.4.6 does not apply on BNSF Railway.

BNSF SPECIAL INSTRUCTIONS

14. Continental Time



Continental time (24 hour clock) has been adopted by most railroads for operating purposes. The following table provides conversion between Continental Time and the common 12 hour clock. For example, 1627 is converted to 4.27 p.m.

Continental Time	12 Hour Clock
0000	Midnight
0001	12.01 a.m.
0100	1.00 a.m.
0200	2.00 a.m.
0300	3.00 a.m.
0400	4.00 a.m.
0500	5.00 a.m.
0600	6.00 a.m.
0700	7.00 a.m.
0800	8.00 a.m.
0900	9.00 a.m.
1000	10.00 a.m.
1100	11.00 a.m.

Continental Time	12 Hour Clock
1200	Noon
1201	12.01 p.m.
1300	1.00 p.m.
1400	2.00 p.m.
1500	3.00 p.m.
1600	4.00 p.m.
1700	5.00 p.m.
1800	6.00 p.m.
1900	7.00 p.m.
2000	8.00 p.m.
2100	9.00 p.m.
2200	10.00 p.m.
2300	11.00 p.m.

All railroad operations within California are conducted in the Pacific Continental Time Zone. Arizona observes Mountain Standard Time year round.

Time Change		
Time	Date	Clock
Standard	0200 Sun. November 3, 2025	- 1 hour
Daylight Savings	0200 Sun. March 8, 2026	+1 hour
Standard	0200 Sun. November 1, 2026	- 1 hour

15. Amtrak Schedules

Southwest Chief		
3	AMTRAK®	4
Daily		Daily
10.42 pm 10.49 pm	Kingman, AZ (MST)	12.37 am 12.27 am
11.49 pm 11.54 pm	Needles, CA (PT)	11.22 pm 11.20 pm
3.18 am 3.23 am	Barstow, CA	8.47 pm 8.42 pm
4.02 am	Victorville, CA	7.54 pm
5.20 am 5.26 am	San Bernardino, CA	6.43 pm 6.26 pm
5.52 am	Riverside, CA	6.18 pm
7.24 am	Fullerton, CA	5.33 pm
8.12 am	Los Angeles, CA (PT)	4.55 pm

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RUN 8 SIMULATOR LOCOMOTIVE DATA

Model	Length (feet)	Full Weight (tons)	Axles	Horse Power	Power Axles	DB Axles	Fuel Capacity (gallons)
Amtrak (AMTK)							
MP15	48	126	4	1500	4	0	1600
P42	69	134	4	4250	4	4	2200
Arizona & California (ACR)							
SD45-2	69	195	6	3600	6	6	4000
Atchison, Topeka & Santa Fe (ATSF)							
C44-9W	74	208	6	4400	8	8	4800
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
BNSF Railway (BNSF)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
Burlington Northern (BN)							
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
Canadian National (CN)							
SD40-2	69	195	6	3000	6	6	4000
Cargill (CARG)							
SD40-2	69	195	6	3000	6	6	4000
Chessie System (BO)							
SD40-2	69	195	6	3000	6	6	4000
Conrail (CR)							
GP40-2	60	138	4	3000	4	6	3800
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
CSX Transportation (CSXT)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
Denver & Rio Grande Western (DRGW)							
GP40-2	60	138	4	3000	4	6	3800
SD40T-2	69	195	6	3000	0	6	4000

RUN 8 SIMULATOR LOCOMOTIVE DATA

Model	Length (feet)	Full Weight (tons)	Axles	Horse Power	Power Axles	DB Axles	Fuel Capacity (gallons)
Florida East Coast (FEC)							
SD40-2	69	195	6	3000	6	6	4000
GCFX (GCFX)							
SD40-2	69	195	6	3000	6	6	4000
GMTX (GMTX)							
MP15	48	126	4	1500	4	0	1600
Kansas City Southern (KCS)							
SD70ACe	74	210	6	4500	9	9	4900
Modesto & Empire Traction (MET)							
MP15	48	126	4	1500	0	0	1600
Norfolk Southern (NS)							
ES44DC	73	205	6	4400	8	8	5000
MP15	48	126	4	1500	4	0	1600
SD45-2	69	195	6	3600	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
San Joaquin Valley (SJVR)							
GP40-2	60	138	4	3000	4	6	3800
Seaboard Coast Line (SCL)							
SD45-2	69	195	6	3600	6	6	4000
Seaboard System (SBD)							
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
Soo Line (SOO)							
SD40-2	69	195	6	3000	6	6	4000
Southern Pacific (SP)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD40T-2	69	195	6	3000	6	6	4000
Trona (TRON)							
SD45-2	69	195	6	3600	6	6	4000
Union Pacific (UP)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD40T-2	69	195	6	3000	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
Western Pacific (WP)							
GP40-2	60	138	4	3000	4	6	3800

BNSF Railway — SIGNAL ASPECTS AND INDICATIONS

All signals are subject to modification indicated under individual subdivision special instructions.

DISTANT SIGNALS

Aspects shown in Rules 9.1.3 through 9.1.8 may be displayed with a "D" sign on the signal mast to identify the signal as a distant signal. When a "D" sign is displayed, if train is delayed per Rule 9.9 and Rule 9.9.1 between a distant signal and the next signal, proceed prepared to stop short of the next signal. Absolute signals at automatic switches, outside of block system limits, convey main track distant signal information for the other end of the siding.

BLOCK AND INTERLOCKING SIGNALS

Aspects shown in Rules 9.1.3 through 9.1.8 and 9.1.13 may be displayed on signals with or without a number plate on signal mast.

Rule	Aspects of Color Light and Semaphore Signals	Cab Signal Aspects	Name	Indication	Track Line
9.1.3	       		CLEAR	Proceed.	
9.1.4	       		APPROACH LIMITED	Proceed prepared to pass next signal not exceeding 60 MPH and be prepared to enter diverging route at prescribed speed.	
9.1.5	       		ADVANCE APPROACH	Proceed prepared to pass next signal not exceeding 50 MPH and be prepared to enter diverging route at prescribed speed.	
9.1.6	       		APPROACH MEDIUM	Proceed prepared to pass next signal not exceeding 40 MPH and be prepared to enter diverging route at prescribed speed.	
9.1.7	       		APPROACH RESTRICTING	Proceed prepared to pass next signal at restricted speed. Freight trains exceeding 30 MPH immediately reduce to that speed. (Note: Speed is 40 MPH for freight trains in PTC Full Enforcement Mode.)	
9.1.8	       		APPROACH	Proceed prepared to stop at next signal. Trains exceeding 30 MPH immediately reduce to that speed. (Note: Speed is 40 MPH for passenger and trains in PTC Full Enforcement Mode.)	
9.1.9	       		DIVERGING CLEAR	Proceed on diverging route not exceeding prescribed speed through turnout.	
9.1.10	       		DIVERGING APPROACH DIVERGING	Proceed on diverging route not exceeding prescribed speed through turnout prepared to advance on diverging route at the next signal not exceeding prescribed speed through turnout.	
9.1.11	       		DIVERGING APPROACH MEDIUM	Proceed on diverging route not exceeding prescribed speed through turnout prepared to pass next signal not exceeding 35 MPH. (Note: Speed is 40 MPH for trains in PTC Full Enforcement Mode.)	
9.1.12	       		DIVERGING APPROACH	Proceed on diverging route not exceeding prescribed speed through turnout; approach next signal prepared to stop. Trains exceeding 30 MPH immediately reduce to that speed. (Note: Speed is 40 MPH for passenger and trains in PTC Full Enforcement Mode.)	
9.1.13	                               				

SPECIAL ASPECTS WHICH ARE NOT PART OF AUTOMATIC BLOCK, CTC AND INTERLOCKING SYSTEMS

Rule	Aspects	Name	Indication
9.1.16		TAKE SIDING INDICATOR	When illuminated, hand operate switch to enter next siding or to leave siding and enter main track.
9.1.22		SLIDE FENCE INDICATOR	When illuminated continuously or when not illuminated, slide fence has been activated; proceed at restricted speed.
9.1.23		SLIDE FENCE INDICATOR	When flashing, slide fence has not been activated.
9.1.24		RESUME SPEED	End of slide fence restriction; resume speed.
9.1.25		HIGH WATER INDICATOR	When red or not illuminated, high water may be present; proceed at restricted speed through detection limits identified by timetable.
9.1.26		HIGH WATER INDICATOR	When green, no high water has been detected.

General Signal Instructions

In addition to Rule 9.1 of the General Code of Operating Rules, the following General Signal Instructions apply on BNSF Railway:

- Dwarf signals will display the same aspects and indications as high signals.
- The following symbols are used in diagrams of signal aspects.



To indicate a number plate.



To indicate position of semaphore arm.



To indicate a flashing light.



To indicate grade marker.



To indicate color light signal head.

Wayside Horn System (WHS)



Flashing - operating as intended.



Steady or not illuminated - not operating as intended.

PTC Display Information

Track Line			Track Line Overlays		
Color	Symbol	Description	Color	Symbol	Description
Red		Unauthorized track	Red-hash overlay		Stop required
Yellow		Authorized speed restricted track	Yellow-hash Overlay		Restricted Speed
Green		Authorized track	Blue-hash Overlay		Work Zone (Form B) Limits
Grey		Non-enforcing or unknown track			

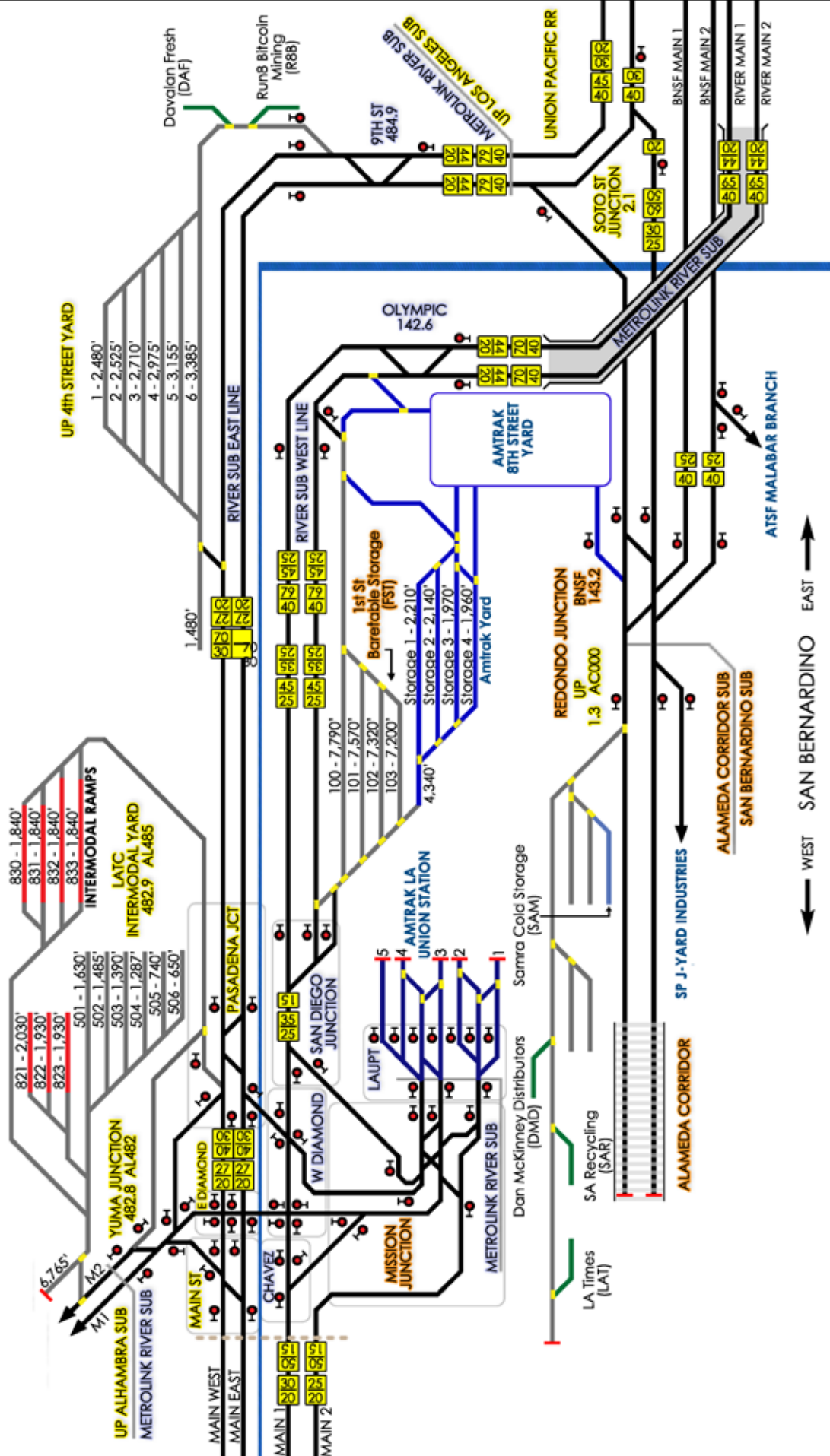
METROLINK REGIONAL RAIL SYSTEM



MAP NOT TO SCALE

METROLINK

metrolinktrains.com



SCRR (Metrolink) River Subdivision

Radio Communication:

All Channel 047

Method of Operation:

East Bank Line CTC 2MT
 West Bank Line CP Dayton to CP Chavez CTC 2MT
 West Bank Line CP Chavez to CP San Diego Jct. CTC
 West Bank Line CP San Diego Jct. to BNSF CTC 2MT
 Terminal Lead Yuma Jct. to CP Mission CTC
 Terminal Lead CP Mission to CP Terminal CTC 5 MT
 Terminal Lead CP Terminal through LAUPT YL
 All Connecting Tracks CTC

Maximum Speeds - Main Tracks:

East Bank Line • Eastward			
Limit	Limit	Psg	Frt
MP 480.9 MT 1 & MT 2	MP 482.1 MT 1 & MT 2	40	30
MP 482.1 MT 1 & MT 2	MP 483.2 MT 1 & MT 2	27	20
MP 483.2 MT 1 & MT 2	MP 484.8 MT 1 & MT 2	70	30
MP 484.8 MT 1 & MT 2	MP 484.9 (UP MP 2.1)	30	20

East Bank Line • Westward			
Limit	Limit	Psg	Frt
MP 484.9 MT 1 & MT 2	MP 484.8 MT 1 & MT 2	30	20
MP 484.8 MT 1 & MT 2	MP 483.2 MT 1 & MT 2	70	30
MP 483.2 MT 1 & MT 2	MP 482.1 MT 1 & MT 2	27	20
MP 482.1 MT 1 & MT 2	MP 480.9 MT 1 & MT 2	40	30

West Bank Line • Eastward			
Limit	Limit	Psg	Frt
	MP 2.2 MT 1 & MT 2	50	25
MP 2.2 MT 1 & MT 2	MP 2.1 MT 1 & MT 2	30	20
MP 2.1 MT 1 & MT 2	MP 1.8 MT 1 & MT 2	50	15
MP 1.8 MT 1	MP 0.9 MT 1	30	20
MP 1.8 MT 2	MP 0.9 MT 2	25	20
MP 0.9	MP 0.8 = MP 140.0	25	20
MP 140.0	MP 140.3	25	20
MP 140.3 MT 1 & MT 2	MP 141.0 MT 1 & MT 2	35	25
MP 141.0 MT 1 & MT 2	MP 141.1 MT 1 & MT 2	45	25
MP 141.1 MT 1 & MT 2	MP 142.9 MT 1 & MT 2	79	40
MP 142.9 MT 1 & MT 2	MP 143.6 MT 1 & MT 2	44	20
MP 143.6 MT 1 & MT 2	MP 144.6 MT 1 & MT 2	65	40
MP 144.6 is west limit BNSF San Pedro Jct. interlocking			

Maximum Speeds - Main Tracks:

West Bank Line • Westward			
Limit	Limit	Psg	Frt
MP 144.6 MT 1 & MT 2	MP 143.6 MT 1 & MT 2	65	40
MP 143.6 MT 1 & MT 2	MP 142.9 MT 1 & MT 2	44	20
MP 142.9 MT 1 & MT 2	MP 141.1 MT 1 & MT 2	70	30
MP 141.1 MT 1 & MT 2	MP 141.0 MT 1 & MT 2	45	25
MP 141.0 MT 1 & MT 2	MP 140.0 = MP 0.8	35	25
MP 0.8	MP 0.9	35	25
MP 0.9 MT 1 & 2	MP 1.4 MT 1 & 2	35	25
MP 1.4 MT 1 & 2	MP 2.1 MT 1 & 2	50	15
MP 2.1 MT 1 & 2	MP 2.2 MT 1 & 2	30	20
MP 2.2 MT 1 & 2		50	25
MP 144.6 is west limit BNSF San Pedro Jct. interlocking			

Terminal Lead			
Limit	Limit	Psg	Frt
CP Yuma Jct.	CP West Diamond	20	20
CP West Diamond	CP Mission	15	15
CP Mission	CP Terminal	25	15
CP Terminal	LAUPT End of Track	15	15

Maximum Speeds - Other Tracks and Turnouts:

Track	Psg.	Frt.
CP Dayton East Bank Line connections	30	20
CP Dayton East Bank Line crossover	40	30
CP Main Street crossover	25	25
CP Pasadena Jct. crossovers	27	20
CP Ninth Street crossovers	40	30
Northeast Connecting Track CP Main Street - CP Yuma Jct.	20	20
San Gabriel Connecting Track CP Pasadena Jct. - CP Mission	15	15
Northwest Connecting Tracks CP Chavez - CP Mission	15	15
Southwest Connecting Track CP San Diego Jct. - CP Mission	15	15
CP Mission crossovers	25	15
CP Terminal crossovers	15	15
CP Olympic crossover	45	40
All other tracks and turnouts	15	15

SCRRA (Metrolink) River Subdivision

Designation of Multiple Main Tracks:

East Bank Line

Two Main Tracks between CP Dayton and UP Soto St. Jct. are designated from north to south as Main Track 1 and Main Track 2.

West Bank Line

Two Main Tracks between west limits CP Taylor and east limits CP Chavez are designated from north to south as Main Track 1 and Main Track 2.

Single track between CP Chavez and CP San Diego Jct.

Two Main Tracks between CP San Diego Jct. MP 140.2 and BNSF Soto are designated from north to south as Main Track 1 and Main Track 2.

Northwest Connecting Track

Two Main Tracks between CP Chavez and CP Mission are designated from south to north as Main Track 3 and Main Track 4.

Los Angeles Union Station

Five Main Tracks between CP Terminal and end of track LAUS are designated from north to south as Station Tracks 1 to 5.

The main track designations on the East Bank Line and the West Bank Line on Run 8 Map do not match SCRRA real world designations.

Los Angeles Union Station has six platforms and 16 main tracks in the real world (station tracks and runaround tracks are designated main tracks).

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Rule 6.13 Yard Limits

In effect on Station Tracks 1-5 and the runaround tracks at Los Angeles Union Station. All movements must be made at restricted speed

Station Tracks (measured from WBCS CP Terminal)

1 1,539 feet

2 1,544 feet

3 1,730 feet

4 1,730 feet

5 1,740 feet

The runaround tracks are 1,250 feet long.

Amtrak Long Distance Trains • Los Angeles Union Station				
No.	Name	Arrives	Departs	Days
1	Sunset Limited	5.35 am	---	Mo We Sa
3	Southwest Chief	8.12 am	---	Daily
14	Coast Starlight	---	9.51 am	Daily
4	Southwest Chief	---	4.55 pm	Daily
11	Coast Starlight	9.11 pm	---	Daily
2	Sunset Limited	---	10.00 pm	Su We Fr

RUN 8 TRAIN SIMULATOR FORMS

SoCal Form A/B/Crossing Warning

12.14.20

FORM A									
		To:						Date:	
Number	Subdiv	Limits		Speed MPH		Track(s)	Flags At		
		MP	to MP	Psg	Frt		MP	MP	
							N/A	N/A	
Comments:									
OK DISPR									

FORM A									
		To:						Date:	
Number	Subdiv	Limits		Speed MPH		Track(s)	Flags At		
		MP	to MP	Psg	Frt		MP	MP	
							N/A	N/A	
Comments:									
OK DISPR									

FORM B									
		To:						Date:	
Subdivision	Limits	Time/Date	Tracks(s)	Flags At	Foreman/Gang	Stop			
						MP	REQUIRED		
	MP	N/A		N/A					
	MP	N/A		N/A					
Comments:									
OK DISPR									

CROSSING WARNING NOTIFICATION

Subdiv:		Date:	
1.	☐	Automatic crossing warning device activation failure or disabled at . Stop and protect movement even if devices are seen to be working. Proceed per Rule 6.32.2, Procedure 1.	
2.	☐	Automatic crossing warning device false or partial activation at . Stop and protect movement, unless devices are seen to be working or otherwise instructed. Proceed per Rule 6.32.2, Procedure 2.	
3.	☐	Passive crossing warning device damaged or missing at . Stop and protect movement. Proceed per Rule 6.32.2, Procedure 3.	

MOVEMENT PROCEDURES

GCOR Rule 6.32.2

Procedure 1	Procedure 2	Procedure 3
<i>Crew is notified of an automatic crossing warning system activation failure or devices are disabled:</i>	<i>Crew is notified of an automatic crossing warning system false or partial activation:</i>	<i>Crew is notified of passive warning device (cross-bucks, stop signs, etc.) damaged or missing:</i>
Stop before fouling the crossing After a crew member is on the ground at the crossing to warn traffic, proceed over the crossing as directed by that crew member.	• Stop before fouling the crossing • After a crew member is on the ground at the crossing to warn traffic, proceed over the crossing as directed by that crew member; or if devices are seen to be working or when instructed by the train dispatcher or proper authority, proceed over the crossing not exceeding 15 MPH without stopping until the head end of the train completely occupies the crossing. • The train may then proceed.	• Stop before fouling the crossing • After a crew member is on the ground at the crossing to warn traffic, proceed over the crossing as directed by that crew member.

INSTRUCTIONS / EXAMPLES

FORM A - EXAMPLE

Example: D26 is informed of a NEW Form A restriction from a Track Inspector.

- ☐ Restriction Number: **1001**
- ☐ Subdivision: **Bakersfield**
- ☐ Limits (MP to MP): **891.9 to 892.1**
- ☐ Speed required for Passenger & Freight: **50/30**
- ☐ Track(s): **MAIN 1**

FORM A		To: <i>BNSF 5469 West</i>		Date: <i>12/06/20</i>				
Number	Subdiv	Limits		Speed MPH		Track(s)	Flags At	
		MP	to MP	Psg	Frt		MP	MP
<i>1001</i>	<i>Bakersfield</i>	<i>891.9</i>	<i>892.1</i>	<i>50</i>	<i>30</i>	<i>MAIN 1</i>	N/A	N/A
Comments:								
OK <i>1305</i> DISPR <i>HBD</i>								

Form A - Verbiage Example

DS: "DS 26 calling BNSF 5469 West, over."

Train: "BNSF 5469 West answering, over."

DS: "I have a Form A restriction for you to copy. Can I get your Name, Title, Location when you're ready to copy, over."

Train: "Conductor Briskey, Milepost 885.0, ready to copy, over."

DS: "This is verbally issued Form A Restriction 1001, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.9 & MP 892.1, speed for Passenger 50mph, speed for Freight 30mph, on Main Track 1, over."

Train: "Form A Restriction 1001, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.9 & MP 892.1, speed for Passenger 50MPH, speed for Freight 30MPH, on Main Track 1, over."

DS: "Show verbally issued Form A Restriction 1001 OK at 1305, 1-3-0-5, HBD, over."

Train: "Verbally issued Form A Restriction 1001 OK at 1305, 1-3-0-5, HBD, over."

DS: "That is correct. DS out."

FORM B - EXAMPLE

Example: D26 is informed of a NEW Form B restriction from a MOW Foreman.

- ☐ Restriction Number: **6002**
- ☐ Subdivision: **Bakersfield**
- ☐ Limits (MP to MP): **891.1 to 892.3**
- ☐ Track(s): **MAIN 1 & MAIN 2**
- ☐ Employee in Charge: **BRISKEY**

FORM B		To: BNSF 5469 West		Date: 12/06/20		
No. 6002	Limits	Time/Date	Tracks(s)	Flags At	Foreman/Gang	Stop
Subdivision	MP 891.1	N/A	MAIN 1	N/A	BRISKEY	REQUIRED
Bakersfield	MP 892.3	N/A	MAIN 2	N/A		
Comments:				OK	1458	DISPR HBD

Form B - Verbiage Example

DS: "DS 26 calling BNSF 5469 West, over."

Train: "BNSF 5469 West answering, over."

DS: "I have a Form B restriction for you to copy. Can I get your Name, Title, Location when you're ready to copy, over."

Train: "Conductor Smith, Milepost 885.0, ready to copy, over."

DS: "This is verbally issued Form B Restriction 6002, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.1 & MP 892.3, Tracks, Main 1, and Main 2, Employee in Charge Briskey, over."

Train: "Form B Restriction 6002, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.1 & MP 892.3, Tracks, Main 1, and Main 2, Employee in Charge Briskey, over."

DS: "Show verbally issued Form B Restriction 6002 OK at 1305, 1-4-5-8, HBD, over."

Train: "Verbally issued Form B Restriction 6002 OK at 1305, 1-4-5-8, HBD, over."

DS: "That is correct. DS out."

CROSSING WARNING NOTIFICATION - EXAMPLE

Example: D26 is informed of a NEW Crossing Malfunction at Reina Rd. Milepost 896.8 on Bakersfield Subdivision.

CROSSING WARNING NOTIFICATION	
Subdiv: Bakersfield	Date: 12/06/20
1. ☒	Automatic crossing warning device activation failure or disabled at <u>Reina Rd, Milepost 896.8</u> . Stop and protect movement even if devices are seen to be working. Proceed per Rule 6.32.2, Procedure 1.
2. ☐	Automatic crossing warning device false or partial activation at _____. Stop and protect movement, unless devices are seen to be working or otherwise instructed. Proceed per Rule 6.32.2, Procedure 2.
3. ☐	Passive crossing warning device damaged or missing at _____. Stop and protect movement. Proceed per Rule 6.32.2, Procedure 3.

Crossing Warning Notification - Verbiage Example

DS: "DS 26 calling BNSF 5469 West, over."

Train: "BNSF 5469 West answering, over."

DS: "I have a crossing restriction for you to copy. Can I get your Name, Title, Location when you're ready to copy, over."

Train: "Conductor Briskey, MP 885.0, ready to copy, over."

DS: "Crossing Warning Notification, addressed to the BNSF 5469 West, X in Box 1, O-N-E, Automatic crossing warning device activation failure or disabled at **Reina Rd, Milepost 896.8**. Stop and protect movement even if devices are seen to be working. Proceed per rule 6.32.2, Procedure 1, over."

Train: "Crossing Warning Notification, addressed to the BNSF 5469 West, X in Box 1, O-N-E, Automatic crossing warning device activation failure or disabled at **Reina Rd, Milepost 896.8**. Stop and protect movement even if devices are seen to be working. Proceed per rule 6.32.2, Procedure 1, over."

DS: "That is correct, over."

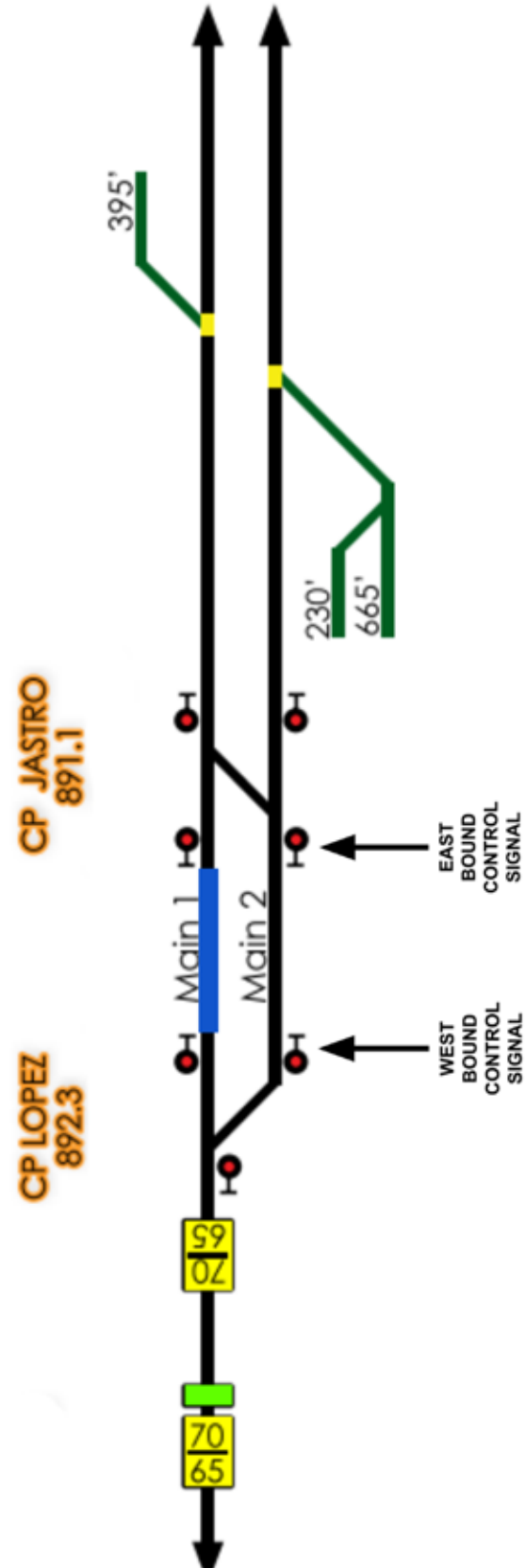
Train: "Correct on the repeat, thank you, out."

WBSCS West Bound Control Signal EBSCS East Bound Control Signal NBSCS North Bound Control Signal SBSCS South Bound Control Signal		WSS West Siding Switch ESS East Siding Switch NSS North Siding Switch SSS South Siding Switch		WE West End EE East End NE North End SE South End		XO Crossover WYO West Crossover EYO East Crossover	
Name (Last):		Vehicle Number:		Date:		Form	
						12.14.20	
Repeat as follows: For (name), authority (number), granted (behind _____), on (track), between (point), switch (yes/no), and point, switch (yes/no), (joint), until (time).							
Track Limits Authorized							
Authority	Conditions of Authority	Track(s)	Between (Beginning Location)	Switch Included	And (Ending Location)	Switch Included	Joint Status
Behind:							Joint
							Joint
Behind:							Joint
							Joint

Authority behind Trains		Train ID (Engine initials, engine number and direction)	Milepost location	Time Contacted
• Record train MP location provided by crew member. • After verifying MP location, state the following "Please inform me before making any stop or backup movements." • Record time briefing was completed.				

INSTRUCTIONS / EXAMPLES

Example: Track Inspector Briskey wants to inspect track between CP Lopez and CP Jastro on Main 1 behind the BNSF 5469 (West) on the Bakersfield Subdivision.



****This is how Track & Time form will look AFTER it's filled out. First Authority. Extension. Released.**

Name (Last): Briskey		SoCal MOW Authority to Occupy Track (Track & Time) In CTC Territory Rule 10.3, in ABS Territory Rule 9.15 or in Rule 17.0 Foul Time		Date: 12/06/20	Vehicle Number: 21269		Form 12.14.20			
Repeat as follows: For (name), authority (number), granted (behind _____), on (track), between (point), switch (yes/no), and point, switch (yes/no), (joint), until (time).										
Authority	Conditions of Authority	Track(s)	Between (Beginning Location)	Switch Included	And (Ending Location)	Switch Included	Joint Status	Time Limits Authorized	OK Time/ DS Initials	Time Authority Released
8321	Behind: BNSF 5469 West	MT SDG Main 1 Main 2	WSS WE ESS EE NCS NE SSS SE EXO EXO	Yes No	WSS WE ESS EE NCS NE SSS SE EXO EXO	Yes No	Joint	Until: 1410 Extended To: 1450	1310 H8D 1403 H8D	1429
Authority behind Trains		Train ID (Engine initials, engine number and direction)							Time Contacted	
• Record train MP location provided by crew member.		BNSF 5469 West							1312	
• After verifying MP location, state the following "Please inform me before making any stop or backup movements."										
• Record time briefing was completed.										

Requesting Authority to Occupy Main - Verbiage Example

Track Inspector: "Track Inspector Briskey calling DS 26, over."
DS: "Go ahead Track Inspector Briskey, over."
Track Inspector: "Yes, I would like to request authority on Main 1 between CP Lopez and CP Jastro to inspect the track, over."
DS: "Understand. Are you ready to copy, over?"
Track Inspector: "Yes, Track Inspector Briskey with Vehicle Number 21269 is ready to copy, over."
DS: "Authority 8321, Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No. and EBSC Jastro, Switch No, Until 1410, over."
Track Inspector: "Understand, Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No. and EBSC Jastro, Switch No, Until 1410, over."
DS: "1310, Dispatcher HBD, over."
Track Inspector: "1310, Dispatcher HBD, over."
DS: "That is correct DS out."

****Since the Dispatcher said "Behind BNSF 5469 West", the Track Inspector must wait for that train to clear where he/she sets-on the track.**

****Track Inspector must also contact BNSF 5469 West and ask for their headend Milepost Location, and confirm they will inform the Track Inspector before stopping or making any reverse movements.**

****Joint is only used for MOW employees sharing authority with other MOW employees.**

Contacting Train with Joint Authority - Verbiage Example (If Joint Authority)

Track Inspector: "Track Inspector Briskey calling BNSF 5469 West, over."
Train: "Go ahead Track Inspector Briskey, over."
Track Inspector: "BNSF 5469, I'll be setting on behind you. What is your headend milepost location, over."
Train: "Our headend is at MP 892.0, over."
Track Inspector: Copy, MP 892.0 Please inform me before making any stop or backup movements, over."
Train: "Understand, we will let you know before making any stop or backup movements, over"
Track Inspector: "Thank you, out"

****At this time, the Track Inspector can record the headend Milepost Location of the train and time contact was established.**

When the Track Inspector (1) needs an extension of time or, (2) is done inspecting the specified limits AND has taken his/her truck off the rails, he/she will contact the Dispatcher to release authority. ****Either of these must be done before authority time ends****

Time Extension - Verbiage Example

Track Inspector: "Track Inspector Briskey calling DS 26, over."
DS: "Go ahead Track Inspector Briskey, over."
Track Inspector: "Yes, I would like to request an extension of time on Authority 8321, over."
DS: "Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBSC Jastro, Switch No, Extended To: 1450, over."
Track Inspector: "Understand, Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBSC Jastro, Switch No, Extended To: 1450, over."
DS: "1403, Dispatcher HBD, over."
Track Inspector: "1403, Dispatcher HBD, over."
DS: "That is correct. DS out."

Releasing Authority - Verbiage Example

Track Inspector: "Track Inspector Briskey calling DS 26, over."
DS: "Go ahead Track Inspector Briskey, over."
Track Inspector: "Yes, I am ready to release Authority 8321, over."
DS: "Authority 8321 displayed, over."
Track Inspector: "Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBSC Jastro, Switch No, Extended To: 1450, Released at 1429, over." (For added realism, you may also add "All work groups, employees and myself are clear of the track.")
DS: "Understand, Track Inspector Briskey, on 12/04/20, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBSC Jastro, Switch No, Extended To: 1450, Released at 1429, over." ("Everyone is clear of the track.")
Track Inspector: "That is correct. Thank you Dispatcher. Track Inspector Briskey out."
DS: "Thank you. DS out."

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Created By: Kyler Briskey

Appendix A - Track Flagging Examples

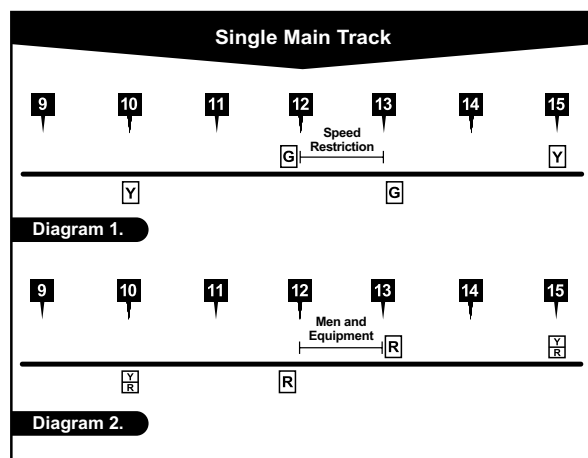
The figures in the appendix provide examples for protecting temporary speed restrictions and people or equipment working on or near the track. When reviewing these examples, keep in mind the following:

- The examples provided do not cover every situation.
- The distances shown are those specified by rule.

Yellow and yellow-red flags will be displayed on all main tracks and sidings leading to the track affected. Yellow and yellow-red flags will be placed 2 miles before each restriction with the exception of at foreign line junctions, areas where flags cannot be placed 2 miles in advance and in certain situations at crew change points.

In multiple Main Track territory, when a restriction is placed on a crossover, or in single Main Track territory when a restriction is placed on a turnout not affecting the Main Track, no track flags will be displayed after the restriction is specified by track bulletin or track warrant. This information must be included on the track bulletin or track warrant.

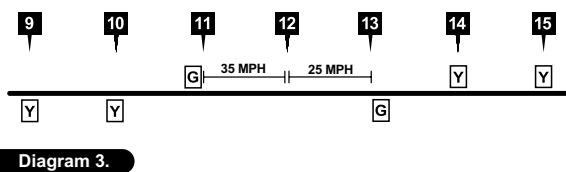
In situations in multiple Main Track or at sidings, when a train passes a yellow or yellow-red flag and a restriction is specified 2 miles in advance on track bulletin or track warrant, if the train takes a different route from the restricted track, this will not be considered as an unspecified restriction. Crew members must determine the track affected by comparing the flag location with the information contained in the track bulletin.



Display of Green Flags with Overlapping Yellow Flags

Track flagging for temporary speed restrictions when a series of locations requiring reduced speeds are so closely spaced that the green flags will overlap the yellow flags.

Only one green flag will be placed at the leaving end of the last location.



Single Main Track (Sidings at the 2-mile point)

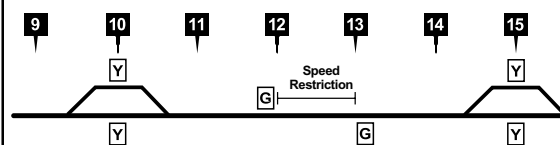


Diagram 4.

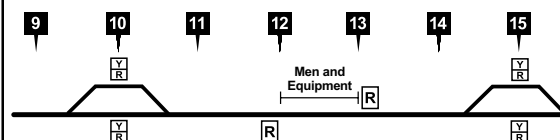


Diagram 5.

Restriction on Siding

Speed restrictions on sidings will be short flagged. Location of short flag must be indicated in track bulletin or track warrant.

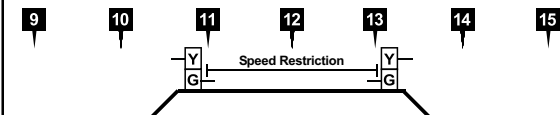


Diagram 6.

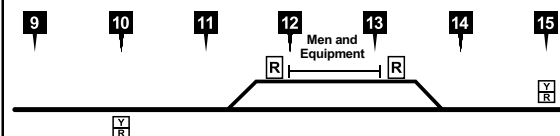


Diagram 7.

Train crews would determine the track affected by the information contained in their track bulletin.

Speed Restriction on Main Track Where Siding is Adjacent

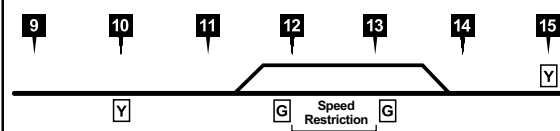


Diagram 8.

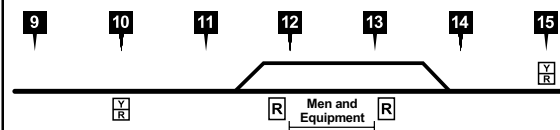
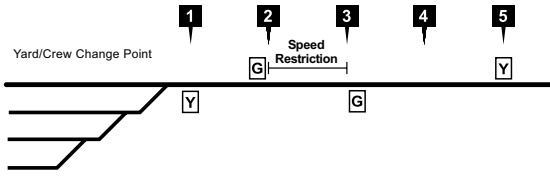


Diagram 9.

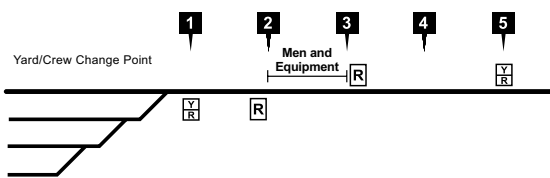
Train crews would determine the track affected by the information contained in their track bulletin.

Speed Restriction When Flag Cannot Be Placed 2 Miles in Advance

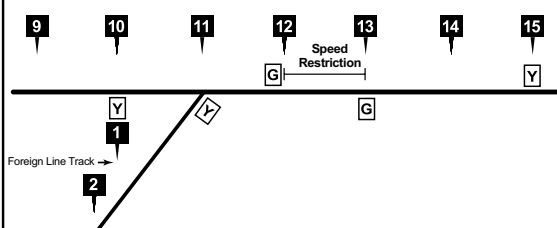
Location of short flag must be indicated in track bulletin or track warrant.

**Diagram 10.****When Flag Cannot Be Placed 2 Miles in Advance of Men and Equipment**

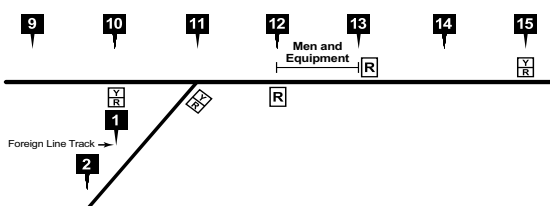
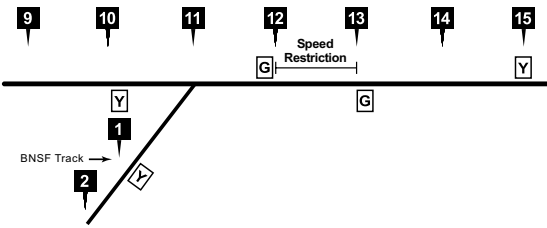
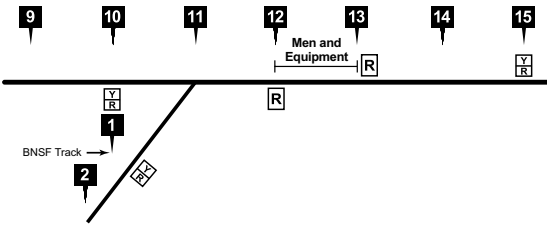
Location of short flag must be indicated in track bulletin or track warrant.

**Diagram 11.****Speed Restriction at Foreign Line Junction**

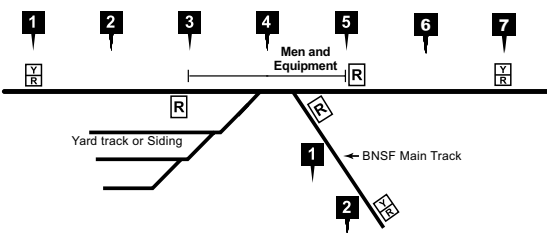
Location of short flag must be indicated in track bulletin or track warrant.

**Diagram 12.****Foreign Line junction Near Men and Equipment**

Location of short flag must be indicated in track bulletin or track warrant.

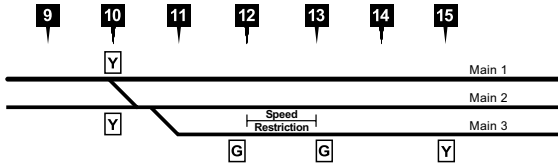
**Diagram 13.****Speed Restriction at BNSF Junction****Diagram 14.****BNSF Junction Near Men and Equipment****Diagram 15.****Men and Equipment with Junction and Intervening Switch**

Red flags at the limits of Form B and Main Track junctions within the limits.

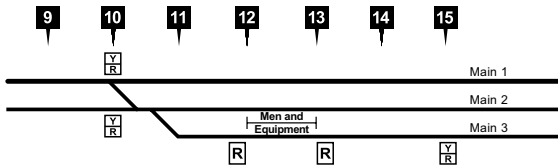
**Diagram 16.**

Speed Restriction Just Beyond Turnout to Third Main Track

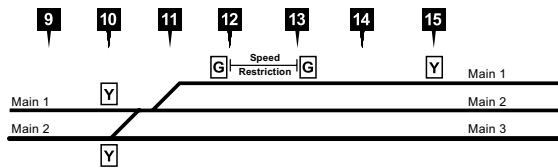
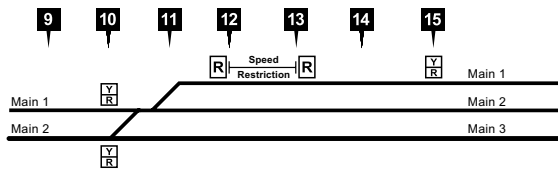
Train crews would determine the track affected by the information contained in their track bulletin.

**Diagram 17.****Men and Equipment just Beyond Turnout to Third Main Track**

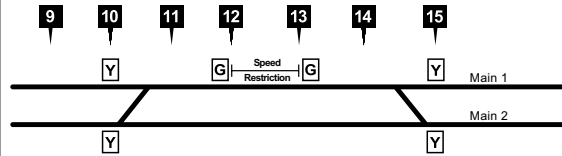
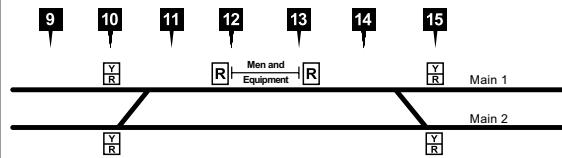
Train crews would determine the track affected by the information contained in their track bulletin.

**Diagram 18.****Speed Restriction Just Beyond Turnout to Main 1**

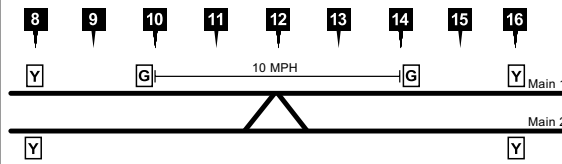
Train crews would determine the track affected by the information contained in their track bulletin.

**Diagram 19.****Men and Equipment Just Beyond Turnout to Main 1****Diagram 20.****Speed Restriction on Multiple Main Track**

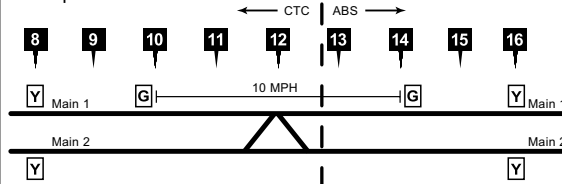
Train crews would determine the track affected by the information contained in their track bulletin.

**Diagram 21.****Men and Equipment on Multiple Main Track****Diagram 22.****Speed Restriction on Main 1 (CTC Territory)**

Yellow flags are placed 2 miles from the point of the restriction on both tracks because crews determine the track affected by comparing yellow flag with information on their track bulletin.

**Diagram 23.****Speed Restriction on Main 1 (CTC and ABS Territory)**

Yellow flags are placed 2 miles from the point of the restriction on both tracks. When a restriction, or flags placed for a restriction, includes both CTC and DT ABS, flags will be placed in accordance with rules for flag placement in multiple main track CTC.

**Diagram 24.**

BNSF TRACK FLAG EXAMPLES

Speed Restriction on Multiple Main Tracks (3 or More Main Tracks)

Train crews would determine the track affected by the instruction contained in their track bulletin.

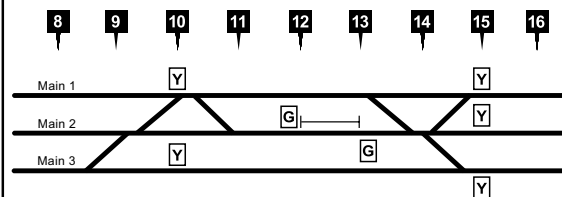


Diagram 25.

Men and Equipment on Multiple Main Tracks (3 or More Main Tracks)

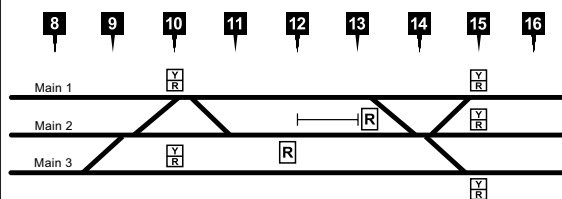


Diagram 26.

Appendix A

California Division Track Flagging Examples

The figures in this appendix provide examples for protecting temporary speed restrictions on turnouts, sidings and crossovers that do not affect Main Track movements. These flag placement requirements must be used on the California Division supplemental to the flag placement requirements located in BNSF System Special Instructions. When reviewing these examples, keep in mind the following:

- The following examples are additional flagging requirements applicable only on the California Division.
- The examples provided do not cover every situation.
- These examples apply for temporary speed restrictions that are scheduled for repair 24 or more hours after restriction placed.
- The distances shown are those specified by rule.

Place yellow flags two miles in advance of the restricted turnout or crossover:

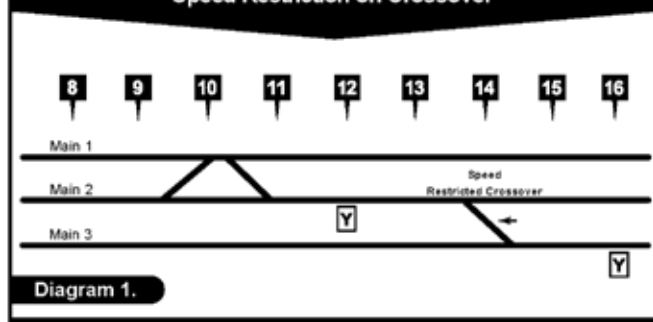
- only on the tracks to which the turnout or crossover is directly connected; and,
- only for the direction where a movement could potentially negotiate the turnout or crossover.

For restrictions on turnouts or crossovers yellow flags may be placed less than two miles in advance if there is an intervening track within two miles of the restriction. List the location of short flags in the Track Bulletin Form A. No yellow flags are placed for movements in the opposite direction.

For restrictions on a siding between siding turnouts place yellow flags two miles in advance of restriction.

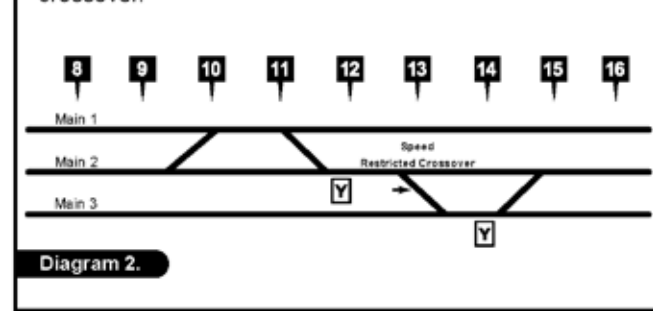
In these scenarios, no green flags are displayed.

Speed Restriction on Crossover



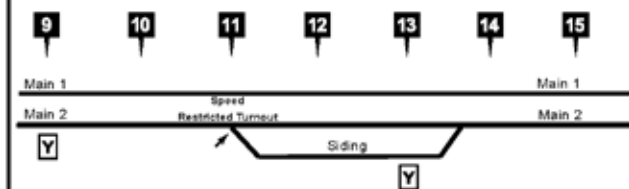
Speed Restriction on Crossover

Intervening tracks less than 2 miles from restricted crossover.



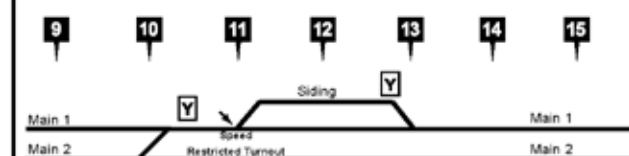
Speed Restriction on Siding Turnout

Yellow flag on field side of siding.



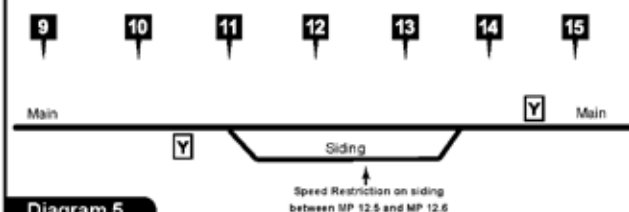
Speed Restriction on Siding Turnout

Intervening tracks less than two miles from restricted turnout. Place yellow flag maximum distance on siding from the restriction.



Speed Restriction on Siding

Yellow flags two miles in advance.



RUN 8 KEYBOARD COMMANDS

AIR BRAKES		
Bleed Air Brakes	L CTR F7	Bleeds air brakes all cars
BP Recharge Cheat	F7	Reset all angle cocks and re-charge all brake components
Brake Type	L ALT B	Toggle AB type frt. / psgr.
Emergency	L CTR Backspace	
Emergency Brake EOT	L CTR F11	EOT dump air at rear of train
Independent Apply	Page Up	
Independent Bail	Period	
Independent Full	R CTR Page Up	
Independent Off	R CTR Page Down	
Independent Release	Page Down	
Train Brake Apply	Home	
Train Brake Apply Suppression	R CTR	
Train Brake Release	End	
Train Brake Release Full	R CTR End	
AVATAR		
Avatar Tags	L ALT F8	Show/hide player names
Backward	S	Back normal speed
	L SHIFT S	Back increased speed
	L CTR S	Back high speed
Bow	2	Avatar bows
Down	Q	Down normal speed
	L SHIFT Q	Down increased speed
	L CTR Q	Down high speed
Forward	W	Back normal speed
	L SHIFT W	Back increased speed
	L CTR W	Back high speed
Left	A	Back normal speed
	L SHIFT A	Back increased speed
	L CTR A	Back high speed
Right	D	Back normal speed
	L SHIFT D	Back increased speed
	L CTR D	Back high speed
Up	E	Back normal speed
	L SHIFT E	Back increased speed
	L CTR E	Back high speed
Wave	1	Avatar waves
To activate high speed avatar (free fly) press L SHIFT F12		

DISPATCH		
Dispatch Screen	F3	Toggles DS screens
Exit	Escape	Close DS screen
Next DS Screen	R Arrow	
Previous DS Screen	Left Arrow	
Screen Brighter	Equals	
Screen Dimmer	Minus	
DISTRIBUTED POWER		
Dynamic Brake Setup	L Shift Divide	
Fence Decrease	L Shift L Bracket	DB fence closer to front of the train
Fence Decrease	L Shift R Bracket	DB fence closer to the rear of the train
Throttle Decrease	L Shift Semi Colon	
Throttle Increase	L Shift Apostrophe	
GENERAL		
AI Trains Menu	L Shift F2	
Attach Point	F11	Hold down F11 then left click locomotive
Car Tags	L CTR F8	Toggles off/unit number/destination tag
Consist Editor	L CTR	
Exit	Escape	Close any menu
Flashlight	F	Flashlight on/off
Fullscreen	L Shift F4	
Hailing	Tab	Text chat in multiplayer
Hide Messages	L CTR Tab	
Horn Menu	L CTR F3	Customize horn and bell
Humping Options	L CTR F6	Hump controller menu
Industry Editor	L CTR I	
Industry List	L CTR L	
Industry Tags	R CTR F8	Toggles industry tags
Load / Save Menu	F1	
MOW Window	F6	
MP Tags	L Shift F8	Toggle mile post tags
Network Menu	F2	
Options Menu	F1	
Parking Brake	L Shift F5	Apply hand brakes to all rail units in train
Parking Brake Release	F5	Release hand brakes to all rail units in train
Pause	Pause	
Reset Terrain	F10	Resets all surrounding terrain tiles
Screen Shot	F8	

RUN 8 KEYBOARD COMMANDS

GENERAL		
Show Window Border	F4	Toggles window border
Switch List	R CTR L	
Track Bulletin Window	L CTR F2	
Transport To Switch	Space	
User Notes	L ALT F1	
HUD		
Coupler Brakes	L Shift B	
Engine	L Shift C	
Sim	L Shift X	
Toggle	L Shift Z	
Track	L Shift N	
Train	L Shift Z	
LOCOMOTIVE CONTROLS		
Alerter Reset	R ALT	Reset cab alerter
Bell	Decimal	Locomotive bell on/off
Cabin Light Switch	L	Toggle light in cab
CB Engine Run	L ALT 1	Toggle eng run circuit breaker
CB Gen Field	L ALT 2	Toggle gen field circuit breaker
CB Control	L ALT 3	Toggle control circuit breaker
CB Dynamic Brake	L ALT 4	Toggle DB circuit breaker
Change Control RV	R ALT F11	Change controlling unit
Distance Counter Down	R Shift Multiply	
Distance Counter Up	Multiply	
Dynamic Setup	Divide	
Gauge Light Switch	R ALT L	
Headlight Front Down	L Shift H	
Headlight Front Up	H	
Headlight Rear Down	L Shift J	
Headlight Rear Up	J	
Horn	Space	
Radio Channel Down	L CTR T	Can also be set using mouse
Radio Channel Up	L CTR V	Can also be set using mouse
Reverser Decrease	Delete	
Reverser Increase	Insert	
Sander	Num Pad 0	Toggles sanders on/off
Slow Speed Control	L CTR C	Used in hump operation
Step Light Switch	R Shift L	Toggles step lights
Throttle Decrease	Subtract	
Throttle Increase	Add	
Traction Motor 1	R Shift 1	Toggles TM 1 on/off
Traction Motor 2	R Shift 2	Toggles TM 2 on/off
Traction Motor 3	R Shift 3	Toggles TM 3 on/off
Traction Motor 4	R Shift 4	Toggles TM 4 on/off

LOCOMOTIVE CONTROLS		
Traction Motor 5	R Shift 5	Toggles TM 5 on/off
Traction Motor 6	R Shift 6	Toggles TM 6 on/off
Wiper Control	V	
MFD		
MFD1 Page Decrease	L ALT Z	
MFD1 Page Increase	L ALT A	
MFD2 Page Decrease	L ALT X	
MFD2 Page Increase	L ALT S	
MFD3 Page Decrease	L ALT C	
MFD3 Page Increase	L ALT D	
MFD4 Page Decrease	L ALT V	
MFD4 Page Increase	L ALT F	
MFD Brighter	Equals	
MFD Dimmer	Minus	
MFD Page Decrease	X	Current MFD
MFD Page Increase	C	Current MFD
MFD Select	Z	Toggles current MFD
VIEWS		
Cab View Backward	Down Arrow	
Cab View Decrease	L Shift F11	
Cab View Forward	Up Arrow	
Cab View Increment	R Shift F11	Moves to next attach point
Cab View Left	Left Arrow	
Cab View Right	Right Arrow	
Camera Free Fly	L Shift F12	Enter "free fly" mode
Camera Ground	F12	Exit "free fly" mode
Camera Tracking	4	
Default Cab Position	P	Seat default position
Engineer Head Out Forward	R CTR Up	
Engineer Head Out Reverse	R CTR Down	
EOT	L CTR F12	
Load View 1	L CTR 1	
Load View 2	L CTR 2	
Load View 3	L CTR 3	
Load View 4	L CTR 4	
Load View 5	L CTR 5	
Quick Zoom	R ALT Up	
Reset Zoom	R ALT Down	
Save Cab Cam Position	R CTR P	
Save View 1	L Shift 1	
Save View 2	L Shift 2	
Save View 3	L Shift 3	
Save View 4	L Shift 4	
Save View 5	L Shift 5	