

SOUTHERN PACIFIC COMPANY



TUCSON DIVISION SPECIAL INSTRUCTIONS

No. 7

EFFECTIVE SUNDAY, JULY 28, 1957

AT 12:01 A. M.,

MOUNTAIN STANDARD TIME

SUPERSEDING SPECIAL INSTRUCTIONS No. 6

THESE INSTRUCTIONS CONSTITUTE A PART
OF THE TIMETABLE CURRENTLY IN
EFFECT

W. D. LAMPRECHT,
General Manager.

E. D. MOODY,
J. A. McKINNON,
Assistant General Managers.

C. H. GRANT,
General Superintendent of
Transportation.

J. M. HATCHER,
Superintendent of Transportation.

G. A. BAYS,
Superintendent.

©This symbol indicates change, except changes on
rating of engines pages are not so indicated.

○**RULE A.** Transportation Department rule revisions from December 1, 1951 to and including April 1, 1957 are shown on pages 1 and 2 of the Rules and Regulations of the Transportation Department. Employees must have revised pages covering these revisions in their copy of the Rules and Regulations of the Transportation Department.

RULE M. Employees are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employees must be familiar with their location and avoid personal injury.

RULE 10-J. Speed signs prescribing an increase in speed will not be installed on branches. Speed Restrictions tables will indicate permissible speeds between mile post locations named.

○**RULE 19.** Certain passenger cars have supplemental roof-line markers in addition to side electric markers. When such cars are on rear of train, the supplemental markers must be lighted by day as well as by night and duplicate the display to the rear of side electric markers.

Permanently installed electric marker lights located on top of cabooses must be lighted by day as well as by night to be considered as markers and within block system limits will display only one red light to the rear, except when train is turned out or running against the current of traffic on double track one red light and one green light to the rear will be displayed. Outside of block system limits one red light to the rear will be displayed, except when train is clear of main track to be passed by another train one green light to the rear will be displayed. Lights must be extinguished when train arrives at destination and has stopped clear of main track. Indications shown in Figures 1 to 8 will not apply.

Figure 7 is revised to read:

"Rear of Train by Night When on Siding To Be Passed by Another Train, Outside of Block System Limits."

○**RULE 19-A.** Is revised to read:

"Outside of block system limits, when markers display red lights to the rear at night, it is an indication that the main track is obstructed. A following train must approach with caution, and if the rear of train is clear of main track, it may proceed with caution to the point where the main track may be obstructed."

RULE 283. Movements governed by semaphore type diverging route signals displaying "Proceed on Diverging Route", Figs. A and B, must be made with caution.

RULES 281 and 285. Movements against the current of traffic governed by semaphore type dwarf signals displaying "Proceed", Fig. E, Rule 281; or by light type dwarf signals displaying "Proceed not Exceeding Medium Speed", Fig. G, Rule 285, must be made with caution and position of switches observed.

○**RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM**

PUSH BUTTONS

Where signal protection is provided for movements from an adjacent track to main track, push buttons and pilot lights are installed in box near each of the two signals, with time-release feature, to clear signals on one track when the control circuit on the other track is occupied. Within interlocking limits signal operator's permission must also be obtained before lock box door is opened.

Train on main track to let train on siding pass may clear signal on siding by pressing button bearing number of signal on siding. Train on siding to let train on main track pass should not pass Approach Circuit sign, but when necessary to do so, may clear signal on main track by pressing button bearing number of signal on main track.

Further instructions posted inside push button box.

ELECTRIC SWITCH LOCKS

Where electric switch locks are installed, lock box door must not be opened if movement is to be made into a track leading from main track until engine or car is standing within 150 feet of the switch; or if movement is to be made from such track, or through a crossover to a main track, until block indicator indicates block clear on opposite track.

After lock box door is opened lock lever cannot be moved to opposite position to release switch for hand throwing until indicator in lock box indicates "unlocked".

Lock lever must not be returned to locked position until all movements over the switch are completed, switch returned to normal position and locked.

When block indicators indicate "block occupied", instructions posted inside lock box for operation of push button to start time-release must be complied with if movement is to be made to main track while approach circuit is occupied by another train, in addition to providing flag protection when necessary.

Low type electric locks, such as are applied direct to lever of hub type switch stands, function as above except that the removal of the switch lock has the same effect as opening the lock box door. Instead of being equipped with an "unlocked" indicator, these locks have a pilot light that indicates by illumination when the lock is unlocked.

When pilot light will not illuminate to indicate electric lock is unlocked, push button on adjacent cast iron box, protected with cover and locked with switch lock, should be depressed to illuminate green light. After a time interval of from one to seven minutes pilot light on electric lock will be illuminated, indicating lock is unlocked.

Emergency lock release is to be used only in case of electrical or mechanical failure, as indicated by failure of time-release to function after several minutes. When necessary to break seal on emergency lock release, train dispatcher's or signal operator's permission must first be obtained, and movement made only after flag protection provided on both tracks.

MECHANICAL SWITCH LOCKS

After lock box door is opened lock lever may be moved upward against stop. After a time interval of from one to seven minutes indicator will show UNLOCKED and lever may be moved to reverse position "R". Switch may then be operated in usual manner.

Lock lever must not be returned to normal position "N" until all movements over the switch are completed and switch returned to normal position and locked.

Emergency lock release is to be used only in case of mechanical failure, as indicated by failure of time release to function after several minutes. When necessary to break seal on emergency release, train dispatcher or signal operator must be notified immediately and movement made only after necessary flag protection is provided.

GENERAL REGULATIONS

RULE 825. Instructions for setting hand brakes:

At points where hand brakes must be set on freight trains such brakes must be securely set, using standard brake club to set staff brakes, after train or cut has stopped, unless yardmen immediately take charge and yard engine is coupled to cars. Any employee releasing any of these brakes must set as many others to replace them.

○**RULE 836.** When necessary to shove cars ahead of engine between stations on descending grade, cars must be chained to the engine unless air brakes are operative on all cars and air cut in.

AIR BRAKE RULES

○**RULE 3.** On engines of DP-5, 6, 8, 9, 10 and 11 classes the safety valve in the discharge pipe must be set at 185 pounds. Standard brake pipe pressure on AON, is 90 pounds.

RULE 13. Should all power units of an engine running light or while handling train become inoperative on a grade, light engine or train, after stopping, must be immediately secured with hand brakes and engine wheels secured by blocking or chains.

○**RULE 17.** Trains handled by DF-120 to 126 class engines must not use more than three units of dynamic brakes. Dynamic brake cable must be removed between third and fourth units in direction of movement and unit selector switch on lead unit placed in No. 3 position.

○**RULE 22.** Terminal test outlined in this rule, after having been made at originating terminal on through freight trains, will not be made at intermediate terminals Tucson, Gila and Yuma, except when cars are added to the consist. Instead test will be made as outlined in Air Brake Rule 25—Rear end test. Changing crews, caboose, and/or engine, will not necessitate terminal test outlined under Air Brake Rule 22.

○**RULE 25.** After terminal test outlined in Air Brake Rule 22 has been made at originating terminal, rear end test outlined in Air Brake Rule 25 will be made at intermediate terminals Tucson, Gila and Yuma on freight trains moving through without cars being added to the consist or on which only crews, caboose and/or engines, may be changed. Under these conditions, rolling inspection by car inspectors or trainmen will be made on freight trains arriving and leaving the intermediate terminal.

MISCELLANEOUS

○**5.** Helper service:

- Helper engines must not be placed behind wooden underframe equipment.
- Helper engines consisting of not more than two units may be placed behind caboose.
- Helper engines consisting of not more than four units may be placed immediately ahead of caboose.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

27. Should a passenger train be stopped in a tunnel, air conditioned cars within the tunnel must immediately have the air conditioning systems, including ice engines and engine generators, shut off, fresh air intake shutters closed, and blower fans shut off.

Should a train be stopped with the engine in a tunnel and it is found that, in the case of a passenger train it cannot be moved within five minutes after stopping, and in the case of a freight train it cannot be moved within a reasonable length of time, trainmen and enginemen must take necessary precautions to prevent movement. Independent brake and sufficient hand brakes must be immediately applied. Engine wheels must be secured by blocks or chains, and power plants and steam generators, if any, on engine shut down.

○**SPEED RESTRICTIONS FOR ENGINES:** Maximum speed shown below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains:

NOMINAL CLASS	RUNNING FORWARD		RUNNING BACKWARD WITH TRAIN OR LIGHT
	WITH TRAIN	LIGHT	
DF-1 to 12, except.....	65	65	*30
6194, 6195, 6230, 6231, 6240, 6247, 6254, 6270 to 6283, 6286, 6288, 6293, 6300, 6301, 6307 to 6311, 6317, 6321, 6328, 6351, 6357, 6360, 6365, 8094, 8146, 8166, 8168, 8170, 8172 to 8174, 8178 to 8182, 8195, 8200, 8202, 8203, 8207, 8208, 8213, 8220, 8229, 8231, 8233, 8241, 8245, 8250, 8254, 8255, 8257.....	***55	55	*30
6190 to 6193, 6202, 6203, 6206 to 6211, 6214 to 6219, 6222 to 6229, 6232 to 6239, 6378 to 6382, 6384, 6385, 6387 to 6392, 6394 to 6405, 6440 to 6445, 6447, 6450, 6451, 6455 to 6457, 8090 to 8093, 8102, 8103, 8106, 8107, 8109, 8110, 8115 to 8117, 8119, 8122 to 8126, 8130 to 8133, 8138, 8139, 8290 to 8303.....	70	70	*30
6383, 6386, 6393, 6446, 6448, 6449, 6452 to 6454, 8095, 8108, 8111, 8114, 8118, 8127 to 8129, 8134 to 8137.....	79	79	*30
DF-100, 114 (5288, 5289), 115, 119, 123, 126.....	65	65	**65
DF-114 (5279 to 5287, 5290 to 5293), 117.....	55	55	**55
DF-116, 118, 120, 121, 122, 124, 125.....	70	70	**70
DF-101 to 112.....	60	60	**60
DF-200 to 206.....	55	55	**55
DF-300 to 306.....	65	65	**65
DF-307.....	60	60	**60
DF-500, 501.....	70	70	**70
DF-603, 606.....	70	70	**70
DF-605, 607, 611.....	65	65	**65
DF-608, 609.....	75	75	**75
DF-610.....	65	65	**65
DP.....	79	79	*30
DS-1, 4, 5.....	45	45	45
DS-2, 3, 6 to 12.....	60	60	60
DS-100 to 108, 110, 111, 113 to 115, 117 to 122.....	60	60	**60
DS-109.....	65	65	65
Any engine not listed.....	35	35	25

*When on head end of train or running light and engineer is in other than lead control cab direction of movement.

**When operated in multiple unit control with engineer in other than lead unit in direction of movement must not exceed 30 MPH.

***May operate at maximum speed of 60 MPH when handling AON.

28. DF and DP class engines when moving without cars must, when possible, be operated from cab in direction of movement, except for short direct movements.

DF and DP class engines operated with engineer in other than lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossings at grade, subject to further restrictions imposed by local conditions.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

- When all weight has been removed from any one pair of drivers..... 20 MPH
- When all weight has been removed from only one wheel of any pair of drivers..... 30 MPH
- When engine truck is removed..... 20 MPH
- When main rod only is removed..... 30 MPH
- When side rod only is removed..... 30 MPH
- When both main and side rods are removed..... 20 MPH

Maximum speed of trains handling dead engines of S or SE class 20 MPH; other SPCo steam engines 40 MPH; and diesel engines the speed shown for same engine running forward light, except DS-200, 201 class must have traction motor brushes removed and speed restricted to 30 MPH.

Dead diesel engines hauled in train and weighing 150,000 pounds or more must be placed first behind engine handling the train. If weight is less than 150,000 pounds dead diesel engines must be placed near rear of train.

Dead steam engines hauled in train and weighing 150,000 pounds or more on drivers must, as far as practicable, be cut in between 25 and 30 cars from the head end of the train but in no event less than 8 cars from engine handling the train. If weight is less than 150,000 pounds on drivers dead steam engines must be placed near rear of train.

Unless otherwise restricted, not more than two dead steam engines shall be moved in any one train and when so moved they must be separated by five cars. When an S or SE class and a road engine are moved dead in train, a steel underframe freight car must be placed between them and S or SE class engine entrained with tender ahead.

Dead or disabled engines, and equipment listed in timetable which requires movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine or equipment is to be moved. Any such engine must not be handled in train until train order designating maximum speed is issued.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current line Clearance Circular have been complied with.

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or triple loads.....	..	25
Scale test cars.....	40	30
Cars with arch bar trucks.....	40	30
Steel pile-drivers.....	40*	30*
Relief outfits with steam derrick, except:.....	35*	25*
(Relief outfits 7014 and 7025 must not be operated on any branch except Litchfield, Nogales and Creamery Branches).....
Power shovel on own wheels.....	35*	25*
Ditchers on own wheels, except:.....	35*	25*
SPMW-4044.....	25*	25*
Car-top ditchers, if blocking and tie-down cables are removed.....	35*	25*
K&J, pedestal or center-hinged air-dump cars (except SPMW 5100 to 5289 loaded or empty).....	35*	25*
Locomotive cranes:
With boom disconnected, heavy end forward.....	35*	25*
With boom disconnected, light end forward.....	20*	15
With boom in place, either end forward.....	25*	15
Rotary snow plows.....	25	15

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced 5 MPH less than shown in timetable and on speed signs.

OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT AND MIXED TRAINS
Foreign steel-wheel cars not equipped with high speed trucks.....	60	*55
Trains of deadhead equipment, with caboose.....	55	..
Passenger trains, with caboose.....	55	..
Engine and caboose only, except:.....	..	55
must not exceed speed for same engine running forward light.
Engine, flanger and caboose only, except:.....	..	40
On curves.....	..	30
Logs loaded on flat or logging cars, except:.....	..	25
On curves.....	..	20
Over truss bridges, through tunnels, and passing stations.....	..	15

*60 MPH permitted when handled in AON.

SPMW cars equipped with K type brakes must not be handled in trains consisting of more than 50 cars and train must not exceed 40 MPH while handling such equipment.

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers, if any, to move on passenger trains.

Passenger carrying cars, baggage, express and other head-end cars, unless equipped with steel center sills and steel platforms must not be handled in passenger trains except on authority of Superintendent.

When foreign steel-tired or all-steel wheel cars are picked up by passenger trains at points where no car inspectors are on duty, conductor must contact train dispatcher to determine applicable speed restriction for the movement.

Freight cars must not be handled behind occupied passenger carrying cars, except in military or naval mixed trains.

When moving against current of traffic, or when movement is not protected by block signals, speed of passenger trains and light engines must not exceed 59 MPH, and speed of freight trains must not exceed 49 MPH, nor may speed exceed that applying to normal operation. Unless proceed signal received, or it is known that warning devices are operating, such trains and engines must stop approaching road crossings where automatic warning devices are installed, and may proceed after member of crew protects crossing.

SPECIAL INSTRUCTIONS—WELLTON SUBDIVISION

RULE 10-J. Speed signs to left of track:

Eastward	Reading
MP 733.01	50-25
MP 736.76	35
MP 904.74	15

RULE 14(e). As specified below, — — — — — sounds will be indication that flagman may return from east: Wellton..... Trains on Phoenix line,

RULE 21-C. At Phoenix, Gila and Yuma, incoming trains may display indicators until arrival of engine on service track.

RULE 93. Yard limits within which the provisions of Rule 93 will apply except within CTC limits are established at the following points:

West MP	East MP
731.51 Yuma.....	737.83
" (Yuma Valley RR).....	0.22
768.88 Wellton.....	771.00
" (Gila line).....	771.00
888.80 Litchfield Jct.....	890.60
" (Litchfield Branch).....	End of track
900.96 Phoenix.....	908.79
854.20 Gila.....	857.70

Yuma: Eastward freight trains must not pass Signals 7340 and 7342 unless proceed signal received from yardman, white flag by day, green light by night.

East Yard: Westward trains entering yard tracks must not pass Signal P-7375 unless proceed signal received from yardman, white flag by day, green light by night.

Phoenix: Tracks at east and west end of Union Station are used jointly by AT&SFRy and SP trains. Yard and light engines must avoid delaying first-class trains on all tracks within Union Station zone. Trains will approach switch at entrance to Union Station tracks prepared to stop and may proceed only when track is known to be clear.

Movements against the current of traffic may be made on Eastward Track between 7th St. and 3rd Ave., just east of Union Depot, without protection being afforded except against first-class trains. Trains, except first-class, and engines moving in either direction between these points must not exceed restricted speed, expecting to find track occupied by opposing movements.

Phoenix Yard: Freight trains arriving or departing must receive proceed signal from yardman, white flag by day, green light by night, before passing 7th St., or 16th St.

Yardman's proceed signal, white flag by day, green light by night, will be an indication to westward trains crossing over Eastward Track to Westward Track that protection for such movement has been provided on both main tracks and yardman is responsible that such protection has been provided.

RULE 103-A. A flagman must precede all movements over: Yuma..... 1st, 2nd, 3rd and 4th Sts., on yard tracks,

RULE 103-B. Back-up hose must be used on leading car when shoving cars on Government tracks at airport at Yuma.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

- Yuma..... Yard track on Madison Ave., for YVRR main track,
- Litchfield Jct. ... Litchfield Br., for Phoenix line,
- Phoenix..... Switch in Eastward Track, immediately west of First Avenue, Phoenix, from main track to Eastward Track,
- Phoenix..... West end double track, for westward track.

Normal position of west crossover switch from yard track No. 1 to Eastward Track at East Yard, is for tail track.

Derails in main track: Litchfield Park, 75 feet west of switch to Boswell Gin spur.

RULE 211. Will apply when letter "M" is illuminated in letter-type indicator as follows:

On Signal	Approaching
7941.....	Mohawk

RULE 221. Unit for display of flashing light installed at the following location:

Station	Location	Direction
Sentinel...	On train-order signal mast.....	Eastward

Display of flashing white light indicates that train-order signal is displaying proceed indication or that train-order operator has train orders ready for delivery, that such train orders do not restrict train at that station, and that train, providing it is not restricted by timetable or by train orders previously received, may pass fouling point of switch at which an opposing train may enter siding or place where time applies if there is no siding.

RULE 306. The following block signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Absolute signals are listed as "P-A".

Eastward Signals	Protection	Westward Signals
P-A } P-A }	Spring switch, east end Colorado River bridge.....	
P-7428	Spring switch, end double track, East Yard.....	P-7375
	Spring switch, west end siding, Fortuna.....	
P-7500	Spring switch, east end siding, Fortuna.....	P-7441
	Spring switch, west end siding, Kinter.....	
P-7532	Spring switch, east end siding, Kinter.....	P-7513
P-7606	Spring switch, end double track, Dome.....	
	Collision Detector, Liguria underpass, MP 760.61.....	P-7607
P-7756	Spring switch, west end siding, Noah.....	
P-7836	Spring switch, west end siding, Colfred.....	
	Spring switch, east end siding, Colfred.....	P-7849
P-7920	Spring switch, west end siding, Mohawk.....	
	Spring switch, east end siding, Mohawk.....	P-7931
P-8002	Spring switch, west end siding, Stoval.....	
P-8190	Spring switch, west end siding, Stanwix.....	
P-8252	Spring switch, west end siding, Sentinel.....	
P-8398	Spring switch, west end siding, Piedra.....	
P-8494	Spring switch, west end siding, Smurr.....	
P-9052	Spring switch, west end passenger lead, Phoenix.....	
	Spring switch, east end double track, Phoenix Yard.....	P-9075

SPECIAL INSTRUCTIONS—WELLTON SUBDIVISION

○RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Yuma: Signal 7342 on drill track governs eastward movements through crossover to main track only and will remain dark until crossover switch is opened.

Phoenix: Crossing—AT&SFRy Wye: If signal indicates "Stop" trains and engines must stop, and if wye is clear of intersecting movement, may then proceed as prescribed by Rules 509 or 510, but must provide flag protection on intersecting track unless derail is known to be in derailing position.

Eastward trains and engines to move on main track east of passenger lead, must stop before reaching Signal P-9052 until spring switch has been lined for main track, and signal displays proceed indication for such movement.

Main track has no block signal protection between Signal 9061 and end of double track; and double track has no block signal protection from west end to Signal 9064.

RULE 516. Overlap posts:

Tolleson... 450 feet east of Signal 8958... Eastward trains
Tolleson... 750 feet east of MP 895.00... Westward trains
23rd Ave. Phoenix... Middle of siding... Eastward trains
23rd Ave. Phoenix... Middle of siding... Westward trains

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location	Normal Position
Yuma	East end bridge... Eastward Track
East Yard	End double track... Westward Track
Fortuna	West end siding... Main track
Fortuna	East end siding... Main track
Kinter	West end siding... Main track
Kinter	East end siding... Main track
Dome	End double track... Eastward Track
Noah	West end siding... Main track
Colfred	West end siding... Main track
Colfred	East end siding... Main track
Mohawk	West end siding... Main track
Mohawk	East end siding... Main track
Stoval	West end siding... Main track
Stanwix	West end siding... Main track
Sentinel	West end siding... Main track
Piedra	West end siding... Main track
Smurr	West end siding... Main track

Spring switches not equipped with facing point locks are located as follows:

Location	Normal Position
Phoenix	Main track at passenger lead... Passenger lead
Phoenix Yard	East end double track... Westward track

Yuma: Spring switch on engine lead equipped with switch-point indicator. Indicator does not indicate track occupancy. Indicator will display green aspect with switch in either normal or reverse position. When indicator displays red aspect or indicator light is extinguished, careful examination of switch must be made before making a facing point movement.

RULE 605. INTERLOCKING

Wellton: Limits extend from westward interlocking signals 4,300 feet east of station building on Gila line and 4,600 feet east of station building on Phoenix line, to eastward interlocking signals 1,000 feet west of station building on westward track and 1,600 feet west of station building on eastward track.

East switch of siding equipped with an electric switch lock and must not be used unless permission is obtained from signal operator.

Switches to spurs on Westward Track in the vicinity of station building equipped with mechanical switch locks but must not be used until permission is obtained from signal operator.

Dual control switches within interlocking limits are under control of signal operator. When necessary to hand-throw these switches, permission must be obtained from signal operator and be governed by Rules 771 and 772.

GENERAL REGULATIONS

RULE 825. Instructions for setting hand brakes:

Yuma: Freight trains... Four brakes on east end, Two brakes on west end;
East Yard: Freight trains... Two brakes on east end, Five brakes on west end;
Phoenix Yard: Freight trains... Two brakes on west end, Two brakes on east end.

RULE 826. Yuma: Indicator lights located above tracks at each end PFE icing platform govern movements on those tracks as follows:

Green: Tracks may be used for train or switching movements.
Yellow: Tracks may be entered and engines, cars or cabooses added or detached, but cars must not be dropped or kicked against cars on those tracks.
Red: Tracks may be entered but cars on tracks must not be coupled to or moved. Trains made up on these tracks must not depart until it has been ascertained indicator displays green aspect.
Not Lighted: Must be considered as displaying most restrictive indication and icing platform foreman must be contacted for instructions before cars are coupled to or moved.

AIR BRAKE RULES

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hose on outgoing freight trains at Gila until train is made up and engine and caboose on train, unless train is made up by crew making air test and handling the train from Gila.

SPECIAL INSTRUCTIONS—WELLTON SUBDIVISION

MISCELLANEOUS

6. Litchfield, gate at entrance Goodyear Aircraft spur is locked with Government lock, and to gain entrance a long and short sound of whistle will be notification to watchman on duty to take care of the opening and closing of the gate.

Litchfield Park, Boswell spur is protected by gate, which must be kept closed and locked when not in use.

11. Load limit (car and contents):

Yuma-Phoenix Yard... 251,000 pounds
Wellton-Gila... 251,000 pounds
Litchfield Jct.-Litchfield Park... 210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

○13. LOCATION OF STOCK YARDS

Station	Capacity in cars
East Yard	117 (Water)
Wellton	2 (Water)
Roll	2
Horn	Chute
Hyder	Chute
Arlington	10 (Water)
Buckeye	6 (Water)
Liberty	6 (Water)
Litchfield	10 (Water)
Tolleson	9
Campo	35
Phoenix	81 (Water)
Sentinel	3 (Water)
Theba	11 (Water)
Gila	5 (Water)
Litchfield Park	7

○29. Operation of Yuma Valley Railroad is under the jurisdiction of the Yuma Division except train dispatching is handled by the Tucson Division.

Movements on YVRR are governed by SPCo Rules and Regulations of the Transportation Department, Air Brake Rules and Regulations, timetable, Special Instructions and timetable bulletins.

Trains must not exceed 10 MPH between MP 0.00 and 0.53, 25 MPH between MP 0.53 and MP 14.70, and 10 MPH between MP 14.70 and MP 18.00, except must not exceed 8 MPH over trestle at U. S. R. S.

Impaired clearance at Spillway, MP 10.25.

Normal position of junction switch at Yuma is for YVRR main track.

Track out of service and must not be used east of MP 18.00 (Somerton).

Load-limit (car and contents):

Yuma-Somerton... 210,000 pounds

Unless authorized by Superintendent heavier loads must not be handled.

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

Nominal Class	Engine Numbers	Yuma to Somerton	Somerton to Yuma
DF-200 to 206	5100 to 5120....	3000	2325

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THESE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

30.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description
778.00	Gila River bridge	Side
891.00	Agua Fria River bridge	Side
YVRy MP 10.00	Canal Spillway gates	Side

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS With Caution Not Exceeding MPH

Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through turnouts on other than sidings	10
On branches	10
★Over, upon, or across any street crossing, Yuma	5
On Government tracks at Yuma airport	10

★Regulated by City ordinance.

SPECIAL INSTRUCTIONS—WELLTON SUBDIVISION

⊙ SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 3, and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT and OTHER MAXIMUM SPEEDS appearing on page 4 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin. All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

Table with columns for TERRITORY, PASSENGER TRAINS, FREIGHT AND MIXED, and LIGHT ENGINES. It is divided into sections for EASTWARD, WESTWARD, and LITCHFIELD JCT. territories, with specific mileposts and engine ratings.

★Regulated by City ordinance.

AON, when consist contains no restricted cars, may operate at speeds shown in Column 1, except maximum speed must not exceed 60 MPH.

SPECIAL INSTRUCTIONS—WELLTON SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

Table showing engine ratings for various engine classes (DP, DF, DS) and engine numbers. Columns include engine numbers, and ratings for different territories: Yuma to East Yard, East Yard to MP 788, Saddle to 2 M W Gillette, etc.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULES 7-A and 10-G. Yellow signals and unattended red flags and red lights must be placed to the left of track in the direction of movement on No. 1 Track and No. 2 Track between Park Avenue, Tucson, and MP 1000.22 west of Vail.

Table with 4 columns: Rule, Direction, Reading, Westward, Reading. Includes Rule 10-J for speed signs.

RULE 14(d). As specified below, — — — — o sounds of whistle will be indication that flagman may return from west: Phoenix Yard-Kendall... Trains on Second Main Track, Picacho... Trains on Phoenix line.

RULE 14(e). As specified below, — — — — o sounds of whistle will be indication that flagman may return from east: Kendall-Phoenix Yard... Trains on Second Main Track, McQueen... Trains on Christmas Branch.

RULE 21-C. At Phoenix, Gila and Tucson, incoming trains may display indicators until arrival of engine on service track.

RULE 93. Yard limits within which the provisions of Rule 93 will apply are established at the following points:

Table with 4 columns: West MP, East MP, Location, Distance. Lists yard limits for Phoenix, Tempe, Mesa, Picacho, Tucson, Gila, Casa Grande, Ray Jct., Hayden Jct., and Nogales.

Phoenix Yard: Freight trains arriving or departing must receive proceed signal from yardman, white flag by day, green light by night, before passing 7th St., or 16th St.

Yardman's proceed signal, white flag by day, green light by night, will be an indication to westward trains crossing over Eastward Track to Westward Track that protection for such movement has been provided on both main tracks and yardman is responsible that such protection has been provided.

Phoenix: Tracks at east and west end of Union Station are used jointly by AT&SFRy and SP trains. Yard and light engines must avoid delaying first-class trains on all tracks within Union Station zone.

Movements against the current of traffic may be made on Eastward Track between 7th St. and 3rd Ave., just east of Union Depot, without protection being afforded except against first-class trains.

Tucson: Trains moving against current of traffic on No. 1 Track between end of double track MP 984.12 and crossover between main tracks just east of junction switch, Nogales Branch, must approach Park Ave. prepared to stop clear of this crossing unless proceed signal received from yardman, white flag by day, green light by night, which will indicate that crossover switches are lined for movement to No. 2 Track.

Eastward freight trains moving on No. 2 Track may pass Signal 9848 displaying stop indication without stopping provided proceed signal received from yardman, white flag by day, green light by night, which will indicate that protection for such movement has been provided.

Trains arriving from Nogales Branch must not pass Signal 9846 displaying proceed indication unless proceed signal is received, from yardman, white flag by day, green light by night, which will indicate that protection has been provided on No. 1 Track and No. 2 Track.

If Signal 9846 displays stop indication train, after stopping, may proceed as prescribed above.

Engines may move from roundhouse lead to PFE Yard against the current of traffic on No. 1 Track when proceed signal received from yardman, white flag by day, green light by night, which will indicate protection has been provided for the movement.

Westward trains must not pass Signal 9843 unless proceed signal received from yardman, white flag by day, green light by night.

Trains and engines finding Signal 9843 displaying stop indication may proceed into passenger tracks Nos. 2 or 3 if switches are properly lined and proceed signal from yardman, white flag by day, green light by night is received.

Freight trains moving from PFE Yard to Nogales Branch must receive proceed signal from yardman, white flag by day, green light by night, before passing Nogales Branch junction switch east of Park Ave.

Eastward freight trains, after passing Sixth Ave. tower and before entering freight yard, must receive proceed signal from yardman, white flag by day, green light by night.

RULE 99-C. Will apply as follows: On Christmas Branch.

RULE 103-A. A flagman must precede all movements over:

- List of locations for Rule 103-A: Tovrea, Washington St., Tempe, Spur crossing Mill Ave. and 8th St., Mesa, Spur crossing East Main St., Tucson, West Congress St., South 4th Ave., South 6th Ave., Simpson St., Sahuarita, Nogales Highway, Nogales, Banks Bridge crossing at MP 1048.92, Nogales, Court and Park Sts.

A flagman must precede all switching movements over Fifth St., Tempe.

Trains and engines must stop before proceeding over Baseline Road at MP 917.84 on Tempe Branch.

RULE 103-B. Back-up hose must be used when shoving cars between North and South yards and/or PFE Yard, Tucson.

Back-up hose must be used on leading car when shoving cars on Government tracks at airport at Higley, and on Eagle-Picher spur at Sahuarita.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

- Phoenix: Switch in eastward main track, immediately west of First Avenue, Phoenix, from main track to eastward main track, West end double track, for westward track, Kendall: Second main track, for first main track, Picacho: Phoenix line, for Gila line. Operators will handle switches to and from Phoenix line, also for movements through crossovers, and west switches of north and south sidings, Tempe Jct.: Tempe Br., for Phoenix line, McQueen: Christmas Br., for Phoenix line, Magma: Magma-Arizona RR main track, for back track, Ray Jct.: KCCRR main track, for yard track, Hayden Jct.: Christmas Branch, for KCCRR line, Hayden: SMARR main track, for Christmas Branch. Derails on main track: Christmas: 250 feet east of west switch, Nogales: Point derail, facing westward movement, just west of west switch of first yard track north of main track.

RULE 221. Unit for display of flashing light installed at the following location:

Table with 3 columns: Station, Location, Direction. Includes Stockham on mast MP 980.15 Westward.

Stockham: Display of flashing white light, for trains moving on Westward Track, indicates that operator has train orders ready for delivery which do not restrict the train at the end of double track.

If such train is restricted by timetable or train orders previously received, train must stop short of Prince Road crossing unless train-order signal arm is actuated in accordance with the provisions of Rule 211 or Signal 9793 displays "Proceed on Diverging Route" indication.

Display of flashing white light, with switch lined for train to enter westward siding, indicates that operator has train orders ready for delivery which may restrict the train at the fouling point at the west end of siding.

RULE 306. The following block signals equipped with triangular plate displaying the letter "P", have included in their control limits some special protective device:

Table with 3 columns: Eastward Signals, Protection, Westward Signals. Lists various spring switches and their locations.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Phoenix: Main track has no block signal protection between Signal 9061 and end of double track; and double track has no block signal protection from west end to Signal 9064.

Picacho: Top unit in Signal 9377 governs movement on main track. Middle unit for north siding; Bottom unit for south siding.

Stockham: Top unit on Signal 9793 governs movement from Westward Track through crossover to single track; bottom unit governs movement into westward siding, Stockham.

When Signal 9813 displays stop indication, westward train must stop 500 feet east of Grant Road crossing, and may proceed when signal displays a proceed indication; or may proceed after stopping as prescribed by Rule 509(d) to Signal 9793 provided track can be seen to be clear of trains, cars or engines.

Tucson: Passenger tracks Nos. 1, 2 and 3 between end of double track at MP 983.66 and Signal 9838 on No. 2 Track have no block signal protection.

RULE 516. Overlap posts: McQueen: Middle of siding... Westward trains, Papago: Middle of siding... Eastward trains, Papago: Middle of siding... Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Table with 3 columns: Location, Normal Position. Lists spring switches at various locations like Bosque, Shawmut, Estrella, etc.

Spring switches not equipped with facing point locks are located as follows:

Table with 3 columns: Location, Normal Position. Lists spring switches at Phoenix and Phoenix Yard.

Spring switches are also located on engine leads at Tucson.

RULE 605. INTERLOCKING

Picacho: Limits extend from eastward SA signals 300 ft. west of station on Phoenix line and 1130 ft. west of station on Gila line to westward SA signals 400 ft. east of station on north siding, and 700 ft. east of station on main track.

One unit dwarf light type signal located 560 ft. east of station on south siding east of crossover to main track may display indication per Rule 281 Fig. G; Rule 285 Fig. G; and Rule 290 Fig. I. This signal normally dark, will display indication for movement through crossover to Phoenix line only.

An eastward train restricted at Picacho, for an opposing train may accept proceed indication in eastward interlocking signal as authority to move on main track to Signal 9376, at fouling point east end south siding.

Tucson, Sixth Ave.: Limits extend from Signal 9835 on both main tracks, to end of double track, and on passenger track No. 1 to dwarf signal 7 feet west of west switch of passenger track No. 2, and on freight lead to dwarf signal 10 feet east of Sixth Ave. tower, and on middle track to dwarf signal 230 feet west of east switch, and on Independent Ice lead to dwarf signal 240 feet west of Sixth Ave. tower.

Signals prescribed by Rule 628 may be given from tower.

○RULE 705. LETTER TYPE INDICATORS

Table with columns: Illuminated Letter, On Signal, Approaching, Authorizes Movement, and Requires Movement as Follows. Includes entries for M, SS, NS, W, and W.

Indicator on mast 300 feet east of 22nd St., Nogales Branch, Tucson. When letter W is illuminated westward trains, except freight trains of 15 cars or less, must stop east of 22nd St.

When letter "W" is not displayed on Signal 9813 or flashing white light is not displayed on stub mast at MP 980.15 westward trains, except first-class must stop to clear Prince Road crossing until authorized to proceed.

GENERAL REGULATIONS

○RULE 821. Wooley: Eastward trains must approach stop sign at MP 984.66 and westward trains must approach stop sign at MP 984.80 prepared to stop until it can be ascertained that Wooley Wash track is safe for passage of trains.

During and after heavy rains and run-off when there are indications that gravel or debris may be found on Wooley Wash track, trains must stop at these stop signs and not proceed until it has been ascertained that track is safe for the passage of trains.

Maximum speed across Wooley Wash must not exceed 10 MPH.

RULE 825. Instructions for setting hand brakes:

- Phoenix Yard: Freight trains... Tucson: Passenger trains... Tucson: Freight trains... PFE Yard: Freight trains...

Tucson: Hand brakes will not be set on Golden State and Sunset Limited unless engine is detached. If engine is detached sufficient hand brakes must be set to prevent uncontrolled movement of cars.

Hand brakes on passenger trains are to be set after engine is spotted for oil. If necessary to detach engine after these hand brakes have been released, employe before detaching engine must see that sufficient hand brakes have again been set.

Hand brakes must be securely set on all cars left at Eagle-Picher plant, Sahuarita. Cars must not be left west of derail.

○RULE 826. Tucson: Indicator lights located on pole just west of west switch of crossover from work lead to PFE Icing Platform lead, and above tracks at each end of PFE Icing Platform govern movements on these tracks as follows:

- Green... Tracks may be used for train or switching movements. Yellow... Tracks may be entered and engines, cars of cabooses added or detached, but cars must not be dropped or kicked against cars on those tracks. Red... Tracks may be entered but cars on tracks must not be coupled to or moved. Not Lighted... Must be considered as displaying most restrictive indication and icing platform foreman must be contacted for instructions before cars are coupled to or moved.

AIR BRAKE RULES

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hose on outgoing freight trains at Gila until train is made up and engine and caboose on train, unless train is made up by crew making air test and handling the train from Gila.

RULE 25. Air brakes must be used, and rear end test made on all movements on Eagle-Picher spur, Sahuarita.

MISCELLANEOUS

6. Tovrea: Entrance to Cudahy Packing Co. plant is protected by gates, which must be kept closed and locked when not in use. Look out for material alongside tracks around plant.

Coolidge: Gate at entrance to Indian Service spur must be kept closed and locked when not in use.

Rillito: Derail on Arizona Portland Cement spur must be lined before switch to the spur is lined. Cars must not be kicked or dropped into this spur, and cars must not be left standing between derail and 550 feet west of road crossing. Derail must be lined to normal as soon as each movement completed over same. Chains across crusher spur at each end of pit are secured by snaps to posts, and may be unfastened to move cars to or from pit. Chains must be fastened across track when there is no car spotted over pit.

Derail on crusher spur, located 80 feet east of crusher pit, must not be lined for movement into spur until it is known that track over pit is ready for the movement.

PFE Yard: Look out for ice and material alongside PFE tracks.

○10. Engines listed must not operate on tracks shown below:

Table with columns: Class of Engine and Restricted Tracks. Lists engines like Phoenix-Tucson, Gila-Picacho, McQueen-Christmas, Tempe Jct.-West Chandler, Tucson-Nogales and their restricted tracks.

11. Load limit (car and contents):

Table listing load limits for Phoenix-Tucson, Gila-Picacho, McQueen-Christmas, Tempe Jct.-West Chandler, and Tucson-Nogales.

Unless authorized by Superintendent, heavier loads must not be handled.

○13. LOCATION OF STOCK YARDS

Table with columns: Station and Capacity of cars. Lists stations like Phoenix, Normal Jct., Falfa, Chandler, Serape, Dock, Coolidge, Gila, Maricopa, Casa Grande, Picacho, Red Rock, Tucson, Amado, Otero, Nogales, Gilbert, Higley, Queen Creek, Florence, Branaman, Winkelman, West Chandler with their capacities.

○29. Hayden Jct.: Kennecott Copper Corporation Railroad between Hayden Jct. and Hayden Mills is operated by the Tucson Division and is within Hayden Jct. yard limits.

Movements on KCCRR are governed by SPCo Rules and Regulations of the Transportation Department, Air Brake Rules and Regulations, timetable, Special Instructions and timetable bulletins.

Movements between Hayden Jct. and Hayden Mills must be spaced 10 minutes apart.

Back-up hose must be used and a trainman must ride in cab of engine when shoving cars Hayden Jct. to Hayden Mills.

Flag protection to the rear must be provided as prescribed by Rule 99 between junction switch KCCRR and Hayden Mills derail.

Maximum speed permitted between Hayden Jct. and Hayden Mills is 15 MPH. Grade is 2.2 percent descending Hayden Mills to Hayden Jct.

Normal position of KCCRR junction switch is for KCCRR.

Special upper quadrant signals located on mast at train-order office govern movements between train-order office and KCCRR junction switch when train-order operator is on duty.

These signals display stop indication when semaphore arms are in horizontal position.

Westward movements from Christmas Branch must stop before fouling junction switch and may then proceed.

Eastward signal must be placed in stop position while a westward movement is being made from Hayden Mills.

Proceed indication on eastward signal authorizes movement Hayden Jct. to Hayden Mills and proceed indication on westward signal authorizes movement from KCCRR junction switch to Hayden Jct. Movements from KCCRR approaching junction switch have preference over westward movements on Christmas Branch.

When both upper quadrant signals display proceed it is an indication that train-order operator is not on duty.

Unit for display of flashing light controlled by train-order operator located on a mast just west of spring derail at Hayden Mills governs westward movements between Hayden Mills and junction switch KCCRR at Hayden Jct. when train-order operator is on duty.

When a westward movement is to be made from Hayden Mills to Hayden Jct., a member of crew must first visually ascertain that there is no eastward movement closely approaching Hayden Mills before derail is lined. After derail has been lined for movement, train or engine must not proceed until flashing white light has been displayed. Switching movements over spring derail westward must continue until engine and cars are west of unit for display of flashing white light and derail returned to normal position before reverse movement is made. In either case, if flashing white light is not displayed authorizing desired movement, derail must be returned to normal position before an eastward movement passes location of unit for display of flashing white light.

Westward movements from either AS&R or Ore Bin tracks must not foul adjacent track until flashing white light is displayed.

Should a following eastward movement overtake and couple into a preceding movement between Hayden Jct. and spring derail at Hayden Mills, two separate movements must be made over spring derail to announce arrival of second movement.

Impaired overhead and side clearance at Hayden Mills smelter.

Entrance to Kennecott Copper Corp plant is protected by gate which must be closed and locked at night.

Hayden: Engines and cars must not be operated beyond east derail located east of east switches of sidings on San Manuel Arizona Railroad.

30. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Table with columns: Mile Post, Location, and Description. Lists mile posts and structures like Salt River bridge, Gila River bridge, Car repair shed, Rock cuts, Tunnels, and Loading chute.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS With Caution Not Exceeding MPH

Table listing speed restrictions for various track types like Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, On yard tracks, Through Government tracks, etc.

SPECIAL INSTRUCTIONS—PICACHO SUBDIVISION

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TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	3	MP	MP	Column:	1	2	3
EASTWARD, PHOENIX TO PICACHO:						WESTWARD, TUCSON TO PICACHO:					
905.51 to 907.43			20	20	20	986.00 to 982.73			20	20	20
907.43 to 907.45 (spring switch)			15	15	15	982.73 to 981.91			40	30	40
907.45 to 907.91			20	20	20	981.91 to 979.30			79	55	70
907.91 to 908.79			40	25	40	979.30 to 979.22 (spring switch)			35	35	35
908.79 to 912.74			60	40	60	979.22 to 975.96			79	55	70
912.74 to 913.77			40	25	40	975.96 to 975.57			75	55	70
★913.77 to 917.46 (Tempe)			20	20	20	975.57 to 936.82			79	55	70
917.46 to 920.84			79	55	70	★936.82 to 936.69 (979.75)			20	20	20
920.84 to 922.04			25	25	25	WESTWARD, PICACHO TO PHOENIX:					
922.04 to 928.57			60	45	60	★979.75 to 979.32			20	20	20
928.57 to 929.57			40	35	40	979.32 to 959.39			79	55	70
929.57 to 943.93			79	55	70	959.39 to 958.02			70	55	70
943.93 to 945.49			70	55	70	958.02 to 946.80			79	55	70
945.49 to 946.80			60	50	60	946.80 to 945.49			60	50	60
946.80 to 958.02			79	55	70	945.49 to 943.93			70	55	70
958.02 to 959.39			70	55	70	943.93 to 929.57			79	55	70
959.39 to 979.32			79	55	70	929.57 to 928.57			40	35	40
★979.32 to 979.75 (936.69)			20	20	20	928.57 to 922.04			60	45	60
EASTWARD, PICACHO TO TUCSON:						WESTWARD, PICACHO TO GILA:					
★936.69 to 936.82			20	20	20	★936.69 to 936.55			20	20	20
936.82 to 975.57			79	55	70	936.55 to 919.24			70	55	70
975.57 to 975.96			75	55	70	919.24 to 918.40			25	25	25
975.96 to 981.91			79	55	70	918.40 to 874.48			70	55	70
981.91 to 982.73			40	30	40	874.48 to 870.12			55	45	55
982.73 to 986.00			20	20	20	870.12 to 867.85			30	30	30
EASTWARD, GILA TO PICACHO:						WESTWARD, KENDALL TO PHOENIX YARD ON SECOND MAIN TRACK:					
854.97 to 856.80			30	30	30	911.38 to 911.01			..	20	20
856.80 to 866.98			70	50	70	911.01 to 907.82			..	25	25
866.98 to 867.85			50	50	50	EASTWARD, PHOENIX YARD TO KENDALL ON SECOND MAIN TRACK:					
867.85 to 870.12			30	30	30	907.82 to 911.01			..	25	25
870.12 to 874.48			55	45	55	911.01 to 911.38			..	20	20
874.48 to 918.40			70	55	70	EASTWARD, PHOENIX TO PICACHO:					
918.40 to 919.24			25	25	25	905.51 to 907.43 (spring switch)			15	15	15
919.24 to 936.55			70	55	70	907.43 to 905.51			20	20	20
★936.55 to 936.69			20	20	20	WESTWARD, TUCSON TO PICACHO:					

★Regulated by City ordinance. ★★ICC Regulation.
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SPECIAL INSTRUCTIONS—PICACHO SUBDIVISION

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All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY			FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY			FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	MP	MP	Column:	1	2
EASTWARD, McQUEEN TO CHRISTMAS:					WESTWARD, CHRISTMAS TO McQUEEN:				
923.90 to 924.08			25	25	1010.88 to 1000.64			10	10
924.08 to 955.93			30	30	1000.64 to 999.53			15	15
955.93 to 956.07			25	25	999.53 to 988.24			25	25
956.07 to 964.28			30	30	988.24 to 968.79			15	15
964.28 to 964.54			20	20	968.79 to 964.54			30	30
964.54 to 968.79			30	30	964.54 to 964.28			20	20
968.79 to 988.24			15	15	964.28 to 956.07			30	30
988.24 to 999.53			25	25	956.07 to 955.93			25	25
999.53 to 1000.64			15	15	955.93 to 924.08			30	30
1000.64 to 1010.88			10	10	924.08 to 923.90			25	25
EASTWARD, TEMPE JCT. TO WEST CHANDLER:					WESTWARD, WEST CHANDLER TO TEMPE JCT.:				
			20	20				20	20
EASTWARD, TUCSON TO NOGALES:					WESTWARD, NOGALES TO TUCSON:				
984.04 to 985.81			15	15	★1049.89 to 1046.37 (Nogales)			20	20
985.81 to 987.42			20	20	1046.37 to 996.75			*25	*25
987.42 to 996.75			35	35	996.75 to 987.42			35	35
996.75 to 1046.37			*25	*25	987.42 to 985.81			20	20
★1046.37 to 1049.89 (Nogales)			20	20	985.81 to 984.04			15	15

★Regulated by City ordinance.
*Trains with DF-1 to 12 or DS-101, 109, 113 class engines must not exceed 20 MPH from MP 996.75 to MP 1024.90, MP 1028.10 to MP 1039.80 and 1042.79 to 1049.89
Trains handled by Eng. 5288, 5289, 5372 to 5444 must not exceed 20 MPH on Christmas Branch.

SPECIAL INSTRUCTIONS—PICACHO SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Territories			
		Mariopoa to Tucson Phoenix to Picacho	Gila to Estrella	Estrella to Mariopoa Tucson to Mariopoa Estrella to Gila Picacho to Phoenix Yard	Mariopoa to Estrella
DP-4, 7	6000 to 6004, 6017, 6018, 5900 to 5909, 5916, 5917	1250	775	1250	1250
DP-5, 6	6005 to 6016, 6055 to 6058, 5910 to 5915	1725	1100	2475	1725
DP-8, 9, 10	6019 to 6033, 5918 to 5924	2100	1350	3000	2100
DP-11	6034 to 6045	2975	1925	3075	2975
DP-12	6046 to 6054	2150	1375	3075	2150
DF-1 to 12	6138 to 6461, 8022 to 8303, except with 61:16 gear ratio	2425	1525	3400	2425
DF-100	5200 to 5202	2100	1375	2950	2100
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278	2150	1250	2700	2150
DF-109, 111	4903 to 4905, 5250 to 5252	3325	2150	4800	3325
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493	4000	2600	5900	4000
DF-115, 119, 123, 126	5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507	4000	2600	5900	4000
DF-200 to 206	5100 to 5120	3375	2200	4775	3375
DF-300 to 304	4600 to 4623, 4700 to 4703	2025	1325	2925	2025
DF-305, 306	4624 to 4633	2275	1500	3225	2275
DF-307	4634 to 4645	4800	4815	4800	4815
DF-500, 501	4800 to 4815	5600	5719, 5730 to 5799	3175	1850
DF-603, 605, 606, 607, 611	5600 to 5719, 5730 to 5799	3175	1850	4375	3175
DF-608 to 610	5720 to 5729	1025	650	1475	1025
DS-1 to 8	1000 to 1032	1025	650	1475	1025
DS-9 to 12	1033 to 1090	1825	1200	2600	1825
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	1575	1025	2225	1575
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	2000	1300	2900	2000
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	1925	1300	2700	1925
DS-200, 201	1900 to 1903				

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—PICACHO SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Territories				
		McQueen to Christmas	Christmas to McQueen	Tucson to Calabasas	Calabasas to Nogales	Nogales to Tucson
DF-1 to 12	6138 to 6461, 8022 to 8303, except with 61:16 gear ratio	2625	3125	2175	1600	6050
DF-100	5200 to 5202	3600	4325	3900	2175	5000
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278	4400	5300	4400	2600	10000
DF-109, 111	4903 to 4905, 5250 to 5252	3625	4325	3000	2200	10000
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493	2200	2625	1825	1325	4000
DF-115, 119, 123, 126	5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507	2475	2950	2050	1500	4000
DF-200 to 206	5100 to 5120	4800	4815	4075	3000	10000
DF-300 to 304	4600 to 4623, 4700 to 4703	3175	3600	2525	1850	10000
DF-305, 306	4624 to 4633	1375	1650	1125	825	4000
DF-307	4634 to 4645	1975	2350	1650	1200	4000
DF-500, 501	4800 to 4815	2125	2550	1750	1275	4000
DF-603, 605, 606, 607, 611	5600 to 5719, 5730 to 5799	2175	2600	1800	1300	4000
DF-608 to 610	5720 to 5729	2075	2450	1725	1250	4000
DS-1 to 8	1000 to 1032					
DS-9 to 12	1033 to 1090					
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567					
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550					
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596					
DS-200, 201	1900 to 1903					

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULES 7-A and 10-G. Yellow signals and unattended red flags and red lights must be placed to the left of track in the direction of movement on No. 1 Track and No. 2 Track between Park Avenue, Tucson, and MP 1000.22 west of Vail.

RULE 21-C. At Tucson incoming trains may display indicators until arrival of engine on service track.

RULE 93. Yard limits within which the provisions of Rule 93 will apply are established at the following points:

Table with 3 columns: West MP, Tucson (No. 2 Track), East MP. Lists yard limits for various tracks and branches like Mescal, Willcox, Safford, etc.

Tucson: Trains moving against current of traffic on No. 1 Track between end of double track MP 984.12 and crossover between main tracks just east of junction switch, Nogales Branch, must approach Park Ave. prepared to stop clear of this crossing unless proceed signal received from yardman, white flag by day, green light by night, which will indicate that crossover switches are lined for movement to No. 2 Track.

Eastward freight trains moving on No. 2 Track may pass Signal 9848 displaying stop indication without stopping provided proceed signal received from yardman, white flag by day, green light by night, which will indicate that protection for such movement has been provided.

When authorized by train dispatcher, yardman at Park Avenue will give a proceed signal, white flag by day, green light by night, which will authorize trains to proceed to letter-type indicator on Signal 9852 at Cherry Avenue.

Trains arriving from Nogales Branch must not pass Signal 9846 displaying proceed indication unless proceed signal is received from yardman, white flag by day, green light by night, which will indicate that protection has been provided on No. 1 Track and No. 2 Track.

If Signal 9846 displays stop indication train, after stopping, may proceed as prescribed above.

Engines may move from roundhouse lead to PFE Yard against the current of traffic on No. 1 Track when proceed signal received from yardman, white flag by day, green light by night, which will indicate protection has been provided for the movement.

Westward trains entering PFE Yard must not pass east switch of crossover in vicinity of scale house unless proceed signal received from yardman.

Westward trains must not pass Signal 9843 unless proceed signal received from yardman, white flag by day, green light by night.

Trains and engines finding Signal 9843 displaying stop indication may proceed into passenger tracks Nos. 2 or 3 if switches are properly lined and proceed signal received from yardman, white flag by day, green light by night, but must move with caution, not exceeding 12 MPH.

Freight trains moving from PFE Yard to Nogales Branch must receive proceed signal from yardman, white flag by day, green light by night, before passing Nogales Branch junction switch east of Park Ave.

RULE 99-C. Will apply as follows: On Globe Branch.

RULE 103-B. Back-up hose must be used when shoving cars, between North and South yards Tucson and/or PFE Yard.

Back-up hose must be used on leading car when shoving cars on Government tracks at Airport at Wilmot.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

Table with 2 columns: Location, Normal Position. Lists Tucson, Benson, and Bowie with their respective branch and siding information.

RULE 211. Will apply when letter "M" is illuminated in letter-type indicator as follows:

Table with 2 columns: On Mast, Approaching. Signal 10347 is associated with Benson.

RULE 221. Unit for display of flashing light installed at the following location:

Table with 3 columns: Station, Location, Direction. Dragon on train-order signal mast, Eastward.

Display of flashing white light indicates that train-order signal is displaying proceed indication or that train-order operator has train orders ready for delivery, that such train orders do not restrict train at that station, and that train, providing it is not restricted by timetable or by train orders previously received, may pass fouling point of switch at which an opposing train may enter siding or place where time applies if there is no siding.

RULE 306. The following block signals equipped with triangular plate displaying the letter "P", have included in their control limits some special protective device:

Table with 4 columns: Eastward Signals, Protection, Westward Signals, Signal Number. Lists various signals like P-10140, P-10320, P-10356, etc.

RULE 505. AUTOMATIC BLOCK SIGNAL SYSTEM

Tucson: Passenger tracks Nos. 1, 2 and 3 between end of double track at MP 983.66 and Signal 9838 on No. 2 Track have no block signal control.

Tucson-Mescal: Eastward and westward trains moving against current of traffic on No. 1 and No. 2 Tracks will have no block signal protection.

Between Park Ave., Tucson, and PFE Yard automatic block signals are located to left of track in current of traffic direction.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Table with 3 columns: Location, Normal Position. Lists various locations like Wilmot, Chamiso, Benson, Fenner, Tully, Dragon, Cochise, Willcox, Luzena, Bowie, Olga, San Simon, Vanar, Steins, Mondel, Gary with their siding and track information.

Spring switches not equipped with facing point locks are located as follows:

Table with 2 columns: Location, Normal Position. Pantano, East end siding, No. 2 Track.

*Equipped with switch-point indicator.

Pantano: Facing point movement over spring switch east end siding must not exceed 20 MPH.

RULE 605. INTERLOCKING

Tucson, Sixth Ave.: Limits extend from Signal 9835 on both main tracks, to end of double track, and on passenger track No. 1 to dwarf signal 7 feet west of west switch of passenger track No. 2, and on freight lead to dwarf signal 10 feet east of Sixth Ave. tower, and on middle track to dwarf signal 230 feet west of east switch, and on Independent Ice lead to dwarf signal 240 feet west of Sixth Ave. tower.

Signals prescribed by Rule 628 may be given from tower.

PFE Yard: Limits extend on No. 1 Track between signals located 410 feet west and 510 feet east of switch to PFE Yard at MP 987.54 and on PFE Yard leads Nos. 1 and 2 to dwarf signals 410 feet west of this switch. Telephones located at signals to contact signal operator.

Signal operator located in Tucson train-order office. Transmitter to announce approach of trains for signal operator located on post at MP 990.40. Whistle signal must be sounded at MP 990.52 as follows:

For main track, - o -
For PFE yard track, o - o.

Mescal: Limits extend from interlocking signals at east switch of east crossover and west switch of west crossover on Marsh-Fairbank line, and interlocking signals at east and west ends of north and south sidings on Pantano-Benson line. Switch and derail east end coal track (derail is equipped with electric lock) are hand-thrown, but must not be used until permission is secured from signal operator. North and south sidings have no signal control between fouling points.

Where hand signals, as prescribed by Rule 628, cannot be seen, trains stopped will call the signal operator and secure permission to proceed.

Westward interlocking dwarf signal on east crossover from Marsh-Fairbank line to No. 2 Track at Mescal will display yellow aspect when serving as an approach indication for next home signal on No. 2 Track; or as a caution signal for diverging route when switch is lined for south siding. When so displayed, movement must be made with caution until fouling point at east end of south siding has been passed.

Dual control switches within interlocking limits are under the control of signal operator. When necessary to hand-throw these switches, permission must be obtained from signal operator and be governed by Rules 771 and 772.

Whistle signals:

- Eastward trains to Tucson Division, o o - o o,
Eastward trains to Rio Grande Division, - o o o o,
Eastward trains south siding, o - o,
Eastward trains south siding to Tucson Division, o o - o
Eastward trains south siding to Rio Grande Division, o - o o,
Westward trains north siding to No. 1 Track, - - o o,
Westward trains Tucson Division to No. 1 Track, o - -
Westward trains Tucson Division to north siding, o o - -
Westward trains Rio Grande Division to No. 1 Track, - o -
Westward trains from Rio Grande Division through east crossover and Tucson Division to No. 1 Track, o - - o.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Table with 4 columns: Illuminated Letter, On Signal, Approaching Movement, Authorizes and Requires Movement as Follows. Lists indicators M-9852, M-9916, M-9977, M-10012, M-10104, M-10126, M-11464, S-11464.

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

GENERAL REGULATIONS

RULE 825. Instructions for setting hand brakes:

Tucson: Passenger trains... Two brakes on west end, Two brakes on east end; Freight trains... Fifteen brakes on west end, Ten brakes on east end.

PFE Yard: Freight trains... Fifteen brakes on west end, Ten brakes on east end.

Tucson: Hand brakes will not be set on Golden State and Sunset Limited unless engine is detached. If engine is detached sufficient hand brakes must be set to prevent uncontrolled movement of cars.

Hand brakes on passenger trains are to be set after engine is spotted for oil. If necessary to detach engine after these hand brakes have been released, employe before detaching engine must see that sufficient hand brakes have again been set.

Portable rail skids are hung on posts at lower end of sidings at:

Chamiso, Fenner, Sibyl.

When necessary to leave cars on any of these sidings permission must first be obtained from chief train dispatcher, after which rail skid must be placed on rail and leading wheel of first car in descending direction run onto the rail skid, and hand brakes set if brakes are operative, before engine is detached. Trains picking up cars from these sidings must remove rail skid and return it to proper post and lock it in place with switch lock.

RULE 826. Tucson: Indicator lights located on pole just west of west switch of crossover from work lead to PFE Icing Platform lead, and above tracks at each end of PFE Icing Platform govern movements on these tracks as follows:

Green... Tracks may be used for train or switching movements.

Yellow... Tracks may be entered and engines, cars or cabooses added or detached, but cars must not be dropped or kicked against cars on those tracks.

Red... Tracks may be entered but cars on tracks must not be coupled to or moved. Trains made up on these tracks must not depart until it has been ascertained indicator displays green aspect.

Not Lighted. Must be considered as displaying most restrictive indication and icing platform foreman must be contacted for instructions before cars are coupled or moved.

AIR BRAKE RULES

FREIGHT TRAINS

RULE 33. The tonnage per operative brake Pinal to Burch, and Pinal to Cutter, must not exceed 60 tons.

TRAIN HANDLING

RULE 60. On freight trains using dynamic brakes, before entering or leaving siding, turnout or crossover on descending grade between Pantano and Mondel, and Cutter and Miami, dynamic braking force must be reduced to one half of the maximum and, if necessary, automatic brake applied sufficiently so that speed of 15 MPH will not be exceeded while engine is moving between points 500 feet before reaching and 1500 feet after passing turnout or crossover.

MISCELLANEOUS

10. PFE Yard: Look out for ice and material along-side PFE tracks.

Willcox: Look out for bedding sand between tracks Nos. 2 and 3.

11. Load limit (car and contents):

Tucson-Lordsburg... 251,000 pounds; Bowie-Miami... 210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

12. No. 1 Track and No. 2 Track Bowie subdivision will be operated under double track rules, No. 1 Track westward track and No. 2 Track eastward track.

Limits of double track operation between Tucson and Mescal will be as follows:

Eastward—via No. 2 Track to west interlocking limit at Mescal.

Westward—via No. 1 Track from west interlocking limit at Mescal to Tucson.

13. LOCATION OF STOCK YARDS

Table with 3 columns: Station, Capacity in cars, and (Water) status. Lists stations like Tucson, Benson, Cochise, Willcox, Bowie, San Simon, Lordsburg, Solomon, Safford, Dublin, Fort Thomas, Calva, San Carlos, Pinal, Radium.

30. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Table with 3 columns: Mile Post, Location, Description. Lists structures like Car Repair shed, Cienega Creek bridge, Rock cut, Overhead crossing, Water column, San Pedro River bridge, Water tank spout.

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 3, and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT and OTHER MAXIMUM SPEEDS appearing on page 4 of Special Instructions for All Subdivisions.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

Large table with columns for Territory, Passenger Trains, Freight and Mixed, Light Engines. It lists speed restrictions for various territories like Eastward, Tucson to Lordsburg, and Westward, Lordsburg to Tucson.

*Regulated by City ordinance.

**ICC Regulation.

Light engines on descending grades without dynamic brakes in operation must not exceed speed shown for freight and mixed trains.

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

⊙SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 3, and MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT and OTHER MAXIMUM SPEEDS appearing on page 4 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE SAFETY, REGARDLESS OF TIME.

TERRITORY		FREIGHT AND MIXED	LIGHT ENGINES	TERRITORY		FREIGHT AND MIXED	LIGHT ENGINES
MP	MP	Column:	1	2	MP	MP	Column:
EASTWARD, BOWIE TO MIAMI:				WESTWARD, MIAMI TO BOWIE:			
1098.12 to 1099.50			15	15	1232.98 to 1220.59		15
1099.50 to 1126.12			*30	*30	1220.59 to 1217.52		20
1126.12 to 1126.43			30	30	1217.52 to 1207.01		*30
1126.43 to 1136.65			*30	*30	1207.01 to 1195.00		25
1136.65 to 1138.34			15	15	1195.00 to 1183.70		20
1138.34 to 1145.33			*30	*30	1183.70 to 1178.17		*30
★1145.33 to 1146.42 (Pima)			25	25	1178.17 to 1178.03		25
1146.42 to 1178.03			*30	*30	1178.03 to 1146.42		*30
1178.03 to 1178.17			25	25	★1146.42 to 1145.33 (Pima)		25
1178.17 to 1183.70			*30	*30	1145.33 to 1138.34		*30
1183.70 to 1195.00			20	20	1138.34 to 1136.65		15
1195.00 to 1207.01			25	25	1136.65 to 1126.43		*30
1207.01 to 1217.52			*30	*30	1126.43 to 1126.12		30
1217.52 to 1220.59			20	20	1126.12 to 1099.50		*30
1220.59 to 1232.98			15	15	1099.50 to 1098.12		15

★Regulated by City ordinance.

*DS-101, 109, engs. 1310-1319, 1403-1425 must not exceed 25 MPH.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
On PFE yard tracks Nos. 1 to 7, inc., Tucson	10
On Government tracks at Wilmot airport	10

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Tucson to Meescal (No. 2 Track)	Benson to Dragoon San Simon to Stearns	Meescal to Benson Dragoon to Wilcox Pima to Safford MP 1136.5 MP 1143.9 to Lordsburg	Wilcox to Pima MP 1136.5 to MP 1143.9	Lordsburg to MP 1143.9
DP-4, 7	{6000 to 6004, 6017, 6018, 5900 to 5909, 5916, 5917	675	600	1250	1150	1250
DP-5, 6	{6005 to 6016, 6055 to 6058, 5910 to 5915	1075	725	5525	1400	1550
DP-8, 9, 10	{6019 to 6033, 5918 to 5924	1325	850	5525	1725	1925
DP-11	{6034 to 6045	1350	1325	5525	2425	3275
DP-12	{6046 to 6054	1350	950	5500	1775	1975
DF-1 to 12	{6138 to 6461, 8022 to 8303, except with 61:16 gear ratio with 60:17 gear ratio	1925	①1300	6050	2000	2225
DF-100	{5200 to 5202	1350	975	5275	1725	1925
DF-101 to 108, 110, 112	{4900 to 4902, 5203 to 5249, 5253 to 5278	1250	875	4750	1575	1750
DF-109, 111	{4903 to 4905, 5250 to 5252	2075	1500	5000	2725	3025
DF-114, 116 to 118, 120 to 122, 124, 125	{5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493	2550	1800	10000	3350	3700
DF-115, 119, 123, 126	{5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507	2150	1550	10000	2775	3075
DF-200 to 206	{5100 to 5120	825		3000		
DF-300 to 304	{4600 to 4623, 4700 to 4703	1300	925	4000	1675	1860
DF-305, 306	{4624 to 4633	1450	1050	4000	1875	2075
DF-307	{4634 to 4645					
DF-500, 501	{4800 to 4815	2925	2100	10000	3775	4150
DF-603, 605, 606, 607, 611	{5600 to 5719, 5730 to 5799	1825	1300	10000	2350	2575
DF-608 to 610	{5720 to 5729					
DS-1 to 8	{1000 to 1032	650	450	4000	850	850
DS-9 to 12	{1033 to 1090	1150	825	4000	1500	1675
DS-100 to 109, 111, 115, 119	{1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	975	700	4000	1275	1425
DS-110, 114, 118	{1442 to 1463, 1492 to 1513, 1539 to 1550	1250	975	4000	1775	1975
DS-113, 117, 120 to 122	{1486 to 1491, 1529 to 1538, 1568 to 1596	1225	850	4000	1575	1750
DS-200, 201	{1900 to 1903					

①Rating Benson to Dragoon 5300.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	MP 1143.8 to Mondel Steins to Benson 2 M E Cochise Diesel to Benson Mescal to Tucson (No. 1 Track)	San Simon to Bowie	Bowie to Raso 2 M E Cochise to Dragon	Mondel to Steins Benson to Mescal					
DP-4, 7	6000 to 6004, 6017, 6018, 5900 to 5909, 5916, 5917	1250	1250	750	650					
DP-5, 6	6005 to 6016, 6055 to 6058, 5910 to 5915	5525	1750	1075	750					
DP-8, 9, 10	6019 to 6033, 5918 to 5924	5525	2150	1325	975					
DP-11	6034 to 6045	5525	3700	1875	1375					
DP-12	6046 to 6054	5500	2200	1350	1000					
DF-1 to 12	6138 to 6461, 8022 to 8303, except with 61:16 gear ratio with 60:17 gear ratio	6050 5275 4750	2475 2150 2150	1575 1350 1225	1325 1000 900					
DF-100	5200 to 5202									
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278	5000	3400	2100	1550					
DF-109, 111	4903 to 4905, 5250 to 5252	5000	5000	3075	①2275					
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493	10000	4150	2600	1900					
DF-115, 119, 123, 126	5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507	10000	3425	2175	1600					
DF-200 to 206	5100 to 5120	3000			625					
DF-300 to 304	4600 to 4623, 4700 to 4703	4000	2075	1300	950					
DF-305, 306	4624 to 4633	4000	2350	1475	1075					
DF-307	4634 to 4645									
DF-500, 501	4800 to 4815	10000	4650	2950	2225					
DF-603, 605, 606, 607, 611	5600 to 5719, 5730 to 5799	10000	2875	1825	1350					
DF-608 to 610	5720 to 5729									
DS-1 to 8	1000 to 1032	4000	1050	650	470					
DS-9 to 12	1033 to 1090	4000	1875	1175	850					
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	4000	1600	1000	725					
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	4000	2225	1275	1000					
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	4000	1950	1225	900					
DS-200, 201	1900 to 1903									

①Rating Benson to Mescal 2300.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

RATING OF ENGINES—In Units of 2000 Lbs. (Tons)

NOMINAL CLASS	ENGINE NUMBERS	Bowie to San Carlos	San Carlos to Cutter	Cutter to Pinal	Pinal to Globe	Globe to Miami	Miami to Globe	Globe to Pinal	Pinal to San Carlos	San Carlos to Tanque	Tanque to Bowie						
DF-100	5200 to 5202																
DF-101 to 108, 110, 112	4900 to 4902, 5203 to 5249, 5253 to 5278	5000	2200	1000	5000	2375	1975	1125	5000	3125	2325						
DF-109, 111	4903 to 4905, 5250 to 5252																
DF-114, 116 to 118, 120 to 122, 124, 125	5279 to 5293, 5308 to 5335, 5340 to 5444, 5449 to 5493	4400	2600	1200	10000	2850	1700	1325	10000	3700	2900						
DF-115, 119, 123, 126	5294 to 5307, 5336 to 5339, 5445 to 5448, 5494 to 5507	3625	2200	1025	10000	2375	1425	1150	10000	3075	2400						
DF-200 to 206	5100 to 5120	1400	850	395	3000	925	555	440	3000	1200	925						
DF-300 to 304	4600 to 4623, 4700 to 4703	2200	1325	600	4000	1425	875	650	4000	1850	1450						
DF-305, 306	4624 to 4633	2450	1500	700	4000	1625	975	775	4000	2100	1625						
DF-307	4634 to 4645																
DF-500, 501	4800 to 4815																
DF-603, 605, 606, 607, 611	5600 to 5719, 5730 to 5799	3175	1850	875	10000	2025	1225	975	10000	2575	2025						
DF-608 to 610	5720 to 5729																
DS-1 to 8	1000 to 1032	1350	825	365	4000	900	520	405	4000	1150	900						
DS-9 to 12	1033 to 1090	1975	1200	550	4000	1300	775	600	4000	1675	1300						
DS-100 to 109, 111, 115, 119	1300 to 1441, 1464 to 1485, 1514 to 1528, 1551 to 1567	1675	1025	455	4000	1100	650	505	4000	1425	1100						
DS-110, 114, 118	1442 to 1463, 1492 to 1513, 1539 to 1550	2950	1500	695	4000	1625	1150	775	4000	2150	1400						
DS-113, 117, 120 to 122	1486 to 1491, 1529 to 1538, 1568 to 1596	1775	1250	575	4000	1350	800	625	4000	1750	1350						
DS-200, 201	1900 to 1903																

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.