Goods Trains Past and Present.

Stan Moore and Arthur Hayes

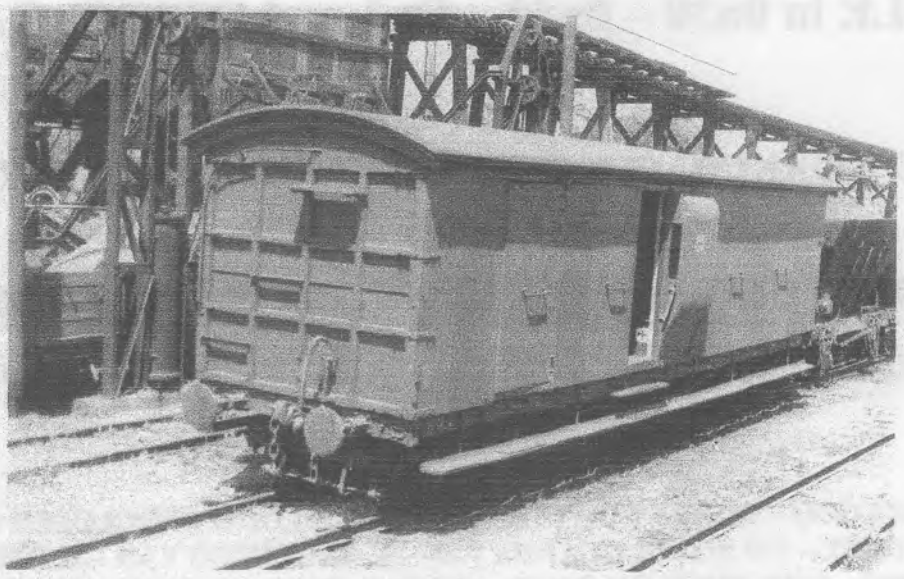
MODELLING THE RAILWAYS OF QUEENSLAND

CONVENTION 2006

Early Goods Trains

Queensland first considered the construction of railways back in the mid 1850's, when the population was only approximately 24,000 people, and it was decided to adopt the 3 foot 6 inch gauge and construct lines as cheaply as possible. In the early to mid 1860's when the first contracts were let and construction commenced the railways used light rails, tight curves with 4 and 5 chains being common, minimum of earthworks resulting in some fairly severe grades and as far as possible following the contours of the land. These factors resulted in the use of small light locomotives initially being 2-4-0 wheel arrangement and four wheel timber wagons.

The early goods trains of 1865 were hauled by A10 (2-4-0) locomotives (weighing some 23 tons), consisting of a couple of passenger cars, several four wheel goods wagons, maybe a horse box and a guard's van. This gave a total weight of generally of some 90 to 100 tons, reducing to 35 tons on 1 in 40 grades, and a maximum speed of 20mph. Typically the goods wagons were 14 to 17 feet long weighing 3 to 4 tons, with spring buffers, centre draw hooks, screw couplings and coupling chains.



Growth of Goods Trains

Virtually from the very beginning goods trains began to grow, and have continued to this day, with the demand for heavier and faster locomotives, heavier wagons with greater carrying capacity capable of faster speeds. With the introduction of air brakes safety was greatly increased particularly in stopping distances and on grades and so over time the coupling chains disappeared, together with the spring buffers, centre drawer hook and screw couplings to be replaced with auto couplings.

With the introduction progressively of new larger, faster, mechanically improved, heavier locomotives, and some track improvements, saw loads being hauled increase requiring an increase in the capacity of wagons. Loads in four wheel wagons increased over time generally from 10 to 16 tons and the demand for greater loads saw the introduction of eight wheel wagons and loads grow from 20 to 32 tons. It was not until the diesel era that we saw loads increase further dramatically.

However this change has been a relatively slow process not gaining any real momentum until the late 1940's early 1950's. As a result of these demands much improvement has been made to the track on which trains operate to permit the changes.

It is interesting to look at the increase in locomotive size over time:

Loco Class	Year	Loco Weight	Loco Class	Year	Loco Weight
A10	1865	35 ton	C17	1920	80 ton
B12	1869	38 ton	C19	1922	95 ton
B13	1883	45 ton	B18 1/4	1926	91 ton
B15	1889	52 ton	AC16	1943	95 ton
C16	1903	77 ton	BB18 1/4	1950	103 ton
B17	1911	80 ton	Beyer Garratt	1950	139 ton

Goods Trains in the Steam Era

A single locomotive normally hauled goods trains in the steam era, and the maximum load of trains was 650 tons. However there were occasions when double heading did take place, and on particular sections of track where bank engines were used on a fairly regular basis. Some of the more common sections in the South East being Eumundi to Cooroy, Grandchester to Laidley, Murphy's Creek to Toowoomba and Gowrie Junction to Toowoomba.

There were also restrictions on the use of attached locomotives on certain structures. Two of the most notable being the Albert Bridge at Indooroopilly, where a separation of 16F was required and the Alexandra Bridge in Rockhampton where a separation of 12F was required

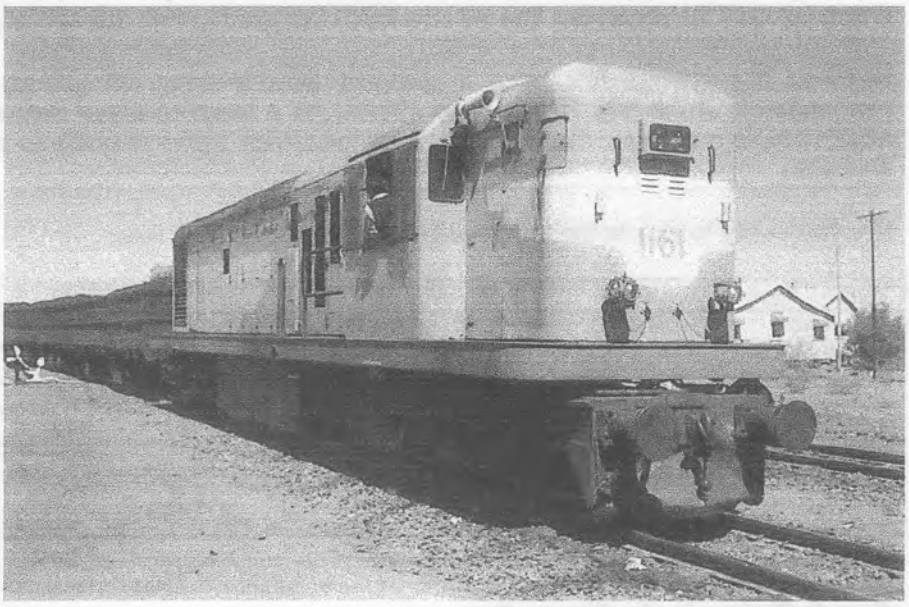
Loads for goods trains were calculated for the various classes of locomotives over various sections of track taking into account various items such as the tractive effort of the locomotive and the grades prevailing on that section of track. There were also maximum loads for attached loads and maximum loads in older type of wagons.

During the last 20 years of the steam era and the early years of the diesel era we saw the introduction of steel wagons, some minor track upgrades, automatic couplings which commenced the speed of change on the railway system.

Goods Trains in the Early Diesel Era

Generally with the introduction of diesel locomotives trains continued to be hauled by a single locomotive and the use of double headers and banking engines disappeared due to the increase of power available and the weight restrictions on the track and the bridges in particular.

With the introduction of the diesel era we saw the introduction of certain restrictions. The most interesting being the recovery of a diesel hauled train after a failure where the steam locomotive had to have a 2F separation from the diesel locomotive and this applied to extensive sections of track, an example being Howard to Gladstone and Conn to Cairns.



We also saw longer trains, with increased loads. The classification of rolling stock altered along with changes to drawgear. That required instructions being issued on the marshalling of trains to gain the maximum loads for this new traction.

The length of trains was generally restricted due to the length of the crossing loops, some trains were given authority to exceed the norm.

The increase in loads resulted from the increase in the power of the locomotives and the increase in the carrying capacity of the wagons from the transition to steel wagons and the introduction of stronger draw gear on the wagons. We saw loads in excess of 1,000 tons become common.

Load Tables;

To allow trains to run across sections in a reasonable amount of time and to maintain schedules, load tables were developed for trains. These tables took into consideration the power of the hauling locomotive/s and the gradients in the section. Load Tables also took into consideration the strength of the drawgear on rollingstock and the schedule the train was required to maintain. These tables were published in the "Supplement to Working Time Table" (SWTT). At times they were also published in Circular Memos, Weekly Notice and on Train Notice. Today, Railway Operators record their own load tables in local Business Instructions.

The "Supplement to Working Time Table" also includes various information and instructions relating to the movement of trains. The following information can be found in the document;

- Movement of Break Down Cranes
- Bulk Sugar Loads
- Classification of Lines
- Clearance of Sections of Line in an Emergency

- Whistle Codes
- Definition of Line Classifications
- Description of Rollingstock
- Description of Trains
- Limitation of Gross Wagon Loads
- Livestock Loads
- Make Up of Trains
- Restrictions on Rollingstock

The following Load Tables are extracts from Sunday 1st July 1973 Supplement.

1 x 90 t locomotives (1250, 1270, 1300, 1450, 1460, 1502, 1550)

Sections	**UP** (Brisbane to Toowoomba)				**Down** (Toowoomba to Brisbane)			
	Col.1	Col. 2	Col. 3	Col. 4	Col.1	Col. 2	Col. 3	Col. 4
Brisbane – Ipswich	1204	1204	1130	790	1170	1170	1070	750
Ipswich - Grandchester	1330	1330	1250	850	1760	1760	1570	1100
Grandchester – Laidley	690	690	670	480	1120	1120	880	630
Laidley - Gatton	1900	1900	1700	1180	1900	1900	1700	1180
Gatton - Helidon	1370	1370	1250	870	1760	1760	1570	1100
Helidon – Lockyer	1240	1240	1130	790	1900	1900	1700	1180
Lockyer – Murphy's Ck	1090	1090	1010	710	1900	1900	1700	1180
Murphy's Ck – Toowoomba	630	630	610	440	1240	1240	1130	790

2100 DEL (93 t) 720 (1990) (All loads are in tonnes)
2300 DEL (94 t) 840 (1998)

2 x 90 t locomotives (1250, 1270, 1300, 1450, 1460, 1502, 1550)

Sections	**UP** (Brisbane to Toowoomba)				**Down** (Toowoomba to Brisbane)			
	Col.1	Col. 2	Col. 3	Col. 4	Col.1	Col. 2	Col. 3	Col. 4
Brisbane – Ipswich	2470	1260	1130	790	2330	1200	1070	750
Ipswich - Grandchester	2660	1360	1210	850	3520	1760	1570	1100
Grandchester – Laidley	1380	750	670	480	2240	1120	880	630
Laidley - Gatton	3800	1900	1700	1180	3800	1900	1700	1180
Gatton - Helidon	2740	1390	1250	870	3520	1760	1570	1100
Helidon – Lockyer	2470	1260	1130	790	3800	1900	1700	1180
Lockyer – Murphy's Ck	2180	1130	1010	710	3800	1900	1700	1180
Murphy's Ck – Toowoomba	1250	680	610	440	2470	1260	1130	790

The Supplement also provided through loads for unit/block trains in some locations.

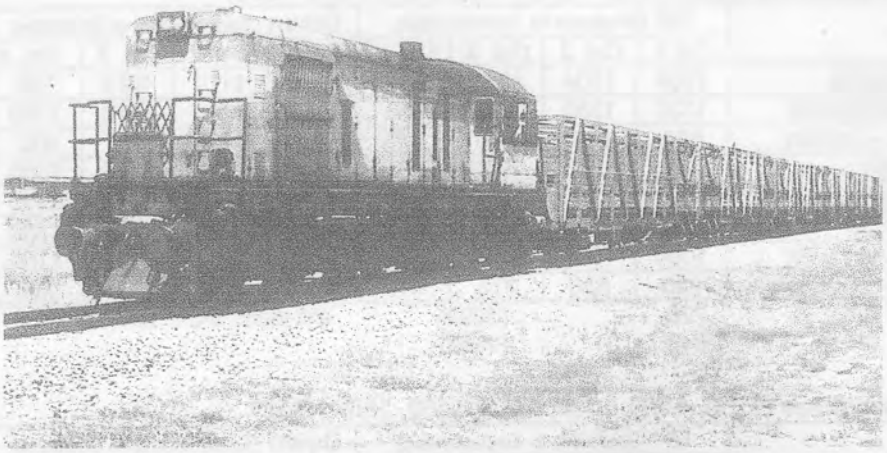
Bulk Sugar Loads

Carstairs to Townsville Jetty

Locomotive Class	*Load*
1250/1450	*38 MTW plus Van*
1200	*35 MTW plus Van*
1150/1400	*32 MTW plus Van*
1600,1620, or 1700	*29 MTW plus Van*
1720	*30 MTW plus Van*
1170	*18 MTW plus Van*
Two 1170, Two 1600, Two 1620, Two 1700, or Two 1720	*38 MTW plus Van (1388 t)*
2 D.H. Class	*34 MTW plus Van*

Livestock Loads

Section	1600, 1620 or 1700 Class			1170 Class	
	KSA	K	KKB	K	KKB
Kajabbi to Cloncurry	3	36	1	29	1
Dajarra to Duchess	5	42	1	35	1
Mt Isa to Hughenden		54	1	41	1
Hughenden to Stuart		43	1	30	1



Section	Two 1600, 1620 or 1700 Class				Two 1170 Class		
	KSA (D2)	KSA (D3)	K	KKB	KSA	K	KKB
Kajabbi to Cloncurry	6	14	36	1	10	36	1
		(57 Wagons = 1140 t)			*(47 Wagons = 940 t)*		

The Supplement to the Working Time Table dated 1962 showed 5 columns.

Generally, goods/freight trains loads were as per the Load Table. However, express freight services on a faster time table the load was reduced. Some services on the North Coast Line were given a gross mass of 650, compared to 790 tonnes in the SWTT.

Wagon Drawgear;

Over the years with newer wagons entering the network, the strength of drawgear increased allowing heavy and longer trains.

Table of Wagons by Drawgear *(1973 SWTT)*

Drawgear Class	*Wagon Type*
Class D1. Wagons fitted with Automatic Coupling, except ALY/T, FJST, SX & A/c Cars, 1700 DEL's	BLC/T, CMIS/T, CMR, G, HJC/T, HO, HWA, HJST, HAS/T, LRC, QLX/T, CO, PC, PCC, VGY, VAO, VO, VSO, WHOT, WHO, WHE/T, QFC except 33017,33059 QFX/T,QFCR, QGX, QGX/C, QR LPO, OBAO, OCAO,OCO, ODY, OHO, OJY,OLE/T, OLY, OCY, OHE/T, OPO, OTO, OVAO, OVO

Class D 2. Wagons capable of withstanding the greatest pull permissible on the drawhooks and screwed couplings. Includes SX & A/c Cars, 1700 DEL's (includes Locomotives fitted with drawhooks)	HRC, HAS, PE, PF, PWZ, QFX, QLX, WHE, QFC Nos 33017,33059. KSA 31819 – 31918, 32793 – 32892. LPY, OBE, OBY, OFY, OHE, OHY, OPY OPE No. 27, OQE, OQY, OLE, OTY, OVY
Class D 3. Wagons capable of withstanding a pull on the drawgear to a lesser extent than D2 wagons but greater than D4 wagons.	BCF, BLC, CJF, CJFF, CLC, CMIS, GWW, HJB, HJC, HJS, HJSF, HJU, PCS, PCSS, PFCP, PJC, LTM, LTR, PJW, WE, WH, WHA, WW, ZZ, KSA (other than above) MTW, NWB, W, WBC, WR ((CD inside a diamond or stencilled "Draft Gear fitted" OA, OB, OC, OCE, ODE, OL, OLE, OP OPE Except No. 27), OQ, OR, OS, OT, OV, OVE.
Class D 4.	Comprises all wagons other than above including ALY/T, FJST, VJM, VJMG, VJD wagons (four wheeled wagons with steel underframes) 1976 Supplement included the following; When ALY, ALY/T & FJS wagons are used for bulk loading and are loaded to not less than 80% of their gross load, these classes of wagons may be used to make up the difference between Col 3 and Col 4 loads of trains, provided that these wagons are marshalled to the rear of any bogie wagons. VTE wagons may be used to make up the difference between Col 3 and Col 4 loads in any part of the state provided the wagon are loaded to not less than 80% of their gross mass.

Given the above information and the load tables, there are fifteen differed methods to calculate the maximum load applicable for a train.

The table below shows how loads can be calculated.

Sections	Two 1600, Two 1620 or Two 1700 Class D.E.L. Hauling			
	DOWN			
	Column 1.	Column 2.	Column 3.	Column 4.
Willowburn - Gowie	1,520	1,130	1,010	710
Marshalling order From Engine	D1.	D2.	D3.	D4.
	D1 + D2	D2 + D3	D3 + D4	
	D1 + D2 + D3 (390+120+1010=1520)	D2 + D3 + D4 (120+300+710=1130)		
	D1 + D3	D2 + D4		
	D1 + D2 + D3 + D4			
	D1 + D2 + D4			
	D1 + D3 + D4			
	D1 + D4.			

In the Transition Coupling era, only 3 links were allowed in a train.

Length of Trains;

The method to calculate the length of train has varied over the years. The "F" wagon (17' 5") was used during the steam era. This was later altered to a unit. Today the length of trains is in metres.

The general length of trains in the steam era was 60 F (273.6 Mts), however this was subject to the pump size fitted to the hauling locomotive. BB18¼ locomotives have hauled 120 F (547.2 Mts) of empty wagons under authority.

In the diesel era the average length of goods/freight trains was 90/95 units (410.4 Mts), similarly this was increased to 120 units in some locations for various empty unit trains. The length of trains were also increased on unit coal /mineral trains worked with multiple locomotives to achieve the increased loads that could be hauled by these trains. The maximum number of four wheeled wagons on any train was 68 vehicles.

In today's environment the maximum length of trains are as follows;
Trains including four wheel wagons other than FCZY wagons shall not exceed 500 metres. Trains not including four wheel wagons shall not exceed 650 metres. The length of the train now includes the length of the hauling locomotives.

Most vehicles have their length marked on it in some form, over the years this had been shown in various ways. Some eras it was shown in the measure of the day. During the period where a unit was 17 feet 5 inches over buffers (prior to 1973), the unit length was shown within a circle after the wagon number.

i.e FJS 24565 (1.2)

Later, the unit was changed to 5 metres, this era can be identified by the unit length shown in a diamond.

i.e. QLX 363401 ◇2.7◇

Length of locomotives and rollingstock can also be found in the SWTT. When train lengths went to metres, this figure was multiplied by 5. (2.7 x 5 = 13.5 metres.)

The length of trains played two roles. Number of vehicles the hauling locomotives can handle with the braking system, and the length of siding and crossing loops for train to pass. Length of loops can be located in the Working Time Table.

The information in "Supplement to Working Time Table" was reviewed every few years to reflect the current requirement, thus a revised document was issued. These books provide helpful information to era or prototypical operational modeller.

Track Classification;

One of the limitations that have governed the movement of trains from day one was the condition/strength of the track. Over the years the track condition has improved which has allowed the operation of heavier locomotives and increased wagon loads.

In 1973 the following track classifications were shown in the Supplement.

"S" Class.	These lines are of "Special" standard of construction, generally for mineral traffic. (At the time they were rated as a 20 tonne axle load)
"A" Class	Available for locomotives with axle loading not greater than 15 tons (namely the 90 ton and 60 ton D.E.L and D.H.L.) and for wagons with axle loading not greater than 15.5 tons, including "block trains"
"B" Class	Available for locomotives with axle loading not greater than 10.45 tons (namely 60 ton D.E.L and D.H.L.) and for wagons with axle loading not greater than 10 tons, including "block trains"

Some"B" Class Available for locomotives with axle loading not greater than 10 tons (namely the 60 ton D.E.L and D.H.L.) and for wagons with axle loading not greater than 12 tons, including "block trains"

(July 1973 SWTT)

Line or Section	Class	Special Provisions and Restrictions
Roma St to Toowoomba	A	Available for block trains via the main lines (newer) bridge at Indooroopilly. Any number of locomotives may be coupled to the hauling locomotives, as vehicles, via this bridge (newer), between Roma Street and Ipswich, and between Wulkuraka and Toowoomba **Restrictions on Albert Bridge Indooroopilly.** On the Albert Bridge (suburban lines) over Brisbane River, another locomotive must not run coupled to a 90 ton locomotive, but two 60 ton or D.H. locomotives may run coupled. Wagons loaded to more the 12 tons gross per axle, are not permitted. Such wagons must travel via the main lines (newer) bridge.
	A	Queensland Cement & Lime Coy. Siding Darra except no locomotive beyond sign on 5 Road. B class beyond this sign for wagons.
	B	Rosewood Turntable
	B	Normanton Colliery
Toowoomba to Roma	A	Available for "Block trains." Any number of locomotives may be couple to the hauling locomotive as vehicles.
Roma to Charleville	B	Available for wagons with gross load not exceeding 12 tons. All trains subject to a speed restriction of 20 M.P.H across Maranoa River
Charleville to Cunnamulla	B	
Westgate to Quilpie	B	
Cotton Vale to Amiens	B	Not available for coupled 60 ton locomotives. Speed of 60 ton locomotives must not exceed 15 M.P.H.
Theebine to Kingaroy	B	Not available for 60 ton locomotive. Speed limit 4 miles per hour over Dickabram Bridge

Over the years, the below table provides a guide to which locomotives were allowed to work over the various classifications of lines.

Locomotives used on these Lines

"S" Class Lines 20 t		"A" Class Lines 15.75 t		Some "B" Class Lines 12t		"B" Class Lines 10 t	
DEL	Steam	DEL	Steam	DEL	Steam	DEL	Steam
97 t	Nil	***90/94 t***	Garrat	***60/63 t***	C 17	***60/63 t***	C 17
2100		1150	BB18 ¼	1170	AC 16	1170	AC 16
2130		1200	B18 ¼	1720	C 16	1720	C 16
2141		1250	C 17	1700	PB 15	1700	* PB 15
2150		1270	AC 16	1600	B 15	1600	* B 15
2170		1300	C 16	1620		1620	* Some
2200		1400	PB 15			D.H.	lines only
2250		1450	B 15				allowed
		1460	B 17				these
		1502	D 17				locomotives
		1550	DD17				
		2400	C 18/19				
		2450					
		2470					
		2300					

Today, the Supplement to the Working Time Table has been replaced by Standard STD/0071/SWK Operational Route Manual (Ver 1 Nov 99). Module 2 provides track information. The standard details the section of track, route, control centre, number of operating tracks, maximum allowable axle loadings, maximum speed/axle loading, train regulation system, communication system and crossing loops.

The table below provides an extract of some sections.

Line Section	Max. Axle Loading	Max. speed/ axle loading	Notes
Northgate to Caboolture	20	80/20 60/20 See Notes 100/EMU	3900 EL's 100km/h Any number of loco's may be coupled. Available for block trains
Caboolture to Nambour	20	100/20 120/ICE 160/Tilt Train	Available for block trains
Corinda to Wulkuraka	15.75	80/15.75 100/EMU	**Corinda – Ipswich** Available for block trains Available 3900 EL's 80 k/h Any number of loco's may be coupled. **Ipswich – Wulkuraka** Available for block trains max speed 60 km/h.
Dalby to Roma West	15.75	80/15.75 to Chinchilla 70/15.75	Available for block trains Double header – line speed Triple header 60km/h Dalby – Ch'illa, 40km/h Ch'illa – Miles Triple header not permitted beyond Miles. Any number of loco's may be coupled.
Roma West to Charleville	15.75	70/15.75	30 km/h max speed over Maranoa River
Charleville to Cunnamulla	10.62	60/10.62 to 697.00 km then 50/10.62	
Gayndah to Monto	10.62 to Mund'bera then 12.2	60/10.62 60/12.2	
Dalrymple Jtn - Goonyella	26	60/26 to Hatfield then 80/26	Available for block trains Any number of loco's may be coupled. Available for 4 loco's hauling in multiple

Wagon Loads

The load a wagon can carry is restricted to the class of line the wagon is to travel on.

Wagon class	Tare	Brisbane/Roma "A" Class Line	Roma / Charleville Some "B" Class Line	Charleville / Quiplie "B" Class Line
F	3	7	7	7
FJS	6	10	10	10
ALY	9	12.2	12.2	11
WHE	13.4	30.2	30.2	26.1
HWO	20.1	42.4 t	28.3 t	20.1t
HSA	10.3	26.5 t	26.5 t	26.5 t
QGX	13.0	35.7 t	29.6 t	27.6
QLX	18.8	29.4 t	29.4 t	21.2 t

The line class dictated the class of locomotive/s that could work over the section of track and the capacity a wagon could be loaded too.

Wagon Orders:

Prior to 8 AM each morning, station staff (mainly Numbertakers in bigger Yards) would walk or ride a bike around the yard and record all wagons and their condition in the various sidings under the control of the Station responsibilities. This report had two functions. One being the 8AM wagon report sent to the Head Office (Wagons Clerk) and the other was to check the station Rollingstock Book. This book recorded the arrival of all wagons, if it was loaded or empted, (for Demurrage) and details of the wagons departure from the station. This report was completed daily and forwarded to Head Office.

The Uniform Telegraph Code was used to compile the 8 AM Wagon Report.

Code	PHRASE
EBER	Empty goods trucks on hand required
EBON	Loaded goods trucks on hand inwards
DYAK	Empty stock trucks on hand
DEMO	Tarpaulins on hand require ..... Spare .....
ECCE	Loaded goods trucks on hand outwards
EDEP	Goods trucks loaded with Departmental materials
EDOW	Goods trucks in transit
ELMO	Required for to-morrow's use
ERPY	Following empties on hand not required
FULO	Loco. Coal on hand

Thus a report could look like the following.

Code	Details
EBER	4 H, 3 HJS, 2 FJS, 3 CLF, 5 ALG.
EBON	7 FJS, 1 H, 2 HJS, 5 CJF, 1 CJFF, 1 ALJ
DYAK	10 K, 4 N
DEMO	Require 15, Spare 20.
ECCE	UP 4 H, 2 HJS, 1 F, 2 ALG, 3 CLF DOWN 1 H, 2 FG, 2 C, 1 CJF
EDEP	2 C, 3 S, 2 H
ELMO	6 H, 4 CJF
ERPY	6 H, 2 CJF, 3 FJS
FULO	4 H.

During the Day before 2 PM station staff would advise the Trains Room of their anticipated loading figures.

2 FJS 2.4 F – 27 t Gympie.
2 H 4.0 F – 32 t Maryborough
2 CLF 4.0 F – 40 t Roma Street.

These figures were used to allocate accommodation on through trains.

Each afternoon around 4 PM the Train Room would issue orders to the various Yards detailing transit instructions.

The following document is an example of these orders.

QUEENSLAND RAILWAYS

TUESDAY 13 TH MARCH 1984. MAYNE YARD ORDERS. GENERAL MANAGER OFFICE

YELLOW BANDED WR/SR/QG TO BANYO. ORDINARY WR/SR FOR GENERAL LOADING CO/CLO FOR MOOLABIN & ACACIA RIDGE CLEAR FIRST TRAIN. EMPTY HWO TO ACACIA RGE. EMPTY VJMG TO MURGON AFTER ORDERS. OTHER GRAIN WAGONS TO TOOWOOMBA AFTER ORDERS. WH CLASS WITHOUT TARPS SUPPORTS FOR GENERAL LOADING.WH CLASS WITH TARP SUPPORTS TO TOOWOOMBA AFTER ORDERS. ALL EMPTY BOX & RED SPOT FLATS TO ROMA ST AFTER ORDERS. S WAGONS TO LOWMEAD AFTER ORDERS. ARRANGE CLEARANCE FRIST TRAIN OF ALL PB/FJB LOADED OR EMPTY IN SUNSHINE/MONKLAND TRAFFIC. EMPTY WAGONS NOT NOT BE USED AS COVER FOR EMPTY HOPPERS NORTH WITHOUT AUTHORITY.

7483	Tues	Attach Woombye QLX ety Nambour Nambour 1 M (must be M)
7491	Tues	Gympie BRM 41652 QRC 2039 ety ex CMR Shed Pomona 1 MS OB 1 Monkland ex P'ba 7026 OB 9, OB 98 Monkland ex P'ba 7026 OPAO 31, OHE 3 Gympie ex P'ba 7026 OV 14 Monkland ex Cannon Hill 7F08 (2nd trip)
7495	Wed	Caboolture 1 M class Attach Narangba 8 FJS, 1 QFC ety return South
8F03	Wed	Beaudesert 1 ALY ety ex Newstead 7F16 Salt for B'desert remain Mayne Yd for 8F06 Wed
7F02	Wed	Rocklea 1 M (must be M), 2 QLX, 5 FJS Coorparoo 1 QLX G.M.H. All M class after orders.
7506	Wed	Wacol 5 FJS, HJS, MS, 2 QLX
7103	Wed	Albion 1 QLX
7101	Wed	Massey Ferg 2 FJS Woodlands PB 31067, 31065 ex Monkland 7462 Tues

6313	Wed	Rockhampton 20 K, 9 K Benaraby, 12 K Berajondo. Lifts Oakhurst 1 K R'ton. Rockhampton 1 K ex Oakey (ex 6667)
7105	Wed	Strathpine 1 M Sunshine Timber Ind. 7 S ex 7396 (to go on the lead of train) Zillmere 1 H Red Spot, 1 H class, 2 QLX
7107	Wed	Northgate Cement Shop 2 FJS
7510	Wed	Toogoolawah 1 MTW

CARRIAGE AND VAN ORDERS : 4.00 PM TUESDAY, 13TH MARCH 1984.
TUESDAY, 13TH MARCH 1984.

6251	TLV	1837	Ex 7017
6469	CLV	1013	On hand Roma St. In addition to van on the train ex Yard.
7461	MV	924	On Hand Roma St Yard, Ex 7904
6277	TDV	1893	Ex 7F02
3459	MV	1010	On hand Roma St Station
6275	MV	1058	On hand Roma St Station
6279	TGV	1784	Ex 7706
6676	TGV	1809	On hand Roma St Yard
7684	BBV	1590	On hand Roma St Yard ex 7901
7692	BDV	973	On hand Redbank

BBV 1597 to go to Carriage Shed for inspection when located
One of the following vans is to be sent to Maryborough Workshops for overhaul:- TGV 1810,1812
Fast Freight Van and one other van (16 Tonne) must be sent to Gympie spare on either 7491 or 7514

Each day a Train Notice was issued for the conveyance of Livestock. Below is an example of such a Train Notice for Cannon Hill and Murarrie.

QUEENSLAND RAILWAYS

General Manager's Office,
Notice 526 BRISBANE

LIVESTOCK LIST FOR CANNON HILL AND MURARRIE

Consignee	Order	Station From	Train List
TODAY TUESDAY			
6328 Additional			
Dalgety/Wildman	1 K	Bororen	6328
6240			
Giasoto/Dalgety	1 K	Bloomsbury	6398
6464			
Mitchell / QBA	NA as IC	Ubobo	6464
Albrand/Burrows	1 K ½ IC	Mundubbera	do.
J. Mosman/Downs Buyers	4 K	Eidsvold	do.
Slack/Downs Buyers	4 K	Ideraway	do.
6667			
Assoc. Buyers	1 NA	Dalby	7804 Wed.
DAlwin	3 K, 1 IC, 1NA	Quilpie	do.
Elders	1 K	Quilpie	do.
WEDNESDAY 29TH			
6611			
Stanton	1 K	Whitleys	6611
Winrose	1 K ½ IC	do.	do.
6242			
Primac	1 NA as 1L	Barcaldine	7804 Thur

In today's world, wagons are allocated to a set traffic and the wagons travel back and forward in that traffic. i.e. Wagons loaded with hay in Monto will travel to Cloncurry, unload and return to Monto empty.

Wagon Labels

During the steam and early diesel era, all wagons were labelled.

The following labels were in use.

Today, with electronic train information, shunting employees use Train Wire and Road Lists for shunting of wagons from sidings onto and off trains.

Clearance Restrictions

Today, rollingstock is given a clearance category and this applies to the fixed profile of the vehicle.

Category 1: Available anywhere on the QR Network.

Category 2: Available for the QR electrified lines only.

Category 3: Available for the QR electrified lines only, but not permitted through Tunnels Nos 1 and 4 between Roma St and Brunswick St.

Category 4: May run only on lines as specifically designated for that particular rollingstock subject to any special restrictions.

Category 5: Available for Standard Gauge or Dual Gauge lines only.

Loading of Freight into Wagons

Freight wagons can not be attached to a train until it is considered safe for travel. Poorly loaded wagons can cause derailments, effect the trains braking, hit other rail vehicles or line side structures and cause injuries to passengers, workers and members of the public. Also poorly loaded wagons can cause damage to our customers freight.

Freight needs to be loaded into suitable wagons, packed to ensure that it won't come loose during transit and is suitably secured, the weight of the load is evenly distributed along and across the wagon,

Types of Goods Trains

Unit Train
A train composed entirely of one class classification and one drawgear classification of rollingstock. E.g a coal train, all wagons on the train are VAJQ's

Block Train
A train composed of 12 or more similar wagons which have axle loads over 12.2 t gross within a train length of 315 metres or less. (i.e. 8 wheeled wagons, 48.8tonnes and over).

Seafreighter/Superfreighter
A train composed of rollingstock capable of speeds in excess of 80 km/h with the figures '100' superimposed over the red circle or red diamond.

Express Freight Train
A train composed entirely of rollingstock marked with a red circle or red diamond in accordance with the General Appendix.

Express Livestock Trains
A train composed of KA, KSA, KL, KLS, KLEX, KLEH, KSA/T, KWA, KOJX, PCYK, NA, PSC wagons marked with a red circle conveying livestock at speeds not exceeding (80 km/h) on sections of line where such speeds are permissible.

Mixed Train
A train composed of both passenger and other freight rollingstock restricted to a maximum speed of 60 km/h. Some services with express freight rollingstock did travel at 80 km/h.

Goods Train
A train composed of freight rollingstock restricted to a maximum speed of 60 km/h

Marshalling of Goods Trains

Once we are across the above, we can now start putting the train together, however, wait for it, there is more.

Head Office Instructions

Instructions in the Working Time Table, Circular Memo, Train Notices and Standards tell us were things can go on a train.

The 1990 Working Time Table for the Main Line shows the following for Train 6678.

This train must as far as practicable be restricted to a maximum of 75 units and will convey loading for stations Toowoomba and beyond to and including Roma, and non-perishable loading for stations beyond Roma and also loading for stations south of Toowoomba. It will also convey contract wagons account Hiles Transport for Toowoomba, Dalby and Warwick. Any Dalby contract wagons will go forward from Toowoomba not later than 7D78 Tuesdays – Fridays and 6R12 Saturday. Any Warwick contract wagons will go forward from Toowoomba 7E44 the next morning.

The Dalby contract and or parcel wagons will be marshalled at the rear of the train. The Warwick contract wagons will be marshalled immediately behind the locomotive followed by the Toowoomba contract wagons. Loading for stations west of Toowoomba is to be marshalled in reverse station order as the train is admitted "head on" to the Toowoomba Station Yard.

This train was put together at Rocklea, fill loading would arrive during the afternoon mainly from Acacia Ridge on most days. During the early part of the month *(after the accounts had been sent out)*, no additional loading was required to fill the train. Hile's Transport would load one or two HWO wagons for Warwick, the same for Dalby and a mix of HWO's, QLXP's and QLX wagons for Toowoomba. There was also a time when half height containers of scrap steel were loaded for Toowoomba Foundry. At one stage the company had a contract for fuel/oils for Roma, Charleville, Cunnamulla and Quilpie. This traffic was loaded into QLX type wagons and was conveyed on the same train. This provided plenty of shunting to marshal the train each night.

Customer Instructions

Another requirement was the placement of loading/wagons as required by the customer, their yard was set up to receive freight at set locations, thus the wagons for these destinations were required to be placed at that location. Likewise, at the end of the day when the train was marshalled the customer would have requests on how the wagons were to be placed at their destination. Thus wagons were also marshalled to make sure that minimum shunting was carried out on the trains arrival at its destination. Most days the loaders would be late finishing resulting a late train leaving Brisbane.

Other Requirements

During the mid 1980's, the Australian Dangerous Goods Code (ADGC) was introduced to the Transport Industry. This required documents and marking of all Dangerous Goods being transported. Bulk loads required Emergency Information Panels to be displayed. The code stipulated what class of goods could be loaded together and segregation of other products. Similarly, marshalling of trains with various classes of good required separation for other products, some products could be marshalled on the locomotive, while others could not. Likewise, with vehicles carrying passengers and flammable products.

Below is the current Marshalling Segregation chart that assists shunting employees.

CLASS		1 Explosive	2.1 Flammable Gas	2.2 Non-Flammable Non-Toxic Gas	2.3 Toxic Gas	3 Flammable Liquid	4.1 Flammable Solid	4.2 Spontaneously Combustible	4.3 Dangerous When Wet	5.1 Oxidizing Agent	5.2 Organic Peroxide	6 Toxic 6.1 or Infectious 6.2	7 Radioactive	8 Corrosive	9 Miscellaneous Dangerous Goods	Locomotive in power or Guard's Brake Van	Fire Risk Vehicle	Bulk Combustible Liquid Vehicle	Vehicle Marked with Logo, Radioactive Signs or Bulkhead	Operating Refrigerated Container or Power Van	Vehicle Carrying Passengers
1	Explosive	A[X]	4[X]	2[X]	2[X]	2[X]	2[X]	2[X]	2[X]	2[X]	2[X]	4[X]	4[X]	2[X]	2[X]	4[X]	2[X]	2[X]	4[X]	2[X]	4[PX]
2.1	Flammable Gas	4[X]	2[BE]	0	0	2	2	2	2	2	2	0	4[X]	0	0	4[X]	2[X]	0	4[X]	2[X]	4[PX]
2.2	Non-Flammable Non-Toxic Gas	2[X]	0	0	0	0	0	2	0	0	2	0	0	0	0	2[X]	0	0	4[X]	0	2[PX]
2.3	Toxic Gas	2[X]	0	0	0	2	0	2	2	2	2	0	0	0	0	4[X]	0	0	4[X]	0	4[PX]
3	Flammable Liquid	2[X]	2	0	2	0	0	2	2	2	2	0	2[X]	0	0	2[GX]	2[X]	0	4[X]	0	4[PX]
4.1	Flammable Solid	2[X]	2	0	0	0	0	2	0	2	2	0	2[X]	0	0	2[X]	2[X]	0	4[X]	0	2[PX]
4.2	Spontaneously Combustible	2[X]	2	2	2	2	2	0	0	2	2	0	2[X]	0	0	2[X]	2[X]	0	4[X]	0	2[PX]
4.3	Dangerous When Wet	2[X]	2	0	2	2	0	0	0	2	2	0	2[X]	2	0	2[X]	0	0	4[X]	0	2[PX]
5.1	Oxidizing Agent	2[X]	2	0	2	2	2	2	2	0	2	0[D]	2[X]	2	2	2[X]	2[X]	2[X]	4[X]	0	2[PX]
5.2	Organic Peroxide	2[X]	2	2	2	2	2	2	2	2	0	0	2[X]	2	2	2[X]	2[X]	2[X]	4[X]	2[X]	2[PX]
6	Toxic 6.1 or Infectious 6.2	4[X]	0	0	0	0	0	0	0	0[D]	0	0	0	0[C]	0	2[X]	0	0	4[X]	0	2[PX]
7	Radioactive	4[X]	4[X]	0	0	2[X]	2[X]	2[X]	2[X]	2[X]	2[X]	0	0	2[X]	0	4[X]	0	0	4[X]	2[X]	4[PX]
8	Corrosive	2[X]	0	0	0	0	0	0	2	2	2	0[C]	2[X]	0	0	2[X]	0	0	4[X]	0	2[PX]
9	Miscellaneous Dangerous Goods	2[X]	0	0	0	0	0	0	0	2	2	0	0	0	0	2[X]	0	0	4[X]	0	2[PX]
	Mixed Class Placard Load	4[X]	2	0	2	2	2	2	2	2	2	0[CD]	2[X]	2	0	4[X]	2[X]	2[X]	4[X]	0	2[PX]

Sample of Explanation of Symbols

- **0** means ' No Separated Required'
- **2** Means 'Separated by a least 12 metres' (2 standard 20' Containers)
- **4** Means 'Separated by a least 24 metres' (4 standard 20' Containers)
- **X** Indicates where separation also applies from placard loads of packaged dangerous goods.
- **A** Refer to Australian Explosives Code.
- **G** 0 where the class 3 is in a rail tank wagon.

Train Documentation

Once a train is marshalled, the Guard/Driver is required to carry the train documentation.

Over the years the documentation carried on a train has changed. Roles in carrying various functions had moved from the Guard, to the Fireman / Driver's Assistance (DA) and onto the Driver.

Below is some documents carried on Goods/Freight Trains

- Invoices/Consignment Notes
- Special Authorities on Train Notice
- Livestock Permits
- Dangerous Goods Documents
- Train Wire

Before a train leaves a yard, a Number Taker, Station Master, Porter or the Guard would take the train and prepare a Train Wire. The wire commences from the rear (last vehicle on the train). All other rail systems in Australia make the train wire out from front, from the hauling locomotive, QR is expected to follow in the near future.

Below is an example of a current Train Wire

Train Wire

Train: W46P/6W46 **Ex Origin:** Rockhampton **Date:** Sun 19/06/05 14:14
Metres: 466.70 **Tonnes:** 823.000 **Vehicles:** 31
Hauling Locos: 2488 H 1736

Class	No.	From	Destination	Gross	Loading
BCZY	**46719**	**Acacia Ridge**	**Yamala**	**29**	**Containers**
RWTU	9703669	Acacia Ridge	Yamala		Allied Pickford 6M ALP Ety
RWTU	9702174	Acacia Ridge	Yamala		Allied Pickford 6M ALP Ety
RWTU	9711638	Acacia Ridge	Yamala		Allied Pickford 6M ALP Ety
PYCC	**38449**	**Rockhampton**	**Yamala**	**23**	**Containers**
RWLU	2973	Acacia Ridge	Yamala		A/P'ford 6M Royal Wolf GenIndust Mach
RWLU	9601915	Acacia Ridge	Yamala		A/P'ford 6M Royal Wolf GenIndust Mach
PYCC	**38435**	**Rockhampton**	**Emerald**	**31**	**Containers**
ERSB	11068	Acacia Ridge	Emerald		Consignments Q-Link/QRN
ERSH	3013	Acacia Ridge	Emerald		Consignments Q-Link/QRN
PYCM	**39054**	**Rockhampton**	**Emerald**	**31**	**HCDG Containers**
QLSD	2023157	Acacia Ridge	Emerald		Consignments Q-Link/QRN
QLSV	3041379	Acacia Ridge	Emerald		Consignments Q-Link/QRN
PYCM	**37633**	**Rockhampton**	**Emerald**	**41**	**Containers**
QLSD	2023033	Rockhampton	Emerald		General – Stockfeed Q-L/QRN
ERS	2079	Acacia Ridge	Emerald		Consignments Q-Link/QRN
PYCM	**39221**	**Rockhampton**	**Emerald**	**44**	**Containers**
ERSH	807	Rockhampton	Emerald		Consignments Q-Link/QRN
ERSH	3032	Acacia Ridge	Emerald		General – Stockfeed Q-L/QRN
PYCM	**39229**	**Rockhampton**	**Emerald**	**22**	**DG & Container**
ACL	800825	Rockhampton	Emerald		DG/Consignments Q-L/QRN
PYCM	**37622**	**Rockhampton**	**Emerald**	**14**	**Empty**
HO	**39524**	**Rockhampton**	**Emerald**	**28**	**Iron & Steel** Q-Link
PCUY	**45293**	**Tully**	**Winton**	**21**	**Containers**
QRCM	6361	Tully	Winton		Ety Mirrawinni Lime
QRCM	6375	Tully	Winton		Ety Mirrawinni Lime

Once the train is made up, the hauling locomotives are attached and brake test are carried out before the train leaves the yard.

Train Numbers

The numbering of trains was a simple thing. Even numbers were "Up" trains and odd numbers were "Down" trains. Brisbane to Toowoomba is in the "Up" direction, Toowoomba to Brisbane were "Down" trains. Up and down the hill. The Westlander to Charleville was numbered 8 S and returned as 13 Down. The system continued onto the North Coast Line, "Down" to Cairns and "Up to Brisbane.

By the early 1970's, trains running on the main routes were given an extra character to identify its destination.
2 Townsville
3 Rockhampton
4 Bundaberg
6 Toowoomba West.

Soon after the introduction of electric trains and route controlled signalling, it became clear that more than the train's destination identification was required. A four character was added to identify traction.

The 1981 Time Table showed the following

First Character		Second Character	
Character	**Type of Train**	**Character**	**Destination**
1	Electric Passenger train	1	NCL to Caboolture
2	Electric Empty Unit	2	Northern Division
3	Diesel Passenger Train	3	Central Division
4	Diesel Empty Cars	4	Caboolture – Maryborough
5	Rail Car (passengers)	5	Ipswich – Grandchester
6	Express Freight	6	Main Line beyond G'cheater
7	Goods / Shunt Train	7	Beenleigh Line
8	Suburban Special Shunt	8	Lota Line
		9	Roma Street
9	Altered Suburban Pass	0	Bowen Hills / Mayne
0	Light Engine / Ety Rail Car	A	Shorncliffe Line
		B	Pinkenba Line
		C	Corinda via Yeerongpilly

Third & Fourth Character was the Train Number.

By 1990 the table had grown into 2 pages and adopted state wide with most destinations included.

First Character		Second Character	
Character	Type of Train	Character	Destination
0	Diesel Departmental Train	1	NCL to Caboolture/ Saraji
1	Electric Passenger train	2	Townsville
2	Electric Empty Unit	3	Rockhampton
3	Diesel Passenger Train	4	Gympie
4	Diesel Empty Cars	5	Ipswich – Grandchester
5	Rail Car (passengers)	6	G'cheater - Toowoomba
6	Express Freight	7	Beenleigh Line
7	Goods / Shunt Train	8	Lota Line
8	Diesel Special Goods	0	Bowen Hills / Mayne
9	Diesel Mineral Train	A	Shorncliffe Line. Abbott Pt
A	Elec Loco Passenger Train	B	Pinkenba Line
B	Elec Loco Empty Cars	C	Corinda via Yeerongpilly Cairns, Cecil Plains
C	Elec Loco Express Freight	E	Ferny Grove, Warwick, Emerald
D	Elec Loco Goods Train	F	Various destinations
E	Elec Loco Mineral Train	G	Gladstone, Monto, Hay Point
F	Elect Loco Special Goods	K	Kingaroy, Kuranda, Bell
G	Elect Loco Light Engine	L	Yandina, Cobarra
H	Diesel Departmental	S	Charleville, Sarina, Q.A.L.
L	Diesel Light Engine	U	Mackay, Beaudesert

Third & Fourth Character was the Train Number.

Today, some extra train types are included.
Y 2800 Loco (R'ton – Brisbane)
8 100 Km/h Diesel Freight
F 100 Km/h Elect Freight
M Steam Hauled
P 100 Km/h Diesel Passenger
Q Tilt Train (Electric)
V Tilt Train (Diesel) CTT

Branch Line Trains

Trains on Branch Lines generally ran on lighter track, which followed a goanna around the side of hills and across gullies. Trains were shorter than their Main Line cousins and shunted most locations in route. Due to the amount of shunting, trains were marshalled in station order with the wagons requiring detaching falling on the engine.

Due to the capacity of the track, the train was worked by a smaller light locomotive hauling lighter wagons. These trains were the life blood to the community and carried freight that serviced the local area.

Shunt Trains

At various locations there were shunt trains that work from station to station attaching and detaching wagons acting as sweepers.

In the Brisbane area, shunt trains worked most lines. Some would work their way to the end of the line, stable and return working a passenger service. The reverse would happen after the afternoon peak. Others would work all day between major yards and inner city stations. Shunt trains also worked between major regional centres. During the seventies, there were three shunt trains each way a day between Brisbane and Gympie.

495 Beerwah Goods/Shunting conveys loading for Dakabin, Caboolture, Elimbah, Beerburrum, Glass House Mts and Beerwah. The engine and van returned to Caboolture to work a passenger service to Brisbane. Returning to Brisbane in the afternoon as 476.

483 Yandina Goods/Shunting conveys loading for Landsborough, Mooloolah, Eudlo, Palmwoods, Woombye, Nambour, Yandina and beyond. The service returned as 468 in the afternoon. The train departed Mayne at 10:05 pm and arrived back the next evening at 11:57 pm and was a regular 1720 locomotive working. During this period the locomotive worked a passenger service between Landsborough and Nambour, shunt train from Yandina to Pomona returning to Nambour, passenger service from Nambour to Eumundi.

468 returning to Brisbane was marshalled as follows.

Locomotive
Clapham Interstate loading
Northgate Fruit
Roma Street and other loading
Van

491 M'boro Goods/Shunting conveys loading for Eumundi to Gympie, Mary Valley and stations Gympie to Maryborough. Returned as 462 from Gympie.

Main Line Trains

Trains on the Main Line were made up to the maximum load as per the SWTT. These trains ran to and from regional centres. Most trains did not have any order of marshalling, loading for the area was chucked onto a van leaving the other end to sort out the mess. Loading for smaller locations was conveyed to a regional location and then placed on a shunt service. I.e. A wagon from Brisbane to St Lawrence would be conveyed on a Rockhampton train and then placed on the Rocky to Mackay (37) shunt.

At some locations with freight for the north, it was quicker to send a wagon south to a regional centre for attaching to a through service. Otherwise the wagon was conveyed on shunt services to and from regional centres. I.e. A wagon loaded at Nambour for Cairns would be sent to Mayne and then placed on a Brisbane to Cairns service. If the wagon was picked up by a north bound service, the wagon would be picked up by the Gympie/Maryborough Shunt and detached in Maryborough, then conveyed on another shunt to Rockhampton and so on, taking over a week to arrive at is destination.

Until the mid sixties, the speed of Goods trains was 35 M.P.H. (60 km/h), with the introduction of steel rollingstock, mainly the QLX type wagons saw the establishment a fast freight services on selected routes. Over the years during the late fifties and early sixties various wagons had entered service with cast iron three piece bogies. In 1969 these wagons were given express freight status and the number of express freights (80 km/h) started to increase.

Special Loads

A number of loads conveyed on the network were outside the loading gauge. These are called "Out of Gauge" Loading and need special authority to be attached to trains. Some of these loads include Wide Plate steel, Transformers, Caravans and machinery. Due to the nature of the load various restrictions were placed on the travel conditions of the load. These instructions were issued on Train Notice. Some of the instructions for a wide load could include the following.

- Not to be marshalled on the engine.
- To be marshalled 100 metres back behind the hauling locomotive.
- Not a pass any other trains between two given locations.
- Reduce speed passing through stations or crossing over bridges.
- Tracks that the load can be conveyed on or not to enter.

Other loads extend over the headstocks of wagons, i.e. timber poles, long steel beams etc. Runners (platform wagons) are marshalled next to the loaded wagon to prevent the load from running into other wagons or causing injury to shunting employees.

Tarpaulins

Most general freight that required protection from the weather was loaded into box wagons. However, some freight was to large to fit through the doors or was to heavy to be man handled or stacked into a box wagon. This type of freight was loaded into open wagons and sheeted with tarpaulins. Until about the early seventies, traps were canvas and coloured green. After this period the traps were PVC and were yellow in colour. Each trap was numbered, this changed in 1962. Each trap carried the Q ^ R symbol with a number under the symbol, smaller traps were identified by the letter "A". During the fifties and early sixties, a letter was used to mark the year of manufacture.
i.e "M" for 1960, "N" for 1961, and "O" for traps manufactured before April 62. After this, the year of manufacture formed the number.

Q ^ R	Q ^ R	Q ^ R	Q ^ R
N	62	73 - 110	62 WH 29512
A 1448	2556		

Tarpaulins were not supplied to cover the following;

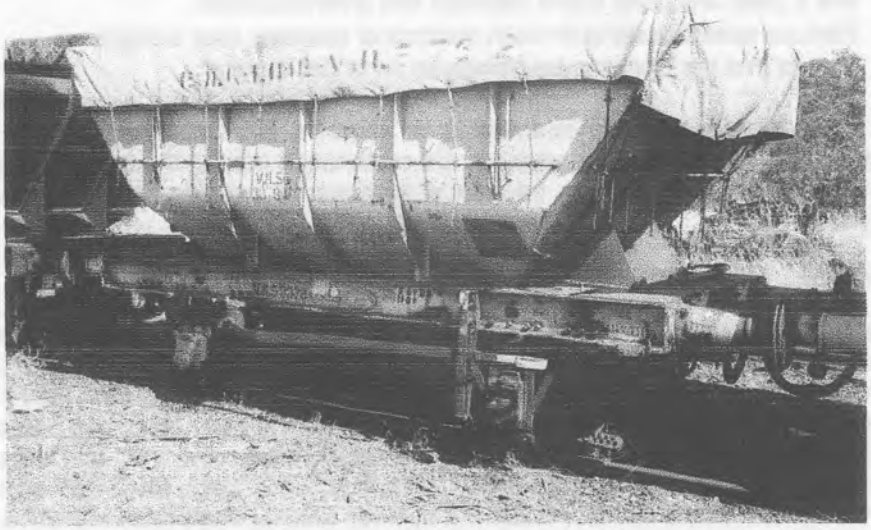
Bitumen	Fencing wire & netting	Motor spirit, oil in drums
Bones	Empty Cases, casks, drums, gas cylinders, kegs etc	Gravel, stone, sand, ashes, screenings, marble, gypsum
Log Timber	Firebricks (except where authorised)	Pipes
Boxes and cases empty	Live stock loaded in wagons	Sawdust, (loose or bagged)
Bricks	Lump rock salt not in bags	Tallow
Charcoal in bags	Machinery for outdoor use	Tractors
Clay (except where authorised)	Melons & pumpkins loose or bagged	Sawn timber and shooks (bundles of timber), except as approved with Special Traps.
Coke, bulk or bagged	Bottles (loose or bagged)	
Earthenware packed in straw	Motor cars/chassis	

Tarpaulins were not to be left in empty wagons.

Standard Sizes of Tarpaulins.
General Appendix 1962.
Small Tarps identify with "A" before the number 20 ' 5" by 14 '
Large Traps 23' 5" by 17'
Bulk Wheat Tarps for "WH" and "WHX" wagons 48' by 14'

General Appendix 1962.

Purpose	Size
Standard Tarps for general purpose	6 700 mm by 5 200 mm
Bulk Grain GVJD wagons	5 490 mm by 3 660 mm
Bulk Grain HSAG wagons	11 200 mm by 4 000 mm
Bulk Grain WH, WHE wagons	13 700 mm by 4 000 mm
Fertilizer HOF wagons	16 500 mm by 4 000 mm



Two Driver Operation (TDO), Driver Only Operation (DOO)

By the mid 1960's, the length of trains had grown to over 900 meters on the Moura Short Line. Guard's travelling at the rear of the train where not enjoying their ride. Draft forces and gaps in automatic couplings were tossing them around like a cork in the ocean, some were thrown out of the van door. This resulted in padding being added to a number of BBV vans, the vans were referred to as padded cells. Later a number of BBV's were modified for coal traffic, the Guard's compartment was altered to relocate the Guard to the centre of the van, a periscope was added so the Guard could maintain a visual lookout of this train.

In July1971, trains commenced running on the Goonyella system without Guard's Vans, the Guard rode on the trailing locomotive at the lead of the train. Similarly, in August 1974 trains on the Greenvale System commenced running without vans.

By the end of 1984, guards were not being used on trains, the Fireman and the Guard role were combined on the locomotive and the position was called a Driver's Assistance (DA). If passenger accommodation was required, the van was marshalled behind the hauling locomotives. By the end of the 1980's most wooden wagons were removed from service. Four wheeled wagons were hard to find by the mid 1990's and the removal of buffers from rollingstock had commenced.

By 1989 agreement with the Unions saw the introduction of Driver Only Operated trains on the North Coast Line. To allow this, locomotives were fitted with a Driver's Aid. Electric rollingstock operating between Brisbane and Rockhampton was fitted with Automatic Train Control (ATC) and diesel power was fitted with Automatic Train Protection (ATP).

Today's Goods Trains

In 1991, Queensland Railways was divided into various Business Groups with each section needing to work within it own operating budget. The running of trains took on a new era. Rollingstock, with the exception of locomotives was divided among the groups. Trains were now being run by the various business groups for their specific traffic.

Friday the 19th of June 1992 saw the commencement of a new era of freight trains on the QR Network. Train 6U19 conveying a test load of Nitropril weighting 1200 tonnes from Brisbane to Rockhampton at 100 km/h using PCOY class wagons. Regular 100 km/h services commence a few years later.

A few years later, the North Coast Line and the Mt Isa line were upgraded to 20 tonne axle load.

Today, most trains are made up into wagon sets and run merry go round services. This allows for the same train each day to have the same accommodation from each location. Each location has a set allocation of wagons. Detaches enroute are generally at attended locations and the allocated wagons are on the rear of the train. The system also allows for systematic inspection and maintenance of rollingstock. The down side is the wagons have a tenancy to run backward and forward between destinations empty.

Currently, trains from Acacia Ridge are made up with 30 x 3 slot container wagons, likewise trains from Fisherman Islands consist of 40 x 2 slot container wagons.

For the last few years, most freight services on the NCL run at 100 km/h, only 3 train a week each way travel at 80 km/h. May be only one train a week travels at 60 km/h, this train conveys welded rail to Central Queensland.

In 2004, QR commenced running 4 trains a week to Sydney and Melbourne using Interail. This service increased to six services in 2005 and 8 services in mid 2006.

February 2005, a new Railway Operator commenced conveying freight on the QR Network. Pacific National Queensland was established to convey QRX freight on the east coast. New 4000 class locomotives and articulated wagons now work approximately 27 trains a week between Brisbane (Moolabin) to Mackay, Townsville, Cairns and return.

Acknowledgements / References

John Kerr
John Armstrong
Chris Malone / Keith McDonald
AMRA Q
Various QR Publications

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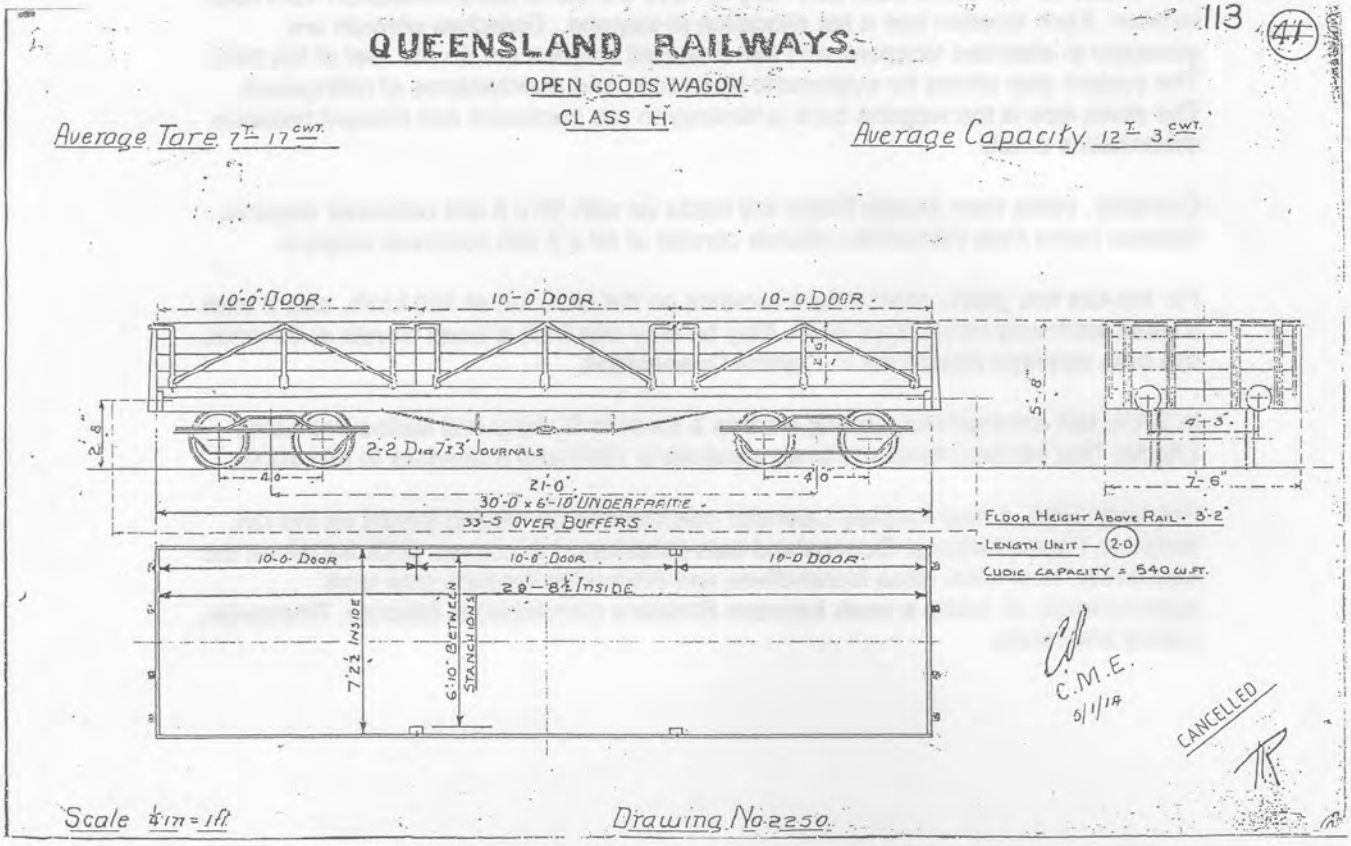
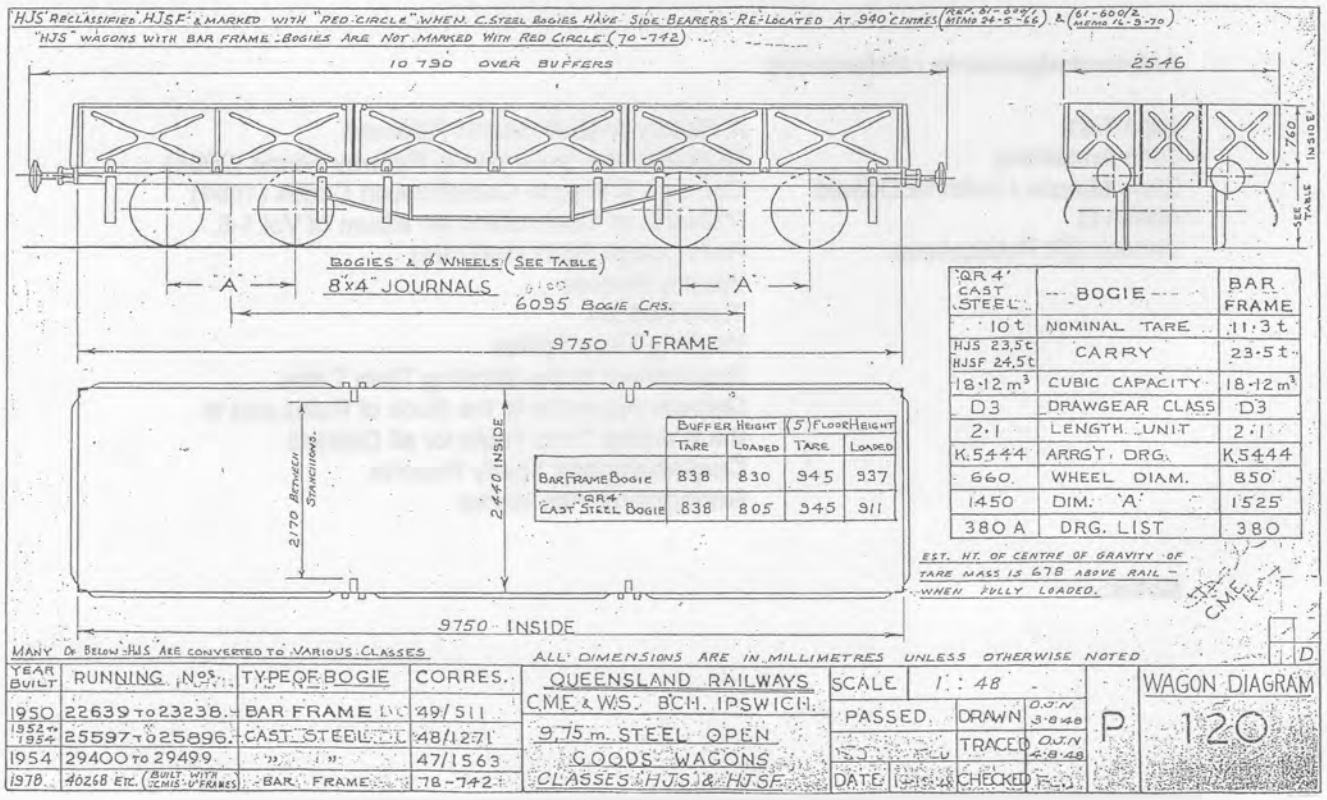
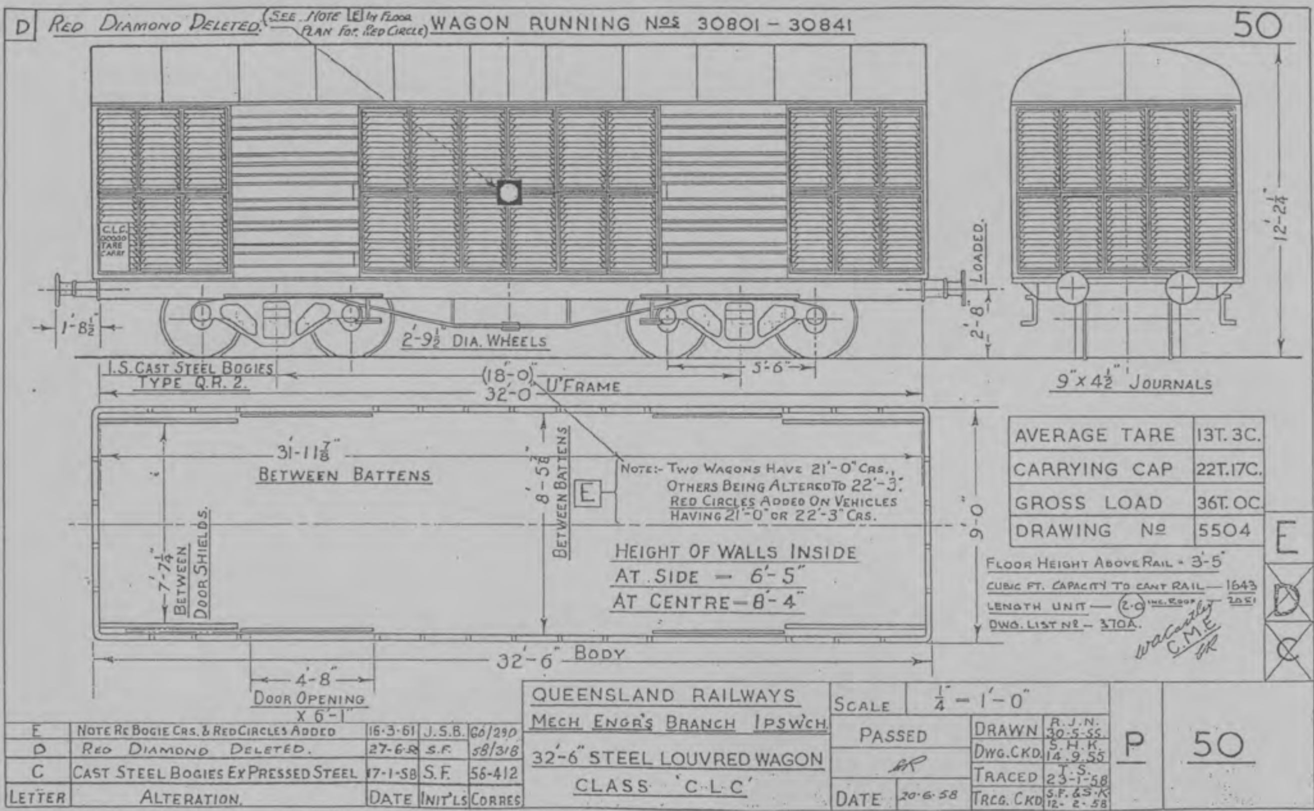
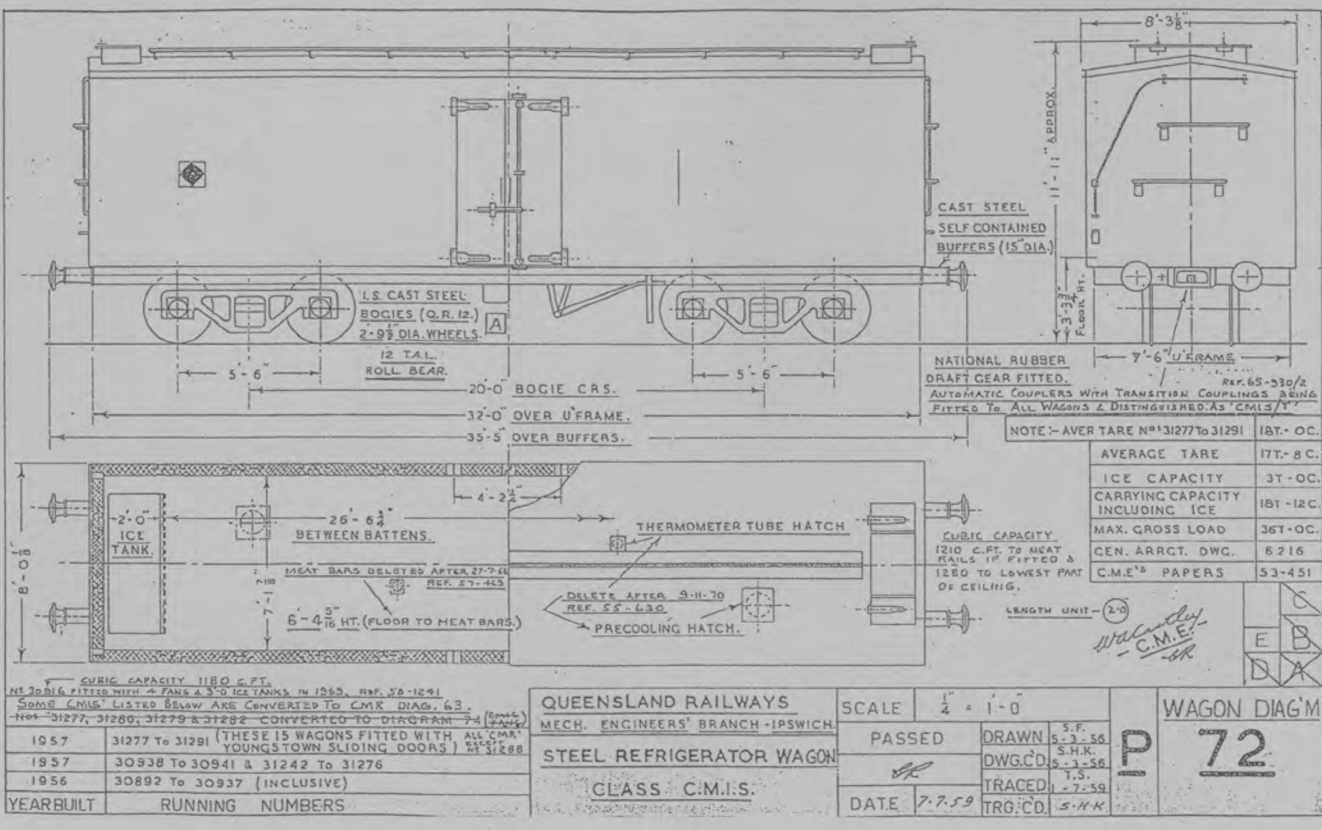
Railways of Queensland an album of Vol 1-6
Rollingstock Book (1982/91)
Weekly Notices
Train Notices
Working Time Tables
Supplement to the Working Time Table
General Appendix to the Book of Rules and to the Working Time Table for all Districts
Commissioner's Yearly Reports.
Rollingstock Plan Books

Notes:-


QUEENSLAND RAILWAYS.
OPEN GOODS WAGON.
CLASS "H".
Average Tare 7T- 17CWT.
Average Capacity 12T- 3CWT.
113
44
10'-0" DOOR
10'-0" DOOR
10'-0" DOOR
2-2 Dia 7x3 JOURNALS
21'-0"
30'-0" x 8'-10" UNDERFRAME
33'-5" OVER BUFFERS
FLOOR HEIGHT ABOVE RAIL - 3'-2"
LENGTH UNIT — 2·0
CUBIC CAPACITY = 540 cu.FT.
28'-8½" INSIDE
7'2½" INSIDE
6'10" BETWEEN STANCHIONS
C.M.E.
5/1/18
CANCELLED
Scale ¼in = 1ft
Drawing No 2250.


HJS RECLASSIFIED HJSF & MARKED WITH "RED CIRCLE" WHEN C.STEEL BOGIES HAVE SIDE BEARERS RE-LOCATED AT 940 CENTRES (REF. 61-600/1 MEMO 24-5-66) & (61-600/2 MEMO 14-3-70)
"HJS" WAGONS WITH BAR FRAME BOGIES ARE NOT MARKED WITH RED CIRCLE (70-742)
10 730 OVER BUFFERS
2546
760 INSIDE
SEE TABLE
BOGIES & Ø WHEELS (SEE TABLE)
8"x4" JOURNALS
6095 BOGIE CRS.
A
A
9750 U'FRAME
2170 BETWEEN STANCHIONS.
2440 INSIDE
9750 INSIDE
BUFFER HEIGHT (5) FLOOR HEIGHT
TARE LOADED TARE LOADED
BAR FRAME BOGIE 838 830 945 937
QR4 CAST STEEL BOGIE 838 805 945 911
QR 4' CAST STEEL — BOGIE — BAR FRAME
10t NOMINAL TARE 11·3t
HJS 23,5t HJSF 24,5t CARRY 23·5t
18·12 m³ CUBIC CAPACITY 18·12 m³
D3 DRAWGEAR CLASS D3
2·1 LENGTH UNIT 2·1
K.5444 ARRGT. DRG. K.5444
660 WHEEL DIAM. 850
1450 DIM. 'A' 1525
380 A DRG. LIST 380
EST. HT. OF CENTRE OF GRAVITY OF TARE MASS IS 678 ABOVE RAIL — WHEN FULLY LOADED.
C.M.E.
MANY OF BELOW HJS ARE CONVERTED TO VARIOUS CLASSES
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED
D
YEAR BUILT | RUNNING NOS. | TYPE OF BOGIE | CORRES.
1950 | 22639 to 23238 | BAR FRAME | 49/511
1952 to 1954 | 25597 to 25896 | CAST STEEL | 48/1271
1954 | 29400 to 29499 | " " | 47/1563
1978 | 40268 ETC. (BUILT WITH CM&S U'FRAMES) | BAR FRAME | 78-742
QUEENSLAND RAILWAYS
C.M.E. & W.S. BCH. IPSWICH.
9,75 m. STEEL OPEN GOODS WAGONS
CLASSES HJS & HJSF
SCALE 1 : 48
PASSED
DRAWN O.J.N 3·8·48
TRACED O.J.N 4·8·48
DATE 1-10-48 CHECKED F.C.D
P
WAGON DIAGRAM
120


D Red Diamond Deleted. (See Note E in Floor Plan for Red Circle)
WAGON RUNNING Nos 30801 – 30841
50
2'-9½" DIA. WHEELS
I.S. CAST STEEL BOGIES TYPE Q.R. 2.
(18'-0") U'FRAME
32'-0"
9"x4½" JOURNALS
31'-11⅞" BETWEEN BATTENS
NOTE:- TWO WAGONS HAVE 21'-0" CRS., OTHERS BEING ALTERED TO 22'-3". RED CIRCLES ADDED ON VEHICLES HAVING 21'-0" OR 22'-3" CRS.
HEIGHT OF WALLS INSIDE AT SIDE – 6'-5" AT CENTRE – 8'-4"
AVERAGE TARE 13T. 3C.
CARRYING CAP 22T. 17C.
GROSS LOAD 36T. 0C.
DRAWING No 5504
FLOOR HEIGHT ABOVE RAIL = 3'-5"
32'-6" BODY
4'-8" DOOR OPENING x 6'-1"
QUEENSLAND RAILWAYS
MECH. ENGR'S BRANCH IPSWICH.
32'-6" STEEL LOUVRED WAGON
CLASS 'C.L.C'
SCALE ¼" – 1'-0"
PASSED
DATE 20-6-58
P 50
E NOTE RE BOGIE CRS. & RED CIRCLES ADDED 16-3-61 J.S.B. 60/290
D RED DIAMOND DELETED. 27-6-58 S.F. 58/318
C CAST STEEL BOGIES EX PRESSED STEEL 17-1-58 S.F. 56-412
LETTER ALTERATION DATE INIT'LS CORRES


CAST STEEL SELF CONTAINED BUFFERS (15" DIA.)
I.S. CAST STEEL BOGIES (Q.R. 12.) 2'-9½" DIA. WHEELS.
12 T.A.L. ROLL. BEAR.
20'-0" BOGIE CRS.
32'-0" OVER U'FRAME.
35'-5" OVER BUFFERS.
NATIONAL RUBBER DRAFT GEAR FITTED.
7'-6" U'FRAME
NOTE:- AVER TARE Nos 31277 To 31291 18T.- 0C.
AVERAGE TARE 17T.- 8C.
ICE CAPACITY 3T - 0C.
CARRYING CAPACITY INCLUDING ICE 18T - 12C.
MAX. GROSS LOAD 36T - 0C.
GEN. ARRGT. DWG. 6216
C.M.E.'s PAPERS 53-451
26'-6¾" BETWEEN BATTENS.
THERMOMETER TUBE HATCH
PRECOOLING HATCH.
ICE TANK.
QUEENSLAND RAILWAYS
MECH. ENGINEERS' BRANCH - IPSWICH.
STEEL REFRIGERATOR WAGON
CLASS C.M.I.S.
SCALE ¼" = 1'-0"
PASSED
DATE 7.7.59
P
WAGON DIAG'M 72
1957 31277 To 31291 (THESE 15 WAGONS FITTED WITH YOUNGSTOWN SLIDING DOORS)
1957 30938 To 30941 & 31242 To 31276
1956 30892 To 30937 (INCLUSIVE)
YEAR BUILT RUNNING NUMBERS