

UNION PACIFIC RAILROAD

PAINTING GUIDE, 1903 - 1930 COMMON STANDARD No. 22



UNION PACIFIC RAILROAD HISTORICAL SOCIETY

UNION PACIFIC SYSTEM

COMMON STANDARD

SPECIFICATIONS CS-22

PAINT

DECEMBER, 1903

REVISED JAN. 20, 1923

REV. OCT. 8, 1923

" DEC. 15, 1923

" APR. 7, 1924

" DEC. 20, 1924



Published By

Union Pacific Railroad Historical Society

5006½ Capitol

Omaha, Nebraska 68132

First Printing - June 1981

Printed in the United States of America

By

Colonial Press, Inc.

Omaha, Nebraska

Cover Photo —

This is the resurrected 3985. This photo was taken March 25, 1981 on the test run staged between Cheyenne, Wyoming and LaSalle, Colorado. By Danny Johnston.

**UNION PACIFIC SYSTEM
SPECIFICATION CS-22
PAINT**

TABLE OF CONTENTS

Numerical List of Paints and Their Uses	Page 1
Schedule of Uses by Location:	
Locomotives and Tenders	23
Passenger Cars	27
Freight Equipment	31
Maintenance of Way	33
General Conditions for Mixing	43
Paint Mixing Instructions	45
Standard Method of Painting Structural Steelwork	78
Current Paint Colors	79
Painting and Lettering Diagrams:	
Steam Locomotives, Circa 1937	82
Steam Locomotives, Circa 1946	87
Steam Locomotives, Circa 1904	89
Striping of Locomotives, 1916	94
Lettering Tanks, 1922	95
Passenger Cars, Circa 1938	97
Passenger Cars, Circa 1946	102
Passenger Car Details	105
Color Chip, Circa 1923	Back Cover



If one looks at the above scene for contents only one can see a steam locomotive, passenger cars and a passenger station. The painting and lettering of each of these, and more, are described in some detail in the following chapters. The above scene was found in Butte, Montana in August, 1947 by R.S. Schmeling.

UNION PACIFIC SYSTEM
SPECIFICATION CS-22
PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES.

No. 1, AD DARK OLIVE	Passenger Cars	Bodies, vestibules, outside of end doors, window sash and screens, vestibules handrails, corner and side door handholds.
No. 2, OLIVE ENAMEL	Passenger Cars	Trucks (except wheels, axles and brake rigging), platforms and steps, battery boxes.
No. 4, MAROON	Passenger Cars	Heater pipes, air signal pipes, inside of coach, diner, observation and motor cars, truss planks and wood floors on all cars except express refrigerator.
	Freight Equipment	Caboose: Floors, including floor of platform and steps of same, and floor of cupola platforms.
	Maintenance of Way	Plain seats in depots.
No. 5, BURNT SIENNA IN JAPAN	Passenger Cars	Interior mahogany stains and tinting for mahogany filler.
No. 7, BLACK VARNISH	Locomotives and Tenders	Boiler jacket outside, channels of main and side rods, valve motion parts, smoke box, smoke stack, cylinder and valve head casings, when specified. Brake rigging, engine frames, engine truck except axles, hand rails, pipes, steps, bottom of tender tank, tender frame, tender trucks except axles, tool boxes, outside of cab except roof, outside of sash and cab doors, cylinder saddle, dome, pilot, safety valve casing, sand box, driving box, driving and trailing wheels, outside of tender tank, etc.
	Passenger Cars	Upper and lower buffing devices, diaphragm face plate, and similar outside iron work and iron work on inside of baggage, baggage dormitory, horse baggage and motor cars, equipment in postal cars and postal apartments as follows:—Bridges (thin coat), center rods and pedestals, letter chute casting and steel chute and scoop, heating pipe guards, pouch racks (thin coat), safety rods, safety bars, stanchions and sockets and wall latches, wheels except axles.
	Maintenance of Way	Iron and wood semaphore poles to a height of 7 feet above ground, ladders, castings, mechanism cases (exterior), battery cases and relay posts, switch stands. All iron work on motor cars.
	Freight Equipment	Sides of refrigerator cars. (Two under coats.)
No. 8, REFRIGERATOR LIGHT ORANGE PAINT	Freight Equipment	Sides of refrigerator cars. (Final coat.)
No. 8-A REFRIGERATOR LIGHT ORANGE ENAMEL	Freight Equipment	Sides of refrigerator cars. (Repairs, old equipment.)
No. 8-B REFRIGERATOR YELLOW	Freight Equipment	Walls of baggage, baggage apartments, horse-baggage and baggage-dormitory cars.
No. 9, DRAB ENAMEL	Passenger Cars	Ceiling, water tanks, overhead water piping, light fixtures and overhead conduit and junction boxes of baggage, baggage apartments, horse-baggage and baggage-dormitory cars.
No. 10, PEARL GRAY	Passenger Cars	Back of Agasote ceiling and lining.
No. 11, METALLIC	Freight Equipment	Caboose, Wood—Automobile, Box and Stock Cars:—Body and roof. Ends of refrigerator cars.
	Maintenance of Way	Wood work on motor cars.

Rev. March 30, 1929.

" July 16, 1929.

" Nov. 1, 1930.

" Nov. 20, 1931

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES.

No. 1, DARK OLIVE	Passenger Cars	Bodies, vestibules, outside of end doors, window sash and screens, vestibule handrails, and corner and side door handholds.
No. 2, OLIVE ENAMEL	Passenger Cars	Trucks (except wheels, axles and brake rigging), platforms and steps, battery boxes.
No. 4, MAROON	Passenger Cars	Heater pipes, air signal pipes, inside of coach, diner, observation and motor cars, truss planks and wood floors on all cars except express refrigerator.
	Freight Equipment	Cabooses: Floors, including floor of platform and steps of same. <i>and floor of cupola ports</i>
	Maintenance of Way	Plain seats in depots.
No. 5, BURNT SIENNA IN JAPAN	Passenger Cars	Interior mahogany stains and tinting for mahogany filler.
No. 7, BLACK VARNISH	Locomotives and Tenders	Boiler jacket outside, channels of main and side rods, valve motion parts, smoke box, smoke stack, cylinder and valve head casings, when specified. Brake rigging, engine frames, engine truck except axles, hand rails, pipes, steps, bottom of tender tank, tender frame, tender trucks except axles, tool boxes, outside of cab except roof, outside of sash and cab doors, cylinder saddle, dome, pilot, safety valve casing, sand box, driving box, driving and trailing wheels, outside of tender tank, etc.
	Passenger Cars	Upper and lower buffing devices, diaphragm face plates, and similar outside iron work and iron work on inside of baggage, baggage dormitory, horse baggage and motor cars, equipment in postal cars and postal apartments as follows:—Bridges (thin coat), center rods and pedestals, letter chute casting and steel chute and scoop, heating pipe guards, pouch racks (thin coat), safety rods, safety bars, stanchions and sockets and wall latches, wheels except axles.
	Maintenance of Way	Iron and wood semaphore poles to a height of 7 feet above ground, ladders, castings, mechanism cases exterior), battery cases and relay posts, switch stands. All iron work on motor cars.
	Freight Equipment	Sides of refrigerator cars.
No. 8, REFRIGERATOR YELLOW	Passenger Cars	Walls of baggage, baggage apartments, horse-baggage and baggage-dormitory cars.
No. 9, DRAB ENAMEL	Passenger Cars	Ceiling, water tanks, overhead water piping, light fixtures and overhead conduit and junction boxes of baggage, baggage apartments, horse-baggage and baggage-dormitory cars.
No. 10, PEARL GRAY	Passenger Cars	Back of Agasote ceiling and lining.
No. 11, METALLIC	Freight Equipment	Cabooses, Wood—Automobile, Box and Stock Cars:—Body and roof. Roof and ends of refrigerator cars.
	Maintenance of Way	Wood work on motor cars.
No. 11-A, DARK BROWN	Maintenance of Way	All buildings where smoke discoloration makes it inadvisable to use No. 201 (Colonial Yellow) and No. 202 (Light Brown). Back of sign boards and sign posts. Interior walls of engine houses and shop buildings, including car repair buildings to a height of 6 feet. Tin and sheet metal roofs on all shop buildings where the use of No. 13 (Carbon Black) is not advisable. Freight and baggage skids. Top, both sides and ends of ties on all steel bridges. (See special instructions.)

Revised Jan. 20, 1923.
Revised June 6, 1927.

Revised Jan. 20, 1923.
Revised June 6, 1927.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES.

No. 1, DARK OLIVE	Passenger Cars	Bodies, vestibules, outside of end doors, window sash and screens, vestibule handrails, and corner and side door handholds.
No. 2, OLIVE ENAMEL	Passenger Cars	Trucks (except wheels, axles and brake rigging), platforms and steps, battery boxes.
No. 4, MAROON	Passenger Cars	Heater pipes, air signal pipes, inside of coach, diner, observation and motor cars, truss planes and wood floors on all cars except express refrigerator.
	Freight Equipment	Cabooses: Floors, including floor of platform and steps of same.
	Maintenance of Way	Plain seats in depots.
No. 5, BURNT SIENNA IN JAPAN	Passenger Cars	Interior mahogany stains and tinting for mahogany filler.
No. 7, BLACK VARNISH	Locomotives and Tenders	Boiler jacket outside, channels of main and side rods, valve motion parts, smoke box, smoke stack, cylinder and valve head casings, when specified. Brake rigging, engine frames, engine truck except axles, hand rails, pipes, steps, bottom of tender tank, tender frame, tender trucks except axles, tool boxes, outside of cab except roof, outside of sash and cab doors, cylinder saddle, dome, pilot, safety valve casing, sand box, driving box, driving and trailing wheels, outside of tender tank, etc.
	Passenger Cars	Upper and lower buffing devices, diaphragm face plates, and similar outside iron work and iron work on inside of baggage, baggage dormitory, horse baggage and motor cars, equipment in postal cars and postal apartments as follows:—Bridges (thin coat), center rods and pedestals, letter chute casting and steel chute and scoop, heating pipe guards, pouch racks (thin coat), safety rods, safety bars, stanchions and sockets and wall latches, wheels except axles.
	Maintenance of Way	Iron and wood semaphore poles to a height of 7 feet above ground, ladders, castings, mechanism cases exterior), battery cases and relay posts, switch stands. All iron work on motor cars.
	Freight Equipment	Sides of refrigerator cars.
No. 8, REFRIGERATOR YELLOW	Freight Equipment	Walls of baggage, baggage apartments, horse-baggage and baggage-dormitory cars.
No. 9, DRAB ENAMEL	Passenger Cars	Ceiling, water tanks, overhead water piping, light fixtures and overhead conduit and junction boxes of baggage, baggage apartments, horse-baggage and baggage-dormitory cars.
No. 10, PEARL GRAY	Passenger Cars	Back of Agasote ceiling and lining.
No. 11, METALLIC	Freight Equipment	Cabooses, Wood—Automobile, Box and Stock Cars:—Body and roof. Roof and ends of refrigerator cars.
	Maintenance of Way	Wood work on motor cars.
No. 11-A, DARK BROWN	Maintenance of Way	All buildings where smoke discoloration makes it inadvisable to use No. 201 (Colonial Yellow) and No. 202 (Light Brown). Back of sign boards and sign posts. Interior walls of engine houses and shop buildings, including car repair buildings to a height of 6 feet. Tin and sheet metal roofs on all shop buildings where the use of No. 13 (Carbon Black) is not advisable. Freight and baggage skids.

Revised Jan. 20, 1923.
Revised. Oct. 26, 1926.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES.

No. 1, DARK OLIVE	Passenger Cars	Bodies, vestibules, outside of end doors, window sash and screens.
No. 2, OLIVE ENAMEL	Passenger Cars	Trucks (except wheels, axles and brake rigging), platforms and steps, battery boxes.
	Locomotives and Tenders	Sash.
No. 4, MAROON	Passenger Cars	Heater pipes, air signal pipes, couplings, truss planks and wood floors on all cars except refrigerator express.
	Freight Equipment	Cabooses: Floors, including floor of platform and steps to same.
	Maintenance of Way	Plain seats in depots.
No. 5, BURNT SIENNA IN JAPAN	Passenger Cars	Interior stains and tinting for filler.
	Locomotives and Tenders	Boiler jacket outside, brake rigging, channels of main and side rods, engine frames, engine truck except axles, hand rails, iron rods, pipes, smoke box, smoke stack, steps, bottom of tender tank, tender frame, tender trucks (except axles), tool boxes, outside of cab (except roof), cylinder head casings, cylinder saddle, dome, pilot, safety valve casing, sand box, driving box, driving and trailing wheels, outside of tender tank, etc. <i>Outside of sash & cab</i>
No. 7, BLACK VARNISH	Passenger Cars	Upper and lower buffing devices, diaphragm face plates, hand rails and similar outside iron work and iron work on inside of baggage, postal, horse baggage cars, and wheels, except axles.
	Maintenance of Way	Iron and wood semaphore poles to a height of 7 feet above ground, ladders, castings, mechanism cases (exterior), battery cases and relay posts, switch stands. All iron work on motor cars.
No. 8, REFRIGERATOR YELLOW	Freight Equipment	Sides of refrigerator cars.
No. 9, DRAB ENAMEL	Passenger Cars	Walls of baggage and horse baggage cars.
No. 10, PEARL GRAY	Passenger Cars	Ceiling of baggage and horse baggage cars.
	Passenger Cars	Back of Agasote ceiling and lining.
No. 11, METALLIC	Freight Equipment	Cabooses, Wood—Automobile, Box and Stock Cars:— Body and roof. Roof and ends of refrigerator cars.
	Maintenance of Way	Wood work on motor cars.
No. 11-A, DARK BROWN	Maintenance of Way	All buildings where smoke discoloration makes it inadvisable to use No. 201 (Colonial Yellow) and No. 202 (Light Brown). Back of sign boards and sign posts. Interior walls of engine houses and shop buildings, including car repair buildings to a height of 6 feet. Tin and sheet metal roofs on all shop buildings where the use of No. 13 (Carbon Black) is not advisable. Freight and baggage skids.

Revised Jan. 20, 1923.
Revised Sept. 30, 1925.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES.

No. 1, DARK OLIVE	Passenger Cars	Bodies, vestibules, outside of end doors, window sash and screens.
No. 2, OLIVE ENAMEL	Passenger Cars	Trucks (except wheels, axles and brake rigging), platforms and steps, battery boxes.
No. 4, MAROON	Locomotives and Tenders	Sash.
	Passenger Cars	Heater pipes, air signal pipes, couplings, truss planks and wood floors on all cars except refrigerator express.
	Freight Equipment	Cabooses: Floors, including floor of platform and steps to same.
	Maintenance of Way	Plain seats in depots.
No. 5, BURNT SIENNA IN JAPAN	Passenger Cars	Interior stains and tinting for filler.
No. 7, BLACK VARNISH	Locomotives and Tenders	Boiler jacket outside, brake rigging, channels of main and side rods, engine frames, engine truck except axles, hand rails, iron rods, pipes, smoke box, smoke stack, steps, bottom of tender tank, tender frame, tender trucks (except axles), tool boxes, outside of cab (except roof), cylinder head casings, cylinder saddle, dome, pilot, safety valve casing, sand box, driving box, driving and trailing wheels, outside of tender tank, etc.
	Passenger Cars	Upper and lower buffing devices, diaphragm face plates, hand rails, and similar outside iron work and iron work on inside of baggage, postal, horse baggage cars, and wheels, except axles.
	Maintenance of Way	Iron and wood semaphore poles to a height of 7 feet above ground, ladders, castings, mechanism cases (exterior), battery cases and relay posts, switch stands. All iron work on motor cars.
No. 8, REFRIGERATOR YELLOW	Freight Equipment	Sides of refrigerator cars.
No. 9, DRAB ENAMEL	Passenger Cars	Walls of baggage and horse baggage cars.
No. 10, PEARL GRAY	Passenger Cars	Ceiling of baggage and horse baggage cars.
No. 11, METALLIC	Passenger Cars	Back of Agasote ceiling and lining.
	Freight Equipment	Cabooses, Wood—Automobile, Box and Stock Cars:— Body and roof. Roof and ends of refrigerator cars.
	Maintenance of Way	Wood work on motor cars.
No. 11-A, DARK BROWN	Maintenance of Way	All buildings where smoke discoloration makes it inadvisable to use No. 201 (Colonial Yellow) and No. 202 (Light Brown). Back of sign boards and sign posts. Interior walls of engine houses and shop buildings, including car repair buildings to a height of 6 feet. Tin and sheet metal roofs on all shop buildings where the use of No. 13 (Carbon Black) is not advisable.

FREIGHT AND PASSENGER ST.

Revised Jan. 20, 1923.

UNION PACIFIC SYSTEM
SPECIFICATION CS-22
PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 11-A, DARK BROWN	Maintenance of Way	All buildings where smoke discoloration makes it inadvisable to use No. 201 (Colonial Yellow) and No. 202 (Light Brown). Back of sign boards and sign posts. Interior walls of engine houses and shop buildings, including car repair buildings to a height of 6 feet. Tin and sheet metal roofs on all shop buildings where the use of No. 13 (Carbon Black) is not advisable. Freight and baggage skids. Top, both sides and ends of ties on all steel bridges. (See special instructions.)
	Passenger Cars	For Express Refrigerator Cars—Tongue of car flooring, tongue of roof boards before applying canvas and bottom of running board saddles.
No. 12 or 12-A, WHITE LEAD	Freight Equipment	Lettering and routing card space, grain and coal lines of steel cars. For Cabooses—Tongue of car flooring and sheathing boards, all window sills, fascia boards, battens, moulding, etc., on surfaces not exposed to weather. For Refrigerator Cars—Lettering on ends, ends of indicator arms, metal and tongue of flooring.
	Maintenance of Way	Upper part of signal poles, both wood and iron. Signs—Background of exterior building and roadway signs, etc. Mail Cranes (except iron movable fittings, floor of platform and top of ladder treads).
No. 12-B, SEMAPHORE WHITE ENAMEL	Maintenance of Way	Switch targets, semaphore blades.
No. 12-C, WHITE	Maintenance of Way	General interior and exterior building work.
	Locomotives and Tenders	Fuel space, cab roof.
	Passenger Cars	Roofs, running boards, underframes, all iron and steel underneath car except axles and battery boxes.
	Freight Equipment	Body of all steel cars, steel underframes , trucks, all iron work exposed to view on refrigerator cars and cabooses. Metal roof of refrigerator cars.
	Maintenance of Way	Final coat on bridges and other structural steel. (See Spec. CS-1019.) Steel and wooden water tanks, exterior. Machinery and pumps. Radiators in engine houses, shops, etc. Mail Cranes—Iron movable fittings, floor of platform and top of ladder treads only. Final coat on stand pipes (See Spec. CS-1019).
No. 14, DROP BLACK	Passenger Cars	Eaves moulding.
	Locomotives and Tenders	Interior of cab, sash and cab doors.
No. 15, GREEN ENAMEL	Freight Equipment	Interior of cabooses, including walls and ceiling of car and cupola; all stationary wooden fixtures, including seats, platforms , bunks, desks, etc., and such iron work as wash stand, water cooler, indicator lamp parts, etc. (For alternate paints, see Nos. 30 and 31.)
	Maintenance of Way	Body of warehouse and baggage trucks.
No. 16, ALUMINUM LEAF	Locomotives and Tenders	Lettering.

Revised Jan. 20, 1923.
Revised March 30, 1929.
Revised July 16, 1929.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 12 or 12-A, WHITE LEAD	Passenger Cars	For Express Refrigerator Cars—Tongue of car flooring, tongue of roof boards before applying canvas and bottom of running board saddles.
	Freight Equipment	Lettering and routing card space, grain and coal lines of steel cars. For Caboose—Tongue of car flooring and sheathing boards, all window sills, fascia boards, battens, moulding, etc., on surfaces not exposed to weather. For Refrigerator Cars—Lettering on ends, ends of indicator arms, medallions and tongue of flooring.
	Maintenance of Way	Upper part of signal poles, both wood and iron. Signs—Background of exterior building and roadway signs, etc. Mail Cranes (except iron movable fittings, floor of platform and top of ladder treads).
No. 12-B, SEMAPHORE WHITE ENAMEL	Maintenance of Way	Switch targets, semaphore blades.
No. 12-C, WHITE	Maintenance of Way	General interior and exterior building work.
	Locomotives and Tenders	Fuel space, cab roof.
	Passenger Cars	Roofs, running boards, underframes, all iron and steel underneath car except axles and battery boxes.
	Freight Equipment	Body of all steel cars, steel under-frames, trucks, all iron work exposed to view on refrigerator cars and cabooses. Metal roof of refrigerator cars.
	Maintenance of Way	Final coat on bridges and other structural steel (See Spec. CS-1019). Steel and wooden water tanks, exterior Machinery and pumps. Radiators in engine houses, shops, etc. Main Cranes—Iron movable fittings, floor of platform and top of ladder treads only. Final coat on stand pipes (See Spec. CS-1019).
No. 14, DROP BLACK	Passenger Cars	Eaves moulding.
	Locomotives and Tenders	Interior of cab, sash and cab doors.
	Passenger Equipment	Body of warehouse and baggage trucks.
No. 15, GREEN ENAMEL	Freight Equipment	Interior of cabooses, including walls and ceiling of car and cupola; all stationary wooden fixtures, including seats, platforms, bunks, desks, etc., and such iron work as wash stand, water cooler, indicator lamp parts, etc.
	Maintenance of Way	Body of warehouse and baggage trucks.
No. 16, ALUMINUM LEAF	Locomotives and Tenders	Lettering.

Revised Jan. 20, 1923.
Revised Oct. 26, 1926.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 12 or 12-A, WHITE LEAD	Passenger Cars	For Refrigerator Express Cars—Tongue of car flooring, tongue of roof boards before applying canvas and bottom of running board saddles.
	Freight Equipment	Lettering and routing card space, grain and coal lines of steel cars. For Caboose—Tongue of car flooring and sheathing boards, all window sills, fascia boards, battens, moulding, etc., on surfaces not exposed to weather. For Refrigerator Cars—Lettering on ends, ends of indicator arms, medallions and tongue of flooring.
	Maintenance of Way	Upper part of signal poles, both wood and iron. Signs—Background of exterior building and roadway signs, etc. Mail Cranes (except iron movable fittings, floor of platform and top of ladder treads).
No. 12-B, SEMAPHORE WHITE ENAMEL	Maintenance of Way	Switch targets, semaphore blades.
No. 12-C, WHITE	Maintenance of Way	General interior and exterior building work.
	Locomotives and Tenders	Fuel space, cab roof.
	Passenger Cars	Roofs, running boards, underframes, all iron and steel underneath car except axles and battery boxes.
	Freight Equipment	Body of all steel cars, steel under-frames, trucks, all iron work exposed to view on refrigerator cars and cabooses. Metal roof of refrigerator cars.
	Maintenance of Way	Final coat on bridges and other structural steel (See Spec. CS-1019). Steel and wooden water tanks. Machinery and pumps. Radiators in engine houses, shops, etc. Mail Cranes—Iron movable fittings, floor of platform and top of ladder treads only. Final coat on stand pipes (See Spec. CS-1019).
No. 14, DROP BLACK	Passenger Cars	To parts varnished, crown moulding and eaves.
	Locomotives and Tenders	Interior of cab, <i>dash and cab door</i> .
	Passenger Equipment	Interior of engine room of motor cars. Body of warehouse and baggage trucks.
No. 15, GREEN ENAMEL	Freight Equipment	Interior of cabooses, including walls and ceiling of car and cupola; all stationary wooden fixtures, including seats, platforms, bunks, desks, etc., and such iron work as wash stand, water cooler, indicator lamp parts, etc.
	Maintenance of Way	Body of warehouse and baggage trucks.
No. 16, ALUMINUM LEAF	Locomotives and Tenders	Lettering.

Revised Jan. 20, 1923.
Revised Dec. 15, 1923.
Revised Sept. 30, 1925.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 12 or 12-A, WHITE LEAD	Passenger Cars	For Refrigerator Express Cars—Tongue of car flooring, tongue of roof boards before applying canvas and bottom of running board saddles.
	Freight Equipment	Lettering and routing card space, grain and coal lines of steel cars. For Cabooses—Tongue of car flooring and sheathing boards, all window sills, fascia boards, battens, moulding, etc., on surfaces not exposed to weather. For Refrigerator Cars—Lettering on ends, ends of indicator arms, medallions and tongue of flooring.
	Maintenance of Way	Upper part of signal poles, both wood and iron. Signs—Background of exterior building and roadway signs, etc. Mail Cranes (except iron movable fittings, floor of platform and top of ladder treads).
No. 12-B, SEMAPHORE WHITE ENAMEL	Maintenance of Way	Switch targets, semaphore blades.
No. 12-C, WHITE	Maintenance of Way	General interior and exterior building work.
	Locomotives and Tenders	Fuel space, cab roof.
	Passenger Cars	Roofs, running boards, underframes, all iron and steel underneath car except axles and battery boxes.
	Freight Equipment	Body and roof of all steel cars, steel under-frames, trucks, all iron work exposed to view on refrigerator cars and cabooses. Metal roof of refrigerator cars.
	Maintenance of Way	Final coat on bridges and other structural steel (See spec. 1019). Steel and wooden water tanks. Machinery and pumps. Radiators in engine houses, shops, etc. Mail Cranes—Iron movable fittings, floor of platform and top of ladder treads only.
No. 14, DROP BLACK	Passenger Cars	FINAL COAT ON STAND PIPES (SEE SPEC. CO-1019) To parts varnished, crown moulding and eaves.
	Locomotives and Tenders	Interior of cab.
	Passenger Equipment	Interior of engine room of motor cars. Body of warehouse and baggage trucks.
No. 15, GREEN ENAMEL	Freight Equipment	Interior of cabooses, including walls and ceiling of car and cupola: all stationary wooden fixtures, including seats, platforms, bunks, desks, etc., and such iron work as wash stand, water cooler, indicator lamp parts, etc.
	Maintenance of Way	Body of warehouse and baggage trucks.
No. 16, ALUMINUM LEAF	Locomotives and Tenders	Lettering.

Revised Jan. 20, 1923.
Revised Dec. 15, 1923.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 12 or 12-A, WHITE LEAD	Passenger Cars	For Refrigerator Express Cars—Tongue of car flooring, tongue of roof boards before applying canvas and bottom of running board saddles.
	Freight Equipment	Lettering and routing card space, grain and coal lines of steel cars. For Cabooses—Tongue of car flooring and sheathing boards, all window sills, fascia boards, battens, moulding, etc., on surfaces not exposed to weather. For Refrigerator Cars—Lettering on ends, ends of indicator arms, medallions and tongue of flooring.
	Maintenance of Way	Upper part of signal poles, both wood and iron. Signs—Background of exterior building and roadway signs, etc. Mail Cranes (except iron movable fittings, floor of platform and top of ladder treads).
No. 12-B, SEMAPHORE WHITE ENAMEL	Maintenance of Way	Switch targets, semaphore blades.
No. 12-C, WHITE	Maintenance of Way	General interior and exterior building work.
	Locomotives and Tenders	Fuel space, cab roof.
	Passenger Cars	Roofs, running boards, underframes, all iron and steel underneath car except axles and battery boxes.
	Freight Equipment	Body and roof of all steel cars, steel under-frames, trucks, all iron work exposed to view on refrigerator cars and cabooses; <i>METAL ROOFS ON REFRIGERATOR CARS</i>
	Maintenance of Way	Final coat on bridges and other structural steel (See spec. 1019). Steel and wooden water tanks. Machinery and pumps. Radiators in engine houses, shops, etc. Mail Cranes—Iron movable fittings, floor of platform and top of ladder treads only.
No. 14, DROP BLACK	Passenger Cars	To parts varnished, crown moulding and eaves.
	Locomotives and Tenders	Interior of cab.
	Passenger Equipment	Interior of engine room of motor cars. Warehouse and baggage trucks.
No. 15, GREEN ENAMEL	Freight Equipment	Interior of cabooses, including walls and ceiling of car and cupola: all stationary wooden fixtures, including seats, platforms, bunks, desks, etc., and such iron work as wash stand, water cooler, indicator lamp parts, etc.
	Maintenance of Way	Warehouse and baggage trucks.
No. 16, ALUMINUM LEAF	Locomotives and Tenders	Lettering.

Revised Jan. 20, 1923.

SPECIFICATION CS-22 PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 17, LAMP BLACK	Passenger Cars	Inside lettering of postal, postal apartments, baggage, baggage apartments, horse-baggage, automobile, baggage-dormitory and express refrigerator.
	Freight Equipment	Lettering sides of refrigerator cars. Medallions. Inside lettering, coal and grain lines of wood box and automobile cars. Space for route cards on side doors of wood box, automobile, and refrigerator cars. Board for defect and explosive cards. Interior of cabooses—back of door knobs and spaces around locker door catches.
	Maintenance of Way	Outside sash of all buildings and trim of buildings painted No. 11-A, dark brown. Lettering of roadway and exterior building signs, also background (sanded) of interior signs. Fire Escapes (Final Coat).
No. 18, GOLD LEAF	Passenger Cars	Lettering exterior of all cars except express refrigerator. Interior of coach, diner and observation cars.
	Maintenance of Way	Lettering—interior and exterior Signs of Important stations.
Nos. 20 REDACTED , RED LEAD	Locomotives and Tenders	Metallic surfaces in contact with each other or wood surfaces in contact with metal, outside of boilers, inside of tanks and priming coat of iron and steel parts which are to be painted. Underside of boiler jackets (when specified).
	Passenger Cars	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all metal parts which are to be painted, except interior steel finish, the outside of car body, platforms, trap-doors and steps.
	Freight Equipment	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all iron and steel parts which are to be painted, except inside of open top steel cars.
	Maintenance of Way	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, 1st and 2nd coats on iron and steelwork, also stand pipes. (See Specification No. CS-1019.) Interior of steel water tanks. (See special instructions.)
No. 23, POSTAL CAR BROWN	Passenger Cars	Side walls and the following equipment:—Back of paper boxes, lock box, water cooler, portable bin, slip and scheme cases, wire screen in paper and packages box slides, wire screen in stationery bulkhead of postal cars, postal apartments and motor car engine rooms.
No. 24, HARD WOOD FILLER	Passenger Cars	Interior Wood Finish.
No. 26, ALUMINUM PAINT	Passenger Cars	Diners, kitchen equipment as follows:—Steel dish locker, locker under steam table, insulation back of range, charcoal box, range boiler, overhead water piping, guard over pipes from range to hot water tank, sweat pans, water tank straps and vegetable bins.
	Maintenance of Way	For interior steel mechanism cases of semaphores, radiators in buildings, etc.
No. 27, COPPER BRONZE PAINT	Maintenance of Way	For radiators and other incidental metal work in station and office buildings where this finish is desired.

Revised Jan. 20, 1923.
Revised June 6, 1927.
Revised March 30, 1929.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 17, LAMP BLACK	Passenger Cars	Inside lettering of postal, postal apartments, baggage, baggage apartments, horse-baggage, automobile, baggage-dormitory and express refrigerator.
	Freight Equipment	Lettering sides of refrigerator cars. Medallions. Inside lettering, coal and grain lines of wood box and automobile cars. Space for route cards on side doors of wood box, automobile, and refrigerator cars. Board for defect and explosive cards.
	Maintenance of Way	Outside sash of all buildings and trim of buildings painted No. 11-A, dark brown. Lettering of roadway and exterior building signs, also background (sanded) of interior signs. Fire Escapes (Final Coat).
No. 18, GOLD LEAF	Passenger Cars	Lettering exterior of all cars except express refrigerator.
	Maintenance of Way	Interior of coach, diner and observation cars. Lettering—interior and exterior Signs of Important stations.
Nos. 19 and 19-A, RED LEAD	Locomotives and Tenders	Metallic surfaces in contact with each other or wood surfaces in contact with metal, outside of boilers, inside of tanks and priming coat of iron and steel parts which are to be painted. Underside of boiler jackets (when specified).
	Passenger Cars	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all metal parts which are to be painted, except interior steel finish, the outside of car body, platforms, trap doors and steps.
	Freight Equipment	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all iron and steel parts which are to be painted, except inside of open top steel cars.
	Maintenance of Way	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, 1st and 2nd coats on iron and steelwork, and stand pipes. (See Specification No. CS-1019.) INTERIOR OF STEEL
No. 23, POSTAL CAR BROWN	Passenger Cars	Side walls and the following equipment:—Back of paper boxes, lock box, water cooler, portable bin, slip and scheme cases, wire screen in paper and packages box slides, wire screen in stationary bulkhead of postal cars, postal apartments and motor car engine rooms.
No. 24, HARD WOOD FILLER	Passenger Cars	Interior Wood Finish.
No. 26, ALUMINUM PAINT	Passenger Cars	Diners, kitchen equipment as follows:—Steel dish locker, locker under steam table, insulation back of range, charcoal box, range boiler, overhead water piping, guard over pipes from range to hot water tank, sweat pans, water tank straps and vegetable bins.
	Maintenance of Way	For interior steel mechanism cases of semaphores, radiators in buildings, etc.
No. 27, COPPER BRONZE PAINT	Maintenance of Way	For radiators and other incidental metal work in station and office buildings where this finish is desired.

Revised Jan. 20, 1923.
Revised Oct. 26, 1926.

SPECIFICATION CS-22

P A I N T

NUMERICAL LISTS OF PAINTS AND THEIR USES--Continued.

No. 17, LAMP BLACK	Passenger Cars	Inside lettering of refrigerator express cars.
	Freight Equipment	Lettering sides of refrigerator cars. Medallions. Inside lettering, coal and grain lines of wood box and automobile cars. Space for route cards on side doors of wood box, automobile, and refrigerator cars. Board for defect and explosive cards.
	Maintenance of Way	Outside sash of all buildings and trim of buildings painted No. 11-A, dark brown. Lettering of roadway and exterior building signs, also background (sanded) of interior signs. Fire Escapes (Final Coat).
No. 18, GOLD LEAF	Passenger Cars	Lettering and striping.
	Maintenance of Way	Lettering—interior and exterior Signs of Important stations.
Nos. 19 and 19-A, RED LEAD	Locomotives and Tenders	Metallic surfaces in contact with each other or wood surfaces in contact with metal, outside of boilers, underside of boiler jackets , inside of tanks and priming coat of iron and steel parts which are to be painted. <i>Underside of boiler jackets, etc.</i>
	Passenger Cars	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all metal parts which are to be painted, except interior steel finish, the outside of car body, platforms, trap doors and steps.
	Freight Equipment	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all iron and steel parts which are to be painted, except inside of open top steel cars.
	Maintenance of Way	Metallic surfaces in contact with each other, or wood surfaces in contact with metal. 1st and 2nd coats on iron and steelwork, also stand pipes. (See Specification No. CS-1019.)
	Passenger Cars	Side walls of postal car and postal apartments.
No. 23, POSTAL CAR BROWN	Passenger Cars	Interior Wood Finish.
No. 24, HARD WOOD FILLER	Passenger Cars	For interior steel mechanism cases of semaphores, radiators in buildings, etc.
No. 26, ALUMINUM PAINT	Maintenance of Way	For radiators and other incidental metal work in station and office buildings where this finish is desired.
No. 27, COPPER BRONZE PAINT	Maintenance of Way	Headlinings of postal cars and postal apartments, coaches, chair cars, dining, observation, motor cars and passenger compartment, baggage-buffet (two undercoats).
No. 28, LIGHT CREAM (Flat Enamel)	Passenger Cars	Headlinings of postal cars and postal apartments, coaches, chair cars, dining, observation, motor cars and passenger compartment baggage-buffet. (Final Coat).
No. 28-A, LIGHT CREAM (Gloss)	Passenger Cars	

Revised Jan. 20, 1923.

Revised Dec. 15, 1923.

Revised Sept. 30, 1925.

SPECIFICATION CS-22

PAINT

NUMERICAL LISTS OF PAINTS AND THEIR USES--Continued.

No. 17, LAMP BLACK	Passenger Cars	Inside lettering of refrigerator express cars.
	Freight Equipment	Lettering sides of refrigerator cars. Medallions. Inside lettering, coal and grain lines of wood box and automobile cars. Space for route cards on side doors of wood box, automobile, and refrigerator cars. Board for defect and explosive cards.
	Maintenance of Way	Outside sash of all buildings and trim of buildings painted No. 11-A, dark brown. Lettering of roadway and exterior building signs, also background (sanded) of interior signs.
No. 18, GOLD LEAF	Passenger Cars	Lettering and striping.
	Maintenance of Way	Lettering—interior and exterior Signs of Important stations.
Nos. 19 and 19-A, RED LEAD	Locomotives and Tenders	Metallic surfaces in contact with each other or wood surfaces in contact with metal, outside of boilers, underside of boiler jackets, inside of tanks and priming coat of iron and steel parts which are to be painted.
	Passenger Cars	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all metal parts which are to be painted, except interior steel finish, the outside of car body, platforms, trap doors and steps.
	Freight Equipment	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all iron and steel parts which are to be painted, except inside of open top steel cars.
	Maintenance of Way	Metallic surfaces in contact with each other, or wood surfaces in contact with metal. 1st and 2nd coats on iron and steelwork. (See Specification No. 1019.)
	Passenger Cars	Side walls of postal car and postal apartments.
No. 23, POSTAL CAR BROWN	Passenger Cars	Interior Wood Finish.
No. 24, HARD WOOD FILLER	Passenger Cars	For interior steel mechanism cases of semaphores, radiators in buildings, etc.
No. 26, ALUMINUM PAINT	Maintenance of Way	For radiators and other incidental metal work in station and office buildings where this finish is desired.
No. 27, COPPER BRONZE PAINT	Maintenance of Way	Headlinings of postal cars and postal apartments, coaches, chair cars, dining, observation, motor cars and passenger compartment, baggage-buffet (two undercoats).
No. 28, LIGHT CREAM (Flat Enamel)	Passenger Cars	Headlinings of postal cars and postal apartments, coaches, chair cars, dining, observation, motor cars and passenger compartment baggage-buffet. (Final Coat).
No. 28-A, LIGHT CREAM (Gloss)	Passenger Cars	

Revised Jan. 20, 1923.

Revised Dec. 15, 1923.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 17, LAMP BLACK	Passenger Cars	Inside lettering of refrigerator express cars and routing card space.
	Freight Equipment	Lettering sides of refrigerator cars. Medallions. Inside lettering, coal and grain lines of wood box and automobile cars. Space for route cards on side doors of wood box, automobile, and refrigerator cars. Board for defect and explosive cards.
	Maintenance of Way	Outside sash of all buildings and trim of buildings painted No. 11-A, dark brown. Lettering of roadway and exterior building signs, also background (sanded) of interior signs.
No. 18, GOLD LEAF	Passenger Cars	Lettering and striping.
	Maintenance of Way	Lettering—interior and exterior Signs of Important stations.
Nos. 19 and 19-A, RED LEAD	Locomotives and Tenders	Metallic surfaces in contact with each other or wood surfaces in contact with metal, outside of boilers, underside of boiler jackets, inside of tanks and priming coat of iron and steel parts which are to be painted.
	Passenger Cars	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all metal parts which are to be painted, except interior steel finish, the outside of car body, platforms, trap doors and steps.
	Freight Equipment	Metallic surfaces in contact with each other, or wood surfaces in contact with metal, and priming coat on all iron and steel parts which are to be painted, except inside of open top steel cars.
	Maintenance of Way	Metallic surfaces in contact with each other, or wood surfaces in contact with metal. 1st and 2nd coats on iron and steelwork. (See Specification No. 1019.)
	Passenger Cars	Side walls of postal car and postal apartments.
No. 23, POSTAL CAR BROWN	Passenger Cars	Interior Wood Finish.
No. 24, HARD WOOD FILLER	Passenger Cars	For interior steel mechanism cases of semaphores, radiators in buildings, etc.
No. 26, ALUMINUM PAINT	Maintenance of Way	For radiators and other incidental metal work in station and office buildings where this finish is desired.
No. 27, COPPER BRONZE PAINT	Maintenance of Way	Headlinings of postal cars and postal apartments, coaches, chair cars, dining, observation, motor cars and passenger compartment, baggage-buffet (two undercoats).
No. 28, LIGHT CREAM (Flat Enamel)	Passenger Cars	Headlinings of postal cars and postal apartments, coaches, chair cars, dining, observation, motor cars and passenger compartment baggage-buffet. (Final Coat).
No. 28-A, LIGHT CREAM (Gloss)	Passenger Cars	

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 28, LIGHT CREAM (Flat Enamel)	Passenger Cars	Headlinings of coaches, chair cars, dining, observation and passenger compartment, baggage-buffet (two undercoats).
No. 28-A, LIGHT CREAM (Gloss)	Passenger Cars	Headlinings of coaches, chair cars, dining, observation and passenger compartment baggage-buffet. (Final Coat.)
No. 29, WHITE ENAMEL (Flat)	Passenger Cars	Headlining, candle-lamp box, hangers and braces for safety rods, overhead water tank and light fixtures of postal cars and postal apartments (two under coats).
No. 29-A, WHITE ENAMEL (Gloss)	Passenger Cars	Headlining, candle-lamp box, hangers and braces for safety rods, overhead water tank and light fixtures of postal cars and postal apartments (final coat).
No. 30, DARK GREEN (Flat) (Alternate)	Freight Equipment	Interior of Caboose—Side and end walls to a height of 4 feet from top of floor; all stationary wooden fixtures, including seats, platforms, bunks, desks, etc., and such iron work as wash stand, water cooler, indicator lamp parts, etc.
No. 31, LIGHT GREEN (Flat) (Alternate)	Freight Equipment	Interior of Caboose—Side and end walls above 4 feet and ceiling of car.
No. 201, COLONIAL YELLOW	Maintenance of Way	Outside Body; Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths, and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration.
No. 202, LIGHT BROWN	Maintenance of Way	Outside Trim: Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration. Wainscoating for inside of waiting rooms, ticket offices and living rooms in depots, section houses, when not subject to smoke discoloration. Wooden Bridges: When part of main buildings adjoining main tracks, when not subject to smoke discoloration.
No. 203, CREAM	Maintenance of Way	Walls and ceilings (not plastered) down to wainscoating line, inside of waiting rooms, ticket offices and living rooms in depots, section houses, toilet or outhouses, etc.

Revised Jan. 20, 1923.
Revised Oct. 26, 1926.
Revised Mar. 30, 1929.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 28, LIGHT CREAM (Flat Enamel)	Passenger Cars	Headlinings of coaches, chair cars, dining, observation and passenger compartment, baggage-buffet (two undercoats).
No. 28-A, LIGHT CREAM (Gloss)	Passenger Cars	Headlinings of coaches, chair cars, dining, observation and passenger compartment baggage-buffet. (Final Coat).
No. 29, WHITE ENAMEL (Flat)	Passenger Cars	Headlining, candle-lamp box, hangers and braces for safety rods, overhead water tank and light fixtures of postal cars and postal apartments (two under coats).
No. 29-A, WHITE ENAMEL (Gloss)	Passenger Cars	Headlining, candle-lamp box, hangers and braces for safety rods, overhead water tank and light fixtures of postal cars and postal apartments (final coat).
No. 30, LIGHT BROWN No. 31, LIGHT BROWN No. 201, COLONIAL YELLOW	Maintenance of Way	Outside Body: Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths, and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration.
	TRIM	Outside Body : Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths, and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration.
No. 202, LIGHT BROWN	Maintenance of Way	Wainscoating for inside of waiting rooms, ticket offices and living rooms in depots, section houses, when not subject to smoke discoloration. Wooden Bridges: When part of main buildings adjoining main tracks, when not subject to smoke discoloration.
No. 203, CREAM	Maintenance of Way	Walls and ceilings (not plastered) down to wainscoating line, inside of waiting rooms, ticket offices and living rooms in depots, section houses, toilet or outhouses, etc.
No. 205, SEMAPHORE VERMILION	Passenger Cars	Fire apparatus which is painted red and fuel tanks of motor cars.
	Maintenance of Way	Switch targets, semaphore blades and derails. Fire apparatus which is painted red.
No. 205-A, VERMILION	Freight Equipment	Medallions.
No. 206, SEMAPHORE YELLOW	Maintenance of Way	Switch targets and semaphore blades.
No. 210, SLATE COLOR	Maintenance of Way	Metal roof, when remainder of building painted with Nos. 201 and 202.
No. 211, SLATE COLOR STAIN	Maintenance of Way	Wooden shingle roof, when remainder of building painted with Nos. 201 and 202.

Revised Jan. 20, 1923.
Revised Oct. 26, 1926.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 201, COLONIAL YELLOW	Maintenance of Way	Outside Body: Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths, and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration.
No. 202, LIGHT BROWN	Maintenance of Way	Outside Trim: Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths, and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration. Wainscoating for inside of waiting rooms, ticket offices and living rooms in depots, section houses, when not subject to smoke discoloration. Wooden Bridges: When part of main buildings adjoining main tracks, when not subject to smoke discoloration.
No. 203, CREAM	Maintenance of Way	Walls and ceilings (not plastered) down to wainscoating line, inside of waiting rooms, ticket offices and living rooms in depots, section houses, toilet or outhouses, etc.
No. 205, SEMAPHORE VERMILION	Passenger Cars	Fire apparatus which is painted red.
	Maintenance of Way	Switch targets, semaphore blades and derails. Fire apparatus which is painted red.
No. 205-A, VERMILION	Freight Equipment	Medallions.
No. 206, SEMAPHORE YELLOW	Maintenance of Way	Switch targets and semaphore blades.
No. 210, SLATE COLOR	Maintenance of Way	Metal roof, when remainder of building painted with Nos. 201 and 202.
No. 211, SLATE COLOR STAIN	Maintenance of Way	Wooden shingle roof, when remainder of building painted with Nos. 201 and 202.
No. 213, GRAY FLOOR PAINT	Maintenance of Way	Floor of station and section house porches, and other building floors exposed to weather. For exterior purposes varnish over if necessary. Interior walls of baggage and freight rooms of depots, to height of 6 feet. Wheels and running gears of warehouse and baggage trucks.
No. 214, ASPHALT ROOF COATING	Maintenance of Way	Roofs of buildings covered with prepared roofings.
No. 215, WHITE INTER- IOR COLD WATER PAINT	Maintenance of Way	Interior walls above 6 feet and ceiling of baggage and freight rooms of depots, all shops including car repair buildings, also engine houses.
No. 216, SEMAPHORE BLACK	Maintenance of Way	Stripes and backs of Semaphore Blades.
No. 217, SEMAPHORE GREEN	Maintenance of Way	Lever handles of Interlocking Machines.
No. 218, SEMAPHORE BLUE	Maintenance of Way	Lever handles of Interlocking Machines.
No. 218-A, BLUE	Freight Equipment	Medallions.
No. 219, GOLD BRONZE	Passenger Cars	Interior metal work.
	Maintenance of Way	Stations and other buildings.

Revised Jan. 20, 1923.

Revised Dec. 15, 1923.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 201, COLONIAL YELLOW	Maintenance of Way	Outside Body: Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths, and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration.
No. 202, LIGHT BROWN	Maintenance of Way	Outside Trim: Depots, section houses, wood sheds, toilet or outhouses, tool houses, telephone booths, and all buildings where such buildings are part of a group of buildings adjoining track, when not subject to smoke discoloration. Wainscoating for inside of waiting rooms, ticket offices and living rooms in depots, section houses, when not subject to smoke discoloration. Wooden Bridges: When part of main buildings adjoining main tracks, when not subject to smoke discoloration.
No. 203, CREAM	Maintenance of Way	Walls and ceilings (not plastered) down to wainscoating line, inside of waiting rooms, ticket offices and living rooms in depots, section houses, toilets or outhouses, etc.
No. 205, SEMAPHORE VERMILION	Passenger Cars	Fire apparatus which is painted red.
No. 205-A, VERMILION	Maintenance of Way	Switch targets, semaphore blades and derails.
No. 206, SEMAPHORE YELLOW	Freight Equipment	Fire apparatus which is painted red.
No. 210, SLATE COLOR	Maintenance of Way	Medallions.
No. 211, SLATE COLOR STAIN	Maintenance of Way	Switch targets and semaphore blades.
No. 213, GRAY FLOOR PAINT	Maintenance of Way	Metal roof, when remainder of building painted with Nos. 201 and 202.
No. 214, ASPHALT ROOF COATING	Maintenance of Way	Wooden shingle roof, when remainder of building painted with Nos. 201 and 202.
No. 215, WHITE INTERIOR COLD WATER PAINT	Maintenance of Way	Floor of station and section house porches, and other building floors exposed to weather. For exterior purposes varnish over if necessary. Interior walls of baggage and freight rooms of depots to height of 6 feet.
No. 216, SEMAPHORE BLACK	Maintenance of Way	WHEELS AND AXLES OF PASSENGER CARS Roofs of buildings covered with prepared roofings.
No. 217, SEMAPHORE GREEN	Maintenance of Way	Interior walls above 6 feet and ceiling of baggage and freight rooms of depots, all shops including car repair buildings, also engine houses.
No. 218, SEMAPHORE BLUE	Maintenance of Way	Stripes and backs of Semaphore Blades.
No. 218-A, BLUE	Freight Equipment	Lever handles of Interlocking Machines.
No. 219, GOLD BRONZE	Passenger Cars	Lever handles of Interlocking Machines.
	Maintenance of Way	Medallions.
		Interior metal work.
		Stations and other buildings.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 205, SEMAPHORE VERMILION	Passenger Cars	Fire apparatus which is painted red and fuel tanks of motor cars.
	Maintenance of Way	Switch targets, semaphore blades and derails. Fire apparatus which is painted red.
No. 205-A, VERMILION	Freight Equipment	Medallions.
No. 206, SEMAPHORE YELLOW	Maintenance of Way	Switch targets and semaphore blades.
No. 210, SLATE COLOR	Maintenance of Way	Metal roof, when remainder of building painted with Nos. 201 and 202.
No. 211, SLATE COLOR STAIN	Maintenance of Way	Wooden shingle roof, when remainder of building painted with Nos. 201 and 202.
No. 213, GRAY FLOOR PAINT	Maintenance of Way	Floor of station and section house porches, and other building floors exposed to weather. For exterior purposes varnish over if necessary. Interior walls of baggage and freight rooms of depots, to height of 6 feet. Wheels and running gears of warehouse and baggage trucks.
No. 214, ASPHALT ROOF COATING	Maintenance of Way	Roofs of buildings covered with prepared roofings.
No. 215, WHITE INTER- IOR COLD WATER PAINT	Maintenance of Way	Interior walls above 6 feet and ceiling of baggage and freight rooms of depots, all shops including car repair buildings, also engine houses.
No. 216, SEMAPHORE BLACK	Maintenance of Way	Stripes and backs of Semaphore Blades.
No. 217, SEMAPHORE GREEN	Maintenance of Way	Lever handles of Interlocking Machines.
No. 218, SEMAPHORE BLUE	Maintenance of Way	Lever handles of Interlocking Machines.
No. 218-A, BLUE	Freight Equipment	Medallions.
No. 219, GOLD BRONZE	Passenger Cars	Interior metal work.
	Maintenance of Way	Stations and other buildings.

Revised Jan. 20, 1923.

Revised Oct. 26, 1926.

Revised Mar. 30, 1929.

SPECIFICATION CS-22

PAINT

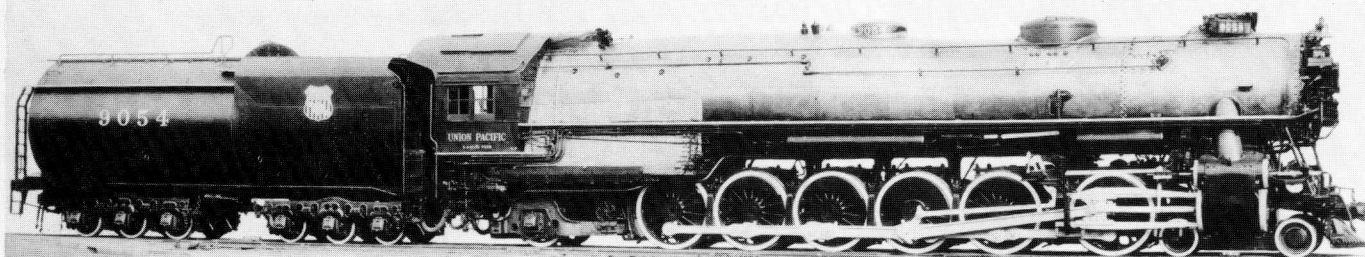
NUMERICAL LIST OF PAINTS AND THEIR USES—Continued.

No. 213, GRAY FLOOR PAINT	Maintenance of Way	Floor of station and section house porches, and other building floors exposed to weather. For exterior purposes varnish over if necessary. Interior walls of baggage and freight rooms of depots, to height of 6 feet. Wheels and running gears of warehouse and baggage trucks.
No. 214, ASPHALT ROOF COATING	Maintenance of Way	Roofs of buildings covered with prepared roofings.
No. 215, WHITE INTERIOR COLD WATER PAINT	Maintenance of Way	Interior walls above 6 feet and ceiling of baggage and freight rooms of depots, all shops including car repair buildings, also engine houses.
No. 216, SEMAPHORE BLACK	Maintenance of Way	Stripes and backs of Semaphore Blades.
No. 217, SEMAPHORE GREEN	Maintenance of Way	Lever handles of Interlocking Machines.
No. 218, SEMAPHORE BLUE	Maintenance of Way	Lever handles of Interlocking Machines.
No. 218-A, BLUE	Freight Equipment	Medallions.
No. 219, GOLD BRONZE	Passenger Cars	Interior metal work.
	Maintenance of Way	Stations and other buildings.

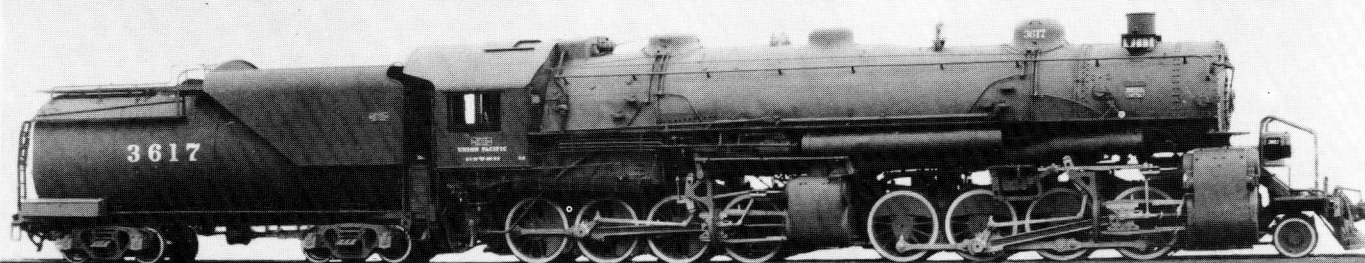
Revised Jan. 20, 1923.

Revised Oct. 26, 1926.

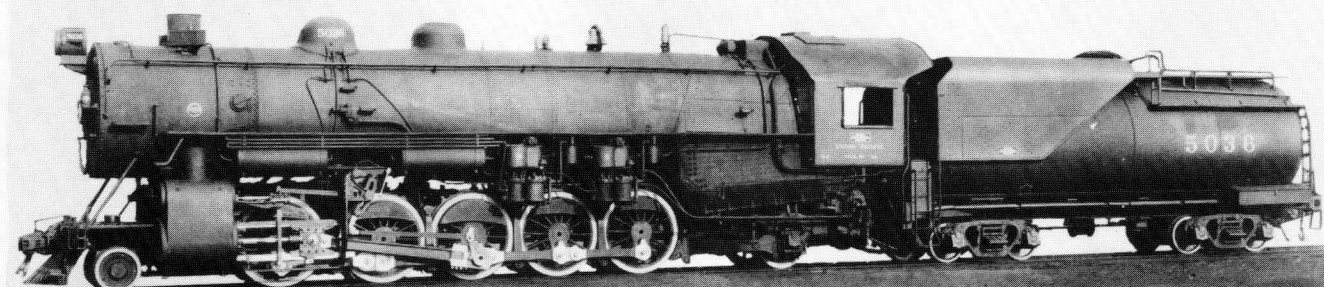
9000



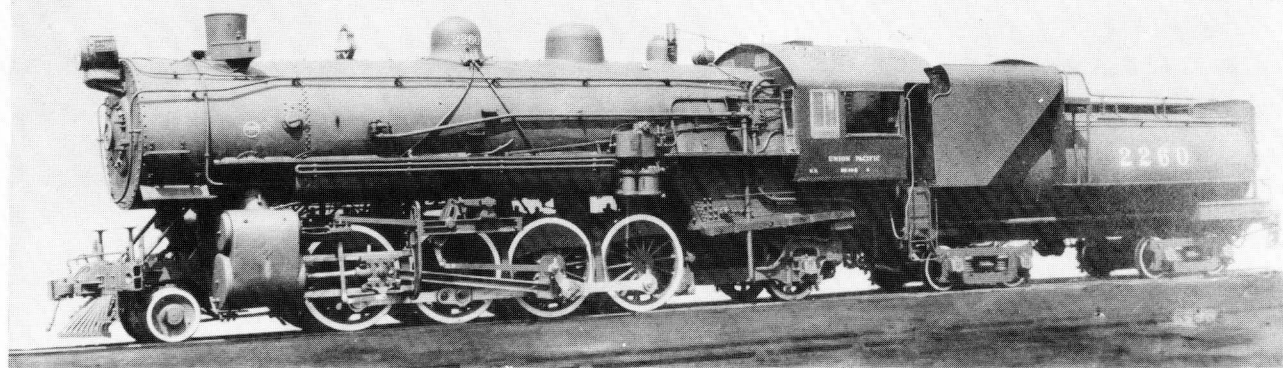
MALLET



2-10-2



MIKADO



At a quick glance here are 4 steam locomotives of the Union Pacific Railroad. The following section specifically addresses the painting of each. All photos from Union Pacific.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.
LOCOMOTIVES AND TENDERS

	Paint No.	Color
Boiler Jacket, Outside (when specified)	7	Black Varnish
Brake Rigging (when specified)	7	" "
Reds—Main and Side—Channels of (when specified)	7	" "
Frames	7	" "
Trucks, Engine and Tender (except axles)	7	" "
Hand Rails	7	" "
Valve Motion Parts	7	" "
Pipes	7	" "
Smoke Box (when specified)	7	" "
Smoke Stack (when specified)	7	" "
Steps	7	" "
Tank, Tender, bottom of	7	" "
Tool Boxes	7	" "
Outside of Cab, Sash and Cab Doors, except roof	7	" "
Cylinder and Valve Head Casings (when specified)	7	" "
Cylinder Saddle	7	" "
Dome	7	" "
Pilot	7	" "
Safety Valve Casing	7	" "
Sand Box	7	" "
Wheels, Driving and Trailing	7	" "
Tank (outside)	7	" "
Fuel Space	13	Carbon Black
Roof of Cab	13	" "
Interior Cab, Sash and Cab Doors	15	Green Enamel
Lettering	16	Aluminum Leaf
Metallic Surfaces in contact with each other or wood surfaces in contact with metal	20	Red Lead
Priming Coat of Iron and Steel parts which are to be painted	20	" "
Boiler (outside)	20	" "
Boiler Jacket, underside (when specified)	20	" "
Tanks (inside)	20	" "

Revised Jan. 20, 1923.
Revised Oct. 26, 1926.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.
LOCOMOTIVES AND TENDERS

	Paint No.	Color
Cash	4	Maroon
Boiler Jacket (Outside) <i>(when specified)</i>	7	Black Varnish
Brake Rigging <i>when specified</i>	7	" "
Rods—Main and Side—Channels of <i>(when specified)</i>	7	" "
Frames	7	" "
Trucks, Engine and Tender (except axles)	7	" "
Hand Rails	7	" "
Iron Rods	7	" "
Pipes	7	" "
Smoke Box <i>(when specified)</i>	7	" "
Smoke Stack <i>(when specified)</i>	7	" "
Steps	7	" "
Tank, Tender, bottom of	7	" "
Tool Boxes	7	" "
Outside of Cab, except roof <i>Cash and cab doors</i>	7	" "
Cylinder Head Casings <i>(when specified)</i>	7	" "
Cylinder Saddle	7	" "
Dome	7	" "
Pilot	7	" "
Safety Valve Casing	7	" "
Sand Box	7	" "
Wheels, Driving and Trailing	7	" "
Tank (outside)	7	" "
Fuel Space	13	Carbon Black
Roof of Cab	13	" "
Cab, interior <i>Cash and cab doors</i>	15	Green Enamel
Lettering	16	Aluminum Leaf
Metallic Surfaces in contact with each other or wood surfaces in contact with metal	19 or 19-A	Red Lead
Priming Coat of Iron and Steel parts which are to be painted	19 or 19-A	" "
Boiler (outside)	19 or 19-A	" "
Boiler Jacket (underside) <i>(when specified)</i>	19 or 19-A	" "
Tanks, (inside)	19 or 19-A	" "

Revised Jan. 20, 1923.
Revised Sept. 30, 1925.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.
LOCOMOTIVES AND TENDERS

	Paint No.	Color
Sash	4	Maroon
Parts not varnished, viz:		
Boiler Jacket (Outside)	7	Black Varnish
Brake Rigging	7	" "
Rods—Main and Side—Channels of	7	" "
Frames	7	" "
Trucks, Engine and Tender (except axles)	7	" "
Hand Rails	7	" "
Iron Rods	7	" "
Pipes	7	" "
Smoke Box	7	" "
Smoke Stack	7	" "
Steps	7	" "
Tank, Tender, bottom of	7	" "
Tool Boxes	7	" "
Outside of Cab, except roof	7	" "
Cylinder Head Casings	7	" "
Cylinder Saddle	7	" "
Dome	7	" "
Pilot	7	" "
Safety Valve Casing	7	" "
Sand Box	7	" "
Wheels, Driving and Trailing	7	" "
Tank (outside)	7	" "
Fuel Space	13	Carbon Black
Roof of Cab	13	" "
Cab, interior	15	Green Enamel
Lettering	16	Aluminum Leaf
Metallic Surfaces in contact with each other or wood surfaces in contact with metal	19 or 19-A	Red Lead
Priming Coat of Iron and Steel parts which are to be painted	19 or 19-A	" "
Boiler (outside)	19 or 19-A	" "
Boiler Jacket (underside)	19 or 19-A	" "
Tanks, (inside)	19 or 19-A	" "

Revised Jan. 20, 1923.



As one might imagine from the above photo the next section encompasses the painting of Passenger Cars followed by similar section on Freight Cars and Maintenance of Way equipment. This scene was taken in Ogden, Utah and supplied by the Union Pacific Railroad.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.
PASSENGER CARS

	Paint No.	Color
Bodies, including Vestibule Hand Rails, and Corner and Side Door Handholds	1-A	Dark Olive
Window Sash and Screens (outside)	1-A	" "
Trucks (except wheels, axles and brake rigging)	2	Olive Enamel
Platforms	2	" "
Steps	2	" "
Floors, wood (except refrigerator express cars)	4	Maroon
Pipes and Fittings, Heater and Air Signal	4	"
Interior Stains and Tinting for Filler	5	Burnt Sienna in Japan
Handholds and similar outside iron work except Vestibule Handrails and corner and Side Door Handholds	7	Black Varnish
Wheels	7	" "
Iron Work on Inside of Baggage, Baggage Apartments, Postal, Postal Apartments, Horse Baggage, and Baggage-Dormitory Cars	7	" "
Walls of Baggage, Baggage Apartments, Horse Baggage and Baggage-Dormitory Cars	9	Drab Enamel
Headlinings of Baggage, Baggage Apartments, Horse Baggage and Baggage Dormitory Cars	10	Pearl Gray
Headlinings and Sidelinings, back of Agasote	11	Metallie
Tongue of Roof Boards, Bottom of Running Board Saddles and Tongue of Flooring, Express Refrigerator Cars	12 or 12-A	White Lead
Roofs, Running Boards, Under Frames, all Iron and Steel Underneath Car (except axles)	13	Carbon Black
Eaves Moulding	14	Drop Black
Trucks, Warehouse and Baggage:		
Body	15	Green Enamel
Wheels and running gears	213	Gray Floor Paint
Stenciling on Inside of Baggage, Baggage Apartments, Postal, Postal Apartments, Postal, Postal Apartments, Horse-Baggage-Automobile, Baggage-Dormitory, Express Refrigerator Cars and Motor Car Engine Room	17	Lamp Black
Lettering and Striping (except Express Refrigerator Cars)	18	Gold Leaf
Metallie Surfaces in contact with each other or wood surfaces in contact with metal and priming coat on all metal parts that are to be painted, with the exception of interior steel finish, outside of car body, platforms, trap doors and steps	20	Red Lead
Walls and Adjacent Equipment except Iron Trimmings or Postal Cars and Postal Apartments	23	Postal Car Brown
Engine Room of Motor Cars	23	" " "
Interior Wood Finish (except Express Refrigerator Cars)	24	Hardwood Filler
Headlining of Coaches, Chair, Dining, Observation, Passenger Apartment and Baggage-Buffer Cars (two undercoats)	28	Light Cream (Flat Enamel)
Headlining of all Cars Using Paint No. 28 (final coat)	28-A	Light Cream (gloss)
Headlining and Adjacent Equipment of Postal Cars and Postal Apartments (two undercoats)	29	White Enamel (flat)
Headlining and Adjacent Equipment of Postal Cars and Postal Apartments (final coat)	29-A	White Enamel (gloss)
Fire Apparatus which is painted red and Fuel Tanks of Motor Cars	205	Semaphore Vermilion
Interior Metal Work (where specified)	219	Gold Bronze

Revised Jan. 20, 1923.
Revised Oct. 26, 1926.

SPECIFICATION CS-22

PAINT

SCHEDULE OF USES BY LOCATION.

PASSENGER CARS

	Paint No.	Color
Bodies (except refrigerator express cars)	1	Dark Olive
Window Sash and Screens (outside)	1	" "
Trucks (except wheels, axles and brake rigging)	2	Olive Enamel
Platforms	2	" "
Steps	2	" "
Floors, wood (except refrigerator express cars)	4	Maroon
Pipes and Couplings, Heater and Air Signal	4	"
Interior Stains and Tinting for Filler	5	Burnt Sienna in Japan
Hand Rails and similar outside iron work	7	Black Varnish
Wheels	7	" "
Iron work on inside of Baggage, Postal and Horse Baggage Cars	7	" "
Walls of Baggage, and Horse Baggage Cars	9	Drab ENAMEL
Headlinings of Baggage, and Horse Baggage Cars	10	Pearl Gray
Headlinings and Sidelinings, back of Agasote	11	Metallic
Tongue of Roof Boards, Bottom of Running Board Saddles and Tongue of Flooring, Refrigerator Express Cars	12 or 12-A	White Lead
Roofs, Running Boards, Under Frames, all Iron and Steel Underneath Car (except axles)	13	Carbon Black
Crown Moulding and Eaves	14	Drop Black
Engine Room, Interior, Motor Cars	15	Green Enamel
Trucks, Warehouse and Baggage:		
Body	15	Green Enamel
Wheels and running gears	213	Gray Floor Paint
Stenciling on Inside of Refrigerator Express Cars	17	Lamp Black
Lettering and Striping (except refrigerator express cars)	18	Gold Leaf
Metallic Surfaces in contact with each other or wood surfaces in contact with metal and priming coat on all metal parts that are to be painted, with the exception of interior steel finish, outside of car body, platforms, trap doors and steps	19 or 19-A	Red Lead
Walls of Mail Cars	23	Postal Car Brown
Interior Wood Finish (except refrigerator express cars)	24	Hardwood Filler
Headlining of Coaches, Chair, Dining, Observation, <u>Postal</u> , <u>Motor</u> Cars, Passenger Compartment Baggage-Buffer Cars, and <u>Postal</u> Apartments (two undercoats)	28	Light Cream (Flat Enamel)
Headlining of all Cars using Paint No. 28 (final coat)	28-A	Light Cream (Gloss)
Fire Apparatus which is painted red	205	Semaphore Vermilion
Interior Metal Work (where specified)	219	Gold Bronze

Revised Jan. 20, 1923.

Revised Dec. 15, 1923.

SPECIFICATION CS-22
P A I N T
SCHEDULE OF USES BY LOCATION.
PASSENGER CARS

	Paint No.	Color
Bodies (except refrigerator express cars)	1	Dark Olive
Window Sash and Screens (outside)	1	" "
Trucks (except wheels, axles and brake rigging)	2	Olive Enamel
Platforms	2	" "
Steps	2	" "
Floors, wood (except refrigerator express cars)	4	Maroon
Pipes and Couplings, Heater and Air Signal	4	"
Interior Stains and Tinting for Filler	5	Burnt Sienna in Japan
Hand Rails and similar outside iron work	7	Black Varnish
Wheels	7	" "
Iron work on inside of Baggage, Postal and Horse Baggage Cars	7	" "
Walls of Baggage, and Horse Baggage Cars	9	Drab ENAMEL
Headlinings of Baggage, and Horse Baggage Cars	10	Pearl Gray
Headlinings and Sidelinings, back of Agasote	11	Metallic
Tongue of Roof Boards, Bottom of Running Board Saddles and Tongue of Flooring, Refrigerator Express Cars	12 or 12-A	White Lead
Roofs, Running Boards, Under Frames, all Iron and Steel Underneath Car (except axles)	13	Carbon Black
Crown Moulding and Eaves	14	Drop Black
Engine Room, Interior, Motor Cars	15	Green Enamel
Trucks, Warehouse and Baggage:		
Body	15	Green Enamel
Wheels and running gears	213	Gray Floor Paint
Stenciling on Inside of Refrigerator Express Cars	17	Lamp Black
Lettering and Striping (except refrigerator express cars)	18	Gold Leaf
Metallic Surfaces in contact with each other or wood surfaces in contact with metal and priming coat on all metal parts that are to be painted, with the exception of interior steel finish, outside of car body, plat- forms, trap doors and steps	19 or 19-A	Red Lead
Walls of Mail Cars	23	Postal Car Brown
Interior Wood Finish (except refrigerator express cars)	24	Hardwood Filler
Headlining of Coaches, Chair, Dining, Observation, Postal, Motor Cars, Passenger Compartment Baggage-Buffer Cars, and Postal Apartments (two undercoats)	28	Light Cream (Flat Enamel)
Headlining of all Cars using Paint No. 28 (final coat)	28-A	Light Cream (Gloss)
Fire Apparatus which is painted red	205	Semaphore Vermilion
Interior Metal Work (where specified)	219	Gold Bronze

Revised Jan. 20, 1923.

Revised Dec. 15, 1923.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.
PASSENGER CARS

	Paint No.	Color
Bodies (except refrigerator express cars)	1	Dark Olive
Window Sash and Screens (outside)	1	" "
Trucks (except wheels, axles and brake rigging)	2	Olive Enamel
Platforms	2	" "
Steps	2	" "
Floors, wood (except refrigerator express cars)	4	Maroon
Pipes and Couplings, Heater and Air Signal	4	"
Interior Stains and Tinting for Filler	5	Burnt Sienna in Japan
Hand Rails and similar outside iron work	7	Black Varnish
Wheels	7	" "
Iron work on inside of Baggage, Postal and Horse Baggage Cars	7	" "
Walls of Baggage, and Horse Baggage Cars	9	Drab
Headlinings of Baggage, and Horse Baggage Cars	10	Pearl Gray
Headlinings and Sidelinings, back of Agasote	11	Metallic
Tongue of Roof Boards, Bottom of Running Board Saddles and Tongue of Flooring, Refrigerator Express Cars	12 or 12-A	White Lead
Roofs, Running Boards, Under Frames, all Iron and Steel Underneath Car (except axles)	13	Carbon Black
Crown Moulding and Eaves	14	Drop Black
Engine Room, Interior, Motor Cars	15	Green Enamel
Trucks, Warehouse and Baggage	15	" "
Stenciling on Inside of Refrigerator Express Cars	17	Lamp Black
Routing Card Space, Refrigerator and Express Cars	17	" "
Lettering and Striping (except refrigerator express cars)	18	Gold Leaf
Metallic Surfaces in contact with each other or wood surfaces in contact with metal and priming coat on all metal parts that are to be painted, with the exception of interior steel finish, outside of car body, plat- forms, trap doors and steps	19 or 19-A	Red Lead
Walls of Mail Cars	23	Postal Car Brown
Interior Wood Finish (except refrigerator express cars)	24	Hardwood Filler
Headlining of Coaches, Chair, Dining, Observation, Postal, Motor Cars, Passenger Compartment Baggage-Buffer Cars, and Postal Apartments (two undercoats)	28	Light Cream (Flat Enamel)
Headlining of all Cars using Paint No. 28 (final coat)	28-A	Light Cream (Gloss)
Fire Apparatus which is painted red	205	Semaphore Vermilion
Interior Metal Work (where specified)	219	Gold Bronze

Revised Jan. 20, 1923.

UNION PACIFIC SYSTEM
SPECIFICATION CS-22
PAINT

SCHEDULE OF USES BY LOCATION.

FREIGHT EQUIPMENT

	Paint No.	Color
Floors of Cabooses, Including Platforms of Cupola	4	Maroon
Platform and Steps of Cabooses	4	"
Sides of Refrigerator Cars	8	Refrigerator Light Orange Paint
Sides of Refrigerator Cars	8-A	Refrigerator Light Orange Enamel
SIDES OF REFRIGERATOR CARS	8-B	REFRIGERATOR YELLOW
Body of Cabooses, Wood—Automobile, Box and Stock Cars	11	Metallic
Roof of Cabooses, Wood—Automobile, Box Stock and Refrigerator Cars	11	"
Ends of Refrigerator Cars	11	"
Lettering Ends of Refrigerator Cars and Medallions	12 or 12-A	White Lead
Lettering, except Sides of Refrigerator Cars	12 or 12-A	" "
Tongue of Car Flooring, Refrigerator Cars	12 or 12-A	" "
Routing Card Space, Steel—Box and Automobile Cars	12 or 12-A	" "
Grain and Coal Lines of Steel Cars	12 or 12-A	" "
Tongue of Car Flooring and Sheathing Boards of Cabooses	12 or 12-A	" "
Window Sills, Exterior of Cabooses	12 or 12-A	" "
Fascia Boards, Battens and Moulding of Caboose Cars	12 or 12-A	" "
Ends of Indicator Arms of Refrigerator Cars	12 or 12-A	" "
Body of All Steel Cars and Metal Roof of Refrigerator Cars	13	Carbon Black
Inside of Steel Hopper, Gondola and Work Cars	13	" "
Underframes	13	" "
Trucks	13	" "
Ironwork Exposed to View on Refrigerator Cars and Cabooses	13	" "
Interior of Cabooses, viz.:		
Walls	15	Green Enamel
Walls, to a Height of 4 ft. Above Floor (Alternate)	30	Dark Green
Walls, Above 4 ft. and Ceilings (Alternate)	31	Light Green
Ceilings	15	Green Enamel
Cupola	15 or 31	Green
Stationary Wooden Fixtures	15 or 30	"
Seats	15 or 30	"
Bunks	15 or 30	"
Desks	15 or 30	"
Wash Stands	15 or 30	"
Water Cooler	15 or 30	"
Indicator Lamp Parts	15 or 30	"
Back of Door Knobs and Spaces Around Locker Door Catches	17	Lamp Black
Lettering Sides of Refrigerator Cars and Medallions	17	" "
Lettering Inside of Wood—Box and Automobile Cars	17	" "
Coal and Grain Lines in Wood—Box and Automobile Cars	17	" "
Route Card Space on Wood—Box, Automobile and Refrigerator Cars	17	" "
Board for Defect and Explosive Cards	17	" "
Metallic Surfaces in contact with each other or wood surfaces in contact with metal, and priming coat on all iron and steel parts that are to be painted, except inside of open top steel cars (car Spec. to govern)...	20	Red Lead
Medallions on Refrigerator Cars	205-A	Vermillion
Medallions on Refrigerator Cars	218-A	Blue

~~Revised Jan. 20, 1923.~~
~~Revised Sept. 30, 1925.~~
Revised Mar. 30, 1929.
Revised July 16, 1929.

SPECIFICATION CS-22

PAINT

SCHEDULE OF USES BY LOCATION.

FREIGHT EQUIPMENT

	Paint No.	Color
Floors of Caboosees <i>including tops of doors</i>	4	Maroon
Platform and Steps of Caboosees	4	"
Sides of Refrigerator Cars	8	Refrigerator Yellow
Body of Caboosees, Wood—Automobile, Box and Stock Cars	11	Metallic
Roof of Caboosees, Wood—Automobile, Box, Stock and Refrigerator Cars...	11	"
Ends of Refrigerator Cars	11	"
Lettering Ends of Refrigerator Cars and Medallions	12 or 12-A	White Lead
Lettering, except Sides of Refrigerator Cars	12 or 12-A	" "
Tongue of Car Flooring, Refrigerator Cars	12 or 12-A	" "
Routing Card Space, Steel—Box and Automobile Cars	12 or 12-A	" "
Grain and Coal Lines of Steel Cars	12 or 12-A	" "
Tongue of Car Flooring and Sheathing Boards of Caboosees	12 or 12-A	" "
Window Sills, Exterior of Caboosees	12 or 12-A	" "
Fascia Boards, Battens and Moulding of Caboose Cars	12 or 12-A	" "
Ends of Indicator Arms of Refrigerator Cars	12 or 12-A	" "
Body of All Steel Cars and Metal Roof of Refrigerator Cars	13	Carbon Black
Inside of Steel Hopper, Gondola and Work Cars	13	" "
Roof of All Steel Cars	13	" "
Underframes	13	" "
Trucks	13	" "
Ironwork Exposed to View on Refrigerator Cars and Caboosees	13	" "
Interior of Caboosees, viz:		
Walls	15	Green Enamel
Ceilings	15	" "
Cupola	15 <i>m3</i>	" "
Stationary Wooden Fixtures	15 <i>m3</i>	" "
Seats	15	" "
Platforms	15	" "
Bunks	15	" "
Desks	15	" "
Wash Stand	15	" "
Water Cooler	15	" "
Indicator Lamp Parts	15	" "
Lettering Sides of Refrigerator Cars and Medallions	17	Lamp Black
Lettering Inside of Wood—Box and Automobile Cars	17	" "
Coal and Grain Lines in Wood—Box and Automobile Cars	17	" "
Route Card Space on Wood—Box, Automobile and Refrigerator Cars	17	" "
Board for Defect and Explosive Cards	17	" "
Metallic Surfaces in contact with each other or wood surfaces in contact with metal, and priming coat on all iron and steel parts that are to be painted, except inside of open top steel cars	19 or 19-A	Red Lead
Medallions on Refrigerator Cars	205-A	Vermillion
Medallions on Refrigerator Cars	218-A	Blue

Revised Jan. 20, 1923.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.
MAINTENANCE OF WAY

	Paint No.	Color
Bridges (Wooden), when part of a group of buildings adjoining main tracks	202	Light Brown
Buildings (Wooden), which are a part of a group of buildings adjoining main tracks:		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Buildings (Wooden), subject to excessive smoke discoloration	11-A	Dark Brown
Buildings, Rough, when not located near main tracks:		
Body, exterior	11-A	Dark Brown
Trim, "	17	Lamp Black
Bunk Houses (Wooden):		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Walls and ceiling, interior	203	Cream
Car Repair Buildings (Wooden) forming part of a group of buildings adjoining main tracks:		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet and ceiling	215	White Cold Water
Car Repair Buildings (Wooden), when not located near main tracks:		
Body, exterior	11-A	Dark Brown
Trim, "	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet and ceiling	215	White Cold Water
Depots (Wooden):		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Walls, interior, and Ceiling (when ceiled)	203	Cream
Walls, interior, and Ceiling (when plastered)	Special	Instructions
Wainscot, interior of Waiting Room, Ticket Office and Living Rooms ..	202	Light Brown
Walls, interior, to height of 6 feet, Baggage and Freight Rooms	213	Gray Floor Paint
Walls, interior, above 6 ft., and ceilings of Baggage and Freight Rooms	215	White Cold Water
Floors, interior, when required	213	Gray Floor Paint
Derails	205	Semaphore Vermilion

Revised Jan. 20, 1923.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.

MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Engine Houses (Wooden), when part of a group of buildings adjoining main tracks:		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Engine Houses (Wooden), when not located near main tracks:		
Body, exterior	11-A	Dark Brown
Trim, "	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet and ceiling	215	White Cold Water
Fire Apparatus which is painted red	205	Semaphore Vermilion
Interlocking lever handles	217	Semaphore Green
Interlocking lever handles	218	Semaphore Blue
Fire Escapes:		
First coat	20	Red Lead
Second Coat	20	" "
Final Coat	17	Lamp Black
Floors, interior, when painting required	213	Gray Floor Paint
Floors of porches and exterior floors, when painting required	213	" " "
Machinery	13	Carbon Black
Pumps	13	" "
Mail Cranes (except parts listed on next line)	12 or 12-A	White Lead
Iron movable fittings, floor of platform and top of ladder treads	13	Carbon Black
Motor Cars:		
Woodwork	11	Metallic
Ironwork	7	Black Varnish
Radiators:		
Engine Houses, Shops, etc.	13	Carbon Black
	26	Aluminum
	27	Copper Bronze
Stations and other buildings, where specified	219	Gold Bronze
	13	Carbon Black
Important Stations and other buildings required by color scheme	27	Copper Bronze
Roofs, Metal:		
When remainder of building painted with Nos. 11-A and 17	11-A	Dark Brown
When remainder of building painted with Nos. 201 and 202	210	Slate Color
Roofs, Shingle:		
When remainder of building painted with Nos. 201 and 202	211	Slate Color Stain
Roofs, Prepared	214	Asphalt Roof Coating
Section Houses:		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Wainscoting, interior	202	Light Brown
Walls, interior, and Ceiling	203	Cream
Floors, interior	213	Gray Floor Paint

Revised Jan. 20, 1923.
Revised Sept. 30, 1925.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.

MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Engine Houses (Wooden), when part of a group of buildings adjoining main tracks:		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Engine Houses (Wooden), when not located near main tracks:		
Body, exterior	11-A	Dark Brown
Trim, "	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet and ceiling	215	White Cold Water
Fire Apparatus which is painted red	205	Semaphore Vermilion
Interlocking lever handles	217	Semaphore Green
Interlocking lever handles	218	Semaphore Blue
Floors, interior, when painting required	213	Gray Floor Paint
Floors of porches and exterior floors, when painting required	213	" " "
Machinery	13	Carbon Black
Pumps	13	" "
Mail Cranes (except parts listed on next line)	12 or 12-A	White Lead
Iron movable fittings, floor of platform and top of ladder treads.....	13	Carbon Black
Motor Cars:		
Woodwork	11	Metallic
Ironwork	7	Black Varnish
Radiators:		
Engine Houses, Shops, etc.	13	Carbon Black
	26	Aluminum
	27	Copper Bronze
Stations and other buildings, where specified	219	Gold Bronze
	13	Carbon Black
Important Stations and other buildings required by color scheme.....	27	Copper Bronze
Roofs, Metal:		
When remainder of building painted with Nos. 11-A and 17.....	11-A	Dark Brown
When remainder of building painted with Nos. 201 and 202.....	210	Slate Color
Roofs, Shingle:		
When remainder of building painted with Nos. 201 and 202.....	211	Slate Color Stain
Roofs, Prepared	214	Asphalt Roof Coating
Section Houses:		
Body, exterior	201	Colonial Yellow
Trim, "	202	Light Brown
Sash, "	17	Lamp Black
Wainscoting, interior	202	Light Brown
Walls, interior, and Ceiling	203	Cream
Floors, interior	213	Gray Floor Paint

Revised Jan. 20, 1923.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.

MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Floors, porch	213	Gray Floor Paint
Seats:		
Hardwood in Important Depots	Special	Instructions
Plain	4	Maroon
Semaphore Poles:		
Upper part—wood and iron	12 or 12-A	White Lead
Iron and steel to height of 7 feet above ground	7	Black Varnish
Ladders and castings	7	“ “
Battery Cases	7	“ “
Mechanism Cases, exterior	7	“ “
“ “ interior	26	Aluminum
Wood to first ladder casting	7	Black Varnish
Semaphore Blades	12-B	White Enamel
“ “ backs and stripes	216	Semaphore Black
“ “	205	Semaphore Vermilion
“ “	206	Semaphore Yellow
Signals, Automatic Block, and Interlocking: (See Semaphore)		
Signs:		
Background of exterior—Building, Roadway, etc.	12 or 12-A	White Lead
Lettering of exterior—Building, Roadway, etc.	17	Lamp Black
Background of interior	17	“ “ (Sanded)
Lettering of interior and exterior—Important Stations	18	Gold Leaf
Back of sign boards and sign posts	11-A	Dark Brown
Shop Buildings (Wooden) when not located near main tracks:		
Body, exterior	11-A	Dark Brown
Trim, “	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet, and ceiling	215	White Cold Water
Shop Buildings (Wooden) when part of a group of buildings adjoining main tracks:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Sash, “	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet and ceiling	215	White Cold Water
Skids, Freight and Baggage	11-A	Dark Brown

Revised Jan. 20, 1923.

Revised Sept. 30, 1925.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.

MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Floors, porch	213	Gray Floor Paint
Seats:		
Hardwood in Important Depots	Special	Instructions
Plain	4	Maroon
Semaphore Poles:		
Upper part—wood and iron	12 or 12-A	White Lead
Iron and steel to height of 7 feet above ground	7	Black Varnish
Ladders and castings	7	“ “
Battery Cases	7	“ “
Mechanism Cases, exterior	7	“ “
“ “ interior	26	Aluminum
Wood to first ladder casting	7	Black Varnish
Semaphore Blades	12-B	White Enamel
“ “ backs and stripes	216	Semaphore Black
“ “	205	Semaphore Vermilion
“ “	206	Semaphore Yellow
Signals, Automatic Block, and Interlocking: (See Semaphore)		
Signs:		
Background of exterior—Building, Roadway, etc.	12 or 12-A	White Lead
Lettering of exterior—Building, Roadway, etc.	17	Lamp Black
Background of interior	17	“ “ (Sanded)
Lettering of interior and exterior—Important Stations	18	Gold Leaf
Back of sign boards and sign posts	11-A	Dark Brown
Shop Buildings (Wooden) when not located near main tracks:		
Body, exterior	11-A	Dark Brown
Trim, “	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet, and ceiling	215	White Cold Water
Shop Buildings (Wooden) when part of a group of buildings adjoining main tracks:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Sash, “	17	Lamp Black
Walls, interior, to a height of 6 feet	11-A	Dark Brown
Walls, interior, above 6 feet and ceiling	215	White Cold Water
SKIDS <i>7-11-17-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-1229-1230-1231-1232-1233-1234-1235-1236-1237-1238-1239-1240-1241-1242-1243-1244-1245-1246-1247-1248-1249-1250-1251-1252-1253-1254-1255-1256-1257-1258-1259-1260-1261-1262-1263-1264-1265-1266-1267-1268-1269-1270-1271-1272-1273-1274-1275-1276-1277-1278-1279-1280-1281-1282-1283-1284-1285-1286-1287-1288-1289-1290-1291-1292-1293-1294-1295-1296-1297-1298-1299-1300-1301-1302-1303-1304-1305-1306-1307-1308-1309-1310-1311-1312-1313-1314-1315-1316-1317-1318-1319-1320-1321-1322-1323-1324-1325-1326-1327-1328-1329-1330-1331-1332-1333-1334-1335-1336-1337-1338-1339-1340-1341-1342-1343-1344-1345-1346-1347-1348-1349-1350-1351-1352-1353-1354-1355-1356-1357-1358-1359-1360-1361-1362-1363-1364-1365-1366-1367-1368-1369-1370-1371-1372-1373-1374-1375-1376-1377-1378-1379-1380-1381-1382-1383-1384-1385-1386-1387-1388-1389-1390-1391-1392-1393-1394-1395-1396-1397-1398-1399-1400-1401-1402-1403-1404-1405-1406-1407-1408-1409-1410-1411-1412-1413-1414-1415-1416-1417-1418-1419-1420-1421-1422-1423-1424-1425-1426-1427-1428-1429-1430-1431-1432-1433-1434-1435-1436-1437-1438-1439-1440-1441-1442-1443-1444-1445-1446-1447-1448-1449-1450-1451-1452-1453-1454-1455-1456-1457-1458-1459-1460-1461-1462-1463-1464-1465-1466-1467-1468-1469-1470-1471-1472-1473-1474-1475-1476-1477-1478-1479-1480-1481-1482-1483-1484-1485-1486-1487-1488-1489-1490-1491-1492-1493-1494-1495-1496-1497-1498-1499-1500-1501-1502-1503-1504-1505-1506-1507-1508-1509-1510-1511-1512-1513-1514-1515-1516-1517-1518-1519-1520-1521-1522-1523-1524-1525-1526-1527-1528-1529-1530-1531-1532-1533-1534-1535-1536-1537-1538-1539-1540-1541-1542-1543-1544-1545-1546-1547-1548-1549-1550-1551-1552-1553-1554-1555-1556-1557-1558-1559-1560-1561-1562-1563-1564-1565-1566-1567-1568-1569-1570-1571-1572-1573-1574-1575-1576-1577-1578-1579-1580-1581-1582-1583-1584-1585-1586-1587-1588-1589-1590-1591-1592-1593-1594-1595-1596-1597-1598-1599-1600-1601-1602-1603-1604-1605-1606-1607-1608-1609-1610-1611-1612-1613-1614-1615-1616-1617-1618-1619-1620-1621-1622-1623-1624-1625-1626-1627-1628-1629-1630-1631-1632-1633-1634-1635-1636-1637-1638-1639-1640-1641-1642-1643-1644-1645-1646-1647-1648-1649-1650-1651-1652-1653-1654-1655-1656-1657-1658-1659-1660-1661-1662-1663-1664-1665-1666-1667-1668-1669-1670-1671-1672-1673-1674-1675-1676-1677-1678-1679-1680-1681-1682-1683-1684-1685-1686-1687-1688-1689-1690-1691-1692-1693-1694-1695-1696-1697-1698-1699-1700-1701-1702-1703-1704-1705-1706-1707-1708-1709-1710-1711-1712-1713-1714-1715-1716-1717-1718-1719-1720-1721-1722-1723-1724-1725-1726-1727-1728-1729-1730-1731-1732-1733-1734-1735-1736-1737-1738-1739-1740-1741-1742-1743-1744-1745-1746-1747-1748-1749-1750-1751-1752-1753-1754-1755-1756-1757-1758-1759-1760-1761-1762-1763-1764-1765-1766-1767-1768-1769-1770-1771-1772-1773-1774-1775-1776-1777-1778-1779-1780-1781-1782-1783-1784-1785-1786-1787-1788-1789-1790-1791-1792-1793-1794-1795-1796-1797-1798-1799-1800-1801-1802-1803-1804-1805-1806-1807-1808-1809-1810-1811-1812-1813-1814-1815-1816-1817-1818-1819-1820-1821-1822-1823-1824-1825-1826-1827-1828-1829-1830-1831-1832-1833-1834-1835-1836-1837-1838-1839-1840-1841-1842-1843-1844-1845-1846-1847-1848-1849-1850-1851-1852-1853-1854-1855-1856-1857-1858-1859-1860-1861-1862-1863-1864-1865-1866-1867-1868-1869-1870-1871-1872-1873-1874-1875-1876-1877-1878-1879-1880-1881-1882-1883-1884-1885-1886-1887-1888-1889-1890-1891-1892-1893-1894-1895-1896-1897-1898-1899-1900-1901-1902-1903-1904-1905-1906-1907-1908-1909-1910-1911-1912-1913-1914-1915-1916-1917-1918-1919-1920-1921-1922-1923-1924-1925-1926-1927-1928-1929-1930-1931-1932-1933-1934-1935-1936-1937-1938-1939-1940-1941-1942-1943-1944-1945-1946-1947-1948-1949-1950-1951-1952-1953-1954-1955-1956-1957-1958-1959-1960-1961-1962-1963-1964-1965-1966-1967-1968-1969-1970-1971-1972-1973-1974-1975-1976-1977-1978-1979-1980-1981-1982-1983-1984-1985-1986-1987-1988-1989-1990-1991-1992-1993-1994-1995-1996-1997-1998-1999-2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-243</i>		

UNION PACIFIC SYSTEM
SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.

MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Switch Stands	7	Black Varnish
“ Targets	12-B	White Enamel
“ Targets	205	Semaphore Vermilion
Stand Pipes, both Oil and Water lines:		
First Coat (See also Spec. CS-1019)	20	Red Lead
Second Coat (first field coat) (See also Spec. CS-1019)	20	“ “
Final Coat (See also Spec. CS-1019)	13	Carbon Black
Structural Iron and Steel:		
First Coat (See also Spec. CS-1019)	20	Red Lead
Second Coat (first field coat) (See also Spec. CS-1019)	20	“ “
Final Coat (See also Spec. CS-1019)	13	Carbon Black
Metallic Surfaces in contact with each other or wood surfaces in contact with metal	20	Red Lead
Telephone Booths:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Ties, on all steel bridges	11-A	Dark Brown
Toilet or Outhouses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Walls, interior, and Ceiling	203	Cream
Tool Houses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Trucks—Baggage and Warehouse:		
Body	15	Green Enamel
Wheels and Running Gears	213	Gray Floor Paint
Water Tanks, steel and wood, exterior	13	Carbon Black
Water Tanks, steel, interior	SPECIAL	Red Lead
Wood Sheds:	INSTRUCTIONS	
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown

NOTE:—Special instructions should be obtained for painting hotels, rest houses, important depots, freight stations, shop buildings, etc.

Revised Jan. 20, 1923.

Revised June 6, 1927.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.
MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Switch Stands	7	Black Varnish
“ Targets	12-B	White Enamel
“ Targets	205	Semaphore Vermilion
Stand Pipes, both Oil and Water lines:		
First Coat (See also Spec. CS-1019)	19 or 19-A	Red Lead
Second Coat (first field coat) (See also Spec. CS-1019)	19 or 19-A	“ “
Final Coat (See also Spec. CS-1019)	13	Carbon Black
Structural Iron and Steel:		
First Coat (See also Spec. CS-1019)	19 or 19-A	Red Lead
Second Coat (first field coat) (See also Spec. CS-1019)	19 or 19-A	“ “
Final Coat (See also Spec. CS-1019)	13	Carbon Black
Metallic Surfaces in contact with each other or wood surfaces in contact with metal	19 or 19-A	Red Lead
Telephone Booths:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
TOILETS ON ALL BRIDGES		
Toilet or Outhouses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Walls, interior, and Ceiling	203	Cream
Tool Houses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Trucks—Baggage and Warehouse:		
Body	15	Green Enamel
Wheels and Running Gears	213	Gray Floor Paint
Water Tanks, steel and wood	13	Carbon Black
Wood Sheds:	19 or 19-A	“ “
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown

NOTE:—Special instructions should be obtained for painting hotels, rest houses, important depots, freight stations, shop buildings, etc.

Revised Jan. 20, 1923.

Revised Dec. 15, 1923.

Revised Sept. 30, 1925.

SPECIFICATION CS-22
PAINT
SCHEDULE OF USES BY LOCATION.

MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Switch Stands	7	Black Varnish
“ Targets	12-B	White Enamel
“ Targets	205	Semaphore Vermilion
Structural Iron and Steel:		
First Coat (See also Spec. CS-1019)	19 or 19-A	Red Lead
Second Coat (first field coat) (See also Spec. CS-1019)	19 or 19-A	“ “
Final Coat (See also Spec. C. S.-1019)	13	Carbon Black
Metallic Surfaces in contact with each other or wood surfaces in contact with metal	19 or 19-A	Red Lead
Telephone Booths:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Toilet or Outhouses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Walls, interior, and Ceiling	203	Cream
Tool Houses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Trucks—Baggage and Warehouse:		
Body	15	Green Enamel
Wheels and Running Gears	213	Gray Floor Paint
Water Tanks, steel and wood	13	Carbon Black
Wood Sheds:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown

NOTE:—Special instructions should be obtained for painting hotels, rest houses, important depots, freight stations, shop buildings, etc.

Revised Jan. 20, 1923.

Revised Dec. 15, 1923.

SPECIFICATION CS-22

PAINT

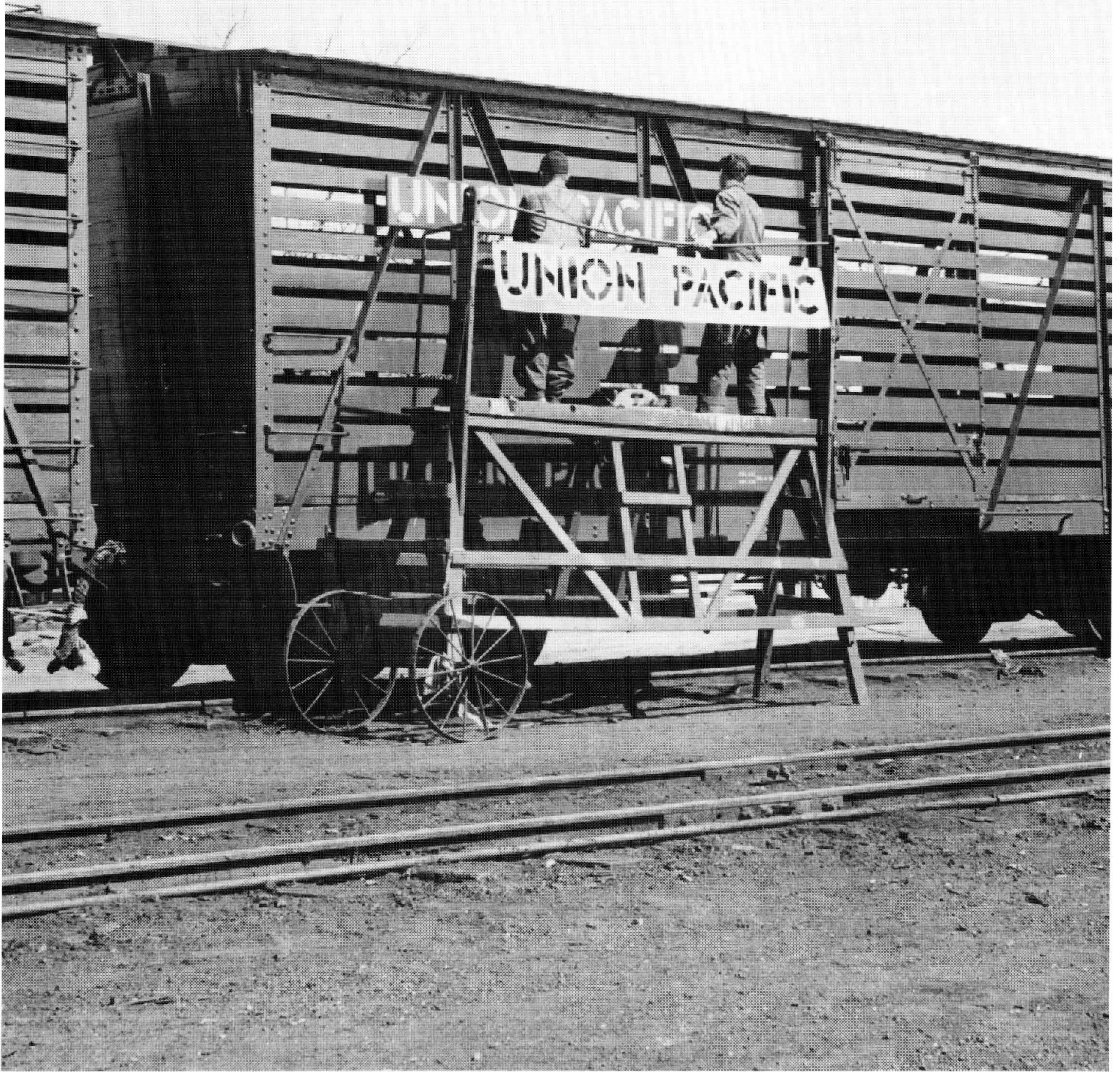
SCHEDULE OF USES BY LOCATION.

MAINTENANCE OF WAY—Continued.

	Paint No.	Color
Switch Stands	7	Black Varnish
“ Targets	12-B	White Enamel
“ Targets	205	Semaphore Vermilion
Structural Iron and Steel:		
First Coat (See also Spec. CS-1019)	19 or 19-A	Red Lead
Second Coat (first field coat) (See also Spec. CS-1019)	19 or 19-A	“ “
Final Coat (See also Spec. CS-1019)	13	Carbon Black
Metallic Surfaces in contact with each other or wood surfaces in contact with metal	19 or 19-A	Red Lead
Telephone Booths:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Toilet or Outhouses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Walls, interior, and Ceiling	203	Cream
Tool Houses:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown
Trucks—Baggage and Warehouse	15	Green Enamel
Water Tanks, steel and wood	13	Carbon Black
Wood Sheds:		
Body, exterior	201	Colonial Yellow
Trim, “	202	Light Brown

NOTE:—Special instructions should be obtained for painting hotels, rest houses, important depots, freight stations, shop buildings, etc.

Revised Jan. 20, 1923.



The following section describes the mixing of each of the paint colors used by the Union Pacific Railroad during the earlier years of this century. These instructions are as they were stated in the original manuscript and can be duplicated to create each of those colors by simply following the instructions as these painters probably did in Denver in May, 1951. Union Pacific Railroad photo.

SPECIFICATION CS-22

PAINT

GENERAL CONDITIONS.

MATERIAL:

Paints must contain raw materials in accordance with the following:

Raw Linseed Oil	Specification CS-28-B.
Boiled Linseed Oil	" CS-28-A.
Turpentine	" CS-30
Japan Drier	" CS-50 OR CS-50-A,
White Lead	" CS-22, No. 12-A.
Red Lead	" CS-22, No. 19-A.
Reducing Oil	" CS-68

Zinc Oxide shall be "American Process" and must contain at least 98% by Weight of Oxide of Zinc (ZnO), not more than 2% of sulphur in any form, nor more than .075% free sulphur dioxide (SO₂)

Inert material shall preferably be silica, but it may also consist of any other inert material having approximately the same specific gravity and no less opacity, such as full hydrated sulphate of lime, china clay, asbestine, or a mixture of any of these. No barytes, carbonates of alkali, lakes, organic matter, soaps, or other emulsifying material permitted.

COMPOSITION:

Paints shall contain nothing but the materials specified.

Paints that are called for in ready mixed form must be made with exactly the same pigments and in the same proportions as are used in making the paints in question in paste form.

TESTS FOR SHADE:

PASTE FORM: Mix thoroughly equal parts by weight of the standard sample and pure raw linseed oil; mix thoroughly equal parts by weight of the shipment under test and pure raw linseed oil. Place small hillocks of each on a piece of glass, cover with another glass and press them slowly together. The line where the two hillocks join will be clearly marked if they are not the same shade.

READY MIXED PAINTS will be compared for shade with standard sample ready mixed paint in the same manner as outlined above for paste form.

The standard shades are shown on the color chart, which forms a part of this Specification.

FINENESS:

PASTE FORM: Mix thoroughly equal parts by weight of the shipment under test and pure raw linseed oil. Place a portion of the mixture on one end of a strip of dry, clean glass, stand the strip in a vertical position and allow to remain undisturbed for half an hour, at a temperature of 70° Fahrenheit, so that the mixture will flow down the glass. If the pigment is ground fine enough, there will be no separation from the oil in less than one-half hour. When diluted in this manner and spread upon a piece of glass with a spatula the surface should appear even and free from specks or coarse particles.

READY MIXED PAINTS will be tested for fineness, as above, in the condition as received.

DRYING:

PASTE FORM: Unless otherwise specified, when thinned for application with linseed oil, turpentine and Japan Drier, must dry, when spread in a thin film on glass, within twenty-four (24) hours. This test shall be made at a temperature of 65 to 75° Fahrenheit. The Volatile shall in no case exceed ten (10) per cent. of the vehicle.

READY MIXED PAINTS must dry, when spread in a thin film on glass, in 24 hours. This test shall be made at a temperature of 65 to 75° Fahrenheit. The Volatile shall in no case exceed 10 per cent. of the vehicle.

Revised Jan. 20, 1923.

SPECIFICATION CS-22
PAINT
GENERAL CONDITIONS—Continued.

INSPECTION:

The Inspector representing the purchaser shall have free entry to all parts of the works of the manufacturer at all times when orders are being filled, and shall have all reasonable facilities afforded him by the manufacturer to satisfy him that the materials are furnished in accordance with the terms of these specifications.

SAMPLES:

Samples of paint covered by this specification are to be furnished by the manufacturer in pint compression top cans as required for analysis and test.

CONTAINERS:

Containers must be of such material and workmanship as to withstand conditions of shipment and storage. Containers of tin must be properly cased.

Manufacturers will be held responsible for loss or damage resulting from defective containers or packing.

Where paints are specified to be in paste form, the content of each container must be plainly stenciled with the net weight in pounds.

CONDITIONS:

Shipments will not be accepted if—

1. They contain any oil other than raw linseed where this oil alone is specified.
2. They do not meet the tests or vary appreciably from standard shade.
3. They are so stiff, when received in paste form, that they cannot be readily broken up and mixed with the necessary thinning liquids.
4. They do not work well under a brush when ready for application.
5. The pigments or vehicle, or any constituent thereof, vary more than three (3) per cent. from the amount specified.
6. Paste paints, ground in raw linseed oil, contain more than four (4) per cent. Volatile matter when dried on open steam bath.

GENERAL REMARKS:

Samples of the standard paints will be furnished upon application to the Purchasing Agent. Shipments, which do not conform to the above specification, will be rejected and returned to the manufacturer at his expense.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAIN T

No. 1, DARK OLIVE IN JAPAN.

PACKING:

Paste Form, in 10-lb. press cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are—

Pigment	63% by weight
Vehicle	37% " "

COMPOSITION:

PIGMENT shall consist only of Burnt Italian Sienna, Chrome Yellow, Bone Black and Venetian Red in such proportion as will produce the standard shade.

The Burnt Italian Sienna shall be of the best grade, containing at least 65% of ferric oxide (Fe_2O_3 .)

The Chrome Yellow shall be pure, containing at least 98% of normal chromate of lead.

The Bone Black shall be best quality, containing at least 10% carbon.

The Venetian Red shall consist of at least 33% ferric oxide (Fe_2O_3), the balance being fully hydrated calcium sulphate.

VEHICLE shall consist of the highest grade Coach Grinding Japan.

REQUIREMENTS:

The paste when thinned for application shall dry on glass for second coat within three hours, at a temperature of 70° Fahrenheit.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

P A I N T

No. 1-A, DARK OLIVE IN VARNISH (READY MIXED)

PACKING:

Ready Mixed Form, in 1-gallon pails and 5-gallon cans.

COMPOSITION:

PIGMENT shall consist of Burnt Italian Sienna, Chrome Yellow, Bone Black, and Venetian Red in such proportions as will produce the standard shade.

VEHICLE shall be a high grade, exterior varnish of such character as to meet the requirements outlined.

REQUIREMENTS:

The varnish color must work freely when applied with either hand brush or by spray method.

The varnish color must set to touch or out of the way of dust in four hours and must dry to a hard tough film in twelve hours at a temperature of 70° F.

One coat of varnish color must cover solid over any color and must show an egg-shell gloss or better.

The varnish color, when properly applied must flow out to a smooth, even coating, showing no brush marks or "orange peel", and having a uniform color free from excessive streaking; and when dry it must permit application of a clear finishing varnish without causing the clear varnish to crawl or show any other defect.

A brush coat of the varnish color after drying 24 hours, must withstand immersion in cold water for 15 hours without turning white or showing permanent discoloration.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Dated Oct. 20, 1931.

SPECIFICATION CS-22

PAINT

No. 2, OLIVE ENAMEL.

PACKING:

Ready Mixed Form, in 1-Gal. pails and 5-Gal. cans.

COMPOSITION:

PIGMENT shall consist only of Lithopone, Chrome Yellow, Bone Black and Iron Oxide in such proportions as will produce standard shade.

VEHICLE shall be a long oil hard gum varnish of such character as to meet the requirements outlined.

REQUIREMENTS:

The enamel must work freely when applied with either hand brush or by spray method.

The enamel must be set to the touch or out of the way of dust in 6 hours and must dry hard in 12 hours at a temperature of 70° Fahrenheit. One coat of enamel must cover solid over any color and must show a good varnish gloss.

A brush coat of enamel after having dried 24 hours must withstand immersion in water 15 hours without turning white or showing permanent discoloration.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 4, MAROON.

PACKING:

Ready Mixed, in 1-Gal. pails and 5-Gal. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	24% by weight
Hard Drying Varnish	76% “ “

COMPOSITION:

PIGMENT shall consist of best iron oxide, containing at least 65% ferric oxide (Fe_2O_3), mixed with a quantity of lamp black sufficient to produce the standard shade.

VEHICLE shall be a mixture of hard gum mixing varnish, linseed oil, drier, and the necessary thinner.

REQUIREMENTS:

In actual practice the paint must:

1. Cover solid with one coat.
2. Be dried hard enough to go into service on the morning following the day of application.
3. Show a fair gloss.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 5, BURNT SIENNA IN JAPAN.

PACKING:

Paste Form, in 1-lb. tins and 5-lb. press cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	60% to 65% by weight
Vehicle	35% to 40% " "

COMPOSITION:

PIGMENT shall consist only of pure Burnt Italian Sienna, containing at least 65% ferric oxide (Fe_2O_3).

VEHICLE shall be the highest grade Coach Grinding Japan.

REQUIREMENTS:

1. The paste when spread thinly on glass, must show characteristic transparency and warm undertone.
2. The paste must be equal to standard in strength and character of tint. Strength and tint to be determined by letting down a small amount of paste with a larger quantity of white, the relative amounts to be the same in each test.
3. The paste, when thinned with spirits of turpentine to painting consistency and spread on clean glass, shall dry hard enough in a temperature of 70° Fahrenheit, to permit varnishing in 3 hours or less.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 7, BLACK VARNISH PAINT.

PACKING:

Ready Mixed Form, in 1-gal. or 5-gal. cans.

COMPOSITION:

PIGMENT shall be pure Carbon (Gas Black).

VEHICLE shall be a high grade hard gum varnish, such as is necessary to enable the paint to meet the requirements outlined.

REQUIREMENTS:

1. Paint shall be a varnish paint of dense black color.
2. The paint must work well under the brush and cover solid over any color with one coat.
3. Must dry hard enough at normal temperatures to go into service on the morning of the following day after application.
4. Must have a full varnish gloss.
5. Must be weather resisting and not turn white or lose its color.
6. A brush coat after drying 24 hours must withstand immersing in water for 15 hours, without turning white or being permanently discolored.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 8, REFRIGERATOR YELLOW.

PACKING:

READY MIXED FORMIn barrels and 5-Gal. cans
PASTE FORMIn barrels and 100-lb. kegs

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form
Pigment	60% by weight	80% by weight
Vehicle	40% by weight	20% by weight

COMPOSITION:

PIGMENT desired is of the following composition:—

Chrome Yellow	40% by weight
White Lead	20% “ “
Zinc Oxide	20% “ “
Approved Inert Material	20% “ “

The Chrome Yellow shall contain not less than 85% chromate of lead, the balance being lead sulphate.

VEHICLE desired is of the following composition:—

Ready Mixed Form.

The vehicle shall consist of pure, raw linseed oil, pure turpentine and japan.

Paste Form.

The vehicle shall be pure, raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 8. REFRIGERATOR LIGHT ORANGE.

(Two Under Coats)

PACKING:

Paste FormIn barrels, drums and 100 lb. kegs.

PROPORTIONS:

The proportions of pigment and vehicle shall show on analysis:

Pigmentbetween 78 and 82 per cent by weight.
Vehiclebalance.

COMPOSITION:

The pigment required shall be--

Chrome Yellow—Light Orangenot less than 60% by wt.
Inert Materialnot to exceed 40% by wt.

The chrome yellow (light orange) shall consist only of chemically precipitated color or colors, and shall be made entirely of normal or basic lead chromate or a mixture of these to produce the required shade, without the addition of any other pigment materials of any kind.

The chrome yellow component of the finished pigment shall show on analysis not less than 42 per cent by weight of the total pigment to be normal chromate of lead (PbCrO_4). For the purposes of this specification, any sulphates present in the pigment shall be calculated to lead sulphate (PbSO_4) and considered as part of the inert, and not part of the chrome yellow component.

The inert material shall consist of either silica or asbestine (but not a mixture of both), and any lead sulphate determined as described in the preceding paragraph.

COLOR STRENGTH:

A sample of the finished pigment shall be mixed with 20 parts by weight of zinc oxide and the resulting shade compared with a standard sample similarly reduced. Compared in this manner, the shade of the material offered for test shall not be lighter than the shade of the reduced standard sample.

VEHICLE:

The vehicle shall be pure raw linseed oil.

CONDITIONS:

All material shall conform to the requirements under general conditions as far as they apply.

Revised Aug. 27, 1931.

SPECIFICATION CS-22

PAINT

No. 8-A—LIGHT ORANGE REFRIGERATOR ENAMEL. (Finish Coat)

PACKING:

Ready mixed, in 1 gallon cans, 5 gallon cans or buckets, and 50 gallon drums.

PROPORTIONS:

The proportions of pigment and vehicle shall show on analysis:

Pigment	between 34 and 37 per cent by weight.
Vehicle	balance.

PIGMENT:

The pigment shall be chrome yellow (light orange) and shall consist only of precipitated color or colors composed entirely of normal or basic lead chromate or a mixture of these to produce the required shade without the addition of any other pigment material of any kind.

The extracted pigment taken from a sample offered for inspection shall show on analysis a total of lead chromate (PbCrO_4) content of not less than 70 per cent by weight of the total pigment and not more than 5 per cent by weight of sulphates calculated as lead sulphate, (PbSO_4).

COLOR STRENGTH:

A sample of the finished enamel or of the extracted pigment shall be mixed with 20 parts by weight of zinc oxide, and the resulting shade compared with a standard sample similarly reduced.

Compared in this manner, the shade of the material offered for test shall not be lighter than the shade of the reduced standard sample.

VEHICLE:

The vehicle shall be an approved, high grade, exterior, water-resisting spar varnish, meeting the following general requirements as designated in the U. S. Navy Department Specification No. 52 V 12 b, of April 1, 1927, combined with the requisite amount of approved enamel oil for grinding; but not to exceed 21% by weight of total vehicle.

SPECIFICATION CS-22

PAINT

- (a) The varnish shall be clear and transparent.
- (b) Its color shall not be darker than a solution of 3 gms. of potassium dichromate in 100 cc of pure sulphuric acid, specific gravity 1.84.
- (c) It shall have a flash point (closed cup) of not below 30° C. (85° F.)
- (d) It shall have a viscosity of not less than 1.40 nor more than 2.25 poises.
- (e) Varnish shall have good brushing, flowing, covering and leveling properties. The dried film shall have the characteristic gloss of spar varnish.
- (f) The varnish shall pass the draft test.
- (g) The dried film shall withstand cold water for 18 hours, and boiling water for 15 minutes without whitening or dulling.
- (h) It shall pass a 50 per cent Kauri reduction test at 24° C. (75° F.)

FINISH ENAMEL:

The volatile content of the finished enamel shall not exceed 45 per cent by weight of total vehicle.

The enamel when applied to a strip of clean bright tin, or glass, by dipping, and placed in a vertical position shall dry to touch within 24 hours, leaving a clean bright film without any separation of vehicle and pigment and free from specks or coarse particles and free from any indication of crazing or frosting and with color conforming to standard shade.

It shall dry hard and tough within 36 hours.

CONDITIONS:

Shipments will not be accepted if they do not conform to these specifications, and requirements under general conditions as far as they apply. Shipments will be accepted only from manufacturers on the approved list, such approval to be given only after satisfactory laboratory and/or service tests.

Rev. Aug. 27, 1931.

SPECIFICATION CS-22

PAINT

No. 8-B, REFRIGERATOR YELLOW.

PACKING:

READY MIXED FORMIn Barrels and 5-Gal. cans
PASTE FORMIn barrels and 100-lb. kegs

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form.
Pigment	60% by weight	80% by weight
Vehicle	40% by weight	20% by weight

COMPOSITION:

PIGMENT desired is of the following composition:—

Chrome Yellow	40% by weight
White Lead	20% “ “
Zinc Oxide	20% “ “
Approved Inert Material	20% “ “

The Chrome Yellow shall contain not less than 85% chromate of lead, the balance being lead sulphate.

VEHICLE desired is of the following composition:—

Ready Mixed Form.

The vehicle shall consist of pure, raw linseed oil, pure turpentine and japan.

Paste Form.

The vehicle shall be pure, raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

Revised Nov. 1, 1930.

SPECIFICATION CS-22

PAINT

No. 9, DRAB ENAMEL (Egg Shell Finish)

PACKING:

Ready mixed, in 1-gal. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	61% by weight
Vehicle	39% “ “

COMPOSITION:

PIGMENT shall consist of:

Lithophone	70% by weight
Zinc Oxide	10% “ “
Tinting Material and Approved Inert Material {	20% “ “

The Lithophone shall contain:—

Barium Sulfate	70% by weight
Zinc Sulfide	30% “ “

TINTING MATERIAL shall consist of Yellow Ochre, Chrome Yellow, and Lamp Black of composition as follows:

Yellow Ochre	{ Ferric Oxide at least 19%, by weight Silica and Silicates, balance.
--------------------	--

Chrome Yellow Chemically pure.

Lamp Black Carbon at least 98%, by weight.

VEHICLE desired is a high grade, durable, “Flatting Oil” of the following composition:

Treated vegetable oil or oils Not less than 55%, by weight.

The remainder shall be drier and volatile thinners with flash point (closed tester) not less than 86° F.

The total amount of rosin and other gums shall not exceed 3% (by weight) of the vehicle.

Considerable latitude is allowed the manufacturer, within the limits prescribed, in order that he may produce a vehicle of such a nature that will impart to the finished paint, the same working, flowing, drying and gloss as the standard sample. It is specially desired that the material be sufficiently elastic to prevent checking after application.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

Revised Apr. 7, 1924.

Revised Sept. 30, 1925.

SPECIFICATION CS-22

PAINT

No. 10, PEARL GRAY.

PACKING:

Ready Mixed Form, in 1-gal. pails and 5-gal. kits.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	42%	by weight
Vehicle	58%	“ “

COMPOSITION:

PIGMENT desired is of the following composition:—

Zinc White	98%	by weight
Tinting Material	2%	“ “

Tinting material shall consist of chemically pure Chrome Yellow and Lamp Black, with carbon at least 98% by weight.

VEHICLE desired shall be an approved hard gum oil varnish, free from Rosin.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 11, METALLIC PAINT.

PACKING:

Paste Form, in barrels and 100-lb. kegs.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	70%	by weight
Vehicle	30%	“ “

COMPOSITION:

PIGMENT desired is of the following composition:—

Sesquioxide of Iron	43%	by weight
Approved Inert Material	54%	“ “
Carbonate of Lime	3%	“ “

VEHICLE shall consist of pure, raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22 PAINT

No. 11-A, DARK BROWN.

PACKING:

READY MIXED FORMIn barrels, half barrels, 5-gal. kits and 1-gal. cans.
PASTE FORMIn barrels, 100-lb. kegs and 12½-lb. pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form.	Paste Form.
Pigment	48% by weight	65% by weight
Vehicle	52% “ “	35% “ “

COMPOSITION:

Pigment desired is of the following composition:—

Sesquioxide of Iron	33% by weight
Red Lead	not less than 2% “ “
Lamp Black	10% “ “
Calcium Carbonate	not over 3% “ “
Approved Inert Material	52% “ “

The lamp black must be pure and absolutely neutral and contain at least 99% by weight, of pure carbon.

VEHICLE desired is of the following composition:—

Ready Mixed Form.

Pure Raw Linseed Oil	90% by weight
Turpentine	5% “ “
Driers	5% “ “

Paste Form.

The Vehicle shall be pure raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample, or requirements under general conditions so far as they apply.

Revised Jan. 20, 1923.

Revised Dec. 20, 1924.

SPECIFICATION CS-22

PAINT

No. 12, WHITE LEAD (Paste).

PACKING:

Paste Form, in 12½, 25, 50, 100 or 250 pound kegs.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	85%	by weight
Vehicle	15%	“ “

COMPOSITION:

PIGMENT desired is pure hydrated carbonate of lead, free from all adulterants.

VEHICLE shall consist of pure raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 12-A, WHITE LEAD (Dry).

PACKING:

In 12½, 25, 50, 100 or 200-lb. kegs.

COMPOSITION:

Must consist of pure hydrated carbonate of lead, free from all adulterants.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

Revised Sep. 16, 1929.

SPECIFICATION CS-22

PAINT

No. 12-B, SEMAPHORE WHITE ENAMEL.

PACKING:

Ready Mixed Form, in 1-qt., 1/2-gal. and 1-gal. pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	47.5%	by weight
Vehicle	52.5%	" "

COMPOSITION:

PIGMENT shall be a pure white seal zinc oxide.

VEHICLE shall be an approved varnish.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 12-C, WHITE.

PACKING:

Semi-Paste Form, in barrels, 100-lb. kegs and 12 1/2-lb. pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	70%	by weight
Vehicle	30%	" "

COMPOSITION:

PIGMENT desired is of the following composition:—

White Lead	65%	by weight
Zinc White	25%	" "
Inert Material	10%	" "

VEHICLE shall be pure raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions, as far as they apply.

Revised Jan. 20, 1923.

Revised Sept. 30, 1925.

REV. JUNE 19, 1930

SPECIFICATION CS-22

PAINT

No. 13, CARBON BLACK.

PACKING:

Paste Form, in barrels, 100-lb. kegs and 12½-lb. pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	44%	by weight
Vehicle	56%	“ “

COMPOSITION:

PIGMENT desired is of the following composition:—

Red Lead	10%	by weight
Lamp Black	50%	“ “
Inert Material	40%	“ “

The Lamp Black must be pure and absolutely neutral and contain at least 99% by weight of pure carbon.

VEHICLE shall be pure, raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 14, DROP BLACK.

PACKING:

PASTE FORM	5-lb. press cans
READY MIXED FORM	1-qt. and 1-gal. cans

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form
Pigment	15% by weight	50% by weight
Vehicle	85% “ “	50% “ “

COMPOSITION:

PIGMENT desired is pure dense Bone Black.

VEHICLE (Paste Form) must be a high grade Grinding Japan.

(Ready Mixed) must be a high grade Rubbing and Wearing Varnish.

REQUIREMENTS:

1. The paste must be soft and admit of thinning readily with spirits of turpentine.
2. Must pass the following test for covering and drying, etc.:
A quantity of the paste will be thinned with an equal bulk of spirits of turpentine. This mixture will be applied to a properly surfaced panel of light color with a clean, soft brush. When so used, the black must cover solid, and dry at a temperature of 70° Fahr. in one and one-half hours or less so that a coat of varnish may be applied over it. When varnished, the black must not crack or cause the varnish to crawl.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 15, GREEN ENAMEL.

PACKING:

Ready Mixed Form, in 1-gal. pails.

COMPOSITION:

PIGMENT desired shall be chemically pure Chrome Green.

VEHICLE desired shall be suitable hard gum varnish, such as is necessary to meet the requirements stipulated.

REQUIREMENTS:

1. The enamel must cover solid with one coat.
2. Must dry hard in 12 hours at 70° Fahr.
3. Must not streak or separate after being brushed out.
4. The enamel when dry must have a full varnish gloss.
5. A brush coat applied to smooth, clean steel and allowed to dry for 24 hours and then submerged in water for 3 hours must not turn white or show permanent discoloration.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 16, ALUMINUM LEAF.

PACKING:

In rolls of desired width or in books of size as ordered.

No. 17, LAMP BLACK.

PACKING:

Paste Form, in 12½ and 25-pound pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	25% by weight
Vehicle	75% “ “

COMPOSITION:

PIGMENT desired shall be a pure lamp black, absolutely neutral and containing at least 99% carbon.

VEHICLE desired shall be pure raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 18, GOLD LEAF.

PACKING:

In rolls of desired width or in books of size as ordered.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 19-A, RED LEAD (Dry).

PACKING:

In 25-pound kegs.

COMPOSITION:

Must contain not less than 94% true red lead (Pb_3O_4).

CONDITIONS:

When shipments are received containing less than the desired amount of pure red lead they will be rejected.

No. 20, RED LEAD (Ready Mixed).

PACKING:

Ready Mixed Form in 25-gal. drums, 5-gal kits and 1-gal. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:

Pigment	76%	by weight
Vehicle	24%	" "

COMPOSITION:

Pigment desired is of the following composition:

Red Lead	88%	by weight
China clay or Asbestine	12%	" "

The red lead shall conform to the requirements of specification C. S. 22, No. 19-A, for dry red lead. Vehicle desired is of the following composition:

Raw Linseed Oil	94%	by weight
Japan Drier, not to exceed	6%	" "

Fineness:

When passed through a No. 325 sieve the total residue, consisting of coarse particles and skins, which is retained, shall not exceed 1.5% of the pigment content of the paint.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample, or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.
Revised May 18, 1929.
Revised April 16, 1930.

SPECIFICATION CS-22

PAINT

No. 23, POSTAL CAR BROWN. (Flat Enamel).

PACKING:

Ready Mixed Form, in 1-gal. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment66%	by weight
Vehicle34%	“ “

COMPOSITION:

PIGMENT desired is of the following composition:—

Lithopone At least 62%.

Balance Inert and Tinting Material to produce standard shade desired.

The Lithopone shall contain:—

70% BaSO₄.

30% ZnS.

Tinting Material shall consist of best pure Chrome Yellow, Burnt Turkey Umber and French Yellow Ochre to produce standard shade.

VEHICLE desired is of the following composition:—

An Approved Flatting Oil 51% by weight

Turpentine and Japan 49% “ “

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 24, HARD WOOD FILLER.

PACKING:

Paste Form, in 12½ and 25-pound pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment, approximately60% to 65%	by weight
Vehicle, “35% to 40%	“ “

COMPOSITION:

An Approved Varnish 38.5% by weight

Linseed Oil 25 % “ “

Turpentine 27 % “ “

Japan 9.5% “ “

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 26, ALUMINUM PAINT.

PACKING:

Pigment and Vehicle to be furnished in separate containers, and purchased in quart and pint compression top cans:

COMPOSITION:

PIGMENT shall consist of finely ground, best grade pure powdered lac aluminum.

VEHICLE shall consist of best quality bronzing liquid, made from pure hard varnish gums and spirits of turpentine in accordance with Specification CS-30.

REQUIREMENTS:

In actual practice, material must—

1. Not settle or become hard in package;
2. Dry satisfactorily and with good lustre;
3. Not change color unduly when subjected to heat.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 27, COPPER BRONZE PAINT.

PACKING:

Pigment and Vehicle to be furnished in separate containers, and purchased in quart and pint compression top cans.

COMPOSITION:

PIGMENT shall consist of finely ground, best grade pure copper bronze.

VEHICLE shall consist of best quality bronzing liquid, made from pure hard varnish gums and spirits of turpentine in accordance with Specification CS-30.

REQUIREMENTS:

In actual practice, material must:

1. Not settle or become hard in package;
2. Dry satisfactorily and with good lustre;
3. Not change color unduly when subjected to heat.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 28, LIGHT CREAM. (Flat Enamel).

PACKING:

Ready Mixed Form, in 1-gal. pails and 5-gal. kits.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	66% by weight
Vehicle	34% “ “

COMPOSITION:

PIGMENT desired is of the following composition:—

Lithopone	At least 75%
Inert and Tinting Material to produce standard shade	Balance

The Lithopone shall contain 70% BaSO₄ and 30% ZnS.

Tinting Material shall consist of chemically pure Chrome Yellow, Burnt Turkey Umber, and French Yellow Ochre to produce standard shade.

VEHICLE desired is of the following composition:—

An Approved Flatting Oil	51% by weight
Turpentine and Japan	49% “ “

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 28-A, LIGHT CREAM (Gloss).

PACKING:

Ready Mixed Form, in 1-gal. pails and 5-gal. kits.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	42% by weight
Vehicle	58% “ “

COMPOSITION:

PIGMENT desired is of the following composition:—

Zinc White	98% by weight
Tinting Material	2% “ “

The Tinting Material shall consist of chemically pure Chrome Yellow, Burnt Turkey Umber, French Yellow Ochre to produce standard shade.

VEHICLE desired shall be an approved hard gum oil varnish free from rosin.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 29, POSTAL CAR WHITE

(Flat Enamel)

PACKING:

Ready Mixed Form, in 1-Gal. pails and 5-Gal. Kits.

PROPORTIONS:

The proportion of pigment and vehicle are:

Pigment	66% by weight
Vehicle	34% by weight

COMPOSITION:

PIGMENT desired is of the following composition:

Lithopone	at least 75%
Inert	Balance

The Lithopone shall contain 70% BaSO₄ and 30% ZnS.

VEHICLE desired is of the following composition:

An approved Flattening Oil	51% by weight
Turpentine and Japan	49% by weight

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 29-A, POSTAL CAR WHITE

(Gloss Enamel)

PACKING:

Ready Mixed Form, in 1-Gal. pails and 5-Gal. Kits.

PROPORTIONS:

The proportions of pigment and vehicle desired are:

Pigment	42% by weight
Vehicle	58% by weight

COMPOSITION:

PIGMENT desired is of the following composition:

Zinc White	100% by weight
------------------	----------------

VEHICLE desired shall be an approved hard gum oil varnish free from rosin.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Adopted October 26, 1926.

SPECIFICATION CS-22
PAINT
No. 30 DARK GREEN FLAT PAINT

PACKING:

Ready mixed form in 1-gallon pails and 5-gallon kits.

PROPORTIONS:

The proportions of pigment and vehicle are:

Pigment	43% by weight
Vehicle	57% by weight

COMPOSITION:

Pigment desired is the following composition:

Approved silicates	75%
C. P. Color	25%

The color shall consist essentially of C. P. chrome green with any other necessary pure colors to make the standard shade.

Vehicle desired is the following composition:

Approved flatting oil	51% by weight
Mineral spirits and japan	49% by weight

REQUIREMENTS:

The composition desired is such as will produce a flat wall paint of good quality which is washable, and has easy working and flowing properties.

The material shall present a uniform flat surface after drying which refracts rather than reflects light.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Adopted October 2, 1928.

SPECIFICATION CS-22
PAINT
No. 31 LIGHT GREEN FLAT PAINT

PACKING:

Ready mixed form in 1-gallon pails and 5-gallon kits.

PROPORTIONS:

The proportion of pigment and vehicle are:

Pigment	66% by weight
Vehicle	34% by weight

COMPOSITION:

Pigment desired is of the following composition:

Litopone	at least 75%
Inert and tinting material balance.	

The litopone shall contain 70% BaSO₄ and 30% ZnS.

The tinting material shall consist of the necessary proportion of chemically pure chrome green to produce the desired shade.

Vehicle desired is of the following composition:

An approved flatting oil	51% by weight
Mineral spirits and japan	49% by weight

REQUIREMENTS:

The composition desired is such as will produce a flat wall paint of good quality which is washable, and has easy working and flowing properties.

The material shall present a uniform flat surface after drying which refracts rather than reflects light.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Adopted October 2, 1928.

SPECIFICATION CS-22

PAINT

No. 201, COLONIAL YELLOW.

PACKING:

READY MIXED FORMIn barrels, half barrels, 5-gal. kits and 1-gal. cans.
PASTE FORMIn barrels, half barrels, 100-lb. kegs, 25-lb. cans, and
12½-lb. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form
Pigment	57% by weight	80% by weight
Vehicle	43% “ “	20% “ “

COMPOSITION:

PIGMENT desired is of the following composition:—

White Lead	44% by weight
Zinc White	37% “ “
Approved Inert and Tinting Material.....	19% “ “

The Tinting Material shall consist of necessary proportions of Chrome Yellow and Yellow Ochre, or such other approved combination as will produce shade and in accordance with other requirements.

VEHICLE desired is of the following composition:—

Ready Mixed Form.

Pure Raw Linseed Oil	90% by weight
Japan Drier	4% “ “
Turpentine	6% “ “

Paste Form.

The vehicle shall be pure raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions, as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 202, LIGHT BROWN.

PACKING:

READY MIXED FORMIn barrels, half barrels, 5-gal. kits, and 1-gal. cans.
PASTE FORMIn barrels, half barrels, 100-lb. kegs, 25-lb. cans and
12½-lb. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form
Pigment	45% by weight	80% by weight
Vehicle	55% “ “	20% “ “

COMPOSITION:

PIGMENT desired is of the following composition:—

White Lead	11% by weight
Zinc White	45% “ “
An Approved Inert and Tinting Material.....	44% “ “

The Inert and Tinting Material shall be composed only of Italian Raw Sienna and Iron Oxide Pigment of composition as follows:

Raw Sienna shall be best Italian Raw Sienna containing at least 45% Ferric Oxide.

Iron Oxide shall contain:—

Ferric Oxide	At least 55% by weight
Silica and Silicates	Balance

VEHICLE desired is of the following composition:—

Ready Mixed Form.

Pure Raw Linseed Oil	90% by weight
Japan Drier	4% “ “
Turpentine	6% “ “

Paste Form.

The vehicle shall be pure raw linseed oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 203, CREAM.

PACKING:

READY MIXED FORMIn barrels, half barrels, 5-gal. kits and 1-gal. cans.
PASTE FORMIn barrels, half barrels, 100-lb. kegs, 25-lb. cans, and
12½-lb. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form
Pigment	54% by weight	80% by weight
Vehicle	46% “ “	20% “ “

COMPOSITION:

PIGMENT desired is of the following composition:—

White Lead	45% by weight
Zinc White	37% “ “
An Approved Inert and Tinting Material	18% “ “

The tinting material shall consist of necessary proportions of Yellow Ochre, Chrome Yellow and Iron Oxide Pigment or such other approved combination as will produce shade and in accordance with other requirements.

VEHICLE desired is of the following composition:—

Ready Mixed Form.

Pure Raw Linseed Oil	90% by weight
Japan Drier	4% “ “
Turpentine	6% “ “

Paste Form.

The vehicle shall be pure Raw Linseed Oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 205, SEMAPHORE VERMILION.

PACKING:

Ready Mixed Form, in 1-quart, 1/2-gallon and 1-gallon pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	8.5 7.4 %	by weight
Vehicle	91.5 92.6 %	" "

COMPOSITION:

Pigment shall be of pure Toluidine Red and should not show more than 10% of ash.
Vehicle shall be an approved varnish.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 205-A, VERMILION.

PACKING:

Paste Form, in 12 1/2 or 25-pound cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	55%	by weight
Vehicle	45%	" "

COMPOSITION:

Pigment should be the following proportions:—

Pure Toluidine Red	33%
Blanc Fixe	67%

Vehicle shall be two parts raw linseed oil and one part Japan Drier.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

Revised Dec. 20, 1924.

SPECIFICATION CS-22

PAINT

No. 206, SEMAPHORE YELLOW.

PACKING:

Ready Mixed Form, in 1-quart, 1/2-gallon and 1-gallon pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	32.38% by weight
Vehicle	67.62% “ “

COMPOSITION:

Pigment shall be a pure Chrome Yellow.

Vehicle shall be an approved varnish.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.
Revised Oct. 8, 1923.
Revised Dec. 15, 1923.
REV. JUNE 19, 1930.

No. 210, SLATE COLOR PAINT.

PACKING:

READY MIXED FORMIn barrels, half-barrels, 5-gal. cans, and 1-gal. cans.
PASTE FORMIn barrels, half-barrels or 25-lb. cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form
Pigment	51% by weight	68% by weight
Vehicle	49% “ “	32% “ “

COMPOSITION:

PIGMENT desired is of the following composition:—

White Lead	20% by weight
Zinc Oxide	20% “ “
Approved Inert and Tinting Material.....	60% “ “

The Tinting Material shall consist of necessary proportions of Yellow Ochre, Lamp Black and Venetian Red, or such other approved combination as will produce shade and in accordance with other requirements.

VEHICLE desired is of the following composition:—

Ready Mixed Form.

Pure Raw Linseed Oil	90% by weight
Japan Drier	4% “ “
Turpentine	6% “ “

Paste Form.

The vehicle shall be pure Raw Linseed Oil.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 211, SLATE COLOR SHINGLE PAINT.

PACKING:

READY MIXED FORMIn barrels, half-barrels, 5-gal. cans and 1-gal. cans.
PASTE FORMIn 100, 50 or 25-pound kegs.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

	Ready Mixed Form	Paste Form
Pigment	23% by weight	70% by weight
Vehicle	77% “ “	30% “ “

COMPOSITION:

PIGMENT desired is of the following composition:—

Zinc Oxide	40% by weight
An Approved Tinting Material	60% “ “

The Tinting Material shall consist of necessary proportions of Lamp Black, Venetian Red and Yellow Ochre, or such approved combination as will produce shade and in accordance with other requirements.

VEHICLE desired is of the following composition:—

Ready Mixed Form.

Raw Linseed Oil	13 % by weight
Turpentine Japan	4.5% “ “
Mineral Oil	82.5% “ “

The Mineral Oil shall be pure white in color and have a specific gravity between .815 and .825 and shall not flash below 146 degrees Fahrenheit (open tester). When evaporated on a water bath for four hours shall not have a residue of more than 12%.

Paste Form.

The vehicle shall be pure Raw Linseed Oil.

PASTE FORM—REDUCER.

The Reducer in thinning this paste for application shall consist of:—

Mineral Oil	95% by weight
Drier	5% “ “

The paste shall be thinned in the proportion of 10-lbs. of paste to 3 gallons of reducer as above specified.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION CS-22

PAINT

No. 213, GRAY FLOOR PAINT.

PACKING:

Ready Mixed Form, 1-gallon pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	57% by weight
Vehicle	43% “ “

COMPOSITION:

PIGMENT shall consist of equal parts White Lead and White Zinc, with inert and tinting material to produce shade (combined inert and tinting material not to exceed 10% by weight of pigment).

VEHICLE shall be a combination of Linseed Oil, Turpentine, and Japan, as will produce drying properties and finish desired.

REQUIREMENTS:

In actual practice the paint must:—

1. Cover solid with one coat;
2. Dry under normal conditions for service within 14 hours.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 214, BLACK ASPHALT ROOF COATING.

PACKING:

Ready Mixed Form, in 1, 2, 5, and 10-gal. tin pails; half-barrels and barrels.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	Not less than 60% by weight
Vehicle	Not less than 40% “ “

COMPOSITION:

PIGMENT shall be made from natural solid asphalt and must be free from coal tar and coal tar products, having the following characteristics:—

Specific Gravity	Not more than .935 at 60° Fahr.
Penetration	25 to 35 at 77° Fahr.
Melting Point	K & S Method 120°—140° Fahr.
Soluble in Carbon Disulphide	98%.

VEHICLE shall consist of petroleum—naptha.

REQUIREMENTS:

Shall flash New York open cut test not less than 85° Fahrenheit.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

Revised Oct. 8, 1923.

SPECIFICATION CS-22

PAINT

No. 215, WHITE INTERIOR COLD WATER PAINT.

PACKING:

Dry Powder Form, in barrels, 100-lb. kegs, 50-lb. boxes, and 5-lb. packages.

COMPOSITION:

Paint shall consist of a uniform mixture of Whiting, China Clay, and an adhesive binder in suitable proportions to conform to the following:—

Physical Characteristics.

The Whiting and China Clay shall be of good grade, finely ground and free from lime or alkali, or other solvents.

The Binder shall be manufactured from suitable gums, cements, and adhesives, which shall be readily soluble in cold water without the use of solvents.

The materials shall be in such proportions as to produce a cold water paint which, when mixed up with **cold water** in proper proportions, will flow and spread easily under the brush, spray freely with a painting machine and when dry it must be a good white color and shall not chip, scale or rub off when applied to a clean, dry surface.

The paint in dry form shall not deteriorate nor lose any of its effectiveness with reasonable age.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

No. 216, SEMAPHORE BLACK.

PACKING:

Ready Mixed Form, in 1-quart, 1/2-gallon and 1-gallon pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	1% by weight
Vehicle	99% " "

COMPOSITION:

Pigment shall be pure Carbon Black.

Vehicle shall be an approved varnish.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

SPECIFICATION CS-22 PAINT

No. 217, SEMAPHORE GREEN.

PACKING:

Ready Mixed Form, in 1-quart, ½-gallon and 1-gallon pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	15%	by weight
Vehicle	85%	“ “

COMPOSITION:

The pigment shall consist of:—

Pure Chrome Green	60%	by weight
Titanox	40%	“ “

Vehicle shall be an approved Varnish.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

No. 218, SEMAPHORE BLUE.

PACKING:

Ready Mixed Form, in 1-quart, ½-gallon and 1-gallon pails.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	28%	by weight
Vehicle	72%	“ “

COMPOSITION:

The pigment desired is of the following composition:—

Pure Ultra Marine Blue	95%	by weight
Titanox	5%	“ “

Vehicle shall be an approved Varnish.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

Revised June 19, 1930

Revised March 16, 1931

SPECIFICATION CS-22 PAINT

No. 218-A, BLUE.

PACKING:

Paste Form, in 12½ or 25-pound cans.

PROPORTIONS:

The proportions of pigment and vehicle desired are:—

Pigment	70%	by weight
Vehicle	30%	" "

COMPOSITION:

Pigment desired is of the following composition:—

Ultramarine Blue	55%	by weight
Zinc Oxide	45%	" "

Approximately three per cent. or less of the Ultramarine Blue may be replaced by Chinese Blue, if necessary to give proper shade.

Vehicle shall be two parts of raw linseed oil and one part Japan Drier.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

Revised Dec. 20, 1924.

No. 219, GOLD BRONZE.

PACKING:

Pigment and Vehicle to be furnished in separate containers, and pigment or powder purchased in pound, and vehicle in quart or pint compression top cans.

COMPOSITION:

Pigment shall consist of finely ground, best grade powdered Gold Bronze (equal to standard sample, known as "Extra Fine Brilliant Pale Gold").

Vehicle shall consist of best quality bronzing liquid, made from pure hard varnish gums and spirits of turpentine; shall contain no rosin, benzine or other substitutes or adulterants; must not flash below 105 degrees Fahrenheit (open tester) and shall have a specific gravity of not less than .820.

REQUIREMENTS:

In actual practice, material must:—

1. Dry satisfactorily and with good lustre.
2. Not change color unduly when subjected to heat.

CONDITIONS:

Shipments will not be accepted if they do not conform to standard sample or requirements under general conditions as far as they apply.

Revised Jan. 20, 1923.

SPECIFICATION C. S. 1019**STANDARD METHOD OF PAINTING STRUCTURAL STEELWORK****I. SHOP COAT
(Red)****Using Red Lead in Dry Form—(Not less than 94% Pb_3O_4)**

Red Lead.....	20 lbs.
Raw Linseed Oil (Specification CS-28).....	1 Gal.
*Japan Drier (Specification CS-50).....	1/2 Pint

The above makes 1.33 measured gallons of paint.

Using Red Lead Paste—(Not less than 94% Pb_3O_4)

Red Lead Paste.....	27 lbs.
Raw Linseed Oil (Specification CS-28).....	1 Gal.
*Japan Drier (Specification CS-50).....	1/2 Pint

The above makes 1.65 measured gallons of paint.

**II. FIRST FIELD COAT
(Brown)****Using Red Lead in Dry Form—(Not less than 94% Pb_3O_4)**

Red Lead.....	20 lbs.
Raw Linseed Oil (Specification CS-28).....	1 Gal.
*Japan Drier (Specification CS-50).....	1/2 Pint
Lamp Black Paste (Specification CS-22).....	13 Oz.

The above makes 1.41 measured gallons of paint.

Using Red Lead Paste—(Not less than 94% Pb_3O_4)

Red Lead Paste.....	27 lbs.
Raw Linseed Oil (Specification CS-28).....	1 Gal.
*Japan Drier (Specification CS-50).....	1/2 Pint
Lamp Black Paste (Specification CS-22).....	13 Oz.

The above makes 1.73 measured gallons of paint.

*NOTE: Proportion of drier may be modified to suit varying conditions in the field.

**III. SECOND FIELD COAT
(Black)**

Apply one good coat of Carbon Black, No. 13 of Specification CS-22, using the following proportions:

No. 13 Carbon Black Paste.....	6 3/4 lbs.
Raw Linseed Oil (Specification C-S 28).....	1 Gal.
Turpentine and Japan Drier, total of both not to exceed.....	1 Pint

The above makes approximately 2 measured gallons of paint.

NOTE: When using Red Lead dry, only sufficient quantity should be mixed for the day's work to prevent its setting before in place.

Red Lead paste may be mixed in any quantity desired, as it remains workable indefinitely.

Adopted January 28th, 1916.

Revised March 27, 1925.

UNION PACIFIC RAILROAD

CURRENT PAINT COLORS

ALUMINUM U.P. Color No. 26
DuPont Color No. 354-784

ALUMINUM U.P. Color No. 26
DuPont Color No. 354-784
Glidden Color No. Y-5227
Sherwin-Williams Color No. C-90SC5

LOCOMOTIVE BLACK U.P. Color No. 7
DuPont Color No. 88-762
Pittsburgh Color No. 51823-A
Devoe Color No. 546-36

HARBOR MIST GRAY U.P. Color No. 182
DuPont Color No. 83-27200
Pittsburgh Color No. 56419
Sherwin-Williams Color No. CA-26353

LIGHT GRAY U.P. Color No. 183
DuPont Color No. 88-19687

DARK GRAY U.P. Color No. 184
DuPont Color No. 88-19688

PULLMAN GREEN U.P. Color No. 14
DuPont Color No. 68-8647

REEFER ORANGE U.P. Color No. 8A
DuPont Color No. 672-9009
Glidden Color No. SF-8238
Pittsburgh Color No. 39190

RED STRIPPING U.P. Color No. 29
DuPont Color No. 83-6491

FREIGHT CAR RED U.P. Color No. 33
DuPont Color No. 672-9009
Pittsburgh Color No. 79418
Glidden Color No. 94-R-992

ARMOUR YELLOW U.P. Color No. 181
DuPont Color No. 81-29030
Pittsburgh Color No. 56521
Sherwin-Williams Color No. G-41(Y)-C10

CURRENT SHIELD COLORS

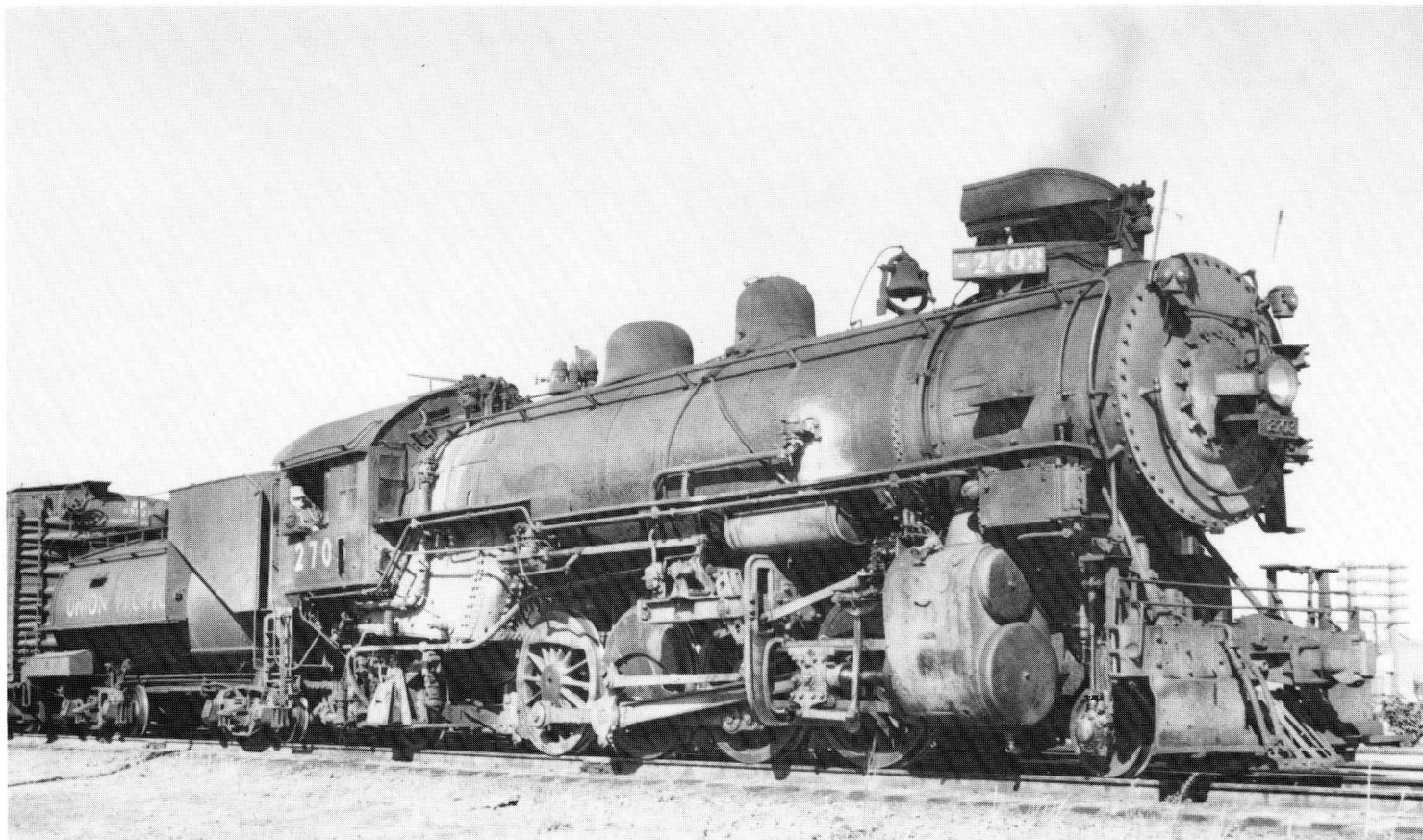
BLUE DuPont Color No. 93-63203
Sherwin Williams Color No. C20-L11(B)

RED DuPont Color No. 93-29198
Sherwin Williams Color No. C20-R7(A)

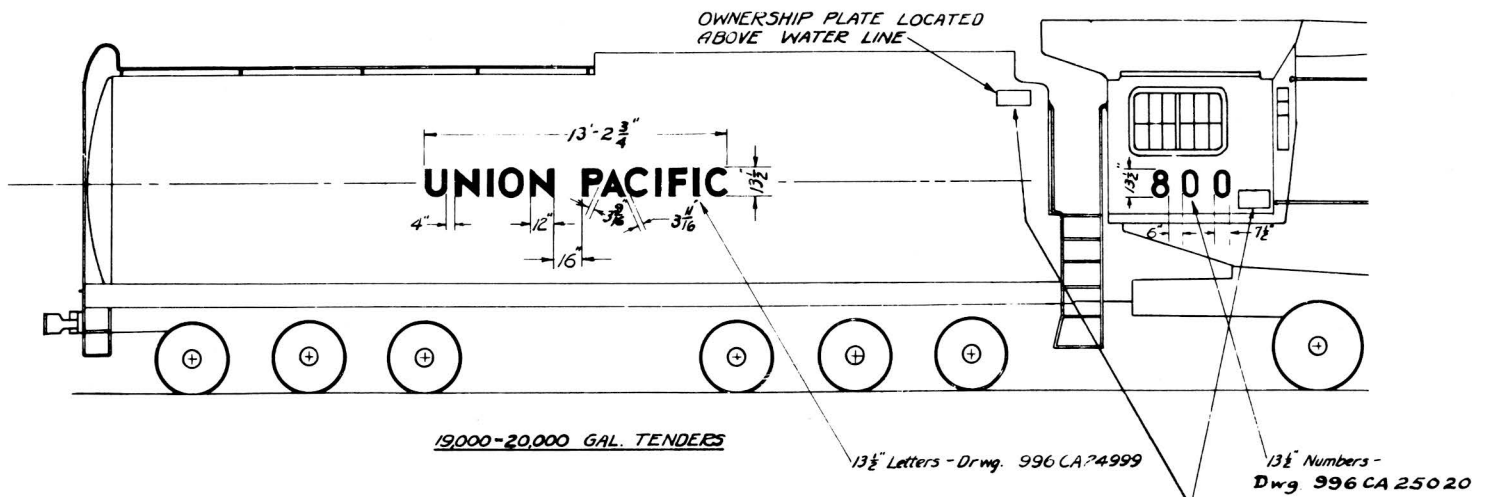
WHITE DuPont Color No. 93-29198
Sherwin-Williams Color No. C20-W1(A)

PLEASE NOTE-

The list of Union Pacific Railroad paint colors shown on the opposite page was made by the Union Pacific Railroad in 1973. They were the colors that each of the paint manufacturers had specified as the closest match to their specific color shown. We suggest that if you want to try to mix these colors that you obtain a color chip of that color from a paint supplier in your area and then procede to match that chip using your paints.

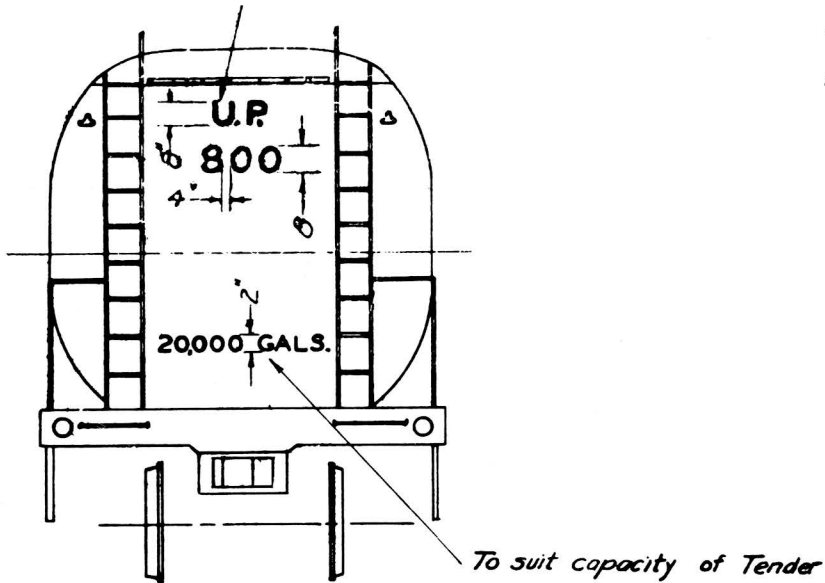


Shown here in the above photos by W.C. Whittaker are 2 examples of the following Painting and Lettering diagrams depicting the last basic scheme used on the Union Pacific Railroad. Above photo - Vancouver, Washington, 9-21-47. Lower photo - Yakima, Washington, 9-45.

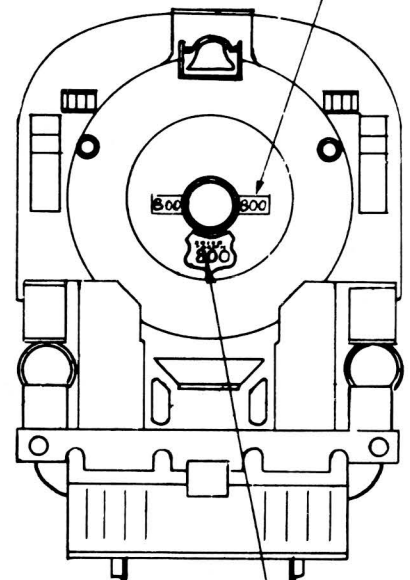


OWNERSHIP PLATES TO BE APPLIED AS PER SPECIAL INSTRUCTIONS ON EACH SIDE OF LOCO. AND TENDER

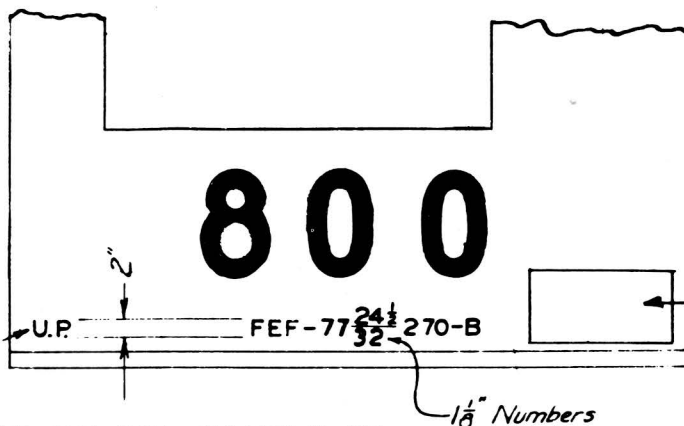
THE INITIALS U.P., O.S.L., O.W.R.&N., OR L.A.&S.L. TO BE STENCILED IN THIS LOCATION TO INDICATE CORPORATE OWNERSHIP



STENCIL PLATES WITH 3" NUMBERS
DWG. 992 CA 26792

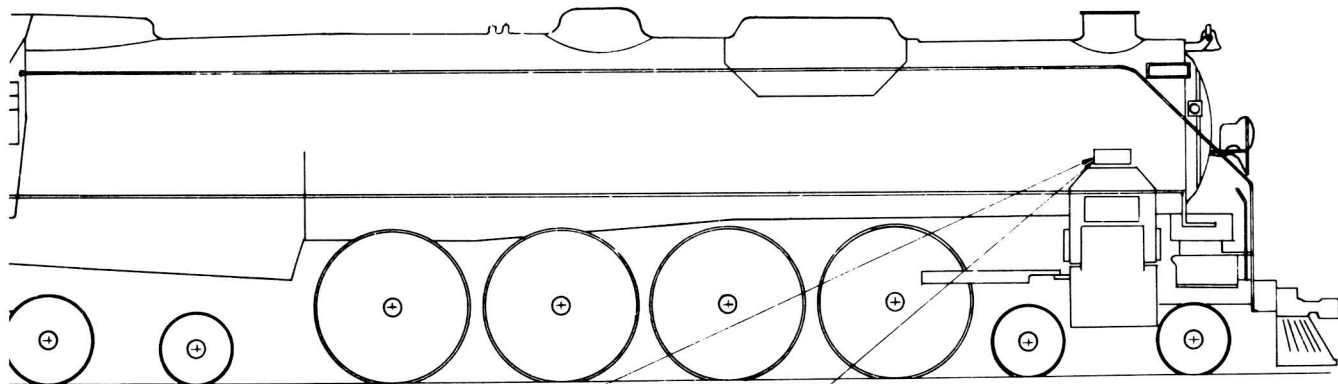


4" Numbers - All classes
Aluminum figures
Engine No. Plate.



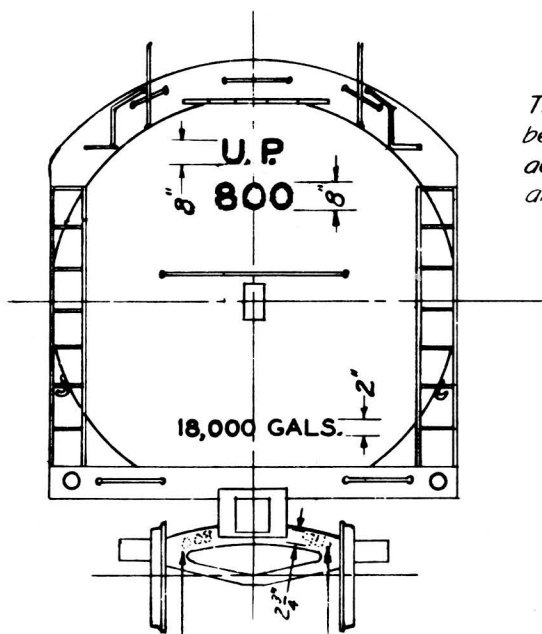
RELOCATE OWNERSHIP PLATES IN LOWER RIGHT HAND CORNER BOTH SIDES OF CAB, ALL CLASSES, EXCEPT AS NOTED.

THE INITIALS U.P., O.S.L., O.W.R.&N., OR L.A.&S.L. TO BE STENCILED IN THIS LOCATION ON BOTH SIDES OF CAB TO INDICATE CORPORATE OWNERSHIP

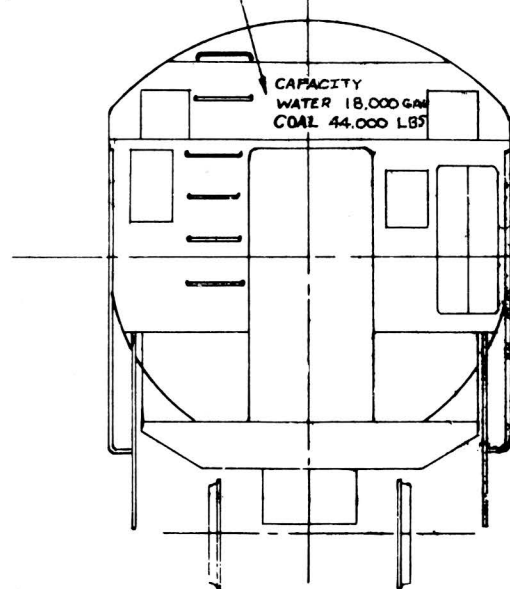


OWNERSHIP PLATES TO BE APPLIED AS PER SPECIAL INSTRUCTIONS ON EACH SIDE OF LOCO. AND TENDER

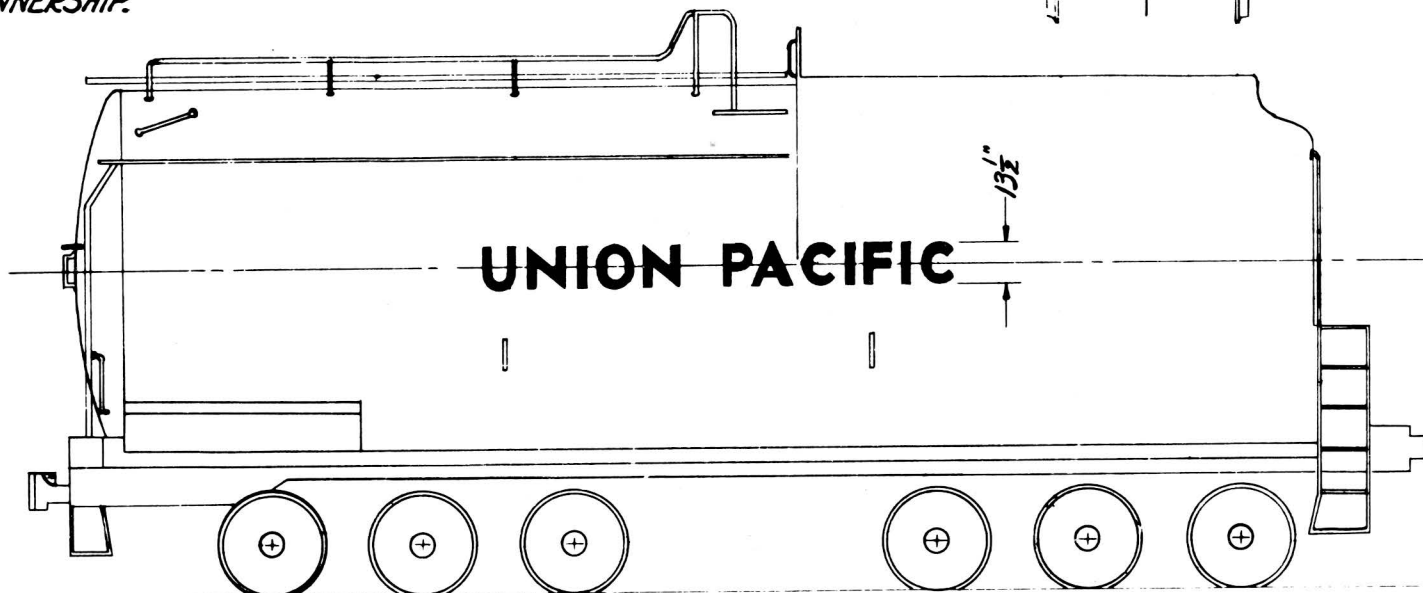
LOCATION OF OWNERSHIP PLATE ON SMOKE BOX
CLASS C3A-2 & FEF-1-2



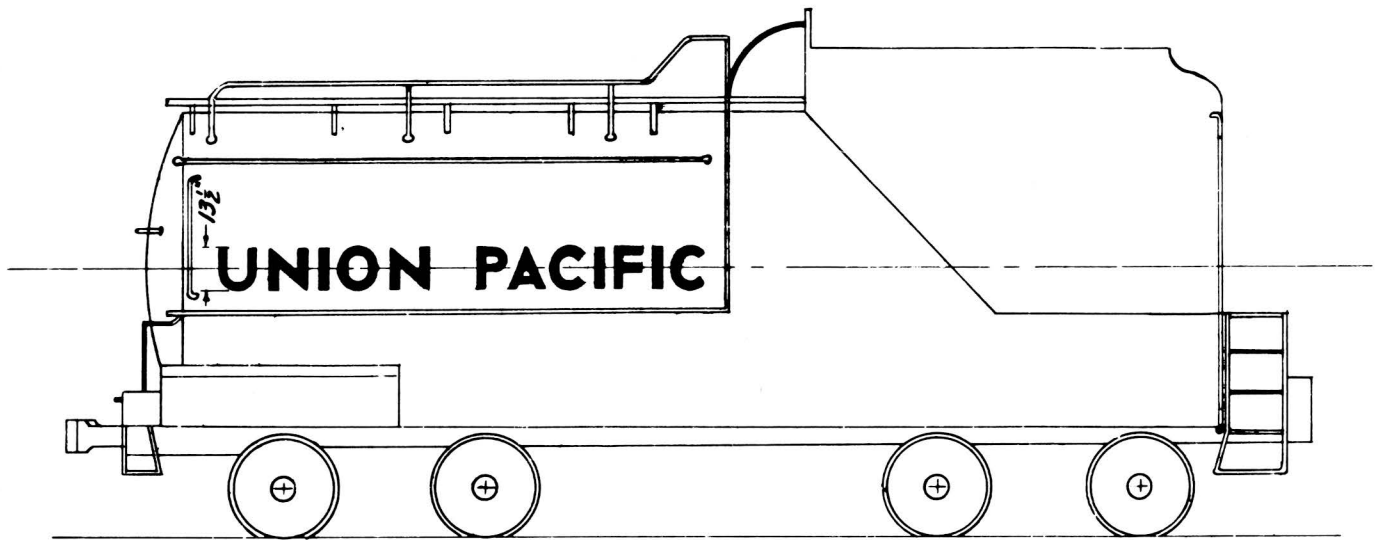
The Coal or Oil and Water Capacity must be stenciled in 2" letters and figures in accordance with capacity shown in locomotive and tender specifications.



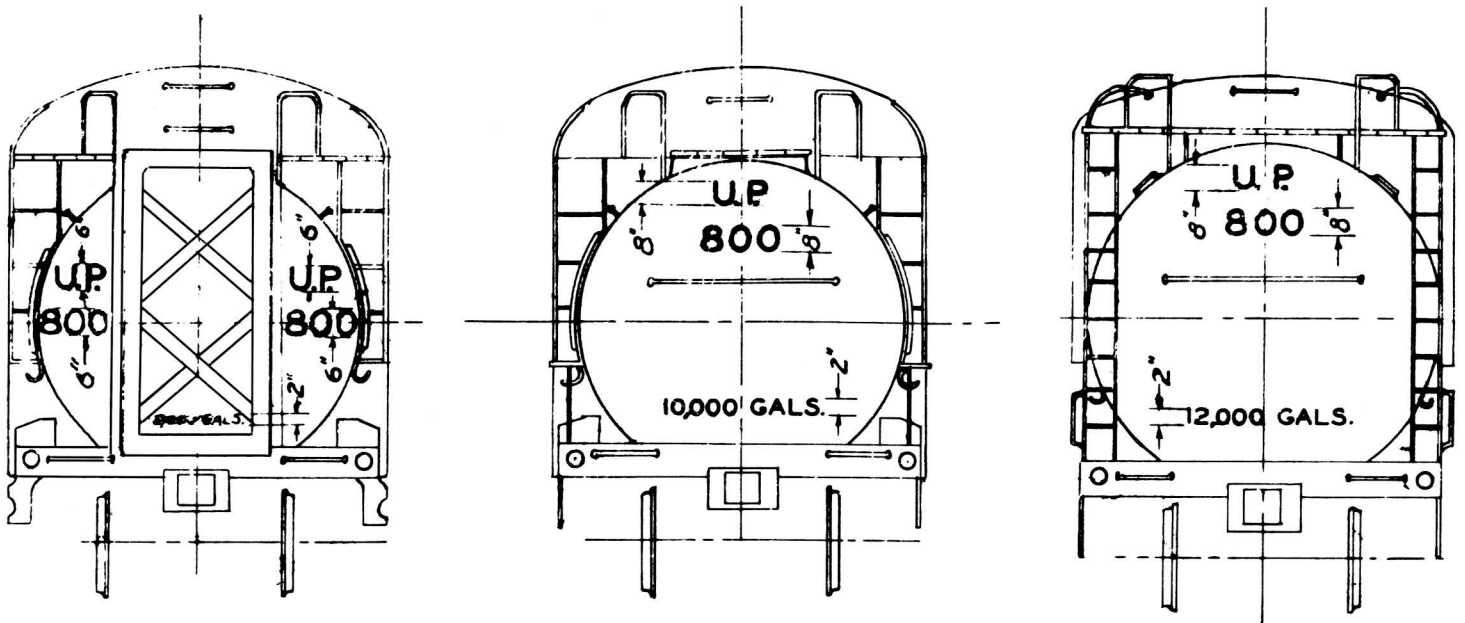
THE INITIALS U.P., O.S.L., O.W.R.&N., OR L.A.&S.L. AND NUMBER OF LOCOMOTIVE MUST BE STENCILED ON EACH TRUCK BOLSTER ON THE SIDE FACING CENTER TO INDICATE CORPORATE OWNERSHIP.



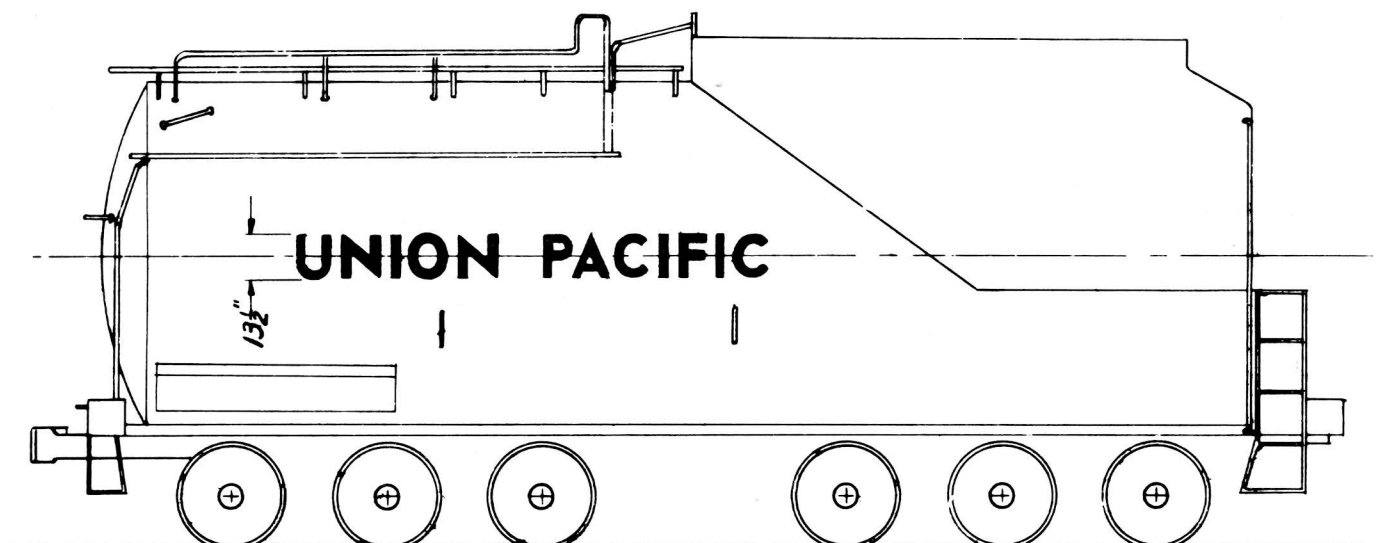
15,000 - 18,000 GAL. TENDERS



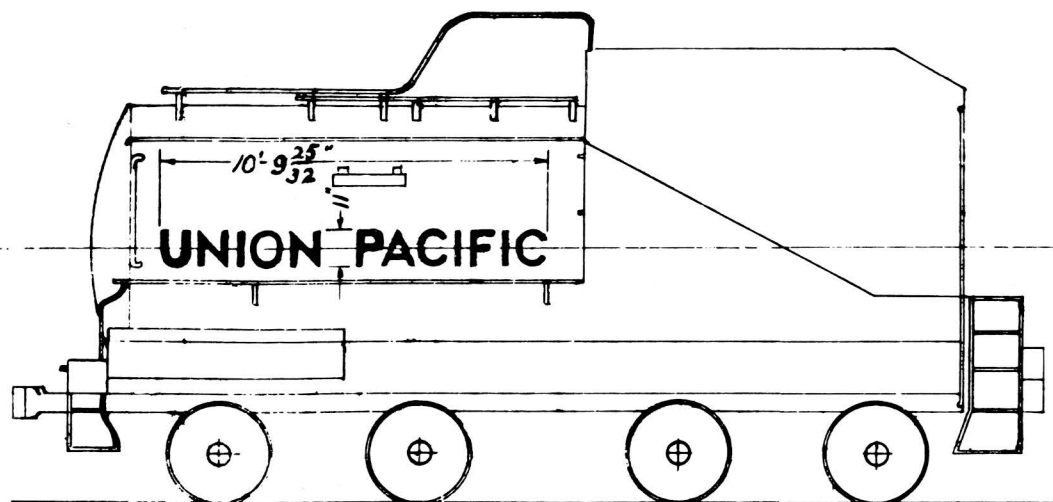
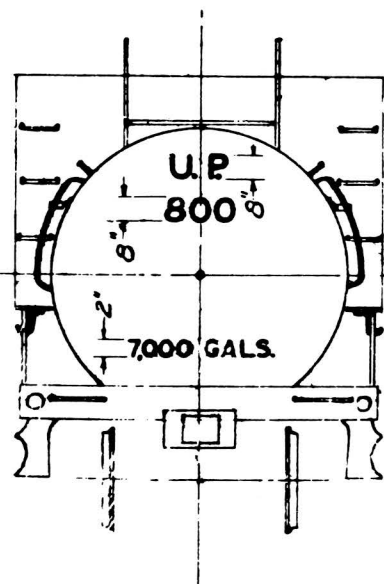
9,000-10,000 GAL. TENDERS



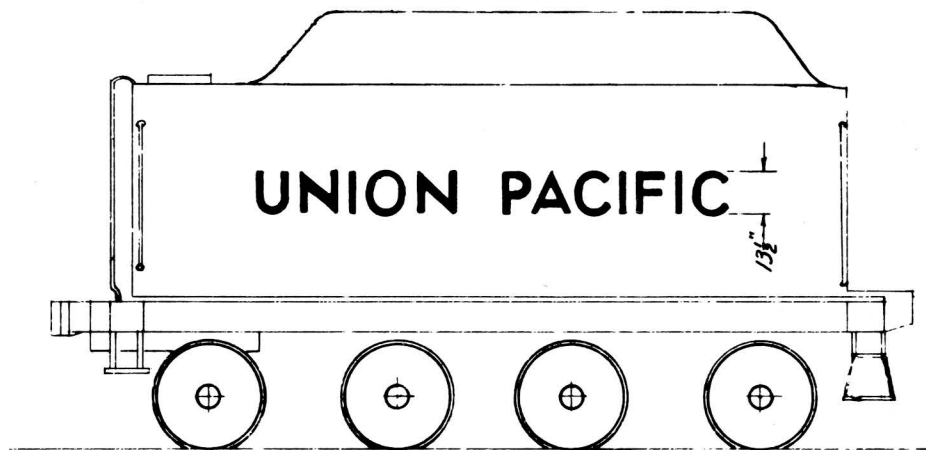
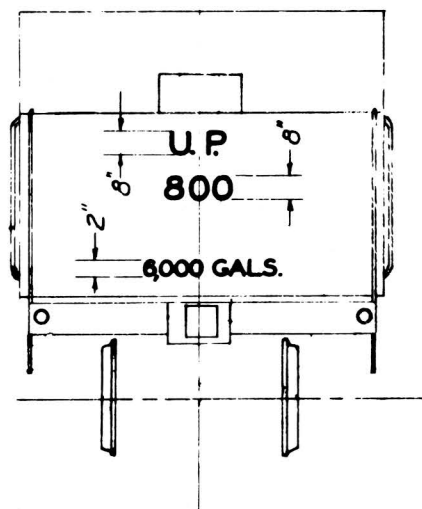
VESTIBULE TYPE



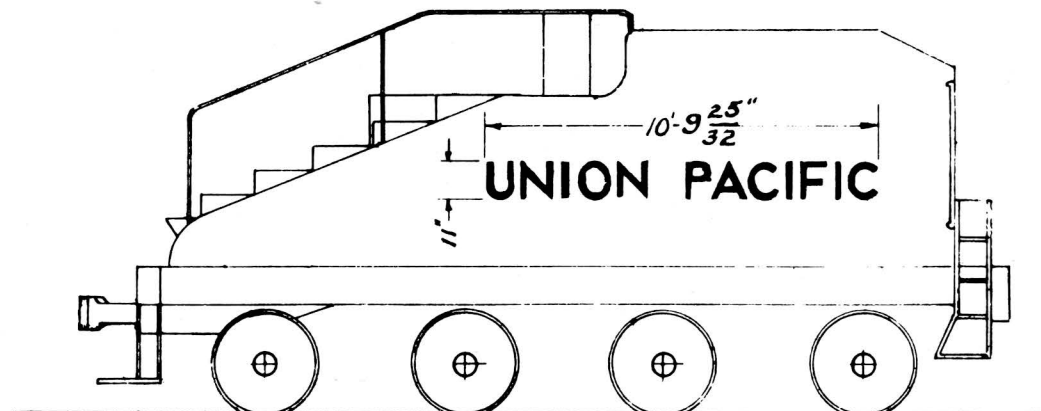
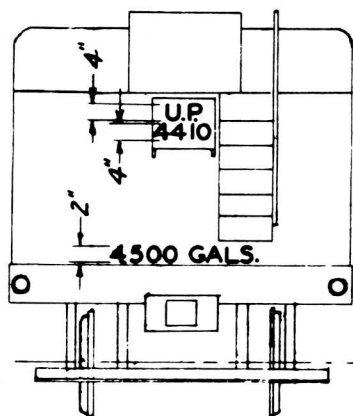
12,000 GAL. TENDERS



7000 GAL. TENDERS



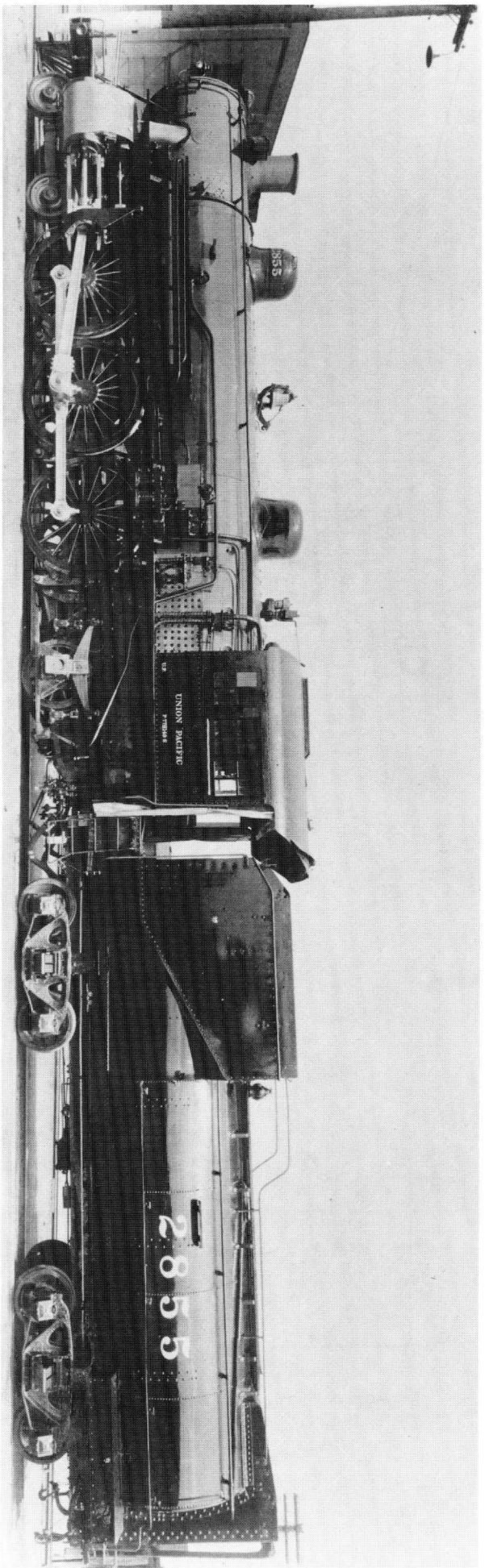
RECTANGULAR TENDERS



4,000 - 4,500 GAL. SWITCH TENDERS.

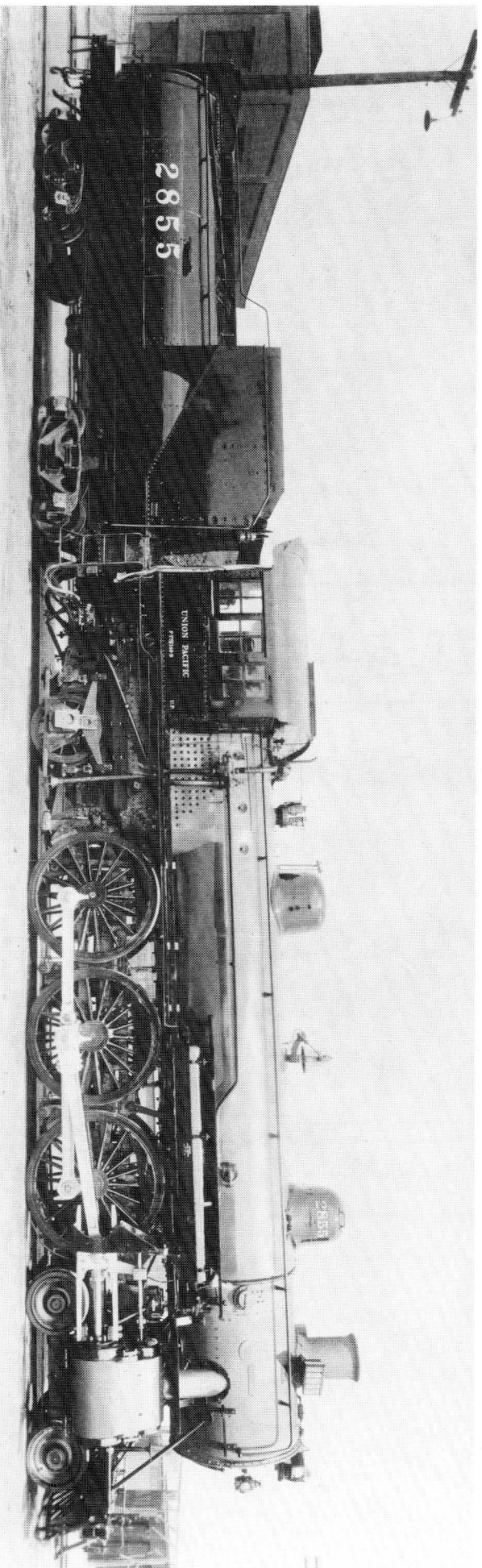


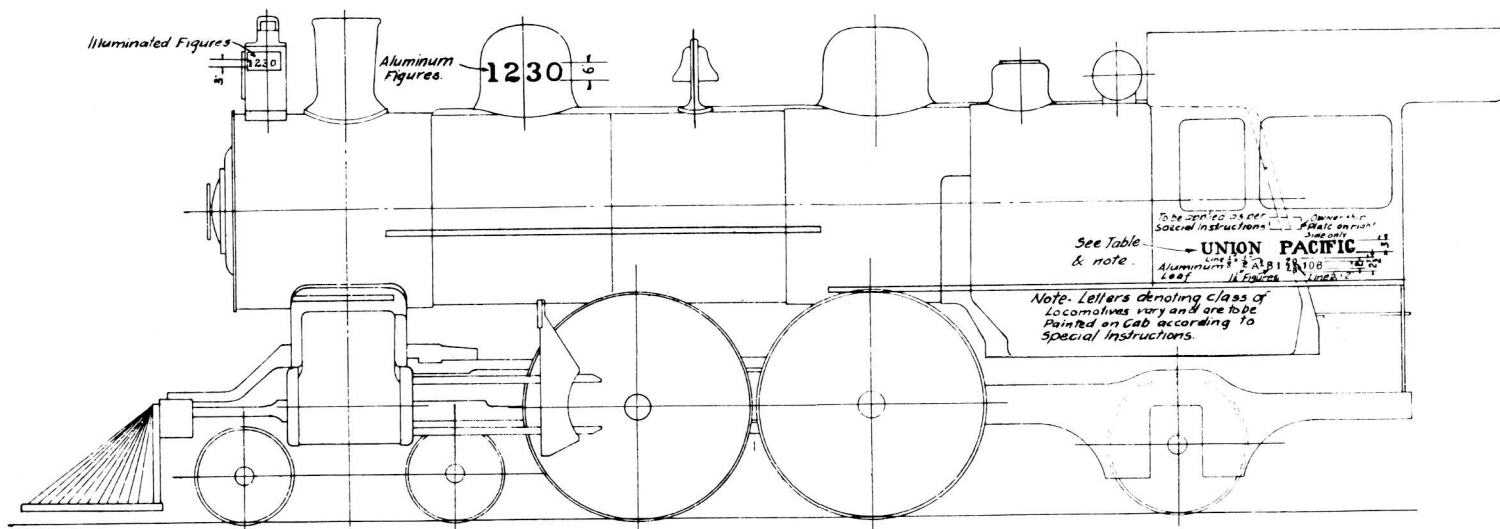
The following diagram pertains to the above examples of the Two-Tone Gray scheme used for passenger locomotives starting in late 1946. Both photos by W.C. Whittaker around Spokane, Washington in May, 1951.



The right and left views of U.P. 2855 show graphically the earlier painting scheme used by the Union Pacific Railroad for the first 30 years of this

century as detailed by the following diagrams. Both photos from Union Pacific Railroad.

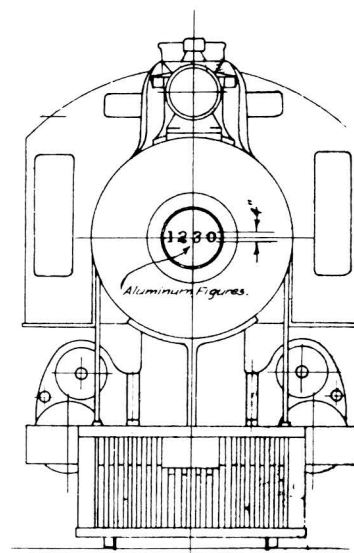
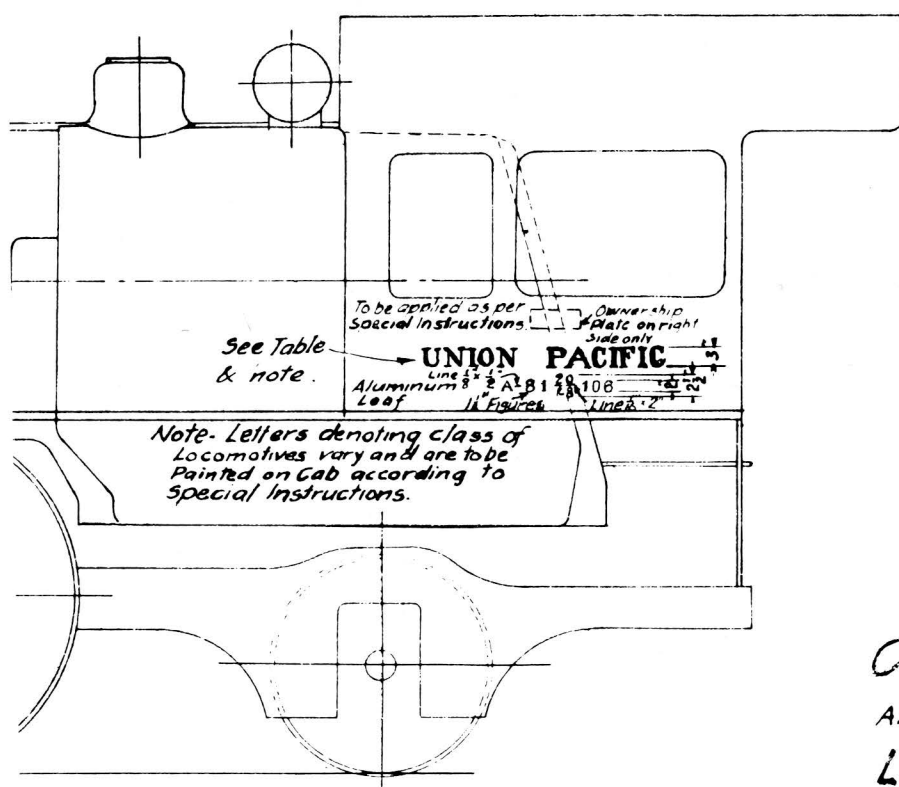




Lettering for Locomotives owned by the various Roads is as follows.

Road owning Locomotives.	Name on sides of cab.	Initials on each Side of Tank	Road owning Locomotives.	Name on sides of cab.
Union Pacific R.R.	Union Pacific	U. P.		
Oregon Short Line	Oregon Short Line	O. S. L.		
Oregon, Washington Railroad & Navigation Co.	Ore-Wash. R.R. & Nav.	O.W. R.R. & N.		
St. Joseph & Grand Island	St. Joseph & Grand Island	St. J. & G. I.		
San Pedro, Los Angeles & Salt Lake	S. P. L. A. & S. L. <small>See note</small>	S. P. L. A. & S. L.		

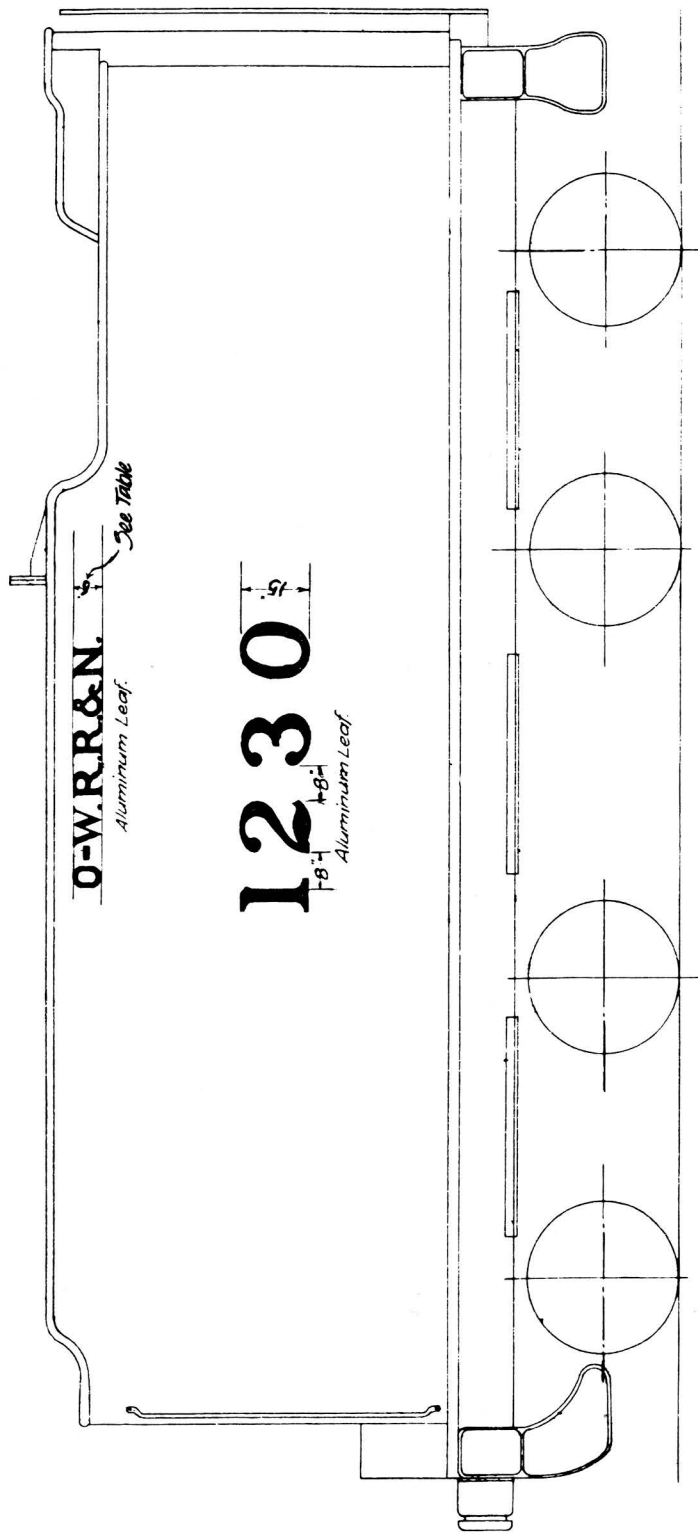
Note:- On locomotives where the name of the road is too long to permit its being shown in full, the initials of such road are to be indicated, in 6" Roman letters, on each side of the cab.



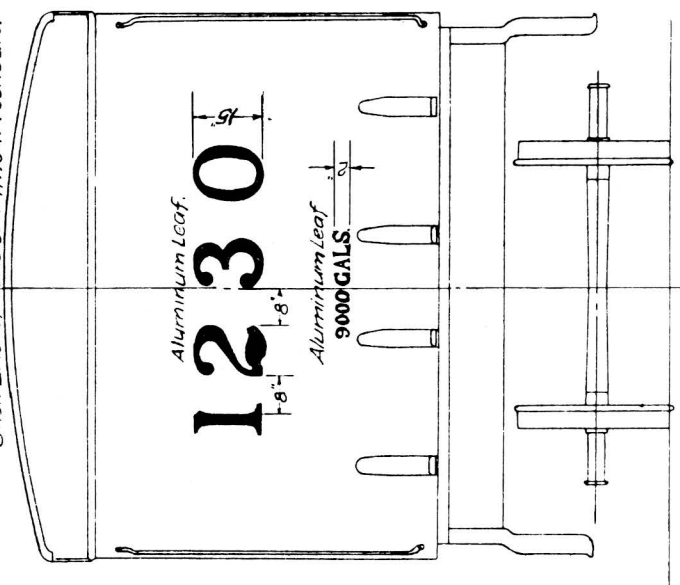
Common Standard.

ADOPTED: AUGUST, 26 1904

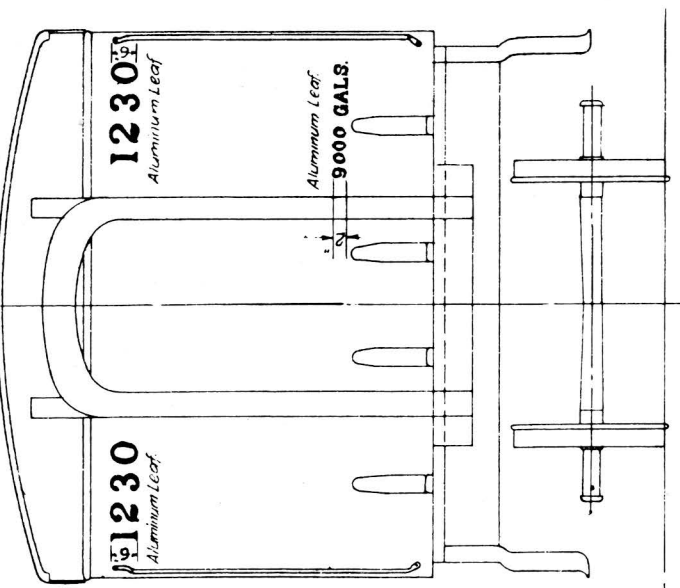
Lettering and Numbering
May 20, 1904.

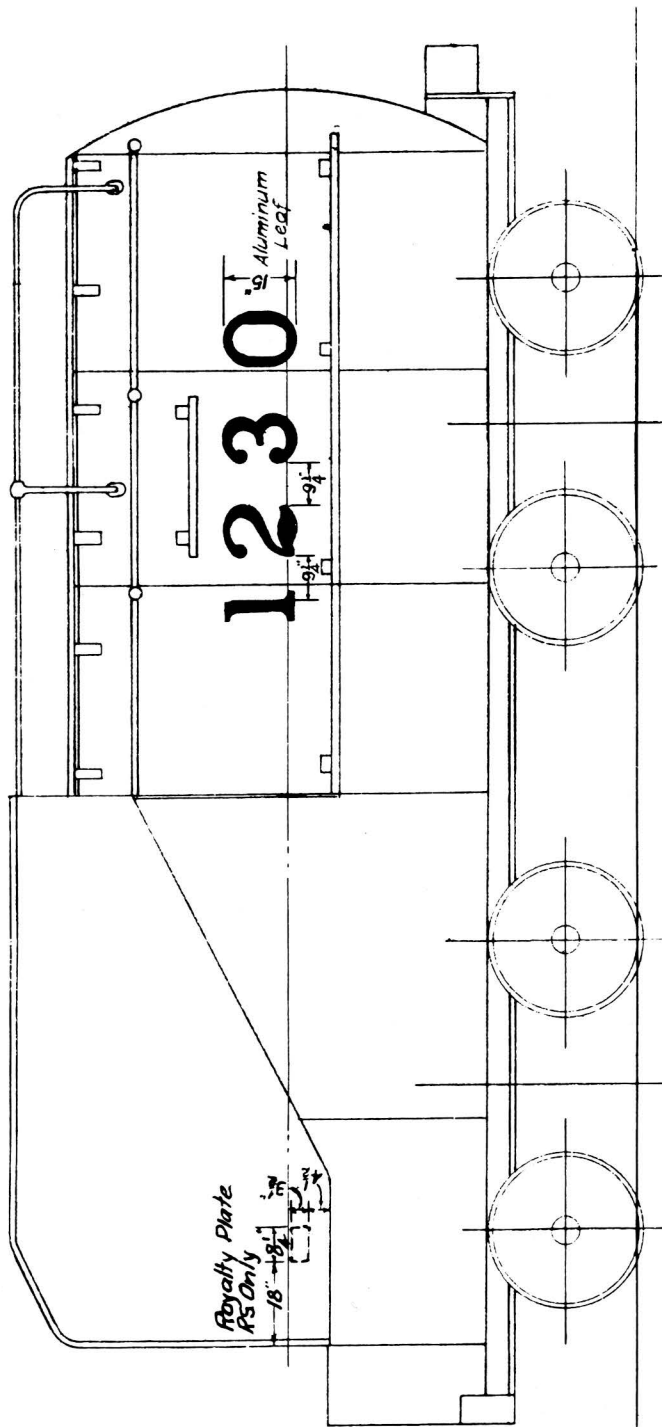


Back End of Tender without Vestibule.



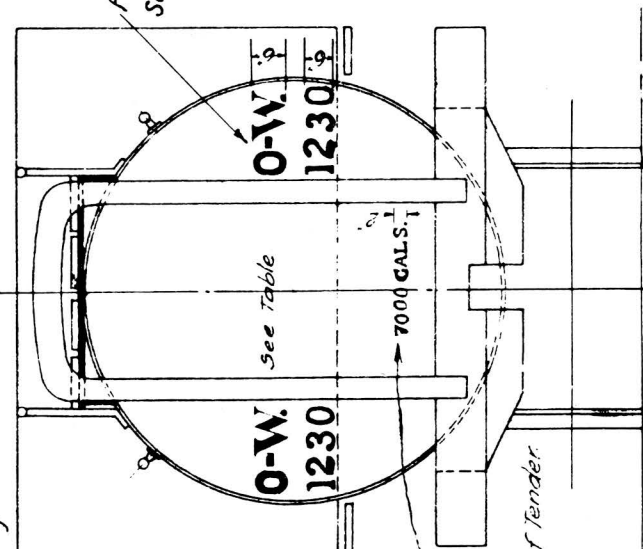
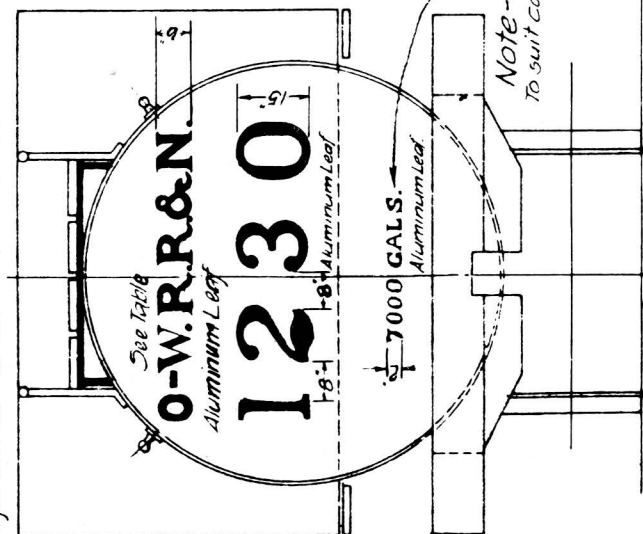
Back End of Tender with Vestibule.





Cylindrical Tender without Vestibule.

Cylindrical Tender with Vestibule.

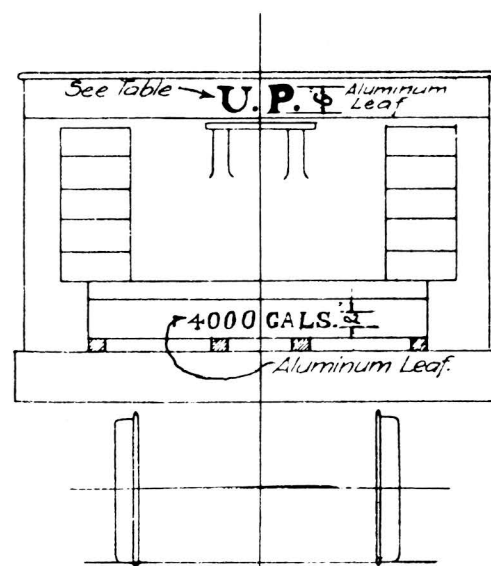
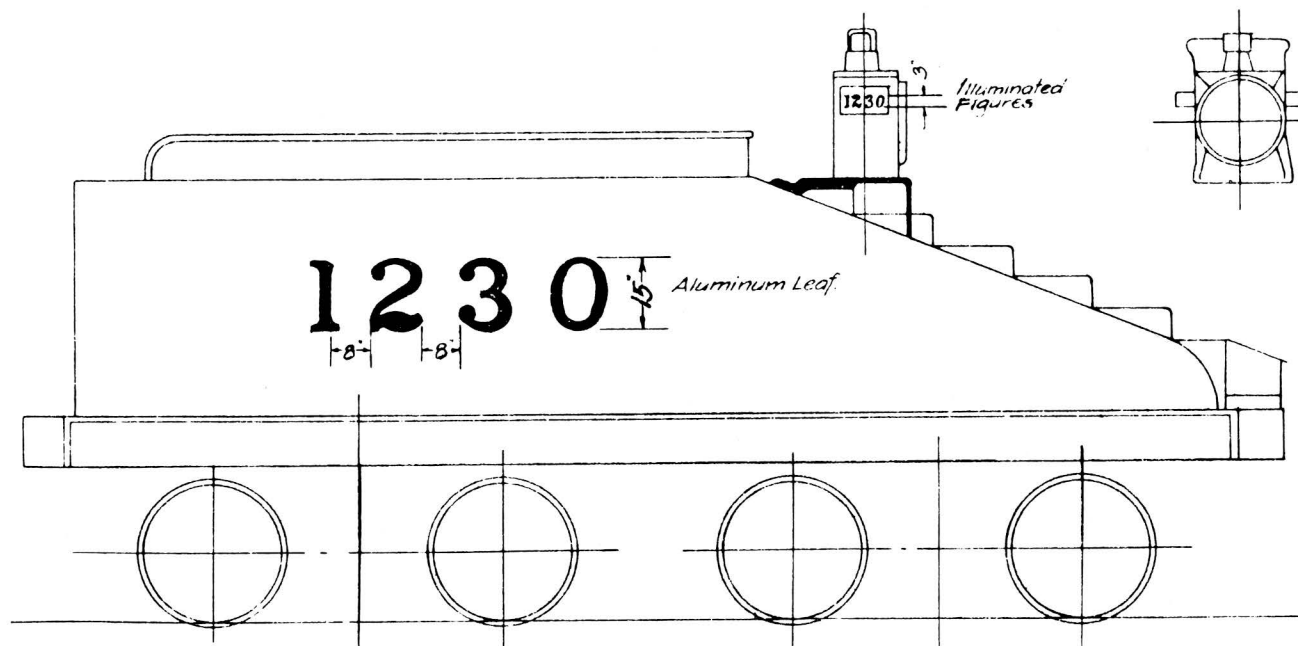


ST. J. & G.I. 1230 S.P. L.A. 1230
& S.L. 1230

For lettering
See table.

Note-
To suit Capacity of Tender

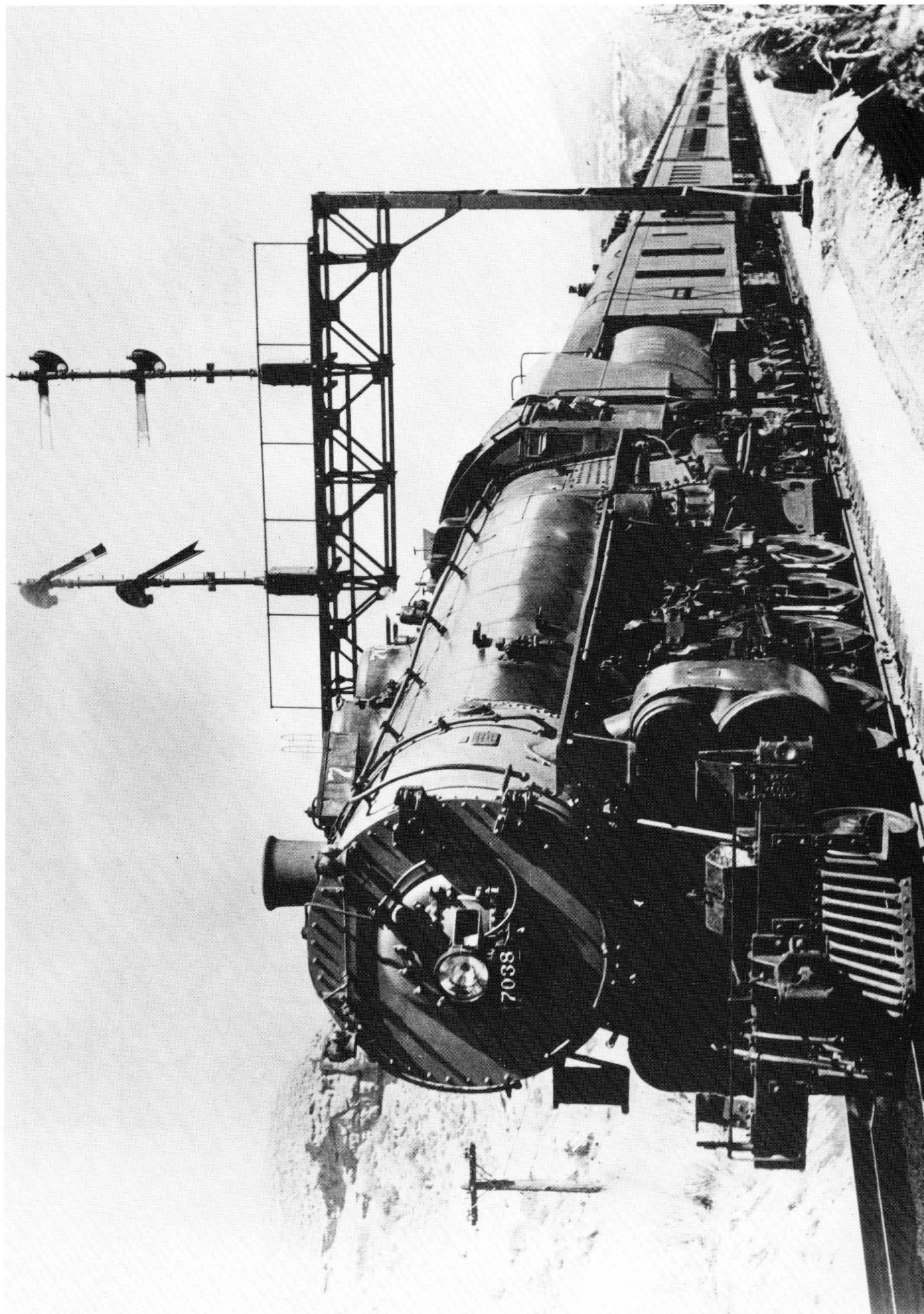
In all cases where the figure "1" is repeated two, or more times, the spacing must be measured from foot to foot, instead of from Stem as indicated.



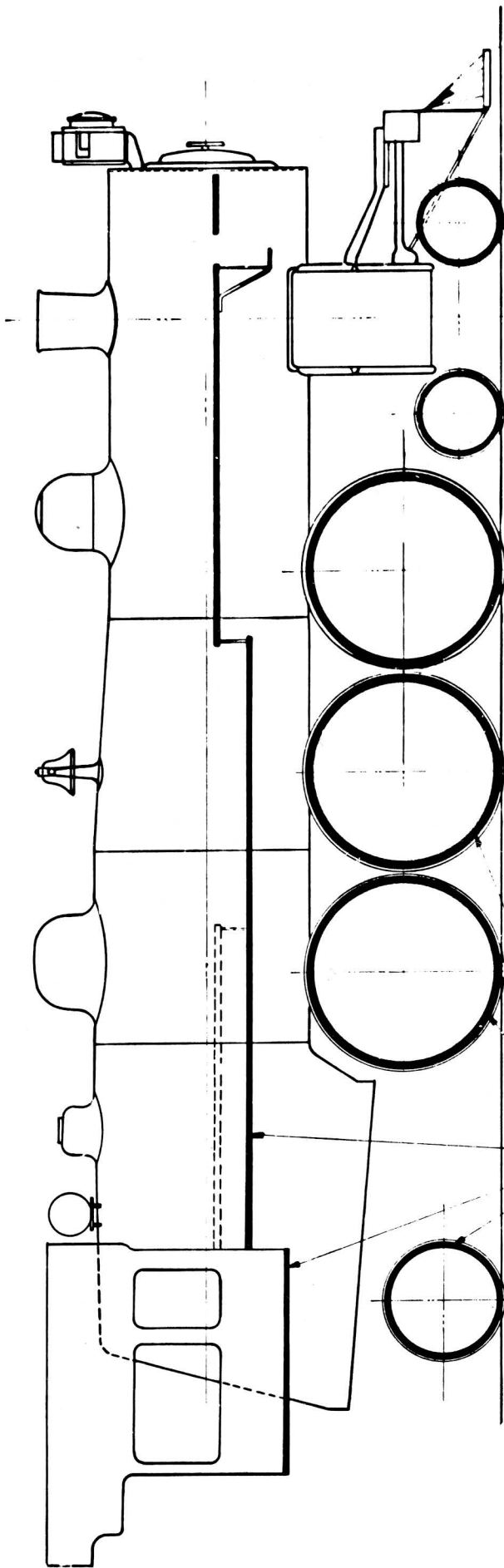
ISSUE	DATE	
A	5-1-37	ADDED 7000 GAL. CYLINDRICAL, ALL RECTANGULAR, & SWITCH TENDERS, INITIALS ON REAR OF TANK, INITIALS BOTH SIDES OF CAB, & INITIALS ON TRUCK BOLSTERS.
B	6-3-37	ADDED NOTES
C	6-7-37	NOTES ON LOCATION OF OWNERSHIP PL. ADDED
D	5-10-39	NEW DESIGN NUMBERS & LETTERS ENG. NO. ON STEAM DOME & SAND BOX REMOVED. 3" NUMBERS ADDED.

List of Detail Drawings.

4" Metal figures for numbers on Front Number Plate - Drawing CA 4463.
6" Metal figures for numbers on Sand Box - Drawings CA 3872 & CA 3873.
6" Roman Letters for initials on rear of tank - Drawings CA 3874, CA 3875, CA 3876, CA 3877 & CA 3878 & CA 6557.
3" Roman Letters for name of Road on sides of cab - Drawings CA 3879 & CA 3880
3" Roman Figures for numbers on Headlight. - Drawing CA 3881.
2" Roman Letters & Figures for capacity of tank and for class designation - Drawing CA 3882.
1 1/2" Roman Figures for class designation. - Drawing CA 3937.
15" Roman Figures for number on sides and rear of tank - Drawing CA 3883, CA 3884 and CA 3885. CA 3886, CA 3887, CA 3888, CA 3889 and CA 3890.

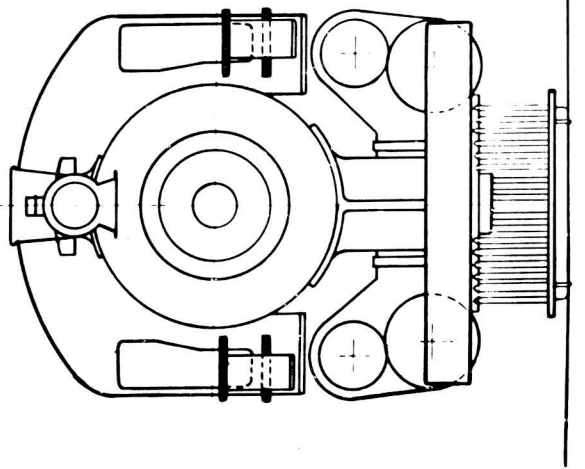


The Los Angeles Limited in Echo Canyon, Utah during the earlier part of this century. A very new 7038 is doing the honors in this posed Union Pacific Railroad photo.



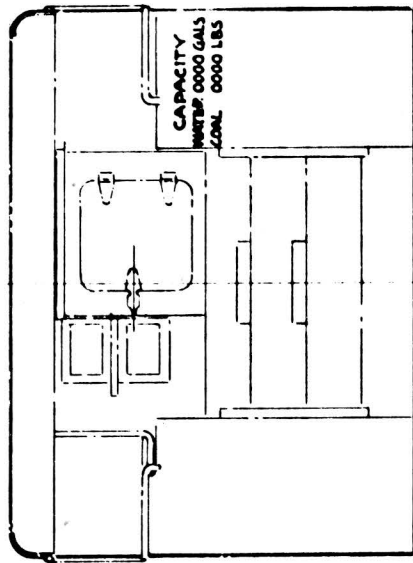
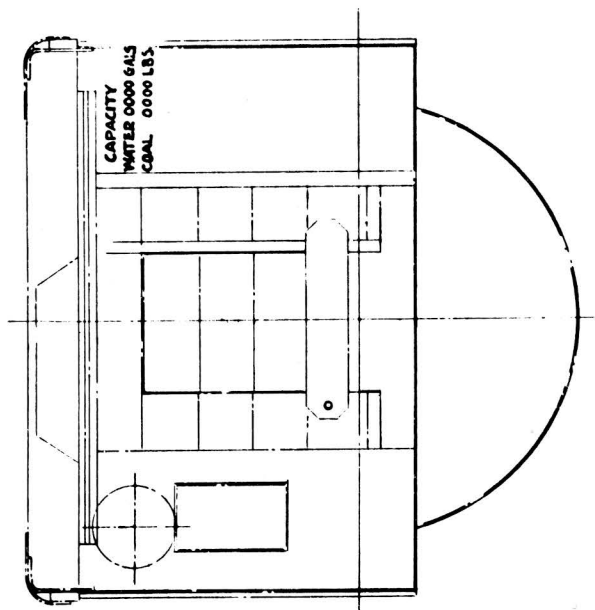
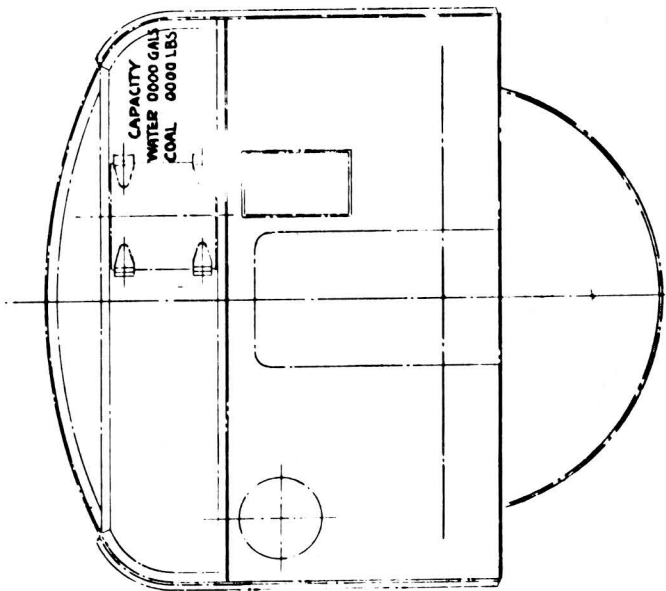
TO BE STRIPED WITH STEEL COLOR AS
PER M.E. CIRCULAR NO 383.

NOTE

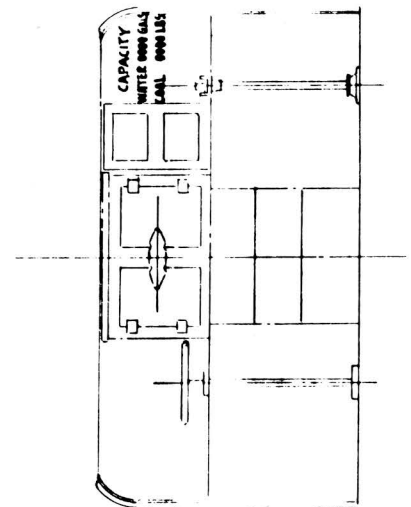
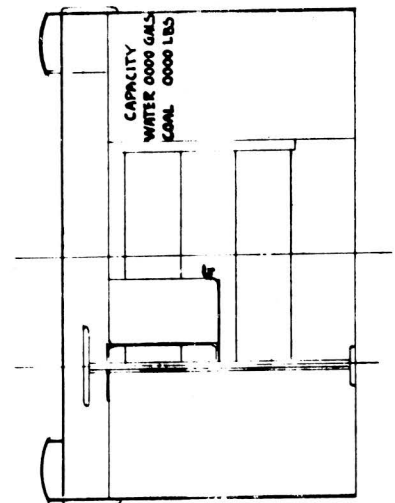


UNION PACIFIC-R-R CHAMPA, AUG. 23, 1916 STRIPING OF LOCOMOTIVES

BOOK-259
4862
REVISED



NOTE: THE COAL AND WATER CAPACITY
MUST BE STENCILED IN 2" LETTERS
AND FIGURES IN ACCORDANCE WITH
CAPACITIES SHOWN IN LOCOMOTIVE
DIAGRAM BOOK —
WHEN IMPOSSIBLE TO USE 2" LETTERS &
FIGURES 1½" MAY BE SUBSTITUTED



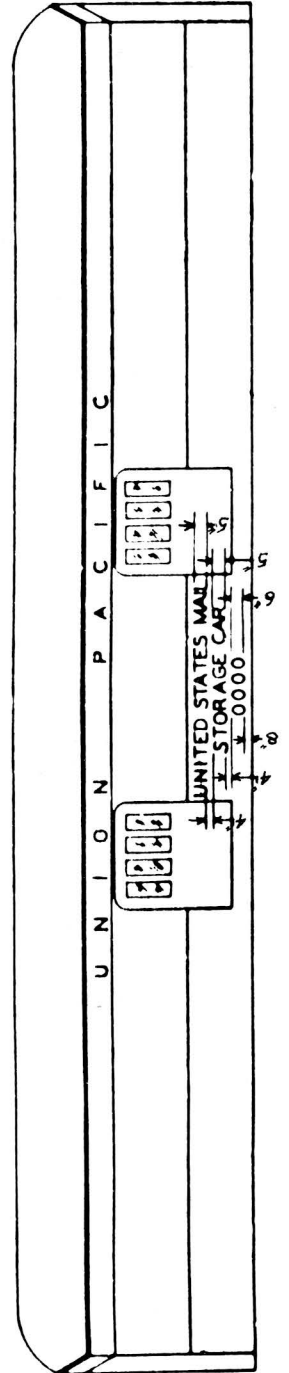
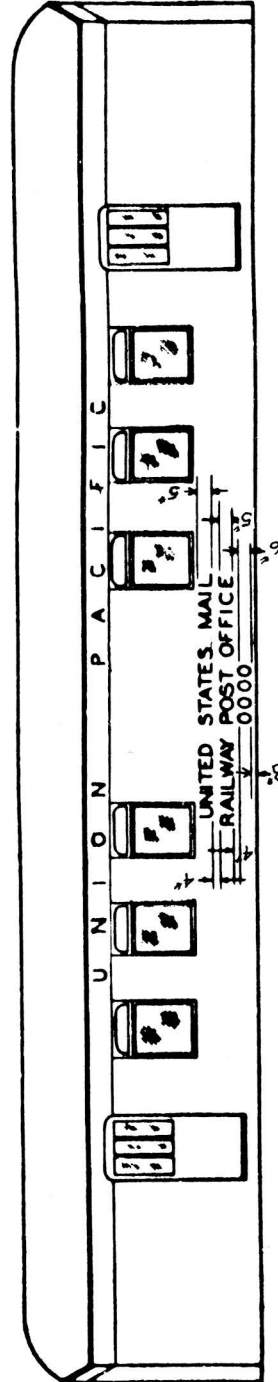
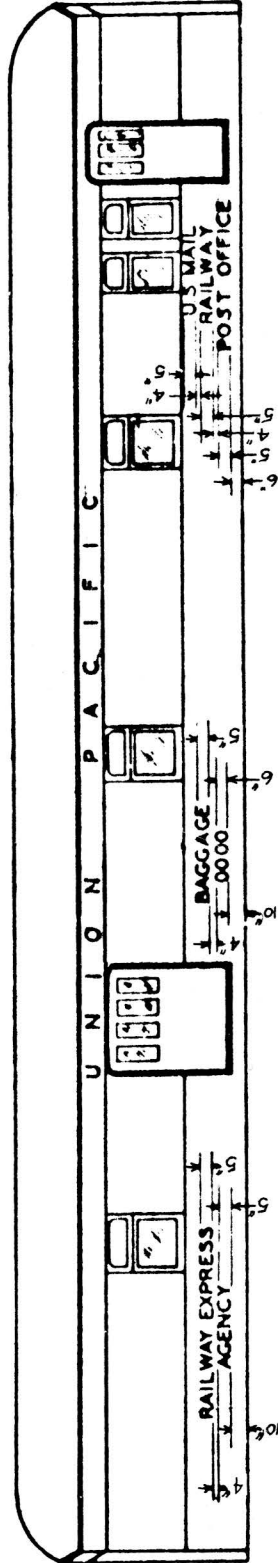
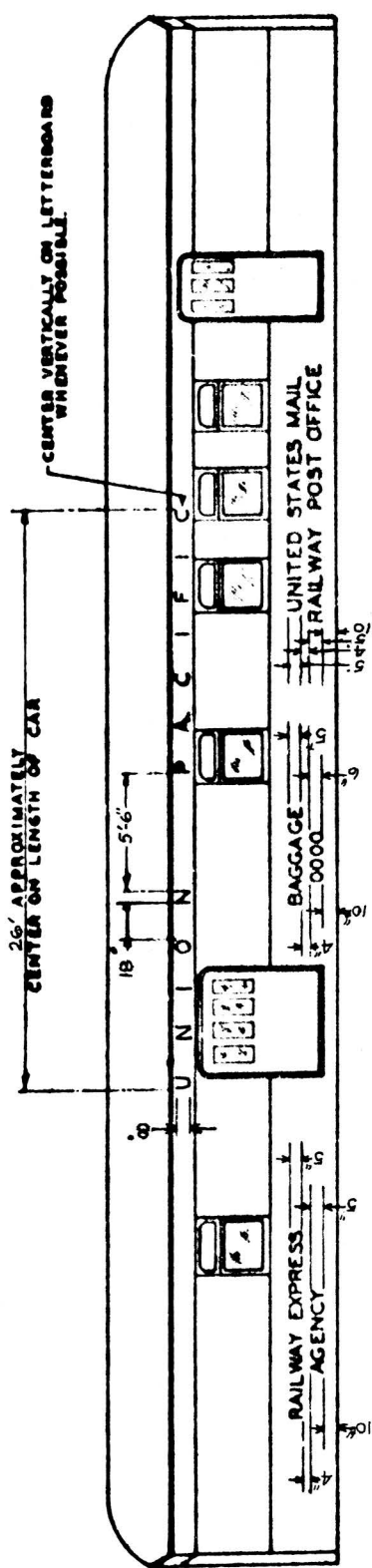
UNION PACIFIC R.R. OMAHA, MAY 10, 1922 LETTERING-TANKS WATER AND COAL CAPACITY

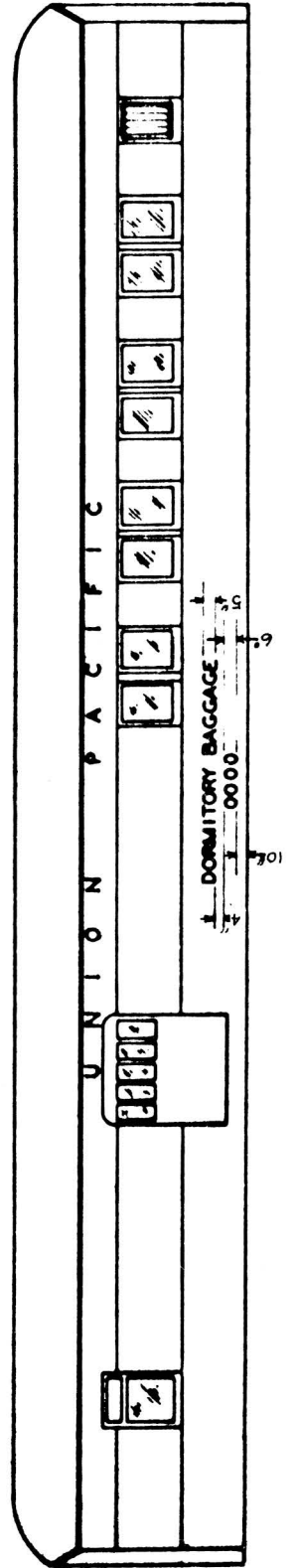
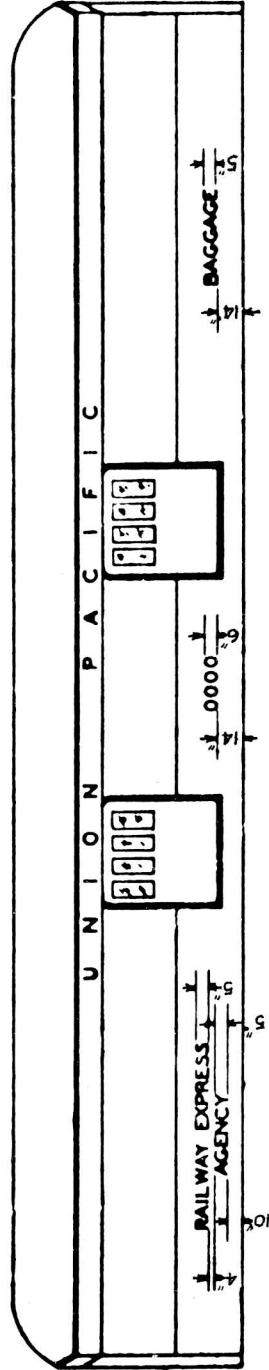
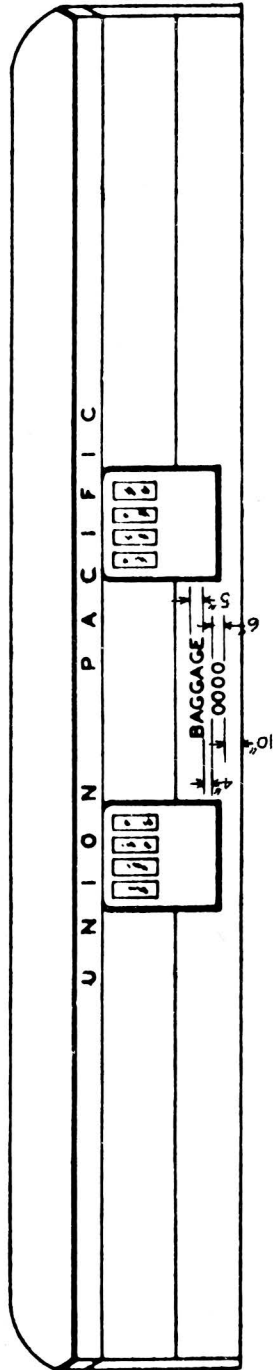
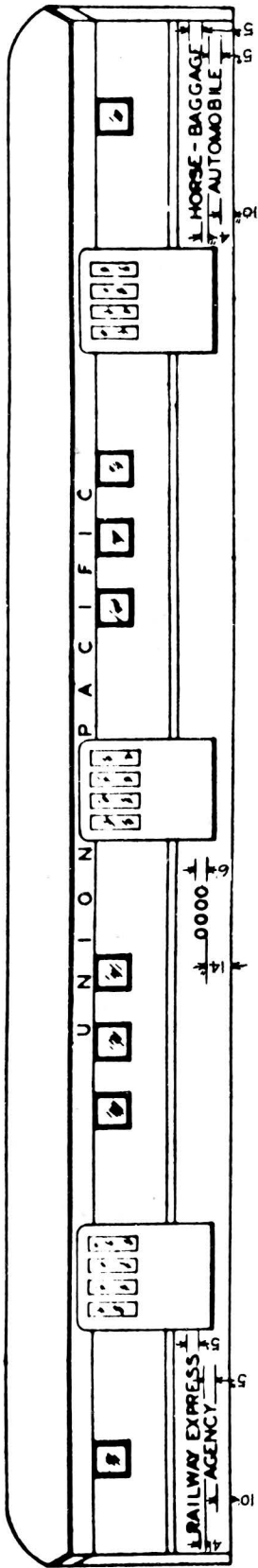
BOOK 759					
5523					
REVISED					

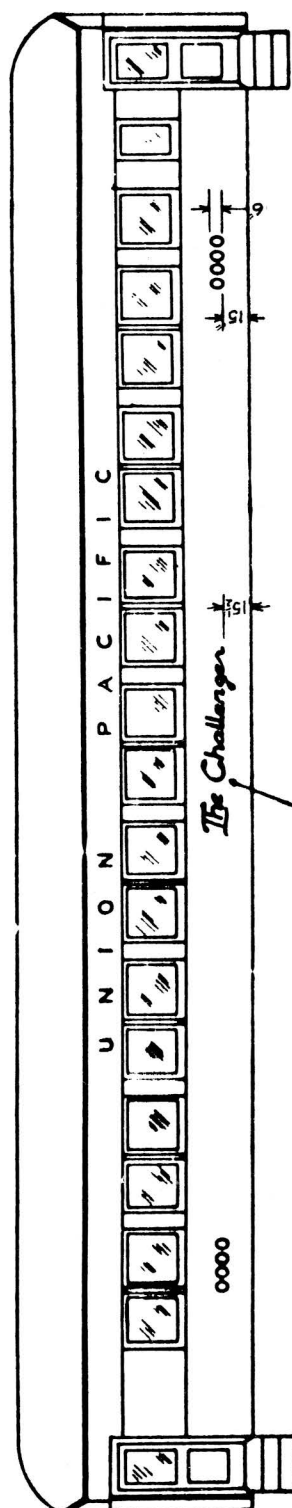
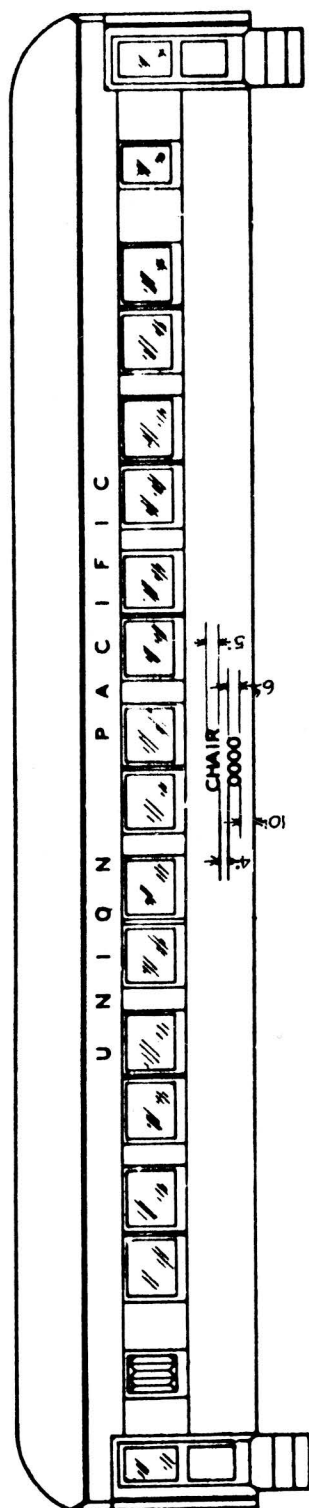
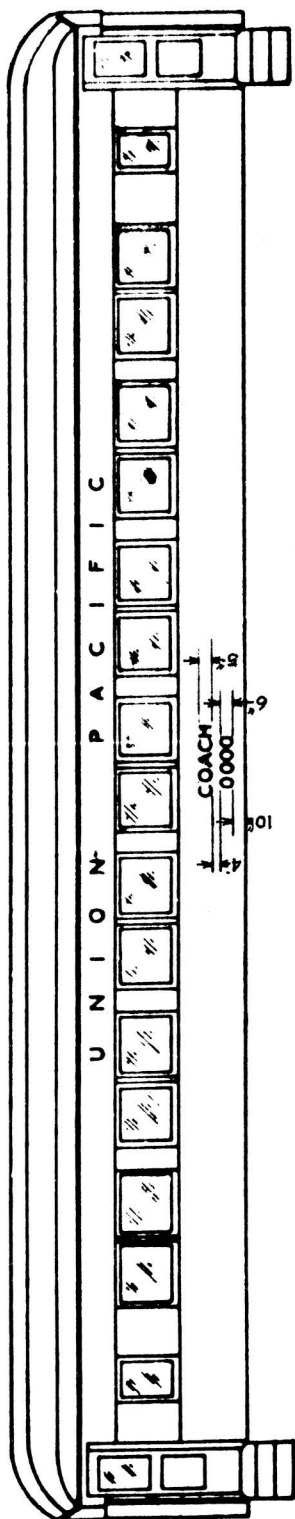


Back in July, 1947 this is what the passenger car yards looked like in Council Bluffs, Iowa. The following diagrams will give you a good idea of how to letter those cars. Photo by Henry J. McCord through R.L. Schmeling.

PULLMAN GREEN PAINT SCHEME

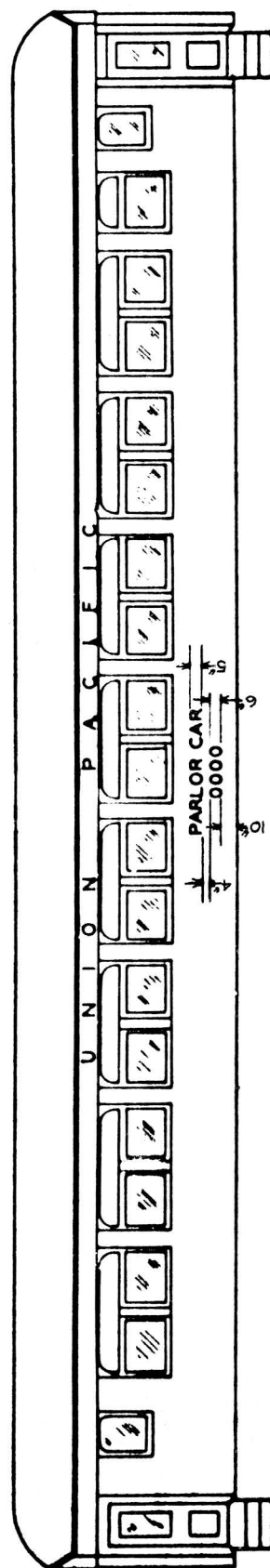


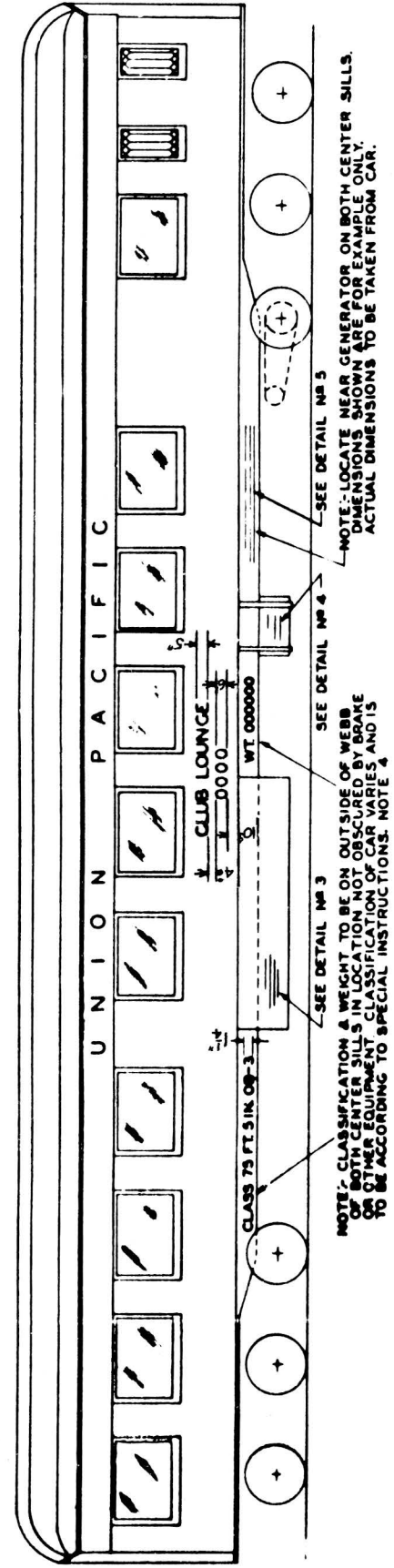
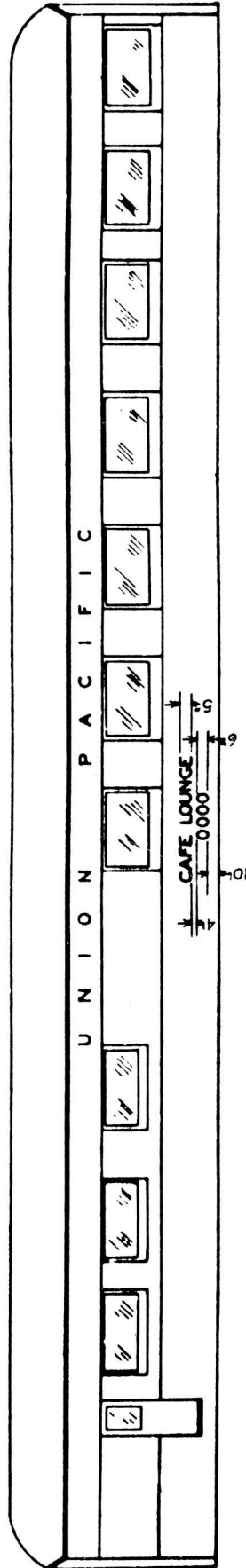
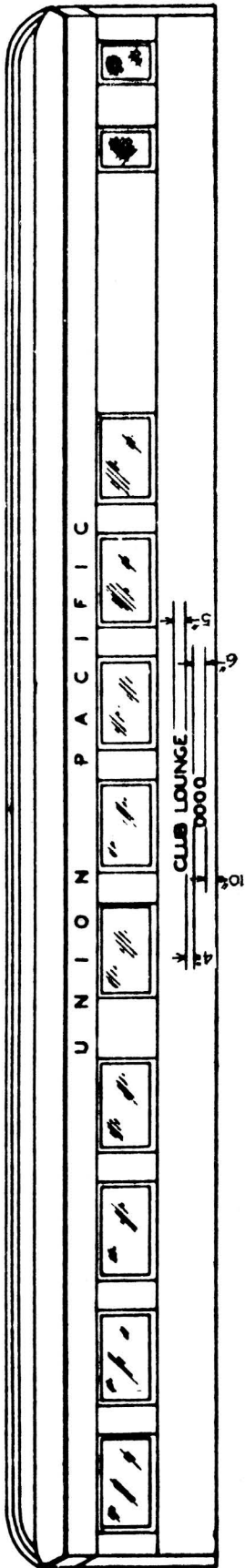




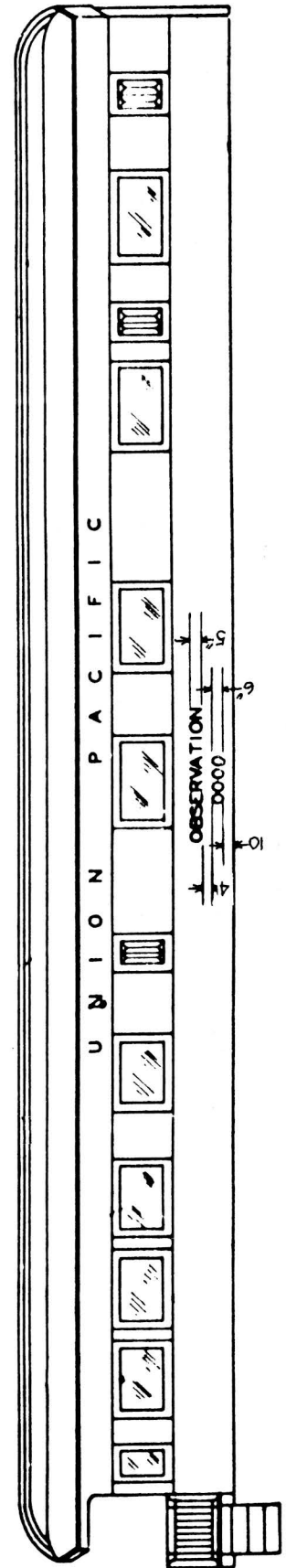
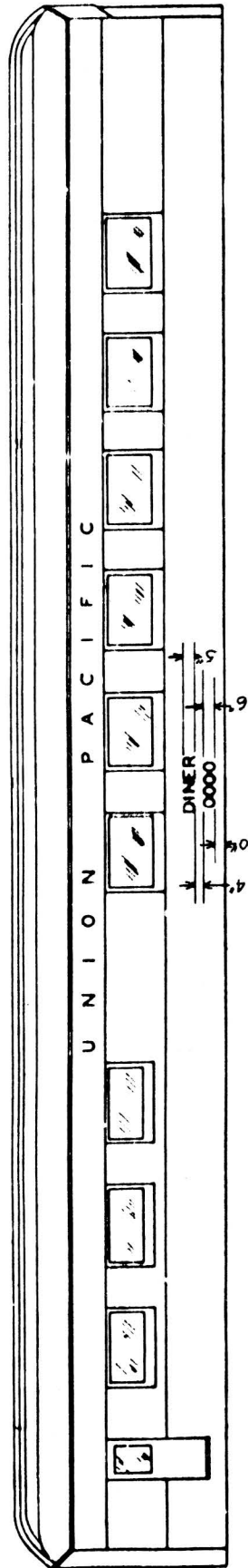
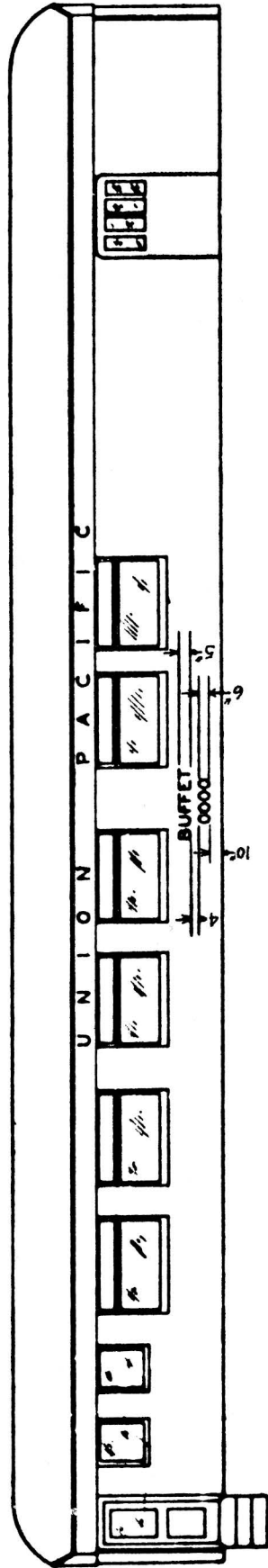
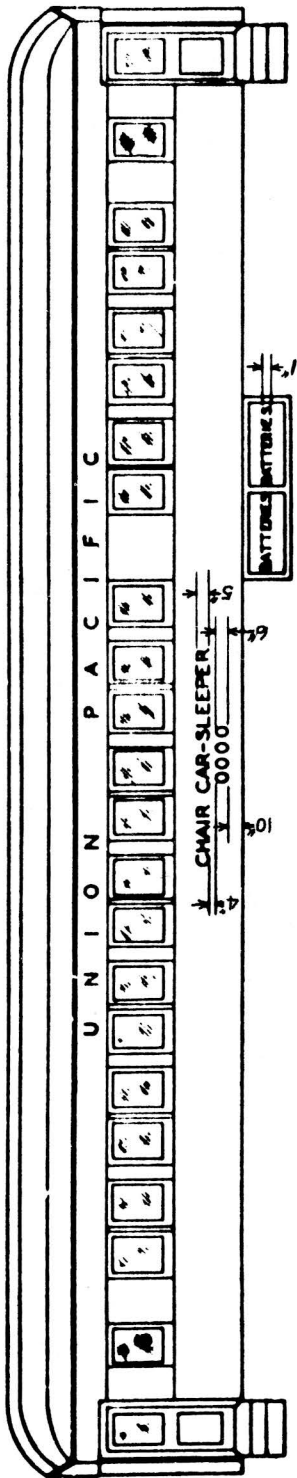
The Challenger

SEE SHAPE OF LETTERS AND PAINT COLORS
SEE ENG. 355 CB 2/1903.

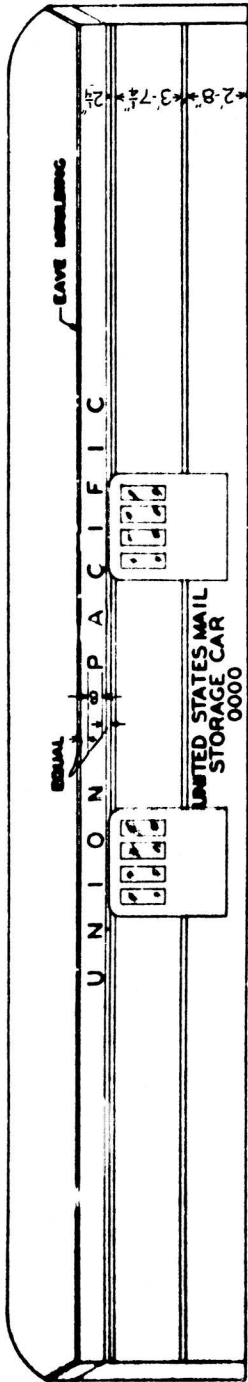




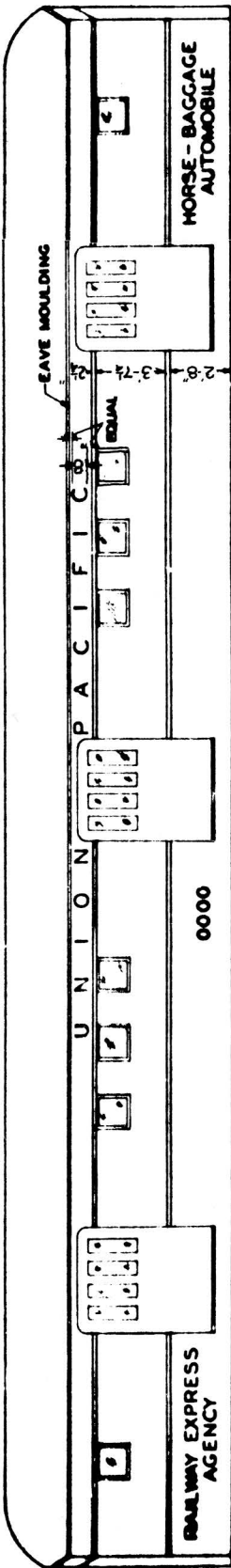
STENCILING ON UNDERFRAME



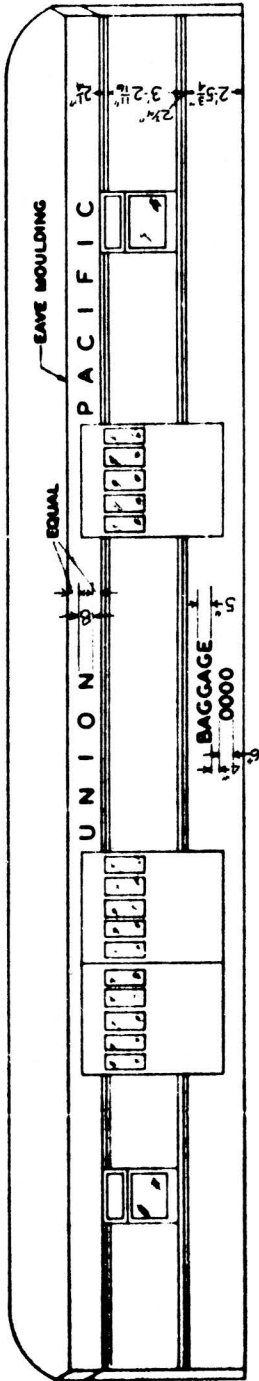
TWO-TONE GRAY PAINT SCHEME



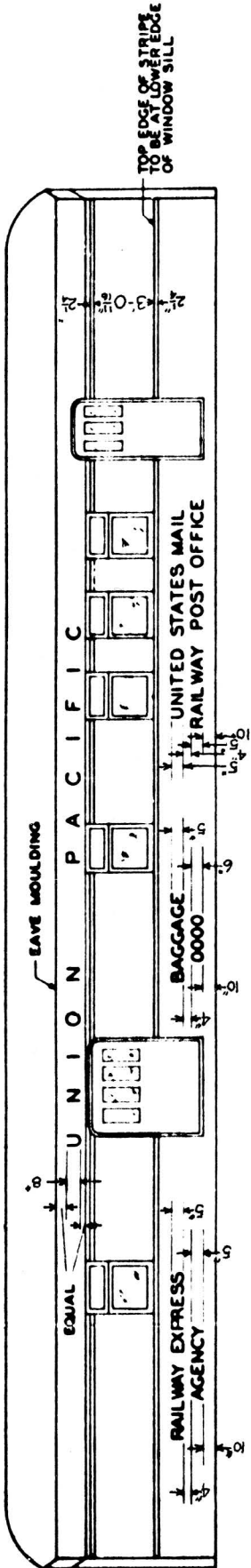
POSTAL STORAGE CARS
CONVERTED FROM BAGGAGE
CARS



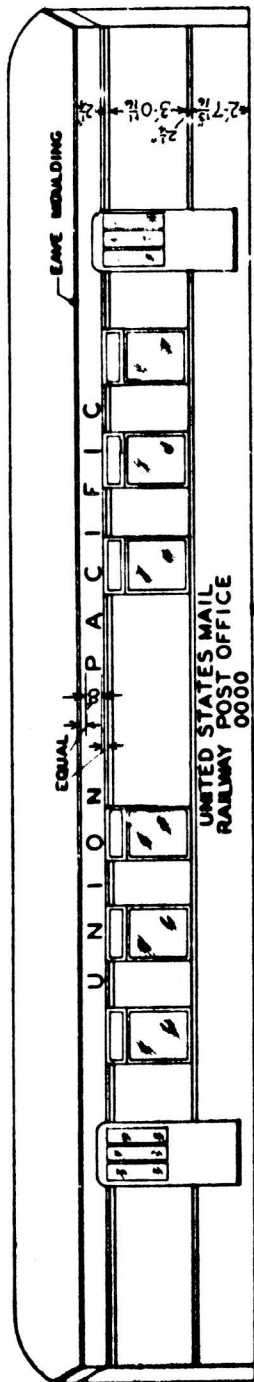
HORSE-BAGGAGE
AUTOMOBILE CARS



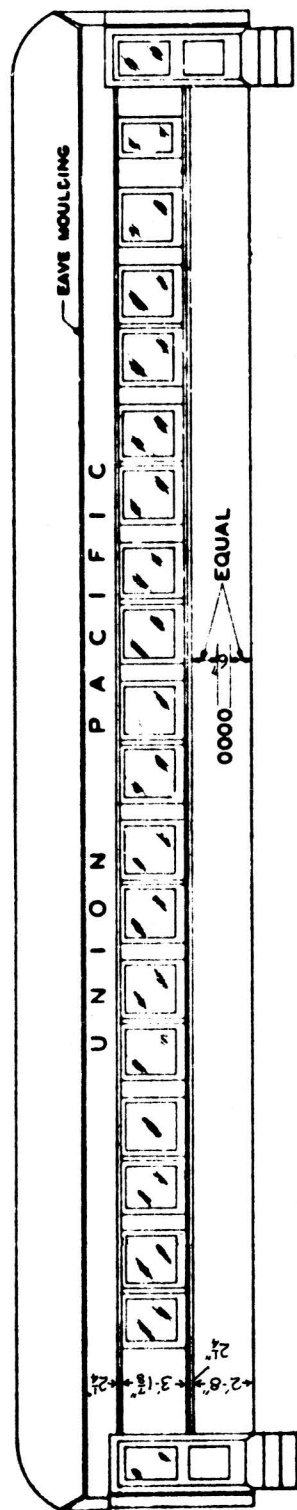
BAGGAGE



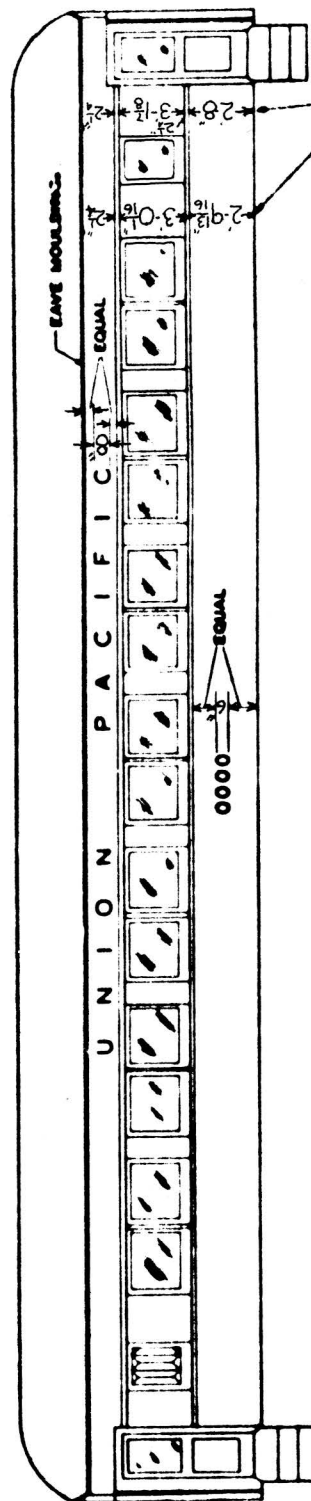
BAGGAGE POSTAL



ALL POSTAL CARS

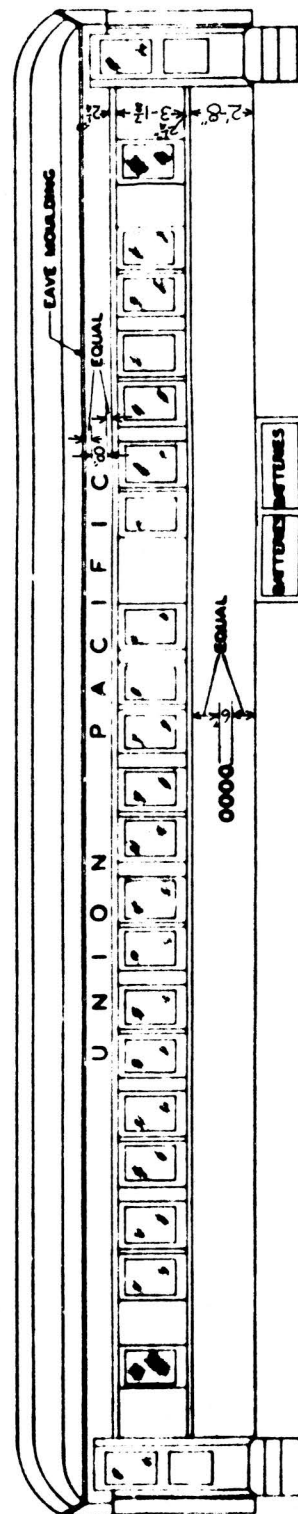


CHAIR CARS AND CLUB LOUNGE CARS (BUILT PRIOR TO 1937)



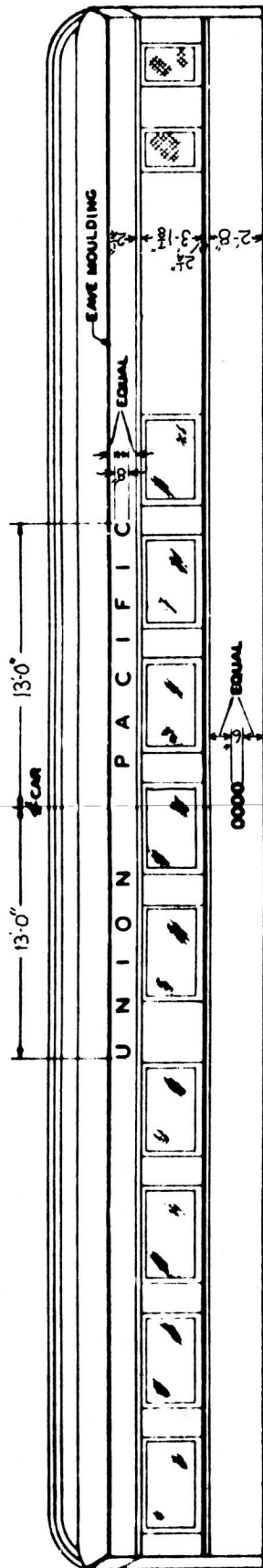
CHAIR CARS BUILT PRIOR TO 1937

THESE DIMENSIONS FOR
ALL CARS EXCEPT
4200-4215 & 1200-1209



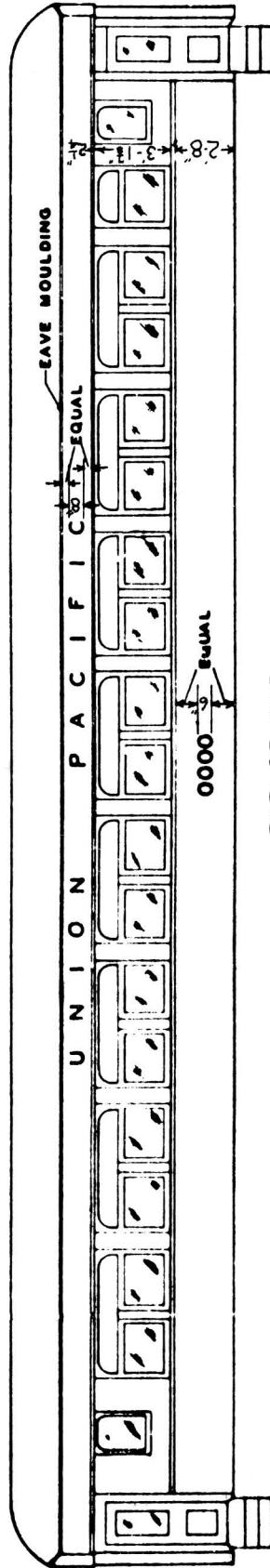
CHAIR CAR SLEEPER

BUTTONS
BUTTONS

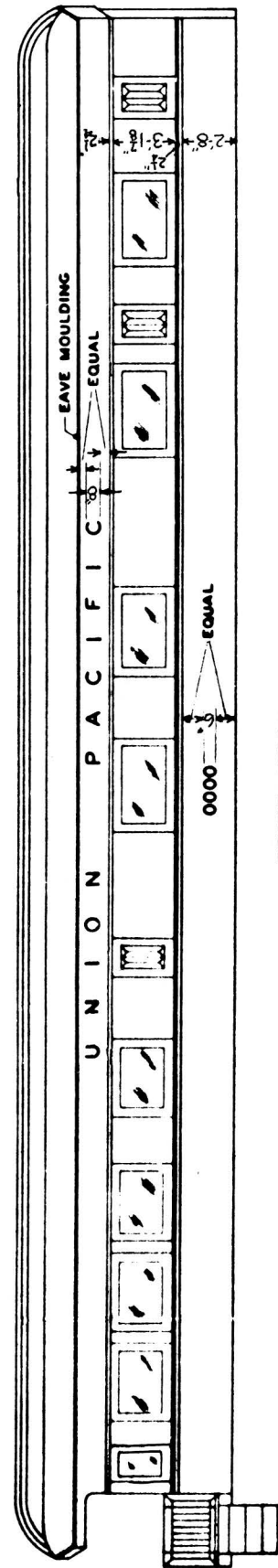


FOR CARS ASSIGNED TO SAN FRANCISCO OVERLAND SERVICE
SEE DWG. 357 CB 23996
FOR CARS ASSIGNED TO CITY OF ST. LOUIS
SEE DWG. 357 CB 23998

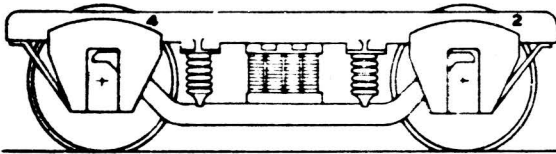
CLUB LOUNGE CARS



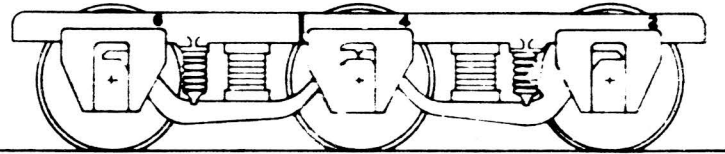
PARLOR CAR



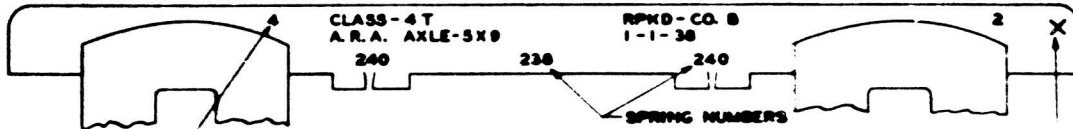
OBSERVATION



4 WHEEL TRUCK
LETTERING TO BE ON BOTH SIDES OF TRUCK
SEE DETAIL NA. 1



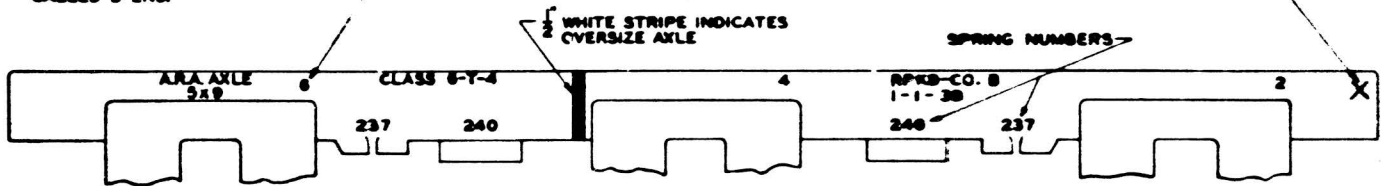
6 WHEEL TRUCK
LETTERING TO BE ON BOTH SIDES OF TRUCK
SEE DETAIL NA. 2



NOTE:- ODD NUMBERS 1,3,5,7 ETC ON RIGHT SIDE OF TRUCKS AND EVEN NUMBERS ON LEFT SIDE BEGINNING AT 'B' END
B' END OF CAR IS END TOWARD WHICH CYLINDER PUSH ROD MOVES. ON CERTAIN CARS WITH TWO CYLINDERS KITCHEN END OF CAR WILL BE CALLED 'B' END.

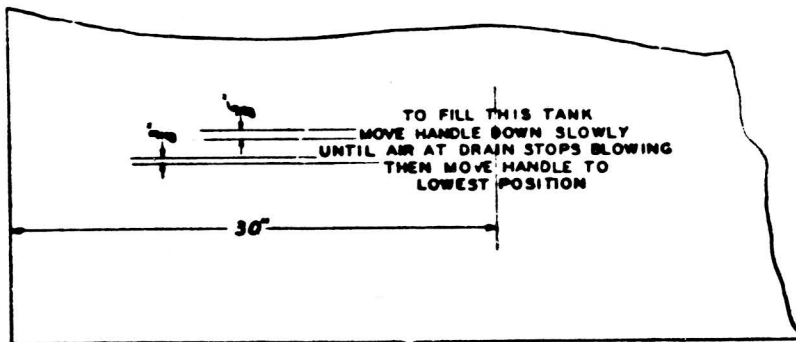
DETAIL NA. 1
ALL LETTERS & NUMBERS TO BE 1 IN. HIGH

NOTE:- 'X' INDICATES CENTER PIN LOCKING DEVICE PIN MUST BE DISCONNECTED BEFORE JACKING UP CAR LOCATED ON END OF TRUCK TOWARD CENTER OF CAR

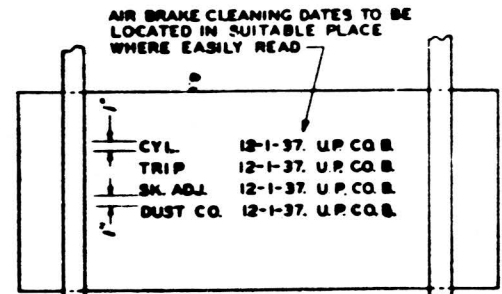


DETAIL NA. 2
ALL LETTERS & NUMBERS TO BE 1 IN. HIGH

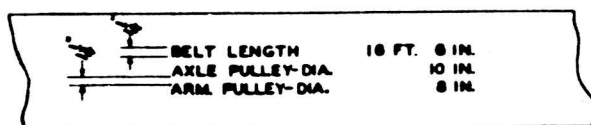
TRUCK LETTERING
CARS BUILT PRIOR TO 1937



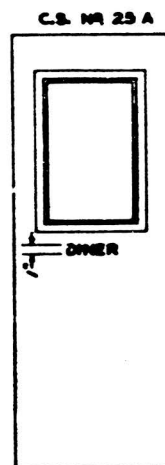
DETAIL NA. 3
NOTE 4



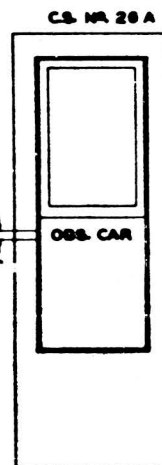
DETAIL NA. 4
NOTE 4



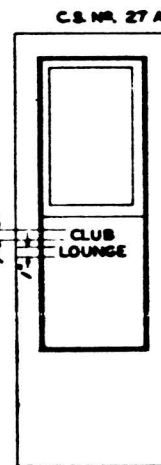
DETAIL NA. 5
NOTE 4



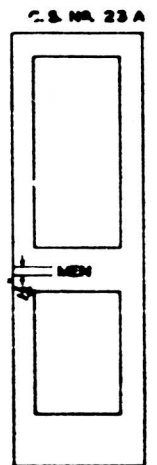
DETAIL NA. 6
OUTSIDE OF DINING CAR END DOORS



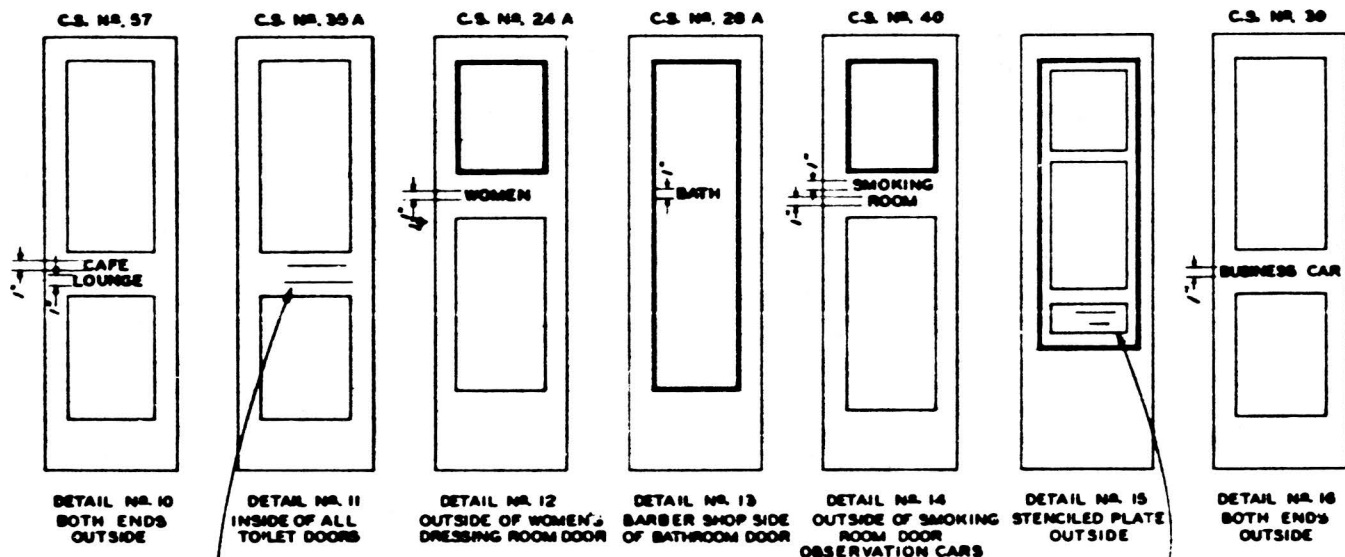
DETAIL NA. 7
DUMMY VEST. END ONLY OUTSIDE



DETAIL NA. 8
BOTH ENDS OUTSIDE



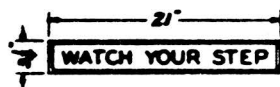
DETAIL NA. 9
OUTSIDE OF TOILET DOORS



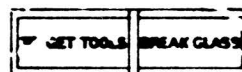
PLEASE DO NOT FLUSH TOILET
WHILE TRAIN IS STANDING AT A STATION

TRANSFER C.S. NR. 35

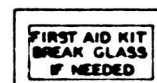
DETAIL NR. 15
MADE AT OMAHA SHOPS
SEE SKETCH 2843 BK-2



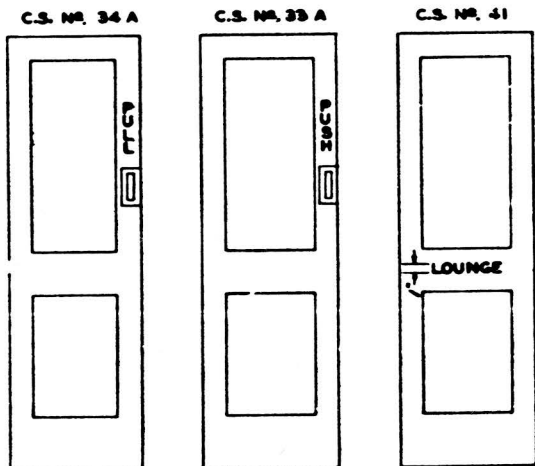
DETAIL NR. 20
SEE DWG. 255 CB 20982



DETAIL NR. 21
SEE DWG. 412 CB 5752

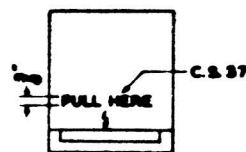


DETAIL NR. 22
PRINTED FORM
R-3246

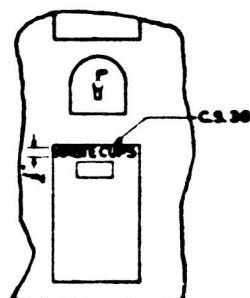
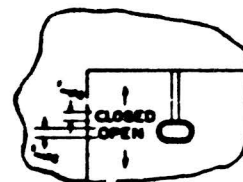


CONDUCTORS
VALVE

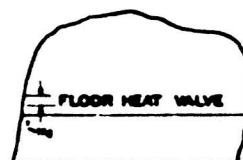
DETAIL NR. 23
PLACE UNDER VALVE
HANDLE WHERE POSSIBLE



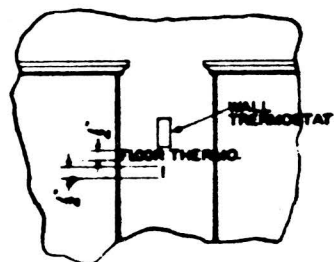
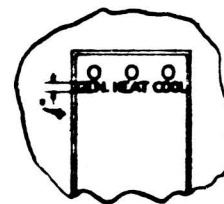
DETAIL NR. 25
PAPER TOWEL HOLDER



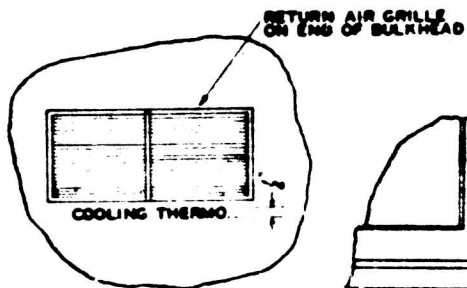
DETAIL NR. 27



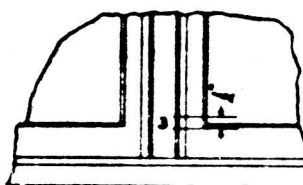
DETAIL NR. 28
SIGN ABOUT 8 IN. OFF FLOOR
ON PARTITION OR WALL NEAR-
EST FLOOR HEAT VALVE



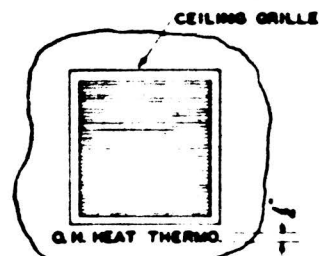
DETAIL NR. 30
IN NUMBERING WALL THERMOSTATS
STAND IN FRONT OF SWITCH BOARD
FACING BODY OF CAR NO. 1 THERMO-
STAT WILL BE ON YOUR LEFT. EVEN
NUMBERS ON OPPOSITE SIDE.



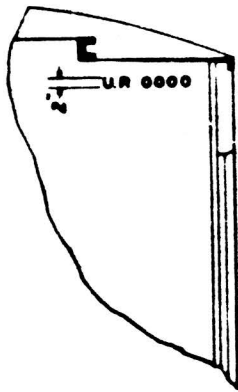
DETAIL NR. 31



THE TWO PLASTERS EACH SIDE OF DINING
ROOM WINDOWS TO HAVE SAME NUMBER ODD
NUMBERS ON KITCHEN SIDE OF CAR BEGINNING
AT KITCHEN END OF DINING ROOM AND NUMBERING
ALTERNATELY. EVEN NUMBERS ON OPPOSITE SIDE.

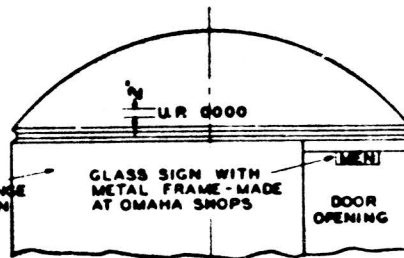


DETAIL NR. 33

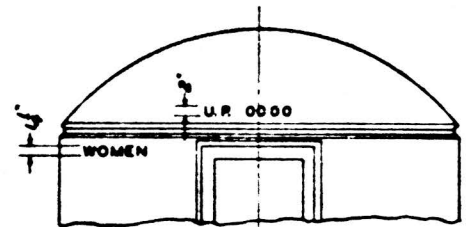


DETAIL No. 34
ON KITCHEN END OF DINING CARS
INSTEAD OF OVER END DOOR
LIKE OPPOSITE END OF CAR

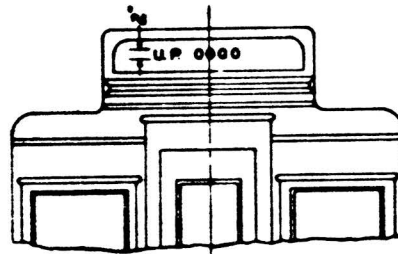
SMOKING ROOM
OR LADIES LOUNGE
ROOM PARTITION



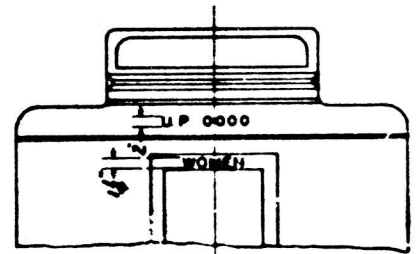
DETAIL No. 35
INSIDE END LETTERING



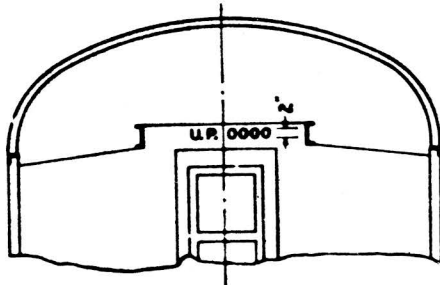
DETAIL No. 36
INSIDE END LETTERING
CARS WITH BULKHEAD



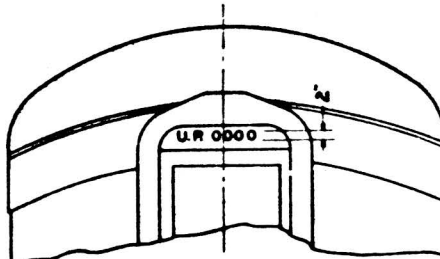
DETAIL No. 37
INSIDE END LETTERING
CARS WITH CLERESTORY



DETAIL No. 38
CARS WITH TOILET ON ONE SIDE
WASHROOM ON OTHER SIDE

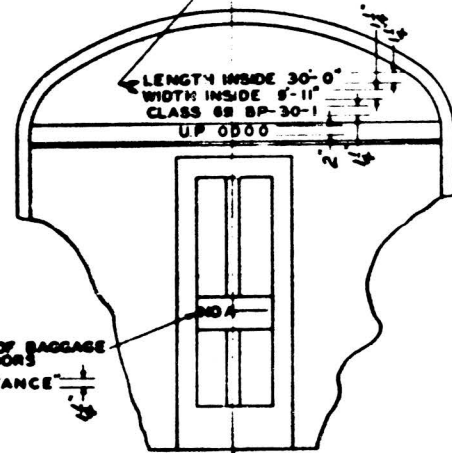


DETAIL No. 39
OUTSIDE LETTERING OVER DOOR
VESTIBULE CARS

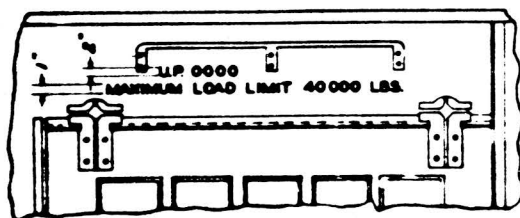


DETAIL No. 40
OUTSIDE LETTERING OVER DOOR

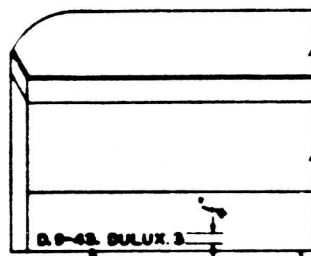
FOR MAIL COMPARTMENTS ONLY



DETAIL No. 41
INSIDE END BAGGAGE & MAIL
COMPARTMENTS



DETAIL No. 42
VIEW INSIDE OVER SIDE DOORS
BAGGAGE CARS
NOTE - 3

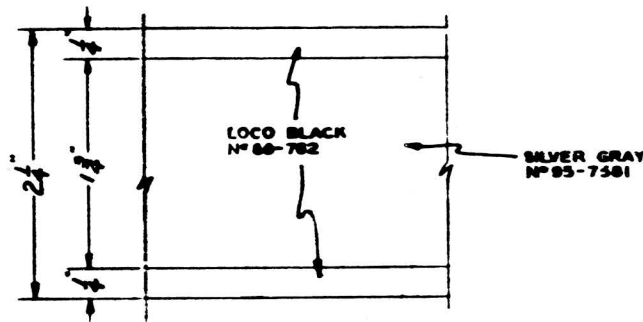


DETAIL No. 43

SEE NOTE 8 & KEY FOR ABBREVIATIONS
ON BOTH SIDES OF CAR AT LEFT CORNER
WHEN FACING SIDE OF CAR

KEY FOR ABBREVIATIONS			
LOCATION OF SHOP	ABBR.	REPAIRS PER M.I. 09-P-2	ABBR.
ALBINA	A	CLASS-1	1
CHEYENNE	C	CLASS-2	2
DENVER	D	CLASS-3	3
KANSAS CITY	K	CLASS-4	4
LOS ANGELES	L	CLASS-5	5
OMAHA	O		
POCATELLO	P		
SALT LAKE CITY	S		

- NOTE 1. CARS TO HAVE NAME DESIGNATION AND NUMBER PLACED ABOUT MIDWAY BETWEEN BOTTOM OF SIDE SHEET AND BOTTOM EDGE OF LOWER STRIPE.
- NOTE 2. C.S. NUMBERS REFER TO DECALCOMANIA TRANSFERS (DWG 353-ST-1207) TO BE USED FOR ALL INTERIOR LETTERING AND CAR NUMBERS OVER DOORS IN CARS WITH VESTIBULE.
- NOTE 3. INTERIOR OF BAGGAGE CARS AND MAIL CARS TO BE STENCILED BLACK NO. 17.
- NOTE 4. ALL STENCILING OF UNDERNEATH EQUIPMENT INCLUDING TRUCKS TO BE DONE WITH WHITE PAINT.
- NOTE 5. REFER TO GENERAL SPECIFICATIONS FOR PAINTING AND LETTERING ALSO SPEC. CS-22 FOR PAINT AND COMMON STANDARD COLOR CARD.
- NOTE 6. ALL OUTSIDE LETTERING ON CAR BODY TO BE DULUX SILVER GRAY PAINT NO. 95-7581 USING LETTERS AND FIGURES AS SHOWN ON REFERENCE DRAWINGS AND TO HAVE $\frac{1}{8}$ INCH BLACK EDGING USING DULUX LOCOMOTIVE BLACK NO. 88-762.
- NOTE 7. FOR LETTERING ON SIDE OF CAR OTHER THAN LETTERBOARD SPACE BETWEEN LETTERS AND FIGURES TO BE 6 INCHES, AND SPACE BETWEEN WORDS TO BE 12 INCHES EXCEPT WHERE SPACE ON CAR WILL NOT PERMIT, THE SPACING BETWEEN LETTERS & WORDS MUST BE ADJUSTED TO SUIT.
- NOTE 8. SHOP LOCATION AND DATE, TYPE OF PAINT USED AND CLASS OF REPAIRS PER M.I. LETTER 08-P-2 TO BE STENCILED ON DIAGONAL CORNERS AS SHOWN.
- NOTE 9. ALL SIDE DOORS, SPACE BETWEEN EAVE MOULDING & UPPER STRIPE, SPACE BETWEEN BOTTOM OF SIDE SHEET & LOWER STRIPE AND END SHEETS TO BE DUPONT DULUX LIGHT GRAY NO. 88-8234.
- NOTE 10. ROOF, FROM EAVE MOULDING TO EAVE MOULDING, TO BE NOBRAC BLACK.
- NOTE 11. STRIPES TO BE DULUX SILVER GRAY NO. 95-7581 WITH $\frac{1}{4}$ INCH BLACK EDGING.
- NOTE 12. SPACE BETWEEN STRIPES TO BE DUPONT DULUX DARK GRAY NO. 88-8235.
- NOTE 13. INSIDE OF VESTIBULE & BOTH END DOORS TO BE SHERWIN WILLIAMS LIGHT TAN NO. 8488-2.
- NOTE 14. TRUCKS TO BE DULUX LOCOMOTIVE BLACK NO. 88-762.



DETAIL OF STRIPE

PLEASE NOTE-

The color chip page reproduced at the right was photographically produced from the original paint chips made in 1923. The colors shown should only be used as a guide as they cannot be reproduced economically and still be guaranteed that they will retain their exact color. Due to the age of the original, we also felt, the paint chips might not be the exact color originally intended. We have included the exact mixing instructions should you want to mix your own paints. This is the only way in which you can be assured of getting the original color for use today.

