FRISCO All Aboard FRISCO

Volume 11 1997 Number 2

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About the Covers

FRONT: Frisco depot, Billings, MO, as captured on film by the late Howard Killam, August 15, 1959, and the Billings, MO depot as captured in miniature by Frisco Folk Vince Griesemer.

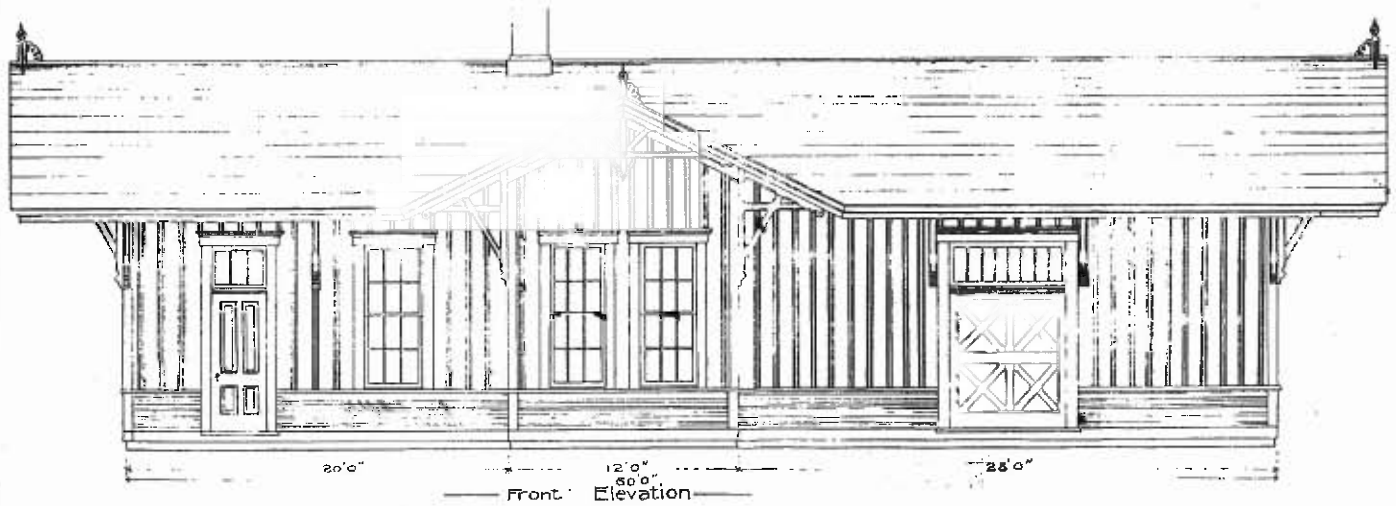
BACK: Frisco Folk A.W. McBride caught train 731 as it approached Winslow Tunnel, July, 1979.

MUSEUM ADDRESS
543 E. Commercial St.
Springfield, MO 65803-2945
866-SLSF
(866-7573)

HOURS OF OPERATION
Tuesday thru Saturday
10:00 a.m. to 5:00 p.m.

MODELING FRISCO'S STANDARD Nº 2

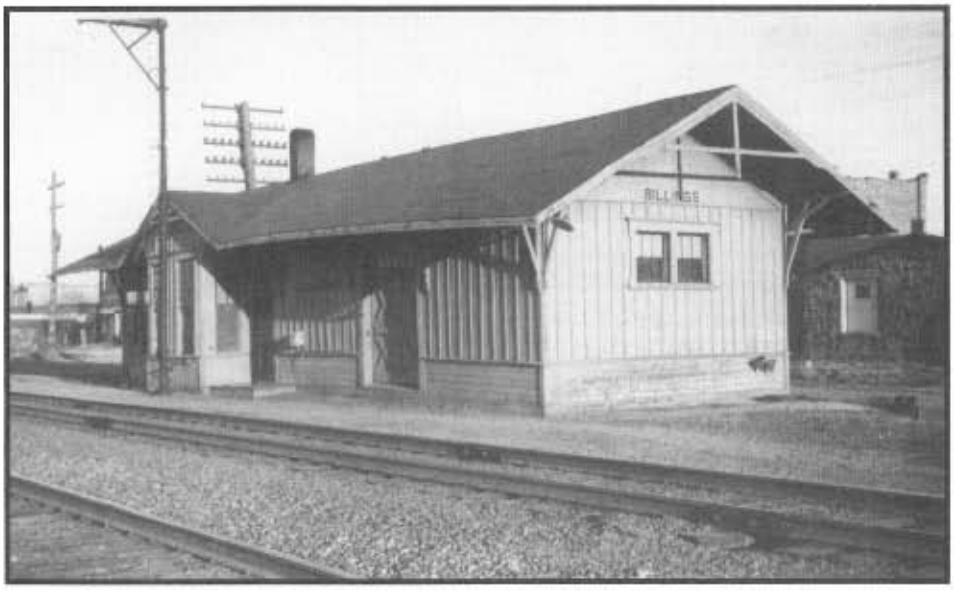
By Vince Griesemer



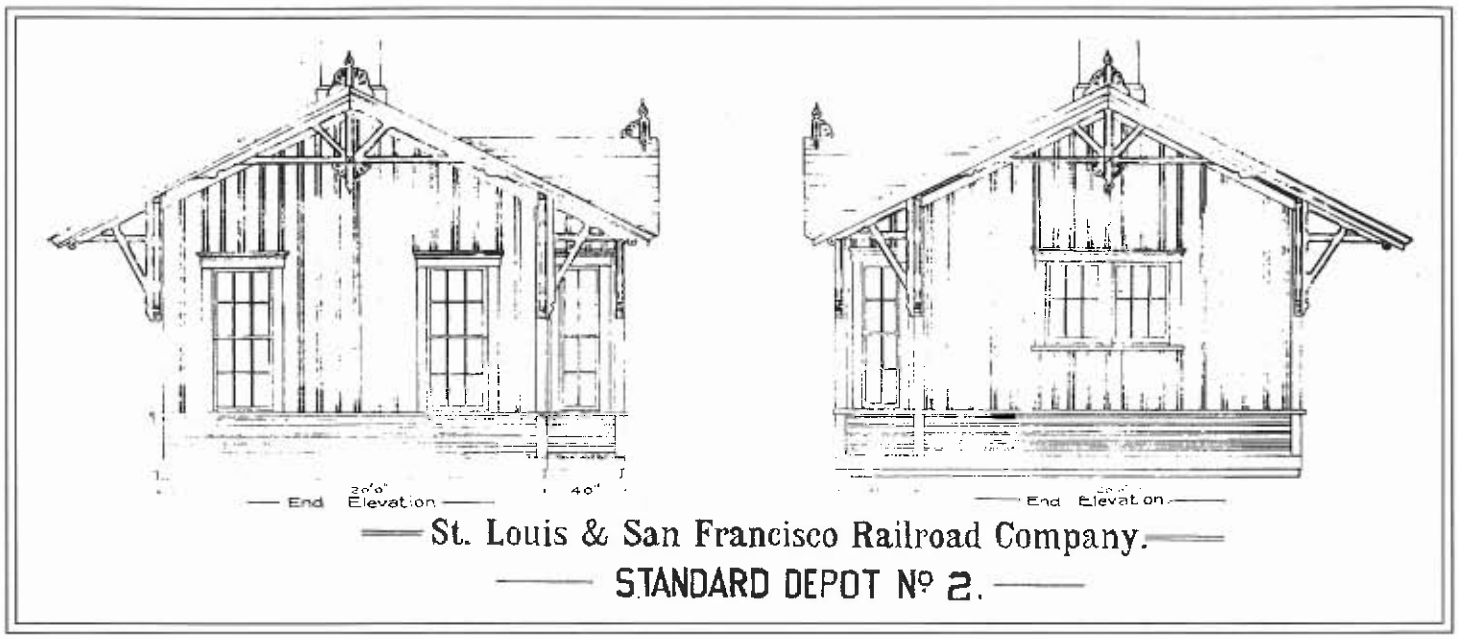
Capturing a little bit of authentic Frisco architecture is a good way to bring extra realism to a model railroad and to create scenes that say to visitors, "This is the Frisco." I was looking for just such a project when the depot at Billings Missouri was featured in the *Down At The Depot* series in the Spring 1993 issue of the ***All Aboard***. Having grown up in Billings, modeling the depot had a natural attraction and the small size made it a good candidate for a fully modeled scene.

A subsequent trip to The Frisco Railroad Museum provided me with a set of plans for the Frisco #2 depot, a standard plan which the Frisco used for many small towns along its lines. These plans, along with the floor plan and pictures from the ***All Aboard*** article provided the information I needed to construct a scale model of the depot. Since this was a very common Frisco building, the same basic construction and some customizations can be used to model a depot for your favorite part of the Frisco.

The first step in scratchbuilding the depot was to reduce the plans to scale. I worked out the necessary steps to produce HO scale plans on a reducing copier. The plans from the museum were scaled 1/4" to the foot so the reduction factor for HO scale works out to be .552. On the copier I used, this required two steps. I first reduced the original plans by .8 and then reduced these copies by .69 to get a final



The Frisco depot at Billings Missouri, March 2, 1948. A. Johnson photo.

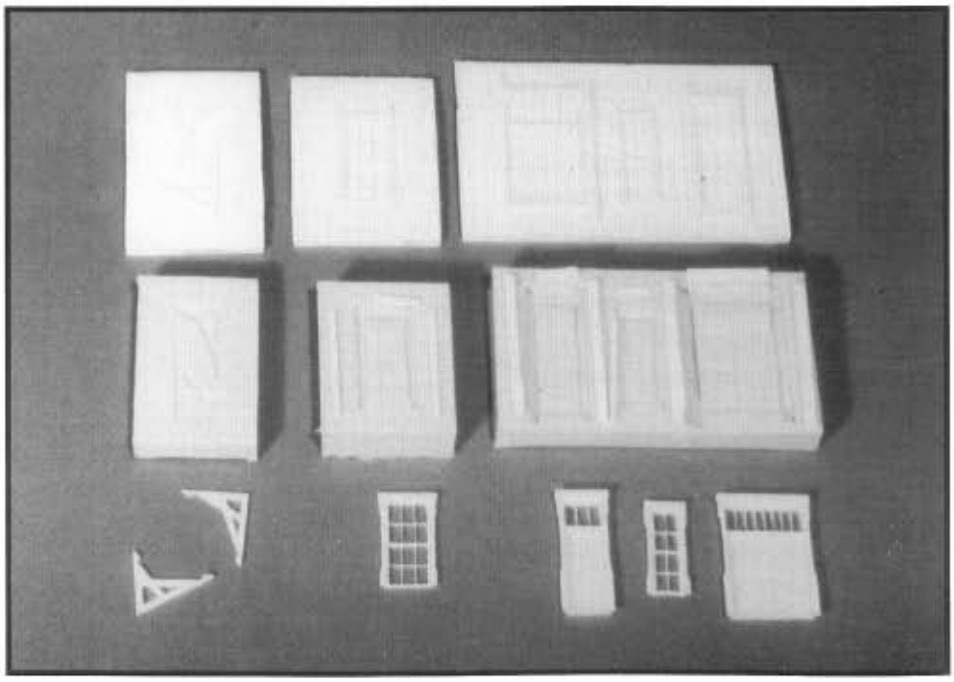


reduction of .552. Bring along a scale tule and check a known dimension on the plans to adjust for any inaccuracies in the copier reduction.

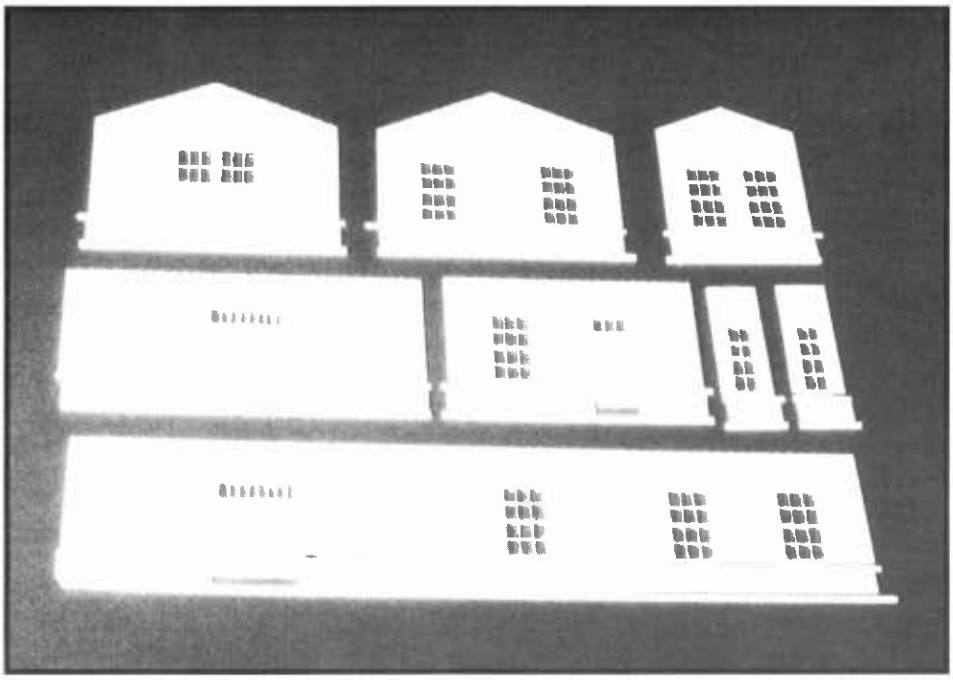
Once I had the plans and started gathering materials, it became obvious that I wasn't going to be able to find a close match for the windows and eave supports from any of the scale window or kit manufacturers. This left me with the challenge of scratchbuilding eight 12 pane windows plus all of the eave supports. The narrow 8 pane windows in the sides of the bay window looked especially challenging.

Having recently attended a clinic at a regional NMRA convention on creating molds and casting in urethane, I decided to try this technique for the windows and eave supports. I built masters and molds using the one sided mold technique used by many urethane craftsman kit manufacturers. I designed the molds with special styrene inserts to provide the recesses needed to have the window trim cover the edges of the hole cut for thewindow. I won't go into the details of the casting process here. However, since I could make several sets of windows and eave supports from one set of molds, I made extra sets of these parts.

Once I had a set of windows and eave supports, the next step was to lay out and cut the parts for the wall sections. Each wall consists of an upper area of board and batten siding on top of a lower area of clapboard siding. These are separated by a 2 x 8 styrene strip layed flat. These wall sections sit on top of a 4 x 6 foundation strip layed on edge. Using the scale plans to measure and cut the parts for the wall sections. Allow extra length for the 2 x 8 and 4 x 6 strips at the corners so they can be trimmed to fit when the walls are joined to each other.



Masters, molds, and example parts for the windows, doors, and eave supports.



Cut out wall sections ready for assembly.

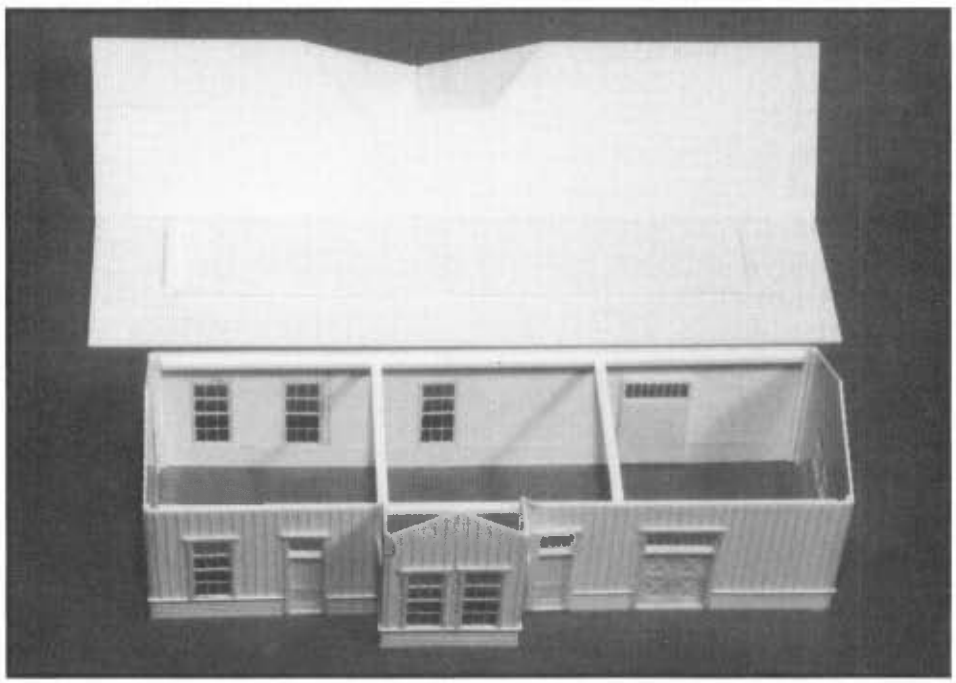
The Frisco #2 Depot standard plans were customized for depots in each town where they were used. You will have to refer to pictures of specific depots to see special arrangements of doors and windows. For the Billings depot, the door and window are reversed on the front wall at the main entrance into the passenger section. Also, an extra door was added between the bay window and the freight door on the front wall of the freight station.

Since the windows sit on top of the 2 x 8 strip separating the board and batten siding from the clapboard siding, I found it was easiest to cut the openings for the doors and windows before gluing together the wall sections. Once all of the parts have been cut and test fit, it is an easy process to build the wall sections using fast acting styrene cement.

Using a square to glue the wall sections together at the corners. Trim the 2x8 and 4x6 strips to fit at this time. I used larger strips of styrene to brace the inside of the walls and added these as I put the building together.

The roof on the depot is a standard 1 to 4 pitch roof with a single gable. I cut the main roof sections first, allowing for the overlap on one side at the ridge peak. I simply made a notch for the bay window roof under the gable. To cut the gable sections, use an angle of 48 degrees to match the slop of the main roof. I made a beveled cut on this edge to make a better fit where the gable roof meets the main roof. Be sure to allow for the overlap at the ridge of the gable.

I painted the windows and eave supports white and the walls gray prior to final assembly. I used Accuflex Reefer White for the windows, doors, and eave supports and Accuflex Reefer Gray for the walls. I sprayed the interior of the building black to subdue anything seen through the windows. If you want to detail the interior, you will want to add and paint an interior siding material. Before painting, be sure to wash everything in soapy water and rinse thoroughly to remove any mold release from the castings and any dirt or oils from the walls. Getting paint to adhere to the urethane castings can be a problem but Accuflex does a reasonable job at this.



Assembled walls and roof showing interior bracing.

Clear acetate window panes were glued to the inside of all the windows before attaching them to the building. I also added window shades made from paper cut to size at different length to simulate shades at various positions. The completed windows were inserted into their cut outs and glued in place with ACC.

After adding the windows, the next step is to attach the roof. Center and fit the roof on the walls and glue in place with styrene cement. Next glue the eave supports in place with ACC using the drawings or a picture of your depot as a guide. There are two styles of eave supports, four for the ends of the building and the rest for the front and back.

Depending on the era and depot you are modeling, you may need various kinds of roofing material. I chose to use tar paper roofing based on a picture of the Billings depot from the 1950's era which I am modeling. Frisco used standard green shingles or tar paper on these depots so I used a green tar paper material that I shaded and weathered with chalks.

The final touch to the depot is the chimney. I was able to construct a near match for the chimney in the pictures of the Billings depot using Campbell's plastic chimney kit. The kit comes with parts for two chimneys with wide and narrow sides. I combined four of the wide section chimney parts to construct a square chimney and used a file to bevel the top edge. I painted the assembled chimney with a brick red and used a thinned wash of concrete gray to color the mortar lines. Black chalk for soot at the opening was the finishing touch.

To evaluate my results, I constructed a small diorama to match a picture of the Billings depot from the 1950's. I placed trees and small structures on the diorama to match the location and perspective in the original picture. I took a pinhole lens view of the diorama to closely match the prototype scene in a picture obtained from the Frisco Museum.

The Frisco #2 depot is a simple structure and makes a good candidate for a relatively simple modeling project. The results can help to add realism to a Frisco town on your pike. My Billings depot is ready to take its place on my model railroad so the agent can start encouraging local businesses to ***"Ship it on the Frisco."***

List of Materials

Evergreen Styrene
- 9040 040" Plain Sheet
- 4544 .125" Board & Batten Siding
- 4061 .060" Clapboard Siding
- 8208 HO Scale 2x8 Strips
- 8406 HO Scale 4x6 Strips
- Misc. large strips for bracing.

Builders in Scale
- 262 Worn Green Tar Paper

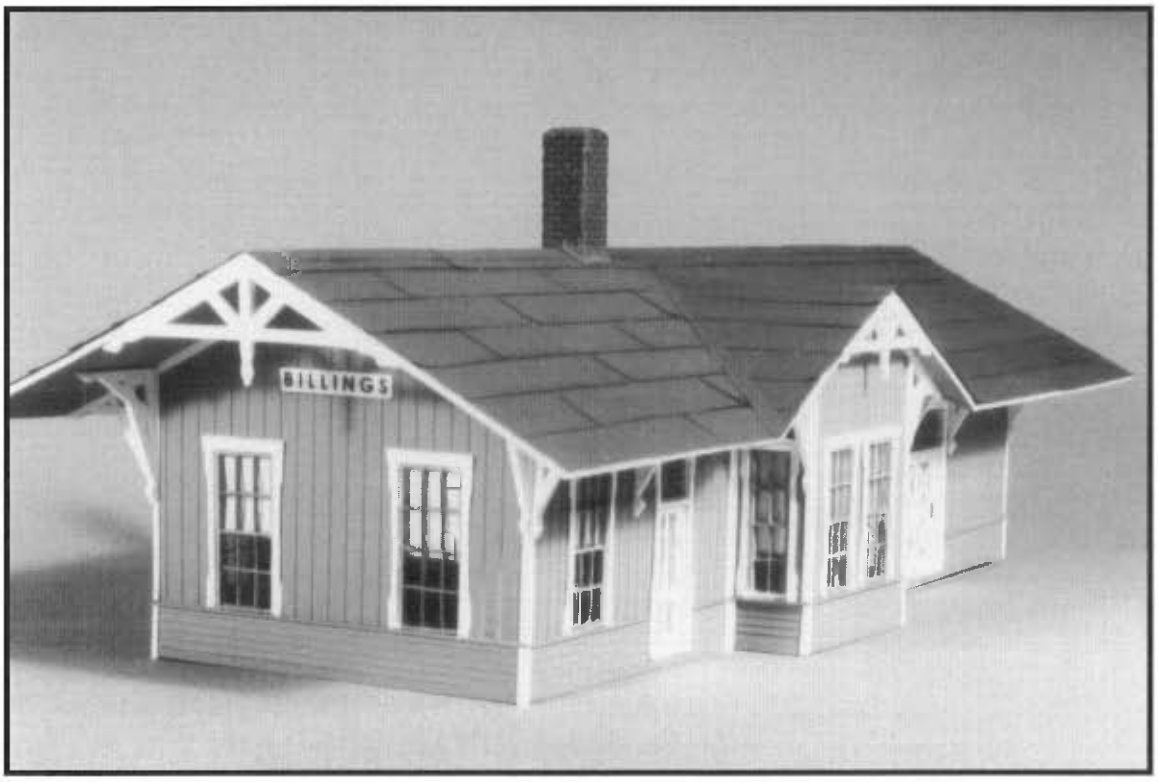
Campbell
- 2923 Chimneys Kit

Custom Castings
- #2 Depot Casting Set

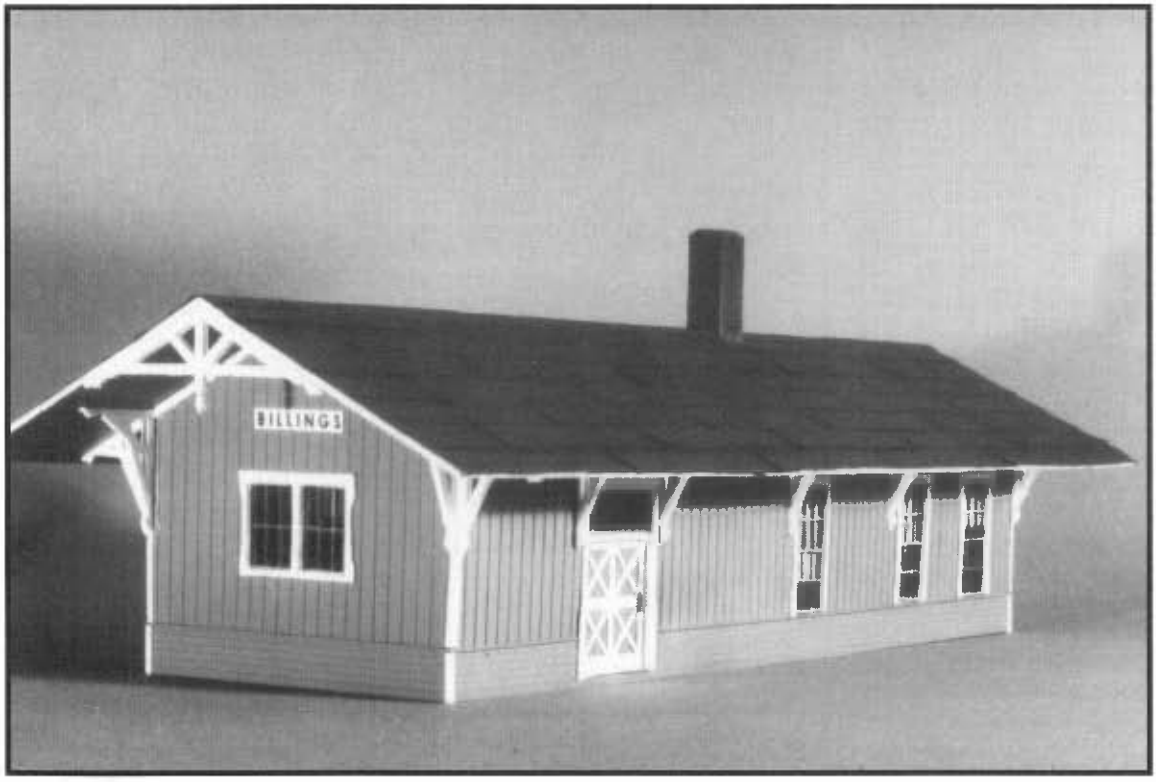
Paint (Accuflex)
- Reefer Gray
- Reefer White
- Concrete
- Dark Tuscan Oxide Red

Frisco depot at Billings, MO, circa. 1985. H.D. Connor photo

Frisco facility at Billings, MO, March 2, 1948. A. Johnson photo



Front view of completed Billings, MO, depot.



Rear view of completed Billings, MO, depot.

FRISCO BANANA SHEDS

Of the many challenges the early railroads were confronted with, none demanded more attention and innovation than did the handling and shipment of fresh fruit. The need for produce to arrive at distant markets in a firm and sound condition quickly became the mother of invention.

Early refrigerator cars were cooled with ice loaded into bunkers inside the ends or top of the cars. Although they could hold as much as 3,000 lbs. of ice, a long journey in the heat of the summer often proved to be more than the ice could support. In the 1870's, refrigerator cars were equipped with larger bunkers (up to 10,000 lbs. capacity) and several devices were experimented with using fans to blow the air from the melting ice in the car bunkers through the fruit.

In one method a fan run by a small motor blew the air over the ice in one end of the car. It would pass through the fruit and was drawn out of the other end of the car by an exhaust fan. It was then carried back to the end from which it started in a pipe surrounded by water from the melting ice. The same air was, therefore, used over and over again. Sometimes the ice would be crushed and salt added to produce a lower temperature.

Another innovation employed to keep the fruit cool was the erecting of cold storage houses. As their name implies, these were refrigerated warehouses that were designed to pre-cool the fruit just prior to it being loaded into refrigerator cars for shipment. In some cases, the cars could be switched inside the cold storage facility for loading. According to the 1905 *Yearbook Of The Department Of Agriculture*, a shipment of 8,000 packages of peaches pre-cooled in a cold storage house reached distant markets with less than 1 per cent of soft and decayed fruit, while shipments not pre-cooled could experience as much as 5 to 30 per cent spoilage.

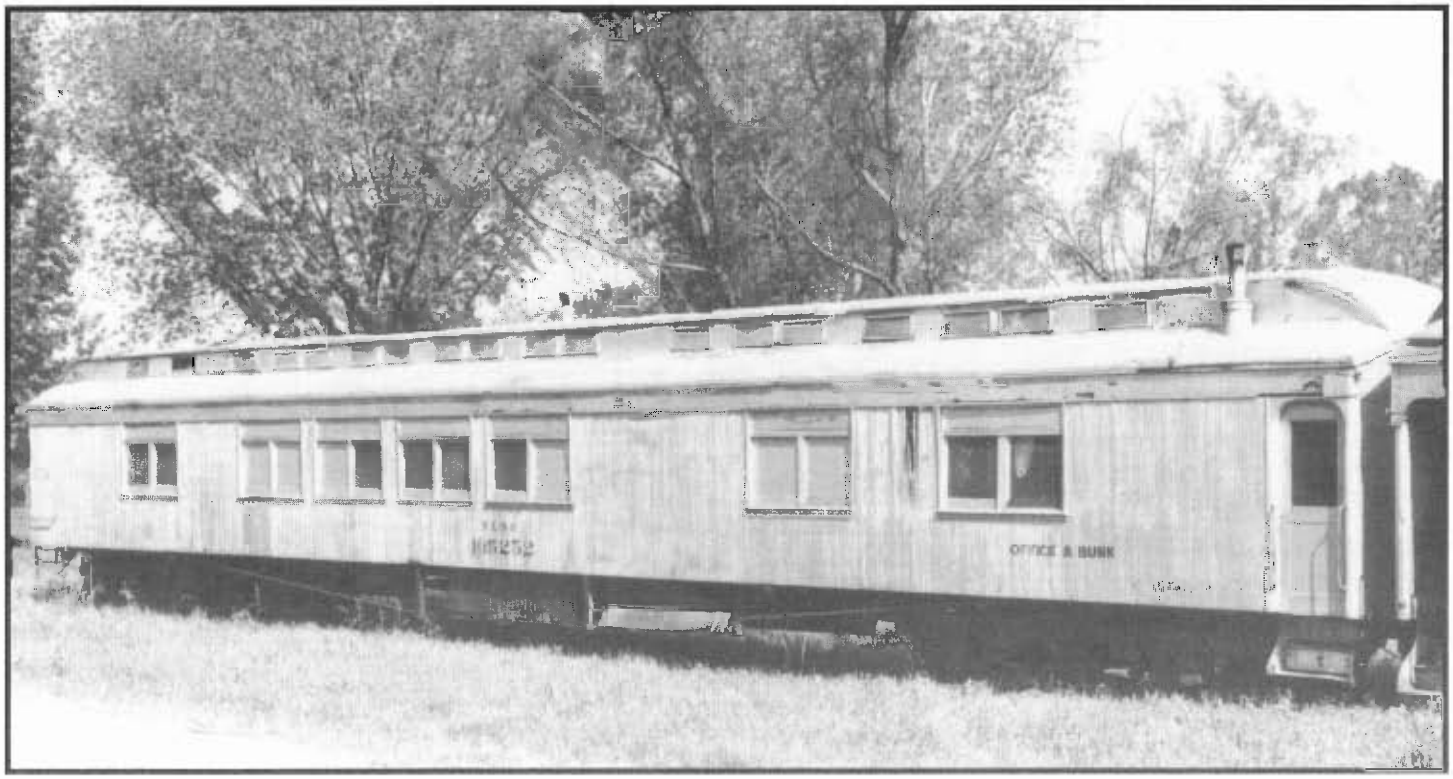
A rare photo of the Frisco's Springfield Banana Shed, circa. 1906, from Springfield Missouri - Metropolis of the Southwest, 1906.

Cold storage houses were built by large fruit growers or shippers, by associations of growers or shippers, and by refrigerator-car lines or railroad companies as a part of their refrigeration service.

Another similar innovation was known as cold storage plants. Using this process, cold air would be forced through the fruit after it was loaded in the car. Cold air was blown through a large insulated tube leading from a bunker room in the storage plant to the ice trap in one end of the car. From a trap in the opposite end of the car another tube would lead back to the warehouse. The cold air was blown into the car at a temperature of thirty-two degrees, and after passing through the car was drawn back by an exhaust fan to the warehouse where the moisture and gases from the fruit were frozen on the refrigerator pipes.

In 1904, the Frisco constructed such a cold plant at their North Springfield Shops for the purpose of cooling bananas in cars in transit. The plant consisted of four tracks inside of a shed, with light insulation, each track holding ten cars. Large air ducts were carried along the top of the shed, and by means of canvas tubes the cool air was carried into a car at one end and taken out at the other after passing through the fruit. The same plant was used in the winter to raise temperature of the fruit when desired.

COMPANY SERVICE ROSTER



Office-Bunk 105252, ex-Western Union 1375, a pre-1900 wood composite car, was still in service at Cullumburg, AL, on April 24, 1969. Photo from the collection of John C. La Rue

This is the nineth in our *Company Service Roster* feature in which we are profiling some of the most interesting, unique, and often underrated facets of Frisco equipment and operations: the Company Service Department... those men and machines that maintained the track, roadbed, right-of-way, bridges, structures, etc., all of which was essential to the successful operation of the railroad.

Bunk Cars

They were called Boarding Cars, Camp Cars, and Bunk Cars. Their official AAR classification was MWX-Boarding Outfit Cars. To the track, signal, and B & B gangs who had to live on them for extended periods of time, they were no doubt given other, more descriptive, and non-printable names. They were a curious assortment of recycled freight and passenger equipment that provided a home-away-from-home for their temporary railroad residents.

This is the second of a two part Company Service article that will profile the various types of equipment that served the housing needs of the traveling Frisco workers. This installment will feature recycled passenger equipment.

While recycled box cars were the mainstay of company service living quarters as far back as 1908, *(see **All Aboard**, Vol. X, No. IV, 1995-96, pp. 21-26)* a new fleet of bunk cars started to appear on the Frisco in the mid 1940's.

With the post-war decline in rail passenger travel and the condition of the Frisco's fleet of aging heavyweight equipment, the decision was made to purchase new streamline equipment and to retire or recycle many of the older units. Consequently, for a twelve year period from 1946 to 1958, over 100 new bunk or bunk combination cars were added to the company service fleet, all recycled passenger cars.

In addition to those cars classified as bunk, there were also a number of bunk combination cars, as follows:
Coach-Bunk
Coach-Office-Bunk
Diner-Bunk
Kitchen-Bunk
Kitchen-Diner-Bunk
Kitchen-Diner-Office-Bunk
Office-Bunk

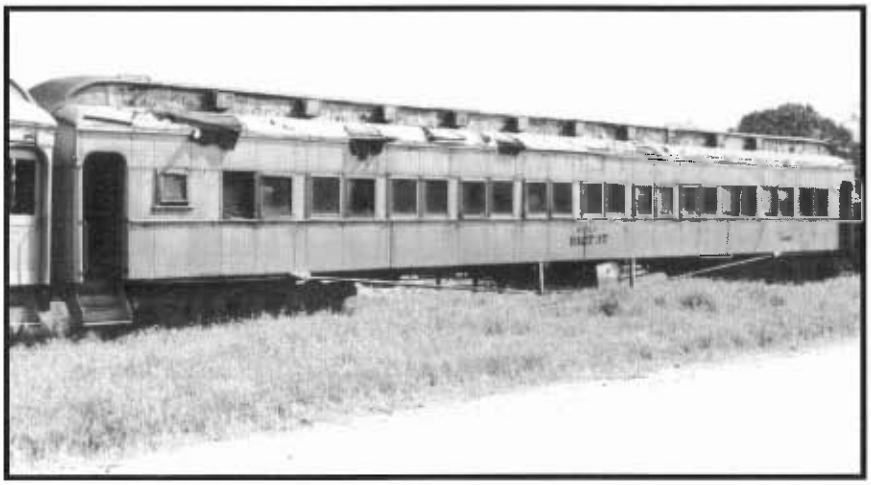
According to our records, some of the first passenger cars to be converted to company service were from:

- Chair Cars, series 706-750, built by Pullman between 1900 and 1907.
- Coach Cars, series 950-961, built by Pullman in 1901-02, and series 962-999, built by ACF between 1902 and 1904..
- Coach Cars, series 1001-1054 built by ACF (1001-1002) and Pullman (1003-1051) in 1907.

According to our records, thirty of these units were initially rebuilt for bunk car service, as follows:

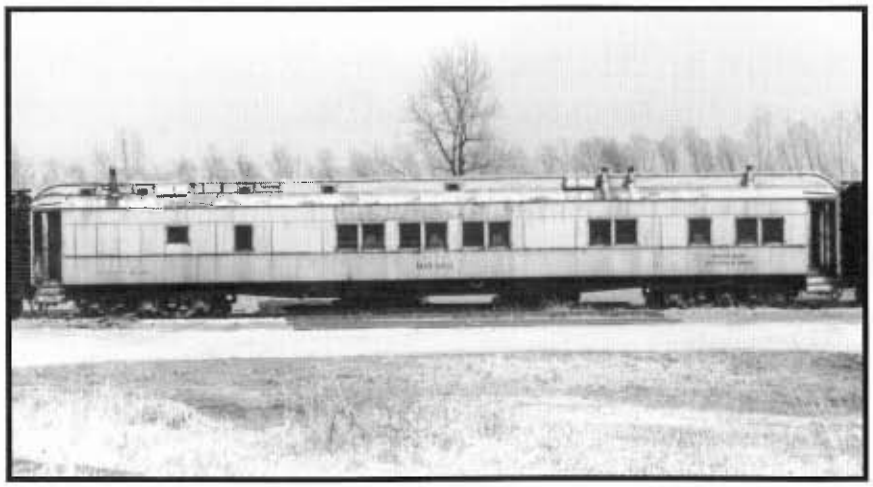
Original Number	CS Number	Date Converted
722	105282	1951
723	102743	1951
724	102745	1951
727	105297	?
729	105019	1946
730	105279	1952
734	105049	1947
735	105298	1952
739	105021	1950
740	105048	1947
741	105283	1951
950	102737	1953
984	105299	1952
987	105065	1947
990	105301	1952
994	105032	1947
996	105017	1946
1002	105062	1947
1018	105438	1955
1020	105302	1952
1022	105191	1949
1023	105192	1948
1026	105259	1950
1030	105072	1948
1034	105190	1949
1035	105284	1951
1036	105260	1950
1041	105261	1950
1048	105303	1952
1051	105306	1952

The largest single group of passenger equipment converted to company service arrived on Frisco property in the form of sixty-two former Tourist Sleepers.



Frisco 102737, originally built by Pullman in 1901 as Coach 950 was still in service on April 24, 1969 when this photo was taken at Cullumbury, AL. Photo from the collection of John C. La Rue

Although its looks are deceiving, Frisco 105306 began its tenure of service as Coach 1051, built by Pullman in 1907, and was still in service on April 25, 1969 when this photo was taken at Sulligent, AL. Photo from the collection of John C. La Rue



It started its railroad career in 1910 as Pullman built Tourist Sleeper 2526, "Morga." It was purchased by the Frisco in April, 1956, and was placed in company service as Kitchen-Diner-Office-Bunk car 105463. Photo was taken in October, 1966, at St. Genevieve, MO. Photo from the collection of John C. La Rue

In 1896, the Central Pacific Railroad started a program to improve emigrant travel, and enhance emigrant purchase of railroad land, by building a series of super economy "no frills" sleeping cars. Other western lines soon followed with similar equipment and service. As competition for emigrant travel increased, many roads began to see the economic advantages of offering similar reduced-fare accommodations for regular revenue service. Consequently, the low cost emigrant sleeper concept gradually evolved into a new class of cut-rate equipment known as the *Tourist Sleeper*, most of which were built and operated by the Pullman Company. With the post-war decline of all rail passenger travel, Pullman sold their fleet of surplus tourist cars to various railroads, with most being placed in company service.

The Frisco's fleet of ex-tourist sleepers was purchased in two groups. The first order of thirty-six were purchased in 1953 and the remaining twenty-five arrived in 1956. Ex-tourist 5052 was converted into a mobile instruction car for the Safety Department. The remaining sixty units were converted to company service, forty-four of which we have record of being converted into bunk or bunk combination cars.

Original Number	CS Number	Date Purchased
1394	105400	1953
1481	105401	1953
5110	105405	1953
5120	105407	1953
5133	105409	1953
1654	105411	1953
2125	105413	1953
2135	105415	1953
2338	105417	1953
2368	105418	1953
2373	105419	1953
5014	105420	1953
4053	105421	1953
4046	105422	1953
4198	105423	1953
4243	105424	1953
2614	105425	1953
2648	105426	1953
3010	105427	1953
2552	105429	1953
3112	105430	1953
5025	105431	1953
2568	105432	1953
2589	105433	1953
2610	105434	1953
6073	105435	1953
1583	105442	1956
2395	105443	1956
1158	105444	1956
1157	105445	1956
1205	105446	1956
2345	105447	1956
1610	105448	1956
1661	105449	1956
1667	105450	1956
1939	105451	1956
2345	105452	1956
5104	105453	1956
1008	105454	1956
1113	105455	1956
1808	105458	1956
2131	105462	1956
2565	105463	1956
2574	105464	1956

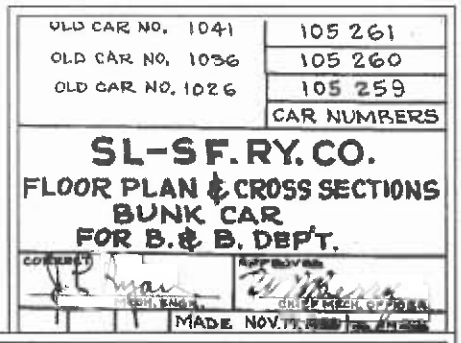
Two additional classes of passenger equipment were converted to bunk cars. According to our records, eight ex-heavyweight sleeper cars were also recycled as bunk or bunk combination cars.

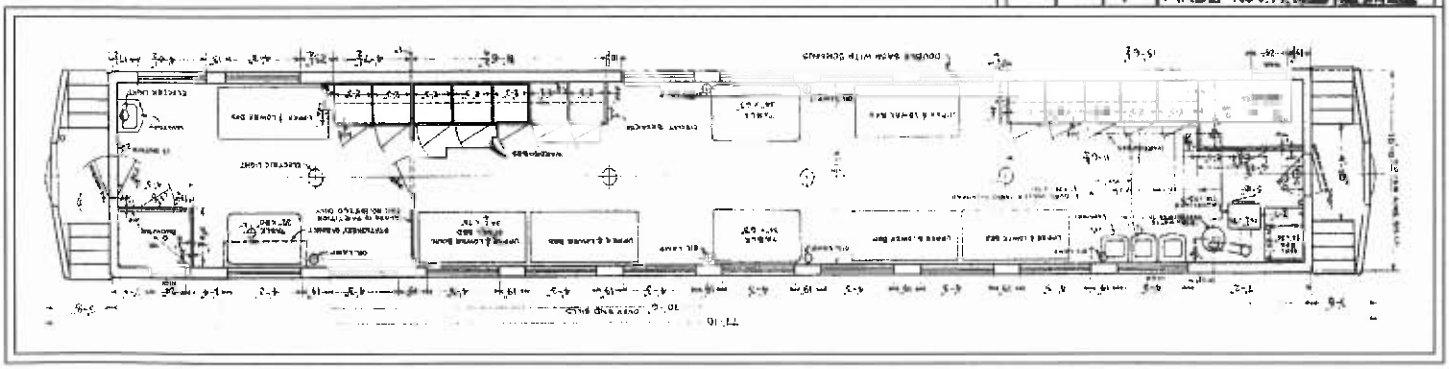
Original Name	CS Number	Date Converted
Edwardsville	105358	1953
Dulverton	105359	1954
Buxar	105360	1954
Tonoor	105361	1954
Tiana	105362	1954
Red Buttes	105397	1956
Duroyce	105398	1954
Fithian	105399	1954

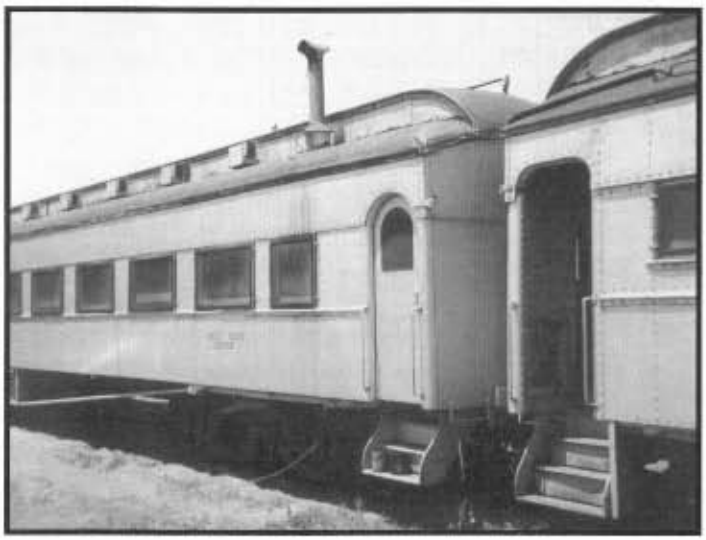
Two ex-Western Union cars were also purchased and converted to bunk cars. WU 1375 became SLSF 105252 in 1950, and WU 1330 was converted to SLSF 105436 in 1955.

Conversion of passenger equipment into company service continued well into the late 1960's and early 1970's, and many were still in service following the 1980 Frisco-BN merger.

According to our records, the only streamlined car placed in company service was the 1551, the *Oklahoma City*.





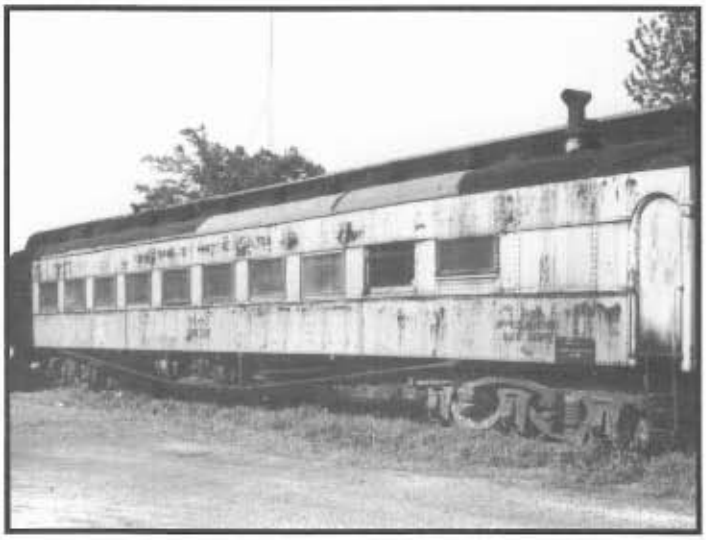


ex-Chair Car 729, Kitchen-Diner-Bunk 105019, was working in Afton, OK, when this photo was taken May 23, 1962. *Frisco photo*

It was apparently lunch time on SLSF 105019, when this photo was taken May 23, 1962, at Afton, OK. Notice the "modern" kitchen facilities. *Frisco photo*

After a long day working on the B & B gang in Quanah, TX, June 27, 1962, ex-Chair Car 730, SLSF 105279, was a welcomed retreat for one resident. *Frisco photo*

ex-Chair Car 990, SLSF 105301, was in service as a full bunk car on the B & B gang in Ft. Scott, KS, when this photo was taken November 28, 1962 *Frisco photo*



ex-Coach 1036, SLSF Office-Bunk 105260, was in service at Columbus, MS, April 24, 1969, when this photo was taken. From the collection of John C. LaRue

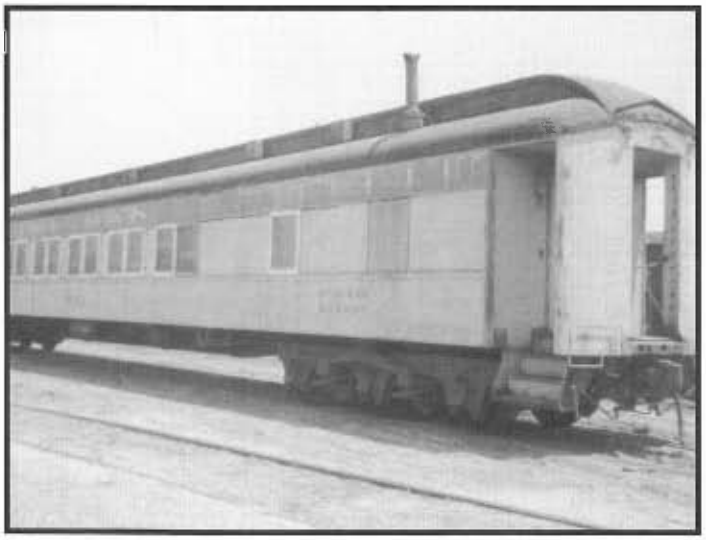
SLSF 105260, showing bunk area. (See diagram on p. 11) Photo taken January 24, 1963, at Amory, MS. *Frisco photo*

This rare interior photo of ex-Tourist Sleeper 2125, SLSF 105413, shows the individual sleeping compartments still in place. *Frisco photo*

This rare interior photo of ex-Tourist Sleeper 2373, SLSF 105419, shows the upper berth sleeping accommodations still in place. *Frisco photo*

ex-Tourist Sleeper 2610, SLSF 105434, was in service on DG gang 219, Clayton, OK, when this photo was taken. Frisco photo

This rare photo of the office area of ex-Western Union Car 1375, SLSF 105252, was taken at Cabool, MO, August 22, 1962. *Frisco photo*



ex-Pullman heavyweight sleeper "Tonoor," SLSF 105361, in service at Chelsea, OK, May 11, 1962. Notice the PULLMAN name still on car. *Frisco photo*

Looking similar to its days in revenue service, note this interior view of SLSF 105361, in service at Chelsea, OK, May 11, 1962. *Frisco photo*