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Date: Tue, 24 Jul 2001 14:34:38 -0700
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Subject: Caboose Notes

Gents--This is some draft material that Jim Dick dug up from MHS. I thought you might have some use for it in the future. FYI.

July 24, 2001

President's File 1387, Northern Pacific Railway, Minnesota Historical Society, Box 137.E.6.5.B. Research by James C. Dick.

Edward A. Moseley, Secretary, Interstate Commerce Commission, to Howard Elliott, January 14, 1908

Complaint received at Jamestown; "The cabooses are frequently made of box cars without proper steps leading to or from them, and without draw-bars and without cupolas, and are very cold and dingy, and in all ways unsafe. They are operated on the main line and branch lines, and the men or employees who refuse to take them out have their conduct charged against them." Interstate Commerce Commission's investigator reports: "I find that box cars in an old and worn out condition are in general use as cabooses. These cars are equipped with automatic couplers and other safety appliances required by law, also with a step and grab iron on the outside close to the door. These cars have no cupolas and crews required to ride in them have no way of watching their train while in motion. It is a fact . . . that the cars are cold, dingy and unsafe. I might call your attention to the case of the death of a conductor at [Kalama] Washington, on this railway last fall. This conductor was one of the dead-head crews, the train upon which they were riding was struck by a following train, the caboose being of the four-wheeled dinky pattern. The conductor was pinned under the wreckage and burned to death. I arrived on the scene one hour after the accident and the evidence was to the effect that the train was not moving over ten or fifteen miles an hour. The death of this conductor would have been avoided if the regular standard caboose had been in service."

Howard Elliott to Charles M. Levey, February 1, 1909

House Bill 267 regarding cabooses. "I presume the small caboose must go, but perhaps we could get this bill changed so that the type of car adopted in Montana would be satisfactory in Minnesota. The same bill is up in Washington, and it may be wise for you to send detailed plans to [Henry C.] Nutt of our Montana car so that he can have them to use with Judge [George Theron] Reid in trying to get that car adopted[,] rather than some special Washington car." Enclosed is Montana House Bill 116, "An Act to regulate the size and manner of construction of all caboose cars used by any person, corporation or company, within the State of Montana, and providing a penalty for the violation thereof." Sets minimum 24 foot length, door in each end, water closes, cupolas, platforms, guard rails, grab irons and steps for the safety of person in alighting or getting on said caboose cars, and said caboose cars shall be equipped with at least two, four wheel trucks. (Penalty of \$500-\$1,000 for each offense.) Takes effect November 1, 1907.

Henry C. Nutt to Francis B. Clarke, President, Spokane, Portland and Seattle Railway, Portland, September 17, 1909

Mr. [Richard M.] Crosby and Mr. Cook, our Car Foreman at South Tacoma, have just been looking over your way cars and the [Coeur d'Alene Railway and Navigation] flats, which [it] was suggested might be converted into way cars.

The six [Northern Pacific] dinky way cars, which you have, can be converted into cars that will comply with the Washington law, at an expense of about \$225,00 each, and it seems to me that just as soon as we can get the material ready for this work - which will be in about ten days - you ought to send these cars up to South Tacoma one at a time and

have them remodeled and returned to you.

As I understand it, you will need 25 cabooses in all, so that if these six are converted it will be necessary to build 19 or 20 other cars. Mr. Crosby tells me that the [Coeur d'Alene Railway and Navigation] flats can be converted into cabooses at \$225.00 each, but at a cost of about \$300 or \$325.00 he could take the old trucks from under these cars and scrap the bodies and build new way car bodies, which, in his judgment and in mine, will be very much better than to remodel the [Coeur d'Alene Railway and Navigation] flat cars.

My recommendation is that you arrange at once to have the six [Northern Pacific] dinky cabooses lengthened out, so as to conform with the law, and secure authority from Mr. [Howard] Elliott and Mr. [James J.] Hill for building new caboose car bodies to go on the old [Coeur d'Alene Railway and Navigation] flat car trucks for what other cabooses you need.

North Dakota House Bill 169, May 13, 1921

An Act for an Act to Amend and Re-enaction Section 4671 of the Compiled Laws of the State of North Dakota for the year 1913, relating to the size and construction of caboose cars.

This law is effective on January 1, 1924, and requires that [r]ailroads furnish cabooses at least 24 feet in length, exclusive of platform[,] equipped with two [four-wheel] trucks; the center sill to be constructed of steel and that the caboose shall be of constructive quality equal to that of a thirty-ton capacity freight car, constructed according to the [Master Car Builder's Association] standards; shall be provided with a door in the each end thereof and an outside platform across each end of car; platform shall not be less than twenty-four inches in width and shall be equipped with proper guard rails, and with grab-irons and steps for safety of persons getting on and off car, said steps shall be equipped with suitable rod, board, or other guard at each end at the back thereof, properly designed to prevent slipping from said steps.

"Owing to the make-up of the [l]egislative body and the general situation in North Dakota, it was thought that it was rather hopeless to oppose any Bills which might be introduced."

Rapelje to Donnelly, March 19, 1924

On June 7th, 1923, I wrote you that in my opinion we should make a start toward providing steel center sill cabooses for the main line trains where pushers are used, and somewhat later improvement papers were made covering ten cabooses. Material has been very much delayed, but the steel center sills for these ten cabooses have now been shipped and we will have the work completed on this number within the next sixty days.

The budget for 1924 contains an item for equipping twenty additional cabooses.

The situation now is as follows:

We now have assigned in North Dakota 116 cabooses, of which 24 have steel center sills. This leaves 92 with wooden center sills; and to conform literally with the law and put in steel center sills on these cabooses will cost approximately \$78,000, the estimate being \$843 for each caboose.

Of the above cabooses there are now assigned to main lines or to branches where pushers are regularly used, a total of thirty-nine. This number is of course considerably increased during the fall months. These cabooses are assigned as follows:

- 10 Fargo Division, Main Line
- 09 Dakota Division, Main Line
- 17 Yellowstone Division, Main Line
- 02 Devils Lake Branch
- 01 JR and O Branch
- 39

If we provide steel center sills for the ten cabooses now authorized and for the twenty additional covered by the 1924 budget, we will have a total of 54 such cabooses which will take care of the thirty-nine listed above and give us fifteen additional to apply during

the fall rush. It seems to me that this is as far as we should go toward complying with the law until it is definitely determined that the law can be sustained. This, you will note, would leave us with 62 wooden sill cabooses, which would be used on the smaller branch lines and for incidental service. If we were to equip these 62 cabooses with steel center sills it would mean an expenditure of approximately \$52,000. C. W. Bunn to Donnelly, May 17, 1923, quoted in Rapelje: "While in my opinion is that the law ought to be held invalid, it is hard to distinguish the case from the headlight case and I am bound therefore to think that what the Supreme Court will say about the question is quite doubtful Provided the improvement is a desirable one, it seems to me decidedly that the thing to do is to go ahead and conform with the law."

Rapelje to Donnelly, continued:

Mr. [Aaron M.] Burt has talked this matter over with Mr. Lyons who suggests that it would be desirable to advise the North Dakota authorities just how far we are willing to go in compliance with the law, and what we are doing; and endeavor to arrange with the Attorney General for a test case based on one violation.

It is of course unreasonable in the extreme to be required to put center sills in cabooses used on our isolated branch lines.

F. E. Williamson to Donnelly, September 7, 1926

Mechanical Department [Authorization for Expenditure] 213 covering application of steel center sills, body bolsters, truck bolsters, couplers and second-hand 70-ton capacity trucks to twenty-five cabooses, \$29,932.

(This is partially in response to the North Dakota bill passage in 1921, which gave railroads operating in North Dakota until January 1, 1924, to complete the work.)

"Various informal extensions have been obtained. Finally the Commission advised we must comply with the law and refused to permit operation of cabooses in the state after September 1, 1926, unless equipped with steel center sills. In order to comply with the law we arranged for the transfer of sufficient steel sill cabooses from other divisions to take care of the situation. This necessitates cutting pusher engines in ahead of caboose in our mountain territories and to avoid agitation of this subject in Montana, it is proposed to equip twenty-five cabooses for use on the Montana and Rocky Mountain [d]ivisions as outlined in the attached [Authorization for Expenditure].

Williamson to Donnelly, February 4, 1927

Mechanical Department [Authorization for Expenditure] 31, covering application of steel center sills, body bolsters, truck bolsters, couplers, and second-hand [seventy-ton] capacity trucks to fifty 24-foot cabooses, amount \$54,365.

"There is really very little which we can add to narrative on face of AFE in support of this expenditure. From an operating standpoint our operations are rendered burdensome in that wherever we have pusher service on wooden underframe cabooses we must cut helper in ahead of caboose which delays every such train on an average about 30 minutes. Secondly, dropping of caboose onto train at top of hill or mountain involves a personal injury hazard which is expensive and may, in some accident, prove extremely so."

"Considerable discussion has been had of this proposed expenditure and we feel that we must progress program of application of steel sills to cabooses as rapidly as we can."

Judson to Stevens, March 30, 1941

Proposed operation of cabooses through terminals: In working out the details . . . so many obstacles have been brought up that I doubt whether anything can be worked out which will show enough saving and advantage to warrant further consideration. (Problems: necessary to stop so trainmen could transfer belongings, "cause more or less trouble and delay." Living quarters would have to be provided at points where

cabooses would be run through, "will eventually involve quite a little expense because of the demand for taking care of them." "If we did this for the trainmen there is no reason why engineers should not be similarly accommodated, all of which will run into expense...")

Lowry Smith to Stevens, August 6, 1941

Memorandum on Northern Pacific Caboose Situation

Information collected and tabulated in a statement dated May 12 showed that the ownership of cabooses with steel sills to be 328 and with wood sills, 89, total 417. At that time the requirements for steel sill were 261 leaving a surplus of 67; for wood sill 29 leaving a surplus of 60. Also at that time it was estimated by the superintendents that the maximum requirements would be steel sill 354, shortage 26, wood sill 39, surplus 50.

...
Since the date of this inventory business has increased to such an extent that the surplus of steel sill cars is practically used up and it will evidently be necessary to use cars with wood sills under conditions where it is very objectionable.

On the assumption that the present business is going to continue for some time and no doubt increase, it is very desirable that additional cabooses suitable for heavy main line service be acquired. Consideration has been given to several designs and all things considered one of all steel seems best, and it is agreed by those concerned that a program of increasing the ownership should be started and that as many all-steel 30-foot cabooses as condition will permit up to 50 be purchased as soon as obtainable and that thereafter the program be continued by the purchase each year of as many cabooses as conditions may dictate. When new cabooses are available all-wood cars shall be retired as fast as they can be replaced and those remaining in service given only such repairs as many be necessary to carry them until they can be replaced The yearly purchase of all steel cars should continue until an ownership is established that appears to be sufficient for the present or future conditions.

From the standpoint of cost the wooden cabooses with steel sills would be considerably cheaper. As at present those in service could be perpetuated almost indefinitely at a cost of about \$900 for rebuilding about every 7 1/2 years plus the usual running repairs, making the yearly cost for rebuilding \$120, running repairs \$60, total \$180.

The steel cabooses if built in company shops would probably cost about \$6,500 each and would likely be paid for from company cash; however, interest and depreciation rates will be assumed in order to see what the economic prospects are. Assuming an interest rate of 2 1/4 [percent] and depreciation rate of 3.29 [percent] the annual carrying charges will amount to \$287 per car. The running repairs will amount to about \$75, making the total yearly cost \$368 as against about \$180 for steel sill wooden cars.

Buying new wooden cars and perpetuating indefinitely these now owned is contrary to the present trend and it is generally believed that legislation will be enacted within a comparatively short time requiring that all cabooses be of all-steel construction and add certain details of arrangement.

It will be impossible to get quick action on cabooses delivered under any circumstances. If they should be built in the company shop, it would require six weeks to two months for preparing plans and an additional [three to four] months for delivery of material. This would mean probably six months before the work could be started. It is considered that Brainerd would be the best location for manufacturing and that about one car per day could be completed when production started.

If bought from car manufacturers, about three weeks would be required to prepare special specifications and about three weeks further for obtaining bids and placing the order, after which it would be about four months before delivery would be started at the rate of possibly four to five cars per day.

The cost for steel cabooses, used above, is on the assumption that the work will be done in company shops. If purchased the cost would

possibly run around \$1,000 higher.

Stevens to Denney, August 10, 1941

Stevens recommends to that the Northern Pacific start a program for building up to a minimum of 50 new all-steel 30-foot cabooses, based on the August 6 memorandum. Cited in Stevens to Denney, February 23, 1942.

Stevens to Denney, September 1, 1941

"You will note that we have 37 steel sill cabooses in transfer service and that on most, if not all, of these transfers it would be satisfactory to use a [thirty-six-foot] steel box car converted into a caboose, plan for which we are developing. The immediate construction of 19 or 20 of these converted box car cabooses will meet the present requirements fairly well, but I am still of the opinion that we should start a moderate program for the construction of all-steel cabooses up to a total of about 40, say at the rate of about 15 or 20 units per year.

"Taking into consideration the investment, maintenance and operating cost of facilities the Milwaukee has provided in lieu of assigned cabooses, it seems to me very questionable if they have made any net saving. The information furnished by the Great Northern is quite general in character and they apparently do not care to cover the present situation in very much detail. In my opinion, all things considered, it is very questionable if the transcontinental lines can effect any worthwhile net saving by providing house accommodations in lieu of assigned cabooses."

Denney to Stevens, September 5, 1941

"We will apparently have to continue our present practice The present steel situation may make it necessary to build wood-sheathed cars."

Stevens to Denney, September 18, 1941

"Mechanical Department 144-41, conversion of twenty steel underframe box cars into cabooses at an estimated cost of \$18,710, the division of expense per each caboose being as follows:

\$778.53 - New material and labor
\$030.00 - Second-hand material
\$126.95 - Store and shop expense
\$935.48 - Total

"The plan makes a very satisfactory caboose The only objectionable feature is the necessity of using strap sill steps, account of the platform coming over the wheels."

Hand-written note: AFE signed by Mr. Denney 9/20/41.

Stevens to Denney, October 30, 1941

"The first car completed, No. 1559, will come down from Brainerd today and we will hold it at [the Third] Street [C]oach [Y]ard for a few days for inspection by Mechanical and Operating officers with a view to ascertaining if any changes should be made before we go ahead with the balance of the program."

Stevens to Denney, February 23, 1942

[Regarding the conversion of 20 box cars into bay window-type cabooses]

"that work is now in progress and will be completed about the middle of next month. One caboose of this type has been put in service and both the [t]rainmen and [c]onductors [o]rganizations have strongly protested the use of this type of caboose in [main line] service on the grounds that the bay window does not give sufficient vision to enable them to perform the duties for which they are responsible.

"The officers also prefer the cupola-type caboose for main line service, but consider the box car bay window-type satisfactory for transfer service or emergency use on the [main line] during the months of peak business.

"Survey made last August shows a total of 37 steel sill cabooses in transfer service as follows:

09 - Lake Superior Division

17 - St. Paul Division
02 - Fargo Division
07 - Tacoma Division
37 - Total

"The out-of-pocket cost of converting old box cars into bay window-type cabooses is about \$800 per unit. Conversion of 15 more in addition to the present program of 20, making a total of 35 of this type added to our 328 steel sill cupola-type, will give enough units to equip the [main line] and transfer service with steel sill cabooses for the peak business we handled last year.

"We have 34 [main line] freight districts including the Tacoma-Portland line, and if we assume the increase in business will necessitate two additional cabooses per freight district, our ownership should be increased to 68 units, to a total of 396.

"Increasing the converted box car program by 15 units and building 30 new all-steel cabooses will give us a total increase of 65 units which is, I think, as good a guess as any of our possible requirements.

"We have plans and specifications practically complete for the all-steel cupola-type caboose. I recommend that material for the construction of 30 units of this plan be ordered immediately and the construction program completed as quickly as material can be obtained' also that we continue the program now in progress at Brainerd shops for converting box cars into bay window-type cabooses until a total of 35 units have been converted."

W. D. Richeson, Manger of Sales, American Car and Foundry Company, to Denney, March 3, 1942

CED trying to get 30 sets of Bettendorf Swing Motion Trucks fails as the War Department is about to give Bettendorf's plant to International-Harvester to build tanks and armor castings. Richeson points out that the lag between war time conversion may allow Bettendorf enough time to produce just 30 sets for the Northern Pacific.

Eugene L. Grimm to J. H. Poore, April 13, 1942

Grimm outlining materials needed to construct 30 all-steel cars at Brainerd: .10 inch thick steel for roof, sides and ends. Grimm advised that the Northern Pacific has on hand enough .134-inch thick steel to handle the sides and ends, but this would increase the weight 750 to 1000 pounds per caboose, or about two percent of the total weight.

"This would be preferable to the use of wood sheathing and Mr. Turner would be glad to have this material taken from his stock.

"Wood sheathing would require a redesign of the superstructure frame with application of diagonals to give the rigidity lost by omission of the steel plate; also the application of members to which the wood sheathing can be fastened. I will have such a redesign made as, with the present outlook, it quite likely will be necessary for us to use wood sheathing on subsequent lots. I hope we will be allowed to use the plate we have on hand, as to use wood sheathing we would have to cancel all orders for steel superstructure frame, make a redesign and reorder to proper dimensions and quantities with consequent delay."

Denney to Stevens, April 25, 1942

The War Production Board is shutting down car production - 36,000 cars will be produced in February, March and April before plants are converted to producing war material. CED trying to get a substantial part of 500 ballast cars on order by having them included as hopper cars in an additional 18,000 cars that will be produced up to October 1.

"You will note that no cabooses are included in the additional 18,000 cars and I am convinced, after conferences in Washington, that it will not be possible to secure allocations of material for cabooses."

Judson to Stevens, May 29, 1942

Department heads discussing MW car needs, pressing needs for 77 assorted cars, with a request that authorization for 100 be given, with the 23 surplus to be built as need arises.

"[Twenty] of the 35 bay window-type cabooses authorized have

been completed. [Ten] of these cars are on the Western District and [ten] on the Eastern District. Work is progressing on the remaining 15. Recent survey of the caboos situation shows that to handle the peak business this fall, [six] cabooses will be necessary on the Lake Superior Division and [eight] on the Yellowstone Division, none being necessary on the St. Paul and Fargo [d]ivisions. I do not have information as to the requirements, if any, on the Western District, but if 14 of the 15 bay window-type cabooses are now being constructed are furnished to the Eastern District when completed, the caboose situation will be taken care of for this year.

Grimm to Stevens, June 22, 1942

Grimm notes the War Production Board has cut out the 30 all-steel cabooses, but 30 swing-motion Bettendorf trucks have been secured. He also notes President Denney has suggested one set be applied to the box car rebuilds.

"Brainerd Shop assembled two of these Swing-Motion trucks and attempted to apply them to one of the bay window cabooses, and report as follows:

"The truck condition of the present trucks under [thirty-six-foot] steel underframe box cars with truck bolster FG-293 and truck side frames FS-570 is about 23 inches from rail to bearing surface of center plate on truck bolster.

"The truck condition of Bettendorf swing motion trucks as shown on Drawing 46894 is 25-3/4 [inches] from rail to bearing surface of center plate on truck bolster. The height at center of the top of truck transom from rail is about 25-1/2 [inches]. . . . If the height of the truck bolster could be reduced to conform to a coupler height of 34-1/2 [inches] the draft arms would ride on the truck transom. My conclusion is that the application of Bettendorf swing motion trucks to 36 [foot] bay window-type cabooses is impracticable."

"It is evident that the Bettendorf trucks as furnished cannot be applied to these cars.

"We also have information that the bay window-type cabooses that were converted last winter now possess satisfactory riding qualities since the proper elliptic springs have been received and applied, and in view of this, I think we should hold the Bettendorf trucks until we are permitted to build new cabooses."

Stevens to Denney, July 18, 1942

Mechanical Department AFE 83 covering construction of ten steel underframe bay window-type cabooses from box cars.

"We now have a total of 35 cabooses of this type in operation and they have proven quite satisfactory. If our fall business reaches the anticipated peak we will need at least ten additional cabooses and we will be taking no chances in building [ten] additional cabooses of this type as it is bound to be a long time before any substantial part of our present [caboose] ownership is replaced with all-steel cabooses.

"We are still operating about 75 all-wood cabooses so there will be no danger of getting a surplus of box car-type cabooses for [some time] to come, as this type of caboose will be used to replace all-wood cabooses during off-peak business, or when peak business drops off.

Division Staff of the Eastern District, and representatives of the operating Department, January 7, 1943

"Considerable discussion was had on the advantages and disadvantages of the bay window-type caboose. Most of the men seem to like them, although some do not, and it is thought that when all are equipped with the elliptic springs complaints will gradually decline. All the men seem to like the interior arrangement, the most complaints being on the riding qualities of the cars.

"Matter of using wood sill cabooses in main line service was discussed, but this is being done only at the wishes of the men who desire the larger cabooses on local trains.

"Survey is now being made as to the number of cabooses that will be required to handle an increase of [35 percent] in business."