

Technical Errors Addressed in 2021 MS Excel Version of URCS Phase III Railroad Cost Program

Development of the 2021 MS Excel-based URCS Phase III Railroad Cost Program revealed certain technical errors in the legacy programs that cost the waybill sample. These seventeen errors are described below.

1. STCC 08 (Forest Products) and STCC 09 (Marine Products): Shipments of STCC 08 (Forest Products) and STCC 09 (Marine Products) are incorrectly assigned the Loss & Damage (L&D) category of STCC 01 (Farm Products) because they start with a zero. The legacy waybill costing programs contain a line of code that assumes any STCC that starts with a zero is a Farm Product.
2. STCC 20821 (Beer/Ale): Shipments of STCC 20821 (Beer/Ale) are incorrectly assigned the L&D category of STCC 20 (Food & Kindred Products) instead of their own L&D category because of a lookup omission. The legacy waybill costing programs are missing a line of code to assign STCC 20821 to its own L&D category.
3. STCC 362 (Other Electrical Machinery): Shipments of STCC 362 (Other Electrical Machinery) are incorrectly assigned the L&D category of STCC 363 (Household Appliances) instead of their own L&D category because of a typographical error. The legacy waybill costing programs contain a line of code that assigns STCC 362 Other Electrical Machinery to the L & D category for STCC 363 Household Appliances.
4. STCC 363 (Household Appliances): Shipments of STCC 363 (Household Appliances) are incorrectly assigned the L&D category of STCC 362 (Other Electrical Machinery) instead of their own L&D category because of a typographical error. The legacy waybill costing programs contain a line of code that assigns STCC 363 Household Appliances to the L & D category for STCC 362 Other Electrical Machinery.
5. “All Other” Loss & Damage Categories: Some 2-digit STCC codes have L&D sub-categories along with an “All Other” sub-category for commodities that are not otherwise individually specified. The legacy waybill costing programs incorrectly assigns STCCs that are not included in a sub-category to the average of the entire commodity group, instead of to the average of the “All Other” category. For example, STCC 37 (Transportation Equipment) has three sub-categories: Automobiles (STCC 37111), Trucks (STCC 37112), and Motor Vehicle Parts (STCC 3714). If a shipment is STCC 37 – but is not an automobile, truck, or parts – the legacy waybill costing programs sets the category to the average of all STCC 37 commodities, which includes automobiles, truck, and parts, rather than to the average of “All Other” STCC 37 commodities.
6. Toledo Peoria & Western: Any waybill records of the Toledo Peoria & Western railroad, an independent railroad, are incorrectly changed to a different railroad, BNSF Railway Co.
7. Car Ownership of Pooled Equipment: The car ownership for pooled equipment with car initials ABOX, RBOX, and GONX is incorrectly treated as railroad-owned equipment, instead of privately owned equipment. Cars with these initials are Trailer Train (TTX) cars, which operate in equipment pools. The railroads report trailer train equipment in their R-1 reports under privately-owned

equipment. The legacy waybill costing programs, however, explicitly change the car ownership of cars whose car initial is “ABOX”, “RBOX” or “GONX” to railroad-owned equipment.

8. Rounding of Mileage: The waybill sample contains distances in the tenths of miles but the legacy waybill costing programs override those values by rounding the miles to the nearest whole number.
9. Railroad Equipment of Intermodal Shipments: The legacy waybill costing programs incorrectly change the car type for all intermodal shipments to a TOFC/COFC Flatcar even if the rail railroad specified a different type of flatcar (e.g., General Service Flatcar or Other Flatcar) on its waybill record.
10. Private Car Rental Costs of Bituminous Coal (STCC 112): Although the railroads report all information regarding rental costs of privately-owned equipment in Schedule 414 of their R-1 Reports, the legacy waybill costing programs contain a line of code that incorrectly sets to zero the private car rental costs for shipments of Bituminous Coal (STCC 112) moving in privately-owned equipment.
11. Circuitry Adjustment: The legacy waybill costing programs apply a circuitry factor for very short intermodal movements that adjusts the mileage reported in the waybill records. Such an adjustment is not used to change the mileage for any other types of shipments. The updated program eliminates the inconsistent treatment of these intermodal movements.
12. “Train-Mile-Other Than Crew” (TM-Other) Costs Are Not Expanded: The legacy waybill costing programs do not contain code to expand the “Train Mile (TM) Other than Crew” Costs for unit train shipments.
13. Train-Mile Efficiencies Excluded from the Make-Whole Adjustment: The legacy waybill costing programs incorrectly omit “TM-Crew” and “TM-Other Than Crew” costs from the make whole adjustment when redistributing costs associated with efficiency adjustments from larger shipments to smaller shipments.
14. Rounding Up Sub-Parts of the Make-Whole Factors: The legacy waybill costing programs incorrectly round up each of the ten subparts of the Make-Whole Factors when applying the Make-Whole Adjustments to the waybill records. They incorrectly round up the individual subparts prior to summing rather than rounding the completed sum in order to express the total in whole dollars.
15. Rounding of Cars Used in the Station Clerical Calculations for Intermodal: Station clerical costs are based on the number of cars in the shipment. Intermodal shipments may use only some of the available platforms on the flat car and therefore only a partial car. The legacy waybill costing programs incorrectly round the number of intermodal cars in the station clerical calculations to a whole number and therefore do not accurately reflect partial-car intermodal shipments.
16. Assignment of More Than 100% of Loss & Damage (L&D) Expenses: The legacy waybill costing programs assign Loss & Damage expenses based on the distance traveled by one leg of the shipment divided by the total distance. A cap has been added to prevent the assignment of more than 100% of Loss & Damage expenses.
17. Inconsistent Costing of Intraterminal (IA) and Interterminal (IR) shipments: The legacy waybill costing programs incorrectly use different sets of parameters when applying the Make-Whole

Factors to intraterminal and interterminal shipments, than those used to create the Make-Whole Factors. The updated program uses the parameters that created the Make-Whole Factors when applying those factors to intraterminal and interterminal shipments, which is consistent with other shipment types.