



**ASPEN TRAILER COMPANY LTD.**

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March 25, 1997

Wayne Lewis  
Stone and Webster Engineering Corporation  
P.O. Box 5406  
Denver, Colorado, 80217

Dear Wayne.

Drawing D13690S shows a possible combination for your requirement and D13691S the turn around at the loading yard. The requirements outlined in your letter introduce restraints that are severe but manageable.

First the weight, you ask for "Utah legal". A normal 18 wheeler in Utah would gross 80000 pounds and have axle loads of 34000 pounds per 8 wheel tandem. Single axle loads may be up to 20,000 pounds and these figures are typical for most states. Practically all heavy haul, including on rural roads is at weights higher than that, typically 20000 pounds to 25000 pounds per axle.

Considering the 142 ton payload we would expect a gross of about 450,000 pounds. You have no bridges to cross so we assume that the main requirement would be to minimize axle load, or more simply, tire load. The combination shown, including the tractor steering axle, has 94 tires. Assuming 18000 pounds for the steering axle, axle loading would be about 18,782 pounds or 4696 pounds per tire.

PFS-00085

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These are so called 16 wheel groups which are needed at this weight, to keep the length compact. Components shown are parts of our modular design so more or less axles and tires are possible although this is one of the optimum combinations. A normal form for this design is as a "double lane loader" where the axles can be expanded from 12 ft out to 20 ft to reduce bridge loadings. With no bridges to cross you would seek permits without this extra complexity, to help minimize tare weight.

Turning in the restricted loading yard is manageable. We have built this class with not only double lane loading but also with all groups steering. Drawing D13690S shows steering of the wing dollies (rear of each set) which allows for really tight turning but this also might not be necessary. D13691S indicates a steady state turn in 150 ft (151 ft at the bumper) without steering the wing dollies. In practice steering input by the driver is more complex and this particular combination would be able to U-turn in the yard by steering just the lead group of the dolly.

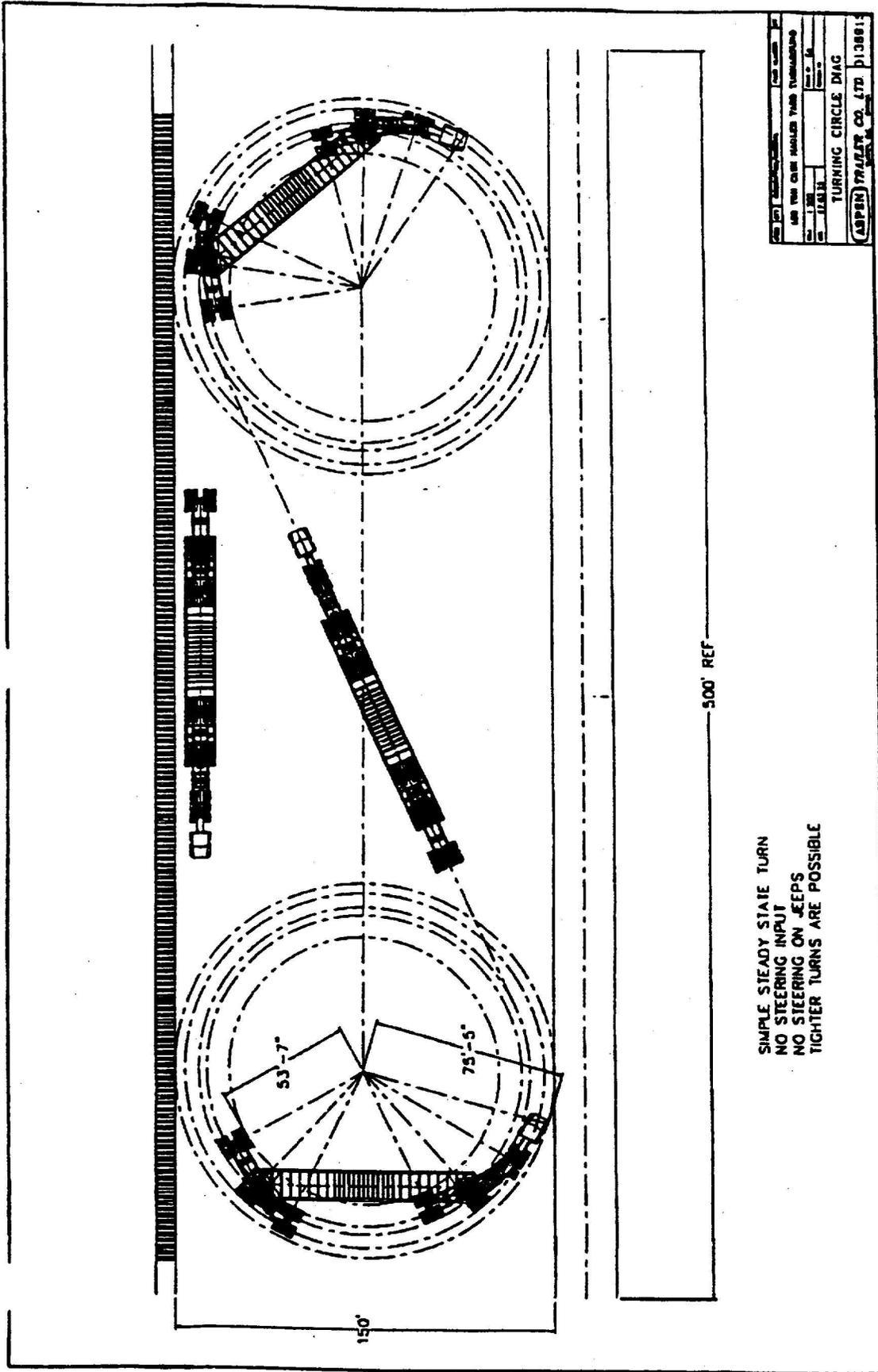
The first stage of such a project, would to get an approval in principle from the state for the axle loadings and configuration type. In the mean time I trust this satisfies your immediate needs. Murray is away at the moment so you may phone me if you have any questions.

Sincerely

The Aspen Trailer Group



Ed Boon  
Engineering



SIMPLE STEADY STATE TURN  
 NO STEERING INPUT  
 NO STEERING ON JEPS  
 TIGHTER TURNS ARE POSSIBLE

500' REF

DATE	BY	REV	DESCRIPTION
			ADD TURN CIRCLE DIMENSIONS
			TURNING CIRCLE DIAG
(ASPEN) TRAILER CO. LTD. D13881			