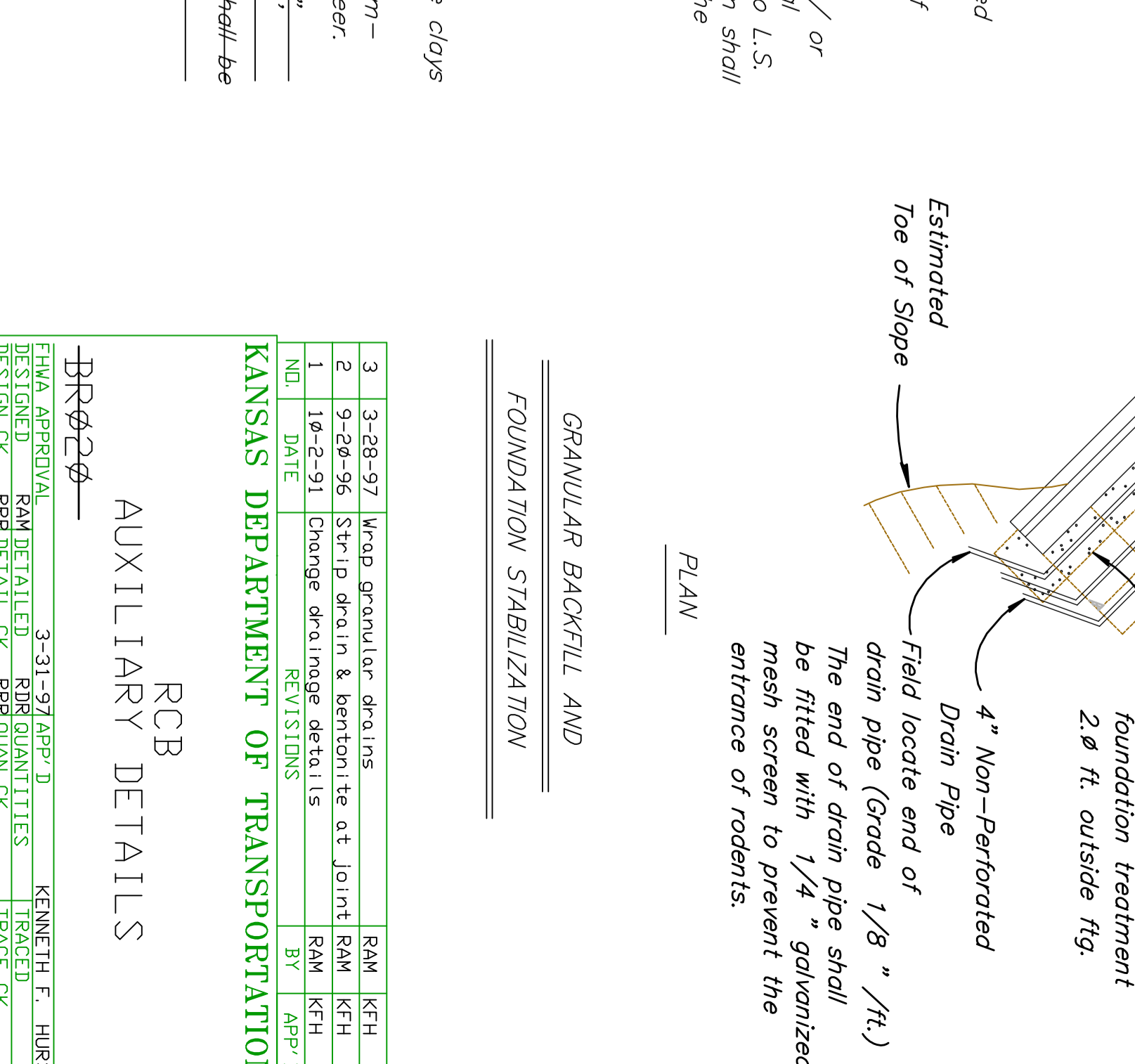
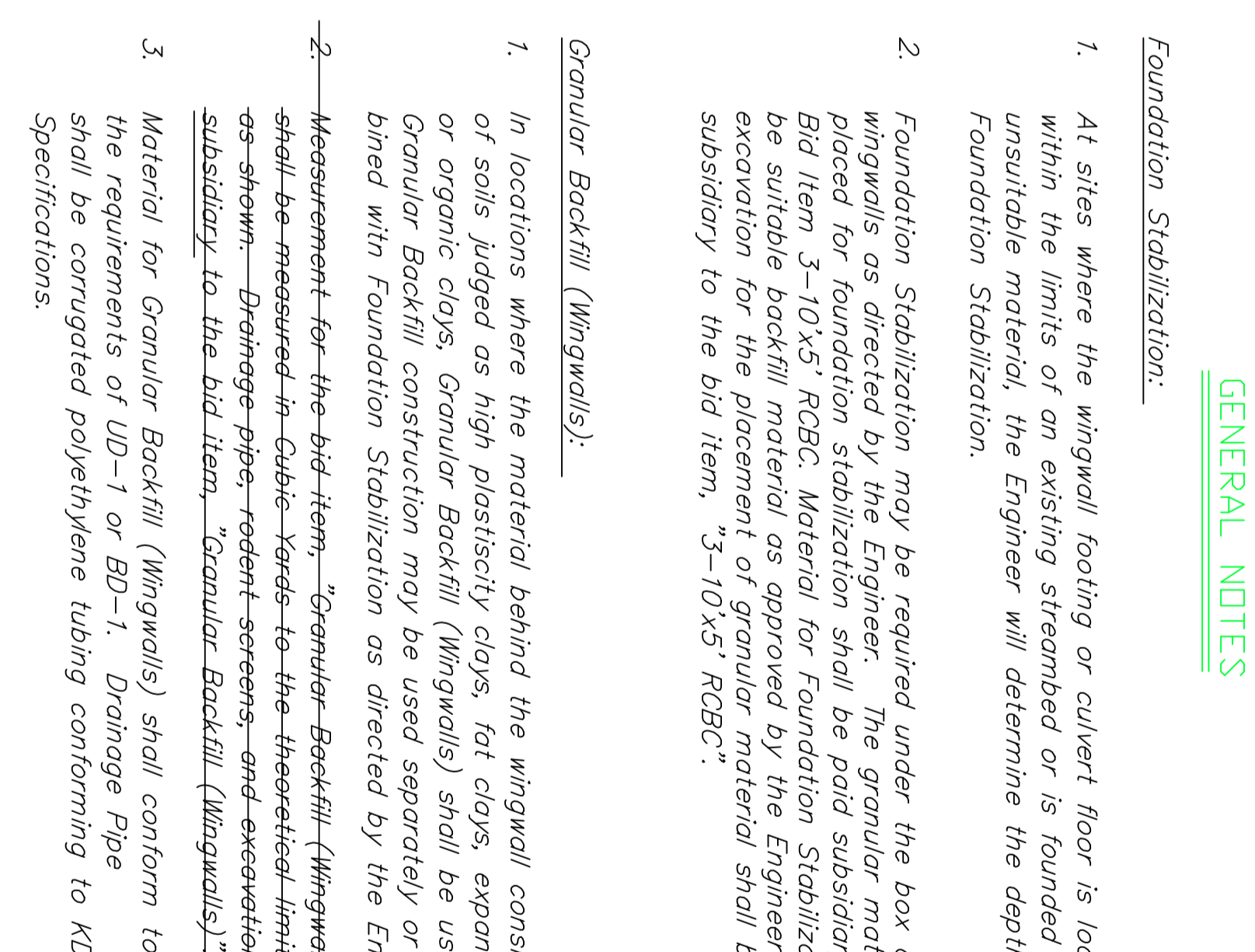
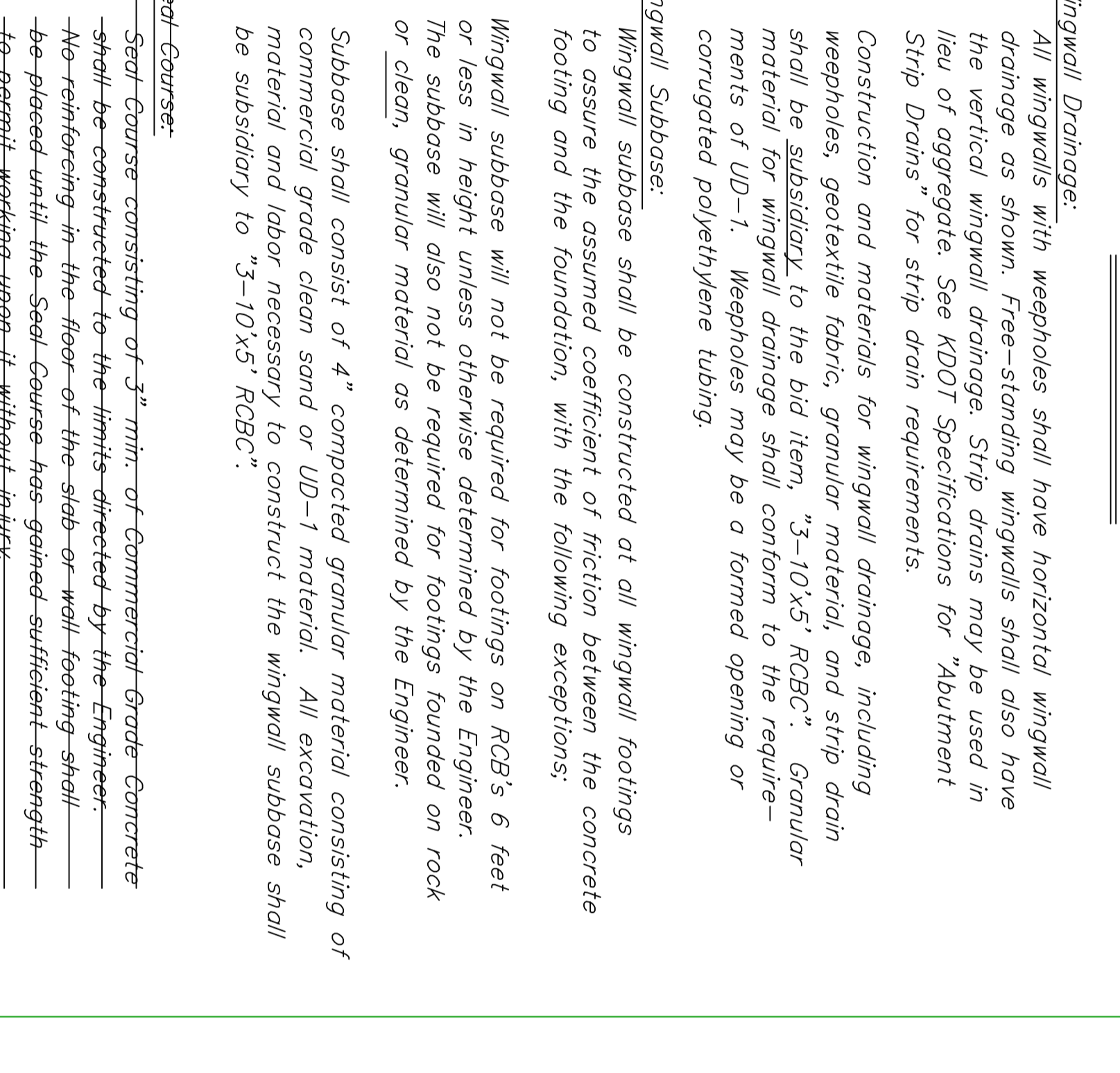
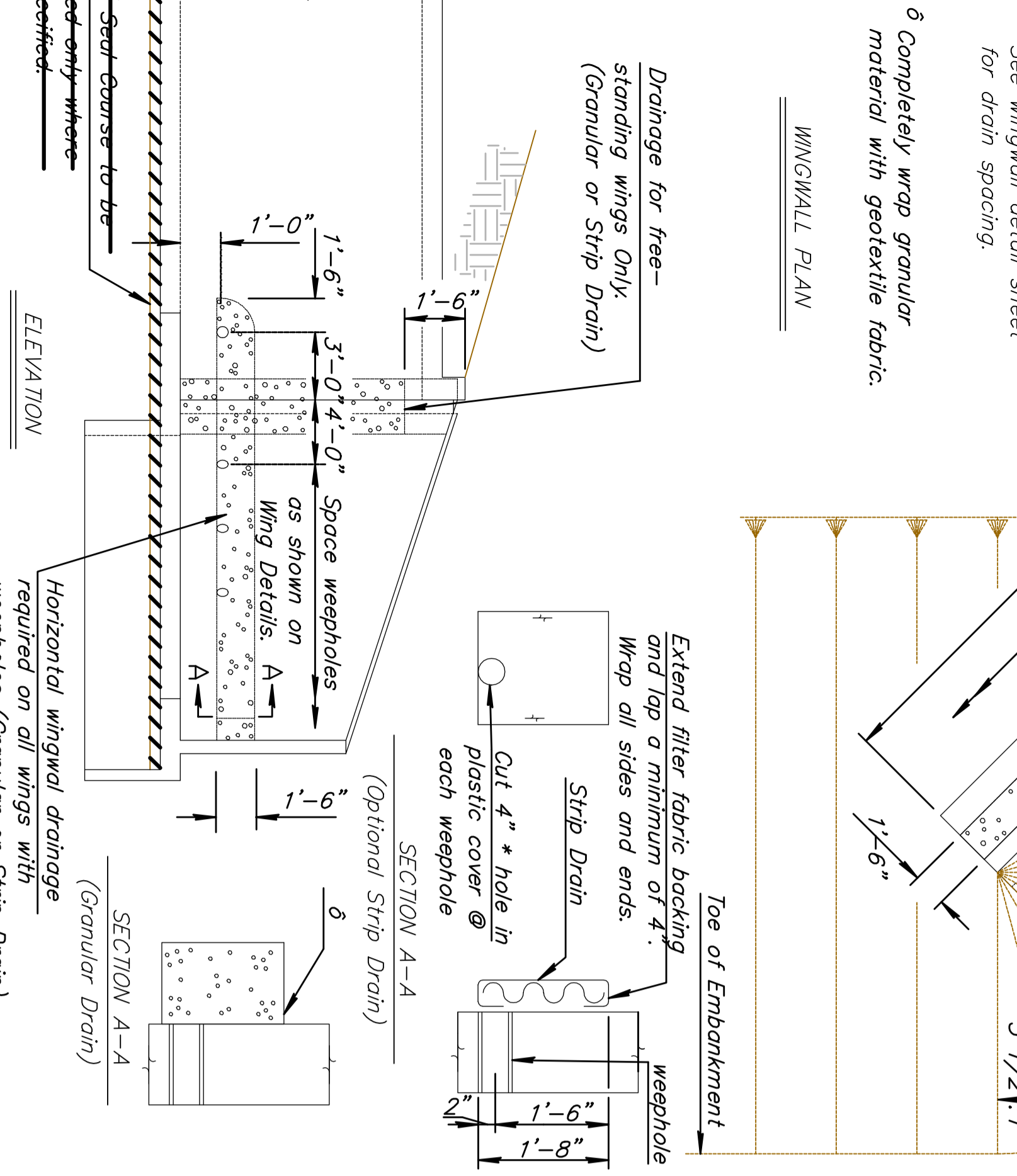
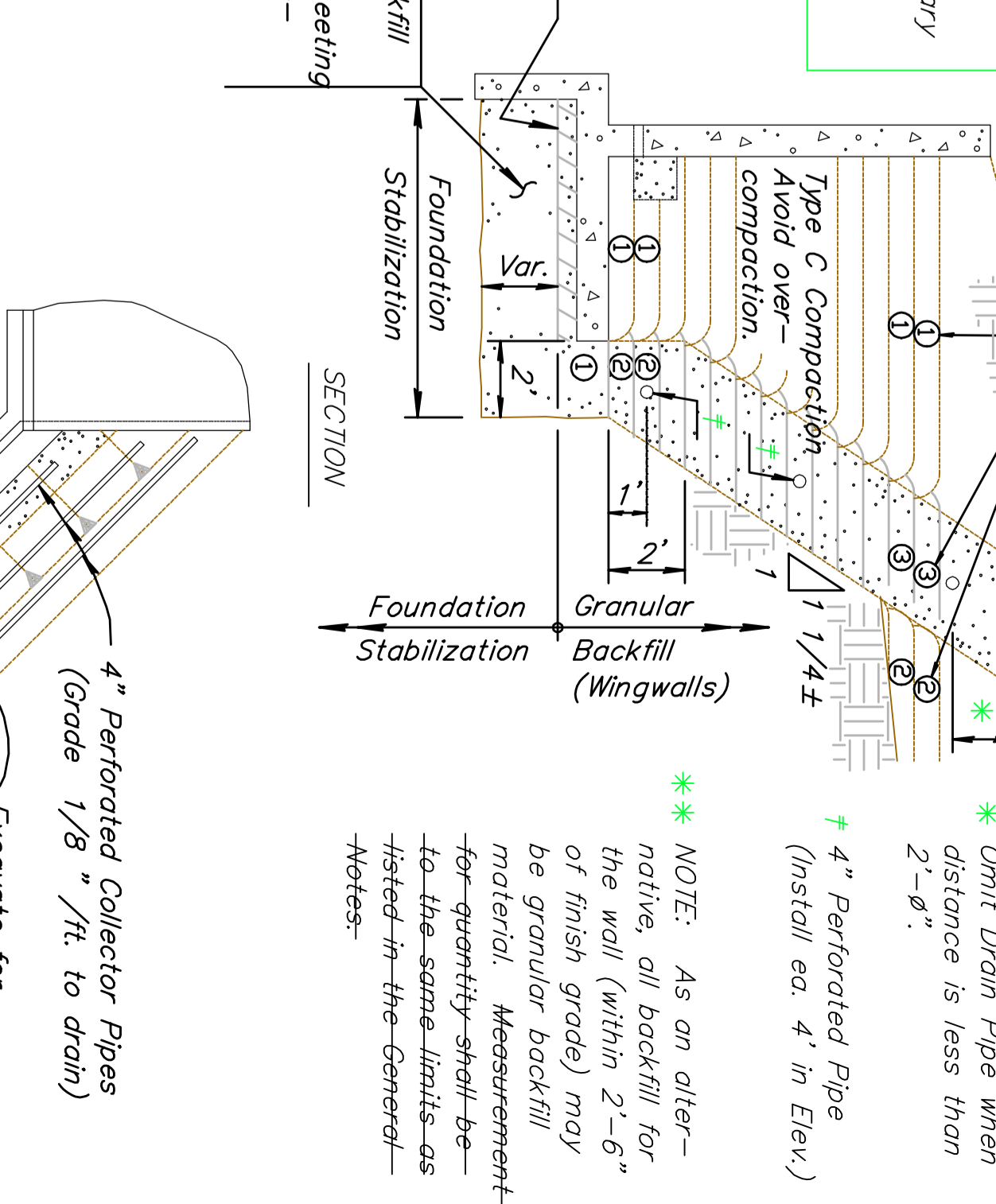
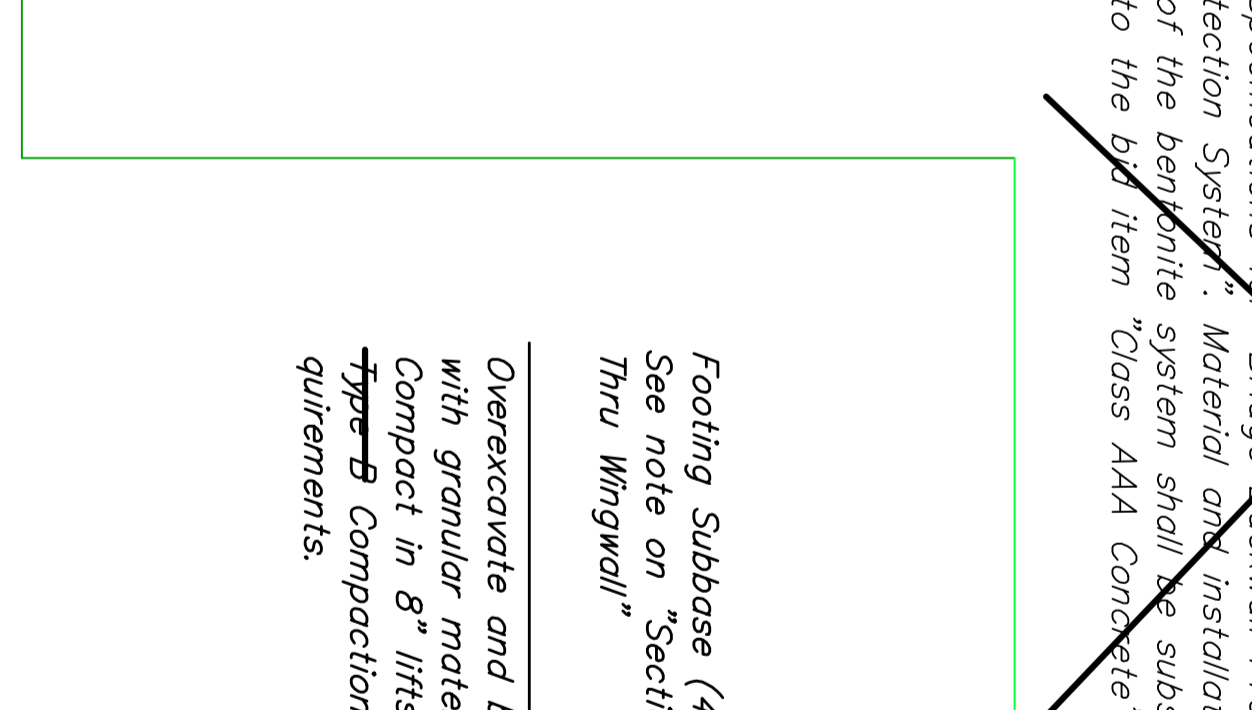
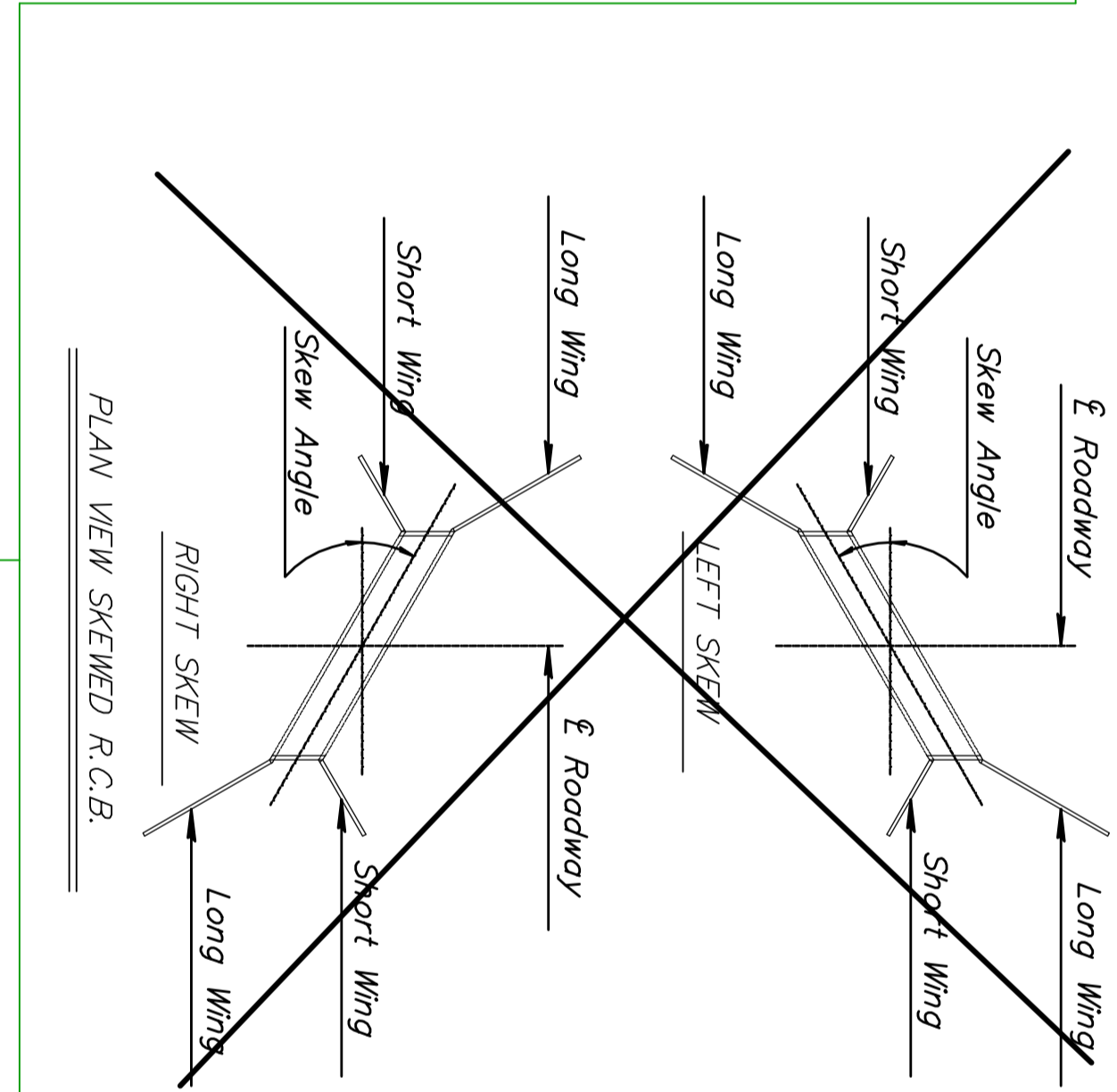
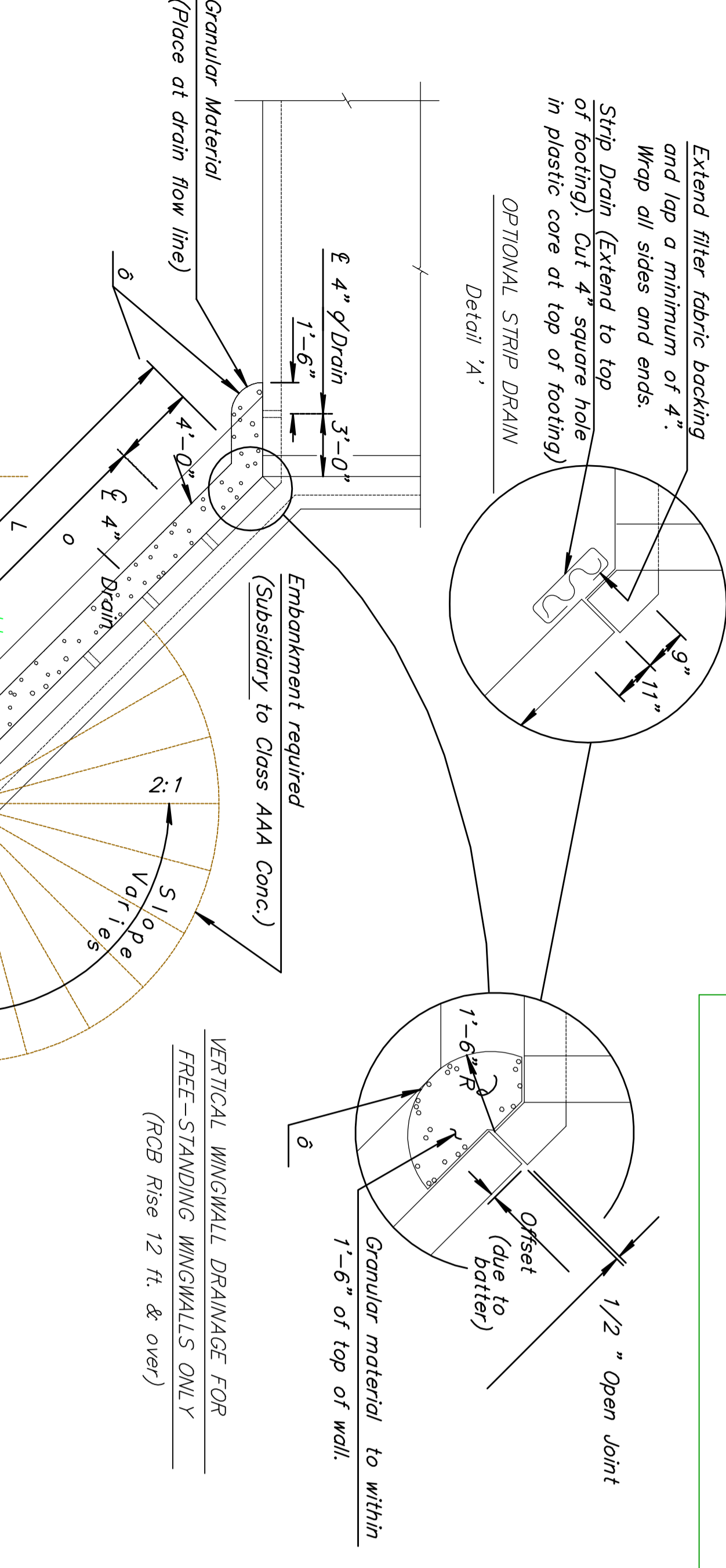
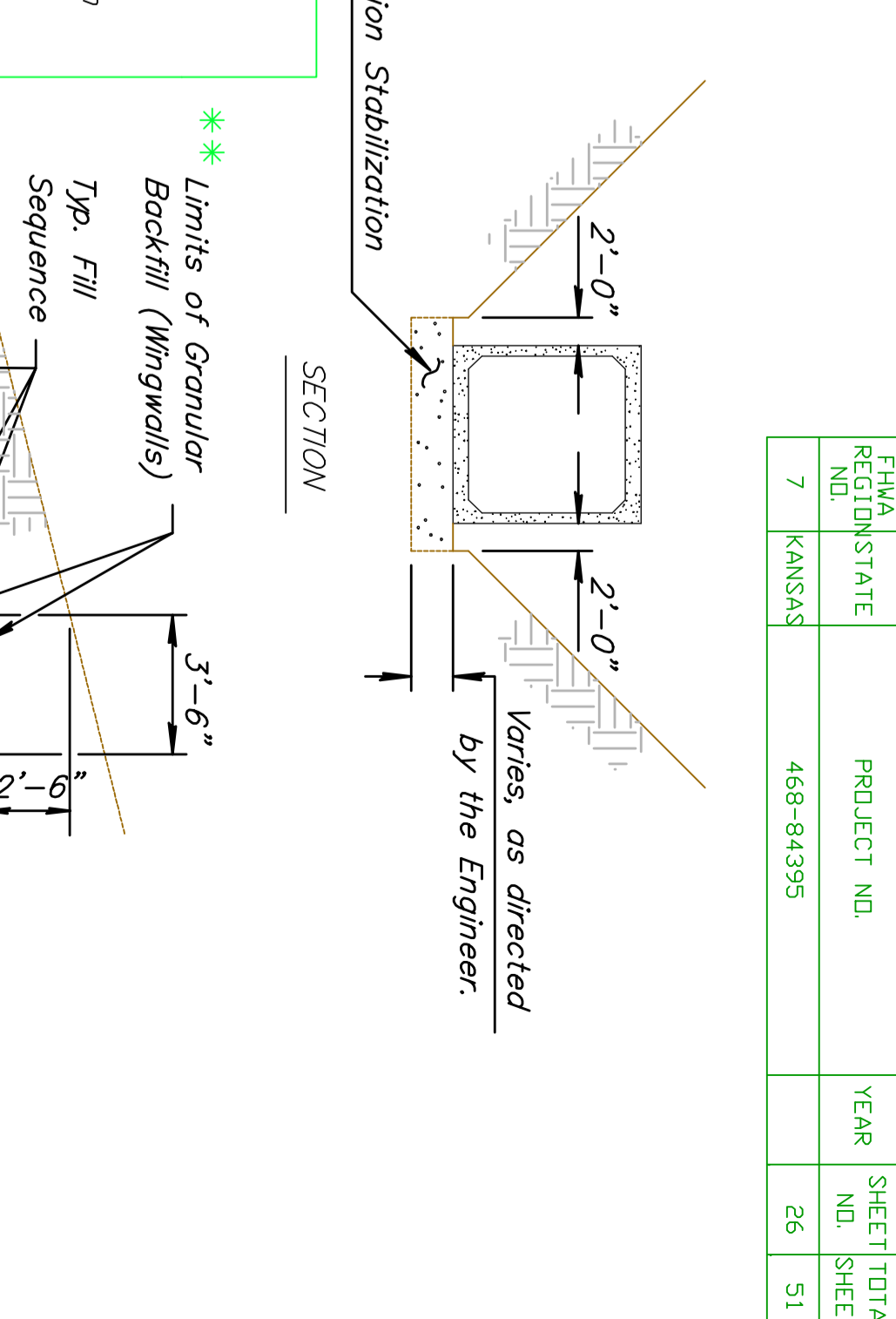
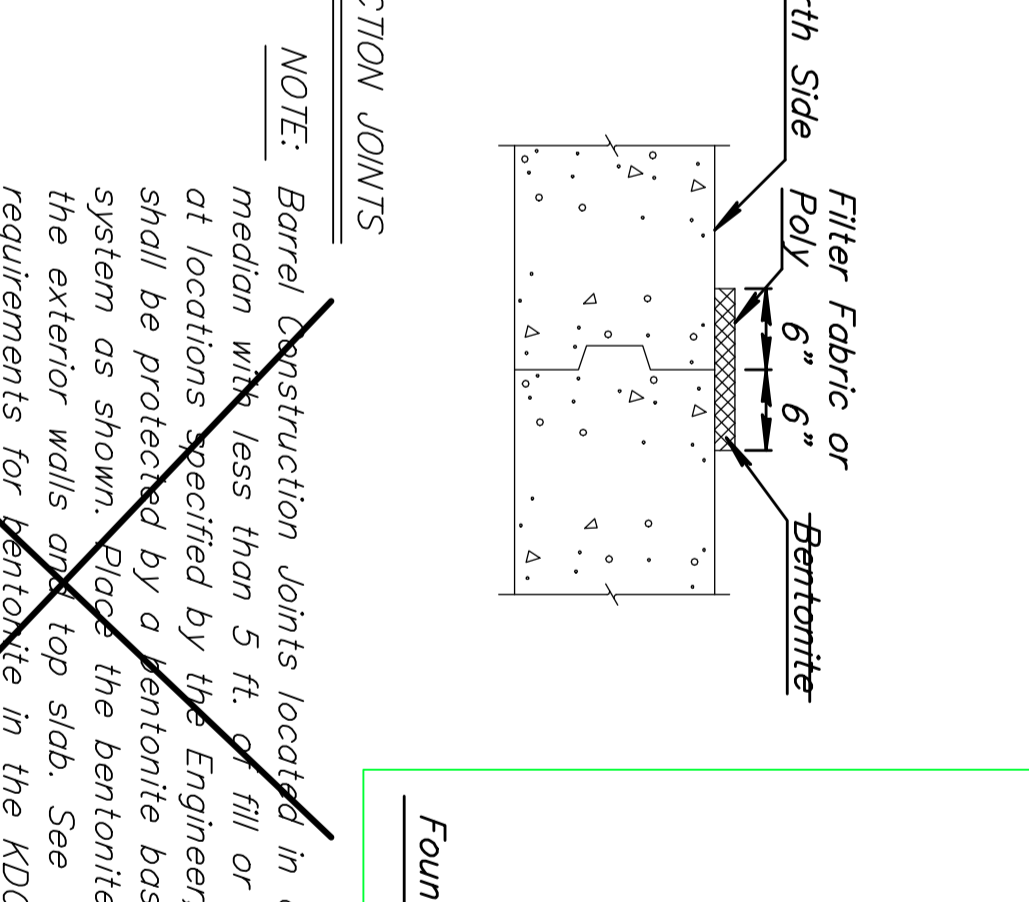
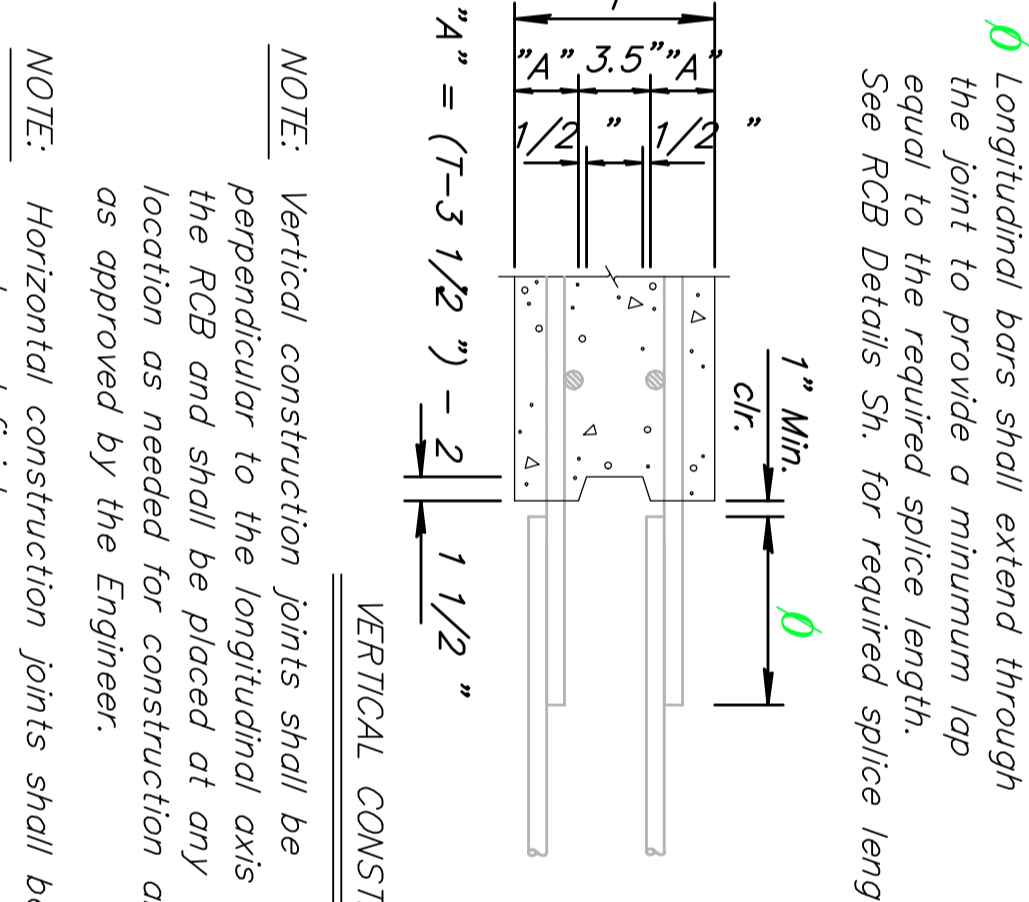
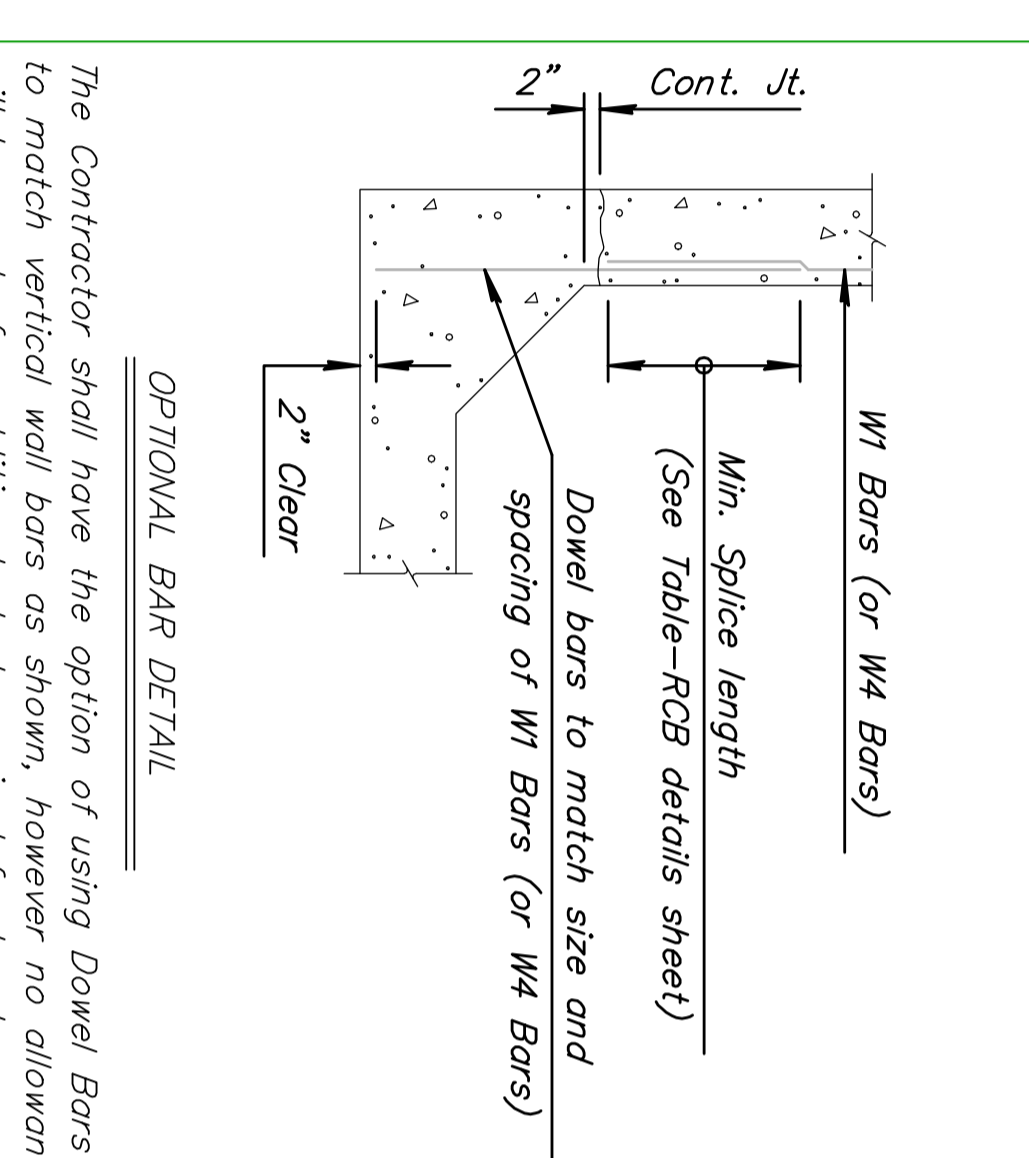
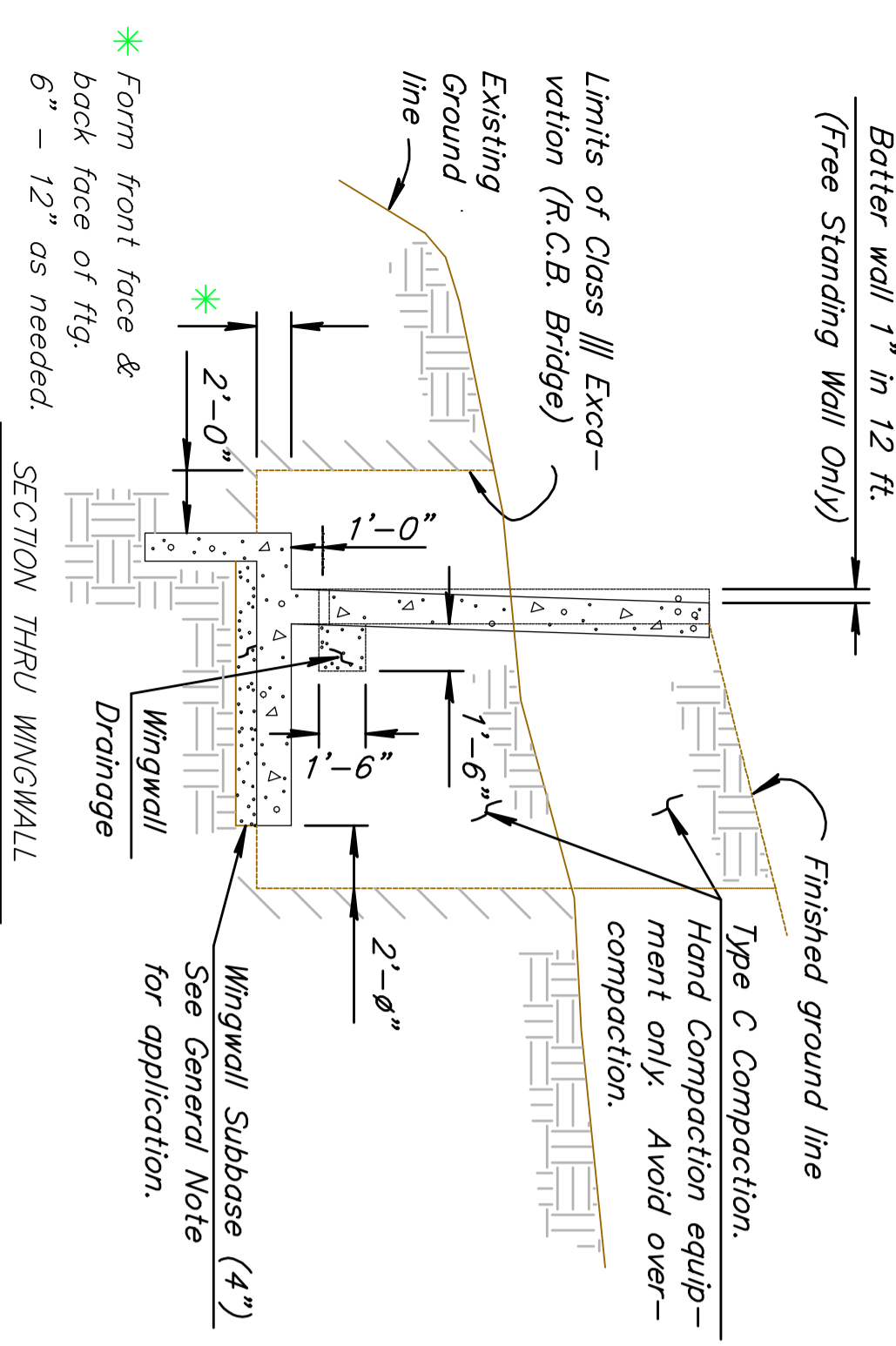


PHIA REGIONAL NO. 7	KANSAS	PROJECT NO. 468-84395	YEAR NO. 26	TOTAL SHEETS 51
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3	3-28-97	Wingw. granular drains	RAM	KFH
2	9-28-96	Strip drain & bentonite at Joint	RAM	KFH
1	10-2-91	Change drainage details	RAM	KFH
ND	DATE	REVISIONS	BY	APP'D

3" Seal Course to be applied only where approved.

Drainage for free-standing wings Only (Granular or Strip Drain)

Extend filter fabric backing and lap a minimum of 4". Wrap all sides and ends.

Wingwall Subbase: 1. Wingwall subbase shall be constructed at all wingwall footings to assure the assumed coefficient of friction between the concrete footing and the foundation, with the following exceptions:

2. Subbase shall consist of 4" compacted granular material consisting of commercial grade clean sand or UD-1 material. All excavation, material and labor necessary to construct the wingwall subbase shall be subsidiary to "3-10x5" RCBC".

Seal Course: 1. Seal Course consisting of 3" min. of Commercial Grade Concrete shall be constructed to the limits directed by the Engineer. No reinforcing in the floor of the slab or wall footing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.

Foundation Stabilization: 1. At sites where the wingwall footing or culvert floor is located within the limits of an existing streambed or is founded on unsuitable material, the Engineer will determine the depth of Foundation Stabilization.

Granular Backfill (Wingwalls): 1. In locations where the material behind the wingwall consists of soils judged as high plasticity clays, fat clays, expansive clays or organic clays, Granular Backfill (Wingwalls) shall be used. Granular Backfill construction may be used separately or combined with Foundation Stabilization as directed by the Engineer.

2. Measurement for the bid item, "Granular Backfill (Wingwalls)", shall be measured in Cubic Yards to the theoretical limits as shown. Drainage pipes, rodent screens, and excavation shall be subsidiary to the bid item, "Granular Backfill (Wingwalls)".

Material for Granular Backfill (Wingwalls) shall conform to the requirements of UD-1 or BD-1. Drainage Pipe shall be corrugated polyethylene tubing conforming to KDOT Specifications.

Excavate for foundation treatment 2.0 ft. outside fig. 4" Non-Perforated Drain Pipe Field locate end of drain pipe (Grade 1/8" /ft.) The end of drain pipe shall be fitted with 1/4" galvanized mesh screen to prevent the entrance of rodents.