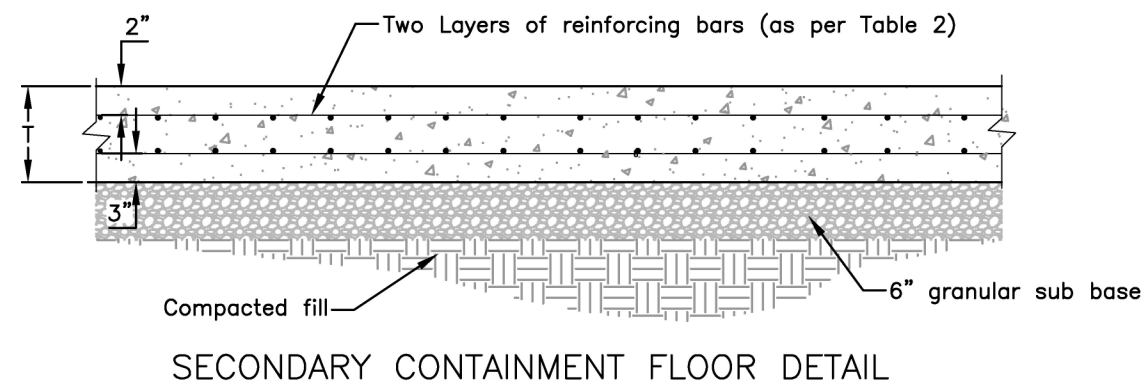
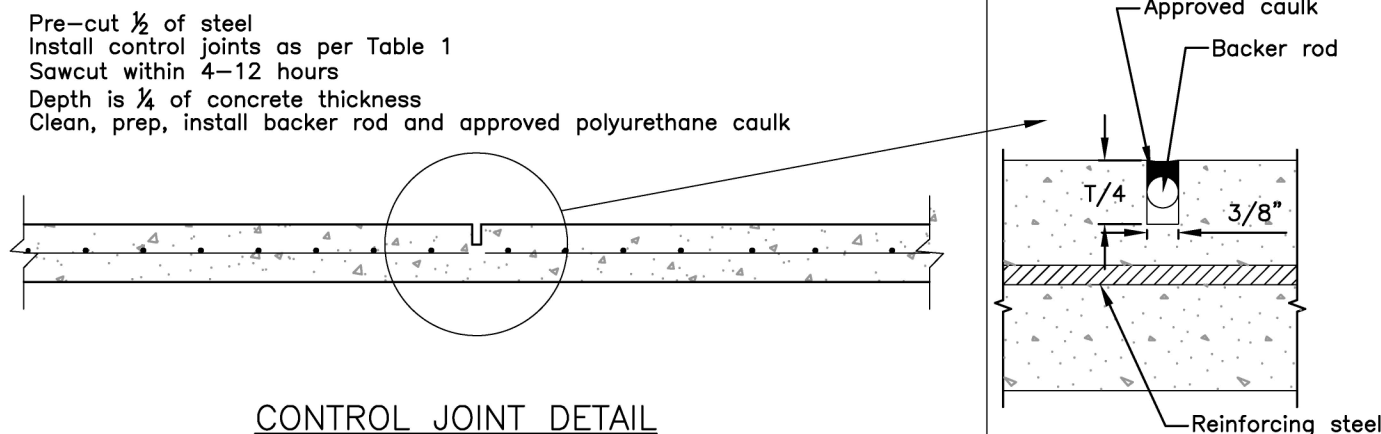
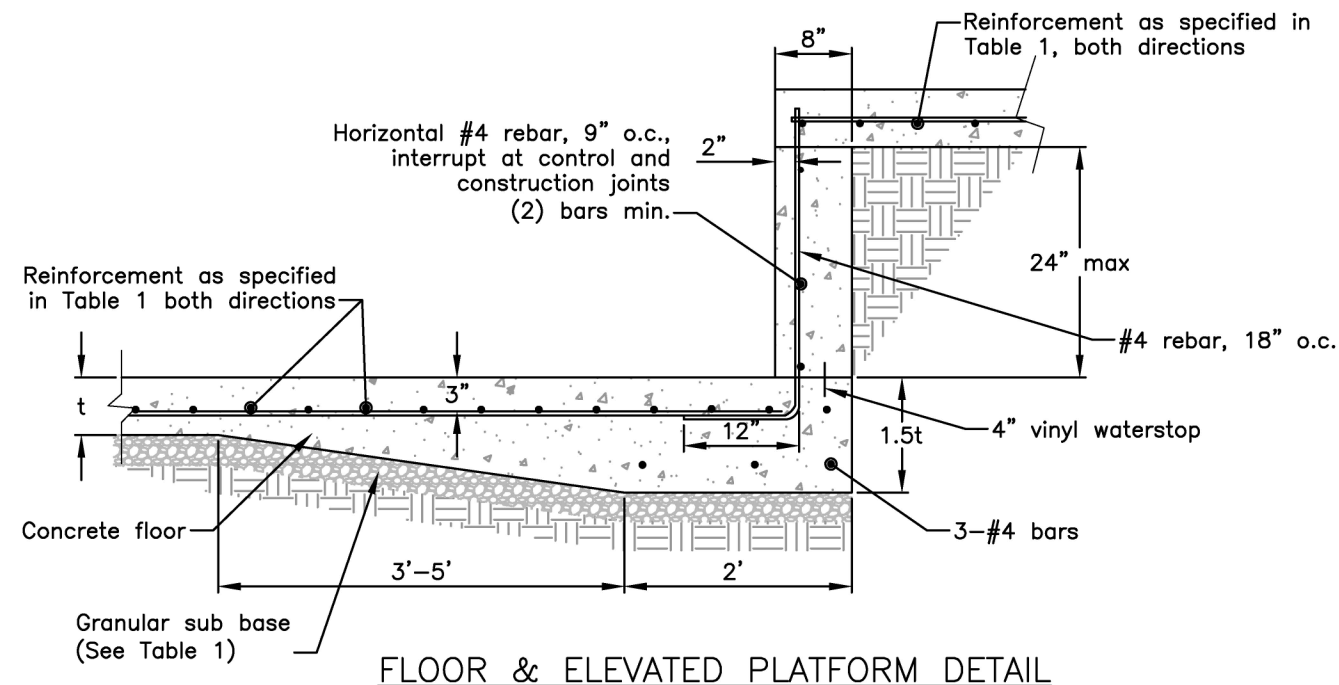
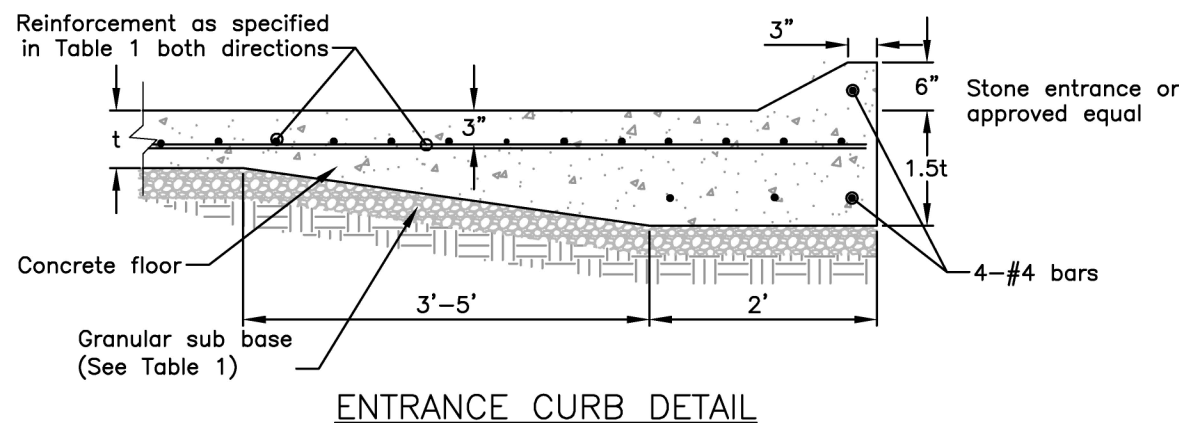
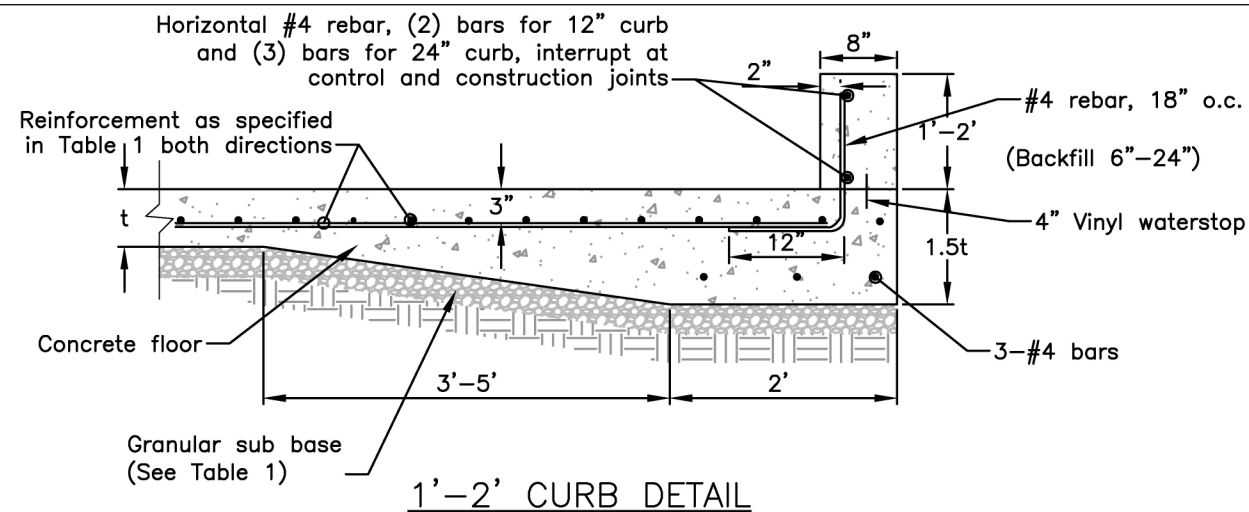




- Construction Notes**
- Concrete shall be 5000 psi, Type II or V cement with part of cement replaced with fly ash or natural pozzolan or silica fume or GBF slag, 3" to 6" slump with maximum water cement ratio of 0.40 and air entrainment. Steel reinforcement 60 ksi.
 - See Construction Specifications PA-309 for additional information.
 - Sub-base AASHTO #57 or as approved by "Engineer of record".
 - Curbs normally set to inside of roof support posts. Wider curbs to accommodate posts need the "Engineer of Record" to address crack control and water tightness.

	Maximum Single axle load	Concrete Thickness (t) in.	Control joints <40' Rebars, single layer, both ways	Control joint 40'<150' Rebars, single layer, both ways	Min. Sub base, in.
☐	<20,000	6	#4 @ 8"	#4 @ 6.5"	4
☐	20,000-29,999	8	#4 @ 6" or #5 @ 9"	#4 @ 5" or #5 @ 7"	6
☐	30,000-40,000	10	#4 @ 5" or #5 @ 8"	#4 @ 4" or #5 @ 6"	8

TABLE 1 – PRIMARY CONTAINMENT FLOOR REQUIREMENTS
☒ APPROPRIATE BOX FOR THIS SITE

	Maximum tank height (ft)	Concrete Thickness (t) in.	Reinforcing bars and spacing (both ways)	Area of Steel (in²)
☐	10	8	#4, two layers, 12" o.c.	0.18
☐	15	10	#5, two layers, 12" o.c.	0.34
☐	20	12	#6, two layers, 12" o.c.	0.47
☐	25	14	#7, two layers, 12" o.c.	0.62
☐	30	14	#8, two layers, 12" o.c.	0.75

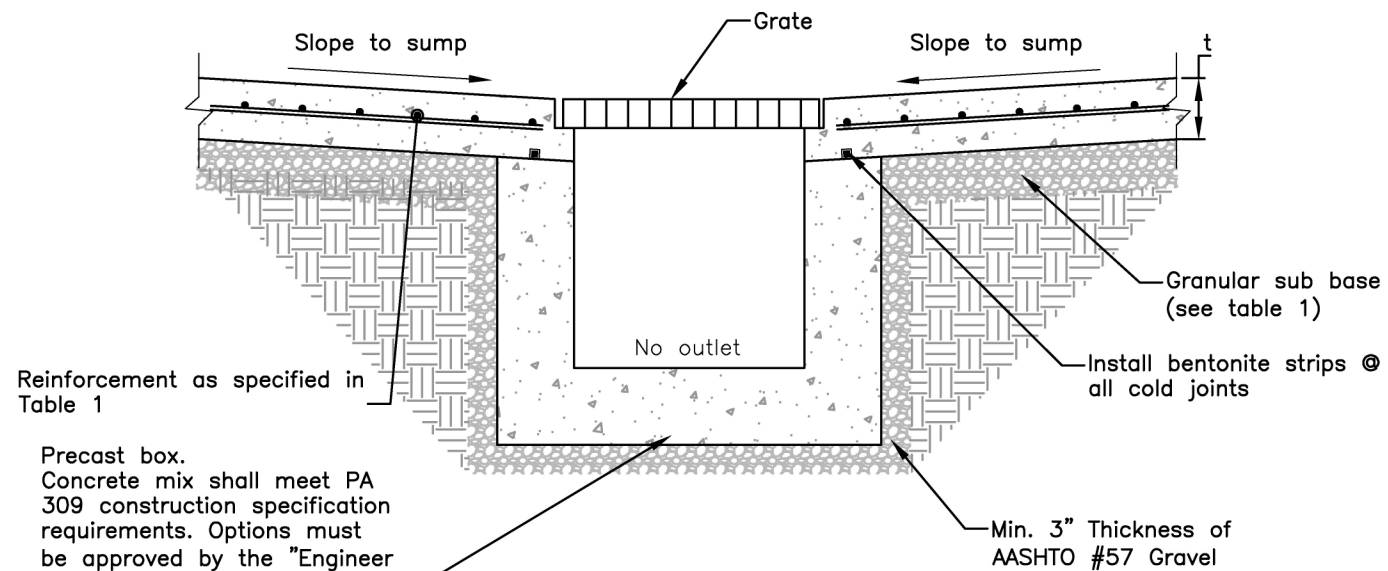
TABLE 2 – SECONDARY CONTAINMENT FLOOR REQUIREMENTS
☒ APPROPRIATE BOX FOR THIS SITE

References: ACI360-10 (Table 3-1, Fig. 6.6, Table 5.1)
ACI 350 (Chapter 7, Appendix H)
MWPS37 (Table 21 & 24, Fig. 65 & 79)
NRCS Structural Design Workshop, 2015 (p.26-9), PCA Method

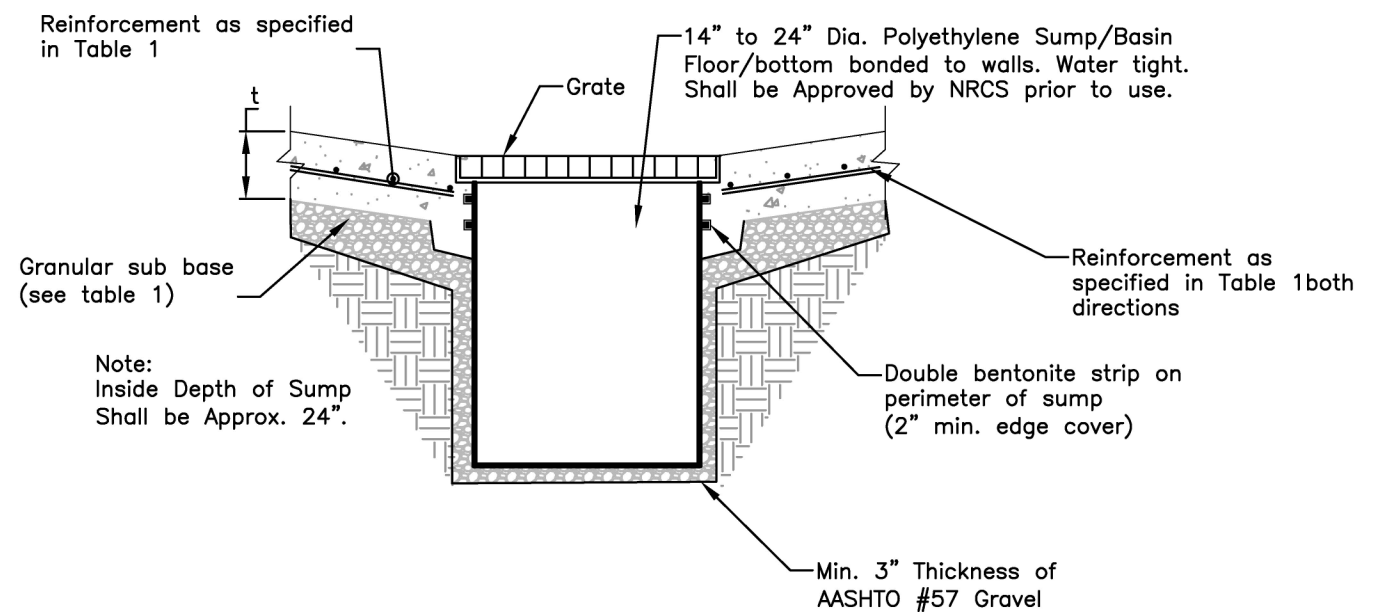
Date: 1-17
Designed: A. Wood, PE
Drawn: J. Boger
Checked: P. Vanderstappen, PE
Approved: W.H. Latshaw, PE&SCE

FLOOR AND WALL DETAILS
AGRICHEMICAL HANDLING FACILITY (309)

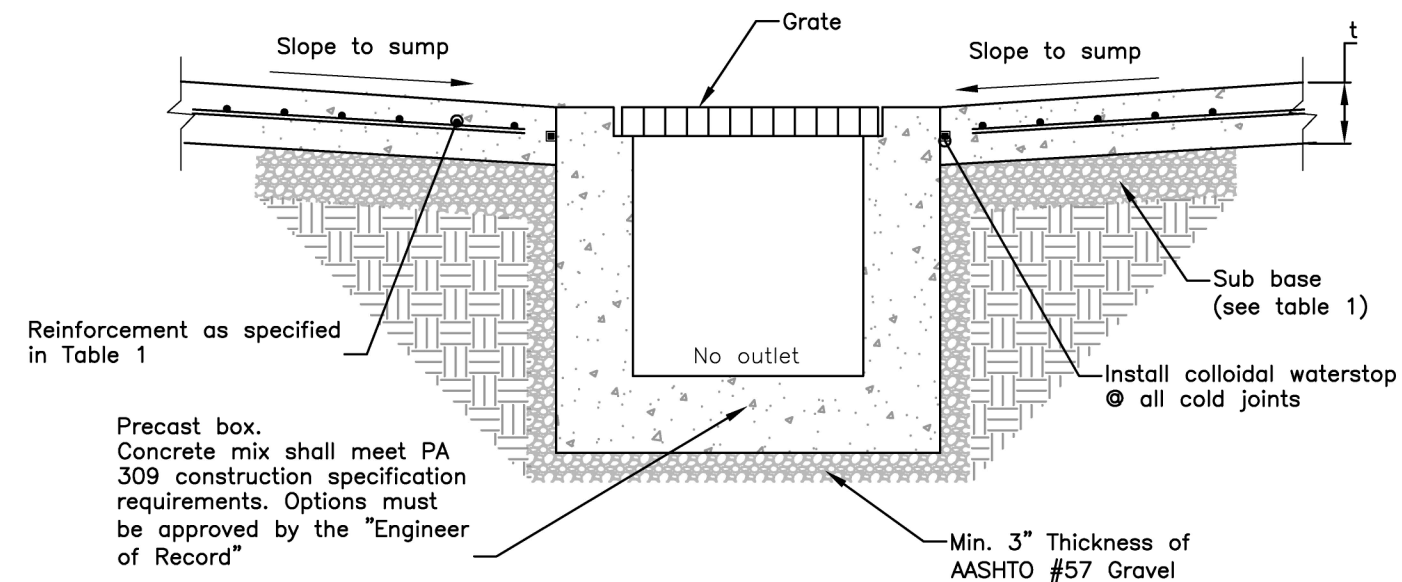
United States Department of Agriculture
USDA
Natural Resources Conservation Service
File No. AHF DETAILS
Drawing No. PA-084-1 of 2
Sheet 1 of 2



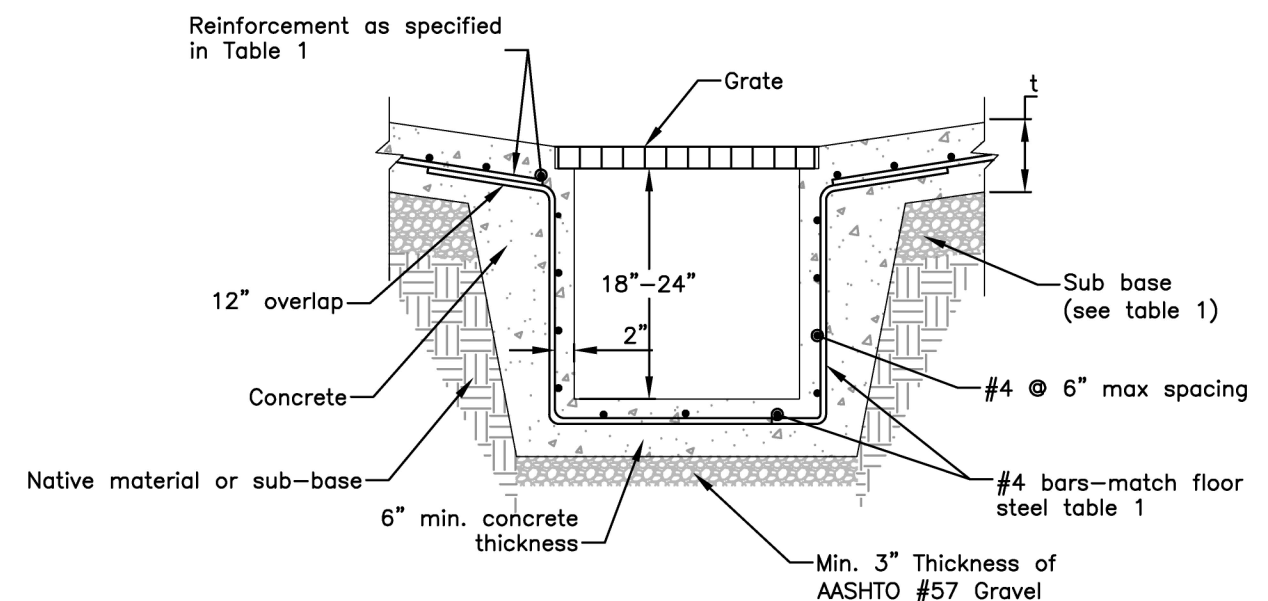
PRECAST SUMP OPTION 1



POLYETHYLENE SUMP



PRECAST SUMP OPTION 2



CAST IN PLACE SUMP

- NOTE:
1. Side wall slopes can be from vertical to 45° depending on soil condition.
 2. If multiple placements are made, sufficient vibration shall be done to eliminate voids between placement.

Date _____
 Designed A. Wood, PE 1-17
 Drawn J. Boger 1-17
 Checked P. Vanderstappen, PE 1-17
 Approved W.H. Latshaw, PE&SCE 1-17

SUMP OPTIONS FOR AGRICHEMICAL
HANDLING FACILITIES (309)

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Drawing No.
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