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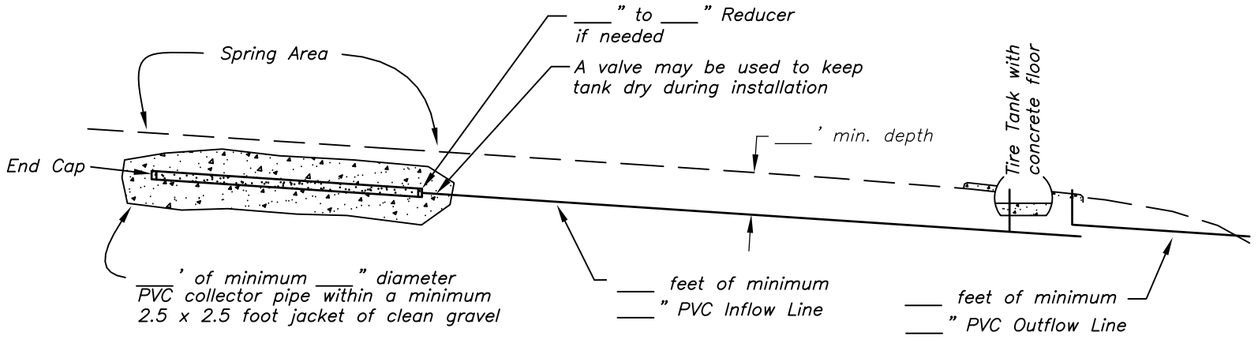
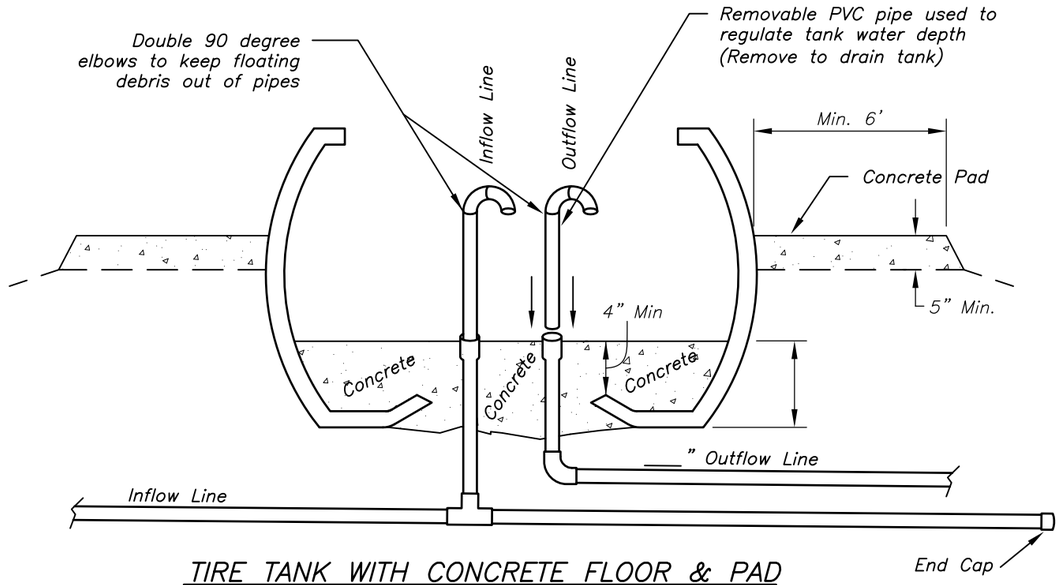


PROFILE VIEW



TIRE TANK WITH CONCRETE FLOOR & PAD

QUANTITIES

_____	Ft. _____"	PVC Pipe for collector
1	Ea. _____"	end cap
_____	Ea. _____"	to _____" reducer assembly
_____	Ft. _____"	PVC Pipe for inflow/outflow line
1	Ea. _____"	tee
1	Ea. _____"	end cap for inflow line stub
5	Ea. 3"	90 degree elbow
_____	C.Y.	Concrete 5 1/2 bag mix
_____	Ea.	Used heavy equipment tire
_____	Ft.	Trenching
_____	C.Y.	Clean gravel

Estimated Spring Flow	Minimum Size of Collector	Minimum Length of Collector	Minimum Size of Inflow/Outflow Line
10 gpm or less	3"	20'	3"
10.1 to 20 gpm	3"	2' for each gpm	3"
	4"	1.5' for each gpm	3"
	6"	1' for each gpm	3"
20.1 to 40 gpm	6"	1' for each gpm	4"
	4"	1.5' for each gpm	4"

CONCRETE REQUIREMENTS

____ Fiber mesh concrete is required
____ Floor of tank is reinforced with steel bars
____ Pad is reinforced

GENERAL NOTES:

1. Pipe shall be PVC pipe, SDR=35 or less. Collector pipe shall be perforated or slotted. PVC pipe shall conform to ASTM D 1785, D 2241, D 3034 or equivalent. Perforations shall be 1/4 inch diameter, equally spaced in rows to provide a minimum of 0.58 square inch open area per foot. Holes shall be located in a manner such that pipe will not be weakened. Slotted pipe with slot width not exceeding 0.15 inch and minimum 0.58 square inch per foot of open area. Perforations or slots shall be clean cut and free of obstructions.
2. Center the collector pipe in the excavated spring veins. Try to locate the main spring veins and over dig the area at least 18", then backfill with clean gravel to the desired level of the collector pipe. Place the collector, and gently cover the collector pipe with additional gravel. The gravel jacket shall be a minimum of 1 foot thick completely around the collector pipe.
3. The pipe must drain toward the tank. No bumps or reverses in grade are permissible, or the pipe will air-lock and quit flowing.
4. After the inflow and outflow lines are placed, backfill the trench area underneath the planned tank and pad at the area marked in the field with clean gravel.
5. Cut the top bead of the tire tank off. Cut in a manner that a smooth cut is made. Provide lift of the upper bead while cutting by inserting a large steel bar under the upper bead. Attach a chain from the bar to a front end loader and provide enough lift to prevent the bead from pinching the saw during cutting. The bottom bead may be left on. Use minimum 10 inch thickness of concrete in the tire, and pour at least a minimum 6 foot wide 6 inch thick concrete pad around the tire. Put a female coupler in the bottom of the tank in the inflow and outflow lines.
6. The inflow line is to tee into the inlet riser, then continue about 10 feet past the outside location of the planned pad. Cap the inflow line there, and mark with a notch in the concrete pad. Should gravel ever infiltrate the system and impede flow, dig up the inflow line and saw the cap off. The flowing water should remove the gravel from the system. When complete, replace the cap.
7. The tire tank may be used on other spring development or stock watering systems. It should only be used on continuous flow systems. Flow from stock watering systems through earth dams should be regulated by a valve to ensure the desired quantity of water.
8. For additional details see Missouri Construction Specifications 574, Spring Development, and 614, Watering Facility.
9. Concrete shall conform to Missouri Construction Specification 750, Reinforced Concrete, except 5 1/2 bags of cement per cubic yard is adequate.
10. Collector's inflow and outflow lines shall be buried below frost line as needed to prevent freezing.
11. The heavy equipment tire shall be free from breaks or other defects that would cause excessive leakage. Do not use Agricultural tractor tires as sidewall strength is not adequate. Do not use heavy equipment tires greater than 6' in diameter, as the very large ones are too heavy for placement by typical backhoes.
12. Steel bar reinforcement may be used inside of tire if landowner desires. Normal cracking of concrete pad should not be a problem. If reinforcing steel is required inside of tire it shall be # 4 steel deformed bars at 12 inches Center to Center. Steel reinforcement is not required for pad but # 4 bars at 18" C.C. or equivalent is acceptable. All steel shall have minimum 2 1/2 inch clearance from top of concrete.

Landowner:

DRAFT

NOT FOR CONSTRUCTION

Revised 3/11

Date
Designed
Drawn
Checked
Approved

LOW PRODUCING SPRING DEVELOPMENT WITH HEAVY EQUIPMENT TIRE TANK

United States Department of Agriculture Natural Resources Conservation Service NRCS

File Name

Drawing Name
29-N-78B

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