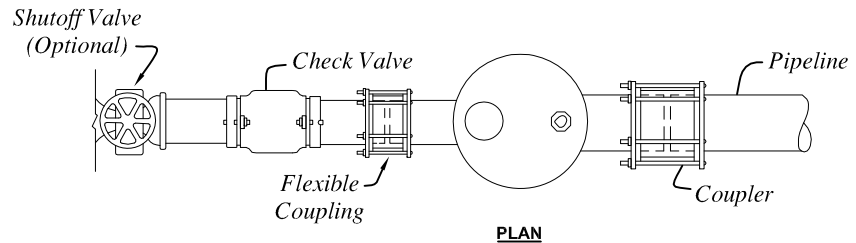
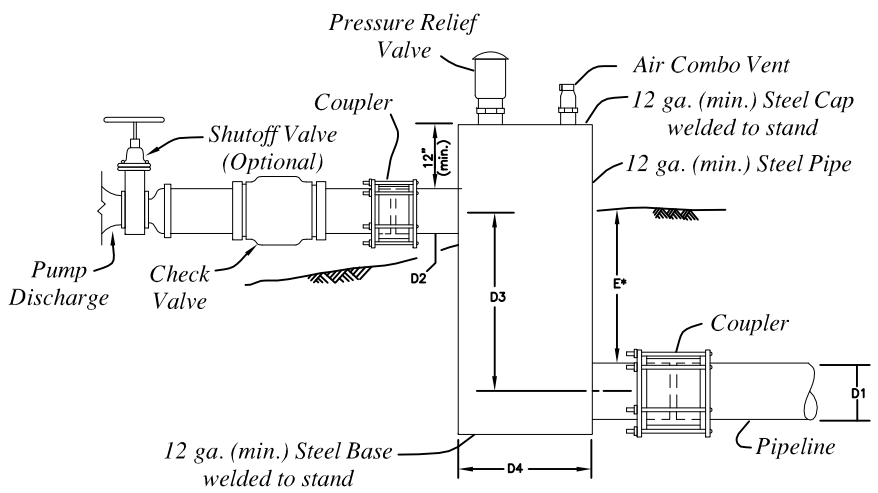


PLAN



PROFILE

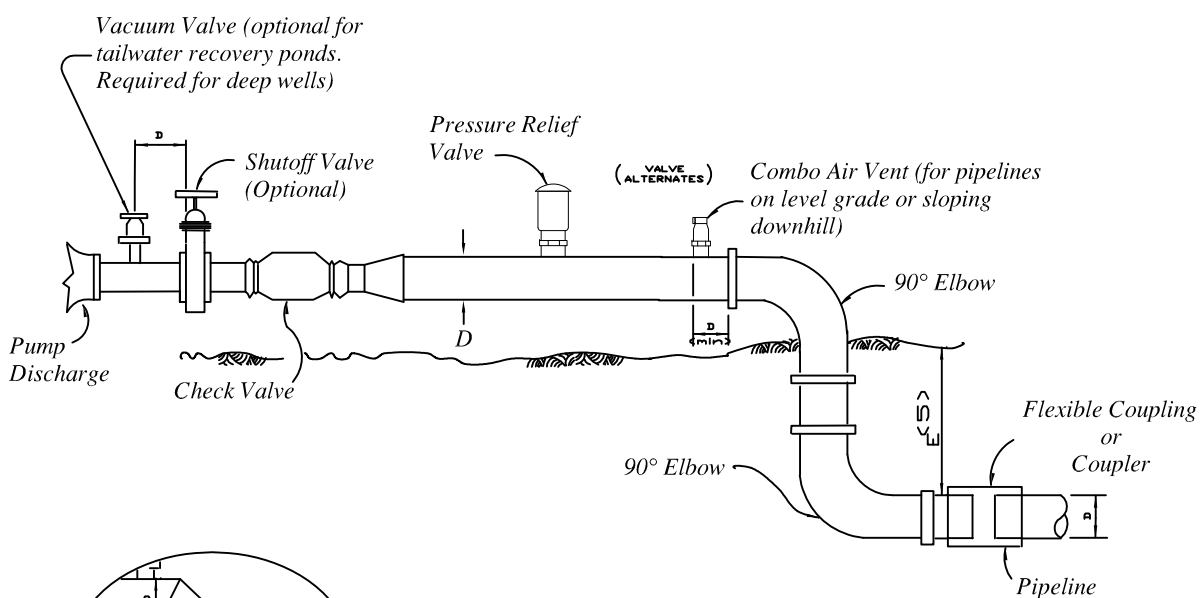
E*	D1 Dia.	D2 Dia.	D3*** Dia.	D4** Dia.	P.R. Size	A–V Size

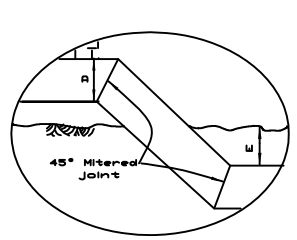
*** Minimum D3=D1+D2

** Minimum D4 shall provide a downward velocity of 2 ft/sec, however, not less than D1.

$$D_4\ (in) = \sqrt{\frac{flow\ (gpm)}{705}} \cdot 12$$

* E=Minimum depth of cover for the pipeline





ALTERNATE ELBOW DETAIL

Notes:

1. Recommended pipe length from check valve to 90° elbow is 8 times the pipe diameters.
2. Air vents may be a manually operated or continuous acting.
3. A pipeline is considered to be sloping uphill if the distal end is at a higher elevation than the above-ground section on the pump side of the dogleg.
4. Size Air-vacuum valve as specified in NRCS standard 430-EE
5. E= Minimum depth of cover for the pipeline.
6. All pipe & fittings shall be steel, unless otherwise noted

Water Quality at Source (Optional)

____Very Good: Water contains no abrasive particles, and/or TDS < 50 ppm.
____Good: Water may contain small amounts of silt, and/or TDS < 100 ppm.
____Fair: Water may contain small amounts of silt, sand, or rust, and/or TDS < 200 ppm.
____Poor: Water may contain moderate amounts of silt, sand, or rust, and/or TDS = 200-800 ppm.
____Very Poor: Water regularly contains silt, sand, or rust, and/or TDS > 800 ppm.

Comments: _____

Water Pumping Data

Static Water Depth: _____ft. (Distance from ground to water surface when not pumping).
Drawdown Level: _____ft., at ____GPM. (Depth water drops when pumping).
Discharge Head: _____ft. (Dist. from ground surface to highest water surface in discharge line)
(Use either Discharge Level or Pressure Head, but not both)
Pressure Head: _____ft. (Tank pressure in psi. x 2.31)
Losses: _____ft. (Minor and friction losses in discharge line)
Total Dynamic Head: _____ft. (Sum of values above).

Water Source Informaton							
Subsurface				Surface			
Well		Spring			Stream	Canal	Pond
Depth (ft.)		Yield (gpm)		Flow Rate (gpm)			
Max. Yield (gpm)		Collection Box Data		Seasonal or Perennial (S/P)			
Casing I.D. (in.)		Depth (ft.)					
Well Test (Y or N)		Volume (gal.)					
Date of Test		Covered (Y or N)					

Valve Type	D Dia.	PR Size (inch)	A-V Size (inch)	E (inch)
Air Release				
Air Vacuum				
Pressure Relief				
Shutoff				
Vacuum				

Pump Requirements (Design)

Total Dynamic Head _____#.

Design Flow Rate _____/gpm

Pump As-Built

Manufacturer _____

Model _____

HP _____

REVISIONS			
DATE	APPROVED	TITLE	JAA

Date
Designed
Drawn
Checked
Approved

Arizona Drawing Template
533A – General Purpose
Standard

Field Office

County, Arizona

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

Drawing No.
AZ533A_02_10

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