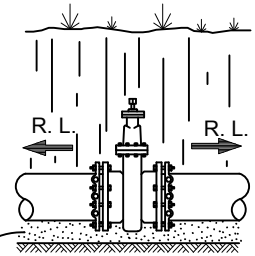
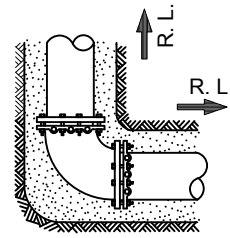
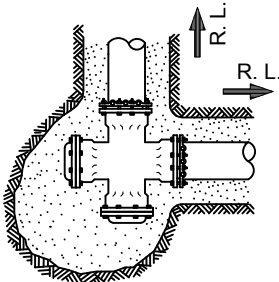
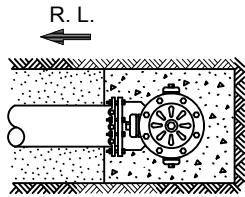


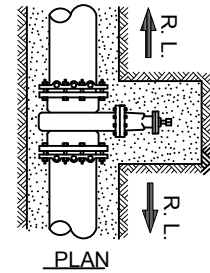
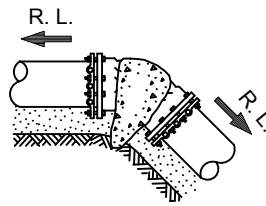
R. L. = RESTRAINED LENGTHS TO BE DETERMINED BY DESIGNING ENGINEER.



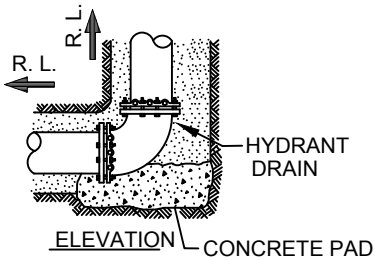
SELECT MATERIAL



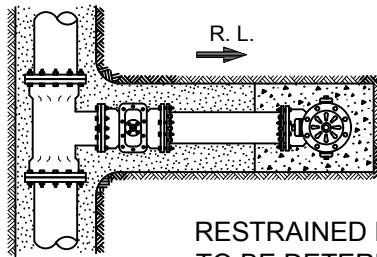
PLAN
POUR CONCRETE PAD AFTER HYDRANT HAS BEEN PLACED



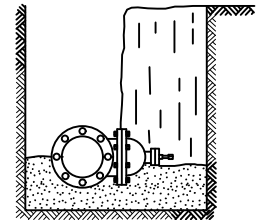
PLAN



ELEVATION
CONCRETE PAD



RESTRAINED LENGTH (R.L.)
TO BE DETERMINED BY
ENGINEER AND SHOWN ON
PLANS



ELEVATION

RESTRAINTS FOR FITTING
(NOT TO SCALE)



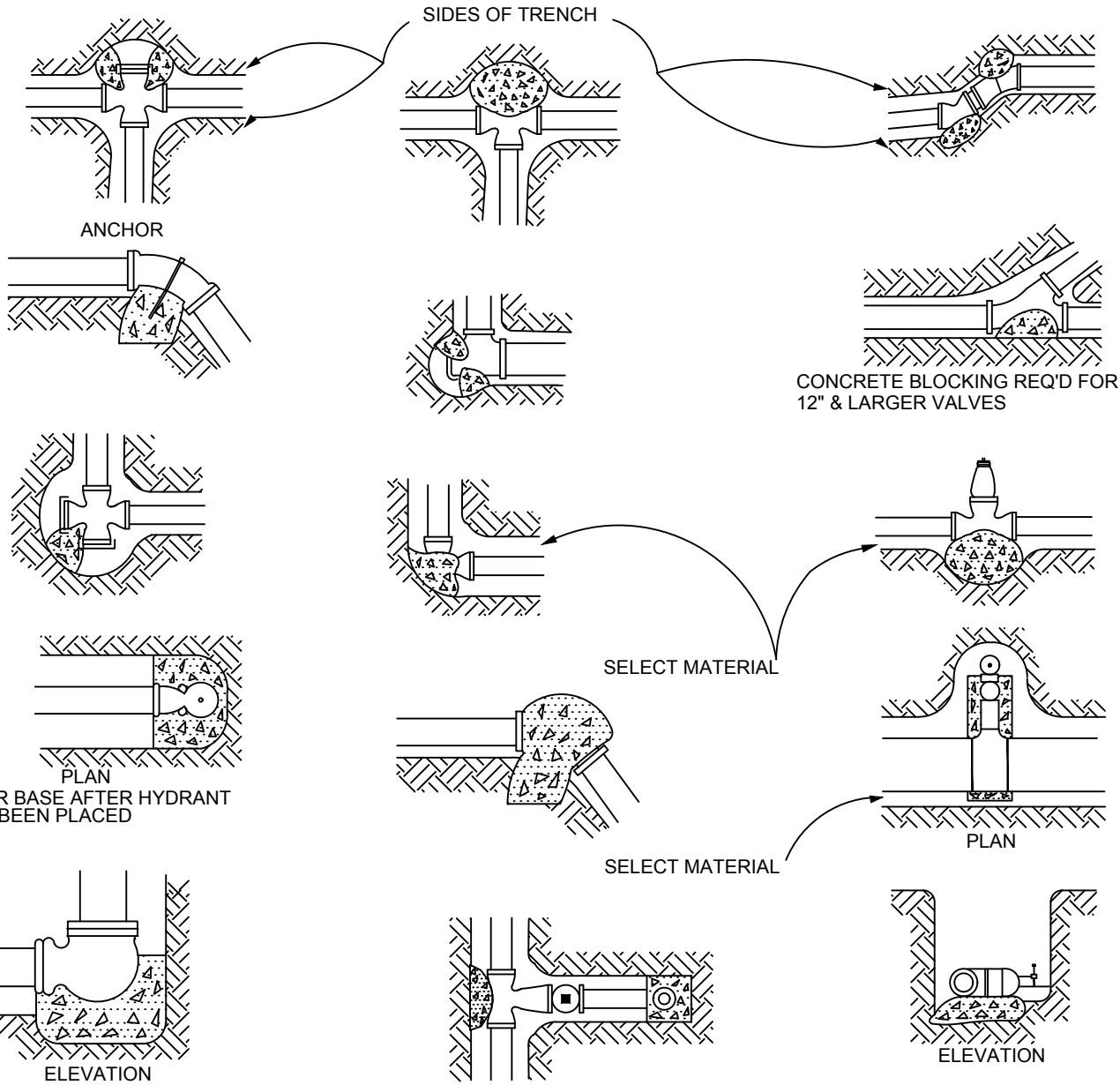
CITY OF SCHERTZ TEXAS
ENGINEERING AND PUBLIC WORKS

STANDARD DETAIL
N.T.S.

RESTRAINTS FOR FITTINGS

PW TECH. SPEC. SECTION 02511

SHEETNUMBER	PROJECT NO.:	DATE: 2/15/18
DRWN. BY: BCP	DSGN. BY: BCP	CHKD. BY: KJV
		SHEET NO.: 1 of 2



POUR BASE AFTER HYDRANT HAS BEEN PLACED

SELECT MATERIAL

SELECT MATERIAL

CONCRETE BLOCKING REQ'D FOR 12" & LARGER VALVES

SQUARE FEET OF BLOCKING REQUIRED FOR ROCK EXCAVATION (3000 psi concrete)

SQUARE FEET OF BLOCKING REQUIRED FOR OTHER THAN ROCK EXCAVATION (3000 psi concrete)

SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	2	2	1	1
8"	3	4	2	1
12"	6	9	5	2
16"	11	15	8	4
18"	14	20	10	5

SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	3	4	2	1
8"	4	6	4	2
12"	10	14	8	4
16"	18	25	14	7
18"	21	31	17	10

THRUST BLOCKING FOR FITTINGS
(NOT TO SCALE)



CITY OF SCHERTZ TEXAS
ENGINEERING AND PUBLIC WORKS

THRUST BLOCKING FOR FITTINGS

STANDARD DETAIL
N.T.S.

PW TECH. SPEC. SECTION 02511

SHEETNUMBER	PROJECT NO.	DATE: 1/18/18
DRWN. BY: BCP	DSGN. BY: BCP	CHKD. BY: KJW
		SHEET NO.: 2 of 2