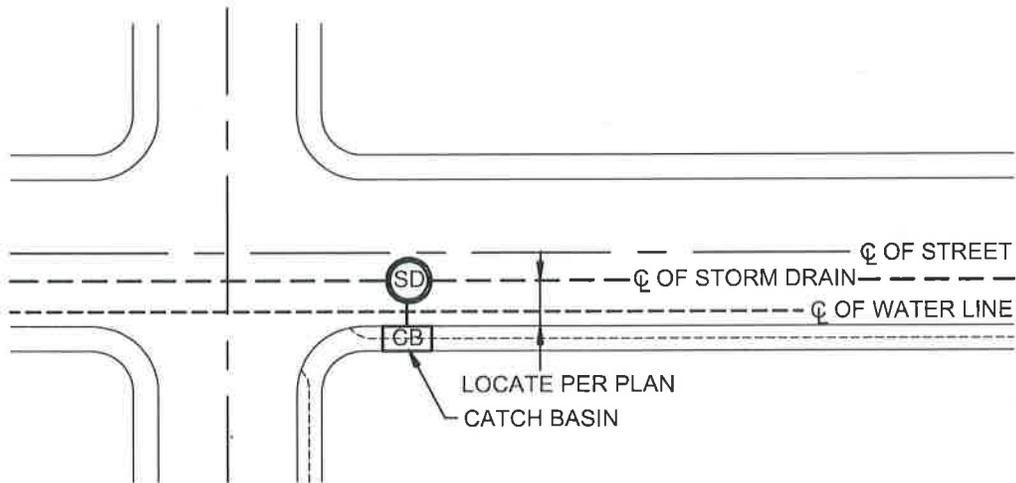


## GENERAL NOTES FOR FLOOD CONTROL AND STORM DRAIN SYSTEM



### STORM DRAIN LOCATION

1. STORM DRAIN SHALL BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY CITY ENGINEER. STORM DRAIN SHALL BE LOCATED ON THE APPROPRIATE SIDE OF THE STREET AS WATER MAINS.
2. PIPE SHALL BE LAID IN OPEN TRENCHES OF SUFFICIENT WIDTH TO GIVE ADEQUATE ACCESS; BUT, LIMITED TO A MAXIMUM WIDTH OF THE PIPES GREATEST DIAMETER PLUS 20" (INCHES). SEE BREA STD PLAN 404.
3. THE SUBGRADE OF THE PIPE SHALL BE TO THE EXTERIOR BOTTOM OF THE PIPE AND THE TRENCH SHALL BE CAREFULLY GRADED TO PROVIDE SUPPORT, OR UNIFORM BEARING SURFACE.
4. MINIMUM PIPE DIAMETERS FOR STORM DRAINS TRUNK DRAIN, TRUNK LATERAL, AND INLET LATERAL (NOT A STREET CROSSING) IS 18" (INCHES).
5. WHERE CONCRETE PIPE IS USED, IT SHALL BE "EXTRA STRENGTH" AS A MINIMUM.
6. ANGLE POINTS IN ALIGNMENT SHALL NOT EXCEED 10 DEGREES DEFLECTION, WITHOUT A MANHOLE.
7. MANHOLE FREQUENCY SHALL NOT EXCEED 500' (FEET).
8. PIPE SHALL BE LAID WITHOUT A BREAK UPHILL FROM STRUCTURE TO STRUCTURE, AND WITH SOCKET END UP GRADE. FOR GRADE BREAK COLLAR, SEE APWA STD PLAN 204.
9. IN A TRAVELLED WAY, ENCASEMENT IS REQUIRED WHEN THE TOP OF PIPE TO FINISH SURFACE DISTANCE IS TWO FEET (2') OR LESS. SEE BREA STD PLAN 404.



### GENERAL NOTES - STORM DRAIN

APPROVED:

*[Signature]*  
CITY ENGINEER

DATE: 10-15-2013

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GENERAL NOTES FOR FLOOD CONTROL AND STORM DRAIN SYSTEM

12. FOR REINFORCED CONCRETE PIPE. SPECIFY "D LOAD" ON PLANS. REINFORCED CONCRETE PIPE SHALL CONFORM TO THE PROVISIONS IN SECTION 65 OF THE CALIFORNIA DIVISION OF HIGHWAYS - STANDARD SPECIFICATIONS AND THESE SPECIAL PROVISIONS:
  - a. WHERE THE "D-LOAD" IS INDICATED WITH THE PIPE SIZE, THAT LOADING SHALL BE THE BASIS OF ACCEPTANCE IN LIEU OF THE LOADINGS SPECIFIED IN AASHTO DESIGNATION "M 170" FOR SPECIFIC CLASSES OF PIPE.
  - b. MEASUREMENT: THE LENGTH OF PIPE TO BE PAID FOR WILL BE THE HORIZONTAL LENGTH MEASURE ALONG CENTER LINES TO TERMINATIONS, OR BETWEEN CENTERLINE INTERSECTIONS.
13. PIPE SHALL BE 18" MIN. DIAMETER D-2000 R.C.P. UNLESS OTHERWISE NOTED PER ENGINEERING DESIGN. PIPE JOINTS SHALL BE RUBBER GASKET.



CITY OF BREA

GENERAL NOTES - STORM DRAIN

APPROVED:

*Reddy*  
CITY ENGINEER

DATE: 10-15-2013

STD. PLAN NUMBER

401-0

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