



# Facilities Planning and Construction

Design & Building Standards

## Division 21 – Fire Suppression

### Preface

The Texas Tech University System's 'Design and Construction Standards', as administrated by Facilities Planning and Construction, are intended T



Division 21 – Fire Suppression

Install fire risers and fire riser valves required in a dedicated fire riser room'

At the end of the one-year warranty period, the Fire Suppression contractor shall execute a documented annual inspection, acceptable to the component institution Fire Marshal's Office, without change in the Contract amount. The inspection form shall be filled out in triplicate and submitted to the component institution Fire Marshal's Office and TTUS Facilities Planning and Construction'



This section encompasses and provides general requirements for ball valves, butterfly valves, check

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and F " 8lobal standard !or indicating valves \$ball ty#e%, Class 7umber 1116' \* ctuators can be )orm gear o! traveling nut' Su#ervisory s ) itch to be internal or external de#endent on valve' , nd connections !or valves to be threaded ends'

Butterfly valves with indicators Per U> 1?F1 1 2ron4e body )ith minimum #ressure rating o! 1G; #sig, !ull #ort si4e, , P " seats, stainless steel stems and disc, and F " 8lobal standard !or indicating valves \$butter!ly ty#e%, Class 7umber 1116' \* ctuators can be )orm gear o! traveling nut' Su#ervisory s ) itch to be internal or external de#endent on valve' , nd connections !or valves to be threaded ends'

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Underground #i#ing to be CF?? PCC or C1; 1 ductile iron )ater #i#e' Underground #i#ing under lootings and #enetrating !looring to be Class =?? \* 9 9 \* C1; 1 ductile iron )ater #i#e or F " a##roved stainless steel s#igot assembly'

S#ecily double chec/ bac/!lo ) #reventer assemg51(?) -07586(g)0. 58 9 586(51(?)-1(u)0. 58 9 586(b)0. 56

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To be developed

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\* Fire department connection shall be provided for each building and located as directed by the specifier and the component -institution Fire Marshal's Office. Specify the fire department connection to be either wall mounted flush type or F-1 degree side wall type depending on project location. Side wall type shall be marked with a F-1 marking sign and a metal sign.

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\* Aboveground piping for wet systems to be schedule 40 black/ steel piping conforming to ASTM A106; installed with approved screwed, grooved, flanged, and welded fittings. Schedule 40 galvanized pipe will be required for dry systems and preaction systems. Comply with applicable governing regulations and industry standards. Piping shall be domestically manufactured. All non-galvanized black/ steel piping used in water-based fire protection systems shall be provided with an antimicrobial coating designed to inhibit the growth of microbiologically influenced corrosion (MIC). The use of the

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Fire suppression piping is not allowed in - F0 " F rooms, elevator machine rooms, and electrical rooms except where serving that specific room'

For pendant heads in finished ceilings, specify white concealed sprinkler heads with round cover plates  
Unless approved otherwise by the FP5C Project Manager' \*All sprinkler heads are to be installed  
center of the tile, unless approved otherwise' 3ther pendant sprinkler head options will only be allowed  
if approved by the component institution Fire Marshal'

F " approved flexible drop connections are allowed for center of tile applications only'

Fire protection design for each system should include a 11inch inspector's test with a smooth bore  
corrosion resistant orifice giving a flow equal to one sprinkler of a type having the smallest diameter  
installed on the system' Inspector's test should be located at the most accessible remote location'  
, each system shall include a 6A main drain with gauges for the dual purpose of draining the entire  
sprinkler system and for conducting future main drain test'

System piping and components will be hydrostatically tested per 7FP\* 1= requirements' \*All  
aboveground and underground pipe 9 5 8 4 9 3 (I) 4 . 1 9 2 2 5 (e) 0 7 (c) - 0 . 9 anec  
co boiallin tyom'

0 . 5 9 0 2 5 1 8 7 (I) 1 0 8 . 9 5 7 (a) 0 . 5 8 9 5 9 . 0 8 Tdc [ (-18 . 9 0





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\* rrange the lire #um# !or manual sto# only' \* ccording to FM Global Data Sheet !"# the lire #um# should be arranged to automatically start as !ollo ) s)

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- 6' The loc/ey #um# sto# #oint is 1? #si more than the loc/ey #um# start #oint'
- = ' The lire #um# start #oint is ; to 1? #si less than the loc/ey #um# start #oint'