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

-nstall !ire risers and !ire #um#s $i! re(uired% in a dedicated !ire #um# room'

*t the end o! the one1year)arranty #eriod, the Fire Su##ression contractor shall execute a documented annual ins#ection, acce#table to the com#onent -nstitution Fire "arshall's 3!!ice,)ithout change in the Contract amount' The -ns#ection !orm shall be !illed out in tri#licate and submitted to the com#onent -nstitution Fire "arshall's 3!!ice and TTUS Facilities Planning and Construction'

This section encom#asses and #rovides general re(uirements !or ball valves, butter!ly valves, chec/

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 indicators0 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'

! "

To be develo#ed'

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Underground #i#ing to be CF?? PCC or C1;1 ductile iron) ater #i#e' Underground #i#ing under !ootings 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#eci!y double chec/ bac/!lo) #reventer assemb51(?)-07586(g)0.589586(51(?)-1(u)0.589586(b)0.56

$ %

To be develo#ed'

& " '

* !ire de#artment connection) ill be #rovided !or each building and located as directed by the 3) ner and the com#onent -nstitution Fire " arshal's 3!!ice' S#eci!y the !ire de#artment connection to be either) all mounted !lush ty#e or F?1degree side) al/ ty#e de#ending on #ro‰ect location' Side) al/ ty#e) ill be mar/ed) ith a F C mar/ing sign and a metal sign

 # ("

*boveground #i#ing !or) et systems to be schedule <? blac/ steel #i#ing con!orming to *ST " * ;= installed) ith a##roved scre) ed, grooved, !langed, and) elded !ittings' Schedule <? galvani4ed #i#e) ill be re(uired !or dry systems and #re1action systems' Com#ly) ith a##licable governing regulations and industry standards' Pi#ing shall be domestically manu!actured' *ll non1galvani4ed blac/ steel #i#ing used in) ater1based !ire #rotection systems shall be #rovided) ith an antimicrobial coating designed to inhibit the gro) th o! microbiologically in!luenced corrosion $ " -C%' The use o! thd

Fire su##ression #i#ing is not allo)ed in - F0" F rooms, elevator machine rooms, and electrical rooms exce#t)here serving that s#eci!ic room'

For #endant heads in !inished ceilings, s#eci!y)hite concealed s#rin/ler heads)ith round cover #lates Unless a##roved other)ise by the FP5C Pro&ect "anager' *ll s#rin/ler heads are to be installed center o! the tile, unless a##roved other)ise' 3ther #endent s#rin/ler head o#tions)ill only be allo)ed i! a##roved by the com#onent -nstitution Fire "arshall'

F" a##roved !lexible dro# connections are allo)ed !or center o! tile a##lications only'

Fire #rotection design !or each system should include a 1inch ins#ector's test)ith a smooth bore corrosion resistant ori!ice giving a !lo) e(ual to one s#rin/ler o! a ty#e having the smallest I!actor installed on the system' -ns#ector's test should be located at the most accessible remote location' ,ach system shall include a 6A main drain)ith gauges !or the dual #ur#ose o! draining the entire s#rin/ler system and !or conducting !uture main drain test'

System #i#ing and com#onents)ill be hydrostatically tested #er 7FP* 1= re(uirements' *ll aboveground and underground #i#e 9584 93(l)4.19225(e)07(c)-0.9 anec

co boiallin tyom'

0.59025187(l)108.957(a)0.58959.08 Tdc[(-18.9

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

1' The ⍁oc/ey #um# start #oint e(uals the #um# #ressure at churn $4ero !lo)% #lus the maximum static #um# suction #ressure #lus ; #si
6' The ⍁oc/ey #um# sto# #oint is 1? #si more than the ⍁oc/ey #um# start #oint'
=' The !ire #um# start #oint is ; to 1? #si less than the ⍁oc/ey #um# start #oint'