### FIRE DEPARTMENT DETAILS

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NOTES:
1. DOUBLE CHECK DETECTOR ASSEMBLY WITH BYPASS METER SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS RECOMMENDED IN THE AWWA-M14 MANUAL.
3. THE ENTIRE ASSEMBLY SHALL BE SECURED WITH CHAIN AND LOCK.
4. BACKFLOW DEVICES SHALL BE PAINTED TO MATCH THE LANDSCAPE (DESERT BROWN).
5. FDC’S AND PIVS SHALL BE PAINTED RED AND SIGNED PER FIRE DEPT. DETAIL NO. 104 SIGNAGE A, B, OR C.

GENERAL NOTES:
1. FDC’S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE SAME SIDE OF DRIVEWAY. AT THE ENTRANCE TO THE SITE.
2. A REGISTERED STRUCTURAL ENGINEER SHALL SEAL THE DESIGN OF THE THRUST BLOCKS, SUPPORTS AND TIE ROD ASSEMBLIES.
3. MAINTAIN 3 FEET CLEARANCE AROUND PIV AND FDC. (NO TREES, BUSHES, FENCES, CACTUS OR RIVER ROCK.
4. MAX DISTANCE BETWEEN FDC AND BACKFLOW MAY BE MODIFIED ONLY AS APPROVED BY THE FIRE MARSHAL.
NOTES:
1. ALL FD102 NOTES, GENERAL NOTE AND LIST OF MATERIALS SHALL APPLY TO FD103 DESIGN.
(EXCEPT GENERAL NOTE #4).
2. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE
   SAME SIDE OF DRIVEWAY AT THE ENTRANCE TO THE SITE.
3. SWING CHECK VALVES USED ON UNDERGROUND FIRE LINES SHALL BE INSTALLED WITHIN A VAULT IN
   ACCORDANCE WITH THIS DETAIL. THE CHECK VALVE AND VAULT ASSEMBLY SHALL BE INSTALLED
   AFTER THE PRIVATE HYDRANT LINE (PRIVATE HYDRANTS SHALL BE PAINTED YELLOW WITH A BLACK
   BONNET).
4. FIRE SPRINKLER LINES SHALL HAVE A SECTIONAL CONTROL PIV INSTALLED BETWEEN THE SWING
   CHECK VALVE AND THE FDC. A SECTIONAL CONTROL PIV SHALL BE INSTALLED AT MID POINT ON
   THE LOOPED FIRE LINE TO PROVIDE FOR ISOLATION OF THE FIRE LINE.
5. FIRE SPRINKLER LINES SHALL HAVE A RISER CONTROL PIV FOR EACH INDIVIDUAL RISER. THE PIV'S
   SHALL BE LOCATED AS CLOSE TO THE RISER AS PRACTICAL. THE RISER CONTROL PIV'S MAY BE
   ELIMINATED WHEN FD105 IS USED. FIRE SPRINKLER (FS) SYSTEM RISER (FD105) SHALL BE SHOWN ON
   CIVIL AND FS BUILDING PLANS. PROVIDE A KEY BOX FOR FIRE DEPARTMENT ACCESS.
6. ALL STUB OUT AND FUTURE DEVELOPMENT PADS (PHASED PROJECTS) SHALL END WITH A PIV PAINTED
   FOREST GREEN.

VAULT DETAIL

MINIMUM 6" OF APPROVED COMPACTED BACKFILL MATERIAL.

DETAIL NO. FD103 NTS
CITY OF CHANDLER STANDARD DETAIL

FIRE LINE INSTALLATION
(ON-SITE HYDRANT REQUIRED)

APPROVED: M. Sanderlin
FIRE MARSHAL
DATE: 05-10-2018

DETAIL NO. FD103 NTS
NOTES:
1. THE SIGNS SHALL INCLUDE THE ADDRESS(S) OF THE PREMISE(S) SERVING THE FDC OR PIV.
2. THE SIGNS SHALL BE RED IN COLOR WITH WHITE REFLECTIVE LETTERING AND SHALL BE 0.08 GAUGE ALUMINUM AND SHALL BE SECURELY ATTACHED TO THE FDC OR PIV WITH "U" TYPE BOLTS.
COMMERCIAL INSTALLATION

STANDARD DETAIL

CITY OF CHANDLER

DATE: 07-09-2015

FIRE SPRINKLER SYSTEM RISER
COMMERCIAL INSTALLATION

NOTE:
1. WHEN RISER CONTROLS ARE LOCATED INSIDE THE BUILDING A KEY BOX (WITH A MASTER KEY FOR THE BUILDING) SHALL BE PLACED AT THE FRONT ENTRANCE.
2. CHECK VALVE SHALL NOT BE REMOVED FROM THE RISER WHEN A BACKFLOW IS INSTALLED ON A WATER LINE.
3. TAMPER SWITCH OR CHAIN AND LOCK REQUIRED FOR RISER CONTROL VALVE.

4-WAY BRACING SECURED TO STRUCTURE

WATER FLOW SWITCH WIRED TO EXTERIOR LOCAL ALARM

HYDRAULIC DESIGN CALCULATIONS PLACARD

300 LB PRESSURE GAUGES ABOVE AND BELOW RISER CHECK VALVE

RISER ALARM CHECK VALVE OR APPROVED VERTICAL CHECK VALVE SHALL BE PROVIDED ON ALL RISERS.

RISER CONTROL VALVE. WHEN A RISER CONTROL PIV IS INSTALLED ON THE UNDERGROUND FIRE LINE, THE CONTROL VALVE ON THE RISER MAY BE OMITTED.

FLANGE 6" MINIMUM ABOVE FINISHED FLOOR. UNI-FLANGES (MEGA-LUGS) SHALL NOT BE USED ABOVE GRADE.

SLEEVE THROUGH FINISHED FLOOR. CLEARANCE ON ALL SIDES SHALL NOT BE LESS THAN ONE INCH FOR PIPE SIZES 1" THROUGH 3-1/2", AND TWO INCHES FOR PIPE SIZES 4" AND LARGER.

THRUST BLOCK PER NFPA #24

2" SYSTEM MAIN DRAIN PIPED TO EXTERIOR

EXTERIOR LOCAL ALARM, 10" ELECTRIC BELL OR APPROVED AUDIBLE DEVICE (RED)

2" SYSTEM MAIN DRAIN PIPED TO EXTERIOR

FIRE MARSHAL

APPROVED: 07-09-2015
NOTES:
1. ALL SIGNS SHALL RED IN COLOR WITH WHITE REFLECTIVE LETTERING.
2. OUTSIDE SIGNS SHALL BE 0.08 GAUGE ALUMINUM OR EQUIVILANT,
   SECURED TO THE DOOR, OR THE SIGN MAY BE STENCILED ON THE DOOR.
   STENCILING SHALL BE RED BACKGROUND WITH WHITE REFLECTIVE LETTERING.
3. INSIDE SIGNS SHALL BE OF DURABLE MATERIAL.
NOTES:

1. ALL SIGNS SHALL RED IN COLOR WITH WHITE REFLECTIVE LETTERING.
2. SIGNS SHALL BE POSTED AT ALL FIRE DEPT ACCESS POINTS TO THE SITE.
3. SIGNS SHALL BE MADE OF DURABLE OR ALL WEATHER MATERIALS.
4. SIGNS SHALL BE MOUNTED ON EITHER A SINGLE CENTER POST OR DOUBLE SIDE POST. POST MAY BE STEEL OR WOOD.
5. TOP OF SIGN SHALL BE 6-8 FEET FROM FINISH GRADE.
6. SIGNS SHALL BE POSTED WHEN TEMPORARY FIRE DEPARTMENT ACCESS ROADS ARE INSTALLED.
7. SIGNS SHALL BE REMOVED WHEN PERMANENT ROADS ARE COMPLETED.
NOTES:
1. ALL SIGNS SHALL USE 3M RED HIGH INTENSITY PRISMATIC SHEETING WITH WHITE REFLECTIVE LETTERING.
2. SIGNS SHALL BE POSTED AT ALL FIRE DEPT EMERGENCY GATE ACCESSSES.
3. SIGNS SHALL BE MADE OF DURABLE OR ALL WEATHER MATERIALS.
4. SIGNS SHALL BE MOUNTED ON BOTH SIDES OF THE GATE.
**General Notes:**

1. **Approved Sign:** (2" letters Helvetica Medium, 36" x 24"), shall use 3M red high intensity prismatic sheeting with white reflective lettering, to identify the name of the complex and the location (address). ½" x 1½" mounting straps.
2. Property owner/management padlock (only long hasp locks are allowed).
3. Knox padlock shall be accessible from both sides of gate.
4. "FD emergency access do not block" FD108 signs (2" letters, 24" x 24"), shall use 3M red high intensity prismatic sheeting with white reflective lettering, placed back to back and fastened on all 4 corners. ½" x 1½" mounting straps.
5. The minimum overall width of the gate opening shall be 20 ft.
6. Weld modified l-bracket to gate frame or post. Round all edges. (TYPICAL 2 PLACES)
7. Locking bar length is determined by the frame width and the gap width between the 2 gates. Remove all sharp edges / round all corners.
8. 24" diameter concrete post footings. (TYPICAL)
9. Posts and gates shall be painted chrome yellow.
10. Gates / barriers shall be set off the roadway fifty-five (55') to allow safe distance to pull off the roadway.
11. All other gate designs shall be approved by the fire marshal.

**Post Gate Notes:**

1. 3" x 3" x .120 post 6' - 6" w/ cap approved color chrome yellow.
2. 2" x 2" x .120 rails approved color chrome yellow.
3. 5" heavy duty barrel hinges (TYPICAL 4 PLACES)

**Type A: Double Swing Gate**

**Chain Gate Notes:**

1. 3" x 3" x .120 post 6' - 6" w/ cap approved color chrome yellow. Minimum 3/8" zinc plated chain, welded to "L" bracket. Lock shall fit loosely in links.
2. Securely attach signs to chain in 2 places each, signs shall be horizontal in chain-locked position.

**Type B: Chain Gate**
NOTES:
1. 2" LETTERS ARE 5/8" WIDE.
2. 1-1/2" LETTERS ARE 1/2" WIDE.
3. 3/4" LETTERS ARE 1/8" WIDE.
4. ALL LETTERS ARE RED WITH A WHITE REFLECTIVE BACKGROUND.
5. THE SIGNS ARE TO BE MOUNTED ON A POST AS PER MAG STD. DTL. 131.
6. THE BOTTOM OF THE SIGN IS TO BE 7' ABOVE GRADE AND SPACED
   NO MORE THAN 75' APART.
7. CURBING SHALL BE PAINTED BRILLIANT RED WITH WHITE 2" LETTERING
   "NO PARKING-FIRE LANE".
8. THESE SIGNS ARE NOT SUPPLIED BY THE CITY OF CHANDLER.
9. FOR APPLICATION OF THIS DETAIL REFER TO TABLE 2 IN STREET DESIGN AND ACCESS
   CONTROL (TDM# 4) OR AS OTHERWISE DIRECTED BY THE FIRE MARSHAL.
NOTES:
1. LETTERS SHALL HAVE A PRINCIPAL STROKE OF NOT LESS THAN 3/4 INCH (19.1mm).
2. LETTERING SHALL BE WHITE REFLECTIVE WITH A RED BACKGROUND.
3. SIGNS SHALL BE 0.08 GAUGE ALUMINUM.
4. SIGNS SHALL BE SECURED TO THE DOOR IN A PERMANENT FASHION. NO GLUE. SIGN MAY BE STENCILED ON DOOR.
5. TOP OF SIGN SHALL BE 6' ABOVE FINISHED GRADE.
TURNAROUNDS: ALL DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH APPROVED APPARATUS TURNAROUNDS.

SURFACE: FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPPOSED LOADS OF FIRE APPARATUS (80,000 LBS. MIN) AND SHALL BE PROVIDED WITH A SURFACE SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.

HEIGHT: UNOBSTRUCTED VERTICAL CLEARANCE SHALL BE NOT LESS THAN 15 FEET.

WIDTH*: UNOBSTRUCTED ROADWAY WIDTH SHALL NOT BE LESS THAN 20 FEET.
NOTE:
SEE ALSO FD141 FOR MORE DETAILS
NOTES

1. DOUBLE CHECK DETECTOR ASSEMBLY WITH BYPASS METER SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS RECOMMENDED IN THE AWWA-M14 MANUAL.

2. ADEQUATE CLEARANCE SHALL BE PROVIDED AROUND FIRE RISER. DIMENSIONS FROM FACE-OF-PIPE SHALL MEASURE A MINIMUM OF 12" OFF THE BACK WALL, 18" ON EACH SIDE, AND 36" CLEAR IN FRONT WITH A FULL HEIGHT DOOR. THE FIRE LINE SHALL EXTEND A MAXIMUM OF 36" INTO THE BUILDING FROM INSIDE FACE-OF-WALL TO CENTER OF PIPE.

3. TAMPER SWITCH OR CHAIN & LOCK REQUIRED FOR CONTROL VALVES.

BLACK STEEL PIPE

FLANGE 6" MINIMUM ABOVE FINISHED FLOOR. UNI-FLANGES (Mega-Lugs) SHALL NOT BE USED ABOVE GRADE.

SLEEVE THROUGH FINISHED FLOOR. CLEARANCE ON ALL SIDES SHALL NOT BE LESS THAN ONE INCH FOR PIPE SIZES 1" THROUGH 3-1/2", AND TWO INCHES FOR PIPE SIZES 4" AND LARGER.

4 WAY BRACING SECURED TO STURCUTURE

FLOW SWITCH

MAIN DRAIN (VENT TO ATMOSPHERE)

APPROVED BACKFLOW ASSEMBLY NOTE #1

300LB PRESSURE GAUGE

CHECK VALVE AT F.D.C.

F.D.C. W/NST

EXTERIOR WALL

EXTerior LOCAL ALARM 10" ELECTRIC BELL OR APPROVED AUDIBLE DEVICE (RED)

3'-0" MAX.

THRUST BLOCK PER NFPA #24
The address numbers shall be posted on the top center identification sign at main entrance of commercial mall, center, village, or square, so as to be visible from a north-south or east-west direction.

Identification numbers and suffixes assigned to buildings shall be displayed in the upper, right hand corner at the end of each building so as to be plainly visible from the access thoroughfare.

Multi-family developments with internal drives, building number and range of suffixes shall be posted on each side of building so as to be clearly visible from all access drives and thoroughfares.

Color of numbers and background shall contrast and conform to requirements for Helvetica medium numbering. Distance at which numbers shall be legible from center of thoroughfare:

- 0-50' - 4"
- 50-200' - 10"
- 201-300' - 12"
- 301-400' - 14"

Notes:
1. There shall be no landscaping or screen wall that covers or hinders the view of the monument sign from the roadway.
2. All suites shall have the address and suite number on both the front and back door(s).