

STANDARD PLANS

FIRE

1. The number of driveways and private street connections to public streets shall be kept to a minimum.
2. Driveways and private street connections to public streets shall be located as far as possible from public street intersections and other full access driveways to commercial, industrial or residential developments.
3. Residential driveways shall connect to the public street with Standard Detail S-5 concrete driveway approaches. Private streets and commercial driveways shall connect to the public street with Standard Detail S-5 concrete driveway approaches, or a street type opening with Standard Details S-8 & S-9 curb returns. When street type openings are used the limits of the private pavement areas shall be clearly distinguishable from the public street by installing a minimum 10 foot wide decorative concrete strip on the project parcel along the public street right of way line.
4. Driveway approach aprons (excluding the flare) shall be the same width as the required width of the driveway.

3.04 FIRE DEPARTMENT ACCESS

3.04.01 GENERAL

A. Access

More than one fire apparatus access route shall be provided when it is determined by the Fire Chief that access by a single route might be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit ingress or egress.

Residential developments having more than 50 dwelling units shall be provided with at least two points for fire apparatus access.

When two points of access are required, they shall be located a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between the two access points.

Emergency vehicle only access routes are not permitted as a means to satisfy the second point of access requirement.

Fire apparatus access routes shall be unobstructed as defined by the following criteria:

1. Streets and commercial driveway minimum widths shall be as follows:
 - (a) 14 feet for one-way traffic (no parking on either side).
 - (b) 20 feet for two-way traffic (no parking on either side).
2. Residential driveway minimum widths shall be 12 feet.
3. A minimum unobstructed vertical clearance of 13 feet 6 inches shall be provided.
4. A maximum longitudinal grade of 15% shall be provided.

Refer to the City of Napa "Citywide Guidelines for Traffic Calming and Neighborhood Traffic Management" for appropriate and acceptable traffic calming measures.

All temporary and permanent Fire Department access routes surfacing structural sections shall be designed to support an HS-20 loading, and in accordance with Section 3.01.06 – "Pavement Structural Section (Streets)" of these Standard Specifications.

Permanent Fire Department access routes shall be surfaced with an asphalt concrete or

Portland Cement Concrete structural section (or an alternate equivalent all-weather pavement structural section approved by the Fire Chief and City Engineer).

The City of Napa Fire Department's largest apparatus (currently the ladder truck) shall be used as the design vehicle for all fire access routes.

Fire Department access shall be provided so that a 150-foot length of hose can be extended from the parked fire vehicle to all points along the exterior perimeter of all structures along an approved route.

B. Turnaround

Public Street Turnaround – Fire Department access for all public streets shall be along a through route or (when through access is not available) shall end in a standard cul-de-sac bulb designed and installed in accordance with City Standard Plans S-7A & S-7B.

All streets (and driveways exceeding 150 feet in length) shall be along a through route or shall end with an approved turn around area (to provide for forward entry and exit). Private street access will be reviewed and approved by the Fire Chief and City Engineer based on site constraints in accordance with the following hierarchy:

1. Through access shall be provided.
2. Standard Turnaround – When through access is not available, a cul-de-sac bulb shall be installed at the end of the street as follows:
 - (a) Residential Developments
 - (1) Standard Bulb – A standard cul-de-sac bulb designed in accordance with Standard Detail S-7A shall be installed at the end of the street.
 - (2) Reduced Bulb – Generally, the cul-de-sac bulb face of curb radius shall be 40 feet to provide for on-street parking. However, on private streets the bulb face of curb radius may be reduced to 35 feet when at least one 8-foot-wide parallel parking bay is provided, outside of the 35-foot radius area, along the frontage of each lot. No parking is allowed along the reduced portion of the bulb, and appurtenant bulb return frontages. These no-parking frontages require red curbing and/or “No-Parking” signs (Standard Details FP-2A & FP-2B) as determined by the Fire Chief.
 - (b) Commercial/Industrial Developments
 - (1) A standard cul-de-sac bulb designed in accordance with Standard Detail S-7B shall be installed.
 - (2) The cul-de-sac bulb face of curb radius shall be 55 feet to provide for on-street parking.
3. Alternate Turnaround – For residential development private streets, when through access is not available, and a standard turnaround is not feasible, alternate turnarounds will be allowed (in accordance with Standard Details S-29A & S-29B) as follows:
 - (a) Based on evidence supplied by the developer (in the form of a design exception that is approved by the Fire Chief and City Engineer) when:
 - (1) The standard cul-de-sac bulb will cause significant environmental impacts such as excessive hillside grading, rock outcroppings, and/or removal of significant trees.

- (2) The standard cul-de-sac bulb will prevent site layouts that achieve minimum development densities.
- (b) For a driveway serving a flag lot.
- (c) For a street that abuts 4 or less lots.
- (d) The layout of the hammerhead turnaround and surrounding lots and connecting driveways shall be “self-policing”, (i.e., in addition to signage and painted curbing the layout configuration shall include design elements that discourage the parking of vehicles or placement of obstructions within the fire lane turnaround area), as reviewed and approved by the Fire Chief and City Engineer.

Residential Partial Cul-de-Sac (Standard Details S-7C & S-7D) – When a standard turnaround is required for residential developments (and that turnaround will serve future development across the street on an abutting parcel) a partial cul-de-sac designed in accordance with either City Standard S-7C (Fire Engine) or City Standard S-7D (Fire Ladder Truck) will be allowed as an interim solution when approved by the Fire Department. All public street partial cul-de-sacs shall be designed with parking, i.e., a minimum 40-foot face of curb radius partial bulb and a minimum 28-foot pavement width partial street cross section are required.

The cross slope of a turnaround area shall not exceed 5%.

When required by the Fire Chief, Fire Department apparatus access routes shall be designated as “Fire Lanes” and appropriate signs and/or markings shall be installed in accordance with City Standard FP-1 and the California Vehicle Code.

To allow for Fire Department apparatus access, 1) parking shall be prohibited on streets with pavement widths that are less than 28 feet, 2) parking on one side of a street is permitted on streets with pavement widths that are 28 feet or greater, and 3) parking on both sides of the street is permitted on streets with pavement widths that are 36 feet or greater.

Fire Department access routes that exceed 500 feet in length require additional intermittent turnaround areas. The maximum spacing between turnaround areas shall be 500 feet. Hammerhead turnarounds may be used to satisfy the intermittent turnaround requirement.

3.04.02 FIRE ACCESS REQUIREMENTS (FOR BUILDING CONSTRUCTION)

If the streets or access roads in a development are not paved from October 15th through April 15th, a temporary all weather access road shall be provided by the Contractor.

The City of Napa Fire Department requires that a fire hydrant be in service within 250 feet of the furthest point of construction prior to the stockpiling of combustible materials or the beginning of combustible construction. (Exception: Storage of combustible materials for framing of slab(s) only shall be allowed).

Temporary all weather construction phase Fire Department access route structural sections shall consist of a minimum of 12 inches of base rock material over either: (1) a lime treated subgrade, or (2) a subgrade covered with fabric in accordance with the following design criteria:

1. Subgrade is defined as the native soil at the bottom of the access route structural section, excavated to the lines and grades shown on the project grading plan, and

provided with a discharge for the collected storm water runoff, as approved by the City Engineer.

2. Base rock shall be Class II aggregate base compacted to at least 95% relative compaction.
3. Base rock shall be placed only on a firm and unyielding (compacted to at least 95% relative compaction) excavated and drained subgrade to a depth of 12-inches.
4. Lime treated subgrades shall be designed in accordance with the recommendations of a geotechnical engineer and compacted to at least 95% relative compaction.
5. Fabric shall be a ground stabilization fabric such as Mirafi 600X or equivalent.
6. Fire Department access shall be a minimum 20 feet in width and provided so that a 150-foot length of hose can be extended from the parked fire vehicle to all points along the exterior perimeter of all structures.
7. Alternate all weather access road sections may be proposed by a geotechnical engineer and submitted to the Public Works Director for approval. Approval of the Public Works Director and Fire Marshal is required for alternate all weather access roads.

3.05 STREET SPECIAL PROVISIONS

Whenever a pipe is installed in paved public streets, the sides of the trench shall be cut to a neat line in a manner satisfactory to the Public Works Director or their designee. The trench shall be backfilled with $\frac{3}{4}$ " Class II AB and a temporary patch of cold mix asphalt shall be placed on the trench at the end of the workday. Permanent pavement shall be placed on the trench within 48 hours after the storm drainage pipe has been installed unless otherwise approved by the Public Works Director or their designee. Refer to City of Napa Standard Plan D-12, "Storm Drain Trench" for drainage related facilities, City of Napa Standard Plan W-16, "Water Trench Detail" for water related facilities, and City of Napa Standard Plan S-12, "Standard Backfill Detail", for all other facilities.

3.05.01 EXISTING FACILITIES

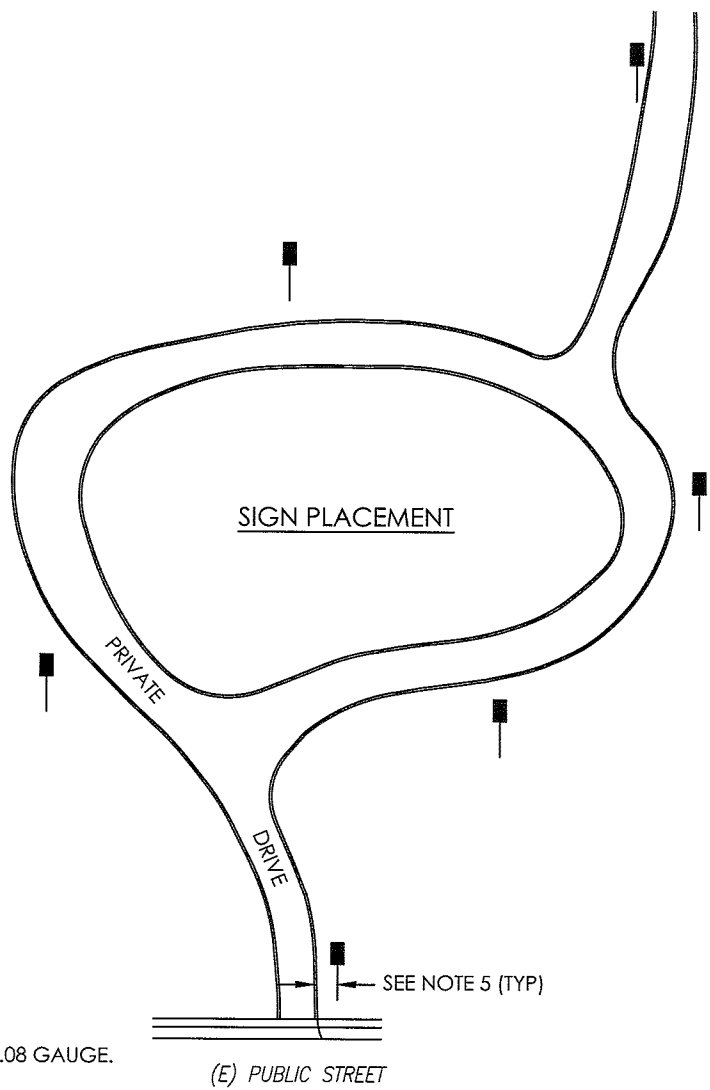
The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, "Existing Facilities," of the Standard Specifications and these City Standard Specifications.

The Contractor shall remove and relocate/reset traffic signs and poles and other facilities which are in the construction area.

3.05.02 AGGREGATE BASE

Aggregate base shall be Class 2, three quarter inch ($\frac{3}{4}$ " maximum grading, and shall conform to the provisions in Section 26, "Aggregate Bases," of the Standard Specifications and these City Standard Specifications.

Aggregate for Class 2 aggregate base placed in street sections shall not include material processed from portland cement concrete, lean concrete base, cement treated base or a combination of any of these materials. All subgrade and aggregate base placed must be compacted to a minimum relative compaction of ninety-five percent (95%).



NOTES

1. SIGNS SHALL BE RED ON WHITE REFLECTIVE COMMERCIAL GRADE 0.08 GAUGE.
2. SIGNS SHALL BE VISIBLE AND READABLE ALONG ACCESS ROADWAY.
3. SIGNS ARE TO FACE ONCOMING TRAFFIC.
4. SIGNS ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
5. A MINIMUM OF ONE SIGN SHALL BE POSTED AT THE BEGINNING AND END OF THE FIRE LANE AREA.
6. FOR CONTINUOUS FIRE LANES AREAS, SIGNS SHALL BE POSTED AT INTERVALS OF 100' MINIMUM AND 175' MAXIMUM.
7. SIGNS ARE TO BE POSTED SO THE BOTTOM OF THE SIGN IS 90" ABOVE GROUND LEVEL.
8. SIGN POSTS SHALL BE LOCATED 2' FROM EDGE OF TRAVELED WAY TO CENTER OF POST.
9. FINAL PLACEMENT OF ALL SIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE FIRE CODE OFFICIAL.

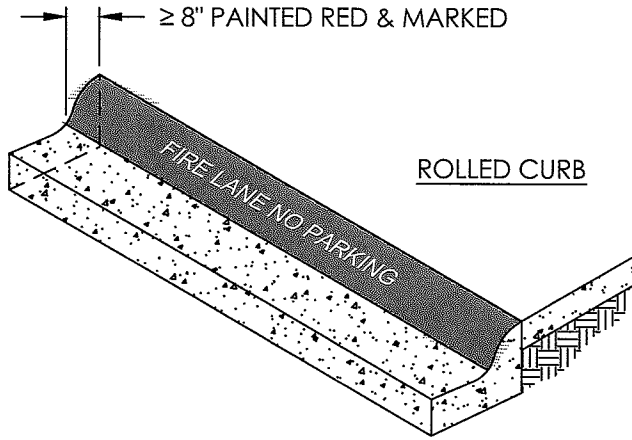
CITY OF NAPA

FIRE DEPARTMENT

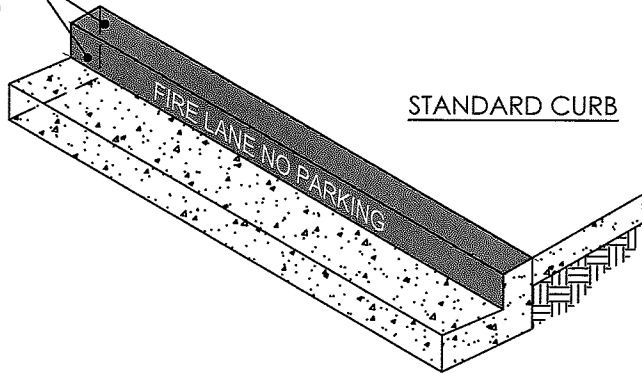
FIRE LANE SIGN & PLACEMENT

DRAWN BY: LFM
 APPROVAL DATE: 08/2021
 SCALE: NONE
 REVISED DATE:

CHECKED BY: BV
 APPROVED BY: GDF
 DRAWING NO. FP-2



TOP & FACE PAINTED
RED & MARKED



NOTES

1. ALL CURBS ALONG FIRE LANES ARE REQUIRED TO BE PAINTED RED AND STENCILED "FIRE LANE NO PARKING".
2. THERE SHALL BE A MAXIMUM DISTANCE OF 20' BETWEEN "FIRE LANE NO PARKING" LETTERING.
3. IF NO CURBS ARE PRESENT, CONTINUOUS RED STRIPING OF 6" WIDTH SHALL BE USED, LETTERING IS THE SAME AS CURBS.
4. LETTERING ON CURBS IS TO BE A MINIMUM OF 3" IN HEIGHT AND WHITE IN COLOR.

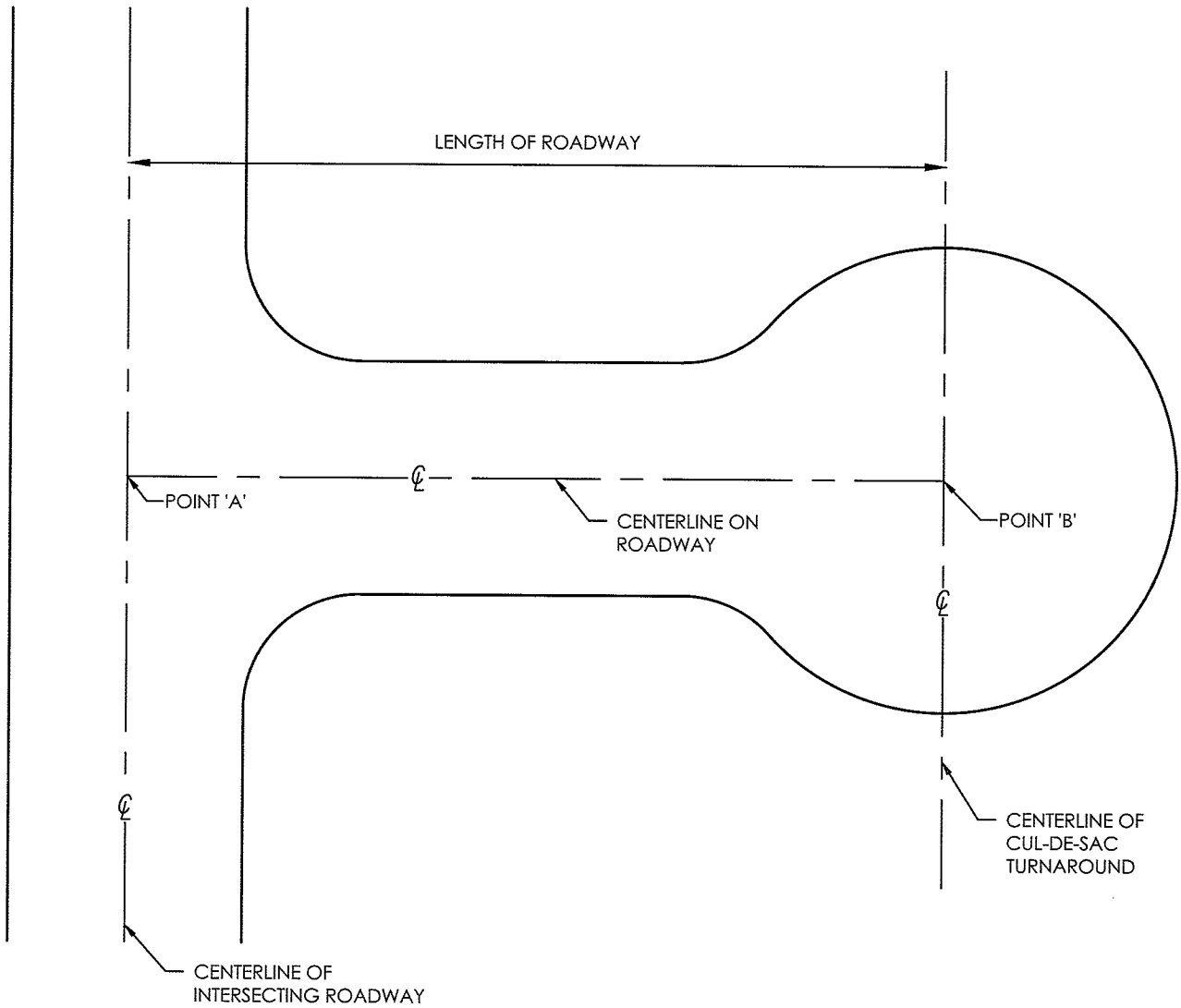
CITY OF NAPA

FIRE DEPARTMENT

FIRE LANE CURB PAINTING

DRAWN BY:	RC
APPROVAL DATE:	08/2021
SCALE:	NONE
REVISED DATE:	

CHECKED BY:	BY
APPROVED BY:	GDF
DRAWING NO.	FP-3

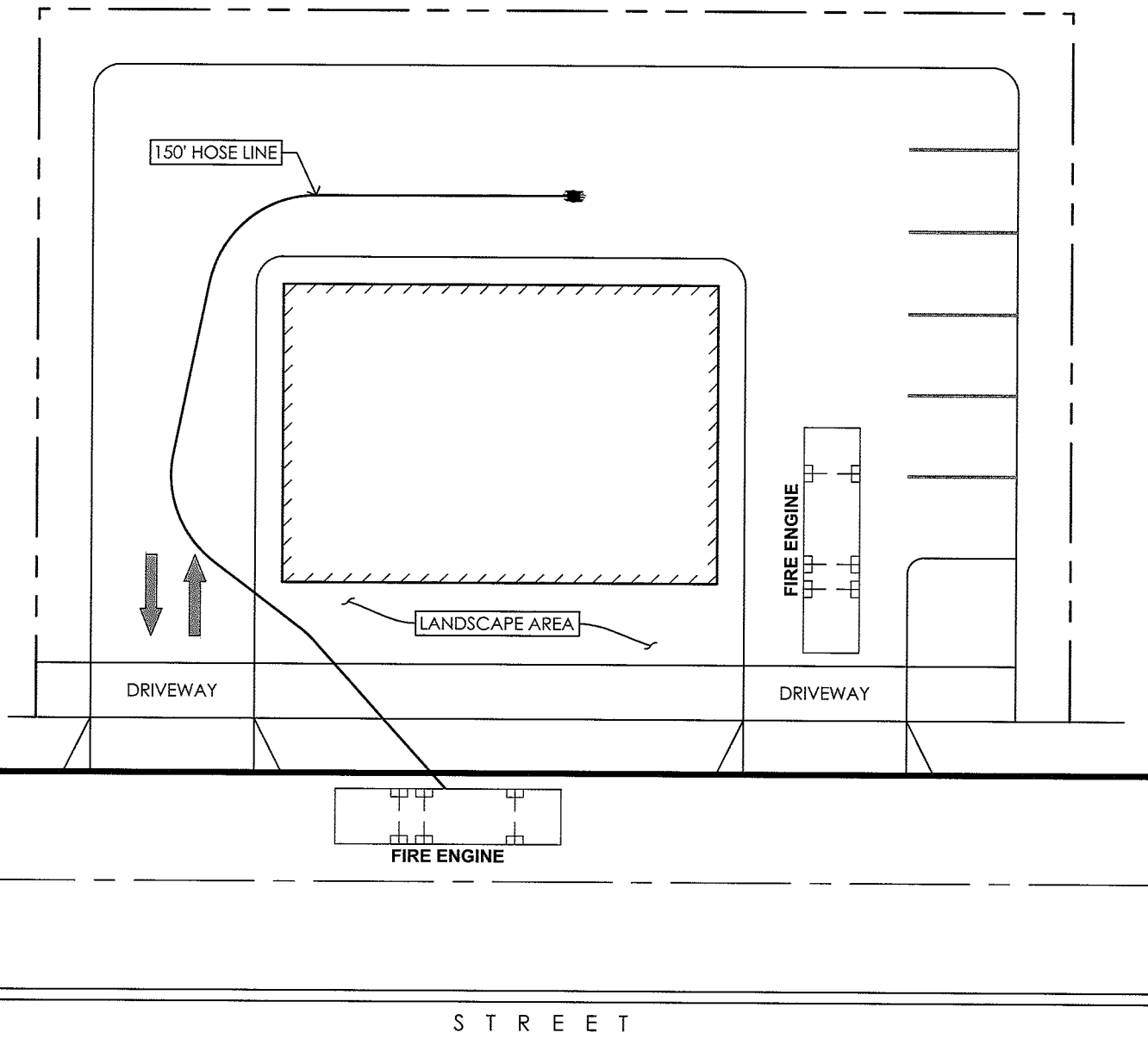


CITY OF NAPA

FIRE DEPARTMENT

METHOD OF MEASURING
CUL-DE-SAC-LENGTH

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-4
REVISED DATE:			

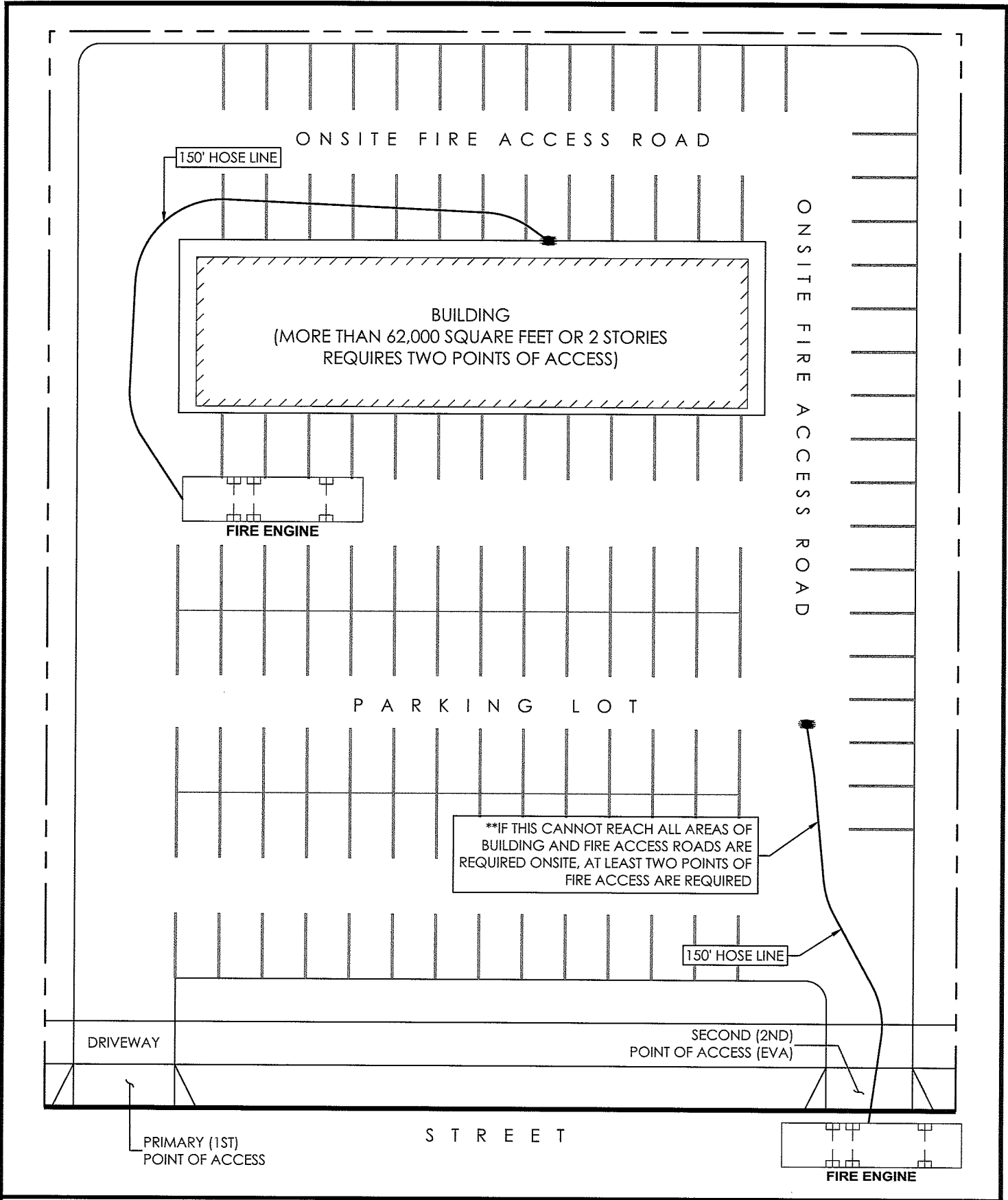


CITY OF NAPA

FIRE DEPARTMENT

ROUTE OF TRAVEL AROUND BUILDINGS

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-5
REVISED DATE:			



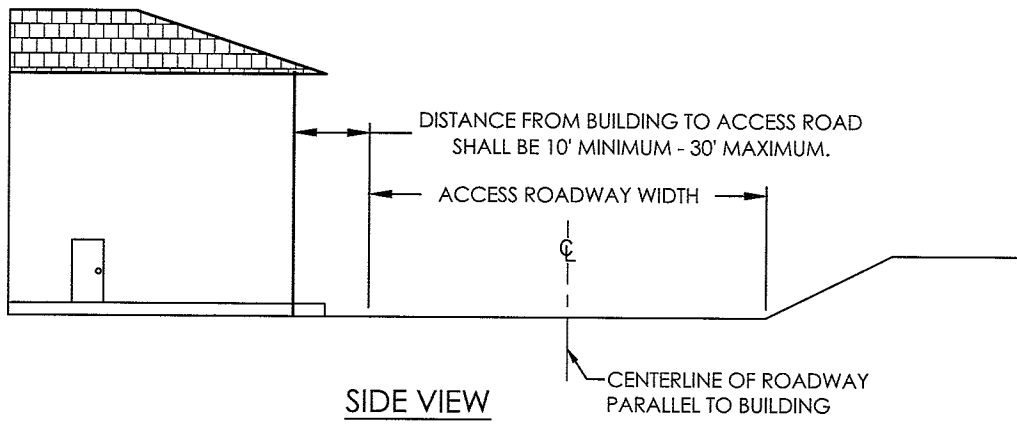
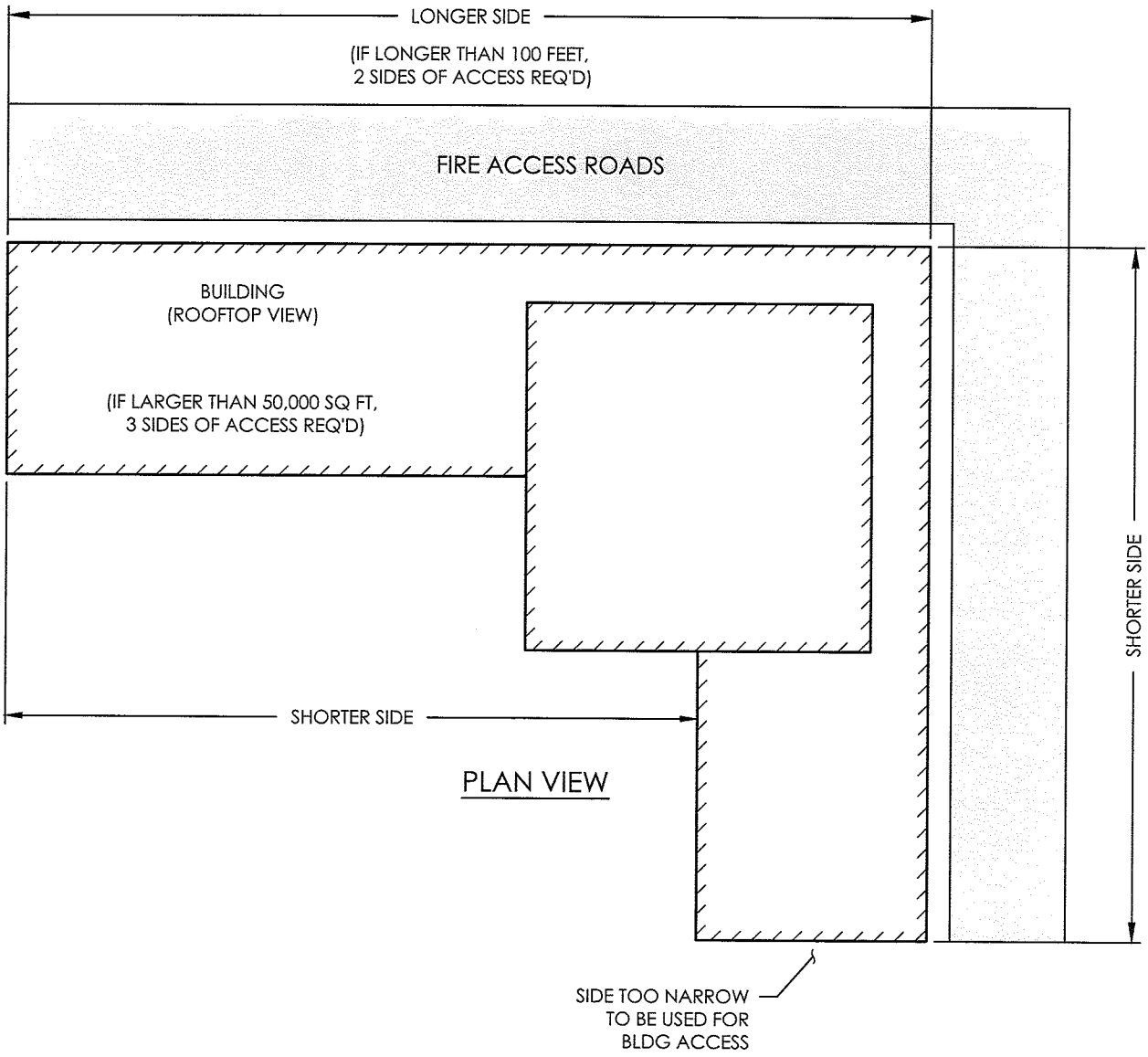
CITY OF NAPA

FIRE DEPARTMENT

MULTIPLE POINTS OF ACCESS

DRAWN BY: RC
 APPROVAL DATE: 08/2021
 SCALE: NONE
 REVISED DATE:

CHECKED BY: BV
 APPROVED BY: GDF
 DRAWING NO. FP-6



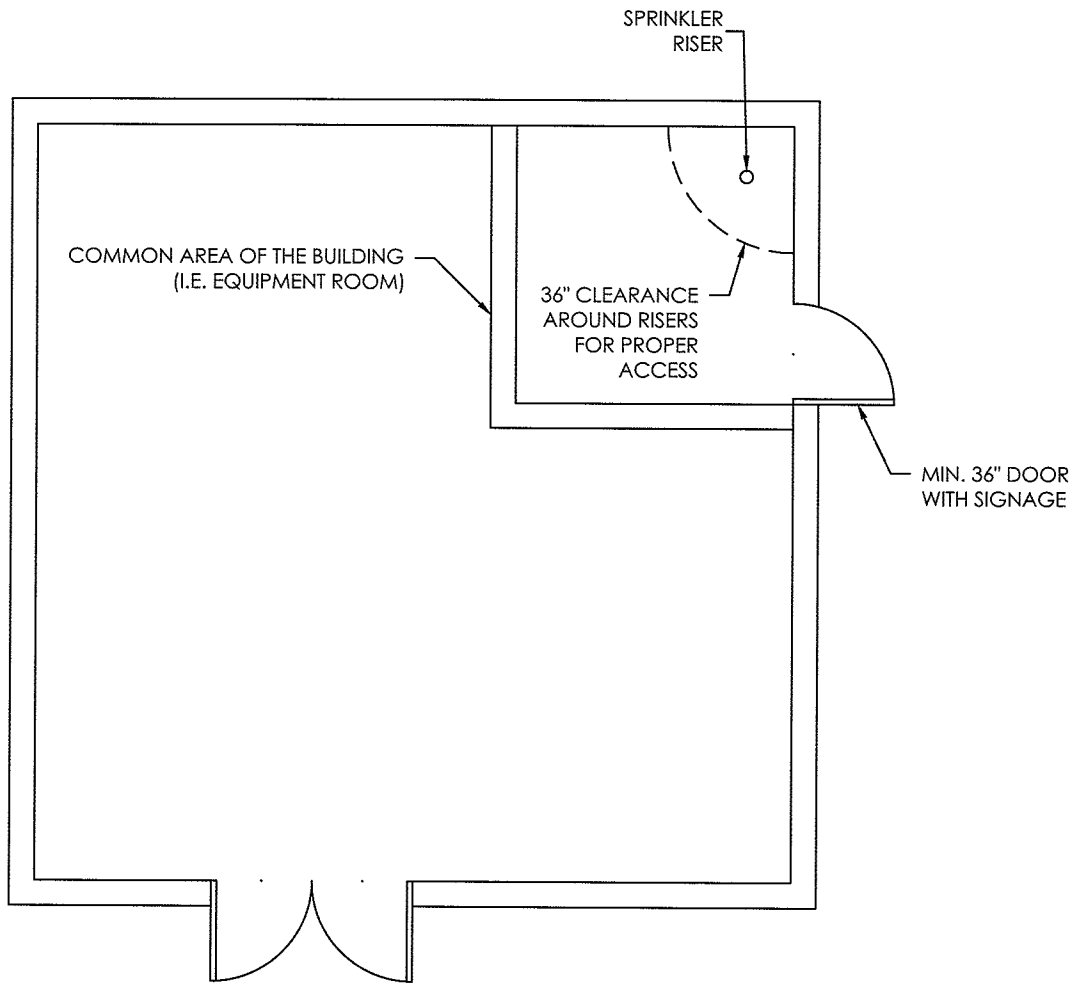
CITY OF NAPA

FIRE DEPARTMENT

SIDES OF BUILDING ACCESS

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-7
REVISED DATE:			

ACCESS TO SPRINKLER RISERS



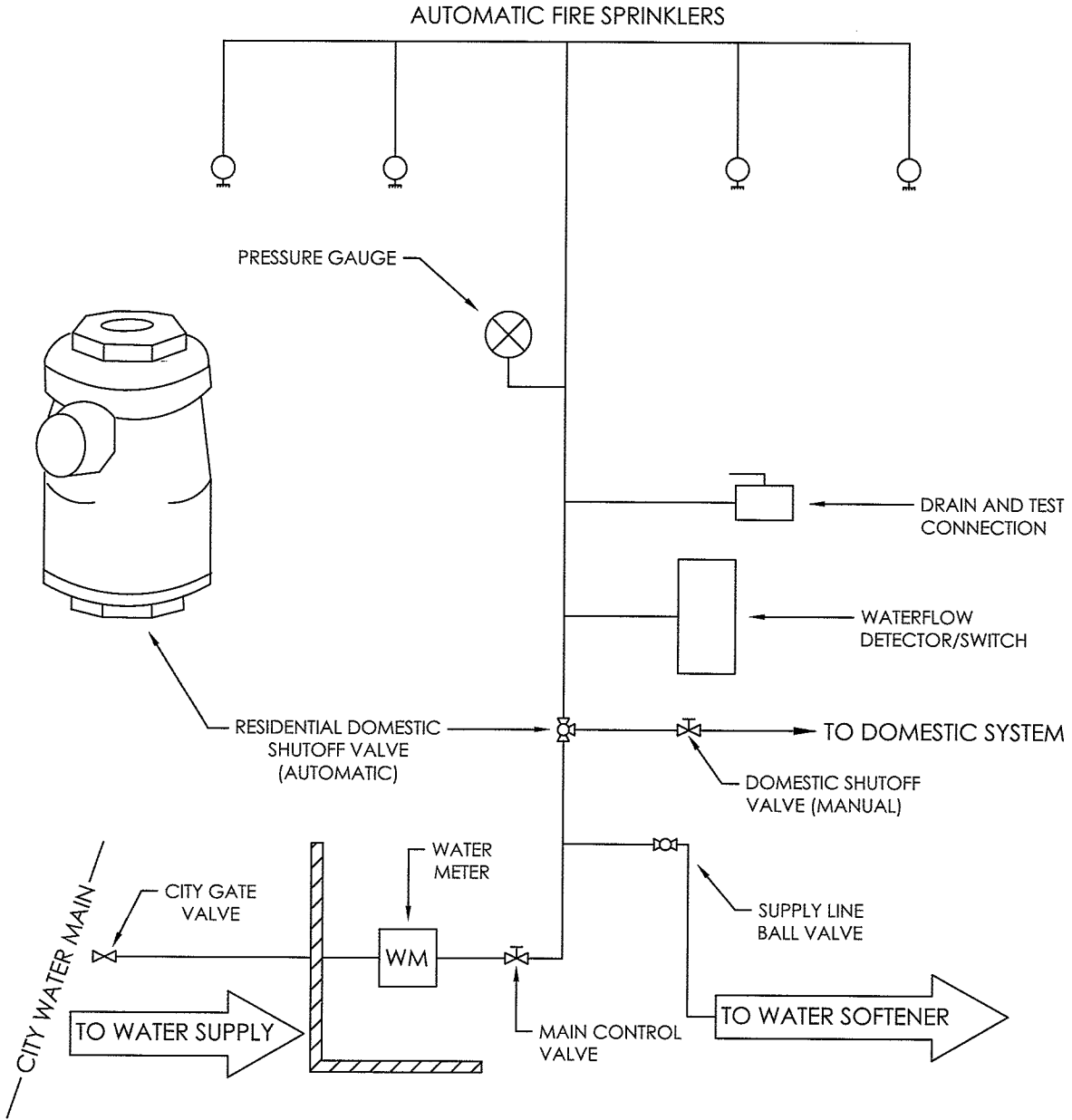
CITY OF NAPA

FIRE DEPARTMENT

FIRE SPRINKLER RISER ACCESS IN
MULTI-FAMILY OR COMMERCIAL BUILDINGS

DRAWN BY: RC
APPROVAL DATE: 08/2021
SCALE: NONE
REVISED DATE:

CHECKED BY: BV
APPROVED BY: GDF
DRAWING NO. FP-8



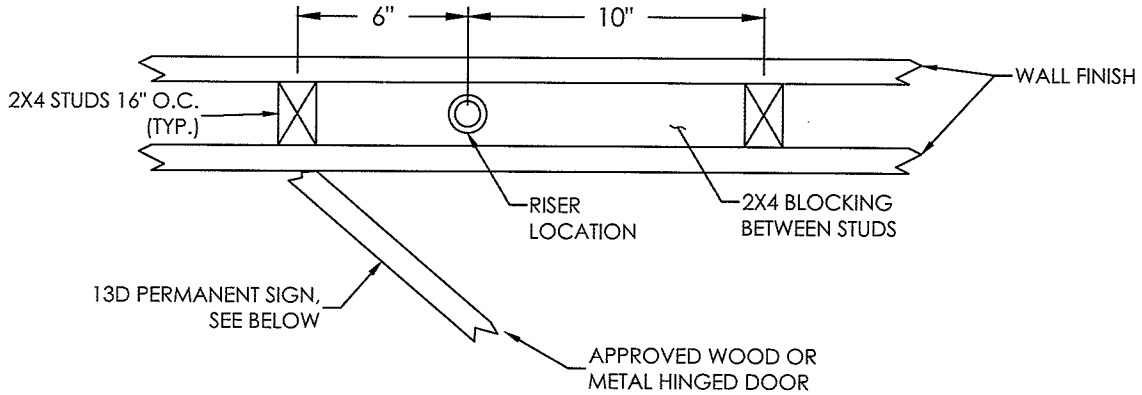
CITY OF NAPA

FIRE DEPARTMENT

DOMESTIC WATER SHUTOFF

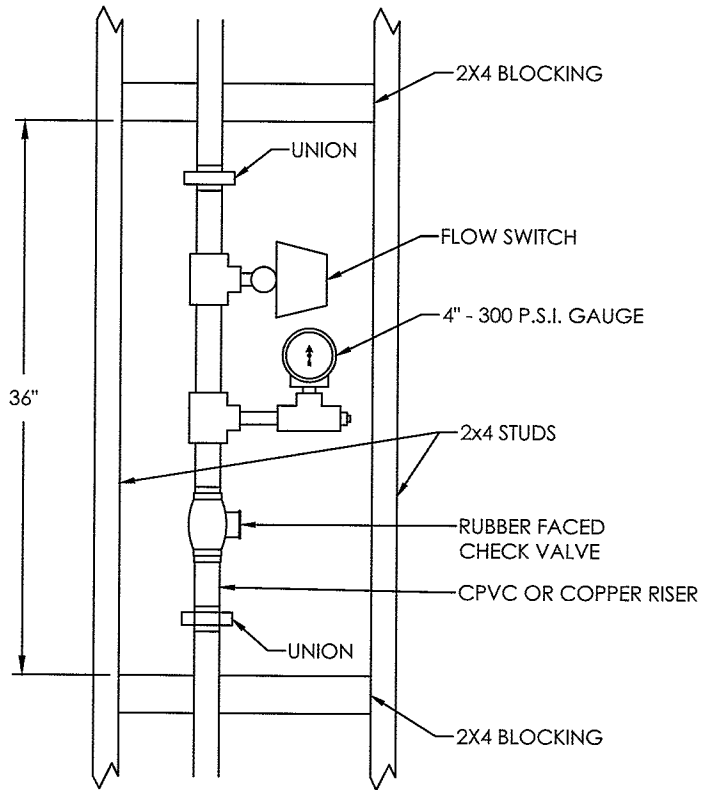
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APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	
REVISED DATE:			FP-9

TOP VIEW



13D PERMANENT SIGN

"WARNING: THE WATER SYSTEM FOR THIS HOME SUPPLIES A SPRINKLER SYSTEM THAT DEPENDS ON CERTAIN FLOWS AND PRESSURES TO FIGHT A FIRE. DEVICES THAT RESTRICT THE FLOW OR PRESSURE SUCH AS PRESSURE REDUCERS AND WATER SOFTENERS SHALL NOT BE ADDED TO THE SYSTEM WITHOUT A REVIEW OF THE SYSTEM BY A FIRE PROTECTION SPECIALIST. LEAVE VALVE IN THE FULLY OPEN POSITIONS AT ALL TIMES."



FRONT VIEW

SPRINKLER CABINET

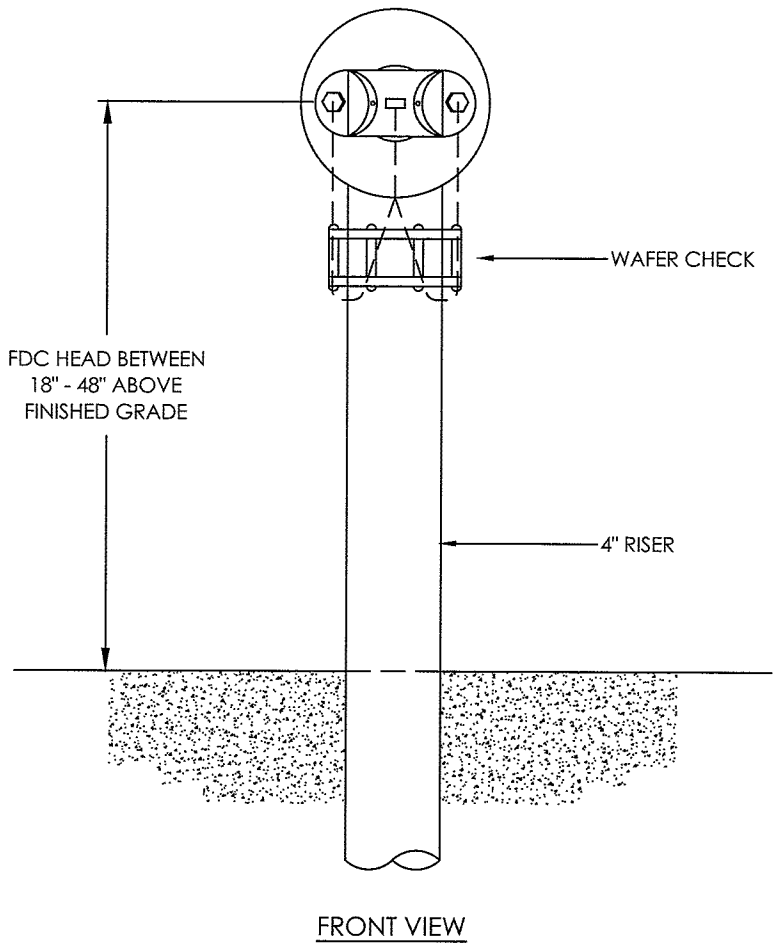
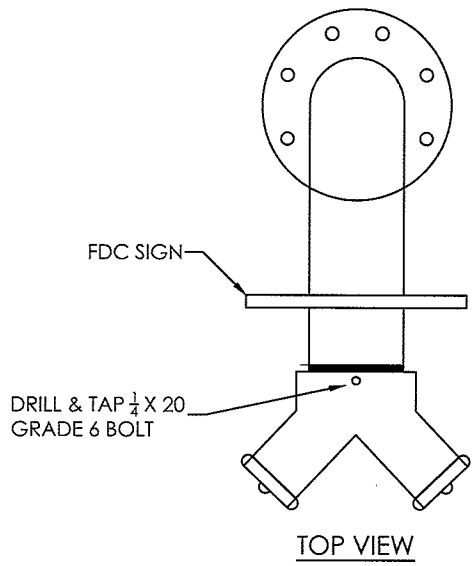
STOCK OF SPARE SPRINKLERS

CITY OF NAPA

FIRE DEPARTMENT

RISER ACCESS PANEL DETAIL

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-10
REVISED DATE:			



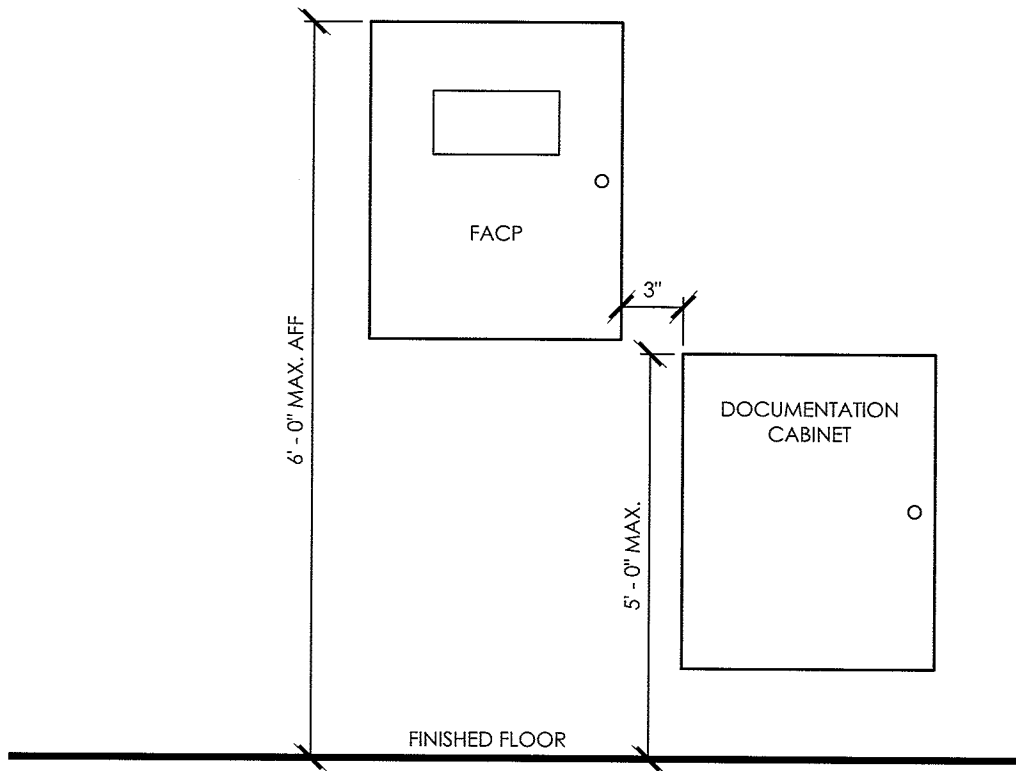
CITY OF NAPA

FIRE DEPARTMENT

SINGLE 4" X 2 $\frac{1}{2}$ " X 2 $\frac{1}{2}$ " FDC DETAIL

DRAWN BY:	RC
APPROVAL DATE:	08/2021
SCALE:	NONE
REVISED DATE:	

CHECKED BY:	BV
APPROVED BY:	GDF
DRAWING NO.	FP-11

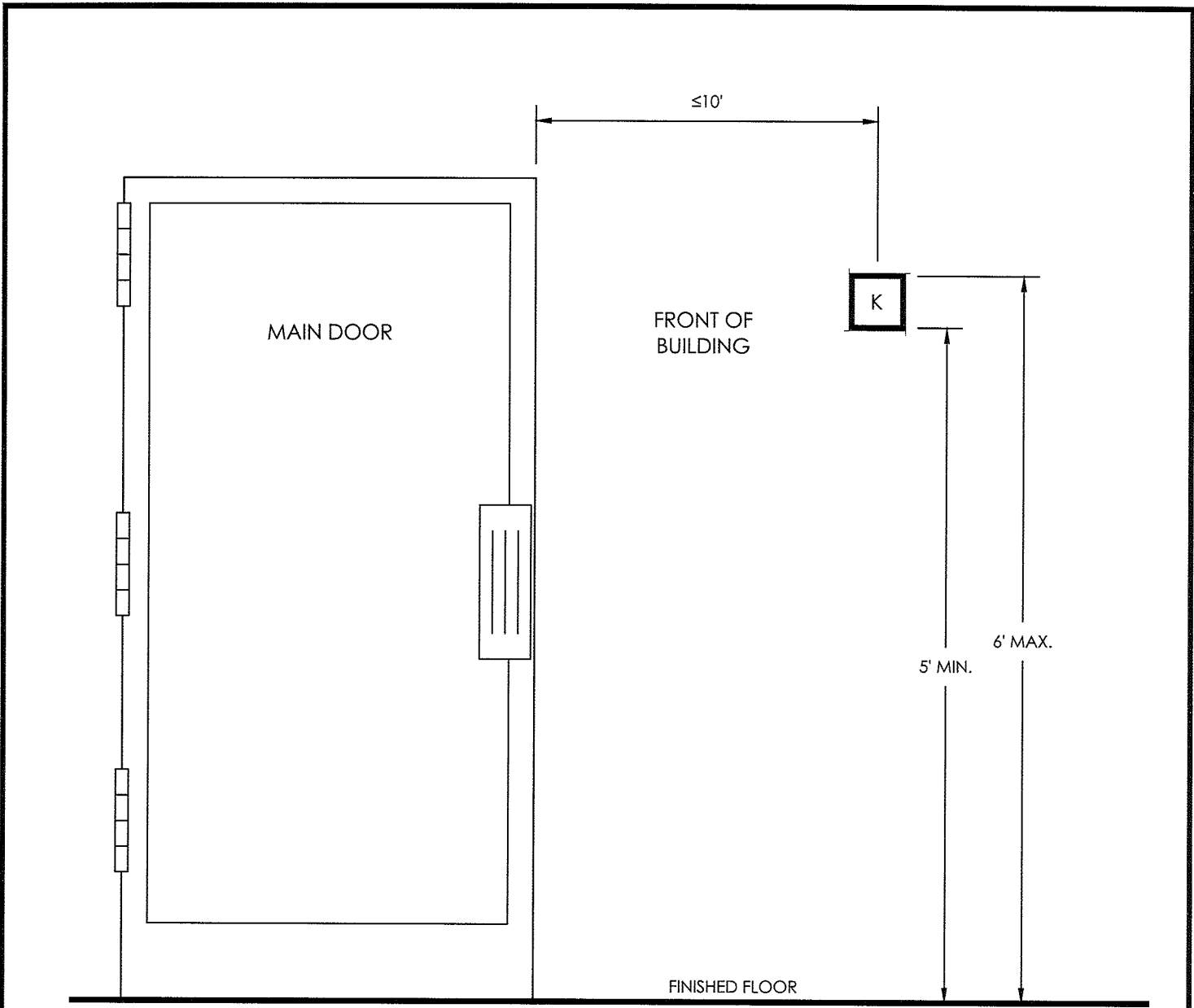


CITY OF NAPA

FIRE DEPARTMENT

FIRE ALARM CONTROL PANEL DETAILS

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-12
REVISED DATE:			



NOTES:

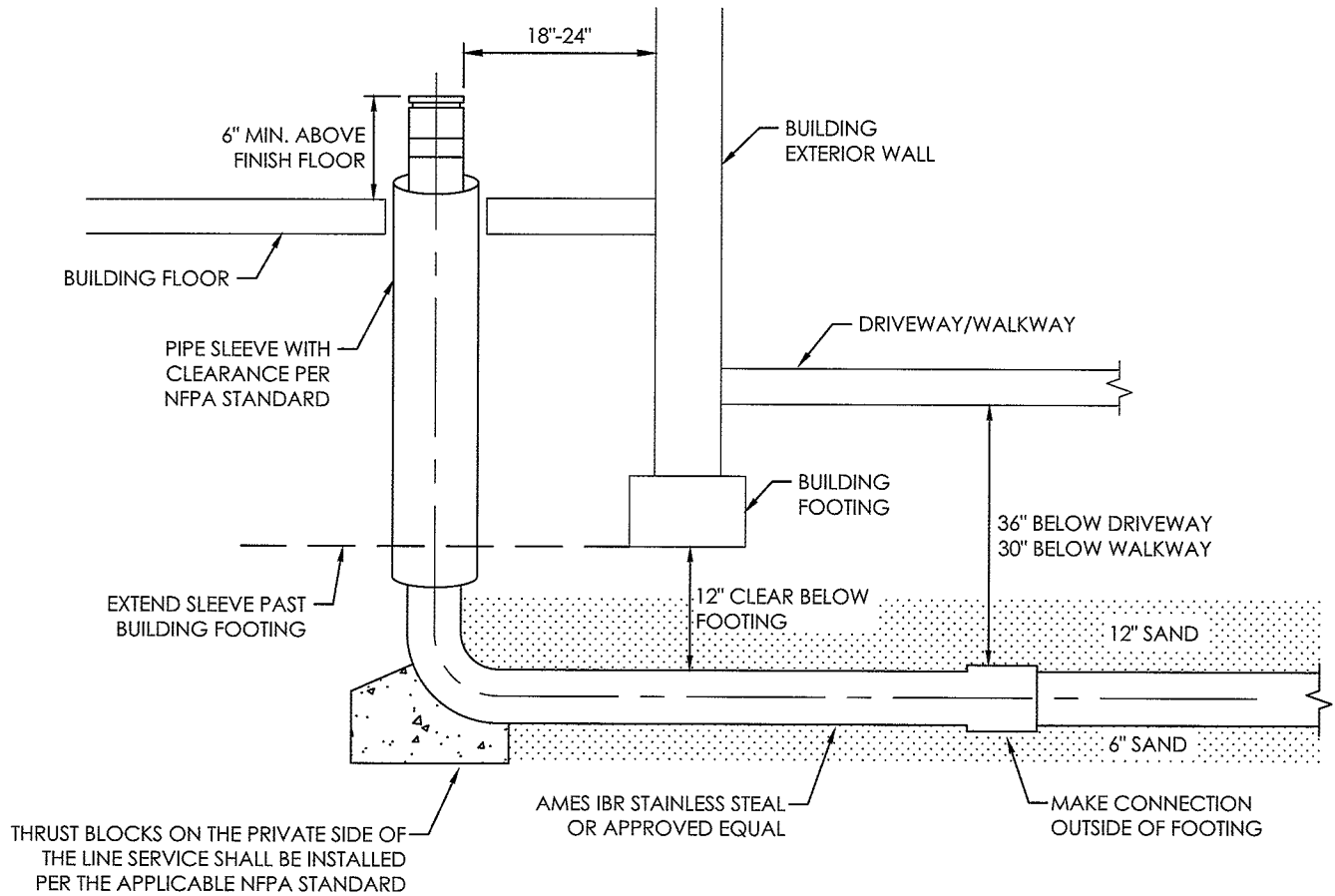
1. HAVE KEY(S) MADE THAT WILL PROVIDE ACCESS TO THE INTERIOR OF THE BUILDING, ANY INTERIOR SECURED AREAS AND ANY SPECIFIC KEYS REQUESTED BY THE FIRE DEPARTMENT.
2. THE KEY BOX SHALL BE INSTALLED NO LOWER THAN 5' FROM THE BOTTOM OF THE KEY BOX AND NO HIGHER THAN 6' FROM THE TOP OF THE KEY BOX ABOVE FINISHED GRADE. KEY BOX SHALL BE NO GREATER THAN 10' ADJACENT TO THE MAIN BUILDING ENTRANCE THAT FRONTS THE PUBLIC STREET ACCESS UNLESS DESIGNATED AT A DIFFERENT LOCATION BY THE FIRE DEPARTMENT.
3. THE BOX MUST BE INSTALLED IN PLAIN VIEW, AS YOU APPROACH THE BUILDING, IN A LOCATION NOT LIKELY TO BE HIDDEN WITH LANDSCAPE GROWTH OR OTHER OBSTRUCTIONS.
4. FOLLOW THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. ALL KEYS MUST BE LABELED USING A SUBSTANTIAL KEY IDENTIFICATION TAG THAT WILL WITHSTAND EXPOSURE TO MOISTURE.
6. TEST ALL KEYS IN LOCK MECHANISMS BEFORE CONTACTING THE FIRE PREVENTION DIVISION.
7. SCHEDULE AN INSPECTION ON THE FIRE PREVENTION DIVISION WEB PAGE TO HAVE THE KEY BOX LOCKED.

CITY OF NAPA

FIRE DEPARTMENT

KNOX BOX MOUNTING HEIGHT

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-13
REVISED DATE:			



NOTES:

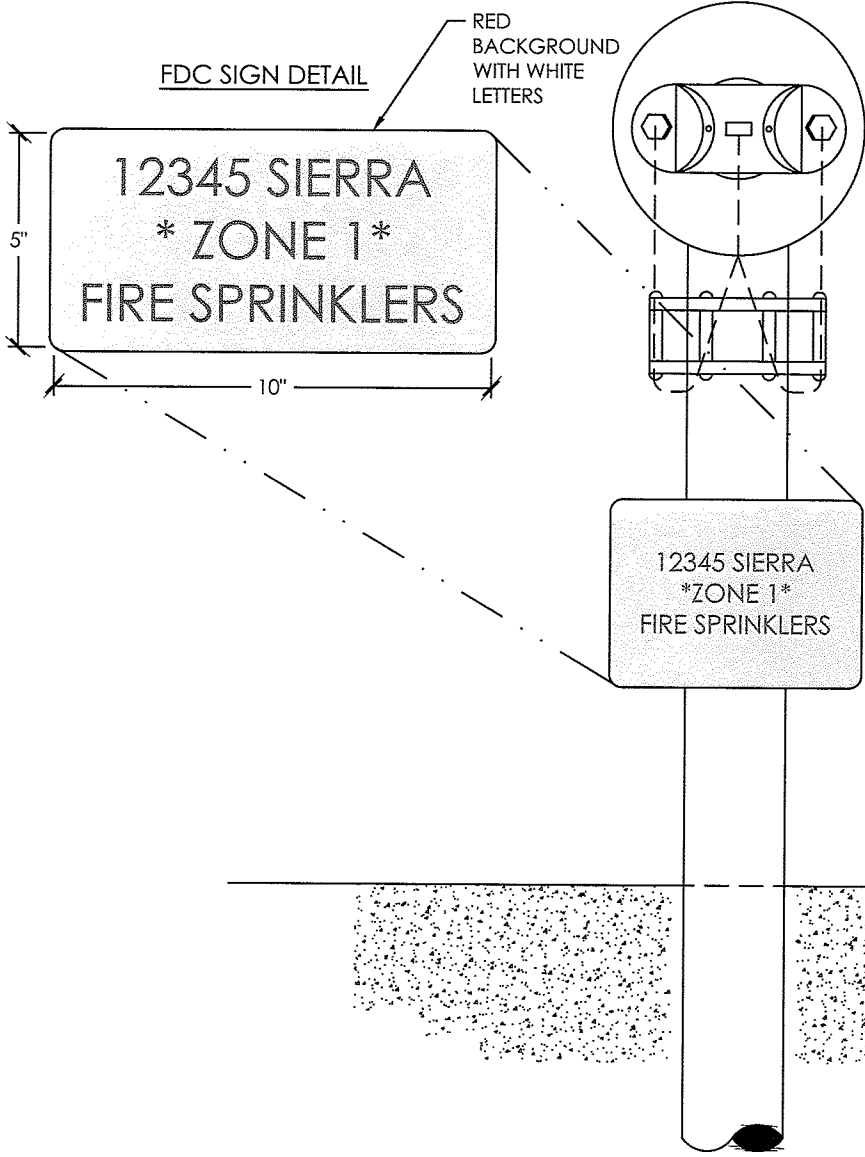
1. CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING EXTENDING THROUGH WALLS, FLOORS, PLATFORMS, AND FOUNDATIONS, INCLUDING DRAINS, FIRE DEPARTMENT CONNECTIONS, AND OTHER AUXILIARY PIPING.
2. CLEARANCE SHALL BE SIZED SUCH THAT THE DIAMETER OF THE HOLES IS NOMINALLY 2" LARGER THAN THE PIPE FOR PIPE 1" (25MM) NOMINAL TO 3 1/2" (90MM) NOMINAL AND 4" (100MM) LARGER THAN THE PIPE FOR PIPE 4" (100MM) NOMINAL AND LARGER.
3. CLEARANCE PROVIDED BY A PIPE SLEEVE, A NOMINAL DIAMETER 2" (50MM) LARGER THAN THE NOMINAL DIAMETER OF THE PIPE SHALL BE ACCEPTABLE FOR PIPE SIZES 1" (25MM) THROUGH 3 1/2" (90MM), AND THE CLEARANCE PROVIDED BY A PIPE SLEEVE OF NOMINAL DIAMETER 4" (100MM) LARGER THAN THE NOMINAL DIAMETER OF THE PIPE SHALL BE ACCEPTABLE FOR PIPE SIZES 4" (100MM) AND LARGER.
4. THE PIPE SLEEVE CLEARANCE SHALL BE FILLED WITH FLEXIBLE MATERIAL THAT IS COMPATIBLE WITH THE PIPING MATERIAL. (ROCK WOOL AND LISTED ELASTOMETRIC OR FLEXIBLE SEALANT. *NO AGGREGATE, SAND, OR ANY OTHER COMPACTED MATERIAL ALLOWED.

CITY OF NAPA

FIRE DEPARTMENT

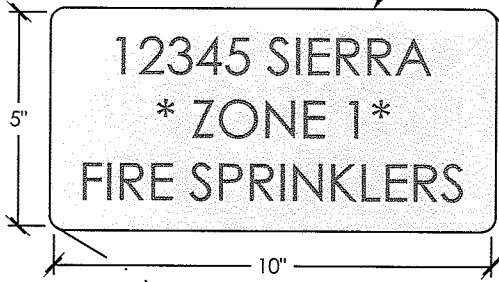
FIRE SERVICE UNDERGROUND
INSTALLATION DETAIL

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-14
REVISED DATE:			

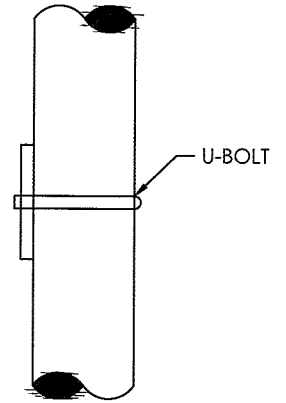


FDC SIGN DETAIL

RED BACKGROUND WITH WHITE LETTERS



FDC SIGN ATTACHMENT



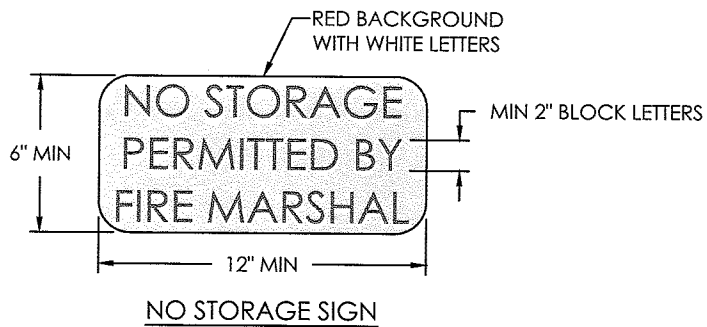
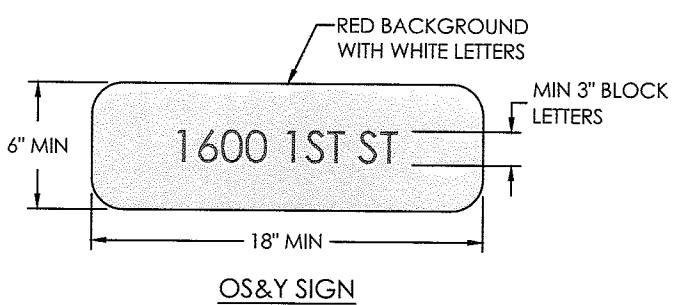
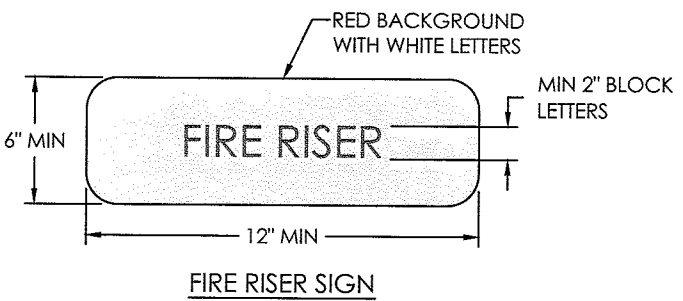
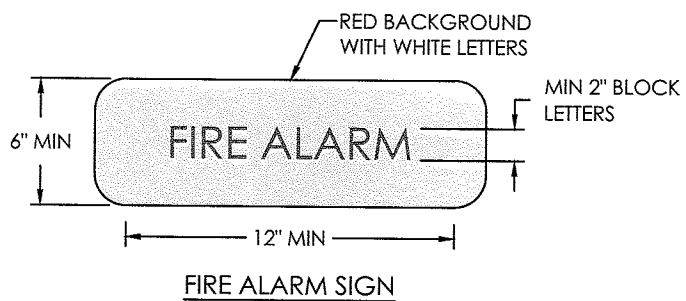
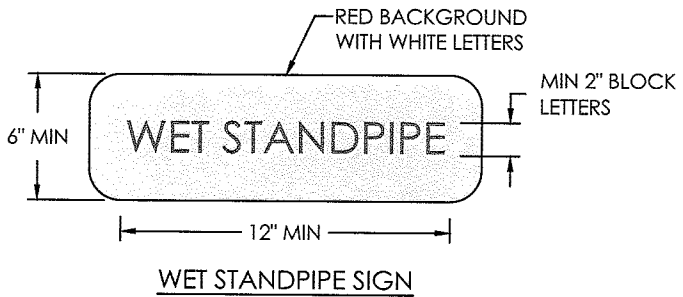
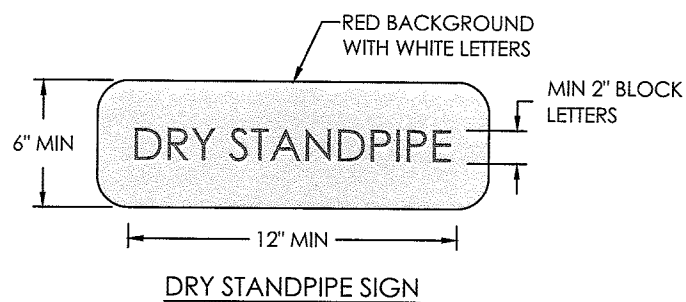
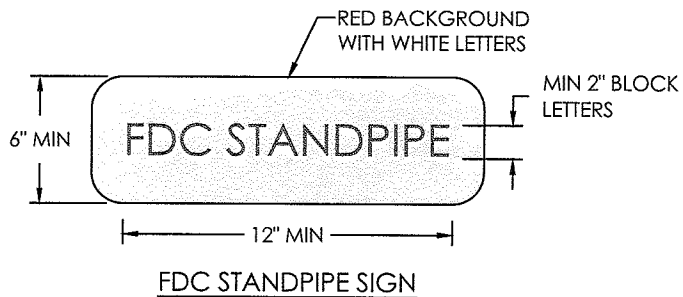
U-BOLT

CITY OF NAPA

FIRE DEPARTMENT

FDC IDENTIFICATION SIGNAGE DETAIL

DRAWN BY:	RC	CHECKED BY:	BY
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-15
REVISED DATE:			



NOTES:

1. ALL UTILITY ROOMS AND RELATED FIRE APPURTENANCES SHALL BE LABELED AND BE PROPERLY IDENTIFIED AS TO THE PURPOSE THEY SERVE.
2. SIGNAGE AT HVAC, SPRINKLER, ELECTRICAL, AND FIRE ALARM CONTROL PANEL LOCATION.
3. ALL REQUIRED SIGNS SHALL BE WEATHER RESISTANT AND PERMANENTLY AFFIXED.
4. IN UTILITY ROOMS OR OTHER AREAS WHERE COMBUSTIBLE STORAGE IS NOT ALLOWED, A PERMANENTLY AFFIXED SIGN SHALL BE INSTALLED THAT READS, "NO STORAGE PERMITTED BY ORDER OF FIRE MARSHAL".

CITY OF NAPA

FIRE DEPARTMENT

SIGNAGE DETAILS

DRAWN BY:	RC	CHECKED BY:	BV
APPROVAL DATE:	08/2021	APPROVED BY:	GDF
SCALE:	NONE	DRAWING NO.	FP-16
REVISED DATE:			