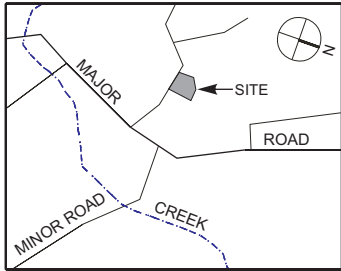


LOCATE HYDRANT SO THAT DRIVE IS NOT BLOCKED WHEN CONNECTED. CONNECTION IS ON THE SIDE OF THE TRUCK. SEE SPACING DETAIL, DWG 3



VICINITY MAP

PROJECT NAME
PROJECT ADDRESS, CITY
APPLICANT NAME
APPLICANT PHONE
PERMIT NO

ALL WEATHER SURFACE
SEC 13-30

DRIVEWAY/ROAD GRADE
< 15%, SEC 13-31

DRIVE LENGTH, SEC 13-37

ROAD CLEARANCE FROM
VEGETATION, SEC 13-56

30' MIN OR
TABLE 13-55

BARN
1,000 SF

60'-150'
SEC 13-52(c)(2)

TURNAROUND, SEC 13-37(c)
DWG 8

GATE, SEC 13-38

ADDRESS SIGN
SEC 13-48(b)

WIDTH AS REQUIRED
BY SEC 13-33 TO 13-38

RADIUS - SECTION 13-32(c)

DISTANCE TO PUBLIC HYDRANT
WHERE APPLICABLE
SEC 13-52

60'-150'
SEC 13-52(c)(2)

60' MIN. CLR

30' OR MORE
PER TABLE 13-55
TYPICAL TO
PROP. LINES

SINGLE
FAMILY
RESIDENCE

TURNAROUND WITHIN 150' OF
EACH STRUCTURE,
SEC 13-37(c) OR
HAMMERHEAD/T - DWG 9

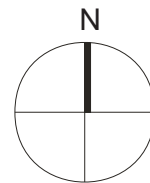
RADIUS
DWG 10

4" MIN SUPPLY PIPING,
SEC 13-52(c)(1)

TURNOUT, SEC 13-37(b)
NON COMBUSTIBLE TANK IF
INSIDE MIN SETBACK, 20' VEG
CLEARANCE IF POLY OR SIM.

WATER STORAGE TANK

20' MIN TO PROPERTY LINE
OR TABLE 13-55



PROPERTY LINE

ROAD NAME

SAMPLE SITE PLAN

SONOMA COUNTY
FIRE AND EMERGENCY SERVICES DEPARTMENT

2300 COUNTY CENTER DR
Santa Rosa, California 95403
Telephone (707) 565-1152 Fax (707) 565-1172

FIRE SAFE STANDARDS

1" = 50'

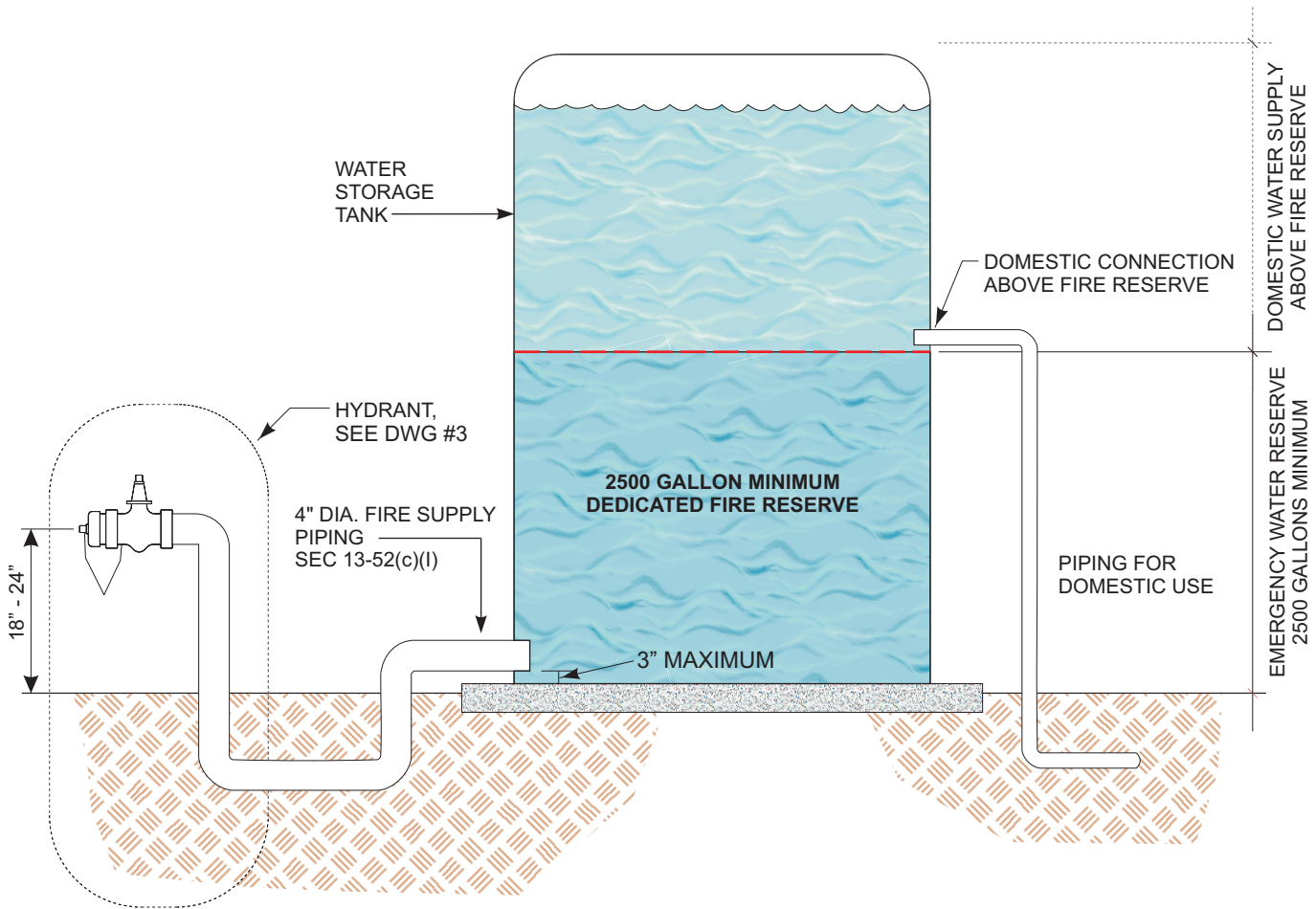
SCALE

04/22/03

REVISION DATE

F1

DRAWING NO



- FOR STORAGE CAPACITY REQUIREMENTS, REFER TO SEC 13-51(b) & 13-52(b)
- WHEN MULTIPLE TANKS ARE UTILIZED TO ACHIEVE THE REQUIRED VOLUME OF WATER, THE CONNECTION BETWEEN THE TANKS SHALL BE BY AN APPROVED 4" DIA. WATER LINE

SEC 13-51 EMERGENCY WATER SUPPLY

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FIRE AND EMERGENCY SERVICES DEPARTMENT
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 Santa Rosa, California 95403
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FIRE SAFE STANDARDS

NOT TO SCALE

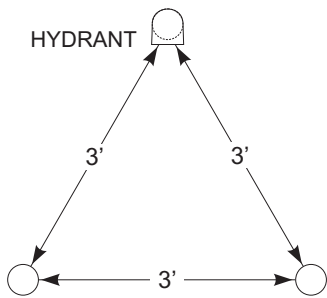
SCALE

02/11/03

REVISION DATE

F2

DRAWING NO



**HYDRANT AND POST/BOLLARD
TYPICAL SPACING**

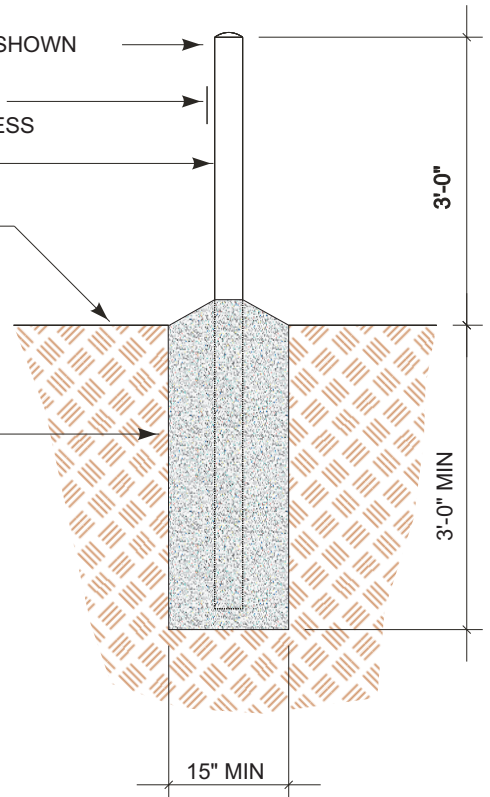
GUARD POSTS WHERE SHOWN

3" BLUE REFLECTOR AT
BOLLARD AND AT ADDRESS

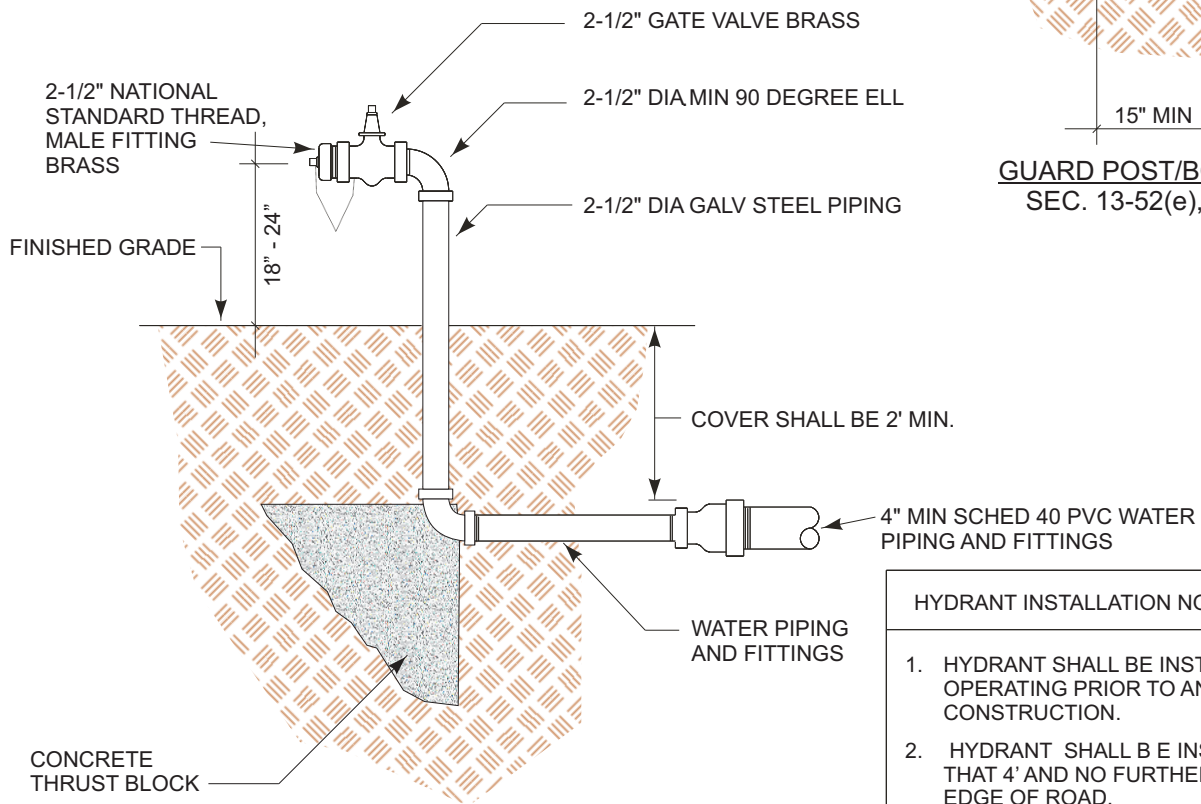
3" DIA. STEEL PIPE,
CONC FILLED

FINISHED GRADE

UNREINFORCED
CONC ENCASEMENT



**GUARD POST/BOLLARD
SEC. 13-52(e), 13-53**



**FIRE DEPT. HYDRANT
SEC. 13-52**

HYDRANT INSTALLATION NOTES

1. HYDRANT SHALL BE INSTALLED AND OPERATING PRIOR TO AND DURING CONSTRUCTION.
2. HYDRANT SHALL BE INSTALLED NO CLOSER THAN 4' AND NO FURTHER THAN 12' FROM EDGE OF ROAD.
3. WHERE HYDRANT IS PROVIDED AT ROAD OR DRIVEWAY LESS THAN 20' IN WIDTH, A TURNOUT SHALL BE PROVIDED AT HYDRANT LOCATION. SEE DRAWING 7.

SEC 13-52 FIRE DEPT HYDRANT/GUARD POSTS

FIRE SAFE STANDARDS

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FIRE AND EMERGENCY SERVICES DEPARTMENT**

2300 COUNTY CENTER DR
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1/2" = 1'-0"

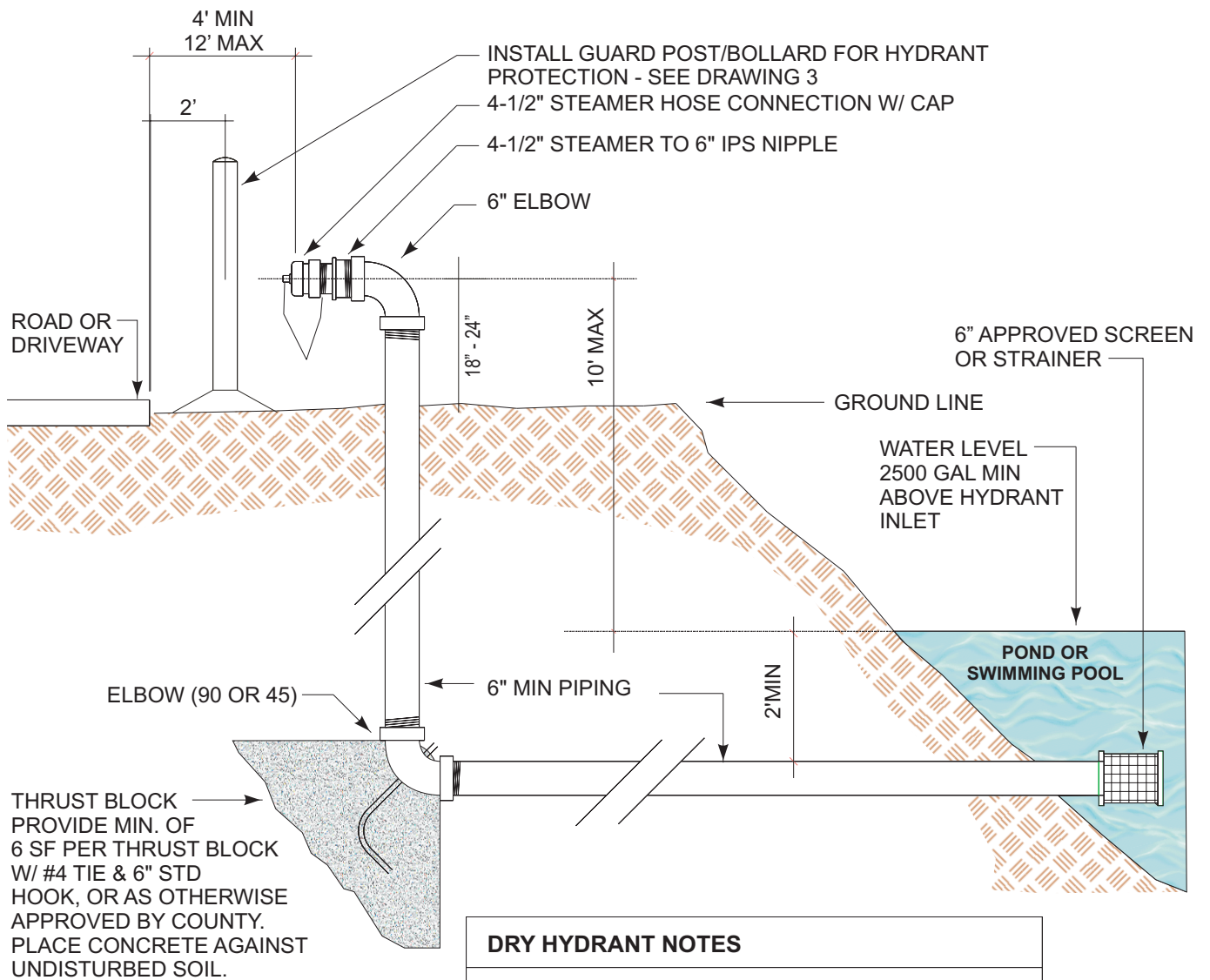
SCALE

02/11/03

REVISION DATE

F3

DRAWING NO



DRY HYDRANT NOTES

1. PIPING MAY BE IRON, STEEL OR PVC SCHEDULE 40 MIN.
2. **USE SIMILAR HYDRANT CONFIGURATION FOR SWIMMING POOL AS WATER SOURCE.**
3. SCREEN OR STRAINER PER NFPA APPENDIX B-5.3.1.1(f)

SEC 13-52(e) DRY OR DRAFT HYDRANT

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FIRE SAFE STANDARDS

1/2" = 1'-0"

SCALE

02/11/03

REVISION DATE

F4

DRAWING NO

ALL BRIDGES

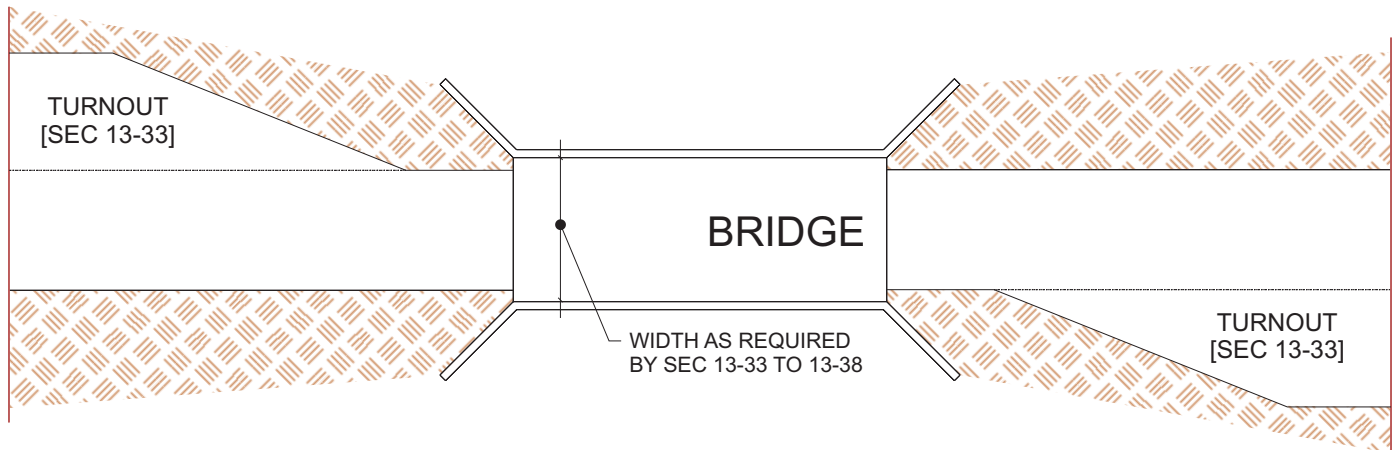
- HS 20 LOADING [SEC 13-33(a)]
- SIGNS INDICATING WEIGHT LIMIT AND VERTICAL CLEARANCE LIMITS [SEC 13-33 (b)]
- COMBINATION VEHICLE/PEDESTRIAN GUARD RAILS BOTH SIDES

BRIDGE WIDTH: 12'
MAX. LOAD: 80,000 LBS

ONE LANE BRIDGE

- MINIMUM WIDTH: 12.0' [SEC 13-33(c)] EXCEPT DRIVEWAYS WITH MAXIMUM LENGTH OF 65' IN WHICH CASE MINIMUM WIDTH MAY BE 10.0'
- SIGNS INDICATING ONE WAY OR ONE LANE CONDITION [SEC 13-33 (b)]
- UNOBSTRUCTED VISIBILITY ENTIRE LENGTH [SEC 13-33(c)]
- TURNOUTS AT BOTH ENDS [SEC 13-33(c)]

SIGN EXAMPLE
NOT TO SCALE



SEC 13-33 BRIDGES

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Santa Rosa, California 95403
Telephone (707) 565-1152 Fax (707) 565-1172

FIRE SAFE STANDARDS

1/16" = 1'-0"

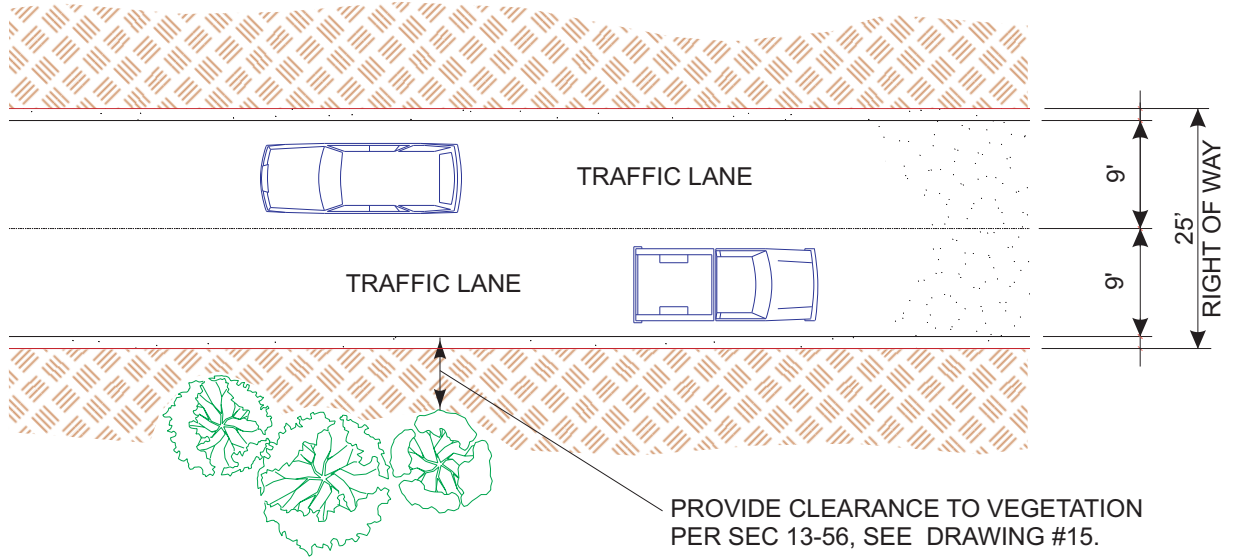
SCALE

02/11/03

REVISION DATE

F5

DRAWING NO



TWO WAY ROAD
SEC. 13-34

- MINIMUM RIGHT OF WAY: 25'
- WIDTH AS REQUIRED BY SEC 13-33 TO 13-38



DRIVEWAY
SEC. 13-37

- WIDTH AS REQUIRED BY SEC 13-33 TO 13-38
- DRIVEWAYS SERVE BUILDINGS
- ROADS SERVE PARCELS

SEC 13-34 ROAD/SEC 13-37 DRIVEWAY

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FIRE SAFE STANDARDS

1/16" = 1'-0"

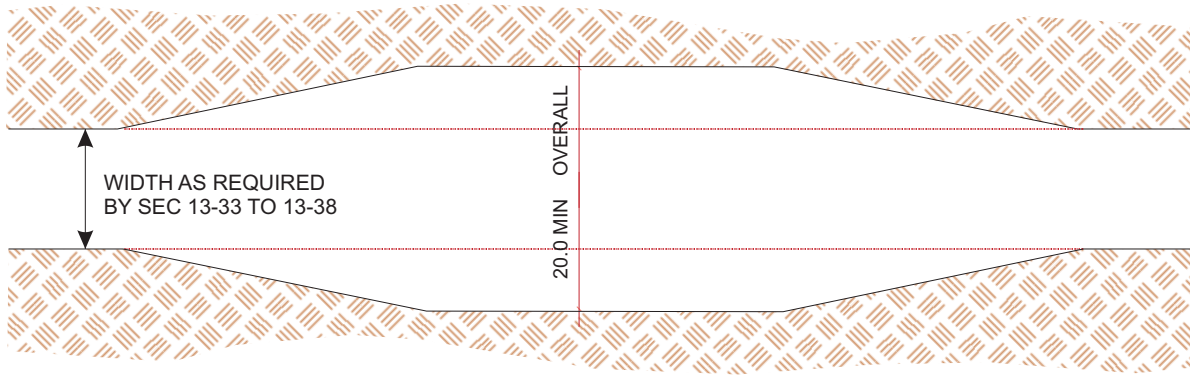
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02/11/03

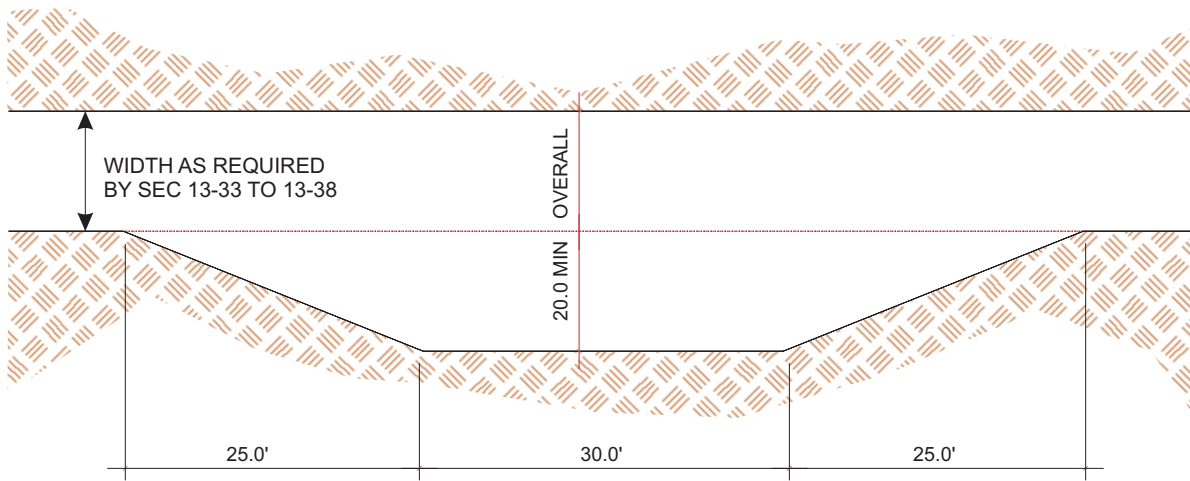
REVISION DATE

F6

DRAWING NO



BULGE TURNOUT



TURNOUT

[SEC 13-37(b)] ALL DRIVEWAYS EXCEEDING ONE HUNDRED FIFTY (150) FEET IN LENGTH SHALL HAVE A TURNOUT CONSTRUCTED AT APPROXIMATELY THE MIDPOINT OF THE DRIVEWAY. ANY DRIVEWAY EXCEEDING EIGHT HUNDRED (800) FEET IN LENGTH SHALL HAVE TURNOUTS CONSTRUCTED APPROXIMATELY EVERY FOUR HUNDRED (400) FEET ALONG THE ENTIRE LENGTH OF THE DRIVEWAY.

[SEC 13-35(c)] ALL ONE-WAY ROADS EXCEEDING FIVE HUNDRED (500') IN LENGTH SHALL HAVE A TURNOUT CONSTRUCTED AT APPROXIMATELY THE MIDPOINT OF THE ROAD. ANY ONE-WAY ROAD EXCEEDING ONE THOUSAND FEET (1000') IN LENGTH SHALL ALSO HAVE TURNOUTS CONSTRUCTED APPROXIMATELY EVERY FIVE HUNDRED FEET (500') ALONG THE ENTIRE LENGTH OF THE ROAD.

SEC 13-37(b) & SEC 13-35(c) TURNOUT

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FIRE SAFE STANDARDS

1/16" = 1'-0"

SCALE

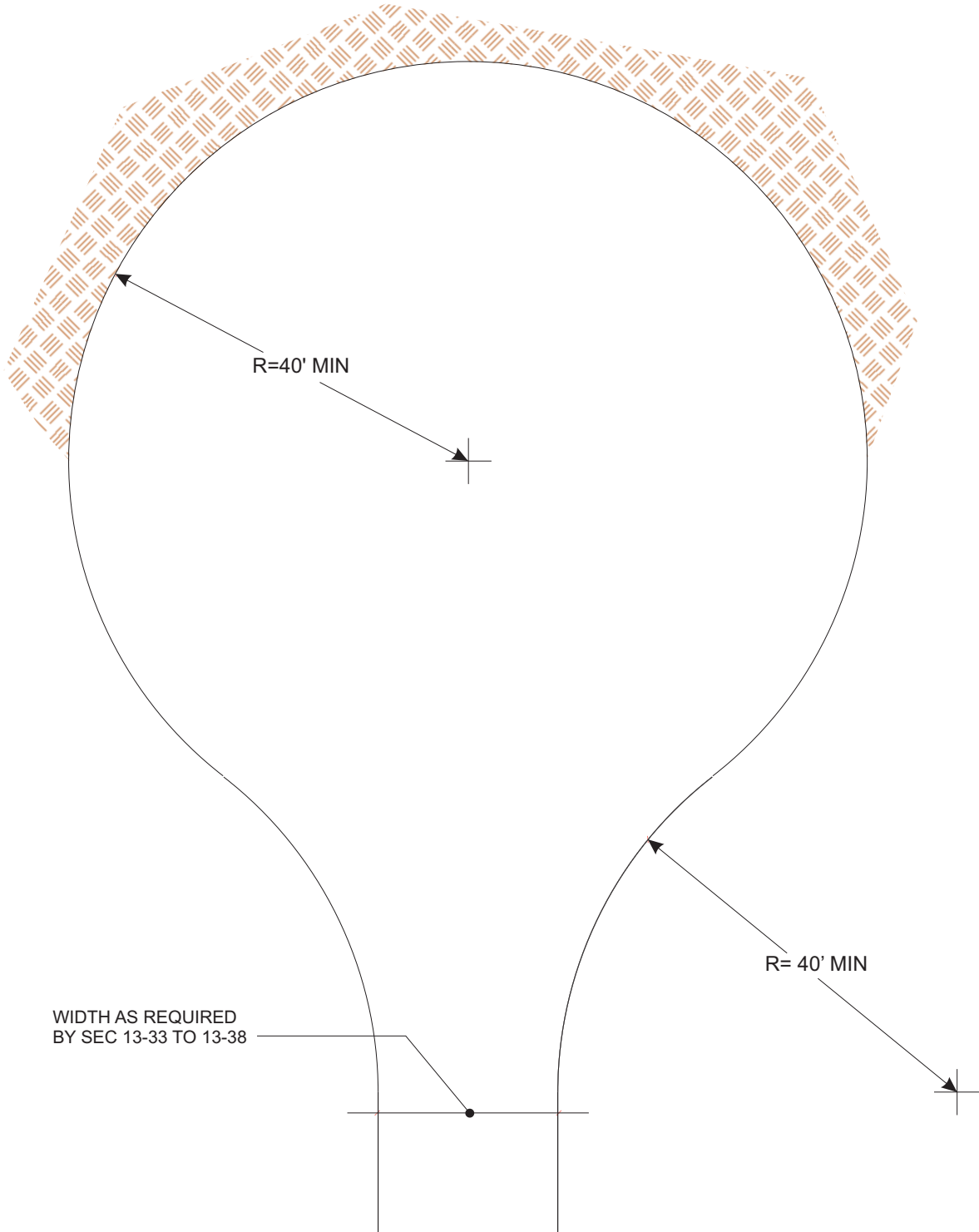
02/11/03

REVISION DATE

F7

DRAWING NO

SLOPE ON TURNAROUNDS SHALL NOT EXCEED 8%



BULB TURNAROUND
Option #1

SEC 13-37(c) & 13-36(b),(c) TURNAROUND

SONOMA COUNTY
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Santa Rosa, California 95403
Telephone (707) 565-1152 Fax (707) 565-1172

FIRE SAFE STANDARDS

1/16" = 1'-0"

SCALE

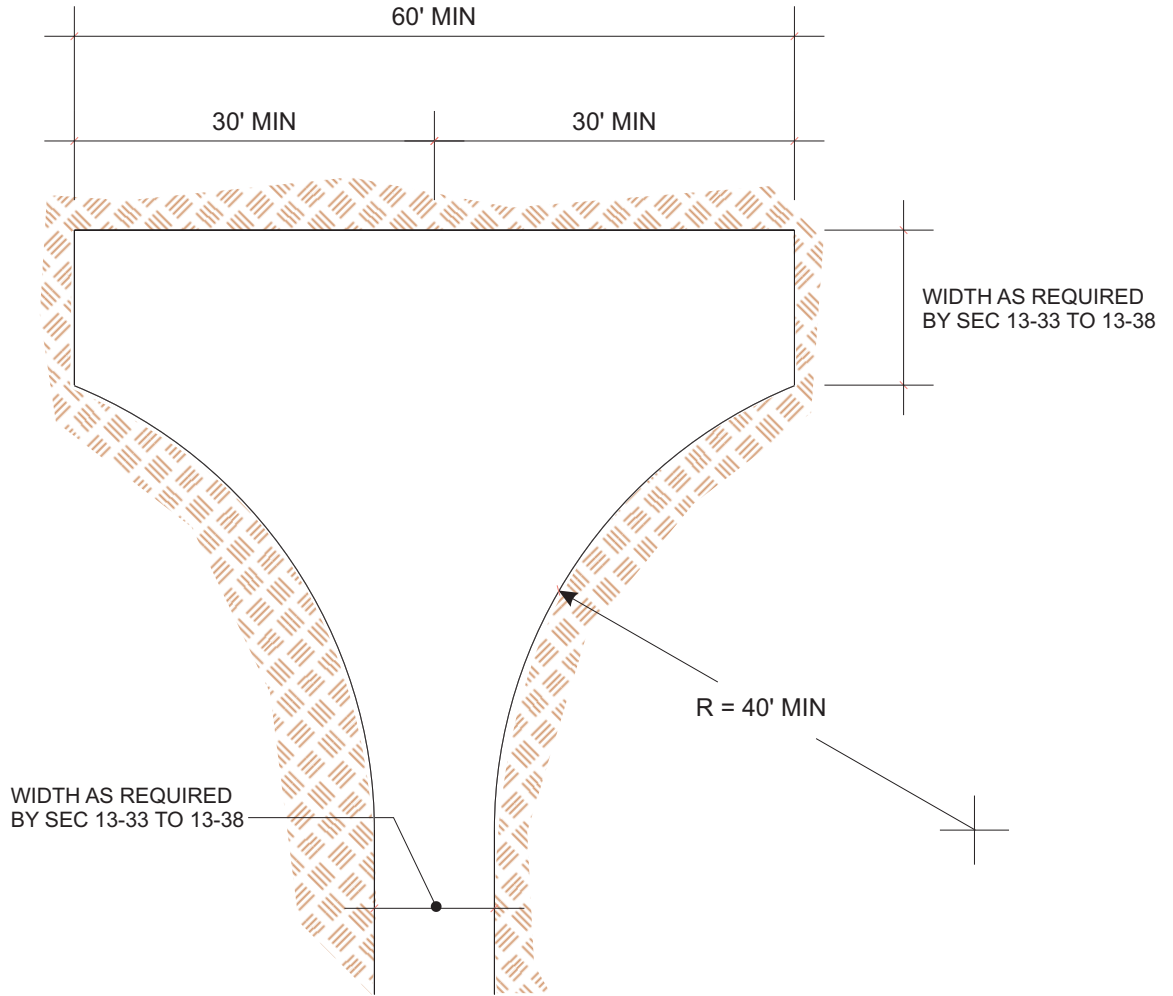
09/15/06

REVISION DATE

F8

DRAWING NO

SLOPE ON TURNAROUNDS SHALL NOT EXCEED 8%



HAMMERHEAD TURNAROUND
Option #2

SEC 13-37(c) & 13-36(b),(c) HAMMERHEAD/T

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FIRE SAFE STANDARDS

1/16" = 1'-0"

SCALE

09/08/06

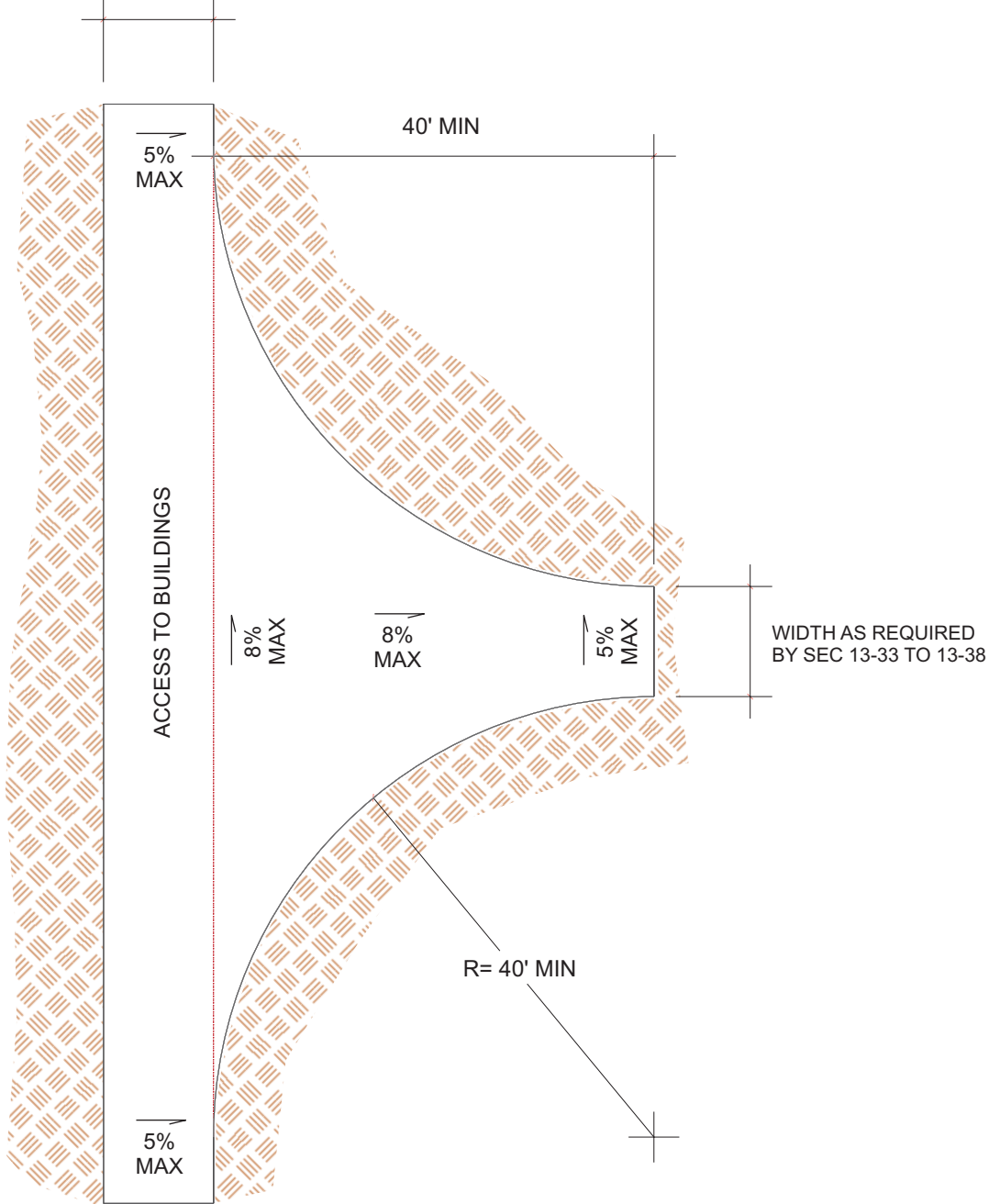
REVISION DATE

F9

DRAWING NO

SLOPE ON TURNAROUNDS SHALL NOT EXCEED 8%

WIDTH AS REQUIRED
BY SEC 13-33 TO 13-38



STUB-OUT TURNAROUND
Option #3

SEC 13-31, SEC 13-37(c) & 13-36(b), (c) TURNAROUND

FIRE SAFE STANDARDS

SONOMA COUNTY
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Santa Rosa, California 95403
Telephone (707) 565-1152 Fax (707) 565-1172

1/16" = 1'-0"

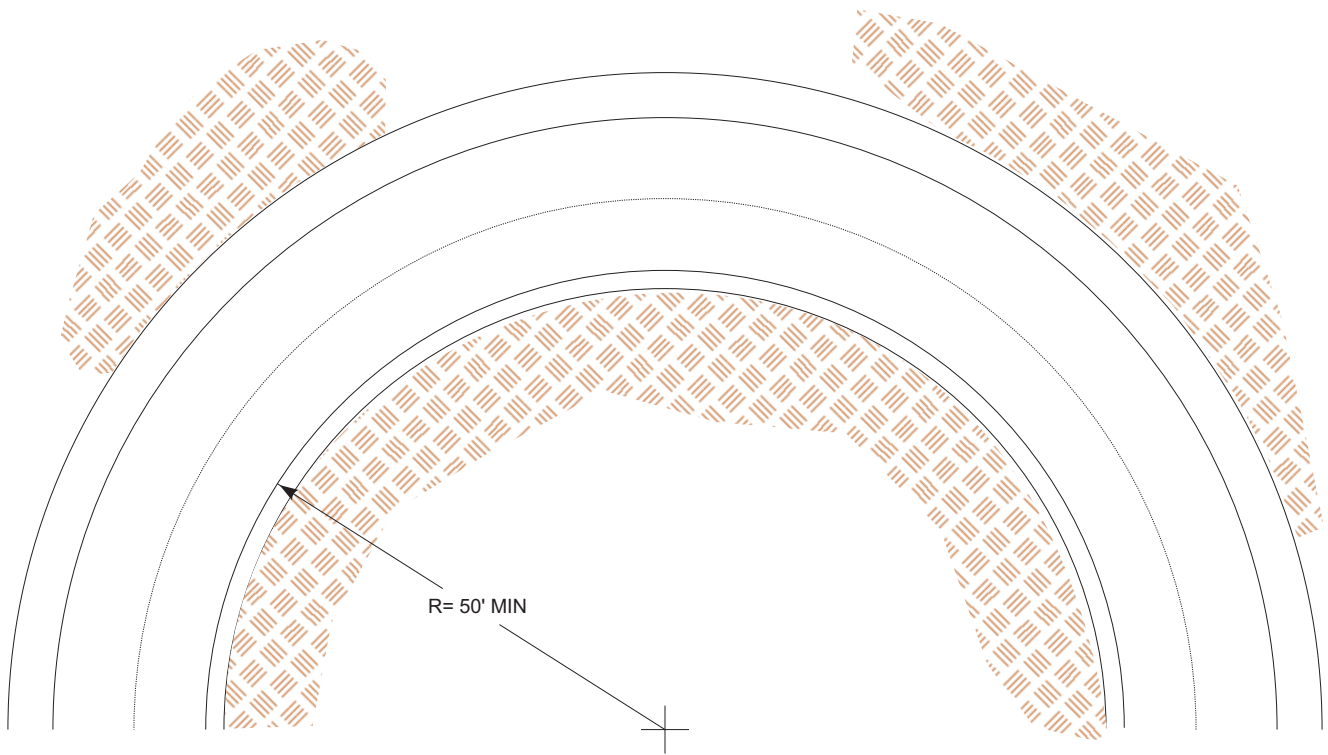
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09/15/06

REVISION DATE

F10

DRAWING NO



HORIZONTAL CURVE TURNING RADIUS, ROAD/DRIVEWAY
SECTION 13-32

- HORIZONTAL INSIDE RADIUS 50' MIN
- ADDITIONAL WIDTHS ARE REQUIRED:
 - 4' IF RADIUS IS LESS THAN 100' AND A CENTRAL ANGLE > 45 DEGREES
 - 2' IF RADIUS IS 100' TO 200' AND A CENTRAL ANGLE > 45 DEGREES
- TURNOUTS ARE NOT ALLOWED ON THE INSIDE OF CURVES.

SEC 13-32, ROAD/DRIVEWAY CURVES

FIRE SAFE STANDARDS

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Santa Rosa, California 95403
Telephone (707) 565-1152 Fax (707) 565-1172

1/16" = 1'-0"

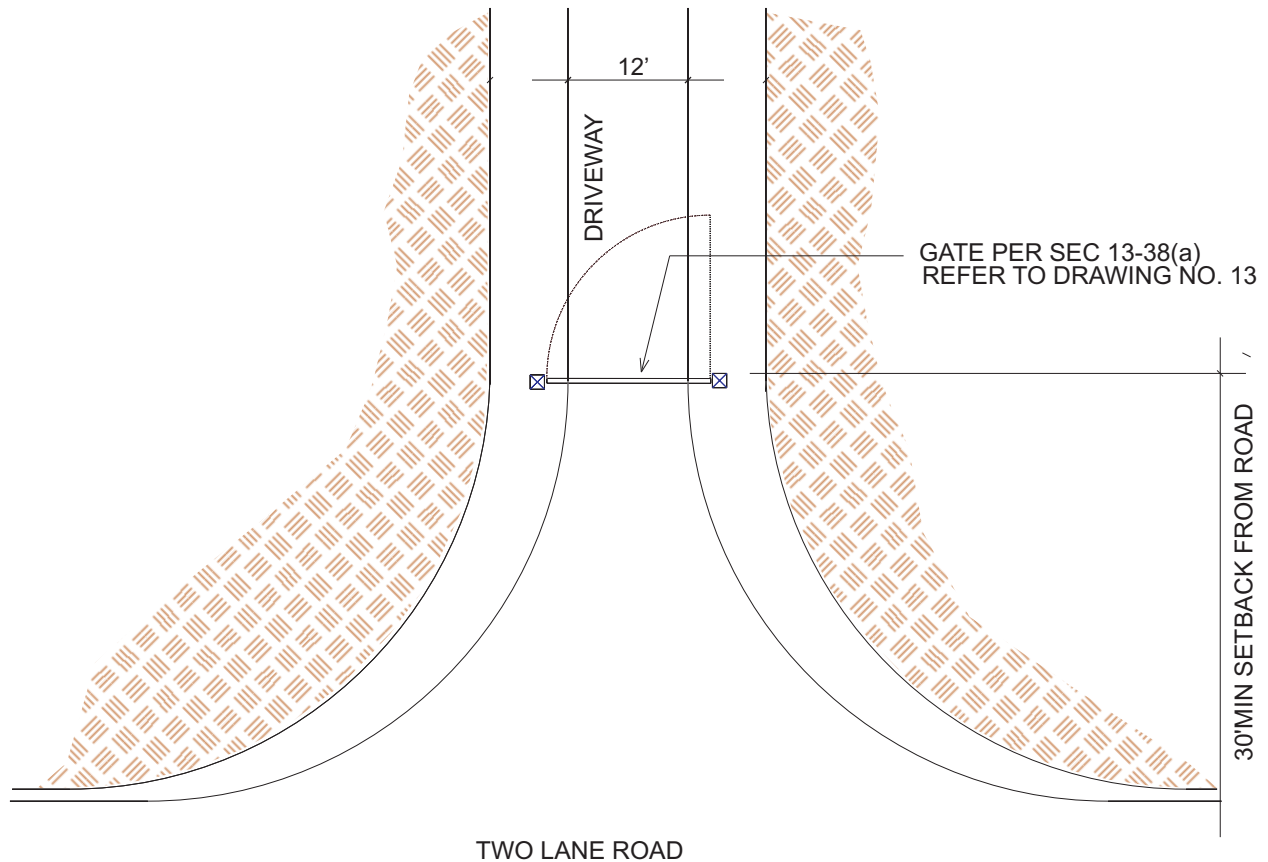
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02/11/03

REVISION DATE

F11

DRAWING NO



GATED ENTRANCES
SECTION 13-38

- GATE ENTRANCE 2 FEET WIDER THAN WIDTH OF TRAFFIC LANE [SEC 13-28(a)]
- 30 FEET FROM THE ROADWAY, OPEN TO ALLOW A VEHICLE TO STOP WITHOUT OBSTRUCTING TRAFFIC [SEC 13-38(B)]
- PROVIDE FIRE DEPARTMENT APPROVED KEY ACCESS [13-38(D)]

SEC 13-38 GATED ENTRANCES

SONOMA COUNTY
FIRE AND EMERGENCY SERVICES DEPARTMENT
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Santa Rosa, California 95403
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FIRE SAFE STANDARDS

1/16" = 1'-0"

SCALE

02/11/03

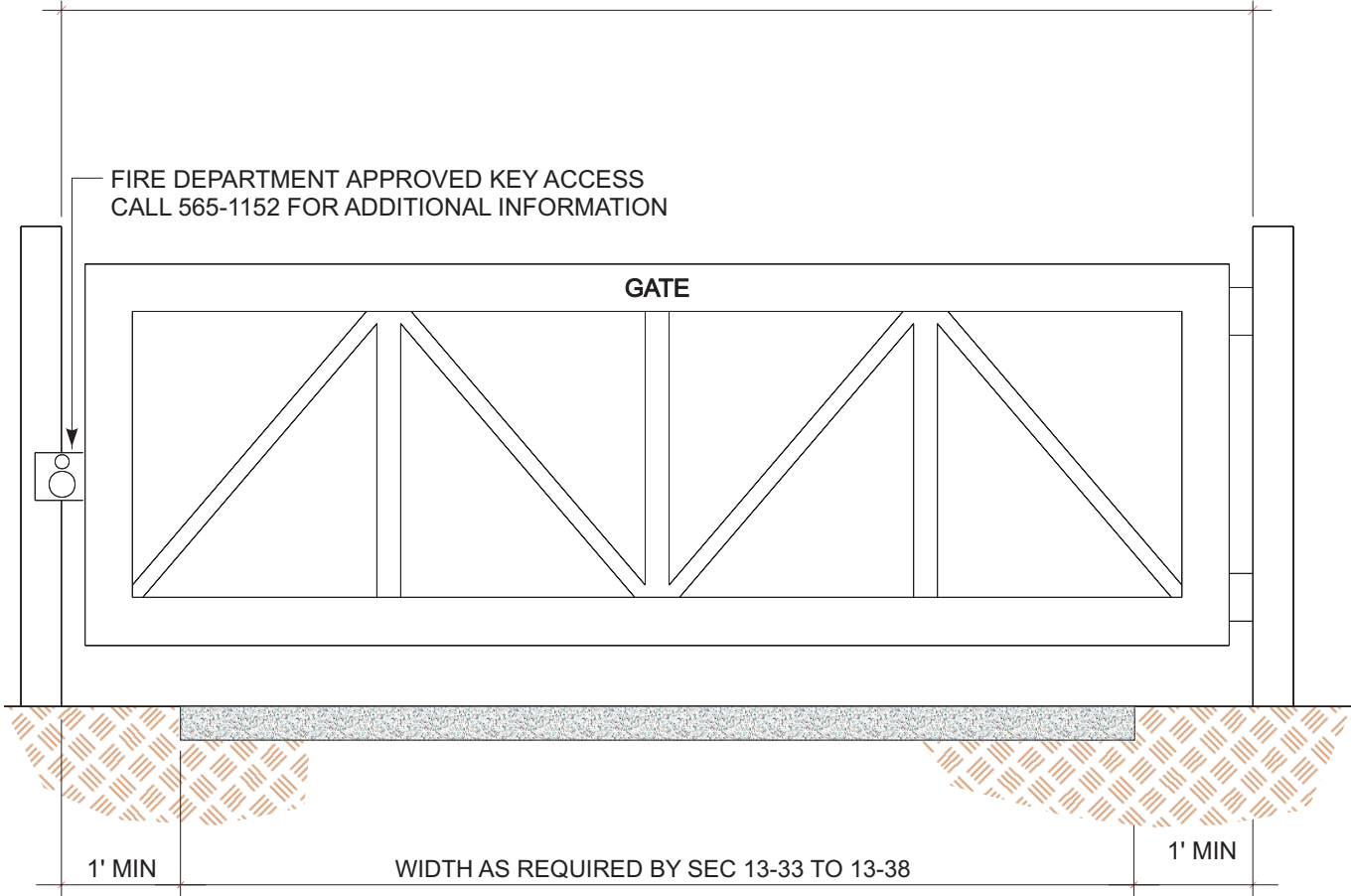
REVISION DATE

F12

DRAWING NO

WIDTH AS REQUIRED BY SEC 13-33 TO 13-38

FIRE DEPARTMENT APPROVED KEY ACCESS
CALL 565-1152 FOR ADDITIONAL INFORMATION



NOTE:
GATE WIDTH SHALL BE NO LESS THAN WIDTH
OF ROAD PLUS 1' SHOULDER, EACH SIDE OF ROAD

SEC 13-38 GATE

SONOMA COUNTY
FIRE AND EMERGENCY SERVICES DEPARTMENT
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FIRE SAFE STANDARDS

1/2" = 1'-0"

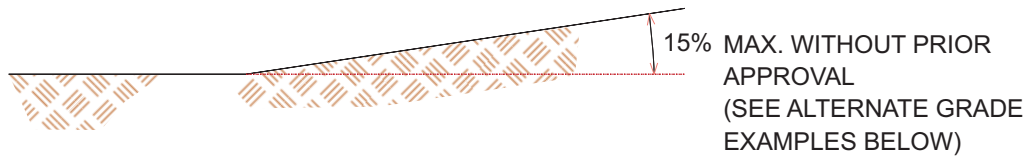
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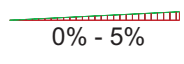
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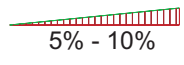
REVISION DATE


F13

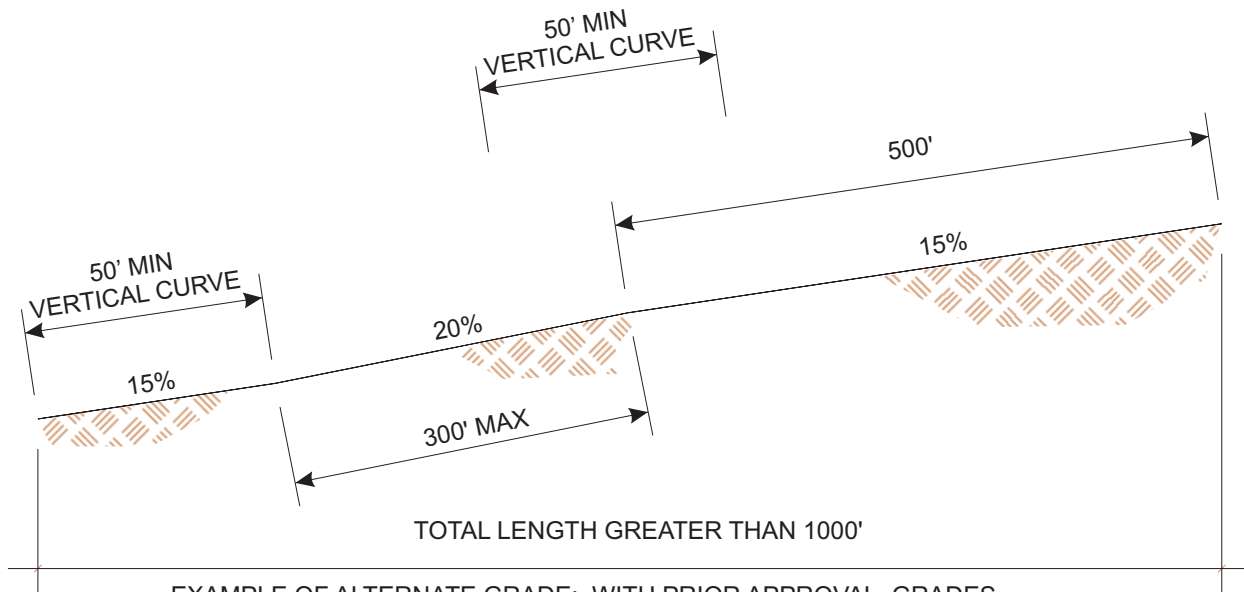
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 0% - 5% GRAVEL SURFACE: 1.00 FEET COMPACTED CLASS 2 AGGREGATE BASE [SEC 13-30(a)]


 5% - 10% SEAL COAT SURFACE: DOUBLE SEAL COAT OVER 1.00 FEET COMPACTED CLASS 2 AGGREGATE BASE [SEC 13-30(b)]


 OVER 10% ASPHALTIC CONCRETE SURFACE: 0.20 FEET ASPHALTIC CONCRETE OVER 0.50 FEET COMPACTED CLASS 2 AGGREGATE BASE [SEC 13-30(c)]



EXAMPLE OF ALTERNATE GRADE: WITH PRIOR APPROVAL, GRADES MAY BE UP TO 20% FOR DISTANCES NOT EXCEEDING 300' WITHIN ANY 1000' OF ROAD LENGTH.

GRADES & SURFACES
SECTION 13-30 & 13-31

SEC 13-30 & 13-31 GRADES & SURFACES

FIRE SAFE STANDARDS

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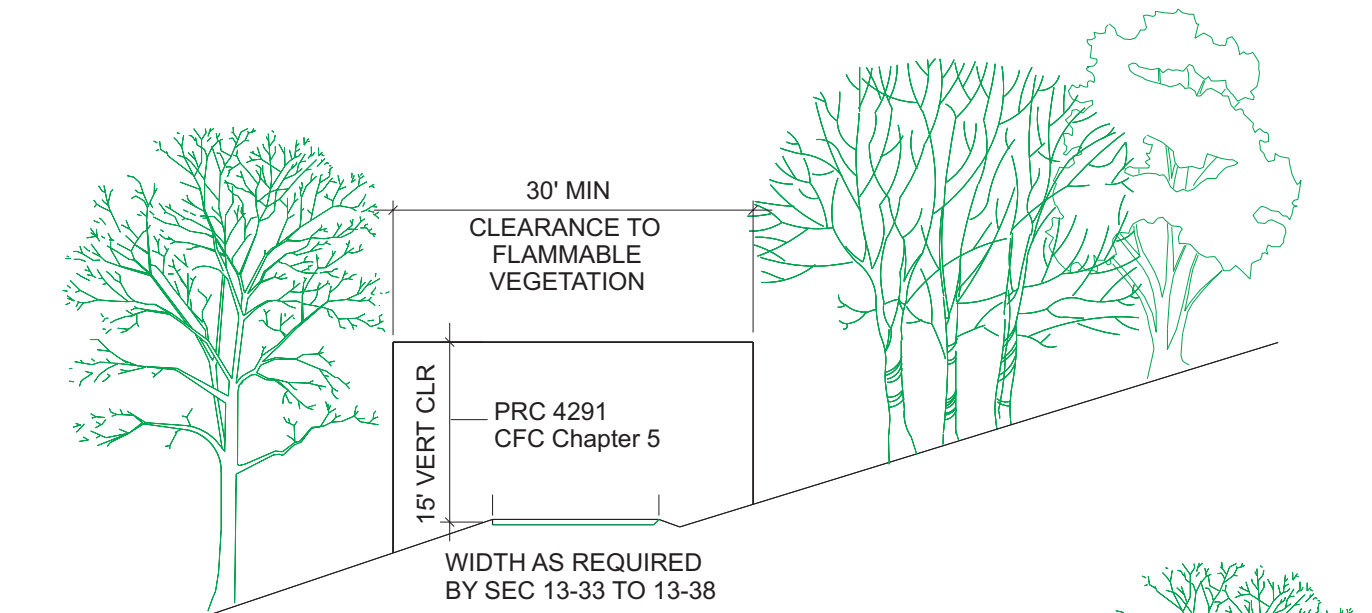
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03/26/03

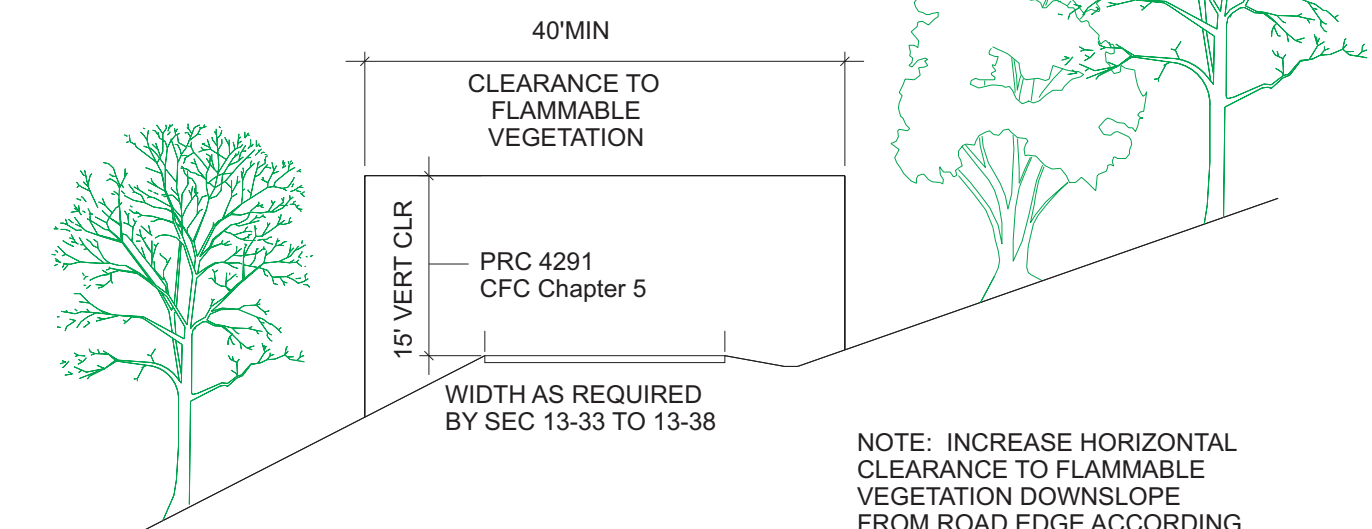
REVISION DATE

F14

DRAWING NO



DRIVEWAY
SEC 13-37



TWO WAY ROAD
SEC 13-34

NOTE: INCREASE HORIZONTAL
CLEARANCE TO FLAMMABLE
VEGETATION DOWNSLOPE
FROM ROAD EDGE ACCORDING
TO THE FOLLOWING TABLE

0 - 10% SLOPE	10'
11 - 20% SLOPE	20'
30% + SLOPE	30'

SEC 13-34, 37 ROAD & DRIVE, VEGETATION CLEARANCE

FIRE SAFE STANDARDS

SONOMA COUNTY
FIRE AND EMERGENCY SERVICES DEPARTMENT

2300 COUNTY CENTER DR
Santa Rosa, California 95403
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1/16" = 1'-0"

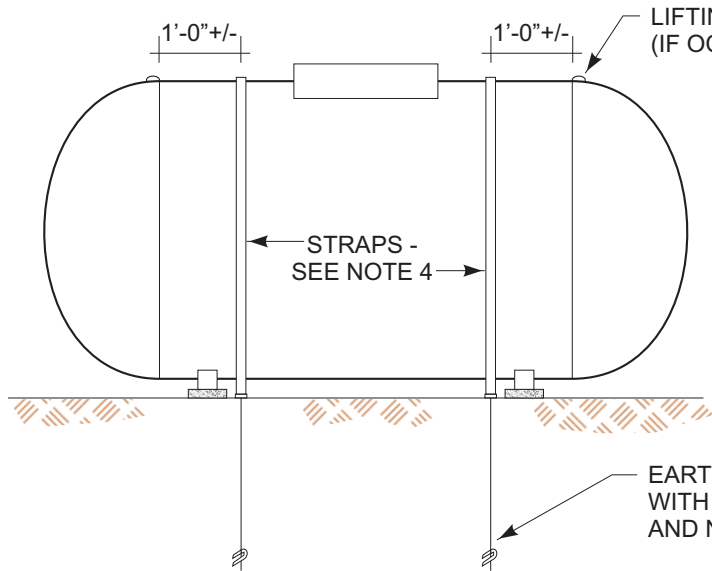
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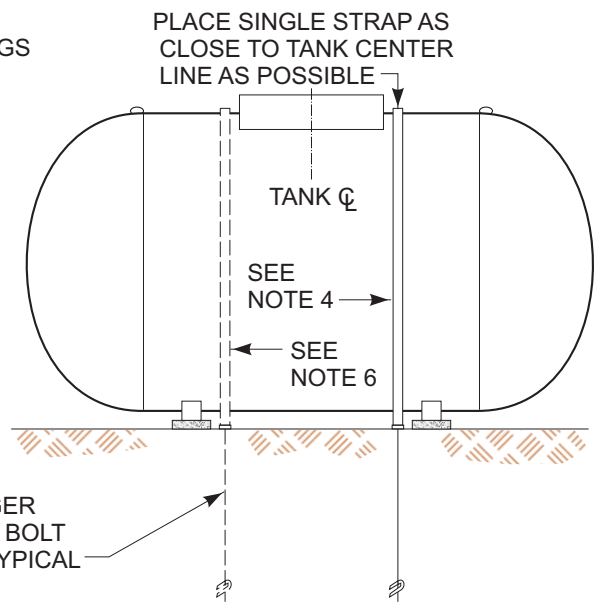
REVISION DATE

F15

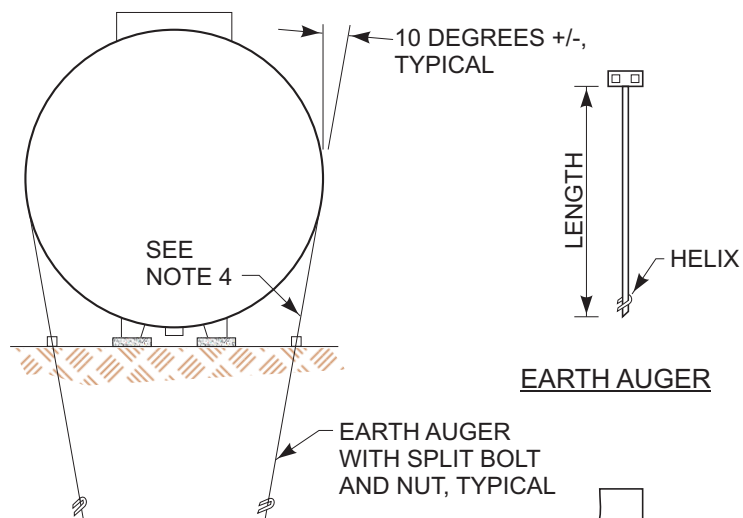
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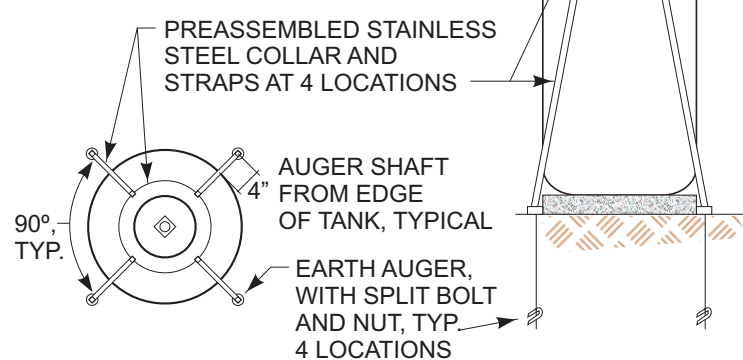
**351-1500 GALLON TANK ELEVATION
2 STRAP PLACEMENT**



**UP TO 350 GALLON TANK ELEVATION
1 STRAP PLACEMENT**



CROSS SECTION



**BOTTLE TYPE TANK
PLAN VIEW**

**BOTTLE TYPE TANK
ELEVATION**

NOTES

1. PRIOR TO INSTALLING THE EARTH AUGERS, CHECK FOR UNDERGROUND UTILITIES.
2. THE EARTH AUGERS AND STRAPS SHOWN HEREON ARE DESIGNED TO RESIST THE BOUYANCY FORCES FROM AN EMPTY TANK FULLY SUBMERGED, AND THE LATERAL FORCES GENERATED FROM SEISMIC ZONE 4 ACTIVITY.
3. EARTH AUGER TYPES AND LENGTHS REQUIRED ARE DEPENDANT UPON THE EXISTING SOIL CONDITIONS:
 - a. ALL CLASS 5 SOILS (CLAY, SANDY CLAY, SILTY CLAY AND CLAYEY SILT) AND SAND, SILTY SAND AND CLAYEY SAND OF THE CLASS 4 SOILS REQUIRE EARTH AUGERS OF MINIMUM 48 INCHES IN LENGTH AND (1) 6 INCH DIAMETER HELIX.
 - b. CLASS 4 AND BETTER SOILS WITH THE EXCEPTION OF SAND, SILTY SAND, AND CLAYEY SAND REQUIRE EARTH AUGERS OF MINIMUM 32 INCHES IN LENGTH AND (2) 4 INCH DIAMETER HELICES.
 - c. EARTH AUGERS SHALL HAV A TESTED MINIMUM PULL OUT VALUE OF 6000 LBS.
4. STRAPS SHALL BE ONE OF THE FOLLOWING:
 - a. 1-1/4"x0.031" STAINLESS STEEL, 301-1/4 HARD, MINIMUM TENSILE STRENGTH OF 4750 LBS
 - b. 1-1/4"x0.031" GALVANIZED STEEL, CLASS B, GRADE 1, MINIMUM TENSILE STRENGTH OF 4750 LBS.
5. IN THE EVENT EARTH AUGERS ARE PRECLUDED FROM INSTALLATION, ALTERNATE TETHERING DESIGNS CAN BE SUBMITTED FOR CONSIDERATION.
6. IN ALL CASES, WHEN TANKS UP TO 350 GALLONS ARE PLACED IN AREAS OF SOIL TYPES AS DESCRIBED IN NOTE 3a, 2 STRAPS AND 4 EARTH AUGERS ARE REQUIRED. EARTH AUGER SIZE IS AS NOTED IN 3-a.
7. MINIMUM DISTANCES OF TANKS FROM STRUCTURES AND PROPERTY LINES:

CHAPTER 38 CALIFORNIA FIRE CODE

Distance from buildings and property lines based on size of LPG container capacity.

SIZE	UNDERGROUND	ABOVEGROUND
0-125	10	5 with conditions
125-500	10	10
501-2000	10	25
2001-30,000	50	50
All others see CFC Table		

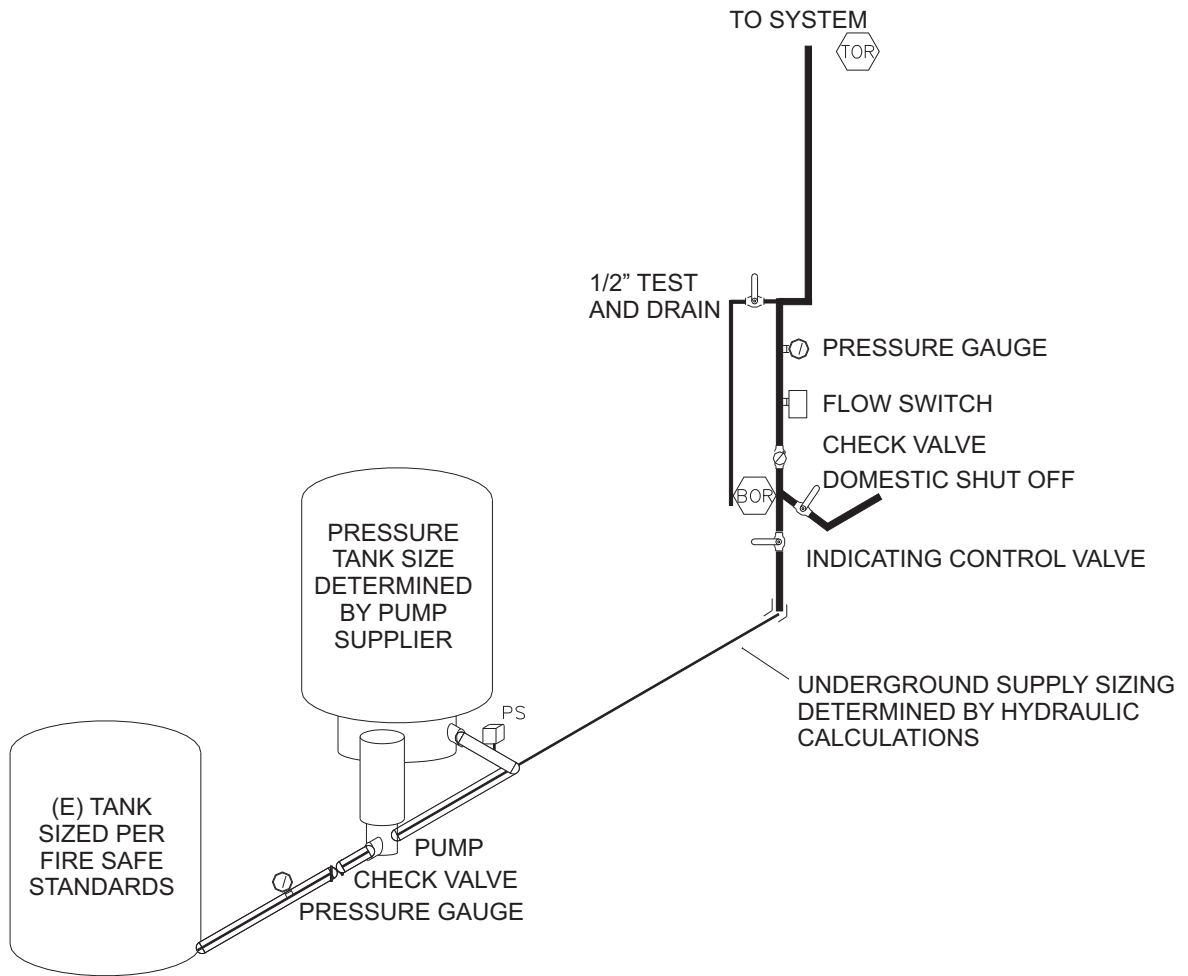
8. Earth Augers are required in areas subject to flooding. All others may be bolted or cable tied to a concrete slab seismic only. Per CFC

SEISMIC STABILIZATION & SEPARATIONS

FIRE SAFE STANDARDS

**SONOMA COUNTY
FIRE AND EMERGENCY SERVICES DEPARTMENT**
2300 COUNTY CENTER DR
Santa Rosa, California 95403
Telephone (707) 565-1152 Fax (707) 565-1172

NOT TO SCALE	F16
SCALE	
02/11/03	
REVISION DATE	DRAWING NO



PUMP & RISER DETAIL

NFPA 13-D

GUIDELINE FOR 13-D PUMP/TANK ASSEMBLY

FIRE SAFE STANDARDS

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FIRE AND EMERGENCY SERVICES DEPARTMENT

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 Santa Rosa, California 95403
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NOT TO SCALE

SCALE

11/08/05

REVISION DATE

F17

DRAWING NO