City of Laguna Niguel
Building Division
30111 Crown Valley Pkwy
Laguna Niguel, CA 92677
(949) 362-4360 FAX 362-4369
www.CityofLagunaNiguel.org

FENCES AND WALLS

116

Handouts Included:

116 Wood / Chain Link Fences

117 Masonry Fence

118 Masonry Pilaster

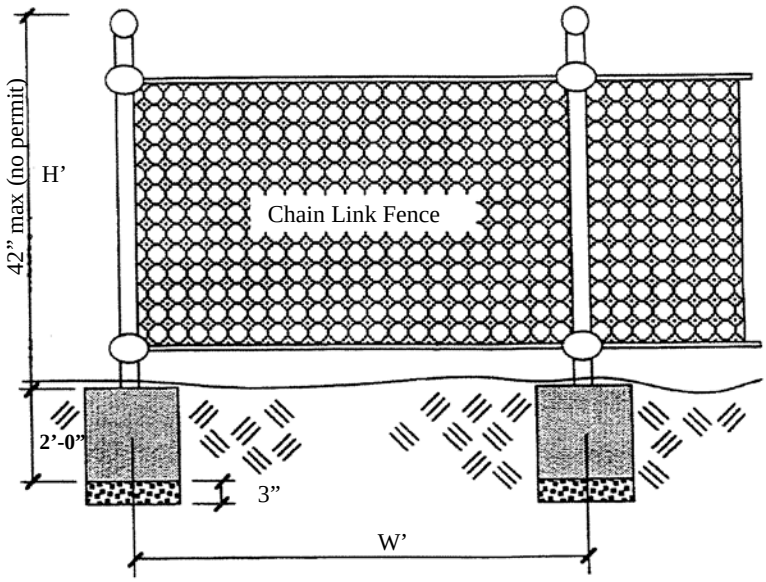
City of Laguna Niguel
Building Division
30111 Crown Valley Pkwy
Laguna Niguel, CA 92677
(949) 362-4360 FAX 362-4369
www.CityofLagunaNiguel.org

WOOD / CHAIN LINK FENCES

116

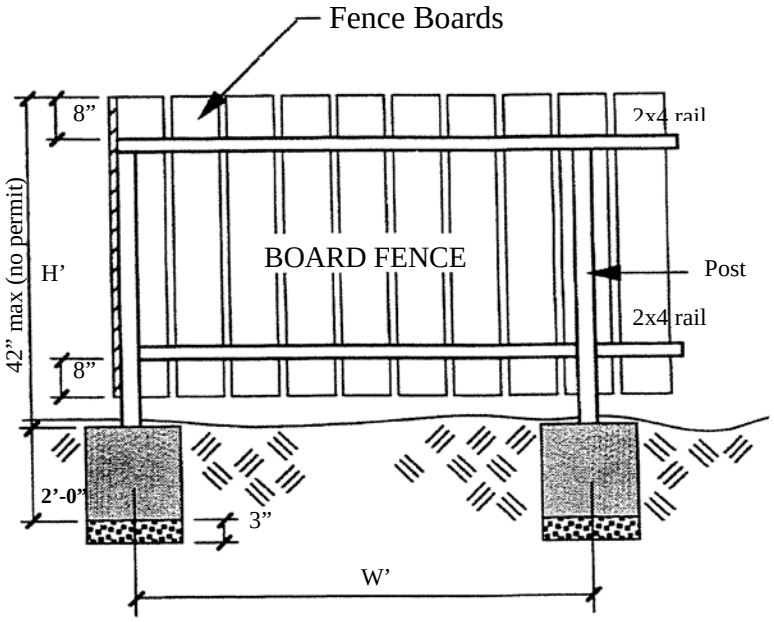
WOOD FENCES

- Posts must be redwood No. 2 grade or better or treated post.
- Set posts in 12” diameter concrete base on 3” of loose gravel.



Fence Specifications

Height (in Feet)	Post Material (Size in inches)	Section Width (in feet)
4	4” x 4” posts	6
5	4” x 4” posts	6
6	4” x 4” posts	6
4	4” x 4” posts	8
5	4” x 4” posts	8



City of Laguna Niguel
Building Division
30111 Crown Valley Pkwy
Laguna Niguel, CA 92677
(949) 362-4360 FAX 362-4369
www.CityofLagunaNiguel.org

MASONRY FENCE

117

Construction of masonry fences requires permits. Wood fences lower than 42 Inches high and not supporting surcharge or top of slope does not require a building permit from the City of Laguna Niguel Building & safety. However, it is regulated by the California Building Code.

The following specifications are from the 2016 California Building Code used by the City of Laguna Niguel.

I. **Wall Height**
Fence height is measured from the top of the footing to the top of the wall.

II. **Masonry Fence Specifications**
Use the following specifications when constructing a masonry fence.

1. **Concrete Mix**
The concrete mix for footings must meet the strength of F'c = 4500 psi minimum Type V. W/C 0.45

2. **Mortar Mix**
Mortar mix must meet the strength of F'c= 1800 psi minimum or the following:
1 part Portland cement
3 ½ parts sand
¼ part hydrated lime or lime putty
Plastic cement may be used with 3 parts sand to 1 part plastic cement.

3. **Reinforcing Steel**
Reinforcing steel must be deformed and comply with ASTM specifications A615-82, Grade 40. When one continuous bar cannot be used, a lap or splice of 40-bar diameters is required.

4. **Grout Mix**
Grout must meet the strength of F'c=2000 psi minimum, or the following:
- 1 part Portland cement
- 3 parts sand
- 2 parts pea gravel (3/8 – inch aggregate)

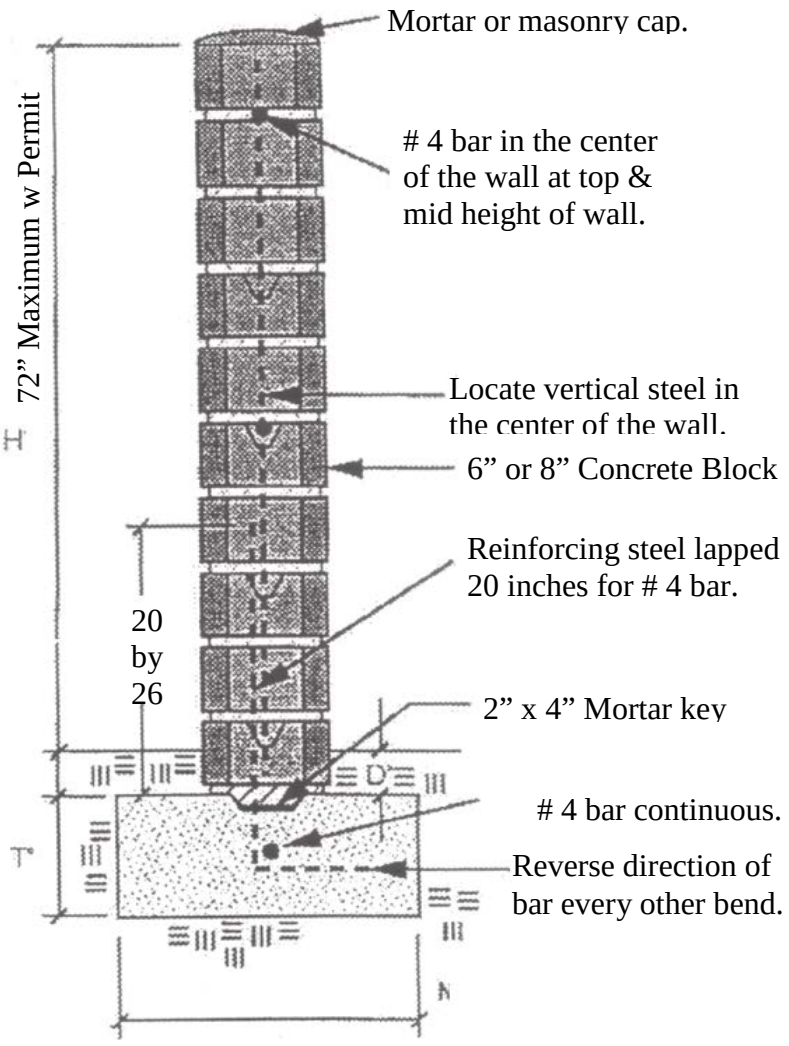
Water added to pouring consistency without segregation of the grout constituents.
Use of plastic cement is not allowed for grout.

NOTE: Fill cells solid with grout where steel occurs.

Rod or vibrate immediately. Re-rod or revibrate grout about 10 minutes after pouring to insure solid consolidation. Stop grout 2 inches from top of masonry units when grouting of second lift is to be continued at another time.

5. **Mortar Key**
To insure proper bonding between the footing and the first course of block, a mortar key must be formed by embedding a flat 2x4 flush with and at the top of the freshly poured footing. It should be removed after the concrete has started to harden (about 1 hour). A mortar key may be omitted if the first course of block is set into the fresh concrete when the footing is poured, and a good bond is obtained.

6. **Soil**
All footing must extend at least 24 inches into undisturbed natural soil compacted to at least 90 percent density. Soil should be dampened prior to placing concrete in footings. A soils report, completed by a licensed engineer, may be required.



Expansion Joints Required every 25'

Note: A building permit may be required if adjacent to slopes. Regardless of height.

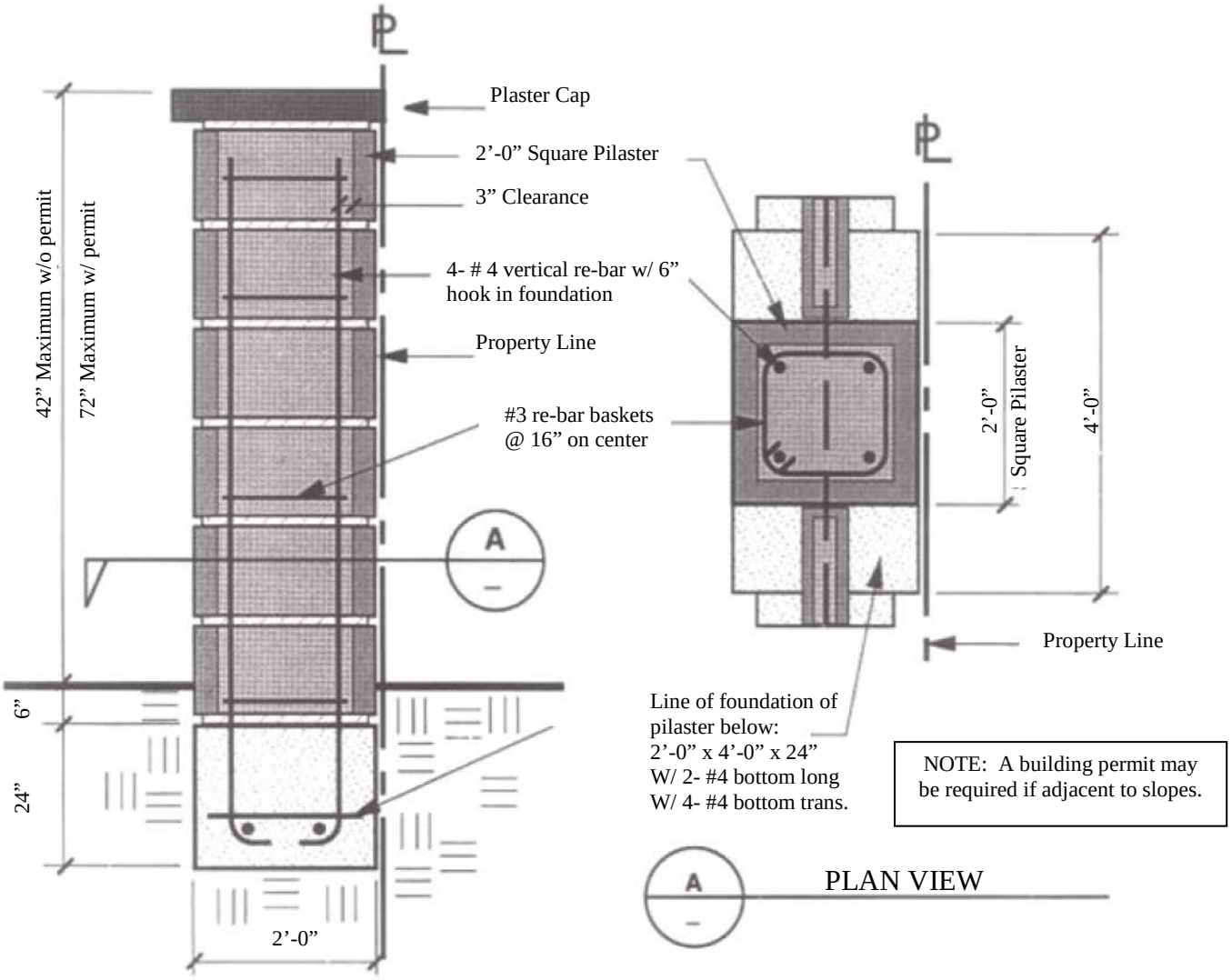
REINFORCING STEEL REQUIREMENTS FOR MASONRY WALLS

Wall Height	Material	W in Inches	T in Inches	D in Inches	Reinforcing Steel
4'0"	6" Block 8" Block	12" 12"	24" 24"	2" 2"	#4 @ 32" o.c. #4 @ 16" o.c.
5'-0"	6" Block 8" Block	12" 18"	24" 24"	4" 4"	#4 @ 32' o.c. #4 @ 16" o.c.
6'-0"	6" Block 8" Block	18" 18"	24" 24"	4" 4"	#4 @ 24" o.c. #4 @ 16" o.c.

City of Laguna Niguel
Building Division
30111 Crown Valley Pkwy
Laguna Niguel, CA 92677
(949) 362-4360 FAX 362-4369
www.CityofLagunaNiguel.org

MASONRY PILASTER

118



NOTES:
1. All cells shall be filled with grout (See concrete masonry specifications on
2. All construction must comply with the specifications shown on the reverse side

REINFORCED CONCRETE

1. Cement shall conform to ASTM C- 150, Type V. (4500 psi) W/C 0.45
2. Aggregates shall conform to ASTM C-33 for structural normal weight concrete (1"maximum size) and ASTM C-330 for structural lightweight concrete.
3. Ready – mix concrete shall be mixed and delivered in accordance with ASTM C- 94.
4. Concrete design mixes shall be in accordance with Section 1905 of the California Building Code and shall be signed by a Registered Professional Engineer, registered in the state of California.