

# RETAINING WALL STANDARD

## **GENERAL:**

Retaining walls require a permit when the retaining wall retains earth, and is over 4 feet in height, (Measured from the bottom of the footing), as defined in the 2010 California Building Code Sect. 105.2(4).

The city retaining wall standard requires it to be built out of masonry, concrete and steel. A retaining wall may be built from other materials when approved by the City of Rancho Santa Margarita's Building & Safety Division. Any deviation from this standard requires the retaining wall to be designed and stamped by a California Licensed Civil or Structural Engineer, or a California Licensed Architect.

The use of this retaining wall standard is only permitted when:

- 1.The retaining wall materials and methods conform to the 2010 California Building Code and City Retaining Wall Standard.
- 2.The retaining wall is not built within 10 feet of a slope or swimming pool. (i.e. it must have a level backfill for a minimum of 10 feet clear of all structures).
- 3.The City of Rancho Santa Margarita's Planning, Engineering and Building Divisions have reviewed and approved it.

## **APPLICATION:**

Applicants desiring to use the city's retaining wall handout shall complete the following:

- 1.The Permit Application.
- 2.Receive and understand the Best Management Practice city handout.

## **PLAN REVIEW:**

Each retaining wall shall be submitted for plan review by the City of Rancho Santa Margarita. The following things shall be found with each plan:

- 1.Site Plan
- 2.Vicinity Map
- 3.Retaining wall legend with wall heights (by definition)
- 4.Clear scope of work
- 5.Storm-water flow and masonry wall drainage details
- 6.The following notes:  
"All work shall conform to the 2010 California Building Code"

## **BUILDING PERMIT:**

The applicant may be issued a retaining wall permit, once the submitted plans have been approved.



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**CITY OF RANCHO SANTA MARGARITA**

Paul Melby 4/27/2011  
Building Official Date

Last Revised on 4/24/2011

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## DRAINAGE:

Retaining wall drainage is achieved by installing a 4" perforated pipe (weep holes pointing down) in a 12" wide gravel pocket at the base of the wall on the retention side (see detail). The site plan shall show the drainage line and the termination point. Each property shall be responsible for its own drainage, therefore no property shall drain onto adjoining properties. Please be advised that if any work is to be done in the public right of way, an encroachment permit is required from the Engineering Department.

## MATERIAL:

- Masonry: shall comply to ASTM C 90 and manufactured per the Masonry Standards Joint Committee Standards. F'm=1500 psi.
- Concrete: shall have a minimum compressive strength of 4500 psi at 28 days and a water/cement ratio = 0.45 unless. Portland cement shall conform to ASTM C 150, type V.
- Mortar: 1 part cement, ½ part lime putty, 4 1/2 parts sand. Mortar shall be evenly mixed and conform to ASTM C 270. Keep fins at less than 1/2".
- Grout: 1 part cement, 3 parts sand or 1 part cement, 3 parts sand, 2 parts pea gravel. Up to a 4 feet in height lift of grouted masonry units for pre-grout inspection.
- Reinforcing steel: reinforcing steel shall be made of deformed steel bar conforming to ASTM A 615 Grade 60 or better.

## DEPUTY INSPECTION:

Is a deputy inspector required?

No, however, material receipts and delivery tickets are required at time of inspection proving the material used.



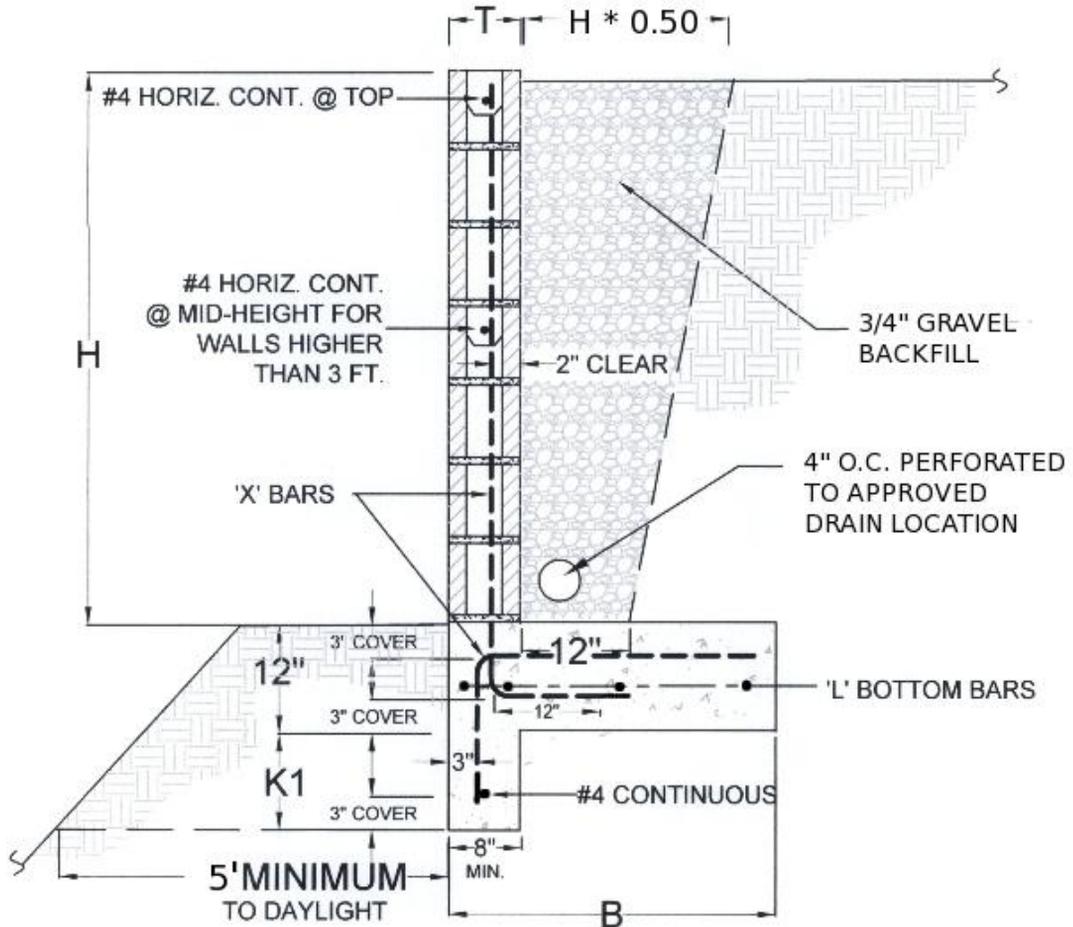
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Paul Melby                      4/27/2011  
Building Official                      Date

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WALL DATA TABLE						
H	B	T	X	L	K1	K2
>2'-3'	3'-0"	6"	3@24" O.C.	3 - #4's	12"	12"
>3'-4'	3'-8"	8"	4@24" O.C.	4 - #4's	18"	18"
>4'-5'	4'-8"	8"	5@16" O.C.	4 - #5's	24"	24"



**NOTE:**

1. PROVIDE A MINIMUM OF 24" FOR ALL HORIZONTAL AND VERTICAL REBAR LAPS AND SPLICES.
2. SOLIDLY GROUT ALL CELLS WITH LISTED ICC GROUT.
3. ALL REBAR HOOKS SHALL BE AT 90 DEGREES.



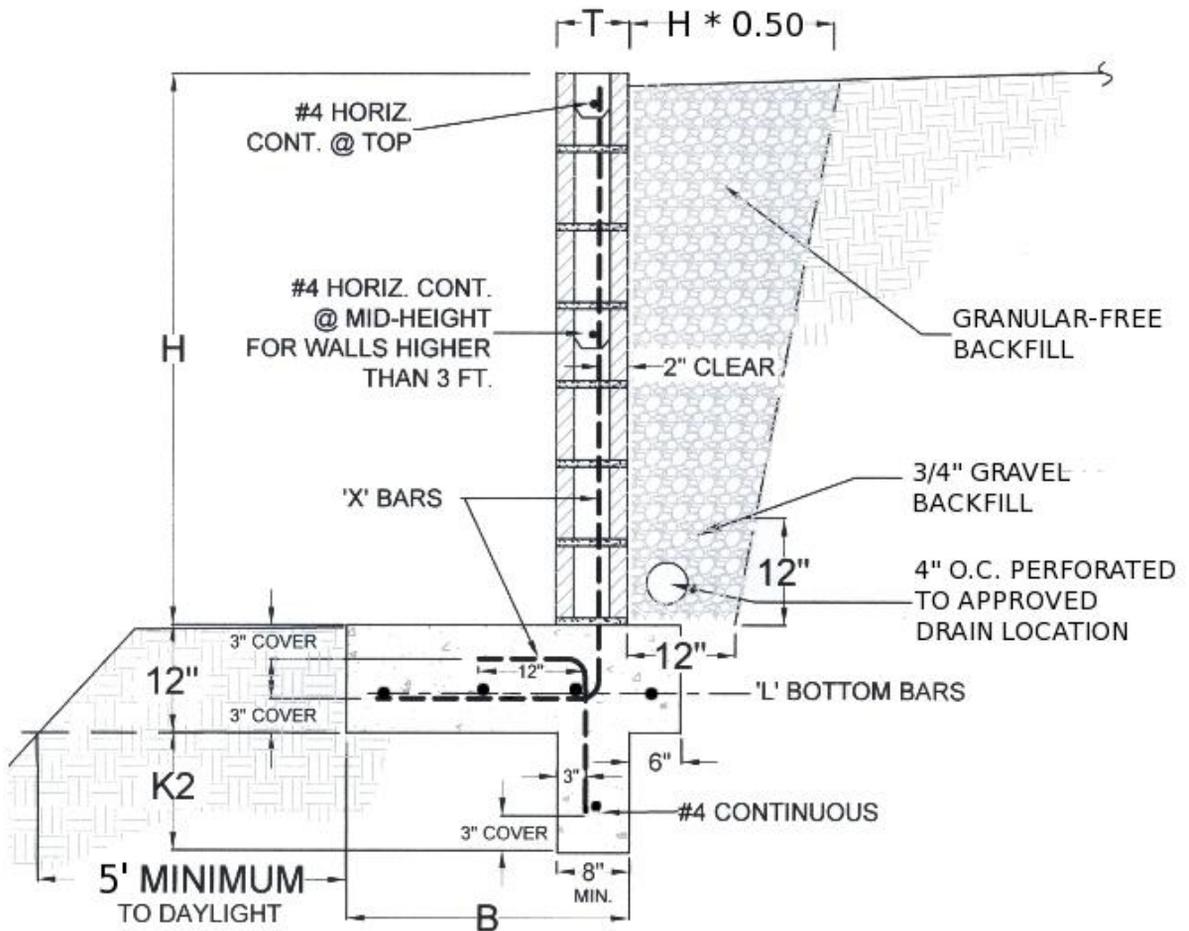
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