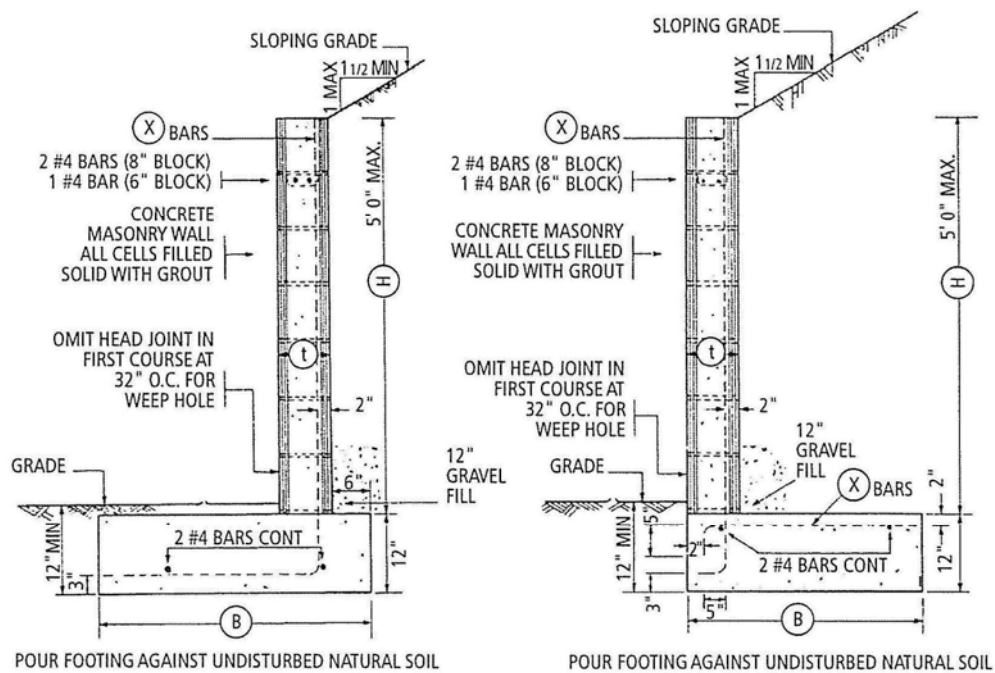


# Retaining Walls

## SLOPING GRADE



H	t	B	X BARS
3'	6"	2'-3"	#3 @ 24" O.C.
4'	8"	3'-0"	#4 @ 24" O.C.
5'	8"	3'-6"	#5 @ 16" O.C.

Design for Sloping Grade Above Wall

H	t	B	X BARS
3'	6"	2'-9"	#3 @ 24" O.C.
4'	8"	3'-6"	#4 @ 24" O.C.
5'	8"	4'-0"	#5 @ 16" O.C.

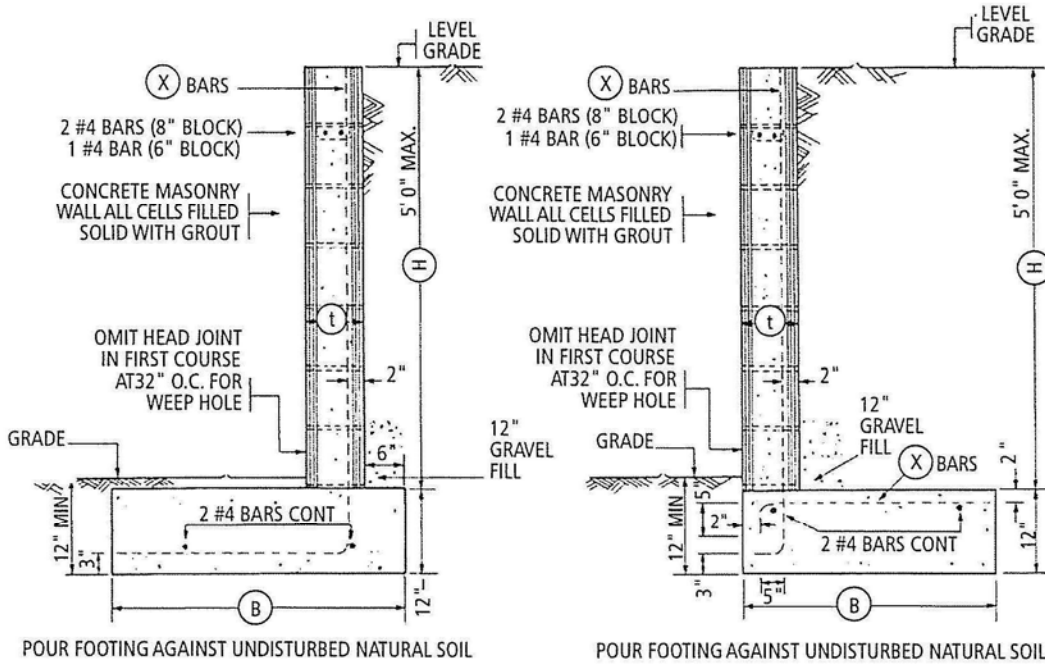
Design for Sloping Grade Above Wall

### PERMIT REQUIRED FOR WALLS 3 FT. AND OVER

#### GENERAL NOTES:

- Concrete - 2000 p.s.i. Min. @ 28 days; Mix. 1: 2 1/2 / 3 1/2, Max w/c 7 1/2 Gal./Sack
- Reinf. Steel - ASTM.A15 & A305, Min.  $f_s = 20,000$  p.s.i.
- Reinf. Steel Laps - Min. 1'-6"
- Concrete Masonry Units - ASTM C 90; Conc. Blks. Grade 'A'
- Grout - 1 part Cement, 2 to 3 parts sand, 2 parts pea gravel
- Soil - Max 1000 p.s.f. bearing pressure
- Backfill - Cohesionless soil
- All workmanship and materials to conform with the UNIFORM BUILDING CODE.
- No surcharge on wall. Consult a professional Civil or Structural Engineer for design of retaining walls having:
  - a height greater than 5 feet and/or
  - any surcharge. (Vehicle loading, adjacent footings, etc.)

## LEVEL GRADE



POUR FOOTING AGAINST UNDISTURBED NATURAL SOIL

POUR FOOTING AGAINST UNDISTURBED NATURAL SOIL

H	t	B	X BARS
2'	6"	1'-6"	#3 @ 48" O.C.
3'	6"	1'-9"	#3 @ 32" O.C.
4'	8"	2'-2"	#4 @ 48" O.C.
5'	8"	2'-9"	#5 @ 24" O.C.

Design for Level Grade Above Wall

H	t	B	X BARS
2'	6"	1'-6"	#3 @ 48" O.C.
3'	6"	1'-10"	#3 @ 32" O.C.
4'	8"	1'-6"	#4 @ 48" O.C.
5'	8"	3'-0"	#5 @ 24" O.C.

Design for Level Grade Above Wall

### GENERAL NOTES:

1. Concrete - 2000 p.s.i. Min. @ 28 days; Mix. 1: 2 1/2 / 3 1/2, Max w/c 7 1/2 Gal./Sack
2. Reinf. Steel - ASTM.A15 & A305, Min. fs = 20,000 p.s.i.
3. Reinf. Steel Laps - Min. 1'-6"
4. Concrete Masonry Units - ASTM C 90; Conc. Blks. Grade 'A'
5. Grout - 1 part Cement, 2 to 3 parts sand, 2 parts pea gravel
6. Soil - Max 1000 p.s.f. bearing pressure
7. Backfill - Cohesionless soil
8. All workmanship and materials to conform with the UNIFORM BUILDING CODE.
9. No surcharge on wall. Consult a professional Civil or Structural Engineer for design of retaining walls having:
  - a) a height greater than 5 feet and/or
  - b) any surcharge. (Vehicle loading, adjacent footings, etc.)