

**TABLE B-4600-1**  
**6" POLYSTEEL® PS-4600 FLAT WALL FORM**  
**8-FOOT HIGH BASEMENT WALL**

**VERTICAL (Grade 40) REBAR REQUIREMENTS \***

Unbalanced Backfill Depth	Backfill Equivalent Fluid Density		
	30 pcf	45 pcf	60 pcf
4 ft.	#4@48"	#4@48"	#4@48"
5 ft.	#4@48"	#3@12"; #4@22"; #5@32"; #6@40"	#3@8"; #4@14"; #5@20"; #6@26"
6 ft.	#3@12"; #4@22"; #5@30"; #6@40"	#3@8"; #4@14"; #5@20"; #6@24"	#3@6"; #4@10"; #5@14"; #6@20"
7 ft.	#3@8"; #4@14"; #5@22"; #6@26"	#3@5"; #4@10"; #5@14"; #6@18"	#3@4"; #4@6"; #5@10"; #6@14"
8 ft.	#3@ 6"; #4@ 12"; #5@ 18"; #6@ 24"	#3@ 4"; #4@ 8"; #5@ 12"; #6@ 16"	#3@ 3"; #4@ 5"; #5@ 8"; #6@ 12"

**\* Minimum Rebar Requirements:**

- If the basement wall is **NOT** supporting an above grade PolySteel wall in Seismic Design Category A, B, C, D1, and D2 areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category A, B, and C areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category D1 and D2 areas: Maximum spacing of vertical rebar is 18" o.c. Minimum vertical rebar is #4 @ 12" o.c., #5 @ 18" o.c., or table above if more restrictive. Vertical rebar size and spacing shall match the above grade wall reinforcement if more restrictive. Minimum horizontal rebar is #5 @ 24" o.c. (See note #2 below.)

**NOTES:**

1. This table is based on the design criteria of ACI 318-02 "Building Code Requirements for Structural Concrete"
2. The reinforcement requirements listed in this table are based on Grade 40 (ASTM A 615 or ASTM A 996) rebar and 2,500 psi concrete. Basement walls in Seismic Design Category D1 and D2 areas may use the above table for designs to resist lateral soil pressure but must specify Grade 60 (ASTM A 706 for low-alloy steel) rebar and 3,000 psi for construction.
3. This table assumes the vertical rebar is placed in the center of the 6" thick PolySteel wall (d=3.0").
4. The basement floor must be poured and the first floor in place before backfilling.
5. The floor or roof system supporting the top of the basement wall and the connection to the top of the basement wall, must be specifically designed to provide the necessary strength to resist the horizontal reaction or force developed at the top of the basement wall by the lateral loads exerted on the wall by the backfill.
6. Concrete must cure a minimum of 7 days before backfilling.
7. Backfill should be well drained.
8. Refer to the PolySteel® Installation Manual for proper basement drainage and waterproofing systems.

**TABLE B-4600-2**  
**6" POLYSTEEL® PS-4600 FLAT WALL FORM**  
**9-FOOT HIGH BASEMENT WALL**

**VERTICAL (Grade 40) REBAR REQUIREMENTS \***

Unbalanced Backfill Depth	Backfill Equivalent Fluid Density		
	30 pcf	45 pcf	60 pcf
4 ft.	#4@48"	#4@48"	#4@48"
5 ft.	#4@48"	#3@12"; #4@20"; #5@28"; #6@36"	#3@8"; #4@14"; #5@20"; #6@22"
6 ft.	#3@10"; #4@20"; #5@28"; #6@34"	#3@6"; #4@12"; #5@18"; #6@20"	#4@8"; #5@14"; #6@16"
7 ft.	#3@8"; #4@14"; #5@20"; #6@22"	#4@8"; #5@12"; #6@16"	#4@6"; #5@10"; #6@12"
8 ft.	#3@6"; #4@10"; #5@14"; #6@16"	#4@6"; #5@10"; #6@12"	#4@4"; #5@6"; #6@8"
9 ft.	#3@ 4"; #4@ 8"; #5@ 13"; #6@ 15"	#4@ 5"; #5@ 8"; #6@ 11"	#4@ 3"; #5@ 5"; #6@ 7"

**\* Minimum Rebar Requirements:**

- If the basement wall is **NOT** supporting an above grade PolySteel wall in Seismic Design Category A, B, C, D1, and D2 areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category A, B, and C areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category D1 and D2 areas: Maximum spacing of vertical rebar is 18" o.c. Minimum vertical rebar is #4 @ 12" o.c., #5 @ 18" o.c., or table above if more restrictive. Vertical rebar size and spacing shall match the above grade wall reinforcement if more restrictive. Minimum horizontal rebar is #5 @ 24" o.c. (See note #2 below.)

**NOTES:**

1. This table is based on the design criteria of ACI 318-02 "Building Code Requirements for Structural Concrete"
2. The reinforcement requirements listed in this table are based on Grade 40 (ASTM A 615 or ASTM A 996) rebar and 2,500 psi concrete. Basement walls in Seismic Design Category D1 and D2 areas may use the above table for designs to resist lateral soil pressure but must specify Grade 60 (ASTM A 706 for low-alloy steel) rebar and 3,000 psi for construction.
3. This table assumes the vertical rebar is placed in the center of the 6" thick PolySteel wall (d=3.0").
4. The basement floor must be poured and the first floor in place before backfilling.
5. The floor or roof system supporting the top of the basement wall and the connection to the top of the basement wall, must be specifically designed to provide the necessary strength to resist the horizontal reaction or force developed at the top of the basement wall by the lateral loads exerted on the wall by the backfill.
6. Concrete must cure a minimum of 7 days before backfilling.
7. Backfill should be well drained.
8. Refer to the PolySteel® Installation Manual for proper basement drainage and waterproofing systems.

**TABLE B-4600-3**  
**6" POLYSTEEL® PS-4600 FLAT WALL FORM**  
**10-FOOT HIGH BASEMENT WALL**

**VERTICAL (Grade 40) REBAR REQUIREMENTS \***

Unbalanced Backfill Depth	Backfill Equivalent Fluid Density		
	30 pcf	45 pcf	60 pcf
4 ft.	#4@48"	#4@48"	#4@48"
5 ft.	#4@48"	#3@10"; #4@18"; #5@26"; #6@30"	#3@6"; #4@14"; #5@18"; #6@20"
6 ft.	#3@10"; #4@18"; #5@24"; #6@30"	#3@6"; #4@12"; #5@16"; #6@18"	#3@4"; #4@8"; #5@12"; #6@14"
7 ft.	#3@6"; #4@12"; #5@16"; #6@18"	#3@4"; #4@8"; #5@12"	#4@6"; #5@8"; #6@10"
8 ft.	#3@4"; #4@8"; #5@12"; #6@14"	#4@6"; #5@8"; #6@12"	#4@4"; #5@6"; #6@8"
9 ft.	#3@4"; #4@6"; #5@10"; #6@12"	#4@4"; #5@6"; #6@8"	#5@4"; #6@6"
10 ft.	#3@ 3"; #4@ 5"; #5@ 9"; #6@ 11"	#4@ 3"; #5@ 5"; #6@ 7"	<b>Design Required</b>

**\* Minimum Rebar Requirements:**

- If the basement wall is **NOT** supporting an above grade PolySteel wall in Seismic Design Category A, B, C, D1, and D2 areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category A, B, and C areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category D1 and D2 areas: Maximum spacing of vertical rebar is 18" o.c. Minimum vertical rebar is #4 @ 12" o.c., #5 @ 18" o.c., or table above if more restrictive. Vertical rebar size and spacing shall match the above grade wall reinforcement if more restrictive. Minimum horizontal rebar is #5 @ 24" o.c. (See note #2 below.)

**NOTES:**

1. This table is based on the design criteria of ACI 318-02 "Building Code Requirements for Structural Concrete"
2. The reinforcement requirements listed in this table are based on Grade 40 (ASTM A 615 or ASTM A 996) rebar and 2,500 psi concrete. Basement walls in Seismic Design Category D1 and D2 areas may use the above table for designs to resist lateral soil pressure but must specify Grade 60 (ASTM A 706 for low-alloy steel) rebar and 3,000 psi for construction.
3. This table assumes the vertical rebar is placed in the center of the 6" thick PolySteel wall (d=3.0").
4. The basement floor must be poured and the first floor in place before backfilling.
5. The floor or roof system supporting the top of the basement wall and the connection to the top of the basement wall, must be specifically designed to provide the necessary strength to resist the horizontal reaction or force developed at the top of the basement wall by the lateral loads exerted on the wall by the backfill.
6. Concrete must cure a minimum of 7 days before backfilling.
7. Backfill should be well drained.
8. Refer to the PolySteel® Installation Manual for proper basement drainage and waterproofing systems.

**TABLE B-4600-4**  
**6" POLYSTEEL® PS-4600 FLAT WALL FORM**  
**8-FOOT HIGH BASEMENT WALL**

**VERTICAL (Grade 60) REBAR REQUIREMENTS \***

Unbalanced Backfill Depth	Backfill Equivalent Fluid Density		
	30 pcf	45 pcf	60 pcf
4 ft.	#4@48"	#4@48"	#4@48"
5 ft.	#4@48"	#3@18"; #4@33"; #5@48"	#3@12"; #4@21"; #5@30"; #6@39"
6 ft.	#3@18"; #4@33"; #5@45"; #6@48"	#3@12"; #4@21"; #5@30"; #6@36"	#3@9"; #4@15"; #5@21"; #6@30"
7 ft.	#3@12"; #4@21"; #5@33"; #6@39"	#3@8"; #4@15"; #5@21"; #6@27"	#3@6"; #4@9"; #5@15"; #6@21"
8 ft.	#3@ 9"; #4@ 18"; #5@ 27"; #6@ 36"	#3@ 6"; #4@ 12"; #5@ 18"; #6@ 24"	#3@ 4"; #4@ 7"; #5@ 12"; #6@ 18"

**\* Minimum Rebar Requirements:**

- If the basement wall is **NOT** supporting an above grade PolySteel wall in Seismic Design Category A, B, C, D1, and D2 areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category A, B, and C areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category D1 and D2 areas: Maximum spacing of vertical rebar is 18" o.c. Minimum vertical rebar is #4 @ 12" o.c., #5 @ 18" o.c., or table above if more restrictive. Vertical rebar size and spacing shall match the above grade wall reinforcement if more restrictive. Minimum horizontal rebar is #5 @ 24" o.c. (See note #2 below.)

**NOTES:**

1. This table is based on the design criteria of ACI 318-02 "Building Code Requirements for Structural Concrete"
2. The reinforcement requirements listed in this table are based on Grade 60 (ASTM A 615 or ASTM A 996) rebar and 2,500 psi concrete. Basement walls in Seismic Design Category D1 and D2 areas may use the above table for designs to resist lateral soil pressure but must specify Grade 60 (ASTM A 706 for low-alloy steel) rebar and 3,000 psi for construction.
3. This table assumes the vertical rebar is placed in the center of the 6" thick PolySteel wall (d=3.0").
4. The basement floor must be poured and the first floor in place before backfilling.
5. The floor or roof system supporting the top of the basement wall and the connection to the top of the basement wall, must be specifically designed to provide the necessary strength to resist the horizontal reaction or force developed at the top of the basement wall by the lateral loads exerted on the wall by the backfill.
6. Concrete must cure a minimum of 7 days before backfilling.
7. Backfill should be well drained.
8. Refer to the PolySteel® Installation Manual for proper basement drainage and waterproofing systems.

**TABLE B-4600-5**  
**6" POLYSTEEL® PS-4600 FLAT WALL FORM**  
**9-FOOT HIGH BASEMENT WALL**

**VERTICAL (Grade 60) REBAR REQUIREMENTS \***

Unbalanced Backfill Depth	Backfill Equivalent Fluid Density		
	30 pcf	45 pcf	60 pcf
4 ft.	#4@48"	#4@48"	#4@48"
5 ft.	#4@48"	#3@18"; #4@30"; #5@42"; #6@48"	#3@12"; #4@21"; #5@30"; #6@33"
6 ft.	#3@15"; #4@30"; #5@42"; #6@48"	#3@9"; #4@18"; #5@27"; #6@30"	#4@12"; #5@21"; #6@24"
7 ft.	#3@12"; #4@21"; #5@30"; #6@33"	#4@12"; #5@18"; #6@24"	#4@9"; #5@15"; #6@18"
8 ft.	#3@9"; #4@15"; #5@21"; #6@24"	#4@9"; #5@15"; #6@18"	#4@6"; #5@9"; #6@12"
9 ft.	#3@ 6"; #4@ 12"; #5@ 19"; #6@ 22"	#4@ 7"; #5@ 12"; #6@ 16"	#4@ 4"; #5@ 7"; #6@ 10"

**\* Minimum Rebar Requirements:**

- If the basement wall is **NOT** supporting an above grade PolySteel wall in Seismic Design Category A, B, C, D1, and D2 areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category A, B, and C areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category D1 and D2 areas: Maximum spacing of vertical rebar is 18" o.c. Minimum vertical rebar is #4 @ 12" o.c., #5 @ 18" o.c., or table above if more restrictive. Vertical rebar size and spacing shall match the above grade wall reinforcement if more restrictive. Minimum horizontal rebar is #5 @ 24" o.c. (See note #2 below.)

**NOTES:**

1. This table is based on the design criteria of ACI 318-02 "Building Code Requirements for Structural Concrete"
2. The reinforcement requirements listed in this table are based on Grade 60 (ASTM A 615 or ASTM A 996) rebar and 2,500 psi concrete. Basement walls in Seismic Design Category D1 and D2 areas may use the above table for designs to resist lateral soil pressure but must specify Grade 60 (ASTM A 706 for low-alloy steel) rebar and 3,000 psi for construction.
3. This table assumes the vertical rebar is placed in the center of the 6" thick PolySteel wall (d=3.0").
4. The basement floor must be poured and the first floor in place before backfilling.
5. The floor or roof system supporting the top of the basement wall and the connection to the top of the basement wall, must be specifically designed to provide the necessary strength to resist the horizontal reaction or force developed at the top of the basement wall by the lateral loads exerted on the wall by the backfill.
6. Concrete must cure a minimum of 7 days before backfilling.
7. Backfill should be well drained.
8. Refer to the PolySteel® Installation Manual for proper basement drainage and waterproofing systems.

**TABLE B-4600-6**  
**6" POLYSTEEL® PS-4600 FLAT WALL FORM**  
**10-FOOT HIGH BASEMENT WALL**

**VERTICAL (Grade 60) REBAR REQUIREMENTS \***

Unbalanced Backfill Depth	Backfill Equivalent Fluid Density		
	30 pcf	45 pcf	60 pcf
4 ft.	#4@48"	#4@48"	#4@48"
5 ft.	#4@48"	#3@15"; #4@27"; #5@39"; #6@45"	#3@9"; #4@21"; #5@27"; #6@30"
6 ft.	#3@15"; #4@27"; #5@36"; #6@45"	#3@9"; #4@18"; #5@24"; #6@27"	#3@6"; #4@12"; #5@18"; #6@21"
7 ft.	#3@9"; #4@18"; #5@24"; #6@27"	#3@6"; #4@12"; #5@18"	#4@9"; #5@12"; #6@15"
8 ft.	#3@6"; #4@12"; #5@18"; #6@21"	#4@9"; #5@12"; #6@18"	#4@6"; #5@9"; #6@12"
9 ft.	#3@6"; #4@9"; #5@15"; #6@18"	#4@6"; #5@9"; #6@12"	#5@6"; #6@9"
10 ft.	#3@ 4"; #4@ 7"; #5@ 13"; #6@ 16"	#4@ 4"; #5@ 7"; #6@ 10"	<b>Design Required</b>

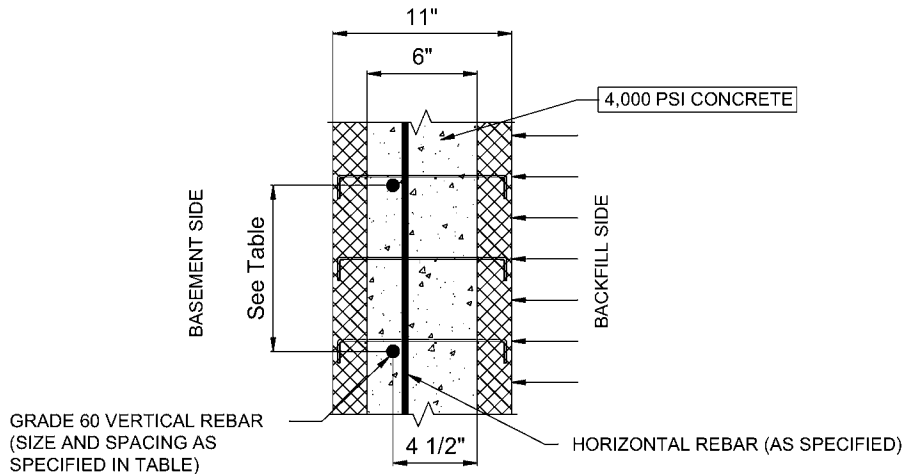
**\* Minimum Rebar Requirements:**

- If the basement wall is **NOT** supporting an above grade PolySteel wall in Seismic Design Category A, B, C, D1, and D2 areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category A, B, and C areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category D1 and D2 areas: Maximum spacing of vertical rebar is 18" o.c. Minimum vertical rebar is #4 @ 12" o.c., #5 @ 18" o.c., or table above if more restrictive. Vertical rebar size and spacing shall match the above grade wall reinforcement if more restrictive. Minimum horizontal rebar is #5 @ 24" o.c. (See note #2 below.)

**NOTES:**

1. This table is based on the design criteria of ACI 318-02 "Building Code Requirements for Structural Concrete"
2. The reinforcement requirements listed in this table are based on Grade 60 (ASTM A 615 or ASTM A 996) rebar and 2,500 psi concrete. Basement walls in Seismic Design Category D1 and D2 areas may use the above table for designs to resist lateral soil pressure but must specify Grade 60 (ASTM A 706 for low-alloy steel) rebar and 3,000 psi for construction.
3. This table assumes the vertical rebar is placed in the center of the 6" thick PolySteel wall (d=3.0").
4. The basement floor must be poured and the first floor in place before backfilling.
5. The floor or roof system supporting the top of the basement wall and the connection to the top of the basement wall, must be specifically designed to provide the necessary strength to resist the horizontal reaction or force developed at the top of the basement wall by the lateral loads exerted on the wall by the backfill.
6. Concrete must cure a minimum of 7 days before backfilling.
7. Backfill should be well drained.
8. Refer to the PolySteel® Installation Manual for proper basement drainage and waterproofing systems.

**TABLE B-4600-7**  
**6" POLYSTEEL® PS-4600 FLAT WALL FORM**  
**BASEMENT WALL W/ OFFSET REBAR ( $d = 4\text{-}1/2"$ )**



**PLAN VIEW**

**VERTICAL (Grade 60) REBAR REQUIREMENTS \***

Basement Wall Height	Unbalanced Backfill Depth	Backfill Equivalent Fluid Density		
		30 pcf	45 pcf	60 pcf
10 feet	10 ft.	#4@15"; #5@18"; #6@18"	#4@10"; #5@15"; #6@18"	#4@7"; #5@11"; #6@16"
12 feet	12 ft.	#4@8"; #5@13"; #6@18"	#5@9"; #6@12"; #7@17"	#6@9"; #7@12"; #8@16"
14 feet	14 ft.	#4@5"; #5@8"; #6@11"	#6@7"; #7@10"; #8@13"	#6@5"; #7@7"; #8@9"
16 feet	16 ft.	#5@5"; #6@7"; #7@10"	#7@6"; #8@8"	<b>Special Design Required</b>

**\* Minimum Rebar Requirements:**

- If the basement wall is **NOT** supporting an above grade PolySteel wall in Seismic Design Category A, B, C, D1, and D2 areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category A, B, and C areas: Vertical rebar size and spacing per table above. Minimum horizontal rebar is #4 @ 48" o.c.
- If the basement wall **IS** supporting an above grade PolySteel wall in Seismic Design Category D1 and D2 areas: Maximum spacing of vertical rebar is 18" o.c. Minimum vertical rebar is #4 @ 12" o.c., #5 @ 18" o.c., or table above if more restrictive. Vertical rebar size and spacing shall match the above grade wall reinforcement if more restrictive. Minimum horizontal rebar is #5 @ 24" o.c. (See note #2 below.)

**NOTES:**

1. This table is based on the design criteria of ACI 318-02 "Building Code Requirements for Structural Concrete"
2. The reinforcement requirements listed in this table are based on Grade 60 (ASTM A 615 or ASTM A 996) rebar and 4,000 psi concrete. Basement walls in Seismic Design Category D1 and D2 areas may use the above table for designs to resist lateral soil pressure but must specify Grade 60 (ASTM A 706 for low-alloy steel) rebar for construction.
3. This table requires that the vertical rebar be located 4-1/2" from the outside face edge of concrete and towards the inside face of the basement as shown in above sketch.
4. The basement floor must be poured and the first floor in place before backfilling.
5. The floor or roof system supporting the top of the basement wall and the connection to the top of the basement wall, must be specifically designed to provide the necessary strength to resist the horizontal reaction or force developed at the top of the basement wall by the lateral loads exerted on the wall by the backfill.
6. Concrete must cure a minimum of 7 days before backfilling.
7. Backfill should be well drained.
8. Refer to the PolySteel® Installation Manual for proper basement drainage and waterproofing systems.