



Retaining Excellence

City of SAN DIEGO MASTER PLAN #45



CHULA VISTA
75 N. 4th Ave.
(619) 474-1516

LEMON GROVE
8240 Broadway
(619) 460-9101

SANTEE
8755 Magnolia Ave.
(619) 448-2240

ENCINITAS
577 N. Vulcan Ave.
(760) 753-1164

ESCONDIDO
1070 W. Mission Ave.
(760) 480-9696

MURRIETA
25725 Jefferson Ave.
(951) 677-1489

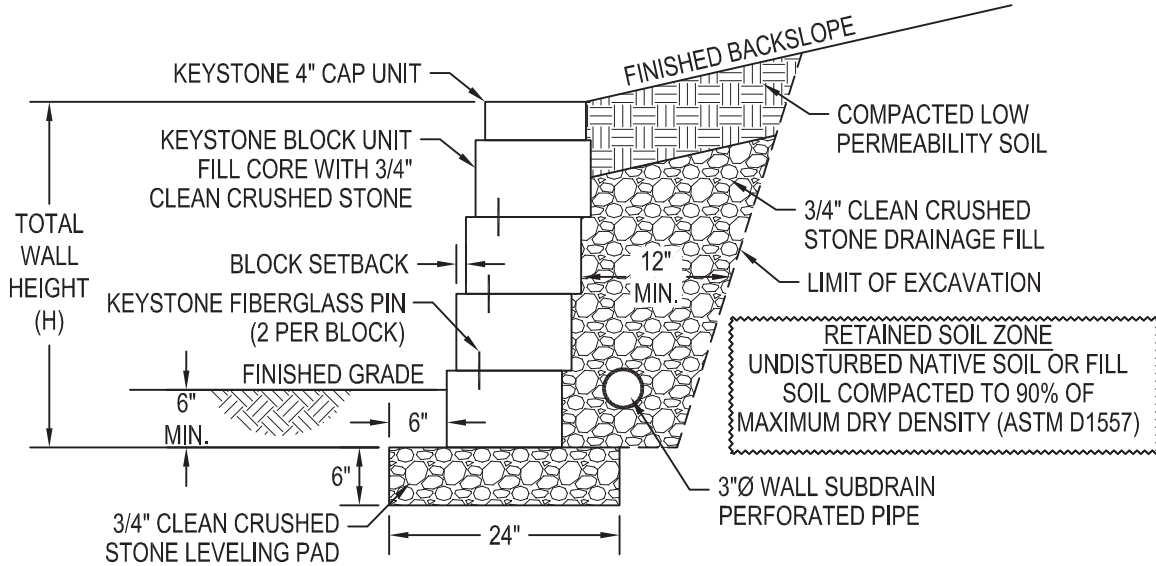
MASTER PLAN # 45

General Notes/Disclaimers/Limitations

1. Site preparation, footing preparation, installation of the base course, Keystone concrete modular units, interlocking pins, backfill, and caps should conform to the "Installation Guidelines", "Specification Guidelines" and other recommendations prepared by Keystone Retaining Wall Systems, Inc.
2. Soil materials used to support the Keystone Wall shall be firm natural soil (per most recent adopted version of CBC). Walls should not be founded in loose fill soil, topsoil or alluvium. Failure to meet this specification may result in substandard wall performance and/or wall failure. If required by the building department, a geotechnical engineer can assist in determining acceptable foundation zone soils.
3. Keystone Walls are to be placed on a 6 inch thick (minimum) leveling pad of ¾" gravel or Class II base material.
4. ¾ inch crushed gravel is to be used to fill the void space within the Keystone block unit (unit core fill) extending to a minimum distance of 24 inches from the wall face.
5. Soil materials used to backfill the Keystone Wall shall be compacted to a minimum of 90 percent of the soil maximum dry density as defined by the most current ASTM D1557 test standard.
6. The designs provided herein do not include surcharge loads for heavy vehicles, house foundations, equipment, pools, spas, slopes or other walls. If wall is to be subject to surcharge loading above 250 psf (driveway or parking lot) or slope steeper than 2:1 (horizontal : vertical) this chart should not be used. These charts are not intended to be used with terraced walls or any other conditions described above.
7. Proper detailing of drainage atop the Keystone Wall is imperative, and will play a critical role on the wall performance. The soil grades atop the wall should convey water to adequately detailed drainage outlet. Under no circumstances should water be allowed to pond atop or around the wall or spill over the wall face.
8. A wall back drain (3" perforated pipe) is to be installed behind the wall, draining to a suitable outlet away from the wall. The intent of the pipe is to drain subsurface water away from the back of the wall. Surface drain lines should not be connected to the wall back drain pipe.
9. Total wall height, as specified in the design charts, includes a 6" deep unit embedment below grade.
10. Where walls are built atop descending slopes, the wall shall maintain a minimum 7' horizontal distance from outside bottom edge of the lowest block to daylight in the slope face. Where walls do not meet these criteria, the wall shall be deepened, possibly requiring a site specific engineered design.
11. Surface flatwork improvements constructed atop the Keystone Wall may be subject to minor amounts of movement associated with normal wall performance. Proposed flatwork improvements, or other non-surcharging improvements, shall be designed and detailed to accommodate the minimum expected soil movement identified herein.

The recommendations presented in this manual are based on the assumption that site preparation, footing preparation, installation of the base course, Keystone concrete modules, interlocking pins, backfill and caps are in conformance with the recommendations of the manufacturer/supplier and recommendations contained herein. The design tables presented are based on assumed soil parameters; actual soil conditions may vary. If conditions vary from those assumed, a site specific engineered design will be required.

By accepting the designs in this manual, the Client agrees to indemnify RCP and hold harmless RCP from and against all liability. This manual has been prepared in accordance with generally accepted engineering practice, which exists in the area at the time of analysis. No other warranty is expressed or implied.



KEYSTONE BLOCK GRAVITY WALL SECTION DETAIL

**0" BLOCK SETBACK
VERTICAL WALL**

KEYSTONE STANDARD II/III UNIT (8"H x 18"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	3'-0"	2'-4"	2'-4"

KEYSTONE COMPAC II/III UNIT (8"H x 12"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	2'-4"	1'-8"	1'-8"

KEYSTONE CENTURY UNIT (8"H x 12"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	2'-4"	1'-8"	1'-8"

KEYSTONE COUNTRY MANOR UNIT (6"H x 10"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	1'-9"	1'-3"	1'-3"

KEYSTONE VERAZZO UNIT (6"H x 10.5"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	1'-9"	1'-3"	1'-3"

**1" BLOCK SETBACK
BATTER WALL**

KEYSTONE STANDARD II UNIT (8"H x 18"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	4'-4"	3'-0"	3'-0"

KEYSTONE COMPAC II/III UNIT (8"H x 12"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	2'-4"	2'-4"	1'-8"

KEYSTONE CENTURY UNIT (8"H x 12"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	2'-4"	2'-4"	1'-8"

KEYSTONE COUNTRY MANOR UNIT (6"H x 10"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	2'-3"	1'-9"	1'-9"

KEYSTONE VERAZZO UNIT (6"H x 10.5"D)			
BACKSLOPE	LEVEL	LEVEL	2H:1V
SURCHARGE	--	250 PSF	--
WALL HEIGHT	2'-3"	1'-9"	1'-9"

**KEYSTONE SEGMENTAL BLOCK WALL
GRAVITY WALL CHART**

SOIL TYPE = CBC SOIL TYPE 4 OR BETTER ($\phi=30^\circ$)
SEISMIC DESIGN ACCELERATION = 0.15g

