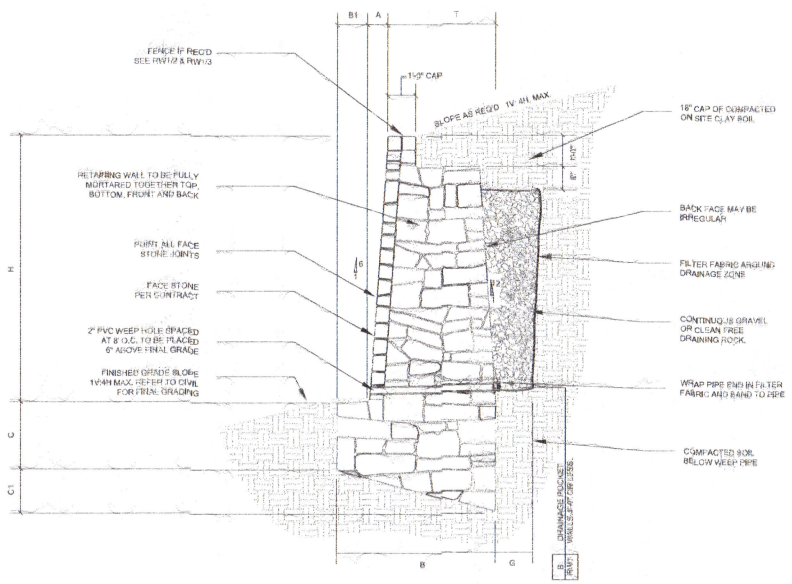
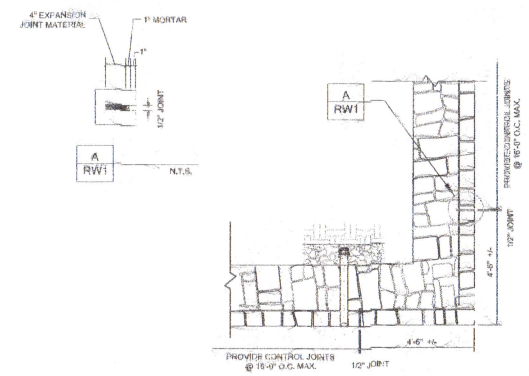


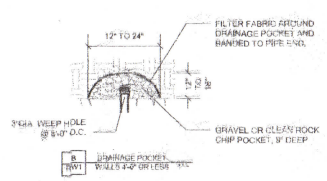
RW1/1 MASONRY WALL W/ 6V:1H BATTER

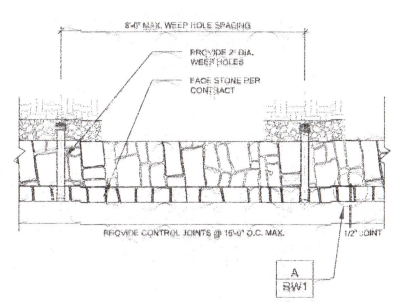
SCALE: N.T.S.



RW1/3 TYPICAL PLAN VIEW AT CORNER

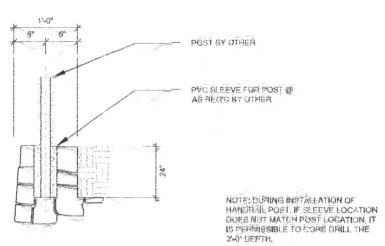
SCALE: N.T.S.





RW1/4 TYPICAL PLAN VIEW AT BASE

SCALE: N.T.S.



RW1/2 WALL SECTION W/ FENCE POST

SCALE: N.T.S.

RW1/1 MASONRY WALL SCHEDULE								
1500 psf - BEARING CAPACITY (COMPACTED AND TESTED FILLS OR SOIL)								
WALL	BASE	TOE	BASE	BASE	BATTER	THICKNESS	DRAINAGE ZONE	BEARING
HEIGHT	WIDTH		DEPTH (TOE)	DEPTH (HEEL)		OF WALL	THICKNESS	CAPACITY
H	B	B1	C	C1	A	T	G	
1' - 0"	1' - 0"	0' - 0"	0' - 8"	0' - 2"	0' - 2"	1' - 0"	SEE B/RW1	1500 psf
2' - 0"	1' - 3"	0' - 0"	0' - 9"	0' - 2"	0' - 4"	1' - 3"	SEE B/RW1	
3' - 0"	1' - 7"	0' - 0"	0' - 10"	0' - 2"	0' - 6"	1' - 7"	SEE B/RW1	
4' - 0"	2' - 0"	0' - 0"	0' - 11"	0' - 3"	0' - 8"	2' - 0"	SEE B/RW1	
5' - 0"	2' - 6"	0' - 2"	1' - 2"	0' - 5"	0' - 10"	2' - 6"	0' - 9"	
6' - 0"	3' - 3"	0' - 6"	1' - 6"	0' - 6"	1' - 0"	2' - 9"	0' - 9"	
WALL DESIGN CRITERIA								
BEARING	SLOPE TOP	SLOPE BOT	ACTIVE PRESSURE	PASSIVE PRESSURE	FRICTION ANGLE BASE	SLOPE OF BACK OF WALL	SURCHARGE	
Q_a	β	β_1	ϕ_a	ϕ_p	δ	α	q	
1500 psf	14.3 deg	14.3 deg	26 deg	26 deg	17 deg	80.5 deg	0 psf	

RW1/5 RETAINING WALL SCHEDULE

1. Design Building Code
International Building Code, 2015 Edition

2. Geotechnical Report
Firm: ALPHA TESTING, INC.
Report No: G132080-1
Dated: June 12, 2015
Allowable Bearing Capacity: 1500psf minimum on compacted and tested or native soils.

3. Geotechnical Criteria
Bearing on Stiff Natural Undisturbed Clayey Sandy Soils or Compacted and Tested Soils
Allowable Bearing: 1500 psf minimum clays

Backfill Soil Parameters:
Backfill Soil - Natural Sandy Clays or Fill Soils
Backfill Angle of Internal Friction PHI = 26 degrees

Base Soil Parameters:
Soil at Toe - natural, Undisturbed or Fill Soils
Angle of Internal Friction PHI = 26 degrees

The backfill soil angle of internal friction referred to above is a composite angle of internal friction and includes both cohesion and angle of internal friction of the soils.

The use of very wet or very dry backfill soil should be avoided. The use of heavy equipment within 3'-0" of the wall could damage the wall and should be avoided.

Locate base of walls on undisturbed or properly compacted soil.

4. Materials
Average density of masonry stone wall varies from 135 pcf to 145 pcf. Size of stone within wall varies from 4" to 18". Crushed concrete with or without rebar is acceptable to be used in the wall construction.

Drainage zone materials may be composed of clean gravel or stone ranging from 1" to 5". Crushed concrete is acceptable provided it is clean and generally free of dust or other deletrious materials.

Type 'S' cement mortar used for construction of the masonry stone retaining walls shall be mixed onsite with a minimum 28 day compressive strength of about f'c = 2000 psi.

5. Construction Reviews
DirtSavers, LLC. shall be called for construction review of masonry wall.

6. Retaining Wall Design Constraints
No surcharge load anticipated for structures located greater than 1.5 times wall height.

Maximum 4:1 top and toe slopes for all sections of wall.

Install weep holes for all walls 2' tall and over.

Contractor to provide fence sleeves as requested by owner.

Face stones to be per contract.

Minimum 5,000 psi face stones and type S Mortar Required.

Control joints shall be spaced at 25' maximum.

Drain cap to consist of compacted native clay soils with intent to limit absorption of surface runoff.

Walls constructed on fill areas shall be compacted per the geotech.

Due to highly expansive clay soils in this area it is recommended that lot owners maintain good watering practices to limit soil movements and excessive pressures on wall.

Minor variations in the construction of the retaining walls from these documents may be accepted at the discretion of the design engineer.

"AS-BUILT"

DIRTSAVERS
2708 Chesapeake Court
Grapevine, TX 76051
PH: 469.854.7446
F-14138

SOMERSET PARK, PHASE 1
MASONRY RETAINING WALLS
CITY OF ROCKWALL, TEXAS

No.	Date	Item

REVISIONS
DB: MAM CHKD: MAM APPD: MAM

STATE OF TEXAS
MICHAEL A. MARSHALL
110099
LICENSED
PROFESSIONAL ENGINEER
11/2/17

RETAINING WALL DETAILS AND NOTES

Project No.	RW09'217-1
Date	09.12.2017
Last Revision	09.12.2017