

SECTION 02274 - UNIT MASONRY RETAINING WALL SYSTEM.

PART 1 GENERAL

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work specified in this section.

Work includes but not limited to:

Engineering, furnishing and installing segmental concrete retaining wall systems, complete with required backfill to lines and grades indicated.

Work in related Sections

Section 02300 Earthwork
Section 02711 Foundation Drainage System.

Submittals:

Submit manufacturer's product data, installation instructions and sample block of each color selected.

Erect sample panel for review using proposed masonry units, anchors and jointing.

Quality Assurance:

Engineer, fabricate, and install unit masonry retaining wall system for applications indicated to conform to local code requirements. Furnish engineering drawings as required to show compliance with all imposed loads.

Delivery, Storage & Handling:

Deliver to jobsite and protect materials prior to installation.

PART 2 PRODUCTS

Retaining Wall Units: "Versa-Lok" as manufactured by Kirchner Industries, Inc., or an approved equal prior to bid.

Conform to ASTM C-145-85 specifications, minimum weight 125 lbs per cubic foot.

Provide matching solid wall caps at top of walls.

Color: as selected by Architect from manufacturer.

System Components:

Fiberglass Pins: Versa-Tuff non-corrosive pins, supplied with Versa-Lok units.

Filter Fabric: nonwoven polyester as recommended by manufacturer.

Granular Fill: free draining.

Footing Materials: ¾" minus limestone aggregate well compacted.

Geogrid Wall Reinforcement: Geogrid-Tensor Mesh as manufactured by Tensor Corporation, or an approved equal prior to bid.

Geogrid shall be SS2, SR1, SR2, (engineer to select proper grade as required).

PART 3 EXECUTION

Installation:

Foundation soil shall be excavated as required for footing dimensions as indicated.

Foundation soil shall be examined by Soil Engineer to assure that actual foundation soil strength meets or exceeds assumed design strength. Soil's not meeting required strength shall be removed and replaced with acceptable material.

Over-excavated areas shall be filled and compacted with acceptable backfill material.

Base Footing:

Place footings as indicated with a minimum thickness of 8 inches.

Material shall be compacted so as to provide level, hard surface on which to place the first course of units. Compact with mechanical plate compactors to 95% of original density.

Unit Installation:

Install first course 6" below grade on prepared footing. To assure proper alignment, 1" of river sand may be spread over footing material to aid in leveling and to assure that units are in full contact with base.

Sweep all excess material from top of units and install next course with ¼" set back in running bond pattern. Install two fiberglass pins per unit. Make sure pins protrude into lower course a minimum of 1 inch.

If cutting is necessary, use brick chisel and split unit in half. No pieces shall be used in wall if less than 1/2 of the original unit size.

Backfill behind wall 12" with clean rock. Backfilling shall be performed in 6" layers as the wall is erected. Each layer should be compacted to 95% of its standard proctor maximum density. Install filter fabric directly behind backfill to eliminate soil seepage.

Wall cap units, when used shall be installed according to manufacturer's recommendations.

Remove and replace units which are loose, chipped, broken, stained or otherwise damaged.

Geogrid Installation:

Refer to drawings to determine proper length and location of geogrid.

Geogrid soil reinforcement shall be laid horizontally on compacted backfill, connected to the concrete wall units and embedded a minimum of 12 inches. Hook grid over fiberglass pins, pull taut, and anchor before backfill is placed on the geogrid.

Slack in the geogrid at the wall unit connections shall be removed in the manner, and to such a degree, as approved by the Engineer.

Wall Fill Placement:

Backfill shall be placed, spread, and compacted in such a manner that minimizes the development of wrinkles in and/or movement of the geogrid.

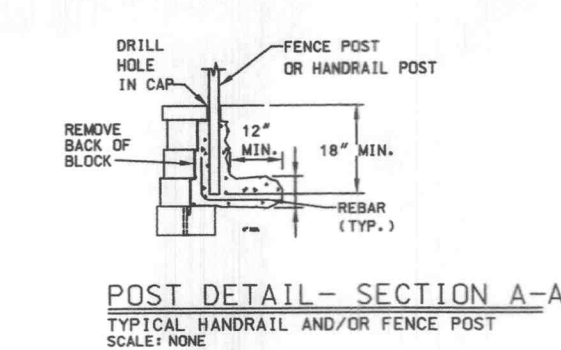
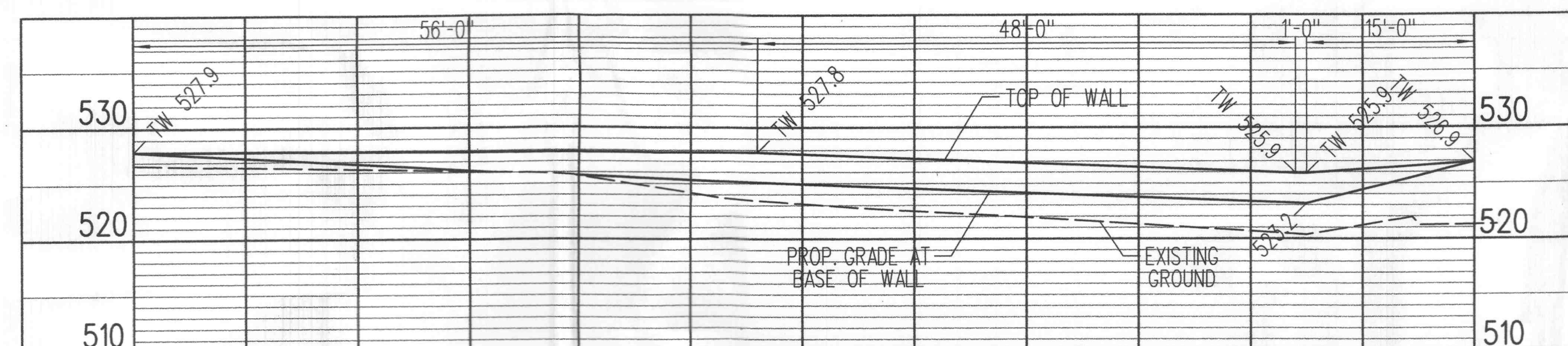
Backfill shall be placed from the wall outward, to insure that the geogrid remains taut.

Only hand-operated compaction equipment shall be allowed within 3 feet of the wall face.

Tracked construction equipment shall not be operated directly on the geogrid. Rubber tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 m.p.h. Sudden braking and sharp turning shall be avoided.

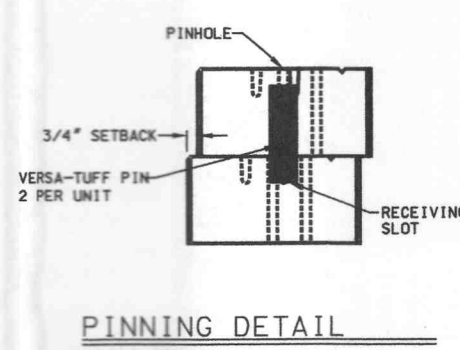
END OF SECTION 02274

CONCRETE BLOCK RETAINING WALL (ALONG MAIN STREET IN FRONT OF CHURCH)



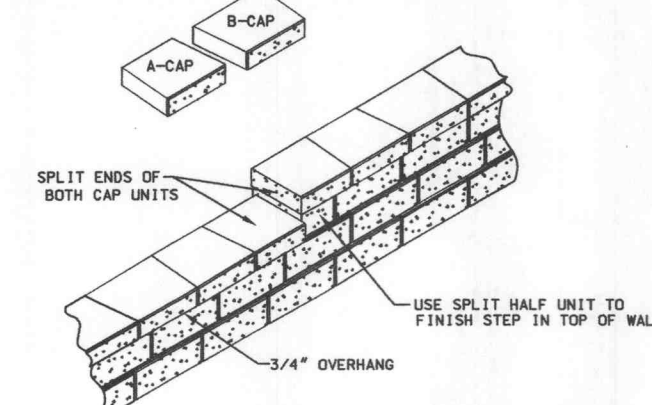
POST DETAIL - SECTION A-A
TYPICAL HANDRAIL AND/OR FENCE POST
SCALE: NONE

MS Acrot file no.: 0283016 (Mfr file no.: R124L05)



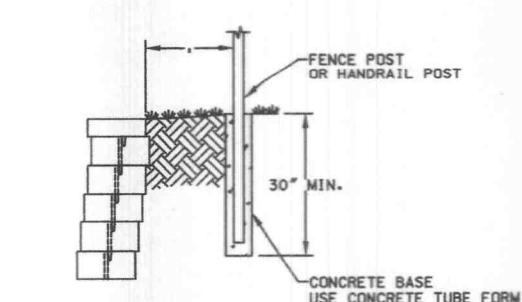
PINNING DETAIL
CROSS SECTION
SCALE: NONE

MS Acrot file no.: 0283004 (Mfr file no.: R124L01)



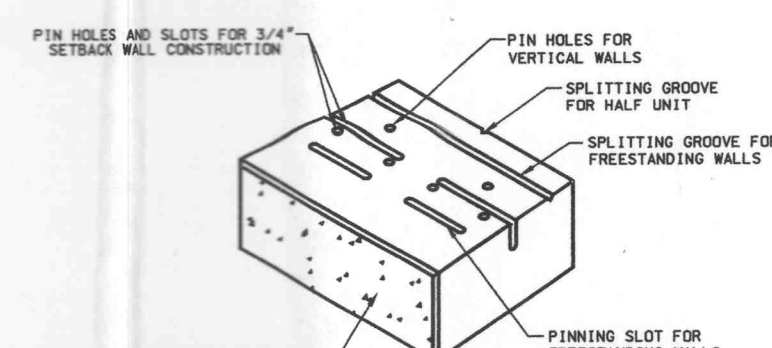
CAPPING DETAILS

MS Acrot file no.: 0283014 (Mfr file no.: R124L03)



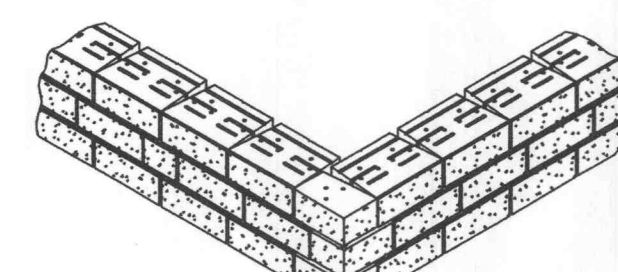
POST DETAIL
TYPICAL HANDRAIL AND/OR FENCE POST
SCALE: NONE

MS Acrot file no.: 0283017 (Mfr file no.: R124L05)



VERSALOK STANDARD UNIT
UNIT DIMENSIONS
SCALE: NONE

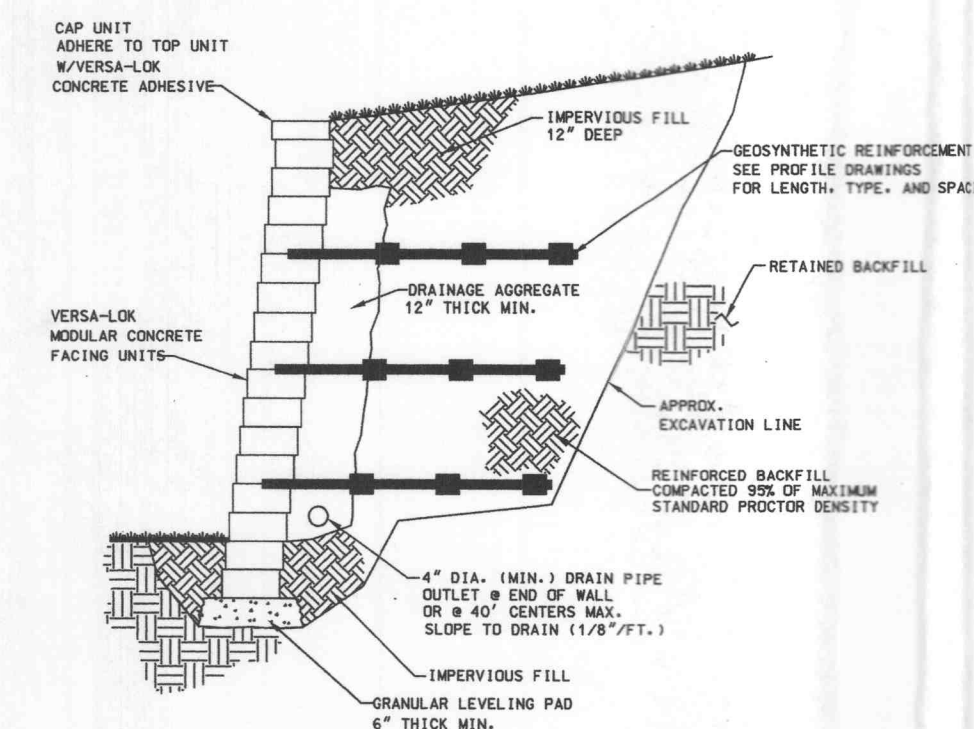
MS Acrot file no.: 0283001 (Mfr file no.: R124L01)



OUTSIDE 90° CORNER
CORNER DETAILS

MS Acrot file no.: 0283007 (Mfr file no.: R124L03)

NOTE: CONTRACTOR IS TO CONSTRUCT 'VERSALOK' (OR APPROVED EQUAL) CONCRETE BLOCK RETAINING WALL ALONG MAIN STREET IN FRONT OF THE CHURCH. (SEE SHEETS C2 & C8)



TYPICAL SECTION - REINFORCED RETAINING WALL
MODULAR CONCRETE UNIT
SCALE: NONE

MS Acrot file no.: 0283002 (Mfr file no.: R124L01)

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VOLZ

ASSUMPTION
Of Blessed Virgin Mary Church
O'FALLON, MISSOURI

RETAINING WALL DETAILS
Base Map No. XX-XX
Design By: W.G.K.
Drawn By: J.R.S.
Checked By: W.G.K.
7004