

St. Louis County Masterplan Construction Drawings

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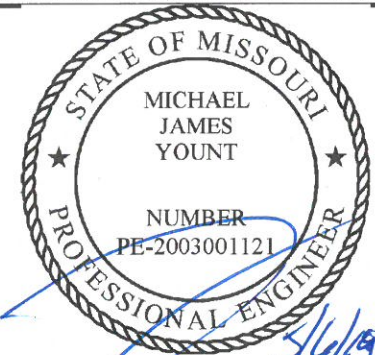
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- Sheet 11 Level Backslope, 120 psf Live Load Surcharge (Residential Driveway)

This seal refers to this masterplan only and does not refer to any other plan or design relating to a specific project



Michael James Yount - Engineer
Mo# PE-2003001121

Lemay Concrete Block Co.

326 E Courtois
St. Louis, Mo. 63111

phone (314) 638-9940



Engineering Solutions, P.C.

5393 Old Baumgartner Rd
St Louis, Mo. 63129
Phone (314) 280-7748

Mo. State Certificate of Authority #P00565746

Title & Index

Sheet 1 of 11

General

The contractor shall protect all existing utilities, and shall be responsible for all worker and public safety at the retaining wall site. All installation shall be per the retaining wall manufacturer's construction recommendations and/or as noted herein.

Materials

The **Leveling Pad** shall be constructed 1" minus or clean compacted by at least 4 passes with a vibratory compactor with minimum dimensions of 12" thick and 48" wide.

Retaining Wall Units shall be Verti-Block standard block. Units must be 24" tall x 48" wide x 36" deep with a 2-3/16" setback (5.21 deg).

The **wall infill** material shall be 1" clean crushed limestone.

The **wall drainage backfill** material shall be 1" clean crushed limestone.

Filter Fabric shall be Mirafi 140N, Carthage Mills FX40 or approved equivalent.

Drain Tile shall be 4" HDPE, perforated.

The **Soil Cap** shall consist of compacted low plastic impervious soil above the granular backfill in areas not to be paved.

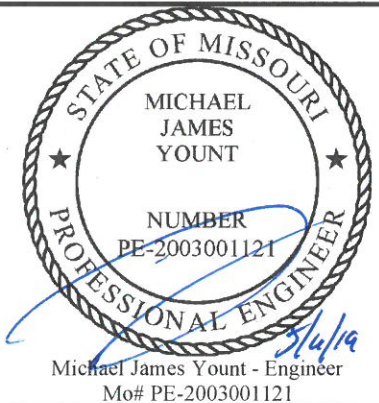
Wall Foundation Excavation

Foundation soil shall be excavated as required for the leveling pads and the reinforcing zone. Any soils that are soft, plastic (LL > 50%), frozen, or wet and untested fills shall be removed and recompacted to 90% modified Proctor under the direction of the geotechnical engineer.

Wall Construction

Install toe first course of units on the leveling pad. Install the next course in a running bond stack. Adjust for setback per course. Backfill and continue construction. Filter fabric shall separate the granular backfill from the retained soil and the soil cap. Filter fabric shall not cover the foundation materials.

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Specifications

Sheet 2 of 11

Wall Backfill

Backfill material shall be placed in maximum 8" lifts and compacted. During backfill placement only hand operated equipment shall be used in the 4' zone directly behind the wall. The front of the wall shall be backfilled and compacted to finished grade.

Protection of Work

The surfaces surrounding the wall shall be graded at the end of each day to provide positive drainage away from the wall. Grading shall include proper contouring of fills in adjacent areas to prevent the flow of excessive surface water toward the wall. Finish grading should be completed in accordance with the approved site development plan.

General Notes

Existing utilities are not shown. The contractor shall locate and protect all utilities. The contractor shall notify Engineering Solutions, P.C. of any utility conflict affecting this work.

Unless otherwise noted all temporary shoring is strictly the responsibility of the contractor under a separate design.

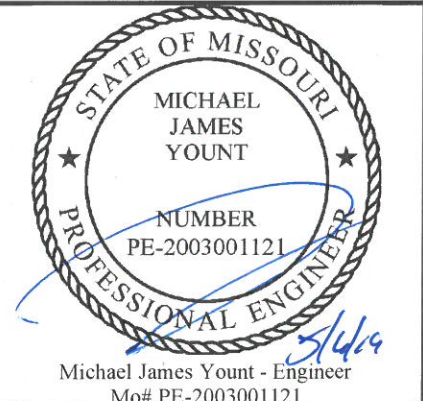
All job site worker and public safety is strictly the responsibility of the contractor. The contractor shall comply with all OSHA regulations & requirements.

Engineering Solutions, P.C. is available upon request to confirm construction compliance with this plan. Please notify Engineering Solutions, P.C. in advance of the work if field inspection is requested.

The Owner or Owner's Representative is responsible for ensuring that construction by others adjacent to the wall does not disturb the wall or place temporary construction loads on the wall that exceed design loads, including loads such as water pressure, temporary grades, or equipment loading. Heavy paving or grading equipment shall be kept a minimum of 3 feet behind the back of the wall face. Equipment with wheel loads in excess of 150 psf live load shall not be operated within 10 feet of the face of the retaining wall during construction adjacent to the wall. Care should be taken by the Owner or Owner's Representative to ensure water runoff is directed away from the wall structure until final grading and surface drainage collection systems are completed.

Global stability and settlement are outside of the scope of this design.

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Specifications
(cont.)

Sheet 3 of 11

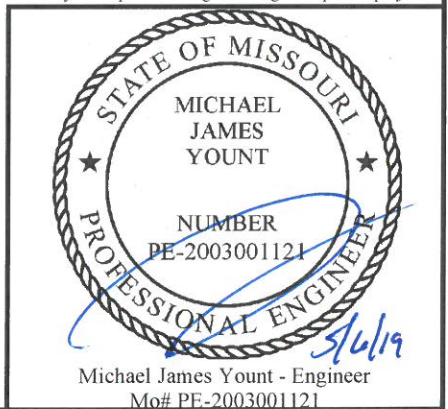
SOIL PROPERTIES

<u>SOIL</u>	<u>FRICTION ANGLE</u>	<u>UNIT WEIGHT</u>	<u>COHESION</u>
DRAINAGE FILL (1" Clean)	34°	100 PCF	0 PSF
RETAINED BACKFILL (Low plastic silty clay)	26°	120 PCF	0 PSF
FOUNDATION SOIL (Low plastic silty clay)	26°	120 PCF	0 PSF

MINIMUM FACTORS OF SAFETY

EXTERNAL SLIDING = 1.5
 INTERNAL SLIDING = 1.5
 OVERTURNING = 1.5
 BEARING CAPACITY = 1,500 PSF

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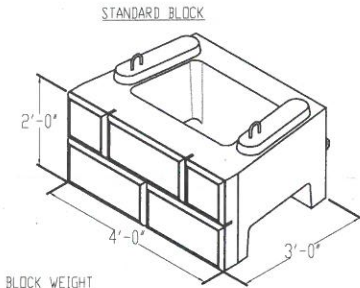
Engineering Solutions, P.C.

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 St Louis, Mo. 63129
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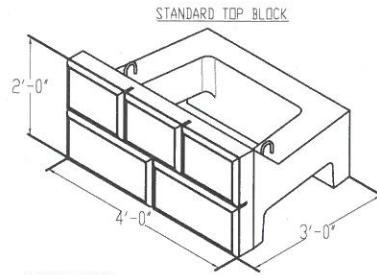
Specifications
 (cont.)

Sheet 4 of 11

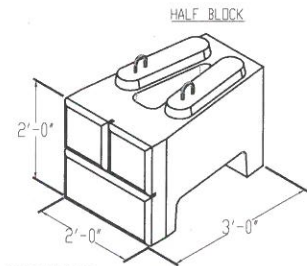
36" STANDARD BLOCK & GRAVEL INFILL



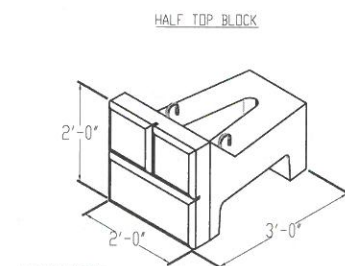
BLOCK WEIGHT
1,755 LBS



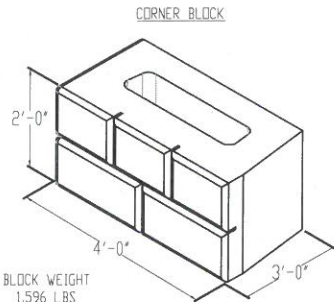
BLOCK WEIGHT
1,308 LBS



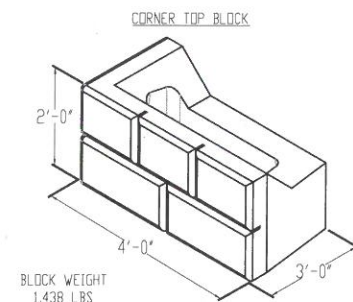
BLOCK WEIGHT
1,066 LBS



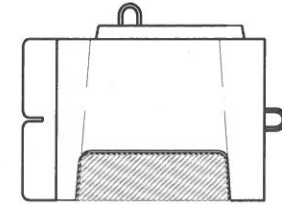
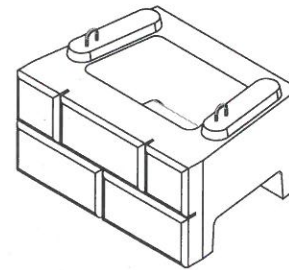
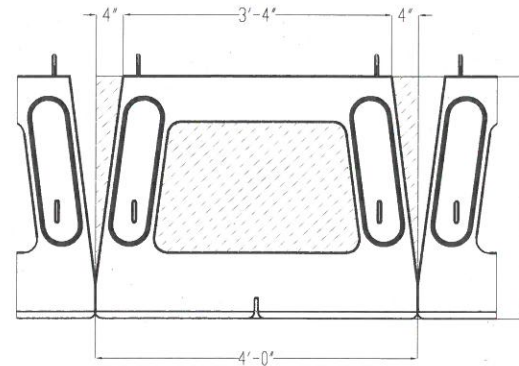
BLOCK WEIGHT
741 LBS



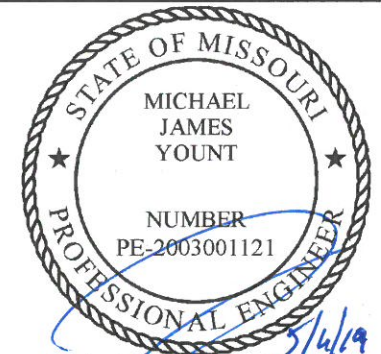
BLOCK WEIGHT
1,596 LBS



BLOCK WEIGHT
1,438 LBS



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326 E Courtois
St. Louis, Mo. 63111

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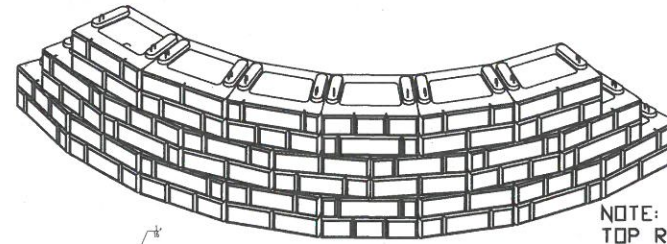
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St Louis, Mo. 63129
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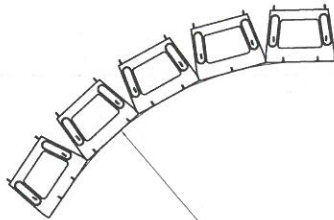
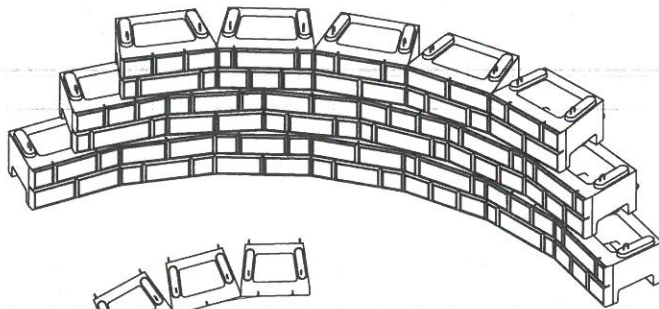
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Typical Details

Sheet 5 of 11

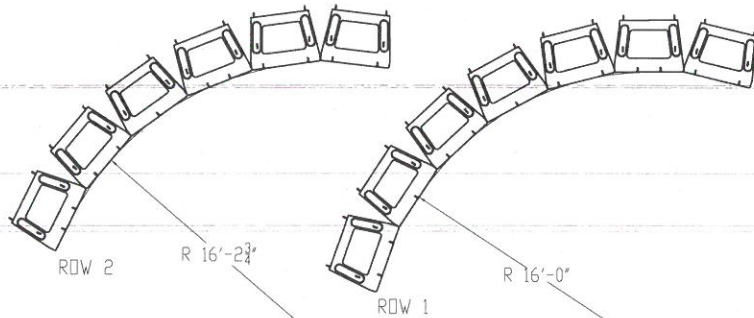


NOTE:
TOP ROW MINIMUM RADIUS IS 16'.
SETBACK IS 1 7/8" AND EACH ROW WILL INCREASE THE RADIUS BY 1 7/8" MORE THAN THE ROW ABOVE IT.



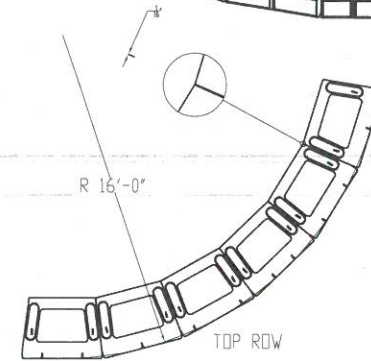
ROW 3 R 16'-5 1/2"

NOTE:
BOTTOM ROW MINIMUM RADIUS IS 16'.
SETBACK IS 2 3/4" AND EACH ROW WILL INCREASE THE RADIUS BY 2 3/4" MORE THAN THE ROW BELOW IT.



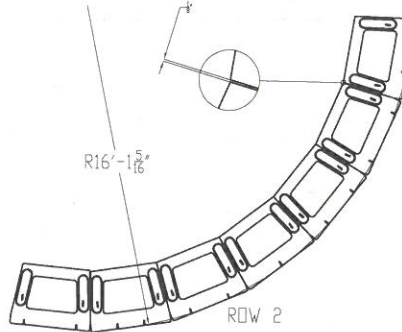
ROW 2 R 16'-2 3/4"

ROW 1 R 16'-0"



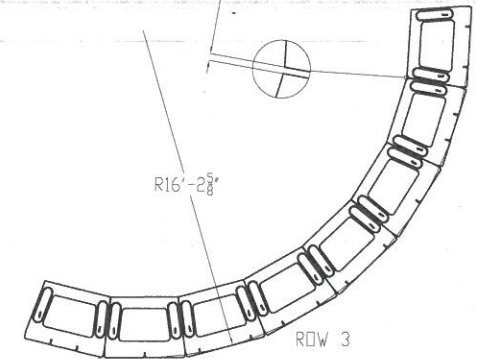
R 16'-0"

TOP ROW



R 16'-1 5/8"

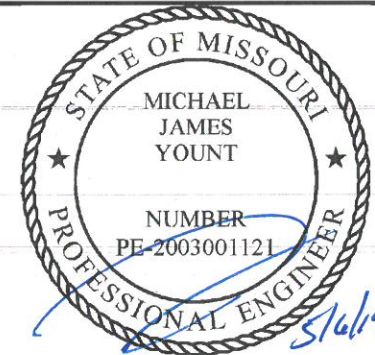
ROW 2



R 16'-2 5/8"

ROW 3

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Michael James Yount - Engineer
Mo# PE-2003001121

Lemay Concrete Block Co.

326 E Courtois
St. Louis, Mo. 63111

phone (314) 638-9940



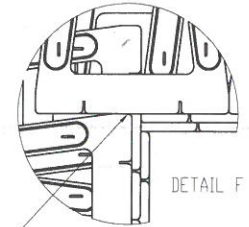
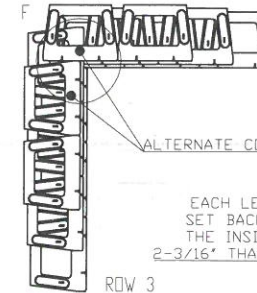
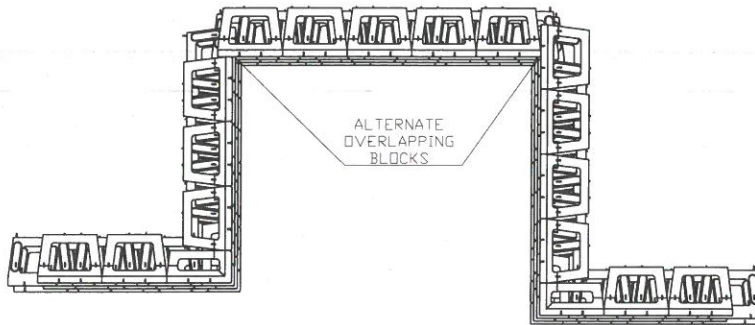
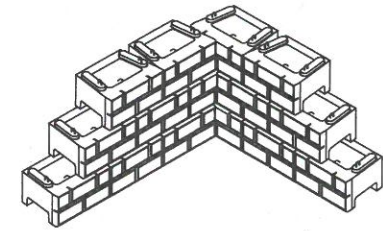
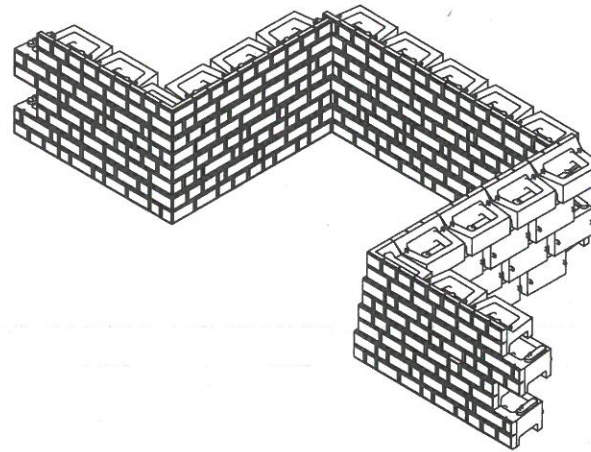
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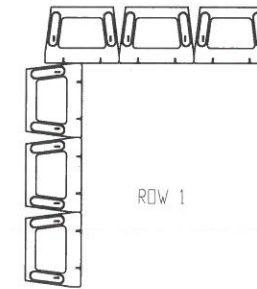
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Sheet 6 of 11

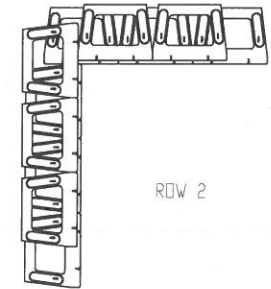


EACH LEVEL WILL BE SET BACK AND TOWARD THE INSIDE CORNER BY 2-3/16" THAN THE ONE BELOW

ROW 3

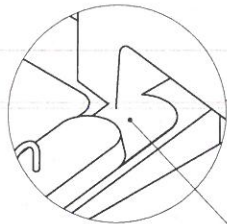
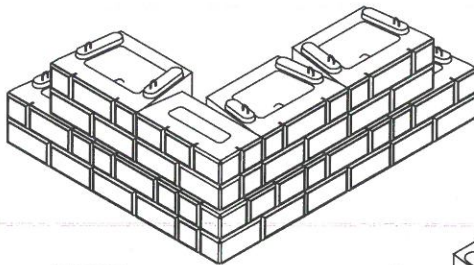


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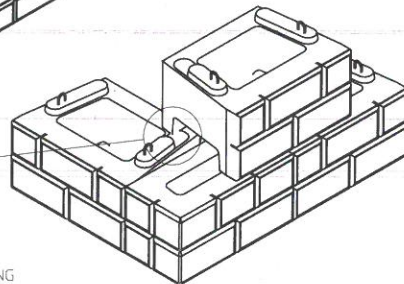


ROW 2

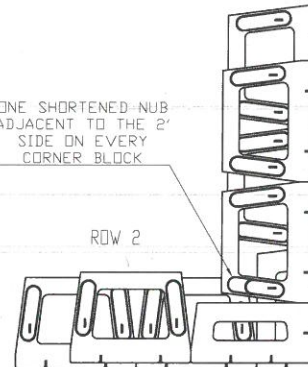
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CONFLICTING POINT

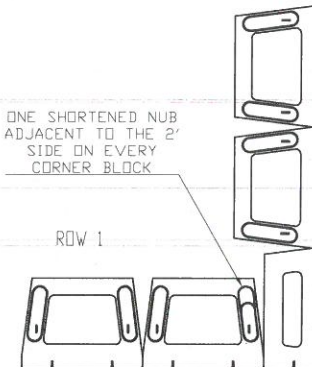


ONE SHORTENED-NUB ADJACENT TO THE 2' SIDE ON EVERY CORNER BLOCK



ROW 2

ONE SHORTENED NUB ADJACENT TO THE 2' SIDE ON EVERY CORNER BLOCK



ROW 1

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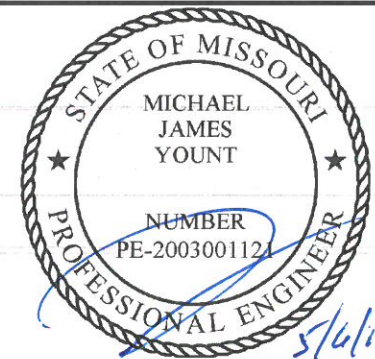
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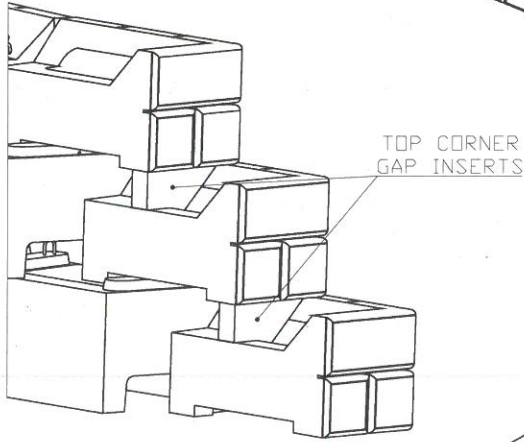
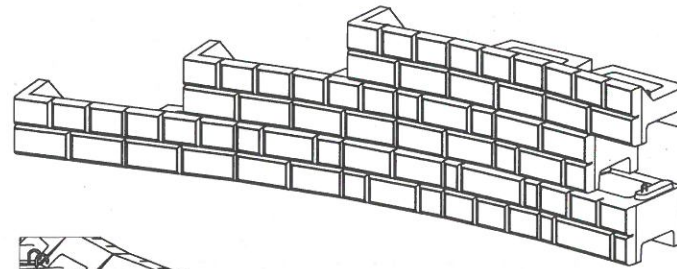
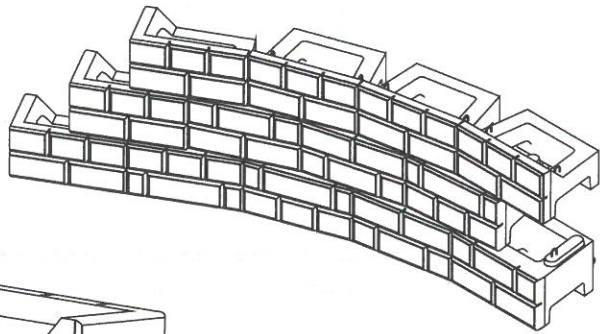
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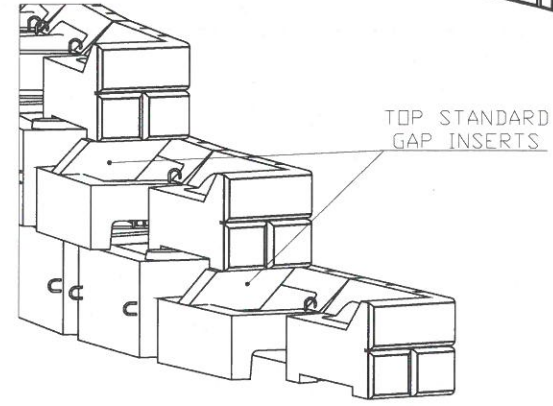
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Mo# PE-2003001121

Typical Details
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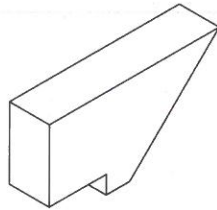
Sheet 7 of 11



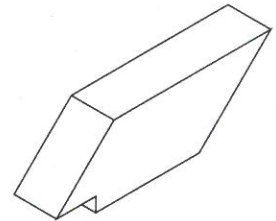
TOP CORNER
GAP INSERTS



TOP STANDARD
GAP INSERTS

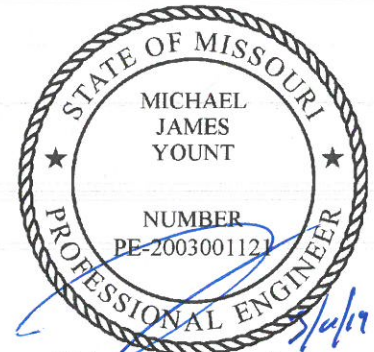


TOP CORNER GAP INSERT



TOP STANDARD GAP INSERT

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St. Louis, Mo. 63111

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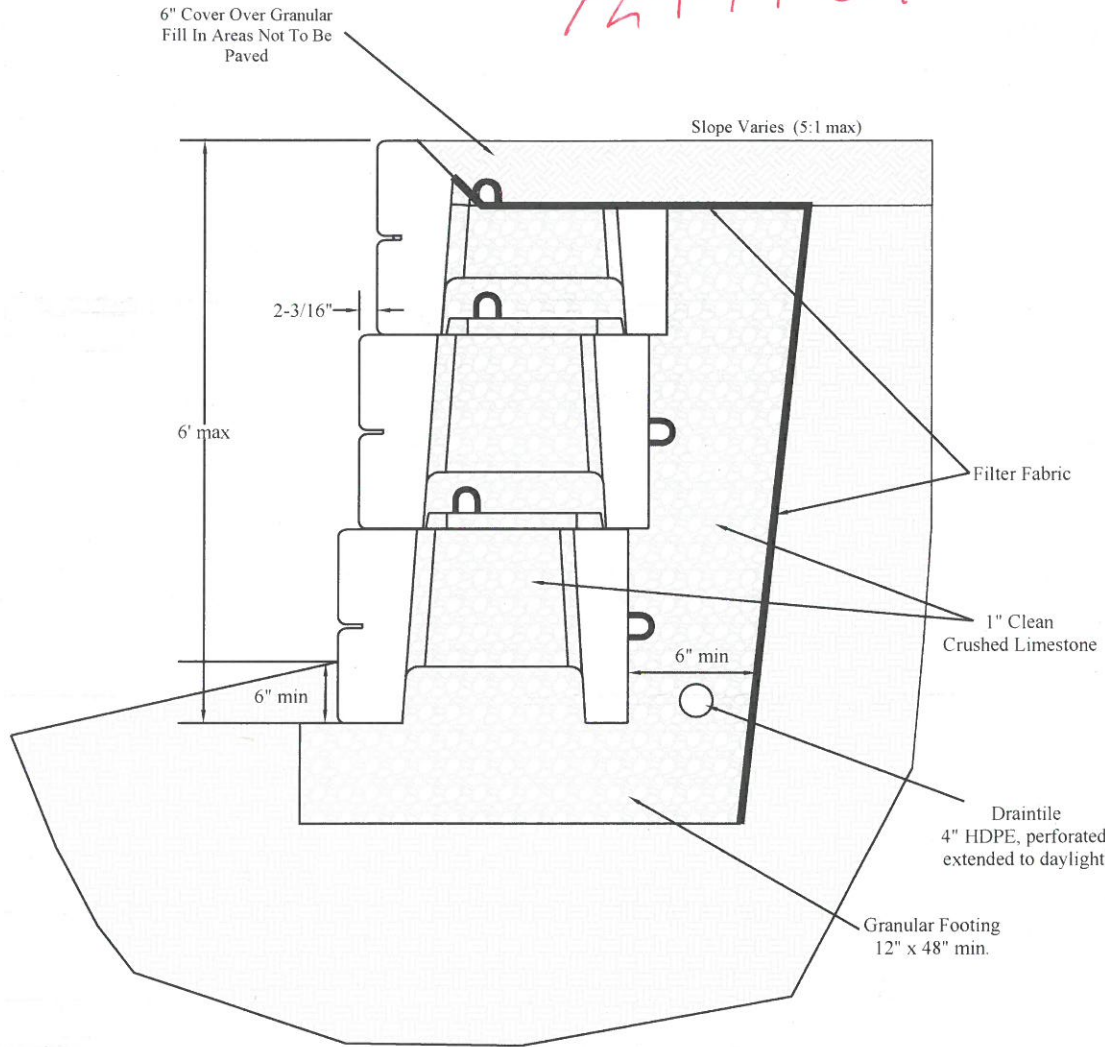
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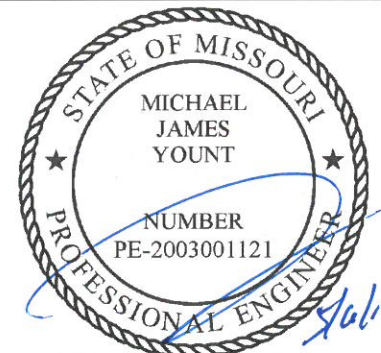
Typical Cross Section
Level Backslope, No Surcharge

Sheet 8 of 11

729-19-01



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Michael James Yount - Engineer
Mo# PE-2003001121

Refer to Specifications Sheets 2-4 & Construction Details Sheets 5-8 for Additional Requirements

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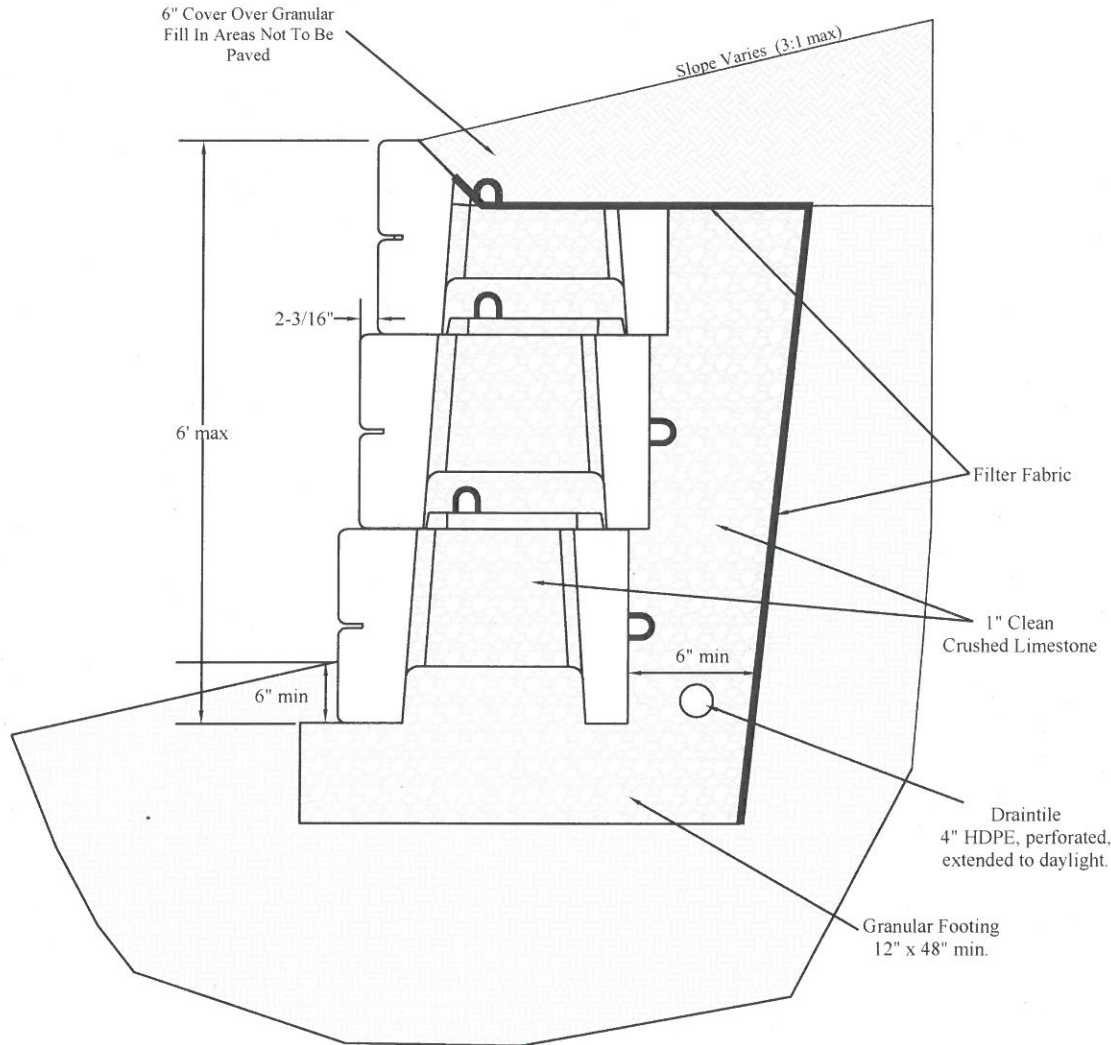
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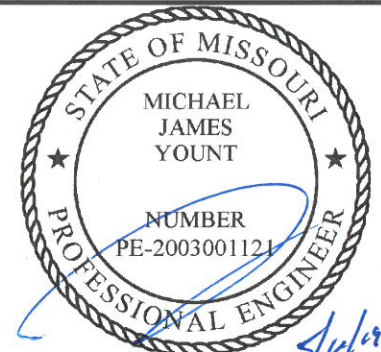
Typical Cross Section
Level Backslope, No Surcharge

Sheet 9 of 11

729-19-02



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Additional Requirements

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326 E Courtois
St. Louis, Mo. 63111

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Solutions, P.C.**

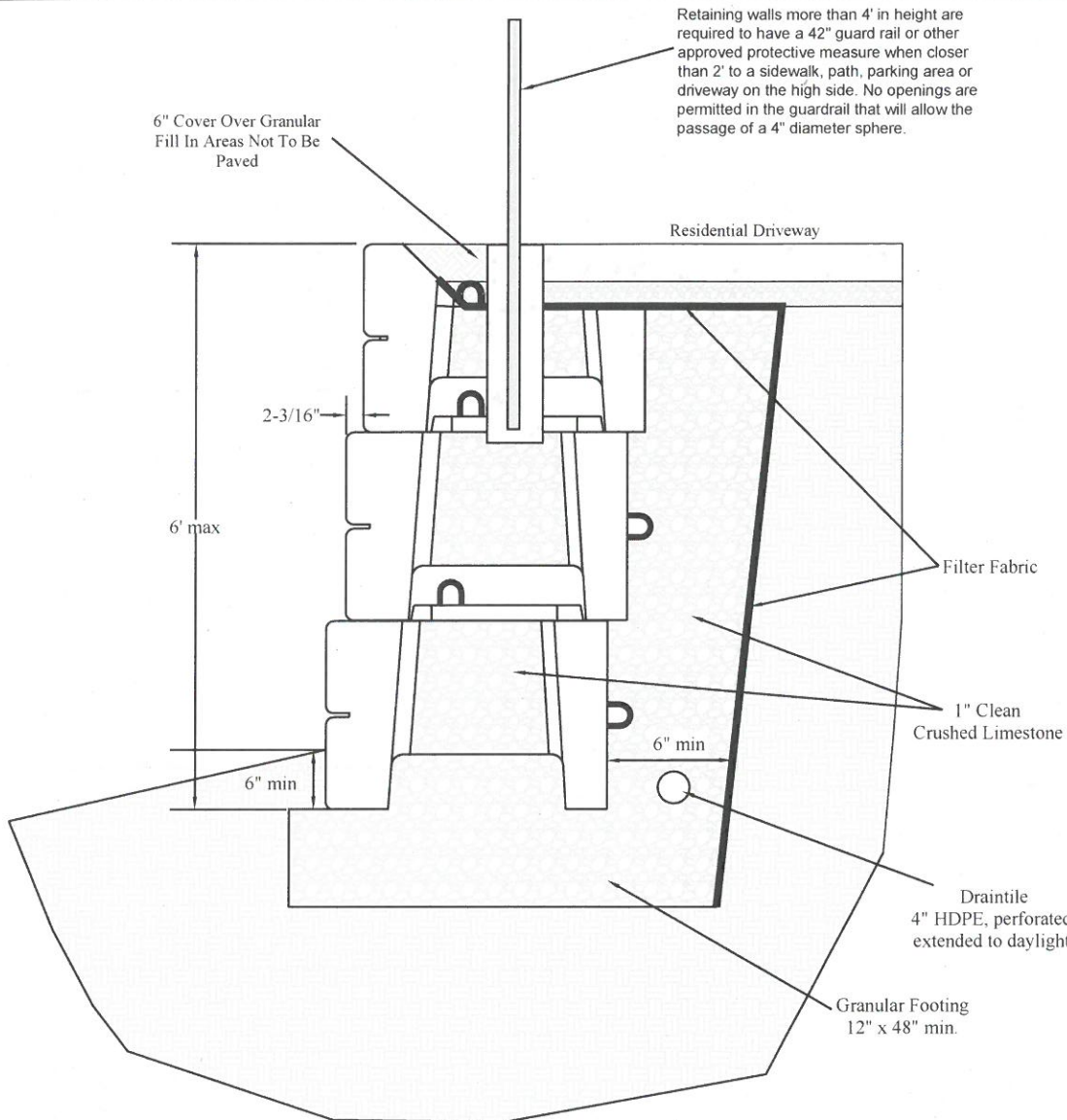
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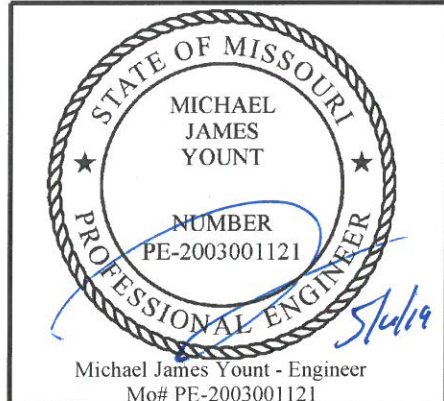
Typical Cross Section
3:1 Backslope, No Surcharge

Sheet 10 of 11

729-19-03



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Typical Cross Section
Level Backslope, 120 psf Surcharge
(Residential Driveway)

Sheet 11 of 11

Plan Set #2

Building Address: **41 S CENTRAL AVE**

Builder **RETAINING WALL SOLUTION** Phone **3148428200**

BLDG _____ MECH _____

ELEC _____ PLMB _____

Conditions of Approval _____

Approved for Issuance (Signature Below) Date 6-3-19

Scott Roth

Residential - Non-Habitable South

New Construction

MASTER PLAN

No. 729-19-01

729-19-03

LEMAY CONCRETE BLOCK

18BLD-06961