

to:	David Schaeffer Engineering Limited - Mr. Robert Freel - rfreel@dsel.ca
re:	Pisa 2 Segmental Retaining Wall Design Proposed Residential Development - 146 Mountshannon Drive - Ottawa
date:	June 10, 2014
file:	PG0267-MEMO.03R
from:	Richard Groniger

Further to your request, Paterson Group (Paterson) has provided the following memo in response to the City of Ottawa comment requesting that a global slope stability review be completed for the proposed retaining walls at the aforementioned site. The proposed retaining walls are illustrated on the following grading plan prepared by DSEL:

- Grading Plan - Drawing No. GP-1 - Project 09-396 - Revision 11 dated January 14, 2014

Based on our review, it is understood that a 5 Course, Pisa 2 retaining wall with a maximum height of 0.84 m, is to be constructed as part of the proposed residential development. Based on our calculations, the retaining wall cross-section detailed in Drawing PG0267-3 - Typical Detail - 5 Course Pisa 2 SRW attached to the present memo is recommended to ensure that a global slope stability factor of greater than 1.5 is provided. The above noted design is acceptable provided that regular field inspections are completed by our firm from a geotechnical perspective during construction.

We trust that this information satisfies your requirements.

Best Regards,

Paterson Group Inc.



Richard Groniger, C. Tech.



David J. Gilbert, P.Eng.

Paterson Group Inc.

Head Office and Laboratory
154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381
Fax: (613) 226-6344

Northern Office and Laboratory
63 Gibson Street
North Bay, Ontario P1B 8Z4
Tel: (705) 472-5331
Fax: (705) 472-2334

St. Lawrence Office
993 Princess Street - Suite 102
Kingston, Ontario K7L 1H3
Tel: (613) 542-7381
Fax: (613) 542-8399

RAIL, WHERE REQUIRED, CORED INTO COURSE NO. 4 AND CEMENTED (IF REQUIRED, SEE RAIL PER LANDSCAPE PLAN)

PISA 2 COPING UNIT GLUED TO TOP COURSE. GLUE JOINTS TO FIRST COURSE WITH GEOGRID.

PISA 2 STANDARD UNIT

EMBED MINIMUM OF ONE COURSE OF PISA 2

FINISHED GRADE

3H MAX. 1V

COMPACTED GRANULAR BASE (95% STANDARD PROCTOR DENSITY)

PERFORATED DRAIN WITH FILTER SOCK AND CLEAR STONE SURROUND (CONNECT TO POSITIVE OUTLET)

IN SITU SOIL

REINFORCED FILL (SEE NOTES)

1.8m GRID LENGTH

1.2m GRID LENGTH

RETAINED SOIL

STRATAGRID 200 GEOGRID (OR EQUIVALENT)

FILTER CLOTH OVER SUBGRADE



NOTES:

1. REINFORCED FILL TO CONSIST OF FREE-DRAINING GRANULAR FILL (i.e. OPSS GRANULAR B TYPE I OR BETTER).
2. COMPACT FILL TO 95% STANDARD PROCTOR DENSITY IN LIFTS AS WALL IS CONSTRUCTED.
3. KEEP HEAVY COMPACTION EQUIPMENT 200mm TO 300mm AWAY FROM BACK OF WALL.
4. GEOGRID IS TO BE PLACED OVER KEYWAY IN PISA 2 WITH PRIMARY STRENGTH DIRECTION PERPENDICULAR TO WALL ALIGNMENT. REMOVE ANY SLACK FROM GRID AND HOLD IN PLACE WHILE BACKFILLING OVER GRID. GEOGRID LENGTHS ARE MEASURED FROM WALL FACE.
5. WHERE SOFT LANDSCAPED YARD DRAINS TOWARDS WALL, INSTALL A SWALE AT BACK OF WALL TO INTERCEPT SURFACE WATER AND GRADE TO DRAIN AWAY FROM WALL. SWALE (IF PRESENT) IS TO BE MAINTAINED BY LANDOWNER.
6. REFER TO GRADING PLAN FOR PROPOSED GRADING AND WALL LEVELS. NOTE UNDERSIDE OF WALL TO BE PROVIDED WITH MINIMUM OF 0.15m EMBEDMENT BELOW FINISHED GRADE IN FRONT OF WALL.
7. GEOTECHNICAL FIELD REVIEW IS REQUIRED DURING CONSTRUCTION.

paterson group

consulting engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

Scale: 1:10
Des.: RG
Dwn.: MPG
Chkd.: DG

RICHCRAFT HOMES
GEOGRID REINFORCED PISA 2 WALL
146 MOUNTSHANNON DRIVE
OTTAWA, ONTARIO

TYPICAL DETAIL: 5 COURSE
PISA 2 SRW

Dwg. No. PG0267-3
Report No. PG0267-MEMO.03
Date: 03/2014