

CITY OF CINCINNATI

DEPARTMENT OF
BUILDINGS AND INSPECTIONS

STATEMENT OF SPECIAL INSPECTIONS

LOCATION: 3580 Handman Ave., Cin.

PERMIT APPLICATION NUMBER: _____
(by City)

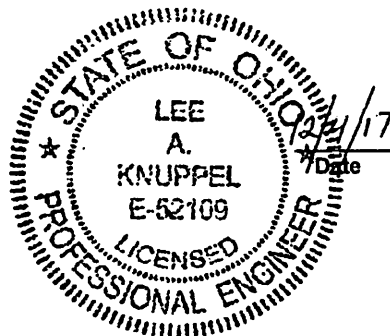
Because of the complexity, size, or special conditions associated with this project, the special inspections checked under "REQ" on the attached schedule are to be provided by the owner or owner's agent, other than the contractor, as required by Section 1704.1.1 of the Ohio Building Code (OBC).

Please indicate the inspection agent performing the specific inspections, the Inspection Coordinator who will submit the reports required by Section 1704.1.2 OBC and the extent of inspection services if other than full-time.

This *Statement of Special Inspections* shall be submitted as a condition for permit issuance. It includes a Schedule of Special Inspections applicable to this project as well as the name of the special inspectors, and the identity of other testing laboratories or agencies intended to be retained for conducting these inspections. Special Inspectors and testing agency personnel shall be under the direct supervision of a registered design professional who shall sign inspection reports; otherwise the qualifications of the person performing the inspections shall be submitted to the Department for acceptance.

An overall inspection coordinator shall keep records of all inspections and tests and shall furnish such reports to the code official and to the design professional of record. All discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the code official and the design professional of record. Interim reports shall be submitted to the code official and the design professional of record monthly, unless more frequent submissions are requested by the code official.

During the course of construction, additional third party inspections may be required in addition to those specified in the attached schedule if conditions warrant.



Lee A. Knuppel
P.E. or R.A.

SCHEDULE OF SPECIAL INSPECTIONS

ITEM	REQ.	INSP. AGENCY	SCOPE
1. Soils and foundations (1704.7) Geotech Inv.			
a) shallow foundations	✓	LEE A. Knuppel & Assoc.	Verify Bearing
b) controlled structural fill			
c) deep foundations/piles/caissons/piers			
d) excavation/fill	✓	LEE A. Knuppel & Assoc.	Inspect/Observe Per Plan
e) soil stability/landslide	✓	LEE A. Knuppel & Assoc.	Inspect/Observe Geo. Envir.
2. Concrete (1704.4)			
A. Cast-in-place concrete			
a) mix design			
b) material certification			
c) reinforcement & installation	✓	LEE A. Knuppel & Assoc.	Ck Placement & Size
d) post-tensioning operation			
e) batching plant			
f) formwork geometry	✓	LEE A. Knuppel & Assoc.	Correct Placement
g) concrete placement			
h) evaluation of concrete strength			
i) curing & protection			
j) other			
B. Pre-cast Concrete			
a) plant certification / quality control procedures			
b) mix design			
c) material certification			
d) reinforcement installation			
e) pre-stress operations			
f) connections / embedded items			
g) form work geometry			
h) concrete placement			
i) evaluation of concrete strength			
j) curing protection			
k) erected pre-cast elements			
l) other			
3. Masonry (1704.5)			
a) material certification			
b) mixing of mortar and grout			
c) installation of masonry			
d) reinforcement installation			
e) grouting operations			
f) weather protection			
g) evaluation of masonry strength			
h) anchors and ties			
i) other			
4. Steel (1704.3)			
A. Structural Steel			
a) fabricator certification/quality control procedures			
b) material certification			
c) open web steel joists			
d) bolting			
e) welding			
f) shear connectors			
g) structural details			
h) metal deck			

INSPECTION AGENTS	FIRM	ADDRESS
1. Inspection Coordinator (Section 1704.1.2)	<u>Lee A. Knuppel & Assoc., Inc</u>	<u>7770 Cooper Rd., #7</u>
2. Special Inspector	<u>Lee A. Knuppel</u>	<u>Cin., OH 45242</u>
3. Testing Laboratory	_____	<u>Same</u>
4. Approved Independent Quality Control Agency	_____	
5. Geotechnical Engineer: When required from Part 1 above	<u>Lee A. Knuppel & Assoc., Inc</u>	<u>Same</u>
6. Other	_____	

FINAL REPORT OF SPECIAL INSPECTION

To the best of my information, knowledge, and belief, the special inspections required for this project, and itemized in the statement of Special Inspections submitted for permit, have been completed.

The following discrepancies that were outstanding since the last Interim report dated _____, have been corrected:

(Attach 8 1/2 x 11 continuation sheet(s) if required to complete the description of corrections.)

Interim reports submitted prior to this report, and numbered _____ to _____, are to be considered an integral part of this final report.

Respectfully submitted,

Signature

Date

Title

Lee A. Knuppel & Associates, Inc.

Consulting Engineers and Surveyors, Civil, Structural, and Geotechnical
7770 Cooper Road, Suite #7
Montgomery, Ohio 45242

Telephone: (513) 793-4222
Fax: (513) 793-4922

Proj. # : 2017-068
Date: 12/04/2017

Redknot Homes
7723 Tylers Place Blvd., #137
West Chester, Ohio 45069

Attn: Mr. Mark Pottebaum

Re: Geotechnical site assessment for: 3576-3580 Handman Ave., Cincinnati, Ohio.

The subject site was inspected by personnel from Lee A. Knuppel and Associates, Inc. (LKA), on November 28, 2017, per your request. At the time of the site inspection the site consisted of 3 lots with 1 existing structure located on the west side. Prior to the inspection, the proposed plans and published geotechnical reports of the area were reviewed. **Figure 1**, attached, shows the site survey prior to any demolition.

The site is located on a ridge top with the hillside sloping from the east to west of the lots and Handman Ave. to the south. Maximum relief from the east property line to the west property line is approximately 20 feet.

According to the USDA Soil Survey of Hamilton County Ohio, the following agricultural soil associations can be found on the property:

- Rossmoyne-Urban Land Complex (RtC), 8 to 15 percent slopes

This complex consists of a deep, strongly sloping, moderately well drained Rossmoyne soil and Urban land. The areas of Rossmoyne soil and the areas of Urban land are so intricately mixed, or so small, that it is not practical to separate them at the scale used in mapping.

Typically, the Rossmoyne soil has a surface layer of brown, friable silt loam about 6 inches thick. The subsoil is about 62 inches thick. The upper part of the subsoil is yellowish brown, mottled, friable and firm silty clay loam; the middle part is a fragipan consisting of yellowish brown, mottled, very firm clay loam; and the lower part is yellowish brown, mottled,

firm clay loam. The substratum to a depth of about 92 inches is yellowish brown, firm clay loam glacial till. Limestone and shale bedrock is typically at depths greater than 60 inches.

In some places the soil has been radically altered. Some of the low areas have been filled or levelled during construction; and other small areas have been cut, built up, or smoothed. The Urban land part of the complex is covered by streets, parking lots, buildings, and other structures that so obscure or alter the soils that identification of the soils is not feasible.

Included in mapping, and making up about 10 percent of most areas, are narrow strips of well drained Switzerland soils on the upper part of the slopes.

The Rossmoyne soil is moderately well suited to use as a site for buildings and poorly suited to us as septic tank absorption fields. Land shaping has been done in some areas. The use of the soil as septic tank absorption fields is limited by the seasonal wetness and the slow permeability. Those limitations can be partly overcome by using curtain drains and by using absorption areas that are larger than normal.

Drains at the base of footings and exterior basement wall coatings will help prevent wet basements.

Our evaluation of the above items is presented below:

The site inspection confirmed the above soil conditions, however the depth to bedrock may be more or less due to the previous development. The hillsides not landscaped are moderately eroded and show minor signs of soil creep. Soil creep is a common condition for slopes in this area and is primarily related to the saturated soil freezing and the soil being forced upward perpendicular to the slope and then let down vertically by thawing. This process moves the soil downslope and accounts for any tilted fences, or bowed trees on the property.

Based on our inspection of the site and slopes, bedrock should be relatively shallow and the overburden soils are erodible and subject to soil creep and surface slumping (shallow slides). There is no surface expression (tension cracks, scarps or toe bulges) of deep seated sliding or other anomalies that would be indicative of soil related issues that may impact the development.

Engineering Opinion:

It is our opinion that the soil, bedrock, and the existing slopes will provide the necessary support for the intended private property development.

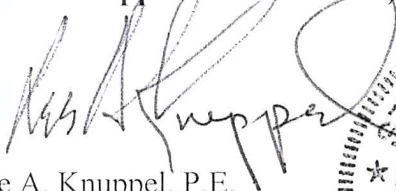
Recommendations:

1. In order to maintain stable slopes all cuts and fills shall be no steeper than 1V to 3H. Upon completion of the grading, the slopes will have to be seeded and maintained until sufficient grass cover has developed to prevent soil erosion.
2. Re-grading of the site shall be done in such a way that will minimize erosion and wherever feasible natural vegetation shall be retained and supplemented.
3. Any area which has the potential to direct water offsite will be controlled with silt fence.
4. The ground surface shall be stripped, within the limits of any proposed fills, of all organic and other unsuitable material.
5. All fill shall be placed in lifts not exceeding 8" loose thickness and compacted to a minimum density of 95% standard proctor.
6. Any fill placed against the existing hillside or new embankment slopes shall be benched into the slope to stiff natural soil using an 8" max. vertical cut face.
7. The proposed house footings shall be founded on the limestone and shale bedrock, and those along the downslope sides shall be embedded at least 2 feet into the rock. If the full basement is founded within the limestone and shale bedrock the downslope footings will not need to be embedded. If rock is greater than the basement depth drilled piers may be more economical than over excavating the proposed footings. All footing excavations should be inspected by a registered geotechnical engineer to ensure there adequacy, and consistency.
8. Should any of the rear basement walls be supporting the overburden material rather than shale and limestone, it shall be designed to resist an at-rest earth pressure (EFP=55 to 60 psf)
9. A geotechnical engineer is required to perform field construction observations

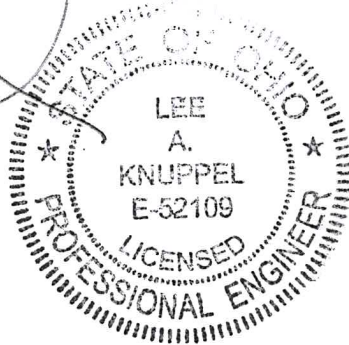
and testing to verify compliance with the plans and specifications.

We appreciate this opportunity to provide engineering services. Should you need further assistance, please feel free to call.

Lee A. Knuppel and Associates, Inc.



Lee A. Knuppel, P.E.



BOOK: 02B PAGE: 0006
 PARCELS: 0012, 0013, 0014

BASIS OF BEARINGS:
 SURVEY OF RECORD: 028-0005-0108
 MARCH 1, 2008

DEED OF RECORD
 D.B. 4239, PG. 710
 028-0006-0014 (LOT 20)
 028-0006-0013 (LOT 21)
 028-0006-0012 (LOT 22)

LEGEND
 SHOWN AS PER THE RECORD
 ○ IP FOUND - 5/8"
 ○ IP FOUND - 1/2"
 ○ IP SET - 5/8"
 ○ IP SET - 1/2"
 ○ IRON PIPE FOUND
 ○ AS FOUND
 ○ AS SET
 ○ RR SPIKE SET
 ○ RR SPIKE FOUND
 ○ HOLE & JACK SET
 ○ STONE FOUND
 ○ BRICK FOUND
 ○ BRICK METER SET
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PROPOSED ELEVATION
 PROPOSED DOWNPOUTS TO BE ROUTED THROUGH FRENCH DRAINS TO THE EXISTING SEWER LATERAL WITH CLEANOUT AS SHOWN.
 BOTH FRONT AND REAR RETAINING WALLS ARE EXTENSIONS OF THE FOUNDATION.
 NOTE: UNABLE TO LOCATE WATER METER OR GAS METER.

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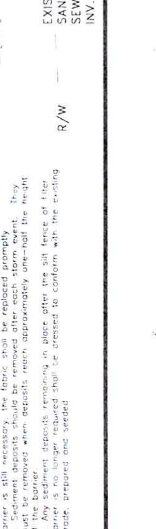
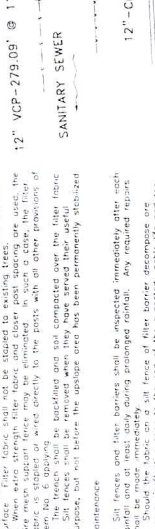
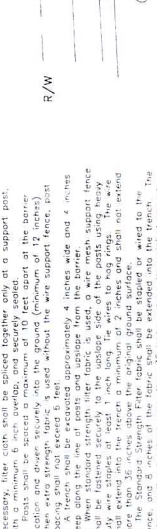
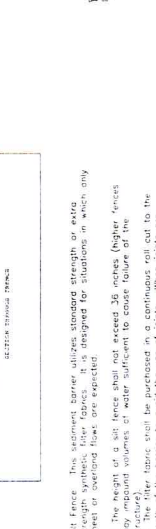
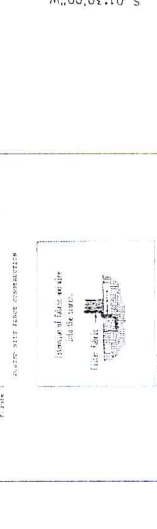
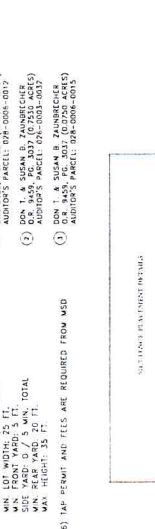
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- NOTES**
- 1) ALL FOUNDATIONS SHALL BE IN PLACE BEFORE STARTING CONSTRUCTION.
 - 2) SANITARY LATERAL SHALL BE 6" SDP 35 PVC @ 2x.
 - 3) ALL BASE SOIL SHALL BE SECTED & WATCHED.
 - 4) FACE OF FOUNDATION WILL NOT SHOW MORE THAN THREE (3) FEET OF EXPOSED CONCRETE AT FRONT OF HOUSE.
 - 5) ZONING = CITY OF CINCINNATI
 - 6) MIN. LOT AREA = 51-2
 - 7) MIN. LOT WIDTH = 25 FT.
 - 8) MIN. SIDE YARD SETBACK = 5 FT.
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PLUMBING PERMIT, FEES AND INSPECTION ARE REQUIRED FROM THE CITY OF CINCINNATI PLUMBING DEPARTMENT. THE DRAINAGE AND SEWERAGE DEPARTMENT SHALL BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION. THE CITY OF CINCINNATI PLUMBING DEPARTMENT SHALL BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION. THE CITY OF CINCINNATI PLUMBING DEPARTMENT SHALL BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION.

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Figure 1