ICHD

Penninger Soil Consulting, PLLC
Ph: 704-996-6330 Email: pgpenninger@gmail.com

Soil Pkg for site visit

February 20, 2016

Aurora Building Group
16607 Riverstone Way
Charlotte, North Carolina 28277

Attention: Mr. Terry Jordan

Reference: **Technical Assistance with Expedited Review Septic Permitting**
Pinnacle Shores Lot 94
130 Old Timber Lane
Iredell County, North Carolina
Project No. 16-111

Dear Mr. Jordan:

Penninger Soil Consulting, PLLC has provided technical assistance to obtain a possible new, 4-bedroom septic Improvement Permit from the Iredell County Health Department (ICHD) for the referenced lot. The technical assistance was performed in general accordance with our written proposal dated January 27, 2016.

The lot located at 130 Old Timber Lane has an existing 4-bedroom Improvement Permit that was issued by the ICHD on May 30, 2007. This permit is still valid. The owner has requested a slightly revised house pad with a proposed future pool area. You contacted Penninger Soil Consulting PLLC to assist you with this Expedited Review Improvement Permit application submittal. Your surveyor staked the proposed house pad and the lot lines for the permitting and also located the proposed septic lines and backhoe pits on the attached site plan.

Mr. Paul Penninger visited the lot on January 28, 2016 to describe 7 backhoe pits and flag the proposed T&J Panel system and repair area in the proposed septic area as shown on the attached site plan. The proposed house and septic repair area are in similar locations as shown in the 2007 Improvement Permit. The primary system is being proposed in the front yard to allow an area for the future pool. Latham-Walters Engineering designed the proposed drain around the house and the grading plan to level the proposed house pad.

Once the septic area is permitted, it should be fenced off for protection during home construction. Access to the lot should only be by the proposed drive. There shall not be cuts of 2 feet or greater within 15 feet of any part of the permitted septic system.

The attached information is not an Improvement Permit or Construction Authorization, and is only to assist you with the Expedited Review site evaluation. The attached plan is

not intended to be a Professional Engineer plan. The ICHD must approve each lot and only the ICHD can issue these permits. The ICHD should verify all soils and system specifications, required setbacks, and whether a professional engineer plan is required before permitting and/or septic system installation. Any changes deemed necessary by the ICHD can be shown on the permit or the attached information. Soil evaluations and system layouts are done based on interpretations of the rules governing wastewater treatment and disposal systems and are not guarantees for site approval or future septic system performance.

If you have any questions or require additional information please contact us at your convenience.

Sincerely,

Penninger Soil Consulting, PLLC

Paul G. Penninger, L.S.S.
Soil Scientist



Attachments:

1. ICHD Permit Application
2. Site Plan and System Specifications
3. Existing 2007 ICHD Improvement Permit

C:\Users\Paul G. Penninger\Documents\2016 Projects\16-111 Aurora Building Group - Pinnacle lot 94\16-111 Aurora - Pinnacle Lot 94 Expedited Review Summary Letter.doc

Aurora Building Group - Pinnacle Lot 94 Expedited Review Proposal (pg 1 of 2)
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Number of Bedrooms	4
Basement or Crawl	**crawl/slab garage**
Design Flow (gpd)	480
Primary System LTAR (gpd/sqft)	0.325 (system designed at 0.3)
Primary System Type	**LP PPBPS - T&J Panel Block**
No. Lines	6 (see attached site plan)
Total Linear Feet	267 ft.
Trench Width	2' min.
Trench Spacing	8' min.
Trench Depth	36 inch max
Pump Required	Yes
Distribution Device	Gate Valve Box w/ LPP Distribution
Maintenance Agreement Required	Yes
Length and Diameter of Supply Pipe	approx. 65' of 2" SCH 40 PVC
Size of laterals	1 1/4" SCH 40 PVC
Flow Rate through the system	30.5 gpm
Elevation head	approx. 12'
Pressure head	3.0'
Friction head	approx. 2'
20% Contingency	3.4'
Total Head	20.4'
Pump Requirements	30.5 gpm @ 21' of head (To be verified by installer and ICHD after final tank placement)
Maximum Dosing Volume	219 gallons max*
Volume of water pumped per dose	Calculated to specific tank by measure or dealer engineering specifications (1 cubic ft. of water equals 7.48 gal.)
Pump Run per dose	approx. 7.2 min.
Check Valve	yes
Siphon Break hole	yes
Repair System -	**LP PPBPS - T&J Panel Block**
Total Linear Feet	285' shown - 267' required
Repair LTAR (gpd/sqft)	0.3 with 36 in. max. trench depth

Approved 3/2/16 MD

***Before placement of cap block, one panel on each line near the center of the field should be observed filling to make certain that it does not overflow top chamber into air chambers of panel. If overflow occurs, reduce floats by 25 gallons and reset until no overflow is observed.**

Approved MD 3/2/16

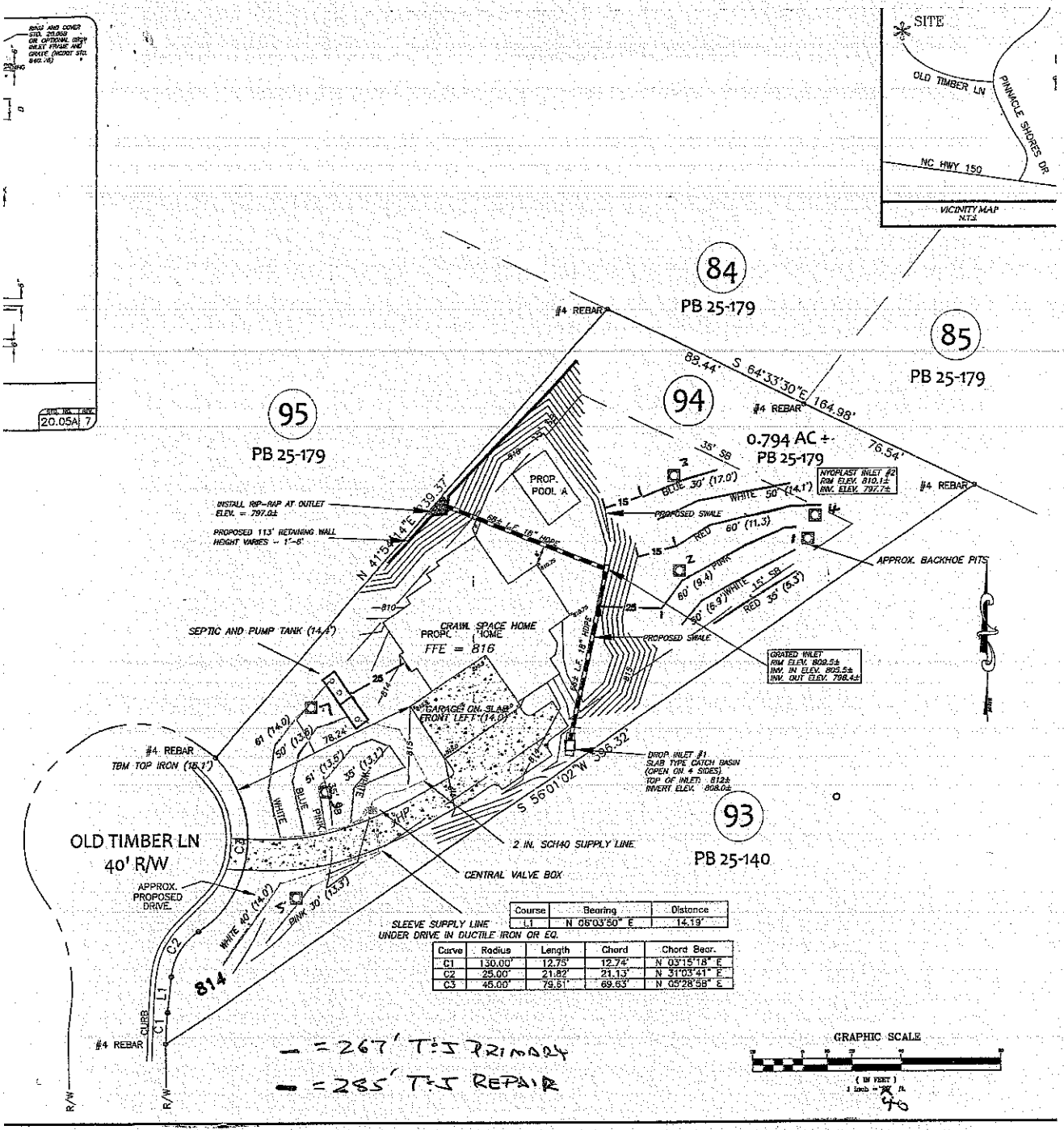
Aurora Building Group - Pinnacle Lot 94 Expedited Review Proposal (pg 2 of 2)
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Summary of Primary and Repair T&J Panel System Lines

Line No.	Use	Line Color	System Type	Line Length (Ft.)	Rod Reading (Ft.)	Panels	Holes	Hole Spacing	Hole Size (In.)
1	System	white	LPPPBPS	35	13.1	8	8	1 per panel	5/32"
2	System	pink	LPPPBPS	51	13.5	12	12	1 per panel	5/32"
3	System	blue	LPPPBPS	50	13.6	11	11	1 per panel	5/32"
4	System	white	LPPPBPS	61	14.0	14	14	1 per panel	5/32"
5	System	pink	LPPPBPS	30	13.3	7	7	1 per panel	5/32"
6	System	white	LPPPBPS	40	14.0	9	9	1 per panel	5/32"
7	Repair	red	LPPPBPS	35	5.3				
8	Repair	white	LPPPBPS	50	6.9				
9	Repair	pink	LPPPBPS	60	9.4				
10	Repair	red	LPPPBPS	60	11.3				
11	Repair	white	LPPPBPS	50	14.1				
12	Repair	blue	LPPPBPS	30	17.0				
				Total System: 267'		Total: 61	Total 61 (1 in each panel)		

Tank		1000 gal (2 compartment)	
Pump Tank		1000 gal. - per ex. IP	14.4
House		Front Left Garage	14.0
TBM		Top of iron at left front corner	16.1

Note: **Installer and ICHD shall verify all line locations, tank locations, and elevations prior to installation.**
^System is to be installed according to any other ICHD and T&J Panel requirements or policies.
^These specifications are to satisfy the ICHD Expedited Review Checklist and are not intended to represent an Engineered System Design.
^On similar systems the ICHD has requested the central valve box be located on the upper drainfield line.
^System proposal information must accompany Penninger Soil Consulting, PLLC written report dated 2/20/16.



Course	Bearing	Distance
L1	N 05°03'50" E	14.19'

Curve	Radius	Length	Chord	Chord Bear.
C1	130.00'	12.75'	12.74'	N 03°15'18" E
C2	25.00'	21.82'	21.13'	N 31°03'41" E
C3	45.00'	79.51'	69.63'	N 65°28'58" E

Aurora Building Group Septic Site Plan (2/20/16)

130 Old Timber Lane - Pinnacle Shores Lot 94

Notes:

Base site plan from Latham Walters Engineering Inc.

Septic Backhoe pits, house, and septic lines located by Dedmon Surveys.

Septic details by Penninger Soil Consulting, PLLC. Site plan must accompany written report by Penninger Soil Consulting, PLLC dated 2/20/16.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATERPROTECTION BRANCH

PROPERTY ID #:
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

OWNER: Applicant: Aurora Building Group
APPLICATION DATE 2/20/16
ADDRESS: 130 Old Timber Lane
DATE EVALUATED: Jan 28, 2016
PROPOSED FACILITY: 4 bdr sfr
PROPOSED DESIGN FLOW (.1949): 480
PROPERTY SIZE: 0.793 ac

LOCATION OF SITE: Lot 94 Pinnacle Shores
PROPERTY RECORDED: 1995
WATER SUPPLY: ☐ Private ☑ Public ☐ Well ☐ Spring ☐ Other Comm. Well
EVALUATION METHOD: ☑ Auger Boring ☑ Pit ☐ Cut
TYPE OF WASTEWATER ☑ Sewage ☐ Industrial Process ☐ Mixed

Approved 3/24/16

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS AND NOTES				PROFILE CLASS & LTAR
					.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	L/N approx. 24%	0-6	wsbk/scl	fr ss/sp	br				PS .3
		6-36	msbk-abk/c	fr s/p	red; f sap, quartz incl				
		36-54	wsbk/cl	fr ss/sp	yell red; c sap incl.; f quartz				
		54-80	vwsbk-mass./ sl sap	fr ss/sp	mc. wr/hard sap incl on n end pit; zones sl sl sap at 40 inches				
					n/a	40-54in.	PS	n/a	
2	L /N approx. 15%	0-6	wsbk/scl	fr ss/sp	br				PS .3
		6-34	msbk/c	fr s/p	red;f yell wr incl n wall, ff sap. incl				
		34-68	massive sl-l sap	fr ss/sp	mc				
					n/a	34in.	PS	n/a	
3	L/N approx. 32%	0-6	wsbk/scl	fr ss/sp	br				PS .3
		6-20	msbk/c	fr ss/sp	red;				
		20-30	wsbk/cl	fr ss/sp	red; c sap incl.				
		30-68	mass. sl-l sap	fr ss/sp	mc f incl wr/hard sap; few yell lithochromic				
					n/a	30in.	PS	n/a	
4	L/N approx. 24%	0-9	wsbk/cl	fr ss/sp	br				PS 0.3
		9-28	sbk-abk/c	fi s/p	red				
		28-51	wsbk/cl	fr ss/sp	yell red; f-c sap incl.				
		51-72	mix wsbk scl soil and sl sap	fr ss/sp	mc				
					n/a	51in.	PS	n/a	

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	T&J Panel	T&J Panel
Site LTAR	0.325	0.3

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: PGP - must be reviewed by ICHD
OTHER(S) PRESENT:

COMMENTS: Repair area previously permitted at 0.3 by ICHD. Valid IP for site.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATERPROTECTION BRANCH

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Approved MP 3/2/16

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5	L approx. 7%	0-12	abk/c	f s/p	red; compacted zones				PS .325
		12-32	m-wsbk/c-cl	fr ss/sp	red; f-c sap incl.				
		32-68	massive sl-l sap	fr ss/sp	mc				
			wavy boundaries						
					n/a	32in.	PS	n/a	
6	L approx. 5%	0-11	abk/scl	fi s/p	red; compacted zones				PS .325
		11-32	wsbk cl	fr s/p	yell red; c sap incl				
		34-68	massive sl-l sap	fr ss/sp	mc; few cl incl				
					n/a	34in.	PS	n/a	
7	L approx. 5%	0-4	wsbk/scl	fr ss/sp	red br; mix A,B - muddy surface				PS .325
		6-31	msbk/c	fr ss/sp	yell red c sap incl				
		31-68	mass. sl-l sap	fr ss/sp	mc; f cl incl; c mica flakes				
					n/a	31in.	PS	n/a	
8									

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