

# letter of transmittal



KANSAS CITY  
TESTING & ENGINEERING, LLC

DATE 2/12/18 JOB NO. R20-17-261

1308 Adams Street  
Kansas City, KS 66103  
Ph (913) 321-8100  
Fax (913) 321-8181

ATTN: JAKE LOVELESS

TO: GRIFFIN RILEY INVESTMENTS LLC  
120 SE 30TH ST  
LEE'S SUMMIT MO 64082

RE: RESIDENCES @ ECHELON

## WE ARE SENDING YOU

☒ ATTACHED ☐ UNDER SEPARATE COVER ☐ THE FOLLOWING ITEMS:

<input type="checkbox"/> AGGREGATE REPORT	<input type="checkbox"/> CONCRETE REPORT	<input type="checkbox"/> PROPOSAL
<input type="checkbox"/> ASPHALT REPORT	<input type="checkbox"/> FOUNDATION REPORT	<input type="checkbox"/> SOILS REPORT
<input checked="" type="checkbox"/> AS NOTED	<input type="checkbox"/> INVOICE	<input type="checkbox"/> OTHER

COPIES	DATE	NO.	DESCRIPTION
1			SITE OBSERVATION PERFORMED 1/31 - 2/09

THESE ARE TRANSMITTED AS CHECKED BELOW:

<input type="checkbox"/> FOR CHECKING	<input type="checkbox"/> FOR REVIEW / COMMENT	<input checked="" type="checkbox"/> FOR FILES & INFO.
<input type="checkbox"/> FOR YOUR USE ON JOB	<input type="checkbox"/> APPROVED AS NOTED	
<input type="checkbox"/> AS REQUESTED	<input type="checkbox"/> APPROVED AS SUBMITTED	

REMARKS:

## COPY TO:

jake@griffinriley.com  
tjwatreas@lukedrailly.com  
cbeverlin@bdc-engrs.com  
thauschild@nspjarch.com  
mschlicht@es-kc.com

matthew.munger@cityofLS.net  
srunyan@lukedrailly.com

BY:

JIM BYRNES  
SR PROJ MANAGER

## REPORT OF IN-PLACE DENSITY

**CLIENT:** GRIFFIN RILEY INVESTMENTS, LLC  
ATTN: JAKE LOVELESS  
120 SE 30TH STREET  
LEE'S SUMMIT MO 64082

PAGE 1 OF 2

**PROJECT:** THE RESIDENCES @ ECHELON  
MO 291 & 50  
LEE'S SUMMIT, MO

**PROJECT NO.:** R20-17-261  
**REPORT NO.:** K22071  
**DATE OF SERVICE:** 01/31/2018  
**AUTHORIZATION:** JAKE LOVELESS  
**REPORT DATE:** 02/12/2018

**SERVICES:** Perform in-place density and moisture content tests to determine the degree of field compaction.

### PROJECT DATA

**CONTRACTOR:** LUKE DRAILY CONST

**GAUGE:** Troxler 3440

**GAUGE SERIAL NO.:** 15277

	DENSITY	MOISTURE
<b>METHOD OF TEST:</b>	ASTM D6938	ASTM D3017
<b>SPECIFICATION:</b>	95% Min	-1 to +3% of Opt

**STANDARD COUNTS**  
**MOISTURE - CURRENT:** 720 **PREVIOUS:** 709  
**DENSITY - CURRENT:** 1483 **PREVIOUS:** 1491  
**TEST MODE:** Direct Transmission  
**PROBE DEPTH:** 8

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS		REFERENCE REPORT
			OPTIMUM MOISTURE %	MAXIMUM DENSITY pcf	
1.	STANDARD PROCTOR	BROWN-GRAY SILTY CLAY	22.1	99.9	K21467
2.	STANDARD PROCTOR	YELLOWISH BROWN SILTY CLAY	21.1	101.4	K21470
3.	STANDARD PROCTOR	REDDISH BROWN SILTY CLAY	23.1	96.7	K21466
4.	STANDARD PROCTOR	YELLOWISH BROWN SILTY CLAY	19.0	102.8	K21468

### REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf)		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		
1.	B.5-0.5	8	6' bg	1	23.4	22.1	121.5	98.5	99.9	99
2.	C.2-0.5	8	8' bg	1	21.8	22.1	116.3	95.5	99.9	96
3.	D.1-0.5	8	11.9' bg	1	21.3	22.1	118.9	98.0	99.9	98
4.	C-1.1	8	6' bg	1	24.0	22.1	118.9	95.9	99.9	96
5.	D.1-1.1	8	2' bg	1	23.9	22.1	121.1	97.7	99.9	98
6.	San sewer lateral to bldg #8	8	4' bg	2	22.5	21.1	118.6	96.8	101.4	95
7.	San sewer lateral to bldg #8	8	3' bg	3	24.6	23.1	118.0	94.7	96.7	98

Report of Tests continued on page 2

PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 01/31/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf)		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		
8.	B.5-0.5	8	4' bg	3	25.7	23.1	115.4	91.8	96.7	95
9.	C.2-0.5	8	7' bg	3	24.9	23.1	116.5	93.3	96.7	96
10.	D.1-0.5	8	11' bg	3	25.9	23.1	115.7	91.9	96.7	95
11.	C.1-1.1	8	3' bg	1	24.4	22.1	119.1	95.7	99.9	96
12.	C.2-0.5	8		3	25.1	23.1	115.0	91.9	96.7	95
13.	B.5-0.5	8	3.5' bg	4	19.9	19.0	120.1	100.2	102.8	97
14.	C.2-0.5	8	7' bg	1	22.3	22.1	116.3	95.1	99.9	95
15.	D.1-0.5	8	8' bg	1	21.4	22.1	117.6	96.9	99.9	97
16.	D.1-1.1	8	1' bg	1	22.7	22.1	119.3	97.2	99.9	97
17.	C.1-1.1	8	2' bg	1	23.4	22.1	117.8	95.5	99.9	96
18.	B.7-1.1	8	3' bg	1	25.3 *	22.1	119.9	95.7	99.9	96

An asterisk (\*) appears next to test results which do NOT meet the project specifications as noted above.

ADDITIONAL COMMENTS:

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

Report Distribution:

(1) cbeverlin@bdc-engrs.com  
(1) jake@griffinriley.com  
(1) matthew.munger@cityofLS.net  
(1) mschlicht@es-ko.com  
(1) srnyan@lukedrailey.com  
(1) thauschild@nspjarch.com  
(1) tjwatreas@lukedrailey.com

KANSAS CITY TESTING & ENGINEERING,

  
JIM BYRNES, R.G.  
PROJECT MANAGER

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products.



DENSITY TEST LOCATION GRID  
RESIDENCES AT ECHELON

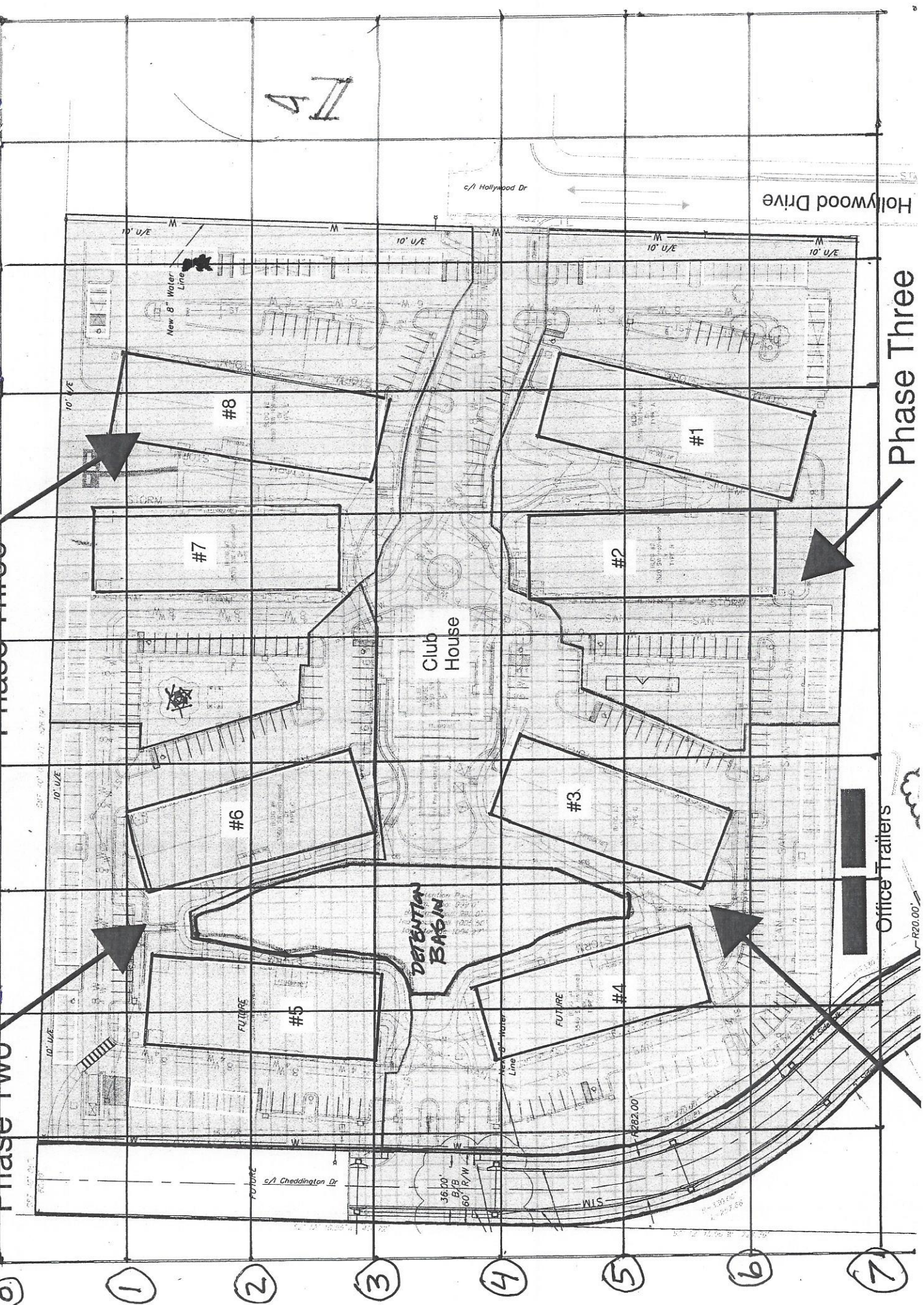
Exhibit "C" - Schedule and Phasing

(A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K)

Phase Two

Phase Three

Phase Three





## REPORT OF IN-PLACE DENSITY

**CLIENT:** GRIFFIN RILEY INVESTMENTS, LLC  
ATTN: JAKE LOVELESS  
120 SE 30TH STREET  
LEE'S SUMMIT MO 64082

PAGE 1 OF 2

**PROJECT:** THE RESIDENCES @ ECHELON  
MO 291 & 50  
LEE'S SUMMIT, MO

**PROJECT NO.:** R20-17-261  
**REPORT NO.:** K22099  
**DATE OF SERVICE:** 02/01/2018  
**AUTHORIZATION:** JAKE LOVELESS  
**REPORT DATE:** 02/12/2018

**SERVICES:** Perform in-place density and moisture content tests to determine the degree of field compaction.

### PROJECT DATA

**CONTRACTOR:** LUKE DRAILY CONST

**GAUGE:** Troxler 3440

**GAUGE SERIAL NO.:** 15277

	DENSITY	MOISTURE
<b>METHOD OF TEST:</b>	ASTM D6938	ASTM D3017
<b>SPECIFICATION:</b>	95% Min	-1 to +2% of Opt

**STANDARD COUNTS**  
**MOISTURE - CURRENT:** 713 **PREVIOUS:** 720  
**DENSITY - CURRENT:** 1485 **PREVIOUS:** 1483  
**TEST MODE:** Direct Transmission  
**PROBE DEPTH:** 8

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS		REFERENCE REPORT
			OPTIMUM MOISTURE %	MAXIMUM DENSITY pcf	
1.	STANDARD PROCTOR	GRAY SILTY CLAY	21.0	100.4	K21465
2.	STANDARD PROCTOR	BROWN-GRAY SILTY CLAY	22.1	99.9	K21467

### REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf)		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		
1.	C-0.6	8	3' bg	1	22.6	21.0	118.6	96.7	100.4	96
2.	C.9-0.6	8	6' bg	2	25.1 *	22.1	120.2	96.1	99.9	96
3.	D.1-0.6	8	9' bg	2	24.7 *	22.1	119.6	95.9	99.9	96
4.	C.9-1.2	8	5' bg	2	24.3 *	22.1	118.8	95.6	99.9	96
5.	B.9-1.2	8	3' bg	2	24.2 *	22.1	119.2	96.0	99.9	96
6.	San sewer lateral to bldg 4	8	4' bg	2	23.1	22.1	120.3	97.7	99.9	98
7.	D.1-0.6	8	6.5' bg	2	23.3	22.1	118.5	96.1	99.9	96

Report of Tests continued on page 2

PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 02/01/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf)		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		
8.	C.9-0.6	8	3' bg	2	24.3 *	22.1	119.2	95.9	99.9	96
9.	C-0.6	8	1.5' bg	2	25.0 *	22.1	119.4	95.5	99.9	96
10.	C.9-1.1	8	5' bg	1	24.3 *	21.0	119.5	96.1	100.4	96
11.	B.9-1.1	8	3' bg	2	22.4	22.1	121.1	98.9	99.9	99
12.	San sewer lateral to bldg 4	8	2' bg	2	23.7	22.1	120.9	97.7	99.9	98
13.	San sewer lateral to bldg 4	8	1' bg	2	24.2 *	22.1	121.8	98.1	99.9	98
14.	San sewer lateral to bldg 3	8	5' bg	2	25.0 *	22.1	119.6	95.7	99.9	96
15.	Line B, M/L 0+40	8	5' bg	2	24.9 *	22.1	121.5	97.3	99.9	97
16.	San sewer lateral to bldg 3	8	4' bg	2	25.0 *	22.1	119.8	95.8	99.9	96
17.	San sewer lateral to bldg 3	8	3' bg	2	24.9 *	22.1	120.9	96.8	99.9	97
18.	San sewer lateral to bldg 3	8	2' bg	2	24.1	22.1	121.7	98.1	99.9	98
19.	C.7-0.8	8	6' bg	2	22.8	22.1	117.2	95.4	99.9	95
20.	C-0.8	8	2.5' bg	2	21.2	22.1	117.2	96.7	99.9	97
21.	B.5-0.4	8	on grade	2	23.8	22.1	118.2	95.5	99.9	96
22.	C.2-1.2	8	on grade	2	22.9	22.1	124.3	101.1	99.9	101
23.	C.4-1.1	8	on grade	2	25.1 *	22.1	120.3	96.2	99.9	96

An asterisk (\*) appears next to test results which do NOT meet the project specifications as noted on page 1.

ADDITIONAL COMMENTS:

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

**Report Distribution:**

(1) cbeverlin@kdc-engrs.com  
(1) jake@griffinriley.com  
(1) matthew.munger@cityofls.net  
(1) mschlicht@es-kc.com  
(1) srnyan@lukedrailey.com  
(1) thauschild@nspjarch.com  
(1) tjwatreas@lukedrailey.com

KANSAS CITY TESTING & ENGINEERING,

  
JIM BYRNES, R.G.  
PROJECT MANAGER

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DENSITY TEST LOCATION GRID  
RESIDENCES AT ECHELON

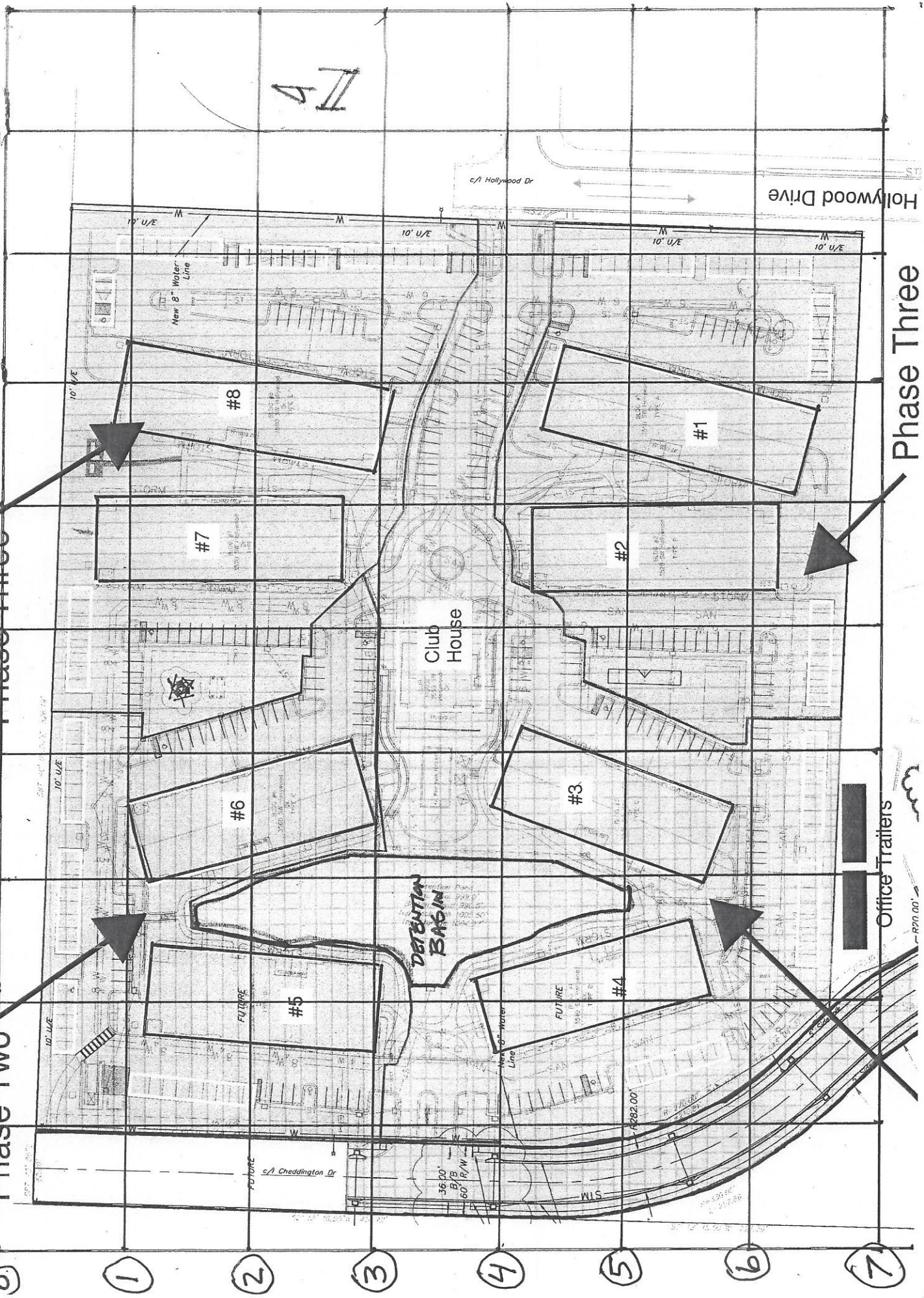
Exhibit "C" - Schedule and Phasing

Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓐ Ⓙ Ⓚ Ⓛ

Phase Two

Phase Three

Phase Three







## REPORT OF IN-PLACE DENSITY

**CLIENT:** GRIFFIN RILEY INVESTMENTS, LLC  
ATTN: JAKE LOVELESS  
120 SE 30TH STREET  
LEE'S SUMMIT MO 64082

PAGE 1 OF 2

**PROJECT:** THE RESIDENCES @ ECHELON  
MO 291 & 50  
LEE'S SUMMIT, MO

**PROJECT NO.:** R20-17-261  
**REPORT NO.:** K22123  
**DATE OF SERVICE:** 02/02/2018  
**AUTHORIZATION:** JAKE LOVELESS  
**REPORT DATE:** 02/12/2018

**SERVICES:** Perform in-place density and moisture content tests to determine the degree of field compaction.

### PROJECT DATA

**CONTRACTOR:** LUKE DRAILY CONST

**GAUGE:** Troxler 3440

**GAUGE SERIAL NO.:** 15277

	DENSITY	MOISTURE
<b>METHOD OF TEST:</b>	ASTM D6938	ASTM D3017
<b>SPECIFICATION:</b>	95% Min	-1 to +3% of opt

**STANDARD COUNTS**  
**MOISTURE - CURRENT:** 713 **PREVIOUS:** 720  
**DENSITY - CURRENT:** 1485 **PREVIOUS:** 1483  
**TEST MODE:** Direct Transmission  
**PROBE DEPTH:** 8

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS		REFERENCE REPORT
			OPTIMUM MOISTURE %	MAXIMUM DENSITY pcf	
1.	STANDARD PROCTOR	YELLOWISH BROWN SILTY CLAY	19.0	102.8	K21468
2.	STANDARD PROCTOR	BROWN-GRAY SILTY CLAY	22.1	99.9	K21467

### REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf)		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		
1.	STORM SEWER: 100' N of box 2-1	8	on grade	1	19.3	19.0	116.4	97.6	102.8	95
2.	100' SE of inlet 2-1	8	3' bg	2	24.0	22.1	120.5	97.2	99.9	97
3.	30' SW of inlet 2-4	8	2' bg	2	23.8	22.1	120.7	97.5	99.9	98
4.	30' SW of inlet 2-4	8	on grade	2	22.0	22.1	118.5	97.1	99.9	97
5.	30' NW of inlet 2-3	8	1' bg	2	22.6	22.1	122.4	99.8	99.9	100
6.	40' E of inlet 2-1	8	on grade	2	21.8	22.1	120.7	99.1	99.9	99
7.	20' E of inlet 2-1	8	2' bg	2	21.1	22.1	119.8	98.9	99.9	99

Report of Tests continued on page 2



PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 02/02/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf)		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		
8.	30' E of inlet 2-1	8	2' bg	2	22.1	22.1	121.0	99.1	99.9	99
9.	40' SE of inlet 2-1	8	on grade	1	20.0	19.0	120.0	100.0	102.8	97
10.	30' SW of inlet 2-4	8	on grade	2	21.1	22.1	120.9	99.8	99.9	100

Test results on this report meet project specifications as noted on page 1.

ADDITIONAL COMMENTS:

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

**Report Distribution:**

(1) cbeverlin@bdc-engrs.com  
(1) jake@griffinriley.com  
(1) matthew.munger@cityofls.net  
(1) mschlicht@es-kc.com  
(1) srulyan@lukedrailey.com  
(1) thauschild@nspjarch.com  
(1) tjwatreas@lukedrailey.com

KANSAS CITY TESTING & ENGINEERING,



JIM BYRNES, R.G.  
PROJECT MANAGER

## REPORT OF IN-PLACE DENSITY

**CLIENT:** GRIFFIN RILEY INVESTMENTS, LLC  
ATTN: JAKE LOVELESS  
120 SE 30TH STREET  
LEE'S SUMMIT MO 64082

PAGE 1 OF 2

**PROJECT:** THE RESIDENCES @ ECHELON  
MO 291 & 50  
LEE'S SUMMIT, MO

**PROJECT NO.:** R20-17-261  
**REPORT NO.:** K22203  
**DATE OF SERVICE:** 02/09/2018  
**AUTHORIZATION:** JAKE LOVELESS  
**REPORT DATE:** 02/12/2018

**SERVICES:** Perform in-place density and moisture content tests to determine the degree of field compaction.

### PROJECT DATA

**CONTRACTOR:** LUKE DRAILY CONST

**GAUGE:** Troxler 3440

**GAUGE SERIAL NO.:** 15277

	DENSITY	MOISTURE
<b>METHOD OF TEST:</b>	ASTM D6938	ASTM D3017
<b>SPECIFICATION:</b>	95% Min	-1 to +3% of Opt

**STANDARD COUNTS**  
**MOISTURE - CURRENT:** 715 **PREVIOUS:** 713  
**DENSITY - CURRENT:** 1482 **PREVIOUS:** 1483  
**TEST MODE:** Direct Transmission  
**PROBE DEPTH:** 8

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS		REFERENCE REPORT
			OPTIMUM MOISTURE %	MAXIMUM DENSITY pcf	
1.	STANDARD PROCTOR	GRAY SILTY CLAY	21.0	100.4	K21465
2.	STANDARD PROCTOR	REDDISH BROWN SILTY CLAY	23.1	96.7	K21466

### REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf)		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		
1.	SANITARY SEWER LINE A: 20' N of MH A-2	8	2' bg	1	21.4	21.0	119.0	98.0	100.4	98
2.	100' N of MH A-2	8	3' bg	1	21.6	21.0	123.5	101.6	100.4	101
3.	120' N of MH A-2	8	1' bg	1	22.9	21.0	119.8	97.5	100.4	97
4.	160' N of MH A-2	8	on grade	2	24.1	23.1	116.0	93.5	96.7	97
5.	220' N of MH A-2	8	1' bg	2	23.5	23.1	115.3	93.4	96.7	97

Test results on this report meet project specifications as noted on page 1.

Report of Tests continued on page 2



PROJECT NO.: R20-17-261 GRIFFIN RILEY INVESTMENTS, LLC

DATE OF SERVICE: 02/09/2018

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY		MAXIMUM DENSITY (pcf)	DENSITY (% max)
							WET	DRY		

ADDITIONAL COMMENTS:

Technician: ANDREW WILSON, SR. ENGR. TECHNICIAN

Report Distribution:

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PROJECT MANAGER