GEOTECHNOLOGY INC
FROM THE GROUND UP

September 14, 2020

Mr. Keith Welch
Trident Lee's Summit, LLC
3400 East Lafayette
Detroit, Michigan 48207

RE: Special Inspection Report No. 2
Aristocrat Pre-Owned Sales Building
704 SE Oldham Road
Lee's Summit, Missouri 64081
Report Period: March 1, 2020 to September 3, 2020
Geotechnology Inc. Project No.: J031621.02

Dear Mr. Welch:

This letter with attachments will constitute our Final Special Inspection transmittal for the above referenced project. Representatives of Geotechnology, Inc. have provided field observation and testing services for structural fill, utility trench backfill, concrete, drilled and epoxy-grouted anchors, structural masonry, and structural steel during the report period. Our services have been provided on a part-time basis as scheduled by representatives of Centric Projects. The compliance of materials or work not observed by our personnel is not addressed, or implied by this or any previous report.

Summary of Activities

Structural Fill

Field density tests were performed in the engineered fill placed in parking areas on March 13 and April 1. The engineered fill consisted of on-site clays. The fill was placed in approximately 8-inch lifts and compacted with a self-propelled sheepsfoot roller. Results of the field density tests are enclosed.

The building pad subgrade was evaluated on April 2. The low-volume-change limestone screenings placed previously were observed with respect to stability and moisture content.

The parking lot subgrade was evaluated on May 20 and June 1. The exposed grades were observed with respect to stability and moisture content prior to fill placement. The exposed grades were also proofrolled with a fully loaded tandem-axle dump truck to aid in evaluating the stability of the underlying soils.

Utility Trench Backfill

Field density tests were performed in the backfill placed in the water line trench on April 9. Results of the field density and standard Proctor tests are summarized in the attached reports.

Asphaltic Concrete

Field density tests were performed on the base course of the asphaltic concrete placed in the parking lot on July 24, August 22, and September 2. The field density test results were evaluated based on the Marshall density provided by the asphalt supplier. The field density test results are enclosed.

Concrete

Field tests were performed and compressive strength test specimens cast with concrete placed for curb and gutter between June 18 and July 22, and sidewalk and pavement between July 23 and July 25. The concrete compressive strength test results are enclosed.

Structural Masonry

Placement of the reinforcing steel and grout for the masonry walls was observed at the following locations:

March 3	-	Line C.75, 8-10 and Line 8, C.75-D at elevation 99.3' to 112' Line D, 7-8; Line K, 8-9; Line 7, B-D; and Line 8, D-K at elevation 112' to 120'
March 6	-	Line B, 7-10 and Line 7, B-D at elevation 112' to 124' Line C.75, 8-10 at elevation 112' to 120'
March 12	-	Line 10, B-K at elevation 99.3' to 112'
March 21	-	Line 10, B-K at elevation 112' to 120'
March 26	-	Line K, 8.7-10 and Line 10, B-K at elevation 120'-132.3' Line B, 9-10 at elevation 124'-132.3'
April 8	-	Line E, 2-3; Line H.1, 2-3; Line 2, E-H; Line 2, G.9-H.1; Line 3, E to F.3; and Line 3, G.9-H.1 at elevation 99.3' to 112' and 112' to 124'

Wall heights for grout locations are referenced from the top of slab elevation of 100'. Grout was observed for compliance with high lift placement procedures. Results of the compressive strength tests are enclosed.

Structural Steel

The following items within the structural steel framing were observed:

April 29	-	Joist end-bearing and deck edge angle welded connections within the roof framing between Lines A-L, 2-8 and L-K, 5-9
May 4	-	Column base plate weld washers at Grids A-1, A-4, A-6, C-6, H-3, H-4, H-5, H.5-8.5, H.5-8.9, J-4, J-5, L-4, L-5.1, L-8.2, and L-9
May 12	-	Low roof framing and joist end bearing at Lines L to 7' south of M, 1-10 and Lines F to 7' south of Line M, 1-4 - High roof joist end bearing at Line 8, K-D - Low roof metal decking at Line A-C, 4-6 and Line A-F, 1-4 - High roof metal decking Lines A-L, 4-10
May 14	-	Canopy metal decking at Lines A-C, 1-6; Line E-F, 1-4; Line K-L, 9-10; Line 1-4, G to south end; and Line 1-4, L to south end

The structural steel framing was observed for type, member size, location, connection geometry, anchor bolts, and general appearance. The A325 bolted connections were observed for size, type, condition, length, count, and for conformance with the RCSC fully pretensioned installation specifications. Welds were visually observed per AWS D1.1 for size, type, length, location, orientation, and general appearance. The metal decking was observed for size, gauge, location, orientation and lap length. The 5/8-inch diameter puddle welds were observed for general appearance, size, location, pattern interior spacing and spacing at perimeter. TEK screws were installed at sidelaps.

On May 8 sample lots of the Grade A325 tension control bolts were calibrated using a Skidmore Wilhelm supplied by the Geotechnology. The enclosed Bolt Pre-Installation Verification/Calibration report summarizes the bolt sizes and lots tested.

Corrected Variance

Drilled and Epoxy-Grouted Anchors

The bar joist bearing plates along Line 8, from D to K were off-center, not allowing the bar joist to be fully welded to the plate. On May 12, additional plates were added and anchored to the CMU bond beam with drilled and epoxy-grouted bolts. Installation of the anchors dowels was observed per RFI #036 with respect to the specified diameter, grade, embedment, projection, and type of epoxy used.

Final Inspection

To the best of our knowledge, this report covers our final observations of the materials placed during the construction of the proposed building, as specified by the City of Lee's Summit, Missouri. The items monitored included site development, structural fill, building subgrades, pavement subgrades, utility trench backfill, foundation bearing materials, reinforced concrete, drilled and epoxy-grouted reinforcing steel, drilled and epoxy-grouted anchors, structural masonry, and structural steel. The known discrepancies with the project documents were reported and have been either corrected or the as-built conditions accepted by the project engineer. Our services were provided on a part-time basis as scheduled by representatives of Centric Projects. The compliance of any materials or work not observed by our personnel cannot be determined by our firm and is not addressed, or implied, by this or any previous report. In our opinion, the materials observed by our personnel were in general compliance with the project documents or the project engineer's recommendations.

Closure

The results of our field observations and testing were reported to authorized personnel during our site visits. If you have any questions regarding this report, or if we may be of further service, please contact us.

Respectfully submitted,

GEOTECHNOLOGY, INC.

Steve Biritz
Senior Field Representative

Peter F. Brull, P.E.
Senior Engineer

Attachments: Field Soil Density Test Results
Field Asphalt Density Test Results
Concrete Compressive Strength Results
Masonry Block Prism Compressive Strength Results
Bolt Calibration Results
RFI #036

cc: Mr. Joseph Frogge – City of Lee's Summit Codes Administration
Mr. C.W. Keller – Slaggie Architects Inc.
Mr. Andrew Snyder – Centric Projects
Mr. Doug Evans – Centric Projects
Geotechnology S.I. File

Aristocrat Pre-Owned Sales Building
Unresolved Discrepancy/Variance List

NOTE: Items resolved during the report period are shaded

Variance Number	Date Opened	Date Closed	Description
1	January 7		While removing cut soils, rubble and wood debris was discovered in the central parking area.
		March 13 May 20	The contractor removed the rubble and wood debris and replaced with on-site clays. In-Place density tests were performed on March 13 and a proofroll was performed on May 20. **Discrepancy Resolved.**

GEOTECHNOLOGY INC
FROM THE GROUND UP

Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Field Density Test Results

Report Date: 03/13/2020

Area Being Filled: east parking lot

Description of Fill Material: (1) Light brown mottled gray-brown FAT CLAY - (CH)

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Elevation (feet) -/+	Max. Dry Den. @ Optimum Moisture (pcf @ %)	In Place Dry Density (pcf)	In Place Moisture (%)	Probe Depth	Percent Compaction	Moisture Tolerance (-/+)	Min. Comp. Spec. (%)	Result
1	east parking lot 50" N of Manhole 2B 15" E of manhole 2B	SG	105.3@19.1 (1)	106.50	19.70	8"	101.0	--/--	95	
2	east parking lot 100" N of manhole 2B 20" W of manhole 2B	SG	105.3@19.1 (1)	105.30	19.80	8"	100.0	--/--	95	Pass

Remarks:

Geotechnology Representative: Kurt J. Porritt

Report Date: 04/01/2020

Area Being Filled: Backfill south of building

Description of Fill Material: (1) Light brown mottled gray-brown FAT CLAY - (CH)

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Elevation (feet) -/+	Max. Dry Den. @ Optimum Moisture (pcf @ %)	In Place Dry Density (pcf)	In Place Moisture (%)	Probe Depth	Percent Compaction	Moisture Tolerance (-/+)	Min. Comp. Spec. (%)	Result
1	25' W, 75' S	Grade	105.3@19.1 (1)	103.00	19.20	10"	98.0	0.0/4.0	95	
2	25' E, 75' S	Grade	105.3@19.1 (1)	104.20	19.00	10"	99.0	0.0/4.0	95	Pass
3	50' E, 75' S	Grade	105.3@19.1 (1)	104.40	19.50	10"	99.0	0.0/4.0	95	Pass

Remarks:

Geotechnology Representative: Linda A. Souder

Report Date: 04/10/2020

Area Being Filled: Waterline backfill west of building.

Description of Fill Material: (1)

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Elevation (feet) -/+	Max. Dry Den. @ Optimum Moisture (pcf @ %)	In Place Dry Density (pcf)	In Place Moisture (%)	Probe Depth	Percent Compaction	Moisture Tolerance (-/+)	Min. Comp. Spec. (%)	Result
1	50' W 10' S of SW corner of the building	Grade	99.0@20.7 (1)	98.30	20.80	12"	99.0	0.0/4.0	95	
2	50' W 30' N of SW corner of the building	Grade	99.0@20.7 (1)	99.90	20.90	12"	101.0	0.0/4.0	95	Pass

Remarks:

Geotechnology Representative: Linda A. Souder

GEOTECHNOLOGY INC
FROM THE GROUND UP

Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Asphalt Density Test Results

Report Date: 07/23/2020

Area Being Filled: Aristocrat Motors East Parking Lot

Description of Fill Material: Type 1

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Course	Mix Design	Laboratory Density (pcf)	In Place Density (pcf)	Probe Depth (in)	Percent Compaction	Min./Max. Comp. Spec. (%)	Result
1	45' S, 45' W of NE Parking Lot Corner	Base	Type 1	149.50	151.30	Asphaltic Concrete	101.0	95.0/105.0	Pass
2	90' S, 50' W of NE Parking Lot Corner	Base	Type 1	149.50	149.30	Asphaltic Concrete	100.0	95.0/105.0	Pass
3	145' S, 60' W of NE Parking Lot Corner	Base	Type 1	149.50	147.80	Asphaltic Concrete	99.0	95.0/105.0	Pass
4	150' S, 90' W of NE Parking Lot Corner	Base	Type 1	149.50	154.50	Asphaltic Concrete	103.0	95.0/105.0	Pass
5	165' S, 120' W of NE Parking Lot Corner	Base	Type 1	149.50	149.40	Asphaltic Concrete	100.0	95.0/105.0	Pass
6	175' S, 165' W of NE Parking Lot Corner	Base	Type 1	149.50	149.20	Asphaltic Concrete	100.0	95.0/105.0	Pass
7	150' S, 175' W of NE Parking Lot Corner	Base	Type 1	149.50	150.30	Asphaltic Concrete	101.0	95.0/105.0	Pass
8	150' S, 210' W of NE Parking Lot Corner	Base	Type 1	149.50	149.50	Asphaltic Concrete	100.0	95.0/105.0	Pass
9	120' S, 210' W of NE Parking Lot Corner	Base	Type 1	149.50	148.90	Asphaltic Concrete	100.0	95.0/105.0	Pass
10	160' S, 230' W of NE Parking Lot Corner	Base	Type 1	149.50	147.40	Asphaltic Concrete	99.0	95.0/105.0	Pass
11	45' S, 150' W of NE Parking Lot Corner	Base	Type 1	149.50	152.80	Asphaltic Concrete	102.0	95.0/105.0	Pass
12	30' S, 120' W of NE Parking Lot Corner	Base	Type 1	149.50	148.90	Asphaltic Concrete	100.0	95.0/105.0	Pass
13	60' S, 240' W of NE Parking Lot Corner	Base	Type 1	149.50	146.90	Asphaltic Concrete	98.0	95.0/105.0	Pass
14	90' S, 180' W of NE Parking Lot Corner	Base	Type 1	149.50	145.20	Asphaltic Concrete	97.0	95.0/105.0	Pass
15	100' S, 150' W of NE Parking Lot Corner	Base	Type 1	149.50	146.10	Asphaltic Concrete	98.0	95.0/105.0	Pass
16	110' S, 150' W of NE Parking Lot Corner	Base	Type 1	149.50	150.80	Asphaltic Concrete	101.0	95.0/105.0	Pass
17	80' S, 120' W of NE Parking Lot Corner	Base	Type 1	149.50	151.10	Asphaltic Concrete	101.0	95.0/105.0	Pass

Remarks:

Geotechnology Representative: John D. Hootman

Report Date: 08/21/2020

Area Being Filled: West side parking lot around building

Description of Fill Material: Type 1

Report Date: 08/21/2020

Area Being Filled: West side parking lot around building

Description of Fill Material: Type 1

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Course	Mix Design	Laboratory Density (pcf)	In Place Density (pcf)	Probe Depth (in)	Percent Compaction	Min./Max. Comp. Spec. (%)	Result
1	75' N, 60' W of SW Bldg corner	Base	Type 1	149.50	149.90	Asphaltic Concrete	100.0	95.0/105.0	
2	30' N, 60' W of SW Bldg corner	Base	Type 1	149.50	150.20	Asphaltic Concrete	100.0	95.0/105.0	Pass
3	60' N, 25' W of SW Bldg corner	Base	Type 1	149.50	148.20	Asphaltic Concrete	99.0	95.0/105.0	Pass
4	5' N, 30' W of SW Bldg corner	Base	Type 1	149.50	148.70	Asphaltic Concrete	99.0	95.0/105.0	Pass
5	30' S, 60' W of SW Bldg corner	Base	Type 1	149.50	151.30	Asphaltic Concrete	101.0	95.0/105.0	Pass
6	60' S, 30' W of SW Bldg corner	Base	Type 1	149.50	150.60	Asphaltic Concrete	101.0	95.0/105.0	Pass
7	40' S, 70' E of SW Bldg corner	Base	Type 1	149.50	146.60	Asphaltic Concrete	98.0	95.0/105.0	Pass
8	60' S, 30' E of SW Bldg corner	Base	Type 1	149.50	149.30	Asphaltic Concrete	100.0	95.0/105.0	Pass
9	30' S, 30' E of SW Bldg corner	Base	Type 1	149.50	150.70	Asphaltic Concrete	101.0	95.0/105.0	Pass
10	70' S, 70' E of SW Bldg corner	Base	Type 1	149.50	148.90	Asphaltic Concrete	100.0	95.0/105.0	Pass
11	50' S, 95' E of SW Bldg corner	Base	Type 1	149.50	147.10	Asphaltic Concrete	98.0	95.0/105.0	Pass
12	30' S, 110' E of SW Bldg corner	Base	Type 1	149.50	144.30	Asphaltic Concrete	97.0	95.0/105.0	Pass
13	30' N, 110' E of SW Bldg corner	Base	Type 1	149.50	147.00	Asphaltic Concrete	98.0	95.0/105.0	Pass
14	90' S, 120' E of SW Bldg corner	Base	Type 1	149.50	150.30	Asphaltic Concrete	101.0	95.0/105.0	Pass
15	80' N, 90' E of SW Bldg corner	Base	Type 1	149.50	144.50	Asphaltic Concrete	97.0	95.0/105.0	Pass
16	30' N, 90' E of SW Bldg corner	Base	Type 1	149.50	148.70	Asphaltic Concrete	99.0	95.0/105.0	Pass

Remarks:

Geotechnology Representative: John D. Hootman

Report Date: 09/01/2020

Area Being Filled: Parking Lot surface

Description of Fill Material: Type 3-01

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Course	Mix Design	Laboratory Density (pcf)	In Place Density (pcf)	Probe Depth (in)	Percent Compaction	Min./Max. Comp. Spec. (%)	Result
1	22 feet east, 24 feet south of the lot northwest corner	Surface	Type 3-01	149.50	142.40	Asphaltic Concrete	95.0		Pass
2	54 feet east, 30 feet south of the lot northwest corner	Surface	Type 3-01	149.50	143.00	Asphaltic Concrete	96.0		Pass
3	25 feet east, 60 feet south of the lot northwest corner	Surface	Type 3-01	149.50	145.60	Asphaltic Concrete	97.0		Pass
4	54 feet east, 87 feet south of the lot northwest corner	Surface	Type 3-01	149.50	140.10	Asphaltic Concrete	94.0		Fail

Report Date: 09/01/2020

Area Being Filled: Parking Lot surface

Description of Fill Material: Type 3-01

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Course	Mix Design	Laboratory Density (pcf)	In Place Density (pcf)	Probe Depth (in)	Percent Compaction	Min./Max. Comp. Spec. (%)	Result
5	24 feet east, 95 feet south of the lot northwest corner	Surface	Type 3-01	149.50	145.40	Asphaltic Concrete	97.0		Pass
6	24 feet east, 130 feet south of the lot northwest corner	Surface	Type 3-01	149.50	143.10	Asphaltic Concrete	96.0		Pass
7	70 feet east, 120 feet south of the lot northwest corner	Surface	Type 3-01	149.50	143.40	Asphaltic Concrete	96.0		Pass
8	125 feet east, 120 feet south of the lot northwest corner	Surface	Type 3-01	149.50	143.60	Asphaltic Concrete	96.0		Pass
9	65 feet east, 157 feet south of the lot northwest corner	Surface	Type 3-01	149.50	144.40	Asphaltic Concrete	97.0		Pass
10	105 feet east, 140 feet south of the lot northwest corner	Surface	Type 3-01	149.50	143.80	Asphaltic Concrete	96.0		Pass
11	125 feet east, 157 feet south of the lot northwest corner	Surface	Type 3-01	149.50	148.00	Asphaltic Concrete	99.0		Pass
12	225 feet west, 11 feet south of the lot northeast	Surface	Type 3-01	149.50	144.00	Asphaltic Concrete	96.0		Pass
13	185 feet west, 11 feet south of the lot northeast	Surface	Type 3-01	149.50	145.10	Asphaltic Concrete	97.0		Pass
14	140 feet west, 11 feet south of the lot northeast	Surface	Type 3-01	149.50	147.20	Asphaltic Concrete	98.0		Pass
15	55 feet west, 17 feet south of the lot northeast	Surface	Type 3-01	149.50	144.60	Asphaltic Concrete	97.0		Pass
16	100 feet west, 29 feet south of the lot northeast	Surface	Type 3-01	149.50	143.20	Asphaltic Concrete	96.0		Pass
17	225 feet west, 29 feet south of the lot northeast	Surface	Type 3-01	149.50	143.70	Asphaltic Concrete	96.0		Pass
18	100 feet west, 50 feet south of the lot northeast	Surface	Type 3-01	149.50	143.10	Asphaltic Concrete	96.0		Pass
19	225 feet west, 50 feet south of the lot northeast	Surface	Type 3-01	149.50	142.60	Asphaltic Concrete	95.0		Pass
20	50 feet west, 70 feet south of the lot northeast	Surface	Type 3-01	149.50	142.70	Asphaltic Concrete	95.0		Pass
21	70 feet west, 111 feet south of the lot northeast	Surface	Type 3-01	149.50	143.50	Asphaltic Concrete	96.0		Pass
22	100 feet west, 150 feet south of the lot northeast	Surface	Type 3-01	149.50	142.40	Asphaltic Concrete	95.0		Pass
23	95 feet west, 95 feet south of the lot northeast	Surface	Type 3-01	149.50	144.90	Asphaltic Concrete	97.0		Pass
24	140 feet west, 155 feet south of the lot northeast	Surface	Type 3-01	149.50	142.50	Asphaltic Concrete	95.0		Pass
25	165 feet west, 145 feet south of the lot northeast	Surface	Type 3-01	149.50	142.40	Asphaltic Concrete	95.0		Pass
26	195 feet west, 112 feet south of the lot northeast	Surface	Type 3-01	149.50	142.10	Asphaltic Concrete	95.0		Pass
27	135 feet west, 90 feet south of the lot northeast	Surface	Type 3-01	149.50	142.20	Asphaltic Concrete	95.0		Pass
28	177 feet west, 85 feet south of the lot northeast	Surface	Type 3-01	149.50	142.70	Asphaltic Concrete	95.0		Pass
29	230 feet west, 90 feet south of the lot northeast	Surface	Type 3-01	149.50	143.40	Asphaltic Concrete	96.0		Pass
30	175 feet west, 155 feet south of the lot northeast	Surface	Type 3-01	149.50	143.60	Asphaltic Concrete	96.0		Pass
31	295 feet west, 13 feet south of the lot northeast	Surface	Type 3-01	149.50	146.70	Asphaltic Concrete	98.0		Pass

Report Date: 09/01/2020

Area Being Filled: Parking Lot surface

Description of Fill Material: Type 3-01

TABULATION OF FIELD DENSITY TEST RESULTS (ASTM D6938)

Test No.	Test Location	Course	Mix Design	Laboratory Density (pcf)	In Place Density (pcf)	Probe Depth (in)	Percent Compaction	Min./Max. Comp. Spec. (%)	Result
32	270 feet west, 18 feet south of the lot northeast	Surface	Type 3-01	149.50	143.60	Asphaltic Concrete	96.0		Pass
33	298 feet west, 52 feet south of the lot northeast	Surface	Type 3-01	149.50	143.90	Asphaltic Concrete	96.0		Pass
34	298 feet west, 100 feet south of the lot northeast	Surface	Type 3-01	149.50	146.70	Asphaltic Concrete	98.0		Pass
35	271 feet west, 74 feet south of the lot northeast	Surface	Type 3-01	149.50	143.40	Asphaltic Concrete	96.0		Pass
36	271 feet west, 155 feet south of the lot northeast	Surface	Type 3-01	149.50	143.20	Asphaltic Concrete	96.0		Pass

Remarks:

Geotechnology Representative: Thomas E. Buckley

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 03/03/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Temperature/Weather: 45°F Cloudy
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Footings at Line D, 7 to 8 and Line 7, C to D
Cast Date: 02/03/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	3.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	3.2	**Mix Design:**	P4BC500V450
Conc. Temp., ASTM C1064 (°F):	71	**Truck/Ticket No.:**	421/898360
Unit Weight, ASTM C138 (p.c.f.):	147.6	**Batch Time:**	14:21:00
Yield, ASTM C138 (ft.³):	--	**Sample Time:**	14:35:00
Truck/Accum. Quantity (yd.³):	10/10	**Mixing Time (min.):**	14
Sampled From, ASTM C172:	Truck Chute	**Initial Curing Method:**	Sealed/Curing Box
Specified Strength (psi):	**3,500**	**Cylinders Cast By:**	Kurt J. Porritt
Average Strength (psi):	**7,260**	**Received in Lab:**	02/04/2020
--	--	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
17906-1-1	--	12.50	3.99	65800	5260	5/N	02/10/2020	7
17906-1-2	--	12.44	3.98	96370	7750	2/N	03/02/2020	28
17906-1-3	--	12.44	3.98	86550	6960	5/N	03/02/2020	28
17906-1-4	--	12.44	3.98	87910	7070	2/N	03/02/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/10/2020)
David D. Windler (3/2/2020)
Dvaid D. Windler (3/2/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

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FROM THE GROUND UP

Report Date: 03/04/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Site Contact: Doug Evans
Temperature/Weather: 30°F Cloudy

Contractor: Bedrock Concrete, LLC
Sample Location: Footings at Line 10, H.5 to K
Set No.: 1
Cast Date: 02/04/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	2.75	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	--	**Mix Design:**	P4BC500V450
Conc. Temp., ASTM C1064 (°F):	68	**Truck/Ticket No.:**	421/898392
Unit Weight, ASTM C138 (p.c.f.):	--	**Batch Time:**	11:33:00
Yield, ASTM C138 (ft.³):	--	**Sample Time:**	11:55:00
Truck/Accum. Quantity (yd.³):	7/7	**Mixing Time (min.):**	22
Sampled From, ASTM C172:	Truck Chute	**Initial Curing Method:**	Sealed/Curing Box
Specified Strength (psi):	**3,500**	**Cylinders Cast By:**	Stephen A. Biritz
Average Strength (psi):	**7,353**	**Received in Lab:**	02/05/2020
--	--	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
17992-1-1	--	12.50	3.99	70020	5600	2/N	02/11/2020	7
17992-1-2	--	12.44	3.98	89490	7190	2/N	03/03/2020	28
17992-1-3	--	12.44	3.98	96050	7720	2/N	03/03/2020	28
17992-1-4	--	12.44	3.98	88910	7150	2/N	03/03/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/11/2020)
David D. Windler (3/3/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 03/06/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Temperature/Weather: 35°F Sunny
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Footings at Line L, 8.5 to 9 and Line 9, L to K
Cast Date: 02/06/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	4.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	2.8	**Mix Design:**	P4BC500V450
Conc. Temp., ASTM C1064 (°F):	63	**Truck/Ticket No.:**	358/898460
Unit Weight, ASTM C138 (p.c.f.):	148.0	**Batch Time:**	12:08:00
Yield, ASTM C138 (ft.³):	--	**Sample Time:**	12:30:00
Truck/Accum. Quantity (yd.³):	8/8	**Mixing Time (min.):**	22
Sampled From, ASTM C172:	Truck Chute	**Initial Curing Method:**	Sealed/Curing Box
Specified Strength (psi):	**3,500**	**Cylinders Cast By:**	Kurt J. Porritt
Average Strength (psi):	**7,673**	**Received in Lab:**	02/07/2020
--	--	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
18084-1-1	--	12.44	3.98	77710	6250	2/N	02/13/2020	7
18084-1-2	--	12.44	3.98	95110	7640	2/N	03/05/2020	28
18084-1-3	--	12.44	3.98	97630	7850	2/N	03/05/2020	28
18084-1-4	--	12.44	3.98	93720	7530	2/N	03/05/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/13/2020)
David D. Windler (3/5/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 03/09/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 35°F Cloudy
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Footings at Line L, 4.5 to 8.5
Cast Date: 02/07/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	3.50	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	0.0	**Mix Design:**	P4BC500V450
Conc. Temp., ASTM C1064 (°F):	65	**Truck/Ticket No.:**	324/898570
Ambient Temp. (°F):	--	**Batch Time:**	13:23:00
Unit Weight, ASTM C138 (p.c.f.):	0.0	**Sample Time:**	13:45:00
Yield, ASTM C138 (ft.³):	--	**Mixing Time (min.):**	22
Truck/Accum. Quantity (yd.³):	10/10	**Initial Curing Method:**	Sealed/Curing Box
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Kurt J. Porritt
Specified Strength (psi):	**3,500**	**Received in Lab:**	02/10/2020
Average Strength (psi):	**7,220**	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
18123-1-1	--	12.50	3.99	66360	5310	2/N	02/14/2020	7
18123-1-2	--	12.44	3.98	89670	7210	2/N	03/06/2020	28
18123-1-3	--	12.44	3.98	92590	7440	2/N	03/06/2020	28
18123-1-4	--	12.44	3.98	87230	7010	2/N	03/06/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/14/2020)
David D. Windler (3/6/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 03/11/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 45°F Sunny
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Footing at Line A, 1 to 4.5
Cast Date: 02/10/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	4.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	1.2	**Mix Design:**	P4BC500V450
Conc. Temp., ASTM C1064 (°F):	73	**Truck/Ticket No.:**	424/898664
Ambient Temp. (°F):	--	**Batch Time:**	14:25:00
Unit Weight, ASTM C138 (p.c.f.):	--	**Sample Time:**	14:45:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	20
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Field Cured
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Eric N. Behrens
Specified Strength (psi):	**3,500**	**Received in Lab:**	02/11/2020
Average Strength (psi):	**6,463**	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
18289-1-1	--	12.50	3.99	60950	4870	5/N	02/17/2020	7
18289-1-2	--	12.44	3.98	76180	6120	2/N	03/09/2020	28
18289-1-3	--	12.44	3.98	84570	6800	2/N	03/09/2020	28
18289-1-4	--	12.44	3.98	80520	6470	2/N	03/09/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/17/2020)
David D. Windler (3/9/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 03/11/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 40°F Ptl. Cloudy
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Footings at Line 2, F to H
Cast Date: 02/11/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	4.50	**Supplier:**	--
Air Content, ASTM C231 (%):	0.0	**Mix Design:**	P4BC500V450
Conc. Temp., ASTM C1064 (°F):	65	**Truck/Ticket No.:**	438/898746
Ambient Temp. (°F):	--	**Batch Time:**	14:23:00
Unit Weight, ASTM C138 (p.c.f.):	0.0	**Sample Time:**	14:35:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	12
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed/Curing Box
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Kurt J. Porritt
Specified Strength (psi):	**3,500**	**Received in Lab:**	02/12/2020
Average Strength (psi):	**7,757**	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
18315-1-1	--	12.44	3.98	69800	5610	2/N	02/18/2020	7
18315-1-2	--	12.44	3.98	96140	7730	2/N	03/10/2020	28
18315-1-3	--	12.44	3.98	94730	7610	2/N	03/10/2020	28
18315-1-4	--	12.44	3.98	98630	7930	2/N	03/10/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/18/2020)
David D. Windler (3/10/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 03/23/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 38°F Sunny
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Footings at Line 4, H to K
Cast Date: 02/19/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	3.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	--	**Mix Design:**	P4BC500V450
Conc. Temp., ASTM C1064 (°F):	65	**Truck/Ticket No.:**	422/899042
Ambient Temp. (°F):	38	**Batch Time:**	13:24:00
Unit Weight, ASTM C138 (p.c.f.):	--	**Sample Time:**	14:03:00
Yield, ASTM C138 (ft.³):	--	**Mixing Time (min.):**	39
Truck/Accum. Quantity (yd.³):	8/8	**Initial Curing Method:**	Field Cured
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Eric N. Behrens
Specified Strength (psi):	**3,500**	**Received in Lab:**	02/20/2020
Average Strength (psi):	**7,043**	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
18738-1-1	--	12.50	3.99	70000	5600	2/N	02/26/2020	7
18738-1-2	--	12.50	3.99	87990	7040	5/N	03/18/2020	28
18738-1-3	--	12.50	3.99	86300	6900	2/N	03/18/2020	28
18738-1-4	--	12.50	3.99	89900	7190	2/N	03/18/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/26/2020)
David D. Windler (3/18/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 03/23/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 35°F Ptl. Cloudy
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Footings at Line 2, G to H and Grids J/2, L/2, M/4, M/5.1, M/8.2, M/9, and M/9
Cast Date: 02/20/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	1.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	5.0	**Mix Design:**	W500-3/4-4.50
Conc. Temp., ASTM C1064 (°F):	68	**Truck/Ticket No.:**	307/899090
Ambient Temp. (°F):	34	**Batch Time:**	13:13:00
Unit Weight, ASTM C138 (p.c.f.):	147.6	**Sample Time:**	14:00:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	47
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Linda A. Souder
Specified Strength (psi):	**4,000**	**Received in Lab:**	02/21/2020
Average Strength (psi):	**6,813**	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
18708-1-1	--	12.32	3.96	60720	4930	2/N	02/27/2020	7
18708-1-2	--	12.44	3.98	92170	7410	2/N	03/19/2020	28
18708-1-3	--	12.44	3.98	81800	6580	2/N	03/19/2020	28
18708-1-4	--	12.44	3.98	80230	6450	2/N	03/19/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (2/27/2020)
David D. Windler (3/19/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 05/18/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 39°F Ptl. Cloudy
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Slab-on-grade at Grid D/8.2
Cast Date: 04/15/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	7.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	2.2	**Mix Design:**	W564-3/4-6.48
Conc. Temp., ASTM C1064 (°F):	68	**Truck/Ticket No.:**	421/802485
Ambient Temp. (°F):	38	**Batch Time:**	06:56:00
Unit Weight, ASTM C138 (p.c.f.):	148.8	**Sample Time:**	07:15:00
Yield, ASTM C138 (ft.³):	--	**Mixing Time (min.):**	19
Truck/Accum. Quantity (yd.³):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Linda A. Souder
Specified Strength (psi):	**4,000**	**Received in Lab:**	04/16/2020
Average Strength (psi):	**6,840**	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
22123-1-1	--	12.50	3.99	70160	5610	2/N	04/22/2020	7
22123-1-2	--	12.50	3.99	88460	7070	2/N	05/13/2020	28
22123-1-3	--	12.50	3.99	86020	6880	2/N	05/13/2020	28
22123-1-4	--	12.50	3.99	82170	6570	2/N	05/13/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (4/22/2020)
David D. Windler (5/13/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 05/18/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 39°F Ptl. Cloudy
Site Contact: Doug Evans

Contractor: Bedrock Concrete, LLC
Set No.: 2
Sample Location: Slab-on-grade at Grid C/5
Cast Date: 04/15/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	6.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	2.0	**Mix Design:**	W540-3/4-6.45
Conc. Temp., ASTM C1064 (°F):	68	**Truck/Ticket No.:**	354/802489
Ambient Temp. (°F):	41	**Batch Time:**	07:14:00
Unit Weight, ASTM C138 (p.c.f.):	149.4	**Sample Time:**	07:45:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	31
Truck/Accum. Quantity ($yd.^3$):	10/60	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Linda A. Souder
Specified Strength (psi):	**4,000**	**Received in Lab:**	04/16/2020
Average Strength (psi):	**7,033**	**Condition Received:**	Satisfactory

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
22123-2-1	--	12.50	3.99	65010	5200	2/N	04/22/2020	7
22123-2-2	--	12.50	3.99	86700	6930	2/N	05/13/2020	28
22123-2-3	--	12.50	3.99	89200	7130	2/N	05/13/2020	28
22123-2-4	--	12.50	3.99	87990	7040	2/N	05/13/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (4/22/2020)
David D. Windler (5/13/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 07/16/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Site Contact: Doug Evans
Ave. Temperature/Weather: 88°F Ptl. Cloudy
Report No.: 27085

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Curb and gutter, 0 feet south, 0 to 20 feet east of the parking lot northeast corner
Cast Date: 06/18/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	0.75	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	5.8	**Mix Design:**	KCMMB 4K
Conc. Temp., ASTM C1064 (°F):	84	**Truck/Ticket No.:**	337/807082
Ambient Temp. (°F):	89	**Batch Time:**	08:12:00
Unit Weight, ASTM C138 (p.c.f.):	145.2	**Sample Time:**	09:00:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	48
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Linda A. Souder
Specified Strength (psi):	**4,000**	**Received in Lab:**	
Average Strength (psi):	**7,413**	**Condition Received:**	Satisfactory
Field Condition:	Satisfactory	--	--

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
27085-1-1	--	12.50	3.99	73520	5880	2/N	06/25/2020	7
27085-1-2	--	12.50	3.99	90640	7250	2/N	07/16/2020	28
27085-1-3	--	12.50	3.99	91090	7290	2/N	07/16/2020	28
27085-1-4	--	12.50	3.99	96270	7700	2/N	07/16/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (6/25/2020)
David D. Windler (7/16/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 08/06/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Ave. Temperature/Weather: 92°F Sunny
Site Contact: Doug Evans
Report No.: 28687

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Curb and gutter at 20 feet south, 72 to 90 feet west of the building southwest corner
Cast Date: 07/08/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	1.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	7.0	**Mix Design:**	KC4KDM10Q
Conc. Temp., ASTM C1064 (°F):	89	**Truck/Ticket No.:**	356/808663
Ambient Temp. (°F):	93	**Batch Time:**	13:18:00
Unit Weight, ASTM C138 (p.c.f.):	--	**Sample Time:**	14:00:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	42
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Eric N. Behrens
Specified Strength (psi):	**4,000**	**Received in Lab:**	07/09/2020
Average Strength (psi):	**7,083**	**Condition Received:**	Satisfactory
Field Condition:	Satisfactory	--	--

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
28687-1-1	--	12.38	3.97	70770	5720	2/N	07/15/2020	7
28687-1-2	--	12.44	3.98	92470	7430	2/N	08/05/2020	28
28687-1-3	--	12.44	3.98	91600	7360	2/N	08/05/2020	28
28687-1-4	--	12.44	3.98	80340	6460	2/N	08/05/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (7/15/2020)
David D. Windler (8/5/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 08/10/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Site Contact: Doug Evans
Ave. Temperature/Weather: 91°F Sunny
Report No.: 28804

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Curb and gutter at 19 feet east, 15 feet south to 55 feet north of the building southeast corner
Cast Date: 07/09/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	1.25	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	6.0	**Mix Design:**	KC4KDM10Q
Conc. Temp., ASTM C1064 (°F):	89	**Truck/Ticket No.:**	468/808766
Ambient Temp. (°F):	91	**Batch Time:**	11:49:00
Unit Weight, ASTM C138 (p.c.f.):	--	**Sample Time:**	12:20:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	31
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Mark E. McIntyre
Specified Strength (psi):	**4,000**	**Received in Lab:**	07/10/2020
Average Strength (psi):	**7,165**	**Condition Received:**	Satisfactory
Field Condition:	Satisfactory	--	--

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
28804-1-1	--	12.50	3.99	65580	5240	2/N	07/16/2020	7
28804-1-2	--	12.50	3.99	42090	3370	2/N	08/05/2020	27
28804-1-3	--	12.50	3.99	93730	7500	2/N	08/06/2020	28
28804-1-4	--	12.50	3.99	85420	6830	2/N	08/06/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks: Cylinder 28804-1-2 removed from 28-day compressive strength average.

Tested By: David D. Windler (7/16/2020)
David D. Windler (8/5/2020)
David D. Windler (8/6/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 08/11/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Site Contact: Doug Evans
Ave. Temperature/Weather: 77°F Ptl. Cloudy
Report No.: 28731

Contractor: Bedrock Construction
Sample Location: Curb and gutter at 0 feet south, 0 to 25 feet west of the building northwest corner
Set No.: 1
Cast Date: 07/10/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	1.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	6.1	**Mix Design:**	KCMMB 4K
Conc. Temp., ASTM C1064 (°F):	74	**Truck/Ticket No.:**	466/808842
Ambient Temp. (°F):	72	**Batch Time:**	05:38:00
Unit Weight, ASTM C138 (p.c.f.):	142.6	**Sample Time:**	06:15:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	37
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Linda A. Souder
Specified Strength (psi):	**4,000**	**Received in Lab:**	07/11/2020
Average Strength (psi):	**6,263**	**Condition Received:**	Satisfactory
Field Condition:	Satisfactory	--	--

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
28731-1-1	--	12.50	3.99	59400	4750	2/N	07/17/2020	7
28731-1-2	--	12.50	3.99	80920	6470	2/N	08/07/2020	28
28731-1-3	--	12.50	3.99	74830	5980	2/N	08/07/2020	28
28731-1-4	--	12.50	3.99	79330	6340	5/N	08/07/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (7/17/2020)
David D. Windler (8/7/2020)

Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 08/03/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Site Contact: Doug Evans
Ave. Temperature/Weather: 85°F Ptl. Cloudy
Report No.: 29837

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Curb island at 20 to 30 feet north, 15 feet west of the building southwest corner
Cast Date: 07/22/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	1.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	5.7	**Mix Design:**	KCMMB 4K
Conc. Temp., ASTM C1064 (°F):	83	**Truck/Ticket No.:**	422/809616
Ambient Temp. (°F):	98	**Batch Time:**	11:57:00
Unit Weight, ASTM C138 (p.c.f.):	146.0	**Sample Time:**	12:30:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	33
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Linda A. Souder
Specified Strength (psi):	**4,000**	**Received in Lab:**	07/23/2020
Average Strength (psi):	**5,730**	**Condition Received:**	Satisfactory
Field Condition:	Satisfactory	--	--

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
29837-1-1	--	12.50	3.99	71630	5730	2/N	07/29/2020	7
29837-1-2	--	--	--	--	--	--	08/19/2020	28
29837-1-3	--	--	--	--	--	--	08/19/2020	28
29837-1-4	--	--	--	--	--	--	08/19/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (7/29/2020)
Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 08/04/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Site Contact: Doug Evans
Ave. Temperature/Weather: 88°F Sunny
Report No.: 29886

Contractor: Bedrock Concrete, LLC
Set No.: 1
Sample Location: Sidewalk at 19 feet south to 63 feet north, 0 to 19 feet east; 0 to 19 feet south, 19 feet east to 90 feet west; and 19 feet south to 30 feet north, 84 to 98 feet west of the building southeast corner
Cast Date: 07/23/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	7.00	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	6.8	**Mix Design:**	KC4KDM60Q
Conc. Temp., ASTM C1064 (°F):	87	**Truck/Ticket No.:**	356/809715
Ambient Temp. (°F):	88	**Batch Time:**	07:35:00
Unit Weight, ASTM C138 (p.c.f.):	--	**Sample Time:**	08:05:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	30
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Mark E. McIntyre
Specified Strength (psi):	**4,000**	**Received in Lab:**	07/24/2020
Average Strength (psi):	**4,830**	**Condition Received:**	Satisfactory
Field Condition:	Satisfactory	--	--

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
29886-1-1	--	12.57	4.00	60690	4830	2/N	07/30/2020	7
29886-1-2	--	--	--	--	--	--	08/20/2020	28
29886-1-3	--	--	--	--	--	--	08/20/2020	28
29886-1-4	--	--	--	--	--	--	08/20/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (7/30/2020)
Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Report Date: 08/04/2020
Client: Trident Lee's Summit, LLC
Project: J031621.02
Aristocrat Pre-Owned Sales Building
Lee's Summit, MO

Concrete Cylinder Test Results

General Contractor: CentricProjects
Site Contact: Doug Evans
Ave. Temperature/Weather: 75°F Clear
Report No.: 29984

Contractor: Bedrock Concrete, LLC
Sample Location: Trash Enclosure Pad
Set No.: 1
Cast Date: 07/25/2020

FIELD DATA (ASTM C31)

Slump, ASTM C143 (in.):	4.75	**Supplier:**	Geiger Ready-Mix
Air Content, ASTM C231 (%):	6.8	**Mix Design:**	KC4KDM40Q
Conc. Temp., ASTM C1064 (°F):	84	**Truck/Ticket No.:**	377/810014
Ambient Temp. (°F):	75	**Batch Time:**	07:07:00
Unit Weight, ASTM C138 (p.c.f.):	141.6	**Sample Time:**	07:30:00
Yield, ASTM C138 ($ft.^3$):	--	**Mixing Time (min.):**	23
Truck/Accum. Quantity ($yd.^3$):	10/10	**Initial Curing Method:**	Sealed
Sampled From, ASTM C172:	Truck Chute	**Cylinders Cast By:**	Tresor Vesolo-Mouanda
Specified Strength (psi):	**4,000**	**Received in Lab:**	07/26/2020
Average Strength (psi):	**4,840**	**Condition Received:**	Satisfactory
Field Condition:	Satisfactory	--	--

Laboratory Data (ASTM C39 / C1231 / C617)

Cylinder ID/ Report No.	Cylinder Weight (lbs.)	Cross Sec. Area (sq.in.)	Cylinder Diameter (in.)	Maximum Load (lbs.)	Compressive Strength (psi)	Fracture/ Capping Type *	Test Date	Cylinder Test Age (day)
29984-1-1	--	12.50	3.99	60480	4840	2/N	08/01/2020	7
29984-1-2	--	--	--	--	--	--	08/22/2020	28
29984-1-3	--	--	--	--	--	--	08/22/2020	28
29984-1-4	--	--	--	--	--	--	08/22/2020	28

* Fracture type as shown in Figure 2, ASTM C39 / Capping type: N - Neoprene Pads (C1231); B - Bonded (C617); G - Ground

Remarks:

Tested By: David D. Windler (8/1/2020)
Reviewed by: Peter F. Brull (Senior Engineer)

CC: Welch, Keith (Trident Lee"s Summit, LLC) (e)
Keller, C.W. (Slaggie Architects Inc) (e)
Evans, Doug (Centricprojects) (e)
Snyder, Andrew (Centricprojects) (e)

GEOTECHNOLOGY INC
FROM THE GROUND UP

Compressive Strength of Masonry Block Prisms
ASTM C 1314

Client:	Trident Lee's Summit, LLC	**Sample No:**	20-001
Project Name:	Arristocrat Pre-Owned Sales Building	**Project Number:**	J031621.02
Contractor:	Centric Projects	**Report Date:**	August 12, 2020
Sample Location:	N/A	**Elevation:**	N/A

Field Data

Subcontractor:	Bell Masonry	**Date Sampled:**	2/28/2020
Technician:	Eric Behrens	**Max/Min Temperature (^{o}F):**	N/A
Weather:	Sunny	**Specified Strength - f'm (psi):**	1,500
Temperature (^{o}F):	48	**Block Width (DxHxL, inch):**	12x4x16
Mortar Type:	Type N	**Number of Mortar Beds:**	1
Grout Type:	N/A	**Construction Type[1]:**	Hollow Cell

Laboratory Data

Specimen Dimensions

Unit Number	Average Height (in.)	Average Length (in.)	Average Width (in.)	Height to Width Ratio	Correction Factor
A	7.60	15.55	11.62	0.65	0.75
B	7.69	15.55	11.60	0.66	0.75
C	7.65	15.56	11.62	0.66	0.75

Net Block Prism Area - ASTM C 140 (in^{2}): 83.00

Compressive Strength Test Result

Unit Number	Age (days)	Break Date	Compressive Load (lbs.)	Compressive Strength (psi)	Corrected Strength (psi)	Fail Mode
A	7	3/6/2020	176,890	2,130	1,600	N/A
B	28	3/27/2020	295,610	3,560	2,670	N/A
C	28	3/27/2020	285,790	3,440	2,580	N/A

Average 28-day Strength (psi): 2,630

Reviewed by: Peter F. Brull, P.E.

Comments:

[1]Hollow cell or fully grouted

GEOTECHNOLOGY INC
FROM THE GROUND UP

Compressive Strength of Masonry Block Prisms
ASTM C 1314

Client:	Trident Lee's Summit, LLC.	**Sample No:**	20-002
Project Name:	Aristocrat Pre-Owned Sales Bldg.	**Project Number:**	J031621.02
Contractor:	Centric Projects	**Report Date:**	August 12, 2020
Sample Location:	Line B, 7-10	**Elevation:**	99.3' to 112.3'

Subcontractor:	Bell Masonry	**Date Sampled:**	2/28/2020
Technician:	Eric Behrens	**Max/Min Temperature (°F):**	N/A
Weather:	Sunny	**Specified Strength - f'm (psi):**	1,500
Temperature (°F):	48	**Block Width (DxHxL, inch):**	12x8x16
Mortar Type:	Type N	**Number of Mortar Beds:**	1
Grout Type:	N/A	**Construction Type[1]:**	Hollow Cell

Laboratory Data

Specimen Dimensions

Unit Number	Average Height (in.)	Average Length (in.)	Average Width (in.)	Height to Width Ratio	Correction Factor
20-002A	15.60	15.61	11.68	1.34	0.86
20-002B	15.70	15.64	11.69	1.34	0.86
20-002C	15.62	15.66	11.69	1.34	0.86

Net Block Prism Area - ASTM C 140 (in²): 82.00

Compressive Strength Test Result

Unit Number	Age (days)	Break Date	Compressive Load (lbs.)	Compressive Strength (psi)	Corrected Strength (psi)	Fail Mode
20-002A	7	3/6/2020	242,500	2,960	2,550	N/A
20-002B	28	3/27/2020	225,910	2,760	2,370	N/A
20-002C	28	3/27/2020	312,240	3,810	3,280	N/A

Average 28-day Strength (psi): 2,830

Reviewed by: Peter F. Brull, P.E.

Comments:

[1]Hollow cell or fully grouted

GEOTECHNOLOGY INC
FROM THE GROUND UP

Compressive Strength of Masonry Block Prisms
ASTM C 1314

Client:	Trident Lee's Summit, LLC	**Sample No:**	20-003
Project Name:	Arristocrat Pre-Owned Sales Building	**Project Number:**	J031621.02
Contractor:	Centric Projects	**Report Date:**	August 12, 2020
Sample Location:	N/A	**Elevation:**	N/A

Field Data

Subcontractor:	Bell Masonry	**Date Sampled:**	2/28/2020
Technician:	Eric Behrens	**Max/Min Temperature (^{o}F):**	N/A
Weather:	Sunny	**Specified Strength - f'm (psi):**	1,500
Temperature (^{o}F):	48	**Block Width (DxHxL, inch):**	8x8x16
Mortar Type:	Type N	**Number of Mortar Beds:**	1
Grout Type:	N/A	**Construction Type[1]:**	Hollow Cell

Laboratory Data

Specimen Dimensions

Unit Number	Average Height (in.)	Average Length (in.)	Average Width (in.)	Height to Width Ratio	Correction Factor
A	15.64	15.65	7.67	2.04	1.00
B	15.67	15.63	7.67	2.04	1.00
C	15.65	15.67	7.69	2.03	1.00

Net Block Prism Area - ASTM C 140 (in^{2}): 60.00

Compressive Strength Test Result

Unit Number	Age (days)	Break Date	Compressive Load (lbs.)	Compressive Strength (psi)	Corrected Strength (psi)	Fail Mode
A	7	3/6/2020	130,740	2,180	2,180	N/A
B	28	3/27/2020	143,790	2,400	2,400	N/A
C	28	3/27/2020	146,350	2,440	2,440	N/A

Average 28-day Strength (psi): 2,420

Reviewed by: Peter F. Brull, P.E.

Comments:

[1]Hollow cell or fully grouted

A325/A490 BOLT PRE-INSTALLATION VERIFICATION CALIBRATION FORM

(for fully pre-tensioned and/or slip-critical connections – threads excluded)

Project Name: Aristocrat Pre-Owned Sales Building Date: 05/08/2020

Project Number: J031621.02 Foreman:

Tightening Method	☐ Turn-of-Nut	☒ Twist-off (Tension Control) Type	☐ Direct Tension Indicator	☐ Calibrated Wrench

Bolt Assembly/ASTM #			Lot Numbers			Diameter (in)	Length (in)	Kips/Torque/Gap		
Bolt	Washer	Nut	Bolt	Washer	Nut					
A325	F436	A563				¾	1 ¾	34	39	38
A325	F436	A563				¾	2	34	36	34
	F436	A563								
	F436	A563								
	F436	A563								
	F436	A563								

Calibration and Tightening Equipment			
Location	**Type and Model**	**Serial Number**	**Calibration Date**
Job Site	**Skidmore Wilhelm MS**	15113	09/30/2019
Job Site	**Torque Wrench (Manual)**		
Job Site	**Impact Wrench (Air/Elec.)**	060-9298	

Bolting Crew:

Table 1
Minimum Bolt Pretension (kips)

Nominal Bolt Diameter	A325 and F1852	A490
1/2”	12.6	15.75
5/8”	19.95	25.2
3/4”	29.4	36.75
7/8”	40.95	51.45
1”	53.55	67.2
1-1/8”	58.8	84.0
1-1/4”	74.55	107.1
1-3/8”	89.25	127.05
1-1/2”	108.15	155.4

Table 2
Nut Rotation from Snug-Tight

Disposition of Outer Face of Bolted Parts			
Bolt Length (d = diameter)	**Both faces normal to bolt axis**	**One face normal to bolt axis, other sloped not more than 1:20**	**Both faces sloped not more than 1:20 from normal to bolt axis**
Not more than 4 x d	1/3 turn	1/2 turn	2/3 turn
More than 4 x d but not more than 8 x d	1/2 turn	2/3 turn	5/6 turn
More than 8 x d but not more than 12 x d	2/3 turn	5/6 turn	1 turn

Field Representative: P. Brull **Reviewed By:**

Notice: The Geotechnology representative is on-site to observe operations of the contractor identified, form opinions about the accuracy of those operations and report those opinions to the client. The presence and activities of our field representative do not relieve the contractor from its obligation to meet contractual requirements. No one except our client may rely on our findings and opinions. The contractor retains sole responsibility for site safety and the methods, operations, and sequences of construction.

Note: Until reviewed and signed by an authorized Geotechnology project manager, this Calibration Form is to be considered preliminary and is provided solely as evidence that the field observation was performed. Observations, conclusions, and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in a preliminary report.

GEOTECHNOLOGY INC
FROM THE GROUND UP

RFI #036

Centric
520 W Pennway St, Suite 100
Kansas City, Missouri 64108
Phone: 8163898300

Project: 19-032 - Aristocrat New Building
704 SE Oldham Pkwy
Lee's Summit, Missouri 64081

8 Line top of wall embeds

TO:	Greg Bernard **(Slaggie Architects, Inc.)** *(Response Required)*	**FROM:**	Doug Evans **(Centric)** 1814 Main Kansas City, Missouri 000-006-4108
DATE INITIATED:	04/29/2020	**STATUS:**	Open
LOCATION:		**DUE DATE:**	05/01/2020
PROJECT STAGE:	Construction	**COST CODE:**	
SUB JOB:		**SCHEDULE IMPACT:**	TBD
COST IMPACT:	TBD	**SPEC SECTION:**	
DRAWING NUMBER:	E103	**REFERENCE:**	
LINKED DRAWINGS:			
RECEIVED FROM:	Phillip Tanner **(Doing Steel)**		

COPIES TO:
Greg Bernard **(Slaggie Architects, Inc.)**, Doug Evans **(Centric)**, CW Keller **(Slaggie Architects, Inc.)**, Phillip Tanner **(Doing Steel)**

Question from Doug Evans (Centric) at 03:47 PM on 04/28/2020

There are 6 embeds on top of the masonry wall along 8 line that are off center by 1-1/2" not allowing a weld to one side of the joists bearing on them. Please see the RFI and proposed solution from Doing Steel regarding this issue.

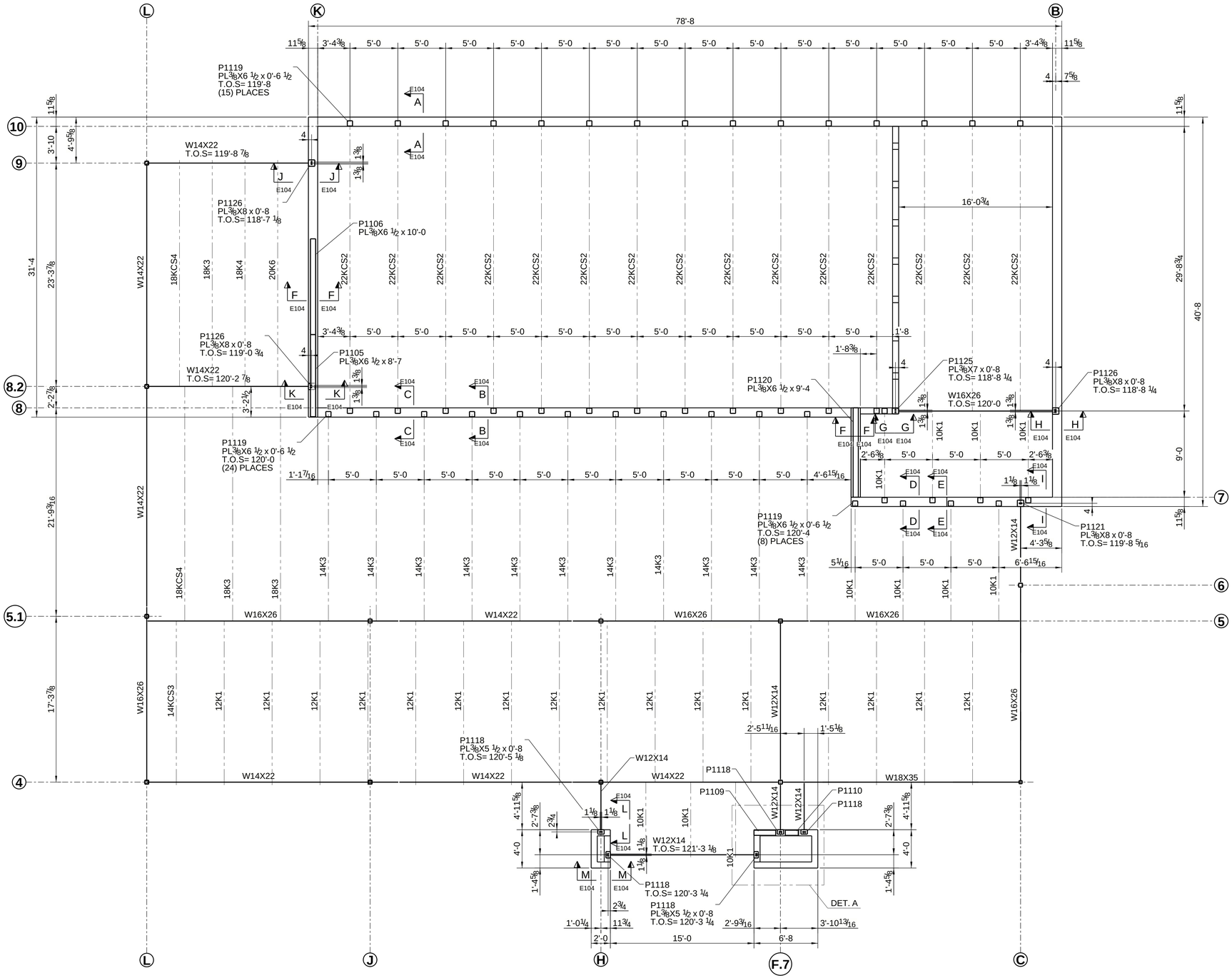
Attachments:
E103.pdf 19-5033 RFI 016.pdf

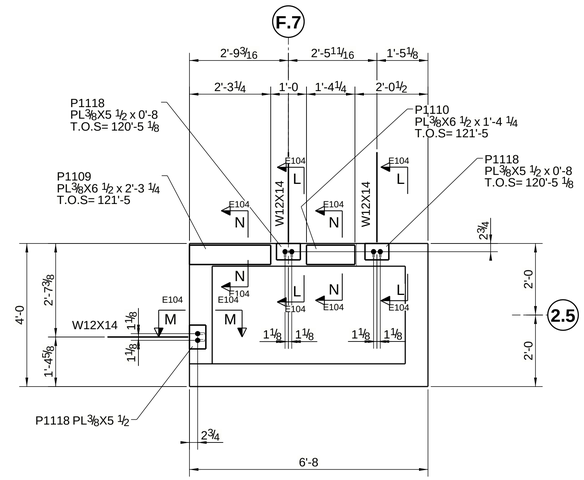
Awaiting an Official Response

All Replies:

ok with 5/8"dia. epoxy anchors
with 4" embed. hilti hit hy 270
clark basinger, bdc, 4-30-2020

BY **DATE** **COPIES TO**





DETAIL - A

EMBED PLAN AT HIGH ROOF

NOTES
MATERIALS WILL NOT BE SCHEDULED FOR FABRICATION UNTIL APPROVAL IS RECEIVED.
AISC CODE OF STANDARD PRACTICE, AMERICAN INSTITUTE OF STEEL CONSTRUCTION
16.3-57 Subsection 7.14 Correction of errors
The correction of minor misfits by moderate amounts of reaming, grinding, welding or cutting, and the drawing of elements into line with drift pins, shall be considered to be normal erection operations. Errors that cannot be corrected using the foregoing means, or that require major changes in member or connection configuration, shall be promptly reported to the owner's designated representatives for design and construction and the fabricator by the erector, to enable the responsible entity to either correct the error or approve the most efficient and economical method of correction to be used by others. Unless this procedure is followed no back charges will be accepted.

PAINT _____ (Unless Noted)	ISSUE		DATE
CLEAN _____ (Unless Noted)	APPROVAL		A: 10/31/2019
	B:	C:	D:
BOLTS _____ A325 (U.N.O.)	FABRICATION		
HOLES _____ (Unless Noted)	JOB USE		0:

AISC CERTIFIED FABRICATOR

DOING STEEL
2125 N. Golden, Springfield, MO 65803
(417) 866-5020 FAX (417) 866-7619
www.doingsteel.com

DETAILED BY:	SJB
DATE:	10/31/2019
CHECKED BY:	BH
DATE:	12/16/2019

DATE	NO.	DESCRIPTION	BY
12/20/2019	0	FOR FIELD USE	SJB
10/31/2019	A	FOR APPROVAL ONLY	SJB

BOLTED CONNECTIONS: BOLT TYPE 1 SNUG TIGHT UNO

JOB	ARISTOCRAT PRE-OWNED SALES BUILDING
CUSTOMER	CENTRIC
LOCATION	LEE'S SUMMIT, MO
ARCH - ENGR	BOB D CAMPBELL & CO.
DESCRIPTION	EMBED PLAN AT ROOF

DOING ORDER 5033
SHEET NO. E103
REFERENCE:

DOING STEEL

2125 N. Golden
Springfield, MO 65803-2287
417-866-5020 Fax 417-866-7619

ACTIVE MEMBER

REQUEST FOR INFORMATION

RFI #: 016

Date: 4/28/2020

From: Phillip Tanner

Attn: **Andrew Snyder**

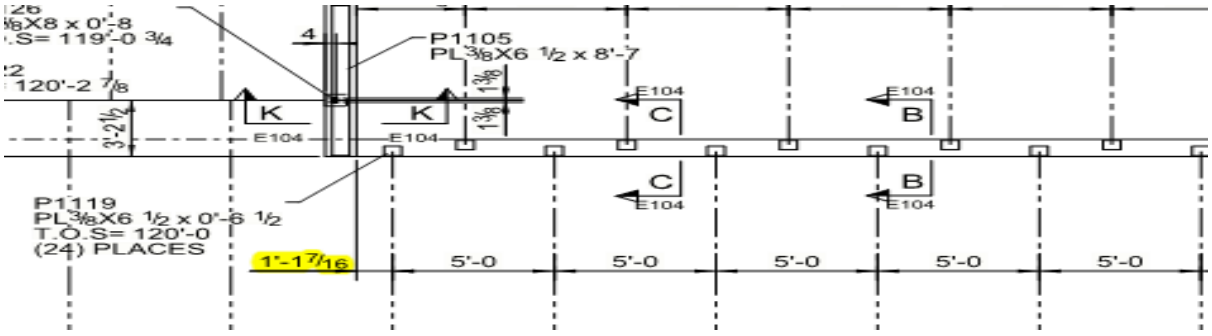
Project: **5033 Aristocrat**

Subject: Embed Placement @ Gridline 8

References: E103

6 embeds in the tops of the wall at grid line 8 are set approximately 1.5” off center not allowing the joist to seat properly on the cast in place embed plates.

We propose to add a ½” X 6” X 6-12” Plate with 2 epoxy anchors.
Please specify epoxy anchor DIA and embed depth.



Please respond by: ASAP

The response to this RFI may impact the cost, schedule and scope of the project. Unless noted otherwise, the response shall constitute a Release for Construction.

Thank you.