

October 31, 2024

RE: IL 53 Temporary Soil Retention System (TSRS)  
 IDOT Contract Number 62N91  
 IDOT Job Number D-91-144-21  
 Section 2018-100-BR  
 Cook County  
 District 1  
 PTB 203-021  
 Gonzalez Job No. 23-1003

SUBJECT: TEMPORARY SOIL RETENTION SYSTEMS

This memorandum was produced by Gonzalez Companies, LLC working as a sub-consultant to Strand Associates, Inc. and is part of a Phase II contract with the Illinois Department of Transportation (IDOT). The work is included as part of the IL 53 Bridge Rehabilitation Project from IL 62 (Algonquin Road) to US 12 (Rand Road). The Temporary Soil Retention System (TSRS) soil borings for IL 62 (Algonquin Road), Kirchoff Road, Euclid Ave, Industrial Avenue, Palatine Road, US 12 (Rand Road), Anderson Drive, and drainage junction chambers along south bound IL-53 north of Rand Road are presented in Table 1.

**Table 1 Boring Locations and Elevations**

Boring ID	Date Drilled	Boring Depth (ft)	Surface Elevation (ft)	Station (ft)	Offset (ft)	TSRS General Location
GC-03	5/1/2023	45	743.8	2229+40	108 RT	Euclid Avenue
GC-04	5/1/2023	45	751.9	3228+98	114 LT	Euclid Avenue
GC-09	5/3/2023	45	751.3	3344+18	29 RT	Palatine Road
GC-12	5/4/2023	45	749.8	3208+17	27 RT	Kirchoff Road
GC-13	5/4/2023	45	750.5	3205+19	28 RT	Kirchoff Road
GC-15	5/7/2023	45	742.7	3258+66	29 RT	Industrial Avenue
GC-16	5/8/2023	45	744.3	3255+83	26 RT	Industrial Avenue
GC-22	5/9/2023	40	742.5	2134+62	26 LT	IL 62 (Algonquin Road)
GC-29	5/11/2023	45	738.5	2415+44	30 LT	US 12 (Rand Road)
GC-61	5/22/2024	45	737.4	2365+78	30 LT	Anderson Drive
GC-62	5/22/2024	45	739.0	2364+95	30 LT	Anderson Drive

Boring ID	Date Drilled	Boring Depth (ft)	Surface Elevation (ft)	Station (ft)	Offset (ft)	TSRS General Location
GC-83	5/21/2024	50	731.2	3422+03	28 LT	Drainage Junction Chamber
GC-84	5/21/2024	50	727.4	3423+63	31 LT	Drainage Junction Chamber
GC-85	5/20/2024	40	722.7	3426+33	32 LT	Drainage Junction Chamber
GC-86	5/20/2024	40	722.3	3429+40	34 LT	Drainage Junction Chamber
GC-87	5/19/2024	40	723.1	3431+83	38 LT	Drainage Junction Chamber
GC-90	10/6/2024	40	718.0	3414+50	95 LT	US 12 (Rand Road)

Temporary excavations will be required during reconstruction of the bridges. We understand sheet piling for is not feasible due to proximity to existing foundation elements, so a Temporary Soil Retention System (TSRS) is recommended. The TSRS should be designed in accordance with Section 522.07 of the IDOT Standard Specifications and to withstand surcharges of traffic and/or structural loads, as appropriate by the contractor. In addition, the contractor should design the TSRS based on encountered soils, anticipated groundwater, and anticipated surcharge loading. The tables below provide basic soil parameters for each of the TSRS locations to assist the contractor with design of the TSRS. The contractor shall review the boring logs associated with each structure and verify soil parameters during the design of the TSRS.

**Table 2. Euclid Avenue Soil Parameters based on Boring GC-03 and GC-04**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 725	9	2.9	125	30	100	0	1500
Natural Deposits (Glacial)	Below 725	11	2.4	120	28	100	0	2000
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

**Table 3. Palatine Road Soil Parameters based on Boring GC-09**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak Friction Angle, phi	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 724	14	3.8	125	30	100	0	2500
Natural Deposits (Glacial)	Below 724	16	3.8	120	28	100	0	2500
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

**Table 4. Kirchoff Road Soil Parameters based on Boring GC-12 and GC-13**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak Friction Angle, phi	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 725	7	2.6	125	30	100	0	1500
Natural Deposits (Glacial)	Below 725	11	2.6	120	28	100	0	2000
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

**Table 5. Industrial Avenue Soil Parameters based on Boring GC-15 and GC-16**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak Friction Angle, phi	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 725	10	3.0	125	30	100	0	2200
Natural Deposits (Glacial)	Below 725	10	1.9	120	28	100	0	1500
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

**Table 6. IL 62 (Algonquin Road) Soil Parameters based on Boring GC-22**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak Friction Angle, phi	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 723	11	2.9	125	30	100	0	2200
Natural Deposits (Glacial)	Below 723	11	2.0	120	28	100	0	1800
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

**Table 7. US 12 (Rand Road) Soil Parameters based on Boring GC-29**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak Friction Angle, phi	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 715	11	2.3	125	30	100	0	2000
Natural Deposits (Glacial)	Below 715	14	3.1	120	28	100	0	2500
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

**Table 8 Anderson Drive Soil Parameters based on Boring GC-61 and GC-62**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak Friction Angle, phi	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 720	11	3.2	125	30	100	0	2000
Natural Deposits (Glacial)	Below 720	15	3.4	120	28	100	0	2500
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500



**Table 9 Drainage Junction Chamber Soil Parameters based on Boring GC-83, GC-84, GC-85, GC-86, GC-87**

Stratum	Approximate Elevation (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak Friction Angle, phi	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Embankment Fill (Existing)	Above 720	8	2.2	125	30	100	0	1500
Natural Deposits (Glacial)	Below 720	10	2.2	120	28	100	0	1500
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

**Table 10. US 12 (Rand Road) Soil Parameters based on Boring GC-90**

Stratum	Depth (ft)	Average N-value (bpf)	Average Rimac Qu Value (tsf)	Total Unit Weight (pcf)	Drained Strengths		Undrained Strengths	
					Peak	Cohesion (psf)	Friction Angle, phi	Shear Strength (psf)
Clay, med. stiff	0 - 12	5	1.7	125	30	100	0	1500
Clay, med. Stiff	12 - 15	11	0.6	120	28	100	0	1250
Clay, stiff	15 - 40	13	1.6	120	30	100	32	2000
Compacted Granular Backfill (New Gravel)	-	-	-	130	34	-	34	-
Compacted Structural Backfill (New Clay)	-	-	-	120	28	100	0	1500

Attachment 1 Soil Boring Logs (17)

Attachment 2 Boring Location Maps (6)

Prepared by: Eric Glazier, P.E.  
 GONZALEZ COMPANIES, LLC  
 Prepared for: STRAND ASSOCIATES, INC.

ROUTE FAP 342 DESCRIPTION Euclid Rd over IL 53 LOGGED BY Gonzalez (NRK)

 SECTION 2018-100-BR LOCATION NE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
 Latitude 42.0886101, Longitude -88.0304341

 COUNTY Cook DRILLING METHOD Hollow stem auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO.	Station	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	GROUNDWATER Elev. (ft)	First Encounter Upon Completion After Hrs.	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)
016-1018	411+00												
BORING NO. GC-03	Station 2229+40												
	Offset 107.7 ft RT												
	Ground Surface Elev. 743.8	ft	(ft)	(/6")	(tsf)	(%)				(ft)	(/6")	(tsf)	(%)
ASPHALT - 10"		743.0					Medium Stiff, Brown, Moist, CLAY, Trace Gravel, Some Silt						
Medium Stiff to Very Stiff, Brown, Moist, CLAY, Some Gravel, Some Silt, Trace Sand (fill)			2		3.5	13					3		15
Trace Gravel			5		P						5		
			3								3		
			4		3.6	15					4	1.6	14
			-5		B						-25	5	B
			3								5		
			4		2.1	16					6	1.6	13
			7		B						6	B	
			4								4		
			6		5.2	16					7	5.1	19
			-10		B						-30	4	B
			4										
			9		5.4	14							
			10		B								
			7								3		
Stiff to Very Stiff, Brown, Moist, CLAY, Some Gravel, Some Silt, Trace Sand		729.8	7		7.7	14					3	0.5	25
			-15		B						-35	5	B
			3										
			4		1.9	15							
			5		B								
			4								8		
			4		2.1	15					7		18
		723.8	-20		B						-40	8	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

ROUTE FAP 342 DESCRIPTION Euclid Rd over IL 53 LOGGED BY Gonzalez (NRK)

SECTION 2018-100-BR LOCATION NE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.0886101, Longitude -88.0304341

COUNTY Cook DRILLING METHOD Hollow stem auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO. <u>016-1018</u>	D E P T H	B L O W S	U C S  Qu	M O I S T	Surface Water Elev. _____ ft
Station <u>411+00</u>					Stream Bed Elev. _____ ft
BORING NO. <u>GC-03</u>	ft (ft)	(/6")	(tsf)	(%)	Groundwater Elev.: _____
Station <u>2229+40</u>					First Encounter <u>720.3</u> ft ▼
Offset <u>107.7 ft RT</u>					Upon Completion _____ ft
Ground Surface Elev. <u>743.8</u> ft					After _____ Hrs. _____ Filled ft

Stiff, Brown, Moist, CLAY, Trace Gravel, Trace Silt (continued)	_____				
	_____				
	_____	3			
	_____	4	2.5	21	
698.8	-45	7	B		
Boring terminated at 45 feet.	_____				
	_____				
	_____				
	_____				
	_____				
	_____				
	_____				
	_____				
	_____				
	_____				
	_____				
	_____				

ROUTE FAP 342 DESCRIPTION Euclid Rd over IL 53 LOGGED BY Gonzalez (NRK)

 SECTION 2018-100-BR LOCATION NE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
 Latitude 42.0886032, Longitude -88.0315478

 COUNTY Cook DRILLING METHOD Hollow stem auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO.	Station	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	GROUNDWATER ELEV.	First Encounter	Upon Completion	After	DEPTH	BLOW	UCS	MOIST	
		(ft)	(/6")	(tsf)	(%)	ft	ft	ft	Dry	ft ∇	ft	(ft)	(/6")	(tsf)	(%)	
016-1018	411+00															
GC-04	3228+98															
	114.4 ft LT															
	751.9															
ASPHALT - 9"		751.2														
Very Soft to Medium Stiff, Brown, Wet, CLAY, Trace Gravel (fill)			3										3			
			2	2.5	17								4	2.9	14	
			2	P									6	B		
			1										3			
			2	1.1	16								3	3.0	16	
		-5	2	B								-25	5	B		
Very Soft			WH										2			
			WH	0.5	23								4	2.3	18	
			WH	P									4	B		
			1										3			
			3	0.8	21								4	2.6	15	
		-10	4	B								-30	5	B		
			3													
		739.9	4	2.3	24											
Medium Stiff to Stiff, Brown and Black, Moist, CLAY			3	B												
			2										3			
			2	1.0	29								3	1.7	18	
		-15	3	B								-35	6	B		
			3													
			4	2.5	16											
			7	B												
		733.9														
Medium Stiff to Stiff, Brown, Moist, CLAY, Trace Gravel			3										3			
			5	3.1	15								4	2.5	25	
		-20	7	B								-40	5	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

**ROUTE**  FAP 342     **DESCRIPTION**  Euclid Rd over IL 53     **LOGGED BY**  Gonzalez (NRK)   
**SECTION**  2018-100-BR     **LOCATION**  NE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,   
 Latitude 42.0886032, Longitude -88.0315478   
**COUNTY**  Cook     **DRILLING METHOD**  Hollow stem auger (8" O.D., 3.25" I.D.)     **HAMMER TYPE**  Auto 140 lb HE 105

<b>STRUCT. NO.</b> <u> 016-1018 </u>	<b>D E P T H</b> <b>B L O W S</b> <b>U C S</b> <b>M O I S T</b>	<b>Surface Water Elev.</b> _____ <b>ft</b>	
<b>Station</b> <u> 411+00 </u>		<b>Stream Bed Elev.</b> _____ <b>ft</b>	
<b>BORING NO.</b> <u> GC-04 </u>		<b>Groundwater Elev.:</b>	
<b>Station</b> <u> 3228+98 </u>		<b>First Encounter</b> <u> Dry </u> <b>ft</b>	
<b>Offset</b> <u> 114.4 ft LT </u>	<b>Qu</b> <b>(%)</b>	<b>Upon Completion</b> <u> 715.4 </u> <b>ft</b> ▽	
<b>Ground Surface Elev.</b> <u> 751.9 </u> <b>ft</b>		<b>After</b> _____ <b>Hrs.</b> <u> Filled </u> <b>ft</b>	

Description	(ft)	(/6")	(tsf)	(%)
Medium Stiff to Stiff, Brown, Moist, CLAY, Trace Gravel <i>(continued)</i>	12		4.0	21
706.9	-45		P	
Boring terminated at 45 feet.				
	-50			
	-55			
	-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Palatine Rd LOGGED BY Gonzalez (BR)

SECTION 2018-100-BR LOCATION SW 1/4, SEC. 18, TWP. 42N, RNG. 11E, 3<sup>rd</sup> PM,  
Latitude 42.11055789, Longitude 88.00317255

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO.	Station	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	GROUNDWATER ELEV.:	First Encounter	Upon Completion	After	DEPTH	BLOW	UCS	MOIST
		(ft)	(/6")	(tsf)	(%)	ft	ft		Dry	Dry	Filled	(ft)	(/6")	(tsf)	(%)
016-0970															
GC-09	3344+18														
	28.9 ft RT														
	751.3														
CONCRETE - 12.5"								Stiff, Brown, Moist, CLAY							
	750.3							(continued)							
Loose, Brown, Moist, Fine SAND	750.0		5										3		
Stiff, Brown, Dry, CLAY, Some Gravel, Trace Sand and Gravel			4	3.5	12								5	2.3	24
			7	P									7	B	
			3										6		
			5	3.3	21								8	3.5	24
Stiff, Black, Dry, CLAY	746.6		7	B									10	B	
	746.3	-5										-25			
Stiff, Brown, Dry to Moist, CLAY, Some Sand, Trace Gravel			4					Organic Material					8		
			5	3.9	15								11	9.9	17
			6	B									15	S	
			3										6		
			4	2.0	25								10	6.6	14
			5	B									13	B	
		-10										-30			
Stiff, Brown, Moist to Dry, CLAY, Trace Gravel	740.8		3												
			5	3.8	12										
			6	B											
			2										4		
			7	4.0	10								8	5.6	17
			5	P									11	B	
		-15										-35			
			5												
Stiff, Brown and Dark Brown, Dry, CLAY	735.2		5												
			5	3.4	17										
	734.0		7	S											
Stiff, Brown, Moist, CLAY															
			5										4		
			7	2.3	17								4	1.9	19
			9	B									6	B	
		-20										-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Palatine Rd LOGGED BY Gonzalez (BR)

SECTION 2018-100-BR LOCATION SW 1/4, SEC. 18, TWP. 42N, RNG. 11E, 3<sup>rd</sup> PM,  
Latitude 42.11055789, Longitude 88.00317255

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO. 016-0970  
 Station \_\_\_\_\_

BORING NO. GC-09  
 Station 3344+18  
 Offset 28.9 ft RT  
 Ground Surface Elev. 751.3 ft

DEPTH H (ft)	BLOW W (/6")	UCS S (tsf)	MOIST I S T (%)
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Surface Water Elev. \_\_\_\_\_ ft  
 Stream Bed Elev. \_\_\_\_\_ ft  
 Groundwater Elev.:  
 First Encounter \_\_\_\_\_ Dry ft  
 Upon Completion \_\_\_\_\_ Dry ft  
 After \_\_\_\_\_ Hrs. \_\_\_\_\_ Filled ft

Stiff, Brown, Moist, CLAY  
 (continued)

706.3 -45

4			
5	1.2	15	
7	B		

Boring terminated at 45 feet.

-50

-55

-60

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

ROUTE FAP 342 DESCRIPTION IL 53 over Kirchoff Rd LOGGED BY Gonzalez (BR)

 SECTION 2018-100-BR LOCATION SE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
 Latitude 42.08288755, Longitude 88.03089875

 COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

 STRUCT. NO. 016-1121  
 Station \_\_\_\_\_  
 BORING NO. GC-12  
 Station 3208+17  
 Offset 27.4 ft RT  
 Ground Surface Elev. 749.8 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
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Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft
Groundwater Elev.:	
First Encounter _____ Dry ft	
Upon Completion _____ Dry ft	
After _____ Hrs. _____ Filled ft	

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
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CONCRETE - 10"	749.0				Stiff, Dark Brown, Moist, CLAY, Trace Gravel				
Loose, Brown, Moist, Course SAND	748.8	4					3		
Medium Stiff to Stiff, Brown, Dry, CLAY, Trace Gravel		2	3.0	17			5	1.7	17
		3	B			727.5	6	B	
		4			Medium Stiff to Stiff, Brown, Dry, CLAY, Trace Gravel				
		4					2		
		4	2.5	16			3	1.4	18
	-5	5	B				4	B	
		4					4		
		2	0.6	18			5	3.6	16
		2	B				9	B	
		1					4		
		1	0.6	20			7	7.2	17
	-10	3	B				10	B	
		2							
		2	2.9	20					
		4	B						
		3					2		
		4		21			3	2.7	18
	-15	5					5	B	
		2							
		2	1.4	20					
		5	B						
		4					2		
		5	2.8	19			4	2.3	21
	729.8 -20	5	B				6	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)





# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Kirchoff Rd LOGGED BY Gonzalez (BR)  
 SECTION 2018-100-BR LOCATION SE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
 COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105  
 Latitude 42.08288755, Longitude 88.03089875

STRUCT. NO. <u>016-1121</u> Station _____	DEPTH H	BLOW S	UCS Qu	M O I S T	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft
BORING NO. <u>GC-12</u> Station <u>3208+17</u> Offset <u>27.4 ft RT</u> Ground Surface Elev. <u>749.8</u> ft	(ft)	(/6")	(tsf)	(%)	Groundwater Elev.: First Encounter _____ Dry ft Upon Completion _____ Dry ft After _____ Hrs. _____ Filled ft

Medium Stiff to Stiff, Brown, Dry, CLAY, Trace Gravel ( <i>continued</i> )	704.8	-45	6	2.6	19	
Boring terminated at 45 feet.	-50	-55	-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Kirchoff Rd LOGGED BY Gonzalez (BR)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.08209321, Longitude 88.03066368

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO.	Station	BORING NO.	Station	Offset	Ground Surface Elev.	D E P T H  H	B L O W S	U C S  Qu	M O I S T  T	Surface Water Elev.	Stream Bed Elev.	D E P T H  H	B L O W S	U C S  Qu	M O I S T  T
					ft	(ft)	(/6")	(tsf)	(%)	ft	ft	(ft)	(/6")	(tsf)	(%)
016-1121		GC-13	3205+19	28.1 ft RT	750.5										
CONCRETE - 13"						749.4				Medium Stiff to Stiff, Brown, Moist, CLAY, Trace Gravel ( <i>continued</i> )					
Medium Stiff to Stiff, Brown, Moist, CLAY, Trace Gravel							4						2		
							2	3.5	18				2	1.2	17
							3	P					3	B	
							2						6		
							2	1.2	22				6	2.6	17
						-5	3	B				-25	8	B	
							4						3		
							4	5.1	29				3	1.1	16
							3	S					4	B	
							4						3		
							4	6.7	16				4	2.9	18
						-10	5	B				-30	5	B	
							2								
							2	2.8	16						
							3	B							
							2						6		
							4	3.4	16				8		19
						-15	6	B				-35	10		
							4								
							6	4.9	19						
							7	B							
							2						5		
							4	3.3	19				4	0.3	22
						-20	4	B				-40	4	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)





# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Industrial Ave LOGGED BY Gonzalez (BR)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 23, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.09593014, Longitude 88.02682141

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO.	Station	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	DEPTH	BLOW	UCS	MOIST
		(ft)	(/6")	(tsf)	(%)	ft	ft	(ft)	(/6")	(tsf)	(%)
016-1120											
GC-15	3258+66										
	28.8 ft RT										
	742.7										
CONCRETE - 12"						Stiff to Soft, Brown to Dark Brown, Moist to Wet, CLAY, Trace Gravel (continued)					
	741.7										
			4						6		
			2		16				3	1.0	20
	740.5		3						4	B	
Loose, Brown, Moist, Fine SAND											
	739.7										
Medium Stiff to Stiff, Brown, Moist, CLAY											
			3						2		
			4	1.7	15				4	1.2	22
		-5	5	B				-25	7	B	
			3						0		
			4	2.2	19				0	0.2	25
			5	B			715.7		4	B	
Medium Stiff to Stiff, Brown, Wet, CLAY, Trace Gravel											
	734.7										
Medium Stiff to Stiff, Dark Brown, Moist, CLAY											
			5						5		
			3	1.6	23				6		19
		-10	3	B				-30	5		
			3								
			4		20						
			6								
			2						3		
			2	1.8	23				3	1.9	15
		-15	4	B				-35	5	B	
Stiff to Soft, Brown to Dark Brown, Moist to Wet, CLAY, Trace Gravel											
	727.2										
			3								
			4	3.7	26						
			4	B							
			3						2		
			2	2.0	15				3	1.2	17
		-20	5	P				-40	4	B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION IL 53 over Industrial Ave LOGGED BY Gonzalez (BR)

SECTION 2018-100-BR LOCATION SE 1/4, SEC. 23, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM, Latitude 42.09593014, Longitude 88.02682141

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO. 016-1120  
 Station \_\_\_\_\_  
 BORING NO. GC-15  
 Station 3258+66  
 Offset 28.8 ft RT  
 Ground Surface Elev. 742.7 ft

DEPTH	BLOWS	UCS	MOIST		
				Qu	T
				(ft)	(/6")

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter _____ <u>Dry</u> ft
Upon Completion _____ <u>Dry</u> ft
After _____ Hrs. _____ <u>Filled</u> ft

Medium Stiff to Stiff, Brown, Wet, CLAY, Trace Gravel (continued)

4			
6	2.7	17	
8	B		

697.7 -45

Boring terminated at 45 feet.

-50			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

ROUTE FAP 342 DESCRIPTION IL 53 over Industrial Ave LOGGED BY Gonzalez (BR)

 SECTION 2018-100-BR LOCATION NE 1/4, SEC. 26, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
 Latitude 42.09530666, Longitude 88.02743663

 COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO.	Station	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	Surface Water Elev. ft	Stream Bed Elev. ft	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)
016-1120											
BORING NO.	GC-16										
Station	3255+83										
Offset	25.8 ft RT										
Ground Surface Elev.	744.3	ft	(ft)	(/6")	(tsf)	(%)					
CONCRETE - 11"						Stiff to Hard, Brown, Dry to Wet, CLAY, Trace Gravel					
	743.4										
Loose, Brown, Moist, Fine SAND	742.8		2					6			
Medium Stiff to Stiff, Brown, Moist to Wet, CLAY, Trace Gravel			4	1.2	19			8	3.5	15	
			3	B				10	S		
			3					4			
			5	4.9	11			5	3.7	17	
			7	B				8	B		
			5					4			
			6	4.9	16			5	2.1	13	
			6	B				6	B		
			4					3			
			7	5.6	13			3	1.4	12	
			8	B				5	B		
			2								
			5	4.1	19						
			7	B							
			4					4			
			6	2.6	18			5	2.8	18	
			9	B				7	B		
			3								
			3	1.4	26						
Organics	727.2		8	B							
			4					49			
			7	2.0	21			50	1.6	17	
			9	P				24	B		
	724.3	-20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

**ROUTE** FAP 342 **DESCRIPTION** IL 53 over IL 62 (Algonquin Rd) **LOGGED BY** Gonzalez (BR)
**SECTION** 2018-100-BR **LOCATION** NW 1/4, SEC. 7, TWP. 41N, RNG. 11E, 3<sup>rd</sup> PM,  
Latitude 42.06298957, Longitude 88.02804913
**COUNTY** Cook **DRILLING METHOD** Hollow Stem Auger (8" O.D., 3.25" I.D.) **HAMMER TYPE** Auto 140 lb HE 105

STRUCT. NO. <u>016-0378</u> Station _____	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. <u>GC-22</u> Station <u>2134+62</u> Offset <u>26.2 ft LT</u> Ground Surface Elev. <u>742.5</u> ft	_____	_____	_____	_____	Stream Bed Elev. _____ ft	_____	_____	_____	_____
_____	_____	_____	_____	_____	Groundwater Elev.: First Encounter <u>Dry</u> ft Upon Completion <u>Dry</u> ft After _____ Hrs. _____ Filled ft	_____	_____	_____	_____
CONCRETE - 14" <u>741.3</u>					Stiff, Brown to Dark Brown, Moist to Wet, CLAY, Trace Gravel <i>(continued)</i>				
Loose, Brown, Moist, Fine SAND <u>740.5</u>	5		3.5	24			5		
Stiff, Brown, Dry, CLAY, Trace Gravel	4	3	P				6	2.2	28
	3						7	B	
	2						4		
	5	3.4		17			5	2.1	19
	-5	7	B				-25	5	B
	5						3		
	6	3.7		13			5	1.4	22
	8	B					8	B	
	4						3		
	6	3.5		13			4	2.0	17
	-10	7	P				-30	5	B
	4								
	6	3.8		16					
	7	B							
	3						4		
	6	2.6		19			5	1.8	19
	-15	8	B				-35	6	B
<u>726.5</u>									
Gravel/Asphalt with Clay	13								
	15			10					
<u>725.3</u>	19								
Stiff, Brown to Dark Brown, Moist to Wet, CLAY, Trace Gravel	3						5		
	5	0.7		26			5	2.6	
	-20	5	B				8	B	
						702.5	-40		

Boring terminated at 40 feet.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



ROUTE FAP 342 DESCRIPTION IL 53 over US 12 (Rand Rd) LOGGED BY Gonzalez (BR)

 SECTION 2018-100-BR LOCATION SE 1/4, SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.13000191, Longitude 88.0048029

 COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 105

STRUCT. NO.	Station	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	GROUNDWATER Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (ft)	Hrs.	Filled	DEPTH (ft)	BLOW (ft)	UCS (tsf)	MOIST (%)	
016-0973																		
GC-29	2415+44																	
	30.1 ft LT																	
	738.5																	
ASPHALT - 14"		737.3																
Medium Stiff to Stiff, Brown, Dry, CLAY, Trace Gravel			5		20										4		1.3	14
			2	0.6											5	B		
			3	B											6			
			4															
			4	7.0	18										4		1.2	15
			4	B											5	B		
			6												5			
			3															
			4	2.3	13										3			
			4	B											4			18
			4															
			4	4.3	11										34			
			8	B											50/4"			16
			3															
			6	2.4	15													
			11	B														
Medium Stiff to Stiff, Brown to Black, Dry, CLAY, Trace Gravel, Some Organics		726.0																
			4															
			3	1.7	18										3		3.4	15
			5	B											8	B		
			4															
			5	2.9	24													
			10	B														
			3															
			6	2.6	22										7		4.6	16
			8	B											11	B		
Medium Dense, Brown, Wet, Fine SAND		718.5																
			8												15			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)





# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - North side Anderson Drive LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 18, TWP. 42N, RNG. 11E, 3<sup>rd</sup> PM,  
Latitude 42.1164080, Longitude -88.003780

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	DEPTH H	BLOW S	UCS Qu	MOIST T
BORING NO. <u>GC-61</u> Station <u>2365+78</u> Offset <u>29.1 ft LT</u> Ground Surface Elev. <u>737.4</u> ft	(ft)	(/6")	(tsf)	(%)	_____ ft	_____ ft	(ft)	(/6")	(tsf)	(%)
Concrete - 12"	736.4									
Loose, Brown, SANDY LOAM	1			17			4			
	3						5	3.0	19	
							8	B/S		
	733.9									
Medium Stiff to Stiff, Brown, CLAY, some sand and gravel	3						6			
	4	4.3	15				8	4.8	16	
	-5	5	B/S				-25	10	B	
	3	2.1	20				4			
	3	B					11	5.4	19	
	4						12	B		
	2						5			
	4	2.4	18				6	3.9	19	
	-10	5	B/S				-30	9	B	
	3									
	5	3.1	15							
	5	B/S								
	4									
	6	3.0	19				7			
	-15	6	B/S				-35	6	0.3	10
	4									
	7	2.8	17							
	7	B								
	5									
	8	2.4	23					4		
	-20	9	B				-40	4	0.2	17

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



ROUTE FAP 342 DESCRIPTION TSRS - South Side Anderson Drive LOGGED BY Gonzalez (OG)

 SECTION 2018-100-BR LOCATION SEC. 18, TWP. 42N, RNG. 11E, 3<sup>rd</sup> PM,  
Latitude 42.1161850, Longitude -88.0037343

 COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. Station	D E P T H  H  ft	B L O W S  S  (/6")	U C S  Qu  (tsf)	M O I S T  T  (%)	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	D E P T H  ft	B L O W S  S  (/6")	U C S  Qu  (tsf)	M O I S T  T  (%)
Concrete - 11" 738.1										
Stiff, Brown, CLAY, with to some sand and gravel		4					5			
		4	2.6	13			8	7.3	17	
		4	B/S				12	S		
		6					4			
		7	4.6	14			5	4.3	16	
	-5	7	B/S			-25	9	B/S		
		7					3			
		5	2.6	15			5	4.1	19	
		7	B				8	B		
		3					4			
		4	3.0	15			5	3.0	18	
	-10	5	B/S			-30	8	B		
		3								
		5	2.0	14						
	5	S								
	4						3			
	6	3.6	23			7	2.8	20		
-15	8	B/S			-35	7	B			
	3									
	6	5.8	23							
	8	B/S								
						701.0				
----- 720.5						700.0				
	4						4			
	7	3.6	19				3		19	
-20	8	B				-40	3			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - South Side Anderson Drive LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 18, TWP. 42N, RNG. 11E, 3<sup>rd</sup> PM,  
 Latitude 42.1161850, Longitude -88.0037343

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. _____	D E P T H  H	B L O W S	U C S  Qu	M O I S T	Surface Water Elev. _____ ft
Station _____					Stream Bed Elev. _____ ft
BORING NO. <u>GC-62</u>					Groundwater Elev.:
Station <u>2364+95</u>					First Encounter _____ Dry ft
Offset <u>30.0 ft LT</u>					Upon Completion _____ Dry ft
Ground Surface Elev. <u>739.0</u> ft	(ft)	(/6")	(tsf)	(%)	After _____ Hrs. _____ Filled ft

Stiff, brown, SANDY CLAY, some silt (continued)	_____				
	_____				
	_____				
	_____		4		
Boring terminated at 45 feet.	694.0 -45		6	1.5	18
			8	B	

Boring terminated at 45 feet.	_____			
	_____			
	_____			
	_____			
	_____			
	_____			
	_____			
	_____			
	_____			
	_____			
	_____			
	-50			
	_____			
	_____			
-55				
_____				
_____				
_____				
_____				
_____				
_____				
-60				



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - Drainage Junction Chamber LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.13181764, Longitude -88.0050245

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. Stream Bed Elev.	DEPTH H	BLOW S	UCS Qu	MOIST T
	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
Asphalt - 12" 730.4					Medium Stiff, Brown, CLAY, some silt and gravel (continued)				
Medium Stiff to Stiff, Brown CLAY, some sand, silt, and gravel	3					2			
	4	2.2	23			3	2.3	15	
	9	B/S				5	B		
	2					3			
	4	2.3	28			3	2.1	15	
	-5	4	B/S			-25	5	B	
	3					3			
	5	2.4	26			4	2.1	14	
	6	B/S				5	B/S		
	3					3			
	3	1.4	22			5	2.3	15	
	-10	5	B/S			-30	6	B	
720.2					699.2				
Medium Stiff, Brown, SANDY CLAY, some silt and gravel	2				Medium Dense, brown, SANDY LOAM, with GRAVEL				
	3	0.0	17						
	3								
717.7									
Medium Stiff, Brown, SANDY CLAY LOAM, some silt and gravel	4					6			
	3	2.0	21			5	0.0	13	
	-15	6	B			-35	7		
715.2									
Medium Stiff, Brown, CLAY, some silt and gravel	3								
	5	1.7	18						
	5	B							
	3								
	3	2.0	16			7			
	-20	5	B			-40	9	0.0	11
							1		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - Drainage Junction Chamber LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.13181764, Longitude -88.0050245

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. _____ Station _____		D E P T H (ft)	B L O W S (/6")	U C S  Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft
BORING NO. <u>GC-83</u> Station <u>3422+03</u> Offset <u>28.2 ft LT</u> Ground Surface Elev. <u>731.2</u> ft						Stream Bed Elev. _____ ft
						Groundwater Elev.:
						First Encounter _____ <u>Dry</u> ft
						Upon Completion _____ <u>Dry</u> ft
						After _____ Hrs. _____ <u>Filled</u> ft
Medium Dense, brown, SANDY LOAM, with GRAVEL ( <i>continued</i> )			4			
			3	0.0	23	
		-45	5			
	684.2					
Medium Stiff, Brown, CLAY, some sand and gravel			5			
			5	0.9	20	
	681.2	-50	6	B		
Boring terminated at 50 feet.						
		-55				
		-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)





# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - Drainage Junction Chamber LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.13225478, Longitude -88.0050367

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. Stream Bed Elev.	DEPTH H	BLOW S	UCS Qu	MOIST T
	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
Asphalt - 10"	726.6				Medium Stiff to Stiff, Brown, CLAY, some sand and gravel (continued)				
Medium Stiff, Brown, SANDY CLAY, some gravel	2					3			
	3	2.7	25			5	1.7	15	
	4	B				6	B		
Medium Stiff to Stiff, Brown, CLAY, some gravel and sand	723.9								
	2					3			
	5	2.3	26			5	1.9	16	
Loose to Medium Dense, Brown, CLAYEY SAND, with gravel	-5	6	B			-25	6	B	
	721.4								
	2					3			
Medium Dense, Brown, SAND, with Gravel, little clay and silt	2	0.5	22			5	1.9	16	
	2	B				8	B		
	698.9								
Medium Stiff to Stiff, Brown, CLAY, some sand and gravel	5					4			
	7	0.6	13			4		14	
	-10	9	B/S			-30	4		
Medium Stiff to Stiff, Brown, CLAY, some sand and gravel	716.4								
	2								
	3	1.5	15						
	4	B							
	2								
	3	1.6	14			5			
	-15	3	B			-35	4		17
	3								
	3	2.2	14						
	4	B							
	3								
	5								
	4	2.3	15						
	-20	6	B			-40	4		12

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - Drainage Junction Chamber LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION , SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
 Latitude 42.13225478, Longitude -88.0050367

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. Station	DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft
BORING NO. <u>GC-84</u> Station <u>3423+63</u> Offset <u>31.1 ft LT</u> Ground Surface Elev. <u>727.4</u> ft	(ft)	(/6")	(tsf)	(%)	Groundwater Elev.: First Encounter _____ <u>Dry</u> ft Upon Completion _____ <u>Dry</u> ft After _____ Hrs. _____ <u>Filled</u> ft
Medium Dense, Brown, SAND, with Gravel, little clay and silt <i>(continued)</i>	_____	_____			
	683.9				
Stiff, Brown, CLAY, some gravel and sand	_____	4			
	_____	4	1.6	20	
	-45	5	B		
	_____				
	_____	5			
	_____	5	1.0	29	
	677.4	9	B		
	-50				
Boring terminated at 50 feet.	_____				
	_____				
	_____				
	_____				
	_____				
	-55				
	_____				
	_____				
	_____				
	_____				
	_____				
	-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - Drainage Junction Chamber LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.13299358, Longitude -88.0050587

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. Station	DEPTH H (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)	Surface Water Elev. Stream Bed Elev.	ft	DEPTH H (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)
Asphalt - 9"	722.0									
Stiff, Brown, SANDY CLAY, with Gravel, some silt	10							3		
	19			18				4	3.6	19
	18							5	B	
Stiff to Medium Stiff, Brown, CLAY, some gravel, sand and silt.	719.2									
	6							3		
	8	3.8	16					3	2.8	18
	-5	6	B					5	B	
		2								
	4	3.2	18					5		23
	5	B						6		
		4								
	6	7.4	12					4		
	-10	8	S					4	1.6	16
								6	B	
	5									
	4	2.2	13							
	3	S								
710.2										
Sand and Gravel seam	2							0		
	3	3.2	17					3		
	-15	4	B					4		
	3									
	2	4.1	21							
	4	B/S								
	2							4		
	2	5.2	16					8	1.7	23
	-20	3	B/S					11	B	

Boring terminated at 40 feet.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

ROUTE FAP 342 DESCRIPTION TSRS - Drainage Junction Chamber LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.13383761, Longitude -88.0051013

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO.	D E P T H		B L O W S	U C S Qu	M O I S T	Surface Water Elev.	D E P T H		B L O W S	U C S Qu	M O I S T
Station	(ft)	(/6")	(tsf)	(%)		ft	(ft)	(/6")	(tsf)	(%)	
Asphalt - 9"	721.6										
Medium Dense, Brown, SANDY CLAY LOAM, with GRAVEL		3						3			
		4	4.8	18				4	1.3	15	
		15	B					6	B		
	699.3										
		6				Stiff, Brown, Gravely CLAY, some sand and silt		4			
		5		7				6	1.5	16	
		-5	3				-25	7	B		
	716.3										
Medium stiff to stiff, Brown, CLAY, some sand, silt and gravel		3						5			
		3	1.1	22				7	1.5	15	
		2	B					8	B		
		2						4			
		2	1.5	18				7	1.0	16	
		-10	3	B			-30	9	B		
		3									
		4	2.6	32							
		5	B								
	688.8										
		2				Medium dense, Brown, SAND, some clay		2			
		4	1.6	15				3			
		-15	4	B			-35	3			
	686.8										
		3				Medium stiff, Brown, CLAY, some sand, silt and gravel					
		2	1.8	15							
		5	B								
		3						3			
		5	1.5	15				4	2.1	21	
		-20	7	B			682.3	-40	5	B	

Boring terminated at 40 feet.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS - Drainage Junction Chamber LOGGED BY Gonzalez (OG)

SECTION 2018-100-BR LOCATION SEC. 12, TWP. 42N, RNG. 10E, 3<sup>rd</sup> PM,  
Latitude 42.13450607, Longitude -88.0051253

COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91

STRUCT. NO. Station	DEPTH H (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	GROUNDWATER ELEV.: First Encounter _____ Dry ft	Upon Completion _____ Dry ft	After _____ Hrs. _____ Filled ft	DEPTH H (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST S (%)
Asphalt - 9"	722.4												
Aggregate Base - 12"	721.4	4									3		
Medium Stiff to Soft, Gray, SILTY CLAY, some gravel and sand		7	3.8	18							4		15
		8	B/S								6		
No recovery, Granular		20									3		
		42									5	1.7	15
	-5	48							-25		6	B	
		2									4		
		1	0.1	23							5	2.9	15
		1	B								8	B/S	
		2									4		
		1		23							5	3.1	14
	-10	2							-30		7	B	
		1											
		1	0.4	24									
		2	B										
Medium Stiff to Stiff, Gray, SILT CLAY, some gravel and sand	709.6	3									3		
		4	2.4	17							4		24
	-15	4	B/S						-35		3		
		3											
		3	2.7	17									
		4	B										
		2									3		
		4	2.6	16							3		19
	-20	3	B						683.1 -40		5		

Boring terminated at 40 feet.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



# SOIL BORING LOG

ROUTE FAP 342 DESCRIPTION TSRS IL 53 over US 12 (Rand Rd) LOGGED BY Gonzalez (OG)SECTION 2018-100-BR LOCATION SW 1/4, SEC. 7, TWP. 42N, RNG. 11E, 3<sup>rd</sup> PM,  
Latitude 42.1297644, Longitude -88.0053273COUNTY Cook DRILLING METHOD Hollow Stem Auger (8" O.D., 3.25" I.D.) HAMMER TYPE Auto 140 lb HE 91STRUCT. NO. 016W2503  
(Proposed)  
Station \_\_\_\_\_BORING NO. GC-90  
Station 3414+50  
Offset 95.0 ft LT  
Ground Surface Elev. 718.0 ft

DEPTH H S	B L O W S	U C S Qu	M O I S T	Surface Water Elev.		D E P T H	B L O W S	U C S Qu	M O I S T
				ft	ft				
				Groundwater Elev.:					
				First Encounter	709.0	ft ▾			
				Upon Completion	709.0	ft ▾			
				After _____ Hrs.	Filled	ft			
Top soil - 4inches				717.7					
Medium Stiff, brown, CLAY, trace sand and gravel	4						4		
	3	1.7	15				7	1.2	16
	4	B					7	B	
	2						3		
	1		23				4	1.4	15
	-5	1					-25	7	B
	17						4		
	32		20				6	1.9	16
	28						7	B	
	1						3		
	2	2.0	16				3	1.5	17
	-10	5	P				-30	6	B
	2								
	3	1.4	16						
	3	B							
	3							13	
becomes stiff	4	0.6	16				7		16
	-15	5	B				-35	11	
	5								
	6	1.5	15						
	7	B							
	4							2	
	5	2.0	15					4	1.4
	-20	8	B				-40	5	B

Boring terminated at 40 feet.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, M-Modified SPT)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



### BORING LOCATION LEGEND

- ◆ Temporary Soil Retention System Boring



NOT TO SCALE

### KEY MAP & LEGEND

TITLE:	PROJECT NO.	SHEET
	23-1003	1
DATE:	OF 5	
01/26/2024		

DESIGNED BY:	GNK
DRAWN BY:	GNK
CHECKED BY:	NRK
DRAWING FILE:	Boring Locations TSSIS.dwg

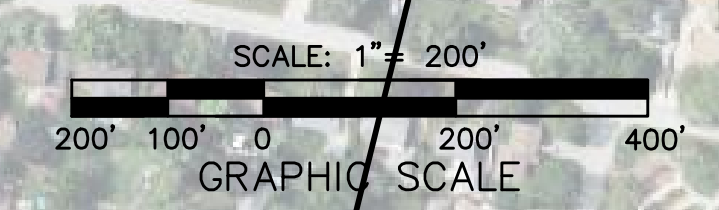
TITLE:	PTB 203-021 62N91 - IL 53 FROM I-90 TO LAKE COOK RD
COOK COUNTY, IL	

REVISIONS:	#	Date	Description

**gonzalez**  
 GONZALEZ COMPANIES, LLC  
 525 WEST MAIN STREET, SUITE 125  
 BELLEVILLE, IL 62220  
 PHONE: (618)222-2221  
 WWW.GONZALEZCOS.COM



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 Plotted on: 7/26/2024 2:29 PM  
 Plotted By: Eric Sauter



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 BELLEVILLE, IL 62220  
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REVISIONS:	#	Date	Description

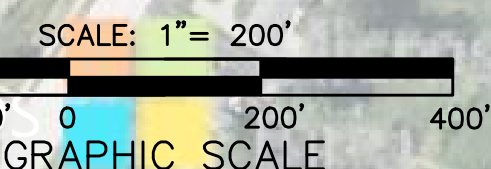
PTB 203-021  
 62N91 - IL 53  
 FROM I-90 TO LAKE COOK RD  
 COOK COUNTY, IL

DESIGNED BY: GMK  
 DRAWN BY: GMK  
 CHECKED BY: NPK  
 DRAWING FILE: Boring Locations TSS.dwg

TITLE: BORING LOCATIONS 1  
 PROJECT NO: 23-1003  
 DATE: 01/26/2024  
 SHEET: 2 OF 5



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REVISIONS:	#	Date	Description

PTB 203-021  
 62N91 - IL 53  
 FROM I-90 TO LAKE COOK RD  
 COOK COUNTY, IL

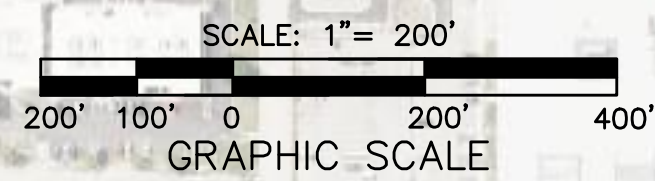
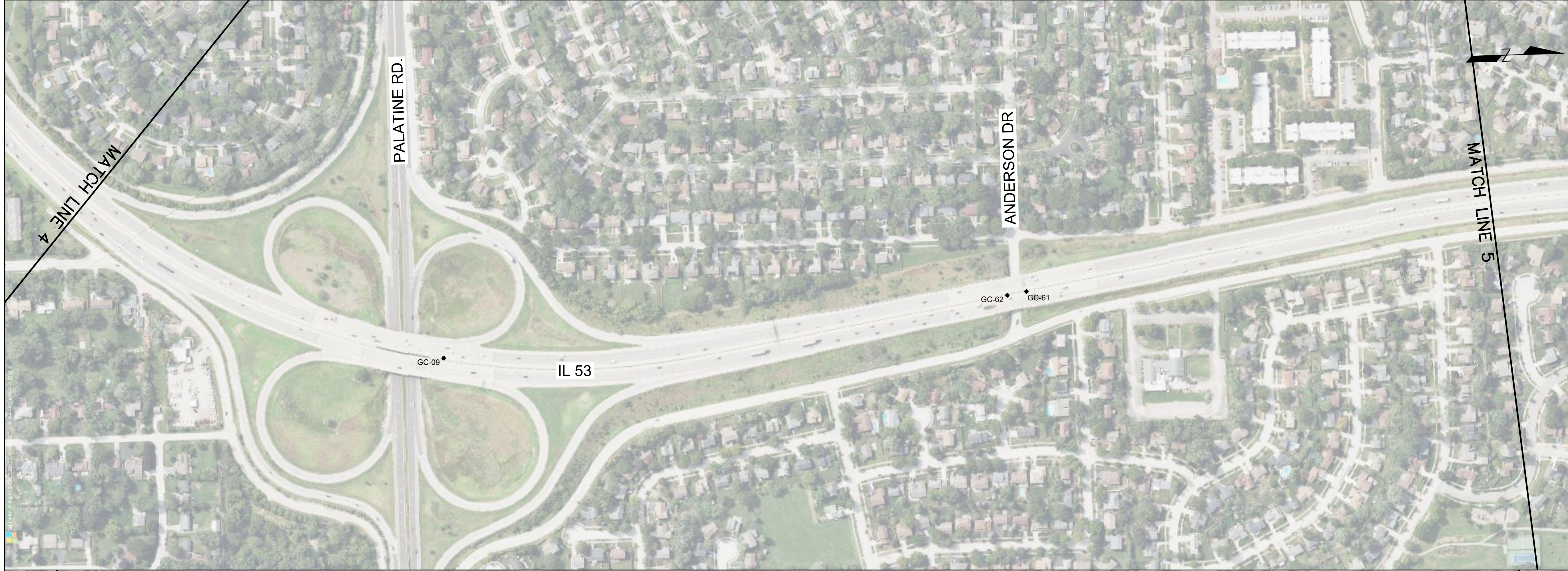
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 DRAWN BY: GMK  
 CHECKED BY: NPK  
 DRAWING FILE: Boring Locations TSS.dwg

TITLE:  
**BORING LOCATIONS 2**

PROJECT NO.  
 23-1003  
 DATE:  
 01/26/2024  
 SHEET  
**3**  
 OF 5



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 Plotted By: Eric Szazler



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REVISIONS:	#	Date	Description

PTB 203-021  
 62N91 - IL 53  
 FROM I-90 TO LAKE COOK RD  
 COOK COUNTY, IL

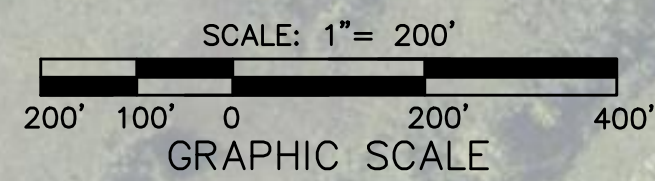
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TITLE:  
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PROJECT NO.	23-1003	SHEET	4
DATE:	01/26/2024		OF 5



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 Plotted By: Eric Guzman



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#	Date	Description

DESIGNED BY: GMK  
 DRAWN BY: GMK  
 CHECKED BY: NPK  
 DRAWING FILE: Boring Locations TSS.dwg

TITLE:  
 PTB 203-021  
 62N91 - IL 53  
 FROM I-90 TO LAKE COOK RD  
 COOK COUNTY, IL

TITLE:  
**BORING LOCATIONS 4**

PROJECT NO.  
 23-1003

DATE:  
 01/26/2024

SHEET  
**5**  
 OF 5