July 29, 2024

RE: IL 53 Mainline and Shoulder Evaluation
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: TECHNICAL MEMO

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 Lake Cook Road. The results of the IL 53 mainline and shoulder evaluation are presented herein. Please note that the below referenced thicknesses are considered approximate and based on visual observations and hand measurements. Pavement and sub-base type and thickness may vary between core locations.

Table 1: Shoulder Pavement Section Summary

CORE NO.	LOCATION	TOTAL OBSERVED PAVEMENT THICKNESS	TOTAL OBSERVED BASE STONE THICKNESS	DCP START DEPTH BEG & BLOWS PER 6 INCHES
A-00	SB OUTSIDE SHOULDER	17 INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED	17 INCHES 4-7-4-3-9-18
B-00	SB INSIDE SHOULDER	18 INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED	18 INCHES 4-5-7-7-6-9-10
C-00	NB INSIDE SHOULDER	20 INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED	20 INCHES 4-4-3-4-12-10
D-00	NB OUTSIDE SHOULDER	20 INCHES OF ASPHALT	2 INCHES OF SUBBASE STONE	22 INCHES 1-5-5-5-4-10
A-13	SB OUTSIDE SHOULDER	10 INCHES OF ASPHALT	6 INCHES OF SUBBASE STONE	16 INCHES 5-9-7-4-5-5-7
A-14	SB OUTSIDE SHOULDER	5 ½ INCHES OF ASPHALT 8 ½ INCHES OF CONCRETE 4 ½ INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED	18 INCHES 10-14-21-17-25/2”

CORE NO.	LOCATION	TOTAL OBSERVED PAVEMENT THICKNESS	TOTAL OBSERVED BASE STONE THICKNESS	DCP START DEPTH BEG & BLOWS PER 6 INCHES
A-15	SB OUTSIDE SHOULDER	14 INCHES OF ASPHALT	8 INCHES OF SUBBASE STONE	22 INCHES 25/0”
A-16	SB OUTSIDE SHOULDER	13 ½ INCHES OF ASPHALT	13 ½ INCHES OF SUBBASE STONE	27 INCHES 25/0”
B-13	SB INSIDE SHOULDER	10 INCHES OF ASPHALT	4 INCHES OF SUBBASE STONE	14 INCHES 5-11-10-8-9-9
B-14	SB INSIDE SHOULDER	11 INCHES OF ASPHALT	3 INCHES OF SUBBASE STONE	14 INCHES 16-20-21-10-7-6
B-15	SB INSIDE SHOULDER	12 INCHES OF ASPHALT	14 INCHES OF SUBBASE STONE	26 INCHES 25/0”
B-16	SB INSIDE SHOULDER	13 INCHES OF ASPHALT	13 INCHES OF SUBBASE STONE	26 INCHES 7-4-6-5
C-13	NB INSIDE SHOULDER	9 INCHES OF ASPHALT	4 INCHES OF SUBBASE STONE	13 INCHES 5-6-7-8-7-7
C-14	NB INSIDE SHOULDER	11 INCHES OF ASPHALT	3 INCHES OF SUBBASE STONE	14 INCHES 12-19-17-16-13-12
C-15	NB INSIDE SHOULDER	14 ½ INCHES OF ASPHALT	2 ½ INCHES OF SUBBASE STONE	17 INCHES 25/2”
C-16	NB INSIDE SHOULDER	13 ½ INCHES OF ASPHALT	8 ½ INCHES OF SUBBASE STONE	22 INCHES 25/3”
D-13	NB OUTSIDE SHOULDER	10 INCHES OF ASPHALT	3 INCHES OF SUBBASE STONE$_1$ 5 INCHES OF SUBBASE STONE$_2$	18 INCHES 15-23-11-11-13-15-12
D-14	NB OUTSIDE SHOULDER	12 INCHES OF ASPHALT	4 INCHES OF SUBBASE STONE	16 INCHES 6-14-17-24-22-16-10
D-15	NB OUTSIDE SHOULDER	17 INCHES OF ASPHALT	5 INCHES OF SUBBASE STONE	22 INCHES 25/1”
D-16	NB OUTSIDE SHOULDER	12 ½ INCHES OF ASPHALT	9 ½ INCHES OF SUBBASE STONE	22 INCHES 25/2”

Table 2: Mainline Pavement Section Summary

CORE NO.	LOCATION	TOTAL OBSERVED PAVEMENT THICKNESS	TOTAL OBSERVED BASE STONE THICKNESS
PN-00	NB INSIDE LANE	7 INCHES OF ASPHALT 13 INCHES OF BROKEN CONCRETE	SUBBASE STONE NOT OBSERVED
PN-01	NB OUTSIDE LANE	7 INCHES OF ASPHALT 7 ½ INCHES OF CONCRETE	7 ½ INCHES OF SUBBASE STONE
PN-02	NB INSIDE LANE	7 INCHES OF ASPHALT 8 ½ INCHES OF CONCRETE	6 ½ INCHES OF SUBBASE STONE
PN-03	NB INSIDE LANE	6 INCHES OF ASPHALT 8 INCHES OF CONCRETE	8 INCHES OF SUBBASE STONE
PN-04	NB OUTSIDE LANE	7 INCHES OF ASPHALT 8 INCHES OF BROKEN CONCRETE	7 INCHES OF SUBBASE STONE
PN-05	NB INSIDE LANE	4 INCHES OF ASPHALT 9 INCHES OF BROKEN CONCRETE	9 INCHES OF SUBBASE STONE
PN-06	NB INSIDE LANE	5 ½ INCHES OF ASPHALT 9 INCHES OF BROKEN CONCRETE	7 ½ INCHES OF SUBBASE STONE
PN-07	NB INSIDE LANE	8 INCHES OF ASPHALT 7 INCHES OF BROKEN CONCRETE	7 INCHES OF SUBBASE STONE
PN-08	NB INSIDE LANE	7 ½ INCHES OF ASPHALT 8 INCHES OF BROKEN CONCRETE	6 ½ INCHES OF SUBBASE STONE
PN-09	NB INSIDE LANE	6 ½ INCHES OF ASPHALT 8 ½ INCHES OF BROKEN CONCRETE	7 INCHES OF SUBBASE STONE
PN-10	NB INSIDE LANE	7 INCHES OF ASPHALT 9 INCHES OF BROKEN CONCRETE	2 INCHES OF SUBBASE STONE
PN-11	NB INSIDE LANE	5 ½ INCHES OF ASPHALT 8 ½ INCHES OF BROKEN CONCRETE 4 INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED
PN-12	NB INSIDE LANE	4 ½ INCHES OF ASPHALT 10 ½ INCHES OF CONCRETE	SUBBASE STONE NOT OBSERVED

CORE NO.	LOCATION	TOTAL OBSERVED PAVEMENT THICKNESS	TOTAL OBSERVED BASE STONE THICKNESS
PN-13	NB OUTSIDE LANE	3 INCHES OF ASPHALT 8 INCHES OF CONCRETE 3 INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED
PN-14	NB OUTSIDE LANE	14 ½ INCHES OF ASPHALT	7 ½ INCHES OF SUBBASE STONE
PN-15	NB OUTSIDE LANE	4 ¼ INCHES OF ASPHALT 10 ¾ INCHES OF BROKEN CONCRETE	7 INCHES OF SUBBASE STONE
PN-16	NB OUTSIDE LANE	5 ¼ INCHES OF ASPHALT 12 ¼ INCHES OF CONCRETE 3 ½ INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED
PS-00	SB INSIDE LANE	4 ¼ INCHES OF ASPHALT 9 ¼ INCHES OF CONCRETE	4 ½ INCHES OF SUBBASE STONE
PS-01	SB OUTSIDE LANE	7 ¼ INCHES OF ASPHALT 8 ¾ INCHES OF CONCRETE	6 INCHES OF SUBBASE STONE
PS-02	SB INSIDE LANE	6 ½ INCHES OF ASPHALT 8 INCHES OF CONCRETE	7 ½ INCHES OF SUBBASE STONE
PS-03	SB INSIDE LANE	6 INCHES OF ASPHALT 8 INCHES OF CONCRETE	8 INCHES OF SUBBASE STONE
PS-04	SB OUTSIDE LANE	6 INCHES OF ASPHALT 8 ½ INCHES OF BROKEN CONCRETE	7 ½ INCHES OF SUBBASE STONE
PS-05	SB INSIDE LANE	7 ½ INCHES OF ASPHALT 8 ½ INCHES OF CONCRETE	6 INCHES OF SUBBASE STONE
PS-06	SB INSIDE LANE	7 ½ INCHES OF ASPHALT 8 ½ INCHES OF BROKEN CONCRETE	6 INCHES OF SUBBASE STONE
PS-07	SB INSIDE LANE	7 INCHES OF ASPHALT 8 INCHES OF CONCRETE	7 INCHES OF SUBBASE STONE
PS-08	SB INSIDE LANE	7 ½ INCHES OF ASPHALT 7 ½ INCHES OF CONCRETE	7 INCHES OF SUBBASE STONE
PS-09	SB INSIDE LANE	8 ½ INCHES OF ASPHALT 8 INCHES OF CONCRETE	5 ½ INCHES OF SUBBASE STONE
PS-10	SB INSIDE LANE	6 INCHES OF ASPHALT 8 INCHES OF BROKEN CONCRETE	8 INCHES OF SUBBASE STONE

CORE NO.	LOCATION	TOTAL OBSERVED PAVEMENT THICKNESS	TOTAL OBSERVED BASE STONE THICKNESS
PS-11	SB INSIDE LANE	7 ¼ INCHES OF ASPHALT 9 ¼ INCHES OF CONCRETE 3 ½ INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED
PS-12	SB INSIDE LANE	6 ½ INCHES OF ASPHALT 8 ½ INCHES OF CONCRETE 5 ½ INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED
PS-13	SB OUTSIDE LANE	4 INCHES OF ASPHALT 9 INCHES OF CONCRETE 3 INCHES OF ASPHALT	SUBBASE STONE NOT OBSERVED
PS-14	SB OUTSIDE LANE	7 INCHES OF ASPHALT 9 INCHES OF BROKEN CONCRETE	2 INCHES OF SUBBASE STONE
PS-15	SB OUTSIDE LANE	3 ½ INCHES OF ASPHALT 11 ½ INCHES OF CONCRETE 2 ½ INCHES OF ASPHALT	4 ½ INCHES OF SUBBASE STONE
PS-16	SB OUTSIDE LANE	5 INCHES OF ASPHALT 11 INCHES OF CONCRETE 2 ½ INCHES OF ASPHALT	3 ½ INCHES OF SUBBASE STONE

Attachment 1 Shoulder and Mainline Pavement Core Summary Table (4 pages)
Attachment 2 Dynamic Cone Penetration Test Results (4 pages)
Attachment 3 Photographic Pavement Core Summary Table (18 pages)
Attachment 4 Coring Location Plan (18 pages)

Prepared by: Eric Glazier, P.E.
GONZALEZ COMPANIES, LLC

Prepared for: STRAND ASSOCIATES, INC.

IDOT Project Number	62N91
IDOT Job Number	D-91-144-21
Route	IL 53 (FAP 342) Supplement Coring - I-90 to Lake Cook Road
Section	2018-100-BR
County	Cook
District	1
PTB	203-021

Prepared by Gonzalez Companies, LLC

Southbound Outside Shoulder Pavement Core Summary

Sample ID	Total Thickness (Inches)	SMA Surface 1 (Inches)	HMA Surface 1 (Inches)	HMA Surface 2 (inches)	HMA Surface 3 (inches)	HMA Binder 1 (Inches)	HMA Binder 2 (Inches)	HMA Binder 3 (Inches)	HMA Binder 4 (Inches)	HMA Layer 3 (Inches)	Concrete (Inches)	Broken Concrete (inches)	Subbase Stone (Inches)
A-00	17		1.25			2.5	1.25	6	6				
A-13	10		2			2	3.5	2.5					6
A-14	18			2		3	4.5				8.5		
A-15	14		1.5			3.25	2.5	2.5	4.25				8
A-16	13.5		2.25			3	2.75	5.5					13.5
PS-01 [1]	16	2.5				1.5	1.25	2			8.75		6
PS-04 [1]	14.5	1.5				1.5	1.25	1.75				8.5	7.5
PS-13 [1]	16	2			3	2						9	
PS-14 [1]	16	2				2				3		9	2
PS-15 [1]	17.5	1.75				1.75	2.5					11.5	4.5
PS-16 [1]	18.5	2.25				2.75	2.5					11	3.5
No. of samples	**11**	**6**	**4**	**1**	**1**	**11**	**9**	**6**	**2**	**1**	**2**	**5**	**8**
Minimum	**10**	**1.5**	**1.25**	**2**	**3**	**1.5**	**1.25**	**1.75**	**4.25**	**3**	**8.5**	**8.5**	**2**
Average	**15.5**	**2.0**	**1.8**	**2.0**	**3.0**	**2.3**	**2.4**	**3.4**	**5.1**	**3.0**	**8.6**	**9.8**	**6.4**
Maximum	**18.5**	**2.5**	**2.25**	**2**	**3**	**3.25**	**4.5**	**6**	**6**	**3**	**8.75**	**11.5**	**13.5**

[1] POSSIBLE SMA Surface

IDOT Project Number	62N91
IDOT Job Number	D-91-144-21
Route	Euclid (FAU 1292) at IL 53 (FAP 342)
Section	2018-100-BR
County	Cook
District	1
PTB	203-021
Prepared by	Gonzalez Companies, LLC

Southbound Inside Shoulder Pavement Core Summary

Sample ID	Total Thickness (Inches)	SMA Surface 1 (Inches)	HMA Surface 1 (Inches)	HMA Surface 2 (inches)	HMA Surface 3 (inches)	HMA Binder 1 (Inches)	HMA Binder 2 (Inches)	HMA Binder 3 (Inches)	HMA Binder 4 (Inches)	Concrete (Inches)	Broken Concrete (inches)	Subbase Stone (Inches)
B-00	18		1.5			1.75	5.75	5.75	3.25			
B-13	10		1.5	2.25		6.25						4
B-14	11		1.75			2.75	3	3.5				3
B-15 [1]	12	1.5				2.75	2.5	5.25				14
B-16 [1]	13	2		2.75	5.75	2.5						13
PS-00 [1]	13.5	1.75				2.5				9.25		4.5
PS-02 [1]	14.5	2.25				2.75	1.5			8		7.5
PS-03 [1]	14	1.5				2.5	2			8		8
PS-05 [1]	16	2				2	3.5			8.5		6
PS-06 [1]	16	2				3.5	2				8.5	6
PS-07 [1]	15	2				2	1.5	1.5			8	7
PS-08 [1]	15	2				2.25	1.25	2			7.5	7
PS-09 [1]	16.5	2				1	3.5	2			8	5.5
PS-10 [1]	14	2.25				1.75	2				8	8
PS-11	20		2			3.5	1.75	3.5		9.25		
PS-12 [1]	20.5	1.5	0.75	0.75		2.75		0.75	5.5	8.5		
No. of samples	**16**	**12**	**5**	**3**	**1**	**16**	**12**	**8**	**2**	**6**	**5**	**13**
Minimum	**10**	**1.5**	**0.75**	**0.75**	**5.75**	**1**	**1.25**	**0.75**	**3.25**	**8**	**7.5**	**3**
Average	**14.9**	**1.9**	**1.5**	**1.9**	**5.8**	**2.7**	**2.5**	**3.0**	**4.4**	**8.6**	**8.0**	**7.2**
Maximum	**20.5**	**2.25**	**2**	**2.75**	**5.75**	**6.25**	**5.75**	**5.75**	**5.5**	**9.25**	**8.5**	**14**

[1] POSSIBLE SMA Surface

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Section	2018-100-BR
County	Cook
District	1
PTB	203-021
Prepared by	Gonzalez Companies, LLC

Northbound Inside Shoulder Pavement Core Summary

Sample ID	Total Thickness (Inches)	SMA Surface 1 (Inches)	HMA Surface 1 (Inches)	HMA Surface 2 (inches)	HMA Leveling Binder 1 (Inches)	HMA Binder 1 (Inches)	HMA Binder 2 (Inches)	HMA Binder 3 (Inches)	HMA Binder 4 (Inches)	HMA Binder 5 (Inches)	HMA Layer 3 (Inches)	HMA Layer 4 (Inches)	Concrete (Inches)	Broken Concrete (inches)	Subbase Stone (Inches)	Asphalt Grindings (inches)
C-00	20		1.5			3	1.5	2.5	3	6		2.5				
C-13	9		1.75		0.25		1.5	2.25	3.25						4	
C-14	11		1.5			2.5	7								3	
C-15	14.5		1	1		2.25	3.25	7								2.5
C-16	13.5		1	1		2.5	4	5							8.5	
PN-00 [1]	20	2				2.75					2.25			13		
PN-02 [1]	15.5	2.25				2.5	2.25						8.5		6.5	
PN-03 [1]	14	2.25				2.5					1.25		8		8	
PN-05 [1]	13	2				2								9	9	
PN-06 [1]	14.5	2				2.5	1							9	7.5	
PN-07 [1]	15	1.5				6.5								7	7	
PN-08 [1]	15.5	2				2.25	3.25							8	6.5	
PN-09 [1]	15	2				2	2.5							8.5	7	
PN-10 [1]	16	1.75				2.5	2.75							9	2	
PN-11 [1]	18	2				2.5	1	4						8.5		
PN-12 [1]	15	1.25				2.5	0.75						10.5			
	0															
	0															
No. of samples	**18**	**11**	**5**	**2**	**1**	**15**	**12**	**5**	**2**	**1**	**2**	**1**	**3**	**8**	**11**	**1**
Minimum	**0**	**1.25**	**1**	**1**	**0.25**	**2**	**0.75**	**2.25**	**3**	**6**	**1.25**	**2.5**	**8**	**7**	**2**	**2.5**
Average	**13.3**	**1.9**	**1.4**	**1.0**	**0.3**	**2.7**	**2.6**	**4.2**	**3.1**	**6.0**	**1.8**	**2.5**	**9.0**	**9.0**	**6.3**	**2.5**
Maximum	**20**	**2.25**	**1.75**	**1**	**0.25**	**6.5**	**7**	**7**	**3.25**	**6**	**2.25**	**2.5**	**10.5**	**13**	**9**	**2.5**

[1] POSSIBLE SMA Surface

IDOT Project Number	62N91
IDOT Job Number	D-91-144-21
Route	IL 53 (FAP 342) Supplement Coring - I-90 to Lake Cook Road
Section	2018-100-BR
County	Cook
District	1
PTB	203-021
Prepared by	Gonzalez Companies, LLC

Northbound Outside Shoulder Pavement Core Summary

Sample ID	Total Thickness (Inches)	SMA Surface 1 (Inches)	HMA Surface 1 (Inches)	HMA Surface 2 (inches)	HMA Surface 3 (inches)	HMA Leveling Binder 2 (Inches)	HMA Binder 1 (Inches)	HMA Binder 2 (Inches)	HMA Binder 3 (Inches)	HMA Binder 4 (Inches)	HMA Binder 5 (Inches)	Concrete (Inches)	Broken Concrete (inches)	Subbase Stone 1 (Inches)	Subbase Stone 2 (Inches)
D-00	20		1				3.25	2.25	1.5	4	8			2	
D-13	10		1.25				1.75	7						3	5
D-14	12		1.5				3.5	2.5	4.5					4	
D-15	17		1.75	2.5			3	5.25	4.5					5	
D-16	12.5		1.75				2.25	2.75	5.75					9.5	
PN-01 [1]	14.5	2					2.25	2.75				7.5		7.5	
PN-04 [1]	15	4.25					0.75	2					8	7	
PN-13 [1]	14	1.5					1.5	3				8			
PN-14 [1]	14.5	2				1	2		9.5					7.5	
PN-15 [1]	15	1.75				1	1.5						10.75	7	
PN-16 [1]	21	2			3.5	0.75	2.5					12.25			
No. of samples	**11**	**6**	**5**	**1**	**1**	**3**	**11**	**8**	**5**	**1**	**1**	**3**	**2**	**9**	**1**
Minimum	**10**	**1.5**	**1**	**2.5**	**3.5**	**0.75**	**0.75**	**2**	**1.5**	**4**	**8**	**7.5**	**8**	**2**	**5**
Average	**15.0**	**2.3**	**1.5**	**2.5**	**3.5**	**0.9**	**2.2**	**3.4**	**5.2**	**4.0**	**8.0**	**9.3**	**9.4**	**5.8**	**5.0**
Maximum	**21**	**4.25**	**1.75**	**2.5**	**3.5**	**1**	**3.5**	**7**	**9.5**	**4**	**8**	**12.25**	**10.75**	**9.5**	**5**

[1] POSSIBLE SMA Surface

Dynamic Cone Penetration Test

IDOT Project Number	62N91
IDOT Job Number	D-91-144-21
Route	IL 53 (FAP 342) Supplement Coring - I-90 to Lake Cook Road
Section	2018-100-BR
County	Cook
District	1
PTB	203-021
Prepared by	Gonzalez Companies, LLC
IDOT Form Source	BMPR SL30

Shoulder Evaluation

Approximate Test Location	Initial Depth (in)	☑ Subgrade ☐ Foundation								
A-00 Southbound Outside Shoulder	17	Depth (in)	23	29	35	41	47	53		
		Blows (per interval)	4	7	4	3	9	18		
		Rate (penetration/blow)	1.5	0.9	1.5	2.0	0.7	0.3		
		IBV (%)	4.2	8.4	4.2	2.9	11.5	27.6		
		Qu (tsf)	1.3	2.6	1.3	1.0	3.8	9.0		
B-00 Southbound Inside Shoulder	18	Depth (in)	24	30	36	42	48	54	60	
		Blows (per interval)	4	5	7	7	6	9	10	
		Rate (penetration/blow)	1.5	1.2	0.9	0.9	1.0	0.7	0.6	
		IBV (%)	4.2	5.5	8.4	8.4	6.9	11.5	13.2	
		Qu (tsf)	1.3	1.6	2.6	2.6	2.2	3.8	4.2	
C-00 Northbound Inside Shoulder	20	Depth (in)	26	32	38	44	50	56		
		Blows (per interval)	4	4	3	4	12	10		
		Rate (penetration/blow)	1.5	1.5	2.0	1.5	0.5	0.6		
		IBV (%)	4.2	4.2	2.9	4.2	16.6	13.2		
		Qu (tsf)	1.3	1.3	1.0	1.3	5.4	4.2		
D-00 Northbound Outside Shoulder	22	Depth (in)	28	34	40	46	52	58		
		Blows (per interval)	1	5	5	5	4	10		
		Rate (penetration/blow)	6.0	1.2	1.2	1.2	1.5	0.6		
		IBV (%)	0.7	5.5	5.5	5.5	4.2	13.2		
		Qu (tsf)	0.3	1.6	1.6	1.6	1.3	4.2		
A-13 Southbound Outside Shoulder	16	Depth (in)	22	28	34	40	46	52	58	
		Blows (per interval)	5	9	7	4	5	5	7	
		Rate (penetration/blow)	1.2	0.7	0.9	1.5	1.2	1.2	0.9	
		IBV (%)	5.5	11.5	8.4	4.2	5.5	5.5	8.4	
		Qu (tsf)	1.6	3.8	2.6	1.3	1.6	1.6	2.6	
A-14 Southbound Outside Shoulder	18	Depth (in)	24	30	36	42	44			
		Blows (per interval)	10	14	21	17	25			
		Rate (penetration/blow)	0.6	0.4	0.3	0.4	0.1			
		IBV (%)	13.2	20.1	33.5	25.7	166.8			
		Qu (tsf)	4.2	6.4	10.9	8.3	53.4			

Dynamic Cone Penetration Test

IDOT Project Number	62N91
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Route	IL 53 (FAP 342) Supplement Coring - I-90 to Lake Cook Road
Section	2018-100-BR
County	Cook
District	1
PTB	203-021
Prepared by	Gonzalez Companies, LLC
IDOT Form Source	BMPR SL30

Shoulder Evaluation

☑ Subgrade ☐ Foundation

Approximate Test Location	Initial Depth (in)									
A-15 Southbound Outside Shoulder	22	Depth (in)	22							
		Blows (per interval)	25							
		Rate (penetration/blow)	0.0							
		IBV (%)	100.0							
		Qu (tsf)								
A-16 Southbound Outside Shoulder	27	Depth (in)	27							
		Blows (per interval)	25							
		Rate (penetration/blow)	0.0							
		IBV (%)	100.0							
		Qu (tsf)								
B-13 Southbound Inside Shoulder	14	Depth (in)	20	26	32	38	44	50		
		Blows (per interval)	5	11	10	8	9	9		
		Rate (penetration/blow)	1.2	0.5	0.6	0.8	0.7	0.7		
		IBV (%)	5.5	14.8	13.2	9.9	11.5	11.5		
		Qu (tsf)	1.6	4.8	4.2	3.2	3.8	3.8		
B-14 Southbound Inside Shoulder	14	Depth (in)	20	26	32	38	44	50		
		Blows (per interval)	16	20	21	10	7	6		
		Rate (penetration/blow)	0.4	0.3	0.3	0.6	0.9	1.0		
		IBV (%)	23.8	31.5	33.5	13.2	8.4	6.9		
		Qu (tsf)	7.7	10.2	10.9	4.2	2.6	2.2		
B-15 Southbound Inside Shoulder	26	Depth (in)	26							
		Blows (per interval)	25							
		Rate (penetration/blow)	0.0							
		IBV (%)	100.0							
		Qu (tsf)								
B-16 Southbound Inside Shoulder	26	Depth (in)	32	38	44	50				
		Blows (per interval)	7	4	6	5				
		Rate (penetration/blow)	0.9	1.5	1.0	1.2				
		IBV (%)	8.4	4.2	6.9	5.5				
		Qu (tsf)	2.6	1.3	2.2	1.6				

Dynamic Cone Penetration Test

IDOT Project Number	62N91
IDOT Job Number	D-91-144-21
Route	IL 53 (FAP 342) Supplement Coring - I-90 to Lake Cook Road
Section	2018-100-BR
County	Cook
District	1
PTB	203-021
Prepared by	Gonzalez Companies, LLC
IDOT Form Source	BMPR SL30

Shoulder Evaluation

Approximate Test Location	Initial Depth (in)	☑ Subgrade ☐ Foundation							
C-13 Northbound Inside Shoulder	13	Depth (in)	19	25	31	37	43	49		
		Blows (per interval)	5	6	7	8	7	7		
		Rate (penetration/blow)	1.2	1.0	0.9	0.8	0.9	0.9		
		IBV (%)	5.5	6.9	8.4	9.9	8.4	8.4		
		Qu (tsf)	1.6	2.2	2.6	3.2	2.6	2.6		
C-14 Northbound Inside Shoulder	14	Depth (in)	20	26	32	38	44	50		
		Blows (per interval)	12	19	17	16	13	12		
		Rate (penetration/blow)	0.5	0.3	0.4	0.4	0.5	0.5		
		IBV (%)	16.6	29.6	25.7	23.8	18.3	16.6		
		Qu (tsf)	5.4	9.6	8.3	7.7	5.8	5.4		
C-15 Northbound Inside Shoulder	17	Depth (in)	19							
		Blows (per interval)	25							
		Rate (penetration/blow)	0.1							
		IBV (%)	166.8							
		Qu (tsf)	53.4							
C-16 Northbound Inside Shoulder	22	Depth (in)	25							
		Blows (per interval)	25							
		Rate (penetration/blow)	0.1							
		IBV (%)	100							
		Qu (tsf)	32.0							
D-13 Northbound Outside Shoulder	18	Depth (in)	24	30	36	42	48	54	60	
		Blows (per interval)	15	23	11	11	13	15	12	
		Rate (penetration/blow)	0.4	0.3	0.5	0.5	0.5	0.4	0.5	
		IBV (%)	21.9	37.6	14.8	14.8	18.3	21.9	16.6	
		Qu (tsf)	7.0	12.2	4.8	4.8	5.8	7.0	5.4	

Dynamic Cone Penetration Test

IDOT Project Number	62N91
IDOT Job Number	D-91-144-21
Route	IL 53 (FAP 342) Supplement Coring - I-90 to Lake Cook Road
Section	2018-100-BR
County	Cook
District	1
PTB	203-021
Prepared by	Gonzalez Companies, LLC
IDOT Form Source	BMPR SL30

Shoulder Evaluation

Approximate Test Location	Initial Depth (in)	☑ Subgrade ☐ Foundation								
D-14 Northbound Outside Shoulder	16	Depth (in)	22	28	34	40	46	52	58	
		Blows (per interval)	6	14	17	24	22	16	10	
		Rate (penetration/blow)	1.0	0.4	0.4	0.3	0.3	0.4	0.6	
		IBV (%)	6.9	20.1	25.7	39.7	35.6	23.8	13.2	
		Qu (tsf)	2.2	6.4	8.3	12.8	11.5	7.7	4.2	
D-15 Northbound Outside Shoulder	22	Depth (in)	23							
		Blows (per interval)	25							
		Rate (penetration/blow)	0.1							
		IBV (%)	158.4							
		Qu (tsf)	50.6							
D-16 Northbound Outside Shoulder	22	Depth (in)	24							
		Blows (per interval)	25							
		Rate (penetration/blow)	0.1							
		IBV (%)	166.8							
		Qu (tsf)	53.4							

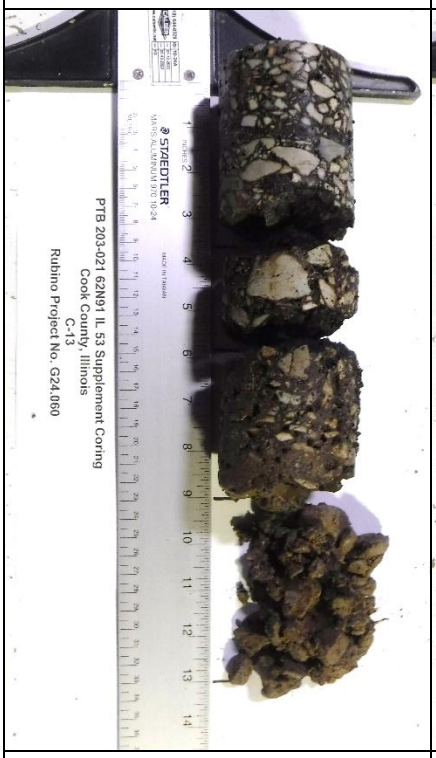
Cores were taken in the pavement of the inside and outside shoulders and lanes of IL 53 in Cook County, Illinois. The table below summarizes the thicknesses observed in the field and laboratory.

A-00 (SB Outside Shoulder)	B - 00 (SB Inside Shoulder)	C - 00 (NB Inside Shoulder)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing North
		
Total Thickness = 17 inches	**Total Thickness = 18 inches**	**Total Thickness = 20 inches**
HMA Surface$_1$ = 1 ¼ in.	**HMA Surface$_1$ = 1 ½ in.**	**HMA Surface$_1$ = 1 ½ in.**
HMA Binder$_1$ = 2 ½ in.	**HMA Binder$_1$ = 1 ¾ in.**	**HMA Binder$_1$ = 3 in.**
HMA Binder$_2$ = 1 ¼ in.	**Weathering & Deterioration**	**HMA Binder$_2$ = 1 ½ in.**
Weathering & Deterioration	**HMA Binder$_2$ = 5 ¾ in.**	**Weathering & Deterioration**
HMA Binder$_3$ = 6 in.	**Weathering & Deterioration**	**HMA Layer$_4$ = 2 ½ in.**
Weathering & Deterioration	**HMA Binder$_3$ = 5 ¾ in.**	**NOT FULLY RECOVERED**
HMA Binder$_4$ = 6 in.	**Weathering & Deterioration**	**HMA Binder$_3$ = 2 ½ in.**
NOT FULLY RECOVERED	**HMA Binder$_4$ = 3 ¼ in.**	**Weathering & Deterioration**
Subbase Stone Not Observed	**Subbase Stone Not Observed**	**HMA Binder$_4$ = 3 in.**
Subbase Type: Gravelly CLAY	**Subbase Type: Gravelly CLAY**	**Weathering & Deterioration**
DCP Start Depth: 17 inches	**DCP Start Depth: 18 inches**	**HMA Binder$_5$ = 6 in.**
DCP Blows (per 6-inches):	**DCP Blows (per 6-inches):**	**Subbase Stone Not Observed**
4 – 7, 4 – 3, 9 – 18	**4 – 5, 7 – 7, 6 – 9, 10**	**Subbase Type: Gravelly CLAY**
		DCP Start Depth: 20 inches
		DCP Blows (per 6-inches):
		4 – 4, 3 – 4, 12 – 10

D - 00 (NB Outside Shoulder)	A - 13 (SB Outside Shoulder)	A - 14 (SB Outside Shoulder)
		
Picture Taken Facing North	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 20 inches **HMA Surface$_1$ = 1 in.** **HMA Binder$_1$ = 3 ¼ in.** **HMA Binder$_2$ = 2 ¼ in.** **HMA Binder$_3$ = 1 ½ in.** **Weathering & Deterioration** **HMA Binder$_4$ = 4 in.** **HMA Binder$_5$ = 8 in.** **NOT FULLY RECOVERED** **Subbase Stone = 2 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 22 inches** **DCP Blows (per 6-inches):** **1 – 5, 5 – 5, 4 – 10**	**Total Thickness = 10 inches** **HMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 in.** **Weathering & Deterioration** **HMA Binder$_2$ = 3 ½ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 2 ½ in.** **NOT FULLY RECOVERED** **Subbase Stone = 6 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 16 inches** **DCP Blows (per 6-inches):** **5 – 9, 7 – 4, 5 – 5, 7**	**Total Thickness = 18 inches** **HMA Surface$_2$ = 2 in.** **HMA Binder$_1$ = 3 in.** **Weathering & Deterioration** **Concrete = 8 ½ in.** **HMA Binder$_2$ = 4 ½ in.** **NOT FULLY RECOVERED** **Subbase Stone Not Observed** **Subbase Type: sand and gravel** **DCP Start Depth: 18 inches** **DCP Blows (per 6-inches):** **10 – 14, 21 – 17, 25/2”(DCP Refusal)**

A - 15 (SB Outside Shoulder)	A - 16 (SB Outside Shoulder)	B - 13 (SB Inside Shoulder)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 14 inches **HMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 3 ¼ in.** **HMA Binder$_2$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_4$ = 4 ¼ in.** **NOT FULLY RECOVERED** **Subbase Stone = 8 inches** **Subbase Type: sand and gravel** **DCP Start Depth: 22 inches** **DCP Blows (per 6-inches):** **25/0" (DCP Refusal)**	**Total Thickness = 13 ½ inches** **HMA Surface$_1$ = 2 ¼ in.** **Weathering & Deterioration** **HMA Binder$_1$ = 3 in.** **HMA Binder$_2$ = 2 ¾ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 5 ½ in.** **Subbase Stone = 13 ½ inches** **Subbase Type: sand and gravel** **DCP Start Depth: 27 inches** **DCP Blows (per 6-inches):** **25/0" (DCP Refusal)**	**Total Thickness = 10 inches** **HMA Surface$_1$ = 1 ½ in.** **HMA Surface$_2$ = 2 ¼ in.** **Weathering & Deterioration** **HMA Binder$_1$ = 6 ¼ in.** **NOT FULLY RECOVERED** **Subbase Stone = 4 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 14 inches** **DCP Blows (per 6-inches):** **5 – 11, 10 – 8, 9 – 9**

B - 14 (SB Inside Shoulder)	B - 15 (SB Inside Shoulder)	B - 16 (SB Inside Shoulder)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 11 inches **HMA Surface$_1$ = 1 ¾ in.** **HMA Binder$_1$ = 2 ¾ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 3 in.** **Weathering & Deterioration** **HMA Binder$_3$ = 3 ½ in.** **Subbase Stone = 3 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 14 inches** **DCP Blows (per 6-inches):** **16 – 20, 21 – 10, 7 – 6**	**Total Thickness = 12 inches** **Possible SMA Surface$_1$ = 1 ½ in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 ¾ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 5 ¼ in.** **NOT FULLY RECOVERED** **Subbase Stone = 14 inches** **Subbase Type: sand and gravel** **DCP Start Depth: 26 inches** **DCP Blows (per 6-inches):** **25/0" (DCP Refusal)**	**Total Thickness = 13 inches** **Possible SMA Surface$_1$ = 2 in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **HMA Surface$_2$ = 2 ¾ in.** **Weathering & Deterioration** **HMA Surface$_3$ = 5 ¾ in.** **Subbase Stone = 13 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 26 inches** **DCP Blows (per 6-inches):** **7 – 4, 6 – 5**

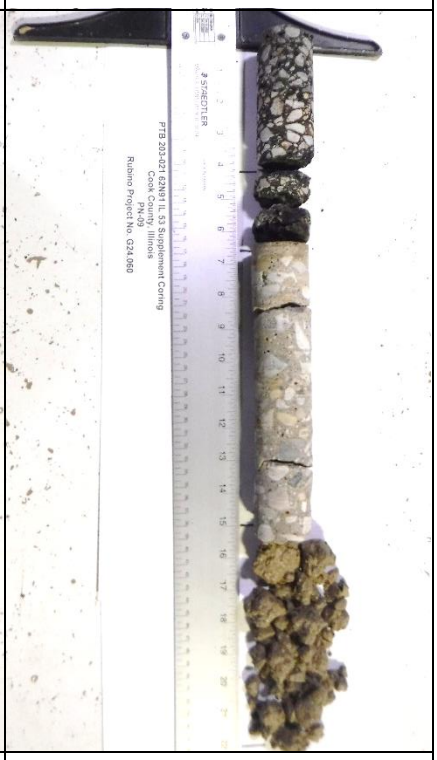
C - 13 (NB Inside Shoulder)	C - 14 (NB Inside Shoulder)	C - 15 (NB Inside Shoulder)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 9 inches **HMA Surface$_1$ = 1 ¾ in.** **HMA Leveling Binder$_1$ = ¼ in.** **HMA Binder$_2$ = 1 ½ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 2 ¼ in.** **Weathering & Deterioration** **HMA Binder$_4$ = 3 ¼ in.** **Subbase Stone = 4 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 13 inches** **DCP Blows (per 6-inches):** **5 – 6, 7 – 8, 7 – 7**	**Total Thickness = 11 inches** **HMA Surface$_1$ = 1 ½ in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 7 in.** **NOT FULLY RECOVERED** **Subbase Stone = 3 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 14 inches** **DCP Blows (per 6-inches):** **12 – 19, 17 – 16, 13 – 12**	**Total Thickness = 14 ½ inches** **HMA Surface$_1$ = 1 in.** **HMA Surface$_2$ = 1 in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 ¼ in.** **HMA Binder$_2$ = 3 ¼ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 7 in.** **Asphalt Grindings = 2 ½ inches (Not Recovered)** **Subbase Type: sand and gravel** **DCP Start Depth: 17 inches** **DCP Blows (per 6-inches):** **25/2" (DCP Refusal)**

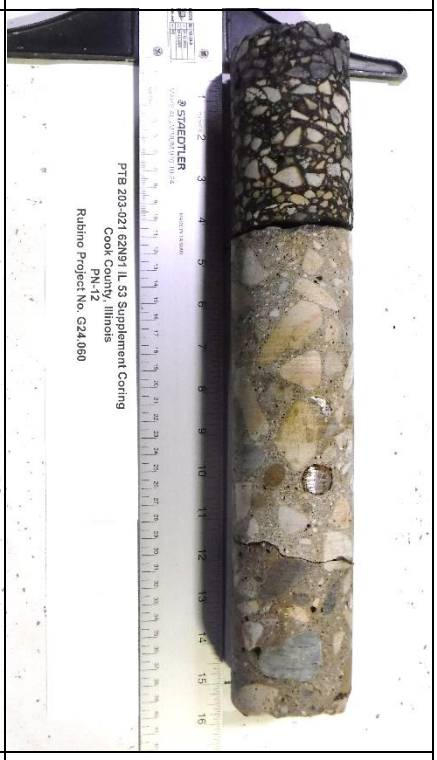
C - 16 (NB Inside Shoulder)	D - 13 (NB Outside Shoulder)	D - 14 (NB Outside Shoulder)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 13 ½ inches **HMA Surface$_1$ = 1 in.** **HMA Surface$_2$ = 1 in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 ½ in.** **HMA Binder$_2$ = 4 in.** **Weathering & Deterioration** **HMA Binder$_3$ = 5 in.** **Subbase Stone = 8 ½ inches** **Subbase Type: sand and gravel** **DCP Start Depth: 22 inches** **DCP Blows (per 6-inches):** **25/3" (DCP Refusal)**	**Total Thickness = 10 inches** **HMA Surface$_1$ = 1 ¼ in.** **HMA Binder$_1$ = 1 ¾ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 7 in.** **NOT FULLY RECOVERED** **Subbase Stone$_1$ = 3 inches** **Subbase Stone$_2$ = 5 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 18 inches** **DCP Blows (per 6-inches):** **15 – 23, 11 – 11, 13 – 15, 12**	**Total Thickness = 12 inches** **HMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 3 ½ in.** **HMA Binder$_2$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 4 ½ in.** **Subbase Stone = 4 inches** **Subbase Type: Gravelly CLAY** **DCP Start Depth: 16 inches** **DCP Blows (per 6-inches):** **6 – 14, 17 – 24, 22 – 16, 10**

D - 15 (NB Outside Shoulder)	D - 16 (NB Outside Shoulder)	PN - 00 (NB Inside Lane)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 17 inches **HMA Surface$_1$ = 1 ¾ in.** **Weathering & Deterioration** **HMA Binder$_1$ = 3 in.** **HMA Surface$_2$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 5 ¼ in.** **HMA Binder$_3$ = 4 ½ in.** **Weathering & Deterioration** **NOT FULLY RECOVERED** **Subbase Stone = 5 inches** **Subbase Type: sand and gravel** **DCP Start Depth: 22 inches** **DCP Blows (per 6-inches): 25/1”**	**Total Thickness = 12 ½ inches** **HMA Surface$_1$ = 1 ¾ in.** **HMA Binder$_1$ = 2 ¼ in.** **HMA Binder$_2$ = 2 ¾ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 5 ¾ in.** **Subbase Stone = 9 ½ inches** **Subbase Type: sand and gravel** **DCP Start Depth: 22 inches** **DCP Blows (per 6-inches): 25/2”**	**Total Thickness = 20 inches** **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 ¾ in.** **Weathering & Deterioration** **HMA Layer$_3$ = 2 ¼ in.** **Weathering & Deterioration** **Broken Concrete = 13 in.** **Subbase Stone Not Observed**

PN - 01 (NB Outside Lane)	PN - 02 (NB Inside Lane)	PN - 03 (NB Inside Lane)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 14 ½ inches **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 ¼ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 ¾ in.** **Weathering & Deterioration** **Concrete = 7 ½ in.**	**Total Thickness = 15 ½ inches** **Possible SMA Surface$_1$ = 2 ¼ in.** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 ¼ in.** **Weathering & Deterioration** **Concrete = 8 ½ in.**	**Total Thickness = 14 inches** **Possible SMA Surface$_1$ = 2 ¼ in.** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **HMA Layer$_3$ = 1 ¼ in.** **NOT FULLY RECOVERED** **Concrete = 8 in.**
Subbase Stone = 7 ½ inches	**Subbase Stone = 6 ½ inches**	**Subbase Stone = 8 inches**
Core Barrel Reached Max Depth at 22 inches	**Core Barrel Reached Max Depth at 22 inches**	**Core Barrel Reached Max Depth at 22 inches**

PN - 04 (NB Outside Lane)	PN - 05 (NB Inside Lane)	PN - 06 (NB Inside Lane)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 15 inches **Possible SMA Surface$_1$ = 4 ¼ in.** **HMA Binder$_1$ = ¾ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 in.** **Weathering & Deterioration** **Broken Concrete = 8 in.** **Subbase Stone = 7 inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 13 inches** **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 in.** **Weathering & Deterioration** **Broken Concrete = 9 in.** **Subbase Stone = 9 inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 14 ½ inches** **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 1 in.** **Weathering & Deterioration** **Broken Concrete = 9 in.** **Subbase Stone = 7 ½ inches** **Core Barrel Reached Max Depth at 22 inches**

PN - 07 (NB Inside Lane)	PN - 08 (NB Inside Lane)	PN - 09 (NB Inside Lane)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 15 inches **Possible SMA Surface$_1$ = 1 ½ in.** **Weathering & Deterioration** **HMA Binder$_1$ = 6 ½ in.** **NOT FULLY RECOVERED** **Broken Concrete = 7 in.** **Subbase Stone = 7 inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 15 ½ inches** **Possible SMA Surface$_1$ = 2 in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 ¼ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 3 ¼ in.** **NOT FULLY RECOVERED** **Broken Concrete = 8 in.** **Subbase Stone = 6 ½ inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 15 inches** **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 ½ in.** **NOT FULLY RECOVERED** **Broken Concrete = 8 ½ in.** **Subbase Stone = 7 inches** **Core Barrel Reached Max Depth at 22 inches**

PN - 10 (NB Inside Lane)	PN - 11 (NB Inside Lane)	PN - 12 (NB Inside Lane)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 16 inches **Possible SMA Surface$_1$ = 1 ¾ in.** **HMA Binder$_1$ = 2 ½ in.** **HMA Binder$_2$ = 2 ¾ in.** **Weathering & Deterioration** **Broken Concrete = 9 in.** **Subbase Stone = 2 inches**	**Total Thickness = 18 inches** **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 ½ in.** **HMA Binder$_2$ = 1 in.** **Weathering & Deterioration** **Broken Concrete = 8 ½ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 4 in.** **Subbase Stone Not Observed**	**Total Thickness = 15 inches** **Possible SMA Surface$_1$ = 1 ¼ in.** **HMA Binder$_1$ = 2 ½ in.** **HMA Binder$_2$ = ¾ in.** **Weathering & Deterioration** **Concrete = 10 ½ in.** **Subbase Stone Not Observed**

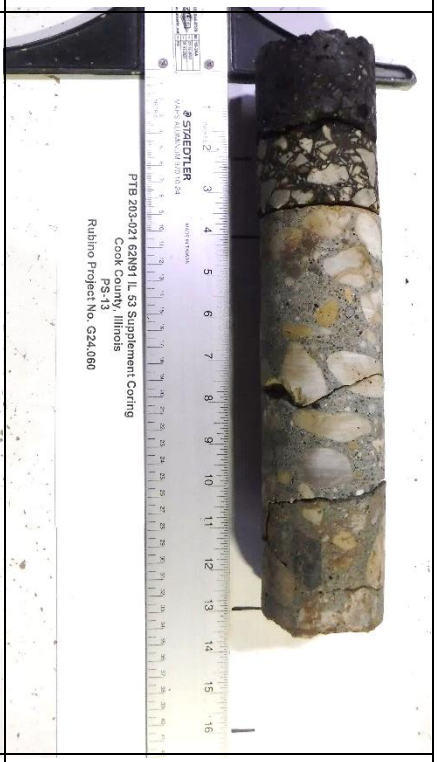
PN - 13 (NB Outside Lane)	PN - 14 (NB Outside Lane)	PN - 15 (NB Outside Lane)
		
Picture Taken Facing North	Picture Taken Facing North	Picture Taken Facing North
		
Total Thickness = 14 inches **Possible SMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 1 ½ in.** **Weathering & Deterioration** **Concrete = 8 in.** **HMA Binder$_2$ = 3 in.** **Subbase Stone Not Observed**	**Total Thickness = 14 ½ inches** **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 in.** **HMA Leveling Binder$_2$ = 1 in.** **HMA Binder$_3$ = 9 ½ in.** **Fabric Interlayer** **Subbase Stone = 7 ½ inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 15 inches** **Possible SMA Surface$_1$ = 1 ¾ in.** **HMA Binder$_1$ = 1 ½ in.** **Longitudinal Joint Sealing** **HMA Leveling Binder$_2$ = 1 in.** **Broken Concrete = 10 ¾ in.** **Subbase Stone = 7 inches** **Core Barrel Reached Max Depth at 22 inches**

PN - 16 (NB Outside Lane)	PS - 00 (SB Inside Lane)	PS - 01 (SB Outside Lane)
		
Picture Taken Facing North	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 21 inches **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **HMA Leveling Binder$_2$ = ¾ in.** **Concrete = 12 ¼ in.** **HMA Surface$_3$ = 3 ½ in.** **Subbase Stone Not Observed**	**Total Thickness = 13 ½ inches** **Possible SMA Surface$_1$ = 1 ¾ in.** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **Concrete = 9 ¼ in.** **Subbase Stone = 4 ½ inches**	**Total Thickness = 16 inches** **Possible SMA Surface$_1$ = 2 ½ in.** **HMA Binder$_1$ = 1 ½ in.** **HMA Binder$_2$ = 1 ¼ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 2 in.** **Weathering & Deterioration** **Concrete = 8 ¾ in.** **Subbase Stone = 6 inches** **Core Barrel Reached Max Depth at 22 inches**

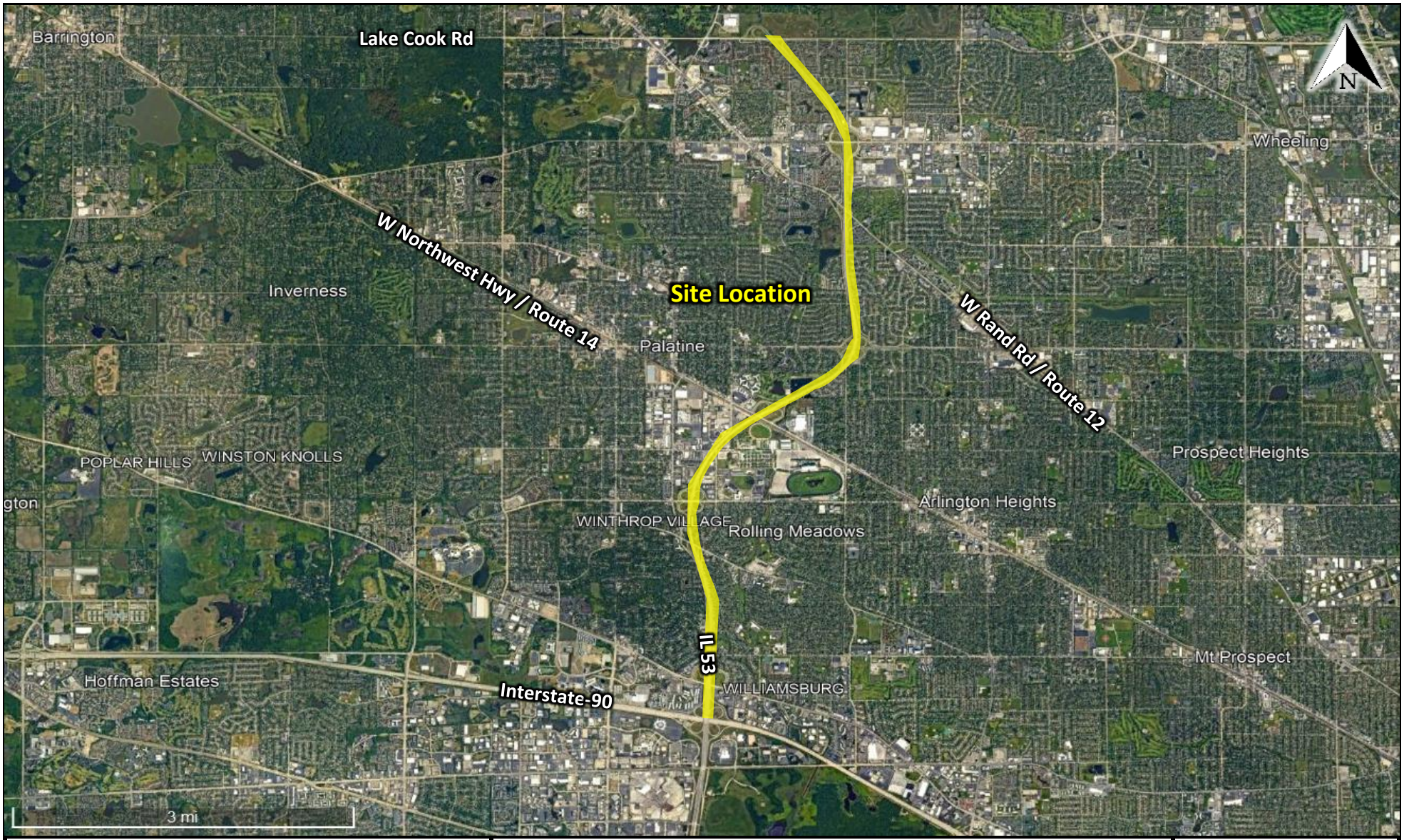
PS - 02 (SB Inside Lane)	PS - 03 (SB Inside Lane)	PS - 04 (SB Outside Lane)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 14 ½ inches **Possible SMA Surface$_1$ = 2 ¼ in.** **HMA Binder$_1$ = 2 ¾ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 1 ½ in.** **Weathering & Deterioration** **Concrete = 8 in.** **Subbase Stone = 7 ½ inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 14 inches** **Possible SMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 2 ½ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 in.** **NOT FULLY RECOVERED** **Concrete = 8 in.** **Subbase Stone = 8 inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 14 ½ inches** **Possible SMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 1 ½ in.** **HMA Binder$_2$ = 1 ¼ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 1 ¾ in.** **Weathering & Deterioration** **Broken Concrete = 8 ½ in.** **Subbase Stone = 7 ½ inches** **Core Barrel Reached Max Depth at 22 inches**

PS - 05 (SB Inside Lane)	PS - 06 (SB Inside Lane)	PS - 07 (SB Inside Lane)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 16 inches Possible SMA Surface$_1$ = 2 in. HMA Binder$_1$ = 2 in. HMA Binder$_2$ = 3 ½ in. Weathering & Deterioration Concrete = 8 ½ in. Subbase Stone = 6 inches Core Barrel Reached Max Depth at 22 inches	**Total Thickness = 16 inches** Possible SMA Surface$_1$ = 2 in. Weathering & Deterioration HMA Binder$_1$ = 3 ½ in. Weathering & Deterioration HMA Binder$_2$ = 2 in. Weathering & Deterioration Broken Concrete = 8 ½ in. Subbase Stone = 6 inches Core Barrel Reached Max Depth at 22 inches	**Total Thickness = 15 inches** Possible SMA Surface$_1$ = 2 in. HMA Binder$_1$ = 2 in. HMA Binder$_2$ = 1 ½ in. Weathering & Deterioration HMA Binder$_3$ = 1 ½ in. Weathering & Deterioration Broken Concrete = 8 in. Subbase Stone = 7 inches Core Barrel Reached Max Depth at 22 inches

PS - 08 (SB Inside Lane)	PS - 09 (SB Inside Lane)	PS - 10 (SB Inside Lane)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 15 inches **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 2 ¼ in.** **HMA Binder$_2$ = 1 ¼ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 2 in.** **Weathering & Deterioration** **Broken Concrete = 7 ½ in.** **Subbase Stone = 7 inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 16 ½ inches** **Possible SMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 1 in.** **Weathering & Deterioration** **HMA Binder$_2$ = 3 ½ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 2 in.** **Weathering & Deterioration** **Broken Concrete = 8 in.** **Subbase Stone = 5 ½ inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 14 inches** **Possible SMA Surface$_1$ = 2 ¼ in.** **HMA Binder$_1$ = 1 ¾ in.** **HMA Binder$_2$ = 2 in.** **Weathering & Deterioration** **Broken Concrete = 8 in.** **Subbase Stone = 8 inches** **Core Barrel Reached Max Depth at 22 inches**

PS - 11 (SB Inside Lane)	PS - 12 (SB Inside Lane)	PS - 13 (SB Outside Lane)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 20 inches **HMA Surface$_1$ = 2 in.** **HMA Binder$_1$ = 3 ½ in.** **HMA Binder$_2$ = 1 ¾ in.** **Weathering & Deterioration** **Concrete = 9 ¼ in.** **Weathering & Deterioration** **HMA Binder$_3$ = 3 ½ in.** **Subbase Stone Not Observed**	**Total Thickness = 20 ½ inches** **Possible SMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 2 ¾ in.** **HMA Surface$_1$ = ¾ in.** **Weathering & Deterioration** **HMA Surface$_2$ = ¾ in.** **HMA Binder$_3$ = ¾ in.** **Weathering & Deterioration** **Concrete = 8 ½ in.** **Weathering & Deterioration** **HMA Binder$_4$ = 5 ½ in.** **Subbase Stone Not Observed**	**Total Thickness = 16 inches** **Possible SMA Surface$_1$ = 2 in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 in.** **Weathering & Deterioration** **Broken Concrete = 9 in.** **HMA Surface$_3$ = 3 in.** **Subbase Stone Not Observed**

PS - 14 (SB Outside Lane)	PS - 15 (SB Outside Lane)	PS - 16 (SB Outside Lane)
		
Picture Taken Facing South	Picture Taken Facing South	Picture Taken Facing South
		
Total Thickness = 16 inches **Possible SMA Surface$_1$ = 2 in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 in.** **HMA Layer$_3$ = 3 in.** **Weathering & Deterioration** **Broken Concrete = 9 in.** **Subbase Stone = 2 inches**	**Total Thickness = 17 ½ inches** **Possible SMA Surface$_1$ = 1 ¾ in.** **HMA Binder$_1$ = 1 ¾ in.** **Weathering & Deterioration** **Broken Concrete = 11 ½ in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 ½ in.** **Subbase Stone = 4 ½ inches** **Core Barrel Reached Max Depth at 22 inches**	**Total Thickness = 18 ½ inches** **Possible SMA Surface$_1$ = 2 ¼ in.** **Weathering & Deterioration** **HMA Binder$_1$ = 2 ¾ in.** **Weathering & Deterioration** **Broken Concrete = 11 in.** **Weathering & Deterioration** **HMA Binder$_2$ = 2 ½ in.** **Subbase Stone = 3 ½ inches** **Core Barrel Reached Max Depth at 22 inches**



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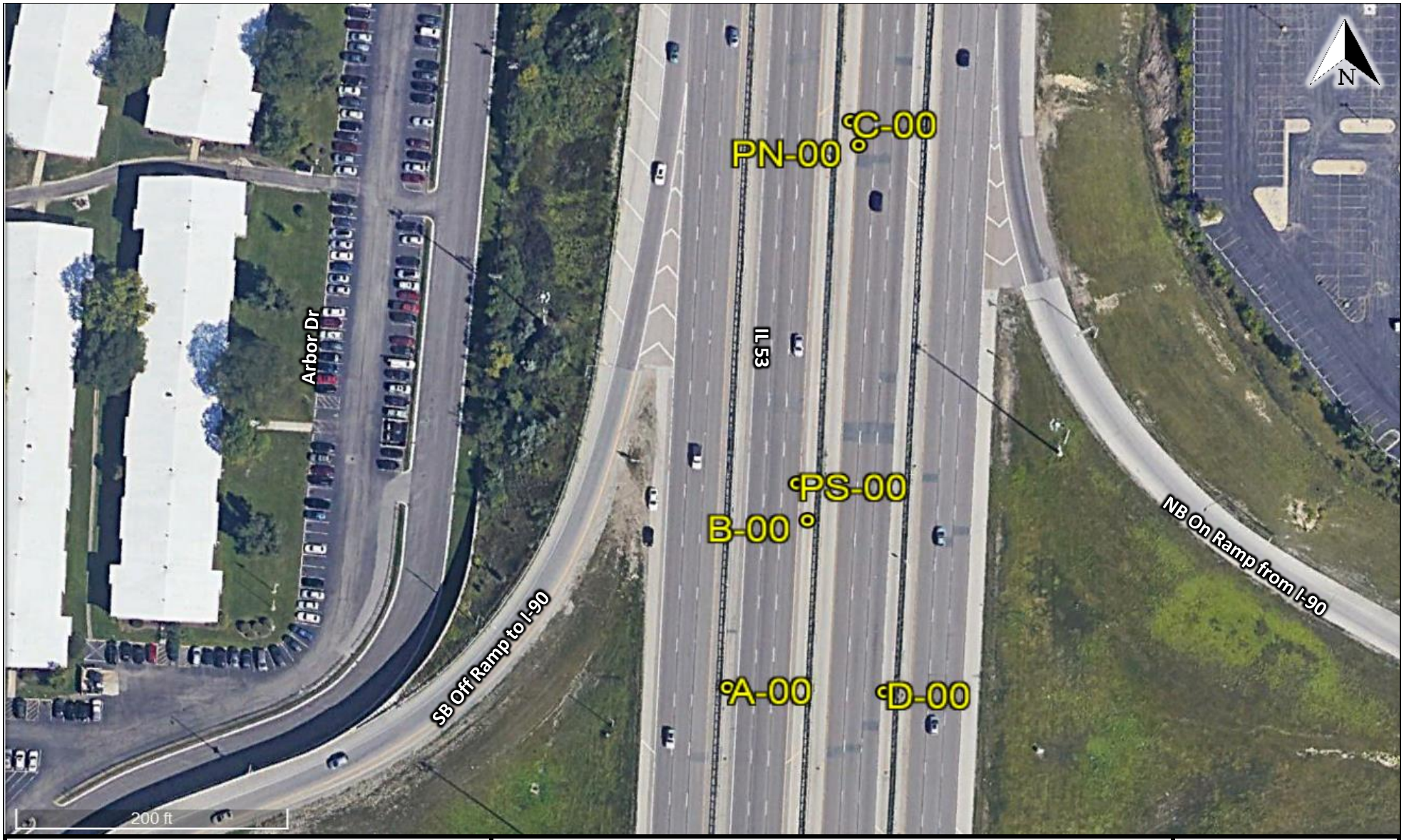
Project Name:	**PTB 203-021 62N91 IL 53 Supplement Coring**
Project Location:	I-90 to Lake Cook Road Cook County, Illinois
Client:	**Gonzalez Companies, LLC**
Rubino Project # :	G24.060

Site Vicinity Map



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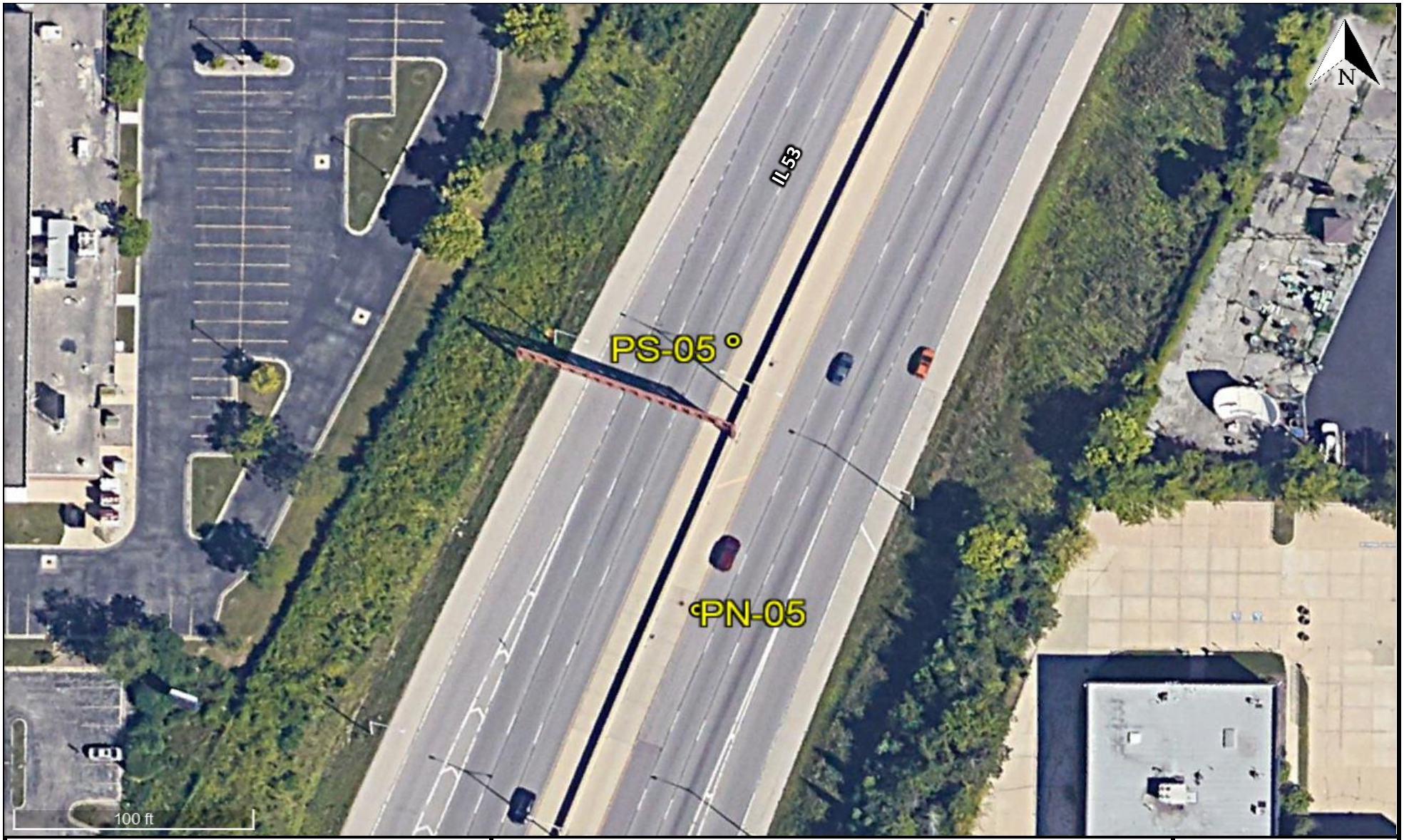

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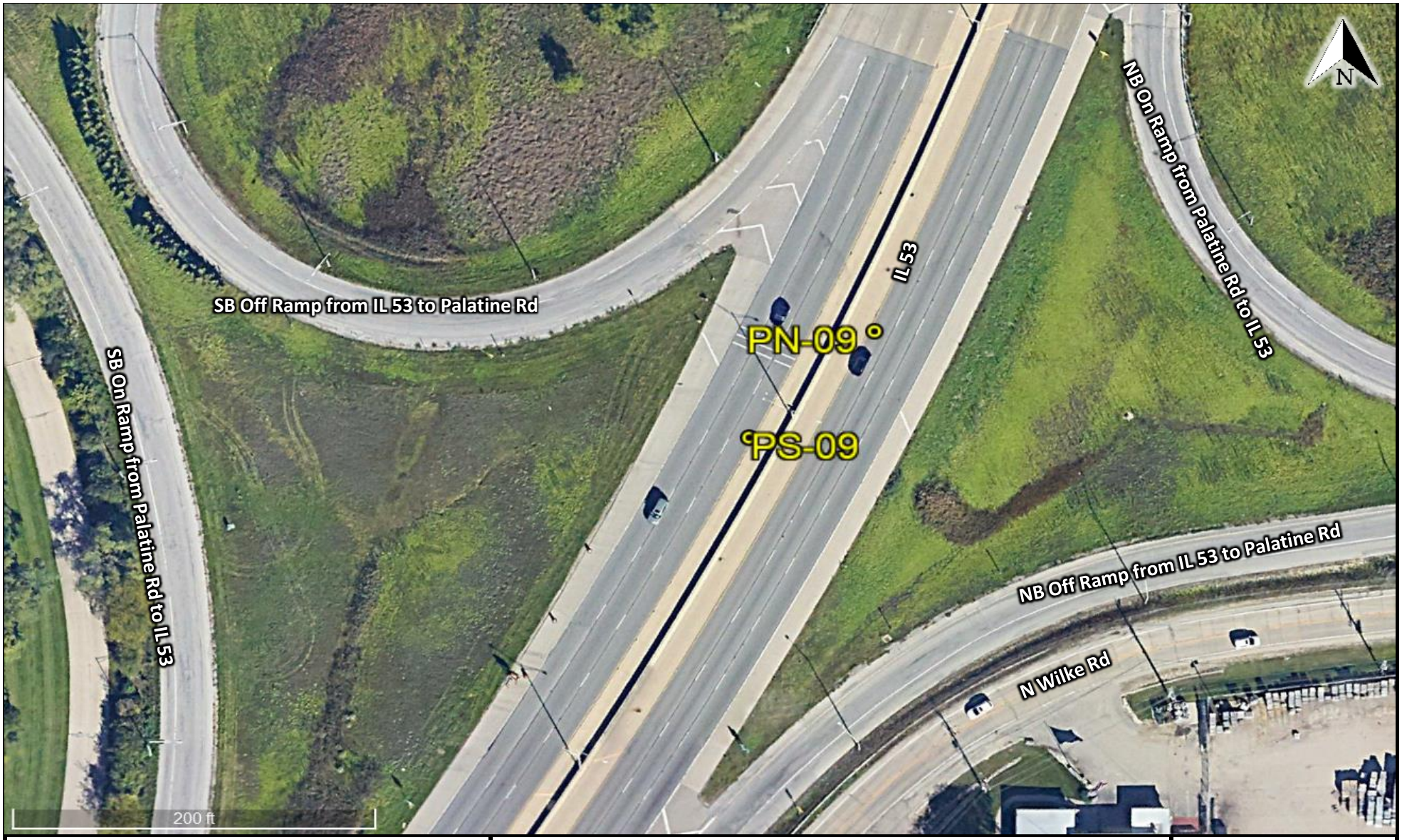

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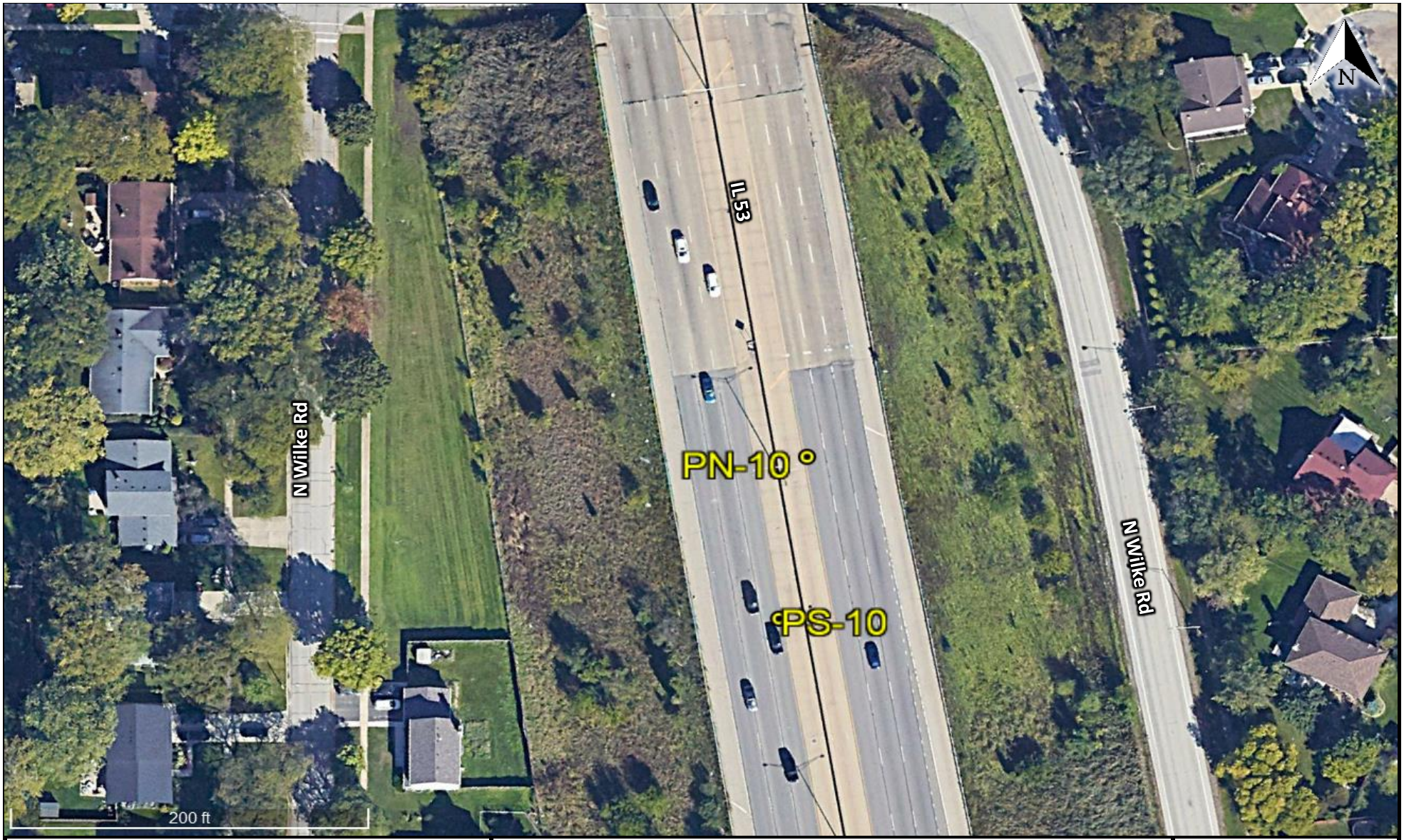

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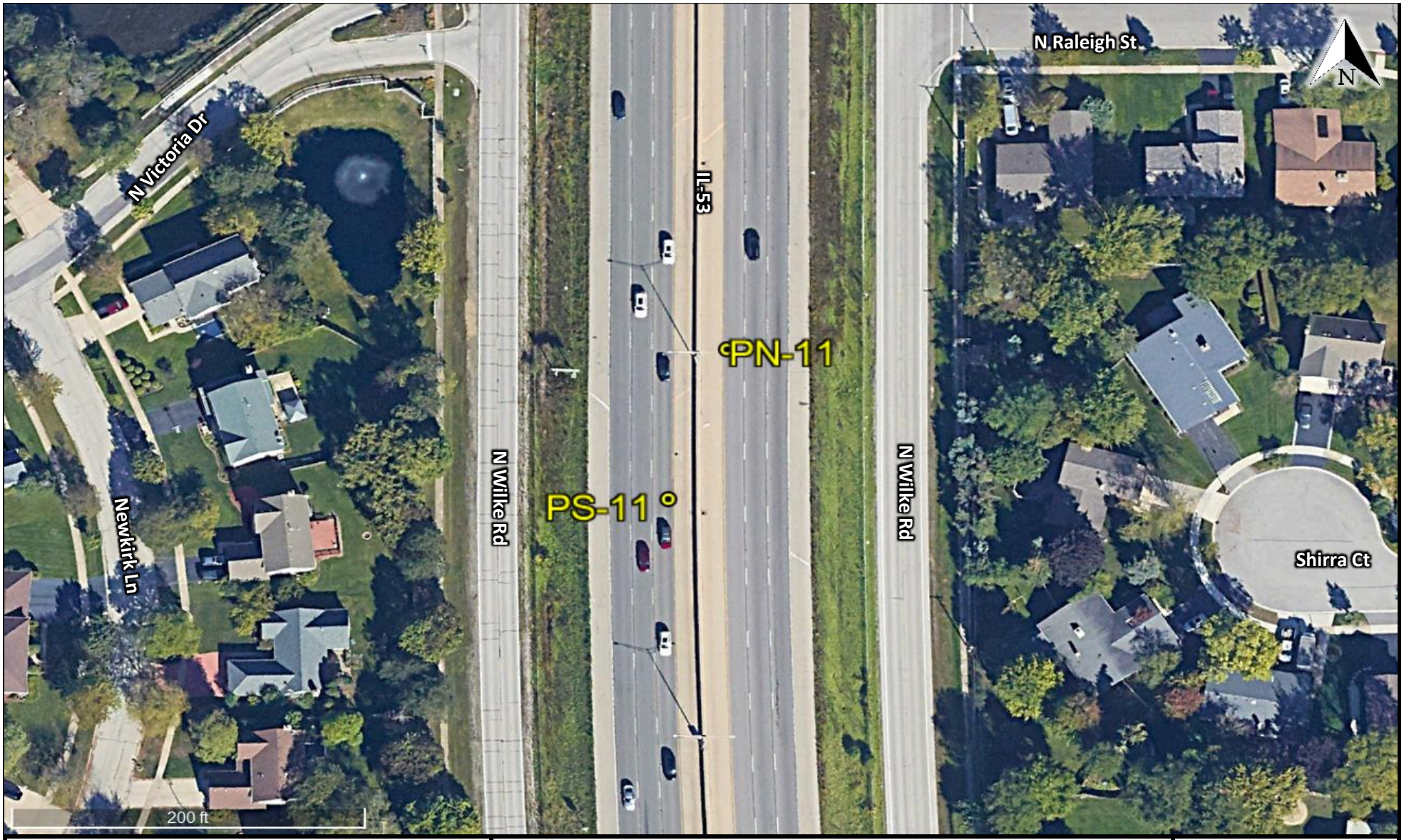

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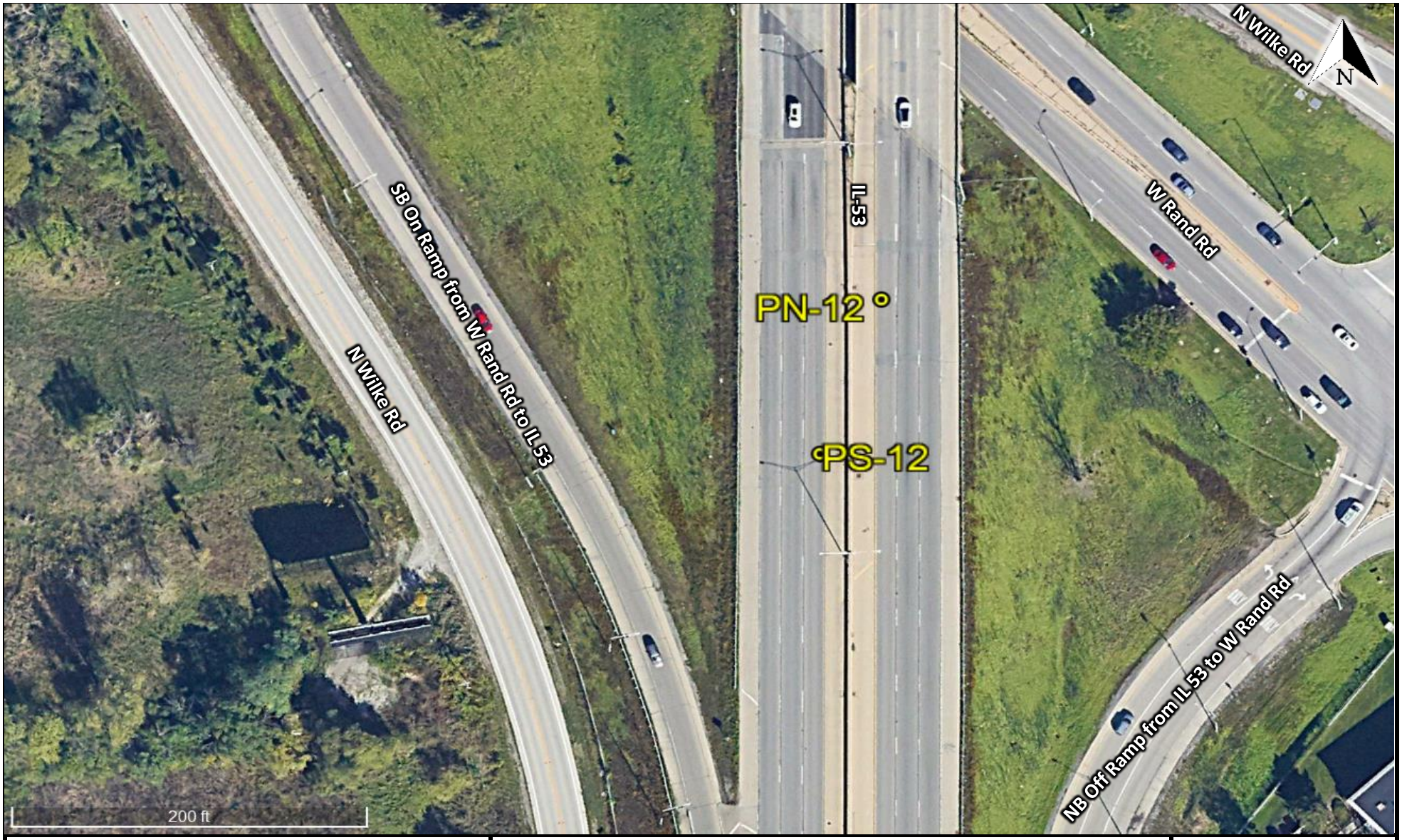

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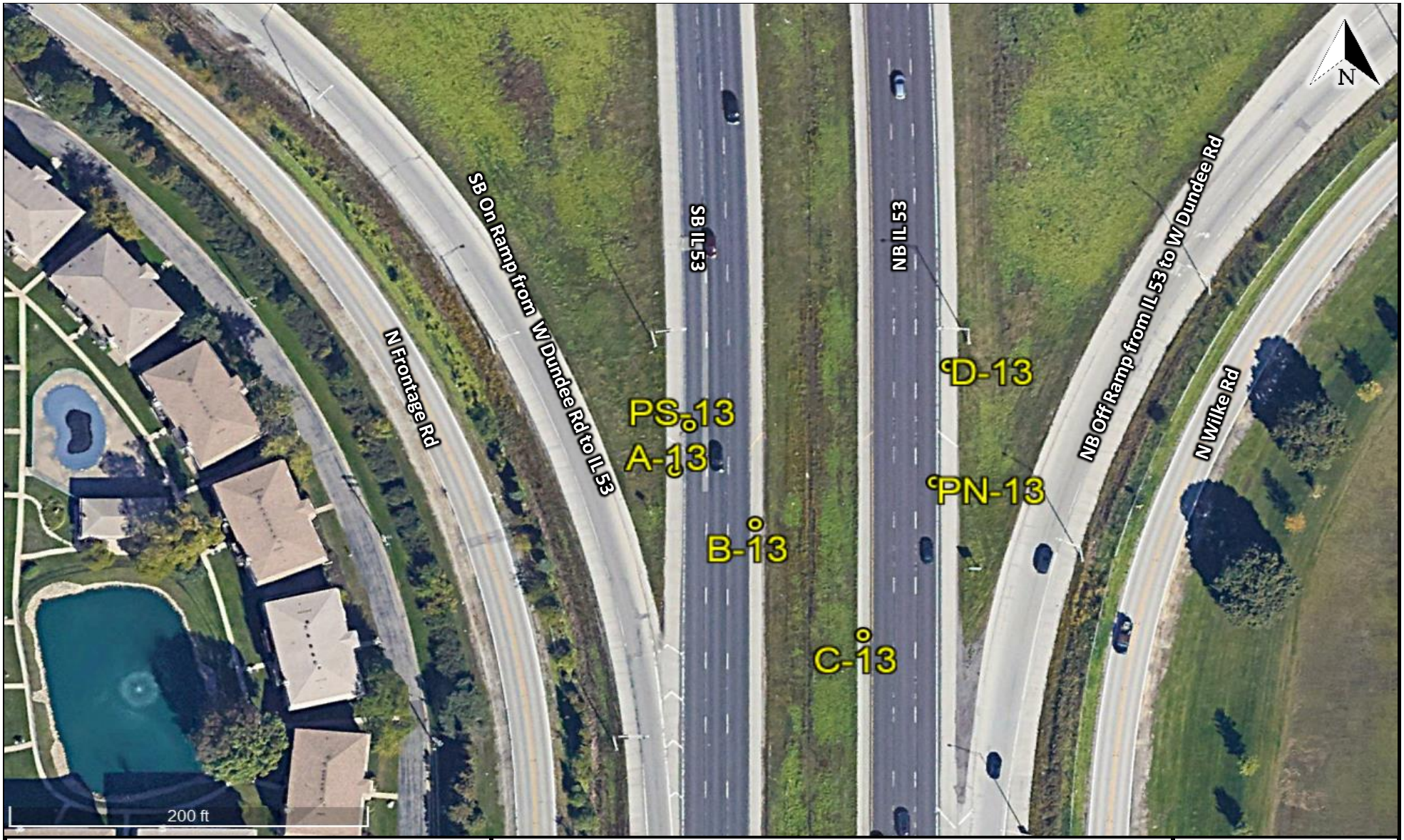

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