Wang Engineering

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September 17, 2019

Mr. Amish T. Bhatt, S.E, P.E
AECOM
303 East Wacker Drive, Suite 1400
Chicago, IL 60601

Re: Geotechnical Letter Report
Overhead Sign Structures and High Mast Towers
Jane Byrne Interchange, Contract **62A76**
Cook County, Illinois
Wang No. 1100-04-01

Dear Mr. Bhatt,

Wang Engineering Inc. (Wang) is pleased to present our geotechnical analysis and recommendations for the design of seven overhead sign and five high mast tower structures along the northbound (NB) I-90/94 as part of Jane Byrne Interchange Reconstruction, Contract 62A76, in Chicago, Cook County, Illinois. Based on the information provided by AECOM, Wang understands the proposed overhead signs and high mast towers will be located between West Roosevelt Road Bridge and West Madison Street Bridge crossings.

The purpose of the investigation was to characterize the subsurface conditions and provide geotechnical analyses and recommendations for the design and construction of the proposed structures.

Subsurface Investigation and Laboratory Testing

The project site is located in the W ½ of Section 16 and NW ½ of Section 21, T39N, R14E of the third Principal Meridian. A *Site Location Map* is presented as Exhibit 1. The subsurface investigation consisted of ten soil borings designated as NB for sign structure borings and LTB for high mast tower borings. The subsurface investigation was carried out between July 5 and August 26, 2019. The borings were drilled to depths ranging from 40.0 to 60.0 feet below ground surface (bgs). In addition, two existing borings designated as boring 02-RWB-06 and 27-RWB-01 were

used to supplement this report. The as-drilled northing and easting coordinates were surveyed by Wang using a mapping grade GPS unit. The sign structures and high mast towers locations, as provided by AECOM/ TranSystems, with corresponding reference borings are shown in Table 1 and Table 2, respectively.

Table 1: Overhead Sign Structure Locations and Reference Borings along NB I-90/94

Overhead Sign Structure ID	Approximate Station	Reference Borings[(1)]	Termination Depth (ft.)
NB-10	6105+20 (NB I-90/94)	NB-10	50
NB-11	6108+25 (NB I-90/94)	NB-11	60
NB-13	6119+45 (NB I-90/94)	NB-13	45
NB-14	6124+75 (NB I-90/94)	02-RWB-06	112
NB-15	6128+37 (NB I-90/94)	NB-15	50
NB-21	6156+60 (NB I-90/94)	NB-21	50
NB-22	6158+80 (NB I-90/94)	NB-22	45

(1) 02-RWB-06 boring was performed by Wang on 06/17/2013.

Table 2: High Mast Tower Structure Locations and Reference Borings along NB I-90/94

High Mast Tower Structure ID	Approximate Station	Approximate Offset	Reference Borings[(1)]	Termination Depth (ft.)
8 CCD2	6108+00 (NB I-90/94)	141.2 RT	LTB-01	60
7 CCD3	6112+50 (NB I-90/94)	140.0 RT	LTB-04	45
7 DAB1	6122+85 (NB I-90/94)	117.5 RT	LTB-06	40
7 DAB3	6118+54 (NB I-90/94)	128.3 RT	LTB-07	60
5 VCD3	6343+85 (NB C-D Rd)	54.0 RT	27-RWB-01	96

(1) 27-RWB-01 boring was performed by Wang on 06/23/2014.

Truck-mounted drilling rigs, equipped with hollow stem augers, were used to advance and maintain an open borehole. Soil sampling was performed in accordance with AASHTO T 206, *"Penetration Test and Split Barrel Sampling of Soils."* The soil was sampled at 2.5-foot intervals to 30 feet bgs and at 5.0-foot intervals thereafter to the boring termination depth. Soil samples collected from each sampling interval were placed in sealed jars for further examination and laboratory testing.

Field boring logs were prepared and maintained by a Wang engineer, and included lithologic descriptions, visual-manual soil classifications, penetrometer or Rimac unconfined compressive strength tests, and results of standard penetration tests recorded as blows per 6-inches of penetration.

Ground water level was measured during drilling and at completion of each boring. The boreholes were backfilled with bentonite chips after completion, and the surface was restored as close as possible to its original condition.

Soil samples were tested in the laboratory for moisture content (AASHTO T 265). Field visual descriptions of the soil samples were verified in the laboratory and classified according to IDH Soil Classification System.

The as-drilled boring locations were surveyed by Wang and station and offset information for each boring were provided by AECOM/ TranSystems. It is noted that LTB boring locations prepared during OUC submittal process are located 30 to 80 feet away from the latest high mast tower locations provided by AECOM. Most of boring elevations were provided by AECOM/ TranSystems from topo drawings. Where information was not available, the boring elevations were estimated either from cross section drawings or from layout survey. Boring location data are presented in the Boring Logs (Appendix A) and the boring locations are shown in Exhibit 2. Please note that the sign structure locations are not shown in the Exhibit 2 because the actual sign locations are not available during the report preparation.

Subsurface Conditions

Detailed descriptions of the soil conditions encountered are presented in the attached *Boring Logs* (Appendix A). Please note the lithological boundaries shown on the logs and profiles (Exhibit 3) represent approximate boundaries between the soil types. In the field, the actual transition between soil types might be different in horizontal and vertical directions.

Below the pavement, the borings encountered one to six feet of fill materials. The fill consists of hard silty clay loam with unconfined compressive strength (Q_u) values of up to 4.1 tsf or medium dense to dense sandy gravel. Please note that Boring LTB-07 encountered 11-foot thick lightweight concrete fill. At elevations of 565 to 581 (2 to 15 feet bgs), the borings advanced through up to 36 feet of very soft to medium stiff clay to silty clay. Beneath the very soft to medium stiff clay to silty

clay, the borings encountered stiff to hard silty clay to silty loam. In deeper borings, the stiff to hard silty clay to silty loam is followed by medium dense to very dense silt to silty loam and sand. Boring 02-RWB-06 encountered Dolostone bedrock at 92 feet bgs (490 feet elevation).
The design and construction of drilled shaft foundation should consider the groundwater in granular fill. Moreover, the granular soil layers within and below the clay layers are expected to be saturated; groundwater in granular soils above the bedrock is expected to be under hydrostatic pressure.

Engineering Analyses and Recommendations

Our evaluation showed at sign structure and High mast tower locations, soft to medium stiff clay to silty clay with Q_u values less than 1.0 tsf extending to about 35 feet below ground surface or about elevation of 540 feet. Therefore, the standard foundation dimensions criteria were not met. Accordingly, the sign structure foundations will require site specific design as per IDOT Sign Structure Manual (IDOT 2012).

Lateral loads on drilled shafts should be analyzed for maximum moments and lateral deflections. The lateral load capacity analysis can be performed using computer program such as COMP 624P, LPILE, LATPILE, or any other similar programs. The estimated soil parameters that may be used to analyze stresses and deflections of drilled shafts sign structure and high mast tower foundations under lateral loads are presented in Table 3 through Table 14. The Qu values for the soft silty clay were obtained from the closest vane shear testing conducted near the structures. Information on the vane shear testing is provided in Appendix A for reference.

Table 3: Recommended Parameters for Lateral Load Analysis of Sign Structure at NB-10
(Reference Borings: NB-10 and VST-07)

Soil Type (Layer)	Unit Weight, γ [(1)] (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ [(1)] (°)	Estimated Lateral Soil Modulus Parameter, k [(2)] (pci)	Estimated Soil Strain Parameter, ε_{50} [(2)] (%)
Existing FILL Below pavement to EL 575 feet	120	0	30	90	--
Stiff SILTY CLAY EL 575 to 572 feet	115	1000	0	500	0.7
Soft to M Stiff CLAY EL 572 to 567 feet	110	800	0	100	1.0
Soft to M Stiff CLAY EL 567 to 557 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 557 to 550 feet	110	780	0	100	1.0

Soil Type (Layer)	Unit Weight, γ[(1)] (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ [(1)] (°)	Estimated Lateral Soil Modulus Parameter, k [(2)] (pci)	Estimated Soil Strain Parameter, ε_{50} [(2)] (%)
Stiff SILTY CLAY EL 550 to 544 feet	115	1000	0	500	0.7
Medium dense SILT EL 544 to 539 feet	120	0	32	90	--
Very Stiff to Hard SILTY CLAY EL 539 to 530 feet	120	3900	0	1000	0.5

[(1)] Based on Naval Facilities Engineering Command, Design Manual 7.1 (1996)
[(2)] Based on L-Pile Technical Manual 2012

Table 4: Recommended Parameters for Lateral Load Analysis of Sign Structure at NB-11
(Reference Borings: NB-11 and VST-07)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 587 feet	120	0	34	225	--
V Stiff SILTY CLAY EL 587 to 578 feet	115	2500	0	100	0.5
Stiff SILTY CLAY EL 578 to 572 feet	115	1000	0	500	0.7
Soft to M Stiff CLAY EL 572 to 567 feet	110	800	0	100	1.0
Soft to M Stiff CLAY EL 567 to 557 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 557 to 550 feet	110	780	0	100	1.0
Stiff SILTY CLAY EL 550 to 544 feet	115	1000	0	500	0.7
Stiff SILTY CLAY EL 544 to 540 feet	120	1100	0	500	0.7
Hard SILTY LOAM to SI CL LOAM EL 540 to 531 feet	120	4600	0	2000	0.4

Table 5: Recommended Parameters for Lateral Load Analysis of Sign Structure at NB-13
(Reference Borings: NB-13 and VST-07)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 571 feet	120	4000	0	2000	0.4
Stiff SILTY CLAY EL 575 to 572 feet	115	1000	0	500	0.7
Soft to M Stiff CLAY EL 572 to 567 feet	110	800	0	100	1.0
Soft to M Stiff CLAY EL 567 to 557 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 557 to 550 feet	110	780	0	100	1.0
Stiff SILTY CLAY EL 550 to 545 feet	115	1000	0	500	0.7
Very Stiff SILTY CLAY EL 545 to 535 feet	120	3500	0	1000	0.5
Stiff SILTY CLAY EL 535 to 531 feet	120	1500	0	500	0.7

Table 6: Recommended Parameters for Lateral Load Analysis of Sign Structure at NB-14
(Reference Borings: 02-RWB-06 and DBT-VST-01)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 578 feet	120	2800	0	1000	0.5
Stiff SILTY CLAY EL 578 to 568 feet	115	1250	0	500	0.7
Soft to M Stiff CLAY EL 568 to 553 feet	110	800	0	100	1.0
Stiff CLAY EL 553 to 540 feet	115	1100	0	500	0.7
Stiff SILTY CLAY LOAM EL 540 to 535 feet	115	1200	0	500	0.7
V Stiff SILTY CLAY LOAM EL 535 to 527 feet	120	3100	0	1000	0.5
Hard SILTY CLAY EL 527 to 520 feet	120	6100	0	2000	0.4

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
M Dense GRAVELLY SANDY LOAM EL 520 to 512 feet	125	0	34	60	--
Hard SILTY CLAY EL 512 to 491 feet	125	6000	0	2000	0.4

Table 7: Recommended Parameters for Lateral Load Analysis of Sign Structure at NB-15 (Reference Borings: NB-15 and VST-01)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 578 feet	120	0	30	25	--
Stiff to V Stiff SILTY CLAY EL 578 to 574 feet	115	1500	0	500	0.7
Soft to M Stiff SILTY CLAY EL 574 to 570 feet	110	750	0	100	1.0
Soft to M Stiff CLAY EL 570 to 562 feet	110	650	0	100	1.0
Soft to M Stiff CLAY EL 562 to 558 feet	110	950	0	100	1.0
Soft to M Stiff CLAY EL 558 to 540 feet	115	1100	0	500	0.7
Dense SILTY LOAM EL 540 to 533 feet	120	0	36	125	--
V Stiff SILTY CLAY LOAM EL 533 to 532 feet	120	2800	0	1000	0.5

Table 8: Recommended Parameters for Lateral Load Analysis of Sign Structure at NB-21 (Reference Borings: NB-21 and VST-03)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 575 feet	120	3000	0	1000	0.5
Soft to M Stiff CLAY EL 575 to 565 feet	110	400	0	30	2.0

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Soft to M Stiff CLAY EL 565 to 552 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 552 to 547 feet	110	950	0	100	1.0
Soft to M Stiff CLAY EL 547 to 541 feet	115	1400	0	500	0.7
V Stiff SILTY CLAY EL 541 to 536 feet	120	2100	0	1000	0.5
Hard Stiff CLAY LOAM EL 536 to 531 feet	120	5200	0	2000	0.4
Very Stiff CLAY EL 531 to 528 feet	120	3300	0	1000	0.5

Table 9: Recommended Parameters for Lateral Load Analysis of Sign Structure at NB-22 (Reference Borings: NB-22 and VST-03)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 570 feet	120	0	30	20	--
M Stiff to V Stiff SILTY CLAY LOAM EL 570 to 565 feet	120	1600	0	500	0.7
Soft to M Stiff CLAY EL 565 to 552 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 552 to 547 feet	110	950	0	100	1.0
Soft to M Stiff CLAY EL 547 to 544 feet	115	1400	0	500	0.7
V Stiff SILTY CLAY EL 544 to 531 feet	120	1500	0	500	0.7

Table 10: Recommended Parameters for Lateral Load Analysis of High Mast Tower 8 CCD2
(Reference Borings: LTB-01 and VST-07)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 585 feet	120	0	30	90	--
V Stiff SILTY CLAY EL 585 to 581 feet	120	2300	0	100	0.5
Soft to M Stiff CLAY EL 581 to 567 feet	110	800	0	100	1.0
Soft to M Stiff CLAY EL 567 to 557 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 557 to 550 feet	110	780	0	100	1.0
Stiff SILTY CLAY EL 550 to 545 feet	115	1000	0	500	0.7
V Stiff SILTY CLAY EL 545 to 540 feet	120	2000	0	1000	0.5
Hard SILTY CLAY EL 540 to 531 feet	125	6600	0	2000	0.4

Table 11: Recommended Parameters for Lateral Load Analysis of High Mast Tower 7 CCD3
(Reference Borings: LTB-04 and VST-07)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Soft to M Stiff CLAY Below Pavement to 567 feet	110	800	0	100	1.0
Soft to M Stiff CLAY EL 567 to 557 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 557 to 550 feet	110	780	0	100	1.0
Stiff SILTY CLAY EL 550 to 544 feet	115	1000	0	500	0.7
M Dense SILTY LOAM EL 544 to 534 feet	120	0	34	125	--
Hard SILTY CLAY LOAM EL 534 to 531 feet	125	6000	0	2000	0.4

Table 12: Recommended Parameters for Lateral Load Analysis of High Mast Tower 7 DAB3
(Reference Borings: LTB-06 and VST-07)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 567 feet	120	0	34	225	--
Soft to M Stiff CLAY EL 567 to 557 feet	110	600	0	100	1.0
Soft to M Stiff CLAY EL 557 to 550 feet	110	780	0	100	1.0
Stiff SILTY CLAY EL 550 to 547 feet	115	1000	0	500	0.7
Stiff SILTY CLAY EL 547 to 541 feet	120	1100	0	500	0.7
Hard SILTY CLAY EL 541 to 532 feet	125	6000	0	2000	0.4

Table 13: Recommended Parameters for Lateral Load Analysis of High Mast Tower 7 DAB1
(Reference Borings: LTB-07 and DBT-VST-01)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing Lightweight Concrete FILL Below pavement to EL 582 feet	48	22,300	0	2000	0.4
M Stiff SILTY CLAY LOAM EL 582 to 577 feet	115	650	0	100	1.0
Stiff SILTY CLAY EL 577 to 574 feet	115	1200	0	500	0.7
Stiff SILTY CLAY EL 574 to 568 feet	115	1300	0	500	0.7
Soft to M Stiff CLAY EL 568 to 553 feet	110	800	0	100	1.0
Stiff CLAY EL 553 to 546 feet	115	1100	0	500	0.7
V Stiff SILTY CLAY LOAM EL 546 to 540 feet	120	3300	0	1000	0.5
Hard SILTY CLAY EL 540 to 537 feet	125	6900	0	2000	0.4

Table 14: Recommended Parameters for Lateral Load Analysis of High Mast Tower 5VCD3
(Reference Borings: 27-RWB-01 and VST-02)

Soil Type (Layer)	Unit Weight, γ (pcf)	Undrained Shear Strength, c_u (psf)	Estimated Friction Angle, Φ (°)	Estimated Lateral Soil Modulus Parameter, k (pci)	Estimated Soil Strain Parameter, ε_{50} (%)
Existing FILL Below pavement to EL 576 feet	120	4100	0	2000	0.4
Soft to M Stiff CLAY EL 576 to 566 feet	115	500	0	100	1.0
Soft to M Stiff CLAY EL 566 to 561 feet	115	900	0	100	1.0
Soft to M Stiff CLAY EL 561 to 553 feet	115	700	0	100	1.0
Soft to M Stiff CLAY EL 553 to 548 feet	115	900	0	100	1.0
Stiff SILTY CLAY EL 548 to 537 feet	120	1100	0	500	0.7
V Stiff to Hard SILTY CLAY EL 537 to 527 feet	120	3400	0	1000	0.5
Stiff SILTY CLAY EL 527 to 517 feet	120	1400	0	500	0.7
M Dense to V Dense SILTY LOAM EL 517 to 507 feet	125	0	34	125	--
Dense to V Dense SAND to SILTY LOAM EL 507 to 483 feet	130	0	36	125	--

Construction Considerations

Excavation

Foundations excavation should be performed in accordance with local, state, and federal regulations including current OSHA regulations. The potential effect of ground movements upon nearby structures and utilities should be considered.

Drilled Shafts Construction

The drilled shafts should be constructed in accordance with IDOT Standard Specification Section 516, *Drilled Shafts*. The soft soil layer with Q_u less than 0.5 tsf is prone to squeeze if left open for long period of time. Therefore, to minimize the squeeze potential, casing should be provided. Due

to high squeeze and water bearing in granular layer potential, the following note should appear on the final plans:

'Due to the squeeze potential of the clay soils and the presence of water bearing layers, the use of temporary casing may be required to properly construct the shafts. Casing may be pulled or remain in place, as determined by the Contractor at no cost to the Department.'

Qualifications

The analyses and recommendations contained in this letter report are based on data obtained at the boring locations shown in Exhibit 2 and do not reflect any variations that may occur elsewhere on the site, variations whose nature and extent may not become obvious until late in the construction phase. Should subsurface conditions encountered during construction differ from those encountered in the borings or if any change in the location of the overhead signs or high mast towers is planned, Wang should be timely notified so that our recommendations could be reviewed and revised as necessary.

It has been a pleasure to assist AECOM and the Illinois Department of Transportation on this project. Please contact us if you have any questions or if we can be of further assistance.

Respectfully Submitted,

WANG ENGINEERING, INC.

Andri A. Kurnia, P.E.
Sr. Geotechnical Engineer

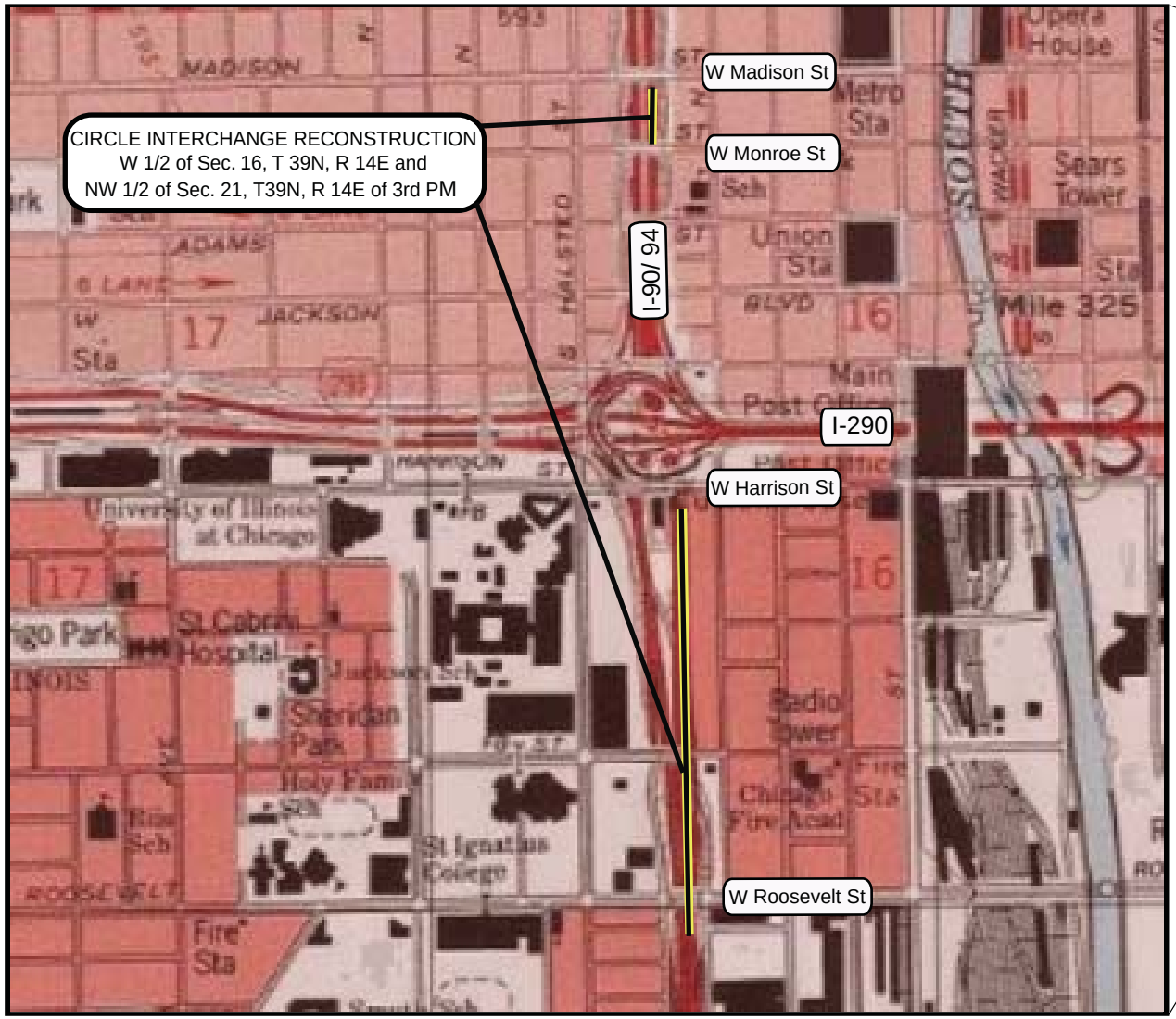
Edwin Greenwood
Engineering Geologist

Corina T. Farez, P.E., P.G.
Vice President

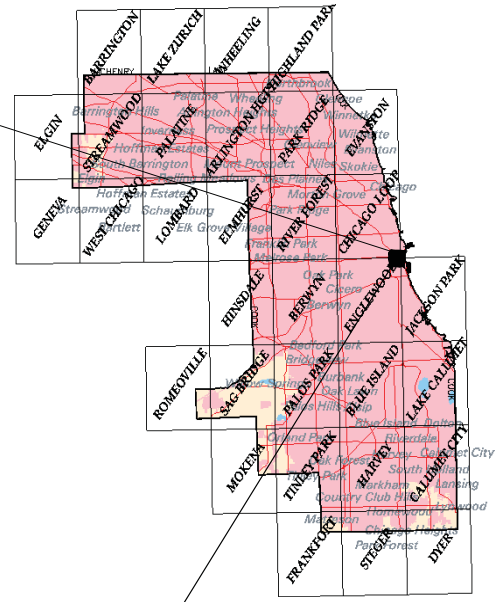
Attachments: Exhibit 1: Site Location Map
Exhibit 2: Boring Location Plan
Exhibit 3: Subsurface Soil Data Profile
Appendix A: Boring Logs

EXHIBITS

Exhibit 1: Site Location Map
Exhibit 2: Boring Location Plan
Exhibit 3: Subsurface Soil Data Profile



Cook County



SITE LOCATION MAP: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, IL

SCALE: GRAPHICAL	EXHIBIT 1	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

Wang Engineering
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FOR AECOM	1100-04-01

Legend

- Boring Location
- Proposed HMLT 8 CCD2

0 30 60 90 120 150 feet

SITE AND BORING LOCATION MAP: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-1	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

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FOR AECOM	1100-04-01

Legend

- Boring Location
- Proposed HMLT 7 CCD3

0 20 40 60 80 100 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-2	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

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FOR AECOM | 1100-04-01

Legend

- Boring Location
- Proposed HMLT 7 DAB1

0 30 60 90 120 150 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-3	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

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Legend

- Boring Location
- Proposed HMLT 7 DAB3

0 30 60 90 120 150 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-4	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

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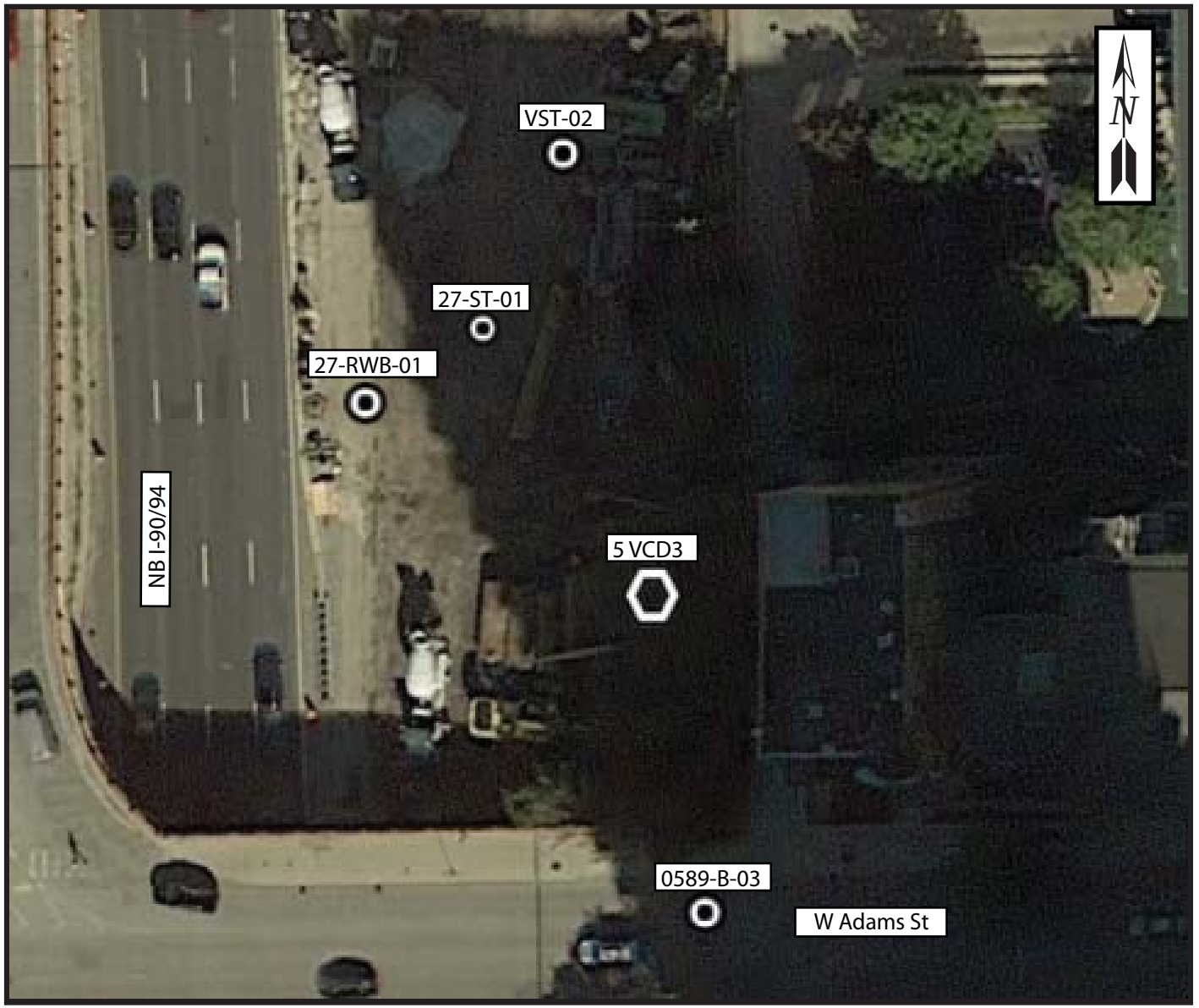

Legend

- Boring Location
- Proposed HMLT 5 VCD3

0 20 40 60 80 100 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE
RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-5	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

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FOR AECOM | 1100-04-01

Legend

Boring Location

0 20 40 60 800 100 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL | EXHIBIT 2-6 | DRAWN BY: E. Greenwood | CHECKED BY: A. Kurnia

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FOR AECOM | 1100-04-01

Legend

Boring Location

0 30 60 90 120 150 feet

SITE AND BORING LOCATION MAP: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-7	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

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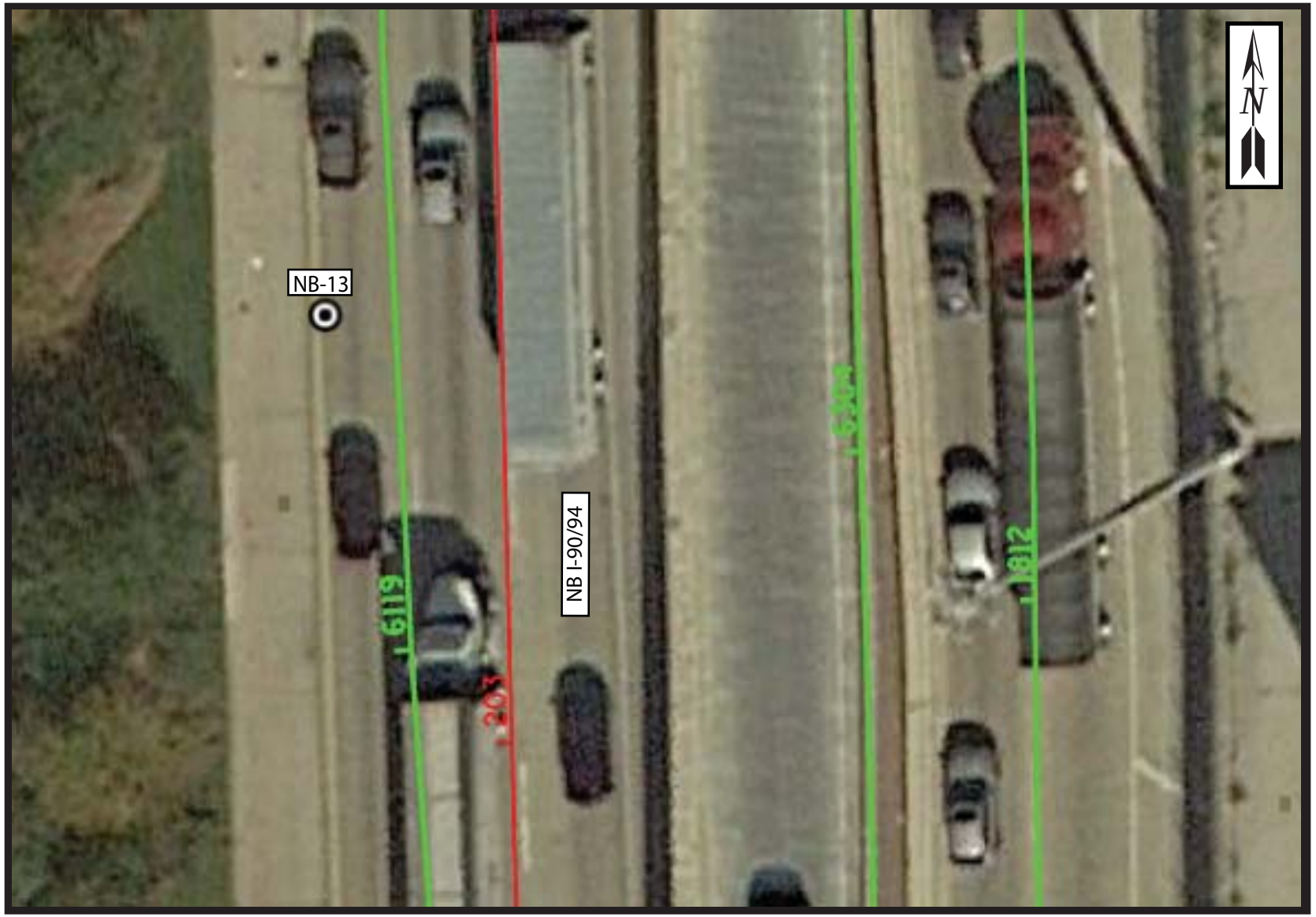
FOR AECOM	1100-04-01



Legend

Boring Location

0 15 30 45 60 75 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE
RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-8	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

Wang Engineering
1145 N. Main Street
Lombard, IL 60148
www.wangeng.com

FOR AECOM

1100-04-01

Legend

- Boring Location
- Proposed NB-14

0 15 30 45 60 75 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL	EXHIBIT 2-9	DRAWN BY: E. Greenwood CHECKED BY: A. Kurnia

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FOR AECOM

1100-04-01

Legend

Boring Location

0 15 30 45 60 75 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE
RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL

EXHIBIT 2-10

DRAWN BY: E. Greenwood
CHECKED BY: A. Kurnia

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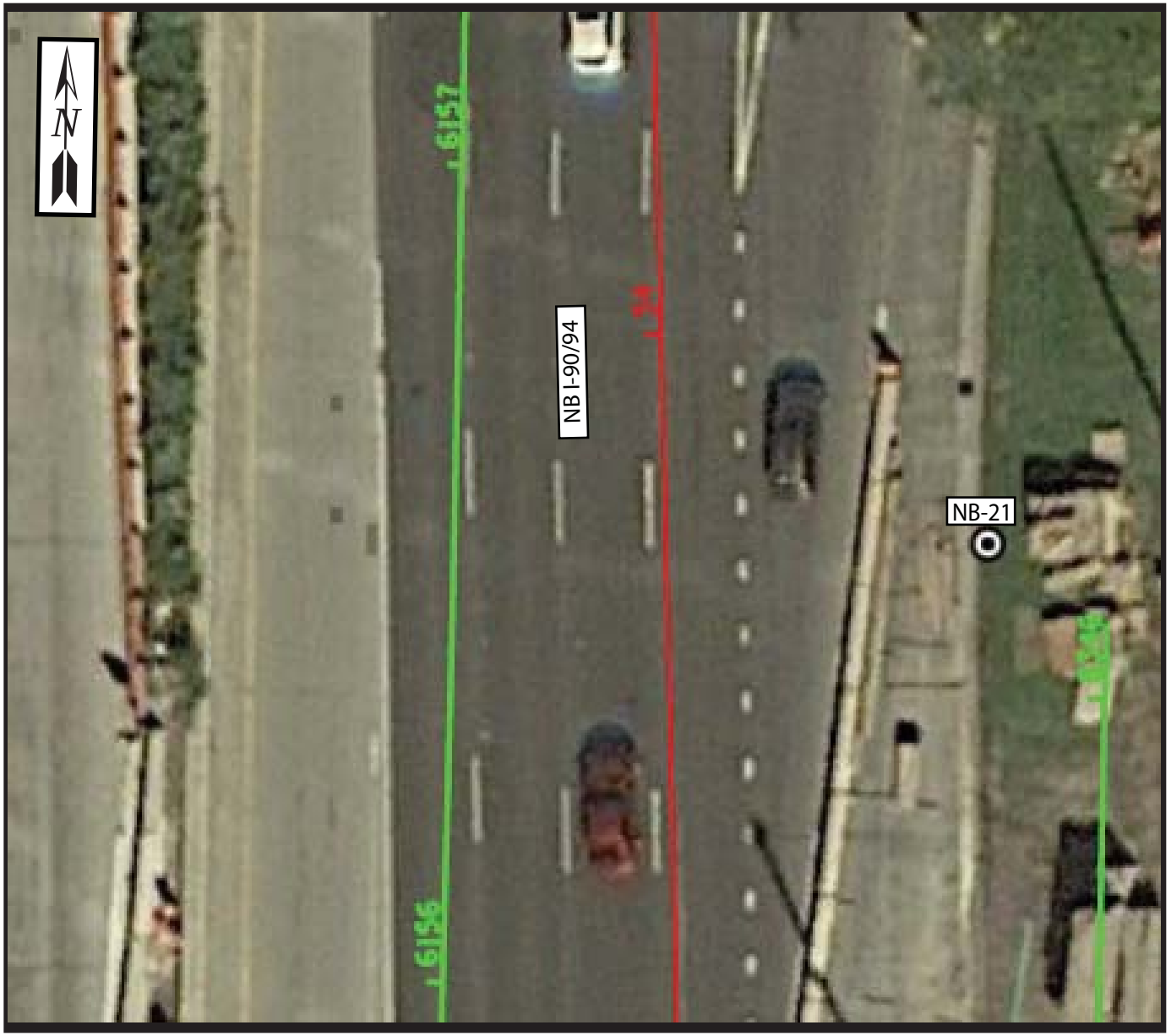

Legend

Boring Location

0 15 30 45 60 75 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL

EXHIBIT 2-11

DRAWN BY: E. Greenwood
CHECKED BY: A. Kurnia

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1100-04-01

Legend

Boring Location

0 20 40 60 80 100 feet

BORING LOCATION PLAN: CIRCLE INTERCHANGE RECONSTRUCTION, CONTRACT 62A76, CHICAGO, ILLINOIS

SCALE: GRAPHICAL

EXHIBIT 2-12

DRAWN BY: E. Greenwood
CHECKED BY: A. Kurnia

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FOR AECOM

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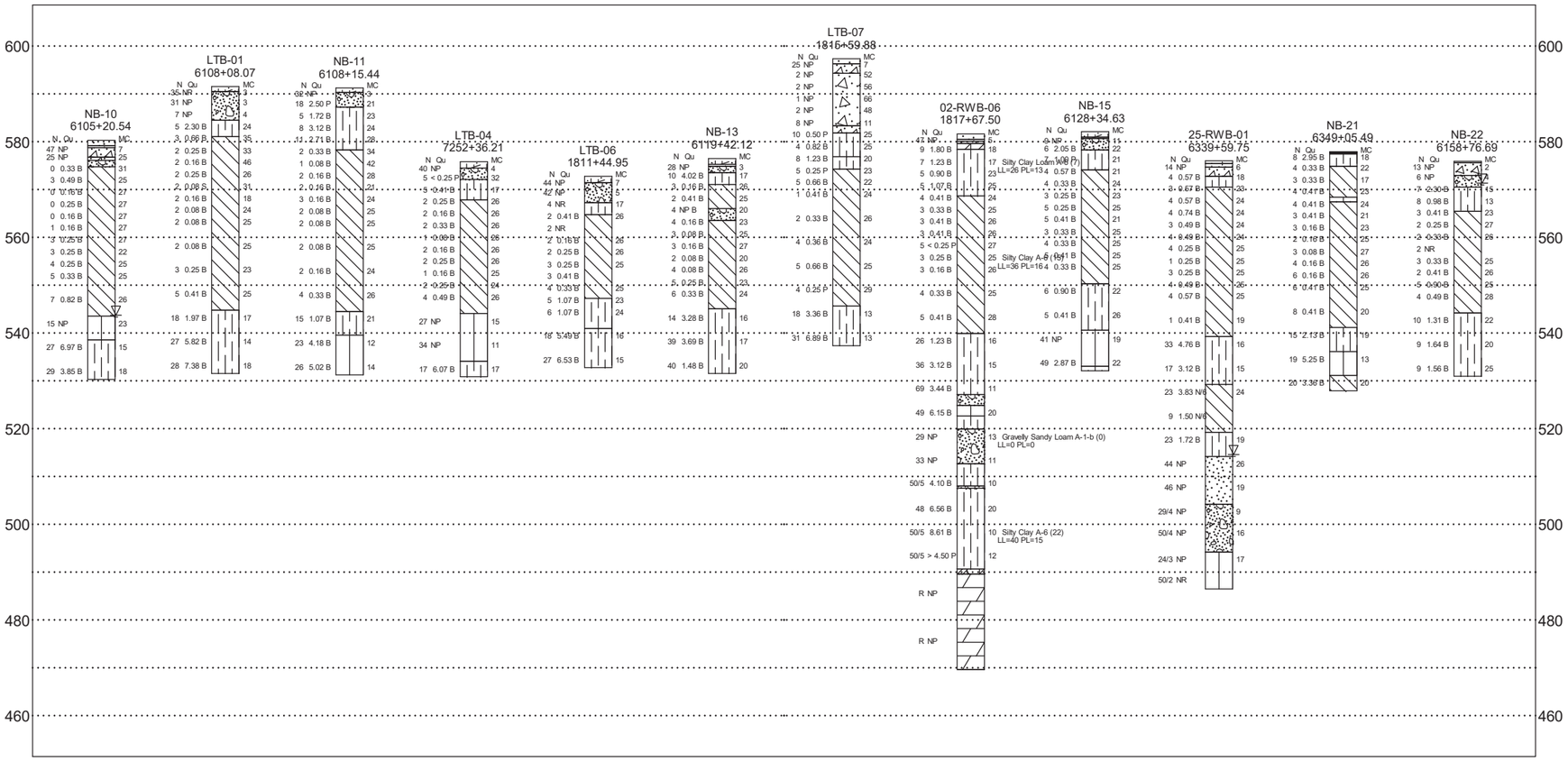


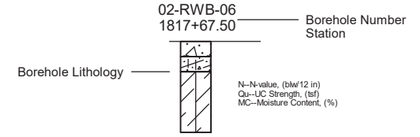
DISTANCE ALONG PROFILE (feet)

Lithology Graphics

- Concrete
- Pavement
- Crushed stone
- IDH Clay Loam
- IDH Silty Clay, Silty Clay Loam
- IDH Clay
- Gravelly sand, sandy gravel
- IDH Silt, Silty Loam
- Weathered bedrock
- Dolomite or Dolomitic Limestone
- IDH Sand, Sandy Loam
- IDH Loam
- Topsoil

Site Map Scale 1 inch equals 2,015 feet

Explanation:



- Water Level Reading at time of drilling.
- Water Level Reading 24-hr after drilling or at end of drilling

0 — 550

Horizontal Scale (feet)

Vertical Exaggeration: 19.5x

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Soil Profile
Contract 62A76

WEI SINCE 1982

Jane Byrne Interchange
Section 17, T39N, R14E of 3rd PM

JOB NUMBER	PLATE NUMBER
1100-04-01	EXHIBIT 3

APPENDIX A: BORING LOGS

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BORING LOG 02-RWB-06

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 581.64 ft
North: 1896796.97 ft
East: 1171829.83 ft
Station: 1817+67.50
Offset: 3.6732 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	580.4	13.75-inch thick CONCRETE --PAVEMENT--						
	580.1	4-inch thick ASPHALT --PAVEMENT--						
	579.6	6-inch thick CRUSHED STONE --BASE COURSE--			1	11 20 27	NP	5
	578.4	Very stiff (2.75P), gray and brown CLAY LOAM, trace gravel --FILL--			2	1 4 5	1.80 B	18
		Medium stiff to stiff, gray and brown SILTY CLAY LOAM, trace gavel	5					
		--L_L(%)=26, P_L(%)=13-- --%Gravel=4.2-- --%Sand=22.5-- --%Silt=49.7-- --%Clay=23.6-- --A-6 (7)--			3	3 3 4	1.23 B	17
			10		4	2 2 3	0.90 B	23
					5	2 2 3	1.07 B	25
	568.6	Very soft to soft, gray CLAY to SILTY CLAY, trace gravel						
			15		6	1 2 2	0.41 B	24
					7	1 1 2	0.33 B	25
			20		8	1 1 2	0.41 B	26
			25		9	1 1 2	0.41 B	26
					10	1 2 3	< 0.25 P	27
		--L_L(%)=36, P_L(%)=16-- --%Gravel=2.8-- --%Sand=16.1-- --%Silt=51.5-- --%Clay=29.7-- --A-6 (15)--			11	1 1 2	0.25 B	25
			30		12	0 1 2	0.16 B	26
			35		13	0 2 2	0.33 B	25
			40		14	1 2 3	0.41 B	28

GENERAL NOTES

Begin Drilling: **06-16-2013** Complete Drilling: **06-17-2013**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **P&N** Logger: **A. Happel** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: ▽ **groundwater not observed**
At Completion of Drilling: ▼ **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: ▼ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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Fax: 630 953-9938

BORING LOG 02-RWB-06

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 581.64 ft
North: 1896796.97 ft
East: 1171829.83 ft
Station: 1817+67.50
Offset: 3.6732 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	539.9							
		Stiff to very stiff, gray SILTY CLAY LOAM, trace gravel						
					15	13 13 13	1.23 B	16
			45					
					16	14 16 20	3.12 B	15
			50					
	527.1				17	17 21 48	3.44 B	11
		Gray SANDY GRAVEL	55					
	524.9							
		Gray SILT						
	522.6				18	20 26 23	6.15 B	20
		Hard, gray SILTY CLAY, trace gravel	60					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	519.9							
		Medium dense, gray GRAVELLY SANDY LOAM						
		--%Gravel=35.8-- --%Sand=43.9-- --%Silt=17.7-- --%Clay=2.6-- --A-1-b (0)--			19	14 15 14	NP	13
			65					
	512.6							
		Hard (4.5P), gray SILTY CLAY LOAM			20	12 13 20	NP	11
			70					
	508.0							
	507.5	Gray SANDY GRAVEL			21	17 50/5	4.10 B	10
		Hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	75					
					22	21 20 28	6.56 B	20
			80					

GENERAL NOTES

Begin Drilling: **06-16-2013** Complete Drilling: **06-17-2013**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **P&N** Logger: **A. Happel** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: ▽ **groundwater not observed**
At Completion of Drilling: ▼ **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: ▼ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG 02-RWB-06

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 581.64 ft
North: 1896796.97 ft
East: 1171829.83 ft
Station: 1817+67.50
Offset: 3.6732 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--L_L(%)=40, P_L(%)=15--						
		--%Gravel=4.2--						
		--%Sand=7.2--						
		--%Silt=48.6--						
		--%Clay=40.0--						
		--A-6 (22)--	85		23	13 22 50/5	8.61 B	10
		--HARD DRILLING (at 86')--						
		--Possible Cobbles--						
			90		24	30 36 50/5	> 4.50 P	12
	490.6							
		--HARD DRILLING--						
	489.6	--WEATHERED BEDROCK--						
		Strong, excellent rock quality, light gray, fresh, joint breaks with little to no infill, slightly vuggy DOLOSTONE				CORE		
		--Run 1-RECOVERY=100%--	95					
		--RQD=95%--			1		NP	
			100					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--Run 2-RECOVERY=100%--				CORE		
		--RQD=97%--	105					
					2		NP	
			110					
	469.6	Boring terminated at 112.00 ft						
			115					
			120					

GENERAL NOTES

Begin Drilling: **06-16-2013** Complete Drilling: **06-17-2013**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **P&N** Logger: **A. Happel** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG 27-RWB-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 579.17 ft
North: 1899481.12 ft
East: 1171604.19 ft
Station: 6344+30.89
Offset: 14.5751 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	578.8	5-inch thick ASPHALT --PAVEMENT--						
	578.2	7-inch thick CONCRETE --PAVEMENT--						
		Hard, brown SILTY CLAY LOAM, trace gravel						
	576.2	--FILL--						
		Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel						
					1	4 2 5	4.10 B	15
			5		2	1 1 1	0.16 B	27
					3	0 1 1	0.16 B	25
			10		4	1 1 1	< 0.25 P	23
					5	0 1 1	0.41 B	25
			15		6	0 0 2	0.49 B	25
					7	1 1 2	0.57 B	25
			20		8	1 2 4	0.57 B	26
			25		9	0 2 1	0.33 B	27
					10	1 1 2	< 0.25 P	30
					11	0 1 1	0.57 B	26
			30		12	0 2 2	0.57 B	25
			35		13	2 3 3	< 0.25 P	29
			40		14	2 4 6	0.98 B	24

GENERAL NOTES

Begin Drilling: **06-23-2014** Complete Drilling: **06-23-2014**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&J** Logger: **S. Woods** Checked by: **C. Marin**
Drilling Method: **2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: ▽ **72.00 ft**
At Completion of Drilling: ▼ **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: ▼ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG 27-RWB-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 579.17 ft
North: 1899481.12 ft
East: 1171604.19 ft
Station: 6344+30.89
Offset: 14.5751 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	537.4	Stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel						
			45		15	5 7 9	4.00 P	13
			50		16	3 6 9	2.87 B	18
			55		17	4 5 9	1.72 B	24
	522.4	Stiff, gray CLAY to SILTY CLAY, trace gravel						
			60		18	2 3 3	1.07 B	28
	517.4	Medium dense to very dense, gray SILTY LOAM, trace to little gravel; damp to moist						
			65		19	8 14 14	NP	13
			70		20	24 29 50/4"	NP	19
	507.4	Dense, gray SAND, little gravel; wet to saturated						
			75		21	21 19	NP	16
	502.4	Very dense, gray SILT to SILTY LOAM; wet						
			80		22	35 50/4"	NP	21

GENERAL NOTES

Begin Drilling: **06-23-2014** Complete Drilling: **06-23-2014**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&J** Logger: **S. Woods** Checked by: **C. Marin**
Drilling Method: **2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **72.00 ft**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG 27-RWB-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 579.17 ft
North: 1899481.12 ft
East: 1171604.19 ft
Station: 6344+30.89
Offset: 14.5751 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			85		23	31 50/5"	NP	19
			90		24	18 33 45	NP	26
			95		25		NA	
	483.2	--ROLLER BIT REFUSAL-- Boring terminated at 96.00 ft	100					

GENERAL NOTES

Begin Drilling: **06-23-2014** Complete Drilling: **06-23-2014**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&J** Logger: **S. Woods** Checked by: **C. Marin**
Drilling Method: **2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **72.00 ft**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG DBT-VST-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 578.78 ft
North: 1896835.88 ft
East: 1171705.33 ft
Station: 6236+46.23
Offset: 93.46' LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	578.0	10-inch thick CONCRETE --PAVEMENT--						
		Blind drill to 7.5 feet						
			5					
	571.3							
		--In-Situ Vane Shear, 7.5 feet-- --$S_{u\ undis}$ = 1335.9-- --$S_{u\ remold}$ = 817.8-- --Sensitivity = 1.63--						
			10		1	VS		
		--In-Situ Vane Shear, 12.0 feet-- --$S_{u\ undis}$ = 905.0-- --$S_{u\ remold}$ = 603.3-- --Sensitivity = 1.50--			2	VS		
		--In-Situ Vane Shear, 14.5 feet-- --$S_{u\ undis}$ = 797.2-- --$S_{u\ remold}$ = 409.4-- --Sensitivity = 1.95--	15		3	VS		
		--In-Situ Vane Shear, 17.0 feet-- --$S_{u\ undis}$ = 883.4-- --$S_{u\ remold}$ = 474.0-- --Sensitivity = 1.86--			4	VS		
		--In-Situ Vane Shear, 19.5 feet--	20		5			

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--$S_{u\ undis}$ = 775.7-- --$S_{u\ remold}$ = 409.4-- --Sensitivity = 1.89--				VS		
		--In-Situ Vane Shear, 22.0 feet-- --$S_{u\ undis}$ = 969.6-- --$S_{u\ remold}$ = 538.7-- --Sensitivity = 1.80--			6	VS		
		--In-Situ Vane Shear, 24.5 feet-- --$S_{u\ undis}$ = 689.5-- --$S_{u\ remold}$ = 387.8-- --Sensitivity = 1.78--	25		7	VS		
		--In-Situ Vane Shear, 27.0 feet-- --$S_{u\ undis}$ = 1012.7-- --$S_{u\ remold}$ = 624.9-- --Sensitivity = 1.63--			8	VS		
		--In-Situ Vane Shear, 29.5 feet-- --$S_{u\ undis}$ = 1034.2-- --$S_{u\ remold}$ = 646.4-- --Sensitivity = 1.60--	30		9	VS		
		--In-Situ Vane Shear, 32.0 feet-- --$S_{u\ undis}$ = 1206.6-- --$S_{u\ remold}$ = 646.4-- --Sensitivity = 1.87--			10	VS		
		--maxed out vane shear before failure--	35		11	VS		
			40					

GENERAL NOTES

Begin Drilling: **06-25-2019** Complete Drilling: **06-25-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **F. Bozga** Checked by: **JAR**
Drilling Method: **3.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **26.00 ft**
At Completion of Drilling: **DRY**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG DBT-VST-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 578.78 ft
North: 1896835.88 ft
East: 1171705.33 ft
Station: 6236+46.23
Offset: 93.46' LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45					
	532.8	Boring terminated at 46.00 ft	50					
			55					
			60					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **06-25-2019** Complete Drilling: **06-25-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **F. Bozga** Checked by: **JAR**
Drilling Method: **3.25" HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **26.00 ft**
At Completion of Drilling: **DRY**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG LTB-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 591.52 ft
North: 1895140.67 ft
East: 1171987.74 ft
Station: 6108+08.07
Offset: 118.94 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick, CONCRETE --PAVEMENT--						
	590.5							
		Dense, brown and gray SANDY GRAVEL; damp --FILL-- --RDR 2 to 4--			1	16 18 17	NP	3
					2	4 13 18	NP	3
			5					
					3	7 5 2	NP	4
	584.5							
		Very stiff, gray SILTY CLAY, trace gravel; damp --RDR 2--						
					4	2 2 3	2.30 B	24
			10					
	581.0							
		Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel; damp to moist --RDR 2--			5	2 1 2	0.66 B	35
					6	0 1 1	0.25 B	33
			15					
					7	0 1 1	0.16 B	46
					8	1 1 1	0.25 B	26
			20					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
					9	1 1 1	0.08 S	31
			25		10	1 1 1	0.16 B	18
					11	1 1 1	0.08 B	24
			30		12	1 1 1	0.08 B	25
			35		13	1 1 1	0.08 B	25
			40		14	1 1 2	0.25 B	23

GENERAL NOTES

Begin Drilling: **07-16-2019** Complete Drilling: **07-16-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **3.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **MUD**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG LTB-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 591.52 ft
North: 1895140.67 ft
East: 1171987.74 ft
Station: 6108+08.07
Offset: 118.94 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	1 2 3	0.41 B	25
	544.8	Stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel; damp --RDR 2 to 3--	50		16	5 8 10	1.97 B	17
			55		17	9 11 16	5.82 B	14
	531.5	Boring terminated at 60.00 ft	60		18	12 13 15	7.38 B	18

GENERAL NOTES

Begin Drilling: **07-16-2019** Complete Drilling: **07-16-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **3.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **MUD**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG LTB-04

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 575.81 ft
North: 1895626.27 ft
East: 1171903.85 ft
Station: 7252+36.21
Offset: 8.25 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		16-inch thick, CONCRETE --PAVEMENT--						
	574.5							
		Loose to dense, brown, moist SANDY GRAVEL --BASE COURSE-- --RDR 3 to 4--			1	18 21 19	NP	4
	572.1							
		Very soft to soft, gray SILTY CLAY; damp to wet --RDR 2 to 3--	5		2	11 3 2	< 0.25 P	32
					3	1 2 3	0.41 B	17
	567.8							
		Very soft to soft, gray CLAY, trace gravel; damp to wet --RDR 2--	10		4	1 1 1	0.25 B	26
					5	1 1 1	0.16 B	26
			15		6	0 1 1	0.33 B	26
					7	0 0 1	0.08 B	26
			20		8	0 1 1	0.16 B	26
			25		9	1 1 1	0.25 B	26
					10	1 0 1	0.16 B	25
					11	0 1 1	0.25 B	24
			30		12	1 1 3	0.49 B	26
	544.1							
		Medium dense, gray SILTY LOAM, trace gravel; damp --RDR 2--	35		13	12 13 14	NP	15
			40		14	9 13 21	NP	11

GENERAL NOTES

Begin Drilling: **08-12-2019** Complete Drilling: **08-12-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG LTB-04

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 575.81 ft
North: 1895626.27 ft
East: 1171903.85 ft
Station: 7252+36.21
Offset: 8.25 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	534.1							
		Hard, gray SILTY CLAY LOAM, trace gravel; damp --RDR 2--			15	6 7 10	6.07 B	17
	530.8		45					
		Boring terminated at 45.00 ft						
			50					
			55					
			60					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **08-12-2019** Complete Drilling: **08-12-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG LTB-06

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 572.72 ft
North: 1896175.31 ft
East: 1171874.75 ft
Station: 1811+44.95
Offset: 14.92 RT

Depth (ft)	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	571.4	16-inch thick, CONCRETE --PAVEMENT--					
		Dense, brown, damp SANDY GRAVEL --FILL-- --RDR 3 to 4--		1	16 21 23	NP	7
5				2	22 24 18	NP	5
	567.2	Gray SILTY CLAY, trace gravel		3	9 2 2	NR	17
	564.7	Very soft to soft, gray CLAY to SILTY CLAY, trace gravel; damp to moist --RDR 2--		4	1 1 1	0.41 B	26
10				5	0 1 1	NR	
				6	0 1 1	0.16 B	26
15				7	0 1 1	0.25 B	26
				8	1 1 2	0.25 B	25
20				9	1 1 2	0.41 B	
				10	1 2 2	0.33 B	25
25	547.2	Stiff, gray SILTY CLAY, trace gravel; damp --RDR 2--		11	1 2 3	1.07 B	23
30				12	1 2 4	1.07 B	24
	541.0	Hard, gray SILTY CLAY LOAM, trace gravel; damp --RDR-- --2-inch, silty loam--		13	6 9 9	5.49 B	16
35				14	10 10 17	6.53 B	15
40	532.7	Boring terminated at 40.00 ft					

GENERAL NOTES

Begin Drilling: **08-12-2019** Complete Drilling: **08-12-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG LTB-07

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 597.33 ft
North: 1896690.25 ft
East: 1171852.45 ft
Station: 1815+59.88
Offset: 14.51 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		10-inch thick, CONCRETE --PAVEMENT--						
	596.3							
		Medium dense, gray CRUSHED STONE; moist --RDR--2 --FILL--			1	16 18 7	NP	7
	594.3							
		Very loose, light gray, lightweight CONCRETE; dry --RDR 1 to 2-- --FILL--	5		2	1 1 1	NP	52
					3	1 1 1	NP	56
			10		4	1 0 1	NP	66
					5	2 1 1	NP	48
	583.3							
		Loose, gray CRUSHED STONE --FILL--	15		6	3 4 4	NP	11
	581.8							
		Medium stiff, gray SILTY CLAY LOAM, trace gravel --RDR--1			7	8 6 4	0.50 P	25
			20		8	2 2 2	0.82 B	25
	576.8							
		Stiff, gray SILTY CLAY LOAM, trace gravel; damp --RDR 2--			9	2 4 4	1.23 B	20
	574.3							
		Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel; damp --RDR 1 to 2--	25		10	1 2 3	0.25 P	23
					11	1 2 3	0.66 B	22
			30		12	0 0 1	0.41 B	24
			35		13	1 1 1	0.33 B	26
			40		14	0 2 2	0.36 B	24

GENERAL NOTES

Begin Drilling: **07-05-2019** Complete Drilling: **07-05-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&J** Logger: **F. Bozga** Checked by: **C. Marin**
Drilling Method: **2.25" IDA HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG LTB-07

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 597.33 ft
North: 1896690.25 ft
East: 1171852.45 ft
Station: 1815+59.88
Offset: 14.51 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	0 2 3	0.66 B	25
			50		16	1 2 2	0.25 P	29
	545.6	Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel; damp --RDR 2--	55		17	7 9 9	3.36 B	13
	537.3	Boring terminated at 60.00 ft	60		18	12 13 18	6.89 B	13

GENERAL NOTES

Begin Drilling: **07-05-2019** Complete Drilling: **07-05-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&J** Logger: **F. Bozga** Checked by: **C. Marin**
Drilling Method: **2.25" IDA HSA, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-10

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 580.30 ft
North: 1894847.01 ft
East: 1171858.74 ft
Station: 6105+20.54
Offset: 21.05 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		14-inch thick CONCRETE --PAVEMENT--						
	579.1							
	578.8	4-inch ASPHALT --PAVEMENT--						
		Dense, gray SANDY GRAVEL --AGGREGATE BASE-- --RDR 2--			1	28 33 14	NP	7
	576.8							
		Brown LOAM; damp --FILL--			2	6 16 9	NP	25
	576.1		5					
		Dense, gray SANDY GRAVEL --FILL-- --RDR 2--						
	574.8							
		Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel; damp to moist --RDR 2--			3	0 0 0	0.33 B	31
			10		4	0 1 2	0.49 B	25
					5	0 0 0	0.16 B	27
			15		6	0 0 0	0.25 B	27
					7	0 0 0	0.16 B	27
			20		8	0 0 1	0.16 B	27
			25		9	0 1 2	0.25 B	27
					10	0 1 2	0.25 B	22
			30		11	0 1 3	0.25 B	25
					12	0 1 4	0.33 B	25
	543.6	Medium dense, gray SILT to SILTY LOAM; wet --RDR 2--	35		13	2 3 4	0.82 B	26
			40		14	9 7 8	NP	23

GENERAL NOTES

Begin Drilling: **08-25-2019** Complete Drilling: **08-25-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **K&A** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **37.00 ft**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG NB-10

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 580.30 ft
North: 1894847.01 ft
East: 1171858.74 ft
Station: 6105+20.54
Offset: 21.05 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	538.6							
		Very stiff to hard, gray SILTY CLAY, trace gravel; damp						
		--RDR 2--						
					15	9 12 15	6.97 B	15
			45					
					16	9 12 17	3.85 B	18
	530.3		50					
		Boring terminated at 50.00 ft						
			55					
			60					

GENERAL NOTES

Begin Drilling: **08-25-2019** Complete Drilling: **08-25-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **K&A** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **37.00 ft**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-11

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 591.27 ft
North: 1895148.03 ft
East: 1171985.82 ft
Station: 6108+15.44
Offset: 117.37 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick, CONCRETE --PAVEMENT--						
	590.3							
		Medium dense to dense, brown SANDY GRAVEL --FILL-- --RDR 3 to 4--			1	17 18 14	NP	3
	587.3							
		Stiff to very stiff, black and gray SILTY CLAY, trace gravel; damp to moist --RDR 2--	5		2	3 10 8	2.50 P	21
					3	2 2 3	1.72 B	23
			10		4	2 4 4	3.12 B	24
					5	4 5 6	2.71 B	28
	578.3							
		Very soft to soft, gray CLAY to SILTY CLAY, trace gravel; damp to wet --RDR 2--	15		6	1 1 1	0.33 B	34
					7	0 0 1	0.08 B	42
			20		8	0 1 1	0.16 B	28
			25		9	1 1 1	0.16 B	21
					10	1 1 2	0.16 B	24
			30		11	0 1 1	0.08 B	25
					12	1 1 1	0.08 B	25
			35		13	0 1 1	0.08 B	25
			40		14	1 1 1	0.16 B	24

GENERAL NOTES

Begin Drilling: **07-17-2019** Complete Drilling: **07-17-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **3.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-11

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 591.27 ft
North: 1895148.03 ft
East: 1171985.82 ft
Station: 6108+15.44
Offset: 117.37 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	1 2 2	0.33 B	26
	544.5	Stiff, gray SILTY CLAY, trace gravel; damp --RDR 2 to 3--						
			50		16	5 7 8	1.07 B	21
	539.5	Hard, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel; damp						
			55		17	10 11 12	4.18 B	12
					18	11 13 13	5.02 B	14
	531.3		60					
		Boring terminated at 60.00 ft						

GENERAL NOTES

Begin Drilling: **07-17-2019** Complete Drilling: **07-17-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **3.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-13

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 576.50 ft
North: 1896264.94 ft
East: 1171770.55 ft
Station: 6119+42.12
Offset: 8.18 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		15-inch CONCRETE --PAVEMENT--						
	575.2							
	574.9	3-inch ASPHALT --PAVEMENT--						
		Medium dense, gray SANDY GRAVEL; damp			1	20 16 12	NP	3
	573.5	--RDR 2--						
		Hard, gray SILTY CLAY; damp --RDR 2--	5		2	5 5 5	4.02 B	17
	571.0	Soft to very soft, gray CLAY to SILTY CLAY, trace gravel; damp to moist			3	1 2 1	0.16 B	26
			10		4	0 1 1	0.41 B	25
	566.0	Loose, gray GRAVEL --RDR 2--			5	1 2 2	NP B	20
	563.5	Very soft to soft, gray CLAY to SILTY CLAY, trace to some gravel; moist --RDR 2--	15		6	1 2 2	0.16 B	23
					7	1 1 2	0.08 B	25
			20		8	0 1 2	0.16 B	27
			25		9	0 1 1	0.08 B	20
			25		10	0 1 3	0.08 B	26
					11	2 2 3	0.25 B	23
			30		12	3 3 3	0.33 B	24
	545.0	Stiff to very stiff, gray SILTY CLAY LOAM to SILTY CLAY; damp --RDR 2--						
			35		13	6 6 8	3.28 B	16
			40		14	15 16 23	3.69 B	17

GENERAL NOTES

Begin Drilling: **08-25-2019** Complete Drilling: **08-25-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **K&A** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-13

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 576.50 ft
North: 1896264.94 ft
East: 1171770.55 ft
Station: 6119+42.12
Offset: 8.18 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	531.5	Boring terminated at 45.00 ft	45		15	13 19 21	1.48 B	20
			50					
			55					
			60					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **08-25-2019** Complete Drilling: **08-25-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **K&A** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-15

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 582.07 ft
North: 1897156.09 ft
East: 1171740.80 ft
Station: 6128+34.63
Offset: 31.64 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	581.0	13.5-inch CONCRETE --PAVEMENT--						
	580.7	4-inch ASPHALT --PAVEMENT--						
		Loose, gray SANDY GRAVEL; moist --RDR 2--			1	6 5 4	NP	11
	578.3	Stiff to very stiff, gray SILTY CLAY, trace gravel; damp to moist --RDR 2--	5		2	8 3 3	2.05 B	22
					3	2 3 4	1.00 P	21
	574.1	Soft, gray CLAY to SILTY CLAY, trace gravel; moist						
			10		4	2 2 2	0.57 B	21
					5	1 2 2	0.33 B	24
			15		6	1 2 1	0.25 B	23
					7	1 2 3	0.25 B	25
		--sand seam--	20		8	3 2 3	0.41 B	21
			25		9	1 1 2	0.33 B	25
					10	1 2 2	0.33 B	25
					11	1 3 2	0.41 B	25
			30		12	1 2 2	0.33 B	25
	550.3	Soft to medium stiff, gray SILTY CLAY, trace gravel; moist --RDR 2--						
		--cobble--	35		13	2 3 3	0.90 B	22
			40		14	2 2 3	0.41 B	26

GENERAL NOTES

Begin Drilling: **08-26-2019** Complete Drilling: **08-26-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **K&A** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG NB-15

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 582.07 ft
North: 1897156.09 ft
East: 1171740.80 ft
Station: 6128+34.63
Offset: 31.64 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	540.6	Dense, gray SILTY LOAM, trace gravel; damp --RDR 2--			15	18 21 20	NP	19
	533.1	Very stiff, gray SILTY CLAY LOAM, little gravel; damp --RDR 2--	50		16	20 29 20	2.87 B	22
	532.1	Boring terminated at 50.00 ft						

45
55
60

GENERAL NOTES

Begin Drilling: **08-26-2019** Complete Drilling: **08-26-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **K&A** Logger: **I. Nenn** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: ▽ **DRY**
At Completion of Drilling: ▼ **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: ▼ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-21

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 577.89 ft
North: 1899954.96 ft
East: 1171596.71 ft
Station: 6349+05.49
Offset: 26.08 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	577.4	6-inch thick, black, organic SOIL --TOPSOIL--						
		Very stiff, gray SILTY CLAY to CLAY, trace gravel --RDR 2--			1	4 4 4	2.95 B	18
	574.9	Soft, gray CLAY, trace gravel --RDR 2--			2	2 1 3	0.33 B	22
			5		3	1 1 2	0.33 B	17
	568.4				4	1 2 2	0.41 B	23
		Medium stiff, gray SILTY CLAY LOAM, trace gravel	10					
	567.4	Very soft to soft, gray CLAY to SILTY CLAY, trace gravel; damp to wet			5	1 2 2	0.41 B	24
			15		6	1 1 2	0.41 B	21
					7	1 1 2	0.16 B	23
			20		8	1 1 1	0.16 B	25
			25		9	1 1 2	0.08 B	27
					10	1 2 2	0.16 B	26
					11	1 3 3	0.16 B	26
			30		12	3 3 3	0.41 B	25
	541.1	Very stiff, gray SILTY CLAY, trace gravel; damp --RDR 2--	35		13	2 3 5	0.41 B	20
			40		14	5 6 9	2.13 B	19

GENERAL NOTES

Begin Drilling: **07-18-2019** Complete Drilling: **07-18-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-21

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 577.89 ft
North: 1899954.96 ft
East: 1171596.71 ft
Station: 6349+05.49
Offset: 26.08 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	536.1							
		Hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel; damp --RDR 2--						
			45		15	8 9 10	5.25 B	13
	531.1							
		Very stiff, gray CLAY, trace gravel; damp --RDR 2 to 3--						
	527.9		50		16	7 9 11	3.36 B	20
		Boring terminated at 50.00 ft						
			55					
			60					

GENERAL NOTES

Begin Drilling: **07-18-2019** Complete Drilling: **07-18-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **DRY**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG NB-22

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 575.93 ft
North: 1900177.31 ft
East: 1171607.02 ft
Station: 6158+76.69
Offset: 74.07 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	575.6	4-inch thick, ASPHALT --PAVEMENT--						
		Medium dense, brown to gray CRUSHED STONE --AGGREGATE BASE-- --FILL--			1	9 7 6	NP	2
	572.9	Loose, brown and gray, damp SANDY GRAVEL --FILL-- --RDR 2 to 3--	5 ▽		2	5 3 3	NP	4
	570.4	Medium stiff to very stiff, gray SILTY CLAY LOAM, little gravel; damp to moist --RDR 2--			3	2 3 4	2.30 B	15
			10		4	3 4 4	0.98 B	13
	565.4	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel; damp to moist --RDR 2--			5	1 1 2	0.41 B	23
			15		6	1 1 1	0.25 B	27
					7	1 1 1	0.33 B	26
			20		8	1 1 1	NR	
			25		9	1 1 2	0.33 B	25
					10	1 1 1	0.41 B	26
			30		11	1 2 3	0.90 B	25
					12	1 2 2	0.49 B	28
	544.2	Stiff, gray SILTY CLAY, trace gravel; damp --RDR 2--	35		13	3 4 6	1.31 B	22
			40		14	3 4 5	1.64 B	20

GENERAL NOTES

Begin Drilling: **07-10-2019** Complete Drilling: **07-10-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **3.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling ▽: **5.00 ft**
At Completion of Drilling ▼: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water ▼: **NA**

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BORING LOG NB-22

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 575.93 ft
North: 1900177.31 ft
East: 1171607.02 ft
Station: 6158+76.69
Offset: 74.07 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	530.9	Boring terminated at 45.00 ft	45		15	3 4 5	1.56 B	25
			50					
			55					
			60					

GENERAL NOTES

Begin Drilling: **07-10-2019** Complete Drilling: **07-10-2019**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **N&A** Logger: **M. Sadowski** Checked by: **C. Marin**
Drilling Method: **3.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **5.00 ft**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG VST-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 593.55 ft
North: 1897108.36 ft
East: 1171435.63 ft
Station: 7313+90.47
Offset: 2.00 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Very stiff, brown SILTY CLAY LOAM, trace gravel --FILL--			1	3 5 7	2.75 P	14
	590.5	Medium dense, fine SAND	5		2	5 5 6	NP	7
	586.8	Medium stiff to stiff, gray SILTY CLAY	10		3	2 2 3	1.31 B	26
			15		4	2 2 3	0.98 B	28
	578.0	Soft, gray SILTY CLAY			5	1 2 2	0.25 P	29
	575.3							
		--In-Situ Vane Shear, 19.5 feet--	20		1			

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--$S_{u\ undis}$ = 786.3 psf-- --$S_{u\ remold}$ = 371.3 psf-- --Sensitivity = 2.1--				VS		
		--In-Situ Vane Shear, 22.0 feet-- --$S_{u\ undis}$ = 742.6 psf-- --$S_{u\ remold}$ = 305.8 psf-- --Sensitivity = 2.4--			2	VS		
		--In-Situ Vane Shear, 24.5 feet-- --$S_{u\ undis}$ = 578.8 psf-- --$S_{u\ remold}$ = 382.2 psf-- --Sensitivity = 1.5--	25		3	VS		
		--In-Situ Vane Shear, 27.0 feet-- --$S_{u\ undis}$ = 742.6 psf-- --$S_{u\ remold}$ = 415.0 psf-- --Sensitivity = 1.8--			4	VS		
		--In-Situ Vane Shear, 29.5 feet-- --$S_{u\ undis}$ = 589.7 psf-- --$S_{u\ remold}$ = 283.9 psf-- --Sensitivity = 2.1--	30		5	VS		
		--In-Situ Vane Shear, 32.0 feet-- --$S_{u\ undis}$ = 1026.6 psf-- --$S_{u\ remold}$ = 447.8 psf-- --Sensitivity = 2.3--			6	VS		
		--In-Situ Vane Shear, 34.5 feet-- --$S_{u\ undis}$ = 764.5 psf-- --$S_{u\ remold}$ = 480.5 psf-- --Sensitivity = 1.6--	35		7	VS		
		--In-Situ Vane Shear, 37.0 feet-- --$S_{u\ undis}$ = 1026.6 psf-- --$S_{u\ remold}$ = 589.7 psf-- --Sensitivity = 1.7--			8	VS		
			40					

GENERAL NOTES

Begin Drilling: **12-01-2015** Complete Drilling: **12-01-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **F. Bozga** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: ▽ **groundwater not observed**
At Completion of Drilling: ▼ **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: ▼ **NA**

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BORING LOG VST-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 593.55 ft
North: 1897108.36 ft
East: 1171435.63 ft
Station: 7313+90.47
Offset: 2.00 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--Equipment Slipped--	45		9	VS		
		--In-Situ Vane Shear, 46.5 feet-- --$S_{u\ undis}$ = 1070.2 psf-- --$S_{u\ remold}$ = 633.4 psf-- --Sensitivity = 1.7--			10	VS		
	544.0	--In-Situ Vane Shear, 49.0 feet-- --$S_{u\ undis}$ = 1157.6 psf-- --$S_{u\ remold}$ = 611.6 psf-- --Sensitivity = 2.3--	50		11	VS		
		Boring terminated at 49.50 ft	55					
			60					

GENERAL NOTES

Begin Drilling: **12-01-2015** Complete Drilling: **12-01-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **F. Bozga** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG VST-02

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 585.26 ft
North: 1899543.57 ft
East: 1171652.91 ft
Station: 8415+02.96
Offset: 258.109 RT

Depth (ft)	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
0		Medium stiff, black and gray SILTY CLAY, trace gravel --FILL--					
5	579.8			1	6 4 3	0.90 B	28
		Very soft, gray SILTY CLAY, trace gravel		2	1 2 1	0.20 B	25
10	576.8						
		--In-Situ Vane Shear, 10.5 feet-- --$S_{u\ undis}$ = 425.9 psf-- --$S_{u\ remold}$ = 218.4 psf-- --Sensitivity = 2.0--		1	VS		
		--In-Situ Vane Shear, 13.0 feet-- --$S_{u\ undis}$ = 589.7 psf-- --$S_{u\ remold}$ = 283.9 psf-- --Sensitivity = 2.1--		2	VS		
15		--In-Situ Vane Shear, 15.5 feet-- --$S_{u\ undis}$ = 622.5 psf-- --$S_{u\ remold}$ = 425.9 psf-- --Sensitivity = 1.5--		3	VS		
		--In-Situ Vane Shear, 18.0 feet-- --$S_{u\ undis}$ = 491.4 psf-- --$S_{u\ remold}$ = 415.0 psf-- --Sensitivity = 1.2--		4	VS		
20		--In-Situ Vane Shear, 20.5 feet-- --$S_{u\ undis}$ = 884.6 psf-- --$S_{u\ remold}$ = 655.2 psf-- --Sensitivity = 1.4--		5	VS		
		--In-Situ Vane Shear, 23.0 feet-- --$S_{u\ undis}$ = 939.2 psf-- --$S_{u\ remold}$ = 655.2 psf-- --Sensitivity = 1.4--		6	VS		
25		--In-Situ Vane Shear, 25.5 feet-- --$S_{u\ undis}$ = 786.3 psf-- --$S_{u\ remold}$ = 611.6 psf-- --Sensitivity = 1.3--		7	VS		
		--In-Situ Vane Shear, 28.0 feet-- --$S_{u\ undis}$ = 644.3 psf-- --$S_{u\ remold}$ = 382.2 psf-- --Sensitivity = 1.7--		8	VS		
30		--In-Situ Vane Shear, 30.5 feet-- --$S_{u\ undis}$ = 720.8 psf-- --$S_{u\ remold}$ =458.7 psf-- --Sensitivity = 1.6--		9	VS		
		--In-Situ Vane Shear, 33.0 feet-- --$S_{u\ undis}$ = 851.8 psf-- --$S_{u\ remold}$ = 567.9 psf-- --Sensitivity = 1.5--		10	VS		
35		--In-Situ Vane Shear, 35.5 feet-- --$S_{u\ undis}$ = 895.5 psf-- --$S_{u\ remold}$ = 666.2 psf-- --Sensitivity = 1.3--		11	VS		
		--In-Situ Vane Shear, 38.0 feet-- --$S_{u\ undis}$ = 993.8 psf-- --$S_{u\ remold}$ = 720.8 psf-- --Sensitivity = 1.4--		12	VS		
40							

GENERAL NOTES

Begin Drilling: **12-04-2015** Complete Drilling: **12-05-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **I. Mohammud** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

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BORING LOG VST-02

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 585.26 ft
North: 1899543.57 ft
East: 1171652.91 ft
Station: 8415+02.96
Offset: 258.109 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--In-Situ Vane Shear, 40.5 feet--			13	VS		
		--$S_{u\ undis}$ = 1277.7 psf--						
		--$S_{u\ remold}$ = 808.1 psf--						
		--Sensitivity = 1.6--						
		--In-Situ Vane Shear, 43.0 feet--			14	VS		
	541.8	--$S_{u\ undis}$ > 1750 psf--						
		Boring terminated at 43.50 ft						
			45					
			50					
			55					
			60					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **12-04-2015** Complete Drilling: **12-05-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **I. Mohammud** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: ▽ **groundwater not observed**
At Completion of Drilling: ▼ **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: ▼ **NA**

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BORING LOG VST-03

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 593.21 ft
North: 1899985.05 ft
East: 1171693.33 ft
Station: 8415+53.90
Offset: 182.276 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	592.9	ASPHALT						
		--PAVEMENT--						
		Medium dense, brown gravelly coarse SAND						
		--FILL--						
					1	5 7 7	NP	6
			5					
	586.5							
		Medium stiff, brown and gray SILTY CLAY LOAM, trace gravel						
					2	3 2 2	0.75 P	26
			10					
	579.0							
		Soft, gray CLAY to SILTY CLAY, trace gravel			3	3 2 2	NR	
			15					
					4	1 1 1	0.25 P	23
	575.0							
		--In-Situ Vane Shear, 19.5 feet--	20		1			

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--$S_{u\ undis}$ = 425.9 psf-- --$S_{u\ remold}$ = 371.3 psf-- --Sensitivity = 1.1--				VS		
		--In-Situ Vane Shear, 22.0 feet--			2	VS		
		--$S_{u\ undis}$ = 371.3 psf-- --$S_{u\ remold}$ = 305.8 psf-- --Sensitivity = 1.2--						
		--In-Situ Vane Shear, 24.5 feet--	25		3	VS		
		--$S_{u\ undis}$ = 382.2 psf-- --$S_{u\ remold}$ = 316.7 psf-- --Sensitivity = 1.2--						
		--In-Situ Vane Shear, 27.0 feet--			4	VS		
		--$S_{u\ undis}$ = 393.1 psf-- --$S_{u\ remold}$ = 338.5 psf-- --Sensitivity = 1.2--						
		--In-Situ Vane Shear, 29.5 feet--	30		5	VS		
		--$S_{u\ undis}$ = 622.5 psf-- --$S_{u\ remold}$ = 371.3 psf-- --Sensitivity = 1.7--						
		--In-Situ Vane Shear, 32.0 feet--			6	VS		
		--$S_{u\ undis}$ = 535.1 psf-- --$S_{u\ remold}$ = 327.6 psf-- --Sensitivity = 1.6--						
		--In-Situ Vane Shear, 34.5 feet--	35		7	VS		
		--$S_{u\ undis}$ = 535.1 psf-- --$S_{u\ remold}$ = 393.1 psf-- --Sensitivity = 1.4--						
		--In-Situ Vane Shear, 37.0 feet--			8	VS		
		--$S_{u\ undis}$ = 655.2 psf-- --$S_{u\ remold}$ = 404.1 psf-- --Sensitivity = 1.6--						
		--In-Situ Vane Shear, 39.5 feet--	40		9			

GENERAL NOTES

Begin Drilling: **12-02-2015** Complete Drilling: **12-02-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **F. Bozga** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG VST-03

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 593.21 ft
North: 1899985.05 ft
East: 1171693.33 ft
Station: 8415+53.90
Offset: 182.276 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--$S_{u\ undis}$ = 622.5 psf--				VS		
		--$S_{u\ remold}$ = 382.2 psf--						
		--Sensitivity = 1.6--						
		--In-Situ Vane Shear, 42.0 feet--			10	VS		
		--$S_{u\ undis}$ = 851.8 psf--						
		--$S_{u\ remold}$ = 458.7 psf--						
		--Sensitivity = 1.9--						
		--In-Situ Vane Shear, 44.5 feet--	45		11	VS		
		--$S_{u\ undis}$ = 928.3 psf--						
		--$S_{u\ remold}$ = 600.6 psf--						
		--Sensitivity = 1.5--						
		--In-Situ Vane Shear, 47.0 feet--			12	VS		
		--$S_{u\ undis}$ = 1266.8 psf--						
		--$S_{u\ remold}$ = 633.4 psf--						
		--Sensitivity = 2.0--						
			50					
	541.7	--In-Situ Vane Shear, 51.0 feet--			13	VS		
		--$S_{u\ undis}$ = 1681.8 psf--						
		--$S_{u\ remold}$ = 1266.8 psf--						
		--Sensitivity = 1.3--						
		Boring terminated at 51.50 ft						
			55					
			60					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **12-02-2015** Complete Drilling: **12-02-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **F. Bozga** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: ▽ **groundwater not observed**
At Completion of Drilling: ▼ **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: ▼ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG VST-07

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 593.11 ft
North: 1895740.00 ft
East: 1171636.91 ft
Station: 6247+22.16
Offset: 105.461 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		6-inch thick ASPHALT over 9-inch thick CONCRETE --PAVEMENT--						
	591.9	Medium dense, brown SAND --FILL--						
			5		1	6 6 6	NP	9
	584.1	Medium stiff to stiff, brown and gray SILTY CLAY	10		2	2 2 2	1.75 P	26
			15		3	1 1 2	0.82 B	27
	577.6							
		--In-Situ Vane Shear, 16.5 feet-- --$S_{u\ undis}$ = 764.5 psf-- --$S_{u\ remold}$ = 305.8 psf-- --Sensitivity = 2.5--			1	VS		
		--In-Situ Vane Shear, 19.0 feet-- --$S_{u\ undis}$ = 1157.6 psf--	20		2	VS		
		--$S_{u\ remold}$ = 633.4 psf-- --Sensitivity = 1.8--						
		--In-Situ Vane Shear, 21.5 feet-- --$S_{u\ undis}$ = 1245.0 psf-- --$S_{u\ remold}$ = 808.1 psf-- --Sensitivity = 1.5--			3	VS		
		--In-Situ Vane Shear, 24.0 feet-- --$S_{u\ undis}$ = 808.1 psf-- --$S_{u\ remold}$ = 546.0 psf-- --Sensitivity = 1.5--	25		4	VS		
		--In-Situ Vane Shear, 26.5 feet-- --$S_{u\ undis}$ = 666.2 psf-- --$S_{u\ remold}$ = 371.3 psf-- --Sensitivity = 1.8--			5	VS		
		--In-Situ Vane Shear, 29.0 feet-- --$S_{u\ undis}$ = 600.6 psf-- --$S_{u\ remold}$ = 327.6 psf-- --Sensitivity = 1.8--	30		6	VS		
		--In-Situ Vane Shear, 31.5 feet-- --$S_{u\ undis}$ = 524.2 psf-- --$S_{u\ remold}$ = 316.7 psf-- --Sensitivity = 1.7--			7	VS		
		--In-Situ Vane Shear, 34.0 feet-- --$S_{u\ undis}$ = 611.6 psf-- --$S_{u\ remold}$ = 338.5 psf-- --Sensitivity = 1.8--	35		8	VS		
		--In-Situ Vane Shear, 36.5 feet-- --$S_{u\ undis}$ = 830.0 psf-- --$S_{u\ remold}$ = 535.1 psf-- --Sensitivity = 1.6--			9	VS		
		--In-Situ Vane Shear, 39.0 feet-- --$S_{u\ undis}$ = 633.4 psf--	40		10	VS		

GENERAL NOTES

Begin Drilling: **12-10-2015** Complete Drilling: **12-10-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **F. Bozga** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG VST-07

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Jane Byrne Interchange**
Location: **Section 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 593.11 ft
North: 1895740.00 ft
East: 1171636.91 ft
Station: 6247+22.16
Offset: 105.461 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--$S_{u\ remold}$ = 393.1 psf--						
		--Sensitivity = 1.6--						
		--In-Situ Vane Shear, 41.5 feet--			11	VS		
		--$S_{u\ undis}$ = 895.5 psf--						
		--$S_{u\ remold}$ = 655.2 psf--						
		--Sensitivity = 1.4--						
	548.6	--In-Situ Vane Shear, 44.0 feet--			12	VS		
		--$S_{u\ undis}$ = 1026.6 psf--	45					
		--$S_{u\ remold}$ = 698.9 psf--						
		--Sensitivity = 1.5--						
		Boring terminated at 44.50 ft	50					
			55					
			60					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)

GENERAL NOTES

Begin Drilling: **12-10-2015** Complete Drilling: **12-10-2015**
Drilling Contractor: **Wang Testing Services** Drill Rig:
Driller: **R&N** Logger: **F. Bozga** Checked by: **A. Kurnia**
Drilling Method: **2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **groundwater not observed**
At Completion of Drilling: **mud in the borehole**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.