Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

October 24, 2016

SUBJECT: FAU 2766 (Harlem Avenue)
Section 15-00191-00-RS (Glenview)
Cook County
Contract No. 61D17
Item 84
November 4, 2016 Letting
Addendum (A)

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. **Revised sheets 8 & 24 of the Plans.**
2. **Revised pages 4 – 10 of the Schedule of Prices.**
3. **Revised pages 2 & 3 of the Index of Special Provisions.**
4. **Revised pages 18, 24, 25 & 27 of the Special Provisions**
5. **Added pages 65A & 164 – 193 to the Special Provisions.**

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

Maureen M. Addis, P.E.
Acting Bureau Chief of Design and Environment

By: Ted B. Walschleger, P.E.
Engineer of Project Management

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
Z0015551	DEBRIS REMOVAL SPL	CU YD	20.000	X			=		
Z0030850	TEMP INFO SIGNING	SQ FT	152.000	X			=		
Z0033044	RE-OPTIMIZE SIG SYS 1	EACH	1.000	X			=		
Z0048665	RR PROT LIABILITY INS	L SUM	1.000	X			=		
Z0073510	TEMP TR SIGNAL TIMING *	EACH	9.000	X			=		
Z0076600	TRAINEES	HOUR	1,000.000	X	0	.80	=	800	.00
Z0076604	TRAINEES TPG	HOUR	1,000.000	X	15	.00	=	15,000	.00
20200100	EARTH EXCAVATION	CU YD	1,070.000	X			=		
20201200	REM & DISP UNS MATL	CU YD	115.000	X			=		
20800150	TRENCH BACKFILL	CU YD	7,438.000	X			=		
21001000	GEOTECH FAB F/GR STAB	SQ YD	1,870.000	X			=		
21101625	TOPSOIL F & P 6	SQ YD	250.000	X			=		
25000400	NITROGEN FERT NUTR	POUND	5.000	X			=		
25000500	PHOSPHORUS FERT NUTR	POUND	5.000	X			=		
25000600	POTASSIUM FERT NUTR	POUND	5.000	X			=		

* Revised 10/24/2016

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 61D17

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
25200100	SODDING	SQ YD	250.000	X			=		
25200200	SUPPLE WATERING	UNIT	12.000	X			=		
28000510	INLET FILTERS	EACH	93.000	X			=		
30300001	AGG SUBGRADE IMPROVE	CU YD	115.000	X			=		
31101100	SUB GRAN MAT B	CU YD	4.000	X			=		
35300200	PCC BSE CSE 7	SQ YD	5,180.000	X			=		
40600290	BIT MATLS TACK CT	POUND	22,867.000	X			=		
40600400	MIX CR JTS FLANGEWYS	TON	52.000	X			=		
40600827	P LB MM IL-4.75 N50	TON	1,443.000	X			=		
40600982	HMA SURF REM BUTT JT	SQ YD	461.000	X			=		
40603340	HMA SC "D" N70	TON	2,885.000	X			=		
40800050	INCIDENTAL HMA SURF	TON	982.000	X			=		
42300200	PCC DRIVEWAY PAVT 6	SQ YD	21.000	X			=		
42400200	PC CONC SIDEWALK 5	SQ FT	6,385.000	X			=		
42400800	DETECTABLE WARNINGS	SQ FT	582.000	X			=		

*Revised 10/24/2016

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
44000100	PAVEMENT REM	SQ YD	5,180.000	X			=		
44000157	HMA SURF REM 2	SQ YD	34,053.000	X			=		
44000200	DRIVE PAVEMENT REM	SQ YD	28.000	X			=		
44000600	SIDEWALK REM	SQ FT	5,461.000	X			=		
44200901	CL B PATCH T1 6	SQ YD	14.000	X			=		
44200905	CL B PATCH T2 6	SQ YD	275.000	X			=		
44200909	CL B PATCH T3 6	SQ YD	746.000	X			=		
44200911	CL B PATCH T4 6	SQ YD	288.000	X			=		
44201297	DOWEL BARS 1	EACH	1,075.000	X			=		
44213200	SAW CUTS	FOOT	4,910.000	X			=		
44213202	TIE BARS 1	EACH	1,075.000	X			=		
550A0340	STORM SEW CL A 2 12	FOOT	40.000	X			=		
550A0400	STORM SEW CL A 2 21	FOOT	7.000	X			=		
55100500	STORM SEWER REM 12	FOOT	7.000	X			=		
56100600	WATER MAIN 6	FOOT	24.000	X			=		

*Revised 10/24/2016

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
56100700	WATER MAIN 8	FOOT	1,153.000	X			=		
56100800	WATER MAIN 10	FOOT	44.000	X			=		
56100900	WATER MAIN 12	FOOT	6,730.000	X			=		
56400500	FIRE HYDNTS TO BE REM	EACH	15.000	X			=		
56400700	FIRE HYDRANTS SPL	EACH	5.000	X			=		
60300105	FR & GRATES ADJUST	EACH	36.000	X			=		
60406000	FR & LIDS T1 OL	EACH	4.000	X			=		
60406100	FR & LIDS T1 CL	EACH	4.000	X			=		
67100100	MOBILIZATION	L SUM	1.000	X			=		
70103815	TR CONT SURVEILLANCE	CAL DA	30.000	X			=		
70300100	SHORT TERM PAVT MKING	FOOT	12,520.000	X			=		
70300150	SHRT TRM PAVT MK REM	SQ FT	1,100.000	X			=		
70300210	TEMP PVT MK LTR & SYM	SQ FT	410.000	X			=		
70300220	TEMP PVT MK LINE 4	FOOT	18,450.000	X			=		
70300240	TEMP PVT MK LINE 6	FOOT	7,730.000	X			=		

* Revised 10/24/2016

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
70300280	TEMP PVT MK LINE 24	FOOT	510.000	X			=		
78000100	THPL PVT MK LTR & SYM	SQ FT	410.000	X			=		
78000200	THPL PVT MK LINE 4	FOOT	12,040.000	X			=		
78000400	THPL PVT MK LINE 6	FOOT	3,150.000	X			=		
78000600	THPL PVT MK LINE 12	FOOT	2,230.000	X			=		
78000650	THPL PVT MK LINE 24	FOOT	505.000	X			=		
78100100	RAISED REFL PAVT MKR	EACH	55.000	X			=		
78300200	RAISED REF PVT MK REM	EACH	55.000	X			=		
81028200	UNDRGRD C GALVS 2	FOOT	27.000	X			=		
85000200	MAIN EX TR SIG INSTAL	EACH	4.000	X			=		
87300010	GROUND HH FR & COVER	EACH	7.000	X			=		
87301215	ELCBL C SIGNAL 14 2C	FOOT	477.000	X			=		
87301225	ELCBL C SIGNAL 14 3C	FOOT	505.000	X			=		
87301900	ELCBL C EGRDC 6 1C	FOOT	27.000	X			=		
87502440	TS POST GALVS 10	EACH	1.000	X			=		

*Revised 10/24/2016

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
87502480	TS POST GALVS 14	EACH	2.000	X			=		
87502500	TS POST GALVS 16	EACH	6.000	X			=		
87800100	CONC FDN TY A	FOOT	4.000	X			=		
87900200	DRILL EX HANDHOLE	EACH	1.000	X			=		
88030020	SH LED 1F 3S MAM	EACH	5.000	X			=		
88030050	SH LED 1F 3S BM	EACH	12.000	X			=		
88030100	SH LED 1F 5S BM	EACH	12.000	X			=		
88030110	SH LED 1F 5S MAM	EACH	10.000	X			=		
88102710	PED SH LED 1F BM	EACH	16.000	X			=		
88102717	PED SH LED 1F BM CDT	EACH	8.000	X			=		
88200410	TS BACKPLATE L F PLAS	EACH	15.000	X			=		
88600600	DET LOOP REPL	FOOT	1,894.000	X			=		
88800100	PED PUSH-BUTTON	EACH	24.000	X			=		
89502200	MOD EX CONTR	EACH	1.000	X			=		
89502210	MOD EX CONTR CAB	EACH	3.000	X			=		

* Revised 10/24/2016

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		UNIT PRICE DOLLARS	UNIT PRICE CENTS		TOTAL PRICE DOLLARS	TOTAL PRICE CTS
89502375	REMOV EX TS EQUIP	EACH	3.000	X		.	=		
				TOTAL			$		

NOTE:

1. EACH PAY ITEM SHOULD HAVE A UNIT PRICE AND A TOTAL PRICE.
2. THE UNIT PRICE SHALL GOVERN IF NO TOTAL PRICE IS SHOWN OR IF THERE IS A DISCREPANCY BETWEEN THE PRODUCT OF THE UNIT PRICE MULTIPLIED BY THE QUANTITY.
3. IF A UNIT PRICE IS OMITTED, THE TOTAL PRICE WILL BE DIVIDED BY THE QUANTITY IN ORDER TO ESTABLISH A UNIT PRICE.
4. A BID MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN.

* Revised 10/24/2016

INDEX OF SPECIAL PROVISIONS

INDEX OF SPECIAL PROVISIONS

Where this vertical separation cannot be obtained and where water main may be closer than ten (10) feet to a sewer line, the sewer shall be constructed of materials and with joints that are equivalent to water main standards, or water main protection shall be added to the proposed water main installation.

2. Crossings (vertical separation) - Water Mains, Sewers and Utilities:

   Normal Conditions: Water mains crossing storm or sanitary services or sewers shall be laid to provide a separation of at least eighteen (18) inches between the bottom of the water main and the crown of the sewer pipe.

   Unusual Conditions: Where this vertical separation cannot be obtained, the sewer shall be constructed of materials and with joints that are equivalent to water main standards or water main protection shall be added to the proposed water main installation for at least ten (10) feet, as measured perpendicular, on either side of the water main.

   a. Water mains passing under sewers shall, in addition, be protected by providing:

      1. A vertical separation of at least eighteen (18) inches between the bottom of the sewer and the top of the water main;

      2. Adequate structural support for the sewers to prevent excessive deflection of joints and settling of sewer over water mains.

D. Trench Backfill: The work shall be performed in conformance with Section 208 of the Standard Specifications, Section 20 of "Standard Specifications for Water and Sewer Main Construction in Illinois" current edition, and indicated on the Village's Utility Trench in Pavement (U-25) detail. Each trench backfill layer shall not be more than 8 inches thick when in loose condition, and thoroughly compacted before the next layer is started. The first lift over the pipe shall be compacted to not less than 90 percent (90%) and the balance to a minimum of 95 percent (95%) of the standard laboratory density (AASHTO T 99).

   Trench backfill (CA 7 crushed) shall be placed and compacted along the entire watermain trench and shall extend up to six (6) inches from finished grade in to be sodded or seeded area. At the crossings of existing street, and/or under paved section of the street trench backfill shall extend up to twelve (12) inches from the pavement/trench pavement subgrade (See detail U-25). Geotextile fabric placement in the trench and the four (4) inches of trench bedding and crushed CA 7 aggregate up to the pipe springline are considered as part of water main installation work and will not be paid separately. Trench backfill above the pipe springline per Village Detail U-25 shall be paid for per Section 208 of the Standard Specifications as Trench Backfill.

E. Testing: The Contractor is required to make the appropriate temporary field arrangements (caps, blind flange, thrust blocks, etc.) to perform both a pressure and leakage test on the water main and fittings installed. The Contractor shall pretest the

WATER SERVICE REPLACEMENT, 1.5"

Description: This work shall conform to Village of Glenview Detail U-20 and shall consist of existing water service replacement with a new one and one-half (1.5) inch water service by locating and disconnecting the existing water service from the water main and connection of new one and one-half (1.5) inch water service to the newly installed water main. The Village's Public Water Department will field locate existing B-boxes upon request. The Contractor's Work shall include locating utilities the installation of a new one and one-half (1.5) inch corporation stop and tap connection to the newly installed water main, tapping sleeve, any necessary one and one-half (1.5) inch copper tubing, the curb box and curb stop, connections and all fittings necessary to reconnect the existing water service at the property line (or at the old, to be replaced, b-box) to the new water main, in accordance with the details on the plans, or as directed by the Engineer and as specified herein. This work shall be performed in accordance with the applicable sections of the "Standard Specifications for Water and Sewer Main Construction in Illinois" and as shown in Village of Glenview Detail U-20.

A double strap bronze saddle shall be used for all service connections to ductile iron pipe. Stainless steel saddles shall be used for all service connections to PVC pipe. Copper pipe shall be copper water tube, Type K, soft temper, for underground service, conforming to ASTM B-88 and B-251. The pipe shall be marked with the manufacturer's name or trademark and a mark indicative of the type of pipe. The outside diameter of the pipe shall conform to ASTM B-251, Table 2. Compacted fine aggregate trench backfilling (FA 6) of all trenches in parkways shall extend up to six (6) inches below the finished grade to allow for topsoil and sod.

In some cases, where obstructions (trees, driveway, retaining wall, etc.) exist, the new water service pipe routing may be different than the existing (to be abandoned) water service. The Engineer together with the Contractor will field establish the water service routing to the existing B-box to minimize parkway damage. All items addressed, including any water service removal or an additional water service length (due to a different new water service routing) shall be considered included in to the contract unit price. Compacted coarse aggregate trench backfill (CA 7, crushed) of all trenches under pavement shall extend up to pavement subgrade. Buffalo boxes in sidewalks, driveways and parkways shall be adjusted as directed by the Engineer to finished grades. The cost of adjusting buffalo boxes to the finished grade shall be considered included in the cost of this pay item.

"Long" water services, as described under the Basis of Payment, shall be installed by Horizontal Directional Drilling. This cost shall also be considered included in the cost of the pay item.

Restoration in non-paved areas shall include 4" Topsoil (per IDOT Section 211) and Sod (per IDOT Section 252) and shall be included in the cost of the water main.

Basis of Payment:
Whenever the existing water service (B-box) is located at the same side of parkway as an the proposed water main and the length of new water service does not exceed twenty feet (20'), then the water service replacement work will be defined and paid for at the contract unit price per each for WATER SERVICE REPLACEMENT, 1.5" – SHORT.

Whenever crossing of paved road with new water service is required (water main is located on the opposite side of street or cul-de-sacs) or the water service is greater than twenty feet (20'), the water service replacement work will be defined and paid for at the contract unit price per each for WATER SERVICE REPLACEMENT, 1.5" – LONG.

This item price shall include locating utilities, excavation, directional drilling, disposal of materials, tapping, saddle, corporation stop, necessary length of copper pipe, curb stop and curb box, necessary connectors and any required final curb box adjustment to finished elevations, backfilling including aggregate trench backfill material for a complete water service operational installation, and restoration with topsoil and sod.

CUT AND CAP EXISTING 10" WATER MAIN

Description: This work shall include preparing the existing 10" water main connection to the existing 16" water main on Glenview Road to be capped. The Contractor shall furnish and install a mega lug fastened water main cap on the water main stub that is attached to the 16" main to remain in service. This work shall be coordinated with the connection for CONNECTION TO EXISTING WATER MAINS (NON-PRESSURE) – 16" to avoid multiple shutdowns on Glenview Road.

Work shall include all excavations; cut and cap of existing water main, backfilling of excavation with fine aggregate material (CA 6) trench backfill, pavement patching in accordance with Village of Glenview Detail P-4, disposal of excavated materials and removed pipes, labor, equipment and materials required for a complete valve removal from the existing water main.

Basis of Payment: This work will be paid for at the contract unit price per each for CUT AND CAP EXISTING 10" WATER MAIN which shall include the work described above.

CONNECTION TO EXISTING WATER MAINS (NON-PRESSURE)

Description: Non-pressure connection to existing water main shall be in accordance with Section 46 of "Standard Specifications for Water and Sewer Main Construction in Illinois", Village of Glenview requirements and as directed by the Engineer. All non-pressure connections shall be constructed after the new water main is pressure tested and accepted by the Village. All new pipe and fittings must by cleaned and swabbed with a chlorine solution of at least fifty (50) mg/L. A Village representative must test this solution.

The methods and procedures used to disconnect the existing water main from use and reconnecting to the newly installed water main shall be coordinated with the Village of Glenview Public Works Department and shall be approved by the Engineer. Any necessary valve shut down, for the purpose of work on existing water system, shall be done by the Village of Glenview Water Department only.

Restoration in non-paved areas shall include 4" Topsoil (per IDOT Section 211) and Sod (per IDOT Section 252) and shall be included in the cost of the water main.

Fire hydrants with leads greater than 25' long shall have eight (8) inch leads and valves and shall be referred to as FIRE HYDRANTS (SPECIAL) and are specified in the Special Provision of the same name.

Restoration in non-paved areas shall include 4" Topsoil (per IDOT Section 211) and Sod (per IDOT Section 252) and shall be included in the cost of the water main.

Basis of Payment: This work shall be paid for at the contract unit price per each for FIRE HYDRANT COMPLETE which shall include all materials (fire hydrant, auxiliary gate valve, auxiliary box, Megalugs, extension sections w/couplings, etc.) as shown on the plans and details including excavation, concrete supports, plastic fabric, thrust blocks, aggregate backfill, removal and disposal of excavated material, restoration with 4" topsoil and sod, for a complete fire hydrant installation.

FIRE HYDRANTS (SPECIAL)

Description: This work shall be in accordance with the special provision for FIRE HYDRANT COMPLETE except that hydrant lead shall be 8" in diameter.

Restoration in non-paved areas shall include 6" Topsoil (per IDOT Section 211) and Sod (per IDOT Section 252) and shall be included in the cost of the water main.

Basis of Payment: This work will be paid for at the contract unit price per each for FIRE HYDRANT COMPLETE (SPECIAL) which shall include all materials (fire hydrant, auxiliary gate valve, auxiliary box, Megalugs, extension sections w/couplings, etc.) as shown on the plans and details including excavation, concrete supports, plastic fabric, thrust blocks, aggregate backfill, removal and disposal of excavated material, restoration with 6" topsoil and sod, for a complete fire hydrant installation.

MANHOLES, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID, SPECIAL

Description: This work shall consist of installing a new manhole/catch basin over an existing storm sewer. The work shall be done in accordance with the applicable portions of Sections 550, and 602 of the Standard Specifications. The location of the proposed manhole shall be verified during construction in conjunction with the final placement of INLETS, TYPE A, SPECIAL.

Construction: The Contractor shall carefully remove the existing storm sewer which falls within the footprint of the proposed structure. After the manhole/catch basin is installed, the pipe connections into and out of the manhole/catch basin shall be mortared closed with a non-shrink concrete grout.

TEMPORARY TRAFFIC SIGNAL TIMING
Effective: May 22, 2002
Revised: July 1, 2015
890.02TS

Description.
This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the duration of the temporary signalized condition, as well as impact to existing traffic signal timings caused by detours or other temporary conditions.

All timings and adjustments necessary for this work shall be performed by an approved Consultant who has previous experience in optimizing Closed Loop Traffic signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants.

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMING.

(a) Consultant shall attend temporary traffic signal inspection (turn-on) and/or detour meeting and conduct on-site implementation of the traffic signal timings.

(b) Consultant shall be responsible for making fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.

(c) Consultant shall provide monthly observation of traffic signal operations in the field.

(d) Consultant shall provide on-site consultation and adjust timings as necessary for construction stage changes, temporary traffic signal phase changes, and any other conditions affecting timing and phasing, including lane closures, detours, and other construction activities.

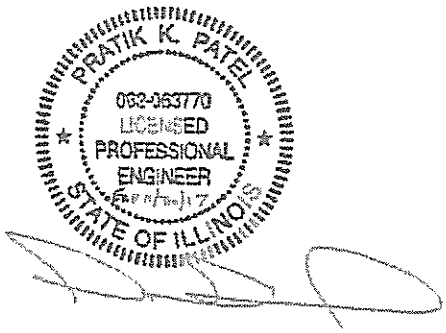
(e) Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

(f) Return original timing plan once construction is complete.

Basis of Payment.
The work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL TIMING, which price shall be payment in full for performing all work described herein per intersection. When the temporary traffic signal installation is turned on and/or detour implemented, 50 percent of the bid price will be paid. The remaining 50 percent of the bid price will be paid following the removal of the temporary traffic signal installation and/or detour.

REPORT OF

SUBSURFACE EXPLORATION AND
GEOTECHNICAL ENGINEERING SERVICES



HARLEM AVENUE IMPROVEMENTS
GOLF ROAD TO GLENVIEW ROAD
GLENVIEW, ILLINOIS

CGMT PROJECT NO. 15G0296

FOR

THE VILLAGE OF GLENVIEW
GLENVIEW, ILLINOIS

DECEMBER 28, 2015

Revised 10/21/2016

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Construction & Geotechnical Material Testing, Inc. (CGMT) has completed your subsurface exploration and geotechnical engineering project. The subsurface conditions encountered during our exploration and CGMT's conclusions and recommendations are summarized below. This summary should not be considered apart from the entire text of the report with all the qualifications and considerations mentioned herein. Details of our conclusions and recommendations are discussed in the following sections and in the Appendix of this report.

The subject portion of Harlem Avenue extends from Glenview Road to Golf Road in Glenview, Illinois. A total of eleven (11) exploratory borings, B-1 through B-11, were performed for this project. The soil conditions encountered at the borings performed at the site are summarized as follows.

Approximately 3 ½ to 6 ½ inches of asphalt pavement underlain by approximately 4 to 6 inches of concrete base course was encountered at the ground surface at the boring locations.

Below the surface materials at Borings B-1, B-2, B-4, and B-8, organic loam and clay that extended to depths of approximately 2 ½ to 3 ½ feet was encountered. Underlying the organic loam and clay, Boring B-01 and B-08 encountered firm to hard, brown and gray, clay and extended to boring termination depths of approximately 10 to 15 feet below grade. Below the surface materials, Borings B-3, B-5, B-6, B-7, B-9, B-10, and B-11 encountered stiff to hard, dark brown, brown to gray, clay and extended to boring termination depths of approximately 2 ½ to 15 feet below grade.

Several methods for the pavement rehabilitation project could be considered. The pavement rehabilitation methods that could be considered would include:

- Complete reconstruction of aggregate base and pavement.
- Removal and replacement of asphalt layers in conjunction with subbase repairs, as needed.
- Grind and overlay existing pavements, with replacing patches of severely disturbed areas.

A complete reconstruction program of the streets would likely be the most expensive alternative, but would provide higher confidence of the subgrade and base course materials. The partial reconstruction options would probably be suitable for most pavements particularly, where a thicker concrete base course exists (5 inches or greater). However, the subgrade or base course conditions that could be the cause of the current pavement distress might not be revealed or corrected, which could result in future distress of the new asphalt layers. A survey and rating system of the current pavement could be performed to assist in evaluating the repair alternatives.

Assuming the pavement subgrade will consist predominantly of the cohesive soils and new fill prepared in accordance with the recommendations given in this report, an estimated IBR value of 2 could be used in proportioning a flexible pavement section. Similarly, an estimated modulus of subgrade reaction value equal to 100 pounds per cubic inch could be used for design of rigid concrete pavement sections. A Subgrade Stability Rating (SSR) rating of (Poor) should be used for pavement design.

We recommend that the excavation of building foundations be monitored full-time by a CGMT geotechnical engineer or his representative to verify that the exposed subgrade materials and the soil bearing pressure will be suitable for the proposed structure.

Report Prepared By:

Pratik Patel

Pratik K. Patel, P.E.
Vice President

Report Reviewed By:

KC Patel

K.C. Patel
President

Revised 10/21/2016

PROJECT OVERVIEW

Introduction

This report presents the results of our subsurface exploration and engineering services for the proposed improvements to Harlem Avenue in Glenview, Illinois. A General Location Plan included in the Appendix of this report, shows the approximate location of this project.

Project Description

Based on the information provided to us, the proposed project will consist of improvements to a portion of Harlem Avenue between Glenview Road and Golf Road. The extent of the design and planned improvements were not made available to CGMT at this time.

Scope of Work

The conclusions and recommendations contained in this report are based on the soil borings performed in the vicinity of the proposed pavement areas and associated laboratory testing of selected soil samples.

A total of eleven (11) soil borings, B-1 through B-11, extended to depths of approximately 2 ½ to 15 feet were located in the vicinity of the proposed Harlem Avenue improvements. The results of the soil borings, along with a Boring Location Plan showing the approximate locations where the borings were performed, are included in the Appendix of this report.

This report also presents our recommendations for subgrade preparation and pavement design for the project. In addition, the report provides construction considerations based upon the results of the soil borings and our previous experience.

Exploration Objectives

The objectives of this exploration were to explore the soil and groundwater conditions at the site and to develop engineering recommendations to guide design and construction of the project. We performed eleven (11) soil borings to depths of approximately 2 ½ to 15 feet below the existing ground surface in the vicinity of the proposed structures to explore the subsurface soil and groundwater condition. Once the samples were returned to our laboratory we performed laboratory tests on selected representative soil samples from the borings to evaluate pertinent engineering properties, and, we analyzed the field and laboratory data to develop appropriate engineering recommendations.

EXPLORATION RESULTS

Site Description

The proposed improvements to Harlem Avenue extend from Glenview Road to Golf Road, in Glenview, Illinois. At the time of our field exploration, the site was a two-lane asphalt covered road from the north widening to a four-lane asphalt covered roadway to the south. The roadway did not have shoulders.

The topography across the site was observed to be generally flat but graded slightly for drainage. We estimate less than 1 to 2 feet of vertical difference was present across the extent of proposed structures.

Soil Conditions

A total of eleven (11) exploratory borings, B-1 through B-11, were performed for this project. The subsurface conditions encountered at the borings performed at the site can be summarized as follows.

Approximately 3 ½ to 6 ½ inches of asphalt pavement underlain by approximately 4 to 6 inches of concrete base course was encountered at the ground surface at the boring locations.

Below the surface materials at Borings B-1, B-2, B-4, and B-8, organic loam, and clay that extended to depths of approximately 2 ½ to 3 ½ feet was encountered. Underlying the organic loam and clay, Boring B-01 and B-08 encountered firm to hard, brown and gray, clay and extended to boring termination depths of approximately 10 to 15 feet below grade. Below the surface materials, Borings B-3, B-5, B-6, B-7, B-9, B-10, and B-11 encountered stiff to hard, dark brown, brown to gray, clay and extended to boring termination depths of approximately 2 ½ to 15 feet below grade.

In general, the clay soils exhibited unconfined compressive strength estimates of less than ½ to approximately 4.5 tsf and moisture contents ranging from 14 to 32 percent. The organic clay and loam soils exhibited moisture contents ranging from 30 to 35 percent.

The specific soil types observed at the borings are noted on the boring logs, enclosed in the Appendix.

Groundwater Observations

Observations for groundwater were made during sampling and upon completion of the drilling operations at the boring locations. In auger drilling operations, water is not introduced into the boreholes, and the groundwater position can often be obtained by observing water flowing into or out of the boreholes. Furthermore, visual observation of the soil samples retrieved during the auger drilling exploration can often be used in evaluating the groundwater conditions.

No groundwater seepage was encountered during or immediately after the completion of drilling operations. Glacial till soils in the Midwest frequently oxidize from gray to brown above the level at which the soil remains saturated. The long-term groundwater level is often interpreted to be near this zone of color change. Based on the results of this exploration, the long-term groundwater level may be located at a depth 13 ½ feet below current grade.

It should be noted that the groundwater level can vary based on precipitation, evaporation, surface run-off and other factors not immediately apparent at the time of this exploration. Based on recent precipitation for the previous several months prior to drilling which are close to average values, groundwater levels are at normal anticipated levels. Surface water runoff will be a factor during general construction, and steps should be taken during construction to control surface water runoff and to remove any water that may accumulate in the proposed excavations as well as pavement areas.

3
ANALYSIS AND RECOMMENDATIONS

Overview

The following recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered. If there are any changes to the project characteristics or if different subsurface conditions are encountered during construction, CGMT should be consulted so that the recommendations of this report can be reviewed.

Pavement Rehabilitation and Reconstruction

Several methods for the pavement rehabilitation project could be considered. The pavement rehabilitation methods that could be considered would include:

- Complete reconstruction of aggregate base and pavement.
- Removal and replacement of asphalt layers in conjunction with subbase repairs, as needed.
- Grind and overlay existing pavements, with replacing patches of severely disturbed areas.

A complete reconstruction program of the streets would likely be the most expensive alternative, but would provide higher confidence of the subgrade and base course materials. The partial reconstruction options would probably be suitable for most pavements particularly, where a thicker concrete base course exists (5 inches or greater). However, the subgrade or base course conditions that could be the cause of the current pavement distress might not be revealed or corrected, which could result in future distress of the new asphalt layers. A survey and rating system of the current pavement could be performed to assist in evaluating the repair alternatives.

A partial reconstruction option would involve leaving portions of the existing concrete subbase in place and replacing the asphalt binder and surface courses. Complete reconstruction would consist of removing the entire existing pavement section down to the soil subgrade.

Subgrade Preparation Recommendations for Complete Reconstruction

Subgrade preparation for complete reconstruction should be initiated by removing the existing asphalt pavement, along with the underlying base course. Although not encountered at the boring locations, any topsoil and/or soft layers encountered immediately below the base course, should also be stripped from the pavement subgrade at this time. Based on the boring field and laboratory and test data, the immediate subgrade soils encountered in Borings B-1, B-2, B-4 and B-8 may be unsuitable for continued support of pavements. As such, CGMT soils near those borings will require remediation. Additional unstable areas may be exposed during construction operations. The actual need for the recommended treatment should be determined in the field at the time of construction based on guidelines presented in the IDOT Geotechnical Engineer Manual under the direction of a licensed geotechnical engineer. All potentially unstable soils should be tested with a cone penetrometer and treated in accordance with Article 301.04 of the IDOT Standard Specifications for Road and Bridge Construction and the undercut guidelines in the IDOT Subgrade Stability Manual.

We recommend that the project geotechnical engineer or his representative should be on site to monitor stripping and site preparation operations and observe that unsuitable soils have been satisfactorily removed and to observe proofrolling.

The sides of the excavations should be sloped or braced for stability. Care should be taken to not undermine any foundations or utilities during excavation. Shoring, sheeting, or bracing of the sides of the excavations may also be required to avoid undermining.

After removal of unsuitable/deleterious materials and stripping to the desired grade, and prior to fill placement, we recommend the stripped/exposed subgrades be observed by an experienced geotechnical engineer or his authorized representative at the time of construction in order to aid in identifying localized soft/loose or unsuitable materials which should be removed. Proofrolling using a loaded dump truck having a gross weight of at least 25 tons, may be used at this time to aid in identifying localized soft or unsuitable material which should be removed. If poorer soil conditions (very soft, clay loam soils are sensitive to moisture changes and some softening/disturbance of the exposed soils should be expected following periods of precipitation. If any remediation is required at time of construction, it may include undercutting and placement of a stabilization stone such as IDOT gradation CA-1 or PGE materials or approved fill material.

Proofrolling will aid in providing a firm base for compaction of new fill or subbase materials and in delineating soft or unstable subgrade conditions. Soft or unstable subgrades identified by proofrolling should be scarified in-place, moisture conditioned as necessary, and recompacted as recommended below. If adequate stability cannot be achieved through scarification and recompaction, or project schedules or weather conditions do not allow scarification and recompaction, the unstable material should be undercut and replaced with suitable engineered fill. Although the borings did not suggest that extensive areas of undercutting would be required, subgrade conditions between borings could vary and some contingency for undercutting should be provided in the contract documents.

Partly organic clay and loam (topsoil) soils were encountered in Borings B-1, B-2, B-4 and B-8 between depths of approximately 1 to 3 ½ feet below grade. Complete removal of these soils are likely to be considered cost prohibitive. These soils are likely to be susceptible to total and differential pavement movement, particularly if grades are raised in these areas. **CGMT recommends that grades be not raised. Even if grades are not raised, long term settlement is a possible occurrence and these areas, in particular, should be carefully monitored and be the subject of long-term maintenance activities.**

If improvements are needed, the aggregate subgrade improvement, as discussed in the IDOT District One Special Provision 303, shall be installed. The special provision requires a gradation CS 01 for a minimum thickness of 12 inches. The upper 3 inches of the improved subgrade shall be composed of a material that will have a maximum particle size of 1½ inches.

Based on the boring information, CGMT anticipates that the aggregate subgrade improvement will be required at the locations noted in the table below, but may also be needed at other locations where the exposed soils consist of unsuitable or unstable soils as determined by the CGMT's on-site representative.

Anticipated Areas Requiring Subgrade Improvement

Boring	Material	Depth
B-1	Loam, Trace Organics, black	1 to 3 feet
B-2	Loam, Trace Organics, black	1 to 2 ½ feet
B-4	Loam, Trace Organics, black	1 to 2 ½ feet
B-8	Loam, Trace Organics, black	1 to 3 ½ feet

The IDOT District One Geotechnical Unit requires the use of a 12 inch thick application of aggregate subgrade improvement for all roads that use Federal Funds. As such, CGMT recommends the new pavement section by underlain by a minimum of 12 inches of well-compacted granular fill.

Where required undercuts less than about 1 foot in depth, IDOT Gradation CA-6 granular fill materials or stockpiled granular base material should be used to backfill the undercut. Where undercuts exceed about 1 foot, consideration could be given to backfilling the undercuts with an approved coarse crushed stone. However, these coarser materials should be "choked off" with a minimum 6-inch thickness of CA-6. The use of geotextile or geogrid materials to separate and reinforce the engineered fill could also be considered. Geogrids can often provide some savings by

reducing the required depths of cut and subsequent fill volumes. If undercut depths excess about 1.5 to 2 feet, consideration should be given to using geogrids.

We should note that the use of granular soils as undercut backfill can create localized areas for water to collect below pavements, which can contribute to subgrade saturation, pumping and frost heave. If conditions warrant such undercuts and granular backfill, it may also be necessary to provide an outlet, such as a gravel filled trench extended to a catch basin or sewer trench backfill, to drain the zone of granular fill.

Some of the near surface soils encountered in the borings had somewhat high moisture contents, and sand or silt layers will likely be encountered near the ground surface. These soil types could be encountered in isolated to relatively broad areas during grading. Instability and disturbance of these soil types could occur during construction, particularly if wetted by surface water or seepage. These soils may exhibit a relatively firm/stable condition upon initial exposure at the subgrade level. However, repetitive construction traffic and/or wetting will deteriorate the strength of these soils. It is likely that portions of the road subgrades could become unstable during proofrolling and construction operations and some means of subgrade stabilization may be required to facilitate construction.

Representatives of CGMT should be present on an on-going basis to perform observations and testing during the preparation of the pavement areas.

Subgrade Preparation Recommendations for Partial Reconstruction

Site preparation for a partial pavement reconstruction would involve the primary steps outlined above, with the exception of removing only a portion of the existing base course. The amount of base course to be removed would be dependent upon the pavement section thickness used to reconstruct the roadway (see next section of report).

After excavating to grade and recompacting as necessary, the proofrolling and undercutting procedures outlined earlier should be performed.

Milling and Overlay

Milling and overlaying the existing asphalt pavement for pavement rehabilitation could also be considered. Areas of alligator cracking or rutting would likely need to be removed and replaced with a thicker section of new asphalt. Following the milling operation, cracks in the exposed asphalt pavement should be sealed and a crack resistant fabric should be placed over the existing milled asphalt surface prior to the placing the overlay.

The planned thickness of new overlay could exceed the practical depth of milling (particularly where existing pavements are thin). The asphalt overlay could extend above the flow line along existing curb and gutter in some areas or additional milling would probably need to be performed around existing manhole structures and curbs to match existing elevations.

Pavements

Assuming the pavement subgrade will consist predominantly of the cohesive soils and new fill prepared in accordance with the recommendations given in this report, an estimated IBR value of 2 could be used in proportioning a flexible pavement section. Similarly, an estimated modulus of subgrade reaction value equal to 100 pounds per cubic inch could be used for design of rigid concrete pavement sections. A Subgrade Stability Rating (SSR) rating of (Poor) should be used for pavement design. Concrete pavements should be air-entrained Portland cement concrete with a minimum compressive strength of 4,000 psi and a minimum flexural strength of 650 psi. Concrete strength requirements are outlined in article 1020.04 of the Standard Specifications for Road and Bridge Construction, effective January 1, 2012.

Final design sections should consider details such as final grades, traffic loadings, traffic volumes, the desired design life and any local, county or city codes. If you wish, we would be pleased to perform a detailed pavement section design using AASHTO or Asphalt Institute procedures when this information is available. Minimum design requirements for hot-mix asphalt (HMA) shall follow Article 1030.05 of the Standard Specifications for Road and Bridge Construction, effective January 1, 2012. During asphalt pavement construction, the wearing and leveling course should be compacted to a minimum of 93 percent of the theoretical density value. Prior to placing the granular material, the pavement subgrade soil should be properly compacted, proofrolled, and free of standing water, mud, and frozen soil.

An important consideration with the design and construction of pavements is surface and subsurface drainage. Where standing water develops, either on the pavement surface or within the base course layer, softening of the subgrade and other problems related to the deterioration of the pavement can be expected. Furthermore, good drainage should reduce the possibility of the subgrade materials becoming saturated over a long period of time. We would be pleased to be of further assistance to you in the design of the project pavements by providing additional recommendations during construction of the project.

Periodic maintenance of pavements should be anticipated. The subgrade parameters provided in this report consider that significant changes in the subgrade moisture content do not occur. To reduce the potential for changes in subgrade moisture, all paved areas should be sloped to provide rapid drainage of surface water and to drain water away from the pavement edges. Water that is allowed to pond on or adjacent to the pavement can saturate and soften the subgrade soils and subsequently accelerate pavement deterioration.

Granular base or subbase materials directly below pavement sections can also collect infiltrated surface water and soften the subgrade as well as increase the effects of frost action, both of which can be detrimental to pavements. For these reasons, where granular materials are used over a cohesive soil subgrade or where the groundwater level is within 3.5 feet of finished pavement subgrade, we recommend that consideration be given to using pavement underdrains hydraulically connected to the granular base or subbase to improve the pavement performance and extend its service life. Underdrains should be installed at 300 to 500 feet intervals and at low points in the roadway profile. Pipe underdrains shall be installed according to Check Sheet #19 of the Supplemental Specifications and Recurring Special Provisions, effective January 1, 2015.

Engineered Fill

Where new fill material is required for backfill or to otherwise reach the design subgrade elevation beneath pavements, we recommend that engineered fill be used. Any soil placed as engineered fill should be an approved material, free of organic matter or debris, be a non-frost susceptible soil, and have a liquid limit and plasticity index less than 40 and 15, respectively. The project geotechnical engineer should be consulted to determine the suitability of off-site/on-site materials for use as engineered fill, prior to use or placement.

Compaction requirements shall be according to Article 205.06 of the Standard Specifications for Road and Bridge Construction, current edition and the requirements of the District One Embankment II special provision. The frequency of tests shall be in accordance with IDOT Project Procedures and Guidelines. The special provision shall be inserted into the contract documents.

Laboratory proctor tests should be performed on fill materials to determine the maximum dry density and optimum moisture content. A shrinkage factor of 15 percent can be assumed for estimating earthwork quantities for bidding purposes.

We recommend suitable silty clays used to raise the grade or backfill undercuts should be compacted with sheepsfoot roller. Granular engineered fill should be compacted with smooth drum roller or adequate heavy vibratory plate. Moisture control during earthwork operations, including the use of disking or appropriate drying equipment and techniques, should be expected.

General Construction Considerations

We recommend that the subgrade preparation, installation of new pavements be monitored by a CGMT geotechnical engineer or his representative. Methods of verification and identification such as proofrolling, DCP testing and hand auger probe holes will be necessary to further evaluate the subgrade soils and identify unsuitable soils. The contractor should be prepared to overexcavate pavement subgrade soils at isolated locations. We recommend that excavations of new pavements be monitored on a full time basis by a CGMT geotechnical engineer or his representative to verify that the exposed subgrade materials will be suitable for the proposed Harlem Avenue Improvements and are consistent with the boring log information obtained during this geotechnical exploration. We would be pleased to provide these services.

We recommend adequate surface and subsurface drainage be considered in the design and construction of pavements. Where standing water develops, either on pavement surfaces or within the base course layer, softening of the subgrade and other problems related to the deterioration of the pavements can be expected. Adequate drainage should reduce the possibility of the subgrade materials becoming saturated over a long period of time. To reduce water infiltration to the pavement section and within the base course layer resulting in softening of the subgrade and deterioration of the pavements, we recommend the timely repair or sealing of joints and cracks in pavement.

All unsuitable materials should be removed and replaced with environmentally clean, inorganic fill and free of debris or harmful matter. Unsuitable materials removed from the project site should be disposed of in accordance with all applicable federal, state, and local regulations.

The contractor should avoid stockpiling excavated materials immediately adjacent to the excavation walls. We recommend that stockpile materials be kept back from the excavation a minimum distance equal to the excavation depth to avoid surcharging the excavation walls. If this is impractical due to space constraints, the excavation walls should be retained with bracing designed for the anticipated surcharge loading.

Excavations should comply with the requirements of OSHA 29CFR, Part 1926, Subpart P, "Excavations" and its appendices, as well as other applicable codes. This document states that the contractor is solely responsible for the design and construction of stable, temporary excavations. The excavations should not only be in accordance with current OSHA excavation and trench safety standards but also with applicable local, state, and federal regulations. The contractor should shore, slope or bench the excavation sides when appropriate. In no case should excavations extend below the level of adjacent structures, utilities or pavements, unless underpinning or other adequate support is provided. Site safety is the sole responsibility of the contractor, who shall also be responsible for the means, methods and sequencing of construction operations.

8

EXPLORATION PROCEDURES

Subsurface Exploration Procedures

The soil borings were located in the field by a CGMT Field Engineer based on the proposed boring site plan provided to us. As required by the State of Illinois, the driller notified Illinois One Call System, JULIE, to verify underground utilities in the vicinity of the project site prior to drilling operations.

The soil borings were performed with a truck-mounted rotary type auger drill rig, which utilized continuous hollow stem augers to advance the boreholes. Representative soil samples were obtained at 2½ foot intervals for the first 10 feet and 5 foot intervals thereafter by means of conventional split-barrel sampling procedures. In this procedure, a 2-inch O.D., split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler through a 12-inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) or N-value and is indicated for each sample on the boring logs. The SPT value can be used as a qualitative indication of the in-place relative density of cohesionless soils. In a less reliable way, it also indicates the consistency of cohesive soils. This indication is qualitative, since many factors can significantly affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies. The drill rig utilized an automatic trip hammer to drive the sampler. Consideration of the effect of the automatic hammer's efficiency was included in the interpretation of subsurface information for the analyses prepared for this report.

The drill crew maintained a field log of the soils encountered in the borings. After recovery, each geotechnical soil sample was removed from the sampler and visually classified. Representative portions of each soil sample were then sealed in jars and brought to our laboratory in Elk Grove Village, Illinois for further visual examination and laboratory testing. After completion of the drilling operations, the boreholes were backfilled with auger cuttings to the existing ground surface.

Laboratory Testing Program

Representative soil samples were selected and tested in our laboratory to check field classifications and to determine pertinent engineering properties. The laboratory testing program included visual classifications and unconfined compressive strength and moisture content determinations.

An experienced geotechnical engineer classified each soil sample on the basis of texture and plasticity in accordance with the AASHTO Classification System. The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. The geotechnical engineer grouped the various soil types into the major zones noted on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs and profiles are approximate; in situ, the transitions may be gradual. Organic content tests were also performed in areas selected samples with organic material. The test results are presented in the tables below as well as on the boring logs.

Unconfined compressive strength tests were performed on cohesive soil samples with the use of a calibrated hand penetrometer. In the hand penetrometer test, the unconfined compressive strength of a soil sample is estimated, to a maximum of 4½ tons per square foot (tsf) by measuring the resistance of a soil sample to penetration of a small, calibrated spring loaded cylinder.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposal.

9
CLOSING

We recommend that the construction activities be monitored by CGMT to provide the necessary overview and to check the suitability of the subgrade soils for supporting new pavements. Once final loads become available, CGMT must be contacted to review the recommendations presented herein.

This report has been prepared in order to aid in the evaluation of this property and to assist the architect and/or engineer in the design of this project. The scope is limited to the specific project and locations described herein and our description of the project represents our understanding of the significant aspects relative to soil characteristics. In the event that any change in the nature or location of the proposed construction outlined in this report are planned, we should be informed so that the changes can be reviewed and the conclusions of this report modified or approved in writing by the geotechnical engineer. It is recommended that all construction operations dealing with earthwork be reviewed by an experienced geotechnical engineer to provide information on which to base a decision as to whether the design requirements are fulfilled in the actual construction. If you wish, we would welcome the opportunity to provide field construction services for you during construction.

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings and tests performed at the locations as indicated on the Boring Location Plan and other information referenced in this report. This report does not reflect any variations, which may occur between the borings. In the performance of the subsurface exploration, specific information is obtained at specific locations at specific times. However, it is a well known fact that variations in soil conditions exist on most sites between boring locations and also such situations as groundwater levels vary from time to time. The nature and extent of variations may not become evident until the course of construction. If variations then appear evident, after performing on-site observations during the construction period and noting characteristics and variations, a reevaluation of the recommendations for this report will be necessary.

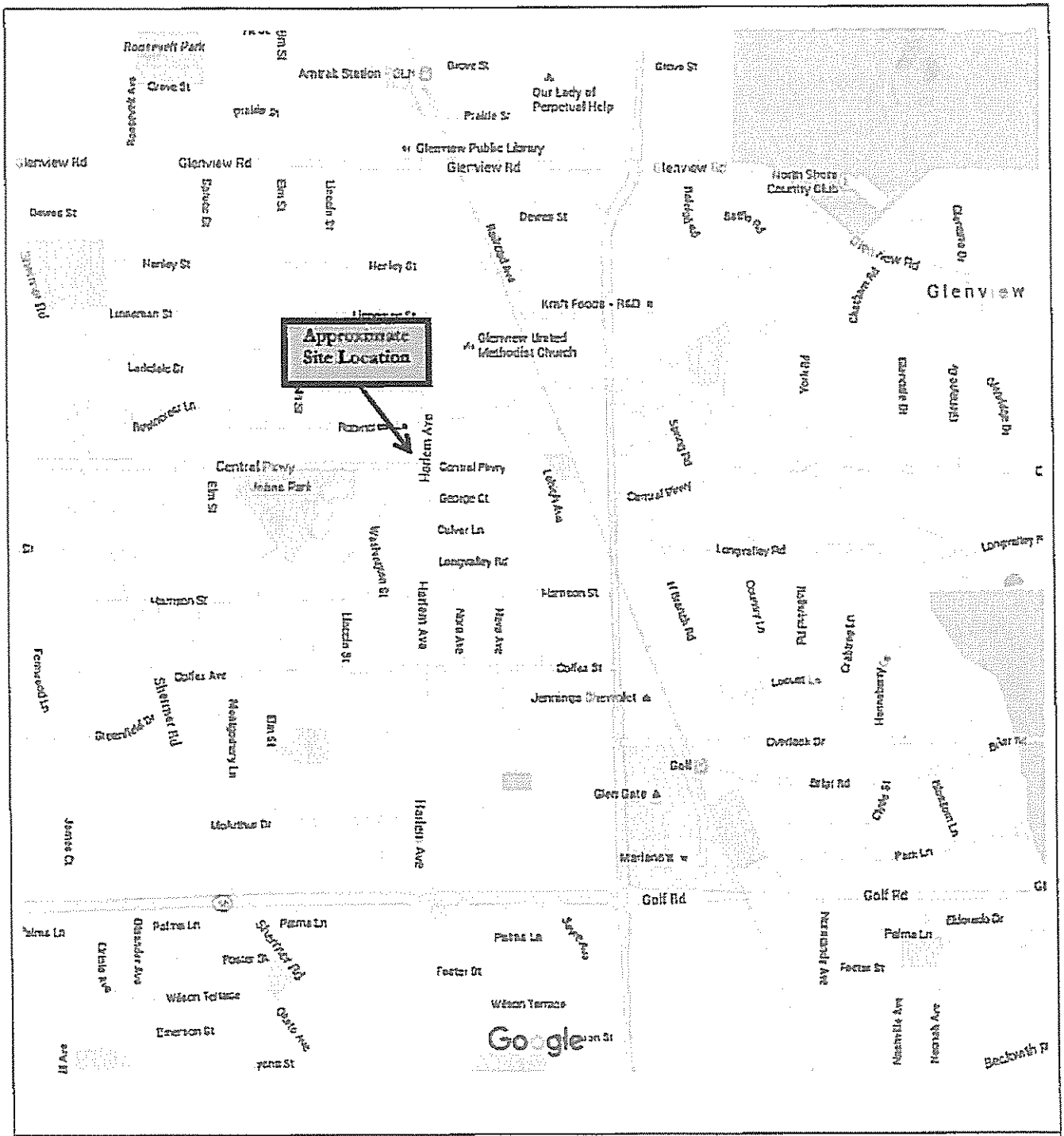
APPENDIX

General Location Map

Boring Location Diagrams

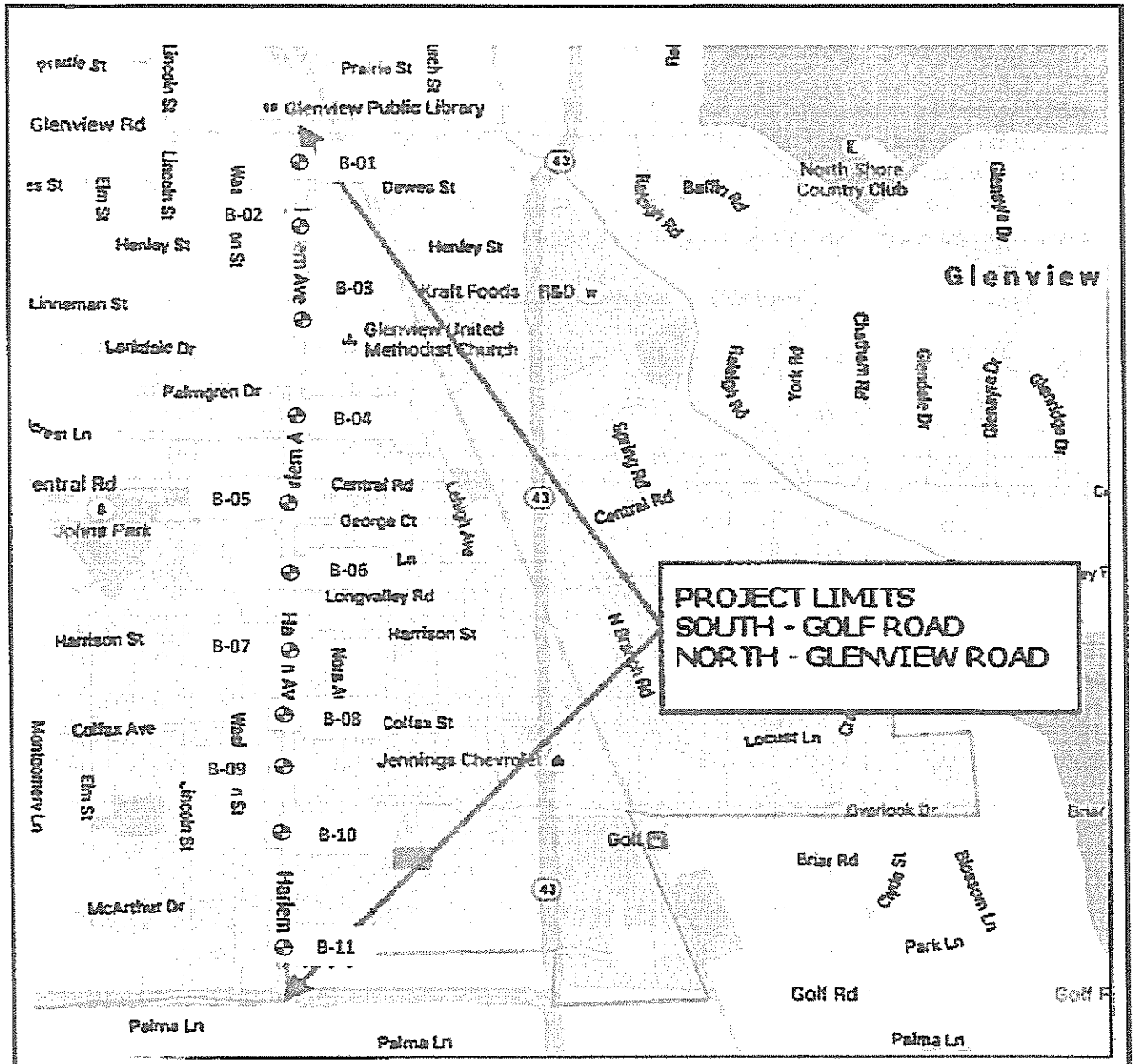
Boring Logs

Reference Notes For Boring Logs



	GENERAL LOCATION PLAN		CGMT Project No. 15G0296 Harlem Avenue Improvements Glenview Road to Golf Road Glenview, Cook County, Illinois

Revised 10/21/2016



Drawing Not To Scale

LEGEND

- Approximate Soil Boring Location

Soil Boring Location Diagram	
Village of Glenview	
Harlem Avenue Improvements Glenview Road to Golf Road Glenview, Illinois	
Project Manager	Project Number
P. Patel	15G0296
Date	Sheet Number
11/25/2015	Fig. 1

Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: **B-01**
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		6.0" Asphalt 5.5" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Loam, black (A-4)	SS-1 1.0' - 2.5' 16" Recovery	3 4 6	35.3	--	
	2.0							
	3.0		Clay, gray to brown, stiff (A-6)					
	4.0			SS-2 3.5' - 5.0' 18" Recovery	3 4 5	26.3	1.5	
	5.0							
	6.0		Clay, brown to gray, stiff to hard (A-6)	SS-3 6.0' - 7.5' 18" Recovery	3 4 6	19.4	4.0	
	7.0							
	8.0							
	9.0			SS-4 8.5' - 10.0' 18" Recovery	3 5 9	19.1	4.5+	
	10.0							
	11.0							
	12.0							
	13.0							
	14.0		Clay, gray, very stiff (A-6)	SS-5 13.5' - 15.0' 18" Recovery	4 5 6	19.3	2.0	
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: B-02
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		5.5" Asphalt 6.0" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Loam, black (A-4)	SS-1 1.0' - 2.5' 16" Recovery	3 4 6	30.0	--	
	2.0		END of BORING at 2.5 Feet					
	3.0							
	4.0							
	5.0							
	6.0							
	7.0							
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: **B-03**
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		4.0" Asphalt 5.0" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, brown to gray, very stiff to hard (A-6)	SS-1 1.0' - 2.5' 18" Recovery	3 4 5	17.7	3.5	
	2.0							
	3.0							
	4.0			SS-2 3.5' - 5.0' 18" Recovery	4 4 5	21.1	3.5	
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	3 5 8	18.9	4.5+	
	7.0							
	8.0							
	9.0		Clay, brown, hard (A-6)	SS-4 8.5' - 10.0' 18" Recovery	3 5 7	18.1	4.5+	
	10.0		END of BORING at 10 Feet					
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: B-04
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (In)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		3.5" Asphalt 5.5" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, black, very stiff, trace organics (A-6)	SS-1 1.0' - 2.5' 13" Recovery	3 4 4	29.8	2.5	
	2.0		END of BORING at 2.5 Feet					
	3.0							
	4.0							
	5.0							
	6.0							
	7.0							
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: B-05
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0295
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (In)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		3.5" Asphalt 5.5" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, gray to brown, very stiff (A-6)	SS-1 1.0' - 2.5' 14" Recovery	3 5 7	22.0	3.25	
	2.0		END of BORING at 2.5 Feet					
	3.0							
	4.0							
	5.0							
	6.0							
	7.0							
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Dril Rig
REVIEWED BY: PKP

Water Level (FL)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: **B-06**
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		6.0" Asphalt 6.0" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, gray to brown, very stiff (A-6)	SS-1 1.0' - 2.5' 18" Recovery	3 5 7	22.9	2.5	
	2.0							
	3.0							
			Clay, brown, hard (A-6)	SS-2 3.5' - 5.0' 18" Recovery	4 6 7	22.4	–	
	4.0							
	5.0							
	6.0			SS-3 6.0' - 7.5' 18" Recovery	4 7 8	19.2	4.5+	
	7.0							
	8.0							
			Clay, brown to gray, hard (A-6)	SS-4 8.5' - 10.0' 18" Recovery	3 7 8	20.6	4.5+	
	9.0							
	10.0		END of BORING at 10 Feet					
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: **B-07**
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60025

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		6.0" Asphalt 5.0" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, gray to brown, very stiff (A-6)	SS-1 1.0' - 2.5' 18" Recovery	3 4 6	25.4	2.25	
	2.0		END of BORING at 2.5 Feet					
	3.0							
	4.0							
	5.0							
	6.0							
	7.0							
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: **B-08**
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		6.5" Asphalt 5.5" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Loam, black (A-4)	SS-1 1.0' - 2.5' 15" Recovery	3 4 5	35.8	--	
	2.0							
	3.0							
	4.0		Clay, gray, very stiff (A-7)	SS-2 3.5' - 5.0' 18" Recovery	3 4 5	25.7	2.25	
	5.0							
	6.0		Clay, gray to brown, firm (A-7)	SS-3 6.0' - 7.5' 18" Recovery	2 3 2	32.4	0.5	
	7.0							
	8.0							
	9.0		Clay, brown to gray, hard (A-6)	SS-4 8.5' - 10.0' 18" Recovery	2 3 3	20.1	4.5+	
	10.0		END of BORING at 10 Feet					
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (FL)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: B-09
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		6.0" Asphalt 6.0" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, gray to brown, hard (A-6)	SS-1 1.0' - 2.5' 18" Recovery	4 6 8	16.3	4.5+	
	2.0		END of BORING at 2.5 Feet					
	3.0							
	4.0							
	5.0							
	6.0							
	7.0							
	8.0							
	9.0							
	10.0							
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: B-10
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		5.0" Asphalt 4.0" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, dark brown, very stiff (A-5)	SS-1 1.0' - 2.5' 15" Recovery	2 3 4	25.4	1.5	
	2.0							
	3.0							
	4.0		Clay, gray, very stiff (A-7)	SS-2 3.5' - 5.0' 18" Recovery	2 3 3	28.9	1.5	
	5.0							
	6.0		Clay, gray to brown, very stiff (A-6)	SS-3 6.0' - 7.5' 18" Recovery	2 3 3	22.9	2.0	
	7.0							
	8.0							
	9.0		Clay, brown to gray, hard (A-6)	SS-4 8.5' - 10.0' 18" Recovery	3 4 5	20.0	4.5+	
	10.0		END of BORING at 10 Feet					
	11.0							
	12.0							
	13.0							
	14.0							
	15.0							
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None

Revised 10/21/2016

Soil Boring Log

Construction & Geotechnical Material Testing, Inc.
60 Martin Lane, Elk Grove Village, Illinois 60007
Telephone (630) 595-1111 • Fax (630) 595-1110

Boring No.: B-11
Date: Wednesday, November 25, 2015
Project: Harlem Avenue
Glenview, Illinois
Project No.: 15G0296
Boring Location: See Boring Location Diagram
Logged By: RG
Ground Elevation:

Soil Boring Prepared for:
Ms. Adriana Webb
Village of Glenview
1370 Shermer Road
Glenview, Illinois 60026

Elevation	Depth	Strata	Soil / Rock Description	Sample Type & No. Depth Interval (Ft) Recovery (in)	Blow Count	Moisture Content (%)	Unconfined Compressive Strength (TSF)	Notes & Test Results
	0.0		3.0" Asphalt 6.0" Concrete					Unconfined compressive strength of soil samples estimated using a calibrated penetrometer.
	1.0		Clay, gray to dark brown, stiff to very stiff (A-6)	SS-1 1.0' - 2.5' 18" Recovery	3 4 6	21.9	3.5	
	2.0							
	3.0							
				SS-2 3.5' - 5.0' 15" Recovery	2 2 3	26.7	1.0	
	4.0							
	5.0							
	6.0		Clay, brown to gray, hard (A-6)	SS-3 6.0' - 7.5' 18" Recovery	3 5 5	21.1	4.5+	
	7.0							
	8.0							
			Clay, brown, hard (A-6)	SS-4 8.5' - 10.0' 18" Recovery	4 4 7	15.4	4.5+	
	9.0							
	10.0							
	11.0							
	12.0							
	13.0							
			Clay, gray, very stiff (A-6)	SS-5 13.5' - 15.0' 18" Recovery	3 4 4	14.2	2.5	
	14.0							
	15.0		END of BORING at 15 Feet					
	16.0							
	17.0							
	18.0							
	19.0							
	20.0							

Drilling Contractor: CGMT, Inc.
Drilling Method: 4.25" O.D. H.S.A. Split Spoon Sampling
Drilling Equipment: CME-45C Truck Mounted Drill Rig
REVIEWED BY: PKP

Water Level (Ft.)
During Drilling: None
Immediately After Drilling: None
Revised 10/21/2016

REFERENCE NOTES FOR BORING LOGS

I. Drilling and Sampling Symbols:

SS – Split Spoon Sampler
ST – Shelby Tube Sampler
RC – Rock Core: NX, BX, AX
PM – Pressuremeter
DC – Dutch Cone Penetrometer
RB – Rock Bit Drilling
BS – Bulk Sample of Drilling
PA – Power Auger (no sample)
HSA – Hollow Stem Auger
WS – Wash Sample

Standard Penetration (Blows/Ft) refers to the blows per foot of a 140 lb. hammer falling 30 inches on a 2 inch O.D. split spoon sampler, as specified in ASTM D-1586. The blow count is commonly referred to as the N-value.

II. Correlation of Penetration Resistances to Soil Properties:

Relative Density-Sands, Silts

SPT – N	Relative Density
0 – 3	Very Loose
4 – 9	Loose
10 – 29	Medium Dense
30 – 49	Dense
50 – 80	Very Dense

Consistency of Cohesive Soils

Unconfined Compressive Strength, Qp, tsf	Consistency
under 0.25	Very Soft
0.25 – 0.49	Soft
0.50 – 0.99	Firm
1.00 – 1.99	Stiff
2.00 – 3.99	Very Stiff
4.00 – 8.00	Hard
over 8.00	Very Hard

III Unified Soil Classification Symbols:

GP – Poorly Graded Gravel
GW – Well Graded Gravel
GM – Silty Gravel
GC – Clayey Gravel
SP – Poorly Graded Sand
SW – Well Graded Sand
SM – Silty Sand
SC – Clayey Sand
ML – Low Plasticity Silt
MH – High Plasticity Silt
CL – Low Plasticity Clay
CH – High Plasticity Clay
OL – Low Plasticity Organic
OH – High Plasticity Organic
CL-ML – Dual Classification (Typical)

IV. Water Level Measurement Symbol:

WL – Water Level
WS – While Sampling
WD – While Drilling
BCR – Before Casing Removal
ACR – After Casing Removal
WCI – Wet Cave In
DCI – Dry Cave In

The water levels are those water levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in a granular soil. In clays and plastic silts, the accurate determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally applied.

Revised 10/21/2016

Huff & Huff
civil/structural engineers
and consultants

915 Harger Road, Suite 330
Oak Brook, IL 60523
Phone (630) 684-9100
Fax (630) 684-9120
Website: http://huffnhuff.com

To: Mr. Anthony Wolff, P.E., C.F.M.

From: Jeremy Reynolds, P.G.

Date: February 23, 2016

Re: CCDD LPC-663 – Harlem Avenue Water Main, Glenview, IL

Huff & Huff, Inc. provided services in support of a Form LPC-663 for the Harlem Avenue Water Main Project in Glenview, IL. Five potentially impacted properties (PIPs) were determined to exist adjacent to and/or in close proximity to portions of the project corridor. Therefore, the LPC-663 form is appropriate for the Project Area.

A total of eleven soil borings were advanced with soil samples collected to address both PIP and non-PIP areas. Samples from four borings were analyzed initially with the other samples placed on hold for potential delineation purposes, pending initial results. Subsequent analysis for delineation purposes was not necessary based on the initial results.

The borings nearest to the PIPs were sampled for the contaminants of concern associated with the identified PIPs. Specifically, lab analysis included assessment for volatile organic compounds (VOCs); a subset of the VOC list, benzene, toluene, ethylbenzene, and xylenes (BTEX); and poly-nuclear aromatic hydrocarbons (PNAs). All VOC, BTEX, and PNA results were below detection limits, achieving their maximum allowable concentrations (MACs). In addition, four samples were submitted for pH analysis, with results ranging from 8.11 to 8.60, within the required range for CCDD disposal (between 6.25 and 9.0).

Based on the findings contained within this document, soils achieve the CCDD requirements and are certified for disposal using the attached LPC-663 form. Refer to the attached narrative for a full description of the Project Area, identified sites, and the analytical testing.

Should conditions within the project corridor change, such as unusual staining, odors, or if loads become rejected, additional analytical assessment may be required for final disposition of spoils from this project corridor. If you have any questions regarding this matter, please contact us at 630-684-9100.

Jeremy J. Reynolds, P.G.
Senior Geologist

Revised 10/21/2016

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Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Harlem Water Main Office Phone Number, if available: 847-489-3470

Physical Site Location (address, including number and street).

Harlem Avenue between Glenview Road and Golf Road

City: Glenview State: IL Zip Code: 60026

County: Cook Township: Northfield

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345)

Latitude: 42.0640581 (Decimal Degrees) Longitude: -87.8059394 (-Decimal Degrees)

Identify how the lat/long data were determined:

☐ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

ISGS Public Land Survey System, lat/long refers to the approximate center of the Project Area

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	Village of Glenview	Name:	Village of Glenview
Street Address:	1225 Waukegan Road	Street Address:	1225 Waukegan Road
PO Box:		PO Box:	
City:	Glenview State: IL	City:	Glenview State: IL
Zip Code:	60026 Phone: 847-489-3470	Zip Code:	60026 Phone: 847-489-3470
Contact:	Robert Steele Sen. Mgr. Capital Projects	Contact:	Robert Steele Sen. Mgr. Capital Projects
Email, if available:	rsteele@glenview.il.us	Email, if available:	rsteele@glenview.il.us

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: Harlem Water Main

Latitude: 42.0640581 Longitude: -87.8059394

Uncontaminated Site Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

A database search was conducted for the Village of Glenview, including coverage of the Harlem Ave Project Area. The database review identified two Potentially Impacted Properties (PIPs) in the vicinity of the Project Area.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm Code 1100.201(g), 1100.205(a), 1100.610]:

Six samples were collected from four soil borings to address the PIPs and to assess soil pH within the Project Area. Samples were analyzed for one or more of the following: volatile organic compounds (VOCs), benzene, toluene, ethylbenzene, xylenes (BTEX), polynuclear aromatic compounds (PNAs), and soil pH. All results achieve the CCDD MACs and soil pH requirement.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Jeremy J. Reynolds, P.G. (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Huff & Huff, a Subsidiary of GZA Geoenvironmental Inc

Street Address: 915 Harger Road, Suite 330

City: Oak Brook State: IL Zip Code: 60523

Phone: 630-684-9100

Jeremy J. Reynolds, P.G.
Printed Name:

Licensed Professional Engineer or Licensed Professional Geologist Signature

2/25/16
Date

LICENSED PROFESSIONAL GEOLOGIST
JEREMY J. REYNOLDS
196-001170
ILLINOIS
Exp 3/17
P.E. or L.P.G. Seal

Revised 10/21/2016