AECOM
100 S. Wacker Drive, Suite 500
Chicago, Illinois 60606

312-939-1000 tel
312-939-4198 fax

September 17, 2015

Mr. Matt Cison
Optima, Inc.
630 Vernon Avenue
Glencoe, IL 60022

RE: Radiological Survey of Right-of-Way Utility Excavations
Permit No.: 569995344 and 569467662
Permit Address: 221-251 East Grand Avenue
AECOM Project No. 60331497

Dear Mr. Cison

Pursuant to conditions specified in permits (see attached) issued by the City of Chicago, radiation monitoring was required to be performed at the above referenced site. AECOM Technical Services, Inc. (AECOM) provided the required radiation surveillance between July 21 and August 28, 2014 for excavations to install sewer, water, and electrical services for the ongoing high-rise construction project on East Grand Avenue.

Surveying was performed on the soil removed from six separate excavations. Gamma radiation count measurements for the project were made using Ludlum Model 2221 survey meter and an unshielded 2 x 2 inch NaI probe (Model 44-10). Three separate Ludlum units were utilized during surveying activities, which each exhibit slightly different gamma count threshold values equivalent to the clean-up value established by the U.S. Environmental Protection Agency (USEPA) for the Streeterville area of Chicago, Illinois. The USEPA cleanup value for Chicago's Streeterville area is 7.1 picocuries per gram (pCi/g) total radium (Ra-226 + Ra-228). The field instrument thresholds equivalent to the USEPA cleanup value are provided on the attached figures.

The field gamma background for the area for the instruments was approximately 7,000 cpm unshielded as measured at the exposed soil beneath concrete areas. The field background measurement is important because field gamma measurements greater than twice the background count may be considered anomalous results that potentially indicate contaminated fill soil is in close proximity to the excavation. When results greater than twice background are observed, they require more cautious and frequent field screening, but are not necessarily indications of the presence of thorium contaminated fill soil. Specifically, there are naturally materials such as granite, clay and brick that may be above twice background. In any case, the field gamma measurements within the excavations and for the spoil materials generated during the excavation process for this project did not exceed twice background or the field instrument threshold equivalent to the USEPA cleanup value. The following briefly describes the completed excavations;

Radiation surveillance of two trench excavations (Trench 2, Figure 1) occurred on July 21- 24, 2015 to address an installation of an electrical (ComEd) connection to the building property. The surveying was performed on the soil removed from two adjacent trenches with a total dimension of 29-foot by 16-foot excavation to an approximate depth of 4-foot to 9.5-foot below ground surface (bgs).

Radiation surveillance of a trench excavation (Trench 1, Figure 1) occurred on July 28 and 29, 2015 to address an installation of a sewer line. The surveying was performed on the soil removed from the trench with a total dimension of 40-foot by 5-foot excavation to an approximate depth of 9-foot bgs. The

maximum gamma readings observed was 11,200 cpm. The monitoring revealed no indication of fill soils above the clean-up value established by the USEPA for the Streeterville area of Chicago, Illinois.

Radiation surveillance of a trench excavation (Trench 3, Figure 1) occurred on August 27 and 28, 2015 to address an installation of two water lines. The surveying was performed on the soil removed from an irregularly shaped trench with a total approximate dimension of 24-foot by 16-foot excavation to an approximate depth of 9-foot bgs. The monitoring revealed no indication of fill soils above the clean-up value established by the USEPA for the Streeterville area of Chicago, Illinois.

Gamma radiation count measurements for the excavations in Trenches 1-3 were made using Ludlum Model 2221 (S/N 176944) survey meter and an unshielded 2 x 2 inch NaI probe (Model 44-10). For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 18,279 counts per minute (cpm) unshielded (6,282 cpm shielded). The maximum gamma readings observed for trenches 1-3 were 10,700, 8,200 and 11,650 cpm, respectively.

Radiation surveillance of a trench excavation (Trench 4, Figure 1) occurred on August 5, 6, and 7, 2015 for installation of a sewer line. The surveying was performed on the soil removed from the trench with a total dimension of 35-foot by 4-foot excavation to an approximate depth of 7-foot to 9-foot bgs. Subsurface material directly beneath the existing roadway was composed of granite pavers. The remaining subsurface material was composed of urban fill and obstructions including concrete beams, old duct banks, and sand. Rails and timbers were identified along the north wall of the excavation. The maximum gamma reading observed was 10,640 cpm, thus, the monitoring revealed no indication of fill soils above the clean-up value established by the USEPA for the Streeterville area of Chicago, Illinois.

Radiation surveillance of a trench excavation (Trench 5, Figure 1) occurred on August 11and 12, 2015 to address an installation of a sewer line. The surveying was performed on the soil removed from the trench with a total dimension of 35-foot by 4-foot excavation to an approximate depth of 9-foot bgs. Subsurface material directly beneath the existing roadway was composed of granite pavers. The remaining subsurface material was composed of urban fill and obstructions including concrete beams /obstructions, and sand. Rail lines and timbers were identified along the north wall of the excavation. The north wall of Trench 5 exhibit elevated reading of 18,344 cpm, greater than twice the background reading but less than the cleanup threshold of 19,294 cpm. The area was located approximately 18-inches bgs in close proximity to identified pavers and a streetcar rail line. The elevated reading was attributed to the naturally occurring radiological characteristics of granite pavers identified within the trench. Readings of excavated spoil from the area were identified to be less than 8,000 cpm, thus, the monitoring revealed no indication of fill soils above the clean-up value established by the USEPA for the Streeterville area of Chicago, Illinois.

Radiation surveillance of a trench excavation (Trench 6, Figure 2) occurred on August 14 and 17, 2015 to install a sewer line. The excavation was in the alley and is believed by AECOM to be in an area previously screened, but screening was performed at the request of the USEPA. The surveying was performed on the soil removed from the trench with a total dimension of 80-foot by 8 to 4-foot excavation to an approximate depth of 9-feet bgs. Subsurface material was composed of 3-inch stone and fine grained sand. Additional concrete obstructions were encountered. For Trench 6 the instrument used, the gamma count threshold equivalent to the 7.1 pCi/g cleanup value is 17,025 cpm. The maximum gamma reading observed was approximately 8,000 cpm. Thus, the monitoring revealed no indication of fill soils above the clean-up value established by the USEPA for the Streeterville area of Chicago, Illinois.

In summary, the field gamma measurements for the excavations mentioned above did not exceed the instrument thresholds previously and ranged from a minimum of 4,100 cpm to a maximum of 11,200 cpm unshielded. One anomalous reading of 18,344 cpm, attributed to the granite pavers, occurred at the north wall of Trench 5 at 18-inches bgs. Therefore, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium for the various trench excavations.

As part of the permit conditions this letter has been forwarded to:

Chicago Department of Public Health
Attention: Ms. Rahmat Begum
333 South State Street, Room 200
Chicago, Illinois 60604

Please contact us with any questions you have regarding this letter or the reported results.
Regards,

Andrew Kozak
Geologist

Steven C. Kornder, Ph.D.
Senior Project Geoscientist

cc: Rahmat Begum, Chicago Department of Public Health
Verneta Simon, USEPA

Attachments: Permits
Figures

PERMITS

DEPARTMENT OF PUBLIC HEALTH

CITY OF CHICAGO

TO: Mary Fulghum
USEPA Region V
Office of the Regional Counsel
Streeterville Investigation Area
77 W. Jackson Blvd.
Chicago, Illinois 60604

FROM: Terry Sheahan, Environmental Engineer III
Chicago Department of Public Health

SUBJECT: Notification of Permit application - Streeterville Investigation Area

DATE: 7/23/2015 221-281 E. Grand Ave

Pursuant to Condition 10(a) of the Right-of-Way agreement dated September 17, 1999, this is to inform you that a permit has been applied for with the City of Chicago Department of Transportation to conduct subsurface activities at the subject right-of-way. The applicant has contacted this Department and has reviewed additional information regarding potential contamination at the subject site (see attached form ROW/Private Property form).

If you have any questions, please do not hesitate to call me at (312) 745-3133 or Rahmat Begum at (312) 745-3152.

Attachment

DEPARTMENT

CITY C

FORM NO. CDPH.ROW.03 (

Notice is hereby given that the site you have requested a permit for is
as potentially having environmental contamination on the site and ad
threat to human health and safety in connection with work performed
employed.

A file containing detailed information regarding the aforementioned
State St., Room 200, Chicago, Illinois 60604 during normal business
3152 for an appointment. This file must be reviewed and the remain
exposed or excavated. **Please note that for some locations, additio**

Please complete the following:

I have reviewed and understand the documents, maintained by CDPH
way. Further, I will ensure that all work at the subject site and adjace
radiation monitoring, will be performed in a manner that is protective
applicable local, state, and federal laws, rules, and regulations, especia
ensure that the results of any radiation monitoring and/or surveying co
Environmental Protection Agency **within two (2) weeks of their com**
immediately contact the United States Environmental Protection Agen

Applicant Name (print): Thomas Hartford

Site Address and Work Location (Describe exact site location and **atta**

281 To 281 East Grand Av

Nature of Work: Sewer & Water Con

Company Name, Address, Phone No.: Legacy Underground

General / Prime Contractor Name, Address, Phone No.: OPTIMA
Include subcontractor information if applicable)
Safety Officer / Phone No. Thomas Hartford JR

Radiation Contractor / Phone No. (if applicable) AECOM

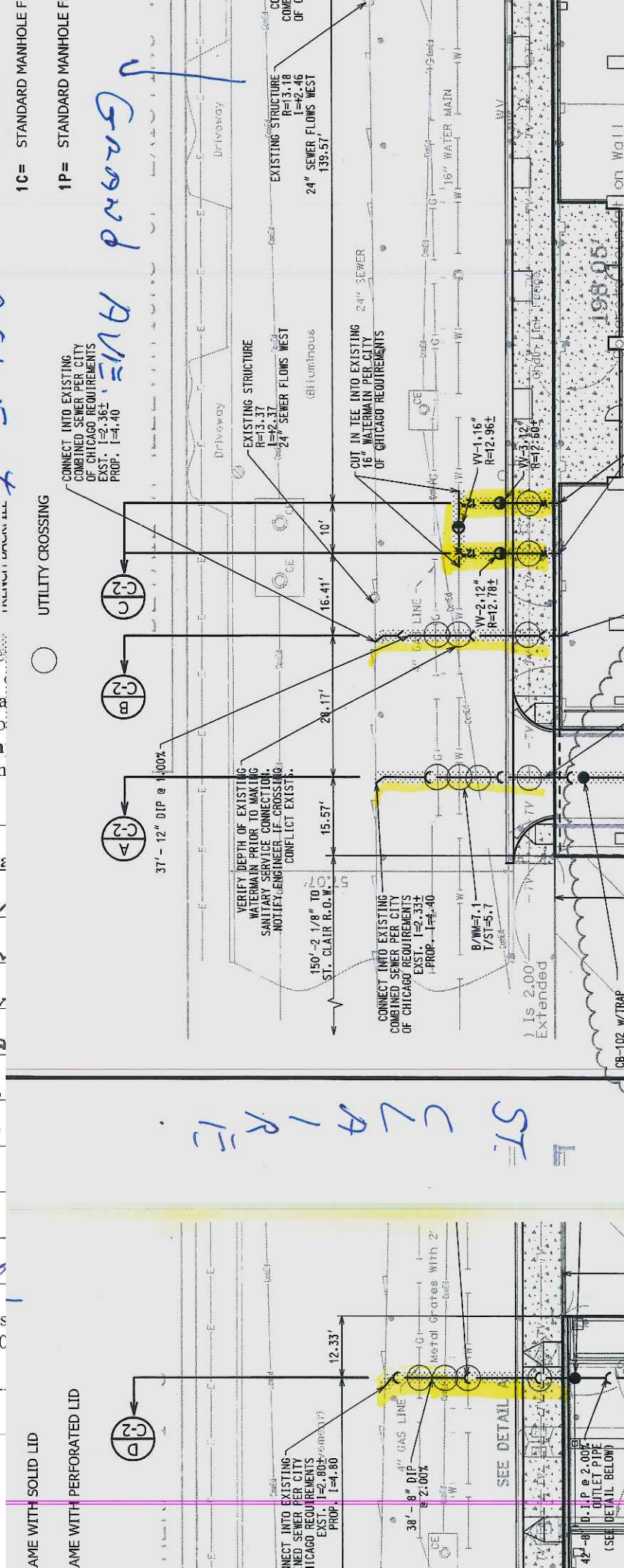
Check if City Department Work ☐ Department Name: _____

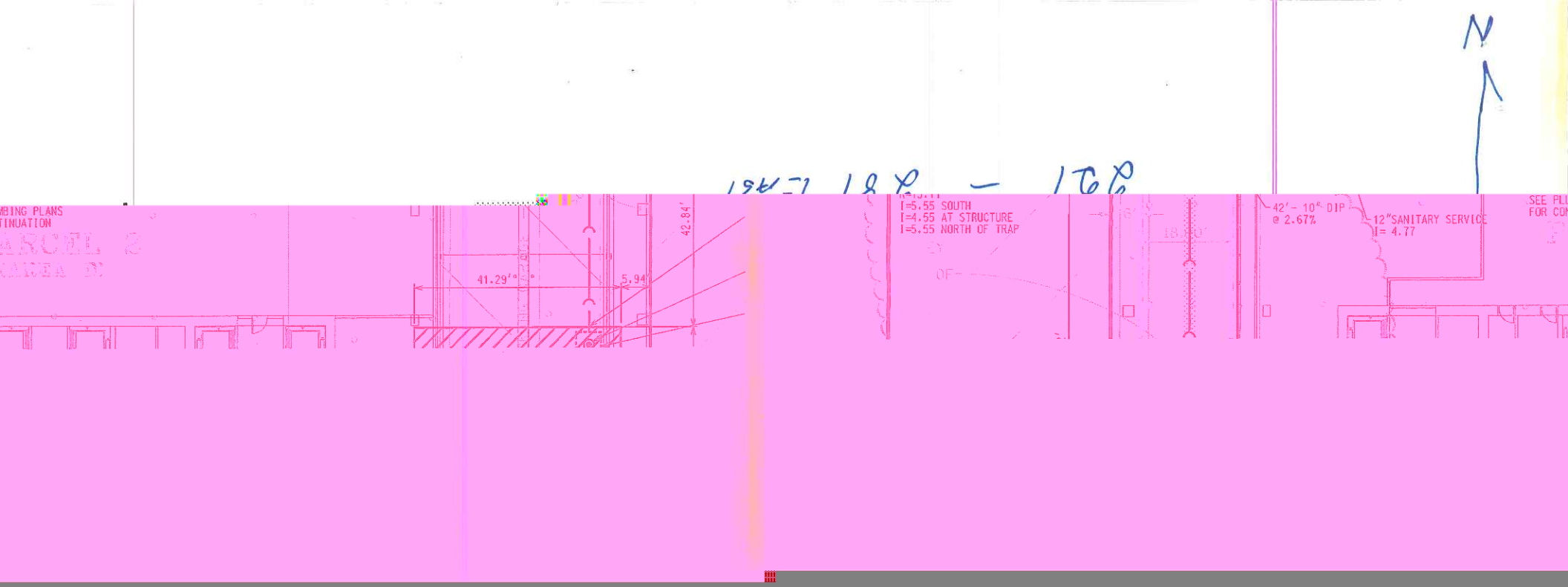
CDOT Permit No.: 569995344

Today's Date: 07/22/15 Expected Start Date: 7/27/2

Please return this completed form to the Chicago Department of Trans
Office, City Hall – Room 905, 121 N. LaSalle St., Chicago, Illinois 60
Friday)

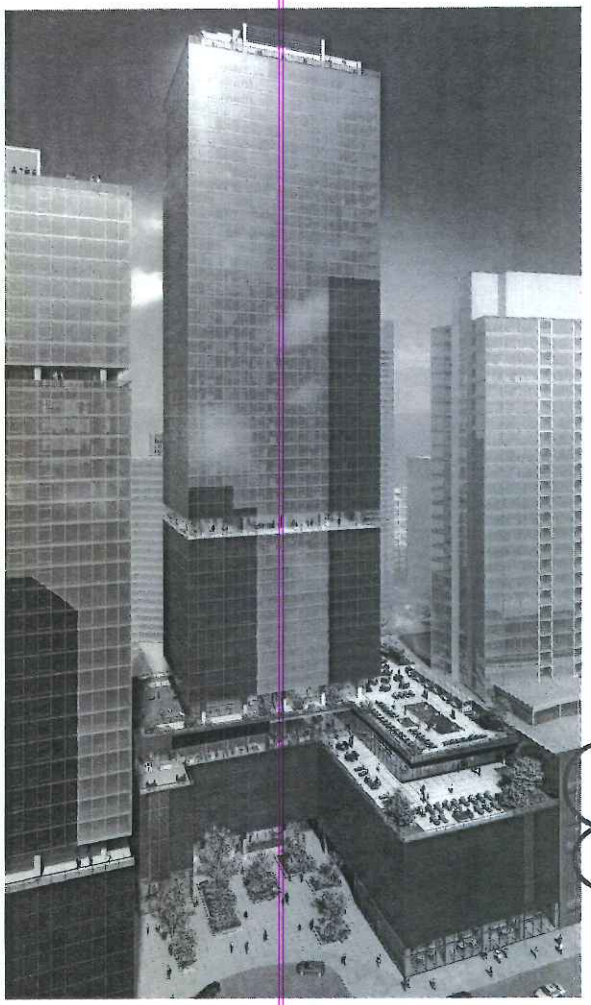
For CDPH Use Only




N
MBING PLANS
TINUATION
42.84'
41.29'
5.94'
I=5.55 SOUTH
I=4.55 AT STRUCTURE
I=5.55 NORTH OF TRAP
42'- 10" DIP
@ 2.67%
12"SANITARY SERVICE
I= 4.77
SEE PL
FOR CON

optima

CHICAGO CENTER II



PROJECT

Optima Center Chicago II
220 E. Illinois St., Chicago, IL 60611

OWNER

Optima Center Chicago II, LLC.
630 Vernon Ave., Glencoe, IL 60022, (847) 835-8400

GENERAL CONTRACTOR

Optima, Inc.
630 Vernon Ave., Glencoe, IL 60022, (847) 835-8400

ARCHITECT

Optima, Inc.
630 Vernon Ave., Glencoe, IL 60022, (847) 835-8400

CIVIL ENGINEER

Spaceco, Inc.
9575 W. Higgins Road, Suite 700, Rosemont, IL 60018

STRUCTURAL ENGINEER

CSAssociates, Inc.
4532 W. 103rd St., Oak Lawn, IL 60453

PLUMBING ENGINEER

Cosentini Associates
1 South Wacker Dr., 37th Floor, Chicago, IL 60606

ELECTRICAL ENGINEER

Cosentini Associates
1 South Wacker Dr., 37th Floor, Chicago, IL 60606

MECHANICAL ENGINEER

Cosentini Associates
1 South Wacker Dr., 37th Floor, Chicago, IL 60606

STATE OF ILLINOIS DAVID C. HOVEY 01-7505 EXP. 11.30.14 LICENSED ARCHITECT

CIVIL ENGINEERING HAS BEEN APPROVED, WITH PERMIT D13198-01. CIVIL DOCUMENTS ARE BEING ISSUED FOR REFERENCE ONLY.

OUC review comments on drawings

DEPARTMENT PLANNING AND DEVELOPMENT BUREAU OF ZONING AND LAND USE
APPROVED
Partial PART II
PD 868 sub A - 08-09-15
By
Foundation Only

DEPARTMENT OF BUILDINGS
DEVELOPER SERVICES
APPROVED
Zoning, Landscape, Architectural, Structural, Plumbing, Air Ventilation, Heat Ventilation, Electrical, Transmission
Construction subject to full compliance with the Municipal Code of Chicago and field inspection
Building Commissioner
By

upload civil and landscape drawings for OUC review.

** PERMIT FOR FOUNDATIONS ONLY **

ISSUED FOR FOUNDATION PERMIT
D13198-02
11/10//14

ARCHITECTURAL STATEMENT OF COMPLIANCE
I certify that these drawings were prepared under my direct supervision and to the best of my professional knowledge they conform to the current edition of the Chicago Building Code. See Professional's Seal located in titleblock on this page.

ENERGY CODE STATEMENT OF COMPLIANCE
I certify that I am the Design Professional of Record for this project. I also certify that to the best of my knowledge and belief the plans for the project listed above fully comply with the requirements of Chapter 18-13, Energy Conservation, of the Municipal Code of Chicago, including all relevant provisions of Article 1.

STATE OF ILLINOIS DAVID C. HOVEY 01-7505 EXP. 11.30.14 LICENSED ARCHITECT

ACCESSIBILITY STATEMENT OF COMPLIANCE
This Project will comply with Chapter 18-11 of the Chicago Building Code and ANSI A117.1-2003

NO.	DATE	DESCRIPTION
	11/10/14	ISSUED FOR FOUNDATION PERMIT
	02/07/14	ISSUED FOR CAISSON PERMIT

STATE OF ILLINOIS DAVID C. HOVEY 01-7505 EXP. 11.30.14 LICENSED ARCHITECT

ARCHITECT:
OPTIMA, INC.
630 VERNON AVE.
GLENCOE, IL 60022
(847) 835-8400

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OPTIMA CHICAGO CENTER II
220 E. ILLINOIS ST. CHICAGO, IL 60611

optima®
630 VERNON AVE. GLENCOE, IL 60022 t:(847)835-8400

THE OPTIMA, ARCHITECT, AND ENGINEER OF RECORD DESIGN AND INFORMATION HEREIN PROVIDED HEREIN REGARDING USE OF THESE PLANS, DRAWINGS, ARTICLES, AND OR SPECIFICATIONS IS ENTITLED.

THE DRAWING DO NOT HAVE BEEN PREPARED FOR A NEW PURPOSE THAN OTHERWISE INTENDED. THE OWNER, ARCHITECT AND ENGINEER ARE ALSO NOT RESPONSIBLE FOR THE USE OF INCORRECT SCALE. DRAWINGS ARE NOT TO BE SCALED.

DRAWING TITLE:
COVER SHEET

SCALE:	NA	DRAWING NUMBER:	
DRAWN BY:	PF		G001
CHECKED BY:	-		
PROJECT NO:	5149		

DEPARTMENT OF PUBLIC HEALTH

CITY OF CHICAGO

TO: Mary Fulghum
USEPA Region V
Office of the Regional Counsel
Streeterville Investigation Area
77 W. Jackson Blvd.
Chicago, Illinois 60604

FROM: Terry Sheahan, Environmental Engineer III
Chicago Department of Public Health

SUBJECT: Notification of Permit application - Streeterville Investigation Area

DATE: 7/14/2015 215 E. Grand Ave.

Pursuant to Condition 10(a) of the Right-of-Way agreement dated September 17, 1999, this is to inform you that a permit has been applied for with the City of Chicago Department of Transportation to conduct subsurface activities at the subject right-of-way. The applicant has contacted this Department and has reviewed additional information regarding potential contamination at the subject site (see attached form ROW/Private Property form).

If you have any questions, please do not hesitate to call me at (312) 745-3133 or Rahmat Begum at (312) 745-3152.

Attachment

DEPARTMENT OF PUBLIC HEALTH

CITY OF CHICAGO

(STREETERVILLE - Private Property)

otice is hereby given that the site you have requested a permit for is recorded with the City of Chicago Department of Public Health (CDPH) ; potentially having environmental contamination on the site. This environmental contamination could present a threat to human health and ıfety in connection with work performed at the site, if proper safeguards are not employed.

file containing detailed information regarding the aforementioned environmental contamination is available for review at CDPH at 333 S. tate St., Room 200, Chicago, Illinois 60604 during normal business hours (8:30AM-4:30PM, Monday through Friday). Contact (312) 745-152 for an appointment. This file must be reviewed and the remainder of this form completed before the permit can be issued if the ground is xposed or excavated. **Please note that for some locations, additional health and safety procedures may be required by law.**

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lease complete the following:

have reviewed and understand the documents, maintained by CDPH, regarding environmental contamination of the site. Further, I will ensure ıat all work at the subject site, and any monitoring required, including but not limited to, radiation monitoring, will be performed in a manner ıat is protective of human health and the environment and in compliance with all applicable local, state, and federal laws, rules, and ;gulations, especially those pertaining to worker safety and waste management. I will ensure that the results of any radiation monitoring ıd/or surveying conducted shall be provided to CDPH and the United States Environmental Protection Agency (USEPA) **within two (2) eeks of their completion**. If any elevated levels of radioactive material are detected, I will immediately contact the United States nvironmental Protection Agency at (800) 424-8802.

pplicant Name (print): ~~DAVID MOORE~~ BRAD HARRIS Signature: [signature]

ite Address and Work Location (Describe exact site location and **attach map**): 215 E GRAND

ature of Work: ComEd Conduit Installation

ompany Name, Address, Phone No.: OPTIMA INC 630 Vernon Ave Glencoe, IL

eneral / Prime Contractor Name, Address, Phone No.: OPTIMA INC 630 Vernon Ave Glencoe, IL
ıclude subcontractor information if applicable)

ıfety Officer / Phone No. AE-Com, Steve Korner 8842792448

adiation Contractor / Phone No. and email address (if applicable) AE-Com Steve Korner 847-279 2448

heck if City Department Work ☐ Department Name:

DOT Permit No. or Developer Services No..: 569 572 552

oday's Date: 7-14-15 Expected Start Date: 7-15-15 CDPH Approval / Date Rahmatunisa Begu 7/14/2015

lease return this completed form along with maps showing exact site location to CDPH at 333 S. State St., Room 200, Chicago, Illinois 60604 ıring normal business hours (8:30 AM - 4:30 PM, Monday through Friday)

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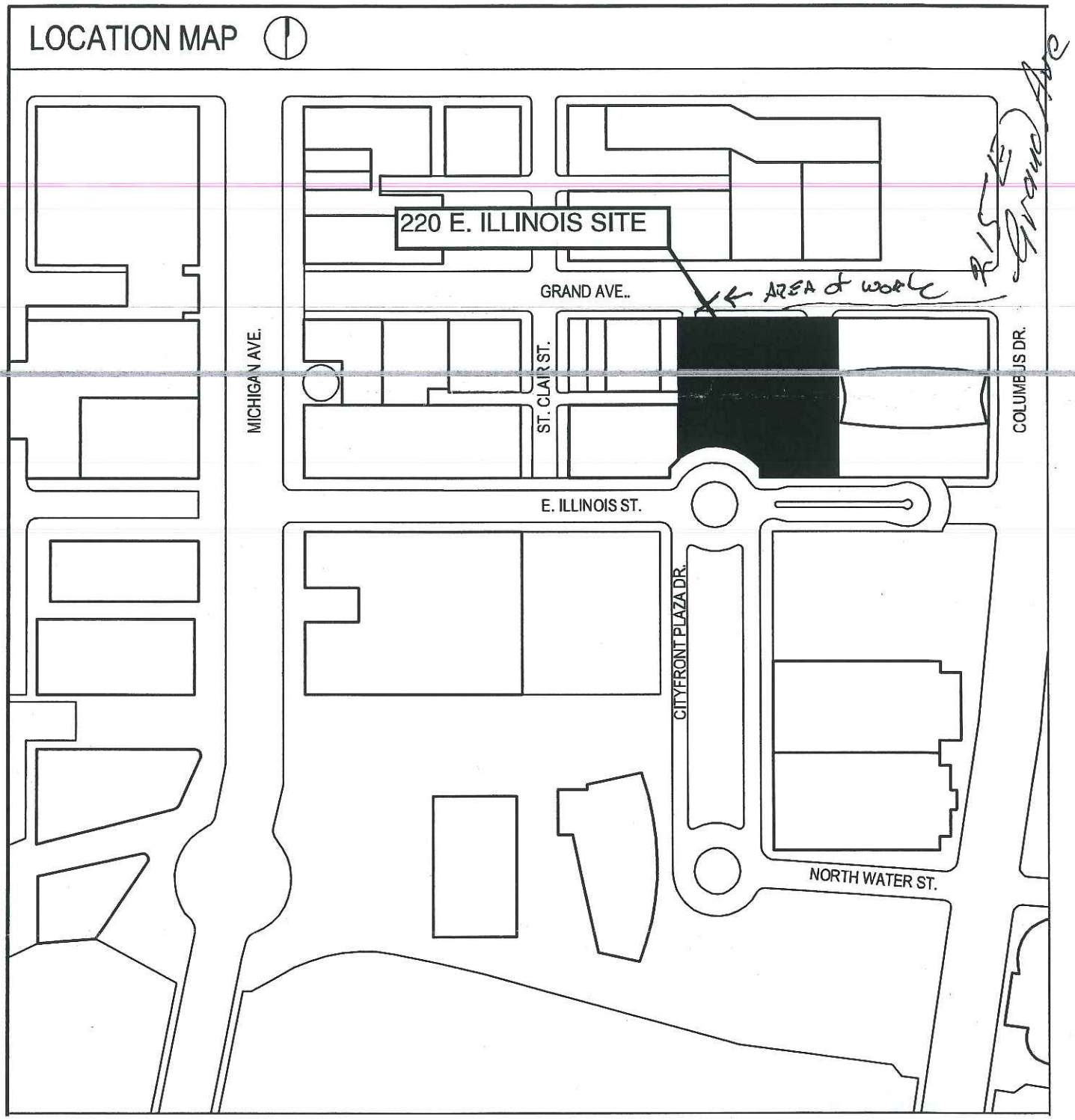
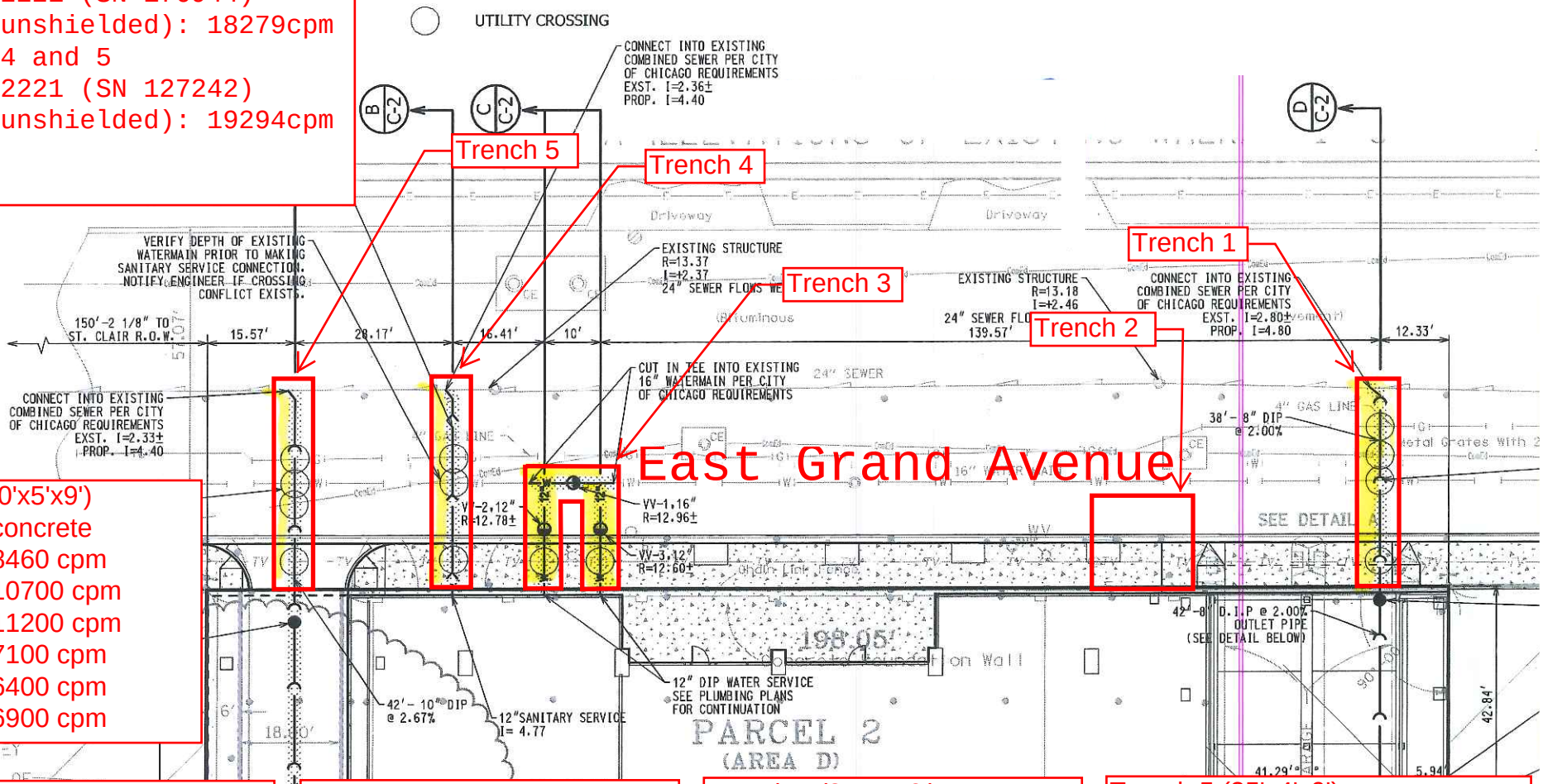
or CDPH Use Only


LOCATION MAP
220 E. ILLINOIS SITE
GRAND AVE..
← AREA of work
MICHIGAN AVE.
ST. CLAIR ST.
COLUMBUS DR.
E. ILLINOIS ST.
CITYFRONT PLAZA DR.
NORTH WATER ST.

FIGURES

Optima Radiological Survey - 221-251 East Grand Avenue
CDPH Permit: 569995344
Dates: 7/21/15 to 8/11/15

Survey Equipment
-Trench 1, 2, and 3
Ludlum 2221 (SN 176944)
Cutoff(unshielded): 18279cpm
-Trench 4 and 5
Ludlum 2221 (SN 127242)
Cutoff(unshielded): 19294cpm



Trench 1 (40'x5'x9')

0-12"	concrete
12-30"	8460 cpm
30-48"	10700 cpm
48-66"	11200 cpm
66-84"	7100 cpm
84-102"	6400 cpm
102-120"	6900 cpm

Trench 2 (29'x16'x9.5')

0-12"	concrete
12-30"	6400-6900 cpm
30-48"	6800-7600 cpm
48-66"	7200-8200 cpm
66-84"	6700 cpm
84-102"	7100 cpm
96-114"	6300 cpm

Trench 3

0-12"	concrete
12-36"	9378-11650 cpm
36-48"	4675-8971 cpm
48-60"	6132-7749 cpm
60-72"	4161-9564 cpm
78-108"	5018-8534 cpm

(Spoil screening below 36" bgs)

Trench 4 (35'x4'x9')

0-12"	concrete
12-28"	7700-10640 cpm
24-36"	7700-8400 cpm
36-48"	8000 cpm
48"-108"	6000-6500cpm

(Spoil screening below 48" bgs)

Trench 5 (35'x4'x9')

0-12"	concrete
12-36"	7000-18344 cpm

(18" bgs street car rails 18000 cpm, at north wall of excavation)

36-54"	5000 cpm
54-72"	6000 cpm
72-108"	5000-7000 cpm

(Spoil screening below 36" bgs)

Figure 2

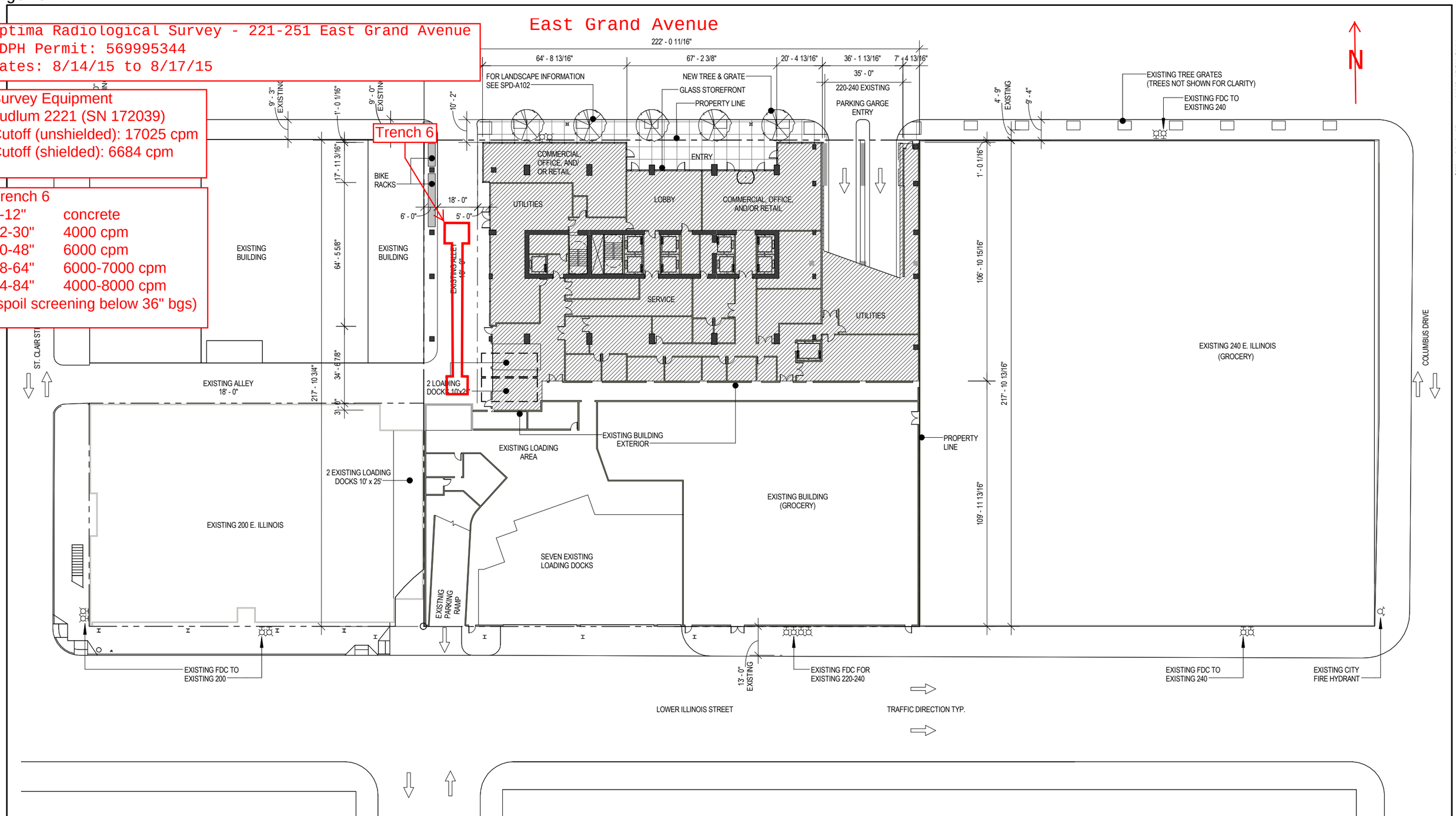
Optima Radiological Survey - 221-251 East Grand Avenue
CDPH Permit: 569995344
Dates: 8/14/15 to 8/17/15

Survey Equipment
Ludlum 2221 (SN 172039)
Cutoff (unshielded): 17025 cpm
Cutoff (shielded): 6684 cpm

Trench 6

0-12"	concrete
12-30"	4000 cpm
30-48"	6000 cpm
48-64"	6000-7000 cpm
64-84"	4000-8000 cpm

(spoil screening below 36" bgs)



SPD-A203
N LOWER ILLINOIS LEVEL
0 20 40 80

optima®

03/10/14

OPTIMA CHICAGO CENTER II

Optima Inc. 630 Vernon Ave. Glencoe, IL 60022 - 847-835-8400

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3/10/2014 4:53:58 PM