



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 11 and 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 OF PUBLIC HEALTH
CITY OF CHICAGO

FORM NO. CDPH.ROW.03 (STREETERVILLE Right-of-Way)

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

A file containing detailed information regarding the aforementioned environmental contamination is available for review at CDPH at 333 S. State St., Room 200, Chicago, Illinois 60604 during normal business hours (8:30AM-4:30PM, Monday through Friday). Contact (312) 745-3152 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 exposed or excavated. Please note that for some locations, additional health and safety procedures may be required by law.

Please complete the following:

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

Applicant Name (print): THOMAS HARTFORD Signature: [Signature]

Site Address and Work Location (Describe exact site location and attach map):
281 TO 281 EAST GRAND AVE CHICAGO, IL

Nature of Work: SEWER & WATER CONNECTIONS

Company Name, Address, Phone No.: LEGACY UNDERGROUND CORP. LAGRANGE, IL 708.485.5780

General / Prime Contractor Name, Address, Phone No.: OPTIMA, INC. 630 VERNON GIBSON, IL 847.835.8400

Safety Officer / Phone No. THOMAS HARTFORD JR 312 296 3290

Radiation Contractor / Phone No. (if applicable) AECOM 312.373.7700 STEVE KANDEN

Check if City Department Work Department Name: _____

CDOT Permit No.: 569995344

Today's Date: 07/22/15 Expected Start Date: 7/27/2015 CDPH Approval / Date: [Signature] 7/23/2015

Please return this completed form to the Chicago Department of Transportation, Division of Infrastructure Management, Public Way Permit Office, City Hall – Room 905, 121 N. LaSalle St., Chicago, Illinois 60602 during normal business hours (8:30 AM - 4:30 PM, Monday through Friday)

For CDPH Use Only

N

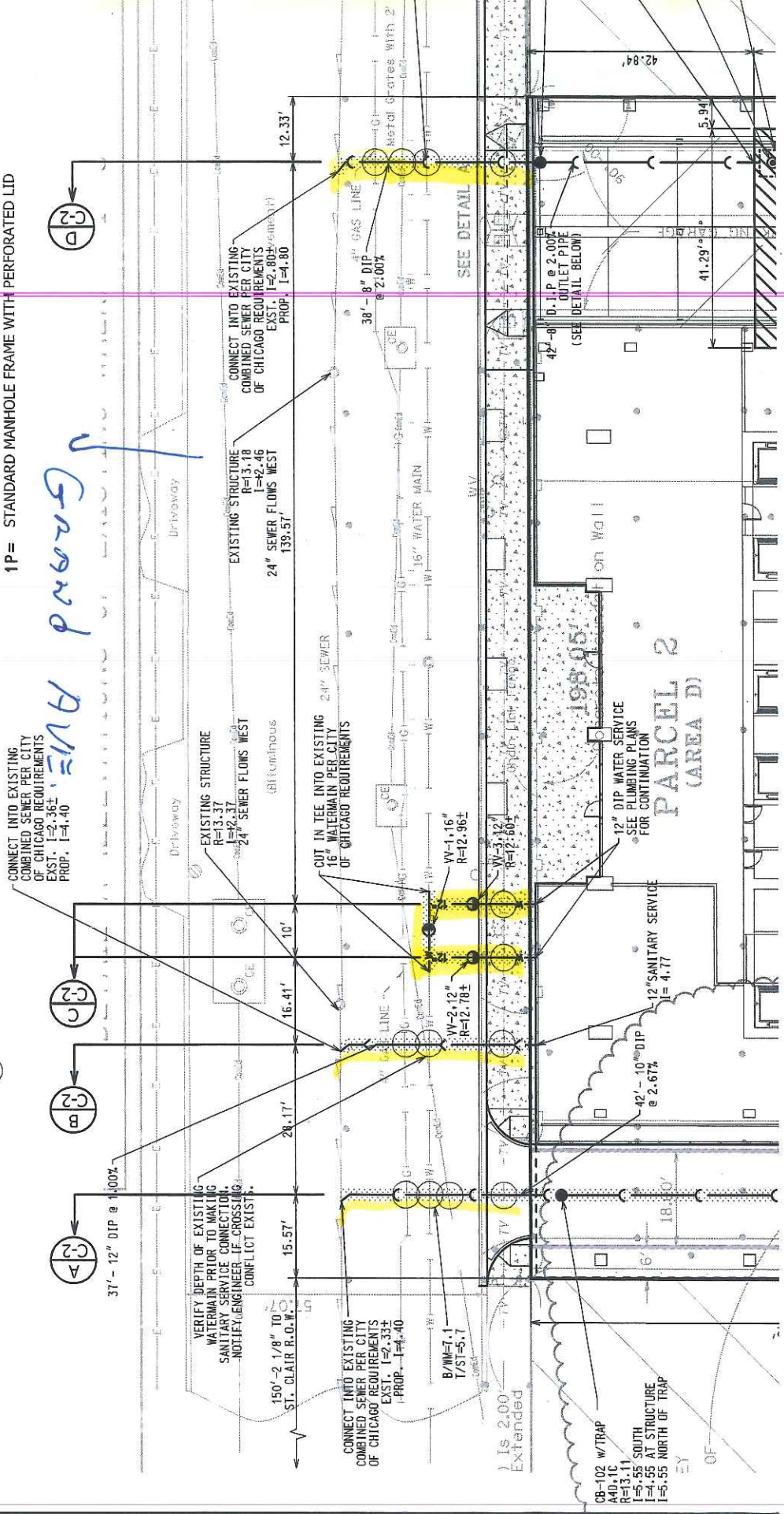
281 East - 221 Grand Ave.

INTEGRATED ENGINEERING

1C= STANDARD MANHOLE FRAME WITH SOLID LID

1P= STANDARD MANHOLE FRAME WITH PERFORATED LID

UTILITY CROSSING



ST CLAIR

CB-102 w/TRAP
 R=11.16
 I=5.55
 I=5.55
 I=5.55 NORTH OF TRAP

12" DIP WATER SERVICE
 *SEE PLUMBING PLANS
 FOR CONTINUATION

198.05
 PARCEL 2
 (AREA D)

SEE DETAIL

0.11" DIP @ 2.00%
 OUTLET PIPE
 (SEE DETAIL BELOW)

CUT IN TEE INTO EXISTING
 16" WATERMAIN PER CITY
 OF CHICAGO REQUIREMENTS

EXISTING STRUCTURE
 R=13.37
 I=42.37
 24" SEWER FLOWS WEST
 (BITUMINOUS)

CONNECT INTO EXISTING
 COMBINED SEWER PER CITY
 OF CHICAGO REQUIREMENTS
 EXST. I=2.36±
 PROP. I=4.40

EXISTING STRUCTURE
 R=13.18
 I=42.46
 24" SEWER FLOWS WEST
 139.57'

VERIFY DEPTH OF EXISTING
 WATERMAIN PRIOR TO MAKING
 SANITARY SERVICE CONNECTION.
 NOTIFY ENGINEER IF CROSSING
 CONFLICT EXISTS.

CONNECT INTO EXISTING
 COMBINED SEWER PER CITY
 OF CHICAGO REQUIREMENTS
 EXST. I=2.35±
 PROP. I=4.40

B/W=7.1
 T/ST=5.7

1 Is 2.00'
 Extended

12" SANITARY SERVICE
 I= 4.77

42'-10" DIP
 @ 2.67%

18'0"

6'

18'0"

18'0"

18'0"

18'0"

18'0"

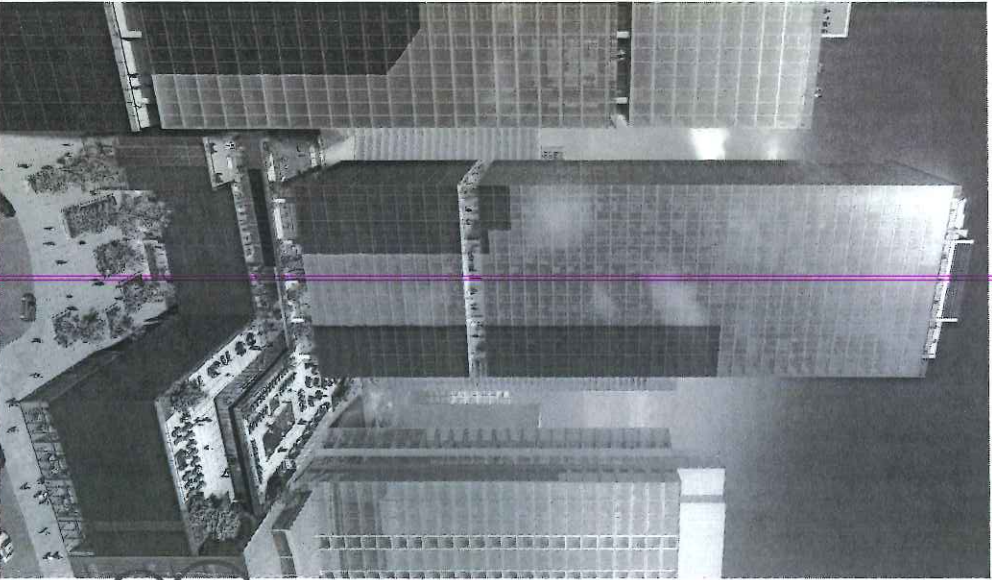
18'0"

18'0"

18'0"

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

OUC review comments on drawings

DEPARTMENT OF PLANNING
AND DEVELOPMENT
BUREAU OF ZONING AND
LAND USE

APPROVED

11/11/14 11:08:15 AM

By
Foundation Only



CIVIL ENGINEERING
HAS BEEN
PREPARED
AND
ISSUED
FOR
REFERENCE
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 that I am a duly licensed professional architect in the State of Illinois. I am the author of the design and I am responsible for the content of the drawings on this page.

ENERGY CODE STATEMENT OF COMPLIANCE
I certify that I am the Designer/Professional of Record for this project. I also certify that I am a duly licensed professional engineer in the State of Illinois. I am responsible for the content of the drawings on this page, including all relevant provisions of Article 1, Chapter 15-1, Energy Conservation, of the Municipal Code of Chicago.

ACCESSIBILITY STATEMENT OF COMPLIANCE
This project will comply with Chapter 15-11 of the Chicago Building Code and ANSI A117.1-2003.



OPTIMA, INC.
220 E. ILLINOIS ST.
CHICAGO, IL 60611

upload civil and landscape
drawings for OUC review.

PERMIT FOR FOUNDATIONS ONLY **

COVER SHEET
G001

DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT SERVICES
APPROVED
11/11/14 11:08:15 AM



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)

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

A file containing detailed information regarding the aforementioned environmental contamination is available for review at CDPH at 333 S. State 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 proposed or excavated. Please note that for some locations, additional health and safety procedures may be required by law.

Please complete the following:

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

Applicant Name (print): DAVID HARRIS Signature: [Signature]

Site Address and Work Location (Describe exact site location and attach map): Z15 E GRAND

Nature of Work: COMED CONDUIT INSTALLATION

Company Name, Address, Phone No.: OPTIMA INC 630 VERNON AVE GLENCOE, IL

General / Prime Contractor Name, Address, Phone No.: OPTIMA INC 630 VERNON AVE GLENCOE, IL
(include subcontractor information if applicable)

Safety Officer / Phone No. AE-com, STEVE KANDER 8842792448

Radiation Contractor / Phone No. and email address (if applicable) AE-com SteveKander 847-279 2448

Check if City Department Work Department Name: _____

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

Today's Date: 7-14-15 Expected Start Date: 7-15-15 CDPH Approval / Date: [Signature]

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

or CDPH Use Only

LOCATION MAP



220 E. ILLINOIS SITE

GRAND AVE..

MICHIGAN AVE.

ST. CLAIR ST.

COLUMBUS DR.

E. ILLINOIS ST.

CITYFRONT PLAZA DR.

NORTH WATER ST.

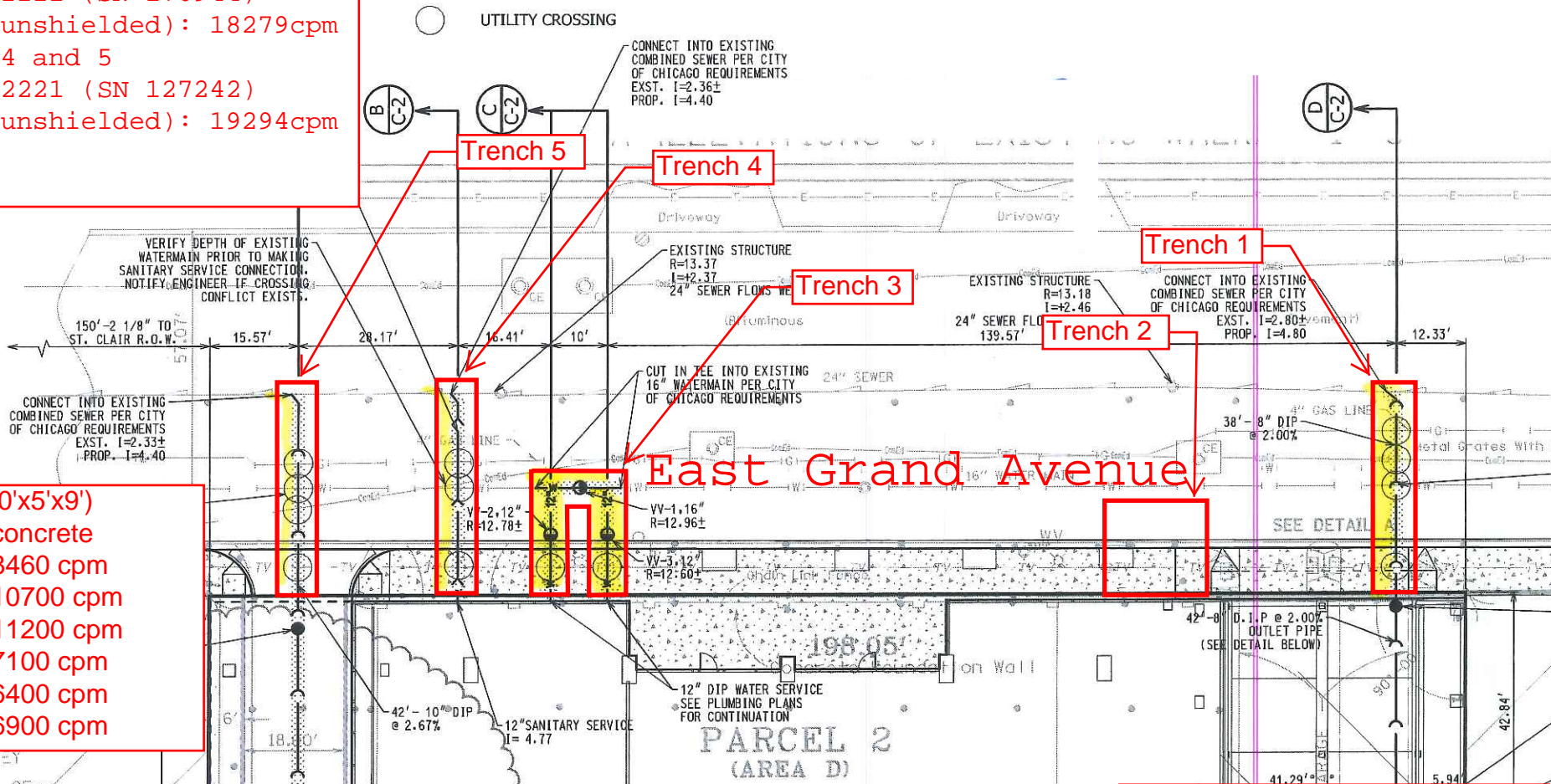
← AREA of work

RISK Grand Ave

FIGURES



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)	

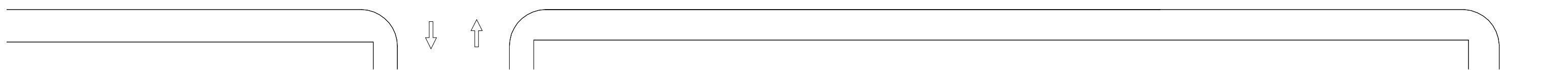
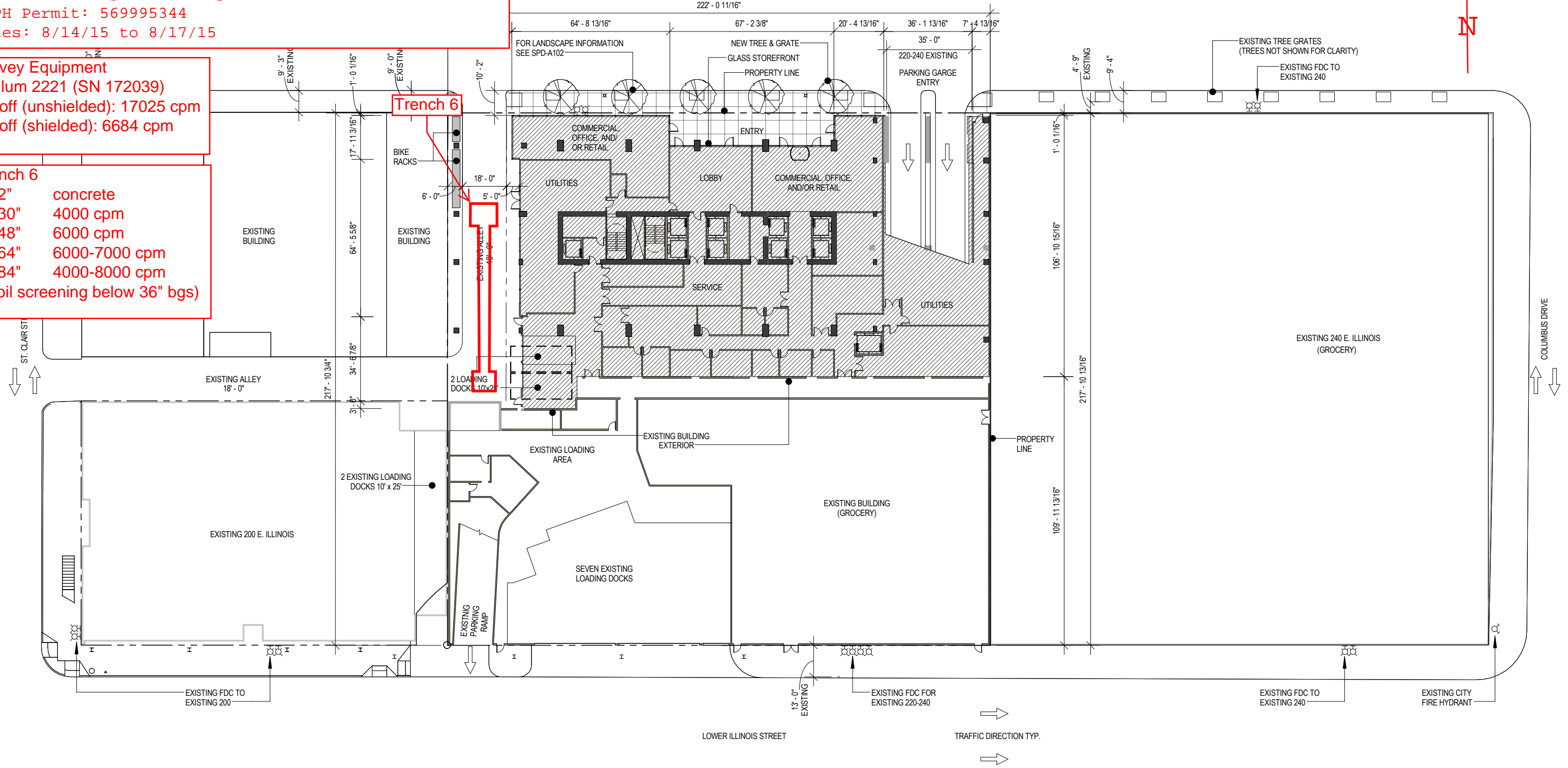
Figure 2

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)

East Grand Avenue



03/10/14

SPD-A203
N LOWER ILLINOIS LEVEL

0 20 40 80

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