

Chicago, Cook County, Illinois, United States

Title:

Local Topography of the Area Surrounding the Site

1021 - 1325 West 119th Street, Chicago, Illinois 60643

Prepared for:

West Pullman Development Partners, LLC (DL3)



Compiled by: JS Date: 06/19/2023

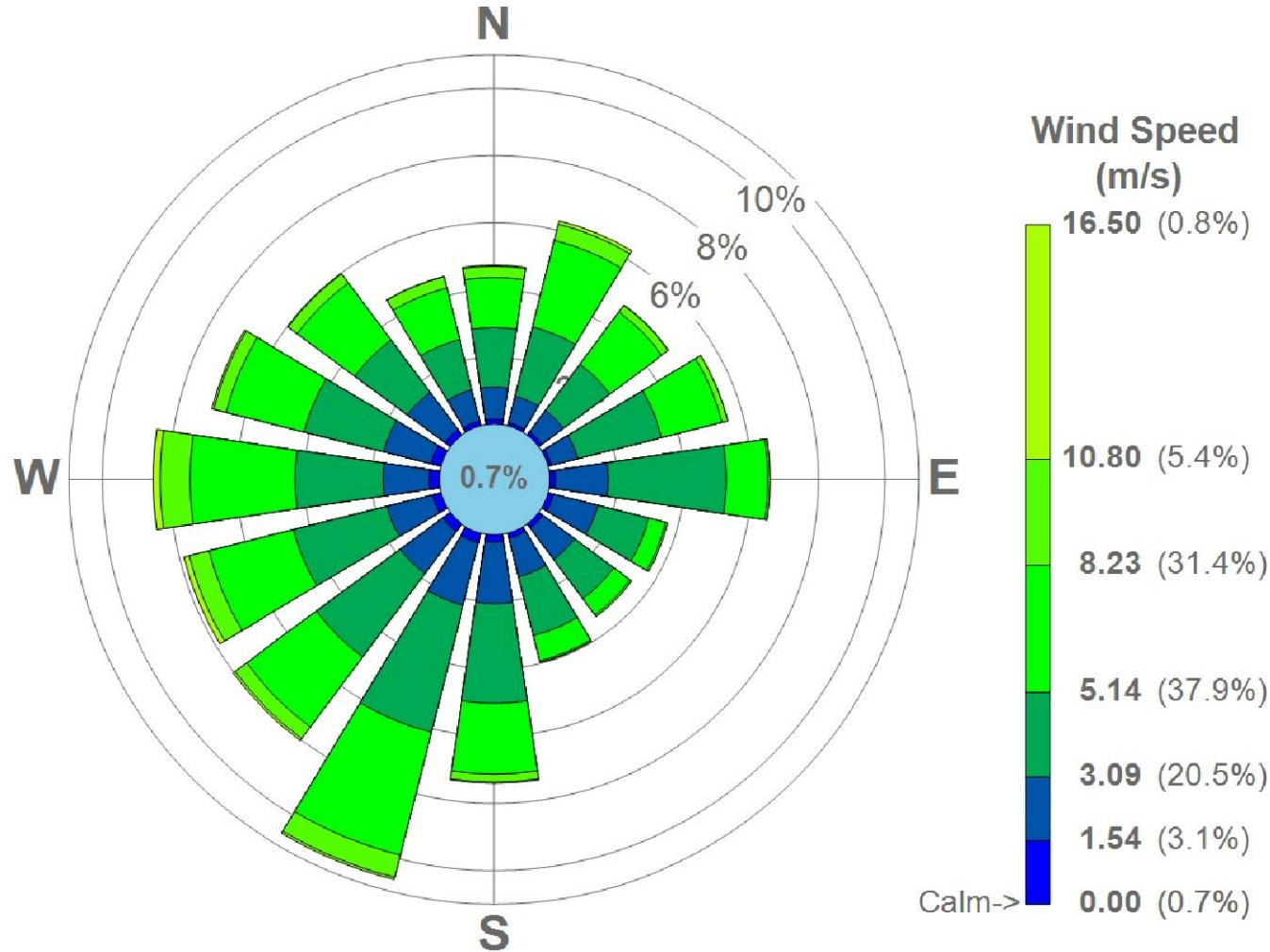
Prepared by: JS Scale: NOT TO SCALE

Project Mgr: MS Project: 4182.0001000

File: INGERSOLL SITE FIGURES.DWG

FIGURE

3



Title: **Windrose for Midway Chicago IL
Station for the Time Period
January 1, 2016 - December 31, 2020**

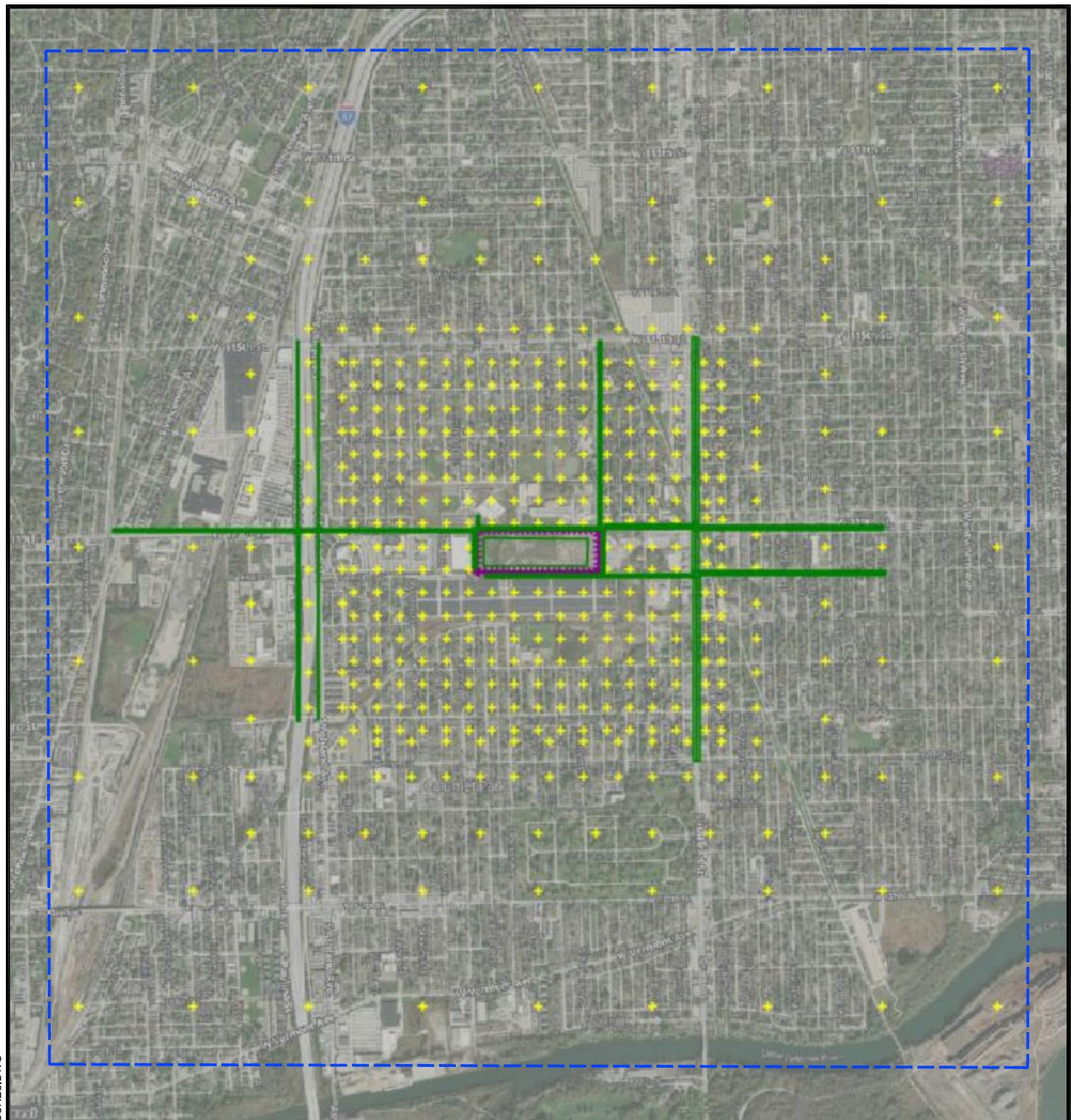
1021 - 1325 West 119th Street, Chicago, Illinois 60643

Prepared for:
West Pullman Development Partners, LLC (DL3)



Compiled by: JS	Date: 06/19/2023
Prepared by: JS	Scale: N/A
Project Mgr: MS	Project: 4182.0001000
File: INGERSOLL SITE FIGURES.DWG	

FIGURE
4



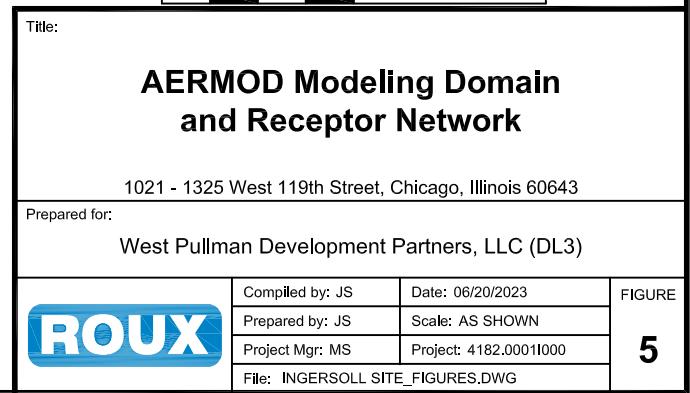
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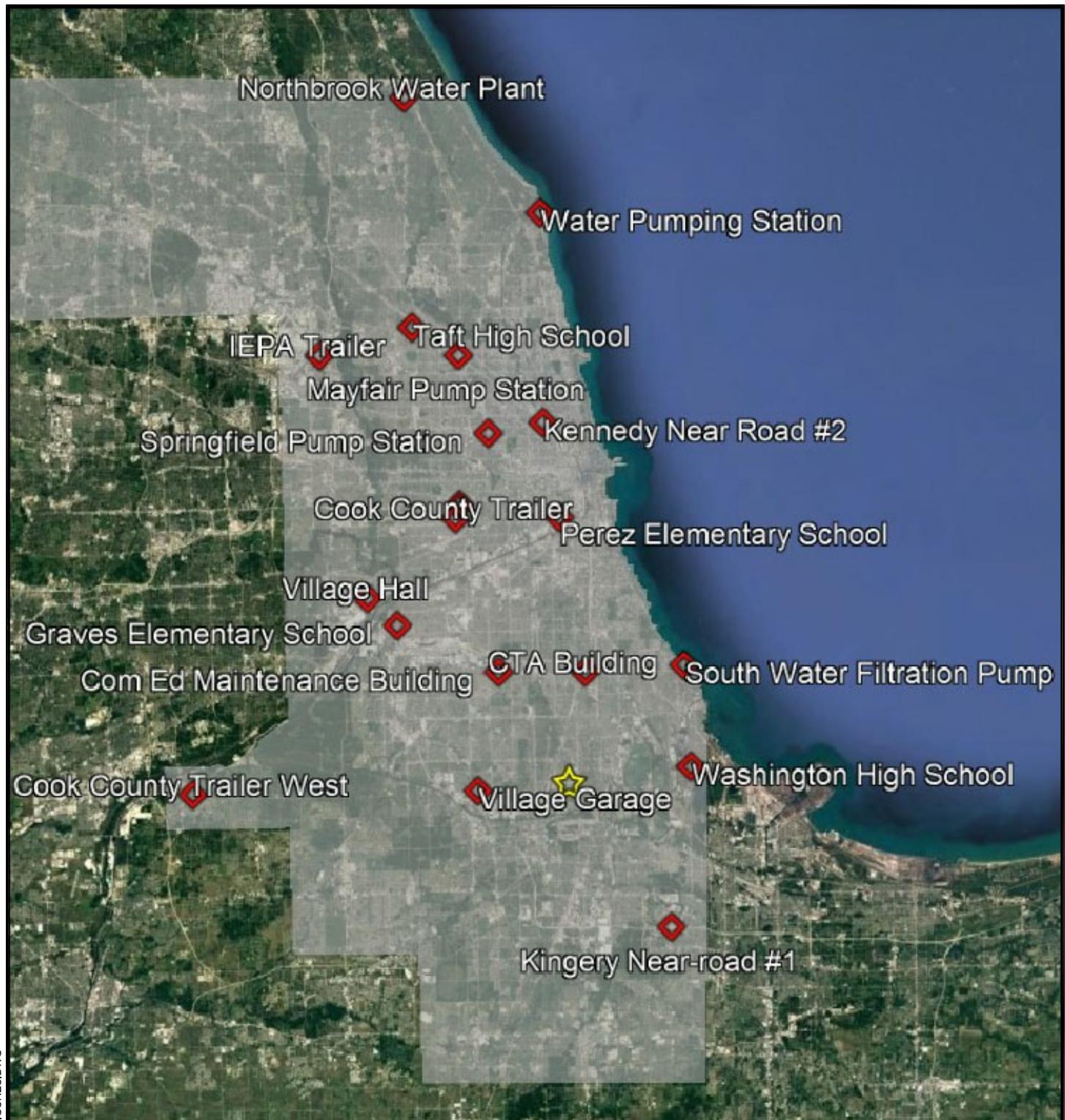
LEGEND:

- ++ + + + AERMOD Discrete Receptors
- + + + + AERMOD Boundary Receptors
- [Green Box] Source Area
- - - - - AERMOD Modeling Domain



2000' 0 2000'





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LEGEND:

◆ Monitoring Site

★ Project Site

□ Cook County Boundary

35000' 0 35000'



Title:

Cook County Monitoring Site Locations - 2020

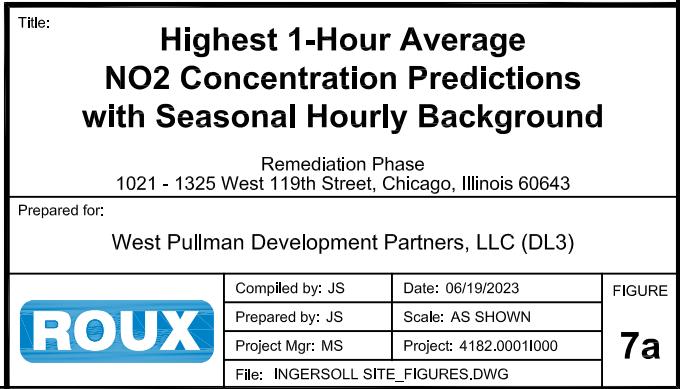
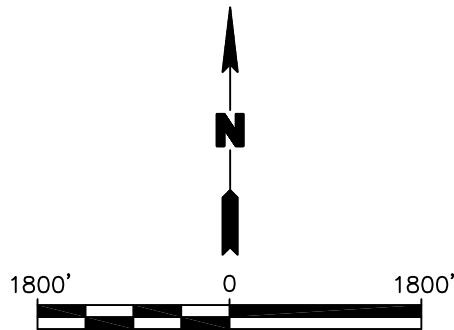
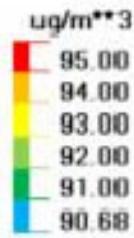
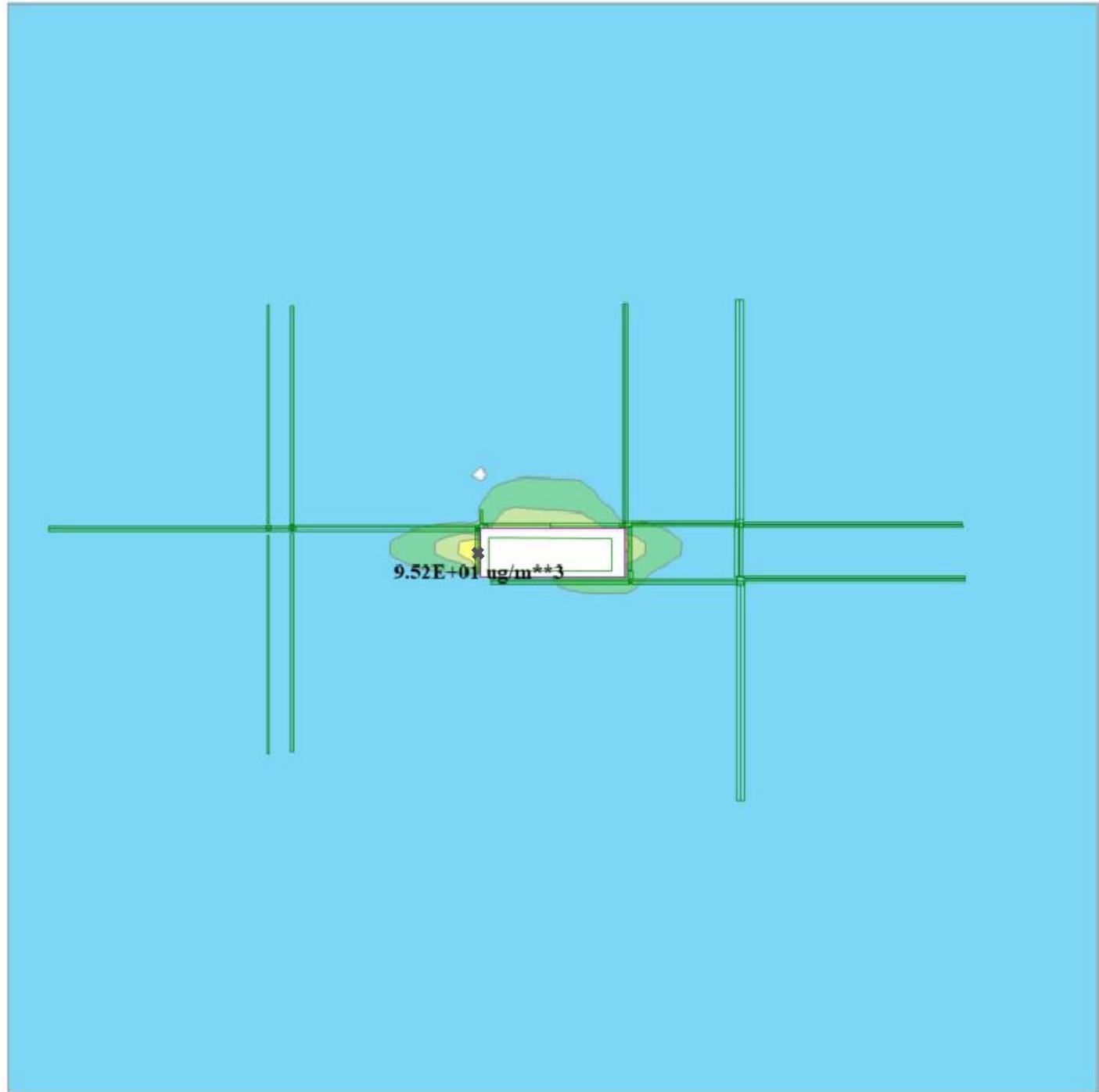
1021 - 1325 West 119th Street, Chicago, Illinois 60643

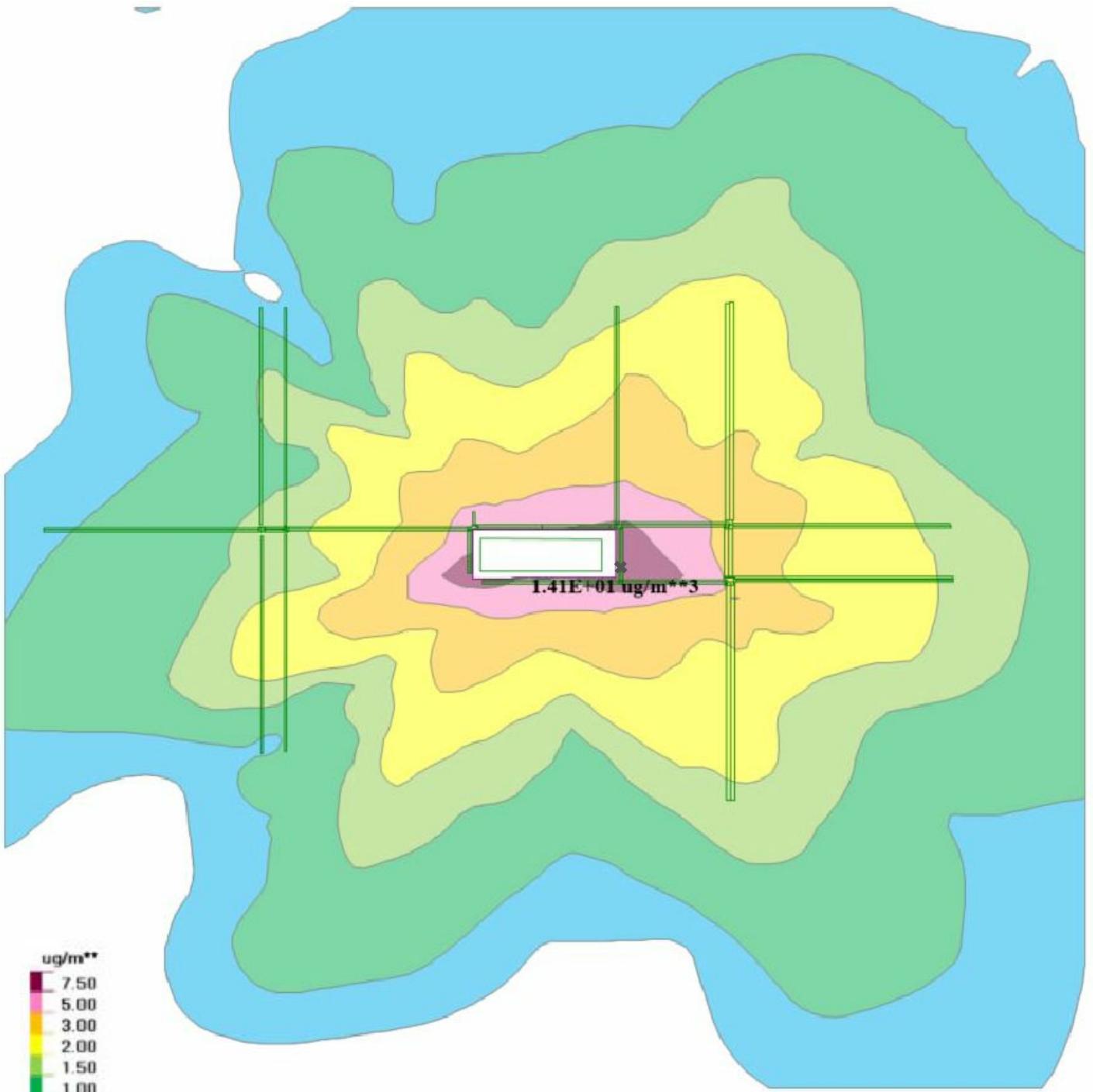
Prepared for:

West Pullman Development Partners, LLC (DL3)

ROUX

Compiled by: JS	Date: 06/19/2023	FIGURE 6
Prepared by: JS	Scale: AS SHOWN	
Project Mgr: MS	Project: 4182.0001I000	
File: INGERSOLL SITE FIGURES.DWG		





■ NOTE: Additional layer added for Significant Impact Levels (SILs)

Title:
Highest 1-Hour Average NO₂ Concentration Predictions without Seasonal Hourly Background

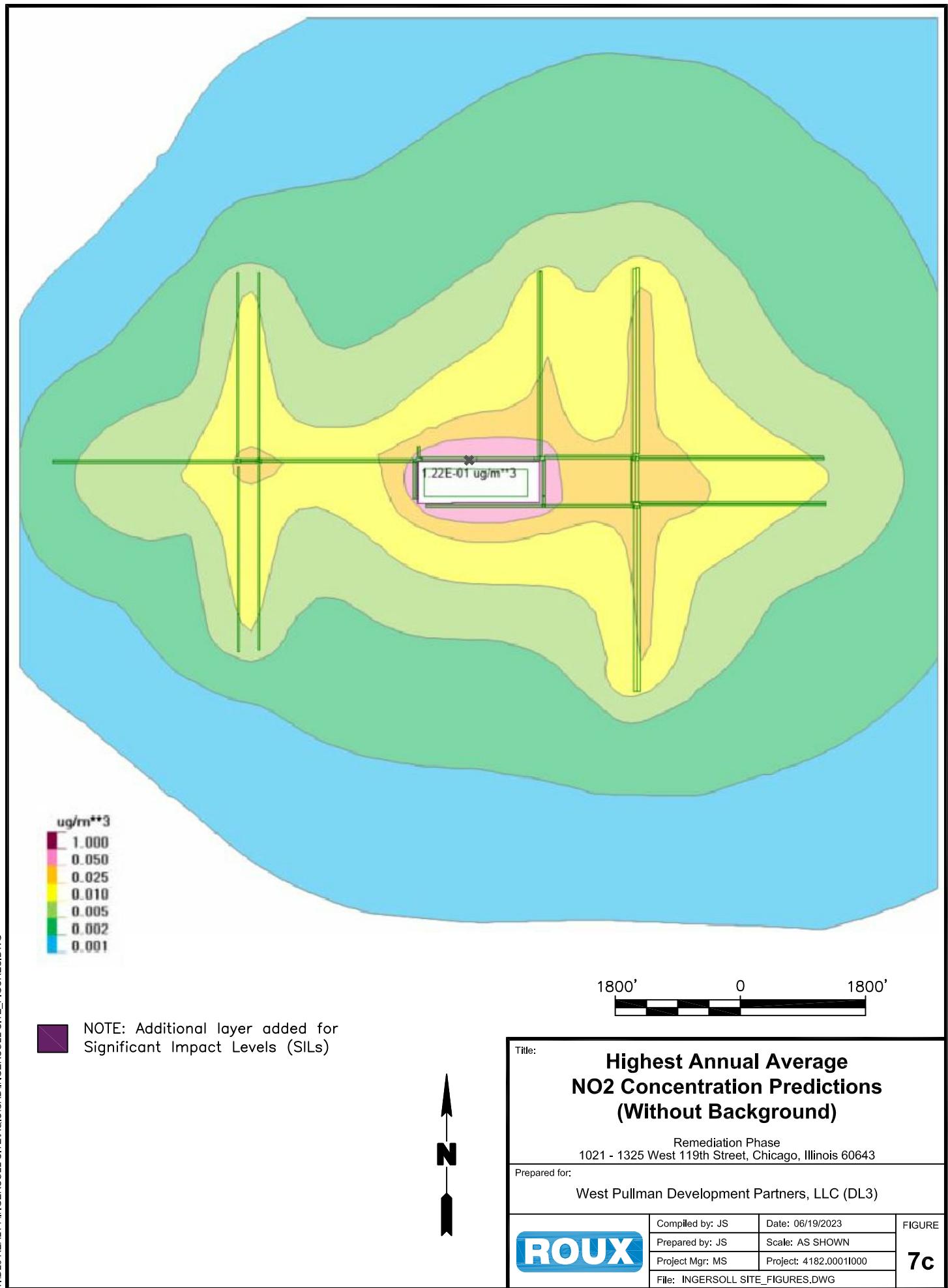
Remediation Phase
 1021 - 1325 West 119th Street, Chicago, Illinois 60643

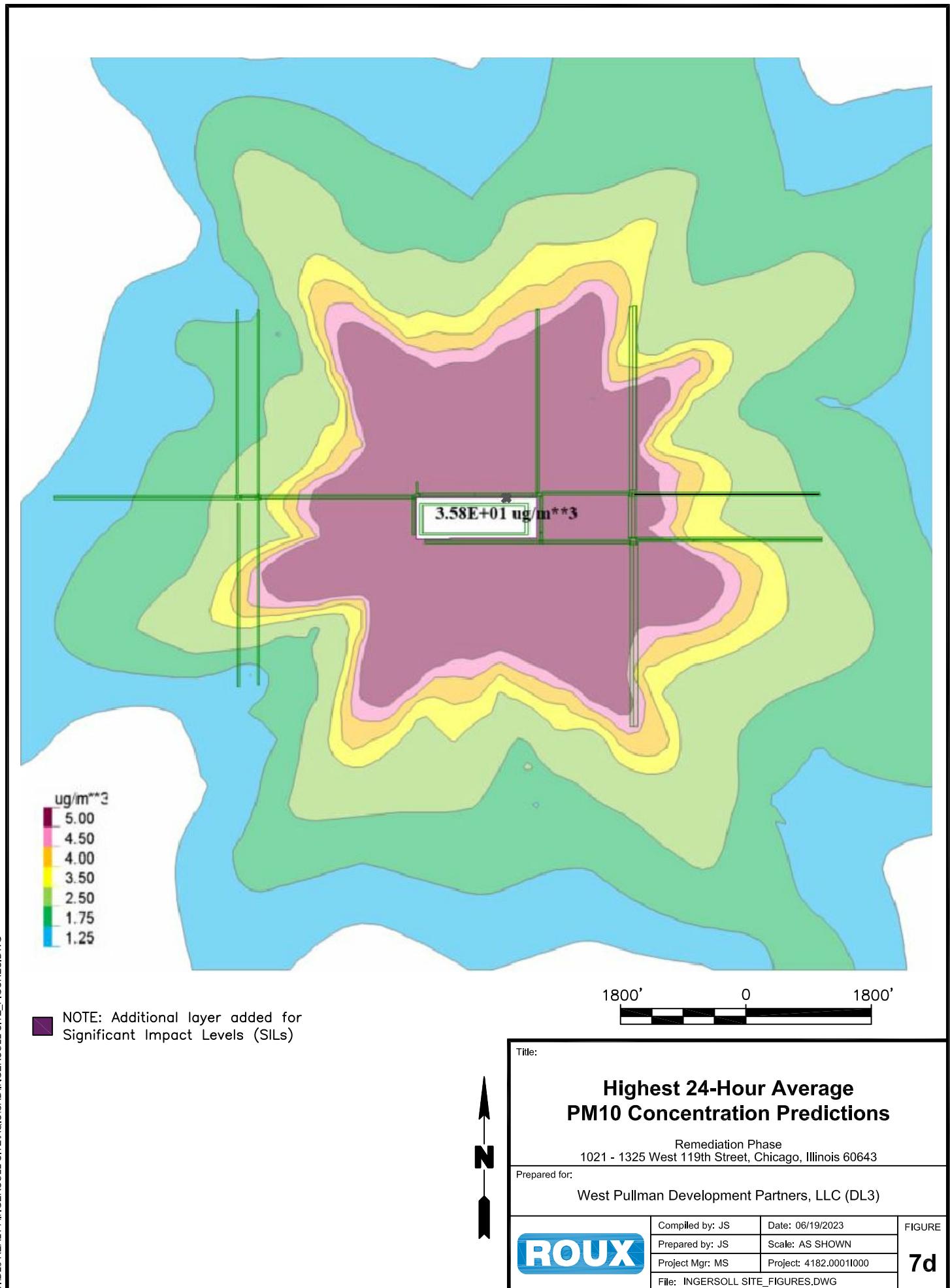
Prepared for:
 West Pullman Development Partners, LLC (DL3)

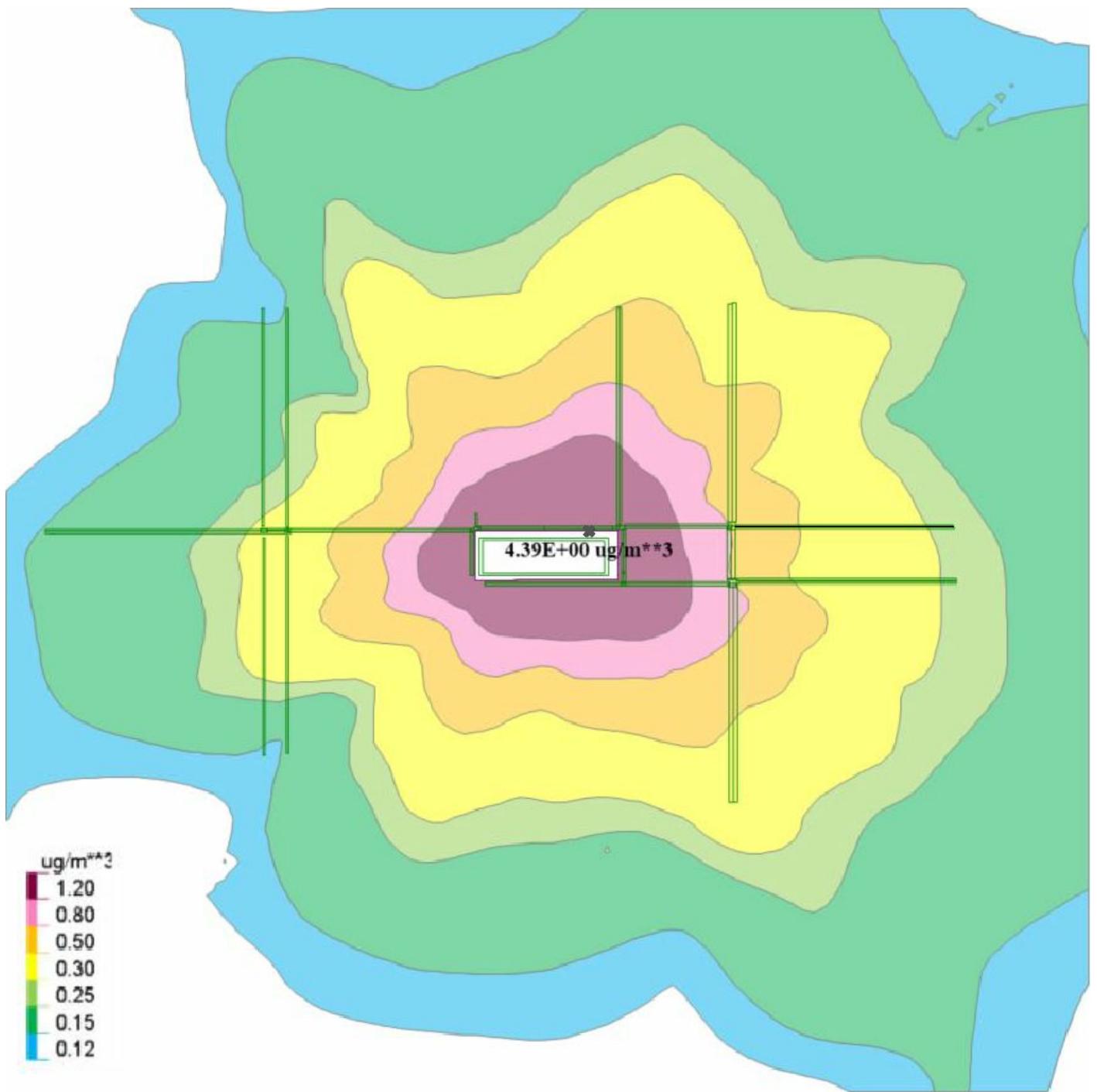


Compiled by: JS	Date: 06/19/2023
Prepared by: JS	Scale: AS SHOWN
Project Mgr: MS	Project: 4182.0001I000
File: INGERSOLL SITE FIGURES.DWG	

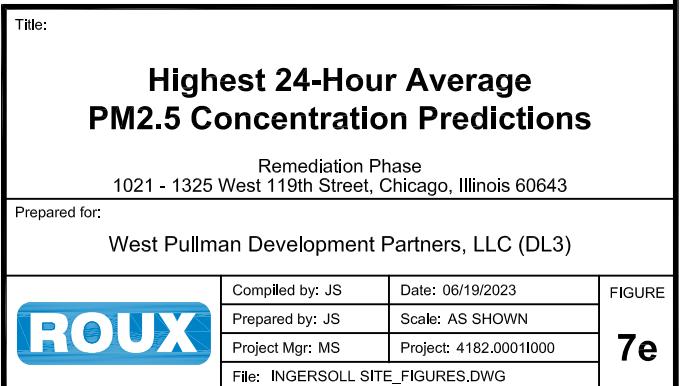
FIGURE
7b

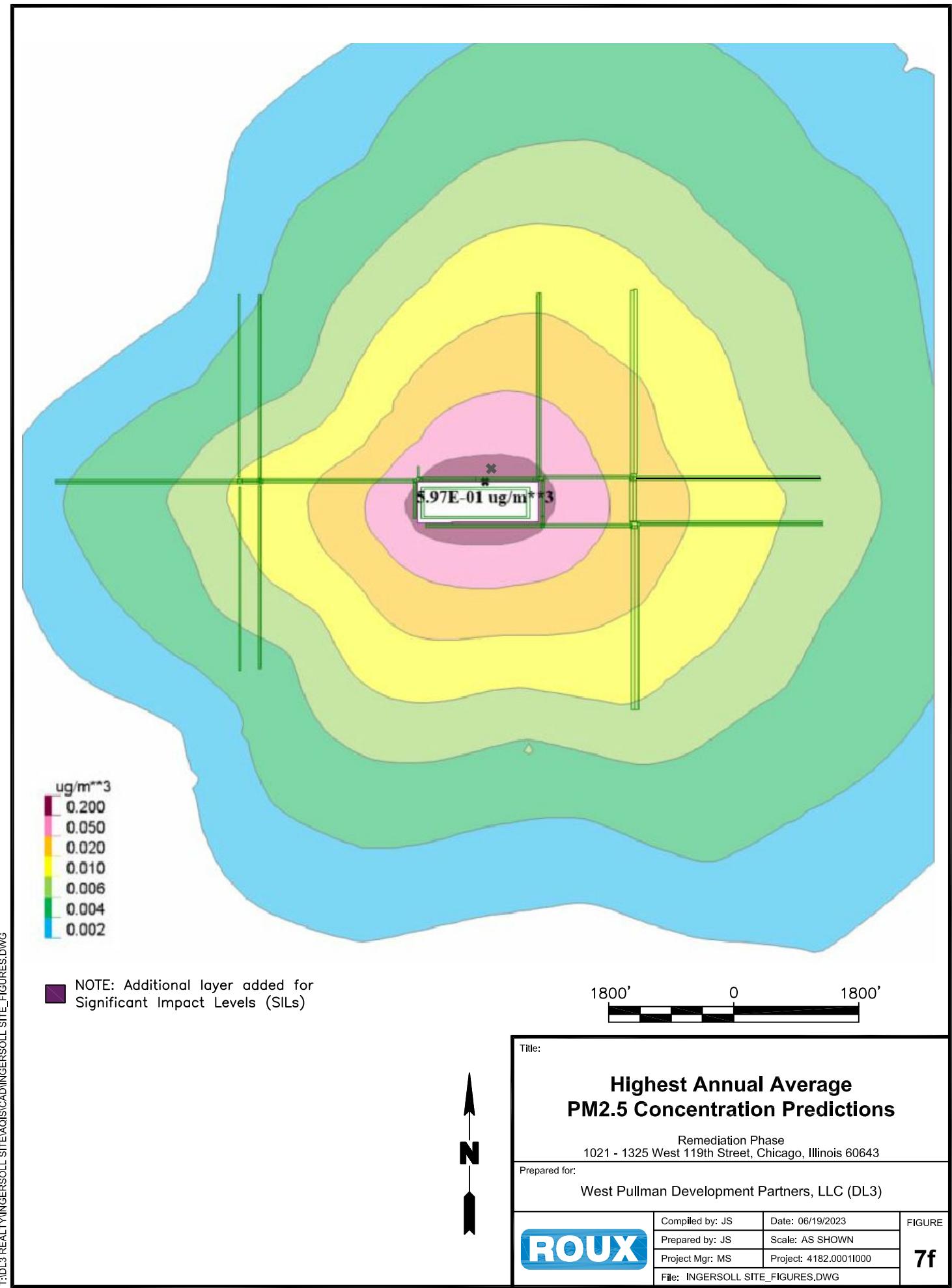


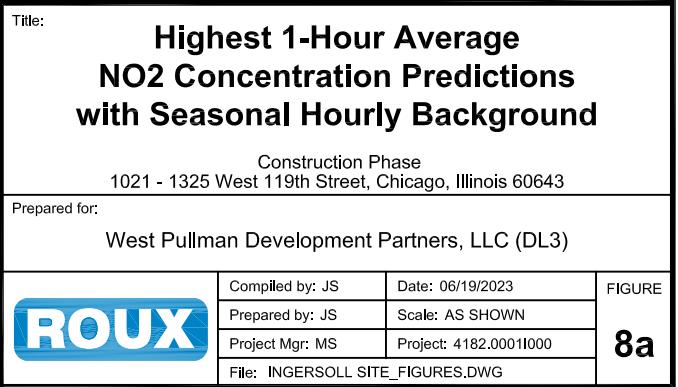
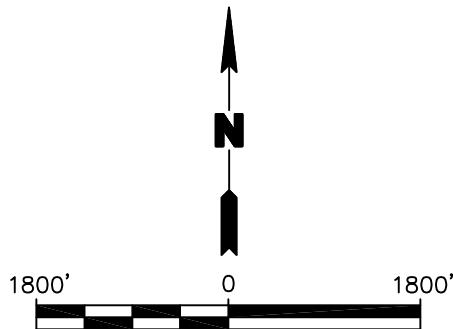
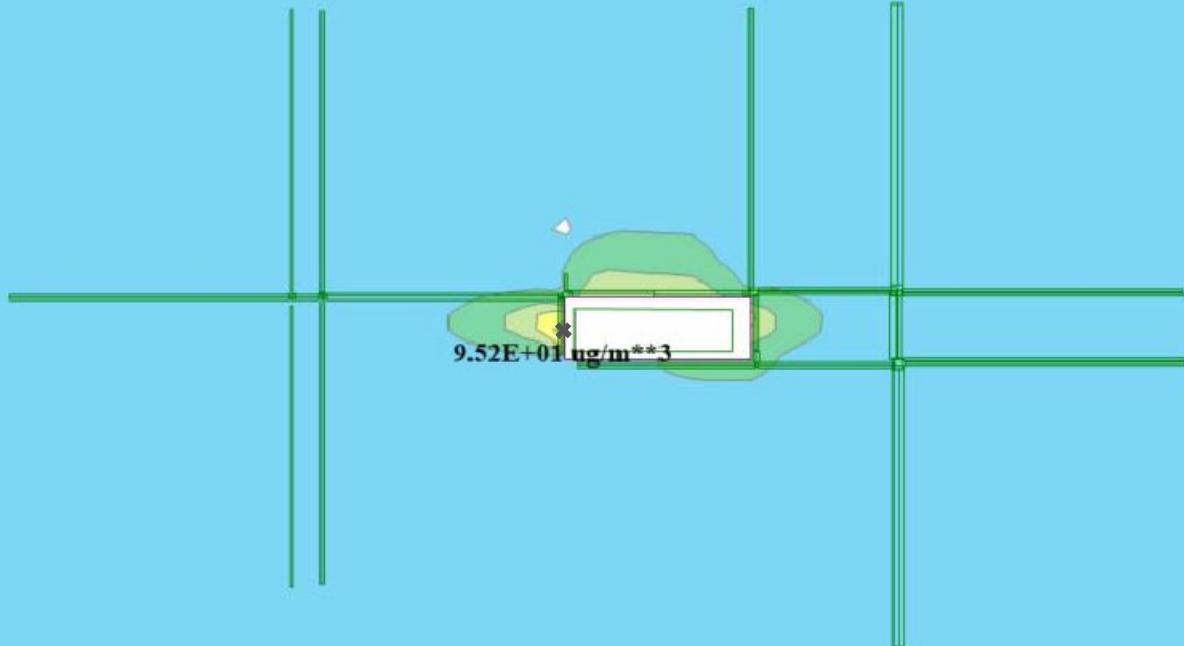
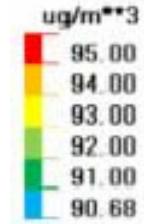


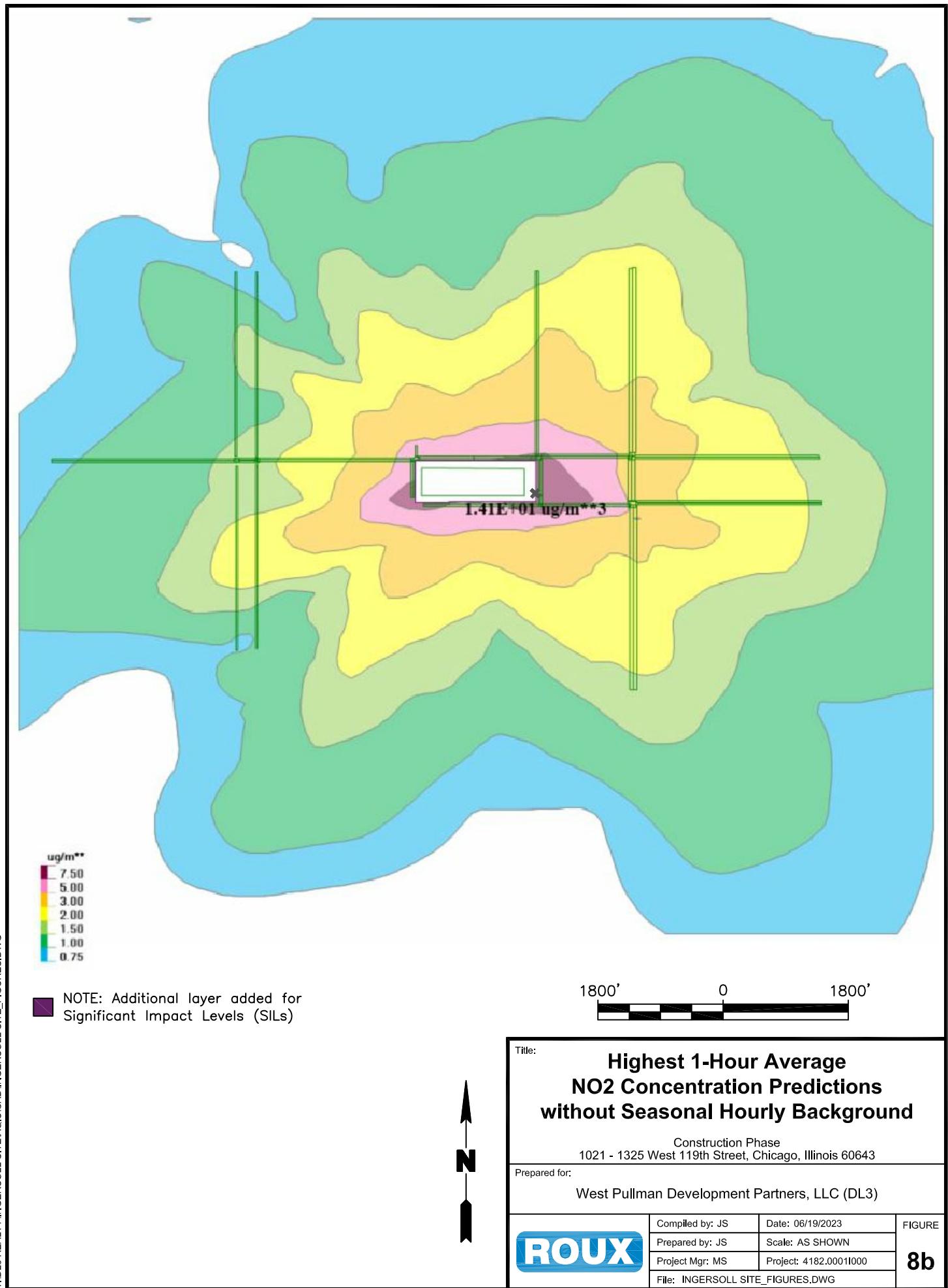


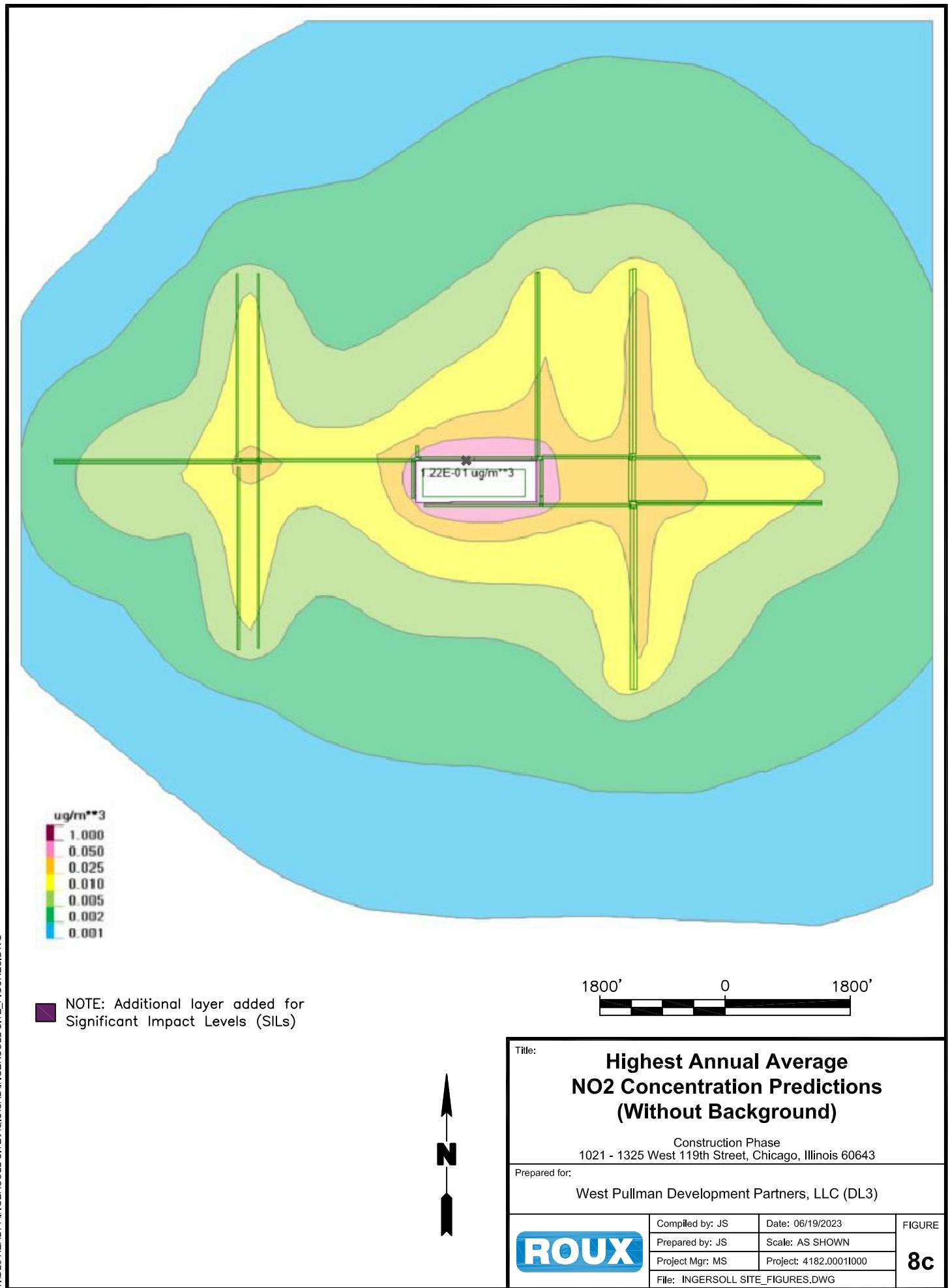
1800' 0 1800'

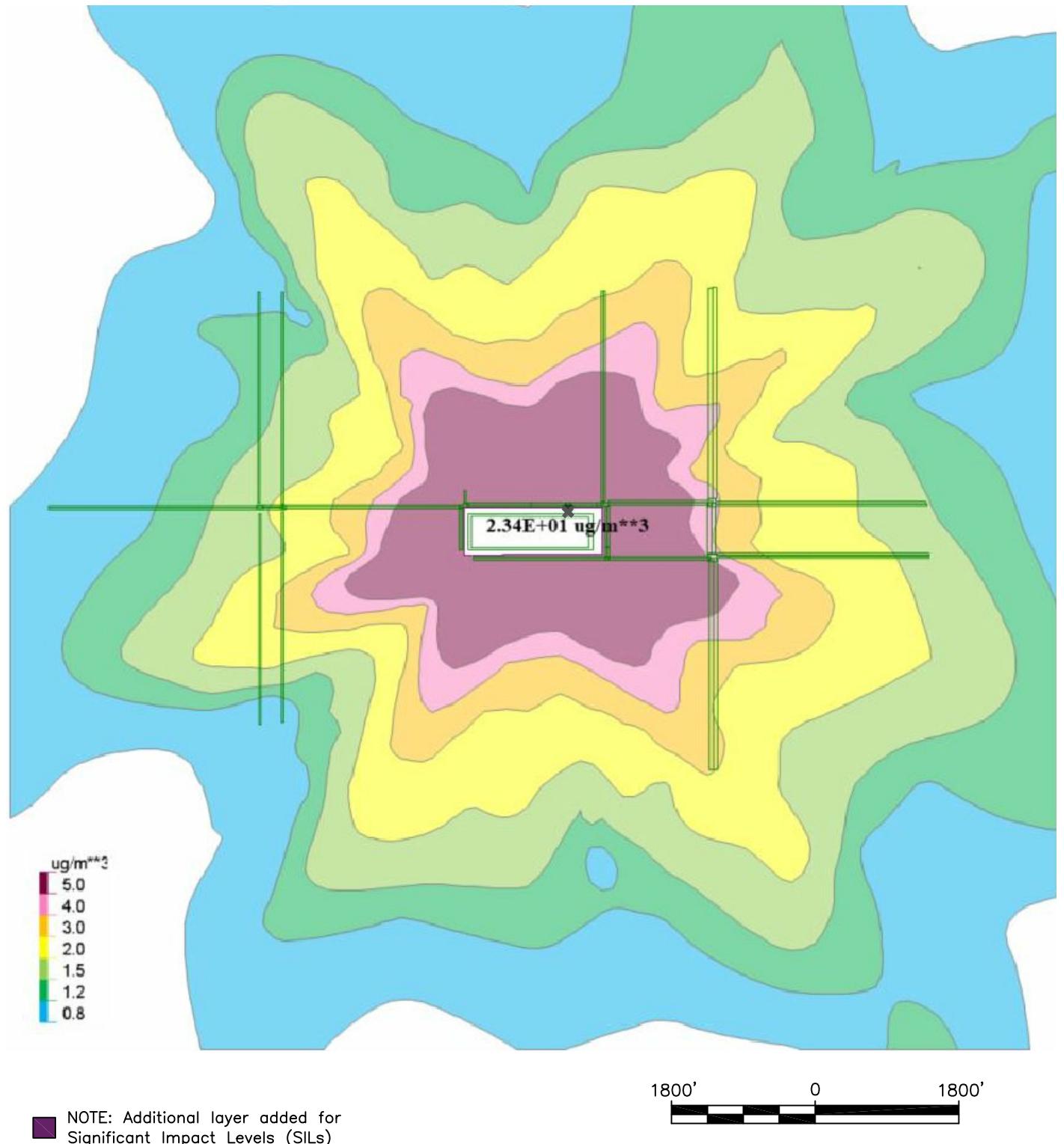




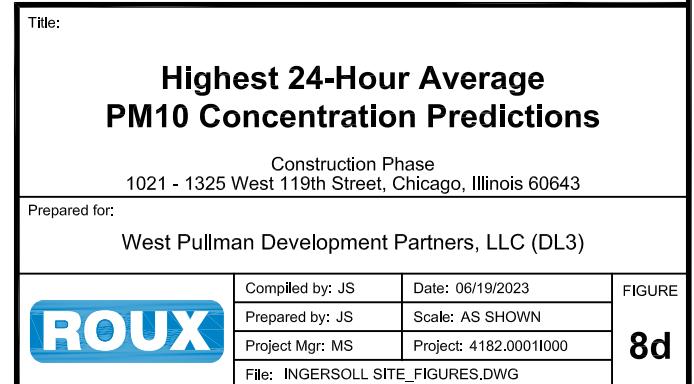


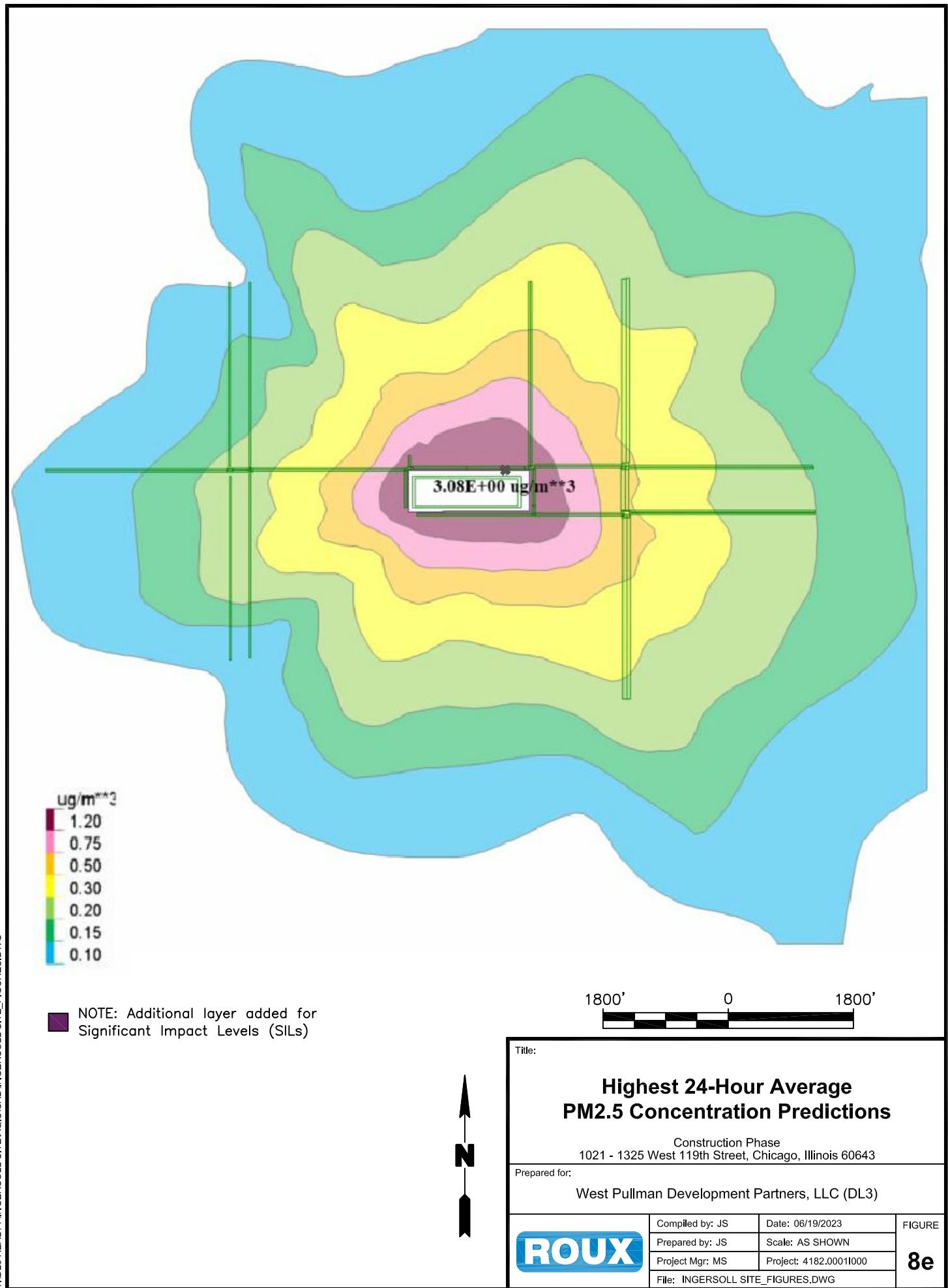


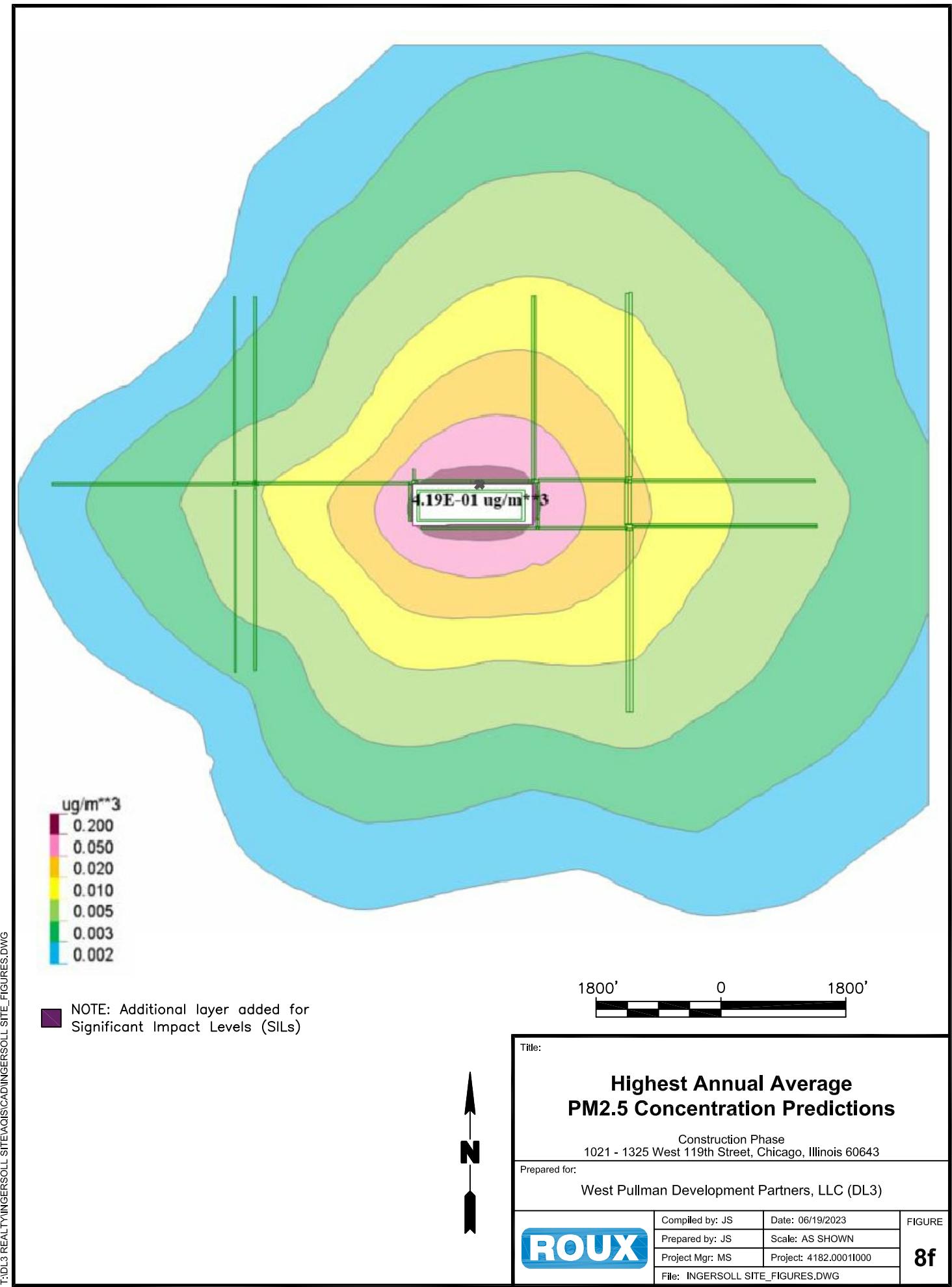


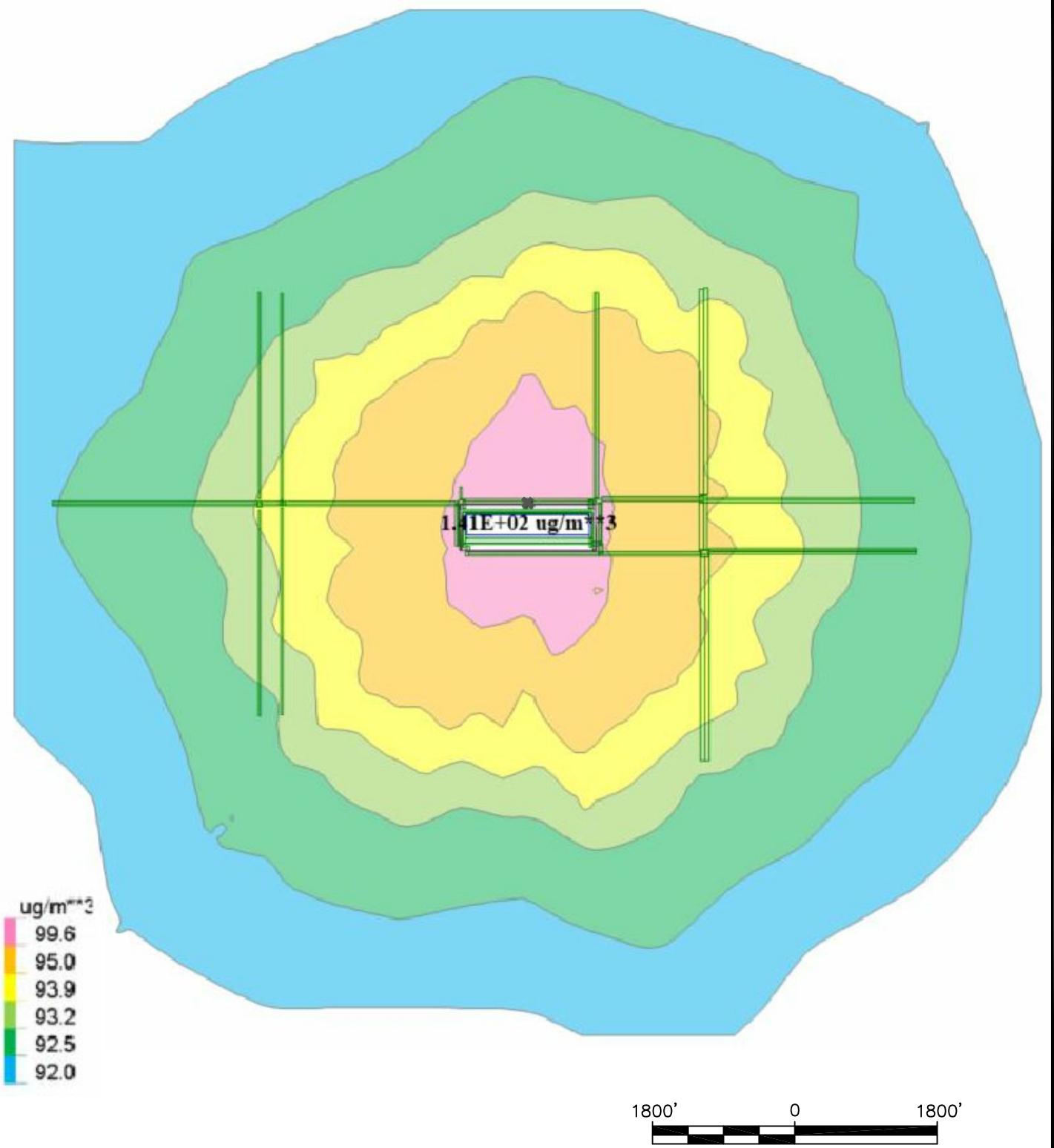


NOTE: Additional layer added for Significant Impact Levels (SILs)

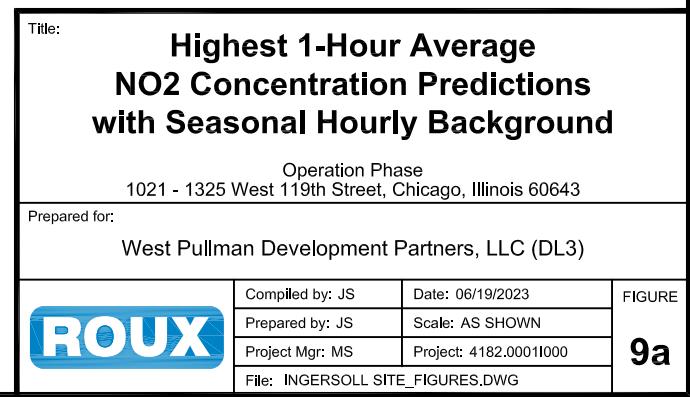


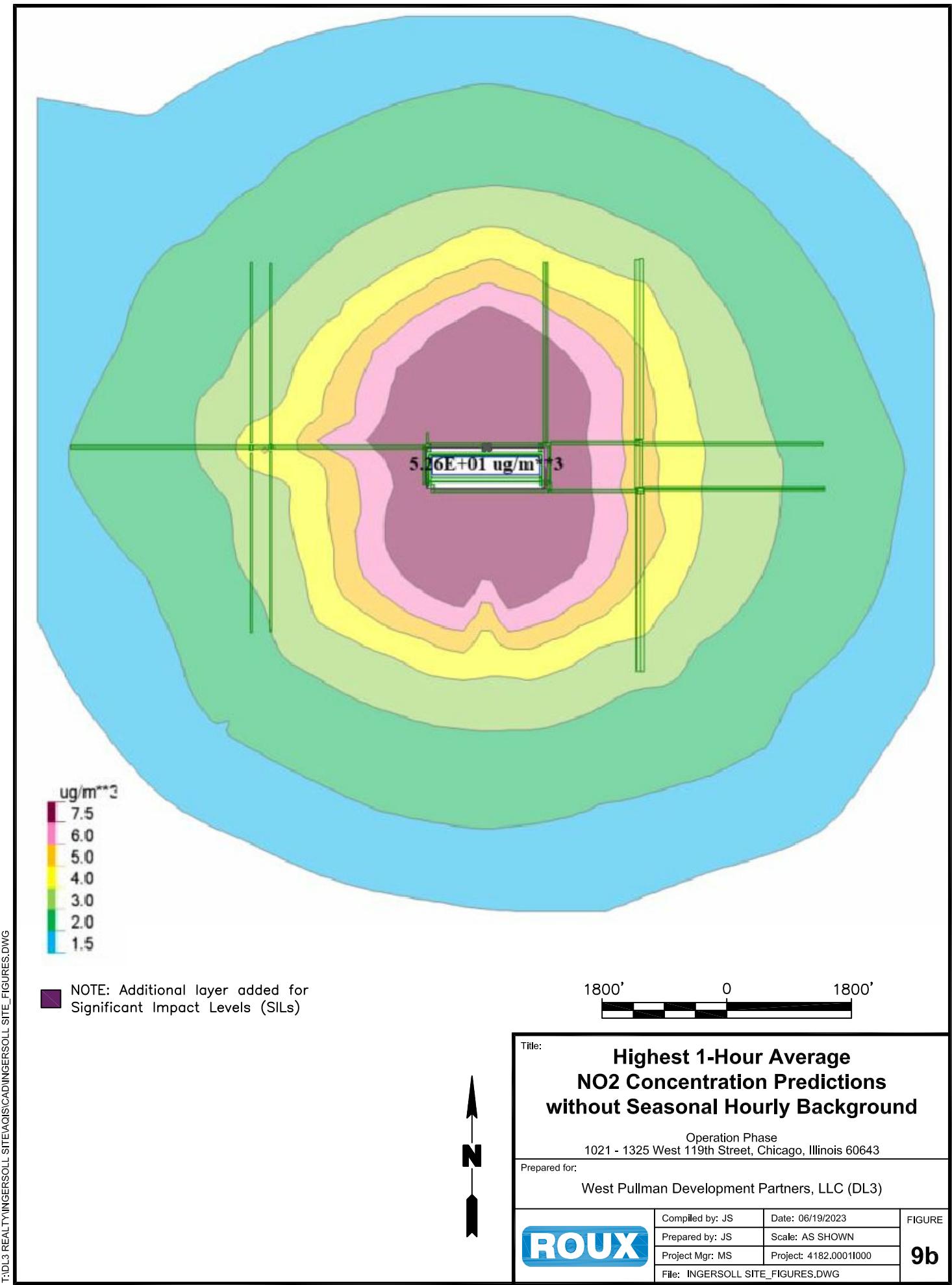


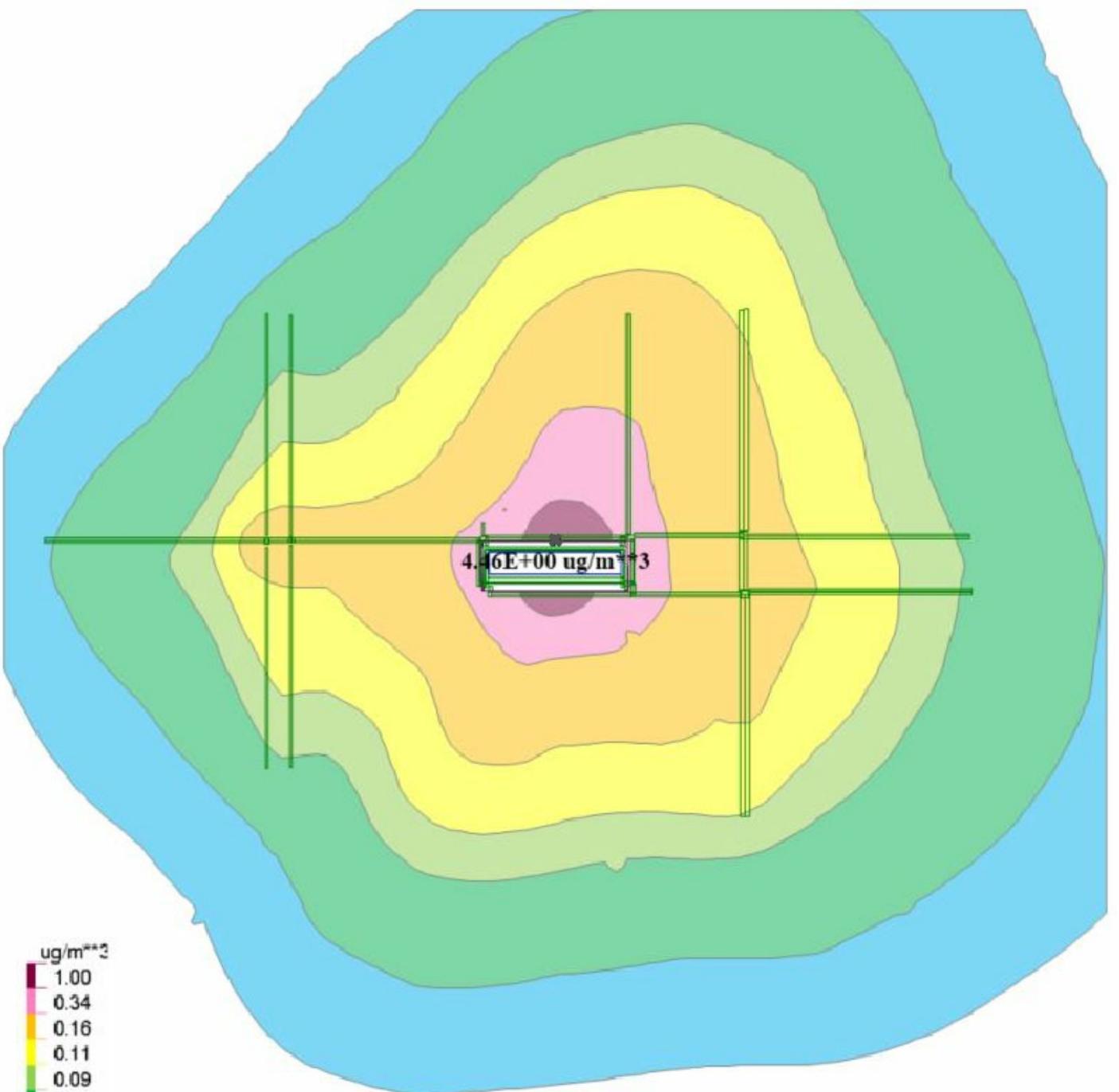




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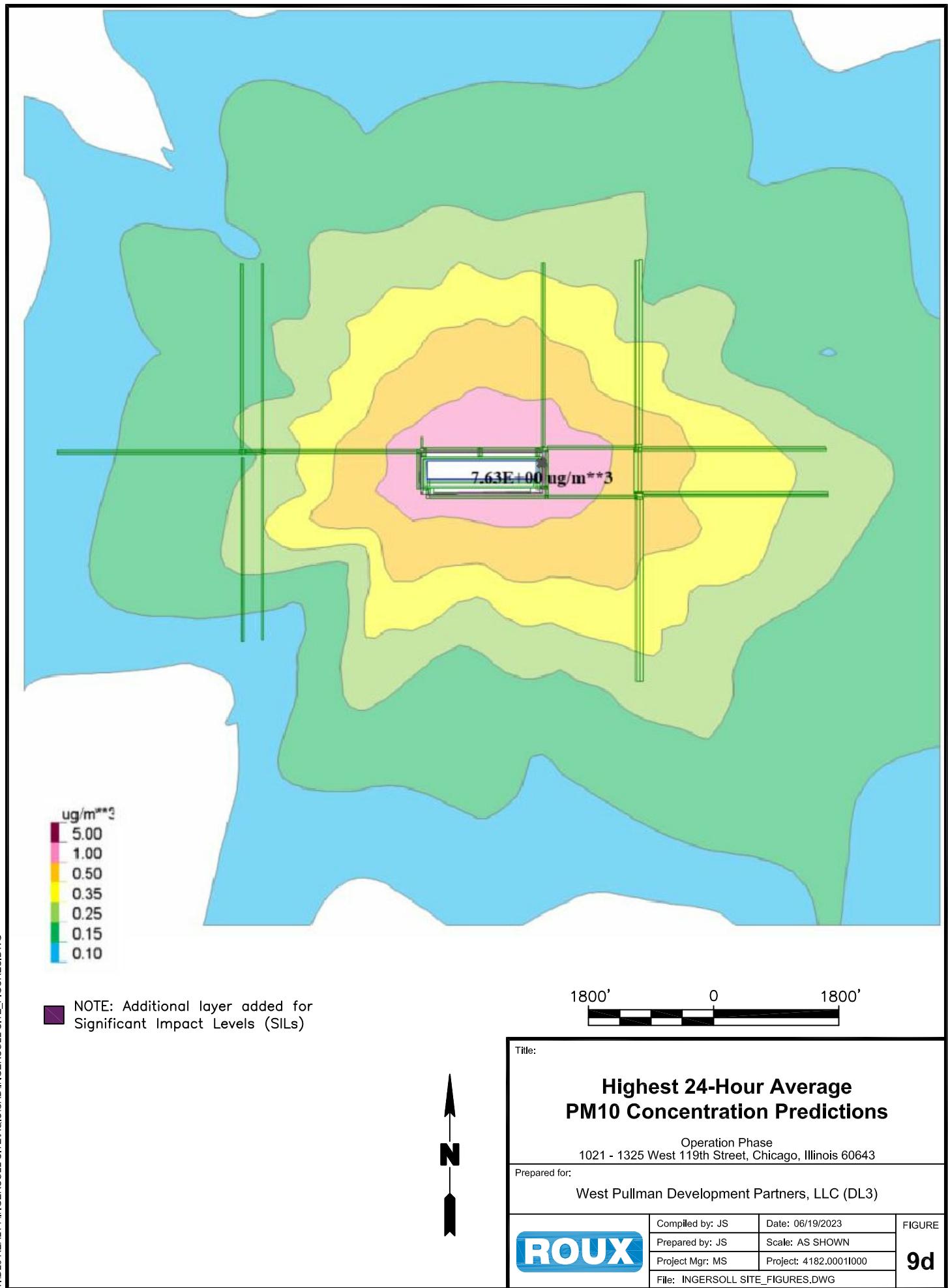
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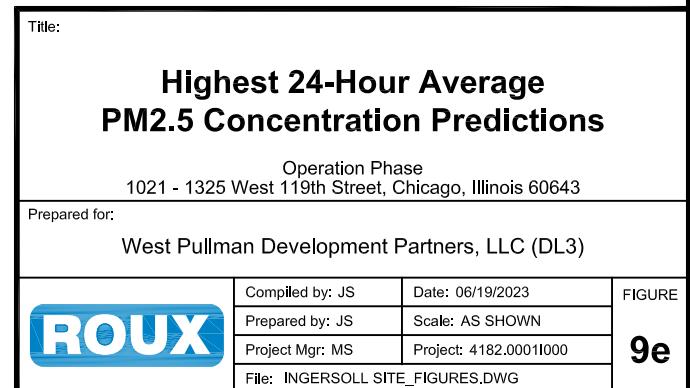
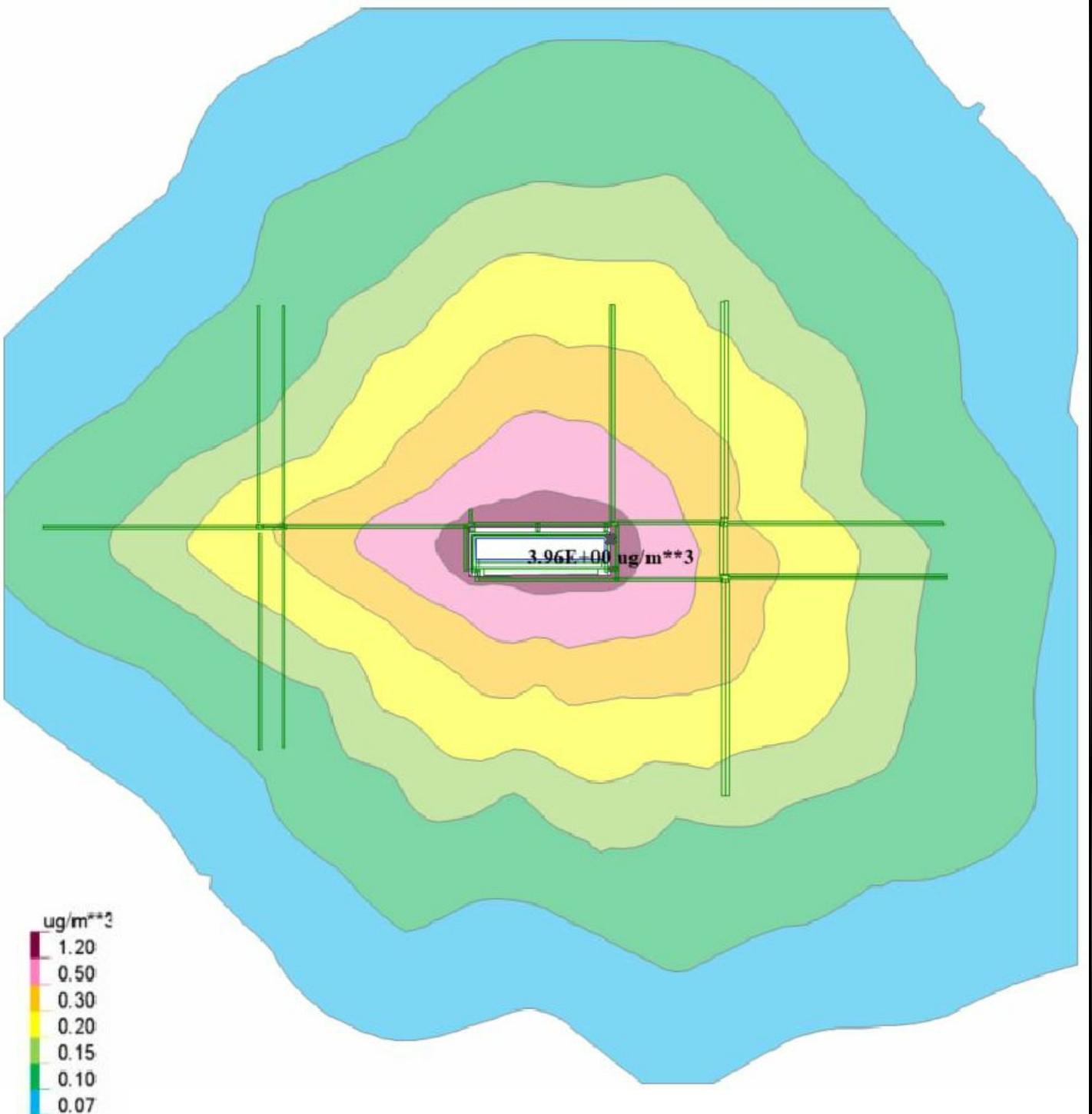
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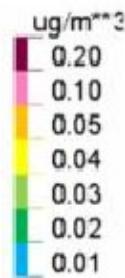
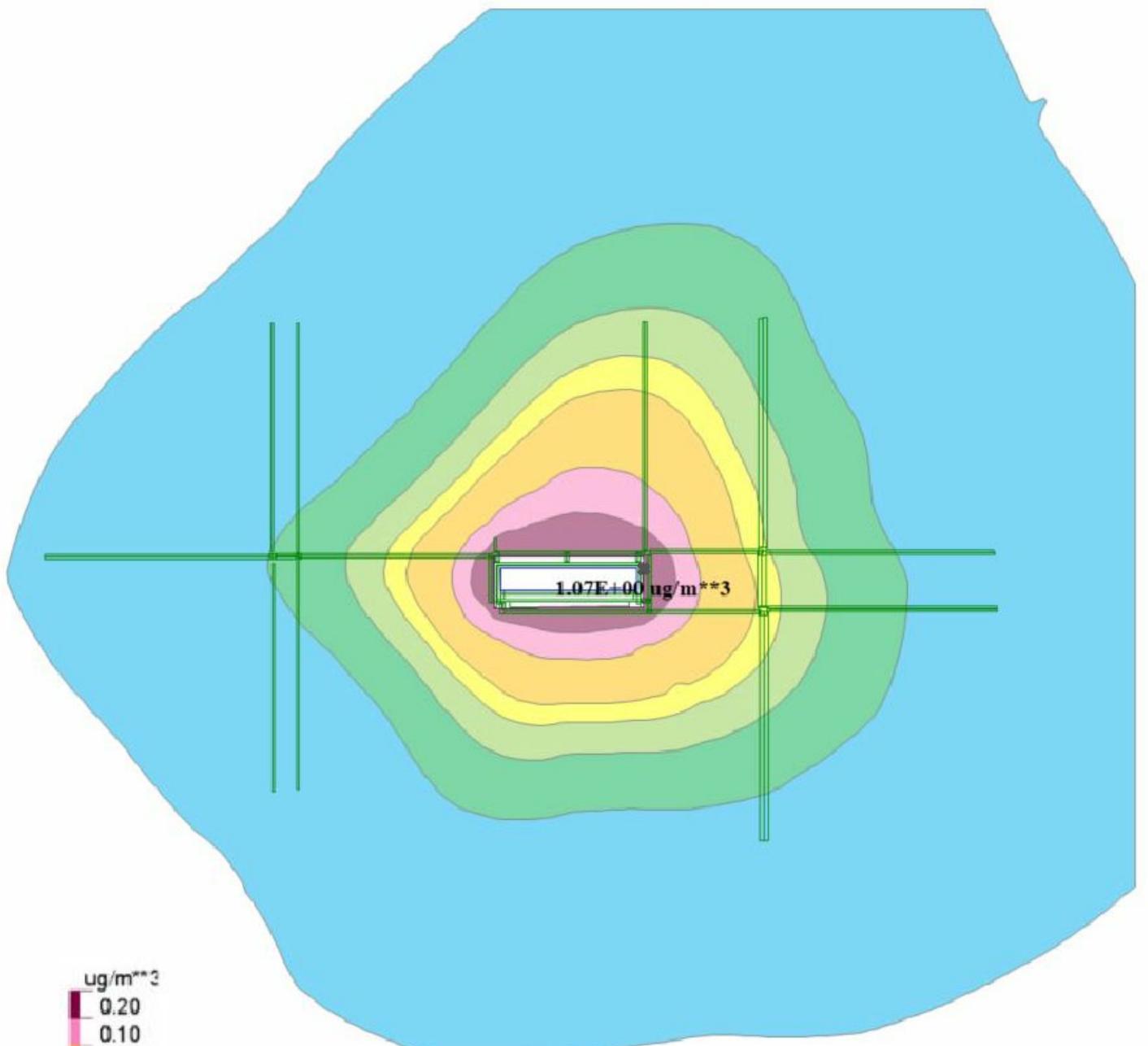


Title: Highest Annual Average NO₂ Concentration Predictions (Without Background)		
Operation Phase 1021 - 1325 West 119th Street, Chicago, Illinois 60643		
Prepared for: West Pullman Development Partners, LLC (DL3)		
ROUX	Compiled by: JS	Date: 06/19/2023
	Prepared by: JS	Scale: AS SHOWN
	Project Mgr: MS	Project: 4182.0001000
	File: INGERSOLL SITE_FIGURES.DWG	

FIGURE
9c

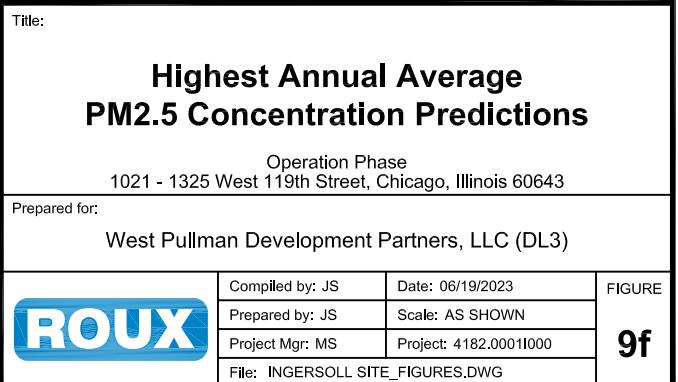






NOTE: Additional layer added for Significant Impact Levels (SILs)

1800' 0 1800'



Air Quality Impact Statement (AQIS) Report
1021 – 1325 W 119th Street, Chicago, Illinois

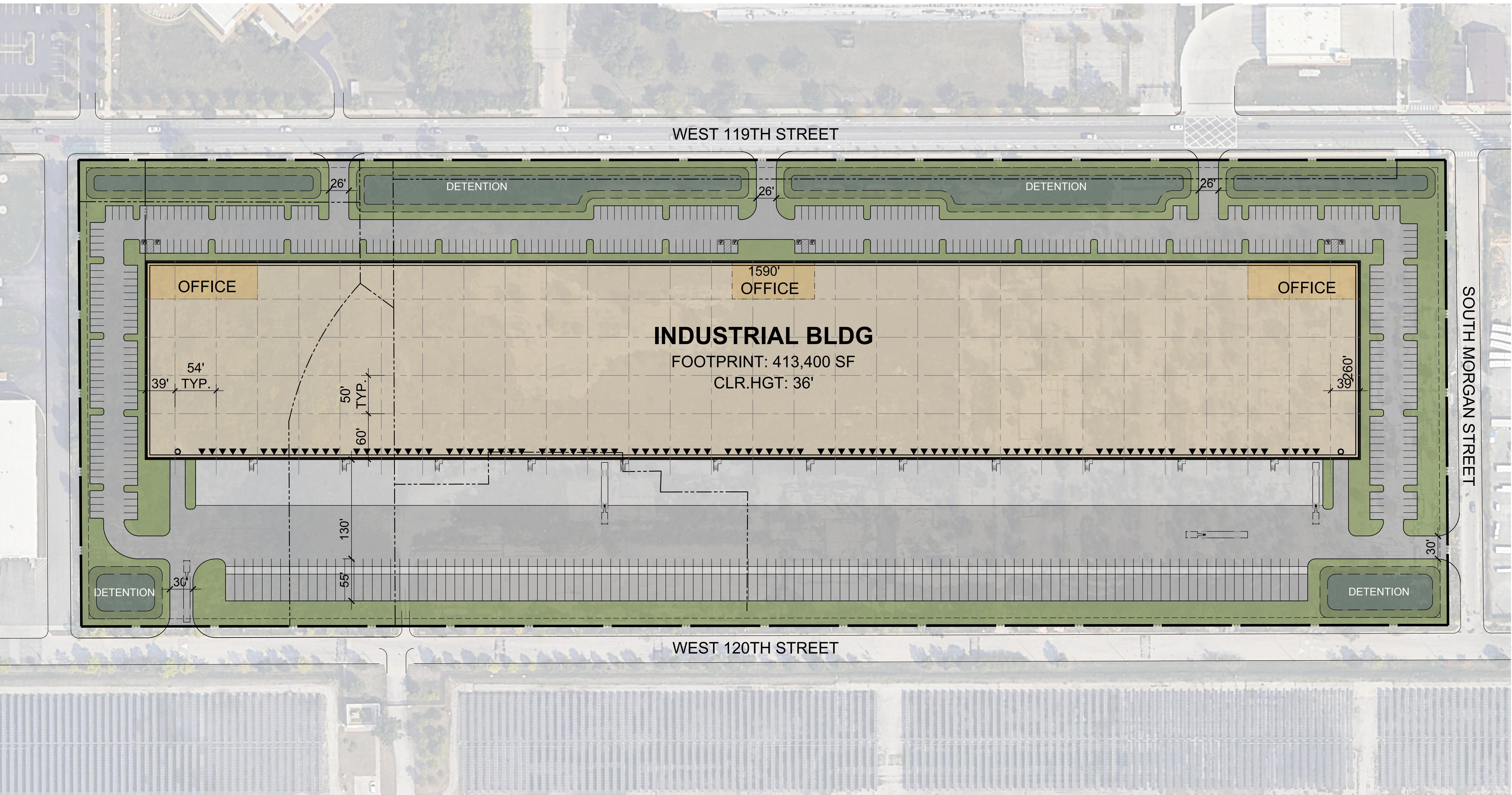
APPENDICES

- A. Proposed Site Plan
- B. Site Activity Emission Calculations
 - Operation Phase
 - Remediation Phase
 - Construction Phase
- C. Summary of Mobile Source Link Emission Calculations
 - Operation Phase
 - Remediation and Construction Phases
- D. CDPH-provided Seasonal Hourly NO₂ Background Concentrations
- E. AERMOD Model Electronic Run Files

**Air Quality Impact Statement (AQIS) Report
1021 – 1325 W 119th Street, Chicago, Illinois**

APPENDIX A

Proposed Site Plan



DEVELOPMENT STANDARDS:

ZONING: PMD10

MAX. F.A.R.: 3.00
MAX. COVERAGE: TBD³
MAX. BLDG. HT.: TBD³

BUILDING SETBACKS:
FRONT: 0 FT¹
SIDE: 0 FT¹
REAR: 30 FT

LANDSCAPE SETBACKS:
FRONT: 10 FT
SIDE: 10 FT
REAR: 10 FT

LANDSCAPE REQ.: 10%

OFF-STREET PARKING:
STANDARD: 8X18
COMPACT: TBD³
COMPACT %: TBD
DRIVE AISLE: 22 FT
FIRE LANE: 26 FT
OVERHANG: TBD³
TREE WELL: TBD³

REQ. PARKING RATIO BY USE:
WAREHOUSE: 1/4 EMP
OFFICE: 1/500 SF²

NOTES:
1 When abutting a street that is shared with an R district,
the setback must match the setback of that district. (20ft)
2 After the first 4,000sf
3 To be determined by city

A PORTION OF THE ZONING INFORMATION
IS UNKNOWN AT THIS TIME AND
REQUIREMENTS MAY DIFFER FROM WHAT
IS SHOWN IN THE SITE PLAN.

This conceptual design is based
upon a preliminary review of
entitlement requirements and on
unverified and possibly incomplete
site and/or building information, and
is intended merely to assist in
exploring how the project might be
developed.

Stormwater Management Design:
ASSUMED SOME UNDERGROUND
SYSTEM

Boundary Source:
GIS MAP & AERIAL IMAGE

PROJECT DATA:

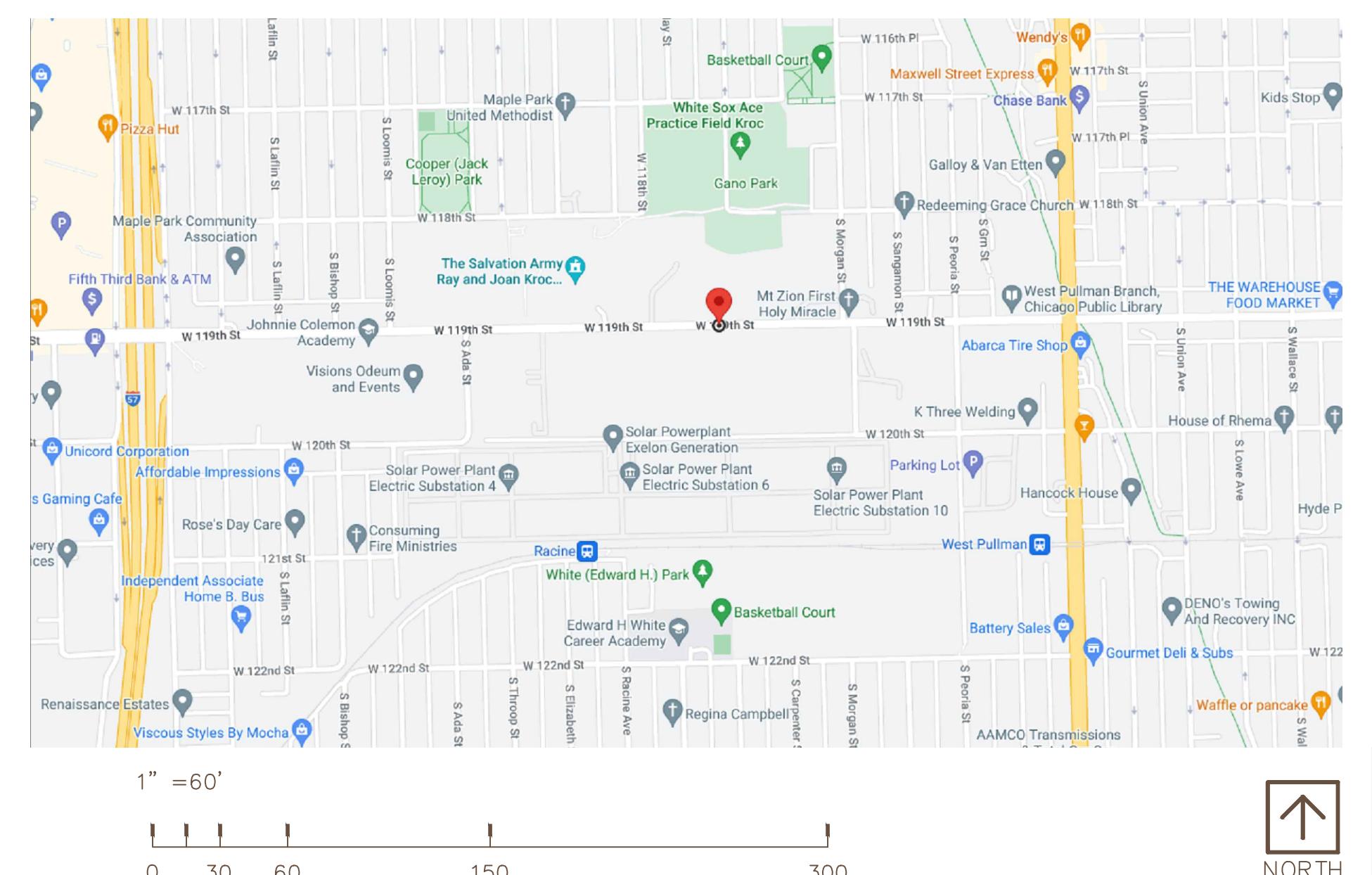
SITE AREA:
GROSS: 25.02 AC
1,090,063 SF

DETENTION: @ 8% 92,186 SF
NET: 22.91 AC
997,877 SF

BUILDING AREA:
BUILDING 1 413,400 SF
TOTAL FOOTPRINT: 413,400 SF

COVERAGE:
GROSS: 38%
NET: 41%

BUILDING 1
▲ DOCK-HIGH DOORS 97
● GRADE-LEVEL DOORS 2
AUTO PARKING 392 STALLS
@0.95/1000 SF
8 STALLS
REQ. ACCESSIBLE TRAILER STALLS 119 STALLS



scheme: 11

Conceptual Site Plan

West 119th Street
Chicago, IL 60643

WARE MALCOMB

CHD22-0022-00
05.15.2023

SHEET 1

**Air Quality Impact Statement (AQIS) Report
1021 – 1325 W 119th Street, Chicago, Illinois**

APPENDIX B

Site Activity Emission Calculations

- Operation Phase
- Remediation Phase
- Construction Phase

Parameter	Value	Units	Reference
Space Heater	1.6	MMBTU/hr	-
Facility Area	413,400	ft ²	Site Plan
# of Space Heaters	5	-	-
Heating requirement for space	8	MMBTU/hr	-
Heating requirement for space	0.00784	MMSCF/hr	-
NOx Emission Factor (Uncontrolled)	100	lb/MMSCF	Table 1.4.1
PM10 Emission Factor (Uncontrolled)	7.6	lb/MMSCF	Table 1.4.2
PM2.5 Emission Factor (Uncontrolled)	7.6	lb/MMSCF	Table 1.4.2

Note:

MM = million

1 SCF = 1020 BTU

Combustor Type = Small Boiler (<100 MMBtu/hr Heat Input)

Parameter	Units	Nox	PM10	PM2.5
EF (Uncontrolled)	lb/MMSCF	100	7.6	7.6
Emissions (Uncontrolled)	lb/hr	7.84E-01	5.96E-02	5.96E-02
Emissions (Uncontrolled)	gr/sec	9.88E-02	7.51E-03	7.51E-03

Note:

EF = Emission Factor

Assumptions:

100% heater rating usage for 24/7, 365 days/yr

Climate zone 5:

<https://basc.pnnl.gov/images/iecc-climate-zonemap>

https://www.energy.gov/sites/default/files/2015/10/f27/ba_climate_region_guide_7.3.pdf

PM2.5 and PM10 emission factors were assumed to be equal to total PM

Parameter	Value	Units	Reference
Emergency backup power generator	100	KW	-
# of emergency backup power generators	1	-	-
Total emergency backup power	100	KW	-
Total emergency backup power	134.00	hp	-
Running time	500	hr/year	-
NOx Emission Factor (Uncontrolled)	0.031	lb/(hp-hr)	Table 3.3.1
PM10 Emission Factor (Uncontrolled)	2.20E-03	lb/(hp-hr)	Table 3.3.1
PM2.5 Emission Factor (Uncontrolled)	2.20E-03	lb/(hp-hr)	Table 3.3.1

Note:

1 KW = 1.34 hp

Parameter	Units	Nox	PM10	PM2.5
EF (Uncontrolled)	lb/(hp-hr)	3.10E-02	2.20E-03	2.20E-03
Emissions (Uncontrolled)	lb/yr	2.08E+03	1.47E+02	1.47E+02
Emissions (Uncontrolled)	gr/yr	9.42E+05	6.69E+04	6.69E+04
Emissions (Uncontrolled)	gr/sec	2.99E-02	2.12E-03	2.12E-03

Note:

EF = Emission Factor

Assumptions:

Total annual operating hours = 500 hrs/yr for the maximum allowable hours of operation for an emergency generator

PM2.5 and PM10 emission factors were assumed to be equal to total PM

Engines < 600 Hp

Parameter	Value	Units	Reference
Fire pumps	50	hp	-
# of fire pumps	1	-	-
Total fire pumps power	50	hp	-
Running time	500	hr/year	-
NOx Emission Factor (Uncontrolled)	0.031	lb/(hp-hr)	Table 3.3.1
PM10 Emission Factor (Uncontrolled)	2.20E-03	lb/(hp-hr)	Table 3.3.1
PM2.5 Emission Factor (Uncontrolled)	2.20E-03	lb/(hp-hr)	Table 3.3.1

Parameter	Units	Nox	PM10	PM2.5
EF (Uncontrolled)	lb/(hp-hr)	3.10E-02	2.20E-03	2.20E-03
Emissions (Uncontrolled)	lb/yr	7.75E+02	5.50E+01	5.50E+01
Emissions (Uncontrolled)	gr/yr	3.52E+05	2.49E+04	2.49E+04
Emissions (Uncontrolled)	gr/sec	1.11E-02	7.91E-04	7.91E-04

Note:

EF = Emission Factor

Assumptions:

Total annual operating hours = 500 hrs per year for the maximum allowable hours of operation for fire pump

PM2.5 and PM10 emission factors were assumed to be equal to total PM

Engines < 600 Hp

Parameter	Value	Units	Reference
Fire pumps	50	hp	-
# of fire pumps	1	-	-
Total fire pumps power	50	hp	-
Running time	500	hr/year	-
NOx Emission Factor (Uncontrolled)	0.031	lb/(hp-hr)	Table 3.3.1
PM10 Emission Factor (Uncontrolled)	2.20E-03	lb/(hp-hr)	Table 3.3.1
PM2.5 Emission Factor (Uncontrolled)	2.20E-03	lb/(hp-hr)	Table 3.3.1

Parameter	Units	NOx	PM10	PM2.5
EF (Uncontrolled)	lb/(hp-hr)	3.10E-02	2.20E-03	2.20E-03
Emissions (Uncontrolled)	lb/yr	7.75E+02	5.50E+01	5.50E+01
Emissions (Uncontrolled)	gr/yr	3.52E+05	2.49E+04	2.49E+04
Emissions (Uncontrolled)	gr/sec	1.11E-02	7.91E-04	7.91E-04

Note:

EF = Emission Factor

Assumptions:

Total annual operating hours = 500 hrs per year for the maximum allowable hours of operation for fire pump

PM2.5 and PM10 emission factors were assumed to be equal to total PM

Engines < 600 Hp

Paved Road - Fugitive Dust	Value	Units	Reference
Particle Size Multiplier, k -- PM2.5	0.25	g/VMT	Table 13.2.1-1 AP-42 Section 13.2.1
Particle Size Multiplier, k -- PM10	1.00	g/VMT	Table 13.2.1-1 AP-42 Section 13.2.1
Road surface silt loading, sL	1.18	g/m ²	Table 13.2.1-2 AP-42 Section 13.2.1
Average passenger car weight	4000	lbs	
Average truck weight	40000	lbs	
Total number of passenger cars	62	-	Estimated on-Site passenger cars
Total number of trucks	18	-	Estimated on-Site trucks
Average vehicle weight, W	5.49	megagrams (Mg)	Estimated
Mean number of days with 0.01 inch or more of precipitation in Chicago	120	days	Figure 13.2.1-2 AP-42 Section 13.2.1
Passenger Parking length	1350	ft	
Passenger Parking length	0.255681818	mile	
Passenger Parking Area	14497.97	m ²	
Truck Parking length	835	ft	
Truck Parking length	0.158143939	mile	
Truck Parking Area	25017.75	m ²	
Emissions (Uncontrolled) - PM2.5	1.5	g/VMT	
Emissions (Uncontrolled) - PM10	6.1	g/VMT	
Passenger Parking Emissions (Uncontrolled) - PM2.5	4.61E-07	g/s/m ²	
Passenger Parking Emissions (Uncontrolled) - PM10	1.85E-06	g/s/m ²	
Dock Parking Emissions (Uncontrolled) - PM2.5	4.80E-08	g/s/m ²	
Dock Parking Emissions (Uncontrolled) - PM10	1.92E-07	g/s/m ²	

Assumptions:

Worst case used to calculate the road surface silt loading (sL) with low volume roads (< 500 ADT).

Average passenger car weight and average truck weight values were conservatively assumed.

Moving cars and trucks conservatively assumed to be on on-site paved road at all times.

Road surface silt loading was calculated assuming 120 days of freezing winter and 240 days of normal days

Passenger parking length was estimated assuming every car travels almost half of the parking lot to park

Truck Parking length was estimated assuming every car travels almost half of the parking lot to park

UnPaved Road - Fugitive Dust (Remediation)	Value	Units	Reference
Particle Size Multiplier, k -- PM2.5	0.15	lb/VMT	Table 13.2.2-2 AP-42 Section 13.2.2
Particle Size Multiplier, k -- PM10	1.50	lb/VMT	Table 13.2.2-2 AP-42 Section 13.2.2
a - PM2.5 and PM10	0.90	-	Table 13.2.2-2 AP-42 Section 13.2.2
b - PM2.5 and PM10	0.45	-	Table 13.2.2-2 AP-42 Section 13.2.2
s, Surface Material Silt Content	6.9	%	Table 11.9-3
Average passenger car weight	4000	tons	
Average truck weight	40000	lbs	
Total number of passenger cars	0	per day	
Total number of trucks	20	per day	See Truck volume in Table 5
Average vehicle weight, W	20.00	tons	calculated
Mean # of days with >0.01" precipitation in Chicago	120	days	Figure 13.2.2-1 AP-42 Section 13.2.2
Passenger Traveled Mile	0	mile	
Remediation Area	104,516	m ²	
Truck Traveled Mile (per hour)	0.1	mile	
Remediation Area	104,516	m ²	
Emissions (Uncontrolled) - PM2.5	0.1	lb/VMT	
Emissions (Uncontrolled) - PM10	4.8	lb/VMT	
Truck UnPaved Fugitive Emissions (Uncontrolled) - PM10	9.62E-07	gr/sec/m ²	
Truck UnPaved Fugitive Emissions (Uncontrolled) - PM2.5	2.88E-08	gr/sec/m ²	

Assumptions:

12-month remediation project with 12-hour workdays and 5 days a week

Average passenger car weight and average truck weight values were conservatively assumed.

Moving cars and trucks conservatively assumed to be on on-site paved road at all times.

Dust-generating Activities (Remediation)	AP-42 Recommended Emission Factor	Scaling Factors		Emission Factors		Units	Emission Factors, g/s/m2		Reference/Notes
		PM2.5	PM10	PM2.5	PM10		PM2.5	PM10	
Demolition of buildings or other (natural) obstacles such as trees, boulders, etc. General Land Clearing	Dozer equation (overburden) in Tables 11.9-1 and 11.9-2	0.105	0.75	0.105	0.753	lb/hr	1.27E-07	9.06E-07	
Loading of debris into trucks	Material handling emission factor equation in Section 13.2.4	0.053	0.35	6.10E-05	4.03E-04	lb/ton	1.36E-07	8.98E-07	
Truck transport of debris	Unpaved road emission factor in Section 13.2.2, or paved road emission factor in Section 13.2.1	-	-	2.88E-08	9.62E-07	gr/sec/m2	2.88E-08	9.62E-07	Fugitive Dust sheet
Truck unloading of debris	Material handling emission factor equation in Section 13.2.4	-	-	0	0	lbs/VMT	0	0	Occurs Offsite
Bulldozing	Dozer equation (overburden) in Tables 11.9-1 and 11.9-2	-	-	-	-	-	1.27E-07	9.06E-07	
Scrapers unloading topsoil	Scraper unloading factor in Table 11.9-4	0.053	0.35	0.003074	0.0203	lb/ton	1.54E-08	1.02E-07	
Scrapers in travel	Scraper (travel mode) expression in Tables 11.9-1 and 11.9-2	-	-	-	-	-	-	-	already calculated in row 5
Scrapers removing topsoil	5.7 kg/vehicle kilometer traveled (VKT) (20.2 lb/vehicle mile traveled [VMT])	0.053	0.35	1.07	7.07	lbs/VMT	5.37E-08	3.55E-07	
Loading of excavated material into trucks	Material handling emission factor equation in Section 13.2.4	-	-	-	-	-	1.36E-07	8.98E-07	already calculated in row 4
Truck dumping of fill material, road base, or other materials	Material handling emission factor equation in Section 13.2.4	-	-	-	-	-	1.36E-07	8.98E-07	already calculated in row 4
Compacting	Dozer equation in Tables 11.9-1 and 11.9-2	-	-	-	-	-	1.27E-07	9.06E-07	already calculated in row 3
Motor grading	Grading equation in Tables 11.9-1 and 11.9-2	0.6	0.031	3.06	0.1581	lb/VMT	1.54E-07	7.93E-09	May not applicable, will be applicable if new soil is brought on site
Vehicular traffic	Unpaved road emission factor in Section 13.2.2, or paved road emission factor in Section 13.2.1	-	-	-	-	-	-	-	already calculated in row 5
Portable plants - Crushing	Factors for similar material/operations in Section 11.19.2	-	-	-	-	-	-	-	Not applicable
Portable plants - Screening	Factors for similar material/operations in Section 11.19.2	-	-	-	-	-	-	-	Not applicable
Portable plants - Material transfers	Material handling emission factor equation in Section 13.2.4	-	-	-	-	-	-	-	Not applicable
Other operations	Factors for similar material/operations in the Mineral Products Industry, Chapter 11 of this document	-	-	-	-	-	-	-	Not applicable

Assumptions:

1 year remediation project

Worst case used to calculate the road surface silt loading (sL) with low volume roads (< 500 ADT).

Average passenger car weight and average truck weight values were conservatively assumed.

Moving cars and trucks conservatively assumed to be on on-site paved road at all times.

Parameter	PM2.5	PM10	Units
Total	1.04E-06	6.84E-06	gr/sec/m2

Input	Value	Units	References
M, material moisture content (%)	7.9	%	Table 11.9-3
s, material silt content (%)	6.9	%	Table 11.9-3
U, mean wind speed (mph)	10	mph	Google - average annual wind speed in Chicago IL
S, mean vehicle speed (mph)	10	mph	assumed
tons of debris	44,400	ton	calculated - Refer to "Ballpark Remediation Volumes" tab
tons of topsoil	36,457	ton	calculated - Refer to "Ballpark Remediation Volumes" tab
number of scrapers	1	-	assumed
miles traveled by each scraper per day	1	mile/day	assumed
number of dozers	1	-	assumed
miles traveled by each dozer per day	1	mile/day	assumed

UnPaved Road - Fugitive Dust (Construction)	Value	Units	Reference
Particle Size Multiplier, k -- PM2.5	0.15	lb/VMT	Table 13.2.2-2 AP-42 Section 13.2.2
Particle Size Multiplier, k -- PM10	1.50	lb/VMT	Table 13.2.2-2 AP-42 Section 13.2.2
a - PM2.5 and PM10	0.90	-	Table 13.2.2-2 AP-42 Section 13.2.2
b - PM2.5 and PM10	0.45	-	Table 13.2.2-2 AP-42 Section 13.2.2
s, Surface Material Silt Content	6.9	%	Table 11.9-3
Average passenger car weight	4000	tons	
Average truck weight	40000	lbs	
Total number of passenger cars	0	per day	
Total number of trucks	12	per day	3,000 trucks per 12 month - Construction Contractor
Average vehicle weight, W	20.00	tons	calculated
Mean # of days with >0.01" precipitation in Chicago	120	days	Figure 13.2.2-1 AP-42 Section 13.2.2
Passenger Traveled Mile	0	mile	
Remediation Area	104515.92	m ²	
Truck Traveled Mile (per hour)	0.1	mile	
Remediation Area	104515.92	m ²	
Emissions (Uncontrolled) - PM2.5	0.1	lb/VMT	
Emissions (Uncontrolled) - PM10	4.8	lb/VMT	
Truck UnPaved Fugitive Emissions (Uncontrolled) - PM10	5.55E-07	gr/sec/m ²	
Truck UnPaved Fugitive Emissions (Uncontrolled) - PM2.5	1.66E-08	gr/sec/m ²	

Assumptions:

12-month remediation project with 12-hour workdays and 5 days a week

Average passenger car weight and average truck weight values were conservatively assumed.

Moving cars and trucks conservatively assumed to be on on-site paved road at all times.

Dust-generating Activities (Construction)	AP-42 Recommended Emission Factor	Scaling Factors		Emission Factors		Units	Emission Factors, g/s/m2		Reference/Notes
		PM2.5	PM10	PM2.5	PM10		PM2.5	PM10	
Demolition of buildings or other (natural) obstacles such as trees, boulders, etc. General Land Clearing	Dozer equation (overburden) in Tables 11.9-1 and 11.9-2	0.105	0.75	0.105	0.753	lb/hr	1.27E-07	9.06E-07	
Loading of debris into trucks	Material handling emission factor equation in Section 13.2.4	0.053	0.35	6.10E-05	4.03E-04	lb/ton	3.06E-08	2.02E-07	
Truck transport of debris	Unpaved road emission factor in Section 13.2.2, or paved road emission factor in Section 13.2.1	-	-	1.66E-08	5.55E-07	gr/sec/m2	1.66E-08	5.55E-07	Fugitive Dust sheet
Truck unloading of debris	Material handling emission factor equation in Section 13.2.4	-	-	0	0	lbs/VMT	0	0	Occurs Offsite
Bulldozing	Dozer equation (overburden) in Tables 11.9-1 and 11.9-2	-	-	-	-	-	1.27E-07	9.06E-07	
Scrapers unloading topsoil	Scraper unloading factor in Table 11.9-4	0.053	0.35	0.003074	0.0203	lb/ton	3.38E-08	2.23E-07	
Scrapers in travel	Scraper (travel mode) expression in Tables 11.9-1 and 11.9-2	-	-	-	-	-	-	-	already calculated in row 5
Scrapers removing topsoil	5.7 kg/vehicle kilometer traveled (VKT) (20.2 lb/vehicle mile traveled [VMT])	0.053	0.35	1.07	7.07	lbs/VMT	5.37E-08	3.55E-07	
Loading of excavated material into trucks	Material handling emission factor equation in Section 13.2.4	-	-	-	-	-	3.06E-08	2.02E-07	already calculated in row 4
Truck dumping of fill material, road base, or other materials	Material handling emission factor equation in Section 13.2.4	-	-	-	-	-	3.06E-08	2.02E-07	already calculated in row 4
Compacting	Dozer equation in Tables 11.9-1 and 11.9-2	-	-	-	-	-	1.27E-07	9.06E-07	already calculated in row 3
Motor grading	Grading equation in Tables 11.9-1 and 11.9-2	0.6	0.031	3.06	0.1581	lb/VMT	1.54E-07	7.93E-09	May not applicable, will be applicable if new soil is brought on site
Vehicular traffic	Unpaved road emission factor in Section 13.2.2, or paved road emission factor in Section 13.2.1	-	-	-	-	-	-	-	already calculated in row 5
Portable plants - Crushing	Factors for similar material/operations in Section 11.19.2	-	-	-	-	-	-	-	Not applicable
Portable plants - Screening	Factors for similar material/operations in Section 11.19.2	-	-	-	-	-	-	-	Not applicable
Portable plants - Material transfers	Material handling emission factor equation in Section 13.2.4	-	-	-	-	-	-	-	Not applicable
Other operations	Factors for similar material/operations in the Mineral Products Industry, Chapter 11 of this document	-	-	-	-	-	-	-	Not applicable

Assumptions:

- 1 year remediation project
- Worst case used to calculate the road surface silt loading (sL) with low volume roads (< 500 ADT).
- Average passenger car weight and average truck weight values were conservatively assumed.
- Moving cars and trucks conservatively assumed to be on on-site paved road at all times.

Parameter	PM2.5	PM10	Units
Total	7.30E-07	4.47E-06	gr/sec/m2

Input	Value	Units	References
M, material moisture content (%)	7.9	%	Table 11.9-3
s, material silt content (%)	6.9	%	Table 11.9-3
U, mean wind speed (mph)	10	mph	Google - average annual wind speed in Chicago IL
S, mean vehicle speed (mph)	10	mph	assumed
tons of debris	10,000	ton	calculated - Refer to "Ballpark Remediation Volumes" tab
tons of topsoil	80,000	ton	calculated - Refer to "Ballpark Remediation Volumes" tab
number of scrapers	1	-	assumed
miles traveled by each scraper per day	1	mile/day	assumed
number of dozers	1	-	assumed
miles traveled by each dozer per day	1	mile/day	assumed

**Air Quality Impact Statement (AQIS) Report
1021 – 1325 W 119th Street, Chicago, Illinois**

APPENDIX C

Summary of Mobile Source Link Emission Calculations

- Operation Phase
- Remediation and Construction Phases

LinkID	Link Description (Road Name, Direction)	Link Length (ft)	Link Length (miles)	Link Width (m)	yearID	sourceTypeName	fuelTypeDesc	Volume (Peak Hour)	Total Vehicle-Miles per Peak Hour	Average Speed (mph)	avgSpeedBin	NOx EF (g/mi)	PM10 EF (g/mi)	PM2.5 EF (g/mi)	NOx EF (g/s)	PM10 EF (g/s)	PM2.5 EF (g/s)	NOx EF (g/s/m2)	PM10 EF (g/s/m2)	PM2.5 EF (g/s/m2)
1	NW Site Entrance SB	60	0.011364	8	2029	Passenger Car	Gasoline	12	0.136	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	1.12E-06	1.42E-07	1.25E-07	9.01E-07	7.12E-09	6.51E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	6	0.068	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	1.31E-04	8.99E-07	8.27E-07			
2	NW Site Entrance NB	60	0.011364	8	2029	Passenger Car	Gasoline	3	0.034	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	2.79E-07	3.55E-08	3.14E-08	3.00E-07	2.29E-09	2.10E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	2	0.023	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	4.36E-05	3.00E-07	2.76E-07			
3	North Entrance SB	60	0.011364	8	2029	Passenger Car	Gasoline	9	0.102	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	8.38E-07	1.06E-07	9.41E-08	6.01E-07	4.82E-09	4.41E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	4	0.045	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	8.71E-05	5.99E-07	5.51E-07			
4	North Entrance NB	60	0.011364	8	2029	Passenger Car	Gasoline	1	0.011	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	9.31E-08	1.18E-08	1.05E-08	1.50E-07	1.11E-09	1.01E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.011	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	2.18E-05	1.50E-07	1.38E-07			
5	NE Entrance SB	60	0.011364	8	2029	Passenger Car	Gasoline	8	0.091	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	7.45E-07	9.46E-08	8.37E-08	6.01E-07	4.74E-09	4.34E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	4	0.045	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	8.71E-05	5.99E-07	5.51E-07			
6	NE Entrance NB	60	0.011364	8	2029	Passenger Car	Gasoline	8	0.091	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	7.45E-07	9.46E-08	8.37E-08	6.01E-07	4.74E-09	4.34E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	4	0.045	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	8.71E-05	5.99E-07	5.51E-07			
7	East Entrance WB	60	0.011364	8	2029	Passenger Car	Gasoline	10	0.114	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	9.31E-07	1.18E-07	1.05E-07	6.02E-07	4.90E-09	4.48E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	4	0.045	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	8.71E-05	5.99E-07	5.51E-07			
8	East Entrance EB	60	0.011364	8	2029	Passenger Car	Gasoline	10	0.114	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	9.31E-07	1.18E-07	1.05E-07	7.51E-07	5.93E-09	5.43E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.057	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	1.09E-04	7.49E-07	6.89E-07			
9	South Entrance SB	60	0.011364	8	2029	Passenger Car	Gasoline	3	0.034	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	2.79E-07	3.55E-08	3.14E-08	1.51E-07	1.27E-09	1.16E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.011	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	2.18E-05	1.50E-07	1.38E-07			
10	South Entrance NB	60	0.011364	8	2029	Passenger Car	Gasoline	3	0.034	5	2.5 <= speed < 7.5 mph	0.029	0.004	0.003	2.79E-07	3.55E-08	3.14E-08	1.51E-07	1.27E-09	1.16E-09
		60	0.011364		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.011	5	2.5 <= speed < 7.5 mph	6.901	0.047	0.044	2.18E-05	1.50E-07	1.38E-07			
11	West alleyway SB	528	0.1	8	2029	Passenger Car	Gasoline	3	0.300	15	12.5 <= speed < 17.5 mph	0.021	0.002	0.001	1.71E-06	1.28E-07	1.13E-07	6.75E-08	6.18E-10	5.65E-10
		528	0.1		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.100	15	12.5 <= speed < 17.5 mph	3.066	0.024	0.022	8.52E-05	6.68E-07	6.14E-07			
12	West alleyway NB	528	0.1	8	2029	Passenger Car	Gasoline	3	0.300	15	12.5 <= speed < 17.5 mph	0.021	0.002	0.001	1.71E-06	1.28E-07	1.13E-07	6.75E-08	6.18E-10	5.65E-10
		528	0.1		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.100	15	12.5 <= speed < 17.5 mph	3.066	0.024	0.022	8.52E-05	6.68E-07	6.14E-07			
13	120th Street WB b/w south entrance & east entrance	1670	0.316288	8	2029	Passenger Car	Gasoline	3	0.949	25	22.5 <= speed < 27.5 mph	0.018	0.001	0.001	4.70E-06	3.17E-07	2.80E-07	4.36E-08	4.43E-10	4.04E-10
		1670	0.316288		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.316	25	22.5 <= speed < 27.5 mph	1.968	0.017	0.016	1.73E-04	1.49E-06	1.37E-06			
14	120th Street EB b/w south entrance & east entrance	1670	0.316288	8	2029	Passenger Car	Gasoline	3	0.949	25	22.5 <= speed < 27.5 mph	0.018	0.001	0.001	4.70E-06	3.17E-07	2.80E-07	4.36E-08	4.43E-10	4.04E-10
		1670	0.316288		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.316	25	22.5 <= speed < 27.5 mph	1.968	0.017	0.016	1.73E-04	1.49E-06	1.37E-06			
15	S Morgan Street SB south of east entrance	115	0.02178	8	2029	Passenger Car	Gasoline	15	0.327	25	22.5 <= speed < 27.5 mph	0.01								

LinkId	Link Description (Road Name, Direction)	Link Length (ft)	Link Length (miles)	Link Width (m)	yearID	sourceTypeName	fuelTypeDesc	Volume (Peak Hour)	Total Vehicle Miles per Peak Hour	Average Speed (mph)	avgSpeedBin	NOx EF (g/mi)	PM10 EF (g/mi)	PM2.5 EF (g/mi)	NOx EF (g/s)	PM10 EF (g/s)	PM2.5 EF (g/s)	NOx EF (g/s/m2)	PM10 EF (g/s/m2)	PM2.5 EF (g/s/m2)
31	Morgan Street SB west of Halsted Street	2640	0.5	8	2029	Passenger Car	Gasoline	1	0.500	25	22.5 <= speed < 27.5 mph	0.018	0.001	0.001	2.48E-06	1.67E-07	1.48E-07	4.28E-08	3.91E-10	3.59E-10
		2640	0.5		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.500	25	22.5 <= speed < 27.5 mph	1.968	0.017	0.016	2.73E-04	2.35E-06	2.16E-06			
32	Morgan Street NB west of Halsted Street	2640	0.5	8	2029	Passenger Car	Gasoline	1	0.500	25	22.5 <= speed < 27.5 mph	0.018	0.001	0.001	2.48E-06	1.67E-07	1.48E-07	4.28E-08	3.91E-10	3.59E-10
		2640	0.5		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.500	25	22.5 <= speed < 27.5 mph	1.968	0.017	0.016	2.73E-04	2.35E-06	2.16E-06			
33	119th Street WB b/w NE entrance & Morgan Street	70	0.013258	8	2029	Passenger Car	Gasoline	11	0.146	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	7.37E-07	4.76E-08	4.21E-08	1.86E-07	2.06E-09	1.89E-09
		70	0.013258		2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.066	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	3.10E-05	3.04E-07	2.80E-07			
34	119th Street EB b/w NE entrance & Morgan Street	70	0.013258	8	2029	Passenger Car	Gasoline	10	0.133	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	6.70E-07	4.33E-08	3.83E-08	1.86E-07	2.04E-09	1.86E-09
		70	0.013258		2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.066	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	3.10E-05	3.04E-07	2.80E-07			
35	119th Street WB b/w North entrance & NE entrance	830	0.157197	8	2029	Passenger Car	Gasoline	11	1.729	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	8.74E-06	5.65E-07	5.00E-07	1.86E-07	2.06E-09	1.89E-09
		830	0.157197		2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.786	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	3.68E-04	3.61E-06	3.32E-06			
36	119th Street EB b/w North entrance & NE entrance	830	0.157197	8	2029	Passenger Car	Gasoline	9	1.415	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	7.15E-06	4.62E-07	4.09E-07	1.49E-07	1.65E-09	1.51E-09
		830	0.157197		2029	Single Unit Long-haul Truck	Diesel Fuel	4	0.629	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	2.94E-04	2.89E-06	2.65E-06			
37	119th Street WB b/w NW entrance & North entrance	800	0.151515	8	2029	Passenger Car	Gasoline	17	2.576	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	1.30E-05	8.41E-07	7.44E-07	2.98E-07	3.28E-09	3.00E-09
		800	0.151515		2029	Single Unit Long-haul Truck	Diesel Fuel	8	1.212	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	5.68E-04	5.56E-06	5.12E-06			
38	119th Street EB b/w NW entrance & North entrance	800	0.151515	8	2029	Passenger Car	Gasoline	27	4.091	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	2.07E-05	1.34E-06	1.18E-06	4.47E-07	4.96E-09	4.54E-09
		800	0.151515		2029	Single Unit Long-haul Truck	Diesel Fuel	12	1.818	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	8.52E-04	8.34E-06	7.68E-06			
39	Community Center Access Drive N B	160	0.030303	8	2029	Passenger Car	Gasoline	1	0.030	15	12.5 <= speed < 17.5 mph	0.021	0.002	0.001	1.73E-07	1.29E-08	1.14E-08	6.66E-08	5.52E-10	5.07E-10
		160	0.030303		2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.030	15	12.5 <= speed < 17.5 mph	3.066	0.024	0.022	2.58E-05	2.02E-07	1.86E-07			
40	119th Street WB east iof Halsted Street	2230	0.422348	8	2029	Passenger Car	Gasoline	27	11.403	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	5.76E-05	3.72E-06	3.29E-06	4.47E-07	4.96E-09	4.54E-09
		2230	0.422348		2029	Single Unit Long-haul Truck	Diesel Fuel	12	5.068	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	2.37E-03	2.33E-05	2.14E-05			
41	119th Street WB east iof Halsted Street	2230	0.422348	8	2029	Passenger Car	Gasoline	27	11.403	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	5.76E-05	3.72E-06	3.29E-06	4.47E-07	4.96E-09	4.54E-09
		2230	0.422348		2029	Single Unit Long-haul Truck	Diesel Fuel	12	5.068	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	2.37E-03	2.33E-05	2.14E-05			
42	Marshfield Ave SB south of 119th Street	2640	0.5	8	2029	Passenger Car	Gasoline	9	4.500	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	2.27E-05	1.47E-06	1.30E-06	1.49E-07	1.65E-09	1.51E-09
		2640	0.5		2029	Single Unit Long-haul Truck	Diesel Fuel	4	2.000	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	9.37E-04	9.18E-06	8.44E-06			
43	Ashland Ave NB north of 119th Street	2640	0.5	8	2029	Passenger Car	Gasoline	9	4.500	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	2.27E-05	1.47E-06	1.30E-06	1.49E-07	1.65E-09	1.51E-09
		2640	0.5		2029	Single Unit Long-haul Truck	Diesel Fuel	4	2.000	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	9.37E-04	9.18E-06	8.44E-06			
44	119th Street WB west of Marshfield Ave	2640	0.5	8	2029	Passenger Car	Gasoline	7	3.500	30	27.5 <= speed < 32.5 mph	0.018	0.001	0.001	1.77E-05	1.14E-06	1.01E-06	1.12E-07	1.25E-09	1.14E-09
		2640	0.5		2029	Single Unit Long-haul Truck	Diesel Fuel	3	1.500	30	27.5 <= speed < 32.5 mph	1.686	0.017	0.015	7.02E-04	6.88E-06	6.33E-06			

LinkID	Link Description (Road Name, Direction)	Idle Link Area (m2)	yearID	sourceTypeName	fuelTypeDesc	Volume (Peak Hour)	Idle minutes per hour per vehicle	Idle minutes/hr	Speed Bin	NOx EF (g/hr)	PM10 EF (g/hr)	PM2.5 EF (g/hr)	NOx EF (g/s)	PM10 EF (g/s)	PM2.5 EF (g/s)	NOx EF (g/s/m2)	PM10 EF (g/s/m2)	PM2.5 EF (g/s/m2)
52-Idle	Stop Light @ 119th St & Marshfield Ave	400	2029	Passenger Car	Gasoline	49	0.624	30.584167	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	1.06E-05	2.24E-06	1.98E-06	3.29E-06	3.17E-08	2.90E-08
			2029	Single Unit Long-haul Truck	Diesel Fuel	22	0.624	13.731667	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	1.31E-03	1.05E-05	9.62E-06			
53-Idle	Stop Light @ 119th St & Ashland Ave	400	2029	Passenger Car	Gasoline	14	0.652	9.1233333	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	3.16E-06	6.68E-07	5.91E-07	9.38E-07	9.11E-09	8.32E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	6	0.652	3.91	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	3.72E-04	2.98E-06	2.74E-06			
54-Idle	Stop Sign @ 119th St & west alleyway	225	2029	Passenger Car	Gasoline	1	0.203	0.2027778	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	7.01E-08	1.49E-08	1.31E-08	8.61E-08	7.52E-10	6.89E-10
			2029	Single Unit Long-haul Truck	Diesel Fuel	1	0.203	0.2027778	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	1.93E-05	1.54E-07	1.42E-07			
55-Idle	Stop Sign @ 119th St & Community Center Entrance & NE	375	2029	Passenger Car	Gasoline	14	0.212	2.9691667	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	1.03E-06	2.17E-07	1.92E-07	3.79E-07	3.59E-09	3.29E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	7	0.212	1.4845833	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	1.41E-04	1.13E-06	1.04E-06			
56-Idle	Stop Sign @ 119th St and North Entrance	225	2029	Passenger Car	Gasoline	11	0.234166667	2.5758333	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	8.91E-07	1.89E-07	1.67E-07	4.99E-07	4.80E-09	4.39E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.234166667	1.1708333	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	0.00011141	8.91155E-07	8.1986E-07			
57-Idle	Stop Sign @ 119th St & NW Entrance	225	2029	Passenger Car	Gasoline	10	0.20625	2.0625	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	7.1347E-07	1.51043E-07	1.33615E-07	4.39E-07	4.16E-09	3.80E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.20625	1.03125	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	9.81E-05	7.85E-07	7.22E-07			
58-Idle	Stop Light @ 119th St & Morgan Street	450	2029	Passenger Car	Gasoline	10	0.561666667	5.6166667	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	1.9429E-06	4.11326E-07	3.63865E-07	5.98E-07	5.66E-09	5.18E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.561666667	2.8083333	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	2.67E-04	2.14E-06	1.97E-06			
59-Idle	Stop Light @ 119th St & Halsted St	900	2029	Passenger Car	Gasoline	8	0.459166667	3.6733333	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	1.2707E-06	2.69009E-07	2.3797E-07	1.47E-07	1.46E-09	1.34E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	3	0.459166667	1.3775	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	1.31E-04	1.05E-06	9.65E-07			
60-Idle	Stop Light @ 120th St & Halsted St	900	2029	Passenger Car	Gasoline	11	0.26	2.86	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	9.8935E-07	2.09447E-07	1.8528E-07	1.39E-07	1.33E-09	1.22E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.26	1.3	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	1.24E-04	9.89E-07	9.10E-07			
61-Idle	Stop Sign @ East Entrance & S Morgan St	225	2029	Passenger Car	Gasoline	16	0.13375	2.14	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	7.4028E-07	1.56719E-07	1.38636E-07	4.0E-07	3.86E-09	3.53E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	7	0.13375	0.93625	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	8.91E-05	7.13E-07	6.56E-07			
62-Idle	Stop Sign @ 120th St & S Morgan St	225	2029	Passenger Car	Gasoline	11	0.141666667	1.5583333	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	5.3907E-07	1.14122E-07	1.00954E-07	3.02E-07	2.90E-09	2.65E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.141666667	0.7083333	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	6.74E-05	5.39E-07	4.96E-07			
63-Idle	Stop Sign @ 120th St & South Entrance	225	2029	Passenger Car	Gasoline	12	0.158333333	1.9	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	6.5726E-07	1.39143E-07	1.23088E-07	3.38E-07	3.30E-09	3.01E-09
			2029	Single Unit Long-haul Truck	Diesel Fuel	5	0.158333333	0.7916667	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	7.53E-05	6.03E-07	5.54E-07			
Pass-Idle	Passenger car idling on site	2591.9	2029	Passenger Car	Gasoline	59	3	177	speed = 0 (idle) (g/hr)	0.075	0.016	0.014	6.12E-05	1.30E-05	1.15E-05	2.36E-08	5E-09	4.42E-09
Doc-Idle	Truck idling at a dock	4071.9	2029	Single Unit Long-haul Truck	Diesel Fuel	3	3	9	speed = 0 (idle) (g/hr)	20.553	0.164	0.151	8.56E-04	6.85E-06	6.30E-06	2.10E-07	1.68E-09	1.55E-09

LinkID	Link Description (Road Name, Direction)	Link Length (ft)	Link Length (miles)	Link Width (m)	yearID	sourceTypeName	fuelTypeDesc	Volume (Peak Hour)	Total Vehicle-Miles per Peak Hour	Average Speed (mph)	avgSpeedBin	NOx EF (g/mi)	PM10 EF (g/mi)	PM2.5 EF (g/mi)	NOx EF (g/s)	PM10 EF (g/s)	PM2.5 EF (g/s)	NOx EF (g/s/m2)	PM10 EF (g/s/m2)	PM2.5 EF (g/s/m2)
1	West alleyway SB	528	0.1	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.100	15	12.5 <= speed < 17.5 mph	7.325	0.374	0.344	2.03E-04	1.04E-05	9.57E-06	1.58E-07	8.08E-09	7.43E-09
2	West alleyway NB	528	0.1	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.100	15	12.5 <= speed < 17.5 mph	7.325	0.374	0.344	2.03E-04	1.04E-05	9.57E-06	1.58E-07	8.08E-09	7.43E-09
3	120th Street WB b/w south entrance & east entrance	1670	0.31629	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.316	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	4.67E-04	2.30E-05	2.12E-05	1.15E-07	5.65E-09	5.20E-09
4	120th Street EB b/w south entrance & east entrance	1670	0.31629	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.316	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	4.67E-04	2.30E-05	2.12E-05	1.15E-07	5.65E-09	5.20E-09
5	S Morgan Street SB south of east entrance	115	0.02178	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.022	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	3.21E-05	1.58E-06	1.46E-06	1.15E-07	5.65E-09	5.20E-09
6	S Morgan Street NB south of east entrance	115	0.02178	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.022	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	3.21E-05	1.58E-06	1.46E-06	1.15E-07	5.65E-09	5.20E-09
7	120th Street WB b/w east entrance & Halsted Street	1276	0.24167	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.242	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	3.57E-04	1.76E-05	1.62E-05	1.15E-07	5.65E-09	5.20E-09
8	120th Street EB b/w east entrance & Halsted Street	1276	0.24167	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.242	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	3.57E-04	1.76E-05	1.62E-05	1.15E-07	5.65E-09	5.20E-09
9	Halsted Street SB south of 120th Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	6.84E-04	3.41E-05	3.14E-05	1.06E-07	5.29E-09	4.87E-09
10	Halsted Street NB south of 120th Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	6.84E-04	3.41E-05	3.14E-05	1.06E-07	5.29E-09	4.87E-09
11	120th Street WB east of Halsted Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	7.38E-04	3.64E-05	3.35E-05	1.15E-07	5.65E-09	5.20E-09
12	120th Street EB east of Halsted Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	7.38E-04	3.64E-05	3.35E-05	1.15E-07	5.65E-09	5.20E-09
13	Halsted Street SB north of 120th Street	650	0.12311	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.123	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	1.68E-04	8.39E-06	7.72E-06	1.06E-07	5.29E-09	4.87E-09
14	Halsted Street NB north of 120th Street	650	0.12311	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.123	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	1.68E-04	8.39E-06	7.72E-06	1.06E-07	5.29E-09	4.87E-09
15	Halsted Street SB north of 119th Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	6.84E-04	3.41E-05	3.14E-05	1.06E-07	5.29E-09	4.87E-09
16	Halsted Street NB north of 119th Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	6.84E-04	3.41E-05	3.14E-05	1.06E-07	5.29E-09	4.87E-09
17	119th Street WB east of Halsted Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	6.84E-04	3.41E-05	3.14E-05	1.06E-07	5.29E-09	4.87E-09
18	119th Street EB east of Halsted Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	6.84E-04	3.41E-05	3.14E-05	1.06E-07	5.29E-09	4.87E-09
19	119th Street WB west of Halsted Street	1300	0.24621	16	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.246	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	3.37E-04	1.68E-05	1.54E-05	5.31E-08	2.65E-09	2.44E-09
20	119th Street EB west of Halsted Street	1300	0.24621	16	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.246	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	3.37E-04	1.68E-05	1.54E-05	5.31E-08	2.65E-09	2.44E-09
21	Morgan Street SB west of Halsted Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	7.38E-04	3.64E-05	3.35E-05	1.15E-07	5.65E-09	5.20E-09
22	Morgan Street NB west of Halsted Street	2640	0.5	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.500	25	22.5 <= speed < 27.5 mph	5.313	0.262	0.241	7.38E-04	3.64E-05	3.35E-05	1.15E-07	5.65E-09	5.20E-09
23	119th Street WB b/w NE entrance & Morgan Street	70	0.01326	16	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.013	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	1.81E-05	9.04E-07	8.31E-07	5.31E-08	2.65E-09	2.44E-09
24	119th Street EB b/w NE entrance & Morgan Street	70	0.01326	16	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.013	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	1.81E-05	9.04E-07	8.31E-07	5.31E-08	2.65E-09	2.44E-09
25	119th Street WB b/w North entrance & NE entrance	830	0.1572	16	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.157	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	2.15E-04	1.07E-05	9.86E-06	5.31E-08	2.65E-09	2.44E-09
26	119th Street EB b/w North entrance & NE entrance	830	0.1572	16	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.157	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	2.15E-04	1.07E-05	9.86E-06	5.31E-08	2.65E-09	2.44E-09
27	119th Street WB b/w NW entrance & North entrance	800	0.15152	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.152	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	2.07E-04	1.03E-05	9.50E-06	1.06E-07	5.29E-09	4.87E-09
28	119th Street EB b/w NW entrance & North entrance	800	0.15152	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.152	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	2.07E-04	1.03E-05	9.50E-06	1.06E-07	5.29E-09	4.87E-09
29	Community Center Access Drive N B	160	0.0303	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.030	15	12.5 <= speed < 17.5 mph	7.325	0.374	0.344	6.17E-05	3.15E-06	2.90E-06	1.58E-07	8.08E-09	7.43E-09
30	119th Street WB east of Halsted Street	2230	0.42235	8	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.422	30	27.5 <= speed < 32.5 mph	4.924	0.245	0.226	5.78E-04	2.88E-05	2.65E-05	1.06E-07	5.29E-09	4.87E-09
31	119th Street EB east of Halsted Street	2230	0.42235	8	2024	Single Unit Short-haul Truck</td														

LinkID	Link Description (Road Name, Direction)	Idle Link Area (m2)	yearID	sourceTypeName	fuelTypeDesc	Volume (Peak Hour)	Idle minutes per hour per vehicle	Idle minutes/hr	Speed Bin	NOx EF (g/hr)	PM10 EF (g/hr)	PM2.5 EF (g/hr)	NOx EF (g/s/m2)	PM10 EF (g/s/m2)	PM2.5 EF (g/s/m2)
42-Idle	Stop Light @ 119th St & Marshfield Ave	400	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.624	0.6241667	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	3.02E-07	2.42E-08	2.23E-08
43-Idle	Stop Light @ 119th St & Ashland Ave	400	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.652	0.6516667	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	3.15E-07	2.53E-08	2.32E-08
44-Idle	Stop Sign @ 119th St & west alleyway	225	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.203	0.2027778	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	1.74E-07	1.40E-08	1.29E-08
45-Idle	Stop Sign @ 119th St & Community Center Entrance	375	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.212	0.2120833	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	1.09E-07	8.77E-09	8.06E-09
46-Idle	Stop Light @ 119th St & Morgan Street	450	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.562	0.5616667	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	2.41E-07	1.93E-08	1.78E-08
47-Idle	Stop Light @ 119th St & Halsted St	900	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.459	0.4591667	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	9.87E-08	7.91E-09	7.28E-09
48-Idle	Stop Light @ 120th St & Halsted St	900	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.26	0.26	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	5.59E-08	4.48E-09	4.12E-09
49-Idle	Stop Sign @ 120th St & S Morgan St	225	2024	Single Unit Short-haul Truck	Diesel Fuel	1	0.142	0.1416667	speed = 0 (idle) (g/hr)	41.769	3.348	3.080	1.22E-07	9.76E-09	8.98E-09
Sitidle	Truck idling at a dock	83414.6	2024	Single Unit Long-haul Truck	Diesel Fuel	2	15	30	speed = 0 (idle) (g/hr)	23.175	0.464	0.427	3.86E-08	7.73E-10	7.11E-10

MOVES emission factors for non-road equipment.

Use for initial project year assessments.

MOVES assumes market penetration of equipment tier levels by project year based on USEPA projections.

Project Year	Equipment Description	Fuel Type	Equipment Horsepower	Exhaust NOx EF (g/hp-hr)	Exhaust PM10 EF (g/hp-hr)	Exhaust PM2.5 EF (g/hp-hr)	# of equip.	hp	Total Days	Exhaust NOx EF (g)	Exhaust PM10 EF (g)	Exhaust PM2.5 EF (g)	Area (m2)	Exhaust NOx EF (g/s/m2)	Exhaust PM10 EF (g/s/m2)	Exhaust PM2.5 EF (g/s/m2)	
2024	Bore/Drill Rigs	Diesel	50 < hp <= 75	4.5490	0.3477	0.3372	1	50	21	1.15E+05	3.65E+02	3.54E+02	104515.9	3.48E-08	1.11E-10	1.07E-10	
2024	Concrete/Industrial Saws	Diesel	40 < hp <= 50	2.5904	0.0320	0.0311	1	40	15	3.73E+04	1.92E+01	1.86E+01	104515.9	1.13E-08	5.83E-12	5.66E-12	
2024	Crawler Tractor/Dozers	Diesel	300 < hp <= 600	0.4995	0.0267	0.0259	1	300	30	1.08E+05	2.41E+02	2.33E+02	104515.9	3.27E-08	7.30E-11	7.08E-11	
2024	Excavators	Diesel	50 < hp <= 75	2.5848	0.0250	0.0242	1	50	30	9.31E+04	3.75E+01	3.63E+01	104515.9	2.82E-08	1.14E-11	1.10E-11	
2024	Forklifts	Diesel	50 < hp <= 75	2.5457	0.0155	0.0150	1	50	30	9.16E+04	2.32E+01	2.25E+01	104515.9	2.78E-08	7.04E-12	6.83E-12	
2024	Scrapers	Diesel	300 < hp <= 600	0.5306	0.0277	0.0269	1	300	30	1.15E+05	2.49E+02	2.42E+02	104515.9	3.48E-08	7.56E-11	7.33E-11	
2024	Tractors/Loaders/Backhoes	Diesel	40 < hp <= 50	2.7038	0.0783	0.0760	1	40	30	7.79E+04	9.40E+01	9.12E+01	104515.9	2.36E-08	2.85E-11	2.77E-11	
														Total	1.93E-07	3.12E-10	3.03E-10

**Air Quality Impact Statement (AQIS) Report
1021 – 1325 W 119th Street, Chicago, Illinois**

APPENDIX D

CDPH-provided Seasonal Hourly NO₂ Background Concentrations

Air Quality Impact Statement (AQIS) Report
4239 West Ferdinand Street, Chicago, Illinois

Seasonal Hourly Ambient NO₂ Concentrations, for use with Southwestern Chicago 1-Hour NO₂ Modeling:

Hour of Day		NO₂ Ambient Background 98th% (ppb)				NO₂ Ambient Background 98th% ($\mu\text{g}/\text{m}^3$)			
Start Time	End Time	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall
0:00	1:00	41.67	46.87	34.40	29.63	78.33	88.11	64.67	55.71
1:00	2:00	40.53	44.40	33.40	28.23	76.20	83.47	62.79	53.08
2:00	3:00	38.77	48.23	33.10	28.00	72.88	90.68	62.23	52.64
3:00	4:00	41.07	47.43	31.27	27.63	77.21	89.17	58.78	51.95
4:00	5:00	42.43	45.13	31.67	27.00	79.77	84.85	59.53	50.76
5:00	6:00	40.43	44.53	30.60	29.33	76.01	83.72	57.53	55.15
6:00	7:00	42.60	46.83	30.17	29.57	80.09	88.05	56.71	55.59
7:00	8:00	43.63	38.07	27.27	29.20	82.03	71.57	51.26	54.90
8:00	9:00	36.07	29.97	20.70	26.47	67.81	56.34	38.92	49.76
9:00	10:00	32.33	26.07	16.33	23.90	60.79	49.01	30.71	44.93
10:00	11:00	28.50	21.87	15.37	19.60	53.58	41.11	28.89	36.85
11:00	12:00	26.63	19.70	13.27	18.40	50.07	37.04	24.94	34.59
12:00	13:00	23.47	21.23	12.63	18.33	44.12	39.92	23.75	34.47
13:00	14:00	21.93	22.43	12.03	20.23	41.23	42.17	22.62	38.04
14:00	15:00	24.17	21.97	14.40	19.17	45.43	41.30	27.07	36.03
15:00	16:00	26.20	21.60	13.97	21.03	49.26	40.61	26.26	39.54
16:00	17:00	30.00	23.77	14.20	25.77	56.40	44.68	26.70	48.44
17:00	18:00	32.67	27.00	17.50	27.63	61.41	50.76	32.90	51.95
18:00	19:00	34.60	30.33	16.17	29.30	65.05	57.03	30.39	55.08
19:00	20:00	35.97	36.40	21.80	31.20	67.62	68.43	40.98	58.66
20:00	21:00	37.20	40.97	27.03	33.13	69.94	77.02	50.82	62.29
21:00	22:00	35.77	43.47	26.83	33.60	67.24	81.72	50.45	63.17
22:00	23:00	36.87	42.37	32.63	31.77	69.31	79.65	61.35	59.72
23:00	0:00	41.33	46.60	36.60	31.67	77.71	87.61	68.81	59.53

*Based on AQS Monitor ID 17-031-0076. Average of years 2018, 2019, and 2020 for Winter, Spring, and Fall; 2016, 2017, and 2019 for Summer.

Ambient Air Background Concentrations
City of Chicago Department of Public Health

Project Location	Pollutant	Averaging Period	3-year Ambient Design Value (ug/m3)	Monitor ID	Monitor Name	Latitude/Longitude
NORTHWEST -4 miles or greater from the lakeshore and north of the Eisenhower Expressway	NO ₂	Annual	34	17-031-3103	IEPA Trailer (2018-2020)	41.965193, -87.876265
	PM ₁₀	24-hour	102	17-031-1016	Village Hall (2018-2020)	41.80118, -87.832349
	PM _{2.5}	24-hour	24	17-031-3103	IEPA Trailer (2018-2020)	41.965193, -87.876265
		Annual	10	17-031-3103	IEPA Trailer (2017, 2019, 2020)	41.965193, -87.876265
NORTHEAST -Within 4 miles of the lakeshore and north of East and West 63rd Street	NO ₂	Annual	31	17-031-0219 and 17-031-0063	Kennedy Near Road 2 (2019-2020) and CTA Building (2017)	41.920009, -87.672995 (Kennedy); 41.7514, -87.635027 (CTA Bldg)
	PM ₁₀	24-hour	102	17-031-1016	Village Hall (2018-2020)	41.80118, -87.832349
SOUTHWEST -4 miles or greater from the lakeshore and south of the Eisenhower Expressway	PM _{2.5}	24-hour	22	17-031-0057	Springfield Pump Station (2018-2020)	41.912739, -87.722673
		Annual	9	17-031-0057	Springfield Pump Station (2016, 2017, 2018)	41.912739, -87.722673
	NO ₂	Annual	29	17-031-0076	Com Ed Maintenance Bldg (2018-2020)	41.7514, -87.713488
	PM ₁₀	24-hour	102	17-031-1016	Village Hall (2018-2020)	41.80118, -87.832349
SOUTHEAST Within 4 miles of the lakeshore and south of East and West 63rd Street		24-hour	23	17-031-1016	Village Hall (2018-2020)	41.80118, -87.832349
Annual	10	17-031-1016	Village Hall (2018-2020)	41.80118, -87.832349		
NO ₂	Annual	19	18-089-0022	Gary, IN (2018-2020)	41.687165, -87.539315	
PM ₁₀	24-hour	61	17-031-0022	Washington HS (2018-2020)	41.687165, -87.539315	
	24-hour	25	17-031-0022	Washington HS (2018-2020)	41.687165, -87.539315	
Annual	9	17-031-0022	Washington HS (2017, 2019, 2020)	41.687165, -87.539315		

**Air Quality Impact Statement (AQIS) Report
1021 – 1325 W 119th Street, Chicago, Illinois**

APPENDIX E

AERMOD Model Electronic Run Files