MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT INFORMATION

Product Identifier:	Superior® Classic Smoke
Chemical Name:	Screening Smoke
Product Use:	Superior® Smoke for Sanitary Sewer Testing (Professional Use Only)
Manufacturer's information:	SUPERIOR SIGNAL COMPANY LLC PO Box 96, Spotswood, NJ 08884 USA

Emergency Phone # (732) 251-0800 Fax # (732) 251-9442 E-Mail: info@superiorsignal.com

SECTION 2: PRODUCT INGREDIENTS (SMOKE)

Neither TLV nor PEL applicable because product is intended for use in short term tests.

	TLV	PEL	8-hour time weighted average
Hydrated Zinc Chloride:	1 mg/m³	1 mg/m³	
Water Condensate:	-	-	
Carbon Monoxide:	55 mg/m³	55 mg/m³	

All other ingredients are present in negligible amounts and/or are non-hazardous.

Concentrations of the various smoke components depend entirely on the size of solid(s) burned, volume of the space and ventilation of the space. They are not independently predictable or knowable.

Superior® Classic Smoke products are available in various sizes that provide sufficient materials to create easily visible smoke for different sized areas at a concentration of 10 mg/m³.

Superior® #1A	-	4,000 ft³ / 113 m³	} recommended for testing
Superior® #2B	-	8,000 ft³ / 227 m³	} building plumbing
Superior® #3C	-	40,000 ft³ / 1133 m³	> recommended for testing
Superior® #W3C	-	40,000 ft³ / 1133 m³	> sanitary sewer collection systems

SECTION 3: PHYSICAL DATA (SMOKE)

Boiling Point:	Not Applicable
Vapor Pressure:	Not Applicable
Vapor Density:	Not Applicable
Solubility in Water:	Soluble (Zinc Chloride)
pH:	No Data
Appearance and Odor:	Gray to white, with an odor of burning paper

SECTION 4: FIRE & EXPLOSION HAZARD DATA

(SMOKE):	Flash Point (method used):	None
	Auto Ignition:	Not Applicable
	Flammable limits in air:	Not Applicable

(SOLID PRODUCT): Extinguishing Media: Use media suitable for surrounding fire.

(SMOKE / SOLID PRODUCT): Normal fire fighting protective equipment: self-contained breathing apparatus and full protective clothing.

(SMOKE / SOLID PRODUCT): Unusual fire and explosion hazards: None Known

SECTION 5: REACTIVITY DATA (SOLID PRODUCT)

Stability: Stable under normal conditions
Hazardous decomposition products: See Section 2
Hazardous polymerization: None Known

SECTION 6: HEALTH HAZARD ASSESSMENT (SMOKE)

- **General:** Superior® Classic Smoke can be used without hazard if applied as directed. The main effects of the smoke are some irritation of the throat, an awareness of an odd odor, and the appearance of smoke. These effects act as a warning and are desirable to prevent voluntary overexposure. Individuals should be urged not to accept exposures that cause minor irritation, but to leave the area and ventilate well to dissipate the smoke.
- **Ingestion:** Not a significant route of exposure.
- **Eye Contact:** Acute exposure is not likely to induce eye irritation.
- **Skin Absorption:** Not a significant route of exposure.
- **Inhalation:** Acute exposure can cause irritation of the respiratory tract and mucous membranes. In itself irritation is not usually regarded as a toxic effect unless it is sufficient to cause inflammation and then inflammation, not irritation, is the toxic effect.
- **Effects of Overexposure:** Irritation of the respiratory passages; cough; nausea. Gross overexposure to dense smoke concentrations for periods of ten minutes or more could result in throat irritation and mucous membrane congestion requiring medical treatment. Coughs, chills, fever and pulmonary edema can result from overwhelming exposure. Increasingly severe overexposure is likely to result in increasingly severe irritation and inflammation to all mucous membranes contacted by the smoke with most severe effects usually appearing in the respiratory tract.

SECTION 7: EMERGENCY AND FIRST AID PROCEDURES

Remove victim to fresh air. If breathing is difficult, get medical attention.

SECTION 8: TOXICOLOGICAL PROPERTIES (SMOKE)

Carcinogen listed by: IARC (No) NTP (No) OSHA (No) OTHER (No)

SECTION 9: DISPOSAL METHOD

(SMOKE): Ventilate area. Use local exhaust to keep exposure to a minimum. The duration of smoke would be short and the length of exposure could be reduced further by opening doors and windows for a few minutes, if and when the smoke appears.

(SOLID PRODUCT): Disposal Method: Dispose in chemical disposal area in a manner that complies with local, state and federal regulations.

SECTION 10: PREPARATION OF THE MSDS

The information herein is given in good faith, but no warranty, express or implied, is made.

Prepared by: James A. Kovacs, President Phone # (732) 251-0800FAX # (732) 251-9442

Date of Preparation: January 18, 2011
Date of Last Revision: N/A
Review Date: January 3, 2014

N O T I C E

In the next few days, inspection crews will be conducting a physical survey of the **City of West Chicago** sanitary sewer system in your area. Workers will be accessing manholes to "SMOKE TEST" sewers and locate defects in the system. The smoke is **NON-TOXIC, HARMLESS, AND CREATES NO FIRE HAZARD**.

The smoke should not enter your home or business unless you have defective plumbing or dry drain traps. If you have seldom used drains, please pour water in the drain to fill the trap. This should prevent smoke from entering. **Drain traps should always be filled with water to prevent sewer gases and odors from entering the building. If smoke does enter your home or business, the potential also exists for sewer gases to enter, and you should consult a licensed plumber to address the problem.**

Some sewer lines and manholes are located in backyards. When these lines require investigation, field crews will need access to the backyard for inspection. These crews are **RJN Group, Inc.** personnel and will be wearing uniforms and carrying identification badges. Homeowners do not need to be home and **AT NO TIME WILL CREWS NEED TO ENTER YOUR BUSINESS OR RESIDENCE.**

We anticipate the smoke testing will require a few days in your area. Your cooperation is appreciated. The information gained from this study will be used to improve your sewer system.

Additional information can be found on the City of West Chicago website www.westchicago.org or the RJN Group website at www.rjn.com.

If smoke enters your home or if you would like more information, please contact a member of the field crew if they are still on your street or contact one of the following:

RJN Field Crew Leader – 630-639-1914
Joe Sullivan, RJN Project Manager – 630-682-4700 x337
City of West Chicago, Public Works Director – Rob Flatter – 630-293-2255

rjngroup

AVISO

En los próximos días, grupos de inspectores estarán conduciendo un examen físico del sistema del drenaje de la **Ciudad de West Chicago**. Los trabajadores tendrán acceso a las alcantarillas para hacer pruebas de humo y localizar defectos en el sistema del drenaje. El humo **NO ES TÓXICO, ES INOFENSIVO Y NO CREA NINGÚN RIESGO DE INCENDIOS**

El humo no debe entrar a su casa o negocio a menos que tenga plomería defectuosa o trampas de desagüe secas. Si usted tiene algún desagüe que no ha sido utilizado con frecuencia, por favor ponga agua en el desagüe para llenar la trampa. Esto debe evitar que el humo entre en su casa. **Las trampas del desagüe siempre deben estar llenas de agua para evitar que los gases y los olores del drenaje entren en el edificio. Si el humo entra a través de la plomería con fallas o rajaduras, el potencial existe para que los gases del drenaje entren a su casa o en el establecimiento y usted debe consultar con un plomero con licencia para arreglar el problema.**

Algunas tuberías y alcantarillas se localizan en los patios traseros. Cuando estas tuberías requieran una investigación, los miembros del grupo de inspectores necesitarán acceso al patio trasero para inspección. Estos equipos de trabajadores son personal de **RJN Group, Inc.** y estarán uniformados y llevando sus respectivas tarjetas de identificación. Los dueños de casa no necesitan estar presente y **EN NINGÚN MOMENTO LOS EQUIPOS DE TRABAJADORES NECESITAN ENTRAR A SU NEGOCIO O RESIDENCIA.**

Anticipamos que las pruebas de humo duraran un par de días en su área. Se le agradecerá su cooperación. La información obtenida a través de este estudio será utilizada para mejorar sus servicios de drenaje.

Información adicional se puede encontrar en la pagina Web de la Ciudad de West Chicago: www.westchicago.org o en la pagina de RJN Group en www.rjn.com.

Si entra humo a su casa, o si desea más información, por favor contacte a uno de los trabajadores si todavía se encuentran en su calle, o llame a cualquiera de los siguientes:

RJN Jefe de la Cuadrilla- 630-639-1914
Joe Sullivan, RJN Gerente del Proyecto - 630-682-4700 x337
Ciudad de West Chicago, Departamento de Trabajos Publicos
Rob Flatter – 630-293-255

rjn group

CITY OF
WEST CHICAGO

WHERE HISTORY & PROGRESS MEET

June 2014

Dear West Chicago Resident:

In its ongoing efforts to improve the City of West Chicago's infrastructure, the Public Works Department will be conducting a program to identify locations where storm water is entering the City sanitary sewer system. The study, being performed by the engineering firm RJN Group, Inc. of Wheaton, Illinois, includes smoke testing of the sanitary sewers in the area indicated on the attached map.

Smoke testing is a simple means of locating openings in the sewer system that allow surface rainwater runoff to enter the sanitary sewers. Air combined with non-toxic smoke is forced into the sewer lines to disclose the location of connections and leaks. Smoke will appear where there are defects in the main sewer line or laterals (connection between the main line and a building) or where there are other connections to the sewer system such as roof drains, patio drains, and footing drains.

Smoke **should not** enter buildings unless there is defective plumbing or dried-up drain traps. **To help prevent smoke from entering your home, please pour water into infrequently used sinks and floor drains.** You should always feel free to call 911 in an emergency. However, if you believe smoke is entering your home from smoke testing, please contact a member of the RJN field crew if they are still on your street. If the RJN field crew is no longer in the area you may contact RJN Group's office at 630-682-4700.

The smoke is non-toxic, creates no fire hazard, leaves no residue, dissipates quickly, and is harmless. However, if someone in your home has respiratory problems, you may wish to take extra precautions on your own, such as leaving your home until the smoke testing is completed.

Weather permitting, the smoke testing will be started the week of July 7th and is anticipated to be completed by July, 31st, 2014. Additional notification will be provided by door hanger cards 24 - 72 hours before the smoke testing is to start in your area and signs will be posted at highly visible intersections when the crews are testing.

Additional information on smoke testing can be found on the RJN website: www.rjn.com under the "Are we smoke testing in your area?" image and on the City's website: www.westchicago.org. If you have questions please call Joe Sullivan at RJN at (630) 682-4700 x337 or the City of West Chicago Department of Public Works at (630) 293-2255.

Sincerely,

City of West Chicago
Department of Public Works

475 Main Street
West Chicago, Illinois
60185

T (630) 293-2200
F (630) 293-3028
www.westchicago.org

Ruben Pineda
MAYOR

Nancy M. Smith
CITY CLERK

Michael L. Guttman
CITY ADMINISTRATOR

CITY OF
WEST CHICAGO

WHERE HISTORY & PROGRESS MEET

June 2014

Estimado Residente de la Ciudad de West Chicago:

En sus esfuerzos de mejorar la infraestructura de la Ciudad de West Chicago, el Departamento de Trabajos Públicos, estará conduciendo un programa para identificar donde el sistema de agua fluvial está entrando al sistema sanitario. El estudio está siendo conducido por la compañía de ingenieros RJN Group Inc. de Wheaton, Illinois, e incluye pruebas de humo en las líneas del drenaje sanitario en el área indicada en el mapa adjunto.

Las pruebas de humo son una forma sencilla para localizar aperturas en el sistema del drenaje que permite la entrada de agua cuando llueve en el sistema sanitario. Aire combinado con humo, no tóxico es forzado en las líneas del drenaje para localizar las conexiones y las infiltraciones. El humo va a aparecer donde haya defectos en la línea principal o laterales (la tubería que conecta la línea principal y la de la casa o edificio) o donde haya otras conexiones al sistema sanitario como, el drenaje de techo, el drenaje de patio y el drenaje debajo de la tierra.

El humo **no debe** entrar a su casa o edificio al menos que usted tenga plomería defectuosa o trampas del desagüe secas. **Para evitar que el humo entre a su casa o edificio, por favor ponga agua en las trampas y desagües que no usa con frecuencia.** En caso de emergencia usted siempre debe llamar al 911. De cualquier manera si usted cree que el humo que está entrando a su casa es de las pruebas de humo, por favor contacte a un miembro del equipo de RJN si todavía se encuentra en su calle. Si los miembros del equipo de RJN ya no están en su área puede llamar a la oficina de RJN Group al 630-682-4700.

El humo no es tóxico, no crea ningún riesgo de incendio, no deja residuos, desaparece pronto y es inofensivo. Sin embargo, si hay alguien en su casa con problemas respiratorios, deberá tomar extra precaución por su cuenta, como salir de su casa hasta que las pruebas de humo sean terminadas.

Mientras lo permita el clima el humo de prueba se iniciará la semana del 7 de julio y se anticipa ser terminado para el 31 de julio de 2014. Información adicional será proveída 24 - 72 horas antes de empezar las pruebas de humo en su área y anuncios serán colocados altamente visibles en las intersecciones cuando los equipos estén trabajando.

Información adicional sobre las pruebas de humo se puede encontrar en la página Web de RJN: www.rjn.com, bajo "Estamos haciendo pruebas de humo en su área?" ("Are we smoke testing in your area?") o en la página Web de la Ciudad: www.westchicago.org. Si tiene preguntas por favor llame a Joe Sullivan de RJN al 630-682-4700 extensión 337 o el Departamento de Trabajos Públicos de la Ciudad de West Chicago al 630-293-2255.

Sinceramente

Ciudad de West Chicago
Departamento de Trabajos Públicos

475 Main Street
West Chicago, Illinois
60185

T (630) 293-2200
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www.westchicago.org

Ruben Pineda
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Michael L. Guttman
CITY ADMINISTRATOR

APPENDIX C –DEFECT AND RECOMMENDATION TABLES

West Chicago, IL 2014 Manhole Inspections
Manhole Recommendation Summary

Manhole Number	Address	Surface	Manhole Depth	Manhole Diameter	Manhole Material	Smoke Data	Replace Cover	Replace Frame & Cover	Seal & Adjust MH Frame	Internal Chimney Seal	MH Sealing, Cementitous	Curtain Grout MH	Grout Wall Joints	Curtain Grout Bottom 18"	Repair Bench & Trough	Replace Bench & Trough
403100011	750 Ingalton	Non-Paved	3.18	36	Concrete Block	Smoke		XB*			X					
403100012	750 Ingalton	Non-Paved	3.02	36	Concrete Block	Smoke		XB*			X				X	
403100020	152 Virgie Pl	Asphalt	7	36	Brick						X					
403100095	247 Highland Av	Non-Paved	7.1	48	Precast Concrete		X									
403100096	247 Highland Av	Non-Paved	3.41	36	Precast Concrete	Smoke					X					
403100098	247 Highland Av	Concrete	4.69	36	Precast Concrete						X					
403100099	247 Highland Av	Non-Paved	3.75	36	Precast Concrete	Smoke				X					X	
403100103	247 Highland Av	Concrete	4.2	36	Precast Concrete	Smoke				X				X	X	
403100104	247 Highland Av	Non-Paved	2.79	36	Precast Concrete	Smoke							X			
403100106	247 Highland Av	Non-Paved	3.2	36	Precast Concrete	Smoke				X				X	X	
403100107	247 Highland Av	Non-Paved	2.88	36	Precast Concrete	Smoke					X					
403100115	330 Sophia St	Asphalt	6.06	36	Precast Concrete						X					
403100116	303 York Av	Asphalt	14.36	36	Precast Concrete					X						
403100117	217 York Av	Asphalt	12.92	36	Precast Concrete					X			X			
403100118	135 Sophia St	Asphalt	15.6	36	Precast Concrete						X					
403100119	219 Sophia St	Asphalt	14.42	36	Brick						X			X		
403100120	332 York Av	Asphalt	9.14	36	Precast Concrete					X			X			
403100121	334 Fairview Av	Asphalt	9.74	36	Brick						X	X				
403100122	360 Fairview Av	Asphalt	4.76	36	Brick						X	X				
403100123	1075 Garden St	Asphalt	9.94	36	Brick						X	X				
403100124	130 Oakwood Av	Asphalt	5.36	36	Precast Concrete					X						
403100125	146 Oakwood Av	Asphalt	7.4	36	Precast Concrete					X			X			
403100126	146 Oakwood Av	Asphalt	10.5	36	Precast Concrete					X			X			
403100127	140 Oakwood Av	Asphalt	12.86	36	Precast Concrete					X			X	X		
403100128	209 Oakwood Av	Asphalt	15.4	36	Precast Concrete					X						
403100129	216 Oakwood Av	Asphalt	16.88	36	Precast Concrete					X						
403100130	220 Ingalton Av	Asphalt	6.5	36	Brick					X	X			X		
403100131	421 Virgie Pl	Asphalt	7.32	36	Brick						X					
403100132	187 Ingalton Av	Asphalt	8.86	36	Precast Concrete					X			X			
403100134	361 York Av	Concrete	9.4	36	Brick						X			X		
404100004	129 National St	Asphalt	16.28	48	Precast Concrete					X			X			
404100005	129 National St	Asphalt	12.55	48	Precast Concrete	Smoke				X			X			
404100008	129 National St	Concrete	10.9	48	Precast Concrete					X				X		
404100009	129 National St	Asphalt	8.45	48	Precast Concrete					X	X					
404100032	350 Elliot Av	Asphalt	3.42	36	Precast Concrete		X				X					
404100033	153 York Av	Non-Paved	9.5	36	Precast Concrete			X			X					
404100034	131 York Av	Non-Paved	15.96	36	Precast Concrete			X					X	X		
404100035	109 York Av	Concrete	11.22	36	Precast Concrete	Smoke				X			X	X		
404100036	307 Fremont St	Asphalt	12.5	36	Precast Concrete					X			X			
404100037	338 Fremont St	Asphalt	9.28	36	Precast Concrete					X			X			
404100038	307 Fremont St	Asphalt	17.62	36	Precast Concrete					X				X		
404100039	348 Arbor Av	Asphalt	11.32	36	Precast Concrete					X			X			
404100040	318 Arbor Av	Asphalt	8	36	Precast Concrete					X			X			
404100041	230 Arbor Av	Asphalt	12.54	36	Precast Concrete					X				X		
404100042	200 Fremont St	Asphalt	12.38	36	Brick						X			X		
404100043	101 Mc Connell Av	Asphalt	12.38	36	Brick						X			X	X	

West Chicago, IL 2014 Manhole Inspections
Manhole Recommendation Summary

Manhole Number	Address	Surface	Manhole Depth	Manhole Diameter	Manhole Material	Smoke Data	Replace Cover	Replace Frame & Cover	Seal & Adjust MH Frame	Internal Chimney Seal	MH Sealing, Cementitous	Curtain Grout MH	Grout Wall Joints	Curtain Grout Bottom 18"	Repair Bench & Trough	Replace Bench & Trough
404100044	129 Mc Connell Av	Non-Paved	7.82	36	Brick	Smoke		X**	X		X	X				
404100045	203 Arbor Av	Asphalt	9.14	48	Precast Concrete								X			
404100046	110 York Av	Non-Paved	12.3	36	Precast Concrete	Smoke		X	X	X						
404100047	160 York Av	Non-Paved	12.92	35	Precast Concrete	Smoke				X						
404100048	160 York Av	Asphalt	5.98	36	Concrete Block						X			X		
404100049	160 York Av	Non-Paved	11.22	36	Precast Concrete	Smoke		X***						X		
404100050	153 York Av	Non-Paved	11.14	36	Precast Concrete			X						X		
404100051	134 York Av	Asphalt	11.32	36	Brick						X	X				
409100001	207 Aurora St	Asphalt	8	36	Concrete Block						X			X		
409100002	207 Aurora St	Asphalt	9.74	36	Precast Concrete						X			X		
409100003	108 Washington St	Asphalt	10.44	36	Precast Concrete	Smoke		X	X						X	
409100004	185 Washington St	Concrete	11.84	36	Precast Concrete					X						
409100005	166 Washington St	Concrete	9.9	36	Precast Concrete					X				X		
409100006	139 Washington St	Concrete	8.56	36	Precast Concrete					X				X		
409100007	111 Washington St	Concrete	8	36	Precast Concrete					X						
409100008	103 Washington St	Concrete	9.2	36	Precast Concrete					X						
409100009	103 Washington St	Concrete	12.02	36	Precast Concrete					X					X	
409100010	101 Washington St	Concrete	6	36	Brick	Smoke				X	X	X				
409100011	101 Washington St	Concrete	6.64	36	Brick		X			X	X	X				
409100012	123 Fremont St	Asphalt	6.74	36	Brick						X	X				
410100117	103 Arbor Av	Asphalt	7.8	36	Brick						X	X				
410100118	103 Washington St	Concrete	10.06	36	Precast Concrete					X						
410100120	115 Washington St	Concrete	19.22	36	Precast Concrete					X			X			
410100121	117 Sophia St	Asphalt	16.82	36	Brick						X			X		
410100122	249 Washington St	Asphalt	18.42	36	Precast Concrete					X			X			
410100123	322 Washington St	Concrete	9.56	36	Precast Concrete					X						
410100124	115 Garden St	Asphalt	8.66	36	Brick					X	X			X		
410100125	322 Washington St	Concrete	9.74	36	Precast Concrete					X			X			
410100126	103 Oakwood Av	Concrete	6.8	36	Precast Concrete					X						
410100127	425 Washington St	Concrete	8.76	36	Precast Concrete					X			X	X		

*XB Indicates Replace Frame & Bolted Cover
** Dig/Replace Curb & Gutter
*** Bring up to grade

West Chicago, IL 2014 Sewer Televising

CCTV Lining Priority

USMH	DSMH	Diam.	Length	Pipe Material	Lining Priority
404100032	404100033	8	369	PVC	-
404100034	404100033	21	240	PVC	-
404100035	404100034	21	272	PVC	-
404100037	404100036	18	319	PVC	-
404100038	404100036	18	141	PVC	-
404100036	404100035	21	129	PVC	-
404100039	404100040	8	315	PVC	-
404100040	404100041	8	245	PVC	-
404100041	404100038	15	350	PVC	-
404100042	404100038	8	447	VCP	High
404100043	404100042	8	79	VCP	High
404100044	404100043	10	361	VCP	High
404100045	404100038	8	424	VCP	High
404100045A	404100041	8	398	VCP	High
404100048	404100049	8	119	VCP	High
404100033	404100049	21	113	PVC	-
404100049	404100047	21	185	PVC	-
403100121	403100115	8	351	VCP	High
403100115	403100116	8	350	VCP	High
403100116	403100117	15	231	PVC	-
403100120	403100116	8	322	Lined	Low
403100116	403100119	12	188	VCP	High
403100117	404100041	15	230	PVC	-
403100119	403100118	12	204	VCP	High
404100045A	403100118	6	191.5	VCP	Medium
403100134	403100120	8	261	Lined	Low
403100122	403100121	8	339	VCP	High
403100128	403100134	8	409	PVC	-
403100133	403100130	8	221	VCP	High
403100130	403100132	8	232	VCP	High
403100132	403100131	8	237	VCP	High
403100131	403100126	8	233	VCP	High
403100126	403100125	8	51	Truss	Low
403100127	403100126	8	67	Truss	Low
403100129	403100128	8	178	Truss	Low
403100125	403100124	8	272	PVC	-
409100001A	409100001	6	185	VCP	High
409100001	409100002	8	103	VCP	Medium
409100002	409100003	8	53	DIP	High
409100003	409100004	8	117	PVC	-
409100005	409100004	8	248	PVC	-

USMH	DSMH	Diam.	Length	Pipe Material	Lining Priority
409100006	409100005	8	228	PVC	-
409100007	409100006	8	197	PVC	-
409100008	409100007	8	66	PVC	-
409100009	409100008	8	132	PVC	-
409100010	409100012	8	217	VCP	High
409100012	404100043	8	258	VCP	High
409100011	410100118	8	153	VCP	-
410100118	410100119	8	120.5	PVC	-
410100117	404100045A	8	329	VCP	High
410100119	410100120	8	199	PVC	-
410100121	410100120	12	200	VCP	High
410100120	410100122	10	296	PVC	-
410100124	410100123	8	201	VCP	Medium
410100123	410100122	8	362	PVC	-
410100125	410100123	8	105	PVC	-
403100124	410100126	8	307	PVC	-
410100127	410100126	8	247	PVC	-
410100110	410100127	8	273	PVC	-
403100123	410100124	8	464	VCP	Medium
403100118	410100121	12	196	VCP	High
404100046	404100046A	21	163	PVC	-
404100046A	404100046B	21	299	PVC	-
404100046B	404100046C	21	291	PVC	-
404100046C	404100046D	21	278	PVC	-
404100047	404100047A	21	120	PVC	-
404100047A	404100046	21	269	PVC	-
404100009	404100008	6	177	PVC	-
404100008	404100005	6	82	PVC	-
404100005	404100004	6	247	PVC	-
404100004	404100001	6	74	PVC	-
403100013	403100012	8	78	VCP	Medium
403100012	403100011	8	116	VCP	Low
403100011	403100005	8	484	VCP	Medium
403100095	403100096	8	320	VCP	Medium
403100096	403100099	8	148	VCP	Low
403100099	403100103	8	110	VCP	Medium
403100102	403100098	8	54	VCP	Low
403100098	403100097	8	327	VCP	Low
403100106	403100103	8	194	VCP	Low
403100104	403100107	8	165	VCP	Low
403100107	403100106	8	259	VCP	Low

West Chicago, IL 2014 Sewer Televising
CCTV Review Observation Summary

Upstream Manhole	Downstream Manhole	Repair	Distance from Upstream (ft)	Comments	POINT REPAIR	LATERAL GROUTING	T-LINER	PROTUDING TAP
404100034	404100033	Lateral Grouting	101.4		0	101.4	0	0
404100034	404100033	Lateral Grouting	142.2		0	142.2	0	0
404100034	404100033	Lateral Grouting	166.2		0	166.2	0	0
404100035	404100034	Lateral Grouting	61.8		0	61.8	0	0
404100037	404100036	Lateral Grouting	12		0	12	0	0
404100037	404100036	Lateral Grouting	59.7		0	59.7	0	0
404100037	404100036	Lateral Grouting	62		0	62	0	0
404100037	404100036	Lateral Grouting	163		0	163	0	0
404100037	404100036	Lateral Grouting	165		0	165	0	0
404100037	404100036	Lateral Grouting	540		0	540	0	0
404100037	404100036	Lateral Grouting	261		0	261	0	0
404100038	404100036	Lateral Grouting	66.7		0	66.7	0	0
404100041	404100038	Lateral Grouting	86		0	86	0	0
404100041	404100038	Lateral Grouting	91		0	91	0	0
404100041	404100038	Lateral Grouting	242		0	242	0	0
404100041	404100038	Lateral Grouting	243.5		0	243.5	0	0
404100044	404100043	Lateral Grouting	73		0	73	0	0
404100044	404100043	Lateral Grouting	309		0	309	0	0
404100045	404100038	Lateral Grouting	327.7		0	327.7	0	0
404100045A	404100041	T-Liner	108.5		0	0	108.5	0
404100045A	404100041	Lateral Grouting	72		0	72	0	0
403100121	403100115	Point Repair	183	Possible T-Liner	183	0	0	0
					0	0	0	0
403100116	403100119	Lateral Grouting	89.5		0	89.5	0	0
403100117	404100041	Lateral Grouting	2.9		0	2.9	0	0
403100117	404100041	Lateral Grouting	66.4		0	66.4	0	0
403100117	404100041	Lateral Grouting	112.8		0	112.8	0	0
403100134	403100120	Lateral Grouting	52.5	from DSMH	0	52.5	0	0
403100134	403100120	Lateral Grouting	72	from DSMH	0	72	0	0
403100119	403100118	Lateral Grouting	13		0	13	0	0
403100119	403100118	Lateral Grouting	15		0	15	0	0
403100119	403100118	Point Repair	60		60	0	0	0
403100119	403100118	Point Repair	95		95	0	0	0
403100119	403100118	Lateral Grouting	145		0	145	0	0
403100119	403100118	T-Liner	165.5		0	0	165.5	0
403100122	403100121	Lateral Grouting	68.3		0	68.3	0	0
403100122	403100121	Lateral Grouting	71		0	71	0	0
403100122	403100121	Lateral Grouting	142		0	142	0	0
403100122	403100121	Lateral Grouting	216		0	216	0	0
403100133	403100130	Lateral Grouting	57.5		0	57.5	0	0
403100133	403100130	Lateral Grouting	71.5		0	71.5	0	0
403100133	403100130	T-Liner	136.6		0	0	136.6	0
403100133	403100130	Protuding Tap	142		0	0	0	142
403100130	403100132	Lateral Grouting	73		0	73	0	0
403100130	403100132	T-Liner	17.6		0	0	17.6	0
403100132	403100131	Protuding Tap	102.3		0	0	0	102.3

West Chicago, IL 2014 Sewer Televising
CCTV Review Observation Summary

Upstream Manhole	Downstream Manhole	Repair	Distance from Upstream (ft)	Comments	POINT REPAIR	LATERAL GROUTING	T-LINER	PROTUDING TAP
403100129	403100128	Lateral Grouting	24		0	24	0	0
403100129	403100128	Lateral Grouting	56		0	56	0	0
409100010	409100012	Protuding Tap	72.9'		0	0	0	72.9'
409100010	409100012	Lateral Grouting	141.5		0	141.5	0	0
409100010	409100012	Lateral Grouting	146.5		0	146.5	0	0
409100010	409100012	Lateral Grouting	200		0	200	0	0
409100012	404100043	Lateral Grouting	35.5		0	35.5	0	0
409100012	404100043	Lateral Grouting	42		0	42	0	0
409100012	404100043	Protuding Tap	42	Slightly protuding	0	0	0	42
409100012	404100043	Lateral Grouting	82		0	82	0	0
409100012	404100043	Lateral Grouting	92		0	92	0	0
409100012	404100043	Protuding Tap	121.5		0	0	0	121.5
409100012	404100043	Protuding Tap	149.5		0	0	0	149.5
409100012	404100043	Lateral Grouting	230		0	230	0	0
409100011	410100118	Protuding Tap	12		0	0	0	12
409100011	410100118	Lateral Grouting	12		0	12	0	0
409100011	410100118	Lateral Grouting	55		0	55	0	0
410100117	404100045A	Lateral Grouting	63		0	0	0	0
410100117	404100045A	Protuding Tap	73.5		0	0	0	73.5
410100117	404100045A	Lateral Grouting	215		0	0	0	0
410100117	404100045A	Lateral Grouting	274		0	0	0	0
410100117	404100045A	Protuding Tap	325.5		0	0	0	325.5
410100121	410100120	T-Liner	18		0	0	18	0
410100121	410100120	T-Liner	100		0	0	100	0
410100121	410100120	Lateral Grouting	18.9		0	18.9	0	0
410100124	410100123	Lateral Grouting	127		0	127	0	0
403100123	410100124	Lateral Grouting	224.5		0	224.5	0	0
403100123	410100124	Protuding Tap	224.5		0	0	0	224.5
403100123	410100124	Protuding Tap	230.5		0	0	0	230.5
403100118	410100121	T-Liner	18		0	0	18	0
403100118	410100121	T-Liner	87		0	0	87	0
403100118	410100121	T-Liner	160		0	0	160	0
403100118	410100121	Lateral Grouting	18.7	In Point Repair Area	0	18.7	0	0
403100118	410100121	Lateral Grouting	70.4		0	70.4	0	0
403100118	410100121	Lateral Grouting	114.7		0	114.7	0	0
403100118	410100121	Lateral Grouting	163	In Point Repair Area	0	163	0	0
403100095	403100096	Lateral Grouting	313.6	FROM DSMH	0	313.6	0	0
403100099	403100103	Point Repair	27	reverse set-up	27	0	0	0
403100099	403100103	Lateral Grouting	28		0	28	0	0
403100098	403100097	Lateral Grouting	50.5		0	50.5	0	0
403100104	403100107	Lateral Grouting	127.9		0	127.9	0	0
403100107	403100106	Lateral Grouting	137		0	137	0	0
403100107	403100106	Lateral Grouting	194.5		0	194.5	0	0

APPENDIX D – SMOKE TESTING PHOTO SUMMARY

11-2778-00: West Chicago, IL 2014 SSES

Smoke Observation Summary

Cleanout, Defective

Basin:
Segment (US : DS): **403100104 : 403100107**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Cleanout, Defective

Basin:
Segment (US : DS): **403100107 : 403100106**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Cleanout, Defective

Basin:
Segment (US : DS): **403100107 : 403100106**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Cleanout, Defective

Basin:
Segment (US : DS): **403100098 : 403100097**
Intensity: **Medium**
Drainage Area (SF): **150**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

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11-2778-00: West Chicago, IL 2014 SSES

Smoke Observation Summary

Cleanout, Defective

Basin:
Segment (US : DS): **410100110 : 410100127**
Intensity: **Medium**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 425 Washington St

Cleanout, Defective

Basin:
Segment (US : DS): **404100034 : 404100054**
Intensity: **High**
Drainage Area (SF): **250**
Surface: **Unpaved**
Comments:

Address: 149 York Av

Cleanout, Defective

Basin:
Segment (US : DS): **403100115 : 403100116**
Intensity: **Low**
Drainage Area (SF): **12**
Surface: **Unpaved**
Comments:

Address: 303 York Av

Cleanout, Missing/Broken Cap

Basin:
Segment (US : DS): **403100023 : 403100129**
Intensity: **High**
Drainage Area (SF): **1**
Surface: **Unpaved**
Comments:

Address: 228 Oakwood Av

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11-2778-00: West Chicago, IL 2014 SSES

Smoke Observation Summary

Cleanout, Missing/Broken Cap

Address: 249 Washington St

Basin:
Segment (US : DS): **410100123 : 410100122**
Intensity: **High**
Drainage Area (SF): **1,500**
Surface: **Unpaved**
Comments:

Cleanout, Missing/Broken Cap

Address: 109 York Av

Basin:
Segment (US : DS): **404100041 : 404100038**
Intensity: **High**
Drainage Area (SF): **1**
Surface: **Unpaved**
Comments:

Lateral

Address: 131 Arbor Av

Basin:
Segment (US : DS): **Unknown : 403100118**
Intensity: **Medium**
Drainage Area (SF): **400**
Surface: **Unpaved**
Comments:

Lateral

Address: 211 Arbor Av

Basin:
Segment (US : DS): **404100045 : 404100041**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Unpaved**
Comments:

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11-2778-00: West Chicago, IL 2014 SSES

Smoke Observation Summary

Lateral

Basin:

Segment (US : DS): **404100041 : 404100038**

Intensity: **High**

Drainage Area (SF): **100**

Surface: **Unpaved**

Comments:

Address: 308 Arbor Av

Lateral

Basin:

Segment (US : DS): **403100122 : 403100121**

Intensity: **Low**

Drainage Area (SF): **100**

Surface: **Unpaved**

Comments:

Address: 331 Fairview Av

Lateral

Basin:

Segment (US : DS): **409100012 : 404100043**

Intensity: **Medium**

Drainage Area (SF): **100**

Surface: **Paved**

Comments:

Address: 130 Fremont St

Lateral

Basin:

Segment (US : DS): **403100123 : 410100124**

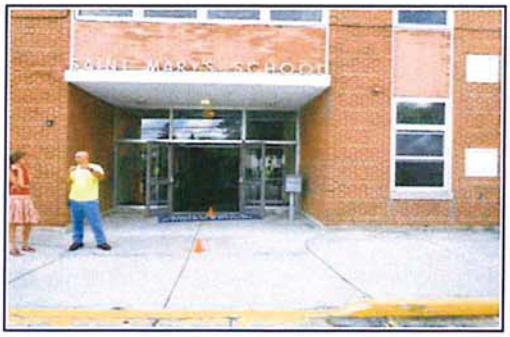
Intensity: **Low**

Drainage Area (SF): **100**

Surface: **Paved**

Comments:

Address: 147 Garden St



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Smoke Observation Summary

Lateral

Basin:
Segment (US : DS): **403100133 : 403100130**
Intensity: **Medium**
Drainage Area (SF): **200**
Surface: **Paved**
Comments:

Address: 221 Ingalton Av

Lateral

Basin:
Segment (US : DS): **Service : 403100012**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Unpaved**
Comments:

Address: 750 Ingalton Av

Lateral

Basin:
Segment (US : DS): **404100044 : 404100043**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 129 Mc Connell Av

Lateral

Basin:
Segment (US : DS): **403100104 : 403100107**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Paved**
Comments:

Address: 247 Neltnor Blvd

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Smoke Observation Summary

Lateral

Basin:
Segment (US : DS): **403100104 : 403100107**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Paved**
Comments:

Address: 247 Neltnor Blvd

Lateral

Basin:
Segment (US : DS): **403100107 : 403100106**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Lateral

Basin:
Segment (US : DS): **403100107 : 403100106**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Lateral

Basin:
Segment (US : DS): **403100099 : 403100103**
Intensity: **Medium**
Drainage Area (SF): **150**
Surface: **Paved**
Comments:

Address: 247 Neltnor Blvd

Smoke Observation Summary

Lateral

Basin:
Segment (US : DS): **403100096 : 403100099**
Intensity: **Medium**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Lateral

Basin:
Segment (US : DS): **403100098 : 403100097**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Lateral

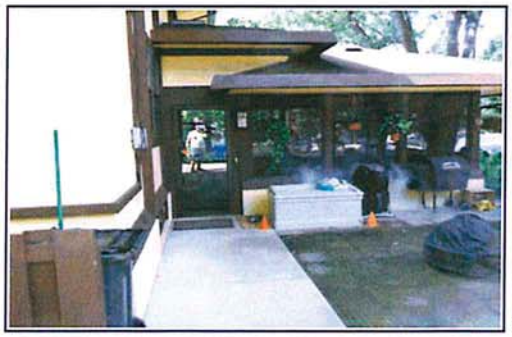
Basin:
Segment (US : DS): **403100098 : 403100097**
Intensity: **Low**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Lateral

Basin:
Segment (US : DS): **403100115 : 403100116**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Paved**
Comments:

Address: 330 Sophia St



Smoke Observation Summary

Lateral

Basin:
Segment (US : DS): **403100134 : 403100120**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 336 York Av

Lateral

Basin:
Segment (US : DS): **403100134 : 403100120**
Intensity: **Low**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 348 York Av

Manhole (Pick Holes)

Basin:
Segment (US : DS): **409100011 : 410100118**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Paved**
Comments: *pick hole*

Address: 101 Washington St

Manhole Downstream

Basin:
Segment (US : DS): **404100049 : 404100052**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 119 Aurora St

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Smoke Observation Summary

Manhole Downstream

Basin:
Segment (US : DS): **404100048 : 404100049**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 160 York Av

Manhole Upstream

Basin:
Segment (US : DS): **404100047 : 404100046**
Intensity: **Medium**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 119 Aurora St

Manhole Upstream

Basin:
Segment (US : DS): **403100011 : 403100005**
Intensity: **Medium**
Drainage Area (SF): **150**
Surface: **Unpaved**
Comments:

Address: 652 Ingalton Av

Manhole Upstream

Basin:
Segment (US : DS): **403100012 : 403100011**
Intensity: **High**
Drainage Area (SF): **150**
Surface: **Unpaved**
Comments:

Address: 750 Ingalton Av

Smoke Observation Summary

Manhole Upstream

Basin:
Segment (US : DS): **404100044 : 404100043**
Intensity: **High**
Drainage Area (SF): **150**
Surface: **Unpaved**
Comments:

Address: 129 Mc Connell Av

Manhole Upstream

Basin:
Segment (US : DS): **404100008 : 404100005**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Paved**
Comments:

Address: 129 National St

Manhole Upstream

Basin:
Segment (US : DS): **404100005 : 404100004**
Intensity: **High**
Drainage Area (SF): **250**
Surface: **Paved**
Comments:

Address: 129 National St

Manhole Upstream

Basin:
Segment (US : DS): **403100104 : 403100107**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

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Smoke Observation Summary

Manhole Upstream

Basin:
Segment (US : DS): **403100107 : 403100106**
Intensity: **Medium**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Manhole Upstream

Basin:
Segment (US : DS): **403100099 : 403100103**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Manhole Upstream

Basin:
Segment (US : DS): **403100106 : 403100103**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Manhole Upstream

Basin:
Segment (US : DS): **403100096 : 403100099**
Intensity: **Medium**
Drainage Area (SF): **100**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

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Smoke Observation Summary

Manhole Upstream

Basin:

Segment (US : DS): **403100103 : 403100102**

Intensity: **High**

Drainage Area (SF): **100**

Surface: **Paved**

Comments:

Address: 247 Neltnor Blvd

Manhole Upstream

Basin:

Segment (US : DS): **409100010 : 409100012**

Intensity: **High**

Drainage Area (SF): **250**

Surface: **Paved**

Comments:

Address: 101 Washington St

Manhole Upstream

Basin:

Segment (US : DS): **409100003 : 409100004**

Intensity: **High**

Drainage Area (SF): **100**

Surface: **Paved**

Comments:

Address: 207 Washington St

Manhole Upstream

Basin:

Segment (US : DS): **404100035 : 404100034**

Intensity: **High**

Drainage Area (SF): **300**

Surface: **Paved**

Comments:

Address: 109 York Av

Smoke Observation Summary

New Manhole

Address: 133 Aurora St , Unit A

Basin:
Segment (US : DS): **409100013 : 409100001**
Intensity: **High**
Drainage Area (SF): **200**
Surface: **Paved**
Comments:

Sanitary Mainline

Address: 750 Ingalton Av

Basin:
Segment (US : DS): **403100012 : 403100011**
Intensity: **Medium**
Drainage Area (SF): **1,000**
Surface: **Unpaved**
Comments:

Sanitary Mainline

Address: 247 Neltnor Blvd

Basin:
Segment (US : DS): **403100104 : 403100107**
Intensity: **High**
Drainage Area (SF): **100**
Surface: **Paved**
Comments:

Storm Inlet

Address: 117 Mc Connell Av

Basin:
Segment (US : DS): **404100044 : 404100043**
Intensity: **Low**
Drainage Area (SF): **3,000**
Surface: **Paved**
Comments:

Smoke Observation Summary

Storm Inlet

Basin:
Segment (US : DS): **404100044 : 404100043**
Intensity: **Medium**
Drainage Area (SF): **2,000**
Surface: **Paved**
Comments:

Address: 128 Mc Connell Av

Storm Inlet

Basin:
Segment (US : DS): **403100106 : 403100103**
Intensity: **Low**
Drainage Area (SF): **3,000**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Storm Inlet

Basin:
Segment (US : DS): **403100106 : 403100103**
Intensity: **Low**
Drainage Area (SF): **1,000**
Surface: **Unpaved**
Comments:

Address: 247 Neltnor Blvd

Storm Inlet

Basin:
Segment (US : DS): **Unknown : 403100118**
Intensity: **Low**
Drainage Area (SF): **3,000**
Surface: **Paved**
Comments:

Address: 130 Sophia St

Smoke Observation Summary

Storm Inlet

Basin:

Segment (US : DS): **Unknown : 403100118**

Intensity: **Low**

Drainage Area (SF): **1,000**

Surface: **Unpaved**

Comments:

Address: 130 Sophia St

Storm Inlet

Basin:

Segment (US : DS): **403100118 : 410100121**

Intensity: **Low**

Drainage Area (SF): **3,000**

Surface: **Paved**

Comments:

Address: 130 Sophia St

Storm Inlet

Basin:

Segment (US : DS): **403100115 : 403100116**

Intensity: **Low**

Drainage Area (SF): **3,500**

Surface: **Paved**

Comments:

Address: 235 York Av

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Smoke Observation Summary

Storm Inlet

Basin:
Segment (US : DS): **403100115 : 403100116**
Intensity: **Low**
Drainage Area (SF): **5,000**
Surface: **Paved**
Comments:

Address: 236 York Av

Storm Inlet

Basin:
Segment (US : DS): **403100120 : 403100116**
Intensity: **Low**
Drainage Area (SF): **3,000**
Surface: **Paved**
Comments:

Address: 319 York Av

Storm Inlet

Basin:
Segment (US : DS): **403100120 : 403100116**
Intensity: **Medium**
Drainage Area (SF): **3,000**
Surface: **Paved**
Comments:

Address: 332 York Av

Storm Manhole

Basin:
Segment (US : DS): **403100120 : 403100116**
Intensity: **Low**
Drainage Area (SF): **5**
Surface: **Paved**
Comments:

Address: 332 York Av

APPENDIX E – DEFINITIONS AND ABBREVIATIONS

DEFINITIONS AND ABBREVIATIONS

This section contains definitions and abbreviations commonly used throughout this report.

(1) Sanitary Sewer Evaluation Survey (SSES) - the study of a sanitary system through various investigation techniques, to identify sources of extraneous rainwater that are entering the sewers. These investigations may include flow monitoring, smoke testing, dye testing, television inspection, manhole inspection, and building inspection.

(2) Infiltration (as defined by USEPA) - the water entering a sewer system and service connections from the ground through such means as, but not limited to, defective pipes, pipe joints, service connections, service laterals, or manhole walls.

(3) Inflow (as defined by USEPA) - the water discharge into a sewer system, including service connections, from such sources as downspouts; sump pumps; cellar, yard, and area drains; foundation drains; cooling water discharges; drains from springs and swampy areas; manhole covers; cross connections from storm sewers, combined sewers, or catch basins; storm waters; surface runoff; or drainage.

(4) Inflow and Infiltration (I/I) - the extraneous clean water from rainfall that enters the sanitary sewer system that can be eliminated on a cost-effective basis.

(5) GIS – Geographic Information System.

(6) GPS – Global Positioning System.

(7) Direct Cross Connection – the connection of a collector of storm water, e.g. area drain, to the sanitary sewer main line or the building lateral

(8) Indirect Cross Connection – the storm sewer is not directly connected to the sanitary sewer main line or building lateral, but there are leaks in both storm sewer and the sanitary sewer allowing storm water to migrate to the sanitary sewer.

(9) PVC – polyvinyl chloride

(10) Runner – water flowing continuously through a crack or joint (not under pressure).

(11) VCP – Vitrified Clay Pipe.

(12) gpd - gallons per day.

(13) gpm - gallons per minute.

(14) Sanitary Sump - Collects sanitary waste from within the building and pumps to the sanitary sewer.

(15) Storm Sump - Collects groundwater drainage from footing drains routes to a storm sewer or to the outside building yard

(16) Combination Sump - Collects both sanitary waste and groundwater drainage and is routed to the sanitary sewer.

(17) Diverter Valve - A valve on a storm sump that allows routing the storm sump discharge to either the sanitary sewer or to the outside yard

(18) Foundation Drain – drainage system for a building that collects storm water around the foundation of a building in order to prevent water from damaging the building. Often conveyed to a sump pump that discharges the water away from the house, but could also be connected to the sanitary sewer.

(19) Building Lateral – the sewer line that connects the plumbing inside of a building to the main sewer line.

(20) Area Drain – a drain that conveys storm water away from an area. There are many different types of area drains, including driveway drains, yard drains, window well drains, and stairwell drains.

(21) CMAP – Chicago Metropolitan Agency for Planning.

(22) CIPP – Cured-in-Place Pipe. Cured-in-place pipelining is a trenchless rehabilitation method used to repair pipelines where a liner is inverted or pulled into a damaged pipe, and cured using hot water, steam, or UV light.

(23) T-Liner - T-liners are a type of cured-in-place pipeliner that rehabilitates the connection between the main sewer line and the lateral line, often shaped like the letter "T". The T-liner is inserted into the main sewer line through a manhole and pulled to the lateral connection, carefully positioned with a lateral camera. A launching device sends the long portion of the T-liner up the lateral, and the T-liner is inverted and cured. T-lining is a trenchless technology; however, longer T-liners require a cleanout to be present along the lateral for positioning and cleaning.

CITY OF WEST CHICAGO

INFRASTRUCTURE COMMITTEE
AGENDA ITEM SUMMARY

ITEM TITLE:

2016 Sanitary Sewer Evaluation Survey Report

AGENDA ITEM NUMBER: 4.B.

COMMITTEE AGENDA DATE: July 13, 2017
COUNCIL AGENDA DATE: N/A

STAFF REVIEW: Robert E. Flatter, P.E., Director of Public Works

SIGNATURE

APPROVED BY CITY ADMINISTRATOR: Michael L. Guttman

SIGNATURE

ITEM SUMMARY:

In June of 2016, City Council approved a contract with RJN Group, Inc. (RJN) to evaluate a portion of the City's sanitary collection system located within the Alta Vista Subdivision. The 2016 Sanitary Sewer Evaluation Survey (SSES) study area is generally described as the area between Town Road and the Wisconsin Central Railroad Tracks, and between Illinois Route 38 (Roosevelt Road) and Washington Street. RJN conducted manhole mapping and inspections, smoke testing, cleaning and televising, and dye testing of the entire sanitary collection system within the study area. A copy of RJN's 2016 SSES Report is attached and will be made available for viewing on the City's web site.

The area studied in 2016 is largely residential and mostly contains sanitary sewers made of vitrified clay pipe (VCP) located in rear yard easements. Many of the sanitary sewer segments are obstructed by severe root intrusion, offset pipe joints, and faulty service lateral connections to the mainline sanitary sewer. Three storm inlets were also found directly connected to the City's sanitary sewer system at 622 Town Road (Ball Horticultural Company). In addition, several private storm water sump pump connections are also suspected in the Alta Vista Subdivision, contributing an unknown volume of inflow and infiltration to the sanitary sewer system.

Given the large amount of rehabilitation work that was identified in the 2016 SSES (i.e., total estimated rehabilitation cost of $1,261,830.00), and the limited rehabilitation funds annually budgeted (i.e., approximately $600,000.00), RJN recommends that the City complete high priority rehabilitation sewer segments first, and the medium and low priority sewer segments in future years. To keep the rehabilitation plan within the budget, RJN's recommendations include the following I&I activities:

1) Perform point repairs on four sanitary sewer segments; required for pipes with defects so severe that they cannot be lined (approximate rehabilitation cost of $52,000).

2) Perform cured-in-place pipelining for approximately 4,939 lineal feet of 8" diameter sanitary sewer (approximate rehabilitation cost of $197,560).

3) Perform cured-in-place pipelining for approximately 594 lineal feet of 18" diameter sanitary sewer (approximate rehabilitation cost of $44,550).

Staff supports RJN's recommendations for repair and rehabilitation of all City owned infrastructure as outlined in its Report.

CITY OF WEST CHICAGO

ACTIONS PROPOSED:

Approve and accept the recommendations outlined in RJN's 2016 SSES report and direct staff to plan for and contractually complete recommended rehabilitation work as determined appropriate by staff and as allowed by budget.

COMMITTEE RECOMMENDATION:

City of West Chicago
Alta Vista
2016 Sanitary Sewer Study

City of West Chicago

rjngroup
40 years of collection system solutions

Final Report
May 2017

200 West Front Street • Wheaton, Illinois 60187 • 630.682.4700 • www.rjn.com