

A G E N D A

REGULAR MEETING OF THE MAYOR AND BOARD OF TRUSTEES OF THE VILLAGE OF WILLOWBROOK TO BE HELD ON MONDAY, MARCH 8, 2021, AT 6:30 P.M. AT THE WILLOWBROOK POLICE DEPARTMENT TRAINING ROOM, 7760 QUINCY STREET, WILLOWBROOK, IL, DUPAGE COUNTY, ILLINOIS

DUE TO THE COVID 19 PANDEMIC THE VILLAGE WILL BE UTILIZING A CONFERENCE CALL FOR THIS MEETING.

THE PUBLIC CAN UTILIZE THE FOLLOWING CALL IN NUMBER:

Dial in Phone Number: 312-626-6799

Meeting ID: 876 0255 3227

Written Public Comments Can Be Submitted By 5:15 pm on March 8, 2021 to cmardegan@willowbrook.il.us

1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. VISITORS' BUSINESS - Public Comment is Limited to Three Minutes Per Person
5. OMNIBUS VOTE AGENDA:
 - a. Waive Reading of Minutes (APPROVE)
 - b. Minutes - Regular Board Meeting - February 22, 2021 (APPROVE)
 - c. Warrants - \$414,999.72 (APPROVE)
 - d. Monthly Financial Report - February 2021 (APPROVE)
 - e. ORDINANCE NO. 21-O-11 - An Ordinance Extending Temporary Executive Powers Pursuant to 65 ILCS 5/11-1-6 (PASS)

NEW BUSINESS

6. RESOLUTION NO. 21-R-07 - A Resolution Declaring the Lowest Responsible and Responsive Bidder and Approving and Authorizing the Mayor and Village Clerk to Execute an Agreement with NJ Ryan Tree & Landscape, LLC for the 2021/2022 Landscape Maintenance Program (ADOPT)

7. RESOLUTION NO. 21-R-08 - A Resolution Approving and Authoring the Execution pf a Three-Year Contract with Clark Environmental Mosquito Management, Inc. for Mosquito Abatement at a Cost Not-To-Exceed \$26,450.00 Per Year (ADOPT)
8. RESOLUTION NO. 21-R-09 - A Resolution Approving and Authoring the Mayor to Execute, On Behalf of the Village of Willowbrook, A Four-Year Extension Amendment to the Illinois Elevator Safety Program Agreement (ADOPT)
9. RESOUTION NO. 21-R-10 - A Resolution Approving and Authorizing the Execution of an Intergovernmental Agreement Between the Village of Willowbrook and the Tri-State Fire Protection District for the Installation of Certain Communication Equipment on a Village-Owned Water Tower (ADOPT)
10. RESOLUTION NO. 21-R-11 - A Resolution Approving and Authorizing the Village Administrator to Execute, On Behalf of the Village of Willowbrook, an Agreement with the Intergovernmental Personnel Benefit Cooperative (IPBC) for the Village's Dental insurance Plan (ADOPT)
11. ORDINANCE NO.20-O-12 - An Ordinance Reserving and Transferring of Volume Cap in Connection with Private Activity Bond Issues and Related Matters (PASS)
12. RESOLUTION NO. 21-R-12 - A Resolution to Approve and Authorize the Execution of a Professional Services Agreement By and Between BLA, Inc. and the Village of Willowbrook for Professional Traffic Consulting Services (ADOPT)

PRIOR BUSINESS

13. TRUSTEE REPORTS
14. ATTORNEY'S REPORT
15. CLERK'S REPORT
16. ADMINISTRATOR'S REPORT
17. MAYOR'S REPORT

18. CLOSED SESSION
 - a) Personnel: - Appointment, employment, compensation, discipline, performance or dismissal of a specific employee - 5 ILCS 120/2(c)(1)
19. ADJOURNMENT

MINUTES OF THE REGULAR MEETING OF THE MAYOR AND BOARD OF TRUSTEES OF THE VILLAGE OF WILLOWBROOK TO BE HELD ON MONDAY, FEBRUARY 22, 2021 AT 6:30 P.M. AT THE WILLOWBROOK POLICE DEPARTMENT TRAINING ROOM, 7760 QUINCY STREET, WILLOWBROOK, DUPAGE COUNTY, ILLINOIS .

DUE TO THE COVID 19 PANDEMIC, THE VILLAGE WILL BE UTILIZING A ZOOM CONFERENCE CALL FOR THIS MEETING.

1. CALL TO ORDER

The meeting was called to order at 6:30 p.m. by Mayor Frank Trilla.

2. ROLL CALL

Those physically present at roll call were Mayor Frank A. Trilla, Trustees Umberto Davi, Michael Mistele, Gayle Neal, Greg Ruffolo, Chief Robert Schaller, Deputy Chief Lauren Kasper, Deputy Clerk Mardegan, Officers Hristo Bojilov, Blake Huntley, Nicholas Volek, Sergeant Timothy Kobler, and Accreditation Manager/ Administrative Assistant Nancy Turville.

Present Via conference call, due to the COVID-19 Pandemic, were, Trustee Paul Oggerino, Village Clerk Deborah Hahn, Village Attorney Thomas Bastian, Village Administrator Brian Pabst, Assistant Village Administrator Michael Mertens. Director of Finance Carrie Dittman, Building Official Roy Giuntoli and Public Works Foreman AJ Passero.

Absent: Trustee Sue Berglund.

A QUORUM WAS DECLARED

3. PLEDGE OF ALLEGIANCE

Mayor Trilla asked Chief Schaller to lead everyone in saying the Pledge of Allegiance.

4. VISITORS' BUSINESS

Kevin Krug, FOP Union Representative, thanked the Board for approving the Police Department contract. He questioned when the officers will receive their retro pay since the approval was at the January meeting. The Police Department has waited close to two months for their retro pay.

Administrator Pabst explained that there was a death for a family member that worked in the Finance Department and there are many aspects in calculating the officers pay. The police retro pay is extremely complicated it has so many different categories.

Director Dittman added that the Village Board approved the contract on January 11, Diane and I have been accumulating all the hours for the last two years. The retro payments will be paid on

Wednesday, February 24th, 2021. The contract had to be reviewed and double checked due to all the different rates and length of time that the contact was being negotiated.

Krug asked if the officers would get a summary of the breakdown of their pay?

Director Dittman stated, there will be a memo and an excel chart given to all officers with a detailed chart of hours worked.

5. OMNIBUS VOTE AGENDA

Mayor Trilla read over each item in the Omnibus Vote Agenda for the record.

- a. Waive Reading of Minutes (APPROVE)
- b. Minutes - Village Board Meeting - February 8, 2021 (APPROVE)
- c. Warrants - \$387,283.72 (APPROVE)
- d. ORDINANCE NO. 21-O-09 - An Ordinance Extending Temporary Executive Powers Pursuant to 65 ILCS 5/11-1-6 (PASS)

Mayor Trilla asked the Board if there were any items to be removed from Omnibus Vote Agenda.

MOTION: Made by Trustee Davi and seconded by Trustee Mistele to approve the Omnibus Vote Agenda.

ROLL CALL VOTE: AYES: Trustees, Davi, Mistele, Neal, Oggerino and Ruffolo. NAYS: None. ABSENT: Trustee Berglund.

MOTION DECLARED CARRIED

NEW BUSINESS

6. RECEIVE - 2020 Officer Recognition Presentation to recognize the 2020 Officer of the Year and Other Departmental Awards and Anniversaries for the Willowbrook Police Department (RECEIVE)

Deputy Kaspar Chief thanked everyone for coming to this unconventional meeting due to COVID-19. On behalf of myself and the Chief with would like to award all the officers with a new COVID-19 service ribbon which all the officers will be receiving in their mailboxes. This is a small token of our appreciation they never gave up, never quit and always showed

up. This ribbon will be worn on their dress uniforms.

The following employees are recognized for their anniversaries:

- Sergeant Michelle Strugala - 20 - year anniversary
- Officer Jose Chavez-Jimenez - 20 - year anniversary
- Officer Darren Biggs - 20- year anniversary
- Secretary Laurie Schmitz - 15 - year anniversary
- Officer Joseph LaValle - 5 - year anniversary
- Officer Blake Huntley - 5 - year anniversary
- Officer Matthew Vanderjack - 5 - year anniversary

The following officers are recognized for Letters of Recognition: Officers Silva, Lavalle, Erdmann, Martino, Vanderjack, Porter, Chavez-Jimenez, Biggs, Rosal, Robles, Lopez, Huntley, Volek and Dillion.

Sergeants include, Kobler, Eisenbeis and Strugala.

Detectives include, Huntley, Polfliet and Robles.

Our next award is the Meritorious Service Award presented to officer Nicolas Volek. On October 22, 2020, Officer Volek was dispatched to an ambulance assist at a condominium complex for a subject who was unconscious. Upon Arrival, Officer Volek observed a citizen performing cardiopulmonary resuscitation (CPR) on the victim and immediately acted. Officer Volek continued CPR and deployed his automated external defibrillator, which delivered a shock to the victim. After checking for responsiveness, Officer Volek then continued to monitor the victim until Tristate Fire Protection District arrived and took over the case.

Chief Schaller thanked Officer Volek for his life saving measures. I really appreciate all that you do.

The resident thanked Officer Volek for saving his life.

Congratulations to Officer Nicholas Volek for the Officer of the Year Award for 2020 which was chosen by his peers. Some of the comments made by his fellow officers were: knowledgeable, controlled, good officer presence and a great

mentor to other officers. Chief Schaller thanked Officer Volek for mentoring the new officers.

7. RECEIVE - A Presentation to Recognize the Government Finance Officers Association (GFOA) Distinguished Budget Presentation Award (RECEIVE)

Administrator Pabst presented Director Dittman with the Government Finance Officers Association (GFOA) Distinguished Budget Presentation Award. The Government Finance Officers Association (GFOA) has announced that the Village of Willowbrook has received the GFOA's Distinguished Budget Presentation Award for its FY2020/2021 Budget. This is the 19th consecutive year the Village has received this award. The award represents a significant achievement for the Village. It reflects the commitment of the Village Board and staff to meeting the highest principles of government budgeting. To receive the budget award, the Village had to satisfy nationally recognized guidelines for effective budget presentation. Congratulations to the Village Board for their commitment and specifically to Carrie Dittman, our Finance Director, on her knowledge, hard work and thoroughness in receiving this award.

8. ORDINANCE NO. 21-O-10 - An Ordinance Amending Chapter 8 Entitled "Parking Rules" of Title 8 Entitled "Traffic Regulations" By Adding Thereto Section 8-8-18 Entitled "Resident Zone Permit Parking" and Section 1-4-2 Entitled "Notice of Violation" of Chapter 7 Entitled "General Penalty" of Title 1 Entitled "Administrative" (PASS)

Chief Schaller stated, during the September and October Public Safety Meetings, the Committee discussed parking congestion and the shortage of parking due, in part, to the proliferation of motor vehicles registered to persons not residents of the Village of Willowbrook being parked on that portion of 79th Street. The Committee in conjunction with the Police Department has determined that it is in the best interest of the residents of the Village of Willowbrook and, in particular, those Willowbrook residents residing on 79th Street from Clarendon Hills Road east to the 50 block of 79th Street in the Village to restrict parking on 79th Street to "Resident Zone Permit Parking" to motor vehicle owners

residing on 79th Street from Clarendon Hills Road east to the 50 block of 79th Street in the Village of Willowbrook.

MOTION: Made by Trustee Ruffolo and seconded by Trustee Neal to pass Ordinance No. 21-R-10 as presented.

ROLL CALL VOTE: AYES: Trustees, Davi, Mistele, Neal, Oggerino and Ruffolo. NAYS: None. ABSENT: Berglund.

MOTION DECLARED CARRIED

PRIOR BUSINESS

9. TRUSTEE REPORTS

Trustee Neal asked everyone to view the information on the new traffic monitoring system on the Village website home page.

Trustee Ruffolo had no report.

Trustee Mistele commented on the professionalism in the Police Department and the Accounting Department and thanked all involved.

Trustee Berglund was not present.

Trustee Davi had no report.

Trustee Oggerino congratulated Officer Volek and the other officers.

8. ATTORNEY'S REPORT

Attorney Bastian had no report.

9. CLERK'S REPORT

Clerk Hahn had no report.

10. ADMINISTRATOR'S REPORT

Administrator Pabst reported

11. MAYOR'S REPORT

Mayor Trilla agreed with Trustee Mistele about the professionalism at the Police Department. The residents and Trustees have nothing but respect for the Police Department.

12. CLOSED SESSION

Mayor Trilla advised there was no need for closed session at tonight's meeting.

13. ADJOURNMENT

MOTION: Made by Trustee Mistele and seconded by Trustee Davi to adjourn the Regular Meeting at the hour of 6:59 p.m.

ROLL CALL VOTE: AYES: Trustees, Davi, Mistele, Neal, Oggerino and Ruffolo. NAYS: None. ABSENT: Berglund.

MOTION DECLARED CARRIED

PRESENTED, READ, and APPROVED.

_____, 2021.

Frank A. Trilla, Mayor

Minutes transcribed by Deputy Clerk Christine Mardegan.

WARRANTS

5c

March 8, 2021

GENERAL CORPORATE FUND	-----	\$285,649.19
WATER FUND	-----	\$129,350.53
TOTAL WARRANTS	-----	\$414,999.72

Carrie Dittman, Director of Finance

APPROVED:
Frank A. Trilla, Mayor

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 01 GENERAL FUND							
03/09/2021	APCH	199(E)*#	INTERGOVERNMENTAL PERSONNEL	EMP DED PAY- INSURANCE	210-204	00	13,189.15
				LIFE INSURANCE - ELECTED OFFICIALS	410-141	05	71.68
				LIFE INSURANCE - COMMISSIONERS	435-148	07	18.48
				HEALTH/DENTAL/LIFE INSURANCE	455-141	10	84.48
				HEALTH/DENTAL/LIFE INSURANCE	455-141	10	3,763.06
				HEALTH/DENTAL/LIFE INSURANCE	510-141	15	610.08
				LIFE INSURANCE - PLAN COMMISSION	510-340	15	70.56
				LIFE INSURANCE - COMMISSIONERS	550-148	20	53.20
				HEALTH/DENTAL/LIFE INSURANCE	610-141	25	3,001.53
				HEALTH/DENTAL/LIFE INSURANCE	630-141	30	29,210.41
				HEALTH/DENTAL/LIFE INSURANCE	710-141	35	3,421.77
				HEALTH/DENTAL/LIFE INSURANCE	810-141	40	1,856.78
				CHECK APCHK 199(E) TOTAL FOR FUND 01:			55,351.18
03/09/2021	APCH	200(E)*#	WEX BANK	FUEL/MILEAGE/WASH	455-303	10	40.00
				FUEL/MILEAGE/WASH	630-303	30	3,920.79
				FUEL/MILEAGE/WASH	710-303	35	1,783.21
				FUEL/MILEAGE/WASH	810-303	40	68.10
				CHECK APCHK 200(E) TOTAL FOR FUND 01:			5,812.10
03/09/2021	APCH	96761	ACTUATE LAW LLC	CYBER DISRUPTION	460-265	10	800.00
03/09/2021	APCH	96762	ADMINISTRATIVE CONSULTING SPECIA	CONSULTING SERVICES-IT/GRANT	640-306	30	2,375.00
03/09/2021	APCH	96764	ANDREW C PASSERO	COMMISSARY PROVISION	455-355	10	67.65
03/09/2021	APCH	96765	ARAMARK UNIFORMS SERVICES	UNIFORMS	710-345	35	277.99
				UNIFORMS	710-345	35	176.89
				UNIFORMS	710-345	35	72.99
				CHECK APCHK 96765 TOTAL FOR FUND 01:			527.87
03/09/2021	APCH	96768	BRENDAN EPPS-JOHNSON	OPERATING EQUIPMENT	630-401	30	127.55
03/09/2021	APCH	96769	BRYAN WELLER	OPERATING EQUIPMENT	630-401	30	126.42
03/09/2021	APCH	96770	CAR REFLECTIONS	MAINTENANCE - VEHICLES	630-409	30	385.00
03/09/2021	APCH	96771	CHICAGO TRIBUNE	PRINTING, PUBLISHING & TRANSCRIPTION	455-302	10	89.45
03/09/2021	APCH	96772	CHOICE SCREEENING	PERSONNEL RECRUITMENT	455-131	10	84.00
03/09/2021	APCH	96773	CHRISTINE MARDEGAN	FUEL/MILEAGE/WASH	455-303	10	23.41
03/09/2021	APCH	96774#	CITY WIDE OF ILLINOIS	MAINTENANCE - BUILDING	466-228	10	1,120.32

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 01 GENERAL FUND							
				MAINTENANCE - BUILDING	630-228	30	1,827.23
				OPERATING SUPPLIES & EQUIPMENT	710-401	35	106.36
				OPERATING SUPPLIES & EQUIPMENT	710-401	35	46.26
				OPERATING SUPPLIES & EQUIPMENT	710-401	35	31.25
				OPERATING SUPPLIES & EQUIPMENT	710-401	35	223.97
				OPERATING SUPPLIES & EQUIPMENT	710-401	35	128.16
				OPERATING SUPPLIES & EQUIPMENT	710-401	35	47.39
				CHECK APCHK 96774 TOTAL FOR FUND 01:			<u>3,530.94</u>
03/09/2021	APCH	96775	CITYWIDE SAFETY	UNIFORMS	710-345	35	277.33
03/09/2021	APCH	96776	COLLEGE OF DUPAGE	SCHOOLS/CONFERENCES/TRAVEL	630-304	30	225.00
				SCHOOLS/CONFERENCES/TRAVEL	630-304	30	225.00
				SCHOOLS/CONFERENCES/TRAVEL	630-304	30	225.00
				CHECK APCHK 96776 TOTAL FOR FUND 01:			<u>675.00</u>
03/09/2021	APCH	96777#	COMCAST CABLE	INTERNET/WEBSITE HOSTING	460-225	10	226.82
				INTERNET/WEBSITE HOSTING	715-225	35	118.35
				CHECK APCHK 96777 TOTAL FOR FUND 01:			<u>345.17</u>
03/09/2021	APCH	96778*#	COMED	ENERGY/COMED (835 MIDWAY)	466-240	10	578.99
				ENERGY - STREET LIGHTS	745-207	35	1,033.83
				ENERGY - STREET LIGHTS	745-207	35	60.36
				ENERGY - STREET LIGHTS	745-207	35	486.60
				CHECK APCHK 96778 TOTAL FOR FUND 01:			<u>2,159.78</u>
03/09/2021	APCH	96779	COMPASS MINERALS AMERICA	SALT	755-331	35	9,867.81
				SALT	755-331	35	5,932.83
				SALT	755-331	35	2,059.45
				SALT	755-331	35	16,707.91
				CHECK APCHK 96779 TOTAL FOR FUND 01:			<u>34,568.00</u>
03/09/2021	APCH	96780	COMPLIANCE POSTER COMPANY	OFFICE SUPPLIES	455-301	10	99.31
03/09/2021	APCH	96781	DAVIS & STANTON, INC.	EMPLOYEE RECOGNITION	630-309	30	296.00
				EMPLOYEE RECOGNITION	630-309	30	25.00
				CHECK APCHK 96781 TOTAL FOR FUND 01:			<u>321.00</u>
03/09/2021	APCH	96782*#	DELTA DENTAL PLAN OF ILLINOIS	EMP DED PAY- INSURANCE	210-204	00	1,437.57

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 01 GENERAL FUND							
				EMP DED PAY- INSURANCE	210-204	00	39.06
				HEALTH/DENTAL/LIFE INSURANCE	455-141	10	271.09
				HEALTH/DENTAL/LIFE INSURANCE	610-141	25	228.64
				HEALTH/DENTAL/LIFE INSURANCE	630-141	30	2,139.30
				HEALTH/DENTAL/LIFE INSURANCE	710-141	35	213.93
				HEALTH/DENTAL/LIFE INSURANCE	810-141	40	228.64
				CHECK APCHK 96782 TOTAL FOR FUND 01:			<u>4,558.23</u>
03/09/2021	APCH	96783	EVT TECH	MAINTENANCE - VEHICLES	630-409	30	1,114.80
				MAINTENANCE - VEHICLES	630-409	30	1,114.80
				MAINTENANCE - VEHICLES	630-409	30	1,114.80
				MAINTENANCE - VEHICLES	630-409	30	1,114.80
				CHECK APCHK 96783 TOTAL FOR FUND 01:			<u>4,459.20</u>
03/09/2021	APCH	96784	FIFTH THIRD BANK	FEES/DUES/SUBSCRIPTIONS	630-307	30	147.72
03/09/2021	APCH	96785	FIRESTONE TIRE & SERVICE	MAINTENANCE - VEHICLES	630-409	30	421.96
03/09/2021	APCH	96786#	FIRST NATIONAL BANK OMAHA	EDP EQUIPMENT/SOFTWARE	417-212	05	754.36
				FEES/DUES/SUBSCRIPTIONS	455-307	10	12.99
				FEES/DUES/SUBSCRIPTIONS	455-307	10	9.99
				EDP LICENSES	460-263	10	64.99
				EDP LICENSES	460-263	10	128.00
				EDP LICENSES	460-263	10	337.50
				EDP LICENSES	555-263	20	14.99
				OFFICE SUPPLIES	610-301	25	43.98
				FEES/DUES/SUBSCRIPTIONS	610-307	25	200.00
				EDP EQUIPMENT/SOFTWARE	715-212	35	669.36
				CHECK APCHK 96786 TOTAL FOR FUND 01:			<u>2,236.16</u>
03/09/2021	APCH	96787	GEWALT HAMILTON ASSOCIATES INC	PLAN REVIEW - TRAFFIC CONSULTANT	520-258	15	745.20
				PLAN REVIEW - TRAFFIC CONSULTANT	520-258	15	1,540.80
				PLAN REVIEW - TRAFFIC CONSULTANT	520-258	15	828.00
				CHECK APCHK 96787 TOTAL FOR FUND 01:			<u>3,114.00</u>
03/09/2021	APCH	96788	Gilman Custom Construction	20_Plan Examination & Review Fee	310-401	00	304.11
03/09/2021	APCH	96789*#	H AND R CONSTRUCTION INC.	SNOW REMOVAL CONTRACT	740-287	35	5,080.00
				SNOW REMOVAL CONTRACT	740-287	35	5,080.00
				SNOW REMOVAL CONTRACT	740-287	35	5,320.00
				SNOW REMOVAL CONTRACT	740-287	35	5,080.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 01 GENERAL FUND							
				SNOW REMOVAL CONTRACT	740-287	35	3,810.00
				CHECK APCHK 96789 TOTAL FOR FUND 01:			<u>24,370.00</u>
03/09/2021	APCH	96791	HENDERSON PRODUCTS INC	MAINTENANCE - VEHICLES	735-409	35	121.60
03/09/2021	APCH	96792*#	HOME DEPOT CREDIT SERVICES	MAINTENANCE - BUILDING	466-228	10	79.98
				MAINTENANCE - GARAGE	725-413	35	222.39
				MAINTENANCE - GARAGE	725-413	35	58.52
				MAINTENANCE - GARAGE	725-413	35	31.16
				MAINTENANCE - GARAGE	725-413	35	245.35
				MAINTENANCE - GARAGE	725-413	35	30.91
				MAINTENANCE - EQUIPMENT	735-411	35	24.97
				CHECK APCHK 96792 TOTAL FOR FUND 01:			<u>693.28</u>
03/09/2021	APCH	96793	ILCMA	PERSONNEL RECRUITMENT	455-131	10	50.00
03/09/2021	APCH	96794	INDUSTRIAL ELECTRICAL SUPPLY	MAINTENANCE - VEHICLES	735-409	35	24.77
03/09/2021	APCH	96795	KLEIN, THORPE & JENKINS, LTD.	FEES - VILLAGE ATTORNEY	470-239	10	4,234.89
				FEES - SPECIAL ATTORNEY	470-241	10	76.50
				CHECK APCHK 96795 TOTAL FOR FUND 01:			<u>4,311.39</u>
03/09/2021	APCH	96796	LAW ENFORCEMENT TRAINING LLC	FEES/DUES/SUBSCRIPTIONS	630-307	30	1,380.00
03/09/2021	APCH	96797	LAW OFFICES STORINO RAMELLO&DURK	FEES - VILLAGE ATTORNEY	470-239	10	6,783.00
				CRISIS MANAGEMENT	475-367	10	133.00
				CHECK APCHK 96797 TOTAL FOR FUND 01:			<u>6,916.00</u>
03/09/2021	APCH	96798	METRO REPORTING SERVICE LTD.	FEES - COURT REPORTER	520-246	15	685.00
03/09/2021	APCH	96801#	MIDCO	PHONE - TELEPHONES	455-201	10	468.00
				PHONE - TELEPHONES	630-201	30	468.00
				CHECK APCHK 96801 TOTAL FOR FUND 01:			<u>936.00</u>
03/09/2021	APCH	96802#	MITECHS, INC.	CONSULTING SERVICES - IT	460-306	10	392.25
				CONSULTING SERVICES-IT/GRANT	640-306	30	1,573.25
				CHECK APCHK 96802 TOTAL FOR FUND 01:			<u>1,965.50</u>
03/09/2021	APCH	96803	MPG TANDEM	UNIFORMS	710-345	35	223.01
03/09/2021	APCH	96804	NANCY TURVILLE	EMPLOYEE RECOGNITION	630-309	30	189.96

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 01 GENERAL FUND							
03/09/2021	APCH	96805	NCPERS GROUP LIFE INSURANCE	EMP DED - SUPPLEMENTAL LIFE INSURANCE	210-213	00	80.00
03/09/2021	APCH	96806#	NICOR GAS	NICOR GAS (835 MIDWAY)	466-236	10	489.59
				NICOR GAS (7760 QUINCY)	630-235	30	829.26
				NICOR GAS	725-415	35	794.28
				CHECK APCHK 96806 TOTAL FOR FUND 01:			<u>2,113.13</u>
03/09/2021	APCH	96807	NJ RYAN TREE & LANDSCAPE LLC	SNOW REMOVAL CONTRACT	740-287	35	4,495.00
				SNOW REMOVAL CONTRACT	740-287	35	4,725.00
				SNOW REMOVAL CONTRACT	740-287	35	10,625.00
				SNOW REMOVAL CONTRACT	740-287	35	2,740.00
				SNOW REMOVAL CONTRACT	740-287	35	5,480.00
				SNOW REMOVAL CONTRACT	740-287	35	1,370.00
				SNOW REMOVAL CONTRACT	740-287	35	12,100.00
				SNOW REMOVAL CONTRACT	740-287	35	13,200.00
				SNOW REMOVAL CONTRACT	740-287	35	10,870.00
				SNOW REMOVAL CONTRACT	740-287	35	10,150.00
				SNOW REMOVAL CONTRACT	740-287	35	7,422.50
				SNOW REMOVAL CONTRACT	740-287	35	5,480.00
				SNOW REMOVAL CONTRACT	740-287	35	1,712.50
				CHECK APCHK 96807 TOTAL FOR FUND 01:			<u>90,370.00</u>
03/09/2021	APCH	96808	NOTARY SERVICE BONDING AGENCY	FEES/DUES/SUBSCRIPTIONS	455-307	10	53.95
03/09/2021	APCH	96809	P.F. PETTIBONE & CO.	PRINTING & PUBLISHING	630-302	30	929.90
03/09/2021	APCH	96810#	QUADIENT LEASING USA, INC.	OFFICE SUPPLIES	455-301	10	139.73
				POSTAGE & METER RENT	630-311	30	547.17
				CHECK APCHK 96810 TOTAL FOR FUND 01:			<u>686.90</u>
03/09/2021	APCH	96811	RUSH TRUCK CENTER -CHICAGO	MAINTENANCE - VEHICLES	735-409	35	4,177.91
03/09/2021	APCH	96812	RUTLEDGE PRINTING CO.	PRINTING & PUBLISHING	630-302	30	587.31
03/09/2021	APCH	96813	STAPLES	OPERATING EQUIPMENT	630-401	30	4.99
03/09/2021	APCH	96814	T.P.I.	PLAN REVIEW - BUILDING CODE-REIMB	820-258	40	5,168.25
				PLAN REVIEW - BUILDING CODE-REIMB	820-258	40	9,030.00
				PART TIME - INSPECTOR-REIMB	830-109	40	2,415.00
				PLUMBING INSPECTION-REIMB	830-115	40	500.00
				CHECK APCHK 96814 TOTAL FOR FUND 01:			<u>17,113.25</u>
03/09/2021	APCH	96815	THE EAGLE UNIFORM CO	UNIFORMS	630-345	30	254.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 01 GENERAL FUND							
03/09/2021	APCH	96816	THOMPSON ELEV. INSPECT. SERVICE	ELEVATOR INSPECTION-REIMB	830-117	40	100.00
03/09/2021	APCH	96817	TIM WALLACE LANDSCAPE SUPPLY CO	MAINTENANCE - VEHICLES	735-409	35	916.29
03/09/2021	APCH	96818	TRAFFIC CONTROL & PROTECTIONS	ROAD SIGNS	755-333	35	532.80
03/09/2021	APCH	96819	U.S. POSTMASTER	POSTAGE & METER RENT	455-311	10	245.00
03/09/2021	APCH	96820	USABLUEBOOK	MAINTENANCE - EQUIPMENT	740-411	35	21.55
03/09/2021	APCH	96822#	WAREHOUSE DIRECT	OFFICE SUPPLIES	455-301	10	34.09
				OFFICE SUPPLIES	455-301	10	20.42
				COMMISSARY PROVISION	455-355	10	62.21
				COMMISSARY PROVISION	455-355	10	22.99
				OPERATING EQUIPMENT	630-401	30	60.00
				OFFICE SUPPLIES	810-301	40	63.12
				OFFICE SUPPLIES	810-301	40	15.78
				CHECK APCHK 96822 TOTAL FOR FUND 01:			<u>278.61</u>
03/09/2021	APCH	96823	WEST SIDE TRACTOR SALES	SNOW REMOVAL CONTRACT	740-287	35	2,050.00
03/09/2021	APCH	96824	WILLOWBROOK FORD INC.	MAINTENANCE - VEHICLES	630-409	30	100.00
				MAINTENANCE - VEHICLES	630-409	30	179.55
				CHECK APCHK 96824 TOTAL FOR FUND 01:			<u>279.55</u>
				Total for fund 01 GENERAL FUND			285,649.19

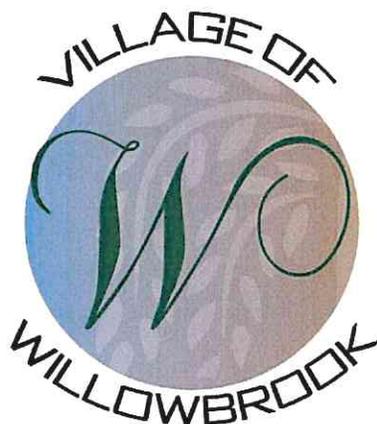
Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 02 WATER FUND							
03/09/2021	APCH	198 (E)	DUPAGE WATER COMMISSION	PURCHASE OF WATER	420-575	50	109,772.39
03/09/2021	APCH	199 (E) *#	INTERGOVERNMENTAL PERSONNEL	HEALTH/DENTAL/LIFE INSURANCE	401-141	50	3,480.51
03/09/2021	APCH	200 (E) *#	WEX BANK	FUEL/MILEAGE/WASH	401-303	50	1,783.21
03/09/2021	APCH	96760	ACLARA TECHNOLOGIES LLC	EDP LICENSES	417-263	50	5,398.00
03/09/2021	APCH	96763	ALARM DETECTION SYSTEMS INC	WELLHOUSE REPAIRS & MAIN - WB EXEC PL	425-474	50	349.86
				WELLHOUSE REPAIRS & MAIN - WB EXEC PL	425-474	50	241.89
				REPAIRS & MAINTENANCE-STANDPIPE/PUMPH	425-485	50	208.26
				CHECK APCHK 96763 TOTAL FOR FUND 02:			<u>800.01</u>
03/09/2021	APCH	96766	ASSOCIATED TECHNICAL SERV. LTD.	LEAK SURVEYS	430-276	50	735.00
03/09/2021	APCH	96767	BLACK GOLD SEPTIC	REPAIRS & MAINTENANCE-STANDPIPE/PUMPH	425-485	50	350.00
03/09/2021	APCH	96778*#	COMED	ENERGY - ELECTRIC PUMP	420-206	50	1,242.21
03/09/2021	APCH	96782*#	DELTA DENTAL PLAN OF ILLINOIS	HEALTH/DENTAL/LIFE INSURANCE	401-141	50	213.93
03/09/2021	APCH	96789*#	H AND R CONSTRUCTION INC.	WATER DISTRIBUTION REPAIRS/MAINTENANC	430-277	50	4,500.00
03/09/2021	APCH	96790	HACH CHEMICAL COMPANY	REPAIRS & MAINTENANCE-STANDPIPE/PUMPH	425-485	50	447.30
03/09/2021	APCH	96792*#	HOME DEPOT CREDIT SERVICES	MATERIALS & SUPPLIES- STANDPIPE/PUMPH	425-475	50	362.91
03/09/2021	APCH	96799	METROPOLITAN INDUSTRIES INC	MATERIALS & SUPPLIES- STANDPIPE/PUMPH	425-475	50	138.00
03/09/2021	APCH	96800	MID AMERICAN WATER	MATERIAL & SUPPLIES - DISTRIBUTION	430-476	50	52.00
03/09/2021	APCH	96821	VERIZON WIRELESS	PHONE - TELEPHONES	401-201	50	75.06
				Total for fund 02 WATER FUND			129,350.53
			TOTAL - ALL FUNDS				414,999.72

'*'-INDICATES CHECK DISTRIBUTED TO MORE THAN ONE FUND

'#'-INDICATES CHECK DISTRIBUTED TO MORE THAN ONE DEPARTMENT

Payroll Liability Check Register
For Check Dates 02/01/2021 to 02/28/2021

Check Number	Vendor Name	Check Date	Check Amount
53944	AFLAC	02/26/2021	2,716.34
53945	I C M A RETIREMENT TRUST - 457	02/26/2021	825.00
53946	ILLINOIS STATE DISBURSEMENT UNIT	02/26/2021	2,244.30
53947	ILLINOIS FRATERNAL	02/26/2021	1,104.00
53948	NATIONWIDE RETIREMENT SOLUTIONS	02/26/2021	8,612.54
EFT366	EFTPS	02/26/2021	53,730.26
EFT367	COMMUNITY BANK OF WILLOWBROOK	02/26/2021	272.23
EFT368	I.M.R.F. PENSION FUND	02/26/2021	38,135.99
EFT369	VILLAGE OF WILLOWBROOK	02/26/2021	50,465.22
EFT370	ILLINOIS DEPT. OF REVENUE	02/26/2021	7,631.35
53942	NATIONWIDE RETIREMENT SOLUTIONS	02/24/2021	5,855.19
EFT363	EFTPS	02/24/2021	32,266.89
EFT364	VILLAGE OF WILLOWBROOK	02/24/2021	12,842.87
EFT365	ILLINOIS DEPT. OF REVENUE	02/24/2021	7,285.10
53933	I C M A RETIREMENT TRUST - 457	02/12/2021	825.00
53934	ILLINOIS STATE DISBURSEMENT UNIT	02/12/2021	997.30
53935	NATIONWIDE RETIREMENT SOLUTIONS	02/12/2021	8,425.48
EFT359	EFTPS	02/12/2021	29,575.28
EFT360	COMMUNITY BANK OF WILLOWBROOK	02/12/2021	272.23
EFT361	VILLAGE OF WILLOWBROOK	02/12/2021	50,370.12
EFT362	ILLINOIS DEPT. OF REVENUE	02/12/2021	6,396.24
Total Checks: 21		Total Paid:	\$320,848.93



MONTHLY FINANCIAL REPORT

FEBRUARY 2021

RESPECTFULLY SUBMITTED BY:

Frank A. Trilla, Mayor

Carrie Dittman, Director of Finance

**VILLAGE OF WILLOWBROOK
FINANCIAL REPORT
MUNICIPAL SALES AND USE TAXES**

MONTH DIST	SALE MADE						Difference from Prior Year
		16-17	17-18	18-19	19-20	20-21	
MAY	FEB	\$ 267,882	\$ 264,472	\$ 276,118	\$ 320,221	\$ 307,589	-3.94%
JUNE	MAR	312,681	304,436	334,282	360,870	359,968	-0.25%
JULY	APR	269,580	304,925	309,957	343,577	289,885	-15.63%
AUG	MAY	331,887	345,478	376,154	397,471	356,759	-10.24%
SEPT	JUNE	398,196	354,582	364,229	408,372	385,683	-5.56%
OCT	JULY	316,266	313,701	320,062	380,773	415,157	9.03%
NOV	AUG	315,293	361,826	339,020	389,765	390,300	0.14%
DEC	SEPT	325,374	334,582	342,467	363,388	391,326	7.69%
JAN	OCT	289,208	312,400	329,103	375,088	404,167	7.75%
FEB	NOV	304,898	319,012	362,572	368,379	379,791	3.10%
MARCH	DEC	371,080	416,900	428,214	437,962		
APRIL	JAN	263,392	285,192	296,927	311,493		
TOTAL		\$ 3,765,737	\$ 3,917,506	\$ 4,079,105	\$ 4,457,359	\$ 3,680,625	
MTH AVG		\$ 313,811	\$ 326,459	\$ 339,925	\$ 371,447	\$ 368,062	
BUDGET		\$ 3,600,000	\$ 3,600,000	\$ 3,600,000	\$ 4,000,000	\$ 3,500,000	

YEAR TO DATE LAST YEAR : \$ 3,707,904
 YEAR TO DATE THIS YEAR : \$ 3,680,625
 DIFFERENCE : \$ (27,279)

PERCENTAGE CHANGE :

-0.74%

CURRENT FISCAL YEAR :

BUDGETED REVENUE: \$ 3,500,000
 PERCENTAGE OF YEAR COMPLETED : 83.33%
 PERCENTAGE OF REVENUE TO DATE : 105.16%
 PROJECTION OF ANNUAL REVENUE : \$ 4,424,566
 EST. DOLLAR DIFF ACTUAL TO BUDGET \$ 924,566
 EST. PERCENT DIFF ACTUAL TO BUDGET 26.42%

VILLAGE OF WILLOWBROOK
MONTHLY CASH AND INVESTMENT BALANCE BY FUND
FOR THE MONTH ENDED 02/28/2021

ACCOUNT	BALANCE
Fund 01 GENERAL FUND	
CHECKING - 0283	0.00
COMMUNITY BANK OF WB - 0275	1,128,789.54
IL FUNDS - 5435	4,057,648.56
COMMUNITY BANK OF WB MM - 1771	305,760.03
COMMUNITY BANK RD LGHT - 0243	15,204.28
COMMUNITY BANK OF WB FSA - 3804	12,083.75
COMMUNITY BANK DRUG ACCT - 4171	29,220.39
PETTY CASH REVLVING	950.00
Total For Fund 01:	<u>5,549,656.55</u>
Fund 02 WATER FUND	
IL FUNDS WATER - 5914	620,890.16
COMMUNITY BANK OF WB WTR - 4163	728,888.90
COMMUNITY BANK OF WB - 0275	0.00
Total For Fund 02:	<u>1,349,779.06</u>
Fund 04 MOTOR FUEL TAX FUND	
IL FUNDS MFT - 5443	685,570.85
Total For Fund 04:	<u>685,570.85</u>
Fund 06 SSA ONE BOND & INTEREST FUND	
IL FUNDS SSA BOND - 4621	21,858.61
Total For Fund 06:	<u>21,858.61</u>
Fund 07 POLICE PENSION FUND	
COMMUNITY BANK OF WB PP - 4155	10,041.21
COMMUNITY BANK OF WB - 0275	0.00
SCHWAB - PP MONEY MARKET	283,328.78
US TREASURIES	811,732.55
US AGENCIES	5,752,369.78
MUNICIPAL BONDS	1,333,173.73
CORPORATE BONDS	1,881,046.50
MUTUAL FUNDS	12,692,567.67
MARKET VALUE CONTRA	4,744,704.56
Total For Fund 07:	<u>27,508,964.78</u>
Fund 09 WATER CAPITAL IMPROVEMENTS FUND	
IL FUNDS WTR CAP - 1206	1,019,419.51
Total For Fund 09:	<u>1,019,419.51</u>
Fund 10 CAPITAL PROJECT FUND	
COMMUNITY BANK OF WB - 0275	680.52
Total For Fund 10:	<u>680.52</u>
Fund 11 DEBT SERVICE FUND	
IL FUNDS BOND PROCEEDS DS - 2756	11.25
Total For Fund 11:	<u>11.25</u>
Fund 14 LAND ACQUISITION, FACILITY, EXPANSION &	
IL FUNDS - 5435	18,369.00
Total For Fund 14:	<u>18,369.00</u>
Fund 15 RT 83/PLAINFIELD RD BUSINESS DISTRICT TAX	
IL FUNDS BUSINESS DISTRICT - 5435	2,008,742.52
Total For Fund 15:	<u>2,008,742.52</u>
TOTAL CASH & INVESTMENTS:	<u>38,163,052.65</u>

ACCOUNT BALANCE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021
 CASH & INVESTMENTS BY FUND AND ACCOUNT TYPE

GL NUMBER	DESCRIPTION	END BALANCE 02/28/2021
Fund 01 - GENERAL FUND		
MONEY MARKET		
01-00-110-322	IL FUNDS - 5435	4,057,648.56
01-00-110-323	COMMUNITY BANK OF WB MM - 1771	305,760.03
01-00-110-325	COMMUNITY BANK RD LGHT - 0243	15,204.28
01-00-110-380	COMMUNITY BANK DRUG ACCT - 4171	29,220.39
	Net MONEY MARKET	4,407,833.26
PETTY CASH		
01-00-110-911	PETTY CASH REVLVING	950.00
	Net PETTY CASH	950.00
SAVINGS		
01-00-110-257	COMMUNITY BANK OF WB - 0275	1,128,789.54
01-00-110-332	COMMUNITY BANK OF WB FSA - 3804	12,083.75
	Net SAVINGS	1,140,873.29
Fund 02 - WATER FUND		
MONEY MARKET		
02-00-110-113	IL FUNDS WATER - 5914	620,890.16
02-00-110-209	COMMUNITY BANK OF WB WTR - 4163	728,888.90
	Net MONEY MARKET	1,349,779.06
Fund 04 - MOTOR FUEL TAX FUND		
MONEY MARKET		
04-00-110-116	IL FUNDS MFT - 5443	685,570.85
	Net MONEY MARKET	685,570.85
Fund 06 - SSA ONE BOND & INTEREST FUND		
MONEY MARKET		
06-00-110-117	IL FUNDS SSA BOND - 4621	21,858.61
	Net MONEY MARKET	21,858.61
Fund 07 - POLICE PENSION FUND		
MONEY MARKET		
07-00-110-202	COMMUNITY BANK OF WB PP - 4155	10,041.21
07-00-110-336	SCHWAB - PP MONEY MARKET	283,328.78
	Net MONEY MARKET	293,369.99
AGENCY CERTIFICATES		
07-00-120-260	US AGENCIES	5,752,369.78
	Net AGENCY CERTIFICATES	5,752,369.78
CORPORATE BONDS		
07-00-120-288	CORPORATE BONDS	1,881,046.50
	Net CORPORATE BONDS	1,881,046.50
MUNICIPAL BONDS		
07-00-120-270	MUNICIPAL BONDS	1,333,173.73
	Net MUNICIPAL BONDS	1,333,173.73
MUTUAL FUNDS		
07-00-120-290	MUTUAL FUNDS	12,692,567.67
	Net MUTUAL FUNDS	12,692,567.67
MARKET VALUE		
07-00-120-900	MARKET VALUE CONTRA	4,744,704.56
	Net MARKET VALUE	4,744,704.56
TREASURY NOTES		
07-00-120-250	US TREASURIES	811,732.55
	Net TREASURY NOTES	811,732.55
Fund 09 - WATER CAPITAL IMPROVEMENTS FUND		
MONEY MARKET		

ACCOUNT BALANCE REPORT FOR WILLOWBROOK
PERIOD ENDING 02/28/2021
CASH & INVESTMENTS BY FUND AND ACCOUNT TYPE

GL NUMBER	DESCRIPTION	END BALANCE 02/28/2021
Fund 09 - WATER CAPITAL IMPROVEMENTS FUND		
09-00-110-324	IL FUNDS WTR CAP - 1206	<u>1,019,419.51</u>
	Net MONEY MARKET	1,019,419.51
Fund 10 - CAPITAL PROJECT FUND		
SAVINGS		
10-00-110-257	COMMUNITY BANK OF WB - 0275	<u>680.52</u>
	Net SAVINGS	680.52
Fund 11 - DEBT SERVICE FUND		
MONEY MARKET		
11-00-110-111	IL FUNDS BOND PROCEEDS DS - 2756	<u>11.25</u>
	Net MONEY MARKET	11.25
Fund 14 - LAND ACQUISITION, FACILITY, EXPANSION & MONEY MARKET		
14-00-110-322	IL FUNDS - 5435	<u>18,369.00</u>
	Net MONEY MARKET	18,369.00
Fund 15 - RT 83/PLAINFIELD RD BUSINESS DISTRCT TAX MONEY MARKET		
15-00-110-322	IL FUNDS BUSINESS DISTRICT - 5435	<u>2,008,742.52</u>
	Net MONEY MARKET	2,008,742.52

ACCOUNT BALANCE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021
 CASH & INVESTMENTS BY INSTITUTION

GL NUMBER	DESCRIPTION	END BALANCE 02/28/2021
COMMUNITY BANK OF WB		
01-00-110-257	COMMUNITY BANK OF WB - 0275	1,128,789.54
01-00-110-323	COMMUNITY BANK OF WB MM - 1771	305,760.03
01-00-110-325	COMMUNITY BANK RD LGHT - 0243	15,204.28
01-00-110-332	COMMUNITY BANK OF WB FSA - 3804	12,083.75
01-00-110-380	COMMUNITY BANK DRUG ACCT - 4171	29,220.39
02-00-110-209	COMMUNITY BANK OF WB WTR - 4163	728,888.90
07-00-110-202	COMMUNITY BANK OF WB PP - 4155	10,041.21
10-00-110-257	COMMUNITY BANK OF WB - 0275	680.52
	Net COMMUNITY BANK OF WB	<u>2,230,668.62</u>
ILLINOIS FUNDS		
01-00-110-322	IL FUNDS - 5435	4,057,648.56
02-00-110-113	IL FUNDS WATER - 5914	620,890.16
04-00-110-116	IL FUNDS MFT - 5443	685,570.85
06-00-110-117	IL FUNDS SSA BOND - 4621	21,858.61
09-00-110-324	IL FUNDS WTR CAP - 1206	1,019,419.51
11-00-110-111	IL FUNDS BOND PROCEEDS DS - 2756	11.25
14-00-110-322	IL FUNDS - 5435	18,369.00
15-00-110-322	IL FUNDS BUSINESS DISTRICT - 5435	2,008,742.52
	Net ILLINOIS FUNDS	<u>8,432,510.46</u>
VILLAGE OF WILLOWBROOK		
01-00-110-911	PETTY CASH REVLVING	950.00
	Net VILLAGE OF WILLOWBROOK	<u>950.00</u>
CHARLES SCHWAB		
07-00-110-336	SCHWAB - PP MONEY MARKET	283,328.78
07-00-120-250	US TREASURIES	811,732.55
07-00-120-260	US AGENCIES	5,752,369.78
07-00-120-270	MUNICIPAL BONDS	1,333,173.73
07-00-120-288	CORPORATE BONDS	1,881,046.50
07-00-120-290	MUTUAL FUNDS	12,692,567.67
07-00-120-900	MARKET VALUE CONTRA	4,744,704.56
	Net CHARLES SCHWAB	<u>27,498,923.57</u>
Total - All Funds:		<u><u>38,163,052.65</u></u>

GL Number	Description	Balance
Fund 01: GENERAL FUND		
Due From Other Funds 01-00-140-107	DUE TO/FROM POLICE PENSION FUND	160,255.40
	Total Due From Other Funds	160,255.40
Fund 07: POLICE PENSION FUND		
Due From Other Funds 07-00-140-101	DUE (TO)/FROM GENERAL FUND	(160,255.40)
	Total Due From Other Funds	(160,255.40)

REVENUE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/2021	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE
Fund 01 - GENERAL FUND						
PROPERTY TAX						
01-00-310-101	PROPERTY TAX LEVY - SRA	0.00	73,766.82	72,750.00	101.40	(1,016.82)
01-00-310-102	PROPERTY TAX LEVY - ROAD & BRIDGE	0.00	117,486.59	116,146.00	101.15	(1,340.59)
Net PROPERTY TAX		0.00	191,253.41	188,896.00	101.25	(2,357.41)
OTHER TAXES						
01-00-310-201	MUNICIPAL SALES TAX	379,790.92	3,680,624.89	3,500,000.00	105.16	(180,624.89)
01-00-310-202	ILLINOIS INCOME TAX	96,490.34	813,089.63	717,000.00	113.40	(96,089.63)
01-00-310-203	AMUSEMENT TAX	10,500.74	49,772.70	65,004.00	76.57	15,231.30
01-00-310-204	REPLACEMENT TAX	0.00	1,126.80	1,250.00	90.14	123.20
01-00-310-205	UTILITY TAX	75,525.00	659,594.92	850,000.00	77.60	190,405.08
01-00-310-206	LOCAL GAS TAX	17,391.00	204,978.55	275,000.00	74.54	70,021.45
01-00-310-208	PLACES OF EATING TAX	35,213.44	368,317.97	400,000.00	92.08	31,682.03
01-00-310-209	WATER TAX	12,478.38	139,380.68	160,000.00	87.11	20,619.32
01-00-310-210	WATER TAX - UNINCORPORATED	0.00	167.07	160.00	104.42	(7.07)
01-00-310-211	HOTEL/MOTEL TAX	14,875.49	128,600.16	216,000.00	59.54	87,399.84
01-00-310-212	SELF-STORAGE FACILITY TAX	10,411.38	101,356.94	0.00	100.00	(101,356.94)
Net OTHER TAXES		652,676.69	6,147,010.31	6,184,414.00	99.40	37,403.69
LICENSES						
01-00-310-302	LIQUOR LICENSES	0.00	21,914.00	66,750.00	32.83	44,836.00
01-00-310-303	BUSINESS LICENSES	(60.00)	99,859.50	93,000.00	107.38	(6,859.50)
01-00-310-304	VIDEO GAMING LICENSES	(4,500.00)	2,875.00	10,000.00	28.75	7,125.00
01-00-310-305	VENDING MACHINE LICENSES	(108.00)	1,794.00	2,500.00	71.76	706.00
01-00-310-306	SCAVENGER LICENSES	(1,000.00)	6,000.00	7,000.00	85.71	1,000.00
Net LICENSES		(5,668.00)	132,442.50	179,250.00	73.89	46,807.50
PERMITS						
01-00-310-401	BUILDING PERMITS	28,635.73	263,374.34	285,000.00	92.41	21,625.66
01-00-310-402	SIGN PERMITS	1,400.88	15,224.20	6,000.00	253.74	(9,224.20)
01-00-310-403	OTHER PERMITS	0.00	(24.00)	500.00	(4.80)	524.00
01-00-310-404	COUNTY BMP FEE	0.00	0.00	500.00	0.00	500.00
01-00-310-405	SPECIAL HAULING PERMITS (OXCART)	50.00	2,395.00	3,000.00	79.83	605.00
Net PERMITS		30,086.61	280,969.54	295,000.00	95.24	14,030.46
FINES						
01-00-310-501	CIRCUIT COURT FINES	3,855.75	51,182.65	90,000.00	56.87	38,817.35
01-00-310-502	TRAFFIC FINES	8,225.00	53,925.00	25,000.00	215.70	(28,925.00)
01-00-310-503	RED LIGHT FINES	31,342.00	518,739.00	565,000.00	91.81	46,261.00
01-00-310-504	DUI FINES	700.00	3,106.21	2,000.00	155.31	(1,106.21)
01-00-310-505	OVERWEIGHT TRUCK FINES	457.00	2,984.50	6,000.00	49.74	3,015.50
Net FINES		44,579.75	629,937.36	688,000.00	91.56	58,062.64
OVERHEAD REIMBURSEMENT						
01-00-310-601	ADMINISTRATIVE SUPPORT REIMB - WATER	46,857.33	468,573.30	562,288.00	83.33	93,714.70
Net OVERHEAD REIMBURSEMENT		46,857.33	468,573.30	562,288.00	83.33	93,714.70

REVENUE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/2021	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE
Fund 01 - GENERAL FUND						
CHARGES & FEES						
01-00-310-700	PLANNING APPLICATION FEES	3,350.00	25,340.00	10,000.00	253.40	(15,340.00)
01-00-310-701	PUBLIC HEARING FEES	7,475.00	25,500.00	2,500.00	1,020.00	(23,000.00)
01-00-310-702	PLANNING REVIEW FEES	0.00	0.00	2,500.00	0.00	2,500.00
01-00-310-704	ACCIDENT REPORT COPIES	180.00	1,865.00	2,000.00	93.25	135.00
01-00-310-705	VIDEO GAMING TERMINAL INCOME	0.00	19,459.83	36,000.00	54.06	16,540.17
01-00-310-706	COPIES-ORDINANCES & MAPS	0.00	0.00	50.00	0.00	50.00
01-00-310-723	ELEVATOR INSPECTION FEES	17,500.00	20,975.00	12,000.00	174.79	(8,975.00)
01-00-310-724	BURGLAR ALARM FEES	5,955.00	6,825.00	10,000.00	68.25	3,175.00
01-00-310-726	NSF FEE	0.00	(25.00)	0.00	100.00	25.00
Net CHARGES & FEES		34,460.00	99,939.83	75,050.00	133.16	(24,889.83)
PARK & RECREATION CHARGES						
01-00-310-813	PARK & REC CONTRIBUTION	0.00	0.00	3,000.00	0.00	3,000.00
01-00-310-814	PARK PERMIT FEES	0.00	(290.00)	3,000.00	(9.67)	3,290.00
01-00-310-815	SUMMER RECREATION FEES	0.00	0.00	9,230.00	0.00	9,230.00
01-00-310-817	SPECIAL EVENTS	0.00	0.00	5,450.00	0.00	5,450.00
01-00-310-819	BURR RIDGE/WILLOWBROOK BASEBALL REI	0.00	0.00	6,500.00	0.00	6,500.00
01-00-310-820	HOLIDAY CONTRIBUTION	0.00	0.00	2,500.00	0.00	2,500.00
01-00-310-823	SPRING RECREATION FEES	0.00	0.00	200.00	0.00	200.00
Net PARK & RECREATION CHARGES		0.00	(290.00)	29,880.00	(0.97)	30,170.00
OTHER REVENUE						
01-00-310-901	REIMBURSEMENTS - IRMA	0.00	26,984.22	0.00	100.00	(26,984.22)
01-00-310-909	SALE - FIXED ASSETS	0.00	5,652.00	7,500.00	75.36	1,848.00
01-00-310-910	REIMBURSEMENTS - TREE PLANTING	0.00	600.00	500.00	120.00	(100.00)
01-00-310-911	REIMBURSEMENTS - RED LIGHT ENERGY	120.49	1,138.60	1,440.00	79.07	301.40
01-00-310-912	REIMBURSEMENTS - BRUSH PICK-UP	12,414.59	20,015.63	10,800.00	185.33	(9,215.63)
01-00-310-913	OTHER RECEIPTS	100.00	4,672.97	0.00	100.00	(4,672.97)
01-00-310-915	REIMBURSEMENTS - POLICE SPECIAL DETA	0.00	6,493.00	5,000.00	129.86	(1,493.00)
01-00-310-917	REIMBURSEMENTS - PUBLIC WORKS OTHEF	0.00	4,411.93	23,600.00	18.69	19,188.07
01-00-310-921	OTHER GRANTS	0.00	2,000.00	0.00	100.00	(2,000.00)
01-00-310-922	FEDERAL/STATE GRANTS	1,866.66	404,114.54	0.00	100.00	(404,114.54)
01-00-310-925	NICOR GAS ANNUAL PAYMENT	0.00	14,126.87	14,000.00	100.91	(126.87)
01-00-310-926	CABLE FRANCHISE FEES	35,954.87	175,133.02	204,000.00	85.85	28,866.98
01-00-310-928	DRUG FORFEITURES - STATE	0.00	45,088.20	500.00	9,017.64	(44,588.20)
01-00-310-929	DRUG FORFEITURES - FEDERAL	0.00	9,750.00	500.00	1,950.00	(9,250.00)
Net OTHER REVENUE		50,456.61	720,180.98	267,840.00	268.88	(452,340.98)
NON-OPERATING						
01-00-320-108	INTEREST INCOME	403.49	11,287.50	48,000.00	23.52	36,712.50
Net NON-OPERATING		403.49	11,287.50	48,000.00	23.52	36,712.50
TRANSFERS IN						
01-00-330-103	TRANSFER FROM HOTEL/MOTEL TAX	0.00	717,758.53	715,941.00	100.25	(1,817.53)
Net TRANSFERS IN		0.00	717,758.53	715,941.00	100.25	(1,817.53)

REVENUE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/2021	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE
Fund 01 - GENERAL FUND						
Fund 01 - GENERAL FUND:						
TOTAL REVENUES		853,852.48	9,399,063.26	9,234,559.00	101.78	(164,504.26)
Fund 02 - WATER FUND						
CHARGES & FEES						
02-00-310-712	WATER USAGE	249,550.41	2,787,720.27	3,200,000.00	87.12	412,279.73
02-00-310-713	WATER PENALTIES	(212.83)	11,131.63	8,000.00	139.15	(3,131.63)
02-00-310-718	SHUTOFF/NSF FEE	0.00	3,465.00	5,000.00	69.30	1,535.00
Net CHARGES & FEES		249,337.58	2,802,316.90	3,213,000.00	87.22	410,683.10
OTHER REVENUE						
02-00-310-714	WATER METER SALES	410.43	820.86	5,000.00	16.42	4,179.14
02-00-310-716	WATER METER READING FEES	623.25	4,800.50	5,000.00	96.01	199.50
02-00-310-717	CONSTRUCTION USAGE	200.00	400.00	1,000.00	40.00	600.00
Net OTHER REVENUE		1,233.68	6,021.36	11,000.00	54.74	4,978.64
NON-OPERATING						
02-00-320-108	INTEREST INCOME	54.33	1,320.63	18,000.00	7.34	16,679.37
02-00-320-713	WATER CONNECTION FEES	600.00	1,325.00	3,000.00	44.17	1,675.00
Net NON-OPERATING		654.33	2,645.63	21,000.00	12.60	18,354.37
Fund 02 - WATER FUND:						
TOTAL REVENUES		251,225.59	2,810,983.89	3,245,000.00	86.63	434,016.11
Fund 04 - MOTOR FUEL TAX FUND						
OTHER TAXES						
04-00-310-216	MFT RECEIPTS	24,711.29	255,446.25	310,429.00	82.29	54,982.75
04-00-310-218	MFT CAPITAL BOND RECEIPTS	0.00	187,606.54	0.00	100.00	(187,606.54)
Net OTHER TAXES		24,711.29	443,052.79	310,429.00	142.72	(132,623.79)
NON-OPERATING						
04-00-320-108	INTEREST INCOME	40.18	1,065.03	6,000.00	17.75	4,934.97
Net NON-OPERATING		40.18	1,065.03	6,000.00	17.75	4,934.97
Fund 04 - MOTOR FUEL TAX FUND:						
TOTAL REVENUES		24,751.47	444,117.82	316,429.00	140.35	(127,688.82)

REVENUE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/2021	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE
Fund 06 - SSA ONE BOND & INTEREST FUND						
PROPERTY TAX						
06-00-310-101	PROPERTY TAX RECEIPTS	0.00	325,144.51	321,925.00	101.00	(3,219.51)
Net PROPERTY TAX		0.00	325,144.51	321,925.00	101.00	(3,219.51)
NON-OPERATING						
06-00-320-108	INTEREST INCOME	1.30	129.04	1,000.00	12.90	870.96
Net NON-OPERATING		1.30	129.04	1,000.00	12.90	870.96
Fund 06 - SSA ONE BOND & INTEREST FUND:						
TOTAL REVENUES		1.30	325,273.55	322,925.00	100.73	(2,348.55)
Fund 07 - POLICE PENSION FUND						
OTHER REVENUE						
07-00-310-607	VILLAGE CONTRIBUTION	82,670.24	909,372.64	1,074,713.00	84.62	165,340.36
07-00-310-906	POLICE CONTRIBUTIONS	31,007.97	190,965.56	216,880.00	88.05	25,914.44
Net OTHER REVENUE		113,678.21	1,100,338.20	1,291,593.00	85.19	191,254.80
NON-OPERATING						
07-00-320-108	INTEREST INCOME	18,877.30	615,658.32	500,000.00	123.13	(115,658.32)
07-00-320-110	UNREALIZED GAIN (LOSS) ON INVESTMENT:	364,690.73	4,297,723.05	0.00	100.00	(4,297,723.05)
07-00-320-111	GAIN (LOSS) ON INVESTMENTS	34,214.84	245,316.89	0.00	100.00	(245,316.89)
Net NON-OPERATING		417,782.87	5,158,698.26	500,000.00	1,031.74	(4,658,698.26)
Fund 07 - POLICE PENSION FUND:						
TOTAL REVENUES		531,461.08	6,259,036.46	1,791,593.00	349.36	(4,467,443.46)
Fund 09 - WATER CAPITAL IMPROVEMENTS FUND						
NON-OPERATING						
09-00-320-108	INTEREST INCOME	59.95	1,591.56	6,000.00	26.53	4,408.44
Net NON-OPERATING		59.95	1,591.56	6,000.00	26.53	4,408.44
TRANSFERS IN						
09-00-330-102	TRANSFER FROM WATER	0.00	200,000.00	200,000.00	100.00	0.00
Net TRANSFERS IN		0.00	200,000.00	200,000.00	100.00	0.00
Fund 09 - WATER CAPITAL IMPROVEMENTS FUND:						

REVENUE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/2021	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE
Fund 09 - WATER CAPITAL IMPROVEMENTS FUND						
TOTAL REVENUES		59.95	201,591.56	206,000.00	97.86	4,408.44
Fund 10 - CAPITAL PROJECT FUND						
NON-OPERATING						
10-00-320-108	INTEREST INCOME	0.00	0.87	0.00	100.00	(0.87)
Net NON-OPERATING		0.00	0.87	0.00	100.00	(0.87)
Fund 10 - CAPITAL PROJECT FUND:						
TOTAL REVENUES		0.00	0.87	0.00	100.00	(0.87)
Fund 11 - DEBT SERVICE FUND						
TRANSFERS IN						
11-00-330-101	TRANSFER FROM GENERAL FUND	0.00	279,851.00	279,851.00	100.00	0.00
11-00-330-102	TRANSFER FROM WATER	0.00	46,695.00	46,695.00	100.00	0.00
Net TRANSFERS IN		0.00	326,546.00	326,546.00	100.00	0.00
Fund 11 - DEBT SERVICE FUND:						
TOTAL REVENUES		0.00	326,546.00	326,546.00	100.00	0.00
Fund 14 - LAND ACQUISITION, FACILITY, EXPANSION &						
TRANSFERS IN						
14-00-330-101	TRANSFER FROM GENERAL FUND	0.00	(0.02)	0.00	100.00	0.02
Net TRANSFERS IN		0.00	(0.02)	0.00	100.00	0.02
Fund 14 - LAND ACQUISITION, FACILITY, EXPANSION & :						
TOTAL REVENUES		0.00	(0.02)	0.00	100.00	0.02
Fund 15 - RT 83/PLAINFIELD RD BUSINESS DISTRCT TAX						
OTHER TAXES						
15-00-310-201	BUSINESS DISTRICT SALES TAX TOWN CEN	50,893.73	452,874.58	600,000.00	75.48	147,125.42
Net OTHER TAXES		50,893.73	452,874.58	600,000.00	75.48	147,125.42
Fund 15 - RT 83/PLAINFIELD RD BUSINESS DISTRCT TAX:						

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REVENUE REPORT FOR WILLOWBROOK
PERIOD ENDING 02/28/2021

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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/2021	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE
Fund 15 - RT 83/PLAINFIELD RD BUSINESS DISTRCT TAX						
TOTAL REVENUES		50,893.73	452,874.58	600,000.00	75.48	147,125.42
TOTAL REVENUES - ALL FUNDS		1,712,245.60	20,219,487.97	16,043,052.00	126.03	(4,176,435.97)

EXPENDITURE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 01 - GENERAL FUND								
Dept 05 - VILLAGE BOARD & CLERK								
GENERAL MANAGEMENT								
01-05-400-147	MEDICARE	89.76	773.99	887.00	87.26	113.01	1,774.00	1,000.01
01-05-400-161	SOCIAL SECURITY	383.79	3,309.50	3,794.00	87.23	484.50	7,588.00	4,278.50
01-05-410-101	SALARY - MAYOR & VILLAGE BO/	5,400.00	45,600.00	54,000.00	84.44	8,400.00	108,000.00	62,400.00
01-05-410-125	SALARY - VILLAGE CLERK	600.00	6,000.00	7,200.00	83.33	1,200.00	14,400.00	8,400.00
01-05-410-141	LIFE INSURANCE - ELECTED OFF	71.68	624.40	767.00	81.41	142.60	1,534.00	909.60
01-05-410-201	PHONE - TELEPHONES	42.46	443.45	696.00	63.71	252.55	1,392.00	948.55
01-05-410-301	OFFICE SUPPLIES	0.00	50.00	500.00	10.00	450.00	1,000.00	950.00
01-05-410-302	PRINTING & PUBLISHING	0.00	176.00	0.00	100.00	(176.00)	0.00	(176.00)
01-05-410-303	FUEL/MILEAGE/WASH	0.00	0.00	100.00	0.00	100.00	200.00	200.00
01-05-410-304	SCHOOLS/CONFERENCES/TRAV	0.00	110.00	5,770.00	1.91	5,660.00	11,540.00	11,430.00
01-05-410-307	FEES/DUES/SUBSCRIPTIONS	0.00	1,589.30	2,400.00	66.22	810.70	4,800.00	3,210.70
GENERAL MANAGEMENT		6,587.69	58,676.64	76,114.00	77.09	17,437.36	152,228.00	93,551.36
COMMUNITY RELATIONS								
01-05-420-365	PUBLIC RELATIONS	0.00	169.96	500.00	33.99	330.04	1,000.00	830.04
COMMUNITY RELATIONS		0.00	169.96	500.00	33.99	330.04	1,000.00	830.04
DATA PROCESSING								
01-05-417-212	EDP EQUIPMENT/SOFTWARE	229.98	229.98	0.00	100.00	(229.98)	0.00	(229.98)
DATA PROCESSING		229.98	229.98	0.00	100.00	(229.98)	0.00	(229.98)
Total Dept 05 - VILLAGE BOARD & CLERK		6,817.67	59,076.58	76,614.00	77.11	17,537.42	153,228.00	94,151.42
Dept 07 - BOARD OF POLICE COMMISSIONERS								
ADMINISTRATION								
01-07-400-147	MEDICARE	0.00	14.48	7.00	206.86	(7.48)	14.00	(0.48)
01-07-400-161	SOCIAL SECURITY	0.00	61.87	31.00	199.58	(30.87)	62.00	0.13
01-07-435-148	LIFE INSURANCE - COMMISSIONI	18.48	184.80	260.00	71.08	75.20	520.00	335.20
01-07-435-239	FEES - BOPC ATTORNEY	0.00	0.00	5,000.00	0.00	5,000.00	10,000.00	10,000.00
01-07-435-301	OFFICE SUPPLIES	0.00	0.00	100.00	0.00	100.00	200.00	200.00
01-07-435-302	PRINTING & PUBLISHING	0.00	348.00	4,000.00	8.70	3,652.00	8,000.00	7,652.00
01-07-435-304	SCHOOLS/CONFERENCES/TRAV	0.00	0.00	1,000.00	0.00	1,000.00	2,000.00	2,000.00
01-07-435-307	FEES/DUES/SUBSCRIPTIONS	0.00	375.00	500.00	75.00	125.00	1,000.00	625.00
01-07-435-311	POSTAGE & METER RENT	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
ADMINISTRATION		18.48	984.15	11,398.00	8.63	10,413.85	22,796.00	21,811.85
OTHER								
01-07-440-542	EXAMS - WRITTEN	0.00	5,558.00	15,000.00	37.05	9,442.00	30,000.00	24,442.00
01-07-440-543	EXAMS - PHYSICAL	0.00	1,375.00	2,000.00	68.75	625.00	4,000.00	2,625.00
01-07-440-544	EXAMS - PSYCHOLOGICAL	0.00	3,850.00	2,500.00	154.00	(1,350.00)	5,000.00	1,150.00
01-07-440-545	EXAMS - POLYGRAPH	0.00	1,280.00	1,000.00	128.00	(280.00)	2,000.00	720.00
OTHER		0.00	12,063.00	20,500.00	58.84	8,437.00	41,000.00	28,937.00
Total Dept 07 - BOARD OF POLICE COMMISSIONERS		18.48	13,047.15	31,898.00	40.90	18,850.85	63,796.00	50,748.85

EXPENDITURE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 01 - GENERAL FUND								
Dept 10 - ADMINISTRATION								
GENERAL MANAGEMENT								
01-10-400-147	MEDICARE	423.07	4,614.43	5,322.00	86.70	707.57	10,644.00	6,029.57
01-10-400-151	IMRF	7,352.67	50,183.93	49,218.00	101.96	(965.93)	98,436.00	48,252.07
01-10-400-161	SOCIAL SECURITY	1,808.94	16,819.26	20,435.00	82.31	3,615.74	40,870.00	24,050.74
01-10-400-171	SUI - UNEMPLOYMENT	180.61	865.40	774.00	111.81	(91.40)	1,548.00	682.60
01-10-455-101	SALARIES - MANAGEMENT STAF	14,381.60	157,162.43	175,125.00	89.74	17,962.57	350,250.00	193,087.57
01-10-455-102	OVERTIME	410.35	2,364.87	5,000.00	47.30	2,635.13	10,000.00	7,635.13
01-10-455-105	ASSISTANT VILLAGE ADMINISTR.	10,429.44	114,426.77	130,175.00	87.90	15,748.23	260,350.00	145,923.23
01-10-455-126	SALARIES - CLERICAL	4,607.36	50,523.36	56,726.00	89.07	6,202.64	113,452.00	62,928.64
01-10-455-131	PERSONNEL RECRUITMENT	0.00	190.95	500.00	38.19	309.05	1,000.00	809.05
01-10-455-141	HEALTH/DENTAL/LIFE INSURANC	4,236.16	42,260.29	49,602.00	85.20	7,341.71	99,204.00	56,943.71
01-10-455-201	PHONE - TELEPHONES	760.19	16,372.50	12,684.00	129.08	(3,688.50)	25,368.00	8,995.50
01-10-455-266	CODIFY ORDINANCES	0.00	2,833.00	5,000.00	56.66	2,167.00	10,000.00	7,167.00
01-10-455-301	OFFICE SUPPLIES	548.96	3,628.79	8,000.00	45.36	4,371.21	16,000.00	12,371.21
01-10-455-302	PRINTING, PUBLISHING & TRANS	54.22	2,722.59	2,500.00	108.90	(222.59)	5,000.00	2,277.41
01-10-455-303	FUEL/MILEAGE/WASH	36.00	356.66	750.00	47.55	393.34	1,500.00	1,143.34
01-10-455-304	SCHOOLS/CONFERENCES/TRAV	0.00	204.00	2,000.00	10.20	1,796.00	4,000.00	3,796.00
01-10-455-305	STRATEGIC PLANNING	0.00	0.00	2,000.00	0.00	2,000.00	4,000.00	4,000.00
01-10-455-306	CONSULTING	575.00	21,825.50	71,000.00	30.74	49,174.50	142,000.00	120,174.50
01-10-455-307	FEES/DUES/SUBSCRIPTIONS	(5.04)	8,214.09	13,000.00	63.19	4,785.91	26,000.00	17,785.91
01-10-455-311	POSTAGE & METER RENT	(21.74)	3,476.32	5,000.00	69.53	1,523.68	10,000.00	6,523.68
01-10-455-315	COPY SERVICE	626.12	5,291.00	7,000.00	75.59	1,709.00	14,000.00	8,709.00
01-10-455-355	COMMISSARY PROVISION	168.96	1,509.48	3,000.00	50.32	1,490.52	6,000.00	4,490.52
01-10-455-411	MAINTENANCE - EQUIPMENT	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
GENERAL MANAGEMENT		46,572.87	505,845.62	625,311.00	80.90	119,465.38	1,250,622.00	744,776.38
COMMUNITY RELATIONS								
01-10-475-365	PUBLIC RELATIONS	0.00	551.90	5,000.00	11.04	4,448.10	10,000.00	9,448.10
01-10-475-367	CRISIS MANAGEMENT	4,668.00	31,382.47	25,000.00	125.53	(6,382.47)	50,000.00	18,617.53
01-10-475-370	MEALS-ON-WHEELS	0.00	0.00	2,000.00	0.00	2,000.00	4,000.00	4,000.00
COMMUNITY RELATIONS		4,668.00	31,934.37	32,000.00	99.79	65.63	64,000.00	32,065.63
CAPITAL IMPROVEMENTS								
01-10-485-602	BUILDING IMPROVEMENTS	0.00	36,541.78	60,000.00	60.90	23,458.22	120,000.00	83,458.22
01-10-485-611	FURNITURE & OFFICE EQUIPME	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
CAPITAL IMPROVEMENTS		0.00	36,541.78	60,500.00	60.40	23,958.22	121,000.00	84,458.22
CONTINGENCIES								
01-10-490-799	CONTINGENCIES	0.00	0.00	10,000.00	0.00	10,000.00	20,000.00	20,000.00
CONTINGENCIES		0.00	0.00	10,000.00	0.00	10,000.00	20,000.00	20,000.00
DATA PROCESSING								
01-10-460-212	EDP EQUIPMENT/SOFTWARE	0.00	1,169.98	1,000.00	117.00	(169.98)	2,000.00	830.02
01-10-460-225	INTERNET/WEBSITE HOSTING	626.82	13,448.89	14,347.00	93.74	898.11	28,694.00	15,245.11
01-10-460-263	EDP LICENSES	796.88	27,048.51	43,435.00	62.27	16,386.49	86,870.00	59,821.49
01-10-460-265	CYBER DISRUPTION	1,200.00	11,299.00	0.00	100.00	(11,299.00)	0.00	(11,299.00)
01-10-460-267	DOCUMENT STORAGE/SCANNIN	0.00	1,745.10	5,000.00	34.90	3,254.90	10,000.00	8,254.90

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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 01 - GENERAL FUND								
01-10-460-306	CONSULTING SERVICES - IT	6,784.30	35,262.72	18,000.00	195.90	(17,262.72)	36,000.00	737.28
DATA PROCESSING		9,408.00	89,974.20	81,782.00	110.02	(8,192.20)	163,564.00	73,589.80
BUILDINGS								
01-10-466-228	MAINTENANCE - BUILDING	12,002.10	63,292.35	30,545.00	207.21	(32,747.35)	61,090.00	(2,202.35)
01-10-466-236	NICOR GAS (835 MIDWAY)	375.91	1,339.57	2,000.00	66.98	660.43	4,000.00	2,660.43
01-10-466-240	ENERGY/COMED (835 MIDWAY)	531.80	1,366.07	3,000.00	45.54	1,633.93	6,000.00	4,633.93
01-10-466-251	SANITARY (835 MIDWAY)	22.35	376.76	450.00	83.72	73.24	900.00	523.24
01-10-466-293	LANDSCAPE - VILLAGE HALL	0.00	82.25	1,000.00	8.23	917.75	2,000.00	1,917.75
01-10-466-351	BUILDING MAINTENANCE SUPPL	194.03	4,211.84	2,000.00	210.59	(2,211.84)	4,000.00	(211.84)
BUILDINGS		13,126.19	70,668.84	38,995.00	181.23	(31,673.84)	77,990.00	7,321.16
LEGAL								
01-10-470-239	FEES - VILLAGE ATTORNEY	6,260.50	75,180.51	140,000.00	53.70	64,819.49	280,000.00	204,819.49
01-10-470-241	FEES - SPECIAL ATTORNEY	0.00	2,200.10	10,000.00	22.00	7,799.90	20,000.00	17,799.90
01-10-470-242	FEES - LABOR COUNSEL	1,286.30	10,334.60	2,000.00	516.73	(8,334.60)	4,000.00	(6,334.60)
LEGAL		7,546.80	87,715.21	152,000.00	57.71	64,284.79	304,000.00	216,284.79
FINANCIAL AUDIT								
01-10-471-252	FINANCIAL SERVICES	0.00	742.78	0.00	100.00	(742.78)	0.00	(742.78)
FINANCIAL AUDIT		0.00	742.78	0.00	100.00	(742.78)	0.00	(742.78)
RISK MANAGEMENT								
01-10-480-272	INSURANCE - IRMA	0.00	234,758.00	233,463.00	100.55	(1,295.00)	466,926.00	232,168.00
01-10-480-273	SELF INSURANCE - DEDUCTIBLE	0.00	0.00	10,000.00	0.00	10,000.00	20,000.00	20,000.00
RISK MANAGEMENT		0.00	234,758.00	243,463.00	96.42	8,705.00	486,926.00	252,168.00
TRANSFERS TO OTHER FUNDS								
01-10-900-112	TRANSFER TO DEBT SERVICE - 2	0.00	279,851.00	279,851.00	100.00	0.00	559,702.00	279,851.00
01-10-900-114	TRANSFER TO LAFER	0.00	(0.02)	0.00	100.00	0.02	0.00	0.02
TRANSFERS TO OTHER FUNDS		0.00	279,850.98	279,851.00	100.00	0.02	559,702.00	279,851.02
Total Dept 10 - ADMINISTRATION		81,321.86	1,338,031.78	1,523,902.00	87.80	185,870.22	3,047,804.00	1,709,772.22
Dept 15 - PLANNING & ECONOMIC DEVELOPMENT								
GENERAL MANAGEMENT								
01-15-400-147	MEDICARE	26.43	363.30	381.00	95.35	17.70	762.00	398.70
01-15-400-151	IMRF	469.29	3,227.40	3,203.00	100.76	(24.40)	6,406.00	3,178.60
01-15-400-161	SOCIAL SECURITY	113.07	1,553.54	1,631.00	95.25	77.46	3,262.00	1,708.46
01-15-400-171	SUI - UNEMPLOYMENT	45.13	90.25	129.00	69.96	38.75	258.00	167.75
01-15-510-126	SALARIES - CLERICAL	1,903.79	20,875.58	23,386.00	89.27	2,510.42	46,772.00	25,896.42
01-15-510-141	HEALTH/DENTAL/LIFE INSURANC	610.08	6,058.42	8,062.00	75.15	2,003.58	16,124.00	10,065.58
01-15-510-301	OFFICE SUPPLIES	0.00	13.33	250.00	5.33	236.67	500.00	486.67
01-15-510-302	PRINTING & PUBLISHING	0.00	92.03	2,500.00	3.68	2,407.97	5,000.00	4,907.97
01-15-510-307	FEES/DUES/SUBSCRIPTIONS	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00

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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 01 - GENERAL FUND								
01-15-510-311	POSTAGE & METER RENT	0.00	1,581.30	500.00	316.26	(1,081.30)	1,000.00	(581.30)
01-15-510-340	LIFE INSURANCE - PLAN COMMIS	70.56	705.60	1,032.00	68.37	326.40	2,064.00	1,358.40
01-15-510-401	OPERATING EQUIPMENT	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
GENERAL MANAGEMENT		3,238.35	34,560.75	42,074.00	82.14	7,513.25	84,148.00	49,587.25
DATA PROCESSING								
01-15-515-305	EDP PERSONNEL TRAINING	0.00	0.00	1,800.00	0.00	1,800.00	3,600.00	3,600.00
DATA PROCESSING		0.00	0.00	1,800.00	0.00	1,800.00	3,600.00	3,600.00
ENGINEERING								
01-15-520-229	RENT - MEETING ROOM	0.00	0.00	250.00	0.00	250.00	500.00	500.00
01-15-520-245	FEES - ENGINEERING	2,761.09	4,634.69	2,500.00	185.39	(2,134.69)	5,000.00	365.31
01-15-520-246	FEES - COURT REPORTER	436.80	2,795.75	2,700.00	103.55	(95.75)	5,400.00	2,604.25
01-15-520-254	PLAN REVIEW - ENGINEER	1,510.57	7,418.15	5,000.00	148.36	(2,418.15)	10,000.00	2,581.85
01-15-520-257	PLAN REVIEW - PLANNER	0.00	87,164.75	125,000.00	69.73	37,835.25	250,000.00	162,835.25
01-15-520-258	PLAN REVIEW - TRAFFIC CONSU	0.00	4,131.00	2,500.00	165.24	(1,631.00)	5,000.00	869.00
ENGINEERING		4,708.46	106,144.34	137,950.00	76.94	31,805.66	275,900.00	169,755.66
Total Dept 15 - PLANNING & ECONOMIC DEVELOPMENT		7,946.81	140,705.09	181,824.00	77.39	41,118.91	363,648.00	222,942.91
Dept 20 - PARKS & RECREATION								
CAPITAL IMPROVEMENTS								
01-20-595-643	POND IMPROVEMENTS	0.00	0.00	400.00	0.00	400.00	800.00	800.00
01-20-595-693	COURT IMPROVEMENTS	0.00	0.00	800.00	0.00	800.00	1,600.00	1,600.00
CAPITAL IMPROVEMENTS		0.00	0.00	1,200.00	0.00	1,200.00	2,400.00	2,400.00
ADMINISTRATION								
01-20-400-147	MEDICARE	38.03	455.16	648.00	70.24	192.84	1,296.00	840.84
01-20-400-151	IMRF	646.49	4,218.01	5,308.00	79.47	1,089.99	10,616.00	6,397.99
01-20-400-161	SOCIAL SECURITY	162.61	1,946.18	2,772.00	70.21	825.82	5,544.00	3,597.82
01-20-400-171	SUI - UNEMPLOYMENT	64.92	213.29	270.00	79.00	56.71	540.00	326.71
01-20-550-101	SALARIES - PERMANENT EMPLO	2,622.70	24,173.94	32,585.00	74.19	8,411.06	65,170.00	40,996.06
01-20-550-103	PART TIME - PROGRAM SUPERV	0.00	0.00	2,500.00	0.00	2,500.00	5,000.00	5,000.00
01-20-550-148	LIFE INSURANCE - COMMISSIONI	53.20	599.76	1,068.00	56.16	468.24	2,136.00	1,536.24
01-20-550-301	OFFICE/GENERAL PROGRAM SU	0.00	381.45	1,000.00	38.15	618.55	2,000.00	1,618.55
01-20-550-302	PRINTING & PUBLISHING	0.00	0.00	13,500.00	0.00	13,500.00	27,000.00	27,000.00
01-20-550-311	POSTAGE & METER RENT	0.00	163.00	3,800.00	4.29	3,637.00	7,600.00	7,437.00
ADMINISTRATION		3,587.95	32,150.79	63,451.00	50.67	31,300.21	126,902.00	94,751.21
DATA PROCESSING								
01-20-555-212	EDP EQUIPMENT/SOFTWARE	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
01-20-555-263	EDP LICENSES	14.99	89.94	0.00	100.00	(89.94)	0.00	(89.94)
01-20-555-306	CONSULTING - PROGRAM HOSTI	0.00	0.00	15,000.00	0.00	15,000.00	30,000.00	30,000.00
DATA PROCESSING		14.99	89.94	15,500.00	0.58	15,410.06	31,000.00	30,910.06

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Fund 01 - GENERAL FUND								
MAINTENANCE								
01-20-570-102	OVERTIME	0.00	3,033.81	7,000.00	43.34	3,966.19	14,000.00	10,966.19
01-20-570-103	PART TIME - LABOR	0.00	798.00	2,541.00	31.40	1,743.00	5,082.00	4,284.00
01-20-570-228	MAINTENANCE - PARK BUILDING	0.00	1,215.55	12,386.00	9.81	11,170.45	24,772.00	23,556.45
01-20-570-234	RENT - EQUIPMENT	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
01-20-570-235	NICOR GAS (825 MIDWAY)	0.00	196.62	1,200.00	16.39	1,003.38	2,400.00	2,203.38
01-20-570-250	SANITARY (825 MIDWAY)	4.39	17.56	50.00	35.12	32.44	100.00	82.44
01-20-570-278	SANITARY (PARKS)	26.64	174.41	150.00	116.27	(24.41)	300.00	125.59
01-20-570-280	BALLFIELD MAINTENANCE	0.00	8,292.80	10,000.00	82.93	1,707.20	20,000.00	11,707.20
01-20-570-281	CONTRACTED MAINTENANCE & I	0.00	115,961.00	120,900.00	95.91	4,939.00	241,800.00	125,839.00
01-20-570-331	MAINTENANCE SUPPLIES	0.00	572.93	5,000.00	11.46	4,427.07	10,000.00	9,427.07
01-20-570-411	MAINTENANCE - EQUIPMENT	0.00	1,799.56	3,500.00	51.42	1,700.44	7,000.00	5,200.44
MAINTENANCE		31.03	132,062.24	163,227.00	80.91	31,164.76	326,454.00	194,391.76
SUMMER PROGRAM								
01-20-575-119	SUMMER PROGRAM MATERIALS	0.00	220.00	7,600.00	2.89	7,380.00	15,200.00	14,980.00
01-20-575-517	SENIORS PROGRAM-SUMMER	0.00	0.00	5,400.00	0.00	5,400.00	10,800.00	10,800.00
SUMMER PROGRAM		0.00	220.00	13,000.00	1.69	12,780.00	26,000.00	25,780.00
FALL PROGRAM								
01-20-580-517	SENIORS PROGRAM-FALL	0.00	0.00	5,400.00	0.00	5,400.00	10,800.00	10,800.00
FALL PROGRAM		0.00	0.00	5,400.00	0.00	5,400.00	10,800.00	10,800.00
WINTER/SPECIAL PROGRAMS								
01-20-585-121	WINTER PROGRAM MATERIALS &	0.00	0.00	2,000.00	0.00	2,000.00	4,000.00	4,000.00
01-20-585-150	CHILDRENS SPECIAL EVENTS - C	0.00	0.00	3,000.00	0.00	3,000.00	6,000.00	6,000.00
01-20-585-151	FAMILY SPECIAL EVENT - MOVIE	0.00	0.00	1,500.00	0.00	1,500.00	3,000.00	3,000.00
01-20-585-152	FAMILY SPECIAL EVENT - TREE L	0.00	2,564.00	4,900.00	52.33	2,336.00	9,800.00	7,236.00
01-20-585-153	FAMILY SPECIAL EVENT - BACK T	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
01-20-585-154	FAMILY SPECIAL EVENT - RACE	0.00	300.05	13,600.00	2.21	13,299.95	27,200.00	26,899.95
01-20-585-155	CHILDREN'S HOLIDAY PARTY	0.00	0.00	5,000.00	0.00	5,000.00	10,000.00	10,000.00
01-20-585-157	COMMUNITY PICNIC	0.00	0.00	3,000.00	0.00	3,000.00	6,000.00	6,000.00
01-20-585-517	SENIORS PROGRAM-WINTER/SP	0.00	0.00	5,400.00	0.00	5,400.00	10,800.00	10,800.00
WINTER/SPECIAL PROGRAMS		0.00	2,864.05	38,900.00	7.36	36,035.95	77,800.00	74,935.95
SPRING PROGRAM								
01-20-586-121	SPRING PROGRAM MATERIALS &	0.00	0.00	200.00	0.00	200.00	400.00	400.00
SPRING PROGRAM		0.00	0.00	200.00	0.00	200.00	400.00	400.00
SPECIAL RECREATION								
01-20-590-518	SPECIAL RECREATION ASSOC P	0.00	39,310.86	39,310.00	100.00	(0.86)	78,620.00	39,309.14
01-20-590-519	ADA PARK MAINTENANCE	0.00	0.00	4,840.00	0.00	4,840.00	9,680.00	9,680.00
01-20-590-520	ADA RECREATION ACCOMMODA	0.00	0.00	7,700.00	0.00	7,700.00	15,400.00	15,400.00
01-20-590-521	ADA PARK IMPROVEMENTS	0.00	0.00	15,400.00	0.00	15,400.00	30,800.00	30,800.00
SPECIAL RECREATION		0.00	39,310.86	67,250.00	58.45	27,939.14	134,500.00	95,189.14
Total Dept 20 - PARKS & RECREATION		3,633.97	206,697.88	368,128.00	56.15	161,430.12	736,256.00	529,558.12

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Fund 01 - GENERAL FUND								
Dept 25 - FINANCE DEPARTMENT								
GENERAL MANAGEMENT								
01-25-400-147	MEDICARE	277.20	3,036.49	3,373.00	90.02	336.51	6,746.00	3,709.51
01-25-400-151	IMRF	4,817.64	25,752.47	23,994.00	107.33	(1,758.47)	47,988.00	22,235.53
01-25-400-161	SOCIAL SECURITY	1,185.27	12,173.90	14,424.00	84.40	2,250.10	28,848.00	16,674.10
01-25-400-171	SUI - UNEMPLOYMENT	232.08	985.21	1,032.00	95.47	46.79	2,064.00	1,078.79
01-25-610-101	SALARIES - MANAGEMENT STAF	11,472.32	128,562.62	138,033.00	93.14	9,470.38	276,066.00	147,503.38
01-25-610-102	OVERTIME	0.00	0.00	1,500.00	0.00	1,500.00	3,000.00	3,000.00
01-25-610-104	PART TIME - CLERICAL	0.00	15,733.04	31,609.00	49.77	15,875.96	63,218.00	47,484.96
01-25-610-126	SALARIES - CLERICAL	7,747.37	64,215.16	61,500.00	104.41	(2,715.16)	123,000.00	58,784.84
01-25-610-141	HEALTH/DENTAL/LIFE INSURANC	3,554.69	23,570.39	19,008.00	124.00	(4,562.39)	38,016.00	14,445.61
01-25-610-301	OFFICE SUPPLIES	0.00	1,431.68	2,500.00	57.27	1,068.32	5,000.00	3,568.32
01-25-610-302	PRINTING & PUBLISHING	0.00	1,275.70	1,000.00	127.57	(275.70)	2,000.00	724.30
01-25-610-303	FUEL/MILEAGE/WASH	0.00	0.00	250.00	0.00	250.00	500.00	500.00
01-25-610-304	SCHOOLS/CONFERENCES/TRAV	0.00	340.00	1,000.00	34.00	660.00	2,000.00	1,660.00
01-25-610-307	FEES/DUES/SUBSCRIPTIONS	126.93	1,085.27	1,605.00	67.62	519.73	3,210.00	2,124.73
01-25-610-311	POSTAGE & METER RENT	0.00	109.35	250.00	43.74	140.65	500.00	390.65
GENERAL MANAGEMENT		29,413.50	278,271.28	301,078.00	92.42	22,806.72	602,156.00	323,884.72
DATA PROCESSING								
01-25-615-212	EDP EQUIPMENT/SOFTWARE	0.00	251.72	500.00	50.34	248.28	1,000.00	748.28
01-25-615-263	EDP LICENSES	0.00	12,172.00	12,000.00	101.43	(172.00)	24,000.00	11,828.00
01-25-615-267	DOCUMENT STORAGE/SCANNING	0.00	0.00	1,000.00	0.00	1,000.00	2,000.00	2,000.00
DATA PROCESSING		0.00	12,423.72	13,500.00	92.03	1,076.28	27,000.00	14,576.28
FINANCIAL AUDIT								
01-25-620-251	AUDIT SERVICES	0.00	29,915.00	34,000.00	87.99	4,085.00	68,000.00	38,085.00
01-25-620-252	FINANCIAL SERVICES	0.00	1,700.00	4,550.00	37.36	2,850.00	9,100.00	7,400.00
FINANCIAL AUDIT		0.00	31,615.00	38,550.00	82.01	6,935.00	77,100.00	45,485.00
Total Dept 25 - FINANCE DEPARTMENT		29,413.50	322,310.00	353,128.00	91.27	30,818.00	706,256.00	383,946.00
Dept 30 - POLICE DEPARTMENT								
ADMINISTRATION								
01-30-400-147	MEDICARE	5,416.98	34,976.63	41,024.00	85.26	6,047.37	82,048.00	47,071.37
01-30-400-151	IMRF	3,482.26	24,480.07	25,270.00	96.87	789.93	50,540.00	26,059.93
01-30-400-161	SOCIAL SECURITY	876.71	9,875.04	11,683.00	84.52	1,807.96	23,366.00	13,490.96
01-30-400-171	SUI - UNEMPLOYMENT	3,624.67	10,201.11	6,708.00	152.07	(3,493.11)	13,416.00	3,214.89
01-30-630-101	SALARIES - PERMANENT EMPLO	250,822.34	1,875,903.41	2,289,826.00	81.92	413,922.59	4,579,652.00	2,703,748.59
01-30-630-102	OVERTIME	37,365.47	309,481.80	336,000.00	92.11	26,518.20	672,000.00	362,518.20
01-30-630-103	OVERTIME - SPECIAL DETAIL & C	237.61	11,593.12	15,000.00	77.29	3,406.88	30,000.00	18,406.88
01-30-630-105	SALARIES-COPS GRANT OFFICE	13,007.36	54,374.40	0.00	100.00	(54,374.40)	0.00	(54,374.40)
01-30-630-126	SALARIES - CLERICAL	14,126.72	155,063.14	178,439.00	86.90	23,375.86	356,878.00	201,814.86
01-30-630-127	OVERTIME - CLERICAL	0.00	635.98	10,000.00	6.36	9,364.02	20,000.00	19,364.02
01-30-630-131	PERSONNEL RECRUITMENT	320.50	320.50	1,000.00	32.05	679.50	2,000.00	1,679.50
01-30-630-141	HEALTH/DENTAL/LIFE INSURANC	29,858.20	289,096.69	358,884.00	80.55	69,787.31	717,768.00	428,671.31
01-30-630-155	POLICE PENSION	82,670.24	909,372.64	1,074,713.00	84.62	165,340.36	2,149,426.00	1,240,053.36

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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 01 - GENERAL FUND								
01-30-630-201	PHONE - TELEPHONES	1,611.51	13,018.36	27,000.00	48.22	13,981.64	54,000.00	40,981.64
01-30-630-202	ACCREDITATION	0.00	4,645.00	4,645.00	100.00	0.00	9,290.00	4,645.00
01-30-630-241	FEES - FIELD COURT ATTORNEY	0.00	750.00	16,000.00	4.69	15,250.00	32,000.00	31,250.00
01-30-630-245	FIRING RANGE	420.00	1,299.50	2,500.00	51.98	1,200.50	5,000.00	3,700.50
01-30-630-301	OFFICE SUPPLIES	0.00	4,471.70	4,000.00	111.79	(471.70)	8,000.00	5,534.21
01-30-630-302	PRINTING & PUBLISHING	46.08	2,465.79	4,000.00	61.64	1,534.21	8,000.00	5,534.21
01-30-630-303	FUEL/MILEAGE/WASH	10,860.14	38,475.05	50,000.00	76.95	11,524.95	100,000.00	61,524.95
01-30-630-304	SCHOOLS/CONFERENCES/TRAV	25,936.00	30,849.82	40,000.00	77.12	9,150.18	80,000.00	49,150.18
01-30-630-305	TUITION REIMBURSEMENT	0.00	0.00	6,000.00	0.00	6,000.00	12,000.00	12,000.00
01-30-630-307	FEES/DUES/SUBSCRIPTIONS	2,686.57	22,431.76	20,500.00	109.42	(1,931.76)	41,000.00	18,568.24
01-30-630-308	CADET PROGRAM	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
01-30-630-309	EMPLOYEE RECOGNITION	0.00	164.04	3,000.00	5.47	2,835.96	6,000.00	5,835.96
01-30-630-311	POSTAGE & METER RENT	0.00	1,381.93	4,200.00	32.90	2,818.07	8,400.00	7,018.07
01-30-630-315	COPY SERVICE	462.10	3,010.06	4,100.00	73.42	1,089.94	8,200.00	5,189.94
01-30-630-345	UNIFORMS	3,202.69	15,889.12	28,500.00	55.75	12,610.88	57,000.00	41,110.88
01-30-630-346	AMMUNITION	0.00	929.60	14,000.00	6.64	13,070.40	28,000.00	27,070.40
01-30-630-401	OPERATING EQUIPMENT	646.19	38,818.39	25,000.00	155.27	(13,818.39)	50,000.00	11,181.61
01-30-630-409	MAINTENANCE - VEHICLES	6,893.22	31,631.52	50,000.00	63.26	18,368.48	100,000.00	68,368.48
01-30-630-421	MAINTENANCE - RADIO EQUIPME	0.00	1,308.59	6,500.00	20.13	5,191.41	13,000.00	11,691.41
ADMINISTRATION		494,573.56	3,896,914.76	4,658,992.00	83.64	762,077.24	9,317,984.00	5,421,069.24
DATA PROCESSING								
01-30-640-212	EDP EQUIPMENT/SOFTWARE	0.00	2,038.80	3,732.00	54.63	1,693.20	7,464.00	5,425.20
01-30-640-225	INTERNET/WEBSITE HOSTING	400.00	4,000.00	6,760.00	59.17	2,760.00	13,520.00	9,520.00
01-30-640-263	EDP LICENSES	5,000.00	25,287.75	30,000.00	84.29	4,712.25	60,000.00	34,712.25
01-30-640-267	DOCUMENT STORAGE/SCANNING	0.00	0.00	2,000.00	0.00	2,000.00	4,000.00	4,000.00
01-30-640-306	CONSULTING SERVICES-IT/GRA	780.80	8,173.68	22,875.00	35.73	14,701.32	45,750.00	37,576.32
DATA PROCESSING		6,180.80	39,500.23	65,367.00	60.43	25,866.77	130,734.00	91,233.77
BUILDINGS								
01-30-630-228	MAINTENANCE - BUILDING	1,923.86	54,863.86	44,927.00	122.12	(9,936.86)	89,854.00	34,990.14
01-30-630-235	NICOR GAS (7760 QUINCY)	605.32	2,445.48	5,000.00	48.91	2,554.52	10,000.00	7,554.52
01-30-630-250	SANITARY (7760 QUINCY)	22.35	511.46	1,200.00	42.62	688.54	2,400.00	1,888.54
01-30-630-351	BUILDING MAINTENANCE SUPPL	0.00	1,081.43	3,000.00	36.05	1,918.57	6,000.00	4,918.57
BUILDINGS		2,551.53	58,902.23	54,127.00	108.82	(4,775.23)	108,254.00	49,351.77
RISK MANAGEMENT								
01-30-645-273	SELF INSURANCE - DEDUCTIBLE	0.00	0.00	20,000.00	0.00	20,000.00	40,000.00	40,000.00
RISK MANAGEMENT		0.00	0.00	20,000.00	0.00	20,000.00	40,000.00	40,000.00
CONSTRUCTION								
01-30-635-288	BUILDING CONSTR & REMODEL	0.00	16,325.00	1,500.00	1,088.33	(14,825.00)	3,000.00	(13,325.00)
CONSTRUCTION		0.00	16,325.00	1,500.00	1,088.33	(14,825.00)	3,000.00	(13,325.00)
PATROL								
01-30-650-268	ANIMAL CONTROL	200.00	200.00	800.00	25.00	600.00	1,600.00	1,400.00
01-30-650-343	JAIL SUPPLIES	510.84	732.13	1,500.00	48.81	767.87	3,000.00	2,267.87
01-30-650-348	DRUG FORFEITURE EXP - STATE	0.00	45,088.20	500.00	9,017.64	(44,588.20)	1,000.00	(44,088.20)

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Fund 01 - GENERAL FUND								
01-30-650-349	DRUG FORFEITURE EXP - FEDEF	0.00	9,750.00	500.00	1,950.00	(9,250.00)	1,000.00	(8,750.00)
PATROL		710.84	55,770.33	3,300.00	1,690.01	(52,470.33)	6,600.00	(49,170.33)
TRAFFIC SAFETY								
01-30-660-105	PART TIME - CROSSING GUARD	456.24	2,889.51	5,323.00	54.28	2,433.49	10,646.00	7,756.49
TRAFFIC SAFETY		456.24	2,889.51	5,323.00	54.28	2,433.49	10,646.00	7,756.49
CRIME PREVENTION								
01-30-670-331	COMMODITIES	0.00	226.53	5,000.00	4.53	4,773.47	10,000.00	9,773.47
CRIME PREVENTION		0.00	226.53	5,000.00	4.53	4,773.47	10,000.00	9,773.47
TELECOMMUNICATIONS								
01-30-675-235	RADIO DISPATCHING	0.00	232,842.17	312,000.00	74.63	79,157.83	624,000.00	391,157.83
TELECOMMUNICATIONS		0.00	232,842.17	312,000.00	74.63	79,157.83	624,000.00	391,157.83
RED LIGHT								
01-30-630-246	RED LIGHT - ADJUDICATOR	0.00	2,222.00	6,000.00	37.03	3,778.00	12,000.00	9,778.00
01-30-630-247	RED LIGHT - CAMERA FEES	22,475.00	201,525.83	275,000.00	73.28	73,474.17	550,000.00	348,474.17
01-30-630-248	RED LIGHT - COM ED	120.49	1,023.82	2,000.00	51.19	976.18	4,000.00	2,976.18
01-30-630-249	RED LIGHT - MISC FEE	1,635.00	17,513.70	35,000.00	50.04	17,486.30	70,000.00	52,486.30
RED LIGHT		24,230.49	222,285.35	318,000.00	69.90	95,714.65	636,000.00	413,714.65
Total Dept 30 - POLICE DEPARTMENT		528,703.46	4,525,656.11	5,443,609.00	83.14	917,952.89	10,887,218.00	6,361,561.89
Dept 35 - PUBLIC WORKS DEPARTMENT								
CAPITAL IMPROVEMENTS								
01-35-765-625	VEHICLES - NEW & OTHER	0.00	15,063.50	0.00	100.00	(15,063.50)	0.00	(15,063.50)
01-35-765-685	STREET IMPROVEMENTS	1,183.00	2,366.00	30,000.00	7.89	27,634.00	60,000.00	57,634.00
CAPITAL IMPROVEMENTS		1,183.00	17,429.50	30,000.00	58.10	12,570.50	60,000.00	42,570.50
ADMINISTRATION								
01-35-400-147	MEDICARE	466.23	2,715.41	3,204.00	84.75	488.59	6,408.00	3,692.59
01-35-400-151	IMRF	7,666.07	29,950.84	28,147.00	106.41	(1,803.84)	56,294.00	26,343.16
01-35-400-161	SOCIAL SECURITY	1,993.48	11,608.36	13,700.00	84.73	2,091.64	27,400.00	15,791.64
01-35-400-171	SUI - UNEMPLOYMENT	554.31	1,180.35	998.00	118.27	(182.35)	1,996.00	815.65
01-35-710-101	SALARIES - PERMANENT EMPLO	9,341.57	126,463.07	163,587.00	77.31	37,123.93	327,174.00	200,710.93
01-35-710-102	OVERTIME	19,642.67	31,963.14	20,000.00	159.82	(11,963.14)	40,000.00	8,036.86
01-35-710-103	PART TIME - LABOR	1,664.00	10,204.61	11,072.00	92.17	867.39	22,144.00	11,939.39
01-35-710-126	SALARIES - CLERICAL	2,115.48	23,206.95	26,308.00	88.21	3,101.05	52,616.00	29,409.05
01-35-710-141	HEALTH/DENTAL/LIFE INSURANC	3,635.70	38,062.36	54,315.00	70.08	16,252.64	108,630.00	70,567.64
01-35-710-201	TELEPHONES	177.25	1,941.61	2,784.00	69.74	842.39	5,568.00	3,626.39
01-35-710-301	OFFICE SUPPLIES	199.38	848.60	500.00	169.72	(348.60)	1,000.00	151.40
01-35-710-302	PRINTING & PUBLISHING	290.70	852.70	750.00	113.69	(102.70)	1,500.00	647.30
01-35-710-303	FUEL/MILEAGE/WASH	798.55	4,929.30	10,400.00	47.40	5,470.70	20,800.00	15,870.70
01-35-710-304	SCHOOLS/CONFERENCES/TRAV	0.00	112.00	2,000.00	5.60	1,888.00	4,000.00	3,888.00

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Fund 01 - GENERAL FUND								
01-35-710-307	FEES/DUES/SUBSCRIPTIONS	0.00	100.00	400.00	25.00	300.00	800.00	700.00
01-35-710-311	POSTAGE & METER RENT	0.00	1,315.44	1,500.00	87.70	184.56	3,000.00	1,684.56
01-35-710-345	UNIFORMS	186.98	823.48	3,800.00	21.67	2,976.52	7,600.00	6,776.52
01-35-710-401	OPERATING SUPPLIES & EQUIPM	224.10	1,952.09	2,500.00	78.08	547.91	5,000.00	3,047.91
01-35-710-405	FURNITURE & OFFICE EQUIPMEN	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
ADMINISTRATION		48,956.47	288,230.31	346,465.00	83.19	58,234.69	692,930.00	404,699.69
DATA PROCESSING								
01-35-715-212	EDP EQUIPMENT/SOFTWARE	0.00	149.96	0.00	100.00	(149.96)	0.00	(149.96)
01-35-715-225	INTERNET/WEBSITE HOSTING	118.35	1,203.59	1,296.00	92.87	92.41	2,592.00	1,388.41
DATA PROCESSING		118.35	1,353.55	1,296.00	104.44	(57.55)	2,592.00	1,238.45
ENGINEERING								
01-35-720-245	FEES - ENGINEERING	0.00	10,920.51	30,000.00	36.40	19,079.49	60,000.00	49,079.49
01-35-720-254	PLAN REVIEW - ENGINEER	0.00	0.00	1,500.00	0.00	1,500.00	3,000.00	3,000.00
ENGINEERING		0.00	10,920.51	31,500.00	34.67	20,579.49	63,000.00	52,079.49
BUILDINGS								
01-35-725-413	MAINTENANCE - GARAGE	492.36	3,131.08	5,000.00	62.62	1,868.92	10,000.00	6,868.92
01-35-725-414	MAINTENANCE - SALT BINS	0.00	0.00	1,500.00	0.00	1,500.00	3,000.00	3,000.00
01-35-725-415	NICOR GAS	516.74	1,514.83	3,200.00	47.34	1,685.17	6,400.00	4,885.17
01-35-725-417	SANITARY USER CHARGE	13.37	66.95	200.00	33.48	133.05	400.00	333.05
01-35-725-418	MAINTENANCE - PW BUILDING	350.00	36,207.03	10,000.00	362.07	(26,207.03)	20,000.00	(16,207.03)
BUILDINGS		1,372.47	40,919.89	19,900.00	205.63	(21,019.89)	39,800.00	(1,119.89)
EQUIPMENT REPAIR								
01-35-735-409	MAINTENANCE - VEHICLES	6,262.35	23,095.14	20,000.00	115.48	(3,095.14)	40,000.00	16,904.86
01-35-735-411	MAINTENANCE - EQUIPMENT	0.00	589.95	1,000.00	59.00	410.05	2,000.00	1,410.05
EQUIPMENT REPAIR		6,262.35	23,685.09	21,000.00	112.79	(2,685.09)	42,000.00	18,314.91
SNOW REMOVAL								
01-35-740-287	SNOW REMOVAL CONTRACT	95,565.00	95,565.00	70,000.00	136.52	(25,565.00)	140,000.00	44,435.00
01-35-740-411	MAINTENANCE - EQUIPMENT	0.00	215.48	4,000.00	5.39	3,784.52	8,000.00	7,784.52
SNOW REMOVAL		95,565.00	95,780.48	74,000.00	129.43	(21,780.48)	148,000.00	52,219.52
STREET LIGHTING								
01-35-745-207	ENERGY - STREET LIGHTS	1,136.68	15,268.38	21,000.00	72.71	5,731.62	42,000.00	26,731.62
01-35-745-223	MAINTENANCE - STREET LIGHTS	31,333.78	48,431.17	17,000.00	284.89	(31,431.17)	34,000.00	(14,431.17)
01-35-745-224	MAINTENANCE - TRAFFIC SIGNAL	0.00	3,141.00	3,141.00	100.00	0.00	6,282.00	3,141.00
STREET LIGHTING		32,470.46	66,840.55	41,141.00	162.47	(25,699.55)	82,282.00	15,441.45
STORM WATER IMPROVEMENTS								
01-35-750-286	JET CLEANING CULVERT	0.00	16,393.85	20,000.00	81.97	3,606.15	40,000.00	23,606.15
01-35-750-289	SITE IMPROVEMENTS	5,025.99	5,025.99	10,000.00	50.26	4,974.01	20,000.00	14,974.01
01-35-750-290	EQUIPMENT RENTAL	99.00	219.00	3,500.00	6.26	3,281.00	7,000.00	6,781.00
01-35-750-328	STREET & ROW MAINTENANCE	0.00	165,387.13	160,000.00	103.37	(5,387.13)	320,000.00	154,612.87
01-35-750-338	TREE MAINTENANCE	3,150.00	158,460.50	150,000.00	105.64	(8,460.50)	300,000.00	141,539.50

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Fund 01 - GENERAL FUND								
01-35-750-381	STORM WATER IMPROVEMENTS	0.00	56,109.02	92,500.00	60.66	36,390.98	185,000.00	128,890.98
	STORM WATER IMPROVEMENTS	8,274.99	401,595.49	436,000.00	92.11	34,404.51	872,000.00	470,404.51
STREET MAINTENANCE								
01-35-755-279	TRASH REMOVAL	0.00	0.00	2,000.00	0.00	2,000.00	4,000.00	4,000.00
01-35-755-281	ROUTE 83 BEAUTIFICATION	0.00	40,490.30	52,000.00	77.87	11,509.70	104,000.00	63,509.70
01-35-755-284	BRUSH PICKUP	0.00	18,500.00	35,000.00	52.86	16,500.00	70,000.00	51,500.00
01-35-755-328	STREET & ROW MAINTENANCE C	0.00	12,767.53	15,000.00	85.12	2,232.47	30,000.00	17,232.47
01-35-755-331	SALT	34,330.70	34,330.70	80,000.00	42.91	45,669.30	160,000.00	125,669.30
01-35-755-332	J.U.L.I.E.	0.00	2,762.13	2,400.00	115.09	(362.13)	4,800.00	2,037.87
01-35-755-333	ROAD SIGNS	89.20	3,931.40	7,700.00	51.06	3,768.60	15,400.00	11,468.60
01-35-755-401	OPERATING EQUIPMENT	0.00	33.10	1,500.00	2.21	1,466.90	3,000.00	2,966.90
	STREET MAINTENANCE	34,419.90	112,815.16	195,600.00	57.68	82,784.84	391,200.00	278,384.84
NUISANCE CONTROL								
01-35-760-258	PEST CONTROL	0.00	0.00	1,000.00	0.00	1,000.00	2,000.00	2,000.00
01-35-760-259	MOSQUITO ABATEMENT	0.00	26,960.00	35,300.00	76.37	8,340.00	70,600.00	43,640.00
	NUISANCE CONTROL	0.00	26,960.00	36,300.00	74.27	9,340.00	72,600.00	45,640.00
Total Dept 35 - PUBLIC WORKS DEPARTMENT		228,622.99	1,086,530.53	1,233,202.00	88.11	146,671.47	2,466,404.00	1,379,873.47
Dept 40 - BUILDING & ZONING DEPARTMENT								
GENERAL MANAGEMENT								
01-40-400-147	MEDICARE	135.79	1,465.99	1,905.00	76.95	439.01	3,810.00	2,344.01
01-40-400-151	IMRF	2,360.21	15,999.05	17,621.00	90.80	1,621.95	35,242.00	19,242.95
01-40-400-161	SOCIAL SECURITY	580.60	6,268.30	8,147.00	76.94	1,878.70	16,294.00	10,025.70
01-40-400-171	SUI - UNEMPLOYMENT	185.83	411.03	387.00	106.21	(24.03)	774.00	362.97
01-40-810-101	SALARIES - PERMANENT EMPLO	7,495.20	82,350.65	97,014.00	84.89	14,663.35	194,028.00	111,677.35
01-40-810-102	OVERTIME	175.67	175.67	11,000.00	1.60	10,824.33	22,000.00	21,824.33
01-40-810-126	SALARIES - CLERICAL	1,904.05	20,876.67	23,386.00	89.27	2,509.33	46,772.00	25,895.33
01-40-810-141	HEALTH/DENTAL/LIFE INSURANC	2,085.42	20,722.38	24,278.00	85.35	3,555.62	48,556.00	27,833.62
01-40-810-201	TELEPHONES	42.46	632.84	876.00	72.24	243.16	1,752.00	1,119.16
01-40-810-301	OFFICE SUPPLIES	200.22	1,201.39	1,000.00	120.14	(201.39)	2,000.00	798.61
01-40-810-302	PRINTING & PUBLISHING	0.00	1,608.95	750.00	214.53	(858.95)	1,500.00	(108.95)
01-40-810-303	FUEL/MILEAGE/WASH	23.06	311.99	1,000.00	31.20	688.01	2,000.00	1,688.01
01-40-810-304	SCHOOLS/CONFERENCES/TRAV	260.00	912.52	1,200.00	76.04	287.48	2,400.00	1,487.48
01-40-810-307	FEES/DUES/SUBSCRIPTIONS	289.00	729.00	500.00	145.80	(229.00)	1,000.00	271.00
01-40-810-311	POSTAGE & METER RENT	0.00	207.65	400.00	51.91	192.35	800.00	592.35
01-40-810-315	COPY SERVICE	557.53	4,333.28	4,500.00	96.30	166.72	9,000.00	4,666.72
01-40-810-345	UNIFORMS	0.00	21.97	400.00	5.49	378.03	800.00	778.03
01-40-810-409	MAINTENANCE - VEHICLES	0.00	1,781.51	500.00	356.30	(1,281.51)	1,000.00	(781.51)
	GENERAL MANAGEMENT	16,295.04	160,010.84	194,864.00	82.11	34,853.16	389,728.00	229,717.16
DATA PROCESSING								
01-40-815-212	EDP EQUIPMENT/SOFTWARE	128.90	128.90	0.00	100.00	(128.90)	0.00	(128.90)
01-40-815-267	DOCUMENT STORAGE/SCANNIN	0.00	3,420.60	9,000.00	38.01	5,579.40	18,000.00	14,579.40

EXPENDITURE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 01 - GENERAL FUND								
DATA PROCESSING		128.90	3,549.50	9,000.00	39.44	5,450.50	18,000.00	14,450.50
ENGINEERING								
01-40-820-245	FEES - ENGINEERING	0.00	442.64	0.00	100.00	(442.64)	0.00	(442.64)
01-40-820-246	FEES - DRAINAGE ENGINEER	0.00	450.00	0.00	100.00	(450.00)	0.00	(450.00)
01-40-820-254	PLAN REVIEW - CIVIL ENGINEER	2,922.16	14,494.01	12,000.00	120.78	(2,494.01)	24,000.00	9,505.99
01-40-820-255	PLAN REVIEW - STRUCTURAL	1,594.50	4,381.50	7,000.00	62.59	2,618.50	14,000.00	9,618.50
01-40-820-258	PLAN REVIEW - BUILDING CODE	11,012.25	126,595.45	140,000.00	90.43	13,404.55	280,000.00	153,404.55
ENGINEERING		15,528.91	146,363.60	159,000.00	92.05	12,636.40	318,000.00	171,636.40
INSPECTION								
01-40-830-109	PART TIME - INSPECTOR	1,575.00	36,435.00	40,000.00	91.09	3,565.00	80,000.00	43,565.00
01-40-830-115	PLUMBING INSPECTION	550.00	3,650.00	15,000.00	24.33	11,350.00	30,000.00	26,350.00
01-40-830-117	ELEVATOR INSPECTION	3,081.00	5,070.00	5,000.00	101.40	(70.00)	10,000.00	4,930.00
01-40-830-119	CODE ENFORCEMENT INSPECTI	360.00	3,125.00	5,000.00	62.50	1,875.00	10,000.00	6,875.00
INSPECTION		5,566.00	48,280.00	65,000.00	74.28	16,720.00	130,000.00	81,720.00
Total Dept 40 - BUILDING & ZONING DEPARTMENT		37,518.85	358,203.94	427,864.00	83.72	69,660.06	855,728.00	497,524.06
Dept 53 - HOTEL/MOTEL								
GENERAL MANAGEMENT								
01-53-401-307	FEES DUES SUBSCRIPTIONS	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
GENERAL MANAGEMENT		0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
COMMUNITY RELATIONS								
01-53-435-319	CHAMBER DIRECTORY	0.00	1,500.00	3,000.00	50.00	1,500.00	6,000.00	4,500.00
COMMUNITY RELATIONS		0.00	1,500.00	3,000.00	50.00	1,500.00	6,000.00	4,500.00
SPECIAL EVENTS								
01-53-436-379	SPECIAL PROMOTIONAL EVENTS	0.00	0.00	2,500.00	0.00	2,500.00	5,000.00	5,000.00
SPECIAL EVENTS		0.00	0.00	2,500.00	0.00	2,500.00	5,000.00	5,000.00
Total Dept 53 - HOTEL/MOTEL		0.00	1,500.00	6,000.00	25.00	4,500.00	12,000.00	10,500.00
TOTAL EXPENDITURES		923,997.59	8,051,759.06	9,646,169.00	83.47	1,594,409.94	19,292,338.00	11,240,578.94

EXPENDITURE REPORT FOR WILLOWBROOK
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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 02 - WATER FUND								
Dept 50 - WATER DEPARTMENT								
CAPITAL IMPROVEMENTS								
02-50-440-626	VEHICLES - NEW & OTHER	0.00	15,063.50	0.00	100.00	(15,063.50)	0.00	(15,063.50)
02-50-440-694	DISTRIBUTION SYSTEM REPLACI	0.00	3,274.80	7,500.00	43.66	4,225.20	15,000.00	11,725.20
CAPITAL IMPROVEMENTS		0.00	18,338.30	7,500.00	244.51	(10,838.30)	15,000.00	(3,338.30)
ADMINISTRATION								
02-50-400-147	MEDICARE	203.10	2,499.77	3,523.00	70.96	1,023.23	7,046.00	4,546.23
02-50-400-151	IMRF	3,122.46	25,495.14	31,969.00	79.75	6,473.86	63,938.00	38,442.86
02-50-400-161	SOCIAL SECURITY	868.51	10,691.07	15,062.00	70.98	4,370.93	30,124.00	19,432.93
02-50-400-171	SUI - UNEMPLOYMENT	257.75	686.72	866.00	79.30	179.28	1,732.00	1,045.28
02-50-401-101	SALARIES - PERMANENT EMPLO	9,341.31	124,958.25	162,087.00	77.09	37,128.75	324,174.00	199,215.75
02-50-401-102	OVERTIME	1,210.38	20,903.28	50,000.00	41.81	29,096.72	100,000.00	79,096.72
02-50-401-103	PART TIME - LABOR	1,644.50	7,862.61	4,538.00	173.26	(3,324.61)	9,076.00	1,213.39
02-50-401-126	SALARIES - CLERICAL	2,115.40	23,205.79	26,308.00	88.21	3,102.21	52,616.00	29,410.21
02-50-401-141	HEALTH/DENTAL/LIFE INSURANC	3,694.44	38,718.31	55,848.00	69.33	17,129.69	111,696.00	72,977.69
02-50-401-201	PHONE - TELEPHONES	344.79	3,351.05	5,592.00	59.93	2,240.95	11,184.00	7,832.95
02-50-401-239	FEES - VILLAGE ATTORNEY	0.00	0.00	1,000.00	0.00	1,000.00	2,000.00	2,000.00
02-50-401-301	OFFICE SUPPLIES	0.00	388.73	500.00	77.75	111.27	1,000.00	611.27
02-50-401-302	PRINTING & PUBLISHING	0.00	5,375.00	5,200.00	103.37	(175.00)	10,400.00	5,025.00
02-50-401-303	FUEL/MILEAGE/WASH	798.55	4,929.26	11,000.00	44.81	6,070.74	22,000.00	17,070.74
02-50-401-304	SCHOOLS CONFERENCE TRAVE	0.00	60.35	1,500.00	4.02	1,439.65	3,000.00	2,939.65
02-50-401-307	FEES DUES SUBSCRIPTIONS	12.35	1,325.20	410.00	323.22	(915.20)	820.00	(505.20)
02-50-401-311	POSTAGE & METER RENT	0.00	3,589.35	6,000.00	59.82	2,410.65	12,000.00	8,410.65
02-50-401-405	FURNITURE & OFFICE EQUIPME	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
ADMINISTRATION		23,613.54	274,039.88	381,903.00	71.76	107,863.12	763,806.00	489,766.12
OTHER								
02-50-449-102	INTEREST EXPENSE	0.00	9,190.00	9,190.00	100.00	0.00	18,380.00	9,190.00
02-50-449-104	BOND PRINCIPAL EXPENSE	0.00	11,314.00	11,314.00	100.00	0.00	22,628.00	11,314.00
02-50-449-105	INTEREST EXPENSE - IEPA LOAN	0.00	14,145.95	14,146.00	100.00	0.05	28,292.00	14,146.05
02-50-449-106	PRINCIPAL EXPENSE - IEPA LOAI	0.00	40,302.25	40,302.00	100.00	(0.25)	80,604.00	40,301.75
OTHER		0.00	74,952.20	74,952.00	100.00	(0.20)	149,904.00	74,951.80
DATA PROCESSING								
02-50-417-212	EDP EQUIPMENT/SOFTWARE	0.00	1,049.93	35,364.00	2.97	34,314.07	70,728.00	69,678.07
02-50-417-263	EDP LICENSES	0.00	1,765.00	15,605.00	11.31	13,840.00	31,210.00	29,445.00
02-50-417-306	IT CONSULTING	0.00	382.00	3,750.00	10.19	3,368.00	7,500.00	7,118.00
DATA PROCESSING		0.00	3,196.93	54,719.00	5.84	51,522.07	109,438.00	106,241.07
ENGINEERING								
02-50-405-245	FEES - ENGINEERING	0.00	0.00	2,500.00	0.00	2,500.00	5,000.00	5,000.00
ENGINEERING		0.00	0.00	2,500.00	0.00	2,500.00	5,000.00	5,000.00
RISK MANAGEMENT								
02-50-415-273	SELF INSURANCE - DEDUCTIBLE	0.00	0.00	10,000.00	0.00	10,000.00	20,000.00	20,000.00
RISK MANAGEMENT		0.00	0.00	10,000.00	0.00	10,000.00	20,000.00	20,000.00

EXPENDITURE REPORT FOR WILLOWBROOK
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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 02 - WATER FUND								
TRANSFERS TO OTHER FUNDS								
02-50-410-501	REIMBURSE OVERHEAD GENER	46,857.33	468,573.30	562,288.00	83.33	93,714.70	1,124,576.00	656,002.70
02-50-900-109	TRANSFER TO WATER CAPITAL I	0.00	200,000.00	200,000.00	100.00	0.00	400,000.00	200,000.00
02-50-900-112	TRANSFER TO DEBT SERVICE - 2	0.00	46,695.00	46,695.00	100.00	0.00	93,390.00	46,695.00
TRANSFERS TO OTHER FUNDS		46,857.33	715,268.30	808,983.00	88.42	93,714.70	1,617,966.00	902,697.70
WATER PRODUCTION								
02-50-420-206	ENERGY - ELECTRIC PUMP	2,460.13	11,746.29	18,900.00	62.15	7,153.71	37,800.00	26,053.71
02-50-420-361	CHEMICALS	(447.30)	28.09	1,500.00	1.87	1,471.91	3,000.00	2,971.91
02-50-420-362	SAMPLING ANALYSIS	130.00	1,520.00	4,000.00	38.00	2,480.00	8,000.00	6,480.00
02-50-420-488	MAINTENANCE - PUMPS & WELL	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
02-50-420-491	PUMP INSPECTION REPAIR MAIN	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
02-50-420-575	PURCHASE OF WATER	120,592.08	1,305,614.03	1,739,500.00	75.06	433,885.97	3,479,000.00	2,173,385.97
WATER PRODUCTION		122,734.91	1,318,908.41	1,764,900.00	74.73	445,991.59	3,529,800.00	2,210,891.59
WATER STORAGE								
02-50-425-473	WELLHOUSE REPAIRS & MAINTEN	0.00	735.22	1,500.00	49.01	764.78	3,000.00	2,264.78
02-50-425-474	WELLHOUSE REPAIRS & MAIN - \	0.00	1,574.68	1,500.00	104.98	(74.68)	3,000.00	1,425.32
02-50-425-475	MATERIALS & SUPPLIES- STAND	1,192.09	3,027.21	5,500.00	55.04	2,472.79	11,000.00	7,972.79
02-50-425-485	REPAIRS & MAINTENANCE-STAN	3,000.00	5,798.71	6,300.00	92.04	501.29	12,600.00	6,801.29
WATER STORAGE		4,192.09	11,135.82	14,800.00	75.24	3,664.18	29,600.00	18,464.18
TRANSPORTATION/DISTRIBUTION								
02-50-430-276	LEAK SURVEYS	3,703.00	8,885.50	9,000.00	98.73	114.50	18,000.00	9,114.50
02-50-430-277	WATER DISTRIBUTION REPAIRS/	13,277.90	189,362.87	200,000.00	94.68	10,637.13	400,000.00	210,637.13
02-50-430-299	LANDSCAPING - OTHER	0.00	920.40	1,500.00	61.36	579.60	3,000.00	2,079.60
02-50-430-401	OPERATING EQUIPMENT	0.00	1,648.00	2,000.00	82.40	352.00	4,000.00	2,352.00
02-50-430-425	J. U. L. I. E. MAINTENANCE & SUF	0.00	0.00	500.00	0.00	500.00	1,000.00	1,000.00
02-50-430-476	MATERIAL & SUPPLIES - DISTRIB	4,313.00	16,939.33	35,000.00	48.40	18,060.67	70,000.00	53,060.67
TRANSPORTATION/DISTRIBUTION		21,293.90	217,756.10	248,000.00	87.80	30,243.90	496,000.00	278,243.90
METERS & BILLING								
02-50-435-278	METERS FLOW TESTING	0.00	17,046.88	2,500.00	681.88	(14,546.88)	5,000.00	(12,046.88)
02-50-435-461	NEW METERING EQUIPMENT	0.00	7,049.41	15,000.00	47.00	7,950.59	30,000.00	22,950.59
02-50-435-462	METER REPLACEMENT	0.00	0.00	1,500.00	0.00	1,500.00	3,000.00	3,000.00
02-50-435-463	MAINTENANCE - METER EQUIPM	0.00	1,556.60	2,500.00	62.26	943.40	5,000.00	3,443.40
METERS & BILLING		0.00	25,652.89	21,500.00	119.32	(4,152.89)	43,000.00	17,347.11
Total Dept 50 - WATER DEPARTMENT		218,691.77	2,659,248.83	3,389,757.00	78.45	730,508.17	6,779,514.00	4,120,265.17
TOTAL EXPENDITURES		218,691.77	2,659,248.83	3,389,757.00	78.45	730,508.17	6,779,514.00	4,120,265.17

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Fund 03 - HOTEL/MOTEL TAX FUND								
Dept 53 - HOTEL/MOTEL								
TRANSFERS TO OTHER FUNDS								
03-53-900-101	TRANSFER TO GENERAL	0.00	717,758.53	715,941.00	100.25	(1,817.53)	1,431,882.00	714,123.47
	TRANSFERS TO OTHER FUNDS	0.00	717,758.53	715,941.00	100.25	(1,817.53)	1,431,882.00	714,123.47
Total Dept 53 - HOTEL/MOTEL		0.00	717,758.53	715,941.00	100.25	(1,817.53)	1,431,882.00	714,123.47
TOTAL EXPENDITURES		0.00	717,758.53	715,941.00	100.25	(1,817.53)	1,431,882.00	714,123.47

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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 04 - MOTOR FUEL TAX FUND								
Dept 56 - MOTOR FUEL TAX								
CAPITAL IMPROVEMENTS								
04-56-430-684	STREET MAINTENANCE CONTRA	0.00	236,652.52	300,000.00	78.88	63,347.48	600,000.00	363,347.48
CAPITAL IMPROVEMENTS		0.00	236,652.52	300,000.00	78.88	63,347.48	600,000.00	363,347.48
ENGINEERING								
04-56-430-245	ENGINEERING	1,955.00	8,693.35	25,000.00	34.77	16,306.65	50,000.00	41,306.65
ENGINEERING		1,955.00	8,693.35	25,000.00	34.77	16,306.65	50,000.00	41,306.65
Total Dept 56 - MOTOR FUEL TAX		1,955.00	245,345.87	325,000.00	75.49	79,654.13	650,000.00	404,654.13
TOTAL EXPENDITURES		1,955.00	245,345.87	325,000.00	75.49	79,654.13	650,000.00	404,654.13

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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 06 - SSA ONE BOND & INTEREST FUND								
Dept 60 - SSA BOND								
OTHER								
06-60-550-401	BOND PRINCIPAL EXPENSE	0.00	180,000.00	180,000.00	100.00	0.00	360,000.00	180,000.00
06-60-550-402	BOND INTEREST EXPENSE	0.00	141,925.00	141,925.00	100.00	0.00	283,850.00	141,925.00
OTHER		0.00	321,925.00	321,925.00	100.00	0.00	643,850.00	321,925.00
Total Dept 60 - SSA BOND		0.00	321,925.00	321,925.00	100.00	0.00	643,850.00	321,925.00
TOTAL EXPENDITURES		0.00	321,925.00	321,925.00	100.00	0.00	643,850.00	321,925.00

EXPENDITURE REPORT FOR WILLOWBROOK
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GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 07 - POLICE PENSION FUND								
Dept 62								
ADMINISTRATION								
07-62-401-242	LEGAL FEES	0.00	550.00	1,000.00	55.00	450.00	2,000.00	1,450.00
07-62-401-251	AUDIT FEES	0.00	3,515.00	3,515.00	100.00	0.00	7,030.00	3,515.00
07-62-401-252	ACTUARY SERVICES	0.00	6,000.00	4,400.00	136.36	(1,600.00)	8,800.00	2,800.00
07-62-401-253	FINANCIAL ADVISORY FEES	0.00	23,979.00	27,500.00	87.20	3,521.00	55,000.00	31,021.00
07-62-401-254	FIDUCIARY INSURANCE	0.00	0.00	3,283.00	0.00	3,283.00	6,566.00	6,566.00
07-62-401-304	SCHOOLS CONFERENCE TRAVE	0.00	2,215.00	4,210.00	52.61	1,995.00	8,420.00	6,205.00
07-62-401-307	FEES DUES SUBSCRIPTIONS	0.00	795.00	819.00	97.07	24.00	1,638.00	843.00
07-62-401-311	POSTAGE & METER RENT	0.00	48.71	0.00	100.00	(48.71)	0.00	(48.71)
07-62-401-531	DEPT OF INSURANCE FILING FEE	0.00	4,544.07	4,400.00	103.27	(144.07)	8,800.00	4,255.93
07-62-401-543	EXAMS - PHYSICAL	0.00	0.00	750.00	0.00	750.00	1,500.00	1,500.00
ADMINISTRATION		0.00	41,646.78	49,877.00	83.50	8,230.22	99,754.00	58,107.22
PENSION BENEFITS								
07-62-401-581	PENSION BENEFITS	113,903.15	1,106,648.33	1,332,332.00	83.06	225,683.67	2,664,664.00	1,558,015.67
07-62-401-582	WIDOW'S PENSION	10,092.82	72,479.56	83,182.00	87.13	10,702.44	166,364.00	93,884.44
07-62-401-583	NON-DUTY DISABILITY BENEFITS	6,088.42	60,120.60	72,297.00	83.16	12,176.40	144,594.00	84,473.40
07-62-401-584	DUTY DISABILITY BENEFITS	6,007.61	60,076.10	72,091.00	83.33	12,014.90	144,182.00	84,105.90
PENSION BENEFITS		136,092.00	1,299,324.59	1,559,902.00	83.30	260,577.41	3,119,804.00	1,820,479.41
Total Dept 62		136,092.00	1,340,971.37	1,609,779.00	83.30	268,807.63	3,219,558.00	1,878,586.63
TOTAL EXPENDITURES								
		136,092.00	1,340,971.37	1,609,779.00	83.30	268,807.63	3,219,558.00	1,878,586.63

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Fund 09 - WATER CAPITAL IMPROVEMENTS FUND								
Dept 65 - WATER CAPITAL IMPROVEMENTS								
CAPITAL IMPROVEMENTS								
09-65-440-600	WATER SYSTEM IMPROVEMENT:	1,682.50	27,917.50	135,380.00	20.62	107,462.50	270,760.00	242,842.50
09-65-440-602	MTU REPLACEMENT	0.00	0.00	1,000.00	0.00	1,000.00	2,000.00	2,000.00
CAPITAL IMPROVEMENTS		1,682.50	27,917.50	136,380.00	20.47	108,462.50	272,760.00	244,842.50
Total Dept 65 - WATER CAPITAL IMPROVEMENTS		1,682.50	27,917.50	136,380.00	20.47	108,462.50	272,760.00	244,842.50
TOTAL EXPENDITURES		1,682.50	27,917.50	136,380.00	20.47	108,462.50	272,760.00	244,842.50

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EXPENDITURE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 11 - DEBT SERVICE FUND								
Dept 70 - DEBT SERVICE FUND								
OTHER								
11-70-550-401	BOND PRINCIPAL EXPENSE	0.00	218,686.00	218,686.00	100.00	0.00	437,372.00	218,686.00
11-70-550-402	BOND INTEREST EXPENSE	0.00	107,860.00	107,860.00	100.00	0.00	215,720.00	107,860.00
OTHER		0.00	326,546.00	326,546.00	100.00	0.00	653,092.00	326,546.00
Total Dept 70 - DEBT SERVICE FUND		0.00	326,546.00	326,546.00	100.00	0.00	653,092.00	326,546.00
TOTAL EXPENDITURES		0.00	326,546.00	326,546.00	100.00	0.00	653,092.00	326,546.00

EXPENDITURE REPORT FOR WILLOWBROOK
 PERIOD ENDING 02/28/2021

GL NUMBER	DESCRIPTION	ACTIVITY FOR MONTH 02/28/21	YTD BALANCE 02/28/2021	2020-21 ORIGINAL BUDGET	% BDGT USED	AVAILABLE BALANCE	APPROP.	APPROP. AVAIL.
Fund 15 - RT 83/PLAINFIELD RD BUSINESS DISTRCT TAX								
Dept 15 - PLANNING & ECONOMIC DEVELOPMENT								
CONTINGENCIES								
15-15-401-242	LEGAL FEES	0.00	3,664.10	10,000.00	36.64	6,335.90	20,000.00	16,335.90
CONTINGENCIES		0.00	3,664.10	10,000.00	36.64	6,335.90	20,000.00	16,335.90
ADMINISTRATION								
15-15-455-513	SALES TAX REBATE- TOWN CEN'	0.00	0.00	84,515.00	0.00	84,515.00	169,030.00	169,030.00
15-15-455-514	SALES TAX REBATE - PFM	0.00	0.00	165,000.00	0.00	165,000.00	330,000.00	330,000.00
ADMINISTRATION		0.00	0.00	249,515.00	0.00	249,515.00	499,030.00	499,030.00
STREET MAINTENANCE								
15-15-745-224	MAINT TRAFFIC SIGNALS	0.00	3,141.00	3,141.00	100.00	0.00	6,282.00	3,141.00
STREET MAINTENANCE		0.00	3,141.00	3,141.00	100.00	0.00	6,282.00	3,141.00
Total Dept 15 - PLANNING & ECONOMIC DEVELOPMENT		0.00	6,805.10	262,656.00	2.59	255,850.90	525,312.00	518,506.90
TOTAL EXPENDITURES		0.00	6,805.10	262,656.00	2.59	255,850.90	525,312.00	518,506.90
TOTAL EXPENDITURES - ALL FUNDS		1,282,418.86	13,698,277.26	16,734,153.00	81.86	3,035,875.74	33,468,306.00	19,770,028.74

ILLAGE OF WILLOWBROOK

BOARD MEETING
AGENDA ITEM - HISTORY/COMMENTARY

AN ORDINANCE EXTENDING TEMPORARY EXECUTIVE POWERS PURSUANT TO
65 ILCS 5/11-1-6

AGENDA NO. 5.e.

AGENDA DATE: 03/08/21

STAFF REVIEW: Mike Mertens, Assistant Village Administrator

SIGNATURE: *M. Mertens*

LEGAL REVIEW: Thomas Bastian, Village Attorney

SIGNATURE: *T. Bastian / mm*

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: *B. Pabst*

REVIEWED & APPROVED BY COMMISSION: YES NO N/A

ITEM HISTORY (PREVIOUS VILLAGE BOARD REVIEWS, ACTIONS RELATED TO THIS ITEM, OTHER PERTINENT HISTORY)

In late 2019, a new and significant outbreak of Coronavirus Disease 2019 (COVID-19) emerged in China. The World Health Organization declared COVID-19 a Public Health Emergency of International Concern on January 30, 2020, and the United States Secretary of Health and Human Services declared that COVID-19 presents a public health emergency on January 27, 2020.

On March 9, 2020 Illinois Governor JB Pritzker declared all counties in the State of Illinois as a disaster area, (Governor's Disaster Proclamation). Following the lead of Governor J. B. Pritzker, health agencies on both the State and Federal level, the DuPage County Board on March 16, 2020 passed the DuPage County Disaster Proclamation. The Centers for Disease Control (CDC) and World Health Organization have declared the COVID-19 a global pandemic.

On July 24, 2020 Illinois Governor JB Pritzker issued an additional Executive Order amending the criteria. On October 20, 2020, the Governor implemented additional restrictions limiting gatherings sizes and banning indoor bar and restaurant services beginning on October 23, 2020 for regions 7 and 8. On December 11, 2020 the Governor issued Executive Order 2020-74 further tightening restrictions on bars, restaurants, and social gatherings to help mitigate the spread of COVID-19. On November 20, 2020, the Governor implemented Tier 3 Resurgence Mitigation restrictions to combat the exponential growth of COVID-19 within the State. On January 18, 2021, the Governor revised the restrictions for regions that have met certain criteria. The Village of Willowbrook is part of Region 8 and this Region has met criteria to be reclassified to Tier 1 restrictions (attached).

ITEM COMMENTARY (BACKGROUND, DISCUSSION, RECOMMENDATIONS, ETC.)

It is the policy of the Village of Willowbrook that the corporate authorities will be prepared to address any emergencies and, therefore, pursuant to Section 5/11-1-6 of the Illinois Municipal Code, it is necessary and appropriate to establish standards for the determination of whether a state of emergency exists authorizing the mayor to exercise extraordinary power and authority, by executive order, during the possible state of emergency, to ensure that the effects of COVID-19 are mitigated and minimized and that residents and visitors in the Village remain safe and secure.

If the ordinance is approved, it would allow for the follow items allowable through the code of ordinances:

- a) All actions reasonably and expeditiously necessary to respond to the local state of emergency; and
- b) Approve previously appropriated expenditures of the Village for the purpose of continuing the operations of the Village; and
- c) In the event the local state of emergency extends beyond the current fiscal year and a new budget has not been approved, the Mayor shall be authorized to approve new spending by the Village during the existence of the local state of emergency;
- d) Canceling meetings of any board or commission to which the Mayor appoints members. Any such cancellation shall automatically extend such deadlines for required actions by such board of commission as is specified in the cancellation notice;
- e) Suspend licenses or permits for special events or any other licenses or permits issued by the Village which in the judgment of the Mayor could impact the public health or well-being of residents or visitors to the community;
- f) Authorize any purchase for which funds are available reasonably related to the local state of emergency; and
- g) Authorize to close Village facilities as is reasonably required to protect the health of the public and employees of the Village related to the local state of emergency.

This Extension of the Temporary Executive Power Ordinance will be in full affect until the next regular meeting of the Village Board of the Village of Willowbrook.

ACTION PROPOSED: Pass the Ordinance.

ORDINANCE NO. 21-O-11

**AN ORDINANCE EXTENDING TEMPORARY
EXECUTIVE POWERS PURSUANT TO 65 ILCS 5/11-1-6**

WHEREAS, on March 23, 2020, the Governor of the State of Illinois issued Executive Order 2020-10 ordering all individuals, with certain exceptions, to shelter in place through April 7, 2020; and

WHEREAS, during the March 23, 2020 regular meeting of the Mayor and Board of Trustees of the Village of Willowbrook, the Village Board adopted and approved Ordinance 20-O-08, entitled “An Ordinance Establishing Temporary Executive Powers Pursuant to 65 ILCS 5/11-1-6”; and

WHEREAS, on March 23, 2020, Village Mayor, Frank A. Trilla, signed a “Proclamation Declaring An Emergency In The Village Of Willowbrook Due To The Coronavirus (COVID-19) Outbreak”; and

WHEREAS, on April 1, 2020, the Governor of the State of Illinois issued Executive Order 2020-18 extending for an additional thirty (30) days certain executive orders, including Executive Order 2020-10, ordering all individuals, with certain exceptions, to shelter in place through April 30, 2020; and

WHEREAS, effective May 1, 2020, Governor JB Pritzker signed Executive Order 2020-32 extending for another thirty (30) days prior Executive Orders continuing shelter-in-place orders until May 30, 2020; and

WHEREAS, during the April 27, 2020 regular meeting of the Mayor and Board of Trustees of the Village of Willowbrook, the Village Board adopted and approved Ordinance 20-O-13, entitled “An Ordinance Extending Temporary Executive Powers Pursuant to 65 ILCS 5/11-1-6”; and

WHEREAS, during the May 11, 2020 regular Village Board Meeting of the Mayor and Board of Trustees of the Village of Willowbrook, the Village Board adopted and approved Ordinance 20-O-17, entitled “An Ordinance Extending Temporary Executive Powers Pursuant to 65 ILCS 5/11-6”; and

WHEREAS, during the May 26, 2020 Village Board meeting of the Mayor and Board of Trustees, the Village Board adopted and approved Ordinance No. 20-O-19 extending temporary executive powers; and

WHEREAS, during the June 8, 2020 Village Board Meeting of the Mayor and Board of Trustees, the Village Board adopted and approved Ordinance No. 20-O-21 extending temporary executive powers; and

WHEREAS, during the June 22, 2020 Village Board Meeting of the Mayor and Board of Trustees, the Village Board adopted and the Mayor approved Ordinance No. 20-O-23 extending temporary executive powers; and

WHEREAS, on June 26, 2020, Governor JB Pritzker issued Executive Order 2020-44 (COVID-19 Executive Order No. 42) which extended prior Executive Orders related to the COVID-19 pandemic and again declared all counties in the State of Illinois disaster areas for an additional thirty (30) days; and

WHEREAS, on July 24, 2020, Governor JB Pritzker extended the Disaster Proclamations, previously issued, for an additional thirty (30) days; and

WHEREAS, on August 21, 2020, Governor JB Pritzker extended the disaster proclamation, previously issued, for an additional thirty (30) days; and

WHEREAS, on October 16, 2020, Governor JB Pritzker again extended the disaster proclamation for an additional thirty (30) days; and

WHEREAS, on November 13, 2020, Governor JB Pritzker again extended the disaster proclamation for an additional thirty (30) days; and

WHEREAS, on January 8, 2021, Governor JB Pritzker extended the disaster proclamation for an additional thirty (30) days and as further extended on February 5, 2021 by Executive Order 2021-4; and

WHEREAS, the corporate authorities of the Village believe it is reasonable and necessary for the temporary executive powers afforded by Village Ordinances 20-O-08, 20-O-10, 20-O-13, 20-O-17, 20-O-19, 20-O-21, 20-O-23, 20-O-26, 20-O-29, 20-O-32, 20-O-36, 20-O-38, 20-O-44, 20-O-45, 20-O-48, 20-O-53, 20-O-55, 20-O-63, 21-O-01, 21-O-4, 21-O-7 and 21-O-9 be extended to the adjournment of the next regularly scheduled Village of Willowbrook Mayor and Board of Trustees' meeting.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, as follows:

SECTION 1. The corporate authorities of the Village hereby determine that it is advisable, necessary and in the best interests of the public health, safety and welfare of the Village that the Village extend the temporary executive powers afforded by Village Ordinances 20-O-08, 20-O-10, 20-O-13, 20-O-17, 20-O-19, 20-O-21, 20-O-23, 20-O-26, 20-O-29, 20-O-32, 20-O-36, 20-O-38, 20-O-44, 20-O-45, 20-O-48, 20-O-53, 20-O-55, 20-O-63, 21-O-01, 21-O-4, 21-O-7 and 21-O-9, and as further extended by this Village Ordinance 21-O-11, until the adjournment of the next regularly scheduled meeting of the Village of Willowbrook Mayor and Board of Trustees.

SECTION 2. The officials, officers and employees of the Village are hereby authorized to take such further actions as are necessary to carry out the intent and purpose of this Ordinance.

SECTION 3. This Ordinance shall be in full force and effect upon and after its passage, approval and publication in accordance with law.

PASSED and APPROVED this 8th day of March, 2021.

ROLL CALL VOTE:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk

Tier 1 Resurgence Mitigations

UPDATED 1/18/2021

Tier 1 mitigations may be applied to regions that are experiencing a sustained resurgence of COVID-19 or regions that have been under more stringent mitigations but have not yet achieved metrics that allow for a resumption of Phase 4 Restore Illinois activities. If a region again experiences a sustained resurgence of COVID-19 with Tier 1 mitigations in place, a return to stricter measures may be necessary to curtail further spread. **Tier 1 mitigations include the following:**

SETTING	MITIGATION REQUIREMENTS
Bars and restaurants	<ul style="list-style-type: none"> • All bars and restaurants close at 11pm and may reopen no earlier than 6am the following day • Indoor service limited to the lesser of 25 guests or 25% capacity per room • Establishments offering indoor service must serve food • Indoor service reservations limited to 2-hour maximum duration and maximum 4 persons per party (dining only with members of the same household recommended) • All bar and restaurant patrons should be seated at tables • No ordering, seating, or congregating at bar (bar stools should be removed) • Tables should be 6 feet apart • No standing or congregating indoors or outdoors while waiting for a table or exiting • No dancing or standing indoors • Reservations required for each party • No seating of multiple parties at one table • Includes private clubs and country clubs • Limit to lesser of 25 guests or 25% of overall room capacity both indoors and outdoors
Meetings, social events and gatherings (including weddings, funerals, potlucks, etc.)	<ul style="list-style-type: none"> • Applicable to professional, cultural and social group gatherings. • Not applicable to students participating in-person classroom learning, or sports. • This does not reduce the overall facility capacity dictated by general Phase 4 business guidance such as office, personal care, retail, etc. • No party buses
Organized group recreational activities (fitness centers, sports, etc.)	<ul style="list-style-type: none"> • Sports should follow the mitigation measures set forth in the All Sport Guidelines, which outlines appropriate levels of practice and competition based on individual sport risk • Face coverings must be worn at all times in fitness centers, including while engaged in individual exercise regardless of person or machine spacing • Recreation, fitness centers and outdoor activities (not included in the above exposure settings) follow Phase 4 guidance

IDPH will continue to track the positivity rate in regions requiring additional mitigations to determine if mitigations can be relaxed, if additional mitigations are required, or if current mitigation should remain in place.

- For regions experiencing a resurgence of COVID-19, Tier 1 mitigations may be applied in either of the two scenarios:
 - If a region's test positivity rate is greater than or equal to 8 percent for three consecutive days (measured with the 7-day rolling average)
 - If a region experiences both a sustained increase in test positivity rate (measured with the 7-day rolling average for 7 of 10 days) and hospital capacity is threatened, which is measured by either:
 - A. A sustained increase in the number of COVID patients in the hospital (measured with the 7-day average for 7 of 10 days), or
 - B. Staffed ICU bed availability falls below 20 percent for three consecutive days (measured with the 7-day rolling average)
- For regions experiencing declining spread of COVID-19, Tier 1 mitigations will go into effect if a region meets the following three metrics:
 - Test positivity rate between 6.5 and 8 percent for three consecutive days (measured with the 7-day rolling average)
 - Staffed intensive care unit (ICU) bed availability greater than or equal to 20 percent for three consecutive days (measured with the 7-day rolling average)
 - No sustained increase in the number of COVID-19 patients in hospitals (measured with the 7-day rolling average for 7 of 10 days)

Please see the Illinois Gaming Board's website for Tier 1 and Tier 2 mitigations for casino gambling and video gaming.

Follow the latest regional metrics at: <https://dph.illinois.gov/regionmetrics>.

For more information on guidance for businesses, please visit the FAQ on [DCEO's website](#).



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SECRETARY OF STATE

December 11, 2020

Executive Order 2020-74

EXECUTIVE ORDER 2020-74
(COVID-19 EXECUTIVE ORDER NO. 70)

WHEREAS, since early March 2020, Illinois has faced a pandemic that has caused extraordinary sickness and loss of life, infecting over 830,000, and taking the lives of more than 14,000 residents; and,

WHEREAS, as Illinois adapts and responds to the public health disaster caused by Coronavirus Disease 2019 (COVID-19), a novel severe acute respiratory illness that spreads rapidly through respiratory transmissions and that continues to be without an effective treatment or vaccine, the burden on residents, healthcare providers, first responders, and governments throughout the State is unprecedented; and,

WHEREAS, at all times but especially during a public health crisis, protecting the health and safety of Illinoisans is among the most important functions of State government; and,

WHEREAS, public health research and guidance indicates the necessity and efficacy of wearing cloth face coverings in public settings where social distancing measures are difficult to maintain, and indicates that the risk of transmission outdoors is less than the risk of transmission indoors; and,

WHEREAS, public health guidance advises that minimizing physical interactions between people who do not reside in the same household is critical to slowing the spread of COVID-19; and,

WHEREAS, as COVID-19 has spread in Illinois over the course of the Gubernatorial Disaster Proclamations, the circumstances causing a disaster throughout the State have changed and continue to change, making definitive predictions of the course the virus will take over the coming months extremely difficult; and,

WHEREAS, in addition to causing the tragic loss of more than 14,000 Illinoisans and wreaking havoc on the physical health of tens of thousands more, COVID-19 has caused extensive economic loss and continues to threaten the financial welfare of a significant number of individuals and businesses across the nation and the State; and,

WHEREAS, many executive agencies in the State have focused their limited resources on the ongoing response to the COVID-19 pandemic; and,

WHEREAS, the COVID-19 pandemic has required the Illinois Department of Agriculture (IDOA) to address the outbreak's impact on the State's food supply chain through regulation and oversight of meat and poultry facilities and livestock management facilities; and,

WHEREAS, the COVID-19 pandemic's disruption to the livestock market has required IDOA to concentrate its resources on working with livestock owners and producers in addressing safe and environmental animal disposal concerns through its oversight and regulation of the Dead Animal Disposal Act; and,

WHEREAS, IDOA regulates and investigates many other industries that have been directly impacted by the COVID-19 pandemic including, but not limited to, pesticide applicators, animal shelters, pet shops, and gas stations, and the continued, proper regulation of these industries requires IDOA to commit additional time and resources into creating new procedures for conducting remote investigations and trainings; and,

WHEREAS, the COVID-19 pandemic's detrimental impact to IDOA's regulated industries has required IDOA to place additional time and resources into organizing and managing the timely implementation of the Business Interruption Grant Program; and,

WHEREAS, on December 11, 2020, considering the expected continuing spread of COVID-19 and the ongoing health and economic impacts that that will be felt over the coming month by people across the State, I declared all counties in the State of Illinois as a disaster area; and,

WHEREAS, in response to the epidemic emergency and public health emergency described above, I find it necessary to re-issue Executive Orders 2020-03, 2020-04, 2020-07, 2020-08, 2020-09, 2020-11, 2020-12, 2020-15, 2020-16, 2020-17, 2020-20, 2020-21, 2020-22, 2020-23, 2020-24, 2020-25, 2020-26, 2020-27, 2020-28, 2020-29, 2020-30, 2020-34, 2020-35, 2020-36, 2020-40, 2020-41, 2020-42, 2020-45, 2020-47, 2020-50, 2020-53, 2020-56, 2020-57, 2020-60, 2020-61, 2020-62, 2020-63, 2020-64, 2020-65, 2020-66, 2020-67, 2020-68, 2020-69, 2020-70, 2020-72, and 2020-73 and hereby incorporate the WHEREAS clauses of those Executive Orders;

THEREFORE, by the powers vested in me as the Governor of the State of Illinois, pursuant to the Illinois Constitution and Sections 7(1), 7(2), 7(3), 7(8), 7(9), and 7(12) of the Illinois Emergency Management Agency Act, 20 ILCS 3305, and consistent with the powers in public health laws, I hereby order the following, effective December 11, 2020:

Part 1: Re-Issue of Executive Orders.

Executive Orders 2020-03, 2020-04, 2020-07, 2020-08, 2020-09, 2020-11, 2020-12, 2020-15, 2020-16, 2020-17, 2020-20, 2020-21, 2020-22, 2020-23, 2020-24, 2020-25, 2020-26, 2020-27, 2020-28, 2020-29, 2020-30, 2020-34, 2020-35, 2020-36, 2020-40, 2020-41, 2020-42, 2020-45, 2020-47, 2020-50, 2020-53, 2020-56, 2020-57, 2020-60, 2020-61, 2020-62, 2020-63, 2020-64, 2020-65, 2020-66, 2020-67, 2020-68, 2020-69, 2020-70, 2020-72, and 2020-73 as follows:

Executive Order 2020-04 (Closure of James R. Thompson Center; waiver of sick leave requirement for State employees):

Sections 2 and 3 of Executive Order 2020-04 are re-issued and extended through **January 9, 2021**. Nothing in Section 2 precludes the Department of Central Management Services from designating specific points of ingress and egress and controlling traffic flow in the James R. Thompson Center for State employees, members of the public attending to State business, and members of the public patronizing the businesses and food court.

Executive Order 2020-07 (In-person meeting requirements):

Section 6 of Executive Order 2020-07, as amended by Executive Order 2020-33 and Executive Order 2020-44, is re-issued and extended through **January 9, 2021**.

Executive Order 2020-08 (Secretary of State operations):

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Sections 3, 4, and 5 of Executive Order 2020-08, as amended by Executive Order 2020-39 and Executive Order 2020-44, are re-issued and extended through **January 9, 2021**.

Executive Order 2020-08 is further amended and revised as follows:

Section 6. The provisions of the Illinois Vehicle Code, 625 ILCS 5, providing for the expiration of vehicle registrations and licenses are suspended as follows: (1) all motor vehicle registrations that expire in November 2020 or December 2020 are extended; and (2) all licenses issued pursuant to Chapter 3, Article IX, Remittance Agents, and Chapter 5, Dealers, Transporters, Wreckers and Rebuilders, that expire on December 31, 2020, are extended if an application to renew the license is received by the Office of the Secretary of State by December 31, 2020.

Executive Order 2020-09 (Telehealth):

Executive Order 2020-09, as amended by Executive Order 2020-52, is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-11 (Illinois Department of Corrections notification period):

Section 4 of Executive Order 2020-11 is re-issued and extended through **January 9, 2021**.

Executive Order 2020-12 (Health care worker background checks; Illinois Department of Juvenile Justice notification period):

Sections 1 and 3 of Executive Order 2020-12 are re-issued and extended through **January 9, 2021**.

Executive Order 2020-15 (Suspending provisions of the Illinois School Code):

Sections 5, 6, 7, 8, and 9 of Executive Order 2020-15 are re-issued and extended through **January 9, 2021**.

Executive Order 2020-16 (Suspension of classroom training requirement for security services):

Section 2 of Executive Order 2020-16 is re-issued and extended through **January 9, 2021**.

Executive Orders 2020-03 and 2020-17 (Cannabis deadlines and applications):

Executive Orders 2020-03 and 2020-17, as modified by Executive Order 2020-18, are re-issued and shall remain in effect as specified by Executive Order 2020-18.

Executive Order 2020-20 (Public assistance requirements):

Executive Order 2020-20 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-21 (Furlough of Illinois Department of Corrections inmates):

Executive Order 2020-21 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-22 (Placements under the Child Care Act of 1969; fingerprint submissions under Health Care Worker Background Check Act):

Sections 4, 5, and the Savings Clause of Executive Order 2020-22 are re-issued and extended through **January 9, 2021**.

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Executive Order 2020-23 (Actions by the Illinois Department of Financial and Professional Regulation for licensed professionals engaged in disaster response):

Executive Order 2020-23 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-24 (Illinois Department of Human Services Forensic Treatment Program; investigations of Illinois Department of Human Services employees):

Executive Order 2020-24 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-25 (Garnishment and wage deductions):

Executive Order 2020-25, as amended by Executive Order 2020-55, is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-26 (Hospital capacity):

While several sections of Executive Order 2020-26 had previously been rescinded, Executive Order 2020-26 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-27 (Cadavers testing positive for COVID-19):

Executive Order 2020-27 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-28 (Industrial radiography certifications):

Executive Order 2020-28, as amended by Executive Order 2020-55, is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-29 (In-person education or exams for professional insurance licenses):

Executive Order 2020-29 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-30 (Expired consular identification documents; electronic filings for the Illinois Human Rights Commission):

Sections, 1, 4, 5, and 6 of Executive Order 2020-30 are re-issued and extended through January 9, 2021.

Executive Order 2020-34 (Cannabis requirements):

Executive Order 2020-34 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-35 (Illinois Department of Public Health regulatory activities):

Sections 14, 15, 16, and 17 of Executive Order 2020-35 are re-issued and extended through January 9, 2021.

Executive Order 2020-36 (Marriage licenses):

Executive Order 2020-36 is re-issued in its entirety and extended through January 9, 2021.

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Executive Order 2020-40 (Child Labor Law):

Sections 2 and 4 of Executive Order 2020-40 are re-issued and extended through January 9, 2021.

Executive Order 2020-41 (Sports wagering):

Executive Order 2020-41 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-42 (State Fairs):

Executive Order 2020-42 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-45 (Cannabis licenses):

Executive Order 2020-45 is re-issued in its entirety and shall remain in effect as specified by Executive Order 2020-45.

Executive Order 2020-47 (In-person instruction at preK-12 schools):

Executive Order 2020-47 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-50 (Resuming transfers from county jails to Illinois Department of Corrections):

Executive Order 2020-50 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-53 (Region 7 mitigations):

Executive Order 2020-53 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-56 (Region 1 mitigations):

Executive Order 2020-56 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-57 (Cannabis identification cards):

Executive Order 2020-57 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-60 (Region 5 mitigations):

Executive Order 2020-60 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-61 (Regions 7 and 8 mitigations):

Executive Order 2020-61 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-62 (Region 1 Tier 2 mitigations):

Executive Order 2020-62 is re-issued in its entirety and extended through January 9, 2021.

Executive Order 2020-63 (Regions 4 and 10 mitigations):

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Executive Order 2020-63 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-64 (Region 11 mitigations):

Executive Order 2020-64 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-65 (Region 9 mitigations):

Executive Order 2020-65 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-66 (Region 3 mitigations):

Executive Order 2020-66 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-67 (Region 6 mitigations):

Executive Order 2020-67 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-68 (Cannabis registry identification card renewals):

Executive Order 2020-68 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-69 (Region 2 mitigations):

Executive Order 2020-69 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-70 (Regions 5, 7, and 8 Tier 2 mitigations):

Executive Order 2020-70 is re-issued in its entirety and extended through **January 9, 2021**.

Executive Order 2020-72 (Residential eviction moratorium):

Executive Order 2020-72, as amended and revised below, is re-issued in its entirety and extended through **January 9, 2021**.

Section 1. For purposes of this Executive Order, the following terms are defined as set forth below:

- (a) "Covered Person" means any tenant, lessee, sub-lessee, or resident of a residential property who provides to their landlord, the owner of the residential property, or other person or entity with a legal right to pursue an eviction or possessory action, a Declaration under penalty of perjury indicating that:
1. the individual either (i) expects to earn no more than \$99,000 in annual income for Calendar Year 2020 (or no more than \$198,000 if filing a joint tax return), (ii) was not required to report any income in 2019 to the U.S. Internal Revenue Service, or (iii) received an Economic Impact Payment pursuant to Section 2001 of the CARES Act;
 2. the individual is unable to make a full rent or housing payment due to a COVID-19 related hardship including, but not limited to, substantial loss of income, loss of compensable hours of work or wages, or an increase in out-of-pocket expenses directly related to the COVID-19 pandemic;

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INDEX DEPARTMENT
DEC 11 2020
IN THE OFFICE OF
SECRETARY OF STATE

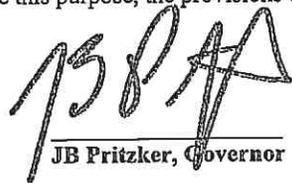
3. the individual is using best efforts to make timely partial payments that are as close to the full payment as the individual's circumstances may permit, taking into account other Non-Discretionary Expenses; and
 4. eviction would likely render the individual homeless—or force the individual to move into and live in close quarters in a new congregate or shared living setting—because the individual has no other available housing options.
- (b) "Declaration" means the form declaration made available by the Illinois Housing Development Authority (or a similar declaration under penalty of perjury) that tenants, lessees, sub-lessees, or residents of residential properties who are covered by this Executive Order may use to invoke the protections of this Executive Order. Each landlord, owner of a residential property, or other person or entity with a legal right to pursue an eviction or possessory action must provide each tenant, lessee, sub-lessee, and resident with a Declaration at least 5 days prior to commencement of any residential eviction proceeding including, but not limited to, at least 5 days prior to the issuance of a notice of termination of tenancy. Service of the Declaration must conform with the requirements of 735 ILCS 5/9-211.
- (c) "Non-Discretionary Expenses" include, but are not limited to, food, utilities, phone and internet access, school supplies, cold-weather clothing, medical expenses, child care, and transportation costs, including car payments and insurance.

Section 7. A person or entity may not commence a residential eviction action pursuant to or arising under 735 ILCS 5/9-101 et seq. against a tenant who does not owe rent unless the tenant poses a direct threat to the health and safety of other tenants or an immediate and severe risk to property. A tenant shall not be required to provide a Declaration if they are covered by this section.

Executive Order 2020-73 (Tier 3 mitigations):

Executive Order 2020-73 is re-issued in its entirety and extended through **January 9, 2021.**

Part 2: Savings Clause. If any provision of this Executive Order or its application to any person or circumstance is held invalid by any court of competent jurisdiction, this invalidity does not affect any other provision or application of this Executive Order, which can be given effect without the invalid provision or application. To achieve this purpose, the provisions of this Executive Order are declared to be severable.



JB Pritzker, Governor

Issued by the Governor December 11, 2020
Filed by the Secretary of State December 11, 2020

FILED
INDEX DEPARTMENT
DEC 11 2020
IN THE OFFICE OF
SECRETARY OF STATE

VILLAGE OF WILLOWBROOK

BOARD MEETING AGENDA ITEM - HISTORY/COMMENTARY

A RESOLUTION DECLARING THE LOWEST RESPONSIBLE AND RESPONSIVE BIDDER AND APPROVING AND AUTHORIZING THE MAYOR AND VILLAGE CLERK TO EXECUTE AN AGREEMENT WITH NJ RYAN TREE & LANDSCAPE, LLC FOR THE 2021/2022 LANDSCAPE MAINTENANCE PROGRAM

AGENDA NO. 6.

AGENDA DATE: 03/08/21

STAFF REVIEW: Mike Mertens, Assistant Village Administrator

SIGNATURE: 

LEGAL REVIEW: Tom Bastian, Village Attorney

SIGNATURE: 

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: 

REVIEWED & APPROVED BY COMMITTEE: YES NO N/A

BACKGROUND

In April 2018, the Village Contracted with Hanson Landscape Design & Installation for landscape maintenance in the form of regular turf mowing, trimming, and planting bed maintenance for parks, rights-of-ways, and the other Village owned facilities (e.g., Village Hall, pump house, water towers). The Village continued this service agreement for one-year in May of 2020. On January 7, 2021, the Village advertised for bid landscape maintenance services for Fiscal 2021 / 2022 contract period. Bids were received on Friday, February 5, 2021 at 10:00 am.

The Village received three bids as follows:

Bid #1 Serenity Landscape Group	\$63,150 *
Bid #2 NJ Ryan Tree & Landscape LLC	\$76,500
Bid #3 Hanson Landscape	\$80,900

* Please note that the Bid #1 for Serenity Landscape Group was non-conforming to the bid standards as they supplied numbers for Plant Bed Maintenance on a per occurrence basis vs. the per season basis as required by the specifications. Attached is a copy of the public bid document, summary page from the three bidders and a bid summary.

STAFF RECOMMENDATION

Upon review of the bids received and consultation with the Village Attorney, staff would recommend that the Village reject Bid #1 from Serenity Landscape Group due to non-conformance with the bid specifications for the Plant Bed Maintenance section. Staff would recommend the Committee consider Bid #2 from NJ Ryan Tree & Landscape LLC as the most responsive and responsible bidder for the 2021 Landscape Maintenance program.

The proposed FY 2021/22 Budget includes the following funding for this program:

<u>FUND</u>	<u>ACCOUNT</u>	<u>DESCRIPTION</u>	<u>FY 2021/22 BUDGET</u>
Pub. Serv.	01-35-755-281	Rt. 83 Beautification	\$55,000
Parks & Rec.	01-20-570-281	Contracted Maintenance	\$125,100

This item was discussed at the February 22, 2021 Municipal Services Committee and recommended for approval by the Village Board at their March 8, 2021 meeting.

ACTION PROPOSED: Adopt the Resolution.

RESOLUTION NO. 21-R-07

**A RESOLUTION DECLARING THE LOWEST RESPONSIBLE AND RESPONSIVE
BIDDER AND APPROVING AND AUTHORIZING THE MAYOR AND VILLAGE
CLERK TO EXECUTE AN AGREEMENT WITH NJ RYAN TREE &
LANDSCAPE, LLC FOR THE 2021/2022 LANDSCAPE MAINTENANCE PROGRAM**

WHEREAS, the Village of Willowbrook (“Village”) sought competitive bids from contractors for the 2021/2022 Village Landscape Maintenance Program; and

WHEREAS, of the 2022 bids submitted, opened and reviewed by the Village, the Village declares that NJ Ryan Tree and Landscape, LLC to be the lowest responsive and responsible bidder at a total bid of \$76,500.00.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, that NJ Ryan Tree & Landscape, LLC is hereby declared to be the lowest responsive and responsible bidder for the 2021/2022 Landscape Maintenance Program with a bid of \$76,500.00.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

BE IT FURTHER RESOLVED by the Mayor and Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, that the Mayor and Village Clerk be and the same are hereby authorized and directed to execute the Agreement with NJ Ryan Tree & Landscape, LLC, on a time and material basis, to complete the 2021/2022 Landscape Maintenance Program in an amount not to exceed amount of \$76,500.00 as set forth in the Agreement attached hereto as Exhibit "A", which Agreement is hereby approved.

PASSED and **APPROVED** this 8th day of March, 2021 by a roll call vote as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk

**AGREEMENT BY AND BETWEEN THE VILLAGE OF WILLOWBROOK
AND NJ RYAN TREE & LANDSCAPE, LLC
FOR THE 2021/2022 LAWN MAINTENANCE PROGRAM**

THIS AGREEMENT ENTERED INTO THIS 8th day of March, 2021 between NJ Ryan Tree & Landscape, LLC., an Illinois limited liability corporation (“Contractor”), and the Village of Willowbrook, a municipal corporation of the State of Illinois (“Village”), and in consideration of the following and other valuable consideration the sufficiency of which is hereby acknowledged, the Village and Contractor agree as follows:

1. The Village of Willowbrook has found it to be in the best interests of the Village to contract for the Landscape Maintenance Program (the “Program”).

2. Contractor has submitted an acceptable proposal to the Village for the Program. Such proposal including all Terms and Conditions is attached hereto as Exhibit “A” and which terms and conditions are expressly made a part of the Agreement as if each was repeated herein, verbatim.

3. Contractor agrees to commence work for the Program on May 1, 2021. Contractor shall complete all such work in a good workmanlike manner as set forth in the General Terms and Conditions.

4. The Contractor certifies that the Contractor is not delinquent in the payment of taxes to the Illinois Department of Revenue in accordance with 65 ILCS 5/11-42.1-1.

5. Contractor certifies that it is not barred from bidding on state, municipal or other contracts by reason of Sections 33E-3 (bid rigging) or 33E-4 (bid totaling) of the Criminal Code of 1961 (720 ILCS 5/33E-3 and 5/33E-4), and further certifies that it is not barred from bidding on State, municipal and other contracts by reason of conviction of State laws regarding bid rigging or bid rotation.

6. Unless otherwise agreed to in writing as an Amendment to this Agreement, the Village of Willowbrook agrees to pay Contractor for the performance of the work completed in a good and workmanlike manner in an amount not to exceed Seventy-Six Thousand Five Hundred and 00/100 Dollars (\$76,500.00) for the work to be performed and such payment shall be in eight (8) installments as set forth in Paragraph R of the Terms and Conditions and in conformance with the Local Government Prompt Payment Act (50 ILCS 505/1 et. seq.).

8. Contractor agrees that it has, will have in place and will enforce a written sexual harassment policy in compliance with 775 ILCS 5/2-105(A)(4).

9. During the performance of this Agreement, the Contractor agrees as follows:

A. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, sexual orientation, military status or an unfavorable discharge from military service; and, further, that he or she will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any underutilization.

B. That, if he or she hires additional employees in order to perform this Agreement or any portion of this Agreement, he or she will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the areas from which he or she may reasonably recruit and he or she will hire for each job classification for which employees are hired in a way that minorities and women are not underutilized.

C. That, in all solicitations or advertisements for employees placed by him or her or on his or her behalf, he or she will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, national origin

or ancestry, citizenship status, age, physical or mental disability unrelated to ability, sexual orientation, military status or an unfavorable discharge from military service.

D. That he or she will send to each labor organization or representative of workers with which he or she has or is bound by a collective bargaining or other agreement or understanding, a notice advising the labor organization or representative of the Contractor's obligations under the Act and the Department's Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the Contractor in his or her efforts to comply with the Act and Rules and Regulations, the contractor will promptly notify the Department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations under the Agreement.

E. That he or she will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Act and the Department's Rules and Regulations.

F. That he or she will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purposes of investigation to ascertain compliance with the Act and the Department's Rules and Regulations.

G. That he or she will include verbatim or by reference the provisions of this clause in every subcontract that may be awarded under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this Agreement, the Contractor will be liable for compliance with applicable provisions of this clause by subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply with the provisions. In addition, the Contractor will not utilize any subcontractor declared by the

Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

H. If applicable, Contractor shall strictly abide by the provisions of the Illinois Prevailing Wage Act.

In the event of the Contractor's non-compliance with the provisions of this Equal Employment Opportunity Clause, the Act or the Rules and Regulations of the Department, the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the Agreement may be cancelled or voided in whole or in part, and other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

10. During the performance of its Agreement with the Village of Willowbrook, Contractor:

Will not maintain or provide for its employees any segregated facilities at any of its establishments, and not permit its employees to perform their services at any location, under its control, where segregated facilities' means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin because of habit, local custom, or otherwise. Contractor (except where it has obtained identical certifications from proposed subcontractors and material suppliers for specific time periods), obtain certifications in compliance with this subparagraph from proposed subcontractors or material suppliers prior to the award of a subcontract or the consummation of material supply agreements, exceeding \$10,000.00 which are

not exempt from the provisions of the Equal Opportunity clause, and that Contractor will retain such certifications in its files.

11. Contractor agrees to assume all risk of loss and to indemnify and hold harmless the Village of Willowbrook, its officers, agents and employees from any and all liabilities, claims, suits, injuries, losses, damages, fines or judgments, including litigation costs and attorneys' fees, arising out of the work performed by Contractor including, to the extent allowed by law, those liabilities, injuries, claims, suits, losses, damages, fines or judgments, including litigation costs and attorneys' fees arising out of, or alleged to arise out of, the intentional, willful, wanton or negligent acts of Contractor, its employees, agents, assigns and/or subcontractors.

12. The Contractor represents and warrants to the Village that neither it nor any of its principals, shareholders, members, partners, or affiliates, as applicable, is a person or entity named as a Specially Designated National and Blocked Person (as defined in Presidential Executive Order 13224) and that it is not acting, directly or indirectly, for or on behalf of a Specially Designated National and Blocked Person. The Contractor further represents and warrants to the Village that the Contractor and its principals, shareholders, members, partners, or affiliates, as applicable, are not, directly or indirectly, engaged in, and are not facilitating, the transactions contemplated by this Agreement on behalf of any person or entity named as a Specially Designated National and Blocked Person. The Contractor hereby agrees to defend, indemnify and hold harmless the Village, the Corporate Authorities, and all Village elected or appointed officials, officers, employees, agents, representatives, engineers, and attorneys, from and against any and all claims, damages, losses, risks, liabilities, and expenses (including reasonable attorneys' fees and costs) arising from and related to any breach of the foregoing representations and warranties.

13. Insurance requirements shall be as follows:

A. Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work by the Contractor, its agents, representatives, employees or subcontractors.

B. Coverage shall be at least as broad as:

- (1) Insurance Services Office Commercial General Liability Occurrence form CG 0001 (Ed. 11/85); and
- (2) Insurance Services Office form number CA0001 (Ed. 1/87) covering Automobile Liability, symbol 01 “any auto” and endorsement CA0029 (Ed. 12/88) changes in Business Auto and Truckers coverage forms – Insured Contract; and
- (3) Worker’s Compensation as required by the Labor Code of the State of Illinois and Employers’ Liability Insurance.

C. Contractor shall maintain limits no less than:

- (1) Commercial General Liability: \$2,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage plus \$1,000,000 excess liability in the annual aggregate injury/property damage.
- (2) Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage.
- (3) Worker’s Compensation and Employers’ Liability: Worker’s Compensation limits as required by the Labor Code of the State of Illinois.
- (4) Employers’ Liability insurance of \$1,000,000 per accident.

D. The policies are to contain, or be endorsed to contain the following provisions:

- (1) Commercial General Liability and Automobile Liability Coverages:

- (a) The Village, its officials and employees are to be covered as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor, as well as materials, and equipment procured, owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limits on the scope of the protection afforded to the Village and its officials.
- (b) The Contractor's insurance coverage shall be primary insurance as respects the Village, its officials and employees. Any insurance or self-insurance maintained by the Village, its officials or employees shall be excess of Contractor's insurance and shall not contribute with it.
- (c) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Village, its officials or employees.
- (d) Coverage shall state that the Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(2) Worker's Compensation and Employers' Liability Coverage:

The insurer shall agree to waive all rights of subrogation against the Village, its officials, employees or volunteers for losses arising from work performed by the Contractor for the Village.

(3) All Coverages:

Each insurance policy required by this clause shall be endorsed to state that the coverage shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) day's prior written notice by certified mail, return receipt requested, has been given to the Village.

14. Contractor shall at all times observe and comply with all laws, ordinances, and regulations of the federal, state, local and Village government which may in any manner affect the performance of this Agreement including but not limited to all laws and ordinances related to the proper disposal of all brush picked-up.

15. No member of the governing body of the Village of Willowbrook or other unit of government and no other officer, employee, or agent of the Village of Willowbrook or other unit of government who exercises any functions or responsibilities in connection with the carrying out of this project to which this Agreement pertains, shall have personal interest, direct or indirect, in the Agreement.

Additionally, the Contractor certifies that no officer or employee of the Village of Willowbrook has solicited any gratuity, discount, entertainment, hospitality, loan, forbearance, or other tangible or intangible item having monetary value including, but not limited to, cash, food and drink, and honoraria for speaking engagements related to or attributable to the government employment or the official position of the employee or officer from the Contractor in violation of Title 1, Chapter 12 of the Village Code of Ordinances of the Village of Willowbrook, adopted by the Village pursuant to the requirements of Article 10 of the State Officials and Employees Ethics Act.

Contractor further certifies that the Contractor has not given to any officer or employee of the Village of Willowbrook any gratuity, discount entertainment, hospitality, loan, forbearance, or other tangible or intangible item having monetary value including, but not limited to, cash, food and drink, and honoraria for speaking engagements related to or attributable to the government employment or the official position of the employee or officer from the Contractor in violation of Chapter 12 of the Village Code of Ordinances of the Village of Willowbrook adopted by the Village pursuant to the requirements of Article 10 of the State Officials and Employees Ethics Act.

16. In the event that Contractor shall fail to perform such work within a reasonable time after being assigned such work or shall fail to complete such work in a good and workmanlike manner, the Village of Willowbrook may terminate this Agreement, as provided for in the General Terms and Conditions, by written notice to Contractor.

17. Notice as provided for herein shall be transmitted to the Village of Willowbrook, Village Administrator, 835 Midway Drive, Willowbrook, Illinois 60527 to Contractor: NJ Ryan Tree and Landscape, LLC, 17271 State Route 23, DeKalb, Illinois 60115, Attn: Darin Ryan, as may be applicable by first class prepaid mail. Any notice to Contractor shall be deemed received when mailed.

18. Contractor agrees to maintain all records and documents for projects of the Public Body in compliance with the Freedom of Information Act, 5 ILCS 140/1 et seq. In addition, Contractor shall produce within three (3) days, without cost to the public body, records which are responsive to a request received by the Public Body under the Freedom of Information Act so that the Public Body may provide records to those requesting them within the required five (5) business day period. If additional time is necessary to compile records in response to a request, then Contractor shall so notify the Public Body within three (3) days in order for the Village shall request an extension so as to comply with the Act. In the event that the Village is found to have not complied with the Freedom of Information Act based upon Contractor's failure to produce documents or otherwise appropriately respond to a request under the Act, then Contractor shall indemnify and hold the Village harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorneys' fees and penalties.

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19. Time is of the essence of this Agreement.

20. This Agreement, consisting of ten (10) pages, Contractor Proposal and the Terms and Conditions, shall constitute the Contract documents.

This Agreement is made and executed in duplicate in Willowbrook, DuPage County, Illinois the day and year first above written.

Contractor:

NJ RYAN TREE & LANDSCAPE, LLC

By: _____
Darin Ryan,
its duly authorized agent

VILLAGE OF WILLOWBROOK

By: _____
Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk

I. GENERAL CONDITIONS

A. DEFINITIONS

The following words and phrases, as used herein, shall have the meaning ascribed to them, as follows:

A. BIDDER shall mean:

NJ Ryan Tree + Landscape LLC

B. VILLAGE shall mean the Village of Willowbrook, DuPage County, Illinois, an Illinois Municipal Corporation.

B. PREPARATION AND SUBMISSION OF PROPOSAL

The Bidder must submit his/her proposal in duplicate on the forms furnished by the Village of Willowbrook. All blank spaces on the proposal form must be filled in if applicable. Authorized signature must be the individual owner of a proprietorship, a general partner of a partnership or a duly authorized officer, attested to by the Corporate Secretary, of a Corporation. The proposal is contained in these documents and must remain attached thereto when submitted. All signatures and spaces are to be completed in ink or typewritten, where applicable. Prices/costs shall be in United States dollars. Incorrect completion, execution or submission of bids shall be sufficient grounds for rejection of a bid. The following documents shall be executed at the time of submission of a bid:

Contractor's Certification Bid Proposal - Page #16
BID PROPOSAL PAGE

ALL PROPOSALS SHALL BE SUBMITTED IN SEALED ENVELOPES CARRYING THE FOLLOWING INFORMATION ON THE FACE:

BIDDER'S NAME, ADDRESS, SUBJECT MATTER OF BID, DESIGNATED DATE OF BID OPENING AND HOUR DESIGNATED FOR BID OPENING.

C. WITHDRAWAL OF PROPOSAL

Bidders may withdraw their bids at any time prior to the time specified in the Bid Notice as the closing time for the receipt of bids. However, no bid shall be withdrawn or cancelled for a period of forty-five (45) calendar days after said advertised closing time for the receipt of bids, nor shall the successful bid be withdrawn, cancelled, or modified after having been accepted by the Village.

D. SUBMISSION OF ALTERNATE BIDS

Bidder may submit alternate bids provided that:

1. Cash bid proposals meet Village Specifications and are submitted separately.
2. The Village shall not consider an alternate bid which fails to meet specifications.

E. BID DEPOSIT

When required on Page 1 of these Specifications, all bids shall be accompanied by a bid deposit in the amount specified. Bid deposits shall be in the form of a certified check, a bank cashier's check drawn on a responsible bank doing business in the United States and shall be made payable to the Village of Willowbrook, or bid bond.

The bid deposit of all except the three lowest bidders on each contract will be returned within twenty (20) calendar days after the opening of the bids. The remaining bid deposits on each contract will be returned, with the exception of the accepted Bidder, after the contract is awarded. The bid deposit of the accepted Bidder will be returned after acceptance by the Village of satisfactory performance bond where such bond is required or completion of contract where no performance bond is required.

F. SECURITY FOR PERFORMANCE

When required on Page 1 of these Specifications, the successful Bidder or Bidders shall, within thirteen (13) calendar days after acceptance of the bid by the Village, furnish a performance bond in the full amount of the contract, in a form acceptable to the Village.

In the event that the successful Bidder(s) fails to furnish the performance bond within thirteen (13) calendar days after acceptance of the bid by the Village, then the bid deposit of the successful Bidder shall be retained by the Village as liquidated damages and not as a penalty, it being agreed by the successful Bidder that said sum is a fair estimate of the amount of damages that said Village will sustain due to the successful Bidder's failure to furnish said bond.

G. EQUIVALENT PRODUCTS

In cases where a specified item is identified by a manufacturer's name, trade name or other reference, it is understood that the Bidder proposes to furnish the item as identified. If the Bidder proposes to furnish an "equal" item, the proposed "equal" item must be so indicated in the bid proposal. The Village shall be the sole determiner of the equality of the substitute offered.

H. BASIS OF AWARD

The Village reserves the right to accept or reject any and all bids, in whole or in part, and to waive technicalities.

I. ACCEPTANCE OF BID

The Village shall make its determination with respect to bids within forty-five (45) days, or within sixty (60) days where approval by other agencies is required, from the date of opening of bids. Should the Village fail to act within the times herein specified, all bids shall be rendered null and void.

J. CATALOGS

Each Bidder shall submit catalogs, descriptive literature and detailed drawings, fully detailing features, designs, construction, appointments, finishes and the like, in order to fully describe the material or work proposed to be furnished.

K. DELIVERY

All materials shipped to the Village of Willowbrook must be shipped F.O.B. freight prepaid, designated location Willowbrook, Illinois. The materials must then be delivered where directed, and unloaded by the successful Bidder, or his/her agent. All deliveries shall be deemed to be "inside delivery". Truck deliveries shall be accepted before 2:30 p.m. on weekdays only. No deliveries shall be accepted on Saturdays, Sundays or holidays. The quantity of material delivered by truck shall be ascertained from a weight certificate issued by a duly licensed public weight-master. In the case of delivery by rail, weight will be ascertained from bill of lading from originating line, but the Village reserves the right to re-weigh at the nearest available railroad scale.

L. GUARANTEES AND WARRANTEES

All guarantees and warrantees required shall be furnished by the successful Bidder and shall be delivered to the Village before the final payment voucher is issued.

M. SUBLETTING OR ASSIGNMENT OF CONTRACT OR CONTRACT FUNDS

No contract awarded by the Village of Willowbrook shall be assigned, in whole or in part, or any part of the same sub-contracted without the written consent of the Village Administrator. In no case shall such consent relieve the successful Bidder from his/her obligations or change the terms of the contract.

Any and all subcontractors shall be bound by contract to the same terms as the successful Bidder. Prior to commencing any work, subcontractors must place on file with the Village a certificate of insurance as outlined under "insurance".

The successful Bidder shall not transfer or assign any contract funds or claims due or to become due without the written approval of the Village Administrator having first been obtained.

N. COMPETENCY OF BIDDER

No bid shall be accepted from, or contract awarded to, any person, firm or corporation that is in arrears or is in default to the Village of Willowbrook upon any debt contract, or other obligation or who has failed to perform faithfully any previous contract with the Village.

The Bidder, if required, must present within forty-eight (48) hours evidence satisfactory to the Village of performance ability, possession of necessary facilities, equipment, pecuniary resources and adequate insurance to comply with the terms of these specifications and contract documents. The Village hereby reserves the right to reject any bid submitted by a Bidder who, in the sole and exclusive discretion of the Village, cannot completely perform the services or deliver the goods specified in these specifications.

O. COMPLIANCE WITH OSHA STANDARDS, THE AMERICANS WITH DISABILITIES ACT, VILLAGE ORDINANCES AND STATE LAWS

The equipment supplied to the Village of Willowbrook must comply with all requirements and standards as specified by the Occupational Safety and Health Act. All guards and protectors as well as appropriate markings will be in place before delivery.

Items not meeting any OSHA specifications will be refused. Bidder may be required at his/her expense to provide training to Village employees in the operation of equipment and its maintenance at the convenience of the Village.

Each contracting agency shall ensure that every contract to which it is a party shall comply with all relevant aspects of the Americans with Disabilities Act.

The Bidder will strictly comply with all ordinances of the Village of Willowbrook, the laws of the State of Illinois and United States Government.

P. SPECIAL HANDLING

Prior to delivery of any product which is caustic, corrosive, flammable or dangerous to handle, the successful Bidder will provide written directions as to methods of handling such products, as well as the antidote or neutralizing material required for first aid.

Q. MATERIAL INSPECTION AND RESPONSIBILITY

The Village shall have a right to inspect any material to be used in carrying out this contract. The Village does not assume any responsibility for the availability of any materials and equipment required under this contract.

R. TOXIC SUBSTANCES

Successful Bidder shall notify the Village of, and provide, material safety data sheets for all substances used or supplied in connection with this contract which are defined as toxic under the Illinois Toxic Substances Disclosure to Employees Act.

Materials, components, or completed work not complying therewith, may be rejected by the Village and shall be replaced by the successful Bidder at no cost to the Village. Any materials or components rejected shall be removed within a reasonable time from the premises of the Village at the expense of the successful Bidder.

S. PRICE REDUCTIONS

If at any time after a contract is awarded the successful Bidder(s) makes a general price reduction in the comparable price of any material covered by the contract to customers generally, an equivalent price reduction based on similar quantities and/or considerations shall apply to the contract for the duration of the contract period (or until the price is further reduced). Such price reduction shall be effective at the same time and in the same manner as the reduction in the price to customers generally. For the purpose of this provision, a "general price reduction" shall mean any horizontal reduction in the price of an article or service offered (1) to successful Bidder's customers generally, or (2) in the successful Bidder's price schedule for the class of customers, i.e., wholesalers, jobbers, retailers, etc., which was used as the basis for bidding on this contract. An occasional sale at a lower price, or sale of distressed merchandise at a lower price, would not be considered a "general price reduction" under this provision. The successful Bidder shall invoice the Village at such reduced prices indicating on the invoice that the reduction is pursuant to the "price reduction" provision of this contract. The successful Bidder, in addition, shall within ten (10) days of any general price reduction, notify the Village Administrator of such reduction by letter. Failure to do so may result in termination of the contract.

T. TERMINATION OF CONTRACT

1. The Village may, by written notice of default to the successful Bidder, terminate the whole or part of this contract in any one of the following circumstances:

- a) If the successful Bidder fails to make delivery of the supplies or to perform the services within the time specified herein or any extension thereof; or fails to provide the supplies or to perform the service at the exact price accepted by the Village (and any charges for contract changes mutually agreed to by the Village and the successful Bidder); or
- b) If the successful Bidder fails to perform any of the other provisions of this contract, or so fails to make progress as to endanger performance of this contract in accordance with its terms, and in either of these two circumstances does not cure such failure within such period of time as the Village Administrator may direct in writing.
- c) If it is determined that successful Bidder knowingly falsified information provided to the Village.
- d) If it is determined that successful Bidder offered substantial gifts or gratuities to a Village official, employee, or agent whether in their official capacity or not.
- e) Any order is entered in any proceeding against the successful Bidder decreeing the dissolution of the successful Bidder and such order remains in effect for sixty (60) days.
- f) The successful Bidder shall apply to any tribunal for the appointment of a trustee or receiver of any part of the assets of the successful Bidder, or commence any proceedings relating to the successful Bidder under any bankruptcy, reorganization, arrangement, insolvency, readjustment of debt, dissolution or other liquidation law of any jurisdiction, or any such application shall be filed, or any such proceedings shall be commenced, against the successful Bidder, and the successful Bidder indicates its approval, consent or acquiescence, or an order shall be entered appointing such trustee or receiver or adjudicating the successful Bidder bankrupt or insolvent, or approving the petition in any such proceeding, and such order remains in effect for sixty (60) days.
- g) In the event the Village terminates this contract in whole or in part as provided in Paragraph (A) of this clause, the Village may procure, upon such terms in such manner as the Village Administrator may deem appropriate, supplies or services similar to those so terminated, and the successful Bidder shall be liable to the Village for any excess costs for such similar supplies or service, provided that the successful Bidder shall continue the performance of this contract to the extent not terminated under the provisions of this clause.

U. EQUAL EMPLOYMENT OPPORTUNITY

Each contracting agency shall ensure every contract to which it is a party shall contain the following clause.

EQUAL EMPLOYMENT OPPORTUNITY

In the event of the contractor's non-compliance with the provisions of this equal employment opportunity clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of the Human Rights ("Department"), the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may

be imposed or remedies invoked as provided by statute or regulation. During the performance of this contract, the contractor agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin, or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from the military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
2. That, if it hires additional employees in order to perform this contract or any portion thereof, it will determine the availability (in accordance with the department's rules and regulations) of minorities and women in the area(s) from which it may reasonably recruit, and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.
4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations.

If any such labor organization or representative fails or refuses to cooperate with the contractor in its efforts to comply with such act and rules and regulations, the contractor will promptly so notify the department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

5. That it will submit reports as required by the department's rules and regulations, furnish all relevant information as may from time to time be requested by the department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's rules and regulations.
6. That it will permit access to all relevant books, records, accounts, and work sites by personnel of the contracting agency and the department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's rules and regulations.
7. That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as with other provisions of this contract, the contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the department in the event any subcontractor fails or refuses to comply therewith. In addition, the contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

SUBCONTRACTS

Each public subcontractor shall in turn include the equal employment opportunity clause set forth within these rules and regulations in each of its subcontracts under which any portion of the contract obligations are undertaken or assumed, said inclusion to be either verbatim or by reference so that the provisions of the clause will be binding upon such subcontractors.

CONTRACTS OR SUBCONTRACTS WITH RELIGIOUS ENTITIES

The requirements of the equal employment clause set forth above with respect to non-discrimination because of religion shall not apply to a religious corporation, association, educational institution, or society with respect to the employment of individuals of a particular religion for the carrying on by such corporation, association, educational institution or society of its activities.

V. INSURANCE SPECIFICATIONS (“Insurance Section”)

1. The successful Bidder **shall not commence work** under the contract until all insurance required herein and such insurance has been approved by both the Village of Willowbrook and the County of DuPage.
2. The successful Bidder shall maintain limits no less than:

<u>TYPE OF INSURANCE</u>	<u>MINIMUM INSURANCE COVERAGE</u>
<p>Commercial (Comprehensive) General Liability</p> <div style="border: 1px solid black; padding: 5px;"> <ol style="list-style-type: none"> 1. Comprehensive Form 2. Premises Operations 3. Explosion & Collapse Hazard 4. Underground Hazard 5. Products/Completed Operations Hazard 6. Contractual Liability Coverage Included 7. Broad Form Property Damage </div>	<p>Insurance with a limit of not less than three million dollars (\$3,000,000) total; including limits of not less than two million dollars (\$2,000,000) per occurrence and one million dollars (\$1,000,000) excess liability in the annual aggregate injury/property damage.</p>
<p>Worker's Compensation Insurance</p>	<p>In the statutory amounts</p>
<p>Employer's Liability Insurance</p>	<p>In an amount not less than one million dollars (\$1,000,000) each accident/injury and one million dollars (\$1,000,000) each employee/disease.</p>
<p>Commercial (Comprehensive) Automobile Liability Insurance</p>	<p>With minimum limits of at least one million (\$1,000,000) dollars Combined Single Limit (Each Accident).</p>

The coverage limits required for **Commercial (Comprehensive) General Liability** and **Commercial (Comprehensive) Automobile Liability Insurance** may be satisfied through a

combination of primary and excess coverage. No work is allowed to commence until all of the insurance coverage(s) required under this insurance section have been obtained. Satisfactory evidence of contractors; insurance including endorsements shall be provided prior to the commencement of any work. In addition, DuPage County shall be named as a third-party beneficiary of the insurance requirements provided for in this insurance section.

The insurance required to be purchased and maintained shall be provided by an insurance company acceptable to both the Village and County of DuPage, and licensed to do business in the State of Illinois; and shall include at least the specific coverage and be written for not less than the limits of the liability specified herein or required by law or regulation whichever is greater; and shall be so endorsed that the coverage afforded will not be canceled or materially changed until at least sixty (60) days prior written notice has been given to both the Village and County of DuPage except for cancellation due to non-payment of premium for which at least fifteen (15) days prior written notice (five days allowed for mailing time) has been given to both the Village and County of DuPage. If the insurance required is satisfied through a combination of primary and excess coverage, said excess/umbrella liability policy shall include in the "Who is Insured" pages of the excess/umbrella policy wording such as "Any other person or organization you have agreed in a written contract to provide additional insurance" or wording to that effect. A copy of said section of the excess/umbrella liability policy shall be provided upon request by the Village and/or County of DuPage.

The Commercial (Comprehensive) General Liability and Commercial (Comprehensive) Automobile Liability Insurance shall name the Village, the County of DuPage, its officers, and employees as additional insured parties. The Certificate of Insurance/endorsements shall state: "The Village of Willowbrook, the County of DuPage, its officers, and employees are named as additional insured(s) as defined in the Commercial (Comprehensive) General Liability and Commercial (Comprehensive) Automobile Liability Insurance policies with respect to claims arising from the contractor's performance under this contract. The Endorsements must also be provided naming both the Village and County of DuPage c/o DuPage County Division of Transportation, 421 N. County Farm Road, Wheaton, IL 60187, as an additional insured. This additional insured is to be on a primary and non-contributory basis."

Coverage shall be at least as broad as (1) Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village named as additional insured on a form at least as broad as the attached sample endorsement including ISO Additional Insured Endorsement (Exhibit A); (2) if requested, Owners and Contractors Protective Liability policy with the Village named as insured; (3) Insurance Services Office Business Auto Liability form number CA 0001, Symbol 01 "Any Auto"; and (4) Workers Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance.

3. In the event of accidents of any kind, the successful Bidder shall furnish the Village with copies of all reports of such accidents at the same time that the reports are forwarded to any other interested parties.
4. Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Village, its officials, agents, employees, and volunteers; or the successful Bidder shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

W. INSURANCE POLICY(S) ENDORSEMENT

SHALL BE PROVIDED PRIOR TO THE COMMENCEMENT OF WORK.

VILLAGE OF WILLOWBROOK ("The Village")

Attention: Administration Department
835 Midway Drive
Willowbrook, Illinois 60527

COUNTY OF DuPAGE ("The County")

Attention: DuPage County Division of Transportation
421 N. County Farm Road
Wheaton, IL 60187

1. POLICY INFORMATION.

- A. Insurance Company West Bend Mutual Insurance Company
- B. Policy Number 0970953
- C. Policy Term: (From) 12/12/2020 (To) 12/12/2021
- D. Endorsement Effective Date 12/12/2020
- E. Named Insured N J Ryan Tree & Landscape LLC, D Ryan Tree & Landscape LLC, Midwest Landscape & Tree Care LLC
- F. Address of Named Insured 17271 IL Route 23, DeKalb IL 60115
- G. Limit of Liability Any One Occurrence/
Aggregate \$ \$1,000,000/\$2,000,000
- H. Deductible or Self-Insured Retention (Nil unless otherwise specified)
\$ Nil

2. VERIFICATION OF COVERAGE

When required on Page 1 of these Specifications, the successful Bidder or Bidders shall, within fourteen (14) calendar days after acceptance of the bid by the Village, furnish both the Village and the County of DuPage with certificates of insurance naming the Village, its officials, agents, employees and volunteers as additional insureds, and with original endorsements affecting coverage required. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

In the event that the successful Bidder(s) fails to furnish the insurance coverage within fourteen (14) calendar days after acceptance of the bid by the Village, then the bid deposit of the successful Bidder shall be retained by the Village as liquidated damages and not as a penalty, it being agreed by the successful Bidder that said sum is a fair estimate of the amount of damages that said Village will sustain due to the successful Bidder's failure to furnish said insurance.

The attached Additional Insured Endorsement (Exhibit A) shall be provided to the insurer for their use in providing coverage to the additional insured. Other additional insured endorsements may be utilized if they provide a scope of coverage at least as broad as the coverage stated on the attached endorsement

(Exhibit A). The Village reserves the right to request full certified copies of the insurance policies and endorsements.

3. POLICY AMENDMENTS

Each policy shall contain, or be endorsed to contain, the following provisions:

A. INSURED.

(COMMERCIAL (COMPREHENSIVE) GENERAL LIABILITY AND COMMERCIAL (COMPREHENSIVE) AUTOMOBILE LIABILITY INSURANCE)
The Village, County of DuPage, its officials, agents, employees, and volunteers are to be included as additional insureds with regard to liability and defense of claims arising from: (a) activities performed by or on behalf of the successful Bidder, (b) products and completed operations of the successful Bidder, (c) premises owned, leased or used by the successful Bidder, and (d) automobiles owned, leased, hired or borrowed by the successful Bidder. The coverage shall contain no special limitations on the scope of protection afforded to the Village or County of DuPage, its officials, agents, employees, and volunteers.

B. CONTRIBUTION NOT REQUIRED.

(COMMERCIAL (COMPREHENSIVE) GENERAL LIABILITY AND COMMERCIAL (COMPREHENSIVE) AUTOMOBILE LIABILITY INSURANCE)
The insurance afforded by the policy shall be primary insurance as respects the Village, County of DuPage, its officials, agents, employees, and volunteers; or stand in an unbroken chain of coverage excess of the successful Bidder's scheduled underlying primary coverage. In either event, any other insurance or self-insurance maintained by the Village or DuPage County, its officials, agents, employees, and volunteers shall be excess of this insurance and shall not contribute with it.

C. SEVERABILITY OF INTEREST.

(COMMERCIAL (COMPREHENSIVE) GENERAL LIABILITY AND COMMERCIAL (COMPREHENSIVE) AUTOMOBILE LIABILITY INSURANCE)
The insurance afforded by the policy applies separately to each insured who is seeking coverage or against whom a claim is made, or a suit is brought, except with respect to the Company's limit of liability.

D. SUBCONTRACTORS. (ALL COVERAGES)

The successful Bidder shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated in these General Conditions.

E. PROVISIONS REGARDING THE INSURED'S DUTIES AFTER ACCIDENT OR LOSS. (COMMERCIAL (COMPREHENSIVE) GENERAL LIABILITY AND COMMERCIAL (COMPREHENSIVE) AUTOMOBILE LIABILITY INSURANCE)
Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the Village, County of DuPage, its officials, agents, employees, and volunteers.

F. CANCELLATION NOTICE. (ALL COVERAGES)

The insurance coverage afforded will not be canceled or materially changed until at least sixty (60) days prior written notice has been given to both the Village and County of DuPage except for cancellation due to non-payment of premium for which at least fifteen (15) days prior

written notice (five days allowed for mailing time) has been given to both the Village and County of DuPage. Such notice shall be addressed as shown in the heading of the endorsement.

G. SUBROGATION (WORKERS COMPENSATION AND EMPLOYER'S LIABILITY)

The insurer shall agree to waive all rights of subrogation against the Village, County of DuPage, its officials, agents, employees, and volunteers for losses arising from work performed by the successful Bidder for the Village.

H. ACCEPTABILITY OF INSURERS. (ALL COVERAGES)

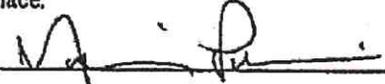
The insurance required to be purchased and maintained shall be provided by an insurance company acceptable to both the Village and County of DuPage and licensed to do business in the State of Illinois.

I. ASSUMPTION OF LIABILITY. (ALL COVERAGES)

The successful Bidder assumes liability for all injury to or death of any person or persons including employees of the successful Bidder, any subcontractor, any supplier, or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in anyway arising out of any work performed pursuant to the contract.

4. SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE OF THE INSURER.

I, Melissa Padilla (print/type name), warrant, and by my signature hereon do so certify, that the required coverage is in place.

Signature of: 

Authorized Representative (Original signature required on endorsement furnished to the Village).

Title: Commercial Account Manager

Organization: Crum Halsted Agency Inc

Address: 2350 Bellhany Rd, Sycamore IL 60178

Phone: 779-777-7356 Fax: 815-748-7323

X. INDEMNITY HOLD HARMLESS PROVISION

To the fullest extent permitted by law, the successful Bidder hereby agrees to defend, indemnify and hold harmless the Village, County of DuPage its officials, agents, employees, and volunteers, against all injuries, deaths, loss, damages, claims, patent claims, suits, liabilities, judgments, costs and expenses, which may in anywise accrue against the Village, its officials, agents, employees, and volunteers; arising in whole or in part or in consequence of the performance of the work by the successful Bidder, its employees, or subcontractors, or which may in anywise result therefore, except that arising out of the sole legal cause of the Village, its officials, agents, employees, and volunteers, and the successful Bidder shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in

connection therewith, and, if any judgment shall be rendered against the Village, its officials, agents, employees, and volunteers, in any such action, the successful Bidder shall, at its own expense, satisfy and discharge same.

The successful Bidder expressly understands and agrees that any performance bond or insurance policies required by the contract, or otherwise provided by the successful Bidder, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Village, its officials, agents, employees, and volunteers, as herein provided.

The successful Bidder further agrees that to the extent that money is due the successful Bidder by virtue of the contract, an amount of said money as shall be considered necessary in the judgment of the Village, may be retained by the Village to protect itself against said loss until such claims, suits, or judgments shall have been settled or discharged and/or evidence to that effect shall have been furnished to the satisfaction of the Village.

ADDITIONAL INSURED ENDORSEMENT - EXHIBIT "A"

Name of Insurer: West Bend Mutual Insurance Company
Name of Insured: N J Ryan Tree & Landscape LLC; D Ryan Tree & Landscape LLC; Midwest Landscape & Tree Care LLC
Policy Number: 0970953
Policy Period: 12/12/2020 - 12/12/2021
Endorsement Effective Date: 12/12/2020

This endorsement modifies coverage provided under the following:

Commercial General Liability Coverage Part

Name of Individuals or Organization:

The Village of Willowbrook its officials, agents, employees and volunteers and The County of DuPage

WHO IS AN INSURED section of the policy / coverage document is amended to include as an insured, the individuals or organization shown above, but only with respect to liability "arising out of your work".

For purposes of this endorsement, "arising out of your work" shall mean:

1. Liability the Additional Insured may incur resulting from the actions of a contractor it hires.
2. Liability the Additional Insured may incur for negligence in the supervision of the Named Insured Contractors work.
3. Liability the Additional Insured may incur for failure to maintain safe worksite conditions.
4. Liability the Additional Insured may incur due to joint negligence of the Named Insured Contractor and the Additional Insured.

[EXHIBIT A IRMA - Section 4:06, Page 13]

CONTRACTOR'S CERTIFICATION - BID PROPOSAL

NJ Ryan Tree + Landscape LLC, as part of its bid on a
(Name of Contractor)

contract for Landscape Maint. Services to The Village of Willowbrook, Illinois, hereby certifies that said contractor is not barred from bidding on the aforementioned contract as a result of a violation of either 720 ILCS 5/33E-3 or 5/33E-4.

By: [Signature]
Authorized Agent of Contractor

SUBSCRIBED AND SWORN BEFORE ME

This 3 day of
February, 2021.

MY COMMISSION EXPIRES:

July 26, 2022

Phyllis Frye
NOTARY PUBLIC



CONTRACT – Page One of Two

1. This agreement, made and entered into this _____ day of _____, 20____, between the Village of Willowbrook, acting by and through its Mayor and Board of Trustees and _____

2. That for and in consideration of the payments and agreements mentioned in the Specifications and Contract Document attached hereto, _____ agrees with the Village of Willowbrook at his/her own proper cost and expense to furnish the equipment, material, labor, supplies and/or services as provided therein in full compliance with all of the terms of such specifications and contract documents attached hereto.

3. It is understood and agreed that the specifications and contract documents hereto attached, prepared by the Village of Willowbrook, are all essential documents of this contract and are a part hereof.

4. In witness whereof, the said parties have executed these presents on the date above mentioned.

=====

(Village Seal)

VILLAGE OF WILLOWBROOK

Attest:

By: _____
Village Clerk

By: _____
Village Administrator

=====

IF A CORPORATION

(Corporate Seal)

CORPORATE NAME

Attest:

By: _____
Secretary

By: _____
President

SUBSCRIBED AND SWORN BEFORE ME

This _____ day of _____, 20_____.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC

CONTRACT - Page Two of Two

IF A PARTNERSHIP

(Seal) _____

(Seal) _____

(Seal) _____

(Seal) _____

PARTNERS DOING BUSINESS UNDER THE NAME OF

SUBSCRIBED AND SWORN BEFORE ME

This ____ day of _____, 20____.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC

IF AN INDIVIDUAL

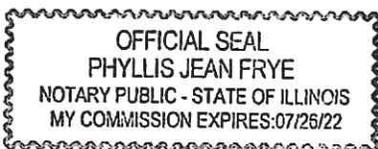
(Seal) 

SUBSCRIBED AND SWORN BEFORE ME

This 3 day of February, 2021.

MY COMMISSION EXPIRES: July 26, 2022

Phyllis Frye
NOTARY PUBLIC



II. ADDITIONAL REQUIREMENTS FOR PUBLIC WORKS PROJECTS

A. INTENT

It is the intent of these specifications and contract that a complete working improvement be constructed. All necessary work and materials shall be included; whether specifically called for or implied.

B. LOCATION OF UTILITIES

The successful Bidder shall contact the Village of Willowbrook Department of Public Works at least seventy-two (72) hours before beginning work. Where required, electric, gas, telephone and cable utilities must be located in the field prior to construction. The Village bears no responsibility for damage done to existing utilities during construction.

C. TRAFFIC CONTROL AND PROTECTION

Traffic control and protection - the successful Bidder's manner of prosecuting the work or revisions in the phasing of operations may require temporary traffic control devices to be installed. In such cases, all but not limited to, signs, signals, markings, traffic codes, barricades, warning lights, flagmen and other traffic control devices must conform with all provisions of the appropriate standards. The Village shall be the sole judge as to the acceptability of placement and maintenance of the traffic control devices prescribed in the appropriate standards. Said temporary traffic control devices shall be considered incidental to the contract and no compensation will be allowed.

D. EXAMINATION OF SITE

The successful Bidder shall carefully examine the site and become familiar with the conditions under which he/she will have to execute the work required under this contract. Failure to do so will in no way relieve the successful Bidder of his/her responsibility under this contract.

E. ADDITIONAL WORK

The Village reserves the right to order additional work during the course of construction. Prior to commencing any additional work, the successful Bidder shall submit his/her charges for performing the work and shall not proceed until the Village has approved the charges.

F. PREVAILING WAGES

In accordance with the law and the provisions of 820 ILCS 130/0.01 et seq., entitled "an Act regulating wages of laborers, mechanics, and other workers employed in any public works by the state, county, city or any public body or any political subdivision or by any one under contract for public works", not less than the prevailing rate of wages shall be paid to all laborers, workmen and mechanics performing work under this contract. Prospective Bidders shall thoroughly familiarize themselves with the provisions of the above mentioned act and shall prepare any and all bids in strict compliance therewith. Copies of the prevailing rate of wages for this Village are on file in the office of the Village Clerk of the Village of Willowbrook.

G. PROTECTION OF EXISTING FACILITIES

Existing facilities, including grounds, structures, landscaping, and so forth, shall be protected by the successful Bidder. Any damage to existing facilities shall be reported to the Village and shall be repaired promptly by the successful Bidder when ordered to do so by the Village. All repairs of damage to existing facilities shall be made to the satisfaction of the Village. Failure to repair damage shall be just cause for withholding payment for work that becomes due.

H. BIDDER'S RESPONSIBILITY

The successful Bidder shall be responsible for constructing the improvements in accordance with the specifications. The successful Bidder shall have available on the job site at all times during construction, a complete set of specifications with all revisions thereto. The successful Bidder shall employ only workmen skilled in their trade and shall furnish full-time supervision of all construction. An English-speaking superintendent shall be at the site whenever construction is in progress. The superintendent shall have authority to receive and carry out instructions from the Village. The lack of a competent superintendent on the site during construction shall be just cause for the Village to order the work to cease.

I. SITE CONDITION AND CLEAN-UP

The successful Bidder shall store materials and equipment where directed by the Village and shall move same, if and when it becomes necessary at his/her own expense.

The successful Bidder shall have control over his/her employees' parking of automobiles on the site and shall provide portable toilet facilities and receptacles for depositing waste paper and garbage. The successful Bidder shall keep the site neat and shall clean up any debris when directed to do so by the Village. Upon completion of the improvement, the site shall be left in a condition acceptable to the Village. Failure to keep the site neat, or clean-up debris when directed to do so shall be just cause for withholding payment due the successful Bidder and final acceptance will not be made until the site is in a condition acceptable to the Village.

J. TRESPASS ON LAND

The successful Bidder shall confine his/her operations and storage of materials and equipment to the job site, public right-of-way or easements. The successful Bidder shall exercise extreme caution so as not to trespass upon property of third parties not involved in the contract. In the event that the successful Bidder is to enter upon the property of third parties in the execution of the work, he/she shall obtain written permission prior to doing so and submit evidence of said written permission to the Village.

K. COPIES OF DRAWINGS AND SPECIFICATIONS

The Village shall furnish to the Bidder, without charge, three (3) sets of specifications for that portion of the work to be performed by the Bidder. If the Bidder desires additional copies of the specifications, they may be secured from the Village at Bidder's expense.

L. PROTECTION OF PUBLIC

The Bidder shall erect and maintain sufficient signs, barricades, lights and fences and shall employ competent flagmen and watchmen to warn and guard the public against the hazards created by the construction of the work. The Bidder shall not allow hazardous conditions to remain without affording adequate protection to the public. If, in the

opinion of the Village, a hazardous condition exists and the Bidder fails to correct the condition, or to protect the public, the Village may order the necessary precautions to safeguard the public, the cost of which will be deducted from payments due the Bidder. Flagrant disregard for the safety of the public shall constitute just reason for the Village to order cessation of work.

M. GUARANTEE

All work and materials furnished under this contract shall be guaranteed by the Bidder against defects, failure, improper performance and non-compliance with the contract documents for a period of one (1) year after completion and acceptance of the work under this contract. During the guarantee period, the Bidder shall repair and replace, at his/her own expense, when so ordered by the Village, all work that develops defects whether these defects may be inherent in the functioning of the piece of operating equipment, materials furnished or workmanship performed. Any equipment or material that is repaired or replaced shall have the guarantee period extended one (1) year from the date of the last repair or replacement.

N. PAYMENT

Final payment will be made when the work is accepted by the Village. The Bidder shall submit final waivers-of-lien covering all labor, material, equipment, services and so forth, prior to receiving final payments.

O. ACCEPTANCE

The work shall not be accepted by the Village until the Village has determined that all work is complete and in accordance with the specifications.

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III. TERMS AND CONDITIONS OF THE SPECIFIC PROJECT

A. EXAMINATION OF SITE

Bidders shall inform themselves of all the conditions under which the work is to be performed concerning the site of the work, the obstacles that may be encountered, and all other relevant matters concerning the work to be performed under this contract.

The Contractor to whom a contract is awarded will not be allowed any extra compensation by reason of any such matters of things concerning which the Contractor did not inform himself prior to bidding. The successful Contractor must employ, so far as reasonably possible as determined by the Village, such methods and means in the carrying out of his work as will not cause any interruption or interference with any other contractor.

B. MEETING BEFORE WORK BEGINS

It is mandatory that the Contractor meets with the Superintendent of Parks & Recreation and the Public Works Foreman and/or their designee(s) prior to the start of work in order to review the contract specifications, designate the appropriate project contacts, and discuss the manner in which work will be proceeding, among other items.

C. DAMAGE TO PUBLIC OR PRIVATE PROPERTY

Any damage of public or private property caused by the Contractor's operations shall be resolved with the property owner within ten (10) days after damage occurs to the satisfaction of the Village. The Contractor shall inform the Village of any damage caused by the Contractor's operation on the day such damage occurs. Should the damage not be rectified within the time frame agreed upon or to the satisfaction of the Village, the Village reserves the right to repair or replace that which was damaged or assess the Contractor such cost as may be reasonable and related to damaged caused by the Contractor and deduct these costs from any payment due the Contractor.

D. PREVAILING WAGES

In accordance with the law and the provisions of 820 ILCS 130/0.01 et seq., entitled "an Act regulating wages of laborers, mechanics, and other workers employed in any public works by the state, county, city or any public body or any political subdivision or by any one under contract for public works", not less than the prevailing rate of wages shall be paid to all laborers, workmen and mechanics performing work under this contract. Prospective Bidders shall thoroughly familiarize themselves with the provisions of the above-mentioned act and shall prepare any and all bids in strict compliance therewith. Copies of the prevailing rate of wages for this Village are on file in the office of the Village Clerk of the Village of Willowbrook

E. SUBLETTING CONTRACT

It is mutually understood and agreed that the Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of this contract or his right, title, or interest therein, or his power to execute such contract, to any other person, firm, or corporation, without the previous written consent of an authorized representative of the Village of Willowbrook; but in no case shall consent relieve the Contractor from his obligations or change the terms of the contract.

F. DEFAULT

The contract may be canceled or annulled by the Village in whole or in part by written notice of default to the Contractor upon nonperformance or violation of contract terms. Failure of the Contractor to deliver services within the time stipulated, unless extended in writing by the Village of Willowbrook, shall constitute contract default.

G. SAFETY

The Contractor shall insure that all its employees or agents shall abide by all safety rules or regulations set by the Village of Willowbrook as well as by general regulations and standards of the industry and in accordance with all applicable federal, state, and local regulations.

H. WORKMANSHIP

Workmanship shall be of the highest caliber in every respect. Workers must take care to insure the least amount of disturbance to the sites, Village staff members, and the general public.

I. PENALTY FOR NON-COMPLETION

Time is of the essence to the contract. Should the Contractor fail to complete the work within the timelines stipulated in the contract or within such extended time as may have been allowed, the Contractor shall be liable and shall pay the Village two hundred fifty dollars (\$250.00) per calendar day not as a penalty but as liquidated damages, for each day of overrun in the contract time or such extended time as may have been allowed. The liquidated damages for failure to complete the contract on time are approximate, due to the impracticality of calculating and proving actual delay costs. This penalty established is to cover the cost of delay to account for administration, engineering, inspection, and supervision during periods of extended and delayed performance. The costs of delay represented by this schedule are understood to be a fair and reasonable estimate borne by the Village during extended and delayed performance by the Contractor of the work, remaining incidental work, correction of work improperly completed, or repair of work damaged as a result of the Contractor. The liquidated damage amount specified will accrue and be assessed until final completion of the total physical work of the contract even though the work may be substantially complete. The Village will deduct these liquidated damages from any monies due or to become due to the Contractor from the Village.

The other provisions of the Contract have been established to allow for the efficient completion of this project, without creating additional burden or hardship on the Village or additional administration and/or operating expenses for the Village. The failure to adhere to the specifications of the contract, including but not limited to the following examples, shall result in the assessment of liquidated damages of one hundred dollars (\$100.00) per incident per day. Some examples include:

- failing to complete work in a manner or sequence as required;
- damaging landscaping (i.e. debarking plants by running into them with equipment);
- failure of the contractor to be accessible to the Village or respond to requests to complete work;
- improperly applying mulch;
- not completing and/or maintaining the removal of weeds; and
- failing to clean-up garbage or debris.

J. SUPERVISION AND TRAINING

Competent English speaking supervisory personnel shall be present at each facility on a regular basis. The Contractor shall properly schedule and train all of its personnel. It is required that the supervisor visit the facilities being cleaned on a weekly basis to be sure that it has been completed in a satisfactory manner. The Village reserves the right to have the contractor assign a new contact, supervisor, and/or staff, for the Village's account if the current representative(s) are deemed unacceptable.

K. WORKING HOURS

The Contractor shall work the same hours as the Municipal Services Department unless other arrangements are agreed upon ahead of time. The Contractor must inform the Director of Municipal Services, or his designee, when the Contractor will be working outside of the normal working hours for Municipal Services.

L. TRESPASS ON LAND

The Contractor shall confine his operations and storage of materials and equipment to the job site public right-of-way or easements. The Contractor shall exercise extreme caution so as not to trespass upon property of third parties not involved in the contract. In the event that the Contractor is to enter upon the property of third parties in the execution of the work he shall obtain written permission prior to doing so and submit evidence of said written permission to the Village.

M. COSTS

The undersigned hereby affirms and states that the prices quoted herein constitute the total cost to the Village for all work involved in the respective items. This cost also includes all proposal preparation costs, insurance, royalties, transportation charges, use of all tools and equipment, superintendent, overhead expense, inspection costs, all profits and all other work services and conditions necessarily involved in the work to be done in accordance with the requirements of the contract documents considered severally and collectively.

N. TRAFFIC CONTROL

The Contractor shall provide adequate traffic control for work area protection in compliance with the Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways, the State of Illinois Vehicle Code, the Illinois Department of Transportation Highway Standards, and the Illinois Department of Transportation Handbook of Traffic Engineering Practice for Small Cities.

O. PROTECTION OF EXISTING FACILITIES

Existing facilities, including grounds, structures, landscaping and so forth shall be protected by the vendor. Any damage to existing facilities shall be reported to the Village and shall be repaired promptly by the vendor when ordered to do so by the Village at no cost to the Village. All repairs of damage to existing facilities shall be made to the satisfaction of the Village. Failure to repair damage shall be just cause for withholding payment for work, which becomes due.

P. ACCESSIBILITY OF CONTRACTOR

Contractor shall supply cell phone numbers, daytime office numbers, fax numbers, and pager numbers of supervisors handling this contract. The Contractor shall return all calls or pages within one hour of the Village placing the call. On-site response time for

complaints must be made within 24 hours of the initial call being made by the Village. The Contractor must assign an English-speaking crew leader to monitor all work being performed within the Village. The Contractor shall update the Director of Municipal Services or his designee on work progress no less than once per week. Failure to comply with the accessibility requirements shall be deemed as substandard work and will be subject to the same penalties.

Q. REFERENCES

A reference list (attached) must also be submitted with the bid documents. The references must be municipal accounts or accounts similar in size but shall include at least one (1) municipal client at a minimum.

R. BILLING & PAYMENT

Payment shall be made in eight (8) equal payments, once all work has been completed in a satisfactory manner and the specifications stated herein have been met, for the following months: May, June, July, August, September, October, November, and April following receipt of an invoice from the Contractor for the month in question.

S. RENEWAL AND EXTENSION

This Contract shall be in full force and effect from May 1, 2021 to and including April 30, 2022. At the sole discretion of the Village, this contract may be extended for an additional twelve (12) month period under the same terms and conditions.

T. SPECIFIC CONDITIONS FOR LANDSCAPE MAINTENANCE TRASH AND DEBRIS

The entire site will be inspected and cleared of all trash, debris, glass, rocks, etc. before mowing begins. Mowing over paper, cups, cans and other litter shall not be accepted. Should this occur the Contractor shall immediately pick-up and properly dispose of all debris.

U. EQUIPMENT CONDITION

All equipment will be kept in good, safe operating condition. All mowing equipment will have sharp blades so that the grass is cut properly. All equipment will be kept in such a condition so that the gas/oil is not leaking.

V. FUEL/OILING

Spilling gasoline and oil kills the grass. Mowers will not be fueled or oiled in grass areas. They should be moved to a paved area to perform this function. If any spill should occur the Contractor shall immediately commence the appropriate clean up in conformance with any and all applicable regulations. The Contractor shall be responsible for all costs associated with such a clean up and restoration and/or reimbursement for any damages that may occur.

W. FINAL APPEARANCE

Mowing patterns shall be such that the clippings and mulch are evenly distributed, not wind rowed into noticeable deposits. Grass clippings will not be allowed to accumulate on hard surface areas, sidewalks or roadways and must be removed by the Contractor in an appropriate manner. If windrows are present, raking and properly disposing of the material by the Contractor must remove the clippings. The Contractor shall immediately pick up any debris that is mowed over.

Y. ADDITIONS OR DELETIONS

The Village reserves to right to increase or decrease quantities and number of mowings/weedings based on actual field conditions and requirements. The Contractor will be asked to provide a list of hourly manpower and equipment rates used to calculate the proposal prices for this section of the contract. These rates shall be used when the quantities of work must be increased or decreased for any reason such as adding sites, deleting sites, or failure of the Contractor to complete required work. Using these rates, the Village and the Contractor shall meet and shall mutually agree upon the dollar amounts to be added to or deleted from the contract.

Z. OPTIONAL WORK

At the Village's option, the Contractor may be asked to provide additional lawn mowing in the event that such services become necessary. The cost of such service will be provided on a per acre basis as stated on the proposal page.

AA. REPORT OF WORK PERFORMED AND SCHEDULED

The Contractor shall, at a minimum of once per month during the period of providing services, submit a written report to the Director of Municipal Services in detailing the weekly progress that has been performed by the Contractor during the previous month. At the same time, the Contractor shall also provide a schedule of work that is anticipated to be completed in the subsequent month.

BB. MOWING AND TRIMMING OF PARKS, ROADSIDE RIGHTS OF WAY, MEDIANS, AND SPECIFIED FACILITIES

Lawn mowing equipment must be mulching type, and the die shoots must be blocked or, if not mulching, a bag must be used. Mowing should be done so as to spread clippings evenly over the area. Otherwise grass clippings should be removed. Each mowing area should be completed in one day.

This mowing rotation schedule can be adjusted to a less frequent mowing schedule with the approval of the Director of Municipal Services during those times of the season when heat and/or lack of rain would cause weekly mowing to stress the grass.

From the last week in August until the final mowing of the season, mowing at the Community Park shall be done on either Thursdays or Fridays, to coincide with prevalent events at the park, as so advised by the Superintendent of Parks & Recreation

Mowing equipment shall be set at 2½" at all times. Community Park game fields should be cut to a height of 2" when fields are in use. In all mowed areas included in this contract, care should be taken to lower the height of the cut so as not to put the turf under stress.

The Director of Municipal Services, or his designee, shall have the right to inspect all equipment and height of cut immediately after mowing for compliance.

1. Village Parks

A. To be mowed at least one (1) time each week

Grass should be mowed as provided in these specifications with the additional specification for game fields at Borse Memorial Community Park (defined as the softball fields and soccer field with an approximate area of 6.18 acres). Those game

fields should be cut to a height of 2” when fields are in use (April through October), but taking care during times of extreme heat and/or lack of rain. It should be noted that this entire area is equipped with an underground sprinkler system and that care must be used to prevent damage to that system. Estimated acreage areas included for mowing and trimming are as follows:

<u>PARKS</u>	<u>ACRES</u>
Borse Memorial Community Park	8.8
Midway Park	2.1
Creekside Park	5.1
Lake Hinsdale Park	1.0
Ridgemoor Park	5.4

<u>PARKS (continued)</u>	<u>ACRES</u>
Waterford Park	4.3
Farmingdale Terrace Park	3.0
Willow Pond	3.0
Prairie Trail Park	5.0
Roger’s Glen Park *	<u>1.5</u>

(* includes both parkways on Rogers Farm Rd.)

Total: 39.2 acres

2. Roadside Rights of Way, Medians, and Specified Facilities

A. To be mowed and trimmed at least one (1) time each week:

1. DuPage County right-of-ways (Grand Total: 23.6 acres):

63rd Street (Total: 4.42 acres):

North Side: From Western to Madison	2.23 ac.
South Side: From Western to Madison	1.99 ac.
Median: From IL Route 83 to 550 feet E. of IL Route 83:	.20 ac.

75th Street (Total: 8.51 acres):

North Side: From W. of Sheridan Drive to IL Route 83:	2.61 ac.
South Side: From W. of Sheridan Drive to IL Route 83:	3.50 ac.
Median: From W. of Sheridan Drive to IL Route 83:	2.40 ac.

Madison Street (Total: 7.44 acres):

West Side: From 63 rd Street to Joliet Road:	3.61 ac.
East Side: From 63 rd Street to Joliet Road:	3.83 ac.

Plainfield Road (Total: 3.23 acres):

South Side: From IL Route 83 to Garfield Avenue:	1.59 ac.
North Side: From IL Route 83 to Garfield Avenue:	1.64 ac.

2. State of Illinois right-of-ways (Grand Total: 24.67 acres)

Illinois Route 83 (Kingery Hwy.):

Median areas and road side right-of-way from approximately the 5900 block of Route 83 to Route 83 south 79th St., including the bermed area at Midway Drive, (south of Midway Drive: 24.67 acres

3. Specified Facilities (Grand Total: 3.87 acres)

Public Works site:
700/710 Willowbrook Cntr. Pkwy. Approx. 3.37 acres

Village Municipal Complex:
Village Hall, 835 Midway Drive
Police Station, 7760 Quincy Street
Community Resource Center, 825 Midway Drive
Approx. 0.5 acres

B. To be mowed and trimmed at least one (1) time in each two-week period:

73rd Court & Quincy Street in a southerly direction for approximately 500 feet on the east side of Quincy, and from 73rd Court and Quincy in an easterly direction on the north and south right of way for 600 feet a total of .50 acres.

72nd Street east of Route 83 within northern right of way for 612 feet. The mowing width will incorporate from the curb and gutter to three feet north of the sidewalk.

79th Street – southern right of way from Eleanor to Route 83; northern right of way from Sawmill Creek west 1,000 feet; southern right of way from Sawmill Creek west 400 feet (adjacent to guardrail)

75th Street & Clarendon Hills Road – eastern right of way of Clarendon Hills Rd. south of 75th Street (area is 150' x 25'); western right of way Clarendon Hills Rd. south of 75th St (area is 150' x 25')

61st Street & Bentley Ave. – 650 feet east from Bentley Ave. on 61st St.; northern right of way and 150 feet north from 61st eastern right of way.

59th Street & Clarendon Hills Road – 75 feet north from 59th St on Clarendon Hills Rd. western right of way; 75 feet west from Clarendon Hills Rd northern right of way 59th St; 75 feet south from Clarendon Hills Rd. western right of way of Clarendon Hill Rd; 75 feet west from Clarendon Hills Rd. on 59th St. southern right of way of 59th St.

59th Street & Western Ave. - 100 feet east from Western Ave on 59th St southern right of way; 75 feet south from 59th St. on Western Ave. in the eastern right of way of Western Ave.; 75 feet south from 59th St on the western right of way of Western Ave.

Executive Drive & Quincy – 500 feet north from Executive Drive on the eastern right of way of Quincy; 205 feet east from Quincy on Frontage Rd on the northern right of way of Frontage Rd.

Quincy & Frontage (Joliet Road) 150 feet north of Joliet Road on the eastern right of way of Quincy; 205 feet east from Quincy on Frontage Rd. on the northern right of way of Frontage Rd.

Garfield Road – West Right-of Way from Plainfield Rd to Rodgers Farm Rd. = 1,770 x 10’

79th Street – North Right-of Way -- addresses 228 and 234 = 400’ x 20’

73rd Court - North Right-of Way of 73rd Ct. -- 920’ x 15’. South Right-of-Way of 73rd Court – 600’ x 15’

65th Street - North Right-of Way of 65th St -- addresses 364-368-372 = 320’ x 15’

Adams Street – Right-of Way at 7052 Adams St and 7263 Adams St. = 700’ x 15’

General Trimming

Trimming will be done along with the mowing and will be accomplished with suitable mechanical equipment, at the same cutting height as the rest of the area and before that specific site is to be considered completed. This work is incidental to and included with the weekly mowing. It shall be the responsibility of the contractor to restore any mulch rings that are disturbed during mowing and/or trimming. Mowing and trimming shall be done as to spread clippings over the entire area. All grass must be neatly mowed and trimmed around and along all concrete, screenings paths and asphalt paths, playground surfaces, building structures, signs, shrub beds, tree rings, fence lines and backstops. Trees, shrubs and other plants must not be “debarked” by running into them with mowing or trimming equipment. All grass clippings from mowing and/or trimming which fall anywhere but on the grass (curb, gutter, parking lot, sidewalk, etc.) shall be swept up and removed. If the grass clippings fall into clumps or piles onto the mowed lawn, the piles shall be raked up and removed.

Median & Right-of-Way Trimming at Concrete Area and Curbs

Grasses and weeds at concrete median areas and in front of curbs (i.e., the flag of the curb – between the curb and pavement) and at joints shall be removed in their entirety. This can be accomplished by manual weeding or by trimming with suitable mechanical equipment. This work is incidental to and included with the weekly mowing.

CC. AERATION OF PARKS, ROADSIDE RIGHTS OF WAY, MEDIANS, AND SPECIFIED FACILITIES

Aeration shall be performed once in the fall and shall be scheduled with the Director of Municipal Services or his designee, at least one week prior to work being done. Aeration shall be done using a mechanical core aerator with hollow tines that produce cores (soil debris). Aeration shall not be done when the soil is dry or very wet (saturated with water). It shall be done only when there is optimum moisture in the soil to produce good penetration. Penetration of the soil shall be a minimum of three inches.

<u>1. PARKS</u>	<u>ACRES</u>
Borse Memorial Community Park #	8.3
Midway Park	2.1
Creekside Park (all grass areas except sides of basin)	4.0
Lake Hinsdale Park	1.0
Ridgemoor Park	5.4
Waterford Park (all grass areas except sides of basin)	3.0
Farmingdale Terrace Park	3.0
Willow Pond	1.5
Prairie Trail Park (all grass areas except sides of pond)	5.0
Roger's Glen Park *	<u>1.5</u>

(* includes both parkways on Roger's Farm Rd.)

Total: 34.80 acres

- Note that the Community Park softball and football fields are equipped with an underground sprinkler system. Care must be used to prevent damage to the sprinkler system. The Contractor shall be responsible for all costs incurred related to repairing any damage to the underground sprinkler system from or caused by the Contractor's operations. Also note that at the Community Park the area east of the creek is not included in the aeration schedule.

2. ROADSIDE RIGHTS OF WAY, MEDIANS, AND SPECIFIED FACILITIES

Village Hall 0.5 acres

DD. PLANTING BED MAINTENANCE

All planting beds must be spaded. As part of this work tilled dirt and grass must be removed and properly disposed of and not incorporated in plant beds. Dirt, rocks and grass found in plant beds shall be removed the same day and failure to do so will be deemed as substandard work. Spring clean up includes removing debris and cutting back dead shrub plant materials in beds, perennial beds, tilling, cultivating and additional mulch shall be completed by May 15. *Planting beds must remain weed free at all times throughout the contract season.* Regular weeding and cultivating shall be carried out along with the lawn mowing cycle. Manual weed pulling will be necessary in most cases. Plant materials in plant beds are to be trimmed and thinned including shrubs and trees of dead material and pruned throughout the contract, in addition to trimming any overgrowth of plant materials.

As part of this contract, one (1) fertilizer/weed control application shall be made to all shrubs in planting beds included in this schedule. Application shall take place between May 15 and May 30, but after the spring clean up. Contractor shall water shrubs to dissolve the fertilizer application, in the event sufficient rain is not experienced. Apply at an application of 25-2-15 product at 5 lbs. nutrients per 1000 square feet of land area. Product to be used is Arthur Clesen Inc. or approved equal and is to be a granular material. Contractor shall provide the name of the material on the bid proposal form. The Contractor shall periodically inspect plant material in the planting beds for insect and disease damage. Recommendations should be brought to the attention of the Director of

Municipal Services. Treatments will be made on an hourly rate as specified on the bid proposal form. The product must be pre-approved by the Director of Municipal Services. Mulch/Compost shall be added or removed at the Village's request. Labor shall be provided at the contractor's expense and there will be no additional charges to the Village for adding and tilling mulch. Mulch and/or compost will be provided by the Village and delivered on site. Mulch in plant beds shall be a minimum of 3" to 4" in depth and turned at minimum of three times in May, July, and September. All mulch beds shall be tilled and mulch added, if needed, no later than May 30 of each year of the contract.

<u>1. PARKS</u>	<u>Number of Planting Beds</u>	<u>Est. Total Square Yards</u>
Community Park	2	130
Midway Park	1	10
Creekside Park	1	10
Lake Hinsdale Park	3	44
Ridgemoor Park	2	36
Waterford Park	2	33
Farmingdale Terrace Park	5	100
Willow Pond	2	40
Prairie Trail Park (south entrance sign bed only)	1	8
Roger's Glen Park	1	6
Total	20	417

2. ROADSIDE RIGHTS OF WAY, MEDIANS, AND SPECIFIED FACILITIES

	<u>Number of Planting Beds</u>	<u>Est. Total Square Yards</u>
Village Hall	7	414
Village entrance signs on Rte 83	2	52
Total	9	466

EE. REQUIREMENTS FOR ALTERNATE BIDS

1. Additional Mowing

Specifications for any additional mowing selected by the Village shall be the same as those specifications for the contracted mowing.

2. Additional Aeration

Specifications for any additional aeration selected by the Village shall be the same as those specifications for the contracted aeration.

3. Tree Ring Maintenance

Tree rings trees that are selected by the Village shall be spaded. As part of this work tilled dirt and grass must be removed and properly disposed of and not incorporated in plant beds and mulch rings. Dirt and grass found in the tree rings shall be removed the same day by the Contractor.

4. Tree Fertilization

Trees that are selected by the Village for fertilization. Contractor specify product and method of Fertilization in the bid form

Village of Willowbrook

LANDSCAPE SERVICES SPECIFICATIONS BID FORM – PAGE 1 OF 2

Bidder, in submitting this proposal, hereby agrees to comply with all provisions and requirements of the specifications and contract documents attached hereto for the prices as specified below. This proposal shall remain in force and full effect for a twelve (12) month period, from May 1, 2021 through April 30, 2022.

Mowing and Trimming

- A. Parks (Section III-BB-1) \$ 28,000 -
- B. Roadside Rights of Way, Medians, and Specified Facilities (Section III-B-2) \$ 35,800 -

Aeration

- A. Parks (Section III-CC-1) \$ 3,800 -
- B. Roadside Rights of Way, Medians and Specified Facilities - Village Hall only (Section III-CC-2) \$ 1,800 -

Planting Bed Maintenance

- A. Parks (Section III-DD-1) \$ 3,700 -
- B. Roadside Rights of Way, Medians, and Specified Facilities (Section III-DD-2) \$ 3,400 -

ck # →

TOTAL -- Mowing/Trimming, Aeration, Planting Bed Maintenance (Sections BB, CC and DD) \$ 76,500 -

Alternate #1 - Tree Ring Maintenance- Parks, Roadside Rights of Way, Medians and Other Facilities - Per Tree Unit Price \$ 75 -

Alternate #2 - Additional Mowing – Per Acre/ Per Occurrence Unit Price \$ 650 -

Alternate #3 - Tree Fertilization - Per Tree Unit Price - Parks, Roadside Rights of Way, Medians and Other Facilities \$ 125 -

Village of Willowbrook

LANDSCAPE SERVICES SPECIFICATIONS BID FORM – PAGE 2 of 2
(CONTRACT EXTENTION)

Rates for services listed for 2021/22 contract period will not increase more than 2.5 % for the 2022/2023 contract period. At its sole discretion, the Village of Willowbrook may extend the contract for a one-year term beginning on May 1, 2022 and concluding April 30, 2023.

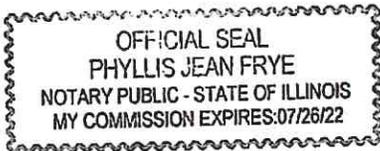
Also, as noted in the Additions or Deletions section, the Contractor shall provide a list of hourly manpower and equipment rates used to calculate the proposal prices for this section of the contract. Attach list marked as "Contractor's Exhibit" and write "attached" in the following blank: _____

Company: NJ Ryan Tree & Landscape LLC
Address: 17271 IL Rt 23
DeKalb IL 60115
Telephone No. 630-800-8767 Fax No. _____
Signature: 
Name and Title: (Please Print) DARIN RYAN
Date: 2-3-2021

Subscribed and sworn before me this 3 day of February, 2021

MY COMMISSION EXPIRES: July 26, 2022

Phyllis Frye
NOTARY PUBLIC



REFERENCES

The Contractor must list at least four (4) references, including at least one (1) municipality, listing the firm name, address, telephone number and contact person, for whom the Contractor has supplied landscaping services similar to those provided in these specifications, for a period no less than six (6) months.

Company Name: City of DeKalb
Address: _____
Phone # / Fax #: 815-748-2040
Contact Person: Andy
Dates of Service (from – to): _____

Company Name: Village of Downersgrove
Address: _____
Phone # / Fax #: 630-878-7505
Contact Person: Mike
Dates of Service (from – to): _____

Company Name: Village of Woodridge
Address: _____
Phone # / Fax #: 630-719-4717
Contact Person: Scott
Dates of Service (from – to): _____

Company Name: Village of Lombard
Address: _____
Phone # / Fax #: 630-306-2838
Contact Person: Eric
Dates of Service (from – to): _____

CONTRACTOR'S EXHIBIT – ADDITIONS OR DELETIONS

LABOR RATES

Employee Title/Classification	Hourly Rate

EQUIPMENT RATES

Make/Model	Hourly Rate

VILLAGE OF WILLOWBROOK

BOARD MEETING AGENDA ITEM - HISTORY/COMMENTARY

A Resolution Approving and Authoring the Execution of a Three-Year Contract with Clark Environmental Mosquito Management, Inc. for Mosquito Abatement at a Cost Not-To-Exceed \$26,450.00 Per Year

AGENDA NO. 7.

AGENDA DATE: 03/08/21

STAFF REVIEW: Mike Mertens, Assistant Village Administrator

SIGNATURE: M. Mertens

LEGAL REVIEW: Tom Bastian, Village Attorney

SIGNATURE: T. Bastian /man

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: B. Pabst

REVIEWED & APPROVED BY COMMITTEE: YES NO N/A

ITEM HISTORY (PREVIOUS VILLAGE BOARD REVIEWS, ACTIONS RELATED TO THIS ITEM, OTHER HISTORY)

Our three-year contract with Clarke to provide mosquito abatement services for the Village expired after the 2020 season. Therefore, staff has met with representatives from Clarke to discuss the terms of renewal contract provisions and to ensure that the contract price remains competitive with surrounding towns that receive the same or similar services from Clarke.

The result is that Clarke has agreed to offer continued services to the Village for a new three (3) year term. Given both the price of pesticides and labor costs have risen, Clarke has proposed a 1.5% contract price increase to \$26,450 for the 2021 season. They would also agree to freeze that price for an additional two (2) years if we entered another three (3) year contract. Therefore, the cost of the 2021, 2022 and 2023 program would be \$26,450 each year. Staff would also recommend, same as the last contract, that an additional \$7,400 be budgeted for up to two (2) optional ULV services which includes adulticide (spraying), both localized and community wide, should the need arise to combat the continuing threat of West Nile Virus (WNV).

This recommended program continues with the previous program in that it includes the use of environmentally friendly products as an alternative to conventional chemical insecticides. This program Clarke offers is called EarthRight™. Products used within this program are made from naturally derived active ingredients and are applied using earth-friendly methods, such as with bicycles and all-electric sprayers. Clarke advises that the larvicide product used in this program is equally effective as its chemical alternative, and the adulticide applications (i.e., ULVs) have an increased level of effectiveness. There is no increase in basic cost to the Village over the previous program.

The treatment terms of the contract, including Village-wide catch basin treatment four (4) times a year, or roughly once a month during the summer season, will remain unchanged. To ensure adequate protection is in place prior to the onset of mosquito breeding attributed to WNV, a second catch basin treatment, referred to as a "booster" treatment, will be performed in mid-August.

STAFF RECOMMENDATION

This item was discussed at the February 22, 2021 Municipal Services Committee and recommended the Village Board adopt a resolution authorizing the Mayor to execute the agreement to provide mosquito abatement services for the Village during the 2021 thru 2023 seasons.

ACTION PROPOSED: Adopt the Resolution

RESOLUTION NO. 21-R-08

**A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF A
THREE-YEAR CONTRACT WITH CLARKE ENVIRONMENTAL MOSQUITO
MANAGEMENT, INC. FOR MOSQUITO ABATEMENT SERVICES AT A COST NOT
TO EXCEED \$26,450.00 PER YEAR**

WHEREAS, the Village of Willowbrook (the “Village”) has previously contracted with Clarke Environmental Mosquito Management, Inc. (“Clarke”) to perform mosquito abatement services on behalf of the Village; and

WHEREAS, the Village has had a satisfactory working relationship with Clarke and has determined that it is in the best interest of the Village to continue its association with Clarke by entering into a three (3) year contract with Clarke to continue to perform mosquito abatement services on behalf of the Village.

NOW THEREFORE, BE IT RESOLVED by the Mayor and Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, that the Agreement by and between the Village of Willowbrook and Clarke Environmental Mosquito Management, Inc. to perform mosquito abatement services on behalf of the Village at an annual cost of \$26,450.00 per year, a copy of said Agreement and Proposal are attached hereto as Exhibit “A” and made a part hereof, and the same is hereby approved.

BE IT FURTHER RESOLVED that the Village Mayor be and is hereby directed and authorized to execute said Agreement and Proposal on behalf of the Village.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

This Resolution shall be in full force and effect upon its passage and approval in accordance with law.

PASSED and **APPROVED** this 8th day of March, 2021 by a roll call vote as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk

EXHIBIT "A"



EarthRight™

**Clarke Environmental Mosquito Management, Inc.,
Professional Services Outline for
The 2021-2023 Village of Willowbrook
EarthRight™ Program**

Part I. General Service

- A. Aerial Survey and Geographic Information System (GIS) Mapping
- B. Computer System and Record Keeping Database
- C. Public Relations and Educational Brochures
- D. Mosquito Hotline Citizen Response – (800) 942-2555
- E. Comprehensive Insurance Coverage naming the Village of Willowbrook additionally insured
- F. Program Consulting and Quality Control Staff
- G. Monthly Operational Reports, Periodic Advisories, and Annual Report
- H. Regulatory compliance on local, state, and federal levels

Part II. Surveillance and Monitoring

- A. Floodwater Mosquito Migration Model:
The use of weather data and computer model to predict the arrival of *Aedes vexans* brood (hatch) and peak annoyance periods. (Clarke will contact the Village of Willowbrook representative and inform him of the impending brood arrival.)
- B. Arbovirus Surveillance:
 - 1. Clarke New Jersey Light Trap Network: Operation of one (1) traps within the Village of Willowbrook to monitor and evaluate adult mosquito activity.
- C. Weather Monitoring – Operational Forecasts

Part III. Larval Control

- A. Targeted Mosquito Management System (TMMS™) computer database and site management.
- B. Larval Site Monitoring: 10 inspections
 - 1. Two (2) complete inspections of up to 72 sites as outlined by most recent Clarke GIS Survey.
 - 2. Five (5) targeted inspections of up to 42 breeding areas as determined by the computerized Clarke Targeted Mosquito Management System™.
 - 3. Three (3) targeted inspections of up to 30 known *Culex spp.* breeding areas as determined by the computerized Clarke Targeted Mosquito Management System™.
 - 4. Inspections of sites called in by residents on the Mosquito Hotline.
- C. Prescription Larval Control will be performed with Natular® mosquito larvicide as described in the following sections.
 - 1. Larval Control: The program provides for 50.4 acres of single brood or 30 day residual product with backpack, hand, or helicopter equipment.
 - 2. Larval Control: Stocking of 1,000 mosquito fish (*Gambusia affinis*) for biological control.
 - 3. Catch Basins: One treatment of up to 775 catch basins, inlets and manholes using Natular® XRT, an extended residual slow release insecticide for control of up to 180 days.



EarthRight™

4. Catch Basins: One (1) late-season treatment of up to 775 street side catch basins, inlets and manholes using Natular® 30-day sustained slow release insecticide.
5. Catch Basins: Back Yard Catch Basins: One (1) treatment of up to one known backyard catch basin at 6031 Bentley using Natular® XRT, an extended residual slow release insecticide for control of up to 180 days.

Part IV. Adult Control

- A. Adulticiding in mosquito harborage areas:
- B. Upon the request of Village staff, backpack barrier treatments using a synthetic pyrethroid insecticide of up to 1 mile for residual control of adult mosquitoes in isolated residential areas experiencing severe mosquito annoyance conditions. Any authorized backpack barrier treatments will be priced at \$418.00 per treatment.
- C. Adulticiding in Residential Areas:
 1. As authorized by Village staff, community-wide truck ULV treatments of up to 46.5 miles of streets using Merus™ a botanical insecticide (pyrethrin). Any authorized community ULV treatments will be priced at \$3,700.00 per treatment.
- D. Adulticiding Operational Procedures
 1. Notification of community contact.
 2. Weather limit monitoring and compliance.
 3. Notification of residents on Clarke Call Notification List.
 4. ULV particle size evaluation.
 5. Insecticide dosage and quality control analysis.

2021-2023 Total Annual Price for Parts I, II, III, IV**

\$26,450.00

****NPDES Permit:** A National Pollutant Discharge Elimination System (NPDES) permit is necessary for the execution of the work for mosquito control effective October 31, 2011. Any additional costs associated with activities and/or services that may be required by Clarke in order to comply with an NPDES permit are not included in this proposal.



EarthRight™

**Clarke Environmental Mosquito Management, Inc.,
Professional Services Outline for
The 2021-2023 Village of Willowbrook
EarthRight™ Program**

I. Program Payment Plan: For Parts I, II, III, and IV as specified in the 2021-2023 Professional Services Price Outline, the total for the 2021-2023 program is \$26,450.00 per year. The payments will be due on May 1st, June 1st, July 1st, & August 1st according to the payment schedule below. Any additional treatments beyond the core program will be invoiced when the treatment is completed. The program pricing for 2022-2023 will be held at 2021 rates.

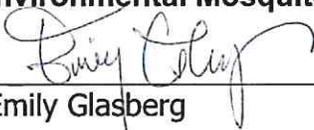
PROGRAM PAYMENT PLAN

Month	2021-2023
May 1	\$6,612.50
June 1	\$6,612.50
July 1	\$6,612.50
August 1	\$6,612.50
TOTAL	\$26,450.00

For Village of Willowbrook:

Sign Name: _____ Title: _____ Date: _____

For Clarke Environmental Mosquito Management, Inc.:

Name:  Title: Key Accounts Manager Date: 12/14/2020
Emily Glasberg



EarthRight™

**Clarke Environmental Mosquito Management, Inc.,
Professional Services Outline for
The 2021-2023 Village of Willowbrook
EarthRight™ Program**

Administrative Information:

Invoices should be sent to:

Name: _____
Address: _____
City: _____ State: _____ Zip _____
Office Phone: _____ Fax: _____ P.O. # _____
E-mail: _____ County: _____

****In an effort to be more sustainable, we ask that you provide us with an Email address that the invoices should be sent to.****

Treatment Address (if different from above):

County: _____

Address: _____
City: _____ State: _____ Zip _____

Contact Person for Village of Willowbrook:

Name: _____ Title: _____
Office Phone: _____ Fax: _____ E-Mail: _____
Home Phone: _____ Cell: _____ Pager: _____

Alternate Contact Person for Village of Willowbrook:

Name: _____ Title: _____
Office Phone: _____ Fax: _____ E-Mail: _____
Home Phone: _____ Cell: _____ Pager: _____

Please sign and return a copy of the complete contract for our files to:

Clarke Environmental Mosquito Management, Inc., Attn: Emily Glasberg
675 Sidwell Court, St. Charles, IL 60174 or email to eglasberg@clarke.com

VILLAGE OF WILLOWBROOK

BOARD MEETING AGENDA ITEM - HISTORY/COMMENTARY

A RESOLUTION APPROVING AND AUTHORIZING THE MAYOR TO EXECUTE, ON BEHALF OF THE VILLAGE OF WILLOWBROOK, A FOUR-YEAR EXTENSION AMENDMENT TO THE ILLINOIS ELEVATOR SAFETY PROGRAM AGREEMENT

AGENDA NO. 8.

AGENDA DATE: 03/08/21

STAFF REVIEW: Mike Mertens, Assistant Village Administrator

SIGNATURE: *Mr. Mertens*

LEGAL REVIEW: Tom Bastian, Village Attorney

SIGNATURE: *T. Bastian*

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: *B. Pabst*

REVIEWED & APPROVED BY COMMITTEE: YES NO N/A

ITEM HISTORY (PREVIOUS VILLAGE BOARD REVIEWS, ACTIONS RELATED TO THIS ITEM, OTHER HISTORY)

In August 2016, the Village entered into an agreement with the Office of the Illinois State Fire Marshal (OSFM) for their local Elevator Safety Program Agreement. Under this agreement the Village utilizes Thompson Elevator Inspection Service, Inc. for our local elevator inspections. The OSFM offered a one-year extension to the Elevator Safety Program due to the COVID-19 Pandemic and the associated State of Illinois Disaster Proclamation of March 9, 2020. The proposed amendment extends the program by one year but does not alter the duties or responsibilities under the agreement. On June 22, 2020, the Village entered the one-year extension.

The Village by signing this four-year Agreement agrees to operate its Program in compliance and conformance with the Elevator Safety and Regulation Act and Administrative Rules. Under the Program, the Local Authority shall:

- a. Issue construction and alteration permits and certificates of operation.
- b. Consider requests to extend the time frame for construction or alteration permits. Such requests shall be granted for an additional 12 months if the request is received by the Local Authority prior to expiration of the existing permit. Extension requests received by the Local Authority after the expiration of the existing permit shall be denied, requiring a new application that must be accompanied by payment of the current fee charged by the Local Authority.
- c. Provide for inspection of elevators, including temporary operation inspections.
- d. Grant exceptions and variances from the literal requirements of applicable State codes, standards and regulations in cases in which such variances would not jeopardize the public safety and welfare. The OSFM shall be notified immediately by mail of any exception or variance granted. The OSFM may object to such exception or variance within 7 business days of receipt of the notice. Should the OSFM and Local Authority not reach agreement on the exception or variance, the matter shall be directed to the Elevator Safety Review Board ("Board") to hear and decide.
- e. Enforce the applicable provisions of the Elevator Safety Act, and levy fines in accordance with the Municipal Code [65 ILCS 5] or Counties Code [55 ILCS 5].

f. Maintain for inspection by the OSFM the following documentation and information, all of which shall be maintained for a 2-year period:

- i. All permit applications.
- ii. All permits issued by the Local Authority.
- iii. All exceptions or variances granted or denied.
- iv. All inspection reports for conveyances subject to the Program, and
- v. Proper records demonstrating the number of certificates of operation issued by the Local Authority.

g. Ensure that all inspections are performed by personnel properly licensed by the State.

h. Notify the OSFM of any instances of non-compliance with the Elevator Safety Act and/or Administrative Rules of which it becomes aware.

i. Amend its Program within 90 days of receipt of notice from the OSFM informing them of changes to any form, document, the Standards and/or rules that affect the Program.

j. To notify the OSFM at least 90 days in advance of the date the Local Authority elects to discontinue its Program.

k. To require all conveyances in its jurisdiction to register and pay the associated fee to the OSFM and to put out-of-service and report to the OSFM the names of the owners of those conveyances that fail to register within 30 days of determination that the conveyance is not registered.

l. To make itself available, upon reasonable notice, to meet with the Administrator or its representatives, to ensure compliance with the Elevator Safety Act and Administrative Rules.

STAFF RECOMMENDATION

Staff recommend that the Village consider the four-year Extension Amendment to the Illinois Elevator Safety Program Agreement.

ACTION PROPOSED:

Adopt the Resolution

RESOLUTION NO. 21 R-09

A RESOLUTION APPROVING AND AUTHORIZING THE MAYOR TO EXECUTE, ON BEHALF OF THE VILLAGE OF WILLOWBROOK, A FOUR-YEAR EXTENSION AMENDMENT TO THE ILLINOIS ELEVATOR SAFETY PROGRAM AGREEMENT

BE IT RESOLVED by the Mayor and Board of Trustees of the Village of Willowbrook DuPage County, Illinois, that the certain Four-Year Extension Amendment to the Illinois Elevator Safety Program Agreement, attached hereto as Exhibit "A", which is, by this reference, expressly incorporated herein is hereby approved.

BE IT FURTHER RESOLVED that the Mayor is hereby directed to execute said One-Year Extension Amendment to the Illinois Elevator Safety Program Agreement on behalf of the Village of Willowbrook.

ADOPTED and APPROVED this 8th day of March, 2021.

ROLL CALL VOTE:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk



ILLINOIS ELEVATOR SAFETY PROGRAM AGREEMENT

This Agreement is made between the Office of the State Fire Marshal ("OSFM") and the municipality or county ("Local Authority") as hereinafter identified.

This Agreement constitutes a contract between the OSFM and Local Authority which permits the Local Authority to operate an Elevator Safety Program ("Program") in conformity with Section 140 of the Elevator Safety Act (225 ILCS 312/140) and the Administrative Rules adopted at 41 Ill. Adm. Code 1000. In that regard, the Local Authority agrees to the following:

1. This Agreement will become effective on the date it is accepted by the OSFM and shall remain valid for a period of four (4) calendar years thereafter. Prior to the expiration of this Agreement, the Local Authority shall reapply for approval of its PROGRAM by submitting to the OSFM the information detailed in Section 2, below.
2. The Local Authority shall submit to the OSFM, along with this Agreement executed by an officer of the Local Authority, the following information and shall notify the OSFM in writing of any changes to subsections "A" and "B" thereafter during the term of this Agreement:
 - a. The name and contact information of its Program administrator. It is the responsibility of the Local Authority to notify the OSFM of any changes to this information.
 - b. The name and contact information of any third party inspection company/is under contract with the Local Authority or the name and license number of the inspector(s) employed by the Local Authority to perform such inspections.
 - c. The number and type of conveyances covered by the Program.
 - d. The number and type of conveyances NOT covered by the Program, if any. These records shall be maintained by the Local Authority.
3. The Local Authority, by signing this Agreement, attests to the OSFM that it will enforce safety standards, codes and regulations at least as stringent as those adopted in the current version of the Illinois Elevator Safety Rules, 41 Ill. Adm. Code 1000.60. The Local Authority also agrees to amend and enforce its Program, as required by Section 6(l) of this Agreement, to reflect subsequent amendments to the safety standards, codes and regulations adopted by the Illinois Elevator Safety Rules.
4. Should the Local Authority desire to amend any of the Standards, the Local Authority must submit to the OSFM, for approval by the Illinois Elevator Safety Review Board ("Board"), a copy of the amendment and its reason for the change. The Board shall review the amendment and 2 notify the Local Authority no later than 30 days after the Board meeting at which the variance request is heard of its approval or denial.
5. With respect to ASME A17.3-2005, Safety Code for Existing Elevators and Escalators, upgrades required by Section 35(h) must be completed no later than January 1, 2015. By signing this Agreement, the Local Administrator recognizes that Public Act 97-1048 adjusted the compliance date for upgrade requirements to the restricted opening of hoistway doors or car doors on passenger elevators from January 1, 2015 to January 1, 2014. An existing conveyance is a conveyance located in a building for which a building permit was issued prior



to the effective date of the Administrative Rules which were adopted in conformance with the Elevator Safety and Regulation Act.

6. The Local Authority by signing this Agreement agrees to operate its Program in compliance and conformance with the Elevator Safety and Regulation Act and Administrative Rules. Under the Program, the Local Authority shall:
- a. Issue construction and alteration permits and certificates of operation.
 - b. Consider requests to extend the time frame for construction or alteration permits. Such requests shall be granted for an additional 12 months if the request is received by the Local Authority prior to expiration of the existing permit. Extension requests received by the Local Authority after the expiration of the existing permit shall be denied, requiring a new application that must be accompanied by payment of the current fee charged by the Local Authority.
 - c. Provide for inspection of elevators, including temporary operation inspections.
 - d. Grant exceptions and variances from the literal requirements of applicable State codes, standards and regulations in cases in which such variances would not jeopardize the public safety and welfare. The OSFM shall be notified immediately by mail of any exception or variance granted. The OSFM may object to such exception or variance within 7 business days of receipt of the notice. Should the OSFM and Local Authority not reach agreement on the exception or variance, the matter shall be directed to the Elevator Safety Review Board ("Board") to hear and decide.
 - e. Enforce the applicable provisions of the Elevator Safety Act, and levy fines in accordance with the Municipal Code [65 ILCS 5] or Counties Code [55 ILCS 5].
 - f. Maintain for inspection by the OSFM the following documentation and information, all of which shall be maintained for a 2-year period:
 - i. All permit applications;
 - ii. All permits issued by the Local Authority;
 - iii. All exceptions or variances granted or denied;
 - iv. All inspection reports for conveyances subject to the Program; and
 - v. Proper records demonstrating the number of certificates of operation issued by the Local Authority
 - g. Ensure that all inspections are performed by personnel properly licensed by the State.
 - h. Notify the OSFM of any instances of non-compliance with the Elevator Safety Act and/or Administrative Rules of which it becomes aware.
 - i. Amend its Program within 90 days of receipt of notice from the OSFM informing them of changes to any form, document, the Standards and/or rules that affect the Program.
 - j. To notify the OSFM at least 90 days in advance of the date the Local Authority elects to discontinue its Program.
 - k. To require all conveyances in its jurisdiction to register and pay the associated fee to the OSFM and to put out-of-service and report to the OSFM the names of the owners of those conveyances that fail to register within 30 days of determination that the conveyance is not registered.
 - l. To make itself available, upon reasonable notice, to meet with the Administrator or its representatives, to ensure compliance with the Elevator Safety Act and Administrative Rules.



**OFFICE OF THE ILLINOIS
STATE FIRE MARSHAL**

JB Pritzker, Governor
Matt Perez, State Fire Marshal

- 7. In accordance with the Elevator Safety and Regulation Act and the Administrative Rules, with the exception of the registration fees, the fees and procedures for applications, permits, inspection and enforcement under the Local Authority's Program shall remain the jurisdiction of the Local Authority and such procedures shall take precedence over the procedures adopted by the OSFM and Board.
- 8. Should the OSFM determine that the Program does not meet the requirements of the Elevator Safety and Regulation Act or the Administrative Rules, the OSFM shall notify the Local Authority of the corrective actions needed to bring the Program into compliance. Should the Local Authority fail to make the corrections, the OSFM may, after allowing time for corrective action and after a hearing under Section 160 of the Administrative Rules, withdraw approval of the Program.
- 9. A copy of the Administrative Rules (41 Ill. Admin. Code 1000) is available at <http://www.ilga.gov/commission/icar/admincode/titles.html> once published.

Village of Willowbrook
Local Authority Name

Office of the State Fire Marshal
1035 Stevenson Drive
Springfield, IL 62703

Signature of Officer

(217) 785-0969

Frank A. Trilla
Printed Name

Accepted by:

835 Midway Drive
Street Address

Matt Perez, Illinois State Fire Marshal

Willowbrook, IL 60527
City, State, Zip

Date

(630) 323-8215
Telephone Number

2. A. Name:
 Title: Roy Giuntoli, C.B.O. Building Official
 Phone: (630) 920-2240 (Bldg. Dept.)
 B. Thompson Elevator Inspection Service
 830 E Rand Rd, Unit 10
 Mt Prospect, IL 60056
 C. See separate sheet
 D Non-Registered Conveyances: See 2C Other- these units
 may be dock lifts, material lifts, casket lifts, conveyors, scissor lifts,
 pool equipment, auto lifts, but not limited to.

02/19/2021
Email Address for Officer

Date Revised: 04/12/16

2021 Illinois Elevator Safety Program Agreement

Municipality Name	Willowbrook
-------------------	-------------

2C	<u>Hyd-Elev</u>	<u>Trac-Elev</u>	<u>DW</u>	<u>Escalator</u>	<u>WCL / VPL</u>	<u>Lift</u>	<u>Sidewalk / People Mover</u>	<u>Other</u>	<u>Total Units</u>
	50	3	3	0	3	2	0	8	69

VILLAGE OF WILLOWBROOK

**BOARD MEETING
AGENDA ITEM - HISTORY/COMMENTARY**

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE VILLAGE OF WILLOWBROOK AND THE TRI-STATE FIRE PROECTION DISTRICT FOR THE INSTALLATION OF CERTAIN COMMUNICATION EQUIPMENT ON A VILLAGE-OWNED WATER TOWER

AGENDA NO. 9.

AGENDA DATE: 03/08/21

STAFF REVIEW: Brian Pabst, Village Administrator

SIGNATURE: B. Pabst

LEGAL REVIEW: Thomas Bastian, Village Attorney

SIGNATURE: T. Bastian

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: B. Pabst

REVIEWED & APPROVED BY COMMISSION: YES NO N/A

ITEM HISTORY (PREVIOUS VILLAGE BOARD REVIEWS, ACTIONS RELATED TO THIS ITEM, OTHER PERTINENT HISTORY)

In 2015, the Illinois General Assembly adopted Public Act 99-0006 (Act), which significantly amended the Emergency Telephone System Act (50 ILCS 750) (ETSA) and repealed the Wireless Emergency Telephone Safety Act (50 ILCS 751/27), for the purpose of consolidating local 911 systems in preparation for a statewide conversion to a "Next Generation" 911 system (NG911).

NG911 systems include greater data capacity and broad interoperability with various communication media including text messages, web submissions and video calls.

The DuPage County Emergency Telephone System Board (ETSB) rolled out two other programs for the entire County, upgrading the Public Safety Answering Points (PSAP's) to state-of-the-art NG911 Computer Aided Dispatch (CAD) and Fire Station Alerting (FSA). Both programs are state of the art systems as it pertains to emergency dispatch services. Tri-State Fire Protection District (Tri-State) was tasked with upgrading their own network systems to allow for full utilization of these emergency dispatch programs.

Currently, the Addison Consolidated Dispatch Center (ACDC) is Tri-State's Public Safety Answering Point which transmits emergency dispatch information via microwave from their communications tower in Addison, to a microwave tower/antenna located at I-55 and Cass Ave. That signal then is directed to a microwave antenna currently at Tri-State Station 122 on Plainfield Road in Darien. If the Tri-State Fire Protection District only had one station in Darien, they would not have a need to upgrade their communications infrastructure or network further. Since there are three other Tri-State stations, Station 121 at 236 Sunrise Avenue in unincorporated Willowbrook, Station 124 in Willow Springs, and Station 123 on Madison St. in Burr Ridge, it becomes Tri-State's responsibility to transmit that same emergency dispatch and communications information to their other three stations.

ITEM COMMENTARY (BACKGROUND, DISCUSSION, RECOMMENDATIONS, ETC.)

At the May 26, 2020, Village Board meeting Tri-State presented their concept to improve the communication system. Tri-State has constructed two communication towers and will utilize a tower already in place at Station

124 in Willow Springs which will carry microwave antennas to provide a redundant ring of connectivity between those stations but lacks the last leg of connectivity to Station 123. The water tower at the Village Municipal Complex (7760 Quincy Street) was identified as the ideal location to provide point to point microwave connectivity to Station 123. The ambulance crew and engine company that are located at Station 123 at 110 S Madison in Burr Ridge, respond to portions of Willowbrook. Allowing this placement of equipment on the Village water tower will ensure that vital emergency dispatch information will not delay response due to an antiquated network infrastructure. Upon discussion the consensus of the Village Board was to concur with the need and the future utilization of the Village Water tower for these communication devices.

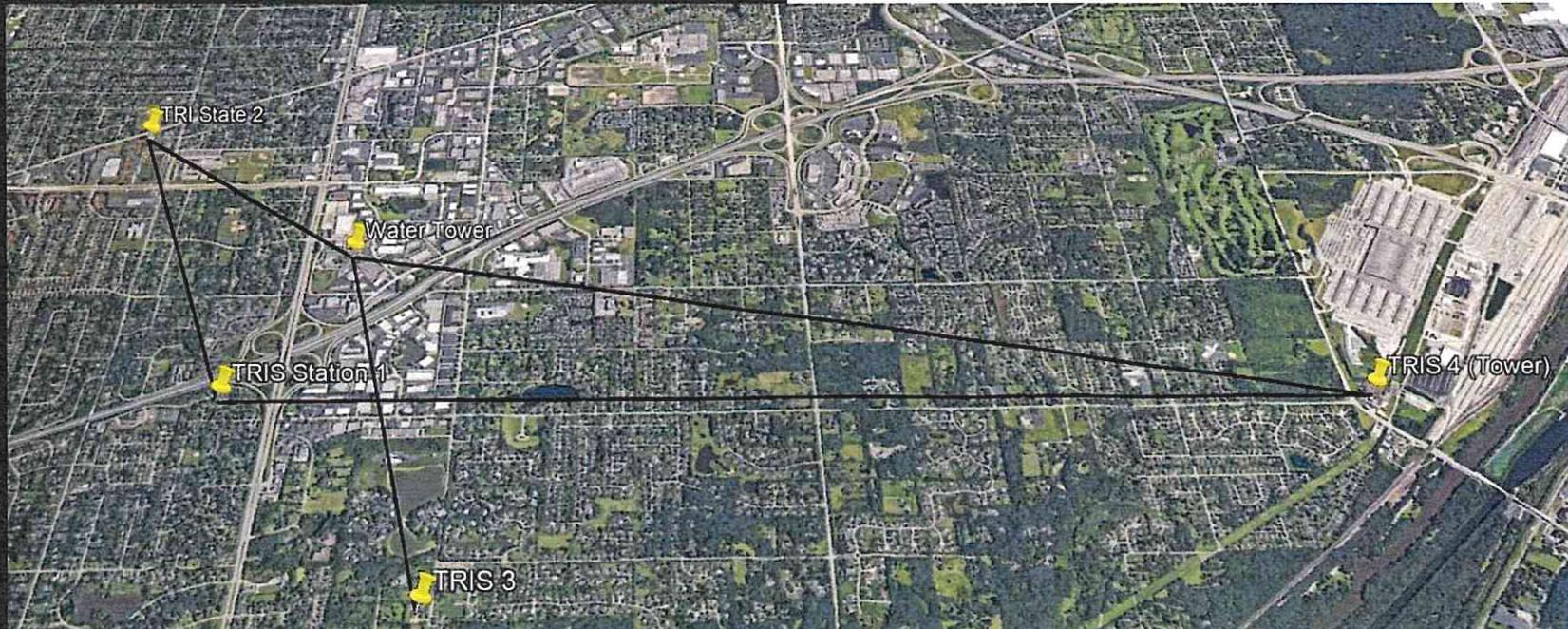
The Village has determined that it is in the best interest of the health, safety and welfare of Village residents to enter into an intergovernmental agreement with Tri-State, a copy of which is attached hereto as Exhibit "A", for the installation of certain communication equipment owned by Tri-State on the Village-owned water tower located at 7760 Quincy Street, Willowbrook, Illinois. The site plan and equipment description are highlighted in Exhibit "B".

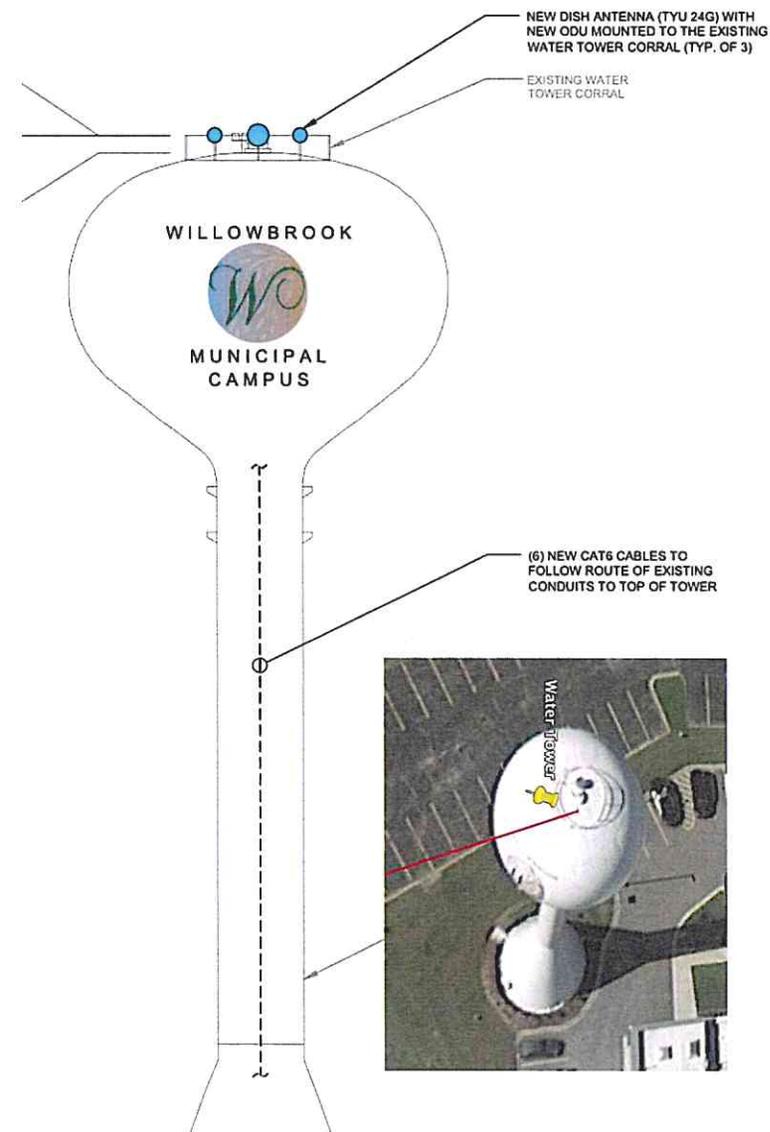
ACTION PROPOSED: Adopt the Resolution



Tri-State Fire
District
Microwave Plan

Microwave Link Design Plain





Willow Brook Water Tower

- Vital to the Ring to link all Fire Stations
 - This system will provide IP Connectivity for all Emergency Response Systems including Fire Station Alerting, Cad (Computer Aided Dispatch) Interface, and Radio Communications for the Fire District.
 - This will allow the use of video conferencing for training.
 - Additionally this will be used for the Fire Districts Administrative computers and phone systems.
- The Willow Brook Water Tower has the needed direct Line of site to Station 123 on Madison Street.
- Propose to mount 3 Dishes on the the handrail of the water tower
 - 2 – 24in Dishes and 1 – 36in Dish
- Propose installing an equipment Cabinet in the base of the water tower. This will host the connections, Router, and UPS Battery Back Up.

RESOLUTION NO. 21 R-10

A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE VILLAGE OF WILLOWBROOK AND THE TRI-STATE FIRE PROTECTION DISTRICT FOR THE INSTALLATION OF CERTAIN COMMUNICATION EQUIPMENT ON A VILLAGE-OWNED WATER TOWER

WHEREAS, the Constitution of the State of Illinois, 1970, Article VII, Section 10, authorizes units of local government to contract or otherwise associate among themselves in any manner not prohibited by law or ordinance; and

WHEREAS, the provisions of the Intergovernmental Cooperation Act (5 ILCS 220/1, *et seq.*) authorizes and encourages intergovernmental cooperation; and

WHEREAS, the Village of Willowbrook (“Village”) is a unit of government organized and existing pursuant to the provisions of the Illinois Municipal Code (65 ILCS 5/1-1, *et seq.*) and the Tri-State Fire Protection District (“Tri-State”) is a unit of government organized and existing pursuant to the provisions of the Illinois Fire Protection District Act (70 ILCS 705/0.01 *et seq.*). Both the Village and Tri-State are units of government within the meaning of the Constitution of the State of Illinois, 1970, Article VII, Section 10, having the power and authority to enter into intergovernmental agreements; and

WHEREAS, Tri-State provides fire protection and EMS services to the Village; and

WHEREAS, Tri-State desires to install certain communication equipment on Village-owned property, namely the Village water tower located at 7760 Quincy Street in the Village; and

WHEREAS, the corporate authorities of the Village have determined that it is in the best interest of the health, safety and welfare of Village residents to enter into an intergovernmental agreement with Tri-State, a copy of which is attached hereto as Exhibit “A” and made a part hereof.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, as follows:

The foregoing recitals are adopted as the findings of the corporate authorities of the Village of Willowbrook, DuPage County, Illinois.

BE IT FURTHER RESOLVED that the Intergovernmental Agreement (the "Agreement") by and between the Village of Willowbrook and the Tri-State Fire Protection District for the installation of certain communication equipment owned by Tri-State on the Village-owned water tower located at 7760 Quincy Street, Willowbrook, Illinois, all as detailed in the Agreement, is hereby approved and the Mayor of the Village of Willowbrook is hereby directed and authorized to execute said Agreement on behalf of the Village of Willowbrook and the Village Clerk is hereby directed to attest to said signature. A copy of said Agreement is attached hereto as Exhibit "A" and made a part hereof.

This Resolution shall be in full force and effect upon its passage and approval as required by law.

PASSED and **APPROVED** this 8th day of March, 2021 by a roll call vote as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk

EXHIBIT "A"

**INTERGOVERNMENTAL AGREEMENT
BETWEEN THE VILLAGE OF WILLOWBROOK AND THE TRI-STATE FIRE
PROTECTION DISTRICT FOR THE INSTALLATION AND MAINTENANCE OF
COMMUNICATION EQUIPMENT ON THE VILLAGE-OWNED WATER TOWER
LOCATED AT 7760 QUINCY STREET, WILLOWBROOK, ILLINOIS**

INTERGOVERNMENTAL AGREEMENT

THIS INTERGOVERNMENTAL AGREEMENT (this “Agreement”) is made and entered into by and between **TRI-STATE FIRE PROTECTION DISTRICT**, an Illinois Fire Protection District, commonly referred to as “Tri-State,” with offices at 419 Plainfield Road, Darien, Illinois 60561 (the “District”) and the **VILLAGE OF WILLOWBROOK**, Illinois, an Illinois municipal corporation, (the “Village”) on _____, 2021 (the “Effective Date”). The District and the Village may, for convenience purposes only, be referred to as the “Parties” and each individually as a “Party.”

WITNESSETH

WHEREAS, Article VII, Section 10 of the Constitution of the State of Illinois, adopted in 1970, expressly permits units of local government to jointly obtain or share services and to exercise, combine or transfer their powers or functions in any manner not otherwise prohibited by law or ordinance; and

WHEREAS, the Intergovernmental Cooperation Act (5 ILCS 220/1, *et seq.*) authorizes public agencies, which include units of local government, to jointly enjoy and/or exercise powers, privileges, functions or authority with other public agencies, except where specifically and expressly prohibited by law; and

WHEREAS, the Intergovernmental Cooperation Act authorizes public agencies to enter into intergovernmental agreements with other public agencies; and

WHEREAS, the District and the Village are both public agencies under the laws of the State of Illinois; and

WHEREAS, the District seeks to install certain communications equipment described in Exhibit A attached hereto (the “Equipment”) on the Village-owned real property (the “Property”) and water tower (“Water Tower”) located at 7760 Quincy Street in Willowbrook, Illinois; and

WHEREAS, the installation of the Equipment at the Property and upon the Water Tower is necessary for the District to provide operations-level communications for emergency responses to ensure the safety of members of the public; and

WHEREAS, in order to ensure the communications system meets the needs of the Parties and allow for the continued provision of emergency services to members of the public, the Parties have determined that the Equipment should be installed upon the Water Tower and the Property as described herein; and

NOW, THEREFORE, in consideration of the foregoing recitals, the mutual promises and covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. **RECITALS:** The above stated recitals set forth above are full, true and correct and are hereby incorporated into this Agreement as if fully restated herein.

2. **GRANT OF LICENSE; TERM:**

(A) Water Tower License. The Village hereby grants a license (the “Water Tower License”) to the District to enter onto the Property and to install and maintain the Equipment on the Water Tower and the Property, in the manner and to the extent depicted on Exhibit A hereto, subject to the terms and conditions herein.

(B) License Term. The term of the Water Tower License shall be five (5) years from the Effective Date, unless earlier terminated pursuant to this Agreement. The Water Tower License, and this Agreement, shall automatically renew for additional one (1) year terms, unless either Party issues a notice of non-renewal to the other Party within thirty (30) days of the renewal date.

(C) This Agreement may be terminated at any time upon thirty (30) days' written notice from either party.

3. **PLANS, PERMITS & APPROVALS:** The District shall submit plans and specifications for the installation of the Equipment to the Village for permitting and approval in the manner provided by the Village Code of Ordinances prior to installation of any Equipment at the Property or on the Water Tower.

4. **INSTALLATION:** Upon the Village’s approval of the plans and specifications and the issuance of all other permits and approvals required for the installation of the Updated Equipment, the District shall, at its cost, cause the Equipment to be installed by its agent, contractor or subcontractor, as applicable. No access to the Water Tower shall be made by the District or its agents, contractors or subcontractors unless accompanied by a representative of the Village.

5. **INTERFERENCE:** The District shall ensure that the operation of the Equipment and its use of the Water Tower will not interfere with existing radio frequency users on the Water Tower or other Village properties.

6. **MAINTENANCE:**

(A) The District shall maintain the Equipment in good working order, condition and repair. The cost of maintenance of the Equipment shall be borne by the District.

(B) The Village shall maintain the right to perform maintenance on the Water Tower, both structural and painting, whenever determined to be necessary by the Village. During the period in which maintenance is being done by the Village or its contractors, the District shall, at its sole expense, remove or protect the Equipment as may be necessary in the sole discretion of the Village. If the Village determines that the

Equipment must be temporarily removed from the Water Tower due to ongoing maintenance, the District shall, at its sole expense, remove and reinstall the Equipment upon completion of the maintenance work on the Water Tower. The Village shall provide the District with at least thirty (30) days' prior written notice of any planned maintenance on the Water Tower which would require the District to protect or remove the Equipment.

7. INSURANCE AND INDEMNIFICATION:

(A) The District shall, at its expense, maintain self-insurance to keep the Equipment fully insured for fire, windstorm and other casualties and shall maintain workman's compensation insurance equal to or greater than the Illinois statutory amount for employee claims and employer's liability coverage for each occurrence, accident or illness. Any such coverage provided by the District shall name the Village as additionally covered on the policy.

(B) The District shall, at its expense, indemnify and hold harmless the Village and all of its officers, boards, employees, agents, and attorneys from any and all losses, damages, claims, and causes of action arising from the installation, operation, and maintenance of the Equipment by the District or on the District's behalf. However, the District shall not be liable for damages resulting from negligence or misconduct on the part of the Village, its employees, agents, contractors, or subcontractors.

8. DEFAULT; TERMINATION:

(A) If either Party fails to cure any breach of this Agreement within thirty (30) calendar days after written notice thereof, the non-breaching Party may, in its sole and absolute discretion, choose to pursue any remedy or legal action available to said Party at law or equity including, but not limited to, bringing a lawsuit against the breaching Party. The breaching Party shall reimburse the non-breaching Party for all costs incurred by the non-breaching Party in connection with a breach of this Agreement, including reasonable attorneys' fees.

(B) This Agreement shall continue until terminated by either Party upon providing thirty (30) days' prior written notice to the other Party. Upon termination of this Agreement, the District shall, at its expense, remove the Updated Equipment within thirty (30) days of the date of termination. In the event the District fails to do so, the Village may thereupon remove or cause the removal of the Updated Equipment. Any costs incurred by the Village in removing the equipment shall be paid by the District upon thirty (30) days' written request.

9. OWNERSHIP OF EQUIPMENT: The Equipment installed on the Water Tower and the Property shall at all times remain the property of the District. Upon the termination of this Agreement, the Village shall allow the District to remove or cause the removal of the Equipment from both the Water Tower and the Property within thirty (30) days of such termination.

10. **NOTICES:** Any notice, request, demand, or other communication provided for by this Agreement shall be in writing and shall be deemed to have been duly received upon: (a) actual receipt if personally delivered and the sender received written confirmation of personal delivery; (b) receipt as indicated by the written or electronic verification of delivery when delivered by overnight courier; (c) receipt as indicated by the electronic transmission confirmation when sent via telecopy or facsimile transmission; (d) three (3) calendar days after the sender posts notice with the U.S. Post Office when sent by certified or registered mail, return receipt requested; or (e) when delivery is refused. Notice shall be sent to the addresses set forth below, or to such other address as either Party may specify in writing.

If to the District:
Tri-State Fire Protection District
4949 West Cermak Road
Cicero, Illinois 60804
Attn: Don Schultz

If to the Village
Village Hall
835 Midway Drive
Willowbrook, IL 60527
Attn: Village Administrator

With a Copy to:

With a Copy to:
Thomas M. Bastian
Storino, Ramello & Durkin
9501 W. Devon Avenue, Suite 800
Rosemont, Illinois, 60018

11. **SEVERABILITY:** The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any one or more of the provisions hereof shall not affect the validity and enforceability of the other provisions hereof. Provided, however, that if permitted by applicable law, any invalid, illegal, or unenforceable provision may be considered in determining the intent of the Parties with respect to the provisions of this Agreement.

12. **ENTIRE AGREEMENT:** This Agreement contains the entire agreement and understanding by and between the Parties. No representations, promises, agreements, or understandings, written or oral, not herein contained shall be of any force or effect. No change or modification hereof shall be valid or binding unless the same is in writing and signed by authorized representatives of each Party.

13. **MODIFICATION & WAIVER:** No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing and signed by each Party or an authorized representative thereof. No waiver by either Party regarding any breach of a condition or provision of this Agreement shall be deemed a waiver of similar or dissimilar provisions or conditions of this Agreement. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either Party that are not expressly set forth in this Agreement.

14. **HEADINGS:** The headings used herein form no substantive part of this Agreement, are for the convenience of the Parties only, and shall not be used to define, enlarge or limit any term of this Agreement.

15. **CONSTRUCTION AND GOVERNING LAW:** Construction and interpretation of this Agreement shall at all times and in all respects be governed by the laws of the State of Illinois, without regard to its conflicts of laws principles. All suits, actions, claims, and causes of action relating to the construction, validity, performance, and enforcement of this Agreement shall be brought in the state court of DuPage County. The Parties acknowledge that they have had an opportunity to review and revise this Agreement and have it reviewed by legal counsel, if desired; and, therefore, the normal rules of construction, to the extent that any ambiguities are to be resolved against the drafting Party, shall not be employed in the interpretation of this Agreement. Neither Party, by entering into this Agreement, waives any immunity provided by local, state or federal law including, but not limited to, the immunities provided by the Local Governmental and Governmental Employees Tort Immunity Act (745 ILCS 10/1-101, *et seq.*).

16. **RIGHT TO COUNSEL:** The Parties acknowledge that they were informed that they have the right to consult with an attorney before signing this Agreement and this paragraph shall constitute written notice of the right to be advised by legal counsel. Additionally, the Parties acknowledge that they had an opportunity to and did negotiate over the terms of this Agreement. The Parties acknowledge that they have been given a reasonable amount of time to consider and sign this Agreement and agree that this consideration period has been reasonable and adequate.

17. **COUNTERPARTS & FACSIMILE:** This Agreement may be executed in counterpart originals, each of which shall be deemed to be an original with the same effect as if the signatures thereto were on the same instrument. A signature affixed to this Agreement and transmitted by facsimile shall have the same effect as an original signature.

18. **LEGISLATION:** The Board of Trustees of the District and Board of Trustees of the Village shall enact all necessary ordinances or resolutions to effectuate the terms of this Agreement. All provisions of this Agreement shall be carried out and discharged in full compliance with all applicable local, state and federal laws.

THE PARTIES TO THIS AGREEMENT HAVE READ THE FOREGOING AGREEMENT IN ITS ENTIRETY AND FULLY UNDERSTAND EACH AND EVERY PROVISION CONTAINED HEREIN.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the later date written below.

Executed:

Authorized Representative of the Tri-State Fire Protection
District

Date

ATTEST:

District Clerk

(SEAL)

Authorized Representative of the Village of Willowbrook, Illinois

Date

ATTEST:

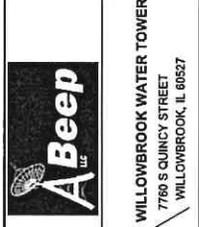
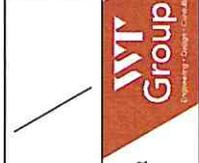
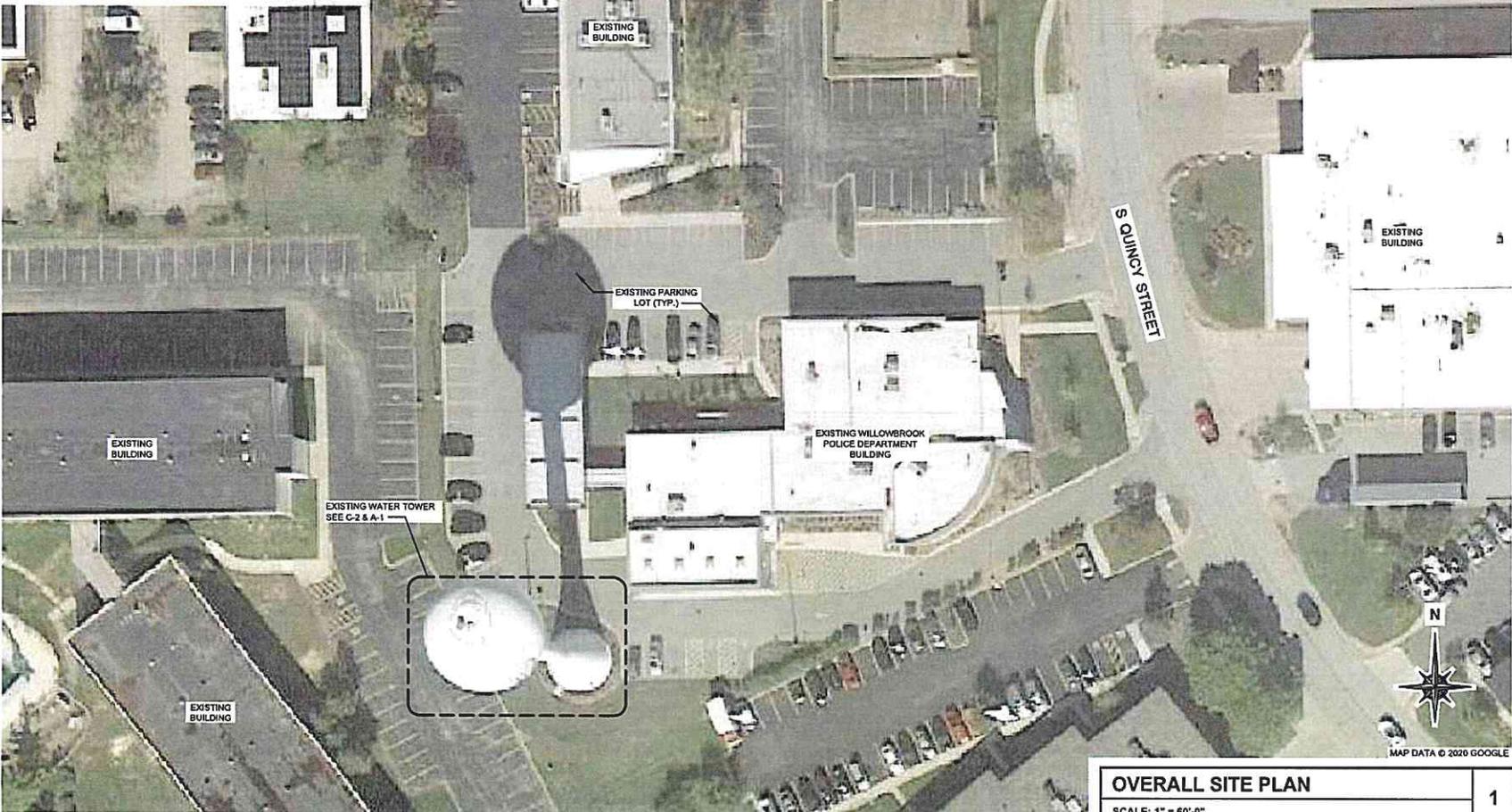
Village Clerk

(SEAL)

EXHIBIT B
Site Plan and Equipment Description

GENERAL SITE NOTES:

1. CONTRACTOR TO HIRE PUBLIC (811) AND PRIVATE LOCATING SERVICE IN ORDER TO LOCATE AND PROTECT ALL SURFACE UTILITIES. DO NOT SCALE OFF THESE PLANS FOR ANY BELOW GRADE UTILITIES.
2. CONTRACTOR SHALL VERIFY ALL EXISTING BURIED AND OVERHEAD UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL REPAIR ALL DAMAGED UTILITIES AT HIS OWN COST AND COORDINATE ANY REPAIRS WITH RESPECTIVE UTILITY COMPANY.
3. CONTRACTOR TO VERIFY ALL HEIGHTS AND AZIMUTHS IN FIELD PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ABEEP AND ENGINEERING FIRM OF ANY DISCREPANCIES BEFORE PROCEEDING.
4. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION.



EXPIRES: 11/30/21 SIGNED: 07/22/20

REVISIONS

REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/30/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CD	06/18/20	ATK
D	FINAL	07/22/20	TRK

MAP DATA © 2020 GOOGLE

MAP DATA © 2020 GOOGLE

OVERALL SITE PLAN

SCALE: 1" = 60'-0"

1

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 PLUMBING \ ELECTRICAL \ LAND SURVEYING
 ACCESSIBILITY CONSULTING \ STRUCTURAL

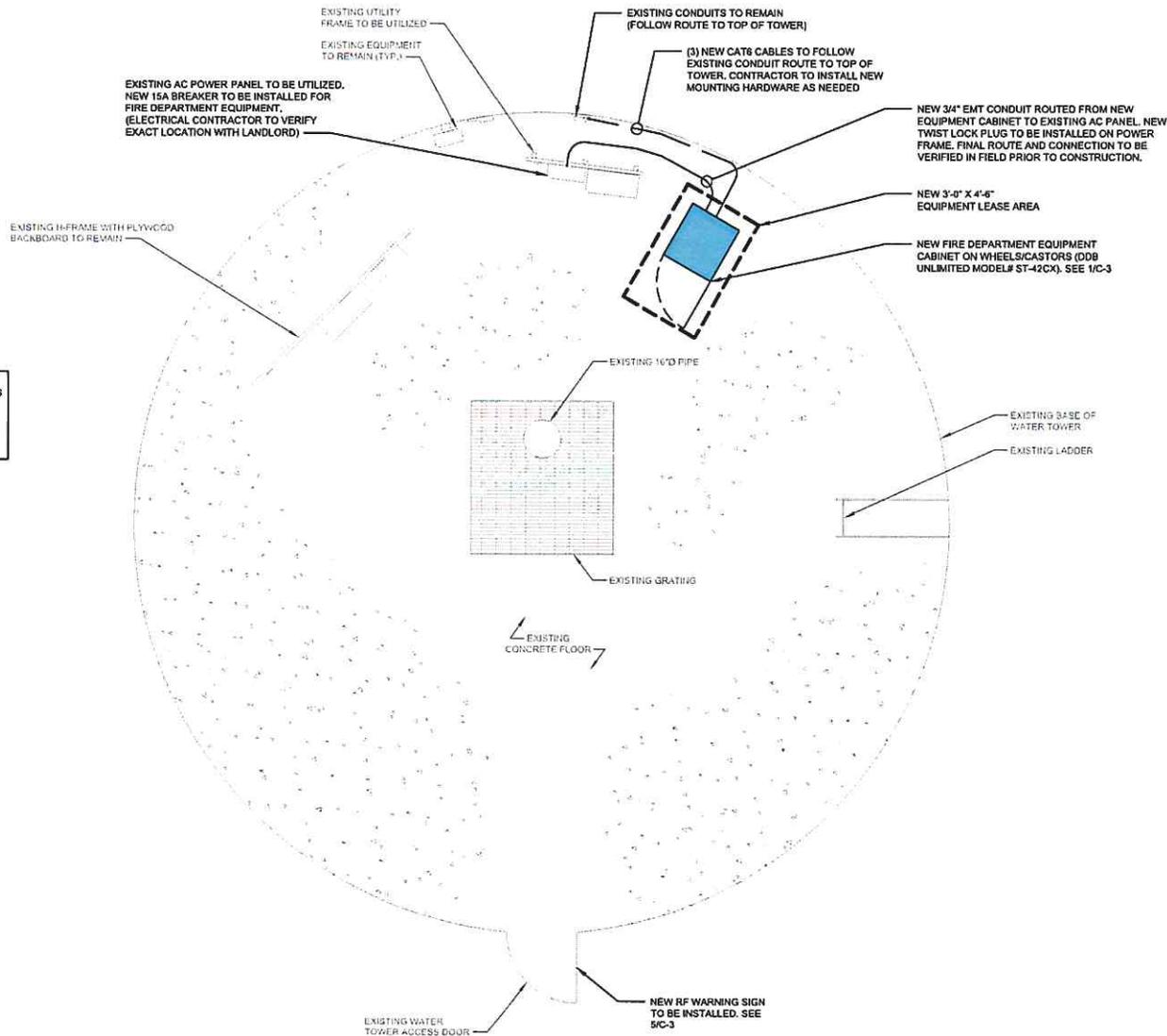
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 DRAWN: TRK
 JOB: 20060201

C-1

OVERALL SITE PLAN

LEGEND

- EXISTING EQUIPMENT
- NEW EQUIPMENT
- REMOVED EQUIPMENT



NOTE:
CONTRACTOR TO ENSURE THAT NO CONFLICTS OCCUR IN THE FIELD WITH THE LOCATION OF THE PROPOSED FIRE DEPARTMENT EQUIPMENT. ANY CONFLICTS SHOULD BE REPORTED TO THE FIRE DEPARTMENT CONSTRUCTION MANAGER.



EQUIPMENT PLAN

SCALE: 1/4" = 1'-0"

1



WILLOWBROOK WATER TOWER
7760 S QUINCY STREET
WILLOWBROOK, IL 60527



WT Group
Engineering • Design • Construction



WT GROUP
Engineering and Construction, Site and Process,
200 Professional Services Building, L 40122
1000 West 15th Street, Suite 100
Chicago, IL 60604
Tel: (773) 233-1111
Fax: (773) 233-1111
www.wtgroup.com



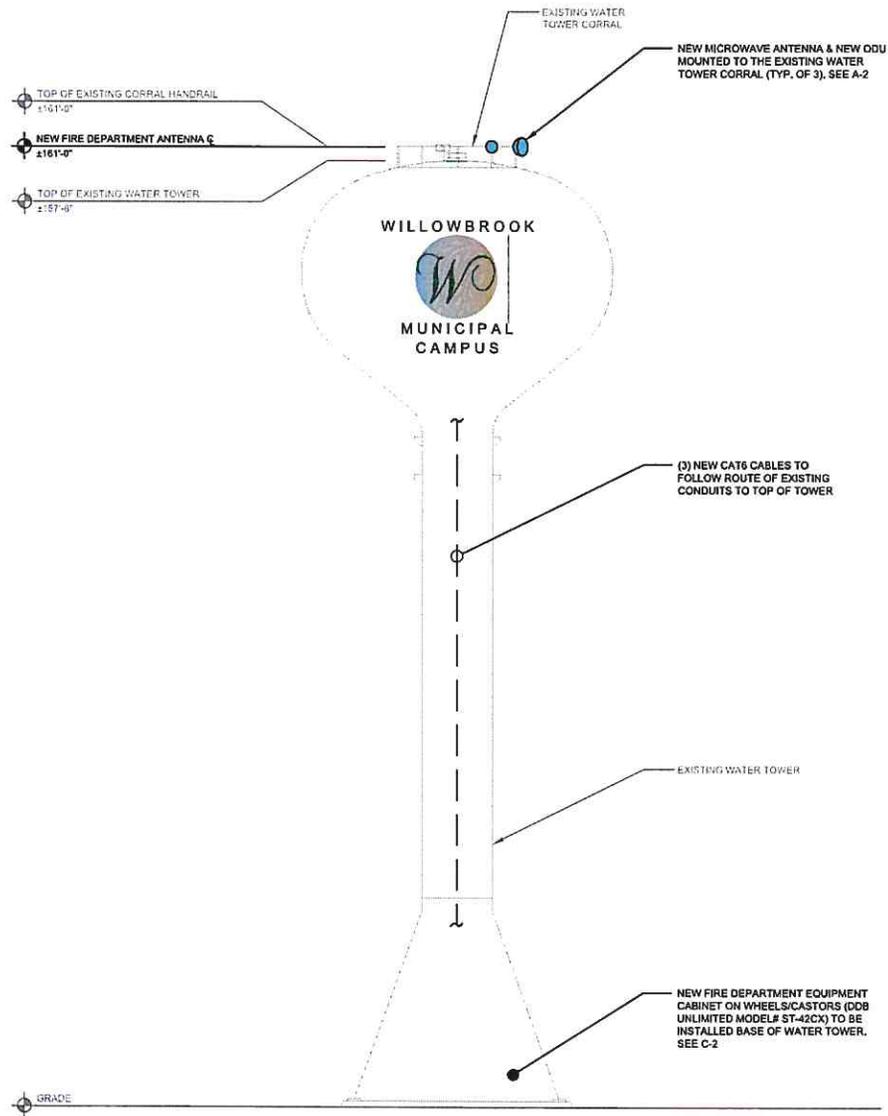
EXPIRES: 11/30/21 SIGNED: 07/22/20

REVISIONS			
REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/20/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CD	06/16/20	ATR
D	FINAL	07/22/20	TRK

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ACCESSIBILITY CONSULTING \ STRUCTURAL

CHECK: JKR
DRAWN: TRK
JOB: 2000826T

C-2
EQUIPMENT PLAN



NOTE:
A STRUCTURAL EVALUATION OF THE WATER TANK CORRAL FOR THE NEW ANTENNA LOADING HAS BEEN COMPLETED BY WT GROUP STRUCTURAL ENGINEERING, LLC ON JULY 22, 2020. THE LOCATION AND MOUNTING OF THE ANTENNAS SHOWN IN THE STRUCTURAL ANALYSIS SHALL SUPERSEDE THESE DRAWINGS.

NOTE:
W-T'S SCOPE OF WORK DOES NOT INCLUDE A STRUCTURAL EVALUATION OF THIS TOWER OR STRUCTURE. NEW ANTENNAS AND EQUIPMENT SHOWN ON THIS PLAN HAVE NOT BEEN EVALUATED TO VERIFY THE TOWER OR STRUCTURE HAS THE CAPACITY TO ADEQUATELY SUPPORT THESE ANTENNAS. PRIOR TO ANY ANTENNA OR EQUIPMENT INSTALLATION, A STRUCTURAL EVALUATION OF THE TOWER OR STRUCTURE, INCLUDING ALL ANTENNA MOUNTING SYSTEMS & HARDWARE SHALL BE PERFORMED.

TOWER ELEVATION
SCALE: 1'-0" = 20'-0"
1



WT GROUP
Engineering and Construction, Inc. and Division,
2020 Parkway Avenue, Hoffman Estates, IL 60139
Tel: 815.383.8333 Fax: 815.383.8444
www.wtgroup.com



WT GROUP
Engineering and Construction, Inc.



A Beep
LLC

WILLOWBROOK WATER TOWER
7760 S QUINCY STREET
WILLOWBROOK, IL 60527



EXPIRES: 11/30/21 SIGNED: 07/22/20

REVISIONS			
REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/30/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CD	06/18/20	ATK
D	FINAL	07/22/20	TRK

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PLUMBING \ ELECTRICAL \ LAND SURVEYING
ACCESSIBILITY CONSULTING \ STRUCTURAL

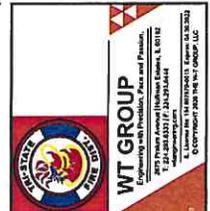
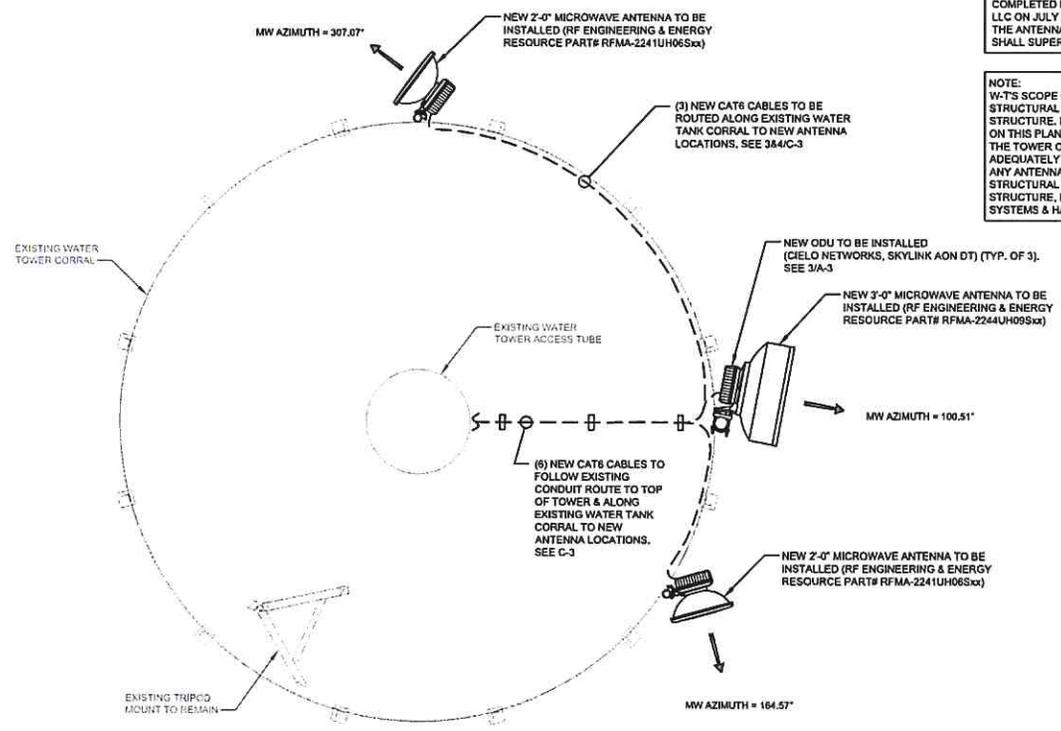
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DRAWN: TRK
JOB: 20008267

A-1
TOWER ELEVATION

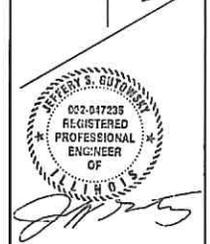
WILLOWBROOK WATER TOWER			
ANTENNA MODEL #	RFMA-2244UH095xx	RFMA-2241UH065xx	RFMA-2241UH065xx
DIAMETER/WEIGHT	40.2" / 66 LBS	25.9" / 24 LBS	25.9" / 24 LBS
FREQUENCY RANGE	21.2-23.6 GHZ	21.2-23.8 GHZ	21.2-23.8 GHZ
RAD CENTER	161'-0"	161'-0"	161'-0"
AZIMUTH	100.51°	164.57°	307.07°
VERTICAL ANGLE	0.40° DOWNTILT	0.80° DOWNTILT	0.94° DOWNTILT
RECEIVE SITE	TRIS 4 (TOWER)	TRIS 3	TRI STATE 2
PATH DISTANCE	3.00 MILES	1.38 MILES	0.95 MILES
ODU MODEL #	(1) SKYLINK AON DT	(1) SKYLINK AON DT	(1) SKYLINK AON DT
CABLE RUNS/TYP	(1) RUN OF CAT6	(1) RUN OF CAT6	(1) RUN OF CAT6
CABLE LENGTH	200'-0"	200'-0"	200'-0"

NOTE:
A STRUCTURAL EVALUATION OF THE WATER TANK CORRAL FOR THE NEW ANTENNA LOADING HAS BEEN COMPLETED BY WT GROUP STRUCTURAL ENGINEERING, LLC ON JULY 22, 2020. THE LOCATION AND MOUNTING OF THE ANTENNAS SHOWN IN THE STRUCTURAL ANALYSIS SHALL SUPERSEDE THESE DRAWINGS.

NOTE:
W-T'S SCOPE OF WORK DOES NOT INCLUDE A STRUCTURAL EVALUATION OF THIS TOWER OR STRUCTURE. NEW ANTENNAS AND EQUIPMENT SHOWN ON THIS PLAN HAVE NOT BEEN EVALUATED TO VERIFY THE TOWER OR STRUCTURE HAS THE CAPACITY TO ADEQUATELY SUPPORT THESE ANTENNAS. PRIOR TO ANY ANTENNA OR EQUIPMENT INSTALLATION, A STRUCTURAL EVALUATION OF THE TOWER OR STRUCTURE, INCLUDING ALL ANTENNA MOUNTING SYSTEMS & HARDWARE SHALL BE PERFORMED.



WT GROUP
WILLLOWBROOK WATER TOWER
STRUCTURAL ENGINEERING
7760 S QUINCY STREET
WILLOWBROOK, IL 60527



REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/20/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CD	06/19/20	ATK
D	FINAL	07/22/20	TRK

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ACCESSIBILITY CONSULTING \ STRUCTURAL

CHECK: JKR
DRAWN: TRK
JOB: 20008267

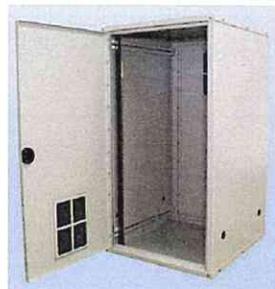
A-2
ANTENNA PLAN

ANTENNA PLAN
SCALE: NONE



DDB
UNLIMITED

ST-42DX

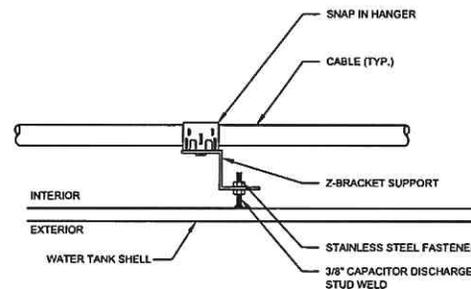


- 43"H X 24"W X 26"D
- ADJUSTABLE 19" RACKING
- 24 RACKING UNITS
- FRONT AND REAR DOORS
- FOAM FILTERED VENTS
- POWDER BAKED-ON CREAM PAINT
- LOCKABLE
- SHIPPING WEIGHT: 95 lbs.

EQUIPMENT CABINET DETAIL

SCALE: NONE

1



TANK MOUNTED CABLE DETAIL

SCALE: NONE

2

**COMMSCOPE SNAPSTAK PLUS
ADJUSTABLE HANGER,
14.1mm-16mm CABLE**

TESSCO SKU: 207219
QTY/UOM: 10 PACK

UPC: PSSH-1416
MFG PART #: SSH-1416

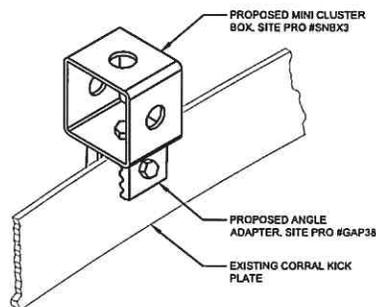


SNAP-IN HANGER DETAIL

SCALE: NONE

3

NOTE:
INSTALL CABLES ON MINI
CLUSTER BOX W/ SNAP IN
HANGERS. SEE 3/C-3.



CORRAL CABLE ROUTING DETAIL

SCALE: NONE

4



RF WARNING SIGN

SCALE: NONE

5



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WILLOWBROOK WATER TOWER
7760 S QUINCY STREET
WILLOWBROOK, IL 60527



EXPIRES: 11/30/21 SIGNED: 07/22/20

REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/30/20	TRK
B	ADDITIONAL DASH	05/06/20	TRK
C	PERMIT CD	06/16/20	ATX
D	FINAL	07/22/20	TRK

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ACCESSIBILITY CONSULTING \ STRUCTURAL

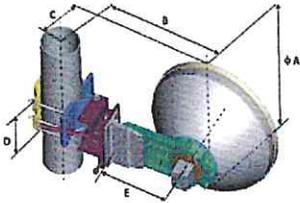
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JOB: 20060281

C-3

EQUIPMENT DETAILS



RFMA-2241UH06Sxx



DIMENSIONS (IN.)	
A	25.9
B	16.2
C	10.4
D	4.5
E	9.1

Mechanical Specifications	
Diameter (in/ft)	0.6m/2ft
Antenna Color	Polystyrene Cool Gray 1C
Wave-guide Size	153 IEC-RJ20
Radiator Options	Molded
Azimuth Adjustment	Course : 360° Fine : ±15°
Elevation Adjustment	Course : ±25° Fine : ±15°
Diameter of Mounting Pole (mm/in)	Φ51-Φ114mm/2-4.5in
Wind Velocity Survival Rating (m/s)	67
Wind Velocity Operational (m/s)	30
Ice-load (mm/in)	25.4mm/1in
Operational Temperature (C) / (F)	-45 ~ +60 C / -49 ~ 140 F
Axial Force (N)	1218
Side Force (N)	601
Twisting Moment (N-m)	505
Packaging	Carton
L x W x H (mm/in)	750x750x440mm/29.5x29.5x17in
Gross Weight/Net Weight (kg/lb)	16kg/35lb/24lb

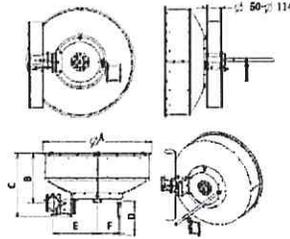
ANTENNA DETAIL

SCALE: NONE

1



RFMA-2244UH09Sxx



DIMENSIONS (IN.)	
A	40.2
B	18.3
C	23.2
D	39.4
E	16.3
F	8.3

Mechanical Specifications	
Diameter (in/ft)	0.9m/3ft
Antenna Color	Cool Gray
Wave-guide Size	153 IEC-RJ20
Radiator Options	Molded
Azimuth Adjustment	Course : 360° Fine : ±10°
Elevation Adjustment	Course : ±10° Fine : ±10°
Diameter of Mounting Pole (mm/in)	Φ51-Φ114mm/2-4.5in
Wind Velocity Survival Rating (m/s)	67
Wind Velocity Operational (m/s)	30
Ice-load (mm/in)	25.4mm/1in
Operational Temperature (C) / (F)	-45 ~ +60 C / -49 ~ 140 F
Axial Force (N)	2605
Side Force (N)	1244
Twisting Moment (N-m)	715
Packaging	Wooden
L x W x H (mm/in)	1100x1100x450mm/43.3x43.3x18in
Gross Weight/Net Weight (kg/lb)	60kg/132kg/66lb

ANTENNA DETAIL

SCALE: NONE

2

cielo[®] NETWORKS SkyLink AON DT



Mechanical and Environmental	
Input Power Requirements	-48 VDC direct DC or PoE (-36 VDC to -40 VDC range)
Weight	2.2kg (20.3lbs) including internal OMT or coupler (2+0 configuration)
Size	23.0cm x 23.2cm x 12.0cm (9.1x9.1x4.7 in) not including antenna nose or handle
Operating Temperature	-33 °C to +55 °C (27 °F to +131 °F) per ETS 300 619-2,4 Class 4M5
Humidity	5% - 100%
Weather	IP67 / IP68 Weather
Safety	IEC 60950-1, -2
Regulatory	US FCC Part 101, FCC Part 15B, ETSI EN 302 217

ODU DETAIL

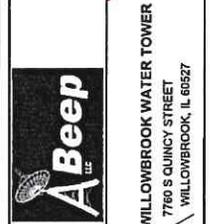
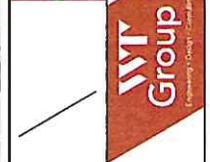
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3

NOT USED

SCALE: NONE

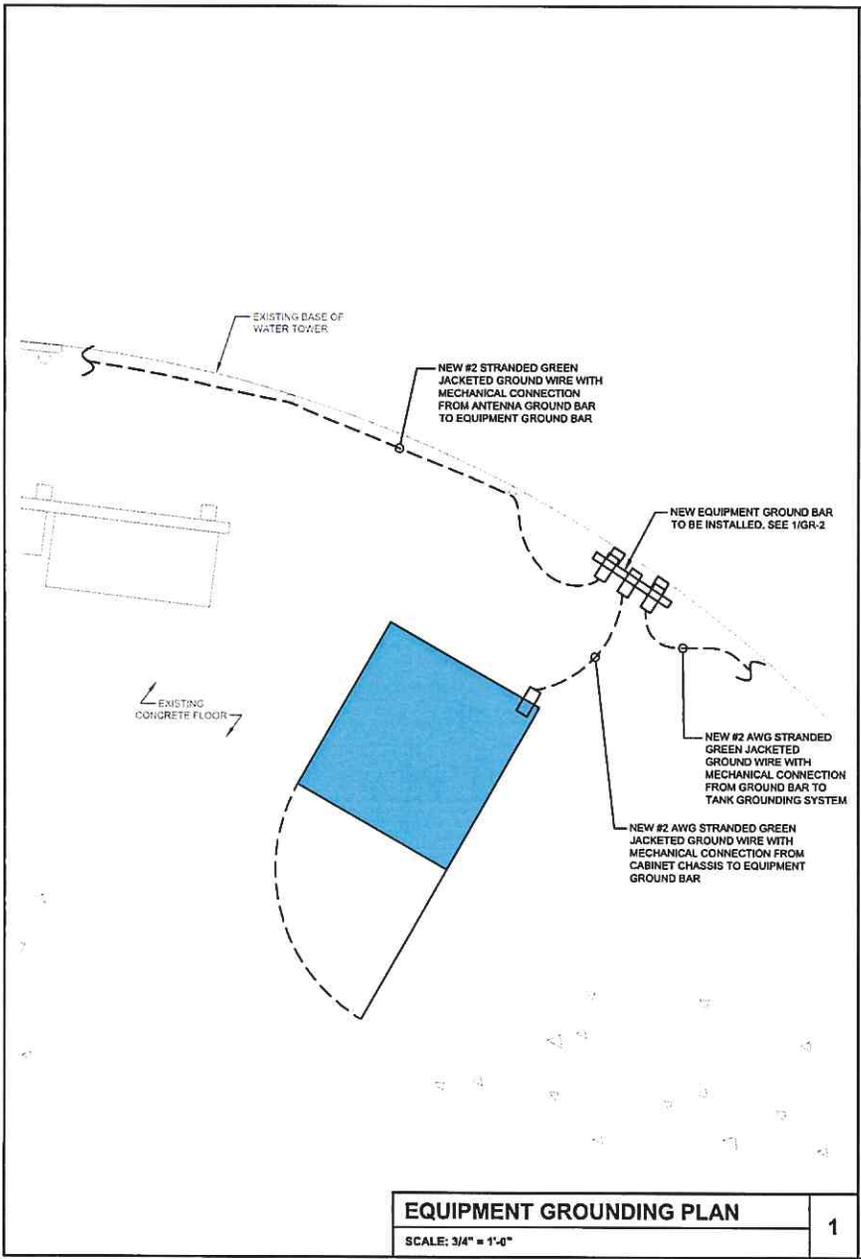
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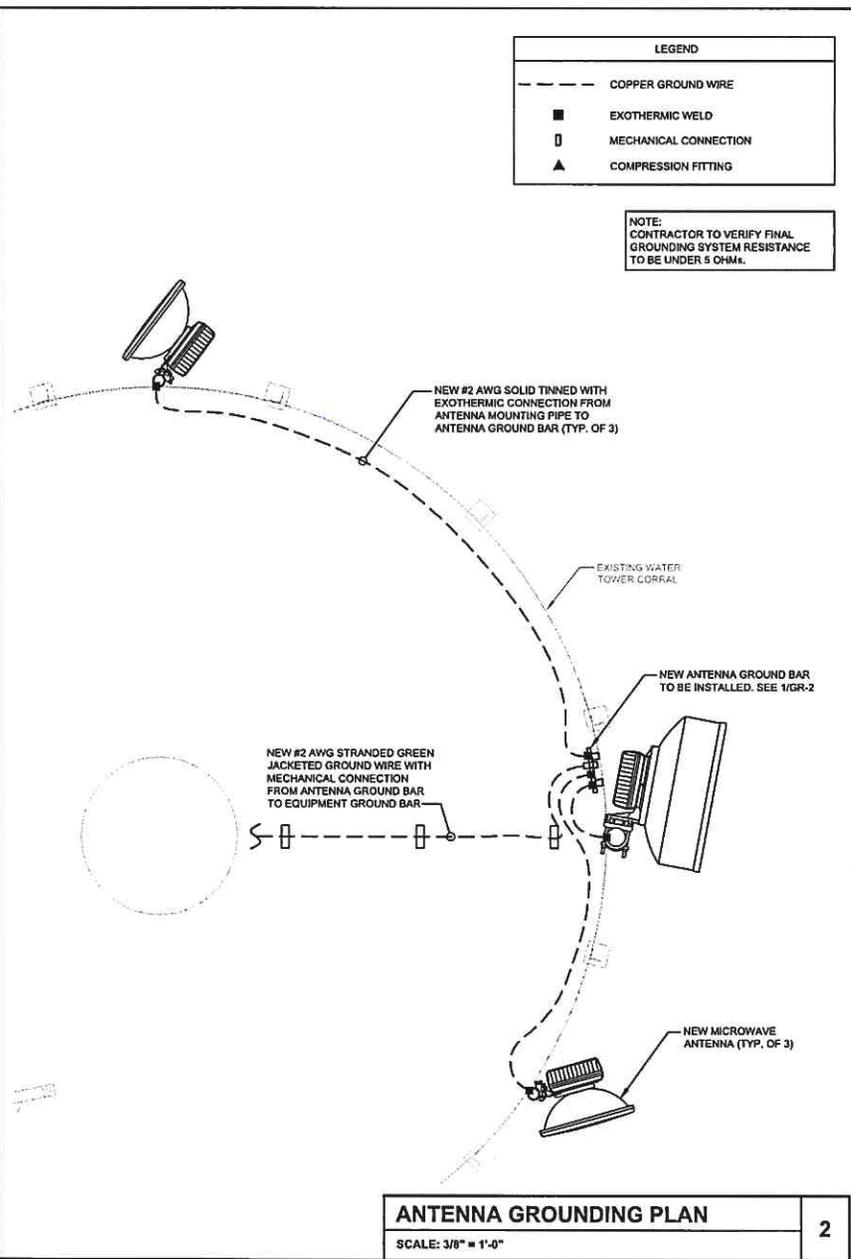
REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/20/20	TRK
B	ADDITIONAL DISH	05/09/20	TRK
C	PERMIT CD	06/16/20	ATK
D	FINAL	07/22/20	TRK



A-3
ANTENNA DETAILS



EQUIPMENT GROUNDING PLAN
SCALE: 3/4" = 1'-0"
1



ANTENNA GROUNDING PLAN
SCALE: 3/8" = 1'-0"
2

LEGEND

---	COPPER GROUND WIRE
■	EXOTHERMIC WELD
□	MECHANICAL CONNECTION
▲	COMPRESSION FITTING

NOTE: CONTRACTOR TO VERIFY FINAL GROUNDING SYSTEM RESISTANCE TO BE UNDER 5 OHMS.



WILLOWBROOK WATER TOWER
7760 S QUINCY STREET
WILLOWBROOK, IL 60527



WT GROUP
Lighting • Design • Consulting



ROBERT S. GUTOWSKI
REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS
NO. 032-647235

EXPIRES: 11/30/21 SIGNED: 07/22/20

REVISIONS		
REV.	ISSUED FOR	DATE BY
A	ZONING DRAWING	04/20/20 TRK
B	ADDITIONAL DISH	05/06/20 TRK
C	PERMIT CD	06/16/20 ATK
D	FINAL	07/22/20 TRK

AGENCY: DESIGN & PROGRAM MANAGEMENT
 CLIENT: ELECTRICAL, PLUMBING, LAND SURVEYING
 ACCESSIBILITY CONSULTING, STRUCTURAL

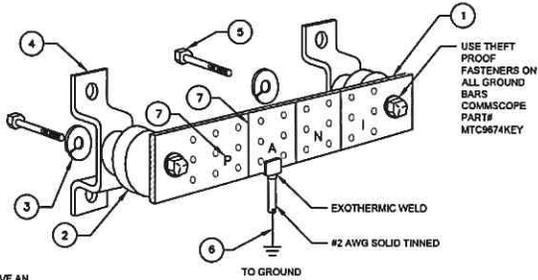
CHECK: JKR
 DRAWN: TRK
 JOB: 20008267



GR-1
GROUNDING PLANS

KEY NOTES:

1. 1/4" THK ELECTRICAL TINNED GROUND BAR HARGER OR APPROVED EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2. INSULATORS (UNLESS NOTED OTHERWISE)
3. 3/8" STAINLESS STEEL LOCKWASHERS
4. WALL MOUNTING BRACKET
5. 3/8" STAINLESS STEEL BMLF BOLTS
6. EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD
7. CONTRACTOR SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "N", "T") WITH 1" HIGH LETTERS



EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION

SECTION "P" - SURGE PRODUCERS

- COLLECTOR GROUND BAR
- GENERATOR FRAMEWORK (IF AVAILABLE)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND
- FIBER GROUND BAR
- EQUIPMENT ROOM COLLECTOR GROUND BAR
- HVAC
- RECTIFIER FRAMES

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING)
- METALLIC COLD WATER PIPE (IF AVAILABLE)
- BUILDING STEEL (IF AVAILABLE)
- AC POWER

SECTION "N" - NON-ISOLATED GROUND ZONE EQUIPMENT

- MISCELLANEOUS NON-ISOLATED GROUND ZONE EQUIPMENT
- CABLE TRAY SYSTEM
- EQUIPMENT FRAMES
- BATTERY RACKS
- DC POWER

SECTION "T" - ISOLATED GROUND ZONE

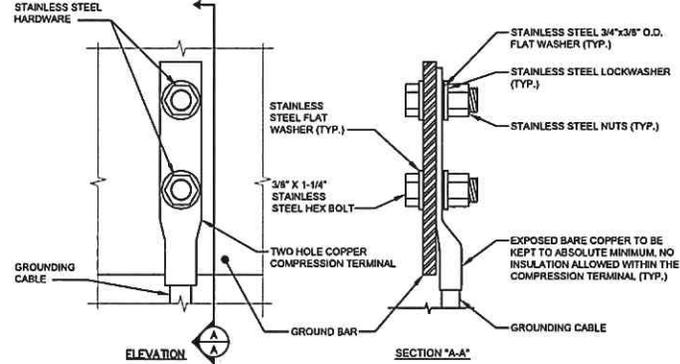
- ISOLATED EQUIPMENT FRAMES
- ISOLATED GROUND BAR - IGB

NOTES:
 -EXTERIOR GROUND BARS TO BE TIN PLATED
 -HARDWARE SHALL BE STAINLESS STEEL
 -CONTRACTOR SHALL GROUP INCOMING WIRES
 -CONTRACTOR TO APPLY "KOPR-SHIELD" TO ALL CONNECTIONS

GROUND BAR DETAIL

SCALE: NONE

1



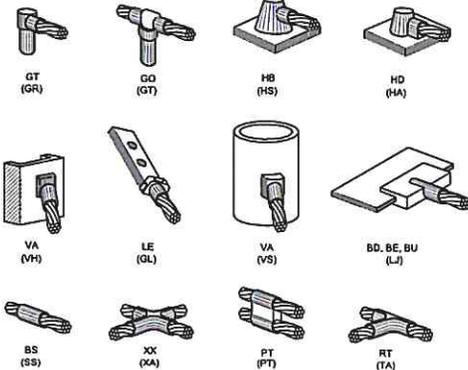
1. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS
2. NO CRIMPING OF SOLID #2. USE EXOTHERMIC WELD ONLY

GROUND BAR CONNECTION DETAIL

SCALE: NONE

2

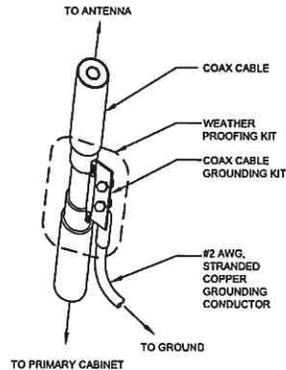
NOTE:
 THE FOLLOWING SYMBOLS SHOWN ARE HARGER ULTRAWELD EXOTHERMIC CONNECTIONS WITH PART NUMBERS BELOW. THESE CONNECTIONS MAY BE CROSS-REFERENCED WITH CADWELD CONNECTIONS WHICH ARE SHOWN IN PARENTHESES.



EXOTHERMIC WELD TYPES

SCALE: NONE

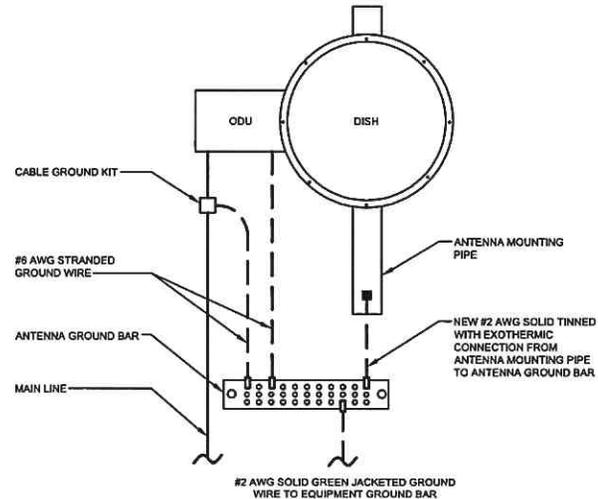
3



COAX CABLE GROUNDING KIT

SCALE: NONE

4



ANTENNA GROUNDING DETAIL

SCALE: NONE

5

WT GROUP
 Engineering with Precision, Passion and Perseverance.
 4077 Truman Avenue (Hickman Corner), L. 68112
 Norfolk, NE 68701
 Phone: (402) 471-1111
 Fax: (402) 471-1111
 Email: info@wtgroup.com

WT Group
 Engineering - Consulting - Construction

Abeep
 WILLOWBROOK WATER TOWER
 7760 S QUINCY STREET
 WILLOWBROOK, IL 60527

STEFANY S. AUTOMANN
 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

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AGRICULTURE, DESIGN & PROGRAM MANAGEMENT
 CIVIL, TELECOMMUNICATION, MECHANICAL
 PLUMBING, ELECTRICAL, LAND SURVEYING
 ACCESSIBILITY CONSULTING, STRUCTURAL

CHECK: JKR
 DRAWN: TRK
 JOB: 20008267

GR-2
 GROUNDING DETAILS

GENERAL STRUCTURAL NOTES

- DESIGN AND CONSTRUCTION OF WORK SHALL CONFORM TO 2018 INTERNATIONAL BUILDING CODE, AISC/ASD 15TH EDITION, ASCE 7-16, TIA/EIA-222-H STANDARDS. IN CASE OF CONFLICT BETWEEN THE CODES, STANDARDS, REGULATIONS, SPECIFICATIONS, GENERAL NOTES AND/OR MANUFACTURER'S REQUIREMENTS USE THE MOST STRINGENT PROVISION.
- IT IS THE EXPRESS INTENT OF THE PARTIES INVOLVED IN THIS PROJECT THAT THE CONTRACTOR OR SUBCONTRACTOR OR INDEPENDENT CONTRACTOR OR THEIR RESPECTIVE EMPLOYEES SHALL EXCULPATE THE ARCHITECT, THE ENGINEER, THE CONSTRUCTION MANAGER, THE OWNER, AND THEIR AGENTS, FROM ANY LIABILITY WHATSOEVER AND HOLD THEM HARMLESS AGAINST LOSS, DAMAGES, LIABILITY OR ANY EXPENSE ARISING IN ANY MATTER FROM THE WRONGFUL OR NEGLIGENT ACT, OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, OR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FAILURE TO CONFORM TO THE STATE SCAFFOLDING ACT IN CONNECTION WITH THE WORK.
- VERIFY ALL EQUIPMENT MOUNTING DIMENSIONS PER MANUFACTURER DRAWINGS.
- SUBMIT ONE SEPIA AND TWO PRINTS OF ALL STRUCTURAL SHOP DRAWINGS. MARKED UP SEPIA SHALL BE RETURNED.
- DESIGN LOADS:
DEAD LOADS USED IN DESIGN ARE AS FOLLOWS:

A. RFMA-2244UH09Sxx	= 132.0 LBS
B. RFMA-2241UH06Sxx	= 35.0 LBS
C. CIELO NETWORKS SKYLINK AON DT	= 20.3 LBS

 WIND LOADS USED IN DESIGN ARE AS FOLLOWS:

A. BASIC WIND SPEED (3 SECOND GUST)	= 107 MPH
B. BUILDING OCCUPANCY CATEGORY	= II
C. WIND EXPOSURE	= C
D. DESIGN WIND PRESSURE	= 40.0 PSF
E. WIND LOADS ARE BASED ON ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, AND ANSI/TIA-222-H STANDARD	

REPAIRS AND REPLACEMENTS NOTES

- IN THE EVENT OF DAMAGE, THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS AND REPAIRS AT NO ADDITIONAL COST TO THE CLIENT AND/OR BUILDING OWNER.
- EXISTING INTERIOR OR EXTERIOR FACADES REMOVED FOR WALL OPENINGS OR ANY OTHER REMODELING WORK SHALL BE REPLACED TO MATCH THE EXISTING CONDITIONS.
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STRUCTURAL SHEET INDEX

S-0.0	STRUCTURAL NOTES
S-1.0	CORRAL PLAN & DETAIL

STRUCTURAL STEEL NOTES

- MEET OR EXCEED THE FOLLOWING CODES & STANDARDS EXCEPT AS NOTED:
 - STRUCTURAL STEEL AISC SPECIFICATION: ALLOWABLE STRESS DESIGN, 15TH EDITION

• WIDE FLANGE	ASTM A992 - 50 KSI
• PIPES	ASTM A53
• CHANNELS, ANGLES, AND PLATES	ASTM A36
• PLATES BENT OR COLD FORMED	ASTM A283, GRADE C
• HSS PIPES	ASTM A500, GRADE C - 46 KSI
• HSS TUBES	ASTM A500, GRADE C - 50 KSI
• STRUCTURAL SHEETS, HOT ROLLED	ASTM A570
• COLD-FORMED STEEL TUBING	ASTM A500, GRADE B
• BOLTS, NUTS & WASHERS FOR FRAMING MEMBERS AND BRACINGS	ASTM A325-N
• BOLTS, NUTS & WASHERS FOR ANCHOR BOLTS AND SECONDARY CONNECTIONS	ASTM A307
 - WELDS

	ASTM E70XX (EXCEPTION IS TAKEN TO AISC CODE OF STANDARD PRACTICE PARAGRAPH)
--	---
- COATINGS:
 - ALL NEW STEEL SHALL BE HOT DIP GALVANIZED
 - FIELD TOUCH UP ALL GALVANIZED SURFACES
 - ALL NEW STEEL AND STEEL COMPONENTS SHALL BE FINISH COATED WITH TMEC PAINT TO A COLOR TO MATCH EXISTING SUPPORTING STRUCTURE AND APPLIED PER MANUFACTURERS RECOMMENDATION. FINAL COLORS SHALL BE APPROVED BY THE CITY PRIOR TO USE.

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- DO NO SCALE DRAWINGS.



EXP.: 11/30/20 SIGNED: 07/22/20

NO.	REVISION	DATE	BY
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7780 S QUINCY STREET
WILLowBROOK, IL 60527



CHECK:JSG
DRAWN:CJS
JOB 20008261

S-0.0
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- DO NO SCALE DRAWINGS.

JEFFERY S. GUTOWSKY
081-005847
STATE OF ILLINOIS

EXP: 11/30/20 SIGNED: 07/22/20

NO.	REVISION	DATE	BY
1	ISSUED FOR PERMIT	07/22/20	CS

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1111 N. LAUREL AVE.
CHICAGO, IL 60610

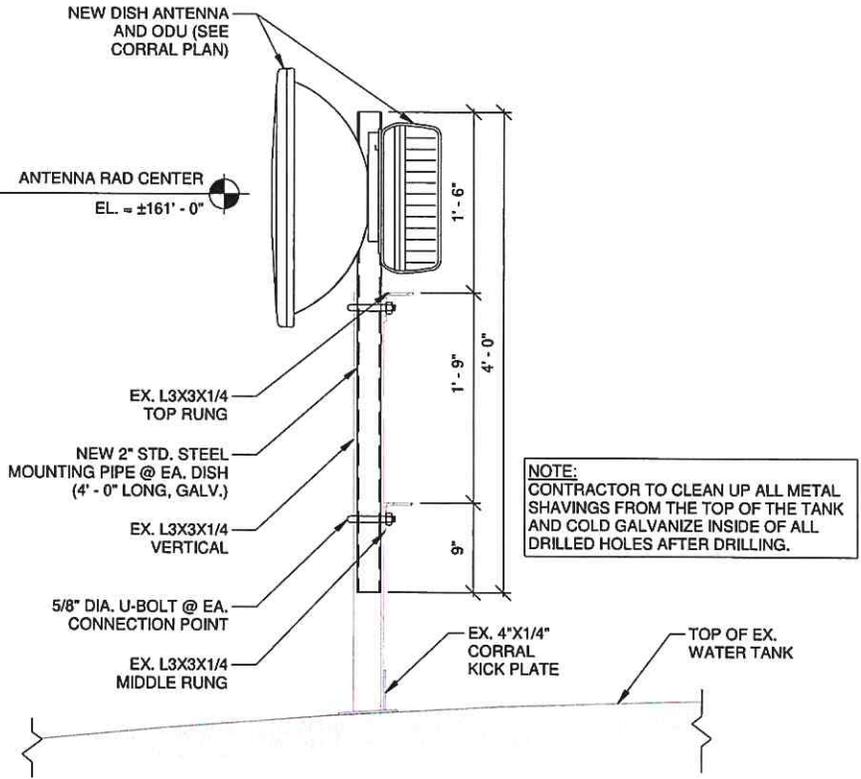
Ivy Group
Engineering & Construction
7760 S QUINCY STREET
WILLOWBROOK, IL 60527

A Beep

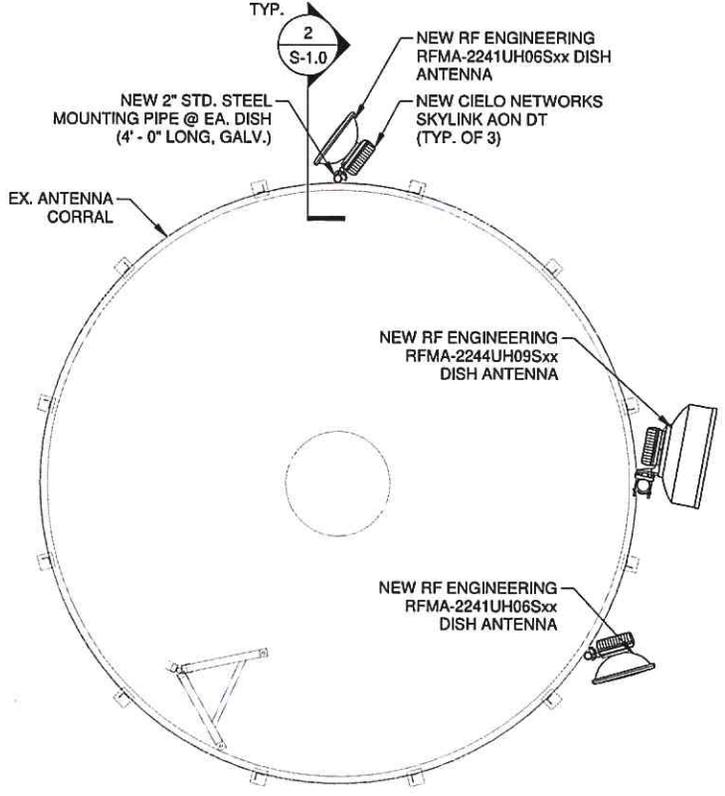
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PLUMBING \ ELECTRICAL AND SURVEYING
ACCESSIBILITY CONSULTING \ STRUCTURAL

CHECK/JSG
DRAWN/CJS
JOB:2009826T

S-0.0
STRUCTURAL NOTES



NOTE:
 CONTRACTOR TO CLEAN UP ALL METAL SHAVINGS FROM THE TOP OF THE TANK AND COLD GALVANIZE INSIDE OF ALL DRILLED HOLES AFTER DRILLING.



2 PROPOSED DISH ANTENNA CORRAL MOUNT DETAIL
 1" = 1'-0"

1 CORRAL PLAN
 1/4" = 1'-0"





WT GROUP
 Engineering and Planning, Survey and Construction
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Ivy Group
 Consulting Engineers & Architects



A Beep

WILLOWBROOK WATER TOWER
 7760 S QUINCY STREET
 WILLOWBROOK, IL 60527



REVISIONS			
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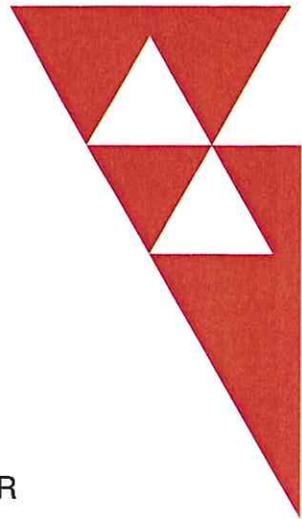
S-1.0
 CORRAL PLAN & DETAIL



Structural Engineering

2675 Pratum Avenue | Hoffman Estates, IL 60192

PH: (224) 293-6333 | www.wtengineering.com



SITE NAME: WILLOWBROOK WATER TOWER
SITE ADDRESS: 7760 S. QUINCY STREET
WILLOWBROOK, IL 60527

W-T GROUP JOB NO: 2000826T

Corral Analysis

DATE: 07/22/2020
REVISED DATE: 11/12/2020

CORRAL CAPACITY LEVEL: 38.4% PASS

The calculations included herein, as listed above, were prepared by me, or under my direct supervision, and to the best of my knowledge; comply with the requirements of all applicable codes and ordinances.



Jeff Gutowsky, P.E., S.E.
Illinois S.E. License No. 081-005847
Expires: 11-30-20

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Engineering • Design • Consulting

November 12, 2020

**The W-T Group, LLC
Communications Division
2675 Pratum Avenue
Hoffman Estates, IL 60192**

Attn: Tim Kuen

**Re: Subject: Structural Corral Analysis Letter
 Site Name: Willowbrook Water Tower
 Address: 7760 S. Quincy Street, Willowbrook, IL 60527
 W-T Structural Engineering Division Job No: 2000826T**

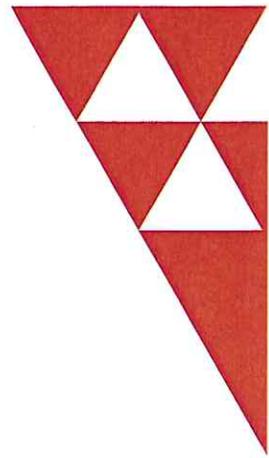
Dear Tim:

The Conclusions and recommendations made in this letter are based on the following assumptions:

- The structure(s) have been built in accordance with applicable building codes and have been properly maintained.
- The existing corral members and connection hardware are free of deficiencies and are capable of supporting the original equipment loads.
- The structure was constructed in accordance with industry standards and expected construction workmanship and that the construction followed the intent of the original design. Throughout the life of the project, no structural member was modified intentionally or not.
- Our scope is limited to verify the antenna corral for the proposed new antennas and RRUs. This letter does not accept or imply any liability for the original design of the antenna support structure design and installation. The liability remains with the original Structural Engineer of record and the installation contractor.
- It is understood that the new equipment will be installed after the existing respective equipment is removed.

Applicable Codes and References:

2018 International Building Code
ASCE 7-16 Minimum Design Loads for Buildings and Other Structures
ANSI-TIA-222-H Standard
AISC Steel Construction Manual Fifteenth Edition





Antenna Corral Structure Summary:

"The W-T Group, LLC (WTG)" has performed a structural analysis of the existing antenna corral for proposed new antennas. The proposed antennas and RRUs are included in the loading table below. New antenna/RRU additions shall be mounted as specified in the construction documents issued by "W-T Communications Division" dated 06/16/2020, and the structural drawings dated 07/22/2020. The corral information was obtained from the previous corral drawings provided by the client.

Proposed Loading:

<i>Description</i>	<i>Appurtenance</i>	<i>Qty.</i>	<i>Weight (lbs)</i>	<i>Elevation (AGL)</i>
Proposed	RF Engineering RFMA-2244UH09Sxx (40.2" Dia. x 23.2")	1	132.0	± 161'-0"
	RF Engineering RFMA-2241UH06Sxx (25.9" Dia. x 10.4")	2	35.0	
	Cielo Networks Skylink AON DT (9.42" x 9.12" x 4.94")	3	20.3	

* Coax – (3) Cat6

Overall Conclusion:

The Existing Antenna Corral Passes at 38.4% of Available Capacity.

Based on our structural analysis performed by "The W-T Group, LLC", the existing antenna corral is ***structurally adequate*** to support the proposed new and existing antenna and RRHs. Connections of the antennas to the corral and the antenna corral leg to the top of the tank have also been checked and are structurally adequate. The antenna corral is supported by an existing water tank that is out of the scope of this report, see the structural analysis by "The W-T Group, LLC.", dated 11/12/2020 for more information.

The engineering services are performed on the basis that the information used is current, complete and correct. The information may consist of, but not limited to information supplied by the client regarding the structure itself. It is the responsibility of the client to ensure that the information provided to "The W-T Group, LLC" is correct and complete. All services are performed, results obtained and recommendations made in accordance with the generally accepted engineering principles and practices.

We appreciate the opportunity to be of service on this project. Please do not hesitate to contact us with any questions or concerns.

**Regards,
The W-T Group, LLC**

**CJ Starke, E.I.T.
Project Engineer, Structural Engineering**

STRUCTURAL CALCULATIONS



THE W-T GROUP, LLC
 2675 PRATUM AVENUE
 HOFFMAN ESTATES, IL 60192
 PHONE: (224) 293-6444

Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section OVERVIEW				Sheet no./rev. 6	
Calc. by CJS	Date 07/22/2020	Chk'd by	Date	App'd by	Date

OVERVIEW

Applicable Codes and References:

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 AISC Steel Construction Manual Fifteenth Edition
 ANSI/TIA-222-H Standard
 Drawings provided by W-T Communications Division, LLC dated 06/16/2020

Load Combinations (ANSI/TIA-222-H Section 2.3.2)

- 1.2 D + 1.0 D_g + 1.6 W_o
- 0.9 D + 1.0 D_g + 1.6 W_o
- 1.2 D + 1.0 D_g + 1.0 D_i + 1.0 W_i + 1.0 T_i
- 1.2 D + 1.0 D_g + 1.0 E
- 0.9 D + 1.0 D_g + 1.0 E

Load Combinations (IBC 2018 LRFD):

- 1.4(D + F) (Eq. 16-1)
- 1.2(D + F) + 1.6(L + H) + 0.5(L_r or S or R) (Eq. 16-2)
- 1.2(D + F) + 1.6(L_r or S or R) + 1.6H + (f₁L or 0.5W) (Eq. 16-3)
- 1.2(D + F) + 1.0W + f₁L + 1.6H + 0.5(L_r or S or R) (Eq. 16-4)
- 1.2(D + F) + 1.0E + f₁L + 1.6H + f₂S (Eq. 16-5)
- 0.9D + 1.0W + 1.6H (Eq. 16-6)
- 0.9(D + F) + 1.0E + 1.6H (Eq. 16-7)

Load Combinations (IBC 2018 ASD):

- D + F (Eq. 16-8)
- D + H + F + L (Eq. 16-9)
- D + H + F + (L_r or S or R) (Eq. 16-10)
- D + H + F + 0.75(L) + 0.75(L_r or S or R) (Eq. 16-12)
- D + H + F + 0.75(0.6W) + 0.75L + 0.75(L_r or S or R) (Eq. 16-13)
- D + H + F + 0.75(0.7E) + 0.75L + 0.75S (Eq. 16-14)
- 0.6D + 0.6W + H (Eq. 16-15)
- 0.6(D + F) + 0.7E + H (Eq. 16-16)

Notations:

- D = Dead load of structure and appurtenances, excluding guy assemblies
- D_g = Dead load of guy assemblies
- D_i = Weight of ice due to factored ice thickness
- E = Combined effect of horizontal and vertical earthquake induced forces.
- f₁ = 1 for floors in places of public assembly in excess of 100 pounds per square foot, and = 0.5 for other live loads.
- f₂ = 0.7 for roof configurations that do not shed snow off the structure, and = 0.2 for other roof configurations.
- F = Load due to fluids with well-defined pressures and maximum heights.
- H = Load due to lateral earth pressures, ground water pressure or pressure of bulk materials.
- L = Floor live load.
- L_r = Roof live load.
- R = Rain load.
- S = Snow load.
- T = Self-straining load.
- T_i = Load effects due to temperature
- W = Load due to wind pressure.
- W_o = Wind load without ice



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Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section ANTENNA WIND LOADING				Sheet no./rev. 8	
Calc. by CJS	Date 07/22/2020	Chk'd by	Date	App'd by	Date

ANTENNA WIND LOADING (ASCE 7-16 & ANSI/TIA-222-H)

In accordance with ANSI / TIA-222-H Standard and ASCE 7-16

Antenna and mounting pipe data

Width of mounting pipe	$W_{pipe} = 2.375$ in
Height of mounting pipe	$H_{pipe} = 8.0$ ft
Width of 2244	$W_{ANT} = 40.2$ in
Depth of 2244	$D_{ANT} = 23.2$ in
Height of 2244	$H_{ANT} = 40.2$ in
Width of 2241	$W_{ANT1} = 25.9$ in
Depth of 2241	$D_{ANT1} = 10.4$ in
Height of 2241	$H_{ANT1} = 25.9$ in
Width of Cielo	$W_{ANT2} = 9.12$ in
Depth of Cielo	$D_{ANT2} = 4.94$ in
Height of Cielo	$H_{ANT2} = 9.42$ in
Height of Antenna above grade	$z = 161.0$ ft

General wind load requirements

Ultimate wind speed	$V = 107$ mph
Risk category / Structure class	II
Importance factor (Table 2-3)	$I = 1.0$
Wind direction probability factor (Table 2-2)	$K_d = 0.95$
Exposure category (cl.26.7.3)	C
Gust effect factor (Sect. 2.6.7)	$G_h = 0.85$

Topography

Topography factor not significant (Sect. 2.6.6.4)	$K_{zt} = 1.0$
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Wind pressure

Nominal height of atmospheric boundary layer	$z_g = 900$ ft
3-second gust wind speed power law exponent	$\alpha = 9.5$
Terrain constant	$K_e = 1.00$
Minimum value for K_z	$K_{zmin} = \max(2.01 \times (z/z_g)^{(2/\alpha)}, 0.85) = 1.399$
Velocity pressure coefficient (Sect. 2.6.5.2)	$K_z = \min(K_{zmin}, 2.01) = 1.399$
Ratio of solid area to gross area	$\epsilon = 1.00$
Velocity pressure	$q_h = 0.00256 \times K_z \times K_{zt} \times K_d \times V^2 \times 1 \text{ psf}/\text{mph}^2 = 38.956$ psf

Wind force coefficient of mounting pipe

Area of mounting pipe	$A_{f,pipe} = W_{pipe} \times H_{pipe} = 1.583$ ft ²
Aspect ratio of mounting pipe	$AR_{pipe} = H_{pipe}/W_{pipe} = 40.421$
Velocity coefficient	$C = (I \times K_z \times K_{zt})^{(1/2)} \times V \times W_{pipe} = 36.738$
Force coefficient for round members (Table 2-8)	$C_{a,pipe} = \text{if}(AR_{pipe} < 25, 0.8, 1.2) = 1.200$

Wind force coefficient of 2244

Area of 2244 (x-axis)	$A_{f,ANTx} = W_{ANT} \times H_{ANT} = 11.222$ ft ²
Area of 2244 (z-axis)	$A_{f,ANTz} = D_{ANT} \times H_{ANT} = 6.477$ ft ²
Aspect ratio of 2244 (x-axis)	$AR_{ANTx} = H_{ANT} / W_{ANT} = 1.000$



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Section ANTENNA WIND LOADING				Sheet no./rev. 9	
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Aspect ratio of 2244 (z-axis)

$$AR_{ANTz} = H_{ANT} / D_{ANT} = 1.733$$

Force coefficient for flat members (x-axis)

$$C_{a,ANTx} = \text{if}(AR_{ANTx} < 25, 1.4, 2.0) = 1.400$$

Force coefficient for flat members (z-axis)

$$C_{a,ANTz} = \text{if}(AR_{ANTz} < 25, 1.4, 2.0) = 1.400$$

Wind force coefficient of 2241

Area of 2241 (x-axis)

$$A_{f,ANT1x} = W_{ANT1} \times H_{ANT1} = 4.658 \text{ ft}^2$$

Area of 2241 (z-axis)

$$A_{f,ANT1z} = D_{ANT1} \times H_{ANT1} = 1.871 \text{ ft}^2$$

Aspect ratio of 2241 (x-axis)

$$AR_{ANT1x} = H_{ANT1} / W_{ANT1} = 1.000$$

Aspect ratio of 2241 (z-axis)

$$AR_{ANT1z} = H_{ANT1} / D_{ANT1} = 2.490$$

Force coefficient for flat members (x-axis)

$$C_{a,ANT1x} = \text{if}(AR_{ANT1x} < 25, 1.4, 2.0) = 1.400$$

Force coefficient for flat members (z-axis)

$$C_{a,ANT1z} = \text{if}(AR_{ANT1z} < 25, 1.4, 2.0) = 1.400$$

Wind force coefficient of Cielo

Area of Cielo (x-axis)

$$A_{f,ANT2x} = W_{ANT2} \times H_{ANT2} = 0.597 \text{ ft}^2$$

Area of Cielo (z-axis)

$$A_{f,ANT2z} = D_{ANT2} \times H_{ANT2} = 0.323 \text{ ft}^2$$

Aspect ratio of Cielo (x-axis)

$$AR_{ANT2x} = H_{ANT2} / W_{ANT2} = 1.033$$

Aspect ratio of Cielo (z-axis)

$$AR_{ANT2z} = H_{ANT2} / D_{ANT2} = 1.907$$

Force coefficient for flat members (x-axis)

$$C_{a,ANT2x} = \text{if}(AR_{ANT2x} < 25, 1.4, 2.0) = 1.400$$

Force coefficient for flat members (z-axis)

$$C_{a,ANT2z} = \text{if}(AR_{ANT2z} < 25, 1.4, 2.0) = 1.400$$

Wind forces

Wind force on mounting pipe

$$F_{A,pipe} = \text{max}(20 \text{ psf}, q_h \times G_h \times C_{a,pipe}) \times A_{f,pipe} = 62.914 \text{ lbs}$$

Distributed load on mounting pipe

$$w_{pipe} = F_{A,pipe} / H_{pipe} = 7.864 \text{ plf}$$

Wind force on 2244 (x-direction)

$$F_{A,ANT,x} = \text{max}(20 \text{ psf}, q_h \times G_h \times C_{a,ANTx}) \times A_{f,ANTx} = 520.251 \text{ lbs}$$

Wind force on 2244 (z-direction)

$$F_{A,ANT,z} = \text{max}(20 \text{ psf}, q_h \times G_h \times C_{a,ANTz}) \times A_{f,ANTz} = 300.244 \text{ lbs}$$

Wind force on 2241 (x-direction)

$$F_{A,ANT1,x} = \text{max}(20 \text{ psf}, q_h \times G_h \times C_{a,ANT1x}) \times A_{f,ANT1x} = 215.954 \text{ lbs}$$

Wind force on 2241 (z-direction)

$$F_{A,ANT1,z} = \text{max}(20 \text{ psf}, q_h \times G_h \times C_{a,ANT1z}) \times A_{f,ANT1z} = 86.715 \text{ lbs}$$

Wind force on Cielo (x-direction)

$$F_{A,ANT2,x} = \text{max}(20 \text{ psf}, q_h \times G_h \times C_{a,ANT2x}) \times A_{f,ANT2x} = 27.657 \text{ lbs}$$

Wind force on Cielo (z-direction)

$$F_{A,ANT2,z} = \text{max}(20 \text{ psf}, q_h \times G_h \times C_{a,ANT2z}) \times A_{f,ANT2z} = 14.981 \text{ lbs}$$

Weights of Antennas

Weight of RFMA-2244UH09Sxx

$$= 132.0 \text{ lbs}$$

Weight of RFMA-2241UH06Sxx

$$= 35.0 \text{ lbs}$$

Weight of Cielo

$$= 20.3 \text{ lbs}$$



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Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section ANTENNA WIND LOADING – ICE				Sheet no./rev. 10	
Calc. by CJS	Date 07/22/2020	Chk'd by	Date	App'd by	Date

ANTENNA WIND LOADING (ASCE 7-16 & ANSI/TIA-222-H) – WITH ICE

In accordance with ANSI / TIA-222-H Standard and ASCE 7-16

Ice Thickness $t_i = 1.5$ in
 Risk category / Structure class II
 Importance factor (Table 2-3) $I = 1.0$
 Wind direction probability factor (Table 2-2) $K_d = 0.95$
 Exposure category (cl.26.7.3) C

Topography

Topography factor not significant (Sect. 2.6.6.4) $K_{zt} = 1.0$
 Wind speed with Ice $V = 40.0$ mph
 Height of Antenna above grade $z = 161.0$ ft
 Height escalation factor for ice thickness $K_{iz} = \min((z/33)^{0.10}, 1.4) = 1.172$
 Thickness of radial glaze ice (Sect. 2.6.10) $t_{iz} = t_i \times I \times K_{iz} \times K_{zt}^{0.35} = 1.758$ in

Appurtenance	Without Ice				With Ice			
	Weight (lb)	Height (in)	Width (in)	Depth (in)	Weight (lb)	Height (in)	Width (in)	Depth (in)
2244	132.0	40.2	40.2	23.2	421.61	43.72	43.72	26.72
2241	35.0	25.9	25.9	10.4	177.90	29.42	29.42	13.92
Cielo	20.3	9.42	9.12	4.94	25.06	12.94	12.64	8.46



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Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section ANTENNA WIND LOADING – ICE				Sheet no./rev. 11	
Calc. by CJS	Date 07/22/2020	Chk'd by	Date	App'd by	Date

ANTENNA WIND LOADING (ASCE 7-16 & ANSI/TIA-222-H)

In accordance with ANSI / TIA-222-H Standard and ASCE 7-16

Antenna and mounting pipe data

Width of mounting pipe	$W_{pipe} = 2.375$ in
Height of mounting pipe	$H_{pipe} = 8.0$ ft
Width of 2244	$W_{ANT} = 43.72$ in
Depth of 2244	$D_{ANT} = 26.72$ in
Height of 2244	$H_{ANT} = 43.72$ in
Width of 2241	$W_{ANT1} = 29.42$ in
Depth of 2241	$D_{ANT1} = 13.92$ in
Height of 2241	$H_{ANT1} = 29.42$ in
Width of Cielo	$W_{ANT2} = 12.64$ in
Depth of Cielo	$D_{ANT2} = 8.46$ in
Height of Cielo	$H_{ANT2} = 12.94$ in
Height of Antenna above grade	$z = 161.0$ ft

General wind load requirements

Ultimate wind speed	$V = 40.0$ mph
Risk category / Structure class	II
Importance factor (Table 2-3)	$I = 1.0$
Wind direction probability factor (Table 2-2)	$K_d = 0.95$
Exposure category (cl.26.7.3)	C
Gust effect factor (Sect. 2.6.7)	$G_h = 0.85$

Topography

Topography factor not significant (Sect. 2.6.6.4)	$K_{zt} = 1.0$
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Wind pressure

Nominal height of atmospheric boundary layer	$z_g = 900$ ft
3-second gust wind speed power law exponent	$\alpha = 9.5$
Terrain constant	$K_e = 1.00$
Minimum value for K_z	$K_{zmin} = \max(2.01 \times (z/z_g)^{(2/\alpha)}, 0.85) = 1.399$
Velocity pressure coefficient (Sect. 2.6.5.2)	$K_z = \min(K_{zmin}, 2.01) = 1.399$
Ratio of solid area to gross area	$\epsilon = 1.00$
Velocity pressure	$q_h = 0.00256 \times K_z \times K_{zt} \times K_d \times V^2 \times 1 \text{ psf}/\text{mph}^2 = 5.444$ psf

Wind force coefficient of mounting pipe

Area of mounting pipe	$A_{f,pipe} = W_{pipe} \times H_{pipe} = 1.583$ ft ²
Aspect ratio of mounting pipe	$AR_{pipe} = H_{pipe}/W_{pipe} = 40.421$
Velocity coefficient	$C = (1 \times K_z \times K_{zt})^{(1/2)} \times V \times W_{pipe} = 13.734$
Force coefficient for round members (Table 2-8)	$C_{a,pipe} = \text{if}(AR_{pipe} < 25, 0.8, 1.2) = 1.200$

Wind force coefficient of 2244

Area of 2244 (x-axis)	$A_{f,ANTx} = W_{ANT} \times H_{ANT} = 13.274$ ft ²
Area of 2244 (z-axis)	$A_{f,ANTz} = D_{ANT} \times H_{ANT} = 8.112$ ft ²
Aspect ratio of 2244 (x-axis)	$AR_{ANTx} = H_{ANT} / W_{ANT} = 1.000$



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Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section ANTENNA WIND LOADING – ICE				Sheet no./rev. 12	
Calc. by CJS	Date 07/22/2020	Chk'd by	Date	App'd by	Date

Aspect ratio of 2244 (z-axis)

$$AR_{ANTz} = H_{ANT} / D_{ANT} = 1.636$$

Force coefficient for flat members (x-axis)

$$C_{a,ANTx} = \text{if}(AR_{ANTx} < 25, 1.4, 2.0) = 1.400$$

Force coefficient for flat members (z-axis)

$$C_{a,ANTz} = \text{if}(AR_{ANTz} < 25, 1.4, 2.0) = 1.400$$

Wind force coefficient of 2241

Area of 2241 (x-axis)

$$A_{f,ANT1x} = W_{ANT1} \times H_{ANT1} = 6.011 \text{ ft}^2$$

Area of 2241 (z-axis)

$$A_{f,ANT1z} = D_{ANT1} \times H_{ANT1} = 2.844 \text{ ft}^2$$

Aspect ratio of 2241 (x-axis)

$$AR_{ANT1x} = H_{ANT1} / W_{ANT1} = 1.000$$

Aspect ratio of 2241 (z-axis)

$$AR_{ANT1z} = H_{ANT1} / D_{ANT1} = 2.114$$

Force coefficient for flat members (x-axis)

$$C_{a,ANT1x} = \text{if}(AR_{ANT1x} < 25, 1.4, 2.0) = 1.400$$

Force coefficient for flat members (z-axis)

$$C_{a,ANT1z} = \text{if}(AR_{ANT1z} < 25, 1.4, 2.0) = 1.400$$

Wind force coefficient of Cielo

Area of Cielo (x-axis)

$$A_{f,ANT2x} = W_{ANT2} \times H_{ANT2} = 1.136 \text{ ft}^2$$

Area of Cielo (z-axis)

$$A_{f,ANT2z} = D_{ANT2} \times H_{ANT2} = 0.760 \text{ ft}^2$$

Aspect ratio of Cielo (x-axis)

$$AR_{ANT2x} = H_{ANT2} / W_{ANT2} = 1.024$$

Aspect ratio of Cielo (z-axis)

$$AR_{ANT2z} = H_{ANT2} / D_{ANT2} = 1.530$$

Force coefficient for flat members (x-axis)

$$C_{a,ANT2x} = \text{if}(AR_{ANT2x} < 25, 1.4, 2.0) = 1.400$$

Force coefficient for flat members (z-axis)

$$C_{a,ANT2z} = \text{if}(AR_{ANT2z} < 25, 1.4, 2.0) = 1.400$$

Wind forces

Wind force on mounting pipe

$$F_{A,pipe} = \max(20 \text{ psf}, q_h \times G_h \times C_{a,pipe}) \times A_{f,pipe} = 31.667 \text{ lbs}$$

Distributed load on mounting pipe

$$w_{pipe} = F_{A,pipe} / H_{pipe} = 3.958 \text{ plf}$$

Wind force on 2244 (x-direction)

$$F_{A,ANT,x} = \max(20 \text{ psf}, q_h \times G_h \times C_{a,ANTx}) \times A_{f,ANTx} = 265.478 \text{ lbs}$$

Wind force on 2244 (z-direction)

$$F_{A,ANT,z} = \max(20 \text{ psf}, q_h \times G_h \times C_{a,ANTz}) \times A_{f,ANTz} = 162.250 \text{ lbs}$$

Wind force on 2241 (x-direction)

$$F_{A,ANT1,x} = \max(20 \text{ psf}, q_h \times G_h \times C_{a,ANT1x}) \times A_{f,ANT1x} = 120.213 \text{ lbs}$$

Wind force on 2241 (z-direction)

$$F_{A,ANT1,z} = \max(20 \text{ psf}, q_h \times G_h \times C_{a,ANT1z}) \times A_{f,ANT1z} = 56.879 \text{ lbs}$$

Wind force on Cielo (x-direction)

$$F_{A,ANT2,x} = \max(20 \text{ psf}, q_h \times G_h \times C_{a,ANT2x}) \times A_{f,ANT2x} = 22.717 \text{ lbs}$$

Wind force on Cielo (z-direction)

$$F_{A,ANT2,z} = \max(20 \text{ psf}, q_h \times G_h \times C_{a,ANT2z}) \times A_{f,ANT2z} = 15.205 \text{ lbs}$$

Weights of Antennas

Weight of RFMA-2244UH09Sxx

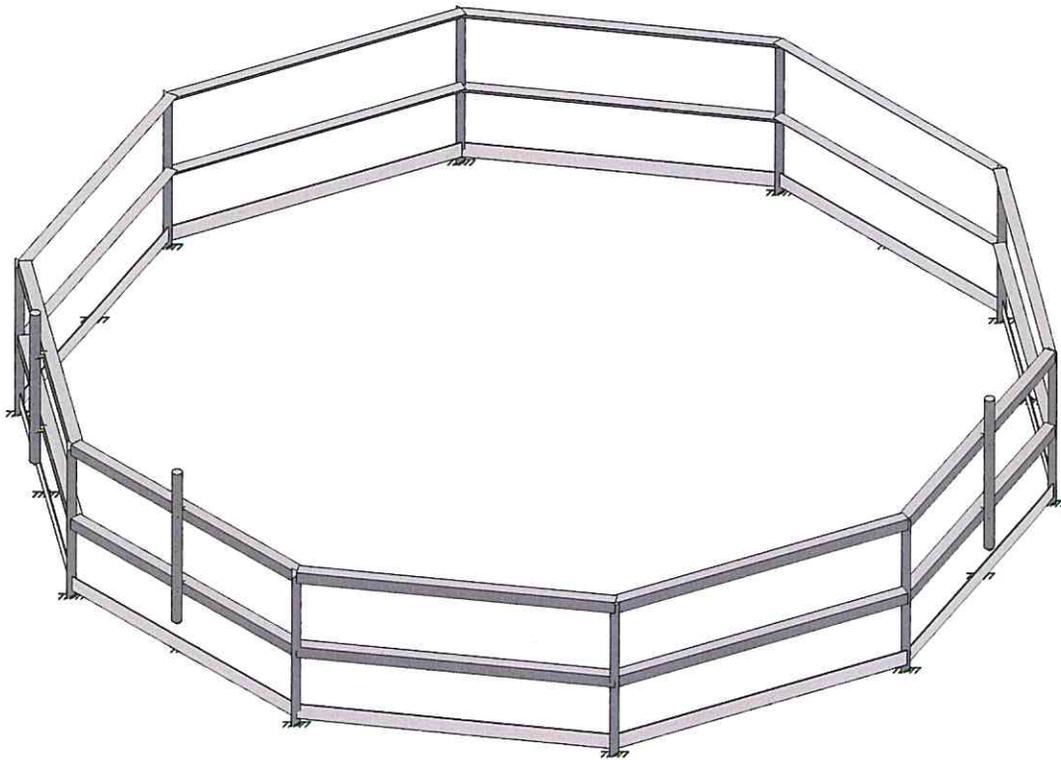
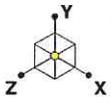
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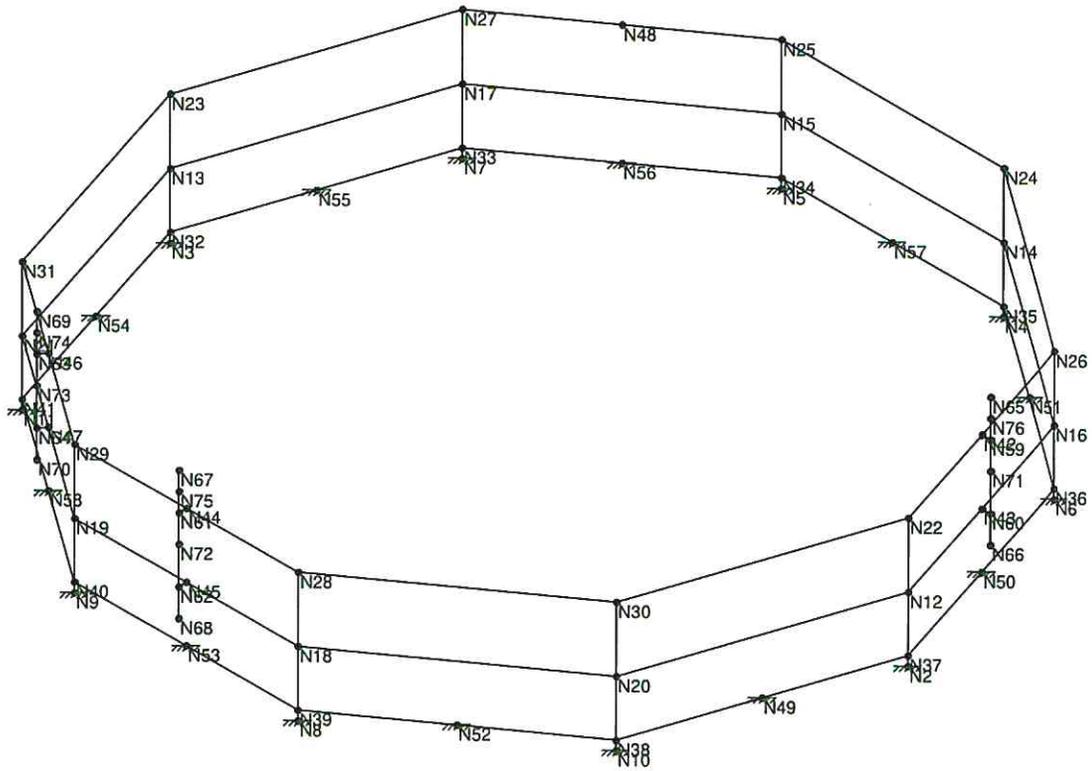
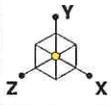
Weight of RFMA-2241UH06Sxx

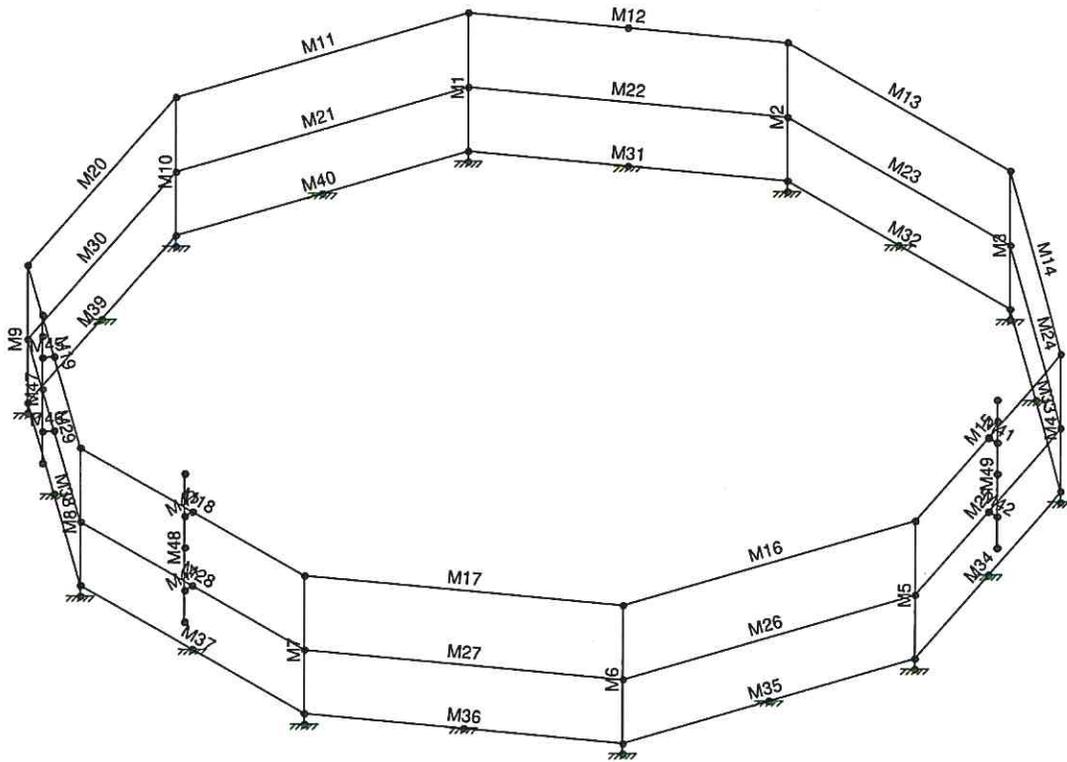
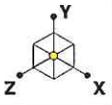
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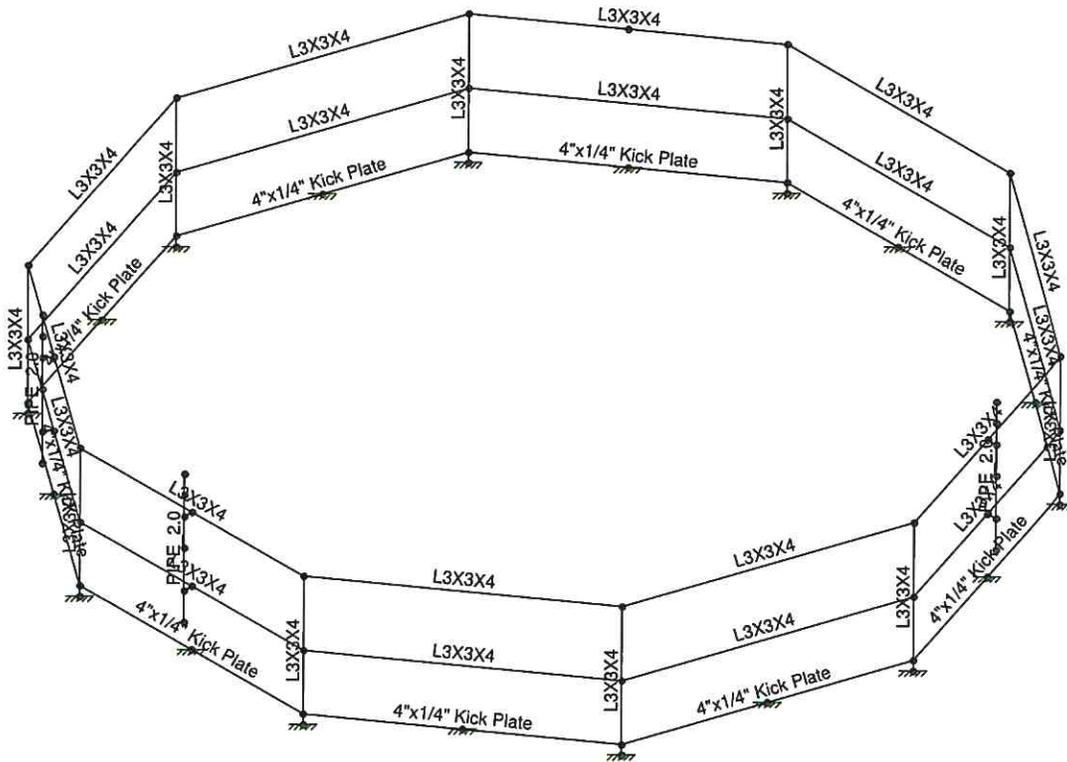
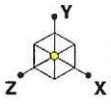
Weight of Cielo

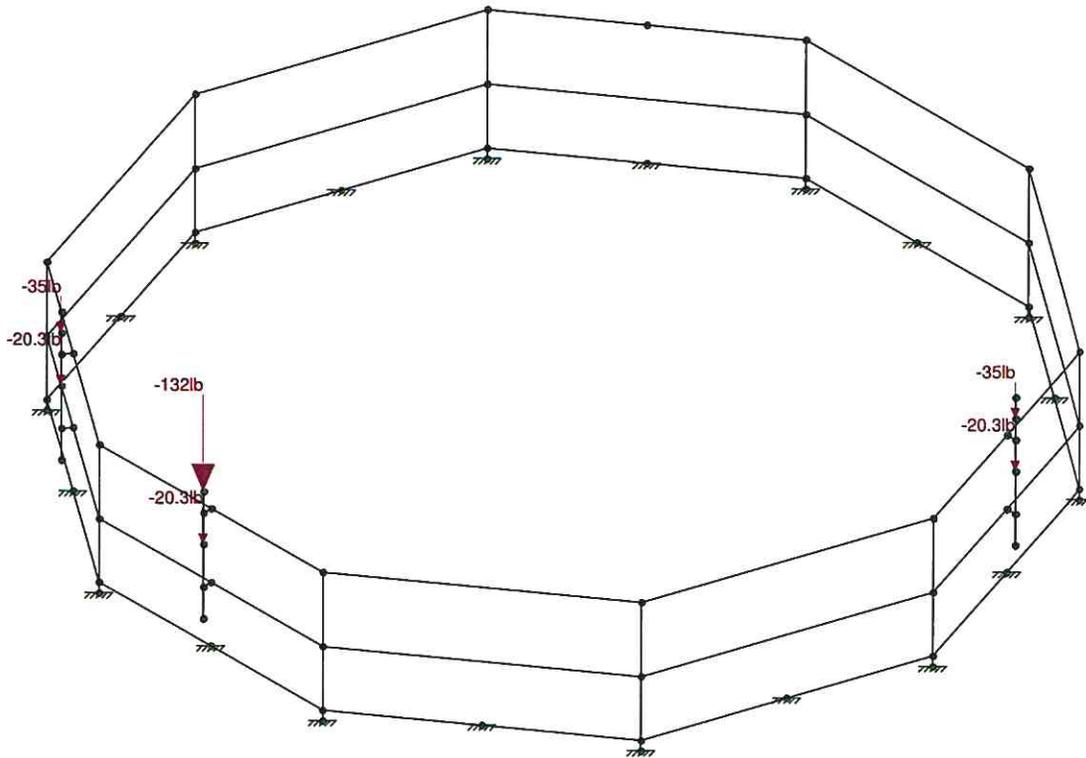
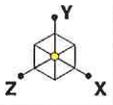
$$= 25.06 \text{ lbs}$$











Loads: BLC 1, DL

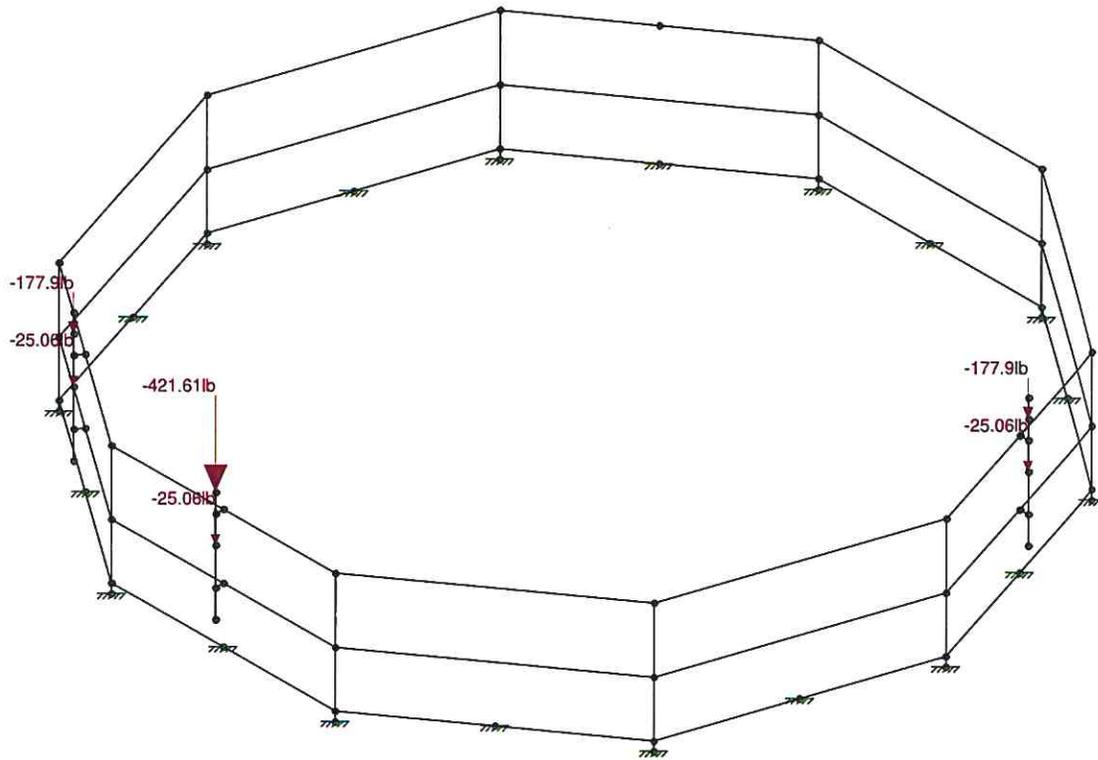
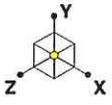
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Willowbrook Water Tower
DEAD LOAD

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Loads: BLC 6, DLi

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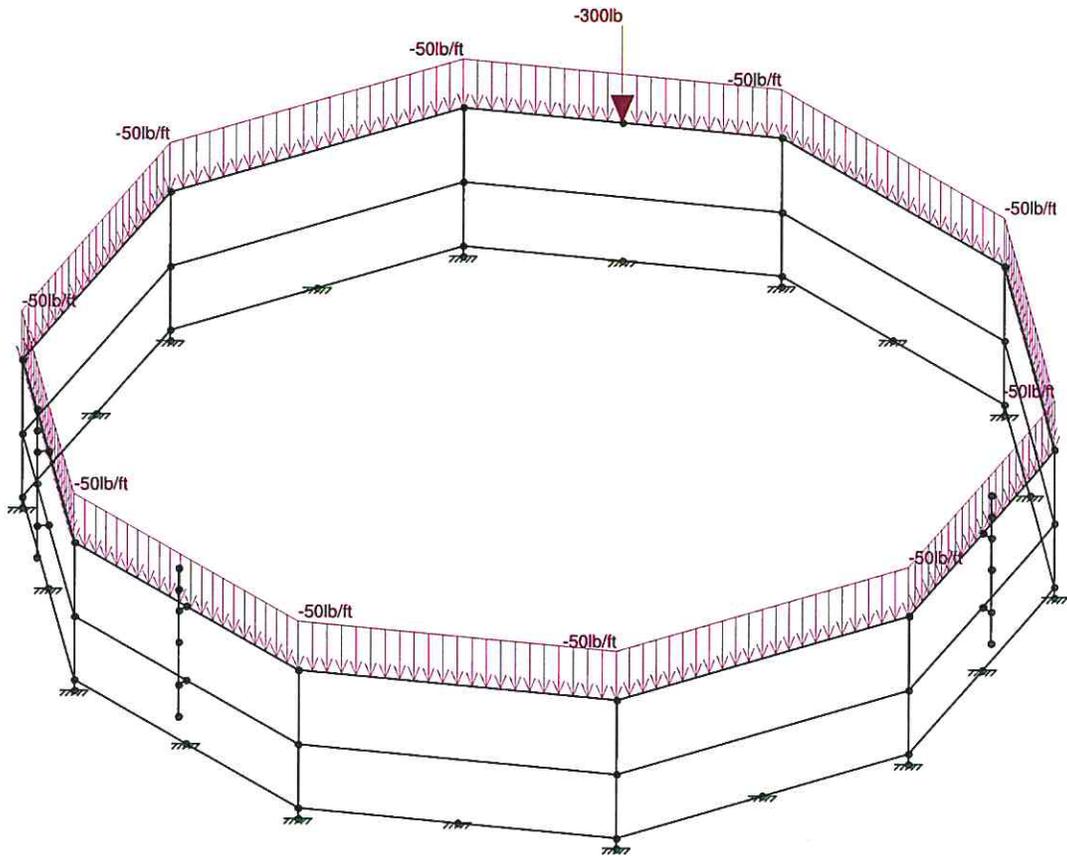
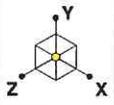
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Willowbrook Water Tower
DEAD LOAD (ICE)

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Loads: BLC 4, Live Load

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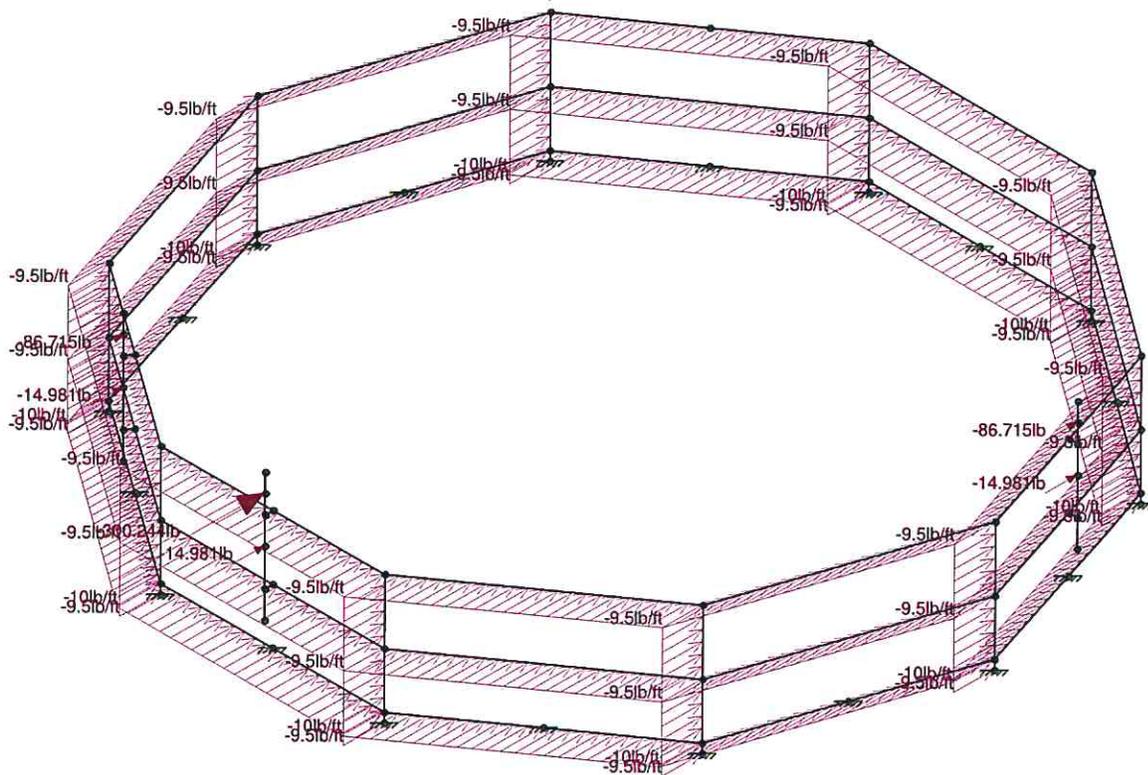
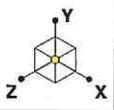
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LIVE LOAD

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Loads: BLC 3, Wind Load Z-Direction

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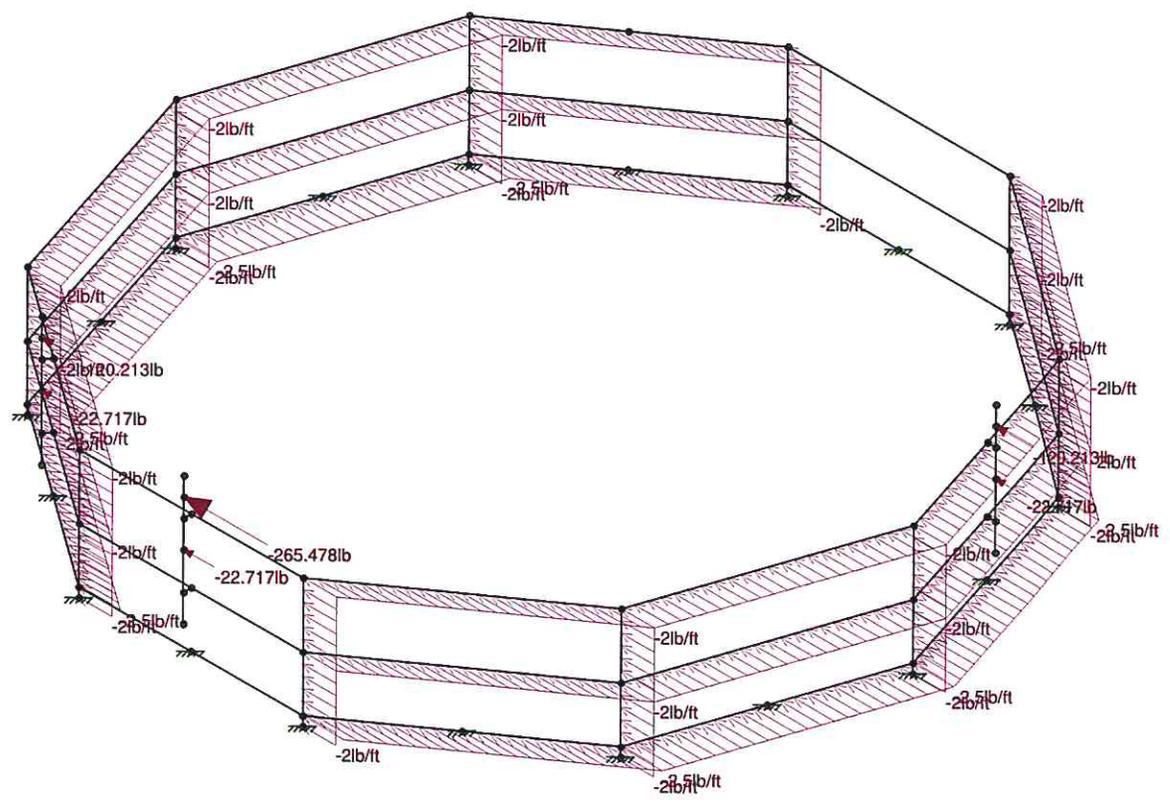
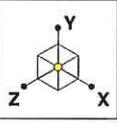
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Willowbrook Water Tower
WIND LOAD Z-DIRECTION

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Willowbrook Water Tower_Handrai...

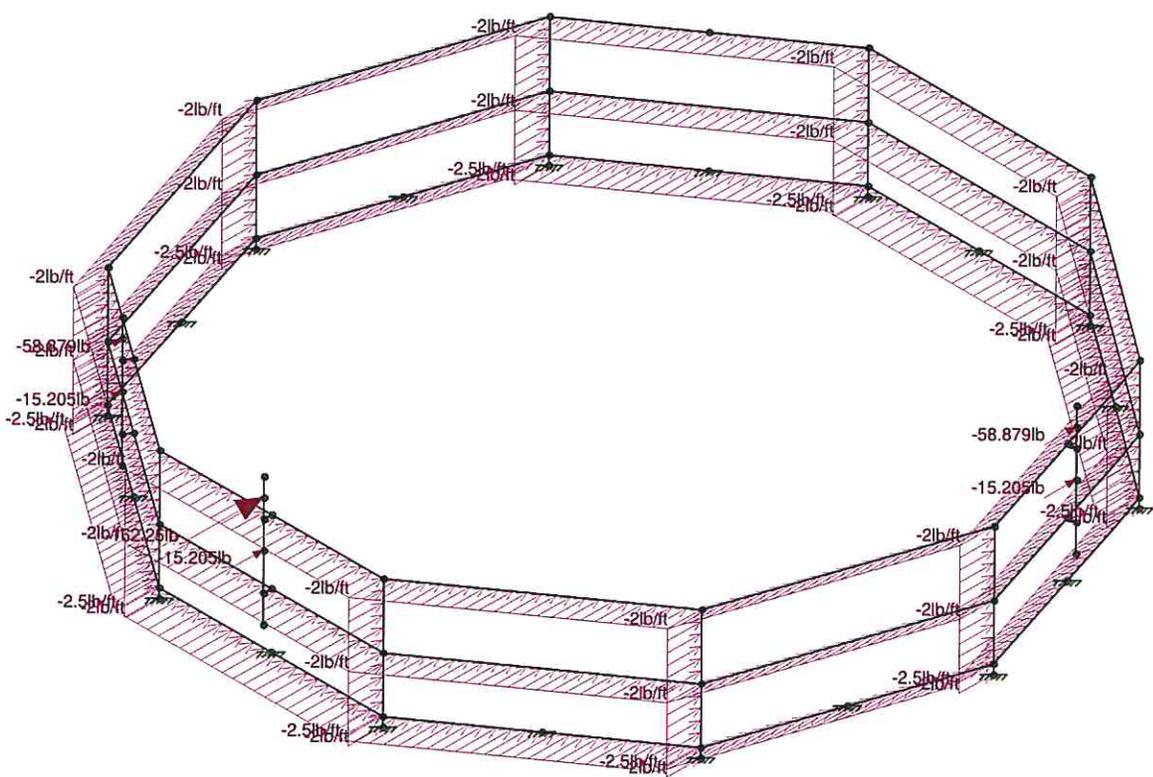
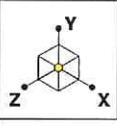


Loads: BLC 7, WLIX

W-T Group, LLC.
CJS
2000826T

Willowbrook Water Tower
WIND LOAD X-DIRECTION (ICE)

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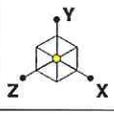


Loads: BLC 8, WLIZ

W-T Group, LLC.
CJS
2000826T

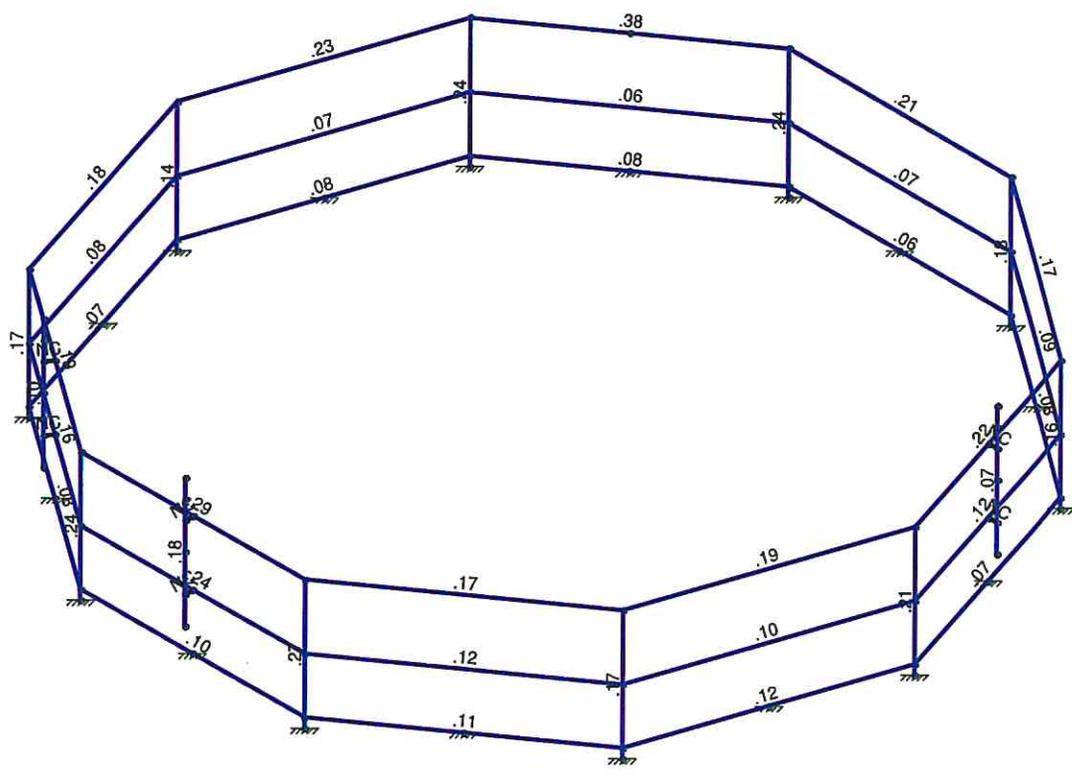
Willowbrook Water Tower
WIND LOAD Z-DIRECTION (ICE)

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Willowbrook Water Tower_Handrai...



Code Check (Env)

No Calc
> 1.0
.90-1.0
.75-.90
.50-.75
0-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

W-T Group, LLC.	Willowbrook Water Tower MEMBER STRESS RATIOS	Page - 24
CJS		July 21, 2020 at 4:51 PM
2000826T		Willowbrook Water Tower_Handrai...



Company : W-T Group, LLC.
 Designer : CJS
 Job Number : 2000826T
 Model Name : Willowbrook Water Tower

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(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (in/sec^2)	386.4
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 13th(360-05): LRFD
Cold Formed Steel Code	AISI S100-16: ASD
Wood Code	AWC NDS-15: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	No
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR SET ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8



Company : W-T Group, LLC.
 Designer : CJS
 Job Number : 2000826T
 Model Name : Willowbrook Water Tower

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(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (in)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	4
Cd X	4
Rho Z	1
Rho X	1

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N2	120	0	0	0	
2	N3	-120	0	0	0	
3	N4	36.25	0	-114.5	0	
4	N5	-36.25	0	-114.5	0	
5	N6	96.5	0	-71.25	0	
6	N7	-96.5	0	-71.25	0	
7	N8	36.25	0	114.5	0	
8	N9	-36.25	0	114.5	0	
9	N10	96.5	0	71.25	0	
10	N11	-96.5	0	71.25	0	
11	N12	120	21	0	0	
12	N13	-120	21	0	0	
13	N14	36.25	21	-114.5	0	
14	N15	-36.25	21	-114.5	0	
15	N16	96.5	21	-71.25	0	
16	N17	-96.5	21	-71.25	0	
17	N18	36.25	21	114.5	0	
18	N19	-36.25	21	114.5	0	
19	N20	96.5	21	71.25	0	
20	N21	-96.5	21	71.25	0	
21	N22	120	42	0	0	
22	N23	-120	42	0	0	
23	N24	36.25	42	-114.5	0	
24	N25	-36.25	42	-114.5	0	
25	N26	96.5	42	-71.25	0	
26	N27	-96.5	42	-71.25	0	
27	N28	36.25	42	114.5	0	
28	N29	-36.25	42	114.5	0	
29	N30	96.5	42	71.25	0	
30	N31	-96.5	42	71.25	0	



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Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
31	N32	-120	3	0	0	
32	N33	-96.5	3	-71.25	0	
33	N34	-36.25	3	-114.5	0	
34	N35	36.25	3	-114.5	0	
35	N36	96.5	3	-71.25	0	
36	N37	120	3	0	0	
37	N38	96.5	3	71.25	0	
38	N39	36.25	3	114.5	0	
39	N40	-36.25	3	114.5	0	
40	N41	-96.5	3	71.25	0	
41	N42	108.25	42	-35.625	0	
42	N43	108.25	21	-35.625	0	
43	N44	0	42	114.5	0	
44	N45	0	21	114.5	0	
45	N46	-66.375	42	92.875	0	
46	N47	-66.375	21	92.875	0	
47	N48	-66.375	42	-92.875	0	
48	N49	108.25	3	35.625	0	
49	N50	108.25	3	-35.625	0	
50	N51	66.375	3	-92.875	0	
51	N52	66.375	3	92.875	0	
52	N53	0	3	114.5	0	
53	N54	-108.25	3	35.625	0	
54	N55	-108.25	3	-35.625	0	
55	N56	-66.375	3	-92.875	0	
56	N57	0	3	-114.5	0	
57	N58	-66.375	3	92.875	0	
58	N59	111	42	-35.625	0	
59	N60	111	21	-35.625	0	
60	N61	0	42	117	0	
61	N62	0	21	117	0	
62	N63	-68	42	95	0	
63	N64	-68	21	95	0	
64	N65	111	54	-35.625	0	
65	N66	111	12	-35.625	0	
66	N67	0	54	117	0	
67	N68	0	12	117	0	
68	N69	-68	54	95	0	
69	N70	-68	12	95	0	
70	N71	111	33	-35.625	0	
71	N72	0	33	117	0	
72	N73	-68	33	95	0	
73	N74	-68	48	95	0	
74	N75	0	48	117	0	
75	N76	111	48	-35.625	0	

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	L3X3X4	42									Lateral
2	M2	L3X3X4	42									Lateral
3	M3	L3X3X4	42									Lateral
4	M4	L3X3X4	42									Lateral
5	M5	L3X3X4	42									Lateral
6	M6	L3X3X4	42									Lateral
7	M7	L3X3X4	42									Lateral



Company : W-T Group, LLC.
 Designer : CJS
 Job Number : 2000826T
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Hot Rolled Steel Design Parameters (Continued)

Label	Shape	Length[in]	Lbvy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
8	M8	L3X3X4	42								Lateral
9	M9	L3X3X4	42								Lateral
10	M10	L3X3X4	42								Lateral
11	M11	L3X3X4	75.025			Lbyy					Lateral
12	M12	L3X3X4	74.166			Lbyy					Lateral
13	M13	L3X3X4	72.5			Lbyy					Lateral
14	M14	L3X3X4	74.166			Lbyy					Lateral
15	M15	L3X3X4	75.025			Lbyy					Lateral
16	M16	L3X3X4	75.025			Lbyy					Lateral
17	M17	L3X3X4	74.166			Lbyy					Lateral
18	M18	L3X3X4	72.5			Lbyy					Lateral
19	M19	L3X3X4	74.166			Lbyy					Lateral
20	M20	L3X3X4	75.025			Lbyy					Lateral
21	M21	L3X3X4	75.025			Lbyy					Lateral
22	M22	L3X3X4	74.166			Lbyy					Lateral
23	M23	L3X3X4	72.5			Lbyy					Lateral
24	M24	L3X3X4	74.166			Lbyy					Lateral
25	M25	L3X3X4	75.025			Lbyy					Lateral
26	M26	L3X3X4	75.025			Lbyy					Lateral
27	M27	L3X3X4	74.166			Lbyy					Lateral
28	M28	L3X3X4	72.5			Lbyy					Lateral
29	M29	L3X3X4	74.166			Lbyy					Lateral
30	M30	L3X3X4	75.025			Lbyy					Lateral
31	M31	4"x1/4" Kick...	74.166	12	12	Lbyy					Lateral
32	M32	4"x1/4" Kick...	72.5	12	12	Lbyy					Lateral
33	M33	4"x1/4" Kick...	74.166	12	12	Lbyy					Lateral
34	M34	4"x1/4" Kick...	75.025	12	12	Lbyy					Lateral
35	M35	4"x1/4" Kick...	75.025	12	12	Lbyy					Lateral
36	M36	4"x1/4" Kick...	74.166	12	12	Lbyy					Lateral
37	M37	4"x1/4" Kick...	72.5	12	12	Lbyy					Lateral
38	M38	4"x1/4" Kick...	74.166	12	12	Lbyy					Lateral
39	M39	4"x1/4" Kick...	75.025	12	12	Lbyy					Lateral
40	M40	4"x1/4" Kick...	75.025	12	12	Lbyy					Lateral
41	M47	PIPE 2.0	42								Lateral
42	M48	PIPE 2.0	42								Lateral
43	M49	PIPE 2.0	42								Lateral

Member Primary Data

Label	I Joint	J Joint	K Joint	Rotat...	Section/Shape	Type	Design List	Material	Desig...
1	M1	N7	N27		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
2	M2	N5	N25		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
3	M3	N4	N24		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
4	M4	N6	N26		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
5	M5	N2	N22		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
6	M6	N10	N30		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
7	M7	N8	N28		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
8	M8	N9	N29		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
9	M9	N11	N31		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
10	M10	N3	N23		L3X3X4	Col...	Single Angle	A36 Gr.36	Typical
11	M11	N23	N27	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
12	M12	N27	N25	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
13	M13	N25	N24	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
14	M14	N24	N26	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
15	M15	N26	N22	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
16	M16	N22	N30	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical



Company : W-T Group, LLC.
 Designer : CJS
 Job Number : 2000826T
 Model Name : Willowbrook Water Tower

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Member Primary Data (Continued)

Label	I Joint	J Joint	K Joint	Rotat...	Section/Shape	Type	Design List	Material	Desig...
17	M17	N30	N28	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
18	M18	N28	N29	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
19	M19	N29	N31	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
20	M20	N31	N23	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
21	M21	N13	N17	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
22	M22	N17	N15	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
23	M23	N15	N14	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
24	M24	N14	N16	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
25	M25	N16	N12	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
26	M26	N12	N20	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
27	M27	N20	N18	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
28	M28	N18	N19	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
29	M29	N19	N21	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
30	M30	N21	N13	90	L3X3X4	Bea...	Single Angle	A36 Gr.36	Typical
31	M31	N33	N34		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
32	M32	N34	N35		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
33	M33	N35	N36		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
34	M34	N36	N37		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
35	M35	N37	N38		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
36	M36	N38	N39		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
37	M37	N39	N40		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
38	M38	N40	N41		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
39	M39	N41	N32		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
40	M40	N32	N33		4"x1/4" Kick Pl..	Bea...	RECT	A36 Gr.36	Typical
41	M41	N42	N59		RIGID	None	None	RIGID	Typical
42	M42	N43	N60		RIGID	None	None	RIGID	Typical
43	M43	N44	N61		RIGID	None	None	RIGID	Typical
44	M44	N45	N62		RIGID	None	None	RIGID	Typical
45	M45	N46	N63		RIGID	None	None	RIGID	Typical
46	M46	N47	N64		RIGID	None	None	RIGID	Typical
47	M47	N69	N70		PIPE 2.0	Col...	Pipe	A53 Gr.B	Typical
48	M48	N67	N68		PIPE 2.0	Col...	Pipe	A53 Gr.B	Typical
49	M49	N65	N66		PIPE 2.0	Col...	Pipe	A53 Gr.B	Typical

Basic Load Cases

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	DL		-1		6			
2	Wind Load X-Direction	WLX			6		34	
3	Wind Load Z-Direction	WLZ			6		40	
4	Live Load	LL			1		10	
5	Snow Load	SL						
6	DLi	OL1			6			
7	WLiX	OL2			6		34	
8	WLiZ	OL3			6		40	

Load Combinations

Description	Sol...	PD...	SR...	BLC Fact...								
1	TIA 1 (a)	Yes	Y	DL	1.2	W...	1					
2	TIA 1 (b)	Yes	Y	DL	1.2	WLZ	1					
3	TIA 2 (a)	Yes	Y	DL	.9	W...	1					
4	TIA 2 (b)	Yes	Y	DL	.9	WLZ	1					
5	TIA 3	Yes	Y	DL	1.4							
6	TIA 4	Yes	Y	DL	1.2	LLS	1.5					
7	TIA 5	Yes	Y	DL	1.2	LL	1.5					



Company : W-T Group, LLC.
 Designer : CJS
 Job Number : 2000826T
 Model Name : Willowbrook Water Tower

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Load Combinations (Continued)

	Description	Sol.	PD	SR	BLC Fact											
8	Deflection 1	Yes	Y		DL	1										
9	Deflection 2	Yes	Y		LL	1										
10	Deflection 3	Yes	Y		DL	1	LL	1								
11	IBC 16-1	Yes	Y		DL	1.4										
12	IBC 16-2 (a)	Yes	Y		DL	1.2	LL	1.6								
13	IBC 16-2 (b)	Yes	Y		DL	1.2	LL	1.6	LLS	1.6	SL	.5	SLN	.5		
14	IBC 16-3 (c)	Yes	Y		DL	1.2	SL	1.6	SLN	1.6	LL	.5	LLS	1		
15	IBC 16-3 (...)	Yes	Y		DL	1.2	W...	.5								
16	IBC 16-3 (...)	Yes	Y		DL	1.2	WLZ	.5								
17	IBC 16-3 (...)	Yes	Y		DL	1.2	W...	-.5								
18	IBC 16-3 (...)	Yes	Y		DL	1.2	WLZ	-.5								
19	IBC 16-3 (...)	Yes	Y		DL	1.2	SL	1.6	SLN	1.6	W...	.5				
20	IBC 16-3 (...)	Yes	Y		DL	1.2	SL	1.6	SLN	1.6	WLZ	.5				
21	IBC 16-3 (...)	Yes	Y		DL	1.2	SL	1.6	SLN	1.6	W...	-.5				
22	IBC 16-3 (...)	Yes	Y		DL	1.2	SL	1.6	SLN	1.6	WLZ	-.5				
23	IBC 16-4 (...)	Yes	Y		DL	1.2	W...	1	LL	.5	LLS	1				
24	IBC 16-4 (...)	Yes	Y		DL	1.2	WLZ	1	LL	.5	LLS	1				
25	IBC 16-4 (...)	Yes	Y		DL	1.2	W...	-1	LL	.5	LLS	1				
26	IBC 16-4 (...)	Yes	Y		DL	1.2	WLZ	-1	LL	.5	LLS	1				
27	IBC 16-4 (...)	Yes	Y		DL	1.2	W...	1	LL	.5	LLS	1	SL	.5	SLN	.5
28	IBC 16-4 (...)	Yes	Y		DL	1.2	WLZ	1	LL	.5	LLS	1	SL	.5	SLN	.5
29	IBC 16-4 (...)	Yes	Y		DL	1.2	W...	-1	LL	.5	LLS	1	SL	.5	SLN	.5
30	IBC 16-4 (...)	Yes	Y		DL	1.2	WLZ	-1	LL	.5	LLS	1	SL	.5	SLN	.5
31	IBC 16-6 (a)	Yes	Y		DL	.9	W...	1								
32	IBC 16-6 (b)	Yes	Y		DL	.9	WLZ	1								
33	IBC 16-6 (c)	Yes	Y		DL	.9	W...	-1								
34	IBC 16-6 (d)	Yes	Y		DL	.9	WLZ	-1								
35	TIA 1 (a)	Yes	Y		OL1	1.2	OL2	1								
36	TIA 1 (b)	Yes	Y		OL1	1.2	OL3	1								
37	TIA 2 (a)	Yes	Y		OL1	.9	OL2	1								
38	TIA 2 (b)	Yes	Y		OL1	.9	OL3	1								
39	TIA 3	Yes	Y		OL1	1.4										
40	TIA 4	Yes	Y		OL1	1.2	LLS	1.5								
41	TIA 5	Yes	Y		OL1	1.2	LL	1.5								
42	Deflection 1	Yes	Y		OL1	1										
43	Deflection 2	Yes	Y		LL	1										
44	Deflection 3	Yes	Y		OL1	1	LL	1								
45	IBC 16-1	Yes	Y		OL1	1.4										
46	IBC 16-2 (a)	Yes	Y		OL1	1.2	LL	1.6								
47	IBC 16-2 (b)	Yes	Y		OL1	1.2	LL	1.6	LLS	1.6	SL	.5	SLN	.5		
48	IBC 16-3 (c)	Yes	Y		OL1	1.2	SL	1.6	SLN	1.6	LL	.5	LLS	1		
49	IBC 16-3 (...)	Yes	Y		OL1	1.2	OL2	.5								
50	IBC 16-3 (...)	Yes	Y		OL1	1.2	OL3	.5								
51	IBC 16-3 (...)	Yes	Y		OL1	1.2	OL2	-.5								
52	IBC 16-3 (...)	Yes	Y		OL1	1.2	OL3	-.5								
53	IBC 16-3 (...)	Yes	Y		OL1	1.2	SL	1.6	SLN	1.6	OL2	.5				
54	IBC 16-3 (...)	Yes	Y		OL1	1.2	SL	1.6	SLN	1.6	OL3	.5				
55	IBC 16-3 (...)	Yes	Y		OL1	1.2	SL	1.6	SLN	1.6	OL2	-.5				
56	IBC 16-3 (...)	Yes	Y		OL1	1.2	SL	1.6	SLN	1.6	OL3	-.5				
57	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL2	1	LL	.5	LLS	1				
58	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL3	1	LL	.5	LLS	1				
59	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL2	-1	LL	.5	LLS	1				
60	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL3	-1	LL	.5	LLS	1				
61	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL2	1	LL	.5	LLS	1	SL	.5	SLN	.5
62	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL3	1	LL	.5	LLS	1	SL	.5	SLN	.5
63	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL2	-1	LL	.5	LLS	1	SL	.5	SLN	.5
64	IBC 16-4 (...)	Yes	Y		OL1	1.2	OL3	-1	LL	.5	LLS	1	SL	.5	SLN	.5



Load Combinations (Continued)

	Description	Sol.	PD.	SR.	BLC Fact.								
65	IBC 16-6 (a)	Yes	Y	OL1	.9	OL2	1						
66	IBC 16-6 (b)	Yes	Y	OL1	.9	OL3	1						
67	IBC 16-6 (c)	Yes	Y	OL1	.9	OL2	-1						
68	IBC 16-6 (d)	Yes	Y	OL1	.9	OL3	-1						

Joint Loads and Enforced Displacements (BLC 1 : DL)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N71	L	Y	-20.3
2	N72	L	Y	-20.3
3	N73	L	Y	-20.3
4	N76	L	Y	-35
5	N74	L	Y	-35
6	N75	L	Y	-132

Joint Loads and Enforced Displacements (BLC 2 : Wind Load X-Direction)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N75	L	X	-520.251
2	N76	L	X	-215.954
3	N74	L	X	-215.954
4	N71	L	X	-27.657
5	N72	L	X	-27.657
6	N73	L	X	-27.657

Joint Loads and Enforced Displacements (BLC 3 : Wind Load Z-Direction)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N71	L	Z	-14.981
2	N72	L	Z	-14.981
3	N73	L	Z	-14.981
4	N75	L	Z	-300.244
5	N76	L	Z	-86.715
6	N74	L	Z	-86.715

Joint Loads and Enforced Displacements (BLC 4 : Live Load)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N48	L	Y	-300

Joint Loads and Enforced Displacements (BLC 6 : DLi)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N75	L	Y	-421.61
2	N73	L	Y	-25.06
3	N72	L	Y	-25.06
4	N71	L	Y	-25.06
5	N76	L	Y	-177.9
6	N74	L	Y	-177.9

Joint Loads and Enforced Displacements (BLC 7 : WLIX)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N75	L	X	-265.478
2	N76	L	X	-120.213
3	N74	L	X	-120.213
4	N71	L	X	-22.717
5	N72	L	X	-22.717
6	N73	L	X	-22.717



Company : W-T Group, LLC.
 Designer : CJS
 Job Number : 2000826T
 Model Name : Willowbrook Water Tower

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Joint Loads and Enforced Displacements (BLC 8 : WLiz)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N73	L	Z	-15.205
2	N72	L	Z	-15.205
3	N71	L	Z	-15.205
4	N75	L	Z	-162.25
5	N76	L	Z	-58.879
6	N74	L	Z	-58.879

Member Distributed Loads (BLC 2 : Wind Load X-Direction)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M17	X	-9.5	-9.5	0	0
2	M16	X	-9.5	-9.5	0	0
3	M15	X	-9.5	-9.5	0	0
4	M26	X	-9.5	-9.5	0	0
5	M25	X	-9.5	-9.5	0	0
6	M27	X	-9.5	-9.5	0	0
7	M14	X	-9.5	-9.5	0	0
8	M24	X	-9.5	-9.5	0	0
9	M3	X	-9.5	-9.5	0	0
10	M4	X	-9.5	-9.5	0	0
11	M5	X	-9.5	-9.5	0	0
12	M6	X	-9.5	-9.5	0	0
13	M7	X	-9.5	-9.5	0	0
14	M8	X	-9.5	-9.5	0	0
15	M19	X	-9.5	-9.5	0	0
16	M29	X	-9.5	-9.5	0	0
17	M12	X	-9.5	-9.5	0	0
18	M22	X	-9.5	-9.5	0	0
19	M2	X	-9.5	-9.5	0	0
20	M20	X	-9.5	-9.5	0	0
21	M30	X	-9.5	-9.5	0	0
22	M21	X	-9.5	-9.5	0	0
23	M11	X	-9.5	-9.5	0	0
24	M10	X	-9.5	-9.5	0	0
25	M1	X	-9.5	-9.5	0	0
26	M9	X	-9.5	-9.5	0	0
27	M36	X	-10	-10	0	0
28	M35	X	-10	-10	0	0
29	M38	X	-10	-10	0	0
30	M39	X	-10	-10	0	0
31	M40	X	-10	-10	0	0
32	M31	X	-10	-10	0	0
33	M33	X	-10	-10	0	0
34	M34	X	-10	-10	0	0

Member Distributed Loads (BLC 3 : Wind Load Z-Direction)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M18	Z	-9.5	-9.5	0	0
2	M28	Z	-9.5	-9.5	0	0
3	M27	Z	-9.5	-9.5	0	0
4	M17	Z	-9.5	-9.5	0	0
5	M19	Z	-9.5	-9.5	0	0
6	M29	Z	-9.5	-9.5	0	0
7	M8	Z	-9.5	-9.5	0	0
8	M7	Z	-9.5	-9.5	0	0
9	M6	Z	-9.5	-9.5	0	0



Member Distributed Loads (BLC 3 : Wind Load Z-Direction) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[in.%]	End Location[in.%]
10	M16	Z	-9.5	-9.5	0	0
11	M26	Z	-9.5	-9.5	0	0
12	M20	Z	-9.5	-9.5	0	0
13	M30	Z	-9.5	-9.5	0	0
14	M10	Z	-9.5	-9.5	0	0
15	M1	Z	-9.5	-9.5	0	0
16	M2	Z	-9.5	-9.5	0	0
17	M3	Z	-9.5	-9.5	0	0
18	M4	Z	-9.5	-9.5	0	0
19	M14	Z	-9.5	-9.5	0	0
20	M24	Z	-9.5	-9.5	0	0
21	M23	Z	-9.5	-9.5	0	0
22	M13	Z	-9.5	-9.5	0	0
23	M12	Z	-9.5	-9.5	0	0
24	M22	Z	-9.5	-9.5	0	0
25	M9	Z	-9.5	-9.5	0	0
26	M5	Z	-9.5	-9.5	0	0
27	M35	Z	-10	-10	0	0
28	M36	Z	-10	-10	0	0
29	M37	Z	-10	-10	0	0
30	M38	Z	-10	-10	0	0
31	M40	Z	-10	-10	0	0
32	M31	Z	-10	-10	0	0
33	M32	Z	-10	-10	0	0
34	M33	Z	-10	-10	0	0
35	M15	Z	-9.5	-9.5	0	0
36	M25	Z	-9.5	-9.5	0	0
37	M34	Z	-10	-10	0	0
38	M39	Z	-10	-10	0	0
39	M11	Z	-9.5	-9.5	0	0
40	M21	Z	-9.5	-9.5	0	0

Member Distributed Loads (BLC 4 : Live Load)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[in.%]	End Location[in.%]
1	M11	Y	-50	-50	0	0
2	M12	Y	-50	-50	0	0
3	M13	Y	-50	-50	0	0
4	M20	Y	-50	-50	0	0
5	M19	Y	-50	-50	0	0
6	M18	Y	-50	-50	0	0
7	M17	Y	-50	-50	0	0
8	M16	Y	-50	-50	0	0
9	M15	Y	-50	-50	0	0
10	M14	Y	-50	-50	0	0

Member Distributed Loads (BLC 7 : WLiX)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[in.%]	End Location[in.%]
1	M33	X	-2.5	-2.5	0	0
2	M34	X	-2.5	-2.5	0	0
3	M31	X	-2.5	-2.5	0	0
4	M40	X	-2.5	-2.5	0	0
5	M39	X	-2.5	-2.5	0	0
6	M38	X	-2.5	-2.5	0	0
7	M36	X	-2.5	-2.5	0	0
8	M35	X	-2.5	-2.5	0	0
9	M24	X	-2	-2	0	0



Company : W-T Group, LLC.
 Designer : CJS
 Job Number : 2000826T
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Member Distributed Loads (BLC 7 : WLIX) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[in.%]	End Location[in.%]
10	M14	X	-2	-2	0	0
11	M12	X	-2	-2	0	0
12	M22	X	-2	-2	0	0
13	M11	X	-2	-2	0	0
14	M21	X	-2	-2	0	0
15	M30	X	-2	-2	0	0
16	M20	X	-2	-2	0	0
17	M19	X	-2	-2	0	0
18	M29	X	-2	-2	0	0
19	M17	X	-2	-2	0	0
20	M27	X	-2	-2	0	0
21	M16	X	-2	-2	0	0
22	M26	X	-2	-2	0	0
23	M25	X	-2	-2	0	0
24	M15	X	-2	-2	0	0
25	M3	X	-2	-2	0	0
26	M4	X	-2	-2	0	0
27	M5	X	-2	-2	0	0
28	M6	X	-2	-2	0	0
29	M7	X	-2	-2	0	0
30	M8	X	-2	-2	0	0
31	M9	X	-2	-2	0	0
32	M10	X	-2	-2	0	0
33	M1	X	-2	-2	0	0
34	M2	X	-2	-2	0	0

Member Distributed Loads (BLC 8 : WLIZ)

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[in.%]	End Location[in.%]
1	M14	Z	-2	-2	0	0
2	M13	Z	-2	-2	0	0
3	M12	Z	-2	-2	0	0
4	M11	Z	-2	-2	0	0
5	M21	Z	-2	-2	0	0
6	M20	Z	-2	-2	0	0
7	M30	Z	-2	-2	0	0
8	M29	Z	-2	-2	0	0
9	M19	Z	-2	-2	0	0
10	M18	Z	-2	-2	0	0
11	M28	Z	-2	-2	0	0
12	M17	Z	-2	-2	0	0
13	M27	Z	-2	-2	0	0
14	M16	Z	-2	-2	0	0
15	M26	Z	-2	-2	0	0
16	M25	Z	-2	-2	0	0
17	M15	Z	-2	-2	0	0
18	M24	Z	-2	-2	0	0
19	M23	Z	-2	-2	0	0
20	M22	Z	-2	-2	0	0
21	M3	Z	-2	-2	0	0
22	M4	Z	-2	-2	0	0
23	M2	Z	-2	-2	0	0
24	M1	Z	-2	-2	0	0
25	M10	Z	-2	-2	0	0
26	M9	Z	-2	-2	0	0
27	M8	Z	-2	-2	0	0
28	M7	Z	-2	-2	0	0



Member Distributed Loads (BLC 8 : WLIZ) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft.F...	Start Location[in, %]	End Location[in, %]
29	M6	Z	-2	-2	0	0
30	M5	Z	-2	-2	0	0
31	M33	Z	-2.5	-2.5	0	0
32	M32	Z	-2.5	-2.5	0	0
33	M31	Z	-2.5	-2.5	0	0
34	M40	Z	-2.5	-2.5	0	0
35	M39	Z	-2.5	-2.5	0	0
36	M38	Z	-2.5	-2.5	0	0
37	M37	Z	-2.5	-2.5	0	0
38	M36	Z	-2.5	-2.5	0	0
39	M35	Z	-2.5	-2.5	0	0
40	M34	Z	-2.5	-2.5	0	0

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N2	max	127.759	31	646.052	13	121.868	31	.121	31	.003	32	.338	29
2		min	-139.633	25	-23.5	3	-132.512	25	-.13	25	-.003	26	-.331	3
3	N3	max	93.177	1	594.168	13	69.36	27	.153	32	.003	34	.11	34
4		min	-89.045	25	-22.432	68	-66.696	33	-.158	26	-.003	24	-.107	24
5	N4	max	41.131	29	581.132	13	103.998	2	.176	27	.003	27	.178	29
6		min	-38.831	3	-32.368	67	-98.278	26	-.175	33	-.003	33	-.175	3
7	N5	max	93.143	28	837.377	13	81.699	2	.154	32	.003	27	.097	29
8		min	-89.38	34	-11.477	67	-79.142	26	-.164	26	-.003	33	-.091	3
9	N6	max	55.73	27	647.157	13	39.168	29	.156	28	.003	28	.239	29
10		min	-53.875	33	-6.715	34	-24.694	3	-.146	34	-.003	34	-.236	3
11	N7	max	95.255	2	855.847	13	81.268	1	.129	32	.002	34	.095	29
12		min	-92.994	26	-5.08	35	-76.55	25	-.136	26	-.002	24	-.084	3
13	N8	max	144.436	32	762.745	47	148.319	31	.312	28	.003	29	.282	29
14		min	-160.482	26	-70.522	3	-163.636	25	-.316	26	-.002	3	-.268	3
15	N9	max	79.212	29	904.664	47	142.476	32	.367	32	.003	33	.202	33
16		min	-74.598	23	-99.535	4	-157.84	26	-.383	26	-.003	23	-.206	1
17	N10	max	97.258	28	601.24	13	169.374	27	.036	64	.002	32	.139	33
18		min	-101.766	34	-41.173	68	-172.864	33	-.023	33	-.002	26	-.149	23
19	N11	max	108.816	27	638.975	13	28.414	47	.19	28	.002	34	.257	33
20		min	-92.597	33	-92.878	33	-12.097	3	-.188	34	-.003	24	-.267	23
21	N49	max	166.213	27	23.856	27	434.282	32	.068	27	0	30	.022	27
22		min	-164.003	33	-2.611	67	-440.438	26	-.068	33	0	4	-.022	33
23	N50	max	107.633	28	17.967	1	357.711	28	.047	34	0	30	.016	28
24		min	-105.689	34	-5.585	46	-351.855	34	-.048	24	0	4	-.016	34
25	N51	max	348.419	27	16.038	27	227.858	27	.033	29	0	33	.045	31
26		min	-347.331	25	-.304	38	-227.053	25	-.032	3	0	23	-.045	25
27	N56	max	215.185	27	20.457	13	163.838	2	.022	30	0	33	.03	30
28		min	-215.105	33	-.903	38	-163.928	26	-.022	24	0	23	-.03	24
29	N55	max	94.51	30	16.29	29	314.986	32	.045	30	0	28	.015	30
30		min	-93.538	4	-2.052	46	-317.942	26	-.044	4	0	34	-.015	4
31	N54	max	112.203	28	18	29	371.547	28	.051	30	0	28	.016	32
32		min	-113.517	26	-.981	37	-375.553	26	-.05	4	0	34	-.017	26
33	N58	max	362.971	27	17.006	29	244.834	28	.033	33	0	27	.047	27
34		min	-353.194	33	-2.029	57	-237.171	34	-.034	23	0	33	-.046	33
35	N52	max	420.403	31	21.089	28	333.438	28	.047	34	0	31	.066	34
36		min	-433.113	25	.808	68	-323.505	34	-.049	24	0	25	-.068	24
37	N53	max	694.553	1	18.523	2	30.316	28	0	32	0	31	.106	27
38		min	-691.833	25	-10.293	57	-30.297	34	0	26	0	25	-.105	25
39	N57	max	249.581	31	17.576	30	30.307	32	0	32	0	33	.039	31
40		min	-255.481	25	-2.138	46	-30.31	26	0	26	0	23	-.04	25



Company : W-T Group, LLC.
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Envelope Joint Reactions (Continued)

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
41 Totals:	max	2809.814	27	6969.458	13	2643.716	28					
42	min	-2809.814	33	767.33	67	-2643.715	34					

Envelope AISC 15th(360-16): LRFD Steel Code Checks

Member	Shape	Code ...	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc [...]	phi*Pnt [lb]	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M1	L3X3X4	.240	42	13	.022	21	y	13	35567.973	46656	1.688	3.756	2... H2-1
2	M2	L3X3X4	.243	42	13	.020	21	z	13	35567.973	46656	1.688	3.756	1... H2-1
3	M3	L3X3X4	.126	3.063	29	.020	3.063	y	29	35567.973	46656	1.688	3.756	1... H2-1
4	M4	L3X3X4	.160	3.063	29	.026	21	y	29	35567.973	46656	1.688	3.756	1... H2-1
5	M5	L3X3X4	.206	3.063	29	.025	21	y	29	35567.973	46656	1.688	3.756	2... H2-1
6	M6	L3X3X4	.174	3.063	27	.023	3.063	y	33	35567.973	46656	1.688	3.756	2... H2-1
7	M7	L3X3X4	.275	3.063	29	.038	3.063	y	29	35567.973	46656	1.688	3.756	2... H2-1
8	M8	L3X3X4	.244	3.063	27	.036	21	y	27	35567.973	46656	1.688	3.756	1... H2-1
9	M9	L3X3X4	.174	3.063	27	.024	21	y	27	35567.973	46656	1.688	3.756	2... H2-1
10	M10	L3X3X4	.143	3.063	30	.022	3.063	z	30	35567.973	46656	1.688	3.756	2... H2-1
11	M11	L3X3X4	.228	75.025	13	.022	75.025	z	13	19627.309	46656	1.688	3.73	2... H2-1
12	M12	L3X3X4	.384	37.083	13	.036	0	z	13	20018.183	46656	1.688	3.422	1... H2-1
13	M13	L3X3X4	.215	0	13	.022	0	z	13	20785.033	46656	1.688	3.717	2... H2-1
14	M14	L3X3X4	.172	0	13	.018	74.166	z	13	20018.183	46656	1.688	3.556	1... H2-1
15	M15	L3X3X4	.216	37.513	27	.026	0	y	29	19627.309	46656	1.688	3.362	1... H2-1
16	M16	L3X3X4	.186	75.025	13	.019	75.025	z	13	19627.309	46656	1.688	3.582	2... H2-1
17	M17	L3X3X4	.175	0	13	.019	0	z	13	20018.183	46656	1.688	3.604	2... H2-1
18	M18	L3X3X4	.292	36.25	28	.035	72.5	y	30	20785.033	46656	1.688	3.411	1... H2-1
19	M19	L3X3X4	.194	37.083	29	.023	74.166	z	27	20018.183	46656	1.688	3.406	1... H2-1
20	M20	L3X3X4	.182	75.025	13	.019	75.025	z	13	19627.309	46656	1.688	3.543	1... H2-1
21	M21	L3X3X4	.073	0	30	.004	0	z	30	19627.309	46656	1.688	3.579	2... H2-1
22	M22	L3X3X4	.061	0	30	.003	74.166	z	28	20018.183	46656	1.688	3.67	2... H2-1
23	M23	L3X3X4	.066	72.5	29	.005	72.5	z	29	20785.033	46656	1.688	3.685	2.4 H2-1
24	M24	L3X3X4	.089	0	1	.007	0	z	27	20018.183	46656	1.688	3.625	2... H2-1
25	M25	L3X3X4	.123	75.025	30	.015	0	z	27	19627.309	46656	1.688	3.482	1... H2-1
26	M26	L3X3X4	.103	0	28	.006	0	z	29	19627.309	46656	1.688	3.657	2... H2-1
27	M27	L3X3X4	.116	74.166	27	.008	74.166	z	30	20018.183	46656	1.688	3.634	2... H2-1
28	M28	L3X3X4	.244	72.5	27	.022	0	z	28	20785.033	46656	1.688	3.633	2... H2-1
29	M29	L3X3X4	.157	0	29	.015	0	z	29	20018.183	46656	1.688	3.469	1... H2-1
30	M30	L3X3X4	.080	0	30	.004	75.025	y	1	19627.309	46656	1.688	3.71	2.6 H2-1
31	M31	4"x1/4" Kick ...	.075	74.166	2	.003	37.083	y	30	8170.494	32400	.169	1.316	2... H1-1b
32	M32	4"x1/4" Kick ...	.064	72.5	28	.003	72.5	y	29	8170.494	32400	.169	1.548	2... H1-1b
33	M33	4"x1/4" Kick ...	.082	74.166	29	.004	74.166	y	29	8170.494	32400	.169	1.247	2... H1-1b
34	M34	4"x1/4" Kick ...	.067	0	28	.004	0	y	28	8170.494	32400	.169	1.332	2... H1-1b
35	M35	4"x1/4" Kick ...	.115	0	33	.005	37.513	y	27	8170.494	32400	.169	1.283	2... H1-1b
36	M36	4"x1/4" Kick ...	.114	74.166	34	.005	37.083	y	28	8170.494	32400	.169	1.273	2... H1-1b
37	M37	4"x1/4" Kick ...	.101	72.5	27	.006	72.5	y	27	8170.494	32400	.169	1.313	2... H1-1b
38	M38	4"x1/4" Kick ...	.085	74.166	27	.005	74.166	y	27	8170.494	32400	.169	1.294	2... H1-1b
39	M39	4"x1/4" Kick ...	.068	0	30	.003	0	y	27	8170.494	32400	.169	1.241	2... H1-1b
40	M40	4"x1/4" Kick ...	.076	0	27	.003	0	y	30	8170.494	32400	.169	1.343	2... H1-1b
41	M47	PIPE 2.0	.099	32.813	30	.033	21	30	27741.09	32130	1.872	1.872	2... H1-1b	
42	M48	PIPE 2.0	.176	32.813	27	.054	6.125	27	27741.09	32130	1.872	1.872	1... H1-1b	
43	M49	PIPE 2.0	.075	32.813	28	.022	6.125	29	27741.09	32130	1.872	1.872	2... H1-1b	



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Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section Bolted Connection				Sheet no./rev. 37	
Calc. by CJS	Date 11/12/2020	Chk'd by	Date	App'd by	Date

U-BOLTED CONNECTION (AISC 15TH EDITION)

Anchor Bolts

Bolt Type	A307
Bolt Diameter	D = 0.625 in
Anchor Bolt Area	$A_b = \pi/4 \cdot D^2 = 0.307 \text{ in}^2$
Number of Bolts	n = 1
Nominal Shear Strength	$F_{nv} = 27 \text{ ksi}$
Nominal Tensile Strength	$F_{nt} = 45 \text{ ksi}$

Applied Forces

Maximum Vertical Force Applied	$P_{ytotal} = 226.961 \text{ lbs}$
Maximum Horizontal Force Applied	$P_{ztotal} = 188.498 \text{ lbs}$
Maximum Tension Force Applied	$P_{xtotal} = 1064.9 \text{ lbs}$
Total Resultant Shear Load	$P_{total} = \sqrt{(P_{ytotal}^2 + P_{ztotal}^2)} = 0.295 \text{ kips}$
Vertical Load Applied per Bolt	$P_y = P_{ytotal} / n = 226.961 \text{ lbs}$
Horizontal Load Applied per Bolt	$P_z = P_{ztotal} / n = 188.498 \text{ lbs}$
Tension Load Applied per Bolt	$P_x = P_{xtotal} / n = 1064.900 \text{ lbs}$
Resultant Shear Load per Bolt	$P = \sqrt{(P_z^2 + P_y^2)} = 295.030 \text{ lbs}$
Required Shear Stress	$f_{rv} = P/A_b = 0.962 \text{ ksi}$
ASD Factor of Safety	$\Omega = 2.00$

Bolt Shear Strength

Nominal Allowable Strength	$R_n = F_{nv} \times A_b = 8.283 \text{ kip}$
Allowable Shear Strength	$R_n/\Omega = 4.142 \text{ kips}$
Check	$R_n/\Omega = 4.142 \text{ kip} > P = 0.295 \text{ kip}$ PASS – Design Force Exceeds Applied Force.

Bolt Combined Tensile/Shear Strength

Required Shear Stress	$f_{rv} = P/A_b = 0.962 \text{ ksi}$
ASD Factor of Safety	$\Omega = 2.00$
Maximum Nominal Tensile/Shear Stress	$F'_{nt_max} = F_{nt} = 45.000 \text{ ksi}$
Nominal Tensile/Shear Stress	$F'_{nt} = 1.3 \times F_{nt} - \Omega \times F_{nv}/F_{nv} \times f_{rv} = 55.295 \text{ ksi}$
Nominal Strength	$R_n = F'_{nt} \times A_b = 16.964 \text{ kip}$
Allowable Strength	$R_n/\Omega = 8.482 \text{ kip}$
Check	$R_n/\Omega = 8.482 \text{ kip} > P_x = 1.065 \text{ kip}$ PASS – Design Force Exceeds Applied Force.



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Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section ALL AROUND WELD CHECK				Sheet no./rev. 38	
Calc. by CJS	Date 11/22/2020	Chk'd by	Date	App'd by	Date

WELDED CONNECTION OF CORRAL POST TO TOP OF TANK

Electrode of Weld $F_{EXX} = 70$ ksi
Type Double Fillet
Fillet Weld Size $D = 0.25$ in
Weld Size $D = 0.250$ in
Controlling member thickness (Column) $t_{COL} = 0.260$ in

Minimum Weld Size (Table J2.4) $D_{min} = 0.1875$ in
 $D = 0.250$ in $> D_{min} = 0.187$ in
PASS – Weld size exceeds minimum weld size

Weld Length $L_w = h_{PL} = 3.000$ in
Minimum Weld Length (J2.2b) $L_{min} = 4 * D = 1.000$ in
 $L_w = 3.000$ in $> L_{min} = 1.000$ in
PASS – Weld length exceeds minimum weld length

Shear Tab Weld Strength at Column

Weld Type Double Fillet
Minimum base material tensile strength $F_{ubase} = \min(F_{uPL}, F_{uCOL}) = 36.000$ ksi
Electrode of Weld $F_{EXX} = 70.000$ ksi
Number of welds $n = 2$
Electrode strength coefficient (Table 8-3) $C_1 = 1.0$
Fillet Weld Size $D = 0.250$ in
Base material proration factor (Eq. 9-2) $\alpha = \min(t_{PL} * 0.6 * F_{ubase} / (0.6 * F_{EXX} * \sqrt{(2)/2 * D * n}), 1) = 0.182$
Weld Length $L_w = 3.000$ in
Weld Nominal Strength (8-1) $R_n = n * C_1 * \alpha * 0.60 * F_{EXX} * \text{sqrt}(2) / 2 * D * L_w = 17.65$ kips
Factor of Safety $\Omega = 2.00$
Weld Allowable Strength $R_n / \Omega = 8.83$ kips
Shear Load $V = 0.7$ kips
 $V / (R_n / \Omega) = 0.08$
PASS – Weld capacity exceeds applied shear load

EXHIBITS

GENERAL STRUCTURAL NOTES

- DESIGN AND CONSTRUCTION OF WORK SHALL CONFORM TO 2018 INTERNATIONAL BUILDING CODE, AISC/ASD 15TH EDITION, ASCE 7-16, TIA/EIA-222-H STANDARDS. IN CASE OF CONFLICT BETWEEN THE CODES, STANDARDS, REGULATIONS, SPECIFICATIONS, GENERAL NOTES AND/OR MANUFACTURER'S REQUIREMENTS USE THE MOST STRINGENT PROVISION.
- IT IS THE EXPRESS INTENT OF THE PARTIES INVOLVED IN THIS PROJECT THAT THE CONTRACTOR OR SUBCONTRACTOR OR INDEPENDENT CONTRACTOR OR THEIR RESPECTIVE EMPLOYEES SHALL EXCULPATE THE ARCHITECT, THE ENGINEER, THE CONSTRUCTION MANAGER, THE OWNER, AND THEIR AGENTS, FROM ANY LIABILITY WHATSOEVER AND HOLD THEM HARMLESS AGAINST LOSS, DAMAGES, LIABILITY OR ANY EXPENSE ARISING IN ANY MATTER FROM THE WRONGFUL OR NEGLIGENT ACT, OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, OR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FAILURE TO CONFORM TO THE STATE SCAFFOLDING ACT IN CONNECTION WITH THE WORK.
- VERIFY ALL EQUIPMENT MOUNTING DIMENSIONS PER MANUFACTURER DRAWINGS.
- SUBMIT ONE SEPIA AND TWO PRINTS OF ALL STRUCTURAL SHOP DRAWINGS. MARKED UP SEPIA SHALL BE RETURNED.
- DESIGN LOADS:
DEAD LOADS USED IN DESIGN ARE AS FOLLOWS:

A. RFMA-2244UH09Sxx	= 132.0 LBS
B. RFMA-2241UH06Sxx	= 35.0 LBS
C. CIELO NETWORKS SKYLINK AON DT	= 20.3 LBS

 WIND LOADS USED IN DESIGN ARE AS FOLLOWS:

A. BASIC WIND SPEED (3 SECOND GUST)	= 107 MPH
B. BUILDING OCCUPANCY CATEGORY	= II
C. WIND EXPOSURE	= C
D. DESIGN WIND PRESSURE	= 40.0 PSF
E. WIND LOADS ARE BASED ON ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, AND ANSI/TIA-222-H STANDARD	

REPAIRS AND REPLACEMENTS NOTES

- IN THE EVENT OF DAMAGE, THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS AND REPAIRS AT NO ADDITIONAL COST TO THE CLIENT AND/OR BUILDING OWNER.
- EXISTING INTERIOR OR EXTERIOR FACADES REMOVED FOR WALL OPENINGS OR ANY OTHER REMODELING WORK SHALL BE REPLACED TO MATCH THE EXISTING CONDITIONS.
- CUTTING AND PATCHING: WHERE EXISTING ELEMENTS OF THE BUILDING ARE REQUIRED TO BE CUT TO FIT, ALTERED OR REMOVED. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO OTHER PORTIONS OF THE EXISTING BUILDING, INCLUDING, BUT NOT LIMITED TO, THE SHORING, BRACING AND SUPPORT REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY. UPON COMPLETION OF THE WORK, ALL EXISTING MATERIALS, SYSTEMS AND ASSEMBLIES SHALL BE REPLACED, REPAIRED, OR REFIT TO MATCH OR EXCEED THE FIT, FINISH AND PERFORMANCE OF PREVIOUS CONDITIONS. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS WHICH AFFECT SAFETY, STRUCTURAL INTEGRITY OR WATER TIGHTNESS OF THE BUILDING ARE CORRECTED.
- PROTECTIONS: PROTECT WITH TEMPORARY BARRICADES, COVERINGS, OR OTHER PROTECTIONS TO PREVENT INJURY OR DAMAGE TO PERSONS OR PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY HIS/HER OPERATIONS.

STRUCTURAL SHEET INDEX

S-0.0	STRUCTURAL NOTES
S-1.0	CORRAL PLAN & DETAIL

STRUCTURAL STEEL NOTES

- MEET OR EXCEED THE FOLLOWING CODES & STANDARDS EXCEPT AS NOTED:
 - STRUCTURAL STEEL AISC SPECIFICATION: ALLOWABLE STRESS DESIGN, 15TH EDITION

• WIDE FLANGE	ASTM A992 - 50 KSI
• PIPES	ASTM A53
• CHANNELS, ANGLES, AND PLATES	ASTM A36
• PLATES BENT OR COLD FORMED	ASTM A283, GRADE C
• HSS PIPES	ASTM A500, GRADE C - 46 KSI
• HSS TUBES	ASTM A500, GRADE C - 50 KSI
• STRUCTURAL SHEETS, HOT ROLLED	ASTM A570
• COLD-FORMED STEEL TUBING	ASTM A500, GRADE B
• BOLTS, NUTS & WASHERS FOR FRAMING MEMBERS AND BRACINGS	ASTM A325-N
• BOLTS, NUTS & WASHERS FOR ANCHOR BOLTS AND SECONDARY CONNECTIONS	ASTM A307
 - WELDS

	ASTM A307
	AWS E70XX (EXCEPTION IS TAKEN TO AISC CODE OF STANDARD PRACTICE PARAGRAPH)
- COATINGS:
 - ALL NEW STEEL SHALL BE HOT DIP GALVANIZED
 - FIELD TOUCH UP ALL GALVANIZED SURFACES
 - ALL NEW STEEL AND STEEL COMPONENTS SHALL BE FINISH COATED WITH TNEPEC PAINT TO A COLOR TO MATCH EXISTING SUPPORTING STRUCTURE AND APPLIED PER MANUFACTURERS RECOMMENDATION. FINAL COLORS SHALL BE APPROVED BY THE CITY PRIOR TO USE.

EXISTING CONDITION NOTES

- CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING CONSTRUCTION TO WHICH THIS CONSTRUCTION SHALL BE CONNECTED, IS AS INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS ON SITE PRIOR TO ORDERING ANY MATERIALS OR PERFORMING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY INADVERTENTLY OCCUR SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREA.
- EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED IN FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER IMMEDIATELY.
- DO NO SCALE DRAWINGS.



EXP: 11/30/29 SIGNED: 07/22/20

NO.	REVISION	DATE	BY
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WILLOWBROOK WATER TOWER
7760 S QUINCY STREET
WILLOWBROOK, IL 60527



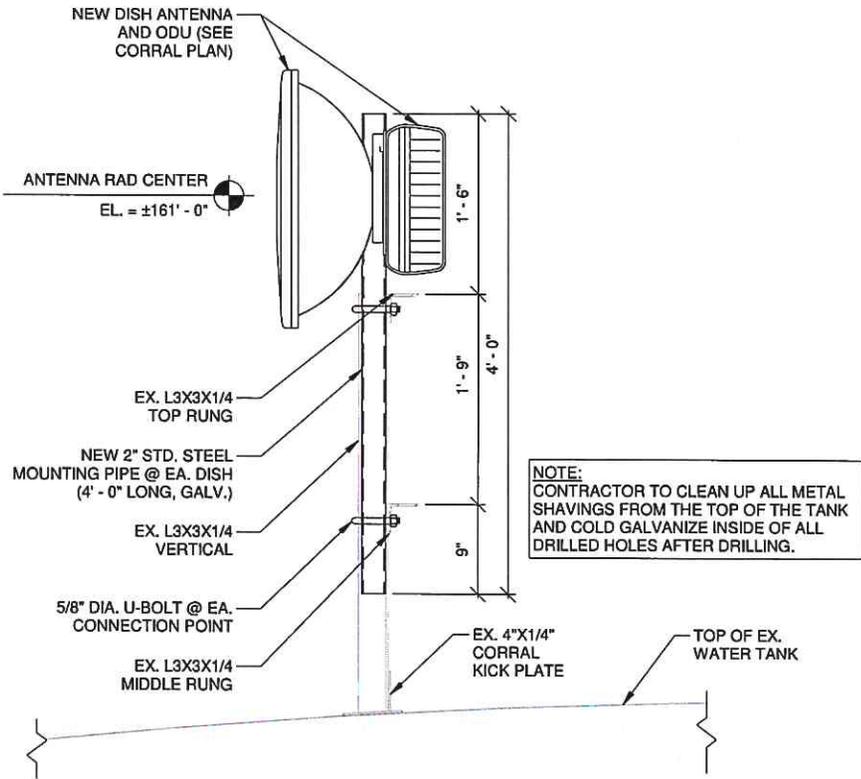
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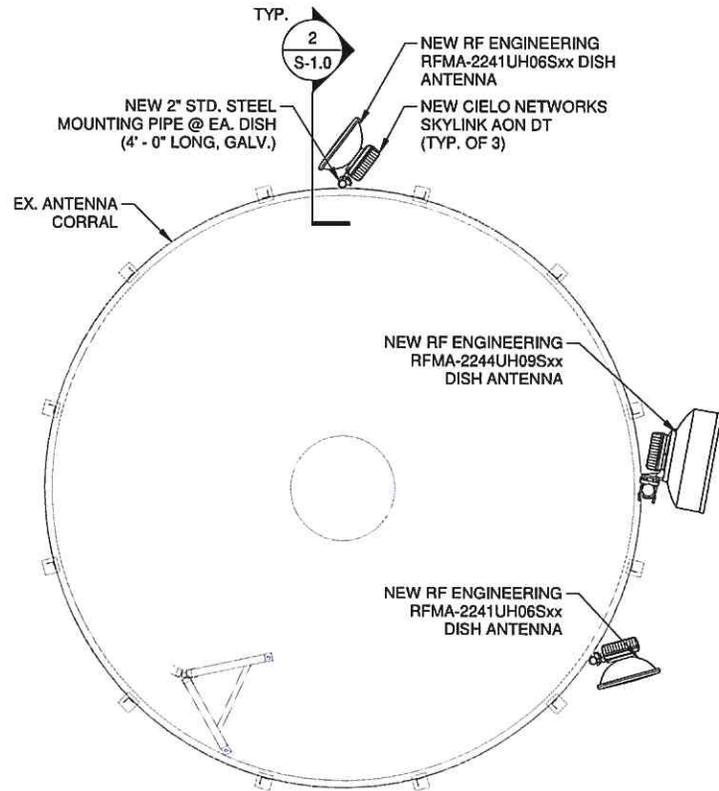
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S-0.0
STRUCTURAL NOTES

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 ACCESSIBILITY CONSULTING \ STRUCTURAL



2 PROPOSED DISH ANTENNA CORRAL MOUNT DETAIL
1" = 1'-0"



1 CORRAL PLAN
1/4" = 1'-0"



JEFFERY S. GUTOWSKY
081-005847
STATE OF ILLINOIS
EXP.: 11/30/20 SIGNED: 07/22/20

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WILLOWBROOK WATER TOWER
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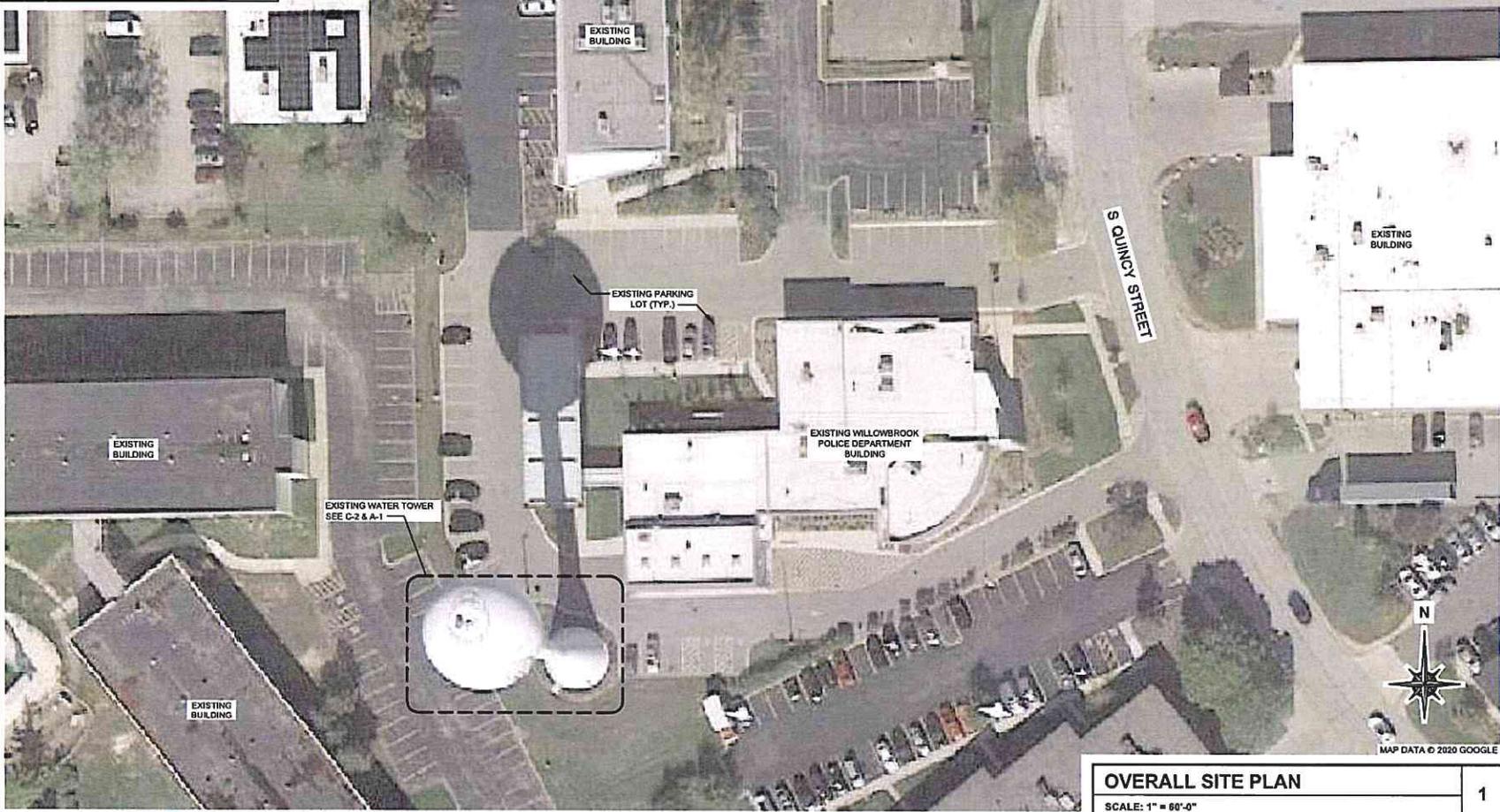
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PLUMBING \ ELECTRICAL \ LAND SURVEYING
ACCESSIBILITY CONSULTING \ STRUCTURAL

CHECK: JSB
DRAWN: CJS
JOB: 200008287

S-1.0
CORRAL PLAN & DETAIL

GENERAL SITE NOTES:

1. CONTRACTOR TO HIRE PUBLIC (811) AND PRIVATE LOCATING SERVICE IN ORDER TO LOCATE AND PROTECT ALL SURFACE UTILITIES. DO NOT SCALE OFF THESE PLANS FOR ANY BELOW GRADE UTILITIES
2. CONTRACTOR SHALL VERIFY ALL EXISTING BURIED AND OVERHEAD UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL REPAIR ALL DAMAGED UTILITIES AT HIS OWN COST AND COORDINATE ANY REPAIRS WITH RESPECTIVE UTILITY COMPANY.
3. CONTRACTOR TO VERIFY ALL HEIGHTS AND AZIMUTHS IN FIELD PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ABEEP AND ENGINEERING FIRM OF ANY DISCREPANCIES BEFORE PROCEEDING.
4. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION.



OVERALL SITE PLAN

SCALE: 1" = 60'-0"

1

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 Changing Outages, Creating Opportunity

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 WILLOWBROOK, IL 60527

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REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/20/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CDS	06/16/20	ATK

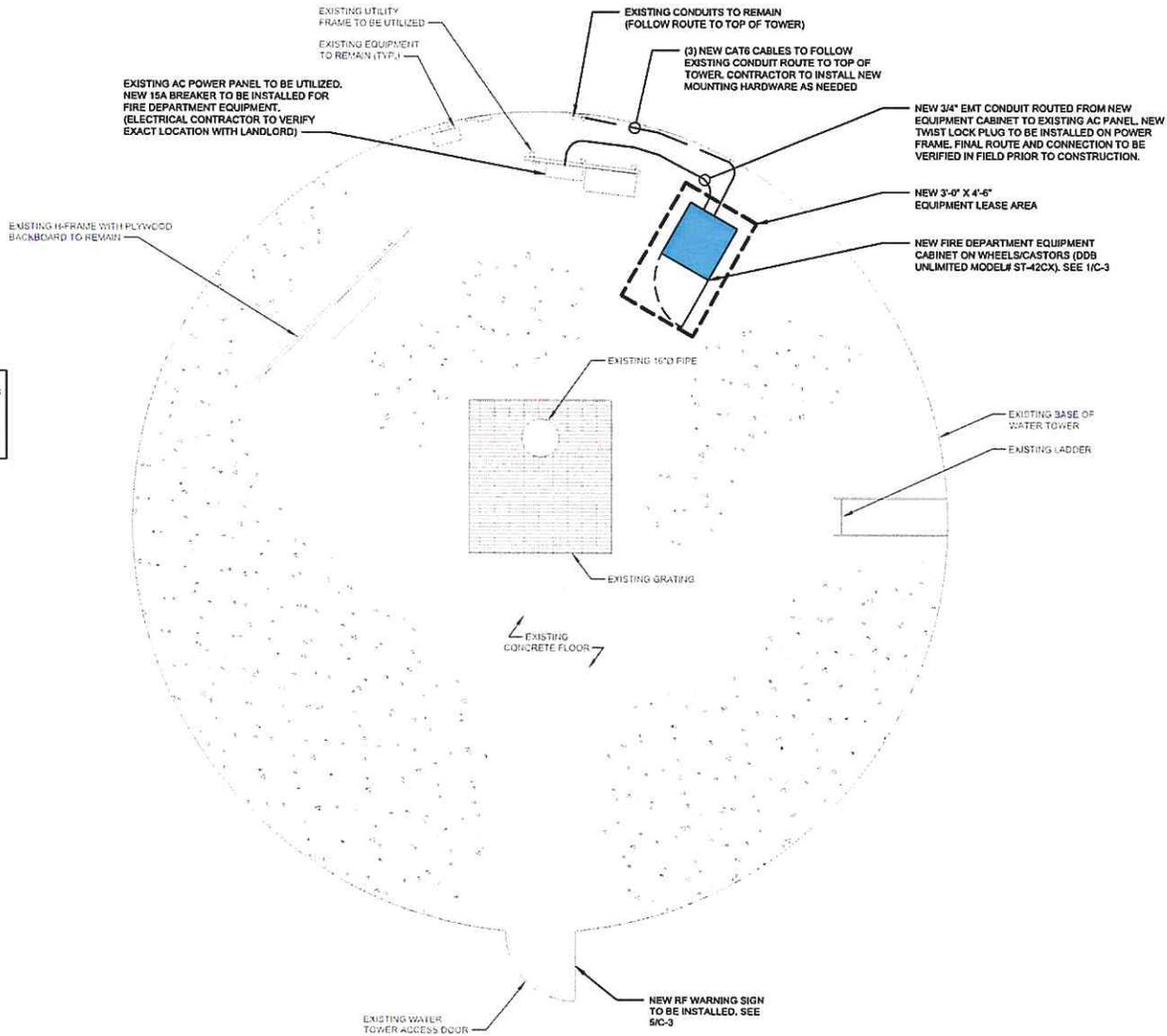
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CHECK: JKR
 DRAWN: TRX
 JOB: 2000825T

C-1
 OVERALL SITE PLAN

LEGEND

- EXISTING EQUIPMENT
- NEW EQUIPMENT
- REMOVED EQUIPMENT



NOTE:
 CONTRACTOR TO ENSURE THAT NO CONFLICTS OCCUR IN THE FIELD WITH THE LOCATION OF THE PROPOSED FIRE DEPARTMENT EQUIPMENT. ANY CONFLICTS SHOULD BE REPORTED TO THE FIRE DEPARTMENT CONSTRUCTION MANAGER.



EQUIPMENT PLAN
 SCALE: 1/4" = 1'-0"
 1



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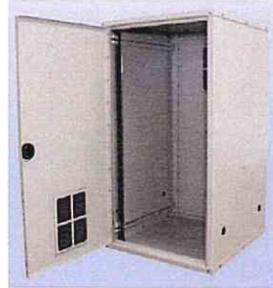
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C-2
 EQUIPMENT PLAN



DDB
UNLIMITED

ST-42DX

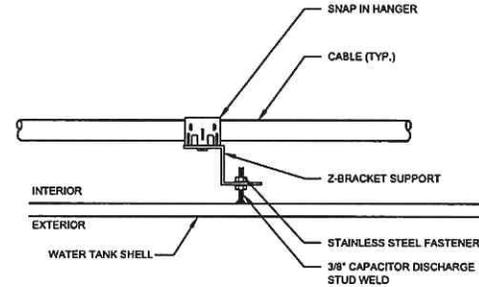


- 43"H X 24"W X 26"D
- ADJUSTABLE 19" RACKING
- 24 RACKING UNITS
- FRONT AND REAR DOORS
- FOAM FILTERED VENTS
- POWDER BAKED-ON CREAM PAINT
- LOCKABLE
- SHIPPING WEIGHT: 95 lbs.

EQUIPMENT CABINET DETAIL

SCALE: NONE

1



TANK MOUNTED CABLE DETAIL

SCALE: NONE

2

**COMMSCOPE SNAPSTAK PLUS
ADJUSTABLE HANGER,
14.1mm-16mm CABLE**

TESSCO SKU: 207219 UPC: PSSH-1416
QTY/UOM: 10 PACK MFG PART #: SSH-1416

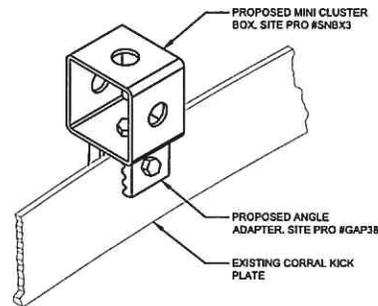


SNAP-IN HANGER DETAIL

SCALE: NONE

3

NOTE:
INSTALL CABLES ON MINI
CLUSTER BOX W/ SNAP IN
HANGERS. SEE 3/C-3.



CORRAL CABLE ROUTING DETAIL

SCALE: NONE

4



RF WARNING SIGN

SCALE: NONE

5



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LLC

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EXPIRES: 11/30/21 SIGNED: J00700/20

REVISIONS

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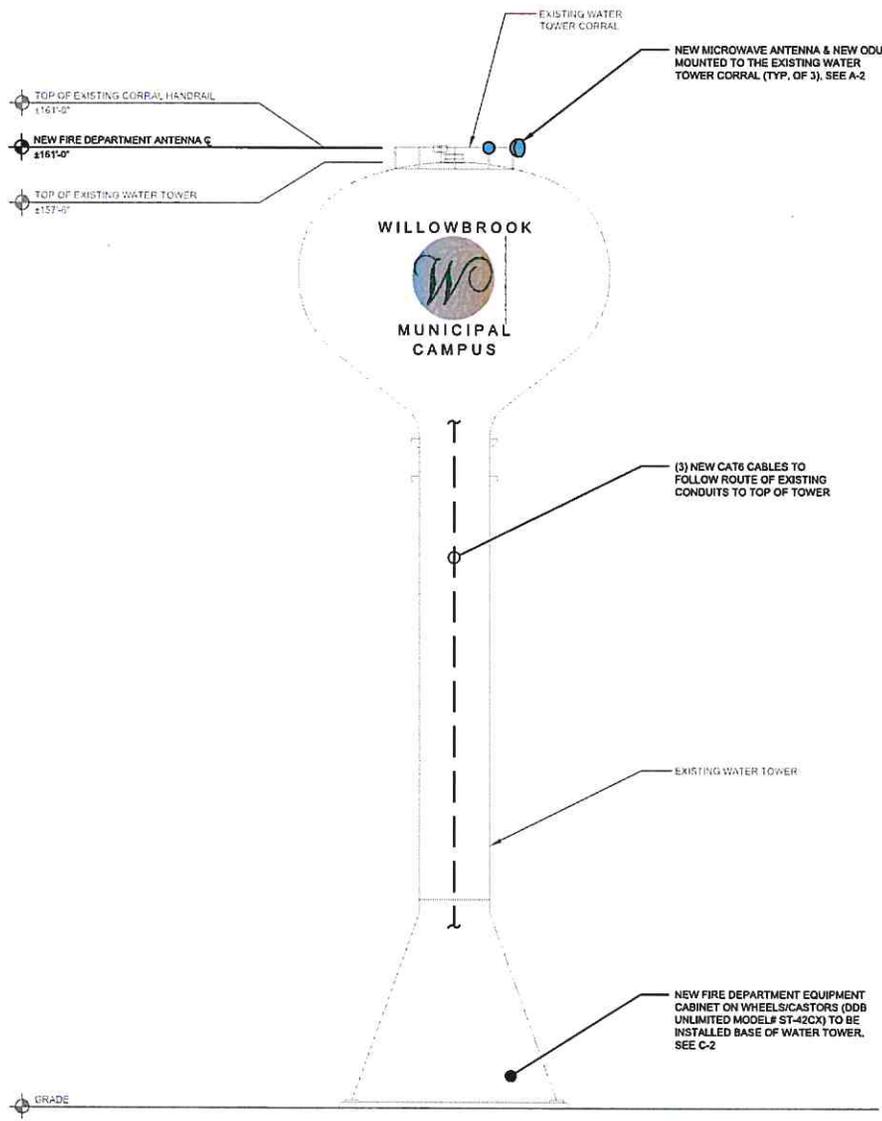
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CHECK: JKR
DRAWN: TRK
JOB: 20008251

C-3

EQUIPMENT DETAILS



NOTE:
 A STRUCTURAL EVALUATION OF THE TOWER OR STRUCTURE FOR THE NEW ANTENNA LOADING HAS BEEN COMPLETED BY WT GROUP STRUCTURAL ENGINEERING, LLC ON DATE PENDING. THE LOCATION AND MOUNTING OF THE ANTENNAS SHOWN IN THE STRUCTURAL ANALYSIS SHALL SUPERSEDE THESE DRAWINGS.

TOWER ELEVATION
 SCALE: 1'-0" = 20'-0"

1



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 B. Expense 11-03-2008
 C. Equipment 1000 11-03-2008



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C	PERMIT CD'S	06/18/20	ATK

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 ACCESSIBILITY CONSULTING \ STRUCTURAL

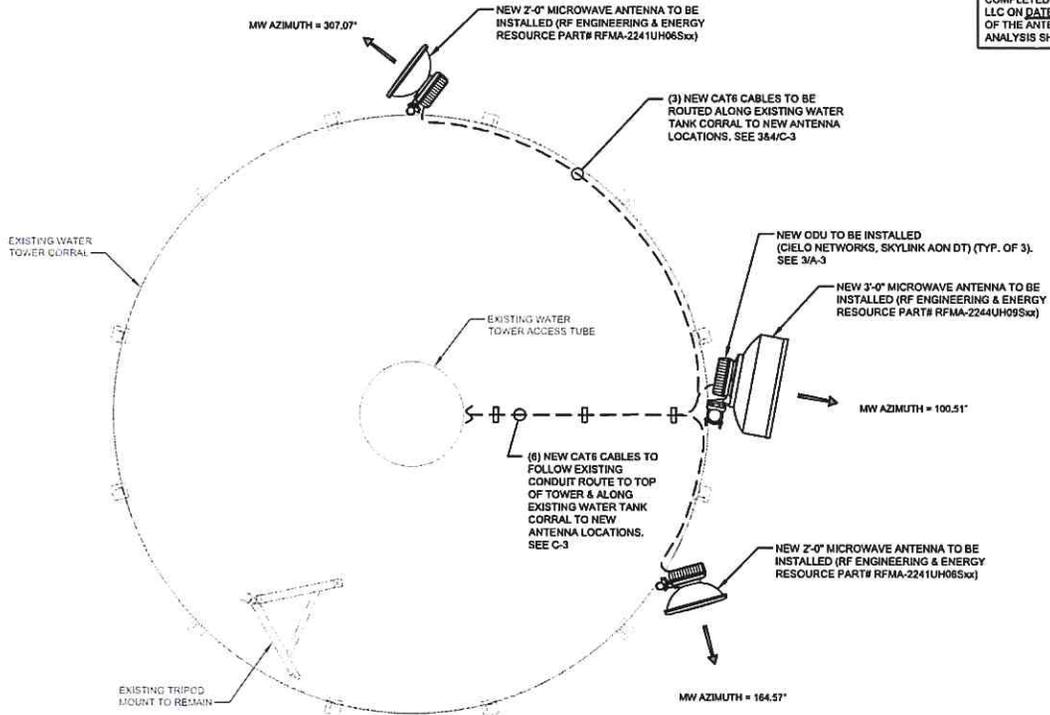
CHECK: JKR
 DRAWN: TRK
 JOB: 20080201



A-1
 TOWER ELEVATION

WILLOWBROOK WATER TOWER			
ANTENNA MODEL #	RFMA-2244UH095xx	RFMA-2241UH065xx	RFMA-2241UH065xx
DIAMETER/WEIGHT	40.2" / 66 LBS	25.9" / 24 LBS	25.9" / 24 LBS
FREQUENCY RANGE	21.2-23.6 GHZ	21.2-23.6 GHZ	21.2-23.6 GHZ
RAD CENTER	161'-0"	161'-0"	161'-0"
AZIMUTH	100.51°	164.57°	307.07°
VERTICAL ANGLE	0.40° DOWNTILT	0.80° DOWNTILT	0.94° DOWNTILT
RECEIVE SITE	TRIS 4 (TOWER)	TRIS 3	TRI STATE 2
PATH DISTANCE	3.00 MILES	1.36 MILES	0.95 MILES
ODU MODEL #	(1) SKYLINK AON DT	(1) SKYLINK AON DT	(1) SKYLINK AON DT
CABLE RUNS/TYP	(1) RUN OF CAT6	(1) RUN OF CAT6	(1) RUN OF CAT6
CABLE LENGTH	200'-0"	200'-0"	200'-0"

NOTE:
A STRUCTURAL EVALUATION OF THE TOWER OR STRUCTURE FOR THE NEW ANTENNA LOADING HAS BEEN COMPLETED BY WT GROUP STRUCTURAL ENGINEERING, LLC ON DATE PENDING. THE LOCATION AND MOUNTING OF THE ANTENNAS SHOWN IN THE STRUCTURAL ANALYSIS SHALL SUPERSEDE THESE DRAWINGS.



ANTENNA PLAN
SCALE: NONE

1



Abeep
LLC

WT GROUP
Engineering with Precision, Pace and Passion.
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WILLOWBROOK WATER TOWER
7760 S QUINCY STREET
WILLOWBROOK, IL 60527

EXPIRES: 11/30/21 SIGNED: XX/XX/20

REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/30/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CD'S	06/18/20	ATK

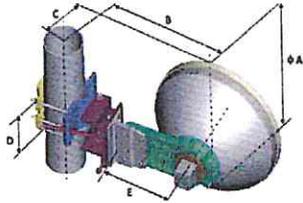
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PLUMBING \ ELECTRICAL \ LAND SURVEYING
ACCESSIBILITY CONSULTING \ STRUCTURAL

CHECK: JKR
DRAWN: TRK
JOB: 20008281

A-2
ANTENNA PLAN



RFMA-2241UH06Sxx



DIMENSIONS (IN.)	
A	25.9
B	18.2
C	10.4
D	4.5
E	9.1

Mechanical Specifications	
Diameter (mp/Ø)	0.6m/2ft
Antenna Color	Panasonic Cool Gray 1C
Wave-guide Size	153 IEC-R1220
Radiator Options	Molded
Azimuth Adjustment	Course : 360° Fine : ±15°
Elevation Adjustment	Course : ±25° Fine : ±15°
Diameter of Mounting Pole (mm/Ø)	Ø51-Ø114mm/2-4.5in
Wind Velocity Survival Rating (m/s)	67
Wind Velocity Operational (m/s)	30
Ice-load (mm/Ø)	25.4mm/1in
Operational Temperature (C) / (F)	-45 ~ +60°C / -49 ~ 140°F
Asial Force (N)	1218
Side Force (N)	601
Twisting Moment (N-m)	505
Packaging	Crates
L x W x H (mm/Ø)	750x750x440mm/29.5x29.5x17in
Gross Weight/Net Weight (kg/Ølb)	16kg/11kg/35lb/24lb

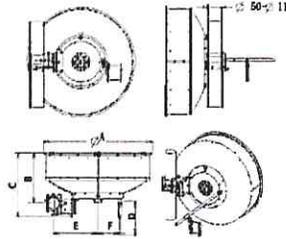
ANTENNA DETAIL

SCALE: NONE

1



RFMA-2244UH09Sxx



DIMENSIONS (IN.)	
A	40.2
B	18.3
C	23.2
D	39.4
E	16.3
F	8.3

Mechanical Specifications	
Diameter (mp/Ø)	0.9m/3ft
Antenna Color	Cool Gray
Wave-guide Size	153 IEC-R1220
Radiator Options	Molded
Azimuth Adjustment	Course : 360° Fine : ±10°
Elevation Adjustment	Course : ±10° Fine : ±10°
Diameter of Mounting Pole (mm/Ø)	Ø51-Ø114mm/2-4.5in
Wind Velocity Survival Rating (m/s)	67
Wind Velocity Operational (m/s)	30
Ice-load (mm/Ø)	25.4mm/1in
Operational Temperature (C) / (F)	-45 ~ +60°C / -49 ~ 140°F
Asial Force (N)	2605
Side Force (N)	1284
Twisting Moment (N-m)	715
Packaging	Wooden
L x W x H (mm/Ø)	1100x1100x450mm/43x43x18in
Gross Weight/Net Weight (kg/Ølb)	60kg/30kg / 132lb/66lb

ANTENNA DETAIL

SCALE: NONE

2

cielo[®] NETWORKS SkyLink AON DT



Mechanical and Environmental	
Input Power Requirements	-48 VDC direct DC or PoE (-36 VDC to -60 VDC range)
Weight	9.3kg (20.3lbs) including internal OMT or coupler (2+0 configuration)
Size	23.8cm x 23.2cm x 12.5cm (9.41" x 9.12" x 4.94") not including antenna nose or handle
Operating Temperature	-33 °C to +65 °C (-27 °F to +161 °F) per ETS 300 019-3.4 Class 44B
Humidity	5%~100%
Weather	IP67 / All Weather
Safety	IEC 60950-1, -2
Regulatory	US FCC Part 101, FCC Part 15B, ETSI EN 302 217

ODU DETAIL

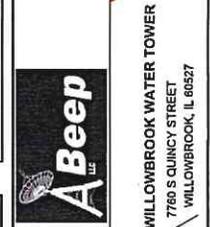
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3

NOT USED

SCALE: NONE

4



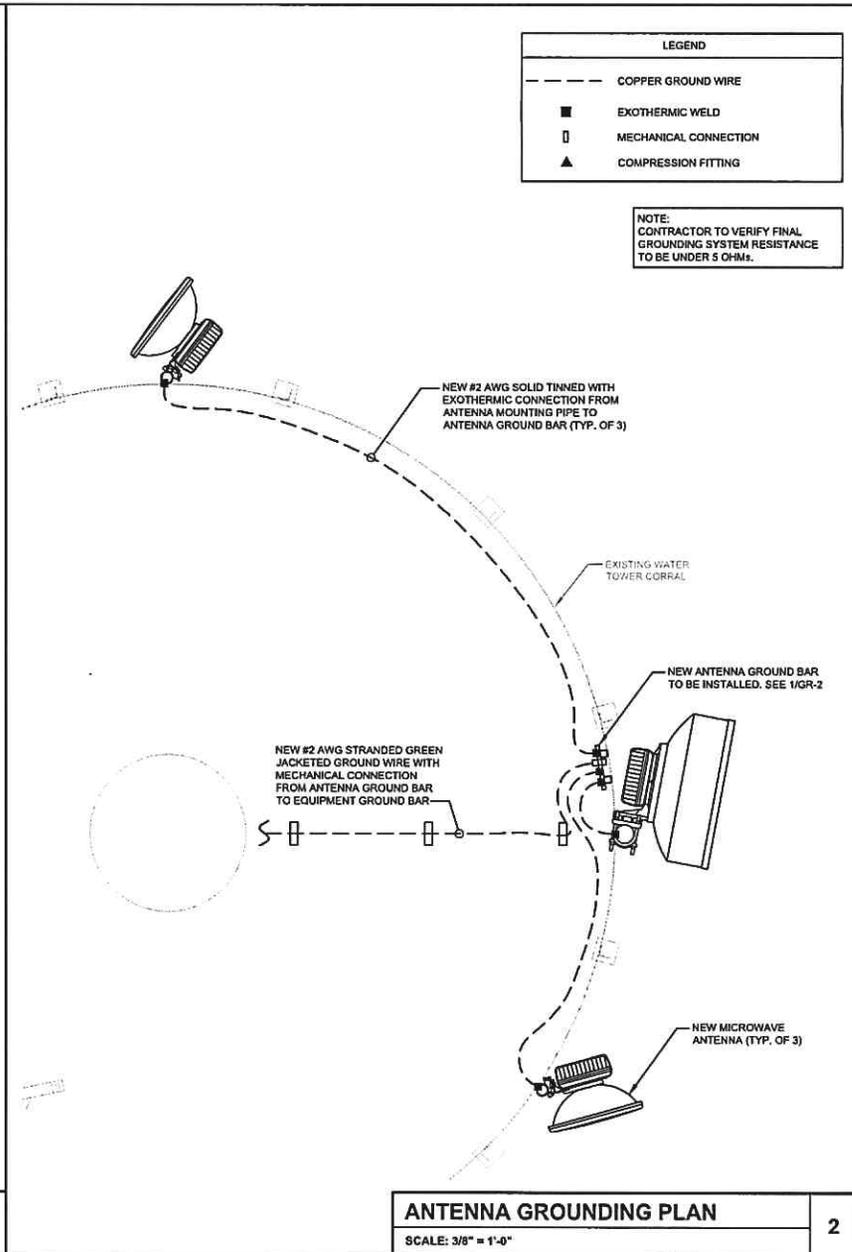
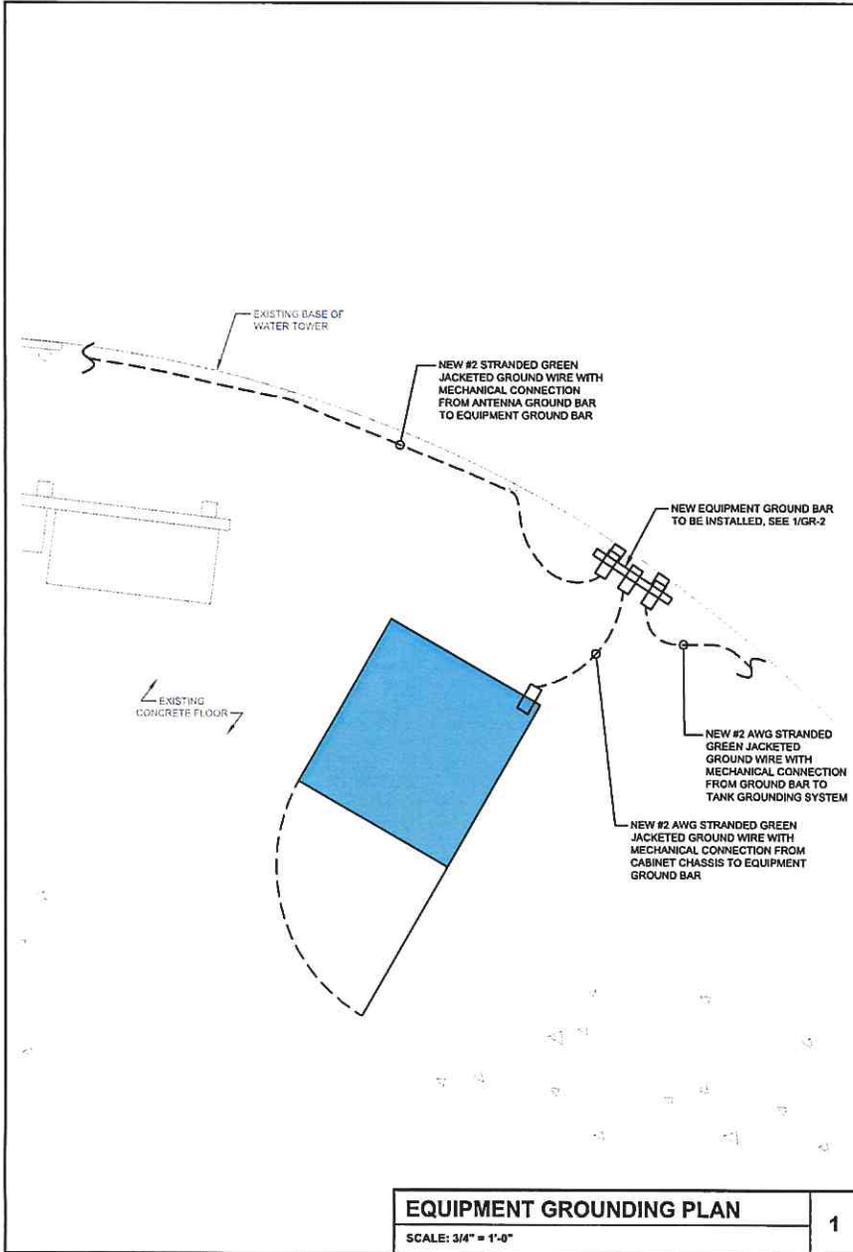
WILLOWBROOK WATER TOWER
7860 S QUINCY STREET
WILLOWBROOK, IL 60527

EXPIRES: 11/30/21 SIGNED: XX/XX/20

REVISIONS			
REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/09/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CDS	06/16/20	ATK



A-3
ANTENNA DETAILS





WILLBROOK WATER TOWER
7760 S QUINCY STREET
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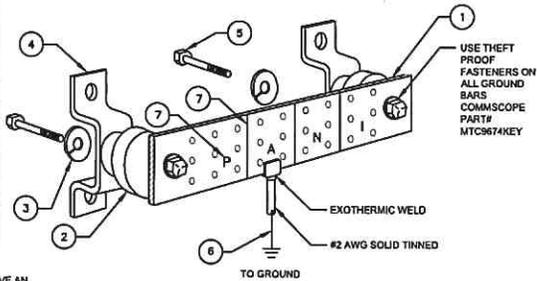
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REVISIONS		
REV.	ISSUED FOR	DATE BY
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B	ADDITIONAL DISH	05/06/20 TRK
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---	---

GR-1
GROUNDING PLANS

KEY NOTES:

- 1/4" THK ELECTRICAL TINNED GROUND BAR HARGER OR APPROVED EQUAL - HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- INSULATORS (UNLESS NOTED OTHERWISE)
- 3/8" STAINLESS STEEL LOCKWASHERS
- WALL MOUNTING BRACKET
- 3/8" STAINLESS STEEL BNLF BOLTS
- EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR, ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD
- CONTRACTOR SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "N", "T") WITH 1" HIGH LETTERS



EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION

SECTION "P" - SURGE PRODUCERS

- COLLECTOR GROUND BAR
- GENERATOR FRAMEWORK (IF AVAILABLE)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND
- FIBER GROUND BAR
- EQUIPMENT ROOM COLLECTOR GROUND BAR
- HVAC
- RECTIFIER FRAMES

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING)
- METALLIC COLD WATER PIPE (IF AVAILABLE)
- BUILDING STEEL (IF AVAILABLE)
- AC POWER

SECTION "N" - NON-ISOLATED GROUND ZONE EQUIPMENT

- MISCELLANEOUS NON-ISOLATED GROUND ZONE EQUIPMENT
- CABLE TRAY SYSTEM
- EQUIPMENT FRAMES
- BATTERY RACKS
- DC POWER

SECTION "T" - ISOLATED GROUND ZONE

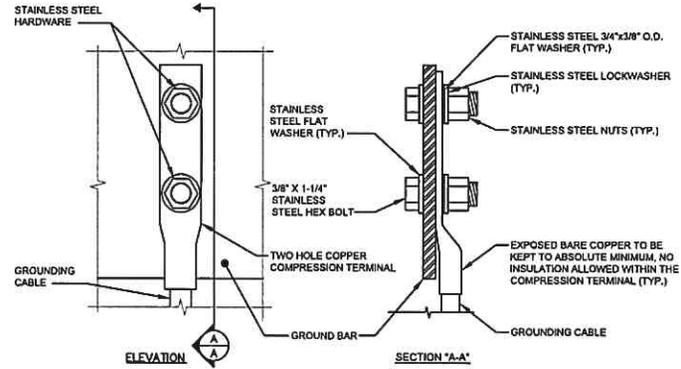
- ISOLATED EQUIPMENT FRAMES
- ISOLATED GROUND BAR - IGB

- NOTES:**
- EXTERIOR GROUND BARS TO BE TIN PLATED
 - HARDWARE SHALL BE STAINLESS STEEL
 - CONTRACTOR SHALL GROUP INCOMING WIRES
 - CONTRACTOR TO APPLY KOPR-SHIELD TO ALL CONNECTIONS

GROUND BAR DETAIL

SCALE: NONE

1



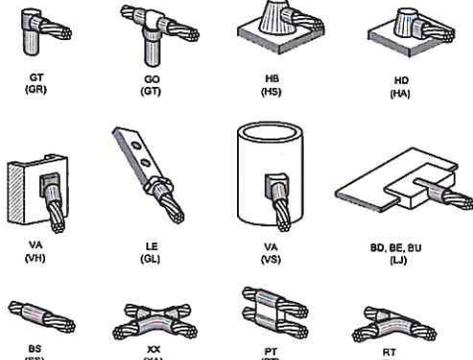
1. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS
2. NO CRIMPING OF SOLID #2, USE EXOTHERMIC WELD ONLY

GROUND BAR CONNECTION DETAIL

SCALE: NONE

2

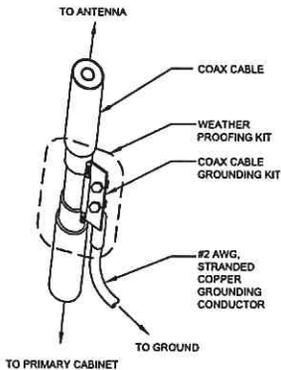
NOTE: THE FOLLOWING SYMBOLS SHOWN ARE HARGER ULTRAWELD EXOTHERMIC CONNECTIONS WITH PART NUMBERS BELOW. THESE CONNECTIONS MAY BE CROSS-REFERENCED WITH CADWELD CONNECTIONS WHICH ARE SHOWN IN PARENTHESES.



EXOTHERMIC WELD TYPES

SCALE: NONE

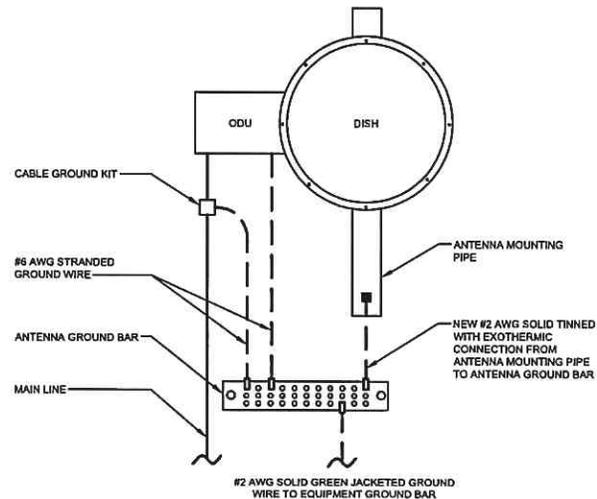
3



COAX CABLE GROUNDING KIT

SCALE: NONE

4



ANTENNA GROUNDING DETAIL

SCALE: NONE

5

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WILLOWBROOK WATER TOWER
 7760 S QUINCY STREET
 WILLOWBROOK, IL 60527

EXPIRES: 11/30/21 SIGNED: 06/06/20

REV.	ISSUED FOR	DATE	BY
A	SCHEMATIC DRAWING	04/29/20	TRK
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C	PERMIT CD'S	06/16/20	ATK

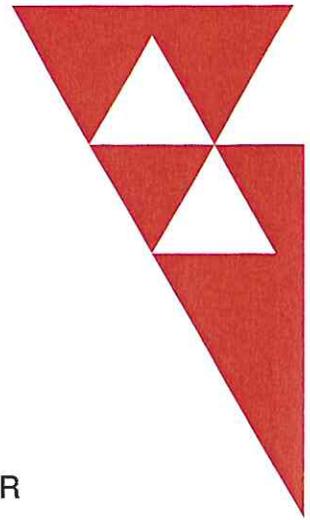
AGENTS: DESIGN & PROGRAM MANAGEMENT
 ELECTRICAL MECHANICAL
 PLUMBING HEATING & AIR CONDITIONING
 ACCESSIBILITY CONSULTING STRUCTURAL

CHECK: JKR
 DRAWN: TRK
 JOB: 20008267

GR-2
 GROUNDING DETAILS



Structural Engineering
2675 Pratum Avenue | Hoffman Estates, IL 60192
PH: (224) 293-6333 | www.wtengineering.com



SITE NAME: WILLOWBROOK WATER TOWER
SITE ADDRESS: 37760 S. QUINCY STREET
WILLOWBROOK, IL 60527

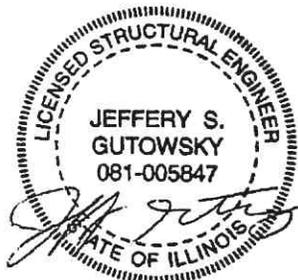
STRUCTURAL JOB NO: 2000826T

STRUCTURAL CALCULATIONS

Date: 11/12/2020

WATER TANK CAPACITY LEVEL: 45.8%

The calculations included herein, as listed above, were prepared by me, or under my direct supervision, and to the best of my knowledge; comply with the requirements of all applicable codes and ordinances.



Jeff Gutowsky, P.E., S.E.
Illinois S.E. License No. 081-005847
Expires: 11-30-20

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THE W-T GROUP, LLC
2675 PRATUM AVENUE
HOFFMAN ESTATES, IL 60192
PHONE: (224) 293-6444

Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section RESULTS SUMMARY				Sheet no./rev. 3	
Calc. by CJS	Date 11/12/2020	Chk'd by	Date	App'd by	Date

RESULTS SUMMARY

Element/ Location	% Capacity
Shaft	45.8
Bell	30.6
Anchor Bolts	41.5

CONCLUSION

A number of limit states has been checked for the adequacy of the water tank structural components with existing and proposed antennas. Based on the percent usage with existing and proposed antennas, the existing water tank is **structurally adequate** to support the existing and proposed antennas and RRUs load. The antenna corral analysis is not included in the scope of this report, see the corral analysis by "The W-T Group, LLC", dated 11/12/2020 for more information.



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Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section PROPOSED/EXISTING APPURTENANCE AND LOADING				Sheet no./rev. 4	
Calc. by CJS	Date 11/12/2020	Chk'd by	Date	App'd by	Date

PROPOSED/EXISTING LOADING:

<i>Carrier</i>	<i>Elevation</i>	<i>Status</i>	<i>Qty.</i>	<i>Appurtenance Description</i>	<i>Weight (lbs)</i>	<i>Coax</i>
T.S.F.D.	± 165'-0"	Proposed	1	RF Engineering RFMA-2244UH09Sxx (40.2" Dia. x 23.2")	132.0	(3) Cat6
			2	RF Engineering RFMA-2244UH06Sxx (25.9" Dia. x 10.4")	35.0	
			3	Cielo Networks Skylink AON DT (9.42" x 9.12" x 4.94")	20.3	

DESIGN LOADS

Wind: 107 mph (3 sec. gust) as per the TIA-222-H standard or 36 psf minimum for antennas.
100 mph (3 sec. gust) as per AWWA D100-11 for the water tank.

STANDARD CONDITIONS AND ASSUMPTIONS

This analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. The analysis is based solely on the information supplied, and the results, in turn, are only as accurate as data extracted from this information. We were provided with the tower and loading information and assume the information supplied is accurate. The W-T Group, LLC has made no independent determination of its accuracy. The following assumptions were made for this structural analysis:

1. No allowance was made for any damaged, missing, or rusted members. The existing tower is assumed to have been properly maintained in accordance with the TIA/EIA Standard, AWWA Standard and/or its original manufacturer's recommendations. The existing tower is assumed to be in good condition with no structural defects and with no deterioration to its member capacities. The tower member sizes and geometry are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and stated in the materials section.
2. The structural analysis by the W-T Group, LLC verifies the adequacy of the main structural members of the tower. The W-T Group, LLC. provides a limited scope of service in that we cannot verify the adequacy of every structural sub-component such as; mounting frames, bolts, welds, plate connections, etc., all bolts, welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report.
3. All prior structural modifications, if any, are assumed to be as per date supplied/available, to be properly installed and to be fully effective.
4. This tower has been analyzed according to the original design criteria or the minimum design wind loads recommended by the Telecommunications Industry Association Standard TIA/EIA-222-H and American Water Works Association AWWA D100-11 Standard. If the owner or local or state agencies require a higher design wind load, W-T Communication Design Group, Inc. should be made aware of this requirement.
5. The antenna configuration is as supplied and/or stated in the analysis section. It is assumed to be complete and accurate. All antennas, mounts, coaxial cables and waveguides are assumed to be properly installed and supported as per the manufacturer's requirements.
6. Some assumptions are made regarding antenna and mount sizes and their projected areas based on the best interpretation of the data supplied and the best knowledge of antenna type and industry practice. Miscellaneous items such as antenna mounts etc. have not been structurally verified, designed or detailed as a part of our work. We recommend the owner or contractor verify that the mount has been constructed by a suitable/reputable manufacturer and meets the loading requirements specified.
7. The existing foundation is assumed to be in good condition with no structural defects and with no deterioration to its member capacities. The foundation system is assumed to support the structure as originally designed.

STRUCTURAL CALCULATIONS



THE W-T GROUP, LLC
 2675 PRATUM AVENUE
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 PHONE: (224) 293-6444

Project WILLOWBROOK WATER TOWER				Job Ref. 2000826T	
Section OVERVIEW				Sheet no./rev. 7	
Calc. by CJS	Date 11/12/2020	Chk'd by	Date	App'd by	Date

OVERVIEW

Applicable Codes and References:

- 2018 International Building Code
- ASCE 7-16 Minimum Design Loads for Buildings and Other Structures
- AISC Steel Construction Manual Fourteenth Edition
- ANSI/TIA-222-H Standard
- Drawings provided by W-T Communications Division, LLC dated 06/16/2020

Load Combinations (ANSI/TIA-222-H Section 2.3.2)

- $1.2 D + 1.0 D_g + 1.6 W_o$
- $0.9 D + 1.0 D_g + 1.6 W_o$
- $1.2 D + 1.0 D_g + 1.0 D_i + 1.0 W_i + 1.0 T_i$
- $1.2 D + 1.0 D_g + 1.0 E$
- $0.9 D + 1.0 D_g + 1.0 E$

Load Combinations (IBC 2018 LRFD):

- $1.4(D + F)$ (Eq. 16-1)
- $1.2(D + F + T) + 1.6(L + H) + 0.5(L_r \text{ or } S \text{ or } R)$ (Eq. 16-2)
- $1.2D + 1.6(L_r \text{ or } S \text{ or } R) + (f_1L \text{ or } 0.8W)$ (Eq. 16-3)
- $1.2D + 1.6W + f_1L + 0.5(L_r \text{ or } S \text{ or } R)$ (Eq. 16-4)
- $1.2D + 1.0E + f_1L + f_2S$ (Eq. 16-5)
- $0.9D + 1.6W + 1.6H$ (Eq. 16-6)
- $0.9D + 1.0E + 1.6H$ (Eq. 16-7)

Load Combinations (IBC 2018 ASD):

- $D + F$ (Eq. 16-8)
- $D + H + F + L + T$ (Eq. 16-9)
- $D + H + F + (L_r \text{ or } S \text{ or } R)$ (Eq. 16-10)
- $D + H + F + 0.75(L + T) + 0.75(L_r \text{ or } S \text{ or } R)$ (Eq. 16-11)
- $D + H + F + (W \text{ or } 0.7E)$ (Eq. 16-12)
- $D + H + F + 0.75(W \text{ or } 0.7E) + 0.75L + 0.75(L_r \text{ or } S \text{ or } R)$ (Eq. 16-13)
- $0.6D + W + H$ (Eq. 16-14)
- $0.6D + 0.7E + H$ (Eq. 16-15)

Notations:

- D = Dead load of structure and appurtances, excluding guy assemblies
- D_g = Dead load of guy assemblies
- D_i = Weight of ice due to factored ice thickness
- E = Combined effect of horizontal and vertical earthquake induced forces.
- $f_1 = 1$ for floors in places of public assembly in excess of 100 pounds per square foot, and = 0.5 for other live loads.
- $f_2 = 0.7$ for roof configurations that do not shed snow off the structure, and = 0.2 for other roof configurations.
- F = Load due to fluids with well-defined pressures and maximum heights.
- H = Load due to lateral earth pressures, ground water pressure or pressure of bulk materials.
- L = Floor live load.
- L_r = Roof live load.
- R = Rain load.
- S = Snow load.
- T = Self-straining load.
- T_i = Load effects due to temperature
- W = Load due to wind pressure.
- W_o = Wind load without ice
- W_i = Concurrent wind load with factored ice thickness

Analysis of Existing Water Tank

Wind Speed

Effective Wind Speed for Water Tank Supports (AWWA-D100-11)

$$V_{\text{eff}} := 100\text{mph}$$

Wind Speed For Antennas (TIA-EIA-222-H/AWWA-D100-11)

$$V_{\text{app}} := 107\text{mph}$$

Material Properties

Material

$$F_y := 36\text{ksi}$$

Modulus of Elasticity

$$E := 29000\text{ksi}$$

Shape Coefficient for Water Tank Structure

Effective Area Coefficient (Flat)

$$C_{d_flat} := 1$$

Effective Area Coefficient (Cylindrical)

$$C_{d_cyl} := 0.6$$

Effective Area Coefficient (Sphere)

$$C_{d_sphere} := 0.5$$

Water Tank Dimensions

Water Tank

Tank Capacity

$$\text{Vol} := 250000\text{gal}$$

Average Tank Diameter

$$d_{\text{tank}} := 45\text{ft}$$

Tank Height

$$h_{\text{tank}} := 44.0833\text{ft}$$

Top of Roof

$$H_{\text{roof}} := 161.333\text{ft}$$

Top of Capacity Level

$$H_{\text{TCL}} := 152.5\text{ft}$$

Bottom of Capacity Level

$$H_{\text{BCL}} := 115\text{ft}$$

Mean Height of Water Tank

$$H_{\text{mean}} := \frac{H_{\text{TCL}} + H_{\text{BCL}}}{2}$$

$$H_{\text{mean}} = 133.75\text{ft}$$

Shaft

Inner Diameter of Shaft

$$d_{\text{inner}} := 10\text{ft}$$

Shaft Wall Thickness at Top of Shaft

$$t_{\text{T.shaft}} := 0.792\text{in}$$

Outer Diameter of Shaft at Top

$$d_{\text{T.shaft}} := d_{\text{inner}} + 2 \cdot t_{\text{T.shaft}}$$

$$d_{\text{T.shaft}} = 10.13\text{ft}$$

Length of Top Shaft Plate

$$L_{\text{T.shaft}} := 8\text{ft}$$

Shaft Wall Thickness at Bottom of Shaft

$$t_{\text{B.shaft}} := 0.880\text{in}$$

Outer Diameter of Shaft at Bottom

$$d_{\text{B.shaft}} := d_{\text{inner}} + 2 \cdot t_{\text{B.shaft}}$$

$$d_{\text{B.shaft}} = 10.15\text{ft}$$

Length of Bottom Shaft Plate

$$L_{\text{B.shaft}} := 4.8\text{ft}$$

Overall Length of Shaft

$$L_{\text{allshaft}} := 77.81\text{ft}$$

Bell

Inner Diameter of Bell

$$d_{\text{in.bell}} := 28\text{ft}$$

Bell Wall Thickness at Bottom

$$t_{\text{bell}} := 0.6875\text{in}$$

Diameter of Bell

$$d_{\text{bell}} := d_{\text{in.bell}} + 2 \cdot t_{\text{bell}}$$

$$d_{\text{bell}} = 28.11\text{ft}$$

Height of Bell

$$h_{\text{bell}} := 30.75\text{ft}$$

Bolt Circle

Diameter of Bolt Circle

$$d_{\text{circle}} := 30.16667\text{ft}$$

Number of Bolts

$$N_{\text{bolt}} := 18$$

Diameter of Bolts

$$d_{\text{bolt}} := 1.75\text{in}$$

Shaft Properties At Top

Radius of Gyration		$r_{T.shaft} := \frac{\sqrt{d_{T.shaft}^2 + d_{inner}^2}}{4}$	$r_{T.shaft} = 42.71 \cdot in$
Slenderness Ratio	$\frac{K}{\lambda} := 2$	$KL_{r.T.shaft} := \frac{K \cdot L_{T.shaft}}{r_{T.shaft}}$	$KL_{r.T.shaft} = 4.5$
Elastic Section Modulus		$S_{T.shaft} := \frac{\pi \cdot (d_{T.shaft}^4 - d_{inner}^4)}{32 \cdot d_{T.shaft}}$	$S_{T.shaft} = 9017.2 \cdot in^3$
Gross Area		$A_{g.T.shaft} := \frac{\pi}{4} \cdot (d_{T.shaft}^2 - d_{inner}^2)$	$A_{g.T.shaft} = 300.55 \cdot in^2$
Radius to Thickness Ratio		$R_{T.shaft} := \frac{d_{T.shaft}}{2}$	$\frac{t_{T.shaft}}{R_{T.shaft}} = 0.013$

Shaft Properties at Bottom

Radius of Gyration		$r_{B.shaft} := \frac{\sqrt{d_{B.shaft}^2 + d_{inner}^2}}{4}$	$r_{B.shaft} = 42.74 \cdot in$
Slenderness Ratio	$\frac{K}{\lambda} := 2$	$KL_{r.B.shaft} := \frac{K \cdot L_{B.shaft}}{r_{B.shaft}}$	$KL_{r.B.shaft} = 2.7$
Elastic Section Modulus		$S_{B.shaft} := \frac{\pi \cdot (d_{B.shaft}^4 - d_{inner}^4)}{32 \cdot d_{B.shaft}}$	$S_{B.shaft} = 10026.6 \cdot in^3$
Gross Area		$A_{g.B.shaft} := \frac{\pi}{4} \cdot (d_{B.shaft}^2 - d_{inner}^2)$	$A_{g.B.shaft} = 334.19 \cdot in^2$
Radius to Thickness Ratio		$R_{B.shaft} := \frac{d_{B.shaft}}{2}$	$\frac{t_{B.shaft}}{R_{B.shaft}} = 0.0145$

Bell Properties

Radius of Gyration		$r_{bell} := \frac{\sqrt{d_{bell}^2 + d_{in.bell}^2}}{4}$	$r_{bell} = 119.04 \cdot in$
Slenderness Ratio	$\frac{K}{\lambda} := 2$	$KL_{r.bell} := \frac{K \cdot h_{bell}}{r_{bell}}$	$KL_{r.bell} = 6.2$
Elastic Section Modulus		$S_{bell} := \frac{\pi \cdot (d_{bell}^4 - d_{in.bell}^4)}{32 \cdot d_{bell}}$	$S_{bell} = 61084.7 \cdot in^3$
Gross Area		$A_{g.bell} := \frac{\pi}{4} \cdot (d_{bell}^2 - d_{in.bell}^2)$	$A_{g.bell} = 727.19 \cdot in^2$
Radius to Thickness Ratio		$R_{bell} := \frac{d_{bell}}{2}$	$\frac{t_{bell}}{R_{bell}} = 0.0041$

Wind Load on Structures**Wind Pressure (AWWA-D100-05)**

$$\text{Flat} \quad P_{\text{flat}} := 30 \cdot C_{d_flat} \cdot \left(\frac{V_{\text{eff}}}{100\text{mph}} \right)^2 \cdot \text{psf} \quad P_{\text{flat}} = 30 \cdot \text{psf}$$

$$\text{Cylindrical} \quad P_{\text{cyl}} := 30 \cdot C_{d_cyl} \cdot \left(\frac{V_{\text{eff}}}{100\text{mph}} \right)^2 \cdot \text{psf} \quad P_{\text{cyl}} = 18 \cdot \text{psf}$$

$$\text{Sphere} \quad P_{\text{sphere}} := 30 \cdot C_{d_sphere} \cdot \left(\frac{V_{\text{eff}}}{100\text{mph}} \right)^2 \cdot \text{psf} \quad P_{\text{sphere}} = 15 \cdot \text{psf}$$

Wind Projected Area

$$\text{Tank} \quad A_{\text{tank}} := \frac{\pi \cdot d_{\text{tank}}^2}{4} \quad A_{\text{tank}} = 1590.43 \text{ ft}^2$$

$$\text{Shaft} \quad A_{\text{shaft}} := L_{\text{allshaft}} \cdot d_{\text{B.shaft}} \quad A_{\text{shaft}} = 789.51 \text{ ft}^2$$

$$\text{Bell} \quad A_{\text{bell}} := \frac{d_{\text{B.shaft}} + d_{\text{bell}}}{2} \cdot h_{\text{bell}} \quad A_{\text{bell}} = 588.27 \text{ ft}^2$$

Wind Load

$$\text{Tank} \quad F_{\text{tank}} := A_{\text{tank}} \cdot P_{\text{sphere}} \quad F_{\text{tank}} = 23.86 \cdot \text{kip}$$

$$\text{Shaft} \quad F_{\text{shaft}} := A_{\text{shaft}} \cdot P_{\text{cyl}} \quad F_{\text{shaft}} = 14.21 \cdot \text{kip}$$

$$\text{Bell} \quad F_{\text{bell}} := A_{\text{bell}} \cdot P_{\text{cyl}} \quad F_{\text{bell}} = 10.59 \cdot \text{kip}$$

Weight of the Structure

$$\text{Density of Metal} \quad \gamma_{\text{metal}} := 490 \text{ pcf}$$

$$\text{Average Thickness of Tank} \quad t_{\text{tank}} := 0.847 \text{ in}$$

$$\text{Volume of Metal in the Tank} \quad \text{Vol}_{\text{metal.tank}} := \pi \cdot d_{\text{tank}}^2 \cdot t_{\text{tank}} \quad \text{Vol}_{\text{metal.tank}} = 449.03 \cdot \text{ft}^3$$

$$\text{Weight of Metal of the Tank} \quad \text{Wt}_{\text{tank}} := \text{Vol}_{\text{metal.tank}} \cdot \gamma_{\text{metal}} \quad \text{Wt}_{\text{tank}} = 220.03 \cdot \text{kip}$$

$$\text{Average Thickness of Shaft} \quad t_{\text{shaft.avg}} := 0.8 \text{ in}$$

$$\text{Average Diameter of Shaft} \quad d_{\text{avg.shaft}} := d_{\text{inner}} + 2t_{\text{shaft.avg}} \quad d_{\text{avg.shaft}} = 10.13 \text{ ft}$$

$$\text{Volume of Metal in the Shaft} \quad \text{Vol}_{\text{metal.shaft}} := \pi \cdot d_{\text{avg.shaft}} \cdot L_{\text{allshaft}} \cdot t_{\text{shaft.avg}} \quad \text{Vol}_{\text{metal.shaft}} = 165.14 \cdot \text{ft}^3$$

$$\text{Weight of Metal of the Shaft} \quad \text{Wt}_{\text{shaft}} := \text{Vol}_{\text{metal.shaft}} \cdot \gamma_{\text{metal}} \quad \text{Wt}_{\text{shaft}} = 80.92 \cdot \text{kip}$$

$$\text{Average Thickness of Bell} \quad t_{\text{avg.bell}} := 0.779 \text{ in}$$

$$\text{Average Diameter of Bell} \quad d_{\text{avg.bell}} := \frac{d_{\text{inner}} + d_{\text{in.bell}}}{2} \quad d_{\text{avg.bell}} = 19 \text{ ft}$$

$$\text{Volume of Metal in the Bell} \quad \text{Vol}_{\text{metal.bell}} := \pi \cdot d_{\text{avg.bell}} \cdot h_{\text{bell}} \cdot t_{\text{avg.bell}} \quad \text{Vol}_{\text{metal.bell}} = 119.15 \cdot \text{ft}^3$$

$$\text{Weight of Metal of the Bell} \quad \text{Wt}_{\text{bell}} := \text{Vol}_{\text{metal.bell}} \cdot \gamma_{\text{metal}} \quad \text{Wt}_{\text{bell}} = 58.38 \cdot \text{kip}$$

$$\text{Total Weight of Structure} \quad \text{Wt}_{\text{structure}} := (\text{Wt}_{\text{tank}} + \text{Wt}_{\text{shaft}} + \text{Wt}_{\text{bell}}) 105\% \quad \text{Wt}_{\text{structure}} = 377.29 \cdot \text{kip}$$

Antenna Load Summary

$$\text{Carrier} = \begin{pmatrix} \text{"T.S.F.D."} \\ \text{"T.S.F.D."} \\ \text{"T.S.F.D."} \end{pmatrix} \quad \text{Elev}_{\text{Ant}} = \begin{pmatrix} 165 \\ 165 \\ 165 \end{pmatrix} \text{ ft} \quad \text{Num}_{\text{Ant}} = \begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix} \quad \text{Num}_{\text{Cab}} = \begin{pmatrix} 3 \\ 0 \\ 0 \end{pmatrix}$$

$$\text{Ant} = \begin{pmatrix} \text{"RFMA-2244UH09Sxx"} \\ \text{"RFMA-2244UH06Sxx"} \\ \text{"Cielo Networks Skylink AON DT"} \end{pmatrix} \quad \text{Ht} = \begin{pmatrix} 40.2 \\ 25.9 \\ 9.42 \end{pmatrix} \cdot \text{in} \quad \text{Wid} = \begin{pmatrix} 40.2 \\ 25.9 \\ 9.2 \end{pmatrix} \cdot \text{in} \quad \text{Dep} = \begin{pmatrix} 23.2 \\ 10.4 \\ 4.94 \end{pmatrix} \cdot \text{in} \quad \text{Wt} = \begin{pmatrix} 132 \\ 35 \\ 20.5 \end{pmatrix} \text{ lb}$$

$$\text{Mnt} = \begin{pmatrix} \text{"Antenna Corral"} \\ \text{"Single Pipe Mount"} \\ \text{"Single Pipe Mount"} \end{pmatrix} \quad \text{Num}_{\text{Mnt}} = \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix} \quad A_{\text{Mnt}} = \begin{pmatrix} 15 \\ 1.46 \\ 1.46 \end{pmatrix} \text{ ft}^2 \quad \text{Wt}_{\text{Mnt}} = \begin{pmatrix} 3000 \\ 38 \\ 38 \end{pmatrix} \text{ lb}$$

Force Coefficient on Appurtenance
(Per TIA-EIA-222 H)

$$Ca(As,F) := \begin{cases} Ca \leftarrow 0 \\ \text{if } F = 1 \\ \left| \begin{array}{l} Ca \leftarrow 1.4 \text{ if } As < 7 \\ Ca \leftarrow 2.0 \text{ if } As > 25 \\ Ca \leftarrow 1.4 + \frac{(As - 7)}{18} \cdot 0.6 \text{ otherwise} \end{array} \right. \\ \text{otherwise} \\ \left| \begin{array}{l} Ca \leftarrow 0.8 \text{ if } As < 7 \\ Ca \leftarrow 1.2 \text{ if } As > 25 \\ Ca \leftarrow 0.8 + \frac{(As - 7)}{18} \cdot 0.4 \text{ otherwise} \end{array} \right. \\ Ca \end{cases}$$

Wind Direction Probability Factor

$$K_d := 0.95 \quad \text{per ANSI/TIA-222-H (Table 2-2, pg 39)}$$

Topographic Factor

$$K_{zt} := 1.0 \quad \text{per ANSI/TIA-222-H (Section 2.6.6.4, pg 14)}$$

Importance Factor

$$I := 1.15 \quad \text{per ANSI/TIA-222-H (Table 2-3, pg 39)}$$

Exposure Type **B**

For Exposure B Use Exp = 2, For Exposure C Use Exp = 1

$$E_{xp} := 2$$

Gust Response Factor

$$G_h := 0.85 \quad \text{per ANSI/TIA-222-H (Section 2.6.7.3, pg 15)}$$

Exposure Coefficient

$$K_z := \begin{cases} 2.01 \left[\left(\frac{\text{Elev}_{\text{Ant}}}{900 \cdot \text{ft}} \right)^{\frac{2}{9.5}} \right] & \text{if } (E_{xp} = 1) \\ 2.01 \left[\left(\frac{\text{Elev}_{\text{Ant}}}{1200 \cdot \text{ft}} \right)^{\frac{2}{7}} \right] & \text{otherwise} \end{cases} \quad K_z = \begin{pmatrix} 1.14 \\ 1.14 \\ 1.14 \end{pmatrix}$$

Check Maximum/Minimum values

$$K_{z\text{min}} := \begin{cases} 0.7 \text{ if } E_{xp} = 1 \\ 0.85 \text{ otherwise} \end{cases} = 0.85 \quad K_{z\text{max}} := 2.01$$

Wind Pressure on Appurtenance
(Per TIA-EIA-222 H)

$$P_{\text{Ant}} := \begin{cases} \text{for } i \in 1..N \\ \left| \begin{array}{l} qz_i \leftarrow \left[0.00256 \cdot K_z \cdot I \cdot K_{zt} \cdot K_d \cdot \left(\frac{V_{\text{app}}}{\text{mph}} \right)^2 \right] \cdot \text{psf} \\ Gh_i \leftarrow 1 \\ P \leftarrow qz_i \cdot Gh_i \end{array} \right. \\ P \end{cases} \quad P_{\text{Ant}} = \begin{pmatrix} 36.51 \\ 36.51 \\ 36.51 \end{pmatrix} \cdot \text{psf}$$

Appurtenance Antenna 1

$$n := 1 \quad F_{\text{w}} := 0$$

$$\text{Carrier}_n = \text{"T.S.F.D."}$$

Model / Elevation / Quantity

$$\text{Ant}_n = \text{"RFMA-2244UH09Sxx"} \quad \text{Elev}_{\text{Ant}_n} = 165 \text{ ft} \quad \text{Num}_{\text{Ant}_n} = 1$$

Dimensions

$$\text{Ht}_n = 40.2 \cdot \text{in} \quad \text{Wid}_n = 40.2 \cdot \text{in} \quad \text{Dep}_n = 23.2 \cdot \text{in} \quad \text{Wt}_n = 132 \text{ lb}$$

Number of Cables / Area / Weight

$$\text{Num}_{\text{Cab}_n} = 3 \quad A_{\text{Cab}_n} = 0.14 \text{ ft} \quad \text{Wt}_{\text{cable}_n} = 1 \frac{\text{lb}}{\text{ft}}$$

Aspect Ratio & Force Coefficient

$$A_s := \frac{\text{Ht}_n}{\text{Wid}_n} \quad A_s = 1 \quad CA := Ca(A_s, F) \quad CA = 0.8$$

Area / Antenna:

$$A_{\text{ant}_n} := CA \cdot \text{Ht}_n \cdot \text{Wid}_n \quad A_{\text{ant}_n} = 8.98 \text{ ft}^2$$

Mounting $\text{Mnt}_n = \text{"Antenna Corral"}$

$$\text{Num}_{\text{Mnt}_n} = 1 \quad \text{Wt}_{\text{Mnt}_n} = 3000 \text{ lb} \quad A_{\text{Mnt}_n} = 15 \text{ ft}^2$$

Appurtenance Load

Total Area of Appurtenance

$$A_{\text{app}_n} := \sum_{i=n}^n \left(\text{Num}_{\text{Ant}_i} \cdot A_{\text{ant}_i} + \text{Num}_{\text{Mnt}_i} \cdot A_{\text{Mnt}_i} \right) \quad A_{\text{app}_n} = 23.98 \text{ ft}^2$$

Total Weight of Appurtenance

$$\text{Wt}_{\text{app}_n} := \sum_{i=n}^n \left(\text{Num}_{\text{Ant}_i} \cdot \text{Wt}_i + \text{Num}_{\text{Mnt}_i} \cdot \text{Wt}_{\text{Mnt}_i} \right) \quad \text{Wt}_{\text{app}_n} = 3132 \text{ lb}$$

Appurtenance Antenna 2

$$n := n + 1 \quad F_{\text{w}} := 0$$

$$\text{Carrier}_n = \text{"T.S.F.D."}$$

Model / Elevation / Quantity

$$\text{Ant}_n = \text{"RFMA-2244UH06Sxx"} \quad \text{Elev}_{\text{Ant}_n} = 165 \text{ ft} \quad \text{Num}_{\text{Ant}_n} = 2$$

Dimensions

$$\text{Ht}_n = 25.9 \cdot \text{in} \quad \text{Wid}_n = 25.9 \cdot \text{in} \quad \text{Dep}_n = 10.4 \cdot \text{in} \quad \text{Wt}_n = 35 \text{ lb}$$

Number of Cables / Area / Weight

$$\text{Num}_{\text{Cab}_n} = 0 \quad A_{\text{Cab}_n} = 0.14 \text{ ft} \quad \text{Wt}_{\text{cable}_n} = 1 \frac{\text{lb}}{\text{ft}}$$

Aspect Ratio & Force Coefficient

$$A_s := \frac{\text{Ht}_n}{\text{Wid}_n} \quad A_s = 1 \quad CA := Ca(A_s, F) \quad CA = 0.8$$

Area / Antenna:

$$A_{\text{ant}_n} := CA \cdot \text{Ht}_n \cdot \text{Wid}_n \quad A_{\text{ant}_n} = 3.73 \text{ ft}^2$$

Mounting $\text{Mnt}_n = \text{"Single Pipe Mount"}$

$$\text{Num}_{\text{Mnt}_n} = 1 \quad \text{Wt}_{\text{Mnt}_n} = 38 \text{ lb} \quad A_{\text{Mnt}_n} = 1.46 \text{ ft}^2$$

Appurtenance Load

Total Area of Appurtenance

$$A_{\text{app}_n} := \sum_{i=n}^n \left(\text{Num}_{\text{Ant}_i} \cdot A_{\text{ant}_i} + \text{Num}_{\text{Mnt}_i} \cdot A_{\text{Mnt}_i} \right) \quad A_{\text{app}_n} = 8.91 \text{ ft}^2$$

Total Weight of Appurtenance

$$\text{Wt}_{\text{app}_n} := \sum_{i=n}^n \left(\text{Num}_{\text{Ant}_i} \cdot \text{Wt}_i + \text{Num}_{\text{Mnt}_i} \cdot \text{Wt}_{\text{Mnt}_i} \right) \quad \text{Wt}_{\text{app}_n} = 108 \text{ lb}$$

Appurtenance Antenna 3

$$n := n + 1 \quad F_n := 1$$

Carrier_n = "T.S.F.D."

Model / Elevation / Quantity

$$\text{Ant}_n = \text{"Cielo Networks Skylink AOI Elev"} \quad \text{Elev}_{\text{Ant}_n} = 165 \text{ ft} \quad \text{Num}_{\text{Ant}_n} = 3$$

Dimensions

$$\text{Ht}_n = 9.42 \text{ in} \quad \text{Wid}_n = 9.2 \text{ in} \quad \text{Dep}_n = 4.94 \text{ in} \quad \text{Wt}_n = 20.5 \text{ lb}$$

Number of Cables / Area / Weight

$$\text{Num}_{\text{Cab}_n} = 0 \quad \text{A}_{\text{Cab}_n} = 0.14 \text{ ft} \quad \text{Wt}_{\text{cable}_n} = 1 \frac{\text{lb}}{\text{ft}}$$

Aspect Ratio & Force Coefficient

$$A_s := \frac{\text{Ht}_n}{\text{Wid}_n} \quad A_s = 1.02 \quad CA := Ca(A_s, F) \quad CA = 1.4$$

Area / Antenna:

$$A_{\text{ant}_n} := CA \text{Ht}_n \cdot \text{Wid}_n \quad A_{\text{ant}_n} = 0.84 \text{ ft}^2$$

MountingMnt_n = "Single Pipe Mount"

$$\text{Num}_{\text{Mnt}_n} = 1 \quad \text{Wt}_{\text{Mnt}_n} = 38 \text{ lb} \quad A_{\text{Mnt}_n} = 1.46 \text{ ft}^2$$

Appurtenance Load

Total Area of Appurtenance

$$A_{\text{app}_n} := \sum_{i=n}^n \left(\text{Num}_{\text{Ant}_i} \cdot \frac{2}{3} A_{\text{ant}_i} + \text{Num}_{\text{Mnt}_i} \cdot A_{\text{Mnt}_i} \right) \quad A_{\text{app}_n} = 3.15 \text{ ft}^2$$

Total Weight of Appurtenance

$$\text{Wt}_{\text{app}_n} := \sum_{i=n}^n \left(\text{Num}_{\text{Ant}_i} \cdot \text{Wt}_i + \text{Num}_{\text{Mnt}_i} \cdot \text{Wt}_{\text{Mnt}_i} \right) \quad \text{Wt}_{\text{app}_n} = 99.5 \text{ lb}$$

Summary of Loads

Appurtenance Wind Load & Weight

$$\text{Carrier} = \begin{pmatrix} \text{"T.S.F.D."} \\ \text{"T.S.F.D."} \\ \text{"T.S.F.D."} \end{pmatrix} \quad F_{\text{Ant}} := \begin{cases} \text{for } i \in 1..N \\ F_i \leftarrow A_{\text{app}_i} \cdot P_{\text{Ant}_i} \\ F \end{cases} \quad F_{\text{Ant}} = \begin{pmatrix} 0.88 \\ 0.33 \\ 0.11 \end{pmatrix} \cdot \text{kip} \quad W_{\text{tapp}} = \begin{pmatrix} 3132 \\ 108 \\ 99.5 \end{pmatrix} \text{ lb}$$

Structure

Wind Load

$$F_{\text{tank}} = 23.86 \cdot \text{kip}$$

$$F_{\text{shaft}} = 14.21 \cdot \text{kip}$$

$$F_{\text{bell}} = 10.59 \cdot \text{kip}$$

Weight

$$W_{\text{water}} := 62.4 \text{ pcf} \cdot \text{Vol}$$

$$W_{\text{water}} = 2085.42 \cdot \text{kip}$$

$$W_{\text{structure}} = 377.29 \cdot \text{kip}$$

$$F_{\text{structure}} := F_{\text{tank}} + F_{\text{shaft}} + F_{\text{bell}} = 48.66 \cdot \text{kip}$$

Overturning Moment at Top of Shaft

$$M_{\text{tank.T.shaft}} := F_{\text{tank}} \left[H_{\text{mean}} - (h_{\text{bell}} + L_{\text{allshaft}}) \right]$$

$$M_{\text{tank.T.shaft}} = 600.94 \cdot \text{kip} \cdot \text{ft}$$

$$M_{\text{Ant.T.shaft}} := \sum_{n=1}^3 \left[F_{\text{Ant}_n} \left[\text{Elev}_{\text{Ant}_n} - (h_{\text{bell}} + L_{\text{allshaft}}) \right] \right]$$

$$M_{\text{Ant.T.shaft}} = 74.26 \cdot \text{kip} \cdot \text{ft}$$

Total Overturning Moment at Top of Shaft

$$M_{\text{total.T.shaft}} := M_{\text{tank.T.shaft}} + M_{\text{Ant.T.shaft}}$$

$$M_{\text{total.T.shaft}} = 675.2 \cdot \text{kip} \cdot \text{ft}$$

Overturning Moment at Bottom of Shaft

$$M_{\text{tank.B.shaft}} := F_{\text{tank}} \cdot (H_{\text{mean}} - h_{\text{bell}})$$

$$M_{\text{tank.B.shaft}} = 2457.22 \cdot \text{kip} \cdot \text{ft}$$

$$M_{\text{shaft.B.shaft}} := F_{\text{shaft}} \cdot \left(\frac{L_{\text{allshaft}}}{2} \right)$$

$$M_{\text{shaft.B.shaft}} = 552.89 \cdot \text{kip} \cdot \text{ft}$$

$$M_{\text{Ant.B.shaft}} := \sum_{n=1}^n \left[F_{\text{Ant}_n} \cdot (\text{Elev}_{\text{Ant}_n} - h_{\text{bell}}) \right]$$

$$M_{\text{Ant.B.shaft}} = 176.64 \cdot \text{kip} \cdot \text{ft}$$

Total Overturning Moment at Bottom of Shaft

$$M_{\text{total.B.shaft}} := M_{\text{tank.B.shaft}} + M_{\text{shaft.B.shaft}} \dots \\ + M_{\text{Ant.B.shaft}}$$

$$M_{\text{total.B.shaft}} = 3186.74 \cdot \text{kip} \cdot \text{ft}$$

Overturning Moment at Anchor Bolts Level

$$M_{\text{tank.anch}} := F_{\text{tank}} \cdot (H_{\text{mean}})$$

$$M_{\text{tank.anch}} = 3190.8 \cdot \text{kip} \cdot \text{ft}$$

$$M_{\text{shaft.anch}} := F_{\text{shaft}} \cdot \left(\frac{L_{\text{allshaft}}}{2} + h_{\text{bell}} \right)$$

$$M_{\text{shaft.anch}} = 989.88 \cdot \text{kip} \cdot \text{ft}$$

$$M_{\text{bell.anch}} := F_{\text{bell}} \cdot \left(\frac{h_{\text{bell}}}{2} \right)$$

$$M_{\text{bell.anch}} = 162.8 \cdot \text{kip} \cdot \text{ft}$$

$$M_{\text{Ant.anch}} := \sum_{n=1}^n \left(F_{\text{Ant}_n} \cdot \text{Elev}_{\text{Ant}_n} \right)$$

$$M_{\text{Ant.anch}} = 217.1 \cdot \text{kip} \cdot \text{ft}$$

Total Overturning Moment at Anchor Bolts

$$M_{\text{total.anchor}} := M_{\text{tank.anch}} + M_{\text{shaft.anch}} \dots \\ + M_{\text{bell.anch}} + M_{\text{Ant.anch}}$$

$$M_{\text{total.anchor}} = 4560.58 \cdot \text{kip} \cdot \text{ft}$$

Total Weight

$$W_{\text{total}} := W_{\text{water}} + W_{\text{structure}} + \sum_{n=1}^n W_{\text{app}_n}$$

$$W_{\text{total}} = 2466.05 \cdot \text{kip}$$

Allowable Stresses on Water Tower Top Shaft (AWWA Sec. 3.4.2)

Class := 2

Allowable Local Buckling Compressive Stress

$$F_L := \begin{cases} (15\text{ksi}) & \text{if Class} = 1 \\ (18\text{ksi}) & \text{otherwise} \end{cases} = 18\text{ksi}$$

Column Slenderness Ratio
(AWWA Eq. 3-10)

$$C'_c := \sqrt{\frac{\pi^2 \cdot E}{F_L}}$$

 $C'_c = 126.1$ Slenderness Ratio
(AWWA Sec. 3.4.1.6)

$$SR := KL_{T,\text{shaft}}$$

SR = 4.5

Slenderness Reduction Factor
For Allowable Axial Load
(AWWA Sec. 3.4.1.6)

$$K_\psi := \begin{cases} K \leftarrow 1 - \frac{1}{2} \cdot \left(\frac{SR}{C'_c} \right)^2 & \text{if } 25 < SR \leq C'_c \\ K \leftarrow \frac{1}{2} \cdot \left(\frac{C'_c}{SR} \right)^2 & \text{if } SR > C'_c \\ K \leftarrow 1 & \text{if } SR \leq 25 \\ K & \end{cases}$$

 $K_\psi = 1$ **Local Buckling Compressive Stress (AWWA Sec. 3.4.3):**

Thickness - Radius Ratio

$$\frac{t_{T,\text{shaft}}}{R_{T,\text{shaft}}} = 0.01302803$$

Allowable Local Buckling Stress, Method 1, Class II Materials

Thickness - Radius Ratio at Which Buckling Changes from Elastic to Inelastic

 $tR_c := 0.0035372$

$$F_{L,LB} := \begin{cases} \left[1750000 \frac{t_{T,\text{shaft}}}{R_{T,\text{shaft}}} \left[1 + 50000 \left(\frac{t_{T,\text{shaft}}}{R_{T,\text{shaft}}} \right)^2 \right] \right] \cdot \text{psi} & \text{if } 0 \leq \frac{t_{T,\text{shaft}}}{R_{T,\text{shaft}}} \leq tR_c \\ \left(6925 + 886000 \frac{t_{T,\text{shaft}}}{R_{T,\text{shaft}}} \right) \cdot \text{psi} & \text{if } tR_c \leq \frac{t_{T,\text{shaft}}}{R_{T,\text{shaft}}} \leq 0.0125 \\ (18\text{ksi}) & \text{if } \frac{t_{T,\text{shaft}}}{R_{T,\text{shaft}}} > 0.0125 \end{cases} \quad F_{L,LB} = 18\text{ksi}$$

Unit Stress - Axial (AWWA Table 5)

$$F_{L,Axial} := 18\text{ksi}$$

Unit Stress - Shear (AWWA Table 7)

$$F_{L,Shear} := 14.4\text{ksi}$$

Unit Stress - Bending (AWWA Table 6)

$$F_{L,Bend} := 18\text{ksi}$$

**Allowable Stresses with 1/3 Increase
(AWWA Sec. 3.3.3)**

Allowable Axial Stress

$$F_{a,T,\text{shaft}} := 1.33 K_\psi \cdot \min(F_L, F_{L,LB})$$

 $F_{a,T,\text{shaft}} = 23.94\text{ksi}$

Allowable Shear Stress

$$F_{v,T,\text{shaft}} := 1.33 \min(F_{L,Shear}, F_{L,LB})$$

 $F_{v,T,\text{shaft}} = 19.15\text{ksi}$

Allowable Bending Stress

$$F_{b,T,\text{shaft}} := 1.33 \min(F_{L,Bend}, F_{L,LB})$$

 $F_{b,T,\text{shaft}} = 23.94\text{ksi}$

Stress Analysis

Check Top of Shaft Stresses

Shear Stress

$$f_{v.T.shaft} := \frac{F_{tank} + \sum_{n=1}^3 F_{Ant_n}}{A_{g.T.shaft}}$$

$f_{v.T.shaft} = 0.08 \cdot \text{ksi}$

$$f_{v.T.shaft} < F_{v.T.shaft} = 1$$

CHECK = "Top of Shaft is adequate for shear loads"

Axial Stress

$$f_{a.T.shaft} := \frac{W_{t_{water}} + W_{t_{tank}} + \sum_{n=1}^3 W_{t_{app_n}}}{A_{g.T.shaft}}$$

$f_{a.T.shaft} = 7.68 \cdot \text{ksi}$

$$f_{a.T.shaft} < F_{a.T.shaft} = 1$$

CHECK = "Top of Shaft is adequate for axial loads"

Bending Stress

$$M_{total.T.shaft} = 675.2 \cdot \text{kip} \cdot \text{ft}$$

$$f_{b.T.shaft} := \frac{M_{total.T.shaft}}{S_{T.shaft}}$$

$f_{b.T.shaft} = 0.9 \cdot \text{ksi}$

$$f_{b.T.shaft} < F_{b.T.shaft} = 1$$

CHECK = "Top of Shaft is adequate for bending"

Combined Stresses (AWWAEq 3-3)

$$\text{Stress}_{shaft} := \frac{f_{a.T.shaft}}{F_{a.T.shaft}} + \frac{f_{b.T.shaft}}{F_{b.T.shaft}}$$

$\text{Stress}_{shaft} = 35.84 \cdot \%$

Allowable Stresses on Water Tower Bottom Shaft (AWWA Sec. 3.4.2)

Class := 2

Allowable Local Buckling Compressive Stress

$$F_{L.LB} := \begin{cases} (15\text{ksi}) & \text{if Class} = 1 \\ (18\text{ksi}) & \text{otherwise} \end{cases} = 18 \cdot \text{ksi}$$

Column Slenderness Ratio
(AWWA Eq. 3-10)

$$C'_c := \sqrt{\frac{\pi^2 \cdot E}{F_L}}$$

 $C'_c = 126.1$ Slenderness Ratio
(AWWA Sec. 3.4.1.6)

$$SR := KL_{r.B.shaft}$$

SR = 2.7

Slenderness Reduction Factor
For Allowable Axial Load
(AWWA Sec. 3.4.1.6)

$$K_{\psi} := \begin{cases} K \leftarrow 1 - \frac{1}{2} \cdot \left(\frac{SR}{C'_c} \right)^2 & \text{if } 25 < SR \leq C'_c \\ K \leftarrow \frac{1}{2} \cdot \left(\frac{C'_c}{SR} \right)^2 & \text{if } SR > C'_c \\ K \leftarrow 1 & \text{if } SR \leq 25 \\ K & \end{cases}$$

 $K_{\psi} = 1$ **Local Buckling Compressive Stress (AWWA Sec. 3.4.3):**

Thickness - Radius Ratio

$$\frac{t_{B.shaft}}{R_{B.shaft}} = 0.01445466$$

Allowable Local Buckling Stress, Method 1, Class II Materials

Thickness - Radius Ratio at Which Buckling Changes from Elastic to Inelastic

 $tR_c := 0.0035372$

$$F_{L.LB} := \begin{cases} \left[1750000 \frac{t_{B.shaft}}{R_{B.shaft}} \left[1 + 50000 \left(\frac{t_{B.shaft}}{R_{B.shaft}} \right)^2 \right] \right] \cdot \text{psi} & \text{if } 0 \leq \frac{t_{B.shaft}}{R_{B.shaft}} \leq tR_c \\ \left(6925 + 886000 \frac{t_{B.shaft}}{R_{B.shaft}} \right) \cdot \text{psi} & \text{if } tR_c \leq \frac{t_{B.shaft}}{R_{B.shaft}} \leq 0.0125 \\ (18\text{ksi}) & \text{if } \frac{t_{B.shaft}}{R_{B.shaft}} > 0.0125 \end{cases} \quad F_{L.LB} = 18 \cdot \text{ksi}$$

Unit Stress - Axial (AWWA Table 5)

$$F_{L.Axial} := 18 \text{ksi}$$

Unit Stress - Shear (AWWA Table 7)

$$F_{L.Sheer} := 14.4 \text{ksi}$$

Unit Stress - Bending (AWWA Table 6)

$$F_{L.Bend} := 18 \text{ksi}$$

**Allowable Stresses with 1/3 Increase
(AWWA Sec. 3.3.3)**

Allowable Axial Stress

$$F_{a.B.shaft} := 1.33 K_{\psi} \cdot \min(F_L, F_{L.LB})$$

 $F_{a.B.shaft} = 23.94 \text{ksi}$

Allowable Shear Stress

$$F_{v.B.shaft} := 1.33 \min(F_{L.Sheer}, F_{L.LB})$$

 $F_{v.B.shaft} = 19.15 \text{ksi}$

Allowable Bending Stress

$$F_{b.B.shaft} := 1.33 \min(F_{L.Bend}, F_{L.LB})$$

 $F_{b.B.shaft} = 23.94 \text{ksi}$

Stress Analysis

Check Bottom of Shaft Stresses

Shear Stress

$$f_{v.B.shaft} := \frac{F_{\text{tank}} + F_{\text{shaft}} + \sum_{n=1}^n F_{\text{Ant}_n}}{A_{g.B.shaft}}$$

$f_{v.B.shaft} = 0.12 \cdot \text{ksi}$

$$f_{v.B.shaft} < F_{v.B.shaft} = 1 \quad \text{CHECK} = \text{"Bottom of Shaft is adequate for shear loads"}$$

Axial Stress

$$f_{a.B.shaft} := \frac{W_{\text{water}} + W_{\text{tank}} + W_{\text{shaft}} + \sum_{n=1}^n W_{\text{app}_n}}{A_{g.B.shaft}}$$

$f_{a.B.shaft} = 7.15 \cdot \text{ksi}$

$$f_{a.B.shaft} < F_{a.B.shaft} = 1 \quad \text{CHECK} = \text{"Bottom of Shaft is adequate for axial loads"}$$

Bending Stress

$$M_{\text{total.B.shaft}} = 3186.74 \cdot \text{kip} \cdot \text{ft}$$

$$f_{b.B.shaft} := \frac{M_{\text{total.B.shaft}}}{S_{B.shaft}}$$

$f_{b.B.shaft} = 3.81 \cdot \text{ksi}$

$$f_{b.B.shaft} < F_{b.B.shaft} = 1 \quad \text{CHECK} = \text{"Bottom of Shaft is adequate for bending"}$$

Combined Stresses (AWWAEq 3-3)

$$\text{Stress}_{\text{shaft}} := \frac{f_{a.B.shaft}}{F_{a.B.shaft}} + \frac{f_{b.B.shaft}}{F_{b.B.shaft}}$$

$\text{Stress}_{\text{shaft}} = 45.8 \cdot \%$

Allowable Stresses on Water Tower Bell (AWWA Sec. 3.4.2)

Class := 2

Allowable Local Buckling Compressive Stress

$$F_{L,Local} := \begin{cases} (15\text{ksi}) & \text{if Class} = 1 \\ (18\text{ksi}) & \text{otherwise} \end{cases} = 18 \cdot \text{ksi}$$

Column Slenderness Ratio
(AWWA Eq. 3-10)

$$C'_c := \sqrt{\frac{\pi^2 \cdot E}{F_L}}$$

$$C'_c = 126.1$$

Slenderness Ratio
(AWWA Sec. 3.4.1.6)

$$SR := KL_{r,bell}$$

$$SR = 6.2$$

Slenderness Reduction Factor
For Allowable Axial Load
(AWWA Sec. 3.4.1.6)

$$K_{\psi} := \begin{cases} K \leftarrow 1 - \frac{1}{2} \cdot \left(\frac{SR}{C'_c} \right)^2 & \text{if } 25 < SR \leq C'_c \\ K \leftarrow \frac{1}{2} \cdot \left(\frac{C'_c}{SR} \right)^2 & \text{if } SR > C'_c \\ K \leftarrow 1 & \text{if } SR \leq 25 \\ K & \end{cases}$$

$$K_{\psi} = 1$$

Local Buckling Compressive Stress (AWWA Sec. 3.4.3):

Thickness - Radius Ratio

$$\frac{t_{bell}}{R_{bell}} = 0.00407558$$

Allowable Local Buckling Stress, Method 1, Class II Materials

Thickness - Radius Ratio at Which Buckling Changes from Elastic to Inelastic

$$tR_c := 0.0035372$$

$$F_{L,Local} := \begin{cases} \left[1750000 \frac{t_{bell}}{R_{bell}} \left[1 + 50000 \left(\frac{t_{bell}}{R_{bell}} \right)^2 \right] \right] \cdot \text{psi} & \text{if } 0 \leq \frac{t_{bell}}{R_{bell}} \leq tR_c \\ \left(6925 + 886000 \frac{t_{bell}}{R_{bell}} \right) \cdot \text{psi} & \text{if } tR_c \leq \frac{t_{bell}}{R_{bell}} \leq 0.0125 \\ (18\text{ksi}) & \text{if } \frac{t_{bell}}{R_{bell}} > 0.0125 \end{cases}$$

$$F_{L,Local} = 10.54 \cdot \text{ksi}$$

Unit Stress - Axial (AWWA Table 5)

$$F_{L,Axial} := 18\text{ksi}$$

Unit Stress - Shear (AWWA Table 7)

$$F_{L,Shear} := 14.4\text{ksi}$$

Unit Stress - Bending (AWWA Table 6)

$$F_{L,Bend} := 18\text{ksi}$$

**Allowable Stresses with 1/3 Increase
(AWWA Sec. 3.3.3)**

Allowable Axial Stress

$$F_{a,bell} := 1.33 K_{\psi} \cdot \min(F_L, F_{L,Local})$$

$$F_{a,bell} = 14.01 \cdot \text{ksi}$$

Allowable Shear Stress

$$F_{v,bell} := 1.33 \min(F_{L,Shear}, F_{L,Local})$$

$$F_{v,bell} = 14.01 \cdot \text{ksi}$$

Allowable Bending Stress

$$F_{b,bell} := 1.33 \min(F_{L,Bend}, F_{L,Local})$$

$$F_{b,bell} = 14.01 \cdot \text{ksi}$$

Stress Analysis

Check Bell Stresses

$$\text{Shear Stress} \quad f_{v,\text{bell}} := \frac{F_{\text{tank}} + F_{\text{bell}} + F_{\text{shaft}} + \sum_{n=1}^n F_{\text{Ant}_n}}{A_{g,\text{bell}}} \quad f_{v,\text{bell}} = 0.07 \cdot \text{ksi}$$

$$f_{v,\text{bell}} < F_{v,\text{bell}} = 1$$

CHECK = "Bell is adequate for shear loads"

$$\text{Axial Stress} \quad f_{a,\text{bell}} := \frac{W_{t,\text{water}} + W_{t,\text{structure}} + \sum_{n=1}^n W_{t,\text{app}_n}}{A_{g,\text{bell}}} \quad f_{a,\text{bell}} = 3.39 \cdot \text{ksi}$$

$$f_{a,\text{bell}} < F_{a,\text{bell}} = 1$$

CHECK = "Bell is adequate for axial loads"

$$\text{Bending Stress} \quad M_{\text{total.anchor}} = 4560.58 \cdot \text{kip} \cdot \text{ft}$$

$$f_{b,\text{bell}} := \frac{M_{\text{total.anchor}}}{S_{\text{bell}}} \quad f_{b,\text{bell}} = 0.9 \cdot \text{ksi}$$

$$f_{b,\text{bell}} < F_{b,\text{bell}} = 1$$

CHECK = "Bell is adequate for bending"

$$\text{Combined Stresses (AWWAEq 3-3)} \quad \text{Stress}_{\text{bell}} := \frac{f_{a,\text{bell}}}{F_{a,\text{bell}}} + \frac{f_{b,\text{bell}}}{F_{b,\text{bell}}} \quad \text{Stress}_{\text{bell}} = 30.59 \cdot \%$$

Load Increases Due to Antennas at Bottom of Bell

Increase in Lateral Load

$$\%V := \frac{\sum_{n=1}^n F_{Ant_n}}{F_{tank} + F_{shaft} + F_{bell}}$$

%V = 2.7·%

Increase in Axial Load

$$\%P := \frac{\sum_{n=1}^n W_{t_{app_n}}}{W_{t_{water}} + W_{t_{structure}}}$$

%P = 0.14·%

Increase in Moment Load

$$\%M := \frac{M_{Ant.anch}}{M_{tank.anch} + M_{shaft.anch} + M_{bell.anch}}$$

%M = 5·%

Wind Area Increase Due to Antennas:

Increase in Wind Area

$$W_{area} := \frac{\sum_{n=1}^n A_{app_n}}{A_{tank} + A_{shaft} + A_{bell}}$$

W_{area} = 1.21·%

Check Anchor Bolts

Diameter of Bolts / Number of Bolts

$$d_{\text{bolt}} = 1.75 \cdot \text{in}$$

$$N_{\text{bolt}} = 18$$

Diameter of Bolts at Root of Threads

$$d_{\text{bolt.root}} := 1.53 \text{in} \quad (\text{Per AISC Table 7-18})$$

Cross Section Area of Bolt at Root of Threads

$$A_{g_{\text{bolt.root}}} := \frac{\pi \cdot d_{\text{bolt.root}}^2}{4}$$

$$A_{g_{\text{bolt.root}}} = 1.84 \cdot \text{in}^2$$

Diameter of Bolt Circle

$$d_{\text{circle}} = 30.17 \text{ft}$$

Allowable Strength on Anchor Bolt
(AWWA-D100-11 Table 4)

$$F_{t,\text{bolt}} := 15 \text{ksi}$$

Overturning Moment at Anchor Bolt Level

$$M_{\text{total.anchor}} = 4560.58 \cdot \text{kip} \cdot \text{ft}$$

Check for Uplift (AWWA D100-11 Eq. 3-41)

$$P_{\text{up}} := \frac{4M_{\text{total.anchor}}}{N_{\text{bolt}} \cdot d_{\text{circle}}} - \frac{W_{\text{total}} - W_{t,\text{water}}}{N_{\text{bolt}}}$$

$$P_{\text{up}} = 12.45 \cdot \text{kip}$$

Tension per Bolt from Uplift

$$T_{\text{bolt}} := \frac{P_{\text{up}}}{A_{g_{\text{bolt.root}}}} + \frac{F_{\text{structure}} + \sum_{n=1}^n F_{\text{Ant}_n}}{N_{\text{bolt}} \cdot A_{g_{\text{bolt.root}}}}$$

$$T_{\text{bolt}} = 8.28 \cdot \text{ksi}$$

Allowable Tension Stress

$$F_t := 1.33 \cdot F_{t,\text{bolt}}$$

$$F_t = 19.95 \cdot \text{ksi}$$

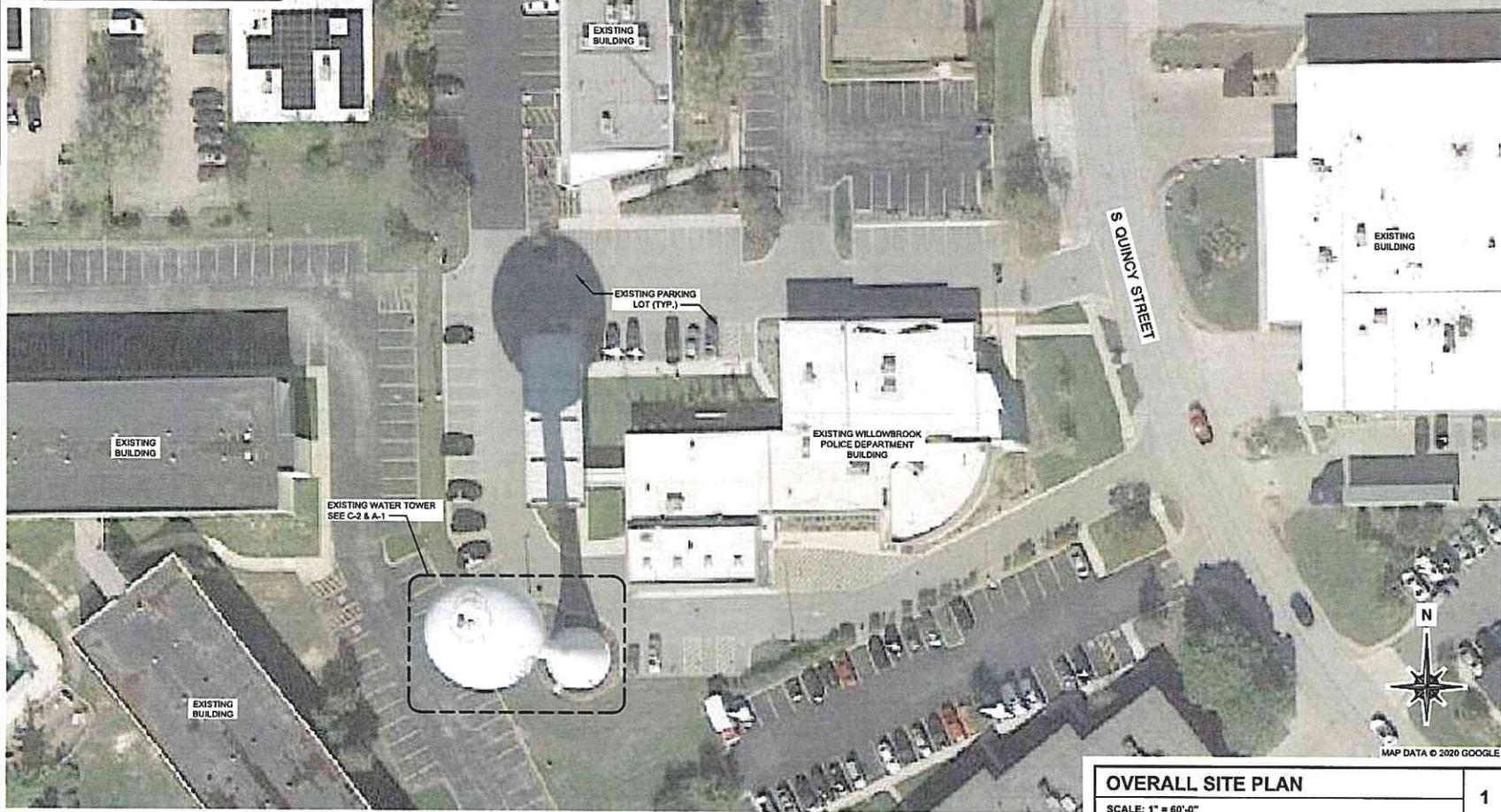
CHECK = "Anchor Bolts are adequate for tension"

$$\frac{T_{\text{bolt}}}{F_t} = 41.51 \cdot \%$$

EXHIBITS

GENERAL SITE NOTES:

1. CONTRACTOR TO HIRE PUBLIC (811) AND PRIVATE LOCATING SERVICE IN ORDER TO LOCATE AND PROTECT ALL SURFACE UTILITIES. DO NOT SCALE OFF THESE PLANS FOR ANY BELOW GRADE UTILITIES
2. CONTRACTOR SHALL VERIFY ALL EXISTING BURIED AND OVERHEAD UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL REPAIR ALL DAMAGED UTILITIES AT HIS OWN COST AND COORDINATE ANY REPAIRS WITH RESPECTIVE UTILITY COMPANY.
3. CONTRACTOR TO VERIFY ALL HEIGHTS AND AZIMUTHS IN FIELD PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ABEEP AND ENGINEERING FIRM OF ANY DISCREPANCIES BEFORE PROCEEDING.
4. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION.



OVERALL SITE PLAN

SCALE: 1" = 60'-0"

1



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7760 S QUINCY STREET
WILLOWBROOK, IL 60527



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EXPIRES: 11/30/21 SIGNED: XXX/XX/20

REV.	ISSUED FOR	DATE	BY
A	ISSUED DRAWING	04/26/20	TRK
B	ADDITIONAL DESH	05/04/20	TRK
C	PERMIT CDS	06/16/20	ATK

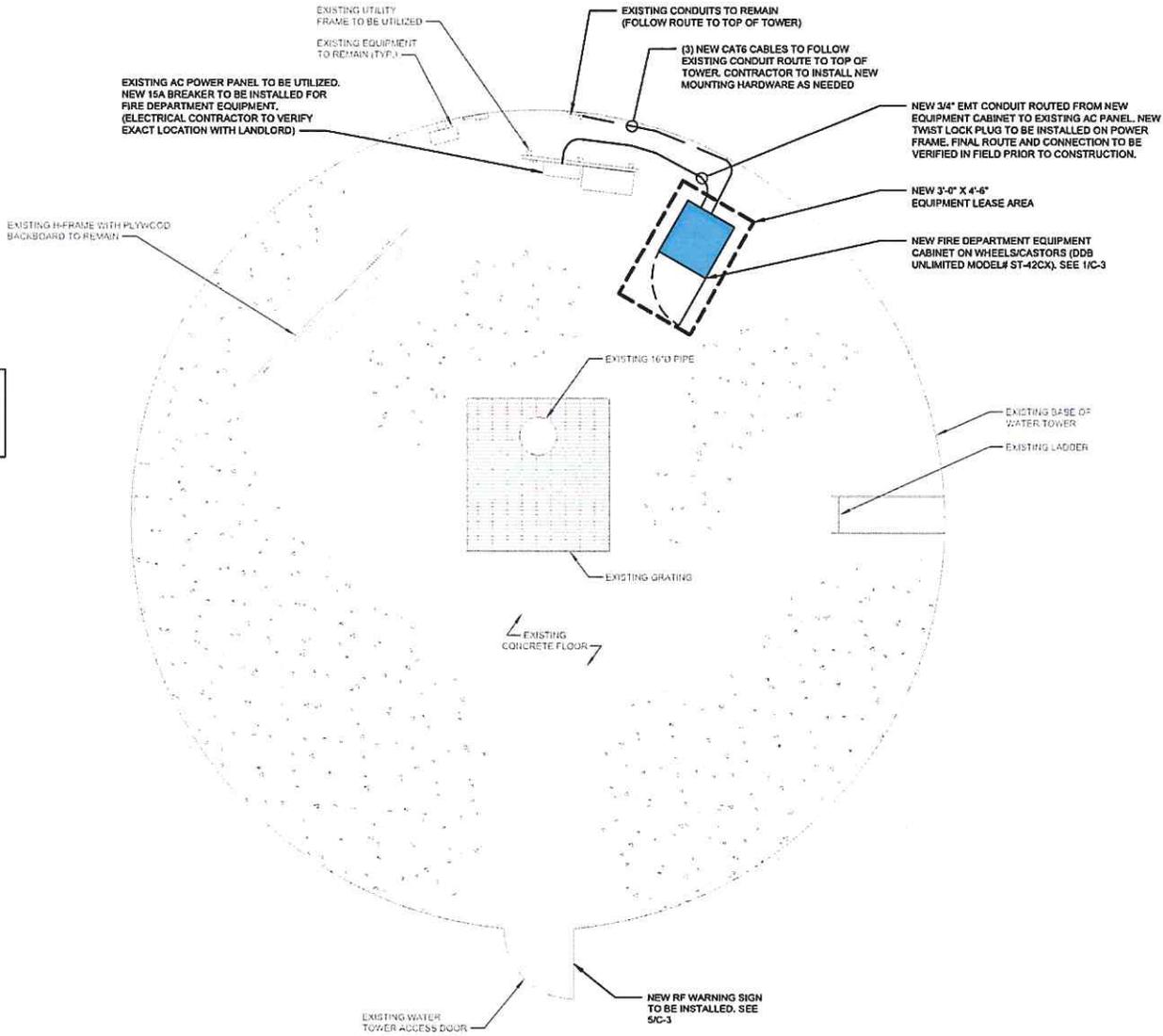
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PLUMBING \ ELECTRICAL \ LAND SURVEYING
ACCESSIBILITY CONSULTING \ STRUCTURAL

CHECK: JKR
DRAWN: TRK
JOB: 20008267

C-1
OVERALL SITE PLAN

LEGEND

- EXISTING EQUIPMENT
- NEW EQUIPMENT
- REMOVED EQUIPMENT



NOTE:
CONTRACTOR TO ENSURE THAT NO CONFLICTS OCCUR IN THE FIELD WITH THE LOCATION OF THE PROPOSED FIRE DEPARTMENT EQUIPMENT. ANY CONFLICTS SHOULD BE REPORTED TO THE FIRE DEPARTMENT CONSTRUCTION MANAGER.



EQUIPMENT PLAN

SCALE: 1/4" = 1'-0"

1



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REVISIONS			
REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/05/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CD3	06/16/20	ATK

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PLUMBING \ ELECTRICAL \ LAND SURVEYING
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CHECK: JKR
DRAWN: TRK
JOB: 20000281

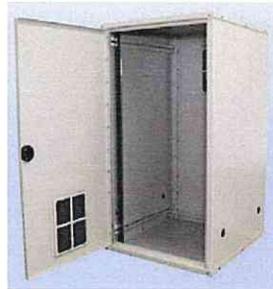
C-2
EQUIPMENT PLAN



DDB

UNLIMITED

ST-42DX

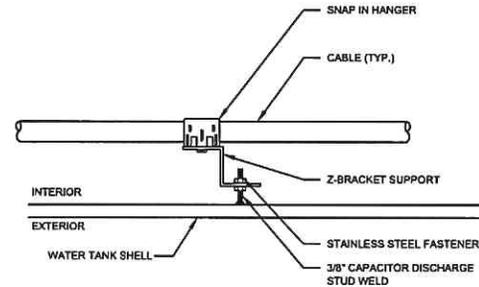


- 43"H X 24"W X 26"D
- ADJUSTABLE 19" RACKING
- 24 RACKING UNITS
- FRONT AND REAR DOORS
- FOAM FILTERED VENTS
- POWDER BAKED-ON CREAM PAINT
- LOCKABLE
- SHIPPING WEIGHT: 95 lbs.

EQUIPMENT CABINET DETAIL

SCALE: NONE

1



TANK MOUNTED CABLE DETAIL

SCALE: NONE

2

COMMSCOPE SNAPSTAK PLUS ADJUSTABLE HANGER, 14.1mm-16mm CABLE

TESSCO SKU: 207219 UPC: PSSH-1416
QTY/UOM: 10 PACK MFG PART #: SSH-1416

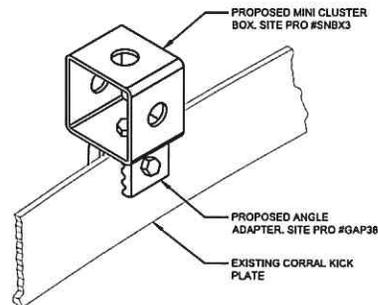


SNAP-IN HANGER DETAIL

SCALE: NONE

3

NOTE:
INSTALL CABLES ON MINI
CLUSTER BOX W/ SNAP IN
HANGERS. SEE 3C-3.



CORRAL CABLE ROUTING DETAIL

SCALE: NONE

4



RF WARNING SIGN

SCALE: NONE

5



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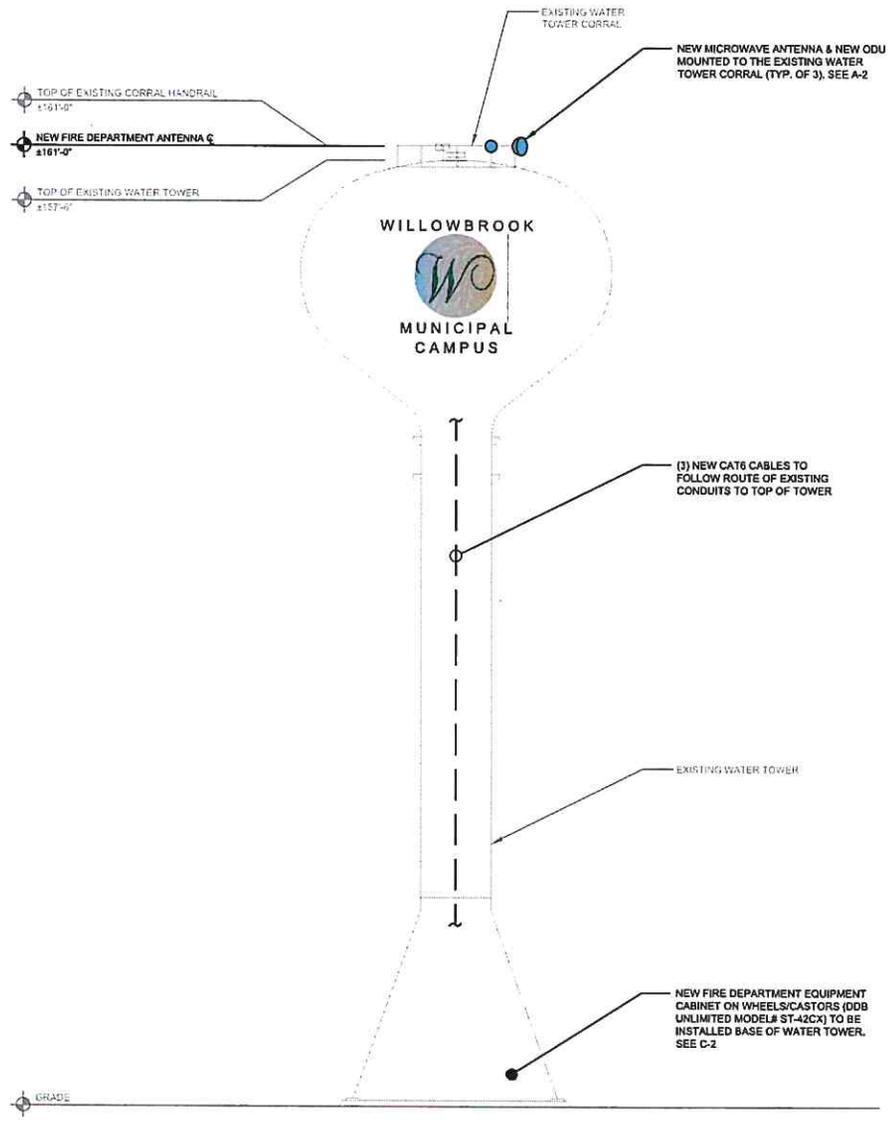
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NOTE:
 A STRUCTURAL EVALUATION OF THE TOWER OR STRUCTURE FOR THE NEW ANTENNA LOADING HAS BEEN COMPLETED BY WT GROUP STRUCTURAL ENGINEERING, LLC ON DATE PENDING. THE LOCATION AND MOUNTING OF THE ANTENNAS SHOWN IN THE STRUCTURAL ANALYSIS SHALL SUPERSEDE THESE DRAWINGS.

TOWER ELEVATION
 SCALE: 1'-0" = 20'-0"
 1



Abeep
LLC

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B	ADDITIONAL DISH	05/04/20	TRK
C	PERMIT CDS	06/16/20	ATK

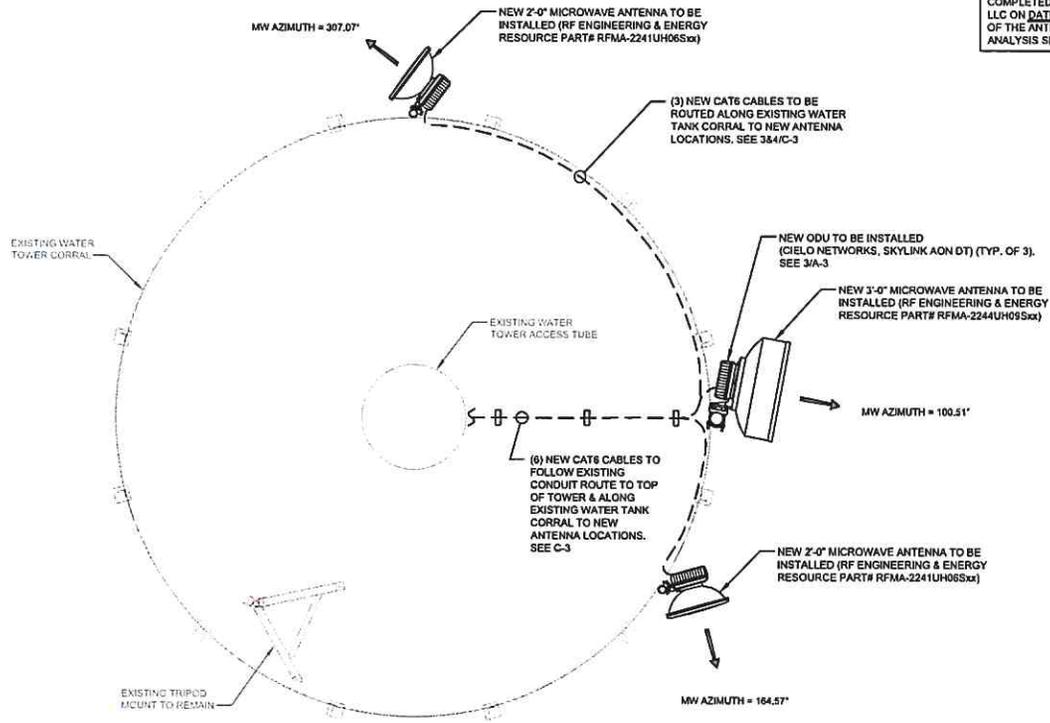
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CHECK: JKR
 DRAWN: TRK
 JOB: 20008287

A-1
 TOWER ELEVATION

	WILLOWBROOK WATER TOWER		
ANTENNA MODEL #	RFMA-2244UH095xx	RFMA-2241UH06Sxx	RFMA-2241UH06Sxx
DIAMETER/WEIGHT	40.2' / 66 LBS	25.9' / 24 LBS	25.9' / 24 LBS
FREQUENCY RANGE	21.2-23.6 GHZ	21.2-23.6 GHZ	21.2-23.6 GHZ
RAD CENTER	161'-0"	161'-0"	161'-0"
AZIMUTH	100.51°	164.57°	307.07°
VERTICAL ANGLE	0.40° DOWNTILT	0.80° DOWNTILT	0.94° DOWNTILT
RECEIVE SITE	TRIS 4 (TOWER)	TRIS 3	TRIS STATE 2
PATH DISTANCE	3.00 MILES	1.36 MILES	0.95 MILES
ODU MODEL #	(1) SKYLINK AON DT	(1) SKYLINK AON DT	(1) SKYLINK AON DT
CABLE RUNS/TYP	(1) RUN OF CAT6	(1) RUN OF CAT6	(1) RUN OF CAT6
CABLE LENGTH	200'-0"	200'-0"	200'-0"

NOTE:
A STRUCTURAL EVALUATION OF THE TOWER OR STRUCTURE FOR THE NEW ANTENNA LOADING HAS BEEN COMPLETED BY WT GROUP STRUCTURAL ENGINEERING, LLC ON DATE PENDING. THE LOCATION AND MOUNTING OF THE ANTENNAS SHOWN IN THE STRUCTURAL ANALYSIS SHALL SUPERSEDE THESE DRAWINGS.



ANTENNA PLAN
SCALE: NONE

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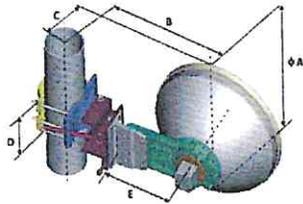
REV.	ISSUED FOR	DATE	BY
A	ZONING DRAWING	04/30/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CDS	06/15/20	ATK

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 STRUCTURAL

CHECK: JKR
DRAWN: TRK
JOB: 2000826T



RFMA-2241UH06Sxx



DIMENSIONS (IN.)	
A	25.8
B	18.2
C	10.4
D	4.5
E	9.1

Mechanical Specifications	
Diameter (m)/(ft)	0.6m/2ft
Antenna Color	Passive Cool Grey 1C
Wave-guide Size	153 IEC-RJ20
Radome Options	Molded
Azimuth Adjustment	Coarse : 360° Fine : ±15°
Elevation Adjustment	Coarse : ±25° Fine : ±15°
Diameter of Mounting Pole (mm)/(in)	Φ51-Φ114mm/2-4.5in
Wind Velocity Survival Rating (m/s)	67
Wind Velocity Operational (m/s)	30
Ice-load (mm)/(in)	25.4mm/1in
Operational Temperature (C)/(F)	-45 ~ +60C/-49 ~ 140F
Axial Force (N)	1218
Side Force (N)	601
Twisting Moment (N-m)	505
Package	Carton
L-W-H (mm)/(in)	750x750x440mm/29.5x29.5x17in
Gross Weight/Net Weight (kg)/(lb)	16kg/11kg/35lb/24lb

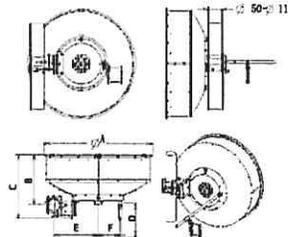
ANTENNA DETAIL

SCALE: NONE

1



RFMA-2244UH09Sxx



DIMENSIONS (IN.)	
A	40.2
B	18.3
C	23.2
D	39.4
E	18.3
F	8.3

Mechanical Specifications	
Diameter (m)/(ft)	0.9m/3ft
Antenna Color	Cool Grey
Wave-guide Size	153 IEC-RJ20
Radome Options	Molded
Azimuth Adjustment	Coarse : 360° Fine : ±10°
Elevation Adjustment	Coarse : ±10° Fine : ±10°
Diameter of Mounting Pole (mm)/(in)	Φ51-Φ114mm/ 2-4.5in
Wind Velocity Survival Rating (m/s)	67
Wind Velocity Operational (m/s)	30
Ice-load (mm)/(in)	25.4mm/1in
Operational Temperature (C)/(F)	-45 ~ +60C/-49 ~ 140F
Axial Force (N)	2605
Side Force (N)	1286
Twisting Moment (N-m)	715
Package	Wooden
L-W-H (mm)/(in)	1100x1100x450mm/43x43x18in
Gross Weight/Net Weight (kg)/(lb)	62kg/38kg/132lb/66lb

ANTENNA DETAIL

SCALE: NONE

2

cielo NETWORKS SkyLink AON DT



Mechanical and Environmental	
Input Power Requirements	-8 VDC direct DC or PSE (38 VDC to 60 VDC range)
Weight	9.2kg (20.2lb) including internal GND or coupler (2-0 configuration)
Size	23.8cm x 23.2cm x 12.5cm (9.42"x9.12"x4.92") not including antenna nose or handle
Operating Temperature	-35 °C to +55 °C (-27 °F to +131 °F) per ETSI EN 300 010-2-4 Class 4M5
Humidity	5% - 100%
Weather	IP67 / All Weather
Safety	IEC 60950-1, -2
Regulatory	US FCC Part 101, FCC Part 15B, ETSI EN 302 217

ODU DETAIL

SCALE: NONE

3

NOT USED

SCALE: NONE

4



WT GROUP
Engineering and Planning, Procure and Install
2017 Park Avenue, Wilmette, IL 60091
Tel: 630-261-1234
Fax: 630-261-1234
www.wtgroup.com
E-MAIL: sales@wtgroup.com

WT Group
Engineering & Design Company

WILLBROOK WATER TOWER
7760 S QUINCY STREET
WILLBROOK, IL 60527

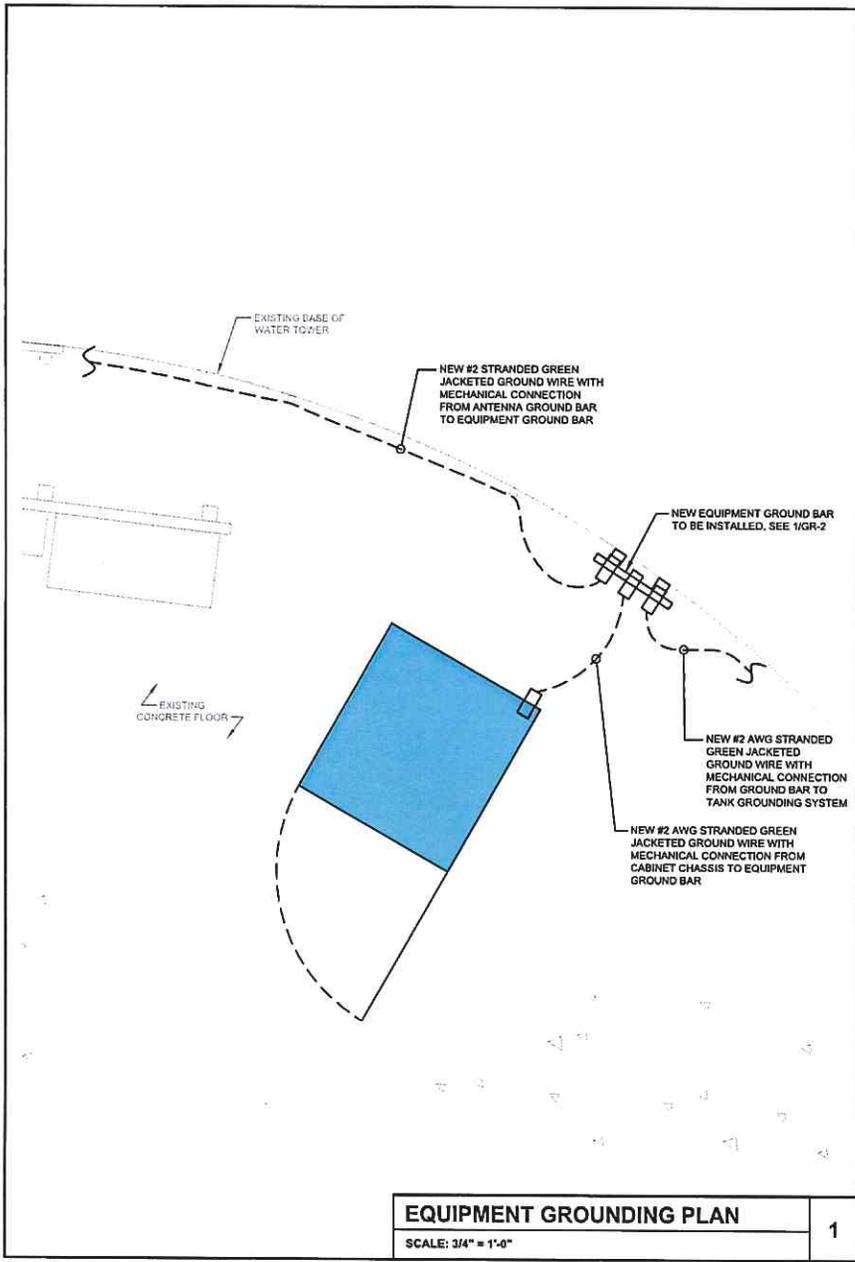
EXPIRES: 11/30/21 SIGNED: XX/XX/20

REVISIONS			
REV.	ISSUED FOR	DATE	BY
A	ISSUE DRAWING	04/03/20	TRK
B	ADDITIONAL DISH	05/06/20	TRK
C	PERMIT CDS	06/18/20	ATK

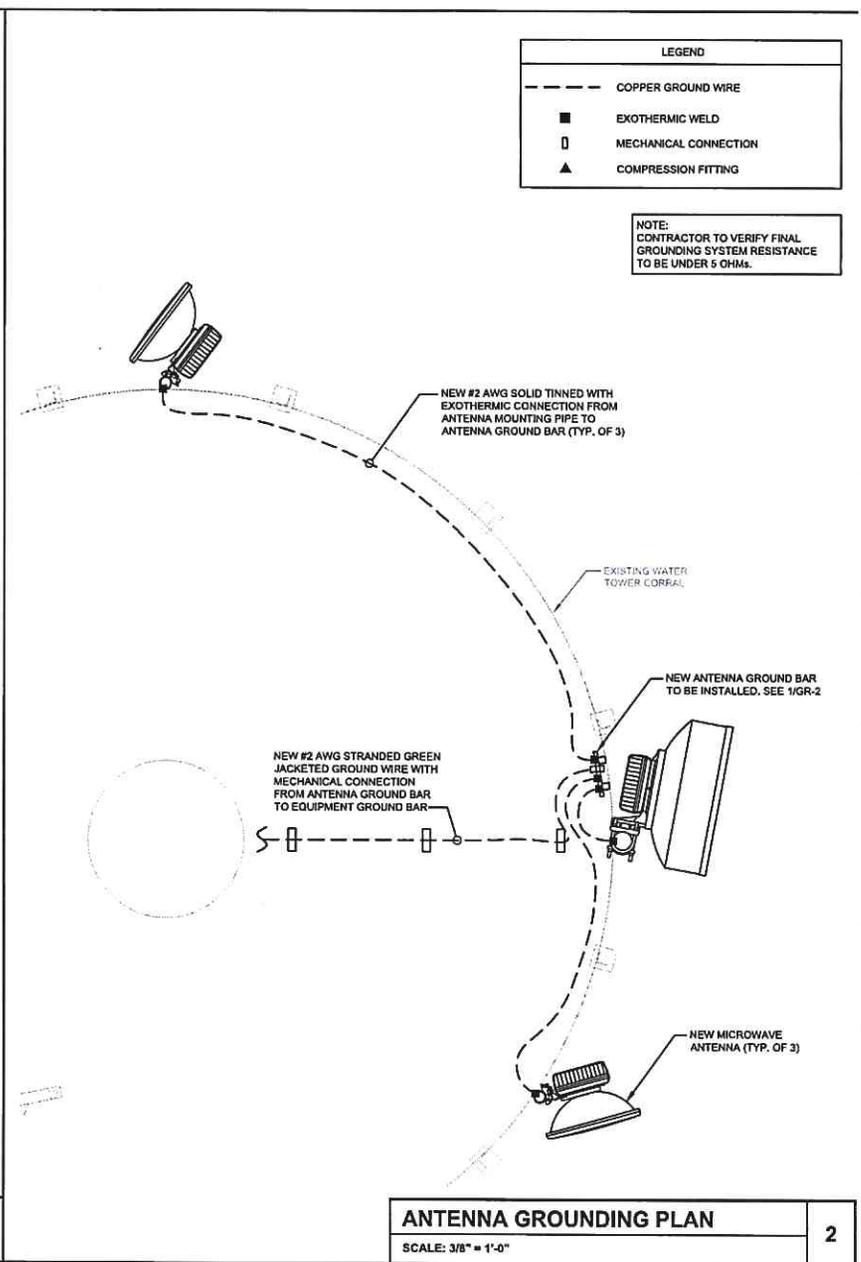


A-3

ANTENNA DETAILS



EQUIPMENT GROUNDING PLAN
SCALE: 3/4" = 1'-0"
1



LEGEND

---	COPPER GROUND WIRE
■	EXOTHERMIC WELD
□	MECHANICAL CONNECTION
▲	COMPRESSION FITTING

NOTE:
CONTRACTOR TO VERIFY FINAL
GROUNDING SYSTEM RESISTANCE
TO BE UNDER 5 OHMS.

ANTENNA GROUNDING PLAN
SCALE: 3/8" = 1'-0"
2



WILLOWBROOK WATER TOWER
7760 S QUINCY STREET
WILLOWBROOK, IL 60527



WT GROUP
Engineering and Production, Process and Piping
2415 Powers Avenue (Off Hwy 150) Lisle, IL 60132
Tel: 630-261-1234
Fax: 630-261-1234
E: info@wtgroup.com
www.wtgroup.com

EXPIRES: 11/30/21 SIGNED: X0X0X/20

REV.	ISSUED FOR	DATE	BY
A	ISSUING DRAWING	04/20/20	TRK
B	ADDITIONAL DSH	05/05/20	TRK
C	PERMIT CD'S	06/16/20	ATR

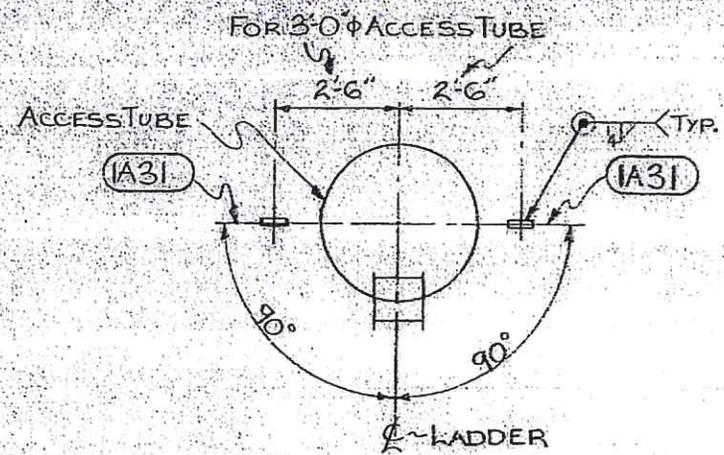
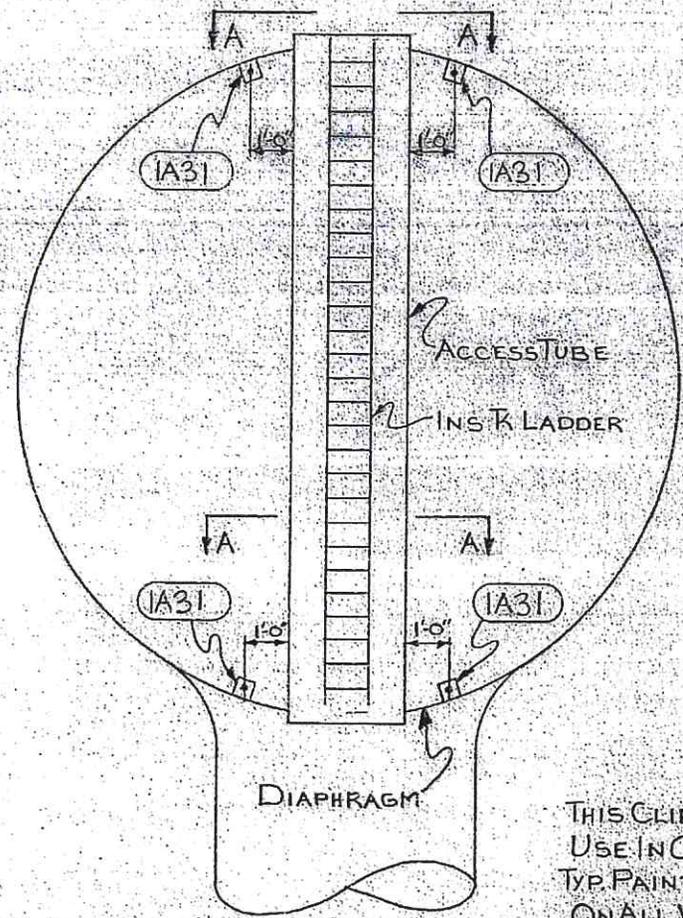
ADULTIC \ DESIGN & PROGRAM MANAGEMENT
CIVIL \ TELECOMMUNICATION \ MECHANICAL
PLUMBING \ ELECTRICAL \ LAND SURVEYING
ACCESSIBILITY CONSULTING \ STRUCTURAL

CHECK: JKR
DRAWN: TRK
JOB: 2000826T

GR-1
GROUNDING PLANS

10-50

SHIP FC.	MARK	ASSH. PC.	DESCRIPTION	LENGTH		SPEC.	WT.
				FT.	IN.		
4	A31		BAR 4X 1/4" HOLE	0	6	A36	7



SECTION A-A

THIS CLIP ARRANGEMENT FOR USE IN CENTRAL REGION TYP. PAINTERS CLIP LOCATIONS ON ALL WATERSPHERS+ WATERSPHEROIDS THROUGH 750MG

SECTION THROUGH BALL

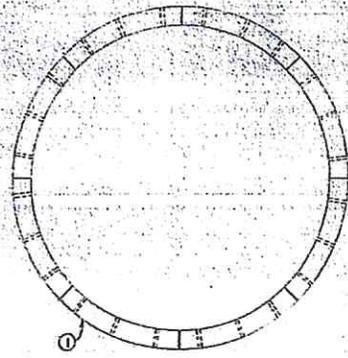
FORM No. MADE BY GH,
BH-A31-0 CHK BY WEST

CHICAGO BRIDGE & IRON COMPANY
BIRMINGHAM, ALA.

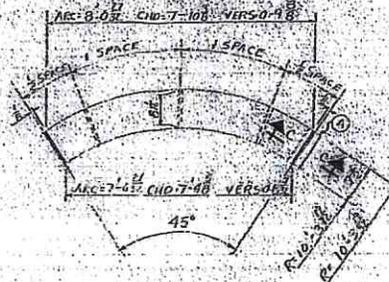
SPECIAL PAINTERS CLIPS

PURCHASER'S NO. _____ CONTRACT NO. 70-6079
 DRAWN BY JS DATE 4-8-70
 CHECKED BY AMW DATE 5-15-70
 R. B. BOWEN ENGINEERING COORDINATOR ENG. NO. 3 REV. 0

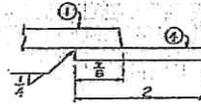
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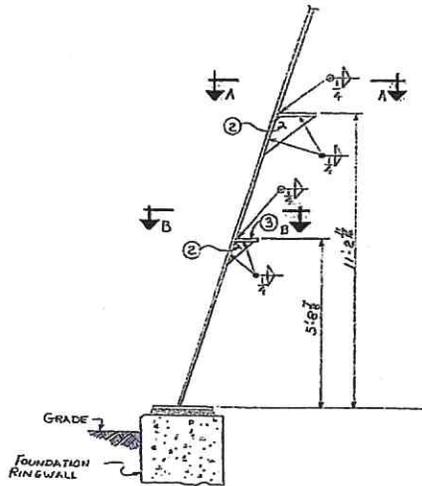
SECTION A-A



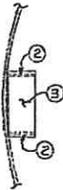
DETAIL 1



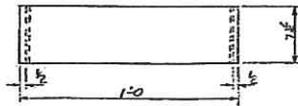
SECTION C-C
(ONE END OF 1 ONLY)



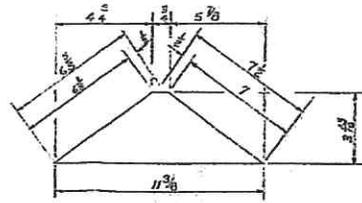
ELEVATION



SECTION B-B



DETAIL 3



DETAIL 2

NO.	MARK	DESCRIPTION	QTY.	REMARKS
8	22-1	1/2" x 2 1/4" (S&W) x 10' (10' x 20')	12	1785
26	22-2	1/2" x 2 1/4" x 10'	12	1785
1	22-3	1/2" x 2 1/4" x 10'	12	1785
8	22-4	1/2" x 2 1/4" x 10'	12	1785

BRIDGE & IRON COMPANY

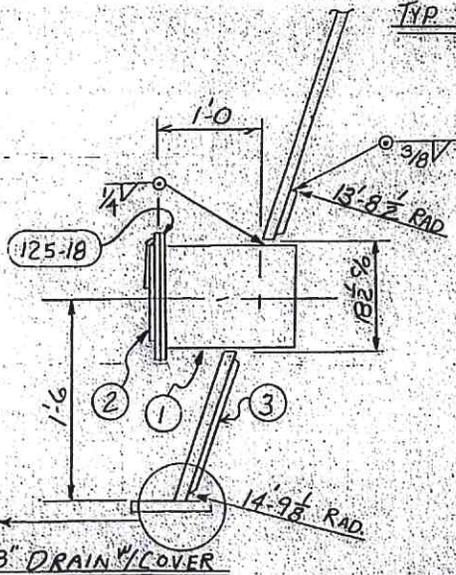
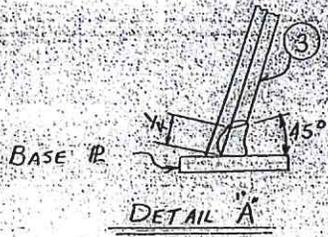
PLATFORM ASSEMBLY

DESIGNED BY: L.S. SNEYD

ENGINEER: SNEYD

70-6071

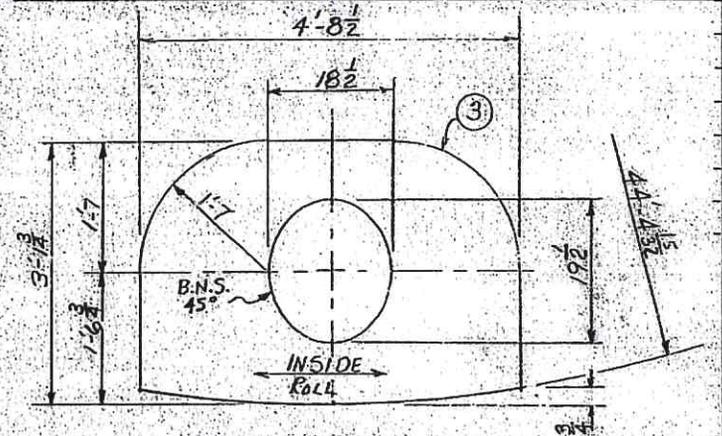
REVISED: 22 OF 0



SEE DETAIL 'A'

18" DRAIN COVER

SHIP PC.	MARK	ASSEM. PC.	DESCRIPTION	LENGTH		SPEC	WT.
				FT.	IN.		
1	23-1		PC 18" STD W. WALL PIPE PEE	1	6	A53B	106
	125-18	1	18" 125" P. FLG. STD FE'D			A283C	94
1	23-2		NEENAH R50.50-FF18			CT	50
			ADD. DRAINAGE GATE				
1	23-3		12" SKX 1/2" (S.P. 3.8 X 4" 8 1/2)			A783C	47
16			1/8" FIN. HEX BOLTS & NUTS	0	4 3/4	A307B	34
1	FC121R		RED. RUBBER GASKET 25" O.D. X 18" I.D. 1/16" - 1/4" HOLES ON 22 3/4" B.C.				1



REINF. IR DETAIL

REVISIONS	DATE	BY	CHKD BY	APP'D BY

CHICAGO BRIDGE & IRON COMPANY

18" DRAIN PIPE

PURCHASER'S NO. _____ CONTRACT NO. 70-6079

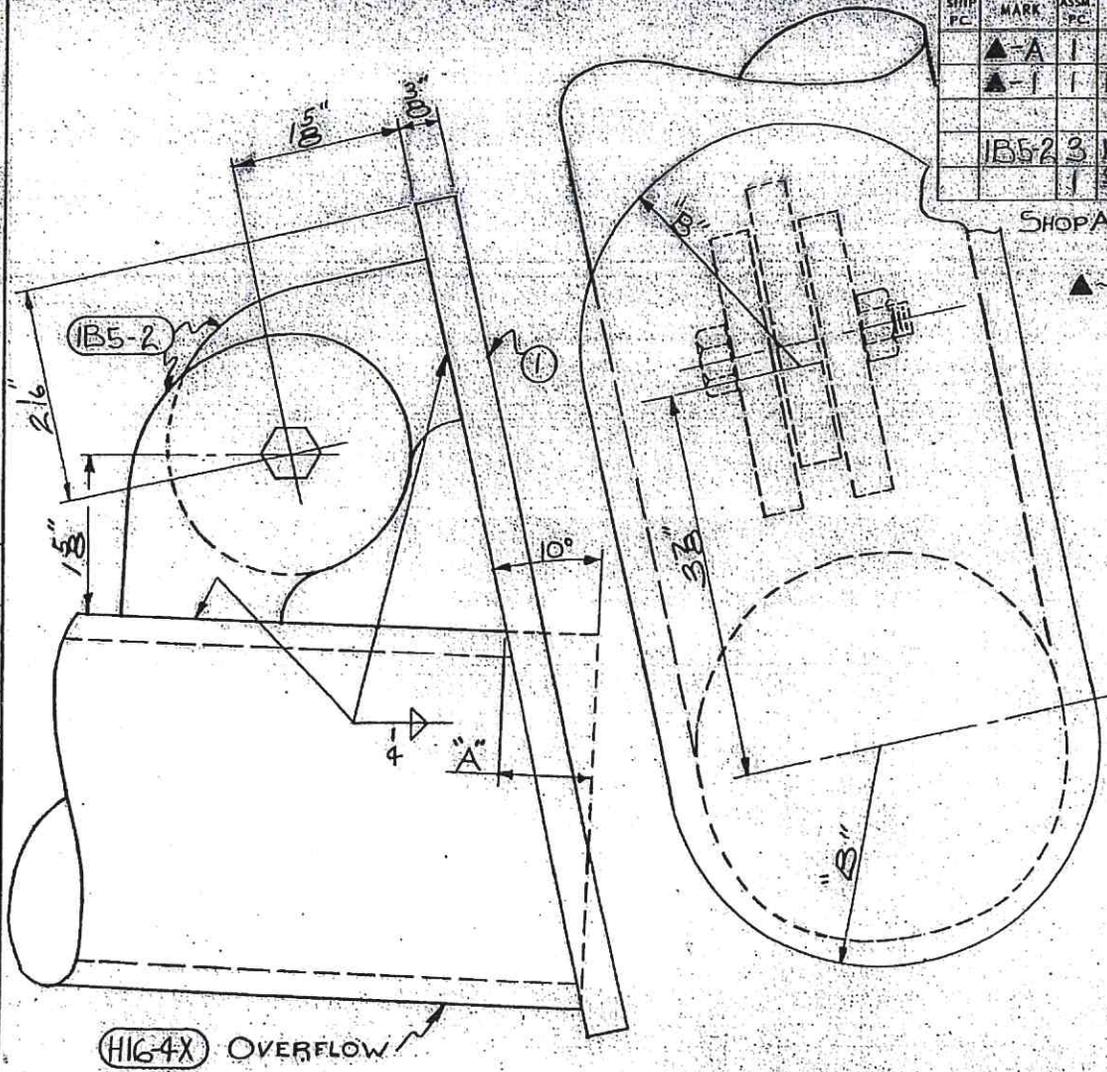
DRAWN BY JS DATE 3-27-70

CHECKED BY H DATE 5-17-70

R.B. BULLOCK

ENGINEERING COORDINATOR

C-23



SHIP PC	MARK	ASSEM PC	DESCRIPTION	LENGTH		SPEC	WT
				FT.	IN.		
▲-A	1		FLAP VALVE ASSY.				
▲-1	1		PLATE 5/8 X 3/8 (CF 2B+3/8 X 2B+3/8+3/8)			A283-C	SEE TABLE
IB5-2	3		HINGE PL'S			do	1
	1		3/4" Φ FIN. HEX BOLT & NUT	0	2 1/4	A307-B	✓

SHOP ATTACH ABOVE TO (HIG-4X)

▲-MEANS MILLER INSERT DWG. NO.

Ø FLOW Φ	A	B	WT OF PLATE
3" Φ	5/8	2 1/8	3#
4" Φ	1 1/16	2 1/8	4#
6" Φ	1 3/16	3 1/8	7#
8" Φ	1 1/2	4 1/8	11#

FORM NO. BH-HIG-X-O
DWG BY GH
CHK BY WEST

(HIG-4X) OVERFLOW

WORK THIS DWG WITH STD HIG-2

CHICAGO BRIDGE & IRON COMPANY
BIRMINGHAM, ALA.

FLAP VALVE
FOR 6" Ø OVERFLOW TO GRD.

PLANT USER'S NO. _____ CONTRACT NO. 70-6079

DRAWN BY JS DATE 3-24-70

CHECKED BY R.B. DIXLESON DATE 5-18-70

R.B. DIXLESON
ENGINEERING COORDINATOR

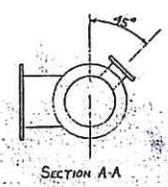
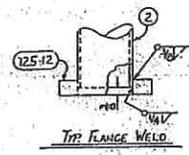
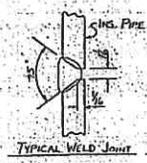
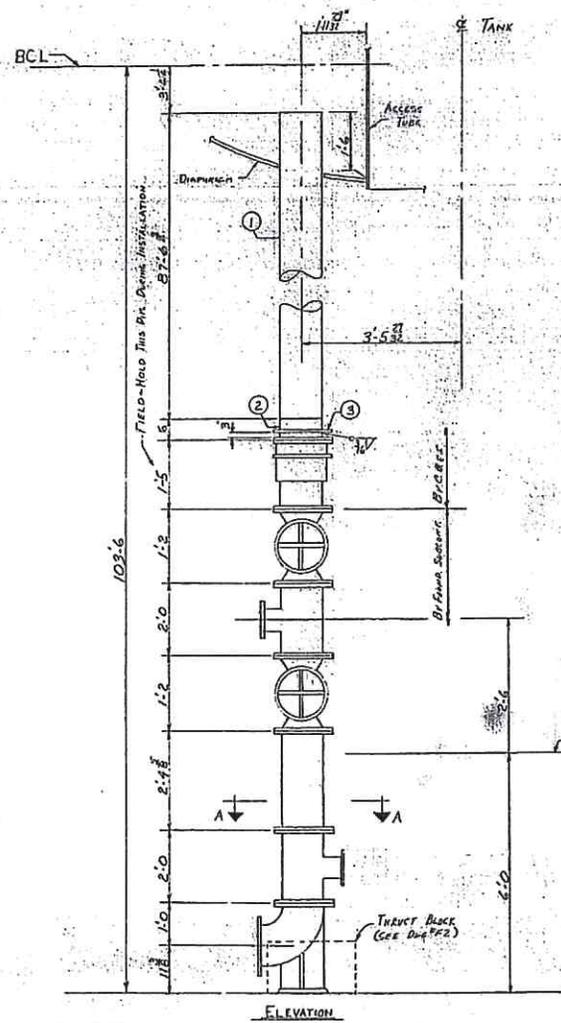
DWG NO. 24 REV 0

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ORIGINAL - Do Not Use

DR 72 BH

NO.	MARK	QTY.	DESCRIPTION	UNIT	QTY.	PRICE	TOTAL
1	25-1		Buy 12" S.W. 20 W.S. Pipe	LF	103.6		
	25-A		Bevel Joint Joints	WT	2.34		
1	25-A		12" Pipe Section	FO	2		
	25-2		12" S.W. 20 W.S. Pipe	LF	5.92		
	25-12		12" 125# Ego. Gro. Fed.				
	25-3		R-15 3/4" x 1/2" 2810				
1	A15-12		12" Flange Joint (Cdn.) (See A15-2)				



NOTE 1
SEE CUST. Dwg. SHEET 20-A FOR FINISH, NOT
SHOWN AND EXTENT OF C.B.T.I. CONTRACT (CONC'D)

TRICKY BRIDGE & IRON COMPANY

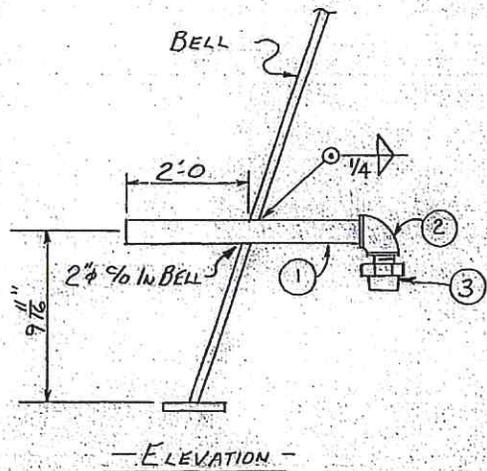
12" INLET - OUTLET

DRAWING NO. **70-6019**

DATE: **APR 1970**

BY: **R.R. HARRISON**

SHIP PC.	MARK	ASSM. PC.	DESCRIPTION	LENGTH		SPEC.	WT.
				FT.	IN.		
1	26-1		PE NEWSON 40 W.S. PIPE 2' x 8"	2	8 1/2	A53B	3
1	26-2		1/2" F.S. 90° ELBOW SCWB.			F.S.	1
1	26-3		1 1/2" UNION - MALE x FEMALE			F.S.	4



FIELD: CONNECT PIPE TO VERTICAL STUB
SECTION SHOWN ON DWG # F3 BEFORE
WELDING TO BELL

BY	DATE	BY	DATE	BY	DATE	REVISION

CHICAGO BRIDGE & IRON COMPANY

SUMP DISCHARGE PIPE

PURCHASER'S NO. _____ CONTRACT NO. _____

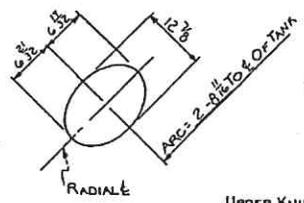
DRAWN BY J.S. DATE 7-16-70

CHECKED BY AKR DATE 7-21-70

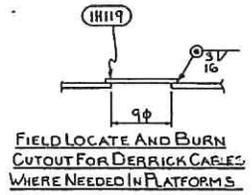
R. B. BURGLERSON ENGINEERING COORDINATOR

DWG NO. 26 REV. 0

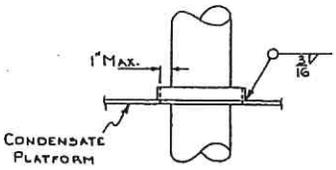
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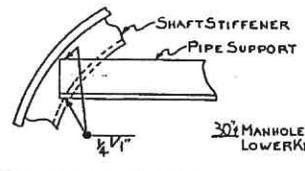
DIAPHRAGM CUTOUT FOR PIPE(S)



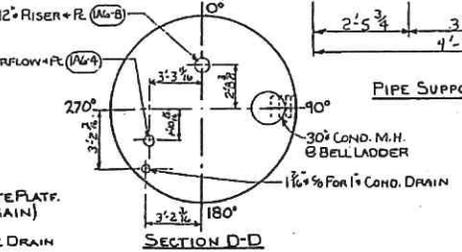
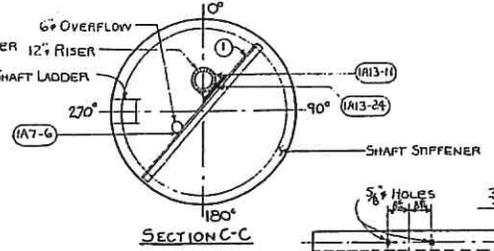
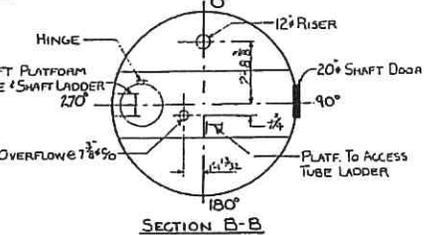
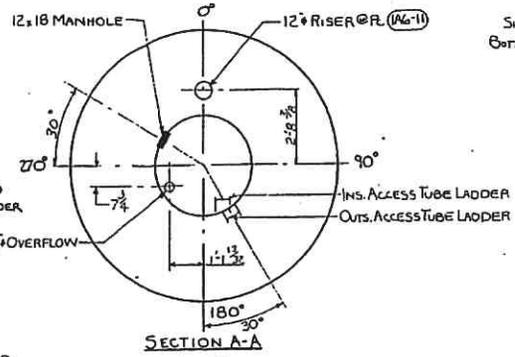
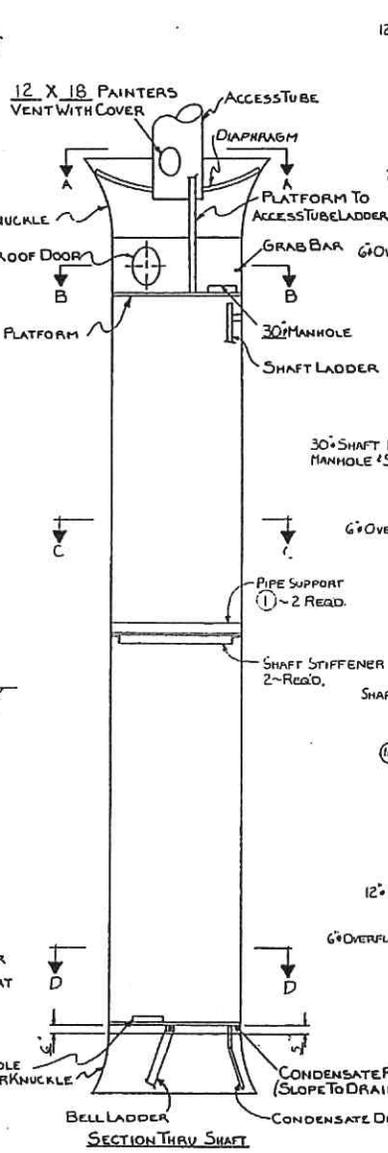
FIELD LOCATE AND BURN CUTOUT FOR DERRICK CABLES WHERE NEEDED IN PLATFORMS



TYP WELDING OF CONDENSATE RING



TYPICAL WELDING OF PIPE SUPPORT TO STIFFENER



SHOP ATTACH TO BOTTOM SHAFT PLATE

QTY	NAME	APP. PC	DESCRIPTION	LENTH	SPEC
1	IA6-8		CONDENSATE PLATFORM (BILL COMPLETE)		
4	IA6-8		BAR - 3 x 1/4 (ROLL)	2 5/8	A36
0	IA6-4		P. B. - 3/8 PIPE P.B.E	3	A53B
5	IA6-11		BAR - 3 x 3/4 (ROLL)	7 1/2	A36
2	1H19		R - 11 X 3/4		A287C
2	ED-1		PIPE SUPPORTS		
9			1 - 3 x 3/4 HOLES	9 3/8	A36
2	1A7-6		PIPE STRAPS AND OR U-BOLTS		
1			U-BOLT 3/8 (TRF 2 1/2)	1 1/2	A36
4			3/8 FIN HEX NUTS		A307B
3	1A13-11		R - 2 x 1/4 S. 2 HOLES BENT	7 3/4	HRS
0			1/2 FIN HEX BOLTS & NUTS	3	A307B
4			1/2 WASHERS		C5
1	1A13-24		2 x 4 WOOD SPACER	8 1/4	WOOD

GENERAL NOTES

1. ALL CUTOUTS IN SHAFT PLATFORMS + DIAPHRAGM ARE TO BE MADE IN THE SHOP.
2. SEE GENERAL PLAN FOR LOCATION OF PIPE SUPPORT BRACKETS IN SHAFT.
3. MAXIMUM SPACING OF PIPE SUPPORT BRACKETS IN SHAFT TO BE 32\"/>

ORIENTATION OF ACCESSORIES IN SHAFT

MICHIGAN STEEL & IRON COMPANY

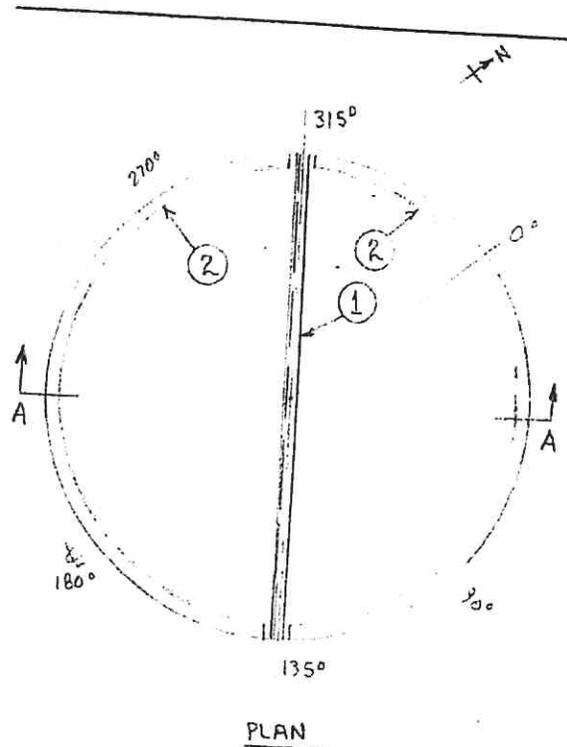
DRAWING NO. 74-2762

REVISED BY: [Signature]

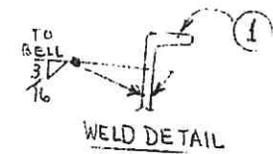
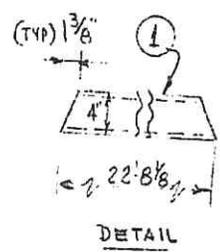
DATE: 10-24-24

CONTRACT NO. 74-2762

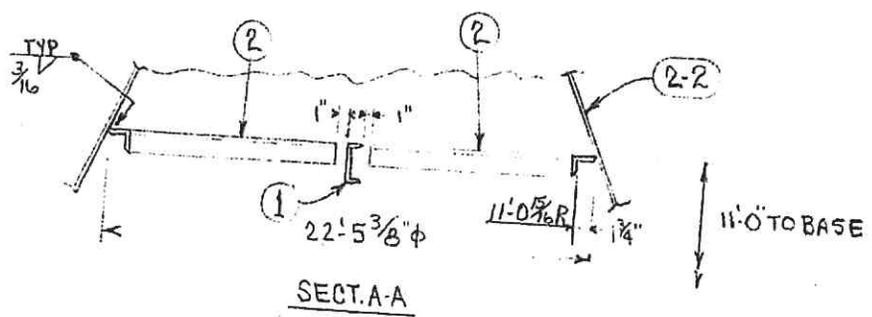
SHEET NO. 20 OF 20



SHIP PC.	MARK	ASSM. PC.	DESCRIPTION	LENGTH		SPEC.	WT.
				FT.	INC.		
1	23-1		PC. C 4" x 5.4# SK BE	22	8 1/8	A36	
2	23-2		L 2" x 2" x 1/4" (ROLL RAD. = 11'-0 5/16")	34	2 3/8	A36	
				36	2		



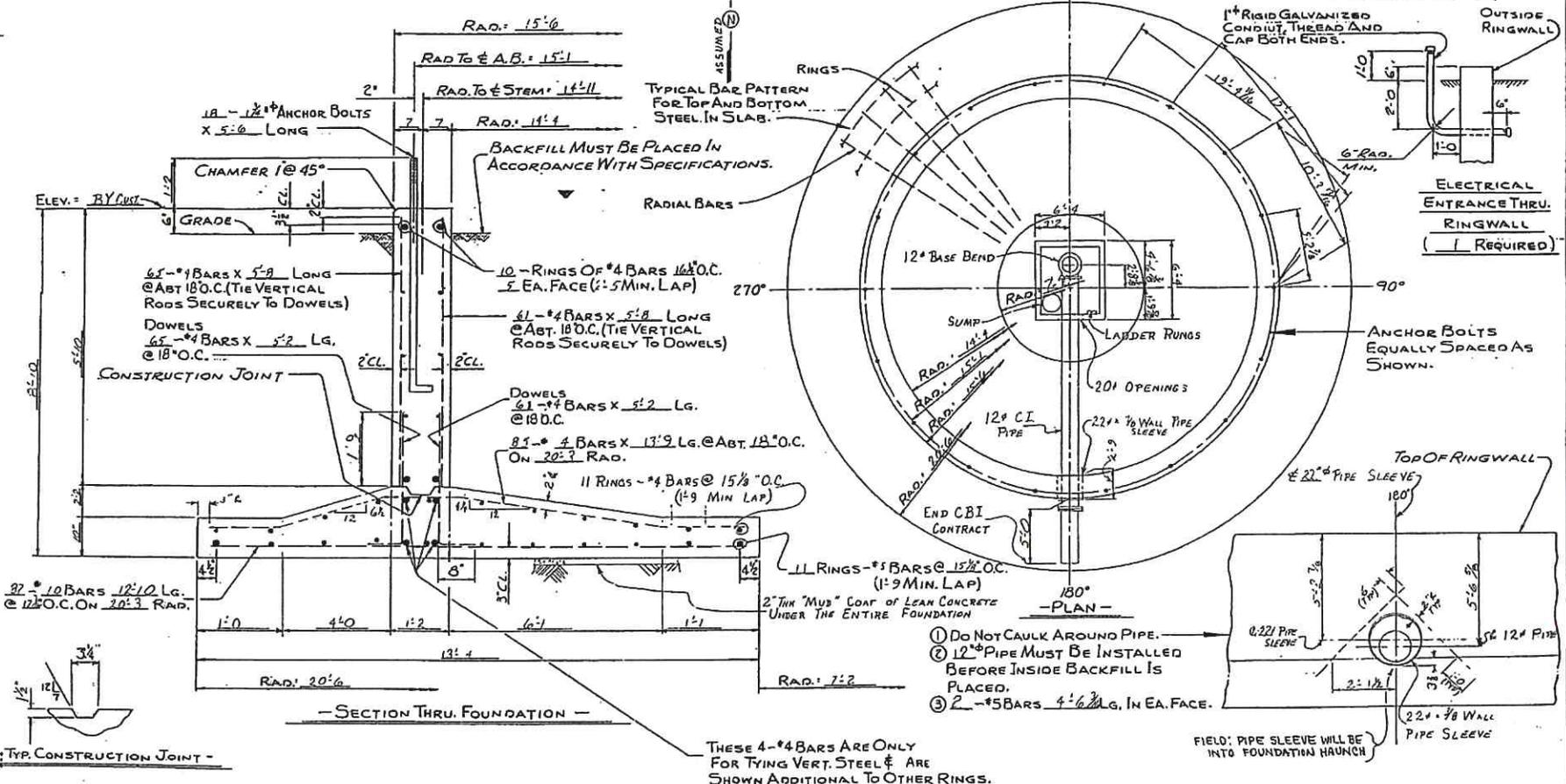
(FALSE CEILING BY CUST.)
(SUPTS. BY CB&I CO.)



REMARKS			
CHICAGO BRIDGE & IRON COMPANY FALSE CEILING SUPTS. 500MG. WATERSPHEROID			
PURCHASER'S NO.	DATE	CONTRACT NO.	
DRAWN BY: RP	2/28/75	74-2762	
CHECKED BY: C	DATE: 2/28/75	DWG NO. 23	REV 0
R.E. PUGH ENGINEERING COORDINATOR			

NOT TO SCALE

NOTE: USE ANCHOR BOLT CHORDS FOR CHECKING ONLY.



WORK THIS DWG. WITH DWG. #F2

CALCULATED FOUNDATION QUANTITIES		
ITEM	CONCRETE (CU. YDS.)	REIN. STEEL (LBS.)
RING FOUNDATION	104	9200
VALVE VAULT	4.9	279
TOTAL	108.9	9,479

QUANTITIES ARE APPROXIMATE, FOUNDATION CONTRACTOR SHALL MAKE OWN ESTIMATE OF QUANTITIES FOR BIDDING AND/OR CONTRACTING.

TOLERANCES:
 TOP OF RING WALL TO BE TROWELLED LEVEL AND TO BE WITHIN $\pm \frac{1}{4}$ " OF THE THEORETICAL ELEVATION.
 ANCHOR BOLTS TO BE WITHIN $\frac{1}{2}$ " OF THEORETICAL POSITION TO BE PLUMB WITHIN $\frac{1}{8}$ " AND WITH PROJECTION ABOVE THE TOP OF RING WALL WITHIN $\pm \frac{1}{2}$ " OF THE SPECIFIED HEIGHT.

SPECIFICATIONS: SEE SPECIFICATIONS BY C.B.I. & ENGINEER
 ALL CONCRETE TO HAVE 3000 P.S.I. COMP. STRENGTH f_c' IN 28 DAYS REINFORCING STEEL TO HAVE MIN. YIELD STRENGTH OF 60000 P.S.I. & CONFORM TO ASTM A615 GR. 60.
 ALL MATERIAL UNLESS OTHERWISE NOTED TO BE FURNISHED & INSTALLED BY FOUNDATION CONTRACTOR.
 ANCHOR BOLTS ARE FURNISHED BY C.B.I. (\$ PER ACI 318-71) PIPE COVER: 4" 6

TABLE OF LOADINGS		
ITEM	LOAD	BEARING PRESSURE (P.S.F.)
WATER	4231.8 $K_{1/2}$	
METAL	321.87 $K_{1/2}$	
CONCRETE	123.56 $K_{1/2}$	
TOTAL W₀ WIND	4677.23	10355 (NET)
OVERTURNING MOMENT	6219.25 $K_{1/2}$	977 ()
MAX. TOE PRESSURE W/ WIND		4968.5 (NET)

- PIPE OPENING IN RINGWALL -

CHICAGO BRIDGE & IRON COMPANY

FOUNDATION PLAN

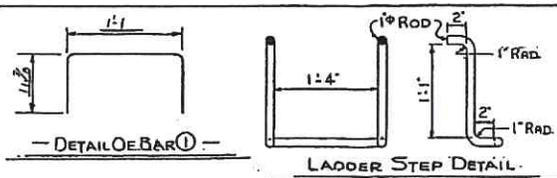
500 MG. WATER SPHEROID

FOR
WILLOW BROOK ILLINOIS

DRAWING NO. _____ CONTRACT NO. 74-2762
 DESIGNER: _____ DATE: 11-15-74
 CHECKED: _____ DATE: 11-22-74
ROBERT E. PUGH 4400 W. F. 100 &

9850-6

FOR WATERSPHERES, WATERSPHERIDS OR TRIPPODS

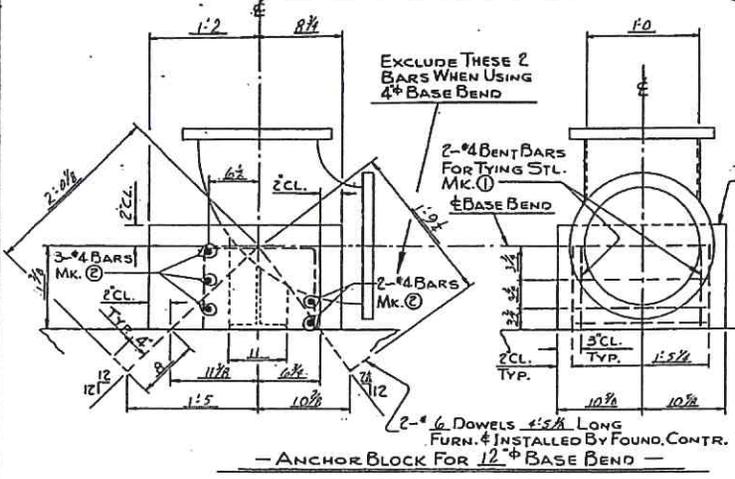
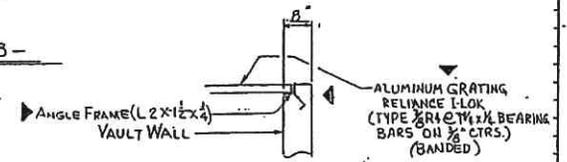
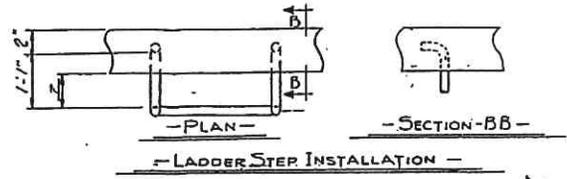


NOT TO SCALE

NOTE: THIS MATERIAL FURNISHED & INSTALLED BY C.B.#1.

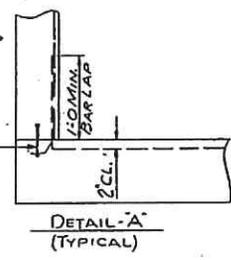
QTY	MARK	SIZE	DESCRIPTION	UNIT	QTY	SPEC.
2	F2-1	#4	REIN. ROD (BENT)	L	11 1/2	A615-60
5	F2-2	#4	REIN. ROD	L	5 1/2	SA

*USE 5 FOR 4" BASE BEND

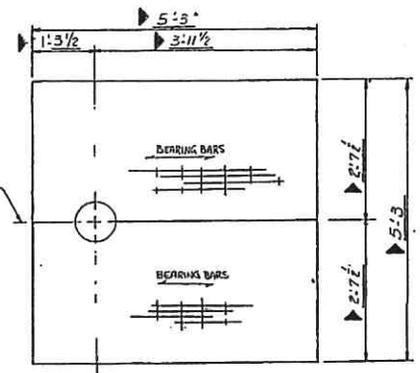


ANCHOR BLOCK By C.B.#1 Co.

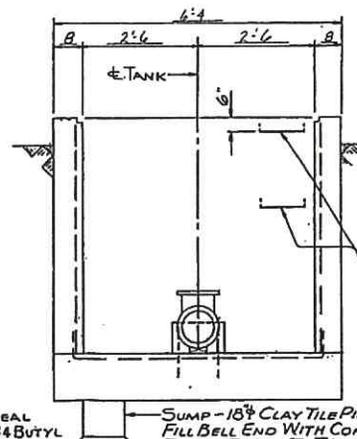
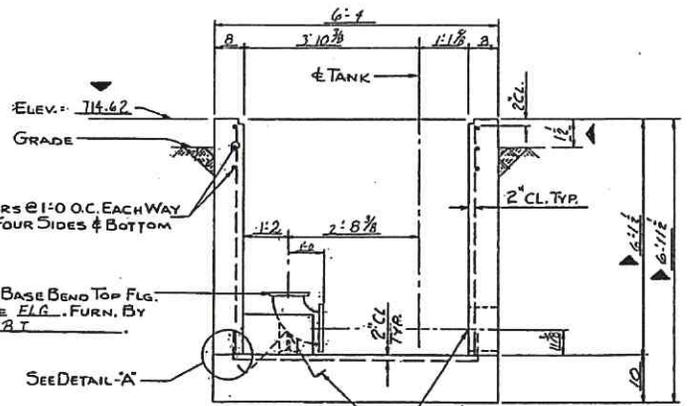
6" DUMBBELL WATERSTOP (CONTINUOUS) (TYPE DB-2 AS MANUF. BY GRACE CONST. PRODUCTS, OR EQUAL.)



TYPICAL SECTION THRU. TOP OF RINGWALL



PLAN OF AL COVER (GRATING-RELIANCE I-LOK) (FURNISHED BY FOUNDATION CONTRACTOR)



6" LADDER STEPS 1:0 O/C (NOTE: SEE DWG. #F1 FOR TRUE ORIENTATION OF STEPS.)

SUMP - 18" CLAY TILE PIPE 1'-0" OLG. FILL BELL END WITH CONCRETE. SLOPE FLOOR TO TILE. (*OR CONCRETE PIPE)

DOWELS BY FOUNDATION CONTRACTOR (SEE DETAILS ABOVE)

20" OPENING, GROUT AROUND PIPE AND SEAL OUTSIDE WITH BENJAMIN FOSTER 95X44 BUTYL RUBBER BASE CAULKING COMPOUND OR EQUAL FOR WATERTIGHT JOINT.

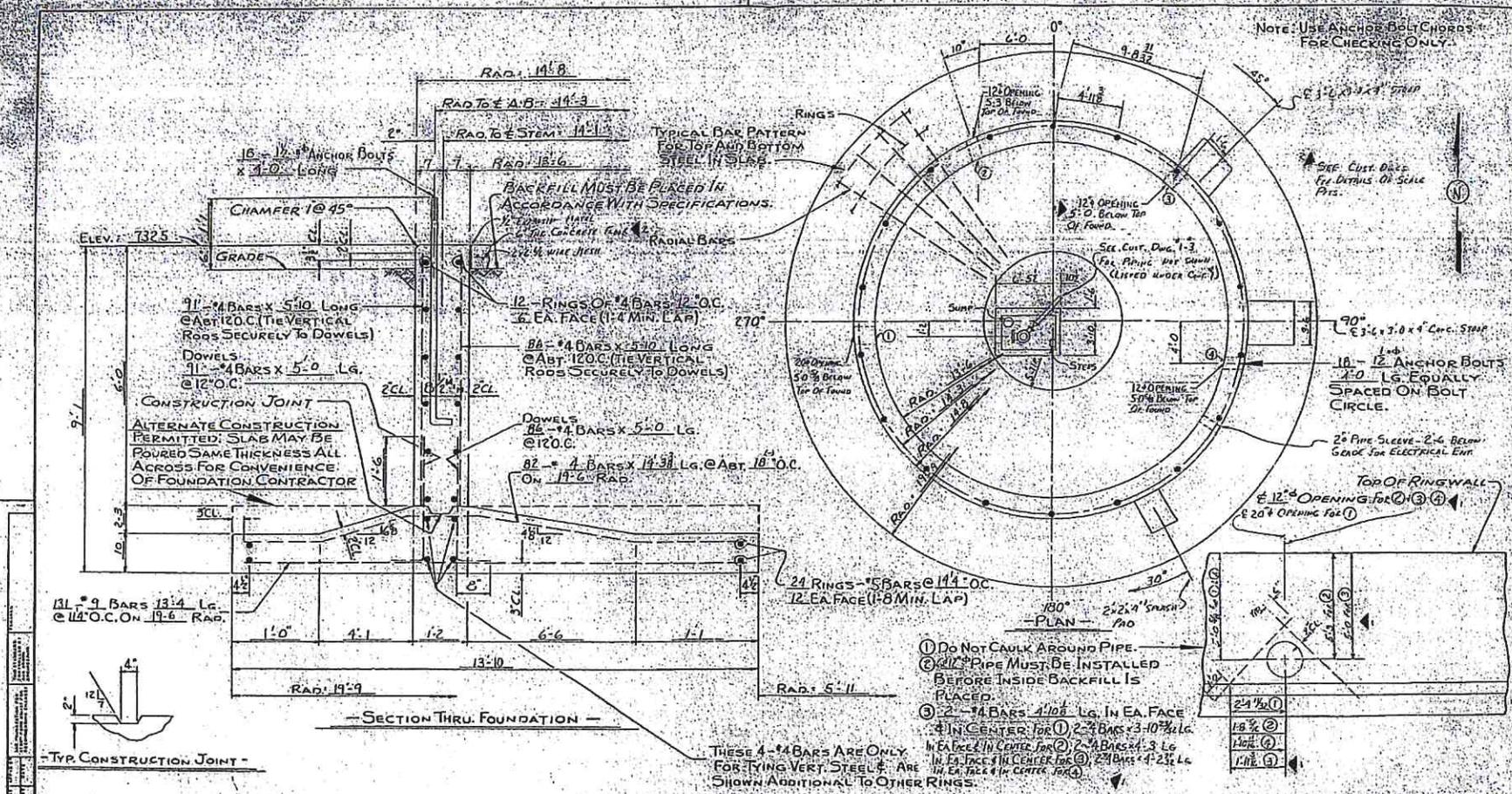
SECTIONS THRU. VALVE VAULT

WORK THIS DWG. WITH DWG. #F1

CHICAGO BRIDGE & IRON COMPANY
PROFESSIONAL CORP.
VALVE VAULT
- For -
WILLOW BROOK, ILLINOIS

DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: 8-11-24
74-2762
ROBERT E. RUGH
SCALE: 1/4" = 1'-0"

118 PROJECT: 141
 119 DRAWING: 9D33
 120 SHEET: 4
 121 DATE: 8/11/24
 122 BY: [Signature]
 123 CHECKED: [Signature]
 124 DATE: 8/11/24
 125 PROJECT: 141
 126 DRAWING: 9D33
 127 SHEET: 4
 128 DATE: 8/11/24
 129 BY: [Signature]
 130 CHECKED: [Signature]
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 132 PROJECT: 141
 133 DRAWING: 9D33
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 135 DATE: 8/11/24
 136 BY: [Signature]
 137 CHECKED: [Signature]
 138 DATE: 8/11/24
 139 PROJECT: 141
 140 DRAWING: 9D33
 141 SHEET: 4
 142 DATE: 8/11/24
 143 BY: [Signature]
 144 CHECKED: [Signature]
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 146 PROJECT: 141
 147 DRAWING: 9D33
 148 SHEET: 4
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 168 DRAWING: 9D33
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 175 DRAWING: 9D33
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 181 PROJECT: 141
 182 DRAWING: 9D33
 183 SHEET: 4
 184 DATE: 8/11/24
 185 BY: [Signature]
 186 CHECKED: [Signature]
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 188 PROJECT: 141
 189 DRAWING: 9D33
 190 SHEET: 4
 191 DATE: 8/11/24
 192 BY: [Signature]
 193 CHECKED: [Signature]
 194 DATE: 8/11/24
 195 PROJECT: 141
 196 DRAWING: 9D33
 197 SHEET: 4
 198 DATE: 8/11/24
 199 BY: [Signature]
 200 CHECKED: [Signature]
 201 DATE: 8/11/24



CALCULATED CONCRETE YARDAGE	
RING FOUNDATION	102.10 CU.YDS.
VALVE VAULT	45.7 CU.YDS.
FLOOR SLAB	9.88
TOTAL	157.68 CU.YDS.
CALCULATED WEIGHT	
REINFORCING STEEL	11,220 LBS.
INCLUDING VALVE VAULT	

TOLERANCES:

TOP OF RING WALL TO BE TROWELLED LEVEL AND TO BE WITHIN 2" OF THE THEORETICAL ELEVATION.

ANCHOR BOLTS TO BE WITHIN 1/4" OF THEORETICAL POSITION TO BE PLUMB WITHIN 1/8" AND WITH PROTECTION ABOVE THE TOP OF RING WALL WITHIN 2 1/2" OF THE SPECIFIED HEIGHT.

SPECIFICATIONS: SEE SPECIFICATIONS BY C.B.S.T.

ALL CONCRETE TO HAVE 3000 P.S.I. COMP. STRENGTH IN 28 DAYS. REINFORCING STEEL TO HAVE MIN. YIELD STRENGTH OF 23000 P.S.I. & CONFORM TO ASTM A-615-40.

ALL MATERIAL UNLESS OTHERWISE NOTED TO BE FURNISHED & INSTALLED BY FOUNDATION CONTRACTOR.

ANCHOR BOLTS ARE FURNISHED BY C.B. & I.

PIPE COVER: 4'-0"

TABLE OF LOADINGS		
ITEM	LOAD	BEARING (P.S.F.) PER SQUARE
WATER	122.5	
METAL	303.7	
CONCRETE (THIS PLAN)	121.6	
TOTAL WIND	164.65	42.67 (NET)
OVERTURNING MOMENTS	572.75	897
MAX. TOP PRESSURE WIND	500.4	(NET)

FOUNDATION PLAN

500 MG. WATER SPHEROID

SECTION CORPORATION

70-6011

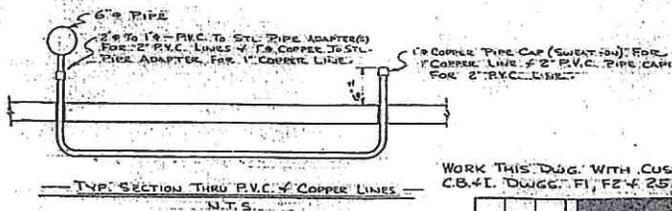
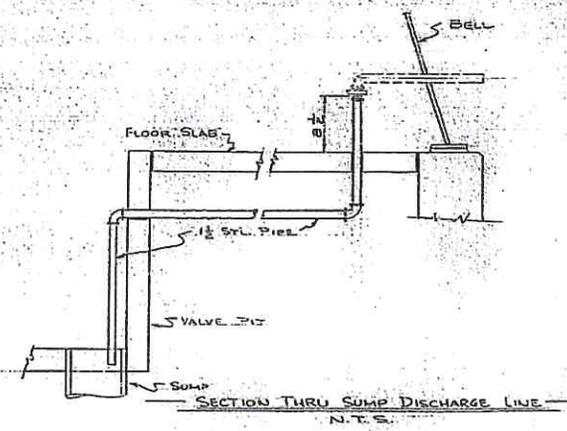
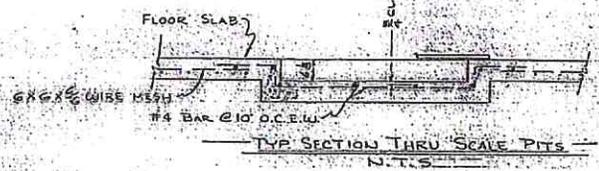
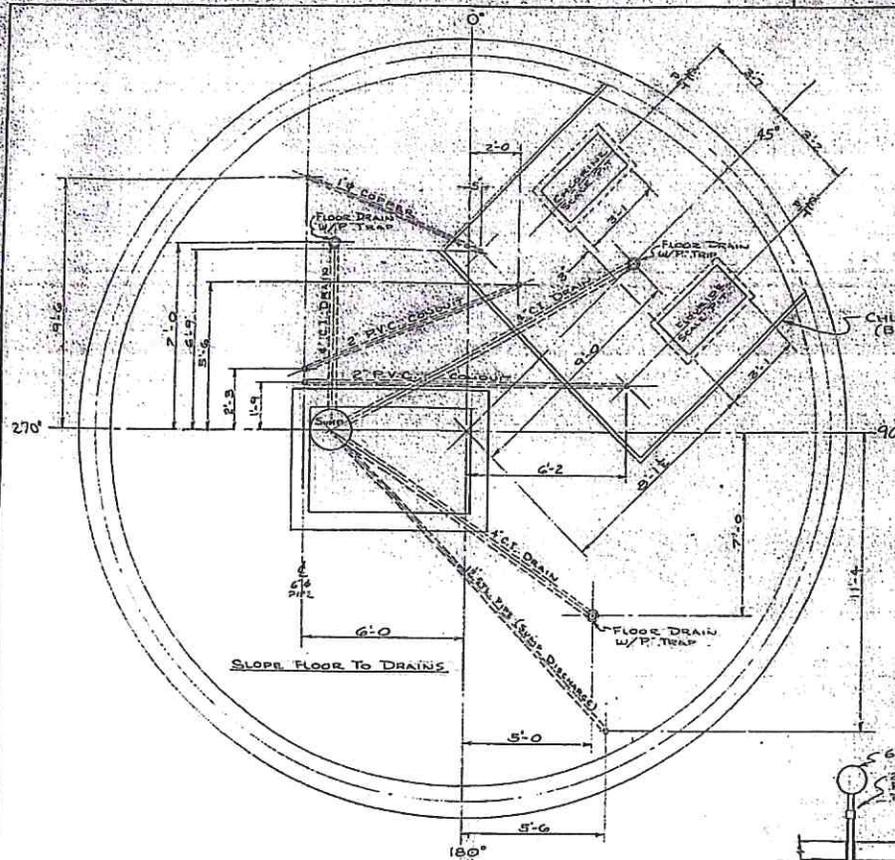
SCALE: 1/4" = 1'-0"

DATE: 11-15-58

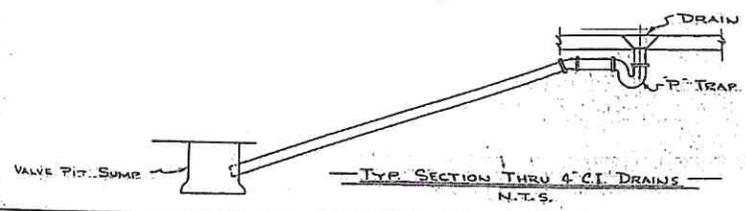
BY: J.E. HARRIS

CHECKED: J.E. HARRIS

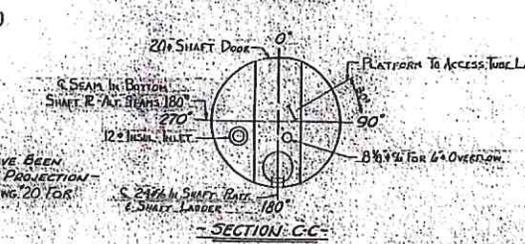
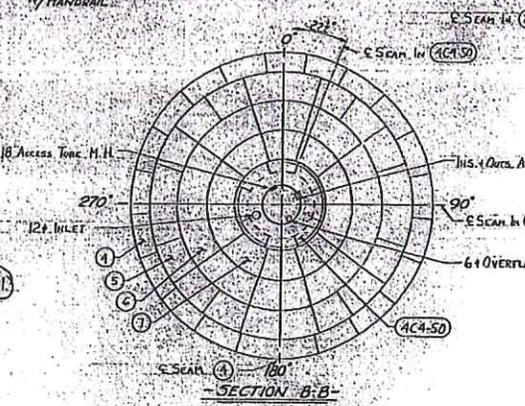
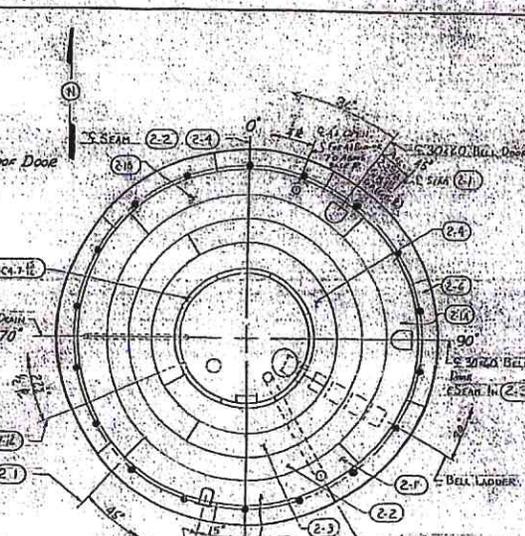
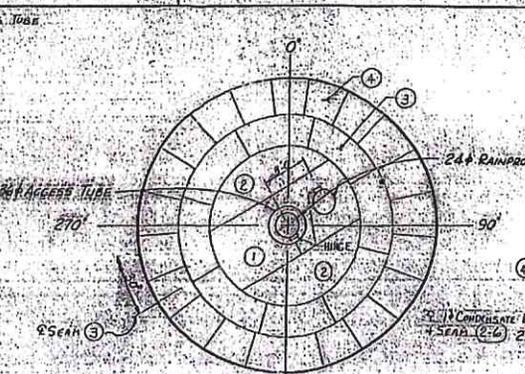
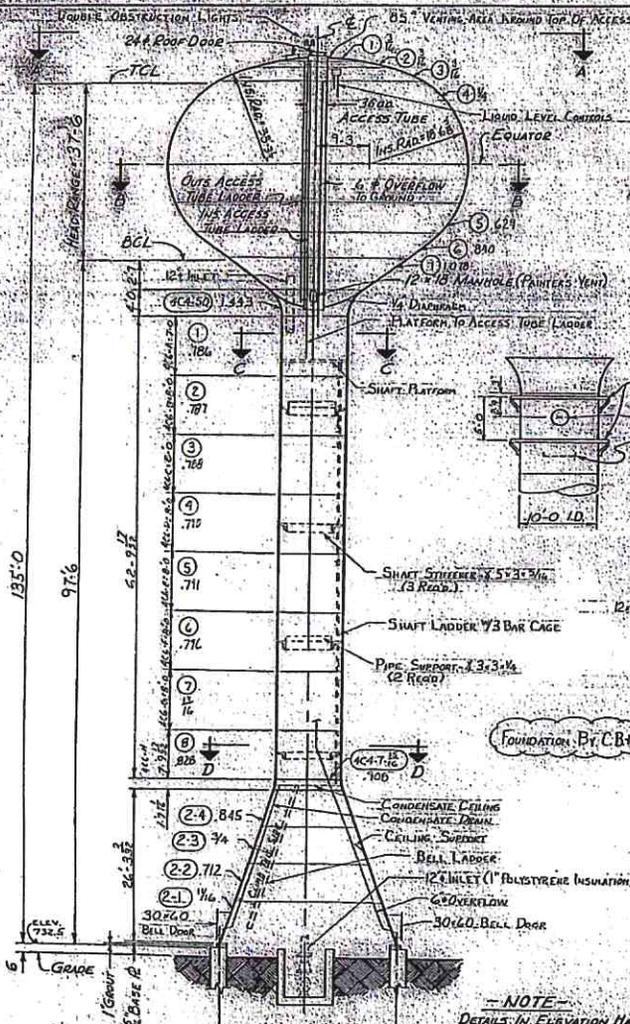
APPROVED: J.E. HARRIS



WORK THIS DWG. WITH CUST. DWG. # 2 OF 4 & C.B. & I. DWGG. F1, F2 & 25.



BRIDGES & IRON COMPANY
 PIPING UNDER FLOOR SLABS
 (EXCEPT 6" INLET PIPES)
 DRAWING NO. 70-6079
 10-6079
 P. P. BRIDGES & IRON COMPANY
 1000 S. 10th St. - Des Moines, Iowa
 70-6079



GENERAL NOTES
 SPECIFICATIONS - A.M.W.A. + Eng.
 SERVICE - DOMESTIC SERVICE (PRIVATE)
 MATERIAL - A516, A283C STRUCTURAL - A36
 INSPECTION - MILL No. SHOP No. FIELD - YES
 ALL BUTT WELDS TO BE 100% FUSION
 PICKLE - YES
 PAINT - SEE B/S P
 STERILIZE - YES
 CATHODIC PROTECTION - YES

NOTE
 DETAILS IN ELEVATION HAVE BEEN
 ROTATED INTO PLANE OF PROJECTION
 SEE VIEWS AT RIGHT & DWG. 20 FOR
 TRUE ORIENTATION

DETAILED & BILLED FOR ONE - ONE RECD.

WILSON BRIDGE & IRON WORKS
 GENERAL PLAN
 300# WATER SPHEROID 176 TO BCL
 TERTON CORPORATION
 MILWAUKEE, ILL.
 DATE 3-23-70
 70-6079

97103
 97103
 97103

INDICATES CHANGE FROM PREVIOUS ISSUE

VILLAGE OF WILLOWBROOK

BOARD MEETING AGENDA ITEM - HISTORY/COMMENTARY

A Resolution Approving and Authorizing the Village Administrator to Execute, On Behalf of the Village of Willowbrook, an Agreement with the Intergovernmental Personnel Benefit Cooperative (IPBC) for the Village's Dental insurance Plan (DELTA DENTAL)

AGENDA NO. 10.

AGENDA DATE: 3/8/2021

STAFF REVIEW: Carrie Dittman, Director of Finance

SIGNATURE: C. Dittman /man

LEGAL REVIEW: Thomas Bastian, Village Attorney

SIGNATURE: T. Bastian /man

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: B. Pabst

REVIEWED BY COMMITTEE: YES Finance/Admin 3/8/21 NO N/A

ITEM HISTORY (PREVIOUS VILLAGE BOARD REVIEWS, ACTIONS RELATED TO THIS ITEM, OTHER PERTINENT HISTORY)

Willowbrook is a member of the Intergovernmental Personnel Benefit Cooperative (IPBC), which provides health and dental insurance to a pool of municipal members; the Village has only health insurance through IPBC. IPBC recently conducted a dental services Request for Proposal (RFP) and selected Delta Dental as the new dental carrier for IPBC members. The Village has its own individual dental insurance plan through Delta Dental through June 30, 2021.

The IPBC has several Delta Dental plan options that are equivalent to the Village's current dental PPO offering, but at a lower cost to both the Village and its employees. Option E is the closest and slightly better than the Village's current plan. In addition, the Village can adopt a 4-tiered plan structure (employee, employee/spouse, employee/children, and family) as was done with health insurance to offer additional savings to the employees (currently we offer employee or family coverage). The savings would range from 5.31% to 45.11% depending on the tier, but ALL tiers would recognize a savings. The plan would be effective July 1, 2021.

Lastly, by moving dental insurance under the IPBC umbrella, the Village can achieve additional savings as IPBC would also be able to provide COBRA continuation services for all insurance products; currently the Village subcontracts with another company and pays an annual minimum fee of \$1,200 to do so because dental insurance is provided separately from health.

ITEM COMMENTARY (BACKGROUND, DISCUSSION, KEY POINTS, RECOMMENDATIONS, ETC.)

The Village currently pays 100% of the single dental premium and about 80% of the dependent coverage premium; those percentages would remain the same. The attached exhibits show the current and proposed benefits and cost savings. The estimated annual cost savings to the Village, while offering a slightly better benefit to the employees, is \$11,503. Employees and retirees that are still on the Village's dental plan would also recognize a significant annual savings.

ACTION PROPOSED: ADOPT THE RESOLUTION

RESOLUTION NO. 21-R-11

A RESOLUTION APPROVING AND AUTHORIZING THE VILLAGE ADMINISTRATOR TO EXECUTE, ON BEHALF OF THE VILLAGE OF WILLOWBROOK, AN AGREEMENT WITH THE INTERGOVERNMENTAL PERSONNEL BENEFIT COOPERATIVE (IPBC) FOR THE VILLAGE'S DENTAL INSURANCE PLAN

BE IT RESOLVED by the Mayor and Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, that the Agreement by and between the Intergovernmental Personnel Benefit Cooperative (IPBC). and the Village of Willowbrook to provide dental insurance using Delta Dental's PPO Option E is hereby approved upon the terms, costs and conditions set forth in the proposal attached as Exhibit "A" and made a part hereof.

BE IT FURTHER RESOLVED that the Village Administrator is authorized and directed to execute said Agreement on behalf of the Village of Willowbrook and to do all other acts necessary for implementation of the Agreement.

PASSED and APPROVED this 8th day of March, 2021 by a ROLL CALL VOTE as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk



Insurance | Risk Management | Consulting

Proposed Plan

	Option A	Option B	Option C	Option D	Option E	Option F
PLAN BASICS	Dental HMO Plan	PPO In/Out	PPO In/Out	PPO In/Out	PPO In/Out	MAXIMUM ALLOWABLE COST*
Deductible (Individual / Family)	\$0 O.V.C.	\$50/\$150	\$50/\$150	\$50/\$150	\$50/\$150	\$50/\$150
Class I - Preventive	Scheduled	100%	100%	100%	100%	100%
Class II - Basic*	Scheduled	80%	80%	80%	80%	80%
Class III - Major	Scheduled	50%	50%	50%	50%	50%
Class IV - Orthodontia	\$2,125 child copay, \$2,625 adult copay	N/A	50%	50%	50%	N/A
Annual Maximum-Class I-III	Unlimited	\$1,000	\$1,000	\$1,500	\$2,000	\$1,000
Lifetime Maximum-Class IV	Unlimited	N/A	\$1,000	\$1,500	\$2,000	N/A
4 TIERED RATES						
Employee	\$16.97	\$31.50	\$31.87	\$34.99	\$36.31	\$24.52
Employee + Spouse	\$31.38	\$62.99	\$63.74	\$69.97	\$72.62	\$49.05
Employee + Child(ren)	\$35.44	\$71.35	\$76.52	\$84.74	\$91.44	\$56.91
Family	\$49.86	\$100.23	\$105.99	\$117.13	\$125.27	\$79.48
3 TIERED RATES						
Employee	\$16.97	\$31.50	\$31.87	\$34.99	\$36.31	\$24.52
Employee + 1	\$33.10	\$61.54	\$64.46	\$69.62	\$72.08	\$48.11
Family	\$45.32	\$101.22	\$106.76	\$118.32	\$126.81	\$80.30
2 TIERED RATES						
Employee	\$16.97	\$31.50	\$31.87	\$34.99	\$36.31	\$24.52
Family	\$39.76	\$93.17	\$98.17	\$108.44	\$115.70	\$73.77
Commission	5%	5%	5%	5%	5%	5%
Supplemental Commission	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY

*Benefit reimbursement for all dentists is based upon the Delta Dental PPO allowed network fees.

**Endodontics and Periodontics are in Major Services for the Maximum Allowable Cost Plan option.

This analysis is for illustrative purposes only, and is not a proposal for coverage or a guarantee of future expenses, claims costs, managed care savings, etc. There are many variables that can affect future health care costs including utilization patterns, catastrophic claims, changes in plan design, health care trend increases, etc. This analysis does not amend, extend, or alter the coverage provided by the actual insurance policies and contracts. See your policy or contact us for specific information or further details in this regard.

While Gallagher does not guarantee the financial viability of any health insurance carrier or market, it is an area we recommend that clients closely scrutinize when selecting a health insurance carrier. There are a number of rating agencies that can be referred to including, A.M. Best, Fitch, Moody's, Standard & Poor's, and Weiss Ratings (The Street.com). Generally, agencies that provide ratings of Health Insurers, including traditional insurance companies and other managed care organizations, reflect their opinion based on a comprehensive quantitative and qualitative evaluation of a company's financial strength, operating performance and market profile. However, these ratings are not a warranty of an insurer's current or future ability to meet its contractual obligations.

VILLAGE OF WILLOWBROOK
DENTAL RATE COMPARISON
IPBC DELTA DENTAL VS. WILLOWBROOK DELTA DENTAL

	<u>EMPLOYEE CENSUS</u>	<u>RETIREE CENSUS</u>	<u>CURRENT PLAN DELTA DENTAL WILLOWBROOK</u>	<u>PROPOSED PLAN DELTA DENTAL - IPBC OPTION E</u>	<u>OPTION E SAVINGS</u>	<u>VILLAGE COST</u>
PLAN BASICS						
Deductible (Individual/Family)			\$50/\$150	\$50/\$150		
CLASS I - Preventative			100%	100%		
CLASS II - Basic			80%	80%		
CLASS III - Major			50%	50%		
Annual Maximum Class I, II, III (per person)			\$ 1,800.00	\$ 2,000.00		
CLASS IV - Orthodontia			50%	50%		
Lifetime Maximum - Class IV (per dep. <19)			\$ 1,000.00	\$ 2,000.00		
RATES - 2 TIER - CURRENT PLAN						
Employee	13	6	\$ 42.45			\$ 6,622.20
Family	24	7	\$ 132.30			\$ 32,927.04
	37	13				\$ 39,549.24 CURRENT
RATES - 4 TIER - PROPOSED PLAN						
Employee	13	6		\$ 36.31	14.46%	\$ 5,664.36
Employee + spouse	6	4		\$ 72.62	45.11%	\$ 790.30
Employee + children	5	2		\$ 91.44	30.88%	\$ 4,824.85
Family	13	1		\$ 125.27	5.31%	\$ 16,766.62
	37	13				\$ 28,046.13 PROPOSED
						\$11,503.11 VILLAGE SAVINGS

Proposed Plan



	Option A	Option B	Option C	Option D	Option E	Option F
PLAN BASICS	Dental HMO Plan	PPO In/Out	PPO In/Out	PPO In/Out	PPO In/Out	MAXIMUM ALLOWABLE COST*
Deductible (Individual / Family)	\$0 O.V.C.	\$50/\$150	\$50/\$150	\$50/\$150	\$50/\$150	\$50/\$150
Class I - Preventive	Scheduled	100%	100%	100%	100%	100%
Class II - Basic*	Scheduled	80%	80%	80%	80%	80%
Class III - Major	Scheduled	50%	50%	50%	50%	50%
Class IV - Orthodontia	\$2,125 child copay, \$2,625 adult copay	N/A	50%	50%	50%	N/A
Annual Maximum-Class I-III	Unlimited	\$1,000	\$1,000	\$1,500	\$2,000	\$1,000
Lifetime Maximum-Class IV	Unlimited	N/A	\$1,000	\$1,500	\$2,000	N/A
4 TIERED RATES						
Employee	\$16.97	\$31.50	\$31.87	\$34.99	\$36.31	\$24.52
Employee + Spouse	\$31.38	\$62.99	\$63.74	\$69.97	\$72.62	\$49.05
Employee + Child(ren)	\$35.44	\$71.35	\$76.52	\$84.74	\$91.44	\$56.91
Family	\$49.86	\$100.23	\$105.99	\$117.13	\$125.27	\$79.48
3 TIERED RATES						
Employee	\$16.97	\$31.50	\$31.87	\$34.99	\$36.31	\$24.52
Employee + 1	\$33.10	\$61.54	\$64.46	\$69.62	\$72.08	\$48.11
Family	\$45.32	\$101.22	\$106.76	\$118.32	\$126.81	\$80.30
2 TIERED RATES						
Employee	\$16.97	\$31.50	\$31.87	\$34.99	\$36.31	\$24.52
Family	\$39.76	\$93.17	\$98.17	\$108.44	\$115.70	\$73.77
Commission	5%	5%	5%	5%	5%	5%
Supplemental Commission	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY	\$0-\$10 PEPEY

*Benefit reimbursement for all dentists is based upon the Delta Dental PPO allowed network fees.

**Endodontics and Periodontics are in Major Services for the Maximum Allowable Cost Plan option.

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While Gallagher does not guarantee the financial viability of any health insurance carrier or market, it is an area we recommend that clients closely scrutinize when selecting a health insurance carrier. There are a number of rating agencies that can be referred to including, A.M. Best, Fitch, Moody's, Standard & Poor's, and Weiss Ratings (The Street.com). Generally, agencies that provide ratings of Health Insurers, including traditional insurance companies and other managed care organizations, reflect their opinion based on a comprehensive quantitative and qualitative evaluation of a company's financial strength, operating performance and market profile. However, these ratings are not a warranty of an insurer's current or future ability to meet its contractual obligations.



**VILLAGE OF WILLOWBROOK
Group# 30774**

Platinum Option with Individual Kids Preferred Plan (Delta Dental PPO Exclusive Provider Feature)

	Delta Dental PPO Network Dentist	Delta Dental Premier® Network Dentist	Non-Network Dentist
<u>DIAGNOSTIC & PREVENTIVE SERVICES</u> <i>Diagnostics:</i> Routine exams twice a year; Bitewing X-rays twice a year; Full-mouth X-rays every five years; Sealants (to age 16) <i>Preventive:</i> Cleanings twice a year; Fluoride treatments for children once a year (to age 19); Space maintainers (to age 14)	100%*	100% **	100% ***
<u>BASIC RESTORATIVE SERVICES</u> <i>Minor Restorative:</i> Fillings, amalgam and composite (including posterior composites) <i>Non-Surgical Periodontics:</i> Non-surgical treatment of gum disease <i>Endodontics:</i> Root canals and pulpal therapy Oral Surgery, Surgical Extractions (including pre- and post-operative care) Oral Surgery, Simple Extractions	80%*	80%**	80%***
<u>MAJOR RESTORATIVE SERVICES</u> <i>Major Restorative:</i> Cast restorations: crowns, onlays, and other ceramic restorations to permanent teeth <i>Prosthodontics:</i> Bridges, partial dentures and complete dentures Implant therapy <i>Surgical Periodontics:</i> Surgical treatment of gum disease	50%*	50%**	50%***
<u>Orthodontia:</u>	50%*	50%**	50%***
<u>INDIVIDUAL KIDS PREFERRED PLAN (DELTA DENTAL PPO EXCLUSIVE PROVIDER FEATURE) RIDER (MEMBERS UNDER AGE 19)</u> Plan rider that meets the pediatric oral EHB required by the ACA. Uses an Exclusive Provider Feature where benefits are paid only when a member uses a Delta Dental PPO dentist. There are no benefits when a member uses a non-Delta Dental PPO network dentist. Members under age 19 can use the benefits of both plans but can only receive benefits from Individual Kids Preferred Plan (Delta Dental PPO Exclusive Provider Feature) with Delta Dental PPO dentists.	Included	N/A	N/A
<u>ENHANCED BENEFITS PROGRAM</u> Provides additional cleanings and/or applications of topical fluoride to people with specific health conditions that put them at risk for oral health disease. The costs of the additional cleanings and fluoride treatments will be applied to enrollees' annual maximum. See enclosure for more information.	Included	Included	Included
Deductible:	\$50/\$150 Applies to B & C	\$50/\$150 Applies to B & C	\$50/\$150 Applies to B & C
Annual Maximum: Per person - Dependent children to age 26	\$1,800	\$1,800	\$1,800
Ortho Lifetime Maximum: Per dependent up to age 19	\$1,000	\$1,000	\$1,000

* Delta Dental PPO dentists accept payment based on the lesser of the submitted fee or the PPO fee schedule, which is established at a level that typically delivers a 15%-35% discount off of average billed charges in Illinois.

** Delta Dental Premier dentists accept payment based on the lesser of the submitted fee or the maximum plan allowance (MPA), which is established at a level that typically delivers a 10%-20% discount off of average billed charges in Illinois.

*** Non-network dentists are reimbursed at the Delta Dental Premier levels (MPA).

Delta Dental PPO and Premier dentists cannot balance bill the enrollee for the difference between Delta Dental's allowed fees and the dentist's submitted fee. The information provided is a brief summary of the VILLAGE OF WILLOWBROOK Dental Plan and the services Delta Dental covers. If you have specific questions regarding benefit coverage, limitations or exclusions, contact Delta Dental at 1-800-323-1743.

VILLAGE OF WILLOWBROOK

BOARD MEETING

AGENDA ITEM - HISTORY/COMMENTARY

AN ORDINANCE RESERVING AND AUTHORIZING THE TRANSFER OF VOLUME CAP IN CONNECTION WITH PRIVATE ACTIVITY BOND ISSUES, AND RELATED MATTERS

AGENDA NO. 11.

AGENDA DATE: 03/8/21

STAFF REVIEW: Brian Pabst, Village Administrator

SIGNATURE: B. Pabst

LEGAL REVIEW: Brian Baugh, Village Attorney

SIGNATURE: B. Baugh / mm

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: B. Pabst

ITEM HISTORY (PREVIOUS VILLAGE BOARD REVIEWS, ACTIONS RELATED TO THIS ITEM, OTHER PERTINENT HISTORY)

The Village of Willowbrook became a Home Rule Municipality through public referendum in April 2019. As such the Village of Willowbrook is now annually allocated an amount of private activity bond volume cap, pursuant to Federal Tax Reform Act of 1986, as amended, and the Illinois Private Activity Bond Allocation Act. The Village can utilize the volume cap itself any time during the calendar year 2021 or transfer it to another municipality, generally for value.

Section 146 of the Internal Revenue Code of 1986, as amended, provides that the Village has volume cap equal to \$110.00 per resident of the Village in each calendar year, which volume cap may be reserved and allocated to certain tax-exempt private activity bonds ($\$110/8,493 = \$934,200$).

The Illinois Private Activity Bond Allocation Act, 30 ILCS 345/1 *et seq.* (State Bar Ed. 2016), as supplemented and amended, provides that a home rule unit of government may transfer its allocation of volume cap to any other home rule unit of government, the State of Illinois or any agency thereof or any non-home rule unit of government.

Private activity bonds (PABs or federally tax-exempt conduit infrastructure bonds) enable the following types of charities and 501(c)(3) organizations to finance their capital infrastructure projects at generally lower interest rates and longer maturities – and to create long-term economic value for communities throughout Illinois:

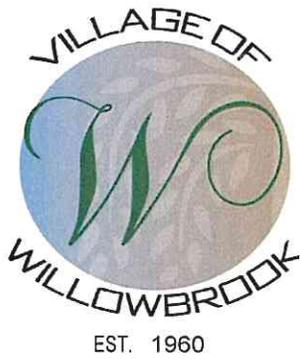
- hospitals and health systems;
- schools – research universities, colleges, charter schools and others;
- museums and cultural institutions; and
- organizations that provide housing for seniors, students and working people

ITEM COMMENTARY (BACKGROUND, DISCUSSION, KEY POINTS, RECOMMENDATIONS, ETC.)

Our Village Attorney recommends the Village to reserve all of its volume cap allocation for calendar year 2020 to be applied toward the issuance of private activity bonds, as provided in this Ordinance, or to be transferred, as permitted by this Ordinance.

In order to reserve the Village's volume cap allocation, the attached ordinance must be passed and approved prior to May 1, 2021. Additionally, a notice of reservation of the volume cap must be provided to the Governor's Office no later than May 10, 2021.

ACTION PROPOSED: Pass the Ordinance



March 9, 2021

Office of the Governor
Governor's Office of Management and Budget
100 W. Randolph Street – Suite 15-100
Chicago, Illinois 60601
Attn: Sophia Ronis

Mayor

Frank A. Trilla

Village Clerk

Deborah A. Hahn

ATTENTION: Debt Management Unit

Village Trustees

Sue Berglund

Umberto Davi

Michael Mistele

Gayle Neal

Paul Oggerino

Greg Ruffolo

Re: Issuer: Village of Willowbrook, a Home Rule Unit
Total 2021 Volume Cap Allocation: \$934,230.00

Volume Cap allocations granted, transferred, or reserved by Issuer ordinance prior to May 1, 2021:

1. Principal Amount of Issue: \$934,230.00

Bond Description: Private Activity Bonds

Reallocation/Transfer: Year 2021 Private Activity Bond issuance authority is reserved to the Village of Willowbrook

Total Allocation Reserved: \$934,230.00

Village Administrator

Brian Pabst

A certified copy of the previously approved reservation ordinance is enclosed. If you have any questions or require further information, please contact me.

Chief of Police

Robert Schaller

Sincerely,

Village of Willowbrook

Director of Finance

Carrie Dittman

Carrie Dittman
Director of Finance
(630) 323-8215



ORDINANCE NO. 21 – O - 12

**AN ORDINANCE RESERVING AND AUTHORIZING THE
TRANSFER OF VOLUME CAP IN CONNECTION WITH
PRIVATE ACTIVITY BOND ISSUES, AND RELATED MATTERS**

WHEREAS, the Village of Willowbrook, DuPage County (the “*Village*”), is a municipality and a home rule unit of government under Section 6 of Article VII of the 1970 Constitution of the State of Illinois; and

WHEREAS, Section 146 of the Internal Revenue Code of 1986, as amended (the “*Code*”), provides that the Village has volume cap equal to \$110.00 per resident of the Village in each calendar year, which volume cap may be reserved and allocated to certain tax-exempt private activity bonds; and

WHEREAS, the Illinois Private Activity Bond Allocation Act, 30 ILCS 345/1 *et seq.* (State Bar Ed. 2016), as supplemented and amended (the “*Act*”), provides that a home rule unit of government may transfer its allocation of volume cap to any other home rule unit of government, the State of Illinois or any agency thereof or any non-home rule unit of government; and

WHEREAS, it is now deemed necessary and desirable by the Village to reserve all of its volume cap allocation for calendar year 2021 to be applied toward the issuance of private activity bonds (the “*Bonds*”), as provided in this Ordinance, or to be transferred, as permitted by this Ordinance;

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, as follows:

SECTION ONE. That, pursuant to Section 146 of the Code and the Act, the entire volume cap of the Village for calendar year 2021 is hereby reserved by the Village, which may issue the Bonds using such volume cap, or without any further action required on the part of the corporate authorities of the Village, may transfer such volume cap to a home rule unit of government, non-home rule unit of government, the State of Illinois or any agency thereof for the issuance of private activity

bonds by such governmental entity, and the adoption of this Ordinance shall be deemed to be an allocation of such volume cap to the issuance of the Bonds or authorization of the transfer of such volume cap for use in the issuance of such other bonds; *provided*, that any such transfer shall be evidenced by a written instrument executed by the Mayor, Village Administrator, Assistant Village Administrator or Finance Director or any other proper officer or employee of the Village.

SECTION TWO. That the Village shall maintain a written record of this Ordinance in its records during the term that the Bonds or any other such bonds to which such volume cap is allocated remain outstanding.

SECTION THREE. That the Mayor, Village Clerk, Village Administrator, Assistant Village Administrator, Finance Director and all other proper officers, officials, agents and employees of the Village are hereby authorized, empowered and directed to do all such acts and things and to execute all such documents and certificates as may be necessary to further the purposes and intent of this Ordinance and to comply with the provisions of the Act with respect to transfers of volume cap.

SECTION FOUR. That the provisions of this Ordinance are hereby declared to be separable, and if any section, phrase or provision of this Ordinance shall for any reason be declared to be invalid, such declaration shall not affect the remainder of the sections, phrases and provisions of this Ordinance.

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SECTION FIVE. That all ordinances, resolutions or orders, or parts thereof, in conflict herewith are, to the extent of such conflict, hereby superseded; and that this Ordinance shall be in full force and effect upon its adoption and approval.

PASSED and APPROVED this 8th day of March, 2021.

ROLL CALL VOTE:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn,
Village Clerk

VILLAGE OF WILLOWBROOK

BOARD MEETING AGENDA ITEM - HISTORY/COMMENTARY

A RESOLUTION TO APPROVE AND AUTHORIZE THE EXECUTION OF A PROFESSIONAL SERVICES AGREEMENT BY AND BETWEEN BLA, INC. AND THE VILLAGE OF WILLOWBROOK FOR PROFESSIONAL TRAFFIC CONSULTING SERVICES

AGENDA NO. 12.

AGENDA DATE: 03/08/21

STAFF REVIEW: Mike Mertens, Assistant Village Administrator

SIGNATURE: M. Mertens

LEGAL REVIEW: Tom Bastian, Village Attorney

SIGNATURE: T. Bastian / man

RECOMMENDED BY: Brian Pabst, Village Administrator

SIGNATURE: B. Pabst

REVIEWED & APPROVED BY COMMITTEE: YES NO N/A

ITEM HISTORY (PREVIOUS VILLAGE BOARD REVIEWS, ACTIONS RELATED TO THIS ITEM, OTHER HISTORY)

The Village of Willowbrook had utilized an outside traffic consultant since 1981 when the Village began contracting with Metro Transportation for traffic engineering consultant services. These services were based on an on-call basis at a time and material rate. In January 2007, Lynn Means joined Metro Transportation and shortly thereafter began performing traffic reviews for the Village.

In January 2011, Sam Schwartz Engineering (SSE) acquired Metro Transportation, with traffic consulting services continuing to be performed under Lynn Means' direction. In April 2015, Lynn Means joined Gewalt Hamilton Associates (GHA) and the traffic engineering consulting services transitioned over from Sam Schwartz Engineering.

Lynn Means has taken a new opportunity with BLA Inc. in February 2021. Due to the on-going projects within the Village of Willowbrook staff believes it would be beneficial for the Village for continuity purposes to continue the long-standing relationship with Lynn Means for performing on-call traffic review services for the Village for the 2021 calendar year.

Prior to joining Metro Transportation, Lynn worked as a Traffic Engineer at Greenman Peterson, Inc. (GPI) New England branch office in Nashua, NH (from 2004-2007) and CLD Consulting Engineers (2000-2004) located in Manchester, NH. Lynn started her career in February 1998 at Testing Service Corporation as a civil engineer, specializing in construction materials engineering/geotechnical engineering.

Lynn Means is a licensed professional engineer (PE) in the States of Illinois, New Hampshire and Tennessee, as well as is a certified professional transportation operation engineer (PTOE). She has a bachelor's degree in civil engineering from Bradley University (1997).

STAFF RECOMMENDATION

Lynn M. Means, P.E., PTOE, a Senior Transportation Engineer with BLA, Inc., with over 20 years of experience in traffic engineering and transportation planning, would be the Project Manager and would serve as the primary

contact for the Village should the agreement be approved by the Village Board.

BLA proposes to provide the requested services on a Time and Materials basis in accordance with the below hourly rates. A 10% municipal discount would be applied to the Senior Transportation Engineer rate. Senior Transportation Engineer is \$180.00 (\$162.00 Village Rate based on the 10% discount). This fee is valid through December 31, 2021. The previous rate through Gewalt Hamilton Associates was also \$180 per hour with a 10% municipal discount.

Attached please find the BLA, Inc's proposal to perform On-Call Traffic Engineering Services for the Village of Willowbrook. Also attached is a brief overview on BLA Inc.

Staff recommends that the Village consider an On-Call agreement for transportation engineering services for the 2021 calendar year.

ACTION PROPOSED:

Adopt the Resolution

RESOLUTION NO. 21-R- ____

**A RESOLUTION TO APPROVE AND AUTHORIZE THE EXECUTION OF A
PROFESSIONAL SERVICES AGREEMENT BY AND BETWEEN BLA, INC. AND THE
VILLAGE OF WILLOWBROOK FOR PROFESSIONAL
TRAFFIC CONSULTING SERVICES**

WHEREAS, the Village of Willowbrook (the “Willowbrook”) is a home-rule unit of local government under Article VII, Section 6 of the 1970 Illinois Constitution and, except as limited by such section, it may exercise any power and perform any function pertaining to its government and affairs;

WHEREAS, in the opinion of a majority of the corporate authorities of the Village of Willowbrook, Illinois (hereinafter referred to as the “Village”), it is advisable, necessary and in the public interest that the Village contract for professional traffic consulting services for the Village;

WHEREAS, the corporate authorities of the Village have determined that (1) the Village has a satisfactory relationship with Lynn M. Means of BLA, Inc.; (2) the Village, as a home-rule unit of government is not subject to the requirements of the Local Government Professional Services Selection Act (50 ILCS 510/1 *et seq.*); and (3) the requirements to be met and the means and methods to be used in procuring such professional services shall be by the submission of a satisfactory proposal; and

WHEREAS, Lynn M. Means of BLA, Inc. has submitted a satisfactory proposal to the Village; and it is advisable, necessary and in the public interest that Lynn M. Means of BLA, Inc. be retained to provide on-call professional traffic consulting for the Village and that the Village enter into an agreement to provide for those services, a copy of which agreement is attached hereto as Exhibit “A” and made a part hereof;

NOW, THEREFORE, BE IT RESOLVED by the Mayor and the Board of Trustees of the Village of Willowbrook, DuPage County, Illinois, as follows:

SECTION 1. The corporate authorities of the Village of Willowbrook hereby determine that (1) the Village has a satisfactory relationship with Lynn M. Means of BLA, Inc.; (2) the Village, as a home-rule unit of government is not subject to the requirements of the Local Government Professional Services Selection Act (50 ILCS 510/1 *et seq.*); and (3) the requirements to be met and the means and methods to be used in procuring such professional services shall be by the submission of a satisfactory proposal; therefore, it is advisable, necessary and in the public interest that the Village enter into an agreement between the Village and BLA, Inc. for the furnishing of professional traffic consulting services.

SECTION 2. The Mayor be and is hereby authorized and directed to execute and the Village Clerk be and is hereby authorized and directed to attest on behalf of the Village to an Agreement between the Village and BLA, Inc. for the furnishing of professional traffic consulting services, which Agreement is hereby approved and is attached hereto as Exhibit "A" and made a part hereof.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

SECTION 3. This resolution shall be in full force and effect upon its passage and approval in accordance with law.

PASSED and APPROVED this 8th day of March, 2021 by a ROLL CALL VOTE as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

APPROVED:

Frank A. Trilla, Mayor

ATTEST:

Deborah A. Hahn, Village Clerk

Exhibit "A"

**PROFESSIONAL TRAFFIC CONSULTING SERVICES AGREEMENT BY AND
BETWEEN BLA, INC. AND THE VILLAGE OF WILLOWBROOK**



February 24, 2021

VIA EMAIL

bpabst@willowbrook.il.us

Mr. Brian Pabst
Village Administrator
Village of Willowbrook
835 Midway Drive
Willowbrook, Illinois 60527

Re: *Traffic Engineering & Planning Services*
Village of Willowbrook

Dear Mr. Pabst:

We at BLA-Inc appreciate the opportunity to provide our proposal for traffic engineering consulting services. BLA staff has provided traffic engineering services for numerous communities, institutions and private developers – in both urban and suburban environments. The experience of our dedicated staff in traffic engineering and planning; transportation design; and traffic signal operation allows us to blend sound engineering with creative solutions to complex, multi-faceted problems. Our goal is always to increase safety for all travelers without compromising functionality, and we are anxious to provide these results to the Village of Willowbrook.

Ms. Lynn M. Means, P.E., PTOE, a Senior Transportation Engineer with the firm, will be the Project Manager and will serve as the primary contact for the Village. With over 20 years of experience in traffic engineering and transportation planning, Ms. Means combines her extensive knowledge with an intense passion for her work. She seeks to understand and assess existing traffic patterns and constraints, and works with clients and constituents to develop practical, cost-effective methods for improvement. Ms. Means is a respected presenter at public hearings and meetings, with a natural aptitude for explaining technical complexities in a manner accessible to everyday citizens.

Following is a brief scope of work and the associated fee. We are available immediately to discuss specific details and scheduling requirements. We will commence with the following scope of work upon your notice to proceed and authorization.

TRAFFIC ENGINEERING & PLANNING SERVICES SCOPE OF WORK AND FEES

The Village of Willowbrook seeks a traffic engineering and transportation planning consultant on an on-call basis to assist with various concerns, questions and issues. Willowbrook is a diverse community with commercial uses along its major corridors; residential uses predominately in the north and west central areas of the Village; light industrial uses predominately on the southeast side of the Village; along with numerous recreational facilities, including nearby Waterfall Gen Forest Preserve. Each of these unique land uses comes with its own traffic engineering challenges and opportunities.

To meet the needs of the Village and its constituents, BLA will call upon its experts from traffic engineering and planning, transportation design and traffic signal operation to perform the Scope of Services depending on the required task. By working with BLA, the Village of Willowbrook will benefit

from our knowledge of the latest regulatory requirements (AASHTO, FHWA, MUTCD, ITE, HCM, HSM, NACTO, IDOT, etc.), industry trends and technologies.

Our capabilities include, but are not limited to:

- Review and/or preparation of traffic impact and parking studies.
- Review and/or preparation of Intersection Design Studies (IDS) and Traffic Signal Plans.
- Overall traffic performance evaluation.
- Synchro/SimTraffic traffic model development, which provide both a static and dynamic visualization of intersection operations and traffic performance.
- Conduct and/or review all-way and two-way Stop sign warrant studies.
- Review stop-control vs. yield-control.
- Analyze one-way versus two-way operations.
- Evaluate the arterial/collector roadway system, operational, capacity, access, and pedestrian issues, including traditional neighborhood study parameters such as speeds, classifications, vehicular and pedestrian circulation, parking issues, overall safety, and general traffic operations.
- Recommend short-, mid- and long-range time frames for specific improvements, with cost estimates.
- Recommend roadway safety, traffic calming, access patterns, capacity performance and intersection control improvements to address vehicular speeding, cut-through traffic and pedestrian safety.
- Roadway corridor studies.
- Experienced professionals who are practiced at public presentations including a refined process for leading open house meetings.

T.01 – Review of Private Development Traffic and/or Parking Studies

The first step of the project is a kick-off meeting. BLA will meet with the Village of Willowbrook staff in person or via tele or video conference to discuss the traffic and/or parking study requirements, identifying specific concerns of the Village. Next, BLA will collect and review available data. We will review all analyses, data and recommendations related to traffic, parking and on-site circulation, as applicable. As necessary or requested, BLA will perform additional data collection, site visits (photos, field measurements or traffic counts) and/or obtain necessary supporting data from online databases or jurisdictional agencies.

Depending on the study findings and proposed improvements, BLA will conduct supporting analysis, calculations and/or perform a review of intersection/roadway geometrics for safety, as necessary to fully review and evaluate the study. If our analyses suggest the recommendations to be infeasible or inadequate to accommodate the specific development's impact, BLA will advise the Village and discuss recommendations and potential solutions prior to proceeding.

Finally, BLA will produce a memorandum, summarizing our findings and recommendations, including any supporting analyses performed, data collected or exhibits prepared, as appropriate.

BLA staff is also available to attend project meetings and/or public hearings to explain our findings and recommendations. If necessary, we are also available to attend meetings with other jurisdictional agencies.

It is estimated that the typical traffic and parking study review would take approximately 10 to 15 hours,

depending on the size of the development – not including preparation and attendance at meetings or public hearings. A draft summary memorandum would be completed in one to two weeks.

T.02 – Develop Solutions in Specific Location

Often specific intersections or roadway segments are identified by the public or Village staff as being unsafe or problematic. BLA would be available to assist the Village in evaluating these concerns or issues via the preparation of safety studies, traffic calming measures and/or identifying pedestrian, bicycle or vehicular traffic operations or facility improvements.

Again, we will begin the study with a kick-off meeting. BLA will meet with the Village of Willowbrook staff in person or via tele or video conference to discuss the traffic and/or parking study requirements, identifying specific concerns of the Village Staff and/or its residents. Next, BLA will collect and review available data specific to the location, including historical traffic counts, crash data, land uses, Chicago Metropolitan Agency for Planning 2050 Traffic Volume Projections and GIS data. As necessary, we will supplement the available data with additional data collection. We will perform a field visit to observe existing conditions and the identified concern/issue. Particular attention will be made to factors that may be related, such as sight-line issues; missing and/or inadequate pavement markings or signage; or pedestrian/bicycle accommodations.

BLA will then perform the appropriate analyses to address and evaluate the specific issue/concern, i.e., signal warrant analysis, crash analyses, auxiliary turn lane warrant analyses, two-way or multi-way stop warrant, capacity, or vehicle queue analyses, etc.

We will then determine and make recommendations for any roadway/operational improvements, as necessary, such as geometric and traffic control improvements, site access modifications/restrictions, pedestrian/bicycle accommodations, traffic calming measures, signal timing/phasing modifications or signing.

BLA will prepare a summary report or memorandum, including supporting exhibits, tables, analysis and conceptual intersection/roadway improvement plans, as appropriate.

Again, if desired by the Village of Willowbrook, BLA is available to attend project meetings and/or public hearings to explain our findings and recommendations. We are also available to attend meetings with other jurisdictional agencies.

Typical specific location evaluation may require 20 to 40 hours of BLA personnel time, again depending on the specific project and data collection (intersection turning movement counts, parking counts, etc.) needs. Projects would typically be completed within one to four weeks, depending on the size and scope of project.

Compensation for Services

BLA proposes to provide the requested services on a Time and Materials basis in accordance with the below hourly rates. *A 10% discount would be applied to the Senior Transportation Engineer rate.*

Our fees for professional services are listed below.

Principal.....	\$235.00
Director of Construction Engineering	\$200.00
Director of Structural Engineering	\$190.00
Director of Preliminary Design Services.....	\$190.00
Senior Transportation Engineer.....	\$180.00 (\$162.00 Village Rate)
Senior Project Manager	\$175.00
Senior Structural Manager.....	\$175.00
Director of Environmental Services	\$135.00
Project Manager	\$135.00
Project Engineer	\$95.00
Structural Engineer.....	\$85.00
Design Engineer	\$80.00
Senior Resident Engineer	\$175.00
Resident Engineer II.....	\$135.00
Resident Engineer I	\$110.00
Construction Engineer II	\$90.00
Construction Engineer I.....	\$80.00
Documentation Engineer	\$125.00
Public Outreach Coordinator.....	\$80.00
Clerical Assistance	\$60.00
Project Surveyor (PLS)	\$125.00
Vehicle (design, per day).....	\$48.00
Vehicle (construction, per day)	\$65.00

These rates are based on average hourly rates and invoices will be based on actual rates with a multiplier of 2.5 and are subject to change with annual performance appraisals.

In addition to the hourly rates for professional services, expenses for any outside costs such as reproducible, prints, and delivery charges will be billed to you at cost plus a 15% fee for handling.

Invoices will be mailed out monthly. Payment is to be made within thirty days after receipt of our invoice.

Client understands and agrees that on January 1, 2022 and yearly thereafter, the fees and quotes for services to be performed shall be increased by an amount not to exceed 5%.

Please let us know if any of the above information is at variance with your instructions. If this correctly reflects your instructions and is acceptable, please sign below and return one copy for our file.

Thank you for requesting BLA, Inc. to do this work.

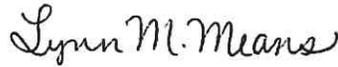
Should you have any questions or require additional information please contact us at (630) 438-6400.

Sincerely,

BLA-Inc.



Dan Bruckelmeyer, P.E.
President/CEO



Lynn M. Means, P.E., PTOE
Senior Transportation Engineer

ACCEPTANCE:

VILLAGE OF WILLOWBROOK

BY: _____

TITLE: _____

DATE: _____

Firm Overview

BLA, Inc. (BLA) is an Illinois corporation established in 1978 as a professional civil engineering consulting firm. Our corporate office is in Itasca (acting primary office) and we have an office in Indiana.

Corporate Headquarters: 333 Pierce Road, Suite 200 - Itasca, IL 60143



BLA has a full-time staff of 55+ professional, technical and support personnel offering extensive expertise in the fields of civil engineering, structural engineering, construction engineering and environmental services. That expertise is utilized on roadway/transportation projects, environmental studies, construction, feasibility studies and design reports for federal, state and local government agencies, consulting firms and private industry. Our knowledge of roadway projects is enhanced because of our 40+ year history of working for IDOT, the Illinois State Toll Highway Authority, all six Chicago-area collar County Divisions of Transportation and more than 40 individual municipalities. Since its inception, BLA has earned and maintained a consistent reputation of professional competence and integrity. Many clients perform periodic reviews/evaluations of our firm and we have repeatedly had exceptional ratings.

BLA Qualifications

BLA is prequalified by IDOT in the following categories:

- Special Studies – Traffic Signals
- Special Studies – Feasibility
- Special Studies – Pump Stations
- Special Studies – Safety
- Special Studies – Traffic Studies
- Special Studies – Location Drainage
- Location Design Studies – New Construction/Major Reconstruction
- Location Design Studies – Reconstruction/Major Rehabilitation
- Location Design Studies – Rehabilitation
- Hydraulic Reports – Waterways: Typical
- Hydraulic Reports – Waterways: Complex
- Special Services – Construction Inspection
- Special Services – Surveying
- Special Services – Sanitary
- Transportation Studies – Railway Engineering
- Structures – Highway: Simple
- Structures – Highway: Typical
- Structures – Highway: Advanced Typical
- Highways – Roads and Streets
- Highways – Freeways

Why Choose BLA?

- *We are flexible and creative in finding ways to meet your needs*
- *We have strong experience with municipalities, local counties and IDOT*
- *We will serve the staff of the Village of Willowbrook and its residents*
- **We build our success by building yours...**

LOCAL PRINCIPALS AND DIRECTORS:	
DAN BRUCKELMEYER, P.E.	PRESIDENT AND CEO
JOEL IHDE, P.E., S.E.	DIRECTOR OF STRUCTURAL
ED LEBBOS, CFM, CWS, DECI	DIRECTOR OF ENVIRONMENTAL
JENNIFER MITCHELL, P.E., PTOE	DIRECTOR OF PRELIMINARY SERVICES
KERRY FIELD, P.E.	DIRECTOR OF CONSTRUCTION

DESIGN: 18 LICENSED PROFESSIONAL ENGINEERS
 CONSTRUCTION: 8 LICENSED PROFESSIONAL ENGINEERS
 STRUCTURAL: 2 LICENSED STRUCTURAL ENGINEERS