

# **Downers Grove Sanitary District**

# Unsewered Area Plan March 2021

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# 1. Introduction

The ultimate service area of the Downers Grove Sanitary District (District) is defined by the Facility Planning Area (FPA) boundary. The District is responsible for planning sewer service for all property within its FPA. Currently, a majority of the area within the FPA is annexed to the District and receives sewer service. There are a few areas in the FPA served by septic systems that are not annexed into the District, and are therefore considered "unsewered." This report is intended to identify plans for the installation of the sewer system improvements needed to serve unsewered areas within the FPA, and to identify the process for obtaining service in unsewered areas.

The Sanitary District Act of 1917 (ILCS 2405/7.6) allows for the orderly planning for and establishment of general and specific locations for all conduits, pipes and pumping stations. Under this statute, the District is not obligated to accept or maintain facilities not built in accordance with this plan. This report is intended to serve as the plan described in this statute.

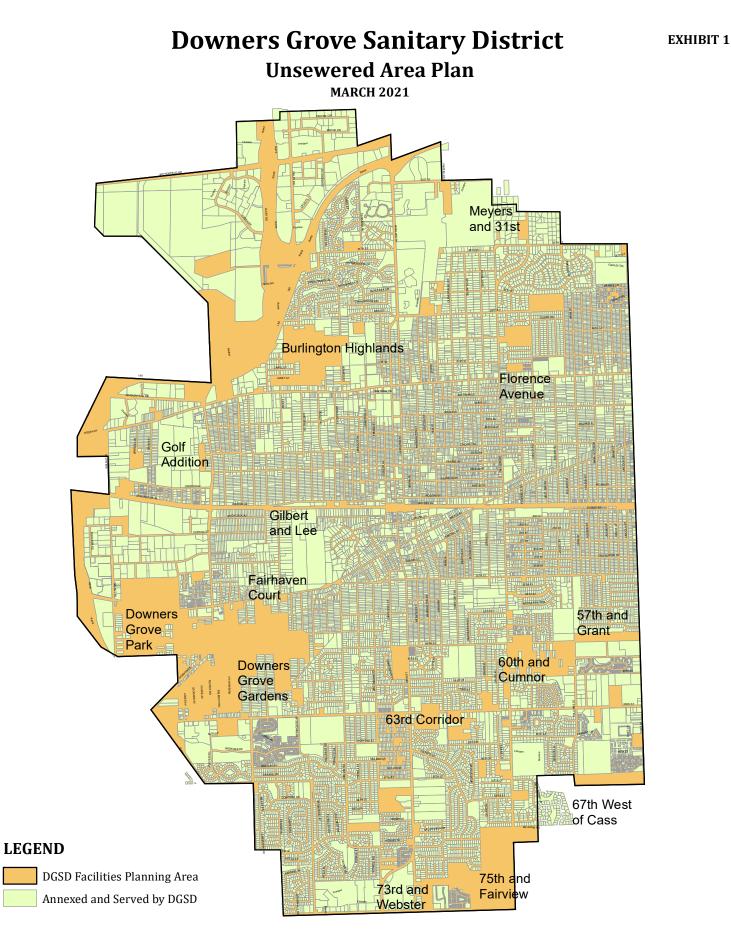
The Federal Water Pollution Control Act Amendments, Public Law 92-500, include provisions for the establishment of state and areawide water quality planning programs to coordinate pollution control decisions and to implement feasible methods to achieve clean water over the long term. Section 208(a) (2) of the Clean Water Act directs that: "The Governor of each State ... shall identify each area within the State which, as a result of urban-industrial concentrations or other factors, has substantial water quality control problems..." This language led to the establishment of Facility Planning Areas (FPAs) as a key element of this Areawide Water Quality Management Plan. A Facility Planning Area (FPA) is defined as "a centralized sewer service area to be considered for possible wastewater treatment facilities within a 20-year planning period." FPAs provide individual jurisdictions with a means of planning and cooperation to provide service to residents.

The State of Illinois has identified the District as the responsible local wastewater treatment authority for the Facility Planning Area, shown on Exhibit 1.

As part of a major metropolitan area, the District FPA is completely surrounded by other designated Facility Planning Areas. There is little opportunity for the FPA boundaries to be changed. However, there are occasions when sewer users along the FPA boundary are more easily served by the designated wastewater authority of an adjacent FPA. In such cases, the two authorities can typically reach an agreement to provide service without altering the FPA boundaries, or can agree to FPA boundary changes.

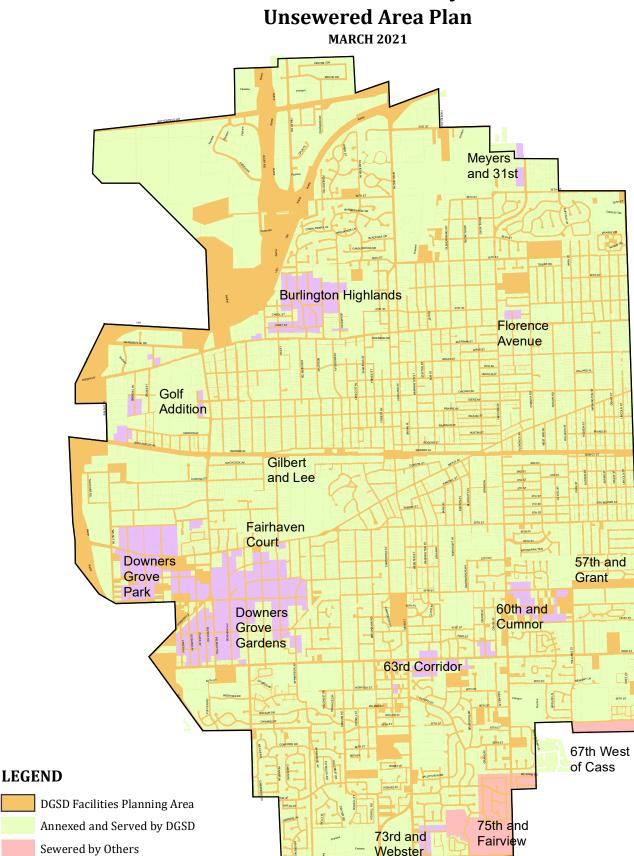
There are sewer users within the District FPA that are served by neighboring designated FPA authorities. These sewer users are located in the 75th and Fairview area and the area along 67th west of Cass, shown on Exhibit 2, which are served by DuPage County Public Works (Marianbrook FPA).

If FPA boundaries require adjustment for any reason, the State of Illinois has designated the Chicago Metropolitan Agency for Planning (CMAP) as the water-quality planning agency for the region. CMAP functions in an advisory role, reviewing applications and conducting administrative hearings, with the Illinois EPA retaining final approval over FPA boundary modifications.



Facilities Planning Area Boundary Map Based on Chicago Metropolitan Agency for Planning FPA Boundary Map of December, 2005

# **Downers Grove Sanitary District**



Unsewered Sub-Areas

Facilities Planning Area Boundary Map Based on Chicago Metropolitan Agency for Planning FPA Boundary Map of December, 2005

## 2. Existing Service Area

The existing service area of the District is smaller than the designated FPA. There are numerous properties within the FPA that do not receive sewer service, and are therefore not part of the existing service area.

The existing service area boundary is updated whenever a new property parcel is annexed into the District. Each annexation is filed with the County Clerk's office, at which time the service area boundary change becomes effective. Exhibit 1 shows the properties within the service area boundary, effective in the fourth quarter of 2005.

Property within the service area is subject to the property tax levy of the District. Property connected to the sewer also receives regular sewer use bills.

Property owners desiring sewer service are required to follow the rules defined by District ordinances and other applicable laws. Application for annexation is followed by construction of any necessary public sewer, and a building sewer connection to connect the improvements on the property to the public sewer. All construction is required to meet District standards, subject to review and inspection by District personnel.

In order to be annexed, a property owner must submit a completed Annexation Application Form. Under State law, property within the District service area must be contiguous.

Where property being annexed is not adjacent to an existing public sewer, a sewer extension must be constructed. Sewer extensions need to be constructed so that they are fully functional when newly built, and can accommodate anticipated future development of adjacent unsewered areas in the FPA.

Sewer extensions are required to meet District standards, subject to review and inspection by District personnel. Sewer extensions must be permitted for construction by the Illinois EPA.

In order to construct a sewer extension, an applicant must submit a completed Sanitary Sewer Service Request. The request must be approved by the Board of Local Improvements prior to proceeding to implementation.

The District will review engineering plans and specifications, prior to the permitting process by the Illinois EPA. Construction permit applications submitted to the Illinois EPA must be signed by the District as the authority receiving the wastewater. The District is thereby certifying that there is adequate downstream capacity to transport and treat all sanitary flows from the area being served by the sewer extension. The District will conduct inspections and require testing during and following construction in order to verify compliance with standards.

Fees are assessed for sewer permits, annexation applications, trunk sewer service charges, lateral sewer charges, recapture, plan reviews, construction inspection, and television inspection. These fees are updated periodically, and applied according to the requirements of District ordinances.

The District requires that sewer extensions be built according to this Unsewered Area Plan in order to allow for orderly and cost-effective construction, and so that capacity is available for anticipated future growth in remaining unsewered areas. This plan is updated from time to time, as projections for future development, zoning and growth may change over time.

# 3. Methods of Obtaining Service in Unsewered Areas

There are four available methods to finance the installation of sanitary sewers in an unsewered area - special assessment, construction by private party, cash plan, or special service area. Each method is discussed in detail below.

# 3.1 Special Assessment

The Statutes of the State of Illinois set forth a special assessment procedure whereby the District may construct sanitary sewers and assess the costs of the sewers against adjacent property to the extent the property is benefited. In order to utilize the special assessment procedure, the property to be benefited and assessed must be within District corporate limits. The procedure for annexing property to the District and the steps involved in a special assessment are discussed separately below.

# 3.1.1 Annexation

Property can be annexed into the District in one of two ways – by an election or by petition of a majority of land owners.

- 3.1.1.1 Upon the submittal to the District of a petition signed by ten percent or more of the legal voters residing within the area to be annexed, an election will be held at a regularly scheduled general election. The question to be submitted to the legal voters shall be whether the designated area should become a part of the District and assume a proportionate share of any bonded indebtedness of the district. If a majority of the votes cast at the election shall be in favor, the area shall be annexed.
- 3.1.1.2 Upon submittal of a petition to the District which has been signed by the owners of more than 50% of the land area of the designated area, the area shall be annexed. The District will provide the appropriate petition forms upon request. Annexation to the District does not involve annexation into a city or village.
- 3.1.2 Special Assessment Procedure

The District Board of Local Improvements originates the procedures for levying the special assessment, and property owners who wish a local improvement to be made on or adjacent to their property should petition this Board. For areas recently annexed by election or by majority petition, as discussed above, the Board of Local Improvements will generally initiate the special assessment procedure immediately following the annexation of the area to the District.

The following list is for general informational purposes only and merely highlights the various steps typically involved in a special assessment. This list should not be relied upon as conclusive since the steps actually followed in an individual special assessment will depend upon various circumstances, including the nature and extent of the improvement, as set forth in more detail in the state statutes and in the relevant case law.

3.1.2.1 Engineer's Report: At the request of the Board of Local Improvements, the plans for the local improvement project, including an estimate of costs thereof, are prepared by the engineer.

- 3.1.2.2 Estimate of Cost: This estimate lists the expenses involved in the local improvement and is signed by the President of the Board after determining that the estimate does not exceed the probable costs.
- 3.1.2.3 Originating Resolution: Board of Local Improvements outlines the improvement and orders a public hearing on the project.
- 3.1.2.4 Notice of Public Hearing: Persons who paid the last tax bill on the property to be assessed receive notice of the public hearing.
- 3.1.2.5 Public Hearing: A general description of the improvement is given to the public at the hearing and they are allowed to express their opinions and ask questions. The District attempts to provide a preliminary and unofficial spread of the assessment so that each property owner may then compute for himself an estimate of the amount to be levied against his property.
- 3.1.2.6 Second Resolution: Board of Local Improvements decides whether to continue, modify, or abandon the local improvement project.
- 3.1.2.7 Recommendation of Board of Local Improvements: If continued or modified, the improvement is recommended to the District Board of Trustees with a draft ordinance which shall be published at least 10 days prior to adoption.
- 3.1.2.8 Ordinance: The Board of Trustees decides whether to proceed with the special assessment by passing said ordinance.
- 3.1.2.9 Court Petition: District petitions the court for approval of the special assessment.
- 3.1.2.10 Appointment of Commissioners: President of Board of Local Improvements appoints commissioners to spread the assessment according to benefit, and to determine damages for any takings. This appointment is subject to approval by the court.
- 3.1.2.11 Assessment Roll: This roll, submitted by the Commissioners, lists the amounts proposed to be assessed against the individual parcels of property and just compensation for any takings (easements).
- 3.1.2.12 Summons: When takings are involved, a summons shall be issued and served upon all parties whose property is to be taken.
- 3.1.2.13 Notice of Court Hearing: Notice of a court hearing is published and mailed to the persons who paid the last tax bill on the property to be assessed.
- 3.1.2.14 Court Hearing: At a hearing before the court, any person owning or occupying property to be assessed or taken may file objections.
- 3.1.2.15 Order of Confirmation: After hearing any objections, the court rules on the assessment roll. Shortly thereafter, those property owners whose property is to be taken shall receive just compensation as determined by the Court.

- 3.1.2.16 Bills Issued: Property owners are sent bills based on the amount confirmed against their property in the earlier court hearing. The assessment will be billed in approximately equal installments over ten years. All installments will be due on January 2 of each year. A property owner who wishes to avoid being charged interest on his assessment can pay his entire assessment prior to the date when interest begins to accrue.
- 3.1.2.17 Invitation for Bids: Board of Local Improvements invites contractors to bid on the construction of the project.
- 3.1.2.18 Opening of Bids: The sealed bids of the contractors are opened publicly. Property owners have the right to do the work under certain conditions.
- 3.1.2.19 Award of Contract: The Board of Local Improvements accepts the lowest responsible bid or rejects all bids. If the bid to be approved is 10% more than the engineer's estimate, further legal proceedings must be undertaken and a supplemental assessment made. Following the award of a contract, construction begins.

# 3.2 Construction by Private Party

A private party may construct a sewer to be dedicated to the District as a public sewer. The private party is responsible for engineering, permitting, and construction of the improvement. The statute (ILCS 2405/7.7) allows for (but does not require) the recapture of costs from other properties benefited by the privately funded improvement.

If property owners along the sewer did not participate in the cost of the improvement, the District may provide a recapture agreement to assess such owners their prorated share of the costs of the sewer upon application to connect. The private party must submit paid copies of all costs of the project in a timely manner, and indicate which undisputed individuals are to receive the recapture payments.

Property owners desiring to connect to the newly constructed sewer must apply for a connection permit and must comply with all District requirements, including annexation to the District and payment of all District fees and charges.

# 3.3 Cash Plan

The residents of a given street may choose between two methods of constructing a sanitary sewer under a cash plan. Under the first method, the residents form a non-profit organization to administer the construction project, dealing directly with an engineer, a contractor, the District and a bank. Under the second method, the residents contract with the District to administer the project on their behalf. An outline of the steps to be taken under each method is presented below:

- 3.3.1 Cash Plan Non-Profit Organization
- 3.3.1.1 The residents of a given street desiring to construct a sanitary sewer should first form a non-profit organization (for example "Smith Avenue Improvement Association"). It is recommended that an attorney be consulted in order to properly establish the organization.

- 3.3.1.2 Officers should be selected, or a governing committee should be selected, to represent the property owners in future dealings with the District, contractors, engineers, etc.
- 3.3.1.3 After the organization has been formed and there is sufficient interest in the project, the officers should retain a registered engineer who is experienced in the design and construction of sanitary sewers.
- 3.3.1.4 The committee should authorize the engineer to prepare a preliminary estimate of cost of the proposed project. This preliminary estimate of cost can be prepared for a nominal fee. It would require the engineer to make a reconnaissance of the area, determine construction conditions in the area and generally look over the area to arrive at the preliminary estimate of cost. The committee should be prepared to supply the engineer with all available information, i.e. limits of the proposed improvement, number of homes, legal descriptions for area involved, etc.
- 3.3.1.5 Upon receipt of the cost estimate, the committee should then call a meeting of all property owners on the street. The estimated cost and other information can then be explained to the property owners.
- 3.3.1.6 If a sufficient number of property owners are in favor of proceeding with the project, the officers should then establish an escrow fund at one of the local banks.
- 3.3.1.7 Following the establishment of an escrow fund, the property owners should be instructed to deposit their pro-rated share of the project into the fund. Ultimately 100% participation will be required by the property owners. If 100% participation is not obtained, the cost of the non-participants will have to be borne by the remaining owners.
- 3.3.1.8 After approximately 50% of the total cost of the project has been deposited in the escrow account, the organization should then authorize the engineers to proceed with the preparation of final plans and specifications.
- 3.3.1.9 Four (4) copies of the completed plans and specifications must be submitted to the District for review and approval. Following District approval, two (2) sets of plans and specifications will be submitted by the District to the Illinois Environmental Protection Agency for review and issuance of the required permit. It is recommended that the plans not be released for bidding until District approval has been received. Construction of the sewer may not begin until the Illinois Environmental Protection Agency permit is received.
- 3.3.1.10 After approximately 80% of the necessary funds are deposited in the escrow account and the organization is assured that the remaining 20% will be deposited prior to the completion of the project, the engineers should then be authorized to solicit bids from contractors.
- 3.3.1.11 It is suggested that bids be opened at a joint meeting of the bidders, the engineer and organization officers. A contract is then awarded by the organization to the selected contractor.
- 3.3.1.12 The organization will be responsible, through the engineer, to monitor the sewer construction.

- 3.3.1.13 Payments to the contractor and the engineer shall be made from the escrow fund as authorized by the organization officers.
- 3.3.1.14 Following completion of the sewer, the District will prepare an agreement to be signed by the representatives of the organization. This agreement will assign the ownership of the sewer to the District and the District will agree to operate and maintain the sewer following acceptance.
- 3.3.1.15 If any of the property owners along the sewer did not participate in the cost of the improvement, the District will provide a recapture agreement to assess such owners their prorated share of the costs of the sewer upon application to connect. The organization officers must submit paid copies of all costs of the project and indicate which individuals are to receive recapture payments.
- 3.3.1.16 Property owners desiring to connect to the newly constructed sewer must apply for a connection permit and must comply with all District requirements, including annexation to the District and payment of all District fees and charges.
- 3.3.2 Contract with Sanitary District

Under the second cash plan method, the residents of the given street enter into an agreement with the District to construct the sewer. The District then administers the project and deals with the engineer and contractors. The following steps are required under this method:

- 3.3.2.1 The District provides an agreement for execution by each property owner who desires to participate in the sewer construction. This agreement will indicate the deposit required of each participating owner, authorize the District to prepare plans and specifications, advertise for bids, publicly open bids, award the contract to the lowest responsible bidder, proceed to construct the sewer, and establish a recapture fee to be assessed against any property along the route of the sewer which did not participate in the cost of the sewer.
- 3.3.2.2 Property owners desiring to connect to the newly constructed sewer must apply for a connection permit and must comply with all District requirements, including annexation to the District and payment of all District fees and charges.

## 3.4 Special Service Area

The Statutes of the State of Illinois set forth a special service area procedure whereby the District may construct sanitary sewers and assess the costs of the sewers against benefited property as a levy of an additional real estate or other tax for special services that are not available to other properties within the District. In order to utilize the special service area procedure, the property to be benefited and assessed must be within the corporate limits of the District. The procedure for annexing property to the District is discussed under Section 3.1.1.

The District has not utilized the special service area procedure to finance the installation of sanitary sewers and prefers the special assessment procedure as a more equitable method of financing such installations.

## 4. Unsewered Sub-Areas

The needs of different unsewered areas vary, depending on local conditions. The District has delineated a number of distinct sub-areas, and developed sewer plans according to the specific circumstances of each sub-area. Exhibit 2 shows these unsewered sub-areas. These sub-areas are listed as follows:

- 73rd and Webster
- Downers Grove Park
- Downers Grove Gardens
- Fairhaven Court
- Burlington Highlands
- Golf Addition
- Florence Avenue
- Meyers and 31st
- 57th and Grant
- 60th and Cumnor
- 63rd Street Corridor
- Gilbert and Lee

Planning elements that have been considered in each sub-area include existing development and associated population density, zoning and associated density for undeveloped property, local topography, and existing nearby sewers. A planned sewer system layout is developed to provide sewer service for the entire sub-area. Sewer system layout includes routing and depth information, as needed to verify capacity and to estimate costs. Manhole spacing has been established assuming the entire sub-area were sewered as a single project. Actual manhole spacing can be adjusted to accommodate specific projects within any sub-area. With this flexibility in mind, construction of sewer extensions in the unsewered area is expected to be consistent with the planned sewer system lay-out.

(Sanitary sewers are available as of March 2015.)

For each planned sewer system addition, estimates of probable construction costs have been made. Estimates are based on unit quantities developed by the District. Unit prices are applied to these unit quantities. Estimates are updated periodically to reflect changes in unit pricing over time. Unit pricing is derived using recent unit prices from similar construction projects. The intent of the District is to update the unit price costs each calendar year using unit prices from recent projects and future industry projections. This report uses projected unit prices for the year 2021.

Every unsewered parcel has an associated sewer construction project that is necessary as the minimal project needed to obtain service. The project includes all downstream construction required to connect the parcel to the existing sewer according to this plan.

Specific sub-areas are identified and discussed here in detail. Preliminary plans were previously prepared for many unsewered areas. Historically, this was done on an as-needed basis as interest in obtaining sewer service is shown in individual unsewered areas. These preliminary plans were updated and included in this report, as well as new preliminary plans for sub-areas that were not investigated previously. Thus, this report contains a comprehensive summary of all the preliminary plans to provide sewer to all unsewered areas within the District FPA.

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# 4.1 73<sup>rd</sup> and Webster

The unsewered area at 73<sup>rd</sup> Street and Webster Street includes 25 lots that are already developed as single family residential, 9 facing 73<sup>rd</sup> Street along the north side, and 16 facing Webster directly south of 73<sup>rd</sup> Street. A map of the area is included in Exhibit 4.1.

The area can be served from four existing locations: a new manhole on the existing sewer on  $75^{\text{th}}$  Street at Webster Street, an existing manhole on the west side of Main Street at  $73^{\text{rd}}$  Street, an existing manhole located on Webster Street just south of Old Orchard Avenue, and/or an existing sewer at Baybury Road and  $73^{\text{rd}}$ .

Another component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the 73<sup>rd</sup> and Webster sub-area.

Several options were considered when determining the cost-effective sewer layout to serve this area. Ground surface contours and major road crossings play a key role in development of the cost-effective sewer layout.

The low-cost layout generally follows the existing ground contours, while minimizing the number of road crossings. A deep cut is avoided in the hill along Webster by serving the homes along Webster with a southward-running sewer segment. The homes along  $73^{rd}$  are best served from the manhole to the north, to avoid a crossing at Main Street. The manhole at Baybury and  $73^{rd}$  is too shallow to serve the homes at the western edge of the service area.

A summary of the manhole and sewer layout are provided in Table 4.1-1.

Table 4.1-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$917,600, including contingency, engineering, easements, and legal/administrative costs. Some easement acquisition is required along 73<sup>rd</sup> street to avoid the nearby water main.

# DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

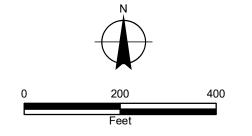
EXHIBIT 4.1

# 73rd AND WEBSTER POSSIBLE SEWER ALIGNMENT

MARCH 2021

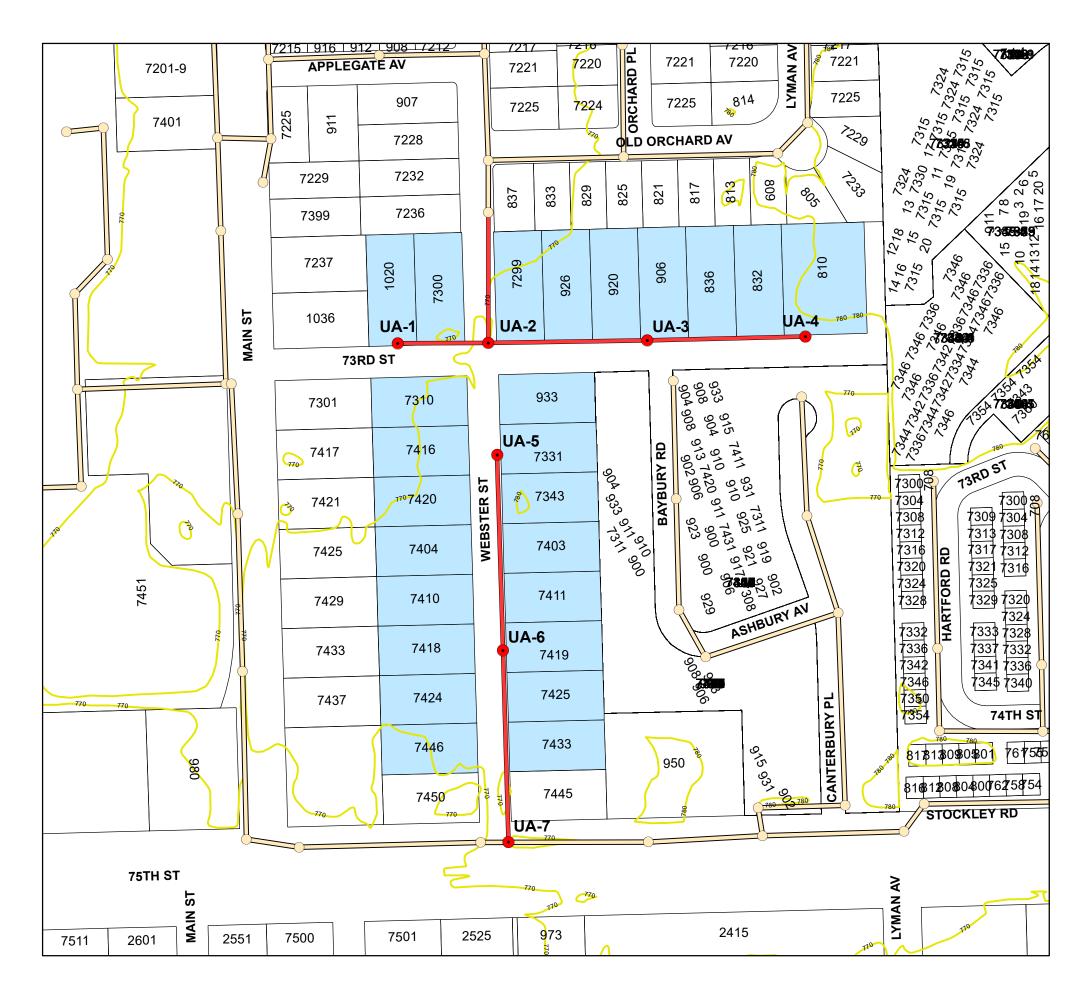
# LEGEND

•	PROPOSED MANHOLES
	PROPOSED SEWERS
$\bigcirc$	EXISTING MANHOLES
	EXISTING SEWERS
	PARCEL BOUNDARIES
	73RD AND WEBSTER





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# Table 4.1-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers73rd and WebsterPreliminary Design Layout

	ary Design Layout					Manhole	
	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	<u>Depth</u>	
73rd Street							
	H-7-9-42 (existing)	765.3	755.09			10.2	
				310	1.50%		
	UA-2	771.8	759.74	250	1.50%	12.1	
	UA-3	775.5	764.99	350	1.50%	10.5	
				340	0.40%		
	UA-4	777.5	766.35			11.2	
		760 F	760 54	200	0.40%	8.0	
	UA-1	768.5	760.54			8.0	
<u>Webster</u>	Street						
	UA-7	770.7	760.77			9.9	
				400	0.80%		
	UA-6	774.3	763.97			10.3	
		776.0	767 47	400	0.80%	0.0	
	UA-5	776.0	767.17			8.8	

NI-	Dev. H		Approxir			Unit		Amo
No.	Pay Item		Quant	ity		Price		Amount
MAIN	ILINE SEWER							
1	SANITARY SEWER (OPE 8-inch	N CUT) 8-12 feet deep	2,000	lin. ft.	\$	87.00	\$	\$174,000
2	SANITARY MANHOLES 48-inch	8-12 feet deep	7	each	\$	6,400.00	\$	\$44,800
3	CONNECTION TO EXISTI 8-inch	NG MANHOLE	1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFILL 8-inch	8-12 feet deep	1,097	lin. ft.	\$	113.00	\$	\$123,961
6	SEWER TELEVISING FOR	R FINAL INSPECTIO	ON 2,000	lin. ft.	\$	3.00	\$	\$6,000
7	SEWER TESTING FOR FI	NAL INSPECTION	2,000	lin. ft.	\$	3.00	\$	\$6,000
8	CULVERT REMOVAL ANI 12-inch	D REPLACEMENT	108	lin. ft.	\$	81.00	\$	\$8,748
9	RESTORATION OF LAWN AND PARKWAYS: Topsoil and sod	IS	2,160	sq.yd.	\$	14.00	\$	\$30,240
10	RESTORATION OF STRE Bit. Concrete Street		630	sq.yd.	\$	64.00	\$	\$40,320
11	REMOVE AND REPLACE Bituminous Concrete	DRIVEWAYS	58 43	sq.yd. sq.yd.	<u>\$</u> \$	48.00 81.00	\$ \$	\$2,784 \$3,483
12	REMOVE AND REPLACE 5-foot PCC	SIDEWALK	50	sq.ft.	\$	13.00	\$	\$650
13	TREE REMOVAL AND TR	IMMING:			Lur	np Sum	\$	\$665
14	EROSION CONTROL				Lur	np Sum	\$	\$998

No.	Pay Item	Approxir Quant			Amount	
15	TRAFFIC CONTROL		,	Lump Sum	\$	\$3,325
	SUBTOTAL			·	\$	\$457,624
SER	VICE LATERALS					
1	BUILDING SERVICE LINES Near Side Far Side	396 1,233	lin. ft. lin. ft.	\$	\$ \$	\$19,800 \$61,650
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far Side	16 9	each each	\$554.00 \$682.00	\$ \$	\$8,864 \$6,138
3	BUILDING SERVICE PLUGS:	25	each	\$ 208.00	\$	\$5,200
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and Sod	260	sq.yd.	\$ 12.00	\$	\$3,120
5	RESTORATION OF STREETS: Bit. Concrete Street	172	sq.yd.	\$ 63.00	\$	\$10,836
6	TRENCH BACKFILL 0-8 feet deep	295	lin. ft.	\$ 62.00	\$	\$18,290
	SUBTOTAL				\$	\$133,898
	TOTAL ESTIMATE OF CO	NSTRUCTION COST			\$	\$591,500
	E	Contingencies Engineering Legal / Admin Easement Acquisition	(20%) (20%) (6%)			\$118,300 \$118,300 \$49,700 \$39,800
	TOTAL OPINION OF PRO	BABLE COST			\$	\$917,600

Cost per lot \$36,700

# 4.2 Downers Grove Park

Downers Grove Park is a large sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.2, the approximate limits of this sub-area are Elmore Avenue and Inverness Avenue to the north, Walnut Avenue to the west, 59<sup>th</sup> Street to the south, and Belmont Road to the east. The proposed service area includes approximately 196 lots that are mostly developed as single-family residences with septic systems. This evaluation establishes the cost-effective sanitary sewer plan for serving the unsewered properties within the Downers Grove Park sub-area.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Downers Grove Park subarea has one major drainage divide running from west to east, just south of Maple Avenue. Serving these properties by following the ground contours will avoid deep cuts through the higher elevations along the drainage divide. Properties north of this divide will generally be served by the existing manhole at Walnut Avenue and Elmore Avenue, the manhole at the intersection of Janes Avenue and Inverness Avenue, the manhole on Inverness west of Belmont, and the manhole on Elinor Avenue just south of Maple Avenue that was recently constructed as part of the Villas of Maple Woods development. Properties south of the drainage divide can be served by the existing sewers on Walnut Avenue, 59th Street and Hobson Road. The Walnut Avenue sewer has been extended east to Katrine Avenue to provide a manhole to connect to at Katrine and College Road. The 59<sup>th</sup> Street sewer contains manholes at each cross street to provide connection points for lots along Katrine Avenue, Lomond Avenue, Elinor Avenue and Janes Avenue. The final connection points south of the drainage divide are manholes on Hobson Road at Chase Road and Puffer Road.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The only major road crossing that would significantly increase construction cost in this sub-area is Maple Avenue. Thus, alternatives were considered to minimize crossing Maple Avenue with both the mainline sewer and building services.

The sewer layout also considered the several wetlands that are located within the sub-area at the following locations: Elinor and Inverness, Katrine and 59<sup>th</sup>, and Lomond and 59th. Avoiding these wetlands will minimize the time and expense involved in the permitting process for construction in wetlands as well as reduce the costs associated with restoring these areas.

The Village of Downers Grove owns and operates water mains on a majority of the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Downers Grove Park sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points. The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
Katrine-Maple (North)	25	Table 4.2-1	Table 4.2-2
Inverness-Lomond-Elinor-Maple (No	orth) 72	Table 4.2-3	Table 4.2-4
Inverness-Belmont (North)	6	Table 4.2-5	Table 4.2-6
Katrine-College (South)	27	Table 4.2-7	Table 4.2-8
Lomond-College (South)	29	Table 4.2-9	Table 4.2-10
Elinor-College (South)	9	Table 4.2-11	Table 4.2-12
Janes-College (South)	13	Table 4.2-13	Table 4.2-14
Chase-Hobson-Belmont (South)	15	Table 4.2-15	Table 4.2-16

Table 4.2-17 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.2.

The Katrine-Maple (North) sub-basin sewer plan follows the existing topography which falls from Maple Avenue north to the dead end of Katrine Avenue and west to Walnut Avenue. Our analysis determined that parallel sewers on the north and south sides of Maple Avenue will be less expensive than bringing numerous services across the street. A sewer will serve the homes on the north side of Maple Avenue and will be included in the Katrine-Maple (North) sub-basin. The sewer on the south side of Maple will run east to the adjacent Inverness-Lomond-Elinor-Maple (North) sub-basin at Lomond, which is less expensive than another crossing of Maple Avenue. Table 4.2-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.2-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$868,500, including contingency, engineering, easements, and legal/administrative costs.

The Inverness-Lomond-Elinor-Maple (North) sub-basin sewer plan also follows existing topography from the intersection of Lomond Avenue and Maple Avenue northeast to an existing manhole at Janes Avenue and Inverness Avenue. This sub-basin will include all unsewered properties fronting the south side of Maple Avenue. Two road crossings of Maple are identified to provide flexibility, but only one crossing at Elinor could be utilized if construction phasing allows. The opinion of project cost is \$2,760,200, including contingency, engineering, easements, and legal/administrative costs.

The Inverness-Belmont (North) sub-basin is best served by extending a sewer east from the existing manhole near the intersection of Inverness and Ashbrook. The existing ground slope, which rises from west to east, accommodates the plan for serving this sub-basin. The opinion of project cost is \$180,500, including contingency, engineering, and legal/administrative costs.

The Katrine-College (South) sub-basin sewer plan will follow the drainage divide south to 59<sup>th</sup> Street. The lots south of College Road will be served by the existing manhole at the southern terminus of Katrine, while lots north of College will be served by the existing sewer at the intersection of Katrine and College. This sewer is not the recommended alternative to serve the

south frontage properties along Maple Avenue because of the costly deep cuts needed through the hill south of Maple. The opinion of project cost is \$599,000, including contingency, engineering, and legal/administrative costs.

The Lomond-College (South) sub-basin sewer plan will follow the drainage divide south to 59<sup>th</sup> Street. The sub-basin will be served by a sewer that will extend north from the existing manhole near the creek near the southern terminus of Lomond Avenue at 59<sup>th</sup> Street. This alignment is the most cost effective alternative to serve the area due to the shortest total sewer length and minimizing of utility conflicts. However, the cost per lot is still comparatively larger than for other sub-basins because portions of the sewer will be located in the pavement to avoid the existing water main. The opinion of project cost is \$901,500, including contingency, engineering, and legal/administrative costs.

The Elinor-College (South) sub-basin will be served just as Katrine and Lomond. The ground slope promotes a sewer draining south that will connect to the existing system just north of 59<sup>th</sup> Street. The northerly limit of the sewer is the southern limit of the Villas of Maple Woods Subdivision. The sewer installed as part of that subdivision will serve several properties north of this sub-basin along Elinor. The opinion of project cost is \$381,900, including contingency, engineering, and legal/administrative costs.

The Janes-College (South) sub-basin will also flow south to 59<sup>th</sup> Street. Design drawings for the sewers from 59<sup>th</sup> Street to College and east on College have been reviewed as part of the proposed Robert's and Lisa Marie subdivisions. The design drawings for these subdivisions are consistent with this preliminary sewer plan. This sewer plan is the least costly because it will not contain any deep sections due to the consistent southerly ground slope. The opinion of project cost is \$406,500, including contingency, engineering, and legal/administrative costs.

The Chase-Hobson-Belmont (South) sub-basin is also best served by sanitary sewers draining to the south to match the topography. A sewer should be constructed north along Chase Road from the existing manhole approximately 200 feet north of Hobson. Belmont Road will be served by a sewer that extends north from Hobson and Puffer. A major factor in the higher cost per lot of this sub-basin was the trench backfill and pavement restoration needed along Belmont Road. The opinion of project cost is \$651,700, including contingency, engineering, and legal/ administrative costs.

# DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

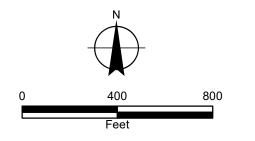
# EXHIBIT 4.2

# DOWNERS GROVE PARK POSSIBLE SEWER ALIGNMENT

### **MARCH 2021**

# LEGEND

- PROPOSED MANHOLES
  PROPOSED SEWERS
  EXISTING MANHOLES
- EXISTING SEWERS
  - PARCEL BOUNDARIES
  - KATRINE-MAPLE (NORTH):TABLES 4.2-1, 4.2-2
  - INVERNESS-LOMOND-ELINOR-MAPLE (NORTH):TABLES 4.2-3, 4.2-4
  - INVERNESS-BELMONT (NORTH):TABLES 4.2-5, 4.2-6
  - KATRINE-COLLEGE (SOUTH):TABLES 4.2-7, 4.2-8
  - LOMOND-COLLEGE (SOUTH):TABLES 4.2-9, 4.2-10
  - ELINOR-COLLEGE (SOUTH):TABLES 4.2-11, 4.2-12
  - JANES-COLLEGE (SOUTH):TABLES 4.2-13, 4.2-14
  - CHASE-HOBSON-BELMONT (SOUTH):TABLES 4.2-15, 4.2-16





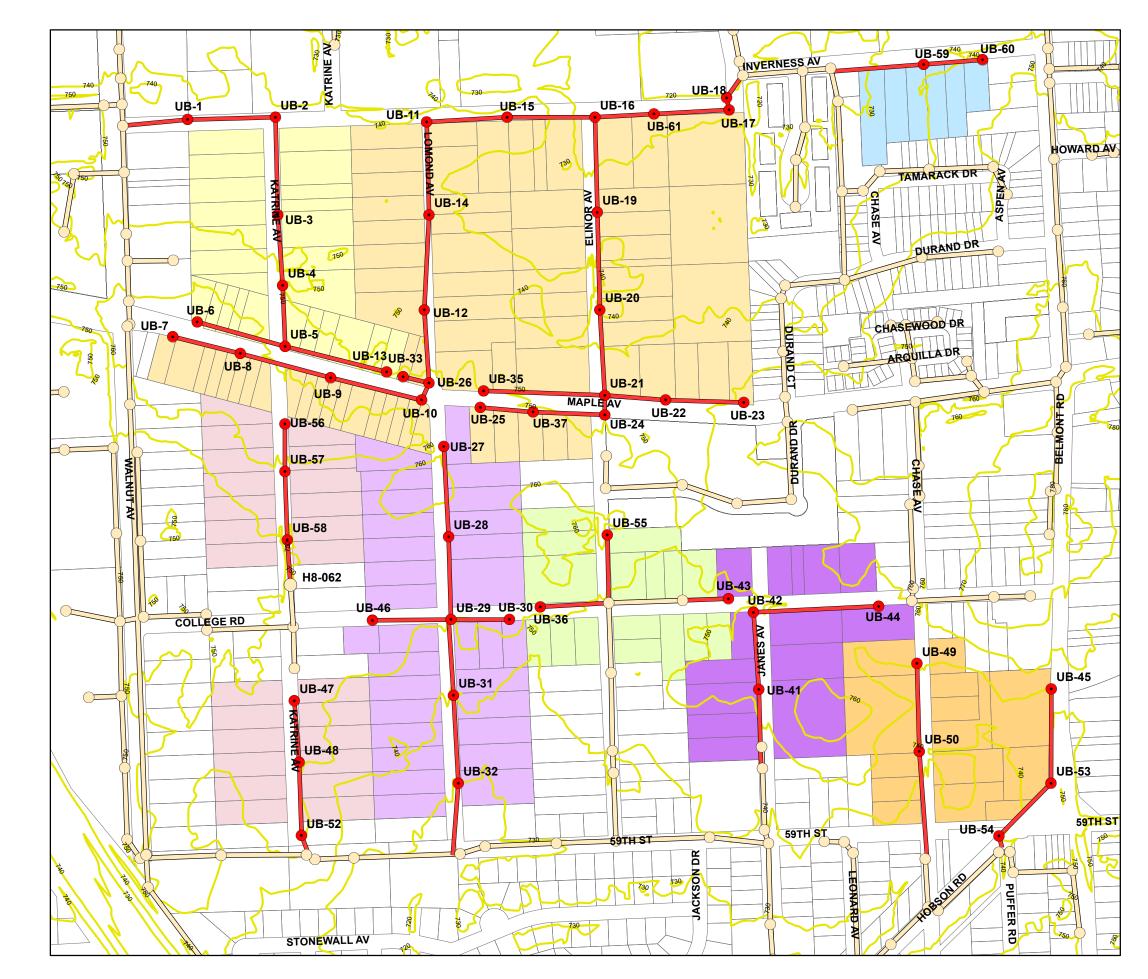


Table 4.2-1

Downers Grove Sanitary District

# Possible Special Assessment for Sanitary Sewers

Katrine-Maple (North)

Preliminary Design

Manhole Number	Rim	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
		invent	<u>Longer (n)</u>	0.000	Dopin
Katrine Avenue					
3-A-23 (existing)	748.1	732.36			15.7
5-A-25 (existing)	740.1	752.50	255	1.00%	15.7
UB-1	741.0	734.91			6.1
			346	0.40%	
UB-2	742.0	736.29	400	0.40%	5.7
UB-3	746.3	737.89	400	0.4078	8.4
			300	0.40%	
UB-4	749.5	739.09			10.4
UB-5	757.3	740.19	275	0.40%	17.1
08-5	151.5	740.19			17.1
Maple Avenue					
UB-13	749.0	741.87	420	0.40%	7.1
08-13	749.0	141.01	380	2.00%	1.1
UB-6	756.0	747.79			8.2

No.	Pay Item		Approximat Quantity	e		Unit Price		Amount
MAINLIN	IE SEWER							
1	SANITARY SE	WER (OPEN CUT)						
	8-inch	0-8 feet deep	270	lin. ft.	\$	75.00	\$	20,250
		8-12 feet deep	996	lin. ft.	\$	87.00	\$	86,652
		12-16 feet deep	705	lin. ft.	\$	106.00	\$	74,730
		16-20 feet deep	150	lin. ft.	\$	127.00	\$	19,050
2	SANITARY SEV	VER (DIRECTIONAL I	ORILLED)					
	8-inch		255	lin. ft.	\$	275.00	\$	70,125
3	SANITARY MA	NHOLES						
	48-inch	0-8 feet deep	3	each	\$	4,800.00	\$	14,400
		8-12 feet deep	3	each	\$	6,400.00	\$	19,200
		16-20 feet deep	1	each	\$	10,300.00	\$	10,300
4	CONNECTION	TO EXISTING MANH	IOLE					
	8-inch		1	each	\$	6,200.00	\$	6,200
5	TRENCH BAC	KFILL						
-	8-inch	0-8 feet deep	35	lin. ft.	\$	93.00	\$	3,255
		8-12 feet deep	95	lin. ft.	\$	113.00	\$	10,735
		12-16 feet deep	70	lin. ft.	\$	137.00	\$	9,590
		16-20 feet deep	25	lin. ft.	\$	180.00	\$ \$	4,500
6	TREE TUNNEL	LING	250	lin. ft.	\$	192.00	\$	48,000
7	SEWER TELE	VISING FOR FINAL IN	ISPECTION					
			2,376	lin. ft.	\$	3.00	\$	7,128
8	SEWER TEST	ING FOR FINAL INSP	ECTION					
			2,376	lin. ft.	\$	3.00	\$	7,128
9	CULVERT REM	MOVAL AND REPLAC	EMENT					
	12-inch		85	lin. ft.	\$	81.00	\$	6,885
10	RESTORATIO							
	Topsoil and		709	sq.yd.	¢	14.00	¢	9,912
	Topsoil and			sq.yd. sq.yd.	<u>\$</u> \$	14.00	\$ \$	40,320
	RESTORATIO							

	Daviltara		Approximate				Americant
No.	Pay Item	Quantity			Price		Amount
12	REMOVE AND REPLACE DRIV			•	40.00	•	5 700
	Bituminous		sq.yd.	\$	48.00	\$ ¢	5,760
	PCC Driveway Gravel Driveway		sq.yd. sq.yd.	\$ \$	81.00 20.00	\$ \$ \$	3,645
	Glaver Driveway	50	sq.yu.	Ψ	20.00	ψ	1,000
13	TREE REMOVAL & TRIMMING			Lum	o Sum	\$	2,660
14	TRAFFIC CONTROL			Lump	o Sum	\$	9,975
	SUBTOTAL					\$	493,512
SERVICE	LATERALS						
1	BUILDING SERVICE LINES						
-	Near side	210	lin. ft.	\$	50.00	\$	10,500
	Far side	400	lin. ft.	\$	50.00	\$	20,000
2	BUILDING SERVICE BRANCH FITTINGS						
	Near Side	17	each	\$	554.00	\$	9,418
	Far side	8	each	\$	682.00	\$	5,456
3	BUILDING SERVICE PLUG	25	each	\$	208.00	\$	5,200
4	RESTORATION OF LAWNS AN	D PARKWAYS:					
	Sod	340	sq.yd.	\$	14.00	\$	4,760
5	RESTORATION OF STREETS:						
	Bit. Concrete Street	60	sq.yd.	\$	63.00	\$	3,780
6	TRENCH BACKFILL						
	0-8 feet deep	152	lin. ft.	\$	62.00	\$	9,424
	SUBTOTAL					\$	68,538
	TOTAL ESTIMATE OF CON	ISTRUCTION COS	Т			\$	562,100
		Contingencies	(20%)				112,400
		Engineering	(20%)				112,400
	• • •		(6%)				47,200
		Easement Acquis	ition				34,400
	TOTAL OPINION OF PROB	ABLE COST				\$	868,500
				C	ost per lot		34,740
							51,110

Table 4.2-3 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Inverness-Lomond-Elinor-Maple (North) Preliminary Design

Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>			
Inverness Avenue (Janes to Lomond)								
2-A-71A (existing)	717.7	704.82	40	4.00%	12.9			
UB-18	717.5	705.32	42 125	1.20% 3.00%	12.2			
UB-17	726.0	709.07	340	1.20%	16.9			
UB-61	723.8	713.15	284	1.20%	10.6			
UB-16	725.5	716.56	400	3.00%	8.9			
UB-15	742.5	728.56	320	0.80%	13.9			
UB-11	742.3	731.12	0_0	0.0070	11.1			
Lomond Avenue (Invernes	<u>s to Maple)</u>							
UB-14	741.3	732.68	390	0.40%	8.6			
UB-12	747.3	735.88	400	0.80%	11.4			
UB-26	750.3	738.55	333	0.80%	11.7			
Maple Avenue (west of Lor	<u>nond)</u>							
			135	0.40%				
UB-33	748.0	739.09	80	0.80%	8.9			
UB-10	754.0	739.19	400	0.80%	14.8			
UB-9	754.0	742.39	400	1.00%	11.6			
UB-8	762.0	746.39	250	1.00%	15.6			
UB-7	763.0	748.89			14.1			

Table 4.2-3

Downers Grove Sanitary District

# Possible Special Assessment for Sanitary Sewers

Inverness-Lomond-Elinor-Maple (North)

Pre	limina	ary D	esign
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r reminiary Design					Manhole			
Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	<u>Depth</u>			
Elinor Avenue (Inverness to Maple)								
			400	2.00%				
UB-19	735.5	724.56			10.9			
UB-20	738.8	730.56	400	1.50%	8.2			
			375	1.50%				
UB-21	747.0	736.19			10.8			
Maple Avenue (east and w	est of Elino	<u>r)</u>						
			350	0.80%				
UB-22	747.0	738.99	050	0.000/	8.0			
UB-23	750.0	740.99	250	0.80%	9.0			
			450	0.80%				
UB-35	750.5	739.79	80	1.00%	10.7			
UB-24	748.0	736.99	00	1.0070	11.0			
UB-37	750.0	739.99	300	1.00%	10.0			
00-37	750.0	199.99	300	1.00%	10.0			
UB-25	752.0	742.99			9.0			

MAINLIN 1			Quantity			Price		Amount
1								
	SANITARY SE	WER (OPEN CUT)						
	8-inch	8-12 feet deep	5,193	lin. ft.	\$	87.00	\$	\$451,791
		12-16 feet deep	920	lin. ft.	\$ \$	106.00	<u>\$</u> \$	\$97,520
		16-20 feet deep	691	lin. ft.	\$	127.00	\$	\$87,757
2	SANITARY MA	NHOLES						
	48-inch	8-12 feet deep	19	each	\$	6,400.00	\$	\$121,600
		12-16 feet deep	3	each	\$	7,700.00	\$	\$23,100
		16-20 feet deep	1	each	\$	10,300.00	\$	\$10,300
3	CONNECTION	TO EXISTING MANH	IOLE					
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACK	KFILL						
	8-inch	8-12 feet deep	3,050	lin. ft.	\$	113.00	\$	\$344,650
		12-16 feet deep	502	lin. ft.	\$ \$	137.00	<u>\$</u> \$	\$68,774
		16-20 feet deep	184	lin. ft.	\$	180.00	\$	\$33,120
5	TREE TUNNEL	ING	350	lin. ft.	\$	192.00	\$	\$67,200
6	SEWER TELEV	ISING FOR FINAL IN	SPECTION					
			6,804	lin. ft.	\$	3.00	\$	\$20,412
7	SEWER TESTI	NG FOR FINAL INSP	ECTION					
			6,804	lin. ft.	\$	3.00	\$	\$20,412
8	CULVERT REM	IOVAL AND REPLAC	EMENT					
	12-inch		515	lin. ft.	\$	81.00	\$	\$41,715
9	RESTORATION							
			200	og vd	\$	14.00	\$	¢1 010
	Topsoil and Sod	seeu		sq.yd. sq.yd.	\$	14.00 14.00	\$	\$4,312 \$47,292
10	RESTORATION							
10	Bituminous		2.000	sq.yd.	\$	64.00	\$	\$128,000
	PCC Curb		60		\$ \$	41.00	<u>\$</u> \$	\$2,460
	PCC Sidew		650		\$	13.00	\$	\$8,450

No.	Pay Item	Approximate Quantity	Unit Price		Amount
11	REMOVE AND REPLACE DRIVI Bituminous PCC Driveway Gravel Driveway	EWAYS 290 sq.yd. 75 sq.yd. 25 sq.yd.	\$ 48.00 \$ 81.00 \$ 20.00	\$ \$ \$	\$13,920 \$6,075 \$500
12	TREE REMOVAL & TRIMMING		Lump Sum	\$	\$4,655
13	TRAFFIC CONTROL		Lump Sum	\$	\$19,950
	SUBTOTAL			\$	\$1,630,165
SERVIC	CE LATERALS				
1	BUILDING SERVICE LINES Near side Far side	763 lin. ft. 400 lin. ft.	\$ 50.00 \$ 50.00	\$ \$	\$38,150 \$20,000
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	59 each 13 each	\$ 554.00 \$ 682.00	\$ \$	\$32,686 \$8,866
3	BUILDING SERVICE PLUG	72 each	\$ 208.00	\$	\$14,976
4	RESTORATION OF LAWNS AN Sod	D PARKWAYS: 1,004 sq.yd.	\$ 14.00	\$	\$14,056
5	RESTORATION OF STREETS: Bit. Concrete Street	149 sq.yd.	\$ 63.00	\$	\$9,387
6	TRENCH BACKFILL 0-8 feet deep	260 lin. ft.	\$ 62.00	\$	\$16,120
	SUBTOTAL			\$	\$154,241
	TOTAL ESTIMATE OF CON	ISTRUCTION COST		\$	\$1,784,400
		Contingencies(20%)Engineering(20%)Legal / Admin(6%)Easement Acquisition			\$356,900 \$356,900 \$149,900 \$112,100
	TOTAL OPINION OF PROB	ABLE COST		\$	\$2,760,200
			Cost per	r lot	\$38,340

Table 4.2-5 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Inverness-Belmont (North) Preliminary Design Layout

Manhole Number	<u>Rim</u>	Invert	Length (ft)	Slope	Manhole <u>Depth</u>
Inverness Avenue					
2-A-71F existing	725.4	715.59	400	2.20%	9.8
UB-59	734.0	724.39	250	2.20%	9.6
UB-60	738.0	729.89	250	2.20%	8.1

No.	Pay Item		Approximate Quantity			Unit Price	Amount	
NO.	F ay item		Quantity			FILLE		Amount
MAINLIN	E SEWER							
1	SANITARY SEW	ER (OPEN CUT)						
	8-inch	0-8 feet deep	200	lin. ft.	\$	75.00	<u>\$</u> \$	\$15,000
		8-12 feet deep	450	lin. ft.	\$	87.00	\$	\$39,150
2	SANITARY MANI	HOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	\$4,800
		8-12 feet deep	1	each	\$	6,400.00	\$	\$6,400
3	CONNECTION T	O EXISTING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKF							
·	8-inch	0-8 feet deep	48	lin. ft.	\$	93.00	\$	\$4,464
		8-12 feet deep	96	lin. ft.	\$	113.00	\$	\$10,848
5	TREE TUNNELIN	IG	0	lin. ft.	\$	192.00	\$	\$0
6	SEWER TELEVIS	SING FOR FINAL INSPEC	CTION					
Ū			650	lin. ft.	\$	3.00	\$	\$1,950
7	SEWER TESTIN	G FOR FINAL INSPECTIO	N					
			650	lin. ft.	\$	3.00	\$	\$1,950
8	CULVERT REMO	VAL AND REPLACEMEN	ЛТ					
	12-inch		40	lin. ft.	\$	81.00	\$	\$3,240
9	RESTORATION	OF LAWNS						
	AND PARKWAYS							
	Topsoil and	seed	900	sq.yd.	\$	14.00	\$	\$12,600
10	RESTORATION							
	Bit. Concrete	Street	0	sq.yd.	\$	64.00	\$	\$0
11	REMOVE AND R	EPLACE DRIVEWAYS						
	Bituminous			sq.yd.	\$	48.00	\$	\$3,264
	Concrete		12	sq.yd.	\$	81.00	\$	\$972
		AND TRIMMING:			1	ip Sum	\$	\$0

No.	Pay Item	Approximate Quantity	Unit Price		Amount
13	EROSION CONTROL		Lump Sum	\$	\$998
14	TRAFFIC CONTROL		Lump Sum	\$	\$998
	SUBTOTAL			\$	\$112,833
SERVICE	LATERALS				
1	BUILDING SERVICE LINES Near side Far side	72 lin. ft. 0 lin. ft.	\$ 50.00 \$ 50.00	\$ \$	\$3,600 \$0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	6 each 0 each	\$     554.00 \$    682.00	\$	\$3,324 \$0
3	BUILDING SERVICE PLUG	6 each	\$ 208.00	\$	\$1,248
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and seed	50 sq.yd.	\$ 14.00	\$	\$700
5	RESTORATION OF STREETS: Bit. Concrete Street	0 sq.yd.	\$ 63.00	\$	\$0
6	TRENCH BACKFILL 0-8 feet deep	0 lin. ft.	\$ 62.00	\$	\$0
	SUBTOTAL			\$	\$8,872
	TOTAL ESTIMATE OF CON	STRUCTION COST		\$	\$121,700
		Contingencies(20%)Engineering(20%)Legal / Admin(6%)			\$24,300 \$24,300 \$10,200
	TOTAL OPINION OF PROB	ABLE COST		\$	\$180,500
			Cost per lot		\$30,080

### Table 4.2-7 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Katrine-College (South) Preliminary Design

Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Katrine Avenue (south of Colleg	<u>le)</u>				
H-8-22 (ex.)	745.0	725.86	00	5.000/	
UB-52	751.0	735.81	39	5.00%	15.2
UB-48	754.0	738.81	300	1.00%	15.2
UB-47	752.0	740.21	350	0.40%	11.8
Katrine Avenue (north of Colleg		140.21			11.0
H8-062 (ex.)	750.0	741.40	100	4.000/	
UB-58	751.0	743.20	180	1.00%	7.8
UB-57	760.0	749.20	300	2.00%	10.8
UB-56	764.0	753.20	200	2.00%	10.8

			Approximat	е	Unit		
No.	Pay Item		Quantity		Price		Amount
MAINLI	NE SEWER						
1	SANITARY SEV	WER (OPEN CUT)					
•	8-inch	0-8 feet deep	580	lin. ft.	\$ 75.00	\$	\$43,500
		8-12 feet deep	499	lin. ft.	\$ 87.00	<u>\$</u> \$	\$43,413
		12-16 feet deep	290	lin. ft.	\$ 106.00	\$	\$30,740
2	SANITARY MAI	NHOLES					
	48-inch	0-8 feet deep	2	each	\$ 4,800.00	\$	\$9,600
		8-12 feet deep	2	each	\$ 6,400.00	\$	\$12,800
		12-16 feet deep	2	each	\$ 7,700.00	\$	\$15,400
3	DROP CONNE	CTION					
C	8-inch		8	lin. ft.	\$ 332.00	\$	\$2,656
4		TO EXISTING MANH					
4	8-inch		1	each	\$ 6,200.00	\$	\$6,200
F					 <u> </u>	<u> </u>	· /
5	TRENCH BACK 8-inch	0-8 feet deep	156	lin. ft.	\$ 93.00	\$	\$14,508
		8-12 feet deep	65	lin. ft.	\$ 113.00	\$	\$7,345
		12-16 feet deep	104	lin. ft.	\$ 137.00	\$	\$14,248
6	TREE TUNNEL	ING	80	lin. ft.	\$ 192.00	\$	\$15,360
7	SEWER TELEV	/ISING FOR FINAL IN	SPECTION				
			1,369	lin. ft.	\$ 3.00	\$	\$4,107
8	SEWER TESTI	NG FOR FINAL INSP	ECTION				
			1,369	lin. ft.	\$ 3.00	\$	\$4,107
9	CULVERT REM	IOVAL AND REPLAC	EMENT				
	12-inch		220	lin. ft.	\$ 81.00	\$	\$17,820
10	RESTORATION	N OF LAWNS					
	AND PARKWA	-					
	Topsoil ar	nd sod	2,130	sq.yd.	\$ 14.00	\$	\$29,820
11	RESTORATION	NOF STREETS:					
	Bit. Concre		12	sq.yd.	\$ 64.00	\$	\$768
12	REMOVE AND	REPLACE DRIVEWA	YS				
12	Bituminous			sq.yd.	\$ 48.00	\$	\$7,200
	Concrete			sq.yd.	\$ 81.00	\$ \$	\$2,025
				-			

No.	Pay Item	Approximate Quantity	Unit Price	Amount
13	TREE REMOVAL AND TRIMMIN	IG:	Lump Sum	\$ \$8,645
14	EROSION CONTROL		Lump Sum	\$\$998
15	TRAFFIC CONTROL		Lump Sum	\$ \$3,325
	SUBTOTAL			\$\$294,585
SERVIC	E LATERALS			
1	BUILDING SERVICE LINES Near side Far side	205 lin. ft. 715 lin. ft.	\$50.00 \$50.00	\$\$10,250 \$\$35,750
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	13 each 14 each	\$    554.00 \$    682.00	\$    \$7,202 \$   \$9,548
3	BUILDING SERVICE PLUG	27 each	\$ 208.00	\$\$5,616
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and seed	685 sq.yd.	\$ 14.00	\$\$9,590
5	RESTORATION OF STREETS: Bit. Concrete Street	195 sq.yd.	\$ 63.00	\$\$12,285
6	TRENCH BACKFILL 0-8 feet deep	305 lin. ft.	\$ 62.00	\$\$18,910
	SUBTOTAL			\$\$109,151
	TOTAL ESTIMATE OF CON	STRUCTION COST		\$\$403,700
		Contingencies(20%)Engineering(20%)Legal / Admin(6%)		\$80,700 \$80,700 \$33,900
	TOTAL OPINION OF PROB/	ABLE COST		\$\$599,000

Cost per lot \$22,190

Table 4.2-9 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Lomond-College (South) Preliminary Design Layout

Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Lomond Avenue					
H-8-19 existing	725.0	720.00			5.0
UB-32	732.0	723.97	305	1.30%	8.0
UB-31	738.0	730.57	300	2.20%	7.4
			400	3.40%	
UB-29	752.0	744.17	370	1.10%	7.8
UB-28	756.0	748.24	375	0.50%	7.8
UB-27	758.0	750.11	575	0.3078	7.9
College Road					
UB-30	753.0	745.39	245	0.50%	7.6
00-30	755.0	743.39	300	1.00%	7.0
UB-46	755.0	747.17			7.8

No.	A Pay Item	Approximate Quantity			Unit Price		Amount
		Loanny			1 1100		, anount
MAINLI	INE SEWER						
1	SANITARY SEWER (OPEN CUT) 8-inch 0-8 feet deep	2,295	lin. ft.	\$	75.00	\$	172,125
2	SANITARY MANHOLES 48-inch 0-8 feet deep	7	each	\$	4,800.00	\$	33,600
3	CONNECTION TO EXISTING MANHOLE 8-inch	1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFILL 8-inch 0-8 feet deep	1,599	lin. ft.	\$	93.00	\$	148,707
5	TREE TUNNELLING	40	lin. ft.	\$	192.00	\$	7,680
6	WATER MAIN RELOCATION:	1	each	\$	7,100.00	\$	7,100
7	SEWER TELEVISING FOR FINAL INSPECT	ION 2,295	lin. ft.	\$	3.00	\$	6,885
8	SEWER TESTING FOR FINAL INSPECTION	l 2,295	lin. ft.	\$	3.00	\$	6,885
9	CULVERT REMOVAL AND REPLACEMENT 12-inch	: 76	lin. ft.	\$	81.00	\$	6,156
10	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	1,548	sq.yd.	\$	14.00	\$	21,672
11	RESTORATION OF STREETS: Bituminous Concrete Street	1,069	sq.yd.	\$	64.00	\$	68,416
12	REMOVE AND REPLACE DRIVEWAYS: Bituminous Driveway PCC Driveway	39 10	sq.yd. sq.yd.	<del>\$</del>	48.00 81.00	\$ \$	1,872 810
13	TREE REMOVAL AND TRIMMING:			Lum	ıp Sum	\$	2,660
14	EROSION CONTROL:			Lum	ıp Sum	\$	998

		Approximate	Unit		
No.	Pay Item	Quantity	Price		Amount
15	TRAFFIC CONTROL:		Lump Sum	\$	6,650
	SUBTOTAL			\$	498,416
SERVI	CE LATERALS				
1	BUILDING SERVICE LINES Near side Far side	360 lin. f 630 lin. f	· · · · · · · · · · · · · · · · · · ·	\$ \$	18,000 31,500
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	14 eac 15 eac		\$ \$	7,756 10,230
3	BUILDING SERVICE PLUG	29 eac	h <u>\$ 208.00</u>	\$	6,032
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	783 sq.yc	I. <u>\$</u> 14.00	\$	10,962
5	RESTORATION OF STREETS: Bituminous Concrete Street	140 sq.yc	I. <u>\$ 63.00</u>	\$	8,820
6	TRENCH BACKFILL 0-8 feet deep	255 lin. f	t. <u>\$ 62.00</u>	\$	15,810
	SUBTOTAL			\$	109,110
	TOTAL ESTIMATE OF CONSTRUCTION	ON COST		\$	607,500
		Contingencie Engineerin Legal / Admi	g (20%)		121,500 121,500 51,000
	TOTAL OPINION OF PROBABLE COS	ST		\$	901,500
			Cost per lo	ot	31,090

Table 4.2-11 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Elinor-College (South) Preliminary Design Layout

Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Elinor Avenue					
H-8-54 (existing)	747.9	737.90	395	3.00%	10.0
UB-55	760.0	749.75		010070	10.3
College Road					
H-8-55 (existing)	745.4	738.99			
UB-43	748.5	740.79	225 420	0.80%	7.7
UB-36	749.5	739.58	420	0.4078	9.9

No.	Pay Item		Approximate Quantity	e		Unit Price		Amount
MAINLIN	E SEWER							
1	SANITARY SEWEF 8-inch	R (OPEN CUT) 8-12 feet deep	1,040	lin. ft.	\$	87.00	\$	90,480
2	SANITARY MANHO 48-inch	DLES 8-12 feet deep	3	each	\$	6,400.00	\$	19,200
3	CONNECTION TO 8-inch	EXISTING MANHOLE	E 3	each	\$	6,200.00	\$	18,600
4	TRENCH BACKFIL 8-inch	L 8-12 feet deep	140	lin. ft.	\$	113.00	\$	15,820
5	TREE TUNNELING	i	150	lin. ft.	\$	192.00	\$	28,800
6	SEWER TELEVISI	NG FOR FINAL INSPE	ECTION 1,040	lin. tt.	\$	3.00	\$	3,120
7	SEWER TESTING	FOR FINAL INSPECT	TION 1,040	lin. ft.	\$	3.00	\$	3,120
8	CULVERT REMOV 12-inch 24-inch	AL AND REPLACEM	ENT 40 20	lin. ft. lin. ft.	\$ \$	81.00 167.00	\$ \$	3,240 3,340
9	RESTORATION OF AND PARKWAYS: Topsoil and S		1,596	sq.yd.	\$	14.00	\$	22,338
10	RESTORATION OF Bit. Concrete S		71	sq.yd.	\$	64.00	\$	4,551
11	REMOVE AND REI Bituminous Concrete	PLACE DRIVEWAYS		sq.yd. sq.yd.	\$ \$	48.00 81.00	\$ \$	1,600 2,700
12	TREE REMOVAL A	ND TRIMMING:			Lum	p Sum	\$	2,500
13	EROSION CONTR	OL			Lum	p Sum	\$	750
14	TRAFFIC CONTRO	)L			Lum	p Sum	\$	2,000
	SUBTOTAL						\$	222,159

No.	Pay Item	Approximat Quantity	Approximate Quantity		Unit Price		Amount
SERVICE	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	75 150	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	3,750 7,500
2	BUILDING SERVICE BRANCH FITTINGS						
	Near Side	5		\$	554.00	\$	2,770
	Far side	4	each	\$	682.00	\$	2,728
3	BUILDING SERVICE PLUG	9	each	\$	208.00	\$	1,872
4	RESTORATION OF LAWNS AND PARKWAYS:						
	Topsoil and seed	325	sq.yd.	\$	14.00	\$	4,550
5	RESTORATION OF STREETS: Bit. Concrete Street	64	sq.yd.	\$	63.00	\$	4,032
6	TRENCH BACKFILL 8-12 feet deep	96	lin. ft.	\$	83.00	\$	7,968
	SUBTOTAL					\$	35,170
	TOTAL ESTIMATE OF CON	STRUCTION COST	Г			\$	257,300
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)				51,500 51,500 21,600
	TOTAL OPINION OF PROB	ABLE COST				\$	381,900

Cost per lot 42,430

Table 4.2-13 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Janes-College (South) Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
<u>Janes</u>	Avenue					
	H-8-56 existing	747.0	735.35	230	1.50%	
	UB-41	751.0	738.80	300	1.25%	12.2
	UB-42	750.0	742.55			7.4
College Road 440 1.25%						
	UB-44	756.0	748.05	440	1.2370	7.9

No.	Pay Item	А	pproximate Quantity	e		Unit Price		Amount
MAINLIN	E SEWER							
1	SANITARY SEW	/ER (OPEN CUT)						
	8-inch	0-8 feet deep	300	lin. ft.	\$	75.00	\$	22,500
		8-12 feet deep	670	lin. ft.	\$	87.00	\$	58,290
2	SANITARY MAN	IHOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	4,800
		8-12 feet deep	2	each	\$	6,400.00	\$	12,800
3	CONNECTION 1	TO EXISTING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	6,200
4	TRENCH BACK	FILL						
	8-inch	0-8 feet deep	54	lin. ft.	\$	93.00	\$	5,022
		8-12 feet deep	260	lin. ft.	\$	113.00	\$	29,380
5	TREE TUNNELI	NG	110	lin. ft.	\$	192.00	\$	21,120
6	SEWER TELEVI	SING FOR FINAL INSPE	CTION					
			970	lin. ft.	\$	3.00	\$	2,910
7	SEWER TESTIN	IG FOR FINAL INSPECTI						
			970	lin. ft.	\$	3.00	\$	2,910
8		OVAL AND REPLACEME						
	12-inch		150	lin. ft.	\$	81.00	\$	12,150
9								
	AND PARKWAY Topsoil and		1 200	sq.yd.	\$	14.00	\$	16,800
			1,200	oq.yu.	Ψ	11.00	Ψ	10,000
10	RESTORATION		05		ሱ	C 4 00	¢	4.400
	Bit. Concrete	e Street	60	sq.yd.	\$	64.00	\$	4,160
11		REPLACE DRIVEWAYS		_				
	Bituminous Concrete			sq.yd.	<u>\$</u> \$	48.00 81.00	<u>\$</u> \$	6,720 1,944
	Concrete		24	sq.yd.	φ	01.00	φ	1,944
12	TREE REMOVA	L AND TRIMMING:			Lum	ıp Sum	\$	8,645
13	EROSION CON	TROL			Lum	ıp Sum	\$	998

No.	Pay Item	Approximat Quantity	е	Unit Price		Amount
14	TRAFFIC CONTROL			Lump Sum	\$	3,325
	SUBTOTAL			·	\$	220,674
SERVICE	LATERALS					
1	BUILDING SERVICE LINES Near side Far side	105 312	lin. ft. lin. ft.	\$ 50.00 \$ 50.00		5,250 15,600
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	6 7	each each	\$		3,324 4,774
3	BUILDING SERVICE PLUG	13	each	\$ 208.00	) \$	2,704
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and seed	370	sq.yd.	<u>\$</u> 14.00	) \$	5,180
5	RESTORATION OF STREETS: Bit. Concrete Street	102	sq.yd.	\$ 63.00	) \$	6,426
6	TRENCH BACKFILL: 0-8 feet deep	160	lin. ft.	\$ 62.00	) \$	9,920
	SUBTOTAL				\$	53,178
	TOTAL ESTIMATE OF CON	ISTRUCTION COST	Г		\$	273,900
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			54,800 54,800 23,000
	TOTAL OPINION OF PROB	ABLE COST			\$	406,500
				Cost per	lot	31,270

Table 4.2-15

### Downers Grove Sanitary District

#### Possible Special Assessment for Sanitary Sewers

### Chase-Hobson-Belmont (South)

Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>				
Chase Avenue										
	H-8-42 existing	734.6	726.10	100	4.050/					
	UB-50	740.0	731.35	420	1.25%	8.6				
	UB-49	752.0	739.35	400	2.00%	12.7				
<u>Hobsor</u>	Hobson Road									
	H-8-44 existing	738.5	729.57							
	UB-54	738.0	730.05	80	0.60%	7.9				
	UB-53	747.0	734.43	350	1.25%	12.6				
Belmor	Belmont Road									
		752.0	739.43	400	1.25%	12.6				
	UB-45	752.0	739.43	400	1.25%	12.6				

No.	Pay Item		Approximat Quantity	e	Unit Price		Amount
MAINLIN	E SEWER						
1		VER (OPEN CUT)					
	8-inch	0-8 feet deep	450	lin. ft.	\$ 75.00	\$	33,750
		8-12 feet deep	1,200	lin. ft.	\$ 87.00	\$	104,400
2	SANITARY MAN	NHOLES					
	48-inch	0-8 feet deep	1	each	\$ 4,800.00	\$	4,800
		8-12 feet deep	4	each	\$ 6,400.00	\$	25,600
3	CONNECTION -	TO EXISTING MANH	OLE				
	8-inch		1	each	\$ 6,200.00	\$	6,200
4	TRENCH BACK	FILL					
	8-inch	0-8 feet deep	450	lin. ft.	\$ 93.00	\$	41,850
		8-12 feet deep	602	lin. ft.	\$ 113.00	\$	68,026
5	TREE TUNNELI	NG	0	lin. ft.	\$ 192.00	\$	(
6	SEWER TELEV	ISING FOR FINAL IN	SPECTION				
			1,650	lin. ft.	\$ 3.00	\$	4,950
7	SEWER TESTIN	IG FOR FINAL INSPE	ECTION				
			1,650	lin. ft.	\$ 3.00	\$	4,950
8		OVAL AND REPLAC					
	12-inch		60	lin. ft.	\$ 81.00	\$	4,860
9							
	AND PARKWAY Topsoil an		780	sq.yd.	\$ 14.00	\$	10,920
	ropson an	u seeu	700	sq.yu.	<u>φ</u> 14.00	Ψ	10,920
10	RESTORATION		744		¢ 04.00	۴	
	Bit. Concret	e Street	711	sq.yd.	\$ 64.00	\$	45,504
11		REPLACE DRIVEWA		_			
	Bituminous Concrete			sq.yd. sq.yd.	\$ 48.00 \$ 81.00	\$ \$	2,400
			0	sy.yu.		Ψ	
12	TREE REMOVA	L AND TRIMMING:			Lump Sum	\$	665
13	EROSION CON	TROL			Lump Sum	\$	998
						-	

No.	Pay Item	Approximat Quantity	e	Unit Price		Amount
14	TRAFFIC CONTROL			Lump Sum	\$	19,950
	SUBTOTAL				\$	379,823
SERVICE	LATERALS					
1	BUILDING SERVICE LINES Near side Far side	198 312	lin. ft. lin. ft.	\$ 50.00 \$ 50.00	\$ \$	9,900 15,600
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	9 6	each each	\$554.00 \$682.00	\$ \$	4,986 4,092
3	BUILDING SERVICE PLUG	15	each	\$ 208.00	\$	3,120
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and seed	122	sq.yd.	\$ 14.00	\$	1,708
5	RESTORATION OF STREETS: Bit. Concrete Street	140	sq.yd.	\$ 63.00	\$	8,820
6	TRENCH BACKFILL 0-8 feet deep	180	lin. ft.	\$ 62.00	\$	11,160
	SUBTOTAL				\$	59,386
	TOTAL ESTIMATE OF CON	STRUCTION COST	-		\$	439,200
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			87,800 87,800 36,900
	TOTAL OPINION OF PROB/	ABLE COST			\$	651,700
				Cost per lo	ot	43,450

# Table 4.2-17Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersDowners Grove Park Sub-AreaCost Summary

Sub-Basin:	Near Services	Far Services	Cost	Co	st per lot
Katrine-Maple (North)	17	8	\$ 868,500	\$	34,740
Inverness-Lomond-Elinor-Maple (North)	59	13	\$ 2,760,200	\$	38,340
Inverness-Belmont (North)	6	0	\$ 180,500	\$	30,080
Katrine-College (South)	13	14	\$ 599,000	\$	22,190
Lomond-College (South)	14	15	\$ 901,500	\$	31,090
Elinor-College (South)	5	4	\$ 381,900	\$	42,430
Janes-College (South)	6	7	\$ 406,500	\$	31,270
Chase-Hobson-Belmont (South)	9	6	\$ 651,700	\$	43,450
TOTALS	129	67	\$ 6,749,800	\$	34,440
	19	96			

### 4.3 Downers Grove Gardens

Downers Grove Gardens is a large sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.3, the approximate limits of this sub-area are Maple Avenue to the north, Janes Avenue and Belmont Road to the west, 63<sup>rd</sup> Street to the south, and Downers Drive to the east. The proposed service area includes approximately 673 lots that are mostly developed as single-family residences with septic systems. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties within Downers Grove Gardens.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Downers Grove Gardens sub-area has two major drainage divides running from west to east:  $61^{st}$  Street from Janes east to Belmont and just south of  $59^{th}$  Street from Belmont east to Downers Drive. Serving these properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divide. The study area can be divided into four smaller service areas. Properties north of  $61^{st}$  Street and west of Belmont Road will be served by the existing sanitary sewer on Hobson Road (at Janes, Leonard, Chase and Puffer). Properties south of  $61^{st}$  Street and west of Belmont Road will be served by the existing sewer on Maple Avenue (between Woodward and Sherman). Residences south of  $59^{th}$  Street and east of Belmont Road will be served by the existing sewer on Maple Avenue (between Woodward and Sherman). Residences south of  $59^{th}$  Street and east of Belmont Road will be served by existing sewers on Boundary Road (at Lee and Downers) and  $63^{rd}$  Street (at Belmont, Pershing, Stonewall, and Springside)

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The major road crossings that would significantly increase construction cost in this sub-area are Belmont Road and Maple Avenue. Thus, alternatives were considered to minimize crossing of these routes with both the mainline sewer and building services.

The sewer layout also considered the several wetlands that are located within the sub-area at the following locations: Woodward and Blanchard (vacated right-of-way), and Sherman and Jefferson (vacated right-of-way). Avoiding these wetlands will minimize the time and expense involved in the permitting process for construction in wetlands as well as reduce the costs associated with restoring these areas.

The Village of Downers Grove owns and operates water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Downers Grove Gardens sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

Sub-basin	No. of Services	Layout	Cost Estimate
Janes-Leonard-Chase-Puffer (North)	68	Table 4.3-1	Table 4.3-2
Janes-Leonard-Chase-Puffer (South)	129	Table 4.3-3	Table 4.3-4
Belmont Road (Southwest)	25	Table 4.3-5	Table 4.3-6
Belmont Road (East)	52	Table 4.3-7	Table 4.3-8
Pershing Avenue (South)	64	Table 4.3-9	Table 4.3-10
Woodward and 63 <sup>rd</sup> Street	18	Table 4.3-11	Table 4.3-12
Lee and Boundary (South)	39	Table 4.3-13	Table 4.3-14
Springside Avenue (South)	14	Table 4.3-15	Table 4.3-16
Springside-Jefferson-Downers (North)	52	Table 4.3-17	Table 4.3-18
Pershing-Woodward-Maple (North)	104	Table 4.3-19	Table 4.3-20
Sherman Avenue (North)	54	Table 4.3-21	Table 4.3-22
Lee Avenue (North)	54	Table 4.3-23	Table 4.3-24
TT 1 1 4 2 25 ' (11 C '			41

The following are the proposed sub-basins:

Table 4.3-25 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.3.

The Janes-Leonard-Chase-Puffer (North) sub-basin sewer plan follows the east-west drainage divide near 61<sup>st</sup> Street from Janes Avenue to Belmont Road. Serving these properties north to the existing sewer along Hobson is the most cost effective because it prevents a deep cut through the ridge line at 61<sup>st</sup>. The sewer alignment on each street should be on the east side of the rightofway because of the existing water main is on the west side of the right-of-way. In October 2019, Baxter & Woodman performed a special assessment evaluation on the area south of Hobson Road, along Puffer Street. The special assessment included a cost estimate and evaluation for a 900-foot sewer extension from existing manhole H8-046 to proposed manhole UC-7. The cost per lot in the Special Assessment was nearly double the cost per lot in this plan. This cost difference is due to the study area on Puffer Street containing a relatively low number of lots and larger-sized lots which results in a higher cost per unsewered lot based on the length of sewer required to be installed. For comparison, the other sub-basin streets west of this study area have a higher density of lots and a resulting lower cost per unsewered lot. The property owners were polled in early 2020, and the majority were not in favor of moving forward with the special assessment. Therefore, it was not constructed. Table 4.3-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,299,200, including contingency, engineering, and legal/administrative costs.

The Janes-Leonard-Chase-Puffer (South) sub-basin sewer plan also follows the east-west drainage divide near 61<sup>st</sup> Street from Janes Avenue to Belmont Road. This sub-basin will also include all unsewered properties fronting 63<sup>rd</sup> Street west of Belmont. The properties on Janes, Leonard, and Chase should connect to the west at the existing manhole on 63<sup>rd</sup> Street at Janes, since the existing manhole east of Chase is too shallow. The properties on Puffer should connect to the existing manhole at Puffer and 63<sup>rd</sup> Street. Similar to the sub-basin to the north, sewer alignment on each street should be on the east side of the right-of-way because of the existing water mains on the west side of the right-of-way. Table 4.3-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-4 includes a breakdown of the unit quantities and

unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$2,446,900, including contingency, engineering, and legal/administrative costs.

The Belmont Road (Southwest) sub-basin sewer plan includes the unsewered properties on the west side of Belmont and south of Hobson Road. These properties will connect to the existing sewer on the west side of Belmont, north of 63<sup>rd</sup> Street. The sewer alignment will require an easement adjacent to the west right-of-way line of Belmont, similar to the existing sewer to the south. Installing a parallel sewer on the both sides of Belmont was determined to be more costeffective than installing services across Belmont. Table 4.3-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$627,900, including contingency, engineering, easements, and legal/administrative costs.

The Belmont Road (East) sub-basin sewer plan follows the existing topography, which consists of a low area between the ridge lines along 61<sup>st</sup> Street west of Belmont and along 59<sup>th</sup> Street east of Belmont. The ground elevation along Belmont decreases from a high point near College Road south to the connection point at an existing sewer manhole at the northeast corner of Belmont and 63<sup>rd</sup> Street. This sub-basin will include all unsewered properties on the east side of Belmont, as well as several properties on 59<sup>th</sup> Street, east of Belmont. Similar to the west side of Belmont Road, the sewer alignment will require an easement adjacent to the east right-of-way line and the parallel sewer was determined to be more cost-effective than installing services across Belmont. Table 4.3-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,232,200, including contingency, engineering, easements, and legal/administrative costs.

The Pershing Avenue (South) sub-basin sewer plan follows the drainage divide just south of 59<sup>th</sup> Street. This sub-basin will include unsewered properties along Pershing Avenue. Connecting to the manhole at 63<sup>rd</sup> Street and Pershing Avenue is the most cost effective because it prevents a deep cut through the ridge line. The sewer alignment on Pershing should be on the east side of the right-of-way because of the existing water main is on the west side of the right-of-way. Table 4.3-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,180,700, including contingency, engineering, and legal/administrative costs.

The Woodward and 63<sup>rd</sup> Street sub-basin sewer plan also follows the existing drainage divide just south of 59<sup>th</sup> Street. This sub-basin includes unsewered properties along Woodward as well as properties on the north side of 63<sup>rd</sup> Street between Woodward Avenue and Pershing Road. For the properties along Woodward, connecting to the existing manhole at 6006 Woodward Avenue is the most feasible alternative. For the properties on the north side of 63<sup>rd</sup> Street is the most feasible alternative because the manhole to the west of Woodward on 63<sup>rd</sup> is too shallow. Table 4.3-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of

project cost is \$324,300, including contingency, engineering, easements and legal/administrative costs.

The Lee and Boundary (South) sub-basin sewer plan also follows the existing drainage divide south of 59<sup>th</sup> Street. Connecting to the existing manhole at Boundary Road eliminates a deep cut through the ridge line south of 59<sup>th</sup> and provides adequate depth with the shortest length of pipe. The sewer should be placed in the east right-of-way on Lee and in the southeast right-of-way on Boundary to avoid existing utilities. Table 4.3-13 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-14 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$742,000, including contingency, engineering, and legal/administrative costs.

The Springside Avenue (South) sub-basin sewer plan is to follow the existing topography and connect to the existing manhole to the south at 63<sup>rd</sup> Street. The only other potential connection point would be the existing manhole to the north, but it is too shallow to be a feasible alternative. Table 4.3-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$312,900, including contingency, engineering, and legal/administrative costs.

The Springside-Jefferson-Downers (North) sub-basin sewer plan follows the existing topography which consists of a high point to the west along 59<sup>th</sup> Street and a low lying area near Springside and Jefferson. There are several potential connection points, but the existing manhole at Boundary and Downers Drive is the only feasible alternative to serve Downers, Jefferson, and Springside north of 59<sup>th</sup> because the two existing manholes on Springside, north of Jefferson and south of 59<sup>th</sup>, are too shallow. The lots on Springside south of 59<sup>th</sup> Street are best served by the existing manhole 320 feet south of 59<sup>th</sup> Street. The cost per lot for this sub-basin is the most expensive in the Downers Grove Gardens sub-area because of the amount of granular backfill and pavement restoration that is required to avoid utilities. Table 4.3-17 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-18 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,464,100, including contingency, engineering, and legal/ administrative costs.

The Pershing-Woodward-Maple Avenue (North) sub-basin sewer plan follows the existing topography which falls from the high point just south of 59<sup>th</sup> and east of Woodward to the lowest elevation, along Woodward north of Blanchard. This is the recommended alternative because it has the shortest sewer length while preventing deep cuts through the ridge line and provides adequate cover at the low elevation. This sub-basin includes all unsewered properties fronting Maple on the south side of the road. The recommended alternative to install one main sewer across Maple Avenue is more cost-effective than installing multiple services across Maple to the existing sewer on the north side. The sewer alignment along Maple will require easements adjacent to the right-of-way line. The connection point for sewer along the south side of Maple is the existing manhole at the intersection of Maple Avenue and Woodward Avenue. Sewer has been extended west to this manhole and south along Woodward Avenue to the manhole south of the intersection of Woodward Avenue and Blanchard Street right-of-way. The connection point for sewer along the north side of Maple is the existing manhole at 5516 Maple Avenue. Table 4.3-19 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-20 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable

cost. The total opinion of project cost is \$2,814,000, including contingency, engineering, and easements, legal/administrative costs.

The Sherman Avenue (North) sub-basin sewer plan follows the drainage divide just south of 59<sup>th</sup> Street. This sub-basin will include unsewered properties along Sherman Avenue. Connecting to the existing manhole just south of Maple is the recommended alternative because it has the shortest sewer length while preventing deep cuts through the ridge line and provides adequate cover at the low elevation at Jefferson. The sewer alignment on Sherman should be on the east side of the right-of-way because of the existing water main is on the west side of the right-ofway. In 2017, 188 feet of sanitary sewer was installed including the 5602 Sherman Ave. service connection for a construction cost of \$22,070. Table 4.3-21 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-22 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,247,200, including contingency, engineering, and legal/administrative costs.

The Lee Avenue (North) sub-basin sewer plan follows the topography which falls to the north from the drainage divide just south of 59<sup>th</sup> Street. Serving the properties along the south side of Maple with a parallel sewer and connecting to the existing manhole at Lee and Maple requires an easement on the south side of Maple but is more cost-effective than jacking sewer services under Maple. The sewer on Lee Avenue should be placed in the west parkway, near the edge of pavement, to avoid the Village water main near the west right-of-way line and the DuPage Water Commission main in the east parkway. The cost per lot for this sub-basin is the fourth most expensive in the Downers Grove Gardens sub-area because of the granular backfill and pavement restoration that is required along the north end of Lee. Table 4.3-23 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-24 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,449,100, including contingency, engineering, easements, and legal/administrative costs.

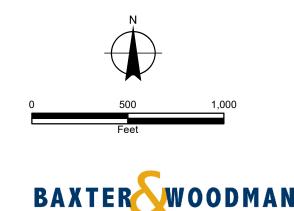
## DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

#### EXHIBIT 4.3

#### DOWNERS GROVE GARDENS POSSIBLE SEWER ALIGNMENT

#### **MARCH 2021**

#### LEGEND EXISTING MANHOLES PROPOSED MANHOLES EXISTING SEWERS PROPOSED SEWERS PARCEL BOUNDARIES JANES-LEONARD-CHASE-PUFFER (NORTH); TABLES 4.3-1, 4.3-2 JANES-LEONARD-CHASE-PUFFER (SOUTH); TABLES 4.3-3, 4.3-4 BELMONT ROAD (SOUTHWEST); TABLES 4.3-5, 4.3-6 BELMONT ROAD (EAST); TABLES 4.3-7, 4.3-8 PERSHING AVENUE (SOUTH); TABLES 4.3-9, 4.3-10 WOODWARD AND 63RD STREET; TABLES 4.3-11, 4.3-12 LEE AND BOUNDARY (SOUTH); TABLES 4.3-13, 4.3-14 SPRINGSIDE AVENUE (SOUTH); TABLES 4.3-15, 4.3-16 SPRINGSIDE-JEFFERSON-DOWNERS (NORTH); TABLES 4.3-17, 4.3-18 PERSHING-WOODWARD-MAPLE (NORTH); TABLES 4.3-19, 4.3-20 SHERMAN AVENUE (NORTH); TABLES 4.3-21, 4.3-22 LEE AVENUE (NORTH); TABLES 4.3-23, 4.3-24



I:\Crystal Lake\DGSD1\180305-2018 UAP\20-GIS\MapDocuments\4-3 dg gardens.mxd 563dks - 3/24/2020 Copyright 2019, By Baxter & Woodman, Inc. State of Illinois - Professional Design Firm License No. - 184-001121 - Expires 4-30-20

**Consulting Engineers** 

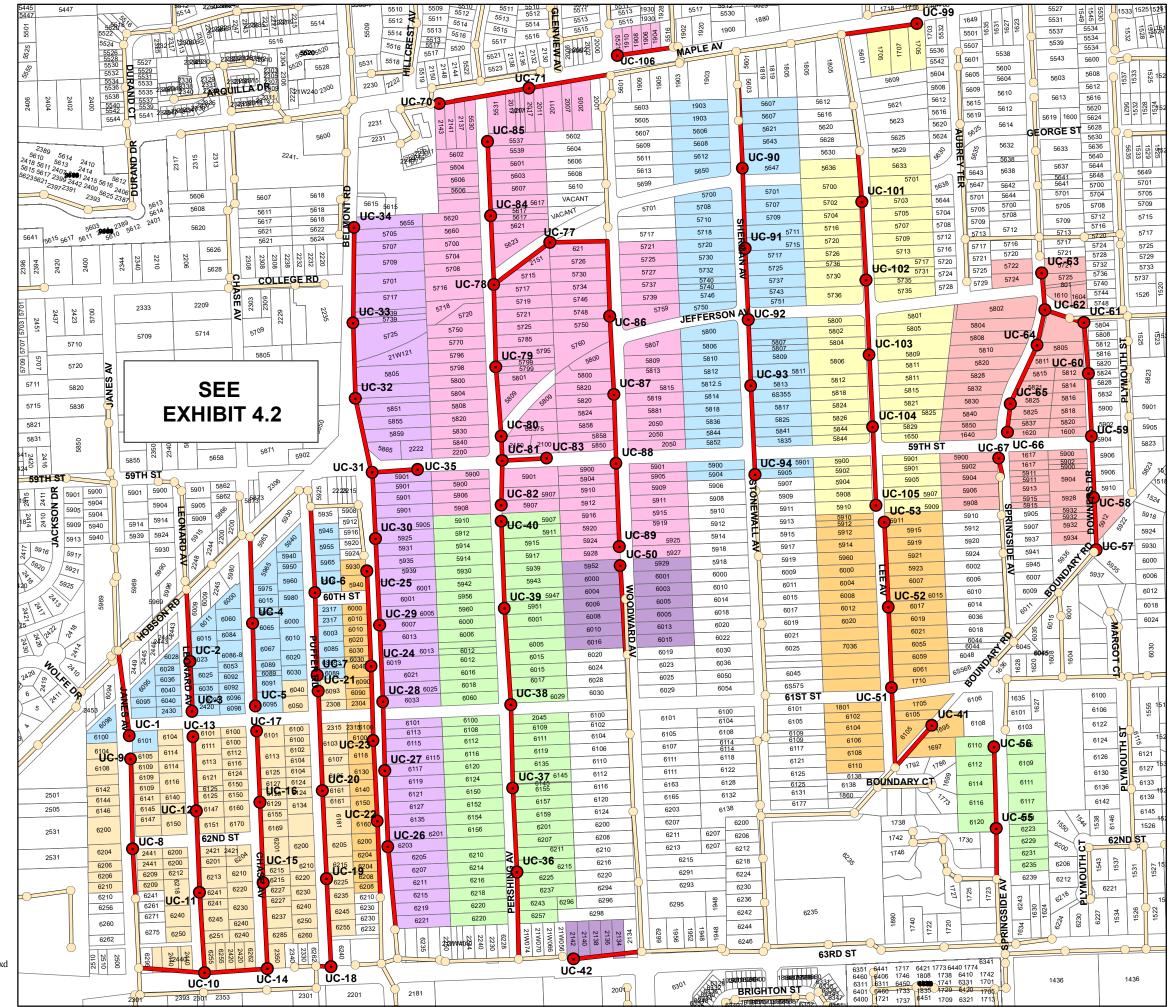


Table 4.3-1 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Janes-Leonard-Chase-Puffer (North) Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Janes Ave	enue					
	H-8-10-1 existing	731.4	715.01	100	4.0004	
	UC-1	736.0	725.05	420	1.20%	11.0
Leonard A	Avenue					
	H-8-33 existing	731.7	719.00			
	UC-2	736.0	727.80	400	2.20%	8.2
	UC-3	742.0	733.52	220	2.60%	8.5
<u>Chase Av</u>	enue					
	H-8-43 existing	733.5	726.62			
	UC-4	755.0	738.92	410	3.00%	16.1
	UC-5	754.0	743.02	410	1.00%	11.0
Puffer Ro	ad					
	H-8-46 existing	741.3	731.65			
	UC-6	741.5	733.45	450	0.40%	8.1
	UC-7	752.0	741.45	400	2.00%	10.6

No.	Pay Item	Approxir Quant			Unit Price		Amount
MAINLI	NE SEWER						
1	SANITARY SEWER (OPEN CU	IT)					
	8-inch 0-8 feet d	,	lin. ft.	\$	75.00	<u>\$</u> \$	\$37,500
	8-12 feet d	eep 2,210	lin. ft.	\$	87.00	\$	\$192,270
2	SANITARY MANHOLES						
	48-inch 0-8 feet d	•		\$	4,800.00	<u>\$</u> \$	\$9,600
	8-12 feet d	eep 5	each	\$	6,400.00	\$	\$32,000
3	CONNECTION TO EXISTING M	MANHOLE					
	8-inch	4	each	\$	6,200.00	\$	\$24,800
4	TRENCH BACKFILL						
	8-inch 0-8 feet d	еер 100	lin. ft.	\$	93.00	\$	\$9,300
	8-12 feet d	eep 822	lin. ft.	\$	113.00	\$	\$92,886
5	TREE TUNNELING	80	lin. ft.	\$	192.00	\$	\$15,360
6	SEWER TELEVISING FOR FIN	AL INSPECTIO	N				
-			lin. ft.	\$	3.00	\$	\$8,130
7	SEWER TESTING FOR FINAL	INSPECTION					
		2,710	lin. ft.	\$	3.00	\$	\$8,130
8	CULVERT REMOVAL AND RE	PLACEMENT					
-	12-inch	357	lin. ft.	\$	81.00	\$	\$28,917
9	RESTORATION OF LAWNS						
	AND PARKWAYS:						
	Topsoil and sod	5,142	sq.yd.	\$	14.00	\$	\$71,988
10	RESTORATION OF STREETS						
	Bit. Concrete Street	160	sq.yd.	\$	64.00	\$	\$10,240
11	REMOVE AND REPLACE DRIN	/EWAYS					
	Bituminous		sq.yd.	\$	48.00	<u>\$</u> \$	\$23,568
	Concrete	67	sq.yd.	\$	81.00	\$	\$5,427
12	TREE REMOVAL AND TRIMMI	NG		Lum	ip Sum	\$	\$333

No.	Pay Item	Approxim Quantit			Unit Price		Amount
13	EROSION CONTROL			Lump	Sum	\$	\$1,330
14	TRAFFIC CONTROL			Lump	Sum	\$	\$7,980
						\$	\$579,759
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	740 1,860	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	\$37,000 \$93,000
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	37 31	each each	\$ \$	554.00 682.00	\$ \$	\$20,498 \$21,142
3	BUILDING SERVICE PLUGS:	68	each	\$	208.00	\$	\$14,144
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	2,700	sq.yd.	\$	14.00	\$	\$37,800
5	RESTORATION OF STREETS Bit. Concrete Street	413	sq.yd.	\$	63.00	\$	\$26,019
6	TRENCH BACKFILL 0-8 feet deep	744	lin. ft.	\$	62.00	\$	\$46,128
	SUBTOTAL					\$	\$295,731
	TOTAL ESTIMATE OF CONS	TRUCTION C	OST			\$	\$875,500
		Contingencie Engineering Legal / Admi	(20	0%) 0%) 6%)			\$175,100 \$175,100 \$73,500
	TOTAL OPINION OF PROBA	BLE COST				\$	\$1,299,200
					Cost pe	r lot	\$19,110

Table 4.3-3 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Janes-Leonard-Chase-Puffer (South) Preliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Janes Ave	enue					
	Existing	720.0	708.00	200	4.000/	
	UC-8	730.0	716.60	300	1.20%	13.4
	UC-9	738.0	726.40	400	1.20%	11.6
63rd Stree	<u>ət</u>					
	Existing	713.6	702.70		o 100/	
	UC-10	719.0	709.10	350	0.40%	9.9
	UC-14	724.5	715.46	340	0.40%	9.0
Leonard A	<u>venue</u>					
				400	3.00%	
	UC-11	730.0	721.10	400	2.00%	8.9
	UC-12	740.0	729.10	400	2.00%	10.9
	UC-13	746.0	737.10			8.9
Chase Av	enue					
	UC-15	730.0	719.06	450	0.80%	10.9
	UC-16	734.0	725.81	450	1.50%	8.2
	UC-17	750.0	739.31	450	3.00%	10.7
Puffer Ro		10010	100101			
	H-1-98 (existing)	730.0	719.79			
	UC-18	730.0	721.29	60	2.50%	8.7
				450	0.60%	
	UC-19	732.0	723.99	450	0.80%	8.0
	UC-20	736.0	727.59	450	2.50%	8.4
	UC-21	750.0	738.84			11.2

			Approxir			Unit		
No.	Pay Item		Quant	tity		Price		Amount
MAINLI	NE SEWER							
1	SANITARY SEWE	ER (OPEN CUT)						
	8-inch	0-8 feet deep	900	lin. ft.	<u>\$</u> \$	75.00	<u>\$</u> \$	\$67,500
		8-12 feet deep	4,450	lin. ft.	\$	87.00	\$	\$387,150
2	SANITARY MANH							
2	48-inch	0-8 feet deep	2	each	\$	4,800.00	\$	\$9,600
		8-12 feet deep	12	each	\$	6,400.00	<u>\$</u> \$	\$76,800
_								
3		DEXISTING MANH		aaab	¢	6 200 00	¢	¢19 600
	8-inch		3	each	\$	6,200.00	\$	\$18,600
4	TRENCH BACKFI	LL						
	8-inch	0-8 feet deep	50	lin. ft.	\$ \$	93.00	<u>\$</u> \$	\$4,650
		8-12 feet deep	1,353	lin. ft.	\$	113.00	\$	\$152,889
5	TREE TUNNELIN	G	240	lin. ft.	\$	192.00	\$	\$46,080
5		0	240	III I. IL.	Ψ	192.00	Ψ	φ+0,000
6	SEWER TELEVIS	ING FOR FINAL IN	ISPECTIC	N				
			5,350	lin. ft.	\$	3.00	\$	\$16,050
7		G FOR FINAL INSP						
1	SEWER TESTING		5,350	lin. ft.	\$	3.00	\$	\$16,050
			-,		<u> </u>		<u> </u>	+ ,
8		VAL AND REPLAC						
	12-inch		856	lin. ft.	\$	81.00	\$	\$69,336
9	RESTORATION C	FLAWNS						
U	AND PARKWAYS							
	Topsoil and	sod	9,789	sq.yd.	\$	14.00	\$	\$137,046
10								
10	RESTORATION C Bit. Concrete		202	sq.yd.	\$	64.00	\$	\$18,688
		olicer	252	34.94.	Ψ	04.00	Ψ	φ10,000
11	REMOVE AND RE	EPLACE DRIVEWA						
	Bituminous			sq.yd.	<u>\$</u> \$	48.00	<u>\$</u> \$	\$48,576
	Concrete		(7	sq.yd.	\$	81.00	\$	\$6,237
12	TREE REMOVAL	AND TRIMMING			Lum	ıp Sum	\$	\$1,131
13	EROSION CONT	ROL			Lun	ıp Sum	\$	\$1,663

No.	Pay Item	Approximate Quantity		Unit Price		Amount
14	TRAFFIC CONTROL		Lum	ıp Sum	\$	\$9,975
	SUBTOTAL				\$	\$1,088,020
SERVIC	E LATERALS					
1	BUILDING SERVICE LINES Near side Far side	1,440 lin. fi 3,420 lin. fi	+	50.00 50.00	\$ \$	\$72,000 \$171,000
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	72 eacl 57 eacl		554.00 682.00	\$ \$	\$39,888 \$38,874
3	BUILDING SERVICE PLUG	129 eacl	n <u>\$</u>	208.00	\$	\$26,832
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	3,575 sq.yd	I. <u>\$</u>	14.00	\$	\$50,050
5	RESTORATION OF STREETS Bit. Concrete Street	1,115 sq.yd	I. <u>\$</u>	63.00	\$	\$70,245
6	TRENCH BACKFILL 0-8 feet deep	1,482 lin. fl	t. <u>\$</u>	62.00	\$	\$91,884
	SUBTOTAL				\$	\$560,773
	TOTAL ESTIMATE OF CONS	TRUCTION COST			\$	\$1,648,800
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			\$329,800 \$329,800 \$138,500
	TOTAL OPINION OF PROBA	BLE COST			\$	\$2,446,900
				Cost ne	r lot	\$18 970

Cost per lot \$18,970

#### Table 4.3-5 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Belmont-Southwest Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	Slope	Manhole <u>Depth</u>
Belmont F	Road					
	H-1-94 (existing)	738.8	728.38			
	UC-22	742.0	732.38	400	1.00%	9.6
	UC-23	744.0	735.98	400	0.90%	8.0
				450	0.90%	
	UC-24	750.0	740.03	470	0.40%	10.0
	UC-25	750.0	741.91		0.1070	8.1

NI -			Approxin			Unit Drieg		A
No.	Pay Item		Quanti	ty		Price		Amount
MAINLI	NE SEWER							
1	SANITARY SEWE	ER (OPEN CUT)						
	8-inch	0-8 feet deep	500	lin. ft.	\$	75.00	<u>\$</u> \$	\$37,500
		8-12 feet deep	1,220	lin. ft.	\$	87.00	\$	\$106,140
2	SANITARY MANH	HOLES						
	48-inch	0-8 feet deep	2	each	\$	4,800.00	<u>\$</u> \$	\$9,600
		8-12 feet deep	2	each	\$	6,400.00	\$	\$12,800
3	CONNECTION TO	O EXISTING MANH	OLE					
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKF	11 1						
	8-inch	0-8 feet deep	264	lin. ft.	\$	93.00	\$	\$24,552
		8-12 feet deep	315	lin. ft.	\$	113.00	\$	\$35,595
5	TREE TUNNELIN	G	120	lin. ft.	\$	192.00	\$	\$23,040
6	SEWER TELEVIS	SING FOR FINAL IN	SPECTION	N				
Ū				lin. ft.	\$	3.00	\$	\$5,160
7	SEWER TESTING	G FOR FINAL INSPI	ECTION					
			1,720	lin. ft.	\$	3.00	\$	\$5,160
8	RESTORATION O							
	AND PARKWAYS							
	Topsoil and	sod	3,547	sq.yd.	\$	14.00	\$	\$49,658
9	RESTORATION (	OF STREETS						
	Bit. Concrete	Street	64	sq.yd.	\$	64.00	\$	\$4,096
10	REMOVE AND R	EPLACE DRIVEWA	YS					
	Bituminous			sq.yd.	\$	48.00	\$ \$	\$12,912
	Concrete		60	sq.yd.	\$	81.00	\$	\$4,860
12	TREE REMOVAL	AND TRIMMING			Lum	p Sum	\$	\$1,330
	EROSION CONT					p Sum	\$	\$665

No.	Pay Item	Approxir Quant			Unit Price		Amount
14	TRAFFIC CONTROL			Lum	p Sum	\$	\$8,645
	SUBTOTAL					\$	\$347,913
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	250 0	lin. ft. lin. ft.	\$	<u>50.00</u> 50.00	<u>\$</u> \$	<u>\$12,500</u> \$0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	25 0	each each	<u>\$</u>	<u>554.00</u> 682.00	\$ \$	\$13,850 \$0
3	BUILDING SERVICE PLUG Near side	25	each	\$	208.00	\$	\$5,200
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	0	sq.yd.	\$	14.00	\$	\$0
5	RESTORATION OF STREETS Bit. Concrete Street	0	sq.yd.	\$	63.00	\$	\$0
6	TRENCH BACKFILL 0-8 feet deep	0	lin. ft.	\$	62.00	\$	\$0
	SUBTOTAL					\$	\$31,550
	TOTAL ESTIMATE OF CONS	STRUCTION (	COST			\$	\$379,500
		Contingenc Engineering Legal / Adn Easement /	g (2 nin (	0%) 6%)			\$75,900 \$75,900 \$31,900 \$64,700
	TOTAL OPINION OF PROBA	ABLE COST				\$	\$627,900
					Cost pe	r lot	\$25,120

#### Table 4.3-7 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Belmont Road (East) Preliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Belmont Ro	oad					
	H-1-97 (existing)	739.5	724.62	100	<b>•</b> • • • • •	
	UC-26	742.0	732.62	400	2.00%	9.4
	UC-27	746.0	734.22	400	0.40%	11.8
	UC-28	748.0	735.82	400	0.40%	12.2
	UC-29	748.0	737.42	400	0.40%	10.6
	UC-30	748.0	739.02	400	0.40%	9.0
	UC-31	750.0	740.62	400	0.40%	9.4
				400	0.40%	
	UC-32	750.0	742.22	400	2.50%	7.8
	UC-33	762.0	752.22	400	4.00%	9.8
	UC-34	780.0	768.22			11.8
59th Street				200	0.80%	
	UC-35	750.0	742.22			7.8

			Approxir			Unit		
No.	Pay Item		Quant	ity		Price		Amount
MAINLI	NE SEWER							
1	SANITARY SEWE	R (OPEN CUT)						
	8-inch	0-8 feet deep	1,000		\$	75.00	\$ \$	\$75,000
		8-12 feet deep	2,800	lin. ft.	\$	87.00	\$	\$243,600
2	SANITARY MANH	IOLES						
	48-inch	0-8 feet deep	2	each	\$	4,800.00	\$	\$9,600
		8-12 feet deep	8	each	\$	6,400.00	\$	\$51,200
3	CONNECTION TO	EXISTING MANH	OLE					
Ū	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFI 8-inch	LL 0-8 feet deep	313	lin. ft.	\$	93.00	\$	\$29,109
	0-IIICH	8-12 feet deep	659	lin. ft.	\$	113.00	\$	\$74,467
		0 12 1001 0000	000	init. it.	Ψ	110.00	Ψ	φ/ 4,407
5	TREE TUNNELIN	G	280	lin. ft.	\$	192.00	\$	\$53,760
6	SEWER TELEVIS	ING FOR FINAL IN	ISPECTIO	N				
Ũ			3,800		\$	3.00	\$	\$11,400
-			FOTION					
7	SEWER TESTING	FOR FINAL INSP	ECTION 3,800	lin. ft.	\$	3.00	\$	\$11,400
			3,800	III I. IL.	φ	3.00	φ	<b>φ11,400</b>
8								
	AND PARKWAYS		0.004		۴	44.00	<u></u>	¢00.404
	Topsoil and	sod	2,031	sq.yd.	\$	14.00	\$	\$28,434
9	RESTORATION C	F STREETS						
	Bit. Concrete	Street	69	sq.yd.	\$	64.00	\$	\$4,416
10	REMOVE AND RE	PI ACE DRIVEWA	YS					
10	Bituminous			sq.yd.	\$	48.00	\$	\$21,264
	Concrete			sq.yd.	\$	81.00	\$ \$	\$10,530
11	TREE REMOVAL	AND TRIMMING			Lum	p Sum	\$	\$13,300
10	EROSION CONTR				Lum	p Sum	¢	\$665
12					Luill	p Sum	\$	φ005

No.	Pay Item	Approxir Quant			Unit Price		Amount
13	TRAFFIC CONTROL		-	Lum	p Sum	\$	\$19,950
	SUBTOTAL					\$	\$664,295
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	520 0	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	\$26,000 \$0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	52 0	each each	\$ \$	554.00 682.00	\$	\$28,808 \$0
3	BUILDING SERVICE PLUG Near side	52	each	\$	208.00	\$	\$10,816
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	0	sq.yd.	\$	14.00	\$	\$0
5	RESTORATION OF STREETS Bit. Concrete Street	0	sq.yd.	\$	63.00	\$	\$0
6	TRENCH BACKFILL 8-12 feet deep	0	lin. ft.	\$	83.00	\$	\$0
	SUBTOTAL					\$	\$65,624
	TOTAL ESTIMATE OF CONS	STRUCTION (	COST			\$	\$729,900
		Contingenc Engineering Legal / Adn Easement /	g (2 nin (	0%) 0%) 6%) on			\$146,000 \$146,000 \$61,300 \$149,000
	TOTAL OPINION OF PROBA	ABLE COST				\$	\$1,232,200
					Cost per lo	ot	\$23,700

# Table 4.3-9Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersPershing Avenue (South)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>	
Pershing Avenue							
	Existing	744.8	733.40	450	1.00%		
	UC-36	750.0	737.90	450		12.1	
	UC-37	750.0	740.15	450	0.50%	9.9	
				450	0.50%		
	UC-38	754.0	742.40	450	0.40%	11.6	
	UC-39	752.0	744.20			7.8	
	UC-40	762.0	747.80	450	0.80%	14.2	

No.	Day Itam		Approxin			Unit Price		Amount
INO.	Pay Item		Quanti	ty		Price		Amount
MAINLI	NE SEWER							
1	SANITARY SEWE	R (OPEN CUT)						
	8-inch	0-8 feet deep	400	lin. ft.	\$	75.00	\$	\$30,000
		8-12 feet deep	1,850	lin. ft.	\$ \$	87.00	\$ \$	\$160,950
2	SANITARY MANH	OLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	\$4,800
		8-12 feet deep	4	each	\$	6,400.00	\$	\$25,600
3	CONNECTION TO	EXISTING MANH	OLE					
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFIL	_L						
	8-inch	0-8 feet deep	130	lin. ft.	\$	93.00	\$	\$12,090
		8-12 feet deep	1,201	lin. ft.	\$	113.00	\$	\$135,713
5	TREE TUNNELING	3	70	lin. ft.	\$	192.00	\$	\$13,440
6	SEWER TELEVISI	NG FOR FINAL IN	ISPECTION	N				
			2,250	lin. ft.	\$	3.00	\$	\$6,750
7	SEWER TESTING	FOR FINAL INSP	ECTION					
			2,250	lin. ft.	\$	3.00	\$	\$6,750
8	CULVERT REMO	/AL AND REPLAC	EMENT					
	15-inch		255	lin. ft.	\$	103.00	\$	\$26,265
9	RESTORATION O	F LAWNS						
	AND PARKWAYS:							
	Topsoil and s	sod	2,616	sq.yd.	\$	14.00	\$	\$36,624
10	RESTORATION O							
	Bit. Concrete	Street	756	sq.yd.	\$	64.00	\$	\$48,384
11		PLACE DRIVEWA						<b>.</b>
	Bituminous			sq.yd.	<u>\$</u> \$	48.00	\$	\$12,624
	Concrete		80	sq.yd.	\$	81.00	\$	\$6,480
12	REMOVE AND RE	PLACE SIDEWAL			<i>~</i>		<u>^</u>	<b>.</b>
	4' Concrete		50	sq.ft.	\$	13.00	\$	\$650

No.	Pay Item	Approximat Quantity	te		Unit Price		Amount
13	TREE REMOVAL AND TRIMMING			Lump	Sum	\$	\$3,325
14	EROSION CONTROL			Lump	Sum	\$	\$665
15	TRAFFIC CONTROL			Lump	Sum	\$	\$3,990
	SUBTOTAL					\$	\$541,300
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side		in. ft. in. ft.	\$ \$	50.00 50.00	\$ \$	\$38,400 \$67,200
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side		each each	\$ \$	554.00 682.00	\$ \$	\$17,728 \$21,824
3	BUILDING SERVICE PLUG	64 6	each	\$	208.00	\$	\$13,312
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	1,387 se	q.yd.	\$	14.00	\$	\$19,418
5	RESTORATION OF STREETS Bit. Concrete Street	427 s	q.yd.	\$	63.00	\$	\$26,901
6	TRENCH BACKFILL 0-8 feet deep	800 li	in. ft.	\$	62.00	\$	\$49,600
	SUBTOTAL					\$	\$254,383
	TOTAL ESTIMATE OF CONST	RUCTION CO	ST			\$	\$795,700
		Contingencies Engineering Legal / Admin	(20	0%) 0%) 6%)			\$159,100 \$159,100 \$66,800
	TOTAL OPINION OF PROBAB	LE COST				\$	\$1,180,700
					Cost pe	r lot	\$18,450

Cost per lot

\$18,450

# Table 4.3-11Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersWoodward and 63rd StreetPreliminary Design Layout

Fleining	ary Design Layout					Manhole
	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	<u>Depth</u>
63rd Stree	<u>et</u>					
	H-2-160 (existing)	736.0	730.63		1.000/	5.4
	UC-42	744.0	734.47	320	1.20%	9.5
Woodwar	d Avenue					
	H-2-173 (existing)	747.0	738.79	115	0.409/	8.2
	UC-50	748.0	739.25	115	0.40%	8.8

No.	Pay Item		Approxim Quantit		Unit Price		Amount
INU.	Fayitem		Quantit	y	FILE		Amount
MAINLI	INE SEWER						
1	SANITARY SEWE	. ,					
	8-inch	8-12 feet deep	435	lin. ft.	\$ 87.00	\$	\$37,845
2	SANITARY MANH						
	48-inch	0-8 feet deep	1	each	\$ 4,800.00	\$	\$4,800
		8-12 feet deep	1	each	\$ 6,400.00	\$	\$6,400
3		EXISTING MANH					
	8-inch		2	each	\$ 6,200.00	\$	\$12,400
4	TRENCH BACKFI	LL					
	8-inch	0-8 feet deep	215	lin. ft.	\$ 93.00	\$	\$19,995
		8-12 feet deep	220	lin. ft.	\$ 113.00	\$	\$24,860
5	TREE TUNNELING	G	40	lin. ft.	\$ 192.00	\$	\$7,680
6	SEWER TELEVIS	ING FOR FINAL IN	ISPECTION				
			435	lin. ft.	\$ 3.00	\$	\$1,305
7	SEWER TESTING	FOR FINAL INSP	ECTION				
			435	lin. ft.	\$ 3.00	\$	\$1,305
8	CULVERT REMO	VAL AND REPLAC	EMENT				
	15-inch		80	lin. ft.	\$ 103.00	\$	\$8,240
9	RESTORATION C	F LAWNS					
	AND PARKWAYS						
	Topsoil and	sod	725	sq.yd.	\$ 14.00	\$	\$10,150
10	RESTORATION C	F STREETS					
	Bit. Concrete	Street	0	sq.yd.	\$ 64.00	\$	\$0
11	REMOVE AND RE	PLACE DRIVEWA	YS				
	Bituminous		171	sq.yd.	\$ 48.00	\$ \$	\$8,192
	Concrete		10	sq.yd.	\$ 81.00	\$	\$810
12	REMOVE AND RE	EPLACE SIDEWAL	К				
	4' Concrete		0	sq.ft.	\$ 13.00	\$	\$0

No.	Pay Item	Approximate Quantity	Unit Price		Amount
13	TREE REMOVAL AND TRIMMING		Lump Sum	\$	\$2,660
14	EROSION CONTROL		Lump Sum	\$	\$665
15	TRAFFIC CONTROL		Lump Sum	\$	\$8,645
	SUBTOTAL			\$	\$155,952
SERVI	CE LATERALS				
1	BUILDING SERVICE LINES Near side Far side	110 lin. ft. 189 lin. ft.	\$ 50.00 \$ 50.00	\$ \$	\$5,500 \$9,450
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	11 each 7 each	\$     554.00 \$    682.00	\$ \$	\$6,094 \$4,774
3	BUILDING SERVICE PLUG	18 each	\$ 208.00	\$	\$3,744
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	219 sq.yd.	<u>\$ 14.00</u>	\$	\$3,064
5	RESTORATION OF STREETS Bit. Concrete Street	103 sq.yd.	\$ 63.00	\$	\$6,468
6	TRENCH BACKFILL 0-8 feet deep	182 lin. ft.	\$ 62.00	\$	\$11,284
	SUBTOTAL			\$	\$50,378
	TOTAL ESTIMATE OF CONS	TRUCTION COST		\$	\$206,300
		Engineering (2	20%) 20%) (6%) n		\$41,300 \$41,300 \$17,300 \$18,100
	TOTAL OPINION OF PROBAE	BLE COST		\$	\$324,300
			Cost per lot		\$18,020

Table 4.3-13 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Lee and Boundry (South) Preliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Lee Aven	ue					
	H-2-151 (existing)	750.0	735.65	400	1.60%	14.4
	UC-51	750.0	742.05	400	1.50%	8.0
	UC-52	760.0	748.05			12.0
	UC-53	770.0	762.05	400	3.50%	8.0
Boundary	Road					
	UC-41	753.0	742.10	430	1.50%	10.9

		Approxin			Unit			
No.	Pay Item	Quant	ity		Price		Amount	
MAINLI	NE SEWER							
1	SANITARY SEWER (OPEN CUT)							
	8-inch 0-8 feet deep	509	lin. ft.	\$	75.00	\$	\$38,175	
	8-12 feet deep	754	lin. ft.	\$ \$ \$	87.00	\$ \$ \$	\$65,598	
	12-16 feet deep	367	lin. ft.	\$	106.00	\$	\$38,902	
2	SANITARY MANHOLES							
	48-inch 0-8 feet deep	2	each	\$	4,800.00	\$	\$9,600	
	8-12 feet deep	2	each	\$	6,400.00	\$ \$	\$12,800	
3	CONNECTION TO EXISTING MANH	OLE						
	8-inch	2	each	\$	6,200.00	\$	\$12,400	
4	TRENCH BACKFILL							
	8-inch 0-8 feet deep	130	lin. ft.	\$	93.00	\$	\$12,090	
	8-12 feet deep	225	lin. ft.	\$	113.00	\$ \$	\$25,425	
	12-16 feet deep	42	lin. ft.	\$	137.00	\$	\$5,754	
5	TREE TUNNELING	79	lin. ft.	\$	192.00	\$	\$15,168	
6	SEWER TELEVISING FOR FINAL IN	SPECTIO	N					
		1,630	lin. ft.	\$	3.00	\$	\$4,890	
7	SEWER TESTING FOR FINAL INSPE	ECTION						
		1,630	lin. ft.	\$	3.00	\$	\$4,890	
8	CULVERT REMOVAL AND REPLACI	EMENT						
	12-inch	200	lin. ft.	\$	81.00	\$	\$16,200	
9	RESTORATION OF LAWNS AND PARKWAYS							
	Topsoil and sod	2,901	sq.yd.	\$	14.00	\$	\$40,614	
10	RESTORATION OF STREETS							
	Bit. Concrete Street		sq.yd.	\$ \$	64.00	<u>\$</u> \$	\$5,952	
	PCC Curb & Gutter	20	lin. ft.	\$	41.00	\$	\$820	
11	REMOVE AND REPLACE DRIVEWA	YS						
	Bituminous		sq.yd.	\$	48.00	\$	\$7,584	
	PCC Driveway		sq.yd.	\$ \$ \$	81.00	\$ \$ \$	\$6,723	
	Aggregate Driveway	61	sq.yd.	\$	20.00	\$	\$1,220	
12	TREE REMOVAL AND TRIMMING			Lum	ıp Sum	\$	\$1,663	

No.	Pay Item	Approximate Quantity		Unit Price		Amount
13	EROSION CONTROL		Lump	Sum	\$	\$665
14	TRAFFIC CONTROL		Lump	o Sum	\$	\$7,315
	SUBTOTAL				\$	\$334,448
SERVIC	E LATERALS					
1	BUILDING SERVICE LINES Near side Far side	200 lin. ft 1,064 lin. ft		50.00 50.00	\$ \$	\$10,000 \$53,200
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	20 each 19 each	<del>,</del>	554.00 682.00	\$ \$	\$11,080 \$12,958
3	BUILDING SERVICE PLUG	39 each	n <u>\$</u>	208.00	\$	\$8,112
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	1,017 sq.yd	. <u>\$</u>	14.00	\$	\$14,238
5	RESTORATION OF STREETS Bit. Concrete Street	377 sq.yd	. <u></u> \$	63.00	\$	\$23,751
6	TRENCH BACKFILL 0-8 feet deep	519 lin. ft	. <u>\$</u>	62.00	\$	\$32,178
	SUBTOTAL				\$	\$165,517
	TOTAL ESTIMATE OF CONS	TRUCTION COST			\$	\$500,000
		-	(20%) (20%) (6%)			\$100,000 \$100,000 \$42,000
	TOTAL OPINION OF PROBA	BLE COST			\$	\$742,000
				Cost per lo	ot	\$19,030

#### Table 4.3-15 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Springside (South) Preliminary Design Layout

Manhole N	Number Rim	Invert	Length (ft)	Slope	Manhole <u>Depth</u>
Springside Avenue					
H-2-166 (e	existing) 740.0	726.63	050	0.000/	13.4
UC-5	55 742.0	728.63	250	0.80%	13.4
UC-5	56 749.0	735.83	400	1.80%	13.2

	Devillen	Approxim			Unit	Arrange
No.	Pay Item	Quanti	ty		Price	Amount
MAINLI	NE SEWER					
1	SANITARY SEWER (OPEN CUT) 8-inch 0-8 feet deep	650	lin. ft.	\$	75.00	\$ \$48,750
2	SANITARY MANHOLES 48-inch 0-8 feet deep	2	each	\$	4,800.00	\$ \$9,600
3	CONNECTION TO EXISTING MANH 8-inch	OLE 1	each	\$	6,200.00	\$ \$6,200
4	TRENCH BACKFILL 0-8 feet deep	206	lin. ft.	\$	93.00	\$ \$19,158
5	TREE TUNNELING	60	lin. ft.	\$	192.00	\$ \$11,520
6	SEWER TELEVISING FOR FINAL IN		N lin. ft.	\$	3.00	\$ \$1,950
7	SEWER TESTING FOR FINAL INSPI	ECTION 650	lin. ft.	\$	3.00	\$ \$1,950
8	CULVERT REMOVAL AND REPLAC 15-inch	EMENT 150	lin. ft.	\$	103.00	\$ \$15,450
9	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	1,098	sq.yd.	\$	14.00	\$ \$15,372
10	RESTORATION OF STREETS Bit. Concrete Street	35	sq.yd.	\$	64.00	\$ \$2,240
11	REMOVE AND REPLACE DRIVEWA Bituminous		sq.yd.	\$	48.00	\$ \$5,280
12	TREE REMOVAL AND TRIMMING			Lum	p Sum	\$ \$1,995
13	EROSION CONTROL			Lum	p Sum	\$ \$665

No.	Pay Item	Approxir Quant			Unit Price		Amount
14	TRAFFIC CONTROL		-	Lum	p Sum	\$	\$3,325
	SUBTOTAL					\$	\$143,455
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	80 450	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	\$4,000 \$22,500
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	5 9	each each	\$ \$	554.00 682.00	\$ \$	\$2,770 \$6,138
3	BUILDING SERVICE PLUG	14	each	\$	208.00	\$	\$2,912
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	400	sq.yd.	\$	14.00	\$	\$5,600
5	RESTORATION OF STREETS Bit. Concrete Street	160	sq.yd.	\$	63.00	\$	\$10,080
6	TRENCH BACKFILL 0-8 feet deep	216	lin. ft.	\$	62.00	\$	\$13,392
	SUBTOTAL					\$	\$67,392
	TOTAL ESTIMATE OF CONS	TRUCTION (	COST			\$	\$210,800
		Contingenc Engineering Legal / Adn	g (2	0%) 0%) 6%)			\$42,200 \$42,200 \$17,700
	TOTAL OPINION OF PROBAI	BLE COST				\$	\$312,900
					Cost per lo	ot	\$22,350

Table 4.3-17Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersSpringside-Jefferson-Downers (North)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Downers Driv	ve					
F	I-3-2-14 (existing)	755.0	736.20	38	0.40%	18.8
	UC-57	754.0	736.35	250	0.40%	17.6
	UC-58	756.0	737.35	253	0.40%	18.6
	UC-59	754.0	738.36	341	0.40%	15.6
	UC-60			0.40%	17.8	
	UC-61	753.0	741.09	340	0.40%	11.9
Jefferson Dri	ive					
	UC-62	750.0	742.09	250	0.40%	7.9
Springside A	venue					
	UC-63	750.0	742.97	220	0.40%	7.0
	UC-64	750.0	742.88	198	0.40%	7.1
	UC-65	763.0	750.56	384	2.00%	12.4
	UC-66	764.0	751.96	140	1.00%	12.4
	00-00	704.0	751.90			12.0
ŀ	H-3-110 (existing)	755.3	745.25	220	3.00%	10.0
	UC-67	764.0	754.85	320	3.00%	9.1

	<b>D</b> 14		Approxir			Unit		<b>A</b>
No.	Pay Item		Quant	ity		Price		Amount
MAINLI	NE SEWER							
1	SANITARY SEWER	(OPEN CUT)						
	8-inch	0-8 feet deep	418	lin. ft.	\$	75.00	\$	\$31,350
		8-12 feet deep	1,114	lin. ft.	\$ \$ \$	87.00	\$ \$ \$	\$96,918
		12-16 feet deep	588	lin. ft.	\$	106.00	\$	\$62,32
		16-20 feet deep	614	lin. ft.	\$	127.00	\$	\$77,97
2	SANITARY MANHO	LES						
	48-inch	0-8 feet deep	3	each	\$	4,800.00	\$	\$14,40
		8-12 feet deep	4	each	\$	6,400.00	<u>\$</u> \$	\$25,60
		12-16 feet deep	1	each	\$	7,700.00	\$	\$7,70
		16-20 feet deep	3	each	\$	10,300.00	\$ \$	\$30,90
3	CONNECTION TO E	EXISTING MANH						
0	8-inch		2	each	\$	6,200.00	\$	\$12,40
4	TRENCH BACKFILL 8-inch	- 0-8 feet deep	370	lin. ft.	\$	93.00	\$	\$34,41
	0-11011	8-12 feet deep	680	lin. ft.	\$ \$ \$	113.00	\$	\$76,84
		12-16 feet deep	481	lin. ft.	\$	137.00	\$	\$65,89
		16-20 feet deep	608	lin. ft.	\$	180.00	\$ \$ \$	\$109,44
5	TREE TUNNELING		60	lin. ft.	\$	192.00	\$	\$11,52
-					<u>+</u>		<u> </u>	+ ,
6	SEWER TELEVISIN	G FOR FINAL IN			•	0.00	<b>•</b>	<b>\$</b> 0.00
			2,734	lin. ft.	\$	3.00	\$	\$8,20
7	SEWER TESTING F	OR FINAL INSPE	ECTION					
			2,734	lin. ft.	\$	3.00	\$	\$8,202
8	CULVERT REMOVA	AL AND REPLACE	EMENT					
	12-inch		160	lin. ft.	\$	81.00	\$	\$12,96
9	RESTORATION OF	LAWNS						
	AND PARKWAYS							
	Topsoil and so	od	3,850	sq.yd.	\$	14.00	\$	\$53,90
10	RESTORATION OF	STREETS						
	Bit. Concrete St	reet	625	sq.yd.	\$	64.00	\$	\$40,00
11	REMOVE AND REP	LACE DRIVEWA	YS					
	Bituminous		255	sq.yd.	\$	48.00	\$	\$12,24
	Concrete		72	sq.yd.	<u>\$</u> \$	81.00	\$ \$	\$5,832
					\$		\$	

No.	Pay Item	Approxir Quant			Unit Price		Amount
12	TREE REMOVAL AND TRIMMING			Lump	Sum	\$	\$2,993
13	EROSION CONTROL			Lump	Sum	\$	\$998
14	TRAFFIC CONTROL:			Lump	Sum	\$	\$6,650
	SUBTOTAL					\$	\$806,247
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	495 912	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	\$24,750 \$45,600
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	33 19	each each	\$ \$	554.00 682.00	\$ \$	\$18,282 \$12,958
3	BUILDING SERVICE PLUG	52	each	\$	208.00	\$	\$10,816
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	842	sq.yd.	\$	14.00	\$	\$11,788
5	RESTORATION OF STREETS Bit. Concrete Street	388	sq.yd.	\$	63.00	\$	\$24,444
6	TRENCH BACKFILL 0-8 feet deep	494	lin. ft.	\$	62.00	\$	\$30,628
7	REMOVE AND REPLACE DRIVEWAY Bituminous	'S 24	sq.yd.	\$	47.00	\$	\$1,128
	SUBTOTAL					\$	\$180,394
	TOTAL ESTIMATE OF CONSTRU		COST			\$	\$986,600
	En	ontingenci Igineering gal / Adm	) (2	0%) 0%) 6%)			\$197,300 \$197,300 \$82,900
	TOTAL OPINION OF PROBABLE	COST				\$	\$1,464,100
					Cost pe	r lot	\$28,160

# Table 4.3-19Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersPershing-Woodward-Maple (North)Preliminary Design Layout

Preliminary De	esign Layout					Manhala
Mai	nhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
<u>Maple Avenue</u>						
2-C	-131 (existing)	730.2	711.80	300	2.00%	18.4
	UC-106	740.0	729.80	500	2.0078	10.2
2-C	-151 (existing)	741.6	723.72	450	3.50%	17.9
	UC-71	752.0	739.47	450	2.00%	12.5
	UC-70	760.0	748.47	450	2.00%	11.5
Woodward Ave	nue					
2-C	-155 (existing)	735.7	727.36			8.3
	UC-86	746.0	731.36	400	1.00%	14.6
	UC-87	750.0	739.36	400	2.00%	10.6
	UC-88	760.0	751.36	400	5.00%	8.6
	UC-89	778.0	761.36	400	5.00%	16.6
Blanchard Stre	et					
	UC-77	739.0	730.94	325	1.10%	8.1
	UC-78	756.0	735.62	390	1.20%	20.4
Pershing Avenu						
<b>_</b>	UC-79	750.0	737.22	400	0.40%	12.8
	UC-80	747.5	738.82	400	0.40%	8.7
	UC-81	752.0	739.46	160	0.40%	12.5
	UC-82	764.0	750.07	225	5.00%	13.9
	UC-84	752.0	738.42	350	0.80%	13.6
	UC-85	750.0	741.62	400	0.80%	8.4
59th Street		100.0	111.02			0.7
<u></u>	UC-83	748.5	741.06	400	0.40%	7.4

No.	Pay Item		Approx Quar			Unit Price		Amount
110.	i dy ttom		Quu	lity		11100		7 inount
MAINLI	NE SEWER							
1	SANITARY SEWER (C	PEN CUT)						
	8-inch	0-8 feet deep	1,130	lin. ft.	\$	75.00	\$	\$84,750
		8-12 feet deep	3,300	lin. ft.	\$	87.00	\$ \$ \$	\$287,100
		12-16 feet deep	960	lin. ft.	\$	106.00	\$	\$101,760
		16-20 feet deep	460	lin. ft.	\$	127.00	\$	\$58,420
2	SANITARY MANHOLE	S						
	48-inch	0-8 feet deep	4	each	\$	4,800.00	\$	\$19,200
		8-12 feet deep	8	each	\$	6,400.00	\$	\$51,200
		12-16 feet deep	3	each	\$	7,700.00	\$	\$23,100
		16-20 feet deep	1	each	\$	10,300.00	\$ \$ \$	\$10,300
3	CONNECTION TO EX	ISTING MANHOLE						
-	8-inch		3	each	\$	6,200.00	\$	\$18,600
4	TRENCH BACKFILL							
•	8-inch	0-8 feet deep	1,203	lin. ft.	\$	93.00	\$	\$111,879
		8-12 feet deep	1,391	lin. ft.	\$	113.00	\$	\$157,183
		12-16 feet deep	676	lin. ft.	\$	137.00	\$	\$92,612
		16-20 feet deep	347	lin. ft.	\$	180.00	\$ \$ \$	\$62,460
5	TREE TUNNELING		440	lin. ft.	\$	192.00	\$	\$84,480
6	SEWER TELEVISING	FOR FINAL INSPECT	ION					
C C			5,850	lin. ft.	\$	3.00	\$	\$17,550
7	SEWER TESTING FO	R FINAL INSPECTION	J					
			5,850	lin. ft.	\$	3.00	\$	\$17,550
8	CULVERT REMOVAL	AND REPLACEMENT	-					
Ũ	15-inch		10	lin. ft.	\$	103.00	\$	\$1,030
	12-inch		185	lin. ft.	\$	81.00	\$	\$14,985
					<u> </u>		<u>+</u>	÷,
9	RESTORATION OF LA	AWNS						
	AND PARKWAYS:				•		•	<b>*</b> • • • <b>• •</b>
	Topsoil and sod		6,027	sq.yd.	\$	14.00	\$	\$84,378
10	RESTORATION OF S							<b>.</b>
	Bit. Concrete Stre	et	2,018	sq.yd.	\$	64.00	\$	\$129,152
11	REMOVE AND REPLA	ACE DRIVEWAYS						
	Bituminous		695	sq.yd.	\$	48.00	<u>\$</u> \$	\$33,360
	PCC		55	sq.yd.	\$	81.00	\$	\$4,455

No.	Pay Item	Approx Qua			Unit Price		Amount
12	TREE REMOVAL AND TRIMMING			l	_ump Sum	\$	\$1,330
13	EROSION CONTROL						
	Silt Fence			l	_ump Sum	\$	\$6,647
14	TRAFFIC CONTROL:			I	_ump Sum	\$	\$11,970
	SUBTOTAL					\$	\$1,485,451
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES						
	Near side	842	lin. ft.	\$	50.00	\$	\$42,100
	Far side	2,286	lin. ft.	\$	50.00	\$ \$	\$114,300
	Riser Pipes	74	vert. ft.	\$	47.00	\$	\$3,478
2	BUILDING SERVICE						
	BRANCH FITTINGS						
	Near Side	58	each	\$	554.00	\$	\$32,132
	Far side	46	each	\$	682.00	\$	\$31,372
3	BUILDING SERVICE PLUG	104	each	\$	208.00	\$	\$21,632
4	RESTORATION OF LAWNS AND PARKWAYS:						
	Topsoil and sod	2,417	sq.yd.	\$	14.00	\$	\$33,838
5	RESTORATION OF STREETS						
	Bit. Concrete Street	562	sq.yd.	\$	63.00	\$	\$35,406
6	TRENCH BACKFILL	4 000	1. A	•	00.00	<b>^</b>	\$07 F00
	0-8 feet deep	1,090	lin. ft.	\$	62.00	\$	\$67,580
	SUBTOTAL					\$	\$381,838
	TOTAL ESTIMATE OF CONSTRU	UCTION COST				\$	\$1,867,300
		Contingen	cies		(20%)		\$373,500
		Engineerin	-		(20%)		\$373,500
		Legal / Adı			(6%)		\$156,900
		Easement	Acquisitio	on			\$42,800
	TOTAL OPINION OF PROBABLE	COST				\$	\$2,814,000
					Cost per lo	ot	\$27,060

# Table 4.3-21Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersSherman Avenue (North)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>				
Sherman Avenue										
	2-C-142 (existing)	734.5	726.04			8.5				
	UC-90	752.0	730.28	212	2.00%	21.7				
		10210	100120	400	0.40%	2				
	UC-91	746.0	731.88			14.1				
	UC-92	742.0	700 40	400	0.40%	0 5				
	00-92	742.0	733.48	400	3.00%	8.5				
	UC-93	760.0	745.48		010070	14.5				
				400	3.00%					
	UC-94	767.0	757.48			9.5				

Na	Approximate Unit Pay Item Quantity Price				Americant		
No.	Pay Item	Quan	uty		Price		Amount
MAINLI	NE SEWER						
4							
1	SANITARY SEWER (OPEN CUT) 8-inch 8-12 feet deep	870	lin. ft.	\$	87.00	¢	\$75,690
	12-16 feet deep	570	lin. ft.	\$	106.00	\$ \$ \$	\$60,420
	16-20 feet deep	385	lin. ft.	\$ \$	127.00	\$	\$48,895
		000		<u> </u>	127.00	Ψ	¢ 10,000
2	SANITARY MANHOLES						
	48-inch 8-12 feet deep	2	each	\$	6,400.00	\$	\$12,800
	12-16 feet deep	2	each	\$ \$ \$	7,700.00	\$ \$ \$	\$15,400
	16-20 feet deep	1	each	\$	10,300.00	\$	\$10,300
3	CONNECTION TO EXISTING MANH						
5	8-inch	1	each	\$	6,200.00	\$	\$6,200
		•	odon	Ψ	0,200.00	Ψ	<b>\$0,200</b>
4	TRENCH BACKFILL						
	8-inch 8-12 feet deep	870	lin. ft.	\$	113.00	\$	\$98,310
	12-16 feet deep	570	lin. ft.	\$ \$	137.00	\$ \$ \$	\$78,090
	16-20 feet deep	385	lin. ft.	\$	180.00	\$	\$69,300
5	TREE TUNNELING	120	lin. ft.	\$	192.00	\$	\$23,040
6	SEWER TELEVISING FOR FINAL IN			¢	2.00	¢	Ф <i>Б 1</i> 75
		1,825	lin. ft.	\$	3.00	\$	\$5,475
7	SEWER TESTING FOR FINAL INSP	ECTION					
		1,825	lin. ft.	\$	3.00	\$	\$5,475
8	CULVERT REMOVAL AND REPLAC						
	12-inch	360	lin. ft.	\$	81.00	\$	\$29,160
9	RESTORATION OF LAWNS						
5	AND PARKWAYS						
	Topsoil and sod	2.847	sq.yd.	\$	14.00	\$	\$39,858
	•	, -	15	<u>.</u>			+ ,
10	RESTORATION OF STREETS						
	Bit. Concrete Street	89	sq.yd.	\$	64.00	\$	\$5,696
11	STORM SEWER REMOVAL AND RE			¢	0.00	¢	ድብ
	18" RCP	20	lin. ft.	\$	0.00	\$	\$0
12	REMOVE AND REPLACE DRIVEWA	YS					
	Bituminous		sq.yd.	\$	48.00	\$	\$20,544
	Concrete		sq.yd.	\$	81.00	\$ \$	\$3,483

No.	Pay Item	Approximate Quantity	Unit Price		Amount	
13	TREE REMOVAL AND TRIMMING		Lump Sum	\$	\$1,663	
14	EROSION CONTROL		Lump Sum	\$	\$665	
15	TRAFFIC CONTROL		' Lump Sum	\$	\$6,650	
	SUBTOTAL		p	\$	\$617,114	
SERVIC				<u> </u>	<i>\\</i>	
1	BUILDING SERVICE LINES Near side Far side	405 lin. ft. 1,377 lin. ft.	\$50.00 \$50.00	\$ \$	\$20,250 \$68,850	
2 3	BUILDING SERVICE BRANCH FITTINGS Near Side Far side BUILDING SERVICE PLUG	27 each 27 each 54 each		\$ \$ \$	\$14,958 \$18,414 \$11,232	
4	RESTORATION OF LAWNS AND PARKWAYS Topsoil and sod	1,260 sq.yd.	<u>\$ 14.00</u>	\$	\$17,640	
5	RESTORATION OF STREETS Bit. Concrete Street	504 sq.yd.	\$ 63.00	\$	\$31,752	
6	TRENCH BACKFILL 0-8 feet deep	648 lin. ft.	\$ 62.00	\$	\$40,176	
	SUBTOTAL			\$	\$223,272	
	TOTAL ESTIMATE OF CONST	RUCTION COST		\$	\$840,400	
		Engineering (2	20%) 20%) (6%)		\$168,100 \$168,100 \$70,600	
	TOTAL OPINION OF PROBAB	LE COST		\$	\$1,247,200	

Cost per lot

\$23,100

#### Table 4.3-23 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Lee Avenue (North) Preliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Maple Ave	enue					
	2-C-147 (existing)	750.8	737.48	000	0.000/	13.3
	UC-99	760.0	748.88	380	3.00%	11.1
Lee Aven	ue					
	2-C-149 (existing)	759.1	745.52		o 4004	13.6
	UC-101	762.0	746.56	260	0.40%	15.4
	UC-102	756.0	748.16	400	0.40%	7.8
				400	0.80%	
	UC-103	760.0	751.36	400	1.80%	8.6
	UC-104	767.0	758.56	400	1.0070	8.4
	UC-105	774.0	765.76	400	1.80%	8.2

No.	Pay Item		Approxin Quanti			Unit Price		Amount
MAINLI	NE SEWER							
1	SANITARY SE	WER (OPEN CUT)						
	8-inch	0-8 feet deep	200	lin. ft.	\$	75.00	\$	\$15,000
		8-12 feet deep	1,250	lin. ft.	\$	87.00	\$	\$108,750
		12-16 feet deep	140	lin. ft.	\$ \$ \$	106.00	\$ \$ \$	\$14,840
		16-20 feet deep	260	lin. ft.	\$	127.00	\$	\$33,020
2	DIRECTIONAL	DRILLING						
	8-inch		400	lin. ft.	\$	275.00	\$	\$110,000
3	SANITARY MA	NHOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	\$4,800
		8-12 feet deep	2	each	\$ \$	6,400.00	\$ \$ \$	\$12,800
		12-16 feet deep	2	each	\$	7,700.00	\$	\$15,400
		16-20 feet deep	1	each	\$	10,300.00	\$	\$10,300
4	CONNECTION	TO EXISTING MA						
	8-inch		2	each	\$	6,200.00	\$	\$12,400
5								
	8-inch	0-8 feet deep	200	lin. ft.	\$	93.00	\$	\$18,600
		8-12 feet deep	1,250	lin. ft.	\$ \$ \$	113.00	\$ \$ \$	\$141,250
		12-16 feet deep	140	lin. ft.	\$	137.00	\$	\$19,180
		16-20 feet deep	260	lin. ft.	\$	180.00	\$	\$46,800
6	TREE TUNNEL	ING	0	lin. ft.	\$	192.00	\$	\$0
7	SEWER TELE	VISING FOR FINAL		ION				
			2,250	lin. ft.	\$	3.00	\$	\$6,750
8	SEWER TEST	ING FOR FINAL IN	SPECTION	1				
			2,250	lin. ft.	\$	3.00	\$	\$6,750
9		MOVAL AND REPL						
	12-inch		55	lin. ft.	\$	81.00	\$	\$4,455
10		R REMOVAL AND						
	18" RCP		20	lin. ft.	<u>\$</u>	0.00	\$	\$0
11								
	AND PARKWA Topsoil a		457	sq.yd.	\$	14.00	\$	\$6,398
	·				*		+	+0,000
12	RESTORATIO		1.678	sq.yd.	\$	64.00	\$	\$107,392
			.,570	- 1.7 4.	¥	01.00	*	φ.01,002

No.	Pay Item	Approxin Quant			Unit Price		Amount
13	REMOVE AND REPLACE DRIVE Bituminous		sq.yd.	\$	48.00	\$	\$34,128
	Concrete		sq.yd.	\$ \$	81.00	\$ \$	\$14,418
14	TREE REMOVAL AND TRIMMING	G:		Lump	Sum	\$	\$665
15	EROSION CONTROL			Lump	Sum	\$	\$665
16	TRAFFIC CONTROL			Lump	Sum	\$	\$9,975
	SUBTOTAL					\$	\$754,736
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side	522	lin. ft.	\$	50.00	\$	\$26,100
	Far side	1,200	lin. ft.	\$ \$	50.00	\$ \$	\$60,000
2	BUILDING SERVICE BRANCH FITTINGS						
	Near Side Far side	29 25	each each	<u>\$</u> \$	554.00 682.00	<u>\$</u> \$	\$16,066 \$17,050
3	BUILDING SERVICE PLUG	54	each	\$	208.00	\$	\$11,232
4	RESTORATION OF LAWNS						
	AND PARKWAYS Topsoil and sod	1,156	sq.yd.	\$	14.00	\$	\$16,184
5	RESTORATION OF STREETS Bit. Concrete Street	422	sq.yd.	\$	63.00	\$	\$26,586
6	TRENCH BACKFILL 0-8 feet deep	625	lin. ft.	\$	62.00	\$	\$38,750
	SUBTOTAL					\$	\$211,968
	TOTAL ESTIMATE OF CONS	STRUCTIO	N COST			\$	\$966,700
	I	Contingenc Engineering Legal / Adm Easement A	) (2 nin (	0%) 0%) 6%) on			\$193,300 \$193,300 \$81,200 \$14,600
	TOTAL OPINION OF PROBA	BLE COST	-			\$	\$1,449,100
					Cost per lo	ot	\$26,840

#### Table 4.3-25 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Downers Grove Gardens Sub-Area Cost Summary

Sub-Basin:	Near Services	Far Services	Cost		Cc	ost per lot
lance Leanerd Chase Duffer (North)	27	21	¢	1 200 200	¢	10 110
Janes-Leonard-Chase-Puffer (North)	37	31	\$	1,299,200	\$	19,110
Janes-Leonard-Chase-Puffer (South)	72	57	\$	2,446,900	\$	18,970
Belmont-Southwest	25	0	\$	627,900	\$	25,120
Belmont Road (East)	52	0	\$	1,232,200	\$	23,700
Pershing Avenue (South)	32	32	\$	1,180,700	\$	18,450
Woodward and 63rd Street	11	7	\$	324,300	\$	18,020
Lee and Boundary (South)	20	19	\$	742,000	\$	19,030
Springside (South)	5	9	\$	312,900	\$	22,350
Springside-Jefferson-Downers (North)	33	19	\$	1,464,100	\$	28,160
Pershing-Woodward-Maple (North)	58	46	\$	2,814,000	\$	27,060
Sherman Avenue (North)	27	27	\$	1,247,200	\$	23,100
Lee Avenue (North)	29	25	\$	1,449,100	\$	26,840
TOTALS	401	272	\$	15,140,500	\$	22,500
	67	73				

#### 4.4 Fairhaven Court

Fairhaven Court is a small service area adjacent to the Downers Grove Gardens sub-area. Exhibit 4.4 shows the approximate limits of this service area which is located north of Maple Avenue. The proposed service area currently includes 10 lots that are developed as single-family residences with septic systems. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties along Fairhaven Court.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, tree protection, water main and existing utility location. In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Maple Avenue. Thus, alternatives were considered to minimize crossing of this roadway.

The Village of Downers Grove owns and operates a water main on Fairhaven Court. Water main locations were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Fairhaven Court sub-area.

A map of the proposed sewer plan is included in Exhibit 4.4.

The topography along Fairhaven Court is relatively flat, and thus, the direction of flow will be dictated by the available sewer depth and the most cost effective route. We identified two existing manholes that would provide adequate cover and would be feasible alternatives for connection points: the manhole located east of the dead end of Fairhaven Court and the manhole along Maple Avenue at Stonewall Avenue. We recommend the first alternative, connecting east of the dead end at Fairhaven Court to reduce the additional cost and pipe footage required to install a sewer in the Maple Avenue right-of-way.

The sewer should be placed in an easement on east side of Fairhaven Court. Previous studies have planned for the sewer to be installed east of the edge of pavement. Our field investigation determined that there is a significant amount of new landscaping, brickwork, lighting, and concrete driveways located in the proposed sewer path. Thus, we recommend that the sewer be installed in the east half of the pavement, opposite of the existing water main which is located west of the pavement centerline. Table 4.4-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.4-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$387,200, including contingency, engineering, and legal/administrative costs.

# DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

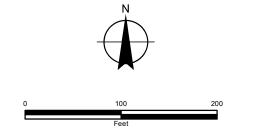
## EXHIBIT 4.4

## FAIRHAVEN COURT POSSIBLE SEWER ALIGNMENT

#### **MARCH 2021**

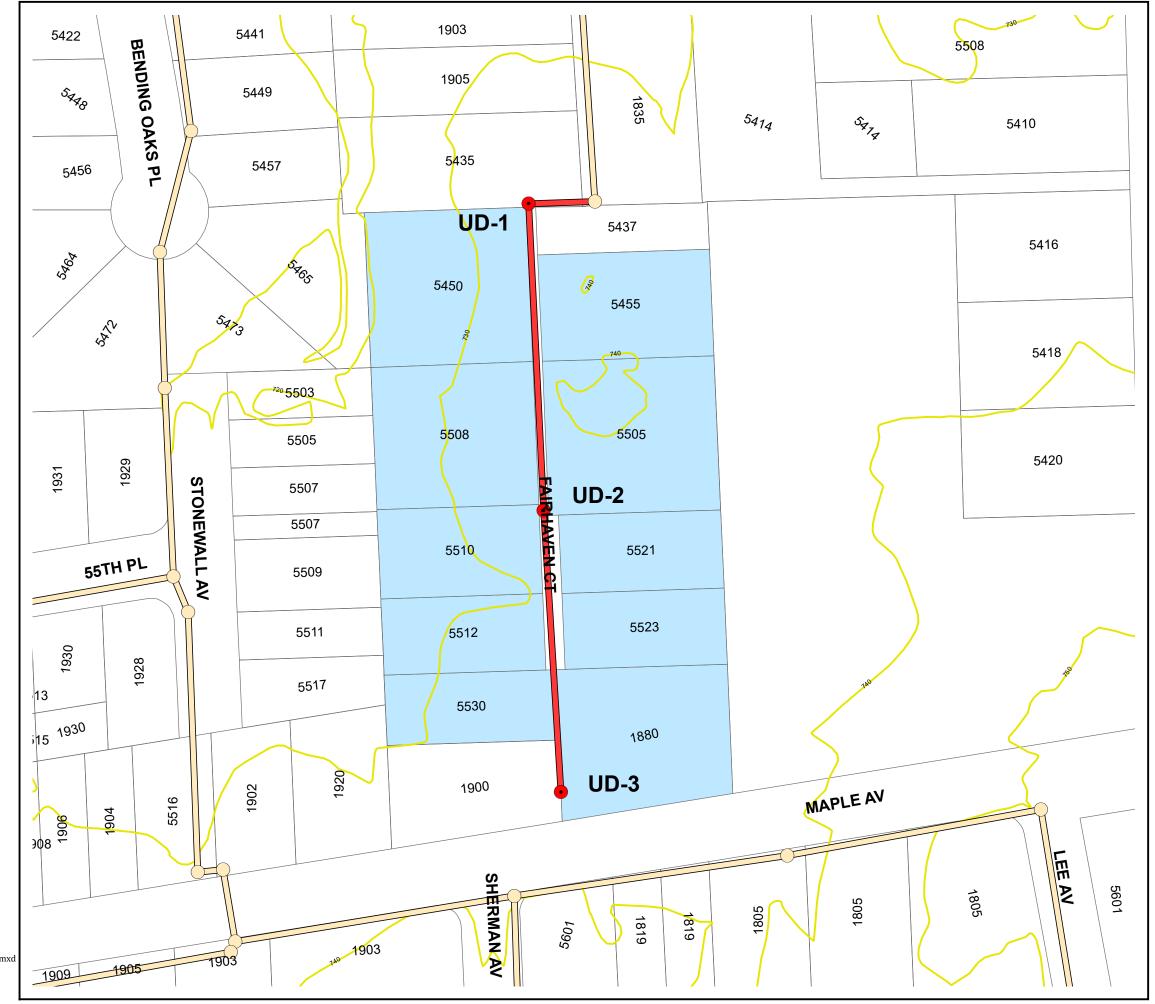
### LEGEND







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# Table 4.4-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersFairhaven CourtPreliminary Design Layout

Mai	nhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Fairhaven Cou	<u>rt</u>					
2-C	-133 (existing)	736.0	723.00			13.0
	UD-1	734.0	723.24	60	0.40%	10.8
	UD-2	734.0	724.84	320	0.50%	9.2
	-			290	0.50%	
	UD-3	735.0	726.29			8.7

Ne	Day Itam		Approxima Quantity			Unit Price	Amount
No.	Pay Item		Quantity	y		Flice	Amount
MAINLI	NE SEWER						
1	SANITARY SEWER (0 8-inch 8	OPEN CUT) -12 feet deep	670	lin. ft.	\$	87.00	\$ \$58,290
2	SANITARY MANHOLE 48-inch 8	ES -12 feet deep	3	each	\$	6,400.00	\$ \$19,200
3	CONNECTION TO EX 8-inch	ISTING MANHOLE	≣ 1	each	\$	6,200.00	\$ \$6,200
4	TRENCH BACKFILL 8-inch 8	-12 feet deep	630	lin. ft.	\$	113.00	\$ \$71,190
5	TREE TUNNELING		0	lin. ft.	\$	192.00	\$ \$0
6	SEWER TELEVISING	For Final Inspe	ECTION 670	lin. ft.	\$	3.00	\$ \$2,010
7	SEWER TESTING FC	R FINAL INSPECT	TION 670	lin. ft.	\$	3.00	\$ \$2,010
8	CULVERT REMOVAL 12-inch	AND REPLACEM	ENT 0	lin. ft.	\$	81.00	\$ \$0_
9	RESTORATION OF L AND PARKWAYS: Topsoil and sod	AWNS	111	sq.yd.	\$	14.00	\$ \$1,554
10	RESTORATION OF S Bit. Concrete Stre		560	sq.yd.	\$	64.00	\$ \$35,840
11	REMOVE AND REPL	ACE DRIVEWAYS	0	sq.yd.	\$	48.00	\$ \$0
12	TREE REMOVAL AND	D TRIMMING			Lum	p Sum	\$ \$333
13	EROSION CONTROL				Lum	p Sum	\$ \$333

No.	Pay Item	Approximate Quantity			Unit Price		Amount
14	TRAFFIC CONTROL			Lum	ıp Sum	\$	\$6,650
	SUBTOTAL					\$	\$203,609
SERVIC	CE LATERALS						
1	BUILDING SERVICE LINES						
	Near side	100	lin. ft.	\$	50.00	\$	\$5,000
	Far side	125	lin. ft.	\$	50.00	\$	\$6,250
2	BUILDING SERVICE BRANCH FITTINGS						
	Near Side	5	each	\$	554.00	<u>\$</u> \$	\$2,770
	Far side	5	each	\$	682.00	\$	\$3,410
3	BUILDING SERVICE PLUG	10	each	\$	208.00	\$	\$2,080
4	RESTORATION OF LAWNS						
	AND PARKWAYS:						
	Topsoil and sod	139	sq.yd.	\$	14.00	\$	\$1,946
5	RESTORATION OF STREETS						
	Bit. Concrete Street	33	sq.yd.	\$	63.00	\$	\$2,079
6	TRENCH BACKFILL						
-	0-8 feet deep	70	lin. ft.	\$	62.00	\$	\$4,340
	SUBTOTAL					\$	\$27,875
	TOTAL ESTIMATE OF CONS	STRUCTION CC	DST			\$	\$231,500
		Contingencies	s (2	0%)			\$46,300
		Engineering	· ·	0%)			\$46,300
		Legal / Admin	•	6%)			\$19,400
		Easement Ac	quisition				\$43,700
	TOTAL OPINION OF PROBA	BLE COST				\$	\$387,200
					Cost per lo	ot	\$38,720

### 4.5 Burlington Highlands

Burlington Highlands is a large sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.5, the approximate limits of this sub-area are Herbert Street to the north, Lacey Road to the west, Grant Street to the south, and Venard Road to the east. The proposed service area includes approximately 187 lots that are mostly developed as single-family residences with septic systems with some potential commercial lots on Ogden Avenue. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties within Burlington Highlands.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Burlington Highlands sub-area has three major drainage divides. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divide. The study area can be divided into four smaller service areas. Properties to the southwest will be served by the existing sanitary sewer south of I-88 (at Lacey and Virginia). Central properties will be served by existing sewers southeast of I-88 (near Morton and Herbert). Residences on Venard Road, north of Drove Avenue will be served by the existing sewer stub 500 feet south of Parrish Court. Residences on Venard Road, just north of Ogden Avenue will be served by the existing sewer south of the park.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Ogden Avenue. Thus, alternatives were considered to minimize crossing of this route with both the mainline sewer and building services.

The sewer layout also considered the several wetlands that are located within the sub-area at the following locations: between Morton and Downers (proposed side yard easement), and various small wetlands located in the vacant development south of Ogden Avenue. Avoiding these wetlands will minimize the time and expense involved in the permitting process for construction in wetlands, as well as reduce the costs associated with restoring these areas.

The Village of Downers Grove and the DuPage Water Commission own and operate water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Burlington Highlands sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

Sub-basin	No. of Services	Layout	Cost Estimate
Morton and Downers	39	Table 4.5-1	Table 4.5-2
40 <sup>th</sup> and Seeley (North)	21	Table 4.5-3	Table 4.5-4
40 <sup>th</sup> and Northcott	14	Table 4.5-5	Table 4.5-6
Virginia-Seeley-Janet-Downers	43	Table 4.5-7	Table 4.5-8
Belle Aire and Venard	21	Table 4.5-9	Table 4.5-10
Venard Road (North)	10	Table 4.5-11	Table 4.5-12
Venard Road (South)	(completed)	Table 4.5-13	Table 4.5-14
Virginia Avenue (West)	6	Table 4.5-15	Table 4.5-16
Lacey-Carol-Northcott	1	Table 4.5-17	Table 4.5-18
Lacey and Janet	14	Table 4.5-19	Table 4.5-20
Ogden-Lacey-Grant-Lee (South)	18	Table 4.5-21	Table 4.5-22

The following are the proposed sub-basins:

Table 4.5-23 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.5.

The Morton and Downers sub-basin sewer plan follows the existing topography which falls from the intersection of Downers and Janet northwest to the creek crossing near Morton and I-88. In general, the sewer alignment on each street should be on the east side of the right-of-way because of the existing water main on the west side of the right-of-way. The existing sewer stub located at Herbert and Downers is too shallow to serve the subject area. The only feasible connection point is the trunk sewer located southeast of I-88. The sewer on Downers should extend west to Morton in a side yard easement along the creek north of 40<sup>th</sup> Street. This subbasin is the second most costly per lot in Burlington Highlands due to the sewer easements that are required. Table 4.5-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,380,300, including contingency, engineering, easements, and legal/administrative costs.

The 40<sup>th</sup> and Seeley (North) sub-basin sewer plan also follows the existing topography which falls from Herbert and Seeley south to 40<sup>th</sup> Street and west to Downers. The sewer alignment on each street should be on the east side of the right-of-way on Seeley and the north side of 40<sup>th</sup> because of the existing water mains on the opposite sides of the right-of-way. Table 4.5-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-4 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$601,700, including contingency, engineering, and legal/administrative costs.

The 40<sup>th</sup> and Northcott sub-basin sewer plan includes the unsewered properties northeast of the ridge that runs from Virginia east of Lee to Janet west of Northcott. The sewer will flow north on Northcott to 40<sup>th</sup> and east along 40<sup>th</sup> to Downers Drive. Table 4.5-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$421,700, including contingency, engineering, and legal/ administrative costs.

The Virginia-Seeley-Janet (South) sub-basin sewer plan follows the existing topography around the highpoint on Downers Dive by flowing east on Janet to Seeley, north to Virginia, and back west to Downers Drive. The proposed sewer must circle Downers Drive because the existing topography at Downers Drive and Janet Street would require a deep cut. Similar to other sub-basins, the sewer should be placed in the parkway opposite of the existing water main. A number of properties between Seeley and Belle Aire could be served by the existing sewer on Belle Aire, but it would require individual grinder pumps and force mains. In the past, the District has not allowed such connections. The proposed sewer on Seeley provides a much better way to serve these parcels by gravity. Table 4.5-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$1,138,900, including contingency, engineering, and legal/administrative costs.

The Belle Aire and Venard sub-basin sewer plan follows the same topography as the Morton and Downers sanitary sewer. All the properties on Belle Aire will flow towards Virginia Street while the sewer on Venard will flow to a low spot near the south end of the park. Similar to the Morton sewer, side yard easements should be obtained to connect Venard to Belle Aire. The required landscaping restoration and easements will be expensive, but the properties on Venard cannot be served by the existing sewer south of 4146 Venard Road or by a sewer on Drove Avenue. This sub-basin is the most costly per lot in Burlington Highlands due to the sewer easements and landscaping. Table 4.5-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$921,700, including contingency, engineering, easements, and legal/administrative costs.

The Venard Road (North) sub-basin sewer plan follows the existing District flow basin as the sewer should flow north on Venard to existing manhole V1-172 in front of 4003 Venard Road. This sewer will serve all remaining unsewered parcels north of Drove Avenue. The sewer should be placed in the east parkway between the edge-of-pavement and sidewalk. Table 4.5-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$370,300, including contingency, engineering, and legal/administrative costs.

Sanitary sewers are available to all parcels in The Venard Road (South) sub-basin as of March 2018. In 2017, approximately 88 feet of 8-inch sanitary sewer was installed with two service connections for a construction cost of \$9,916 to complete the sub-basin. In 2012, approximately 92 feet of 8-inch sanitary sewer and 2 services were constructed for a total price of \$20,000.

The Virginia Avenue (West) sub-basin sewer plan will follow the existing ridge on Virginia west to the existing manhole at 1653 Virginia Avenue. The sewer should be placed in the south right-of-way to avoid the existing water mains. Table 4.5-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$150,000, including contingency, engineering, and legal/administrative costs.

The Lacey-Carol-Northcott sub-basin sewer plan is for the address of 4219 Northcott Avenue. The best alternative is to follow the existing ground slope and connect to the manhole at 4211 Northcott Avenue. From there, the sewer will flow west on Carol Street and north on Lacey Road. Since there is only one unsewered parcel in this basin, the project cost is high. Table 4.5-17 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-18 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$68,100, including contingency, engineering, and legal/administrative costs.

The Lacey and Janet sub-basin sewer plan will follow a similar drainage pattern as the sub-basin to the north. The sewer will flow west on Janet, connect to the existing manhole near 1747 Janet Street, and flow north on Lacey Road. The south right-of-way on Janet is the preferred alignment for the proposed sewer. Table 4.5-19 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-20 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$304,800, including contingency, engineering, and legal/administrative costs.

The Ogden-Lacey-Grant-Lee (South) sub-basin sewer plan follows the existing creek from south of Grant Street to Lacey north of Ogden. There are several potential connection points, but the existing sewer at Lacey is the only feasible alternative to serve the sub-basin because the existing manholes on Grant, Ogden, Stonewall, and Lee are too shallow. The sewers within the undeveloped property south of Ogden should be placed in utility easements. The construction cost for this sub-basin is expensive because of two reasons: the numerous easements required, and the required wetland permitting and restoration. In 2016, construction on the Packey-Webb facility was completed, eliminating a number of unsewered parcels in the sub-basin. In February 2020, Baxter & Woodman performed a special assessment evaluation on the entire Ogden-Lacey-Grant-Lee (South) sub-basin, with the exception of three parcels on the north side of Ogden Avenue. The cost per lot in the special assessment was nearly \$14,000 more than the cost per lot in this plan. This cost difference is due to the entire Ogden/Lacey/Grant/Lee (South) sub-basin needing to be built-out to service the special assessment study area. The cost per lot for the special assessment area did not include three unsewered lots along the north side of Ogden Avenue which have relatively easy and short lengths of sewer installation. Including these three easy-to-connect lots in the UAP causes the overall cost per lot to be lower than the special assessment. This assessment did not move forward any further due to insufficient interest from the property owners. Table 4.5-21 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-22 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$2,485,800, including contingency, engineering, easements, and legal/administrative costs.

# DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

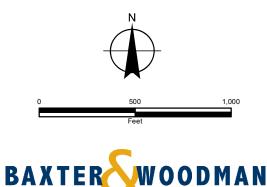
**EXHIBIT 4.5** 

## BURLINGTON HIGHLANDS POSSIBLE SEWER ALIGNMENT

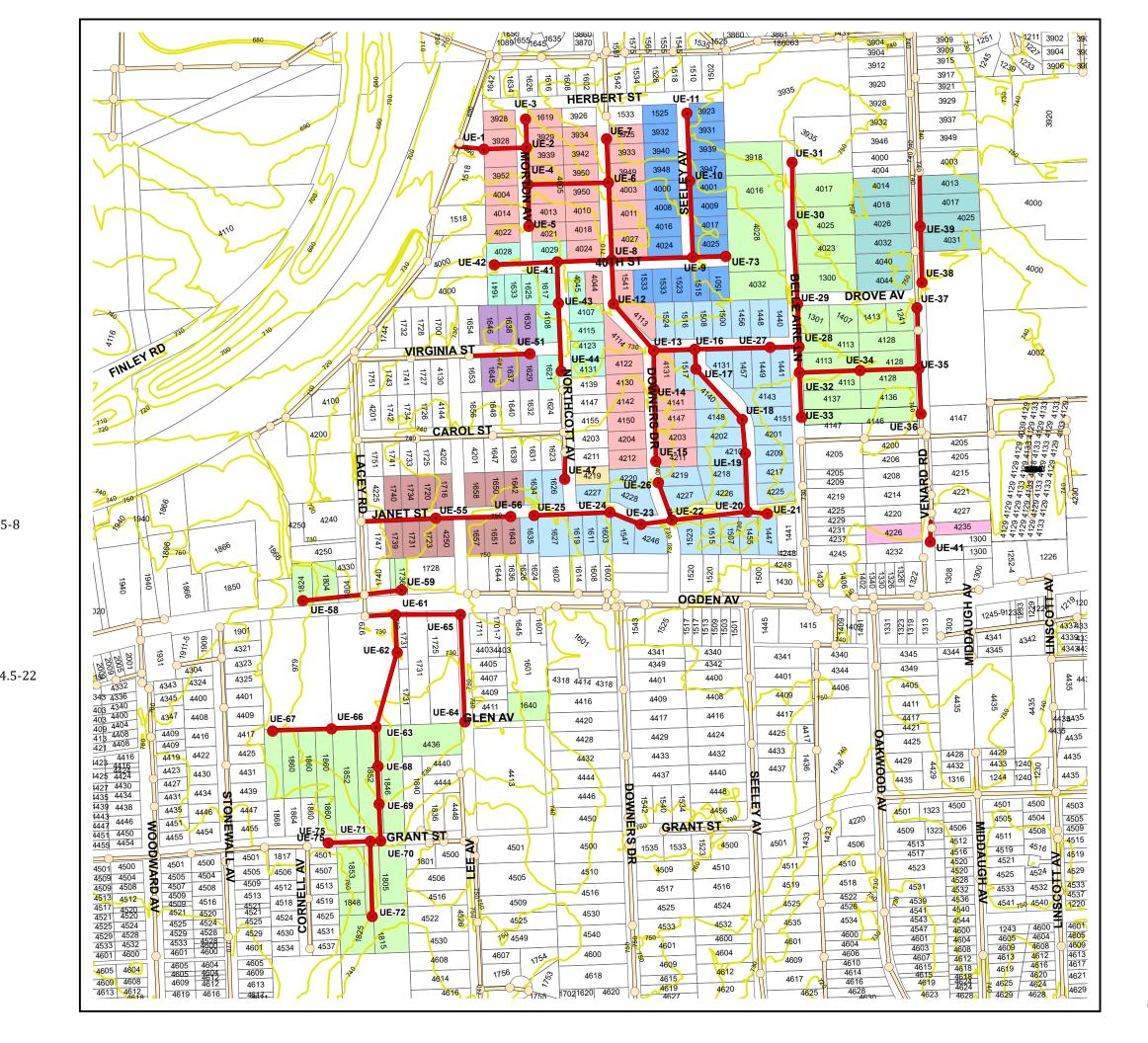
MARCH 2021

### LEGEND

PROPOSED MANHOLES
EXISTING MANHOLES
PROPOSED SEWERS
=== EXISTING SEWERS
PARCEL BOUNDARIES
MORTON AND DOWNERS; TABLES 4.5-1, 4.5-2
40TH AND SEELEY (NORTH);TABLES 4.5-3, 4.5-4
40TH AND NORTHCOTT;TABLES 4.5-5, 4.5-6
VIRGINIA-SEELEY-JANET-DOWNERS;TABLES 4.5-7, 4.5
BELLE AIRE AND VENARD; TABLES 4.5-9, 4.5-10
VENARD ROAD (NORTH);TABLES 4.5-11, 4.5-12
VENARD ROAD (SOUTH);TABLES 4.5-13, 4.5-14
VIRGINIA AVENUE (WEST);TABLES 4.5-15, 4.5-16
LACEY-CAROL-NORTHCOTT;TABLES 4.5-17, 4.5-18
LACEY AND JANET; TABLES 4.5-19, 4.5-20
OGDEN-LACEY-GRANT-LEE (SOUTH);TABLES 4.5-21, 4



I:\Crystal Lake\DGSD1\200407-2020 UAP\GIS\MXDs\4-5 Burlington-Highlands.mxd 563dks - 4/10/2020 Copyright 2020, By Baxter & Woodman, Inc. State of Illinois - Professional Design Firm License No. - 184-001121 - Expires 4-30-20



# Table 4.5-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersMorton and DownersPreliminary Design Layout

Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Morton Avenue					
N-2-001 existing	690.2	685.00	100	4.000/	5.2
UE-1	694.5	686.00	100	1.00%	8.5
UE-2	698.5	688.25	225	1.00%	10.3
UE-3	705.5	694.95	150	3.00%	10.6
UE-4	703.3	690.45	220	1.00%	12.8
UE-5	720.0	707.45	220	5.00%	12.6
Downers Drive					
			400	2.00%	
UE-6	716.0	698.45	250	5.00%	17.6
UE-7	724.0	710.95	400	1.50%	13.1
UE-8	713.5	704.45	250	2.00%	9.0
UE-12	719.5	709.45	320	1.50%	10.1
UE-13	729.0	714.25	180	3.00%	14.8
UE-14	738.0	719.65	400	2.50%	18.4
UE-15	741.0	729.65	400	2.3070	11.4

No.	Pay Item		Approx Quar		Unit Price		Amount
MA	INLINE SEWER						
1	SANITARY SEWER (C	OPEN CUT)					
	8-inch	0-8 feet deep	100	lin. ft.	\$ 75.00	\$	\$7,500
		8-12 feet deep	1,295	lin. ft.	\$ 87.00	\$ \$ \$	\$112,665
		12-16 feet deep	1,485	lin. ft.	\$ 106.00	\$	\$157,410
		16-20 feet deep	235	lin. ft.	\$ 127.00	\$	\$29,845
2	SANITARY MANHOLE	S					
	48-inch	0-8 feet deep	0	each	\$ 4,800.00	\$	\$0
		8-12 feet deep	6	each	\$ 6,400.00	\$	\$38,400
		12-16 feet deep	4	each	\$ 7,700.00	\$	\$30,800
		16-20 feet deep	2	each	\$ 10,300.00	\$	\$20,600
3	CONNECTION TO EX	ISTING MANHOLE					
	8-inch		1	each	\$ 6,200.00	\$	\$6,200
4	TRENCH BACKFILL						
	8-inch	0-8 feet deep	0	lin. ft.	\$ 93.00	\$	\$0
		8-12 feet deep	165	lin. ft.	\$ 113.00	\$ \$ \$	\$18,645
		12-16 feet deep	520	lin. ft.	\$ 137.00	\$	\$71,240
		16-20 feet deep	60	lin. ft.	\$ 180.00	\$	\$10,800
5	TREE TUNNELING		110	lin. ft.	\$ 192.00	\$	\$21,120
6	AUGER UNDER EXIS	TING BOX CULVERT	20	lin. ft.	\$ 477.00	\$	\$9,540
7	SEWER TELEVISING	FOR FINAL INSPECTION	3,115	lin. ft.	\$ 3.00	\$	\$9,345
8	SEWER TESTING FO	R FINAL INSPECTION	3,115	lin. ft.	\$ 3.00	\$	\$9,345
9	CULVERT REMOVAL	AND REPLACEMENT					
	12-inch		160	lin. ft.	\$ 81.00	\$	\$12,960
10		AWNS AND PARKWAYS					
	Topsoil and sod		5,000	sq.yd.	\$ 14.00	\$	\$70,000
11	RESTORATION OF S	TREETS					
	Bit. Concrete Stree	et	85	sq.yd.	\$ 64.00	\$	\$5,440
	PCC Sidewalk		2,500	sq. ft	\$ 13.00	\$	\$32,500
12	REMOVE AND REPLA	ACE DRIVEWAYS					
	Bituminous		230	sq.yd.	\$ 48.00	\$	\$11,040
	Concrete		120	sq.yd.	\$ 81.00	\$	\$9,720

No.	Pay Item	Approx Quar		Unit Price		Amount
110.		Qual	itty		11100	Amount
13	TREE REMOVAL AND TRIMMING:			Lun	np Sum	\$ \$19,950
14	EROSION CONTROL:			Lun	np Sum	\$ \$13,300
15	TRAFFIC CONTROL:			Lun	np Sum	\$ \$13,300
	SUBTOTAL					\$ \$741,665
SEF	RVICE LATERALS					
1	BUILDING SERVICE LINES					
	Near side	320	lin. ft.	\$	50.00	\$ \$16,000
	Far side	950	lin. ft.	\$	50.00	\$ \$47,500
	Riser Pipes	75	vert. ft.	\$	47.00	\$ \$3,525
2	BUILDING SERVICE BRANCH FITTIN					
	Near Side	20	each	\$	554.00	\$ \$11,080
	Far side	19	each	\$	682.00	\$ \$12,958
3	BUILDING SERVICE PLUG:	39	each	\$	208.00	\$ \$8,112
4	RESTORATION OF LAWNS AND PAR	RKWAYS				
	Topsoil and sod	490	sq.yd.	\$	14.00	\$ \$6,860
5	RESTORATION OF STREETS:					
	Bit. Concrete Street	340	sq.yd.	\$	63.00	\$ \$21,420
6	TRENCH BACKFILL					
	8-12 feet deep	600	lin. ft.	\$	83.00	\$ \$49,800
	SUBTOTAL					\$ \$177,255
	TOTAL ESTIMATE OF CONSTRU	ICTION COST				\$ \$918,900
		Contingencies	(20%)			\$183,800
		Engineering	(20%)			\$183,800
		Legal / Admin	(6%)			\$77,200
		Easement Acqui	isition			\$16,600
	TOTAL OPINION OF PROBABLE	COST				\$ \$1,380,300

Table 4.5-3Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers40th and Seely (North)Preliminary Design Layout

ļ	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
40th Place						
	UE-8	713.5	704.45			9.0
	UE-9	719.0	707.43	425	0.70%	11.6
	UE-73	722.0	712.23	160	3.00%	9.8
Seely Avenu	IA					
<u>deely Avent</u>						
	UE-10	725.0	715.43	400	2.00%	9.6
				335	3.00%	
	UE-11	736.0	725.48			10.5

No.	Pay Item		Approxi Quan			Unit Price		Amount
	INLINE SEWER		Quan	in y		11100		,
1	SANITARY SEWER (OF 8-inch	PEN CUT) 0-8 feet deep	80	lin. ft.	\$	75.00	¢	\$6,000
	0-men	8-12 feet deep	1,240	lin. ft.	φ \$	87.00	\$ \$	\$107,880
2	SANITARY MANHOLES	3						
	48-inch	0-8 feet deep	0	each	\$	4,800.00	\$	\$0
		8-12 feet deep	4	each	\$	6,400.00	\$	\$25,600
3	CONNECTION TO EXIS	STING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFILL		50	1: <b>f</b> t	۴	00.00	¢	¢4.050
	8-inch	0-8 feet deep 8-12 feet deep	50 402	lin. ft. lin. ft.	\$ \$	93.00 113.00	<u>\$</u> \$	\$4,650 \$45,426
5	TREE TUNNELING		80	lin. ft.	\$	192.00	\$	\$15,360
6	SEWER TELEVISING F	OR FINAL INSPECTION	1,320	lin. ft.	\$	3.00	\$	\$3,960
7	SEWER TESTING FOR	FINAL INSPECTION	1,320	lin. ft.	\$	3.00	\$	\$3,960
8	CULVERT REMOVAL A							
0	12-inch		188	lin. ft.	\$	81.00	\$	\$15,228
9	RESTORATION OF LAW	WNS AND PARKWAYS						
	Topsoil and sod		1,895	sq.yd.	\$	14.00	\$	\$26,530
10	RESTORATION OF STR		00		۴	64.00	¢	¢4,000
	Bit. Concrete Street		20	sq.yd.	\$	64.00	\$	\$1,280
11	REMOVE AND REPLAC Bituminous	CE DRIVEWAYS	126	sq.yd.	¢	48.00	\$	\$6,048
	Concrete		0	sq.ya. sq.yd.	\$ \$	48.00	ծ \$	\$0,048 \$0
12	TREE REMOVAL AND	TRIMMING:			Lur	mp Sum	\$	\$665

	Deviltere	Approxi		Unit		A
No.	Pay Item	Quan	tity	Price		Amount
13	EROSION CONTROL:			Lump Sum	\$	\$665
14	TRAFFIC CONTROL:			Lump Sum	\$	\$6,650
	SUBTOTAL				\$	\$276,102
SEI	RVICE LATERALS					
1	BUILDING SERVICE LINES Near side Far side	378 1,008	lin. ft. lin. ft.	\$50.00 \$50.00	\$ \$	\$18,900 \$50,400
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	9 12	each each	\$ 554.00 \$ 682.00	\$ \$	\$4,986 \$8,184
3	BUILDING SERVICE PLUG:	21	each	\$ 208.00	\$	\$4,368
4	RESTORATION OF LAWNS AND PARKWA Topsoil and sod	YS 500	sq.yd.	\$ 14.00	\$	\$7,000
5	RESTORATION OF STREETS: Bit. Concrete Street	168	sq.yd.	\$ 63.00	\$	\$10,584
6	TRENCH BACKFILL 8-12 feet deep	300	lin. ft.	\$ 83.00	\$	\$24,900
	SUBTOTAL				\$	\$129,322
	TOTAL ESTIMATE OF CONSTRUCTIO	N COST			\$	\$405,400
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			\$81,100 \$81,100 \$34,100
	TOTAL OPINION OF PROBABLE COS	т			\$	\$601,700
				Cost per lot		\$28,650

Table 4.5-5Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers40th and NorthcottPreliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
40th Plac	<u>e</u>					
	UE-8	713.5	704.45			9.0
				280	2.00%	10.0
	UE-41	721.0	710.05	300	2.00%	10.9
	UE-42	729.0	716.05	300	2.00 /8	12.9
Northcott	Avenue					
				250	1.00%	
	UE-43	725.0	712.55		/	12.4
	UE-44	731.0	719.55	350	2.00%	11.4

No.	Pay Item		Approxi Quan			Unit Price		Amount
MA	NLINE SEWER							
1	SANITARY SEWER (C	PEN CUT)						
	8-inch	0-8 feet deep	15	lin. ft.	\$	75.00	\$	\$1,125
		8-12 feet deep	1,025	lin. ft.	\$	87.00	\$	\$89,175
		12-16 feet deep	140	lin. ft.	\$	106.00	\$	\$14,840
2	SANITARY MANHOLE	S						
	48-inch	0-8 feet deep	0	each	\$	4,800.00	\$	\$0
		8-12 feet deep	4	each	\$	6,400.00	\$	\$25,600
		12-16 feet deep	0	each	\$	7,700.00	\$	\$0
3	CONNECTION TO EXI	STING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFILL							
	8-inch	0-8 feet deep	0	lin. ft.	\$	93.00	\$	\$0
		8-12 feet deep	239	lin. ft.	\$	113.00	<u>\$</u> \$	\$27,007
		12-16 feet deep	15	lin. ft.	\$	137.00	\$	\$2,055
5	TREE TUNNELING		50	lin. ft.	\$	192.00	\$	\$9,600
6	SEWER TELEVISING	FOR FINAL INSPECTION	1,180	lin. ft.	\$	3.00	\$	\$3,540
7	SEWER TESTING FOR	R FINAL INSPECTION	1,180	lin. ft.	\$	3.00	\$	\$3,540
8	CULVERT REMOVAL	AND REPLACEMENT						
	12-inch		30	lin. ft.	\$	81.00	\$	\$2,430
9	RESTORATION OF LA	WNS AND PARKWAYS						
	Topsoil and sod		1,692	sq.yd.	\$	14.00	\$	\$23,688
10	RESTORATION OF ST	REETS						
	Bit. Concrete Stree	et	39	sq.yd.	\$	64.00	\$	\$2,496
	PCC Sidewalk		0	sq. ft.	\$	13.00	\$	\$0
11	REMOVE AND REPLA	CE DRIVEWAYS						
	Bituminous		29	sq.yd.	\$	48.00	<u>\$</u> \$	\$1,392
	Concrete		0	sq.yd.	\$	81.00	\$	\$0
10	TREE REMOVAL AND	TRIMMING			Lur	mp Sum	\$	\$665

No.	Pay Item	Approxi Quan		Unit Price		Amount
13	EROSION CONTROL:		•	Lump Sum	\$	\$665
14	TRAFFIC CONTROL:			Lump Sum	\$	\$5,985
	SUBTOTAL				\$	\$220,003
SEI	RVICE LATERALS					
1	BUILDING SERVICE LINES Near side Far side	75 459	lin. ft. lin. ft.	\$ 50.00 \$ 50.00	\$ \$	\$3,750 \$22,950
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	5 9	each each	\$ 554.00 \$ 682.00	\$ \$	\$2,770 \$6,138
3	BUILDING SERVICE PLUG:	14	each	\$ 208.00	\$	\$2,912
4	RESTORATION OF LAWNS AND PARKW Topsoil and sod	/AYS 281	sq.yd.	\$ 14.00	\$	\$3,934
5	RESTORATION OF STREETS: Bit. Concrete Street	132	sq.yd.	\$ 63.00	\$	\$8,316
6	TRENCH BACKFILL 0-8 feet deep	216	lin. ft.	\$ 62.00	\$	\$13,392
	SUBTOTAL				\$	\$64,162
	TOTAL ESTIMATE OF CONSTRUCT	ION COST			\$	\$284,200
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			\$56,800 \$56,800 \$23,900
	TOTAL OPINION OF PROBABLE CO	ST			\$	\$421,700
				Cost per lot		\$30,120

### Table 4.5-7Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersVirginia-Seeley-Janet-DownersPreliminary Design Layout

Mar	nhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Virginia Street						
	UE-13	729.0	714.25			14.8
	UE-16	726.0	715.05	200	0.40%	11.0
	UE-27	725.5	716.65	400	0.40%	8.9
	UE-28	728.0	717.31	165	0.40%	10.7
Seeley Avenue						
	UE-17	726.0	715.49	110	0.40%	10.5
	UE-18	728.0	716.83	335	0.40%	11.2
				190	0.40%	
	UE-19	727.0	717.59	320	0.40%	9.4
	UE-20	728.0	718.87			9.1
Janet Street						
	UE-21	730.0	719.87	100	1.00%	10.1
				400	0.40%	
	UE-22	730.0	720.47	160	1.00%	9.5
	UE-23	736.0	722.07	150	3.00%	13.9
	UE-24	740.0	726.57			13.4
	UE-25	752.0	738.57	400	3.00%	13.4
Downers Drive						
	UE-26	736.0	722.97	250	1.00%	13.0

			Approx			Unit	
No.	Pay Item		Quar	ntity		Price	Amount
MA	INLINE SEWER						
1	SANITARY SEWER (O	PEN CUT)					
	8-inch	0-8 feet deep	720	lin. ft.	\$	75.00	\$ \$54,000
		8-12 feet deep	2,460	lin. ft.	\$	87.00	\$ \$214,020
2	SANITARY MANHOLES	5					
	48-inch	0-8 feet deep	4	each	\$	4,800.00	\$ \$19,200
		8-12 feet deep	9	each	\$	6,400.00	\$ \$57,600
3	CONNECTION TO EXIS	STING MANHOLE					
	8-inch		1	each	\$	6,200.00	\$ \$6,200
4	TRENCH BACKFILL						
	8-inch	0-8 feet deep	86	lin. ft.	\$	93.00	\$ \$7,998
		8-12 feet deep	796	lin. ft.	\$	113.00	\$ \$89,948
5	TREE TUNNELING		90	lin. ft.	\$	192.00	\$ \$17,280
6	SEWER TELEVISING F	OR FINAL INSPECTION	3,180	lin. ft.	\$	3.00	\$ \$9,540
7	SEWER TESTING FOR	R FINAL INSPECTION	3,180	lin. ft.	\$	3.00	\$ \$9,540
8	CULVERT REMOVAL A	AND REPLACEMENT					
	12-inch		205	lin. ft.	\$	81.00	\$ \$16,605
9		WNS AND PARKWAYS					
	Topsoil and sod		4,312	sq.yd.	\$	14.00	\$ \$60,368
10	RESTORATION OF ST						
	Bit. Concrete Stree	t	109	sq.yd.	\$	64.00	\$ \$6,976
	PCC Sidewalk		50	sq. ft.	\$	13.00	\$ \$650
11	REMOVE AND REPLAC	CE DRIVEWAYS					
	Bituminous		268	sq.yd.	\$	48.00	\$ \$12,864
	Concrete		0	sq.yd.	\$	81.00	\$ \$0
12	TREE REMOVAL AND	TRIMMING:			Lur	mp Sum	\$ \$1,330

No.	Pay Item	Approx Quai		Unit Price		Amount
110.	·	Qua	Inty			
13	EROSION CONTROL:			Lump Sum	\$	\$1,330
14	TRAFFIC CONTROL:			Lump Sum	\$	\$13,300
	SUBTOTAL				\$	\$598,749
SE	RVICE LATERALS					
1	BUILDING SERVICE LINES Near side Far side	375 918	lin. ft. lin. ft.	<u>\$50</u> . \$50.		\$18,750 \$45,900
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	25 18	each each	\$554. \$682.		\$13,850 \$12,276
3	BUILDING SERVICE PLUG:	43	each	\$ 208.	00 \$	\$8,944
4	RESTORATION OF LAWNS AND PARKW/ Topsoil and sod	AYS 878	sq.yd.	<u>\$ 14</u> .	00 \$	\$12,292
5	RESTORATION OF STREETS: Bit. Concrete Street	252	sq.yd.	\$ 63.	00 \$	\$15,876
6	TRENCH BACKFILL 8-12 feet deep	486	lin. ft.	\$ 83.	00 \$	\$40,338
7	REMOVE AND REPLACE DRIVEWAYS Bituminous	10	sq. yd.	\$ 47.	00 \$	\$470
	SUBTOTAL				\$	\$168,696
	TOTAL ESTIMATE OF CONSTRUCTION	ON COST			\$	\$767,400
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			\$153,500 \$153,500 \$64,500
	TOTAL OPINION OF PROBABLE COS	ЭТ			\$	\$1,138,900
				Cost per	lot	\$26,490

## Table 4.5-9Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersBelle Aire and VenardPreliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Belle Aire L	ane					
	UE-28	728.0	717.31		0.000/	10.7
	UE-29	732.0	719.19	235	0.80%	12.8
	UE-30	736.0	723.19	400	1.00%	12.8
	UE-31	744.0	730.39	360	2.00%	13.6
	UE-32	728.0	717.83	130	0.40%	10.2
		736.0	723.43	280	2.00%	
	UE-33	730.0	723.43			12.6
Backyard E				330	0.40%	
	UE-34	730.0	719.15	320	0.80%	10.9
	UE-35	735.0	721.71			13.3
Venard Roa	ad					
		700.0	707 44	270	2.00%	10.0
	UE-36	738.0	727.11	300	2.00%	10.9
	UE-37	738.0	727.71			10.3

	David		Approx			Unit		<b>A</b>
No.	Pay Item		Quar	itity		Price		Amount
MA	INLINE SEWER							
1	SANITARY SEWER (O	PEN CUT)						
	8-inch	0-8 feet deep	150	lin. ft.	\$	75.00	\$	\$11,250
		8-12 feet deep	2,475	lin. ft.	\$	87.00	\$	\$215,325
2	SANITARY MANHOLES	S						
	48-inch	0-8 feet deep	0	each	\$	4,800.00	\$	\$0
		8-12 feet deep	9	each	\$	6,400.00	\$	\$57,600
3	CONNECTION TO EXIS	STING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFILL							
	8-inch	0-8 feet deep	0	lin. ft.	\$	93.00	\$	\$0
		8-12 feet deep	758	lin. ft.	\$	113.00	\$	\$85,654
5	TREE TUNNELING		90	lin. ft.	\$	192.00	\$	\$17,280
6	SEWER TELEVISING F	FOR FINAL INSPECTION	2,625	lin. ft.	\$	3.00	\$	\$7,875
7	SEWER TESTING FOR	R FINAL INSPECTION	2,625	lin. ft.	\$	3.00	\$	\$7,875
8	CULVERT REMOVAL	AND REPLACEMENT			•	04.00	<u> </u>	<b>A</b> 4 000
	12-inch		20	lin. ft.	\$	81.00	\$	\$1,620
9	RESTORATION OF LA	WNS AND PARKWAYS						
	Topsoil and sod		3,536	sq.yd.	\$	14.00	\$	\$49,504
10	RESTORATION OF ST							
	Bit. Concrete Stree	t	530	sq.yd.	\$	64.00	\$	\$33,920
	PCC Sidewalk		50	sq. ft.	\$	13.00	\$	\$650
11	REMOVE AND REPLAC	CE DRIVEWAYS						
	Bituminous		167	sq.yd.	\$	48.00	\$	\$8,016
	Concrete		15	sq.yd.	\$	81.00	\$	\$1,215
12	TREE REMOVAL AND	TRIMMING:			Lu	mp Sum	\$	\$16,625
13	EROSION CONTROL:				Lu	mp Sum	\$	\$9,975

No.	Pay Item	Approx Quar			Unit Price		Amount
	TRAFFIC CONTROL:			Lun	np Sum	\$	\$9,975
	SUBTOTAL					\$	\$540,559
SEF	RVICE LATERALS						
1	BUILDING SERVICE LINES Near side Far side	225 306	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	\$11,250 \$15,300
2	BUILDING SERVICE BRANCH FITTING Near Side Far side	iS 15 6	each each	\$ \$	554.00 682.00	\$ \$	\$8,310 \$4,092
3	BUILDING SERVICE PLUG:	21	each	\$	208.00	\$	\$4,368
4	RESTORATION OF LAWNS AND PARK Topsoil and sod	WAYS 367	sq.yd.	\$	14.00	\$	\$5,138
5	RESTORATION OF STREETS: Bit. Concrete Street	84	sq.yd.	\$	63.00	\$	\$5,292
6	TRENCH BACKFILL 0-8 feet deep	162	lin. ft.	\$	62.00	\$	\$10,044
	SUBTOTAL					\$	\$63,794
	TOTAL ESTIMATE OF CONSTRUC	CTION COST				\$	\$604,400
		Contingencies Engineering Legal / Admin Easement Acqui	(20%) (20%) (6%) sition				\$120,900 \$120,900 \$50,800 \$24,700
	TOTAL OPINION OF PROBABLE C	COST				\$	\$921,700
				С	Cost per lot		\$43,890

### Table 4.5-11 **Possible Special Assessment for Sanitary Sewers Burlington Highlands Venard Road (North) Preliminary Design Layout**

Manhole Number	Rim	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Venard Road					
V1-172 (existing)	742.0	734.24	300	0.40%	7.8
UE-39	746.0	735.44	300	0.40%	10.6
UE-38	746.0	736.64	300	0.40%	9.4

No.	Pay Item		Approx Quar			Unit Price		Amount
МА	INLINE SEWER							
1	SANITARY SEWER (O 8-inch	PEN CUT) 0-8 feet deep 8-12 feet deep	150 450	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	\$11,250 \$39,150
2	SANITARY MANHOLE 48-inch	S 0-8 feet deep 8-12 feet deep	0 2	each each	\$ \$	4,800.00 6,400.00	\$ \$	\$0 \$12,800
3	CONNECTION TO EXI 8-inch	STING MANHOLE	1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFILL 8-inch	0-8 feet deep 8-12 feet deep	150 450	lin. ft. lin. ft.	\$ \$	93.00 113.00	\$ \$	\$13,950 \$50,850
5	TREE TUNNELING		0	lin. ft.	\$	192.00	\$	\$0
6	SEWER TELEVISING F	FOR FINAL INSPECTION	600	lin. ft.	\$	3.00	\$	\$1,800
7	SEWER TESTING FOR	R FINAL INSPECTION	600	lin. ft.	\$	3.00	\$	\$1,800
8	CULVERT REMOVAL A 12-inch	AND REPLACEMENT	40	lin. ft.	\$	81.00	\$	\$3,240
9	RESTORATION OF LA Topsoil and sod	WNS AND PARKWAYS	1,333	sq.yd.	\$	14.00	\$	\$18,662
10	RESTORATION OF ST Bit. Concrete Stree PCC Sidewalk		0 2,000	sq.yd. sq. ft.	\$ \$	64.00 13.00	\$ \$	\$0 \$26,000
11	REMOVE AND REPLA Bituminous Concrete	CE DRIVEWAYS	142 27	sq.yd. sq.yd.	\$ \$	48.00 81.00	\$ \$	\$6,816 \$2,187
12	TREE REMOVAL AND	TRIMMING:			Lu	mp Sum	\$	\$333
13	EROSION CONTROL:				Lu	mp Sum	\$	\$333

No.	Pay Item	Approx Quar		Unit Price		Amount
14	TRAFFIC CONTROL:			Lump Sum	\$	\$8,645
	SUBTOTAL				\$	\$204,015
SEF	RVICE LATERALS					
1	BUILDING SERVICE LINES Near side Far side	60 306	lin. ft. lin. ft.		. <u>00</u> \$	\$3,000 \$15,300
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	4	each each	<u>\$554</u> \$682		\$2,216 \$4,092
3	BUILDING SERVICE PLUG:	10	each	\$ 208	.00 \$	\$2,080
4	RESTORATION OF LAWNS AND PARKW Topsoil and sod	/AYS 244	sq.yd.	<u>\$</u> 14	.00 \$	\$3,416
5	RESTORATION OF STREETS: Bit. Concrete Street	84	sq.yd.	<u>\$ 63</u>	.00 \$	\$5,292
6	TRENCH BACKFILL 0-8 feet deep	162	lin. ft.	\$ 62	.00 \$	\$10,044
	SUBTOTAL				\$	\$45,440
	TOTAL ESTIMATE OF CONSTRUCT	ION COST			\$	\$249,500
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			\$49,900 \$49,900 \$21,000
	TOTAL OPINION OF PROBABLE CO	ST			\$	\$370,300
				Cost per	lot	\$37,030

### Table 4.5-13 Possible Special Assessment for Sanitary Sewers Burlington Highlands Venard Road (South) Preliminary Design Layout

Manhole Number

<u>Rim</u>

Length (ft)

<u>Slope</u>

Manhole <u>Depth</u>

(Sanitary sewers are available as of March 2018.)

Invert

		Approximate	Unit	
No.	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2018.)

		Approximate	Unit	
No.	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2018.)

### Table 4.5-15 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Virginia Avenue (West) Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Virginia Street					
SA-N-1-138	732.4	720.69	330	2.50%	11.7
UE-51	738.0	728.94	330	2.50%	9.1

	5		Approx			Unit	<u> </u>
No.	Pay Item		Qua	ntity		Price	Amount
MA	INLINE SEWER						
1	SANITARY SEWER (O						
	8-inch	8-12 feet deep	80	lin. ft.	\$	87.00	\$ \$6,960
		12-16 feet deep	250	lin. ft.	\$	106.00	\$ \$26,500
2	SANITARY MANHOLES						
	48-inch	8-12 feet deep	1	each	\$	6,400.00	\$ \$6,400
		12-16 feet deep	0	each	\$	7,700.00	\$ \$0
3	CONNECTION TO EXIS	STING MANHOLE					
	8-inch		1	each	\$	6,200.00	\$ \$6,200
4	TRENCH BACKFILL						
	8-inch	8-12 feet deep	20	lin. ft.	\$	113.00	\$ \$2,260
		12-16 feet deep	40	lin. ft.	\$	137.00	\$ \$5,480
5	TREE TUNNELING		0	lin. ft.	\$	192.00	\$ \$0
6	SEWER TELEVISING F	FOR FINAL INSPECTION	330	lin. ft.	\$	3.00	\$ \$990
7	SEWER TESTING FOR	R FINAL INSPECTION	330	lin. ft.	\$	3.00	\$ \$990
8	CULVERT/STORM REI	MOVAL AND REPLACEME	ENT				
	12-inch		60	lin. ft.	\$	81.00	\$ \$4,860
9	RESTORATION OF LA	WNS AND PARKWAYS					
	Topsoil and sod		890	sq.yd.	\$	14.00	\$ \$12,460
10	RESTORATION OF ST	REETS					
	Bit. Concrete Stree	t	0	sq.yd.	\$	64.00	\$ \$0
	PCC Sidewalk		0	sq. ft.	\$	13.00	\$ \$0
11	REMOVE AND REPLAC	CE DRIVEWAYS					
	Bituminous		28	sq.yd.	\$	48.00	\$ \$1,365
	Aggregate		14	sq.yd.	\$	20.00	\$ \$284
12	TREE REMOVAL AND	TRIMMING:			Lu	mp Sum	\$ \$333
13	EROSION CONTROL:				Lu	mp Sum	\$ \$333

No.	Pay Item	Appro> Qua			Unit Price		Amount
	TRAFFIC CONTROL:			Lun	np Sum	\$	\$1,330
	SUBTOTAL					\$	\$76,744
SEF	RVICE LATERALS						
1	BUILDING SERVICE LINES						
	Near side	39	lin. ft.	\$	50.00	\$	\$1,950
	Far side	159	lin. ft.	\$	50.00	\$	\$7,950
2	BUILDING SERVICE BRANCH FITTING	S					
	Near Side	3	each	\$	554.00	\$	\$1,662
	Far side	3	each	\$	682.00	\$	\$2,046
3	BUILDING SERVICE PLUG:	6	each	\$	208.00	\$	\$1,248
4	RESTORATION OF LAWNS AND PARK	WAYS					
-	Topsoil and sod	143	sq.yd.	\$	14.00	\$	\$2,007
5	RESTORATION OF STREETS:						
U	Bit. Concrete Street	48	sq.yd.	\$	63.00	\$	\$3,024
0							
6	TRENCH BACKFILL 0-8 feet deep	72	lin. ft.	\$	62.00	\$	\$4,464
		. –		<u>+</u>		<u>+</u>	÷ , , , , , , , , , , , , , , , , , , ,
	SUBTOTAL					\$	\$24,351
	TOTAL ESTIMATE OF CONSTRUC	CTION COST				\$	\$101,100
		<b>•</b>	(				
		Contingencies	(20%)				\$20,200
		Engineering Legal / Admin	(20%) (6%)				\$20,200 \$8,500
	TOTAL OPINION OF PROBABLE C	COST				\$	\$150,000
				~	Cost per lot		\$25,000

### Table 4.5-17Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersLacey-Carol-NorthcottPreliminary Design Layout

Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Northcott Avenue					
SA-N-1-143	739.5	729.20	140	1.50%	10.3
UE-47	741.0	731.30	140	1.50%	9.7

No.	Pay Item		Approx Qua			Unit Price			Amount
MA	INLINE SEWER								
1	SANITARY SEWER (OF 8-inch	PEN CUT) 0-8 feet deep 8-12 feet deep	40 100	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	\$ \$	3,000 8,700
2	SANITARY MANHOLES 48-inch	6 0-8 feet deep	1	each	\$	3,500.00	\$	\$	3,500
3	CONNECTION TO EXIS 8-inch	STING MANHOLE	1	each	\$	6,200.00	\$	\$	6,200
4	TRENCH BACKFILL 8-inch	12-16 feet deep	15	lin. ft.	\$	137.00	\$	\$	2,055
5	TREE TUNNELING		0	lin. ft.	\$	192.00	\$	\$	-
6	SEWER TELEVISING F	OR FINAL INSPECTION	140	lin. ft.	\$	3.00	\$	\$	420
7	SEWER TESTING FOR	FINAL INSPECTION	140	lin. ft.	\$	3.00	\$	\$	420
8	CULVERT REMOVAL A 12-inch	ND REPLACEMENT	0	lin. ft.	\$	81.00	\$	\$	
9	RESTORATION OF LA Topsoil and sod	WNS AND PARKWAYS	194	sq.yd.	\$	14.00	\$	\$	2,722
10	RESTORATION OF ST Bit. Concrete Stree		20	sq.yd.	\$	64.00	\$	\$	1,252
11	REMOVE AND REPLAC Bituminous	CE DRIVEWAYS	14	sq.yd.	\$	48.00	\$	\$	683

		Approx			Unit			
<u>No.</u>	Pay Item	Qua	ntity		Price			Amount
12	REMOVE AND REPLACE AGGREGATE DIT	CH 78	sq.yd.	\$	20.00	\$	\$	1,556
13	TREE REMOVAL AND TRIMMING:			Lum	np Sum	\$	\$	333
14	EROSION CONTROL			Lum	np Sum	\$	\$	333
15	TRAFFIC CONTROL			Lum	ıp Sum	\$	\$	1,330
	SUBTOTAL					\$	\$	32,502
SEI 1	RVICE LATERALS BUILDING SERVICE LINES							
	Near side	0	lin. ft.	\$	50.00	\$ \$	\$	-
	Far side	1	lin. ft.	\$	50.00	\$	\$	50
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	0 1	each	<u>\$</u> \$	554.00 682.00	\$	\$ \$	682
	Fai side	1	each	φ	002.00	φ	φ	002
3	BUILDING SERVICE PLUG:	1	each	\$	63.00	\$	\$	63
4	RESTORATION OF LAWNS AND PARKWAY Topsoil and sod	S 73	sq.yd.	\$	14.00	\$	\$	1,027
5	RESTORATION OF STREETS: Bit. Concrete Street	156	sq.yd.	\$	63.00	\$	\$	9,828
6	TRENCH BACKFILL 0-8 feet deep	26	lin. ft.	\$	62.00	\$	\$	1,612
	SUBTOTAL					\$	\$	13,262
	TOTAL ESTIMATE OF CONSTRUCTION	COST				\$	\$	45,800
	I	ontingencies Engineering egal / Admin	(20%) (20%) (6%)				\$ \$ \$	9,200 9,200 3,900
	TOTAL ESTIMATE OF COST					\$	\$	68,100
				С	ost per lot		\$	68,100

Table 4.5-19Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersLacey and JanetPreliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Lacey Roa	ad					
(existing)	SA-N-1-134	724.3	711.86			12.4
Janet Stre	<u>et</u>					
				400	1.20%	
	UE-55	730.0	716.66	400	0.80%	13.3
	UE-56	730.0	719.86			10.1

			Approx			Unit		
No.	Pay Item		Quar	ntity		Price		Amount
MA	INLINE SEWER							
1	SANITARY SEWER (C	PEN CUT)						
	8-inch	8-12 feet deep	40	lin. ft.	\$	87.00	\$	\$3,480
		12-16 feet deep	720	lin. ft.	\$	106.00	\$	\$76,320
		16-20 feet deep	40	lin. ft.	\$	127.00	\$	\$5,080
2	SANITARY MANHOLE	S						
	48-inch	8-12 feet deep	2	each	\$	6,400.00	\$	\$12,800
		12-16 feet deep	0	each	\$	7,700.00	\$	\$0
		16-20 feet deep	0	each	\$	10,300.00	\$	\$0
3	CONNECTION TO EXI	STING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFILL							
•	8-inch	8-12 feet deep	0	lin. ft.	\$	113.00	\$	\$0
		12-16 feet deep	128	lin. ft.	\$	137.00	\$	\$17,536
		16-20 feet deep	0	lin. ft.	\$	180.00	\$	\$0
5	TREE TUNNELING		22	lin. ft.	\$	192.00	\$	\$4,224
6	SEWER TELEVISING	FOR FINAL INSPECTION	800	lin. ft.	\$	3.00	\$	\$2,400
7	SEWER TESTING FOR	R FINAL INSPECTION	800	lin. ft.	\$	3.00	\$	\$2,400
8	CULVERT REMOVAL	AND REPLACEMENT						
	12-inch		0	lin. ft.	\$	81.00	\$	\$0
9	RESTORATION OF LA	WNS AND PARKWAYS						
	Topsoil and sod		107	sq.yd.	\$	14.00	\$	\$1,498
10	RESTORATION OF ST	REETS						
	Bit. Concrete Stree	et	27	sq.yd.	\$	64.00	\$	\$1,728
11	REMOVE AND REPLA	CE DRIVEWAYS						
	Bituminous		98	sq.yd.	\$	48.00	\$	\$4,704
12	TREE REMOVAL AND	TRIMMING:			Lu	mp Sum	\$	\$998
12					Lu	mp Oum	Ψ	ψυ

No.	Pay Item	Approx Quar		Unit Price		Amount
13	EROSION CONTROL:		<b>,</b>	Lump Sum	\$	\$665
	TRAFFIC CONTROL:			Lump Sum	\$	\$4,655
	SUBTOTAL			Lamp Cam	\$	\$144,688
SEI	RVICE LATERALS				<u> </u>	<u> </u>
1	BUILDING SERVICE LINES					
I	Near side	105	lin. ft.	\$ 50.00	\$	\$5,250
	Far side	357	lin. ft.	\$ 50.00	\$	\$17,850
~		2				
2	BUILDING SERVICE BRANCH FITTINGS Near Side	5 7	each	\$ 554.00	\$	\$3,878
	Far side	7	each	\$ 682.00	\$	\$4,774
3	BUILDING SERVICE PLUG:	14	each	\$ 208.00	\$	\$2,912
4	RESTORATION OF LAWNS AND PARK	NAYS				
	Topsoil and sod		sq.yd.	\$ 14.00	\$	\$4,900
5	RESTORATION OF STREETS:					
Ū	Bit. Concrete Street	103	sq.yd.	\$ 63.00	\$	\$6,489
6	TRENCH BACKFILL					
	8-12 feet deep	175	lin. ft.	\$ 83.00	\$	\$14,525
	SUBTOTAL				\$	\$60,578
	TOTAL ESTIMATE OF CONSTRUC	TION COST			\$	\$205,300
			(			
		Contingencies Engineering				\$41,100 \$41,100
		Legal / Admin	(20%)			\$17,300
	TOTAL OPINION OF PROBABLE CO	OST			\$	\$304,800
				Cost per lot		\$21,770

### Table 4.5-21Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersOgden-Lacey-Grant-Lee (South)Preliminary Design Layout

Preliminar	y Design Layout					Manhole
	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	<u>Depth</u>
Lacey Road	<u>t</u>					
(existing)	SA-N-1-135	728.0	713.37			14.6
Ogden Ave	nue					
				300	3.00%	
	UE-58	740.0	722.37	215	3.00%	17.6
	UE-59	740.0	719.82	210	0.0070	20.2
(existing)	SA-N-1-136	730.3	713.83			16.4
(e/eg)				180	0.40%	
	UE-61	730.0	714.55	250	0.50%	15.4
	UE-65	739.0	715.80			23.2
<u>Ogden Ave</u>	nue Farms					
				300	1.00%	
	UE-62	730.0	717.55	280	0.40%	12.4
	UE-63	729.0	718.67	350	2.50%	10.3
	UE-66	736.0	727.42			8.6
	UE-67	746.0	736.42	300	3.00%	9.6
	UE-68	731.0	720.27	400	0.40%	10.7
				120	0.40%	
	UE-69	729.0	720.75	260	3.00%	8.2
	UE-70	740.0	728.55	65	2.00%	11.4
	UE-71	742.0	729.85			12.2
	UE-72	749.0	739.85	400	2.50%	9.1
	UE-75	755.0	739.35	220	4.00%	15.7
Lee Avenue	9					
		720.0	740.00	600	0.50%	44.0
	UE-64	730.0	718.80			11.2

No.	Pay Item		Approx Qua			Unit Price		Amount
MA	INLINE SEWER							
1	SANITARY SEWER (O							
1	8-inch	0-8 feet deep	0	lin. ft.	\$	75.00	¢	\$0
	0-IIICII	8-12 feet deep	2,184	lin. ft.	<del>φ</del> \$	87.00	<u>\$</u> \$	\$190,008
		12-16 feet deep	2,104 1,184	lin. ft.	<u></u> \$	106.00	<del>э</del> \$	\$190,008
		16-20 feet deep	683	lin. ft.	<del>φ</del> \$	127.00	<u>\$</u>	\$86,741
•								
2	SANITARY MANHOLE	-	0		¢	4 000 00	¢	ድር
	48-inch	0-8 feet deep	0	each	\$	4,800.00	\$	\$0
		8-12 feet deep	8	each	\$	6,400.00	\$	\$51,200
		12-16 feet deep	5	each	\$	7,700.00	\$	\$38,500
		16-20 feet deep	2	each	\$	10,300.00	\$	\$20,600
3	CONNECTION TO EXI	STING MANHOLE						
	8-inch		3	each	\$	6,200.00	\$	\$18,600
4	TRENCH BACKFILL							
	8-inch	0-8 feet deep	0	lin. ft.	\$	93.00	\$	\$0
		8-12 feet deep	2,184	lin. ft.	\$	113.00	\$	\$246,792
		12-16 feet deep	1,184	lin. ft.	\$	137.00	\$	\$162,208
		16-20 feet deep	683	lin. ft.	\$	180.00	\$ \$	\$122,940
5	TREE TUNNELING		310	lin. ft.	\$	192.00	\$	\$59,520
6	SEWER TELEVISING	FOR FINAL INSPECTION	4,051	lin. ft.	\$	3.00	\$	\$12,153
7	SEWER TESTING FOR	R FINAL INSPECTION	4,051	lin. ft.	\$	3.00	\$	\$12,153
8		AND REPLACEMENT	405	lin <b>A</b>	¢	04.00	¢	<b>*</b> 0 505
	12-inch		105	lin. ft.	\$	81.00	\$	\$8,505
9		WNS AND PARKWAYS	0.050		¢	14.00	¢	¢404.000
	Topsoil and sod		8,859	sq.yd.	\$	14.00	\$	\$124,026
10		ETLANDS AND BUFFERS	700		•		•	04.040
	Wetland		708	sq.yd.	\$	30.00	\$	21,240
	Wetland Buffer		4,667	sq.yd.	\$	15.00	\$	70,005
11	RESTORATION OF ST	REETS						
	Bit. Concrete Stree	et	787	sq.yd.	\$	64.00	\$	\$50,368
	PCC Sidewalk		1,500	sq. ft.	\$	13.00	\$	\$19,500
12	REMOVE AND REPLA	CE DRIVEWAYS						
	Bituminous		338	sq.yd.	\$	48.00	\$	\$16,224
	Concrete		100	sq.yd.	\$	81.00	\$	\$8,100
13	TREE REMOVAL AND	TRIMMING:			Lun	np Sum	\$	\$19,285
			130			-		·

No.	Pay Item	Appro: Qua			Unit Price		Amount
14	EROSION CONTROL:			Lum	p Sum	\$	\$15,960
15	TRAFFIC CONTROL:			Lum	p Sum	\$	\$18,620
	SUBTOTAL					\$	\$1,518,752
SEI	RVICE LATERALS						
1	BUILDING SERVICE LINES	100		<u>^</u>	=	•	<b>*</b> ••••••
	Near side Far side	180 306	lin. ft. lin. ft.	<u>\$</u> \$	<u>50.00</u> 50.00	<u>\$</u> \$	\$9,000 \$15,300
2	BUILDING SERVICE BRANCH FITTINGS	2					
2	Near Side	, 12	each	\$	554.00	\$	\$6,648
	Far side	6	each	\$	682.00	\$	\$4,092
3	BUILDING SERVICE PLUG:	18	each	\$	208.00	\$	\$3,744
4	RESTORATION OF LAWNS AND PARK	VAYS					
	Topsoil and sod	400	sq.yd.	\$	14.00	\$	\$5,600
5	RESTORATION OF STREETS:						
	Bit. Concrete Street	128	sq.yd.	\$	63.00	\$	\$8,064
6	TRENCH BACKFILL						
	8-12 feet deep	168	lin. ft.	\$	83.00	\$	\$13,944
7	REMOVE AND REPLACE DRIVEWAYS						
	Bituminous	0	sq. yd.	\$	47.00	\$	\$0
	SUBTOTAL					\$	\$66,392
	TOTAL ESTIMATE OF CONSTRUCT	FION COST				\$	\$1,585,100
		Contingencies	(20%)				\$317,000
		Engineering	(20%)				\$317,000
		Legal / Admin Easement Acqı	(6%) uisition				\$133,100 \$133,600
	TOTAL OPINION OF PROBABLE CO	DST				\$	\$2,485,800
				C	ost per lot		\$138,100
				U	usi per iut		φ130,100

# Table 4.5-23Downers Grove Sanitary DistrictProposed Special AssessmentsBurlington Highlands Sub-AreaCost Summary

Sub-Basin:	Near Services	Far Services	Cost	Cost per lot
Morton and Downers	20	19	\$ 1,380,300	\$ 35,390
40th and Seely (North)	9	12	\$ 601,700	\$ 28,650
40th and Northcott	5	9	\$ 421,700	\$ 30,120
Virginia-Seely-Janet-Downers	25	18	\$ 1,138,900	\$ 26,490
Belle Aire and Venard	15	6	\$ 921,700	\$ 43,890
Vernard Road (North)	4	6	\$ 370,300	\$ 37,030
Vernard Road (South) (completed)	0	0	\$ -	\$ -
Virginia Avenue (West)	3	3	\$ 150,000	\$ 25,000
Lacey-Carol-Northcott	0	1	\$ 68,100	\$ 68,100
Lacey and Janet	7	7	\$ 304,800	\$ 21,770
Ogden-Lacey-Grant-Lee (South)	12	6	\$ 2,485,800	\$ 138,100
TOTALS	100	87	\$ 7,843,300	\$ 41,940
	18	37		

### 4.6 Golf Addition

Golf Addition is a sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.6, the approximate limits of this sub-area are Warrenville Road to the north, Walnut Avenue to the west, Burlington Avenue to the south, and Belmont Road to the east. The proposed service area includes approximately 48 single-family residences with septic systems, commercial lots without gravity sewer service, Downers Grove Park District property, and several undeveloped residential and commercial parcels. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving unsewered properties within the Golf Addition sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Golf Addition sub-area has four major drainage divides. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divides. The study area can be divided into four smaller service areas. Properties to north of Indianapolis Avenue will be served by the existing sewers on Ogden Avenue. Properties on Drendel and Granville, south of Indianapolis Avenue, will be served by the existing sewer on Burlington Avenue. The Park District parcels at the northeast corner of Walnut and Burlington will be served by the trunk sewer on Walnut Avenue. Parcels on Puffer Road, north of Prairie Avenue, will be served by the sewer at the intersection of Belmont Road and Prairie Avenue.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The major road crossings that would significantly increase construction cost in this sub-area are Ogden Avenue and Belmont Road. Thus, alternatives were considered to minimize crossing of these routes with both the mainline sewer and building services.

The Village of Downers Grove owns and operates water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Golf Addition sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
Drendel and Ogden	(completed)	Table 4.6-1	<i>Table 4.6-2</i>
Cross and Ogden (South)	(completed)	<i>Table 4.6-3</i>	<i>Table</i> 4.6-4
Cross and Ogden (North)	2	Table 4.6-5	Table 4.6-6
Drendel and Granville (South)	28	Table 4.6-7	Table 4.6-8
Burlington and Walnut (South)	2	Table 4.6-9	Table 4.6-10
Puffer North of Prairie	16	Table 4.6-11	Table 4.6-12

Table 4.6-13 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.6.

Sanitary sewers are available to all parcels in the Drendel and Ogden sub-basin and the Cross and Ogden (South) sub-basin as of March 2010. Approximately 3,150 feet of 8-inch sanitary sewer and 41 services were constructed for a total bid price of \$603,700 by Archon Construction Co, Inc. in spring of 2010 with partial funding from ARRA of 2009. The average cost per lot was approximately \$14,720.

The Cross and Ogden (North) sub-basin sewer plan follows the existing topography which falls southwest towards the manhole in front of the new Culver's Restaurant. This sewer will allow the private pump station and force main of the Max Madsen car dealership at 2438 Ogden (northeast corner of Cross and Ogden) and the private septic system on the west side of Cross Street (4340 Cross) to be abandoned. Easements will be required along both Cross and Ogden to construct this sewer. The cost per lot was not calculated because this sub-area is only comprised of the several large commercial parcels. Table 4.6-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$383,000, including contingency, engineering, easements, and legal/administrative costs.

The Drendel and Granville (South) sub-basin sewer plan follows the existing topography which falls from Drendel and Indianapolis south to the intersection of Granville and Burlington Avenue. The sewer will extend north from the existing sewer at Burlington and Granville. Easements will be required to cross the existing Downers Grove Park District property. The parcels on Drendel could also be served by the existing trunk sewer on Walnut, but additional sewer length and easements would be required. The sewer on Drendel should be placed in the west right-of-way, to avoid the water main, and in the east right-of-way on Granville to avoid the existing trees. This sub-basin is the third most costly per lot in the Golf Addition due to the sewer and easements required to cross the Park District property. Table 4.6-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$834,000, including contingency, engineering, easements, and legal/administrative costs.

The Burlington and Walnut (South) sub-basin sewer plan will flow west on Burlington Avenue from the Park District parcel west of Granville to the existing sanitary manhole at Walnut and Burlington. The sewer should be placed in the south right-way-way to avoid the existing water main and overhead electric. The cost per lot was not calculated because this sub-area only includes several large parcels owned by the Park District. Table 4.6-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$204,900, including contingency, engineering, and legal/ administrative costs.

The Puffer North of Prairie sub-basin sewer plan will connect to the sewer on Belmont Road. Currently, the sewer does not have adequate cover to serve Puffer Road. The impending Metra-Belmont underpass project will include the replacement of the existing sewer on Belmont, from Burlington to Prairie, at a flatter slope to provide the additional depth required to allow sewer service on Puffer. This sub-basin is the most costly per lot in the Golf Addition due to the pavement restoration and tree tunneling required, in addition to the small number of lots associated with the project. Table 4.6-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$636,600, including contingency, engineering, easements, and legal/administrative costs.

### DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

### **EXHIBIT 4.6**

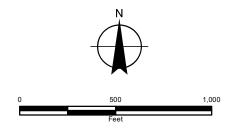
### **GOLF ADDITION**

### **POSSIBLE SEWER ALIGNMENT**

### **MARCH 2021**

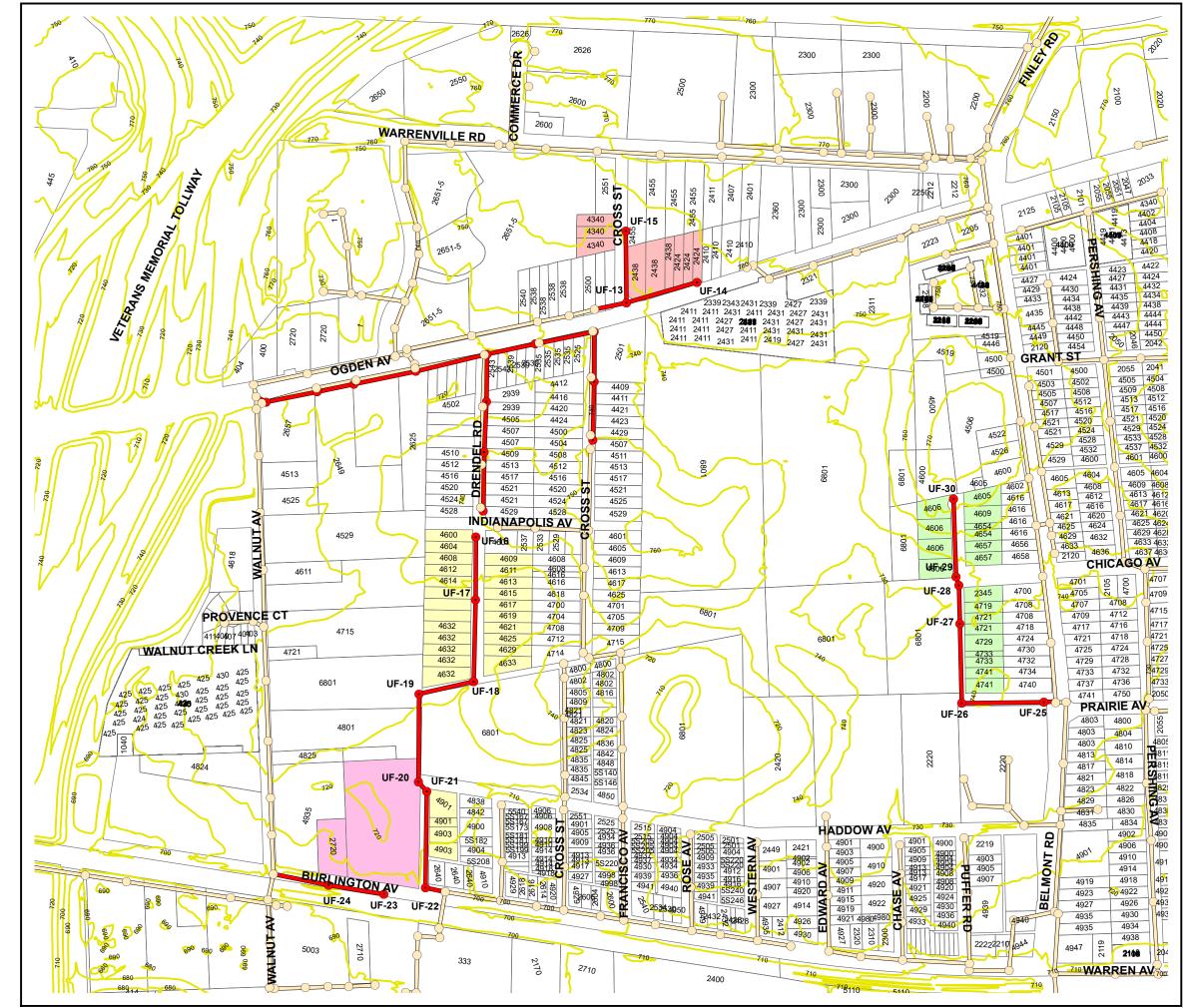
### LEGEND

- PROPOSED MANHOLES
  PROPOSED SEWERS
  EXISTING MANHOLES
  EXISTING SEWERS
- PARCEL BOUNDARIES
- CROSS AND OGDEN (NORTH);TABLES 4.6-5, 4.6-6
- DRENDEL AND GRANVILLE (SOUTH); TABLES 4.6-7, 4.6-8
- BURLINGTON AND WALNUT (SOUTH);TABLES 4.6-9, 4.6-10
- PUFFER NORTH OF PRAIRIE; TABLES 4.6-11, 4.6-12





I:\Crystal Lake\DGSD1\180305-2018 UAP\20-GIS\MapDocuments\ 4-6 Golf Addition.mxd 563dks - 3/24/2020 Copyright 2019, By Baxter & Woodman, Inc. State of Illinois - Professional Design Firm License No. - 184-001121 - Expires 4-30-20



### Table 4.6-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersDrendel and OgdenPreliminary Design Layout

Manhole Number

<u>Rim</u>

Length (ft)

<u>Slope</u>

Manhole Depth

(Sanitary sewers are available as of March 2010.)

Invert

		Approximate	Unit	
No.	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2010.)

		Approximate	Unit	
No.	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2010.)

Table 4.6-3Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersCross and Ogden (South)Preliminary Design Layout

					Manhole
Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	<u>Depth</u>

(Sanitary sewers are available as of March 2010.)

	A	pproximate	Unit	
No. F	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2010.)

	A	pproximate	Unit	
No. F	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2010.)

Table 4.6-5Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersCross and Ogden (North)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Ogden Ave	enue					
	3-A-88 (existing)	741.9	725.00	205	4.00%	16.9
	UF-13	748.0	733.20			14.8
	UF-14	756.0	744.30	370	3.00%	11.7
Cross Stre	et					
	UF-15	751.0	742.45	370	2.50%	8.5

			Approxima			Unit		
No.	Pay Item		Quantity	,		Price		Amount
MAINL	INE SEWER							
1	SANITARY SEW	(ER (OPEN CUT)						
	8-inch	8-12 feet deep	240		\$	87.00	<u>\$</u> \$	20,880
		12-16 feet deep	705	lin. ft.	\$	106.00	\$	74,730
2	SANITARY MAN	HOLES						
	48-inch	8-12 feet deep	2	each	\$	6,400.00	<u>\$</u> \$	12,800
		12-16 feet deep	1	each	\$	7,700.00	\$	7,700
3	CONNECTION T	O EXISTING MANHOL	E					
	8-inch		1	each	\$	6,200.00	\$	3,500
4	TRENCH BACKI	=11 1						
-	8-inch	8-12 feet deep	240	lin. ft.	\$	113.00	\$	27,120
		12-16 feet deep	200	lin. ft.	\$	137.00	\$	27,400
5	TREE TUNNELI	NG	0	lin. ft.	\$	192.00	\$	0
6	SEWER TELEVI	SING FOR FINAL INSP	ECTION					
			945	lin. ft.	\$	3.00	\$	2,835
7	SEWER TESTIN	G FOR FINAL INSPEC	TION					
			945	lin. ft.	\$	3.00	\$	2,835
8	CULVERT REM	OVAL AND REPLACEM	ENT					
	12-inch		0	lin. ft.	\$	81.00	\$	0
9	RESTORATION	OF LAWNS						
	AND PARKWAY							
	Topsoil and	d Sod	1,342	sq.yd.	\$	14.00	\$	18,788
10								
	Bit. Concrete			sq.yd.	\$	64.00	\$	3,200
	Curb & Gutt PCC Sidewa			lin. ft.	\$ \$ \$	41.00 13.00	\$ \$ \$	<u>1,640</u> 2,600
	FCC Sidewa	aik	200	sq. ft.	φ	13.00	φ	2,000
11		REPLACE DRIVEWAYS			¢	10.05	<u>^</u>	
	Bituminous		67	sq.yd.	\$	48.00	\$	3,216
12	TREE REMOVA	L AND TRIMMING:			Lum	ıp Sum	\$	0

No.	Pay Item	Approximate Quantity	Unit Price		Amount
13	EROSION CONTROL		Lump Sum	\$	0
14	TRAFFIC CONTROL:		Lump Sum	\$	19,950
	SUBTOTAL			\$	229,194
SERVI	CE LATERALS				
1	BUILDING SERVICE LINES Near side Far side	10 lin. ft. 48 lin. ft.	\$ 50.00 \$ 50.00	\$ \$	500 2,400
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	1 each 1 each	\$ 554.00 \$ 682.00	\$ \$	554 682
3	BUILDING SERVICE PLUG:	2 each	\$ 208.00	\$	416
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and Sod	28 sq.yd.	\$ 14.00	\$	392
5	RESTORATION OF STREETS: Bit. Concrete Street	21 sq.yd.	\$ 63.00	\$	1,323
6	TRENCH BACKFILL 0-8 feet deep	35 lin. ft.	\$ 62.00	\$	2,170
	SUBTOTAL			\$	8,437
	TOTAL ESTIMATE OF CONS	STRUCTION COST		\$	237,600
		Contingencies (20%) Engineering (20%) Legal / Admin (6%) Easement Acquisition			47,500 47,500 20,000 30,400
	TOTAL OPINION OF PROBA	ABLE COST		\$	383,000

Table 4.6-7Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersDrendel and Granville (South)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	Slope	Manhole <u>Depth</u>
Burlington	Avenue					
	3-B-3 (existing)	702.3	687.50	110	0.000/	14.8
	UF-22	703.0	689.70	110	2.00%	13.3
<u>Granville A</u>	venue					
	UF-21	714.0	701.70	480	2.50%	12.3
	UF-20	715.0	703.10	70	2.00%	11.9
Park Distric	ct Easement					
	UF-19	722.0	711.20	450	1.80%	10.8
Drendel Ro	bad					
	UF-18	722.0	712.32	280	0.40%	9.7
	UF-17	722.0	713.92	400	0.40%	8.1
	UF-16	735.0	726.52	360	3.50%	8.5

No. Pay Item			Approxima Quantity			Unit Price		Amount
INU.	Fayitein		Quantity			FILE		Amount
MAINL	INE SEWER							
1	SANITARY SEW	ER (OPEN CUT)						
	8-inch	0-8 feet deep	60	lin. ft.	\$	75.00	\$	\$4,500
		8-12 feet deep	1,850	lin. ft.	\$ \$ \$	87.00	\$ \$ \$	\$160,950
		12-16 feet deep	240	lin. ft.	\$	106.00	\$	\$25,440
2	SANITARY MAN	HOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	\$4,800
		8-12 feet deep	4	each	\$	6,400.00	\$ \$	\$25,600
		12-16 feet deep	2	each	\$	7,700.00	\$	\$15,400
3	CONNECTION T	O EXISTING MANHO	OLE					
	8-inch		1	each	\$	6,200.00	\$	\$3,500
4	TRENCH BACKF	FILL						
	8-inch	0-8 feet deep	230	lin. ft.	\$	93.00	\$	\$21,390
		8-12 feet deep	185	lin. ft.	\$	113.00	\$ \$	\$20,90
		12-16 feet deep	69	lin. ft.	\$ \$ \$	137.00	\$	\$9,45
5	TREE TUNNELIN	١G	345	lin. ft.	\$	192.00	\$	\$66,240
6	SEWER TELEVIS	SING FOR FINAL IN	SPECTION					
			2,150	lin. ft.	\$	3.00	\$	\$6,450
7	SEWER TESTIN	G FOR FINAL INSPE	ECTION					
			2,150	lin. ft.	\$	3.00	\$	\$6,450
8	CULVERT REMO	OVAL AND REPLACE	EMENT					
	12-inch		115	lin. ft.	\$	81.00	\$	\$9,315
9	RESTORATION	OF LAWNS						
	AND PARKWAY	S:						
	Topsoil and	l Sod	3,158	sq.yd.	\$	14.00	\$	\$44,212
10	RESTORATION	OF STREETS:						
	Bit. Concrete	e Street	13	sq.yd.	\$	64.00	\$	\$832
11	REMOVE AND R	EPLACE DRIVEWA	YS					
	Bituminous			sq.yd.	\$	48.00	\$	\$11,088

No.	Pay Item	Approximate Quantity	Unit Price		Amount
13	EROSION CONTROL		Lump Sum	\$	\$2,328
14	TRAFFIC CONTROL:		Lump Sum	\$	\$3,990
	SUBTOTAL			\$	\$451,820
SERVIO	CE LATERALS				
1	BUILDING SERVICE LINES Near side Far side	124 lin. ft. 600 lin. ft.	\$ 50.00 \$ 50.00	\$ \$	\$6,200 \$30,000
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	18 each 10 each	<b>+</b>	\$ \$	\$9,972 \$6,820
3	BUILDING SERVICE PLUG:	28 each	\$ 208.00	\$	\$5,824
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and Sod	367 sq.yd.	<u>\$ 14.00</u>	\$	\$5,138
5	RESTORATION OF STREETS: Bit. Concrete Street	189 sq.yd.	\$ 63.00	\$	\$11,907
6	TRENCH BACKFILL 0-8 feet deep	350 lin. ft.	\$ 62.00	\$	\$21,700
	SUBTOTAL			\$	\$97,561
	TOTAL ESTIMATE OF CONS	STRUCTION COST		\$	\$549,400
		Contingencies (20%) Engineering (20%) Legal / Admin (6%) Easement Acquisition			\$109,900 \$109,900 \$46,200 \$18,600
	TOTAL OPINION OF PROBA	BLE COST		\$	\$834,000
			Cost per lo	ot	\$29,790

# Table 4.6-9Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersBurlington and Walnut (South)Preliminary Design Layout

Ma	anhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Burlington Ave	nue					
3-	A-34 (existing)	700.0	683.01	200	2.00%	17.0
	UF-24	704.0	692.01	300	3.00%	12.0
	UF-23	708.0	700.05	300	2.68%	8.0

No. MAINLI	Pay Item		Quantitv	proximate Quantity		Unit Price		Amount
	NE SEWER							
1		VER (OPEN CUT)	60	ling ff	¢	75.00	¢	4 500
	8-inch	0-8 feet deep	60 500	lin. ft. lin. ft.	<u>\$</u>	75.00	<u>م</u>	4,500
		8-12 feet deep 12-16 feet deep	500 40	lin. ft.	\$ \$ \$	87.00 106.00	\$ \$ \$	43,500
0								
2			1	aaab	¢	4 900 00	¢	4 90
	48-inch	0-8 feet deep	1	each	<u>\$</u> \$	4,800.00	<u>\$</u> \$	4,80
		8-12 feet deep	I	each	Φ	6,400.00	Φ	6,40
3	CONNECTION -	TO EXISTING MANHO	LE					
	8-inch		1	each	\$	6,200.00	\$	3,500
4	TRENCH BACK	FILL						
	8-inch	0-8 feet deep	60	lin. ft.	\$	93.00	\$	5,58
		8-12 feet deep	120	lin. ft.	\$	113.00	\$ \$	13,56
5	TREE TUNNELI	NG	50	lin. ft.	\$	192.00	\$	9,60
6	SEWER TELEV	ISING FOR FINAL INS	PECTION					
			600	lin. ft.	\$	3.00	\$	1,80
7	SEWER TESTIN	IG FOR FINAL INSPE	CTION					
			600	lin. ft.	\$	3.00	\$	1,80
8	CULVERT REM	OVAL AND REPLACE	MENT					
	12-inch		10	lin. ft.	\$	81.00	\$	810
9	RESTORATION	OF LAWNS						
	AND PARKWAY							
	Topsoil an	d Sod	833	sq.yd.	\$	14.00	\$	11,662
10	RESTORATION	OF STREETS:						
	Bit. Concret	e Street	89	sq.yd.	\$	64.00	\$	5,69
11	REMOVE AND F	REPLACE DRIVEWAY	S					
	Bituminous		0	sq.yd.	\$	48.00	\$	
12	TREE REMOVA	L AND TRIMMING:			Lum	p Sum	\$	1,99

	Daviltara	Approximate	Unit	A manual t
No.	Pay Item	Quantity	Price	Amount
13	EROSION CONTROL		Lump Sum	\$ 665
14	TRAFFIC CONTROL:		Lump Sum	\$ 2,660
	SUBTOTAL			\$ 122,768
SERVIO	CE LATERALS			
1	BUILDING SERVICE LINES Near side Far side	0 lin. ft. 120 lin. ft.	\$ 50.00 \$ 50.00	\$ <u>0</u> \$6,000
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	0 each 2 each	\$     554.00 \$    682.00	\$ <u>0</u> \$1,364
3	BUILDING SERVICE PLUG:	2 each	\$ 208.00	\$ 416
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and Sod	93 sq.yd.	<u>\$ 14.00</u>	<u>\$ 1,302</u>
5	RESTORATION OF STREETS: Bit. Concrete Street	37 sq.yd.	\$ 63.00	<u>\$ 2,331</u>
6	TRENCH BACKFILL 0-8 feet deep	64 lin. ft.	\$ 62.00	\$ 3,968
	SUBTOTAL			\$ 15,381
	TOTAL ESTIMATE OF CONS	STRUCTION COST		\$ 138,100
		Contingencies (20%) Engineering (20%) Legal / Admin (6%)		27,600 27,600 11,600
	TOTAL OPINION OF PROBA	BLE COST		\$ 204,900

Table 4.6-11Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersPuffer North of PrairiePreliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Prairie Ave	enue					
	3-A-12 (existing) <sup>1</sup>	735.2	724.00	60	0.40%	11.2
	UF-25	734.0	724.24			9.8
	UF-26	736.0	725.92	420	0.40%	10.1
<u>Puffer Roa</u>	<u>d</u>					
	UF-27	735.0	727.52	400	0.40%	7.5
				220	1.00%	
	UF-28	738.0	729.72	30	0.40%	8.3
	UF-29	738.0	729.84	44.0	C 000/	8.2
	UF-30	766.0	754.44	410	6.00%	11.6

Note 1: Proposed invert is after the replacement of the sewer on Belmont as part of the Metra project

No.	Pay Item		Approxima Quantity			Unit Price		Amount
INO.	Fay item		Quantity			FILLE		Amount
MAINL	INE SEWER							
1	SANITARY SEW	ER (OPEN CUT)						
	8-inch	0-8 feet deep	200	lin. ft.	\$	75.00	\$	\$15,00
		8-12 feet deep	1,280	lin. ft.	\$ \$ \$	87.00	\$ \$ \$	\$111,36
		12-16 feet deep	60	lin. ft.	\$	106.00	\$	\$6,36
2	SANITARY MAN	HOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	\$4,80
		8-12 feet deep	5	each	\$	6,400.00	\$ \$	\$32,00
3	CONNECTION T	O EXISTING MANHO	DLE					
	8-inch		1	each	\$	6,200.00	\$	\$3,50
4	TRENCH BACKF							
	8-inch	0-8 feet deep	200	lin. ft.	\$ \$ \$	93.00	\$ \$	\$18,60
		8-12 feet deep	410	lin. ft.	\$	113.00	\$	\$46,33
		12-16 feet deep	30	lin. ft.	\$	137.00	\$	\$4,11
5	TREE TUNNELIN	NG	165	lin. ft.	\$	192.00	\$	\$31,68
6	SEWER TELEVI	SING FOR FINAL INS	SPECTION					
			1,540	lin. ft.	\$	3.00	\$	\$4,62
7	SEWER TESTIN	G FOR FINAL INSPE	CTION					
			1,540	lin. ft.	\$	3.00	\$	\$4,62
8		OVAL AND REPLACE						
	12-inch		50	lin. ft.	\$	81.00	\$	\$4,05
9	RESTORATION							
	AND PARKWAYS		1 533	sq.yd.	\$	14.00	\$	\$21,46
			1,000	oq.yu.	Ψ	11.00	<u> </u>	φ21,10
10	RESTORATION Bit. Concrete		333	sq.yd.	\$	64.00	\$	\$21,31
	Curb & Gutte			lin. ft.	\$	41.00	\$	φ21,01 \$
	PCC Sidewa			sq. ft.	\$ \$ \$	13.00	\$ \$ \$	\$65
11	REMOVE AND R	REPLACE DRIVEWAY	/S					
	Bituminous		22	sq.yd.	\$	48.00	\$	\$1,05

Na		Approximate	Unit		A manual
No.	Pay Item	Quantity	Price		Amount
12	TREE REMOVAL AND TRIMMING	:	Lump Sum	\$	\$2,660
13	EROSION CONTROL		Lump Sum	\$	\$665
14	TRAFFIC CONTROL:		Lump Sum	\$	\$2,660
	SUBTOTAL			\$	\$337,495
SERVI	CE LATERALS				
1	BUILDING SERVICE LINES Near side	10 lin. ft.	<u>\$50.00</u> \$50.00	<u>\$</u> \$	\$500
	Far side	750 lin. ft.	\$ 50.00	\$	\$37,500
2	BRANCH FITTINGS	4	¢ 554.00	¢	ф.с.с. <b>4</b>
	Near Side Far side	1 each 15 each	\$ 554.00 \$ 682.00	<u>\$</u> \$	\$554 \$10,230
3	BUILDING SERVICE PLUG:	16 each	\$ 208.00	\$	\$3,328
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	344 sq.yd.	\$ 14.00	\$	\$4,816
5	RESTORATION OF STREETS: Bit. Concrete Street	158 sq.yd.	\$ 63.00	\$	\$9,954
6	TRENCH BACKFILL 0-8 feet deep	285 lin. ft.	\$ 62.00	\$	\$17,670
	SUBTOTAL			\$	\$84,552
	TOTAL ESTIMATE OF CONS	TRUCTION COST		\$	\$422,000
		Contingencies (20%) Engineering (20%) Legal / Admin (6%) Easement Acquisition			\$84,400 \$84,400 \$35,400 \$10,400
	TOTAL OPINION OF PROBA	BLE COST		\$	\$636,600
			Cost per lo	ot	\$39,790

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# Table 4.6-13Downers Grove Sanitary DistrictPossible Special Assessments for Sanitary SewerGolf Addition Sub-AreaCost Summary

Sub-Basin:	Near	Far	Cost	С	Cost per lot	
Drendel and Ogden (completed)	0	0	\$ -	\$	-	
Cross and Ogden (South) (completed)	0	0	\$ -	\$	-	
Cross and Ogden (North)	1	1	\$ 383,000		N/A	
Drendel and Granville (South)	18	10	\$ 834,000	\$	29,790	
Burlington and Walnut (South)	0	2	\$ 204,900		N/A	
Puffer North of Prairie	1	15	\$ 636,600	\$	39,790	
TOTALS	20 4	28 8	\$ 2,058,500	\$	33,420	

### 4.7 Florence Avenue

Florence Avenue is a small service area located within the District's FPA boundary. Exhibit 4.7 shows the approximate limits of this service area which is located west of Fairview Avenue and north of Ogden Avenue. The proposed service area currently includes 11 lots that are either developed as single-family residences with septic systems or vacant. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties along Florence Avenue.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, tree protection, water main and existing utility location. In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Ogden Avenue. Thus, alternatives were considered to minimize crossing of this roadway. The Village of Downers Grove does not own any water mains within the subject area limits. The only utilities that would impact sewer construction are gas mains and overhead electric.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that the existing sewer has adequate capacity to receive the additional flow from Florence Avenue.

A map of the proposed sewer plan is included in Exhibit 4.7.

The topography along Florence Avenue is relatively flat, and thus, the direction of flow will be dictated by the available sewer depth and the most cost effective route. We identified one feasible connection point, the existing manhole in the northern westbound lane of Ogden Avenue (1-J-136).

We recommend the sewer be installed in the west right-of-way to avoid the existing power lines, gas mains, and major landscaping located in the east right-of-way. Table 4.7-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.7-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$244,300, including contingency, engineering, and legal/ administrative costs.

# DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.7

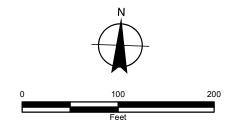
## **FLORENCE AVENUE**

### **POSSIBLE SEWER ALIGNMENT**

MARCH 2021

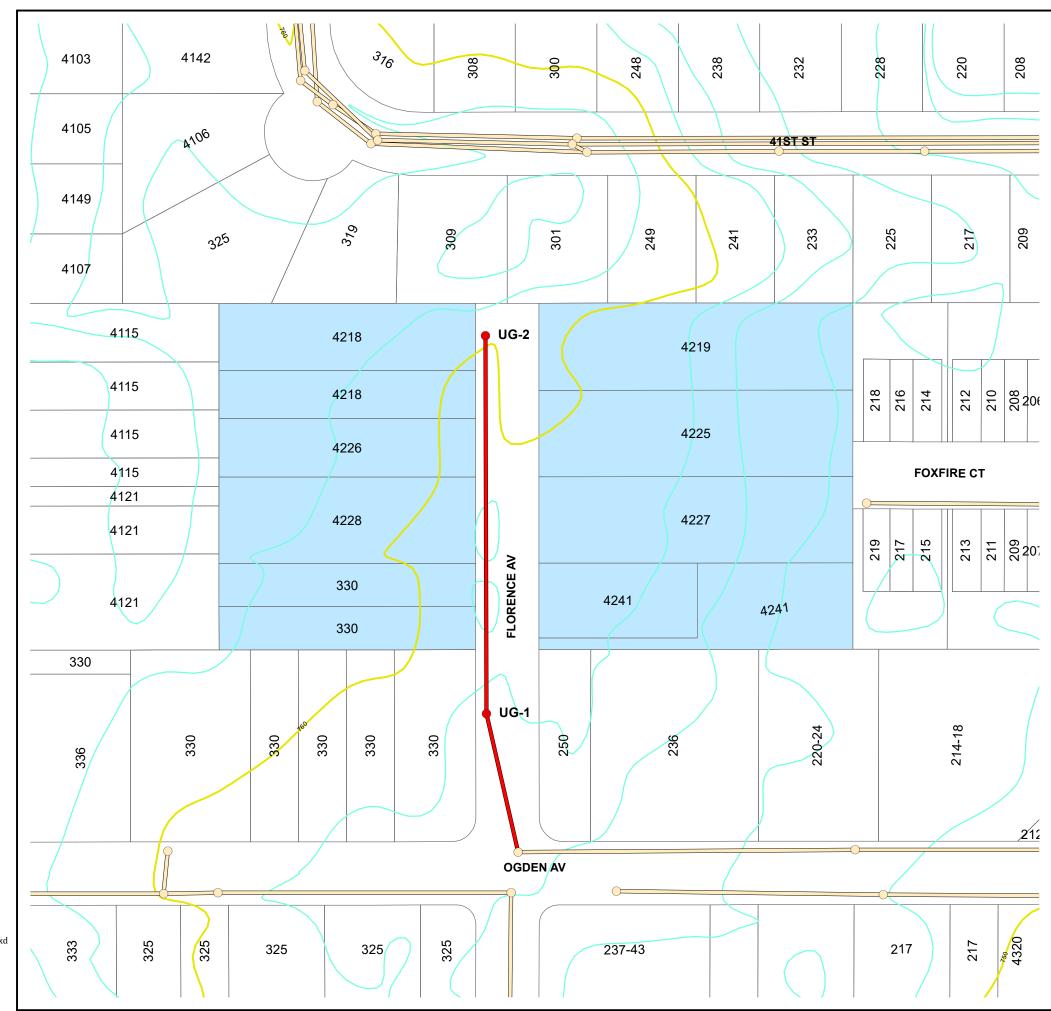
#### LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWER
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- FLORENCE AVENUE





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# Table 4.7-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersFlorence AvenuePreliminary Design Layout

<u>Manhole Number</u>	Rim	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Florence Avenue					
1-J-136 (existing)	756.0	748.54			7.5
UG-1	757.5	749.10	140	0.40%	8.4
	101.0	1 10:110	400	0.50%	0.1
UG-2	761.0	751.10			9.9

No.	Pay Item		proximate Quantity	Э		Unit Price		Amount
MAINLINI	E SEWER							
1	SANITARY SEWE 8-inch	R (OPEN CUT) 0-8 feet deep 8-12 feet deep	40 500	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	\$3,000 \$43,500
2	SANITARY MANH 48-inch	IOLES 0-8 feet deep 8-12 feet deep	0 2	each each	\$ \$	4,800.00	\$ \$	\$0 \$12,800
3	CONNECTION TO 8-inch	EXISTING MANHOLE	1	each	\$	6,200.00	\$	\$6,200
4	TRENCH BACKFI 8-inch	LL 0-8 feet deep 8-12 feet deep	19 177	lin. ft. lin. ft.	\$ \$	93.00 113.00	\$ \$	\$1,767 \$20,001
5	TREE TUNNELIN	G	30	lin. ft.	\$	192.00	\$	\$5,760
6	SEWER TELEVIS	ING FOR FINAL INSPECTI	ON 540	lin. ft.	\$	2.50	\$	\$1,350
7	SEWER TESTING	FOR FINAL INSPECTION	540	lin. ft.	\$	2.50	\$	\$1,350
8	CULVERT REMO 12-inch	VAL AND REPLACEMENT	20	lin. ft.	\$	81.00	\$	\$1,620
9	RESTORATION C AND PARKWAYS Topsoil and	:	575	sq.yd.	\$	14.00	\$	\$8,050
10	RESTORATION C Bit. Concrete		89	sq.yd.	\$	64.00	\$	\$5,696
11	REMOVE AND RE Concrete Bituminous Aggregate	EPLACE DRIVEWAYS	65	sq.yd. sq.yd. sq.yd.	\$ \$ \$	81.00 48.00 20.00	\$ \$	\$1,053 \$3,120 \$260

No.	Pay Item	Approximate Quantity	9		Unit Price		Amount
12				Lump	o Sum	\$	\$665
13	EROSION CONTROL			Lump	o Sum	\$	\$665
14	TRAFFIC CONTROL:				o Sum	\$	\$5,320
	SUBTOTAL			·		\$	\$122,177
SERVICE	LATERALS					<u> </u>	
1	BUILDING SERVICE LINES Near side Far side	90 255	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	\$4,500 \$12,750
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	6 5	each each	\$ \$	554.00 682.00	\$ \$	\$3,324 \$3,410
3	BUILDING SERVICE PLUG:	11	each	\$	208.00	\$	\$2,288
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	158	sq.yd.	\$	14.00	\$	\$2,212
5	RESTORATION OF STREETS: Bit. Concrete Street	80	sq.yd.	\$	63.00	\$	\$5,040
6	TRENCH BACKFILL 0-8 feet deep	145	lin. ft.	\$	62.00	\$	\$8,990
	SUBTOTAL					\$	\$42,514
	TOTAL ESTIMATE OF CONS	TRUCTION COST				\$	\$164,700
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)				\$32,900 \$32,900 \$13,800
	TOTAL OPINION OF PROBA	BLE COST				\$	\$244,300
					Cost per lo	ot	\$22,210

### 4.8 Meyers and 31<sup>st</sup>

Meyers and 31<sup>st</sup> is a sub-area within the northeast corner of the District's planning area that is currently unsewered. Several lots are located outside of the District FPA, but can not be served by the adjacent Hinsdale Sanitary District in an economical manner. As shown on Exhibit 4.8, the approximate limits of this sub-area are White Oak Lane to the north, Meyers Road to the east, and 35<sup>th</sup> Street to the south. The proposed service area includes approximately 7 single-family residences with septic systems. The purpose of this analysis is to establish the recommended sanitary sewer plan for serving all unsewered properties within the Meyers and 31<sup>st</sup> sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. Please note that some of the parcels identified in these sub-basins may require a close evaluation of the legal issues and financial feasibility considerations associated with acquiring private easement or other land use rights from adjacent or nearby property owners in order to install a sanitary sewer service line from the parcel in question to the District's new sewer main. The Meyers and 31<sup>st</sup> sub-area has multiple drainage divides and low spots. The study area can be divided into two smaller service areas, properties between White Oak Lane and Heritage Oaks Lane and properties between 35<sup>th</sup> Street and Heritage Oaks Lane. Each of these two areas has centrally located low spots, which complicate serving each sub-basin in a cost effective manner.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Meyers Road. Thus, alternatives were considered to minimize construction in the right-of-way.

The DuPage Water Commission and Village of Oak Brook own and operate water mains and a transmission main on various streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Meyers and  $31^{st}$  sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Property	Cost Estimate
Meyers Road (North)	1	3200 Meyers	Table 4.8-1
	1	3210 Meyers	Table 4.8-2
	1	3220 Meyers	Table 4.8-3
Meyers Road (South)	1	3400 Meyers	Table 4.8-4
	1	3404 Meyers	Table 4.8-5
	1	3408 Meyers	Table 4.8-6
	1	3412 Meyers	Table 4.8-7

Table 4.8-8 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.8.

The Meyers Road (North) sub-basin was thoroughly investigated and five feasible alternatives were identified. Each of the alternatives was described in detail in a letter report dated October 4, 2006. In summary, this sub-basin cannot be served by a conventional gravity sewer because of the topography or by a central lift station because minimum cleansing velocities cannot be accomplished in a force main. As a result, the three properties must be served by a low pressure sanitary sewer system. We examined two types of low pressures systems: individual grinder pumps discharging into a common force main (District owned) or individual grinder pumps discharging into individual force mains (privately owned). The common force main option was not recommended because the force mains would be placed in wooded, rear yard easements, which would be difficult to maintain by the District. Therefore, the recommended plan includes three, separate grinder pump and force main systems. Each system is costly due to the long, directional drilled force mains, multiple rear yard easements, and the existing creek within the project limits. Exhibit 4.8 shows the most cost effective route for serving each property. Tables 4.8-1, 4.8-2, and 4.8-3 include breakdowns of the unit quantities and unit prices used to prepare the opinion of probable cost for each individual low-pressure sanitary sewer system.

Multiple alternatives for the Meyers Road (South) sub-basin were also investigated and similar conclusions to the north sub-basin were arrived at. The four properties south of Heritage Oaks Lane cannot be served by gravity sewer, due to the topography adjacent to the pond north of the service area. The recommended plan includes four, separate grinder pump and force main systems. Exhibit 4.8 shows the most cost effective route for serving each property. As with the north sub-basin, the cost per lot is high due to the long, directional drilled force mains and multiple rear and side yard easements required. Tables 4.8-4, 4.8-5, 4.8-6, and 4.8-7 include breakdowns of the unit quantities and unit prices used to prepare the opinion of probable cost for each individual low-pressure sanitary sewer system.

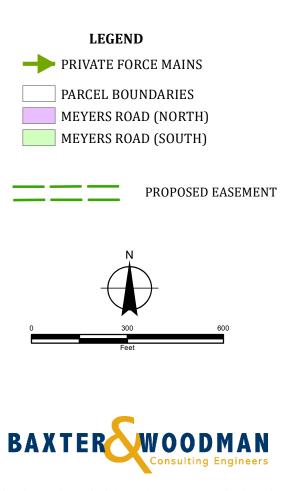
## DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.8

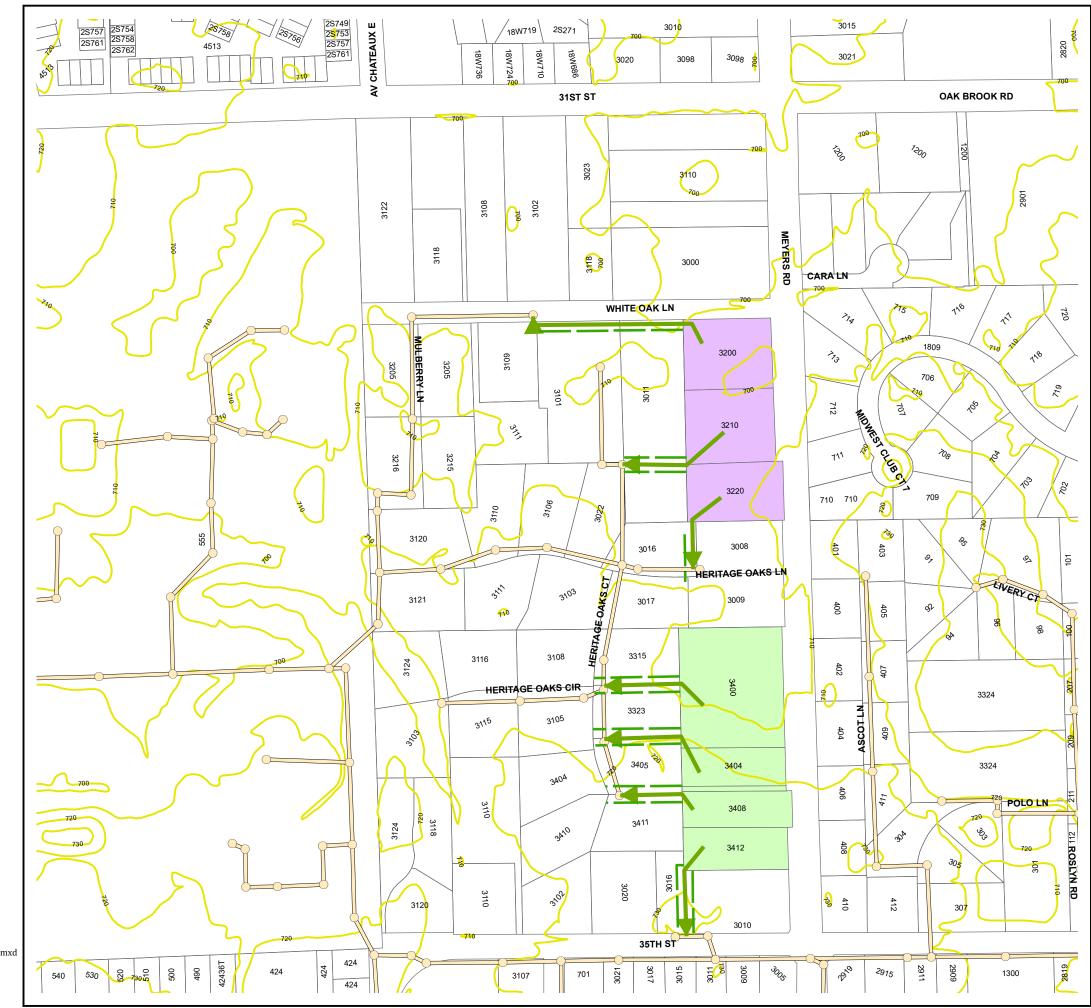
MEYERS ROAD AND 31ST STREET

## **POSSIBLE FORCE MAIN ALIGNMENT**

**MARCH 2021** 



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No.	Pay Item	Approxima Quantity		Unit Price		Amount
SERVIO	CE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	\$ 11,100.	00 \$	11,100
2	BUILDING SERVICE LINES: 1-1/4" HDPE (OPEN CUT)	65	lin. ft.	<u></u> \$ 43.	<u>00 \$</u>	2,795
	1-1/4" HDPE (DRILL)	472	lin. ft.	<u>\$56</u> .	00 \$	26,432
3	CONNECTION TO EXISTING MA	NHOLE: 1	each	<u>\$ 6,200</u> .	<u>00 \$</u>	6,200
4	CLEAN-OUTS:	2	each	\$ 2,700.	00 \$	5,400
5	AIR RELEASE VALVES:	1	each	<u>\$ 1,065</u> .	00 \$	1,065
6	BUILDING SERVICE FITTINGS:	0	each	<u>\$</u> 213.	00 \$	0
7	BUILDING SERVICE PLUG:	1	each	<u>\$</u> 213.	00 \$	213
8	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and Sod	117	sq.yd.	<u>\$ 14</u> .	<u>00 </u> \$	1,638
9	REMOVE AND REPLACE DRIVE		sq.yd.	<u></u> \$ 47.	00 \$	470
10	RESTORATION OF STREETS: Bit. Concrete Street	11	sq.yd.	<u>\$ 63</u> .	00 \$	693
11	TRENCH BACKFILL: 0-8 feet deep	15	lin. ft.	<u>\$ 62</u> .	<u>00 \$</u>	930
12	TREE REMOVAL AND TRIMMING	B:		Lump Sum	\$	1,995
13	EROSION CONTROL:			Lump Sum	\$	333
14	TRAFFIC CONTROL:			Lump Sum	\$	665
	TOTAL ESTIMATE OF CONS	TRUCTION COS	ST		\$	59,900
		Contingencies Engineering Easement Acqu	(20%) (20%) uisition			12,000 12,000 19,500
	TOTAL OPINION OF PROBA	BLE COST			\$	103,400

No.	Pay Item	Approxima Quantity		Unit Price	Amount
		Quantity		FILCE	Amount
			_		
1	GRINDER PUMP SYSTEM:	1	each	\$ 11,100.00	\$ 11,100
2	BUILDING SERVICE LINES: 1-1/4" HDPE (OPEN CUT)	50	lin. ft.	\$ 43.00	\$ 2,150
	1-1/4" HDPE (DRILL)	300	lin. ft.	\$ 56.00	\$ 16,800
3	CONNECTION TO EXISTING MAN	NHOLE: 1	each	\$ 6,200.00	\$ 6,200
4	CLEAN-OUTS:	1	each	\$ 2,700.00	\$ 2,700
5	AIR RELEASE VALVES:	1	each	\$ 1,065.00	\$ 1,065
6	BUILDING SERVICE FITTINGS:	0	each	\$ 213.00	\$ 0
7	BUILDING SERVICE PLUG:	1	each	\$ 213.00	\$ 213
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	106	sq.yd.	\$ 14.00	\$ 1,484
9	REMOVE AND REPLACE DRIVEV Bituminous		sq.yd.	\$ 47.00	\$ 0
10	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$ 63.00	\$ 0
11	TRENCH BACKFILL: 0-8 feet deep	0	lin. ft.	\$ 62.00	\$ 0
12	TREE REMOVAL AND TRIMMING	:		Lump Sum	\$ 2,660
13	EROSION CONTROL:			Lump Sum	\$ 998
14	TRAFFIC CONTROL:			Lump Sum	\$ 0
	TOTAL ESTIMATE OF CONS	TRUCTION COS	Т		\$ 45,400
		Contingencies Engineering Easement Acqu	(20%) (20%) isition		9,100 9,100 8,500
	TOTAL OPINION OF PROBAE	BLE COST			\$ 72,100

No.	Pay Item	Approxima Quantity		Unit Price		Amount
1	CE LATERALS	Quantity		1 1100		7 iniouni
1	GRINDER PUMP SYSTEM:	1	each	\$ 11,100.00	\$	11,100
		·	Cuon	φ 11,100.00	Ψ	11,100
2	BUILDING SERVICE LINES: 1-1/4" HDPE (OPEN CUT)	150	lin. ft.	\$ 43.00	\$	6,450
	1-1/4" HDPE (DRILL)	170	lin. ft.	\$ 56.00	\$	9,520
3	CONNECTION TO EXISTING MAN	NHOLE: 1	each	\$ 6,200.00	\$	6,200
4	CLEAN-OUTS:	1	each	\$ 2,700.00	\$	2,700
5	AIR RELEASE VALVES:	1	each	\$ 1,065.00	\$	1,065
6	BUILDING SERVICE FITTINGS:	0	each	\$ 213.00	\$	0
7	BUILDING SERVICE PLUG:	1	each	\$ 213.00	\$	213
8	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Sod	217	sq.yd.	\$ 14.00	\$	3,038
9	REMOVE AND REPLACE DRIVEV Bituminous		sq.yd.	\$ 47.00	\$	0
10	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$ 63.00	\$	0
11	TRENCH BACKFILL: 0-8 feet deep	0	lin. ft.	\$ 62.00	\$	0
12	TREE REMOVAL AND TRIMMING	):		Lump Sum	\$	1,995
13	EROSION CONTROL:			Lump Sum	\$	998
14	TRAFFIC CONTROL:			Lump Sum	\$	333
	TOTAL ESTIMATE OF CONS	TRUCTION COS	Г		\$	43,600
		Contingencies Engineering Easement Acqu	(20%) (20%) isition			8,700 8,700 6,900
	TOTAL OPINION OF PROBA	BLE COST			\$	67,900

No.	Pay Item	Approxima Quantity		Unit Price		Amount
	CE LATERALS	Quantity		1 1100		7 inount
1	GRINDER PUMP SYSTEM:	1	each	\$ 11,100.00	\$	11,100
•		I	each	φ 11,100.00	Ψ	11,100
2	BUILDING SERVICE LINES: 1-1/4" HDPE (OPEN CUT)	115	lin. ft.	\$ 43.00	\$	4,945
	1-1/4" HDPE (DRILL)	250	lin. ft.	\$ 56.00	\$	14,000
3	CONNECTION TO EXISTING MAN	IHOLE: 1	each	\$ 6,200.00	\$	6,200
4	CLEAN-OUTS:	1	each	\$ 2,700.00	\$	2,700
5	AIR RELEASE VALVES:	1	each	\$ 1,065.00	\$	1,065
6	BUILDING SERVICE FITTINGS:	0	each	\$ 213.00	\$	0
7	BUILDING SERVICE PLUG:	1	each	\$ 213.00	\$	213
8	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Sod	178	sq.yd.	\$ 14.00	\$	2,492
9	REMOVE AND REPLACE DRIVEW Bituminous		sq.yd.	\$ 47.00	\$	0
10	RESTORATION OF STREETS: Bit. Concrete Street	3	sq.yd.	\$ 63.00	\$	189
11	TRENCH BACKFILL: 0-8 feet deep	10	lin. ft.	\$ 62.00	\$	620
12	TREE REMOVAL AND TRIMMING	:		Lump Sum	\$	1,330
13	EROSION CONTROL:			Lump Sum	\$	665
14	TRAFFIC CONTROL:			Lump Sum	\$	665
	TOTAL ESTIMATE OF CONS	TRUCTION COS	Т		\$	46,200
		Contingencies Engineering Easement Acqu	(20%) (20%) isition			9,200 9,200 10,500
	TOTAL OPINION OF PROBAE	BLE COST			\$	75,100

No.	Pay Item	Approxima Quantity		Unit Price	Amount
		Quantity		FIICE	Amount
1	GRINDER PUMP SYSTEM:	1	each	\$ 11,100.00	\$ 11,100
2	BUILDING SERVICE LINES: 1-1/4" HDPE (OPEN CUT)	105	lin. ft.	\$ 43.00	\$ 4,515
	1-1/4" HDPE (DRILL)	240	lin. ft.	\$ 56.00	\$ 13,440
3	CONNECTION TO EXISTING MAN	IHOLE: 1	each	\$ 6,200.00	\$ 6,200
4	CLEAN-OUTS:	1	each	\$ 2,700.00	\$ 2,700
5	AIR RELEASE VALVES:	1	each	\$ 1,065.00	\$ 1,065
6	BUILDING SERVICE FITTINGS:	0	each	\$ 213.00	\$ 0
7	BUILDING SERVICE PLUG:	1	each	\$ 213.00	\$ 213
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	167	sq.yd.	\$ 14.00	\$ 2,338
9	REMOVE AND REPLACE DRIVEW Bituminous		sq.yd.	\$ 47.00	\$ 0
10	RESTORATION OF STREETS: Bit. Concrete Street	3	sq.yd.	\$ 63.00	\$ 189
11	TRENCH BACKFILL: 0-8 feet deep	10	lin. ft.	\$ 62.00	\$ 620
12	TREE REMOVAL AND TRIMMING	:		Lump Sum	\$ 1,330
13	EROSION CONTROL:			Lump Sum	\$ 665
14	TRAFFIC CONTROL:			Lump Sum	\$ 665
	TOTAL ESTIMATE OF CONST	TRUCTION COS	Г		\$ 45,000
		Contingencies Engineering Easement Acqu	(20%) (20%) isition		9,000 9,000 10,300
	TOTAL OPINION OF PROBAE	BLE COST			\$ 73,300

No.	Pay Item	Approxima Quantity		Unit Price		Amount
	CE LATERALS	Quantity		1 1100		Amount
1	GRINDER PUMP SYSTEM:	1	each	\$ 11,100.00	\$	11,100
		I	each	φ 11,100.00	Ψ	11,100
2	BUILDING SERVICE LINES: 1-1/4" HDPE (OPEN CUT)	130	lin. ft.	\$ 43.00	\$	5,590
	1-1/4" HDPE (DRILL)	210	lin. ft.	\$ 56.00	\$	11,760
3	CONNECTION TO EXISTING MAN	NHOLE: 1	each	\$ 6,200.00	\$	6,200
4	CLEAN-OUTS:	1	each	\$ 2,700.00	\$	2,700
5	AIR RELEASE VALVES:	1	each	\$ 1,065.00	\$	1,065
6	BUILDING SERVICE FITTINGS:	0	each	\$ 213.00	\$	0
7	BUILDING SERVICE PLUG:	1	each	\$ 213.00	\$	213
8	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Sod	194	sq.yd.	\$ 14.00	\$	2,716
9	REMOVE AND REPLACE DRIVEV Bituminous		sq.yd.	\$ 47.00	\$	0
10	RESTORATION OF STREETS: Bit. Concrete Street	3	sq.yd.	\$ 63.00	\$	189
11	TRENCH BACKFILL: 0-8 feet deep	10	lin. ft.	\$ 62.00	\$	620
12	TREE REMOVAL AND TRIMMING	:		Lump Sum	\$	1,330
13	EROSION CONTROL:			Lump Sum	\$	665
14	TRAFFIC CONTROL:			Lump Sum	\$	665
	TOTAL ESTIMATE OF CONS	TRUCTION COS	Т		\$	44,800
		Contingencies Engineering Easement Acqu	(20%) (20%) isition			9,000 9,000 8,900
	TOTAL OPINION OF PROBAE	BLE COST			\$	71,700

No.	Pay Item	Approxima Quantity		Unit Price		Amount
	CE LATERALS	<b>Q</b> (0,0,1,1,1)				
1	GRINDER PUMP SYSTEM:	1	each	\$ 11,100.00	\$	11,100
2	BUILDING SERVICE LINES: 1-1/4" HDPE (OPEN CUT)	140	lin. ft.	\$ 43.00	\$	6,020
	1-1/4" HDPE (DRILL)	215	lin. ft.	\$ 56.00	\$	12,040
3	CONNECTION TO EXISTING MAN	IHOLE: 1	each	\$ 6,200.00	\$	6,200
4	CLEAN-OUTS:	1	each	\$ 2,700.00	\$	2,700
5	AIR RELEASE VALVES:	1	each	\$ 1,065.00	\$	1,065
6	BUILDING SERVICE FITTINGS:	0	each	\$ 213.00	\$	C
7	BUILDING SERVICE PLUG:	1	each	\$ 213.00	\$	213
8	RESTORATION OF LAWNS AND PARKWAYS:	000		<b>•</b> • • • • • • • • • • • • • • • • • •	•	0.004
	Topsoil and Sod		sq.yd.	\$ 14.00	\$	2,884
9	REMOVE AND REPLACE DRIVEW Bituminous	/AYS: 7	sq.yd.	\$ 47.00	\$	329
10	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$ 63.00	\$	(
11	TRENCH BACKFILL: 0-8 feet deep	10	lin. ft.	\$ 62.00	\$	620
12	TREE REMOVAL AND TRIMMING:	:		Lump Sum	\$	1,330
13	EROSION CONTROL:			Lump Sum	\$	665
14	TRAFFIC CONTROL:			Lump Sum	\$	1,995
	TOTAL ESTIMATE OF CONST	RUCTION COS	Г		\$	47,200
		Contingencies Engineering Easement Acqu	(20%) (20%) isition			9,400 9,400 5,500
	TOTAL OPINION OF PROBAB	LE COST			\$	71,500

## 4.9 57<sup>th</sup> and Grant

57<sup>th</sup> and Grant is a small service area located within the District's FPA boundary. Exhibit 4.9 shows the approximate limits of this service area which is located west of Cass Avenue on 57<sup>th</sup> Street. The District's collection system has been extended to all properties in this service area.

A map of the collection system is included in Exhibit 4.9.

Sanitary sewers are available to all parcels in the 57<sup>th</sup> and Grant sub-basin as of March 2015. Approximately 315 feet of 8-inch sanitary sewer, two manholes, and one service connection was constructed in 2014 by a developer for an estimated cost of \$40,000, including engineering costs. The service connection was provided to the house being constructed by the developer. The Engineer's estimate for extending this sewer and installing four service connections was \$169,000, including contingency, engineering, legal/administrative, and easement costs with the average cost per lot at approximately \$28,320.

# DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

## **EXHIBIT 4.9**

## 57th & GRANT ST

### **POSSIBLE SEWER ALIGNMENT**

**MARCH 2021** 

LEGEND

PROPOSED MANHOLES

PROPOSED SEWERS

**EXISTING SEWERS** 

 $\bigcirc$ 

EXISTING MANHOLES

PARCEL BOUNDARIES



0 50 100 150 200 Feet



I:\Crystal Lake\DGSD1\180305-2018 UAP\20-GIS\MapDocuments\ 4-9 57th.mxd 563dks - 3/24/2020 Copyright 2019, By Baxter & Woodman, Inc. State of Illinois - Professional Design Firm License No. - 184-001121 - Expires 4-30-20 Table 4.9-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers57th and GrantPreliminary Design Layout

					Manhole
Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	<u>Depth</u>

(Sanitary sewers are available as of March 2015.)

		Approximate	Unit	
No.	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2015.)

March 2021

		Approximate	Unit	
No.	Pay Item	Quantity	Price	Amount

(Sanitary sewers are available as of March 2015.)

March 2021

#### 4.10 60th and Cumnor

60th and Cumnor is a sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.10, the approximate limits of this sub-area are Fairview Avenue to the west, 59<sup>th</sup> Street to the north, Williams Street to the east, and 61<sup>st</sup> Street to the south. The proposed service area includes approximately 57 single-family residences with septic systems or vacant lots. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving unsewered properties within the 60th and Cumnor sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The 60th and Cumnor sub-area has a high point near 60th and Cumnor and the topography generally falls to the north and east. However, there are multiple smaller drainage divides in the sub-area. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divides. The study area can be divided into multiple smaller service areas in order to create the most cost effective plan.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Fairview Avenue. Thus, alternatives were considered to minimize crossing of this route with both the mainline sewer and building services.

The Village of Westmont owns and operates water mains on the streets within the sub-area. Water main atlases were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the 60th and Cumnor sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

Sub-basin	No. of Services	Layout	Cost Estimate
59 <sup>th</sup> (West)	15	Table 4.10-1	Table 4.10-2
59 <sup>th</sup> (East)	4	Table 4.10-3	Table 4.10-4
60 <sup>th</sup> (West)	11	Table 4.10-5	Table 4.10-6
60 <sup>th</sup> and Cumnor	7	Table 4.10-7	Table 4.10-8
60 <sup>th</sup> (East)	3	Table 4.10-9	Table 4.10-10
Cumnor (South)	2	Table 4.10-11	Table 4.10-12
61 <sup>st</sup> and Cumnor	12	Table 4.10-13	Table 4.10-14
61 <sup>st</sup> (East)	3	Table 4.10-15	Table 4.10-16

Table 4.10-17 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.10.

The 59<sup>th</sup> (West) sub-basin sewer plan follows the topography which falls from Fairview east to Raintree Lane. The sewer should be placed in the north right-of-way to avoid the water main and overhead power lines in the south right-of-way. In 2012 approximately 100 feet of 8-inch sanitary sewer and 1 service were constructed for a total price of \$22,000. Table 4.10-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$362,300 including contingency, engineering, and legal/administrative costs.

The 59<sup>th</sup> (East) sub-basin sewer plan follows the topography east to Williams Street. The sewer must be placed in the pavement to avoid utilities and trees in both parkways. This is the most costly sub-basin because of the pavement restoration, trench backfill, and small number of serviceable lots. Table 4.10-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-4 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$314,500, including contingency, engineering, and legal/administrative costs.

The 60<sup>th</sup> (West) sub-basin sewer plan follows the existing topography which falls west towards Fairview Avenue. The sewer should be placed in the south parkway to match the alignment of the existing sewer and avoid a road crossing. Table 4.10-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$220,600, including contingency, engineering, and legal/administrative costs.

The 60<sup>th</sup> and Cumnor sub-basin sewer plan follows the existing topography which falls from 293 W. 60<sup>th</sup> Street east to 217 W. 60<sup>th</sup> Street. Similar to the previous sub-basin, this sewer should be placed in the south parkway to avoid the existing water main and overhead power lines in the north parkway. Table 4.10-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$149,400, including contingency, engineering, and legal/administrative costs.

The 60<sup>th</sup> (East) sub-basin sewer plan will flow east from 105 W. 60<sup>th</sup> Street to the existing sanitary manhole at 35 W. 60<sup>th</sup> Street. The sewer should be placed in the south right-of-way to match the existing sewer alignment and avoid a road crossing. Table 4.10-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$80,800, including contingency, engineering, and legal/ administrative costs.

The Cumnor (South) sub-basin sewer plan will connect to the sewer on  $61^{st}$  Street, west of the existing manhole W-1-41. The existing sewer that is south of the intersection of 60th and

Cumnor does not have adequate cover to serve the sub-basin. This sub-basin is the second most costly per lot in the 60th and Cumnor sub-basin due to the small number of lots associated with the project. Table 4.10-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$112,000, including contingency, engineering, and legal/administrative costs.

The 61<sup>st</sup> and Cumnor sub-basin sewer plan will connect to the sewer at the southeast corner of Cumnor and 61<sup>st</sup>. The sewer should be placed in the west-bound travel lane to avoid the water main in the south parkway and the power lines, underground communication, and wetlands in the north parkway. Table 4.10-13 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-14 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$387,900 including contingency, engineering, and legal/administrative costs.

The 61<sup>st</sup> (East) sub-basin sewer plan will connect to the manhole 200 feet west of the northwest intersection of Williams and 61<sup>st</sup>. Unlike the sewer to the west, this sewer can be placed in the north parkway despite the utilities. Table 4.10-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$86,200, including contingency, engineering, and legal/administrative costs.

#### **DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN**

**EXHIBIT 4.10** 

#### **60TH AND CUMNOR**

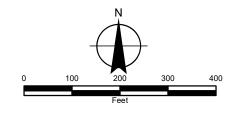
#### **POSSIBLE SEWER ALIGNMENT**

**MARCH 2021** 



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60TH AND CUMNOR; TABLES 4.10-7, 4.10-8 60TH (EAST); TABLES 4.10-9, 4.10-10 CUMNOR (SOUTH); TABLES 4.10-11, 4.10-12 61ST AND CUMNOR;TABLES 4.10-13, 4.10-14 61ST (EAST); TABLES 4.10-15, 4.10-16





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# Table 4.10-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers59th (West)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
59th Stree	t					
	G-5-093 (existing)	736.0	723.50			12.5
				230	1.39%	
	UJ-3	736.0	726.69			9.3
				300	1.10%	
	UJ-2	740.0	729.99		4	10.0
		744.0	700.00	300	1.00%	
	UJ-1	741.0	732.99			8.0

No.	Pay Item		Approxima Quantity			Unit Price		Amount
	NE SEWER		Quantity			11100		Amount
MAINLI	NE SEVVER							
1	SANITARY SEWEF 8-inch	R (OPEN CUT) 8-12 feet deep	830	lin. ft.	\$	87.00	\$	72,210
2	SANITARY MANHO 48-inch	DLES 8-12 feet deep	3	each	\$	6,400.00	\$	19,200
3	CONNECTION TO 8-inch	EXISTING MANHO	LE 1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFIL 8-inch	L 8-12 feet deep	140	lin. ft.	\$	113.00	\$	15,820
5	TREE TUNNELING	i	130	lin. ft.	\$	192.00	\$	24,960
6	SEWER TELEVISI	NG FOR FINAL INS	PECTION 830	lin. ft.	\$	3.00	\$	2,490
7	SEWER TESTING	FOR FINAL INSPEC	CTION 830	lin. ft.	\$	3.00	\$	2,490
8	CULVERT REMOV 12-inch	AL AND REPLACE	MENT 90	lin. ft.	\$	81.00	\$	7,290
9	RESTORATION OF AND PARKWAYS: Topsoil and s		1,533	sq.yd.	\$	14.00	\$	21,462
10	RESTORATION OF Bit. Concrete S		0	sq.yd.	\$	64.00	\$	0
11	REMOVE AND REF Bituminous Aggregate	PLACE DRIVEWAY	S 160 18	sq.yd. sq.yd.	\$ \$	48.00	\$ \$	7,680 360

Na	Daviltare	Approxima			Unit		Americant
No.	Pay Item	Quantity			Price		Amount
12	TREE REMOVAL AND TRIMMING	3:		Lump	o Sum	\$	1,995
13	EROSION CONTROL			Lump	Sum	\$	665
14	TRAFFIC CONTROL:			Lump	Sum	\$	1,995
	SUBTOTAL					\$	184,817
SERVICI	E LATERALS						
1	BUILDING SERVICE LINES						
	Near side	80	lin.ft.	\$	50.00	<u>\$</u> \$	4,000
	Far side	350	lin. ft.	\$	50.00	\$	17,500
2	BUILDING SERVICE BRANCH FITTINGS						
	Near Side	8	each	\$	554.00	\$	4,432
	Far side	7	each	\$	682.00	\$ \$	4,774
3	BUILDING SERVICE PLUG:	15	each	\$	208.00	\$	3,120
4	RESTORATION OF LAWNS AND PARKWAYS:						
	Topsoil and sod	400	sq.yd.	\$	14.00	\$	5,600
5	RESTORATION OF STREETS:						
	Bit. Concrete Street	137	sq.yd.	\$	63.00	\$	8,631
6	TRENCH BACKFILL						
	0-8 feet deep	182	lin. ft.	\$	62.00	\$	11,284
	SUBTOTAL					\$	59,341
	TOTAL ESTIMATE OF CONS	STRUCTION COST	г			\$	244,200
		Contingencies	(20%)		2.00		48,800
		Engineering	(20%)				48,800
		Legal / Admin	(6%)				20,500
	TOTAL OPINION OF PROBA	BLE COST				\$	362,300
					Cost per lo	ot	24,150

### Table 4.10-3Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers59th (East)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole Depth
59th Stree	<u>t</u>					
	W-1-13 (existing)	728.0	714.68			13.3
				56	5.00%	
	UJ-7	728.0	717.48			10.5
				300	1.50%	
	UJ-6	731.0	721.98			9.0
				280	1.50%	
	UJ-5	737.0	726.18			10.8

	_	Δ	pproxima	te	Unit		
No.	Pay Item		Quantity		Price		Amount
MAINLIN	NE SEWER						
1	SANITARY SEW	/ER (OPEN CUT)					
	8-inch	8-12 feet deep	620	lin. ft.	\$ 87.00	<u>\$</u> \$	53,940
		12-16 feet deep	16	lin. ft.	\$ 106.00	\$	1,696
2	SANITARY MAN	HOLES					
	48-inch	8-12 feet deep	3	each	\$ 6,400.00	\$	19,200
		12-16 feet deep	0	each	\$ 7,700.00	\$ \$	0
3	CONNECTION 1	O EXISTING MANHOLE					
-	8-inch		1	each	\$ 6,200.00	\$	6,200
4	TRENCH BACKI	=11.1					
-	8-inch	8-12 feet deep	620	lin. ft.	\$ 113.00	\$	70,060
	••	12-16 feet deep	16	lin. ft.	\$ 137.00	\$ \$	2,192
5	TREE TUNNELI	NG	0	lin. ft.	\$ 192.00	\$	0
6	SEWER TELEVI	SING FOR FINAL INSPEC					
Ū			636	lin. ft.	\$ 3.00	\$	1,908
7	SEWER TESTIN	IG FOR FINAL INSPECTIO	ON				
			636	lin. ft.	\$ 3.00	\$	1,908
8	CULVERT REM	OVAL AND REPLACEMEN	ΝT				
	12-inch		0	lin. ft.	\$ 81.00	\$	0
9	RESTORATION	OF LAWNS					
	AND PARKWAY	S:					
	Topsoil and	d sod	50	sq.yd.	\$ 14.00	\$	700
10	RESTORATION						
	Bit. Concrete	e Street	565	sq.yd.	\$ 64.00	\$	36,160
11	REMOVE AND F	REPLACE DRIVEWAYS					
	Bituminous		0	sq.yd.	\$ 48.00	\$	0

		Approxima	te	Unit		_
No.	Pay Item	Quantity		Price		Amount
12	TRAFFIC CONTROL:			Lump Sum	\$	4,655
	SUBTOTAL				\$	198,619
SERVICI	E LATERALS					
1	BUILDING SERVICE LINES					
	Near side	100	lin. ft.	\$ 50.00	\$	5,000
	Far side	0	lin. ft.	\$ 50.00	\$	0
2	BUILDING SERVICE					
	BRANCH FITTINGS					
	Near Side	4	each	\$ 554.00	<u>\$</u> \$	2,216
	Far side	0	each	\$ 682.00	\$	0
3	BUILDING SERVICE PLUG:	4	each	\$ 208.00	\$	832
4	RESTORATION OF LAWNS					
	AND PARKWAYS:					
	Topsoil and sod	91	sq.yd.	\$ 14.00	\$	1,274
5	RESTORATION OF STREETS:					
	PCC Curb & Gutter	40	lin. ft.	\$ 36.00	\$	1,440
6	TRENCH BACKFILL					
	0-8 feet deep	40	lin. ft.	\$ 62.00	\$	2,480
	SUBTOTAL				\$	13,242
	TOTAL ESTIMATE OF CONS	STRUCTION COST	T		\$	211,900
		Contingencies	(20%)			42,400
		Engineering	(20%)			42,400
		Legal / Admin	(6%)			17,800
	TOTAL OPINION OF PROBA	ABLE COST			\$	314,500
				Cost per lo		78,630

### Table 4.10-5Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers60th (West)Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
60th Stre	<u>eet</u>					
	W-1-104-E (existing)	741.2	735.84	400	0.40%	5.3
	UJ-8	746.0	737.44	100	011070	8.6

No.	Pay Item		roxima uantity	te		Unit Price		Amount
110.	T dy tion		aannty			1 1100		Amount
MAINLIN	IE SEWER							
1	SANITARY SEWE 8-inch	R (OPEN CUT) 0-8 feet deep 8-12 feet deep	150 250	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	11,250 21,750
2	SANITARY MANH 48-inch	OLES 0-8 feet deep 8-12 feet deep	0 1	each each	\$ \$	4,800.00 6,400.00	\$ \$	0 6,400
3	CONNECTION TO 8-inch	EXISTING MANHOLE	1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFII 8-inch	L 8-12 feet deep	160	lin. ft.	\$	113.00	\$	18,080
5	TREE TUNNELING	3	100	lin. ft.	\$	192.00	\$	19,200
6	SEWER TELEVISI	NG FOR FINAL INSPECTION	ON 400	lin. ft.	\$	3.00	\$	1,200
7	SEWER TESTING	FOR FINAL INSPECTION	400	lin. ft.	\$	3.00	\$	1,200
8	CULVERT REMO\ 12-inch	AL AND REPLACEMENT	105	lin. ft.	\$	81.00	\$	8,505
9	RESTORATION O AND PARKWAYS: Topsoil and s		733	sq.yd.	\$	14.00	\$	10,262
10	RESTORATION O Bit. Concrete S		0	sq.yd.	\$	64.00	\$	0
11	REMOVE AND RE Bituminous Aggregate	PLACE DRIVEWAYS	100 9	sq.yd. sq.yd.	\$ \$	48.00 20.00	\$ \$	4,800 180
12	TREE REMOVAL	AND TRIMMING:			Lum	p Sum	\$	2,328

No.	Pay Item	Approxima Quantity		Unit Price		Amount
13	EROSION CONTROL			Lump Sum	\$	665
14	TRAFFIC CONTROL:			Lump Sum	\$	1,995
	SUBTOTAL				\$	114,015
SERVIC	E LATERALS					
1	BUILDING SERVICE LINES Near side Far side	128 150	lin. ft. lin. ft.	\$50.00 \$50.00	\$ \$	6,400 7,500
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	8 3	each each	\$	\$ \$	4,432
3	BUILDING SERVICE PLUG:	11	each	\$ 208.00	\$	2,288
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	222	sq.yd.	\$ 14.00	\$	3,108
5	RESTORATION OF STREETS: Bit. Concrete Street	61	sq.yd.	\$ 63.00	\$	3,843
6	TRENCH BACKFILL 0-8 feet deep	81	lin. ft.	\$ 62.00	\$	5,022
	SUBTOTAL				\$	34,639
	TOTAL ESTIMATE OF CON	STRUCTION COST	Г		\$	148,700
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			29,700 29,700 12,500
	TOTAL OPINION OF PROB	ABLE COST			\$	220,600
				Cost per l	ot	20,050

# Table 4.10-7Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers60th and CumnorPreliminary Design Layout

60th Street	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
	G-5-095 (existing)	747.0	735.10	267	0.40%	11.9
	UJ-9	745.0	736.17	267	0.40%	8.8

			roxima	te		Unit		
No.	Pay Item	Q	uantity			Price		Amount
MAINLIN	IE SEWER							
1	SANITARY SEWER (OPE 8-inch 8-12	N CUT) feet deep	267	lin. ft.	\$	87.00	\$	23,229
2	SANITARY MANHOLES 48-inch 8-12	feet deep	1	each	\$	6,400.00	\$	6,400
3	CONNECTION TO EXIST 8-inch	ING MANHOLE	1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFILL 8-inch 8-12	feet deep	60	lin. ft.	\$	113.00	\$	6,780
5	TREE TUNNELING		50	lin. ft.	\$	192.00	\$	9,600
6	SEWER TELEVISING FO	R FINAL INSPECTI	ON 267	lin. ft.	\$	3.00	\$	801
7	SEWER TESTING FOR F	INAL INSPECTION	267	lin. ft.	\$	3.00	\$	801
8	CULVERT REMOVAL AN 12-inch	D REPLACEMENT	60	lin. ft.	\$	81.00	\$	4,860
9	RESTORATION OF LAWI AND PARKWAYS: Topsoil and sod	NS	378	sq.yd.	\$	14.00	\$	5,292
10	RESTORATION OF STRE Bit. Concrete Street	ETS:	0	sq.yd.	\$	64.00	\$	0
11	REMOVE AND REPLACE Bituminous Aggregate	DRIVEWAYS	76 16	sq.yd. sq.yd.	\$ \$	48.00 20.00	\$ \$	3,648 320
12	TREE REMOVAL AND TR	RIMMING:			Lum	p Sum	\$	1,995

No.	Pay Item	Approxima Quantity			Unit Price		Amount
13	EROSION CONTROL			Lump S	Sum	\$	665
14	TRAFFIC CONTROL:			Lump S	Sum	\$	1,995
	SUBTOTAL					\$	72,586
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	64 150	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	3,200 7,500
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	4 3	each each	\$ \$	554.00 682.00	\$ \$	<u>2,216</u> 2,046
3	BUILDING SERVICE PLUG:	7	each	\$	208.00	\$	1,456
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	178	sq.yd.	\$	14.00	\$	2,492
5	RESTORATION OF STREETS: Bit. Concrete Street	64	sq.yd.	\$	63.00	\$	4,032
6	TRENCH BACKFILL 0-8 feet deep	84	lin. ft.	\$	62.00	\$	5,208
	SUBTOTAL					\$	28,150
	TOTAL ESTIMATE OF CONS	STRUCTION COST	Г			\$	100,700
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)				20,100 20,100 8,500
	TOTAL OPINION OF PROBA	ABLE COST				\$	149,400
					Cost per lo	ot	21,340

### Table 4.10-9Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers60th (East)Preliminary Design Layout

60th Street	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
	G-6-155 (existing)	739.0	731.19	120	2 00%	7.8
	UJ-11	744.0	733.59	120	2.00%	10.4

No.	Pay Item		oroxima Quantity	te		Unit Price		Amount
	IE SEWER		country			1 1100		, inoditi
MAINLIN	NE SEVVER							
1	SANITARY SEWER 8-inch	R (OPEN CUT) 0-8 feet deep 8-12 feet deep	20 100	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	1,500 8,700
2	SANITARY MANHO	DLES						
	48-inch	0-8 feet deep 8-12 feet deep	0 1	each each	\$ \$	4,800.00 6,400.00	\$ \$	0 6,400
3	CONNECTION TO 8-inch	EXISTING MANHOLE	1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFIL 8-inch	L 8-12 feet deep	44	lin. ft.	\$	113.00	\$	4,972
5	TREE TUNNELING	6	30	lin. ft.	\$	192.00	\$	5,760
6	SEWER TELEVISI	NG FOR FINAL INSPECT	ION 120	lin. ft.	\$	3.00	\$	360
7	SEWER TESTING	FOR FINAL INSPECTION	l 120	lin. ft.	\$	3.00	\$	360
8	CULVERT REMOV 15-inch	AL AND REPLACEMENT	30	lin. ft.	\$	103.00	\$	3,090
9	RESTORATION OI AND PARKWAYS: Topsoil and s		244	sq.yd.	\$	14.00	\$	3,416
10	RESTORATION OI Bit. Concrete S		0	sq.yd.	\$	64.00	\$	0
11	REMOVE AND RE Bituminous Aggregate	PLACE DRIVEWAYS		sq.yd. sq.yd.	\$ \$	48.00 20.00	\$ \$	1,440 0
12	TREE REMOVAL A	AND TRIMMING:			Lump	o Sum	\$	665

No.	Pay Item	Approxima Quantity	te	Unit Price		Amount
13	EROSION CONTROL			Lump Sum	\$	333
14	TRAFFIC CONTROL:			Lump Sum	\$	665
	SUBTOTAL				\$	43,861
SERVICI	E LATERALS					
1	BUILDING SERVICE LINES Near side Far side	32 50	lin. ft. lin. ft.	\$ 50.00 \$ 50.00	\$ \$	1,600 2,500
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	2 1	each each	\$	\$ \$	1,108 682
3	BUILDING SERVICE PLUG:	3	each	\$ 208.00	\$	624
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	67	sq.yd.	<u>\$ 14.00</u>	\$	938
5	RESTORATION OF STREETS: Bit. Concrete Street	21	sq.yd.	\$ 63.00	\$	1,323
6	TRENCH BACKFILL 0-8 feet deep	28	lin. ft.	\$ 62.00	\$	1,736
	SUBTOTAL				\$	10,511
	TOTAL ESTIMATE OF CON	STRUCTION COST	T		\$	54,400
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			10,900 10,900 4,600
	TOTAL OPINION OF PROBA	ABLE COST			\$	80,800
				Cost per l	ot	26,930

#### Table 4.10-11 Downers Grove Sanitary District Possible Special Assessment for Sanitary Sewers Cumnor (South) Preliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Cumnor Ro	bad					
	UJ-13	740.0	728.50	330	2.00%	11.5
	UJ-12	746.0	735.10	550	2.0070	10.9

No.	Pay Item		Approximat Quantity	te		Unit Price		Amount
110.	T dy hem		Quantity			1 1100		Amount
MAINLI	NE SEWER							
1	SANITARY SEW	ER (OPEN CUT)						
	8-inch	0-8 feet deep	80	lin. ft.	\$	75.00	<u>\$</u> \$	6,000
		8-12 feet deep	250	lin. ft.	\$	87.00	\$	21,750
2	SANITARY MAN	HOLES						
	48-inch	0-8 feet deep	0	each	\$	4,800.00	<u>\$</u> \$	0
		8-12 feet deep	1	each	\$	6,400.00	\$	6,400
3	CONNECTION T	O EXISTING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKF	ILL						
	8-inch	0-8 feet deep	30	lin. ft.	\$	93.00	\$	2,790
		8-12 feet deep	50	lin. ft.	\$	113.00	\$	5,650
5	TREE TUNNELIN	۱G	0	lin. ft.	\$	192.00	\$	0
6	SEWER TELEVIS	SING FOR FINAL INSPE	CTION					
			330	lin. ft.	\$	3.00	\$	990
7	SEWER TESTIN	G FOR FINAL INSPECTION	ON					
			330	lin. ft.	\$	3.00	\$	990
8	CULVERT REMO	OVAL AND REPLACEME	NT					
	12-inch		19	lin. ft.	\$	81.00	\$	1,539
9	RESTORATION							
					•		•	
	Topsoil and	lsod	600	sq.yd.	\$	14.00	\$	8,400
10	RESTORATION				•	- /		
	Bit. Concrete PCC Curb &		36 10	sq.yd. lin. ft.	\$	64.00	\$	<u>2,304</u> 410
	PCC Curb & PCC Sidewa		50	sq. ft.	\$ \$	41.00 13.00	\$ \$ \$	410 650
11		EPLACE DRIVEWAYS						
	Bituminous		76	sq.yd.	\$	48.00	\$	3,648
12	TREE REMOVAL	AND TRIMMING:			Lum	p Sum	\$	665
12					Luili		Ψ	00

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No.	Pay Item	Approxima Quantity			Unit Price		Amount
13	EROSION CONTROL			Lump S	um	\$	333
14	TRAFFIC CONTROL:			Lump S	um	\$	2,993
	SUBTOTAL					\$	71,711
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES Near side Far side	32 0	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	1,600 0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	2 0	each each	\$ \$	554.00 682.00	\$ \$	<u>1,108</u> 0
3	BUILDING SERVICE PLUG:	2	each	\$	208.00	\$	416
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	50	sq.yd.	\$	14.00	\$	700_
5	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$	63.00	\$	0
6	TRENCH BACKFILL 0-8 feet deep	0	lin. ft.	\$	62.00	\$	0
	SUBTOTAL					\$	3,824
	TOTAL ESTIMATE OF CON	STRUCTION COST	Г			\$	75,500
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)				15,100 15,100 6,300
	TOTAL OPINION OF PROBA	ABLE COST				\$	112,000
				1	Cost per lo	ot	56,000

### Table 4.10-13Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers61st and CumnorPreliminary Design Layout

61st Street	<u>Manhole Number</u> t	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
	-					
	W-1-41 (existing)	736.3	725.04			11.3
	(			50	0.40%	-
	UJ-14	734.0	725.24			8.8
				380	0.40%	
	UJ-15	734.0	726.76			7.2
				310	0.60%	
	UJ-16	741.0	728.62			12.4

No.	Pay Item	Α	pproxima Quantity	te		Unit Price		Amount
110.	i ay nem		Quantity			THUE		Amount
MAINLI	NE SEWER							
1	SANITARY SEW	ER (OPEN CUT)						
	8-inch	0-8 feet deep	80	lin. ft.	\$	75.00	\$	6,000
		8-12 feet deep	660	lin. ft.	\$	87.00	\$ \$	57,420
2	SANITARY MAN	HOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	4,800
		8-12 feet deep	2	each	\$	6,400.00	\$	12,800
3	CONNECTION T	O EXISTING MANHOLE						
	8-inch		1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKF	FILL						
	8-inch	0-8 feet deep	80	lin. ft.	\$	93.00	\$	7,440
		8-12 feet deep	660	lin. ft.	\$	113.00	\$	74,580
5	TREE TUNNELIN	١G	0	lin. ft.	\$	192.00	\$	0
6	SEWER TELEVI	SING FOR FINAL INSPEC	CTION					
			740	lin. ft.	\$	3.00	\$	2,220
7	SEWER TESTIN	G FOR FINAL INSPECTIO	N					
			740	lin. ft.	\$	3.00	\$	2,220
8	CULVERT REMO	OVAL AND REPLACEMEN	١T					
	12-inch		0	lin. ft.	\$	81.00	\$	0
9	RESTORATION	OF LAWNS						
	AND PARKWAY							
	Topsoil and	l sod	33	sq.yd.	\$	14.00	\$	462
10								
	Bit. Concrete			sq.yd.	\$	64.00	<u>\$</u> \$	42,112
	PCC Curb &		120	lin. ft.	\$ \$	41.00	\$	4,920
	PCC Sidewa	шК	50	sq. ft.	\$	13.00	\$	650
11		REPLACE DRIVEWAYS					•	
	Bituminous		0	sq.yd.	\$	48.00	\$	0
12	TREE REMOVAL	AND TRIMMING:			Lum	p Sum	\$	665

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No.	Pay Item	Approxima Quantity		Unit Price		Amount
13	EROSION CONTROL			Lump Sum	\$	1,995
14	TRAFFIC CONTROL:			Lump Sum	\$	6,650
	SUBTOTAL				\$	231,134
SERVIC	E LATERALS					
1	BUILDING SERVICE LINES Near side Far side	336 0	lin. ft. lin. ft.	\$ 50.00 \$ 50.00	\$ \$	<u>16,800</u> 0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	12 0	each each	\$554.00 \$682.00	\$ \$	<u>6,648</u> 0
3	BUILDING SERVICE PLUG:	12	each	\$ 208.00	\$	2,496
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	300	sq.yd.	<u>\$ 14.00</u>	\$	4,200
5	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$ 63.00	\$	0
6	TRENCH BACKFILL 0-8 feet deep	0	lin. ft.	\$ 62.00	\$	0
	SUBTOTAL				\$	30,144
	TOTAL ESTIMATE OF CON	STRUCTION COST	г		\$	261,300
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			52,300 52,300 22,000
	TOTAL OPINION OF PROB/	ABLE COST			\$	387,900
				Cost per l	ot	32,330

# Table 4.10-15Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers61st (East)Preliminary Design Layout

61st Street	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
	G-6-155 (existing)	739.0	731.19	230	2.00%	7.8
	UJ-17	744.0	735.79	230	2.00 /0	8.2

No.	Pay Item	A	pproximat Quantity	te		Unit Price		Amount
MAINLIN	IE SEWER							
1	SANITARY SEWE 8-inch	ER (OPEN CUT) 0-8 feet deep 8-12 feet deep	130 100	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	9,750 8,700
2	SANITARY MANH 48-inch	IOLES 0-8 feet deep 8-12 feet deep	1 0	each each	\$ \$	4,800.00 6,400.00	\$ \$	<u>4,800</u>
3	CONNECTION TO 8-inch	DEXISTING MANHOLE	1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFI 8-inch	LL 0-8 feet deep 8-12 feet deep	15 15	lin. ft. lin. ft.	\$ \$	93.00 113.00	\$ \$	1,395 1,695
5	TREE TUNNELIN	G	20	lin. ft.	\$	192.00	\$	3,840
6	SEWER TELEVIS	ING FOR FINAL INSPEC	TION 230	lin. ft.	\$	3.00	\$	690
7	SEWER TESTING	FOR FINAL INSPECTIC	DN 230	lin. ft.	\$	3.00	\$	690
8	CULVERT REMO 12-inch	VAL AND REPLACEMEN	IT 20	lin. ft.	\$	81.00	\$	1,620
9	RESTORATION C AND PARKWAYS Topsoil and	:	444	sq.yd.	\$	14.00	\$	6,216
10	RESTORATION C Bit. Concrete PCC Curb & C PCC Sidewal	Street Gutter	0 0 0	sq.yd. lin. ft. sq. ft.	\$ \$ \$	64.00 41.00 13.00	\$ \$ \$	0 0 0
11	REMOVE AND RE Bituminous	EPLACE DRIVEWAYS	13	sq.yd.	\$	48.00	\$	624
12	TREE REMOVAL	AND TRIMMING:			Lum	p Sum	\$	1,330

No.	Pay Item	Approxima Quantity		Unit Price		Amount
13	EROSION CONTROL			Lump Sum	\$	333
14	TRAFFIC CONTROL:			Lump Sum	\$	2,660
	SUBTOTAL				\$	50,543
SERVICI	E LATERALS					
1	BUILDING SERVICE LINES Near side Far side	84 0	lin. ft. lin. ft.	\$ 50.00 \$ 50.00	\$ \$	4,200
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	3 0	each each	\$	\$ \$	<u>1,662</u> 0
3	BUILDING SERVICE PLUG:	3	each	\$ 208.00	\$	624
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	75	sq.yd.	<u>\$</u> 14.00	\$	1,050
5	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$ 63.00	\$	0
6	TRENCH BACKFILL 0-8 feet deep	0	lin. ft.	\$ 62.00	\$	0
	SUBTOTAL				\$	7,536
	TOTAL ESTIMATE OF CON	STRUCTION COST	Г		\$	58,100
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			11,600 11,600 4,900
	TOTAL OPINION OF PROB	ABLE COST			\$	86,200
				Cost per	ot	28,730

# Table 4.10-17Downers Grove Sanitary DistrictPossible Special Assessments for Sanitary Sewers60th and Cumnor Sub-AreaCost Summary

Sub-Basin:	Near Services	Far Services	T	otal Project Cost	Cost per lot
59th (West)	8	7	\$	362,300	\$ 24,150
59th (East)	4	0	\$	314,500	\$ 78,630
60th (West)	8	3	\$	220,600	\$ 20,050
60th and Cumnor	4	3	\$	149,400	\$ 21,340
60th (East)	2	1	\$	80,800	\$ 26,930
Cumnor (South)	2	0	\$	112,000	\$ 56,000
61st and Cumnor	12	0	\$	387,900	\$ 32,330
61st (East)	3	0	\$	86,200	\$ 28,730
TOTALS	43	14	\$	1,713,700	\$ 30,060
	5	7			

#### 4.11 63<sup>rd</sup> Corridor

The  $63^{rd}$  Corridor is a sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.11, the approximate limits of this sub-area are Carpenter Street to the west,  $62^{nd}$ Street to the north, Florence Avenue to the east, and  $65^{th}$  Street to the south. The proposed service area includes approximately 76 single-family residences with septic systems or vacant lots. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving all unsewered properties within the  $63^{rd}$  Corridor sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The 63<sup>rd</sup> Corridor sub-area contains a number of small pockets of unsewered lots that have multiple drainage divides. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divides. The study area can be divided into multiple smaller service areas in order to create the most cost effective plan.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The three major road crossings that would significantly increase construction cost in this sub-area are  $63^{rd}$  Street, Main Street, and Fairview Avenue. Thus, alternatives were considered to minimize crossing of this route with both the mainline sewer and building services.

The Villages of Downers Grove and Westmont own and operate water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the  $63^{rd}$  Corridor sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

Sub-basin	No. of Services	Layout	Cost Estimate
Carpenter and 63rd	8	Table 4.11-1	Table 4.11-2
Norfolk and Carpenter	8	Table 4.11-3	Table 4.11-4
Meadowlawn and Washington	28	Table 4.11-5	Table 4.11-6
63 <sup>rd</sup> and Lyman	7	Table 4.11-7	Table 4.11-8
Fairmount and 63rd	9	Table 4.11-9	Table 4.11-10
Blodgett and 62nd	1	Table 4.11-11	Table 4.11-12
63 <sup>rd</sup> and Osage	7	Table 4.11-13	Table 4.11-14
Grand Avenue	8	Table 4.11-15	Table 4.11-16

The following are the proposed sub-basins:

Table 4.11-17 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.11.

The Carpenter and 63rd sub-basin sewer plan follows the topography which falls west and south from Main Street and 63<sup>rd</sup> to Adelia and Carpenter. The existing sewers on the north side of 63<sup>rd</sup> and west side of Main Street are too shallow to serve this area. Thus, the sewer should be placed in the existing alley south of 63<sup>rd</sup> Street and on the east side of Carpenter to avoid the multiple existing utilities. Table 4.11-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$207,800, including contingency, engineering, and legal/administrative costs.

The Norfolk and Carpenter sub-basin topography falls from the ridge east of Carpenter, west along Norfolk and the sewer will need to flow west to the existing manhole on southwest corner of Carpenter and Norfolk. The sewer should match the alignment of the existing sewer in the south parkway. Table 4.11-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-4 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$161,800, including contingency, engineering, and legal/administrative costs.

The Meadowlawn and Washington sub-basin sewer plan follows the existing topography southeast to the existing manhole on Washington Street. The sewer should be placed in the south parkway of Meadowlawn, the east right-of-way of Washington, and an easement on 63<sup>rd</sup> to avoid the existing water main, IBC ducts, and power poles. The existing sewers to the west on 63<sup>rd</sup> and Meadowlawn are too shallow to serve this area. Table 4.11-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$845,200, including contingency, engineering, easements, and legal/administrative costs.

The 63<sup>rd</sup> and Lyman sub-basin sewer plan follows the topography east from 912 W. 63<sup>rd</sup> Street to the existing sewer on Lyman Avenue. This sewer will be parallel to a sewer on the south side of 63<sup>rd</sup> to avoid a large number of service crossings. This sewer should be placed in an easement to avoid the existing utilities in the parkway. This is the second most costly sub-basin because of the easements and the small number of serviceable lots. Table 4.11-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$360,000, including contingency, engineering, easements, and legal/administrative costs.

The Fairmount and 63rd sub-basin sewer plan will flow towards the existing manhole on the northeast corner of Fairmount and  $63^{rd}$  Street. The sewer on the south side of  $63^{rd}$  should be placed in easements, while the sewer on Fairmount will be placed in the pavement to avoid existing utilities. The existing sewer to the south on Fairmount is too shallow to serve this area. This sub-basin is the most costly because of augering under  $63^{rd}$ , the multiple easements, and the

low density of serviceable lots. Table 4.11-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$477,400, including contingency, engineering, easements, and legal/administrative costs.

The Blodgett and 62nd sub-basin sewer plan consists of a sewer extending east from Blodgett to serve only 535 W. 62<sup>nd</sup> Street. The existing sewer on Grand Avenue is not a possible connection point because the sewer is not deep enough. Table 4.11-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$46,900, including contingency, engineering, easements, and legal/administrative costs.

The 63<sup>rd</sup> and Osage sub-basin sewer plan will flow along the north side of 63<sup>rd</sup> Street from Blodgett to east of Osage Avenue. These properties along 63<sup>rd</sup> could not be served by the possible sewer on Grand Avenue or the existing sewer on Osage Avenue because of lack of adequate cover. This sewer should also be placed in an easement. The property at 630 W. 63<sup>rd</sup> Street is a lot that could be redeveloped at a later time and served by this sewer extension. Table 4.11-13 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-14 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$293,000, including contingency, engineering, easements, and legal/administrative costs.

The Grand Avenue sub-basin sewer plan will connect to the proposed 63<sup>rd</sup> and Osage sewer at 63<sup>rd</sup> and Grand. The existing sewer north of the intersection of Grand and 62<sup>nd</sup> is too shallow to adequately serve this area. The sewer should be placed in the east parkway between the sidewalk and pavement. Table 4.11-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$182,300, including contingency, engineering, and legal/administrative costs.

#### DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

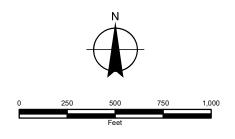
EXHIBIT 4.11

63rd CORRIDOR

#### **POSSIBLE SEWER ALIGNMENT**

#### **MARCH 2021**







I:\Crystal Lake\DGSD1\180305-2018 UAP\20-GIS\MapDocuments\ 4-11 63corr.mxd 563dks - 3/24/2020 Copyright 2019, By Baxter & Woodman, Inc. State of Illinois - Professional Design Firm License No. - 184-001121 - Expires 4-30-20

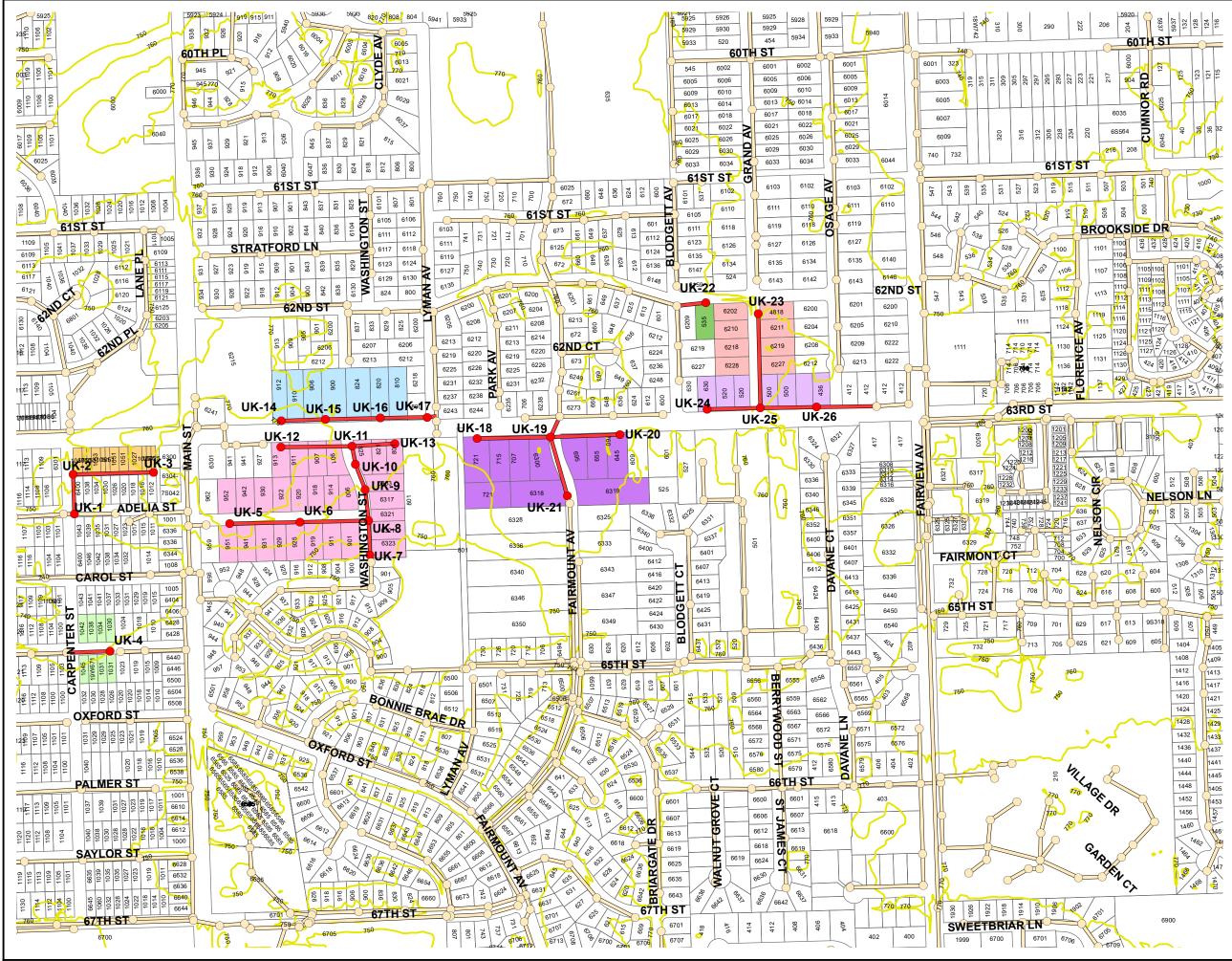


Table 4.11-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersCarpenter and 63rdPreliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
<u>Carpenter</u>	Street					
	UK-1	745.9	740.75	000	0.400/	5.1
	UK-2	750.0	741.64	223	0.40%	8.4
63rd Stree	<u>et</u>					
	UK-3	767.0	754.97	430	3.10%	12.0

No.	Pay Item		Approxima Quantity			Unit Price		Amount
MAINLIN	IE SEWER							
1	SANITARY SEW	i j	222	line for	¢	75.00	ሱ	46 705
	8-inch	0-8 feet deep 8-12 feet deep	223 430	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	16,725 37,410
2	SANITARY MAN	HOLES						
	48-inch	0-8 feet deep 8-12 feet deep	1 1	each each	<u>\$</u> \$	4,800.00 6,400.00	<u>\$</u> \$	4,800
2				Cuon	Ψ	0,400.00	<u> </u>	0,400
3	8-inch	O EXISTING MANHOL	⊑ 1	each	\$	6,200.00	\$	6,200
4	TRENCH BACK	FILL						
	8-inch	0-8 feet deep 8-12 feet deep	60 76	lin. ft. lin. ft.	<u>\$</u> \$	93.00 113.00	<u>\$</u> \$	5,580 8,588
-								
5	TREE TUNNELI	NG	60	lin. ft.	\$	192.00	\$	11,520
6	SEWER TELEVI	SING FOR FINAL INSP	ECTION 653	lin. ft.	\$	3.00	\$	1,959
7	SEWER TESTIN	G FOR FINAL INSPEC	TION 653	lin. ft.	\$	3.00	\$	1,959
8	CULVERT REMO 12-inch	OVAL AND REPLACEM	IENT 0	lin. ft.	\$	81.00	\$	C
9	RESTORATION							
	AND PARKWAY Topsoil and		1,384	sq.yd.	\$	14.00	\$	19,382
10	RESTORATION Bit. Concrete		27	sq.yd.	\$	64.00	\$	1,707
11	REMOVE AND F Bituminous	REPLACE DRIVEWAYS		sq.yd.	\$	48.00	\$	683
	Aggregate			sq.yd.	\$	20.00	\$	89
12	TREE REMOVAI	L AND TRIMMING:			Lump	Sum	\$	2,660

No.	Pay Item	Approxima Quantity			nit ice	Amount	
13	EROSION CONTROL			Lump Su	m	\$	665
14	TRAFFIC CONTROL:			Lump Su	m	\$	1,330
15	SPECIAL RESTORATION:			Lump Su	m	\$	1,995
	SUBTOTAL					\$	129,651
SERVICE	ELATERALS						
1	BUILDING SERVICE LINES Near side Far side	60 0	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	<u>3,000</u>
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	8 0	each each		554.00 682.00	\$ \$	4,432
3	BUILDING SERVICE PLUG:	8	each	\$	208.00	\$	1,664
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	89	sq.yd.	\$	14.00	\$	1,244
5	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$	63.00	\$	0
6	TRENCH BACKFILL 0-8 feet deep	0	lin. ft.	\$	62.00	\$	0
	SUBTOTAL					\$	10,340
	TOTAL ESTIMATE OF CON	STRUCTION COS	т			\$	140,000
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)				28,000 28,000 11,800
	TOTAL OPINION OF PROBA	ABLE COST				\$	207,800
				Co	ost per lo	ot	25,980

### Table 4.11-3Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersNorfolk and CarpenterPreliminary Design Layout

Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Carpenter Street					
H-3-67-4 (existing)	745.6	738.50	230	0.40%	7.1
UK-4	748.0	739.42	200	0.4070	8.6

2	SANITARY SEWER (OF 8-inch 0-8 8-12 SANITARY MANHOLES 48-inch 0-8 8-12 CONNECTION TO EXIS 8-inch	PEN CUT) 3 feet deep 2 feet deep 3 feet deep 2 feet deep 2 feet deep	<u>Quantity</u> 60 170 1 0	lin. ft. lin. ft. each each	\$ \$ \$	Price 75.00 87.00 4,800.00	\$	Amount 4,500 14,790
2	SANITARY SEWER (OF 8-inch 0-8 8-12 SANITARY MANHOLES 48-inch 0-8 8-12 CONNECTION TO EXIS 8-inch	3 feet deep 2 feet deep 3 feet deep 2 feet deep 2 feet deep	170 1	lin. ft. each	\$	87.00	\$	
2	8-inch 0-8 8-12 SANITARY MANHOLES 48-inch 0-8 8-12 CONNECTION TO EXIS 8-inch	3 feet deep 2 feet deep 3 feet deep 2 feet deep 2 feet deep	170 1	lin. ft. each	\$	87.00 4,800.00	\$	
	8-12 SANITARY MANHOLES 48-inch 0-8 8-12 CONNECTION TO EXIS 8-inch	2 feet deep 3 feet deep 2 feet deep	170 1	lin. ft. each	\$	87.00 4,800.00	\$	
	SANITARY MANHOLES 48-inch 0-4 8-12 CONNECTION TO EXIS 8-inch	3 6 feet deep 2 feet deep	1	each	\$	4,800.00	\$	14,790
	48-inch 0-8 8-12 CONNECTION TO EXIS 8-inch	3 feet deep 2 feet deep	-					
3	8-12 CONNECTION TO EXIS 8-inch	2 feet deep	-					
3	CONNECTION TO EXIS 8-inch	·	0	each	\$			4,800
3	8-inch	STING MANHOLE			<u> </u>	6,400.00	\$	С
			1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFILL							
	8-inch 0-8	8 feet deep	65	lin. ft.	\$	93.00	\$	6,045
	8-12	2 feet deep	15	lin. ft.	\$	113.00	\$ \$	1,695
5	TREE TUNNELING		50	lin. ft.	\$	192.00	\$	9,600
6	SEWER TELEVISING F	OR FINAL INSPEC	CTION					
			230	lin. ft.	\$	3.00	\$	690
7	SEWER TESTING FOR	FINAL INSPECTIO	NC					
			230	lin. ft.	\$	3.00	\$	690
8	CULVERT REMOVAL A	ND REPLACEMEN	ΝT					
	12-inch		70	lin. ft.	\$	81.00	\$	5,670
9	RESTORATION OF LAV	WNS						
	AND PARKWAYS:		070		<u>,</u>		•	- 000
	Topsoil and sod		373	sq.yd.	\$	14.00	\$	5,222
10	RESTORATION OF STR							
	Bit. Concrete Street		31	sq.yd.	\$	64.00	\$	1,984
11	REMOVE AND REPLAC	CE DRIVEWAYS						
	Bituminous			sq.yd.	\$	48.00	<u>\$</u> \$	768
	Aggregate		0	sq.yd.	\$	20.00	\$	C
12	TREE REMOVAL AND	TRIMMING:			Lump	o Sum	\$	1,330

No.	Pay Item	Approxima Quantity		Unit Price		Amount
13	EROSION CONTROL			Lump Sum	\$	333
14	TRAFFIC CONTROL:			Lump Sum	\$	1,995
15	SPECIAL RESTORATION:			Lump Sum	\$	998
16	WATER MAIN RELOCATION:	1	each	\$ 7,100.00	\$	7,100
	SUBTOTAL				\$	74,409
SERVICE	ELATERALS					
1	BUILDING SERVICE LINES Near side Far side	60 204	lin ft. lin ft.	\$ 50.00 \$ 50.00	\$ \$	3,000 10,200
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	4 4	each each	\$ 554.00 \$ 682.00	\$ \$	2,216 2,728
3	BUILDING SERVICE PLUG:	8	each	\$ 208.00	\$	1,664
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	222	sq.yd.	<u>\$ 14.00</u>	\$	3,108
5	RESTORATION OF STREETS: Bit. Concrete Street	75	sq.yd.	\$ 63.00	\$	4,725
6	TRENCH BACKFILL 0-8 feet deep	112	lin. ft.	\$ 62.00	\$	6,944
	SUBTOTAL				\$	34,585
	TOTAL ESTIMATE OF CON	STRUCTION COS	т		\$	109,000
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			21,800 21,800 9,200
	TOTAL OPINION OF PROBA	ABLE COST			\$	161,800
				Cost per lo	ot	20,230

#### Table 4.11-5Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersMeadowlawn and WashingtonPreliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Washingto	on Street					
	H-6-55 (existing)	754.1	746.44	40	0.400/	7.7
	UK-7	755.0	746.60	40	0.40%	8.4
	UK-8	755.5	747.44	210	0.40%	8.1
	UK-9	760.0	748.56	140	0.80%	11.4
	UK-10	766.0	752.80	265	1.60%	13.2
	UK-11	768.0	753.44	40	1.60%	14.6
Meadowlay	wn Avenue			400	1.50%	
	UK-6	764.0	753.44	375	1.50%	10.6
	UK-5	770.0	759.07	575	1.50 %	10.9
63rd Stree				400	1.50%	
	UK-12	772.0	759.44	270	0.40%	12.6
	UK-13	763.0	754.52			8.5

No.	Pay Item		Approxima Quantity			Unit Price		Amount
110.	T dy tterm		Quantity			11100		Anount
MAINLIN	IE SEWER							
1	SANITARY SEV	VER (OPEN CUT)						
	8-inch	0-8 feet deep	40	lin. ft.	\$	75.00	\$	3,000
		8-12 feet deep	1,810	lin. ft.	\$ \$ \$	87.00	\$ \$ \$	157,470
		12-16 feet deep	290	lin. ft.	\$	106.00	\$	30,740
2	SANITARY MAN	HOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	4,800
		8-12 feet deep	6	each	\$ \$	6,400.00	\$ \$	38,400
		12-16 feet deep	2	each	\$	7,700.00	\$	15,400
3	CONNECTION -	TO EXISTING MANH	OLE					
	8-inch		1	each	\$	6,200.00	\$	6,200
4	TRENCH BACK	FILL						
	8-inch	0-8 feet deep	25	lin. ft.	\$	93.00	\$	2,325
	••	8-12 feet deep	520	lin. ft.	\$	113.00	\$	58,760
		12-16 feet deep	100	lin. ft.	\$	137.00	\$ \$ \$	13,700
5	TREE TUNNELI	NG	210	lin. ft.	\$	192.00	\$	40,320
6		ISING FOR FINAL IN	OPOTION					
0	SEWER TELEV		2,140	lin. ft.	\$	3.00	\$	6,420
7		IG FOR FINAL INSPE						
1	SEWER IESTIN	NG FUR FINAL INSPE	2,140	lin. ft.	\$	3.00	\$	6,420
			2,140	III I. IL.	φ	3.00	φ	0,420
8	CULVERT REM 12-inch	OVAL AND REPLAC		lin. ft.	¢	91.00	¢	6 490
	12-Inch		80	iin. it.	\$	81.00	\$	6,480
9	RESTORATION							
	AND PARKWAY Topsoil an		3 422	sq.yd.	\$	14.00	\$	47,908
			0,	- 4.7	<u> </u>		<u> </u>	,
10	RESTORATION Bit. Concret		03	sq.yd.	\$	64.00	\$	5,952
				sy.yu.	Ψ	04.00	Ψ	5,852
11		REPLACE DRIVEWA		00.14	¢	10 00	¢	6.040
	Bituminous			sq.yd.	<u>\$</u> \$	48.00	<u>\$</u> \$	6,912
	Aggregate		10	sq.yd.	φ	20.00	Ф	200

No.	Pay Item	Approxima Quantity		Unit Price		Amount
12	TREE REMOVAL AND TRIMMING	i:		Lump Sum	\$	2,660
13	EROSION CONTROL			Lump Sum	\$	665
14	TRAFFIC CONTROL:			Lump Sum	\$	5,320
15	SPECIAL RESTORATION:			Lump Sum	\$	3,325
	SUBTOTAL				\$	463,377
SERVICE	ELATERALS					
1	BUILDING SERVICE LINES Near side Far side	300 408	lin. ft. lin. ft.	\$ 50.00 \$ 50.00	\$ \$	<u>15,000</u> 20,400
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	20 8	each each	\$ 554.00 \$ 682.00	\$ \$	<u>11,080</u> 5,456
3	BUILDING SERVICE PLUG:	28	each	\$ 208.00	\$	5,824
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	578	sq.yd.	<u>\$ 14.00</u>	\$	8,092
5	RESTORATION OF STREETS: Bit. Concrete Street	156	sq.yd.	\$ 63.00	\$	9,828
6	TRENCH BACKFILL 0-8 feet deep	224	lin. ft.	\$ 62.00	\$	13,888
	SUBTOTAL				\$	89,568
	TOTAL ESTIMATE OF CONS	TRUCTION COS	т		\$	552,900
		Contingencies Engineering Legal / Admin Easement Acqu	(20%) (20%) (6%) isition			110,600 110,600 46,400 24,700
	TOTAL OPINION OF PROBA	BLE COST			\$	845,200
				Cost per l	ot	30,190

# Table 4.11-7Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers63rd and LymanPreliminary Design Layout

63rd Street	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
0010 011001	<u>-</u>					
	G-3-76A (existing)	762.0	754.60			7.4
				50	0.40%	
	UK-17	763.0	754.80			8.2
				250	0.40%	
	UK-16	764.0	755.80			8.2
				300	1.20%	
	UK-15	769.0	759.40			9.6
				250	1.20%	
	UK-14	771.0	762.40			8.6

No.	Pay Item		Approxima Quantity			Unit Price		Amount
MAINLIN	E SEWER							
1	SANITARY SEWER 8-inch	R (OPEN CUT) 0-8 feet deep 8-12 feet deep	30 820	lin. ft. lin. ft.	<u>\$</u> \$	75.00	\$ \$	2,250 71,340
2	SANITARY MANHC 48-inch	DLES 0-8 feet deep 8-12 feet deep	0 4	each each	\$ \$	4,800.00	\$ \$	0 25,600
3	CONNECTION TO 8-inch	EXISTING MANHO	LE 1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFIL 8-inch	0-8 feet deep 8-12 feet deep	10 215	lin. ft. lin. ft.	\$ \$	93.00 113.00	\$ \$	930 24,295
5	TREE TUNNELING		145	lin. ft.	\$	192.00	\$	27,840
6	SEWER TELEVISIN	IG FOR FINAL INS	PECTION 850	lin. ft.	\$	3.00	\$	2,550
7	SEWER TESTING	FOR FINAL INSPEC	CTION 850	lin. ft.	\$	3.00	\$	2,550
8	CULVERT REMOV	AL AND REPLACE	MENT 30	lin. ft.	\$	81.00	\$	2,430
9	RESTORATION OF AND PARKWAYS: Topsoil and so		1,656	sq.yd.	\$	14.00	\$	23,184
10	RESTORATION OF Bit. Concrete S		28	sq.yd.	\$	64.00	\$	1,792
11	REMOVE AND REF Bituminous Aggregate	PLACE DRIVEWAY	106	sq.yd. sq.yd.	\$ \$	48.00	\$ \$	5,088 160
12	TREE REMOVAL A	ND TRIMMING:			Lum	p Sum	\$	3,325

# Table 4.11-8Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers63rd and LymanEngineer's Opinion of Probable Construction Cost

No.	Pay Item	Approxima Quantity			Unit Price		Amount
13	EROSION CONTROL			Lump	Sum	\$	665
14	TRAFFIC CONTROL:			Lump	Sum	\$	5,320
15	SPECIAL RESTORATION:			Lump	Sum	\$	1,995
	SUBTOTAL					\$	207,514
SERVICE	ELATERALS						
1	BUILDING SERVICE LINES Near side Far side	70 0	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	3,500 0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	7 0	each each	\$	554.00 682.00	\$	3,878 0
3	BUILDING SERVICE PLUG:	7	each	<u>\$</u>	208.00	<u>\$</u>	1,456
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	78	sq.yd.	\$	14.00	\$	1,092
5	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$	63.00	\$	0
6	TRENCH BACKFILL 0-8 feet deep	10	lin. ft.	\$	62.00	\$	620
	SUBTOTAL					\$	10,546
	TOTAL ESTIMATE OF CONS	STRUCTION COS	т			\$	218,100
		Contingencies Engineering Legal / Admin Easement Acqu	(20%) (20%) (6%) lisition				43,600 43,600 18,300 36,400
	TOTAL OPINION OF PROBA	ABLE COST				\$	360,000
					Cost per lo	ot	51,430

#### Table 4.11-9Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersFairmount and 63rdPreliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Fairmount /	Avenue					
	G-3-20 (existing)	763.0	752.70	110	0.40%	10.3
	UK-19	765.0	753.14	330	0.40%	11.9
	UK-21	764.0	754.46			9.5
63rd Street						
	UK-18	763.0	754.74	400	0.40%	8.3
			-	370	0.40%	
	UK-20	762.0	754.62			7.4

			Approxima			Unit Dria		A
No.	Pay Item		Quantity			Price		Amount
IAINLIN	IE SEWER							
1	SANITARY SEWE	R (OPEN CUT)						
	8-inch	0-8 feet deep	20	lin. ft.	\$	75.00	<u>\$</u> \$	1,50
		8-12 feet deep	1,110	lin. ft.	\$	87.00	\$	96,57
2	SANITARY SEWE	R (AUGER):	80	lin. ft.	\$	275.00	\$	22,00
3	SANITARY MANH	OLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	4,80
		8-12 feet deep	3	each	\$ \$	6,400.00	\$ \$	19,20
4	CONNECTION TO	EXISTING MANHO	DLE					
	8-inch		1	each	\$	6,200.00	\$	6,20
5	TRENCH BACKFII	LL						
	8-inch	0-8 feet deep	0	lin. ft.	<u>\$</u> \$	93.00	<u>\$</u> \$	
		8-12 feet deep	419	lin. ft.	\$	113.00	\$	47,34
6	TREE TUNNELING	9	110	lin. ft.	\$	192.00	\$	21,12
7	SEWER TELEVISI	ING FOR FINAL INS	SPECTION					
			1,210	lin. ft.	\$	3.00	\$	3,63
8	SEWER TESTING	FOR FINAL INSPE	CTION					
			1,210	lin. ft.	\$	3.00	\$	3,63
9		AL AND REPLACE	MENT					
	12-inch		0	lin. ft.	\$	81.00	\$	
10	RESTORATION O							
	AND PARKWAYS:		4 530		•		•	
	Topsoil and s	sod	1,578	sq.yd.	\$	14.00	\$	22,09
11	RESTORATION O				•		•	17.00
	Bit. Concrete	Street	267	sq.yd.	\$	64.00	\$	17,08
12	REMOVE AND RE	PLACE DRIVEWAY			<b>^</b>	10.00	•	
	Bituminous			sq.yd.	<u>\$</u> \$	48.00 20.00	<u>\$</u> \$	4,36
	Aggregate		5	sq.yd.	Φ	20.00	Φ	10
13	TREE REMOVAL	AND TRIMMING:			Lum	p Sum	\$	2,66

No.	Pay Item	Approxima Quantity			Unit Price		Amount
14	EROSION CONTROL	·		Lump	o Sum	\$	665
15	TRAFFIC CONTROL:			Lump	o Sum	\$	5,320
16	SPECIAL RESTORATION:			Lump	o Sum	\$	1,663
	SUBTOTAL					\$	279,953
SERVICE	ELATERALS						
1	BUILDING SERVICE LINES Near side Far side	80 51	lin. ft. lin. ft.	\$ \$	50.00 50.00	\$ \$	4,000 2,550
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	8 1	each each	<u>\$</u>	<u>554.00</u> 682.00	\$ \$	4,432
3	BUILDING SERVICE PLUG:	9	each	\$	208.00	\$	1,872
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	133	sq.yd.	\$	14.00	\$	1,862
5	RESTORATION OF STREETS: Bit. Concrete Street	20	sq.yd.	\$	63.00	\$	1,260
6	TRENCH BACKFILL 0-8 feet deep	22	lin. ft.	\$	62.00	\$	1,364
	SUBTOTAL					\$	18,022
	TOTAL ESTIMATE OF CONS	STRUCTION COS	т			\$	298,000
		Contingencies Engineering Legal / Admin Easement Acqu	(20%) (20%) (6%) lisition				59,600 59,600 25,000 35,200
	TOTAL OPINION OF PROBA	ABLE COST				\$	477,400
					Cost per lo	ot	53,040

Table 4.11-11Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersBlodgett and 62ndPreliminary Design Layout

62nd Stree	<u>Manhole Number</u>	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
	G-3-54 (existing)	762.0	753.64	150	0.409/	8.4
	UK-22	761.0	754.24	150	0.40%	6.8

No.	Pay Itom		Approxima Quantity			Unit Price		Amount
INU.	Pay Item		Quantity			FILLE		Amount
MAINLIN	NE SEWER							
1	SANITARY SEWE	ER (OPEN CUT)						
	8-inch	0-8 feet deep	85	lin. ft.	\$	75.00	\$	6,375
		8-12 feet deep	65	lin. ft.	\$	87.00	\$	5,655
2	SANITARY MANH	IOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	4,800
		8-12 feet deep	0	each	\$	6,400.00	\$	0
3	CONNECTION TO	D EXISTING MANHO	DLE					
	8-inch		1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKF	ILL						
	8-inch	0-8 feet deep	10	lin. ft.	<u>\$</u> \$	93.00	<u>\$</u> \$	930
		8-12 feet deep	0	lin. ft.	\$	113.00	\$	0
5	TREE TUNNELIN	G	0	lin. ft.	\$	192.00	\$	0
6	SEWER TELEVIS	ING FOR FINAL INS	PECTION					
			150	lin. ft.	\$	3.00	\$	450
7	SEWER TESTING	G FOR FINAL INSPE	CTION					
			150	lin. ft.	\$	3.00	\$	450
8	CULVERT REMO	VAL AND REPLACE	MENT					
	12-inch		0	lin. ft.	\$	81.00	\$	0
9	RESTORATION (	OF LAWNS						
	AND PARKWAYS							
	Topsoil and	sod	217	sq.yd.	\$	14.00	\$	3,038
10	RESTORATION (	OF STREETS:						
	Bit. Concrete	Street	0	sq.yd.	\$	64.00	\$	0
11	REMOVE AND R	EPLACE DRIVEWAY	′S					
	Bituminous			sq.yd.	\$	48.00	<u>\$</u> \$	0
	Aggregate		0	sq.yd.	\$	20.00	\$	0
12	TREE REMOVAL	AND TRIMMING:			Lum	ıp Sum	\$	665

No.	Pay Item	Approxima Quantity		Unit Price		Amount
13	EROSION CONTROL			Lump Sum	\$	0
14	TRAFFIC CONTROL:			Lump Sum	\$	665
15	SPECIAL RESTORATION:			Lump Sum	\$	665
	SUBTOTAL				\$	29,893
SERVICE	ELATERALS					
1	BUILDING SERVICE LINES Near side Far side	15 0	lin. ft. lin. ft.	\$ 50.00 \$ 50.00	\$ \$	750 0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	1 0	each each	\$ 554.00 \$ 682.00	\$ \$	<u>554</u> 0
3	BUILDING SERVICE PLUG:	1	each	\$ 208.00	\$	208
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	11	sq.yd.	\$ 14.00	\$	154
5	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$ 63.00	\$	0
6	TRENCH BACKFILL 0-8 feet deep	0	lin. ft.	\$ 62.00	\$	0
	SUBTOTAL				\$	1,666
	TOTAL ESTIMATE OF CONS	STRUCTION COS	т		\$	31,600
		Contingencies Engineering Legal / Admin	(20%) (20%) (6%)			6,300 6,300 2,700
	TOTAL OPINION OF PROBA	ABLE COST			\$	46,900
				Cost per l	ot	46,900

# Table 4.11-13Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary Sewers63rd and OsagePreliminary Design Layout

	Manhole Number	<u>Rim</u>	Invert	Length (ft)	Slope	Manhole <u>Depth</u>
63rd Str	<u>eet</u>					
	W-1-105-4 (existing)	758.1	749.50			8.6
	UK-26	759.0	750.78	320	0.40%	8.2
				300	0.40%	
	UK-25	761.0	751.98	280	0.40%	9.0
	UK-24	762.0	753.10	200	0.4070	8.9

No.	Pay Item		Approxima Quantity			Unit Price		Amount
INO.	Fayitem		Quantity			FILE		Amount
MAINLIN	NE SEWER							
1	SANITARY SEW		400	1: <b>f</b> t	¢	75.00	¢	20.000
	8-inch	0-8 feet deep 8-12 feet deep	400 500	lin. ft. lin. ft.	\$ \$	75.00 87.00	\$ \$	30,000 43,500
2	SANITARY MANI	HOLES						
	48-inch	0-8 feet deep	1	each	\$	4,800.00	\$	4,800
		8-12 feet deep	2	each	\$	6,400.00	\$	12,800
3	CONNECTION T	O EXISTING MANHO	DLE					
	8-inch		1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKF	ILL						
	8-inch	0-8 feet deep	76	lin. ft.	<u>\$</u> \$	93.00	\$ \$	7,068
		8-12 feet deep	72	lin. ft.	\$	113.00	\$	8,136
5	TREE TUNNELIN	IG	40	lin. ft.	\$	192.00	\$	7,680
6	SEWER TELEVIS	SING FOR FINAL INS	SPECTION					
			900	lin. ft.	\$	3.00	\$	2,700
7	SEWER TESTING	G FOR FINAL INSPE	CTION					
			900	lin. ft.	\$	3.00	\$	2,700
8	CULVERT REMC	VAL AND REPLACE	MENT					
	12-inch		56	lin. ft.	\$	81.00	\$	4,536
9	RESTORATION (	OF LAWNS						
			4 000		¢	44.00	¢	40.000
	Topsoil and	SOC	1,300	sq.yd.	\$	14.00	\$	18,200
10	RESTORATION		10		•	- /	•	
	Bit. Concrete	Street	43	sq.yd.	\$	64.00	\$	2,752
11		EPLACE DRIVEWAY						
	Bituminous			sq.yd.	\$	48.00	<u>\$</u> \$	2,736
	Aggregate		0	sq.yd.	\$	20.00	φ	(
12	TREE REMOVAL	AND TRIMMING:			Lum	ıp Sum	\$	1,330

No.	Pay Item	Approxima Quantity		Unit Price		Amount
13	EROSION CONTROL			Lump Sum	\$	665
14	TRAFFIC CONTROL:			Lump Sum	\$	4,655
	SUBTOTAL				\$	160,458
SERVICE	E LATERALS					
1	BUILDING SERVICE LINES Near side Far side	105 0	lin. ft. lin. ft.	\$	\$ \$	5,250 0
2	BUILDING SERVICE BRANCH FITTINGS Near Side Far side	7 0	each each	\$	\$ \$	<u>3,878</u> 0
3	BUILDING SERVICE PLUG:	7	each	\$ 208.00	\$	1,456
4	RESTORATION OF LAWNS AND PARKWAYS: Topsoil and sod	78	sq.yd.	<u>\$</u> 14.00	\$	1,092
5	RESTORATION OF STREETS: Bit. Concrete Street	0	sq.yd.	\$ 63.00	\$	0
6	TRENCH BACKFILL 0-8 feet deep	0	lin. ft.	\$ 62.00	\$	0
	SUBTOTAL				\$	11,676
	TOTAL ESTIMATE OF CONS	STRUCTION COS	т		\$	172,100
		Contingencies Engineering Legal / Admin Easement Acqu	(20%) (20%) (6%) isition			34,400 34,400 14,500 37,600
	TOTAL OPINION OF PROBA	BLE COST			\$	293,000
				Cost per	lot	41,860

# Table 4.11-15Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersGrand AvenuePreliminary Design Layout

	Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Grand Avenu	<u>ne</u>					
	UK-25	761	751.98	480	0.40%	9.0
	UK-23	760.0	753.90	400	0.4070	6.1

No.	Pay Item		roxima uantity			Unit Price		Amount
		<u> </u>	aanny			11100		, incont
1	SANITARY SEWEF 8-inch	R (OPEN CUT) 0-8 feet deep	480	lin. ft.	\$	75.00	\$	36,000
2	SANITARY MANHO 48-inch	DLES 0-8 feet deep	1	each	\$	4,800.00	\$	4,800
3	CONNECTION TO 8-inch	EXISTING MANHOLE	1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFIL 8-inch	L 0-8 feet deep 8-12 feet deep	138 0	lin. ft. lin. ft.	\$ \$	93.00 113.00	\$ \$	12,834 0
5	TREE TUNNELING		20	lin. ft.	\$	192.00	\$	3,840
6	SEWER TELEVISI	NG FOR FINAL INSPECT	ION 480	lin. ft.	\$	3.00	\$	1,440
7	SEWER TESTING	FOR FINAL INSPECTION	l 480	lin. ft.	\$	3.00	\$	1,440
8	CULVERT REMOV 12-inch	AL AND REPLACEMENT	40	lin. ft.	\$	81.00	\$	3,240
9	RESTORATION OF AND PARKWAYS: Topsoil and se		713	sq.yd.	\$	14.00	\$	9,982
10	RESTORATION OF Bit. Concrete S	STREETS:		sq.yd.	\$	64.00	\$	0
11	REMOVE AND REF Bituminous Aggregate	PLACE DRIVEWAYS	57 0	sq.yd. sq.yd.	<u>\$</u> \$	48.00	\$ \$	2,736

#### Table 4.11-16Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersGrand AvenueEngineer's Opinion of Probable Construction Cost

No.	Pay Item	Approxima Quantity	te	Unit Price		Amount
						,
12	TREE REMOVAL AND TRIMMING	6:		Lump Sum	\$	665
13	EROSION CONTROL			Lump Sum	\$	665
14	TRAFFIC CONTROL:			Lump Sum	\$	2,328
	SUBTOTAL				\$	86,170
SERVICE	LATERALS					
1	BUILDING SERVICE LINES					
	Near side	60	lin. ft.	\$ 50.00	\$	3,000
	Far side	204	lin. ft.	\$ 50.00	\$ \$	10,200
2	BUILDING SERVICE BRANCH FITTINGS					
	Near Side	4	each	\$ 554.00	\$	2,216
	Far side	4	each	\$      554.00        \$      682.00	\$ \$	2,728
3	BUILDING SERVICE PLUG:	8	each	\$ 208.00	\$	1,664
4	RESTORATION OF LAWNS					
	AND PARKWAYS:					
	Topsoil and sod	222	sq.yd.	\$ 14.00	\$	3,108
5	RESTORATION OF STREETS:					
	Bit. Concrete Street	78	sq.yd.	\$ 63.00	<u>\$</u> \$	4,914
	PCC Sidewalk	200	sq.ft.	\$ 13.00	\$	2,600
6	TRENCH BACKFILL					
	0-8 feet deep	100	lin. ft.	\$ 62.00	\$	6,200
	SUBTOTAL				\$	36,630
	TOTAL ESTIMATE OF CONS	TRUCTION COS	т		\$	122,800
		Contingencies	(20%)			24,600
		Engineering	(20%)			24,600
		Legal / Admin	(6%)			10,300
	TOTAL OPINION OF PROBA	BLE COST			\$	182,300
				Cost per lo		22,790

# Table 4.11-17Downers Grove Sanitary DistrictPossible Special Assessments for Sanitary Sewers63rd Corridor Sub-AreaCost Summary

Sub-Basin:	Near Services	Far Services	Т	otal Project Cost	Cost per lot
Carpenter and 63rd	8	0	\$	207,800	\$ 25,980
Norfolk and Carpenter	4	4	\$	161,800	\$ 20,230
Meadowlawn & Washington	20	8	\$	845,200	\$ 30,190
63rd and Lyman	7	0	\$	360,000	\$ 51,430
Fairmount and 63rd	8	1	\$	477,400	\$ 53,040
Blodgett and 62nd	1	0	\$	46,900	\$ 46,900
63rd and Osage	7	0	\$	293,000	\$ 41,860
Grand Avenue	4	4	\$	182,300	\$ 22,790
TOTALS	59	17	\$	2,574,400	\$ 33,870
	7	6			

#### 4.12 Gilbert and Lee

Gilbert and Lee is a small service area located within the District's FPA boundary. Exhibit 4.12 shows the approximate limits of this service area which is located south of Gilbert Street between Cornell Avenue and Lee Avenue. The proposed service area currently includes three lots that are developed as single-family residences. One property is on septic while the other two are currently connected to the sewer on Cornell Avenue with a private sewer. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving the three properties along Gilbert Street with a public sewer.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, tree protection, water main and existing utility location. The Village of Downers Grove owns and operates water mains within the subject area limits. The only utilities of that could effect sewer construction are gas mains, overhead electric, and communication.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that the existing trunk sewer capacity on Cornell Avenue will not be affected by the marginal additional flow produced by the three lots on Gilbert Street.

A map of the proposed sewer plan is included in Exhibit 4.12.

The topography falls westerly from Lee Avenue to Cornell Avenue, and thus, the direction of flow will follow the same route. We identified one feasible connection point, the existing manhole north of the intersection of Cornell and Gilbert. This manhole is on the existing 42-inch trunk sewer that flows south on Cornell. The planned sewer will connect to the sewer two feet above the crown of the existing trunk sewer.

We recommend the sewer be installed in the north right-of-way to avoid the existing water main, gas mains, and landscaping located in the south right-of-way. The north parkway does have overhead power line, but adequate room is available for sewer installation. Table 4.12-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.12-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is \$147,400, including contingency, engineering, and legal/administrative costs.

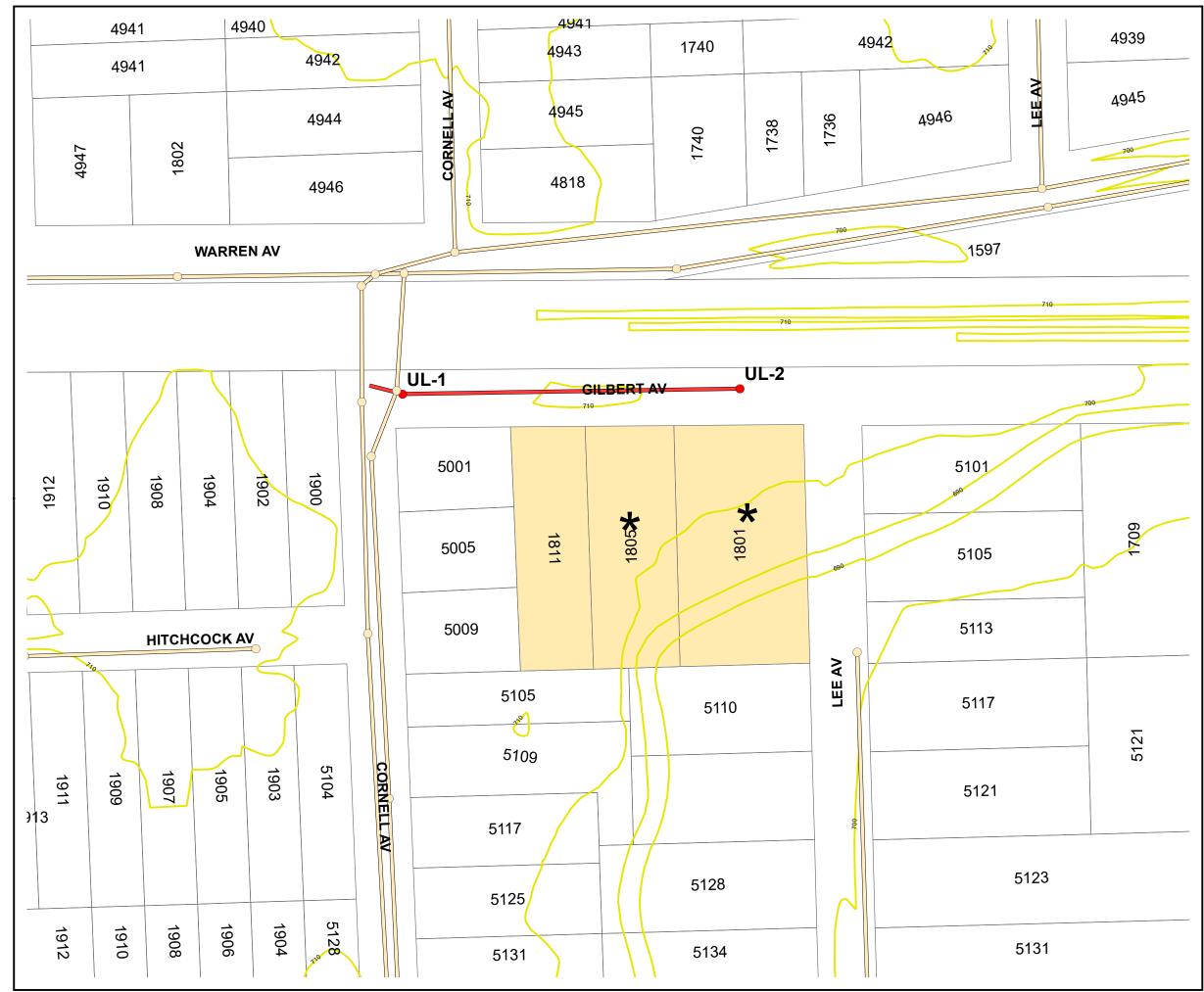
#### DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.12

**GILBERT AND LEE** 

#### **POSSIBLE SEWER ALIGNMENT**

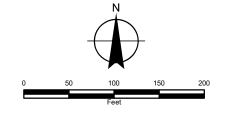
**MARCH 2021** 



PROPOSED MANHOLES
 PROPOSED SEWERS
 EXISTING MANHOLES
 EXISTING SEWERS
 PARCEL BOUNDARIES
 GILBERT AND LEE

LEGEND

CURRENTLY SERVED BY A PRIVATE SEWER





I:\Crystal Lake\DGSD1\180305-2018 UAP\20-GIS\MapDocuments\ 4-12 gilbert.mxd 563dks - 3/24/2020 Copyright 2019, By Baxter & Woodman, Inc. State of Illinois - Professional Design Firm License No. - 184-001121 - Expires 4-30-20

# Table 4.12-1Downers Grove Sanitary DistrictPossible Special Assessment for Sanitary SewersGilbert & LeePreliminary Design Layout

Manhole Number	<u>Rim</u>	<u>Invert</u>	Length (ft)	<u>Slope</u>	Manhole <u>Depth</u>
Gilbert Street					
2-A-14-B-S (existing)	706.0	694.42	380	0.80%	11.6
UL-2	707.0	697.46	000	0.0070	9.5

NJ -	Deviltere	Approximat	e		Unit		A
No.	Pay Item	Quantity			Price		Amount
MAINLI	NE SEWER						
1	SANITARY SEWER (OPEN CUT						
	8-inch 8-12 feet dee	ep 380	lin. ft.	\$	87.00	\$	33,060
2	SANITARY MANHOLES						
	48-inch 8-12 feet dee	ep 1	each	\$	6,400.00	\$	6,400
3	CONNECTION TO EXISTING M	ANHOLE					
	8-inch	1	each	\$	6,200.00	\$	6,200
4	TRENCH BACKFILL						
	8-inch 8-12 feet dee	ep 25	lin. ft.	\$	113.00	\$	2,825
5	TREE TUNNELING	30	lin. ft.	\$	192.00	\$	5,760
6	SEWER TELEVISING FOR FINA	L INSPECTION					
		380	lin. ft.	\$	3.00	\$	1,140
7	SEWER TESTING FOR FINAL IN	SPECTION					
		380	lin. ft.	\$	3.00	\$	1,140
8	CULVERT REMOVAL AND REP	LACEMENT					
	12-inch	0	lin. ft.	\$	81.00	\$	0
9	RESTORATION OF LAWNS						
	AND PARKWAYS:	1.050	مميرم	¢	14.00	¢	44 704
	Topsoil and sod	1,050	sq.yd.	\$	14.00	\$	14,784
10		2		Φ.	04.00	<b>•</b>	<b>F7</b> 0
	Bit. Concrete Street	9	sq.yd.	\$	64.00	\$	576

No.	Pay Item	Approxima Quantity	te		Unit Price		Amount
1101	r uj kom	Quantity			11100		7 uno uno
11	EROSION CONTROL			Lum	p Sum	\$	998
12	TRAFFIC CONTROL:			Lum	p Sum	\$	5,985
	SUBTOTAL					\$	79,723
SERVIC	E LATERALS						
1	BUILDING SERVICE LINES						
	Near side	90	lin. ft.	\$	50.00	\$	4,500
	Far side	0	lin. ft.	\$	50.00	\$ \$	0
2	BUILDING SERVICE						
	BRANCH FITTINGS						
	Near Side	3	each	<u>\$</u> \$	554.00	<u>\$</u> \$	1,662
	Far side	0	each	\$	682.00	\$	0
3	BUILDING SERVICE PLUG:	3	each	\$	208.00	\$	624
4	RESTORATION OF LAWNS						
	AND PARKWAYS:	. –		•	44.00	•	
	Topsoil and sod	17	sq.yd.	\$	14.00	\$	238
5	RESTORATION OF STREETS:						
	Bit. Concrete Street	50	sq.yd.	<u>\$</u>	63.00	\$ \$	3,150
	PCC Sidewalk	150	sq.ft.	\$	13.00	\$	1,950
6	TRENCH BACKFILL						
	0-8 feet deep	120	lin. ft.	\$	62.00	\$	7,440
	SUBTOTAL					\$	19,564
	TOTAL ESTIMATE OF CON	STRUCTION COS	Г			\$	99,300
		Contingencies	(20%)			_	19,900
		Engineering	(20%)				19,900
		Legal / Admin	(6%)				8,300
	TOTAL OPINION OF PROBA	ABLE COST				\$	147,400
					Cost per lo		49,130

#### Table 4.13-1 Downers Grove Sanitary District Unsewered Area Plan Summary of Estimated Costs for Unsewered Areas

Summary of Estimated Costs for Unsewered Areas	S									Number of	:	Costnor
	Ta	ables	Page	<b>Construction</b>	<u>Contingency</u>	Engineering	Legal/Admin	<u>Easements</u>	<u>Total</u>	Number of <u>Services</u>		Cost per <u>Service</u>
4.1 73rd and Webster			11									
73rd and Webster	4.1-1	4.1-2	13-15	\$ 591,500 \$	118,300 \$	118,300 \$	49,700 \$	39,800 \$	917,600	25	\$	36,700
4.2 Downers Grove Park			16									
Katrine-Maple (North)	4.2-1	4.2-2	20-22	\$ 562,100 \$	112,400 \$	112,400 \$	47,200 \$	34,400 \$	868,500	25	\$	34,740
Inverness-Lomond-Elinor-Maple (North)	4.2-3	4.2-4	23-26	\$ 1,784,400 \$	356,900 \$	356,900 \$	149,900 \$	112,100 \$	2,760,200	72	\$	38,340
Inverness-Belmont (North)	4.2-5	4.2-6	27-29	\$ 121,700 \$	24,300 \$	24,300 \$	10,200 \$	- \$	180,500	6	\$	30,080
Katrine-College (South)	4.2-7	4.2-8	30-32	\$ 403,700 \$	80,700 \$	80,700 \$	33,900 \$	- \$	599,000	27	\$	22,190
Lomond-College (South)	4.2-9	4.2-10	33-35	\$ 607,500 \$	121,500 \$	121,500 \$	51,000 \$	- \$	901,500	29	\$	31,090
Elinor-College (South)	4.2-11	4.2-12	36-38	\$ 257,300 \$	51,500 \$	51,500 \$	21,600 \$	- \$	381,900	9	\$	42,430
Janes-College (South)	4.2-13	4.2-14	39-41	\$ 273,900 \$	54,800 \$	54,800 \$	23,000 \$	- \$	406,500	13	\$	31,270
Chase-Hobson-Belmont (South)	4.2-15	4.2-16	42-44	\$ 439,200 \$	87,800 \$	87,800 \$	36,900 \$	- \$	651,700	15	\$	43,450
4.3 Downers Grove Gardens			46									
Janes-Leonard-Chase-Puffer (North)	4.3-1	4.3-2	52-54	\$ 875,500 \$	175,100 \$	175,100 \$	73,500 \$	- \$	1,299,200	68	\$	19,110
Janes-Leonard-Chase-Puffer (South)	4.3-3	4.3-4	55-57	\$ 1,648,800 \$	329,800 \$	329,800 \$	138,500 \$	- \$	2,446,900	129	\$	18,970
Belmont Road (Southwest)	4.3-5	4.3-6	58-60	\$ 379,500 \$	75,900 \$	75,900 \$	31,900 \$	64,700 \$	627,900	25	\$	25,120
Belmont Road (East)	4.3-7	4.3-8	61-63	\$ 729,900 \$	146,000 \$	146,000 \$	61,300 \$	149,000 \$	1,232,200	52	\$	23,700
Pershing Avneue (South)	4.3-9	4.3-10	64-66	\$ 795,700 \$	159,100 \$	159,100 \$	66,800 \$	- \$	1,180,700	64	\$	18,450
Woodward and 63rd Street	4.3-11	4.3-12	67-69	\$ 206,300 \$	41,300 \$	41,300 \$	17,300 \$	18,100 \$	324,300	18	\$	18,020
Lee and Boundry (South)	4.3-13	4.3-14	70-72	\$ 500,000 \$	100,000 \$	100,000 \$	42,000 \$	- \$	742,000	39	\$	19,030
Springside Avenue (South)	4.3-15	4.3-16	73-75	\$ 210,800 \$	42,200 \$	42,200 \$	17,700 \$	- \$	312,900	14	\$	22,350
Springside-Jefferson-Downers (North)	4.3-17	4.3-18	76-78	\$ 986,600 \$	197,300 \$	197,300 \$	82,900 \$	- \$	1,464,100	52	\$	28,160
Pershing-Woodward-Maple (North)	4.3-19	4.3-20	79-81	\$ 1,867,300 \$	373,500 \$	373,500 \$	156,900 \$	42,800 \$	2,814,000	104	\$	27,060
Sherman Avenue (North)	4.3-21	4.3-22	82-84	\$ 840,400 \$	168,100 \$	168,100 \$	70,600 \$	- \$	1,247,200	54	\$	23,100
Lee Avenue (North)	4.3-23	4.3-24	85-87	\$ 966,700 \$	193,300 \$	193,300 \$	81,200 \$	14,600 \$	1,449,100	54	\$	26,840
4.4 Fairhaven Court			89									
Fairhaven Court	4.4-1	4.4-2	91	\$ 231,500 \$	46,300 \$	46,300 \$	19,400 \$	43,700 \$	387,200	10	\$	38,720
4.5 Burlington Highlands			94									
Morton and Downers	4.5-1	4.5-2	99-101	\$ 918,900 \$	183,800 \$	183,800 \$	77,200 \$	16,600 \$	1,380,300	39	\$	35,390
40th and Seely (North)	4.5-3	4.5-4	102-104	405,400 \$	81,100 \$	81,100 \$	34,100 \$	- \$	601,700	21	\$	28,650
40th and Northcott	4.5-5	4.5-6	105-107	284,200 \$	56,800 \$	56,800 \$	23,900 \$	- \$	421,700	14	\$	30,120
Virginia-Seely-Janet-Downers	4.5-7	4.5-8	108-110	767,400 \$	153,500 \$	153,500 \$	64,500 \$	- \$	1,138,900	43	\$	26,490
Belle Aire and Venard	4.5-9	4.5-10	111-113	604,400 \$	120,900 \$	120,900 \$	50,800 \$	24,700 \$	921,700	21	\$	43,890
Vernard Road (North)	4.5-11	4.5-12	114-116	249,500 \$	49,900 \$	49,900 \$	21,000 \$	- \$	370,300	10	\$	37,030
Vernard Road (South) (completed)	4.5-13	4.5-14	117-119	- \$	- \$	- \$	- \$	- \$	-	0	\$	-
Virginia Avenue (West)	4.5-15	4.5-16	120-122	101,100 \$	20,200 \$	20,200 \$	8,500 \$	- \$	150,000	6	\$	25,000
Lacey-Carol-Northcott	4.5-17	4.5-18	123-125	\$ 45,800 \$	9,200 \$	9,200 \$	3,900 \$	- \$	68,100	1	\$	68,100
Lacey and Janet	4.5-19	4.5-20	126-128	205,300 \$	41,100 \$	41,100 \$	17,300 \$	- \$	304,800	14	\$	21,770
Ogden-Lacey-Grant-Lee (South)	4.5-21	4.5-22	129-131	\$ 1,585,100 \$	317,000 \$	317,000 \$	133,100 \$	133,600 \$	2,485,800	18	\$	138,100
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#### Table 4.13-1 Downers Grove Sanitary District Unsewered Area Plan Summary of Estimated Costs for Unsewered Areas

Summary of Estimated Costs for Unsewered Area	IS								Ni	O a star sa
	Tables	Page	<u>Construction</u>	Contingency	Engineering	Legal/Admin	Easements	<u>Total</u>	Number of <u>Services</u>	Cost per <u>Service</u>
4.6 Golf Addition		133								
Drendel and Ogden (completed)	4.6-1 4.6-2	137-139	\$ - \$	- \$	- \$	- \$	- \$	-	0	\$ -
Cross and Ogden (South) (completed)	4.6-3 4.6-4	140-142	\$ - \$	- \$	- \$	- \$	- \$	-	0	\$ -
Cross and Ogden (North)	4.6-5 4.6-6	143-145	\$ 237,600 \$	47,500 \$	47,500 \$	20,000 \$	30,400 \$	383,000	2	 N/A
Drendel and Granville (South)	4.6-7 4.6-8	146-148	\$ 549,400 \$	109,900 \$	109,900 \$	46,200 \$	18,600 \$	834,000	28	\$ 29,790
Burlington and Walnut (South)	4.6-9 4.6-10	149-151	\$ 138,100 \$	27,600 \$	27,600 \$	11,600 \$	- \$	204,900	2	 N/A
Puffer North of Prairie	4.6-11 4.6-12	152-154	\$ 422,000 \$	84,400 \$	84,400 \$	35,400 \$	10,400 \$	636,600	16	\$ 39,790
4.7 Florence Avenue		156								
Florence Avenue	4.7-1 4.7-2	158-160	\$ 164,700 \$	32,900 \$	32,900 \$	13,800 \$	- \$	244,300	11	\$ 22,210
4.8 Meyers Road and 31st Street		161								
Meyers Road (North)	4.8-1 4.8-2	164-166	\$ 148,900 \$	29,800 \$	29,800 \$	- \$	34,900 \$	243,400	3	 N/A
Meyers Road (South)	4.8-3 4.8-4		\$ 183,200 \$	36,600 \$	36,600 \$	- \$	35,200 \$	291,600	4	N/A
4.9 57th and Grant		171				· · · · · · · · · · · · · · · · · · ·		· · ·		
57th and Grant (completed)	4.9-1 4.9-2	173-175	\$ - \$	- \$	- \$	- \$	- \$	-	0	\$ -
4.10 60th and Cumnor		176								
59th (West)	4.10-1 4.10-2	180-182	\$ 244,200 \$	48,800 \$	48,800 \$	20,500 \$	- \$	362,300	15	\$ 24,150
59th (East)	4.10-3 4.10-4		\$ 211,900 \$	42,400 \$	42,400 \$	17,800 \$	- \$	314,500	4	\$ 78,630
60th (West)	4.10-5 4.10-6		\$ 148,700 \$	29,700 \$	29,700 \$	12,500 \$	- \$	220,600	11	\$ 20,050
60th and Cumnor	4.10-7 4.10-8		\$ 100,700 \$	20,100 \$	20,100 \$	8,500 \$	- \$	149,400	7	\$ 21,340
60th (East)	4.10-9 4.10-1		\$ 54,400 \$	10,900 \$	10,900 \$	4,600 \$	- \$	80,800	3	\$ 26,930
Cumnor (South)	4.10-11 4.10-1		\$ 75,500 \$	15,100 \$	15,100 \$	6,300 \$	- \$	112,000	2	\$ 56,000
61st and Cumnor	4.10-13 4.10-1		\$ 261,300 \$	52,300 \$	52,300 \$	22,000 \$	- \$	387,900	12	\$ 32,330
61st (East)	4.10-15 4.10-1		\$ 58,100 \$	11,600 \$	11,600 \$	4,900 \$	- \$	86,200	3	\$ 28,730
4.11 63rd Corridor		205								
Carpenter and 63rd	4.11-1 4.11-2	209-211	\$ 140,000 \$	28,000 \$	28,000 \$	11,800 \$	- \$	207,800	8	\$ 25,980
Norfolk and Carpenter	4.11-3 4.11-4			21,800 \$	21,800 \$	9,200 \$	- \$	161,800	8	\$ 20,230
Meadowlawn and Washington	4.11-5 4.11-6	215-217	\$ 552,900 \$	110,600 \$	110,600 \$	46,400 \$	24,700 \$	845,200	28	\$ 30,190
63rd and Lyman	4.11-7 4.11-8	218-220	\$ 218,100 \$	43,600 \$	43,600 \$	18,300 \$	36,400 \$	360,000	7	\$ 51,430
Fairmount and 63rd	4.11-9 4.11-1	0 221-223	\$ 298,000 \$	59,600 \$	59,600 \$	25,000 \$	35,200 \$	477,400	9	\$ 53,040
Blodgett and 62nd	4.11-11 4.11-1			6,300 \$	6,300 \$	2,700 \$	- \$	46,900	1	\$ 46,900
63rd and Osage	4.11-13 4.11-1			34,400 \$	34,400 \$	14,500 \$	37,600 \$	293,000	7	\$ 41,860
Grand Avenue	4.11-15 4.11-1	6 230-232	\$ 122,800 \$	24,600 \$	24,600 \$	10,300 \$	- \$	182,300	8	\$ 22,790
4.12 Gilbert and Lee		234								
Gilbert and Lee	4.12-1 4.12-2	236-238	\$ 99,300 \$	19,900 \$	19,900 \$	8,300 \$	- \$	147,400	3	\$ 49,130
Totals			\$ 25,189,900 \$	5,038,000 \$	5,038,000 \$	2,088,300 \$	957,500 \$	38,311,700	1,293	\$ 29,630