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Office of Inspector General

City of Chicago

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Chicago Department of Transportation Aldermanic Menu Program Audit

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Joseph M. Ferguson Inspector General

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April 19,2017

To the Mayor, Members of the City Council, City Clerk, City Treasurer, and residents of the City of Chicago:

The City of Chicago Office of Inspector General (OIG) has completed an audit of the Chicago Department of Transportation's (CDOT) Aldermanic Menu Program (Menu). Through this program, the City gives each alderman control of \$1.32 million annually to fund residential infrastructure projects in their ward, including street and alley resurfacing, street lighting, speed humps, and sidewalk replacement.

OIG found that the administration of the Menu program does not align with best practices for infrastructure planning put forth by the Government Finance Officers Association (GFOA). This audit identified significant concerns related to the City's planning and management of residential infrastructure. For example, we determined that the allocation of \$1.32 million per ward bears no relationship to the actual infrastructure needs of each ward. In addition to an overall citywide funding gap, we concluded that the allocation of Menu funds resulted in significant ward-to-ward funding disparities, including a funding disparity relative to need of \$9.3 million between the best- and worst-funded wards. These findings are deeply troubling and point to serious systemic issues in the City's residential infrastructure planning which disproportionately affect certain parts of the City.

To address these concerns, OIG recommends that CDOT fully inhabit its role in residential infrastructure planning by directly implementing a comprehensive, multi-year strategic capital plan for maintenance and improvement. This plan should meet GFOA best practices or comparable industry standards, such as those suggested in OIG's 2015 CDOT Pavement Management Audit. While aldermen and constituents should be encouraged to provide input on residential infrastructure needs within their wards during the planning process, CDOT's infrastructure professionals are best positioned to create long-term plans and make cost-effective decisions on where and how to allocate the City's limited infrastructure resources.

In its response to the audit, CDOT did not address OIG's concerns related to the lack of long-term planning for residential infrastructure, nor did management provide any corrective actions to address the funding disparities between wards. Rather, the Department reasserted its general but analytically unsupported belief that current practice provides an "appropriate framework" for addressing core residential infrastructure needs. We do not agree. Responsible management of taxpayer dollars requires that the City take a comprehensive, long-term strategic approach to residential infrastructure planning, and Chicago's financial concerns make it all the more urgent that the City adhere to this fundamental principle of good governance.

Website: www.chicagoinpectorpeneral.org <<http://www.chicagoinpectorpeneral.org>>

We thank CDOT and the Office of Budget and Management for their cooperation during this audit.

Respectfully,

Joseph M. Ferguson Inspector General City
of Chicago

Website: www.chicagoinpectoracncra1.org <<http://wwwv.chicagoinpectoracncra1.org>>

*OIG File ii14-0430
Aldermanic Menu Program Audit*

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Acronyms

Menu	Aldermanic Menu Program
CCM	Chicago Department of Transportation Construction Management
CDOT	Chicago Department of Transportation
CIP	Capital Improvement Program
CSR	City of Chicago 311 Customer Service Requests System
DWM	Department of Water Management
GFOA	Government Finance Officers Association
ADA	Americans with Disabilities Act
OBM	Office of Budget and Management
OIG	Office of Inspector General
POD	Police Observation Device
TIF	Tax Increment Financing

I. Executive Summary

The Office of Inspector General (OIG) conducted an audit of the Chicago Department of Transportation's (CDOT) Aldermanic Menu Program (Menu), a sub-program of the Neighborhood Infrastructure Capital Improvement Program (CIP), which is the City's primary means of residential infrastructure management. The objectives of this audit were to determine,

- whether the City adequately addresses residential infrastructure needs for all wards through effective planning and funding; and
- whether CDOT effectively manages Menu projects through a uniform process.

OIG found that, by relying on Menu for residential infrastructure improvements, such as streets, alleys, sidewalks and lighting, the City does not follow best practices for multi-year capital planning, and that Menu, together with other smaller funding mechanisms, does not provide adequate funding to meet the City's residential infrastructure needs.¹ In 2015, Menu funding provided approximately \$228.8 million less than the estimated amount needed citywide, and the City's practice of allocating equal funds to each ward, without consideration of specific needs, resulted in a \$9.3 million disparity in funding relative to need between the best- and worst-funded wards. The City allocated an additional \$27.6 million to residential infrastructure through other programs included in the Neighborhood Infrastructure CIP-such as New Street Construction and Sidewalk Construction-and the Department of Water Management (DWM) conducted residential street restoration following water and sewer main work. Based on available data for 2015, OIG estimates that this DWM work may reduce the unfunded need for residential street resurfacing by no more than \$78.3 million. However, DWM street restoration projects are not prioritized based on the condition of the streets, but rather, based on the age and condition of the water mains beneath them. Taken together, the other Neighborhood Infrastructure subprograms and DWM street restoration work address some citywide residential infrastructure needs yet still leave a gap of \$122.9 million citywide.

We also found that in the years 2012 through 2015, the City allowed aldermen to designate \$15.1 million of Menu funds for projects unrelated to core residential infrastructure improvements.² Furthermore, in 2014, the City permitted aldermen to spend Menu funds on projects located outside of the wards they represented at the time and within their yet-to-be-effectuated future ward boundaries. When aldermen designate Menu funds for projects unrelated to core residential

¹ CDOT uses the Illinois Department of Transportation's functional classifications of roadways to distinguish

residential from arterial streets (see <http://www.cmap.illinois.gov/docuirents/10180/97401/FiunctionalClassGuidebook.pdf/327d0751-44f7-4f9a-a0e3->e0655df633a3> and <http://www.gettingaroundillinois.com/gai.htm?mt=fc>). During OIG's 2015 audit of CDOT's pavement management program, CDOT stated that, in general, arterial streets have centerline striped markings, exist at every half mile interval of road network, and have significantly higher traffic relative to residential streets. See page 4 of the audit available at <http://chicagoinspectoigcnral.org/wp-content/uploads/2015/12/CDOT-Pavement-Management-Audit.pdf>.

²In this report, "core residential infrastructure" refers to the basic Menu elements described in the City's CIP such as streets, alleys, curbs, sidewalks, speed humps, and lighting. See City of Chicago, OBM, "2015-2019 Capital Improvement Program," pdf page 4, accessed December 12, 2016, [http://www.cityofchicago.org/content/dam/citv/depts/obm/supp%20info/CIP Archive/2015%20-%202019%20Capital%20Improvement%20Program.pdf](http://www.cityofchicago.org/content/dam/citv/depts/obm/supp%20info/CIP%20Archive/2015%20-%202019%20Capital%20Improvement%20Program.pdf).

infrastructure or located outside their elected ward boundaries, it undermines CDOT's ability to meet the City's basic residential infrastructure needs.

Finally, the City did not enforce Menu deadlines. For instance, starting in 2012, CDOT and the Office of Budget and Management (OBM) requested that aldermen program at least 80% of their project dollars by June 30th in order to allow engineers to schedule site visits, plan for construction, and complete projects on time. In 2014, only 31 of the 50 aldermen met the deadline. CDOT noted it has no effective method of enforcing this deadline.

In light of these findings, OIG recommends that CDOT assume direct responsibility for residential infrastructure planning by implementing a comprehensive, long-term strategic capital plan aligned with industry best practices. Centralizing planning in CDOT would allow the City to coordinate citywide allocation of resources to address residential infrastructure needs.

If the City chooses to continue to rely on aldermen to conduct City planning, CDOT should nevertheless complete a thorough analysis of citywide residential infrastructure, and the City should ensure that sufficient funding is allocated to address the condition of infrastructure in each ward. Additionally, CDOT should ensure that Menu funding is allocated only to core residential infrastructure projects. Finally, CDOT should ensure that all aldermen limit themselves to projects located within boundaries of the wards to which they were elected, and that they meet applicable submission deadlines.

In response to the audit, CDOT disagreed with OIG's finding and recommendation concerning the citywide funding gap for residential infrastructure and the ward-by-ward funding disparity. The Department stated that "CDOT believes that the current decision-making structure for improvements to neighborhood infrastructure provides the appropriate framework and cost effective analysis and will continue to work with Aldermen to program their Menu funds in the manner that most benefits the city and their neighborhoods." CDOT offered no corrective action related to this finding.

CDOT also disagreed with OIG's recommendations concerning Menu spending on projects unrelated to core residential infrastructure improvements. CDOT management stated that "Menu funding uses may include what the OIG refers to as 'non-core residential items,' as long as the proposed use does not violate the rules and regulations of the funding sources." CDOT offered no corrective action related to this finding.

Finally, CDOT did agree with OIG's finding concerning program deadlines and the application of ward boundaries. CDOT stated that "Menu programming will be limited to aldermen's current ward, going forward."

CDOT's entire response to each finding is included in the "Findings and Recommendations" section of this report.

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II. Background CDOT's mission is to,

keep the city's surface transportation networks and public way safe for users, environmentally sustainable, in a state of good repair and attractive, so that its diverse residents, businesses, and guests all enjoy a variety of quality transportation options, regardless of ability or destination.³

The Capital Improvement Program (CIP) is the City's infrastructure spending "blueprint" which details planned projects related to "the physical improvement or replacement of City-owned infrastructure and facilities."⁴ The City's 2015-2019

CIP describes planned funding for \$1.8 billion in infrastructure projects, including projects related to both residential and arterial street and alley construction, streetscaping, bridge and viaduct improvements, and bicycle and pedestrian safety programs.⁵ CDOT administers the City's capital improvements to the local street system (residential streets, alleys, sidewalks, and lighting) through the Neighborhood Infrastructure program within the CIP.⁶ The Neighborhood Infrastructure program in the 2015-2019 CIP totals \$581.1 million, and the majority of Neighborhood Infrastructure program funds are allocated to the Menu sub-program. The City allocated \$423.0 million to Menu for the years 2015 through 2019.

As described in the City's 2015-2019 CIP, Menu gives aldermen "the option of selecting capital improvement of streets, alleys, curbs, sidewalks, and traffic calming, depending on their local infrastructure needs. The Menu option also includes traffic signal modernization, alley lighting, streetlight upgrades and replacement."⁷ Each year, OBM allocates \$84.0 million to Menu. This amount includes \$66.0 million for project execution (\$1.32 million for each of the 50 wards), \$6.0 million for design costs, and \$12.0 million for subsidized ramps that meet Americans with Disabilities Act (ADA) guidelines.⁸ According to OBM, the annual per-ward allocation has been

City of Chicago, CDOT, "Mission," accessed December 12, 2016,
<http://www.cityofchicago.org/city/en/depts/cdot/auto-generated/cdot_mission.html.

⁴ City of Chicago, OBM, "Capital Improvement Program," accessed December 12, 2016,
<https://www.cityofchicago.org/city/en/depts/obm/provdrs/cap_improv.html

⁵ City of Chicago, OBM, "2015-2019 Capital Improvement Program," pdf page 11, accessed December 12, 2016,
<http://www.cityofchicago.org/content/dam/city/depts/obm/surp_info/CIP_Archive/2015%20-%202019%20Capital%20Improvement%20Program.pdf.

⁶ City of Chicago, OBM, "2015-2019 Capital Improvement Program," pdf page 4, accessed December 12, 2016,
<http://www.cityofchicago.org/content/dam/city/depts/obm/surp_info/CIP_Archive/2015%20-%202019%20Capital%20Improvement%20Program.pdf.

⁷ City of Chicago, OBM, "2015-2019 Capital Improvement Program," pdf page 4, accessed December 12, 2016,
<http://www.cityofchicago.org/content/dam/city/depts/obm/surp_info/CIP_Archive/2015%20-%202019%20Capital%20Improvement%20Program.pdf

⁸ Each year, the first five streets selected for resurfacing in each ward receive a subsidy to pay for 100% of the cost of sidewalk ramps compliant with ADA. Streets after the first five receive a 50% subsidy to cover this cost. This subsidy is funded out of \$12 million earmarked each year specifically for the installation of ADA ramps.

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fixed at \$66.0 million for at least the last ten years. Prior to that, OBM allocated \$60 million annually (\$1.2 million to each ward). According to the CIP, 2015 marked Menu's 20th year.⁹

In addition to Menu, the Neighborhood Infrastructure CIP includes several other sub-programs that address neighborhood infrastructure needs each year. In 2015, funding allocated to the other Neighborhood Infrastructure sub-programs for streets, alleys, lighting, and sidewalks totaled \$27.6 million.¹⁰

Finally, the Department of Water Management (DWM) is currently in the midst of a large-scale water and sewer main replacement program projected to end in 2022.¹¹ DWM is responsible for restoring streets following the installation of water and sewer mains.¹² DWM's water and sewer main replacement program reconstructs a portion of citywide residential streets but does not address the funding needs of other residential infrastructure components, such as alleys, sidewalks, and street lights.

According to CDOT, the 2014 Menu proceeded in the typical manner as outlined below:

1. In the spring, the Mayor, and CDOT and OBM, sent letters to the aldermen explaining the role of Menu in the broader context of infrastructure and providing price estimates for residential infrastructure projects.¹³
2. In their letter, CDOT and OBM provided a list of projects and estimated costs. They asked each alderman to select projects totaling up to \$1.5 million for CDOT to survey.¹⁴ CDOT engineers completed the requested surveys, and the Department provided the projected costs to aldermen. CDOT referred to projects that aldermen selected to be surveyed as "primaried projects."
3. Before aldermen selected projects for CDOT to survey, CDOT and OBM briefed the aldermen and their staffs on Menu, providing briefing packets that included complaint

⁹ City of Chicago, OBM, "2015-2019 Capital Improvement Program," pdf page 8, accessed December 12, 2016, <<http://www.cityofchicago.org/content/dam/city/depts/obm/supp> info/CIP Archive/2015%20-%202019%20Capital%20Improvement%20Program.pdf>.

¹⁰ Another Neighborhood Infrastructure sub-program for "other neighborhood improvements" totaled \$36.1 million in 2015, of which \$31.0 million was for the Albany Park Stormwater Diversion Tunnel and \$2.1 million was for ADA ramps on arterial streets. City of Chicago, OBM, "2015-2019 Capital Improvement Program," 93-94, accessed December 12, 2016, <<http://www.cityofchicago.org/content/dam/city/depts/obm/supp> info/CIP Archive/2015%2Q-%202019%20Capital%20Improvement%20Program.Ddf>.

" City of Chicago, OBM, "2015-2019 Capital Improvement Program," pdf page 9, accessed December 12, 2016, <<http://www.cityofchicago.org/content/dam/city/depts/obm/siipp> info/CIP Archive/2015%20-%202019%20Capital%20Improvement%20Program.pdf>.

¹² According to DWM management, DWM restores half the street-from the curb to the median-following water main replacements, while sewer main replacements require a full restoration of the street from curb to curb.

¹³ See Appendix A for the full text of the 2014 Menu letters.

¹⁴ CDOT engineers conducted two types of surveys for Menu projects. For projects other than street resurfacing, CDOT conducted "tablet surveys," which required site visits to estimate project costs. Beginning in 2014, CDOT began conducting "turbo surveys" for street resurfacing projects, which entailed estimating project costs based on satellite images of streets. According to CDOT, the turbo surveys allowed engineers to provide quick and reasonable estimates of project costs without conducting site visits. CDOT engineers stated that turbo surveys are more efficient than previous surveying methods.

data from the City of Chicago 311 Customer Service Requests System (CSR) regarding infrastructure concerns, as well as maps identifying potential projects in each ward.

4. Each alderman narrowed his or her primaried projects lists to stay within the \$1.32 million limit. CDOT referred to these final selections as "programmed projects."
5. Work on the programmed projects began in late spring, and continued through the summer and fall, weather permitting.

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III. Objectives, Scope, and Methodology

A. Objectives

The objectives of this audit were to determine,

- whether the City adequately addresses residential infrastructure needs for all wards through effective planning and funding; and
- whether CDOT effectively manages Menu projects through a uniform process.

B. Scope

This audit reviewed the 2014 and 2015 Menu processes, with a specific focus on CDOT's administration of the program and the allocation of funds. Our analysis of funding by ward focused on 2015 Menu data provided by CDOT. This ward-

by-ward analysis did not include other sources of funding outside of Menu, such as Tax Increment Financing (TIF),¹⁵ other neighborhood infrastructure funds, or street restoration work resulting from water and sewer, gas, electric, or telecommunication projects. However, other funds are addressed in the discussion of our audit findings to provide context for Menu.

Other CDOT programs not included in this analysis include improvements to bridges, major streets, railroads, traffic signals, intersection safety, transit, or bicycle and pedestrian safety.

This audit did not evaluate CDOT's overall pavement management program, which was the focus of a separate OIG audit issued in December 2015,¹⁶ nor did it evaluate how individual aldermen prioritized Menu projects within their wards. This audit also did not assess whether CDOT and OBM ensured that projects funded through Menu satisfied the applicable restrictions of the bond issue that funds the program.

C. Methodology

To assess how effectively CDOT addresses residential infrastructure needs, OIG conducted interviews with CDOT and OBM to gain an understanding of Menu and to determine if funding for the program adequately met residential infrastructure needs. Through these interviews, we learned that neither department had analyzed the adequacy of Menu funding to meet citywide residential, infrastructure needs. Having discovered the absence of such analysis, OIG developed an estimate of annual need by ward. First, we identified the infrastructure components common to an average residential block, including street resurfacing, sidewalk replacements, curb and gutter replacements, street lighting, and speed humps.¹⁷ We discussed the components of an average residential block with CDOT, then divided CDOT's 2015 average cost per component per block (see Appendix C) by CDOT's longest expected life cycle range for each component,

¹⁵ Some of the funding for other Neighborhood Infrastructure sub-programs comes from TIF.

¹⁶ City of Chicago, OIG, "Chicago Department of Transportation Pavement Management Audit," December 2015, accessed December 12, 2016, <http://chicagoinspectorgeneral.org/vvp-content/uploads/2015/12/CDQf-Pavement-Management-Audit.pdf>.

¹⁷ Components per block may vary for any given residential block. OIG's estimates are based on the components found on a "typical" residential block listed in Appendix C.

and totaled all resulting annualized costs.¹⁸ This gave us the total cost of maintaining an average block in 2015. We performed a similar calculation for alleys, using the average costs for alley resurfacing, alley speed humps, and alley aprons. We then multiplied the per block cost by the total number of residential blocks for each ward, and the per alley cost by the total number of alleys for each ward. Finally, we added the residential block and alley totals to arrive at an estimate of the annual funds needed to replace residential infrastructure in each ward in a manner sufficient to keep pace with deterioration.

In evaluating the City's funding for residential infrastructure, OIG did not include certain types of maintenance activities, like pothole filling and crack sealing, because these activities are targeted repairs rather than replacements of entire residential infrastructure components included in our analysis (as discussed in Appendix C).

We also compared GFOA's guidelines for multi-year capital planning to CDOT's Menu process to determine if the City met recommended best practices.

To assess CDOT's administration of Menu, OIG interviewed CDOT management and staff involved in the program. We

also reviewed CDOT Construction Management (CCM) data related to project completion to determine which projects programmed in 2014 were also completed in 2014. Finally, we reviewed a sample of 2014 CCM data from five wards to determine if CDOT ensured that aldermen selected Menu projects located within their then-current ward boundaries.

To calculate Menu spending unrelated to core residential infrastructure needs, OIG reviewed the City's Menu reporting for the years 2012 through 2015, and identified the Miscellaneous Other Projects, and the Chicago Park District and Chicago Public Schools programs, as well as the Police Observation Device (POD) cameras purchased with Menu funds and the Miscellaneous CDOT Projects with descriptions sufficient to determine that they were unrelated to core residential infrastructure.

D. Standards

We conducted this audit in accordance with generally accepted Government Auditing Standards issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

E. Authority and Role

The authority to perform this audit is established in the City of Chicago Municipal Code § 2-56-030 which states that the Office of Inspector General has the power and duty to review the programs of City government in order to identify any inefficiencies, waste, and potential for

CDOT provided OIG with a life cycle range for each component. We used the longest life cycle to estimate the most optimistic scenario for residential infrastructure. This means that under less than ideal conditions, infrastructure would likely require repair sooner than we estimated, and costs would increase accordingly.

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misconduct, and to promote economy, efficiency, effectiveness, and integrity in the administration of City programs and operations.

The role of OIG is to review City operations and make recommendations for improvement.

City management is responsible for establishing and maintaining processes to ensure that City programs operate economically, efficiently, effectively, and with integrity.

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IV. Findings and Recommendations

Finding 1: Menu, which serves as the City's primary residential infrastructure program, underfunds residential infrastructure needs and results in significant funding disparities relative to need between wards.

Based on pricing in the 2015 Menu and CDOT's component life cycle data, OIG estimated that the City's residential infrastructure needs total \$312.8 million annually. Menu, however, provides only \$84.0 million per year, leaving a gap of approximately \$228.8 million in citywide need that is only partially met through other sources. Furthermore, current Menu practice, which allocates an equal dollar amount to each ward without accounting for differences in residential infrastructure needs, results in a significant disparity in unmet need between wards.

In 2015, in addition to Menu, the City allocated \$27.6 million to residential infrastructure through other Neighborhood Infrastructure sub-programs that address streets, alleys, lighting, and sidewalks.¹⁹ DWM also conducted street restoration following water and sewer main work, as described in the Background section of this report. Based on available data for 2015, OIG estimates that this DWM work may reduce the funding deficit for residential street resurfacing by as much as

\$78.3 million.²⁰ It should be acknowledged, however, that DWM street restoration projects are not prioritized based on the condition of the streets, but rather, based on the age and condition of the water mains beneath them. Taken together, the Neighborhood Infrastructure programs and conservative DWM street restoration estimate reduce the total unmet need by \$105.9 million, leaving a gap of \$122.9 million citywide.

<u>Citywide Estimated Need</u>	<u>Millions of Dollars</u>
2015 Funding	\$312.8
<u>Aldermanic Menu</u>	■ . ' ■ . ■ (\$84.0)
Neighborhood Infrastructure sub-	(\$27.6)
programs	
Water and Sewer Main Street ■	(\$78.3) Restoration Work '

The City allocates \$1.32 million in Menu funds for each ward, regardless of its size and the amount of infrastructure in need of replacement. Therefore, wards with more miles of residential

¹⁹ The \$27.6 million total includes the allocations for the Alley Construction, Lighting, New Street Construction, Residential Street Resurfacing, and Sidewalk Construction sub-programs in the 2015 Neighborhood Infrastructure CIP. These sub-programs are included because they represent residential infrastructure components considered in OIG's calculation. This total does not include the sub-program designated "Other Neighborhood Improvements"- which was \$36.1 million in 2015-because the projects in that sub-program do not address the residential infrastructure components included in OIG's calculation.

²⁰ OIG attempted to determine the monetary value of DWM's residential street restoration work in order to identify how much it addresses the unmet need for residential street restoration. However, the City does not keep this data in a format that is sufficiently detailed and readily available for analysis. Based on the available information, OIG estimates that DWM spent between \$37.8 and \$78.3 million on street restoration in 2015.

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roads and alleys receive a substantially lower percentage of Menu funding required to maintain that infrastructure. In 2015, this resulted in a funding disparity relative to need of \$9.3 million between the best- and worst-funded wards. OIG estimates that the best-funded ward (46th) received 88.5% of necessary funding from Menu (\$218,563 less than necessary), while the worst-funded ward (34th) received only 15.1% (\$9.5 million less than necessary). Those wards where Menu funding falls significantly short of meeting need must pursue other sources, such as TIF, for residential infrastructure improvements.

The green columns in the chart below show the standard \$1.32 million in annual Menu funding per ward. The blue columns show ADA supplemental funding and soft costs, a total of \$18 million citywide, broken out on a per ward basis. In practice, these funds vary based on which projects are selected. The red columns show the additional residential infrastructure needs not funded through Menu. The map on the next page illustrates the percentage of each ward's estimated residential infrastructure need that was funded by Menu in 2015.

2015 Menu Funding vs. Estimated Residential Infrastructure Need

Ward Allotment
 ADA Supplement and Soft Costs
 Need Not Funded by Menu
 \$12,000,000 - - ■ -

\$10,000,000

\$8,000,000 f - -
l n

i _

\$6,000,000 j- rj ;

\$4,000,000

\$2,000,000

\$-

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49
Ward

Source: Menu funding data, OIG calculations based on CDOT project life cycle data, and 2015 Menu pricing.

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2015 Menu Funding as a Percent of Residential Infrastructure Needs

0 2 4 8 Miles
1 i i .i .j .J .a .X .L ., .i ., .L -J

Source: OIG calculations based on CDOT project life cycle data and 2015 Menu pricing.

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Menu does not reflect best practices for governmental capital planning issued by the Government finance Officers Association (GFOA). GFOA is a non-profit membership organization of public finance officials whose mission is to "enhance and promote the professional management of governmental financial resources by identifying, developing, and advancing fiscal strategies, policies, and practices for the public benefit."²¹ In 2006, GFOA issued a best practice advisory that describes the four basic steps of multi-year capital planning:²² identify needs; determine costs; prioritize capital requests; and develop financing strategies.²³ GFOA recommends that a multi-year capital planning process should begin

with the identification of needs and the determination of the cost to fulfill them. CDOT, however, stated that it does not perform comprehensive, long-term analysis to determine annual residential infrastructure needs. OBM sets the budget amount for the CIP and Neighborhood Infrastructure sub-programs including the Menu according to the practicability of the budget for the City. OBM stated that it does not seek input from CDOT regarding estimated residential infrastructure needs, and that Menu has received the same annual allocation of \$84.0 million for at least the past ten years because that is what the City could afford. The increasing cost of projects and this stagnant funding level mean that the actual buying power of Menu funds has declined substantially over time.

Furthermore, CDOT did not follow capital planning best practices to identify and prioritize projects. The Department stated that it assisted aldermen in project prioritization by providing them with CSR complaint data and a list of streets that were rated poor or very poor during CDOT's 2014-15 visual inspection of residential street conditions.²⁴ But CDOT did not include other types of information that GFOA recommends, such as "development projections, strategic plans, comprehensive plans, facility master plans, [and] regional plans," nor did the Department focus on "[c]apital assets that require repair, maintenance, or replacement that, if not addressed, will result in higher costs in future years."²⁵ Instead, project prioritization was subject to aldermanic discretion, and some aldermen, as discussed in Finding 2 below, chose to prioritize projects that were unrelated to their wards' residential infrastructure needs of streets, alleys, sidewalks, or lighting.

GFOA recommends that, after identifying needs and determining costs, governments should prioritize projects in a manner designed to ensure that limited resources are used most effectively.²⁶ While GFOA recommends that the prioritization process take into account "input and participation from major stakeholders and the general public,"²⁷ Menu's reliance on aldermanic discretion diminishes the ability and responsibility of CDOT experts to plan and

²¹ GFOA, "About GFOA," accessed December 12, 2016, <<http://gfoa.org/about-gfoa>>.

²² The GFOA advisory defines capital planning to encompass "buildings, infrastructure, technology, and major equipment." GFOA, "Multi-Year Capital Planning Best Practice," February 2006, accessed December 12, 2016, <<http://www.gfoa.org/multi-year-capital-planning>>.

²³ See Appendix B for the full text of the advisory.

²⁴ City of Chicago, OIG, "Chicago Department of Transportation Pavement Management Audit," 13, December 2015, accessed December 12, 2016, <<http://chicagoinspectorgeneral.org/wp-content/uploads/2015/12/CDOT->Pavement-Management-Audit.pdf>>.

²⁵ GFOA, "Multi-Year Capital Planning Best Practice," February 2006, accessed December 12, 2016, <<http://www.gfoa.org/multi-year-capital-planning>>.

²⁶ GFOA, "Multi-Year Capital Planning Best Practice," February 2006, accessed December 12, 2016, <<http://www.gfoa.org/multi-year-capital-planning>>.

²⁷ GFOA, "Multi-Year Capital Planning Best Practice," February 2006, accessed December 12, 2016, <<http://www.gfoa.org/multi-year-capital-planning>>.

prioritize projects over time. The annual, rather than multi-year, cycle of Menu decision-making precludes CDOT and OBM from developing a comprehensive long-term strategy to address residential infrastructure needs that meets the recommended planning timeframe of "at least three years, preferably five or more."²⁸ Long-term planning and citywide coordination of resources depend on CDOT's infrastructure professionals exercising their expertise to maximize efficiency and cost savings. This finding is consistent with OIG's conclusion, in a December 2015 audit, that CDOT's pavement management program, which includes residential streets, did not align with "[Federal Highway Administration] guidelines for an empirically-based, network-level, long-term pavement management strategy," and that "Menu was a decentralized approach, directed by insufficient data and aldermanic discretion." In the 2015 audit, OIG recommended that CDOT experts should be responsible for "pavement preservation techniques, collecting reliable condition data on a routine basis, developing a proactive preventive maintenance strategy," and that the same principles should apply to both

residential and arterial infrastructure.²⁹

Recommendation:

The City's 2015-2019 CIP designates CDOT as the administrator of the Neighborhood Infrastructure CIP, including Menu. To allow CDOT to fully inhabit that role, we recommend that the Department's infrastructure professionals be fully responsible for analysis and decisionmaking regarding residential infrastructure maintenance and improvement on residential streets, alleys, sidewalks and lighting. This responsibility should include adhering to the four basic steps of multi-year capital planning-identifying needs, determining costs, prioritizing capital requests, and developing financing strategies with the assistance of OBM. While aldermen and their constituents may provide input, CDOT should have the authority to make the final determination of the most cost-effective strategies for maintaining the City's infrastructure. Furthermore, CDOT should incorporate residential infrastructure planning into a comprehensive, long-term strategic effort consonant with industry best practices.

Management Response:

"CDOT believes that the current decision-making structure for improvements to neighborhood infrastructure provides the appropriate framework and cost effective analysis and will continue to work with Aldermen to program their Menu funds in the manner that most benefits the city and their neighborhoods. This position is consistent with CDOT's response to the OIG 'CDOT Pavement Management Audit' (OIG File #14-0625). Each location submitted on an Alderman's Menu is reviewed for conditions and need by CDOT engineers. CDOT will exclude a location if the construction is not warranted. Additionally, CDOT will continue to work within the current total CIP and Menu framework and provide Aldermen with analysis using industry best practices and applicable guidelines to make informed decisions for their communities. CDOT will also continue to complete residential street pavement condition

GFOA, "Multij-Year Capital Planning, Best Practice," February 2006, accessed December 12, 2016, <<http://www.gfoa.org/multi-year-capital-planning>>.

²⁹ City of Chicago, OIG, "Chicago Department of Transportation Pavement Management Audit," 14, December 2015, accessed December 12, 2016, <<http://chicagoinspectorgeneral.org/wp-content/uploads/2015/12/CDOT-Pavement-Management-Audit.pdf>>.

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assessments on a routine basis and to provide Aldermen with the relevant condition data they need to make informed decisions.

"To assist Menu decision-making, CDOT presents each alderman a capital improvement map at their annual improvement meeting. Additionally, CDOT's new construction management database (CCM) and an electronic map (DOTMaps) are provided to Aldermen. DOTMaps presents all past, present and future permitted infrastructure and utility projects and street PCI survey data. This enables Aldermen to review and identify Menu projects within their ward. CDOT staff also encourages Aldermen to submit their proposed selections in a timely manner in order for projects to be surveyed, designed, cost estimated and scheduled to meet seasonal construction deadlines. CDOT believes that the existing system for the determination of neighborhood infrastructure projects provides a thorough and cost effective process to deliver improvements at locations which are in need of repair and are desired by the public.

"It should also be noted that several wards have embraced the Participatory Budget Program through PB Chicago. PB Chicago is a partnership between University of Illinois at Chicago's Great Cities Institute and the Participatory Budgeting Project. Since 2012, PB Chicago has worked with residents, public officials, and partner organizations to democratically determine how to spend millions of dollars to benefit their communities. By engaging stakeholders in the

decision-making process for the allocation of public funds, PB Chicago empowers city residents and gives them a voice in their neighborhood infrastructure.

"CDOT believes the four steps of multiple year capital planning outlined by OIG are effectively accomplished in the overall CIP, including the current Menu program. The Menu Program assists Aldermen to annually identify their communities' needs and provide baseline costs for projects. CDOT's Project Coordination Office provides a multiple year review for each proposed Menu project and all proposed infrastructure and utility improvements within the Ward. CDOT then coordinates these multiple year CIP funded projects and provides a holistic and efficient approach to each Alderman and citizens of the Ward. Then Aldermen utilizing CDOT's information, analysis and PCO review to prioritize their community's needs and determine the best multiple year funding strategies for these projects. Finally, the CIP uses the four step approach each year when it assesses funding levels for the various programs. "

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Finding 2: In the years 2012 through 2015, the City permitted aldermen to designate \$15.1 million of Menu funds for projects unrelated to core residential infrastructure.

In the four years from 2012 through 2015, the City allowed aldermen to designate \$15.1 million in Menu funds for projects unrelated to core residential infrastructure. The projects in question were either not listed in the Menu catalog (i.e., they were "off-menu") or were in the catalog but fell outside of CDOT's jurisdiction (e.g., POD cameras, which fall under the auspices of the Office of Emergency Management and Communications). The following chart breaks down these projects.

Category	2012	2013	2014	2015	Total
Miscellaneous ³⁴	963,284	940,652	587,385	848,693	3,340,014
Chicago Public Schools ³⁵	187,270	587,148	971,002	256,750	2,002,170
Cameras ³⁶	231,409	276,018	185,023	177,566	870,016
Total	\$3,315,988	\$4,571,802	\$3,562,221	\$3,662,856	\$15,112,867

The four categories presented in this chart cover the following goods and services: Off-Menu Non-Core

Residential Infrastructure

- Chicago Park District - artificial turf, playgrounds, basketball courts, spray pools, and multi-year investments in

menu projects and items unrelated to core residential infrastructure. If the City wants to provide aldermen a means for allocating funds to parks, playgrounds, community gardens, schools, cameras etc., it should consider defining an additional budget line for such projects rather than allowing the diversion of already-scarce resources intended for core residential infrastructure.

Management Response:

"As the OIG notes, the Menu program is only one of many neighborhood programs in the CIP. The Menu is not intended to pay for all neighborhood infrastructure needs. Additionally, Menu funding uses may include what the OIG refers to as 'non-core residential items,' as long as the proposed use does not violate the rules and regulations of the funding sources. For example, a densely populated high-rise neighborhood may have the need for a dog park, or a low density bungalow belt with high traffic volume and limited green space or parks might feel that upgrading playground equipment best addresses an immediate neighborhood need. While not

In New York and Los Angeles council members are given access to discretionary funds at an estimated rate of less than \$5 per capita citywide. New York Council members are limited to providing grants to non-profits, while Los Angeles Council Members have broader discretion over use of funds. Neither city uses discretionary funds to manage routine infrastructure.

^{JS} City of Chicago, CDOT, "Mission," accessed December 12, 2016, <<http://www.cityofchicago.org/city/cn/dcpts/cdot/auto>> generated/cdot mission.html.

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specifically listed under the CIP, both of these projects address local needs and can be funded through the Menu program, under certain circumstances. Going forward, OBM and CDOT will review and discuss providing greater clarity to the Menu guidelines to Aldermen.

"CDOT will continue to work with Aldermen to identify Menu projects that best serve the city and their communities. In some cases, this may include 'non-core residential items' that are worthy neighborhood investments, such community parks, playgrounds, community gardens, schools, and cameras. As discussed above, CDOT will continue to provide aldermen with all information necessary to make fully-informed decisions about neighborhood infrastructure investments. "

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Finding 3: CDOT allowed at least \$825,292 in Menu spending on projects falling outside the appropriate ward boundaries and did not enforce project selection submission deadlines.

Based on OIG's review of 2014 Menu projects in a sample of five wards, we determined that 32, or 12.2% of the 263 projects were located outside the relevant ward boundaries effective in 2014.³⁹ As a result, the City permitted aldermen in the sampled wards to designate at least \$825,292 of funding toward projects within the yet-to-be-effectuated 2015 ward boundaries, rather than restricting them to the boundaries of the wards they were elected to serve in 2011.

This practice contradicted the Corporation Counsel's 2012 memorandum on the effective date of the new ward map, which stated:⁴

Applicable law provides that the 2001 map, which was in effect for the 2011 elections, should govern for the duration of those four-year terms. This includes the continuing representation of constituents....

The Corporation Counsel further stated that aldermen may serve residents outside their current wards, but not to the detriment of constituents within the boundaries of the wards they were elected to serve:

The aldermen represent, and for administrative purposes (e.g., notifications) are associated with, the wards that elected them for a four-year term. Nevertheless, nothing in the cases cited [in the memorandum], or in applicable statutes, prevents aldermen from making additional efforts to assist any other resident of Chicago, including prospective constituents in the new version of his or her numbered ward. (Emphasis added.)

Because Menu allocates each ward a flat \$1.32 million per year, any projects funded to benefit an alderman's prospective constituents must necessarily have come at the expense of his or her current constituents. Menu projects for 2014 selected outside of the 2011 ward boundaries were not additional efforts as described in the memorandum, but rather a reduction of service to existing constituents. Therefore, the allocation of \$825,292 described above resulted in some future constituent residents benefiting from additional Menu funds to the detriment of current constituent residents.

CDOT staff stated that the decision of which boundaries to use was left up to each alderman. However, CDOT may have encouraged the practice by providing aldermen with maps and CSR complaint data for both their old and their new ward boundaries as part of the 2014 briefing packet. As the Corporation Counsel's memorandum makes clear, CDOT should have continued to rely strictly on the 2011 ward boundaries until after the 2015 election.

In addition, the City did not enforce Menu deadlines provided by CDOT. For instance, starting in 2012, CDOT and OBM requested that aldermen program at least 80% of their project dollars by

³⁹ OIG analyzed one ward using data provided by CDOT, and randomly selected four additional wards for further analysis.

⁴⁰ See Appendix G for the full text of the 2012 Corporation Counsel memorandum on the effective date of the new ward map.

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June 30th. CDOT stated that this was necessary to ensure timely project completion. In 2014, only 31 aldermen, or 62%, reached the 80%) programming goal in a timely fashion. According to CDOT, delays in project submission make it difficult for engineers to schedule site visits, plan for construction, and complete projects on time.

Recommendation:

If the City continues to assign the role of residential infrastructure decision-making to aldermen, the City should enforce uniform rules and regulations governing Menu. Specifically, the City should ensure that all aldermen limit themselves to projects located within boundaries of the wards to which they were elected, and that they meet applicable submission deadlines.

Management Response:

"CDOT advised Aldermen uniformly about the Menu rules and regulations. CDOT's role in the Menu Program is to provide information and decision-making tools for aldermen to identify needed projects, determine costs, prioritize projects and develop financing strategies with OBM's guidance. CDOT's role is also to advise Aldermen to submit their proposed selections in a timely manner in order for projects to be surveyed, designed, cost estimated and scheduled to meet seasonal construction deadlines.

"Menu programming will be limited to aldermen's current ward, going forward. "

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April 19, 2017

V. Appendix A: 2014 Aldermanic Menu Letters and Project Price List

The Mayor, and CDOT and OBM, provided the following introductory letters to aldermen at the start of the 2014 Menu process. The letters explain the role of Menu in the broader context of infrastructure and provide price estimates for residential infrastructure projects.

OFFICE OF THE MAYOR

RAMM fc.MANUEL MAYOR

CITY Of CHICAGO

March 17.2014

Dear Alderman:

As you know, while the City's resources become increasingly limited, its infrastructure needs continue to grow. It has become even more important to direct capital funds to the highest priority and most necessary capital improvements, and to utilize these funds as efficiently as possible.

Continued investment in the City's infrastructure is critical in supporting and enhancing our neighborhoods, stimulating job creation, and providing quality City services. Planning for capital improvements must be a comprehensive and forward-looking process that ensures taxpayer dollars are spent responsibly and strategically.

In 2013, we reformed the City's neighborhood capital planning efforts. We included a more collaborative process for Aldermanic "menu" project requests that ensured better coordination with other infrastructure and utility work, and focused on the City's most pressing capital needs.

As provided last year, we will make information available to you concerning planned improvements in your neighborhoods, supporting your ability to provide enhanced value to constituents with the projects you select. You will receive a comprehensive map of all projects that will be completed by Water Management, CDOT, and private utilities. We will also supply a list of urgent and high-priority projects, informed by the other planned work in your neighborhoods, to ensure strategic coordination and greater collaboration. I know this proactive coordination of infrastructure improvements will enhance the quality of life for the residents of our city.

Sincerely, Mayor

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CHICAGO DEPARTMENT OF TRANSPORTATION

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CHICAGO DEPARTMENT OF TRANSPORTATION

city or community;

Dear Aldermen:

Enclosed you will find a complete list of all components of the 2014 Menu package.

Mayor Emanuel outlined in his letter to you the City's efforts to identify and direct resources towards the City's most critical infrastructure needs. We believe that this new, more collaborative approach to capital planning will help you select the projects that most benefit your neighborhoods, and we look forward to sharing this information. We will contact you soon to schedule a meeting to provide details on the most critical and highest priority infrastructure projects in your neighborhoods and discuss your 2014 Menu plans. We also will provide you with a map of all the projects that will be completed over the next year by the City and private utilities.

Please deliver by April 22, 2014, prioritized primary and alternate Menu selections totaling not more than \$1,500,000. Your final selections will be limited to the \$1,320,000 allocation per alderman. It is important to note that this package includes the estimated average cost per Menu item for the coming year; however, the City's infrastructure varies block-by-block, and these estimated prices will be adjusted to reflect project-by-project costs. Once site-specific estimates for the items in your Menu have been calculated, you may be asked to revise and finalize your selections.

In order to ensure timely and effective investment of scarce infrastructure dollars, we ask that you program 80 percent of your 2014 Menu funds by June 30, 2014, with the remaining 20 percent programmed before the end of the year. The changes implemented in 2012 to the Street and Alley Resurfacing Programs to allocate the costs of ADA ramp construction will be continued in 2014.

We look forward to working with you, and please do not hesitate to reach out to us with any questions or concerns.

Sincerely,

Budget Director City of Chicago

Rebekah Scheinfeld Commissioner
Department of Transportation

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CDOT	ESTIMATED PRICING	ESTIMATED PRICING
Residential Street Resurfacing	\$38,000 for Firsts Blocks \$66,500 for Subsequent Blocks	\$38,000 for First 5 Blocks \$66,500 for Subsequent Blocks
Residential Alley Resurfacing	\$29,500 for First Alley \$47,500 for Subsequent Alleys	\$29,500 for First Alley \$47,500 for Subsequent Alleys
Green Alley Program	\$150,000 per Block	\$150,000 per Block
Alley Speed Hump Program	\$1,400 per Block	\$1,400 per Block
Concrete Alley Aprons	\$10,000 per Location	\$10,000 per Location
Street Speed Hump Program	\$3,700 per Block	\$3,700 per Block
Sidewalk Replacement Program	\$75,000 per Block	\$75,000 per Block
Curb & Gutter Replacement Program	\$80,000 per Block	\$80,000 per Block
Diagonal Parking	\$65,000 per Project	\$65,000 per Project
Residential Street Cul-de-Sac	\$25,000 per Project	\$25,000 per Project
Residential Street Traffic Circle	\$11,000 per Project	\$11,000 per Project
Residential Street Bump Outs	\$11,000 per Project	\$11,000 per Project
Guardrail Installations (\$50/Ft)	\$500 per 10' Section	\$500 per 10' Section
Bollard Installations	\$650 per Bollard	\$650 per Bollard

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LIGHTING

2013

2014

Street Light Pole Painting Program	\$300 per Pole	\$300 per Pole
Traffic Signal Pole Painting Program	\$3,500 per Intersection	\$3,500 per Intersection
Street Light Upgrade Program	\$400 per Fixture	\$400 per Fixture
Residential Street Lighting Program	\$64,000 per Block	\$64,000 per Block
Arterial Street Lighting Installation	\$132,300 per Block	\$132,300 per Block
Arterial Street Ornamental Lighting Program	\$164,850 per Block.	\$164,850 per Block
LED Traffic Signal Upgrades	\$20,000 per Intersection	\$20,000 per Intersection
Left-Turn Arrow Installation	\$70,000 per Intersection	\$70,000 per Intersection
Viaduct Lighting Upgrades	\$1,500 per Fixture	\$1,500 per Fixture
Floodlight Installation	\$600 per Fixture	\$600 per Fixture
Pedestrian Countdown Signal	\$12,000 per Intersection	\$12,000 per Intersection

OEMC

2013

2014

High Definition Camera	High Definition Camera: \$22,500 (wireless connectivity, real time streaming video, edge of network storage, high definition, non-obtrusive, weather resistant)	High Definition Camera: \$22,500 (wireless connectivity, real time streaming video, edge of network storage, high definition, non-obtrusive, weather resistant)
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BIKE

2013

2014

Bike Boulevard	\$60,000 per Half-Mile	\$60,000 per Half-Mile
Protected Bike Lane	\$125,000 per Half-Mile	\$125,000 per Half-Mile
Buffered Bike Lane	\$30,000 per Half-Mile	\$30,000 per Half-Mile
Bike Lane/Marked Shared Lane	\$20,000 per Half-Mile	\$20,000 per Half-Mile
Pedestrian Refuge Island	\$60,000 per Location	\$60,000 per Location
In-road "Slate Law Stop for Pedestrians" signs	\$550 per Location for 1 sign \$950 per Location for 2 signs	\$550 per Location for 1 sign \$950 per Location for 2 signs

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VI. Appendix B: Government Finance Officers Association: Best Practice for Multi-Year Capital Planning

The following document comprises the full text of the GFOA best practice for multi-year capital planning.

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Multi-Year Capital Planning

Background. Information technology, and major physical infrastructure providing services to communities. The investment and maintenance of capital assets are a critical activity of state, local, and federal governments, schools, and other government agencies, and therefore require careful planning.

Capital planning is an integral part of a community's economic development program and strategic plan. Capital assets and infrastructure are important legacies that serve current and future generations. It is extremely difficult for governments to address the current and long term needs of their constituents. A multi-year capital plan that clearly identifies capital and major equipment needs, maintenance requirements, funding, options, and the budget impacts.

A properly prepared capital plan is essential to the future financial health of an organization and the continued delivery of services to citizens and businesses.

Recommendation. The GFOA recommends that state and local governments prepare and adopt comprehensive multi-year capital plans to ensure effective management of capital assets. A prudent multi-year capital plan identifies and prioritizes expected needs based on a community's strategic plan, established project scope and cost, details estimated amounts of funding from various sources and project operating and maintenance costs. A capital plan should cover a period of at least three years, preferably five or more.

Identify needs. The first step in capital planning is identifying needs. This information, including development projections, strategic plans, comprehensive plans, master plans, regional plans, and citizen input processes, should identify present and future service needs that require capital investment in infrastructure. In this process, attention should be given to:

- Capital assets that require repair, maintenance, or replacement that, if not addressed, will result in higher costs in future years.
- Infrastructure improvement needed to support economic development or redevelopment.
- Projects with revenue-generating potential.
- Improvements that support economic development.

GFOA, "Multi-Year Capital Planning, Best Practice," February 2006, accessed June 27, 2016, <<http://www.gfoa.org/multi-year-capital-planning>>.

- Changes in [>olu.\ or communtu uc.cd>

Determine costs, Uic lull extent of project costs should be determined when developing I In; unilinear capital plan. Cos! issue.-- to consider include tin- follow ing.

- "[lie M.opc ami liming of a planned projcil should be uctl dc.'intd tit Hit early slaves "i the pl.uiniiv; process
 - Agencies should idcniiiv and use the- inml appiopiialc approaches, ii-solmliiiji oinside assistance, when estimating pioicrt costs am! poionli.il revenues
 - lor projects programmed bcwiik! the. lust year of the plan, go\ crnmnts should adjust cost projections based oil anticipated inflation
 - The ongoing operating eosis associated Willi each project should he quantified, and the sources of funding for ihose (osis should he identified
- " A clear estimate of all major components required to implement a proicci should he outlined, including land acquisition needs, design, constrictiun. contingency and post construction costs
- " Recogni!c the non-financial impacts of the project (e g., enviionincial) on the community

Prioritize capital requests. Governments are continually faced with extensive capital needs and limited financial resources. Therefore, prioritising capiaal project requests is a critical step in the capital plan preparation process When evaluating project submittals, governments ^lould:

- Relied the relationship ol project submittals to financial and governing policies, plans, and studies
 - Allow submitting agencies to provide an initial prioritization
 - Incorporate input and participation from major stakeholders and the general public
- " Adhere to legal requirements and/or mandates
- Anticipate the operating budget impacts resulting Irom capita! projects
 - Apply analytical techniques, as appropriate, for evaluating potential projects (e.g.. net present value, pay back jx-nod. cost-benefit analysis life ocle costing, cash: (low modeling)
 - Re-evaluate capital projects approved in previous multi yc-.ii capital plans
 - I sc a rating system to facilitate decision-making

Develop financing strategies. GFOA recognizes the importance of establishing a viable financing approach for supporting the multi-year capiaal plan, financing strategies should align with expected project lequircincuts while sustaining the financial health of the organization, Governments undertaking a capital financing plan should:

- Anticipate expected revenue and expenditure Mends, uu Hiding their relationship to multi-\tar financial plans

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Bos! ProciCt

- " Prepatc cash Hon projection^ oi (li)- amount and timing oi the. capital financing
- Continue compliance u ith all established linaneial policies • Kccognwe appropriate legal constr.lines
- Consider alio" eMimaic funding .nuoi.ints iron all appropnafe binding alternatives
- I.nsurc reliability and stability o(identified funding souk <<<
- " I'valnate the affuidability of the. financing siralcgv. including the impact on tlebt ratios. ta.\pavers. i.ucpayers. and others

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VH. Appendix C: Annualized Cost to Maintain an Average Street and Average Alley Based on 2015 Menu Pricing

The following tables outline OIG's estimate of the annual cost to maintain the infrastructure on an average residential street and an average alley. We based this calculation on CDOT's 2015 pricing and life-cycle estimates for each project type. We divided the estimated price of each residential street component by the longest expected life-cycle for that component to determine an annual cost. To determine the cost of residential infrastructure per ward, we multiplied the total per block annual life-cycle cost by the number of residential blocks in each ward, provided by the Department. The total per block costs of street and alley resurfacing projects include ADA supplemental subsidies-\$57,000 per block for streets and \$36,000 per block for alleys. In practice, the subsidies are applied to each project and not on a per ward basis.

In evaluating the City's funding for residential infrastructure, OIG did not include other maintenance activities, such as pothole filling and crack sealing, because these programs address a deficient piece of a whole component and do not replace the entire residential infrastructure components included in our analysis.

Note: OIG used the longest estimated life cycle for each menu item in our calculations, resulting in the most conservative cost estimates.

wmmmmmm
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	Block	JferJ	& Supplement	Per Bid	W, Total	Expected Lifecycle	ri-Petri Block Annual % Cos
Res. Street Resurfacing	i	\$ 42,000	\$ 57,000	\$ 99,000	20	\$ 4,950	
Res. Street Speed Humps	0.18	3,700	-	\$ 666	10	67	
Sidewalk Replacement	1	75,000	-	\$ 75,000	50	1,500	
Curb & Gutter Replacement	1	80,000	-	\$ 80,000	50	1,600	
Res Street Lighting Program	1	73,200	-	\$ 73,200	50	1,464	
to&r^;-v'ow?Va				\$ 327,866		\$ ^9,581'	

Menu Item (Alleys)	#. Ber Bidek	Estimated Pricing	<ADA^ Supplement	Per Block Total	f_Expected Lifecycle	Per Block Lifecycle Cost
Res. Alley Resurfacing	1	\$ 31,500	\$ 36,000	\$ 67,500	20	\$ 3,375
Alley Speed Humps	0.18	1,400	-	\$ 252	10	25
Concrete Alley Apron	2	10,000	-	\$ 20,000	40	500
Total				\$, 87,752 j		S [u . 3,900

Source: 2015 Menu prices and maximum expected life cycle estimates provided by CDOT

VIII. Appendix D: Wards by Percentage of Residential Infrastructure Needs Funded in 2015

OIG used the average cost per street and alley (as calculated in Appendix C), and the number of street and alley miles provided by CDOT, to estimate each ward's total annual residential infrastructure needs for streets, alleys, sidewalk, lighting, curb and gutter, and speed humps.⁴² We then calculated the percentage of residential infrastructure needs addressed by annual Menu funding (assuming all Menu funds are spent on the residential infrastructure project types listed above). These percentages are displayed in the following two tables. The first table is organized by ward, and the second by percentage of need funded.

Street and alley mile counts reflect the 2015 ward boundaries.

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Menu Funding vs. Estimated Residential Infrastructure Needs - Sorted by Ward

Ward	Residential Street Blocks (2015 Wards)	Residential Street Funds Needed	Residential Alley Blocks (2015 Wards)	2015 Residential Alley Funds Needed	2015 Residential Total Need	Ward Per Ward Menu Allocation	ADA Ramp Subsidy and Soft Costs	Difference between Need and Allocation (Unmet Need)	% of Need Funded (AMR)
1	400.0	\$ 3,832,240	321.6	\$ 1,254,304	\$ 5,086,544	\$ 1,320,000	\$ 360,000	\$ 3,406,544	33.0%
2	292.8	\$ 2,805,200	184.0	\$ 717,637	\$ 3,522,836	\$ 1,320,000	\$ 360,000	\$ 1,842,836	47.7%
3	524.8	\$ 5,027,899	253.6	\$ 989,091	\$ 6,016,990	\$ 1,320,000	\$ 360,000	\$ 4,336,990	27.9%
4	431.2	\$ 4,131,155	146.4	\$ 570,989	\$ 4,702,144	\$ 1,320,000	\$ 360,000	\$ 3,022,144	35.7%
5	405.6	\$ 3,885,891	185.6	\$ 723,877	\$ 4,609,768	\$ 1,320,000	\$ 360,000	\$ 2,929,768	36.4%

e	621.6	\$ 5,955,301	451.2	\$ 1,759,770	\$ 7,715,071	\$ 1,320,000	\$ 360,000	\$ 6,035,071	. : 21:8%
7	576.0	\$ 5,518,426	370.4	\$ 1,444,634	\$ 6,963,060	\$ 1,320,000	\$ 360,000	\$ 5,283,060	■ : 24:i%
8	737.6	\$ 7,066,651	530.4	\$ 2,068,666	\$ 9,135,317	\$ 1,320,000	\$ 360,000	\$ 7,455,317	r *! & ▶>
9	822.4	\$ 7,879,085	550.4	\$ 2,146,670	\$ 10,025,756	\$ 1,320,000	\$ 360,000	\$ 8,345,756	
10	848.0	\$ 8,124,349	492.0	\$ 1,918,898	\$ 10,043,247	\$ 1,320,000	\$ 360,000	\$ 8,363,247	V? ."
11	593.6	\$ 5,687,044	312.0	\$ 1,216,862	\$ 6,903,907	\$ 1,320,000	\$ 360,000	\$ 5,223,907	V 24:3%
12	412.8	\$ 3,954,872	289.6	\$ 1,129,498	\$ 5,084,370	\$ 1,320,000	\$ 360,000	\$ 3,404,370	■ ■ " : . " \
13	620.8	\$ 5,947,636	453.6	\$ 1,769,131	\$ 7,716,767	\$ 1,320,000	\$ 360,000	\$ 6,036,767	• : 21:8%
14	569.6	\$ 5,457,110	376.8	\$ 1,469,595	\$ 6,926,705	\$ 1,320,000	\$ 360,000	\$ 5,246,705	. : 24:3jt
15	375.2	\$ 3,594,641	288.0	\$ 1,123,258	\$ 4,717,899	\$ 1,320,000	\$ 360,000	\$ 3,037,899	. - 35.6%
16	553.6	\$ 5,303,820	451.2	\$ 1,759,770	\$ 7,063,590	\$ 1,320,000	\$ 360,000	\$ 5,383,590	• " 23.8%
17	568.8	\$ 5,449,445	416.0	\$ 1,622,483	\$ 7,071,928	\$ 1,320,000	\$ 360,000	\$ 5,391,928	• " £ : 23.8%
18	752.8	\$ 7,212,276	422.4	\$ 1,647,444	\$ 8,859,720	\$ 1,320,000	\$ 360,000	\$ 7,179,720	1%
19	934.4	\$ 8,952,113	404.8	\$ 1,578,801	\$ 10,530,914	\$ 1,320,000	\$ 360,000	\$ 8,850,914	
20	628.0	\$ 6,016,617	424.0	\$ 1,653,685	\$ 7,670,302	\$ 1,320,000	\$ 360,000	\$ 5,990,302	
21	728.0	\$ 6,974,677	496.8	\$ 1,937,619	\$ 8,912,296	\$ 1,320,000	\$ 360,000	\$ 7,232,296	
22	400.8	\$ 3,839,904	268.0	\$ 1,045,254	\$ 4,885,158	\$ 1,320,000	\$ 360,000	\$ 3,205,158	:P#34:4%
23	620.8	\$ 5,947,636	419.2	\$ 1,634,964	\$ 7,582,600	\$ 1,320,000	\$ 360,000	\$ 5,902,600	:> . : 22.2%
24	468.8	\$ 4,491,385	348.0	\$ 1,357,270	\$ 5,848,655	\$ 1,320,000	\$ 360,000	\$ 4,168,655	:m^28:7%
25	446.4	\$ 4,276,780	215.2	\$ 839,323	\$ 5,116,103	\$ 1,320,000	\$ 360,000	\$ 3,436,103	^ 32:8«
26	352.0	\$ 3,372,371	288.0	\$ 1,123,258	\$ 4,495,629	\$ 1,320,000	\$ 360,000	\$ 2,815,629	^ 37.4%
27	791.2	\$ 7,580,171	336.8	\$ 1,313,587	\$ 8,893,758	\$ 1,320,000	\$ 360,000	\$ 7,213,758	,
28	633.6	\$ 6,070,268	396.8	\$ 1,547,599	\$ 7,617,868	\$ 1,320,000	\$ 360,000	\$ 5,937,868	; ^ S 22:i%
29	575.2	\$ 5,510,761	387.2	\$ 1,510,157	\$ 7,020,919	\$ 1,320,000	\$ 360,000	\$ 5,340,919	< ^ 23:9%
30	420.8	\$ 4,031,516	332.0	\$ 1,294,866	\$ 5,326,383	\$ 1,320,000	\$ 360,000	\$ 3,646,383	i#v^3i:5%
31	372.8	\$ 3,571,648	291.2	\$ 1,135,738	\$ 4,707,386	\$ 1,320,000	\$ 360,000	\$ 3,027,386	jW(p35^%
32	424.0	\$ 4,062,174	372.8	\$ 1,453,995	\$ 5,516,169	\$ 1,320,000	\$ 360,000	\$ 3,836,169	:* . i & 3'o:s'
33	328.0	\$ 3,142,437	298.4	\$ 1,163,820	\$ 4,306,256	\$ 1,320,000	\$ 360,000	\$ 2,626,256	ifi\$39:0%
34	888.0	\$ 8,507,573	677.6	\$ 2,642,776	\$ 11,150,348	\$ 1,320,000	\$ 360,000	\$ 9,470,348	' ! . S
35	309.6	\$ 2,966,154	266.4	\$ 1,039,013	\$ 4,005,167	\$ 1,320,000	\$ 360,000	\$ 2,325,167	,' . : 41.9%
36	464.0	\$ 4,445,398	372.0	\$ 1,450,874	\$ 5,896,273	\$ 1,320,000	\$ 360,000	\$ 4,216,273	:&>28.5%
37	429.6	\$ 4,115,826	360.8	\$ 1,407,192	\$ 5,523,018	\$ 1,320,000	\$ 360,000	\$ 3,843,018	:;M3b.4%
38	632.0	\$ 6,054,939	434.4	\$ 1,694,247	\$ 7,749,186	\$ 1,320,000	\$ 360,000	\$ 6,069,186	:;M21:7%
39	633.6	\$ 6,070,268	409.6	\$ 1,597,522	\$ 7,667,790	\$ 1,320,000	\$ 360,000	\$ 5,987,790	'Ja2i-.9%
40	413.6	\$ 3,962,536	312.0	\$ 1,216,862	\$ 5,179,399	\$ 1,320,000	\$ 360,000	\$ 3,499,399	
41	850.4	\$ 8,147,342	408.0	\$ 1,591,282	\$ 9,738,624	\$ 1,320,000	\$ 360,000	\$ 8,058,624	
42	352.0	\$ 3,372,371	66.4	\$ 258,973	\$ 3,631,344	\$ 1,320,000	\$ 360,000	\$ 1,951,344	46:3%
43	279.2	\$ 2,674,904	192.0	\$ 748,838	\$ 3,423,742	\$ 1,320,000	\$ 360,000	\$ 1,743,742	' . , 49.-i%
44	208.0	\$ 1,992,765	176.8	\$ 689,555	\$ 2,682,320	\$ 1,320,000	\$ 360,000	\$ 1,002,320	vil;i62:6%
45	643.2	\$ 6,162,242	494.4	\$ 1,928,259	\$ 8,090,501	\$ 1,320,000	\$ 360,000	\$ 6,410,501	! . : V2b.8%
46	165.6	\$ 1,586,547	80.0	\$ 312,016	\$ 1,898,563	\$ 1,320,000	\$ 360,000	\$ 218,563	@M88?5«
47	420.8	\$ 4,031,516	349.6	\$ 1,363,510	\$ 5,395,026	\$ 1,320,000	\$ 360,000	\$ 3,715,026	?>?;3i^
48	180.8	\$ 1,732,172	166.4	\$ 648,993	\$ 2,381,166	\$ 1,320,000	\$ 360,000	\$ 701,166	' . ^ : 70.6%
49	230.4	\$ 2,207,370	195.2	\$ 761,319	\$ 2,968,689	\$ 1,320,000	\$ 360,000	\$ 1,288,689	' . , 56.6%
50	383.2	\$ 3,671,286	304.0	\$ 1,185,661	\$ 4,856,947	\$ 1,320,000	\$ 360,000	\$ 3,176,947	. 34.6%

Source: OIG calculations based on 2015 Menu prices and ward boundaries. Note: This analysis does not

include other funding such as TIF.

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Menu Funding vs. Estimated Residential Infrastructure Needs - Sorted by Percentage of

Ward	Residential Street Blocks (2015 Ward's)	2015 Residential Street Funds Needed: ...'	2015 Residential Alley Blocks (2015 Wardsey Funds . 'Needed	Total 2015 . Ward •Need Allocation	Per Ward M' ADA Ramp. Subsidy and Soft Costs ' n Need ;and Allocation..'	- % Of :... Needs and Funded by ; AMP (Unmet Need
34	888.0	\$ 8,507,573	677.6	\$ 2,642,776	\$ 11,150,348	\$ 1,320,000 \$ 360,000 \$ 9,470,348
19	934.4	\$ 8,952,113	404.8	\$ 1,578,801	\$ 10,530,914	\$ 1,320,000 \$ 360,000 \$ 8,850,914
10	848.0	\$ 8,124,349	492.0	\$ 1,918,898	\$ 10,043,247	\$ 1,320,000 \$ 360,000 \$ 8,363,247
9	822.4	\$ 7,879,085	550.4	\$ 2,146,670	\$ 10,025,756	\$ 1,320,000 \$ 360,000 \$ 8,345,756
41	850.4	\$ 8,147,342	408.0	\$ 1,591,282	\$ 9,738,624	\$ 1,320,000 \$ 360,000 \$ 8,058,624
8	737.6	\$ 7,066,651	530.4	\$ 2,068,666	\$ 9,135,317	\$ 1,320,000 \$ 360,000 \$ 7,455,317
21	728.0	\$ 6,974,677	496.8	\$ 1,937,619	\$ 8,912,296	\$ 1,320,000 \$ 360,000 \$ 7,232,296
27	791.2	\$ 7,580,171	336.8	\$ 1,313,587	\$ 8,893,758	\$ 1,320,000 \$ 360,000 \$ 7,213,758
18	752.8	\$ 7,212,276	422.4	\$ 1,647,444	\$ 8,859,720	\$ 1,320,000 \$ 360,000 \$ 7,179,720
45	643.2	\$ 6,162,242	494.4	\$ 1,928,259	\$ 8,090,501	\$ 1,320,000 \$ 360,000 \$ 6,410,501
38	632.0	\$ 6,054,939	434.4	\$ 1,694,247	\$ 7,749,186	\$ 1,320,000 \$ 360,000 \$ 6,069,186 21.7%
13	620.8	\$ 5,947,636	453.6	\$ 1,769,131	\$ 7,716,767	\$ 1,320,000 \$ 360,000 \$ 6,036,767 21.8%
6	621.6	\$ 5,955,301	451.2	\$ 1,759,770	\$ 7,715,071	\$ 1,320,000 \$ 360,000 \$ 6,035,071 21.8%
20	628.0	\$ 6,016,617	424.0	\$ 1,653,685	\$ 7,670,302	\$ 1,320,000 \$ 360,000 \$ 5,990,302 21.9%
39	633.6	\$ 6,070,268	409.6	\$ 1,597,522	\$ 7,667,790	\$ 1,320,000 \$ 360,000 \$ 5,987,790 21.9%
28	633.6	\$ 6,070,268	396.8	\$ 1,547,599	\$ 7,617,868	\$ 1,320,000 \$ 360,000 \$ 5,937,868 22.1%
23	620.8	\$ 5,947,636	419.2	\$ 1,634,964	\$ 7,582,600	\$ 1,320,000 \$ 360,000 \$ 5,902,600 22.2%
17	568.8	\$ 5,449,445	416.0	\$ 1,622,483	\$ 7,071,928	\$ 1,320,000 \$ 360,000 \$ 5,391,928 23.8%
16	553.6	\$ 5,303,820	451.2	\$ 1,759,770	\$ 7,063,590	\$ 1,320,000 \$ 360,000 \$ 5,383,590 23.8%
29	575.2	\$ 5,510,761	387.2	\$ 1,510,157	\$ 7,020,919	\$ 1,320,000 \$ 360,000 \$ 5,340,919 23.9%
7	576.0	\$ 5,518,426	370.4	\$ 1,444,634	\$ 6,963,060	\$ 1,320,000 \$ 360,000 \$ 5,283,060 24.1%
14	569.6	\$ 5,457,110	376.8	\$ 1,469,595	\$ 6,926,705	\$ 1,320,000 \$ 360,000 \$ 5,246,705 24.3%
11	593.6	\$ 5,687,044	312.0	\$ 1,216,862	\$ 6,903,907	\$ 1,320,000 \$ 360,000 \$ 5,223,907 24.3%
3	524.8	\$ 5,027,899	253.6	\$ 989,091	\$ 6,016,990	\$ 1,320,000 \$ 360,000 \$ 4,336,990 27.9%
36	464.0	\$ 4,445,398	372.0	\$ 1,450,874	\$ 5,896,273	\$ 1,320,000 \$ 360,000 \$ 4,216,273 28.5%
24	468.8	\$ 4,491,385	348.0	\$ 1,357,270	\$ 5,848,655	\$ 1,320,000 \$ 360,000 \$ 4,168,655 28.7%
37	429.6	\$ 4,115,826	360.8	\$ 1,407,192	\$ 5,523,018	\$ 1,320,000 \$ 360,000 \$ 3,843,018
32	424.0	\$ 4,062,174	372.8	\$ 1,453,995	\$ 5,516,169	\$ 1,320,000 \$ 360,000 \$ 3,836,169 28.8%
47	420.8	\$ 4,031,516	349.6	\$ 1,363,510	\$ 5,395,026	\$ 1,320,000 \$ 360,000 \$ 3,715,026 28.8%
30	420.8	\$ 4,031,516	332.0	\$ 1,294,866	\$ 5,326,383	\$ 1,320,000 \$ 360,000 \$ 3,646,383 28.8%
40	413.6	\$ 3,962,536	312.0	\$ 1,216,862	\$ 5,179,399	\$ 1,320,000 \$ 360,000 \$ 3,499,399 28.8%
25	446.4	\$ 4,276,780	215.2	\$ 839,323	\$ 5,116,103	\$ 1,320,000 \$ 360,000 \$ 3,436,103 28.8%
1	400.0	\$ 3,832,240	321.6	\$ 1,254,304	\$ 5,086,544	\$ 1,320,000 \$ 360,000 \$ 3,406,544 28.9%
12	412.8	\$ 3,954,872	289.6	\$ 1,129,498	\$ 5,084,370	\$ 1,320,000 \$ 360,000 \$ 3,404,370 28.9%

22	400.8	\$ 3,839,904 268.0	\$ 1,045,254 \$ 4,885,158 \$ 1,320,000 \$ 360,000	\$ 3,205,158 j#*:34!4%
50	383.2	\$ 3,671,286 304.0	\$ 1,185,661 \$ 4,856,947 \$ 1,320,000 \$ 360,000	\$ 3,176,947 '<48i>34r6%
15	375.2	\$ 3,594,641 288.0	\$ 1,123,258 \$ 4,717,899 \$ 1,320,000 \$ 360,000	\$ 3,037,899 'i<; *35:6%
31	372.8	\$ 3,571,648 291.2	\$ 1,135,738 \$ 4,707,386 \$ 1,320,000 \$ 360,000	\$ 3,027,386 Sj&S:35';7%
4	431.2	\$ 4,131,155 146.4	\$ 570,989 \$ • 4,702,14\$ 1,320,000 \$ 360,000	\$ 3,022,144 .'i 35.7%
5	405.6	\$ 3,885,891 185.6	\$ 723,877 \$ 4,609,768 \$ 1,320,000 \$ 360,000	\$ 2,929,768
26	352.0	\$ 3,372,371 288.0	\$ 1,123,258 \$ 4,495,629 \$ 1,320,000 \$ 360,000	\$ 2,815,629 •■'S'.Sta K
33	328.0	\$ 3,142,437 298.4	\$ 1,163,820 \$ 4,306,256 \$ 1,320,000 \$ 360,000	\$ 2,626,256 ^39:0%
35	309.6	\$ 2,966,154 266.4	\$ 1,039,013 \$ 4,005,167 \$ 1,320,000 \$ 360,000	\$ 2,325,167 .,!* 41.9%
42	352.0	\$ 3,372,371 66.4	\$ 258,973 \$ 3,631,344 \$ 1,320,000 \$ 360,000	\$ 1,951,344 :46.3%
2	292.8	\$ 2,805,200 184.0	\$ 717,637 \$ 3,522,836 \$ 1,320,000 \$ 360,000	\$ 1,842,836 •.■:;!. 47.7%
43	279.2	\$ 2,674,904 192.0	\$ 748,838 \$ 3,423,742 \$ 1,320,000 \$ 360,000	\$ 1,743,742 49;i%
49	230.4	\$ 2,207,370 195.2	\$ 761,319 \$ 2,968,689 \$ 1,320,000 \$ 360,000	\$ 1,288,689 56:6%
44	208.0	\$ 1,992,765 176.8	\$ 689,555 \$ 2,682,320 \$ 1,320,000 \$ 360,000	\$ 1,002,320 62:6%
48	180.8	\$ 1,732,172 166.4	\$ 648,993 \$ 2,381,166 \$ 1,320,000 \$ 360,000	\$ 701,166 KC. 70.'6%
~46 "	'165:6	Si;586;547 ""'80.0	5 312,016 "\$ 1,898,563"\$ 1,320,000\$ 360,000'	\$218,563 SBSBT aSsss

Source: OIG calculations based on 2015 Menu prices and ward boundaries.
 Note: This analysis does not include other funding such as TIF.

OIG File 1114-0430
 Aldermanic Menu Program Audit

IX. Appendix E: Ward Breakdown of Menu Spending Unrelated to Core Residential Infrastructure

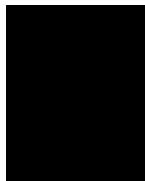
In the four years from 2012 through 2015, the City allowed aldermen to designate \$15.1 million in Menu funds for projects unrelated to core residential infrastructure. The following table provides a breakdown of that spending by ward. For comparison, we included the percent of residential infrastructure needs funded by Menu (as calculated in Appendix D). This analysis does not include other funding such as TIF.

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Ward	% of Needs Funded by AM2012		2013	2014	2015	Total
1	■: 33.0%	\$ 705,155	\$ 598,808	\$ 375,000	\$ 535,000	\$ 2,213,963
2 47.7% •;	\$ 30,000	\$ 18,841	\$	\$	\$ 48,841
3	': 27.9% • ...	\$ 11,450	\$ 34,963	\$ 10,000	\$ 6,897	\$ 63,310
4	r-. -.35.7% •;, v. ;	\$ 150,000	\$	\$	\$	\$ 150,000

5 36.4% \$ 400,515 \$ 200,000 \$ 2,300 \$ 602,815



6	■ 21.8%	\$	\$	\$	\$	\$
7	■ ., 24.1% ■ '.	\$	\$	\$	\$	\$
8		\$	\$	\$	\$	\$
9		\$ 8,674	\$ 65,941	\$	\$	\$ 74,615
10	:W-0&%. ■		\$ 45,000	\$	\$	\$ 45,000
11	!:-;?!"24.3%;tt<<i:!	\$	\$	\$	\$	\$
12	• ; :-33.0% •!■	\$	\$	\$	\$ 250,000	\$ 250,000
13		\$ 180,000	\$ 306,192	\$ 1,800	\$ 115,000	\$ 602,992
14	\w-;V.;!;-;24i3%i^/r-;<:i:;;\$		\$	\$	\$	\$
15	; i :35.6%	\$ 42,500	\$	\$	\$	\$ 42,500
16	!4X :23.8%	\$ 197,200	\$ 515	\$	\$	\$ 197,715
17		\$	\$ 2,177	\$ 20,323	\$	\$ 22,500

18		\$	\$	\$	\$	\$
19		\$ 20,515	\$ 123,738	\$ 30,380	\$	\$ 174,633
20	immm^mmm \$		\$	\$	\$ 12,492	\$ 12,492
21		\$	\$	\$	\$	\$
22		\$ 150,000	\$ 22,500	\$ 460,700	\$ 149,000	\$ 782,200
23	^?.^22:2%'^^#*^v.'	\$ 250,000	\$ 354,112	\$ 43,802	\$ 325,688	\$ 973,602
24		\$ 539	\$ 22,500	\$ 45,000	\$ 15,000	\$ 83,039
25		\$ 387,224	\$ 622,776	\$ 129,742	\$ 205,153	\$ 1,344,895
26		\$ 172,500	\$ 22,500	\$	\$	\$ 195,000
27		\$	\$ 22,500	\$ 22,500	\$	\$ 45,000
28		\$ 9,000	\$ 503,600	\$ 255,400	\$ 263,127	\$ 1,031,127
29		\$	\$	\$	\$	\$
30		\$ 22,500	\$	\$	\$	\$ 22,500
31		\$ 17,250	\$	\$	\$	\$ 17,250
32		\$	\$	\$ 150,000	\$ 150,000	\$ 300,000
33		\$	\$ 121,740	\$ 173,404	\$ 100,000	\$ 395,144
34		\$ 76,515	\$	\$	\$ 150,000	\$ 226,515
35	-.41.9%.; /••v.-:-	\$	\$	\$	\$	\$
36	.,3jii/28.5;%~. -W-	\$ 85,301	\$ 310,277	\$	\$ 58,900	\$ 454,478
37		\$	\$	\$	\$	\$
38	.^S'21.7,%-, '	\$	\$ 50,000	\$	\$ 20,650	\$ 70,650
39		\$	\$ 14,800	\$ 22,500	\$ 27,011	\$ 64,311
40	**-'^3 2;4 %'^*#S^ii»	\$ 3,600	\$ 47,922	\$ 14,823	\$ 23,290	\$ 89,635
41	■ ■'■^vfr' ■ • ■ ■	\$ 120,000	\$ 3,000	\$ 4,000	\$ 10,100	\$ 137,100
42	463%;;;' •	\$	\$	\$	\$ 29,782	\$ 29,782
43	49.1% , ,	\$ 10,000	\$ 64,060	\$ 18,620	\$ 78,500	\$ 171,180
44	a. 62:6 %te'^'-	\$ 784	\$	\$ 287,200	\$ 57,988	\$ 345,972
45		\$ 13,353	\$ 316,600	\$ 100,000	\$ 250,000	\$ 679,953
46		\$	\$ 45,000	\$ 10,000	\$ 150,264	\$ 205,264
47	••31:l-%fwi*;v	\$ 338,765	\$ 55,000	\$ 500,000	\$ 5,188	\$ 898,953
48	•^70.6%> ->,»;	\$ 89,163	\$ 365,144	\$ 128,496	\$ 79,072	\$ 661,875
49	;, ■'■]... 56.6%,	\$ 224,000	\$ 11,081	\$ 558,531	\$ 592,454	\$ 1,386,066
-50	•;:}: 34_S -	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 3,315,988	\$ 4,571,802	\$ 3,562,221	\$ 3,662,856	\$ 15,112,867



X. Appendix F: Total Menu Spending by Type and Ward

OBM posts on its website Menu project selections by ward (http://www.cityofchicago.org/city/en/depts/obm/provdrs/cap_improve.litmn <http://www.cityofchicago.org/city/en/depts/obm/provdrs/cap_improve.litmn>. OIG used this public reporting to summarize Menu spending in the years 2012 through 2015 by type and program (see the first table below) and by ward (see the second table below).

	: Amount	Percent; .
Streets	\$129,495,579	52.0%
Street Resurfacing Menu	98,769,992	
Street Resurfacing Menu(1-5)	29,603,977	
Street Bump Outs Menu	547,551	
Street Resurface Menu-Change Order	310,742	
Street Cul-de-Sac Menu	263,317	
Street Lighting	\$44,575,448	17.9%
Street Lighting	35,793,788	
Street Light Residential Staggered Piggy Back Menu	8,224,504	
Street Light Residential Staggered Menu	193,000	
Street Light Upgrade Menu	140,415	
Street Light Upgrade Piggy Back Menu	97,900	
Street Light Arterial Menu	91,000	
Street Light Piggy Back Only Menu	24,000	
Floodlight Menu	10,841	
Sidewalk and Pedestrian-Related Projects	\$25,619,441	10.3%
Sidewalk Menu	23,908,031	
Sidewalk Menu-Change Order	842,380	
Pedestrian Refuge Island Menu	501,997	
In-Road State Law Stop for Pedestrians Sign	257,828	
Pedestrian Countdown Signal Menu †	102,205	
Accessible Pedestrian Signal	7,000	
Alleys	\$22,921,652	9.2%
Concrete Alley Menu	9,541,081	
Alley Resurfacing Menu	8,334,704	
Alley Apron Menu	2,619,320	
Alley Resurfacing Menu(1-1)	1,647,545	
New Alley Construction	364,231	
Alley Speed Hump Menu	341,918	
Alley Resurfacing Menu - Change Order	55,162	
Concrete Alley Menu-Change Order	17,691	
Curb/Gutter	\$11,402,586	4.6%

Menu program titles are those used in OBM's public reporting. OIG grouped the programs by type based on those titles.

Curb/Gutter Menu	11,079,707	
Curb/Gutter Menu-Change Order	322,879	
Chicago Park District	58,900,667	3.6%
Chicago Park District	8,900,667	
Miscellaneous CDOT Projects	\$6,126,603	2.5%
Miscellaneous CDOT Projects	6,126,603	
Traffic	\$4,971,082	2.0%
Street Speed Hump Menu	2,255,505	
Traffic Signals	1,436,486	
Traffic Signal Modernization	369,240	
Left-Turn Arrow Menu	300,000	
Diagonal Parking Menu	258,292	
Bollard Menu	135,111	
Pavement Markings Menu	132,066	
Guardrail Menu	48,065	
Traffic Signal Modernization Design Menu	25,000	
Street Speed Hump Removal Menu	3,700	
Resurfacing Street Speed Hump Replacement	3,700	
Street Traffic Circles Menu	3,217	
Alley Speed Hump Removal Menu	700	
Miscellaneous Other Projects	\$2,842,596	1.1%
Miscellaneous Other Projects	2,842,596	
Chicago Public Schools	\$2,002,170	0.8%
Chicago Public Schools	2,002,170	
Painting	\$1,198,774	. 0.5%
Pole Painting	1,049,674	
Street Light Pole Painting Menu	110,250	
Traffic Signal Pole Painting Menu	34,150	
Street Pole Painting Menu	4,700	
Cameras	\$870,016	0.3%
POD Camera	692,450	
High Definition Camera Menu	162,066	
Street Light Pole POD Camera Menu	15,500	
Bike Lane/Marked Shared Lane	\$604,613	0.2%
Protected Bike Lane Menu	405,716	
Bike Lane/Marked Shared Lane Menu	106,000	
Buffered Bike Lane Menu	92,897	
	, \$261,531,227	100.0% ;

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XI. Appendix G: Corporation Counsel's February 2, 2012, Memorandum on Effective Date of New Ward Map

The Corporation Counsel's 2012 memorandum on the effective date of the new 2015 ward map (provided below) explains how and when ward boundaries become effective and how aldermen were to represent ward constituents based on the shifts in boundaries.

Department of Law city of chicago

MEMORANDUM

FROM: STEPHEN R. PATTON Corporation Counsel

DATE: February 2, 2012

SUBJECT: Effective Date of New Ward Map

This memorandum addresses the issue of when the ward redistricting ordinance enacted on January 19, 2012 becomes "effective." Applicable law provides that the 2011 map, which was in effect for the 2011 aldermanic elections, should govern for the duration of those four-year terms. This includes the continuing representation of constituents, as well as the filling of any vacancies before the 2013 election. However, nothing precludes aldermen from also rendering appropriate services to other Chicago residents, including those residing in the new versions of their respective wards. Our conclusions are consistent with those issued by this office when this issue last arose in 1992, in connection with the redistricting that occurred after the 1990 census, see, May 22, 1992 memorandum from then-Corporation Counsel Kelly Welsh (attached).

Due to the timelines set by applicable state statutes, a Chicago ward redistricting occurs shortly after an aldermanic election every twenty years. The legal effect of this temporal juxtaposition was first raised in federal lawsuits filed in 1990, which argued that holding the aldermanic elections scheduled for 1991 (under the map based on the 1980 census data) for full four-year terms would effectively dilute minority voting rights because the City's minority population had increased between 1980 and 1990. The district and appellate courts, noting that under Chicago's statutory and redistricting schedules this lag occurred every twenty years, held that it was not a violation of any federal right. Political Action Conference of Illinois v. Daley, 976 F.2d 335 (7th Cir. 1992) ("PACT")-

The timing issue was then raised in a slightly different form in voting rights challenges to the March 1992 referendum redistricting map. Plaintiffs in *Bonilla v. City Council of the City of Chicago*, 809 F.Supp. 590, 598 (N.D.Ill. 1992), filed shortly after the referendum, asserted that the map diluted Latino voting strength in violation of the Voting Rights Act. The plaintiffs then amended their complaint to add the claim that under Illinois law, the 1992 map went into "force and effect" upon its adoption, thereby creating vacancies where aldermen did not live in the new version of their wards, and that special elections were therefore required. The federal district

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court, relying on PAC1, held that this was not a viable federal claim, *Id.* at 598. The court declined to decide the state law claim of whether vacancies were created by the new map. *Id.* In early 1993, a state court lawsuit was also filed by some of the Bonitta plaintiffs, as well as others. *Garcia v. City of Chicago*, 93 CO 00020. The new case again asserted that the new map created vacancies and required special elections. Once again, the circuit court judge rejected this argument, and the affected aldermen served out their terms.

These cases establish that the 2011 aldermanic elections were for full four-year terms notwithstanding the intervening redistricting, and that these eldermen represent the constituencies which elected them. Further, if any of the aldermen elected in the 2011 elections leaves office prematurely, his or her replacement would be appointed or elected to represent and service the constituents of the ward as its boundaries existed in 2011.

Although we have not found governing case law in Illinois on this precise point, cases in other jurisdictions bolster the view set forth above. Most of these cases arose in the context of filling vacancies in office occurring after an intervening redistricting. In *Opinion of the Justices to the Governor*, 361 Mass. 897, 282 N.E.2d 629 (Mass. Sup. Ct. 1972), the court held that the old map should be used for filling a vacancy in the office of Congressional representative notwithstanding an intervening redistricting:

The incumbent representative was elected by the people of the Fifth Congressional District as that district existed on November 3, 1970. In these circumstances, we are of opinion that, notwithstanding any change in district boundaries made subsequent to his election, he continues to represent the people of the cities and towns which chose him. In *Reynolds v. Sims*, 377 U.S. 533 [(1964)], the Supreme Court of the United States said: "Legislators are elected by voters." Cf. *Wesberry v. Sanders*, 376 U.S. 1, 7-9 [(1964)]. These cases indicate that a legislator represents the constituency which elected him. Since the incumbent was elected ... to represent a particular constituency, in the normal course of events he would serve that constituency for the duration of that Congress. We are of the opinion, therefore, that, if the incumbent does not serve his full term but ceases to serve during his term, the resulting vacancy ... will then occur in the district from which he was elected to office.

Id. at 900. After noting that the relevant state statutes did not show an intent to apply the new apportionment to the special election at issue, the court went on to refer again to federal constitutional law:

The apportionment cases of the Supreme Court indicate that the right to vote includes the right not to have that vote diluted. See *Wesberry v. Sanders*, 376 U.S. 1, 7-9... *Reynolds v. Sims* 377 U.S. 533, 555. If the proposed special election were to be held in the new Fifth Congressional District, the voters of Woburn, Burlington, Reading, and Wakefield would be denied a voice in the replacement of their representative in the present Congress. By the same token, the voters of Acton, Ashby, Boxborough, Concord, Littleton, Townsend, and Westford would be allowed to participate in the selection of a successor [sic] to a representative whom they did not elect in the first place. Such a result might be thought to dilute the votes cast in the last general election by the residents of the

four municipalities which the 1971 act removes from the Fifth Congressional District. If the 1971 act contracts the value of the votes cast by some citizens, it at the same time expands the value of those cast by other citizens.

Id. at 901. Similar reasoning was articulated in *Sloan v. Donoghue*, 20 Cal.2d 607, 127 P.2d 922 (Cal. Sup. Ct. 1942):

[T]o apply the Apportionment Act of 1941 to special elections held to fill vacancies arising in terms occupied at the time of its passage would lead to arbitrary and capricious results. To cite one: If the special election here involved were to be held in the new enlarged district, the voters of the 46th Assembly District, which district has been added to the old 17th Congressional District, would be accorded double representation in the present Congress for they are already represented by the congressman from their old district in whose selection they had a voice. As already shown, such double representation is improper. By the same token the voters of the 46th Assembly District are not disenfranchised by restricting the special election to fill the vacancy to the old district for, as stated, they are already represented in this Congress.

Id at 924. The principle articulated in Sloan was reiterated in *Legislature v. Reinecke*, 10 Cal.3d 396,406, 516 P.2d 6 (1973), and in *Gaona v. Anderson*, 9S9 F.2d 299, 301 (9th Cir. 1993).

In *Jackson v. Ogilvie*, 426 F.2d 1333 (7th Cir. 1970), the Seventh Circuit applied the federal constitutional vote dilution principles relied upon in *Opinion of the Justices*, supra, in mandating that the Governor of Illinois issue a writ of election to replace a representative who had died. The court rejected the state's argument that by the time such an election could be held, the replacement could only serve for 11 months at most, and that this was de minimis. The court referred repeatedly to *Yesbeny v. Sanders*, supra, for the proposition that the right to vote provided standing to sue. *Jackson*, 426 F.2d at 1335. Although the *Jackson* case did not involve an intervening redistricting, its reasoning supports the proposition (as stated in *Opinion of the Justices and Sloan*) that utilizing the now map to replace an officeholder elected under the prior map would dilute the votes of those voters who resided in the old but not the new district.

Other cases have indicated, with less lengthy analysis, that the old rather than the new district should be used to fill a vacancy where there had been an intervening redistricting. See *American Civil Liberties Union of Ohio, Inc. v. Toft*, 3S5 F.3d 641, 644 n.1 (6th Cir. 2004) ("[a]t the time he was expelled from the House, Traficant represented the 'old' Seventeenth District... The former . . . district no longer existed when Traficant was expelled in July 2002, but any special election to fill his seat would have had to follow the old boundaries"). Cf. *Siara ex rel. Mathiwsen v. Board of Election Commissioners of St. Louis County*, 841 S.W. 2d 633 (Mo. Sup. Ct. 1992) (Issuing writ of prohibition from conducting a special election to fill a vacancy using the "new" (i.e., post-redistricting) senatorial district).

Based on the above, it is our view that the ward boundaries used for the 2011 elections continue to apply to aldermanic representation of constituents during the current four-year term, and should be employed with respect to any vacancies occurring before the regular 2015 aldermanic elections.

As noted at the outset of this memo, the aldermen represent, and for administrative purposes (e.g., notifications) are associated with, the wards which elected them for a four-year term. Nevertheless, nothing in the cases cited above, or in applicable statutes, prevents aldermen from making additional efforts to assist any other resident of Chicago, including prospective constituents in the new version of his or her numbered ward. As discussed in the May 22, 1992 Welsh memorandum, this was the practice adopted after both the 1947 and the 1992 Chicago ward redistrictings: the aldermen continued to represent the wards that had elected them, but some also elected to provide appropriate services to constituents in the new wards that would become effective for future aldermanic elections. This approach continues to be valid and appropriate.

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City of Chicago Office of Inspector General

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