



AGENDA REPORT

TO: Edward D. Reiskin
City Administrator

FROM: Ryan Russo
Director, Department of
Transportation

SUBJECT: Five Year Pavement Prioritization
Plan

DATE: November 22, 2021

City Administrator Approval

Date: Dec 7, 2021

RECOMMENDATION

Staff Recommends That The City Council Adopts The Following Legislation:

- 1. A Resolution Establishing A Five-Year Prioritization Plan For The City Of Oakland's Complete Streets Paving Program (2022-2027) And Adopting California Environmental Quality Act ("CEQA") Exemption Findings;**
- 2. A Resolution Authorizing The City Administrator To Award All Paving and Concrete Construction Contracts That Follow All City Advertising and Competitive Bidding Requirements And Are Awarded In Direct Service Of Delivering The 2022 Five Year Prioritization Plan In A Total Amount Not To Exceed Seventy-Five Million Dollars, Without Return To City Council.**

EXECUTIVE SUMMARY

Following the successful implementation of the 2019 3-Year Paving Plan (3YP), staff have prepared a Five-Year Paving Plan (5YP) which represents a \$300 million construction investment in pavement rehabilitation and preventative maintenance for Oakland's streets. Consistent with the 3YP, for the duration of this plan, staff recommends that 75% of plan dollars be prioritized for local streets and 25% for major streets, including both rehabilitation and preventative maintenance treatments. Reflecting community input and City Council-adopted prioritization values, staff are proposing to continue the 2019 3YP framework that prioritizes streets for repaving based on equity, street condition, and traffic safety. Anticipating challenges in delivering triple the current annual volume of construction contracts for paving, staff have also developed recommendations for streamlining project delivery, staffing and equipment, and contracting practices.

The 2022 5YP provides a framework to prioritize funds in the Citywide Street Resurfacing portion of the Fiscal Year (FY) 2021-2023 Capital Improvement Plan adopted in June 2021. The Plan's funding is anticipated to come from Measure KK, Oakland's 2016 Infrastructure Bond, as well as other sources, including gas tax revenues (Senate Bill 1), existing grant awards.

Public Works Committee
December 14, 2021

Implementation of the 5YP also requires passage of an anticipated housing and infrastructure bond measure currently under development.

BACKGROUND / LEGISLATIVE HISTORY

Most cities do not have the resources to repave every street that needs repaving. A typical pavement management plan assesses repaving needs, reviews available funding, and produces a fiscally constrained, multi-year workplan of streets to repave. In a typical plan, prioritization is based on street condition and cost-effectiveness. Plans are generally optimized to increase average pavement condition and to decrease paving maintenance backlog over a 20-to-30-year horizon and include both recommendations for pavement rehabilitation (typically mill and overlay treatments) and preventative maintenance (commonly slurry seal or microsurfacing treatments that extend the life of existing good pavement). Overall, Oakland's current paving maintenance backlog is \$432M, which includes \$76M deferred maintenance on major streets and a total maintenance backlog of \$356M on local streets.

Prior Legislation: 2019 3-Year Paving Plan

On May 7, 2019, City Council adopted Resolution No. 87673 C.M.S. establishing the 2019 3YP, a more than \$100M plan to repair Oakland's streets. This plan was funded through the first two years with the adoption of the Fiscal Year (FY) 2019-21 Capital Improvement Plan in June 2019 and for the last year with the adoption of the Fiscal Year (FY) 2021-2023 Capital Improvement Plan in June 2021. The Plan's funding comes from Measure KK, Oakland's 2016 Infrastructure Bond, as well as other sources, including gas tax revenues (Senate Bill 1) and existing grant awards.

The 3YP represented an aggressive step towards investing in Oakland streets, including tripling annual spending on paving compared to prior citywide plans. The plan's investments aimed to keep the majority of Oakland's major streets in good to excellent condition and massively invest in local streets paving. In order to do this, the plan established two main programs of paving: major streets and local streets.

The plan prioritized \$25M total toward major streets. It recommended both rehabilitation and preventative maintenance treatments on major streets to both upgrade pavement condition and preserve existing good pavement. Major streets were prioritized by street condition and by traffic safety to ensure that necessary safety improvements can be advanced quickly on Oakland's high injury corridors, the subset of Oakland streets where the majority of severe and fatal crashes occur.

The plan prioritized \$75M total toward local streets. All local streets paving under the 3YP plan were prioritized for pavement rehabilitation (mill and overlay). Of the proposed \$75M for local streets, the majority was programmed into planning areas by street condition and equity factors, with individual streets selected by poor street condition and proximity to schools. In addition, the 3YP programmed \$7.5M local streets dollars toward cost-share agreements with utility companies to fully pave select residential streets after utility construction work, and \$7M local streets dollars toward residential streets paving based on City Council priorities.

The 3YP used nine “Planning Areas” to distribute local streets funding. Planning areas follow Oakland’s geography and demographics and are thus unique from Oakland’s seven Council District boundaries. Funding for local streets was distributed across planning areas using equally weighted factors of street condition and equity.

Funding Priorities Legislation

Since 2014, City Council has adopted two pieces of legislation that provide policy direction for funding priorities, applicable to all capital projects, including pavement rehabilitation: the 2016 Infrastructure Bond Ordinance (Ordinance No. 86445 C.M.S.) and the 2018 Capital Improvement Program Prioritization Process (Resolution No. 87376 C.M.S.).

The 2016 Infrastructure Bond Ordinance articulated that bond-funded projects would be consistent with City Council-established priorities, including those set forth within the City’s Capital Improvement Plan. The Ordinance also established the following evaluation framework for projects funded by the bond: a) how the projects address social and geographic equity and provide greater benefit to underserved populations and in geographic areas of greatest need; b) how the projects address improvements to the City’s existing core capital assets; c) how the projects maintain or decrease the City’s existing operations and maintenance costs; and d) how the projects address improvements to energy consumption, resiliency and mobility.

These values were further codified in the Capital Improvement Program Prioritization Process, in which the City Council established nine factors that would be used to prioritize the City of Oakland’s Capital Improvement Program. The areas receiving the most scoring weight included equity, health and safety, existing conditions, and economy. Staff’s recommendations on incorporating these adopted evaluation metrics and prioritization factors into this paving plan are included in the subsequent section.

ANALYSIS AND POLICY ALTERNATIVES

The following analysis is divided into three sub-sections: background on the implementation of the 2019 3YP, analysis of the proposed 2022 5YP list of streets, and analysis of the project delivery recommendations to implement the 2022 5YP.

Background: Results of 2019 3-Year Paving Plan

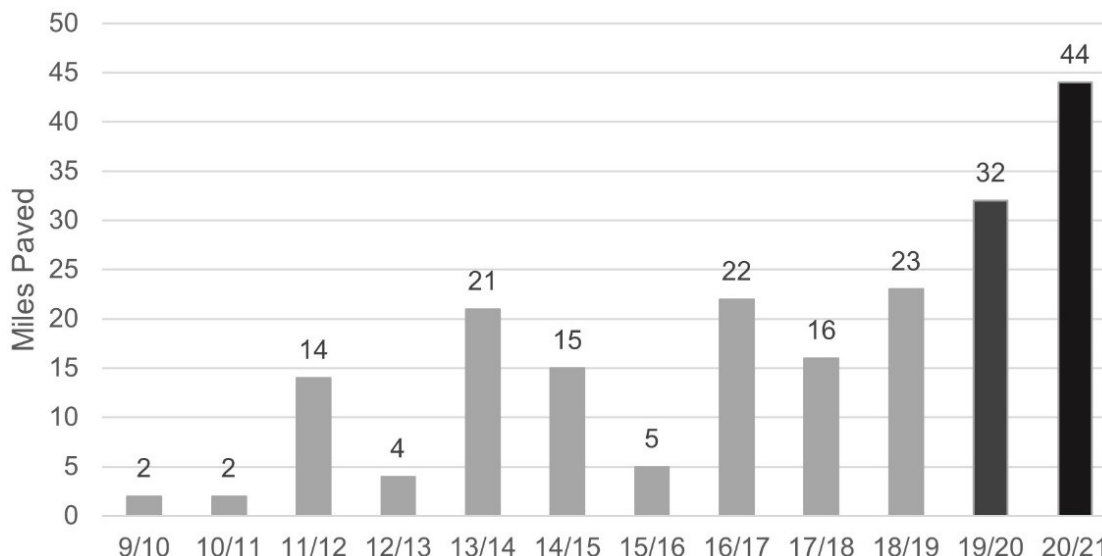
The 2019 3YP proposed \$100M in pavement construction over three years and identified annual targets of 30, 40, and 55 paved miles a year for the duration of the plan, for a total of 125 miles. At the time of this report writing (approximately 2.5 years into the plan duration), the first- and second-year targets were exceeded, and the program is on track to meet the 125 paved mile target (Table 1).

Table 1: 2019 3-Year Paving Plan Mileage Goals and Actuals

	GOAL MILEAGE	ACTUAL MILEAGE
Year 1 (July 2019 - June 2020)	30	32.3
Year 2 (July 2020 - June 2021)	40	44.1
Year 3 (July 2021 - June 2022)	55	<i>In progress</i>

The completed paving mileage during the past 2.5 years represents a continued scaling-up of OakDOT’s paving program. Between 2009 and 2016, the City averaged 9 miles of paving per year. Following the passage of Measure KK and the creation of the Department of Transportation, that average increased to 27 miles a year, a 200% increase.

Figure 1: Annual Number of Miles Paved 2009-2021



In preparation for the 2022 5YP, a citywide pavement condition survey was conducted in summer of 2021, and the results of this survey illustrate the investment and mobilization of the paving program under the 3YP. During this citywide survey, each street segment in Oakland receives a pavement condition index (PCI) score, which is numeric grade that scores the condition of a street on a scale of 0 to 100. Any street with a PCI under 50 is considered in poor condition, 51-70 is fair, 71-90 is good, and above 91 is considered excellent condition.

Table 2 provides a summary of average PCI for all streets, and by street type. City streets are classified as arterials (typically a multi-lane street with higher volume of travel, facilitates crosstown travel), collectors (typically medium-volume streets that may be residential in nature; they “collect” traffic from other streets and connect to arterials), and residential (typically low- to very-low-volume streets). Under the paving program, the major streets program includes arterials; the local streets program includes collectors and residential streets. Between 2018 and 2021, the citywide PCI rose from 55 to 58 (Fair Condition) (Table 2 below). The average condition of Oakland’s major streets continues to improve, with a PCI score of 74 (Good Condition), up from 67 in 2012. The average condition of Oakland’s local streets is now Fair, with a PCI score of 50.

Table 2: Overall Pavement Condition Index (PCI) Between 2012 and 2021 By Street Type

Year	Overall PCI	Major Streets PCI			Local Streets PCI
		Arterials	Collectors	Residential	Subtotal
2012	61	67	58	58	58
2016	55	68	51	48	49
2018	55	73	51	45	46
2021	58	74	59	48	50

The 2021 condition survey identified that nearly 75% of major streets are in good or excellent condition, up from 62% in 2018 (Figure 2). Oakland’s major streets now have an average PCI of 74, in a steady increase from 67 in 2012. Additionally, more than a quarter of local streets are now in good or excellent condition, up from just 16% in 2018. The share of local streets in poor condition also declined for the first time in 10 years, from 60% to 53% (Figure 3 below).

Figure 1: Current Condition of Major Streets

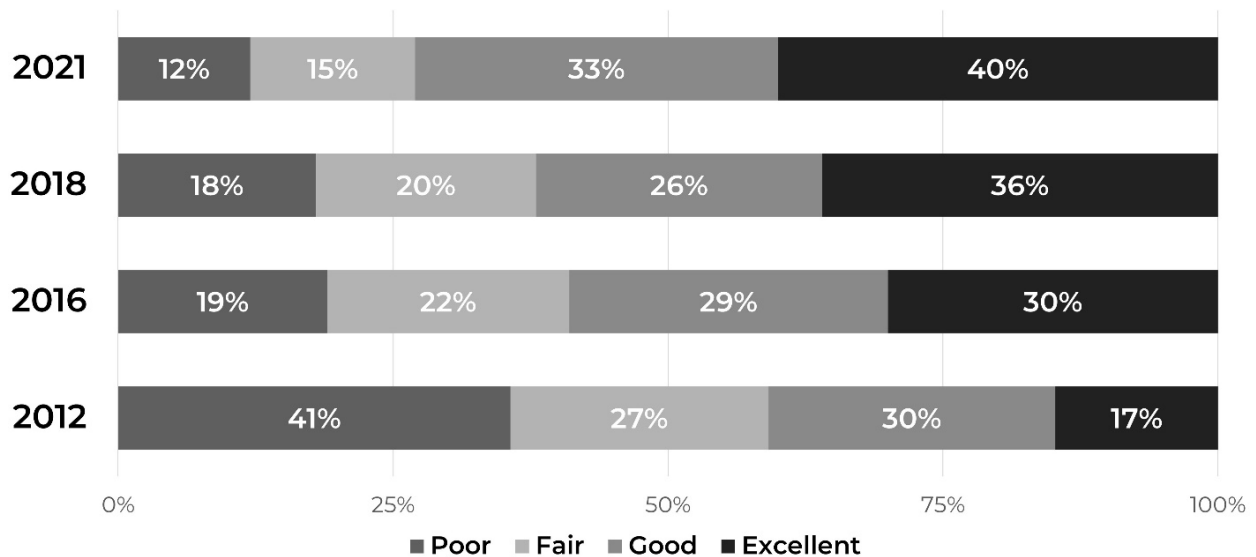
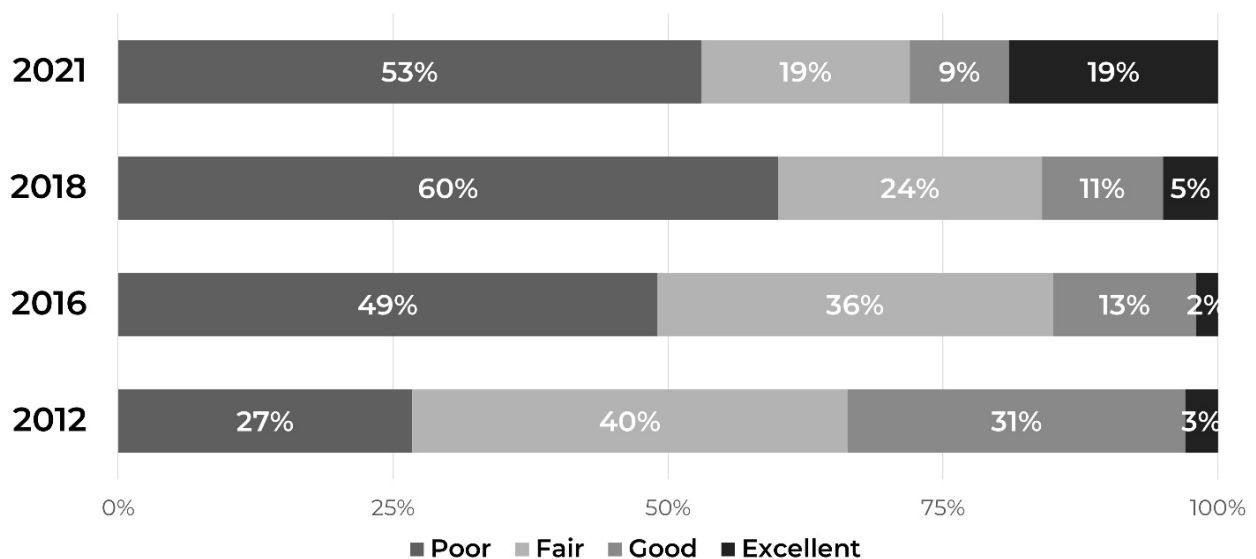


Figure 2: Current Condition of Local Streets



The 3YP prioritized 75% of plan dollars (\$75M) towards rehabilitating local streets. With this investment, the average PCI of local streets in each planning area has improved. The most drastic increase was in West Oakland where the PCI increased by 12 points between 2018 and 2021 (Table 3).

Table 3: Local Streets Average PCI Between 2018 and 2021

Planning Area	Average PCI (2018)	Average PCI (2021)	Change
Central East Oakland	48	51	+3
Coliseum/Airport	47	49	+1
Downtown	56	61	+5
East Oakland Hills	51	52	+0
Eastlake/Fruitvale	42	47	+5
Glenview/Redwood Heights	47	50	+3
North Oakland Hills	46	49	+2
North Oakland/Adams Point	39	48	+9
West Oakland	45	57	+12

The work to rehabilitate Oakland’s streets is a race against time as streets in poor condition deteriorate more rapidly. As each street in poor condition is rehabilitated, a nearby street (or two) in fair condition will often deteriorate to poor condition. This is observable in the 2021 survey data. While nearly 100 miles have been paved (receiving rehabilitation or preventative maintenance) since the beginning of the 3YP in 2019, the total miles in poor condition decreased by only 53 miles, from 394 in 2018 to 341 miles in 2021 (Table 4). As such, many streets that were observed in fair condition (PCI 50 to 60) and not prioritized as part of the proposed 5YP will likely deteriorate to poor condition (PCI less than 50) within five years. The following table provides a comparison of the total number of local street miles in poor condition per planning area, comparing before and mid-way through the 3YP (Table 4). In identifying the number of miles per planning area in Fair Condition, the table identifies mileage that is “at-risk” for dropping to Poor Condition within the next five years.

Table 4: Number of Local Street Miles by Planning Area in Poor and Fair Condition

	Poor Condition (PCI <50) 2018	Poor Condition (PCI <50) 2021	Fair Condition (PCI 50-60) 2021
Central East Oakland	71	63	16
Coliseum/Airport	77	6	3
Downtown	88	5	3
East Oakland Hills	39	40	12
Eastlake/Fruitvale	68	55	9
Glenview/Redwood Heights	39	35	8
North Oakland Hills	62	59	10
North Oakland/Adams Point	75	64	6
West Oakland	25	14	9
Citywide	394	341	76

In the first two years of the 3YP (July 2019 – June 2021), the paving program was also responsible for improving nearly 1000 curb ramps; implementing more than 2000 high visibility crosswalks; repairing 60,000 square feet of sidewalks; implementing 13.5 miles of new bikeways; and improving 4.5 miles of existing bikeways. In the third and final year of the 2019 3-Year Plan (July 1, 2021 to June 30, 2022), staff anticipate meeting the mileage goals of the 3YP for a total of 125 miles paved. All streets prioritized in the 2019 3-Year Plan but not paved before June 2022 will be completed under the 5YP.

2022 5-Year Paving Plan Summary

Building from the success of the 2019 3YP, the proposed 2022 5YP outlines a five-year prioritized street list in conjunction with a 10-year capital plan. The plan proposes five-year construction budget of \$300M, representing an 80% increase in annual spending from the 3YP. The 5YP maintains the 3YP prioritization across the two main programs: major streets and local streets. The plan prioritizes \$75M, or \$15M per year, toward major streets, an increase from \$8M in the 3YP. It recommends both rehabilitation and preventative maintenance treatments on major streets to both upgrade pavement condition and preserve existing good pavement. Major streets are prioritized by street condition and by traffic safety to ensure that necessary safety improvements on Oakland's high injury corridors can be advanced quickly.

The plan prioritizes \$225M, or \$45M a year, toward local streets, increased from \$25M a year in the 3YP. Of the proposed \$225M for local streets, 76% is programmed into Planning Areas by street condition and equity factors, with individual streets selected by street condition and proximity to schools. These local streets will receive rehabilitation (mill and overlay). Ten percent of local streets dollars (\$22.5M) are reserved for cost-share agreements with utility companies to fully pave streets after utility construction work. Five percent of local streets dollars (\$11.3M) are proposed to be programmed at City Council discretion, split among the 8 City Council seats. Another five percent of local street dollars (\$11.3M) are dedicated to neighborhood bikeways and four percent (\$9.0M) is dedicated to preventative maintenance on local streets to extend the life of recently paved streets. A map and complete list of streets prioritized within the plan is provided in **Attachment A**.

Major Streets Program

Oakland's major streets support the majority of daily vehicle, truck, bus, and bicycle trips. Major streets comprise 176 miles of Oakland's 830-mile street network. This plan prioritizes paving treatment on more than 70 major streets miles and allocates \$75M over five years in a cost-effective combination of rehabilitation and preventative maintenance treatments. This investment aims to increase the average PCI from 74 to 75 on Oakland's major streets.

Over one-third of the 70 prioritized major streets miles are on Oakland's High Injury Network. Oakland's High Injury Network includes the 71 miles of streets on which 63% of traffic injuries and fatalities occur and where traffic safety improvements should be prioritized. As with the 3YP, staff incorporated the High Injury Network into the 5YP to facilitate near-term implementation of safety improvement projects concurrent with repaving. Incorporating this safety analysis into the paving plan reflects the heavy weighting that the City's Capital Improvement Plan process places on health and safety.

The plan also includes a short list of unfunded major streets priorities (**Attachment B**). These streets are arterials that have low pavement condition scores but are of concrete construction and are therefore significantly more expensive to repair and replace. Staff recommend these streets as priorities for potential grant funding and spot repair by the department's expanded concrete repair team.

Local Streets Program

The 5YP proposes \$45M a year toward local streets. Staff have proposed that 76% of funds be programmed on approximately 260 miles of local streets using prioritization values of equity and street condition. After the 5YP is complete, the average local streets PCI is projected to rise from 50 to 61 (Fair Condition).

For the core local streets program, staff continued the use of nine “planning areas” to help identify needs and prioritize funds. Planning areas are a simple way of referring to different parts of Oakland that are smaller than Council Districts but larger than individual neighborhoods. Oakland’s 2007 Bicycle Plan, 2017 Pedestrian Plan, 2019 Bicycle Plan, and the 3YP have used the planning areas that staff refer to in this plan. Table 3 and Table 4 provides basic demographics and street statistics by planning area.

Findings from the Oakland Department of Race & Equity’s Oakland Equity Indicators report demonstrate broad disparity in services, resources, outcomes, and opportunities among underserved Oaklanders. Based on this, staff reviewed recent demographic data from the U.S. Census American Community Survey (ACS) to identify underserved populations by planning areas. The definition of underserved populations is a population and/or community that have experienced historic or current disparities, reflected in the Oakland Equity Indicators report and consistent with the Metropolitan Transportation Commission equity analyses. This definition includes people of color, low-income households, people with disabilities, households with severe rent burden, people with limited English proficiency, and youth/seniors.

Prioritizing by Planning Areas

Staff developed a weighting system that equally accounts for street condition and underserved populations for local streets investment. To prioritize by underserved populations, staff used ACS data to total the number of underserved populations who live in each planning area (Table 5). Staff then identified the share of underserved populations living in each planning area. This share varied from 30% in Central East Oakland to 1% in Coliseum/Airport (Table 7).

To prioritize by street condition, staff reviewed the total number of local street miles in each planning area with PCI less than 50 (Poor Condition). Staff then identified the share of citywide miles in poor condition that are in each planning area. North Oakland/Adams Point and Central East Oakland both have the largest share of Oakland’s worst local street miles at 18%; Downtown has the fewest, at 2% (Table 6).

Staff combined the two metrics (street condition and underserved populations) by planning area to produce a weighting factor that incorporated both equity and street condition. This factor was then used to distribute 76% of the \$225M local streets program, or \$171M (Table 7).

Table 5: Demographics by Planning Area

	Population	Share of Citywide Population	Median Income	% People of Color	% Low Income Households
Central / East Oakland	101,611	24%	\$54K	93%	48%
Coliseum / Airport	4,687	1%	\$47K	98%	51%
Downtown	19,410	5%	\$57K	75%	49%
East Oakland Hills	31,704	7%	\$101K	72%	26%
Eastlake / Fruitvale	100,503	24%	\$50K	83%	46%
Glenview/Redwood Heights	31,911	8%	\$122K	47%	18%
North Oakland Hills	24,950	6%	\$191K	31%	11%
North Oakland / Adams Point	81,976	19%	\$83K	48%	29%
West Oakland	27,641	7%	\$58K	74%	48%
Citywide	424,393		\$66K	71%	37%

Table 6: Local Street Condition by Planning Area

	Total Street Miles	Local Street Miles in Poor Condition	Local Streets Average PCI	People per Local Street Mile (PCI < 50)	Share of Local Street Miles in Poor Condition
Central / East Oakland	165	63	51	1,452	18%
Coliseum / Airport	20	6	49	670	2%
Downtown	40	5	61	2,773	1%
East Oakland Hills	98	40	52	773	12%
Eastlake / Fruitvale	134	55	47	1,675	17%
Glenview/Redwood Heights	78	35	50	840	11%
North Oakland Hills	110	59	49	409	17%
North Oakland / Adams Point	126	64	48	1,224	18%
West Oakland	60	14	57	1,728	5%
Citywide	830	341	52	1,156	

Table 7: Local Streets Funding by Planning Area

	Share of Local Street Miles in Poor Condition (A)	Share of Citywide Underserved Populations (B)	Funding Share (A+B)/2	Local Streets Funding Share
Central / East Oakland	18%	30%	24%	\$40.8
Coliseum / Airport	2%	1%	1%	\$2.6
Downtown	1%	5%	3%	\$5.4
East Oakland Hills	12%	6%	9%	\$15.5
Eastlake / Fruitvale	17%	27%	22%	\$37.2
Glenview/Redwood Heights	11%	5%	8%	\$13.5
North Oakland Hills	17%	3%	10%	\$16.9
North Oakland / Adams Point	18%	15%	17%	\$28.4
West Oakland	5%	8%	6%	\$10.8
Citywide				\$171.1M

Prioritizing Individual Streets

Within each planning area, staff first prioritized individual streets by street condition and proximity to parks. Streets near City parks see increased levels of activity, including walking and biking. Because repaving offers a chance to upgrade crosswalks and improve curb ramps, streets near parks were prioritized as a way of efficiently implementing accessibility improvements to support access to City parks. After selecting the worst condition local streets near parks, other streets were selected by order of pavement scores from worst to less worse until the planning area budget target was met. To enable more efficient construction operations, additional priority was given to street segments in poor condition that were continuations of street segments already prioritized and to streets connected to very short (less than 0.10 mile) segments prioritized in the plan.

Local Streets Program: Utility Cost-Share Streets

With the 5YP, staff have proposed to augment the utility cost-share program first introduced in the 3YP. The 5YP proposes to spend \$22.5M over five years on cost-share agreements with utility companies. Under the City's excavation requirements, external entities such as utility companies are required to restore streets after construction. At the street surface, this restoration includes paving a 13' wide lane centered on the utility's trench line, extending for the length of the trench. Given that most residential streets are 30' to 40' wide, this restoration does not amount to full-width repaving. Cost-share agreements enable full-width paving after utility construction work by enabling the City to reimburse utility companies, and vice versa, for repaving beyond each entity's responsibility. A separate program ensures that the City can collaborate with utility companies to take advantage of cost-share opportunities when they arise.

Staff will maintain the 3YP's rubric for cost-share consideration:

- Local streets only (collector and residential streets)
- Street condition must be poor (PCI<50)
- Construction must be part of a major utility job (greater than 1500' in length)
- Funds will be expended in order of construction

This program accounted for more than 10 miles of full-width rehabilitation under the 3YP. Staff have proposed an augmented program budget under the 5YP recognizing EBMUD's increased pipeline replacement work in Oakland and the potential for a PG&E program that would increase utility undergrounding. This kind of interagency collaboration not only implemented more full-width paving citywide, but also decreased the disruption and inconvenience for constituents.

Local Streets Program: Council Discretion Streets

In the 5YP, staff recommend continuing the program introduction in the 3YP which set aside local street program funds for distribution at City Council discretion. In the 5YP, staff have proposed 5% (\$11.3M) of local streets funding be set aside for City Council's street selection. Distributed evenly among the seven districts and the at-large City Council seat, this amounts to approximately \$1.4M per Councilmember office. This represents the same percentage set-aside (5%) as the 3YP but an increase in funding due to the larger total budget of the 5YP.

Under this program, each office would provide a final list of streets selected for repaving by January 15, 2022. Staff would then publish the selected streets in an informational memorandum and add the streets to the 5YP.

Local Streets Program: Neighborhood Bike Routes

Staff have proposed a new 5% set-aside (\$11.3M) for paving on neighborhood bikeways. This recommendation follows community interest in implementing neighborhood bikeways identified in *Let's Bike Oakland* (LBO), the 2019 adopted citywide bike plan, and the City's commitment to maintain higher pavement quality on designated bikeways. Streets in this program were prioritized considering high priority bike plan segments as identified in LBO, existing neighborhood bike routes with low PCI, and local streets that extend existing or new neighborhood bike routes.

Combining the core local streets program and the neighborhood bike routes program, 59 miles of proposed and existing neighborhood bikeways are prioritized for paving in the 5YP.

Local Streets Program: Preventative Maintenance

Finally, staff have proposed a 4% set-aside (\$9M) for preventative maintenance on local streets. This program prioritizes preventative treatments such as slurry seal or microsurfacing on streets that have been recently paved. These treatments, which do not include removing layers of asphalt, are cost-effective measures to protect the City's recent investments in local streets rehabilitation and extend the life of streets that are in good condition.

The following tables summarize proposed mileage by planning area (Table 8) and city council district (Table 9 below). The Local Streets total includes local street rehabilitation, local streets preventative maintenance, and local streets neighborhood bike route funding categories. The overall Total does not include 2019 3-Year Paving Plan carryover streets, council discretion streets, and utility coordination streets.

Table 8: Proposed Miles for Paving in Each Planning Area by Funding Category

	Major Streets	Local Streets*	Total**
Central East Oakland	10.9	68.0	78.9
Coliseum/Airport	5.7	5.5	11.2
Downtown	4.5	6.4	10.9
East Oakland Hills	8.3	25.3	33.6
Eastlake/Fruitvale	10.7	50.1	60.8
Glenview/ Redwood Heights	3.4	20.0	23.4
North Oakland Hills	12.1	32.6	44.7
North Oakland/Adams Point	13.1	43.4	56.5
West Oakland	8.9	11.6	20.5
Citywide	77.7	262.8	340.5

*Local Streets total includes local street rehabilitation, local streets preventative maintenance, and local streets neighborhood bike route categories.

**Total does not include 2019 3-Year Paving Plan carryover streets, council discretion streets, and utility coordination streets.

Table 9: Proposed Miles for Paving in Each Council District by Funding Category

	Major Streets	Local Streets*	Total**
CCD 1	17.0	45.8	62.8
CCD 2	7.9	33.2	41.1
CCD 3	14.2	22.7	36.9
CCD 4	10.0	45.2	55.2
CCD 5	8.4	29.5	37.9
CCD 6	6.0	37.3	43.3
CCD 7	14.2	49.2	63.4
Citywide	77.7	262.8	340.5

*Local Streets total includes local street rehabilitation, local streets preventative maintenance, and local streets neighborhood bike route categories.

**Total does not include 2019 3-Year Paving Plan carryover streets, council discretion streets, and utility coordination streets.

Carryover Streets

While staff anticipate meeting the mileage goals of the 3YP, all streets that were prioritized in the 2019 3-Year Plan but not paved before June 2022 will be completed under the next multi-year paving plan. This total mileage is expected to include 10 miles of major streets and 5 miles of local streets.

Coordination with ADA 30-Year Transition Plan

Overall, the proposed paving plan would advance the City’s ADA Transition Plan. The plan corridors include over 10,000 curb ramps that will be reviewed for compliance and upgraded to current accessibility standards. The paving program will also incorporate sidewalk repairs on the majority of paving corridors, repairing sidewalks on City facilities, addressing damage caused by official City trees, and facilitating private sidewalk repair through reimbursement agreements. These accessibility improvements are in addition to improved crosswalk markings, delivered as standard improvements within paving project scopes of work.

Coordination with Major Plans and Transit

The City’s paving program provides a dependable vehicle for implementing the transportation recommendations of other adopted plans, including specific plans, the citywide 2019 Let’s Bike Oakland bicycle plan, and the citywide pedestrian plan. Approximately 87 street miles proposed in this plan have existing bikeways, of which one-fourth miles are recommended for upgrades in the citywide bike plan, such as from standard bike lanes to buffered bike lanes or to protected bike lanes. Separately, another 58 miles of this paving plan overlap with recommended new bikeways in the bike plan. Together, these 145 miles account for approximately 43% of the paving plan and 46% of the total project mileage recommendations in the bike plan.

The proposed plan also identifies 75 miles of paving on streets with existing AC Transit bus service. With appropriate coordination and input from AC Transit, the OakDOT can incorporate routine improvements to bus stops along paving corridors, including adjusted red curbs and sidewalk repairs at bus stops to meet current safety and accessibility standards. The 75 miles of transit streets also offer the opportunity to coordinate with AC Transit on more significant

changes to bus service, including bus stop optimization and transit priority elements, such as transit only lanes. As with more significant bikeway improvements, these elements warrant additional community outreach, to be determined on a project-by-project basis.

Coordination with Utility Companies, Development Projects, and Other Work in the Street

One of the perennial challenges to a pavement management program is the work that needs to take place underground. Some work is known in advance, such as pipeline replacements by utility companies, street excavations necessary for developing land, or sewer improvements through the City's capital program. Other cuts are difficult to predict or contain, such as underground emergencies or private sewer lateral improvements. OakDOT maintains coordination with utility companies on two levels: a monthly coordination meeting to identify near-term permits and conflicts with projects, and a quarterly meeting to establish a 12-month lookahead for capital project coordination. In addition to individual project notification, these coordination meetings are part of a best-practice approach to ensure timely coordination and project sequencing to reduce subsequent cuts to newly repaved streets.

Annual Mileage Targets and Schedule

Following the adoption of the 2022 5-Year Paving Plan, staff will prepare a workplan and five-year schedule. The workplan will group 5YP streets by geography for more efficient project delivery, and the schedule will incorporate the outreach/conceptual design needs of complex corridors and staff capacity for initiating those processes. The five-year schedule will be shared with utility companies to coordinate on potential conflicts and will be adjusted following that coordination. Construction on the 5YP is anticipated to begin in July 2022. Table 10 catalogs the mileage goal by year, including mileage goals for in-house City crews as part of the total mileage.

Table 10: 2022 5-Year Paving Plan Mileage Goals By Year

	TOTAL GOAL MILEAGE	IN-HOUSE MILEAGE
Year 1 (July 2022 - June 2023)	55	8
Year 2 (July 2023 - June 2024)	55	8
Year 3 (July 2024 - June 2025)	80	16
Year 4 (July 2025 - June 2026)	80	16
Year 5 (July 2026 - June 2025)	80	16
Total	350	64

Plan Funding and Funding Outlook

Voter approval of Measure KK in November 2016 provided the City with a stable source of funding for repaving streets. In addition, voters' rejection of Proposition 6 in November 2018 ensured that additional gas tax revenues from Senate Bill 1, which are directly distributed to cities like Oakland, will continue to be available to maintain Oakland's streets.

At the same time, Measure KK is a \$350M bond. Anticipating the eventual spend-down of the bond, staff have identified the need for an extension or replacement of Measure KK to successfully complete the 5YP and maintain the improved condition of streets citywide. To deliver \$300M in paving construction will require an estimated \$75M in staff costs over the five-

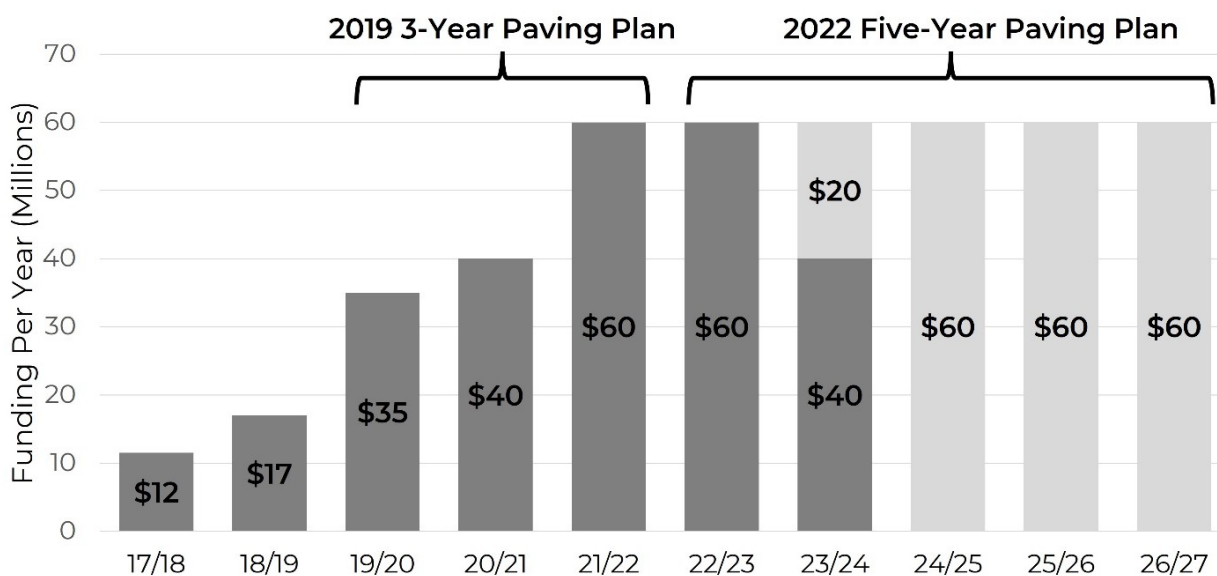
year timeline, bringing the total program budget to \$375M over five years (Table 11). This reflects a standard 25% staff cost estimate which accounts for engineering design, bid and award, and construction management.

Table 11: Five Year Plan Budget

	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	TOTAL
Major Streets Program Construction	\$11.0	\$11.0	\$15.0	\$19.0	\$19.0	\$75M
Local Streets Program Construction	\$35.0	\$35.0	\$45.0	\$55.0	\$55.0	\$225M
Program Soft Costs	\$11.5	\$11.5	\$15.0	\$18.5	\$18.5	\$75M
Total	\$57.5	\$57.5	\$75.0	\$92.5	\$92.5	\$375M

Based on this projection and current Measure KK expenditure rates, staff estimate that the \$350M Measure KK infrastructure balance could be depleted between 2024 and 2025 (Figure 4). This is approximately 1-2 years before the end of the 10-year bond term (2026). An extension of the infrastructure bond is needed to complete the majority of this mileage in this plan.

Figure 3: Proposed and Projected Program Funding Need



As shown in Table 12, with full funding, citywide PCI is anticipated to improve to 66 (Good Condition) by 2027. In a scenario without a Measure KK extension in 2022, the majority of mileage in the 5YP will not be implemented and the City will not be able to invest at the level needed to maintain and repair its street network. By 2027, the PCI will have decreased to 54, reversing 10 years of investment.

Table 12: Pavement Condition Index (PCI) Changes Based on Investment

Scenario Year	Overall	Arterials	Collectors	Residentials
2016	55	68	51	48
2021 (Current)	58	74	59	48
2027 (With MKK extension)	66	75	64	61
2027 (With No MKK extension)	54	68	52	47

Project Delivery Recommendations: Staffing and Contracting

The 5YP represents an 80% increase in annual paving output. This rapid implementation is based on the need to quickly restore and preserve pavement condition to reduce the citywide maintenance backlog. However, an 80% increase in annual paving output will require additional staff resources for planning, design, construction, and construction management. In addition, given the findings of the 2020 release of the Draft Disparity Study (which was received and filed by City Council on December 15, 2020), an 80% increase in paving output warrants thoughtful strategies for equitable contracting. Ensuring on-time delivery of the 5YP also means maintaining any existing successful strategies for project delivery streamlining.

This section provides three policy recommendations for further consideration:

- Following a successful funding measure, **increase staff resources** within all phases of project work
- Introduce a **joint venture contracting program** which reserves one major contract a year for only joint venture bidders
- Continue the **contract award authorization** established in the 3YP to get paving projects moving as quickly as possible

Increasing Staff Resources

The following analysis provides a phase-by-phase review of current gaps in staffing and equipment that would need to be resolved to meet the increased annual output of the proposed 5YP and deliver community benefits such as traffic calming, treatments that prevent severe injury and fatal collisions and mobility enhancements. A summary table of proposed new staffing is provided in Table 13.

- **Planning & Engagement:** Implementation of nearly 10 miles of complex corridors from the 3YP may be carried forward to the 5YP. The 5YP identifies more than 50 miles of paving representing more than 40 projects which may warrant standalone project management and community engagement. With current staffing levels adequate for managing no more than 3 complex projects a year, current staffing levels are therefore even more deeply inadequate to complete the 5YP on schedule. An estimated four additional project managers and six assistant project managers are needed to prepare major corridor safety improvement and neighborhood traffic calming project concepts and to engage with community members and stakeholders to refine designs. Additionally, a spatial data analyst is needed to develop and maintain geospatial data records including pavement, sidewalk, curb ramp, and bikeway modifications.
- **Design:** To achieve the 3YP's record-setting paving mileage amid persistent design staff vacancies, OakDOT engaged consultant designers. Expenditures under the 3YP towards engineering consultants totaled \$3.3M. This is greater than the annual budget of the current paving design section (approximately \$2.3M, fully burdened). The increase in annual mileage of the 5YP requires full staffing of currently budgeted positions plus additional design phase engineers. Additional engineering staff are needed to prepare design plans including pavement engineering and transportation engineering improvements. Construction inspectors are also needed to perform sidewalk inspections and facilitate private sidewalk repair through paving projects.
- **Construction:** Developing a robust in-house paving program means lesser long-term reliance on contractors as the maintenance backlog decreases. Expanding the existing

traffic painting section with an additional crew would support the expansion of in-house paving operations and ensure that non-paving traffic maintenance activities can continue to take separate precedent. The classifications proposed in the table below would comprise one new paving crew and two new paint crews. Finally, current persistent vacancies among City paving crew classifications warrant further review and potential revision of classification specifications.

- **Construction Equipment:** To support new crews, new equipment is needed, including a milling machine, paver box, mini grinder, skip-loader, dedicated sweeper, bobcat, augmented augur machine, six new paint trucks, thermoplastic applicators and trailers, and construction utility vehicles.
- **Construction Management:** Construction management refers to the City's oversight over contractors during paving construction. Resident engineers and construction inspectors ensure contractor performance is satisfactory and fulfills the project specifications, address questions and concerns from residents, and control quantities and payments. Beginning in 2019, OPW Construction Management staff vacancies led to the use of consultant construction management, accounting for approximately \$800,000 in consultant expenditures. In addition, due to staffing levels in OakDOT's Survey section, critical land survey work related to paving projects is routinely consulted out or required of the contractor to consult out. Staff estimate that over the course of the 5YP year, approximately \$5.5M will be paid to private professional land surveying firms for work that a larger Survey section could accomplish. Table 13 below identifies needed increases in OPW's Construction Management division and surveying staff to properly oversee contractors.

Table 13: Potential New Staffing to Complete 5YP With Transportation Improvements

	CLASSIFICATION	FTE
Construction Management	Civil Engineer	2.0
	Assistant Engineer II	4.0
	Construction Inspector	4.0
	Professional Land Surveyor	1.0
	Senior Survey Technician	3.0
	Survey Technician	2.0
Construction	Public Works Supervisor II	2.0
	Traffic Painter	4.0
	Heavy Equipment Operator	2.0
	Street Maintenance Leader	4.0
	Public Works Maintenance Worker	16.0
Design	Civil Engineer/Transportation Engineer	2.0
	Assistant Engineer II	4.0
	Construction Inspector (Sidewalks)	2.0
Planning & Engagement	Transportation Planner III	4.0
	Transportation Planner II	6.0
	Spatial Analyst III	1.0
Total		63.0

The above recommendations are intended for future discussion, particularly following a successful funding measure to fully fund the 5YP, such as an extension of Measure KK or a future bond measure and are not included in the proposed resolution to adopt the 2022 5-Year Paving Plan.

Joint Venture Pilot

As a program-level follow-up to the Draft Disparity Study, OakDOT staff analyzed the past ten years of construction contracts issued towards the paving program (2011-2021). Staff found that three prime contractors received or passed through to subcontractors 86% of paving-related contract expenditures during this time period. The three firms are all certified as local business enterprises, and one is a small local business enterprise. While none are certified as minority-owned or women-owned businesses, these primes do employ a range of sub-contractors to complete portions of the paving projects, such as contractors who specialize in trucking, concrete construction, traffic control, striping and pavement markings, and slurry and crack sealing. Table 13 below provides a summary of expenditures by contractor discipline, race and ethnicity of the firms' principal, and percentage of the total value of all contract expenditures. This summary includes both completed contracts and in-progress contracts for which only completed payments to date are represented. In the table below, race/ethnicity data is self-reported by each firm and generally represents the race/ethnicity of the firm president or CEO.

Table 13: Expenditures (in Millions) by Contractor Discipline and Race/Ethnicity

	African American	Asian Pacific Islander	White	Latinx	Total
Prime	-	-	\$73.0	-	\$73.0
Sub: Concrete	-	-	\$0.5	\$9.7	\$10.2
Sub: Material Supply	-	-	\$0.8	-	\$0.8
Sub: Survey & Misc.	-	-	\$1.4	\$0.8	\$2.2
Sub: Striping, Pavement Markings	-	-	\$7.5	-	\$7.5
Sub: Trucking	\$1.7	\$0.2	\$0.1	\$1.1	\$3.1
Total	\$1.7	\$0.2	\$83.3	\$11.6	\$96.8
% of Total	2%	0%	86%	12%	

Given the extensive mobilization required for pavement construction and cost-efficiency in procuring larger quantities, paving contracts are typically greater than \$10M. This dollar amount alone presents a bonding capacity challenge for smaller firms. In addition, pavement construction requires use of expensive machines some of which are single-use and can still be a significant capital outlay even to rent. These barriers to entry are one explanation for the limited number of prime firms that have been the lowest responsible, responsive bidders in the past ten years.

One way to create pathways for smaller local firms to grow into larger local firms capable of priming a paving contract may be to offer joint-venture opportunities. The City of Oakland's Local and Small Local Business Enterprise Program LBE/SLBE (Resolution No. 13647 C.M.S.) defines joint ventures as the following:

A business that is bidding or competing for City contracts may associate with a certified LBE or SLBE business to compete for contracts as a joint venture. A joint venture should be between two entities with the same discipline or license, as required by the awarding City department. Joint ventures receive bid discounts depending upon the LBE or SLBE percentage of participation as set forth in the Ordinance. The parties must agree to enter into the relationship for at least the life of the project.

In the past ten years, no joint venture firms have bid on paving construction projects in the City of Oakland. To incentivize prime firms to form joint ventures with LBE or SLBEs, OakDOT staff envision soliciting one paving contract per year that only joint ventures may bid on. All other requirements would still apply (lowest responsive, responsible bidder), but the pool of bidders would be limited to joint ventures. This provision has been included in the proposed resolution to adopt the 2022 5-Year Paving Plan.

Streamlining Contracted Paving Through Contract Award Authorization

A paving program for a city of Oakland's size includes a combination of in-house construction by City crews and contracted construction work by private firms, with the majority of construction work anticipated to be completed by contract. A key challenge for implementing paving are the pace of project development and project delivery.

In 2019, Council adopted a resolution to streamline paving project delivery (Resolution No. 87704 C.M.S.). The resolution applied to construction contracts that implement the 3YP and stipulated that all construction contract processes would follow fair and competitive bidding procedures established by state and federal law, local union contract agreements, the Oakland Purchasing Ordinance, and City contracting programs, including the City's local business requirements for construction contracts. Staff estimate that this resolution has saved 500 staff hours spent preparing and reviewing agenda reports and attending City Council meeting and saved 31 total months of additional time that would have otherwise been spent in the construction award process. Staff are recommending that Council again approve a resolution authorizing contract streamlining under the 5YP to continue the savings to staff time and paving timelines. Staff estimate that to deliver the proposed plan, the City will bid out 20-30 contracts over the next five years. A proposed resolution re-authorizing contract authorization for the 5-Year Paving Plan has been included in addition to the resolution adopting the 5YP.

FISCAL IMPACT

This report represents a recommended paving prioritization plan. The approval of these resolutions will not result in additional appropriation of funds.

PUBLIC OUTREACH / INTEREST

This report was received by the Measure KK Oversight Committee, the Mayor's Commission on Persons with Disabilities, and the Bicyclist and Pedestrian Advisory Commission. Additionally, staff presented the recommended approach at fourteen virtual community meetings:

- Bella Vista NCPC, October 13, 7:00PM
- Beat 30X, October 14, 7:00PM
- Chinatown NCPC, October 20, 2:00PM (in Cantonese)
- Beat 32X, October 21, 7:00PM
- Melrose-High Hopes NCPC, October 27, 7:00PM
- 16Y Glenview, November 3, 7:30PM
- Montclair Neighbors, November 4, 6:00PM
- Beat 6X, November 10, 6:00PM

- Brookfield/Columbian Gardens NCPC, November 10, 6:00PM
- Prescott NCPC, November 11, 6:00PM
- 10X Golden Gate NCPC, November 17, 6:30PM
- Beat 8X, November 29, 6:00PM
- Beat 35X, December 1, 7:00PM
- Beats 12Y/13XYZ, December 9, 7:00PM

The information presented at community meetings was also provided through an online “open house” with the same materials shared on the project website.

COORDINATION

The Office of the City Attorney and Budget Bureau were consulted in the preparation of this report.

SUSTAINABLE OPPORTUNITIES

Economic: All construction contracts require the payment of prevailing wage rates, which offer a livable wage for workers and contribute to an improved quality of life. Streets in good condition may indirectly improve the business climate.

Environmental: Recyclable materials will be used within the concrete and asphalt concrete construction materials to the greatest extent possible. Grindings from asphalt paving will be recycled whenever possible.

Race and Equity: The paving plan represents 350 miles of streets that will receive accessibility improvements including curb ramp improvements, sidewalk repairs, and crosswalk marking upgrades. The plan also incorporates race and social equity as a prioritization metric for local streets paving, ensuring that underserved communities are prioritized for paving investment.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) DETERMINATION

The proposed Project is exempt from CEQA pursuant to CEQA Guidelines Sections 15301(c) (Existing Facilities, Highways and Streets) because the proposed project would rehabilitate and maintain existing streets and would not result in additional vehicle travel lanes.

ACTION REQUESTED OF THE CITY COUNCIL

Staff Recommends That The City Council Adopt A Resolution Establishing A Five-Year Prioritization Plan For The City Of Oakland's Complete Streets Paving Program (2022-2027) And Adopting California Environmental Quality Act ("CEQA") Exemption Findings; And

A Resolution Authorizing The City Administrator To Award All Paving and Concrete Construction Contracts That Follow All City Advertising and Competitive Bidding Requirements And Are Awarded In Direct Service Of Delivering The 2022 Five Year Prioritization Plan In A Total Amount Not To Exceed Seventy-Five Million Dollars, Without Return To Council.

For questions regarding this report, please contact Sarah Fine, Complete Streets Paving & Sidewalks Program Manager at (510) 238-6241.

Respectfully submitted,



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Attachments (2):

- A: List of Prioritized Streets*
- B: List of Unfunded Major Streets Priorities*

