# CITY OF LOS ANGELES

INTERDEPARTMENTAL CORRESPONDENCE

- Date: March 30, 2023
- To: Municipal Facilities Committee
- From: Steven Fierce, AIA Principal Architect, Municipal Facilities Program Manager Bureau of Engineering

Al Bazzi, PE, ENV SP Principal Civil Engineer, Engineering Service Division Bureau of Street Services

#### Subject: ASPHALT PLANT NO. 1 – PHASE 2 PROJECT SCOPE RE-EXAMINATION AND BUDGET ADJUSTMENT

#### **RECOMMENDATIONS:**

- 1. Approve Option No. 1 to build out the full scope of work based on the production needs and code compliance including the cost saving items.
- 2. Approve the updated overall project budget of \$27.3 million, which reflects a \$1.6 million decrease over the previously proposed budget of \$28.9 million, and,
- 3. Approve the revised schedule with a construction completion date of March 31, 2026.

#### I. Background:

The complete replacement and modernization of the Asphalt Plant (AP) No. 1, which is located at 2484 E Olympic Boulevard, was completed in 2019, and it has been in operation with a design capacity of producing 700,000 tons of asphalt annually since then. In order to resolve the issue related to the insufficient storage and operational space for the Recycled Asphalt Pavement (RAP) within the AP No. 1, a nearby site located at 2601 E 25<sup>th</sup> Street was chosen to store and process the RAP with rental equipment of crusher and screener.

In April 2020, the Phase II project was initiated with an amount of \$1 million of MICLA funding to develop the 25<sup>th</sup> Street site. The estimated overall project budget of \$10

million is based on the limited scope of procurement and installation of RAP equipment, utility connections, and limited site improvements such as pavement.

During the project development on the Phase II project, additional design criteria was discovered such as the wind-borne debris and operation-generated dust, as well as the control of moisture content of the RAP, resulted in increased project scope. StreetsLA updated the original scope of work and asked to add a canopy structure to cover the entire operation, including the stockpile and equipment, a pair of large concrete bins to hold RAP, a small office space with restroom, and other supporting equipment and facilities such as truck scales, pavement, and security measures.

Following the instruction of MFC after the presentation of the joint report by BOE and StreetsLA on May 27, 2021, BOE conducted the Phase I Environmental Site Assessment (ESA), Hazardous Building Material Survey, Geotechnical Field Investigation, and Phase II ESA. The Phase I and Phase II ESA resulted with a better soil contamination condition than originally expected and can reduce the hazardous material mitigation cost from approximately \$1,200,000 to \$650,000. However, the Geotechnical investigation recommended to increase the original grading cost estimate from \$110,000 to \$1,400,000 due to the existing uncertified fill discovered. In the last two years during the pandemic, commodities have seen noticeable price increases, with ballooning inflation rates, and a sharp uptick of the Consumer Price Index; thus, BOE adjusted the original cost estimate to \$28.9 million based on the inflation rate reported on July 28, 2022.

On October 27, 2022, BOE presented a report to the MFC on the status of the project, including the site investigation findings and budgetary adjustment recommendations. The committee instructed BOE and StreetsLA to provide a scope analysis to identify mandatory and discretionary elements of the proposed scope, along with the corresponding costs, and report back with the recommendations that prioritizes the aspects of the project that are necessary to support the operations of the AP No. 1 facility.

A Task Order Solicitation (TOS) No. 78 has been issued on June 28, 2022 to prepare a 20% architectural and engineering design bridging document. On August 18, 2022, only one proposal from the IBI Group was received, for a total fee of \$523,134.94. The overall fee has been negotiated down to \$374,440.25; however, the award of the TOS has been put on hold pending the final decision of the scope of work and overall project budget.

#### II. Scope Analysis:

The current scope of work, which is based on the Inter-Department Correspondence of scope statement issued on 11/24/2020 and subsequent communication, are listed below:

1. Demolition of the existing concrete platform to expand the operation area.

- 2. Construction of a new canopy structure 178 ft (L) x 119 ft (W) x 46 ft (H) to cover the stockpile of the RAP and the RAP operation along with the processing equipment.
- 3. Construction of an office 30 ft (L) x 20 ft (W) x 10 ft (H) with restrooms and provide utility connections.
- 4. The purchase and installation of a truck weight scale.
- 5. Providing utility connections of water, power, sewer, and communication.
- 6. Concrete bins (70' x 89' and 47' x 89 ft) with a 25-ft height to hold the unprocessed and processed RAP stockpile.
- 7. Site Improvements including the street improvement, driveways, truck route, parking, an operation area, landscape, drainage, irrigation, and hazardous materials mitigation.
- 8. Security measures such as the fence, gate, camera, and lighting.

The scope of the RAP equipment procurement has been completed by StreetsLA and the purchased portable diesel-powered RAP equipment is already in operation on the 25<sup>th</sup> site. The units including the Impact Crusher, Screen, and Conveyor are currently operated under the California Air Resources Board Statewide Portable Equipment Registration Program (Registration No. 197931 and 197958).

While the proposed scopes of work at the 25th and Harriet site are being constructed, StreetsLA will need an interim site to continue the crusher and power screener operations. The scope of relocation and lease of a suitable real estate property will be facilitated by StreetsLA working in conjunction with the Department of General Services. The relocation and lease cost estimate and efforts of property search will be reported by StreetsLA in a separate report.

Following the instruction of MFC for the scope analysis, BOE and StreetsLA reexamined each element of the original scope of work in accordance with the below listed categories:

- 1. Essential to the Operation
- 2. Discretionary to the Operation
- 3. AQMD Compliances
- 4. Building Code Compliance Requirements
- 5. Cost Saving Measures

# 1. Essential to the Operation Items

The essential items to the operation are the canopy structure, the concrete RAP bins (part of the canopy structure functioning as structural bearing walls), the utility connections, concrete pavement, demolition, and all other security measures.

# 1) <u>The Canopy Structure</u> (\$4,627,000)

To mitigate the water content and dust control issues, a canopy structure was proposed to cover and enclose the entire operation and operating equipment. The canopy structure consists of the following:

• <u>Steel roof</u> will prevent the RAP stockpiles from being exposed to the elements and it also will reduce the wind-borne debris and fugitive dust. (\$1,569,823)

As one study<sup>1</sup> has shown, the production rate of the asphalt plant needs to be decreased as the moisture content of the aggregate being delivered increases. The effect of RAP and the moisture content of the RAP can greatly impact the mix discharge temperature, the burner fuel usage, as well as the plant production rate. Thus, it is economically advantageous to cover the aggregate stockpiles, particularly the fine aggregate materials and RAP materials, to reduce the incoming moisture content and increased production rate of the HMA mixture. It should be made clear that covering the aggregate stockpiles with a tarp is not feasible and a roof should be used to keep the rain complete off the stockpile. As an added benefit, the roof will also help reduce the wind-borne debris and fugitive dust generated during the loading, unloading, and screening of the RAP.

- <u>Concrete RAP bins/bearing walls</u> are designed not only holding over 24,000 tons of RAP that is sufficient for 2 weeks production, but also functioning as the structural support of the steel roof. (\$2,338,163)
- <u>The non-bearing partitions</u>, which are filling the space between supporting columns, and <u>the entrance roll-up doors (\$97,462)</u>, along with the concrete bins form a complete enclosure. (\$491,211)
- <u>The electrical work for the internal illumination</u> Internal illumination is necessary for the continuous operation after the dark and this is also a building code requirement. (\$129,950)

# 2) <u>The Utility Connection (\$2,339,100)</u>

There is no utility connection currently on site. The new connection of water, power, sewer, and communication will be required to provide illumination, irrigation, communication, and other service needs.

# 3) <u>The Demolition of existing concrete platform (\$1,480,000)</u>

The existing concrete platform (145 ft x 90 ft) with a steel canopy on the top, and the driveway ramp are impeding the current operations because it is extended above the ground by 12 to 15 ft in height and it occupies over one third of the site. Thus, it has to be demolished to provide space for the proposed canopy and maximize the RAP operation and storage area.

# 4) <u>The Security Measures (\$385,000)</u>

The fence, the sliding gate, the security lighting, the security camera, and the entrance role-up doors will provide a secured working environment to the facility from the vandalism and theft.

# 2. Discretionary to the Operation

The two elements that can be considered as Discretionary to the Operation are the following:

<sup>&</sup>lt;sup>1</sup> James A. Sherocman, "Moisture Issues in Asphalt Concrete Plant Production", *Moisture Damage to Hot-Mix Asphalt Mixtures – Synopsis of a Workshop (January 22, 2012, Washington, D.C.)*, 41.

# 1) <u>The Office Space with Restroom (\$638,000)</u>

The proposed 600 sqft office space will handle the scale operation control, documentation, and transaction of the RAP shipment. It also provides restrooms and breakroom to the facility staff and truck drivers. If the truck scale is not proposed, the office space and breakroom can be considered as discretionary to the facility operation. However, the restroom is required to be provided based on the building code.

# 2) The truck weight scale (\$415,000)

To better account for the truck load variation of each shipment, a low-profile electronic truck scale has been proposed. The truck scale is not direct related to the AP1 operation; however, the installation of the truck scale can save the overall shipment cost by avoiding over payment of those shipments with less than full-truck loads.

# 3. AQMD Compliances

As mentioned above, the StreetsLA has purchased the portable RAP processing equipment and obtained AQMD compliance with the California Air Resources Board Statewide Portable Equipment Registration. The operational permit of the processing equipment requires to keep the site free of the public nuisance as dust and wind-born debris. The regular method of dust control such as water spray cannot be used here. The canopy and enclosure wall will still be needed to mitigate the dust issues and control the moisture content.

### 4. Building Code Compliance Requirements

Beside the canopy structure and its components, the following items are also required to be in compliance with the LA Building Code and Zoning Code:

# 1) <u>Restrooms (part of the office space)</u>

Section 2901 of the Los Angeles Building Code (LABC) and section of 422 of the Los Angeles Plumbing Code (LAPC) require new buildings to provide a minimum number of plumbing fixtures depending on the floor area, occupancy load, and use of the building. The plumbing fixture referenced herein may consist of the water closet, lavatory, urinal and drinking fountain.

# 2) Site Improvements (\$3,717,000)

Site improvement including the project site landscape and right-of-way landscape, site grading, onsite parking, Operation area, truck route, street improvement and street lighting. All items listed below are associated with either building code or city ordinances.

- Project site landscape (including Low Impact Development)
- Right-of-Way Landscape
- Site Grading
- On-site Parking Lot
- Street Improvement
- Street Lighting

• Operation Area and Truck Route

### 3) Hazmat Abatement (\$649,750)

Given the historical use of the site as the refusal collection, the Phase I and Phase II Environmental Site Assessment resulted with surprisingly good findings of limited contamination. Only soluble and leachable lead were detected at spot locations that exceed the hazardous waste criteria and needs mitigation measures. The hazmat report also reported that there are lead containing paints present on the steel canopy above the concrete platform; consequently, the disturbances and removal of the steel canopy needs to be performed by a licensed abatement contractor with certified lead personnel.

The overall estimated cost of the hazardous material mitigation has been reduced significantly from \$1,200,000 million to approximately \$650,000.

#### 5. Cost Saving Measures

Only one discretionary item, Truck Weight Scale can also be considered as the cost saving measure to save the cost of the RAP shipment. A few essential items to the AP No. 1 operation have multiple uses so that they can also be considered as the cost saving measures.

### 1) Truck Weight Scales

Based on the annual report of StreetsLA from last year (2022), there were 158,905 tons of RAP being hauled from the various resurface jobsite to the 25<sup>th</sup> and Harriet site. The payment was based on the truck load, but those truck loads were not uniform and could be fluctuated with the operation condition between 10 to 15 percent. The overpaid shipment cost could be between \$120,000 and \$180,000 based on average shipment cost of \$7.48/ton.

By installation of the truck scale, this saving will be approximately \$150,000 annually on average and the return of the investment will be approximately 3 years.

#### 2) Concrete Bearing Wall/Container Box

The concrete container box consists of three exterior walls and one interior wall to form into two storage areas: one for the unprocessed RAP and another is for the processed RAP. These concrete container walls also function as the structural component of the canopy structure to provide bearing to the canopy roof and provide seismic resistance to the entire structure. This is a significant saving (\$431,750<sup>2</sup>) in the exterior wall construction because the double function of the concrete container box.

Based on the size limit of the canopy structure, the proposed concrete container box can hold 24,000 tons of RAP (roughly twelve days production

<sup>&</sup>lt;sup>2</sup> The total length of the exterior walls being replaced by the concrete container box is 314 ft, and the height is 25 ft, so the construction cost saved is  $314 \times 25 \times 55/$ sqft = \$431,750

volume). Compared with the current storage capacity, the proposed container box will be able to store an additional 12,000 tons of RAP that will ensure a smooth non-interrupted operation, as well as a reduction in the amount of excessive RAP to be disposed.

As a summary, the following table has listed the detailed categorized scope of work and its associated cost:

			Essential	Discretionary			Cost
			to the	to the	AQMD	Building Code	Saving
ltems	Scope Elements	Cost	operation	operation	Compliances	Requirements	Measures
	Canopy Structure (184'-3" x 117'-8" x				Y - Dust		
1	40')	\$4,626,610.35	Y		Control		
2	Utility Connections	\$2,339,100.00	Y				
3	Office space with restroom (20' x 30'-8")	\$637,690.64		Y		Y - Restroom	
4	Truck Weight Scales	\$414,930.35		Υ			Y
5	Demolition (Remove existing concrete structure)	\$1,479,480.75	Y				
6	Site Improvement	\$3,717,280.32				Y	
7	Security Measures/Fence/Light	\$384,652.00	Y				
8	Hazmat Abatement	\$649,750.00	Y			Y	
	Cost Subtotal	\$14,249,494.41					
9	Constractor's Cost	\$2,564,908.99			-		
10	Design Contingency	\$854,969.66					
		. ,					
11	Construction Contingency	\$1,424,949.44					
	Construction Cost Total	\$19,094,322.51					

 Table 01: Categorized Scope of Work and Its Associated Cost

# III. Scope Options and Budget Analysis

### 1. Scope Options

- Option No. 1: Build out the Full Scope with Operational Essential, Code Compliance Required, and the Cost Saving/Discretionary Items To enable the AP No. 1 Plant to economically produce Hot-Mix-Asphalt (HMA), It is ideal to have the full scope of work including the Operational Essential, Code Compliance Required, and Cost Saving/Discretionary items built out. The full scope will:
  - store additional 12,000 tons (approximately) RAP to a total capacity of 24,000 tons;
  - saving the shipment cost by \$150,000 annually;
  - provide continuous supply of RAP with well controlled moisture content to the AP No. 1 operation;
  - accelerate the investment recovery with additional saving from the shipment and raw material cost;
  - increase the RAP recycle amount and reduce the excessive RAP dumping; and,
  - meet the City's green sustainable policies and goals such as to increase landfill diversion rate to 90% by 2025; 95% by 2035, and 100% by 2050<sup>3</sup>.

<sup>&</sup>lt;sup>3</sup> City of Los Angeles, *L.A.'s Green New Deal – Sustainable City pLan (2019),* 98

The following table summarizes the full scope and its construction cost including the Contractor's cost, BOE's cost, BCA's cost, the final design cost, and other direct cost such as the art fee, permit, and printing.

Items	Scope Elements	Cost	
	Canopy Structure (184'-3" x 117'-8"		
1	x 40')	\$4,626,610.35	
2	Utility Connections	\$2,339,100.00	
	Office space with restroom (20' x		
3	30'-8")	\$637,690.64	
4	Truck Weight Scales	\$414,930.35	
	Demolition (Remove existing		
5	concrete structure)	\$1,479,480.75	
6	Site Improvement	\$3,717,280.32	
7	Security Measures/Fence/Light	\$384,652.00	
8	Hazmat Abatement	\$649,750.00	
Construction Cost Labor & Material Subtotal		\$14,249,494.41	
	GC, GR, Bond, and Contractor's OH		
9	& Profits	\$3,277,384.00	
13	Final Design (80% of Design Cost)	\$1,561,744.80	
Design Built Contractor Bid Price		\$19,088,623.21	
10	BOE Construction Administration	\$1,236,856.60	
11	BCA Inspection Cost	\$740,974.00	
12	Other direct cost: Art fee/Permits	\$384,737.00	
Overall Construction Cost \$21,451,190.81			

Table 02: Full Scope and Its Construction Cost

Item No. 9 - the cost of the General Conditions (GC), the General Requirements (GR), the Bond, and the Contractor's Cost was underestimated in the previous report. Based on a similar project, the cost of the GC and GR is approximately 12.5% of the construction; the Bond is 2.5%; and the Contractor's OH & Profit is approximately 8%.

# 2) Option No. 2: Build out a Reduced Scope with the Operation Essential and Code Compliance Items Only

The construction cost of the truck scale and office is 5.5% of the construction cost. With the truck scale removed from the scope, the office space is no longer needed. However, the breakroom, restrooms and the electrical room are required for the code compliance, employee benefit, and operational needs. With the office removed, the accessory structure can be reduced to 20' x 20' with a reduced cost of \$395,000. The overall reduction in the construction cost total will be \$657,621 comparing with Option No. 1. However, the estimated \$150,000 savings per year from the shipment cost will be eliminated.

The following table (Table 03) summarizes the total construction cost with a reduced scope not including the truck scale and office space.

		<b>A</b> .
Items	Scope Elements	Cost

	Canopy Structure (184'-3" x 117'-8"			
1	x 40')	\$4,626,610.35		
2	Utility Connections	\$2,339,100.00		
3	Break Room and Restrooms	\$395,048.00		
4	Truck Weight Scales	\$0.00		
	Demolition (Remove existing			
5	concrete structure)	\$1,479,480.75		
6	Site Improvement	\$3,717,280.32		
7	Security Measures/Fence/Light	\$384,652.00		
8 Hazmat Abatement		\$649,750.00		
Constr	\$13,591,921.42			
9	GC, GR, Bond, and Contractor's OH&Profits	\$3,126,142.00		
10	Final Design (80% of Design Cost)	\$1,489,674.40		
Design-Built Contractor Bid Price		\$18,207,737.82		
11	BOE Construction Administration	\$1,179,779.00		
12	BCA Inspection Cost	\$706,780.00		
13	Other direct cost: Art fee/Permits	\$367,252.00		
	Construction Cost Total \$20,461,548.82			

Table 03: Reduced Scope and Its Construction Cost

# 3) Option No. 3: Place the project on hold and continue the current onsite operation

Placing the project on hold and continue the current onsite operation within the limited confined space is an option; however, the cost to develop a future site is likely to continue to rise and the current unresolved issues at the Olympic site will continue to impact the smooth operation of AP No. 1. Additionally, the StreetsLA's efforts to meet the City's sustainability goal and comply with the green policies will be significantly impacted.

- (1) AP No. 1 is currently running at an optimum production rate closing to its half design capacity. The annual production volume of hot mix asphalt fluctuates between 266,000 to 330,000 tons with the demand of the StreetsLA road improvement program. The 25th and Harriet site operated with strenuous effort to meet this high demand and the dust and debris issues also worsened. StreetsLA staff has to struggle between the high demand of RAP production and the control of dust within an acceptable level.
- (2) As part of the operation condition, the AQMD permit of the RAP processing equipment requires its operation to be free of the public nuisance. The nuisance dust plumes, and wind-borne debris will still be a concern and can cause the violation of the operation condition and risk of losing the current permit.
- (3) The excessive of moisture content, especially during inclement weather, will cause disruption in the continuation of the normal production of HMA utilizing 50% of RAP.

(4) With the current limited working area, the efforts to meet the State and City's sustainability and green policy goal such as increasing RAP recycling capacity or reduction of excessive RAP dumping will be disrupted or delayed.

Beside those impacts and risks, StreetsLA will still need to comply with the building code and zoning code requirement of the LADBS and LA City Planning, including but not limited to, the conditional use permit to operate the subject site as the RAP processing facility.

#### 2. Overall Project Budget Comparison

For Option No. 1 and No. 2, the overall project budget is compared in the following table:

Project Phases	Option No. 1		Option No. 2	
Pre-Design Costs	\$	726,000.00	\$	705,000.00
20% Design/Bid & Award Cost	\$	536,000.00	\$	511,000.00
Final Design & Construction & Equipment Costs	\$	21,451,000.00	\$	20,462,000.00
Construction Contingency	\$	1,425,000.00	\$	1,359,000.00
Subtotal	\$	24,138,000.00	\$	23,037,000.00
Construction Escalation	\$	3,146,000.00	\$	3,001,000.00
Budget Total	\$	27,284,000.00	\$	26,038,000.00

Table 04: Overall Project Budget Comparison Between Option No. 1 and 2

As shown above, the overall reduction by eliminating the truck scale and the office space in Option No. 2 is \$1,381,000, which is 4.5% of the full scope Option No. 1. The delayed installation of the truck scale will continue to cost an additional \$150,000 annually in the shipment and material cost.

As for Option No. 3, the overall cost will need further study based on the development of the current issues on site. If the operation condition of the current AQMD permit was violated and the RAP operation is closed, it will cost an extra \$5.5 million/year<sup>4</sup> for procurement of the extra aggregate and disposal of excessive RAP.

<sup>&</sup>lt;sup>4</sup> The cost benefit analysis was based on the actual production of HMA (327,000 tons) in the AP No. 1 in year 2020

<sup>1.</sup> The scale will result in annual savings of \$150,000.

<sup>2.</sup> Using 50% RAP instead of 20% RAP brings a saving of \$5,384,375 per year:

a. Procurement of extra 30% virgin aggregate: 327,000 tons HMA x 94% x 30% x \$29.43/ton = \$2,713,858

For Option No. 1, the cost recovery of \$27,284,000 will take about 4.9 years based on an estimate of \$5,534,375<sup>5</sup> cost savings. For option No. 2, the cost recovery will be approximately 4.7 years.

Both Option No. 1 and No. 2 have considered the impact of the high inflation rate of last couple of years. As described in the previous report, the construction cost has been adjusted with an inflation rate of 13% from January 2020 to July 2021, and another 15.22% from June 2021 to June 2022. The construction escalation is based on BOE projected inflation rate of 12% for fiscal year 2023-24 and 9% for the fiscal year 2024-25 to the middle of construction.

#### 3. Funding Availability and Fiscal Impact

As previously reported, BOE/StreetsLA was approved with the following MICLA funding in the Mayor's Budget for the Fiscal Year 2020-21, 2021-22, and 2022-23:

Approved MICLA Funding				
Fiscal Year	Amount	Account Number		
FY 2020-21	\$1,000,000	298/50/50TAP1		
FY 2021-22	\$1,200,000	298/50/50VP1H		
FY 2022-23	\$8,629,774	TBD		

#### Table 05: Available Project Funding Sources

Depending on which options to be selected, the project is anticipated to have a funding shortfall beginning Fiscal Year of 2023-24:

Options Selected	Option No. 1	Option No. 2
Project Total	\$27,284,000	\$26,038,000
Total Available Funding	\$10,829,774	\$10,829,774
Project Shortfall	\$16,454,226	\$15,208,226

Table 06: Funding Shortfall of Option No. 1 and 2

StreetsLA is continuing to seek available Federal and State Grants and Funding to support the infrastructural development such as this project to augment the project funding shortfall. BOE has submitted the CTIEP funding request for the Fiscal Year 2023-24. Based on the funding availability and the updated schedule, the funding shortfall of \$16,454,226 shall be identified and/or made available in the Fiscal Year

b. Cost to disposal excessive RAP: 327,000 tons HMA x 94% x 30% x \$28.96/ton = \$2,670,517

Aggregate & washed sand used by AP No. 1 has a unit cost of \$16; shipping cost on average is \$13.43 (total cost of aggregate is \$29.43/ton). The disposing cost of RAP to Sun Valley is \$19.45/ton and the shipping cost is \$9.51/ton from 25<sup>th</sup> and Harriet site (total disposing cost is \$28.96/ton).

<sup>&</sup>lt;sup>5</sup> Overall cost saving annually is \$150,000+\$2,713,858+\$2,670,517 =\$5,534,375

2023-24. The \$16.5 million can be awarded over 2 of fiscal years (FY 2024-25 and FY 2025-26) as shown in the table below:

Fiscal Year	Available Funding anticipated spending	Funding Shortfall Needed	Project Phases
Prior FY	\$726,000		Pre-Design
2022-23	\$536,000		20% Bridging Document, Art Fees, Permits and other direct costs
2023-24	\$5,553,000		Bid & Award, Final Design, Demolition
2024-25	\$4,015,000	\$13,864,000	Construction
2025-26		\$2,590,000	Construction and Post construction
Total	\$10,830,000	\$16,454,000	

Table 07: Project Expenditure and Funding Needs for Next Three Fiscal Years

### 4. Schedule

If Option No. 1 or Option No. 2 is chosen and the overall project budget is approved, the project schedule will be adjusted as follows:

Project Phases	Revised Start Date	Revised Finish Date
Pre-Design	12/30/2020	6/1/2022
20% Bridging Documents	6/2/2022	9/30/2023
Bid & Award	10/1/2023	3/31/2024
Final Design & construction	4/1/2024	3/31/2026
Post Construction	4/1/2026	10/2/2026

 Table 08: Updated Project Schedule

### IV: Final Recommendation

Based on the scope analysis, StreetsLA and BOE strongly recommend choosing Option No. 1 with an overall project budget of \$27.3 million to build out the full scope because it 1) will resolve all underlying issues, 2) mitigate all potential risks for the disruption of RAP supply, 3) provide a stable supply of high quality of RAP to support AP No. 1 operation, 4) accelerate the return of investments, and 5) contribute to the efforts of the City's sustainability development and green policy compliance. Hence, we recommend that the Committee authorize the following:

1. Approve Option No. 1 to build out the full scope of work based on the production needs and code compliance, including the cost saving items.

2. Approve the updated overall project budget of \$27.3 million, which reflects a \$1.6 million decrease over the previously proposed budget of \$28.9 million, and

3. Approve the revised schedule with a construction completion date of March 31, 2026.