

CITY OF LOS ANGELES
INTERDEPARTMENTAL CORRESPONDENCE

Date: May 27, 2021

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: **MUNICIPAL FACILITIES COMMITTEE (MFC) MEETING, May 27, 2021,
ASPHALT PLANT NO. 1 – PHASE 2 SCOPE OF WORK AND FUNDING
APPROVAL**

It is recommended that the MFC

1. **Approve the updated scope of work of Asphalt Plant No. 1 – Phase 2 Project;**
2. **Approve the updated project budget total of \$18.9 million, and;**
3. **Approve the proposed schedule with a construction completion date of 11/01/2024.**

CD 14

Councilmember Kevin de León



Aerial Photo of the Project Site



Current Operation on Site

1. Background

The City of Los Angeles, Bureau of Street Services (StreetsLA) has operated Asphalt Plant (AP) No. 1 at its current location, 2484 E. Olympic Boulevard, Los Angeles, CA 90021, since 1947. The AP No. 1 site was recently completely rebuilt, is approximately 2 acres and is in an industrial area south of downtown Los Angeles.

A project to replace and modernize the plant was awarded to Papich Construction Co., Inc. on June 1, 2016, for \$31,073,000 and has subsequently been completed and operational since 2019. AP No. 1, now with the capacity to produce up to 700,000 tons of asphalt per year, will increase the use of reclaimed asphalt pavement (RAP) from 20% to 50% thus, decreasing the need to purchase virgin asphalt material. Additionally, this change will increase the cost savings of purchasing gravel by 30%.

However, during a functional test performed, it was discovered that in order to produce Hot Mix Asphalt (HMA) efficiently utilizing 50% RAP, additional space along with another crusher and screening unit is required to “process” the material to a consistent gradation size of $\frac{5}{8}$ ” prior to being introduced to the HMA process at AP No. 1.

To maintain the production of HMA with the 50% RAP, BOE had issued a change order to Papich to rent a processing crusher and screener as a temporary measure. RAP material is currently processed and stored at a StreetsLA facility located at the north-east corner of 25th Street and Harriet Street, which is approximately 1.2 miles from the AP No. 1. To enable the plant to economically produce HMA using 50% RAP, it was recommended that the City purchase the crusher and screener rather than renting the equipment. In April 2020, a \$1.0 million MICLA funding was approved to cover the pre-design and design activities of the Phase II project at 25th and Harriet site under the 2020-21 CIEP Mayor’s Proposed Budget (Attachment 1). The estimated \$10 million project budget is based on the scope of installation of an impactor, screener, utility connection, and other limited site improvements.

During recent project development work on the Phase II project, additional issues have been identified on the 25th and Harriet site. Since the stockpile of unprocessed and processed RAP is not covered, wind-borne debris and dust generated during loading, unloading, and processing, have caused a few complaints from the surrounding neighbors. Furthermore, having the RAP pile exposed to the elements can increase the moisture content of the material which

hinders the production rate at the asphalt plant. In order to maintain a low moisture content, even during inclement weather, and help reduce nuisance dust plumes, a canopy covering the RAP pile is recommended.

As a result of the programming effort, an Inter-Departmental Correspondence of scope statement was issued on 11/24/2020 (Attachment 2). StreetsLA updated the original scope of work and asked to add a canopy structure to cover the entire operation including stockpiles and equipment, a small office space with restrooms to facilitate document processing and other staff needs, along with supporting equipment and facilities such as truck scales, pavement, and security measures. Additionally, concrete bins to hold the RAP stockpile have been requested in subsequent pre-design meetings with BOE and StreetsLA.

2. Scope of Work

The Asphalt Plant No. 1 – Phase 2 Project is a continuation of the AP No. 1 (at 2484 E Olympic Blvd). The project will develop a satellite site at 2601 E 25th Street to store and process the Recycled Asphalt Pavement (RAP) for the AP No. 1.

The original scope of work:

The project originally proposed to:

- Purchase and Install the RAP processing equipment that includes the crusher, the screener, and associated conveyor belts;
- Provide utility connections including water and power;
- Continue leasing the RAP equipment currently in operation;
- Improve the site including a concrete pad for the installation of the RAP equipment, pavement for the stockpile and operation area, site drainage, and other security measures such as the fence, gate, and exterior lighting.

Updated Scope of Work:

The additional scope includes:

- Demolition of the existing concrete platform to expand the working area;
- Purchase and install a set of RAP processing equipment;
- Construction of a new canopy structure to cover the stockpile of the RAP and the RAP operation along with the processing equipment;
- Construction of an office with restrooms and provide utility connections;
- Purchase and installation of truck scales;
- Provide utility connections of water, power, sewer, and communication;

- Concrete bins to hold the unprocessed and processed RAP stockpile;
- And other site improvements.

Other site improvements include pavement for the new driveways, a truck route, parking, and an operation area; security measures such as the fence, gate, camera, and lighting; also the drainage, landscaping, and irrigation.

3. Budget

Original Project Cost Estimate

Activities	Cost Estimate
Pre-Design Costs	\$100,000
100% Design/Bid & Award Cost	\$940,000
Construction & Equipment Costs	\$6,400,000
Construction Contingency	\$2,240,000
Subtotal	\$9,680,000
Construction Escalation	\$320,000
Project Total	\$10,000,000

Updated Project Cost Estimate

Activities	Cost Estimate
Pre-Design Costs	\$560,000
30% Design/Bid & Award Costs	\$510,000
Final Design, Construction & Equipment Costs	\$14,248,000
Construction Contingency	\$2,492,000
Subtotal	\$17,810,000
Construction Escalation	\$1,090,000
Project Total	\$18,900,000

Funding Availability

MICLA funding is provided for pre-design and design activities for the installation of an impactor, screener, and utility connections in the fiscal year of 2020-21.

298/50/50TAP1

\$1,000,000

Funding Shortfall:

Based on the revised scope of work, the project currently has a funding shortfall of **\$17,900,000**.

Project Total	\$18,900,000
Available Funding	\$1,000,000
Project Shortfall	\$17,900,000

Note: this project budget estimate is only at class “O” level. The total project cost and funding shortfall will be adjusted during design with additional information being made available.

4. Schedule	Phases	Start	Finish
	Pre-Design	12/30/2020	12/31/2021
	30% Design	01/01/2022	04/30/2022
	Bid and Award	05/01/2022	10/31/2022
	Design & Construction	11/01/2022	11/01/2024
	Post Construction	11/02/2024	05/02/2025

Note:

01. This project schedule is based on 30% design and a Design-Build Delivery process.

02. The Pre-Design phase will include the Task Order Solicitation (TOS) award.

5. Key Issues

A. Project Alternatives

Before the current project scope was determined, there were several other alternatives that have been considered.

Alternative 1: No Project

The alternative to cancel the project or delay the approval of the project will risk losing the current supply of RAP and increase the production cost of asphalt in the AP No. 1. As the result of the functional test performed at AP No. 1 being revealed, there was serious space limitation to process the RAP on site. The subject site will provide adequate space to store and process as much RAP as possible, and it will be a good investment for long term development of the City's street service.

Alternative 2: Keep the operation in the open

Due to the urban environment of the subject site, open operation of RAP processing will be problematic. The dust and noise generated by the RAP processing have to be contained in order to minimize the impact to the surrounding neighbors. The normal method to use water trucks to suppress the dust is not suitable because it will increase the water content of the processed RAP. Operation in the open will be constantly disrupted in the wet season and will cause the reduction of production goal of AP No. 1.

Alternative 3: Develop a covered facility

The 25th and Harriet site is strategically located 1.2 miles away from AP No. 1 and is within the heavy industrial zone, thus it is the ideal place as a satellite site for AP No. 1. With the proposal of a covered facility, it will guarantee the uninterrupted supply of RAP and help AP No. 1 reach its full design capacity.

With thorough research and careful consideration, alternative 3 is recommended to mitigate negative impact to the neighboring property, to increase the production rate of RAP, and to help reducing operation cost of Streets LA.

B. Project Cost

With further study and analysis, Alternative 3 was considered more favorable than other two alternatives and a new updated scope was developed. The new updated scope of work has several costly items compared with the original scope of work:

1. Hazardous Material Abatement.

Though the geotechnical and environmental investigation are still in process, the preliminary record research has returned with a result of potentially risky soil conditions.

Zoning information has indicated the subject lots were used as a landfill site, so there is a great risk of soil contamination.

The anticipated cost for the hazardous material abatement is included in the revised construction budget.

2. *The Canopy Structure.*

In order to mitigate the water content and dust control issue, a canopy structure was proposed to cover and enclose the entire operation and the operating equipment. The proposed canopy will be approximately 145 ft (width) x 200 ft (length) x 40 ft (height) to accommodate the minimum size of the stockpile of daily production. The current construction cost estimate is based on a pre-engineered sprung structure made of fabric and steel framing. The cost to construct a canopy could be higher if a different type of canopy construction material is chosen, and additional subsurface construction costs considering the high probability of un-ideal soil conditions.

3. *The Office Space with Restrooms.*

An office with restroom facilities is necessary to maintain basic sanitary and hygienic conditions for employees working at the facility. The proposed small office with restrooms is only big enough to accommodate the on-site crew's daily activity such as document processing and short breaks; however, the cost to connect with water, power, sewer, and communication adds to the budget.

4. *Demolition of Existing Concrete Structure and Existing Steel Canopy.*

At the east side of the subject lot, there exists a concrete platform (145 ft x 90 ft) with a steel canopy, which might have been the loading platform of railway operations in previous years. The 90 ft x 30 ft steel canopy is situated on the top of a platform next to the alley. A 160 ft long driveway ramp extends from the corner of Harriet Street along the south property line to the top of the concrete platform, which is 12 ft to 15 ft above the grade. The concrete platform and steel canopy need to be demolished because they occupy a large portion of the lot, and do not allow for efficient utilization of the site.

5. *The Concrete Bins to Hold the RAP Stockpiles.*

After receiving the scope statement, it was made clear to the design team that concrete bins were needed to hold as much RAP as possible to avoid the cost of dumping the excess unprocessed RAP as trash. Based on the size limit of the canopy, the proposed concrete bins will hold twelve (12) days production volume (24,000 tons of RAP). The construction cost for the bins includes a 25 ft high retaining wall around the bins, with a thickened lower portion of the wall to resist impact loads.

A detailed comparison of overall project cost and construction cost are provided in Attachment 3. The delta analysis table provides an

overview comparison between each phase of the project cost including predesign, design, bid & award, construction, and other miscellaneous costs; and provides a cost breakdown comparison of each line item of construction cost, along with a simple cost benefit analysis. Per the cost benefit analysis, the cost recovery will take about six (6) years.

C. Associated Risks with the Unresolved Issues if No Action Is Taken at the AP No. 1 – Phase 2:

1. Possible shut down of the facility at 25th and Harriet site due to AQMD permit violations;
2. Fines from AQMD due to significant amounts of particulate matter and dust;
3. Reduced RAP utilization from 50% to 20% at AP No. 1. This will increase the production costs of HMA because StreetsLA will be forced to purchase the more costly virgin material to produce asphalt. The disposal cost of excess RAP will also increase.

D. Funding Shortfall for Fiscal Year 2021-22 and 2022-23

Based on the projected schedule, the project will need \$1,070,000 to cover the fees for the predesign, 30% design, and bid & award phases. The \$1 million available will be exhausted and \$70,000 needs to be identified to reimburse staff costs of the Bureau of Engineering (BOE) before the end of the Fiscal Year of 2021-22.

The remaining project funding of \$17.8 million needs to be made available to award the project at the beginning of the fiscal year 2022-23.

6. Attachments:

Attachment 1: 2021 BlueBookVol2 388

Attachment 2: 25th & Harriet Memo with Scope Statement

Attachment 3: Cost Delta Analysis and Cost Benefit Analysis

SZ/NM/SF/AB/IJ/CK:cd

Q:\05 Asphalt Plant No. 1--Phase II\15 MFC Report

cc: eng.execsignature@lacity.org
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Martin Schlageter, StreetsLA
Robert Sewell, StreetsLA
Ioana June, StreetsLA

MICLA-ISSUED FINANCING

Proceeds from the issuance of MICLA lease obligations or other types of debt will be used to finance the projects listed below. The debt service payments associated with these types of financing will be funded by the City through an annual appropriation of General Fund or Special Fund monies. The issuance of MICLA debt for the projects listed below would cause the City to borrow \$88,303,034 at an approximate 5.5 percent interest rate over 20 years. The total estimated debt service is \$147,780,000, including interest of approximately \$59,477,000. During the life of the bonds, the estimated average annual debt service is \$7,389,000 over 20 years. Actual interest rates may differ as rates are dependent on market conditions at the time of issuance.

The following Municipal Facilities projects have been proposed for MICLA-issued financing.

CATEGORY	PROJECT TITLE	ACTIVITY*	2020-21 AMOUNT
3	Alpine Recreation Center Expansion	C	\$ 686,034
Funding is provided to offset a remaining funding shortfall for this Proposition K specified project that is in active construction.			
1	Asphalt Plant I (Phase II) 25th and Harriet Site Improvements	D	\$ 1,000,000
Funding is provided for pre-design and design activities for the installation of an impactor, screener, and utility connections.			
1	Barnsdall Art Park	C	\$ 500,000
Funding is provided for the restoration, seismic retrofit, and hazardous materials abatement for Residence A located in Barnsdall Art Park.			
1	Building Equipment Lifecycle Replacement	C	\$ 2,500,000
Funding is provided for the lifecycle replacement of aging and obsolete building equipment at the City's highest priority sites in order to achieve more efficient operations and associated cost savings.			
1	Capital Program - Bureau of Street Services	C	\$ 500,000
Funding is provided to address safety hazards and regulatory compliance issues at yards and shops facilities operated by the Bureau of Street Services (BSS) as part of a multi-year program. This will enable BSS to prioritize use of this funding to address the most critical safety hazards and regulatory compliance.			
1	Capital Program - El Pueblo	C	\$ 200,000
Funding is provided for capital repairs and infrastructure improvements at El Pueblo de Los Angeles Historical Monument.			
1	Capital Program - Van Nuys Civic Center (Formerly Marvin Braude Building)	C	\$ 225,000
Funding is provided for capital repairs and infrastructure improvements at Van Nuys City Hall complex, which serves as a City hub in the Van Nuys area.			
1	Capital Program - Zoo	C	\$ 250,000

Funding is provided for capital repairs and infrastructure improvements at the Los Angeles Zoo facilities.


* "PP" indicates preliminary study. "D" indicates design. "C" indicates construction work. "R/W" indicates land or building acquisition.

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

DATE: November 10, 2020

TO: Deborah Weintraub, AIA
Chief Deputy City Engineer City Engineer
Bureau of Engineering
Attention: Steven Fierce

FROM: Keith Mozee 
Chief Operations Officer
Bureau of Streets Services (StreetsLA)

SUBJECT: REQUEST FOR DESIGN WORK FOR ASPHALT PLANT 1 (PHASE II) AT 25TH ST. AND HARRIET ST. YARD

The Bureau of Street Services (StreetsLA) requests the Bureau of Engineering (BOE) to incorporate specific items and essential features within the pre-design and design efforts for Asphalt Plant 1 (AP1) Phase II at the 25th Street and Harriet Street yard. Attached is the Project Scope Statement to outline the project's deliverables and identify the constraints.

AP1 services the metro region and portions of the valley region with the production of hot mix asphalt (HMA) for various Street Renewal Programs. StreetsLA requests that BOE include, but not limited to, the following items in its pre-design and design phases to make the 25th St. and Harriet St. yard a more functional work environment for reclaimed asphalt pavement (RAP) production for AP1: 1) canopy, 2) utility connections, 3) an office space with restroom facilities, 4) RAP processing equipment, 5) truck weight scales, 6) concrete pavement, and 7) remove concrete structure.

The placement of a canopy is crucial for the protection of RAP processing equipment and supplies as well as moisture and dust abatement. Additionally, utilities such as water, sewer and electricity as well as an office with restroom facility are necessary to maintain basic sanitary and hygienic conditions for employees working at the facility. StreetsLA also requests that BOE include the construction of concrete pavement for vehicles entering and existing the facility along with a weight scale to measure the loads on the trucks.

With these various features added to the yard, AP1 and its staff can more efficiently produce the HMA to resurface streets and would result in a significant savings in cost to the City. These basic requests will help ensure that AP1 is a sustainable and safe plant for many years to come.

Should you require additional information regarding this request, you may contact Al Bazzi, Division Manager of the Engineering Services Division, at (213) 847-0962.

Attachment

cc:	Keith Mozee, StreetsLA	Neil Drucker, BOE
	Al Bazzi, StreetsLA	Neel Mistry, BOE
	John Sapone, StreetsLA	Paul Tseng, BOE
	Nick Lopez, Streets LA	Shun Yu Zhang, BOE
	Ioana June, StreetsLA	Chelsea Li, BOE

25th & Harriet Street Project Scope Statement

Project Name	25th Street and Harriet Street Project		
Project Sponsor	Nick Lopez	Project Manager	Ioana June
Approval Date	10/26/2020	Revision Date	
Scope Description & Project Deliverables	<p>Demolish existing concrete structure to maximize the efficiency of the recycle asphalt pavement (RAP) facility and reappropriate any existing storage capacity. Erect a canopy structure covering the RAP and RAP processing equipment to protect from moisture, wind and other natural elements.</p> <p>Provide office structure for employees (<4) with bathroom and furnitures</p> <p>Establish utilities (electricity, water, sewer, and communication) for the facility and office structure.</p> <p>Replace current rental RAP processing equipment and purchase new equipment to accommodate 50% of AP1's full capacity.*</p> <p>Install truck weight scales at entrance and exit to the facility.</p> <p>Construction concrete pavement for vehicles entering and exiting the facility and parking for idle equipments.</p> <p>Evaluate and upgrade current facility lighting system.</p> <p>Design new perimeter fencing with separate access gates for entrance and exit.</p> <p>Evaluate RAP facility for site drainage mitigation.</p> <p>Project design plans with budget and schedule.**</p>		
Acceptance Criteria	<p>The project will be accepted when:</p> <ol style="list-style-type: none"> 1. All permit requirements are satisfied. 2. Street Renewal Program agreed the deliverables meet their needs. 		
Constraints	<p>Project limit is within city owned parcels</p> <p>Total project budget is limited to approval from CAO Maintain RAP operation</p>		

* Installation of an impactor and screener to process RAP. The processed RAP will be used in the production of HMA at AP1.

** construction documents (including specifications), any site investigation report required, environmental reports, progress reports, schedule, design reviews, LID.

A Project Cost Delta Analysis Table

5/17/2021

Item/Description	Original Class "O" Estimate	Revised Class "O" Estimate	Delta (\$)	Remarks
1. Utilities	\$2,000,000	\$2,000,000	\$0	No scope change
2. RAP Equipment	\$1,100,000	\$1,100,000	\$0	No scope change
3. Equipment Rental	\$1,000,000	\$0	\$1,000,000	Equipment will be purchased under item 2
4. Design completion by D/B entity	\$0	\$1,090,000	\$1,090,000	D/B will be used instead of DBB
5. Site Improvement	\$2,300,000	\$2,300,000	\$0	No scope change
6. Hazmat Abatement		\$1,200,000	\$1,200,000	Potential soil contamination remediation was not included
7. Canopy Structure		\$1,590,000	\$1,590,000	Canopy is added to mitigate dust /AQMD compliance
8. Concrete Bins		\$1,000,000	\$1,000,000	Added scope, Bins are needed to store the RAP
9. Office/Restrom Trailer		\$200,000	\$200,000	Added scope, this is required for staff operations
10. Truck scale		\$400,000	\$400,000	Added scope to optimize/reduce transportation costs
11. Demolition of existing concrete structure	\$0	\$1,633,000	\$1,633,000	Added scope to accommodate the new canopy structure (item 7)
12. Security measures		\$835,000	\$835,000	Added scope to secure/protect new City assets
Subtotal	\$6,400,000	\$13,348,000	\$6,948,000	
13. Design Contingency	\$1,280,000	\$0		Design/Build (DB) will be used instead of Design/Bid/Build (DBB)
14. Construction Contingency	\$960,000	\$2,492,000		Revised Contingency due to increased Construction Cost
Total Construction Cost	\$8,640,000	\$15,840,000		
Pre-Design:				
Environmental/Survey/Geotechnical/Hazmat Survey	\$100,000	\$560,000		Higher amount is required to accomplish these tasks
BOE Design/PM/CM	\$748,000	\$510,000		BOE will now deliver 30% vs 100% Design, change to DB vs DBB
BCA Inspection		\$600,000		Was not included in original estimate
Construction escalation	\$320,000	\$1,090,000		5% annually till 2023 (mid-point of construction)
Other Direct Costs	\$192,000	\$300,000		Art fee, plan check/permit fees, printing, etc.
Total Project Estimated Cost	\$10,000,000	\$18,900,000	\$8,900,000	

B **Cost Benefit Analysis:**

1. Procuring the RAP equipment, we save the rental cost of \$645,000 per year.

2. The scales will result in annual savings of \$150,000:

- Calculation: Approx. 80,000 tons of RAP used for production of 220,000 tons of asphalt; assuming 20% empty trucks paid as full, we paid an extra 20,000 tons of RAP; 20,000 tons x \$7.48/ton= \$149,600 (approximately \$150,000 /year).

3. Using 50% RAP instead of 20% RAP brings a saving of \$1,243,200/year cost of the procurement of virgin materials and a saving of \$933,600/year for the hauling and dumping of 30% RAP not used in asphalt production. This calculation is based on 220,000 tons of asphalt production:

- Calculation for \$1,234,200 saving: 80,000 tons RAP used for 50% of the aggregate; for the rest of 50% were used 80,000 tons virgin materials for a total of 160,000 tons aggregates; if only 20% RAP used, the 30% difference of 48,000 tons represents the additional virgin materials needed; $160,000 \text{ tons} \times 30\% = 48,000 \text{ tons virgin material} \times \$25.90/\text{B35ton} = \$1,243,200/\text{year}$;
- Calculation for \$933,600 saving: $48,000 \text{ tons RAP} \times \$19.45/\text{ton disposal cost} = \$933,600$

4. Total savings per year = \$645,000 + \$150,000 + \$1,243,200 + \$933,600 = \$2,971,800/year for 220,000 tons of asphalt

Note: Cost recovery of the investment: approximately six (6) years; The savings are increasing with the increase of production.