



Legislation Details (With Text)

File #: 2022-0005 **Version:** 1 **Name:**
Type: Action Item **Status:** Passed
File created: 1/5/2022 **In control:** Board of Port Commissioners
On agenda: 1/11/2022 **Final action:** 1/11/2022
Title: RESOLUTION AUTHORIZING A SINGLE SOURCE PURCHASE AGREEMENT WITH KONECRANES FOR DISTRICT ACQUISITION OF TWO ALL-ELECTRIC MOBILE HARBOR CRANES WITH A PROCUREMENT COST NOT-TO-EXCEED \$14,760,000 FOR USE AT TENTH AVENUE MARINE TERMINAL, SAN DIEGO, CA; FUNDS FOR THIS PROCUREMENT FOR THIS FISCAL YEAR ARE BUDGETED WITHIN THE ECONOMIC RECOVERY PROGRAM CAPITAL OUTLAY APPROPRIATED ITEM; ALL FUNDS REQUIRED FOR FUTURE FISCAL YEARS WILL BE BUDGETED IN THE ECONOMIC RECOVERY PROGRAM CAPITAL OUTLAY APPROPRIATED ITEM OF THE APPROPRIATE FISCAL YEAR, SUBJECT TO BOARD APPROVAL UPON ADOPTION OF EACH FISCAL YEAR'S BUDGET.

Sponsors:

Indexes:

Code sections:

Attachments: 1. 16. 2022-0005 Attachment A, 2. 16. 2022-0005 Draft Resolution, 3. 16. Agenda Related Materials - Memo re: Electric Cranes - Posted 1-10-22

Date	Ver.	Action By	Action	Result
1/11/2022	1	Board of Port Commissioners	adopted	Pass

DATE: January 11, 2022

SUBJECT:

RESOLUTION AUTHORIZING A SINGLE SOURCE PURCHASE AGREEMENT WITH KONECRANES FOR DISTRICT ACQUISITION OF TWO ALL-ELECTRIC MOBILE HARBOR CRANES WITH A PROCUREMENT COST NOT-TO-EXCEED \$14,760,000 FOR USE AT TENTH AVENUE MARINE TERMINAL, SAN DIEGO, CA; FUNDS FOR THIS PROCUREMENT FOR THIS FISCAL YEAR ARE BUDGETED WITHIN THE ECONOMIC RECOVERY PROGRAM CAPITAL OUTLAY APPROPRIATED ITEM; ALL FUNDS REQUIRED FOR FUTURE FISCAL YEARS WILL BE BUDGETED IN THE ECONOMIC RECOVERY PROGRAM CAPITAL OUTLAY APPROPRIATED ITEM OF THE APPROPRIATE FISCAL YEAR, SUBJECT TO BOARD APPROVAL UPON ADOPTION OF EACH FISCAL YEAR'S BUDGET.

EXECUTIVE SUMMARY:

The Tenth Avenue Marine Terminal (TAMT) is one of two marine cargo terminals within the District's Maritime portfolio. TAMT serves as an omni-cargo terminal, consisting of a 96-acre facility located in San Diego, California, and handles breakbulk, bulk, container, Roll-on/Roll-off (RoRo), and project cargos such as transformers for regional utilities, in addition to steel and engines used in local shipbuilding. Currently, the District utilizes an existing diesel-powered Gottwald HMK300E mobile

harbor crane (diesel-powered crane) acquired in 2001 with a maximum lift capacity of 100 metric tons (MT) and 46 MT when operating at the maximum reach of 38-feet. Most of the heavy-lift cargoes destined for this region weigh more than 200 MT, and the District's current lifting capacity is insufficient to accommodate this cargo. The existing diesel-powered mobile harbor crane has also reached its operational life expectancy, has had three breakdowns in the last six months, and was identified for replacement in the District's Maritime Clean Air Strategy (MCAS). Purchasing the proposed fully electric mobile harbor cranes will position the District to compete for this niche market, further capitalizing on the space unlocked by the TIGER project and the growth forecasted in the TAMT Redevelopment Plan.

Only two companies currently offer fully electric mobile harbor cranes which meet the District's requirements. District staff has had extensive communications with both Konecranes (Kone) and Liebherr beginning in 2020 (detailed in Discussion section below). Due to the extremely limited potential vendors and the importance of procuring the cranes expeditiously from a business perspective (e.g., current issues with Gottwald crane and potential new business, and deadlines associated with spending American Rescue Plan Act (ARPA) funds received from the State of California's Coronavirus Fiscal Recovery Fund of 2021), Staff determined that it would not be in the District's best interest to go through a formal request for proposals process normally undertaken for purchases under Board of Port Commissioners (BPC) Policy No. 110. BPC Policy 110 contemplates such a situation and allows the Board to award single source purchase agreements.

Note that an agenda published for the December 2021 BPC Meeting included a "sole source" Staff recommendation that Kone was the only all-electric solution which met the District's requirements. Staff withdrew that item from the December Board meeting and has since given Liebherr further opportunity to explicitly propose its offered all-electric solution. This current agenda takes into account Liebherr's December 31, 2021 proposal and recommends a single source award to Kone based on price, warranty, and confirmed delivery by Kone of its all-electric solution in Port of Skelleftea (Sweden).

The fully electric cranes would eliminate tailpipe emissions from the District's most polluting piece of equipment, the diesel-powered mobile harbor crane. The District will be the first port in North America to deploy cranes of this kind. The funds for this fiscal year used to pay for this item are budgeted within the Economic Recovery Program (ERP) Capital Outlay appropriated items. Funds for future fiscal years will be budgeted in the Economic Recovery Program (ERP) Capital Outlay appropriated item, subject to Board approval. This item is a part of the previously approved ERP utilizing the American Rescue Plan Act (ARPA) funds received from the State of California's Coronavirus Fiscal Recovery Fund of 2021.

RECOMMENDATION:

Resolution authorizing a Single Source Purchase Agreement with Konecranes for District acquisition of two all-electric mobile harbor cranes with a procurement cost not-to-exceed \$14,760,000 for use at Tenth Avenue Marine Terminal, San Diego, CA; funds for this procurement for this fiscal year are budgeted within the Economic Recovery Program Capital Outlay appropriated item; all funds required for future fiscal years will be budgeted in the Economic Recovery Program Capital Outlay appropriated item of the appropriate fiscal year, subject to Board approval upon adoption of each fiscal year's budget.

FISCAL IMPACT:

The Contract for acquiring the Two Kone All-Electric Mobile Harbor Cranes is incorporated as Attachment A.

The stated project not-to-exceed Cash Requirement of \$14,760,000 is based upon the terms and conditions of the acquisition of the Two Kone All-Electric Mobile Harbor Cranes (Table 1) which are not completely fixed due to the need to calculate final price in US dollars based on Euro exchange rates and forward exchange rates at time of execution, and future adjustments due to the final shipping price - the risk/benefits of price increases/reductions shall be shared by parties. This forecast includes the cost of manufacturing the cranes, shipping the cranes to San Diego, a five (5) year warranty, and applicable taxes. However, as described in Table 1 below, the procurement cost is estimated to be reduced to \$14,209,628 by an anticipated \$350,000 offset from the sale of the existing Gottwald crane (the Gottwald's estimated Fair Market Value is \$350,000 to \$600,000), and anticipated savings on shipping cost reductions. Please note that the Operating and Maintenance costs were not included in this figure and will be budgeted each Fiscal Year based upon anticipated use. Additionally, the District is currently in the engineering design phase for the TAMT electrical upgrades to support the electric cranes and charging infrastructure for all terminal zero emission operations. This electrical demand/load study is underway as a part of the Phase 3 Electrical Distribution System Modernization effort to ensure adequate electrical service is in support to meet the District's electrical needs and may potentially include a transformer, charging outlets, and underground conduit. Preliminary estimates range between \$2.5M-\$4M. Funding is intended to be covered through the Economic Recovery Program, grants, and future Capital Improvement Program allocations.

The anticipated cost to acquire the mobile harbor cranes increased based on increases in transportation costs. Transportation costs increased from euros (€) 850,000 in spring 2021 to €1.55 million in November 2021 - an increase of \$800,000. In order to mitigate the risk of additional cost increases, staff has negotiated a risk-sharing element for those costs that protects against future cost increases and allows us to possibly share in savings from transportation cost reductions. Normally crane transportation costs are a pass-through from the manufacturer to the customer, with the customer fully bearing those costs. It is widely known that the international maritime transportation markets are currently oversubscribed, so we recognized the possibility of changes in these transportation costs. To mitigate this risk, we have negotiated a transportation price and an agreement that any future cost savings or increases will be split between the District and Kone.

Table 1 – Detailed Cost Estimate

Cost Element	Total Estimated Cost in Contract	Estimated Savings or Earnings	Estimated Final Cost to Port	Notes
Crane Purchase (Paid to Kone)	\$12,117,276		\$12,117,276	Based on an exchange rate of \$1.13 per Euro in January 2021 and an FX rate of \$1.14 per Euro for April 2023.
Shipping Cost (Paid to Kone)	\$1,773,510	\$(198,805)	\$1,574,705	As a result of congestion in the global maritime transportation market, the cost of transportation for the cranes from Germany to San Diego rose by about \$800,000 from the prices used to generate the \$14,000,000 budget estimate for the Economic Recovery Program in October 2021. Staff anticipates that a reduction in these costs, as reflected in this table.
CA Sales Tax	\$852,500		\$852,500	CA Sales tax is 7.75% of the cost of the crane. Warranty, commissioning, and related service costs are subtracted from that cost, and we estimated that tax base amount to be \$11,000,000. For each \$1,000,000 reduction in the tax base, the sales tax will be reduced by \$77,500.
Harbor Maintenance Tax	\$15,147			The Harbor Maintenance Tax is a 0.125% ad valorem tax on the value of any imports entering the United States by marine transportation.
US Duty	\$0			There are no duty charges on the cranes.
Sale of Gottwald		\$(350,000)	\$(350,000)	The fair market value of the Gottwald (delivered to South America) is \$350,000-\$650,000. This figure anticipates that we sell the Gottwald for the lowest value.
Estimated Final Cost	\$14,758,433	\$(548,805)	\$14,209,628	

COMPASS STRATEGIC GOALS:

This agenda item supports the following Strategic Goal(s).

- A financially sustainable Port that drives job creation and regional economic vitality.
- A thriving and modern maritime seaport.
- A Port that is a safe place to visit, work, and play.

DISCUSSION:

In October 2021, the Board of Port Commissioners (Board) adopted a resolution approving an Economic Recovery Program (ERP) for projects utilizing American Rescue Plan Act (ARPA) funds received from the State of California's Coronavirus Fiscal Recovery Fund of 2021. The Board also adopted a resolution amending Board of Port Commissioners Policy Number 090 to Establish an ERP Ordinary Expenses appropriated item and an ERP Capital Outlay appropriated item for the funds in the ERP. This proposed item is a part of the approved ERP, and funding is budgeted in the ERP Capital Outlay appropriated item.

Mobile Harbor Crane Timeline

In November 2019, District staff commenced primary research with key steamship lines, stevedores, crane, and barge operators related to industry projected heavy-lift capacity and project cargo needs such as utility-scale projects and on and off-shore wind activities. In addition, secondary research was obtained from studies from The U.S. Department of Energy's National Renewable Energy Laboratory related to California's Electrical Grid Infrastructure and Off-Shore Wind Planning.

In March 2020, District staff had a dual-track internal process split between a multi-departmental stakeholder group that was formed with representatives from Marine Operations, General Services, Engineering/Construction, and Maritime Commercial; concurrently representatives from Planning and Green Port (PGP) and Government and Community Relations initiated its primary research on Cargo Handling Equipment (of which the District's existing mobile harbor crane is categorized) utilized in developing the Maritime Clean Air Strategy.

In April 2020, District staff executed a series of informal Request for Information (RFI) sessions with two (2) Mobile Harbor Crane (MHC) manufacturers: Kone and Liebherr. Both MHC manufacturers are based in Germany. These RFI sessions were 1) useful in gauging interest to provide the District with heavy lift crane solutions and 2) provided each MHC manufacturer with the ability to highlight and provide an overview of their market reach domestically and globally, and 3) introduce the latest safety and environmental technical developments.

In January 2021, District staff presented each MHC manufacturer with a hypothetical scenario for proposals that consisted of the capability to lift a 225 Metric Ton pick, to the centerline of a vessel with 21-meters from outside of outriggers, with a maximum load-bearing ground pressure on berth: 3,000 pounds per square foot, present single and/or tandem crane solution(s) and required hybrid option(s). Required proposal elements included: 1) Hybrid unit cost(s) for single piece or two for appropriate CRANE product(s), 2) Estimated delivery costs and time to deliver from order date, 3) Warranty and service details, 4) Assembly and training commitment, 5) Removal/disposal costs for Gottwald if available, and 6) Valid proposal through December 31, 2023.

By February 2021, both Kone and Liebherr submitted their proposals, and District staff commenced

internal review. Based upon feedback stemming from internal review, District staff requested a second presentation and revised proposals in April 2021 from each respective MHC manufacturer.

The proposals and presentations were reviewed, and a third technical presentation with questions related to lifting capacity, maximum pressure on the wharf, crane placement for tandem lifts, spreader bar specifications, power requirements (voltage and amperage), maintenance costs, cord protection, and batteries/undercarriage secondary power sources (lift v. idle and movement) with General Services and Marine Operations was conducted in June 2021 by each respective MHC manufacturer.

The fourth round of interviews/proposals was completed and received by November 2021. Finally, both Kone and Liebherr were given the opportunity to make final proposals by December 31, 2021.

Overall, District staff has executed 60 meetings in a total of which 42% have been conducted with external parties and 58% internal parties, experienced two existing crane failures with our only liner service from Europe over a twenty-four-month (24) timeline.

The proposals by Kone and Liebherr both offer all-electric solutions which meet the District's requirements. The differences in the final proposals from Kone and Liebherr can be summarized as follows, Table 2.

Table 2 – Summary of Crane Comparison

	Kone	Liebherr
Quantity and model	2 Kone ESP .9/200t	2 LMH 600 Cranes (Liebherr)
Price including delivery dockside at Port of San Diego. Both similarly subject to adjustments based on exchange rate and actual shipping costs	\$13.89 million	\$ 14.60 million (includes unloading at seller cost, whereas Kone requires District to hire stevedores to unload. This cost of approximately \$100,000 has been deducted from the Liebherr proposal for comparisons)
Warranty	5 years comprehensive.	3 years comprehensive. 5 years on paint and steel.
Delivery experience of all-electric crane solution	Kone has delivered two all-electric cranes (no diesel-with battery) to the Port of Skelleftea (Sweden).	Liebherr states, "In this moment Liebherr is in the developing phase of the system. We have finished already the technical evaluation and we will shortly start the production of the first unit."

Based on these differences, Staff recommends the Board authorize a Single Source Purchase Agreement for District acquisition of two Konecranes mobile harbor cranes with a procurement cost not-to-exceed \$14,760,000 for use at Tenth Avenue Marine Terminal, San Diego, CA. As discussed in the Fiscal Impact section above, the total procurement costs include more than the payments to Kone for purchase and delivery, but also other costs paid by the District related to the procurement (e.g., sales tax, etc.).

Commercial Background

The District is in a unique market position in Southern California to serve the special requirements of the maritime heavy lift sector. Sufficient water depth for heavy-lift class vessels coupled with adequate air draft and a specially designed dock capable of handling the heaviest project cargos make the District the optimal choice for specialized high and heavy cargo in the Southland. Procuring the Kone electric mobile harbor cranes would open this market to the District by more than quadrupling the weight that could lift off ships calling at Tenth Avenue Marine Terminal (TAMT).

The case is built on the assumption that the cranes will enhance terminal productivity and lift capacity, leading to growth in G2 Ocean (G2) calls and attracting an Asia breakbulk service as well. The business case for purchasing the fully electric Kone cranes is quite conservative, assuming an increase in heavyweight pieces, which weigh 130-260 MT, increasing from zero in FY 2021 to 96 per year by FY 2029. These cargoes would be carried on 12 G2 sailings, 12 Asia breakbulk service sailings, and about four inducement calls. The forecast also included standard (regular weight) cargoes that would come aboard the breakbulk vessels. This forecast for the increase in heavy-lift business at TAMT following the purchase of the heavy-lift mobile harbor cranes was based on market data, California Department of Transportation (CALTRANS) oversized/overweight truck permit data (described below), and a record of lost business opportunities.

Revenue estimates were developed based on the increase in cargoes forecasted in the business case, with average revenue of \$3.1 million per year for the movement of breakbulk cargoes. The cumulative projected revenues for purchasing the Kone cranes is \$62 million. This level of service has projected net revenue of \$44.5 million over 20 years, with an average of \$2.22 million in net revenues per year. The NPV is \$25 million at a 5% discount rate.

While the larger ports of Los Angeles and Long Beach focus mainly on container business, the District has direct, unimpeded access to the BNSF rail line with sufficient clearances to bring these cargoes into the heartland. The rail reach for the District extends east as far as Chicago, Kansas City, and St. Louis, including movement north to Calgary and Edmonton, Canada.

Truck routes along the Interstate 15 North/South and Interstate 8 East/West offer unimpeded access to inland points as far as Salt Lake City, UT, and Tucson, AZ, respectively. Unlike the other ports located in Southern California, heavy-lift pieces moving on the interstate freeway system do not require transit through extended metropolitan areas to gain access to the main Interstate arteries. In addition, there is an overweight corridor leading to the Interstate 15 termination point near the border with Mexico.

In reviewing the market for heavy-lift breakbulk cargoes in Southern California, staff performed an analysis of the oversized/overweight permits issued by Caltrans to shippers moving oversized and overweight cargoes into, out of, and around California between December 2017 and December 2020. Over that time, Caltrans issued about 63,000 permits to move this type of cargo on California freeways, or about 21,000 permits per 12-month period. Thirty thousand of those permits, or 47% of the total permits, were for cargo moving from the East into CA over the Arizona border. In addition, over 11,000 of those pieces, or about 18% of those permits, were over 40 MT, while the remaining 18,700 were longer than standard cargoes. As a result, the District should be competitive to grab some of these cargoes as we attract new service to the District. At the very least, these cargoes demonstrate our region and California's strong demand for heavy-lift cargo transportation services.

Many of these cargoes are imports that entered the U.S. through the Texas heavy-lift ports and then were trucked to California for lack of a better option. In fact, the cranes, trucks, and all other equipment used to move this cargo from Texas to California is diesel all the way - 1,500 miles of carbon and other particulate emissions.

The Kone electric cranes position the District to compete for this niche market, further capitalizing on the space unlocked by the TIGER project and the growth forecasted in the TAMT Redevelopment Plan by entering new markets. These cranes would result in eliminating all tailpipe emissions from the District's most polluting piece of equipment, the diesel-powered mobile harbor crane.

The District currently owns one Gottwald diesel-powered mobile harbor crane (diesel mobile harbor crane) that is used for various lifting operations at TAMT. Traditional diesel-powered cranes utilize a diesel engine over a hydraulic distribution gearbox to move and complete lifts. The diesel mobile harbor crane is more than 20-years old and is diesel-powered by a 1,030 horsepower Tier 1 engine. It has a maximum lifting capacity of 100 MT (with a much lower capacity when extended over a ship). At this time, it is operated for approximately 245 hours annually (MCAS, Appendix A, Cargo Handling Equipment Inventory). California Air Resources Board (CARB) regulations are phasing out the use of diesel-powered mobile harbor cranes as a part of the proposed amendment to CARB's current Mobile Cargo Handling Equipment Regulation. Therefore, in alignment with the MCAS and forthcoming CARB regulations, the District is not considering the purchase of a traditional diesel-powered mobile harbor crane as a replacement option.

Operation and Maintenance Costs

Based on the Gottwald crane's age, the District anticipates substantially increased maintenance costs prior to its retirement. Over the last five (5) years, the average yearly maintenance and operational cost are approximately \$225,000 per year. The total forecasted maintenance cost from FY 2022 through FY 2027 is approximately \$1,400,000. The Gottwald crane is certified to operate until 2029. The diesel-powered mobile harbor crane has several high-time components approaching the end of its service life and could potentially put the crane out of service for two to three months as replacement parts are ordered from the original equipment manufacturer. These include tires, a hoist motor, wire-rope cables, and engine re-build (estimated to cost \$445,000). If the engine failed and was not repairable, there is currently no Tier Four (4) diesel engine replacement available for the crane. In May 2021, the diesel-powered mobile harbor crane experienced a hydraulic lift failure and was out of service until August 2021, forcing the District to pay \$50,000 to bring in a temporary replacement since the District is contractually required to provide a mobile harbor crane to Dole Fresh Fruit.

Anticipated maintenance and operational cost for the Kone All-Electric Mobile Harbor Cranes will be approximately \$50,000 per year throughout the cranes' warranty period. This includes required preventative maintenance, monthly inspection/assessment, quadrennial inspections, and replacement of consumable parts. Manufacturer warranty coverage includes:

- Crane: 36 months or 7,500 hours
- Steel structure: 60 months or 12,500 hours
- Paint: 60 months
- Battery packs: 36 months or 840 battery charge cycles

Annual future maintenance costs for the Kone All-Electric Mobile Harbor Cranes will increase to an annual estimated cost of \$200,000 after the warranty period ends due to increased preventative maintenance requirements and required component repair. The highest replacement cost is the replacement of the battery packs.

The business case anticipated annual maintenance costs of up to \$400,000 per year for the two cranes (based on the current costs for the diesel Gottwald crane). Based on discussions with Kone after the business case was developed, the estimated maintenance costs should be closer to \$200,000 per year. These cost savings are not reflected in the business case and will therefore result in increased revenues of about \$3,000,000 over the life of the cranes.

Maritime Operational Benefits

With two matched cranes, they can be synchronized. When synchronized during tandem lifts, the capacity is approximately 264 MT at mid-ship, doubling the lifting capacity of a single crane.

With two synchronized cranes performing a tandem pick, the two cranes can be physically distanced from one another, making it possible to lift oversize cargo. For instance, when handling windmill blades, the “pick points” are often one hundred or more feet apart on a 175 to 225 feet long blade. Shoreside cranes often load ships, especially with large pieces such as windmill blades or tower sections. At times, the pieces are placed so that ship’s gear cannot pick the pieces up. In that case, a shoreside crane must be used to offload.

Large yachts are sometimes offloaded directly to water from ships. The ideal situation is to reach over the ship and lower the yacht into the water. When the crane's reach and the crane capacity are insufficient to execute the operation, it is necessary to put the yacht down on the dock on a cradle, disconnect, and move the crane. This hopscotching might be done several times to clear the ship and lines and finally put the yacht in the water. A pair of cranes will mainly end that practice making the heavy lift operationally more efficient.

Much as with the movement of yachts, there are times that large, heavy pieces are moved onto a barge and transported to shipyards. With a pair of cranes, that operation is simplified. There are times when crane barges have been utilized for this operation because the Gottwald diesel-powered mobile harbor crane and ship’s gear do not have the capacity. This is an expensive, time-consuming, and labor-intensive procedure. On occasion, non-geared vessels are loaded by shoreside cranes and must be offloaded by shoreside cranes. Having a pair of cranes at TAMT gives shippers more flexibility when planning cargo moves. With a pair of cranes, multiple operations can be supported. One crane can work on one project, and the second crane can work on another.

Having a pair of cranes supports training. The cranes can simulate ship whirley cranes when placed in free spin mode. Additionally, the cranes are interchangeable, allowing us to train multiple students on mobile and whirley. This will help expedite the number of students processed through the training program. With more trained operators, we’ll have fewer labor shortages.

Cargo, especially heavy pieces such as main engines for ships, are sometimes brought into TAMT on railcars. Moving them off the railcar and onto multi-axle transports for movement to NASSCO is time-consuming and requires a large amount of space. A gantry crane must be leased and mobilized to lift such pieces. With a pair of cranes with sufficient capacity, this operation is simplified. The piece can be lifted, the railcar moved, and the transport moved in beneath the two cranes accomplishing in a

few hours what it takes days of prep and breakdown to do now. Additionally, they can be placed onto a barge with a single move, giving the shipyard greater flexibility in receiving these large and heavy pieces.

Modified reach stackers are used to move large pieces around the yard at this time. One or two cranes may be substituted for reach stackers, improving efficiency within the terminal.

One of the primary purposes of the existing crane is to back up Dole's operation if one or both of their ship cranes are down. A new crane with greater capacity and faster offloading speed will facilitate that.

The newer cranes come with features that improve productivity, including moving the crane from one position to another during repetitive cyclic operations such as bulk cargo operations. With a pair of cranes equipped with this option, more efficient bulk operations could be conducted.

For these reasons, Maritime recommends the purchase of two Kone all-electric model cranes.

Maritime Clean Air Strategy - Emission Reduction Benefits

The transition from a diesel-powered mobile harbor crane to a fully electric mobile harbor crane advances the District's commitments identified in the *MCAS* (Cargo Handling Equipment Goal 1 and Objective 1), and the *TAMT Redevelopment Plan and Demolition and Initial Rail Component Final Environmental Impact Report* (FEIR) (Mitigation Measure Air Quality 6 [MM-AQ-6] and Mitigation Measure Greenhouse Gas 4 [MM-GHG-4]), ensuring the use of zero-emission electric cargo handling equipment upgrades at TAMT.

The Kone all-electric mobile harbor crane system became commercially available in 2021, offering the same lifting capacity and operations as diesel-powered and electric hybrid cranes, with the benefit of eliminating all associated tailpipe emissions. The conversion of the diesel-powered mobile harbor crane to a fully electric mobile harbor crane would eliminate all nitrogen oxides (NOx) and diesel particulate matter (DPM). At the same time, carbon dioxide equivalent emissions (CO₂e) would decrease substantially, provided the electrical grid has a significantly lower greenhouse gas (GHG) emissions factor per unit of activity compared to diesel, as illustrated in the comparison Table 3 below.

Furthermore, the electrical loads of the electric mobile crane will be supported by the District's TAMT Microgrid Infrastructure Project (currently under construction), which will supplement grid energy with on-site solar photovoltaic energy and a battery energy storage system, further reducing associated GHG emissions. In addition, San Diego Gas & Electric (SDG&E) continues to procure greater sources of carbon-free renewable energy sources, further reducing the associated GHG emissions.

Table 3 – Summary of Annual Average Emissions per Piece (Tons per Year)

Crane Emissions Comparison	Tier	Emissions Per Year (tons)			Emission Reductions Per Year (tons)		
		NOx	DPM	CO ₂ e	NOx	DPM	CO ₂ e
Existing Diesel Mobile Crane ¹	1	0.53	0.015	69	-	-	-
Electric Mobile Crane	-	-	-	22	0.53	0.015	47

¹The emissions reductions are dependent on various factors, including but not limited to the amount each piece of equipment is used in a given year. The assumptions above assume 245 operational hours annually.

General Counsel's Comments:

The Office of the General Counsel has reviewed and approved this agenda, proposed contract, and resolution, as presented, as to form and legality.

Environmental Review:

The Board action's proposed resolution would authorize staff to enter a single source purchase agreement for District acquisition of two electric cranes for use at TAMT.

The electric cranes were adequately covered in the Final Environmental Impact Report (FEIR) (SCH No. 2015-031046; Office of the District Clerk (ODC) Document No. 65901), incorporated herein by reference, prepared, and certified by the District on December 13, 2016 by the Board adopting Resolution No. 2016-199.

The Board action is not a separate "project" for CEQA purposes but is a subsequent discretionary approval related to a previously approved project. (CEQA Guidelines § 15378(c); *Van de Kamps Coalition v. Board of Trustees of Los Angeles Comm. College Dist.* (2012) 206 Cal.App.4th 1036.) Additionally, pursuant to CEQA Guidelines Sections 15162 and 15163, and based on the review of the entire record, including without limitation, the FEIR, the District finds and recommends that the approval of the resolution does not require further environmental review as: 1) no substantial changes are proposed to the project and no substantial changes have occurred that require major revisions to the FEIR due to the involvement of new significant environmental effects or an increase in severity of previously identified significant effects; and 2) no new information of substantial importance has come to light that (a) shows the Project will have one or more significant effects not discussed in the FEIR, (b) identifies significant impacts would not be more severe than those analyzed in the FEIR, (c) shows that mitigation measures or alternatives are now feasible that were identified as infeasible and those mitigation measures or alternatives would reduce significant impacts, and (d) no changes to mitigation measures or alternatives have been identified or are required.

The proposed electric cranes would replace the most polluting piece of equipment at TAMT - a 174-foot-tall diesel crane and significantly improve the air quality and decrease the amount of greenhouse gases emitted by TAMT activity. Moreover, the diesel crane is at the end of its useful life. The FEIR analyzed the use of a maximum of five electric gantry cranes with a maximum height of 270 feet and the proposed cranes fall within the analysis as they are 126 feet tall and are electric mobile cranes. The electric cranes would not have any additional environmental impacts or an increase in

environmental impacts identified in the FEIR. Moreover, an additional three electric cranes may be implemented in the future at TAMT under the FEIR. The proposed electric cranes also would result in less view blockage than the maximum height of the allowable cranes under the FEIR. Additionally, the FEIR allows for 4,675,567 MT of throughput annually, under the Sustainable Terminal Capacity (STC), and the current throughput at TAMT is 2,566,051 MT. The additional annual throughput attracted by the proposed electric cranes is anticipated to be approximately 1,000,000 MT by 2029, which is well within the throughput allowed by the FEIR. Moreover, the FEIR analyzed, based on the maximum annual throughput allowed under the STC, the theoretical maximum annual amount of truck trips to be 139,082 and under the currently implementation of the TAMT Redevelopment Plan approximately 38,000 annual truck trips are occurring. It is estimated that throughput generated by the electric cranes would generate approximately 6,000 additional annual truck trips by 2029, well within the truck trips analyzed in the FEIR.

Because none of the aforementioned factors would be triggered by the adoption of the resolution, the District has the discretion to require no further analysis or environmental documentation (CEQA Guidelines §15162(b)). Pursuant to CEQA Guidelines §15162(b), the District finds and recommends that no further analysis or environmental documentation is necessary. Accordingly, the Board action for the proposed resolution is merely a step-in furtherance of the original project for which environmental review was performed and no supplemental or subsequent CEQA has been triggered, and no further environmental review is required.

In addition, the proposed Board action complies with Section 87 of the Port Act, which allows for (1) the establishment, improvement, and conduct of a harbor, and for the construction, reconstruction, repair, maintenance, and operation of wharves, docks, piers, slips, quays, and all other works, buildings, facilities, utilities, structures, and appliances incidental, necessary, or convenient, for the promotion and accommodation of commerce and navigation. The Port Act was enacted by the California Legislature and is consistent with the Public Trust Doctrine. Consequently, the proposed Board action is consistent with the Public Trust Doctrine.

Finally, the proposed Board action is considered “excluded development” pursuant to 8.b (Replacement or Reconstruction) and/or 8.c (New Construction or Conversion of Small Structures) of the District’s Coastal Development Permit (CDP) Regulations because it involves the acquisition of two electric cranes and the installation of associated charging infrastructure in order to replace one diesel crane which will result in minor alterations involving negligible expansion of the existing use and will have substantially the same purpose and capacity as the existing facilities; therefore, issuance of a CDP is not required.

Diversity, Equity, and Inclusion Program:

Due to being a single source, there was no known availability of Small Business Enterprises (SBEs), and limited known sub opportunities with availability of SBEs to participate, therefore no SBE goal was established for this purchase.

PREPARED BY:

Michael LaFleur
Vice President, Maritime

Joel Valenzuela

Director, Maritime

Greg Borossay
Principal, Maritime Commercial

Attachment(s):

Attachment A: Contract with Konecranes for Purchase of Two All-Electric Mobile Harbor Cranes