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Transmittal 4

THE PORT OF LOS ANGELES

Executive Director's Report to the Board of Harbor Commissioners

DATE: SEPTEMBER 11, 2013

FROM: EXECUTIVE OFFICE

SUBJECT: RESOLUTION NO. _____ - APPROVAL OF SECOND AMENDMENT TO PERMIT NO. 881 AND APPROVAL OF REVISED BUDGET FOR THE TRAPAC TERMINAL PROGRAM

SUMMARY:

Permit No. 881 (Permit) with TraPac, Inc. (TraPac) was approved by the Board of Harbor Commissioners (Board) on August 13, 2009 for a 30-year term. The Permit authorizes TraPac to undertake cargo handling operations at Berths 136-147 and requires the City of Los Angeles Harbor Department (Harbor Department) to redevelop the wharf and backland area of the terminal.

The Harbor Department requests approval of a Second Amendment to Permit No. 881. This proposed Second Amendment modifies the scope of terminal redevelopment as requested by TraPac to incorporate terminal automation into the design and construction and addresses minor corrections, clarifications, and technical changes to the overall scope of the redevelopment project.

In support of the Second Amendment, the Harbor Department also requests that the Board approve a revised baseline budget. On April 19, 2012, the Board approved the baseline budget of $364,495,525 for the TraPac Terminal Program (Program). Staff is requesting the Board to approve the revised budget at $510,412,338, an increase of 40.0%, or $145,916,813. The spending on the TraPac Terminal Program through the end of Fiscal Year (FY) 12/13 stands at $154,263,637.

Development of the TraPac Terminal Program has proceeded on an expedited basis in recognition of the strategic importance of these terminal improvements in meeting the competitive challenges facing the Port of Los Angeles. The Program is currently on schedule for delivery in the first quarter of 2018.

RECOMMENDATION:

It is recommended that the Board of Harbor Commissioners:

1. Consider the Addendum to the Certified Environmental Impact Report prepared for the Berths 136-147 [TraPac] Container Terminal Project;

2. Find that, in accordance with the provisions of the California Environmental Quality Act Guidelines Section 15164, the proposed Second Amendment to Permit No. 881 will not result in any new significant environmental effects or any substantially more severe effects than previously analyzed in the certified Environmental Impact Report;

3. Approve, in substantial form, the Second Amendment to Permit No. 881 with TraPac, Inc.;

4. Direct the Board Secretary to transmit the Second Amendment to the Permit to the City Council for approval pursuant to Sections 606 and 654(a)(1) of the City Charter;

5. Authorize the Executive Director to execute and the Board Secretary to attest to the Second Amendment upon approval by City Council;

6. Ratify all previous Executive Director and Board actions undertaken in connection with the improvements Permit No. 881 obligates the City to construct and deliver (including, but not limited to, appropriations and expenditures of funds, contract solicitation and award, and grant funding), so that such actions shall be deemed to have been made pursuant to Permit No. 881 as amended by this Second Amendment;

7. Approve the revised budget of $510,412,338 for the ten projects comprising the TraPac Terminal Program; and

8. Adopt Resolution No. _____.

DISCUSSION:

General Background/Context - Permit No. 881 with TraPac, Inc. was approved by the Board of Harbor Commissioners on August 13, 2009 for a 30-year term. The Permit authorizes TraPac to undertake cargo handling operations at Berths 136-147 and requires the Harbor Department to redevelop the wharf and backland area of the terminal.

In April 2010, TraPac requested that the Harbor Department modify the scope of the Berths 136-147 redevelopment project, or the TraPac Terminal Program (Program), to allow for terminal automation using Automated Rail Mounted Gantry Cranes (also known as Automated Stacking Cranes (ASC)) rather than the originally planned Rubber Tire Gantry (RTG) Cranes.

The modified scope of work was incorporated in project designs, and construction proceeded on that basis. The Second Amendment was not processed or approved at that time to incorporate a revised scope of work into terms of the Permit. This oversight must now be corrected. The Executive Director and the Board have subsequently approved numerous budgets, grant funding agreements, and contracts as part of the TraPac Terminal Program. It is necessary to ratify the previous Executive Director and Board actions undertaken in connection with the improvements that this Permit obligates the Harbor Department to construct and deliver so that such actions shall be deemed to have been made pursuant to the Permit as modified by this Second Amendment. This includes, but is not limited to, appropriations and expenditures of funds, contract solicitation and award, and grant funding.

At the time the Permit was approved by the Board, redevelopment project costs were estimated at $245.2 million based on concept-level designs (not including approximately $5.2 million in environmental review costs). The cost estimate escalated as designs progressed for reasons discussed in this Board report. In February 2011, just prior to the acceptance of scope changes that included ASCs, the TraPac Terminal Program estimate stood at $312,043,651. Inclusion of the ASCs into the Program scope raised the estimate to $344,475,526, a difference of approximately $32 million. By spring 2012, subsequent design development changes had increased the Program estimate to nearly $365 million. The Board had requested establishment of formal baseline budgets for all major Harbor Department projects. Subsequently, a formal baseline budget for the ten projects comprising the TraPac Terminal Program was approved by the Board on April 19, 2012, at $364,495,525. Staff is requesting the Board to approve a revised budget at $510,412,338, an increase of 40%, or $145,916,813 over the previous baseline. The spending on the TraPac Terminal Program through the end of FY 12/13 stands at $154,263,637. Grant Funding for the TraPac Terminal Program is currently $60,081,000. Transmittal 5 provides a summary of cost estimate increases throughout the history of the Program, to date.

The proposed Second Amendment to the Permit (Transmittal 1) modifies the scope of terminal redevelopment as requested by TraPac to incorporate terminal automation into the design and construction and addresses minor corrections, clarifications, and technical changes to the overall scope of the redevelopment project. The modifications were studied in an Addendum pursuant to the requirements of the California Environmental Quality Act (CEQA) which demonstrated no new environmental impacts or increase in severity of previously identified impacts as analyzed in Berth 136-147 [TraPac] Container Terminal Environmental impact Report (EIR) certified by the Board

on December 6, 2007. The Addendum is included here for consideration as Transmittal 2.

Development of the TraPac Terminal Program has proceeded on an expedited basis in recognition of the strategic importance of these terminal improvements in meeting the competitive challenges facing the Port of Los Angeles. TraPac will be the first automated terminal in operation on the West Coast. The Harbor Department development team has been working very closely with TraPac and its equipment provider to coordinate design and construction activities to minimize costs, expedite delivery, and optimize the operational efficiency of the new terminal. The Program is currently on schedule for delivery in the first quarter of 2018 with substantial completion of key terminal elements in 2017.

A. TRAPAC PERMIT

Background/Context - On August 13, 2009, the Board approved the TraPac Permit which was subsequently executed on September 29, 2009. The First Amendment to the Permit, approved by the Board on May 6, 2010 and executed on June 15, 2010, provided an empty container discount, a transshipment discount, and a one-time container terminal tenant discount.

Following execution of the Permit in August 2009, the Engineering Division conducted a series of terminal planning meetings with TraPac. As a result of those meetings, details of the redevelopment project scope were clarified. During that process, TraPac requested modifications to accommodate ASC operations in order to enhance operational efficiencies which allow for greater utilization of current and future Harbor Department land and investments.

Based on the existing compensation structure in the Permit, maximum capacity in throughput would result in additional revenue to the Harbor Department. The Harbor Department will be sharing in the risk to improve terminal operations and enhance efficiency in order to reach maximum capacity.

Below is a description of the two components of the Second Amendment.

1. ASC Improvements – ASC operations require improvements and equipment which are distinctly different and more costly from those required for RTG operations. However, TraPac estimates that the use of ASC cranes will increase efficiency in order to meet throughput volumes as forecasted and analyzed in the certified EIR

for the Berths 136-147 [TraPac] Container Terminal Project. TraPac believed these volumes would be difficult to attain using RTG operations.

Therefore, although ASC-related improvements increased Harbor Department terminal redevelopment costs by approximately $32 million at the time that decision was made (Transmittal 5), such improvements were considered beneficial for the following reasons: 1) ASCs are electric, and thus, an environmentally preferred technology that would result in reductions in air emissions and health risk by eliminating originally planned diesel-fueled RTGs; and 2) ASC operations can improve terminal velocity, throughput, and efficiency up to the maximum capacity that was contemplated in the certified EIR. Additionally, the switch from RTG to ASC would be a shared investment, as TraPac has indicated that it plans to make an investment of over $170 million toward cranes and other equipment to undertake ASC operations.

2. Corrections and Clarifications to Project Scope – During the terminal planning meetings with TraPac, in addition to the ASC changes, other minor project changes that result in no increase in overall project costs, have been identified. These types of changes are common as terminal planning progresses and as details are discussed with the tenant. However, since the Permit is being amended, it is recommended that the changes agreed to date be codified in the proposed Second Amendment.

B. TRAPAC PROGRAM BUDGET

1. Background/Context – The improvements contained in the TraPac lease included wharves, conventional container terminal backland improvements, an on-dock intermodal rail facility, buildings, and gates. Concept-level cost estimates for the Program at the time of the lease were $245.2 million, not including the cost of the EIR (approximately $5.2 million). No grant funding for the TraPac Terminal Program had been secured at the time of the lease approval.

The ten project elements that comprise the TraPac Terminal Program are detailed in Transmittal 5 as to their status and costs and are summarized as follows. Transmittal 6 references the map depicting these Program element locations:

- EIR/Environmental Impact Statement (EIS) and Small Misc. Improvements
- Berth 147 Backland Improvements (Phase 1A – now includes Automation)
- Berths 145-147 Wharf Improvements (including Alternate Marine Power or AMP)

- Rear Berths 136-139 Terminal Buildings and Main Gate
- Berths 145-147 Backland Improvements (Phase 1B – now includes Automation)
- Berths 144-145 Backland Improvements (Phase 1C – now includes Automation)
- Berths 142-143 Backland Improvements (Phases 2-4 – now includes Automation)
- Berths 142-147 TraPac ICTF (now includes Automation)
- Berth 142 Crane Maintenance Building
- Berths 134-135 Backland Expansion (5-acre expansion of conventional terminal)

Wharf design, which had been ongoing during the EIR process, was completed, and wharf construction began in January 2009, even before the final lease execution. In February 2011, during wharf construction, TraPac requested modifications to the Program scope to include terminal automation, specifically involving the Berths 142-147 backland portion of the terminal, and to semi-automate the TraPac Intermodal Container Transfer Facility (ICTF) intermodal rail yard. TraPac's stated need to automate was in large part driven by their desire to increase efficiency and meet the terminal throughput projections anticipated in the EIR which would maximize the revenue to the City of Los Angeles Harbor Department (Harbor Department). After review of the revised scope (Transmittal 3), which included the added terminal automation and also selective offsetting scope reductions, staff estimated the cost differential to be approximately $32 million higher. In March 2011, based on this conceptual cost delta and the contingencies applied to the scope changes, staff agreed to include automation in the project scope and moved forward with project design.

In June 2011, staff directed CH2M Hill Engineers, Inc. (CH2M Hill) to develop the concept design for the automated backland at Berths 142-147 according to the approved plan (Transmittal 3, Alternate K Site Plan). CH2M Hill was hired as the designer for the automated backlands in part due to their experience as designers of the only constructed automated terminal in the United States, the APM Terminals Virginia. Staff toured the APM terminal to develop a better understanding of automated terminal facilities. Harbor Department staff and CH2M Hill prepared a concept-level cost estimate for the automated terminal.

By late 2011, Program cost estimates were escalating due primarily to the automated terminal elements. Staff moved forward with establishing a new baseline budget of $365 million using these higher estimates (Transmittal 5,

Exhibit 2) and obtained Board approval of that budget on April 19, 2012 (Transmittal 4).

In retrospect, the development team significantly underestimated Program costs as part of the baseline budgeting process. The Program baseline budget, based on this estimate and approved by the Board, has therefore proven to be inadequate. In early 2013, as designs were progressing and bids were being received, it became apparent that cost saving measures and grant funding pursuits, while they continued to be relatively successful, were not keeping pace with the escalating estimates. In spring of 2013, staff elevated this issue within the Harbor Department and alerted the Audit Committee through regular "radar reports,[1]" and is now formalizing this request in this Board report.

2. TraPac Terminal Program Phasing - The automated backland portion of the TraPac Terminal Program was separated into four individual projects to facilitate TraPac's ongoing terminal operations, to coordinate terminal automation with TraPac's equipment manufacturers, and to lessen the impacts of the other projects within and adjacent to TraPac. See Transmittal 6 for an illustration of these phases. In November 2011, design began on the first phase of the backland improvements with automation, known as Phase 1A. Phase 1A allowed for the advanced delivery, commissioning, and testing of TraPac's automated shuttle carriers.

   In January 2012, design began on Phase 1B to deliver the automated shuttle carrier buffer area. Engineering on Phase 1C began in February 2012, for the design of the first four automated stacking blocks. Lastly, in June 2012, design began for Phases 2-4, the final 19 automated stacking blocks. Design of the TraPac ICTF, the automated intermodal rail yard, began in August 2012.

3. Baseline Budget - On April 19, 2012, the Board approved the revised baseline budget for the TraPac Terminal Program. Cost estimate escalations, along with elevated contingencies, were included in the Program baseline estimates raising them to $364,495,525. No grant funding was secured at the time the baseline budget was submitted and approved.

   In the April 19, 2012 Board report, the following was noted:

[1] Radar Report - tracks how project baseline estimate, schedule, and adapted fiscal year budget compares to the latest projections for a project.

"Given the complexity of these projects, it is impossible to predict all the variables that may be encountered during the project life cycle. In order to mitigate this variability, a contingency of between 10 and 25 percent is included in the initial project cost estimate. The percentage applied is a function of the project risk and the clarity of the project scope. Even with these contingencies, it is unrealistic to expect baseline budgets will not change during the life of the project. If a project is projected to exceed the approved baseline budget, staff will bring the project back to the Audit Committee and the Board for re-approval [of the budget]." (Transmittal 4, Page 3 of 4).

Board approval of project baseline budgets is a new process at the Harbor Department that grew out of an effort to better control the growth of project scopes and budgets through the development process and provide greater transparency to the Board and to the public. Baseline budget establishment was also in response to the Industrial, Economic, and Administrative Survey dated June 2011 (as noted in Transmittal 4, Page 2 of 4). The current proposed Board action is in recognition of the staff commitment of disclosure and transparency in monitoring and reporting these baseline budgets.

4. Causes of Cost Estimate Increases ($145.9 million) – as detailed in Transmittal 5) - The original baseline budget was prepared when a significant portion of the TraPac Terminal Program was at the conceptual design level. As designs progressed for the automated backland and TraPac ICTF from conceptual to preliminary to final, refinements and changes in project elements began to impact the design, and consequently the budget, as detailed in Transmittal 5. Throughout 2012 and early 2013, construction bids were received for various Program projects including terminal automation Phases 1A, 1B, and 1C, and bid prices confirmed the higher cost estimates. Most notably among the causes of cost estimate increases were the following:

   - The electrical system required much more extensive and expensive infrastructure than was originally estimated. Port of Los Angeles facilities typically operate at 4,160 volts. As design progressed it was suggested that a 12.47 kV power supply would be needed to run the automated cranes. This voltage is not typically supplied by the Los Angeles Department of Water and Power (DWP), so the Harbor Department was faced with having to provide additional infrastructure to step DWP's power down from their available 34.5 kV to the 12.47kV requested. Harbor Department engineers resisted this change and attempted to devise alternative designs; however, it eventually became apparent that the automated equipment would not function properly

at the lower voltage, so expensive design changes were required. ($52.07M cost increase).

- Construction phasing and additional resources were required to a greater extent than anticipated to facilitate the multiple projects in the vicinity that would be under construction at the same time along with larger than expected volumes of container traffic that will need to be accommodated during terminal construction. ($43.59M cost increase).
    - TraPac took on new business during construction that was not anticipated at baseline budget preparation (Oceania). This led to some displacement of existing business, but also required more complicated and expensive phasing in order to provide the flexibility and capacity to allow TraPac to handle this new cargo. TraPac plans on bringing back the displaced business upon completion of the project which will result in an immediate net increase in cargo.
    - Estimates increased due to added specialty design for automated infrastructure related to reefer racks and access.
    - Accelerated schedules due to grant funding deadlines drove added labor costs.
    - Additional utility relocations added to project estimates. The number and complexity of utilities that needed relocation was greater than anticipated at the time of the original estimates.
- Concrete pavement and foundations were required to be thicker and stronger due to poor soil conditions discovered during geotechnical studies. ($20.80M cost increase).
- The storm drain system required an unanticipated and expensive design to comply with the City of Los Angeles Watershed Protection Program, the Standard Urban Stormwater Mitigation Plan (SUSMP), and the Harbor Department's environmental standards. Typically, storm water is required to percolate into the ground to avoid unnecessary runoff. However, due to the existing ground and groundwater contamination encountered during site investigations this could not be done. An intricate design was developed to meet these requirements and received regulatory approval, all at a much higher cost. ($12.90M cost increase).

- Construction inflation is currently much higher than anticipated, as indicated in recent bids, increasing the estimate labor and material costs. ($8.6M cost increase).

- The fire protection system was modified in compliance with the Los Angeles Fire Department (LAFD). Original designs copied those of other terminals but were found to be unacceptable to LAFD. Negotiations with LAFD yielded relief from some of these requirements; nevertheless, final designs resulted in added costs. ($4.79M cost increase).

- Safety fencing and specialty gates were added to provide enhanced secured access and safety to the automated areas. ($3.13M cost increase).

During this same period the development team identified scope reductions and design changes that reduced the estimated cost of some project elements. This value engineering activity saved approximately $49.7 million. Details of these savings are provided in Transmittal 5.

5. Grant Funding - Staff aggressively sought additional grant funding to help offset escalating Program cost estimates. Staff was able to secure $60,081,000 in grant funding in late 2012, in part due to the TraPac ICTF and the automated backland justification for cargo transportation improvements and emission reductions. The total grant funding amount currently secured for the TraPac Terminal Program is $60,081,000. Following is a summary of the growth in grant funding through the development of the Program to date.

	Sept. 2009 (at Lease Execution)	**April 2012 (at Baseline Budget establishment)**	**Aug. 2013 (Currently)**
Grant Funding	$ 0	$0	$60,081,000
Program Cost	[$245,200,000]	$364,495,525	$510,412,338
POLA Share	**[$245,200,000]**	**$364,495,525**	**$450,331,338**

6. Schedule and Contract Status - The TraPac Terminal Program has been largely schedule-driven since its approval in December 2007. Staff has devoted significant effort and resources to moving the Program forward and meeting schedule commitments with TraPac to take advantage of competitive opportunities with the shipping lines. Further, the TraPac terminal is the only container terminal in the Port of Los Angeles without direct access to its own on-

dock rail yard. Delivery of TraPac's ICTF is critical to their growth and that of the Port. The TraPac Terminal Program is presently on schedule with three projects completed, three projects under construction, and four projects in design. The design of the final phase of automation for the backland and the semi-automated Trapac ICTF is nearing completion.

All TraPac Terminal Program construction contracts were awarded by the Board and all of these projects whether complete or not are within their respective Board-approved contractual limits.

7. Contingencies - Undoubtedly, additional changes and unforeseen conditions will be encountered as this Program moves forward. The proposed project budgets include contingencies averaging 10%. Given the advanced state of design and the effort put forward among the designers, equipment providers, and TraPac personnel, staff believes this level of contingency is adequate. Staff will monitor the progress of these projects very closely and quickly elevate any and all indications of further cost escalations.

8. Lessons Learned and Next Steps - Staff has learned valuable lessons through the design of the TraPac Terminal Program. While the vast majority of conventional terminal, marine, and transportation infrastructure development at the Port of Los Angeles are delivered well within budget, this is obviously not the case with this Program. Initial estimates were far too low. Lessons learned fall into three categories: a) technical, b) procedural, and c) organizational. The Executive Director will appoint a Task Force to review these "lessons learned," establish action items, and report back to the Audit Committee and Board on changes made. Staff will also produce an After Action Report (AAR) to be circulated among senior management and forwarded to the Board.

a. Technical lessons learned include the following:

- All future Harbor Department development projects involving terminal automation and electrification will consider and incorporate the design standards developed on the TraPac Terminal Program on electrical systems, paving, drainage, utilities, and security, as applicable.

b. Procedural lessons learned include the following:

- Where possible, baseline budgets, particularly technology-implementing infrastructure projects, should not be set until designs reach a

"preliminary" level, i.e. 40% (as opposed to "conceptual" level as was done with the TraPac Terminal Program).

- In the event baseline budgets are needed at the conceptual level stage, a much higher contingency may be warranted. The task force will review this issue specifically.

c. Organizational lessons learned include the following:

- Structure commercial agreements to better allocate the cost of project scope changes to the benefiting party (this has already been done, e.g. the APL project).
- Cost estimate increases should be better vetted throughout the organization as early as possible in order to maximize opportunity for cost recovery. Establish a Senior-level Program Sponsor with more direct accountability for communication of project issues through all divisions within the Harbor Department, particularly during the formative stages of large programs and projects (this Program Sponsor model is currently being implemented with all major Harbor Department projects).

Staff continues to monitor other projects throughout the world. Our development team has benchmarked terminals in Germany and Virginia and will continue to do so at these and other locations. Staff will also closely watch other West Coast and local San Pedro Bay terminals for trends and lessons learned.

ENVIRONMENTAL ASSESSMENT:

The proposed action includes a Permit amendment between the Harbor Department and TraPac. The 30-year Permit and redevelopment of the wharf and backland improvements was assessed under the Berth 136-147 [TraPac] Container Terminal EIR (ADP: 030127-020/SCH No. 2003104005) certified by the Board on December 6, 2007. Since Board certification and Permit execution, TraPac has requested to allow for terminal automation using electric-powered ASCs rather than the originally planned diesel-powered RTGs. There have also been some minor corrections and technical changes related to the overall project scope from final design. All project changes were documented in the EIR Addendum completed on June 6, 2012 and posted on the Port of Los Angeles website and attached hereto as Transmittal 2 for your consideration. According to Section 15164(a) of the State CEQA Guidelines, the lead agency will prepare an addendum to a previously certified EIR if changes or additions are necessary, but none of the conditions described in Section 15162 calling for the preparation of a subsequent or supplemental EIR have occurred. An addendum does

not need to be circulated for public review but can be included in or attached to the EIR. The findings of the EIR Addendum concluded the proposed action will not result in any new significant environmental effects or any substantially more severe effects than previously analyzed in the certified EIR and therefore, does not trigger any of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent or supplemental EIR. The proposed action is also for the approval of a revised budget for the TraPac Terminal Program. As an activity for which the underlying project has been previously assessed under the requirements of CEQA, the Director of Environmental Management has determined that the proposed Permit amendment and approval of a revised budget are exempt from the requirements of CEQA in accordance with Article II Section 2(i) of the Los Angeles City CEQA Guidelines.

ECONOMIC BENEFITS:

The $510 million in TraPac Terminal Program construction spending will support 7,442 one-year full-time-equivalent jobs in the five-county region. This is an increase of 2,142 jobs over the 5,300 one-year full-time-equivalent indirect and induced construction-related jobs calculated at the start of construction of the TraPac Terminal Program.

FINANCIAL IMPACT:

The Permit with TraPac was executed in September 2009. At that time, it committed existing Harbor Department assets consisting of land and facilities valued at $257 million, plus additional capital expenditures of $245.2 million, to a 30-year lease with TraPac. In addition, the Harbor Department spent a total of $5.5 million on TraPac-related EIR documentation in order to make the execution of this Permit possible. Prior to the delivery of major terminal improvements (i.e., wharf, on-dock rail, gate complex, and grade separation), annual revenues are estimated to be $24-$37 million, whereas subsequent to the delivery of major terminal improvements, annual revenues are expected to be $41 million. With the proposed expansion, as embodied in the Permit, it was projected that the Harbor Department would achieve a 10.02% internal rate of return (ROR), based on the value of land and improvements. Note that this proposed project ROR was below the blended 10% return on land and 12% return on facility improvements set by Board policy.

The TraPac Terminal Program is expected to be completed in FY 17/18. Through FY 12/13, $154,263,637 has been expended on this Program. Funds in the amount of $99,344,073 have been included in the FY 13/14 Capital Budget for the TraPac Terminal Program costs. The revised TraPac Terminal Program costs have already

been incorporated into the Harbor Department's ten-year Capital Improvement Program as follows:

FY	Through 12/13	13/14 (estimated)	14/15 (estimated)	15/16 (estimated)	16/17 (estimated)	17/18 (estimated)
Amount	$154,263,637	$84,426,874	$114,725,075	$92,587,482	$52,122,062	$12,287,208
FY 12-18 TOTAL	**$510,412,338**					

Each of these fiscal year capital expenditures will be budgeted as part of the annual budget adoption process before the Board.

The approximate value of the lease is $2.3 billion over its term. The original rate of return (ROR) at Board approval of the baseline budget was approximately 10.02%. The revised ROR, based on the current cost estimate, is 8.75%. The 8.75% ROR is a deviation from the Harbor Department Leasing Policy, which sets an expectation of a blended rate of 10% on the land value and 12% on the value of the improvements. The 10% ROR originally approved by the Board, as well as the 8.75% ROR based on the current budget, would be deviations from the Harbor Department Leasing Policy. Given this is the first automated terminal being constructed in the Port of Los Angeles, which is a benefit to the Port and TraPac, staff believes that the 8.75% ROR is acceptable. In the event that staff is able to negotiate terms with TraPac to positively impact the ROR if volumes, CPI, or five year resets exceed the estimates in the financial analysis, the actual ROR will be higher.

SUBJECT: **APPROVAL OF SECOND AMENDMENT TO TRAPAC PERMIT AND REVISED BUDGET FOR TRAPAC TERMINAL PROGRAM**

CITY ATTORNEY:

The Office of the City Attorney has approved as to form and legality the Second Amendment in the form as attached to this Board report.

TRANSMITTALS:

1. Second Amendment to Permit No. 881 TraPac, Inc., including Revised Exhibit B
2. June 6, 2012 EIR Addendum Berth 136-147 [TraPac] Container Terminal Project
3. March 2011 TraPac Terminal Program – Scope Changes, Alternate K Site Plan
4. April 19, 2012 Board Report (dated April 11, 2012) – Resolution No. 12-7291 – Approval of Baseline Project Budgets
5. TraPac Terminal Program – Cost Summary & Status Update, including Cost History
6. TraPac Terminal Program Phasing Map

FIS Approval: _____ **(initials)**
CA Approval: _____ **(initials)**

KATHRYN MCDERMOTT
Deputy Executive Director

MICHAEL R. CHRISTENSEN
Deputy Executive Director

APPROVED:

GERALDINE KNATZ, Ph.D.
Executive Director

Author: M. Christensen/K. McDermott

SECOND AMENDMENT TO
PERMIT NO. 881
TRAPAC, INC.

Permit No. 881 granted to TRAPAC, INC. is hereby amended a second time as follows:

1. The provisions of Section 3.1 hereby are amended by deleting the Exhibit "B" attached to Permit No. 881, as amended ("Permit"), on the Effective Date, and replacing it with the document attached hereto as Attachment 1, which from and after the effective date of this Second Amendment shall constitute Exhibit "B" of the Agreement.

2. The effective date of this Second Amendment shall be upon execution by the Executive Director and Board Secretary after approval of the City Council of the Resolution approving this Amendment.

Except as amended herein, all remaining terms and conditions of Permit No. 881, as amended, shall remain the same.

IN WITNESS WHEREOF, the parties hereto have executed this Second Amendment to Permit No. 881 on the date to the left of their signatures.

THE CITY OF LOS ANGELES, by its
Board of Harbor Commissioners

Dated: _____

By _____
Executive Director

Attest _____
Board Secretary

TRAPAC, INC.

Dated: _____

By _____
Mark N. Pisano Executive Vice President
(Type/Print Name and Title)

Attest _____
Y. HIRAKAWA, PRESIDENT
(Type/Print Name and Title)

APPROVED AS TO FORM
_____, 2013
MICHAEL N. FEUER, City Attorney

By _____
STEVEN Y. OTERA, Deputy

BERTHS136-147
TRAPAC CONTAINER TERMINAL
EXHIBIT B

Proposed Terminal

The proposed terminal will include a combination of existing improvements that will not be changed, existing improvements that will be upgraded or demolished, and new improvements that will be constructed.

Proposed Improvements

The proposed B136-147 TraPac Container Terminal Improvements consist of multiple projects to expand the container terminal by approximately 50 acres (from a current size of 176 acres to approximately 226 acres total). Improvements include the construction of approximately 705 feet of new wharf and upgrade approximately 1,022 feet of existing wharf at Berths 145-147; Alternative Maritime Power (AMP); construction of an intermodal container transfer facility (ICTF); construction of a new main gate, Pier A Street gate, and administration building; construction of a yard operations building, crane maintenance building, longshore toilet, and trucker restroom buildings; and construction and redevelopment of backland. The proposed improvements will provide for automated operations in the terminal backland and ICTF areas.This exhibit defines the basic parameters and terminal facilities, final location of facilities will be determined during terminal planning in conjunction with the final design, and encompasses “Existing Improvements,” “New Improvements,” and “Completion Improvements,” all of which comprise “City’s Improvements,” as those terms are defined in Permit No. 881. City owns such “City’s Improvements,”.

Container Terminal

***1 WHARF**

A Berths 136-139

A1 Berths 136-139 - Existing to Remain – (EXISTING)

1) Wharf Specifications: A concrete pile-supported wharf totaling approximately 2,030 linear feet. Berth depth is a minimum of -45 feet mean-lower-low-water (-45 MLLW).
2) Crane Loads: Gantry crane rails for 100-foot gauge cranes. Structural supports for the cranes are designed to accommodate gantry crane operating wheel loads equivalent to 28,000 pounds per foot on the landside and 34,000 pounds per foot waterside crane rails. This loading includes impact.
3) Wharf Loads: The wharf is designed for a uniform load of 1,000 pounds per square foot.
4) Electric Power System: is designed for bus bars in power trench for power adequate for the operation of 6 to 8 gantry cranes.

5) Ship Services: Standard ship services at the wharf include telephone and water hook-up facilities at each berth.

A2 Berths 136-139

1) AMP System (New): will be designed to provide shore to ship electrical connection facility. AMP connection voltage will be 6.6kv, 3 phase, 60Hz.

B Berths 144 -147

B1a Berth 144 - Existing to Remain – (EXISTING)

1) Wharf Specifications: A concrete pile-supported wharf totaling approximately 874 linear feet. Bottom depth of the approach channel and berth is a minimum of -53 feet mean-lower-low-water (-53 MLLW). The fender system for ship berthing is designed for an 186,000 long ton vessel berthing at a 6 degree approach angle parallel to the wharf.
2) Crane Loads: Gantry crane rails for 100-foot gauge cranes. Structural supports for the cranes are designed to accommodate gantry crane operating wheel loads equivalent to 50,000 pounds per foot on the landside and waterside crane rails. This loading includes impact.
3) Wharf Loads: The wharf is designed for a uniform load of 1,000 pounds per square foot.
4) Electric Power System: is designed for bus bars in power trench for power adequate for the operation of 4 gantry cranes.
5) Ship Services: Standard ship services at the wharf include telephone and water hook-up facilities at each berth.

B1b Berth 144

1) AMP System (New): will be designed to provide shore to ship electrical connection facility. AMP connection voltage will be 6.6kv, 3 phase, 60Hz.

B2a Berths 145-146 - Existing to be Upgraded

1) Wharf Specifications: A concrete pile-supported wharf totaling approximately 1,292 linear feet (1,022 to be upgraded per section B2b and 270 to be demolished). Bottom depth of the approach channel and berth is a minimum of -45 feet mean-lower-low-water (-45 MLLW).
2) Crane Loads: Gantry crane rails for 50-foot gauge cranes.
3) Wharf Loads: The wharf is designed for a uniform load of 1,000 pounds per square foot.

B2b Berths 145-146 (Upgrade)

1) Wharf Specifications: A concrete pile-supported wharf totaling approximately 1,022 linear feet. Bottom depth of the approach channel and berth is a minimum of -53 feet mean-lower-low-water (-53 MLLW). The fender system for ship berthing is

designed for a 186,000 long ton vessel berthing at a 6 degree approach angle parallel to the wharf.

2) Crane Loads: Gantry crane rails for 100-foot gauge cranes. Structural supports for the cranes are designed to accommodate gantry crane operating wheel loads equivalent to 50,000 pounds per foot on the landside and waterside crane rails. This loading includes impact.
3) Wharf Loads: The wharf is designed for a uniform load of 1,000 pounds per square foot.
4) Electric Power System: is designed for bus bars in power trench for power adequate for the operation of gantry cranes.
5) Ship Services: Standard ship services at the wharf include telephone and water hook-up facilities at each berth.
6) AMP System (New for Berths 144-147): will be designed to provide shore to ship electrical connection facility. AMP connection voltage will be 6.6kv, 3 phase, 60Hz.

B3a Berth 147 (New)

1) Wharf Specifications: A concrete pile-supported wharf totaling approximately 705 linear feet (for a total of 2,600 linear feet at Berths 144-147). Bottom depth of the approach channel and berth is a minimum of -53 feet mean-lower-low-water (-53 MLLW). The fender system for ship berthing is designed for a 186,000 long ton vessel berthing at a 6 degree approach angle parallel to the wharf.
2) Crane Loads: Gantry crane rails for 100-foot gauge cranes. Structural supports for the cranes are designed to accommodate gantry crane operating wheel loads equivalent to 50,000 pounds per foot on the landside and waterside crane rails. This loading includes impact.
3) Wharf Loads: The wharf is designed for a uniform load of 1,000 pounds per square foot.
4) Electric Power System: is designed for bus bars in power trench for power adequate for the operation of gantry cranes, Electrical power will be provided for 6 to 8 cranes for the total B144-147 wharf of 2,600 linear feet.
5) Ship Services: Standard ship services at the wharf include telephone and water hook-up facilities at each berth.
6) Alternative Maritime Power (AMP) System (New for Berths 144-147): will be designed to provide shore to ship electrical connection facility. AMP connection voltage will be 6.6kv, 3 phase, 60Hz.

2 PAVEMENT SYSTEM

A Container Yard Paving,

i Berths 136-139 - Existing to Remain – (EXISTING)

ii Berths142-147 - Existing to be replaced – (NEW): At its discretion, the Harbor Department will provide Asphalt concrete or Portland Cement Concrete over crushed miscellaneous base and compacted subgrade at design slopes between 0.0% and 1.0%. Pavement is designed for loading for two wheels of 125,000 pounds (which includes 25% impact) spaced at 13 feet on-center with a wheel print of 4.95 square feet to support Caterpillar V925 type top-pick container handling equipment operating with a 40 long ton (LT) load and four high stacking of normally loaded containers.

B Rail Yard Pavement (NEW): Asphalt concrete over crushed miscellaneous base and compacted subgrade at design slopes between 0.5% and 1.0%. Pavement is designed for loading for two wheels of 125,000 pounds (which includes 25% impact) spaced at 13 feet on-center with a wheel print of 4.95 square feet to support Caterpillar V925 type top-pick container handling equipment operating with a 40 long ton (LT) load and four high stacking of normally loaded containers.

C Gate Complex Pavement (NEW): Concrete pavement over crushed miscellaneous base and compacted subgrade at 2% maximum slopes. High use truck areas designed to support traffic for trucks handling 40 LT containers with total loads matching the maximum legal limit on public roadways or AASHTO HS20-44.

D Vehicle Parking Area Pavement: Asphalt concrete over crushed miscellaneous base and compacted subgrade at maximum design slope of 2%. Pavement designed to support private automobile and light truck traffic. This standard is used for existing improvements and will be used for new improvements, as applicable.

*3 GATE COMPLEX

A Main Gate

A1 Main Gate - Existing to be Demolished

1) 8 inbound and 3 outbound lanes, with a delivery gate/lane
2) truck scales
3) 1 guard booth @ entrance, 4 @ main gate
4) Customs Inspection Area
5) Concrete pedestals for cameras and communications
6) Camera T-poles
7) Optical Character Recognition (OCR) structure

8) Radiation Portal Monitor (RPM) structure
9) Equipment provided by the tenant

A2 Main Gate (NEW)
1) Approximately 10 inbound, 2 bi-directional, and 7 outbound lanes
2) 8 truck scales
3) 1 guard booth
4) Customs Inspection Area
5) Canopy structures
6) Concrete pedestals for communications and cameras
7) Camera T-poles
8) Optical Character Recognition (OCR) structure
9) Prefabricated storage units
10) Radiation Portal Monitor (RPM) structure (including conduit and pedestals)
11) Equipment will not be provided by City. (i.e. cameras, RPM equipment, AEI equipment, PA, telecommunication, and all other terminal equipment)

B Water Street Out-Gate - Existing to be Demolished

1) 7 lanes
2) 1 guard booth

C Pier A Street In-Gate

C1 Pier A Street In-Gate - Existing to be Demolished
1) 7 lanes
2) 3 truck scales

C2 Pier A Street Gate (NEW)
1) 1 in-bound, (to 4 lanes at the scales), and 1 out-bound lanes
2) 1 guard booth
3) 4 truck scales

4 TERMINAL BUILDINGS AND STRUCTURES

A1 Administration Building - Existing to be Demolished - Approximately 26,000 square foot, 4-story office building.

A2 Administration Building (NEW): an approximately 20,000 square foot, 4-story, LEED certified office building, including solar power, solar photovoltaic systems, carpet, paint, HVAC, mechanical, plumbing, electrical, lighting, landscaping, and irrigation. (NEW)

B Maintenance and Repair Facility: Existing to remain (EXISTING). Approximately 28,000 square foot, 1-story repair shop and 2-story offices and parts room, including an approx. 10,000 square foot roadability station.

C Office Building @ Water Street Gate is approximately 1,500 square foot, 1-story office trailer. Existing to be demolished.

D Marine Building @ B137 - Existing to remain- (EXISTING): Approximately 4,600 square foot, 1-story building.

E Crane Maintenance Building @ B142 (NEW): approximately 5,000-square foot, 1-story maintenance and office building, including restroom.

F Driver Service Building (New, 1 total) (NEW): be approximately 1,000 square foot, 1-story building, including restroom.

G Longshore Toilet @ B142 is approximately 470 square foot, 1-story building. Existing to be demolished.

H Longshore Toilet @ B146 is approximately 1,400 square foot, 1-story building. Existing to be demolished.

I Yard Operations Building (NEW): an approximately 5,700 square foot, 1-story office building, including restroom.

J Pedestrian Bridge and at-grade crossing, (NEW): will provide pedestrian access from terminal labor parking to the terminal, over existing railroad tracks.

M Tenant Provided Items and Equipment: office cubicles, office equipment, furniture, bridge cranes, shop equipment, security, and all other related items.

5 EQUIPMENT AND VEHICLE PARKING

A Administration Building: parking spaces, in compliance with City of Los Angeles Department of Building and Safety, will be provided for the administration building employees and visitors, including lighting, landscaping, and irrigation. This standard is used for existing improvements and will be used for new improvements, as applicable.

B Terminal Labor: up to 400 parking spaces will be provided for terminal labor, including lighting, landscaping, and irrigation. This standard is used for existing improvements and will be used for new improvements, as applicable.

C Equipment Parking: for marine and container yard equipment will be provided, location shall be per tenant input.

*6 ICTF (NEW)

A 2 sets of 4 working tracks (each track with 8 cars @ 309')

B 136 lb. continuously welded rail trackage

C Compressed air system

D Electric switches

E "Blue flag" protection

F Train-In-Motion System (TIMs)

G Rail Mounted Gantry (RMG) infrastructure including electrical power, crane rail foundation, with communications and control conduits to Yards Ops building, and safety fencing as depicted on Exhibit B drawing titled "B142-B147 ASC 8 AND 10 Wide STACKS-PLAN-ALT K"

H Grounded buffer stacks

I Container yard pavement (refer to Pavement System)
J Fire protection system (refer to Utilities)
K Lighting designed to container yard lighting standards (refer to Utilities)
L Storage tracks will be provided as part of the Rearberth 200 Railyard project.

7 UTILITIES

A Water and Fire Protection System: is designed in compliance with latest editions of the Los Angeles City Plumbing Code and Los Angeles City Fire Code. The fire protection system is designed for three adjacent hydrants flowing simultaneously at the same time with a minimum combined flow of 4,500 gallons per minute at 20 pounds per square inch. This standard is used for existing improvements and will be used for new improvements, as applicable.

B Drainage System: will include a hydrological study and hydraulic calculations. The design frequency is 10 year rainfall frequency
1) Standard Urban Stormwater Mitigation Plan (SUSMP) (New @ B142-147): will be implemented.

This standard is used for existing improvements and will be used for new improvements, as applicable.

C Sanitary Sewer System: is designed with gravity and force main piping to handle flow from all buildings, in compliance with City of Los Angeles Department of Public Works. This standard is used for existing improvements and will be used for new improvements, as applicable.

D Power Distribution System: Main electrical service to the terminal will be 34.5 Kilo Volts with on-site transformers and underground conduit to buildings, container yard, and light poles. AMP service and crane power system, including transformers and underground conduit will be separate from yard and building systems.

E Container yard lighting as required: is designed with 100 foot high mast poles (HMP) in a grid pattern to provide an average lighting level of 5 foot-candles at the pavement surface. This standard is used for existing improvements and will be used for new improvements, as applicable.

F Irrigation System: will be provided for landscaping for buildings and personal owned vehicle (POV) parking. This standard is used for existing improvements and will be used for new improvements, as applicable.

G Communication Infrastructure: will provide communication conduits between buildings, light poles, and other nodes in support of “B142-B147 ASC 8 AND 10 Wide STACKS-PLAN-ALT K”. The wiring, fiber optics, and equipment will be provided by the tenant. This standard is used for existing improvements and will be used for new improvements, as applicable.

8 FENCING

A Security Fencing: around the perimeter of the leased area will be 8 feet high (5'-4" chain link fence on k-rail) with 1 foot barbed wire extension on top. This standard is used for existing improvements and will be used for new improvements, as applicable.

B Internal fencing within the leased area will be up to 8 feet high chain link fence, or variable height chain link fence on K-rail. This standard is used for existing improvements and will be used for new improvements, as applicable.

9 REEFERS

A Rearberth 136 - Existing to remain – (EXISTING): approximately 458 reefer plugs.

B Rearberths 144-147 (NEW): approximately 210 stacked reefer plugs in the Automated Stacking Crane (ASC) stacking area.

10 SIGNAGE, STRIPING, AND WHEEL STOPS

A Signage: Standard terminal signage will be provided.
This standard is used for existing improvements and will be used for new improvements, as applicable.

B Striping: is designed to Cal-Trans standard traffic paint. Paint will be highly reflective. Striping shall be per tenant input.
1) Wharf striping shall be thermoplastic.
2) Terminal yard and parking striping shall be conventional traffic paint.
This standard is used for existing improvements and will be used for new improvements, as applicable.

C Wheels Stops: Anchored wheel stops will be provided within the wheeled container yard and POV parking, as required. This standard is used for existing improvements and will be used for new improvements, as applicable.

*11 AUTOMATED STACKING CRANE (ASC) INFRASTRUCTURE (NEW)

A Berths 142-147 (NEW): Approximately 20,000 lineal feet of ASC runway, including all necessary electrical infrastructure to provide power to the cranes, communications and control conduits to the Yards Ops building and safety fencing as depicted on Exhibit B drawing titled "B142-B147 ASC 8 AND 10 Wide STACKS-PLAN-ALT K"

C Tenant provided items and equipment: ASC's and shuttle carriers , and all other necessary equipment, communication and control systems wiring and fiber optics, and guidance systems to operate the ASC system.

PUBLIC IMPROVEMENTS

***12.** Grade Separation in South Wilmington to carry vehicular traffic over railroad tracks to Port terminals.

13. Rear berth 200 Rail Yard will relocate the Pier A rail yard, including yard site development and tracks, yard office building and diesel engine service facility, storage tracks, and mainline track improvements.

Delivery of Phases

The improvements shall be constructed in phases designed to meet the requirements for maintaining existing terminal operations and coordinating with Public Improvement projects, and will therefore have a number of different delivery times. Improvements other than items 1, 3.A2, 4.A2, 6 and 12 listed above may be delivered in components and on an ongoing basis during City's delivery of Phases I, II and III. In any event, delivery of all improvements set forth above shall occur no later than City's delivery of Phase III.

Phase I: Consists of Item 1 Wharf

Phase II: Consists of Item 3.A2 Main Gate Complex, Item 4.A2 Administration Bldg., and Part 12 Grade Separation

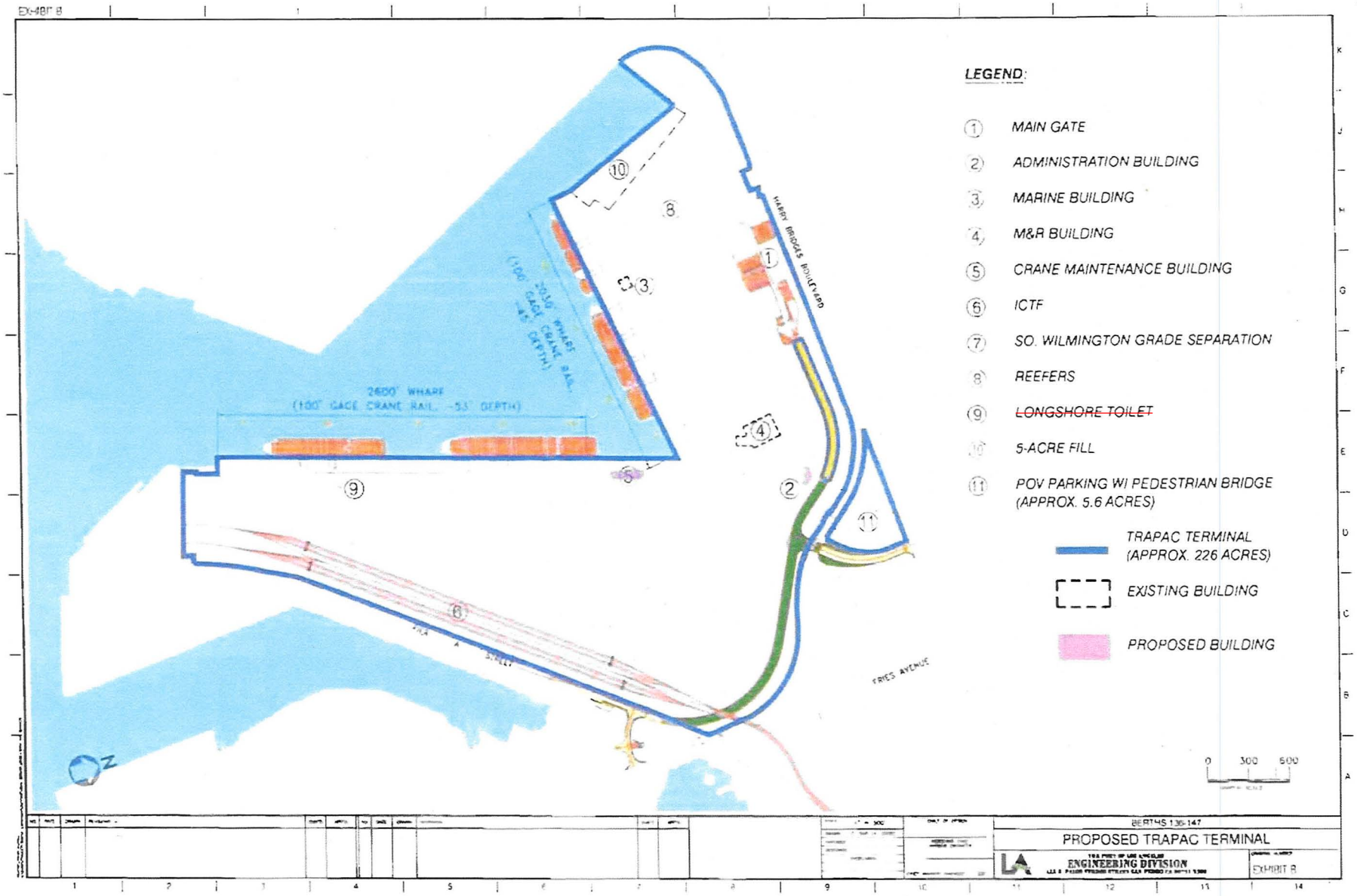
Phase III: Consists of Item 11 Automated Stacking Crane (ASC) Infrastructure

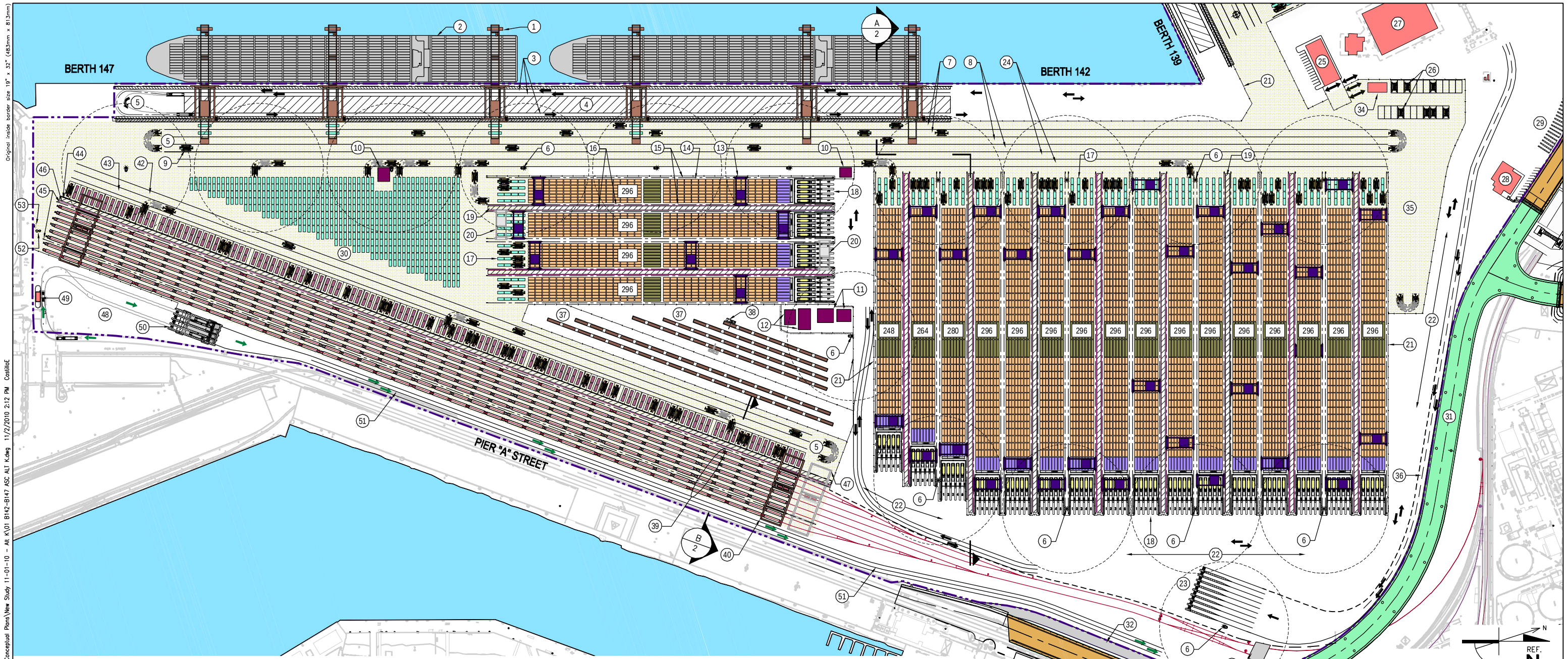
Notes:

1) *****Indicates items that qualify for "Substantial Completion"

Transmittal 1

Exhibit B





B142 - B147 ASC 8 AND 10 WIDE STACKS - PLAN - ALT K

1" = 150'

KEYNOTES

1. 100' GAUGE WHARF CRANES, TYP
2. CONTAINER SHIP (17 WIDE), TYP
3. BOMBCART TRAVEL LANES
4. HATCH COVER LAYDOWN AREA
5. TURN AROUND AREA
6. HIGH MAST LIGHT POLE W/ FIRE HYDRANT, TYP.
7. 2 WHARF LOAD LANES
8. 2 SHUTTLE CARRIER TRAVEL LANES
9. SHUTTLE CARRIER, TYP
10. NEW ELECTRICAL TRANSFORMER
11. EXISTING ELECTRICAL SUBSTATIONS
12. NEW ELECTRICAL SUBSTATIONS
13. 84' GAUGE ASC - 2 PER RUN, TYP
14. GROUNDED ASC CONTAINER STACKS - 8 WIDE, TYP
15. ASC RAILS W/ STOPS AT BOTH ENDS, TYP 41,528± LF TOTAL
16. ASC POWER CABLE TRENCH, TYP 20,764± LF TOTAL
17. ASC / SHUTTLE CARRIER TRANSFER AREA, 4 PER RUN, TYP
18. STREET TRUCK TRANSFER AREA, 5 SLOTS PER RUN, TYP
19. ELECTRICAL AND FIRE SERVICE AISLE, TYP
20. ASC IN MAINTENANCE POSITION
21. SAFETY FENCE AT PERIMETER OF AUTOMATED OPERATIONS
22. STREET TRUCK MANEUVERING AND TRAVEL AREA
23. 9 ASC YARD QUEUE LANES W/ PEDESTALS
24. SHUTTLE CARRIER ACCELERATION / DECELERATION LANE
25. MARINE OPERATIONS BUILDING / CRANE MAINTENANCE BUILDING
26. SHUTTLE CARRIER PARKING - 22 SPOTS
27. EXISTING MAINTENANCE AND REPAIR AND ROADABILITY FACILITY
28. YARD OPERATIONS BUILDING
29. EQUIPMENT PARKING
30. SHUTTLE CARRIER BUFFER AREA
31. GRADE SEPARATION
32. MAINTENANCE ACCESS (FORMER DETOUR ROAD)
33. AT-GRADE RAIL CROSSING
34. FUEL STATION
35. SHUTTLE CARRIER TEST AREA
36. 2 LANE ASC QUEUE ACCESS
37. SCANNING AREA W/ CONTAINERS MOUNTED ON SERVICE PLATFORMS (+4'-0")
38. MOBILE SCANNER
39. PIER "A" RAILYARD
    - 8 - WORKING TRACKS
    - 8 - 305' CARS PER TRACK
    - 2,440' WORKING LENGTH EACH 19,520' WORKING LENGTH TOTAL
40. 2 - 123' GAUGE DOUBLE-CANTILEVER RMG
41. STRADLE CARRIER / RMG TRANSFER AREA, 122 SLOTS
42. STRADDLE CARRIER TRAVEL LANE
43. SHUTTLE CARRIER ACCELERATION / DECELERATION LANE
44. ELECTRICAL SERVICE AISLE
45. RMG RAILS W/ STOPS AT EACH END, TYP 5,080± LF TOTAL
46. POWER CABLE AND TRENCH, TYP 2,540± LF TOTAL
47. RMG IN MAINTENANCE POSITION
48. PIER "A" ENTRY STREET GATE
49. ENTRY GUARD BOOTH
    - TWIC PROCESS
    - GATE ARM
    - OCR / IDENTIFICATION CAMERAS
    - RFID READER
50. ENTRY INSPECTION GATE
    - 4 LANES
    - 4 SCALES
    - SIGNS AND OCR CAMERAS MOUNTED ON CANOPIES
    - CHASSIS CAMERA PEDESTALS
    - COMMUNICATION PEDESTALS
51. TWO LANE TERMINAL ACCESS ROAD
52. PROPOSED SEWER LIFT STATION
53. PROPOSED CONTROL PANEL

LEGEND

- TERMINAL BOUNDARY
- GROUNDED CONTAINERS - ASC 4,576 TGS
- ASC / SHUTTLE CARRIER TRANSFER AREA - 320 TGS
- STREET TRUCK TRANSFER AREA - 100 SPOTS TOTAL
- GROUNDED REEFERS AT SERVICE PLATFORMS - 160 FGS
- ELEVATED 40' CONTAINERS FOR MOBILE SCANNER - 76 SPOTS
- 53' GROUNDED CONTAINERS - ASC - 288 GROUNDED SLOTS
- GROUNDED IY BUFFER STACKS - 244 TGS
- BUILDING
- GRADE SEPARATION - RETAINED STRUCTURE
- GRADE SEPARATION - COLUMN SUPPORTED STRUCTURE
- ELECTRICAL
- AREA OF AUTOMATED OPERATION
- XXX = TOTAL TGS PER ASC RUN
- TOTAL ASC TGS FOR B142 - B147 = 5,824
- ENTRY TRAFFIC FLOW
- EXIT TRAFFIC FLOW
- VEHICLE FLOW DIRECTION
- RAIL
- SAFETY FENCE
- CONCRETE BARRIER

PRELIMINARY

Transmittal 1 - Exhibit B

Revision	By	Approved	Date

TRANSPORTATION

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www.aecom.com

Drawn By	EAC
Approved By	LJD
Date	11/02/10
Meeting	

TraPac
Trans Pacific Container Service Corp.

AUTOMATED CONTAINER YARD
PORT OF LOS ANGELES

Sheet Title
B142–B147
ASC 8 AND 10 WIDE STACKS – PLAN – ALT K

Project Number	Sheet Number
60146052	1 of —

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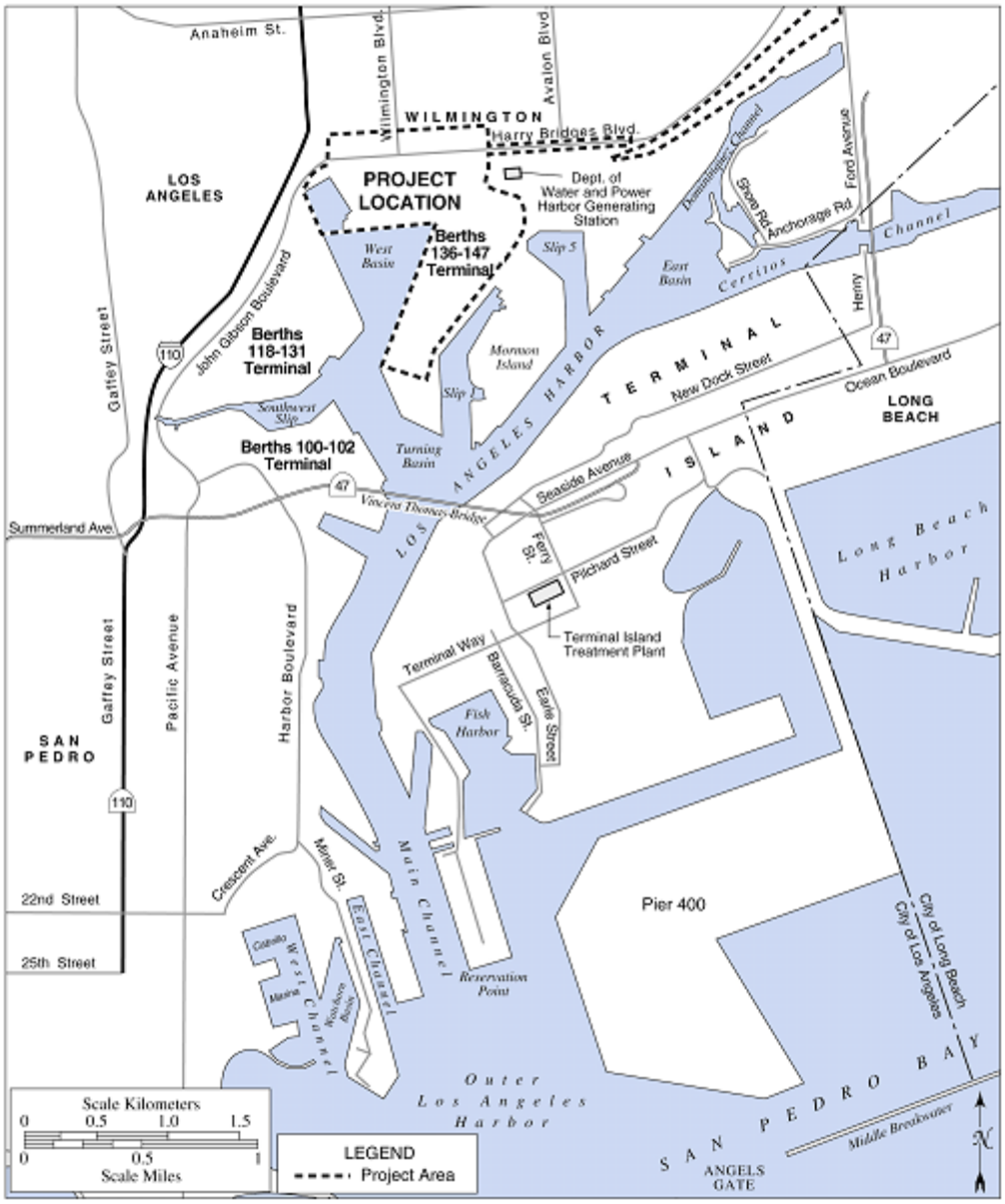
EIR Addendum
Berth 136-147 [TraPac] Container Terminal Project

[SCH No. 2003104005, ADP No. 030127-020]



Prepared by Los Angeles Harbor Department
Environmental Management Division
June 6, 2012

I. Purpose

On December 6, 2007, the Board certified the Berths 136-147 [TraPac] Environmental Impact Report (EIR), State Clearinghouse #2003104005, and adopted a Mitigation Monitoring and Reporting Plan (MMRP), Findings of Fact and a Statement of Overriding Considerations. The LAHD has prepared an addendum to the TraPac EIR to assess the potential impacts associated with proposed project changes since the Final EIR was certified. According to Section 15164(a) of the State CEQA Guidelines, the lead agency will prepare an addendum to a previously certified EIR if changes or additions are necessary, but none of the conditions described in Section 15162 calling for the preparation of a subsequent or supplemental EIR have occurred. An addendum need not be circulated for public review but can be included in or attached to the EIR. The decision-making body considers the addendum with the EIR prior to making a subsequent decision on the project.

Section 15162 of the State CEQA Guidelines states that, for a project covered by a certified EIR, preparation of a subsequent or supplemental EIR rather than an addendum is required only if one or more of the following conditions occur:

1) Substantial changes are proposed in the project that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

2) Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

    a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    d) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

II. Scope and Content

This addendum has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 et seq.), and the State CEQA Guidelines (California Administrative Code [CAC] 1500 et seq.). This addendum describes the affected environmental resources and evaluates the potential changes in the impacts that were previously

described in the 2007 Final EIR with respect to building and operating the TraPac project. The criteria for determining the significance of environmental impacts in this addendum analysis are the same as those contained within the certified EIR. The threshold of significance for a given environmental effect is the level at which the LAHD finds a potential effect of the proposed project to be significant. Thresholds of significance can be defined as a "quantitative or qualitative standard, or set of criteria, pursuant to which significance of a given environmental effect may be determined" (CEQA Guidelines, Section 15064.7 [a]). Except as noted in particular sections of the document, the LAHD has adopted the City of Los Angeles CEQA Thresholds for purposes of this addendum, although some criteria were adapted to the specific circumstances of this project.

The analysis in this addendum focuses on the changes to the impacts that would potentially occur as a result of project modifications. The scope of analysis contained within this addendum addresses the environmental resource areas that were previously analyzed in the certified EIR. The following issues were therefore evaluated in preparation of this addendum:

- Aesthetics
- Air Quality and Meteorology
- Biological Resources
- Cultural Resources
- Geology
- Groundwater and Soils
- Hazards and Hazardous Materials
- Land Use
- Noise
- Transportation/ Circulation
- Marine Transportation
- Utilities and Public Services
- Water Quality, Sediments, and Oceanography

III. Previous Environmental Documents Incorporated by Reference

Consistent with Section 15150 of the California State CEQA Guidelines, the following documents were used in preparation of this addendum and are incorporated herein by reference:

- Berths 136-147 [TraPac] Container Terminal Draft EIS/EIR, December 2007, (SCH No. 2003104005)
- Berths 136-147 [TraPac] Container Terminal Final EIS/EIR, December 2007, (SCH No. 2003104005)
- Berths 136-147 [TraPac] Container Terminal Mitigation Monitoring Report and Program, December 2007

IV. Proposed Project Modifications

1. Substituting Rubber Tire Gantry Cranes with Rail Mounted Gantry Cranes

EIR Assumption

The EIR assumed that wharfside gantry cranes would be electric powered and rubber tired gantry (RTG) cranes would be diesel powered, and both would be used for purposes of handling containers at the redeveloped TraPac terminal. As described in the EIR, containers would be hauled by yard tractors between the vessel berths and the new rail yard. At the rail yard, containers would be lifted onto and off of railcars by diesel-fueled RTGs. Yard tractors would be used to move containers in and out of the stacks, which would be grounded. The number of RTGs to be utilized during operations was not specified in the EIR. However, the total throughput capacity analyzed in the EIR was 2,389,000 TEUs (1,277,540 containers) per year. That maximum capacity is expected to be reached by 2025 as described in Chapter 2 (Project Description) of the EIR.

Improvements associated with loading areas for the RTGs, such as reinforced concrete runways, were included in the Phase I construction activities analyzed for the on-dock rail yard and backland improvements. These improvements are not within the limits of federal jurisdiction and are not subject to federal permitting requirements by the US Army Corps of Engineers. The concrete runways would be built parallel to the wharf at Berth 142-147. Final engineering design estimates included four rows of concrete runways, approximately 14,800 linear feet per pair.

The EIR analyzed the significance of the project's air emissions, including greenhouse gas emissions, for construction and operational activities associated with the RTGs in Section 3.2 (Air Quality and Meteorology). The EIR determined that air quality impacts from both construction and operation of the project would be significant. To mitigate significant environmental impacts related to air quality, the EIR identified numerous mitigation measures (MMs AQ-1 through AQ-5 and AQ-18A for construction emissions; MMs AQ-6 through AQ-18B for operational emissions). However, even with implementation of these mitigation measures, air quality impacts from construction would be significant. Similarly, even with implementation of mitigation measures AQ-6 through AQ-18B, air quality impacts from operations would be significant. No other feasible mitigation measures were identified to further reduce these significant impacts. As such, the EIR concluded that air quality impacts from construction and operations were significant and unavoidable.

The EIR determined that the project would produce significant greenhouse gas emissions and identified mitigation measures AQ-6, AQ-9-10, AQ-14, AQ-16, and AQ-19 through AQ-24 to reduce these emissions. However, implementation of these mitigation measures would not reduce greenhouse gas emissions below the significance threshold. No other feasible mitigation measures were identified to further reduce these significant impacts. As such, the EIR concluded that greenhouse gas impacts were significant and unavoidable.

The EIR also analyzed the impacts of construction and operations of the RTGs in the backlands area on other environmental resource areas and identified applicable mitigation measures including: MM CR-1 for potential archaeological resources encountered during construction, MM GEO-1 for emergency response planning during construction, MM GW-1-2 for soil and groundwater contamination encountered during construction, MM NOI-1 for noise control measures during

construction, MM PS-1 through PS-3 for recycled materials during construction and solid waste management, and MM WQ-2-3 for pollution control and prevention during operations.

Proposed Modifications

TraPac requested that the Harbor Department modify the scope of the project to allow for rail mounted gantry (RMG) cranes rather than the originally planned RTG cranes. RMGs will be electric powered and automated, resulting in zero emissions when in operation. In addition, in place of diesel-fueled yard tractors and their associated emissions related to moving containers in and out of the stacks from the wharf side gantry cranes to the stacks and/or the intermodal container transfer facility (ICFT) rail yard, diesel electric shuttles will be used to move containers in and out of the stacks from the wharf side gantry cranes to the stacks and/or ICTF.

RMG operations require improvements and equipment that are different from those required under an RTG operation. The proposed change would require removal of the RTG-related improvements that have already been constructed to date and installation of the RMG-related improvements. According to engineering estimates, approximately 1,844 linear feet of concrete runways have been built, which is roughly 10 percent of the total RTG-related improvements originally proposed. This construction is relatively minor in comparison to overall project construction and other ongoing activities and would be replaced with approximately 20,500 linear feet of RMG runway, including rail runways and necessary electrical infrastructure to provide power to the cranes, communications, and control conduits to the Administration Building and Yard Operations building. In addition, approximately 702 new reefer plugs would be added in the RMG stacking area beyond the 458 reefer plugs that currently exist in the backlands area. The location for the RMG runways would be the same as the originally planned RTG runways parallel and perpendicular to the wharf.

Comparison of Impacts

The analysis contained herein demonstrates and provides substantial evidence that no additional significant impacts are present, nor would the severity of known significant impacts be increased by the proposed project. Below is a discussion of the resource areas that could potentially be impacted by this change in scope and a discussion of why the impact determinations made in the EIR would not be affected.

Air Quality and Meteorology

The proposed change to substitute electric-powered RMGs in place of diesel-fueled RTGs results in a beneficial change through the use of an environmentally preferred zero emission technology. Although there would be a minor increase in temporary construction activities from the removal of approximately 1,844 linear feet of concrete runways, the same mitigation measures identified in the EIR would still be required and implemented and no new significant impacts would occur as a result of this change, nor would there be any substantial increase in the severity of impacts identified in the EIR. Over the long term, terminal operations would result in a substantial reduction in emissions from the use of electric-powered RMGs in place of diesel-powered RTGs. This reduction is a beneficial change that would not cause any new significant air quality impacts or any substantial increase in the severity of impacts identified in the EIR. The mitigation requirements for operations would not change and would still be required and implemented as part of the project.

The use of RMGs in place of RTGs would increase electricity consumption compared to what was assumed in the EIR. Comparative air quality analysis was conducted to determine the change in greenhouse gas emissions with the change from RTGs to RMGs (see Appendix A). The analysis shows decreases of 68%, 93%, 82% and 68% for CO_2, CH_4, N_2O and CO_2e, respectively. This reduction is a beneficial change that would not cause any new significant greenhouse gas impacts or any substantial increase in the severity of impacts identified in the EIR.

Other Resource Areas

The RMGs would be built in the same location, would be of similar appearance and scale, and would provide essentially the same function as the originally planned RTGs. Construction of the RTG equipment would adhere to all construction-related mitigation measures outlined in the EIR to reduce impacts to various resource areas including cultural resources, groundwater and soils, noise, transportation and circulation and would also adhere to all applicable laws and Harbor Department policies for protection of resource areas. As such, switching from RTGs to RMGs would not differentially impact biological resources, cultural resources, geology, groundwater and soils, hazards and hazardous materials, land use, noise, transportation and circulation, marine transportation, utilities and public services, or water quality, sediments, and oceanography compared to what was analyzed in the EIR. Therefore, the proposed change would not result in any new significant impacts or any substantial increase in the severity of impacts identified in the EIR. Additionally, there would be no change to the mitigation measures identified in the EIR for other resource areas analyzed.

2. Update to Project Description – Rail Improvements

EIR Assumption

Figure 1-5 of the certified Final EIR shows three tracks crossing Avalon Boulevard but does not depict the rail crossings at Fries Avenue and Water Street, which are also within the project boundaries. Although the project accounted for and analyzed the relocation of the Pier A Rail Yard, the EIR did not explicitly describe the number and configuration of existing and new rail tracks that would be required to serve the TraPac container terminal and the relocated Pier A Rail Yard.

Proposed Modifications

The following modifications shown as underlined text are being added to Section 1.4.2.4 on page 1-19 of the Final EIR to describe the finalized rail configuration connecting the TraPac terminal to the relocated Pier A Rail yard:

> **Relocated Pier A Rail Yard.** The Pacific Harbor Line's (PHL) Pier A rail yard would be relocated to a 70-acre area northeast of the existing terminal, between the Consolidated Slip and Alameda Street (Figure 1-5), that is currently being used as a rail transfer facility. PHL would continue its operations out of the relocated rail yard. The new rail yard (Figure 1-5) would include 46 tracks totaling 125,630 feet of track, a locomotive service facility; a small yard office (8,000 square feet) with change areas, toilets, and showers; a track and material storage area; and 30 parking spaces for employees. The locomotive service facility would include a 5,000-square-foot diesel service shed and inspection pits, a sanding building with storage and compressed air, and a 1,000-square-

foot maintenance shed. The relocation of the rail yard would also include the construction of new rail tracks to connect the relocated yard to the TraPac terminal and the removal of some existing tracks (Attachment B). The rail track configuration between TraPac and the Pier A Rail Yard includes four tracks crossing Avalon Boulevard (one existing and three new). It also includes four tracks across Fries Avenue (one existing and three new) and three across Water Street (all new).

Comparison of Impacts

The assumptions used to calculate the rail yard capacity, which is an input variable to the transportation and air quality analyses in the EIR, is unchanged with the finalized track configuration shown in Attachment A. Specifically, the analysis accounted for a peak monthly throughput of 198,287 TEUs, thereby establishing the need for an additional rail track at the Avalon Boulevard crossing. This modification merely clarifies the project description and accurately accounts for the rail improvements at the rail crossing locations. Any construction-related traffic impacts resulting from construction of the rail tracks would be reduced through the development and implementation of a traffic management plan as required under mitigation measure TRANS-1 in the EIR. All other construction-related impacts to air quality, noise and other resource areas would be reduced by adherence to applicable construction mitigation measures for each resource area as identified in the EIR. Therefore, the finalized configuration would not result in any new significant impacts or any substantial increase in the severity of impacts identified in the EIR.

3. Other Minor Technical Changes to the Project Scope

EIR Assumption

The EIR assumed certain improvements associated with the wharf, gate complex, terminal buildings and structures, and utilities.

Proposed Modifications

During final design, minor, technical project changes have been identified for the following:

a. Wharf Specifications: A concrete pile-supported wharf has been reduced from 1,014 to 874 linear feet.
b. Main Gate: Minor changes have been made to lane configurations, truck scales, guard booths, and concrete pedestals for communications and cameras.
c. Crane Maintenance Building at B142: The building size has been reduced from 7,000 to 5,000 square feet.
d. Yard Operations Building: The building size has increased from 3,000 to 5,700 square feet.

Comparison of Impacts

The minor technical changes to building size are not substantial and would not result in any new significant environmental impacts or any substantial increase in the severity of impacts previously identified in the EIR.

Attachment A
Comparative GHG Emission Analysis

Annual RTG Usage from TraPac EIR

Analysis Year	Terminal Container Throughput (TEU/yr) [a]	RTG Work Performed (hp-hr/yr) [b]	Diesel Brake-Specific Fuel Consumption Factor (lb/hp-hr) [c]	Diesel Fuel Density (barrels/ metric ton) [d]	Diesel Fuel Consumption (gal/yr)
2003 (Baseline)	892,014	1,904,186	0.41	7.46	110,957
2007	1,091,207	2,329,404	0.41	7.46	135,734
2015	1,747,626	3,730,664	0.41	7.46	217,386
2025	2,389,088	6,267,433	0.41	7.46	365,203
2038	2,389,088	6,267,433	0.41	7.46	365,203

Notes:

a. Container throughputs for the analysis years were obtained from the TraPac EIR.

b. Consistent with the TraPac EIR, RTG work performed was scaled from 2001 actual RTG usage provided by Starcrest (11/19/2004). Equipment rated horsepower and annual hours of operation were converted to work performed (hp-hr/yr) using an average load factor of 0.43 (from TraPac EIR). Consistent with the TraPac EIR, RTG work performed in 2025 and 2038 was scaled up by an additional 23% to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

c. An average brake-specific fuel consumption (BSFC) factor of 0.41 for RTGs was obtained from the CARB OFFROAD 2007 data file "Equip.csv". The BSFC factor and diesel fuel density were used to convert RTG work performed (hp-hr/yr) into diesel fuel consumption (gal/yr).

d. Diesel fuel density was obtained from the California Climate Action Registry (CCAR) *General Reporting Protocol* v. 3.1 Appendix B.

Annual RTG GHG Operational Emissions

Analysis Year	Diesel Fuel Consumption (gal/yr)	GHG Emission Factors (kg/gal) [a,b]			GHG Emissions (metric ton/yr) [c]			
		CO_2	CH_4	N_2O	CO_2	CH_4	N_2O	CO_2e
2003 (Baseline)	110,957	10.21	0.00058	0.00026	1,133	0.06	0.03	1,143
2007	135,734	10.21	0.00058	0.00026	1,386	0.08	0.04	1,398
2015	217,386	10.21	0.00058	0.00026	2,220	0.13	0.06	2,240
2025	365,203	10.21	0.00058	0.00026	3,729	0.21	0.09	3,763
2038	365,203	10.21	0.00058	0.00026	3,729	0.21	0.09	3,763

Notes:

a. CO2 emission factors are from the *2011 Climate Registry Default Emission Factors* , Table 13.1.

b. N2O and CH4 emission factors are from the *2011 Climate Registry Default Emission Factors* , Table 13.6 for diesel equipment (Other Large Utility Non-Highway Vehicles).

c. CO2e is "CO2-equivalent", which equals CO2 + (CH4 x 21) + (N2O x 310).

Annual Equivalent RMG Usage Due to RTG Replacement

Analysis Year	Terminal Container Throughput (TEU/yr) [a]	RMG Electric Motor Efficiency [b]	Electricity Consumption without Regeneration (kWh/yr) [c]	Electricity Regeneration Factor [d]	Net Electricity Consumption Including Regeneration (kWh/yr)
2007	1,091,207	90%	1,930,041	70%	579,012
2015	1,747,626	90%	3,091,062	70%	927,319
2025	2,389,088	90%	5,192,916	70%	1,557,875
2038	2,389,088	90%	5,192,916	70%	1,557,875

Notes:

a. Container throughputs were obtained from the TraPac EIR.

b. RMG electric motor efficiency is estimated from Attachment C of *Determining Electric Motor Load and Efficiency* (U.S. Department of Energy, Motor Challenge Fact Sheet, DOE/GO-10097-517, undated). A 90% efficiency is the lowest published efficiency from all load and RPM combinations for a 300-hp electric motor (the largest motor listed).

c. RMG work performed is assumed to be equivalent to RTG work performed on a per-TEU basis. Therefore, RMG electricity consumption without regeneration is assumed to be equivalent to the RTG work performed divided by the RMG electric motor efficiency (and converted to kWh/yr).

d. The 70% electricity regeneration factor is the low end of the range (70-75%) provided by the manufacturer for hoisting down (10/26/2011).

RMG GHG Operational Emissions Due to RTG Replacement

Analysis Year	Net Electricity Consumption Including Regeneration (kWh/yr)	GHG Emission Factors (lb/MWh) [a]			GHG Emissions (metric ton/yr) [b]			
		CO_2	CH_4	N_2O	CO_2	CH_4	N_2O	CO_2e
2007	579,012	1,711.72	0.02219	0.02382	450	0.01	0.01	452
2015	927,319	1,711.72	0.02219	0.02382	720	0.01	0.01	723
2025	1,557,875	1,711.72	0.02219	0.02382	1,210	0.02	0.02	1,215
2038	1,557,875	1,711.72	0.02219	0.02382	1,210	0.02	0.02	1,215

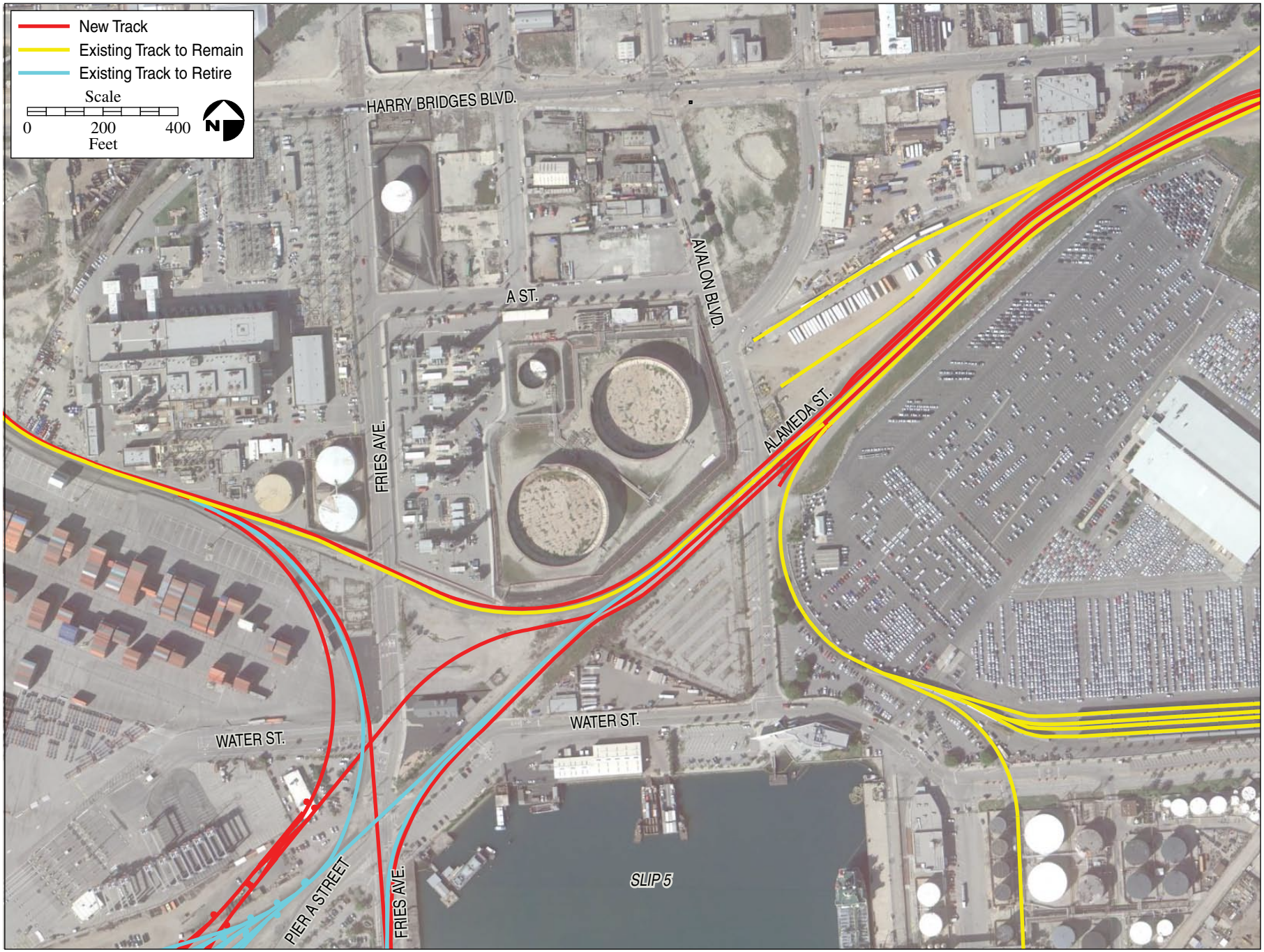
Notes:

a. GHG emission factors are LADWP-specific, and were obtained from eGRIDweb (http://cfpub.epa.gov/egridweb, EPA, December 29, 2010, "Electric Generating Company, Location (Operator)-based"). Emission factors are for the 2005 year, the most recent year available.

b. CO2e is "CO2-equivalent", which equals CO2 + (CH4 x 21) + (N2O x 310).

Change in Annual Operational GHG Emissions Due to RTG Replacement with RMGs

Analysis Year	Change in GHG Emissions (metric ton/yr)				Percent Change in RMG Emissions Relative to RTG Emissions			
	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e
2007	-936	-0.07	-0.03	-947	-68%	-93%	-82%	-68%
2015	-1,500	-0.12	-0.05	-1,516	-68%	-93%	-82%	-68%
2025	-2,519	-0.20	-0.08	-2,547	-68%	-93%	-82%	-68%
2038	-2,519	-0.20	-0.08	-2,547	-68%	-93%	-82%	-68%



Attachment B

Transmittal 3

TRAPAC EXPANSION PROGRAM - SCOPE CHANGES

DATE	DESCRIPTION	NOTES
B136-147 TRAPAC ADMINISTRATION BUILDING & MAIN GATE		
	Yard Operations Bldg - Size Increase	Increase in size from 3,000sf to 5,700sf (increase is due to addition of functions from Admin. Bldg to yard ops, includng resulted changes from exterior corridor to interior)
	Guard Booth (500sf/booth) - Delete 2	Deleted 2 of 3 guard booths
	Truck Scale - Add 1	Increase from 5 to 6 truck scales
	Camera T-poles - Deleted @ Out-Gate	Deleted @ out-gate per tenant, will attach cameras to canopy
	ILWU Parking Area - Reduced POV Overflow Parking - Added	ILWU parking area decreased in size from 7 to 4 acres, due to Lagoon Grade Sep. Added area e/o Lagoon/HBB for overflow parking
1/15/2010	At-Grade Crossing - Deleted	1/15/10 meeting w/ Mike C., Dave W., PHL Rail Yard team - eliminate at-grade xing due to safety issues & PHL's opposition. Allow handicap parking @ Yard Ops Bldg. 2/2/11 Mike C. to reconsider, if PUC approves
9/27/2010	Main In-Gate Canopy - Deleted	Tenant does not want to relocate Main In-Gate due to proximity to fault line & slope
B142-147 BACKLAND IMPROVEMENTS		
10/6/2010	Driver Service Bldg @ Pier A St. Gate - Deleted	per AECOM's Alternate H
10/21/2010	Crane Maintenance Bldg. - Size Decrease	Lease provides for 7,000sf. 10/21 tenant wants to decrease size by +/- 2,500sf.
10/29/2010	Trucker restrooms (350sf each) - Delete	Deleted total 4 trucker restrooms
2/16/2011	20 RMG Rows Panzerbelt - Deleted	AECOM's Alternate K (w/ reduced pavement section in RMG stacking areas and Cable Management Assembly)

Scope Changes Accepted: Frank Tusano 3/16/11

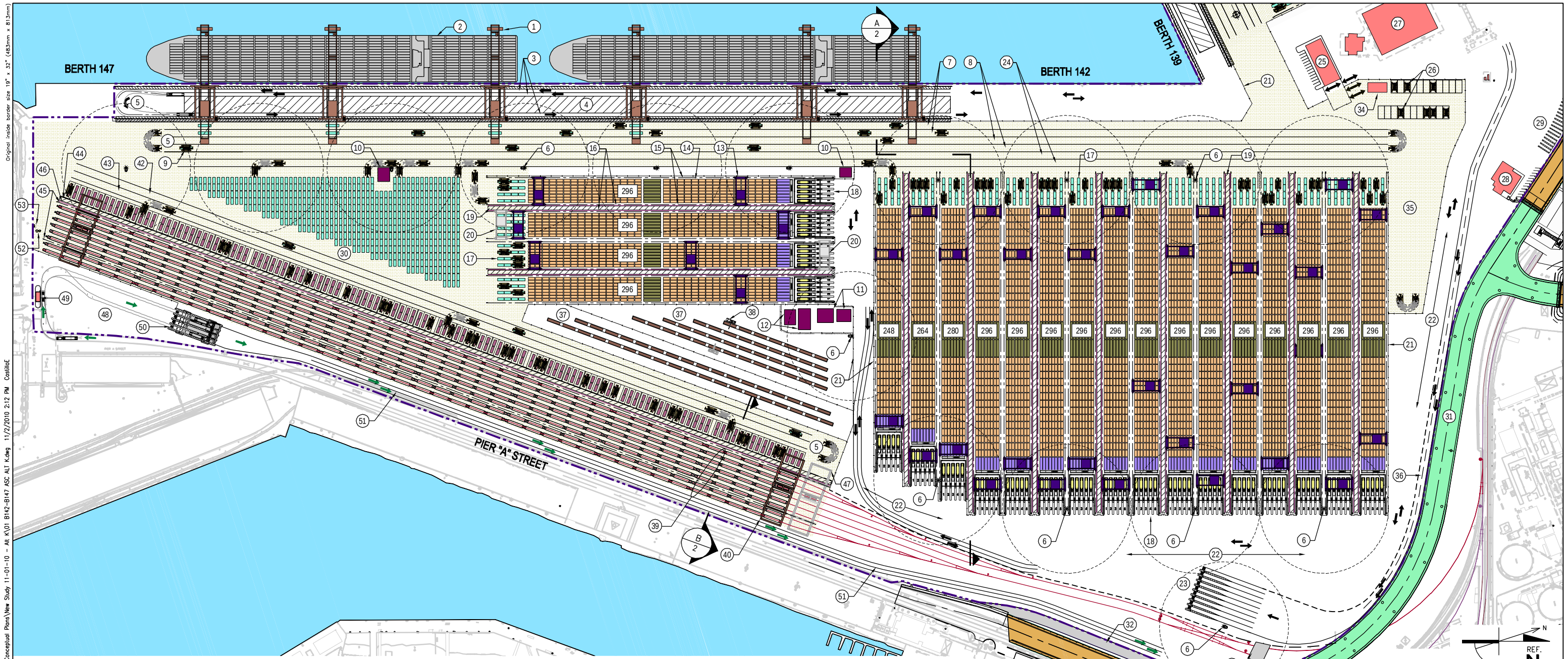
for TraPac date

Geraldine Knatz 3/4/11

for City of Los Angeles Harbor Department date

2-16-11

N:\cadd\project\Trapac Expansion\Support\Projects Summary\TRAPAC Scope Changes



B142 - B147 ASC 8 AND 10 WIDE STACKS - PLAN - ALT K

1" = 150'

KEYNOTES

1. 100' GAUGE WHARF CRANES, TYP
2. CONTAINER SHIP (17 WIDE), TYP
3. BOMBCART TRAVEL LANES
4. HATCH COVER LAYDOWN AREA
5. TURN AROUND AREA
6. HIGH MAST LIGHT POLE W/ FIRE HYDRANT, TYP.
7. 2 WHARF LOAD LANES
8. 2 SHUTTLE CARRIER TRAVEL LANES
9. SHUTTLE CARRIER, TYP
10. NEW ELECTRICAL TRANSFORMER
11. EXISTING ELECTRICAL SUBSTATIONS
12. NEW ELECTRICAL SUBSTATIONS
13. 84' GAUGE ASC - 2 PER RUN, TYP
14. GROUNDED ASC CONTAINER STACKS - 8 WIDE, TYP
15. ASC RAILS W/ STOPS AT BOTH ENDS, TYP 41,528± LF TOTAL
16. ASC POWER CABLE TRENCH, TYP 20,764± LF TOTAL
17. ASC / SHUTTLE CARRIER TRANSFER AREA, 4 PER RUN, TYP
18. STREET TRUCK TRANSFER AREA, 5 SLOTS PER RUN, TYP
19. ELECTRICAL AND FIRE SERVICE AISLE, TYP
20. ASC IN MAINTENANCE POSITION
21. SAFETY FENCE AT PERIMETER OF AUTOMATED OPERATIONS
22. STREET TRUCK MANEUVERING AND TRAVEL AREA
23. 9 ASC YARD QUEUE LANES W/ PEDESTALS
24. SHUTTLE CARRIER ACCELERATION / DECELERATION LANE
25. MARINE OPERATIONS BUILDING / CRANE MAINTENANCE BUILDING
26. SHUTTLE CARRIER PARKING - 22 SPOTS
27. EXISTING MAINTENANCE AND REPAIR AND ROADABILITY FACILITY
28. YARD OPERATIONS BUILDING
29. EQUIPMENT PARKING
30. SHUTTLE CARRIER BUFFER AREA
31. GRADE SEPARATION
32. MAINTENANCE ACCESS (FORMER DETOUR ROAD)
33. AT-GRADE RAIL CROSSING
34. FUEL STATION
35. SHUTTLE CARRIER TEST AREA
36. 2 LANE ASC QUEUE ACCESS
37. SCANNING AREA W/ CONTAINERS MOUNTED ON SERVICE PLATFORMS (+4'-0")
38. MOBILE SCANNER
39. PIER "A" RAILYARD
    - 8 - WORKING TRACKS
    - 8 - 305' CARS PER TRACK
    - 2,440' WORKING LENGTH EACH 19,520' WORKING LENGTH TOTAL
40. 2 - 123' GAUGE DOUBLE-CANTILEVER RMG
41. STRADLE CARRIER / RMG TRANSFER AREA, 122 SLOTS
42. STRADDLE CARRIER TRAVEL LANE
43. SHUTTLE CARRIER ACCELERATION / DECELERATION LANE
44. ELECTRICAL SERVICE AISLE
45. RMG RAILS W/ STOPS AT EACH END, TYP 5,080± LF TOTAL
46. POWER CABLE AND TRENCH, TYP 2,540± LF TOTAL
47. RMG IN MAINTENANCE POSITION
48. PIER "A" ENTRY STREET GATE
49. ENTRY GUARD BOOTH
    - TWIC PROCESS
    - GATE ARM
    - OCR / IDENTIFICATION CAMERAS
    - RFID READER
50. ENTRY INSPECTION GATE
    - 4 LANES
    - 4 SCALES
    - SIGNS AND OCR CAMERAS MOUNTED ON CANOPIES
    - CHASSIS CAMERA PEDESTALS
    - COMMUNICATION PEDESTALS
51. TWO LANE TERMINAL ACCESS ROAD
52. PROPOSED SEWER LIFT STATION
53. PROPOSED CONTROL PANEL

N

REF. N

0' 150' 300' 450'

SCALE: 1" = 150' FULL SIZE
1" = 300' HALF SIZE

LEGEND

- TERMINAL BOUNDARY
- GROUNDED CONTAINERS - ASC 4,576 TGS
- ASC / SHUTTLE CARRIER TRANSFER AREA - 320 TGS
- STREET TRUCK TRANSFER AREA - 100 SPOTS TOTAL
- GROUNDED REEFERS AT SERVICE PLATFORMS - 160 FGS
- ELEVATED 40' CONTAINERS FOR MOBILE SCANNER - 76 SPOTS
- 53' GROUNDED CONTAINERS - ASC - 288 GROUNDED SLOTS
- GROUNDED IY BUFFER STACKS - 244 TGS
- BUILDING
- GRADE SEPARATION - RETAINED STRUCTURE
- GRADE SEPARATION - COLUMN SUPPORTED STRUCTURE
- ELECTRICAL
- AREA OF AUTOMATED OPERATION
- XXX = TOTAL TGS PER ASC RUN
- TOTAL ASC TGS FOR B142 - B147 = 5,824
- ENTRY TRAFFIC FLOW
- EXIT TRAFFIC FLOW
- VEHICLE FLOW DIRECTION
- RAIL
- SAFETY FENCE
- CONCRETE BARRIER

PRELIMINARY

Transmittal 3

Revision	By	Approved	Date

TRANSPORTATION

AECOM
2101 Webster St., Suite 1900
Oakland, CA 94612
T 510.622.6600 F 510.835.3464

www.aecom.com

Drawn By	EAC
Approved By	LJD
Date	11/02/10
Meeting	

TraPac
Trans Pacific Container Service Corp.

AUTOMATED CONTAINER YARD
PORT OF LOS ANGELES

Sheet Title
B142–B147
ASC 8 AND 10 WIDE STACKS – PLAN – ALT K

Project Number	Sheet Number
60146052	1 of —

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Original inside border size 19" x 30" (483mm x 813mm)

Transmittal 4

THE PORT OF LOS ANGELES

AUDIT COMMITTEE

Report to the
Board of Harbor Commissioners

DATE: APRIL 11, 2012

TO: BOARD OF HARBOR COMMISSIONERS

FROM: AUDIT COMMITTEE

SUBJECT: APPROVAL OF BASELINE PROJECT BUDGETS

Transmittal herewith is Resolution No. 12-7291 - Approval of Baseline Project Budgets.

Transmittal 4

THE PORT
OF LOS ANGELES
Executive Director's
Report to the
Board of Harbor Commissioners

DATE: APRIL 11, 2012

FROM: ENGINEERING

SUBJECT: RESOLUTION NO. 12-7291 - APPROVAL OF BASELINE PROJECT BUDGETS

SUMMARY:

Staff is requesting approval of baseline budgets for the attached Capital Improvement Program (CIP) projects of the City of Los Angeles Harbor Department (Harbor Department). These baseline budgets were approved by the Audit Committee (Audit Committee) of the Board of Harbor Commissioners (Board) on March 15, 2012. Baseline budgets will be used as a benchmark against which to measure project performance. They represent an understanding of the costs of the projects based on its current scope. These budgets provide a basis for financial approval and a reference for managing changes to the cost of the project. Staff believes having the Board formalize the approval of baseline budgets allows greater financial oversight and budget control, especially during early project phases, as noted in the Industrial, Economic and Administrative Survey dated June 2011.

RECOMMENDATION:

It is recommended that the Board of Harbor Commissioners:

1. Approve the Baseline Project Budgets for the Capital Improvement Program projects listed in Transmittal 1; and

2. Adopt Resolution No. 12-7291 .

DISCUSSION:

Background - The Harbor Department has formalized its project approval process in response to the Industrial, Economic, and Administrative Survey dated June 2011. The survey included two recommendations dealing with project scope and costs:

1. Finding 15: Clearly defining project scope earlier in the project life cycle could help to mitigate cost growth and schedule slippage.

2. Finding 16: Improved Status Reporting could assist the Board in the oversight of capital projects.

The terms project and program are used throughout this report. A project is a term typically used to define a discreet element of work to construct, for example, a wharf, a building, or a rail yard. A project is typically executed under a single construction contract. A program is a term used to describe a collection of related projects accomplishing multiple elements of work. A program is typically executed using multiple construction contracts spanning several years.

Prior to placing projects into the CIP, they must be preliminarily approved for inclusion by the Project Development Committee (PDC). This recommended inclusion in the Harbor Department's CIP Budget is ultimately approved by the Board during the Harbor Department's budget process. The PDC is co-chaired by the Deputy Executive Directors of Development and Business Development and includes participation of the Deputy Directors of Operations, Finance and Administration, and External Relations. The PDC is facilitated by the Planning and Economic Development Division and includes seven additional Divisions involved in the project development process. Information required by the PDC for project approval includes scope, cost, schedule, and other pertinent details deemed necessary to make an informed decision.

The PDC's preliminary project approval is an internal staff recommendation that staff commence development work on the project leading up to later proposals going to the Board for certification of environmental assessments, project approvals, contract approvals and budget approvals. Preliminary design and the environmental review process are initiated once projects are approved through PDC. For smaller, less complex projects, the initial PDC project approval may serve as the approval of the baseline budget. For larger complex projects, the baseline budget will not be set until completion of the environmental review process allowing confirmation of the project scope. These larger projects may entail multiple approvals at various project phases in order to approve expenditures required to evaluate and define the project, and baseline budgets for these projects must be approved by the Audit Committee and the Board.

Transmittal 1 lists the proposed baselines for current projects both in design and construction. These items only include projects that have environmental clearances or involve only initial project studies.

Project Baseline Budget - The top ten CIP programs/projects proposed for baseline approval are listed in Transmittal 2. These projects, and the corresponding programs under which they fall, represent a five-year period and over $998 million of the nearly $1.2 billion worth of projects listed in Transmittal 1.

Given the complexity of these projects, it is impossible to predict all the variables that may be encountered during the project life cycle. In order to mitigate this variability, a contingency of between 10 and 25 percent is included in the initial project cost estimate. The percentage applied is a function of the project risk and the clarity of the project scope. Even with these contingencies, it is unrealistic to expect baseline budgets will not change during the life of the project. If a project is projected to exceed the approved baseline budget, staff will bring the project back to the Audit Committee and the Board for re-approval. Staff is developing protocols for monitoring and reporting these budgets. Once these protocols are developed, they will be presented to the Audit Committee for approval.

ENVIRONMENTAL ASSESSMENT:

The proposed action is approval of baseline project budgets for CIP projects. This action does not constitute environmental clearance for any of the listed projects. As an administrative activity, the Director of Environmental Management has determined the proposed action is exempt from the California Environmental Quality Act (CEQA) in accordance with Article II, Section 2(f) of the Los Angeles City CEQA Guidelines.

ECONOMIC BENEFITS:

This Board action will have no employment impacts for the five-county region. However, the CIP projects proposed for baseline approval would generate significant economic impacts for the region. When the projects are brought before the Board for approval, at that time, staff will be able to fully evaluate the economic benefits of the projects.

FINANCIAL IMPACT:

Approval of this Board action establishes a reference baseline budget for the CIP projects discussed herein. Establishment of such baseline budgets does not authorize approval or commencement of a project but are intended to represent an understanding of the costs and scope of the projects at a point in time based on current available information. Adoption of the Harbor Department's CIP Budget is undertaken each fiscal year as part of the annual budget adoption process and presented to the Board for

Transmittal 4

approval. The baseline budgets proposed will serve as a reference for managing proposed CIP budget costs and scope when recommending to approve the CIP Budget each fiscal year.

CITY ATTORNEY:

The Office of the City Attorney has reviewed this Board report and finds it raises no legal issues at this time.

TRANSMITTALS:

1. CIP Baseline Budgets, February 2012
2. Top Ten CIP Programs/Projects Proposed for Baseline Approval

FIS Approval: EJ (initials)

CA Approval: (initials)

ANTONIO V. GIOIELLO
Chief Harbor Engineer

for MICHAEL R. CHRISTENSEN, P.E.
Deputy Executive Director, Development

AVG:sc
Baseline Budget Approval

APPROVED:

for GERALDINE KNATZ, Ph.D.
Executive Director

Author: Antonio V. Gioiello

Transmittal 4

Transmittal 2

Top Ten CIP Programs/Projects Proposed for Baseline Approval

The below listed projects are the 10 individual projects with the highest budgeted cost proposed for base lining.

	Project	Baseline Budget	Program
1.	Channel Deepening Project:	$171,250,000	Channel Deepening
2.	Berth 200 Rail Yard:	$112,510,000	Transportation
3.	B. 145-147 - Wharf Improvements	$ 88,075,000	TraPac
4.	B. 142-145 - Backland Improvements - Phases 2-4	$ 79,340,000	TraPac
5.	South Wilmington Grade Separation:	$ 84,300,000	Transportation
6.	RB 136-139 - Terminal Buildings & Main Gate	$ 62,500,000	TraPac
7.	B. 142-147 – TraPac ICTF & Backland	$ 40,426,000	TraPac
8.	B. 401-406 - Alternative Maritime Power (AMP)	$ 40,380,000	AMP
9.	B. 302-305 - Alternative Maritime Power	$ 37,500,000	AMP
10.	B. 145-147 Backland Improvements - Phase 1C	$ 26,595,000	TraPac

As the above projects are elements of larger programs, the information below puts these projects into the context of the identified programs. These program costs reflect only the costs of the requested baseline approvals. They do not include entire program costs for projects already completed and closed out.

TraPac Container Terminal Development: $364,495,525

The TraPac Terminal Expansion Program consists of multiple projects to redevelop approximately 110 acres of existing container terminal property and develop an additional 50 acres of new property. The new terminal will consist of approximately 226 acres. Improvements include the construction of 705 feet of new wharf and upgrade of 1,022 feet of existing wharf at Berths 145-147, new cranes (purchased by TraPac), Alternative Maritime Power (AMP), dredging to -53', new buildings (including Administration Building, Yard Operations, Crane Maintenance/Marine Building, Driver Service Buildings), ILWU parking, new Main Gate (including security, customs and guard booths), Intermodal Container Transfer Facility (ICTF), and general container yard improvements including heavy duty pavement, electrical, lighting, water system, fire protection, sanitary sewer, storm drain, electric rail mounted automated stacking cranes, and demolition of existing buildings and gates. The projects in the program include:

B. 144 & 145-147 - AMP	$14,500,000
B. 136-139 - Alternative Marine Power	$12,500,000
*B. 145-147 - Wharf Improvements	$88,075,000
B. 136 Electrical System Circuit Breaker Upgrade	$ 140,000
B. 147 Backland Improvements - Phase 1A	$ 4,215,000
B. 145-147 Backland Improvements - Phase 1B	$19,870,000
B. 136-147 - Terminal Improvement Project EIR	$ 5,581,025
*B. 145-147 Backland Improvements - Phase 1C	$26,595,000
*RB 136-139 - Terminal Buildings & Main Gate	$62,500,000
*B. 142-147 – TraPac ICTF & Backland	$40,426,000
*B. 142-145 - Backland Improvements - Phases 2-4	$79,340,000
B. 134-135 - Backland Expansion (5-acre)	$10,753,500

Channel Deepening Program: $204,390,000

The objective of the Channel Deepening Program is to dredge existing navigation channels and berthing areas from -45 feet to a depth of -53 feet Mean Lower Low Water (MLLW). Elements of the project include creating 40 acres of land at Berth 306APL's terminal expansion, 43 acres of land at Berth 102 for the China Shipping Terminal expansion, 5 acres of fill at berth 136 for the TraPac terminal expansion, 50 acres of shallow water fill for environmental enhancements, and an 8 acre fill at berths 243-245 as a confined disposal facility for disposal of material unsuitable for ocean disposal. Numerous elements of the Channel Deepening Program have already been completed. Remaining project elements include:

*Channel Deepening Program	$171,250,000
B. 243-245 - Southwest Marine Dry Dock Demolition and Slip Fill	$ 19,000,000
Cabrillo Shallow Water Habitat	$ 14,140,000

Transportation: $221,860,000

The Transportation program includes various projects to facilitate vehicle, truck, and train movements in and out of the Port complex. Major projects submitted for baseline approval include the Berth 200 Rail Yard and the South Wilmington Grade Separation.

The Berth 200 rail yard project includes rail yard site development and tracks, yard office building and diesel engine service facility, roadway, storage tracks for West Basin Intermodal Container Transfer Facility (ICTF), West Basin East ICTF and West Basin mainline track improvements. This project will be completed in two phases, the Berth 200 Rail Yard and the Berth 200 Rail Yard Track Connections. This new rail yard will replace the existing Pier A rail yard to allow for the construction of the new ICTF for the TraPac Container Terminal.

The South Wilmington Grade Separation will carry vehicular traffic over the main line railroad tracks to Port terminals. This grade separation will serve as the main entrance to the TraPac Terminal and the entire Mormon Island and Wilmington Waterfront areas.

Baseline approval request for the Transportation Program include:

*Berth 200 - Rail Yard	$112,510,000
Berth 200 - Rail Yard Track Connections	$ 25,050,000
*South Wilmington Grade Separation:	$ 84,300,000
Advanced Transportation Management Information System	$ 2,000,000
Southern California International Gateway (SCIG) - EIR	$ 8,635,000
Terminal Island Street Improvements	$ 1,521,240
Navy Way - Traffic Control Devices Study	$ 32,500

Alternative Maritime Power (AMP) Program: $113,780,000

The AMP systems in this program are required for Port container terminals to be able to connect vessels to shore power supply and meet the California Air Resource Board (CARB) as well as the Clean Air Action Plan (CAAP) air emissions requirements. AMP projects not included in this program are associated with separate

terminal developments. For example, AMP systems in the TraPac and China Shipping Terminals are included in the program costs of those terminals. AMP projects include:

*B. 401-406 - Alternative Maritime Power	$40,380,000
*B. 302-305 - Alternative Maritime Power	$37,500,000
B. 212-216 - Alternative Maritime Power Phase II	$11,650,000
B. 230-232 - Alternative Maritime Power	$10,750,000
B. 125-129 - Alternative Maritime Power	$10,600,000
B. 214-215 - Alternative Marine Power Retrofit	$ 2,900,000

China Shipping Terminal Development: $93,505,028

Although the individual projects associated with the China Shipping Terminal Development are not included in the top ten most expensive projects, the program is a major element of the Department's Capital Improvement Program budget. The three-phase program involves construction of a container terminal with 2,500 ft. of wharf, 134 acres of backland, two bridges, and two buildings.

Phase I construction was completed in December of 2003. Work included construction of a 1,200 feet wharf at Berth 100, 75 acres of backland development, and an access Bridge across the Southwest Slip between the China Shipping and Yang Ming terminals. Phase II construction was completed December 2010. This phase included construction of 925 feet of wharf at Berth 102, 18 acres of backland behind Berth 102, and a second access bridge between the China Shipping and Yang Ming Terminals. The remaining elements of the project include the construction of 17 acres of backland, a Marine Operations building, 375' Berth 100 south wharf extension (total wharf length at B100-102 of 2,500 feet), another 10 acres of backland improvements, and a Crane Maintenance Building. Projects included in this program are:

Phase II	
B. 100-109 - Marine Operations Building	$12,000,000
B. 102 - Rear Backland Development	$25,000,000
Phase III	
B. 94-95 - Catalina Express Relocation	$ 3,875,000
B. 49-50 Lane Victory Relocation	$ 550,028
B. 100-102 -14 of 24 Acre Backland Development	$20,900,000
B. 100 - Wharf - South Extension	$24,700,000
B. 100 - Wharf - South Extension - AMP	$ 2,700,000
B. 100-109 - Crane Maintenance Building	$ 3,780,000

*Designates projects included in the top ten highest costs requesting baseline approval

TRAPAC TERMINAL PROGRAM
Cost Summary & Status Update
August 2013

SUMMARY:

The TraPac Terminal Program consists of 10 projects and will provide wharves, automated backlands, rail facilities, buildings, and gates for the Port of Los Angeles' first automated container terminal at Berths 136-147.

In February 2012, the TraPac Terminal Program was identified in the City's Priority Capital Projects at the Port. This program will deliver the first automated terminal on the West Coast.

Cost Summary

The baseline budget for this program of $364,495,525 was approved by the Board on April 19, 2012. A significant portion of this cost estimate was based on conceptual level information, particularly the automated portions of the program. Our current cost estimate for the program has increased to $510,412,388, a 40% increase or $145,916,813, due to a number of factors detailed in the Background Section of this memo.

There was no grant funding at the time the baseline budget was set. Since then, the Port has secured $60,081,000 bringing the POLA Share amount to $450,331,388, a 23.5% increase.

It is important to note that these cost increases are not a result of tenant initiated scope changes. The table below indicates the overall baseline, Grant Funding, current cost estimate, and the delta.

	TraPac Terminal Program
Baseline Budget (4/19/2012)	$364,495,525
Grant Funding	$0
POLA Share	$364,495,525
Current Cost Estimate	$510,412,338
Grant Funding	$60,081,000
POLA Share	$450,331,338
Delta = Current Cost Estimate – Baseline Budget	$145,916,813 (40.0% increase)
Delta POLA Share = Current POLA Share – Baseline POLA Share	$85,835,813 (23.5% increase)

Current Status Summary

The Program is on schedule and continues to move forward. Three projects are complete, and three are under construction. Two projects are nearing advertisement, and the last two are in design and planning. See attached Exhibit 2 for a project listing and status.

BACKGROUND

The TraPac Terminal Program will expand, modernize, and automate the TraPac container terminal at Berths 136-147. The improvements consist of expanding and redeveloping container terminal facilities, new buildings and structures, a new main gate and secondary gate, a new wharf extension and upgrades to the existing wharf facilities, AMP, a new intermodal container transfer facility (ICTF), and automated backland infrastructure.

Consultant CH2M Hill was selected as the designer for the automated backlands due to their experience in container terminal automation design, specifically APM Terminal in Norfolk, VA, the only existing automated terminal in the United States. There is no standard design for automated container terminals, each is unique based on layout, operational needs, and equipment. The conceptual construction cost estimates for the automated backlands were prepared by the consultant in October 2011, based on costs and experience in the development of the Norfolk terminal. Design of the first phase of Berths 142-147 Backland automation began early 2012, and subsequent phases started design near the end of 2012. As design progressed, the cost estimates increased as a result of factors unique to this development and the current bidding climate. Berths 144-145 Backland Improvements (Phase 1C automation) opened bids in January 2013 with unit bid item costs much higher than anticipated at the baseline budget.

Cost Increase Factors

The primary reasons for the cost increase for the TraPac Terminal Terminal are indicated below. A detailed Cost Increase Breakdown is included as Exhibit 3:

1. Electrical System
   (Current Estimate $67.08 M - Baseline Estimate $15.01 M = Delta $52.07 M)
   a. As design of the terminal progressed, it was evident that automation requires a much more extensive electrical infrastructure than estimated, a 4.16 kV power supply system was assumed in the baseline estimate. During the design process, it was determined that a 12.47 kV power supply system was required, which resulted in additional infrastructure including new high voltage 34.5kV electrical substations, multiple feeds from DWP, switchgear, transformers, voltage conversion switchgear, and extensive underground conduit for telecommunication, fiber optics, and power. 12.47 kV is a US standard voltage; Norfolk, VA is supplied by 13.2 kV and CTB Hamburg is 10 kV.
   b. Construction activities in the San Pedro Bay are at a historic high. The current bidding climate is showing significant signs of large cost increases, particularly with electrical infrastructure. With the number of AMP projects in construction, in both ports, the availability of equipment and resources have been stretched and is resulting in increased costs showing up in recent bids.
2. Storm Drain System
   (Current Estimate $14.53 M - Baseline Estimate $1.63 M = Delta $12.90 M)
   – The original storm drain design consisted of infiltration to comply with the City of Los Angeles Watershed Protection Program and the Standard Urban Stormwater Mitigation

Plan (SUSMP). The existing site is contaminated. Since infiltration is prohibited due to the high levels of contamination, the storm drain system resulted in a very intricate design, including sand filtration, subdrains, trench drains, and overflow system.

3. Concrete Pavement & Foundations
   (Current Estimate $24.60 M – Baseline Estimate $3.80 M = Delta $20.80 M)
   – Due to site conditions and geotechnical studies, design is resulting in thicker concrete pavement sections, pile supported buildings and structures, thicker and stronger crane rail, and surcharge to decrease long-term settlement.
4. Water/Fire Protection System, Los Angeles Fire Department
   (Current Estimate $6.01 M - Baseline Estimate $1.22 M = Delta $4.79 M)
   – The automated stacking block layout does not provide for typical LAFD access per code, design was approved by LAFD to incorporate an extensive stand pipe system, containment areas, and additional access points to allow LAFD to provide fire protection.
5. Fencing and Specialty Gates
   (Current Estimate $3.88 – Baseline Estimate $0.75 = Delta $3.13 M)
   – Life Safety fencing surrounding the automated areas and individual blocks are required to provide life safety and separation between automated and manned operations. Additional specialty gates, with electrical infrastructure, will be equipped with radio-frequency identification (RFID) to maintain safety for personnel accessing the automated areas.
6. Construction Inflation ($8.60 M)
   – Per Engineering News Record (ENR), there was a 5.9% cost increase in local labor union wages for 2012. Recent bids are indicating much higher labor and material costs.
7. Phasing, Specialty Design, Construction Management, Miscellaneous
   (Current Estimate $58.09 – Baseline Estimate $14.50 = Delta $43.59 M) See Exhibit 3 for details.
   - Additional phasing within each project is required to facilitate ongoing terminal operations at a higher than anticipated level and concurrent construction projects that are adjacent, nearby and interdependent.
   - Additional miscellaneous specialty infrastructure associated with automation: reefer racks, protected access, booth and weight activated pad for trucker safety.
   - Grant funding deadlines required some schedules to be accelerated impacting design and construction phasing.
   - Additional utility relocations were identified during design.

<u>Value Engineering</u>

Engineering has and continues to perform value engineering to decrease the cost estimates. To date, approximately $50 Million has been trimmed from these projects' cost estimates (see attached Exhibit 4).The following changes have been incorporated and have helped to reduce the cost estimates: revisions to materials and design elements of the storm drain system and electrical system, foundation selection for the automated stacking crane (ASC) crane rail, redesign of the rail mounted gantry (RMG) crane rail foundation, using construction material for surcharge instead of hauling material in and out, revising the phasing plan to reduce mobilization costs, early detailed coordination with 3rd party utilities to minimize impacts during construction.

The scopes of the projects, for the TraPac Terminal Program, are consistent with the proposed lease amendment.

FINANCIAL IMPACT:

The TraPac Terminal Program Baseline budget of $364,495,525 was approved by the Board on April 19, 2012. The proposed revised baseline cost of $510,412,388 for the TraPac Terminal Program will result in an increase of $145,916,813. Reimbursement grant funding in the amount of $60,081,000 was secured, resulting in a change in the POLA cost share from $364,495,525 to $450,331,338, which is a $85,835,813 increase.

The TraPac Terminal Program is expected to be completed in 17/18. It is expected that through FY 12/13, $154,263,637 of the $364,495,525 April 19, 2012 Board adopted baseline budget, will have been expended. Funds in the amount of $99,344,073 have been included in the FY 13/14 Capital Budget for the TraPac Terminal Program costs. Revised TraPac Terminal Program costs have been incorporated into the Harbor Department's ten-year Capital Improvement Program as follows:

Fiscal Year	Through 12/13	13/14 (estimated)	14/15 (estimated)	15/16 (estimated)	16/17 (estimated)	17/18 (estimated)	**Total**
Amount	$154,263,637	$84,426,874	$114,725,075	$92,587,482	$52,122,062	$12,287,208	**$510,412,388**

These project estimates include approximately 10% contingencies applied to individual project budgets.

Each fiscal year capital expenditures are requested to be budgeted as part of the annual budget adoption process before the Board.

Grant Funding

Grant Funding in the amount of $60,081,000 has been allocated for three projects, within the TraPac Terminal Program. By the end of 2013, the Port should begin receiving reimbursements on one project. The remaining two should begin receiving reimbursements by 2014 and 2015.

Rate of Return:

The original Rate of Return at Board approval of the baseline budget was 10.09%. The revised Rate of Return, based on the current cost estimate, is 8.75%. The FY 2013-2014 and 5-year CIP includes the current cost estimates.

This Program continues to make financial sense because it:

- Fulfills our contractual commitment to deliver the terminal infrastructure required under our permit with TraPac
- Creates the capacity needed to meet the revenue projections planned for TraPac
- Returns 8.75% on our terminal infrastructure investment (compared to 10.09% initially)
- Allows us to take advantage of significant grant funding opportunities (see Exhibit 2)
- Compares well with POLB's per-acre development cost for similar automated terminal infrastructure ($3.3M/acre @ TraPac versus $3.9M/acre @ POLB's Middle Harbor, see Exhibit 5)

PROGRAM CURRENT STATUS

The status of the TraPac Terminal Program projects are at various stages from design and planning, bid and award, construction, and complete (see attached Exhibit 2). The remaining projects awaiting a construction start are described below.

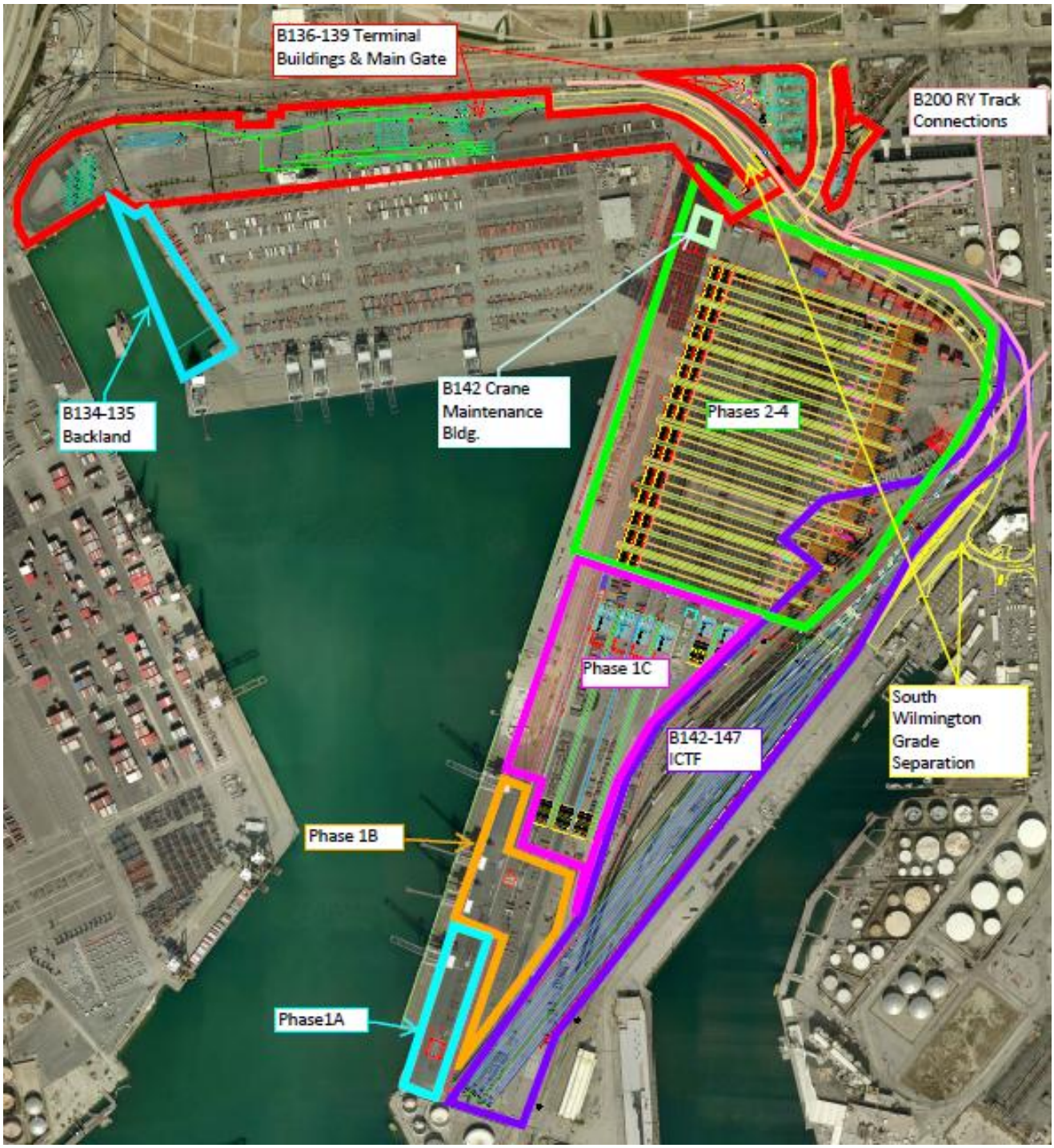
TraPac Terminal Project	Status	Bid & Award	Construction
Berths 142-143 Backland Impr. (Phases 2-4 – Automation)	100% Design	Sept. 2013 – Dec. 2013	Feb. 2014 – Feb. 2018
Berths 142-147 ICTF (Automation)	100% Design	Sept. 2013 – Dec. 2013	Feb. 2014 – Feb. 2016
Berth 142 Crane Maintenance Building	80% Design	Mid 2015 – Early 2016	Early 2016 – Early 2017
Berths 134-135 Backland Terminal	Planning/ Pre-Design	Mid 2015 – Early 2016	Early 2016 – Mid 2017

These projects, in addition to the three under construction (Terminal Buildings and Main Gate, Phase 1B Automation, and Phase 1C Automation), are all moving forward on schedule. Staff will continue to monitor the progress of these projects and report their status on a quarterly basis, implementing any and all cost saving measures available within the scope of our contractual commitments.

EXHIBITS:

Exhibit 1 TraPac Terminal Projects - Site Map
Exhibit 2 TraPac Terminal Projects – Status & Cost Breakdown
Exhibit 3 TraPac Terminal Projects – Cost Increase Breakdown
Exhibit 4 TraPac Terminal Projects – Estimated Cost Reductions
Exhibit 5 POLA/POLB Comparison (FYI Only)

Exhibit 1
TraPac Terminal Projects - Site Map



Note Berth 200 Rail Yard & B145-147 Wharf not shown for clarity.

Exhibit 2

TraPac Terminal Projects – Status & Cost Breakdown

TOTAL PROJECT - DESIGN & CONSTRUCTION

	TraPac Terminal Projects	WO	Status	Sept. 2009 (at Lease Execution)	Feb. 2011 Estimate (w/ conventional backland, no automation)	Feb. 2011 Estimate (includes automation)	April 19, 2012 Baseline Budget	Proposed Budget (May 2013)	Delta (Proposed - Baseline)	Grant Funding
1	EIR/EIS and Small Misc Impvs.	24612 25111	Complete	$5,110,405	$5,721,025	$5,721,025	$5,721,025	$5,221,189	$(499,836)	
2	Berths 145 - 147 Wharf Imp., including AMP at B136-139 and B144-147	24242 24898 24943	Complete	$107,695,285	$115,075,001	$115,075,001	$115,075,000	$111,931,001	$(3,143,999)	
3	Berth 147 Backland Impr. (Phase 1A- Automation)	25132	Complete	included in B142 - 143 Backland	included in B142-143 Backland	included in B142 - 143 Backland	$4,215,000	$3,641,577	$(573,423)	
4	Rear Berths 136-139 Terminal Buildings & Main Gate	24585	In Const.	$36,935,375	$54,000,000	$54,000,000	$62,500,000	$80,000,000	$17,500,000	
5	Berths 145 - 147 Backland Impr. (Phase 1B - Automation)	25143	In Const.	included in B142 - 143 Backland	included in B142-143 Backland	included in B142 - 143 Backland	$19,870,000	$13,862,310	$(6,007,690)	
6	Berths 144 - 145 Backland Impr. (Phase 1C - Automation)	25131	In Const.	included in B142 - 143 Backland	included in B142-143 Backland	included in B142 - 143 Backland	$26,595,000	$50,034,494	$23,439,494	$12,705,000
7	Berths 142 - 143 Backland Impr. (Phases 2 – 4 Automation)	24498	In Design	$52,503,000	$86,068,125	$118,500,000	$79,340,000	$143,422,405	$64,082,405	$26,664,000
8	Berths 142 - 147 ICTF (Automation)	24551	In Design	$36,807,446	$40,426,000	$40,426,000	$40,426,000	$85,865,560	$45,439,560	$20,712,000
9	Berth 142 Crane Maintenance Building	25177	In Design	included in B142 - 143 Backland	included in B142-143 Backland	included in B142 - 143 Backland	included in B142 - 143 Backland	$5,680,302	$5,680,302	
10	Berths 134 - 135 Backland Expansion	25138	Pre-Design	$11,258, 894	$10,753,500	$10,753,500	$10,753,500	$10,753,500	$ -	
	GRAND TOTAL			**$250,310,405**	**$312,043,651**	**$344,475,526**	**$364,495,525**	**$510,412,338**	**$145,916,813**	**$60,081,000**
							Increase in Total Project Budget		40.0%	
	Grant Funding							$60,081,000		
	POLA SHARE			**$250,310,405**		**$344,475,526**	**$364,495,525**	**$450,331,338**		
						Increase in POLA Share		23.5%		

*Cost w/o EIR: $245,200,000

Exhibit 3

TraPac Terminal Projects - Cost Increase Breakdown

		Current Estimate	Baseline Estimate	Delta
Electrical System ($52 M Increase)				
Phase 1C	Electrical System	$ 12,404,000	$ 2,398,600	$ 10,005,400
	New & Relocated HMP	$ 780,000	$ 584,000	$ 196,000
Phs 2-4	Conduit, Wires, Cables, Ductbanks, MHs)	$ 21,400,000	$ 5,213,300	$ 16,186,700
	Equipment (Switchgears, Meters, Substations)	$ 10,700,000	$ 4,000,000	$ 6,700,000
	New & Relocated HMP	$ 2,160,000	$ 1,386,000	$ 774,000
ICTF	Conduit, Wires, Cables, Ductbanks, MHs)	$ 5,980,000	$ 425,000	$ 5,555,000
	Equipment (Switchgears, Meters, Substations)	$ 11,400,000	$ 200,000	$ 11,200,000
	New & Relocated HMP	$ 2,260,000	$ 800,000	$ 1,460,000
	Subtotal	**$ 67,084,000**	**$ 15,006,900**	**$ 52,077,100**
Storm Drain System ($12.9 M Increase)				
Phase 1C SD System, including Geotextile		$ 4,230,000	$ 346,000	$ 3,884,000
Phases 2-4 SD System, including Geotextile		$ 6,200,000	$ 740,000	$ 5,460,000
ICTF		$ 4,100,000	$ 540,000	$ 3,560,000
	Subtotal	**$ 14,530,000**	**$ 1,626,000**	**$ 12,904,000**
Concrete Pavement & Foundations ($20.8 M Increase)				
Phases 1B & 1C Concrete Pavement		$ 6,036,340	$ 1,500,000	$ 4,536,340
Phases 2-4 Concrete Pavement		$ 6,500,000	$ 1,100,000	$ 5,400,000
	RMG Rail Foundation (Ties/Ballast to Concr.			
ICTF	Beam)	$ 6,000,000	$ 700,000	$ 5,300,000
	Building Foundation (Matt to Piles)	$ 600,000	$ 200,000	$ 400,000
	Surcharge	$ 3,000,000		$ 3,000,000
Crane Maintenance Building (Matt Foundation to Piles)		$ 2,500,000	$ 300,000	$ 2,200,000
	Subtotal	**$ 24,636,340**	**$ 3,800,000**	**$ 20,836,340**
Water/Fire Protection System, Los Angeles Fire Department ($4.8 M Increase)				
Phase 1C Water Distribution System		$ 1,206,000	$ 300,000	$ 906,000
Phases 2-4 Water Distribution System		$ 4,800,000	$ 920,000	$ 3,880,000
	Subtotal	**$ 6,006,000**	**$ 1,220,000**	**$ 4,786,000**
Safety Fencing and Specialty Gates ($3.1 M Increase)				
Phase 1C		$ 777,819	$ 100,300	$ 677,519
Phases 2-4		$ 1,900,000	$ 152,000	$ 1,748,000
ICTF		$ 1,200,000	$ 500,000	$ 700,000
	Subtotal	**$ 3,877,819**	**$ 752,300**	**$ 3,125,519**
Construction Inflation Subtotal		**$ 8,600,000**		**$ 8,600,000**
Phasing, Specialty Design, Construction Management, misc ($43.6 M Increase)				
Phase 1C	Reefer Racks	$ 2,229,000	$ 1,000,000	$ 1,229,000
	Booth & weight activated pad for trucker safety	$ 78,900		$ 78,900
	Prefabricated Walkways	$ 110,000		$ 110,000
	10% Contingency at Award	$ 3,839,954		$ 3,839,954
Phs 2-4	Additional Design/Construction Support	$ 2,000,000		$ 2,000,000
	Reefer Racks	$ 8,700,000	$ 4,000,000	$ 4,700,000
	Phasing/Mobilization 10%	$ 8,000,000		$ 8,000,000
	Booth & weight activated pad for trucker safety	$ 230,000		$ 230,000
	Prefabricated Walkways	$ 400,000		$ 400,000
	Contingency/Allowance	$ 8,000,000	$ 6,000,000	$ 2,000,000
	10% Contingency at Award	$ 11,000,000		$ 11,000,000
ICTF	Additional Design/Construction Support	$ 1,500,000		$ 1,500,000
	Contingency/Allowance	$ 5,000,000	$ 3,500,000	$ 1,500,000
	10% Contingency at Award	$ 7,000,000		$ 7,000,000
	Subtotal	**$ 58,087,854**	**$ 14,500,000**	**$ 43,587,854**
GRAND TOTAL				**$ 145,916,813**

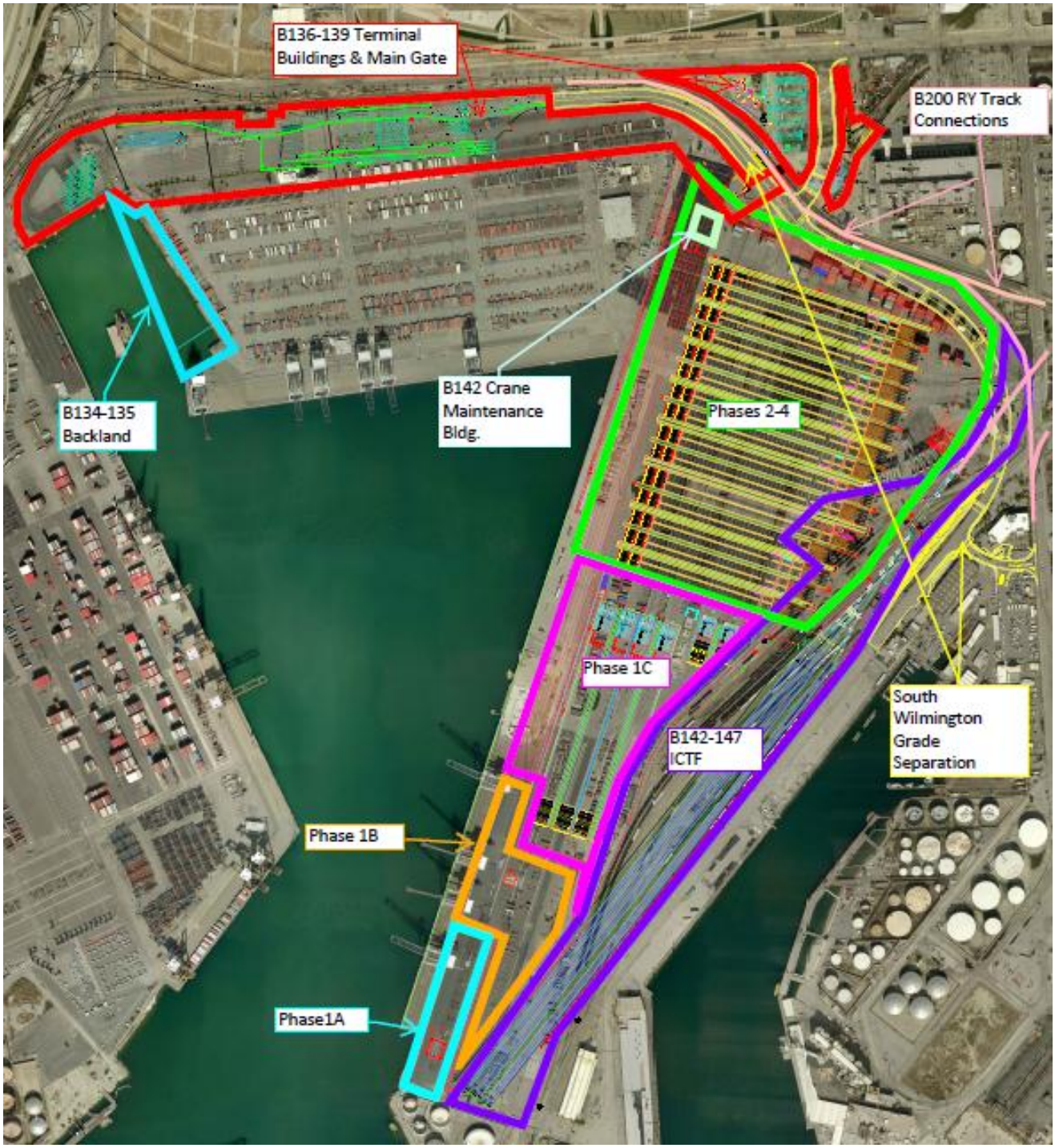
Exhibit 4

TraPac Terminal Projects – Estimated Cost Reductions

Project	Status	Description	Estimated Cost Reduction*	Notes
Berths 144-145 Backland Impr. (Phase 1C – Automation)	In Construction	Storm Drain System	$ 600,000	Material substitution, CM to verify amount
		Subtotal	**$ 600,000**	
Berths 142-143 Backland Impr. (Phases 2-4 Automation)	In Construction	Demo & Dispose AC pvmt	$ 650,000	Reduced volume
		Excavation	$ 75,000	Reduced volume
		Asphalt Concrete pvmt	$ 400,000	Reduced quantity
		CMB	$ 626,000	Maximized Department furnished CMB
		Curb in Rows	$ 890,000	Eliminated
		Concrete pvmt & Misc Concrete	$ 620,000	Reduced quantity
		Ballast, Subbalast, Crushed Rock	$ 920,000	Reduced quantity & adjusted unit costs per Ph 1C bids
		Reefer Racks	$ 3,665,000	Reduced quantity, modified design
		Container Corridor	$ 220,000	Reduced quantity
		Concrete barriers, pvmt markings, tire stops	$ 166,000	Reduced quantity
		Fencing, gates, railings	$ 790,000	Reduced quantity & adjusted unit costs per Ph 1C bids
		Storm Drain System	$ 3,700,000	Material substitution (HDPE)
		Mobilization/Phasing	$ 7,750,000	Reduced from 15% to 10% of subtotal
		Electrical System	$ 13,860,000	Re-evaluated materials & equipment, adjusted unit costs
		Contingency	$ 5,000,000	Reduced contingency
		Subtotal	**$ 39,332,000**	
Berths 142-147 ICTF (Automation)	100% Design	RMG Rail System	$ 5,900,000	Modified foundation & unit costs (TraPac agreed to increase # of wheels from 6 to 8 on RMGs to accommodate the change in design)
		Rail	$ 240,000	Refined estimate due to design
		Storm Drain System	$ 343,000	Material substitution (HDPE)
		Surcharge Material	$ 1,500,000	Replaced with onsite construction material
		Slurry Seal - deleted	$ 100,000	Modified AC mix, to not require slurry seal
		Contingency	$ 1,700,000	Reduced contingency
		Subtotal	$ 9,783,000	
		TOTAL	**$ 49,715,000**	

*Estimated Cost Reductions are estimates only

TraPac Expansion Program Phasing Map
(Projects)



Note Berth 200 Rail Yard & B145-147 Wharf not shown for clarity.