APPLICATION FOR PIER LOADING PERMIT

A. The purpose of the Pier Loading Permit is to identify the dead load and live load that will be placed on the pier and compare it with the allowable loading limits. Based on these calculations, the need and size of cribbing required to spread the load and reduce the bearing pressure to within the allowable limits shall be determined by the Pier Loading Permit applicant. A Pier Loading Permit is required for equipment and material storage and for crane operations.

B. The Quonset Development Corporation (QDC) reserves the right to restrict and/or direct the usage of its premises.

C. No on/off loading operation shall be carried out without a valid Pier Loading Permit duly authorized by the Quonset Development Corporation and proof that the insurance requirements have been met.

D. Loading permits are valid only for the dates and the operations for which they are issued and are not transferable.

E. Completed Pier Loading Permit application shall be submitted to the Quonset Development Corporation no later than five (5) working days prior to the scheduled loading operations.

F. The calculations shall be performed by a RI licensed professional engineer (P.E.) or shall be loading calculations from load bearing computer software programs developed by crane manufacturers and cribbing providers, subject to the acceptance of QDC.

G. Per Quonset Development Corporation Terminal Tariff Schedule:

"Rule 16": CRANE SERVICE and HIRE

All firms providing crane service at QDC shall be assessed 10% of gross rentals based on the equipment usage with a minimum charge of $500.00, exclusive of manpower required to operate said equipment, for the privilege of using the QDC property and all such firms will furnish the QDC a monthly report of their activities at the port for billing purposes. Firms leasing property from the QDC are excluded from the above charge.

QDC crane will be only made available to entities possessing a valid QDC stevedoring license, and can document that the operator is a licensed crane operator in Rhode Island and is certified to operate the make and model of the QDC crane.

QDC Crane Hire Rate - $350.00 per hour"

Please complete the following:

1. FACILITIES REQUESTED:
   _____Davisville Pier 1 - 250 psf (pounds per square foot) max
   _____Davisville Pier 2 - 250 psf max (front face of Pier to 65' inbound / landward)
   _____Davisville Pier 2 - 500 psf max (65' inbound of front face of Pier)
   _____Davisville Pier 2 Heavy Lift Platform - 2,000 psf Heavy Lift Platforms max
   _____Mobile Harbor Crane - 150 US tons maximum lift capacity
   _____Terminal 4 & 5 - 500 psf max (front face of Bulkhead to 55' inbound / landward)
   _____Terminal 4 & 5 - 300 psf max (55' inbound of front face of Bulkhead)

   No Impact Loading Allowed
   Crane Loading Evaluated on a Case by Case Basis

2. DATE(S) OF INTENDED USE:_____

3. APPLICANT:

Name of Company:	
Address:	
Telephone:	
Name of person submitting application:	
Title:	
Email:	
Mobile phone:	

Will the applicant perform all parts of the required work (i.e. transport, rigging, lifting, loading, etc.)?
_____ Yes _____ No *(If no, complete the following:)*

Subcontractor:	
Describe operation:	
Name:	
Address:	
Telephone:	
Email:	
Mobile phone:	

Subcontractor:	
Describe operation:	
Name:	
Address:	
Telephone:	
Email:	
Mobile phone:	

4. CARGO:

Type of cargo:	
Largest piece (list weight with approximate dimensions):	
Heaviest piece (list weight and approximate dimensions):	
Is cargo to be on loaded or off loaded?	
Is cargo to be temporarily stored on the QDC premises? If cargo is not to be on loaded/off loaded directly from vessel to transport vehicle, or vice versa, answer yes and describe. Specify size of area required:	

5. VESSEL:

Vessel name:	
Type of vessel (ship, barge, etc.):	
Owner of registry:	
Country:	
Length:	
Width:	
Depth:	
Lloyds registered tonnage – gross & net:	
Date of arrival:*	
Date of departure:	
Is vessel equipped with boom derrick, crane or other self-contained loading equipment? If answer is yes, give capacities:	

**QDC requires 48 hours' notice of any changes in date of arrival.*

6. LAND TRANSPORTATION:

Method of Travel: If overland method is used describe transport equipment (list net weight, gross weight, number and size of wheels for each piece:	
Provide wheel loading computations for heaviest load to be moved:	
Is an overnight parking area required?	

7. LIFTING/LOADING:

Description of lifting equipment (i.e. forklift, pneumatic tire, mobile crane, crawler [track] crane, other.) List manufacturer name and model number, serial number, nominal lifting capacity, net weight, gross weight (as rigged) boom lengths, wheel base, etc. for each piece:	
Will our assembly or storage area be required for lifting equipment? If yes, specify area and time required:	
Describe in detail, the proposed lifting/loading operations including: Schematic showing locations of transport equipment and cargo lifting equipment, vessel, proposed movements and other information necessary to clarify the operation. Include computations and supporting data for deck loadings resulting from heaviest load to be moved:	

8. CALCULATION PROCEDURE - CRANE

A. The total weight of the crane and lift including dead load and live load will need to be determined. The dead load includes the weight of the crane (including rigging) and the live load is the weight of the object that is being lifted. The load moment due to the lift will also need to be determined so that the maximum outrigger reaction may be calculated. Moment is an engineering term that describes the ability of a force to cause rotation about a reference point. Load moment is the product of the magnitude of the force and its perpendicular distance from the reference point. Moment for the crane lift is the weight of the object being lifted multiplied by the distance to the crane's center of gravity (or to the center of boom rotation). The calculations shall be performed for the boom angle required to make the lift and for the angles of rotation in the horizontal plane that the crane boom is expected to travel through, including front, (0 degrees) rear (180 degrees), side (90 or 270 degrees) and 45 degrees. (45, 135, 225 or 315 degrees). The worst case scenario is generally at an angle between 45 and 90 radius as the load of the crane and lift object are being maximized at one outrigger.

B. The counterweight of the crane produces a moment in the opposite direction of the load moment thus reducing the net effect of the load moment. The reactions at the outriggers due to the combination of the counterweight moment and load moment are added to the reactions at the outriggers due to the dead weight of the crane to determine the outrigger loads on the pier. The highest outrigger load is divided by the allowable bearing pressure to determine the area of the cribbing to be placed under the outriggers. The square root of the calculated cribbing area is determined to identify the required length and width of a square cribbing pad. Transitional pads may also be required to create a "pyramid" shape from the outriggers to the deck surface pad. Calculations demonstrating that the cribbing material, thickness and number of layers are suitable to distribute the applied outrigger load over the intended area shall also be submitted to QDC.

C. CRANE CALCULATION PROCESS OUTLINE

a. Obtain from the crane manufacture the name and model of the crane, its dimensions, gross weight, lifting capacity and load rating chart.
b. Identify the weight of the lift, distance from crane and lift radius.
c. Compute the total weight of the crane and determine the load distribution to the outriggers. This is the average dead weight on the outriggers.
d. Determine the reaction due to moment loads on each of the outriggers for all of the skew angles.
e. Determine the reactions due to moment for the crane's counterweight.
f. Algebraically add the reactions due to the load moment and the counterweight moment for each of the outriggers.
g. Add the dead load and live load per outrigger and compare with the allowable load.
h. If the dead and live load divided by the outrigger bearing area exceeds the allowable distributed deck load, divide the total applied load by the allowable load to determine the area of the cribbing needed under each outrigger.
i. Calculate the square foot of the total surface area to determine the rough dimensions of the square cribbing pads.
j. Identify the dimensions of the transitional pads to create a "pyramid" shape from the surface area of the outriggers to the surface area of the cribbing pads and determine cribbing material, thickness and number of layers required to distribute the applied outrigger load over the intended area.

(Calculations to be provided to QDC along with dimensions of mats, etc.)

I, as a duly authorized representative of the above name applicant, do hereby certify that the information submitted above is, to the best of my knowledge true and accurate.

Signature: _____

Print name and tile: _____

ATTACHMENTS:
Insurance Requirements
Pier Loading Permit

PIER LOADING PERMIT

INSURANCE REQUIREMENTS

Prior to the issuance of a permit, the Quonset Development Corporation requires that all independent terminal loading/unloading operators, which shall include subcontractors and stevedors, provide proof of insurance Certificate of Insurance (FORM ACORD 7/97). Upon receipt of properly completed application form (QP/DP 1-82), applicants will be notified within 5 working days of the required limits of coverage insurance. Certificate of Insurance will be required to be receipted by the QDC no later than 24 hours prior to the issuance of the Dock Loading Permit.

Insurance shall cover damage to streets, substructure utilities, dock decking, dock substructures, pier facing, fender systems and appurtenances thereto. Insurance amounts will vary upon the type of the lift and method of performance but in no case hall be less than as follows:

A.	General Comprehensive Liability including personal injury	$2M/$1M
B.	Property Damage	$1,000,000
Or	Combined General Comprehensive (Single limit)	$2,000,000
C.	Automobile General Liability	$500,000
	Including personal injury	$500,000
	Property Damage	
D.	Workman's Compensation in accordance with Laws of the State of Rhode Island.	

Quonset Development Corporation
Pier Loading Permit

Issued to:

(insert Company Name)
(insert Company Address)
(insert City, State, Zip)

The calculations (insert Company Name) prepared shows that (insert Company Name) can comply with the Pier X load limitation of XXX pounds per square foot (PSF) with the installation of crane mats. Quonset Development Corporation (QDC) accepts no responsibility for the accuracy of your calculations or the validity of the results. The installation of the crane on Pier X will require the size and placement of the crane mats per your calculations. You are authorized to use the crane on Pier X assuming all other conditions of the Pier Loading Permit are satisfied specifically the insurance requirements.

*note update yellow highlights as needed (and remove highlights and this note)

Permit valid for _____.

Date issued: _____

_____

Edward J. Spinard, Jr., P.E.
Quonset Development Corporation
Development Services Director