

**Affidamento in «Concessione mediante project financing del servizio di assistenza passeggeri e di Stazione Marittima nel porto di Ravenna, nonché delle aree per la realizzazione e gestione della nuova Stazione Marittima e degli altri beni strumentali e/o complementari alla prestazione del suddetto servizio da realizzare sulla banchina crociere di Porto Corsini (RA) e aree demaniali adiacenti»**

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**RAV PE-H1-Technical Specification PBB Passenger Boarding Bridge**



## Client



## Design Team



### Atelier(S) Alfonso Femia / AF517

55 rue des petites Ecuries 75010 Paris  
tel. +33 1 42 46 28 94  
[paris@atelierfemia.com](mailto:paris@atelierfemia.com)

via interiano 3/11 16124 Genova  
tel. +39 010 54 00 95  
[genova@atelierfemia.com](mailto:genova@atelierfemia.com)

via cadolini 32/38 20137 Milano  
tel. +39 02 54 01 97 01  
[milano@atelierfemia.com](mailto:milano@atelierfemia.com)

#### Lead Architect

Alfonso Femia  
Project Manager

Carola Picasso

#### Design Team

Stefania Bracco, Luca Bonsignorio, Fabio Marchiori,  
Francesca Raffaella Pirrello, Alessandro Bellus, Simone Giglio,  
Alice Cavicchi, Carlo Occhipinti, Sara Massa

#### DIORAMA

DIORAMA Paris & Atelier(s) Alfonso Femia  
modello 3d e visualizzazioni

#### ARCHITETTURA E PAESAGGIO MICHELANGELO PUGLIESE

STUDIO DI ARCHITETTURA E PAESAGGIO  
Arch. Michelangelo Pugliese  
Landscape architect PhD



For engineering architecture  
piazzetta lagrange 1 10123 Torino tel +39-011-5628702 tech@for-arch.com  
coordinamento  
roberto mancini



### Rina Consulting S.p.A.

Via Cecchi, 6 – 16129 GENOVA – ITALIA  
tel. +39 010 31961

[info@rina.org](mailto:info@rina.org)  
<http://www.rinagroup.org>

#### Technical Director

Alessandro Odasso

Project Manager

Antonio De Ferrari, Alessandra Canale

Investment Analyst

Cristina Migliaro

Structural Engineers

Paolo Basso, Simone Caffè, Alaeddine Fatnassi

Geotechnical Engineers

Roberto Pedone, Luca Buraschi

LEED AP

Fabrizio Tavaroli, Eva Raggi

MEP

Diego Rattazzi, Fabio Mantelli, Andrea Guerra

Roads and Parkings

Nunzio Picchio, Andrea Marengo

Environmet

Pierluigi Guiso

H&S

Federico Barabino

Security

Giovanni Napoli, Davide Zanardi

## Legal

Avv. Luigi Cocchi

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## 1 INTRODUCTION

Ravenna Civitas Cruise Port (RCCP) is a public and private shared company having being granted a concession to build and operate the new Cruise Terminal facility located in the port of Ravenna.

The facility will comprise:

- Roads and parking for the accessibility of cruise client and citizens wishing to visit the accessible areas of the port
- Terminal building, aimed for check in and drop off of cruise clients
- Gangway (“passerella”), aimed to connect the Terminal to the Passenger PBB
- PBB, connecting the Gangway to the Cruise Ships calling at the port of Ravenna.

**This document is part of the tender package for the provision of 3 (three) PBB units.** It is a technical specification to be used as reference input for bidding, designing, building and commissioning these systems.

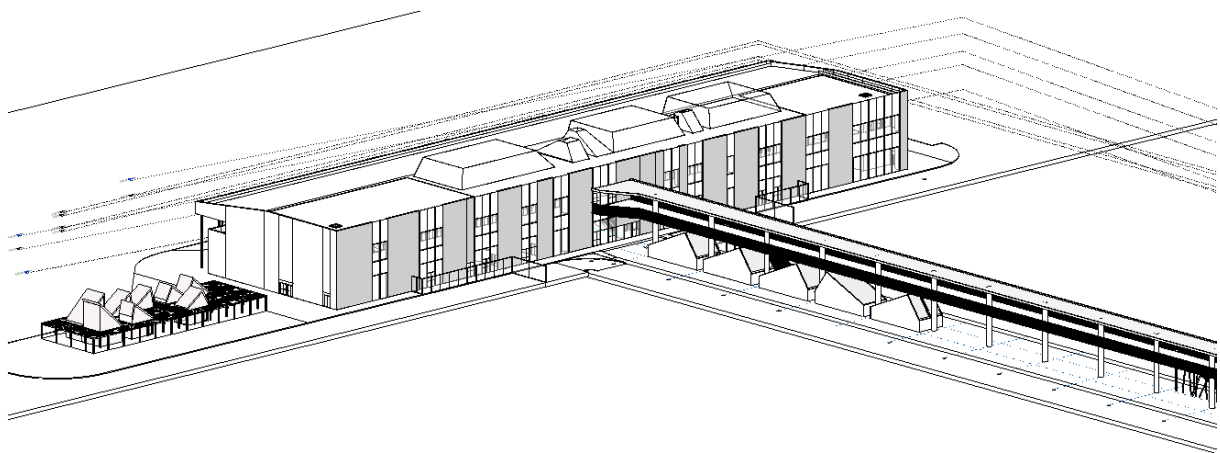


Figure: Terminal and Gangway

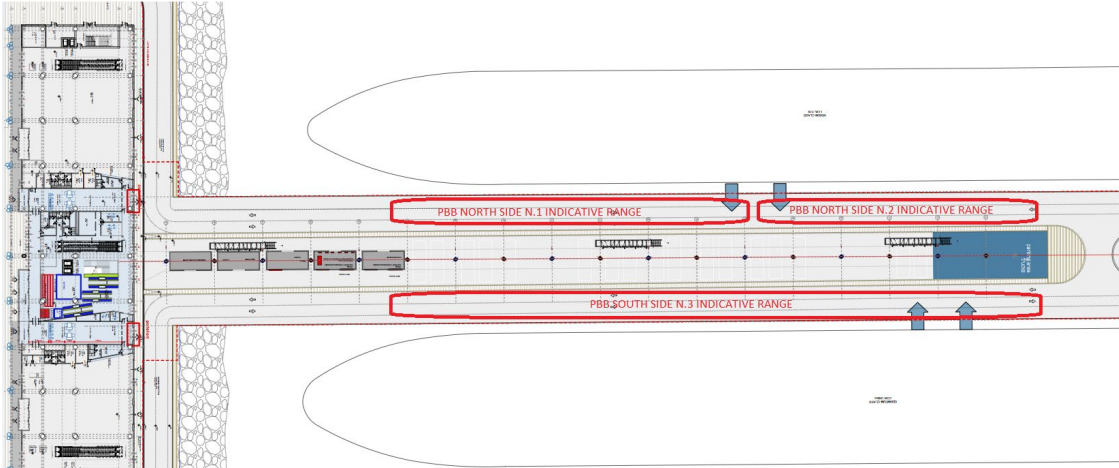



Figure: Aerial view



## 2 TECHNICAL SPECIFICATION

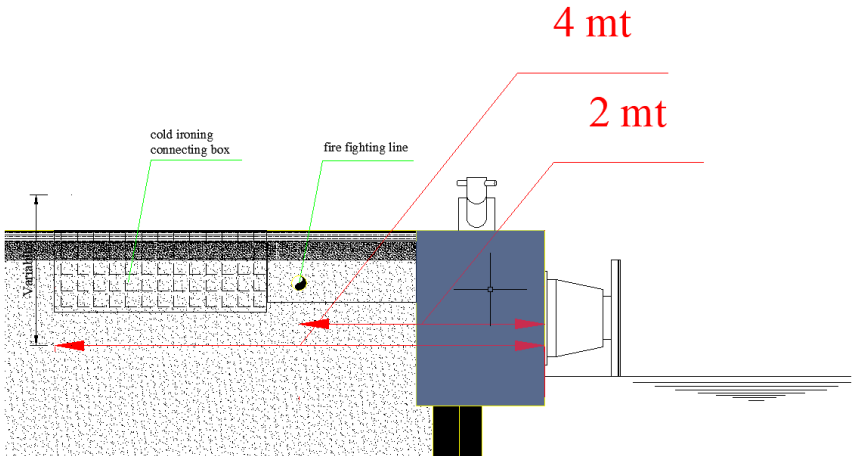
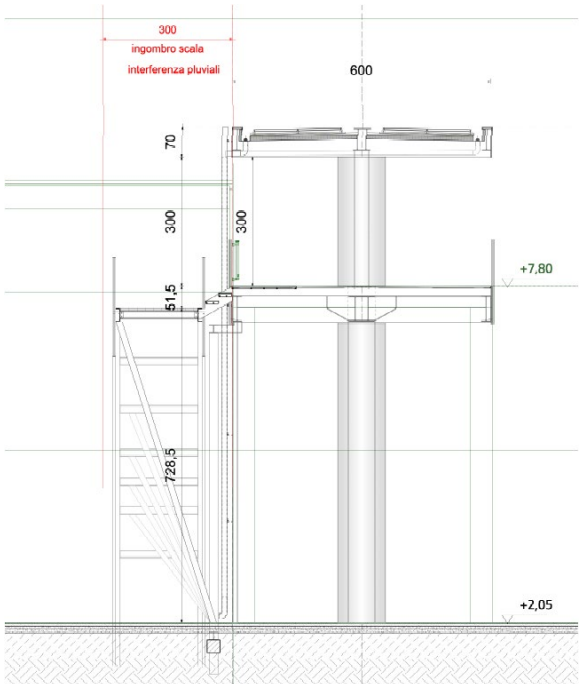
### 2.1 GENERAL REQUIREMENTS

Item	Description
1	<p>PBB Contractor shall provide three (3) high quality mobile elevating passenger boarding bridges attached to the elevated walkway to vessels berthing at the pier and all associated structures, systems, controls, lifts, and equipment needed for their use, including busbars and electrical panel, tie downs, safety and backup systems.</p> <p>Two PBBs will be installed for the South berth and one for the North berth, or viceversa (to be confirmed).</p> <p>Pier is 300 m long and 40 m wide.</p>  
2	Maximum 6,000 passengers per day.

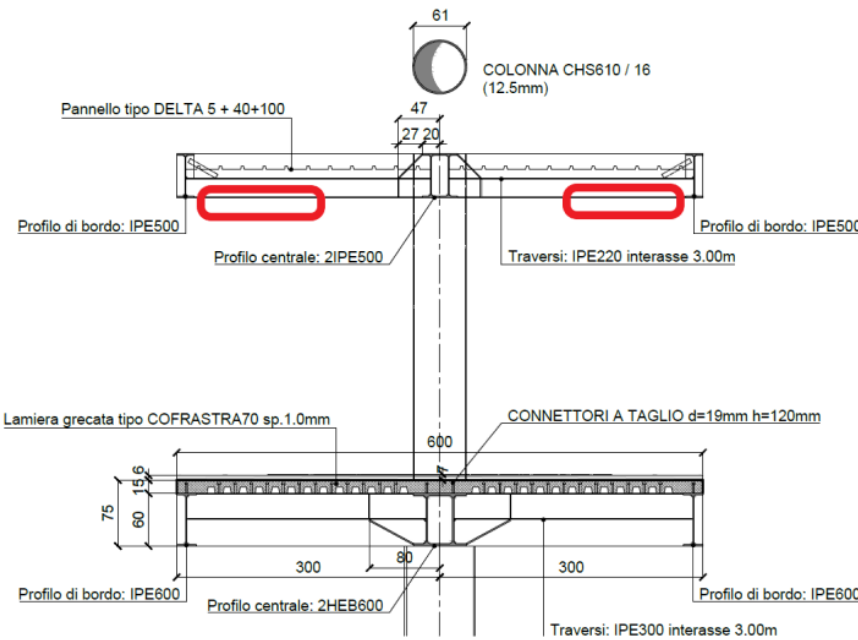
## Technical Specification PBB Passenger Boarding Bridge

3	Rubber wheels (not on rails).
4	Flexibility to allow boarding of passengers for a variety of vessels from different cruise lines. (Elevation range between +4m to +14m above the pier level)
5	It is desired that the proposed gangways aesthetics are aligned with the elevated walkway design using high quality materials.
6	Metal and or glass finishing preferably
7	No glazing or windows on finger sides. Removable protection in case of heavy rain.
8	Sustainable design. Select methods, materials, and equipment to provide an environmentally and operationally sustainable system.
9	Promote cost efficiency and strive for a design that adheres to a conservative budget.
10	Minimum design life 25 years
11	Bird Protection (option)
12	Glazing with UV protection (option)
13	Anti Storm System – Anchorage (option)
14	Anti Storm System - Brake System (option)
15	On line Monitoring (option)
16	External CCTV (option)
17	Auxiliary Generator (option)
18	Wireless remote control (option)
19	LED lighting (option)

## 2.2 PHYSICAL CONSTRAINTS

Item	Description
1	PBB shall allow at least one truck circulation on pier, preferably two simultaneously.
2	<p>PBB shall avoid any interference with cold ironing connection box and fire fighting hydrants (along sea side). The next picture represents a possible size of the connecting boxes that will be present on the lateral side of the pier. These connecting boxes are still under design but it is very unlikely that they will be able to carry the load of the PBB, while they will be specified to hold the load of a truck.</p> 
3	<p>The gangway fire staircase on northern side of pier is on the side of the corridor due to various functional and aesthetical reasons.</p> 

## Technical Specification PBB Passenger Boarding Bridge

	<p>For this reason the PBB bridge has to pass over for a maximum of 3000 mm and it will be necessary to fold back temporarily the handrail of the fire staircase during the lateral movement of the bridge.</p> <p><u>Alternatively</u> the PBB will have a telescopic bridge capable to retract 3000 mm to avoid interference with fire staircase and its handrail. This second choice is largely preferable but may require to solve other dimensional constraints.</p>
4	<p>PBB shall be powered with (preferably) busbar. This equipment shall be included in the scope of work of the PBB vendor, together with the PBB electrical supply panel to busbar. The connecting points on gangway roof and the location of the electrical PBB panel will be determined in the Gangway, in collaboration with the local design team.</p> <p>Busbar must remain off grid when the PBB is not operational and unreachable from pedestrians walking on the corridor.</p>  <p>Power from the pier can be used as alternative in case the roof configuration is not possible.</p>
5	Max allowable pier loads: 6 tons/sqm
6	Distance between the perpendicular pier edge / elevated walkway edge is 17 m.
7	Passengers board from the elevated covered walkway (Elevation above the pier level +10.65m, 6m (W), 250m (L)).
8	Max allowable pier loads: 6 tons/sqm



### 3 SERVICE LEVEL

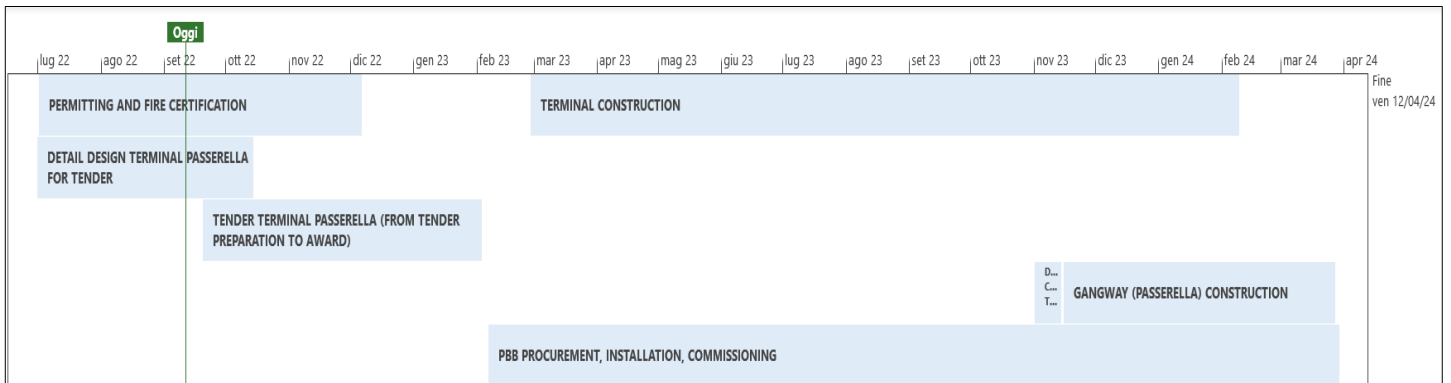
Item	Description
1	At least one truck circulation on pier, preferably two
2	All design and engineering shall be done by appropriately licensed persons. All structures and other work supplied by PBB Contractor must comply with all required building code standards.
3	On site review of existing site conditions, familiarization and incorporation of the terminal architecture and engineering as required for final system design and shop drawings. Coordinate all elements with project Architect team.
4	Erection shall be by Factory Trained Personnel: the PBB Contractor shall use factory trained personnel for gangway erection, with a minimum experience of five (5) years in the installation of this type of equipment.
5	PBB Contractor to coordinate the necessary labor for erection and provide all requirements for the proper unloading and erection of each gangway system.
6	PBB Contractor to provide technical representative and service personnel during the installation of the PBB to assure a proper installation. This representative shall also be available to the Owner at no charge on delivery of the unit and shall be on call for a timely response at no charge, within 8 hours for a period of ninety days after each gangway is officially used for inaugural cruise ship operations. This is to ensure adequate and reliable field service support to correct any and all equipment failures that normally occur during the initial operating period.
7	The PBB shall be warranted to perform to the design function for a minimum period of 5 years from the date of final acceptance by the Owner.
8	PBB Contractor shall maintain, for furnishing to the job site within 24 hours, an adequate inventory of all proprietary or vendor fabricated or modified parts, including long lead time items for routine maintenance of the unit. All stock shall be maintained, whether or not the unit is in current production, for a period of ten (10) years from the date the last unit is manufactured.
9	Defects Liability Period Maintenance Service: Beginning at Equipment Acceptance by the Owner for Beneficial Use, provide 24 months of full maintenance service by skilled, competent employees of the PBB Contractor. This will include monthly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning and adjusting as required for proper operation at rated speeds and capacities. It is required to use identical parts and supplies as used in the manufacture and installation of original equipment.

## 4 SCHEDULE

Essential requirement is the successful completion of commissioning of the PBB before end of March 2024.

Design and Installation shall be performed in strict coordination with the Gangway design team, the Constructor of Terminal and Gangway and the Director of Construction representing the RCCP and the local Port Authority.

Construction schedule shall consider the available space in the pier and the parallel execution of the gangway. For this reason the pre-assembled PBB modules should be preferably supplied from the sea due to complex accessibility from roads and logistic on pier.



## 5 REFERENCE DOCUMENTS

The following documents are available as input to the PBB design phase:

Item	Description
RAV PE-H1-Relazione geotecnica	Geotechnical parameter on berth
RAV PE-H8-Planimetria generale_Progetto	General layout of the concession areas (design phase) including roads and parking
RAV PE-H1-Relazione sugli aspetti di viabilità/mobilità	General layout of the concession areas (construciotn phase) including temporary roads for accessibility to the pier
RAV PE-H11-Piano terra Banchina - corpi illuminanti	Light design pier, describing position of external lights and their type
RAV PE-H16-Dettaglio Passerella	Architectural details passerella (gangway) describing position of landing floor and ways to implement the electrical busbar
RAV PE-H16-Dettaglio Scala passerella	Architectural details describing the fire staircases from passerella (gangway)
RAV PE-H24-Impianti Meccanici Banchina Planimetria e Sezione	Layout and cross section of underground lines in the pier (gravity and pressurized lines)
RAV PE-H24-Distribuzione Impianti elettrici - Banchina Planimetria generale	Power and data cable distribution in the pier
RAV PE-H24-Impianto F.M. - Passerella copertura Planimetria generale	Power and data cable distribution in the gangway (passerella) with predisposition for the electrical panel dedicated to PBB
RAV PE-H24-Impianto rete dati e telefono - Banchina Planimetria generale	Power and data cable distribution in the gangway (passerella) with ways to connect data network to the PBB bridge from the walking level of the gangway
RAV PE-H24-Impianto VIDEOSORV- Passerella Planimetria generale	Videosurveillance of gangway (passerella)
RAV PE-H2-Relazione del progetto di prevenzione incendi	Fire fighting report under approval of fire brigades with description of all fire safety provisions for the gangway and the terminal
RAV PE-H4-Piano della Sicurezza	Healt & Safety Report with section dedicated to PBB (integrations are needed after the PBB design phase)
RAV PE-H1-Relazione idrologica e idraulica	Hydrological report with a description of risks connected to flooding and weather from sea

## Client



## Design Team



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