

JANUARY 2018
WATER EMERGENCY TRANSPORTATION AUTHORITY (WETA)

ALAMEDA MAIN STREET FERRY TERMINAL

FACILITY CONDITION ASSESSMENT



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1 Executive Summary

COWI, along with Water Emergency Transportation Authority (WETA), performed a Facility Assessment Condition investigation of the Alameda Main Street Ferry Terminal on January 17, 2018, in accordance with the National Transit Database (NTD) for the Federal Transit Administration (FTA) in order to fulfill the reporting requirements for the Transit Asset Management Performance targets.

The facility, which is privately owned by WETA, is located on the north side of the island of Alameda, along the Oakland Inner Harbor. The ferry terminal is oriented in a general east-west direction with the landside at the southern end of the pier.

The overall assessment for the Alameda Main Street Ferry Terminal was derived by using Method 2 Alternative outlined in the FTA Facility Condition Assessment Electronic Guidebook, issued to WETA via email on November 20, 2017. Based on Method 2, the overall rating for the Alameda Main Street Facility has been logged as 3.2

2 Introduction

2.1 Objectives

COWI was retained by WETA to perform a condition assessment of the Main Street Ferry Terminal Facility. The purpose of this assessment is to determine the overall condition for each of the main components of the facility using a scale grading system. The overall condition has been derived from the assessment of the condition of individual components of the facility.

The scope of this investigation included the Site (main parking lot, O-lot, passenger waiting area and public restroom), Bridge Structure (bridge structure and approach slab), Gangway, Float, Electrical and Mechanical Components, see Figure 2-1.

The following detailed objectives were defined for this condition assessment report:

- Identify major components.
- Rate all major components.
- Provide detailed assessment ratings logs.

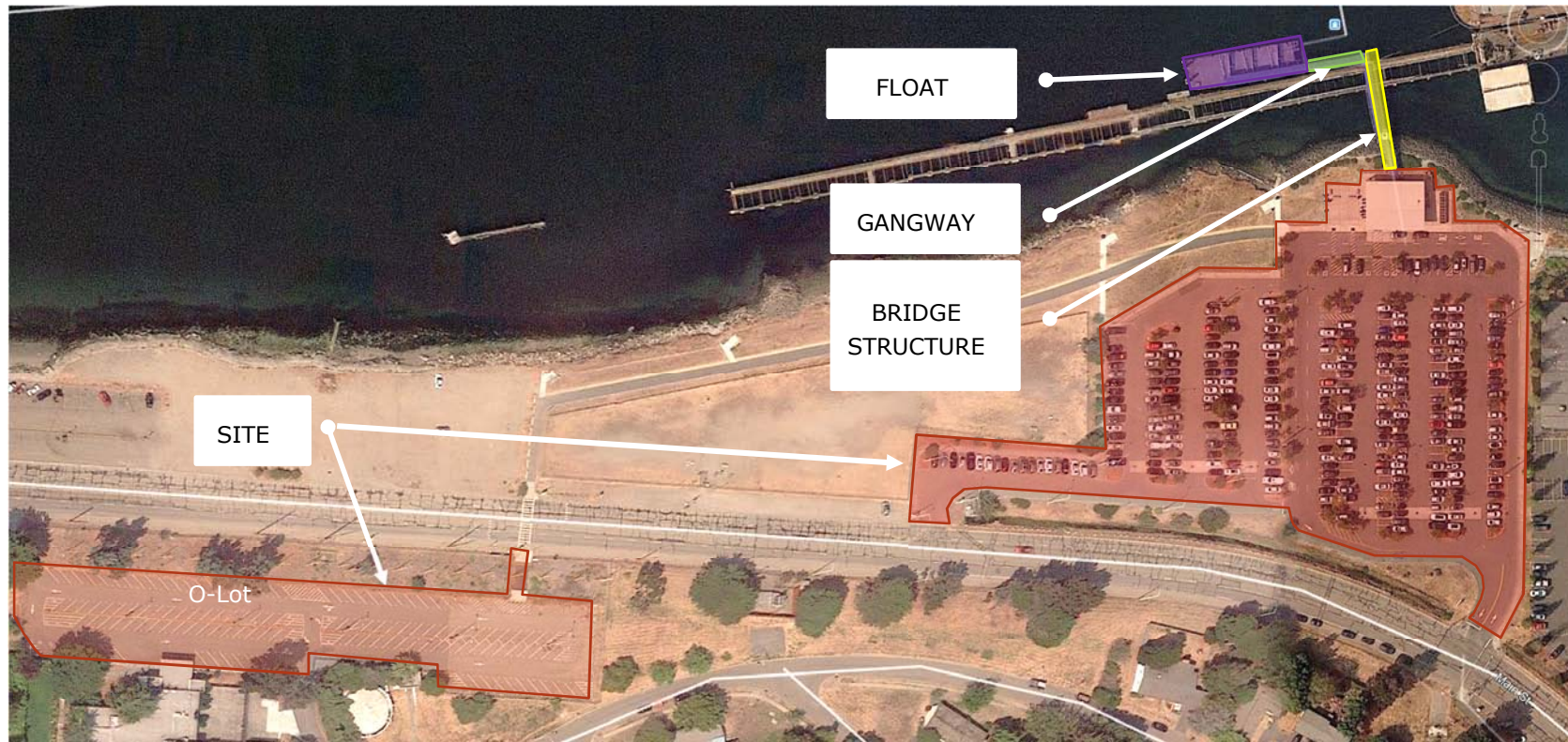


Figure 2-1: Google Image for Alameda Main Street Ferry Terminal - Facility Limits

2.1.1 Site

The site is composed of two parking lots, a passenger waiting facility and public restrooms. The main parking lot is limited to 324 parking spots while the O-Lot provides an additional 121 parking spots. The site is also composed of a passenger covered area with bike lockers and uncovered bike racks.

2.1.2 Approach Slab and Bridge Structure

The concrete approach consists of an 8 foot wide by 6 inch thick concrete slab-on-grade. The 24 foot long concrete approach slab extends from the landside terminal building to the bridge structure abutment. The approach has guardrails and covered with a blue fabric awning.

The bridge structure extends approximately 100 feet north and provides access to the gangway and ramps leading to the float. The bridge structure originally was supported by a concrete abutment and timber pile bents spaced at 20 foot centers. Two longitudinal steel beams were added to support the timber and steel composite beams. The longitudinal steel beams span approximately 57 feet from an onshore concrete abutment added in 2007 to the existing craneway concrete girder at the northern end. The longitudinal steel beams are bolted to the side of craneway concrete girder.

The bridge structure is further supported by bearing against steel brackets at the locations where the bridge passes over the craneway concrete girders. On the northern side of the causeway the support for the bridge structure consists of a steel H-pile, steel beams, channels and pipes. The steel beams are connected to the H-pile and bolted to the face of the craneway concrete girder

The bridge structure consists of aluminum framing, 8 feet wide aluminum decking, steel guardrails and is covered by a cloth awning.

2.1.3 Gangway

The main gangway is an 8 feet wide aluminum element spanning 60 feet from the support at the bridge structure to a gangway landing support. The aluminum gangway is covered with a blue fabric awning. Transition plates are provided at the top and bottom of the gangway to provide smooth transition between structures.

The top of the gangway is connected to the steel support system by a central hinge and two wheels that allow movement of the gangway due to tides and waves at the float end, and is supported by a steel pile and frame bridge structure. The bottom of the gangway is supported by a steel frame system that is welded to the steel float. The gangway has rollers at its bottom which roll on channels that are part of the steel frame system.

2.1.4 Float

The ferry float is approximately 109 feet long by 35 feet wide with an approximate 46-inch free board. The float is held in place by 4-steel pipe piles and is fitted with rubber fenders in order to aid in vessel berthing. The float has fixed aluminum platform and adjustable platforms in order to provide ferry passenger access to the float.

2.1.5 Electrical and Mechanical Components

The electrical and mechanical components were visually inspected, and where applicable were turned on to ensure major components are in working order i.e., adjustable ramps on float were turned on to test out the range of motion. Restroom facilities were not access due to construction.

2.2 Assessment Methodology

The site assessment was conducted on January 17, 2018. COWI performed the visual assessment from land. A professional mechanical and electrical assessment was not part of the scope.

The facility major components were grouped in the following categories per FTA Facility Assessment Condition Guidebook:

- > Substructure
- > Shell
- > Interior
- > Conveyance
- > Plumbing
- > HVAC (if applicable)
- > Fire Protection
- > Electrical
- > Fare Collection (if applicable)
- > Site

Each major component was given a rating depicted in Table 2-1

Table 2-1: Assessment Rating Scores

Rating	Description
5: Excellent	New construction, no visible defects or damage.
4: Good	Minor improvements needed: Subcomponents are more than five years old but are functioning without issue under routine

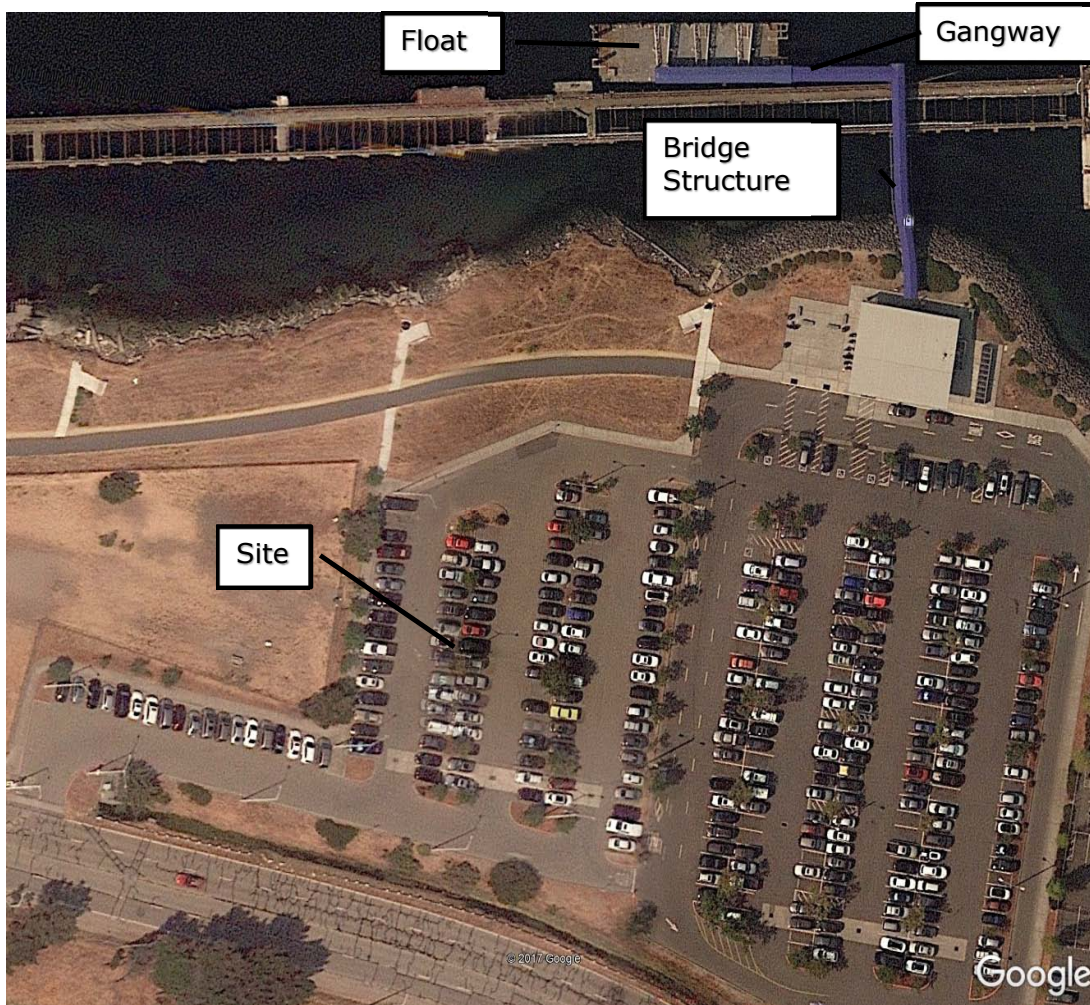
	maintenance. Only minor superficial damage or defect. No sagging, corrosion, cracking, shifting or leaks.
3: Adequate	Repairs are needed: Components or subcomponents show signs of minor cracking, drainage issues, sagging, corrosion, or shifting. They are cosmetically "fair", but functioning as designed.
2: Marginal	Components or sub-components show signs of significant cracking, sagging, swelling, corrosion, leaks or shifting. Significant repairs are needed, but there currently does not appear to be a safety issue on any single subcomponent.
1: Poor	Components or sub-components have critical defects affecting function, health or safety. They are in visible poor condition and must be replaced rather than repaired. They have exceeded their useful life and warrant structural review

The computation of the overall facility component condition was calculated using Alternative 2 outlined in the FTA Facility Condition Assessment Guidebook. The mean value across the components was used as the overall rating for that category. Each category rating was then used in overall rating mean.

3 Facility Specific Rating Tables Logs

Passenger Facility Condition Assessment Form

Inspection Date Wednesday 1/17/2018
On Site Personnel Kevin Donnelly, Jessica Rivas, Masaaki Ward
Facility Name Alameda Main Street Ferry Terminal
Address/Location 2990 Main Street, Alameda CA



Rating	Description
5: Excellent	New construction, no visible defects or damage.
4: Good	Minor improvement needed; only shows superficial damage or defect with no functional impact. Issues are addressed via routine maintenance.
3: Adequate	Repairs are needed; components show signs of corrosion and damage. They are cosmetically "fair", but functioning as intended under maintenance schedule.
2: Marginal	Component or sub-components need replacement or extensive repair. More substantial part replacement and/or repair is frequent. There currently does not appear to be any safety issue. Maintenance schedule is interrupted by more frequent breakdowns.
1: Poor	Component or sub-components have critical defects affecting function. They are in visibly poor condition and must be replaced rather than repaired. They have exceeded their useful life and warrant structural review. Maintenance schedule is reactive rather than proactive due to frequent malfunction.

ID No.	Component Description	Percent of Asset Quantity by Condition					Comments
		5	4	3	2	1	
		Excellent	Good	Adequate	Marginal	Poor	
Substructure							
1	Passenger Waiting Area/Restrooms						
	Typical Concrete Slab		4			Hairline cracks	
2	Bridge and Approach Slab						
	Approach Slab		4				
	Bridge Support		4				
	Timber Cap Beams						
	Timber Piles		4				
	W-Beams			3		Heavy rust on extreme ends and where timber beam bears	
	Steel Seat on Crainway			3		Missing bolt/nuts/washers	
	H-Pile and Frame			3		Bolts require retorquing on crane gantry/require coating	
	Cross Bracing			3		Bolts require retorquing on crane gantry/require coating	
3	Gangway						
	W-Beam			3		Bolts require retorquing on crane gantry/require coating	
	Pin/Plate Connection				2	Pin Plate and Plate corroding/bent	
	Wheel roler plate				2	Plate block bent	
Mean Value of Components = 3.2							
Shell							
1	Site						
	Columns		4				
	Frame		4				
	Truss		4				
	Roof		4				
	Bike Racks		4				
	Restrooms						
	Floors					Exterior of facility recently painted. Internal assessment not conducted due to locked doors per current construction work.	
	Exterior Walls		4				
	Exterior Doors			3			
	Paint Finish						
	Appurtenances						
	Paint Finish			3		Paint on structure showing discoloration	
	Displays		4				
	Benches (concrete/timber)		4				
2	Bridge and Approach Slab						
	Walking Surface				2	Striping worn off/replace tape	
	Handrails		4				
	Canopy Post		4				
	Canopy Awning		4				

ID No.	Component Description	Percent of Asset Quantity by Condition					Comments
		5	4	3	2	1	
		Excellent	Good	Adequate	Marginal	Poor	
	<i>Appurtenances</i>						
	Paint Finish		4				
	Signs		4				
	Door			3			Rust on hinges and face of door panel
	Bollard				2		
3	Gangway						
	Landing/Gangway Connection				2		Cotter pin on wheel base to be replaced
	Frame		4				
	Rails		4				
	Walking Surface		4				
	Transition Plates				2		Non-skid coating worn off
	Solar Panel		4				
4	Float						
	Fixed Ramps		4				
	Walking surface		4				
	Rails		4				
	Adjustable Ramps		4				
	Throw Ramps		4				
	Float Walking Surface				2		West end of float top heavily corroded
	Piles			3			Visible corrosion
	Pile Collars				2		Heavy corrosion/ponding on collars - need drainage holes
	Pile collar plates				2		Heavy corrosion on plate - section loss
	Fenders			3			Deformation - replace in near future
	Fender brackets				2		Heavy corrosion
	Ladders				2		Heavy corrosion
Mean Value of Components = 3.4							
Plumbing							
1	Site						
	Pipe support						Closed off, unable to inspect due to current work being done.
	FW						
	CW						
	PSW						
2	Bridge and Approach Slab						
	Pipe support		4				

ID No.	Component Description	Percent of Asset Quantity by Condition					Comments
		5	4	3	2	1	
		Excellent	Good	Adequate	Marginal	Poor	
	FW				2		Pipe hole rupture - releasing water/mist on Wbeam
	CW		4				
Mean Value of Components = 3.3							
Fire Protection							
4	Float						
	Fire extinguisher				2		Fire extinguishers expired/replacement needed
Mean Value of Components = 2.0							
Electrical							
1	Passenger Waiting Area						
	LED Sign		4				
	Lights		4				
	Fenced Closed of fixtures		4				
2	Bridge Structure Approach Slab						
	Surface Mounted Fixtures						
	Conduits			3			Cover for conduit missing
	Clipper Card Readers		4				
3	Gangway						
	Side Lights			3			
	Cord Lights			3			
4	Float						
	Lighting		4				
	Razor Equipment		4				
Mean Value of Components =3.7							
Site							
	Parking Lot		4				
	Signage		4				
	Markings				2		West end parking lines faded
	O-LOT						
	Parking lot		4				
	Signage		4				
	Markings		4				
Mean Value of Components =3.7							

Total Mean Value Components for Main Street Facility 3.2

4 Site Specific Photograph Rating Sample

Pictures within this section are sample of the rating assigned to the components.


Photo	Rating	Component: Shell
#9398 01-17-2018	4	Description: Passenger Waiting Area Shell
		


Photo	Rating	Component: Shell
#9397 01-17-2018	3	Description: Bridge Structure
		


Photo	Rating	Component: Shell
#9373 01-17-2018	2	Description: Float Walking Surface, Pile Collar
		

Photo	Rating	Component: Shell
#9372 01-17-2018	1	Description: Fender Bracket Plate
