

# **City of Manhattan Beach Public Works Department**

## **Strand Stairs Rehabilitation**

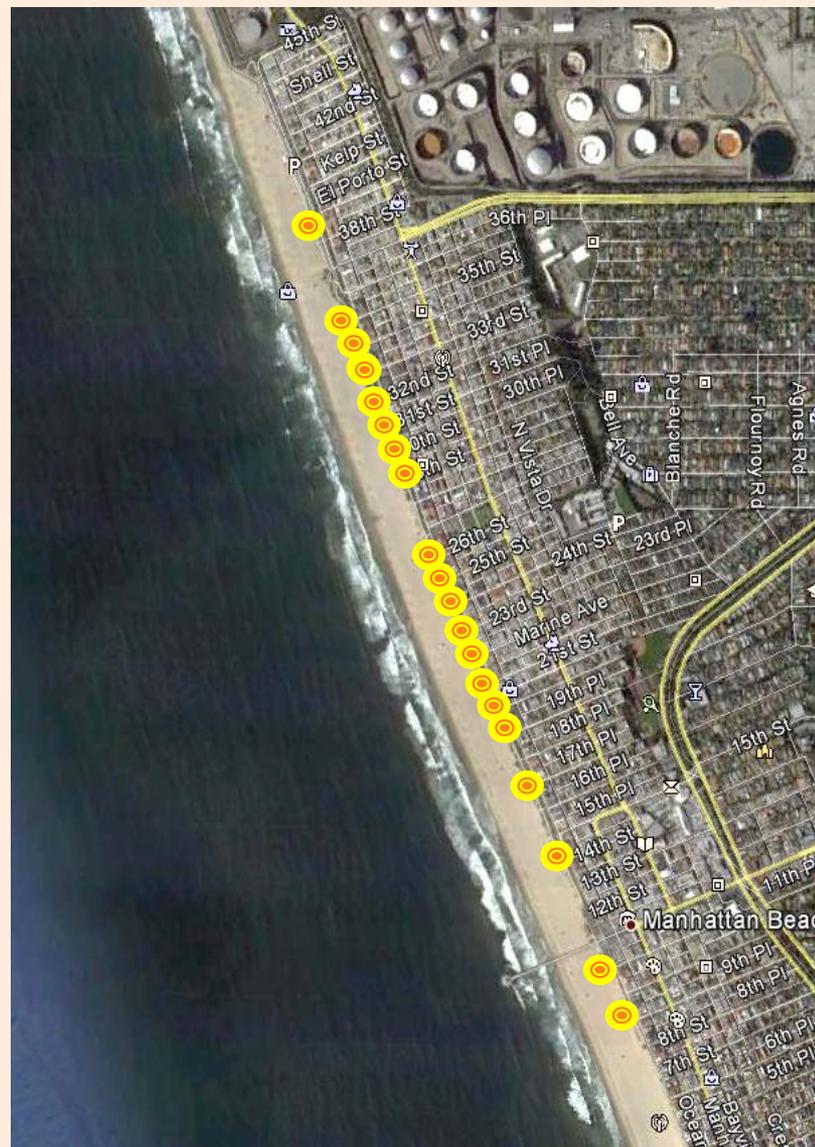
**City Council Meeting  
October 6, 2015**



# Scope of Work

- ▶ Removal and replacement of stairs at 20 locations
- ▶ Aesthetic treatments of retaining walls at 5 locations (Completed)

	Stairs to Be Rehabilitated
1	Rosecrans Ave (W)
2	35th Street (R & R)
3	34th Street
4	33rd Street (R & R)
5	32nd Street (R & R)
6	31st Street
7	30th Street (R & R)
8	29th Street (R & R)
9	26th Street
10	25th Street (R & R)
11	24th Street
12	23rd Street
13	Marine Avenue
14	21st Street (R & R)
15	20th Street (W)
16	18th Street (W)
17	16th Street (W)
18	14th Street (W)
19	10th Street (R & R)
20	8th Street



# Past Key City Council Action

- ▶ December 3, 2013:
  - Directed to separate the project into two (stairs and retaining wall aesthetic treatment)
  - Decided to replace balustrades “in-kind”
  - Selected enhanced rail design
- ▶ February 25, 2014, selected aesthetic treatment for retaining walls and provided comments
- ▶ April 15, 2014, approved final esthetic treatment for retaining walls
- ▶ March 4, 2015, awarded construction contract for the Retaining Walls Enhancement Project (\$79,400)
  - Project Completed



# Past Key City Council Action

- ▶ In November 2014 and July 2015: Rejected bids for Strand Stairs project
  - ▶ 2 bids received each time (cost too high)
- ▶ September 15, 2015,
  - ▶ Approved use of additional federal funds to fully fund the project (STPL - \$481,249)
  - ▶ Directed staff to present the project design at tonight's meeting



# **Approved Stair Design**

## **(December 3, 2013)**





Rebuild concrete balustrade and add anodized aluminum ADA-compliant handrails (CBC 1133B.4.2)

Applicable Locations:  
8<sup>th</sup> Street  
14<sup>th</sup> Street  
16<sup>th</sup> Street  
18<sup>th</sup> Street  
20<sup>th</sup> Street  
26<sup>th</sup> Street

(Typical Narrow Stairway Balustrade Shown)

# PROPOSED STRAND STAIRS IMPROVEMENTS





Add anodized  
aluminum  
ADA-compliant  
handrails  
(CBC 1133B.4.2)

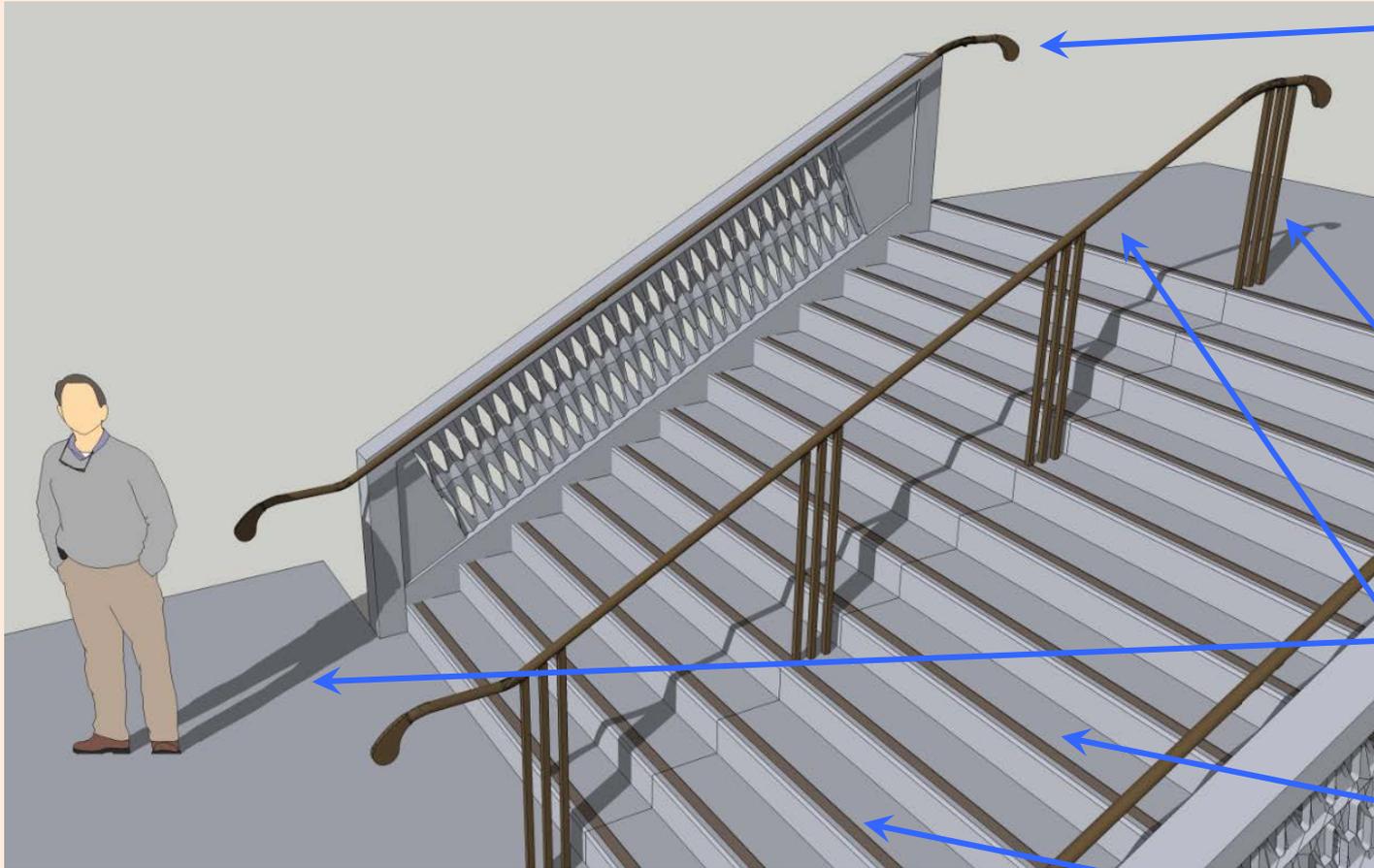
At locations where  
there are no existing  
concrete balustrades

Applicable Locations:  
10<sup>th</sup> Street  
21<sup>st</sup> Street  
23<sup>rd</sup> Street  
25<sup>th</sup> Street  
29<sup>th</sup> Street  
30<sup>th</sup> Street  
32<sup>nd</sup> Street  
33<sup>rd</sup> Street  
35<sup>th</sup> Street

(Typical Narrow Stairway without Balustrade Shown)

# PROPOSED STRAND STAIRS IMPROVEMENTS





Add anodized aluminum ADA-compliant handrails (CBC 1133B.4.2)

Side handrails anchored to new concrete balustrades

Center/ intermediate handrail must be added to wide staircases (CBC 1133B.4.1.1 / 1012.9)

Create level landings at top and bottom of all stairs (CBC 1102B)

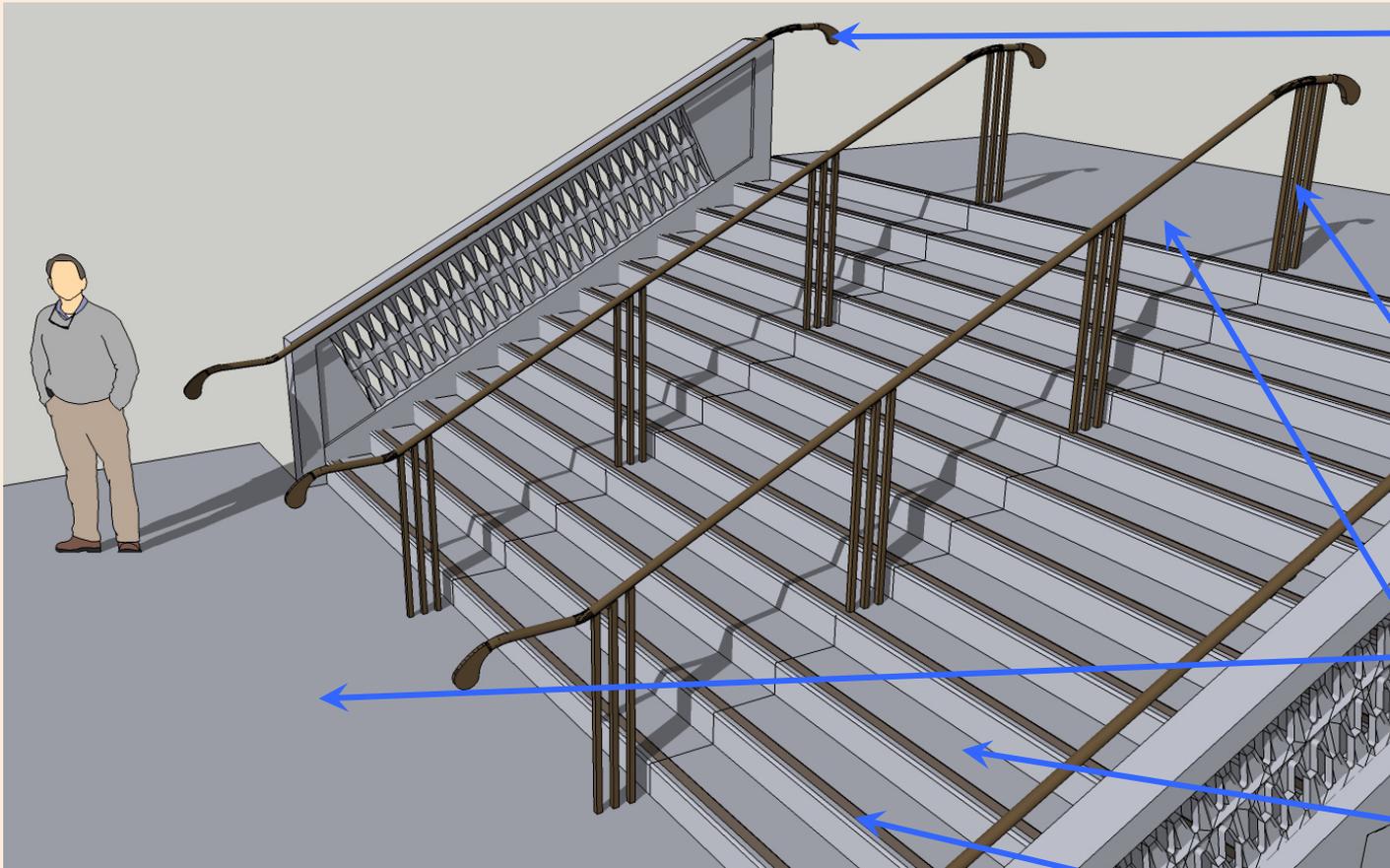
Repair tread damage (CBC 1133B.4.5.1)

Incorporate sandblasted warning strips (CBC 1133B.4.4)

(Typical Stairway Scenario Shown) Applicable Locations: Rosecrans Avenue  
 24<sup>th</sup> Street  
 31<sup>st</sup> Street  
 34<sup>th</sup> Street

# PROPOSED STRAND STAIRS IMPROVEMENTS





Add anodized aluminum ADA-compliant handrails (CBC 1133B.4.2)

Side handrails anchored to new concrete balustrades

(2) Center/intermediate handrails must be added to widest staircases

(CBC 1133B.4.1.1 / 1012.9)

Create level landings at top and bottom of all stairs

(CBC 1102B)

Repair tread damage (CBC 1133B.4.5.1)

Incorporate sandblasted warning strips (CBC 1133B.4.4)

(Typical Wide Stairway Scenario Shown)  
Applicable Location: Marine Avenue

# PROPOSED STRAND STAIRS IMPROVEMENTS



# Design Changes

## Center Rail

- ▶ Considered rail design changes to deter skateboarding on the rails
  - Cleats
  - “Bulging” the railing
- ▶ No change to final design

## Construction Specifications

- ▶ Changed casting methods for balustrades
- ▶ No change to final design



# Retaining Wall Enhancement Project



# Approved Retaining Wall Design (February 25, 2014)

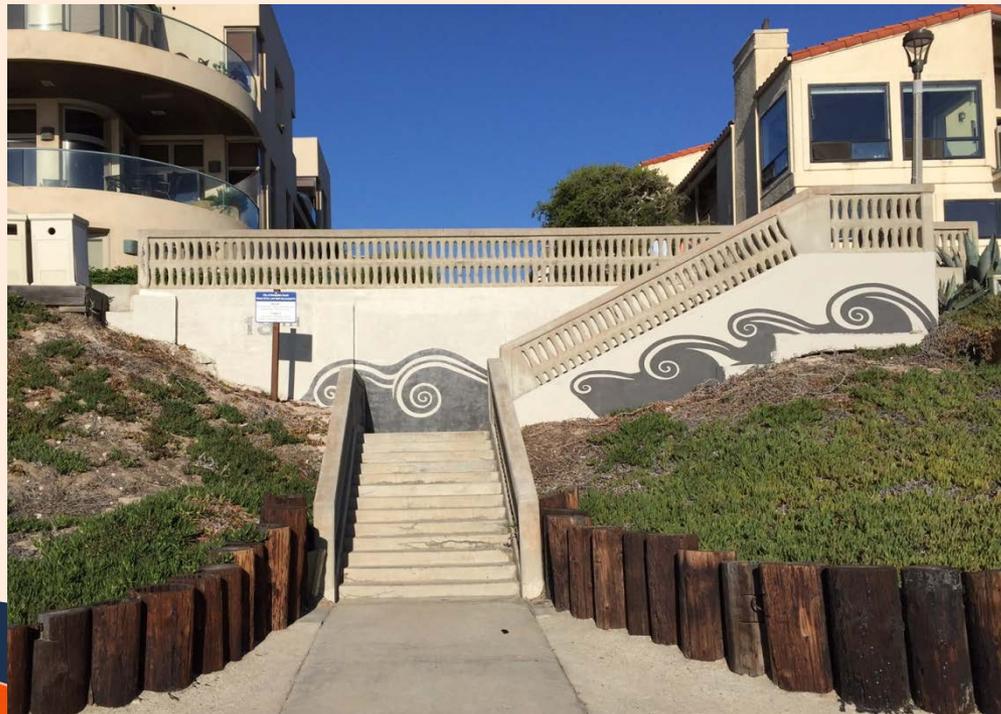


# 18<sup>th</sup> St.

BEFORE →



AFTER →



# Questions?

