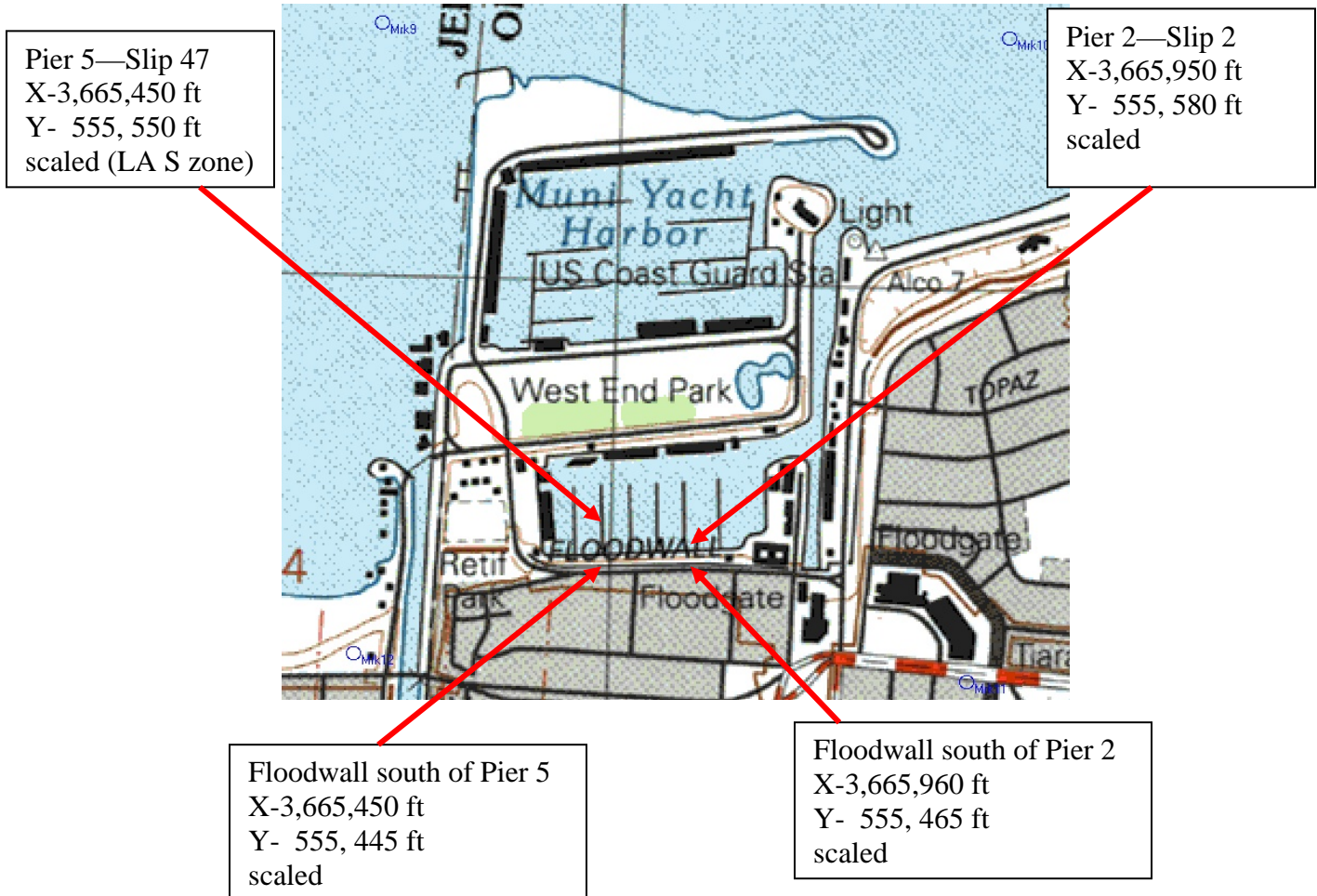DATE: 22 December 2005

MEMORANDUM FOR: Mr. Steve Maynord (ERDC/CHL)

FROM: Bill Bergen (HQUSACE/IPET Team 6)

SUBJECT: ORLEANS MARINA SURGE & HIGH WATER MARK ELEVATIONS

The following sheets contain Lake Pontchartrain surge elevations during the morning of 29 Aug 05. These points were marked by Maynord and Bergen on 15 Dec 05, based on logged visual observations by the owner of the vessel "Kaui Girl" who rode out Hurricane Katrina in the southerly basin of Orleans Marina (Pier 2—Slip 2).

Water surface elevation marks were surveyed by differential leveling on 16 & 22 Dec 05, by 3001, Inc. All elevations are referenced to the updated time dependent vertical datum for the New Orleans region—NAVD88 (2004.65). Horizontal locations of the marks are scaled.

Pier 5—Slip 47
X-3,665,450 ft
Y- 555, 550 ft
scaled (LA S zone)

Pier 2—Slip 2
X-3,665,950 ft
Y- 555, 580 ft
scaled

Floodwall south of Pier 5
X-3,665,450 ft
Y- 555, 445 ft
scaled

Floodwall south of Pier 2
X-3,665,960 ft
Y- 555, 465 ft
scaled

OM-01
TIME 1:30 AM
Bottom of catwalk 2x6 (Pier 2 Slip 2)

ELEVATION 2.97 FT NAVD88 (2004.65)

OM-02
TIME ? (between 1:30 AM and 4:00 AM?)
Top of 1st 2x12 step (Pier 2 Slip 2)

ELEVATION 3.73   FT NAVD88 (2004.65)

OM-03
TIME 4:00 AM
Top of Concrete Pile Cap (Pier 2 Slip 2)

ELEVATION 5.06   FT NAVD88 (2004.65)

OM-04
TIME 6:00 AM
Top of Concrete Pier (Pier 2 Slip 2)

ELEVATION 5.61   FT NAVD88 (2004.65)

OM-05
TIME 6:15 AM
Top of 1st Railing on Bulkhead (East of Pier 2)

ELEVATION 7.00   FT NAVD88 (2004.65)

1ST Rail (rod not on rail during photo)

OM-06
TIME 10:00 AM
Top Rail on Bulkhead (East of Pier 2)

ELEVATION 10.07   FT NAVD88 (2004.65)

Top Rail

OM-07
TIME 11:00 AM
Steel Column on Pier (Pier 2 Slip 2)

ELEVATION 11.91   FT NAVD88 (2004.65)

Mark

OM-08
TIME >11:00 AM (HWM Crest)
HWM determined by computing vessel lift to canopy during surge—comparing damage on
vessel transom which was lifted 9.6 ft up to damaged metal roof. Accuracy estimated at +/- 0.5
ft given uncertainty of damage references. (Location Pier 5 Slip 47 – west of Pier 2)
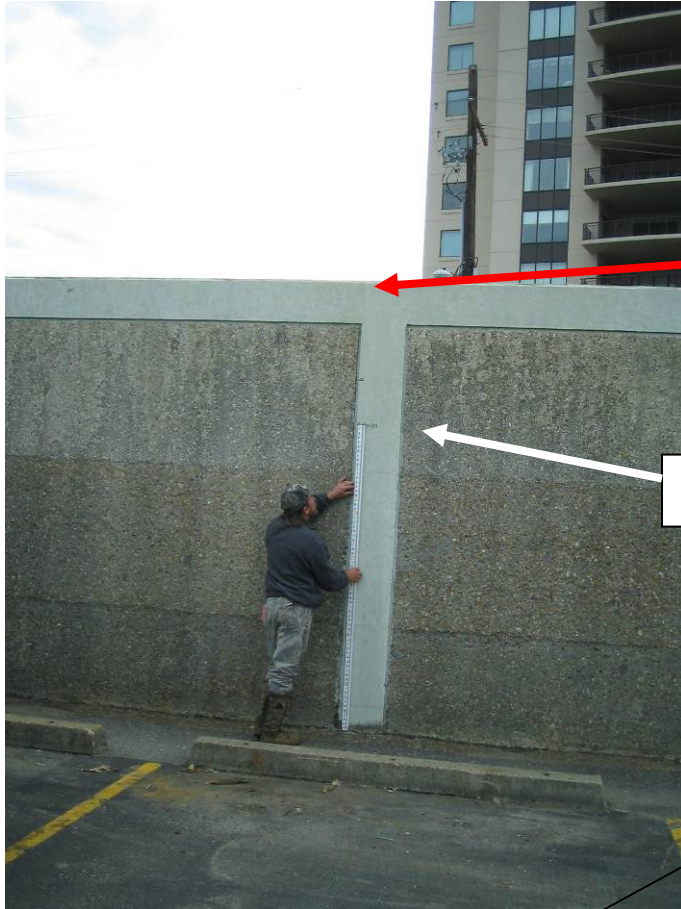

ELEVATION 9.81   FT NAVD88 (2004.65)

Damaged stern rail

OM-09
TIME >11:00 AM (HWM Crest)
E-W Floodwall directly south of Pier 2

TOP OF FLOODWALL ELEVATION
12.49 FT NAVD88 (2004.65)

OM-09 ELEVATION 9.18 FT   NAVD88 (2004.65)

Observer's estimate of top of wave action

Top of floodwall due south of Pier 5   12.52 feet.

(Used as check with prior MVN surveys of same floodwall ... checked to ±0.05 ft)