Attachment I

NED Planset

US Army Corps
of Engineers
San Francisco District

SOUTH SAN FRANCISCO BAY SHORELINE FLOOD RISK MANAGEMENT FEASIBILITY STUDY NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN

Santa Clara County

California

US Army Corps
Engineers
San Francisco District

Approved | Date | Description | Initial

Designed by: I. Z. | Date: 06/24/20. | Rev: XX
Drawn by: I. Z. | Checked by: XX | Design Code: XXX | Drawing Code: | Drawing Scale: -
Level: XX | Submitted by: I. Z. | Date: -

DEPARTMENT OF THE ARMY
D.P.
SACRAMENTO DISTRICT

HDR
HDR Engineering, Inc.
2379 GATEWAY OAKS
SUITE 200
SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT PLAN
SHEET

Sheet reference number:
G-01

UPDATE

GENERAL

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G-02 INDEX SHEET
G-03 OVERALL SITE PLAN

CIVIL

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C-02 PLAN AND PROFILE STA 10+00 TO 20+00
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C-05 PLAN AND PROFILE STA 40+00 TO 50+00
C-06 PLAN AND PROFILE STA 50+00 TO 60+00
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C-13 PLAN AND PROFILE STA 120+00 TO 130+00
C-14 PLAN AND PROFILE STA 130+00 TO 140+00
C-15 PLAN AND PROFILE STA 140+00 TO 150+00
C-16 PLAN AND PROFILE STA 150+00 TO 160+00
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D-07 WICK DRAIN DETAILS

SHORELINE PROJECT DATUMS

HORIZONTAL
- CALIFORNIA COORDINATE SYSTEM NAD83 ZONE III

VERTICAL
- NAVD88

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. ROSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Spec No: XX
Design File no: XXX
Drawing Code:
File name: C-01
Plot date:
Dwg size:
Rev. XX

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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95699-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
INDEX SHEET

Sheet reference number:
G-02

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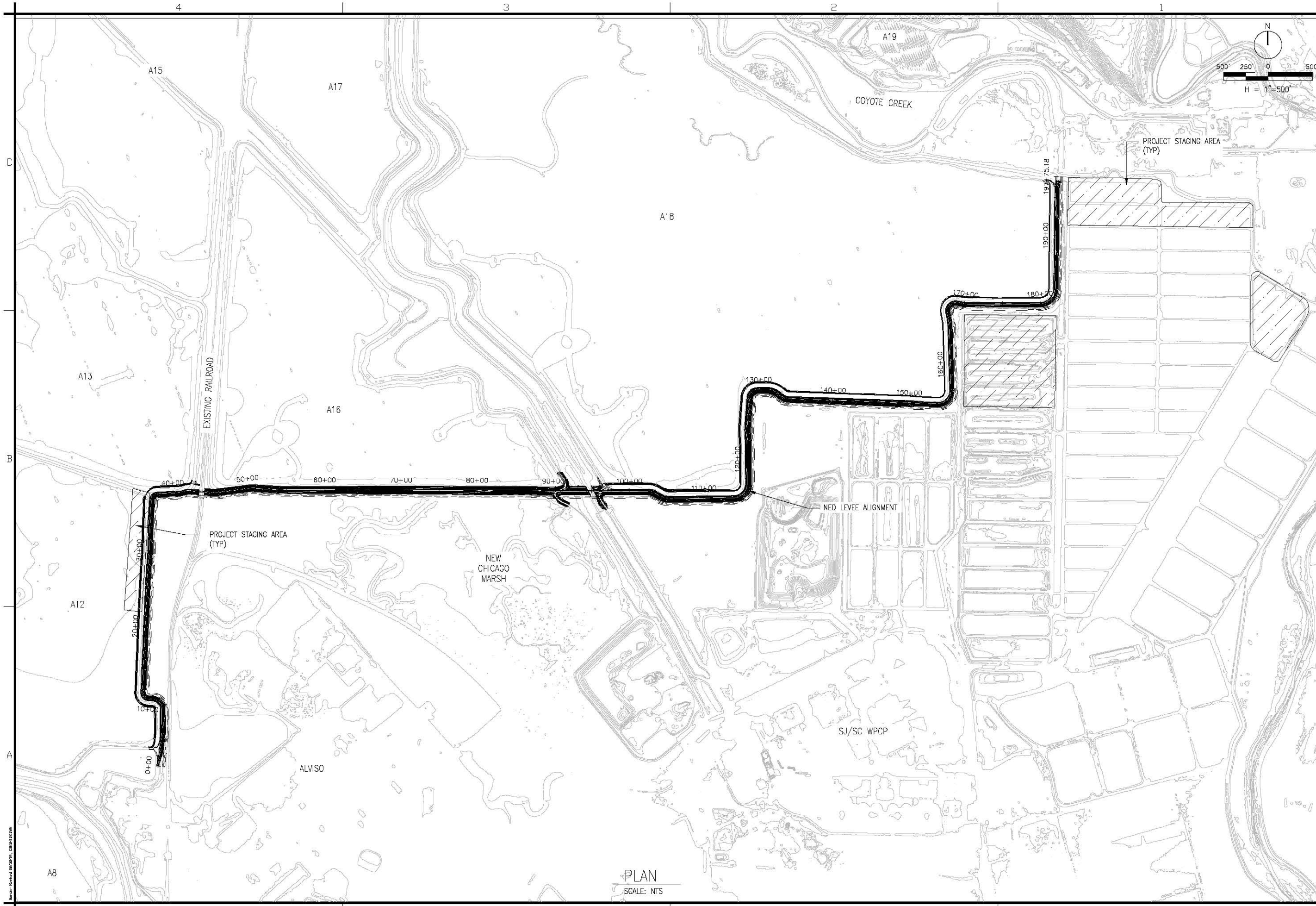
Border: Revised 08/30/04, DESCRIPTION



PLAN
SCALE: NTS

US Army Corps of Engineers
San Fransisco District

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OVERALL SITE PLAN

Sheet reference number:
G-03

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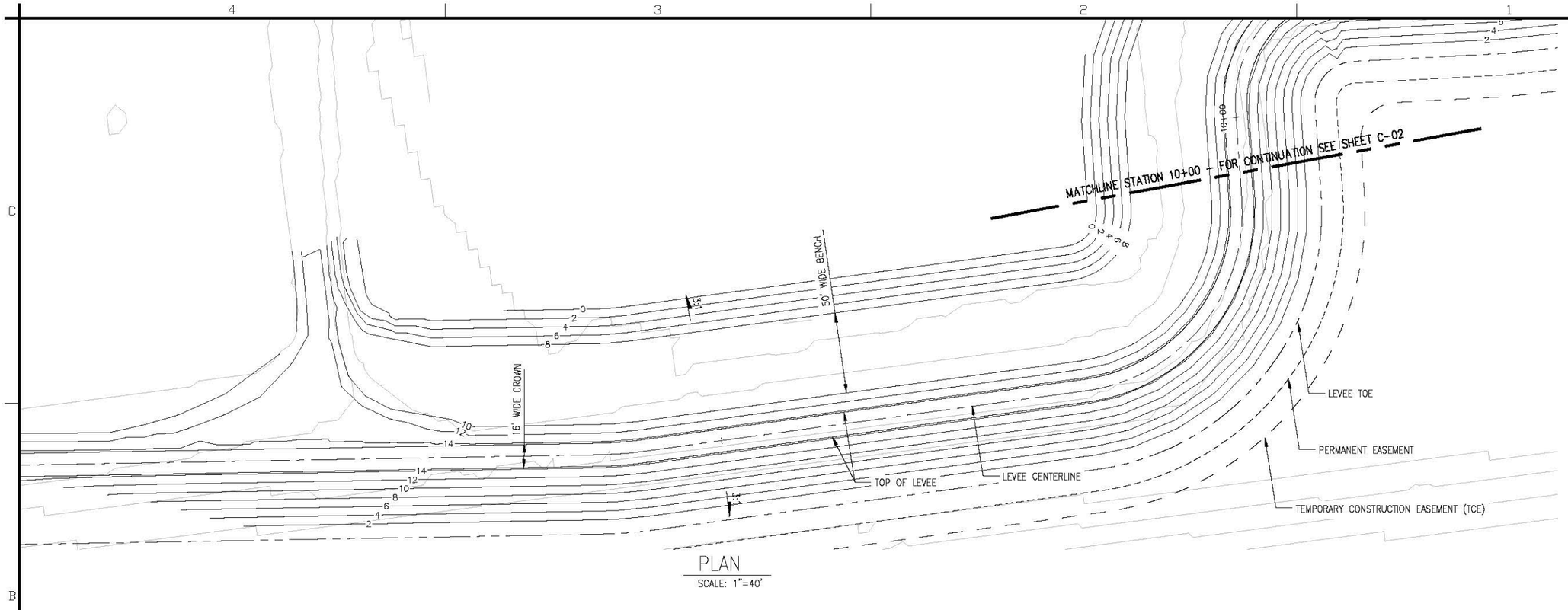

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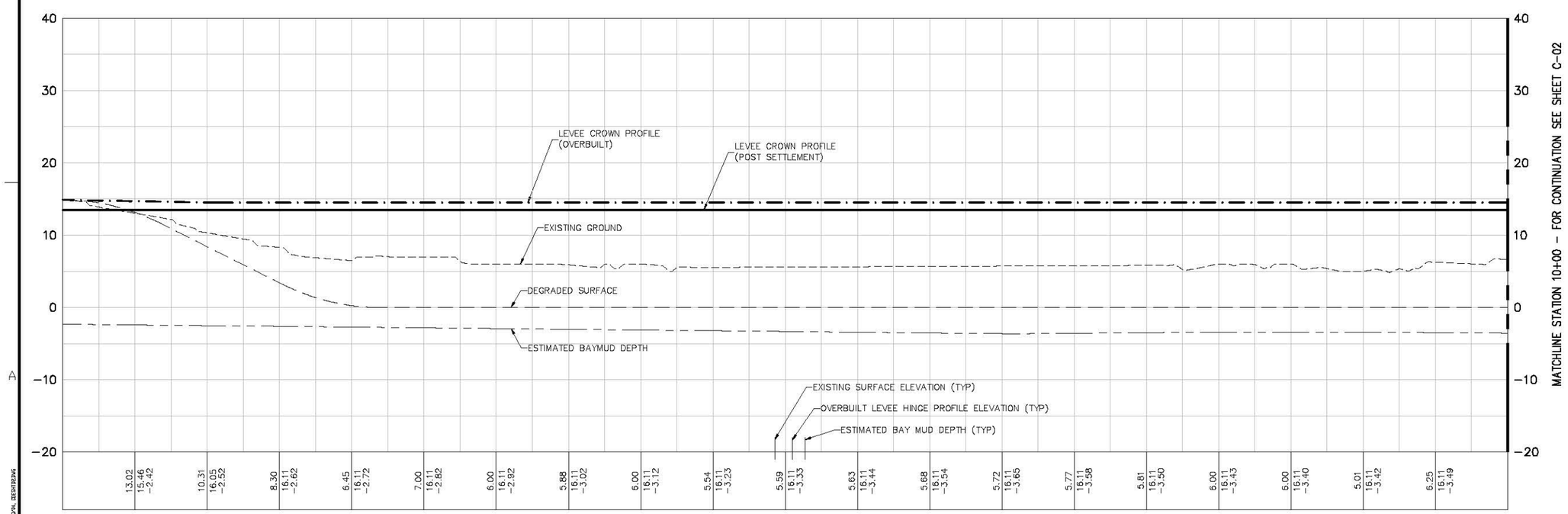

PROFILE

V: SCALE: 1"=5'

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San Fransisco District

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NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 0+00 TO STA 10+00

Sheet reference number:
C-01

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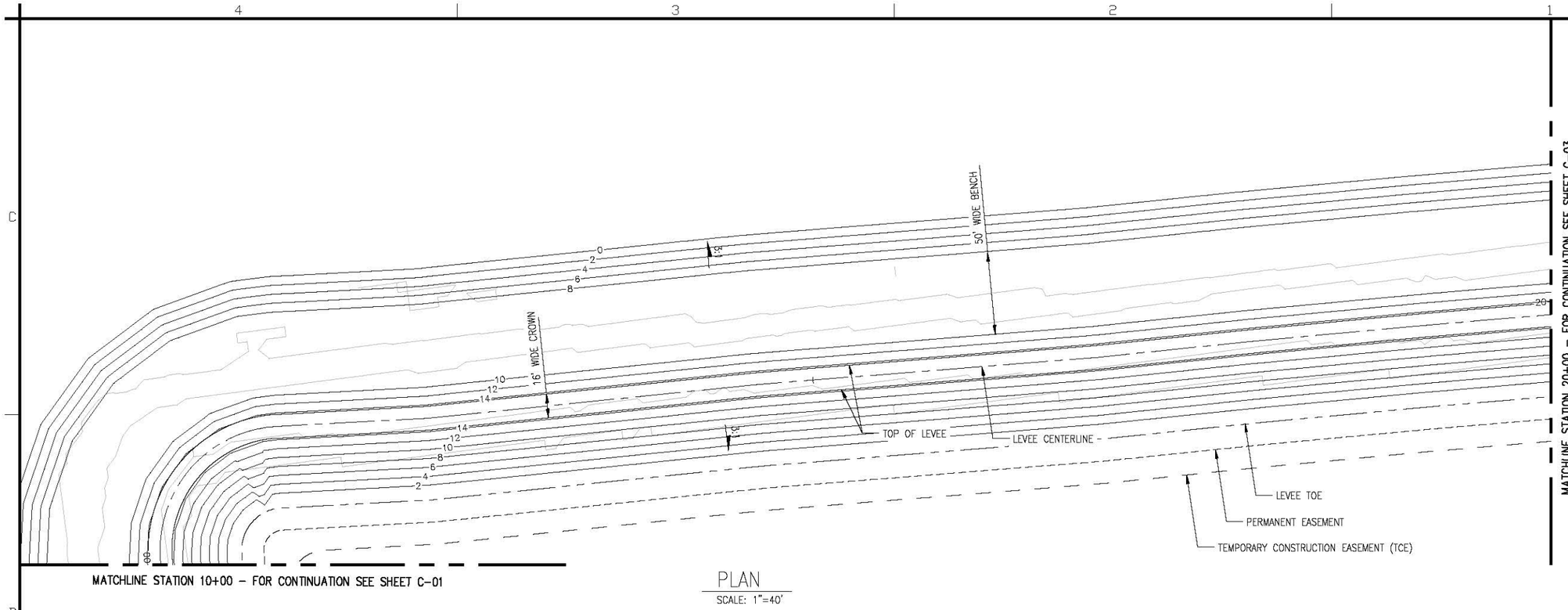

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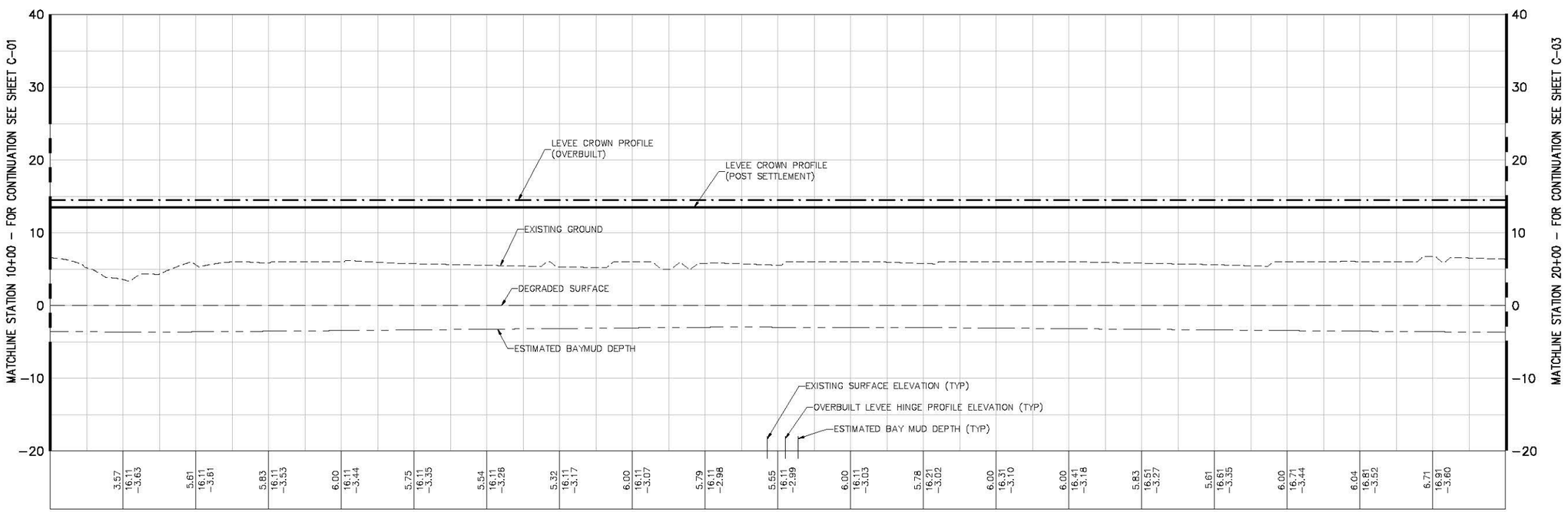

PROFILE

V: SCALE: 1"=5'

H = 1"=40'

V = 1"=5'

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PLAN AND PROFILE STA 10+00 TO STA 20+00

Sheet reference number:
C-02

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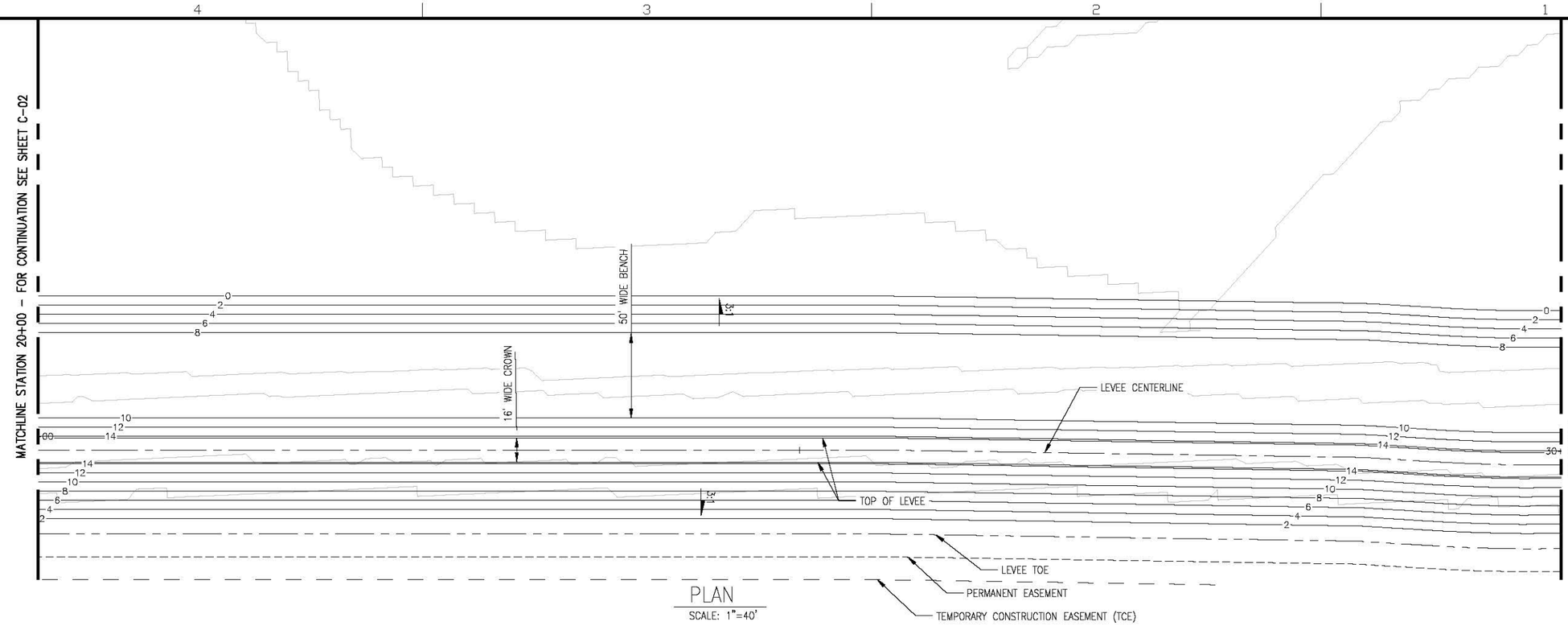

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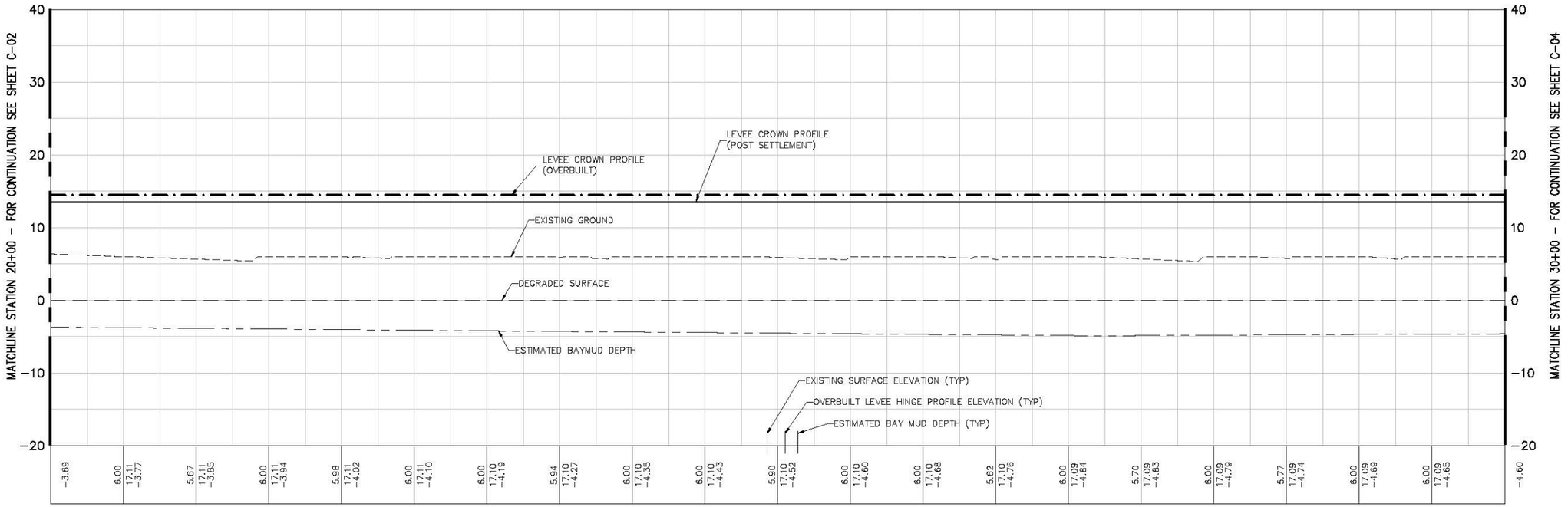

PROFILE

V: SCALE: 1"=5'

H = 1"=40'

V = 1"=5'

US Army Corps of Engineers
San Fransisco District

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SOUTH SAN FRANCISCO BAY SHORELINE
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NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 20+00 TO STA 30+00

Sheet reference number:
C-03

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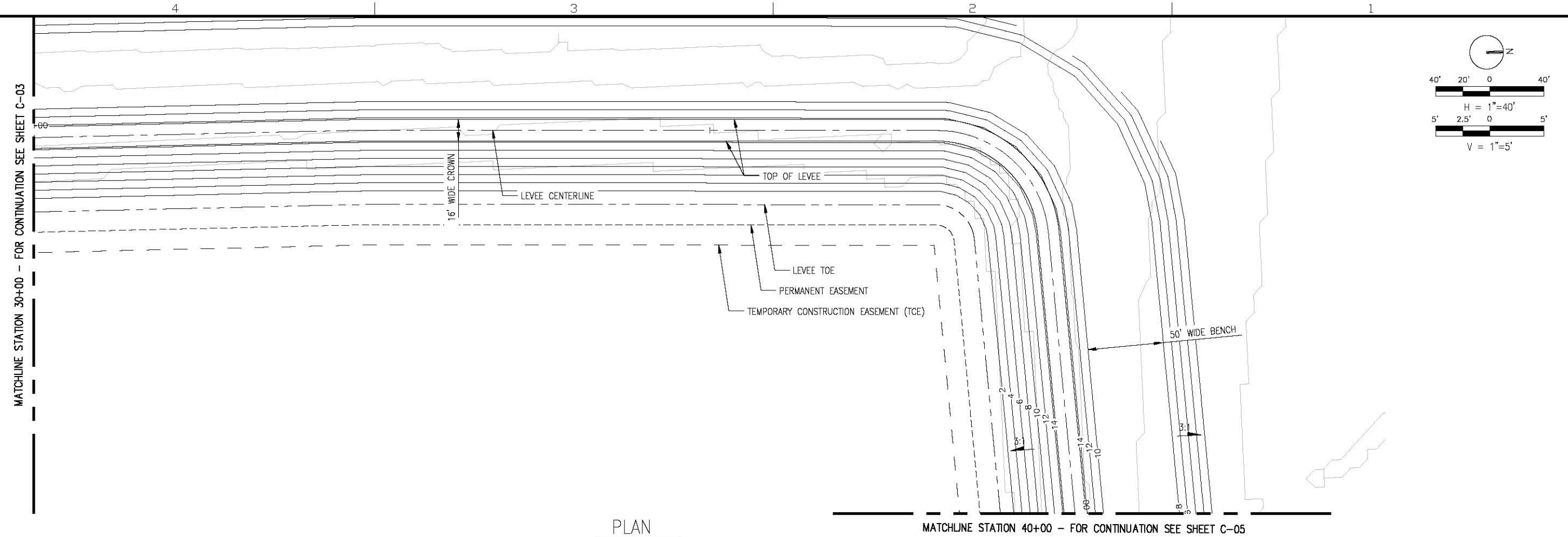

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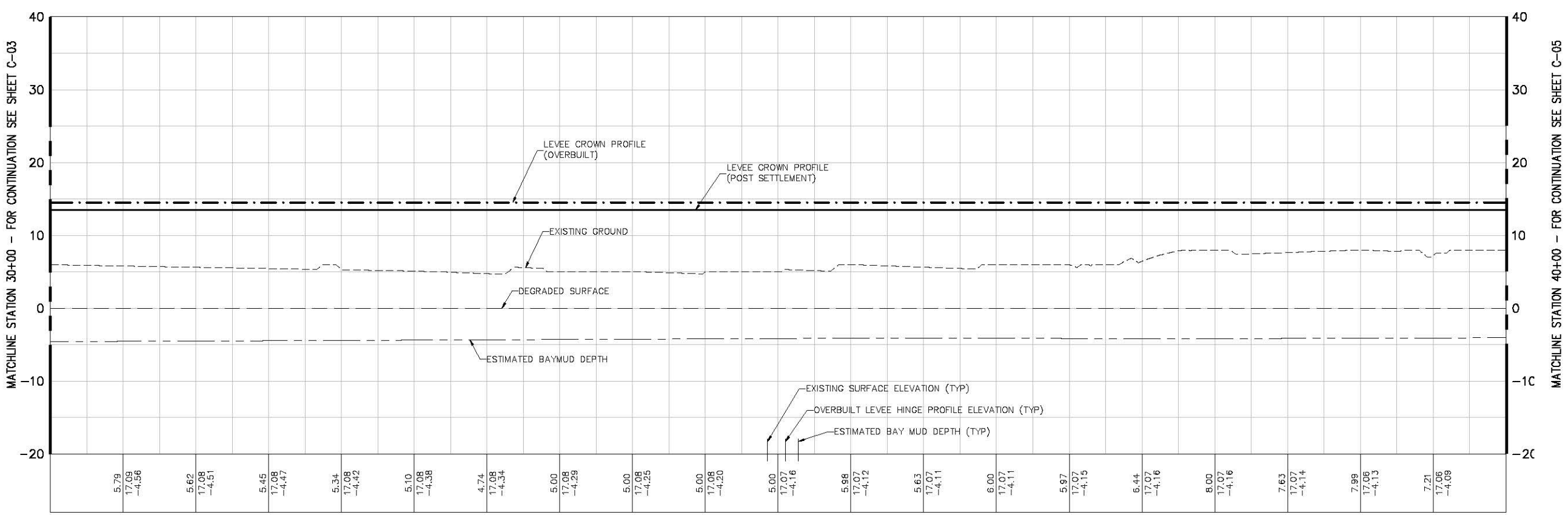

PROFILE

V: SCALE: 1"=5'

US Army Corps of Engineers
San Fransisco District

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Designed by: S. JIMENEZ
Dwn by: V. RUSSO
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Submitted by: S. JIMENEZ
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File name:
Plot date:
Dwg scale:
Rev: XX
C-01

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SOUTH SAN FRANCISCO BAY SHORELINE
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NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 30+00 TO STA 40+00

Sheet reference number:
C-04

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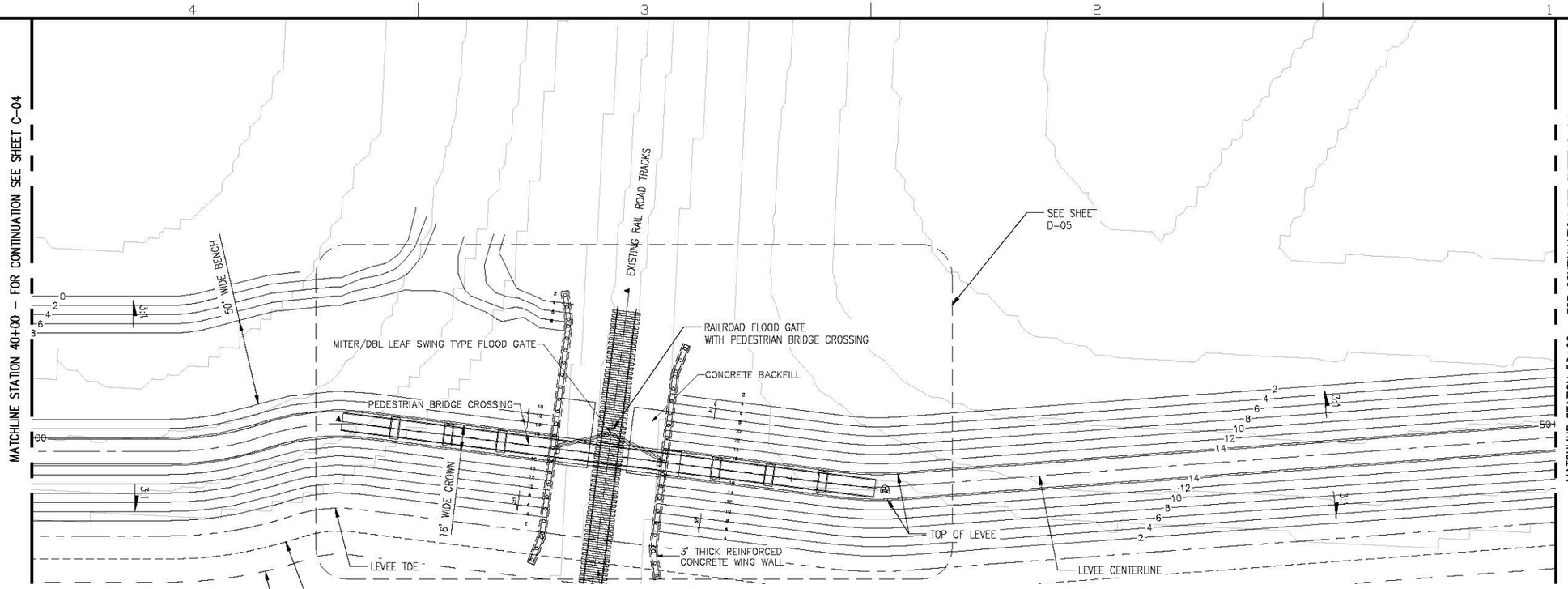
Server: Revised 08/20/14, 02:39:17 PM



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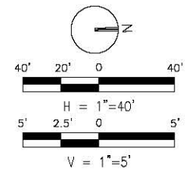

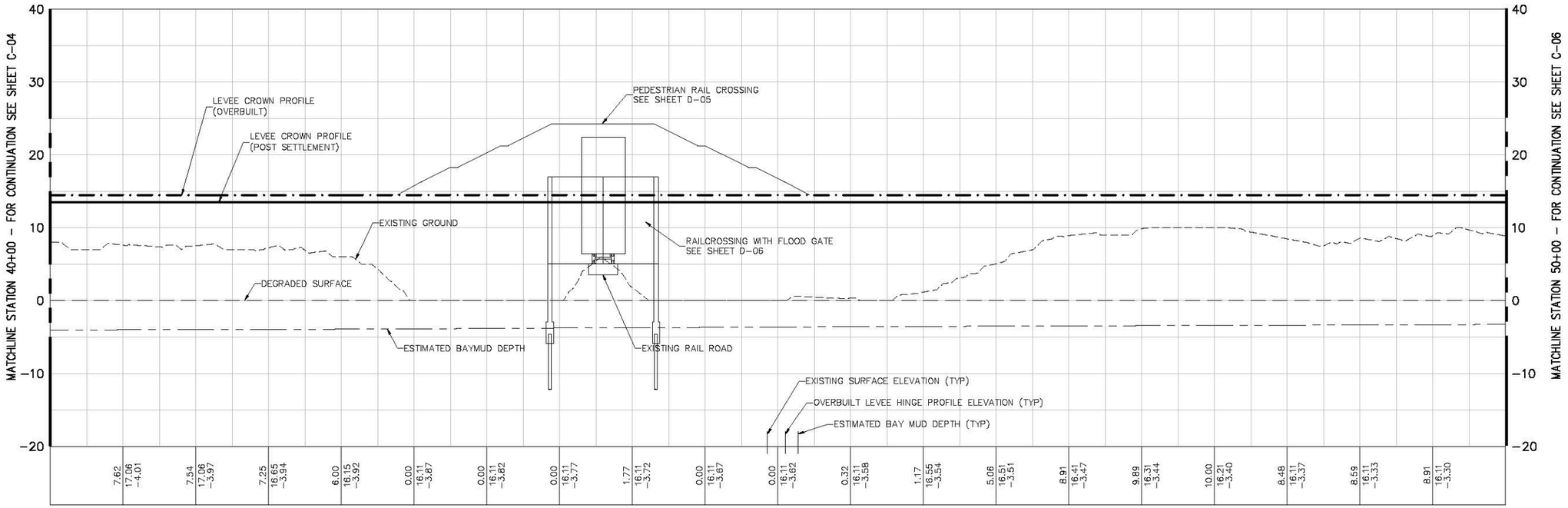

PROFILE

V: SCALE: 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. KUSCU
Spec No: XX
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Design File No: XXX
Drawing Code:
File name: C-01
Plot date:
Dwg scale:
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CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 40+00 TO STA 50+00

Sheet reference number:
C-05

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Border Revised 08/30/04, COESHT02.DWG

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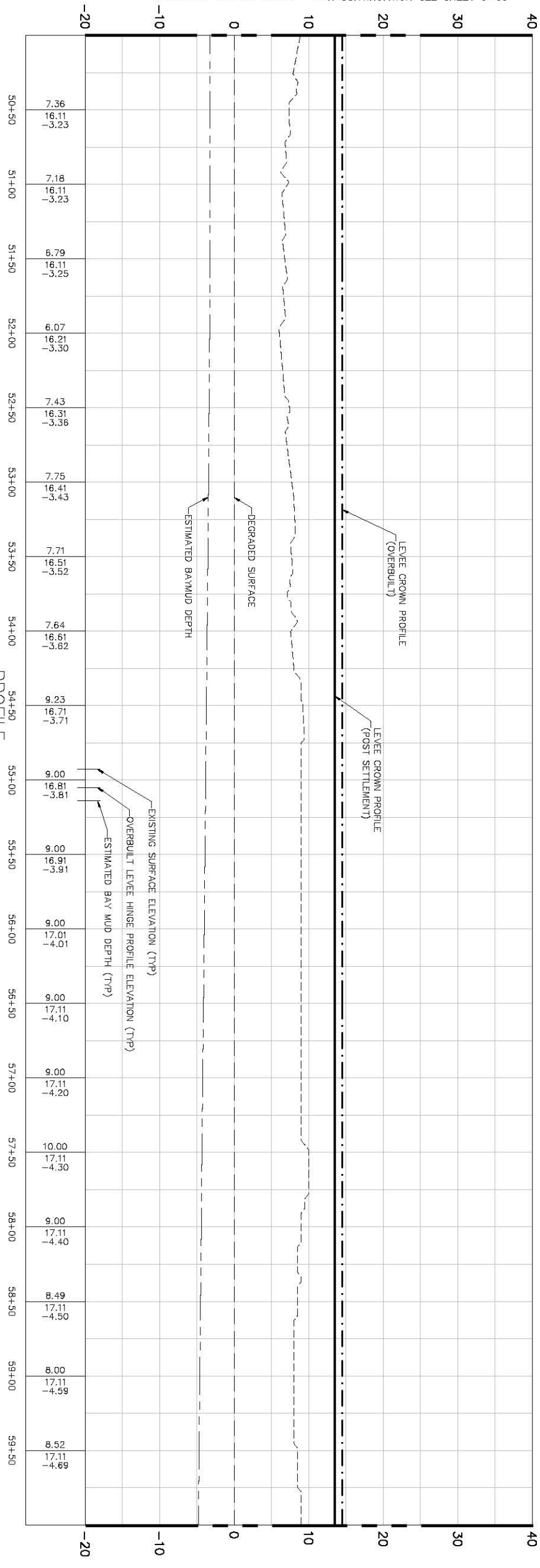
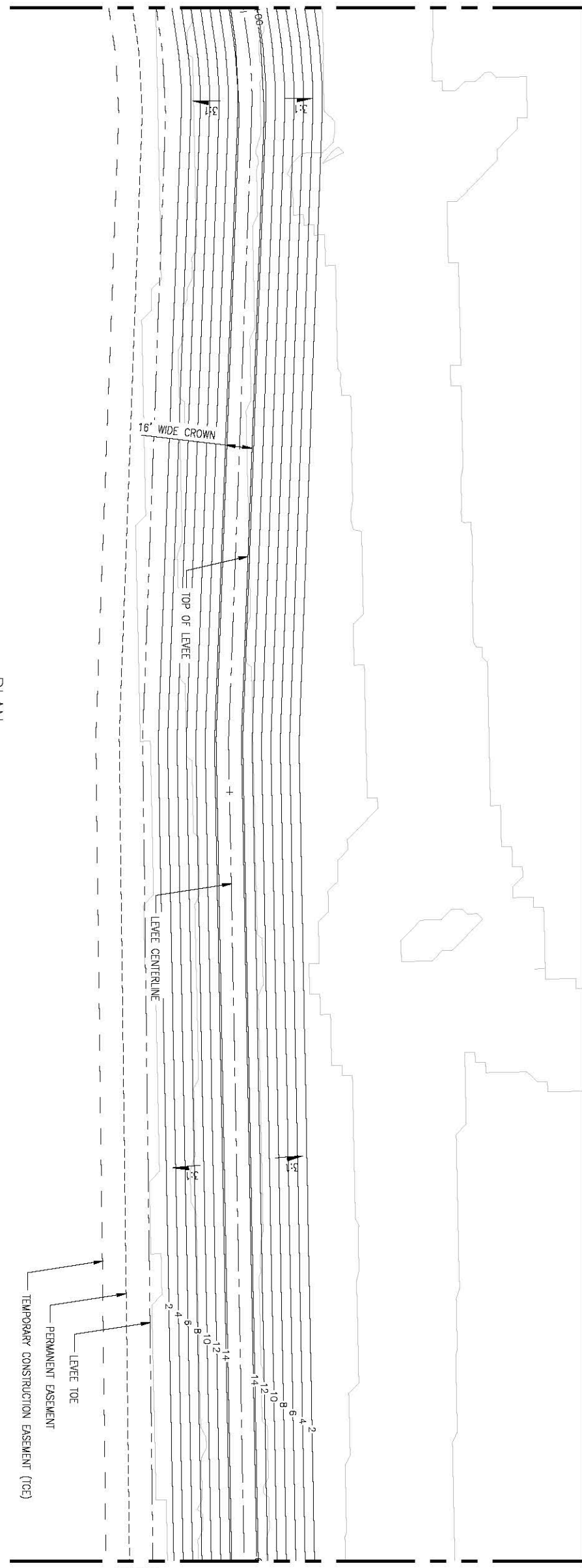


PROFILE
V: SCALE: 1"=5'

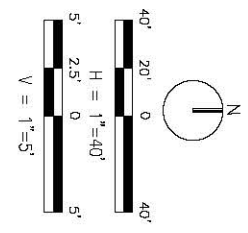
MATCHLINE STATION 60+00 – FOR CONTINUATION SEE SHEET C-07

MATCHLINE STATION 50+00 – FOR CONTINUATION SEE SHEET C-05



PLAN
SCALE: 1"=40'

MATCHLINE STATION 60+00 – FOR CONTINUATION SEE SHEET C-07



Sheet reference number: C-06

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 50+00 TO STA 60+00

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR Engineering, Inc.
2379 GATEWAY OAKS
SUITE 200
SACRAMENTO, CA 95899-4240

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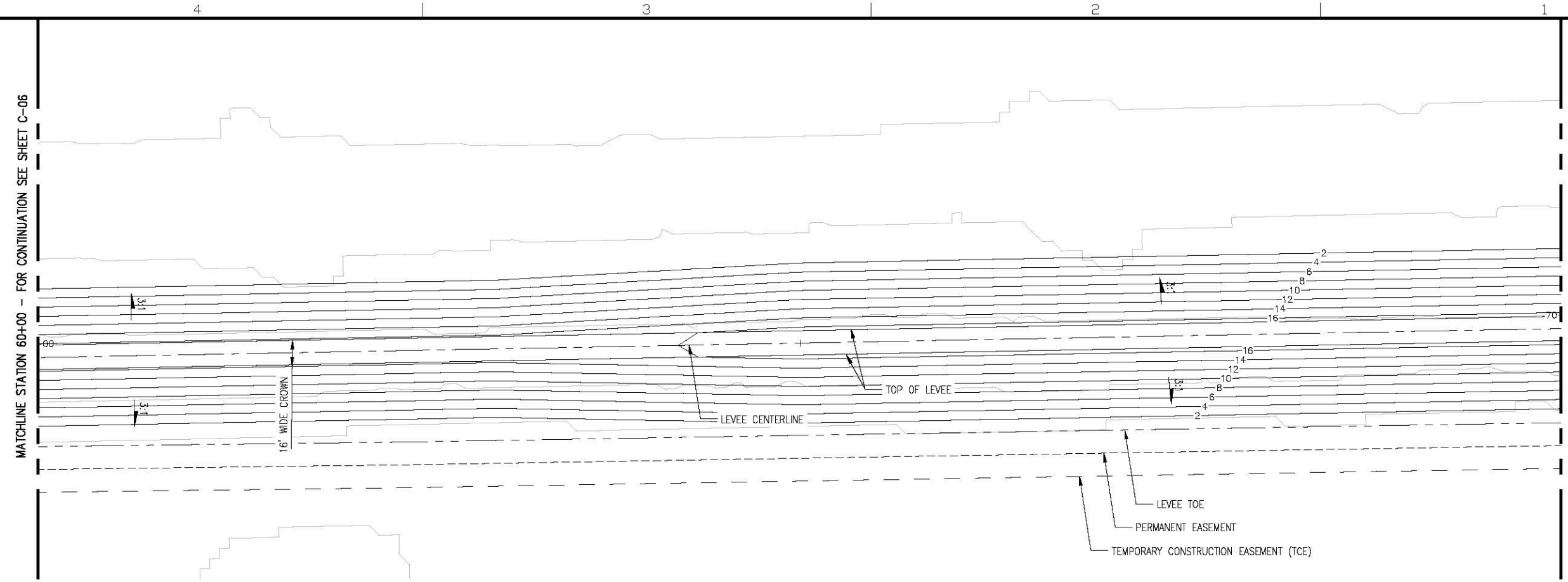
Dwn by: V. RUSSO	Spec No: XX	Design File no: XXX	
Reviewed by: XX		Drawing Code:	
Submitted by: S. JIMENEZ		File name: C-01 Plot date: Dwg scale:	

Symbol	Description	Date	Approved

US Army Corps of Engineers
San Francisco District

UPDATE



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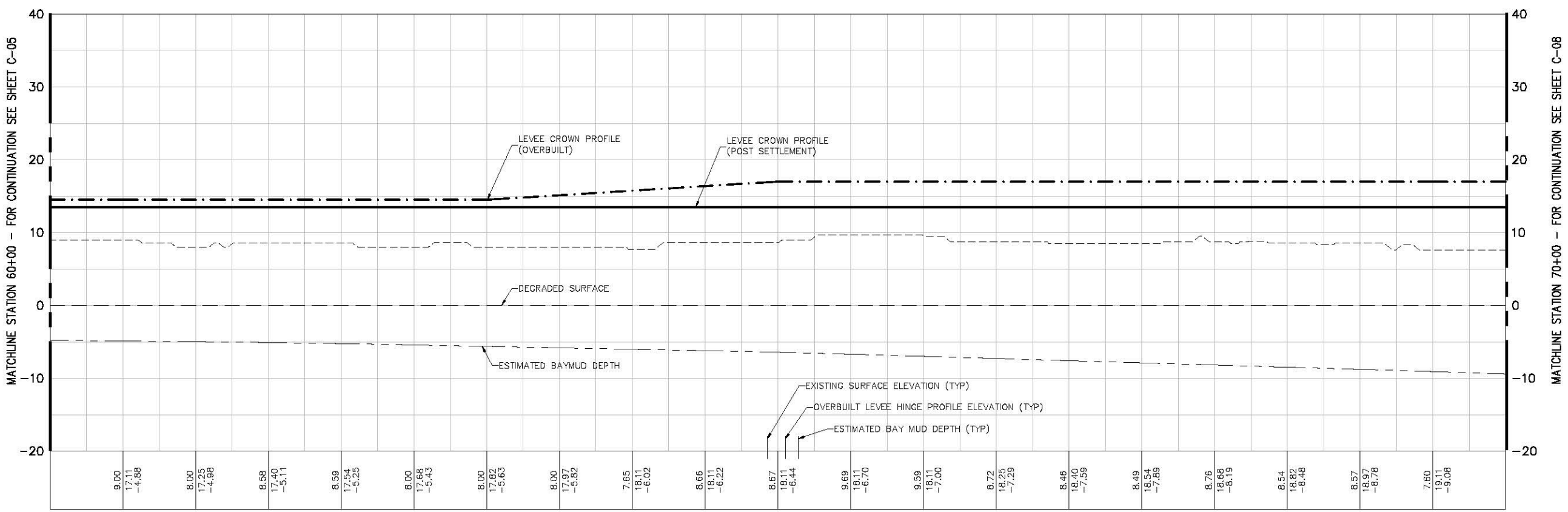

PROFILE

V: SCALE: 1"=5'

N

40' 20' 0 40'

H = 1"=40'

5' 2.5' 0 5'

V = 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. Russo
Reviewed by: XX
Submitted by: S. JIMENEZ
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DEPARTMENT OF THE ARMY
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SACRAMENTO, CALIFORNIA

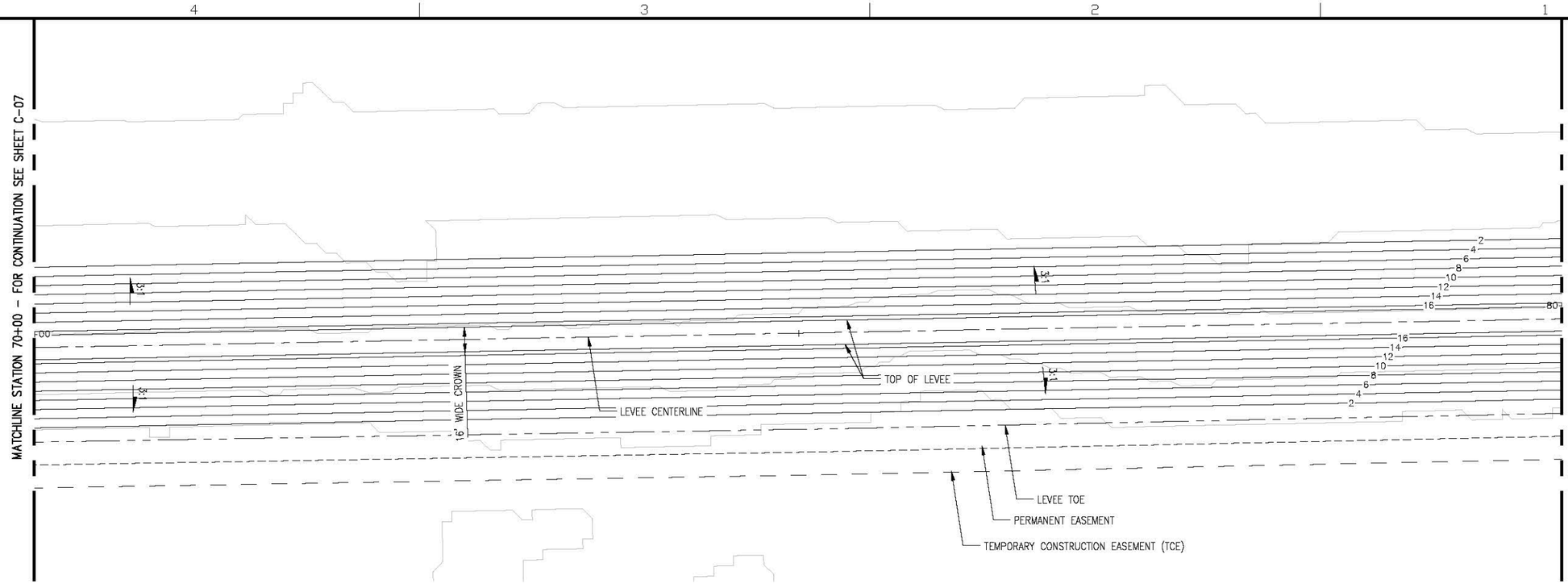
HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 60+00 TO STA 70+00

Sheet reference number:
C-07

UPDATE

Server Revised 08/20/14, 02:39:17 PM



PLAN

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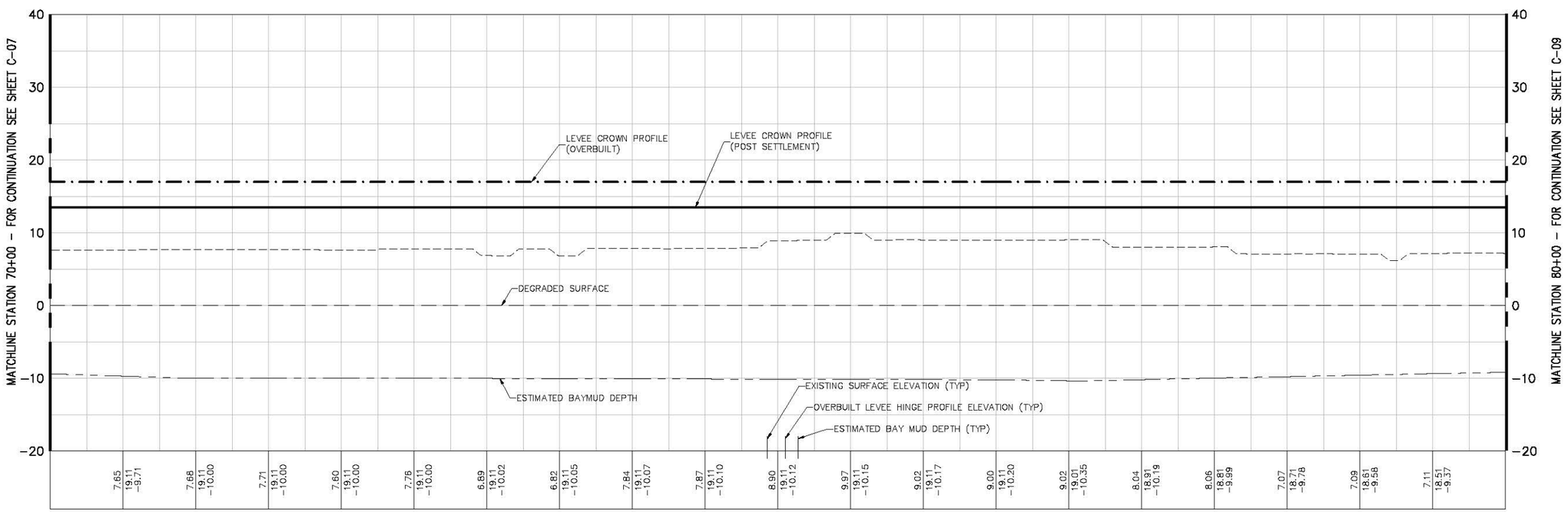

PROFILE

V: SCALE: 1"=5'

N

40' 20' 0 40'

H = 1"=40'

5' 2.5' 0 5'

V = 1"=5'

US Army Corps of Engineers
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SACRAMENTO, CALIFORNIA

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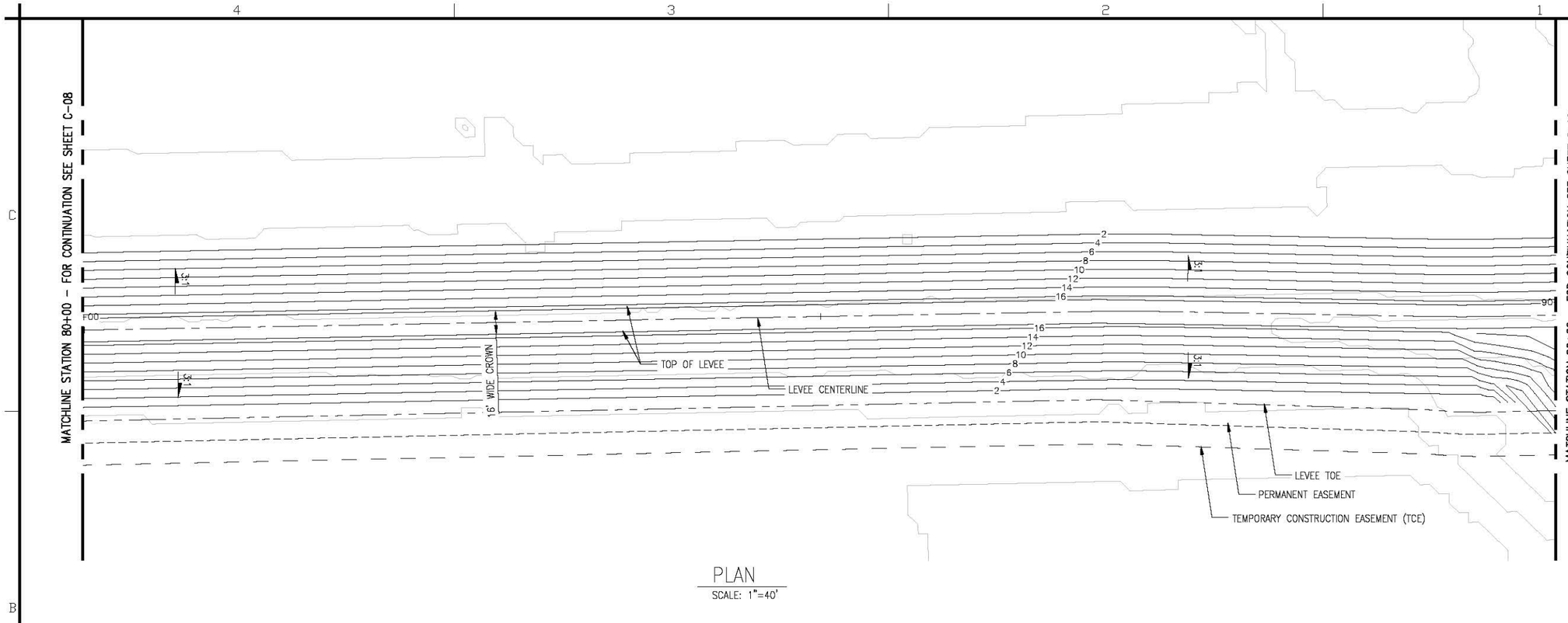
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 70+00 TO STA 80+00

Sheet reference number:
C-08

UPDATE

Server: Revised 08/20/14, 02:39:17 PM



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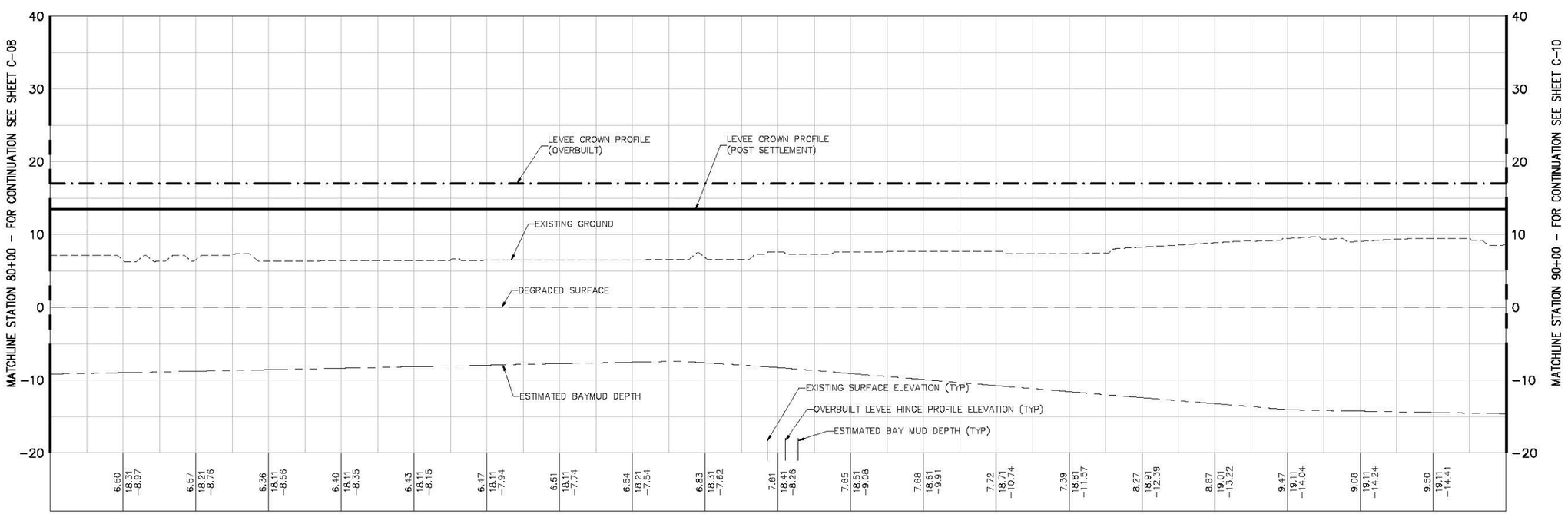

PROFILE

V: SCALE: 1"=5'

N

40' 20' 0 40'

H = 1"=40'

5' 2.5' 0 5'

V = 1"=5'

US Army Corps of Engineers
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SACRAMENTO, CALIFORNIA

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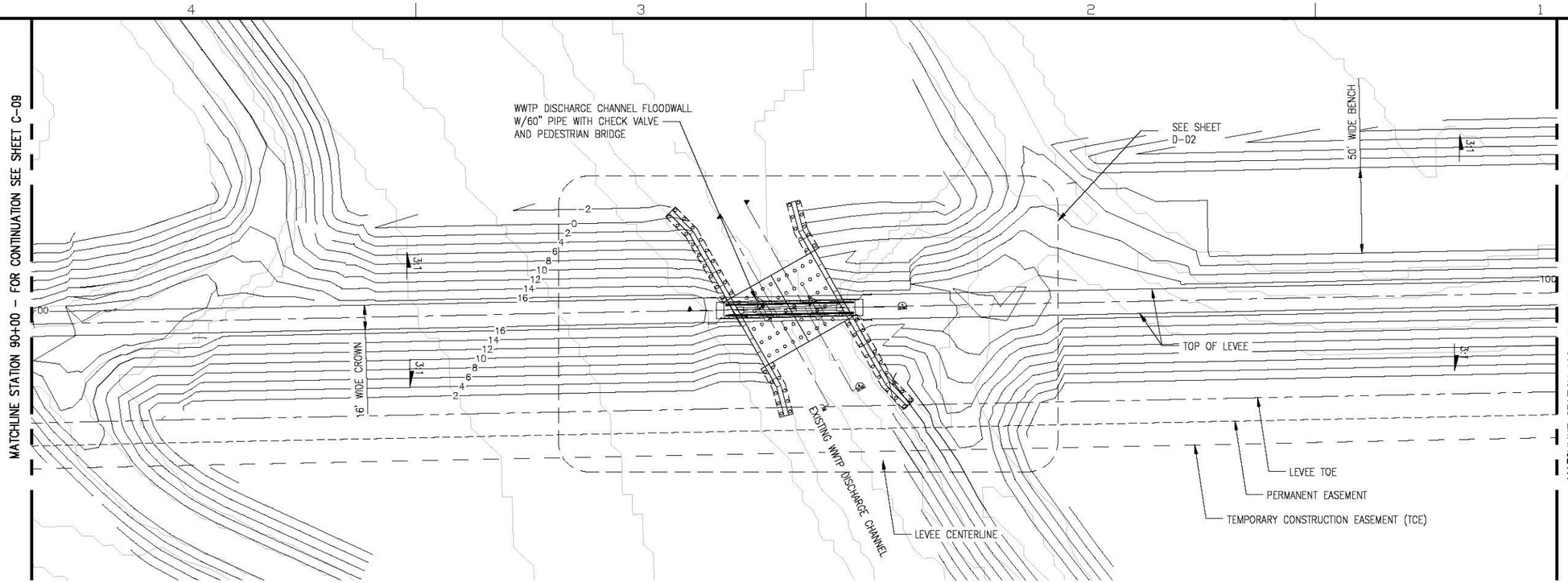
PLAN AND PROFILE STA 80+00 TO STA 90+00

Sheet reference number:
C-09

UPDATE

Server: Revised 08/20/14, 12:39:17 PM



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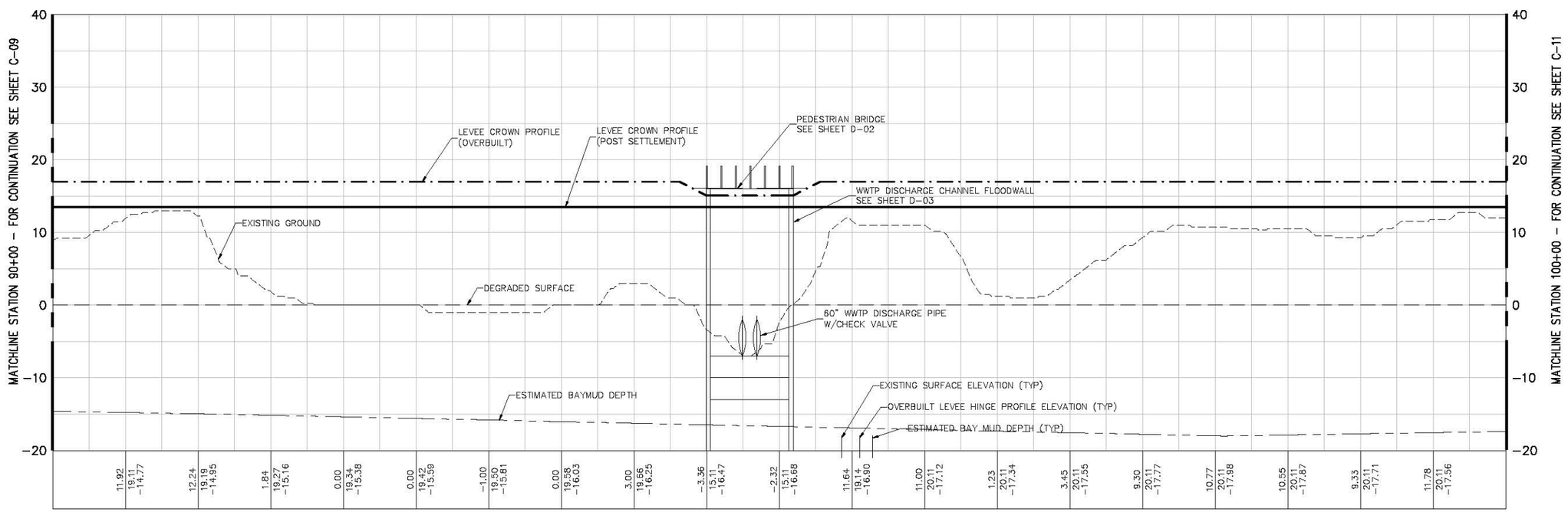

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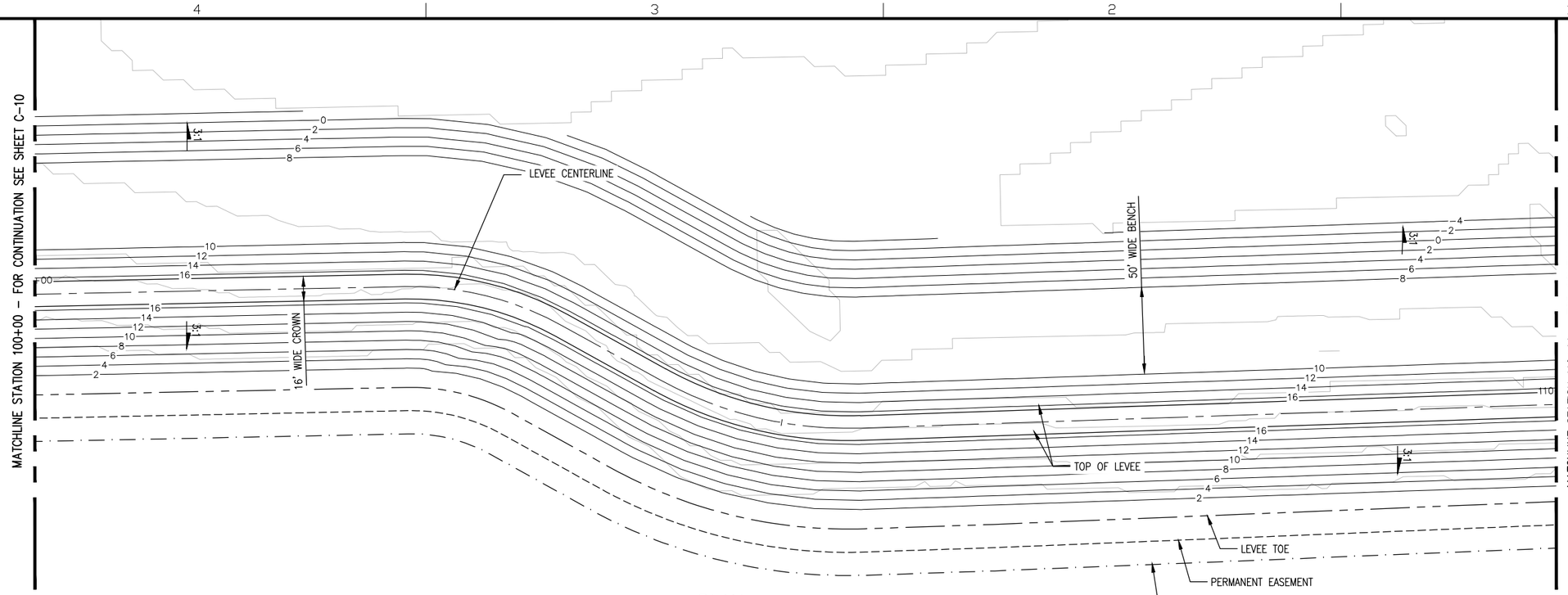
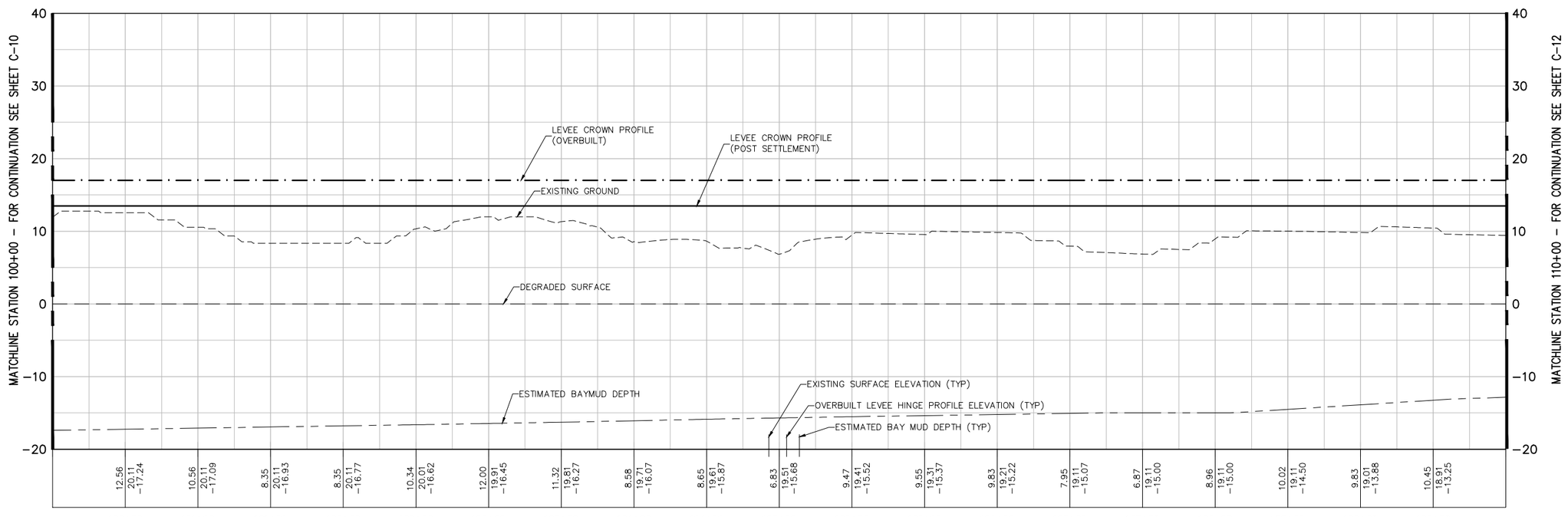
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 90+00 TO STA 100+00

Sheet reference number:
C-10

UPDATE



PLAN
SCALE: 1"=40'



PROFILE
V: SCALE: 1"=5'

US Army Corps of Engineers
San Fransisco District

H = 1"=40'
V = 1"=5'

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. ROSSI
Spec No: XX
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Rev: XX
Design File no: XXX
Drawing Code:
File name: C-11
Plot date:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR Engineering, Inc.
2379 GATEWAY OAKS
SUITE 200
SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 100+00 TO STA 110+00

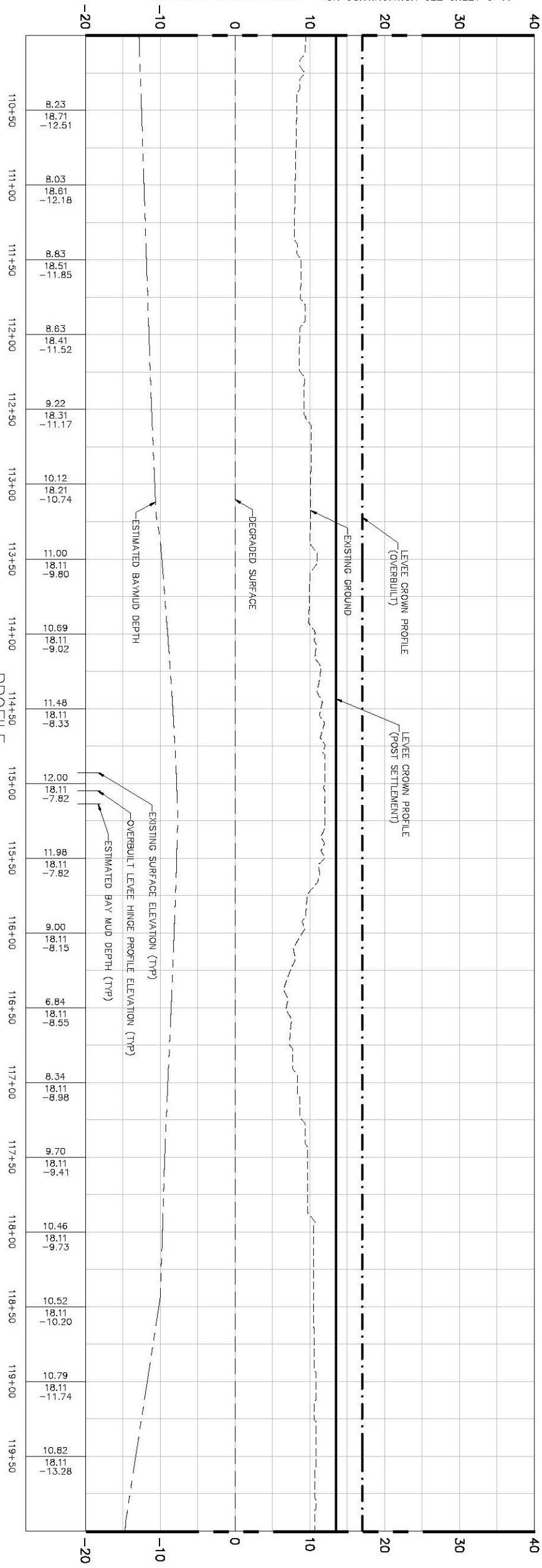
Sheet reference number:
C-11

UPDATE

Border Revised 09/26/04, 02/07/12JWG

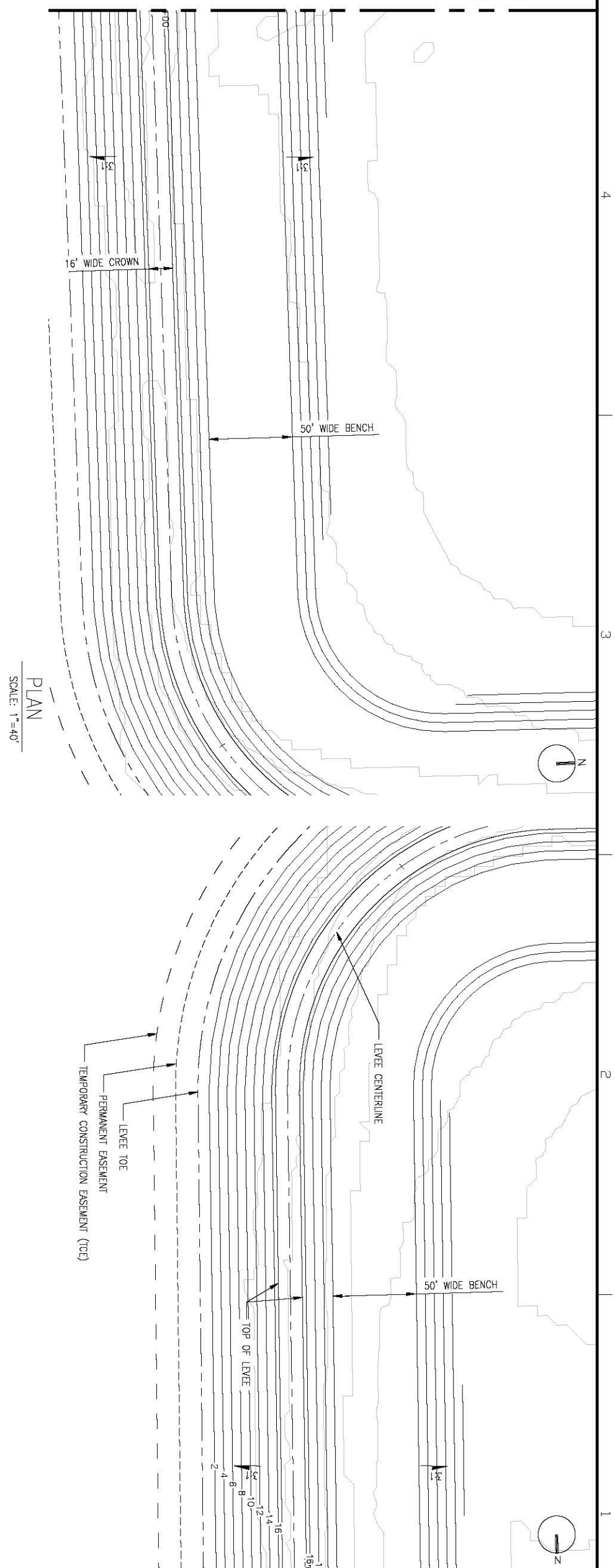
Border Revised 08/30/04, COESHT02.DWG

MATCHLINE STATION 110+00 – FOR CONTINUATION SEE SHEET C-11



MATCHLINE STATION 120+00 – FOR CONTINUATION SEE SHEET C-13

MATCHLINE STATION 110+00 – FOR CONTINUATION SEE SHEET C-11



MATCHLINE STATION 120+00 – FOR CONTINUATION SEE SHEET C-13

H = 1"=40'
V = 1"=5'

Sheet reference number: C-12

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 110+00 TO STA 120+00

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

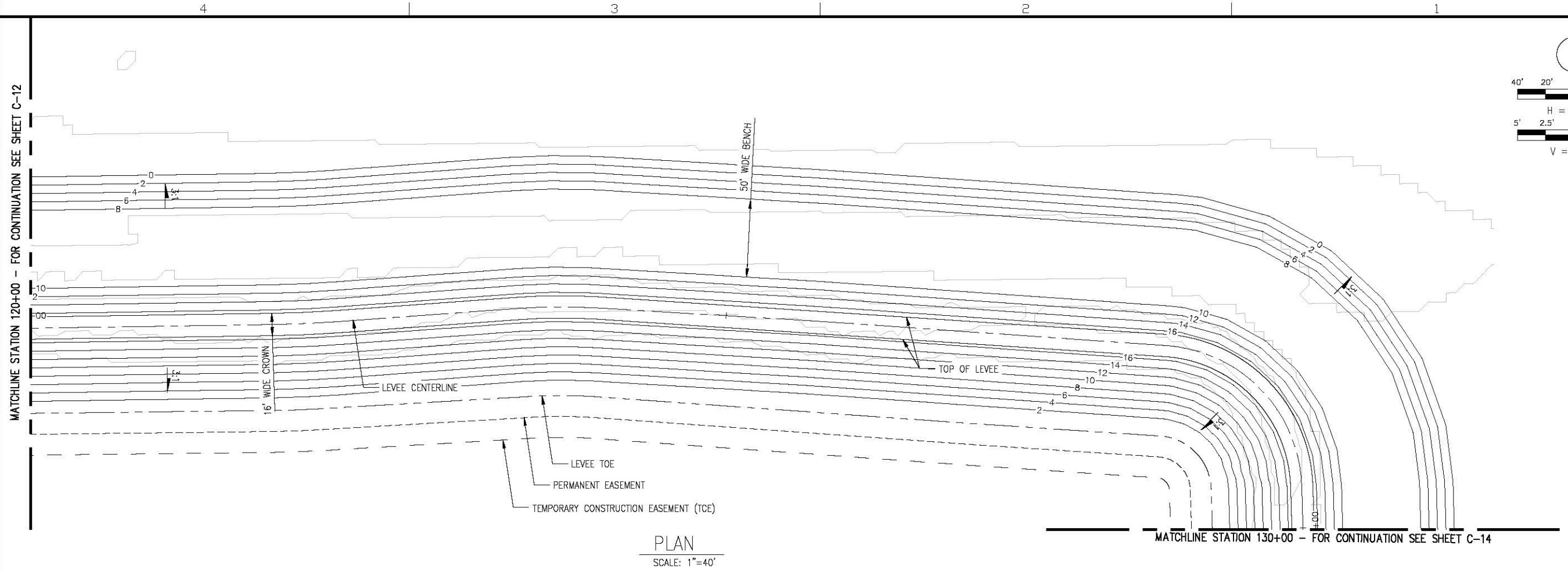
HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95899-4240

Designed by: S. JIMENEZ		Date: 06/24/2013	Rev. XX
Dwn by: V. RUSSO	Spec No: XX	Design file no: XXX	
Reviewed by: XX		Drawing Code:	
Submitted by: S. JIMENEZ		File name: C-01 Plot date: Dwg scale:	

Symbol	Description	Date	Approved

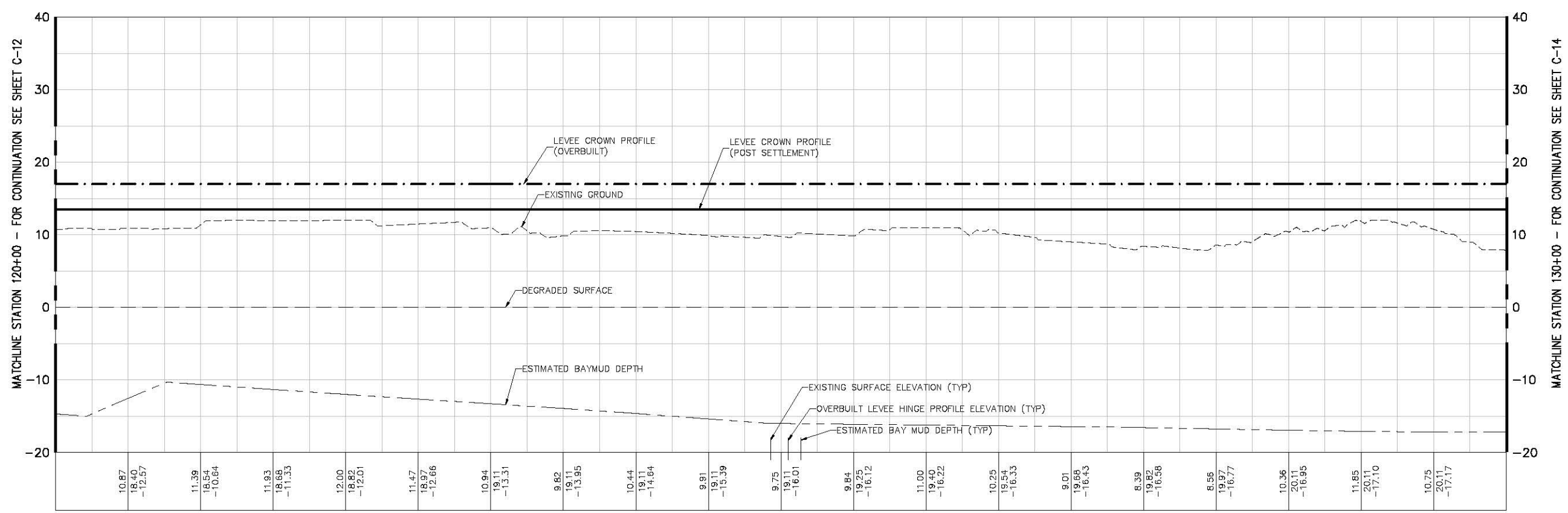
US Army Corps of Engineers San Francisco District

UPDATE



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Design File no: XXX
Drawing Code:
File name: C-01
Plot date:
Dwg scale:
Rev: XX

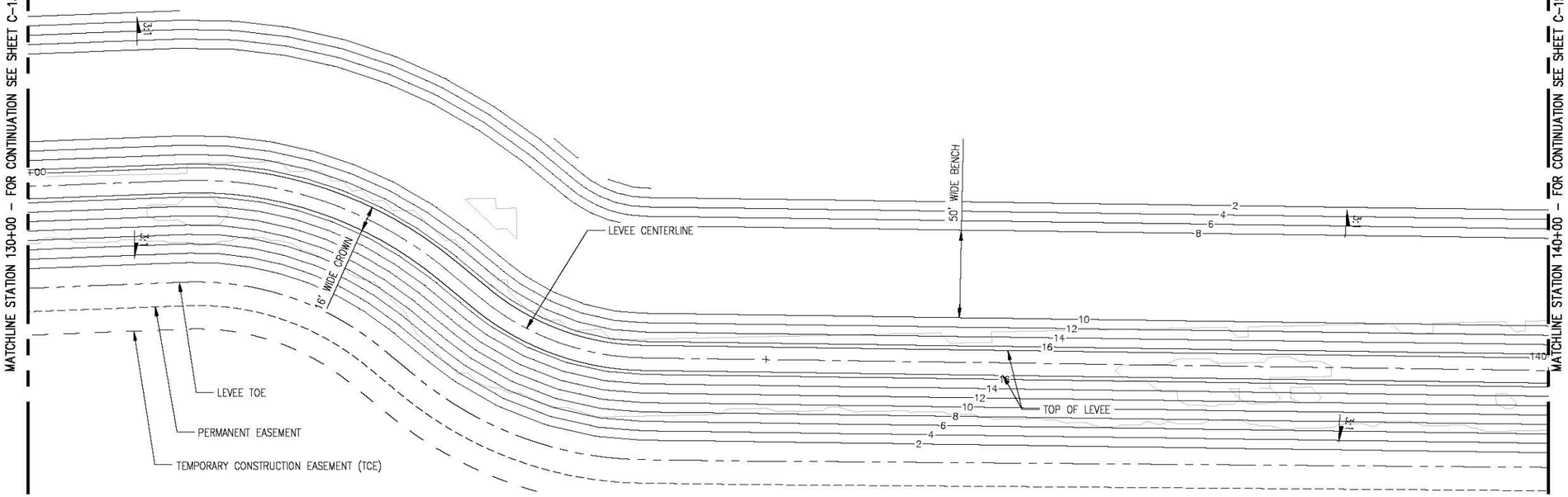
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 120+00 TO STA 130+00

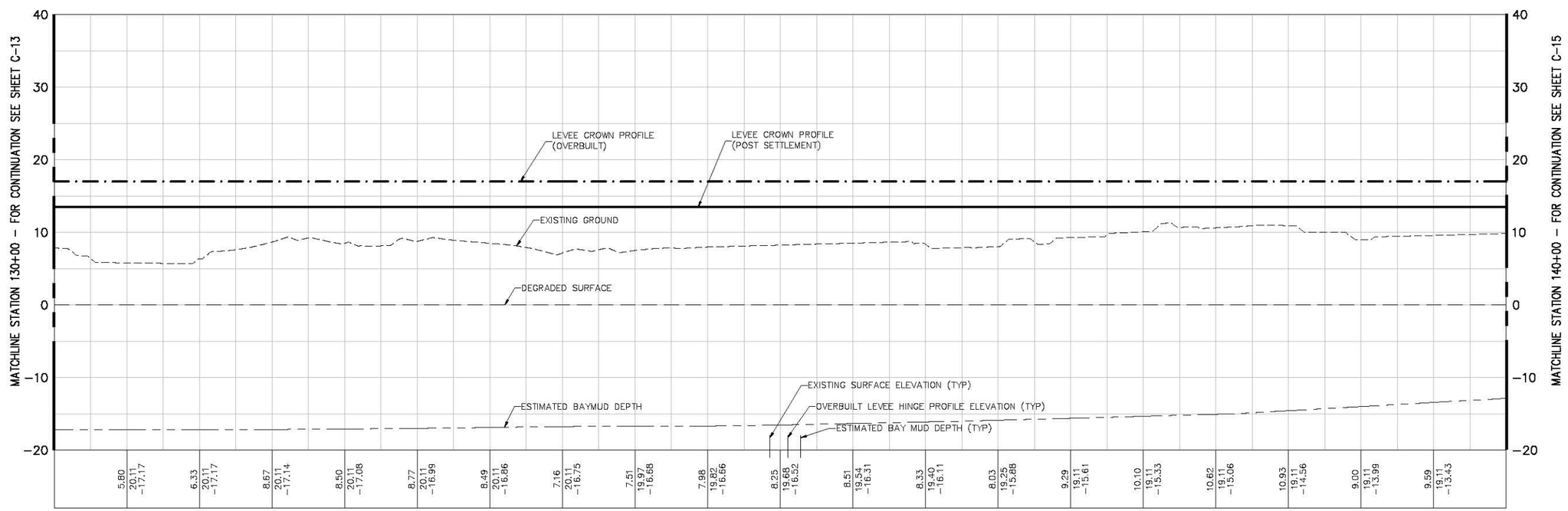
Sheet reference number: C-13

UPDATE



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

N

40' 20' 0 40'

H = 1"=40'

5' 2.5' 0 5'

V = 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Date: 06/24/2013
Rev. XX

Dwn by: V. Russo
Spec No: XX
Design File no: XXX

Reviewed by: XX
Submitted by: S. JIMENEZ
Drawing Code:

File name: C-01
Plot date:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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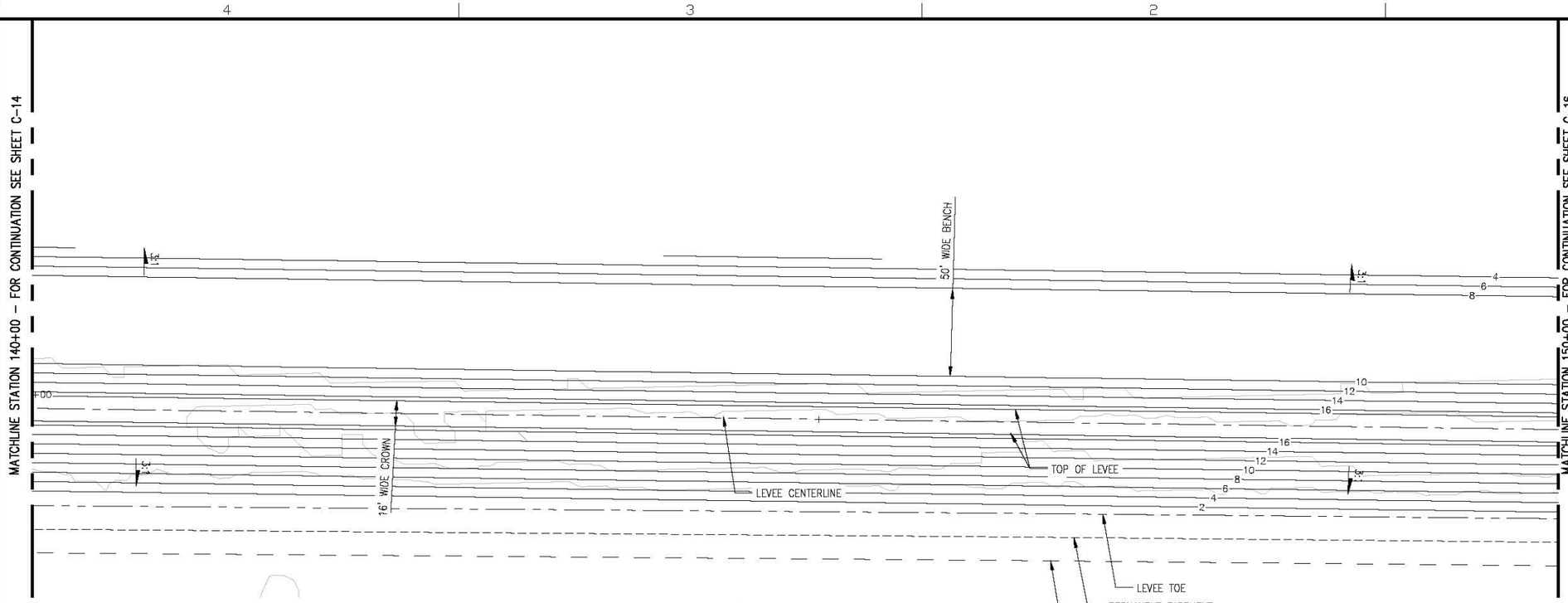
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 130+00 TO STA 140+00

Sheet reference number:
C-14

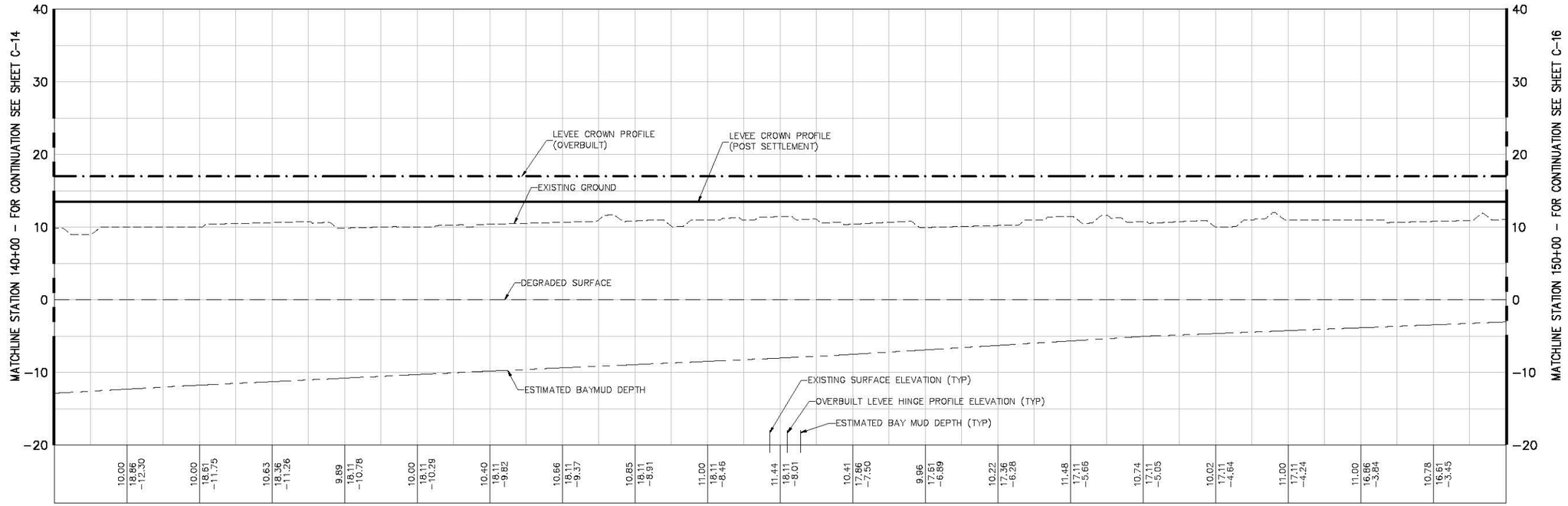
UPDATE

Server: Revised 08/20/14, 12:33:17 PM



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

N

40' 20' 0 40'

H = 1"=40'

5' 2.5' 0 5'

V = 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RASSU
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Design File no: XXX
Spec No: XX
Drawing Code:
File name: C-01
Plot date:
Dwg status:
Rev. XX

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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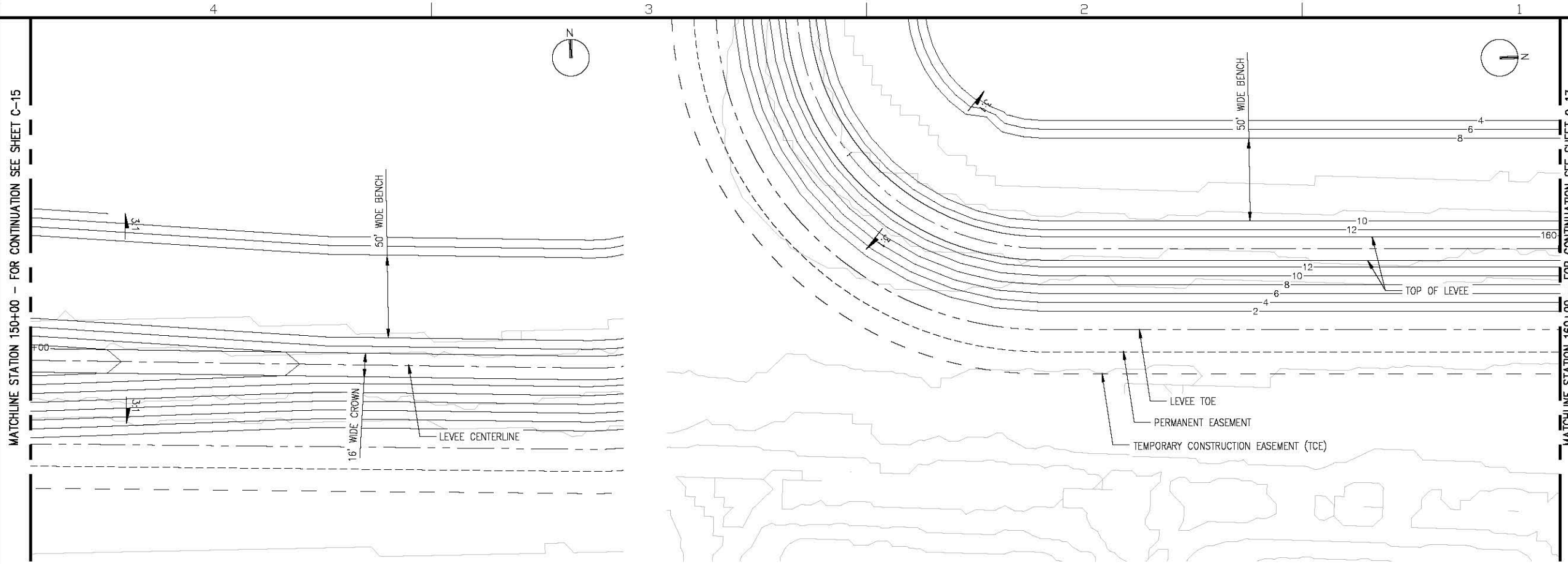
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 140+00 TO STA 150+00

Sheet reference number:
C-15

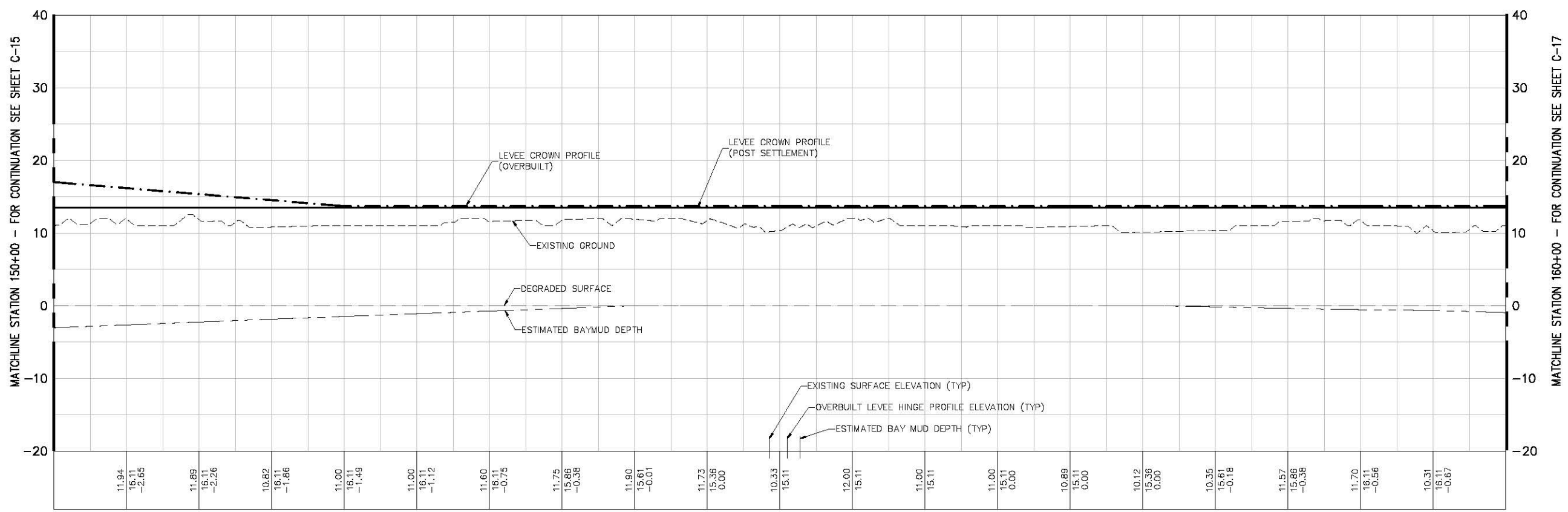
UPDATE

Border Revised 08/30/04, DESIGTEZ.DWG



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

40' 20' 0 40'
H = 1"=40'
5' 2.5' 0 5'
V = 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Design File no: XXX
Drawing Code:
File name: C-01
Plot date:
Dwg scale:
Rev. XX

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
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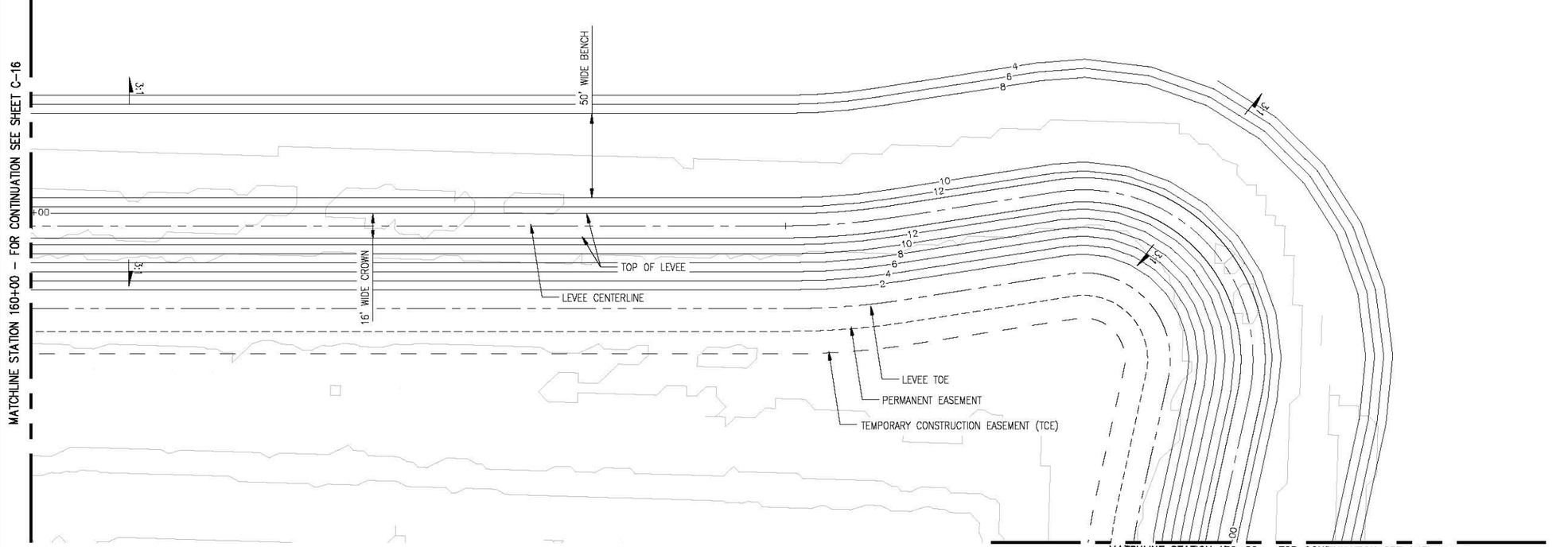
HDR
HDR Engineering, Inc. SACRAMENTO, CA 95899-4210
2379 GATEWAY OAKS
SUITE 200

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 150+00 TO STA 160+00

Sheet reference number:
C-16

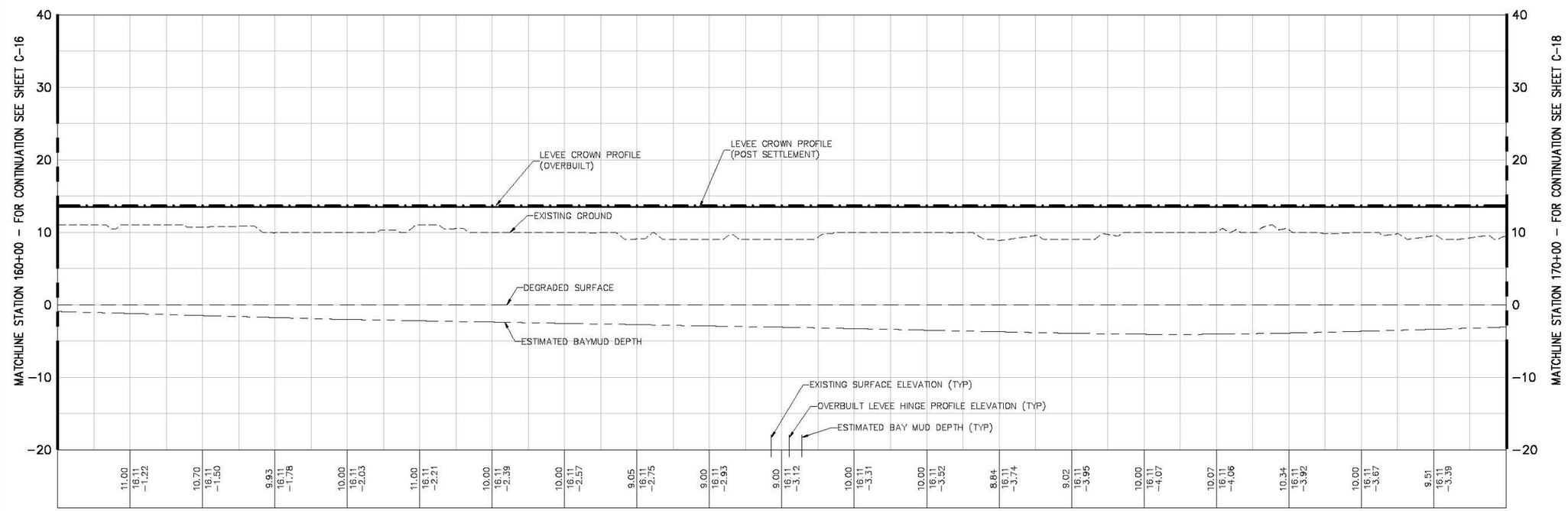
UPDATE

Server: Revised 08/20/14, 02:39:17 PM



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

US Army Corps of Engineers
San Fransisco District

H = 1"=40'

V = 1"=5'

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Design File no: XXX
Drawing Code:
File name: C-01
Plot date:
Dwg scale:
Rev: XX

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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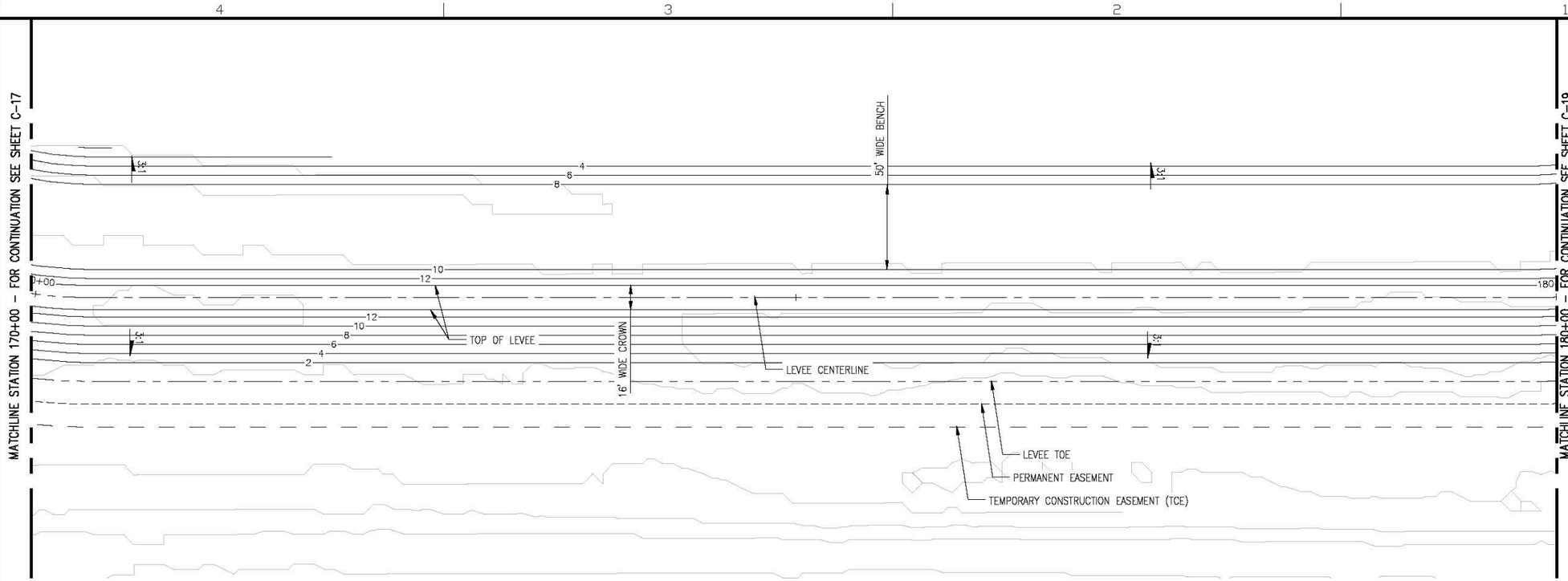
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 160+00 TO STA 170+00

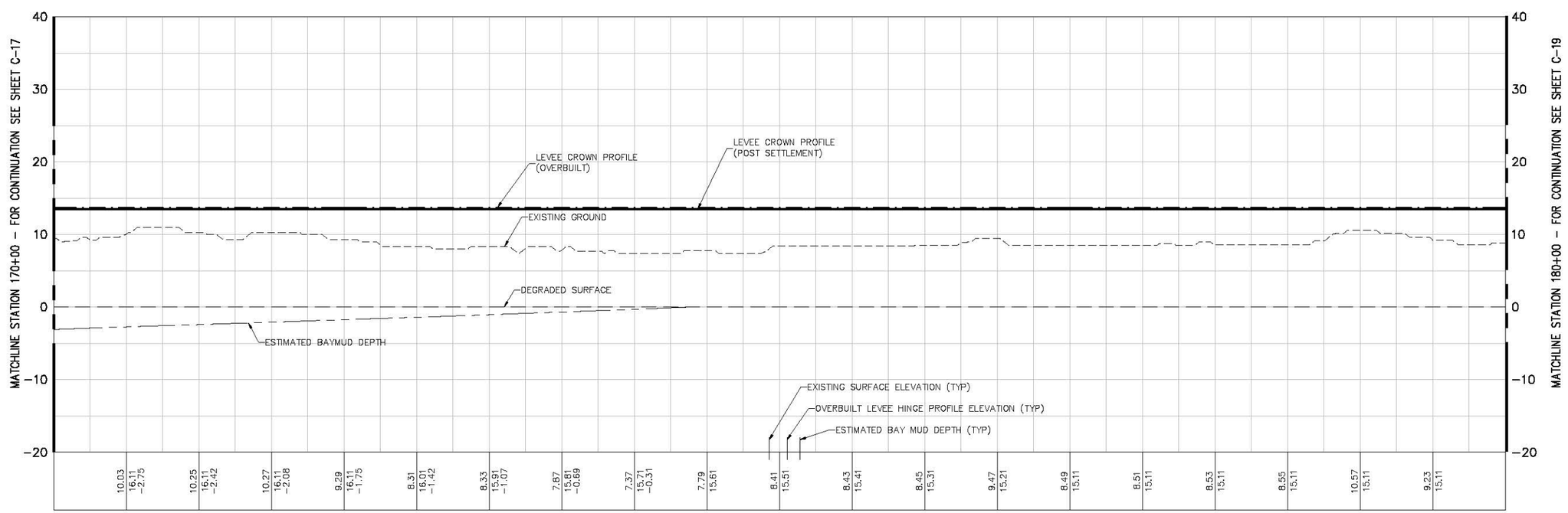
Sheet reference number: C-17

UPDATE



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

N

40' 20' 0 40'

H = 1"=40'

5' 2.5' 0 5'

V = 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 05/24/2013
Design File No: XXX
Drawing Code:
File name: C-01
Plot date:
Dwg scale:
Rev. XX

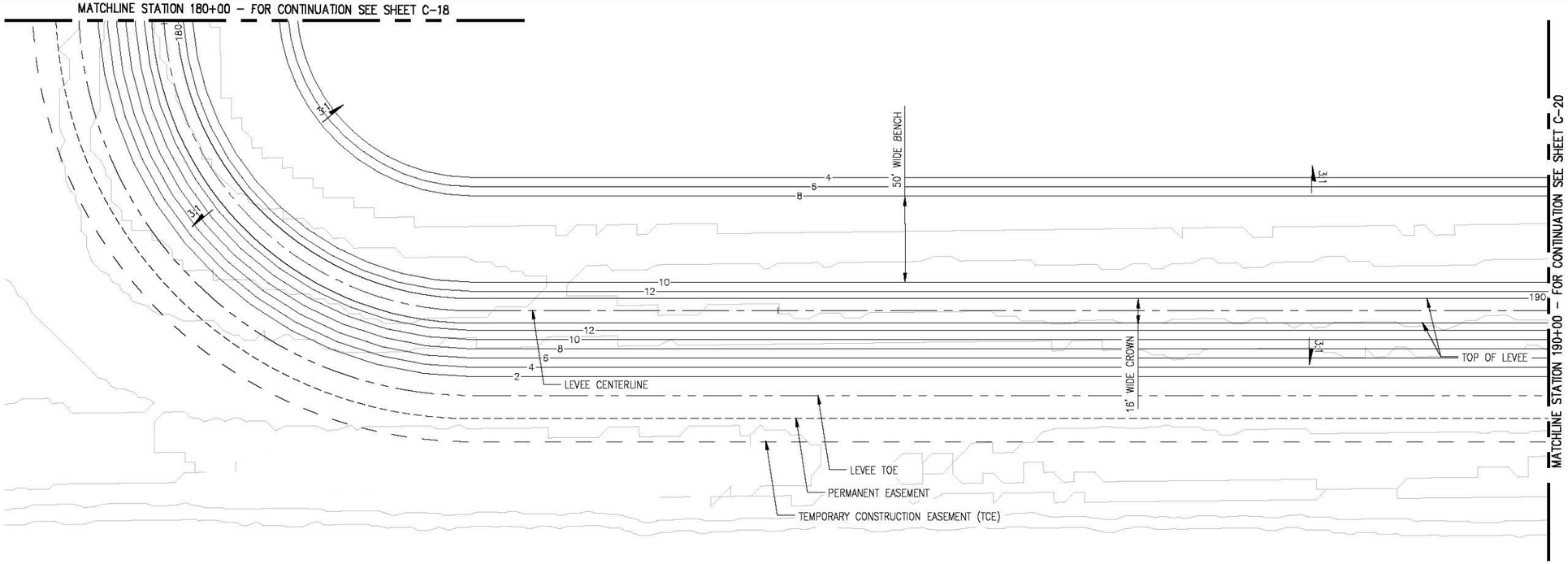
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 170+00 TO STA 180+00

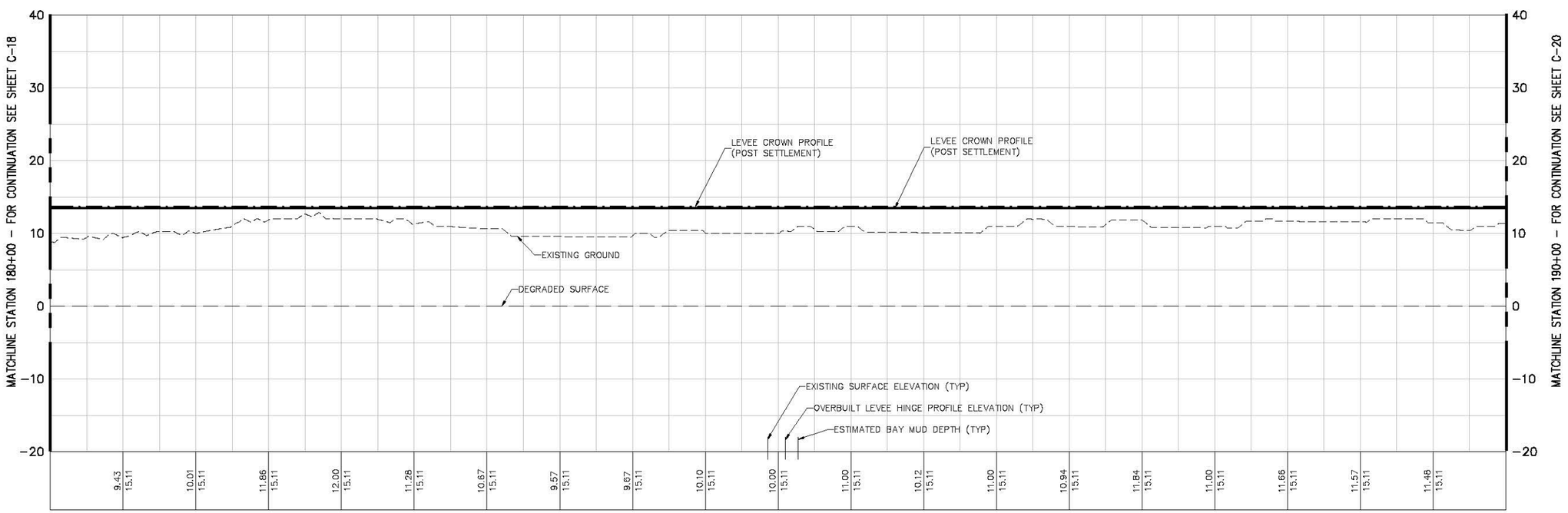
Sheet reference number:
C-18

UPDATE



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

US Army Corps of Engineers
San Fransisco District

H = 1"=40'

V = 1"=5'

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Date: 06/24/2013
Design File no: XXX
Rev. XX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-01
Plot date:
Dwg scale:

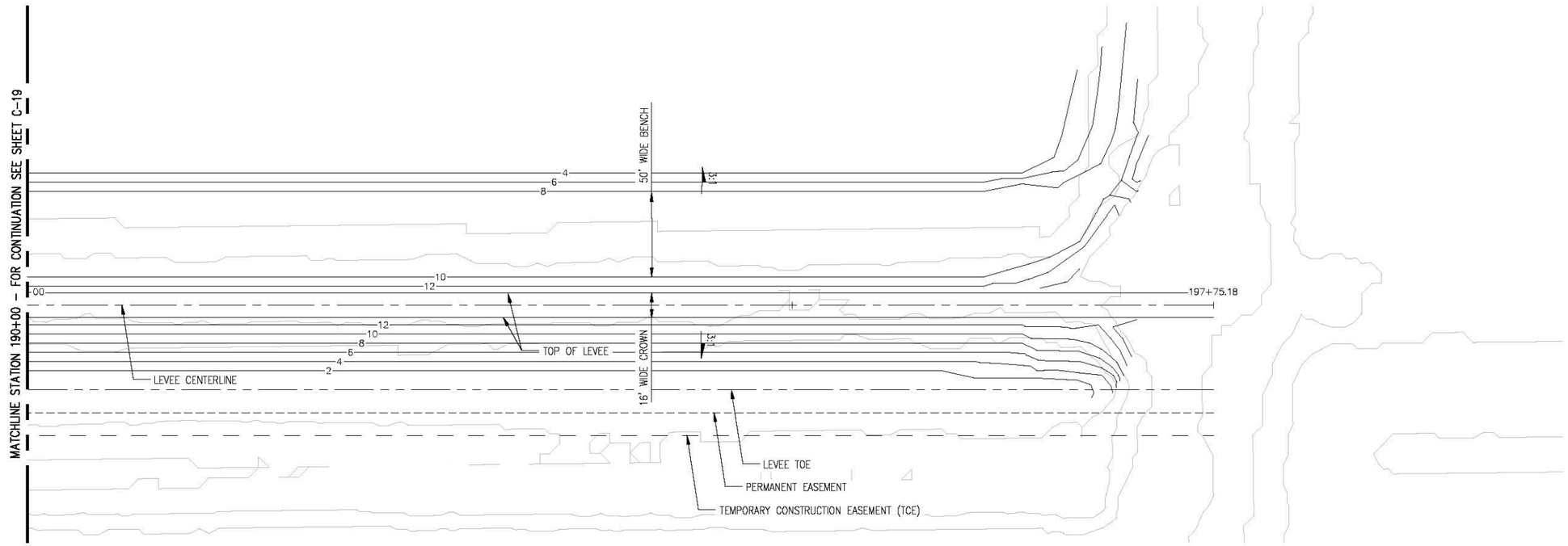
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 180+00 TO STA 190+00

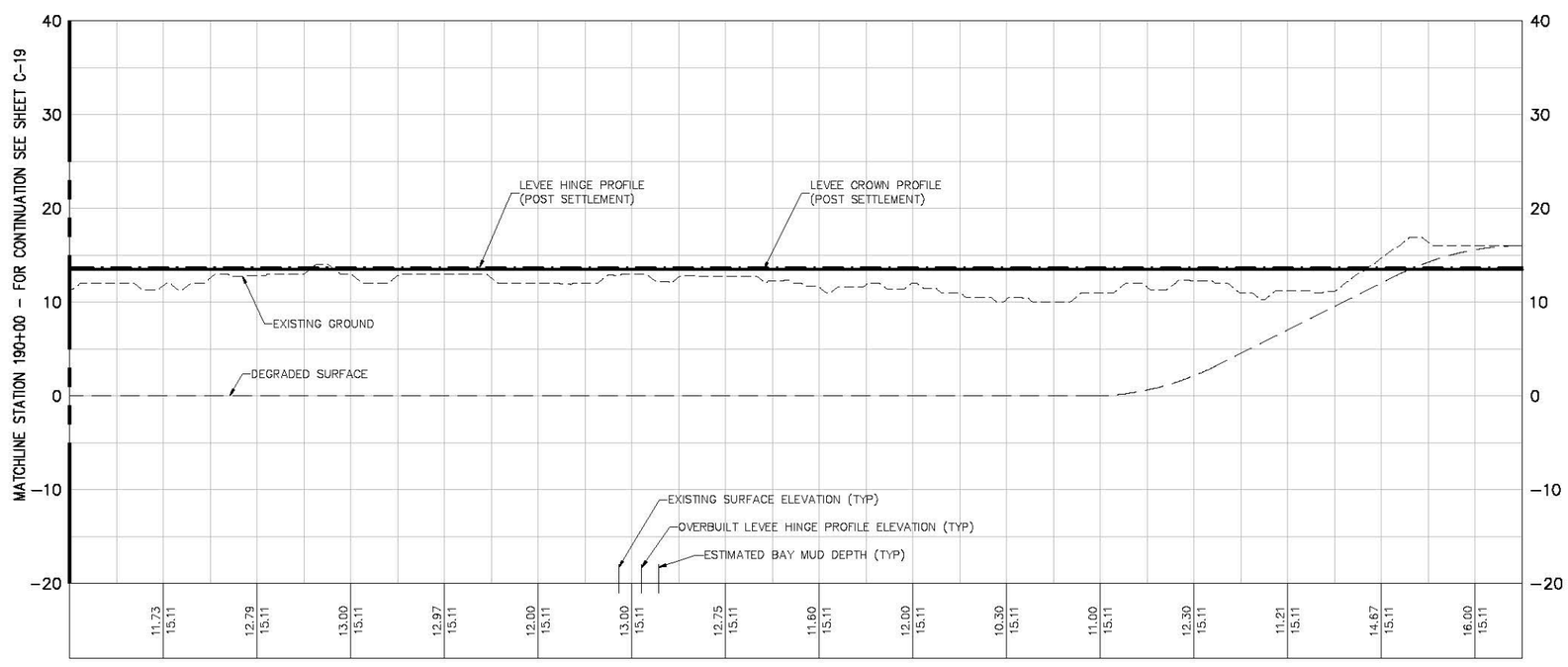
Sheet reference number: C-19

UPDATE



PLAN

SCALE: 1"=40'



PROFILE

V: SCALE: 1"=5'

N

40' 20' 0 40'

H = 1"=40'

5' 2.5' 0 5'

V = 1"=5'

US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Design File no: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-01
Plot date:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

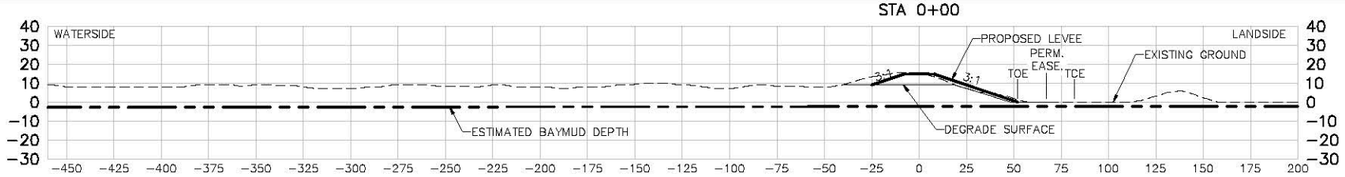
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
PLAN AND PROFILE STA 190+00 TO STA 197+75

Sheet reference number:
C-20

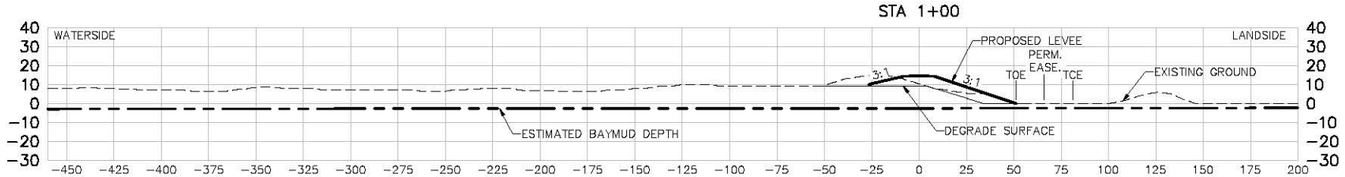
UPDATE

Server: Revised 08/20/14, 12:33:17 PM

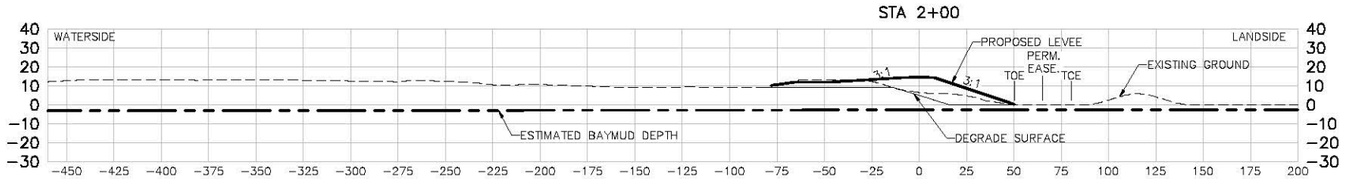
STA 0+00



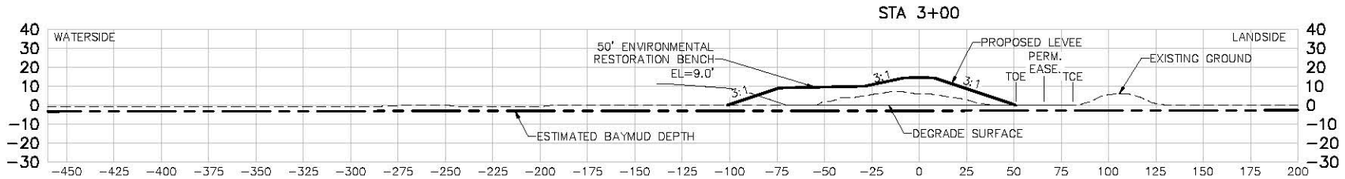
STA 1+00



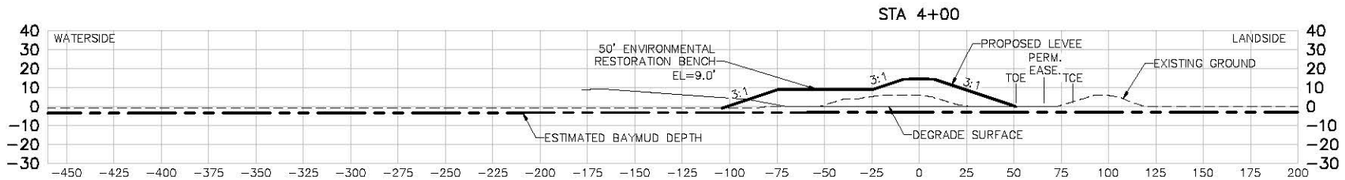
STA 2+00



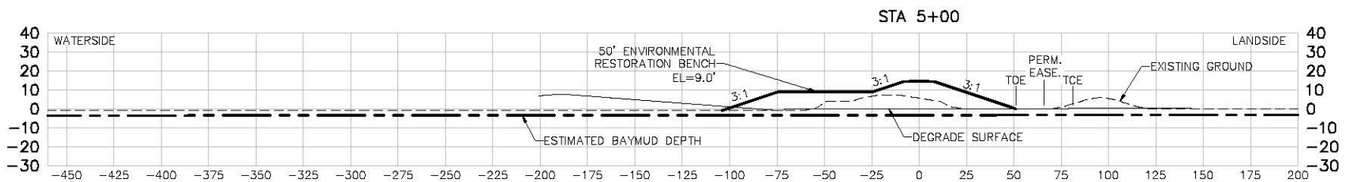
STA 3+00



STA 4+00



STA 5+00



US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Design File No: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

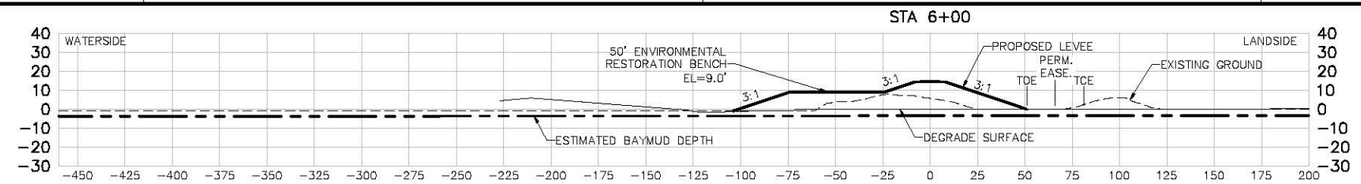
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

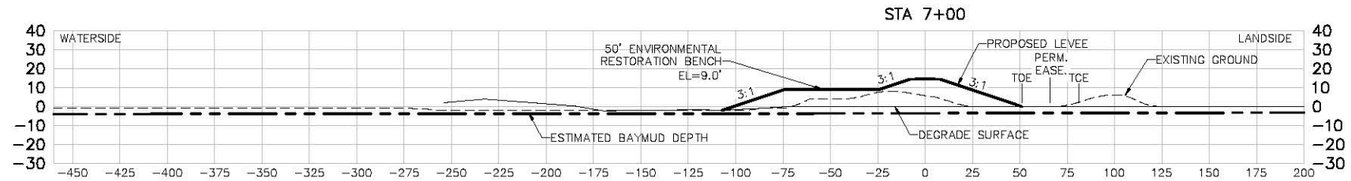
HDR
HDR Engineering, Inc.
2379 GATEWAY OAKS
SUITE 200
SACRAMENTO, CA 95833-4210

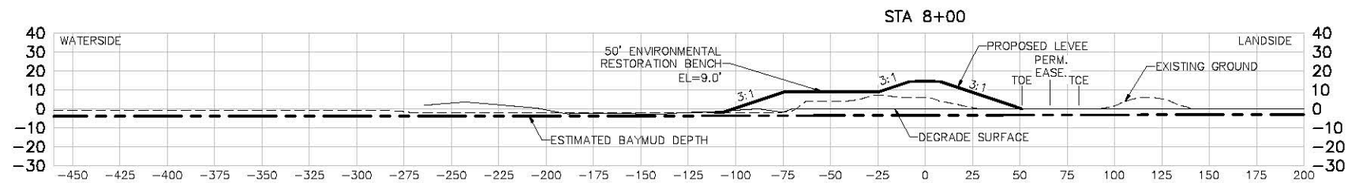
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 0+00 TO STA 5+00

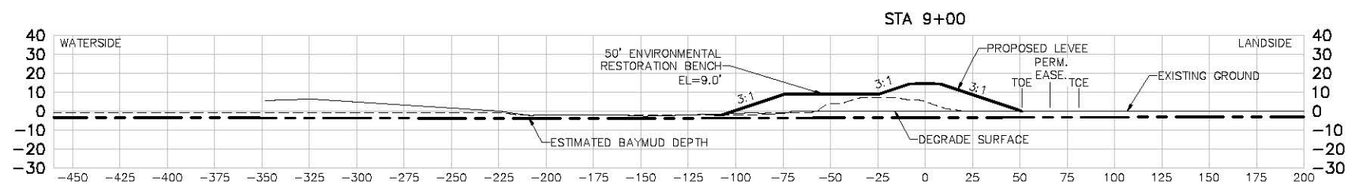
Sheet reference number:
C-21

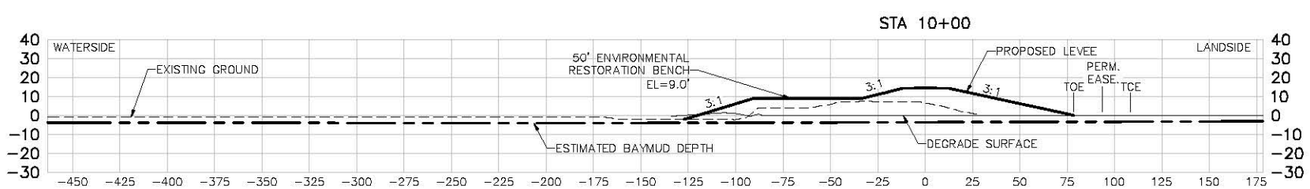
UPDATE

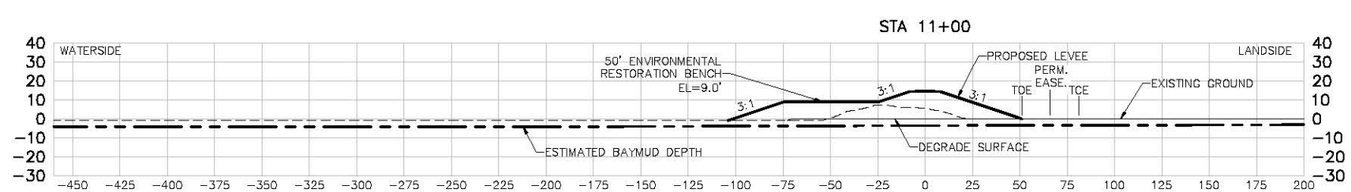












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Spec No: XX
Design File No: XXX
Dwn by: V. RUSSO
Drawing Code:
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR
HDR Engineering, Inc.
2379 GATEWAY OAKS
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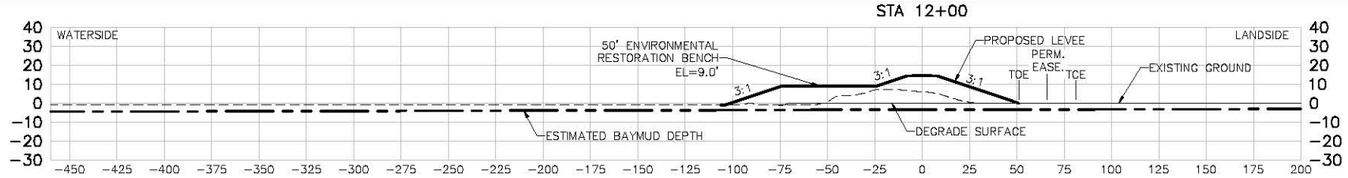
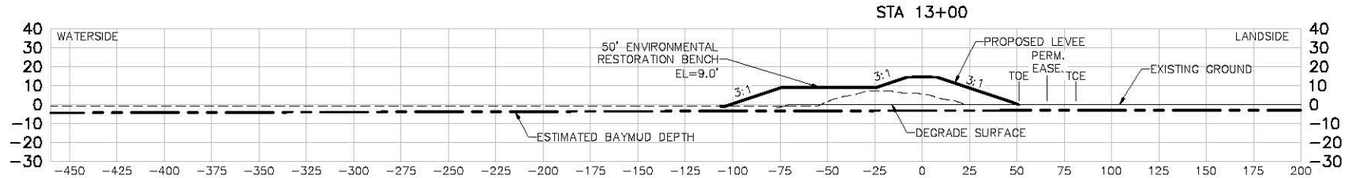
SACRAMENTO, CA 95833-4210

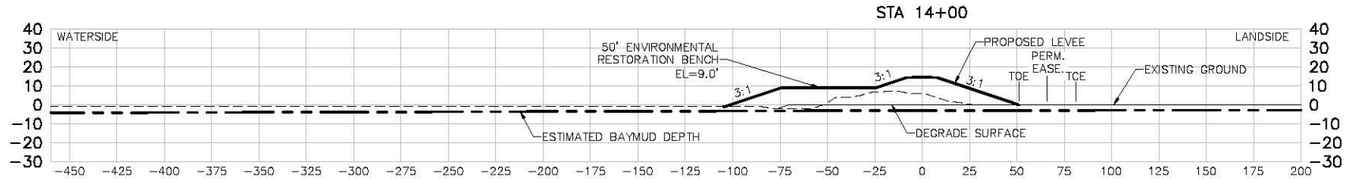
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 6+00 TO STA 11+00

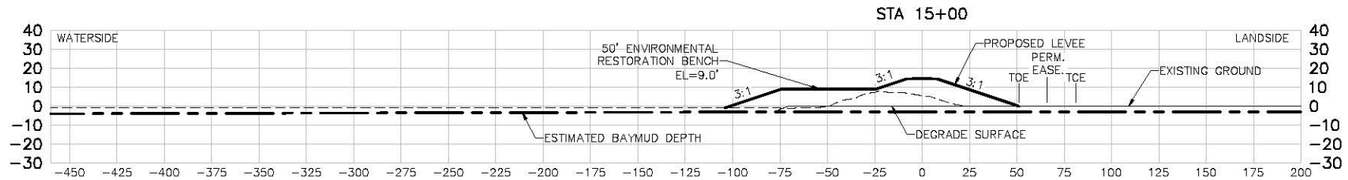
Sheet reference number:
C-22

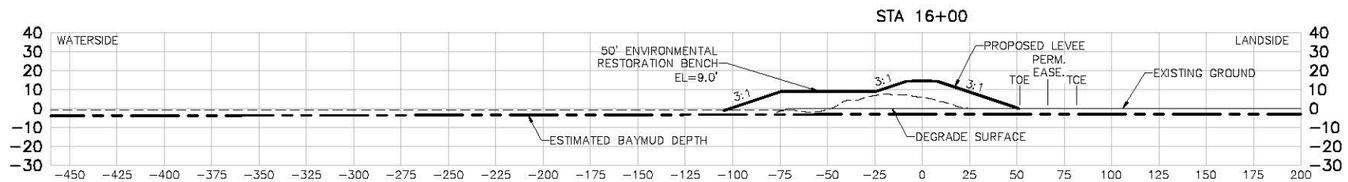
UPDATE

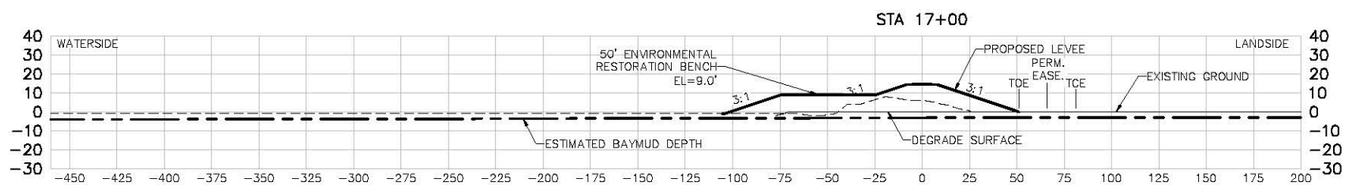












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Spec No: XX
Design File No: XXX
Drawing Code:
File name:
Plot scale:
Dwg scale:
Rev. XX
C-21 Sections

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

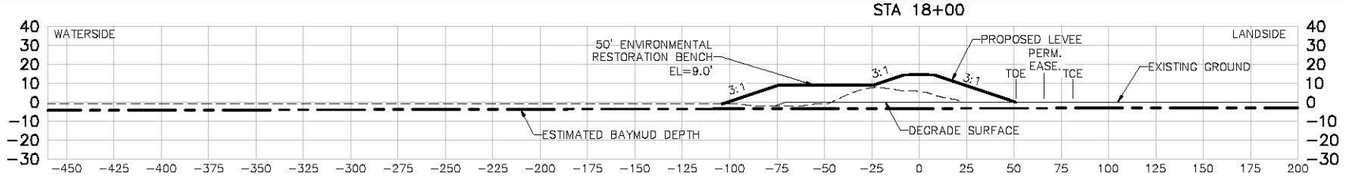
HDR Engineering, Inc.
2379 GATEWAY OAKS
SUITE 200
SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 12+00 TO STA 17+00

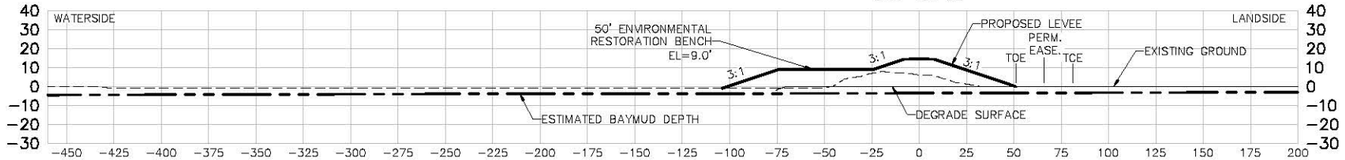
Sheet reference number:
C-23

UPDATE

STA 18+00



STA 19+00



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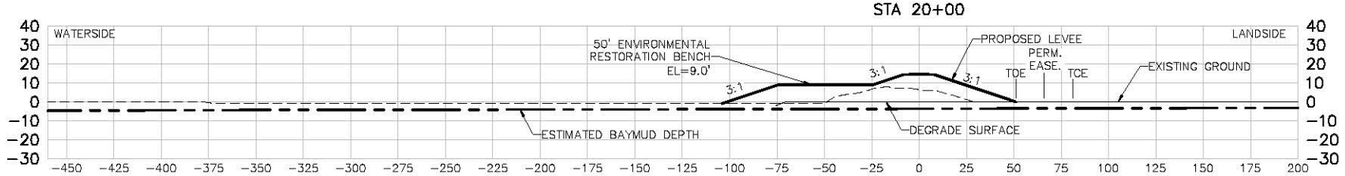
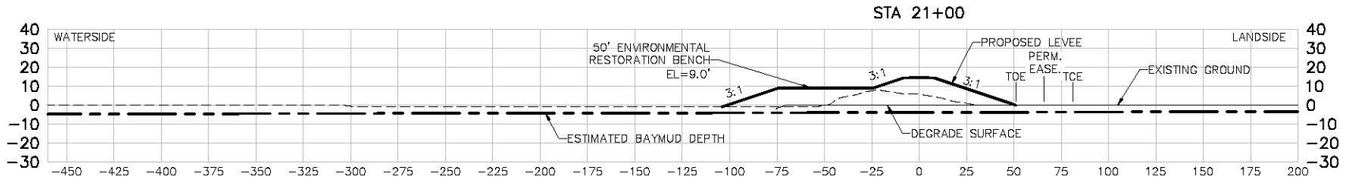
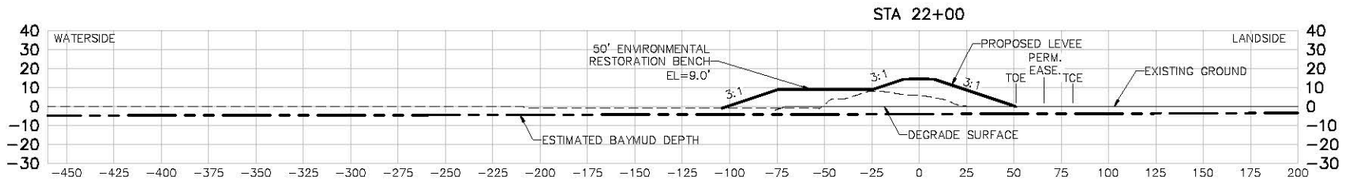


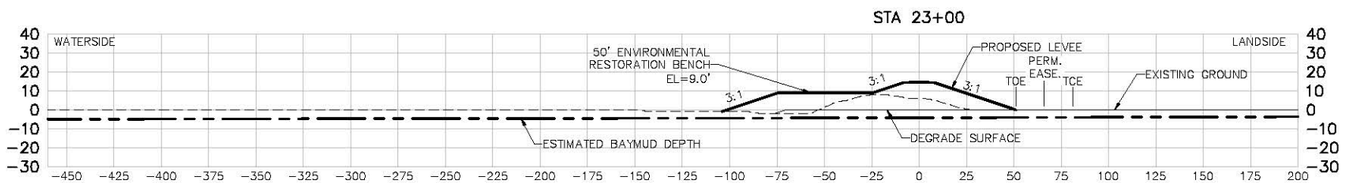
STA 21+00



STA 22+00



STA 23+00



US Army Corps of Engineers
San Fransisco District

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Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
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Date: 06/24/2013
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Design File No: XXX
Drawing Code:
File name: C-21 Sections
Plot scale:
Dwg scale:
Rev. XX

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

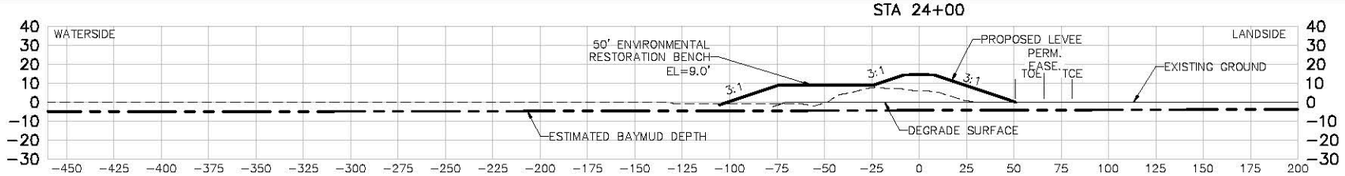
HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 18+00 TO STA 23+00

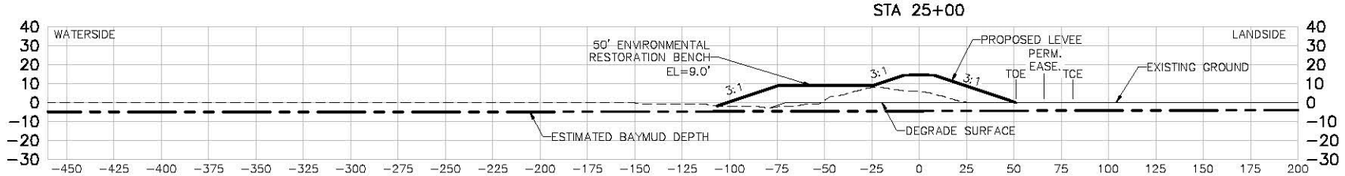
Sheet reference number:
C-24

UPDATE

STA 24+00



STA 25+00



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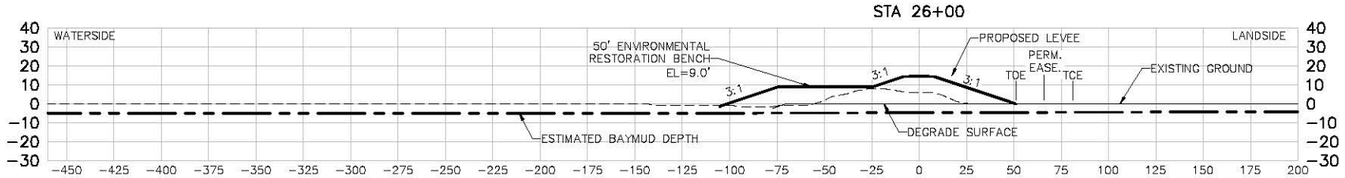
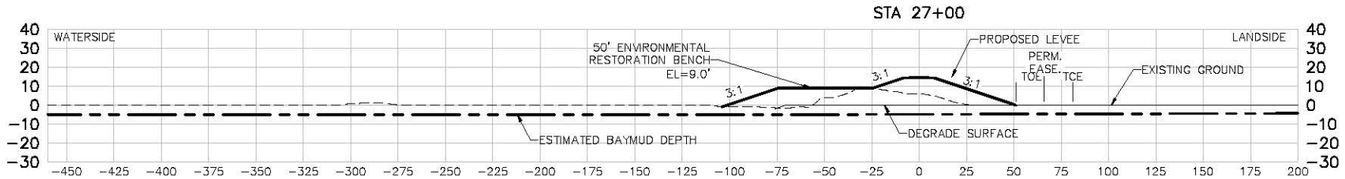
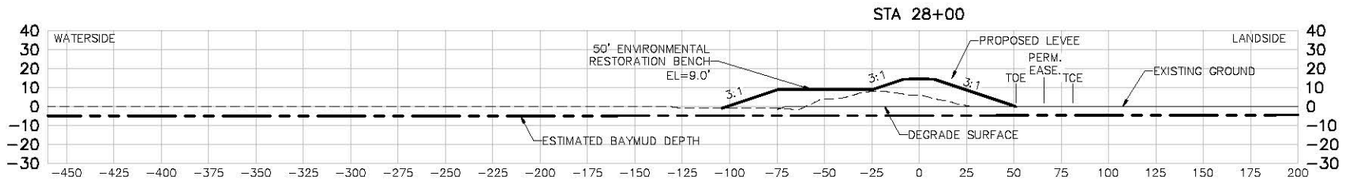


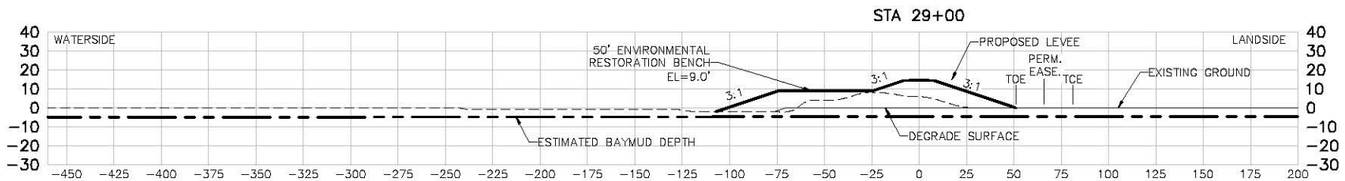
STA 27+00



STA 28+00



STA 29+00



US Army Corps of Engineers
San Fransisco District

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Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Spec No: XX
Design File No: XXX
Drawing Code:
Rev. XX
File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR Engineering, Inc.
2379 GATEWAY OAKS
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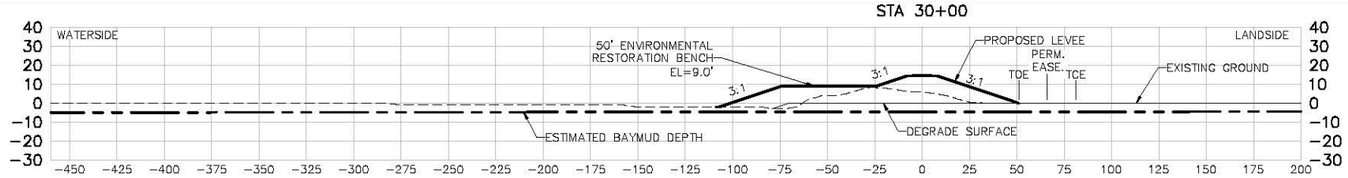
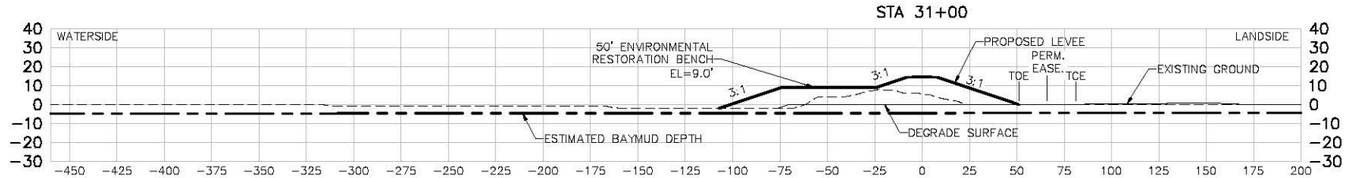
SACRAMENTO, CA 95833-4210

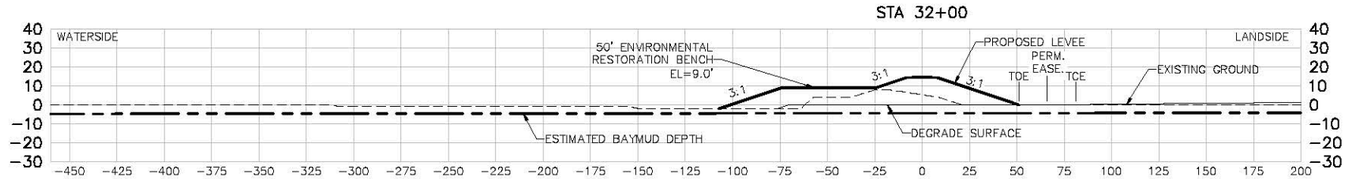
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 24+00 TO STA 29+00

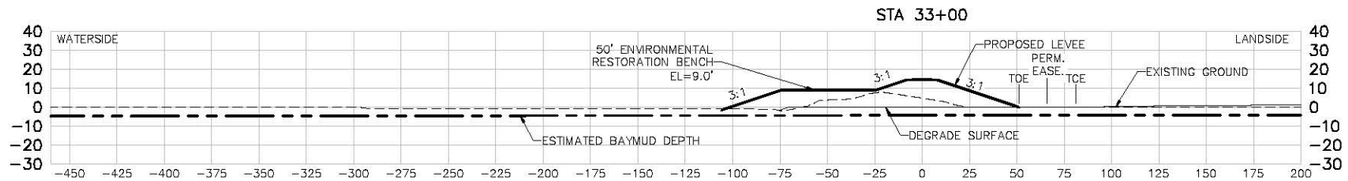
Sheet reference number:
C-25

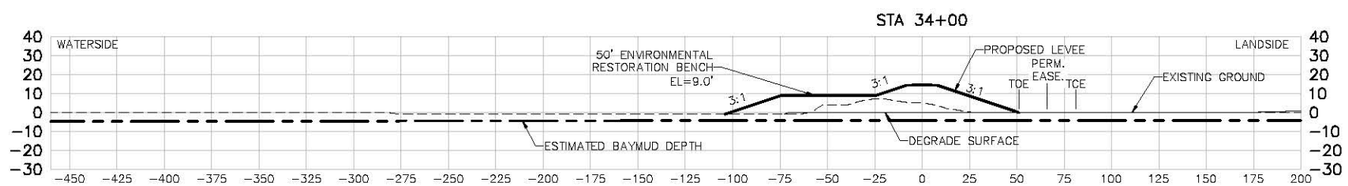
UPDATE

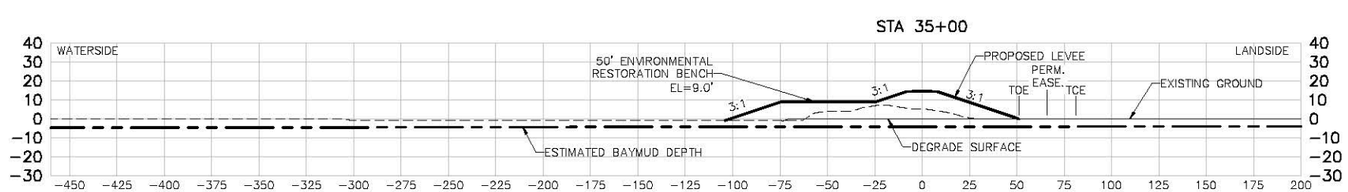












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Design File no: XXX
Reviewed by: XX
Submitted by: S. JIMENEZ
Drawing Code:
File name: C-21 Sections
Plot date:
Dwg size:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR
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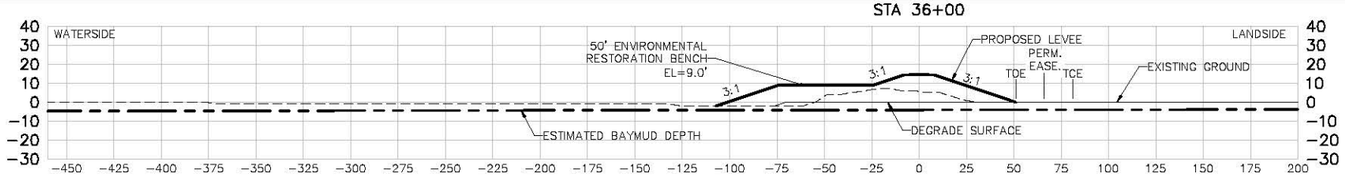
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 30+00 TO STA 35+00

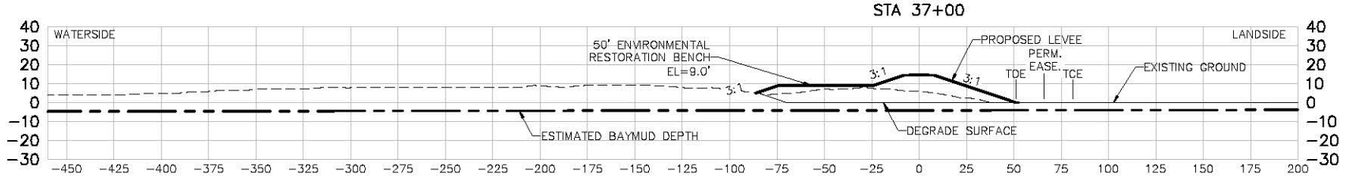
Sheet reference number:
C-26

UPDATE

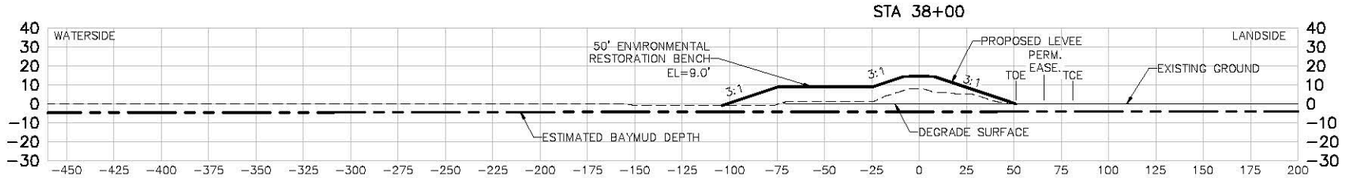
STA 36+00



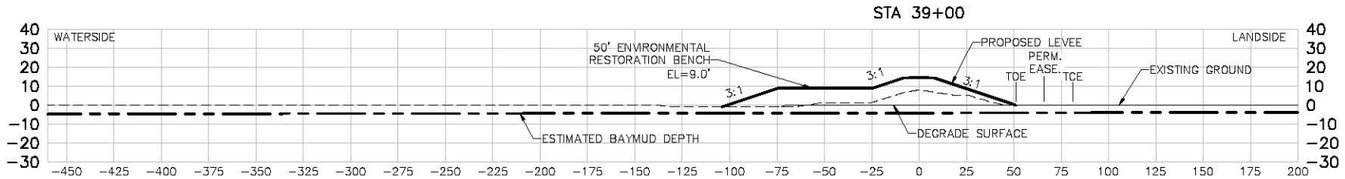
STA 37+00



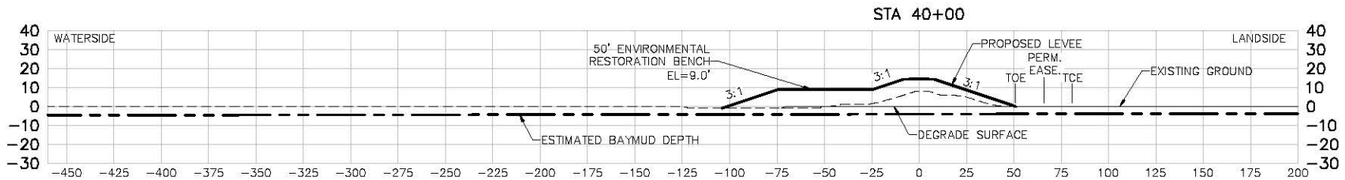
STA 38+00



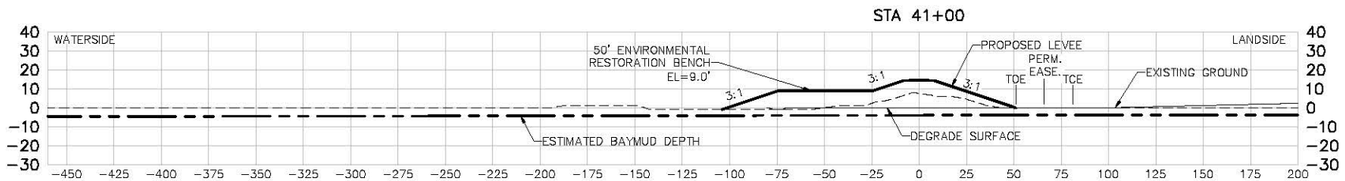
STA 39+00



STA 40+00



STA 41+00



US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Design File No: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR
HDR Engineering, Inc.
2379 GATEWAY OAKS
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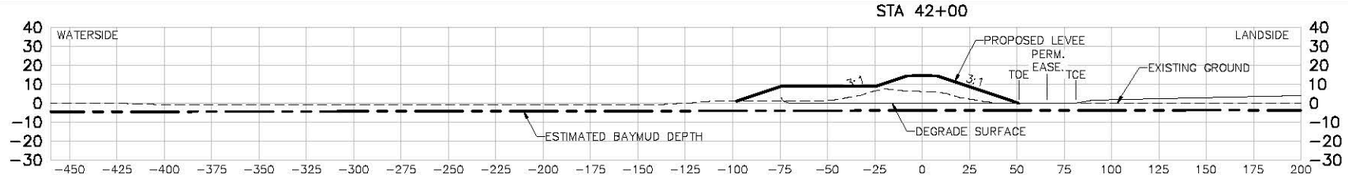
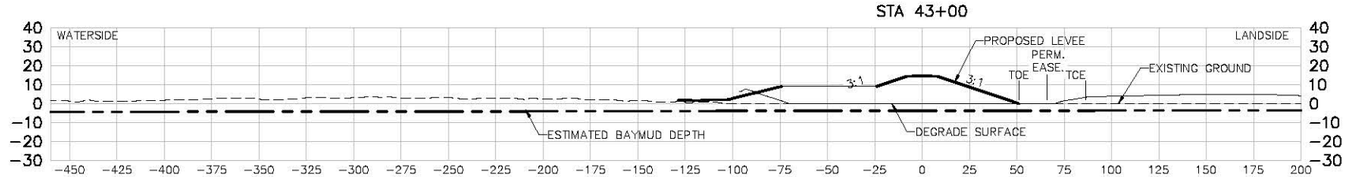
SACRAMENTO, CA 95833-4210

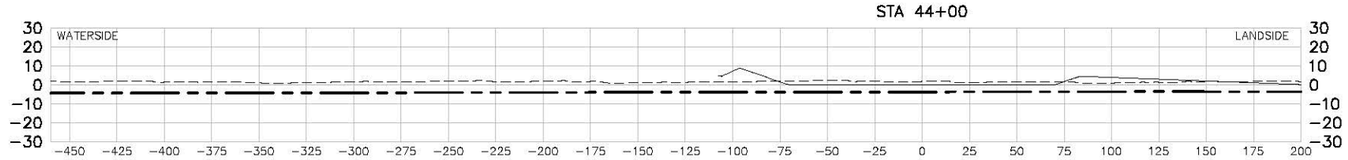
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 36+00 TO STA 41+00

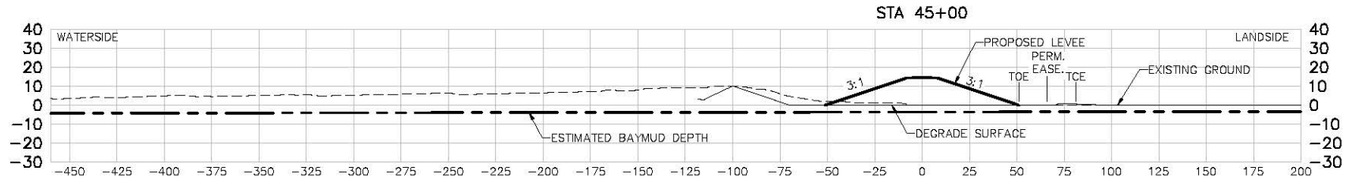
Sheet reference number:
C-27

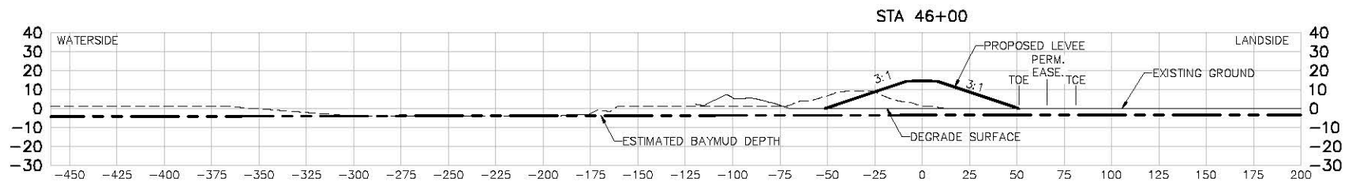
UPDATE

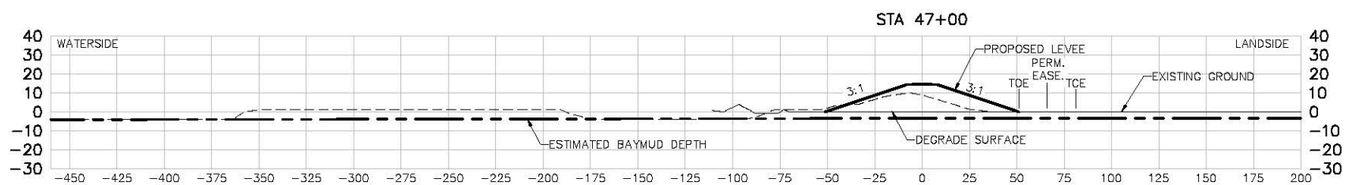












US Army Corps of Engineers
San Fransisco District

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Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
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Plot scale:
Dwg scale:
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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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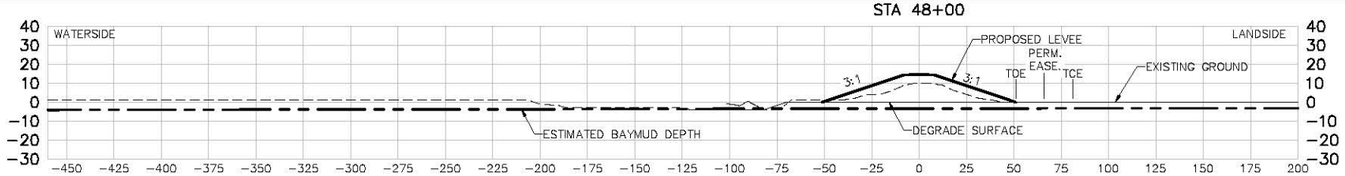
2379 GATEWAY OAKS
SUITE 200
SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 42+00 TO STA 47+00

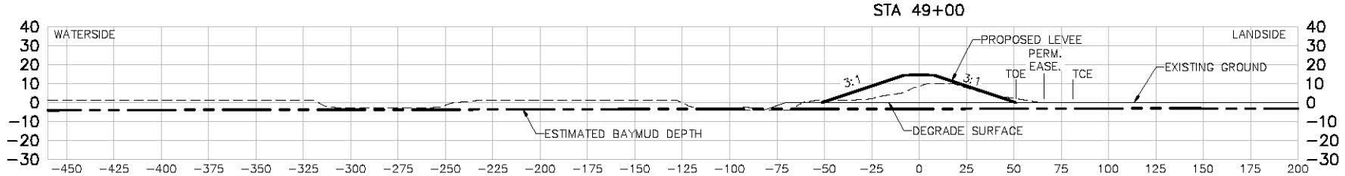
Sheet reference number:
C-28

UPDATE

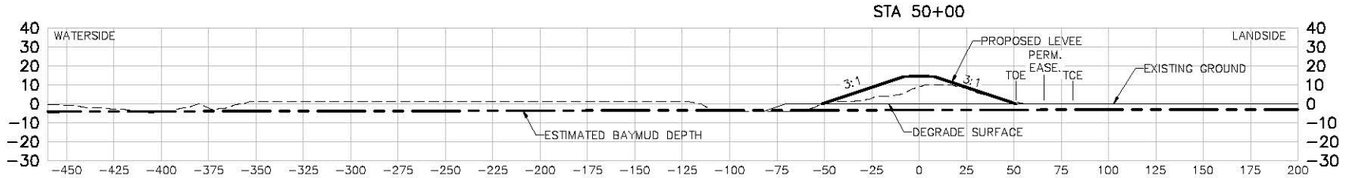
STA 48+00



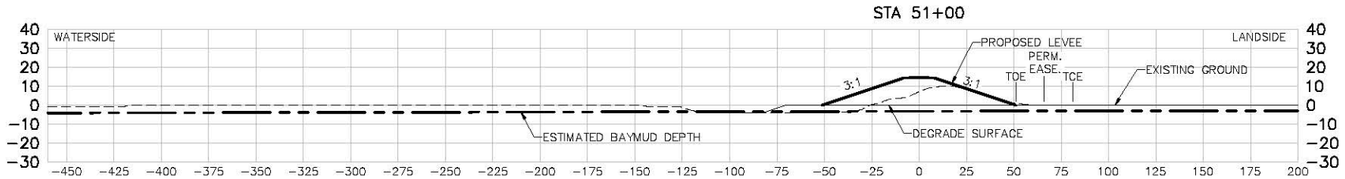
STA 49+00



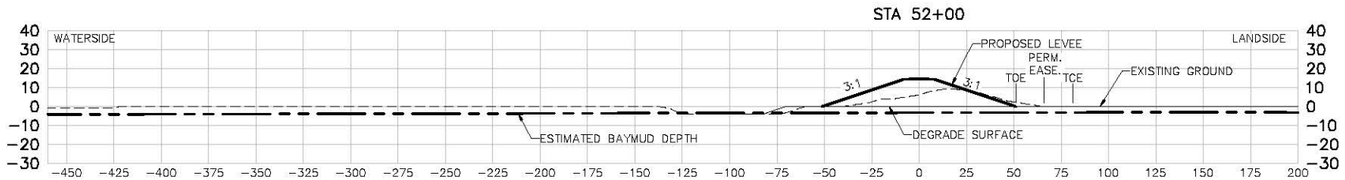
STA 50+00



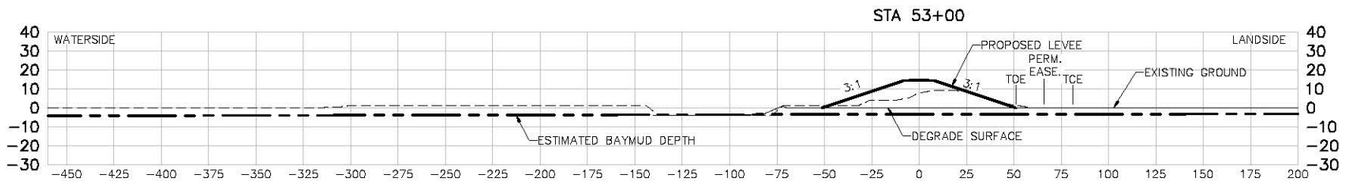
STA 51+00



STA 52+00



STA 53+00



US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Date: 06/24/2013
Rev. XX
Dwn by: V. RUSSO
Spec No: XX
Design File No: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

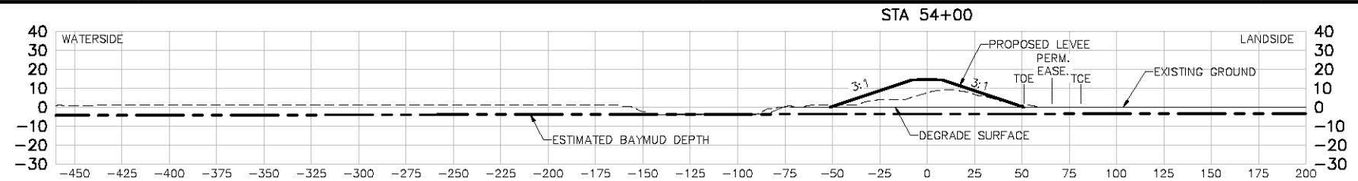
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

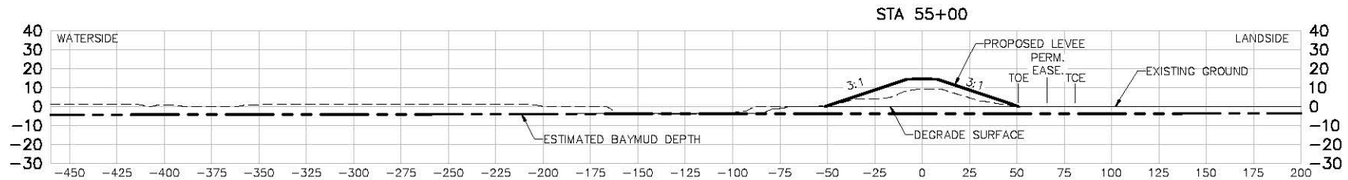
HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

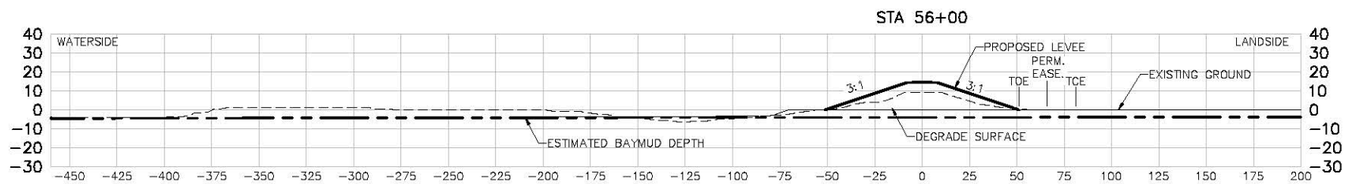
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 48+00 TO STA 53+00

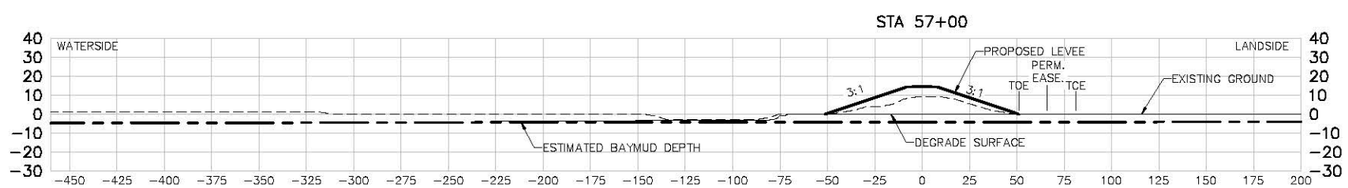
Sheet reference number:
C-29

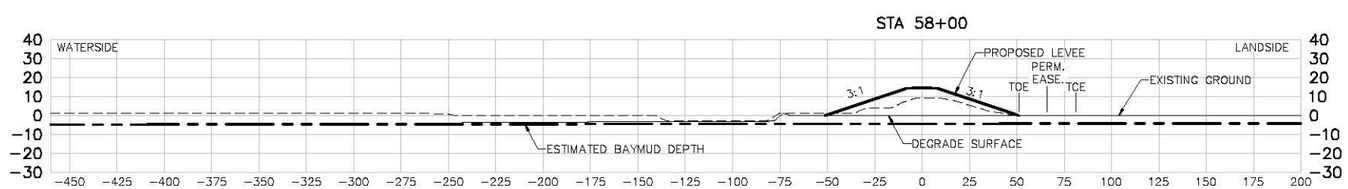
UPDATE

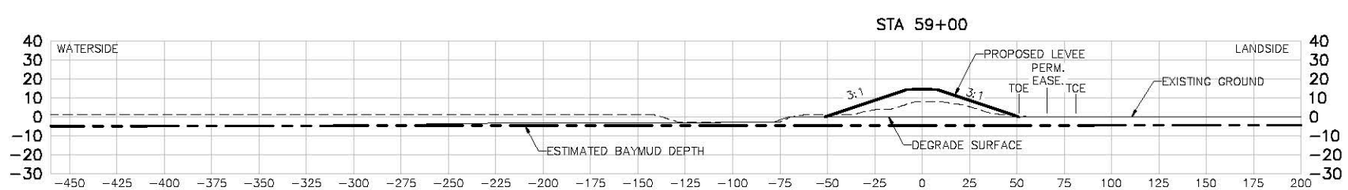












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Spec No: XX
Design File No: XXX
Dwn by: V. RUSSO
Drawing Code:
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

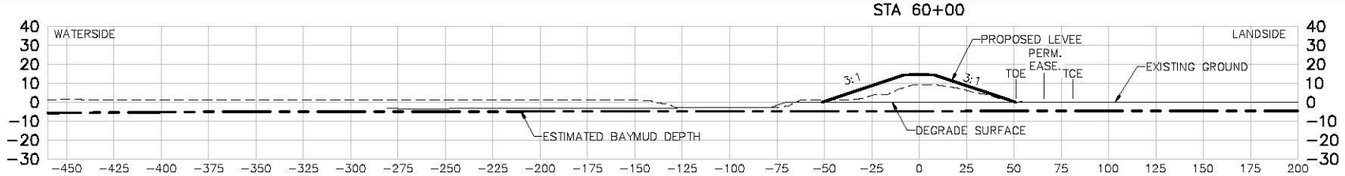
HDR Engineering, Inc. 2379 GATEWAY OAKS SUITE 200 SACRAMENTO, CA 95833-4210

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 54+00 TO STA 59+00

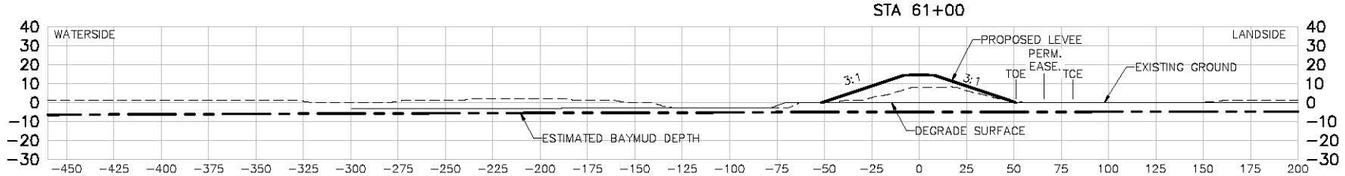
Sheet reference number:
C-30

UPDATE

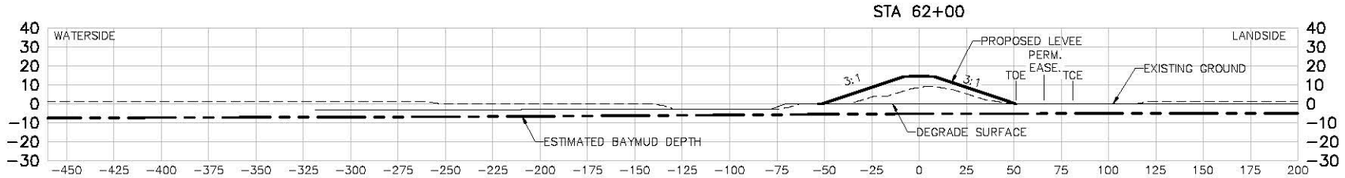
STA 60+00



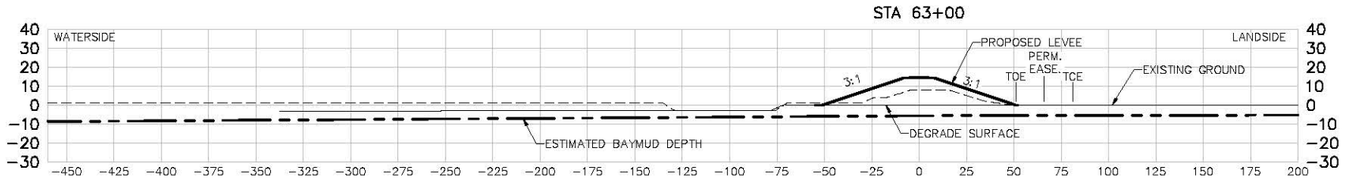
STA 61+00



STA 62+00



STA 63+00



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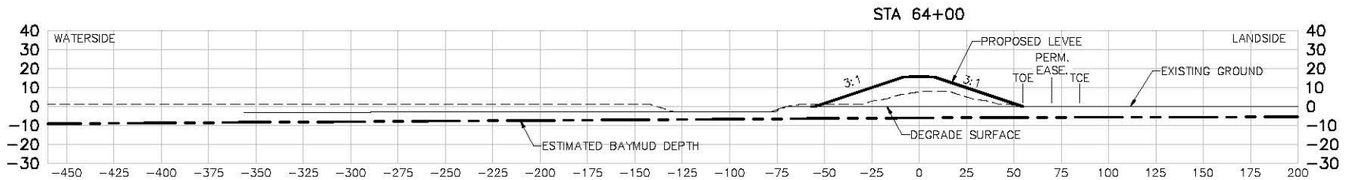
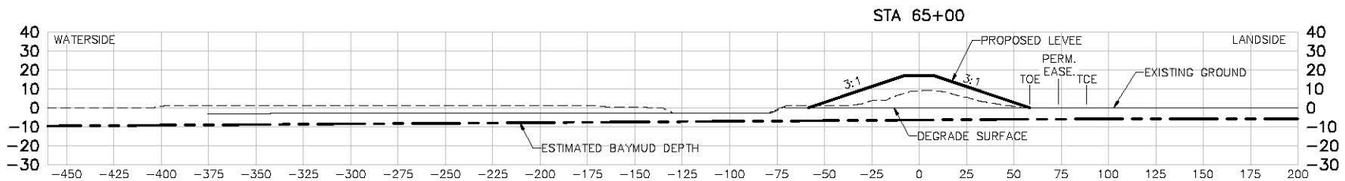


STA 65+00



US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Spec No: XX
Design File No: XXX
Dwn by: V. RUSSO
Drawing Code:
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: C-31 Sections
Plot scale:
Dwg size:

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SACRAMENTO, CALIFORNIA

HDR
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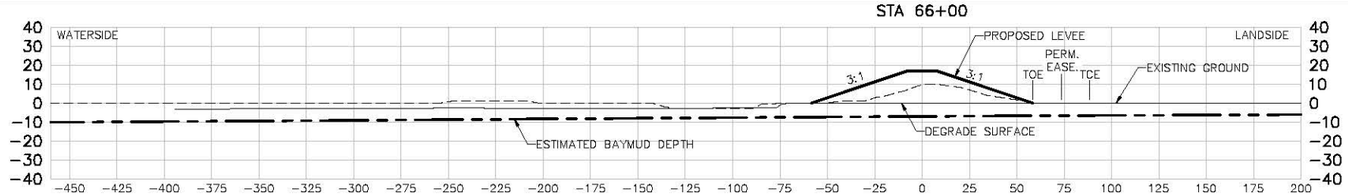
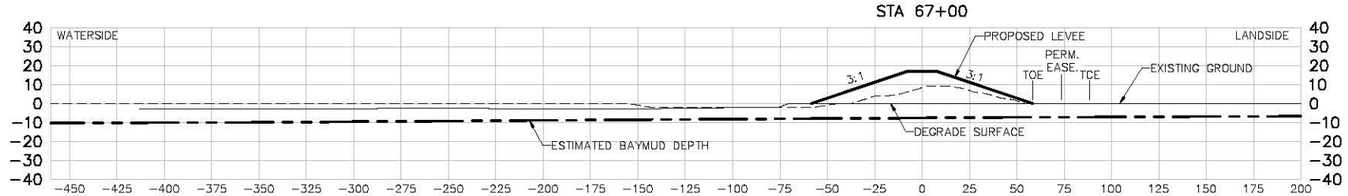
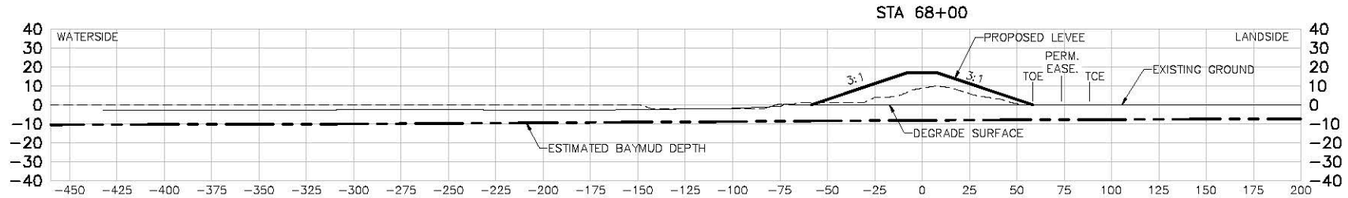
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 60+00 TO STA 65+00

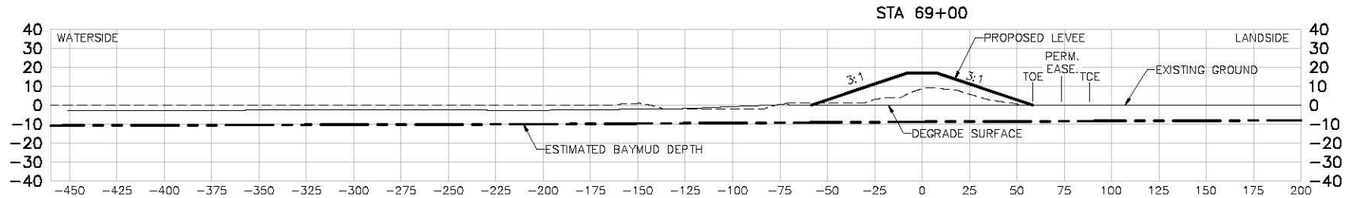
Sheet reference number:
C-31

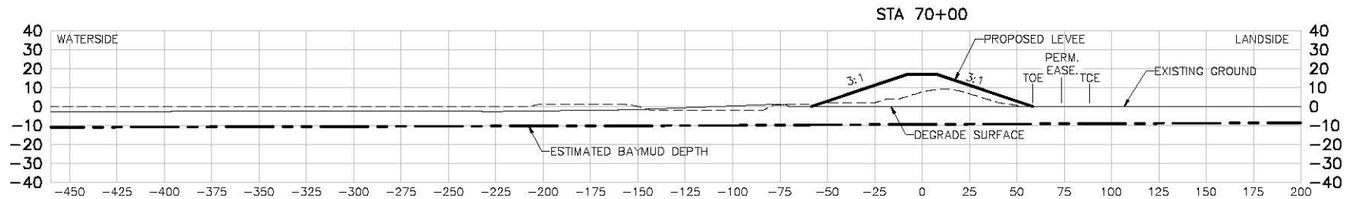
UPDATE

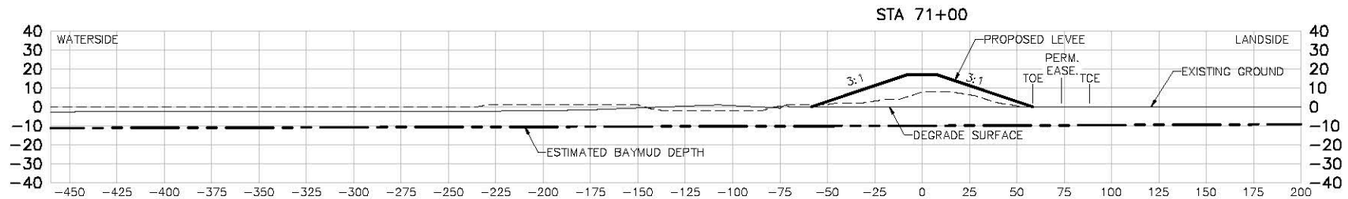












US Army Corps of Engineers
San Fransisco District

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Dwn by: V. RUSSO
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Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg size:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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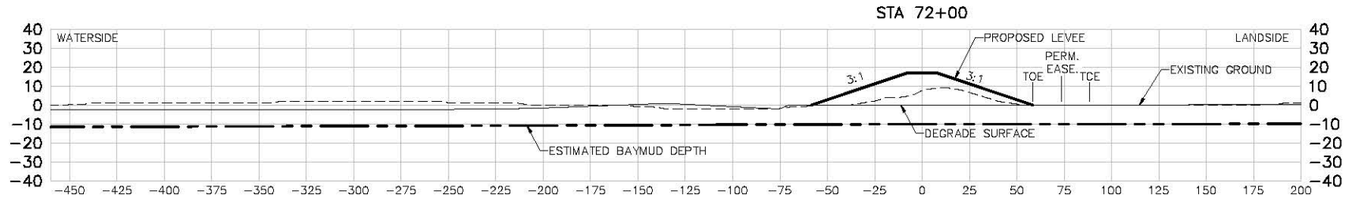
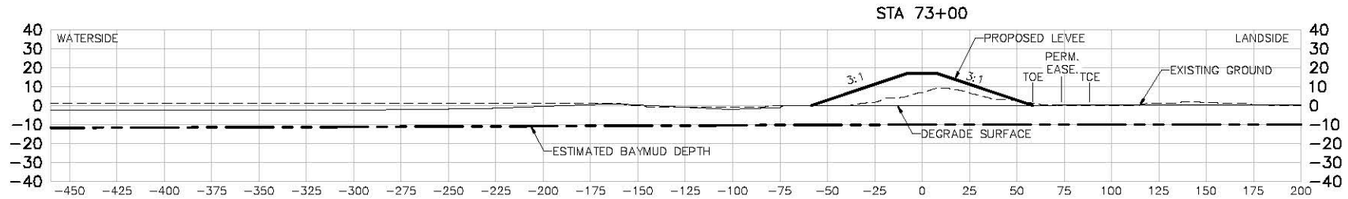
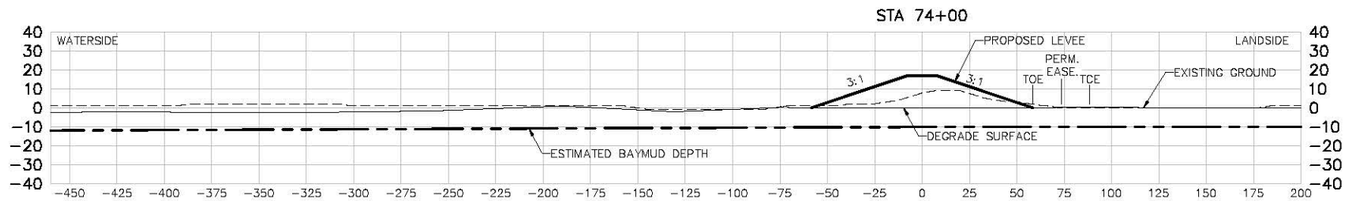
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 66+00 TO STA 71+00

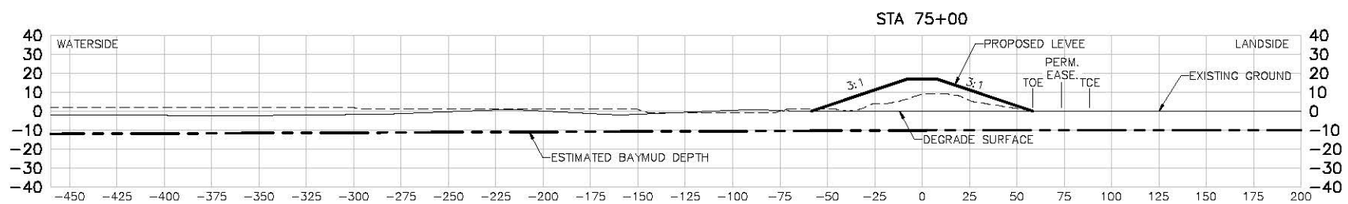
Sheet reference number:
C-32

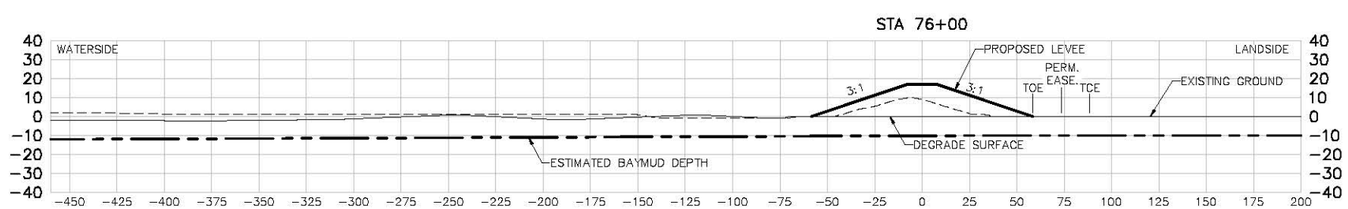
UPDATE

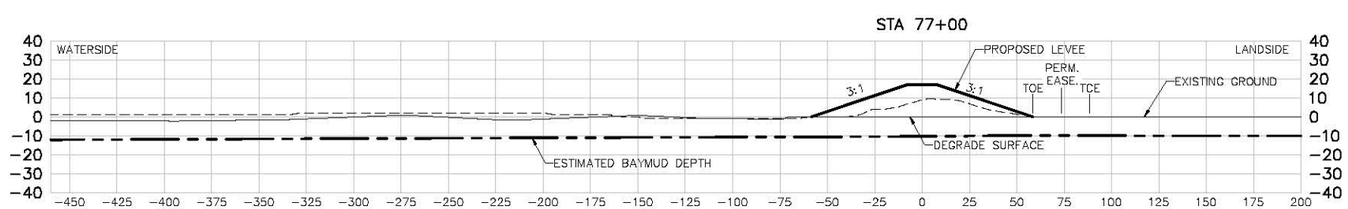












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Design File No: XXX
Drawing Code:
Spec No: XX
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot date:
Dwg scale:

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CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR
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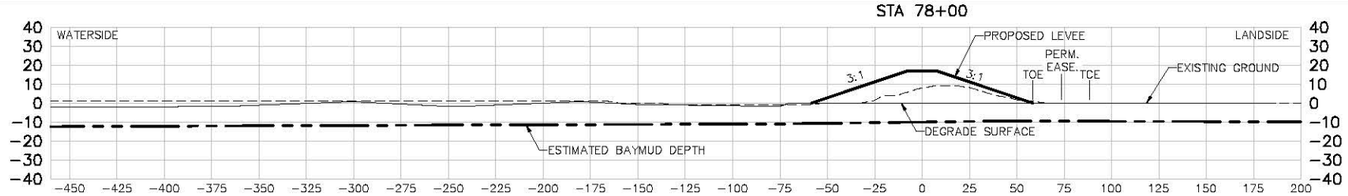
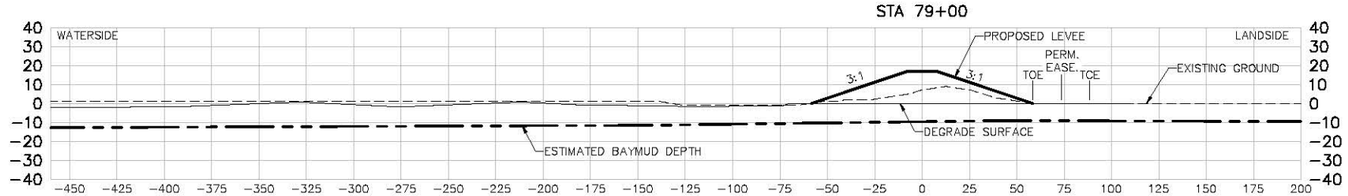
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 72+00 TO STA 77+00

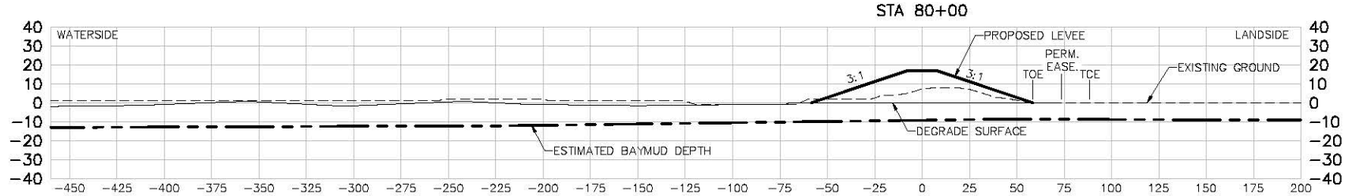
Sheet reference number:
C-33

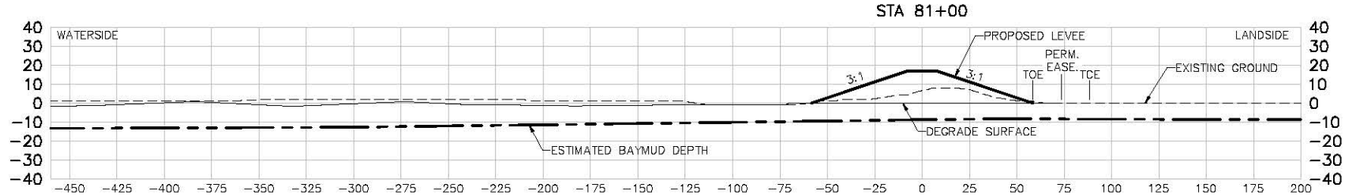
UPDATE

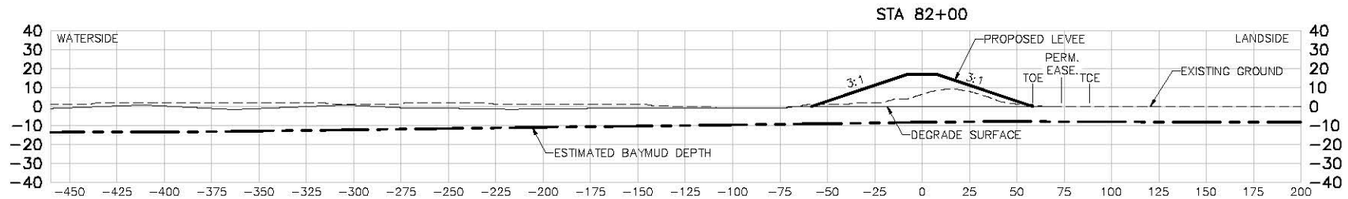
Border Revised 08/30/04, DESCRIPTION

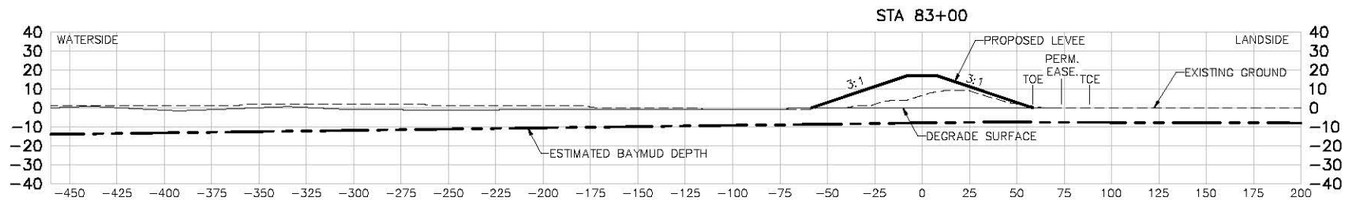












US Army Corps of Engineers
San Fransisco District

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Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Design File No: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR
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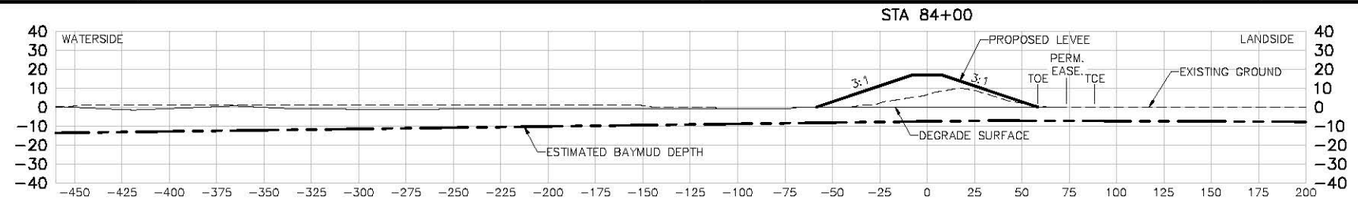
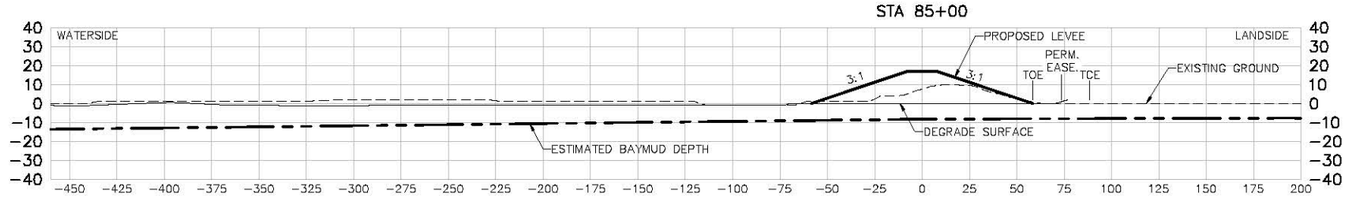
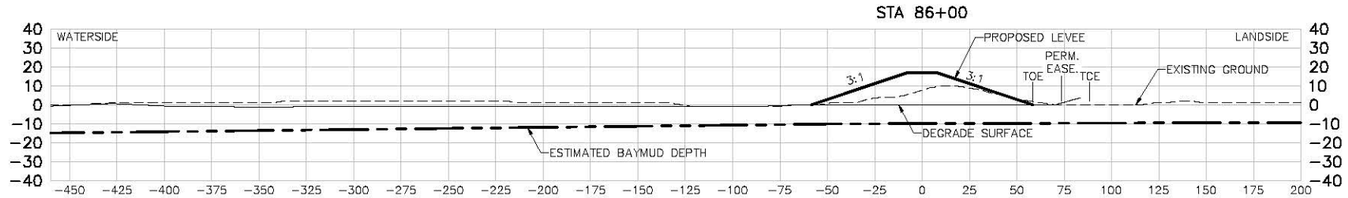
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 78+00 TO STA 83+00

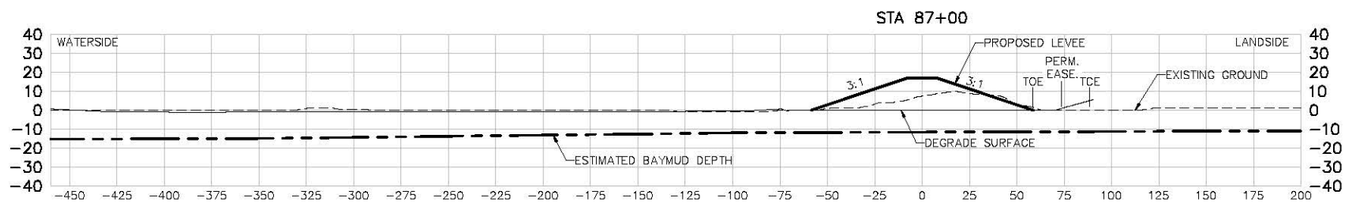
Sheet reference number:
C-34

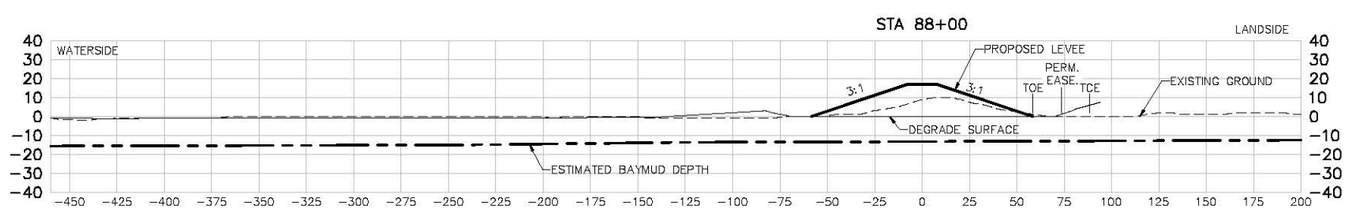
UPDATE

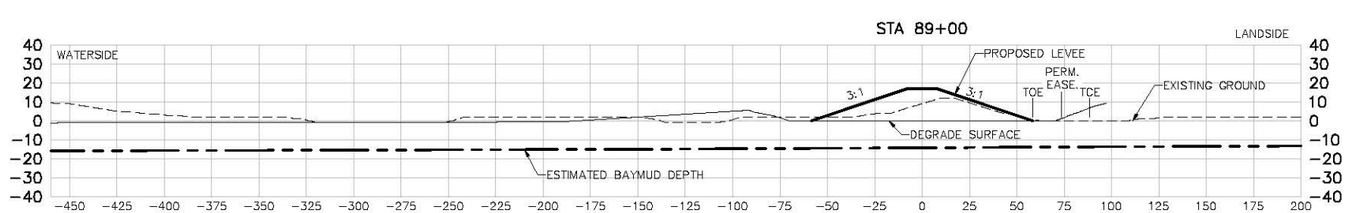












US Army Corps of Engineers
San Fransisco District

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Date: 06/24/2013
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Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
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Drawing Code:
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File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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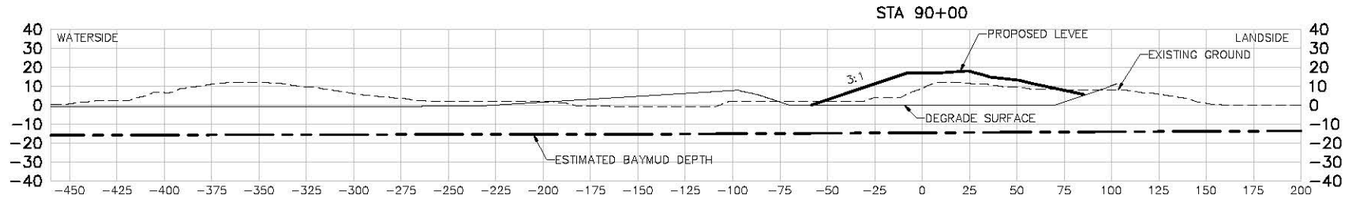
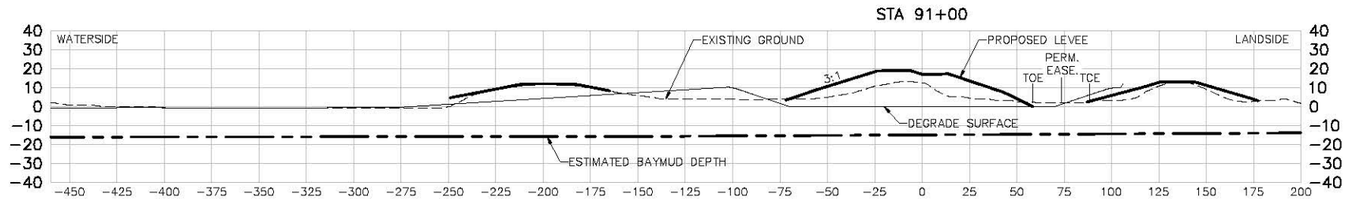
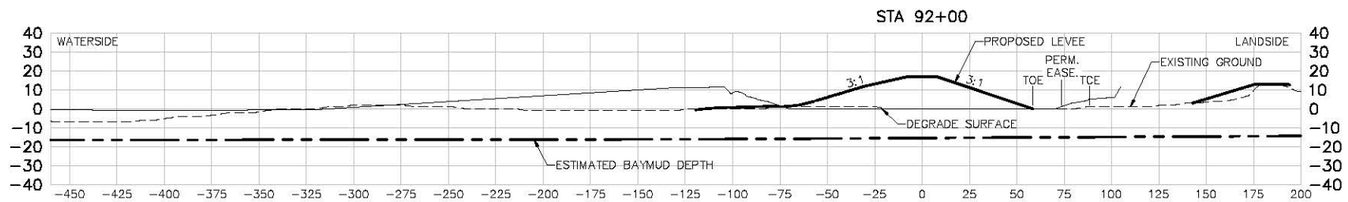
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 84+00 TO STA 89+00

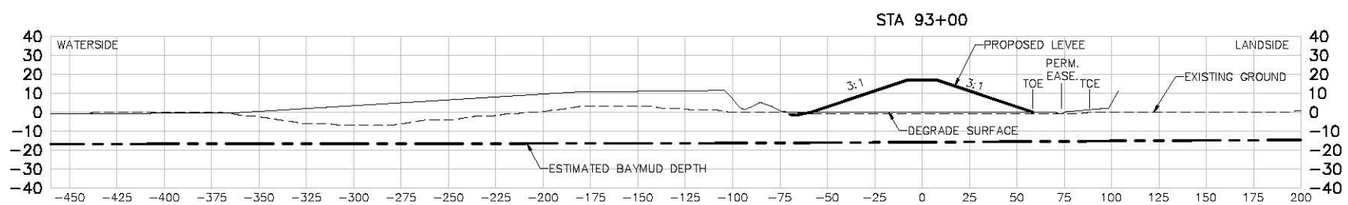
Sheet reference number:
C-35

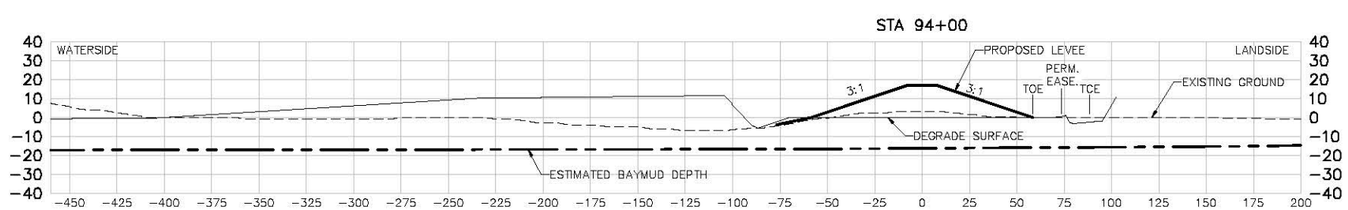
UPDATE

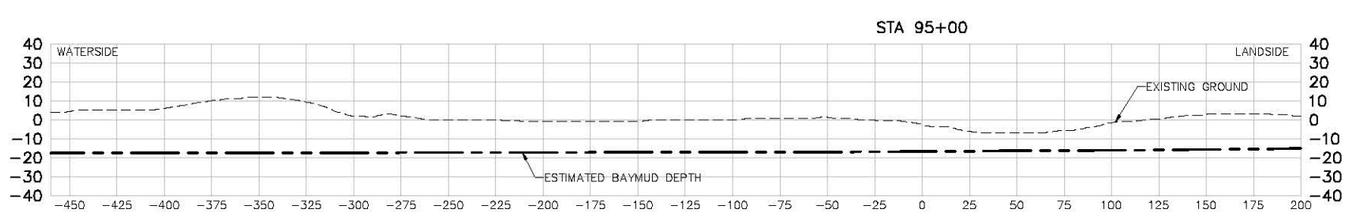












US Army Corps of Engineers
San Fransisco District

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Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
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Rev. XX
File name: C-21 Sections
Plot scale:
Dwg scale:

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CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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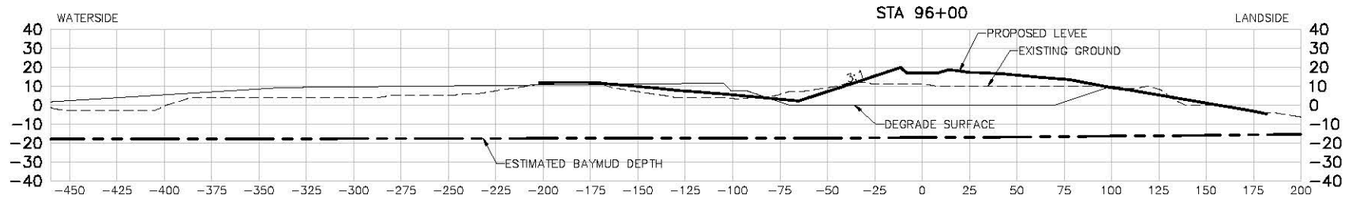
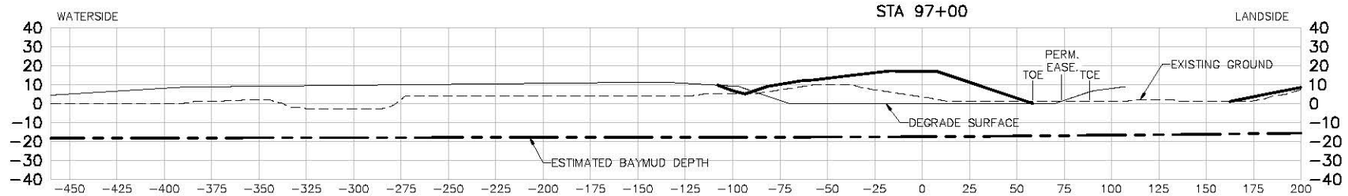
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 90+00 TO STA 95+00

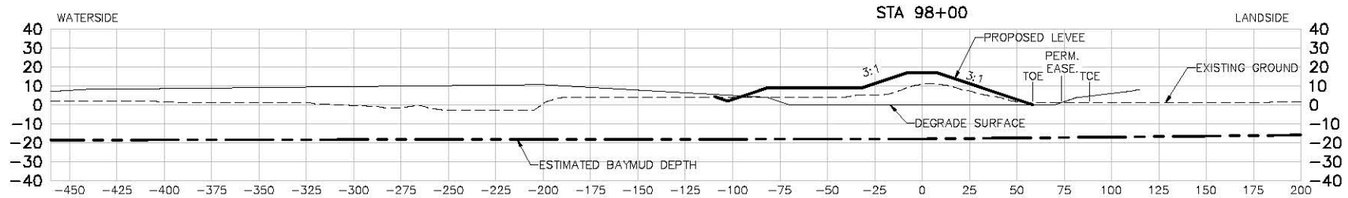
Sheet reference number:
C-36

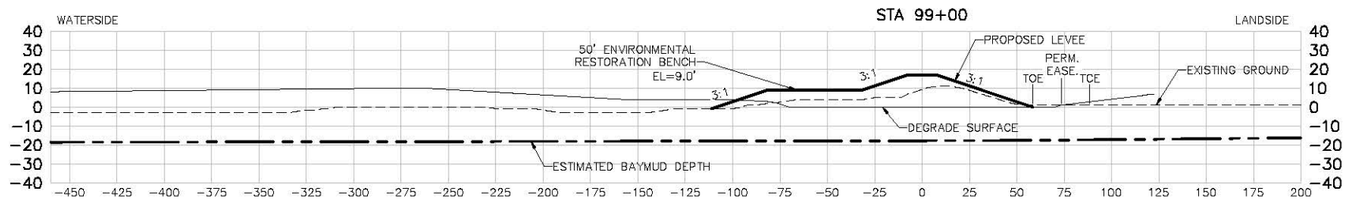
UPDATE

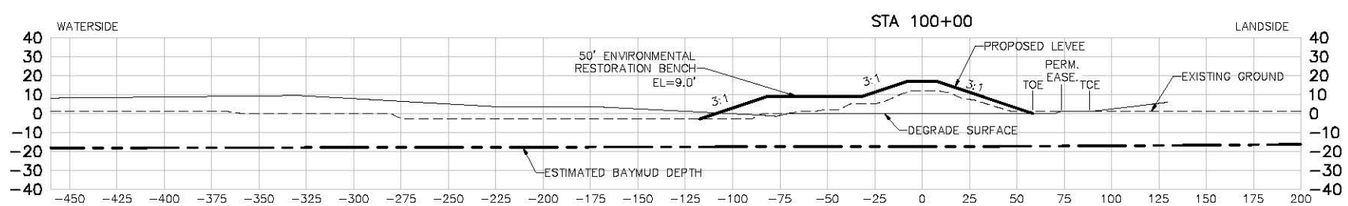
Border Revised 08/30/04, DESCRIPTIONS

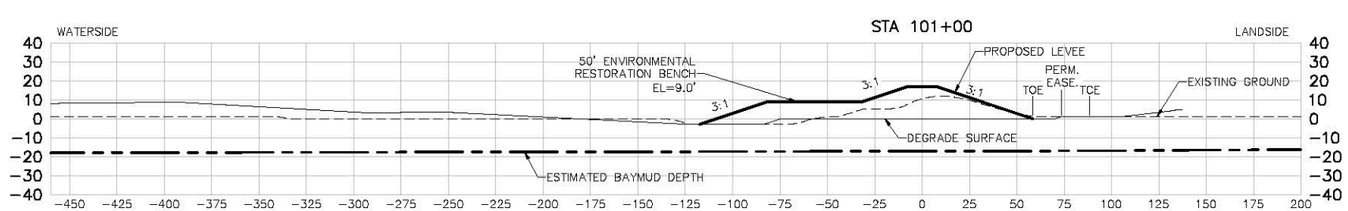












US Army Corps of Engineers
San Fransisco District

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Plot scale:
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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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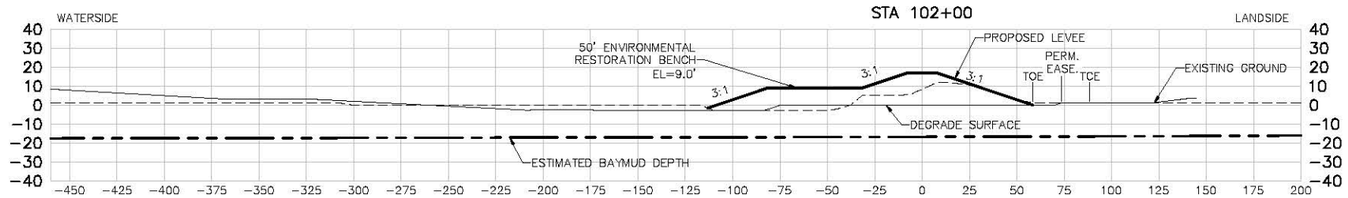
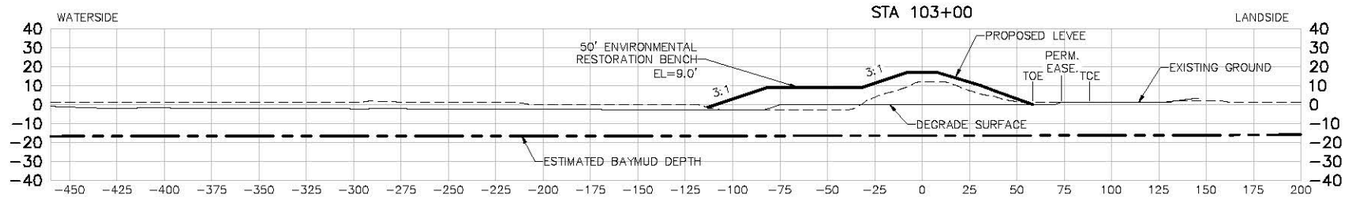
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 96+00 TO STA 101+00

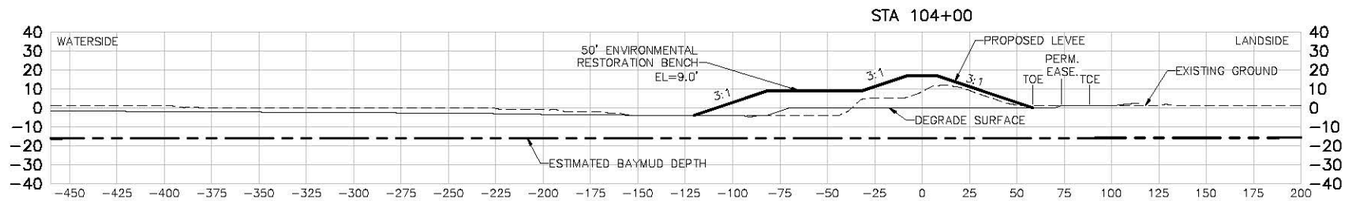
Sheet reference number:
C-37

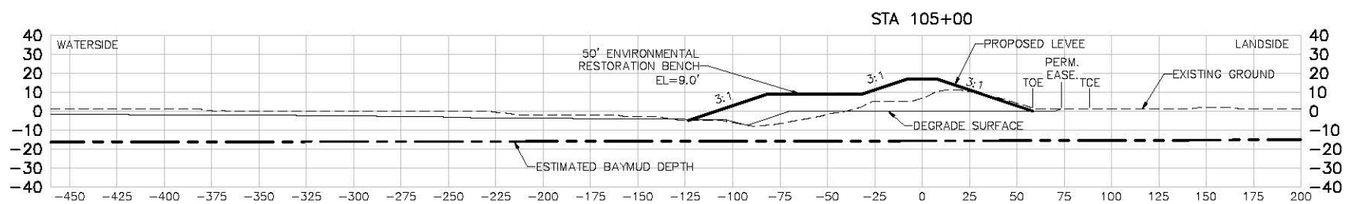
UPDATE

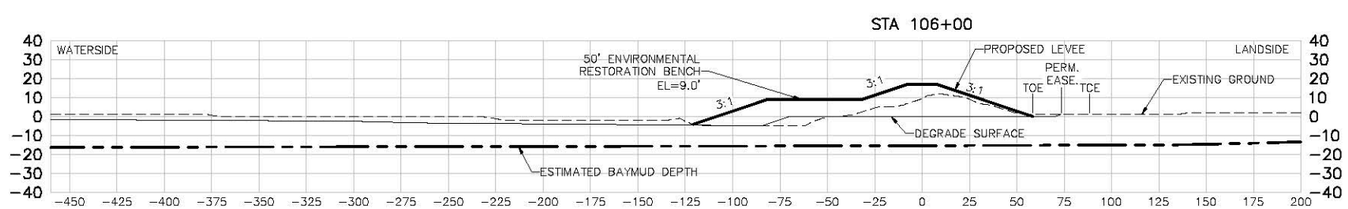
Border Revised 08/30/04, DESCRIPTION

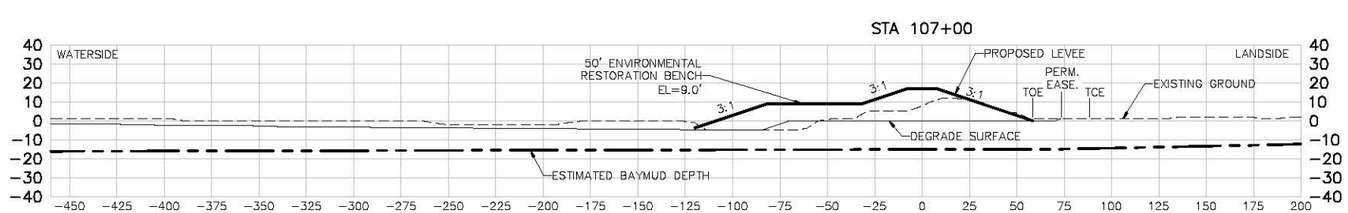












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Design File No: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

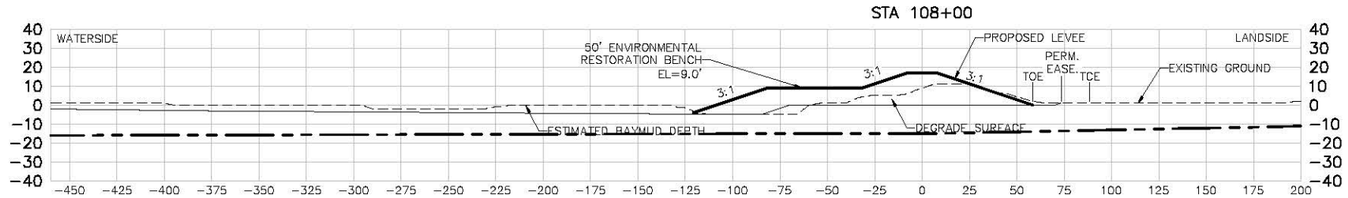
HDR
HDR Engineering, Inc. SACRAMENTO, CA 95899-4240
2379 GATEWAY OAKS
SUITE 200

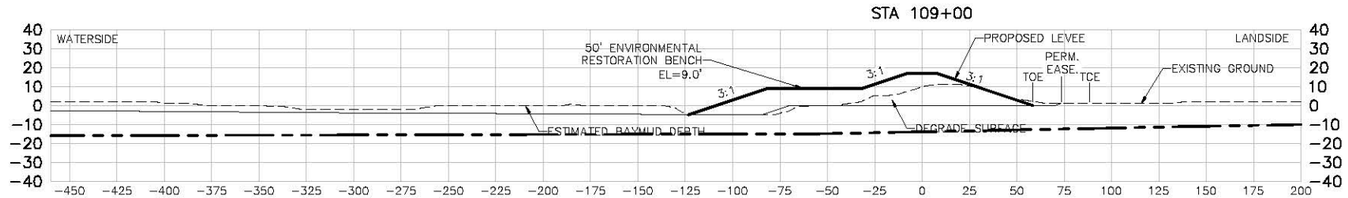
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 102+00 TO STA 107+00

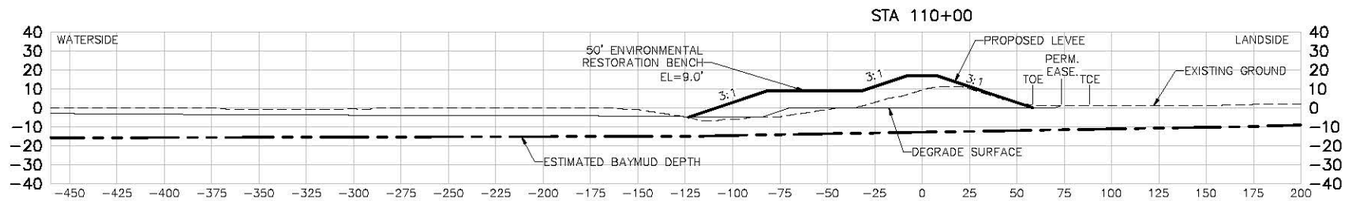
Sheet reference number:
C-38

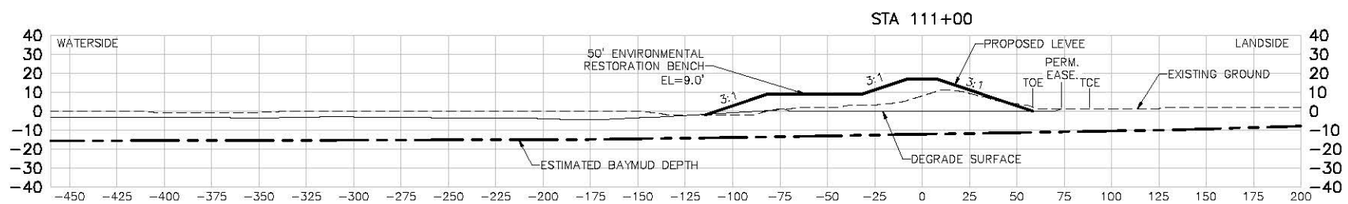
UPDATE

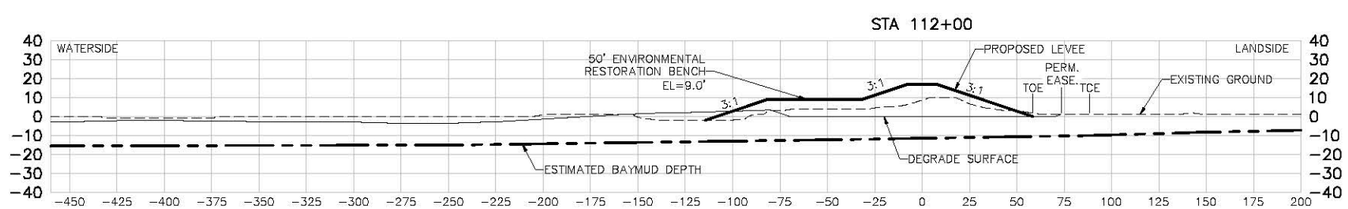
Border: Revised 08/30/04, DESCRIPTION

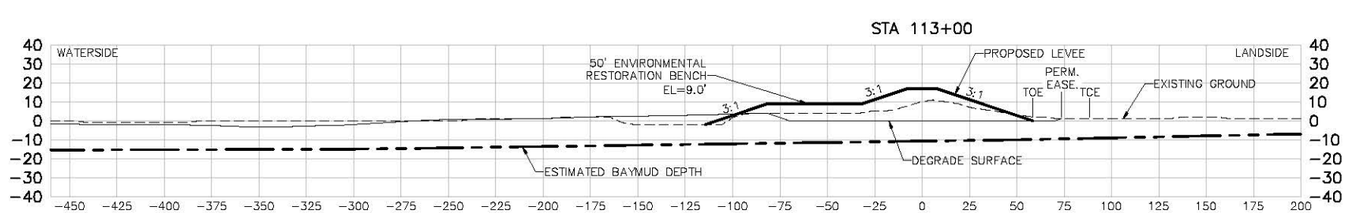












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
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Designed by: S. JIMENEZ
Spec No: XX
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Drawing Code:
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot date:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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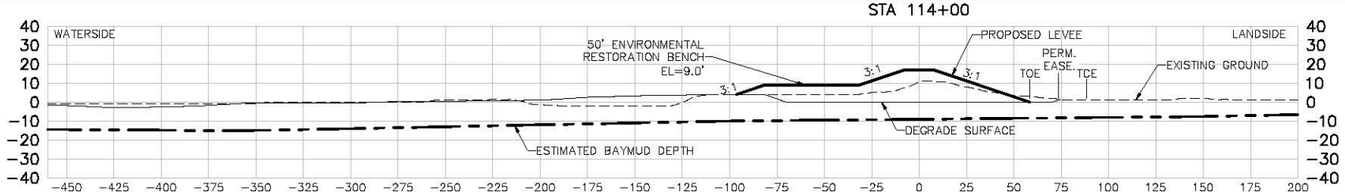
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 108+00 TO STA 113+00

Sheet reference number:
C-39

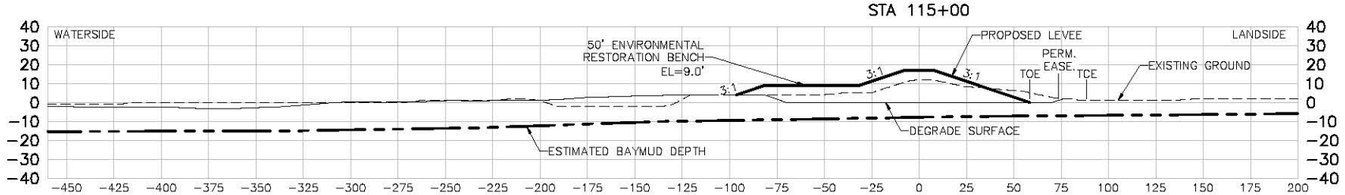
UPDATE

Border: Revised 08/30/04, DESCRIPTIONS

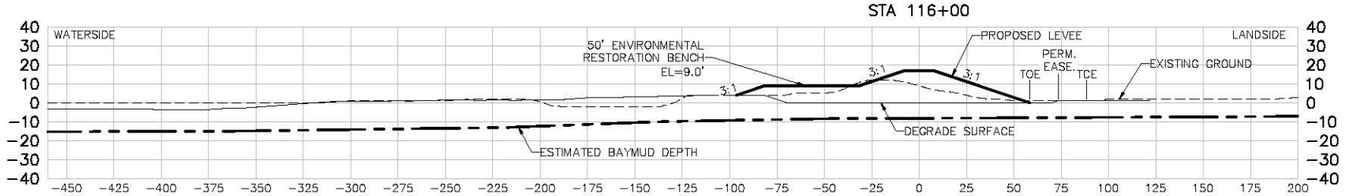
STA 114+00



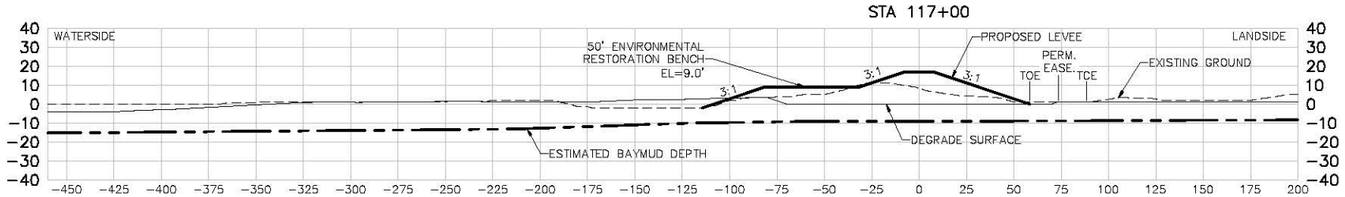
STA 115+00



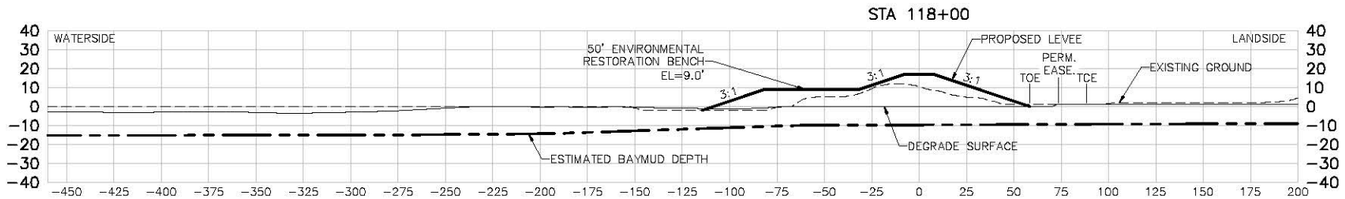
STA 116+00



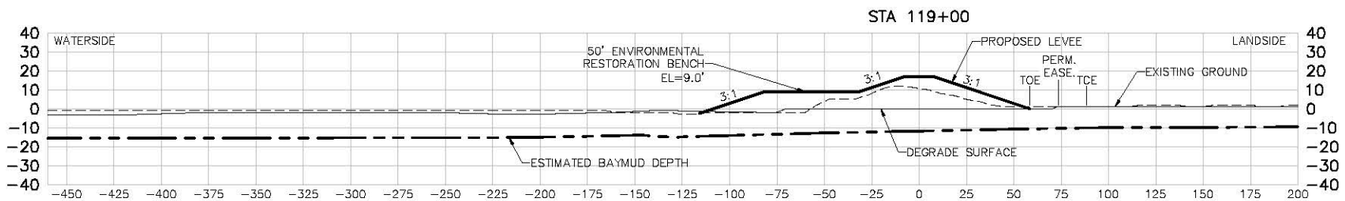
STA 117+00



STA 118+00



STA 119+00



US Army Corps of Engineers
San Fransisco District

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Date: 06/24/2013
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Dwn by: V. RUSSO
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File name: C-21 Sections
Plot scale:
Dwg size:

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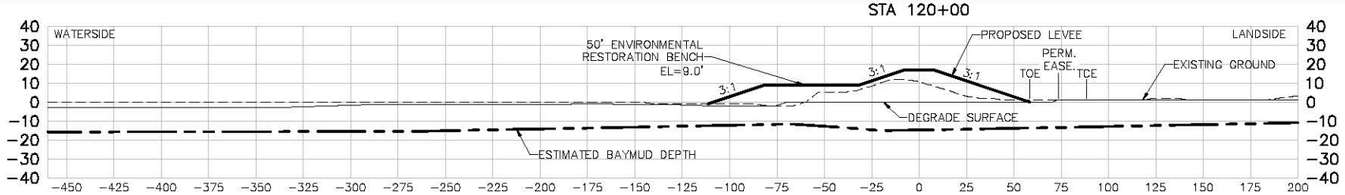
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 114+00 TO STA 119+00

Sheet reference number:
C-40

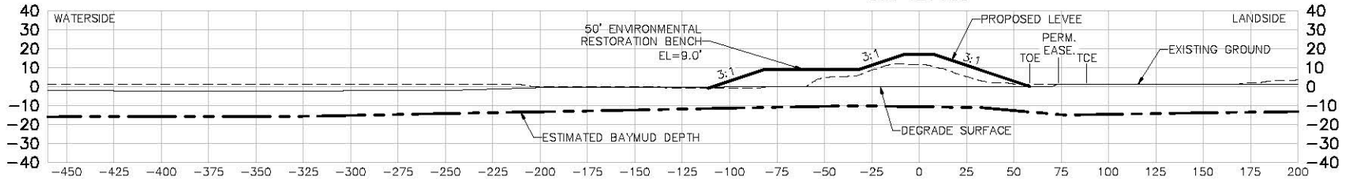
UPDATE

Border Revised 08/30/04, DESCRIPTIONS

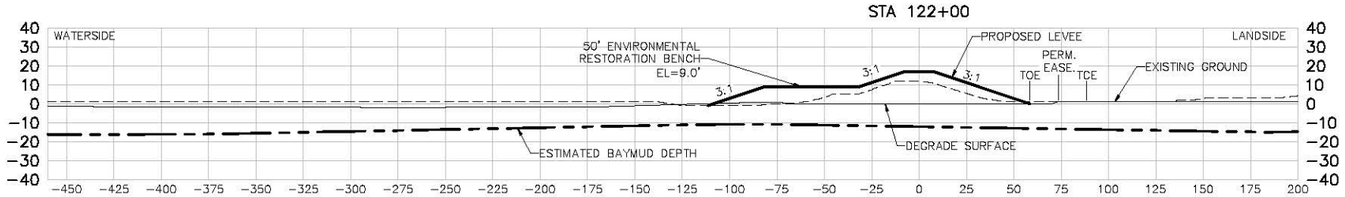
STA 120+00



STA 121+00



STA 122+00



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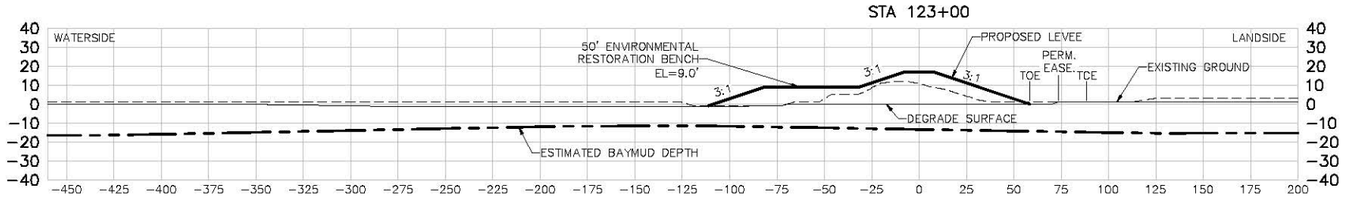

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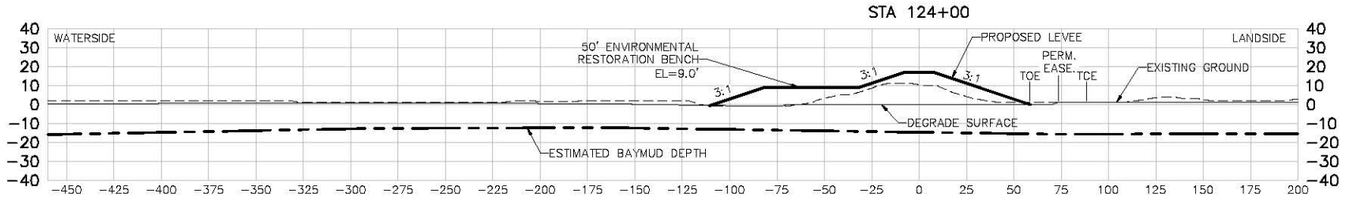
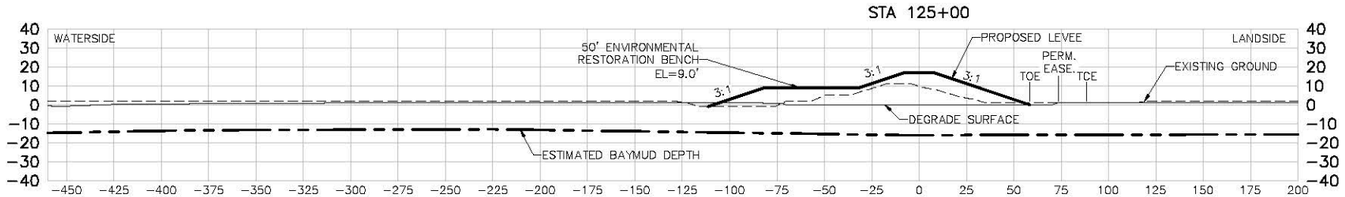


STA 125+00



US Army Corps of Engineers
San Fransisco District

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Date: 06/24/2013
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Dwn by: V. RUSSO
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Drawing Code:
File name: C-21 Sections
Plot scale:
Dwg scale:

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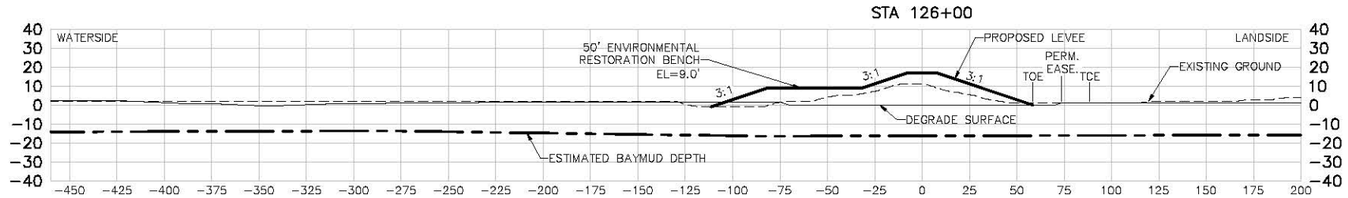
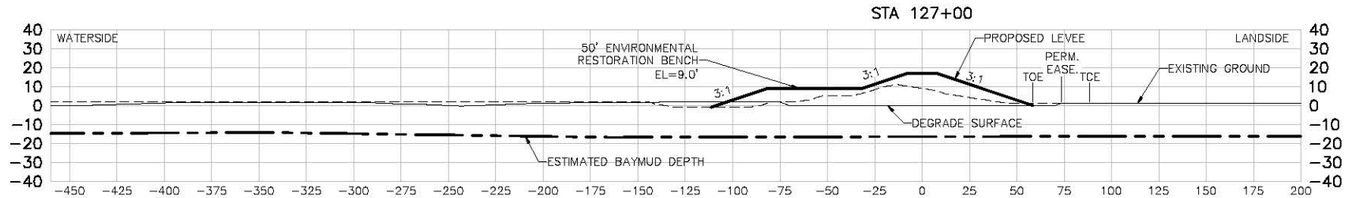
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 120+00 TO STA 125+00

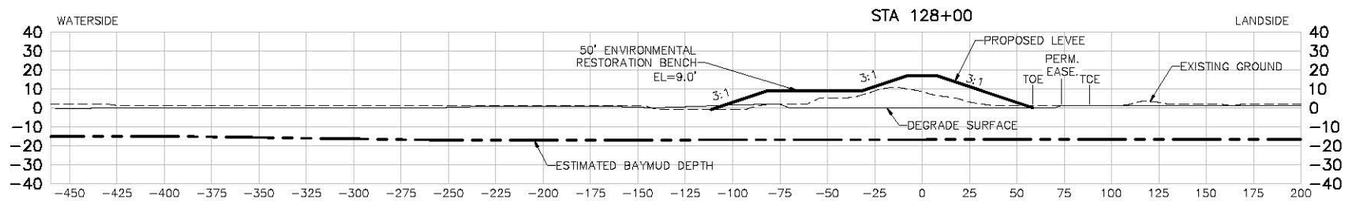
Sheet reference number:
C-41

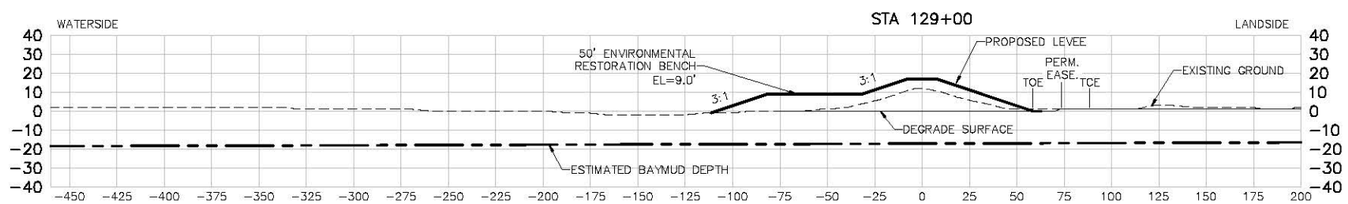
UPDATE

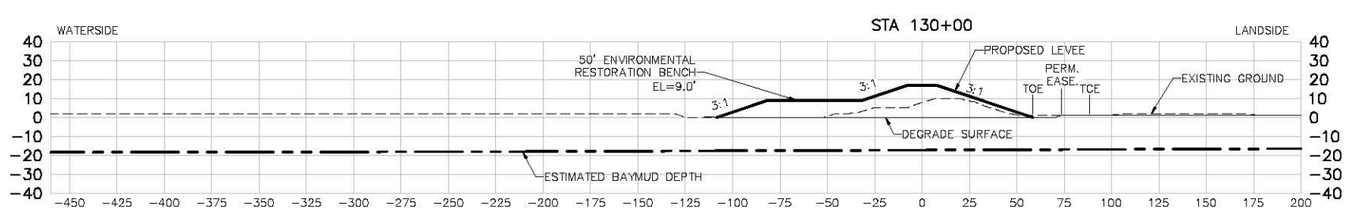
Border: Revised 08/30/04, DESCRIPTION

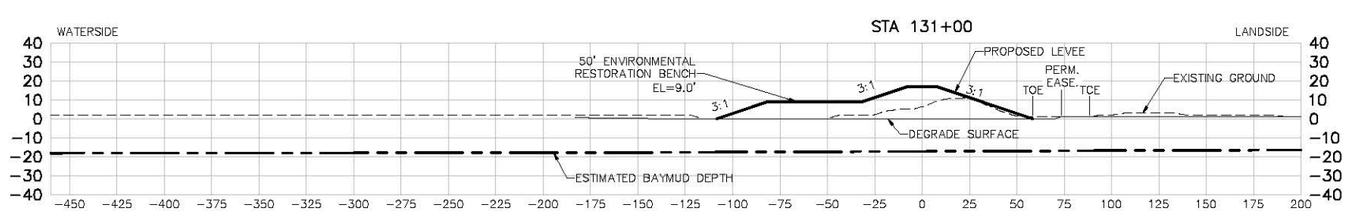












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Rev. XX

Date: 06/24/2013
Design File no: XXX
Drawing Code:
File name: C-21 Sections
Plot scale:
Dwg scale:

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Spec No: XX
Reviewed by: XX
Submitted by: S. JIMENEZ

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CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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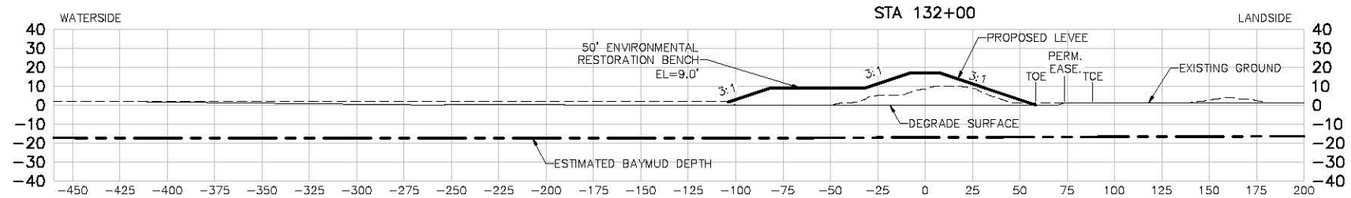
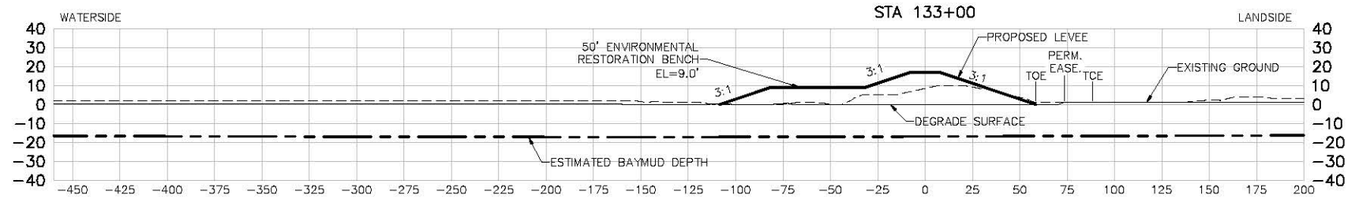
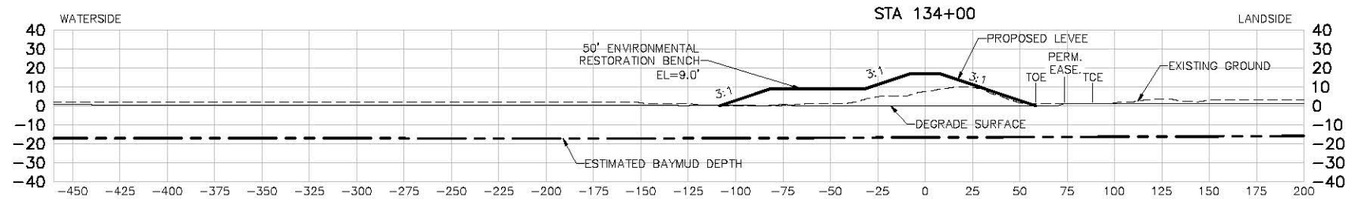
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 128+00 TO STA 131+00

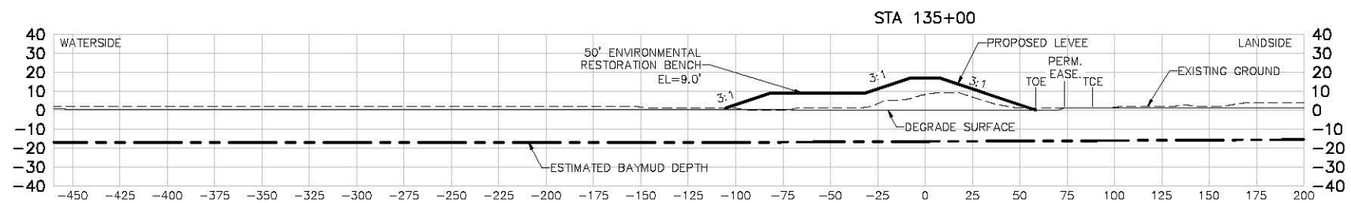
Sheet reference number:
C-42

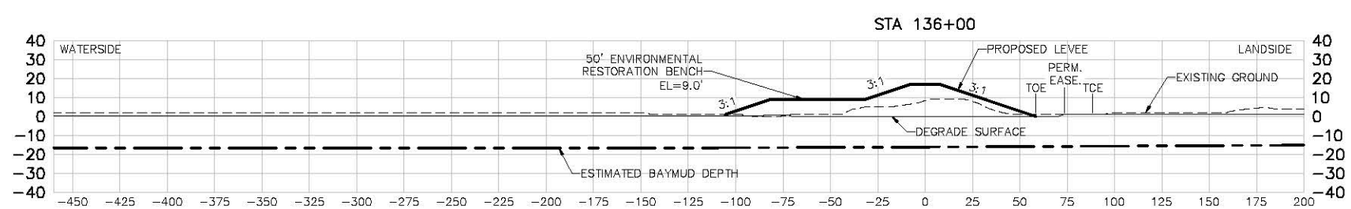
UPDATE

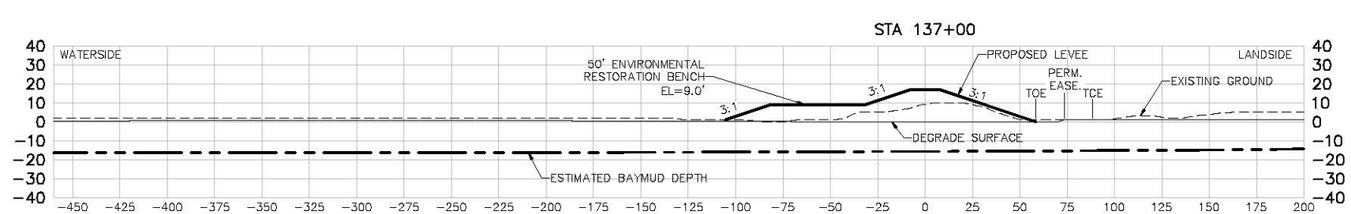












US Army Corps of Engineers
San Fransisco District

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Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Spec No: XX
Design File No: XXX
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File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

HDR
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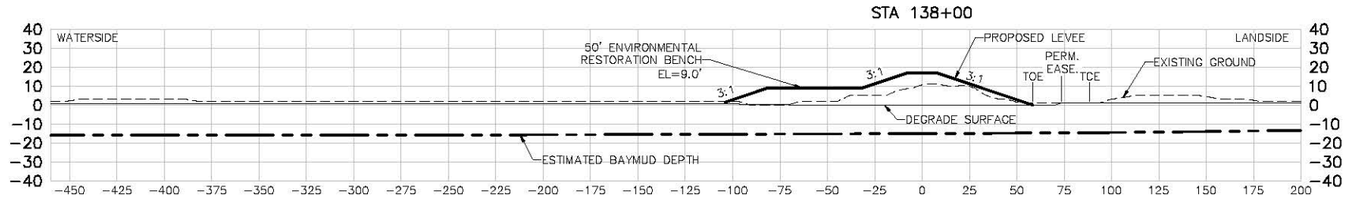
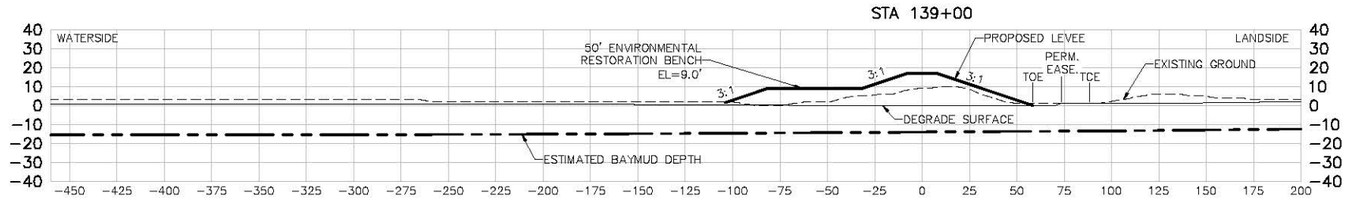
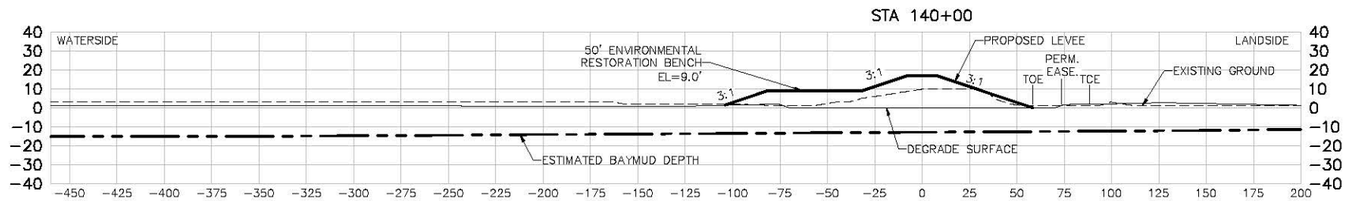
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 132+00 TO STA 137+00

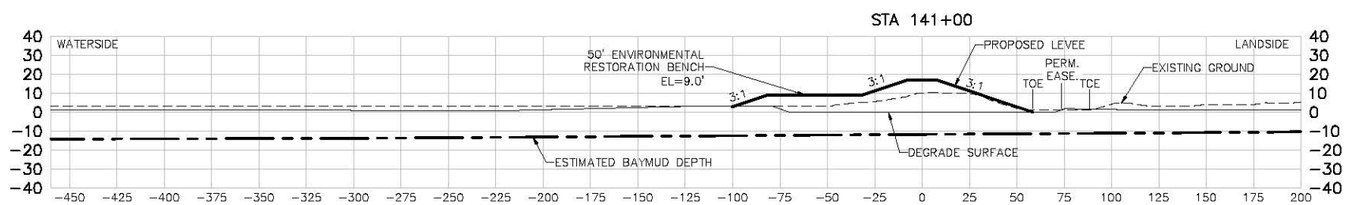
Sheet reference number:
C-43

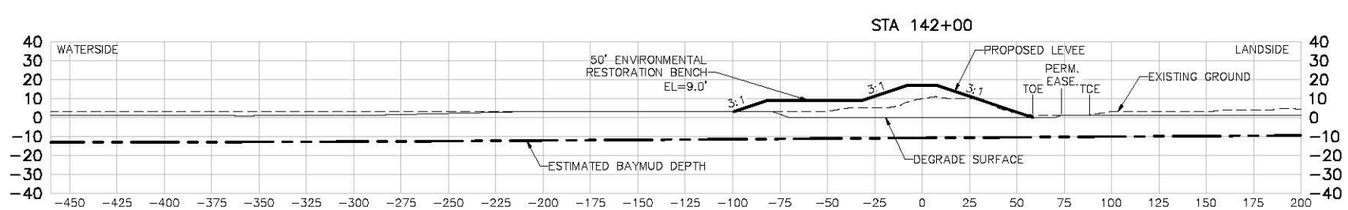
UPDATE

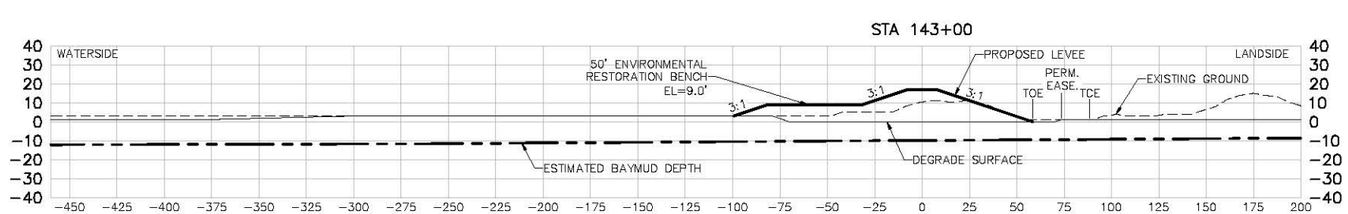












US Army Corps of Engineers
San Fransisco District

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Designed by: S. JIMENEZ
Spec No: XX
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File name: C-21 Sections
Plot scale:
Dwg scale:
Submitted by: S. JIMENEZ

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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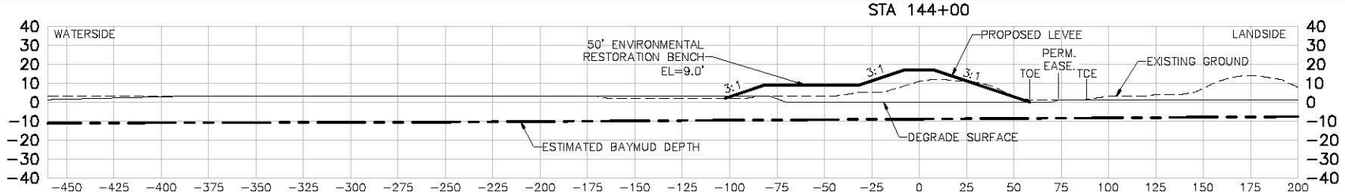
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 138+00 TO STA 143+00

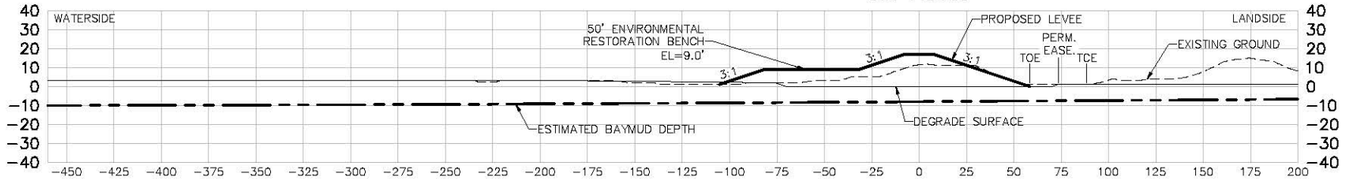
Sheet reference number:
C-44

UPDATE

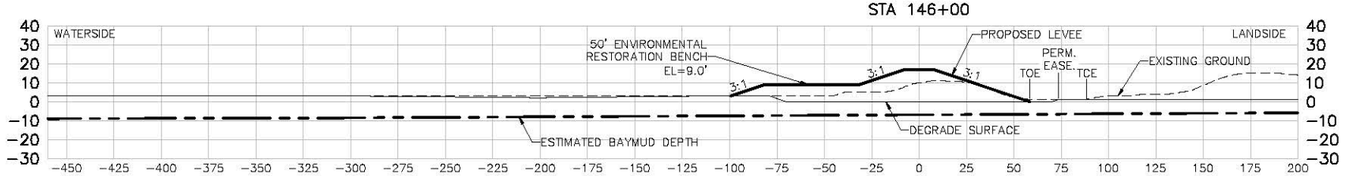
STA 144+00



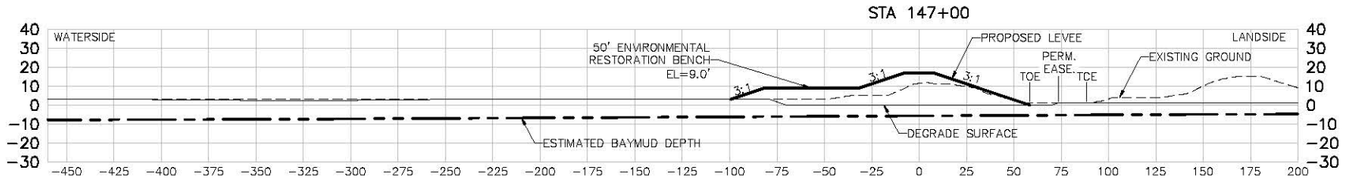
STA 145+00



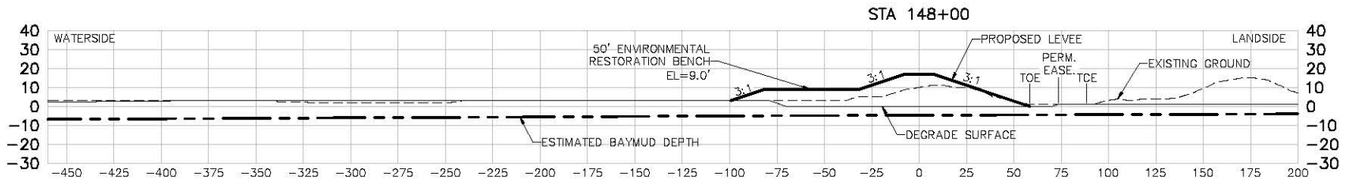
STA 146+00



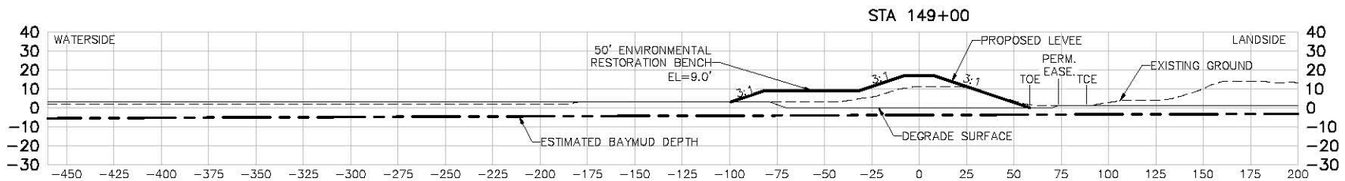
STA 147+00



STA 148+00



STA 149+00



US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Date: 06/24/2013
Rev. XX
Dwn by: V. RUSSO
Spec No: XX
Design File No: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg size:

DEPARTMENT OF THE ARMY
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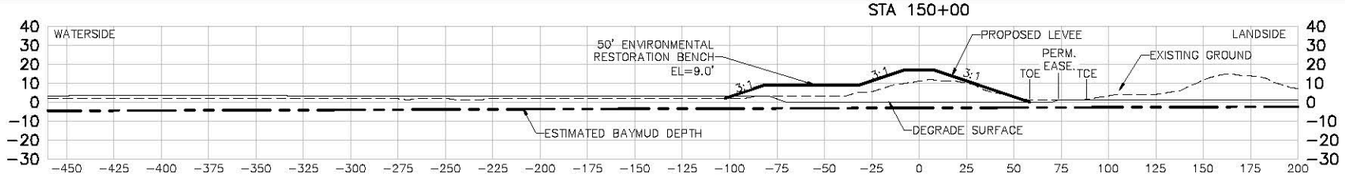
SUITE 200

SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 144+00 TO STA 149+00

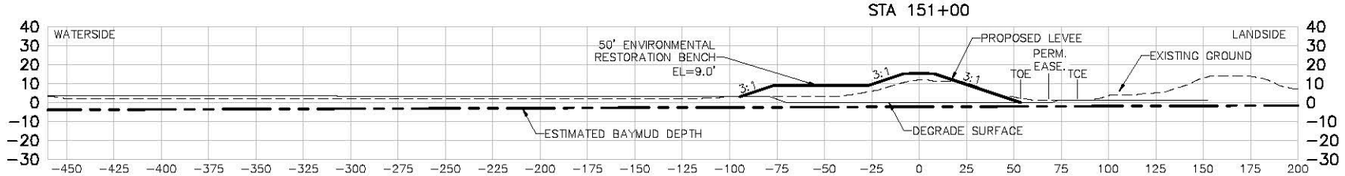
Sheet reference number:
C-45

UPDATE

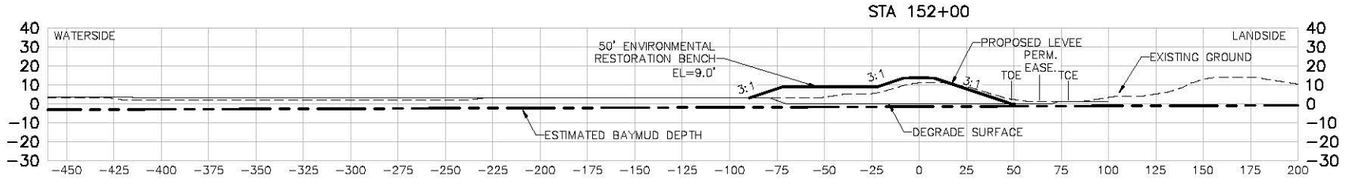
STA 150+00



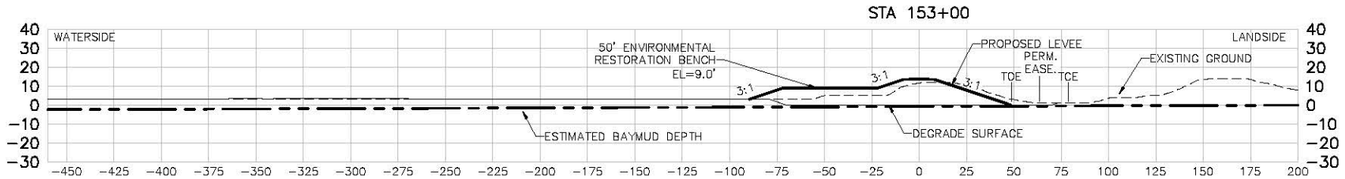
STA 151+00



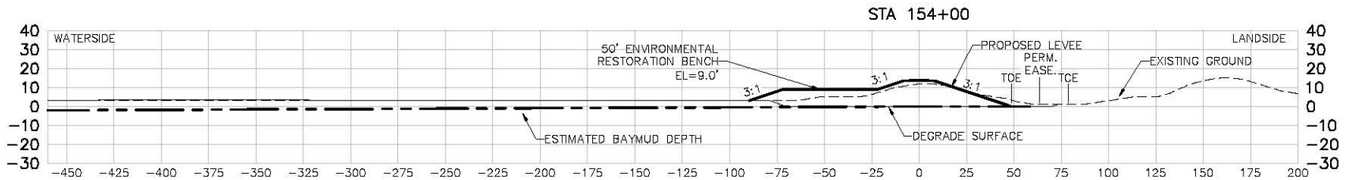
STA 152+00



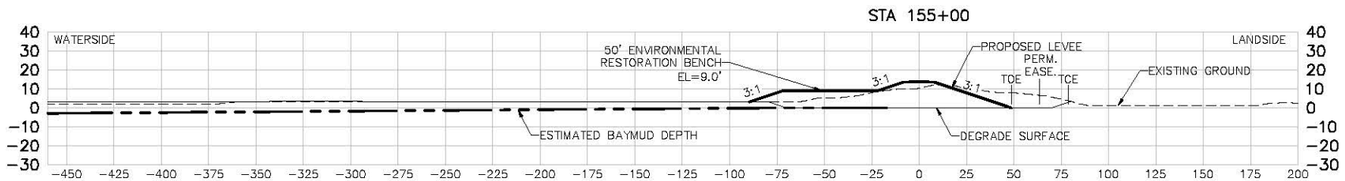
STA 153+00



STA 154+00



STA 155+00



US Army Corps of Engineers
San Fransisco District

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Designed by: S. JIMENEZ
Date: 06/24/2013
Rev. XX
Dwn by: V. RUSSO
Spec No: XX
Design File No: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

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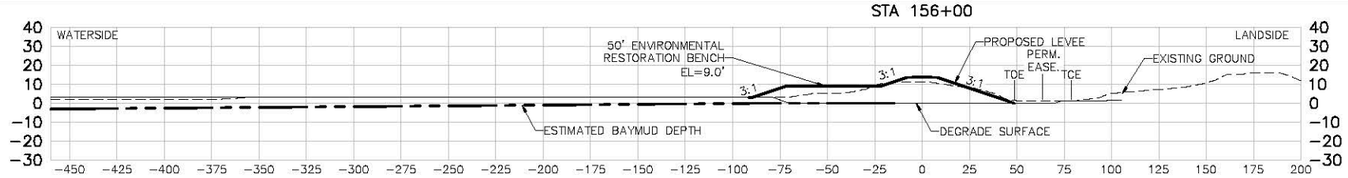
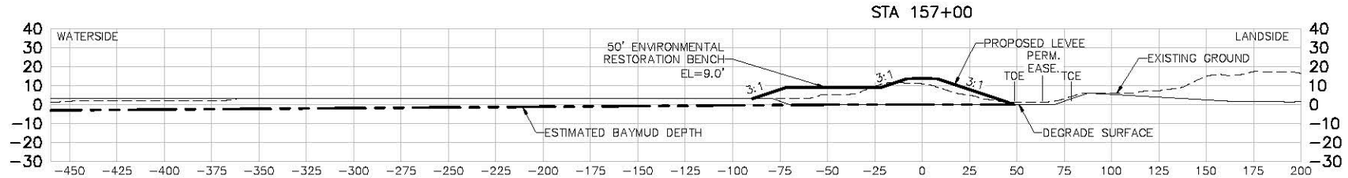
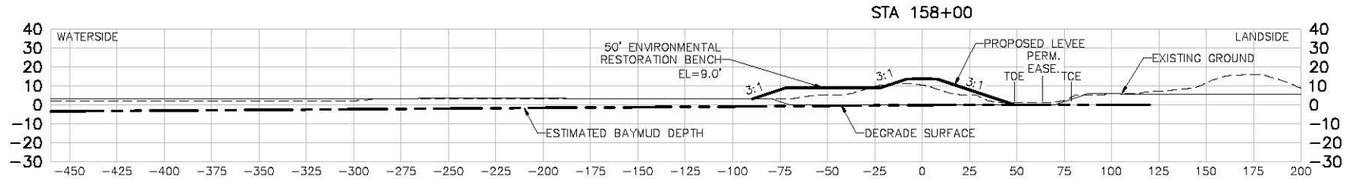
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 150+00 TO STA 155+00

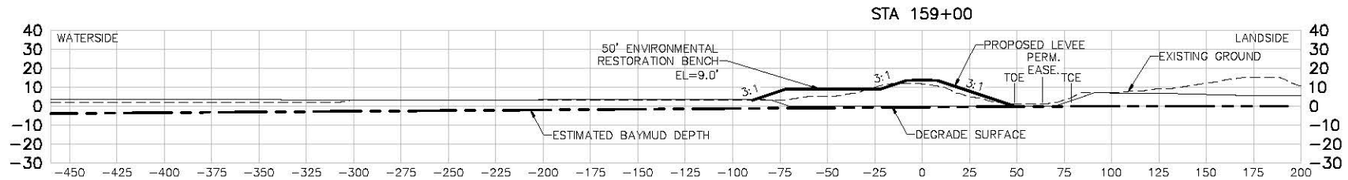
Sheet reference number:
C-46

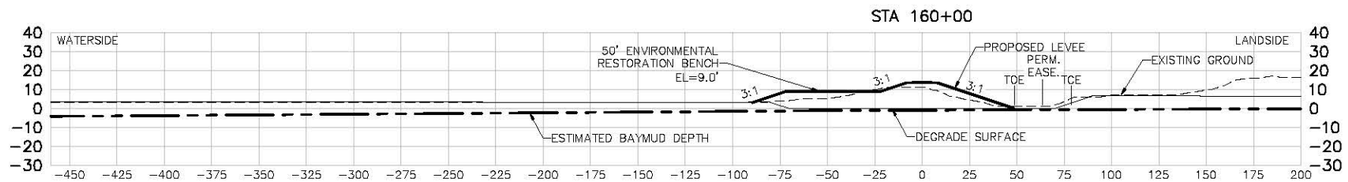
UPDATE

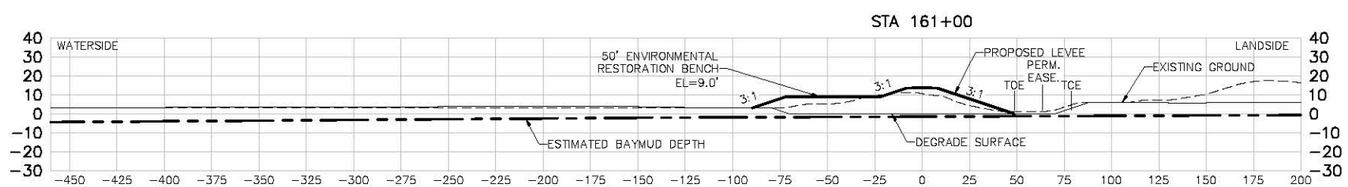












US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Spec No: XX
Design File No: XXX
Drawing Code:
Rev. XX
File name: C-21 Sections
Plot scale:
Dwg scale:

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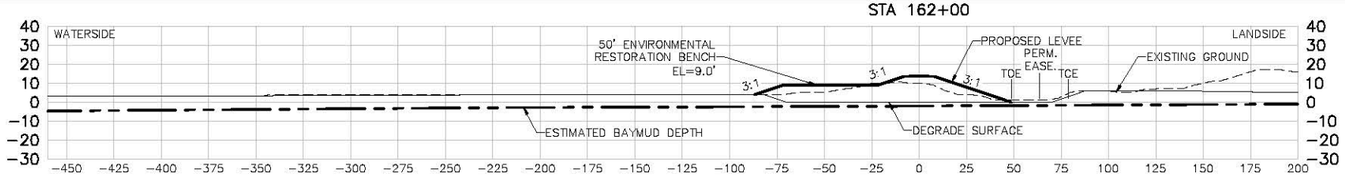
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 156+00 TO STA 161+00

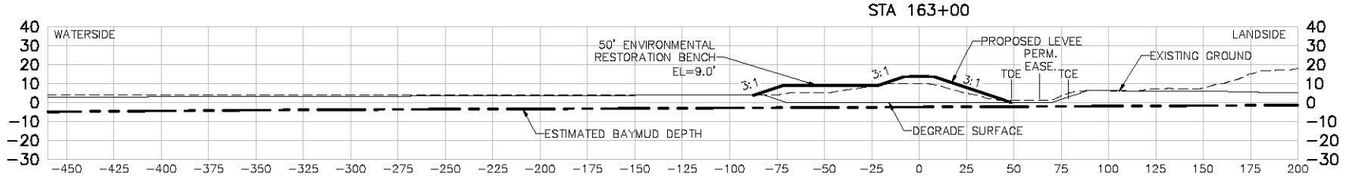
Sheet reference number:
C-47

UPDATE

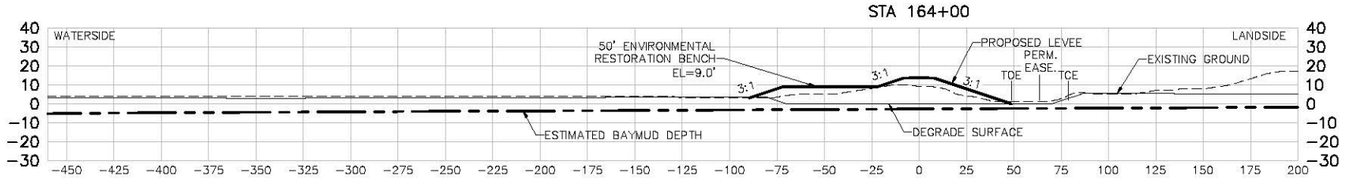
STA 162+00



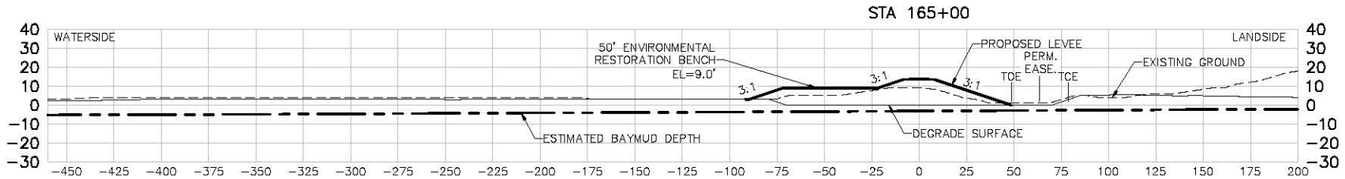
STA 163+00



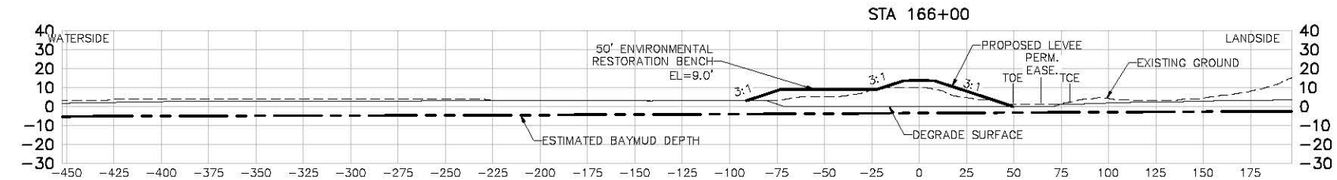
STA 164+00



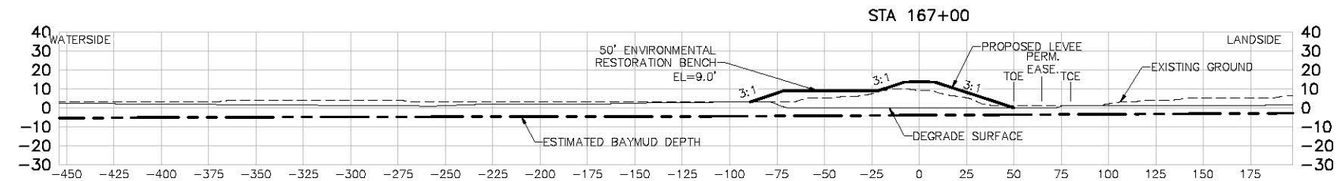
STA 165+00



STA 166+00



STA 167+00



US Army Corps of Engineers
San Fransisco District

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Date: 06/24/2013
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Designed by: S. JIMENEZ
Dwn by: V. RUSSO
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Drawing Code:
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

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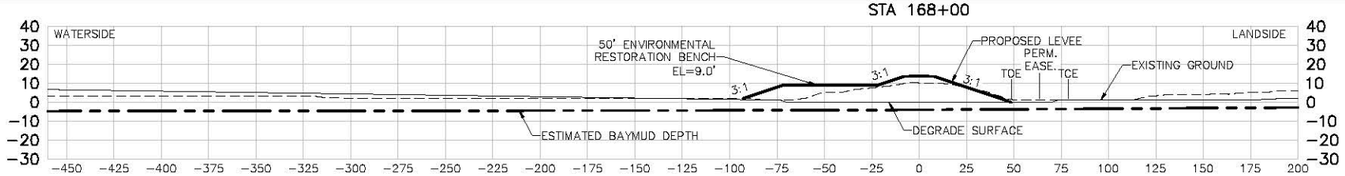
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 162+00 TO STA 167+00

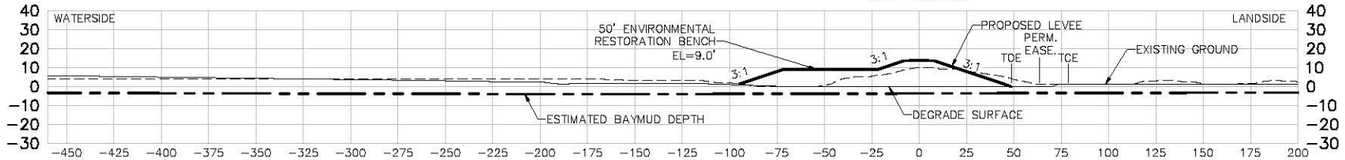
Sheet reference number:
C-48

UPDATE

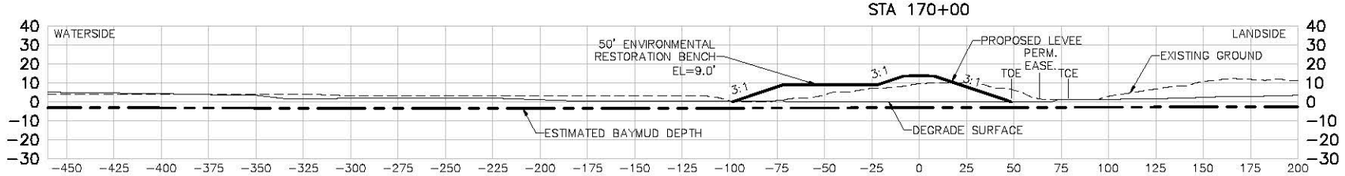
STA 168+00



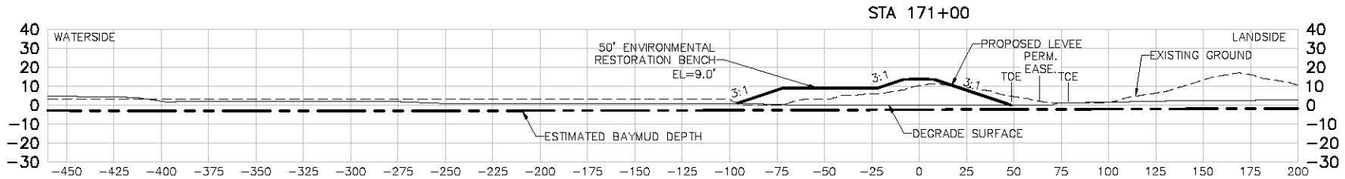
STA 169+00



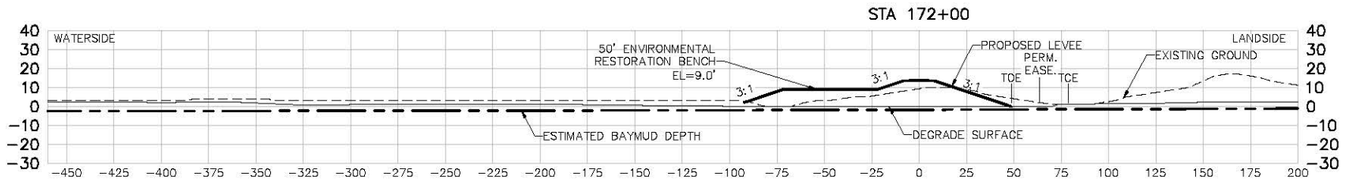
STA 170+00



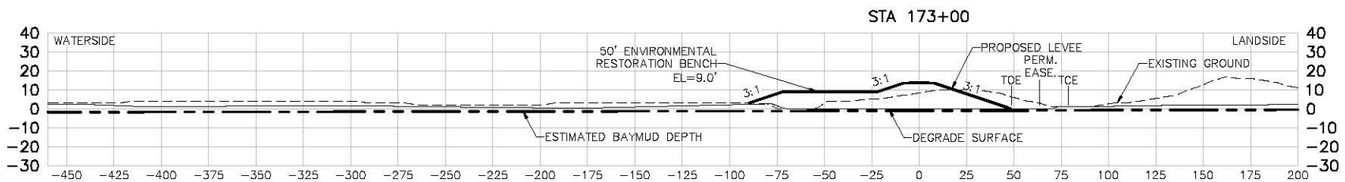
STA 171+00



STA 172+00



STA 173+00



US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Spec No: XX
Design File No: XXX
Dwn by: V. RUSSO
Drawing Code:
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
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SACRAMENTO, CALIFORNIA

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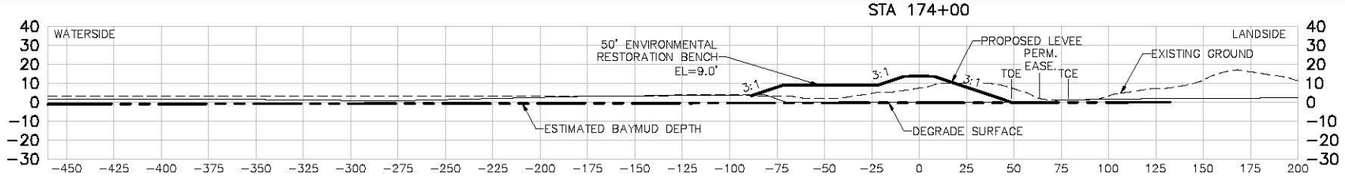
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 168+00 TO STA 173+00

Sheet reference number:
C-49

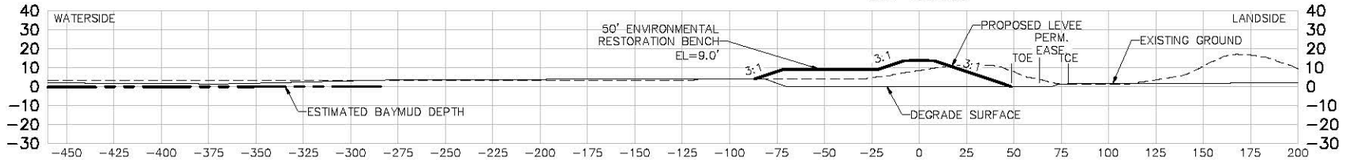
UPDATE

Border Revised 08/30/04, DESCRIPTIONS

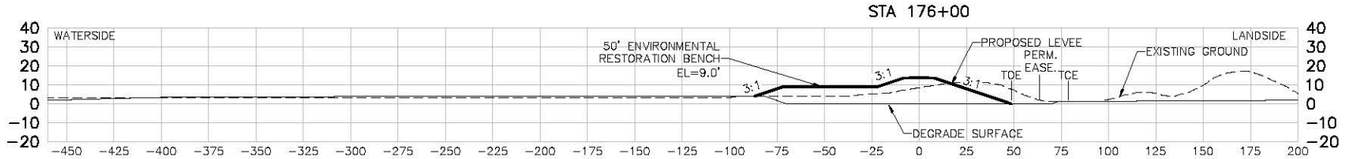
STA 174+00



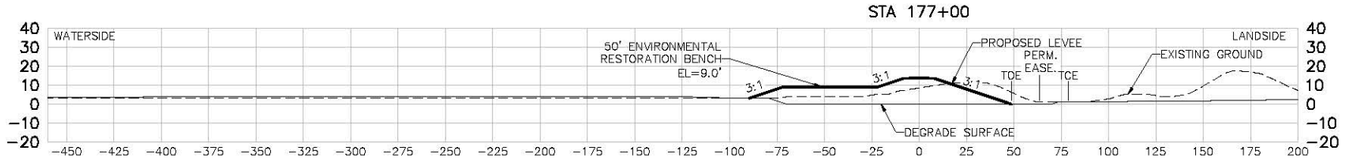
STA 175+00



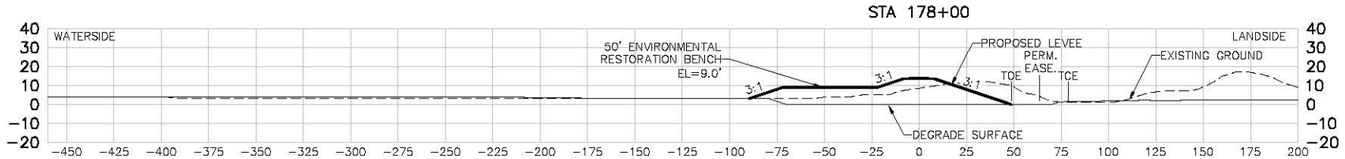
STA 176+00



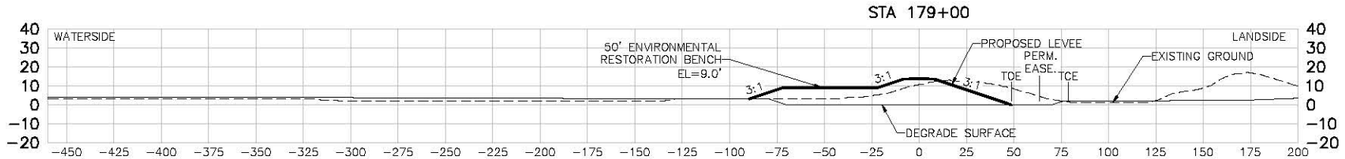
STA 177+00



STA 178+00



STA 179+00



US Army Corps of Engineers
San Fransisco District

Symbol	Description	Date	Approved

Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ
Date: 06/24/2013
Spec No: XX
Design File No: XXX
Drawing Code:
File name:
Plot scale:
Dwg scale:
Rev. XX
C-21 Sections

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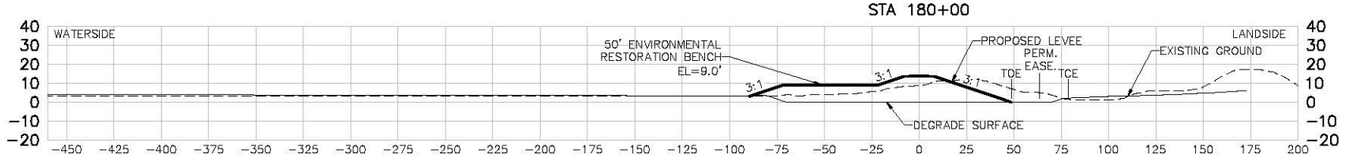
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 174+00 TO STA 179+00

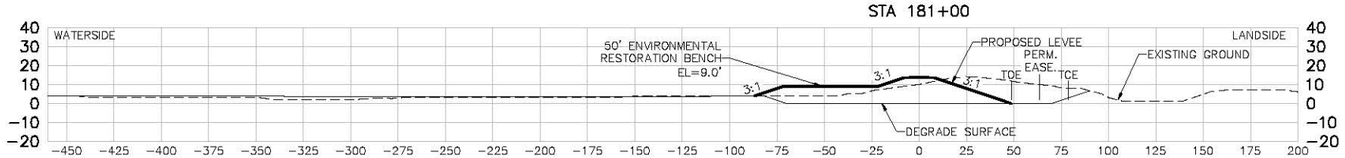
Sheet reference number:
C-50

UPDATE

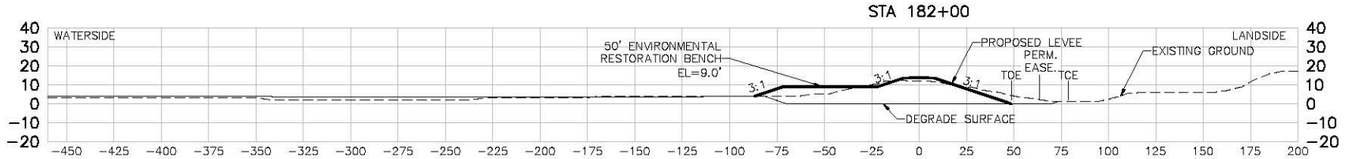
STA 180+00



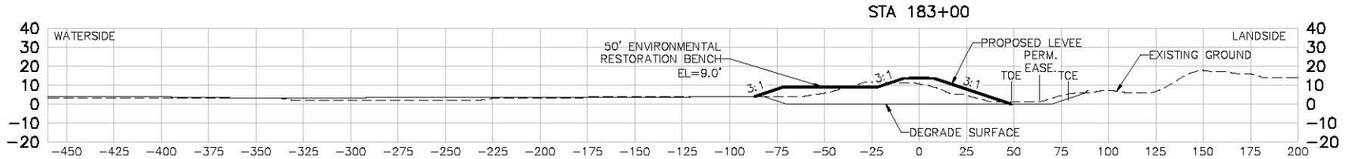
STA 181+00



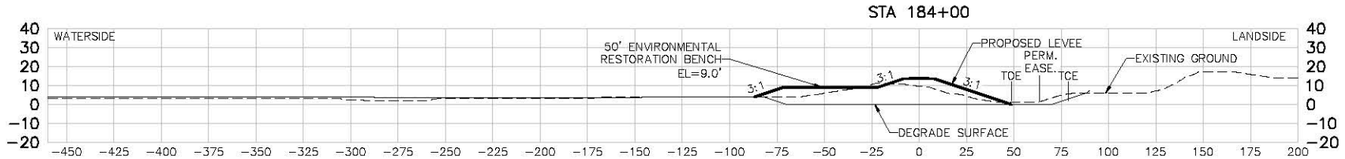
STA 182+00



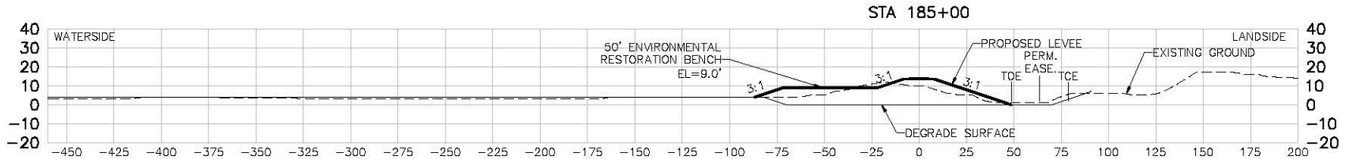
STA 183+00



STA 184+00



STA 185+00



US Army Corps of Engineers
San Fransisco District

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Date: 06/24/2013
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File name: C-21 Sections
Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
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SACRAMENTO, CALIFORNIA

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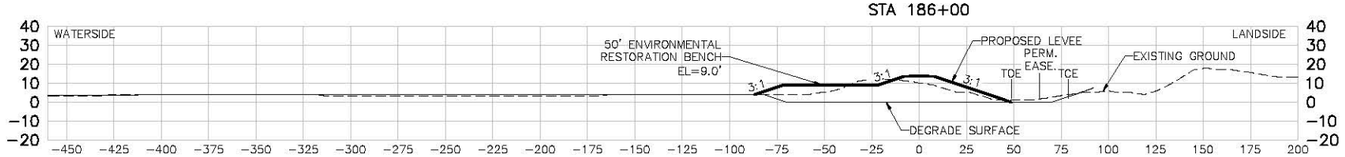
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 180+00 TO STA 185+00

Sheet reference number:
C-51

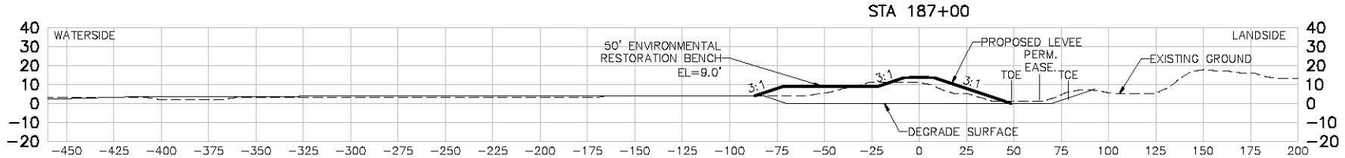
UPDATE

Border: Revised 08/30/04, DESCRIPTION

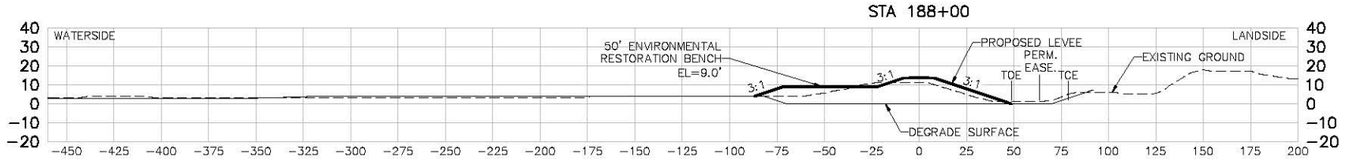
STA 186+00



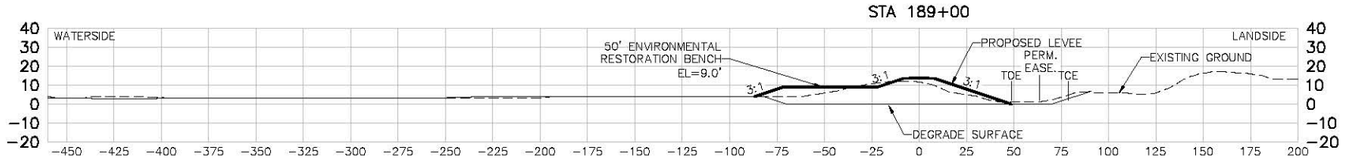
STA 187+00



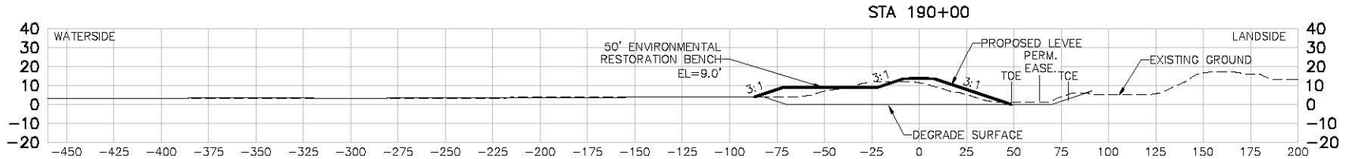
STA 188+00



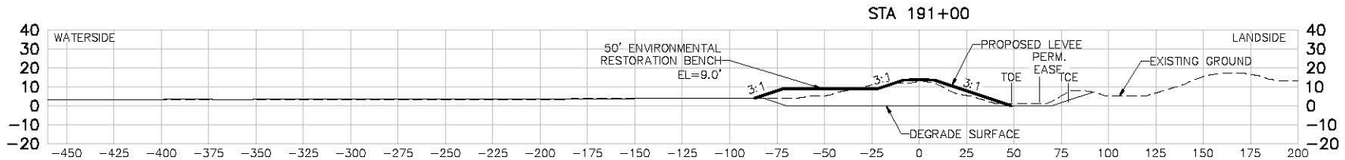
STA 189+00



STA 190+00



STA 191+00



US Army Corps of Engineers
San Fransisco District

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Plot scale:
Dwg scale:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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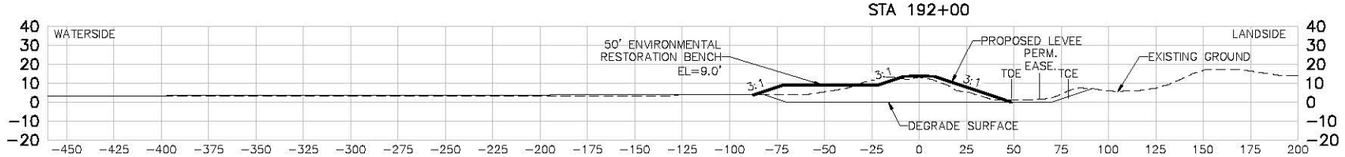
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 186+00 TO STA 191+00

Sheet reference number:
C-52

UPDATE

STA 192+00



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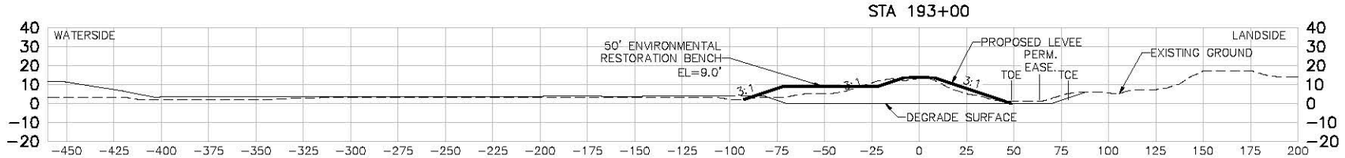

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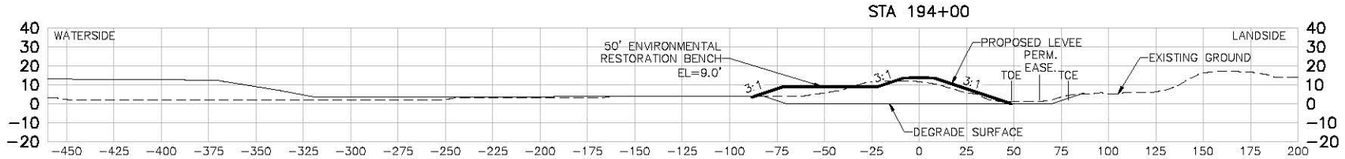

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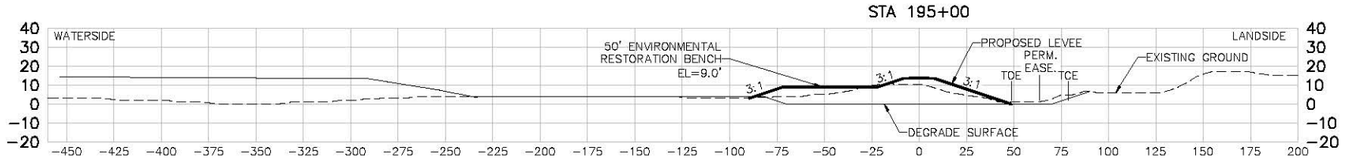

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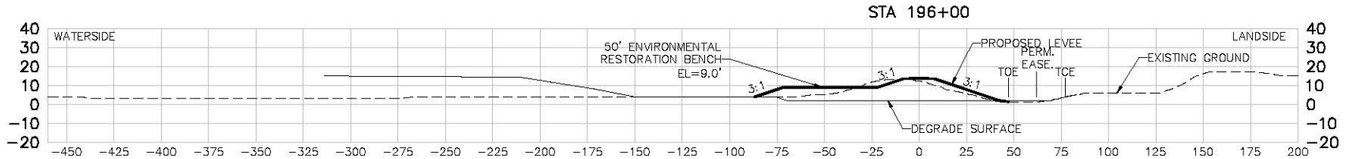

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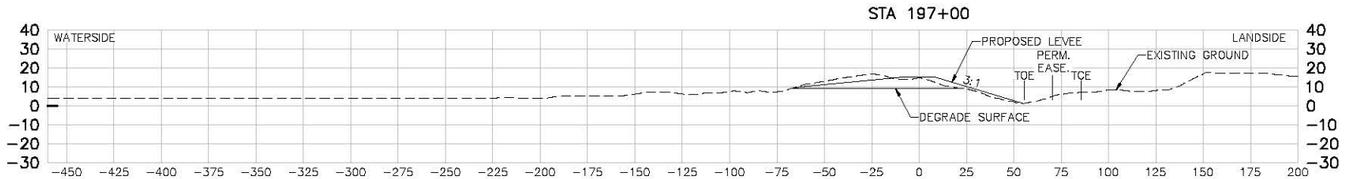

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San Fransisco District

Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Designed by: S. JIMENEZ
Spec No: XX
Design File No: XXX
Dwn by: V. RUSSO
Drawing Code:
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: C-21 Sections
Plot scale:
Dwg scale:

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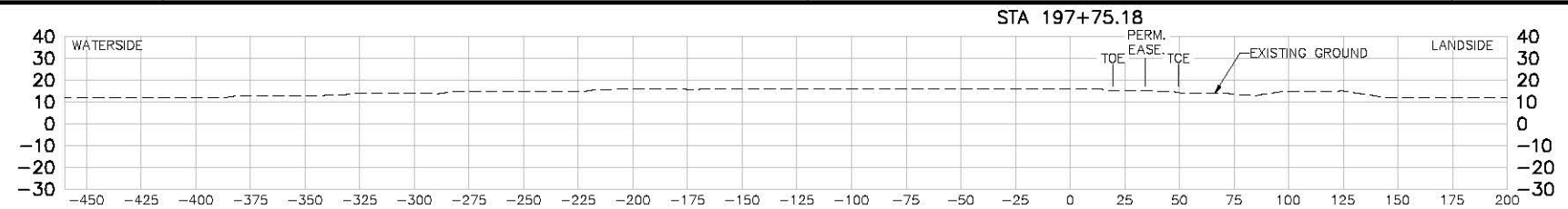
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTIONS STA 192+00 TO STA 197+00

Sheet reference number:
C-53

UPDATE

Border Revised 08/30/04, DESCRIPTIONS



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Symbol	Description	Date	Approved

Date: 06/24/2013
Rev. XX
Design File No: XXX
Spec No: XX
Drawing Code:
File name: C-21 Sections
Plot date:
Dwg scale:
Designed by: S. JIMENEZ
Dwn by: V. RUSSO
Reviewed by: XX
Submitted by: S. JIMENEZ

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SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
SECTION STA 197+75.18

Sheet reference number:
C-54

UPDATE

Border: Revised 08/30/04, DESCRIPTIONS

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San Francisco District

Date	Approved	Description

Designed by S. JUAREZ
Dwn by V. ROSSI
Spec No XX
Reviewed by XX
Submitted by S. JUAREZ
Date 06/24/2013
Design File no XXX
Drawing Code:
File name C-9
Plot date
Plot scale
Rev XX

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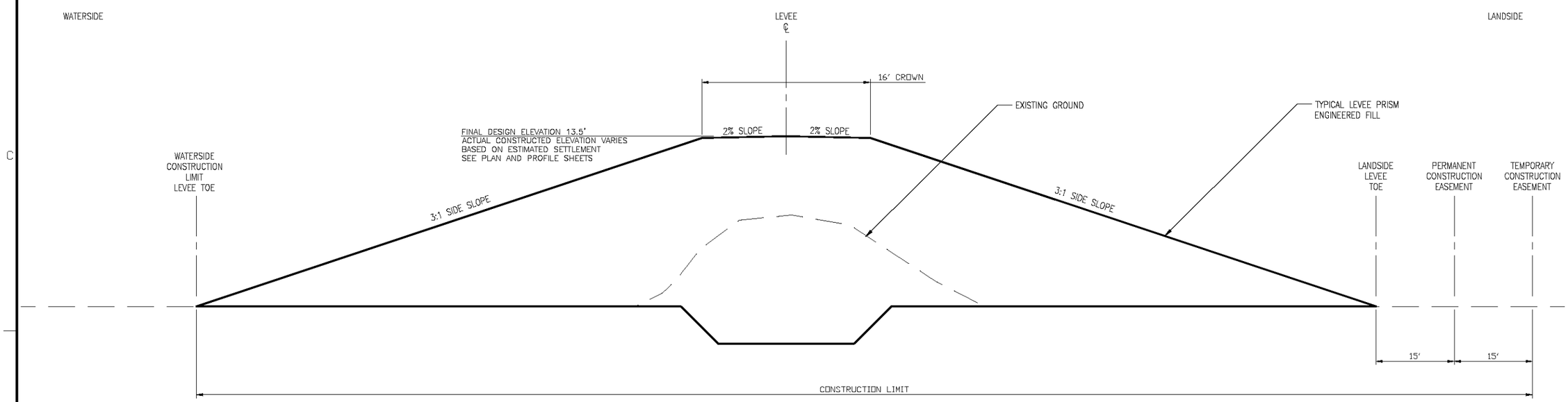
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
IN POND RESTORATION PLAN

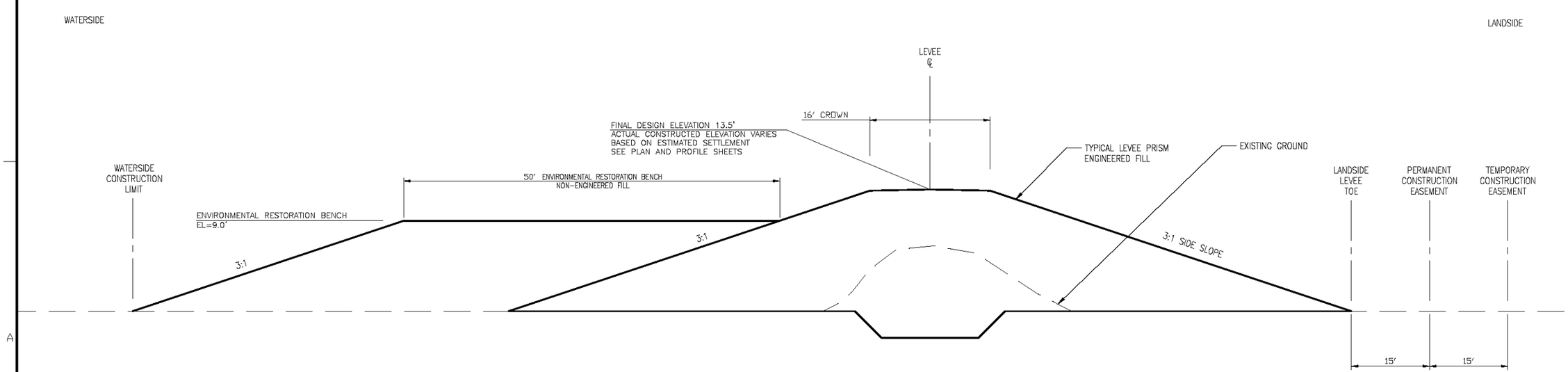
Sheet reference number:
C-55

UPDATE



TYPICAL LEVEE CROSS SECTION

SCALE: NTS



TYPICAL LEVEE CROSS SECTION
W/ENVIRONMENTAL RESTORATION BENCH

SCALE: NTS

US Army Corps of Engineers
San Fransisco District

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Reviewed by: XX
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Submitted by: S. JIMENEZ
File name: C-01
Plot date:
Dwg scale:

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SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
TYPICAL LEVEE CROSS SECTIONS

Sheet reference number:
D-01

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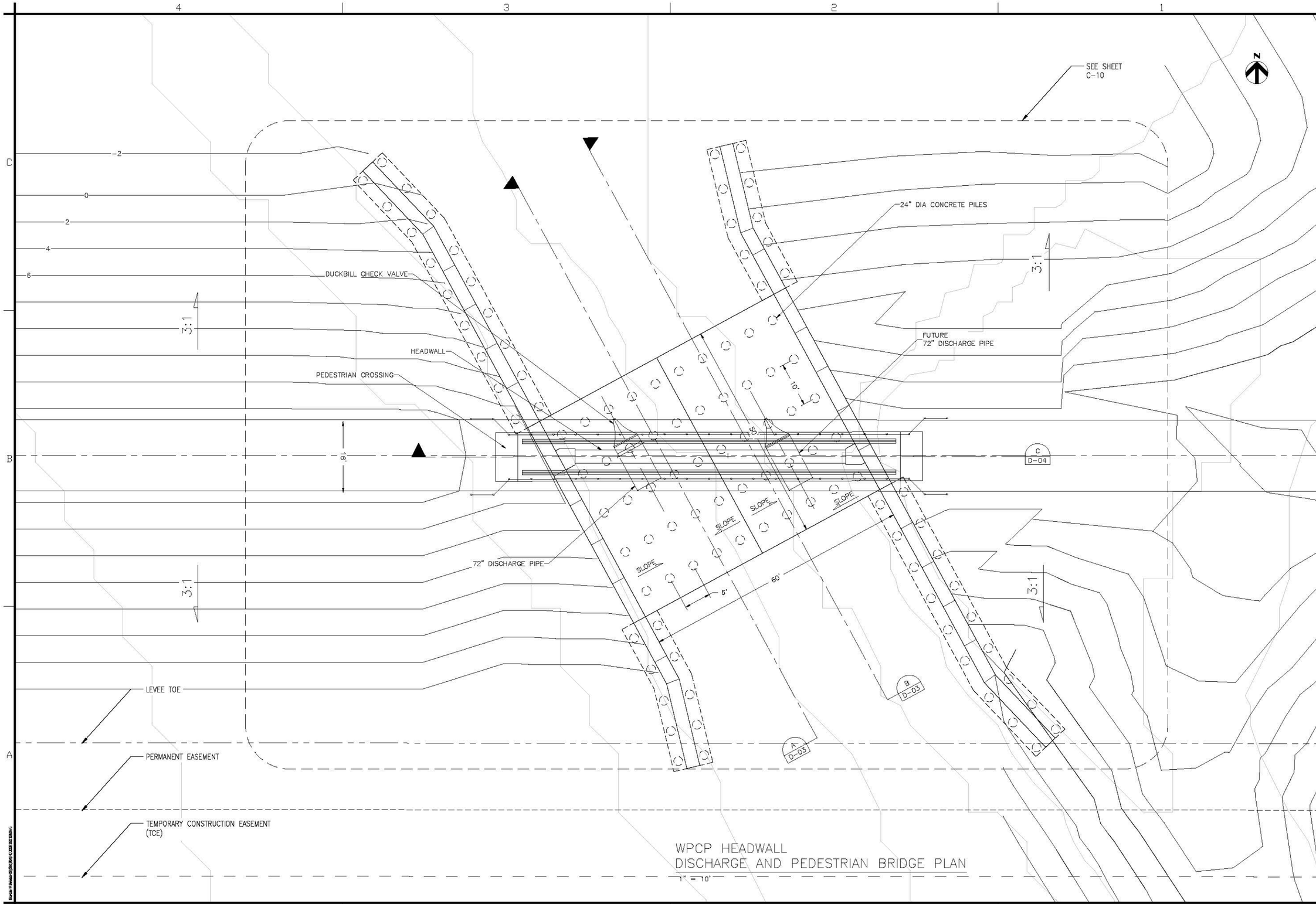

WPCP HEADWALL
DISCHARGE AND PEDESTRIAN BRIDGE PLAN
1" = 10'

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San Fransisco District

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Dwn by: V. ROSSO
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Submitted by: S. JIMENEZ
Date: 05/24/2013
Rev. XX
Spec No. XX
Design File No. XXX
Drawing Code:
File name: D-02
Plot date:
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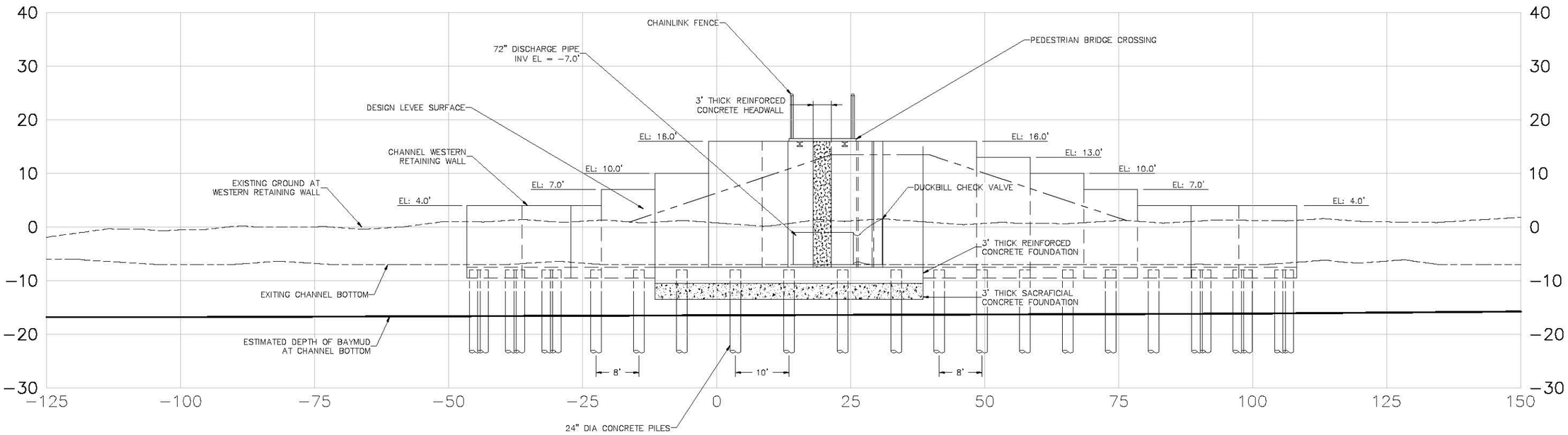
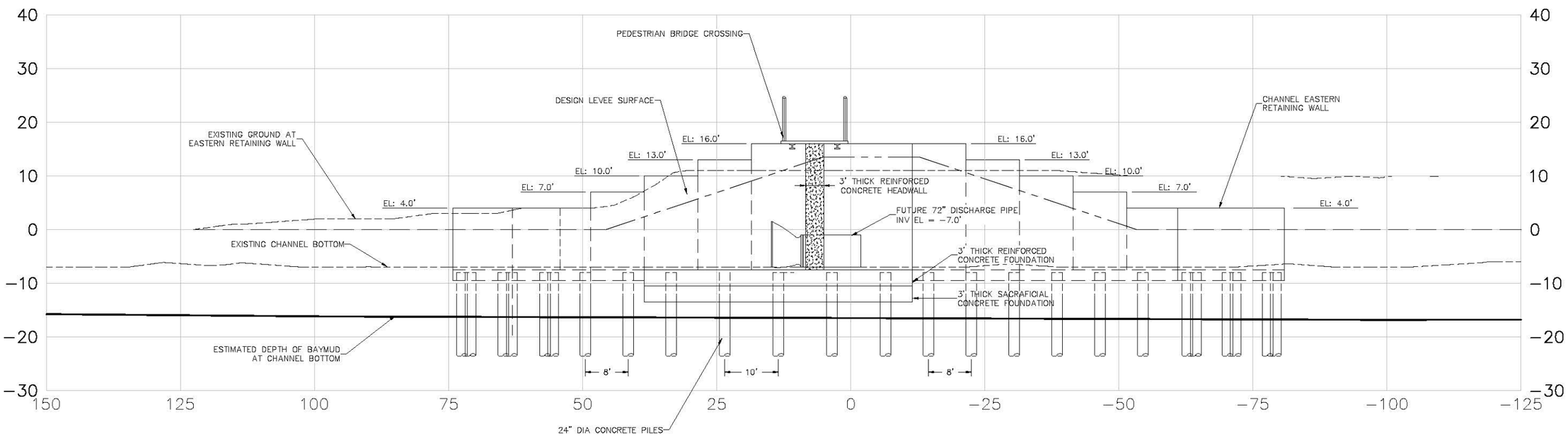
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
WWTP FLOOD WALL PLAN VIEW

Sheet reference number:
D-02

UPDATE



WESTERN SECTION VIEW
1" = 10'
A D-02



EASTERN SECTION VIEW
1" = 10'
B D-02

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Date: 06/24/2013
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Spec No: XX
Design File no: XXX
Reviewed by: XX
Drawing Code:
Submitted by: S. JIMENEZ
File name: D-03
Plot date:
Dwg size:

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SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
WWTP FLOOD WALL SECTIONS I

Sheet reference number:
D-03

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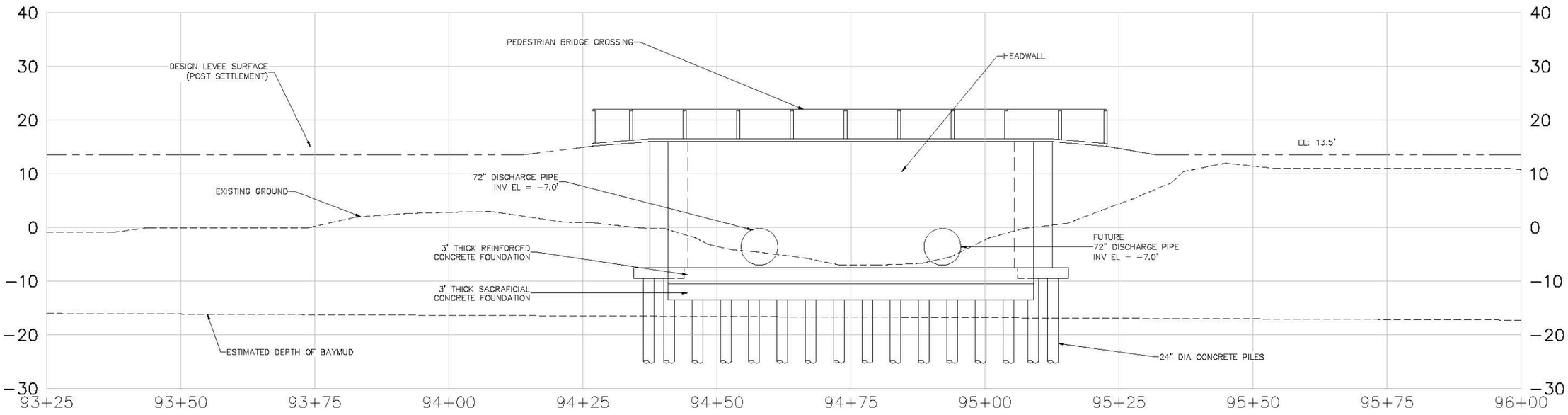

SOUTHERN SECTION VIEW

C
–

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Drawing Code:
Reviewed by: XX
Submitted by: S. JIMENEZ
File name: D-04
Plot date:
Dwg status:

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SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
WWTP FLOOD WALL SECTIONS II

Sheet reference number:
D-04

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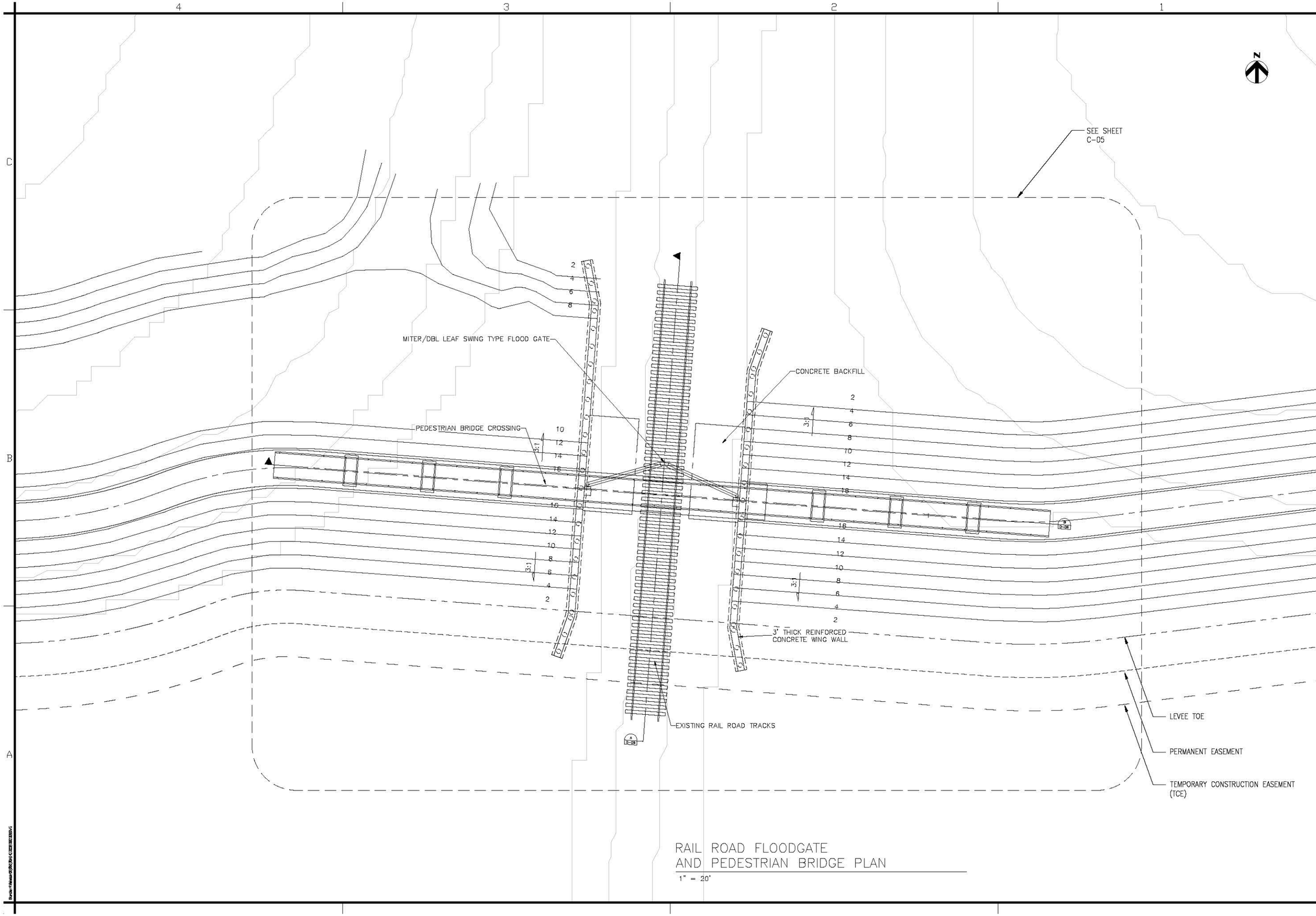

RAIL ROAD FLOODGATE
AND PEDESTRIAN BRIDGE PLAN

1" = 20'

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Designed by: S. JIMENEZ
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Reviewed by: XX
Submitted by: S. JIMENEZ
File name: D-05
Plot date:
Dwg scale:

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SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
RAIL ROAD FLOODGATE PLAN

Sheet reference number:
D-05

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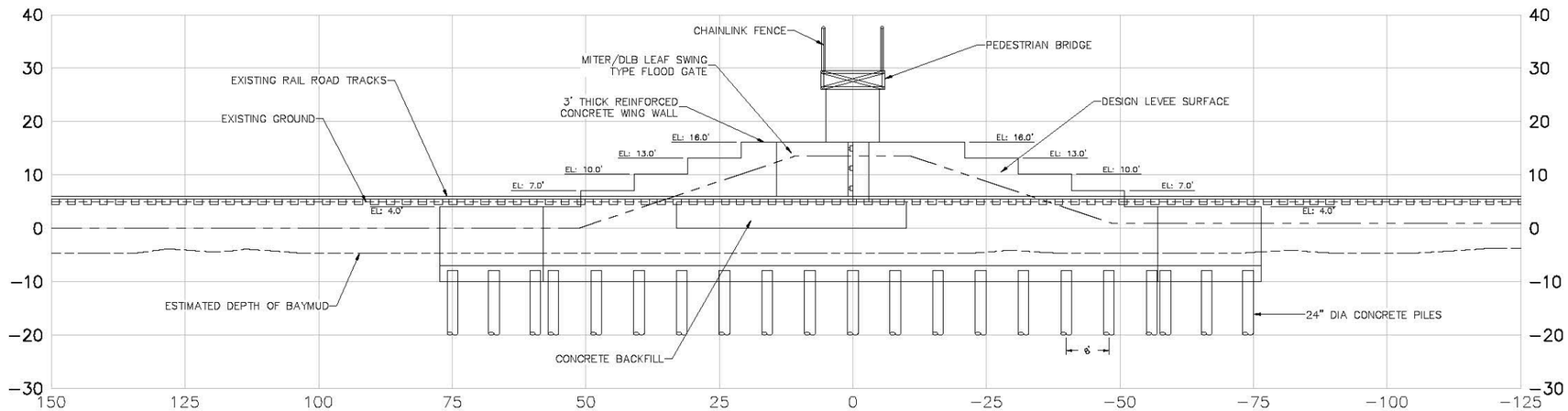
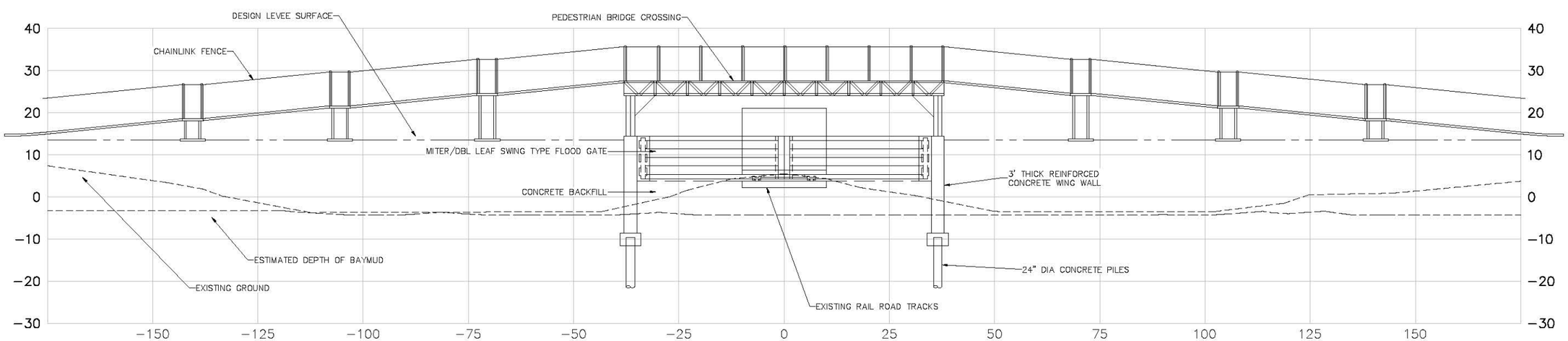


SECTION VIEW
NTS
A
–



SECTION VIEW
NTS
B
–

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Submitted by: S. JIMENEZ
File name: D-06
Plot date:
Dwg size:

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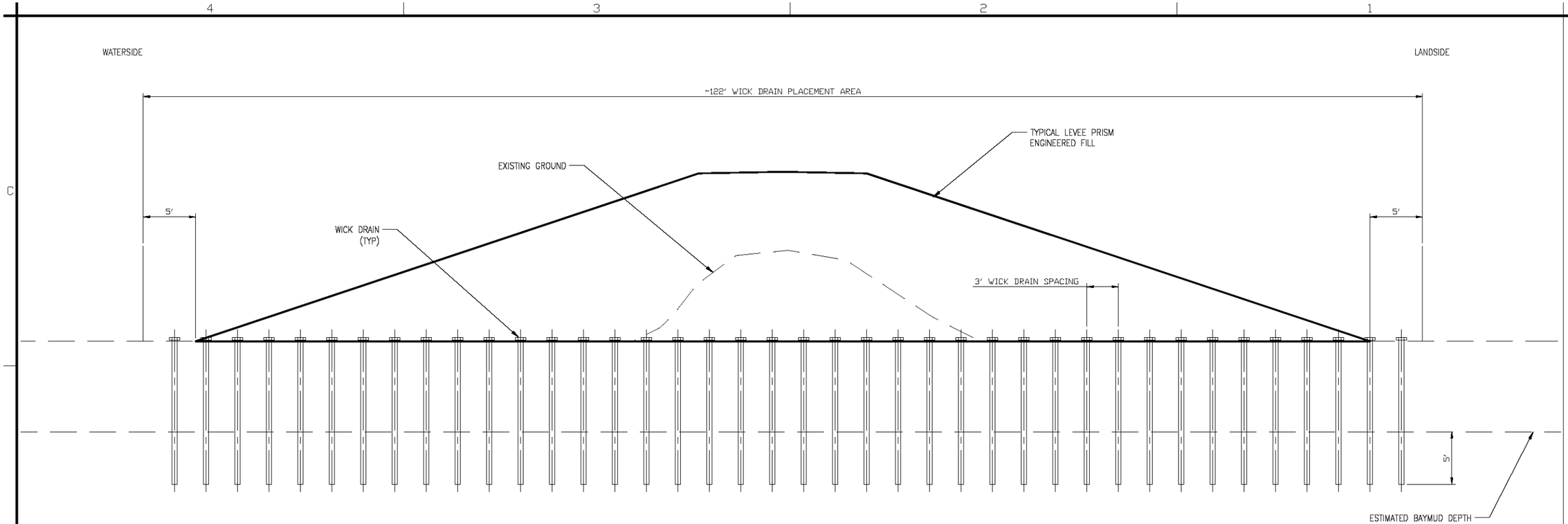
SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
WWTP FLOOD WALL SECTIONS I

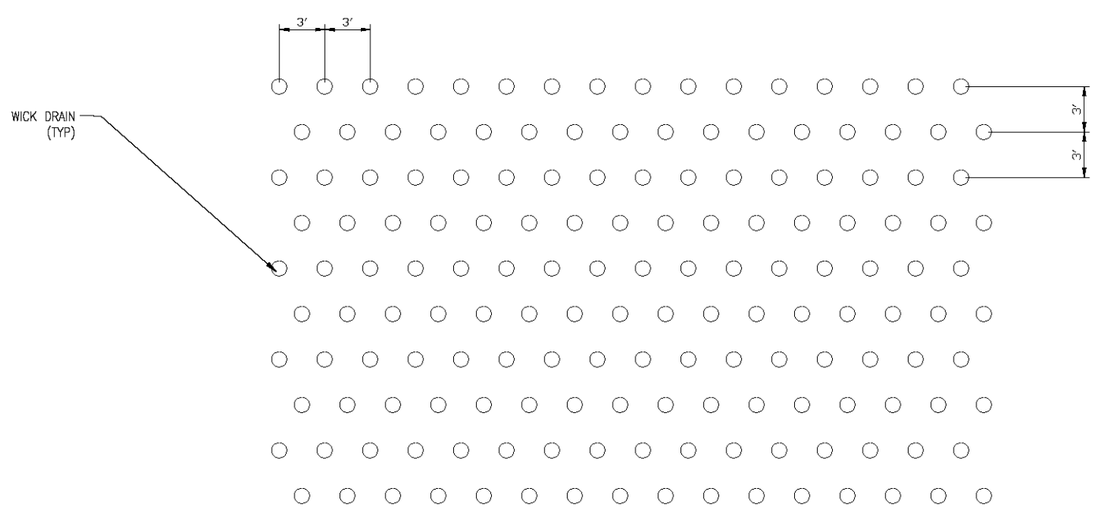
Sheet reference number:
D-06

UPDATE



TYPICAL WICK DRAIN PLACEMENT SECTION

SCALE: NTS



TYPICAL WICK DRAIN PLACEMENT PLAN

SCALE: NTS

US Army Corps of Engineers
San Fransisco District

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Spec No: XX
Design File no: XXX
Drawing Code:
File name: C-01
Plot date:
Dwg scale:
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SOUTH SAN FRANCISCO BAY SHORELINE
FLOOD RISK MANAGEMENT FEASIBILITY STUDY
NATIONAL ECONOMIC DEVELOPMENT (NED) PLAN
WICK DRAIN DETAILS

Sheet reference number:
D-07

UPDATE

Border: Revised 08/30/04, CESPT&CENG

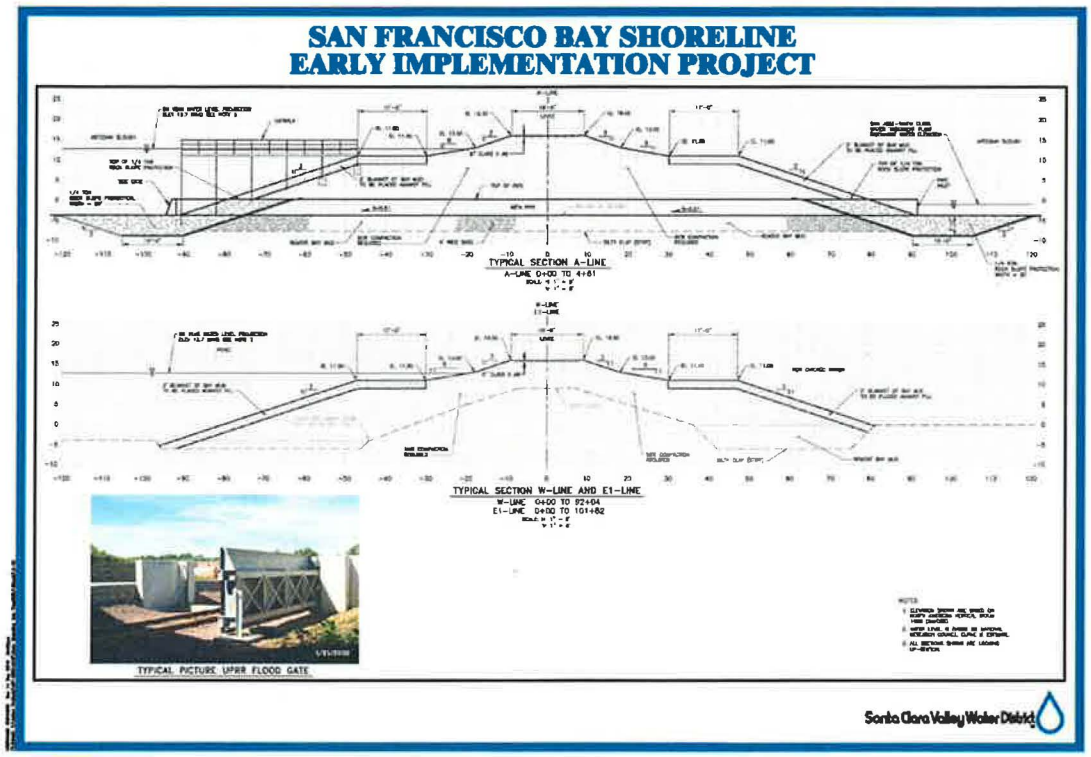

Figure 2. Typical Cross Sections

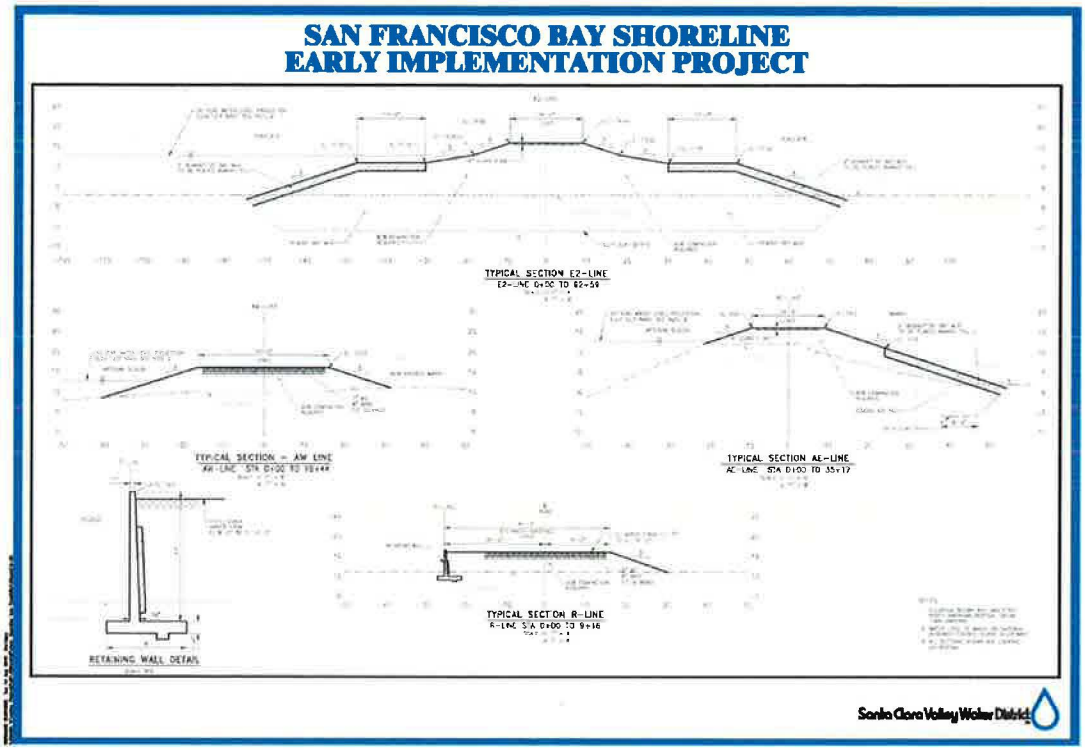

Figure 3. Typical Cross Sections

<u>Proposed alignment Line E-2</u>

- Bay Mud thickness is anticipated to be on the order of 20 feet. Excavation to deeper stiff soil would be very expensive and require very significant dewatering and soil disposal costs. Excavating to deep soil would reduce settlement and stability problem potential.
- It is anticipated that construction directly on Bay Mud with vertical drains and staged construction would be more practical.
- Total fill grade change would be about 13 feet, which would require a fill thickness on the order of 19 feet. This would require at least two fill stages to construct.
- There does not appear to be significant geotechnical value (perhaps there is a vegetation benefit to a bay mud levee surface?) to the 2-foot bay mud blanket on either side of the levee. This detail would add a construction difficulty.
- The slope designs appear to have included some thought that the relatively flat configuration, with slope benches would allow construction in a single stage, however it is not anticipated that in the current alignments single stage fill placement would be possible. However, if two stages of earthwork are performed steeper slopes may be practical.

- If low permeability fills are used seepage concerns are not anticipated. In order to add seepage performance reliability, a landside toe drain would add both stability and seepage performance reliability.
- Drainage features (conduits crossing from landside to bay) would need to have appropriate pipe bedding, joint flexibility and camber.

Proposed tide gate alignment Line A-2

- Bay Mud thickness is anticipated to be on the order of 20 feet. Excavation to deeper stiff soil would be very expensive and require very significant dewatering and soil disposal costs. Excavating to deep soil would reduce settlement and stability problem potential.
- It is anticipated that construction directly on Bay Mud with vertical drains and staged construction would be more practical.
- Total fill grade change would be about 13 feet, which would require a fill thickness on the order of 19 feet. This would require at least two fill stages to construct.
- There does not appear to be significant geotechnical value (perhaps there is a vegetation benefit to a bay mud levee surface?) to the 2-foot bay mud blanket on either side of the levee. This detail would add a construction difficulty.
- The slope designs appear to have included some thought that the relatively flat configuration, with slope benches would allow construction in a single stage, however it is not anticipated that in the current alignments single stage fill placement would be possible. However, if two stages of earthwork are performed steeper slopes may be practical.
- If low permeability fills are used seepage concerns are not anticipated. In order to add seepage performance reliability, a landside toe drain would add both stability and seepage performance reliability.
- Conduits would need to have appropriate pipe bedding, joint flexibility and camber. Possibly filling would be required first, with construction of gates, post levee settlement.
- Recommend consideration of concrete structure supported on deep foundations.
- Differential settlement will need to be considered at gate/levee joint due to differing stress histories.

Proposed AE and AW alignments

- Differing foundations will lead to differential settlement along each alignment. Design should account for this.
- There does not appear to be significant geotechnical value (perhaps there is a vegetation benefit to a bay mud levee surface?) to the 2-foot bay mud blanket on either side of the levee. This detail would add a construction difficulty.
- Practically, construction of thin slope wedges is very difficult. Consider how the construction benching and compaction into the existing levee will be performed in earthwork estimates.