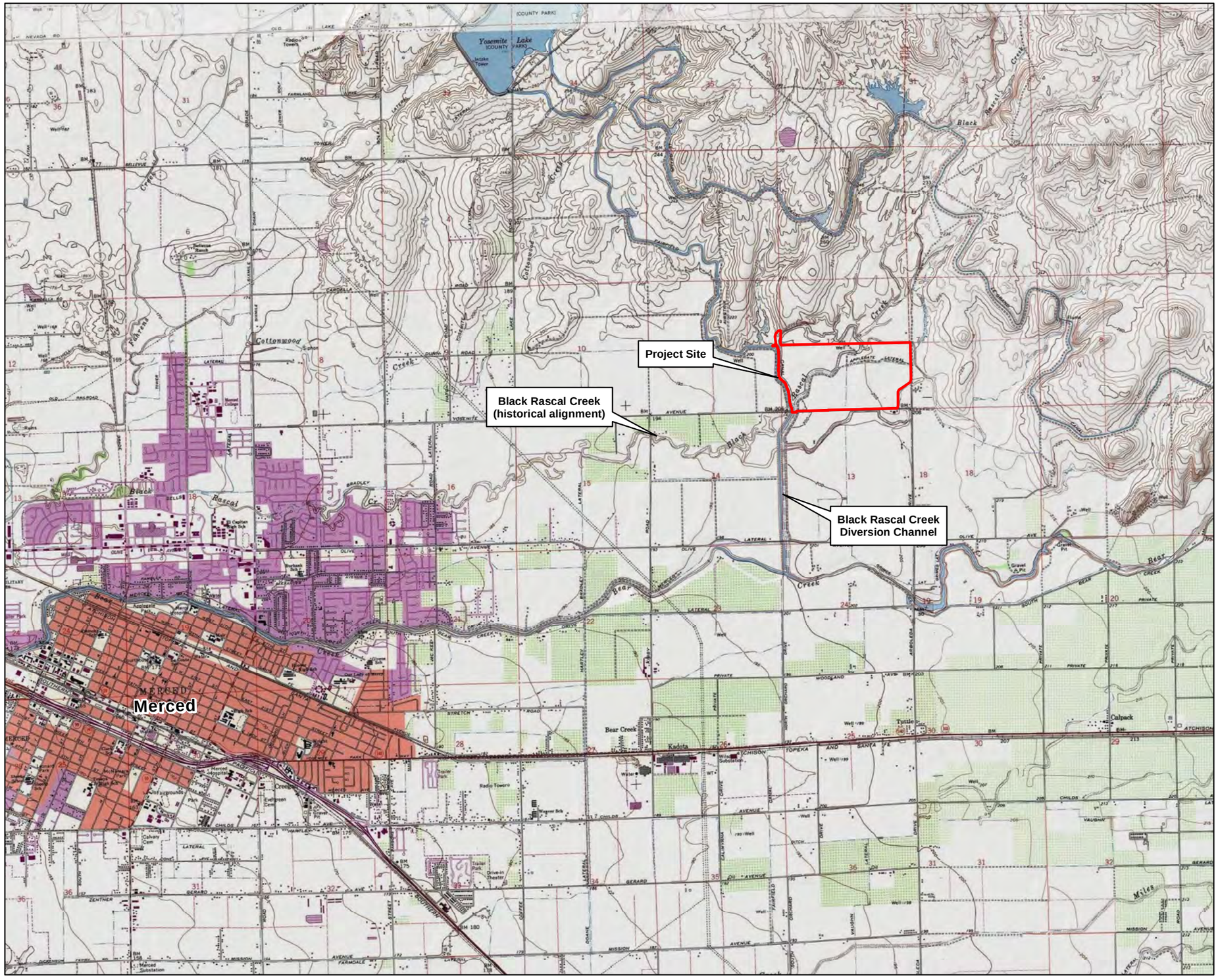


VICINITY MAP

LEGEND

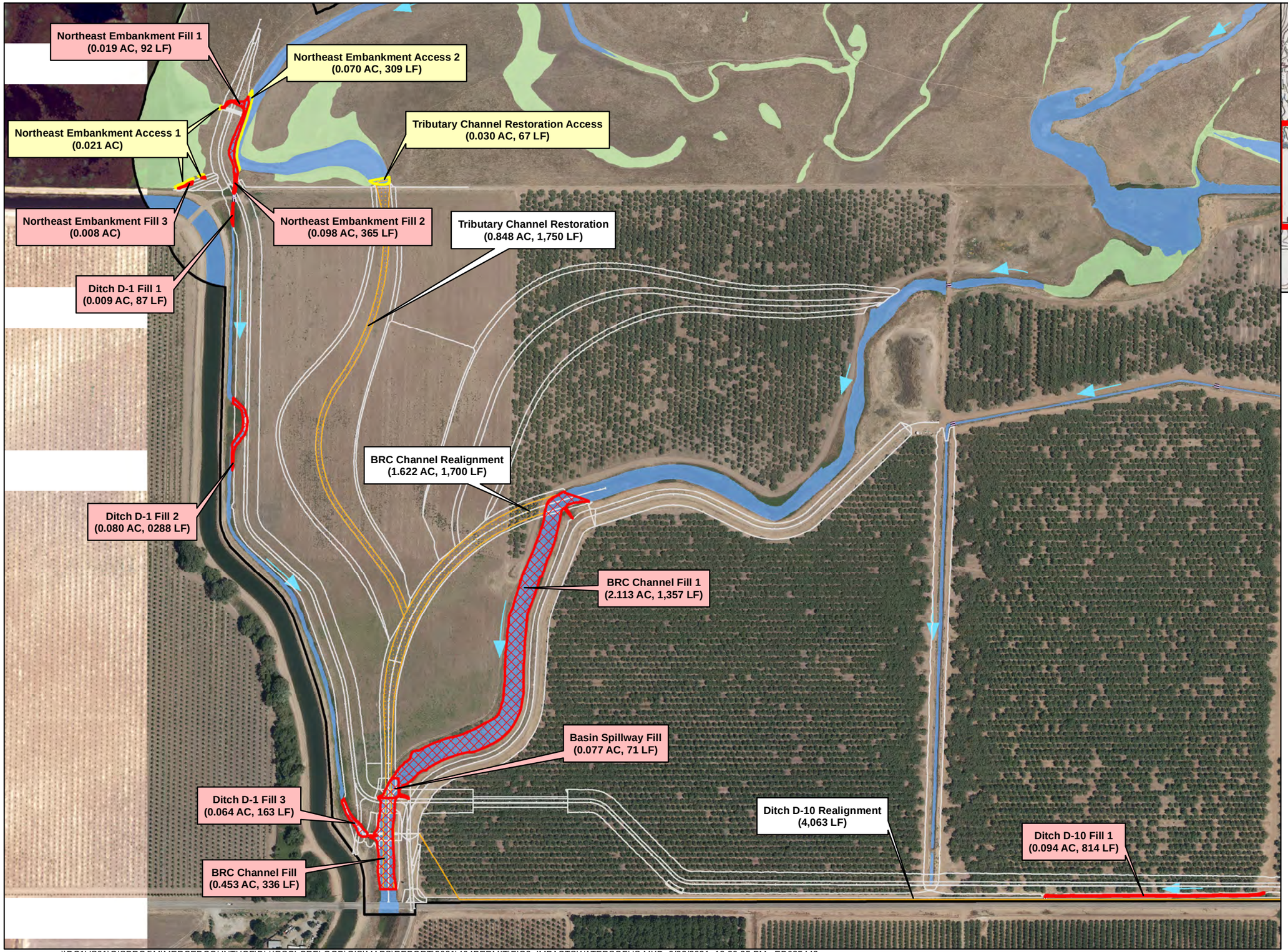
Project Footprint

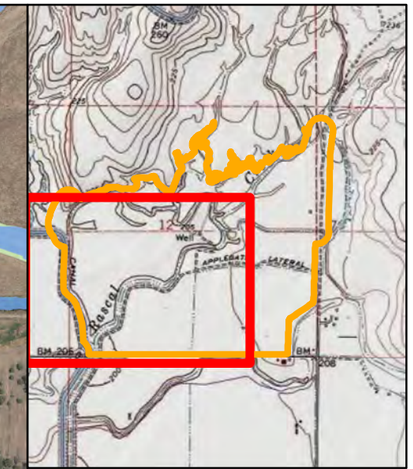
Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed
National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

N

0 2,000 4,000 8,000
Feet

FIGURE 1
Vicinity Map
Clean Water Act Section 404
Individual Permit Application
Black Rascal Creek Flood Control Project





Legend

- Project Area (472.0 acres)
- Culvert
- Project Elements
- Flow Direction

Aquatic Resource Impacts

- Temporary Impacts (0.121 AC, 376 LF)
  Wetland Impacts (0.021 AC)
  Waters Impacts (0.100 AC, 376 LF)
- Permanent Impacts (3.015 AC, 3,573 LF)
  Wetland Impacts (0.008 AC)
  Waters Impacts (3.007 AC, 3,573 LF)
- Establishment (2.563 AC, 7,513 LF)

Aquatic Resources

- Other Waters
- Wetlands

Notes:
AC - Acres
LF - Linear Feet

Delineation:
K. Fisher, M. Marek, S. Lindemann, A. Hiss
February 19, 20, March 19, 20, September 13, 2019

Aerial Imagery:
County of Merced, July 3, 2019

N

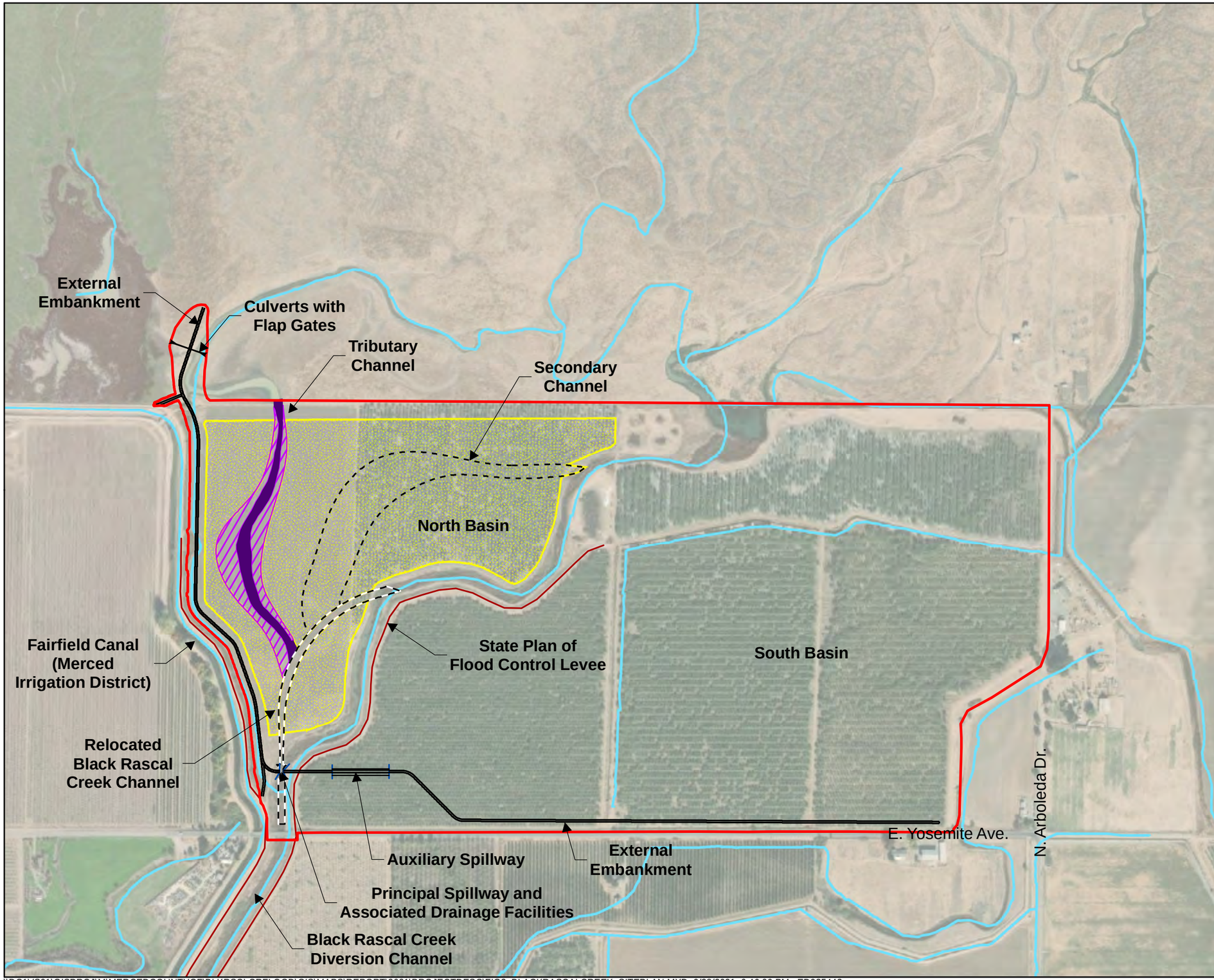
0 350
Feet

FIGURE 2
Impacts to Waters of the U.S.
Clean Water Act Section 404
Individual Permit Application
Black Rascal Creek Flood Control Project

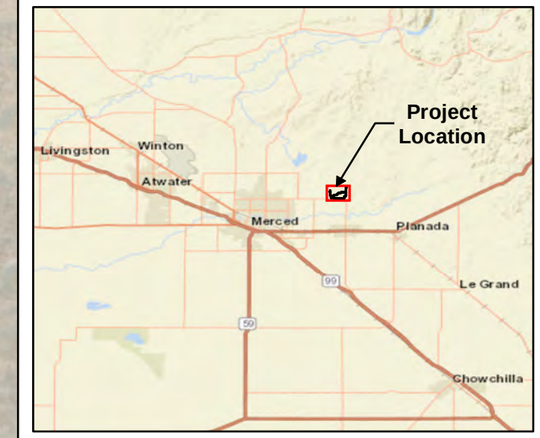
Table 1. Impact Areas, Volume and Type

Resource ID	Impact ID	Temporary Impact	Permanent Impact	Temporary Impact	Permanent Impact	Fill Volume	Fill Type
		(Acres)		(Linear Feet)		(Cubic Yards)	(Cubic Yards)
Wetlands							
EM-01	Northeast Embankment Fill 3	0.000	0.008	NA	NA	6.453	Soil
EM-02	Northeast Embankment Access 1[1]	0.021	0.000	NA	NA	66.579	Gravel
Sub-Total Wetlands		**0.021**	**0.008**	**NA**	**NA**	**73.032**	
Other Waters							
R-01	Northeast Embankment Fill 2	0.000	0.098	0.000	365.000	67.000	Soil
R-01	Northeast Embankment Access 2[1]	0.070	0.000	309.000	0.000	226.400	Gravel
R-01	Tributary Channel Restoration Access[1]	0.030	0.000	67.000	0.000	97.060	Gravel
R-01a	Northeast Embankment Fill 1	0.000	0.019	0.000	92.000	11.300	Soil
R-04	BRC Channel Fill 1	0.000	2.113	0.000	1357.000	10355.800	Soil
R-04	BRC Channel Fill 2	0.000	0.453	0.000	336.000	468.200	Rock
R-04	Basin Spillway Fill	0.000	0.077	0.000	71.000	336.200	Rock/Concrete
D-01	Ditch D-1 Fill 1	0.000	0.009	0.000	87.000	2.000	Soil
D-01	Ditch D-1 Fill 2	0.000	0.080	0.000	288.000	89.200	Soil
D-01	Ditch D-1 Fill 3	0.000	0.064	0.000	163.000	194.100	Soil
D-10	Ditch D-10 Fill 1	0.000	0.094	0.000	814.000	303.259	Soil
Sub-Total Waters		**0.100**	**3.007**	**376.000**	**3573.000**	**12150.519**	
Total		**0.121**	**3.015**	**376.000**	**3573.000**	**12223.552**	

[1] Assumes 2 feet of imported fill in access areas



VICINITY MAP



LEGEND

- Project Footprint
- Embankment
- Waterway

Habitat Enhancements

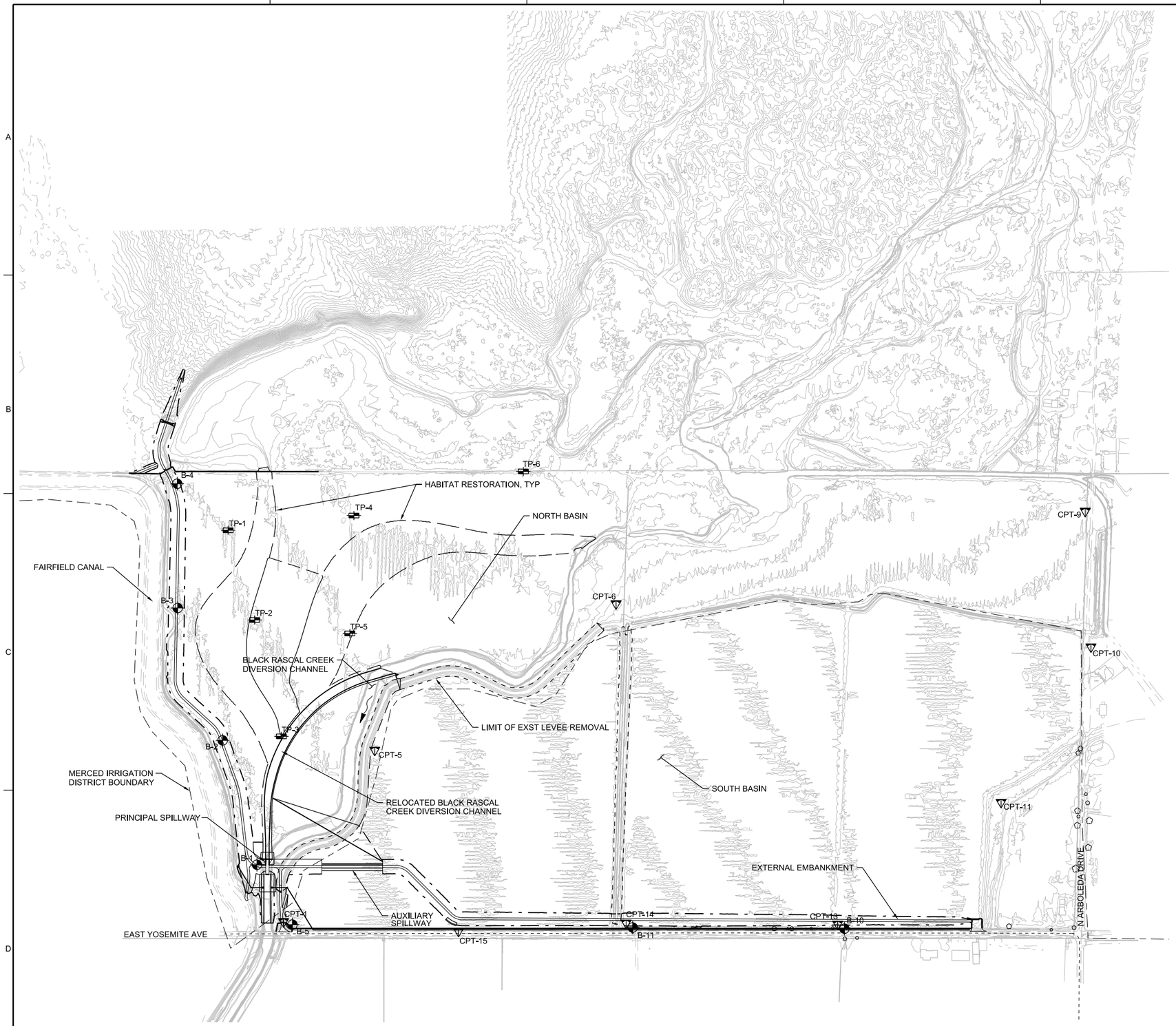
- Aquatic (2.08 acres)
- Valley Foothill Riparian (4.2 acres)
- Oak Savanna (56.4 acres)

N

0 600 1,200
Feet

FIGURE 2
Site Plan
Black Rascal Creek Flood Control Project

Jacobs



PLAN
1"=300'

N

0 300 600 900
Scale In Feet

LEGEND:

CPT-X — APPROXIMATE CONE PENETRATION TEST LOCATION.

B-X — APPROXIMATE BOREHOLE LOCATION.

TP-X — APPROXIMATE TEST PIT LOCATION.

NUMBER	NORTHING	EASTING	DEPTH (FT)	COMPLETED
CPT-1	1943483	6592463	80	YES
CPT-5	1944470	6592987	40	YES
CPT-6	1945312	6594375	50	YES
CPT-9	1945844	6597074	12	YES
CPT-10	1945064	6597107	50	YES
CPT-11	1944170	6596590	60	YES
CPT-13	1943470	6595650	40	YES
CPT-14	1943476	6594433	60	YES
CPT-15	1943429	6593469	60	YES
B-1	1943819	6592310	77	YES
B-2	1944534	6592112	61	YES
B-3	1945295	6591854	52	YES
B-4	1946010	6591851	50	YES
B-5	1943474	6592514	57	YES
B-10	1943451	6595689	57	YES
B-11	1943458	6594471	56	YES
TP-1	1945742	6592144	8	YES
TP-2	1945226	6592296	9	YES
TP-3	1944557	6592450	9	YES
TP-4	1945827	6592867	8	YES
TP-5	1945149	6592844	8	YES
TP-6	1946081	6593842	8	YES

NOTE:

1. BORING LOCATIONS ARE APPROXIMATE, LOCATED USING HAND HELD GPS DEVICE WITH APPROXIMATE ACCURACY OF +/- 15 FEET, AND VISUAL SITING OF THE BORING LOCATIONS IN RELATION TO SURROUNDING FEATURES.

MARK R. TWEDE
CA GE2642

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN M TWEDE | DR J MESTEMACHER | CHK D HARRIS | APVD M TWEDE

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

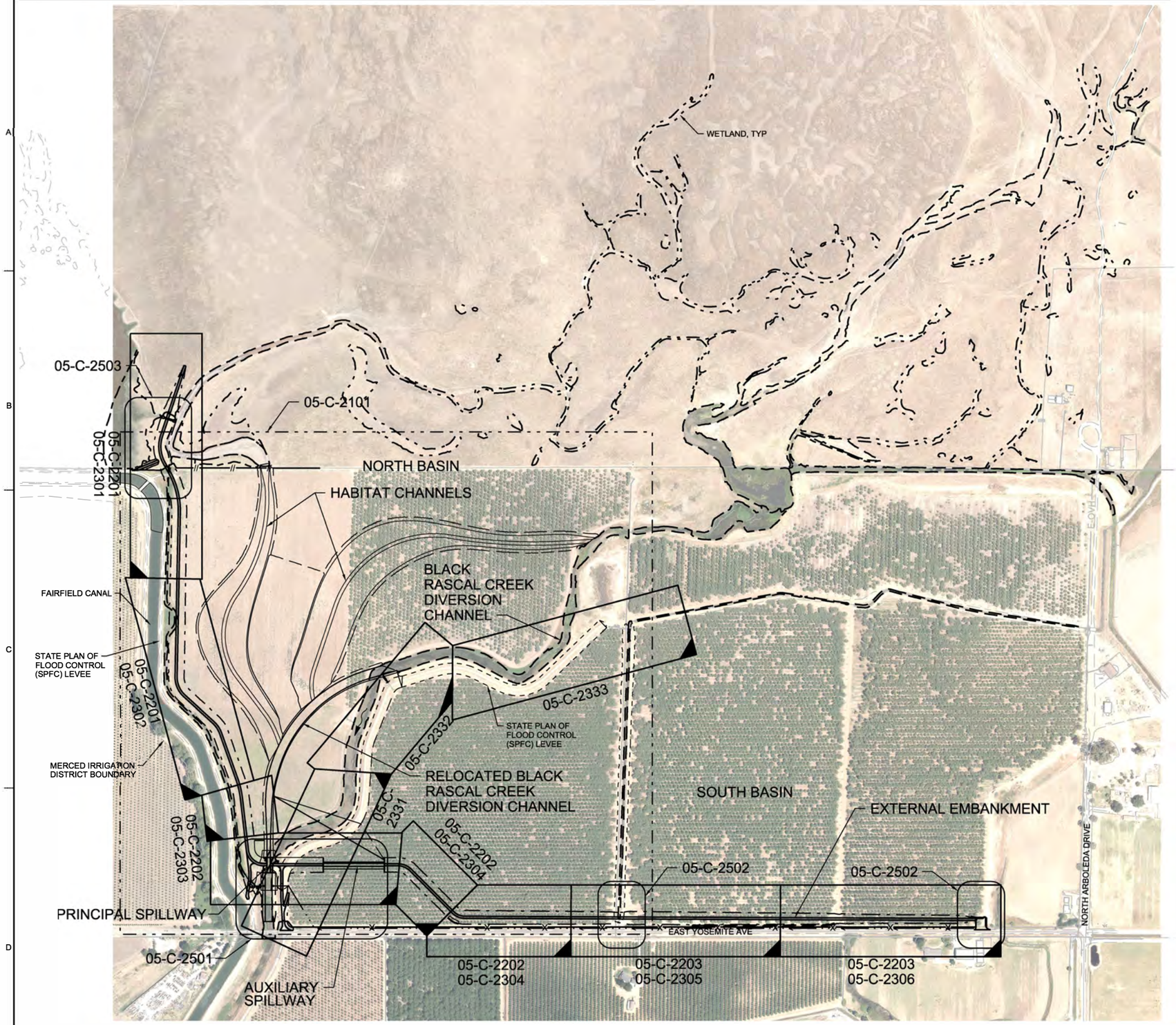
BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

GEOTECHNICAL
EXPLORATION PLAN

1"=300'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	03-B-2001
SHEET	7 of 60

PN: SPK-2021-00278

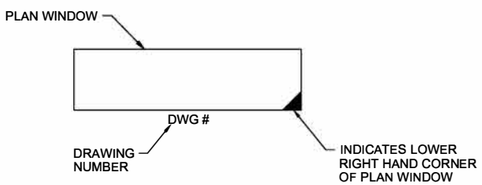


PLAN
1"=300'

N

0 300 600 900
Scale In Feet

LEGEND



BECKY K. CHELONIS
CA C59851

NOT FOR
CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR B CHELONIS | CHK L ALLIGER | APVD B CHELONIS

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.
© JACOBS 2019. ALL RIGHTS RESERVED.

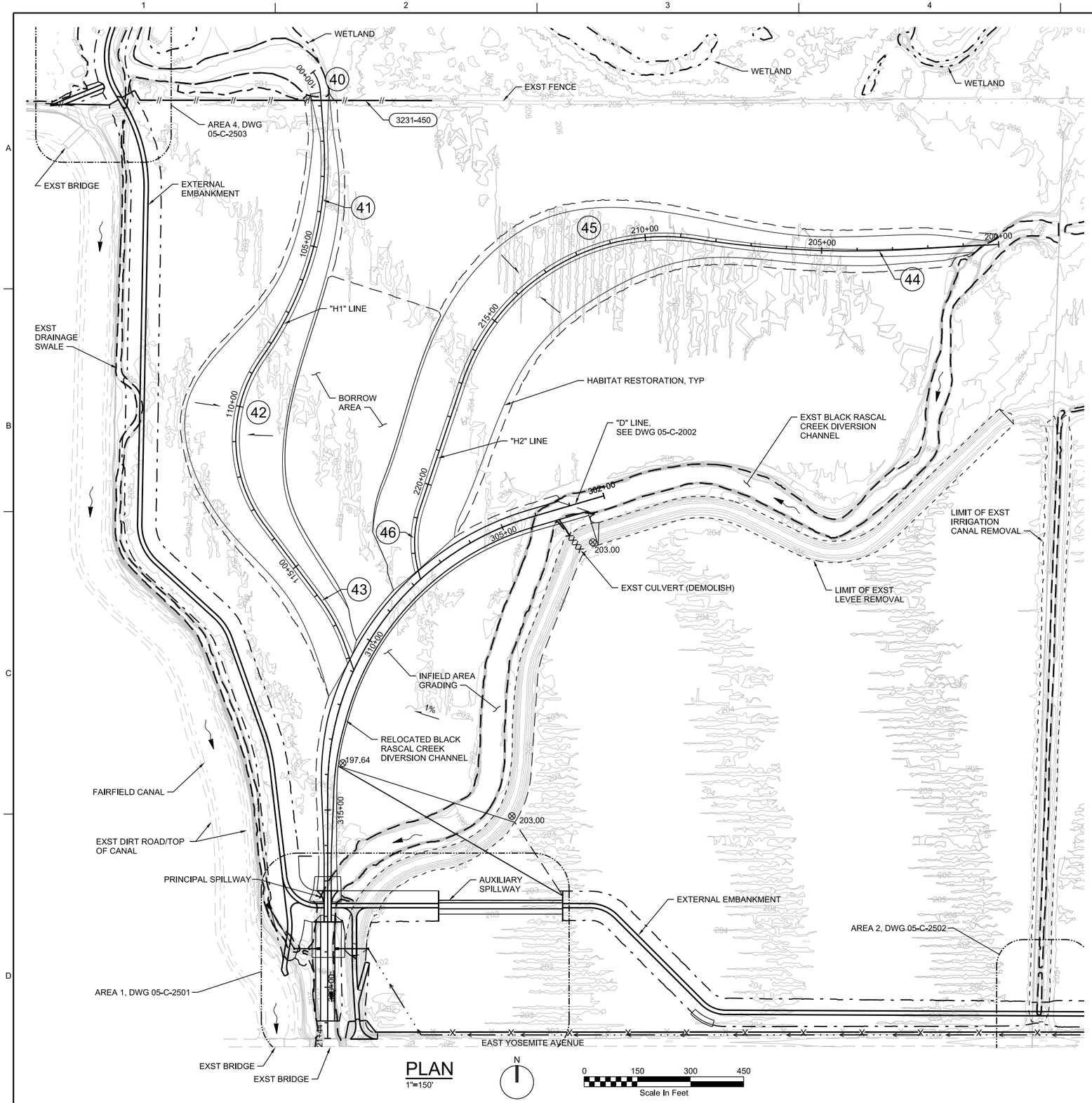
JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL
OVERALL SITE AND KEY PLAN

1"=300'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2001
SHEET	11 of 60



PLAN
1"=150'

CONTROL LINE DATA

ALIGNMENT	TYPE	STATION	NORTHING	EASTING	DELTA	RADIUS	LENGTH	TANGENT
"H1" LINE	POB/PC	100+00.00	1946160.00	6592328.09				
	40				33°31'22"	100'	58.51'	30.12'
	PT	100+58.51	1946106.15	6592348.75				
	PC	101+88.03	1945976.98	6592358.29				
	41				39°41'40"	950'	658.16'	342.90'
	PRC	108+46.18	1945355.74	6592184.56				
	42				72°25'14"	400'	505.59'	292.87'
	PT	113+51.78	1944883.18	6592190.67				
	PC	116+11.82	1944675.37	6592346.98				
	43				17°13'44"	500'	150.35'	75.75'
	PT	117+62.17	1944543.53	6592418.08				
	POE	118+37.29	1944472.82	6592443.43				
"H2" LINE	POB	200+00.00	1945673.68	6594263.04				
	PC	202+50.00	1945659.62	6594013.44				
	44				11°57'22"	2900'	605.16'	303.68'
	PRC	208+55.16	1945688.66	6593410.08				
	45				80°08'51"	600'	839.30'	504.78'
	PT	216+94.46	1945286.85	6592750.27				
	PC	220+69.06	1944931.79	6592630.87				
	46				33°11'05"	310'	179.55'	92.37'
	PT	222+48.61	1944754.84	6592624.72				
	POE	222+75.27	1944729.04	6592631.44				

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMCHER | CHK L ALLIGER | APVD B CHELONIS

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

© JACOBS 2019. ALL RIGHTS RESERVED.

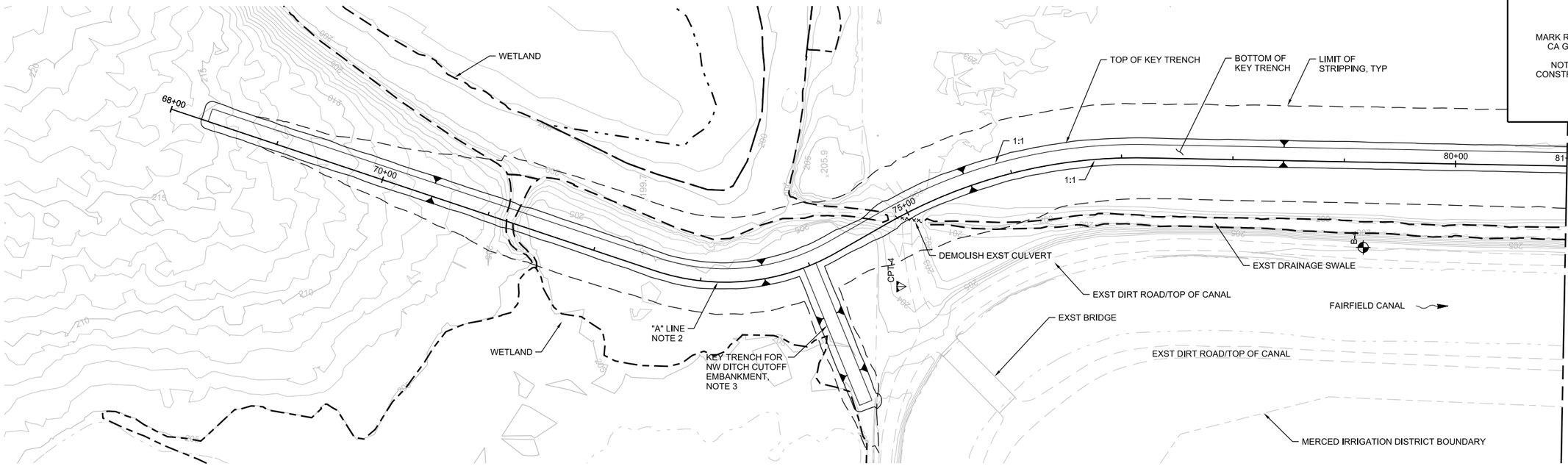
JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

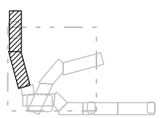
CIVIL
SITE GRADING PLAN

1"=300'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

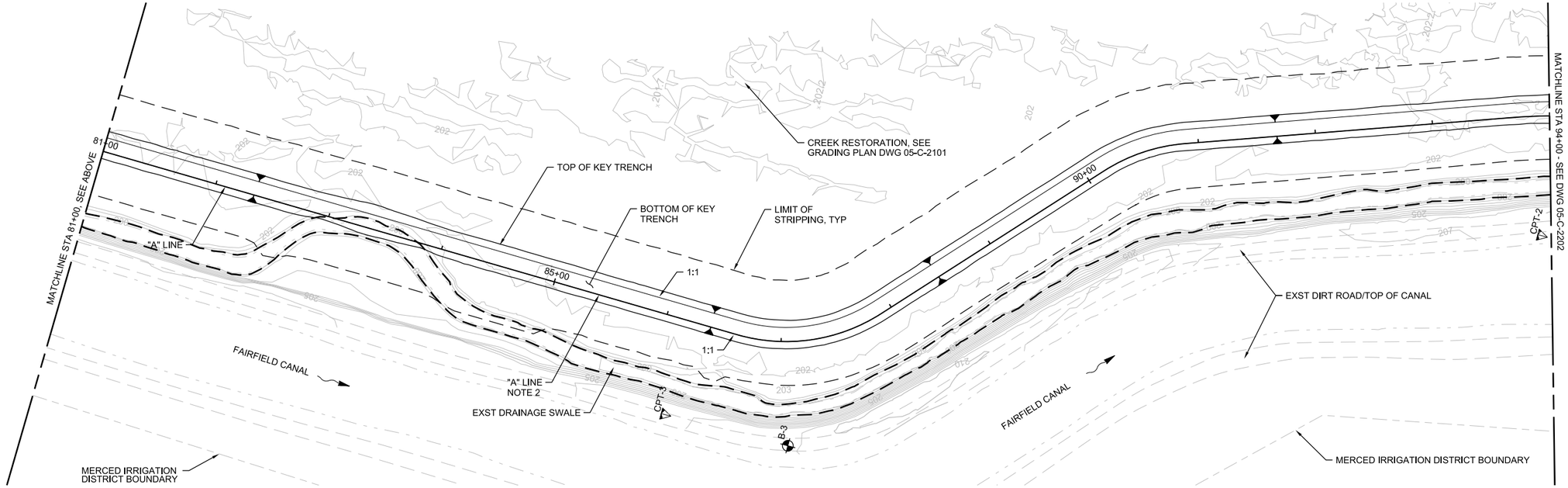
DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2101
SHEET	14 of 60



PLAN
1"=50'



KEY PLAN



PLAN
1"=50'

EMBANKMENT SUBGRADE PLANS GENERAL NOTES:

1. FOR TYPICAL KEY TRENCH SECTION, SEE EMBANKMENT SECTIONS ON DRAWING 05-C-3201.
2. FOR "A" LINE CONTROL DATA, SEE DRAWINGS 05-C-2002 AND 05-C-2003.
3. SEE "A" LINE TYPICAL SECTION FOR KEY TRENCH REQUIREMENTS, SIMILAR. CENTER KEY TRENCH UNDER EMBANKMENT.
4. FOR BOTTOM OF KEY TRENCH ELEVATION, SEE EMBANKMENT PLAN AND PROFILE DRAWINGS.

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

© JACOBS 2019. ALL RIGHTS RESERVED.

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMACHER | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

EMBANKMENT SUBGRADE PLANS "A" LINE STA 68+00 TO 94+00

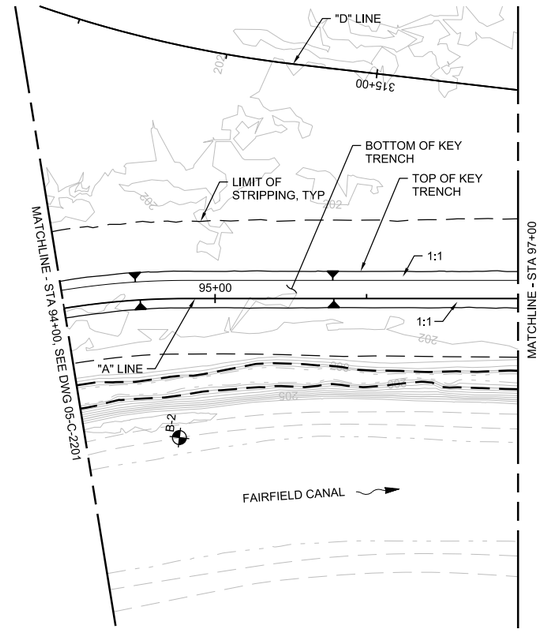
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

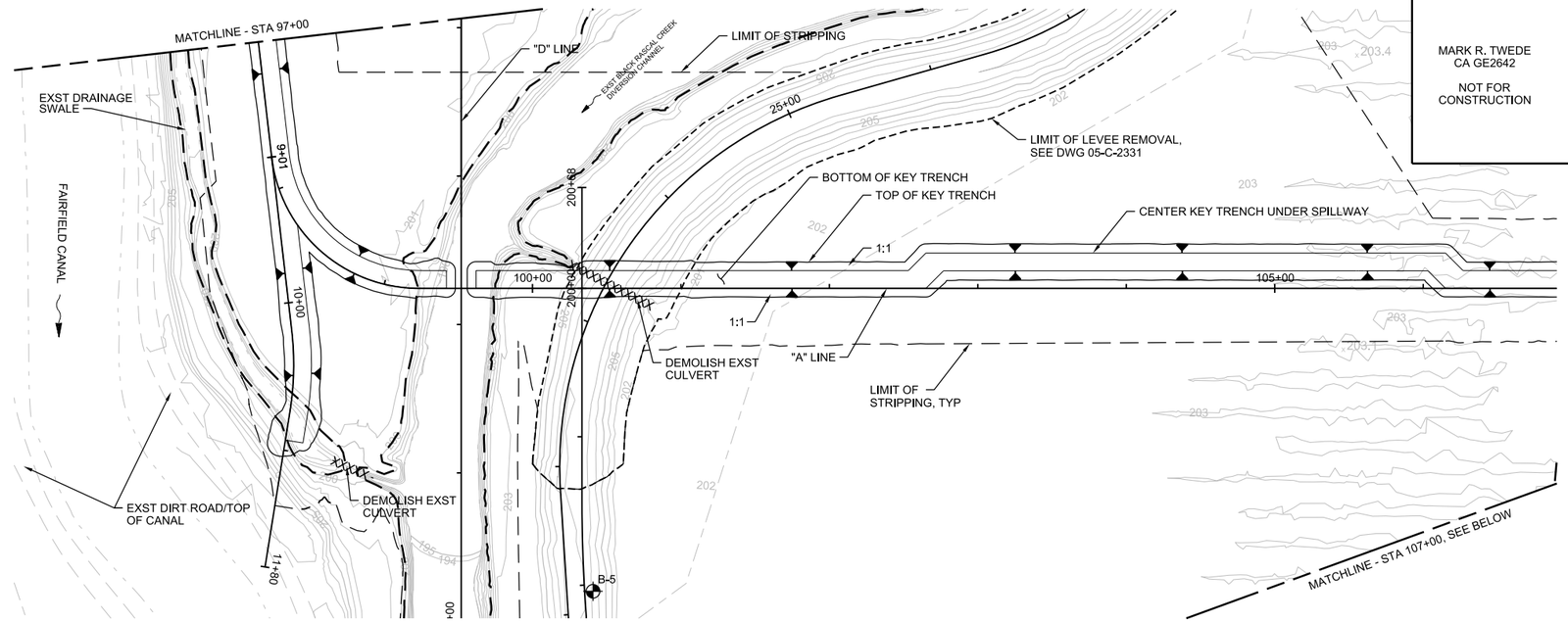
DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2201
SHEET	15 of 60

NOT FOR CONSTRUCTION

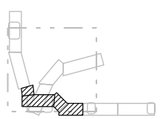
PN: SPK-2021-00278



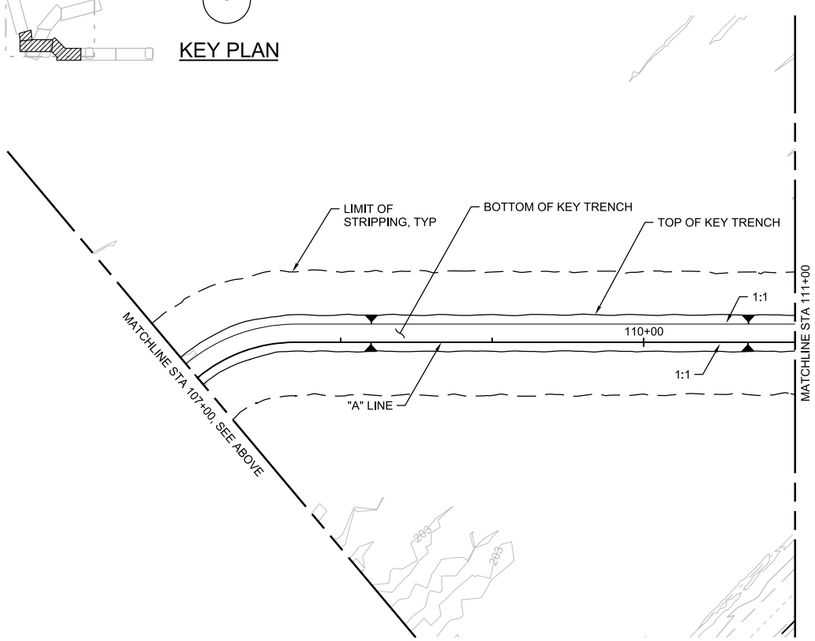
PLAN
1"=50'



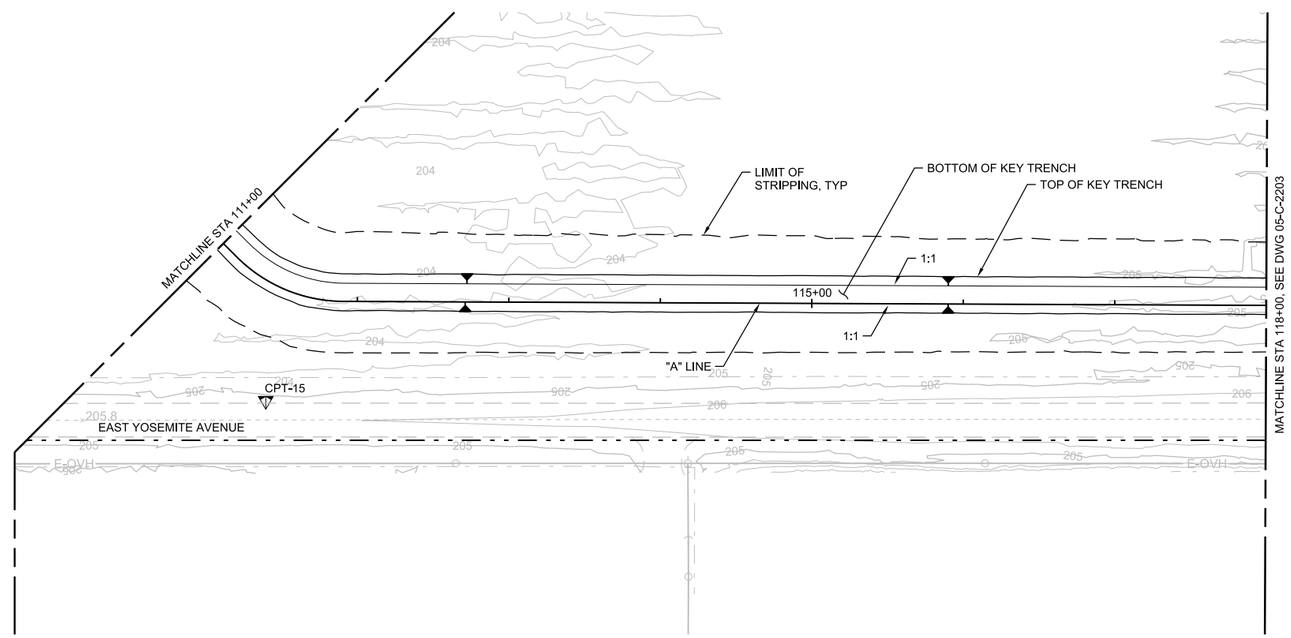
PLAN
1"=50'



KEY PLAN



PLAN
1"=50'



PLAN
1"=50'

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMACHER | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019, ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

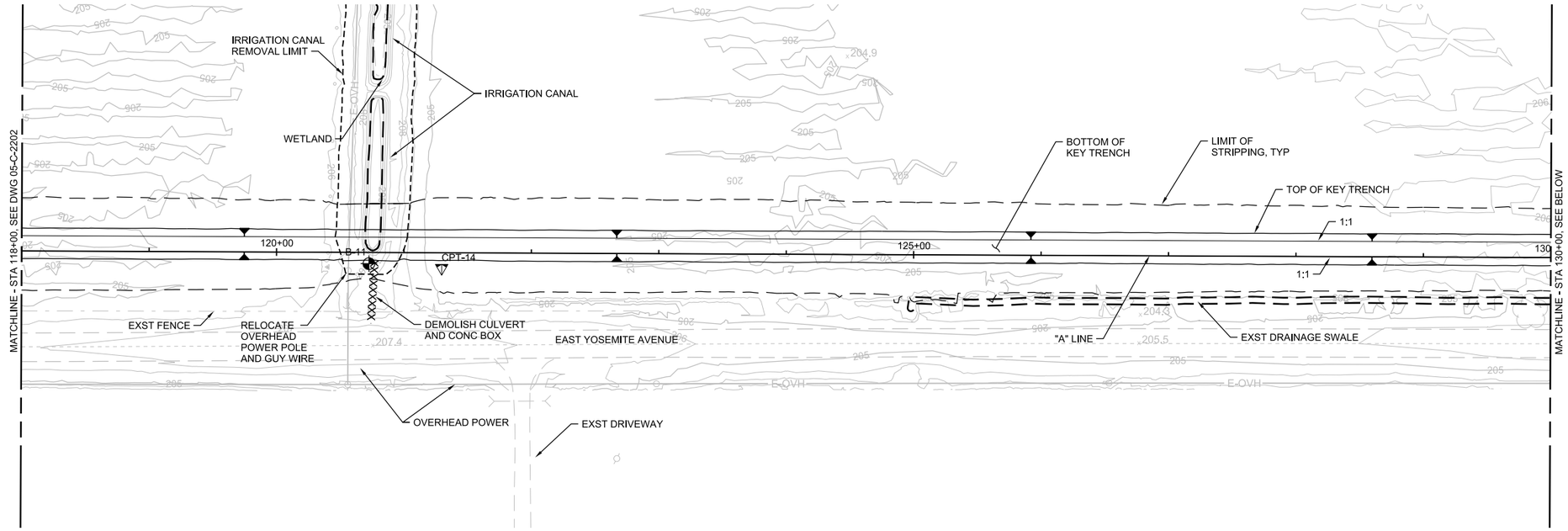
EMBANKMENT SUBGRADE PLANS "A" LINE STA 94+00 TO 118+00

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

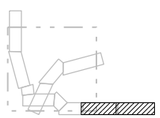
DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2202
SHEET	16 of 60

NOT FOR CONSTRUCTION



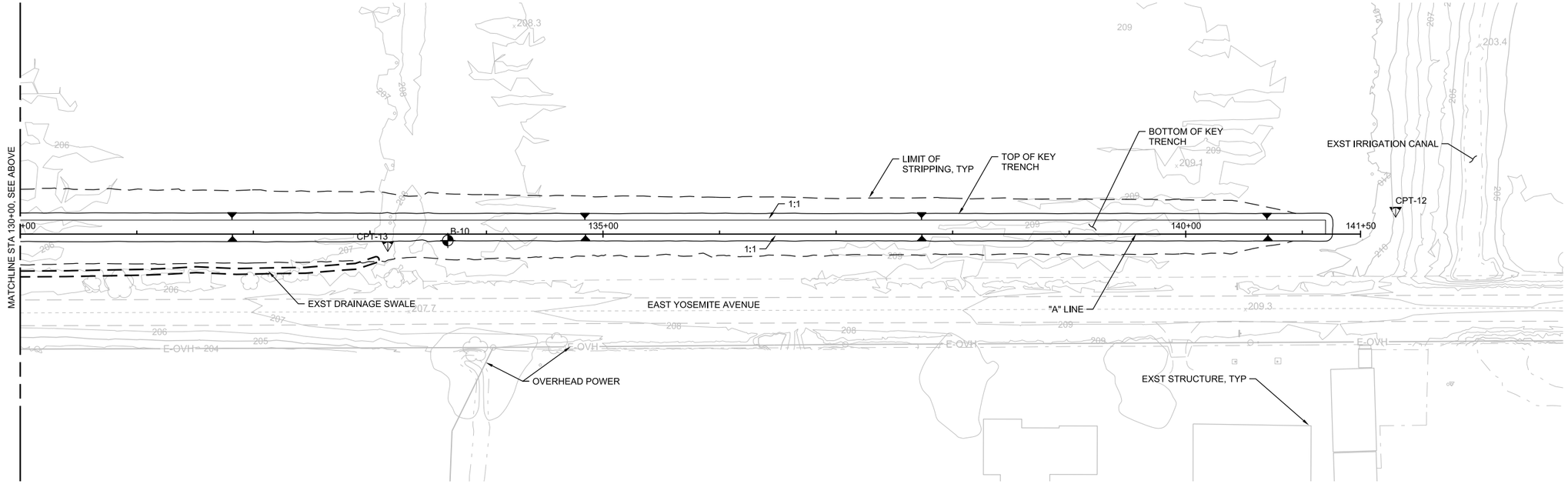
N

PLAN
1"=50'



N

KEY PLAN



N

PLAN
1"=50'

MARK R. TWEDE
CA GE2642

NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMACHER | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019, ALL RIGHTS RESERVED.

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

JACOBS

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

EMBANKMENT SUBGRADE PLANS "A" LINE STA 118+00 TO 143+00

1"=50'

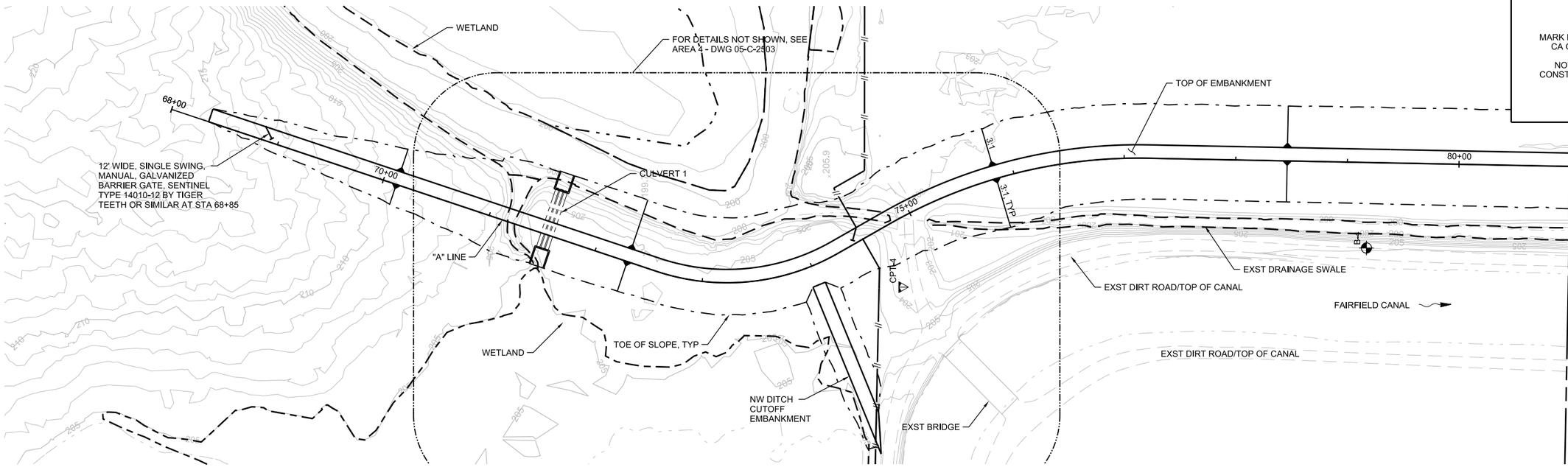
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

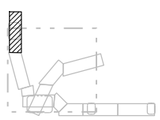
DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2203
SHEET	17 of 60

NOT FOR CONSTRUCTION

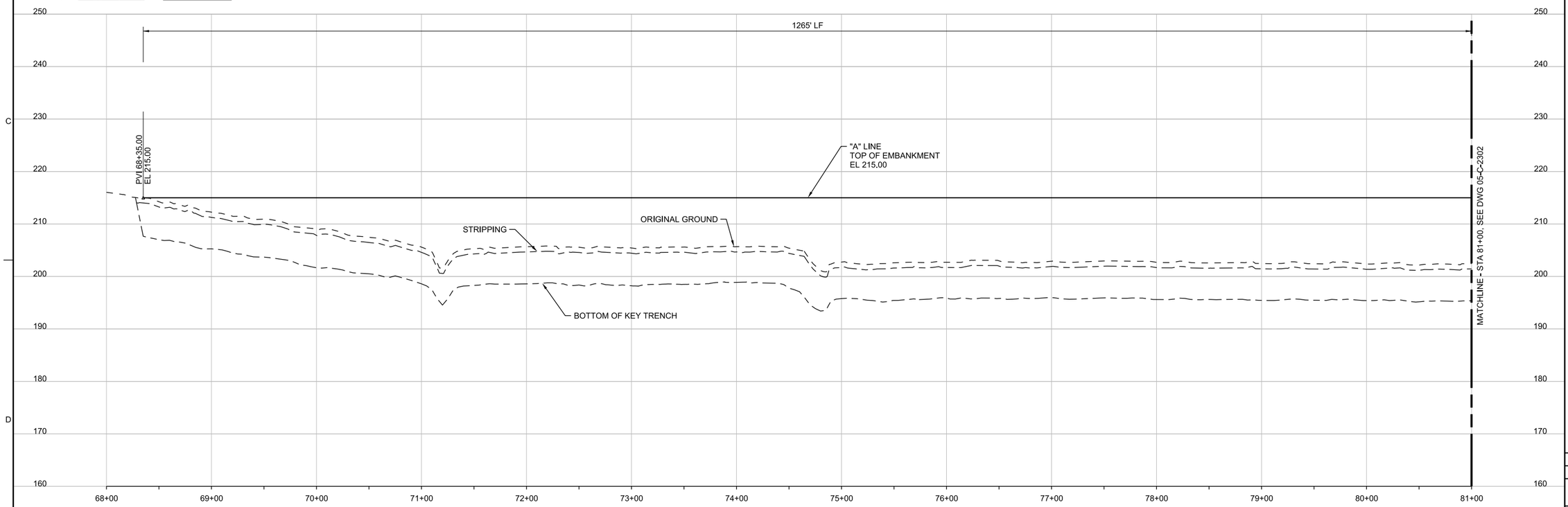
PN: SPK-2021-00278



PLAN
1"=50'



KEY PLAN



PROFILE
HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

© JACOBS 2019, ALL RIGHTS RESERVED.

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J SMITH | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

EMBANKMENT PLAN AND PROFILE "A" LINE STA 68+00 TO STA 81+00

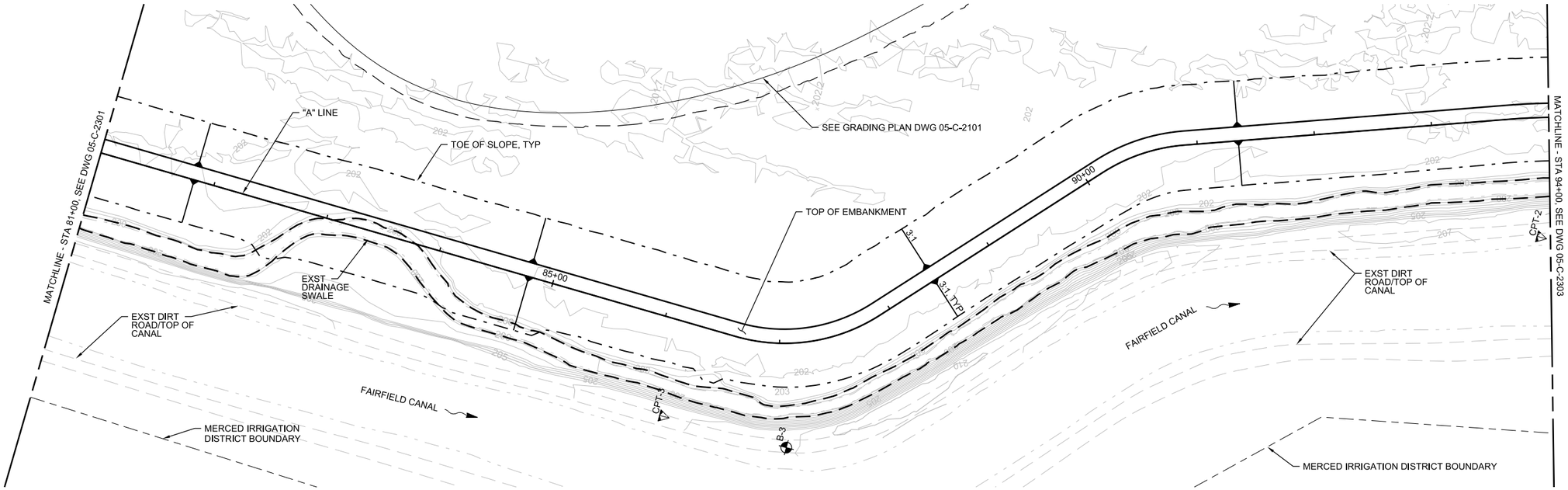
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

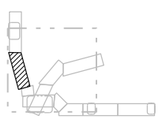
1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2301
SHEET	18 of 60

NOT FOR CONSTRUCTION

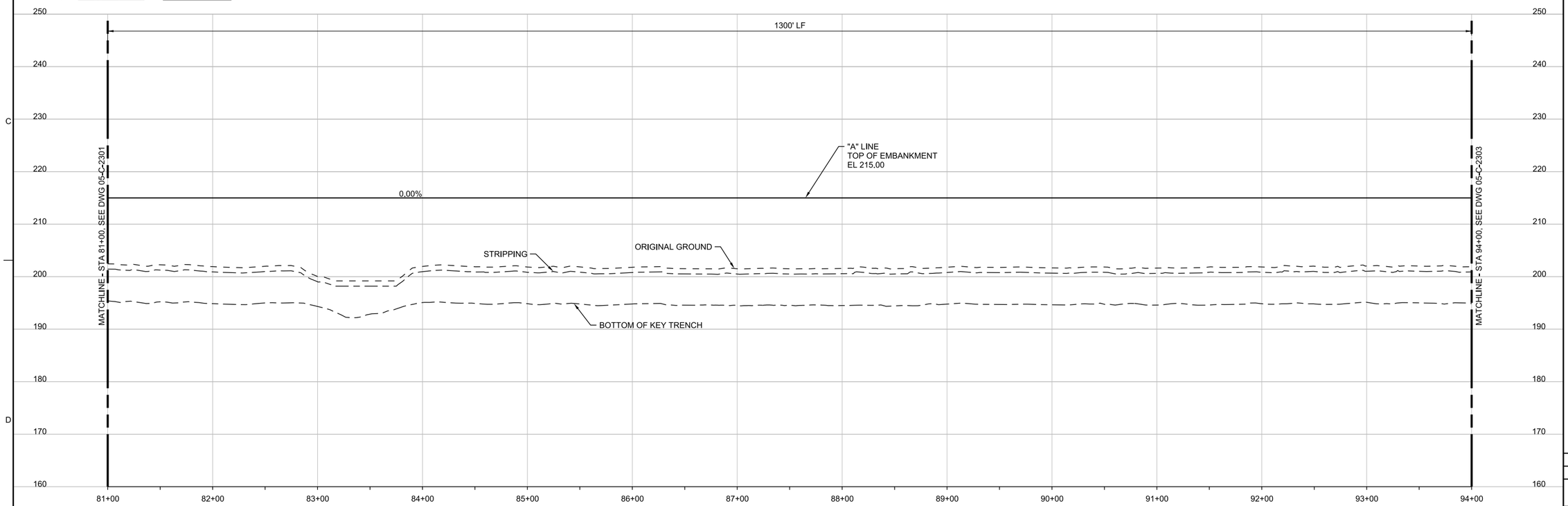
PN: SPK-2021-00278





KEY PLAN

PLAN
1"=50'



PROFILE
HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J SMITH | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

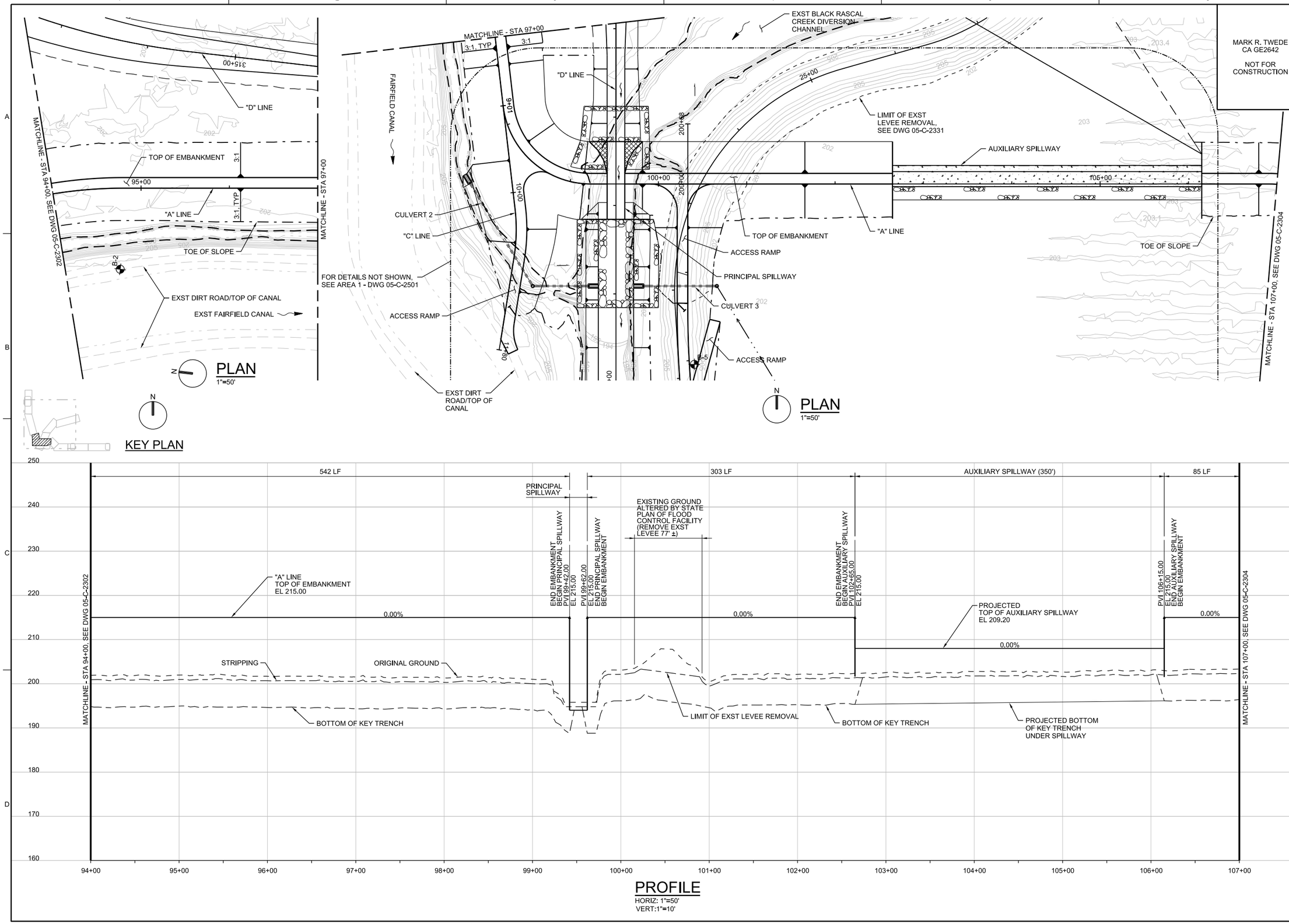
EMBANKMENT PLAN AND PROFILE "A" LINE STA 81+00 TO STA 94+00

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2302
SHEET	19 of 60

NOT FOR CONSTRUCTION



MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J SMITH | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019, ALL RIGHTS RESERVED.

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

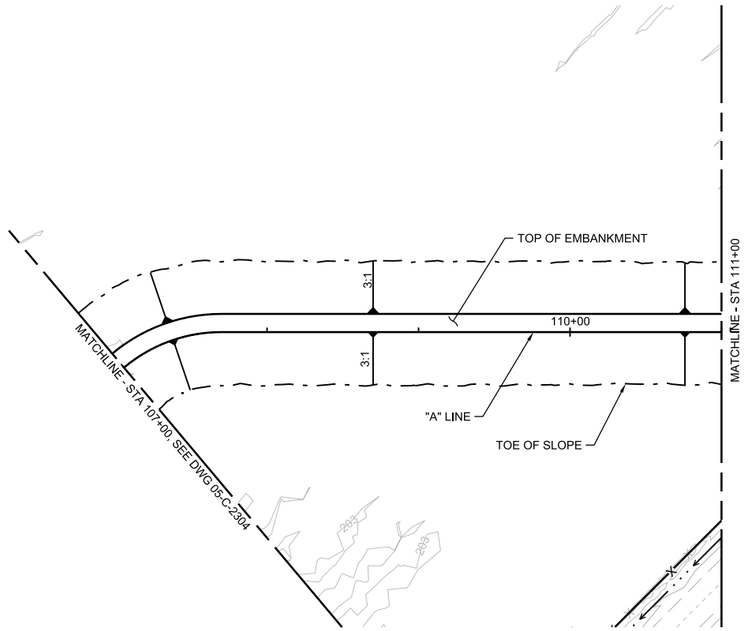
EMBANKMENT PLAN AND PROFILE "A" LINE STA 94+00 TO STA 107+00

1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2303
SHEET	20 of 60

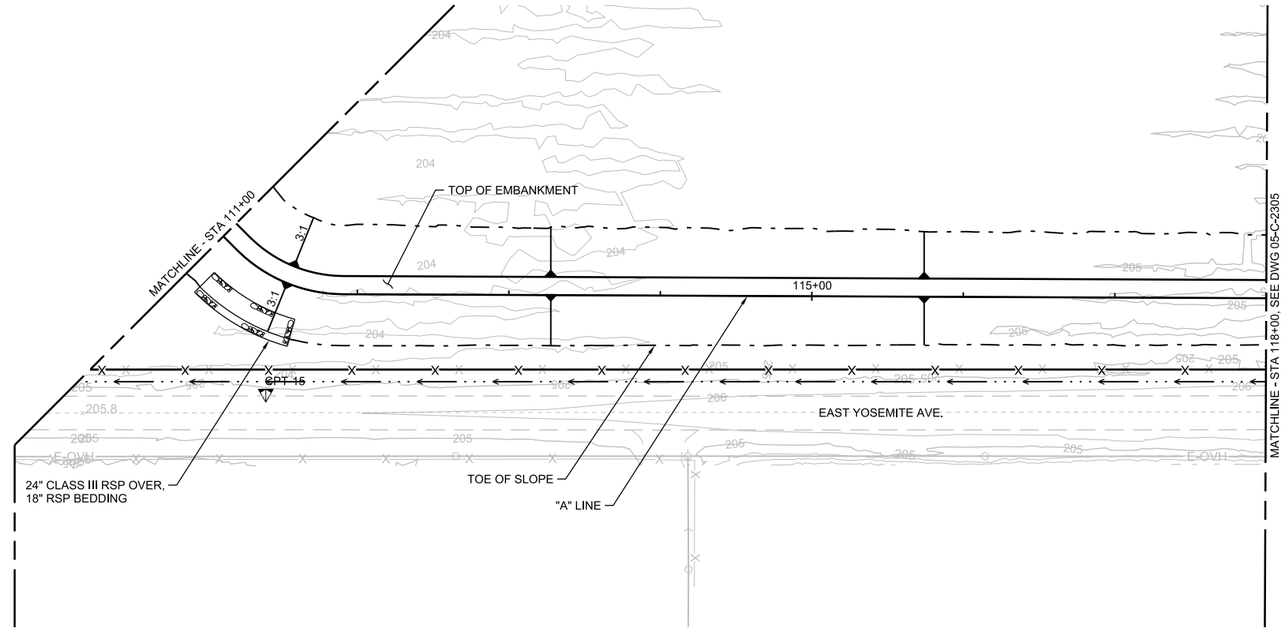
NOT FOR CONSTRUCTION

PN: SPK-2021-00278



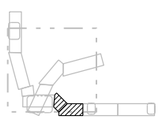
N

PLAN
1"=50'

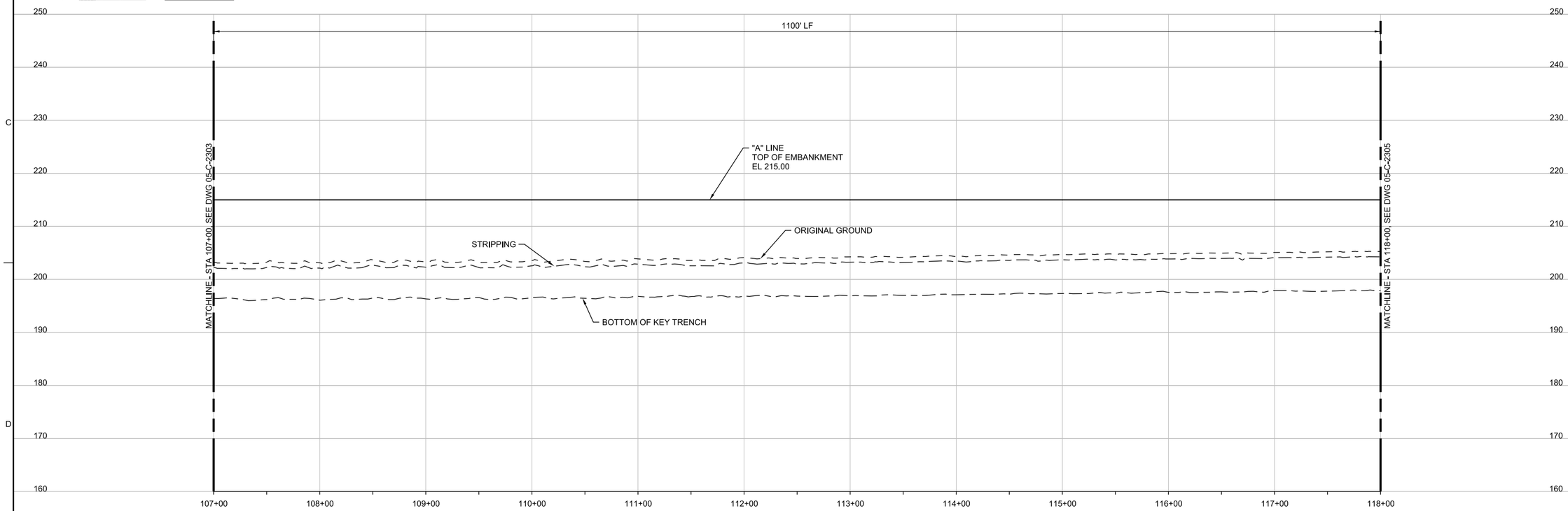


N

PLAN
1"=50'



KEY PLAN



PROFILE
HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642

NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J SMITH | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019, ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

EMBANKMENT PLAN AND PROFILE
"A" LINE STA 107+00 TO STA 118+00

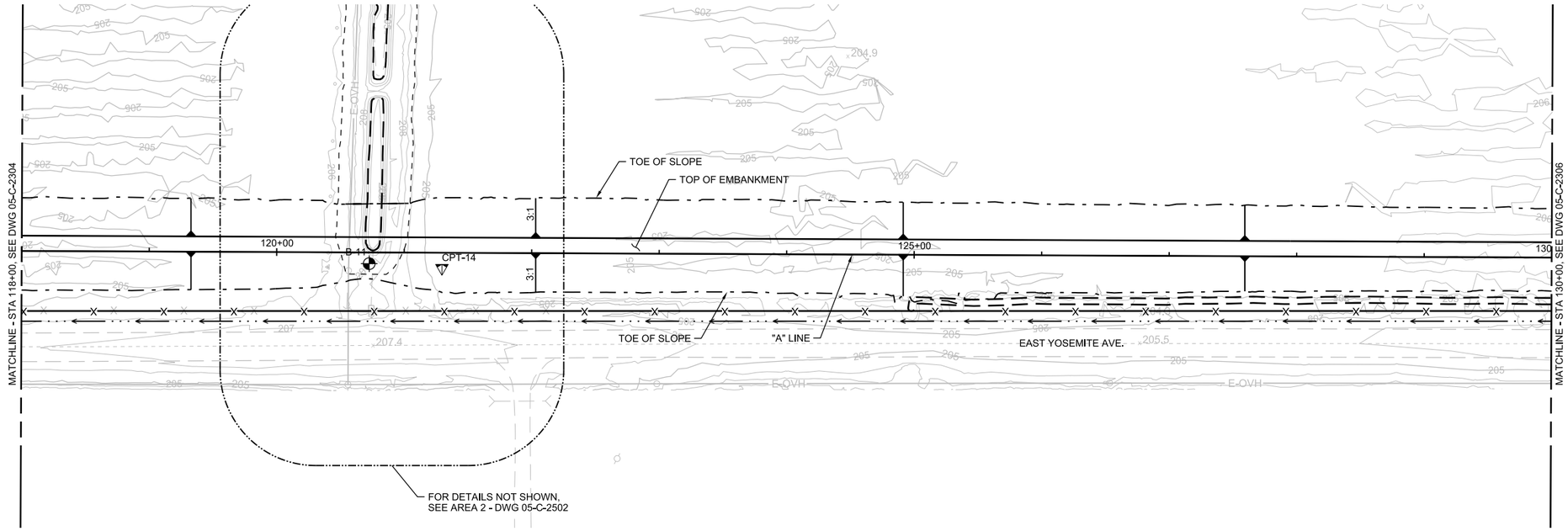
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

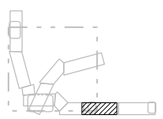
1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2304
SHEET	21 of 60

NOT FOR CONSTRUCTION

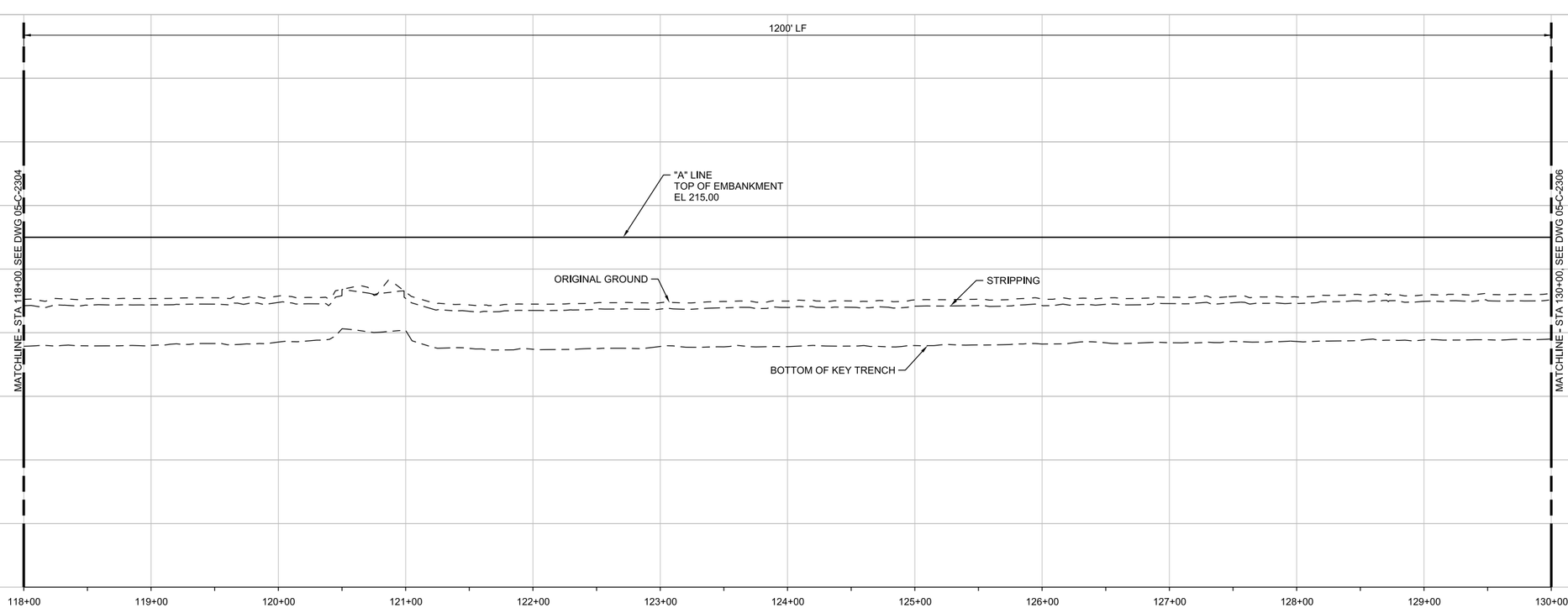
PN: SPK-2021-00278





KEY PLAN

PLAN
1"=50'



PROFILE
HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J SMITH | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019, ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

EMBANKMENT PLAN AND PROFILE "A" LINE STA 118+00 TO STA 130+00

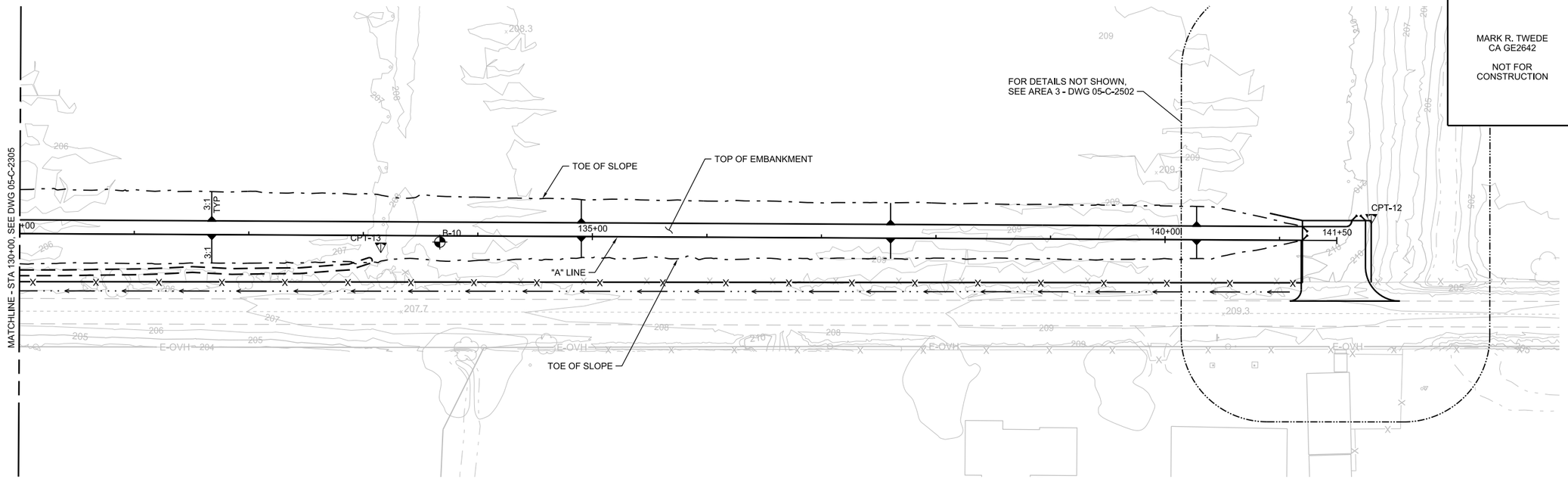
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2305
SHEET	22 of 60

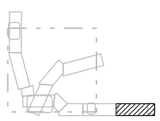
NOT FOR CONSTRUCTION

PN: SPK-2021-00278

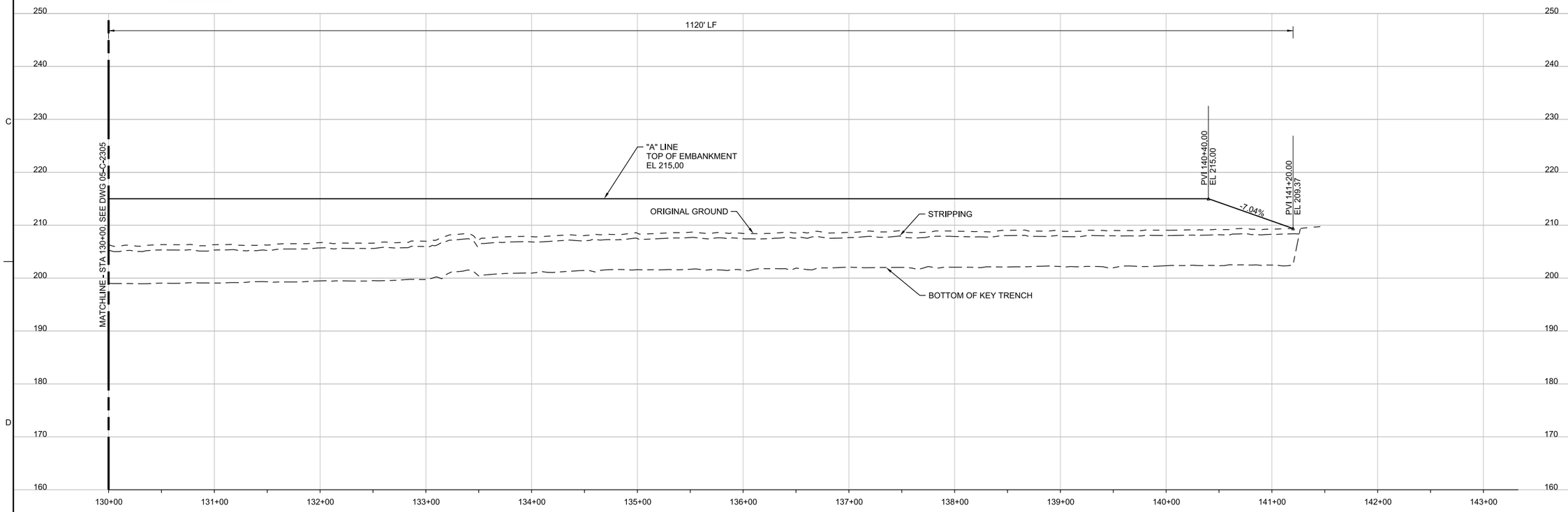


PLAN

1"=50'



KEY PLAN



PROFILE

HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642

NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J SMITH | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

EMBANKMENT PLAN AND PROFILE "A" LINE STA 130+00 TO STA 143+00

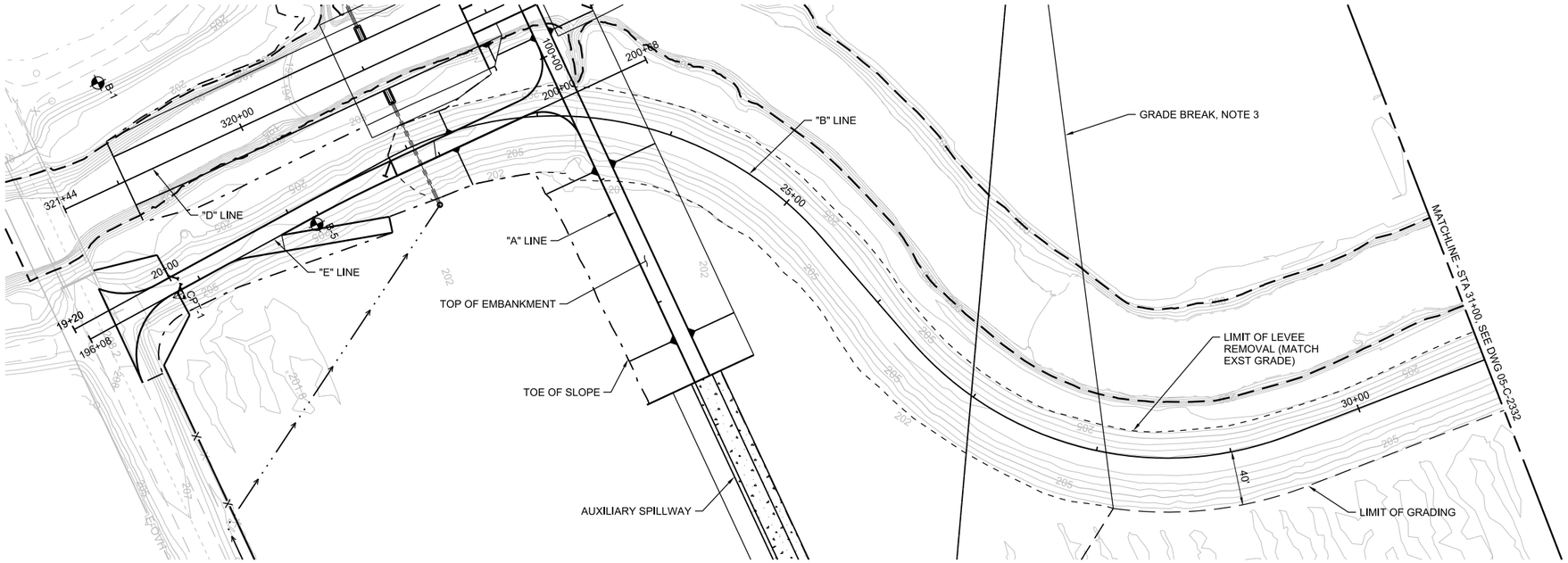
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

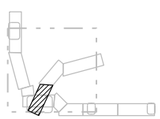
1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2306
SHEET	23 of 60

NOT FOR CONSTRUCTION

PN: SPK-2021-00278





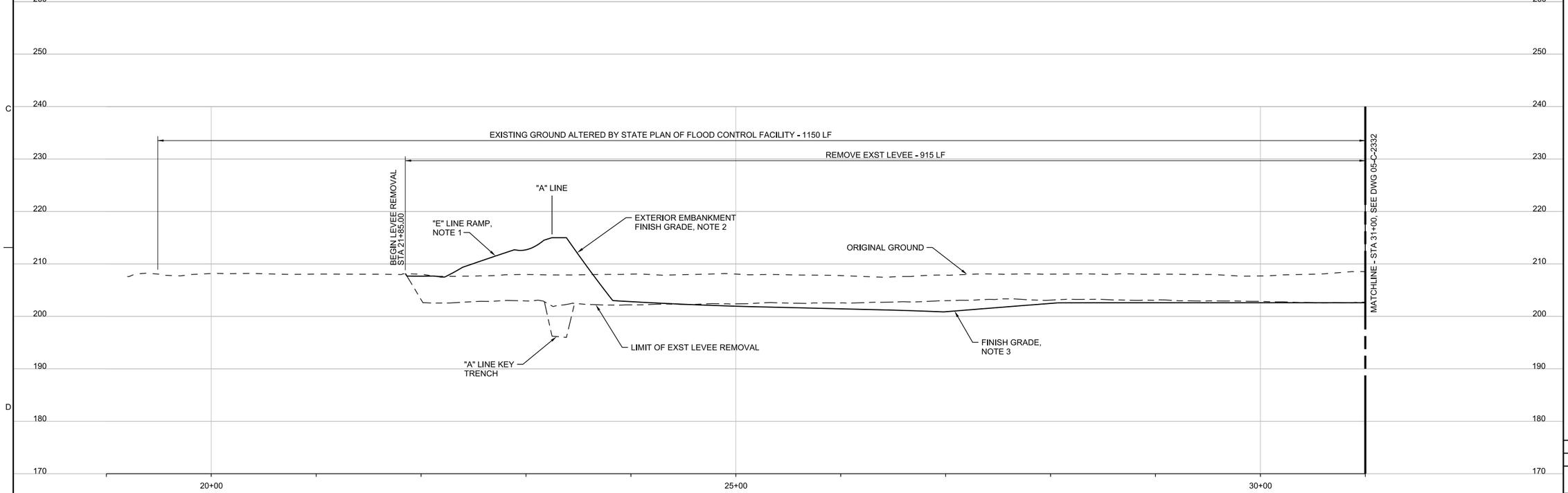
KEY PLAN

PLAN

1"=50'

NOTES:

1. "E" LINE RAMP FINISH GRADE PROFILE IS SHOWN ON DWG 05-C-3001.
2. "A" LINE EXTERIOR EMBANKMENT FINISH GRADE PROFILE IS SHOWN ON DWG 05-C-2303.
3. FOR FINISH GRADE CONTROL, SEE SITE GRADING PLAN, DWG 05-C-2101.
4. FOR LAYOUT AND CONTROL OF ALL OTHER FEATURES NOT LABELED, SEE DWG 05-C-2501.



PROFILE

HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMACHER | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

LEVEE REMOVAL PLAN AND PROFILE "B" LINE STA 19+00 TO STA 31+00

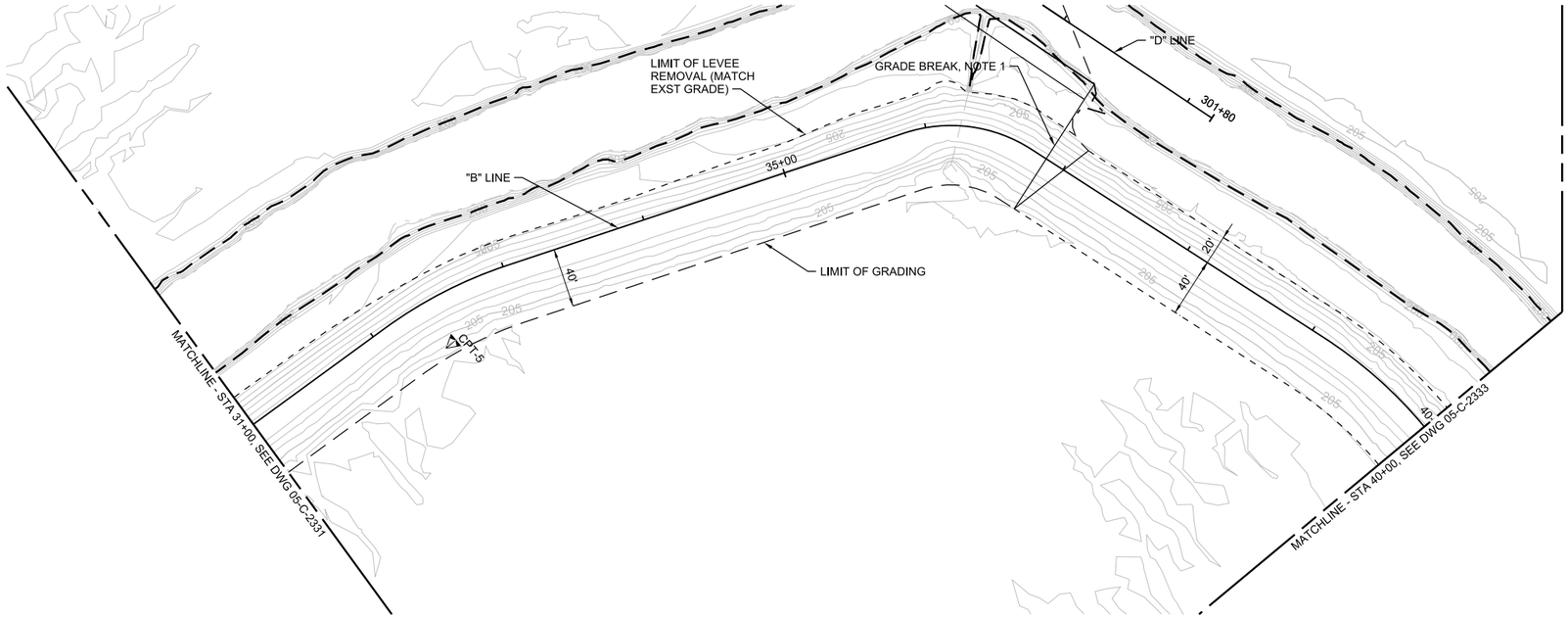
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

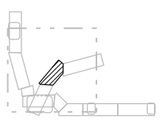
1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2331
SHEET	24 of 60

NOT FOR CONSTRUCTION

PN: SPK-2021-00278





KEY PLAN

N

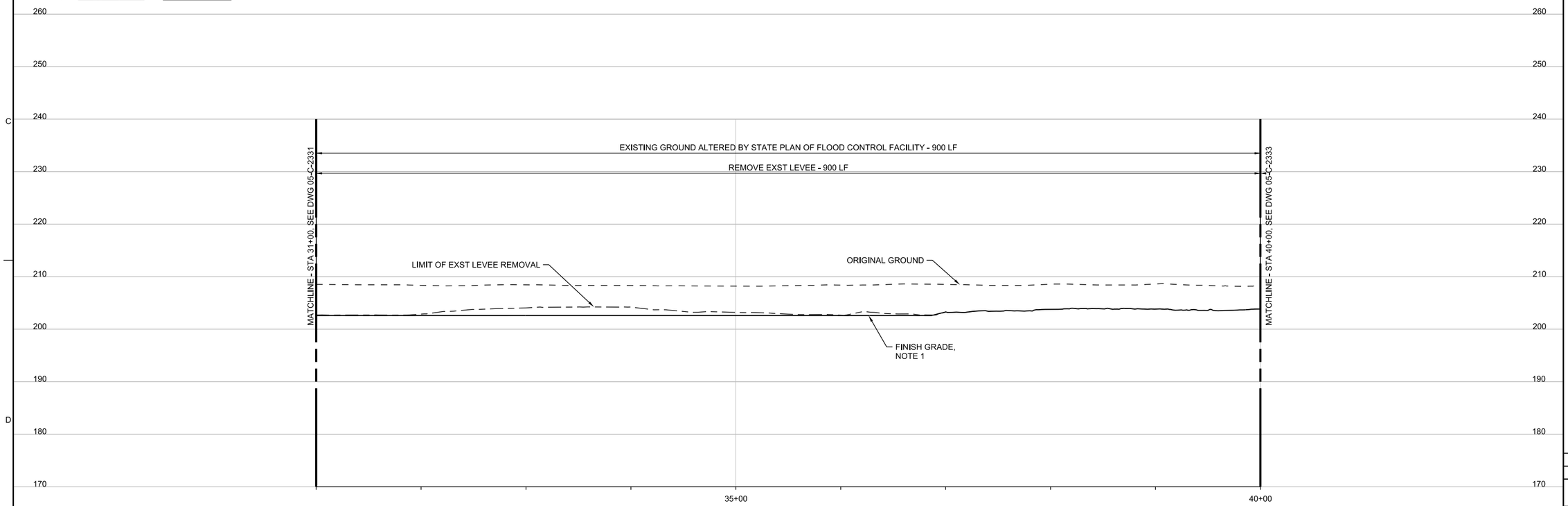
N

PLAN

1"=50'

NOTE:

1. FOR FINISH GRADE CONTROL, SEE SITE GRADING PLAN, DWG 05-C-2101



PROFILE

HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMACHER | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

LEVEE REMOVAL PLAN AND PROFILE "B" LINE STA 31+00 TO STA 40+00

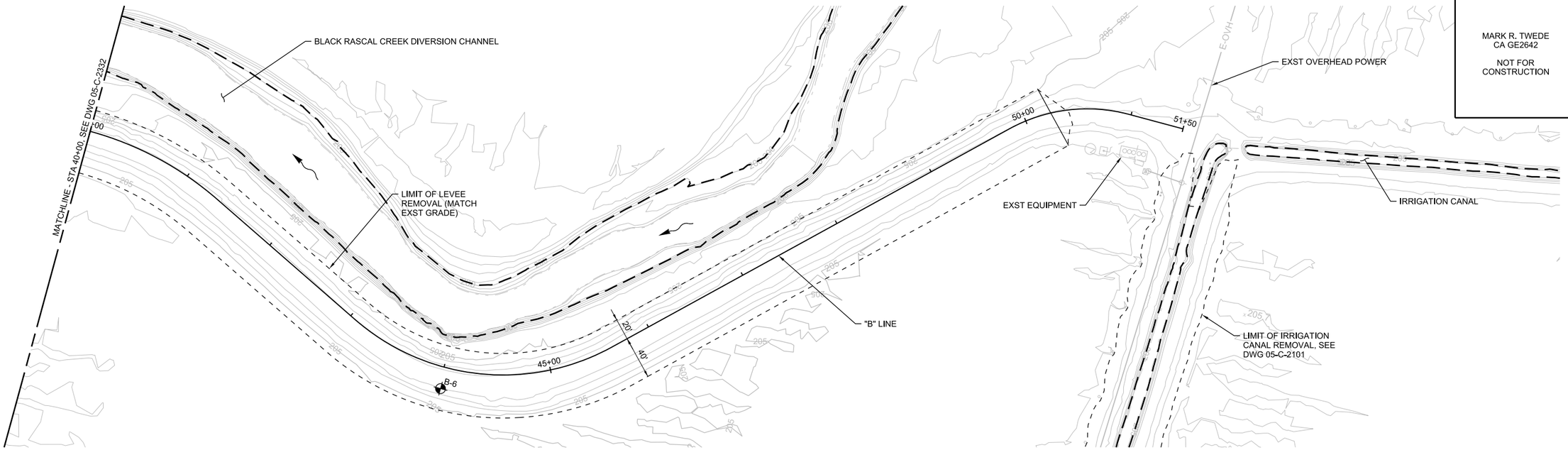
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

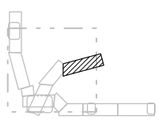
1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2332
SHEET	25 of 60

NOT FOR CONSTRUCTION

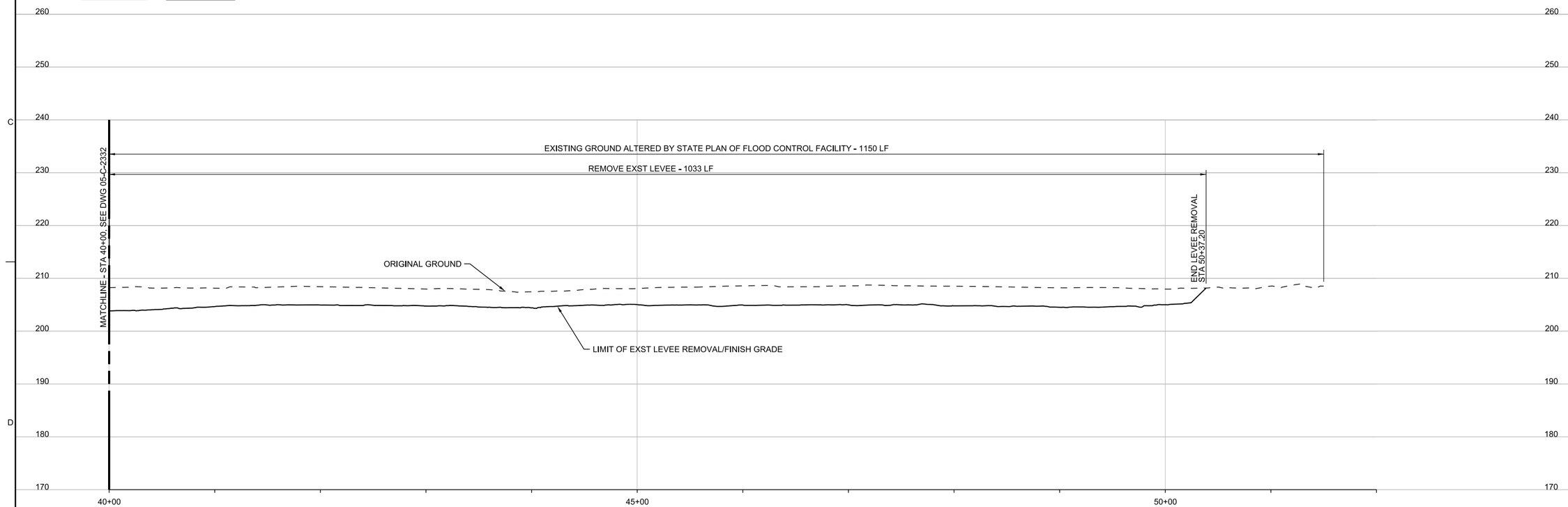
PN: SPK-2021-00278





KEY PLAN

PLAN
1"=50'



PROFILE
HORIZ: 1"=50'
VERT:1"=10'

MARK R. TWEDE
CA GE2642
NOT FOR CONSTRUCTION

BECKY K. CHELONIS
CA C59851
NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMACHER | CHK L ALLIGER | APVD B CHELONIS/M TWEDE

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

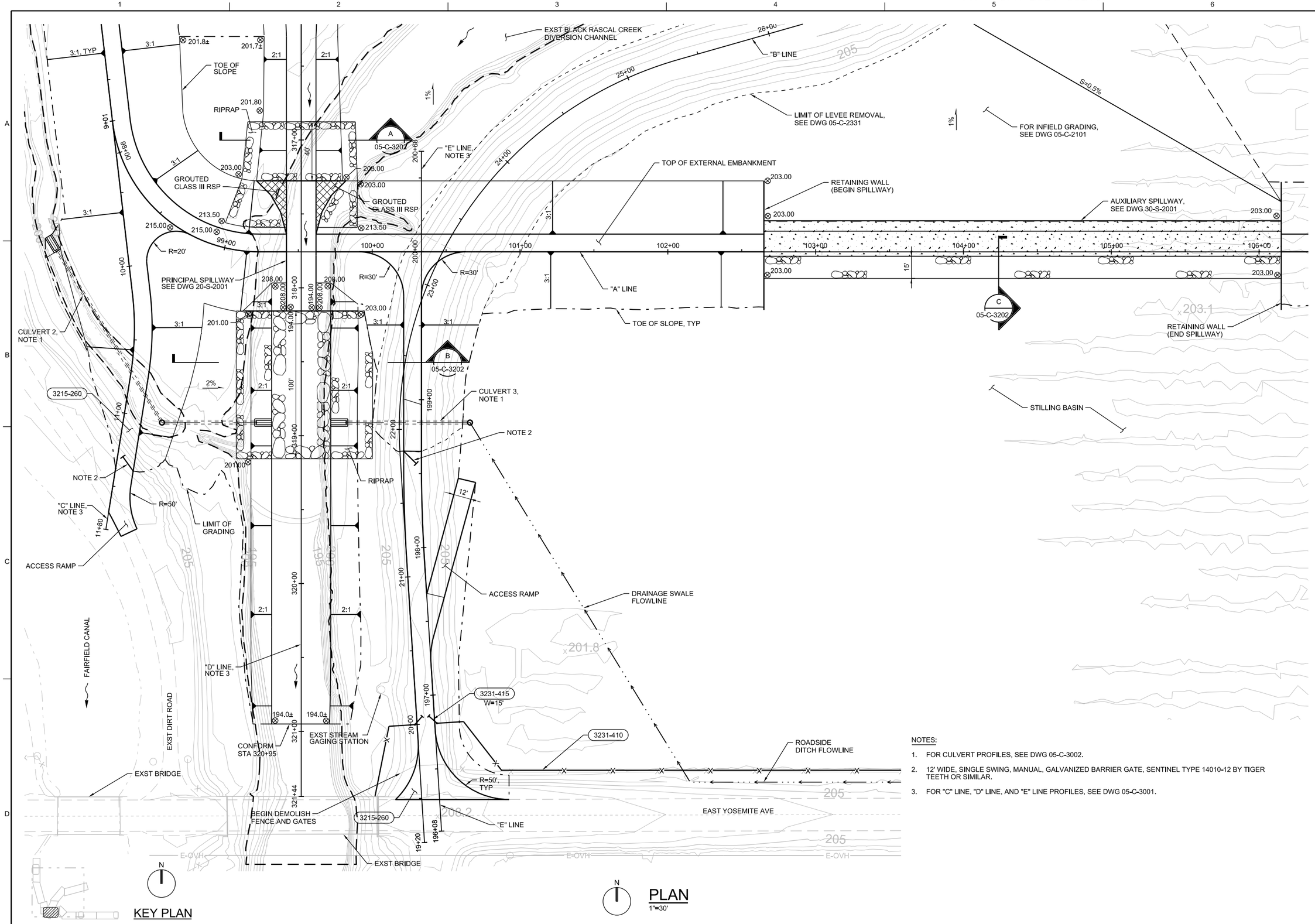
LEVEE REMOVAL PLAN AND PROFILE "B" LINE STA 40+00 TO STA 51+50

1"=50'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2333
SHEET	26 of 60

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

NOT FOR CONSTRUCTION



NOTES:

1. FOR CULVERT PROFILES, SEE DWG 05-C-3002.
2. 12' WIDE, SINGLE SWING, MANUAL, GALVANIZED BARRIER GATE, SENTINEL TYPE 14010-12 BY TIGER TEETH OR SIMILAR.
3. FOR "C" LINE, "D" LINE, AND "E" LINE PROFILES, SEE DWG 05-C-3001.

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J MESTEMACHER | CHK L ALLIGER | APVD B CHELONIS

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL

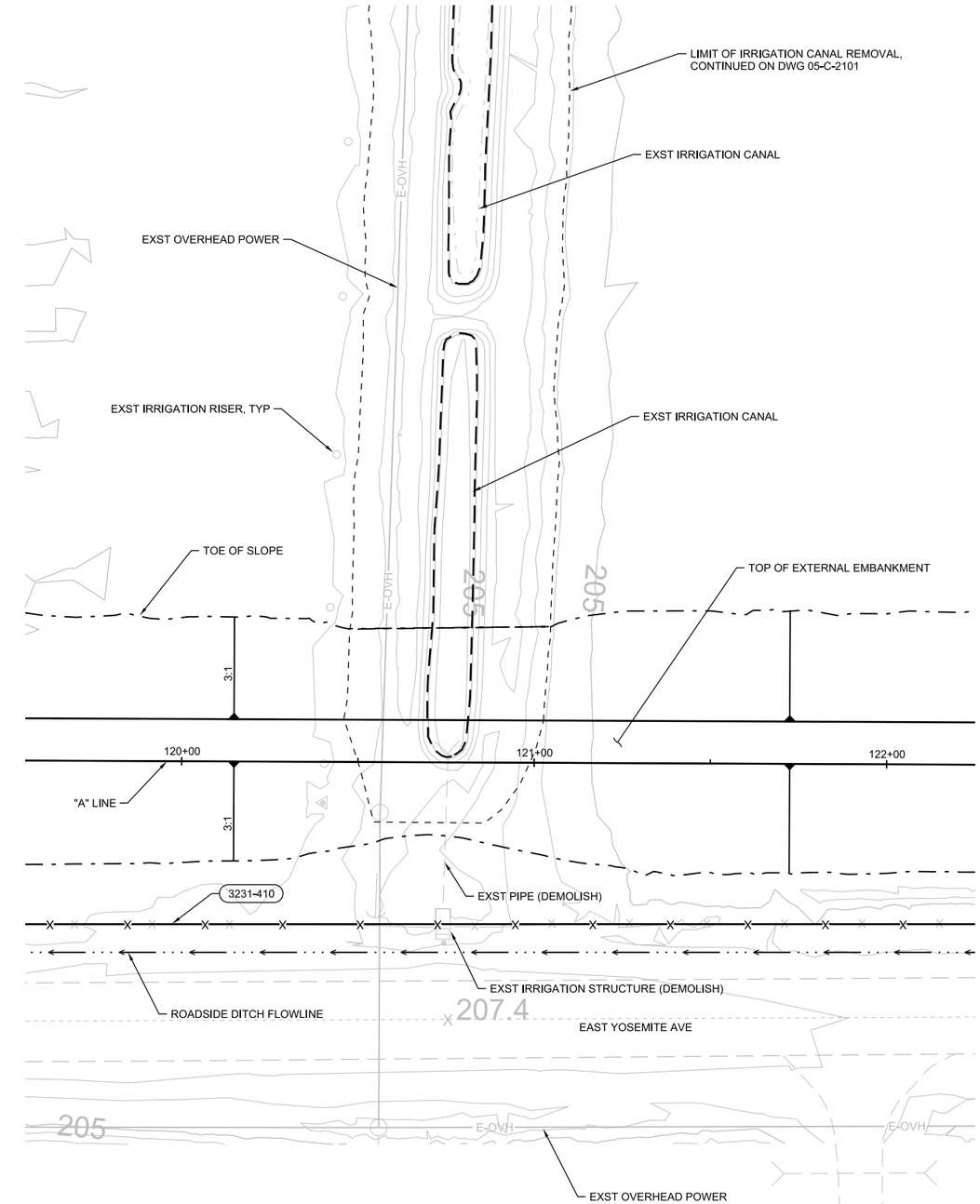
ENLARGED SITE PLAN AREA 1

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

1"=30'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

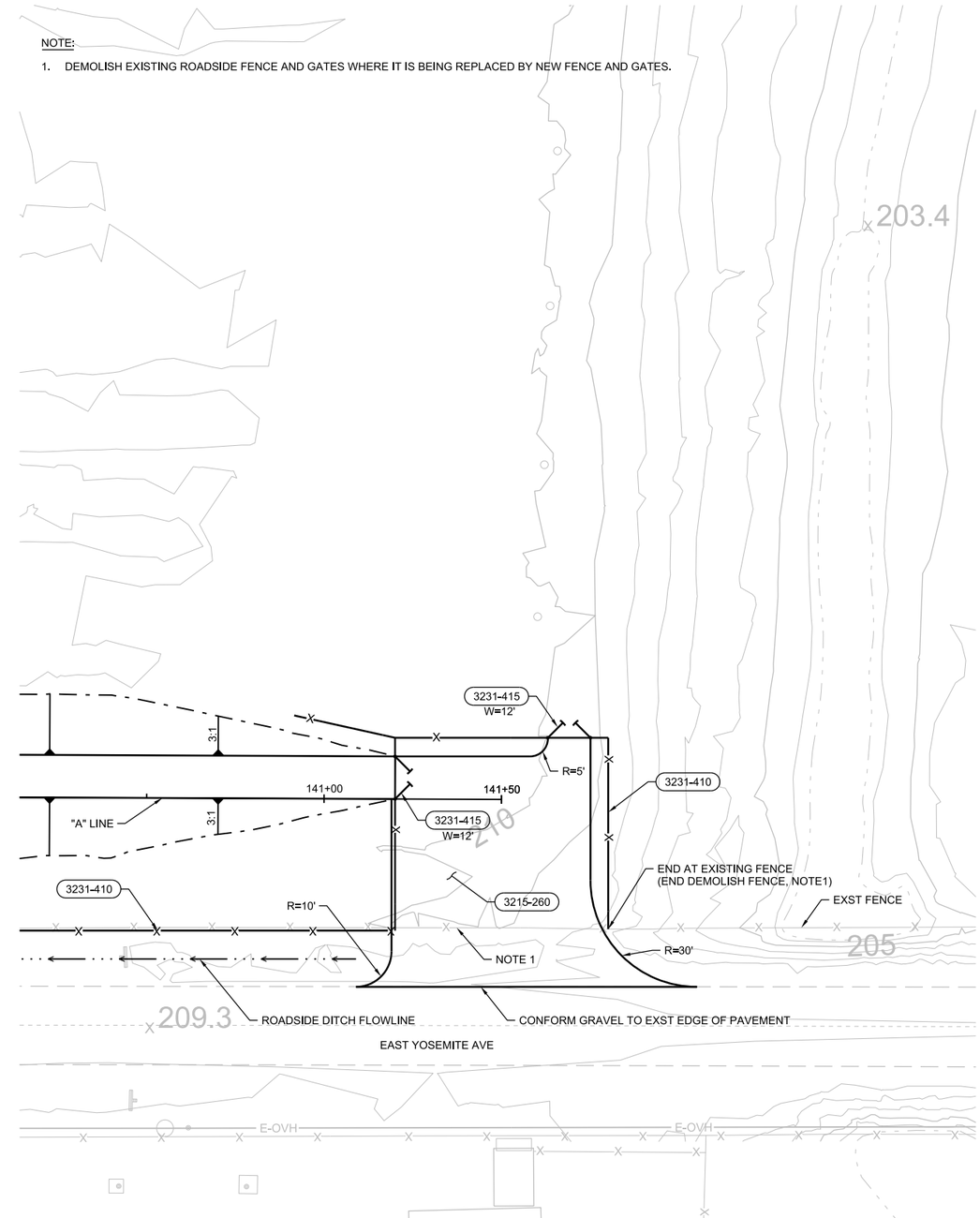
DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2501
SHEET	27 of 60

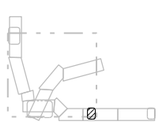
NOT FOR CONSTRUCTION



NOTE:

1. DEMOLISH EXISTING ROADSIDE FENCE AND GATES WHERE IT IS BEING REPLACED BY NEW FENCE AND GATES.

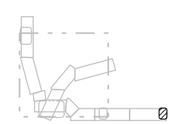




KEY PLAN

AREA 2 PLAN

1"=20'



KEY PLAN

AREA 3 PLAN

1"=20'

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN B CHELONIS | DR J SMITH | CHK L ALLIGER | APVD B CHELONIS

© JACOBS 2019, ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

CIVIL

ENLARGED SITE PLANS AREAS 2 AND 3

1"=20'

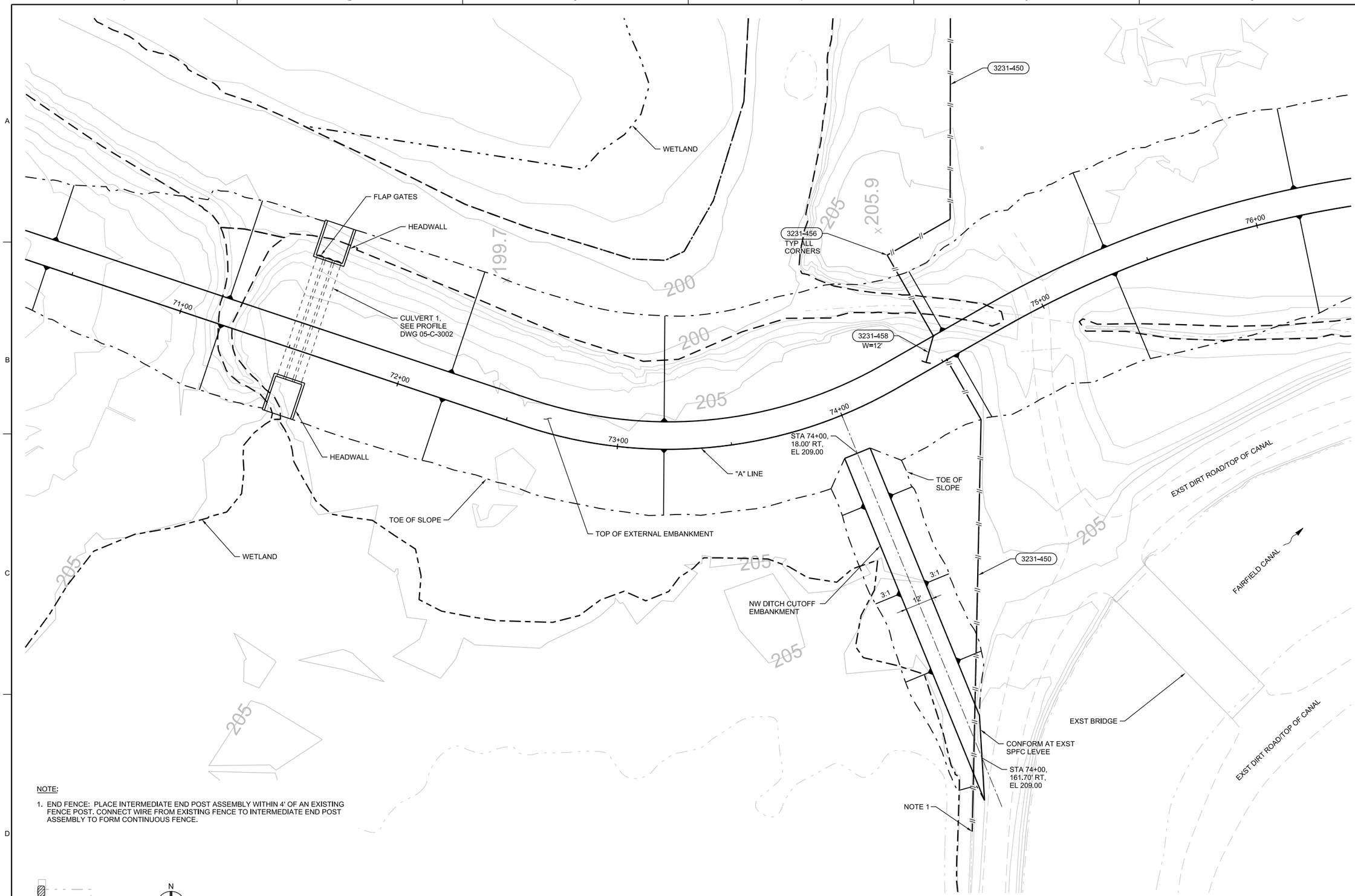
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2502
SHEET	28 of 60

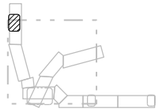
NOT FOR CONSTRUCTION

PN: SPK-2021-00278



NOTE:

1. END FENCE: PLACE INTERMEDIATE END POST ASSEMBLY WITHIN 4' OF AN EXISTING FENCE POST. CONNECT WIRE FROM EXISTING FENCE TO INTERMEDIATE END POST ASSEMBLY TO FORM CONTINUOUS FENCE.



KEY PLAN

N

N

PLAN
1"=20'

BECKY K. CHELONIS
CA C59851

NOT FOR
CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN	DR	CHK	APVD
B CHELONIS	J SMITH	L ALLIGER	B CHELONIS

© JACOBS 2019, ALL RIGHTS RESERVED.

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

JACOBS

CIVIL

ENLARGED SITE PLAN AREA 4

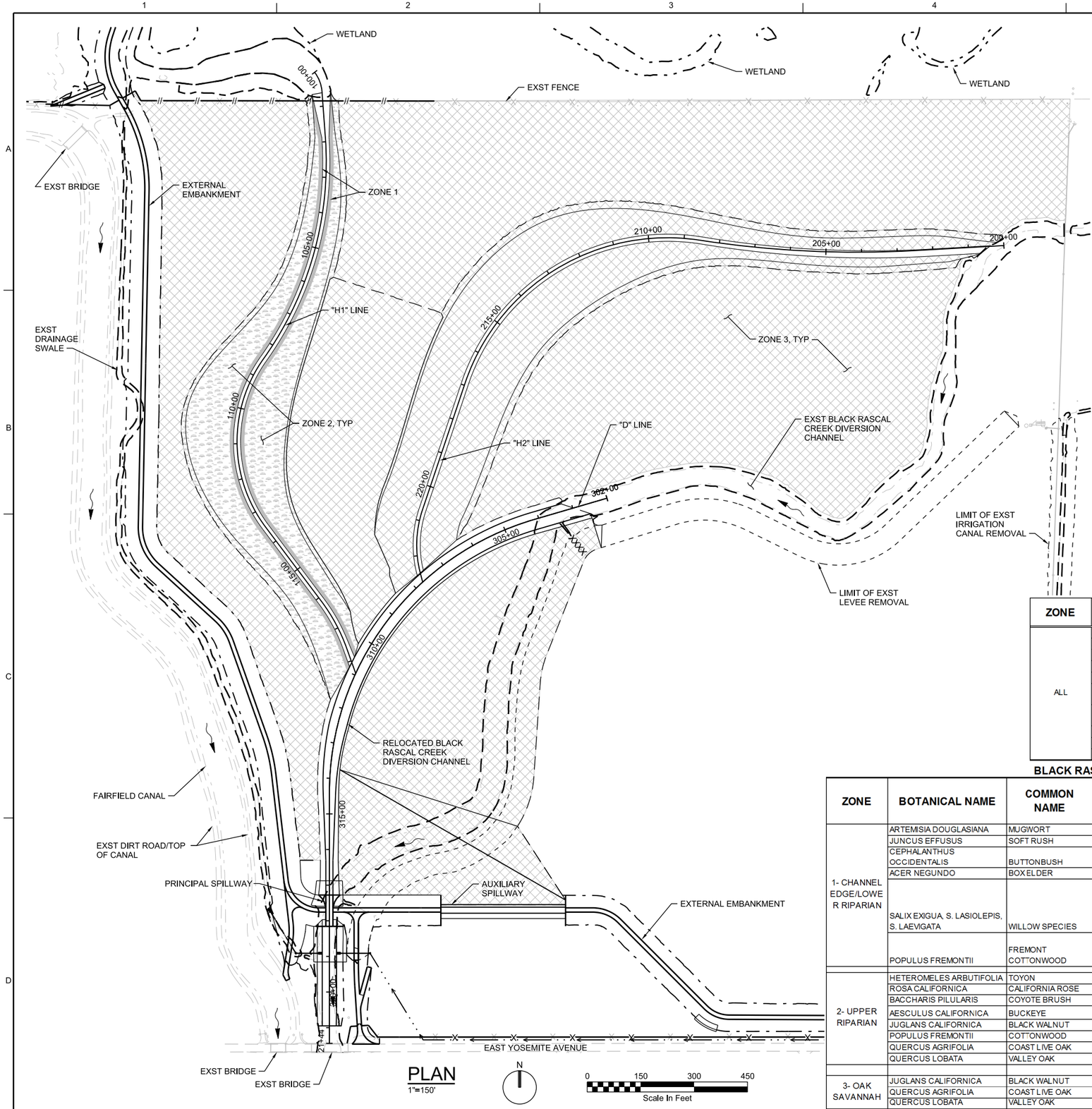
1"=30'

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	05-C-2503
SHEET	29 of 60

NOT FOR CONSTRUCTION



PLAN
1"=150'

LEGEND

- ZONE 1
- ZONE 2
- ZONE 3

ZONE	BOTANICAL NAME	COMMON NAME	PROPOGATION METHOD	SIZE	SPACING	GROWTH FORM
ALL	ACHILLEA MILLEFOLIUM	YARROW	PER CONTRACT SPECIFICATIONS	1	PER CONTRACT SPECIFICATIONS	FORB
	ARTEMISIA DOUGLASIANA	MUGWORT		2		FORB
	BROMUS CARINATUS	CALIFORNIA BROME		8		GRASS
	ELYMUS GLAUCUS	BLUE WILDRYE		8		GRASS
	ELYMUS TRITICOIDES	CREEPING WILD RYE		12		FORB
	ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY		3		FORB
	HORDEUM BRACHYANTHERUM	CALIFORNIA BARLEY		8		GRASS
	TRIFOLIUM WILLDENOVII	WILDCAT CLOVER		2		FORB
	STIPA PULCHRA	GRASS		8		GRASS
	VULPIA MICROSTACHYS	VULPIA		8		GRASS

BLACK RASCAL CREEK 60% REVEGETATION PLANTING PALATTE

ZONE	BOTANICAL NAME	COMMON NAME	PROPOGATION METHOD	SIZE	SPACING	GROWTH FORM	GROUP	PERCENT OF GROUP	QUANTITY
1- CHANNEL EDGE/LOWER RIPARIAN	ARTEMISIA DOUGLASIANA	MUGWORT	CONTAINER	1 GAL	AVERAGE 10 FT O.C., CLUSTER PLANTINGS	HERB	A	35%	122
	JUNCUS EFFUSUS	SOFT RUSH	CONTAINER	1 GAL		HERB		35%	122
	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	CONTAINER	1 GAL		SHRUB		15%	52
	ACER NEGUNDO	BOXELDER	CONTAINER	1 GAL		TREE/SHRUB		15%	52
	SALIX EXIGUA, S. LASIOLEPIS, S. LAEVIGATA	WILLOW SPECIES	CUTTINGS	PER DRAWINGS	1 CUTTING PER 5 LINEAR FT OF CHANNEL, ALTERNATE BANKS.	TREE/SHRUB	C	100%	360
	POPULUS FREMONTII	FREMONT COTTONWOOD	CONTAINER	T4	AVERAGE 20 FT O.C.	TREE	D	100%	87
2- UPPER RIPARIAN	HETEROMELES ARBUTIFOLIA	TOYON	CONTAINER	1 GAL	AVERAGE 20 FT O.C.	SHRUB	E	20%	122
	ROSA CALIFORNICA	CALIFORNIA ROSE	CONTAINER	1 GAL		SHRUB		40%	244
	BACCHARIS PILULARIS	COYOTE BRUSH	CONTAINER	1 GAL		TREE/SHRUB		40%	244
	AESCULUS CALIFORNICA	BUCKEYE	CONTAINER	T4	AVERAGE 30 FT O.C.	TREE/SHRUB	F	5%	14
	JUGLANS CALIFORNICA	BLACK WALNUT	CONTAINER	T4		TREE		20%	54
	POPULUS FREMONTII	COTTONWOOD	CONTAINER	T4		TREE		30%	81
	QUERCUS AGRIFOLIA	COAST LIVE OAK	CONTAINER	T4		TREE		20%	54
	QUERCUS LOBATA	VALLEY OAK	CONTAINER	T4		TREE		25%	68
3- OAK SAVANNAH	JUGLANS CALIFORNICA	BLACK WALNUT	CONTAINER	T4	AVERAGE 80 FT O.C.	TREE	G	20%	95
	QUERCUS AGRIFOLIA	COAST LIVE OAK	CONTAINER	T4		TREE		40%	189
	QUERCUS LOBATA	VALLEY OAK	CONTAINER	T4		TREE		40%	189

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN K FISHER | DR J CHELONIS | CHK L ALLIGER | APVD B CHELONIS

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.

© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

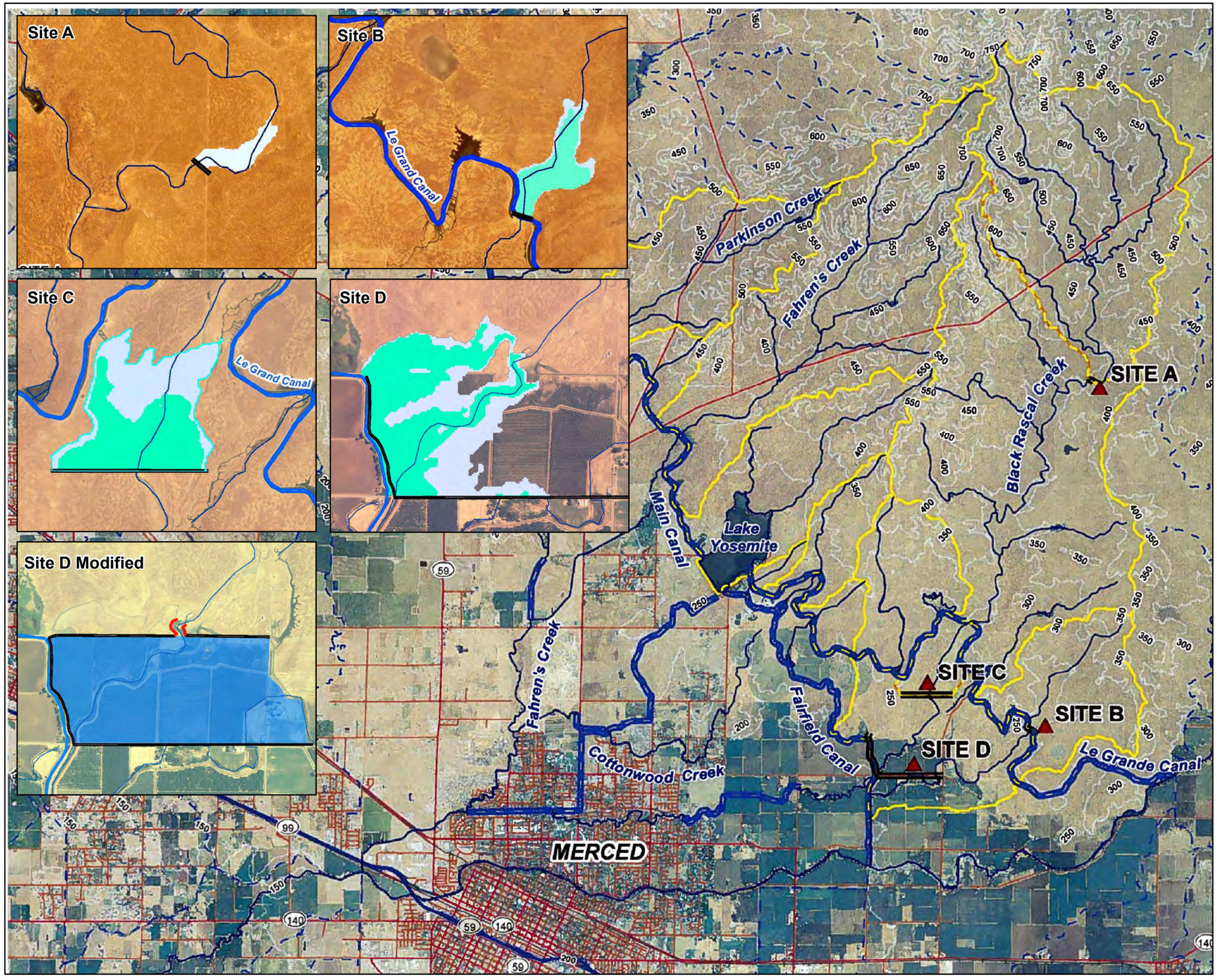
BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

LANDSCAPE
LANDSCAPE PLAN

1"=300'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	W8Y00700
DWG	10-L-2001
SHEET	47 of 60

NOT FOR CONSTRUCTION



VICINITY MAP

LEGEND

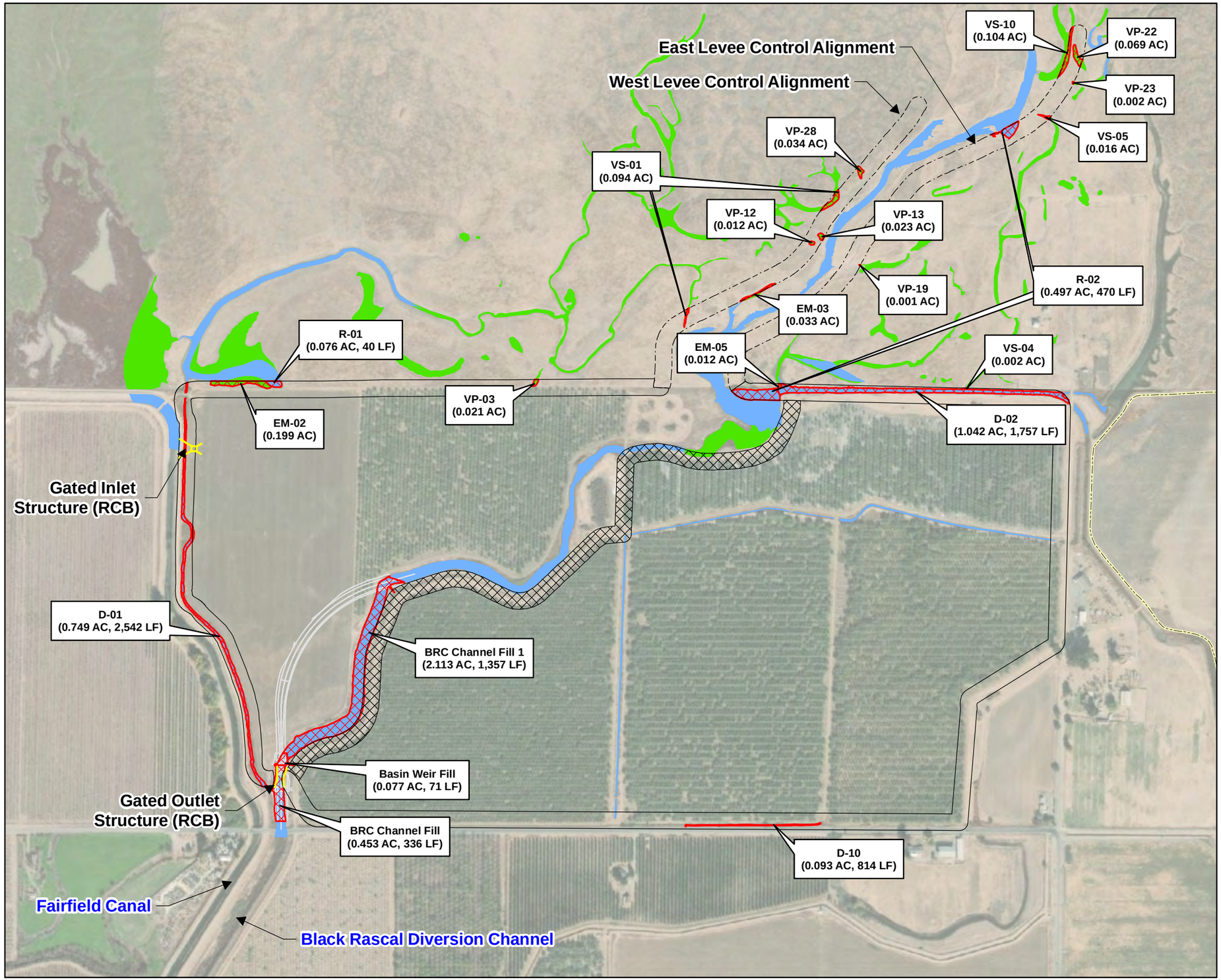
Detention Basin Embankment

N

Note:
Layouts for offsite alternatives taken from Merced County 2009

Notes:
AC - Acres
LF - Linear Feet

FIGURE 4-1
2009 Feasibility Study – Alternative Locations
Clean Water Act Section 404(b)(1) Analysis
Black Rascal Creek Flood Control Project



VICINITY MAP

LEGEND

- External Levee Detail
- Perimeter Levee
- Training Levee
- Interior Levee
- Project Features
- Interior Levee
- Perimeter Levee
- Soil Disposal Site
- Training Levee
- Permanent Impacts (5.731 AC, 7,387 LF)
  Waters Impacts (5.116 AC, 7,519 LF)
  Wetlands Impacts (0.627 AC)

Aquatic Resources

- Other Waters
- Wetlands

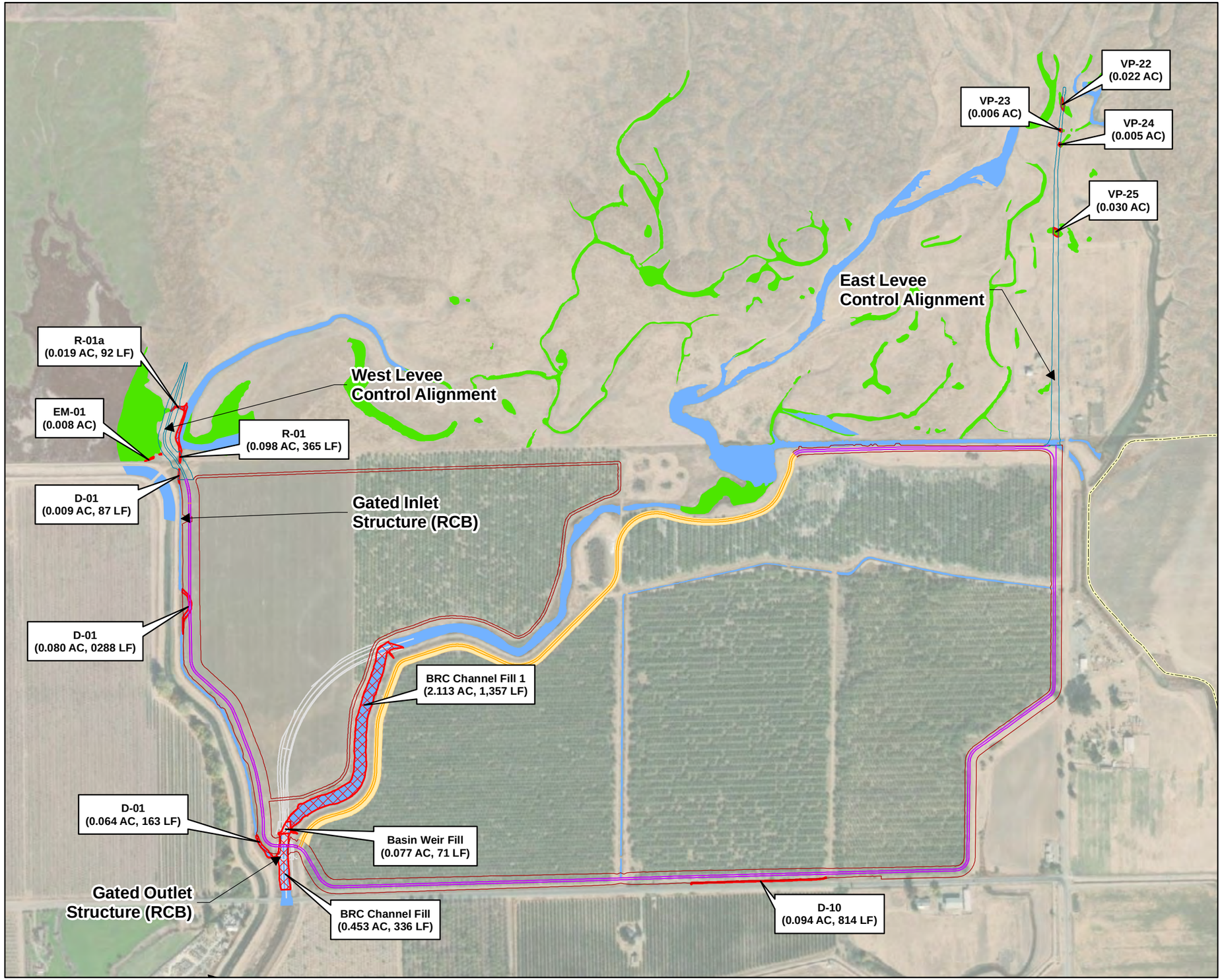
Channel realignment upstream of the outlet structure was not included in the EIR Proposed Project because project design had not progressed to the level of detail required to evaluate hydraulic requirements at this location. The realignment is included in this analysis because it would be required for all on site alternatives.

N

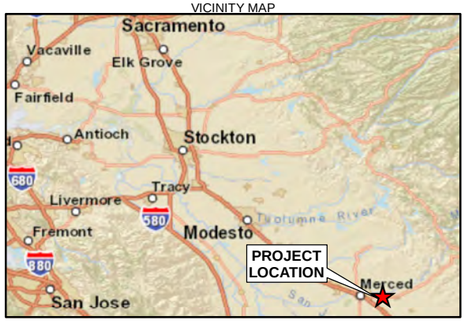
0 300 600 1,200
Feet

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, DeLorme, NAVTEQ, USGS, NRCAN, METI, iPC, TomTom

FIGURE 4-2
2017 EIR Proposed Project Onsite Alternatives
Clean Water Act Section 404(b)(1) Analysis
Black Rascal Creek Flood Control Project



VICINITY MAP



LEGEND

- Interior Levee
- Training Levee
- Perimeter Levee
- Project Features
- Interior Levee
- Perimeter Levee
- Soil Disposal Site
- Training Levee
- Permanent Impacts (3.081 AC, 3,573 LF)
  Waters Impacts (3.008 AC, 3,573 LF)
  Wetlands Impacts (0.073 AC)

Aquatic Resources

- Other Waters
- Wetlands

Channel realignment upstream of the outlet structure was not included in the EIR Proposed Project because project design had not progressed to the level of detail required to evaluate hydraulic requirements at this location. The realignment is included in this analysis because it would be required for all onsite alternatives.

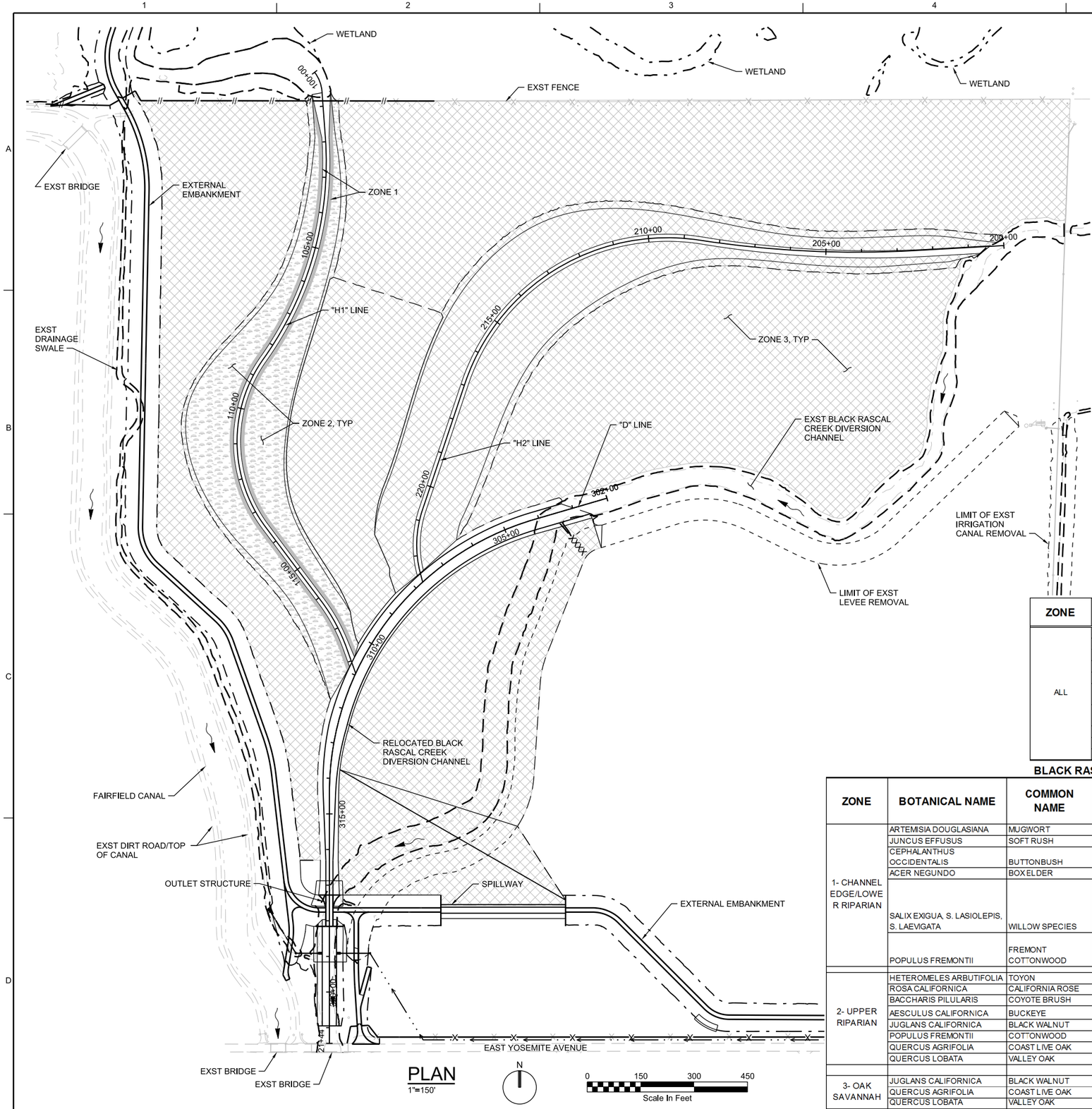
N

0 300 600 1,200
Feet

661987_Levee_Site_ALT8B-R3.dgn
March 13, 2019

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Sources: Esri, DeLorme, NAVTEQ, USGS, NRCAN, METI, iPC, TomTom

FIGURE 4-3
EIR Proposed Project with East/West Training Levee Option
Clean Water Act Section 404(b)(1) Analysis
Black Rascal Creek Flood Control Project



PLAN
1"=150'

PN: SPK-2021-00278

LEGEND

- ZONE 1
- ZONE 2
- ZONE 3

ZONE	BOTANICAL NAME	COMMON NAME	PROPOGATION METHOD	SIZE	SPACING	GROWTH FORM
ALL	ACHILLEA MILLEFOLIUM	YARROW	PER CONTRACT SPECIFICATIONS	1	PER CONTRACT SPECIFICATIONS	FORB
	ARTEMISIA DOUGLASIANA	MUGWORT		2		FORB
	BROMUS CARINATUS	CALIFORNIA BROME		8		GRASS
	ELYMUS GLAUCUS	BLUE WILDRYE		8		GRASS
	ELYMUS TRITICOIDES	CREEPING WILD RYE		12		FORB
	ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY		3		FORB
	HORDEUM BRACHYANTHERUM	CALIFORNIA BARLEY		8		GRASS
	TRIFOLIUM WILLDENOVII	WILDCAT CLOVER		2		FORB
	STIPA PULCHRA	GRASS		8		GRASS
	VULPIA MICROSTACHYS	VULPIA		8		GRASS

BLACK RASCAL CREEK 60% REVEGETATION PLANTING PALATTE

ZONE	BOTANICAL NAME	COMMON NAME	PROPOGATION METHOD	SIZE	SPACING	GROWTH FORM	GROUP	PERCENT OF GROUP	QUANTITY
1- CHANNEL EDGE/LOWER RIPARIAN	ARTEMISIA DOUGLASIANA	MUGWORT	CONTAINER	1 GAL	AVERAGE 10 FT O.C., CLUSTER PLANTINGS	HERB	A	35%	122
	JUNCUS EFFUSUS	SOFT RUSH	CONTAINER	1 GAL		HERB		35%	122
	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	CONTAINER	1 GAL		SHRUB		15%	52
	ACER NEGUNDO	BOXELDER	CONTAINER	1 GAL		TREE/SHRUB		15%	52
	SALIX EXIGUA, S. LASIOLEPIS, S. LAEVIGATA	WILLOW SPECIES	CUTTINGS	PER DRAWINGS	1 CUTTING PER 5 LINEAR FT OF CHANNEL, ALTERNATE BANKS.	TREE/SHRUB	C	100%	360
	POPULUS FREMONTII	FREMONT COTTONWOOD	CONTAINER	T4	AVERAGE 20 FT O.C.	TREE	D	100%	87
2- UPPER RIPARIAN	HETEROMELES ARBUTIFOLIA	TOYON	CONTAINER	1 GAL	AVERAGE 20 FT O.C.	SHRUB	E	20%	122
	ROSA CALIFORNICA	CALIFORNIA ROSE	CONTAINER	1 GAL		SHRUB		40%	244
	BACCHARIS PILULARIS	COYOTE BRUSH	CONTAINER	1 GAL		TREE/SHRUB		40%	244
	AESCULUS CALIFORNICA	BUCKEYE	CONTAINER	T4	AVERAGE 30 FT O.C.	TREE/SHRUB	F	5%	14
	JUGLANS CALIFORNICA	BLACK WALNUT	CONTAINER	T4		TREE		20%	54
	POPULUS FREMONTII	COTTONWOOD	CONTAINER	T4		TREE		30%	81
	QUERCUS AGRIFOLIA	COAST LIVE OAK	CONTAINER	T4		TREE		20%	54
	QUERCUS LOBATA	VALLEY OAK	CONTAINER	T4		TREE		25%	68
3- OAK SAVANNAH	JUGLANS CALIFORNICA	BLACK WALNUT	CONTAINER	T4	AVERAGE 80 FT O.C.	TREE	G	20%	95
	QUERCUS AGRIFOLIA	COAST LIVE OAK	CONTAINER	T4		TREE		40%	189
	QUERCUS LOBATA	VALLEY OAK	CONTAINER	T4		TREE		40%	189

BECKY K. CHELONIS
CA C59851

NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY	APVD

DSGN K FISHER | DR J CHELONIS | CHK L ALLIGER | APVD B CHELONIS

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF JACOBS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF JACOBS.
© JACOBS 2019. ALL RIGHTS RESERVED.

JACOBS
2525 AIRPARK DR
REDDING, CA 96001
(530) 243-5831

BLACK RASCAL CREEK
FLOOD CONTROL PROJECT
MERCED COUNTY
MERCED, CA

CIVIL
LANDSCAPE PLAN

1"=300'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	NOVEMBER 2020
PROJ	W8Y00700
DWG	10-L-2001
SHEET	14 of 58