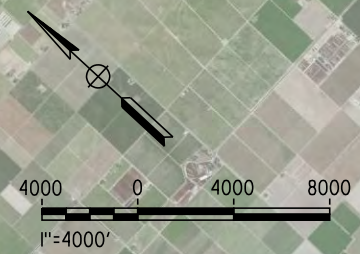


STREET CLOSURE

STREET NAME	HST ALIGNMENT STA	LOCAL STANDARD
E CLARKSON AVE	1180+25.00	FRESNO COUNTY
S MINNEWAWA AVE	1198+00.00	FRESNO COUNTY



c:\pwworking\hmm\external\eron.sudhausen-arup.com\d0125341\FB-CB-0055-H.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
KEY MAP

CONTRACT NO.
HSR 06-0003

DRAWING NO.
CB0055

SCALE
AS SHOWN

SHEET NO.
1 OF 60

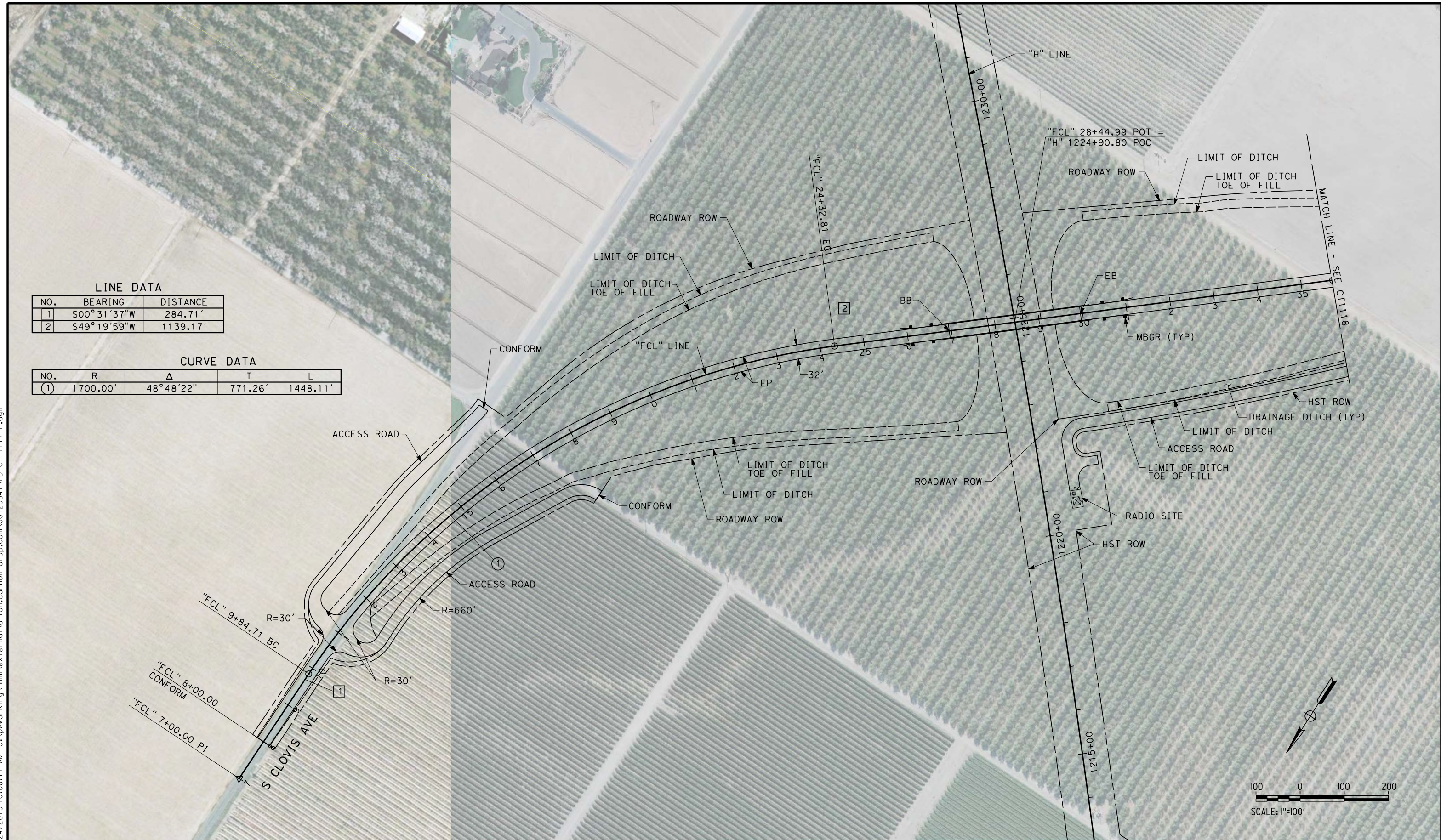
12/24/2013 10:06:17 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1117-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
1	S00°31'37"W	284.71'
2	S49°19'59"W	1139.17'

CURVE DATA

NO.	R	Δ	T	L
(1)	1700.00'	48°48'22"	771.26'	1448.11'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S CLOVIS AVE

CONTRACT NO.
HST 06-0003
DRAWING NO.
CT1117
SCALE
AS SHOWN
SHEET NO.
2 OF 60

LINE DATA

NO.	BEARING	DISTANCE
3	S02°32'24"W	239.63'

CURVE DATA

NO.	R	Δ	T	L
2	1700.00'	46°47'36"	735.54'	1388.38'



\$USER \$ DATE \$ TIME \$ FILE \$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION LAYOUT
 S CLOVIS AVE

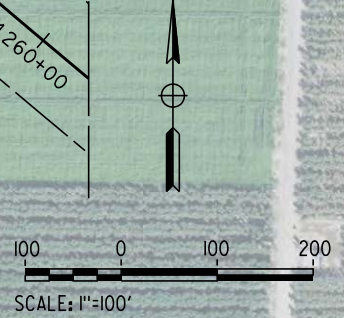
CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT1118
 SCALE
AS SHOWN
 SHEET NO.
3 OF 60

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LINE DATA

NO.	BEARING	DISTANCE
1	S89°22'57"E	4200.00'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

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DESIGN SUBMISSION**

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CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E ELKHORN AVE

CONTRACT NO.
HST 06-0003
DRAWING NO.
CT1119
SCALE
AS SHOWN
SHEET NO.
4 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°22'57"E	4200.00'

12/24/2013 10:09:23 AM c:\pwworking\hmm\external\alton.cannon-ar-up.com\d0125341\FB-CT-1120-H.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E ELKHORN AVE

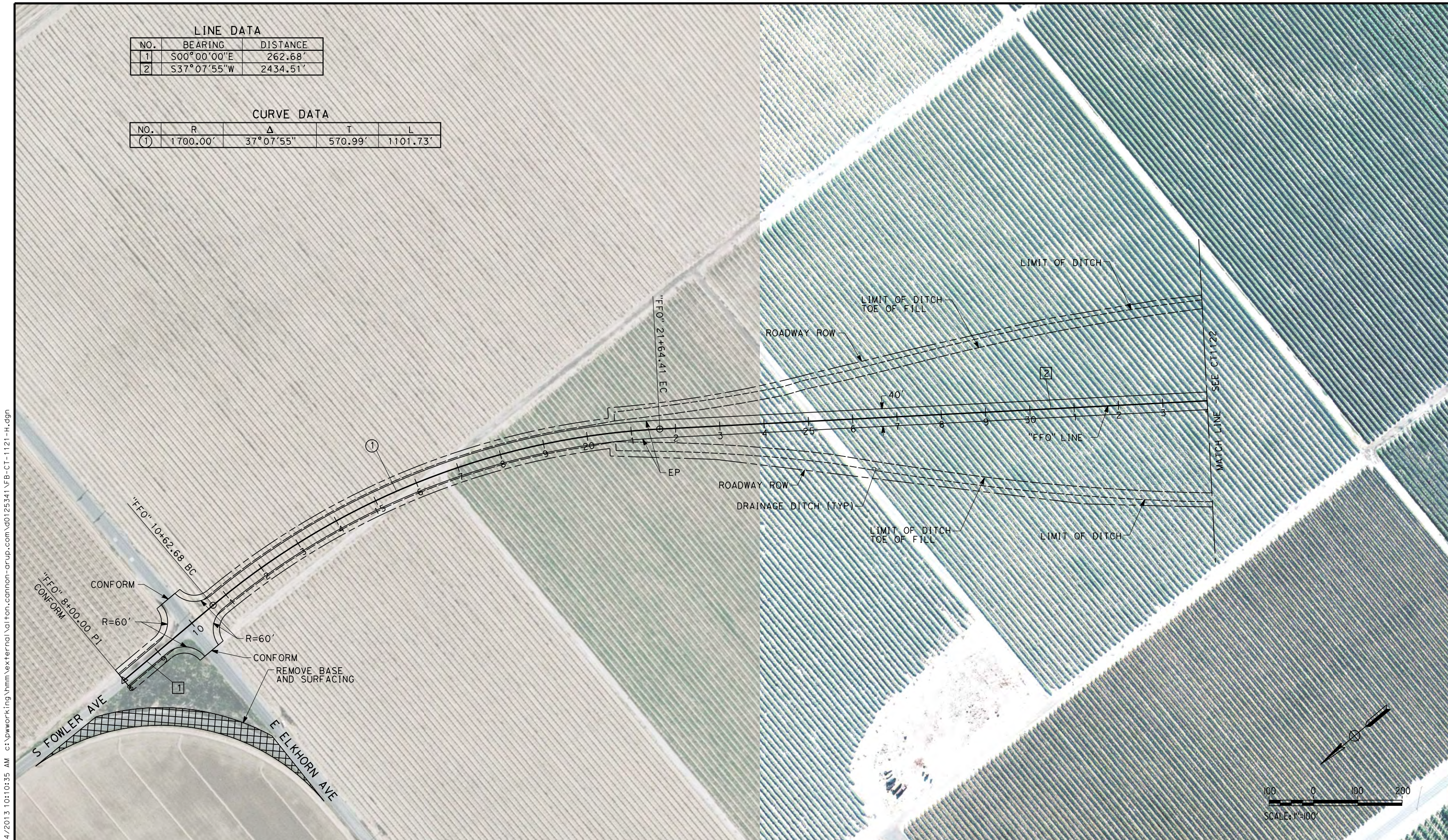
CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1120
SCALE
AS SHOWN
SHEET NO.
5 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S00°00'00"E	262.68'
2	S37°07'55"W	2434.51'

CURVE DATA

NO.	R	Δ	T	L
(1)	1700.00'	37°07'55"	570.99'	1101.73'



12/24/2013 10:10:35 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1121-H.dgn alton.cannon

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

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CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
S FOWLER AVE

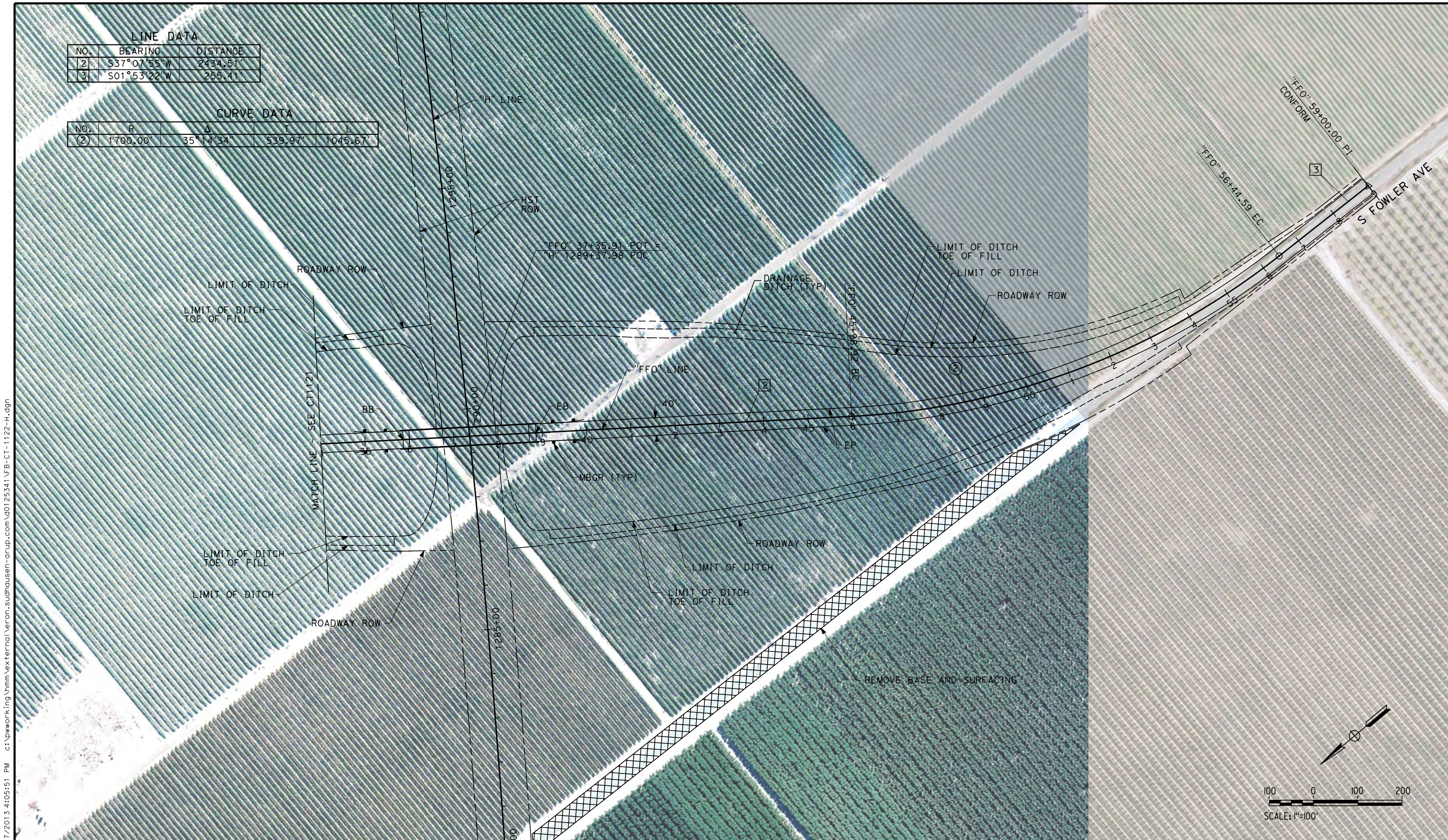
CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1121
SCALE
AS SHOWN
SHEET NO.
6 OF 60

LINE DATA

NO.	BEARING	DISTANCE
2	S37°07'55"W	2434.51'
3	S01°53'22"W	255.41'

CURVE DATA

NO.	R	Δ	T	L
(2)	1700.00'	35°14'34"	539.97'	1045.67'



c:\pwworking\hmm\external\eron.sudhausen-arup.com\d0125341\FB-CT-1122-H.dgn
 eron.sudhausen 12/27/2013 4:05:51 PM

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
 A. CANNON
 DRAWN BY
 E. SUDHAUSEN
 CHECKED BY
 S. BROWN
 IN CHARGE
 R. COFFIN
 DATE
 12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

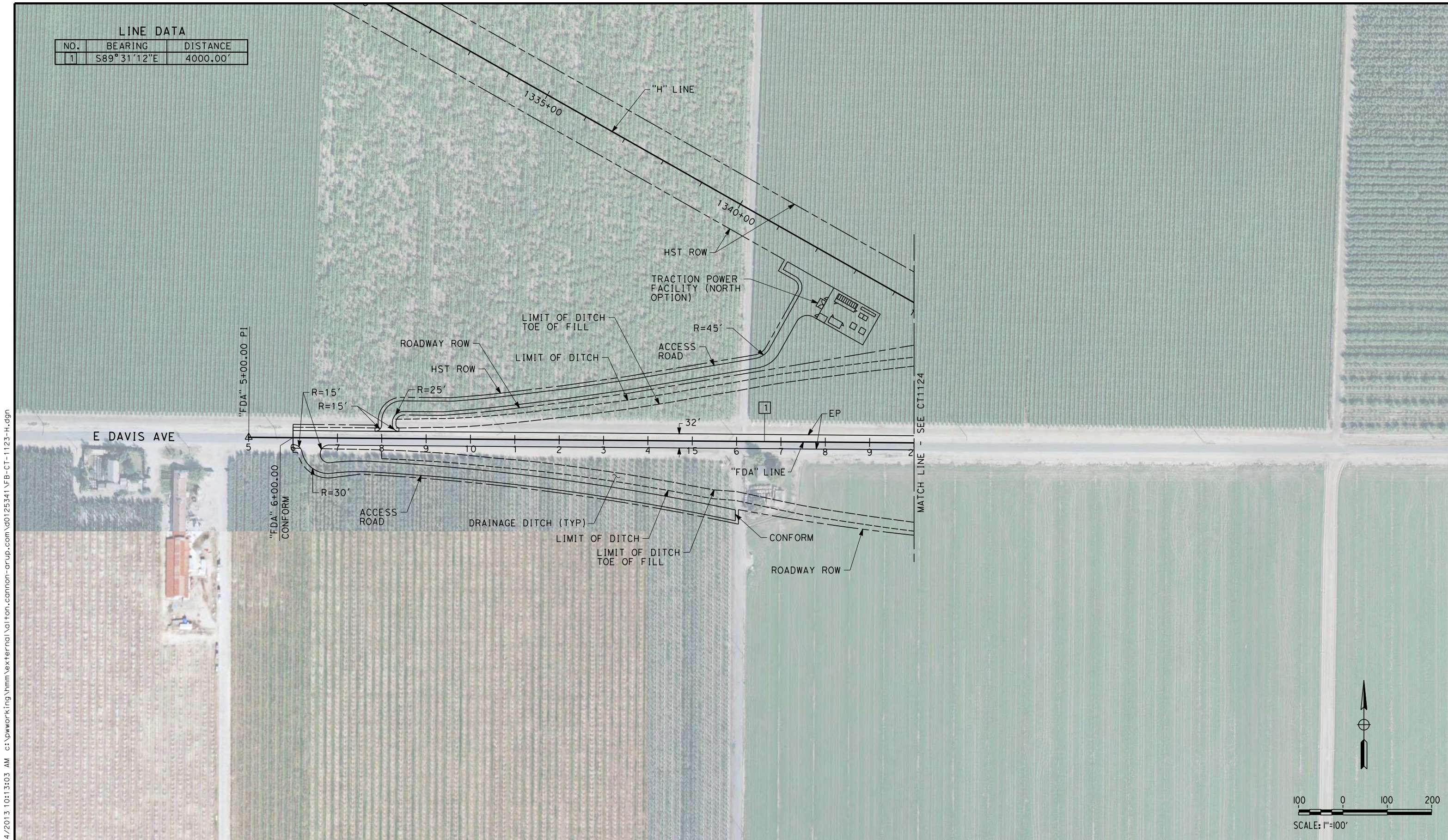


CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION LAYOUT
 S FOWLER AVE

CONTRACT NO.
 HST 06-0003
 DRAWING NO.
 CT1122
 SCALE
 AS SHOWN
 SHEET NO.
 7 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89° 31' 12"E	4000.00'



12/24/2013 10:13:03 AM c:\pwworking\hmm\external\alton.cannon-ar-up.com\d0125341\FB-CT-1123-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
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E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

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CONSTRUCTION**

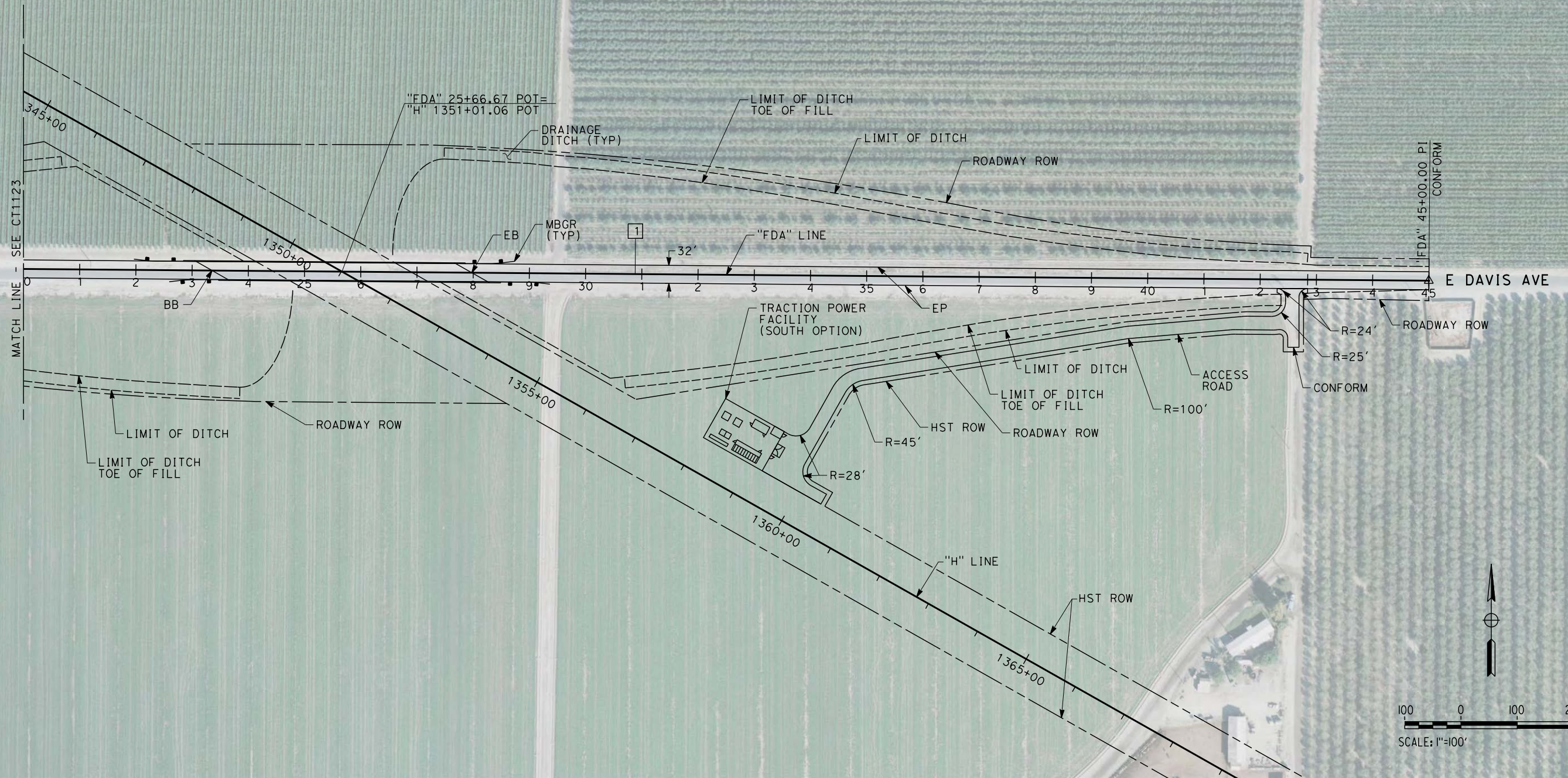


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
E DAVIS AVE

CONTRACT NO.
HST 06-0003
DRAWING NO.
CT1123
SCALE
AS SHOWN
SHEET NO.
8 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°31'12"E	4000.00'



\$USER \$ DATE \$ TIME \$ FILE \$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
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**NOT FOR
CONSTRUCTION**



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION LAYOUT
 E DAVIS AVE

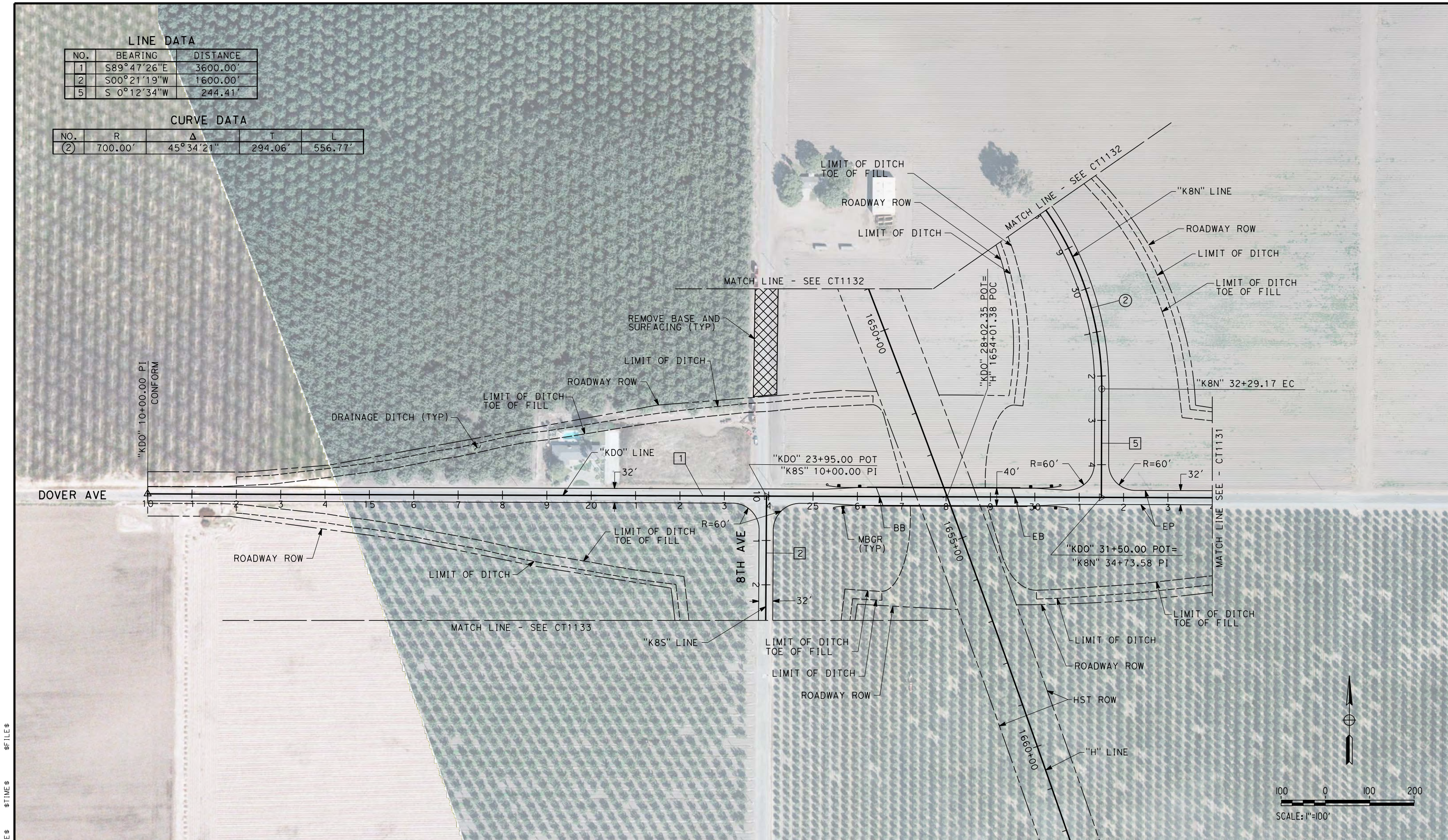
CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT1124
 SCALE
AS SHOWN
 SHEET NO.
9 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°47'26"E	3600.00'
2	S00°21'19"W	1600.00'
5	S 0°12'34"W	244.41'

CURVE DATA

NO.	R	Δ	T	L
(2)	700.00'	45°34'21"	294.06'	556.77'



\$USER \$ DATE \$ TIME \$ FILE \$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
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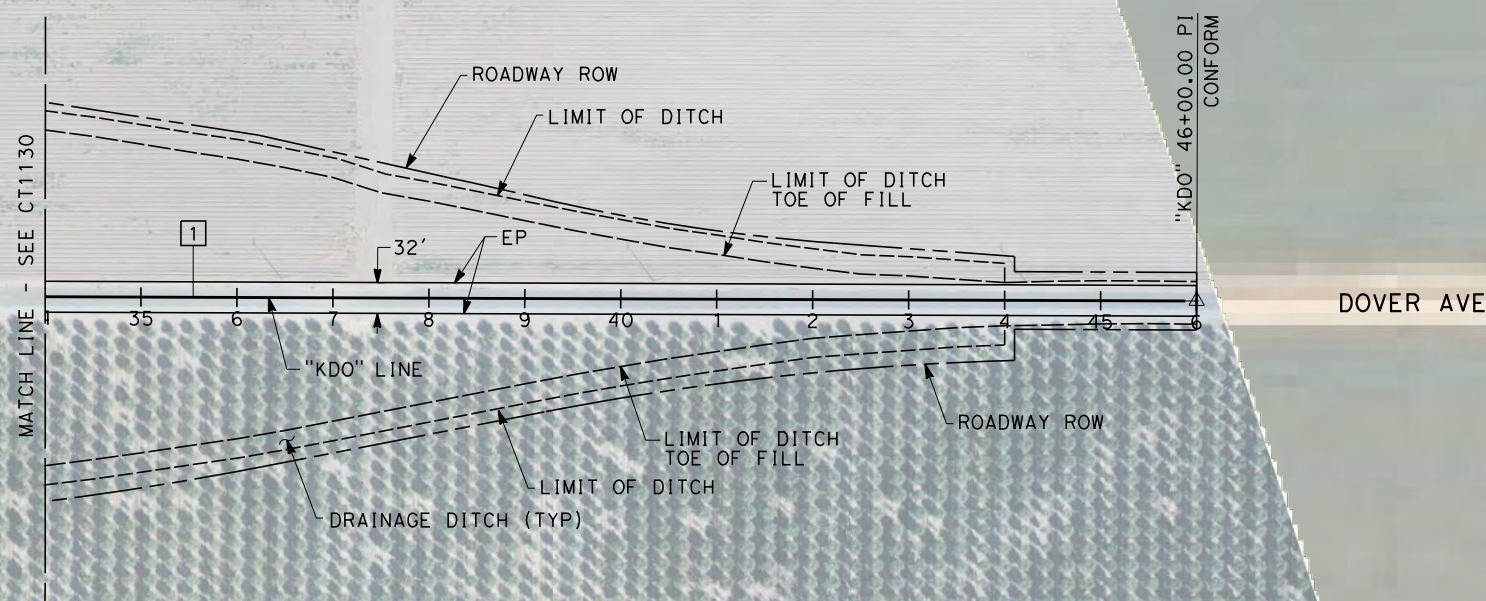


CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION LAYOUT
 DOVER AVE

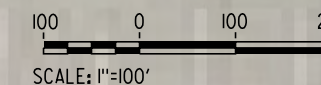
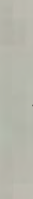
CONTRACT NO.
 HST 06-0003
 DRAWING NO.
 CT1130
 SCALE
 AS SHOWN
 SHEET NO.
 10 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°47'26"E	3600.00'



DOVER AVE



12/24/2013 10:25:32 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1131-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
DOVER AVE

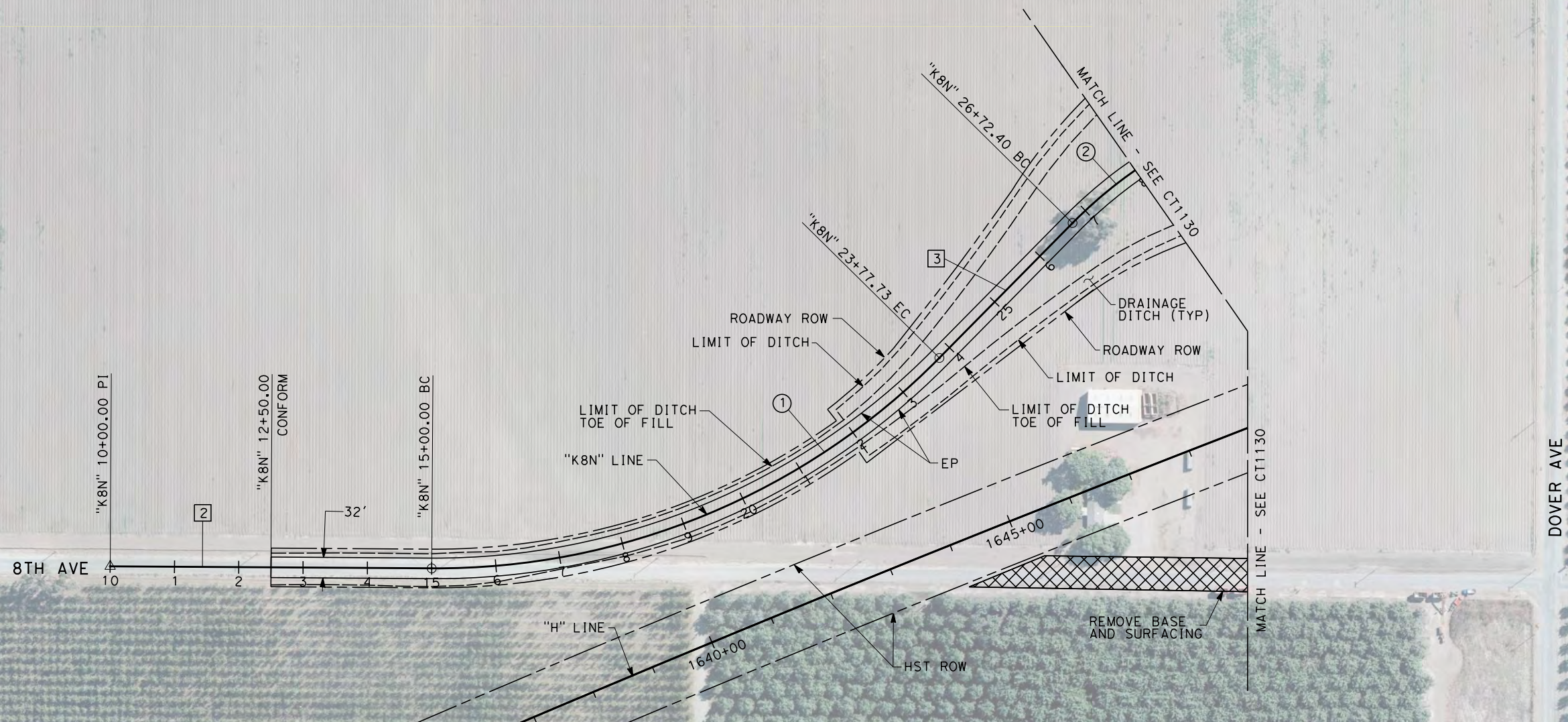
CONTRACT NO.
HST 06-0003
DRAWING NO.
CT1131
SCALE
AS SHOWN
SHEET NO.
11 OF 60

LINE DATA

NO.	BEARING	DISTANCE
2	S00°21'19"W	500.00'
3	S45°21'47"E	294.67'

CURVE DATA

NO.	R	Δ	T	L
1	1100.00'	45°43'06"	463.74'	877.73'
2	700.00'	8°11'06"	294.06'	556.77'



12/24/2013 10:27:13 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1132-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
8TH AVE (NORTH)

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1132
SCALE
AS SHOWN
SHEET NO.
12 OF 60

c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1133-H.dgn

LINE DATA

NO.	BEARING	DISTANCE
2	S 0°21'19"W	1600.00'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
8TH AVE (SOUTH)

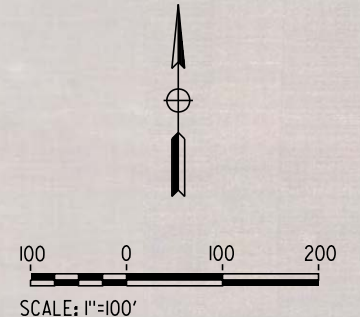
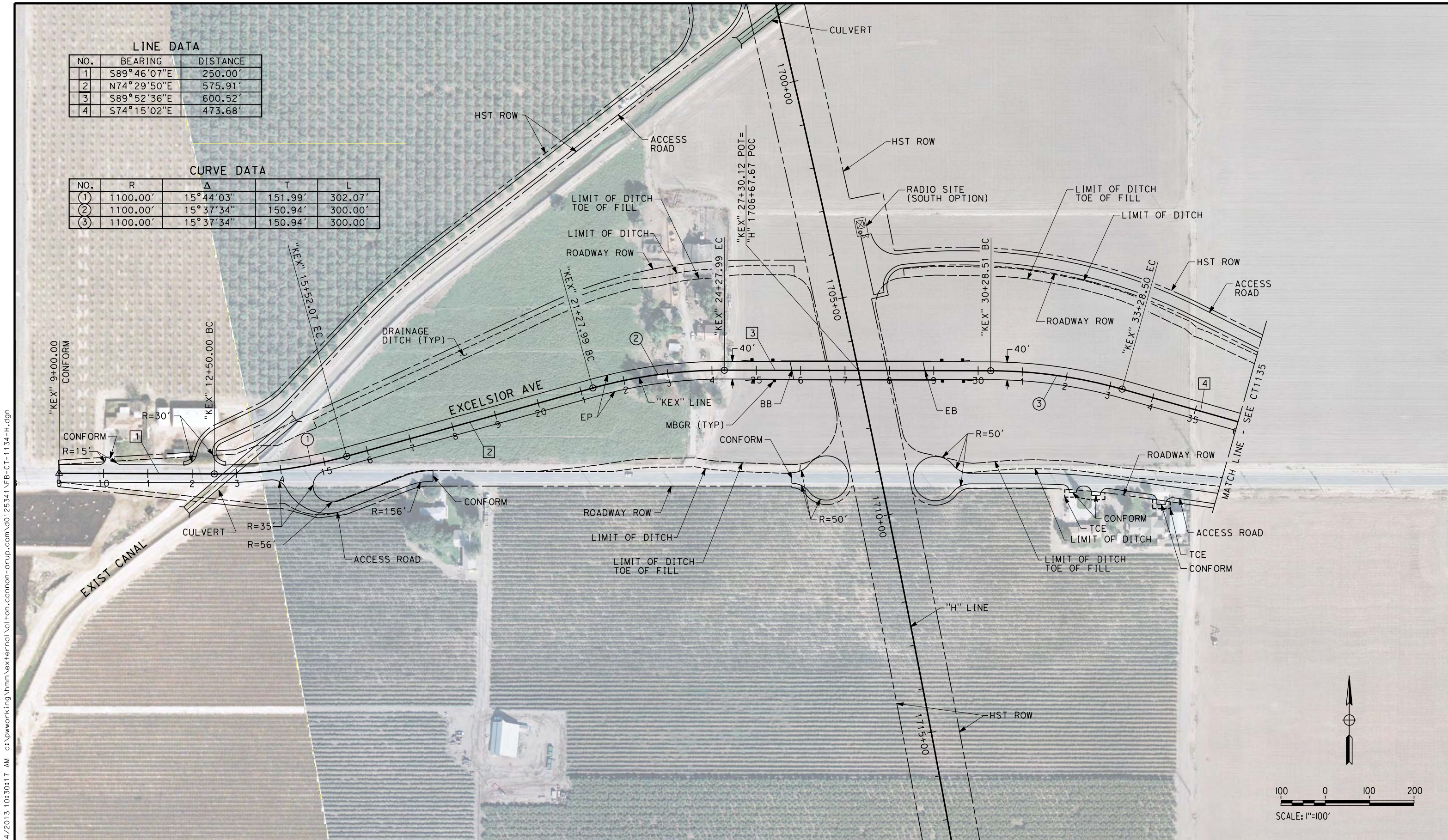
CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1133
SCALE
AS SHOWN
SHEET NO.
13 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°46'07"E	250.00'
2	N74°29'50"E	575.91'
3	S89°52'36"E	600.52'
4	S74°15'02"E	473.68'

CURVE DATA

NO.	R	Δ	T	L
①	1100.00'	15°44'03"	151.99'	302.07'
②	1100.00'	15°37'34"	150.94'	300.00'
③	1100.00'	15°37'34"	150.94'	300.00'



12/24/2013 10:30:17 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1134-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
EXCELSIOR AVE

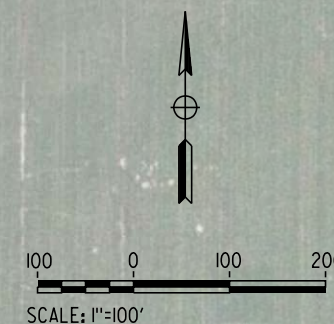
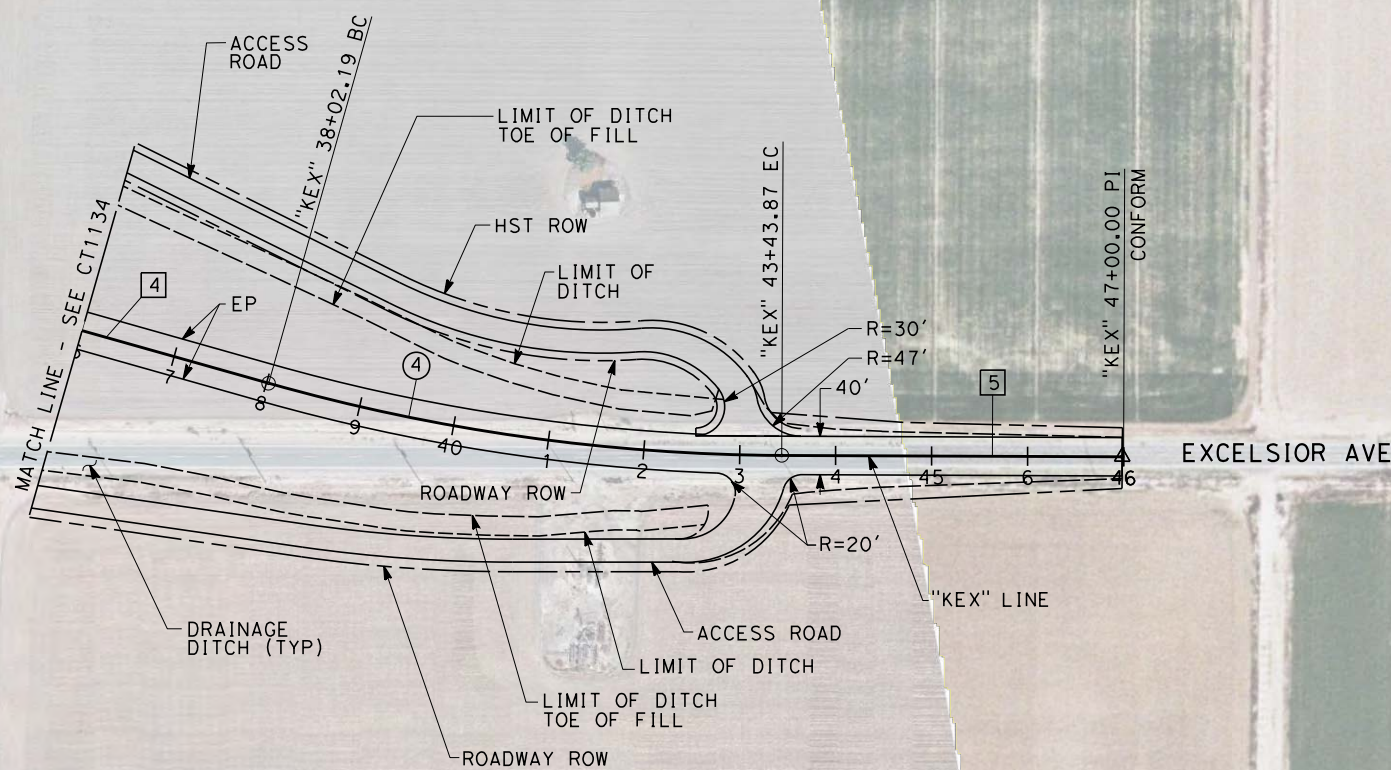
CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1134
SCALE
AS SHOWN
SHEET NO.
14 OF 60

LINE DATA

NO.	BEARING	DISTANCE
4	S74°15'02"E	473.68'
5	S89°46'07"E	354.63'

CURVE DATA

NO.	R	Δ	T	L
(4)	2000.00'	15°31'05"	272.51'	541.68'



12/24/2013 10:31:04 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1135-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
EXCELSIOR AVE

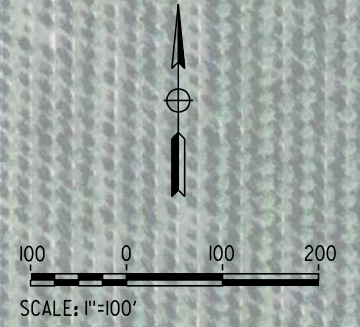
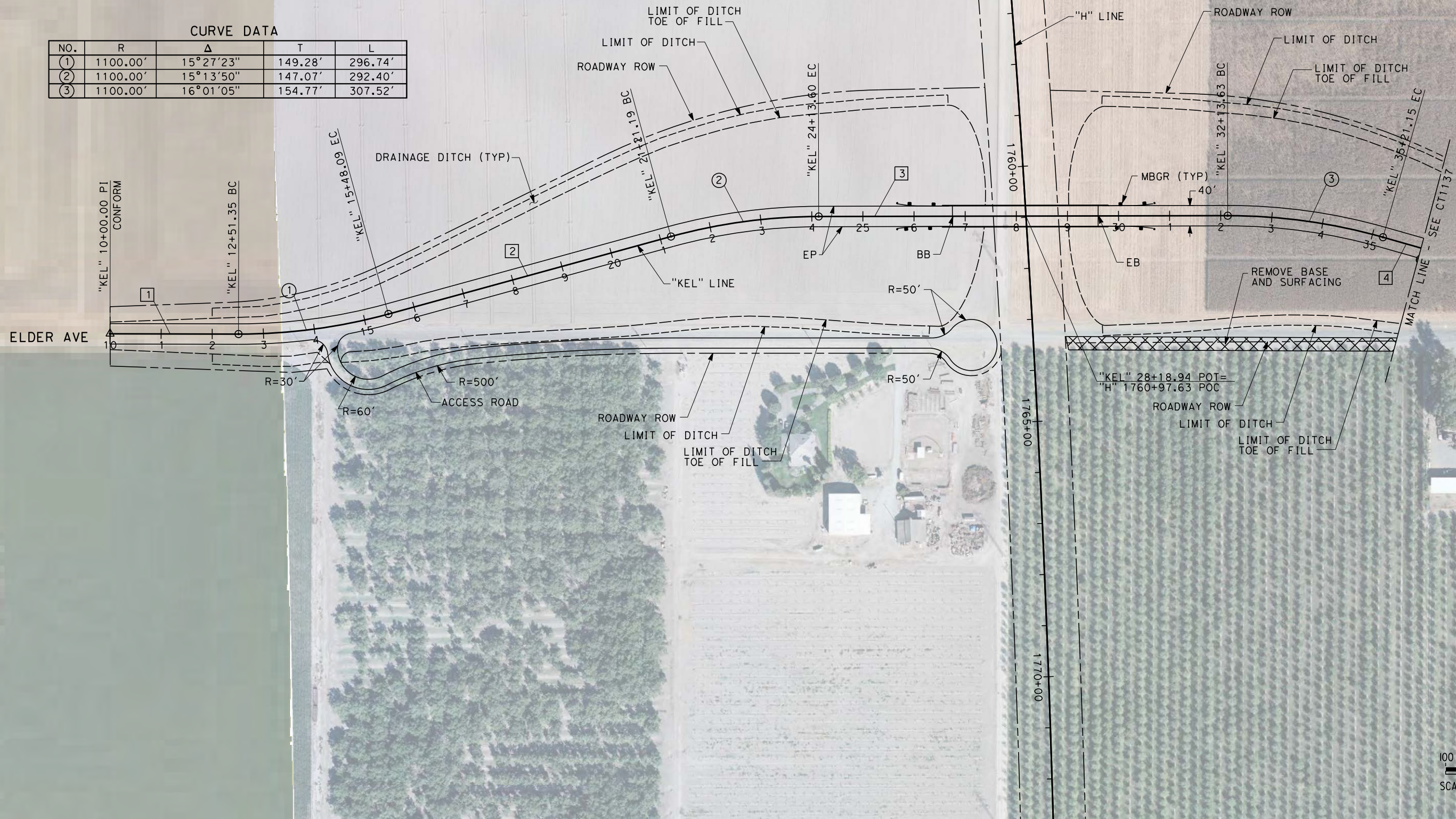
CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1135
SCALE
AS SHOWN
SHEET NO.
15 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°53'06"E	251.35'
2	N74°39'31"E	573.10'
3	N89°53'20"E	800.03'
4	S74°05'35"E	560.07'

CURVE DATA

NO.	R	Δ	T	L
①	1100.00'	15°27'23"	149.28'	296.74'
②	1100.00'	15°13'50"	147.07'	292.40'
③	1100.00'	16°01'05"	154.77'	307.52'



12/24/2013 10:32:56 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1136-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
ELDER AVE

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1136
SCALE
AS SHOWN
SHEET NO.
16 OF 60

LINE DATA

NO.	BEARING	DISTANCE
4	S74°05'35"E	560.07'
5	S89°53'06"E	248.68'

CURVE DATA

NO.	R	Δ	T	L
(4)	1100.00'	15°47'31"	152.56'	303.18'



12/24/2013 10:34:14 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1137-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

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CONSTRUCTION**



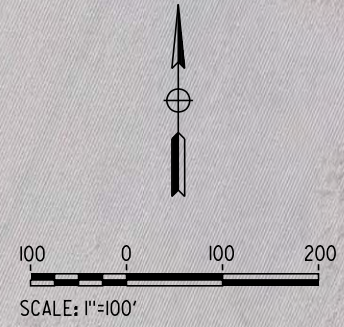
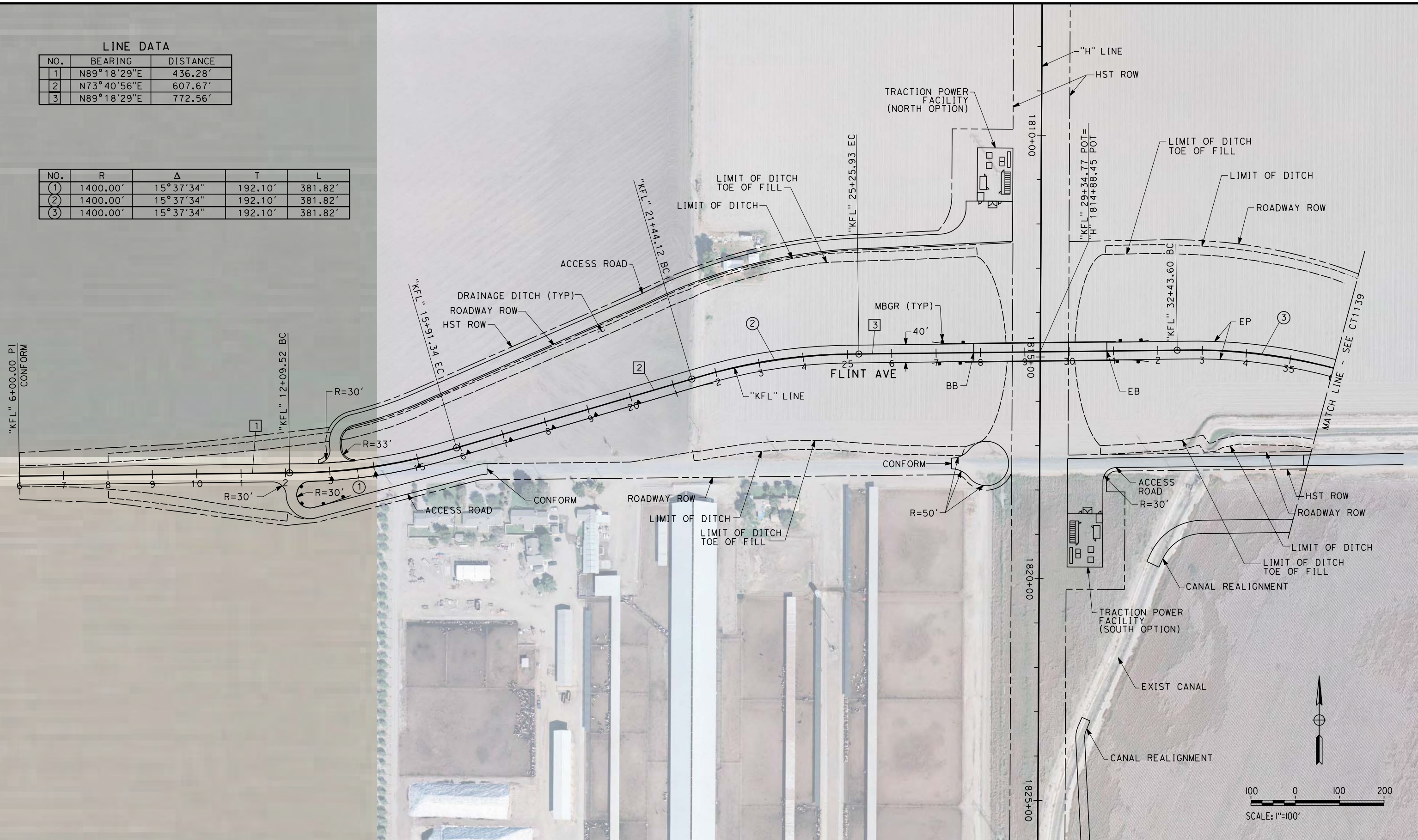
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
ELDER AVE

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1137
SCALE
AS SHOWN
SHEET NO.
17 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	N89°18'29"E	436.28'
2	N73°40'56"E	607.67'
3	N89°18'29"E	772.56'

NO.	R	Δ	T	L
①	1400.00'	15°37'34"	192.10'	381.82'
②	1400.00'	15°37'34"	192.10'	381.82'
③	1400.00'	15°37'34"	192.10'	381.82'



12/24/2013 10:36:04 AM c:\pwworking\hmm\external\alfon.cannon-arup.com\d0125341\FB-CT-1138-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FLINT AVE

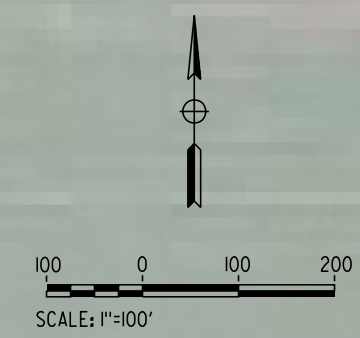
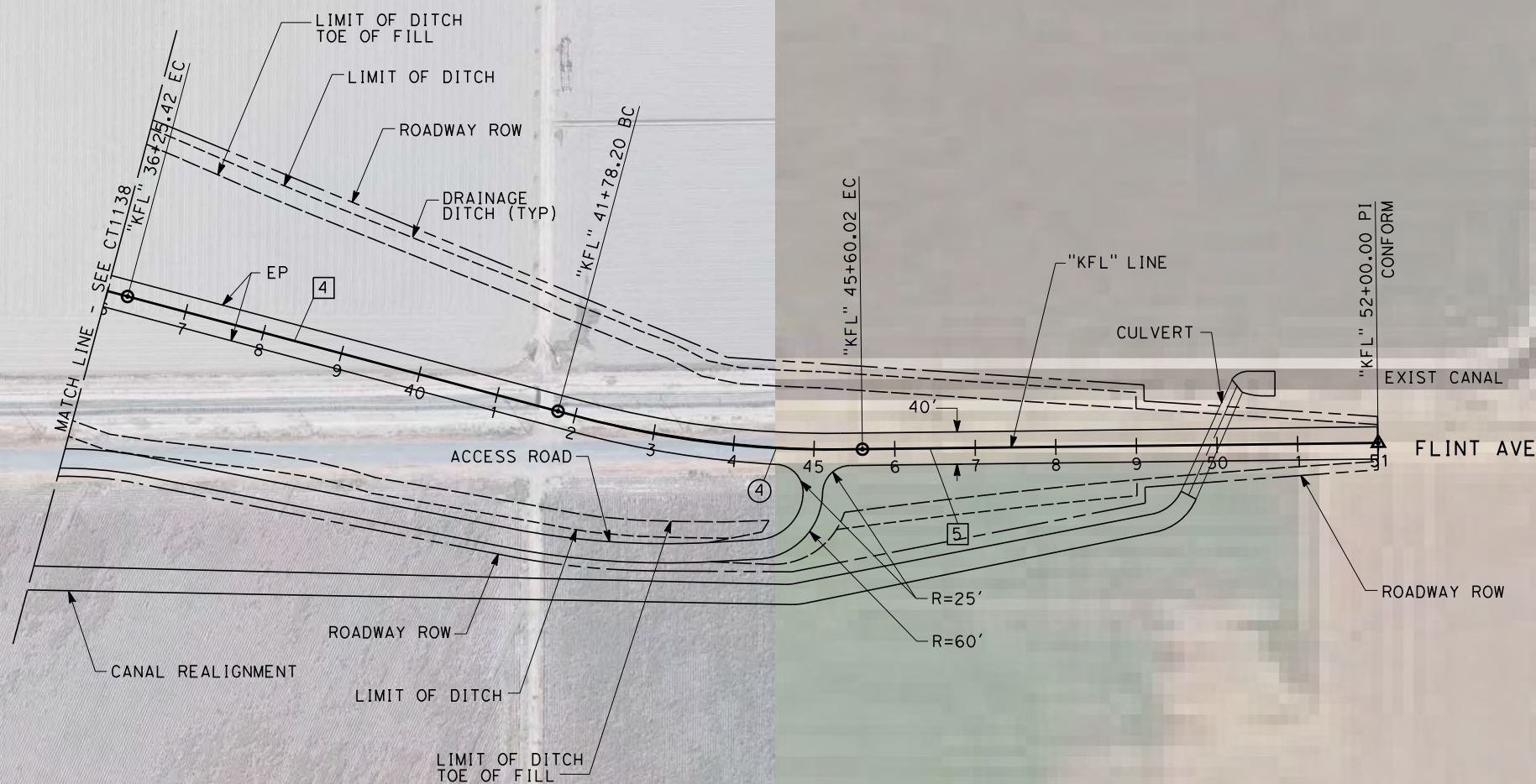
CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1138
SCALE
AS SHOWN
SHEET NO.
18 OF 60

LINE DATA

NO.	BEARING	DISTANCE
4	S75°03'57"E	607.67'
5	N89°18'29"E	466.75'

CURVE DATA

NO.	R	Δ	T	L
(4)	1400.00'	15°37'34"	192.10'	381.82'



12/24/2013 10:37:22 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1139-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FLINT AVE

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1139
SCALE
AS SHOWN
SHEET NO.
19 OF 60

CURVE DATA

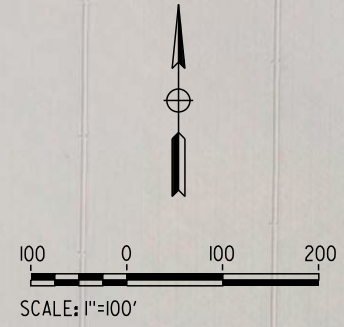
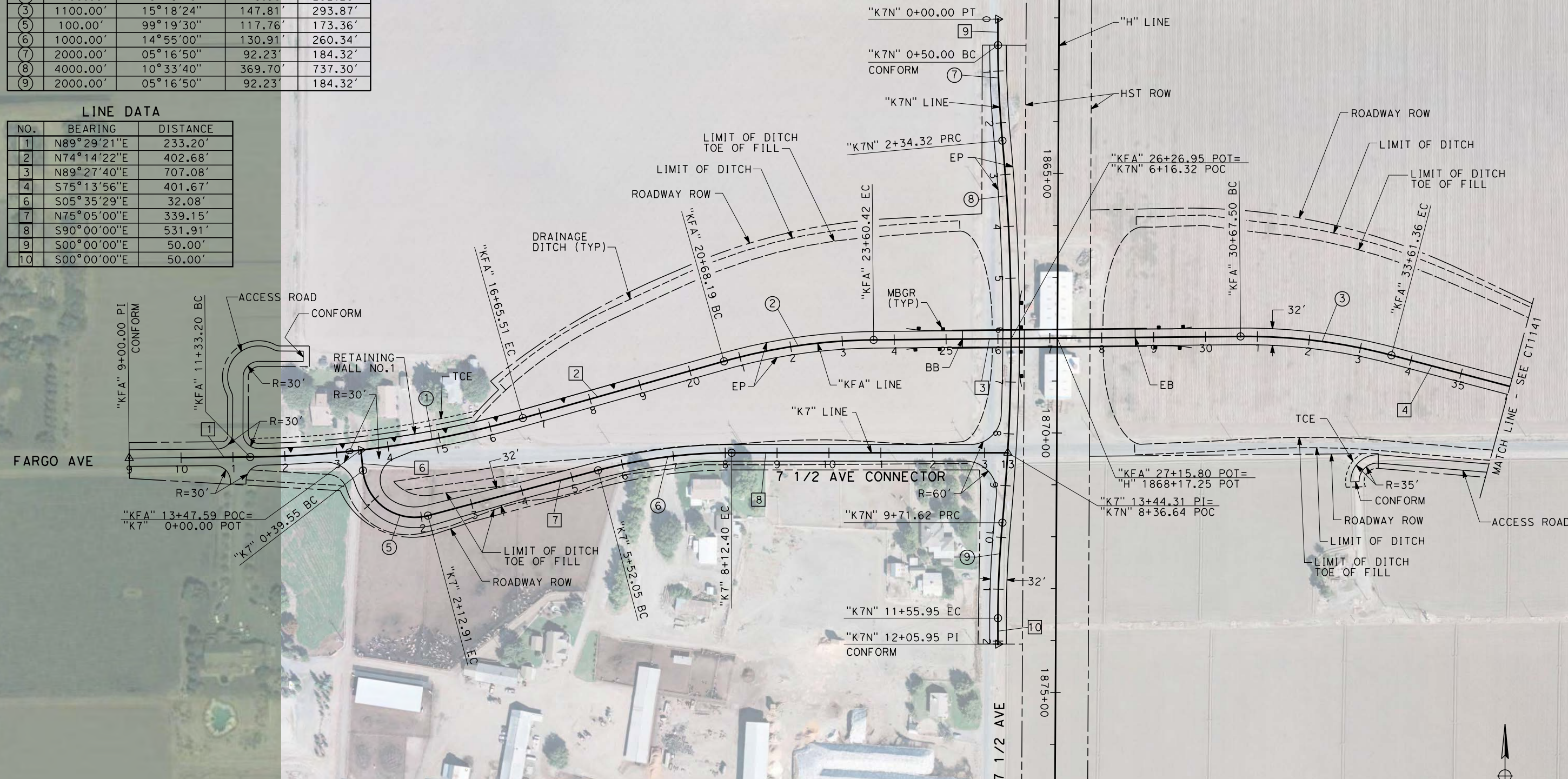
NO.	R	Δ	T	L
①	2000.00'	15°14'58"	267.74'	532.31'
②	1100.00'	15°13'18"	146.98'	292.23'
③	1100.00'	15°18'24"	147.81'	293.87'
⑤	100.00'	99°19'30"	117.76'	173.36'
⑥	1000.00'	14°55'00"	130.91'	260.34'
⑦	2000.00'	05°16'50"	92.23'	184.32'
⑧	4000.00'	10°33'40"	369.70'	737.30'
⑨	2000.00'	05°16'50"	92.23'	184.32'

LINE DATA

NO.	BEARING	DISTANCE
1	N89°29'21"E	233.20'
2	N74°14'22"E	402.68'
3	N89°27'40"E	707.08'
4	S75°13'56"E	401.67'
6	S05°35'29"E	32.08'
7	N75°05'00"E	339.15'
8	S90°00'00"E	531.91'
9	S00°00'00"E	50.00'
10	S00°00'00"E	50.00'

RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	16.00' LT "KFA" 11+49.54	16.00' LT "KFA" 17+97.88	648'	15'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
FARGO AVE

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1140
SCALE
AS SHOWN
SHEET NO.
20 OF 60

LINE DATA

NO.	BEARING	DISTANCE
4	S75°13'56"E	401.67'
5	N89°29'21"E	303.65'

CURVE DATA

NO.	R	Δ	T	L
(4)	2000.00'	15°16'43"	268.25'	533.33'



\$USER \$ DATE \$ \$TIME \$ \$FILE \$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

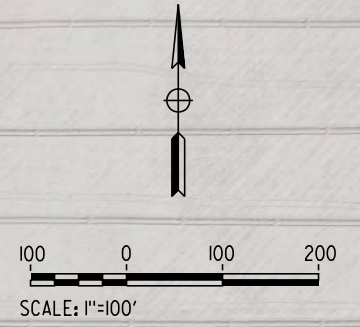
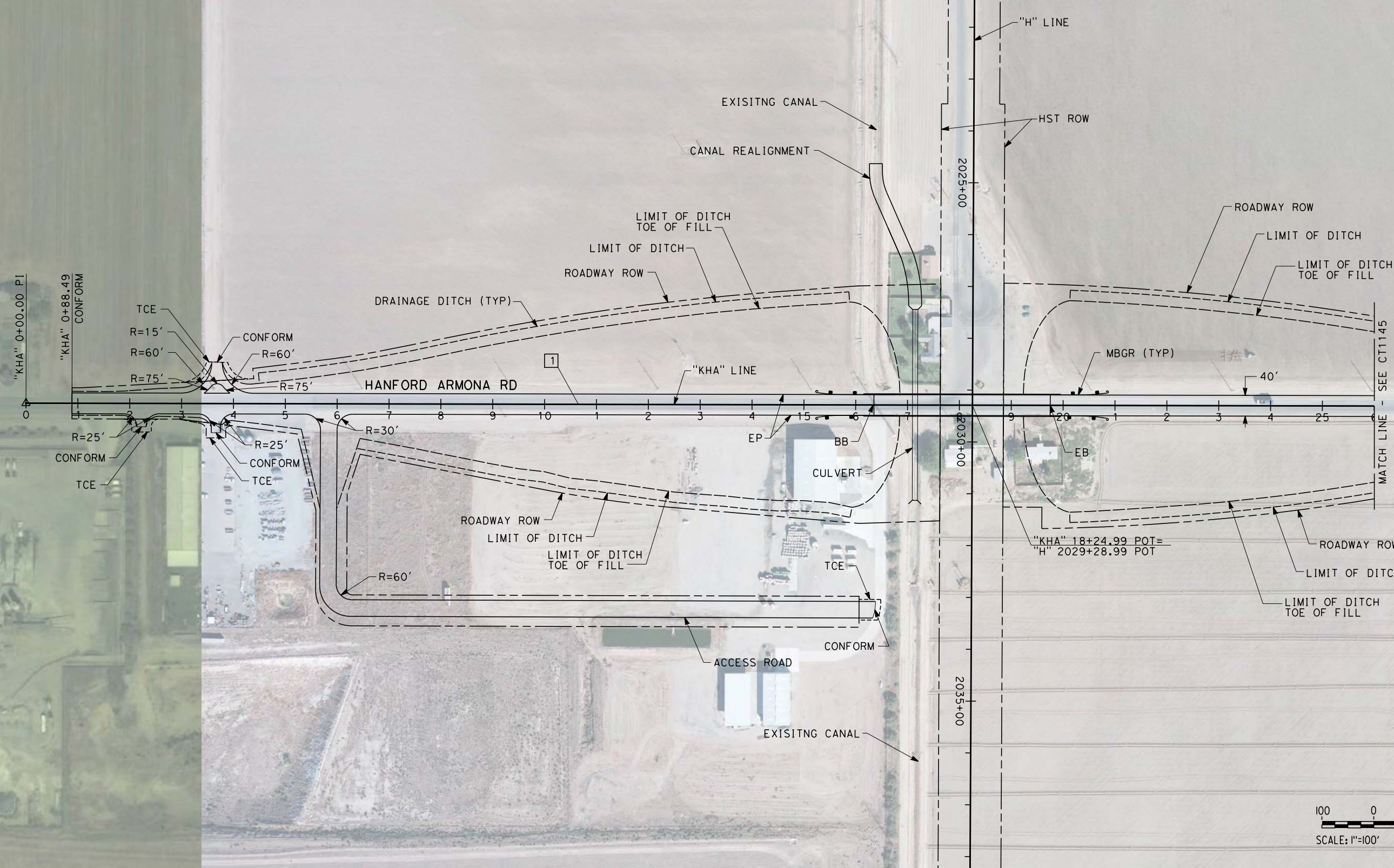


CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION LAYOUT
 FARGO AVE

CONTRACT NO.
 HSR 06-0003
 DRAWING NO.
 CT1141
 SCALE
 AS SHOWN
 SHEET NO.
 21 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°52'53"E	3650.00'



12/24/2013 10:40:54 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1144-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**

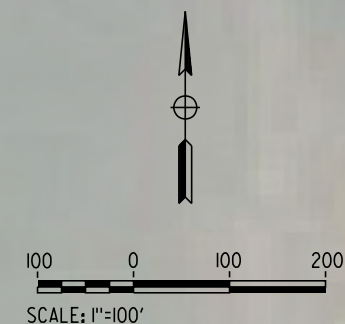
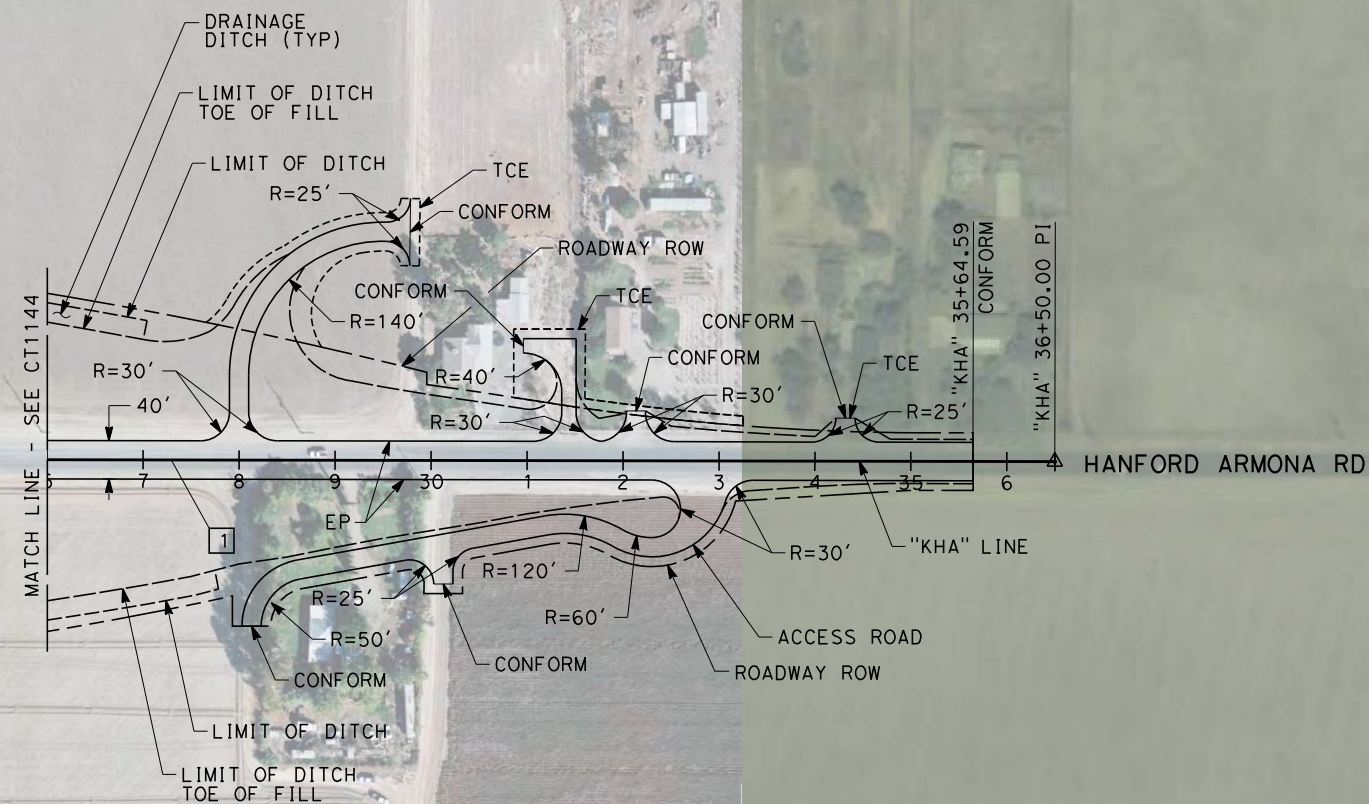


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HANFORD ARMONA RD

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1144
SCALE
AS SHOWN
SHEET NO.
22 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°52'53"E	3650.00'



12/24/2013 10:42:14 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1145-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



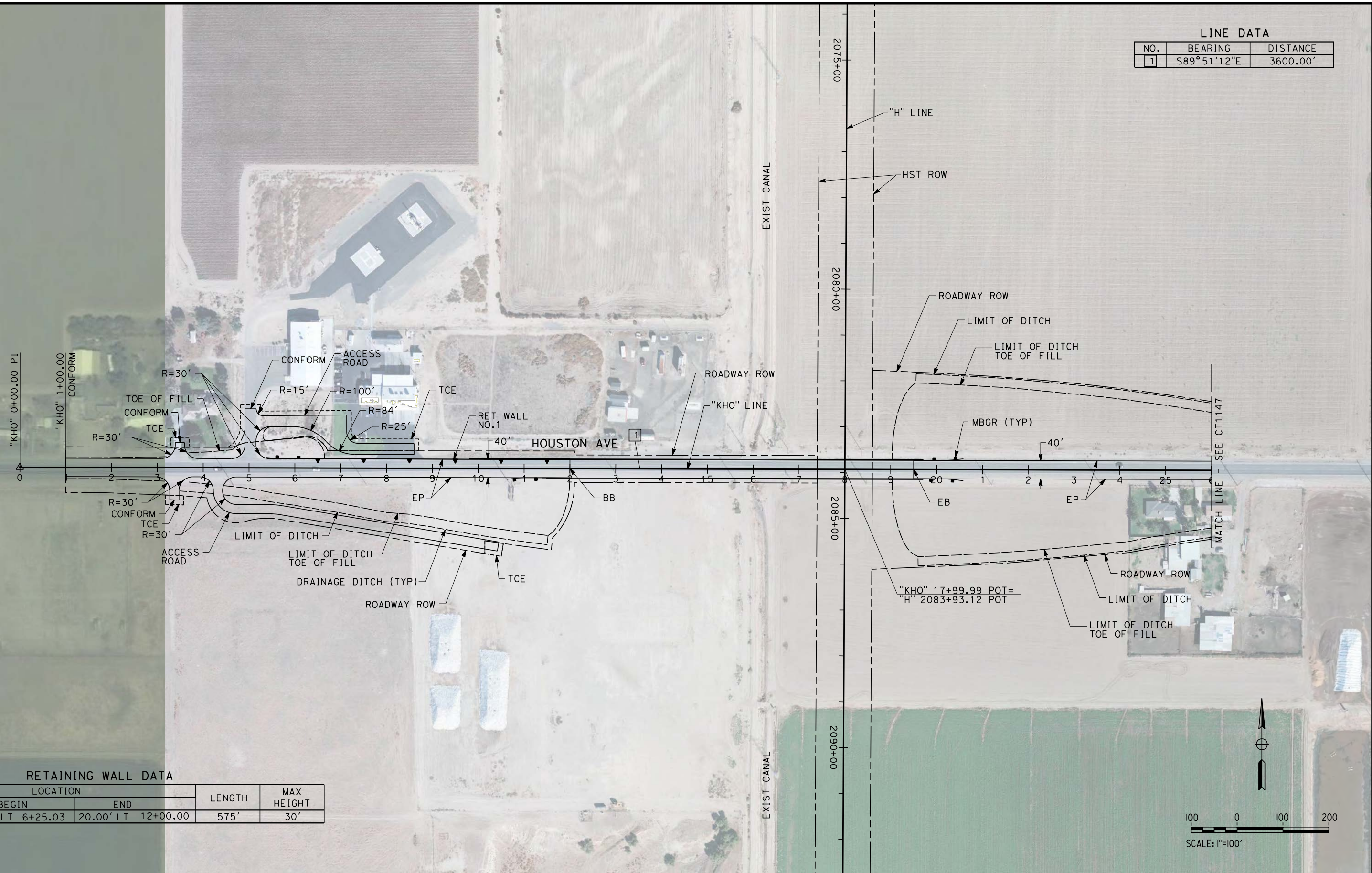
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HANFORD ARMONA RD

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1145
SCALE
AS SHOWN
SHEET NO.
23 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°51'12"E	3600.00'



RETAINING WALL DATA

NO.	LOCATION		LENGTH	MAX HEIGHT
	BEGIN	END		
1	20.00' LT 6+25.03	20.00' LT 12+00.00	575'	30'

12/24/2013 10:43:12 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1146-H.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
HOUSTON AVE

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1146
SCALE
AS SHOWN
SHEET NO.
24 OF 60

LINE DATA		
NO.	BEARING	DISTANCE
1	S89°51'12"E	3600.00'



12/24/2013 10:44:32 AM c:\pwworking\hmm\external\alton.cannon-arup.com\d0125341\FB-CT-1147-H.dgn
 alton.cannon

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

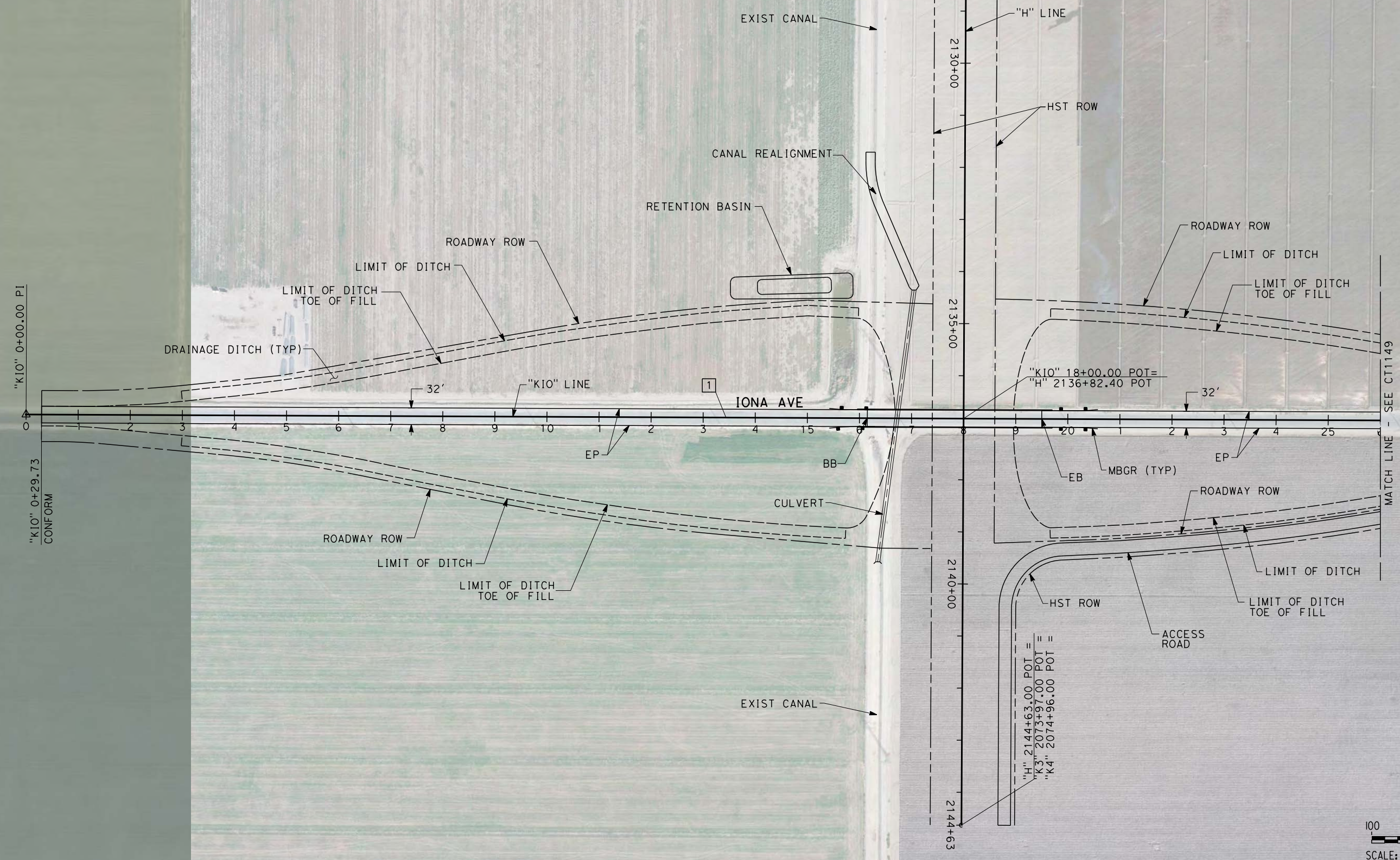
**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION LAYOUT
 HOUSTON AVE

CONTRACT NO.
 HSR 06-0003
 DRAWING NO.
 CT1147
 SCALE
 AS SHOWN
 SHEET NO.
 25 OF 60

LINE DATA		
NO.	BEARING	DISTANCE
1	S89° 45' 10" E	3600.00'



\$USER \$ DATE \$ TIME \$ FILE \$
 \$ DATE \$ TIME \$ FILE \$
 \$ USER \$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
 A. CANNON
 DRAWN BY
 E. SUDHAUSEN
 CHECKED BY
 S. BROWN
 IN CHARGE
 R. COFFIN
 DATE
 12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

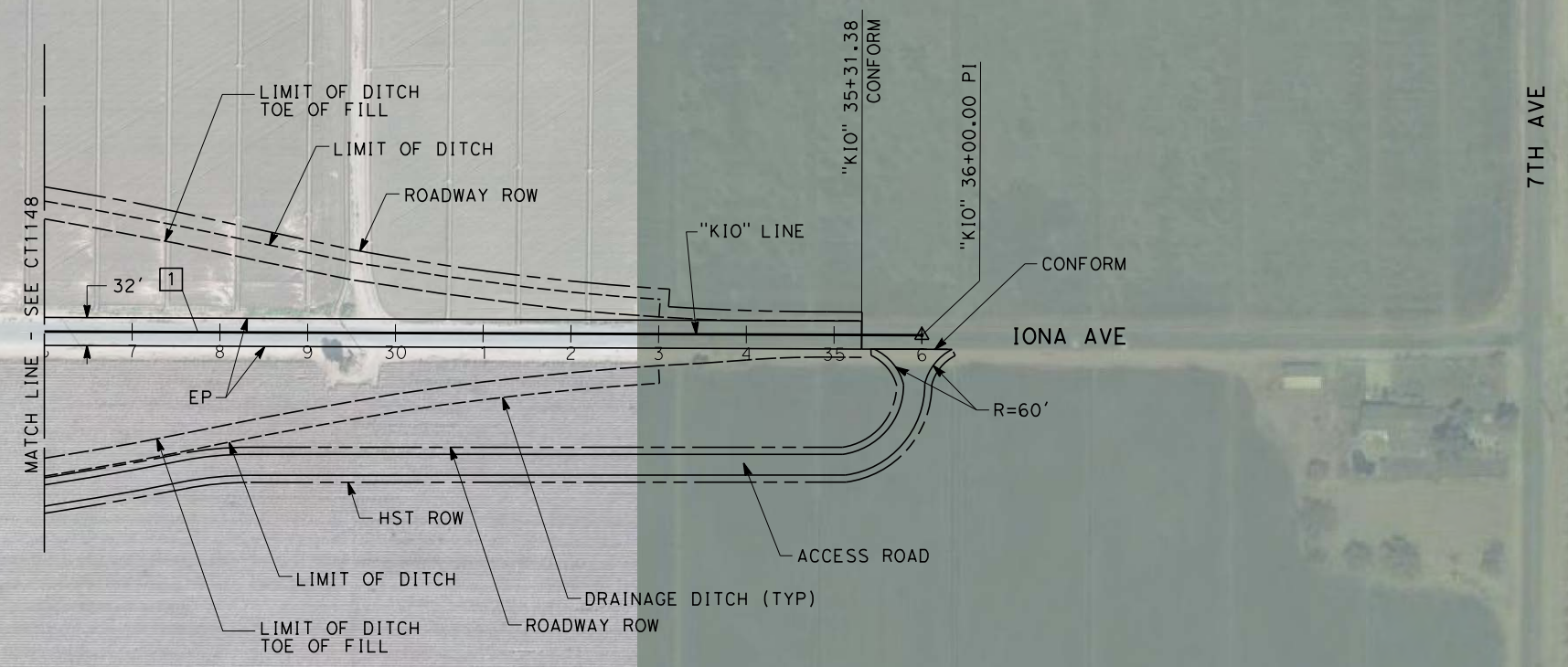


CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION LAYOUT
 IONA AVE

CONTRACT NO.
 HSR 06-0003
 DRAWING NO.
 CT1148
 SCALE
 AS SHOWN
 SHEET NO.
 26 OF 60

LINE DATA

NO.	BEARING	DISTANCE
1	S89°45'10"E	3600.00'



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**

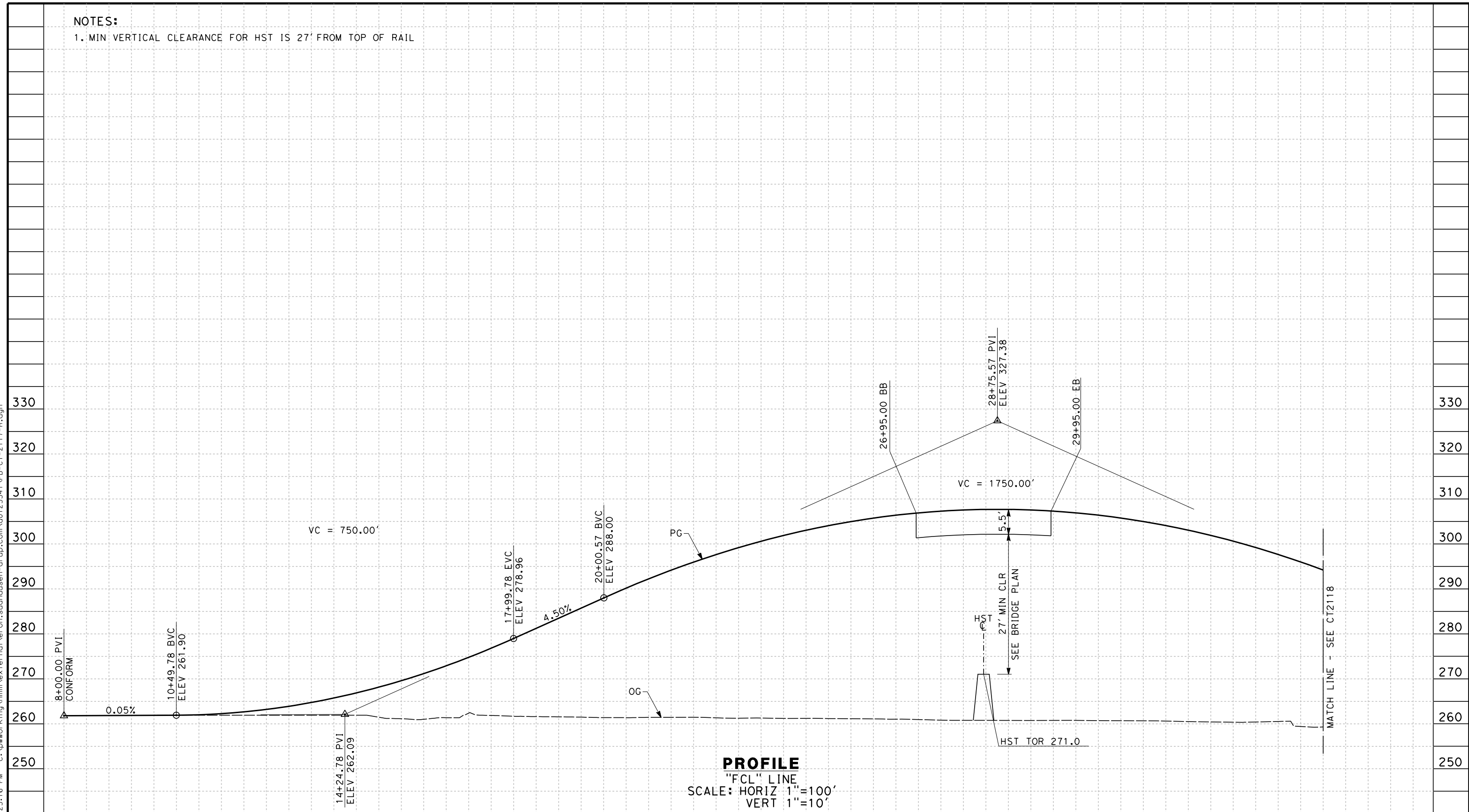


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION LAYOUT
IONA AVE

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT1149
SCALE
AS SHOWN
SHEET NO.
27 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
 "FCL" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
Exc																														
Emb																														

DESIGNED BY	A, CANNON
DRAWN BY	E. SUDHAUSEN
CHECKED BY	S. BROWN
IN CHARGE	R. COFFIN
DATE	12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



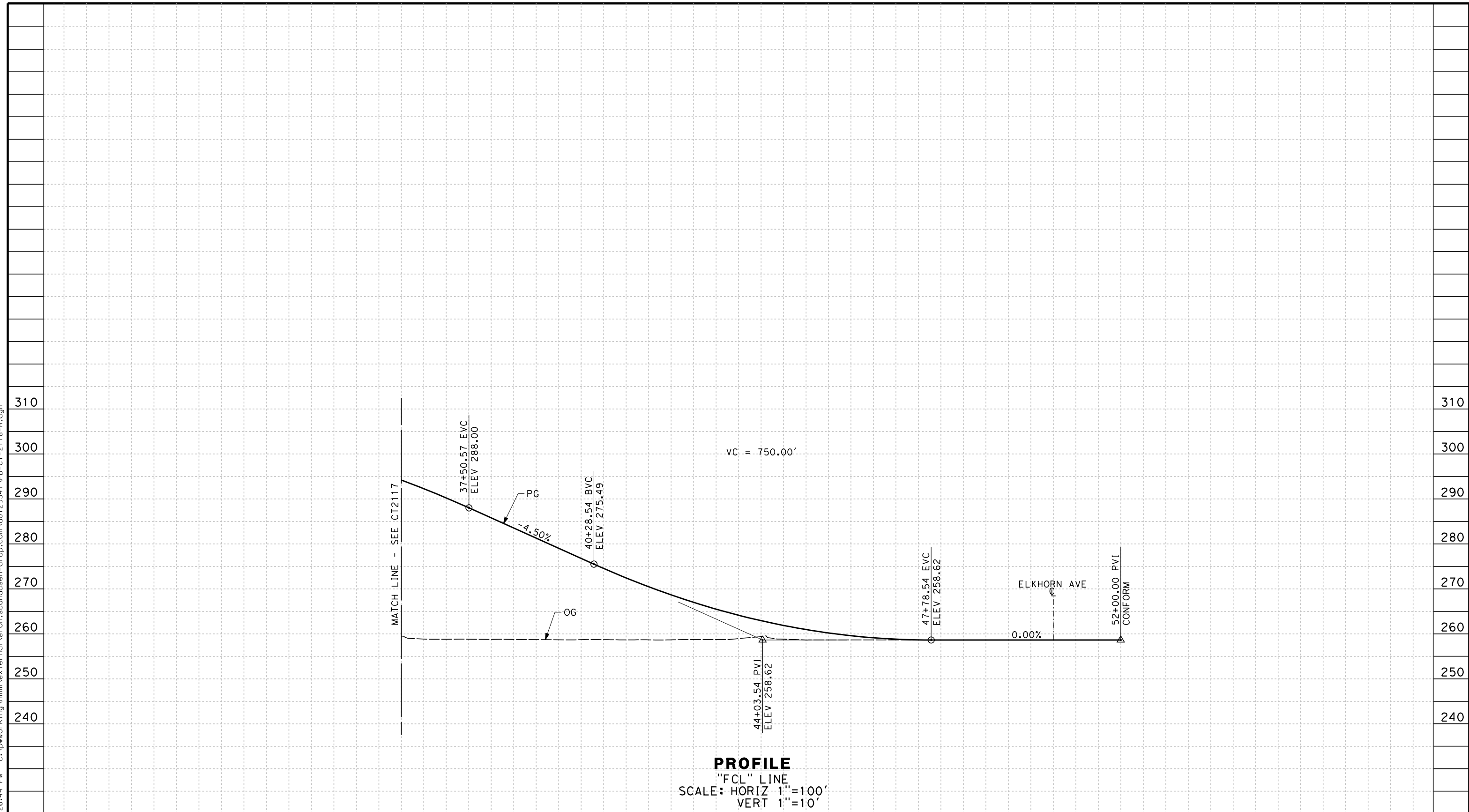
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 S CLOVIS AVE

CONTRACT NO.	HSR 06-0003
DRAWING NO.	CT2117
SCALE	AS SHOWN
SHEET NO.	28 OF 60

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 eron.sudhausen

c:\pwworking\hmm\external\eron.sudhausen-arup.com\d0125341\FB-CT-2118-H.dgn 12/27/2013 4:26:44 PM



STATION	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
Exc																		
Emb																		

DESIGNED BY A. CANNON	DRAWN BY E. SUDHAUSEN	CHECKED BY S. BROWN	IN CHARGE R. COFFIN	DATE 12/31/13	
REV	DATE	BY	CHK	APP	DESCRIPTION

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



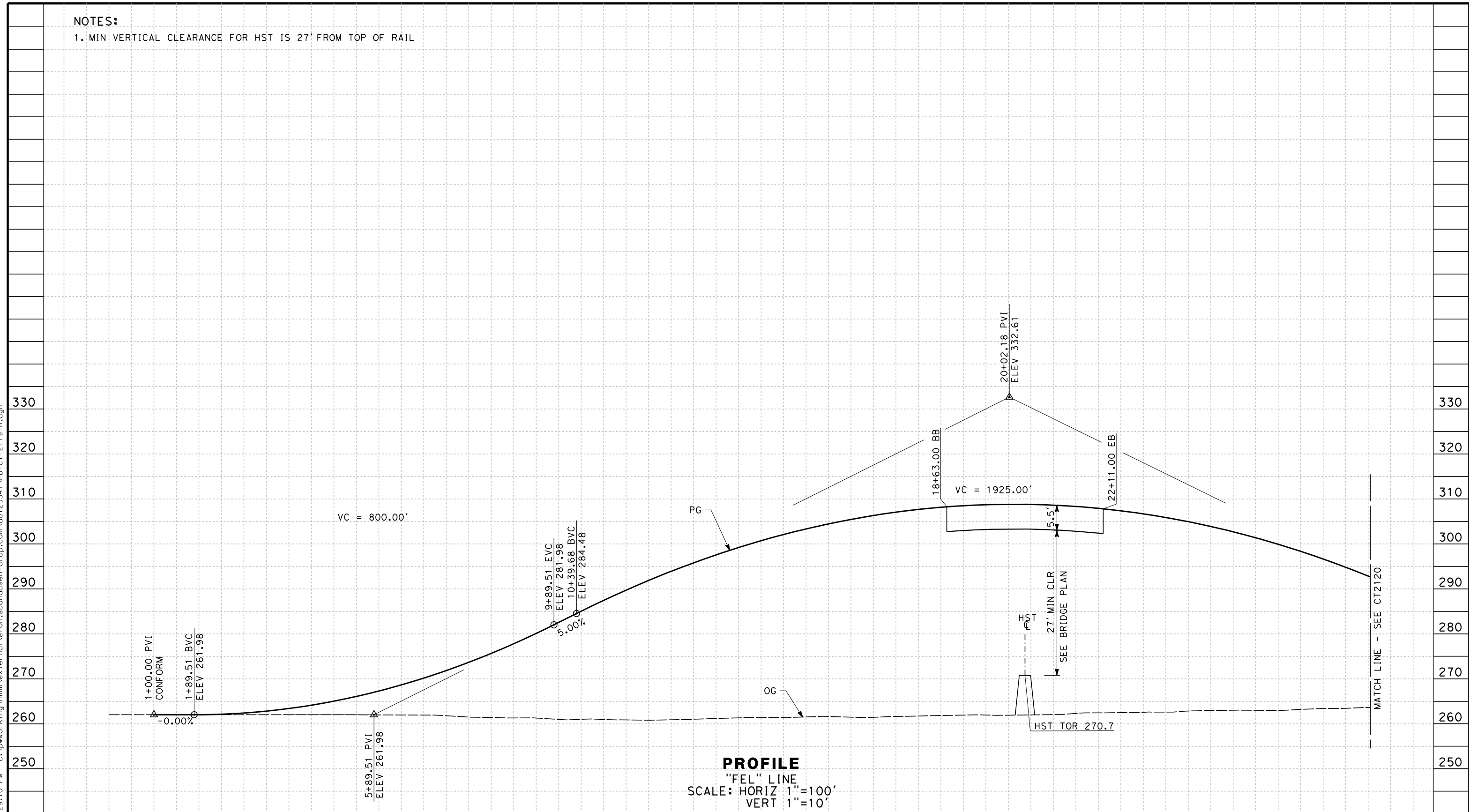
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
S CLOVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2118
SCALE AS SHOWN
SHEET NO. 29 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	TOTAL
Exc																														
Emb																														

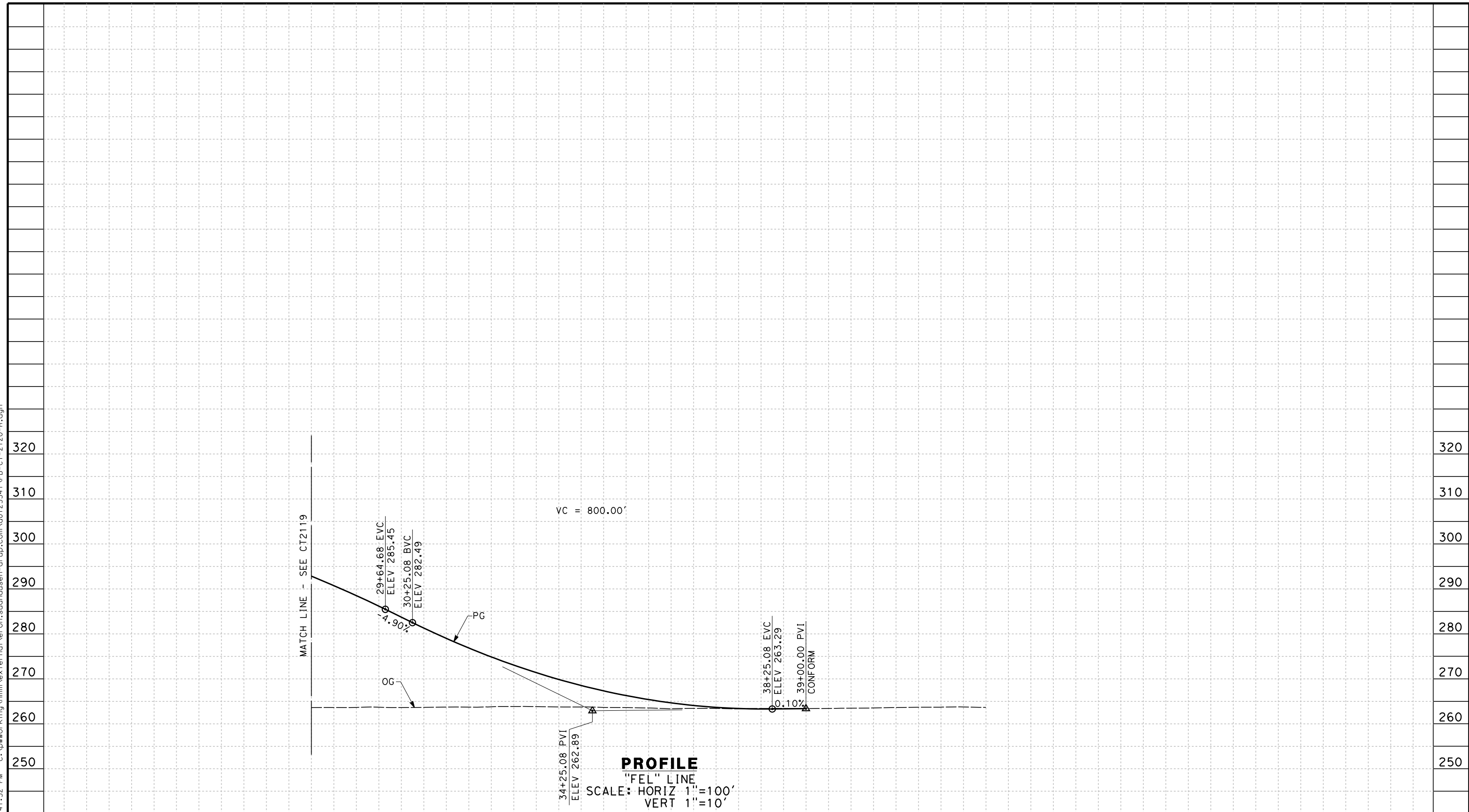
DESIGNED BY A. CANNON	RECORD SET 15% DESIGN SUBMISSION NOT FOR CONSTRUCTION
DRAWN BY E. SUDHAUSEN	
CHECKED BY S. BROWN	
IN CHARGE R. COFFIN	
DATE 12/31/13	

CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 GRADE SEPARATION PROFILE
 E ELKHORN AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2119
SCALE AS SHOWN
SHEET NO. 30 OF 60

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STATION	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	TOTAL
Exc																		
Emb																		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**

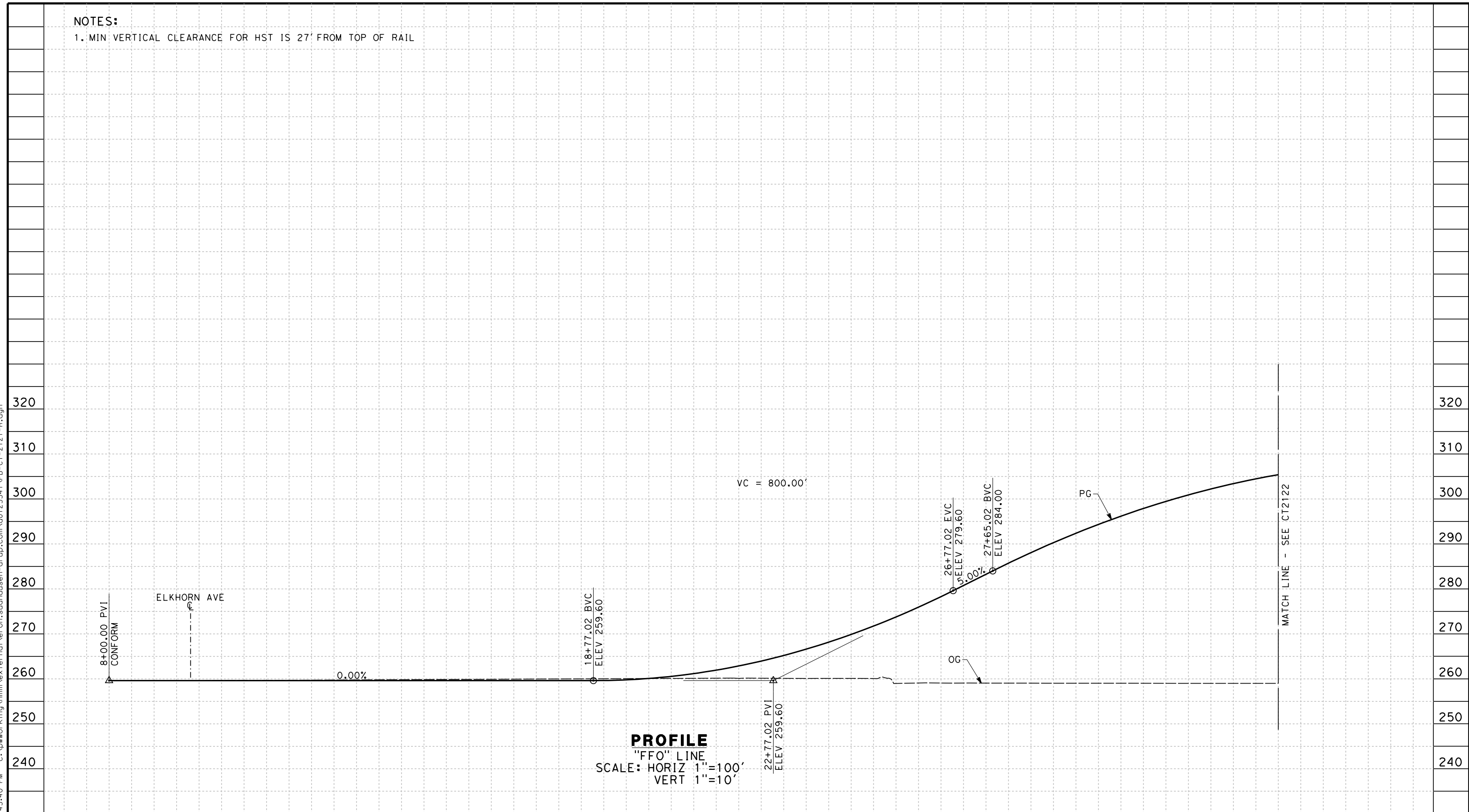


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
GRADE SEPARATION PROFILE
E ELKHORN AVE

CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT2120
SCALE
AS SHOWN
SHEET NO.
31 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
 "FFO" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
Exc																												
Emb																												

DESIGNED BY A. CANNON	DRIVEN BY E. SUDHAUSEN	CHECKED BY S. BROWN	IN CHARGE R. COFFIN	DATE 12/31/13	
REV	DATE	BY	CHK	APP	DESCRIPTION

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



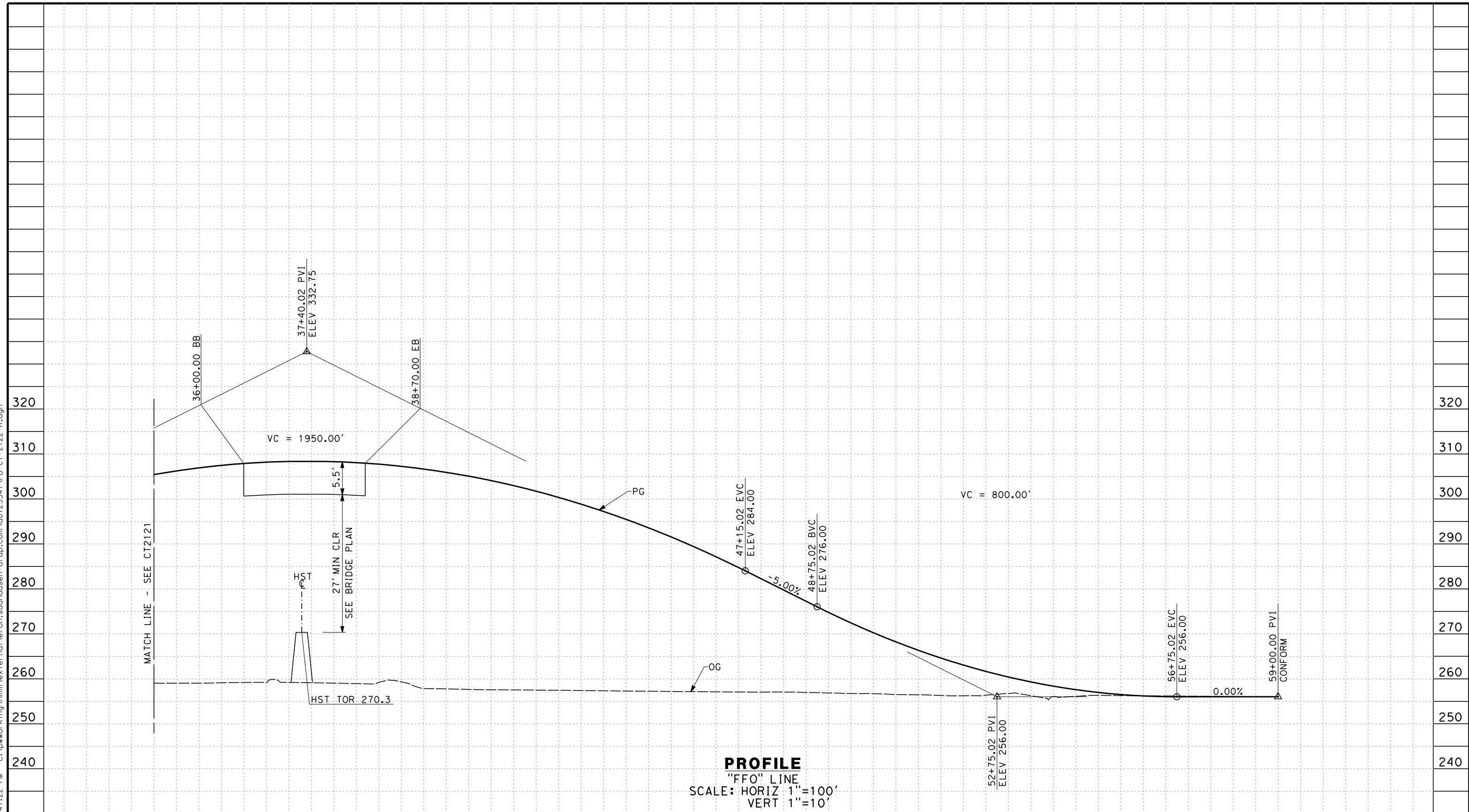
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 S FOWLER AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2121
SCALE AS SHOWN
SHEET NO. 32 OF 60

eron_sudhausen 12/27/2013 4:43:40 PM c:\pwworking\hmm\external\eron_sudhausen-arup.com\d0125341\FB-CT-2121-H.dgn

c:\pwworking\hmm\external\eron.sudhausen-arup.com\d0125341\FB-CT-2122-H.dgn 12/27/2013 4:47:22 PM eron.sudhausen



PROFILE
 "FFO" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	4	35	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	3	4	55	6	7	8	TOTAL
Exc																										
Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



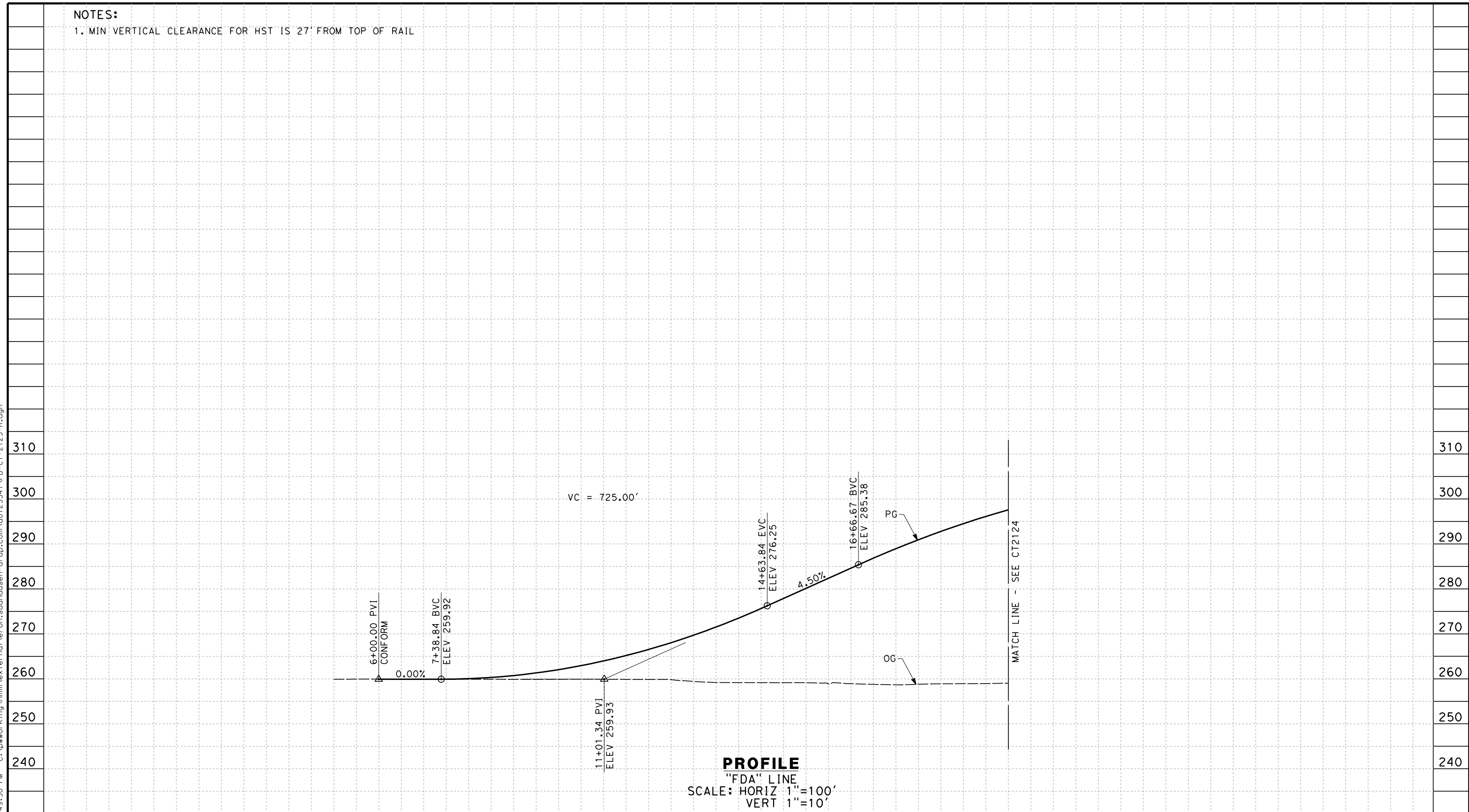
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 S FOWLER AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2122
 SCALE
AS SHOWN
 SHEET NO.
33 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL

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PROFILE
 "FDA" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL
Exc																	
Emb																	

DESIGNED BY A. CANNON	RECORD SET 15% DESIGN SUBMISSION NOT FOR CONSTRUCTION
DRAWN BY E. SUDHAUSEN	
CHECKED BY S. BROWN	
IN CHARGE R. COFFIN	
DATE 12/31/13	

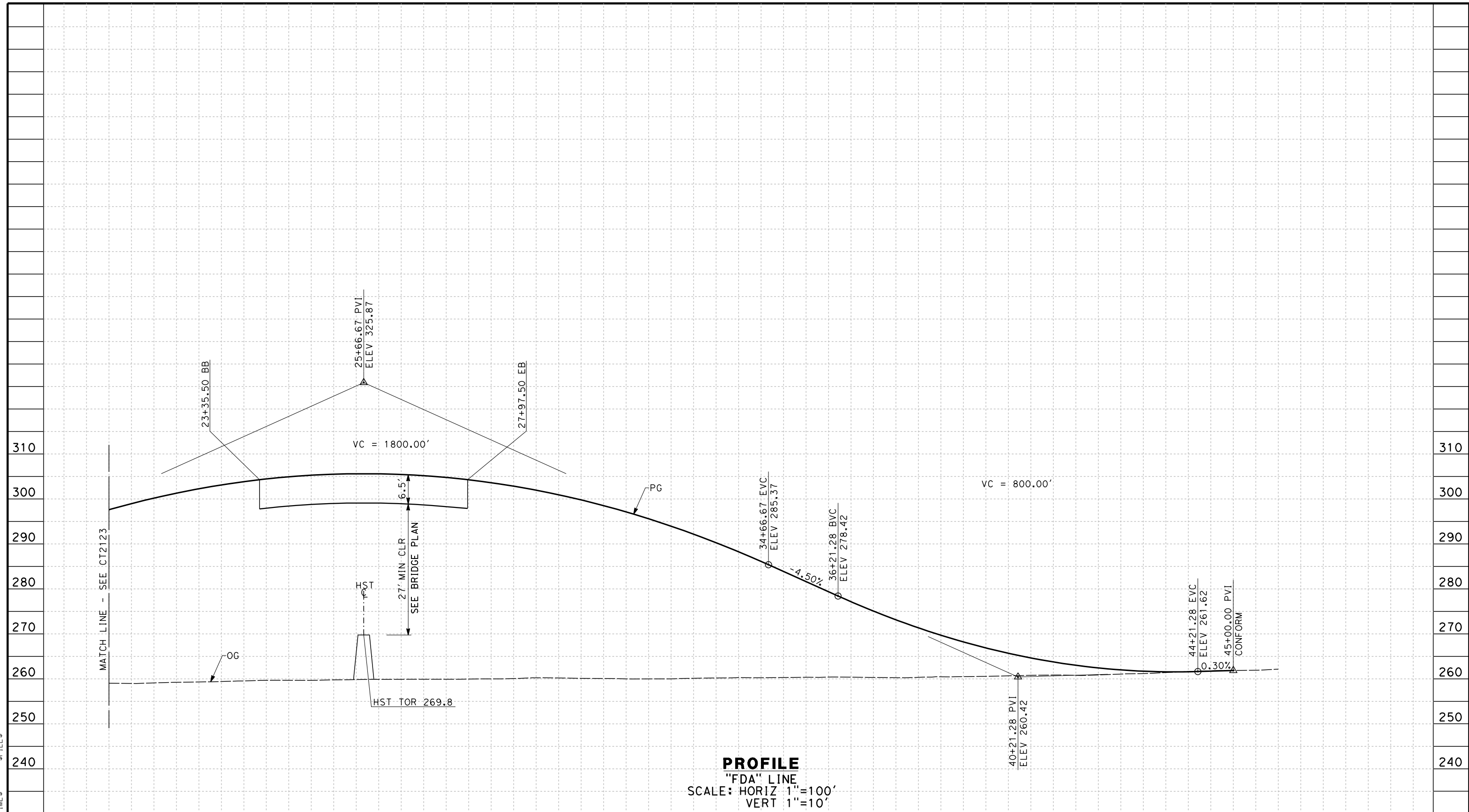
**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 E DAVIS AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2123
SCALE AS SHOWN
SHEET NO. 34 OF 60



STATION	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	7	8	9	40	1	2	3	4	45	TOTAL
Exc																											
Emb																											

DESIGNED BY	A. CANNON
DRAWN BY	E. SUDHAUSEN
CHECKED BY	S. BROWN
IN CHARGE	R. COFFIN
DATE	12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**

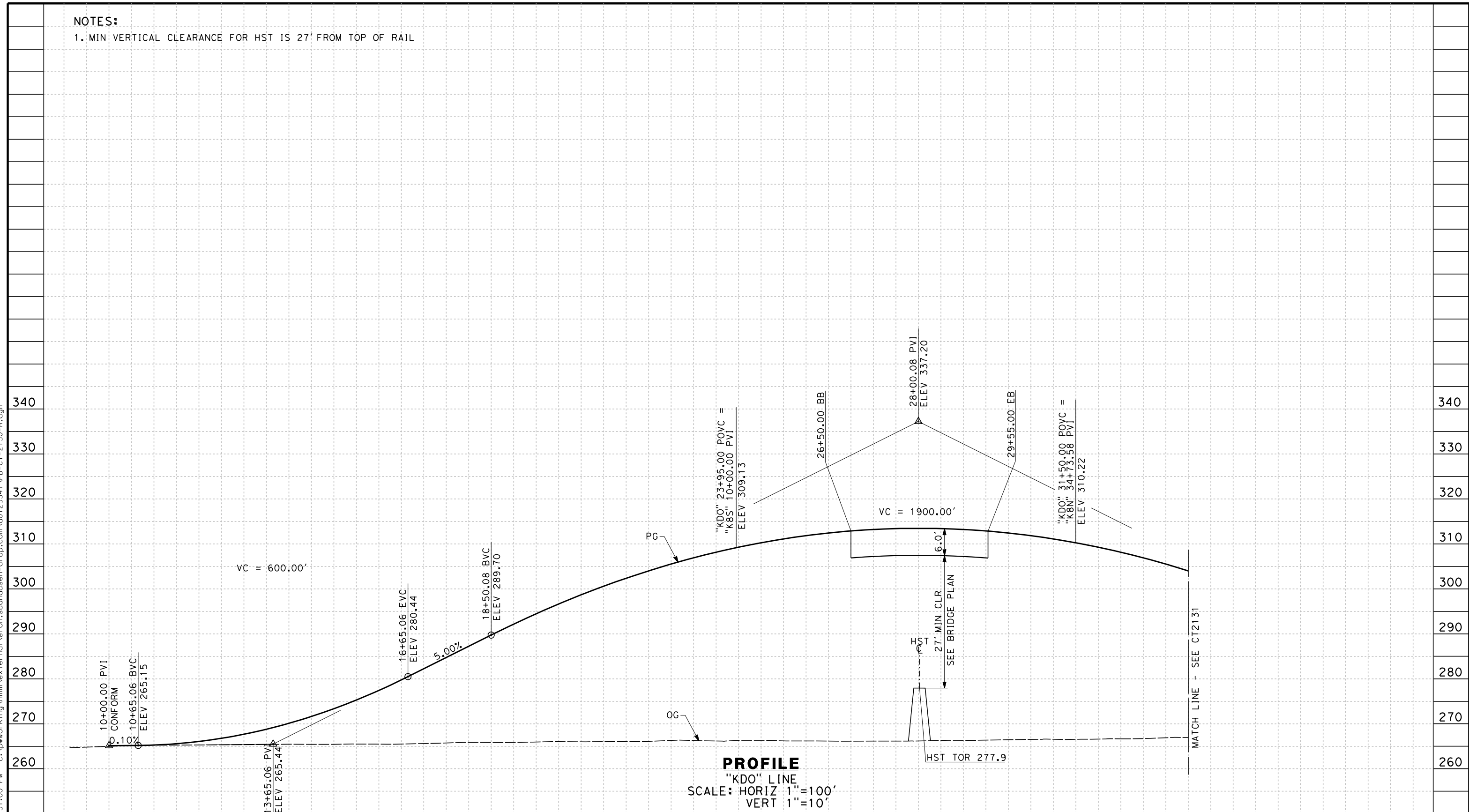
HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 E DAVIS AVE

CONTRACT NO.	HSR 06-0003
DRAWING NO.	CT2124
SCALE	AS SHOWN
SHEET NO.	35 OF 60

\$USER \$ DATE \$ TIME \$ FILE \$

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
Exc																										
Emb																										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

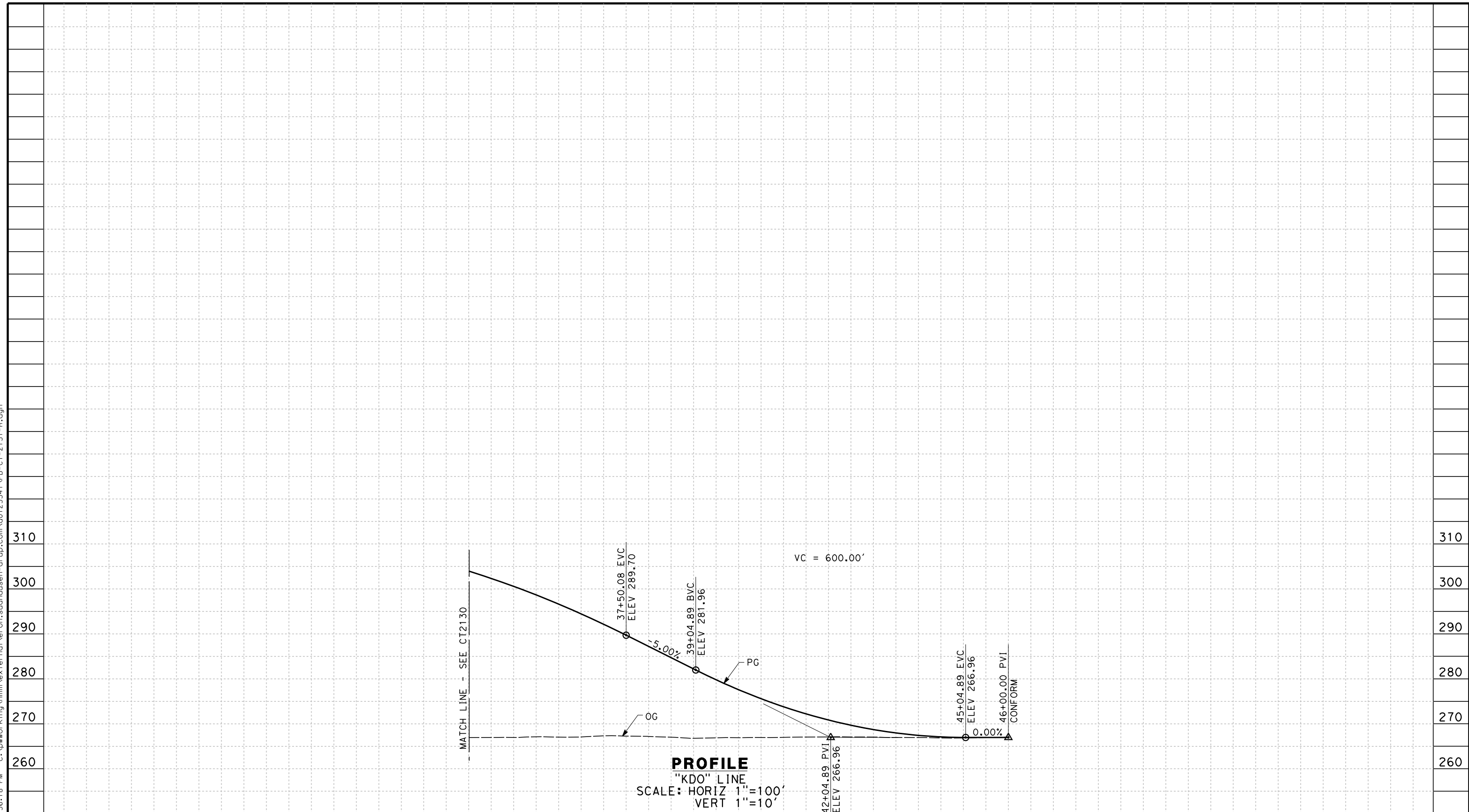


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 DOVER AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2130
 SCALE
AS SHOWN
 SHEET NO.
36 OF 60

eron_sudhausen 12/27/2013 5:31:00 PM c:\pwworking\hmm\external\eron_sudhausen-arup.com\d0125341\FB-CT-2130-H.dgn

eron_sudhausen 12/27/2013 4:56:18 PM c:\pwworking\hmm\external\eron_sudhausen-arup.com\d0125341\FB-CT-2131-H.dgn



STATION	4	35	6	7	8	9	40	1	2	3	4	45	6	TOTAL
Exc														
Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

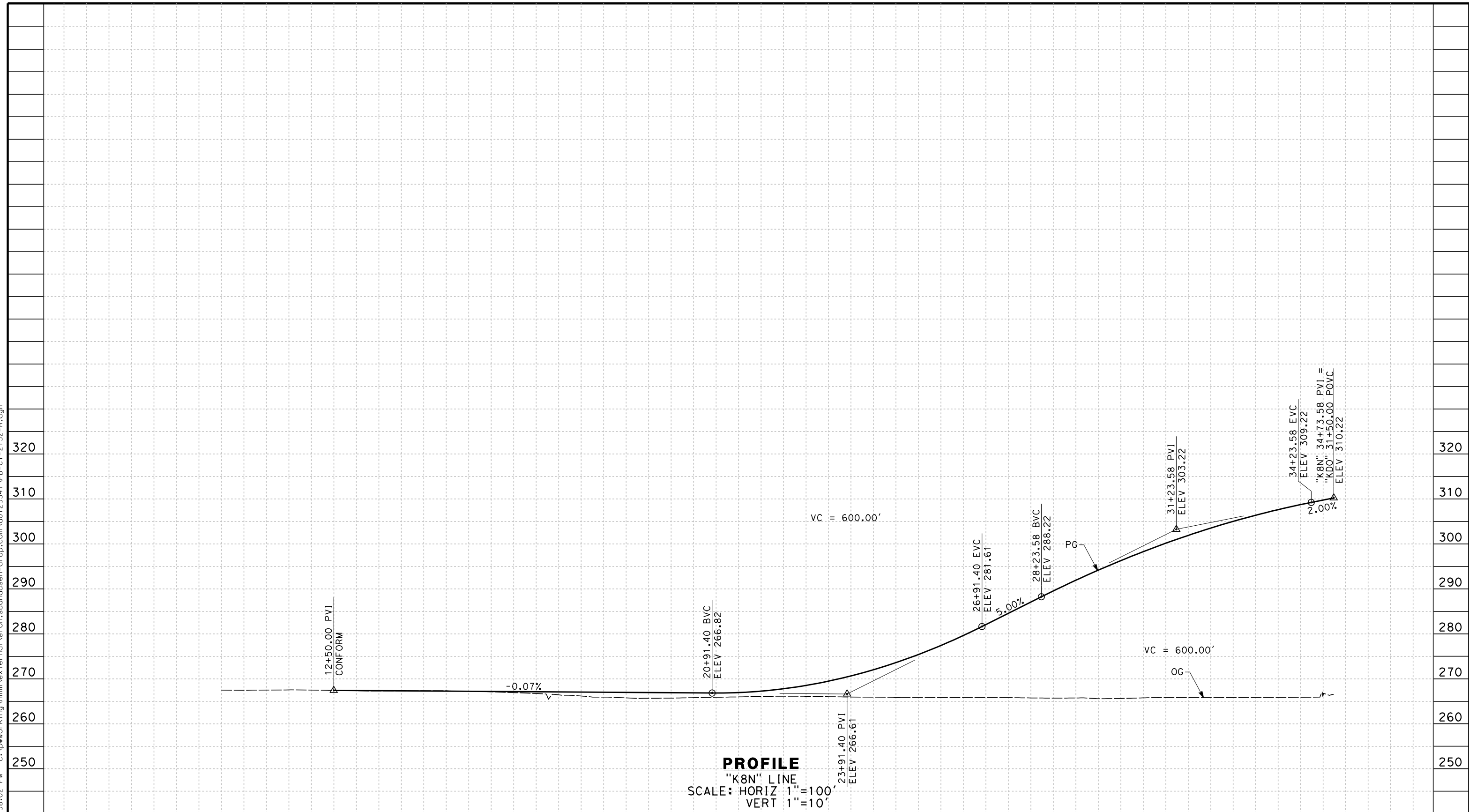
**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 DOVER AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2131
 SCALE
AS SHOWN
 SHEET NO.
37 OF 60

eron_sudhausen 12/27/2013 4:58:02 PM c:\pwworking\hmm\external\eron_sudhausen-arup.com\d0125341\FB-CT-2132-H.dgn



STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	TOTAL
Exc																										
Emb																										

PROFILE
 "K8N" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
 A. CANNON
 DRAWN BY
 E. SUDHAUSEN
 CHECKED BY
 S. BROWN
 IN CHARGE
 R. COFFIN
 DATE
 12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

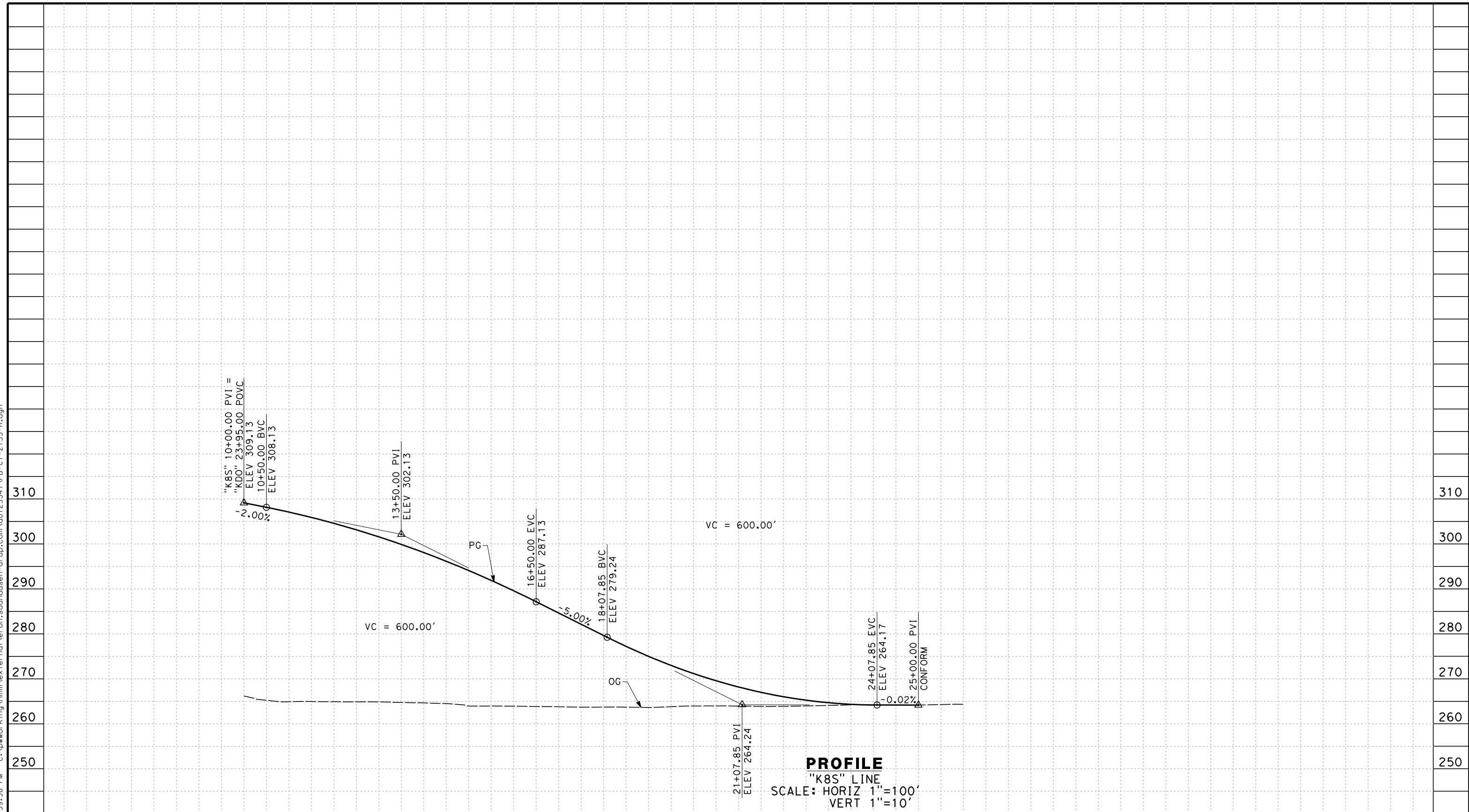
**NOT FOR
 CONSTRUCTION**



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 8TH AVE (NORTH)

CONTRACT NO.
 HSR 06-0003
 DRAWING NO.
 CT2132
 SCALE
 AS SHOWN
 SHEET NO.
 38 OF 60

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PROFILE
 "K8S" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	TOTAL
Exc																		
Emb																		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

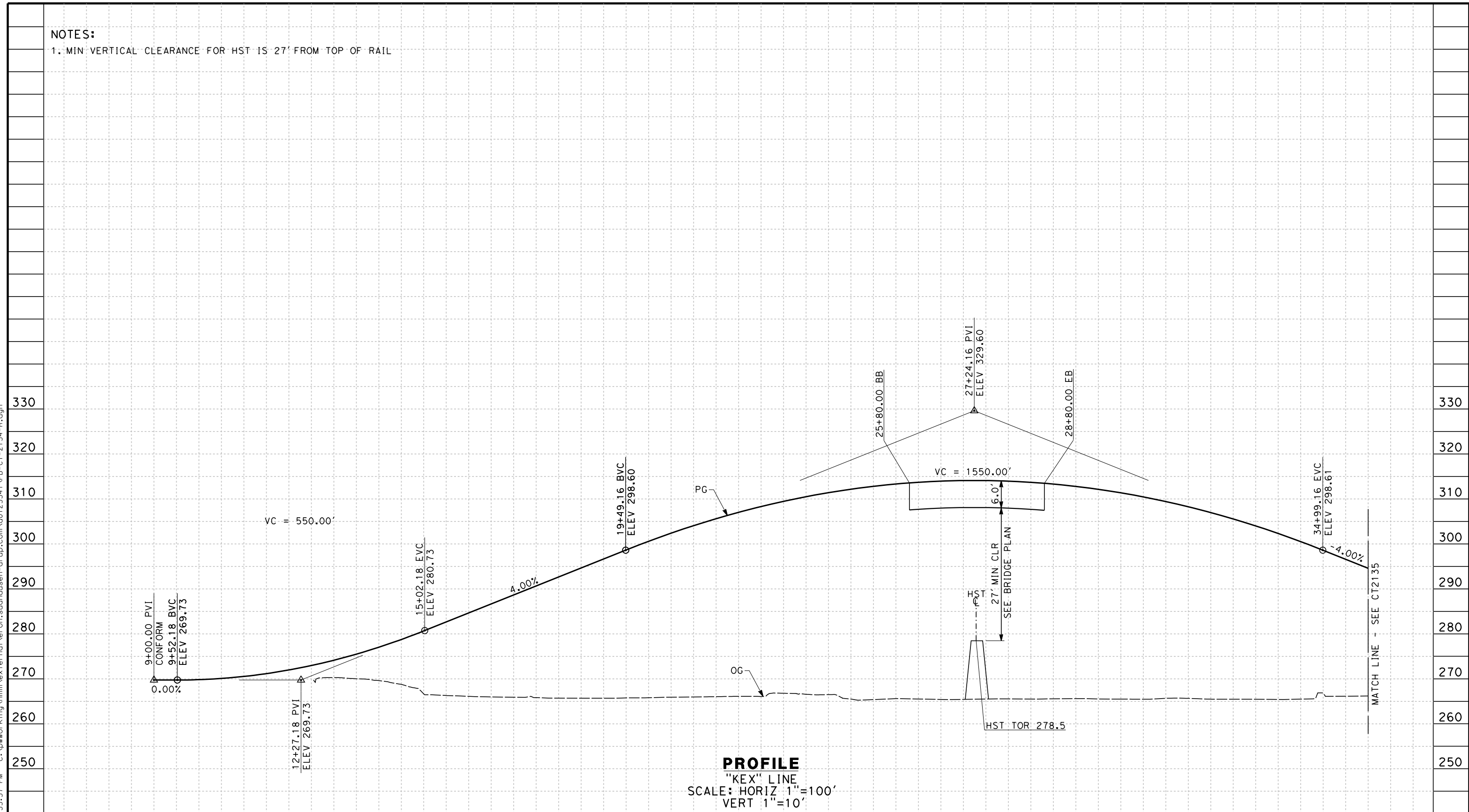


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 8TH AVE (SOUTH)

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2133
 SCALE
AS SHOWN
 SHEET NO.
39 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
 "KEX" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
Exc																													
Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

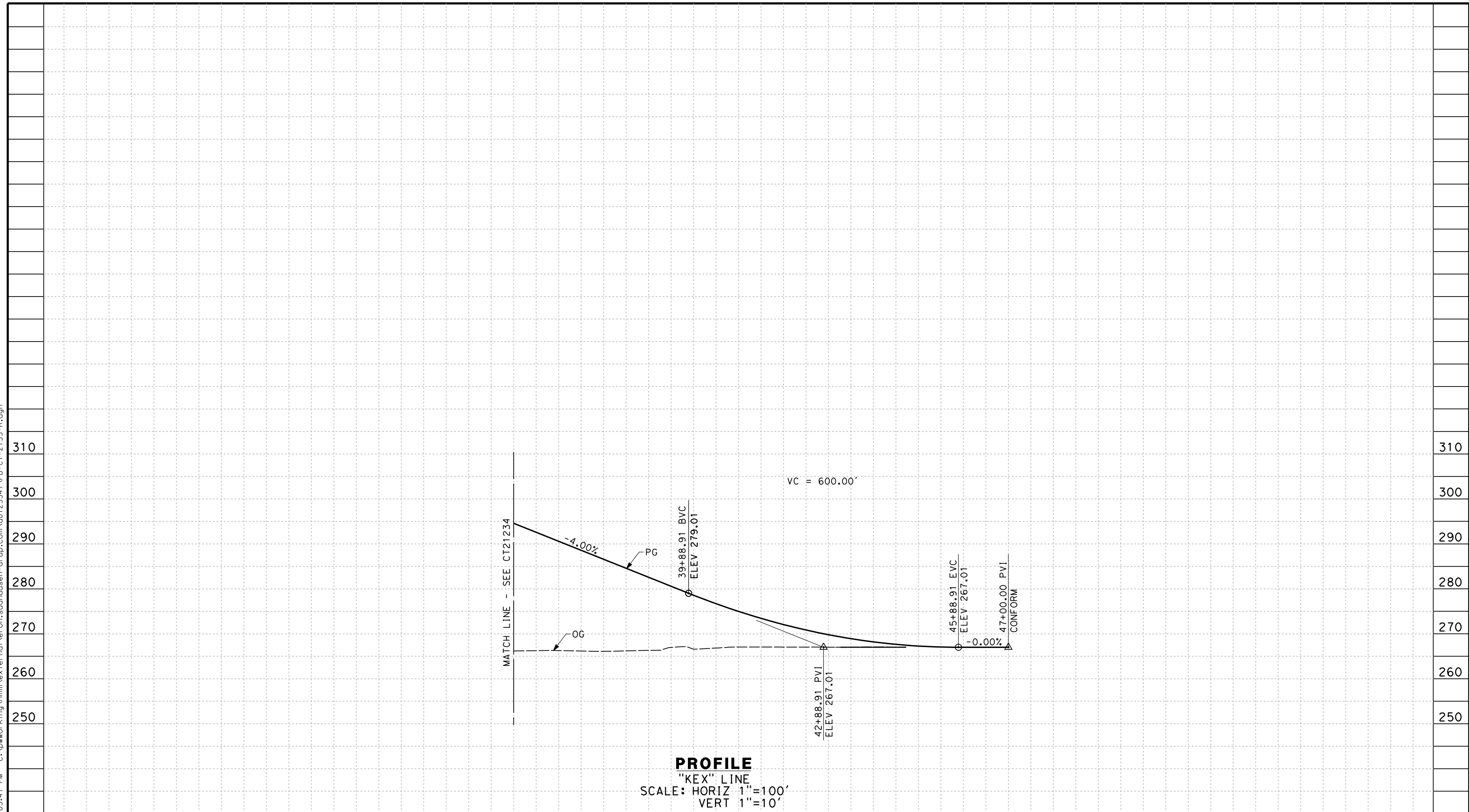


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 EXCELSIOR AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2134
 SCALE
AS SHOWN
 SHEET NO.
40 OF 60

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PROFILE
 "KEX" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	6	7	8	9	40	1	2	3	4	45	6	7	TOTAL
Exc													
Emb													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**
 NOT FOR
 CONSTRUCTION

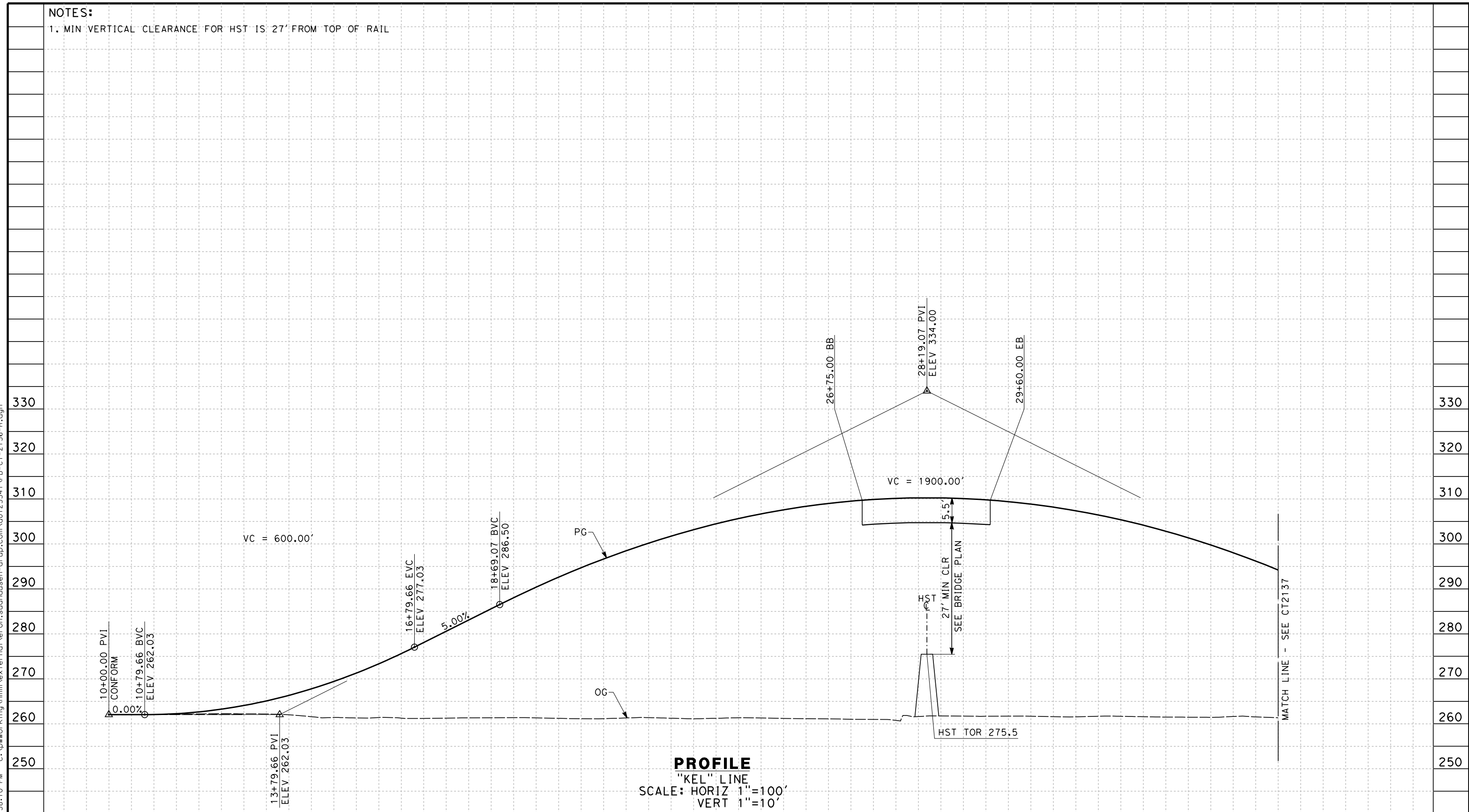


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 EXCELSIOR AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2135
 SCALE
AS SHOWN
 SHEET NO.
41 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



STATION	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
Exc																												
Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

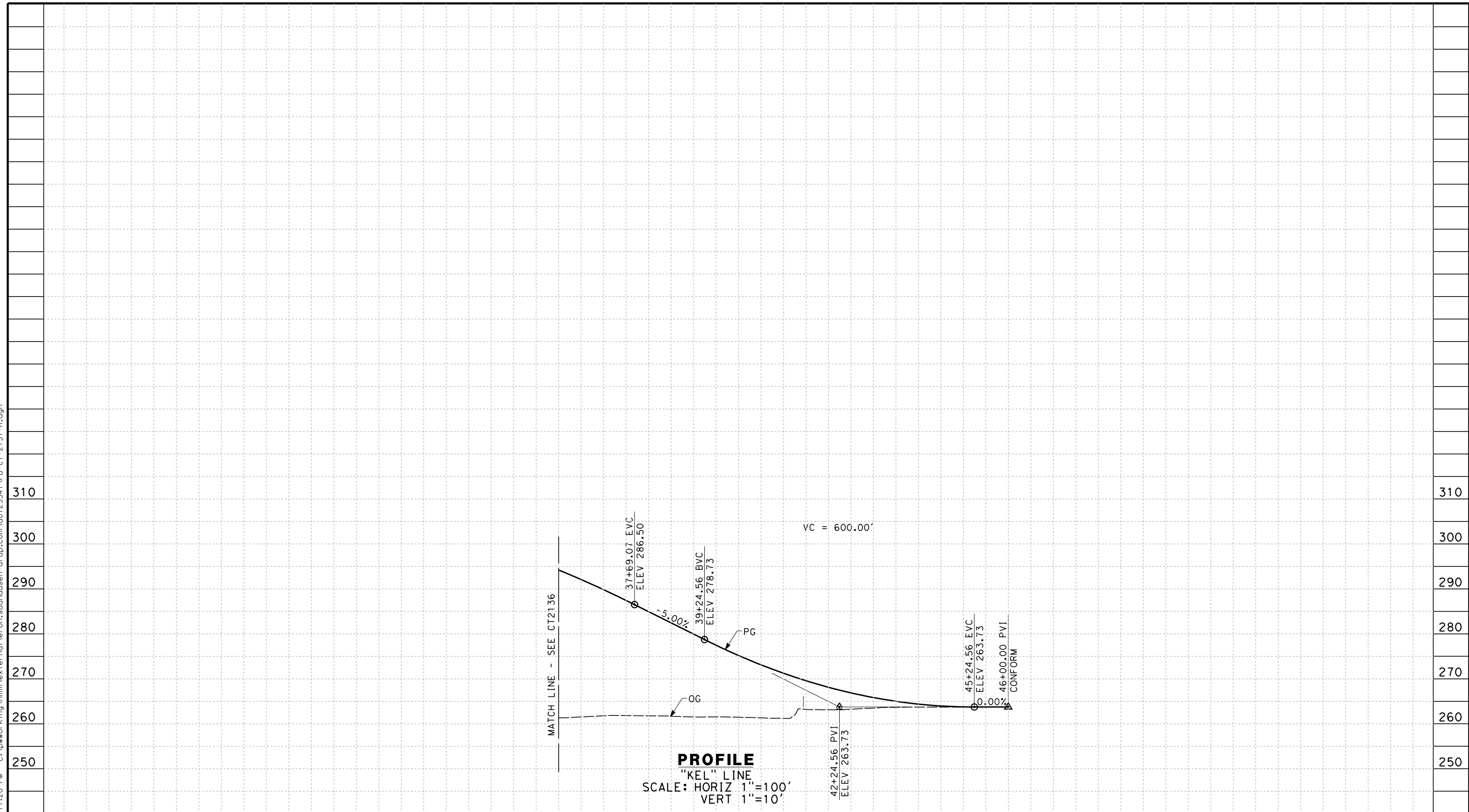


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 ELDER AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2136
 SCALE
AS SHOWN
 SHEET NO.
42 OF 60

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eron_sudhausen 12/27/2013 5:11:20 PM c:\pwworking\hmm\external\eron_sudhausen-arup.com\d0125341\FB-CT-2137-H.dgn



STATION	6	7	8	9	40	1	2	3	4	45	6	7	TOTAL
Exc													
Emb													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**

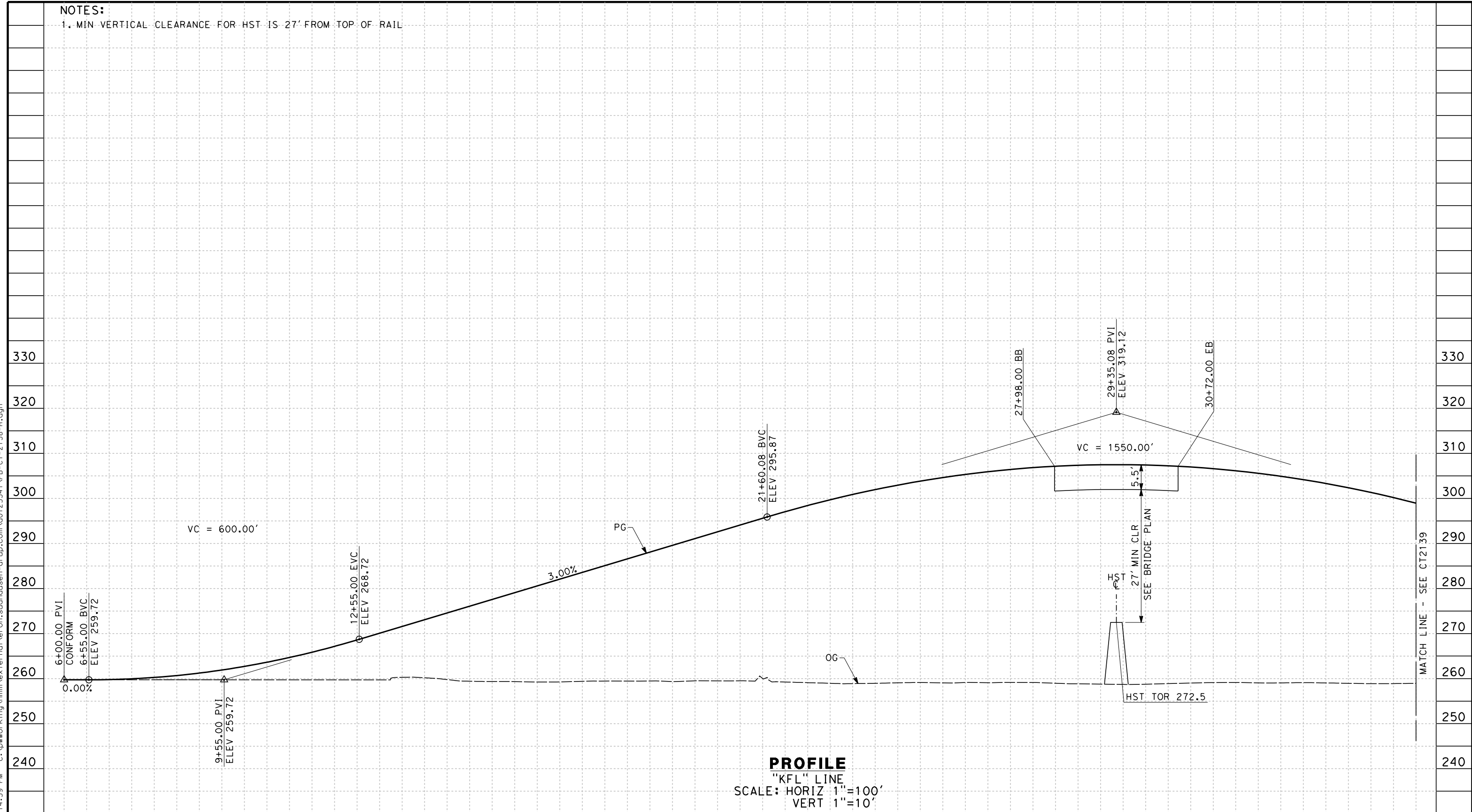


CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 ELDER AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2137
 SCALE
AS SHOWN
 SHEET NO.
43 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
 "KFL" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
Exc																															
Emb																															

DESIGNED BY A. CANNON	RECORD SET 15% DESIGN SUBMISSION NOT FOR CONSTRUCTION			CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD		CONTRACT NO. HSR 06-0003
DRAWN BY E. SUDHAUSEN				DRAWING NO. CT2138		
CHECKED BY S. BROWN		CALIFORNIA HIGH-SPEED TRAIN		SCALE AS SHOWN		
IN CHARGE R. COFFIN		CALIFORNIA HIGH-SPEED RAIL AUTHORITY		SHEET NO. 44 OF 60		
DATE 12/31/13		CALIFORNIA HIGH-SPEED RAIL AUTHORITY		HANFORD SUBSECTION ALIGNMENT H GRADE SEPARATION PROFILE FLINT AVE		

DESIGNED BY
A. CANNON

DRAWN BY
E. SUDHAUSEN

CHECKED BY
S. BROWN

IN CHARGE
R. COFFIN

DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 FLINT AVE

CONTRACT NO.
HSR 06-0003

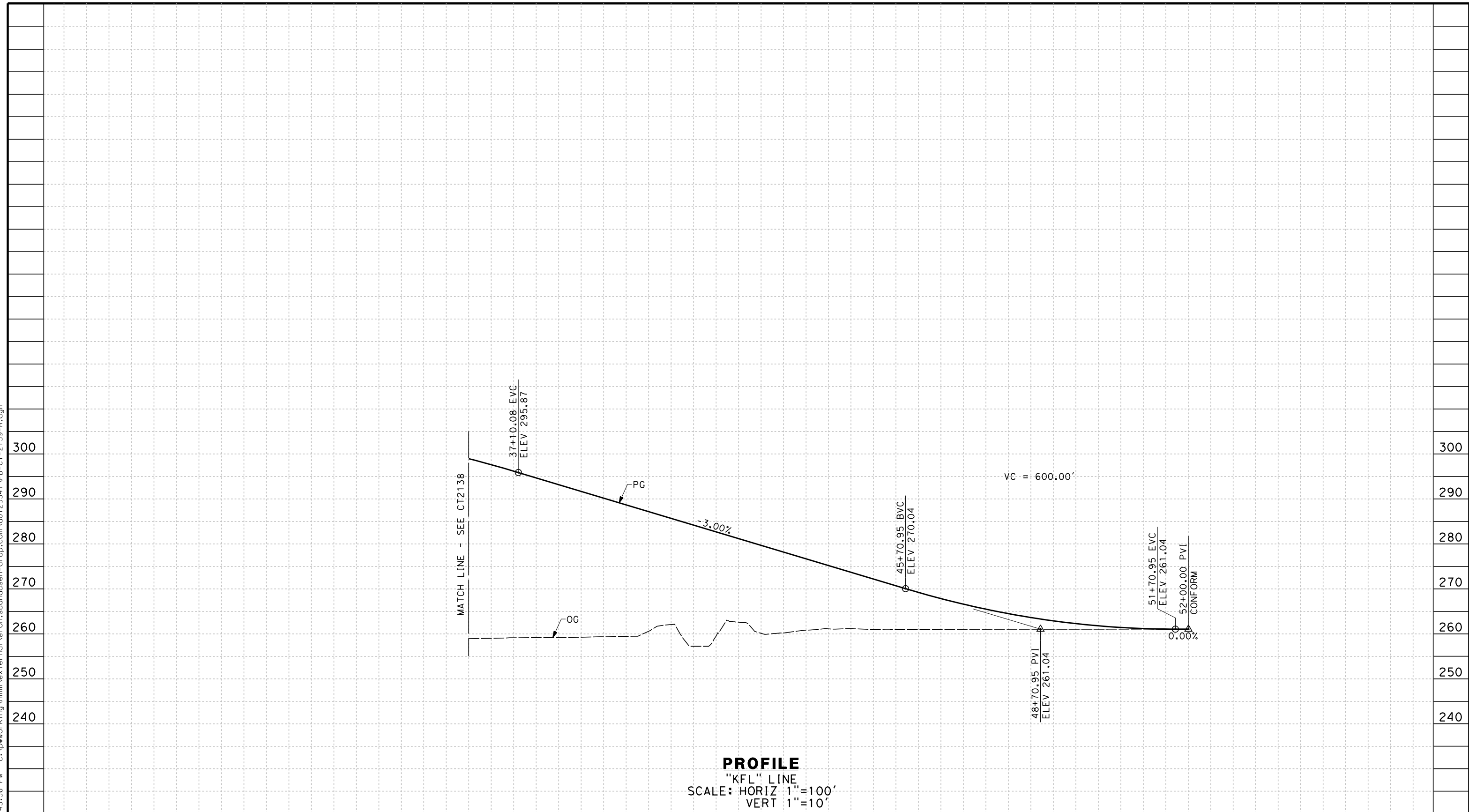
DRAWING NO.
CT2138

SCALE
AS SHOWN

SHEET NO.
44 OF 60

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 eron.sudhausen

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PROFILE
 "KFL" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	6	7	8	9	40	1	2	3	4	45	6	7	8	9	50	1	2	TOTAL
Exc																		
Emb																		

DESIGNED BY A. CANNON	RECORD SET 15% DESIGN SUBMISSION NOT FOR CONSTRUCTION
DRAWN BY E. SUDHAUSEN	
CHECKED BY S. BROWN	
IN CHARGE R. COFFIN	
DATE 12/31/13	

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

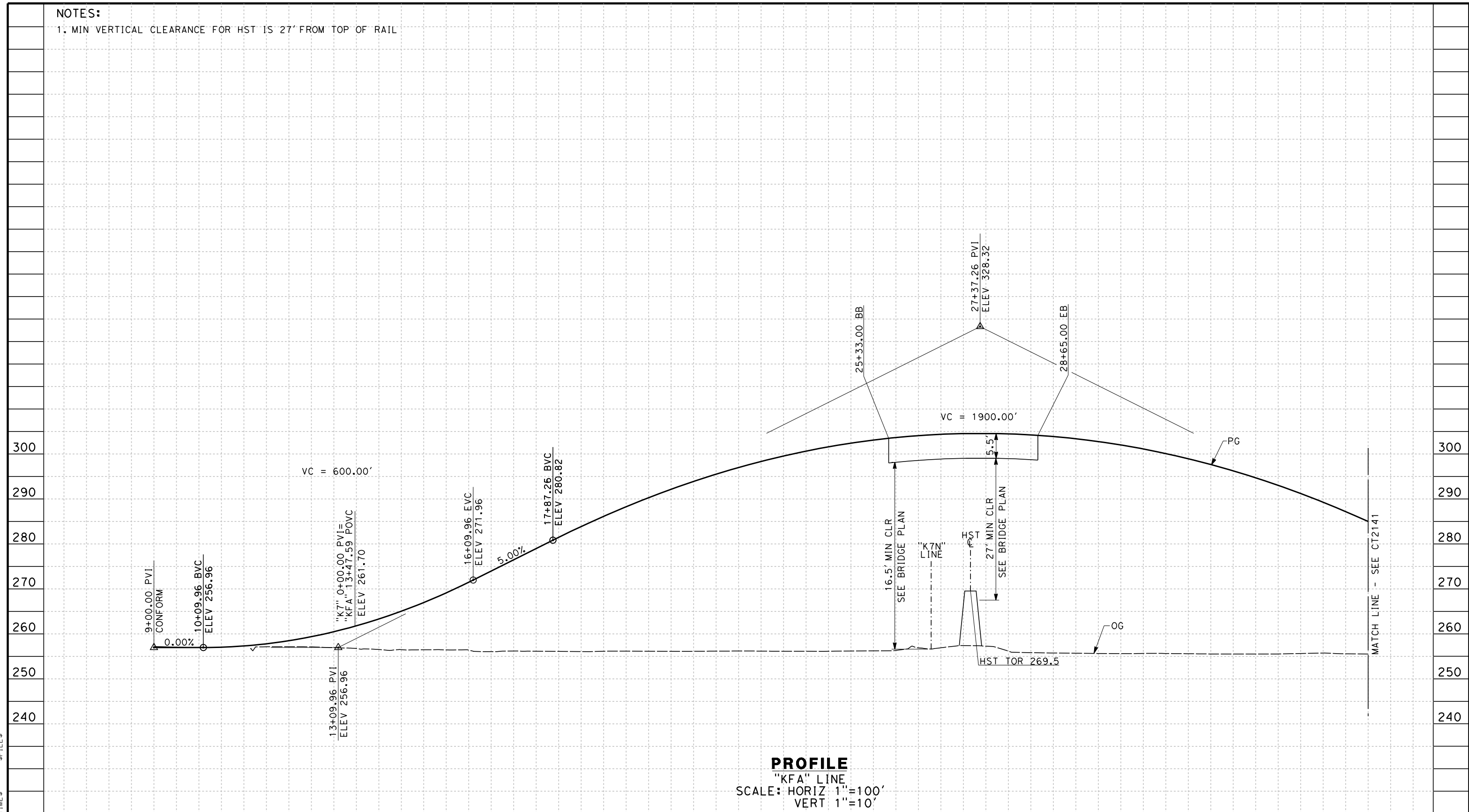


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 FLINT AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. CT2139
SCALE AS SHOWN
SHEET NO. 45 OF 60

NOTES:

1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



STATION	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	8	9	30	1	2	3	4	35	6	TOTAL
Exc																													
Emb																													

DESIGNED BY	A. CANNON
DRAWN BY	E. SUDHAUSEN
CHECKED BY	S. BROWN
IN CHARGE	R. COFFIN
DATE	12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

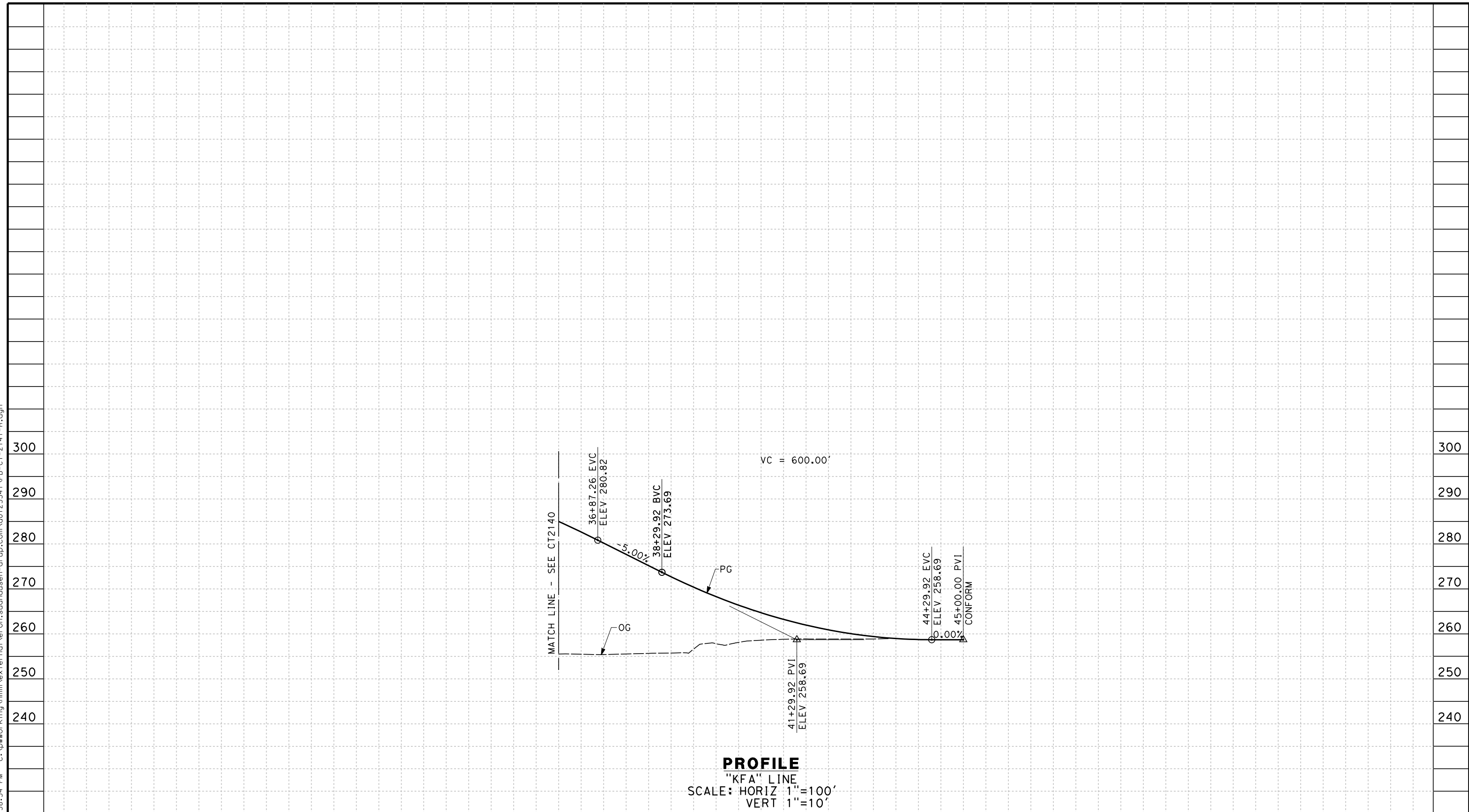


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 FARGO AVE

CONTRACT NO.	HSR 06-0003
DRAWING NO.	CT2140
SCALE	AS SHOWN
SHEET NO.	46 OF 60

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PROFILE
 "KFA" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	6	7	8	9	40	1	2	3	4	5	TOTAL
Exc											
Emb											

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

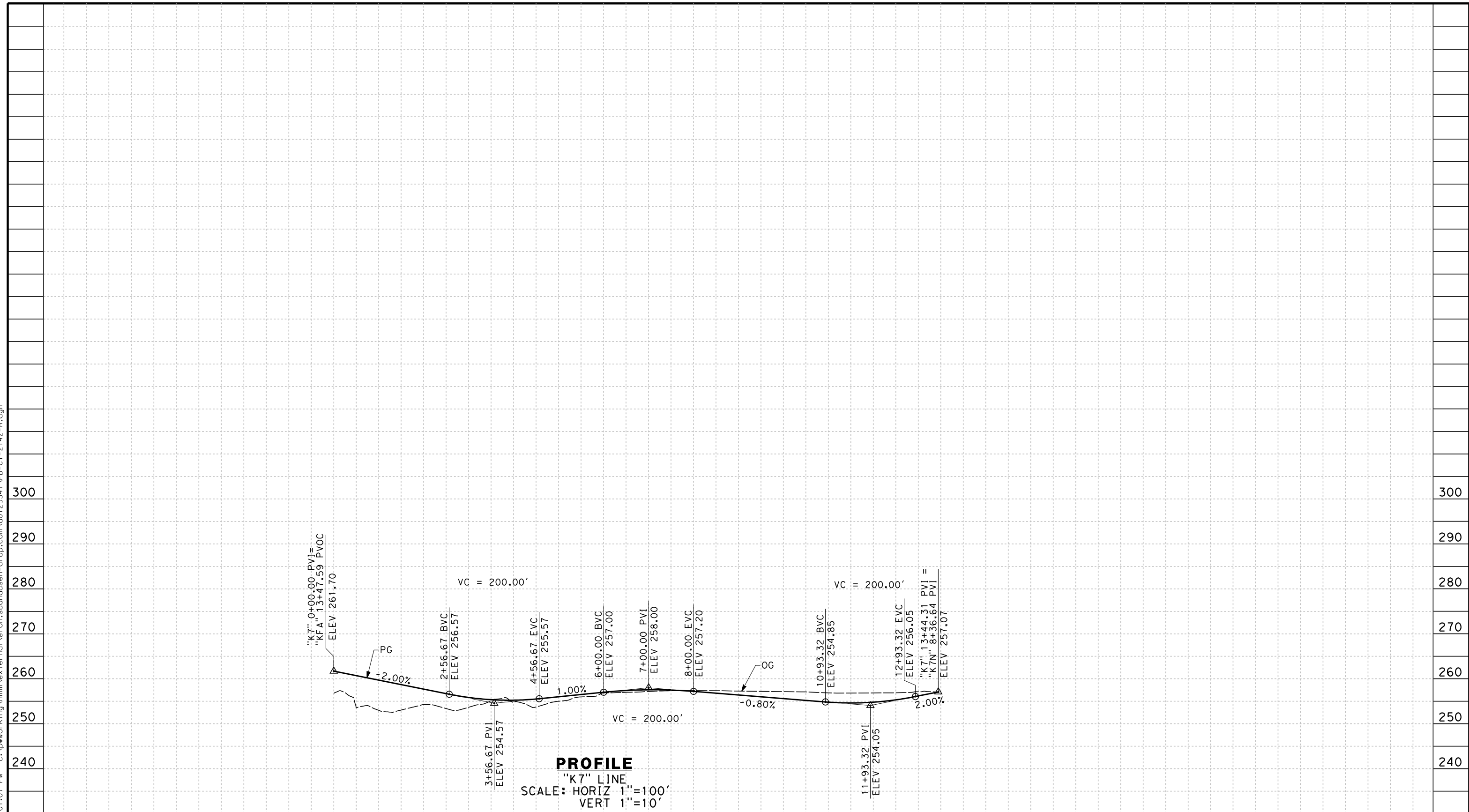
**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 FARGO AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2141
 SCALE
AS SHOWN
 SHEET NO.
47 OF 60

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STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	TOTAL
Exc																
Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



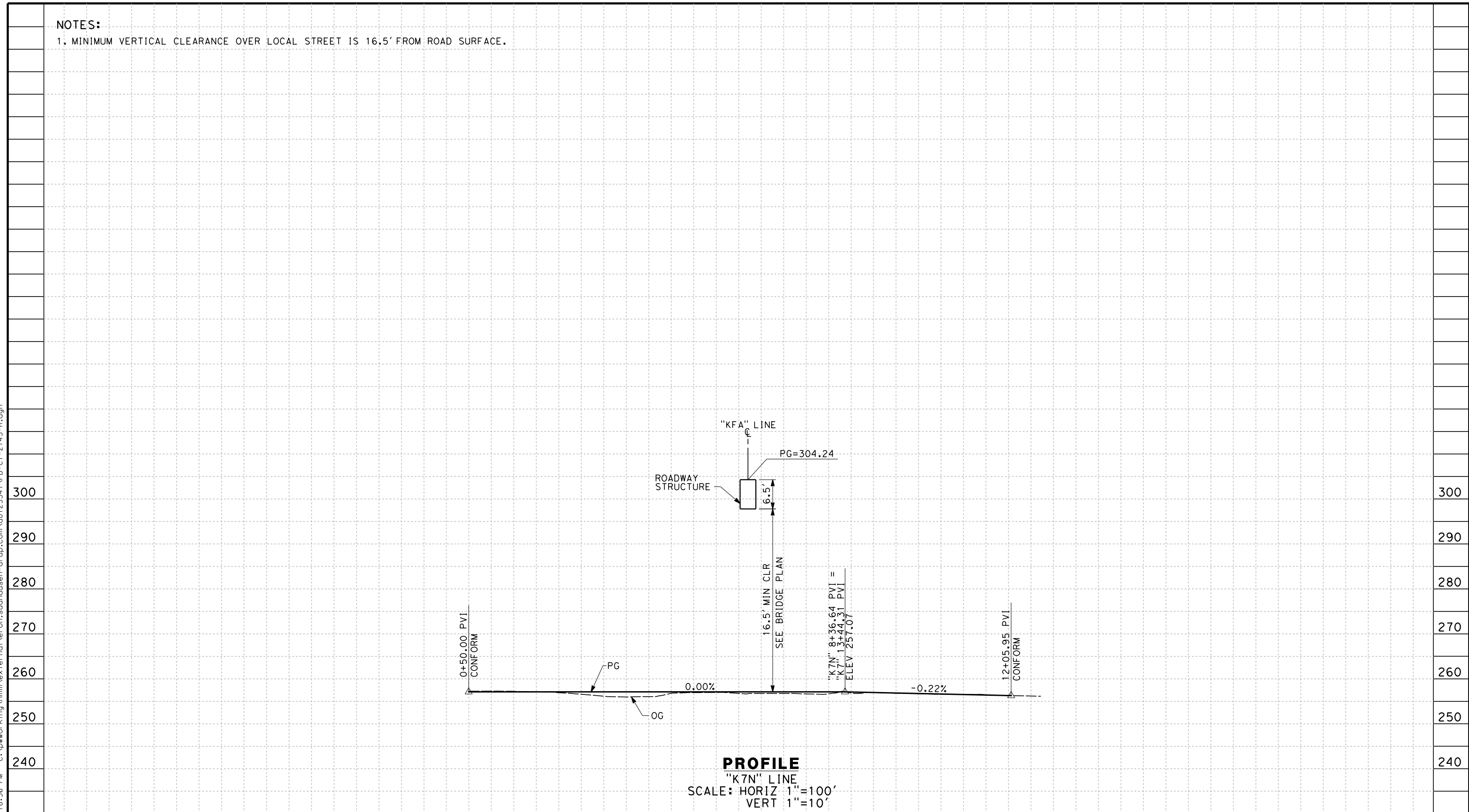
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 7 1/2 AVE CONNECTOR

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2142
 SCALE
AS SHOWN
 SHEET NO.
48 OF 60

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER LOCAL STREET IS 16.5' FROM ROAD SURFACE.

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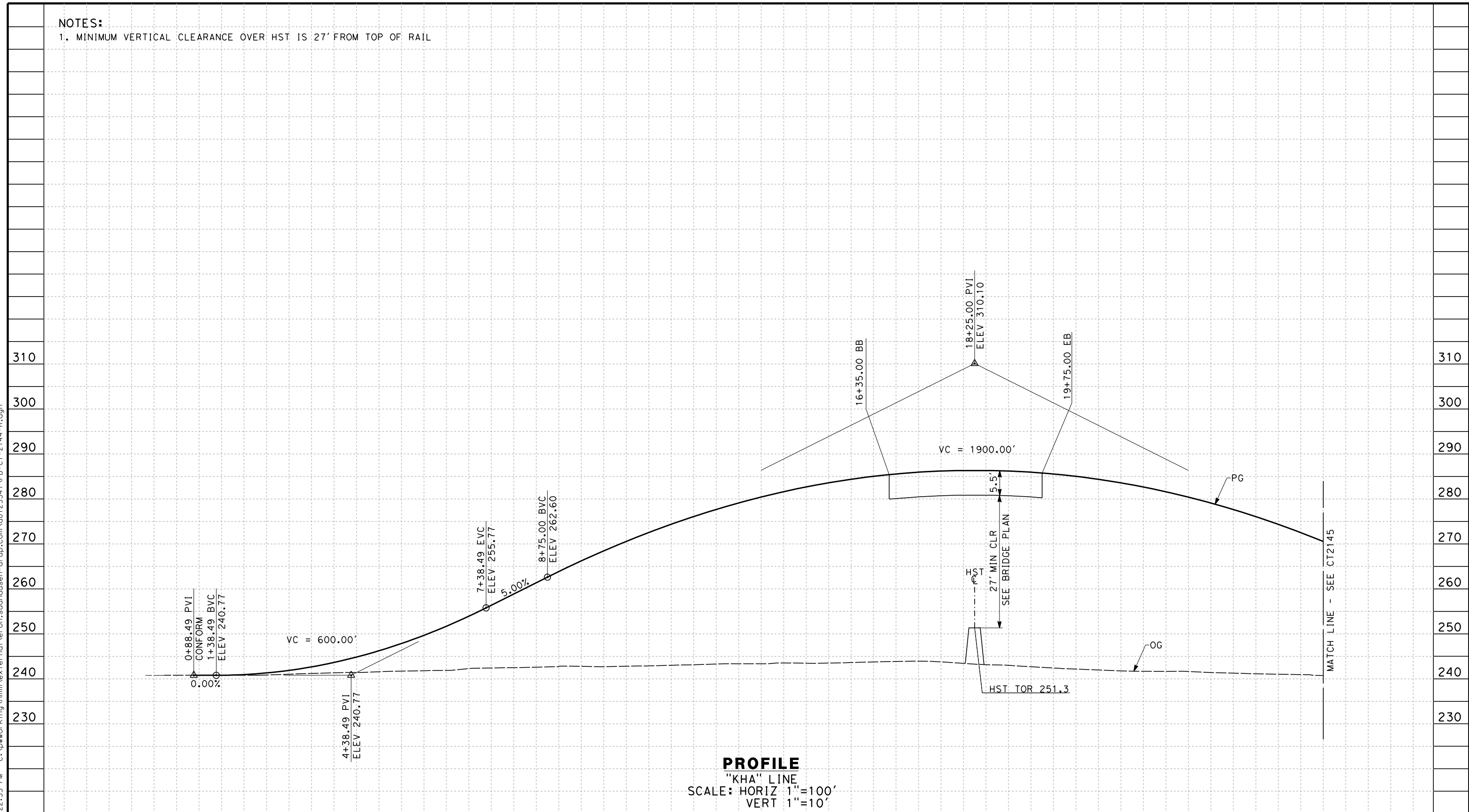
PROFILE
 "K7N" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	TOTAL
Exc														
Emb														

DESIGNED BY A. CANNON	RECORD SET 15% DESIGN SUBMISSION NOT FOR CONSTRUCTION			CALIFORNIA HIGH-SPEED TRAIN PROJECT FRESNO TO BAKERSFIELD HANFORD SUBSECTION ALIGNMENT H GRADE SEPARATION PROFILE 7 1/2 AVE	CONTRACT NO. HSR 06-0003 DRAWING NO. CT2143 SCALE AS SHOWN SHEET NO. 49 OF 60
DRAWN BY E. SUDHAUSEN					
CHECKED BY S. BROWN					
IN CHARGE R. COFFIN					
DATE 12/31/13					

REV	DATE	BY	CHK	APP	DESCRIPTION

NOTES:
 1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL



PROFILE
 "KHA" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	TOTAL
Exc																												
Emb																												

DESIGNED BY	A. CANNON
DRAWN BY	E. SUDHAUSEN
CHECKED BY	S. BROWN
IN CHARGE	R. COFFIN
DATE	12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



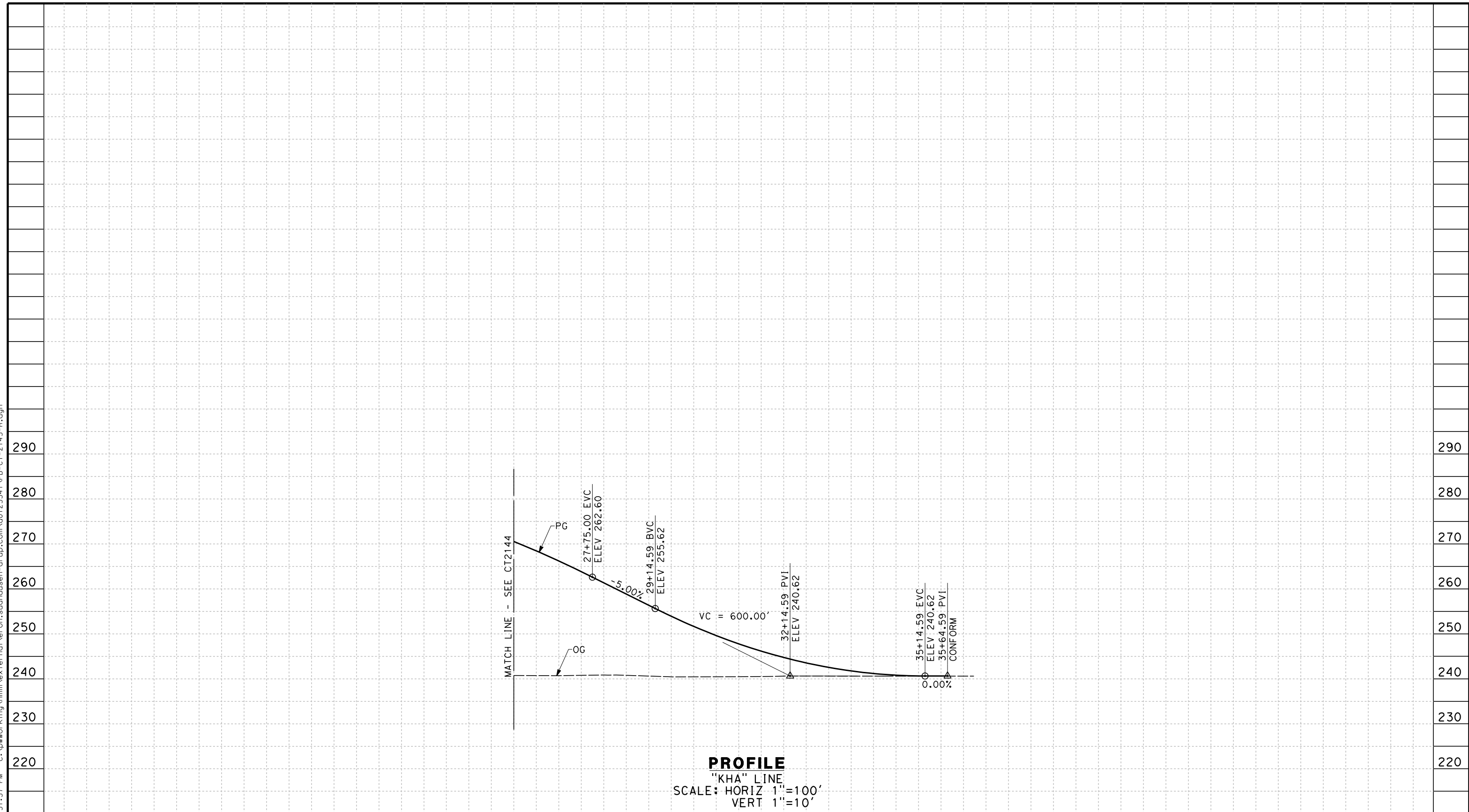
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 HANFORD ARMONA RD

CONTRACT NO.	HSR 06-0003
DRAWING NO.	CT2144
SCALE	AS SHOWN
SHEET NO.	50 OF 60

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STATION	6	7	8	9	30	1	2	3	4	35	6	TOTAL
Exc												
Emb												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**
 NOT FOR
 CONSTRUCTION

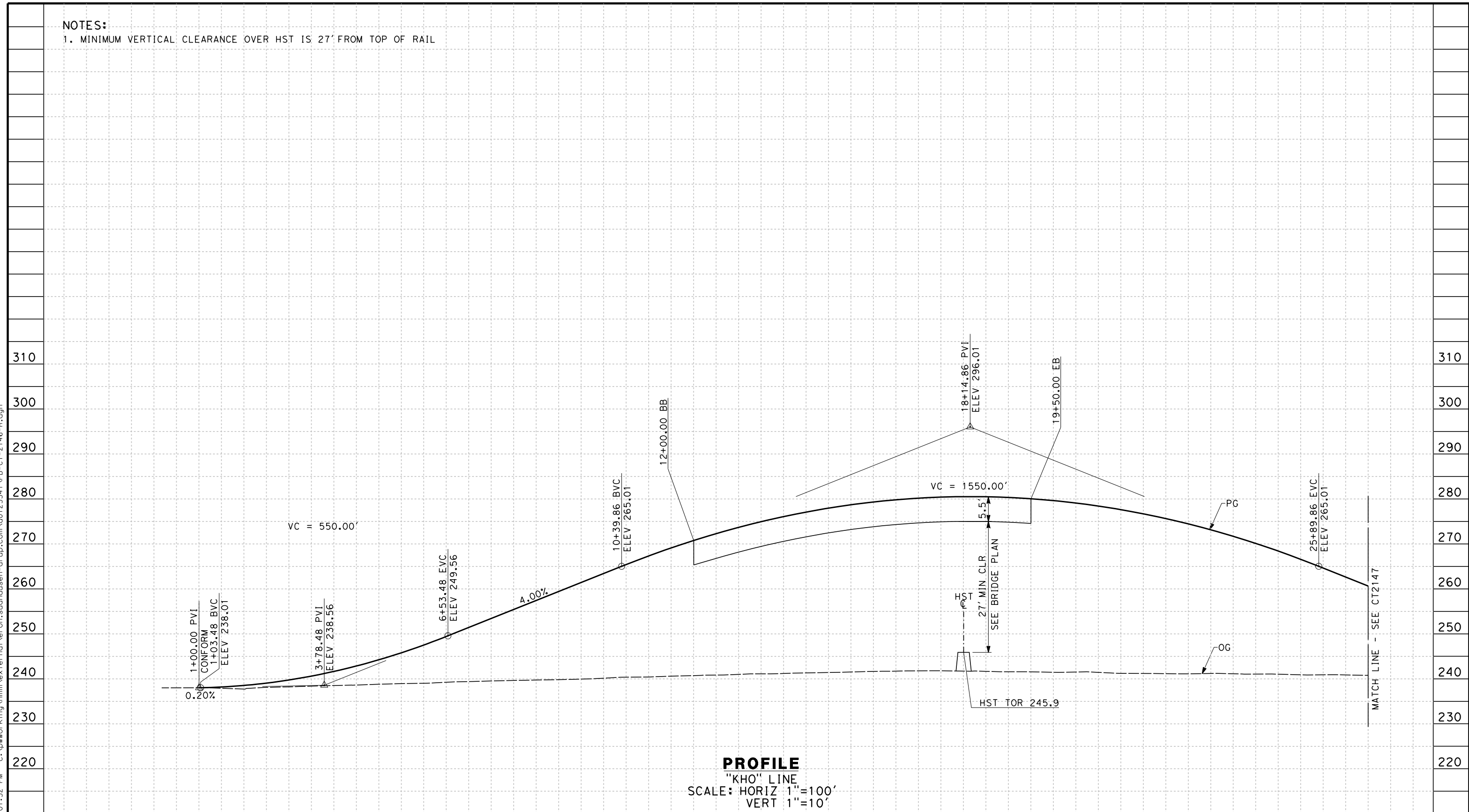


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 HANFORD ARMONA RD

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2145
 SCALE
AS SHOWN
 SHEET NO.
51 OF 60

NOTES:

1. MINIMUM VERTICAL CLEARANCE OVER HST IS 27' FROM TOP OF RAIL



STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	7	TOTAL
Exc																													
Emb																													

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

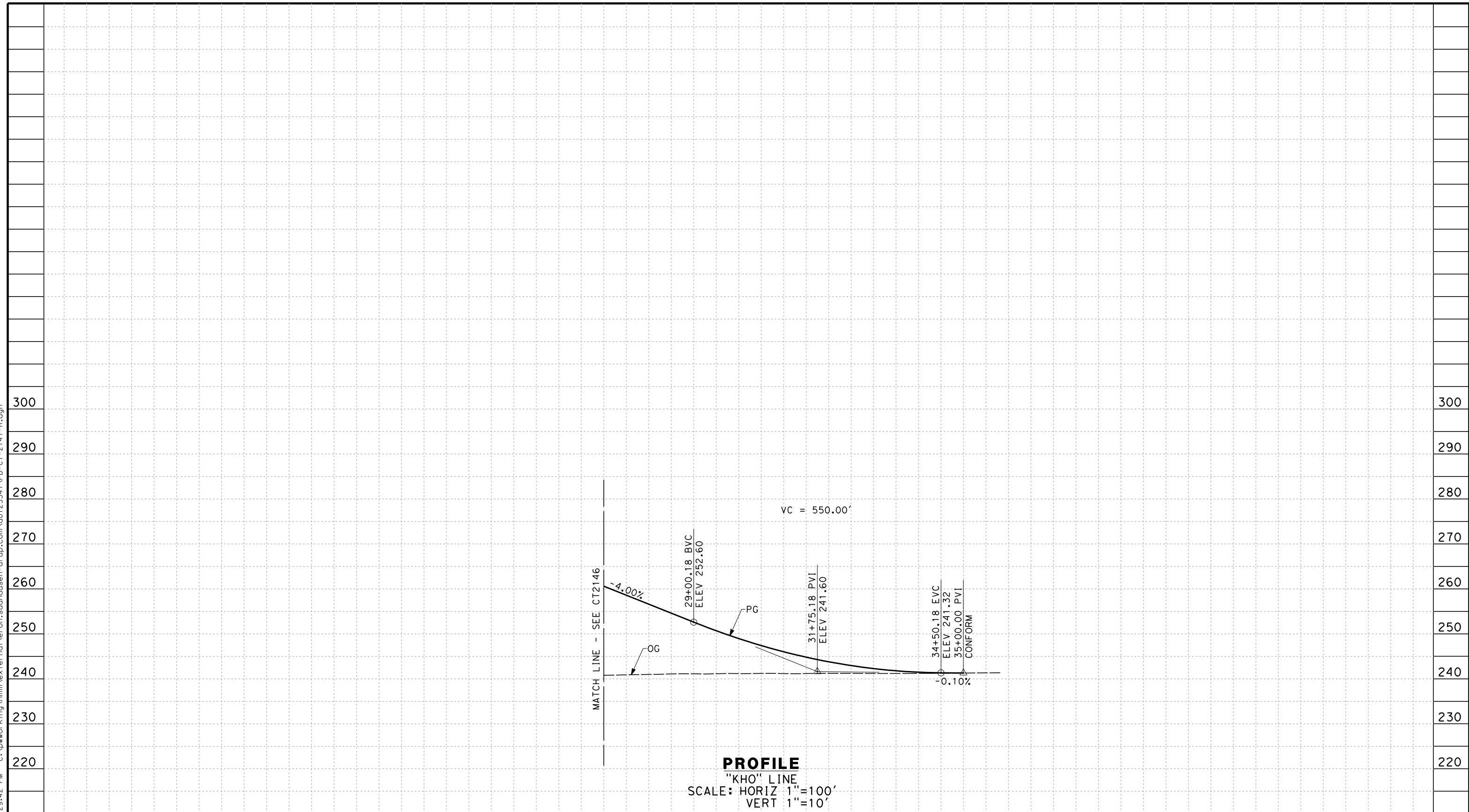


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 HOUSTON AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2146
 SCALE
AS SHOWN
 SHEET NO.
52 OF 60

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eron_sudhausen 12/27/2013 7:29:42 PM c:\pwworking\hmm\external\eron_sudhausen-arup.com\d0125341\FB-CT-2147-H.dgn



PROFILE
 "KHO" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	7	8	9	30	1	2	3	4	35	TOTAL
Exc										
Emb										

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
 A. CANNON
 DRAWN BY
 E. SUDHAUSEN
 CHECKED BY
 S. BROWN
 IN CHARGE
 R. COFFIN
 DATE
 12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

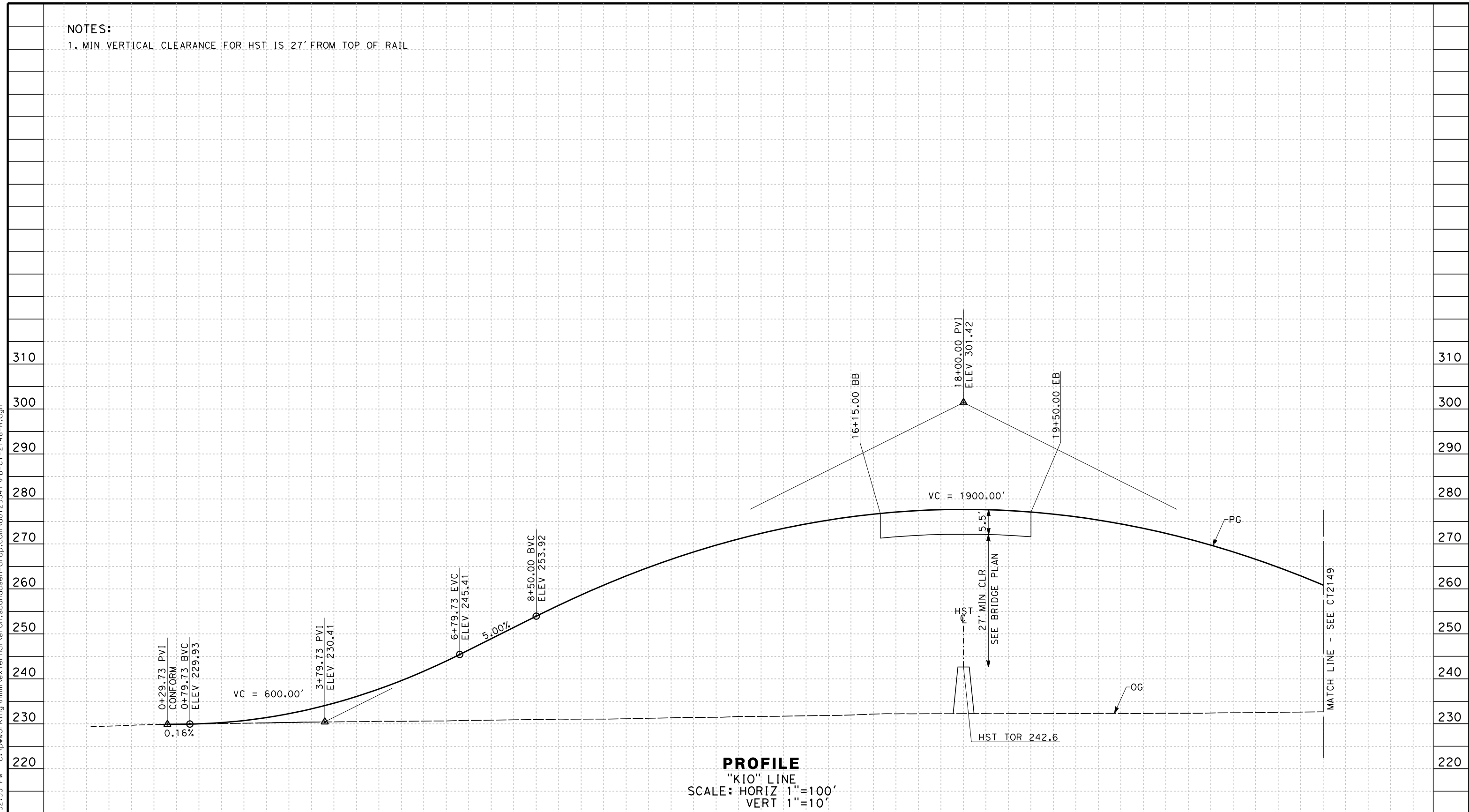
**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 HOUSTON AVE

CONTRACT NO.
 HSR 06-0003
 DRAWING NO.
 CT2147
 SCALE
 AS SHOWN
 SHEET NO.
 53 OF 60

NOTES:
 1. MIN VERTICAL CLEARANCE FOR HST IS 27' FROM TOP OF RAIL



PROFILE
 "KIO" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	3	4	25	6	TOTAL
Exc																												
Emb																												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

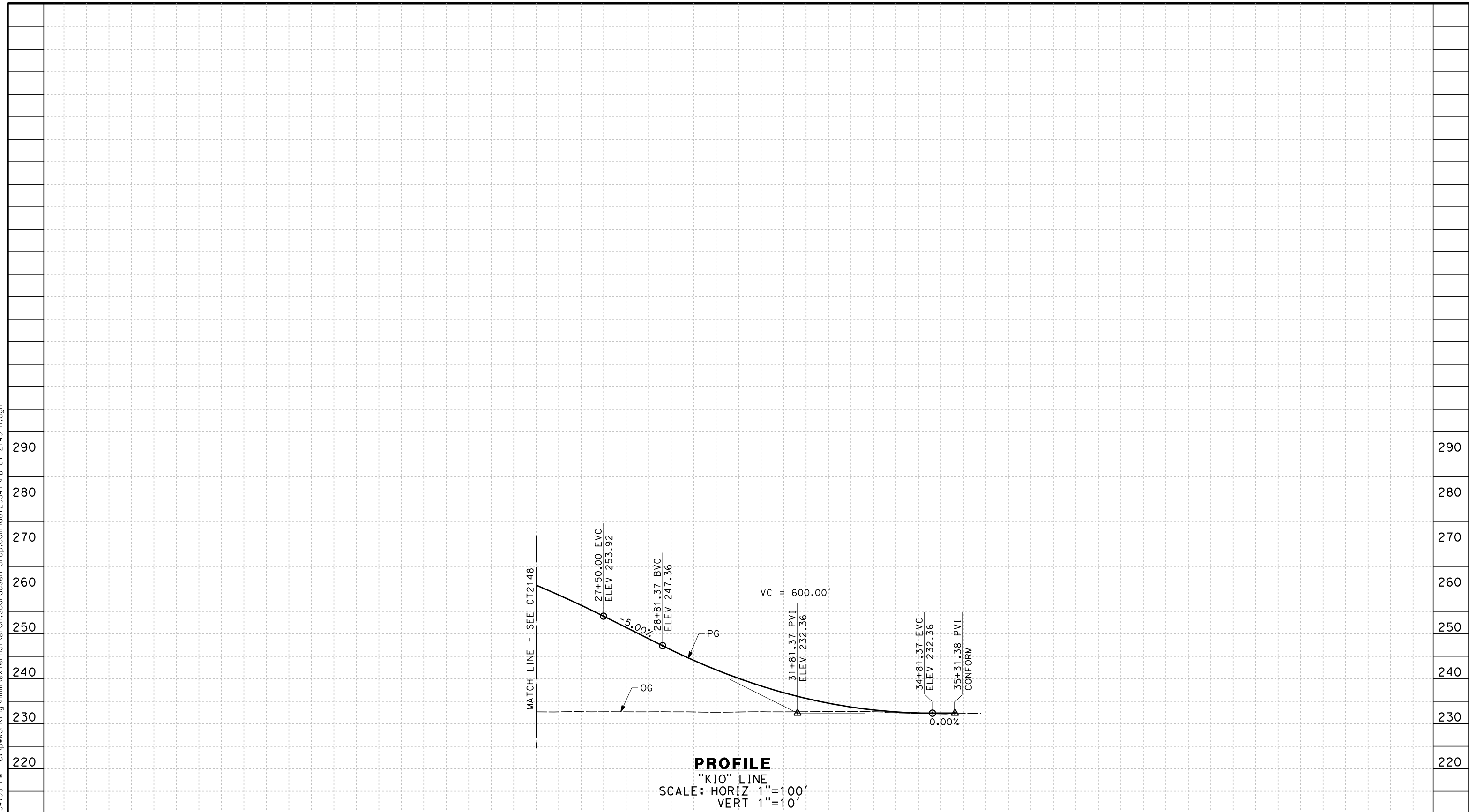


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 GRADE SEPARATION PROFILE
 IONA AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2148
 SCALE
AS SHOWN
 SHEET NO.
54 OF 60

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 eron.sudhausen

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PROFILE
 "KIO" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	6	7	8	9	30	1	2	3	4	35	6	TOTAL
Exc												
Emb												

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**

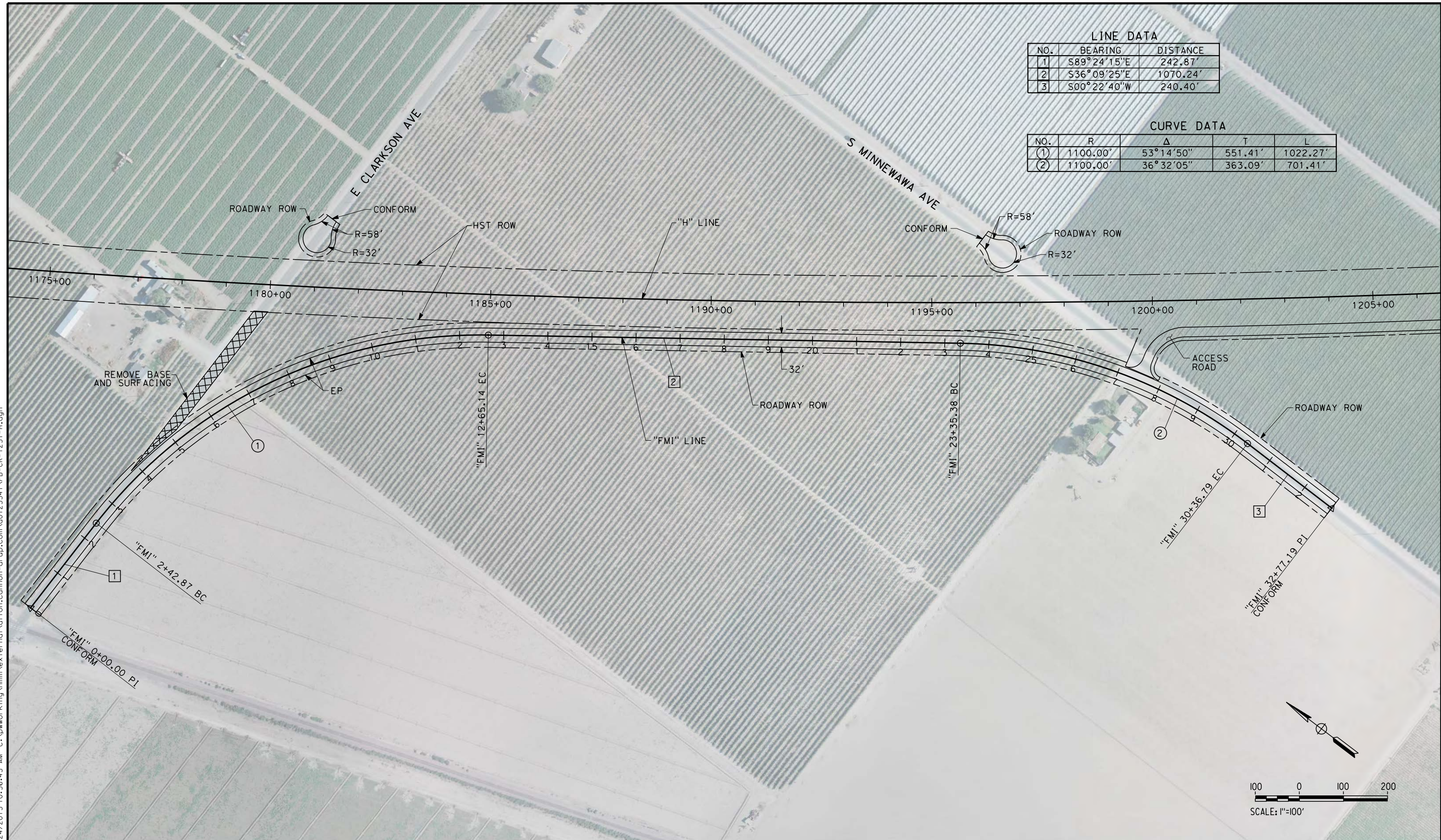


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 GRADE SEPARATION PROFILE
 IONA AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CT2149
 SCALE
AS SHOWN
 SHEET NO.
55 OF 60

LINE DATA		
NO.	BEARING	DISTANCE
1	S89°24'15"E	242.87'
2	S36°09'25"E	1070.24'
3	S00°22'40"W	240.40'

CURVE DATA				
NO.	R	Δ	T	L
①	1100.00'	53°14'50"	551.41'	1022.27'
②	1100.00'	36°32'05"	363.09'	701.41'



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 alton.cannon

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
 A. CANNON
 DRAWN BY
 E. SUDHAUSEN
 CHECKED BY
 S. BROWN
 IN CHARGE
 R. COFFIN
 DATE
 12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

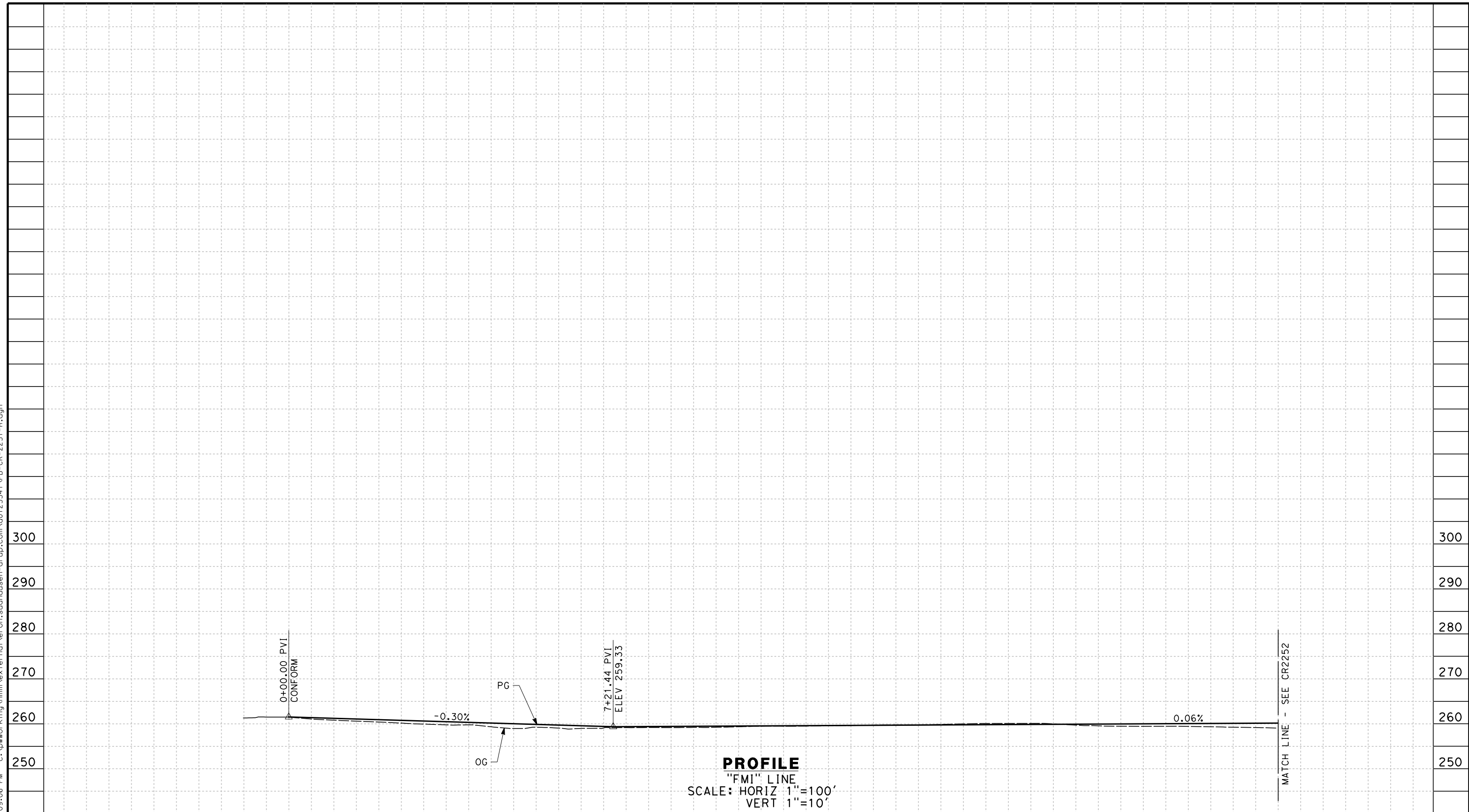
**NOT FOR
 CONSTRUCTION**



CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD
 HANFORD SUBSECTION
 ALIGNMENT H
 ROADWAY LAYOUT
 E CLARKSON AVE & S MINNEWAWA AVE

CONTRACT NO.
 HSR 06-0003
 DRAWING NO.
 CR1251
 SCALE
 AS SHOWN
 SHEET NO.
 56 OF 60

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PROFILE
 "FMI" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	0	1	2	3	4	5	6	7	8	9	10	1	2	3	4	15	6	7	8	9	20	1	2	TOTAL	
Exc																									
Emb																									

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

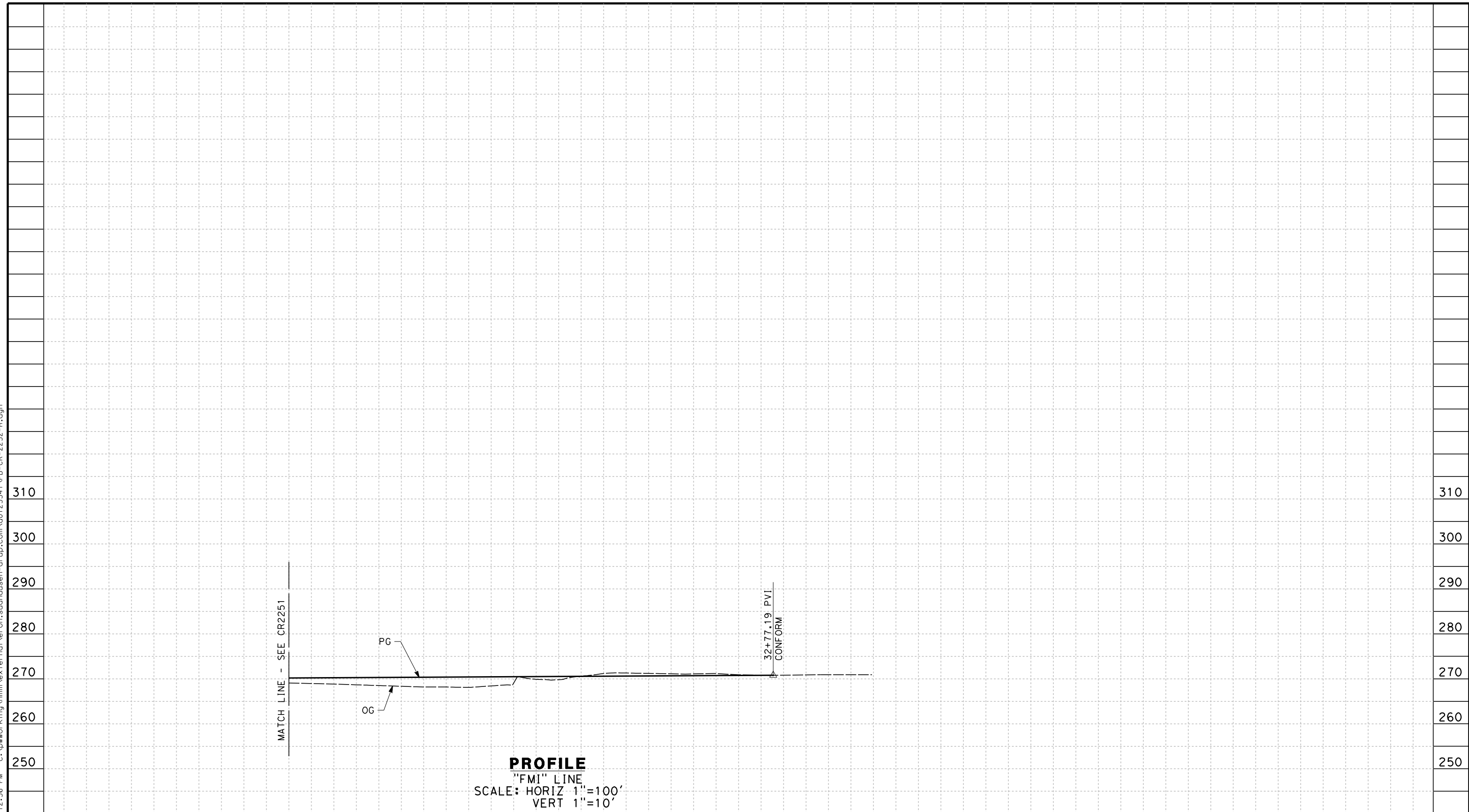
**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 ROADWAY PROFILE
 E CLARKSON AVE & S MINNEWAWA AVE

CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CR2251
 SCALE
AS SHOWN
 SHEET NO.
57 OF 60

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PROFILE
 "FMI" LINE
 SCALE: HORIZ 1"=100'
 VERT 1"=10'

STATION	2	3	4	25	6	7	8	9	30	1	2	3	4	35	TOTAL
Exc															
Emb															

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
 DRAWN BY
E. SUDHAUSEN
 CHECKED BY
S. BROWN
 IN CHARGE
R. COFFIN
 DATE
12/31/13

**RECORD SET 15%
 DESIGN SUBMISSION**

**NOT FOR
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
 FRESNO TO BAKERSFIELD**
 HANFORD SUBSECTION
 ALIGNMENT H
 ROADWAY PROFILE
 E CLARKSON AVE & S MINNEWAWA AVE

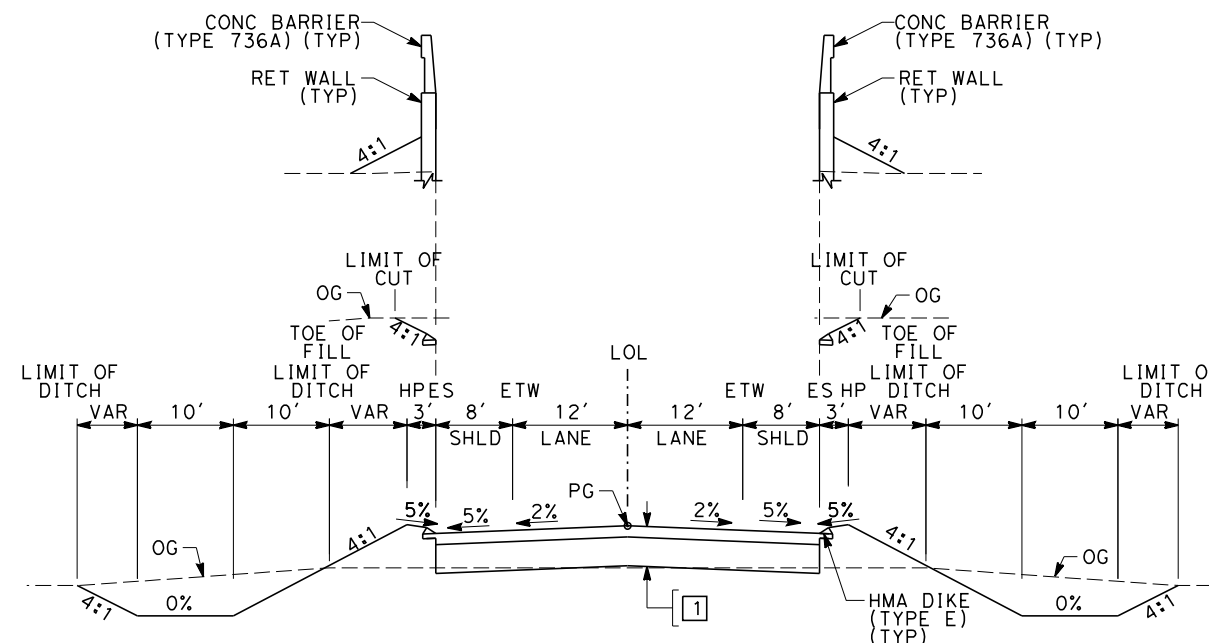
CONTRACT NO.
HSR 06-0003
 DRAWING NO.
CR2252
 SCALE
AS SHOWN
 SHEET NO.
58 OF 60

NOTES:

1. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. PAVEMENT SECTIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. EXACT DIMENSION AND MATERIAL OF THE PAVEMENT SECTION TO BE CONFIRMED.

**STRUCTURAL SECTIONS
TYPICAL ROADWAY**

- 1 - 0.60' HMA (TYPE A)
1.50' CL2 AB
- 2 - 0.40' HMA (TYPE A)
1.20' CL2 AB

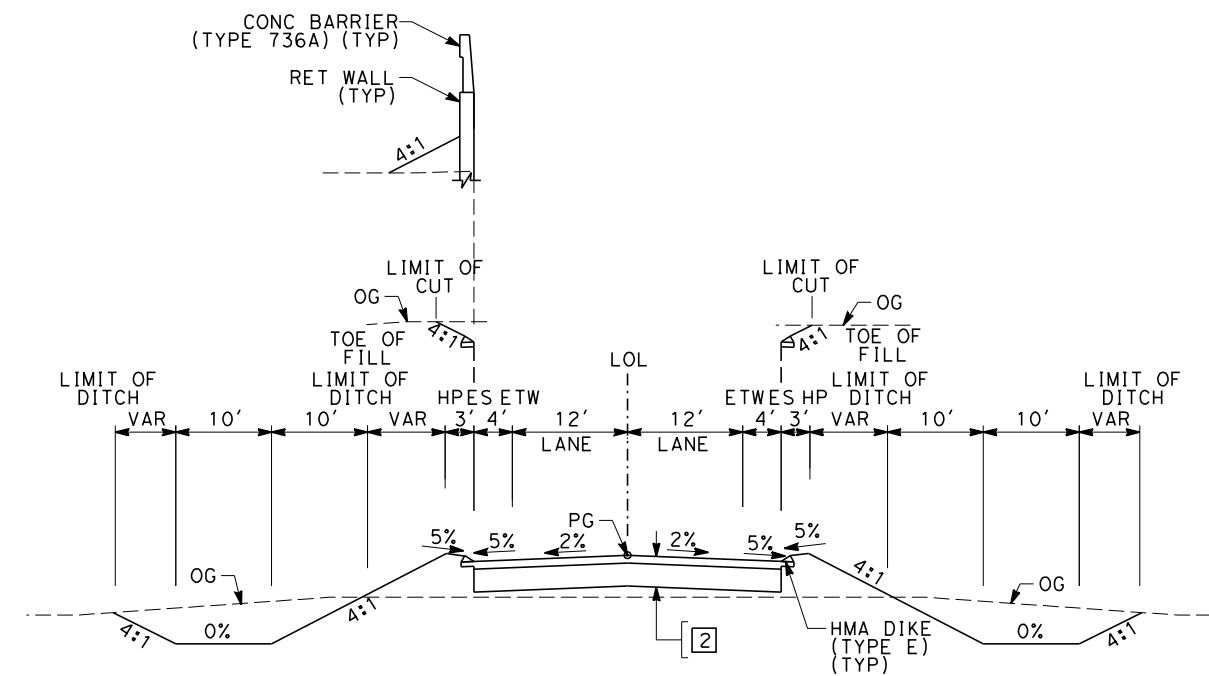


SECTION A

"FEL" 4+00.00 TO 18+63.00	"KEL" 29+60.00 TO 44+50.00
"FEL" 22+11.00 TO 37+00.00	"KFL" 8+00.00 TO 27+98.00
"FFO" 20+60.00 TO 36+00.00	"KFL" 30+72.00 TO 49+00.00
"FFO" 38+70.00 TO 54+00.00	"KHA" 4+50.00 TO 16+35.00
"KEX" 15+00.00 TO 25+80.00	"KHA" 19+75.00 TO 27+50.00
"KEX" 28+80.00 TO 43+00.00	"KHO" 3+50.00 TO 12+00.00
"KEL" 12+00.00 TO 26+75.00	"KHO" 19+50.00 TO 31+00.00

TABLE OF DESIGN SPEEDS

STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED	CRITERIA/JURISDICTION
E CLARKSON AVE	FMI	55	AASHTO/FRESNO COUNTY
S CLOVIS AVE	FCL	65	AASHTO/FRESNO COUNTY
E ELKHORN AVE	FEL	65	AASHTO/FRESNO COUNTY
S FOWLER AVE	FFO	65	AASHTO/FRESNO COUNTY
E DAVIS AVE	FDA	65	AASHTO/FRESNO COUNTY
DOVER AVE	KDO	55	HDM/KINGS COUNTY
8TH AVE	K8N/K8S	55	HDM/KINGS COUNTY
EXCELSIOR AVE	KEX	55	HDM/KINGS COUNTY
ELDER AVE	KEL	55	HDM/KINGS COUNTY
FLINT AVE	KFL	60	HDM/KINGS COUNTY
FARGO AVE	KFA	55	HDM/KINGS COUNTY
7 1/2 AVE	K7N	55	HDM/KINGS COUNTY
7 1/2 AVE CONNECTOR	K7	25	HDM/KINGS COUNTY
HANFORD ARMONA RD	KHA	55	HDM/KINGS COUNTY
HOUSTON AVE	KHO	55	HDM/KINGS COUNTY
IONA AVE	KIO	55	HDM/KINGS COUNTY



SECTION B

"FCL" 11+00.00 TO 26+95.00	"K8N" 22+00.00 TO 34+73.58
"FCL" 29+95.00 TO 45+00.00	"K8S" 10+00.00 TO 23+00.00
"FDA" 8+00.00 TO 23+35.50	"KFA" 11+00.00 TO 25+33.00
"FDA" 27+97.50 TO 42+80.00	"KFA" 28+65.00 TO 43+00.00
"KDO" 12+00.00 TO 26+50.00	"KIO" 3+00.00 TO 16+15.00
"KDO" 29+55.00 TO 44+00.00	"KIO" 19+50.00 TO 33+00.00

\$USER \$ DATE \$ TIME \$ FILE \$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
J. MONG
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**

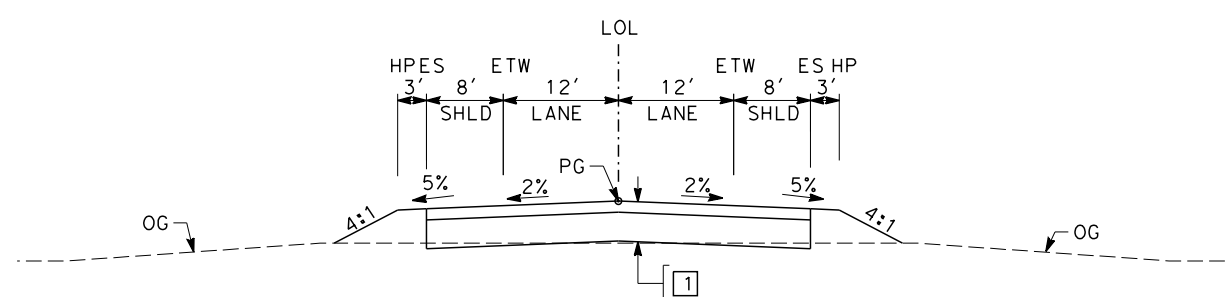


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**

HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

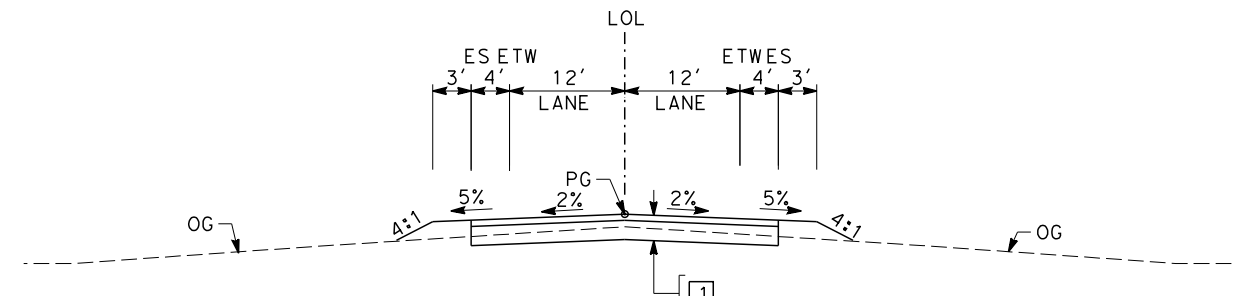
CONTRACT NO.
HSR 06-0003
DRAWING NO.
CT3030
SCALE
NO SCALE
SHEET NO.
59 OF 60

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SECTION C

"FEL" 1+00.00 TO 4+00.00	"KEL" 44+60.00 TO 46+00.00
"FEL" 37+00.00 TO 39+00.00	"KFL" 6+00.00 TO 8+00.00
"FFO" 8+00.00 TO 20+60.00	"KFL" 49+00.00 TO 52+00.00
"FFO" 54+00.00 TO 59+00.00	"KHA" 0+88.49 TO 4+50.00
"KEX" 9+00.00 TO 15+00.00	"KHA" 27+50.00 TO 35+64.59
"KEX" 43+00.00 TO 47+00.00	"KHO" 1+00.00 TO 3+50.00
"KEL" 10+00.00 TO 12+00.00	"KHO" 31+00.00 TO 35+00.00



SECTION D

"K7" 0+00.00 TO 13+44.31	"K8N" 12+50.00 TO 22+00.00
"K7N" 0+50.00 TO 12+05.95	"K8S" 23+00.00 TO 25+00.00
"FMI" 0+00.00 TO 32+77.19	"KDO" 10+00.00 TO 12+00.00
"FCL" 8+00.00 TO 11+00.00	"KDO" 44+00.00 TO 46+00.00
"FCL" 45+00.00 TO 52+00.00	"KFA" 9+00.00 TO 11+00.00
"FDA" 6+00.00 TO 8+00.00	"KFA" 43+00.00 TO 45+00.00
"FDA" 42+80.00 TO 45+00.00	"KIO" 0+29.73 TO 3+00.00
	"KIO" 33+00.00 TO 35.31.38

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
A. CANNON
DRAWN BY
E. SUDHAUSEN
CHECKED BY
S. BROWN
IN CHARGE
R. COFFIN
DATE
12/31/13

**RECORD SET 15%
DESIGN SUBMISSION**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
FRESNO TO BAKERSFIELD**
HANFORD SUBSECTION
ALIGNMENT H
ROADWAY / GRADE SEPARATION
TYPICAL CROSS SECTIONS

CONTRACT NO. HSR 06-0003
DRAWING NO. CT3031
SCALE NO SCALE
SHEET NO. 60 OF 60