California High-Speed Train Project

Request for Proposal for Design-Build Services

RFP No.: HSR 11-16

HYBRID Alternative
Plan, Profile & Typical Sections

CALIFORNIA HIGH-SPEED TRAIN

Track Alignment Plans

"Excerpts of Record Set
For Procurement Purposes Only.
Avenue 17 to Veterans Blvd"

Record Set

15% Design Submittal

Merced to Fresno Section

Plan, Profile & Typical Sections

HYBRID Alternative

May 2011

CALIFORNIA
High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
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	T1117-A	HYBRID		PLAN AND PROFILE	STA 2195+00 TO STA 2250+00
	T1118-A	HYBRID		PLAN AND PROFILE	STA 2250+00 TO STA 2305+00
	T1119-A	HYBRID		PLAN AND PROFILE	STA 2305+00 TO STA 2360+00
	T1120-A	HYBRID		PLAN AND PROFILE	STA 2360+00 TO STA 2415+00
	T1121-A	HYBRID		PLAN AND PROFILE	STA 2415+00 TO STA 2470+00
	T1122-A	HYBRID		PLAN AND PROFILE	STA 2470+00 TO STA 2525+00
	T1123-A	HYBRID		PLAN AND PROFILE	STA 2525+00 TO STA 2580+00
	T1124-A	HYBRID		PLAN AND PROFILE	STA 2580+00 TO STA 2635+00
	T1125-A	HYBRID		PLAN AND PROFILE	STA 2635+00 TO STA 2690+00
	T1126-A	HYBRID		PLAN AND PROFILE	STA 2690+00 TO STA 2740+55.75
	T1127-A	HYBRID		PLAN AND PROFILE	STA 1713+98 TO 1748+00
	T1128-A	HYBRID		PLAN AND PROFILE	STA 1748+00 TO STA 1801+61.52

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY A. SHIELDS
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID ALIGNMENT

INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. T0010-A
SCALE NONE
SHEET NO. ### OF ###

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ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
CS	CURVE TO SPIRAL
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CIRCULAR CURVES
PCS	POINT OF CURVE TO SPIRAL
PF	POINT OF FROG
PI	POINT OF INTERSECTION OF TWO TANGENTS
PITO	POINT OF INTERSECTION OF TURNOUT
POC	POINT ON CURVE
POS	POINT ON SPIRAL
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PS	POINT OF SWITCH
PSC	POINT OF SPIRAL TO CURVE
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
SC	SPIRAL TO CURVE
SPO	POINT OF ORIGIN OF COMPOUND SPIRAL
SS	POINT OF SPIRAL TO SPIRAL
ST	SPIRAL TO TANGENT
TS	TANGENT TO SPIRAL
V	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EQ	EQUATION
EXIST(E)	EXISTING
IN	INCH
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVER HEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL	PROFILE GRADE LINE
RR	RAILROAD
RD	ROAD
R/W ROW	RIGHT OF WAY
RT	RIGHT
SS	SANITARY SEWER
SHT	SHEET
ST	STREET
STD	STANDARD
SD	STORM DRAIN
STRUCT	STRUCTURE
T	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TO	TURNOUT
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI

NOTES:

1. EXISTING ROADS TO BE GRADE SEPARATED OVER THE HIGH SPEED TRAIN (HST) RIGHT OF WAY ARE INDICATED IN THE ALIGNMENT PROFILE. ALL OTHER ROADS CROSSING THE PROPOSED HST TRACKS WILL BE CLOSED OR RELOCATED. SEE ROADWAY PLANS FOR ADDITIONAL INFORMATION.
2. SEE STRUCTURE PLANS FOR LIMITS AND DETAILS OF VIADUCTS, STREAM CROSSINGS, RETAINING WALLS AND OTHER HST STRUCTURES.
3. SEE ROADWAY PLANS FOR ROADWAY RELOCATIONS, GRADE SEPARATIONS, AND MODIFICATIONS TO STATE HIGHWAY FACILTIES.
4. UTILITIES INDICATED ON THE PLANS ARE FOR REFERENCE ONLY. SEE "UTILITIES CONFLICT MEMO" FOR ADDITIONAL INFORMATION AND PROPOSED RELOCATION CONCEPTS.
5. ROAD/LOCAL ACCESS DELINEATED FOR FURTHER EVALUATION. ADDITIONAL STUDIES WILL BE CONDUCTED DURING PRELIMINARY ENGINEERING PHASE (30% DESIGN) TO SUBSTANTIATE ITS INCLUSION OR EXCLUSION FROM THE PROPOSED IMPORVEMENTS.

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ShieldsA

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. CHAN
DRAWN BY S. LEONG
CHECKED BY V. CHIO
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GENERAL

ABBREVIATIONS, SYMBOLS AND NOTES

CONTRACT NO. HSR06-007
DRAWING NO. T0100-A
SCALE NO SCALE
SHEET NO. ### OF ###

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
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DATE 07/27/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALIGNMENT
AVENUE 24
KEY MAP
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. T0103-A
SCALE NO SCALE
SHEET NO. ### OF ###

shieldsa 3/8/2012 10:24:51 AM \\uscr1fp001\cadd\chsr\60022962\Task-03_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\ELECTONIC SUBMITTAL 3-1-2012\TRACK - Opt 1

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-HYBRID MAIN LINE SB

CURVE	DESIGN SPEED (V) (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION (Ea) (IN)	UNBALANCED SUPERELEVATION (Eu) (IN)	SPIRAL LENGTH (Ls) (FT)	BEGIN STATION	END STATION	BEGIN DRAWING
HYBRID202	250	28000	6.00	2.93	2000	2106+38.05	2169+50.77	T1115-A
HYBRID203	250	28000	6.00	2.93	2000	2280+10.37	2414+40.72	T1118-A
HYBRID204	250	28016.5	6.00	2.93	2000	2458+01.31	2561+46.71	T1121-A
HYBRID205	250	28016.5	6.00	2.93	2000	2599+58.87	2731+68.17	T1124-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-HYBRID MAIN LINE NB

	DESIGN SPEED (V) (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION (Ea) (IN)	UNBALANCED SUPERELEVATION (Eu) (IN)	SPIRAL LENGTH (Ls) (FT)	BEGIN STATION	END STATION	BEGIN DRAWING
HYBRID102	250	28016.5	6.00	2.93	2000	2106+50.94	2169+66.78	T1115-A
HYBRID103	250	28016.5	6.00	2.93	2000	2580+25.80	2414+74.09	T1118-A
HYBRID104	250	28000	6.00	2.93	2000	2458+24.68	2566+63.96	T1121-A
HYBRID105	250	28000	6.00	2.93	2000	2599+58.87	2731+68.17	T1121-A

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY A. SHIELDS
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IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALIGNMENT

TRACK GEOMETRY DATA
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. T0150-A
SCALE NO SCALE
SHEET NO. ### OF ###

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ALTERNATIVE HYBRID AVENUE 24

ALIGNMENT	BEGIN STATION	END STATION	SECTION
HYBRID 24	892+90	926+80	AG2
	926+80	1020+00	WYE1
	1020+00	1185+00	AG2
	1185+00	1230+00	WYE1
	1230+00	1360+00	AG2
	1360+00	1375+00	RF2
	1375+00	1435+00	EL1
	1435+00	1443+00	RF2
	1443+00	2100+00	AG2
	2100+00	2135+00	EL1
	2135+00	2681+00	AG2
	2681+00	2695+00	RF2
	2695+00	2731+50	EL1
	2731+50	2740+55	EL5
HYBRID-FR			
	1713+98	1737+00	EL6
	1737+00	1764+78	EL7
	1764+78	1767+00	EL8
	1767+00	1788+84	RF3
	1788+84	1801+61	AG6

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A.SHIELDS
DRAWN BY A. SHIELDS
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

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GENERAL

TYPICAL SECTION LIMITS

CONTRACT NO. HSR06-007
DRAWING NO. T3000-A
SCALE NO SCALE
SHEET NO. ### OF ###

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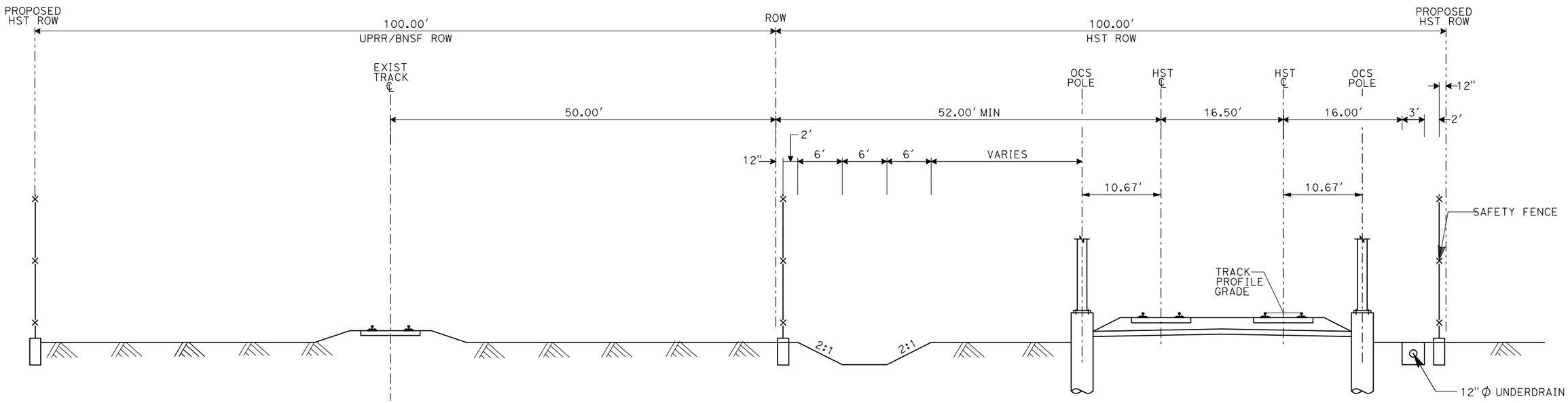
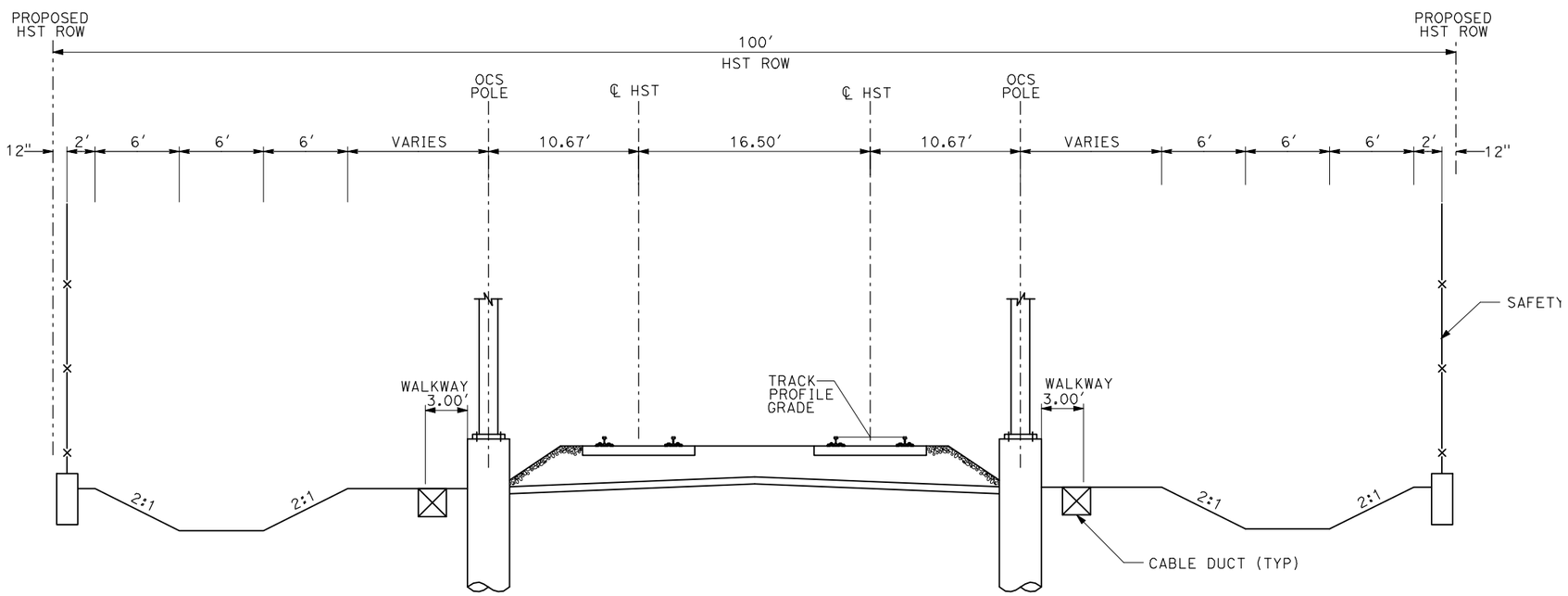


AG1- DOUBLE TRACK AT GRADE ADJACENT TO UPRR/BNSF



AG2 - DOUBLE TRACK AT GRADE

NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 1 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3001-A
SCALE NO SCALE
SHEET NO. OF ###

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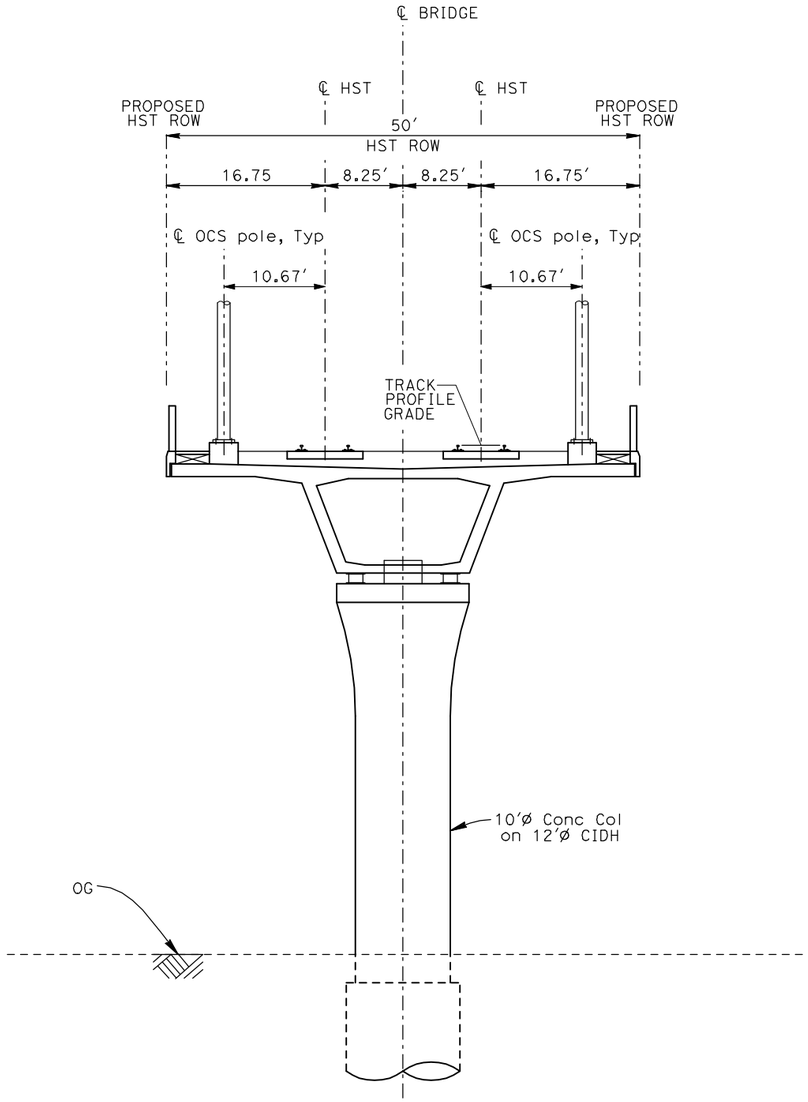
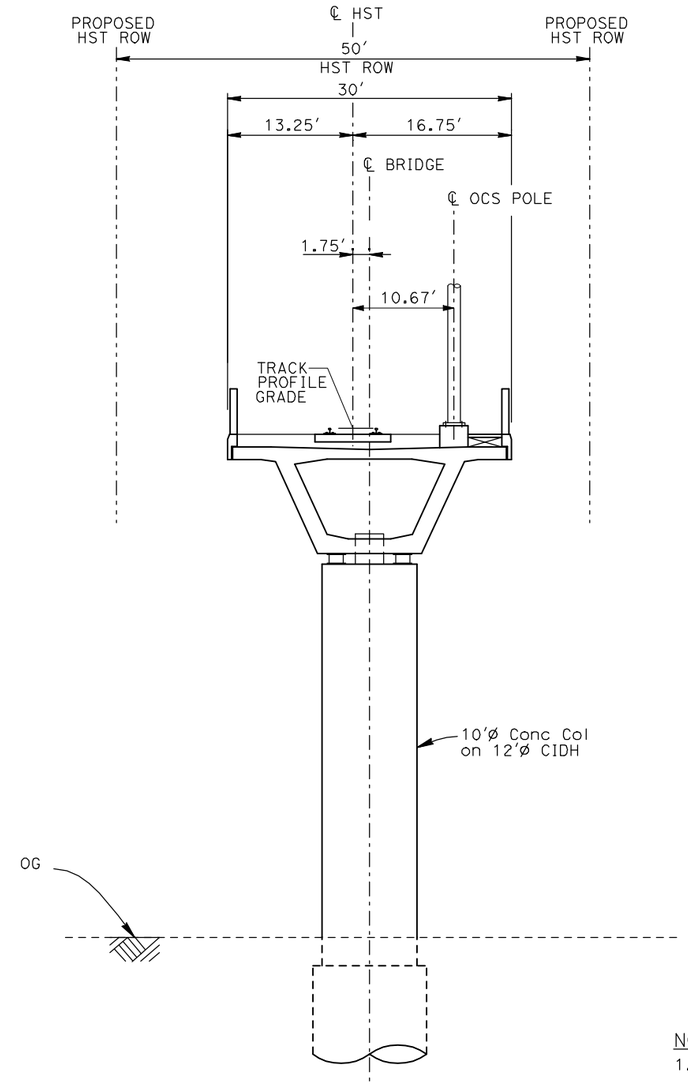


EL1 - DOUBLE TRACK ELEVATED



EL2 - SINGLE TRACK ELEVATED

NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
2. BACK-TO-BACK CANTILEVERS ON A SINGLE POLE MAY BE PERMITTED AT PASSENGER STATIONS.
3. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY C. VALADAO
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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 4 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3004-A
SCALE NO SCALE
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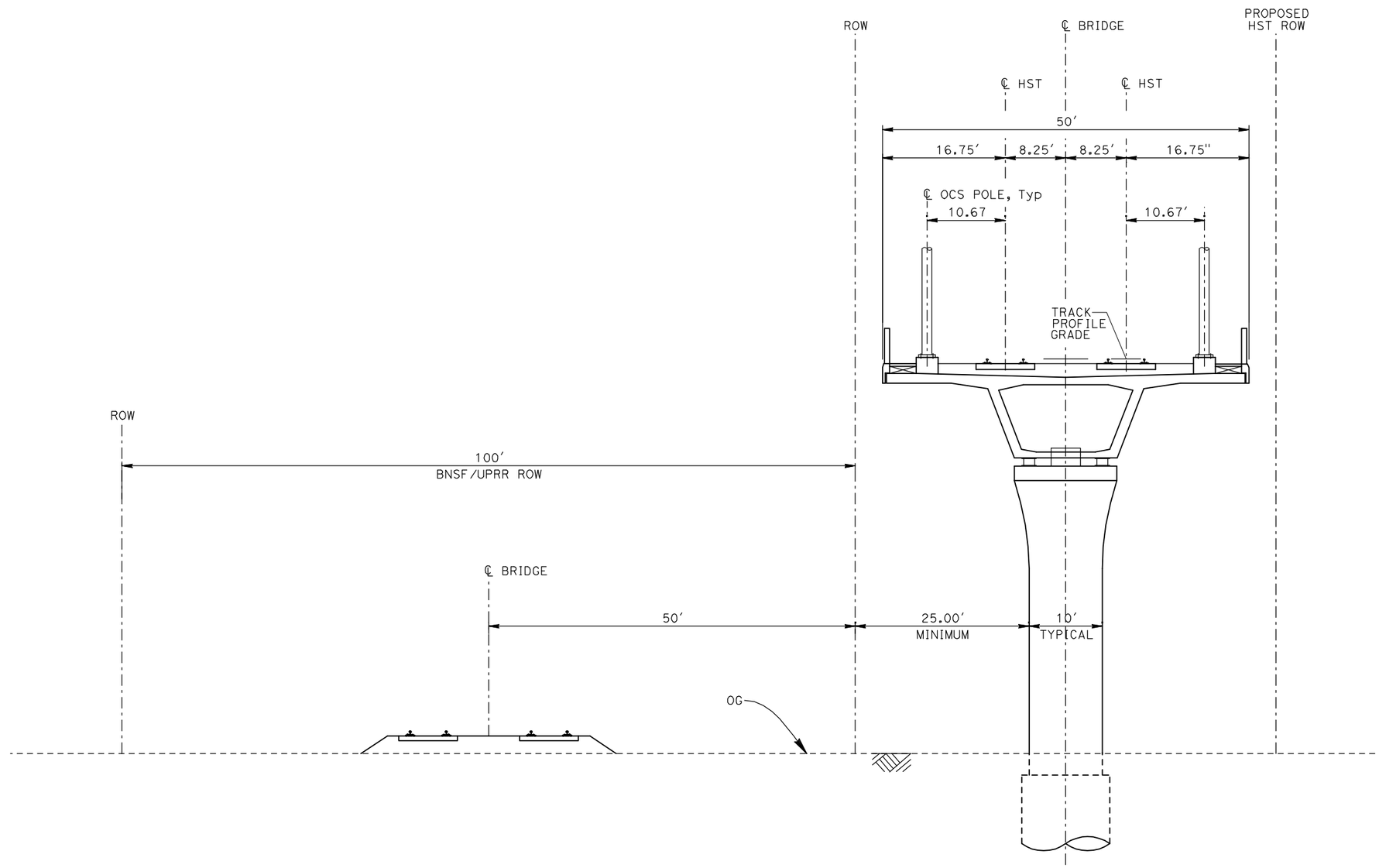

EL3 - DOUBLE TRACK ELEVATED ADJACENT TO UPRR/BNSF

NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY C. VALADAO
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 5 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3005-A
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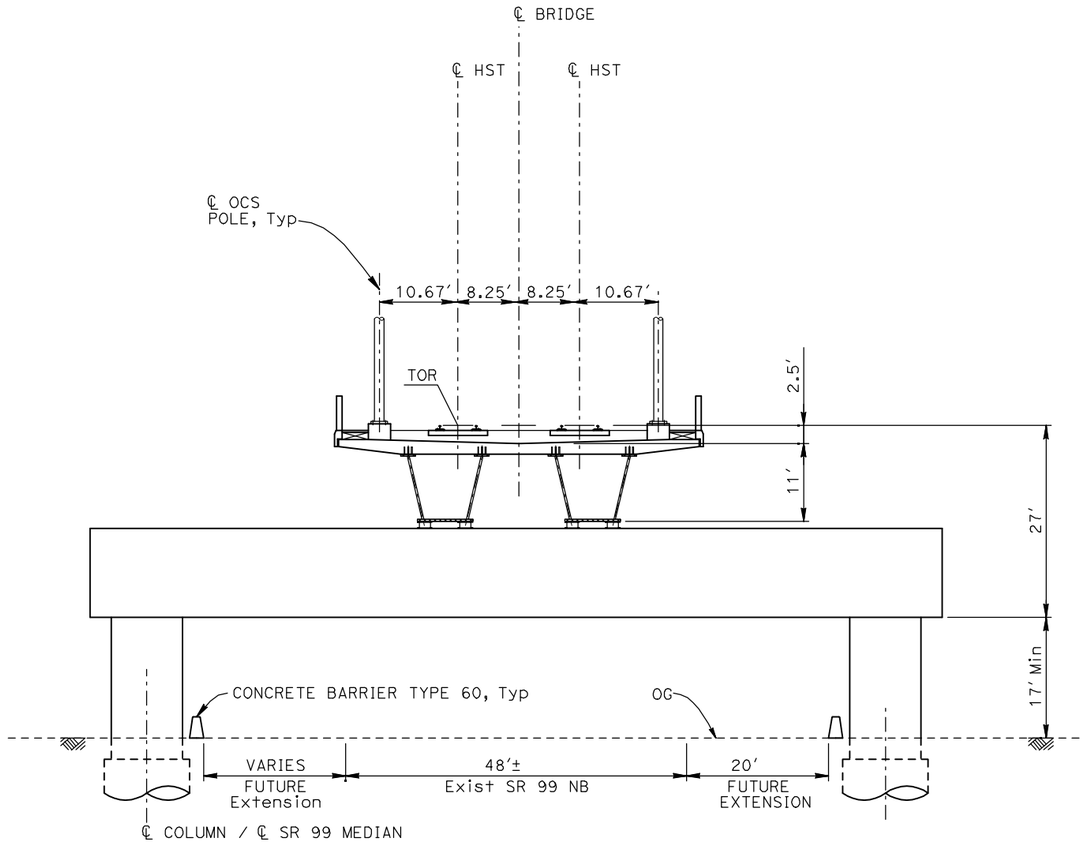
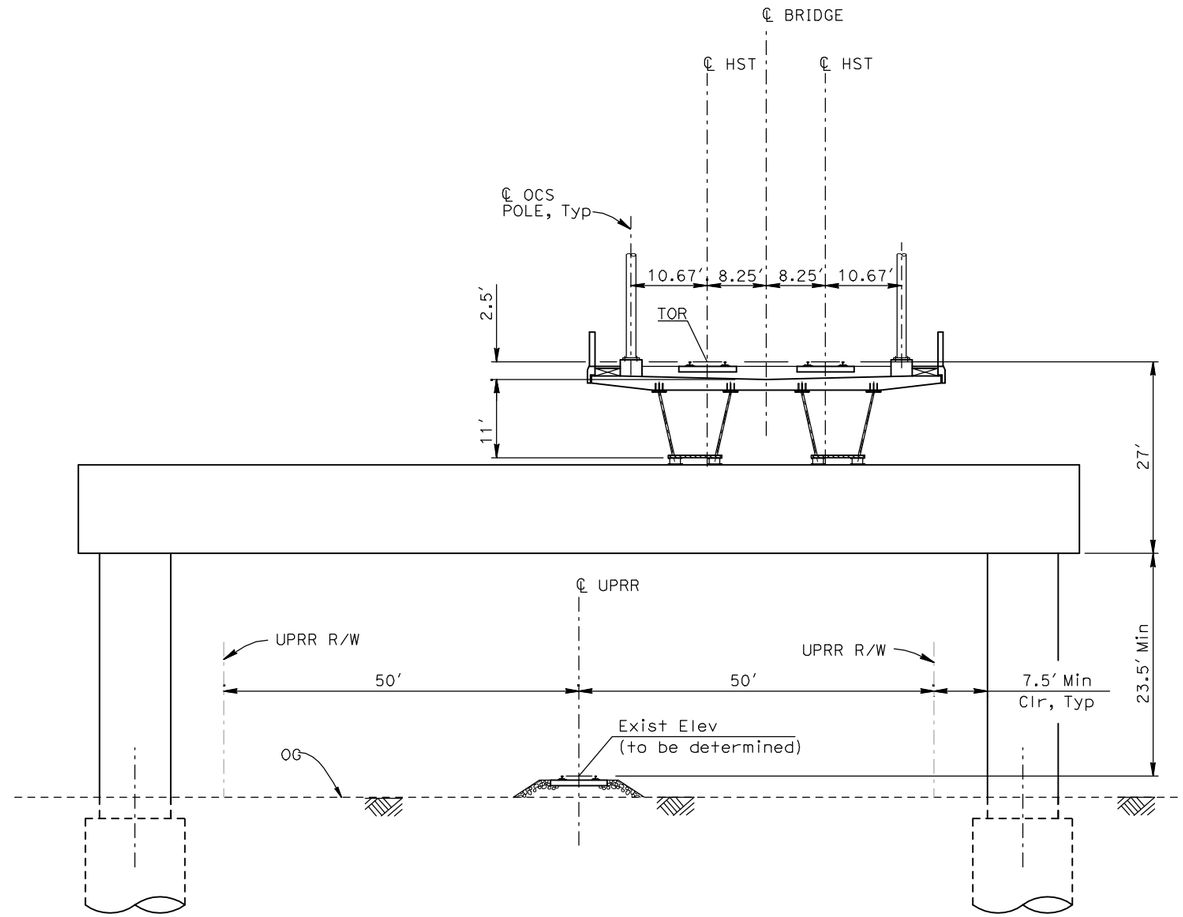


EL4 - DOUBLE TRACK ELEVATED CROSSING SR99



EL5 - DOUBLE TRACK ELEVATED CROSSING UPRR/BNSF

NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.

2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY C. VALADAO
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 6 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3006-A
SCALE NO SCALE
SHEET NO. OF ###

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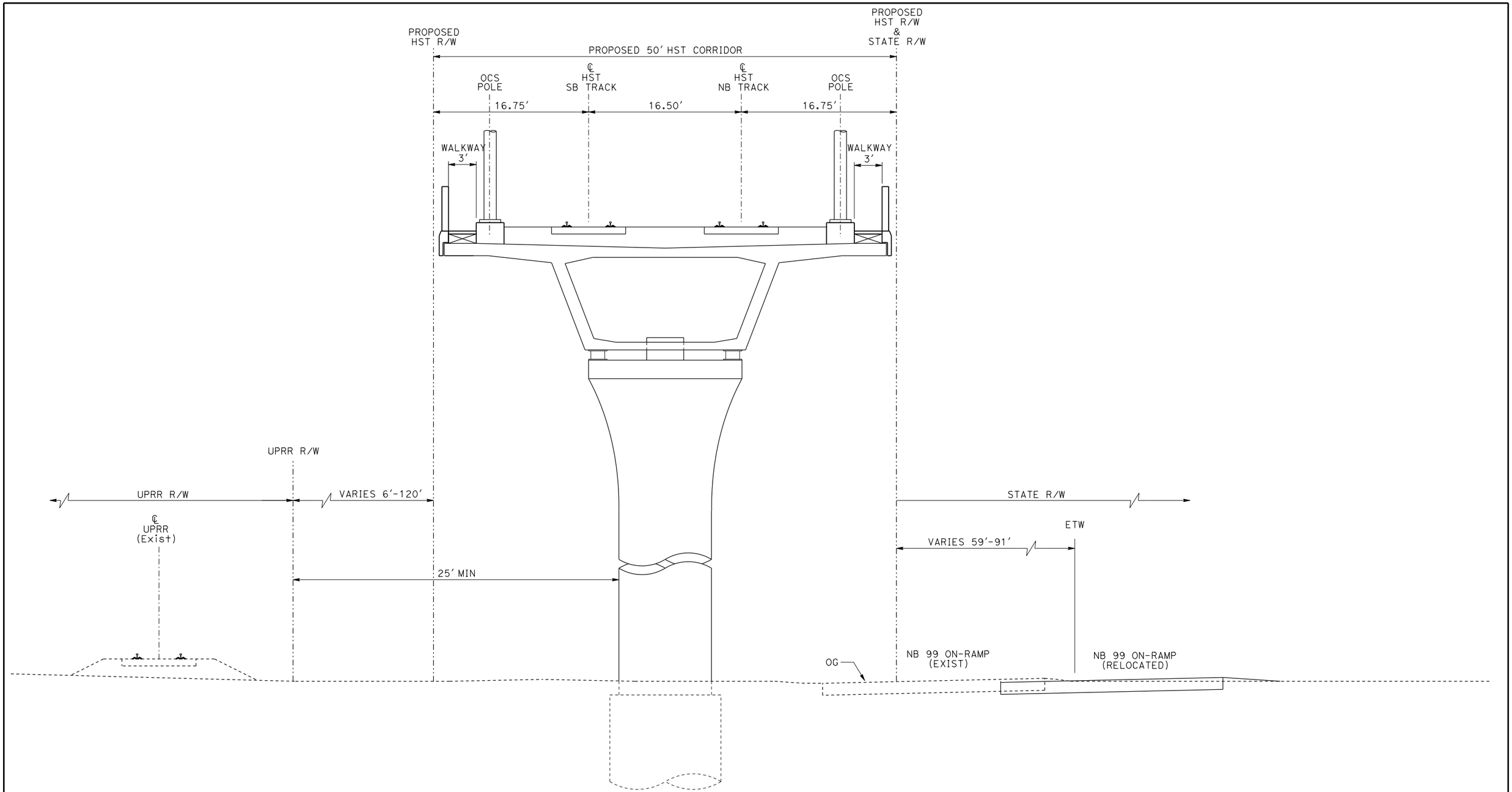

EL6 - DOUBLE TRACK ELEVATED ADJACENT TO UPRR

"SEE T3000-T3014 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET
15% DESIGN SUBMITTAL

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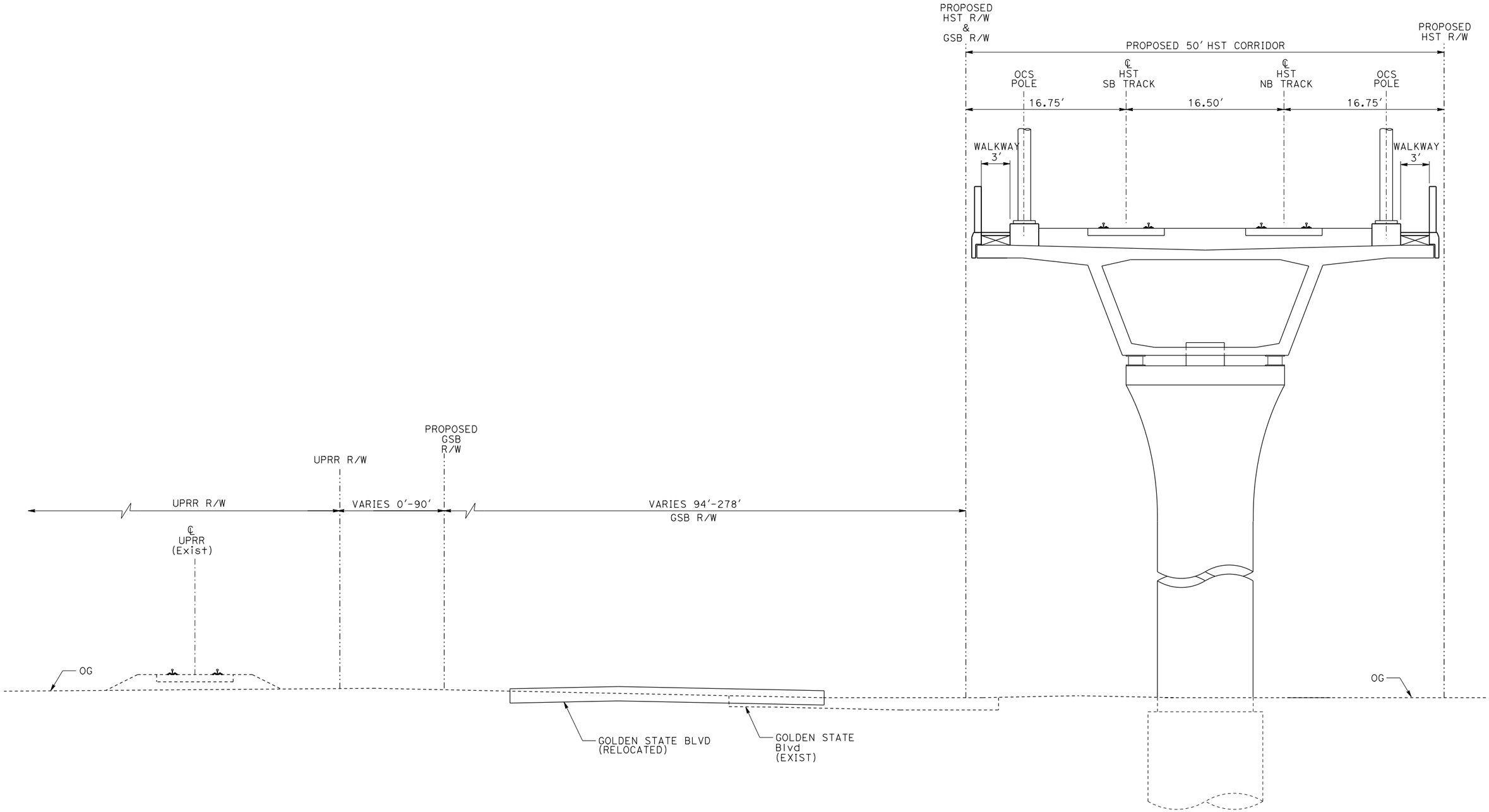
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 9 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3009-A
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 28-APR-2011
USERNAME => lproctor



EL7 - DOUBLE TRACK ELEVATED ADJACENT TO GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

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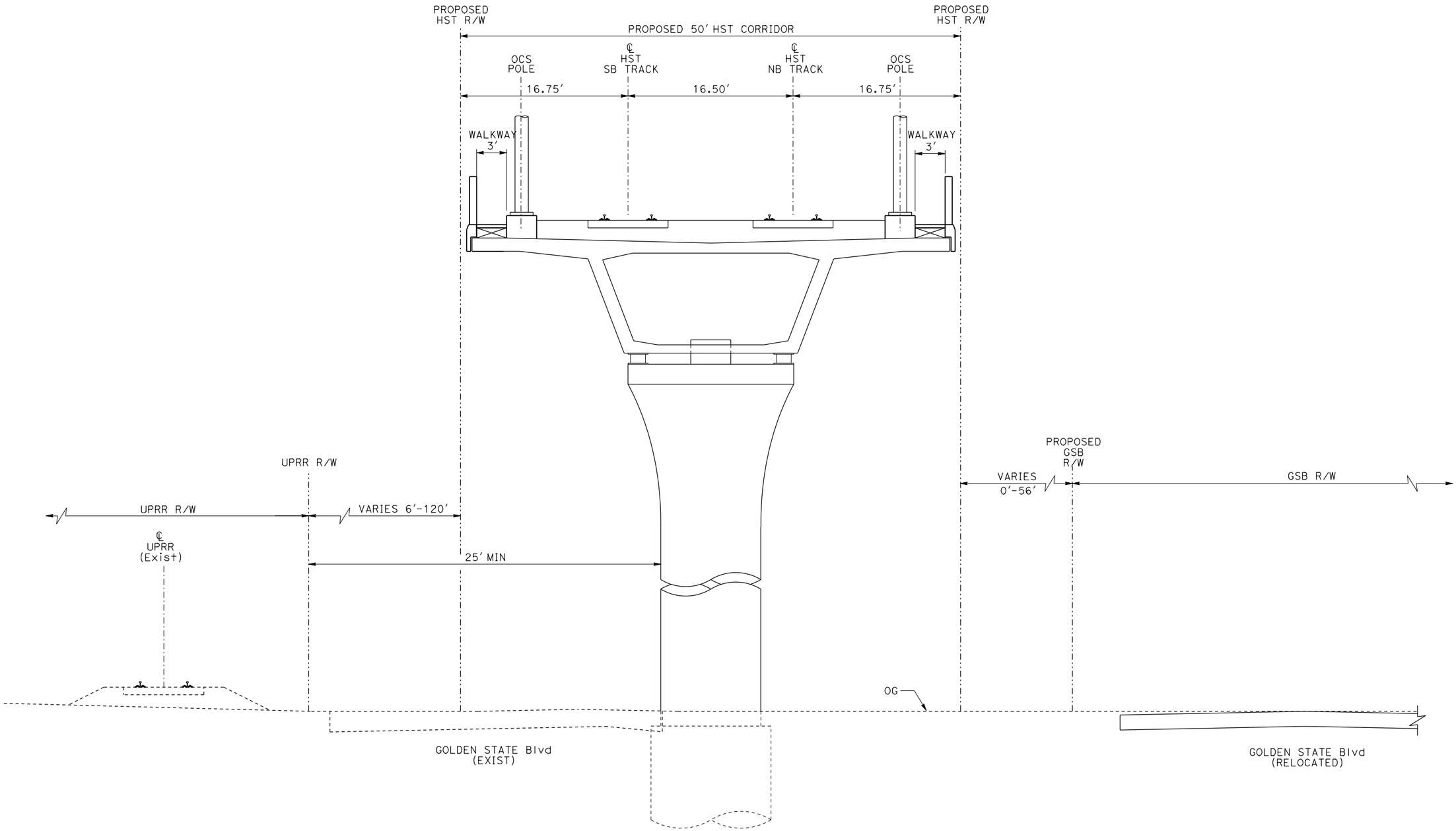
TYPICAL SECTIONS
SHEET 10 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3010-A
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 28-APR-2011

USERNAME => lproctor



EL8 - DOUBLE TRACK ELEVATED BETWEEN UPRR AND GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

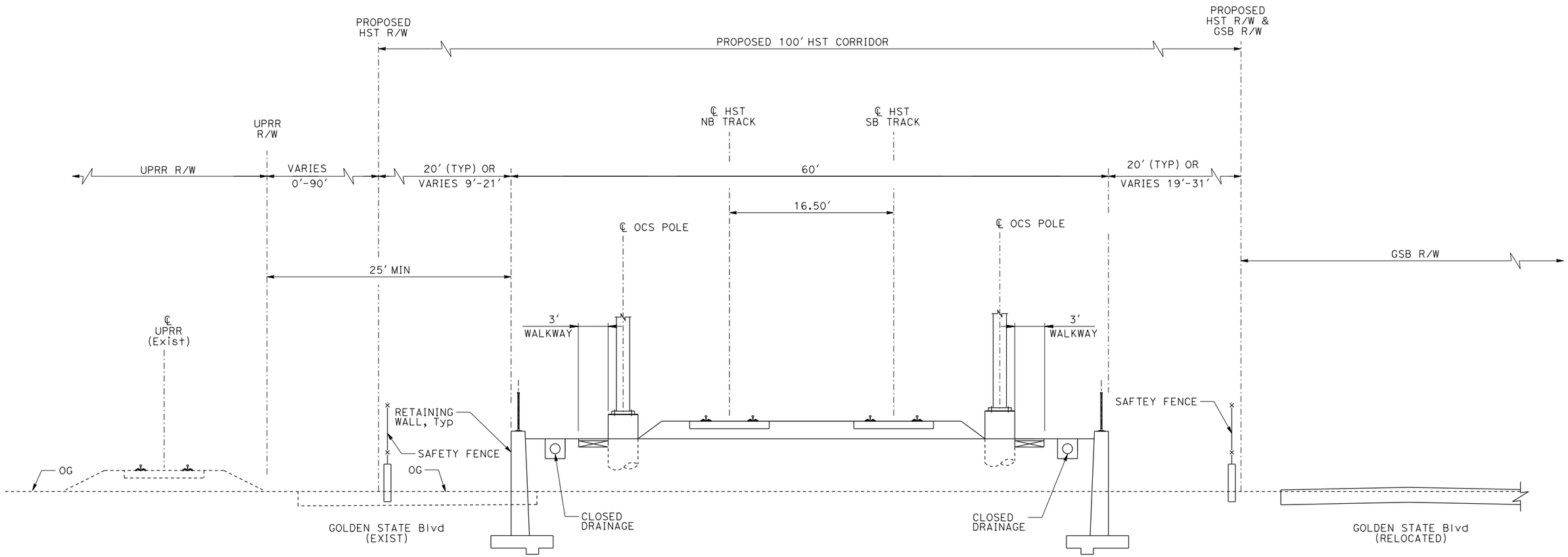
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 11 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3011-A
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 28-APR-2011

USERNAME => lproctor



RF3 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET
15% DESIGN SUBMITTAL

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Sacramento, CA 95811
CH2MHILL

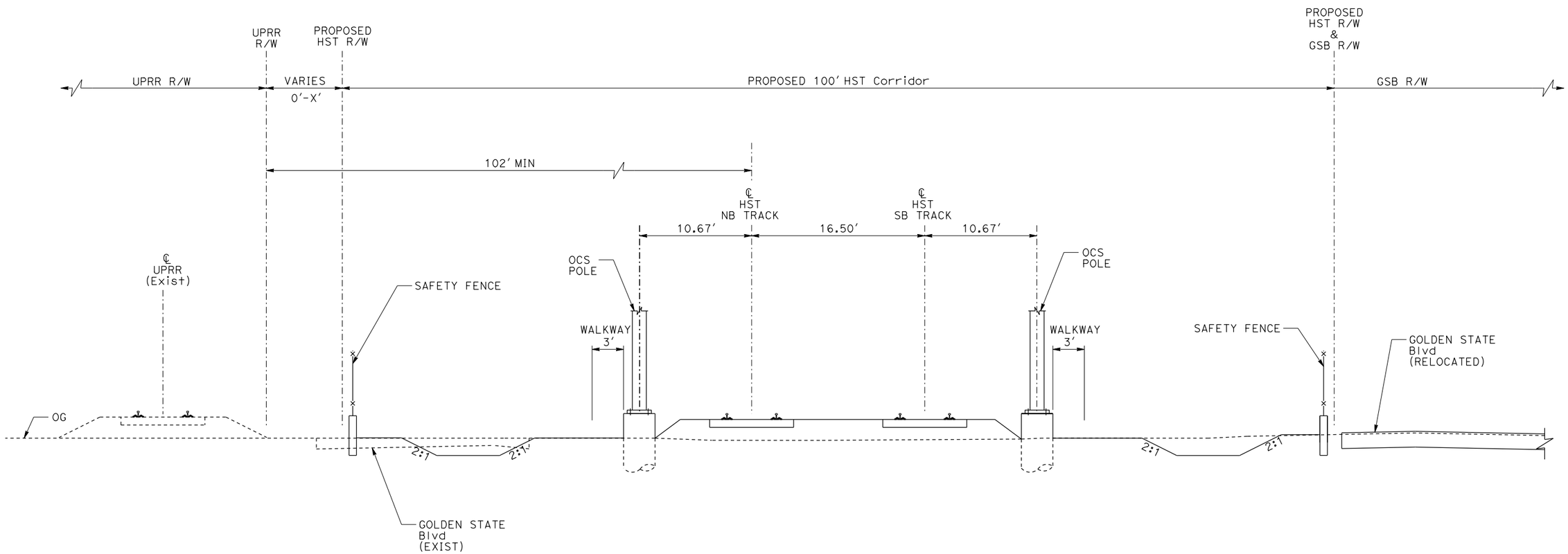
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTION
SHEET 12 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3012-A
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 28-APR-2011
USERNAME => lproctor



AG6 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTION
SHEET 13 OF 17

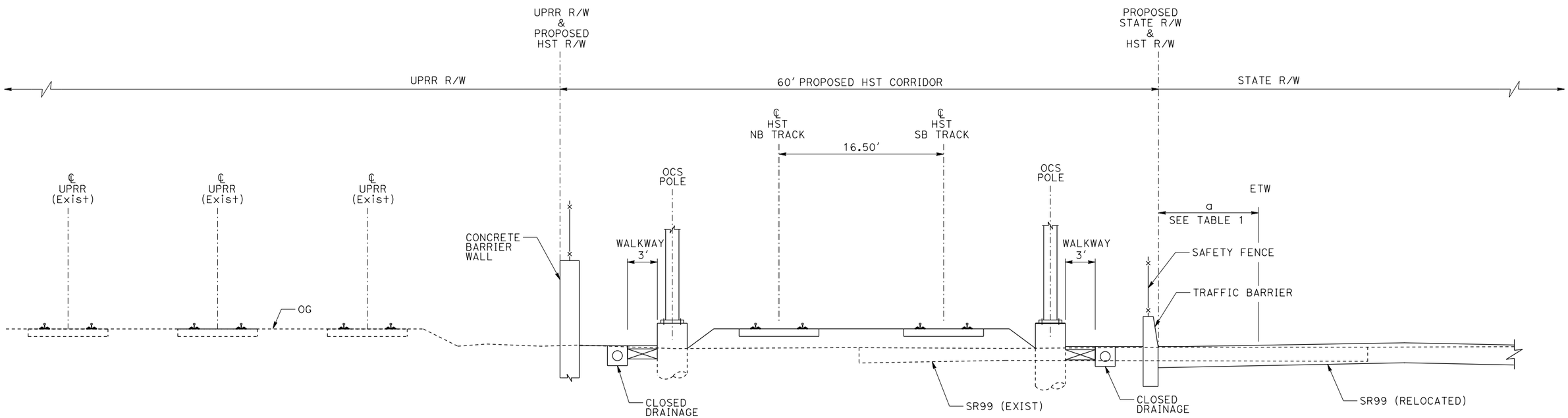
CONTRACT NO. HSR06-007
DRAWING NO. T3013-A
SCALE NO SCALE
SHEET NO.

USERNAME => lproctor

DATE PLOTTED => 28-APR-2011

TABLE 1

a > 30′	NO TRAFFIC BARRIER
4′ < a < 30′	TRAFFIC BARRIER



AG7 - DOUBLE TRACK BETWEEN UPRR AND STATE ROUTE 99

"SEE T3000-T3014 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

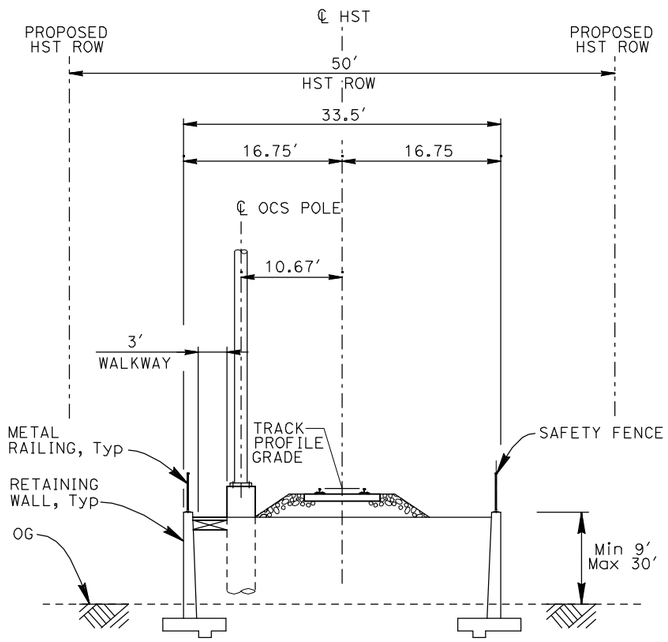
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTION
SHEET 14 OF 17

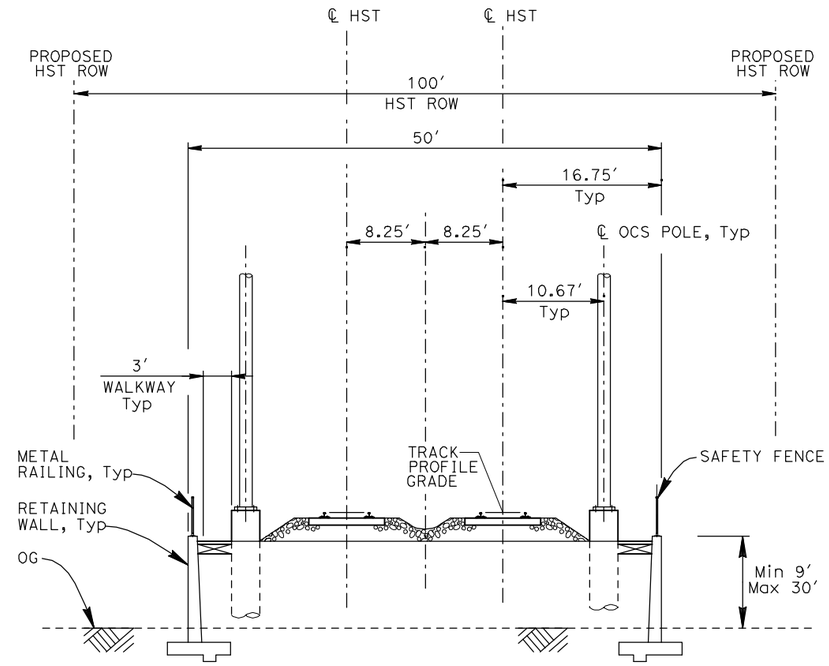
CONTRACT NO. HSR06-007
DRAWING NO. T3014-A
SCALE NO SCALE
SHEET NO.

DATE PLOTTED => 28-APR-2011

USERNAME => lproctor



RF1 - SINGLE TRACK RETAINED FILL



RF2 - DOUBLE TRACK RETAINED FILL

NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY C. VALADAO
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 17 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3017-A
SCALE NO SCALE
SHEET NO. OF ###

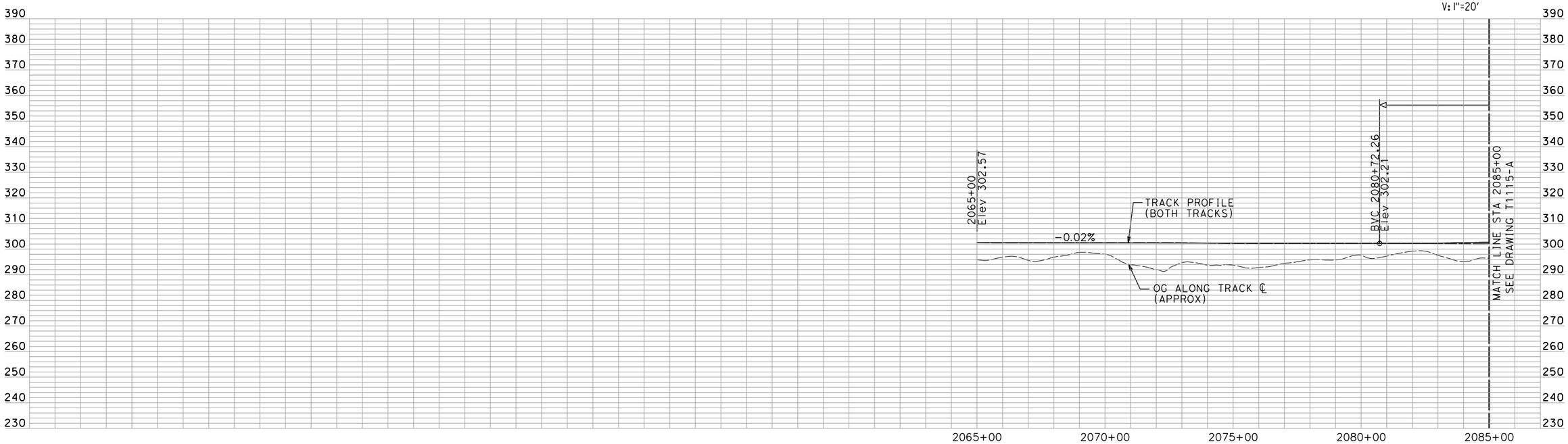
4/29/2011 9:32:33 AM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\sheet\trackwork\typical sections\WF-T-3017-A.dgn
ShieldsA

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

PLAN

200 0 200 400
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

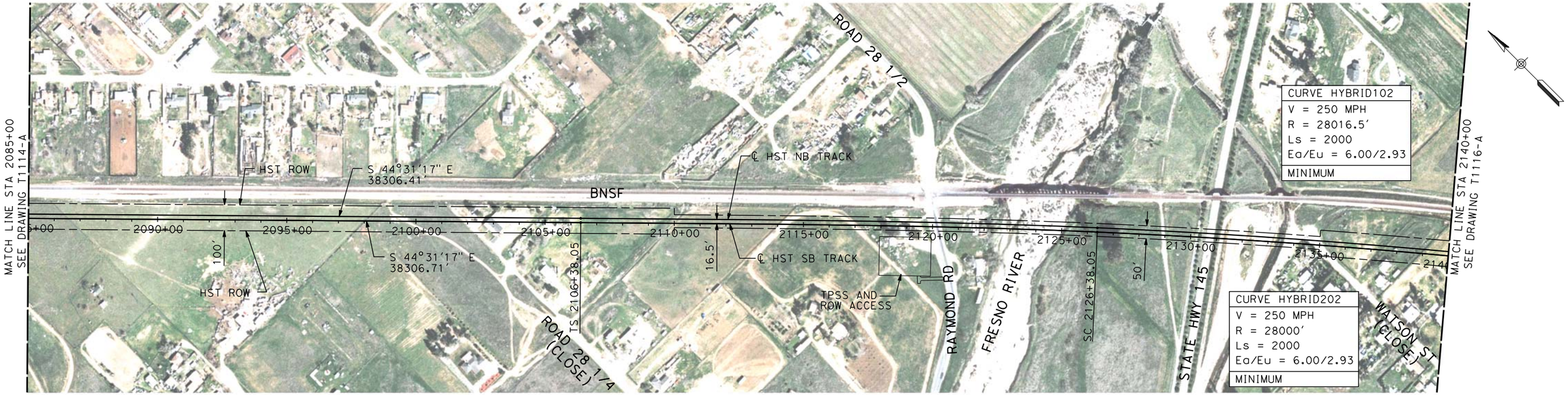
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2030+00 TO STA 2085+00

CONTRACT NO. HSR06-007
DRAWING NO. T1114-A
SCALE AS SHOWN
SHEET NO. ### OF ###

3/8/2012 10:58:10 AM \\usscr1fp001\cadd\chsr\60022962\Task-03_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\ELECTONIC SUBMITTAL 3-1-2012\TRACK - Opt 1
shieldsa

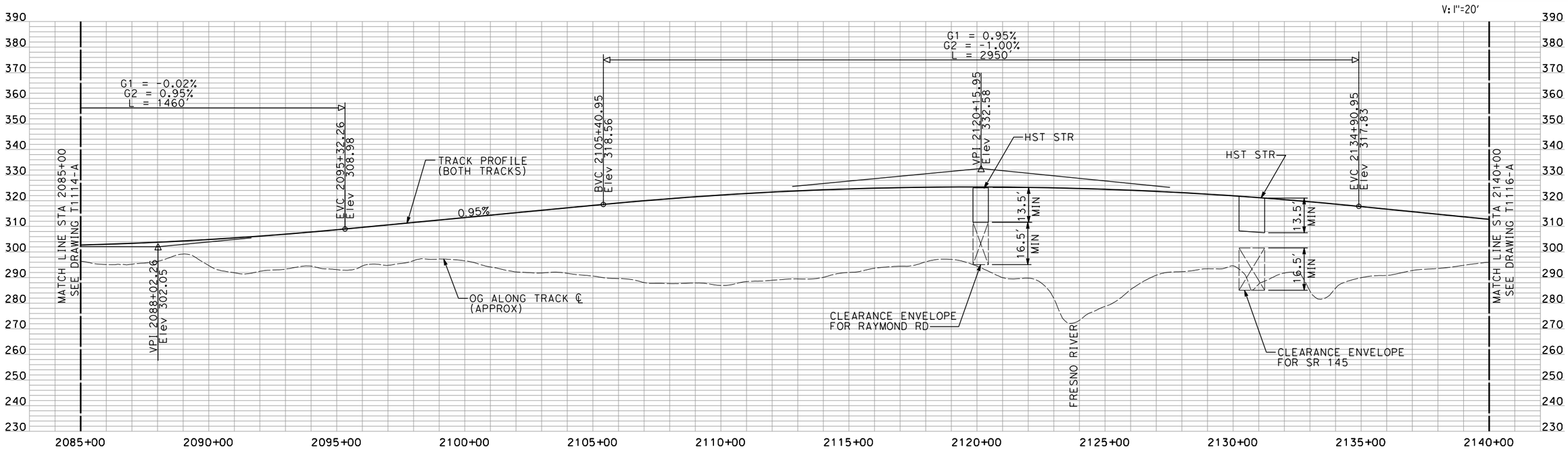


NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

PLAN

200 0 200 400
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2085+00 TO STA 2140+00

CONTRACT NO. HSR06-007
DRAWING NO. T1115-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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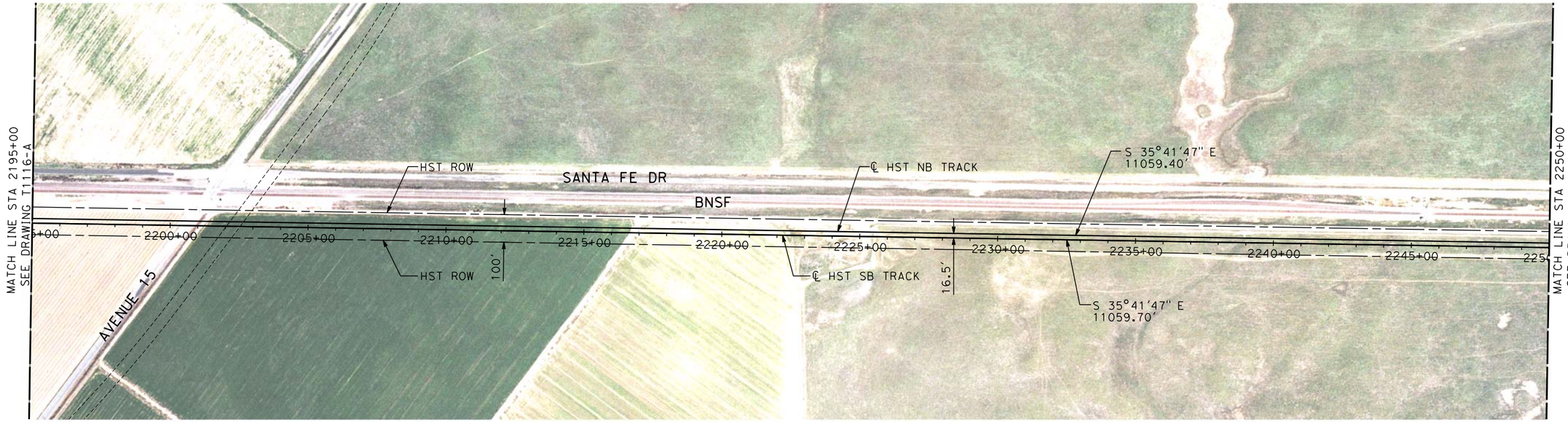

PLAN

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

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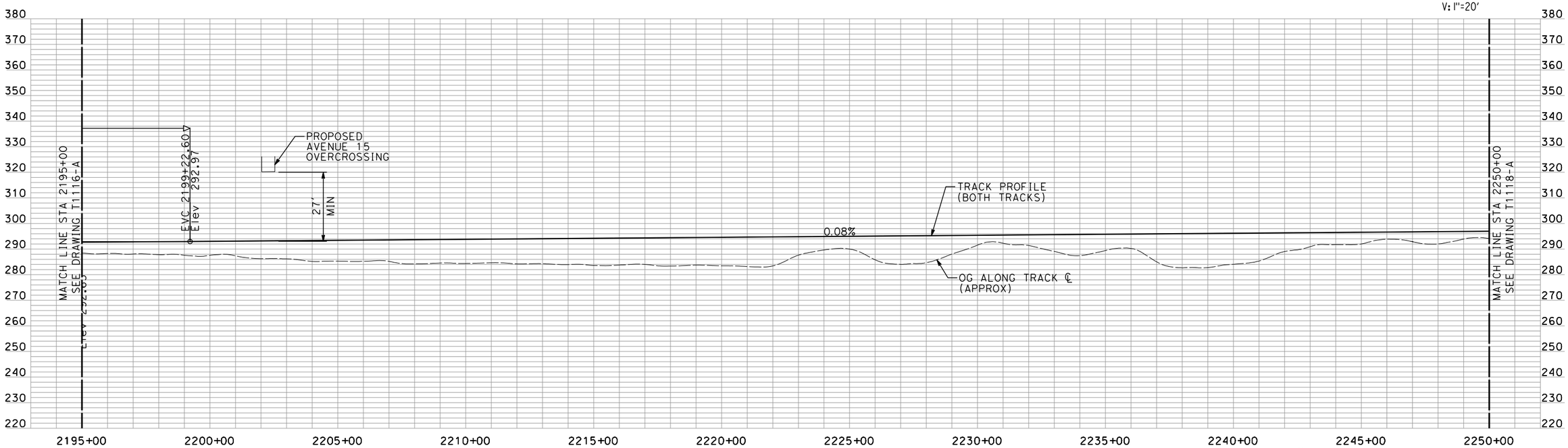
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2195+00 TO STA 2250+00

CONTRACT NO. HSR06-007
DRAWING NO. T1117-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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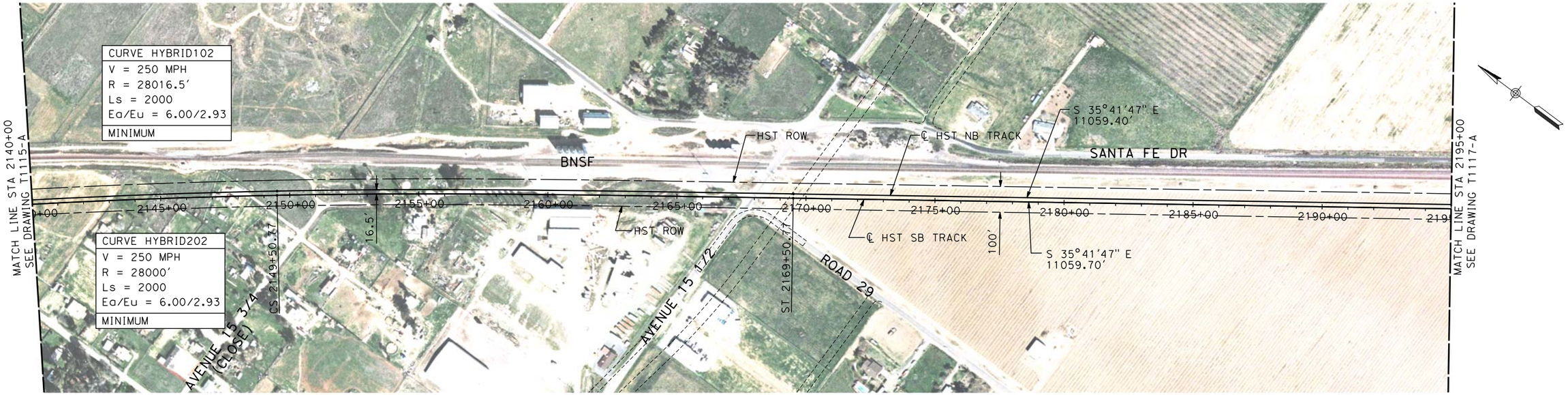
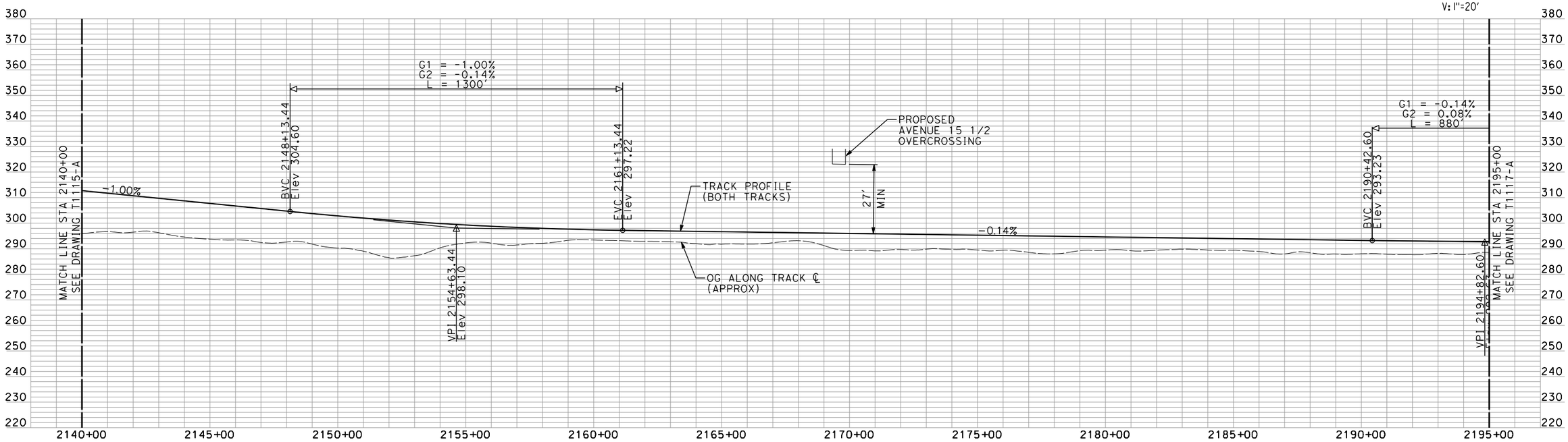


PLAN

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

200 0 200 400
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2140+00 TO STA 2195+00

CONTRACT NO. HSR06-007
DRAWING NO. T1116-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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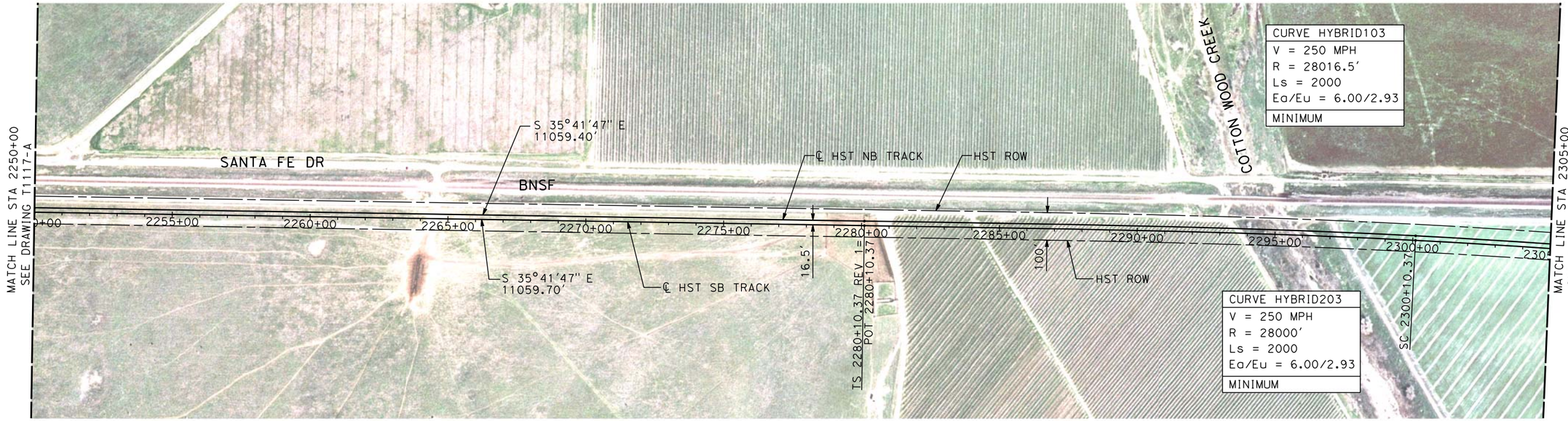
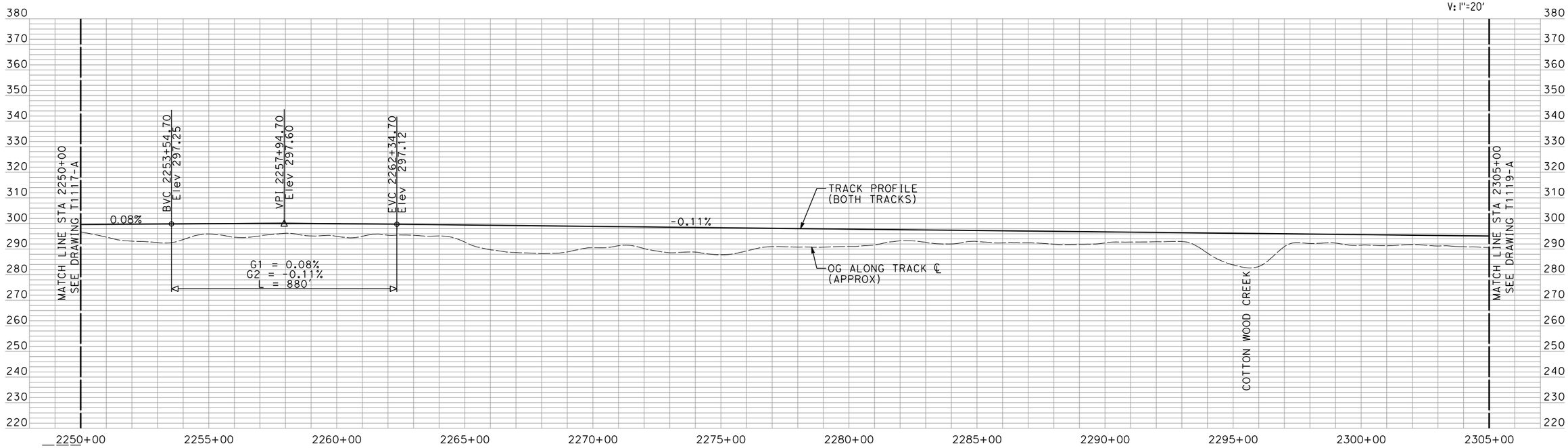


PLAN

H: 1"=200'

V: 1"=20'

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2250+00 TO STA 2305+00

CONTRACT NO. HSR06-007
DRAWING NO. T1118-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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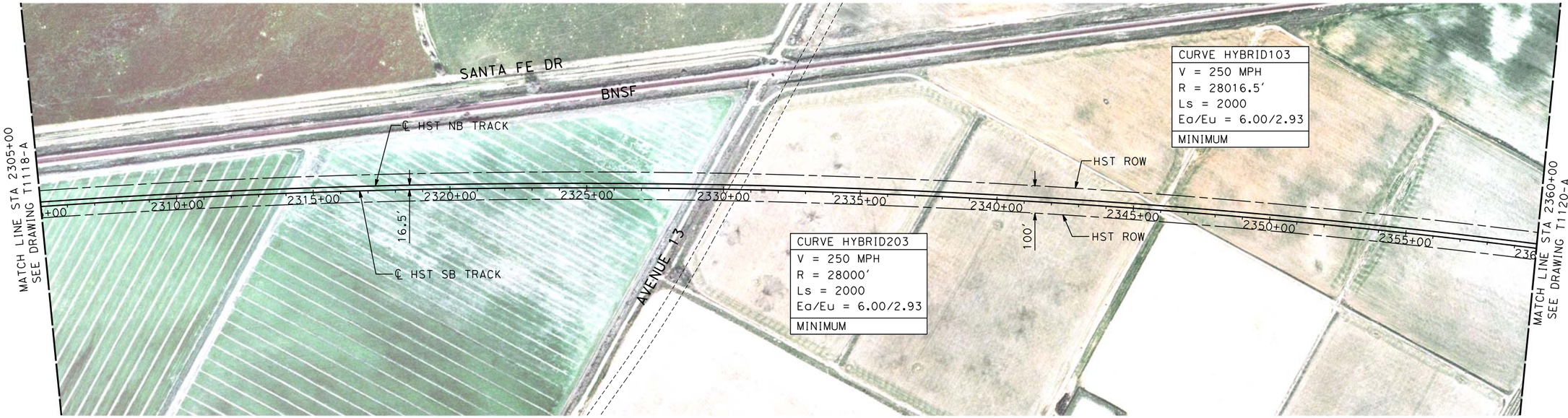

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

PLAN

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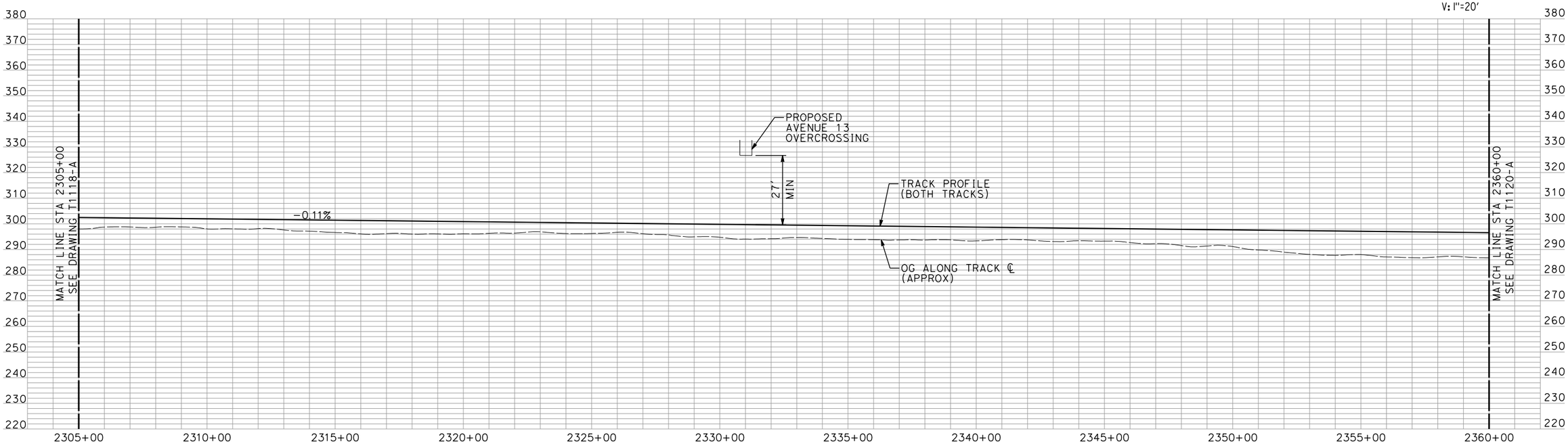
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2305+00 TO STA 2360+00

CONTRACT NO. HSR06-007
DRAWING NO. T1119-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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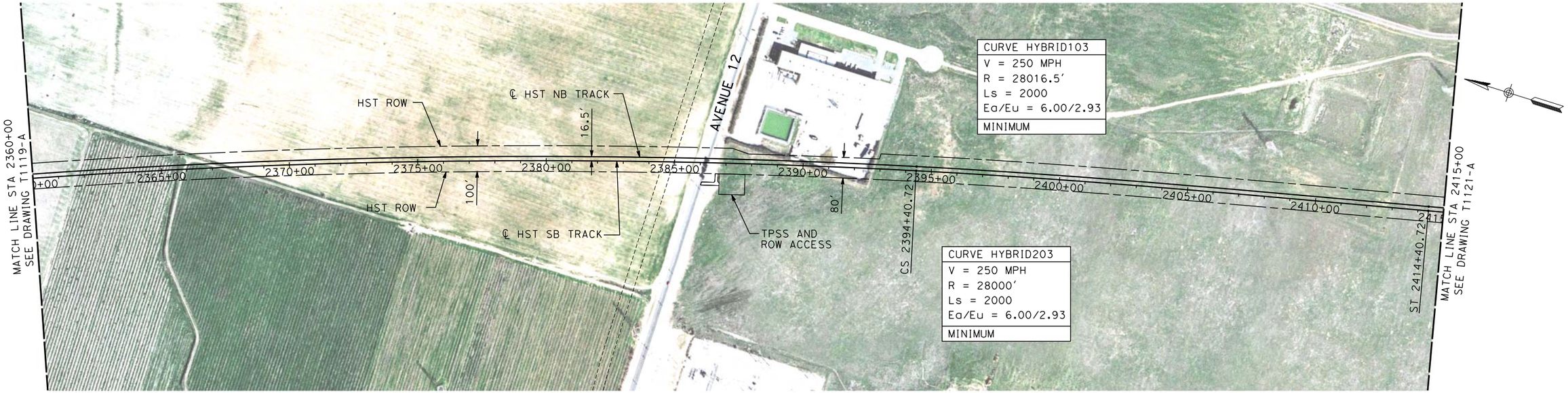

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

PLAN

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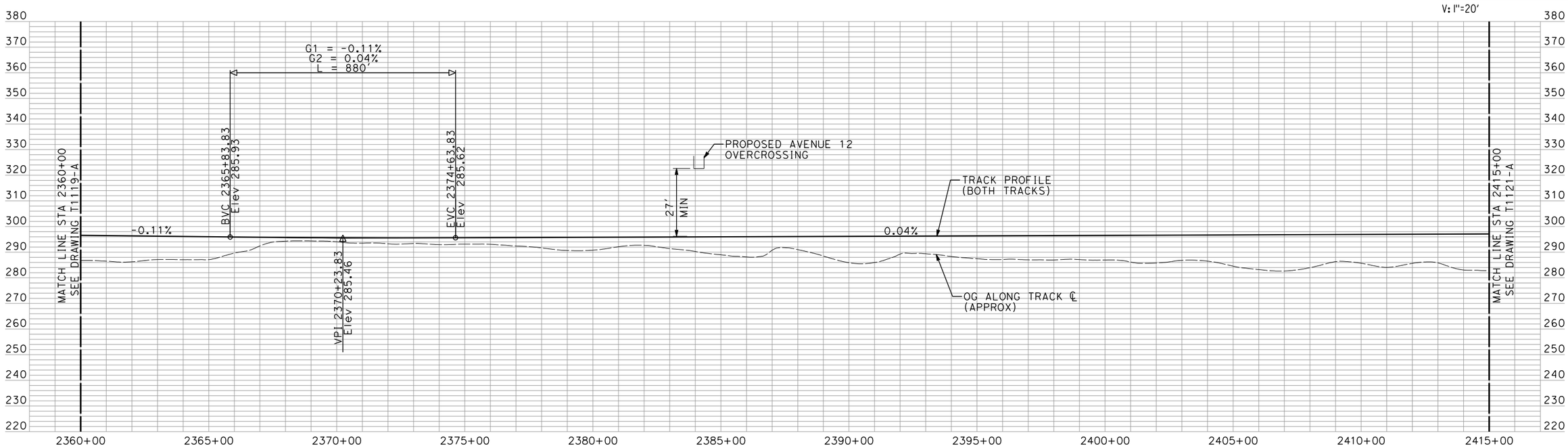
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2360+00 TO STA 2415+00

CONTRACT NO. HSR06-007
DRAWING NO. T1120-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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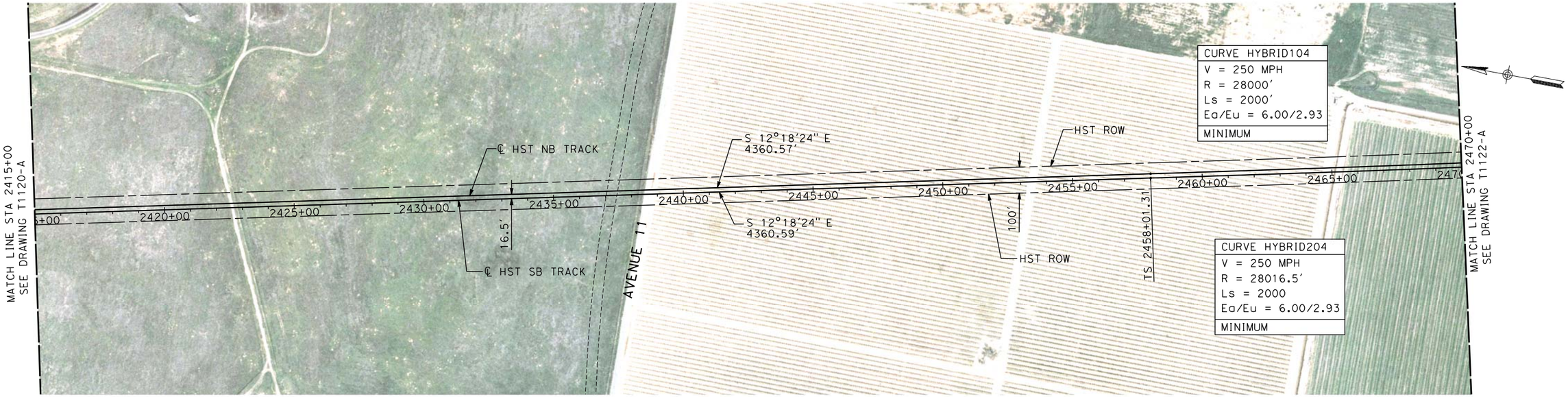

PLAN

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

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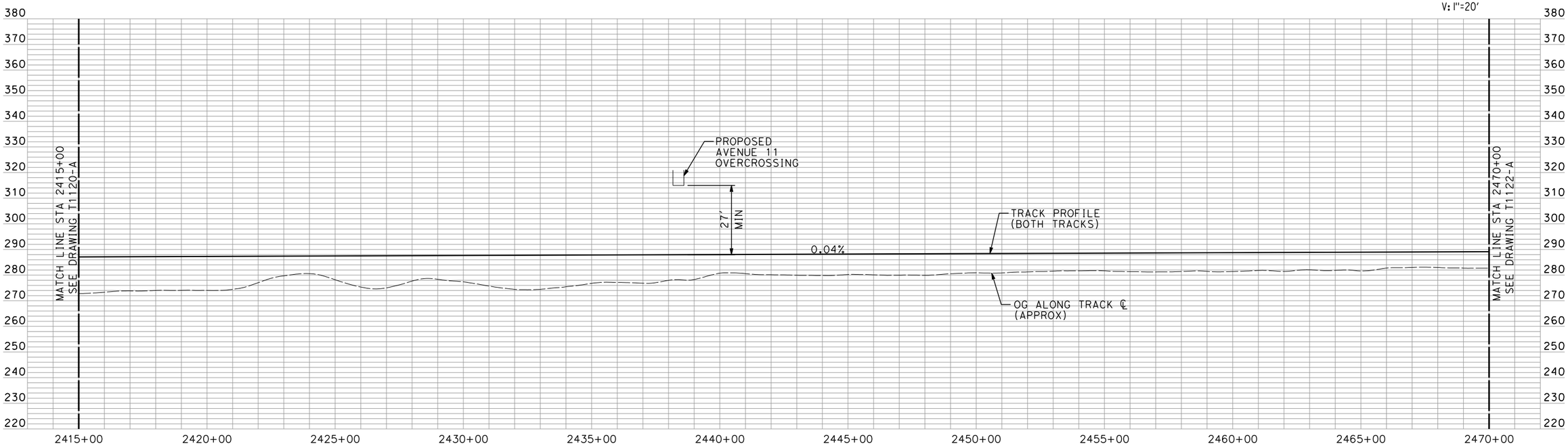
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

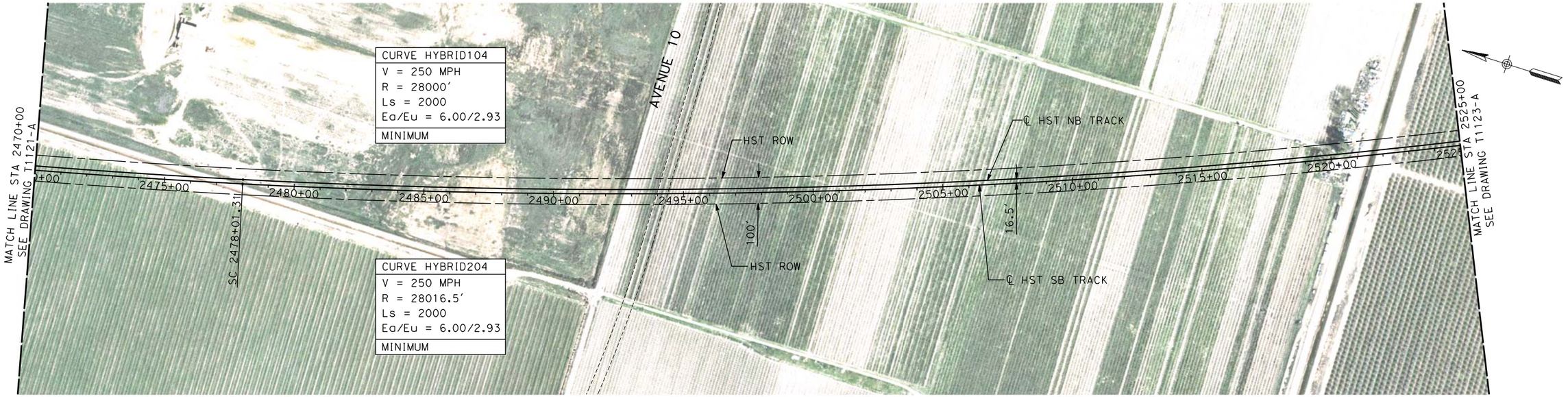
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2415+00 TO STA 2470+00

CONTRACT NO. HSR06-007
DRAWING NO. T1121-A
SCALE AS SHOWN
SHEET NO. ### OF ###

shieldsa 2/16/2012 8:12:36 AM \\usscr1fp001\cadd\chsr\60022962\Task-03_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\MF-T-1121-A.dgn



PLAN

NOTE:
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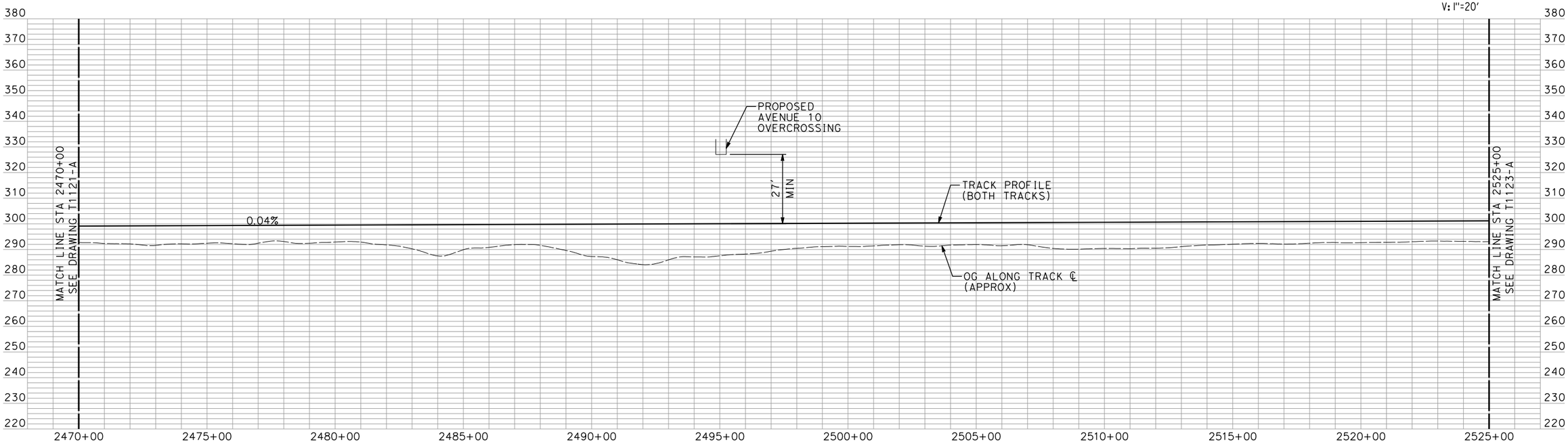
200 0 200 400
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL

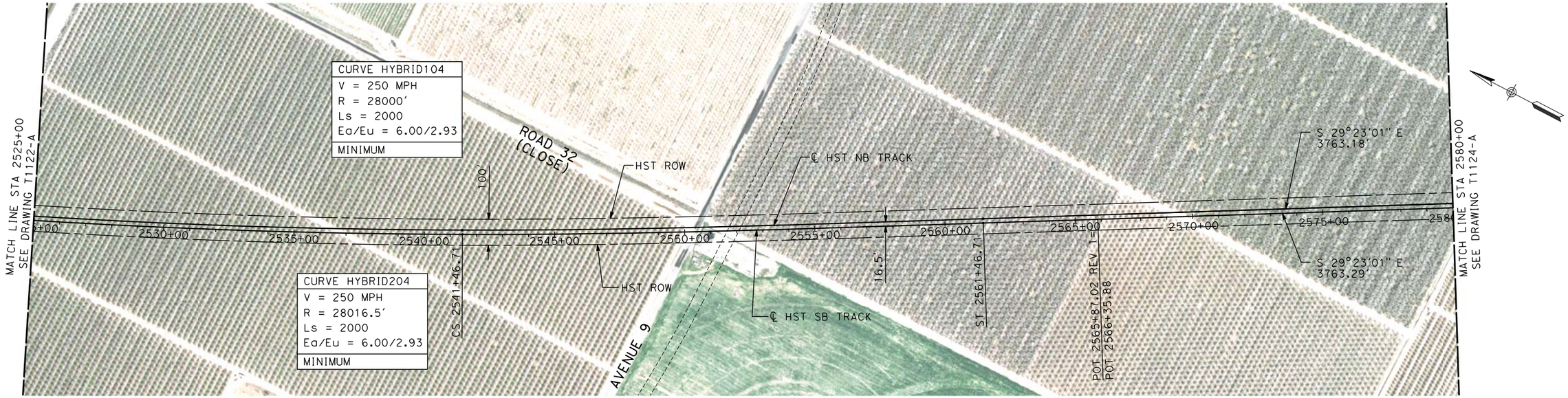
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2470+00 TO STA 2525+00

CONTRACT NO. HSR06-007
DRAWING NO. T1122-A
SCALE AS SHOWN
SHEET NO. ### OF ###

shieldsa 2/16/2012 8:15:52 AM \\usscr1fp001\cadd\chsr\60022962\Task-03_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\MF-T-1122-A.dgn

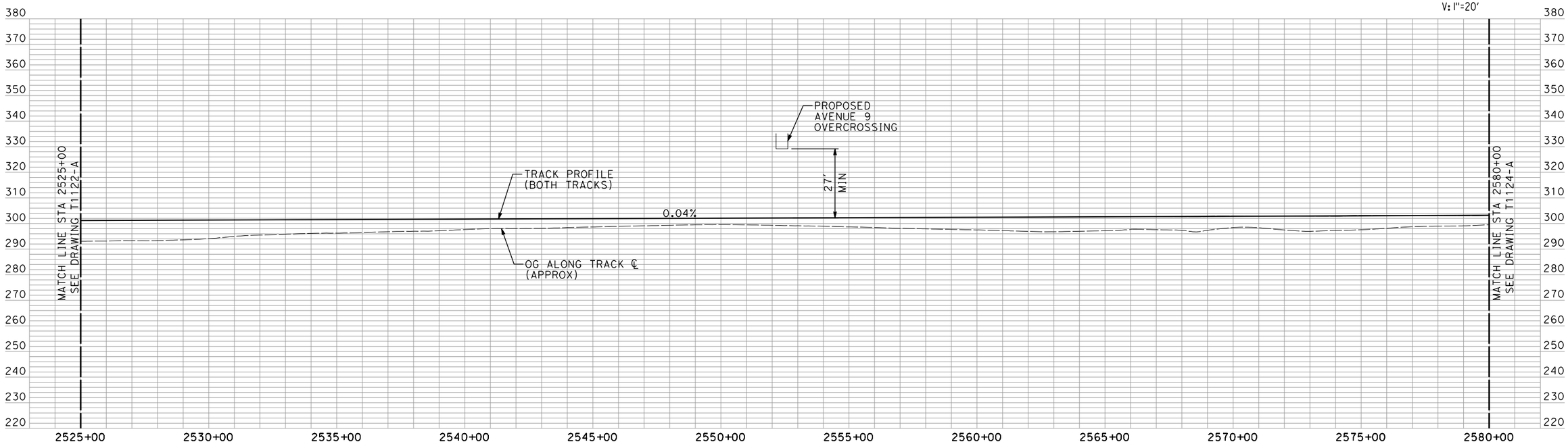


PLAN

NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

200 0 200 400
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

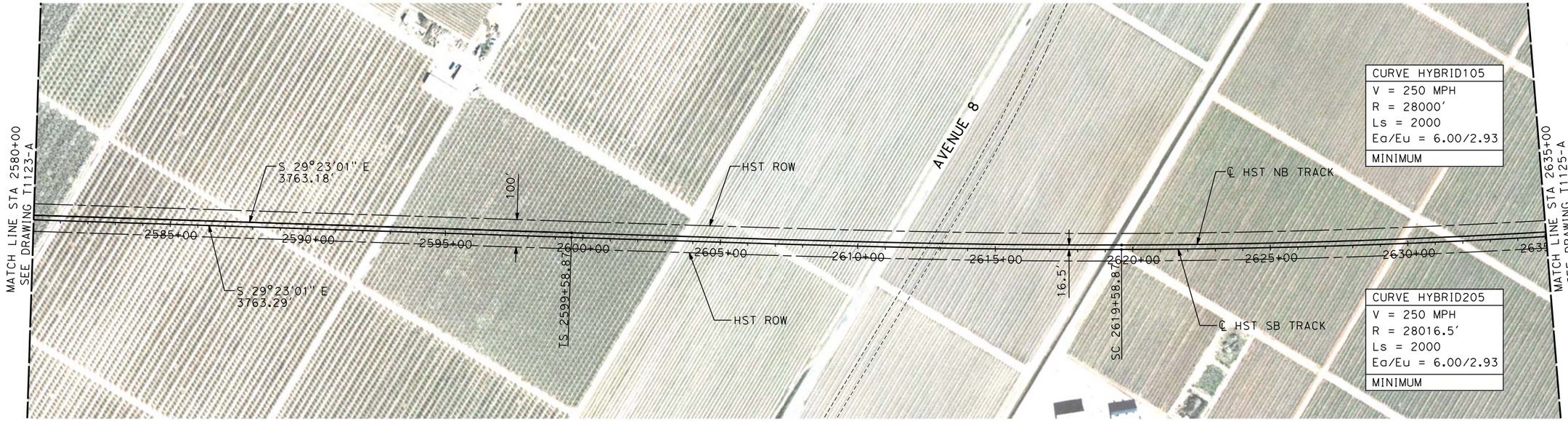
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2525+00 TO STA 2580+00

CONTRACT NO. HSR06-007
DRAWING NO. T1123-A
SCALE AS SHOWN
SHEET NO. ### OF ###

shieldsa 2/16/2012 8:19:20 AM \\usscr1fp001\cadd\chsr\60022962\Task-03_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\MF-T-1123-A.dgn

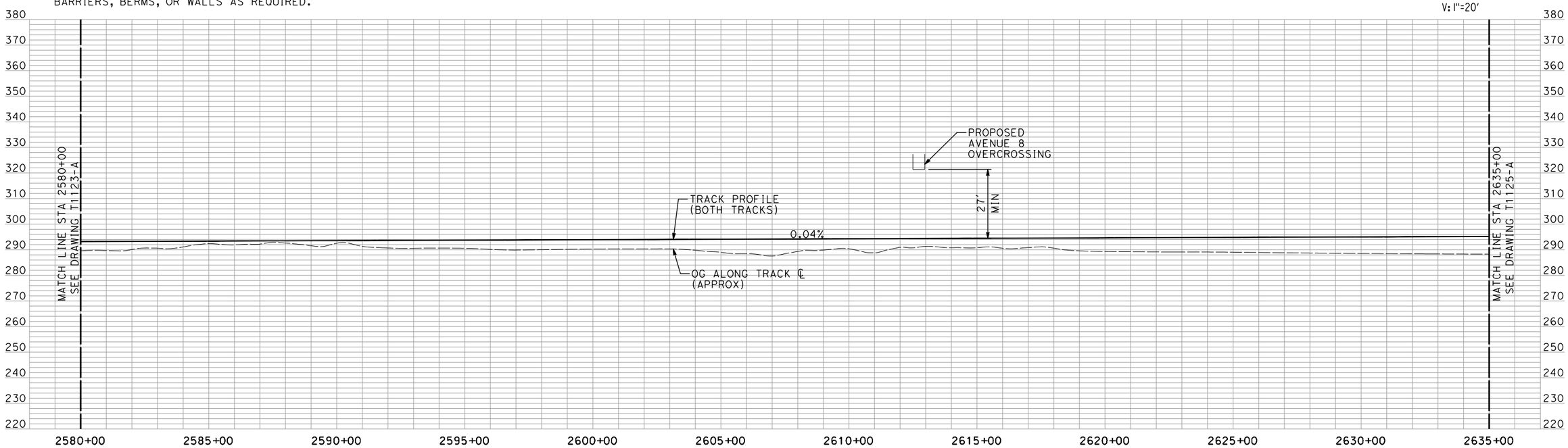


NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN

200 0 200 400
H: 1"=200'

20 0 20 40
V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

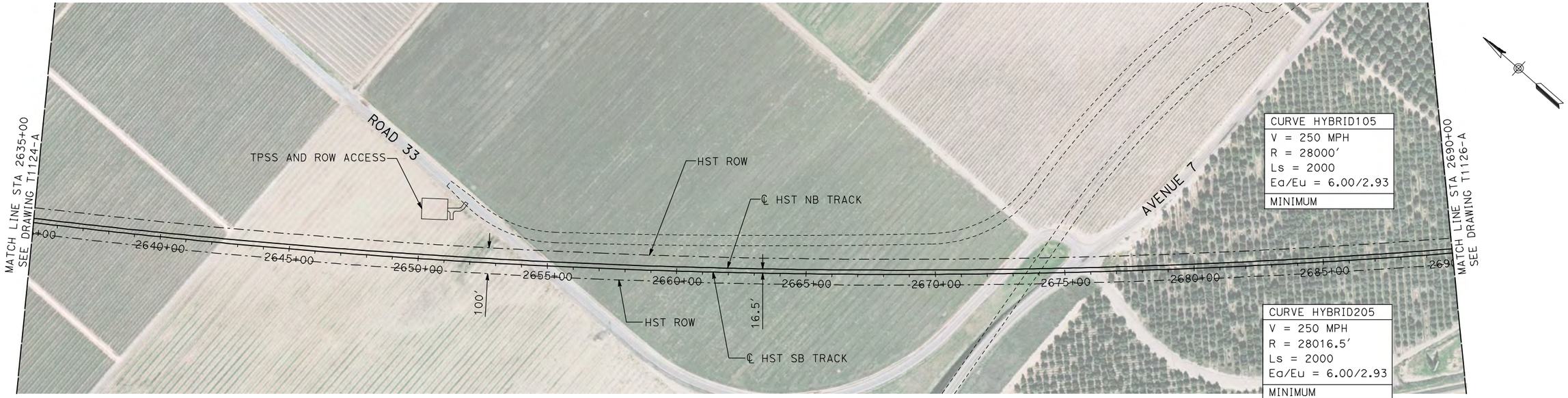
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2580+00 TO STA 2635+00

CONTRACT NO. HSR06-007
DRAWING NO. T1124-A
SCALE AS SHOWN
SHEET NO. ### OF ###

shieldsa 2/16/2012 10:08:55 AM \\usscr1fp001\cadd\chsr\60022962\Task-03_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\MF-T-1124-A.dgn



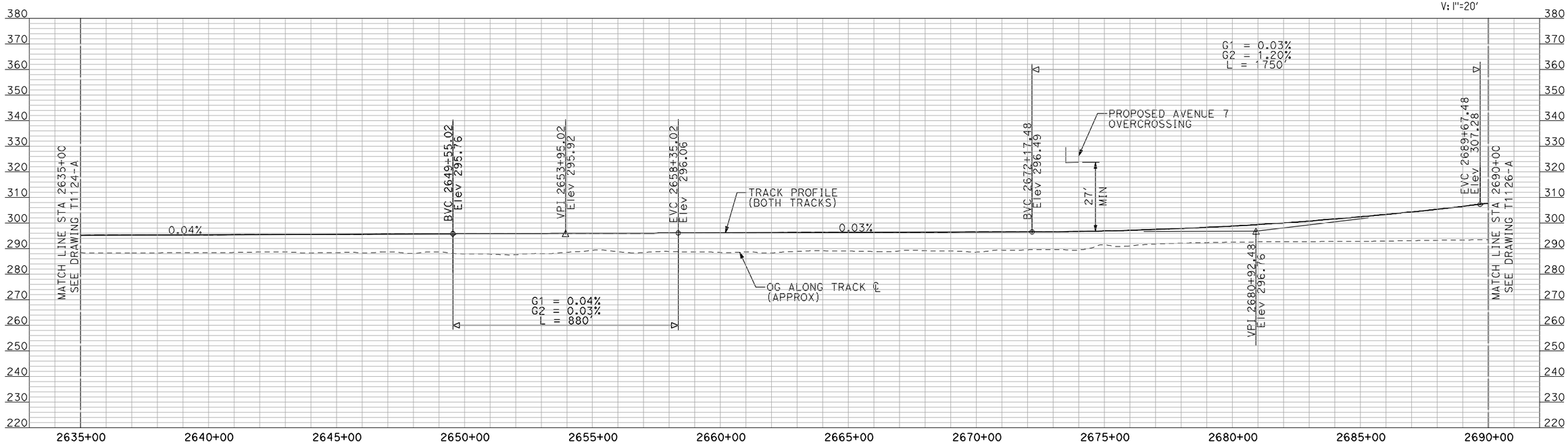
PLAN

200 0 200 400
H: 1"=200'

20 0 20 40
V: 1"=20'

NOTE:

ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

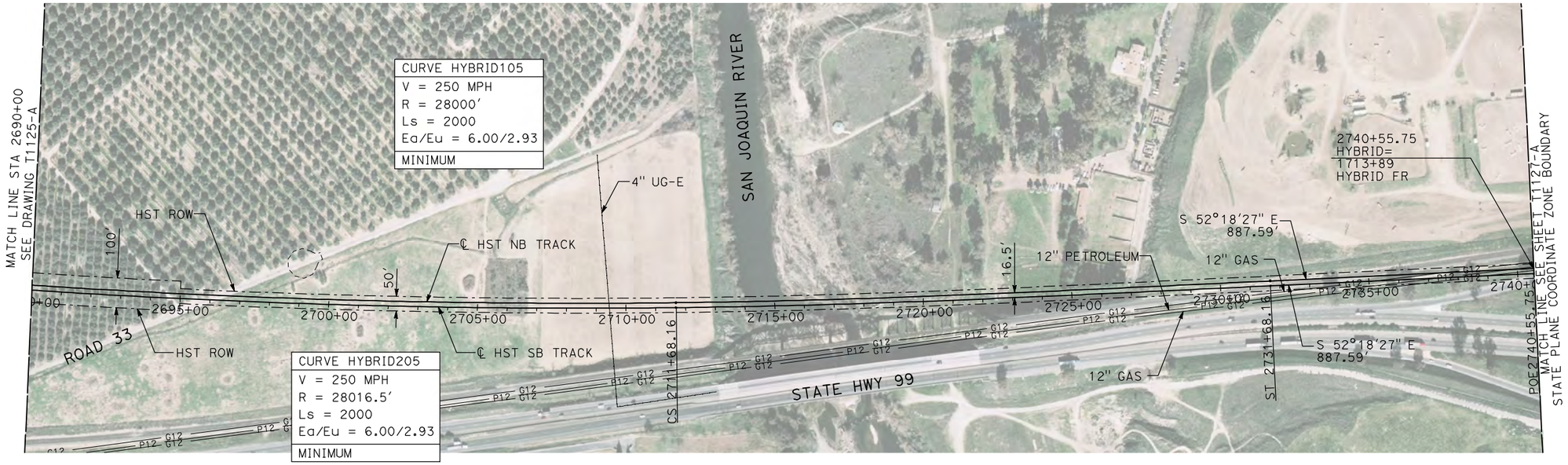
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

PLAN AND PROFILE
STA 2635+00 TO STA 2690+00

CONTRACT NO. HSR06-007
DRAWING NO. T1125-A
SCALE AS SHOWN
SHEET NO. ### OF ###

4/28/2011 11:52:58 AM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\sheet\trackwork\hybrid\MF-T-1125-A.dgn
ShieldsA



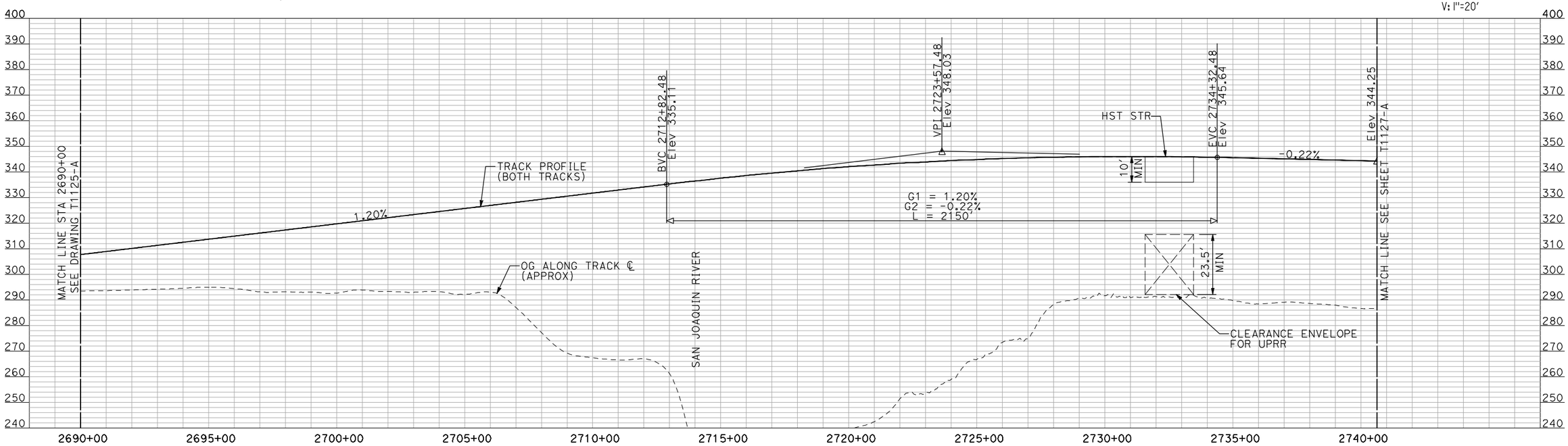
PLAN

NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. FOR CONTROLLING CLEARANCE ENVELOPE, SEE T1128-A AND T1131-A.

H: 1"=200'

V: 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

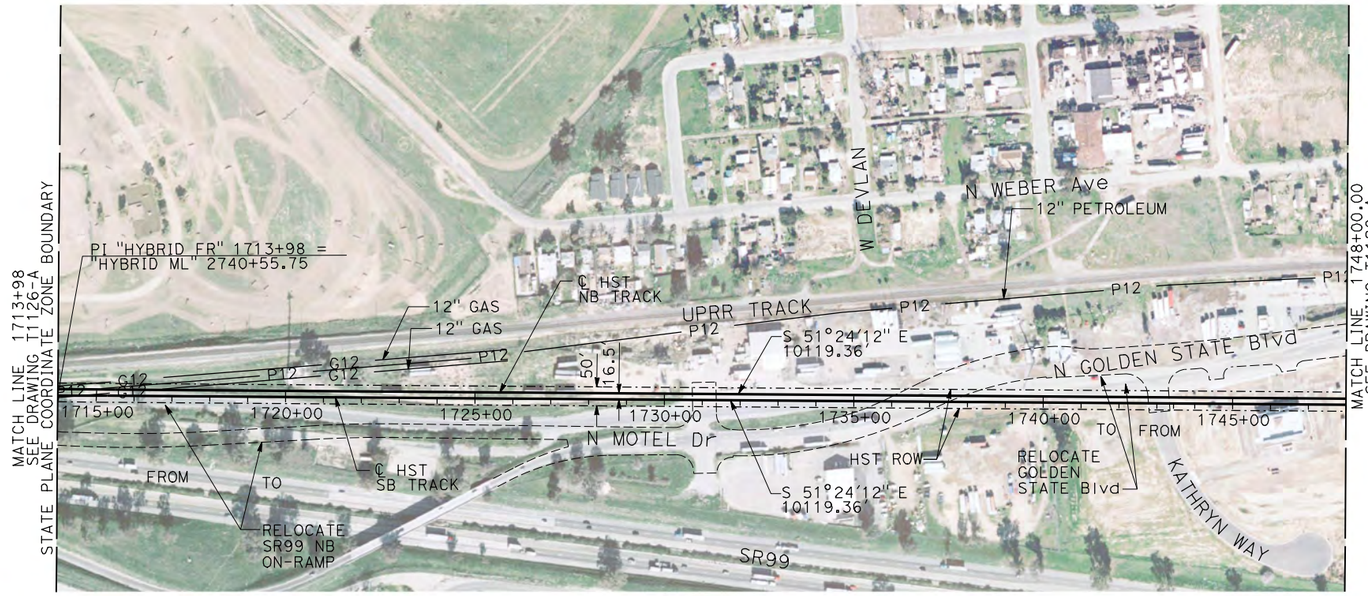
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID

PLAN AND PROFILE
STA 2690+00 TO STA 2740+55.75

CONTRACT NO. HSR06-007
DRAWING NO. T1126-A
SCALE AS SHOWN
SHEET NO. ### OF ###

4/28/2011 11:53:18 AM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\sheet\trackwork\hybrid\MF-T-1126-A.dgn
ShieldsA



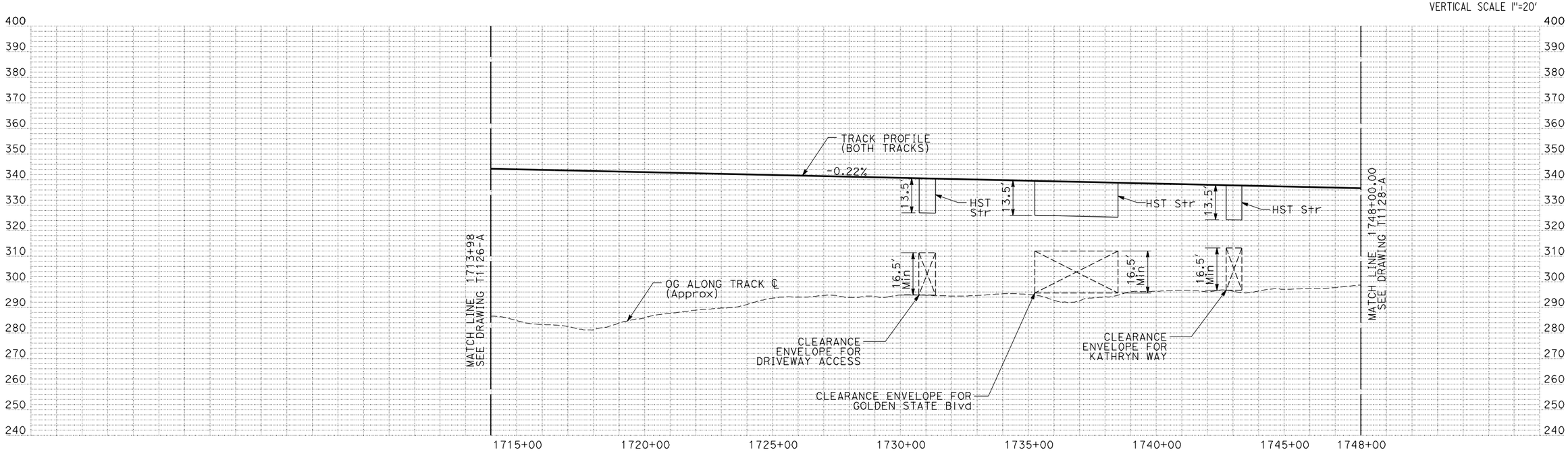
PLAN

NOTE:

ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

200 0 200 400
HORIZONTAL SCALE 1"=200'

20 0 20 40
VERTICAL SCALE 1"=20'



PROFILE

"SEE T3000-T3014 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. CHIU
DRAWN BY M. McKEON
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID

PLAN AND PROFILE
STA 1713+98 TO STA 1748+00

CONTRACT NO. HSR06-007
DRAWING NO. T1127-A
SCALE AS SHOWN
SHEET NO.

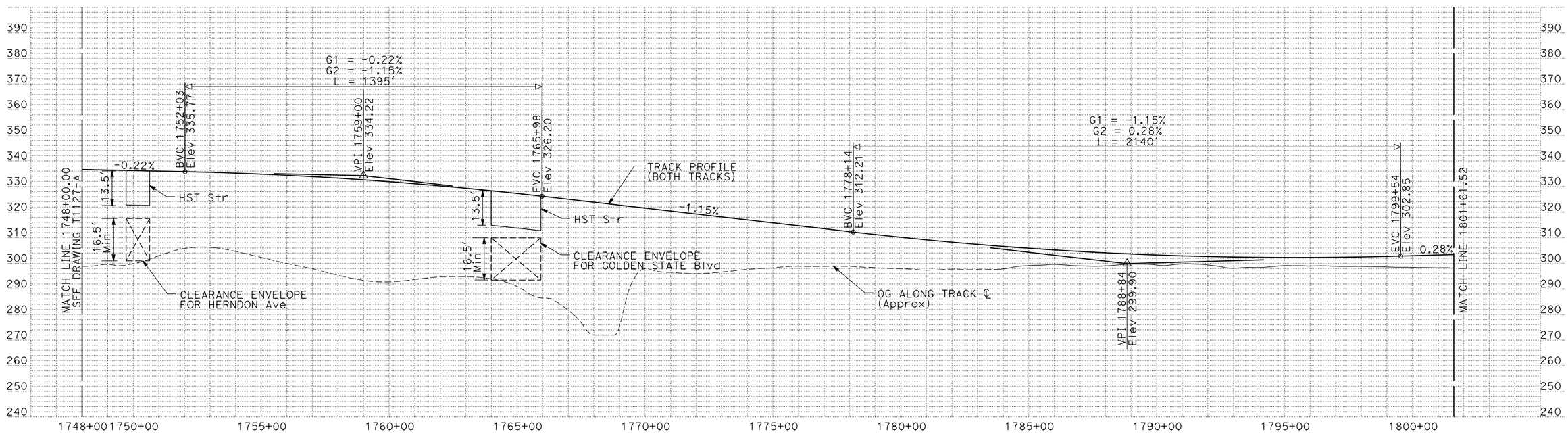
DATE PLOTTED => 28-APR-2011

NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN

200 0 200 400
HORIZONTAL SCALE 1"=200'
20 0 20 40
VERTICAL SCALE 1"=20'



PROFILE

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. CHIU
DRAWN BY M. McKEON
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID

PLAN AND PROFILE
STA 1748+00 TO STA 1801+61.52

CONTRACT NO. HSR06-007
DRAWING NO. T1128-A
SCALE AS SHOWN
SHEET NO.

DATE PLOTTED => 08-MAR-2012
USERNAME => sleona

CALIFORNIA HIGH-SPEED TRAIN

HST Structure Plans

"Excerpts of Record Set
For Procurement Purposes Only.
Avenue 17 to Veterans Blvd"

Record Set
15% Design Submittal
Merced to Fresno Section

Viaducts & Stream Crossings
Hybrid Alternative

May 2011

CALIFORNIA
High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

HYBRID AVENUE 24

SHT NO	DWG NO	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
		GENERAL			
	SB0121	ALIGNMENT HYBRID	AVENUE 24	INDEX OF DRAWINGS	SHEET 1 OF 2
	SB0122	ALIGNMENT HYBRID	AVENUE 24	INDEX OF DRAWINGS	SHEET 2 OF 2
	SB0201	ALIGNMENTS	AVENUE 21 AND 24	GENERAL NOTES, ABBREVIATIONS,	SYMBOLS AND LEGENDS
	SB0271	ALIGNMENT HYBRID	AVENUE 24	LOCATION PLAN	VIADUCTS
	SB0272	ALIGNMENT HYBRID	AVENUE 24	KEY MAP	SHEET 1 OF 3
	~~SB0273~~	~~ALIGNMENT HYBRID~~	~~AVENUE 24~~	~~KEY MAP~~	~~SHEET 2 OF 3~~
	SB0274	ALIGNMENT HYBRID	AVENUE 24	KEY MAP	SHEET 3 OF 3
	SB0277	ALIGNMENT HYBRID	AVENUE 24	LOCATION PLAN	WATER CROSSING BRIDGES
	SB0278	ALIGNMENT HYBRID	AVENUE 24	WATER CROSSING	TABLES
		WATER CROSSING BRIDGE			
	~~ST1060~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~OWENS CREEK~~	~~WATER CROSSING BRIDGE NO. 60~~
	~~ST1061~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~DUCK SLOUGH & GIVENS LATERAL~~	~~WATER CROSSING BRIDGE NO. 61~~
	~~ST1062~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~DEADMAN CREEK~~	~~WATER CROSSING BRIDGE NO. 62~~
	~~ST1065~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~MILES CREEK~~	~~WATER CROSSING BRIDGE NO. 65~~
	~~ST1081~~	~~HYBRID WYE CONNECTION~~	~~AVENUE 24~~	~~ASH SLOUGH~~	~~WATER CROSSING BRIDGE NO. 81~~
	~~ST1082~~	~~HYBRID WYE CONNECTION~~	~~AVENUE 24~~	~~ASH SLOUGH~~	~~WATER CROSSING BRIDGE NO. 82~~
	~~ST1083~~	~~HYBRID MERCED CONNECTION~~	~~AVENUE 24~~	~~ASH SLOUGH~~	~~WATER CROSSING BRIDGE NO. 83~~
	~~ST1084~~	~~HYBRID MERCED CONNECTION~~	~~AVENUE 24~~	~~CHOWCHILLA RIVER~~	~~WATER CROSSING BRIDGE NO. 84~~
	~~ST1085~~	~~HYBRID MERCED CONNECTION~~	~~AVENUE 24~~	~~DUTCHMAN CREEK~~	~~WATER CROSSING BRIDGE NO. 85~~
	~~ST1086~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~SCHMIDT CREEK~~	~~WATER CROSSING BRIDGE NO. 86~~
	~~ST1087~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~FRESNO RIVER~~	~~WATER CROSSING BRIDGE NO. 87~~
	~~ST1088~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~MAIN CANAL~~	~~WATER CROSSING BRIDGE NO. 88~~
	ST1089	HYBRID MAIN LINE	AVENUE 24	COTTONWOOD CREEK	WATER CROSSING BRIDGE NO. 89
	~~ST1090~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~ASH SLOUGH~~	~~WATER CROSSING BRIDGE NO. 90~~
	~~ST1091~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~BERENDA SLOUGH~~	~~WATER CROSSING BRIDGE NO. 91~~
	~~ST1092~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~BERENDA CREEK~~	~~WATER CROSSING BRIDGE NO. 92~~
	~~ST1093~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~DRY CREEK~~	~~WATER CROSSING BRIDGE NO. 93~~
	~~ST1094~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~HERNDON CANAL~~	~~WATER CROSSING BRIDGE NO. 94~~
		RETAINED CUT STRUCTURE			
	~~ST1211~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 211~~	~~STA 5902+50 TO STA 5915+50~~
	~~ST1212~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 211~~	~~STA 5915+50 TO STA 5928+50~~
	~~ST1221~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 212~~	~~STA 5967+50 TO STA 5980+50~~
	~~ST1222~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 212~~	~~STA 5980+50 TO STA 5993+50~~
	~~ST1223~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 212~~	~~STA 5993+50 TO STA 6006+50~~
	~~ST1231~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 213~~	~~STA 6019+50 TO STA 6032+50~~
	~~ST1232~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 213~~	~~STA 6032+50 TO STA 6045+50~~
	~~ST1233~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~RETAINED CUT NO. 213~~	~~STA 6045+50 TO STA 6058+50~~
		MINOR BRIDGE			
	~~ST1301~~	~~BNSF MAIN LINE~~	~~AVENUE 21~~	~~BRIDGE OVER SR 145~~	

SHT NO	DWG NO	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
		SECTIONS			
	~~ST3001~~	~~ALIGNMENTS~~	~~AVENUE 21 AND 24~~	~~TYPICAL SECTIONS~~	~~SHEET 1~~

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
INDEX OF DRAWINGS
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. SB0121
SCALE No scale
SHEET NO. OF

LeeC10 11/17/2011 9:39:43 AM **uscr1fp001*Cadd*CHSR*60022962*Task-02_Merced-Fresno*CADD*Struct*Sheet**APS**HYBRID 24*15% cost reduction submittal*MF-SB-0121.dgn

SHT NO	DWG NO	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
		HYBRID AVENUE 24 VIADUCT			
	~~SV1873~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1355+50 TO STA 1368+50~~
	~~SV1874~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1368+50 TO STA 1381+50~~
	~~SV1875~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1381+50 TO STA 1394+50~~
	~~SV1876~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1394+50 TO STA 1407+50~~
	~~SV1877~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1407+50 TO STA 1420+50~~
	~~SV1878~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1420+50 TO STA 1433+50~~
	~~SV1879~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1433+50 TO STA 1446+50~~
	~~SV1880~~	~~HYBRID MAIN LINE~~	~~AVENUE 24~~	~~VIADUCT NO. 201~~	~~STA 1446+50 TO STA 1459+50~~
	SV1885	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 2678+50 TO STA 2691+50
	SV1886	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 2691+50 TO STA 2704+50
	SV1887	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 2704+50 TO STA 2717+50
	SV1888	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 2717+50 TO STA 2730+50
	SV1889	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 2730+50 TO STA 2740+55.75
	SV1890	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 1713+98 TO STA 1723+00
	SV1891	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 1723+00 TO STA 1737+00
	SV1892	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 1737+00 TO STA 1751+00
	SV1893	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 1751+00 TO STA 1765+00
	SV1894	HYBRID MAIN LINE	AVENUE 24	VIADUCT NO. 203	STA 1765+00 TO STA 1772+78
	~~SV1911~~	~~HYBRID MERCED CONNECTION SB~~	~~AVENUE 24~~	~~VIADUCT NO. 211~~	~~STA 5070+50 TO STA 5083+50~~
	~~SV1912~~	~~HYBRID MERCED CONNECTION SB~~	~~AVENUE 24~~	~~VIADUCT NO. 211~~	~~STA 5083+50 TO STA 5096+50~~
	~~SV1913~~	~~HYBRID MERCED CONNECTION SB~~	~~AVENUE 24~~	~~VIADUCT NO. 211~~	~~STA 5096+50 TO STA 5109+50~~
	~~SV1914~~	~~HYBRID MERCED CONNECTION SB~~	~~AVENUE 24~~	~~VIADUCT NO. 211~~	~~STA 5109+50 TO STA 5122+50~~
	~~SV1915~~	~~HYBRID MERCED CONNECTION SB~~	~~AVENUE 24~~	~~VIADUCT NO. 211~~	~~STA 5122+50 TO STA 5135+50~~
	~~SV1921~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 221~~	~~STA 156+50 TO STA 169+50~~
	~~SV1922~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 221~~	~~STA 169+50 TO STA 182+50~~
	~~SV1923~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 221~~	~~STA 182+50 TO STA 195+50~~
	~~SV1924~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 221~~	~~STA 195+50 TO STA 208+50~~
	~~SV1925~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 221~~	~~STA 208+50 TO STA 221+50~~
	~~SV1932~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 222~~	~~STA 298+50 TO STA 311+50~~
	~~SV1933~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 222~~	~~STA 311+50 TO STA 324+50~~
	~~SV1934~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 222~~	~~STA 324+50 TO STA 337+50~~
	~~SV1935~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 222~~	~~STA 337+50 TO STA 350+50~~
	~~SV1936~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 222~~	~~STA 350+50 TO STA 363+50~~
	~~SV1937~~	~~HYBRID WYE CONNECTION NB~~	~~AVENUE 24~~	~~VIADUCT NO. 222~~	~~STA 363+50 TO STA 376+50~~
	SV2000	HYBRID MAIN LINE	AVENUE 21	VIADUCT NO. 501	STA 2082+00 TO STA 2095+0
	SV2001	HYBRID MAIN LINE	AVENUE 21	VIADUCT NO. 501	STA 2095+00 TO STA 2109+00
	SV2002	HYBRID MAIN LINE	AVENUE 21	VIADUCT NO. 501	STA 2109+00 TO STA 2121+00
	SV2003	HYBRID MAIN LINE	AVENUE 21	VIADUCT NO. 501	STA 2121+00 TO STA 2135+50
	SV2004	HYBRID MAIN LINE	AVENUE 21	VIADUCT NO. 501	STA 2135+50 TO STA 2147+00
	SV2005	HYBRID MAIN LINE	AVENUE 21	VIADUCT NO. 501	STA 2147+00 TO STA 2160+00

SHT NO	DWG NO	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
		SECTIONS			
	SV3001	ALIGNMENTS	AVENUE 21 AND 24	TYPICAL SECTIONS	SHEET 1
	SV3002	ALIGNMENTS	AVENUE 21 AND 24	TYPICAL SECTIONS	SHEET 2
	~~SV3003~~	~~ALIGNMENTS~~	~~AVENUE 21 AND 24~~	~~TYPICAL SECTIONS~~	~~SHEET 3~~
	SV3004	ALIGNMENTS	AVENUE 21 AND 24	TYPICAL SECTIONS	SHEET 4
	SV3005	ALIGNMENTS	AVENUE 21 AND 24	TYPICAL SECTIONS	SHEET 5
	SV3006	ALIGNMENTS	AVENUE 21 AND 24	TYPICAL SECTIONS	SHEET 6
	SV3102	ALIGNMENT BNSF	AVENUE 21 AND 24	SECTIONS	SHEET 2
	SV3301		AERIAL GUIDEWAY	TYPICAL SECTION 1	
	SV3401	ALIGNMENT HYBRID	AVENUE 24	SECTIONS	SHEET 1
	SV3402	ALIGNMENT HYBRID	AVENUE 24	SECTIONS	SHEET 2

"Drawings lined Out are not Included for Procurement Purposes Only"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY E. CISNEROS
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
INDEX OF DRAWINGS
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. SB0122
SCALE No scale
SHEET NO. OF

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GENERAL NOTES

CALTRANS STANDARD PLANS DATED MAY 2006

BO-3 BRIDGE DETAILS

STANDARD PLAN SHEET NO.

DETAIL NO.

ABBREVATIONS

Ave	avenue
BB	beginning of bridge
BC	begin horizontal curve
	box culvert
Beg	begin
Blvd	boulevard
BVC	beginning of vertical curve
℄	center line
CIDH	cast-in-drilled-hole
CIP	cast-in-place
Clr	clear
Col	column
Conc	concrete
CS	curve to spiral
ø	diameter
Dwg.	drawing
EB	end of bridge
[EB]	eastbound
EC	end horizontal curve
EVC	end of vertical curve
Exist	existing
HST	high speed train
ID	identification designation
Max	maximum
Med	median
Min	minimum
ML	match line
N	north
NB	northbound
No.	number
NTS	not to scale
OCS	overhead contact system
OG	original ground
OH	overhead
PC	point of curve
PCC	point of compound circular curves
PCS	point of curve to spiral
PI	point of intersection of two tangents
POC	point of curve
POS	point of spiral
POT	point of tangent
PRC	point of reverse curves
PC/PS	precast/prestressed
PSC	point of spiral to curve
PT	point of tangency
R	radius of curvature in feet
R/C	rate of change
Rd	road
R/W	right of way
S	slope
SB	southbound
SC	spiral to curve
Shld	shoulder
SPO	point of origin of compound spiral
SS	point of spiral to spiral
ST	spiral to tangent
St	street
STA	station
TS	tangent to spiral
Typ	typical
VC	vertical curve
WB	westbound

SYMBOLS

	Match Line
	HST Track
	Proposed HST Right-of-Way
	Existing UPRR Right-of-Way
	Original Ground

LEGEND

	Indicates Direction of Vehicle Traffic
	Indicates Direction of Water Flow
N	North Arrow

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENTS
AVENUE 21 AND 24
GENERAL NOTES, ABBREVIATIONS,
SYMBOLS AND LEGENDS

CONTRACT NO. HSR06-007
DRAWING NO. SB0201
SCALE No scale
SHEET NO. OF

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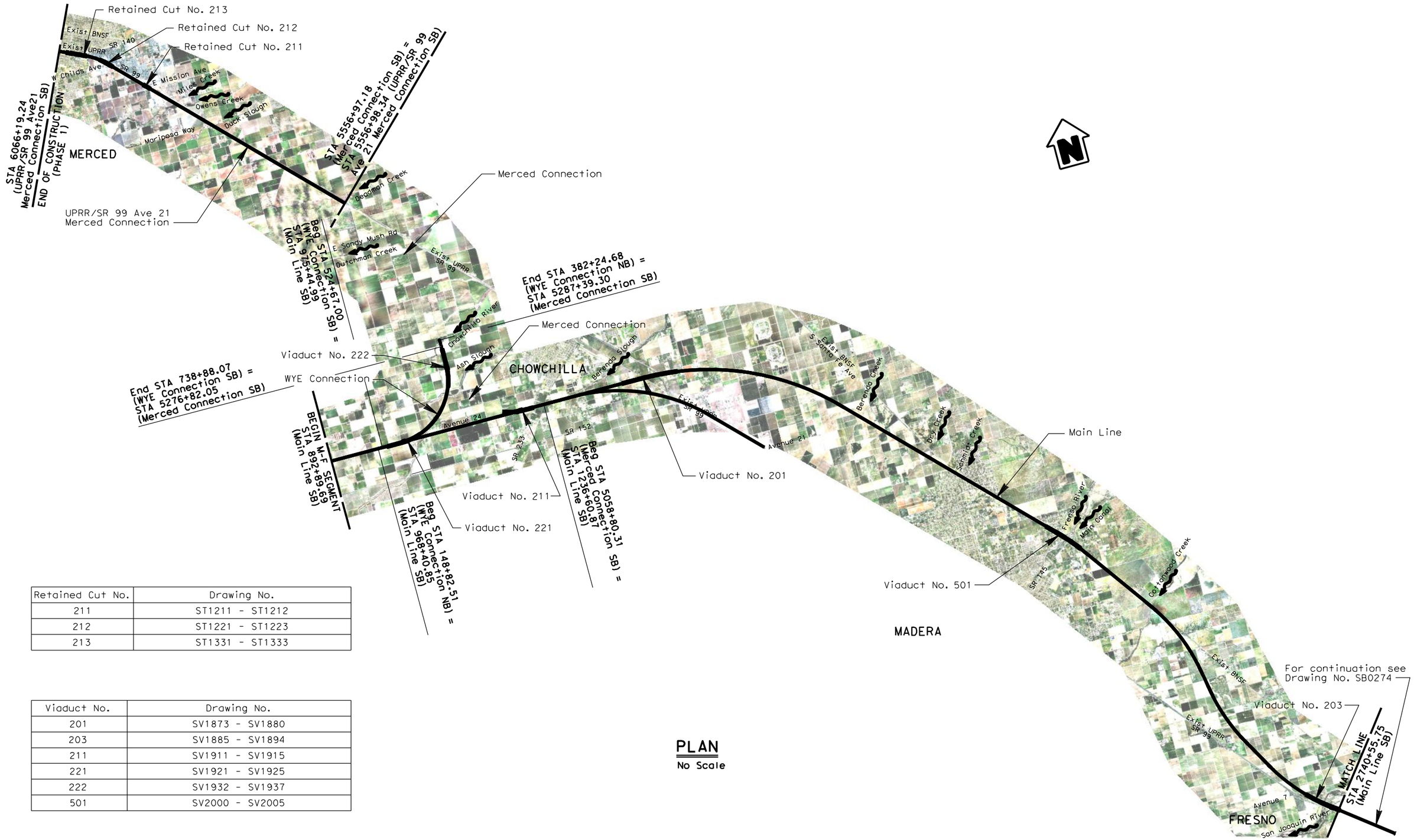

Retained Cut No.	Drawing No.
211	ST1211 - ST1212
212	ST1221 - ST1223
213	ST1331 - ST1333

Viaduct No.	Drawing No.
201	SV1873 - SV1880
203	SV1885 - SV1894
211	SV1911 - SV1915
221	SV1921 - SV1925
222	SV1932 - SV1937
501	SV2000 - SV2005

PLAN

No Scale

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. LEE
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/17/2012

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
LOCATION PLAN
VIADUCTS

CONTRACT NO. HSR06-007
DRAWING NO. SB0271
SCALE As shown
SHEET NO. OF

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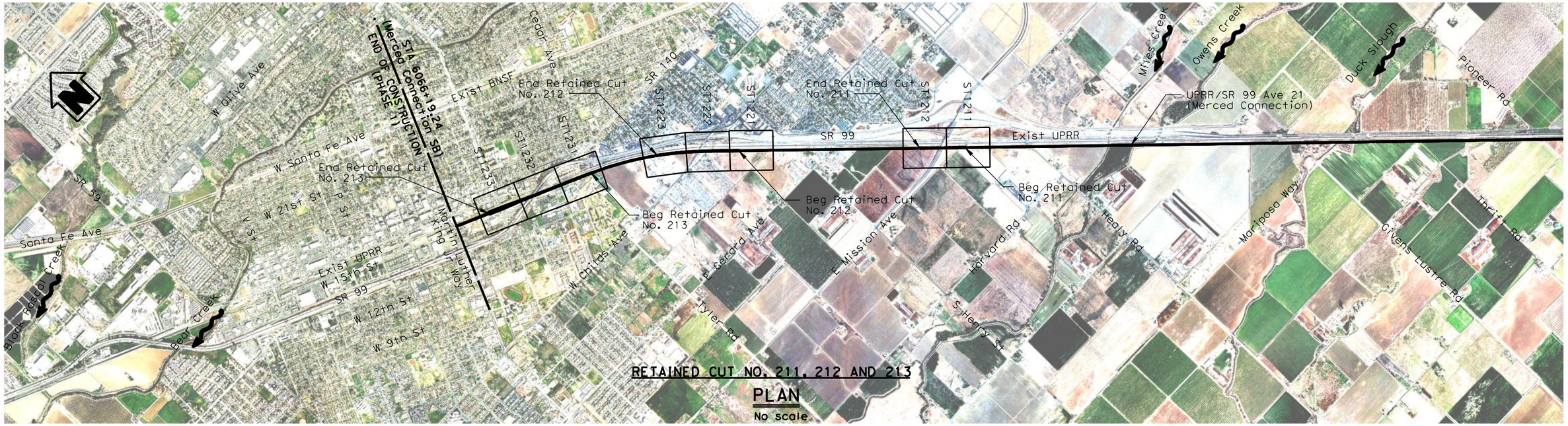
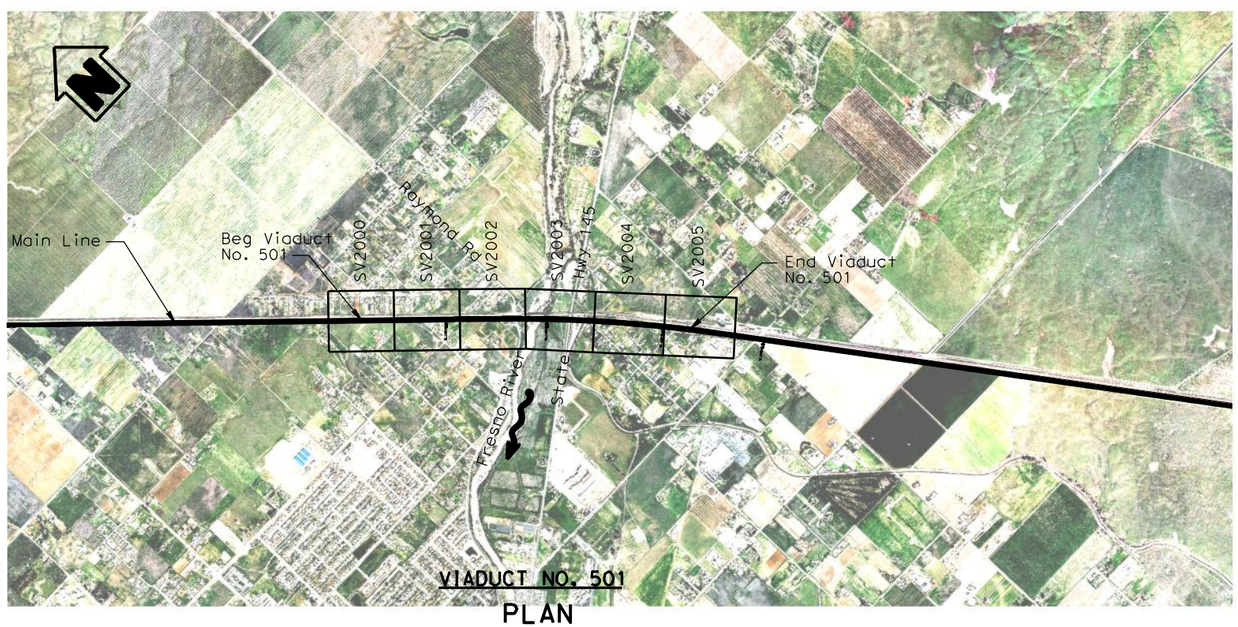


RETAINED CUT NO. 211, 212 AND 213

PLAN

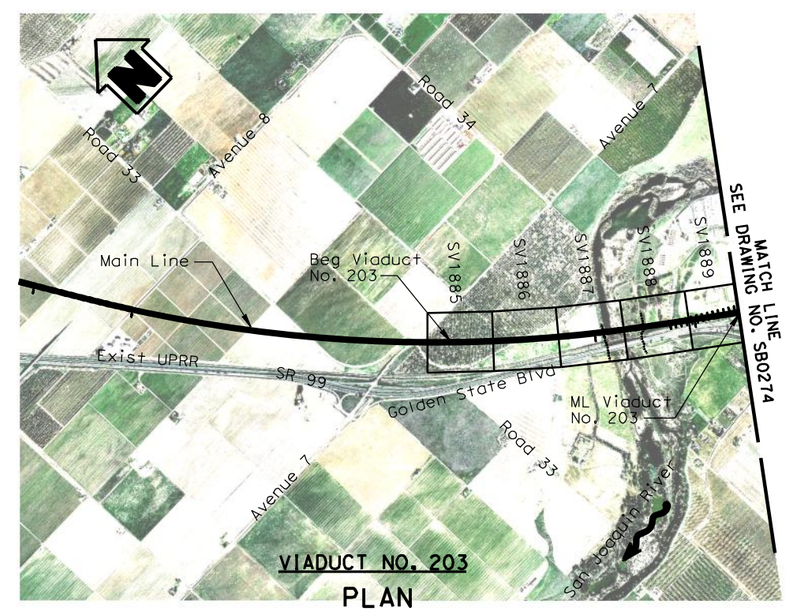
No scale



VIADUCT NO. 501

PLAN

No scale



VIADUCT NO. 203

PLAN

No scale

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY E. CISNEROS
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
KEY MAP
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. SB0272
SCALE As shown
SHEET NO. OF

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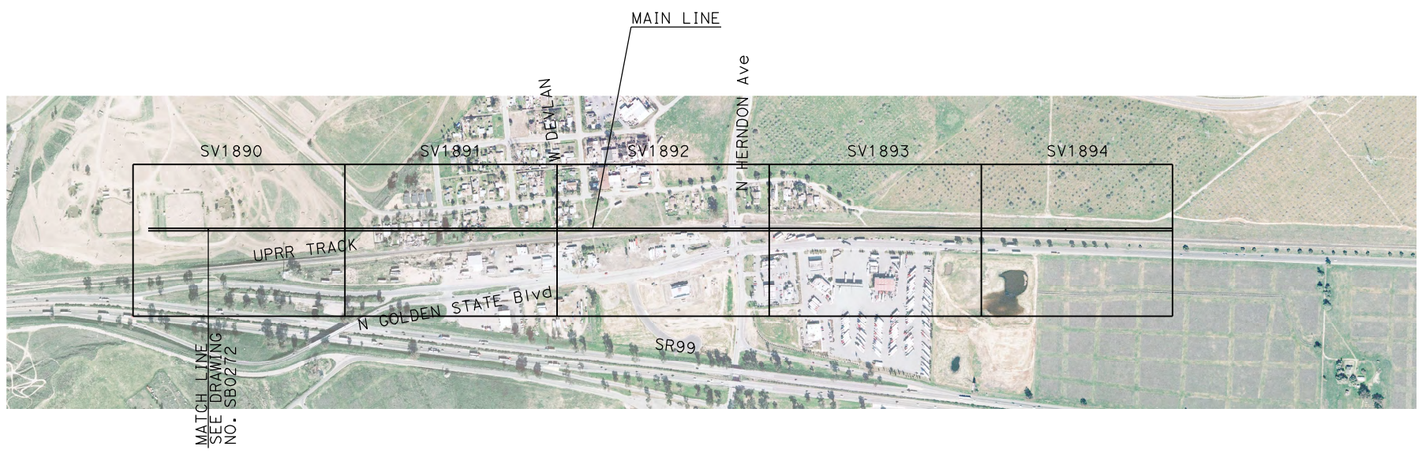

Note:

For modifications to local roads, see "Volume 4: SR99 & Local Road Modifications - Fresno County".

VIADUCT NO. 203

PLAN

No Scale

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

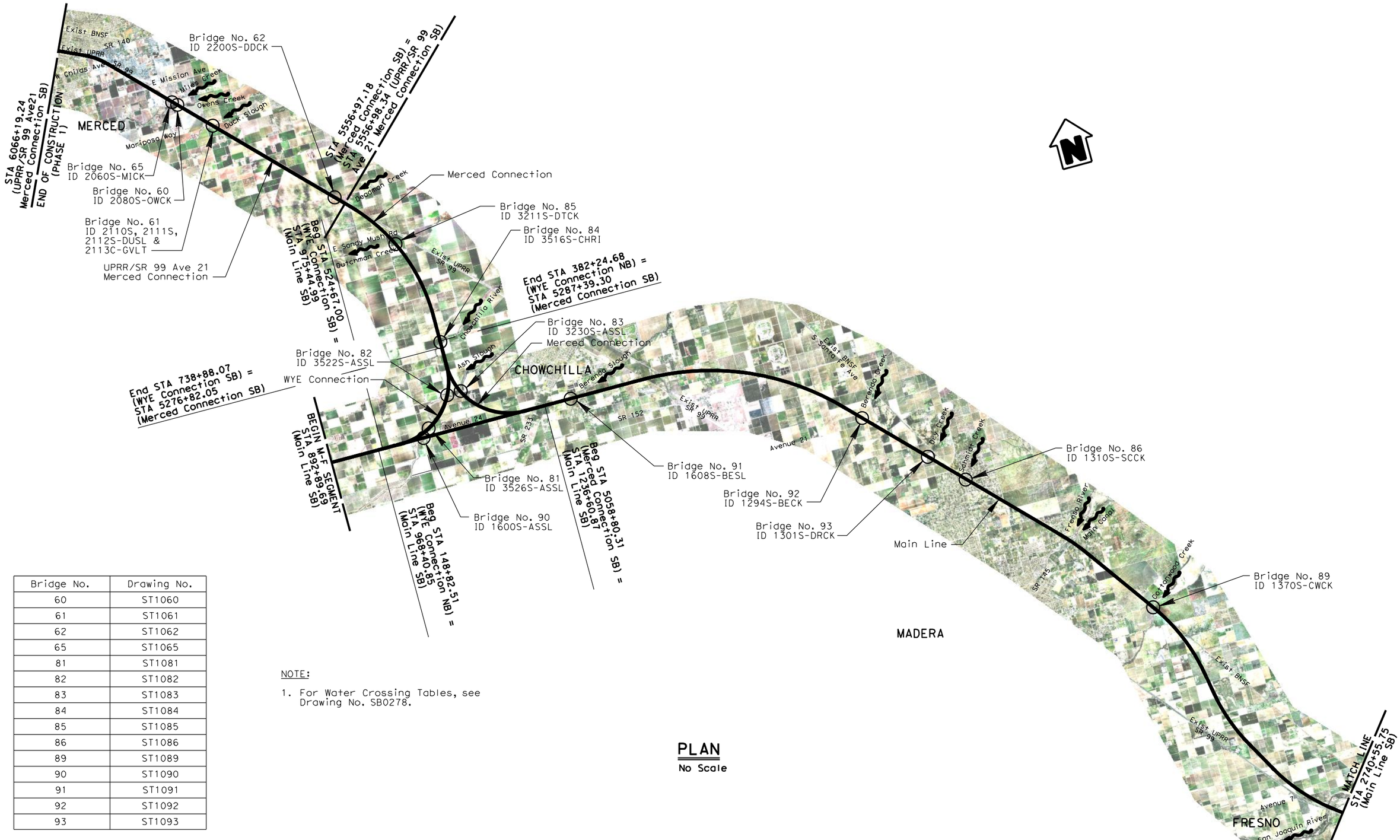
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

ALIGNMENT HYBRID
AVENUE 24
KEY MAP
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. SB0274
SCALE NONE
SHEET NO. OF

DATE PLOTTED => 02-MAY-2011
TIME PLOTTED => 10:10

USERNAME => Pwalker
DGN FILE => MF-S-FS-A1HYBRIDRGPE-KEY



Bridge No.	Drawing No.
60	ST1060
61	ST1061
62	ST1062
65	ST1065
81	ST1081
82	ST1082
83	ST1083
84	ST1084
85	ST1085
86	ST1086
89	ST1089
90	ST1090
91	ST1091
92	ST1092
93	ST1093

NOTE:

1. For Water Crossing Tables, see Drawing No. SB0278.

PLAN

No Scale

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. LEE
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
LOCATION PLAN
WATER CROSSING BRIDGES

CONTRACT NO. HSR06-007
DRAWING NO. SB0277
SCALE As shown
SHEET NO. OF

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STATION	ALIGNMENT ID	FEATURE CROSSED			STRUCTURE	
		NAME	ID	TRACK SUPPORT	TYPE	NO. x SPAN
1041+26±	Hybrid-24ML SB	Ash Slough	1600S-ASSL	At grade	PC/PS (90)	12x50′
1052+30±	Hybrid-24ML SB	Ash Main Canal	1602C-AMCA	At grade	BC	-
1144+60±	Hybrid-24ML SB	Bethel Canal	1604C-BTCA	At grade	BC	-
1269+00±	Hybrid-24ML SB	Berenda Canal	1606C-BECA	At grade	BC	-
1278+00±	Hybrid-24ML SB	Berenda Slough	1608S-BESL	At grade	PC/PS (91)	8x50′
1329+10±	Hybrid-24ML SB	-	1610C	At grade	BC	-
1366+00±	Hybrid-24ML SB	Califa Lateral A	1612C-CALA	Retained fill	BC	-
1398+21±	Hybrid-24ML SB	-	1614P	Elevated	-	-
1462+69±	Hybrid-24ML SB	Califa Canal	1464C-CACA	At grade	BC	-
1635+28±	Hybrid-24ML SB	Lat 32.2	1257C-322	At grade	BC	-
1752+58±	Hybrid-24ML SB	Berenda Creek	1294S-BECK	At grade	PC/PS (92)	3x30′
1871+41±	Hybrid-24ML SB	Dry Creek	1301S-DRCK	At grade	PC/PS (93)	3x40′
1909+26±	Hybrid-24ML SB	24.2	1306C-242	At grade	BC	-
1938+80±	Hybrid-24ML SB	Schmidt Creek	1310S-SCCK	At grade	PC/PS (86)	3x40′
1988+88±	Hybrid-24ML SB	-	1320S	At grade	BC	-
2123+95±	Hybrid-24ML SB	Fresno River	1330S-FRRI	At grade	PC/PS (87)	9x50′
2133+48±	Hybrid-24ML SB	Main Canal	1340C-MACA	At grade	PC/PS (88)	3x40′
2294+90±	Hybrid-24ML SB	Cottonwood Creek	1370S-CWCK	At grade	PC/PS (89)	5x50′
2323+25±	Hybrid-24ML SB	-	1375C	At grade	BC	-
2466+06±	Hybrid-24ML SB	6.2-14.0-W	1278C-6214	At grade	BC	-
2471+06±	Hybrid-24ML SB	6.2-14.0-W	1279C-6214	At grade	BC	-
2522+33±	Hybrid-24ML SB	-	1380C	At grade	BC	-
2619+06±	Hybrid-24ML SB	Mid Lateral 6.2-9.25	1381C-ML2S	At grade	BC	-
2678+16±	Hybrid-24ML SB	6.2-9.2-5.05	1395C-6292	At grade	BC	-
2713+99±	Hybrid-24ML SB	San Joaquin River	1400S-SJRI	Elevated	-	-
5575+75±	UPRR/SR 99-21MC SB	Deadman Creek	2200S-DDCK	At grade	PC/PS (62)	3x30′
5605+85±	UPRR/SR 99-21MC SB	-	2154C	At grade	BC	-
5625+95±	UPRR/SR 99-21MC SB	-	2153C	At grade	BC	-
5646+79±	UPRR/SR 99-21MC SB	-	2152C	At grade	BC	-
5660+94±	UPRR/SR 99-21MC SB	-	2151C	At grade	BC	-
5681+33±	UPRR/SR 99-21MC SB	South Slough/ Russell Lateral	2150C-RULT	At grade	BC	-
5736+89±	UPRR/SR 99-21MC SB	Lateral B	2117C-LATB	At grade	BC	-
5754+00±	UPRR/SR 99-21MC SB	South Slough/ Lingard Lateral	2116C-SOSL	At grade	BC	-
5759+55±	UPRR/SR 99-21MC SB	-	2115C	At grade	BC	-
5774+75±	UPRR/SR 99-21MC SB	-	2114C	At grade	BC	-
5793+41±	UPRR/SR 99-21MC SB	Givens Lateral	2113C-GVLT	At grade	BC	-
5794+09±	UPRR/SR 99-21MC SB	Duck Slough	2110S-DUSL	At grade		
5797+99±	UPRR/SR 99-21MC SB	Duck Slough	2111S-DUSL	At grade	PC/PS (61)	10x60′
5798+47±	UPRR/SR 99-21MC SB	Duck Slough	2112S-DUSL	At grade		
5825+00±	UPRR/SR 99-21MC SB	-	2100D	At grade	BC	-
5835+27±	UPRR/SR 99-21MC SB	Lateral A-A	2090D-LTAA	At grade	BC	-
5851+98±	UPRR/SR 99-21MC SB	Koff Lateral	2081C-KOLT	At grade	BC	-
5860+26±	UPRR/SR 99-21MC SB	Owens Creek	2080S-OWCK	At grade	PC/PS (60)	4x50′
5867+22±	UPRR/SR 99-21MC SB	Miles Creek	2060S-MICK	At grade	PC/PS (65)	2x50′
5898+35±	UPRR/SR 99-21MC SB	Miles Creek Overflow No. 1	2055S-MCOF	At grade	BC	-
5912+25±	UPRR/SR 99-21MC SB	Farmdale Lateral	2050C-FDLT	At grade	BC	-
5916+79±	UPRR/SR 99-21MC SB	-	2046D	At grade	BC	-
5919+70±	UPRR/SR 99-21MC SB	-	2048D	At grade	BC	-
5970+53±	UPRR/SR 99-21MC SB	Lateral D	2042C-LTD	At grade	BC	-
5987+81±	UPRR/SR 99-21MC SB	Lateral D	2040C-LTD	At grade	BC	-

STATION	ALIGNMENT ID	FEATURE CROSSED			STRUCTURE	
		NAME	ID	TRACK SUPPORT	TYPE	NO. x SPAN
5201+60±	HYBRID-24MC-NB	Ash Slough	3230S-ASSL	At grade	PC/PS (83)	5x50′
5242+15±	HYBRID-24MC-NB	Chowchilla River By-Pass	3518C-CRBP	At grade	BC	-
5285+40±	HYBRID-24MC-NB	Chowchilla River	3516S-CHRI	At grade	PC/PS (84)	4x60′
5294+90±	HYBRID-24MC-NB	Lat 4	3514C-LAT4	At grade	BC	-
5362+00±	HYBRID-24MC-NB	Lat 3	3512C-LAT3	At grade	BC	-
5388+00±	HYBRID-24MC-NB	Lat 2	3510C-LAT2	At grade	BC	-
5456+00±	HYBRID-24MC-NB	Dutchman Creek	3211S-DTCK	At grade	PC/PS (85)	3x40′
228+80±	HYBRID-24WC-NB	Ash Main Canal	3564-AMCA	At grade	BC	-
233+25±	HYBRID-24WC-NB	Ash Slough	3526S-ASSL	At grade	PC/PS (81)	15x50′
261+00±	HYBRID-24WC-NB	-	3524C	At grade	BC	-
295+35±	HYBRID-24WC-NB	Ash Slough	3522S-ASSL	At grade	PC/PS (82)	5x50′
302+50±	HYBRID-24WC-NB	Ash Main Canal	3520C-AMCA	At grade	BC	-

Note: (1) - Indicates Water Crossing Bridge No. 1, see Drawing No. SB0277.
21 - Ave 21, MC - Merced Connection, ML - Main Line and WC - WYE Connection

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

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CONSTRUCTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
WATER CROSSING
TABLES

CONTRACT NO. HSR06-007
DRAWING NO. SB0278
SCALE No scale
SHEET NO. OF

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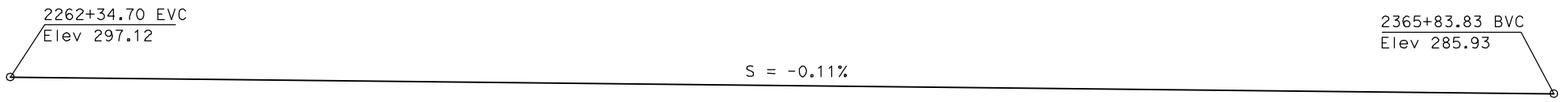
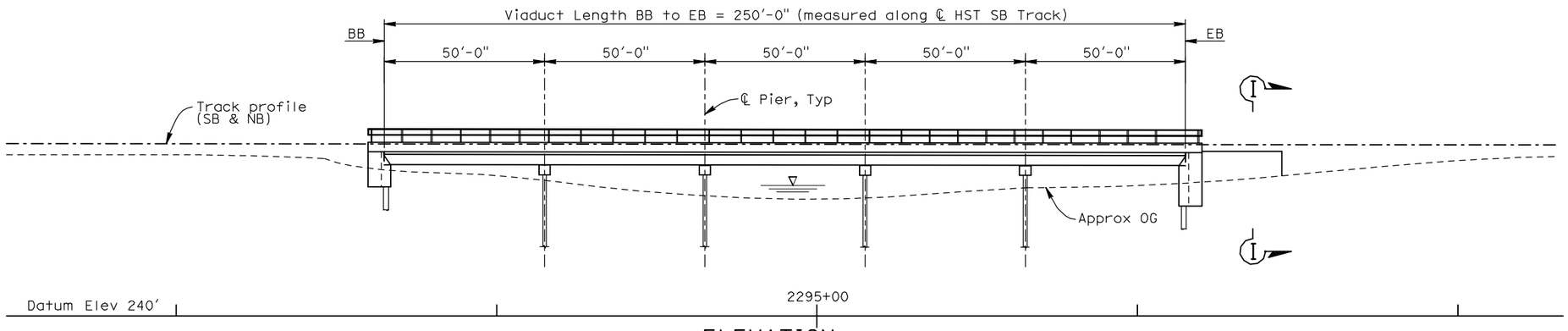


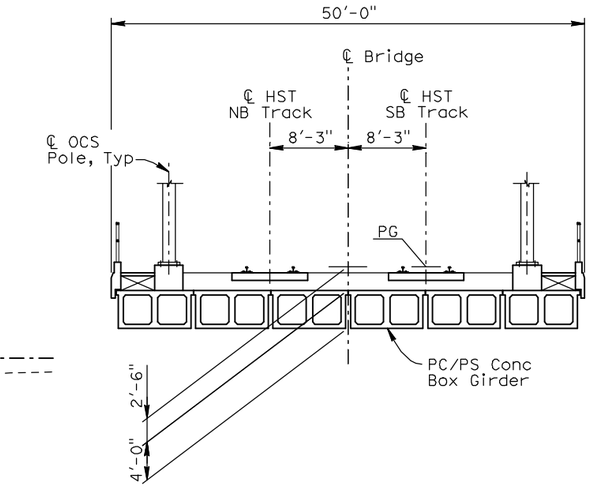
TOP OF TRACK PROFILE

No scale



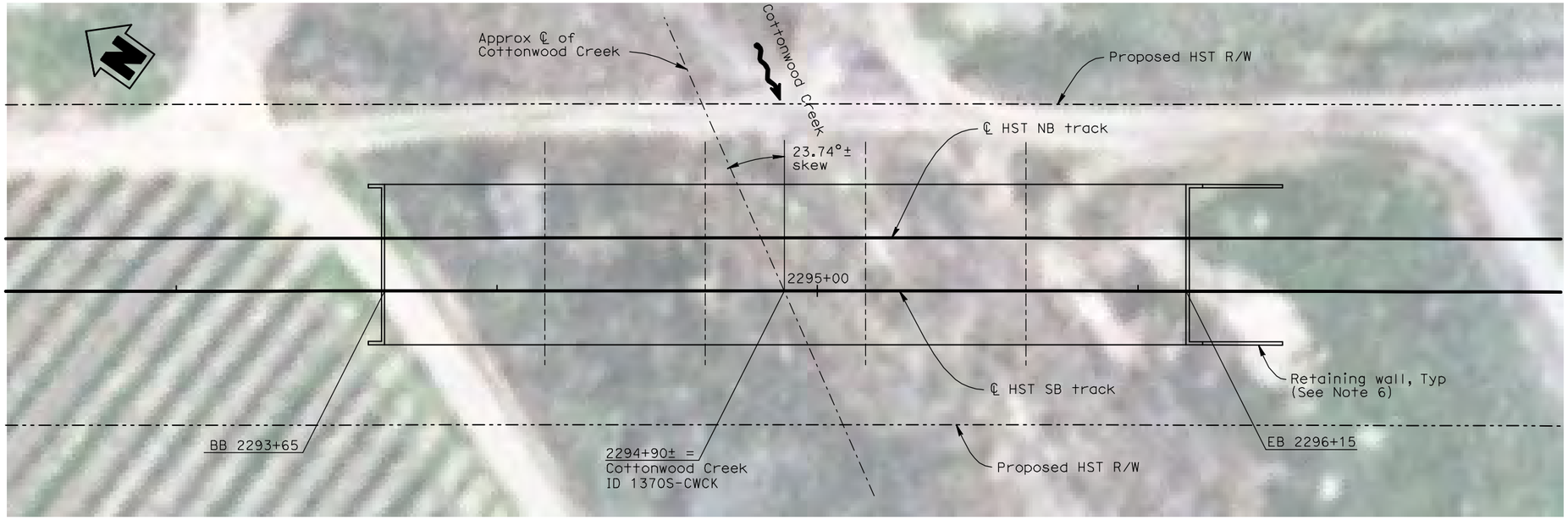
ELEVATION

1" = 20'



TYPICAL SECTION

1/8" = 1'-0"



PLAN

1" = 20'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. Location of Cottonwood Creek to be verified at further study and design.
3. Bent and abutment orientation to be skewed accordingly, if necessary at further study and design.
4. Existing underground and overhead utilities to be determined.
5. For Section I-I, see Drawing No. SV3004.
6. Retaining wall height and limits are subject to further study and design.
7. Maintenance access will be provided under structure, if required.
8. Final design of the structure will conform to floodplain and freeboard requirement.

20 0 20 40
1"=20'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 24
COTTONWOOD CREEK
WATER CROSSING BRIDGE NO. 89

CONTRACT NO. HSR06-007
DRAWING NO. ST1089
SCALE As shown
SHEET NO. OF

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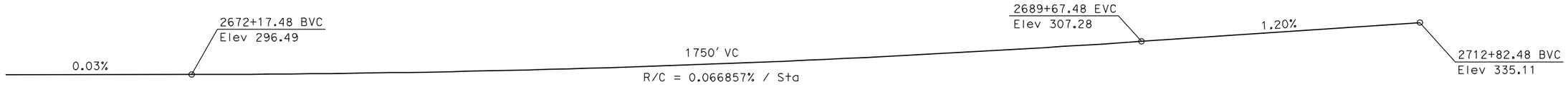
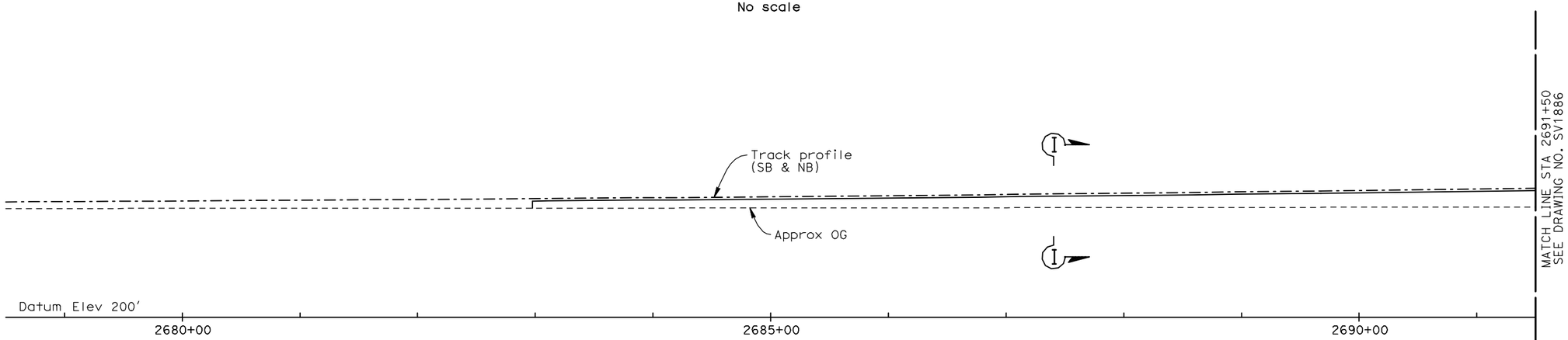


TOP OF TRACK PROFILE

No scale

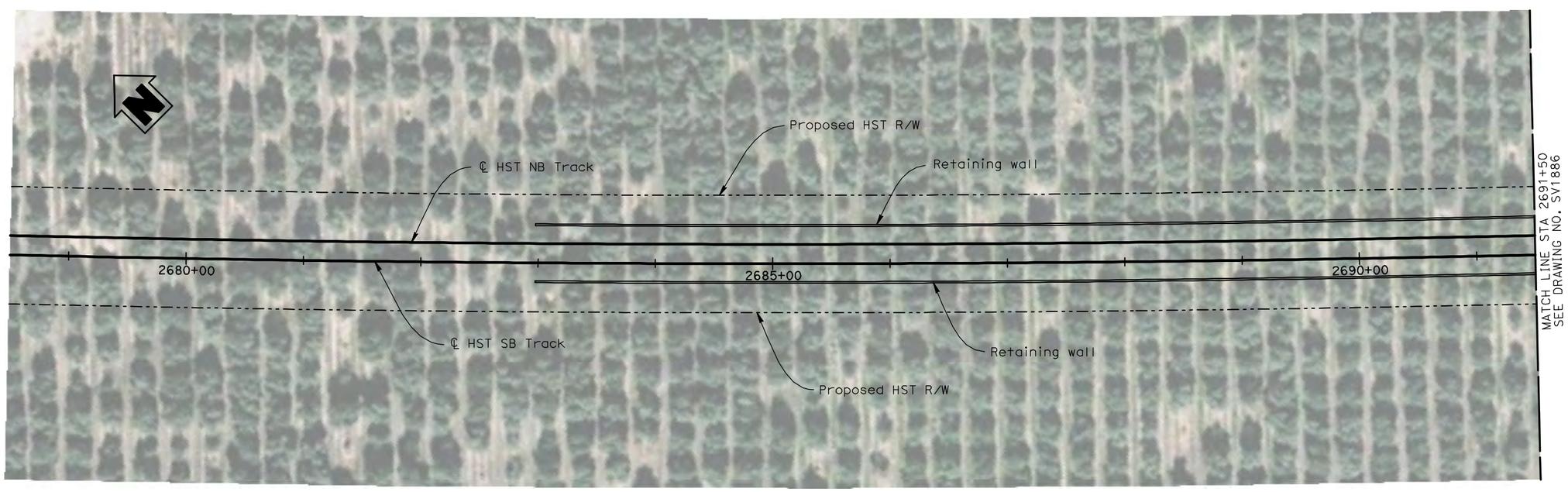


DEVELOPED ELEVATION

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section I-I, see Drawing No. SV3004.



PLAN

1" = 50'

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
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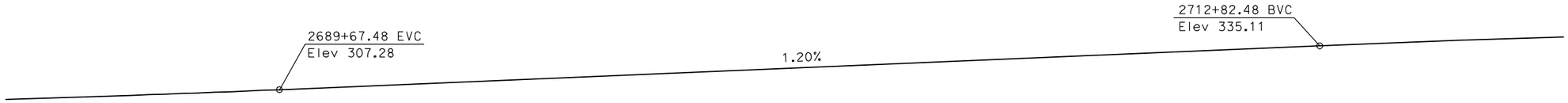
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 2678+50 TO STA 2691+50

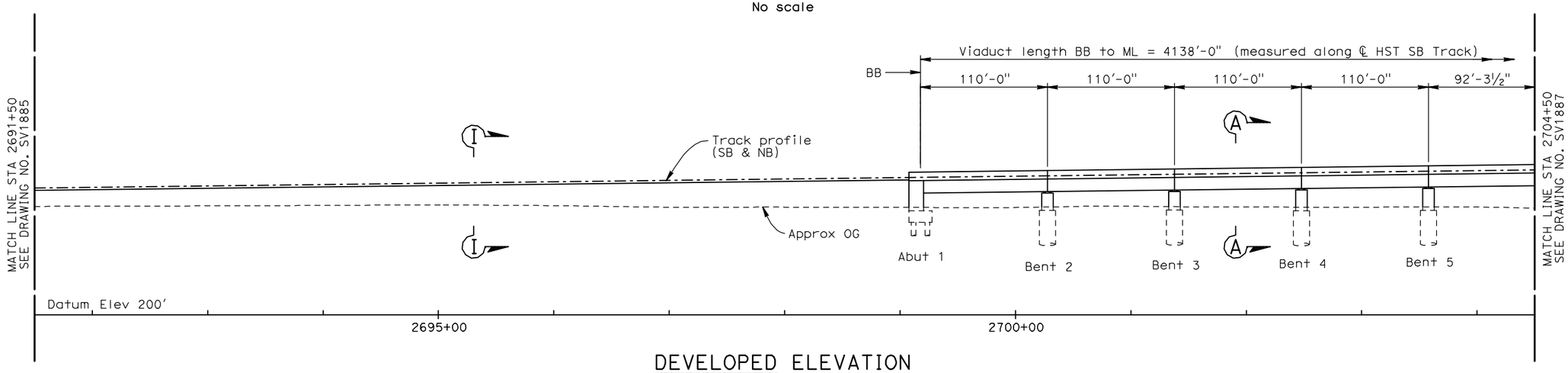
CONTRACT NO. HSR06-007
DRAWING NO. SV1885
SCALE As shown
SHEET NO. OF

LeeC10 4/27/2011 4:31:08 PM i:\chsr\60022962\task-02_merced-fresno\cadd\struct\sheet\aps\hybrid\15% cost reduction submittal\MF-SV-1885.dgn



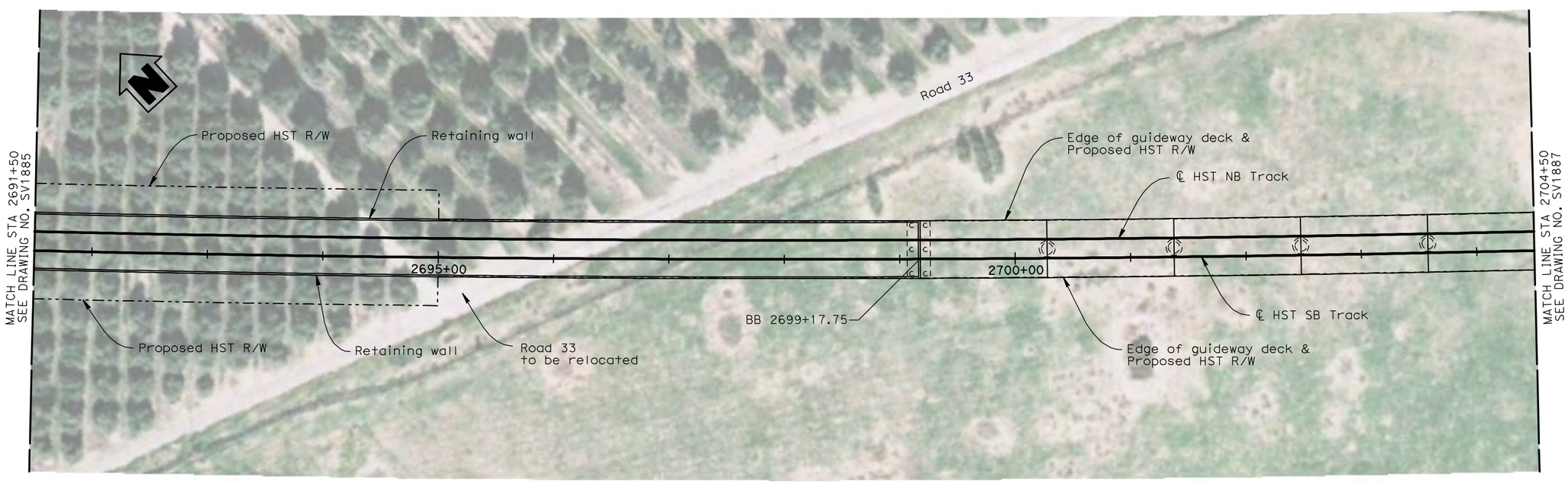
TOP OF TRACK PROFILE

No scale



DEVELOPED ELEVATION

1" = 50'



PLAN

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section A-A, see Drawing No. SV3001.
3. For Section I-I, see Drawing No. SV3004.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

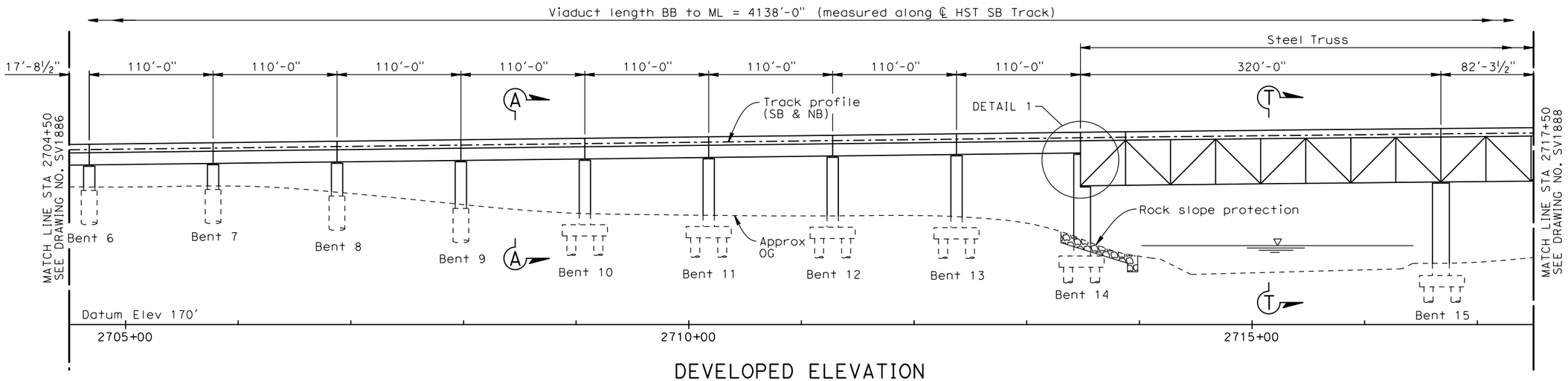
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 2691+50 TO STA 2704+50

CONTRACT NO. HSR06-007
DRAWING NO. SV1886
SCALE As shown
SHEET NO. OF

LeeC10 4/27/2011 4:31:12 PM i:\chsr\60029962\task-02_merced-fresno\cadd\struct\sheet\aps\hybrid\15% cost reduction submittal\MF-SV-1886.dgn

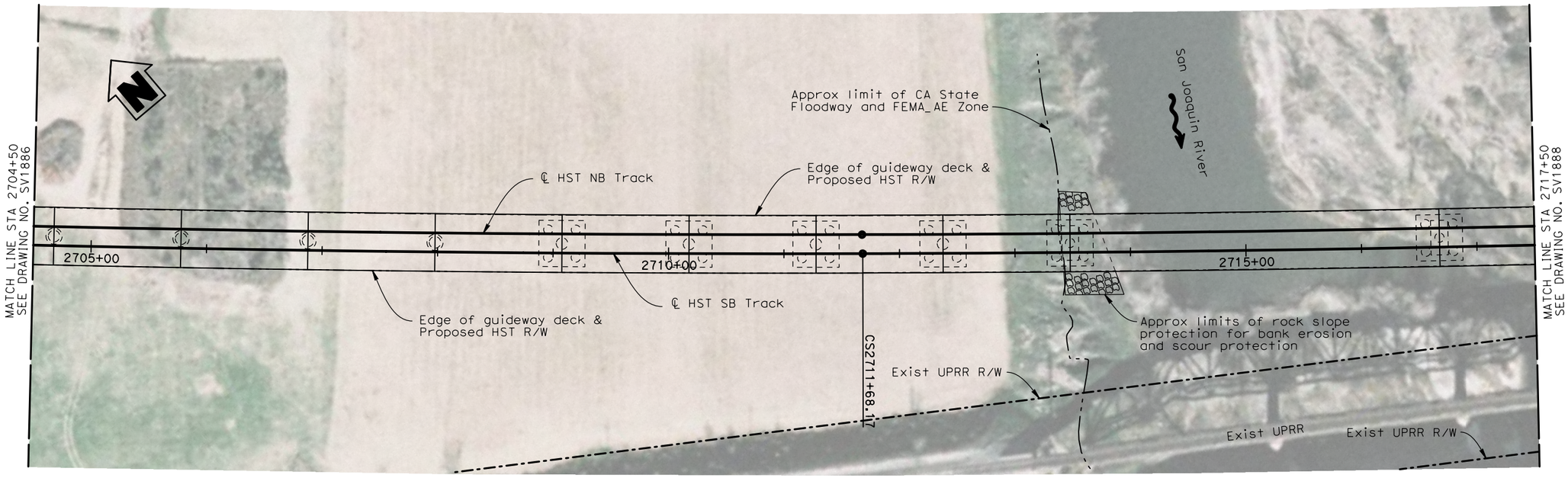
TOP OF TRACK PROFILE

No scale



DEVELOPED ELEVATION

1" = 50'



PLAN

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section A-A, see Drawing No. SV3001.
3. For Section S-S and Detail 1, see Drawing No. SV3006.
4. Foundations shown are indicative subject to detail design and clarification of actual UPRR ROW.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/22/2012

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

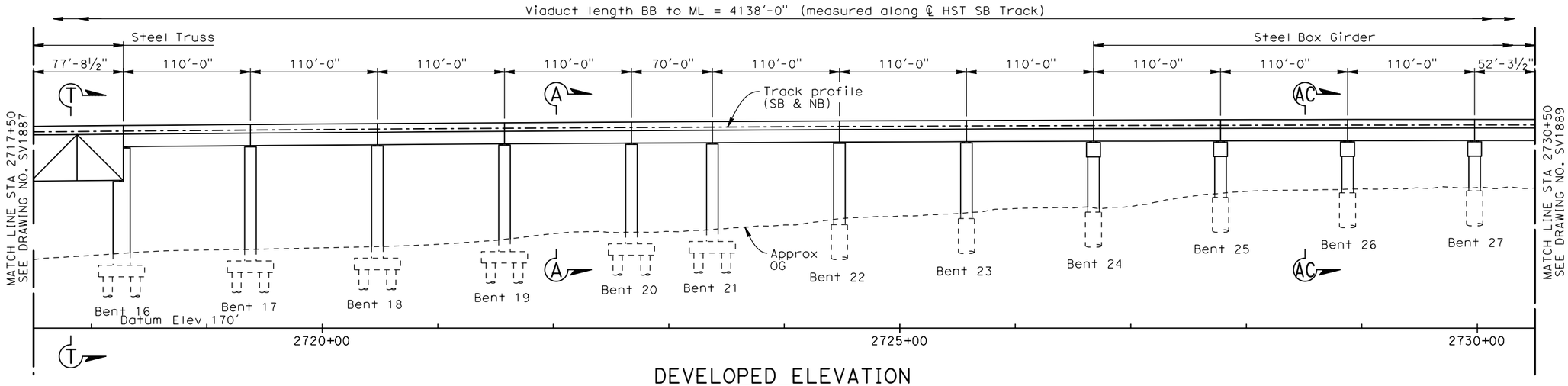
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 2704+50 TO STA 2717+50

CONTRACT NO. HSR06-007
DRAWING NO. SV1887
SCALE As shown
SHEET NO. OF

I:\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 24\15% cost reduction submittal\MF-SV-1887.dgn 2/22/2012 6:09:14 PM leec10

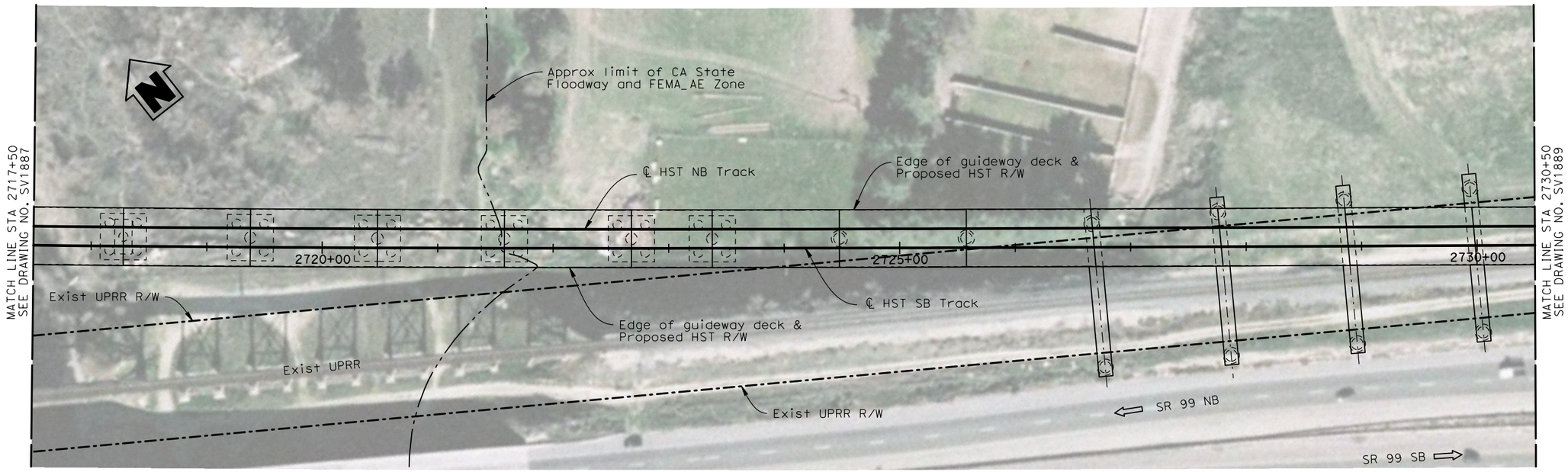
TOP OF TRACK PROFILE

No scale



DEVELOPED ELEVATION

1" = 50'



PLAN

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section A-A, see Drawing No. SV3001.
3. For Section S-S, see Drawing No. SV3006.
4. For Section AC-AC, see Drawing No. SV3102.
5. Foundations shown are indicative subject to detail design and clarification of actual UPRR ROW.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/22/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

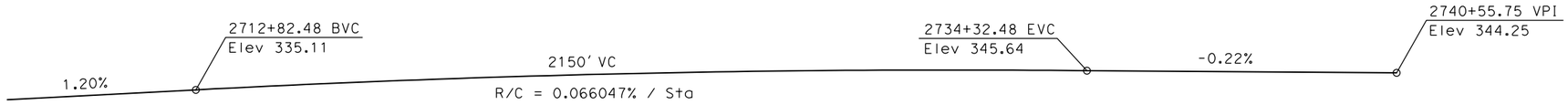
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 2717+50 TO STA 2730+50

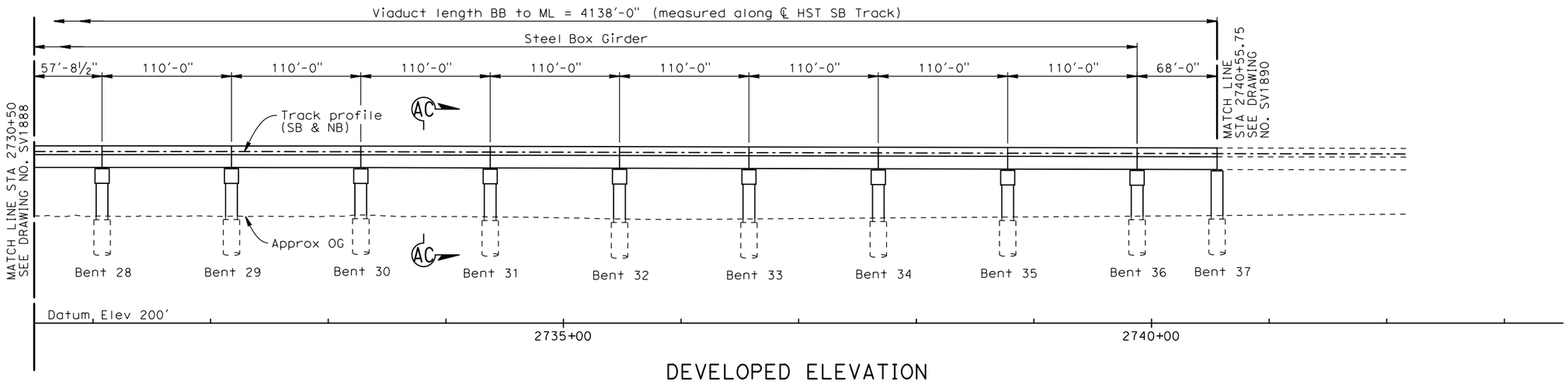
CONTRACT NO. HSR06-007
DRAWING NO. SV1888
SCALE As shown
SHEET NO. OF

2/22/2012 6:07:07 PM I:\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 24\15% cost reduction submittal\MF-SV-1888.dgn
leec10



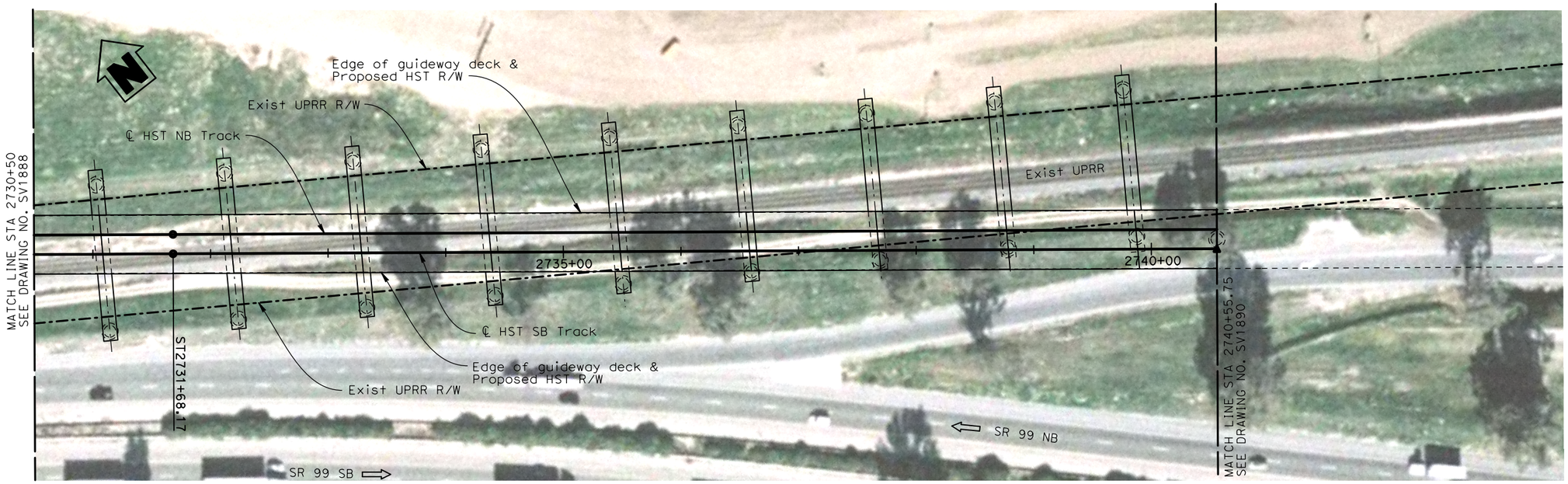
TOP OF TRACK PROFILE

No scale



DEVELOPED ELEVATION

1" = 50'



PLAN

1" = 50'

50 0 50 100

1"=50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section AC-AC, see Drawing No. SV3102.
3. Foundations shown are indicative subject to detail design and clarification of actual UPRR ROW.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

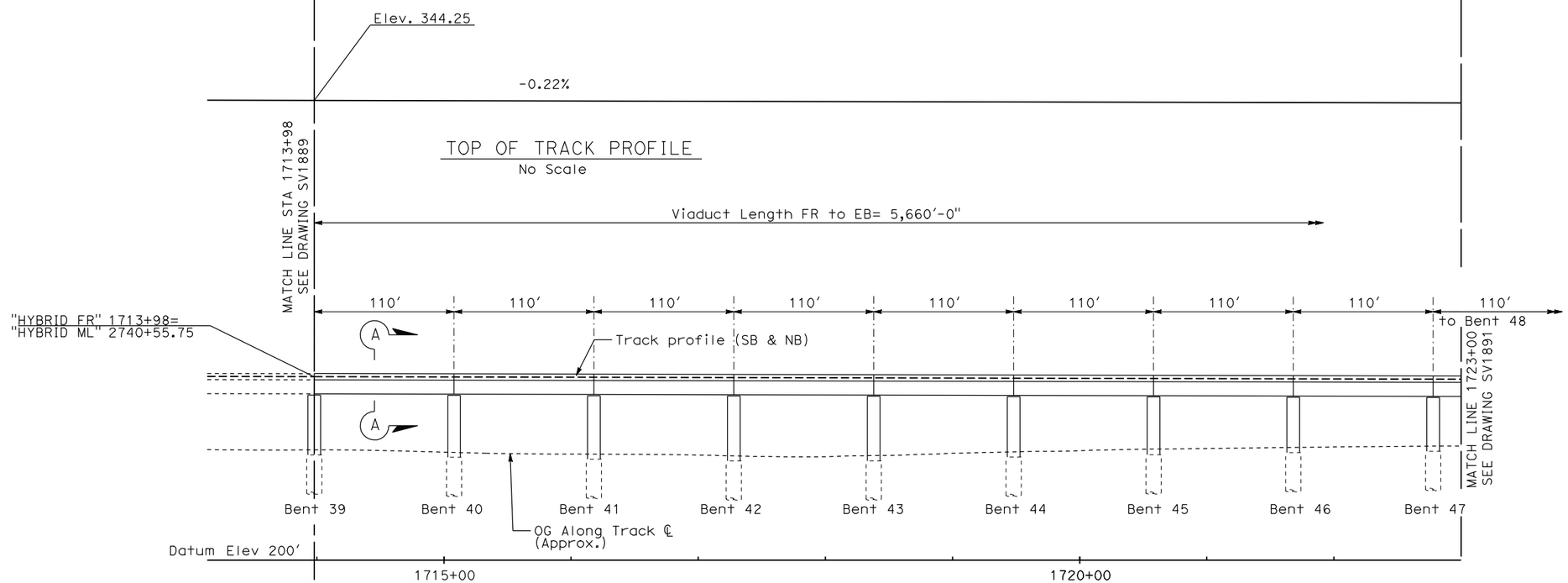
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

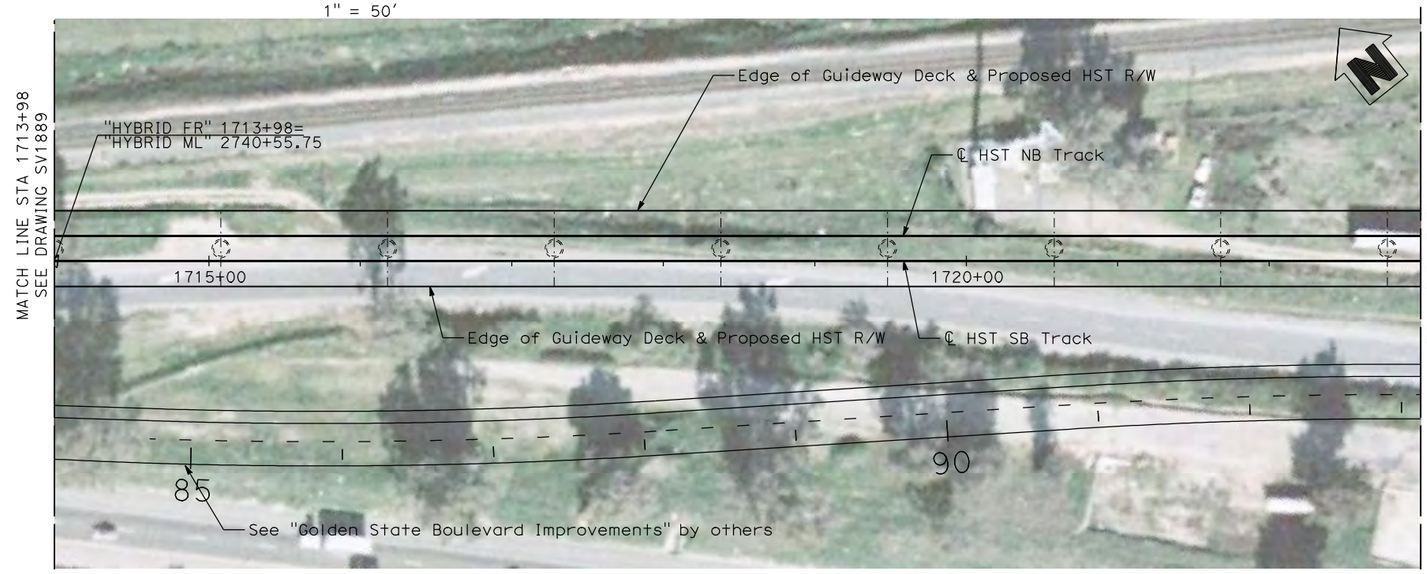
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 2730+50 TO STA 2740+55.75

CONTRACT NO. HSR06-007
DRAWING NO. SV1889
SCALE As shown
SHEET NO. OF

2/14/2012 7:51:02 AM \\usscr1fp001\Cadd\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 24\15% cost reduction submittal\MF-SV-1889.dgn
leec10



ELEVATION
1" = 50'



PLAN
1" = 50'

50 0 50 100
1"=50'

NOTES:

For General Notes, see Drawing No. SB0201.

For Section A-A, see Drawing No. SV3301.

Note:

Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

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NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 1713+98 TO STA 1723+00

CONTRACT NO. HSR06-007
DRAWING NO. SV1890
SCALE 1" = 50'
SHEET NO. OF

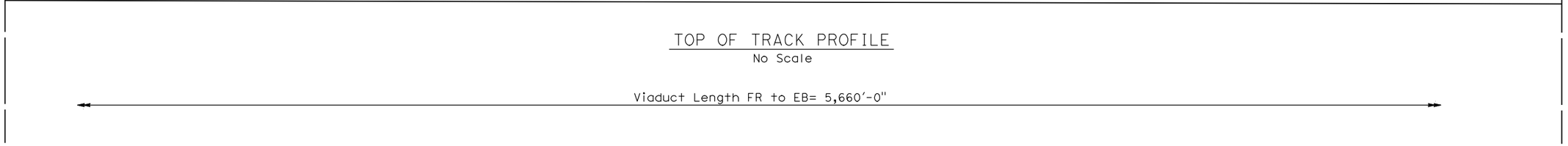
DATE PLOTTED => 02-MAY-2011
TIME PLOTTED => 15:25

USERNAME => Pwalker
DGN FILE => MF-S-FS-A1HybridRGPE-002

NOTES:

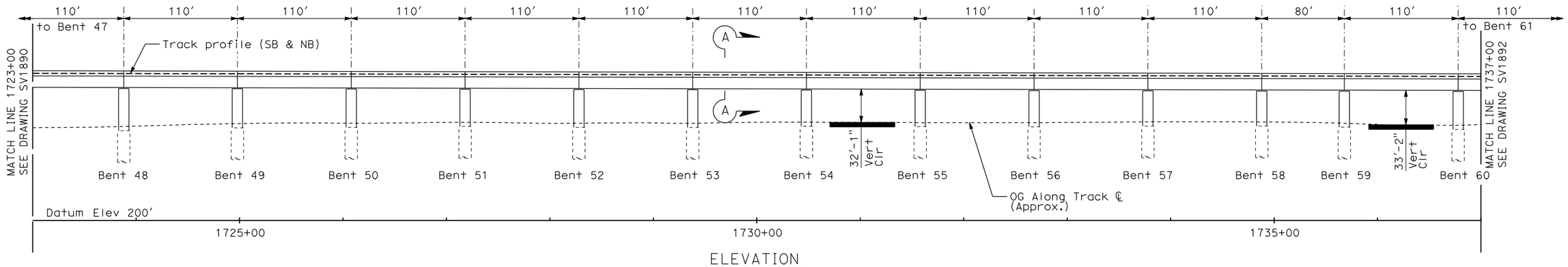
For General Notes, see Drawing No. SB0201.

For Section A-A, see Drawing No. SV3301.

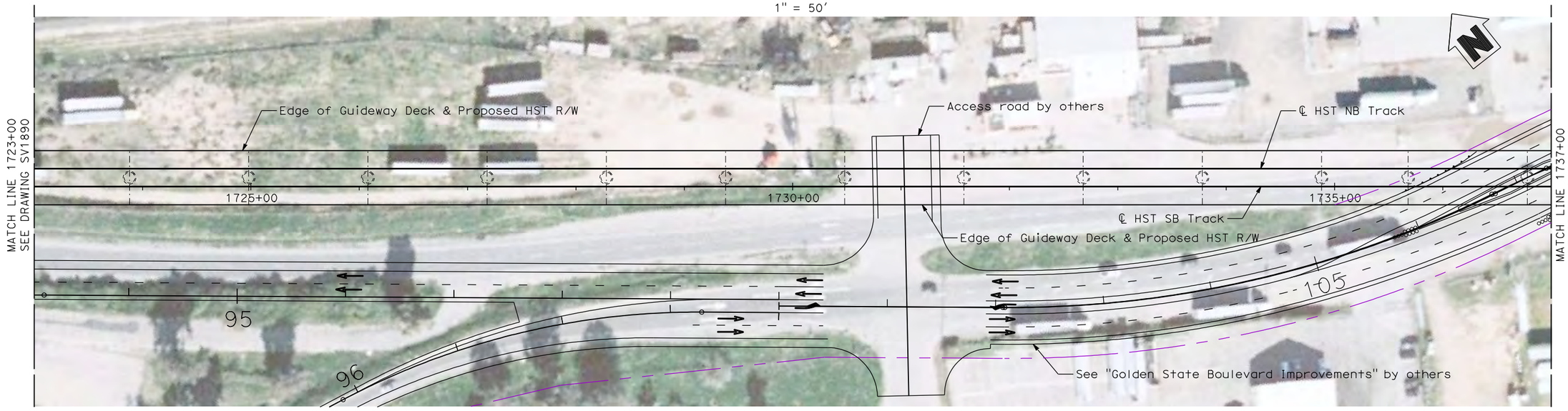


TOP OF TRACK PROFILE
No Scale

Viaduct Length FR to EB= 5,660'-0"



ELEVATION
1" = 50'



Note:

Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

PLAN
1" = 50'

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 1723+00 TO STA 1737+00

CONTRACT NO. HSR06-007
DRAWING NO. SV1891
SCALE 1" = 50'
SHEET NO. OF

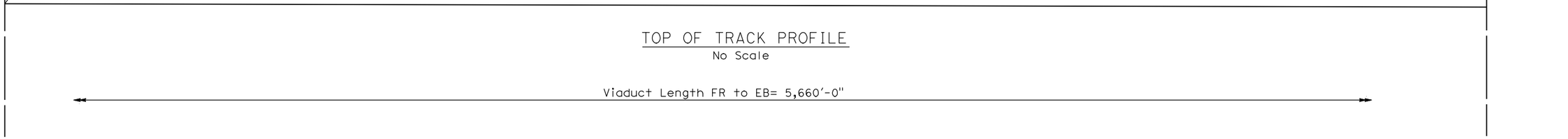
DATE PLOTTED => 02-MAY-2011
TIME PLOTTED => 10:25

USERNAME => Pwalker
DGN FILE => MF-S-FS-A1HybridRGPE-003

NOTES:

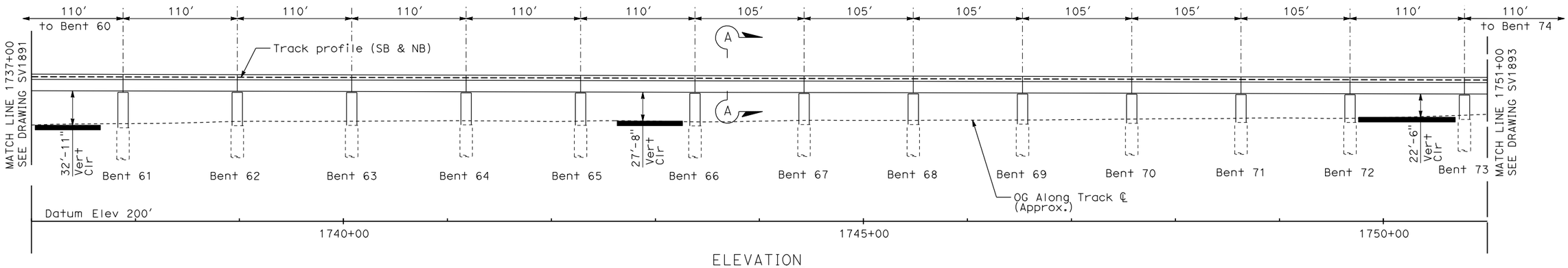
For General Notes, see Drawing No. SB0201.

For Section A-A, see Drawing No. SV3301.

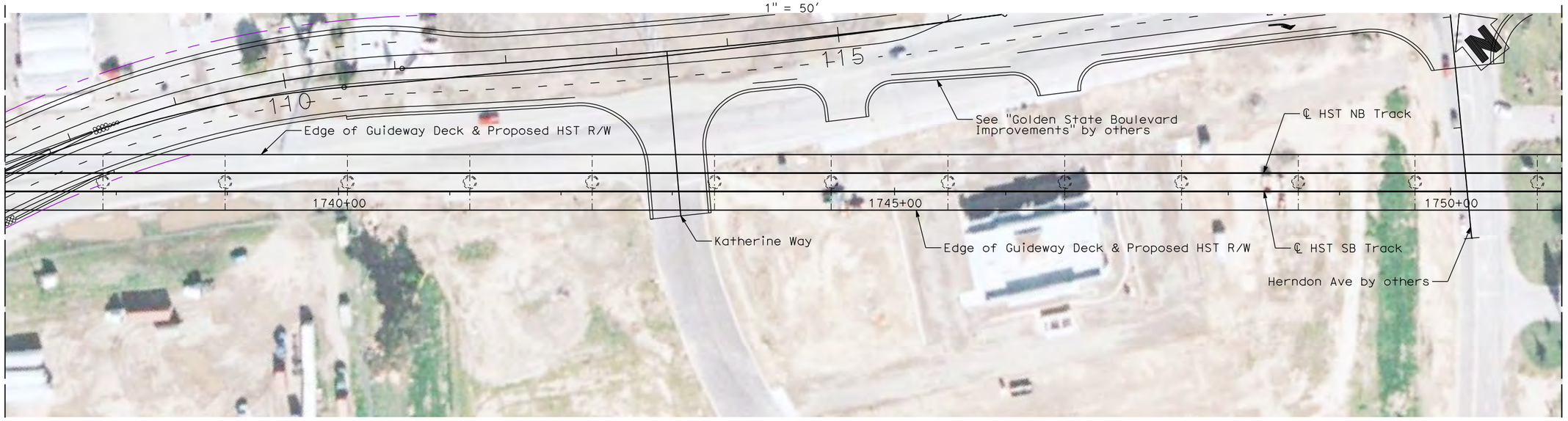


TOP OF TRACK PROFILE
No Scale

Viaduct Length FR to EB= 5,660'-0"



ELEVATION
1" = 50'



PLAN
1" = 50'

50 0 50 100
1"=50'

Note:

Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 1737+00 TO STA 1751+00

CONTRACT NO. HSR06-007
DRAWING NO. SV1892
SCALE 1" = 50'
SHEET NO. OF

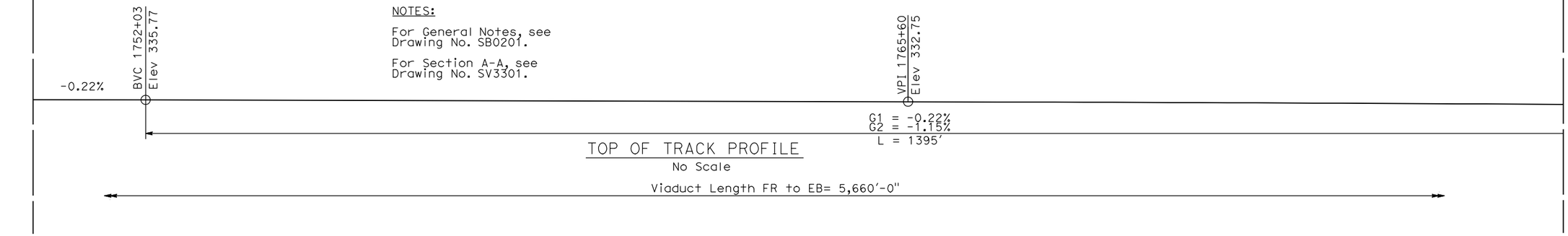
DATE PLOTTED => 02-MAY-2011
TIME PLOTTED => 15:15

USERNAME => Pwalker
DGN FILE => MF-S-FS-A1HybridRGPE-004

NOTES:

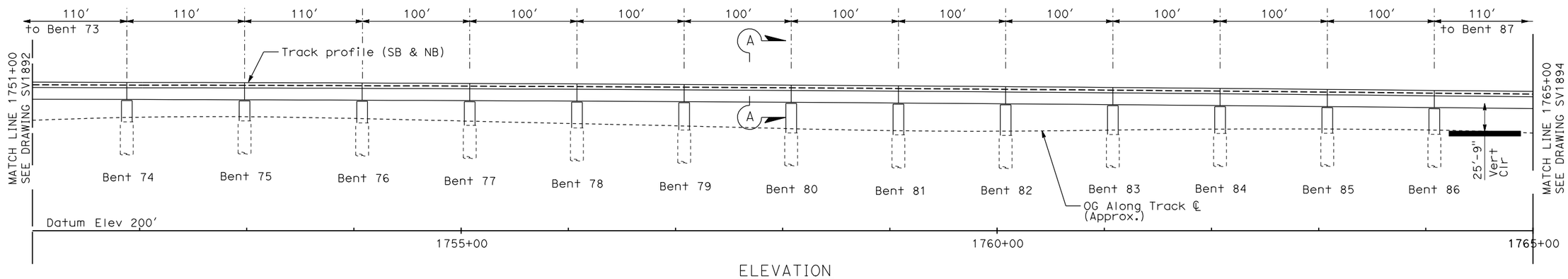
For General Notes, see Drawing No. SB0201.

For Section A-A, see Drawing No. SV3301.



TOP OF TRACK PROFILE

No Scale



ELEVATION

1" = 50'

PLAN

1" = 50'

50 0 50 100

1"=50'

Note:

Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 1751+00 TO STA 1765+00

CONTRACT NO. HSR06-007
DRAWING NO. SV1893
SCALE 1" = 50'
SHEET NO. OF

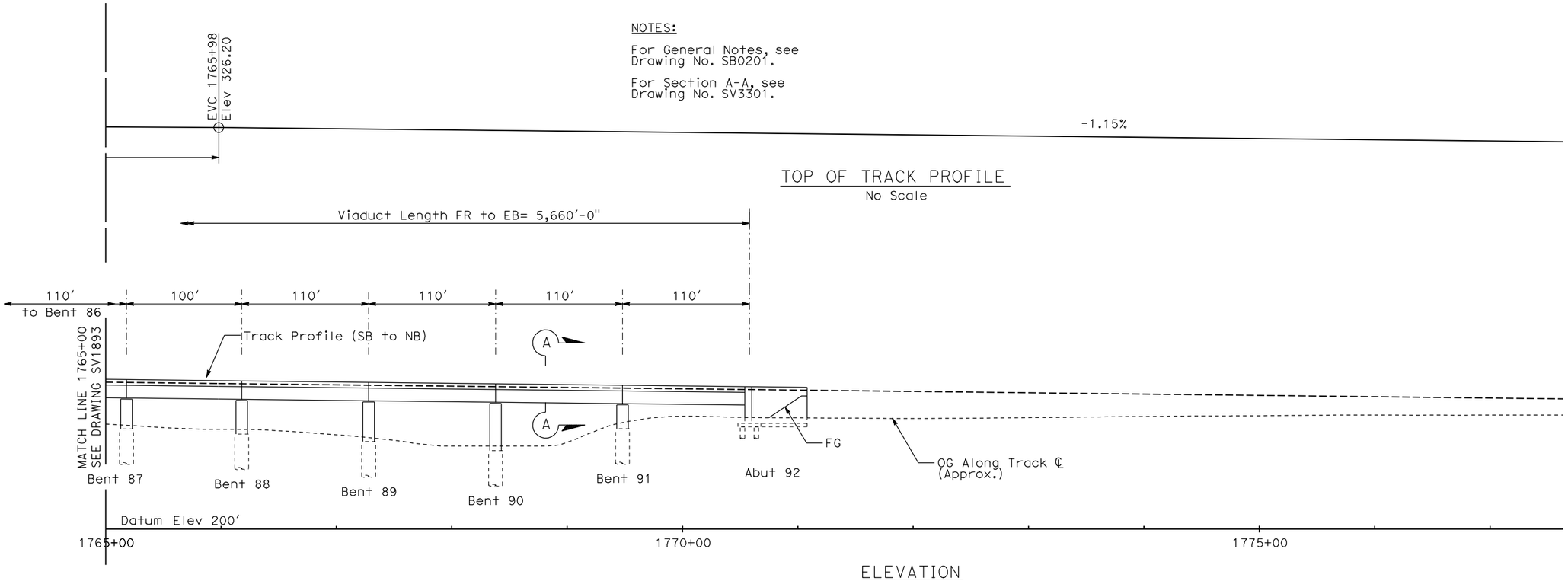
DATE PLOTTED => 02-MAY-2011
TIME PLOTTED => 10:15

USERNAME => Pwalker
DGN FILE => MF-S-FS-A1HybridRGPE-005

NOTES:

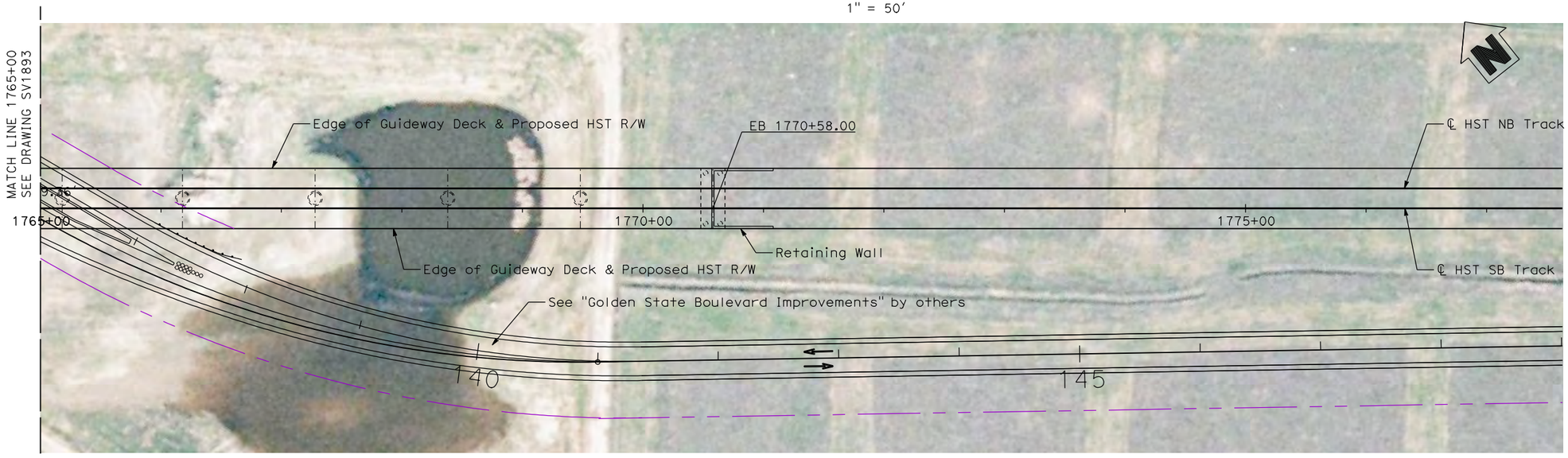
For General Notes, see Drawing No. SB0201.

For Section A-A, see Drawing No. SV3301.



TOP OF TRACK PROFILE
No Scale

ELEVATION
1" = 50'



Note:

Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

PLAN
1" = 50'

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

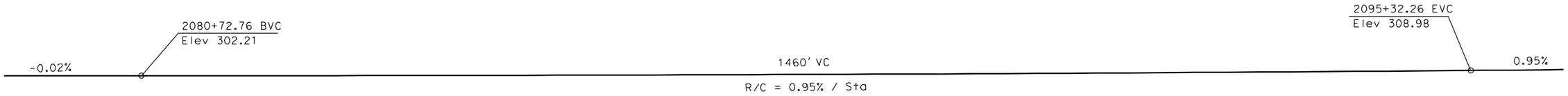
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

HYBRID MAIN LINE
AVENUE 24
VIADUCT NO. 203
STA 1765+00 TO STA 1772+78

CONTRACT NO. HSR06-007
DRAWING NO. SV1894
SCALE 1" = 50'
SHEET NO. OF

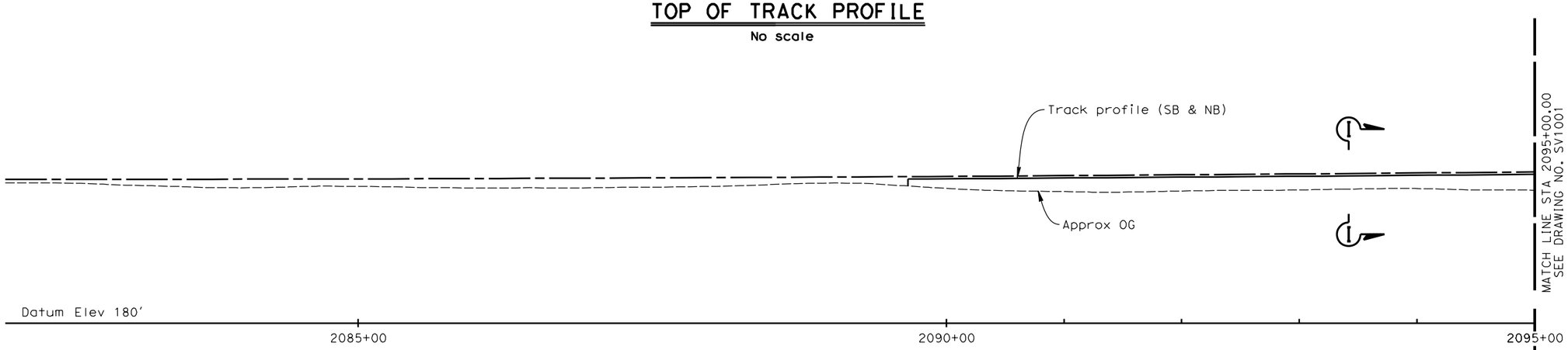
DATE PLOTTED => 02-MAY-2011
TIME PLOTTED => 10:10

USERNAME => Pwalker
DGN FILE => MF-S-FS-A1HybridRGPE-006



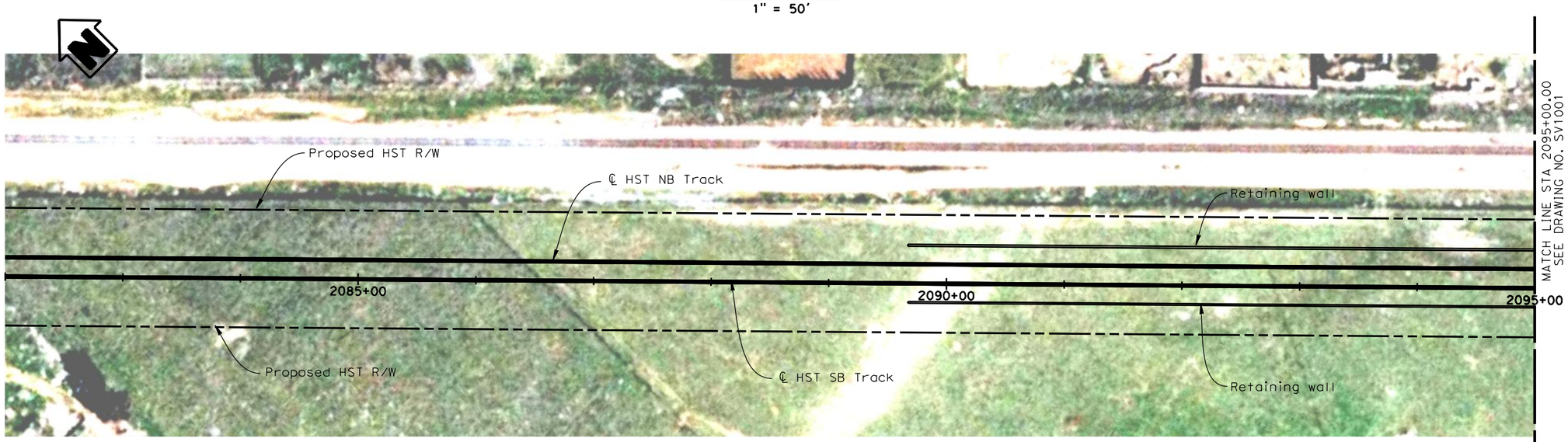
TOP OF TRACK PROFILE

No scale



ELEVATION

1" = 50'



PLAN

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section I-I, see Drawing No. SV3004.

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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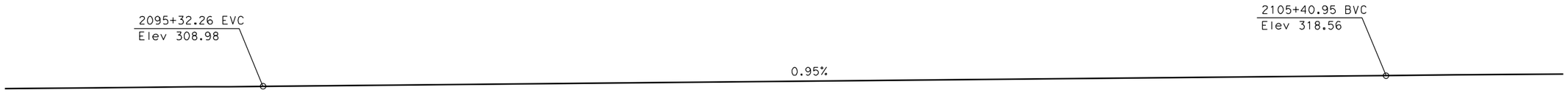
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
VIADUCT NO. 501
STA 2082+00.00 TO STA 2095+00.00

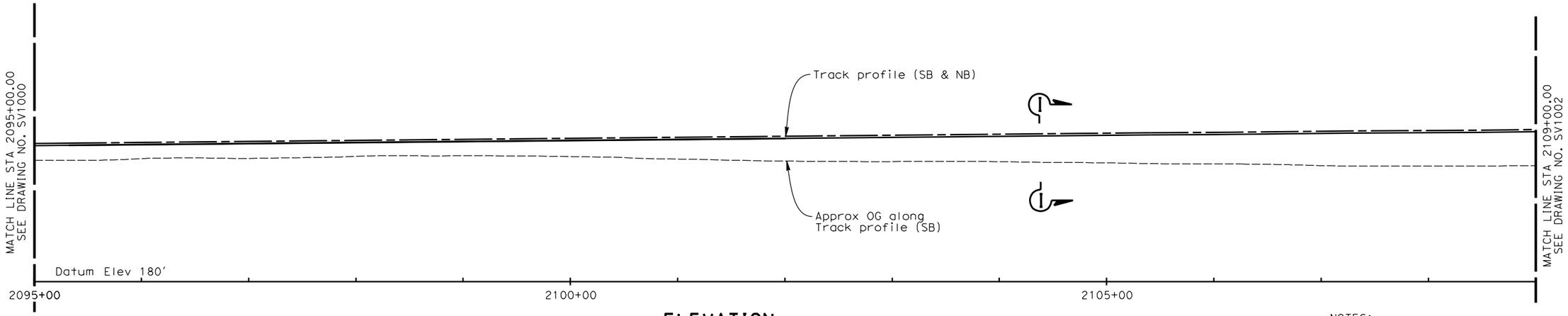
CONTRACT NO. HSR06-007
DRAWING NO. SV2000
SCALE As shown
SHEET NO. OF

2/16/2012 11:28:40 AM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\SR145\MF-SV-2000.dgn
cisnerose



TOP OF TRACK PROFILE

No scale

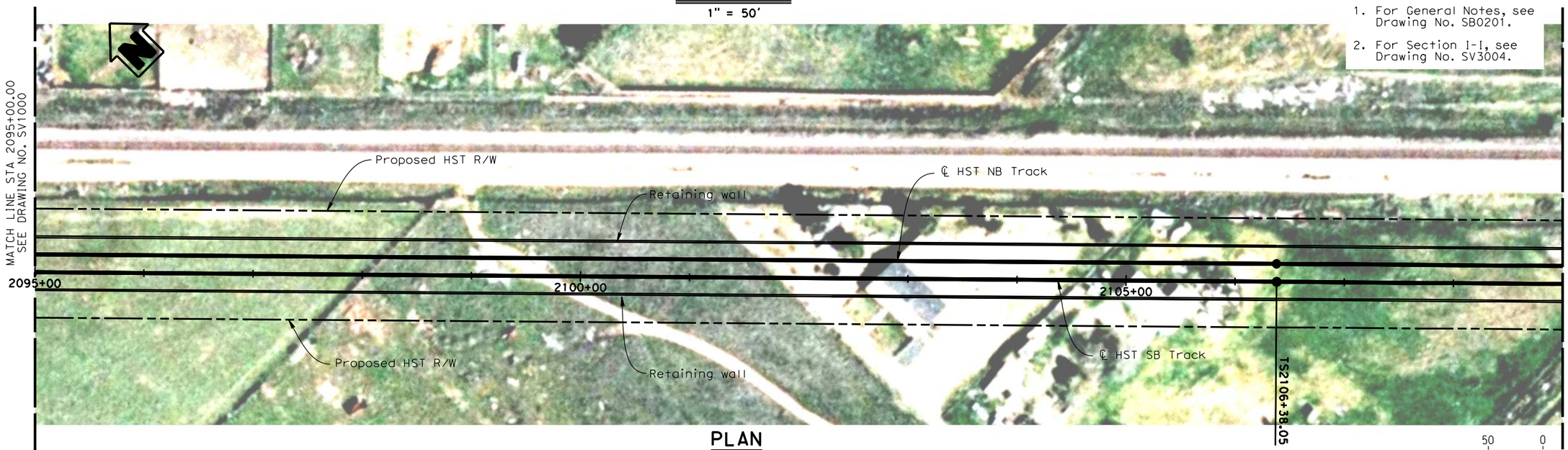


ELEVATION

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section 1-1, see Drawing No. SV3004.



PLAN

1" = 50'

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
VIADUCT NO. 501
STA 2095+00.00 TO STA 2109+00.00

CONTRACT NO. HSR06-007
DRAWING NO. SV2001
SCALE As shown
SHEET NO. OF

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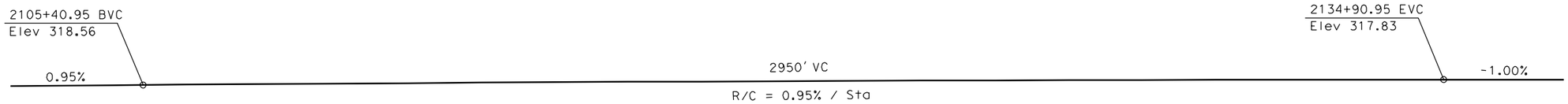
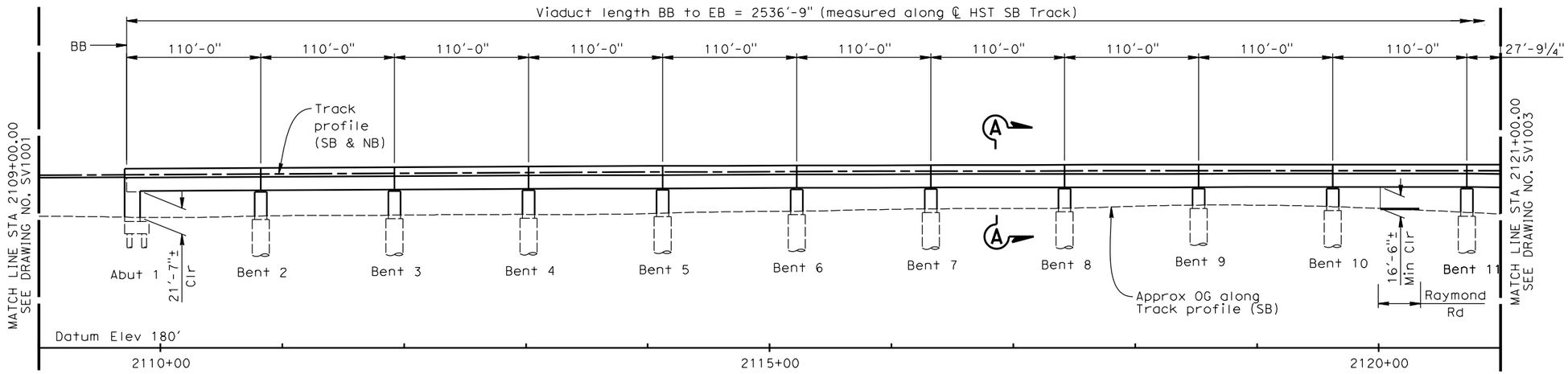
cisnerose



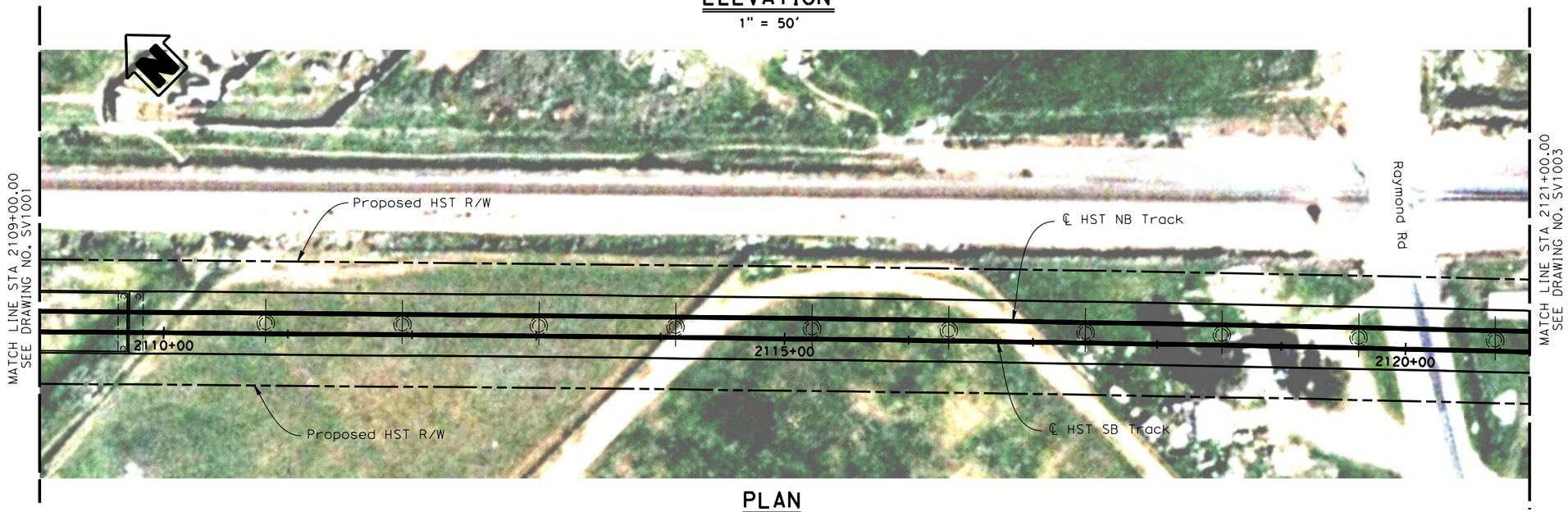
TOP OF TRACK PROFILE

No scale



ELEVATION

1" = 50'



PLAN

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section A-A, see Drawing No. SV3001.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

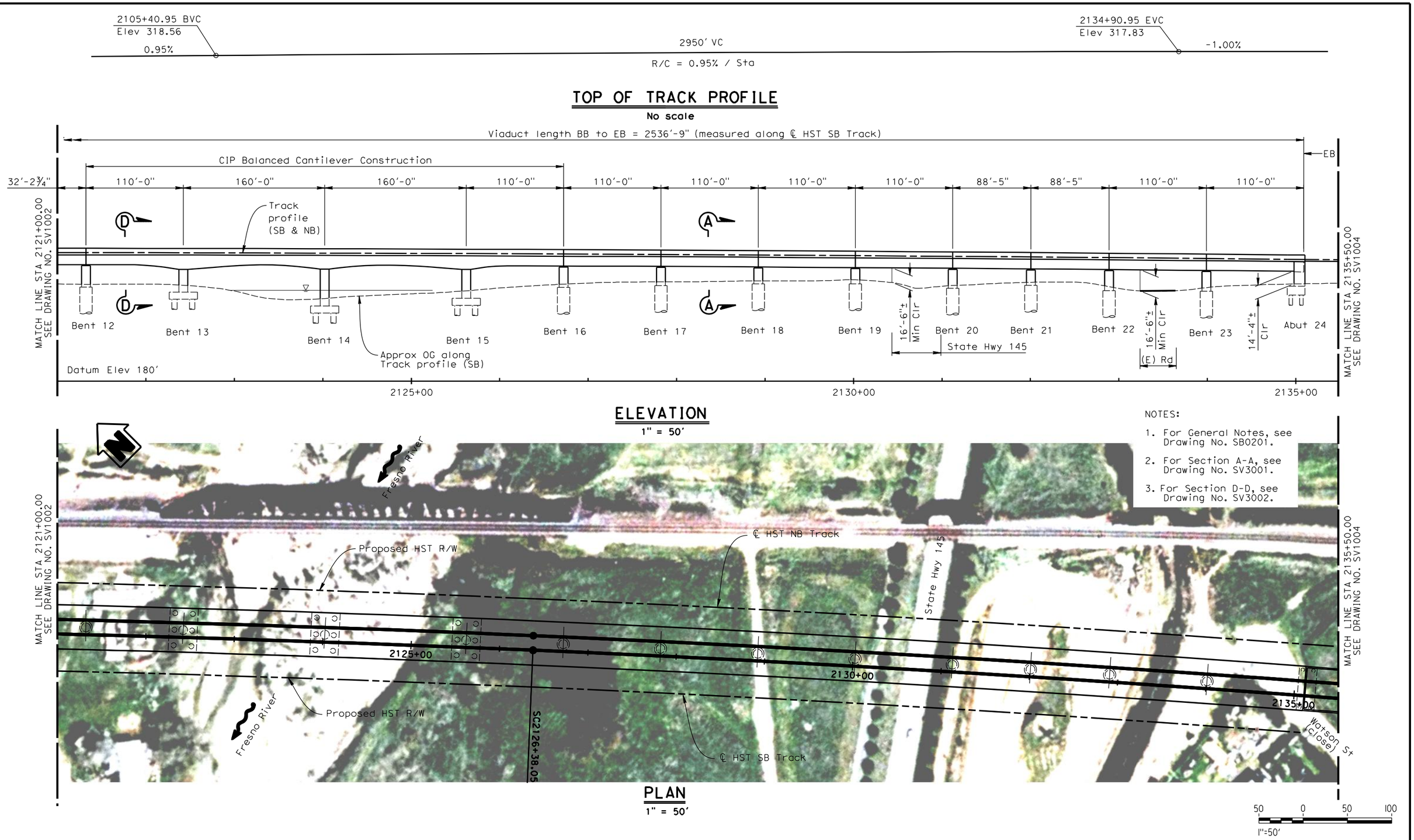
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
VIADUCT NO. 501
STA 2109+00.00 TO STA 2121+00.00

CONTRACT NO. HSR06-007
DRAWING NO. SV2002
SCALE As shown
SHEET NO. OF

cisnerose 2/16/2012 11:29:49 AM \\usscrifp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\SR145\MF-SV-2002.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
VIADUCT NO. 501
STA 2121+00.00 TO STA 2135+50.00

CONTRACT NO. HSR06-007
DRAWING NO. SV2003
SCALE As shown
SHEET NO. OF

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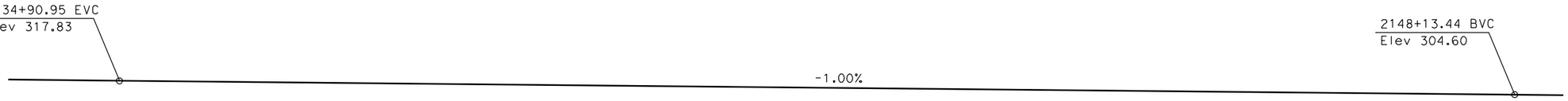
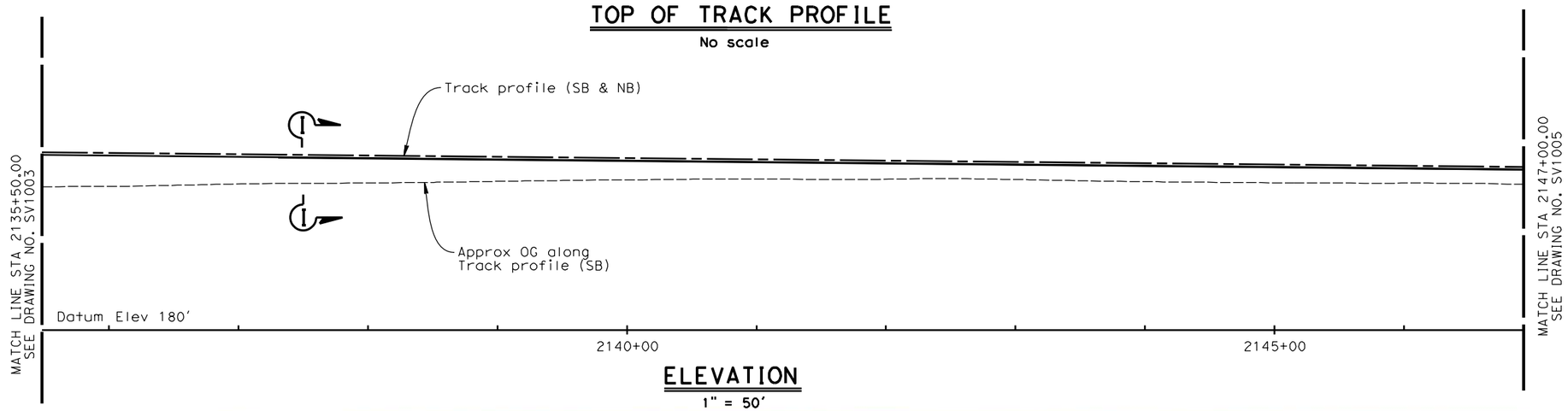
cisnerose



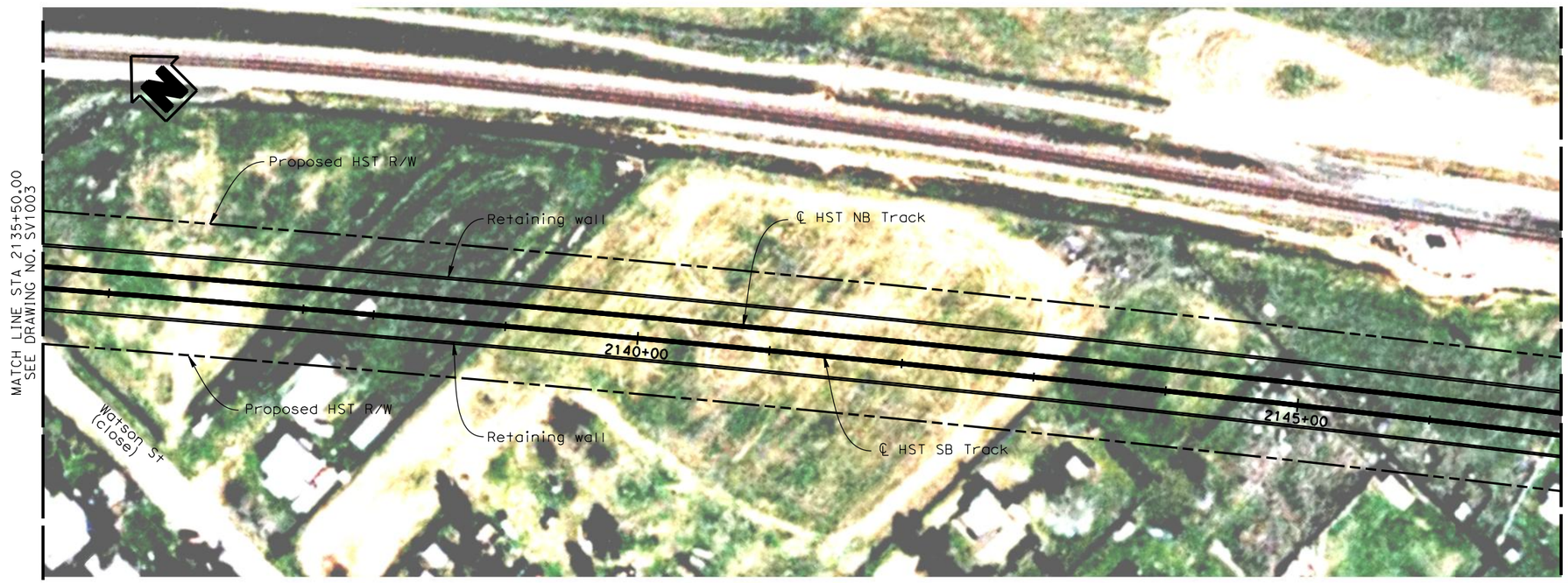
TOP OF TRACK PROFILE

No scale



ELEVATION

1" = 50'



PLAN

1" = 50'

NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section I-I, see Drawing No. SV3004.

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
VIADUCT NO. 501
STA 2135+50.00 TO STA 2147+00.00

CONTRACT NO. HSR06-007
DRAWING NO. SV2004
SCALE As shown
SHEET NO. OF

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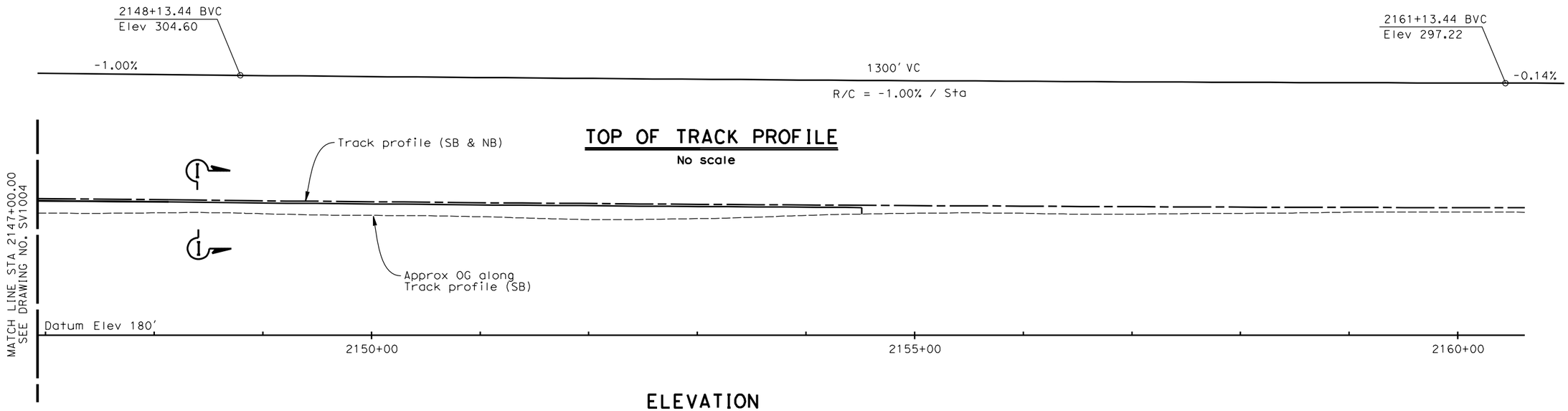
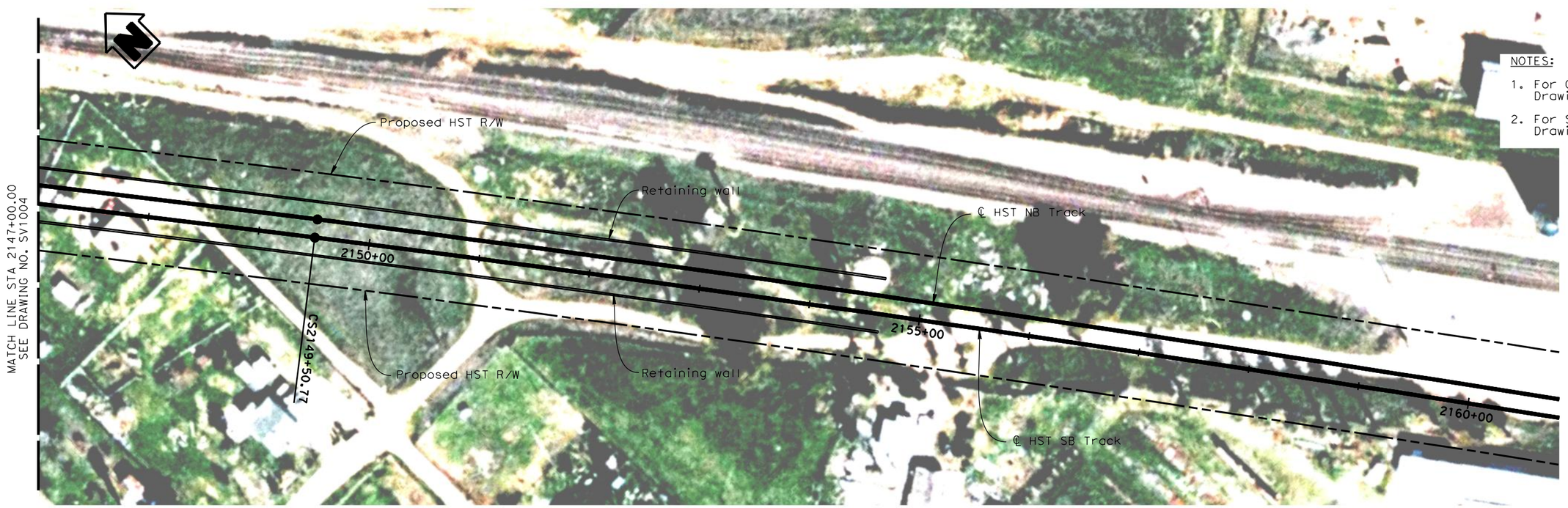


TOP OF TRACK PROFILE

No scale

ELEVATION

1" = 50'



NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section I-I, see Drawing No. SV3004.

PLAN

1" = 50'

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
VIADUCT NO. 501
STA 2147+00.00 TO STA 2160+00.00

CONTRACT NO. HSR06-007
DRAWING NO. SV2005
SCALE As shown
SHEET NO. OF

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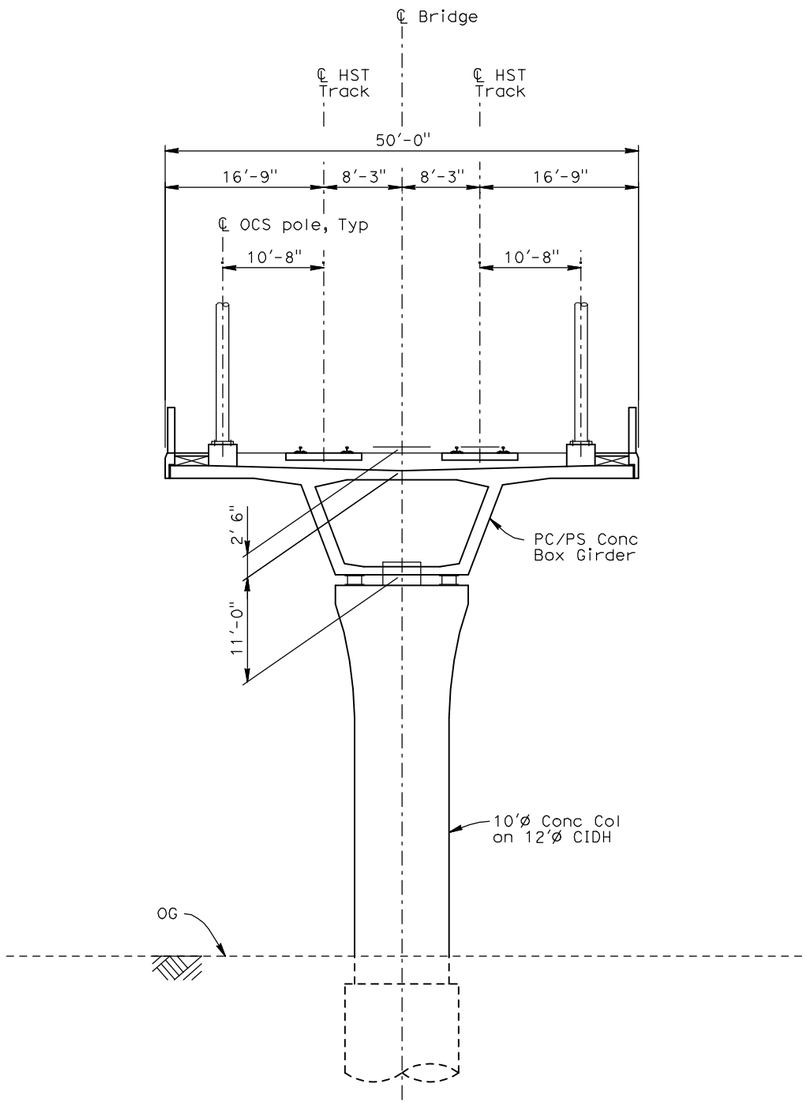
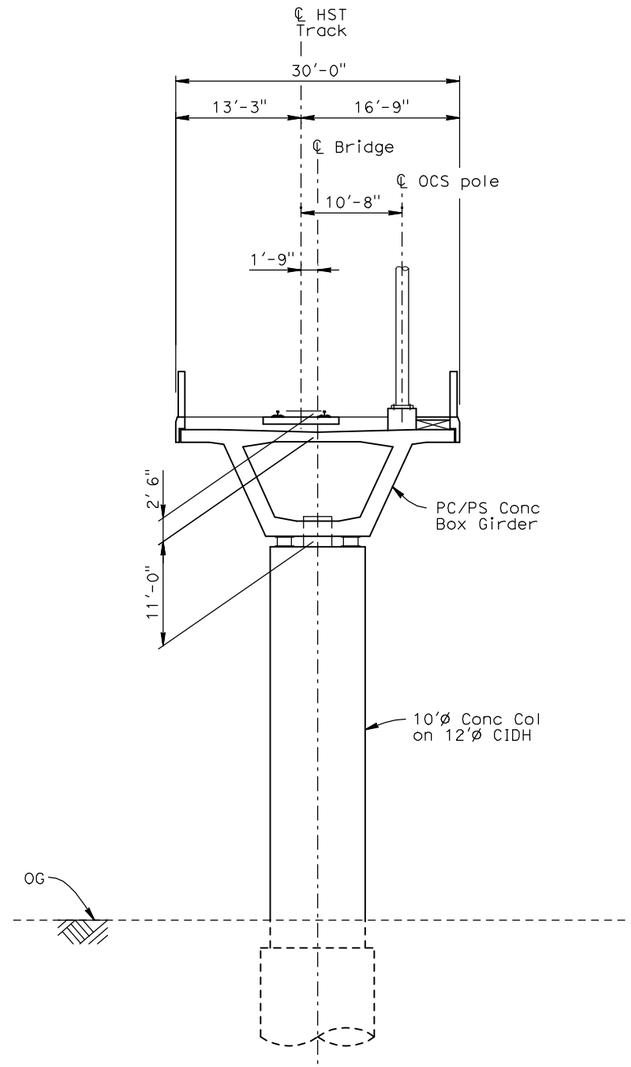
cisnerose



TYPICAL SECTION A

FOR DOUBLE TRACK PC/PS CONCRETE BOX GIRDER

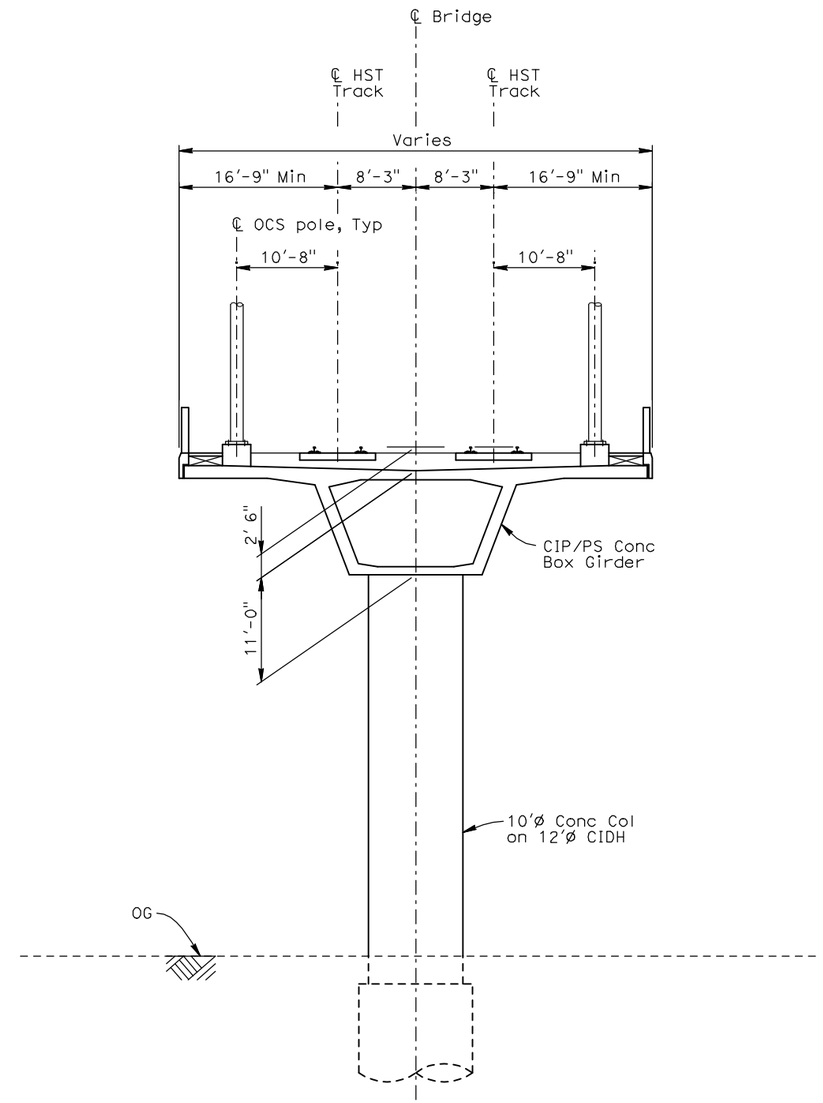
1/8" =1'-0"



TYPICAL SECTION B

FOR SINGLE TRACK PC/PS CONCRETE BOX GIRDER

1/8" =1'-0"



TYPICAL SECTION C

FOR DOUBLE TRACK CIP CONCRETE BOX GIRDER

1/8" =1'-0"

TYPICAL SECTION K SIMILAR

(Section K similar but mirrored about ℄ of bridge)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

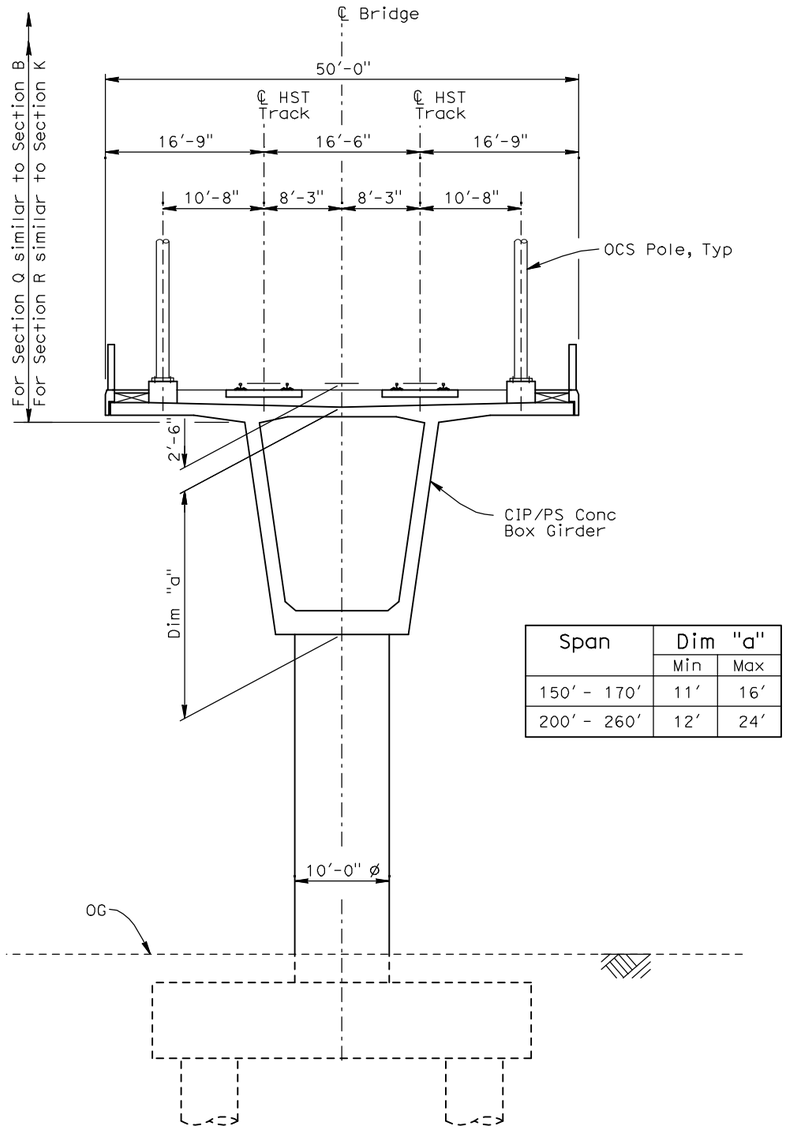
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENTS
AVENUE 21 AND 24
TYPICAL SECTIONS
SHEET 1

CONTRACT NO. HSR06-007
DRAWING NO. SV3001
SCALE As shown
SHEET NO. OF

LeeC10 4/29/2011 9:51:00 AM i:\chsr\6002962\task-02_merced-fresno\cadd\struct\sheet\aps\al\15% cost reduction submittal\ave 21\MF-SV-3001.dgn



Span	Dim "a"	
	Min	Max
150' - 170'	11'	16'
200' - 260'	12'	24'

TYPICAL SECTION D
FOR BALANCED CANTILEVER CONSTRUCTION

1/8" =1'-0"

TYPICAL SECTION Q AND R SIMILAR

(Section Q and R are single track)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENTS
AVENUE 21 AND 24
TYPICAL SECTIONS
SHEET 2

CONTRACT NO. HSR06-007
DRAWING NO. SV3002
SCALE As shown
SHEET NO. OF

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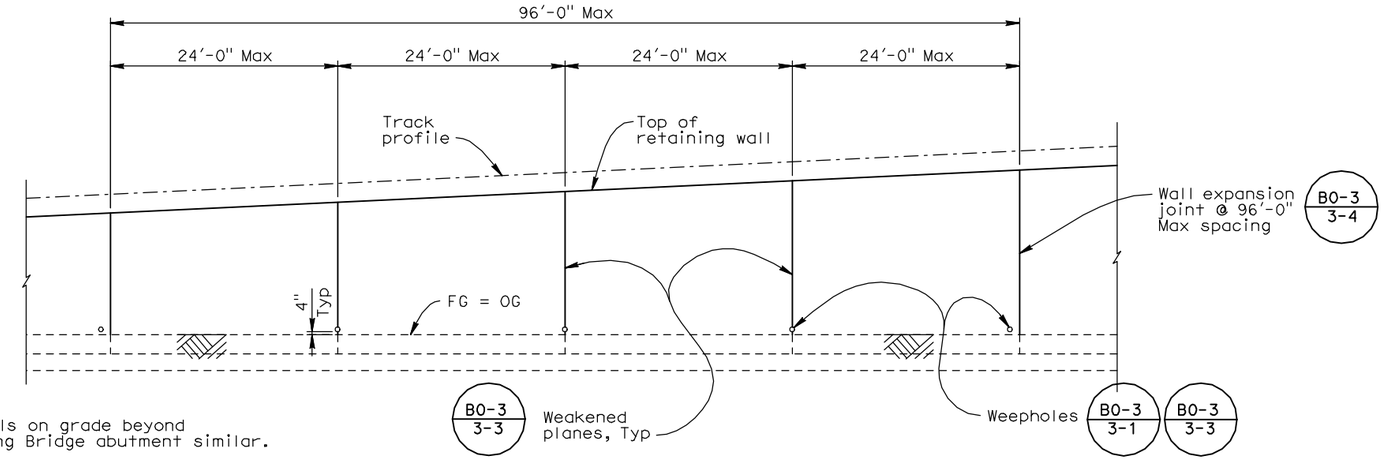


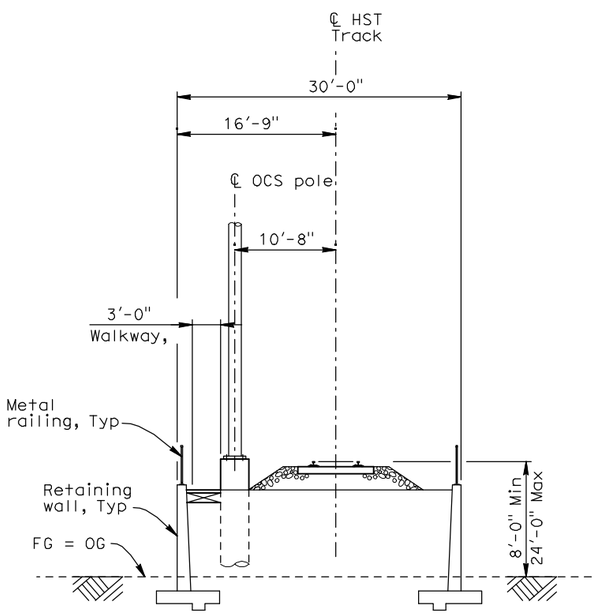
NOTE:

1. Retaining walls on grade beyond Water Crossing Bridge abutment similar.

TYPICAL ELEVATION ON RETAINING WALLS AT RETAINED FILL

1/8" =1'-0"

(Metal railing not shown)

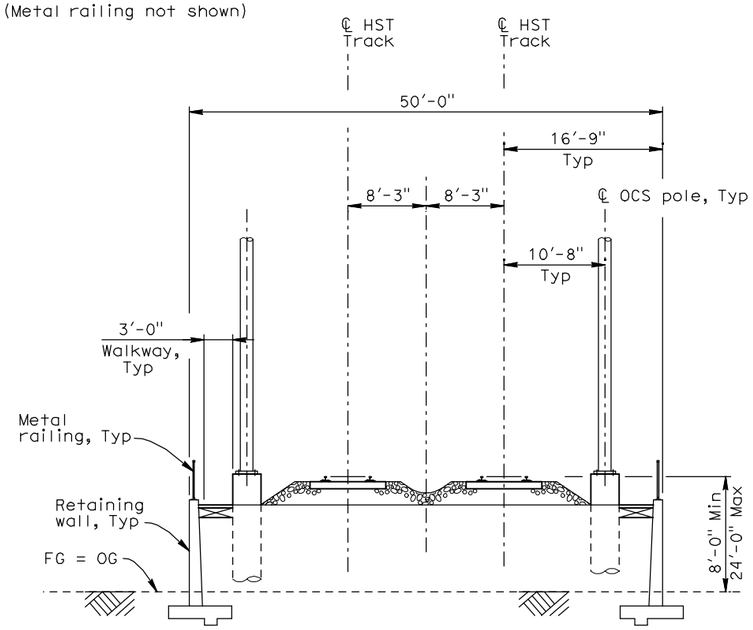


TYPICAL SECTION H
RETAINING WALLS - ONE TRACK

1/8" =1'-0"

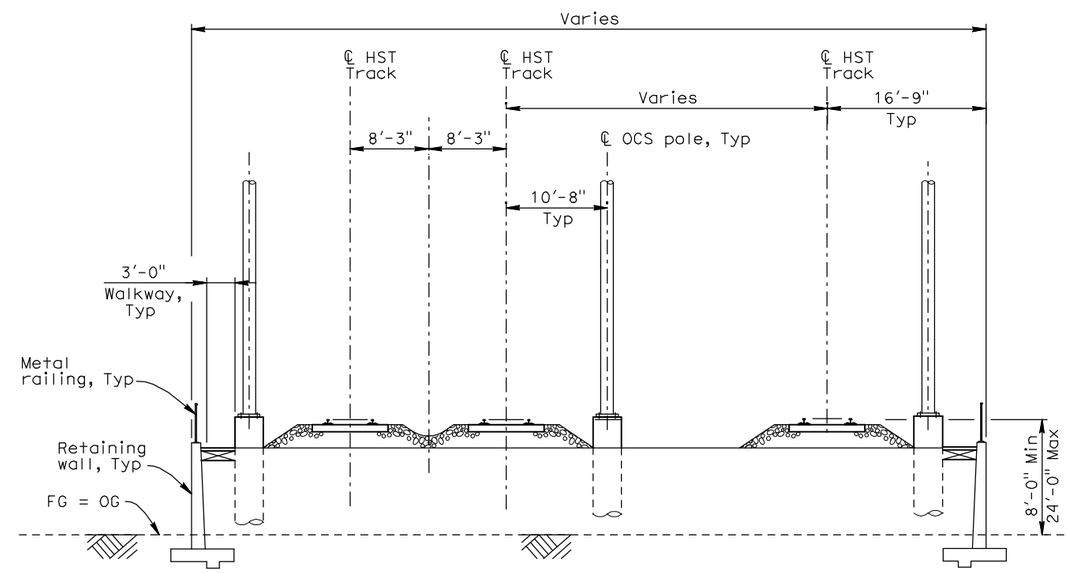
TYPICAL SECTION M SIMILAR

(Section M similar but mirrored about ℄ of HST Track)



TYPICAL SECTION I
RETAINING WALLS - TWO TRACKS

1/8" =1'-0"



TYPICAL SECTION J
RETAINING WALLS - THREE TRACKS

1/8" =1'-0"

TYPICAL SECTION N SIMILAR

(Section N similar but mirrored)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENTS
AVENUE 21 AND 24
TYPICAL SECTIONS
SHEET 4

CONTRACT NO. HSR06-007
DRAWING NO. SV3004
SCALE As shown
SHEET NO. OF

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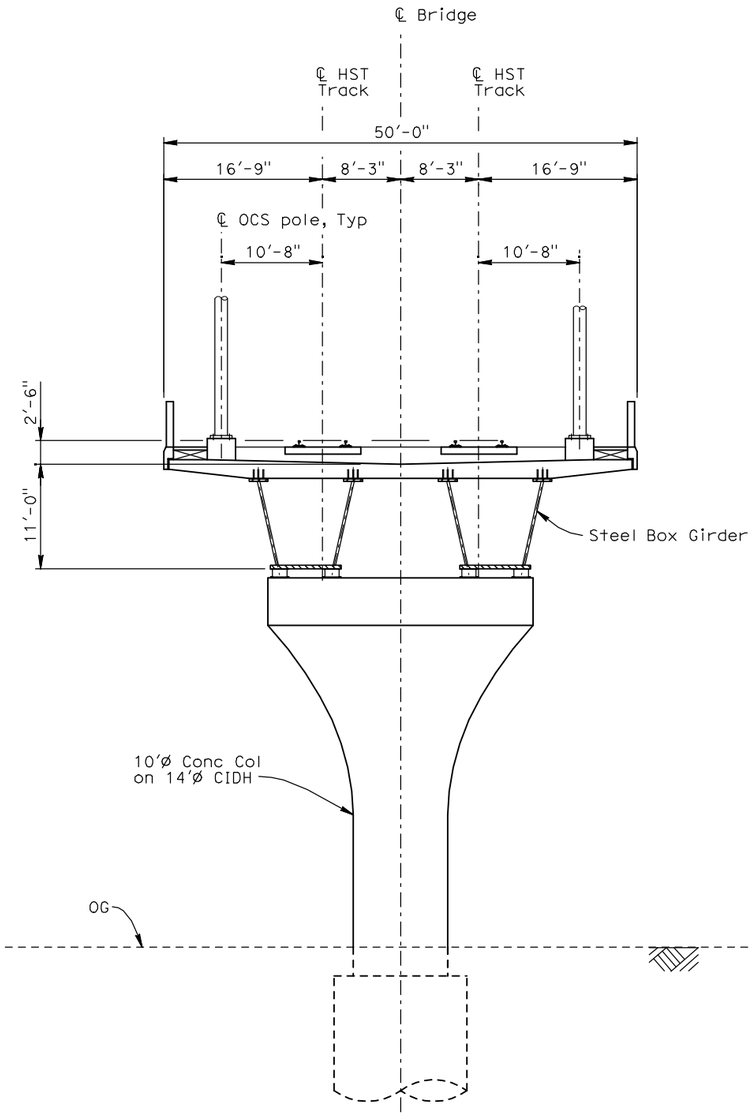
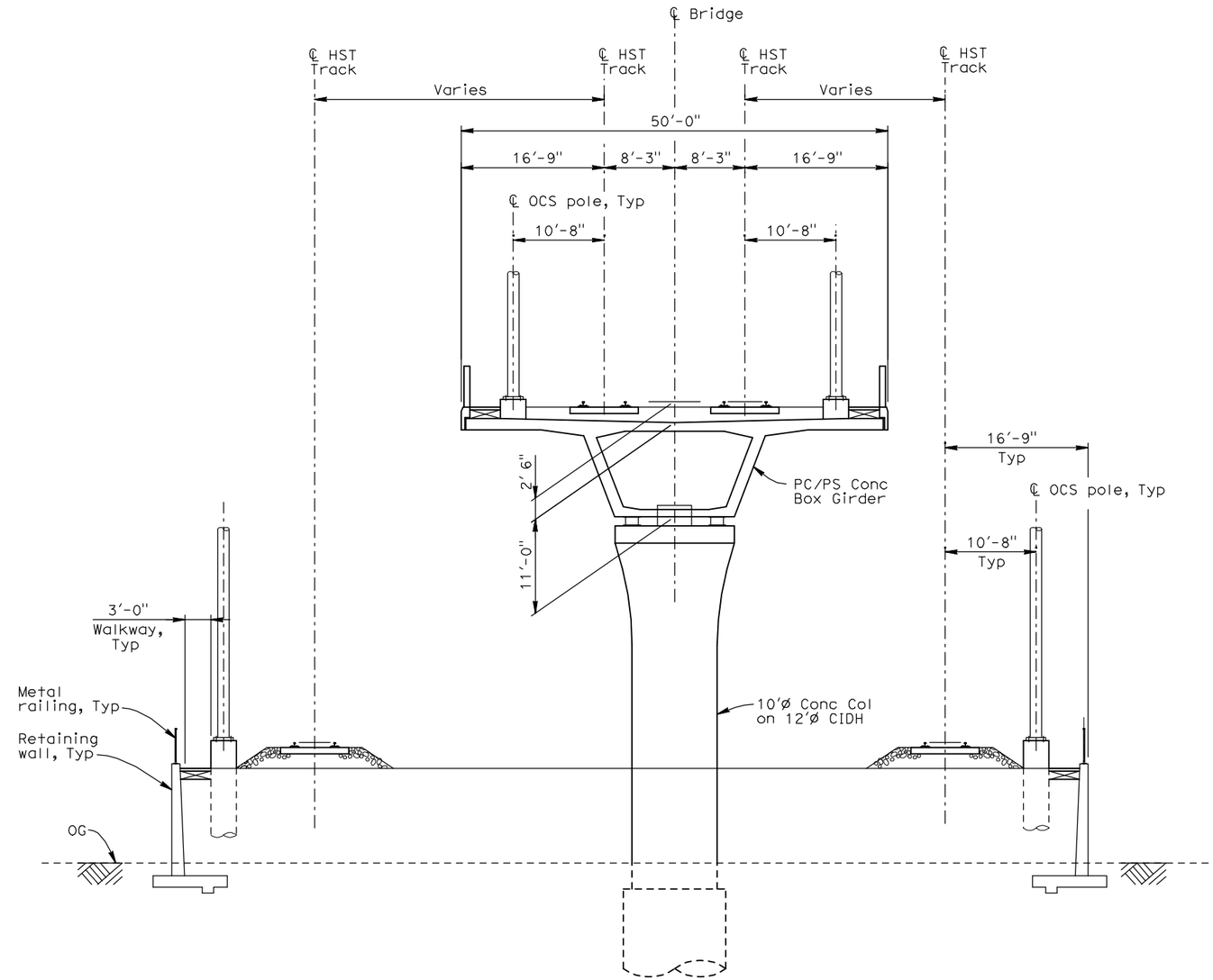
LeeC10



TYPICAL SECTION O
FOR DOUBLE TRACK STEEL BOX GIRDER

1/8" =1'-0"



TYPICAL SECTION P
FOR DOUBLE TRACK PC/PS CONCRETE BOX GIRDER W/ RETAINING WALLS

1/8" =1'-0"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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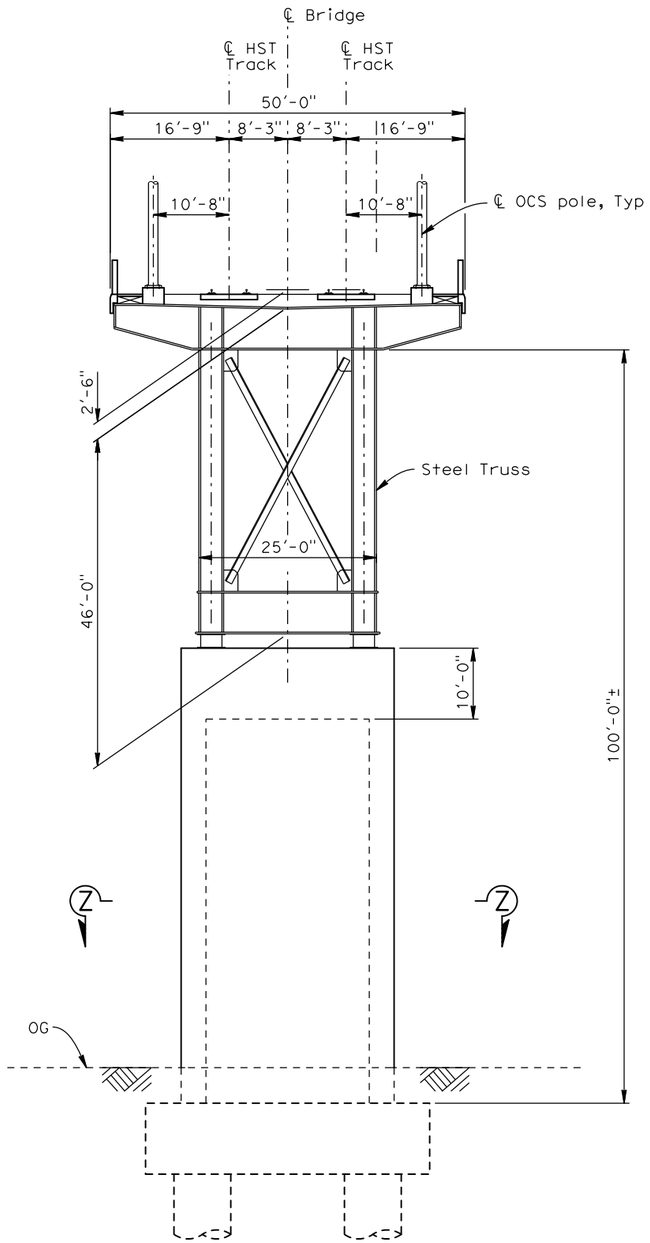
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENTS
AVENUE 21 AND 24
TYPICAL SECTIONS
SHEET 5

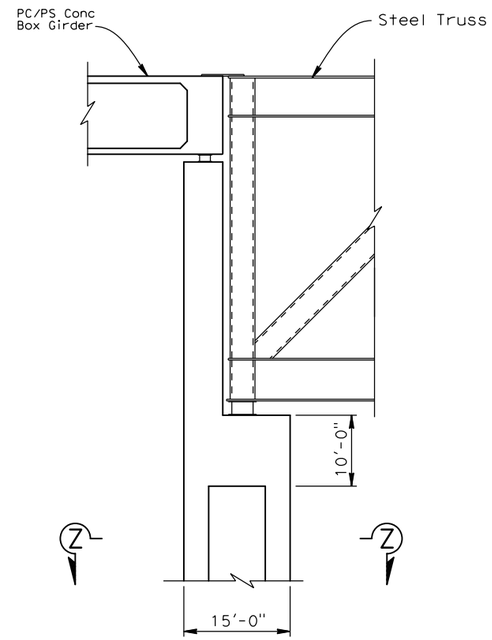
CONTRACT NO. HSR06-007
DRAWING NO. SV3005
SCALE As shown
SHEET NO. OF

LeeC10 4/29/2011 9:51:10 AM i:\chsr\60022962\task-02_merced-fresno\cadd\struct\sheet\aps\al\15% cost reduction submittal\ave 21\MF-SV-3005.dgn



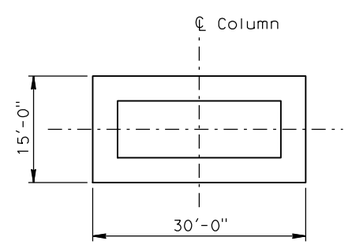
TYPICAL SECTION T
FOR DOUBLE TRACK STEEL TRUSS

3/32" = 1'-0"



DETAIL 1
SECTION THROUGH ℄ BRIDGE

3/32" = 1'-0"



SECTION Z-Z

3/32" = 1'-0"

2/23/2012 9:03:47 AM I:\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 24\15% cost reduction submittal\MF-SV-3006_HB24.dgn

leec10

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY C. LEE
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 02/22/2012

RECORD SET
15% DESIGN SUBMITTAL

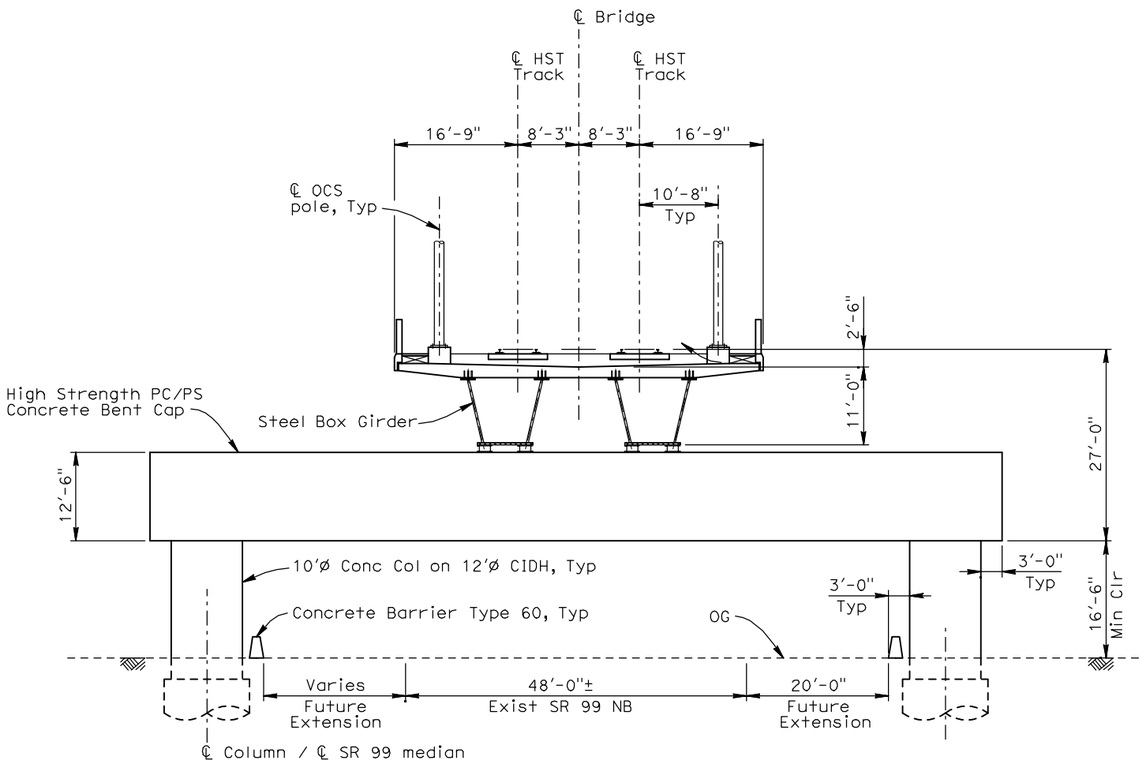
NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENTS
AVENUE 21 AND 24
TYPICAL SECTIONS
SHEET 6

CONTRACT NO. HSR06-007
DRAWING NO. SV3006
SCALE As shown
SHEET NO. OF

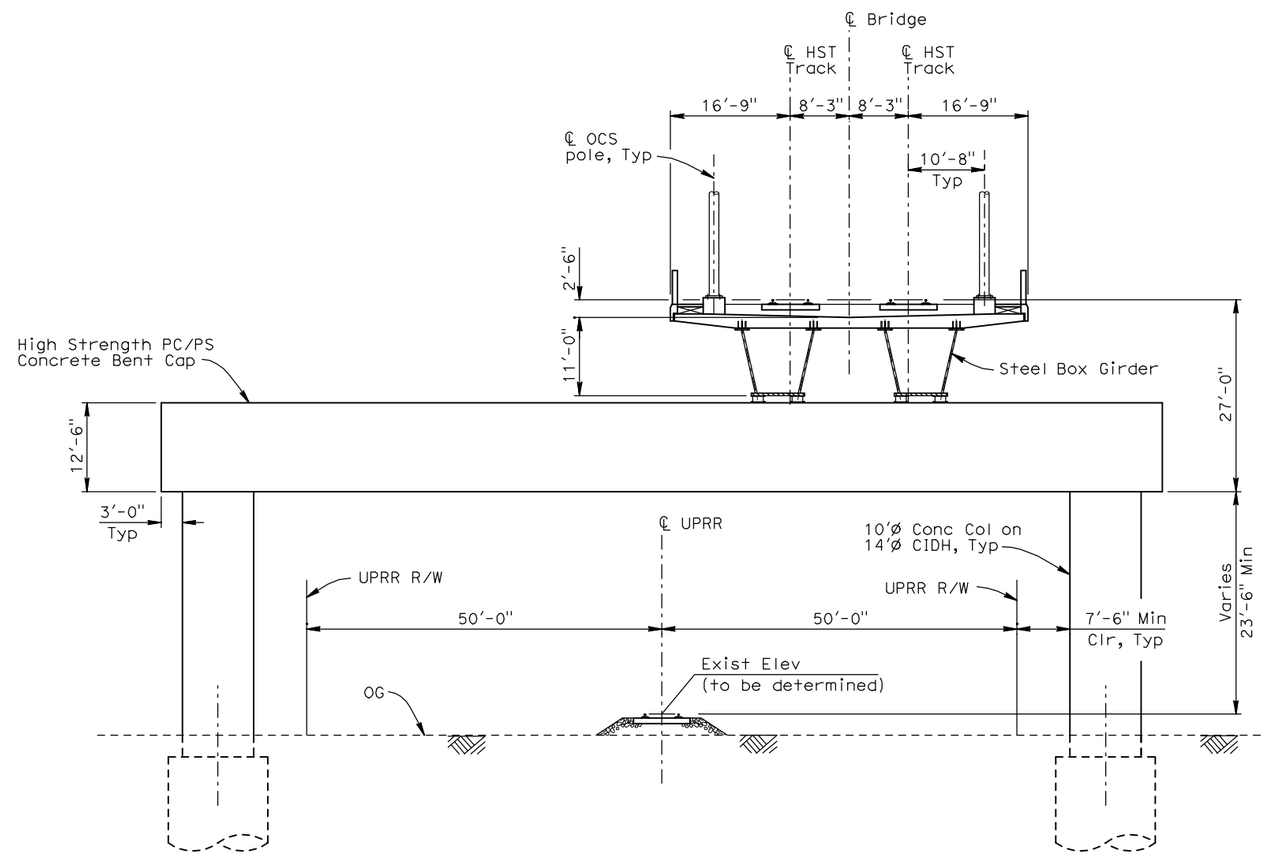


OVER SR 99

Datum Elev 150.00

SECTION AB

3/32" = 1'-0"



OVER UPRR

Datum Elev 150.00

SECTION AC

3/32" = 1'-0"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

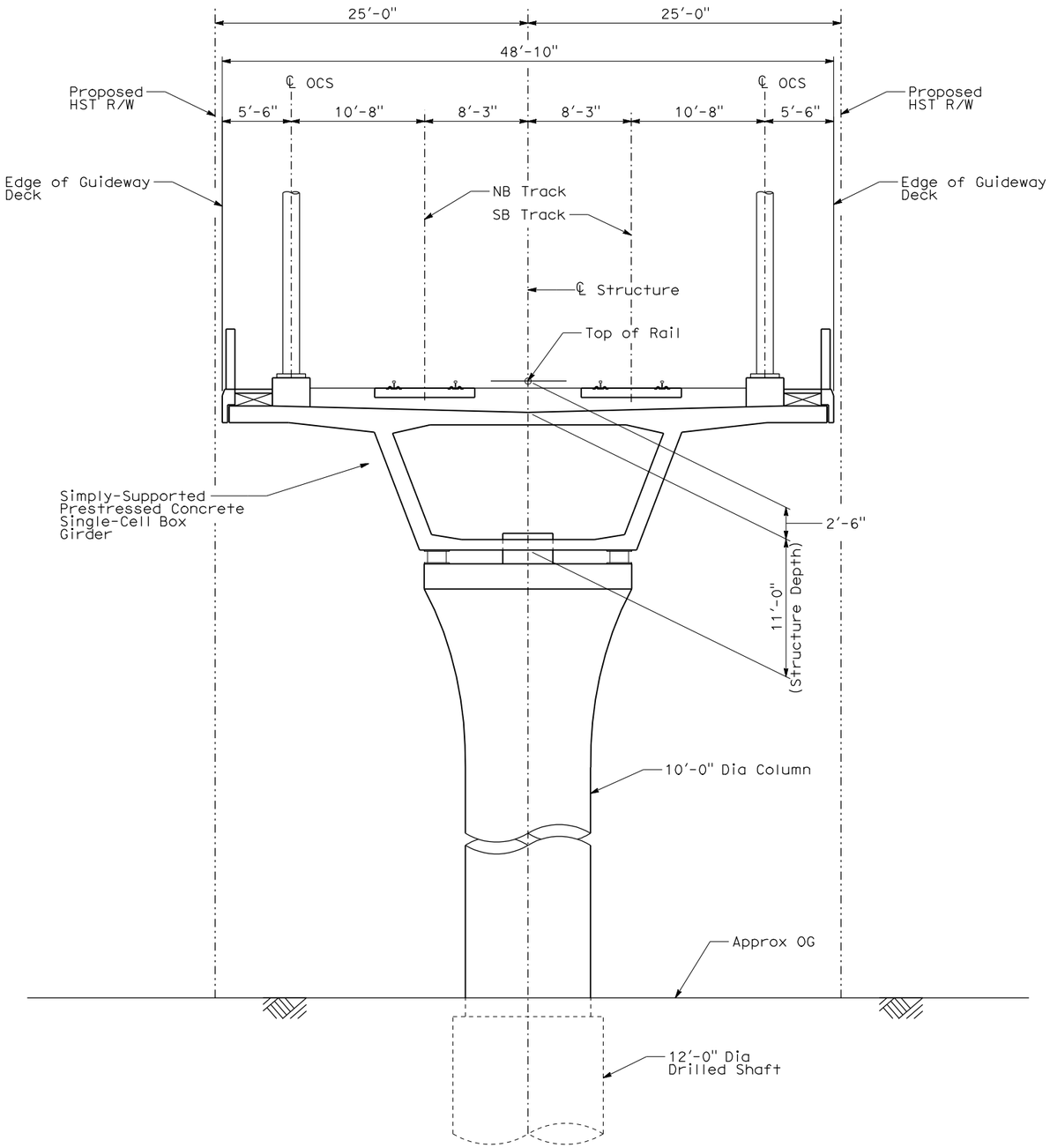
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT BNSF
AVENUE 21 AND 24
SECTIONS
SHEET 2

CONTRACT NO. HSR06-007
DRAWING NO. SV3102
SCALE As shown
SHEET NO. OF

LeeC10 4/30/2011 8:04:38 AM i:\chsr\60022962\task-02_merced-fresno\cadd\struct\sheet\aps\A1\15% cost reduction submittal\Ave 21\MF-SV-3102.dgn



Note:

Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

SECTION A-A

Typical 110' Spans

50 0 50 100

1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

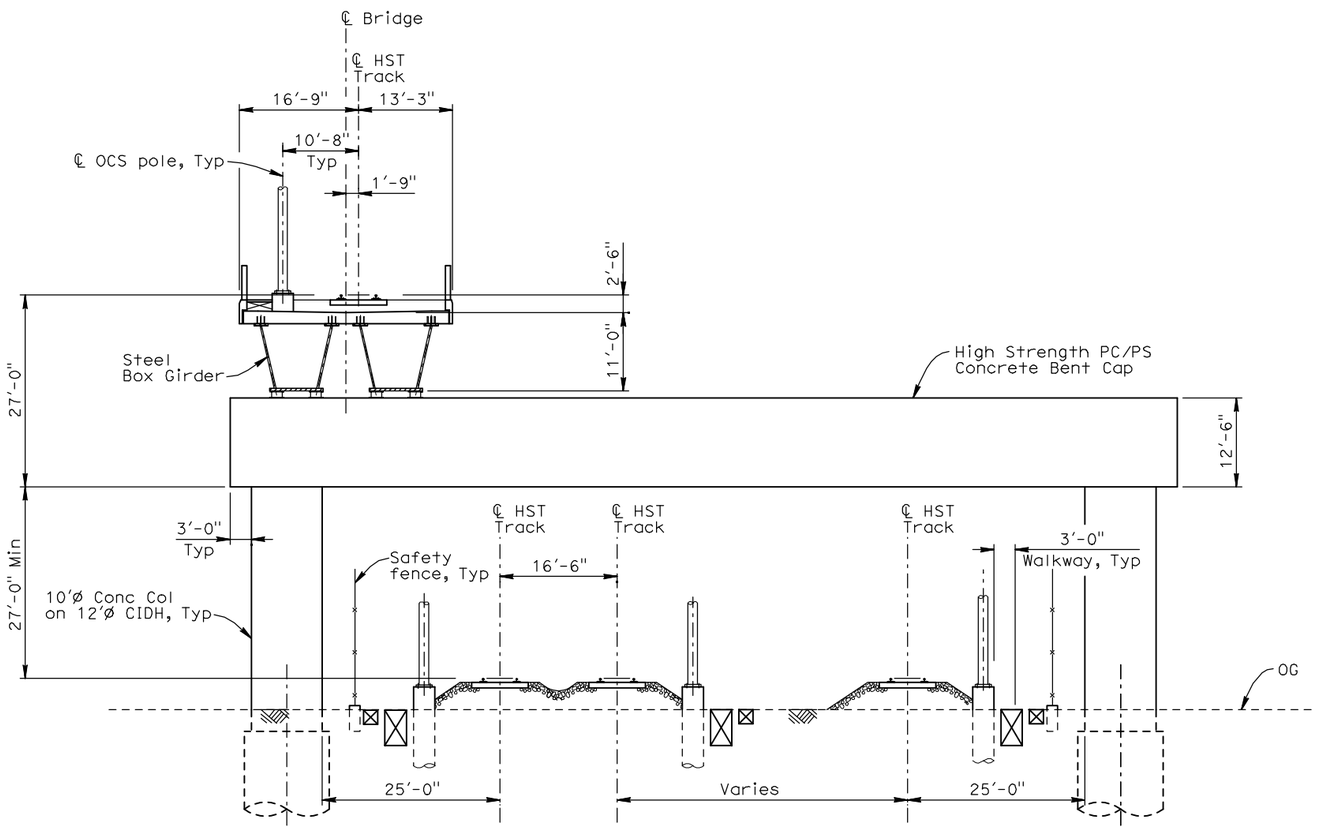
CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

AERIAL GUIDEWAY
TYPICAL SECTION 1

CONTRACT NO. HSR06-007
DRAWING NO. SV3301
SCALE 3/16" = 1'-0"
SHEET NO.

DATE PLOTTED => 28-APR-2011
TIME PLOTTED => 14:43

USERNAME => pwalker
DGN FILE => MF-S-FS-A2RTYP-001.dgn



OVER ON GRADE HST

Datum Elev 160.00

SECTION CA

3/32" = 1'-0"

SECTION CC SIMILAR

(Section CC similar but mirrored about ℄ of bridge)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

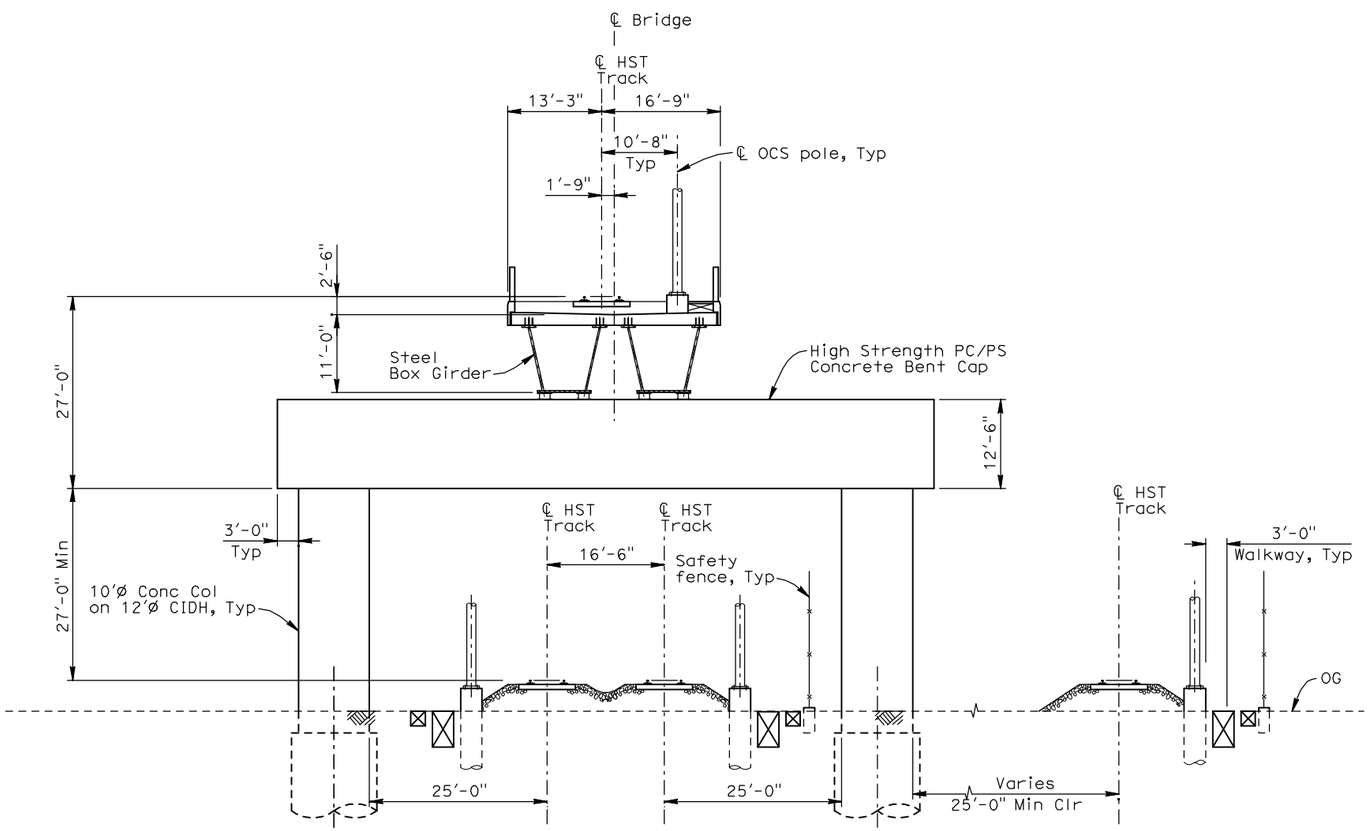
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
SECTIONS
SHEET 1

CONTRACT NO. HSR06-007
DRAWING NO. SV3401
SCALE As shown
SHEET NO. OF

LeeC10 4/30/2011 10:21:25 AM i:\chsr\60022962\task-02_merced-fresno\cadd\struct\sheet\aps\hybrid\15% cost reduction submittal\MF-SV-3401.dgn



OVER ON GRADE HST

Datum Elev 180.00

SECTION CB

3/32" = 1'-0"

SECTION CD SIMILAR

(Section CD similar but mirrored about ℄ of bridge)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
ALIGNMENT HYBRID
AVENUE 24
SECTIONS
SHEET 2

CONTRACT NO. HSR06-007
DRAWING NO. SV3402
SCALE As shown
SHEET NO. OF

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CALIFORNIA HIGH-SPEED TRAIN

Roadway Plans

"Excerpts of Record Set
For Procurement Purposes Only.
Avenue 17 to Veterans Blvd"

Record Set

15% Design Submittal

Merced to Fresno Section

Volume 1: Roadway Grade Separations

HYBRID Alternative

May 2011

CALIFORNIA
High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
				GENERAL		
		B5190-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 4
		B5191-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 2 OF 4
		B5192-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 3 OF 4
		B5193-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 4 OF 4
		B5194-B	HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B5200-B	HYBRID		INDEX MAP	SHEET 1 OF 2
		B5201-B	HYBRID		INDEX MAP	SHEET 2 OF 2
		~~CB5200-B~~	~~BNSF MAINLINE/WYE DO - (HYBRID)~~	~~GRADE SEPARATION - ROAD 10 ALT 1~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB5201-B~~	~~BNSF MAINLINE/WYE DO - (HYBRID)~~	~~GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB5202-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROAD 13~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB5203-B~~	~~UPRR/SR99 WYE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 25~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB5204-B~~	~~UPRR/SR99 WYE/MERCED DO - (HYBRID)~~	~~GRADE SEPRATION - AVENUE 26 ALT 1~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB5205-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - CROSS ROAD~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB5206-B~~	~~UPRR/SR99 WYE/MERCED DO - (HYBRID)~~	~~UNDERPASS - AVENUE 26 ALT 2~~	~~KEYMAP~~	~~SHEET 1 OF 1~~
		CT5190-B	HYBRID	GRADE SEPARATIONS	TYPICAL CROSS SECTIONS	SHEET 1 OF 1
		CT5191-B	HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
				LAYOUT		
1		CT0001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 1 OF 3
1		CT0002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 2 OF 3
1		CT0003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 3 OF 3
2		CT0004-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 1 OF 3
2		CT0005-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 2 OF 3
2		CT0006-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 3 OF 3
3		CT0007-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 1 OF 3
3		CT0008-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 2 OF 3
3		CT0009-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 3 OF 3
4		CT0010-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 1 OF 3
4		CT0011-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 2 OF 3
4		CT0012-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 3 OF 3
5		CT0013-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 1 OF 4
5		CT0014-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 2 OF 4
5		CT0015-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 3 OF 4
5		CT0016-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 4 OF 4
6		CT0017-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 1 OF 3
6		CT0018-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 2 OF 3
6		CT0019-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 3 OF 3
7		CT0020-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 1 OF 3
7		CT0021-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 2 OF 3
7		CT0022-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 3 OF 3
~~8~~		~~CT0023-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - RAYMOND RD~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~8~~		~~CT0024-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - RAYMOND RD~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~8~~		~~CT0025-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - RAYMOND RD~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~9~~		~~CT0026-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 17~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~9~~		~~CT0027-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 17~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~9~~		~~CT0028-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 17~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~10~~		~~CT0029-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 27~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~10~~		~~CT0030-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 27~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~10~~		~~CT0031-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 27~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~11~~		~~CT0032-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 26~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~11~~		~~CT0033-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 26~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~11~~		~~CT0034-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 26~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~32~~		~~CT0113-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 20~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~32~~		~~CT0114-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 20~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~32~~		~~CT0115-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 20~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~33~~		~~CT0116-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 20 1/2~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~33~~		~~CT0117-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 20 1/2~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~33~~		~~CT0118-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 20 1/2~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~34~~		~~CT0119-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 24~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~34~~		~~CT0120-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 24~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~35~~		~~CT0121-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 24~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~35~~		~~CT0122-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 22~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~35~~		~~CT0123-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 22~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~35~~		~~CT0124-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 22~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~36~~		~~CT0125-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 23 1/2~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~36~~		~~CT0126-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 23 1/2~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~36~~		~~CT0127-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 23 1/2~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~37~~		~~CT0128-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 16~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~37~~		~~CT0129-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 16~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~37~~		~~CT0130-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 16~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~38~~		~~CT0131-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 15~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~38~~		~~CT0132-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 15~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~38~~		~~CT0133-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 15~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~42~~		~~CT0143-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 9~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~42~~		~~CT0144-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - ROAD 9~~	~~LAYOUT~~	~~SHEET 2 OF 3~~

~~"Drawings lined Out are not Included for Procurement Purposes Only"~~

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. B5190-B
SCALE NONE
SHEET NO. ### OF ###

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LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
42		CT0145-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 9	LAYOUT	SHEET 3 OF 3
65		CT0146-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 1 OF 3
65		CT0147-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 2 OF 3
65		CT0148-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 3 OF 3
64		CT0149-A	BNSF MERCED CONNECTION - (HYBRID)	GRADE SEPARATION - G STREET	LAYOUT	SHEET 1 OF 1
41		CT5200-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	LAYOUT	SHEET 1 OF 3
41		CT5201-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	LAYOUT	SHEET 2 OF 3
41		CT5202-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	LAYOUT	SHEET 3 OF 3
40		CT5203-B	BNSF MAINLINE/ MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 1 OF 5
40		CT5204-B	BNSF MAINLINE/ MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 2 OF 5
40		CT5205-B	BNSF MAINLINE/ MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 3 OF 5
40		CT5206-B	BNSF MAINLINE/ MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 4 OF 5
40		CT5207-B	BNSF MAINLINE/ MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 5 OF 5
27		CT5210-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 1 OF 14
27		CT5211-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 2 OF 14
27		CT5212-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 3 OF 14
27		CT5213-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 4 OF 14
27		CT5214-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 5 OF 14
27		CT5215-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 6 OF 14
27		CT5216-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 7 OF 14
27		CT5217-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 8 OF 14
27		CT5218-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 9 OF 14
27		CT5219-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 10 OF 14
27		CT5220-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 11 OF 14
27		CT5221-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 12 OF 14
27		CT5222-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 13 OF 14
27		CT5223-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 14 OF 14
26		CT5227-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 1 OF 10
26		CT5228-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 2 OF 10
26		CT5229-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 3 OF 10
26		CT5230-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 4 OF 10
26		CT5231-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 5 OF 10
26		CT5232-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 6 OF 10
26		CT5233-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 7 OF 10
26		CT5234-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 8 OF 10
26		CT5235-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 9 OF 10
26		CT5236-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 10 OF 10
25		CT5238-B	UPRR/SR99 MERCED DO - (HYBRID)	GRADE SEPARATION - CROSS ROAD	LAYOUT	SHEET 1 OF 3
25		CT5239-B	UPRR/SR99 MERCED DO - (HYBRID)	GRADE SEPARATION - CROSS ROAD	LAYOUT	SHEET 2 OF 3
25		CT5240-B	UPRR/SR99 MERCED DO - (HYBRID)	GRADE SEPARATION - CROSS ROAD	LAYOUT	SHEET 3 OF 3
26		CT5246-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	UNDERPASS - AVENUE 26 ALT 2	LAYOUT	SHEET 1 OF 3
26		CT5247-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	UNDERPASS - AVENUE 26 ALT 2	LAYOUT	SHEET 2 OF 3
26		CT5248-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	UNDERPASS - AVENUE 26 ALT 2	LAYOUT	SHEET 3 OF 3
41		CT5249-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	LAYOUT	SHEET 1 OF 3
41		CT5250-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	LAYOUT	SHEET 2 OF 3
41		CT5251-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	LAYOUT	SHEET 3 OF 3
				PROFILE		
		CT5900-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 1 OF 4
		CT5901-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 2 OF 4
		CT5902-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 3 OF 4
		CT5903-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 4 OF 4
1		CT1000-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 1 OF 3
1		CT1001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 2 OF 3
1		CT1002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 3 OF 3
2		CT1003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 1 OF 3
2		CT1004-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 2 OF 3
2		CT1005-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 3 OF 3
3		CT1006-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 1 OF 3
3		CT1007-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 2 OF 3
3		CT1008-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 3 OF 3
4		CT1009-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 1 OF 3
4		CT1010-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 2 OF 3
4		CT1011-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 3 OF 3
5		CT1012-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 1 OF 3
5		CT1013-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 2 OF 3
5		CT1014-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 3 OF 3
6		CT1015-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 1 OF 3
6		CT1016-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 2 OF 3
6		CT1017-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 3 OF 3
7		CT1018-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 1 OF 3
7		CT1019-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 2 OF 3
7		CT1020-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 3 OF 3
8		CT1021-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - RAYMOND RD	PROFILE	SHEET 1 OF 3
8		CT1022-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - RAYMOND RD	PROFILE	SHEET 2 OF 3
8		CT1023-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - RAYMOND RD	PROFILE	SHEET 3 OF 3

"Drawings lined Out are not Included for Procurement Purposes Only"

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DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. B5191-B
SCALE NONE
SHEET NO. ### OF ###

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LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
9		CT1024-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 17	PROFILE	SHEET 1 OF 3
9		CT1025-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 17	PROFILE	SHEET 2 OF 3
9		CT1026-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 17	PROFILE	SHEET 3 OF 3
10		CT1027-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 27	PROFILE	SHEET 1 OF 3
10		CT1028-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 27	PROFILE	SHEET 2 OF 3
10		CT1029-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 27	PROFILE	SHEET 3 OF 3
11		CT1030-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 26	PROFILE	SHEET 1 OF 3
11		CT1031-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 26	PROFILE	SHEET 2 OF 3
11		CT1032-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 26	PROFILE	SHEET 3 OF 3
32		CT1113-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20	PROFILE	SHEET 1 OF 3
32		CT1114-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20	PROFILE	SHEET 2 OF 3
32		CT1115-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20	PROFILE	SHEET 3 OF 3
33		CT1116-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	PROFILE	SHEET 1 OF 3
33		CT1117-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	PROFILE	SHEET 2 OF 3
33		CT1118-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	PROFILE	SHEET 3 OF 3
34		CT1119-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 24	PROFILE	SHEET 1 OF 3
34		CT1120-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 24	PROFILE	SHEET 2 OF 3
34		CT1121-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 24	PROFILE	SHEET 3 OF 3
35		CT1122-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 22	PROFILE	SHEET 1 OF 3
35		CT1123-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 22	PROFILE	SHEET 2 OF 3
35		CT1124-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 22	PROFILE	SHEET 3 OF 3
36		CT1125-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 23 1/2	PROFILE	SHEET 1 OF 3
36		CT1126-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 23 1/2	PROFILE	SHEET 2 OF 3
36		CT1127-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 23 1/2	PROFILE	SHEET 3 OF 3
37		CT1128-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 16	PROFILE	SHEET 1 OF 3
37		CT1129-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 16	PROFILE	SHEET 2 OF 3
37		CT1130-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 16	PROFILE	SHEET 3 OF 3
38		CT1131-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 15	PROFILE	SHEET 1 OF 3
38		CT1132-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 15	PROFILE	SHEET 2 OF 3
38		CT1133-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 15	PROFILE	SHEET 3 OF 3
42		CT1143-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 9	PROFILE	SHEET 1 OF 3
42		CT1144-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 9	PROFILE	SHEET 2 OF 3
42		CT1145-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 9	PROFILE	SHEET 3 OF 3
65		CT1146-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	PROFILE	SHEET 1 OF 3
65		CT1147-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	PROFILE	SHEET 2 OF 3
65		CT1148-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	PROFILE	SHEET 3 OF 3
64		CT1149-A	BNSF MERCED CONNECTION - (HYBRID)	GRADE SEPARATION - G ST	PROFILE	SHEET 1 OF 1
41		CT6200-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	PROFILE	SHEET 1 OF 3
41		CT6201-B	BNSF MAINLINE/ WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	PROFILE	SHEET 2 OF 3
41		CT6202-B	BNSF MAINLINE/WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	PROFILE	SHEET 3 OF 3
40		CT6203-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	PROFILE	SHEET 1 OF 5
40		CT6204-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	PROFILE	SHEET 2 OF 5
40		CT6205-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	PROFILE	SHEET 3 OF 5
40		CT6206-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	PROFILE	SHEET 4 OF 5
40		CT6207-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	PROFILE	SHEET 5 OF 5
27		CT6210-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 1 OF 14
27		CT6211-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 2 OF 14
27		CT6212-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 3 OF 14
27		CT6213-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 4 OF 14
27		CT6214-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 5 OF 14
27		CT6215-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 6 OF 14
27		CT6216-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 7 OF 14
27		CT6217-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 8 OF 14
27		CT6218-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 9 OF 14
27		CT6219-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 10 OF 14
27		CT6220-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 11 OF 14
27		CT6221-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 12 OF 14
27		CT6222-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 13 OF 14
27		CT6223-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	PROFILE	SHEET 14 OF 14
26		CT6226-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 1 OF 10
26		CT6227-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 2 OF 10
26		CT6228-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 3 OF 10
26		CT6229-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 4 OF 10
26		CT6230-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 5 OF 10
26		CT6231-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 6 OF 10
26		CT6232-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 7 OF 10
26		CT6233-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 8 OF 10
26		CT6234-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 9 OF 10
26		CT6235-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	PROFILE	SHEET 10 OF 10

"Drawings lined Out are not Included for Procurement Purposes Only"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. B5192-B
SCALE NONE
SHEET NO. ### OF ###

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LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
~~25~~		~~CT6236-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - CROSS ROAD~~	~~PROFILE~~	~~SHEET 1 OF 3~~
~~25~~		~~CT6237-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - CROSS ROAD~~	~~PROFILE~~	~~SHEET 2 OF 3~~
~~25~~		~~CT6238-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - CROSS ROAD~~	~~PROFILE~~	~~SHEET 3 OF 3~~
~~26~~		~~CT6244-B~~	~~UPRR/SR99 WYE/MERCED DO - (HYBRID)~~	~~UNDERPASS - AVENUE 26 ALT 2~~	~~PROFILE~~	~~SHEET 1 OF 3~~
~~26~~		~~CT6245-B~~	~~UPRR/SR99 WYE/MERCED DO - (HYBRID)~~	~~UNDERPASS - AVENUE 26 ALT 2~~	~~PROFILE~~	~~SHEET 2 OF 3~~
~~26~~		~~CT6246-B~~	~~UPRR/SR99 WYE/MERCED DO - (HYBRID)~~	~~UNDERPASS - AVENUE 26 ALT 2~~	~~PROFILE~~	~~SHEET 3 OF 3~~
~~41~~		~~CT6247-B~~	~~BNSF MAINLINE/ WYE DO - (HYBRID)~~	~~GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2~~	~~PROFILE~~	~~SHEET 1 OF 3~~
~~41~~		~~CT6248-B~~	~~BNSF MAINLINE/ WYE DO - (HYBRID)~~	~~GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2~~	~~PROFILE~~	~~SHEET 2 OF 3~~
~~41~~		~~CT6249-B~~	~~BNSF MAINLINE/WYE DO - (HYBRID)~~	~~GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2~~	~~PROFILE~~	~~SHEET 3 OF 3~~

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REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. B5193-B
SCALE NONE
SHEET NO. ### OF ###

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ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

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DRAWING NO. B5194-B
SCALE NO SCALE
SHEET NO. ### OF ###

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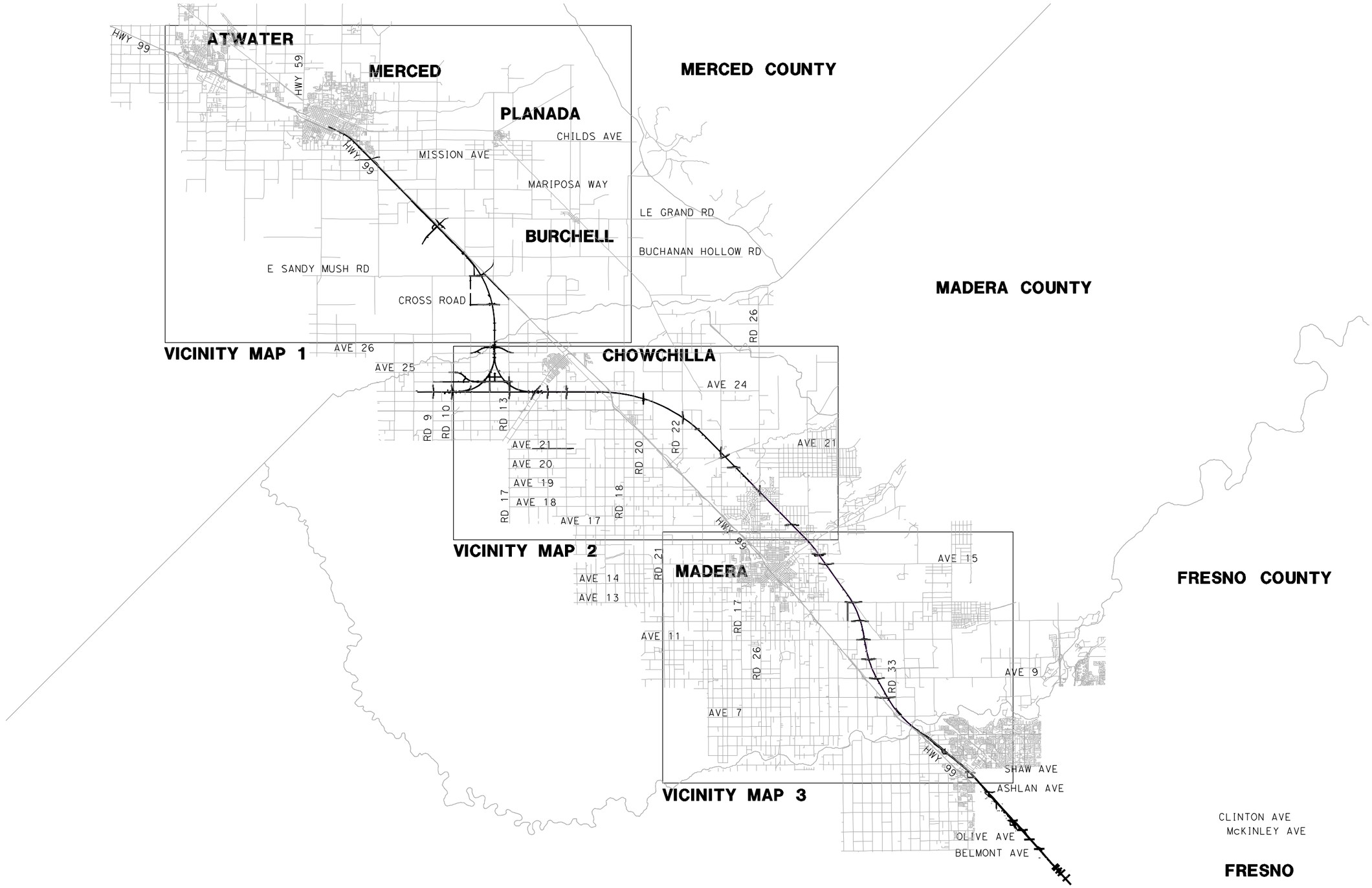

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
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CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

INDEX MAP
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CONTRACT NO. HSR06-007
DRAWING NO. B5200-B
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SHEET NO. ### OF ###

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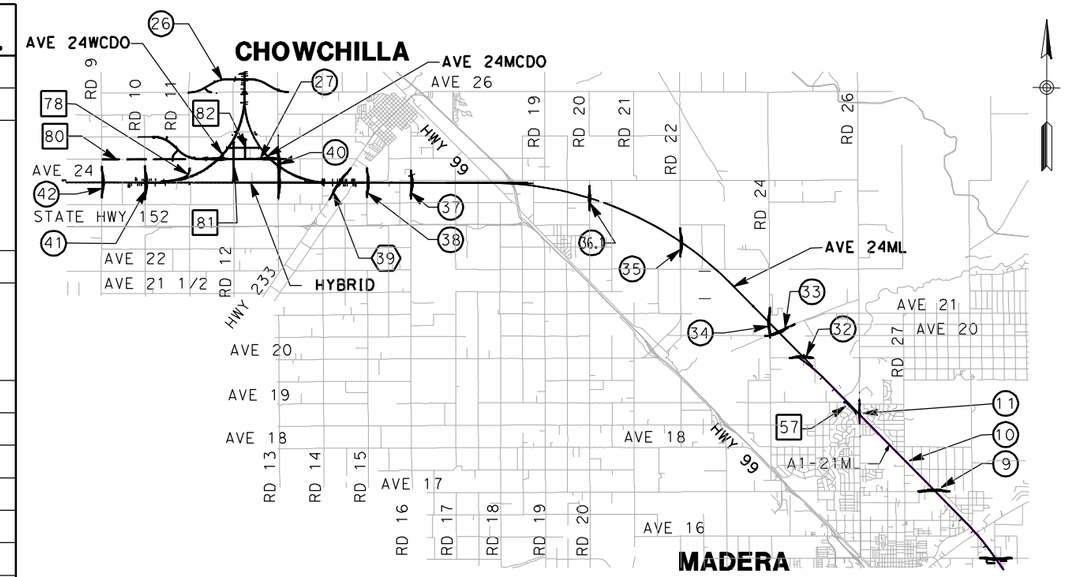
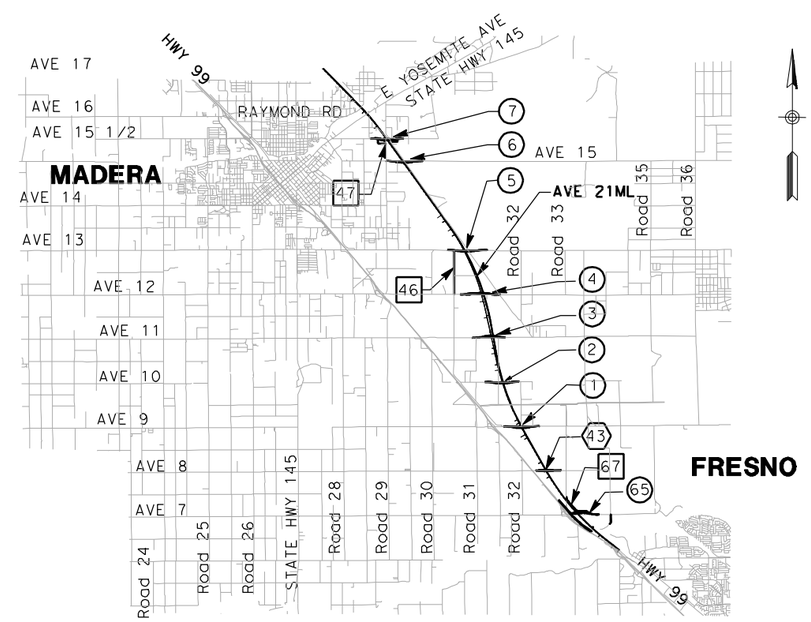
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	
19	GRADE SEPARATION - LE GRAND INTERCHANGE	CT7208-B - CT7214-B	ST1114
25	GRADE SEPARATION - CROSS ROAD	CT5238-B - CT5240-B	ST1136
26	GRADE SEPARATION - AVENUE 26 ALT 1	CT5227-B - CT5236-B	ST1135
	UNDERPASS - AVENUE 26 ALT 2	CT5246-B - CT5248-B	
27	GRADE SEPARATION - AVENUE 25	CT5210-B - CT5221-B	ST1133 - ST1134
32	GRADE SEPARATION - AVENUE 20	CT0113-A - CT0115-A	ST1035
33	GRADE SEPARATION - AVENUE 20 1/2	CT0116-A - CT0118-A	ST1036 - ST1037
34	GRADE SEPARATION - ROAD 24	CT0119-A - CT0121-A	ST1038 - ST1039
35	GRADE SEPARATION - ROAD 22	CT0122-A - CT0124-A	ST1040
35.1	SANDY MUSH RD INTERCHANGE	CT7204-B - CT7207-B	ST1142
36.1	GRADE SEPARATION - ROAD 22	CT0125.1-A - CT0127.1-A	ST1041

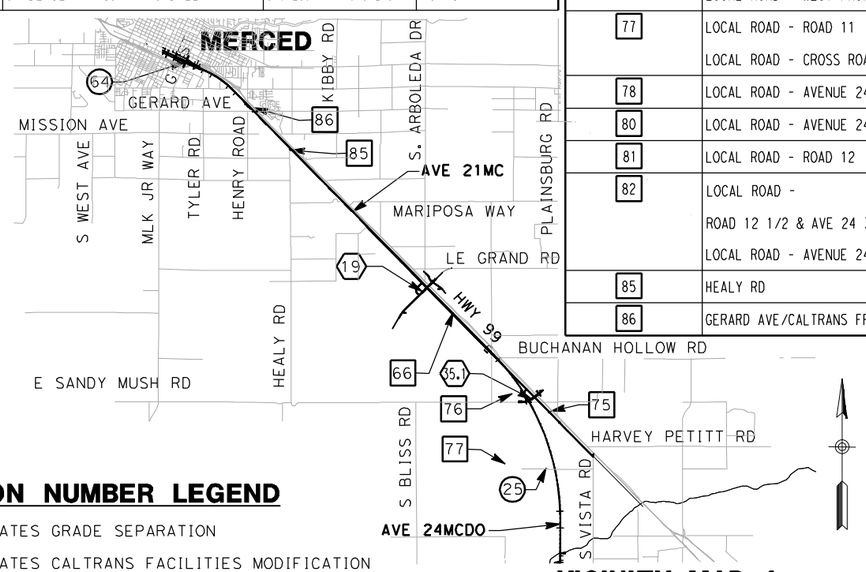
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
37	GRADE SEPARATION - ROAD 16	CT0128-A - CT0130-A	ST1042
38	GRADE SEPARATION - ROAD 15	CT0131-A - CT0133-A	ST1043
39	GRADE SEPARATION - ROBERTSON BLVD (SR233) ALT 1	CT7200-B - CT7203-B	ST1150
	UNDERPASS - ROBERTSON BLVD (SR233) ALT 2	CT7215-B - CT7217-B	
40	GRADE SEPARATION - ROAD 13	CT5203-B - CT5207-B	ST1121 & ST1139
41	GRADE SEPARATION - ROAD 10 ALT 1	CT5200-B - CT5202-B	ST1160
	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	CT5249-B - CT5251-B	ST1160
42	GRADE SEPARATION - ROAD 9	CT0143-A - CT0145-A	ST1120
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	
43	CALTRANS - AVENUE 8	CT2000-A - CT2002-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
57	LOCAL ROAD - HANOVER DR	CR4012-A	
66	PROPOSED WEST FRONTAGE ROAD	CR9204-B - CR9207-B	
67	LOCAL ROAD - ROAD 33	CR4018-A	
75	LOCAL ROAD - WEST FRONTAGE ROAD	CR9200-B - CR9201-B	
76	LOCAL ROAD - SANDY MUSH ROAD	CR9210-B	
	LOCAL ROAD - WEST FRONTAGE ROAD	CR9202-B - CR9203-B	
77	LOCAL ROAD - ROAD 11	CR9208-B - CR9209-B	
	LOCAL ROAD - CROSS ROAD	CR9211-B	
78	LOCAL ROAD - AVENUE 24	CR9217-B - CR9218-B	
80	LOCAL ROAD - AVENUE 24 1/2	CR9212-B - CR9213-B	
81	LOCAL ROAD - ROAD 12	CR9214-B	
82	LOCAL ROAD - ROAD 12 1/2 & AVE 24 3/4	CR9215-B	
	LOCAL ROAD - AVENUE 24 3/4	CR9216-B	
85	HEALY RD	CR9219-B	
86	GERARD AVE/CALTRANS FRONTAGE RD	CR9220-B	



VICINITY MAP 2



VICINITY MAP 3



VICINITY MAP 1

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

FOR ROADWAY STRUCTURES SEE STRUCTURAL INDEX MAPS

9000 0 9000 18000
GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY T. WALTZ
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET 15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B5201-B
SCALE NO SCALE
SHEET NO. ### OF ###

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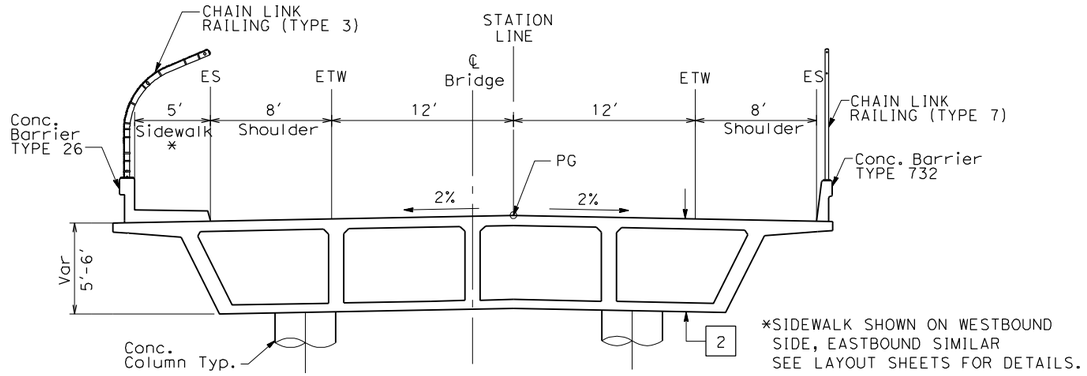
NOTES:

1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.



*SIDEWALK SHOWN ON WESTBOUND SIDE, EASTBOUND SIMILAR SEE LAYOUT SHEETS FOR DETAILS.

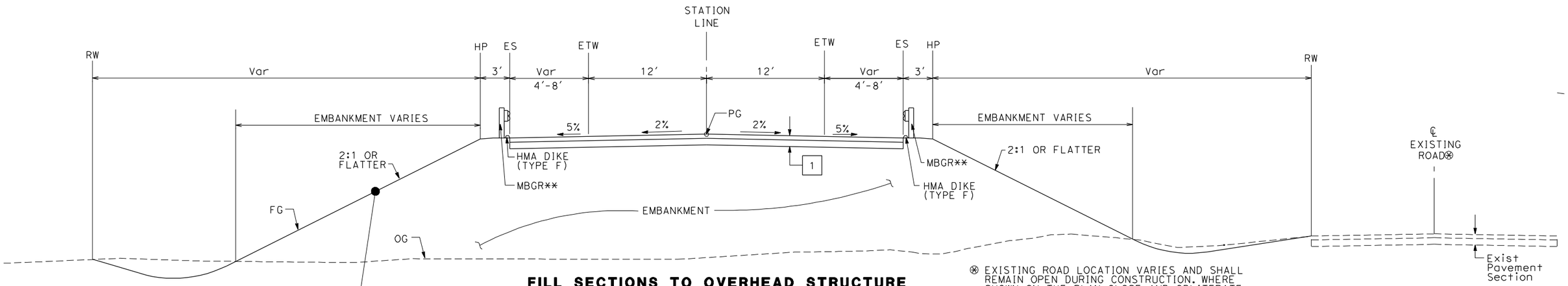
OVERHEAD STRUCTURE

SEE STRUCTURAL PLANS

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

2 — CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)

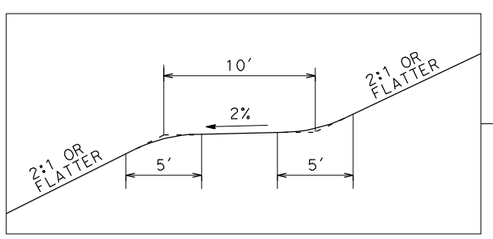


FILL SECTIONS TO OVERHEAD STRUCTURE

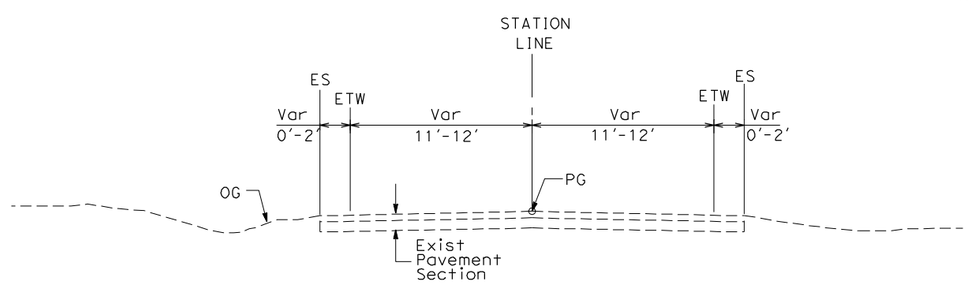
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



BENCHING DETAIL



EXISTING LOCAL ROAD

WEST SIDE SHOWN (EAST SIDE SIMILAR)
SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR THE HYBRID ALIGNMENT:

NO.	STREET NAME		
1	AVENUE 9	13	AVENUE 26
2	AVENUE 10	14	RAYMOND RD
3	AVENUE 11	15	CROSS RD
4	AVENUE 12	16	ROAD 10
5	AVENUE 13	17	ROAD 13
6	AVENUE 15	18	ROAD 15
7	AVENUE 15.5	19	ROAD 16
8	AVENUE 17	20	ROAD 22
9	AVENUE 20	21	ROAD 24
10	AVENUE 20.5	22	ROAD 26
11	AVENUE 23.5	23	ROAD 27
12	AVENUE 25		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GRADE SEPARATIONS
TYPICAL CROSS SECTIONS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT5190-B
SCALE NTS
SHEET NO. ### OF ###

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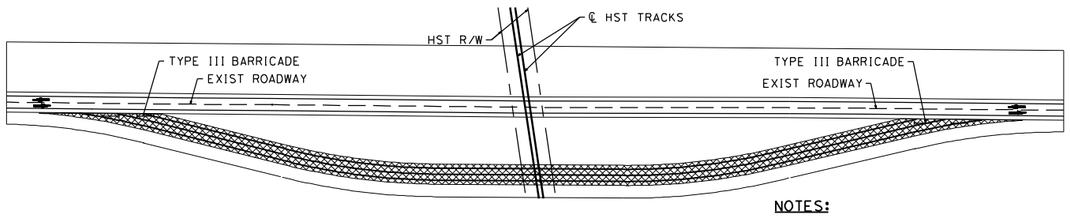
STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN
CENTERED PROPOSED ALIGNMENT

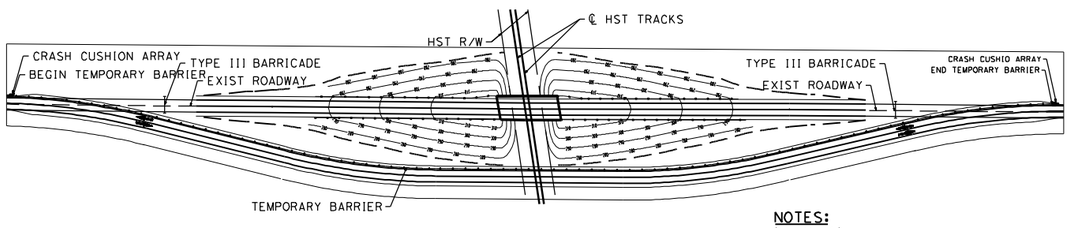


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT TEMPORARY DETOUR ROAD

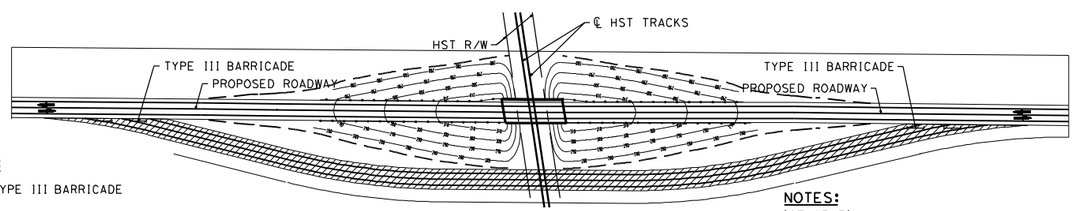


STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO TEMPORARY DETOUR ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 3)

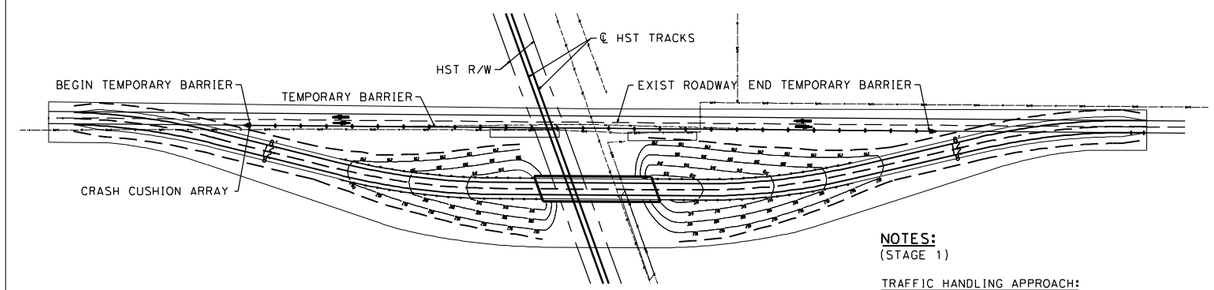
NOTES:
(STAGE 3)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-REMOVE TEMPORARY DETOUR ROAD

LEGEND:
- TYPE III BARRICADE
- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- CONSTRUCT TEMPORARY ROAD
- REMOVE TEMPORARY ROAD

STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN
SHIFTED PROPOSED ALIGNMENT

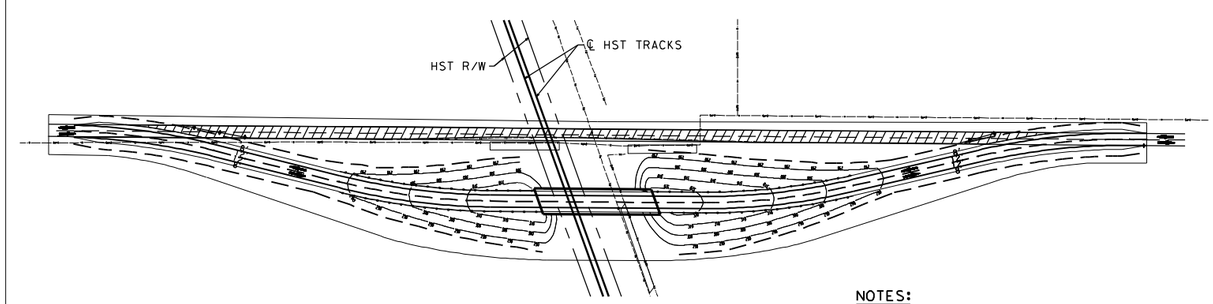


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE BASE AND SURFACING OF EXIST ROAD

LEGEND:
- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE
DATE 07/27/2011

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL STAGE CONSTRUCTION &
TRAFFIC HANDLING APPROACH
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT5191-B
SCALE NO SCALE
SHEET NO. ### OF ###

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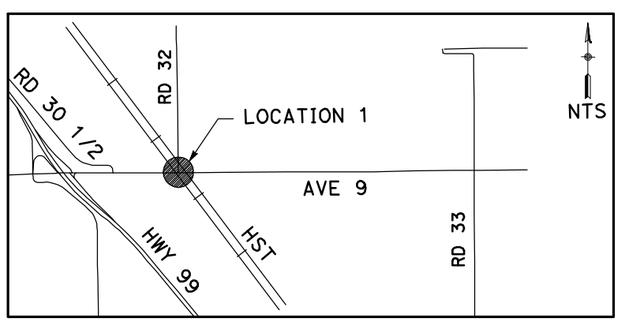

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A THROUGH CT1002-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 9
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0001-A
SCALE AS SHOWN
SHEET NO. OF ###

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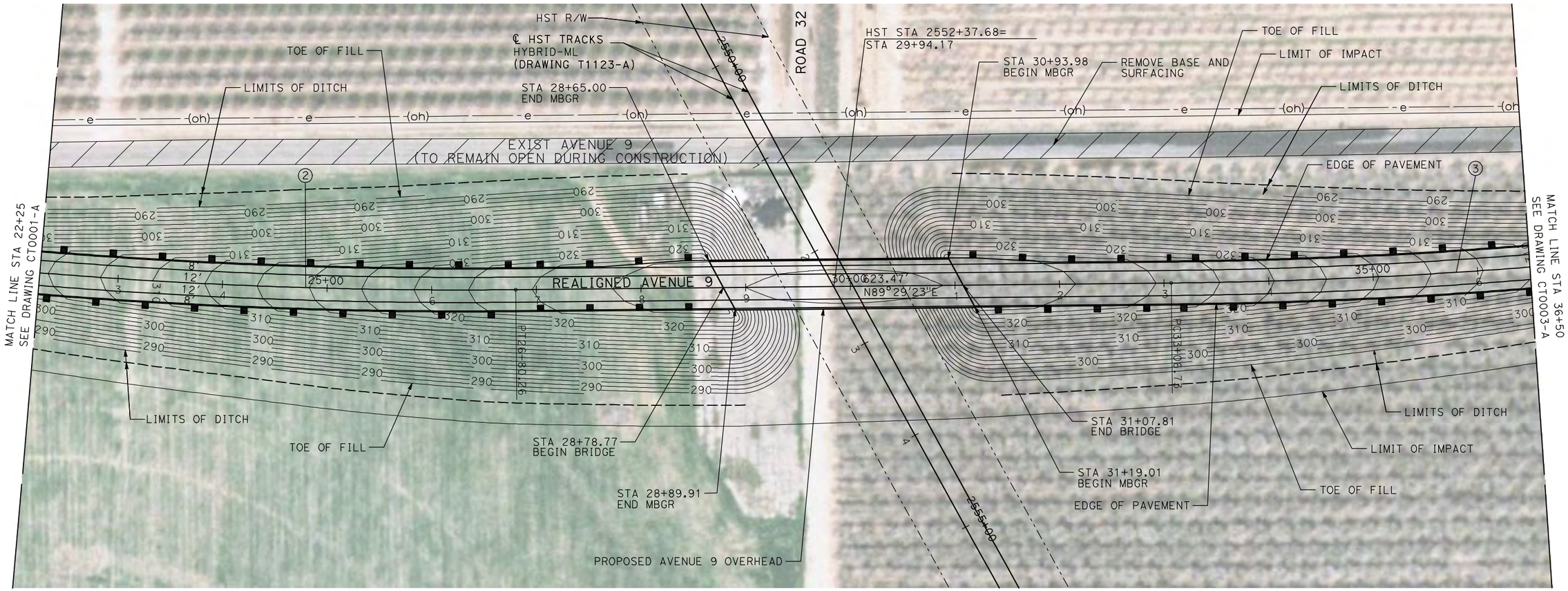

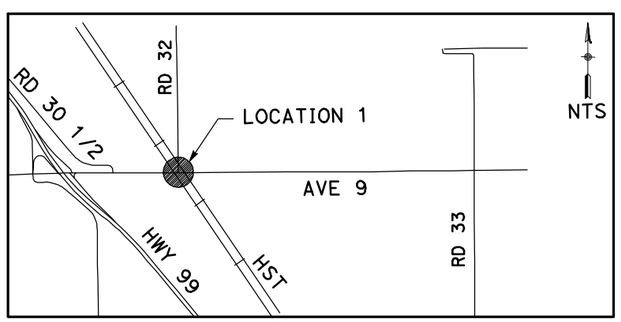

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A THROUGH CT1002-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 9
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0002-A
SCALE AS SHOWN
SHEET NO. OF ###

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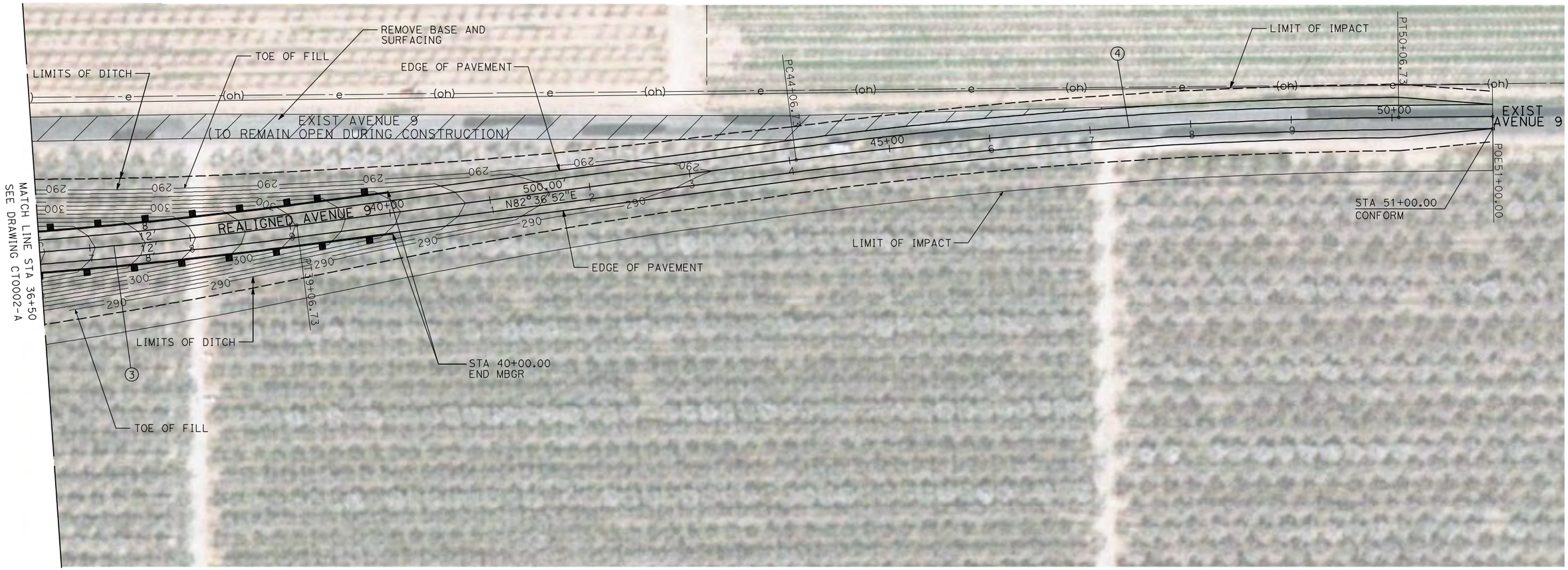

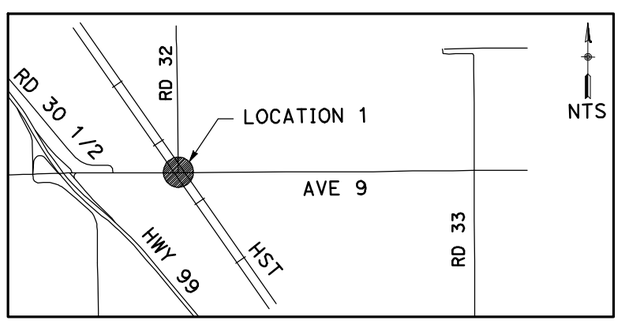

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A THROUGH CT1002-A.

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1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

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CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 9
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0003-A
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SHEET NO. OF ###

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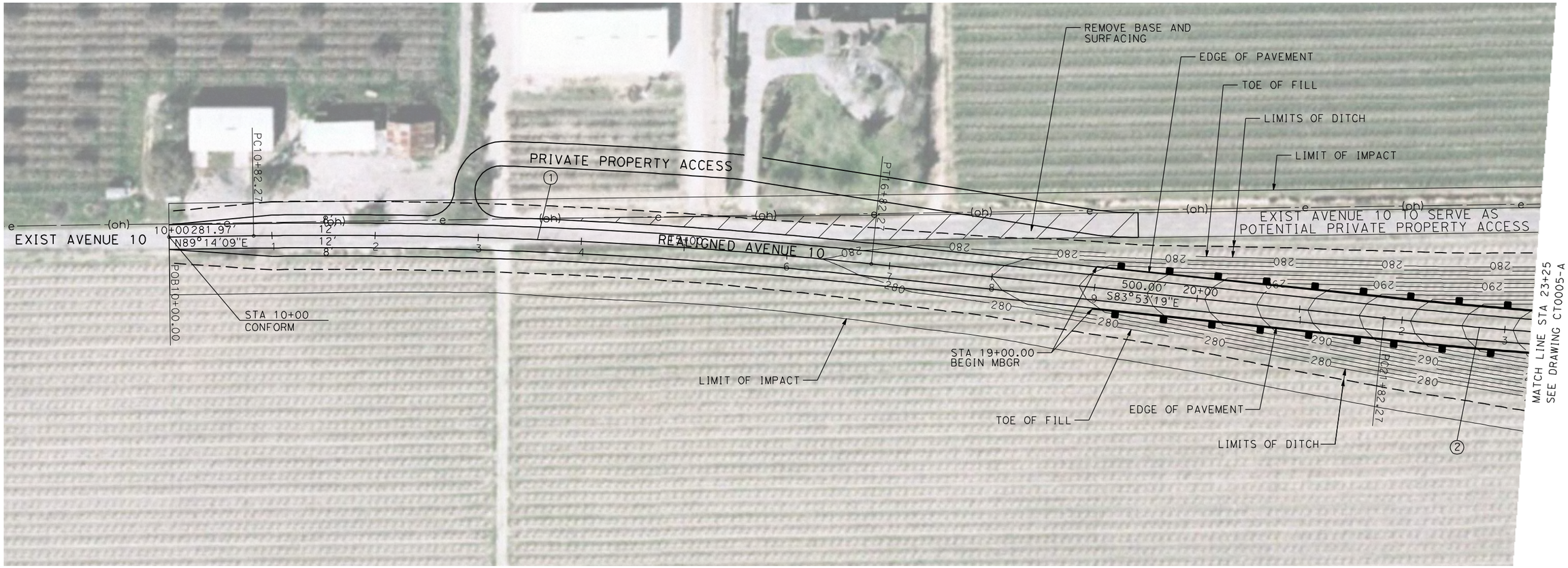

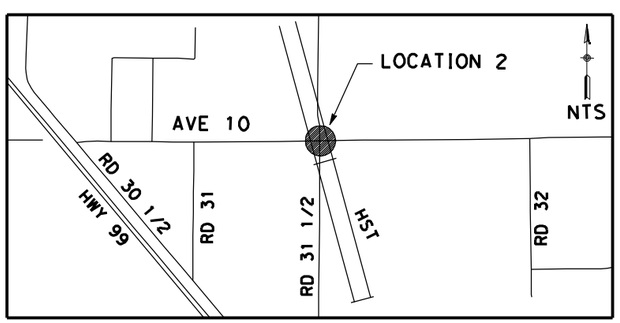

NOTE:

1. FOR PROFILES, SEE DRAWINGS CT1003-A THROUGH CT1005-A.

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1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 10
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0004-A
SCALE AS SHOWN
SHEET NO. OF ###

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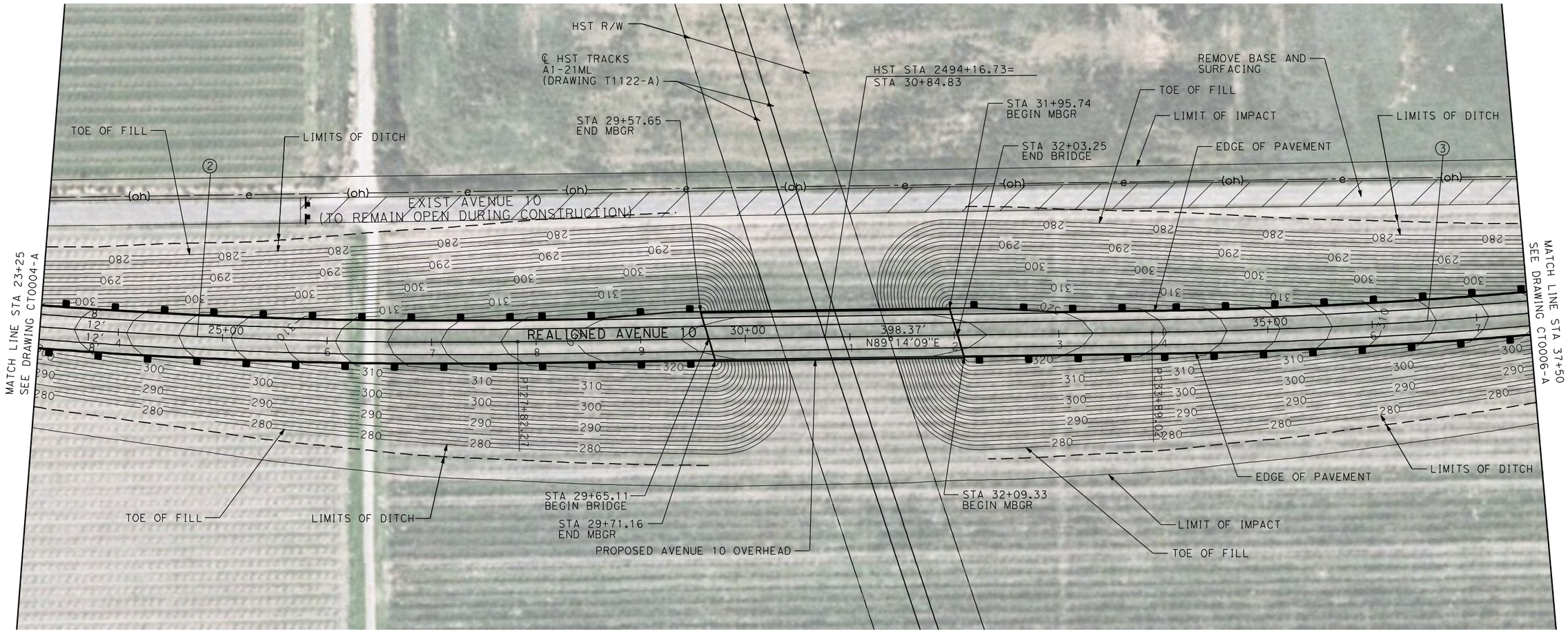

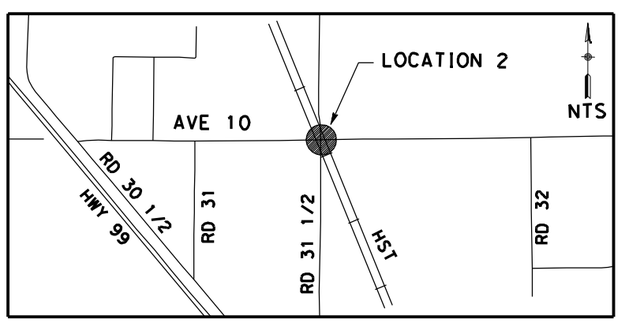

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1003-A THROUGH CT1005-A.

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1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 10
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0005-A
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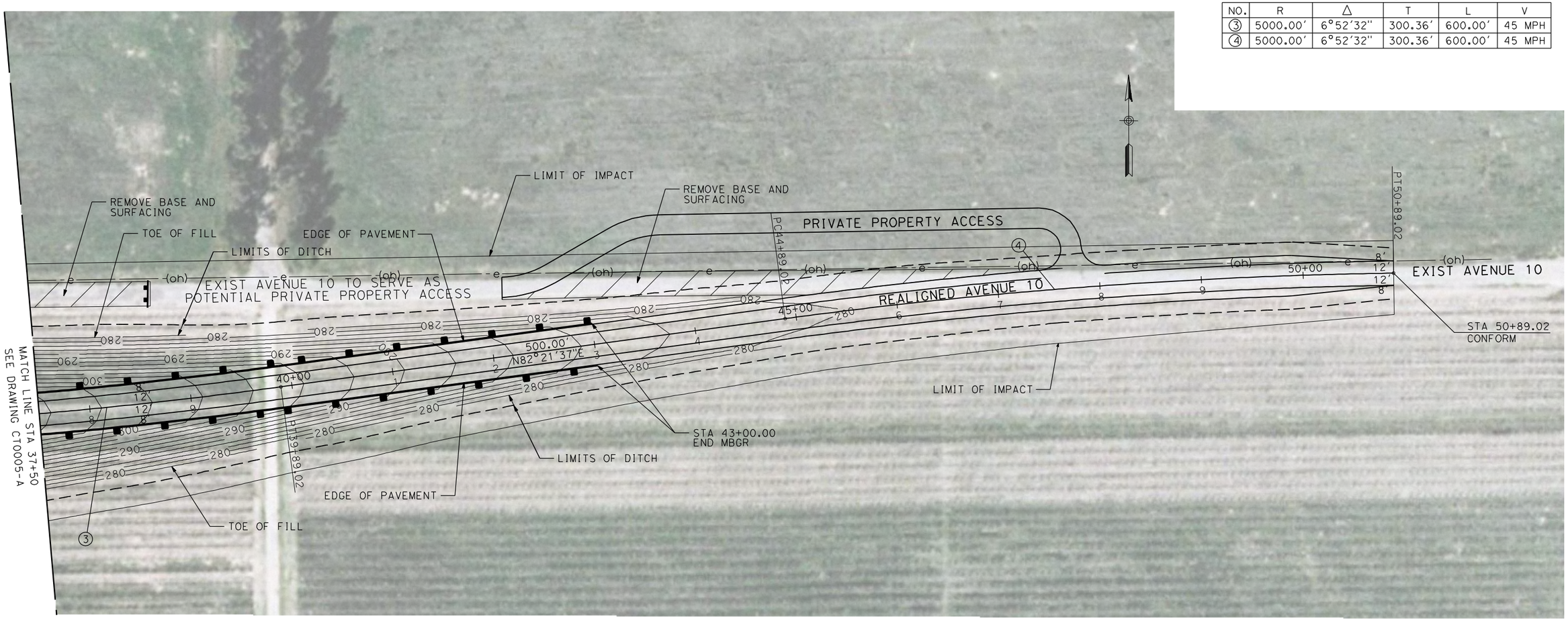

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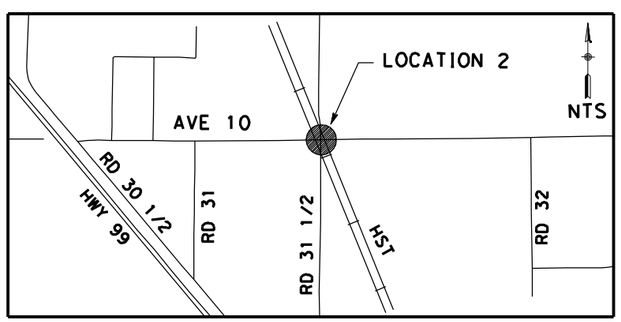

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 10
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0006-A
SCALE AS SHOWN
SHEET NO. OF ###

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GibsonR1

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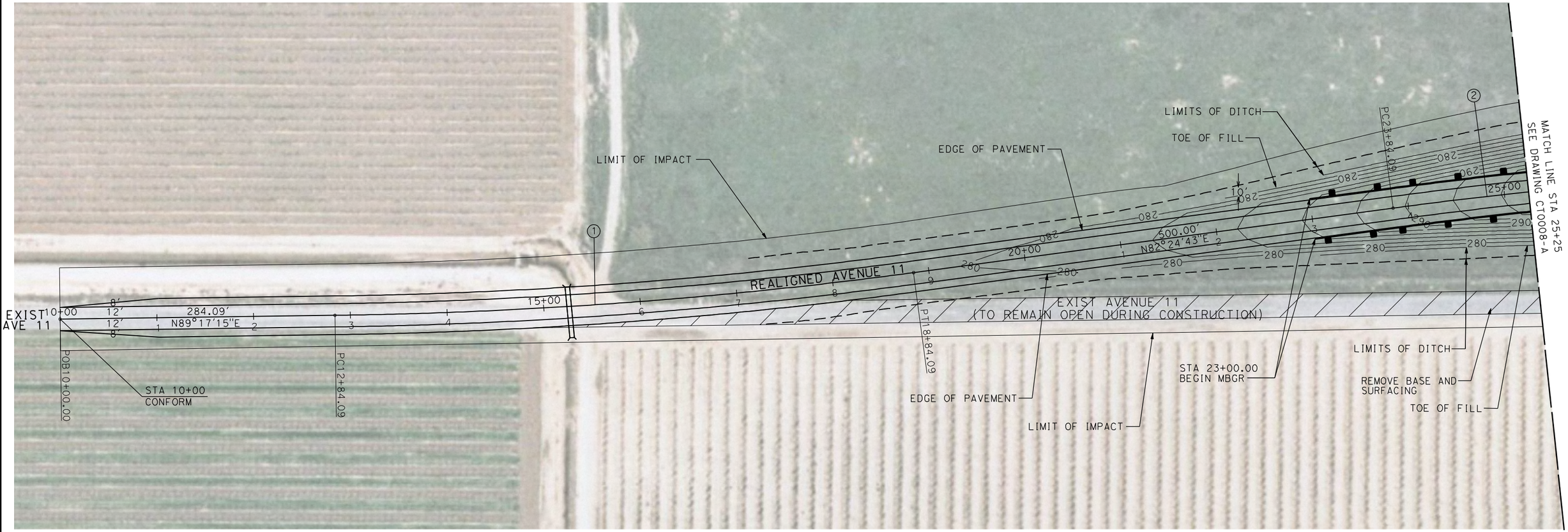

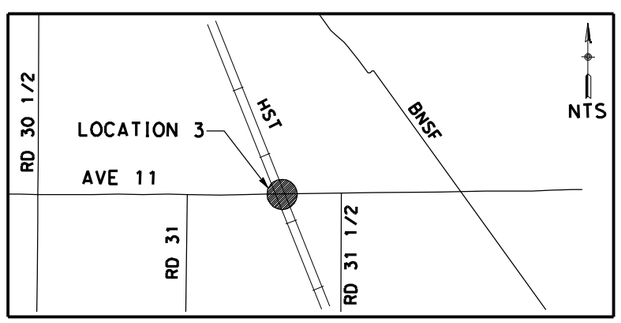

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A THROUGH CT1008-A.

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1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

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SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 11
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0007-A
SCALE AS SHOWN
SHEET NO. OF ###

2/16/2012 12:04:27 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\MF-CT-0007-A_REV2.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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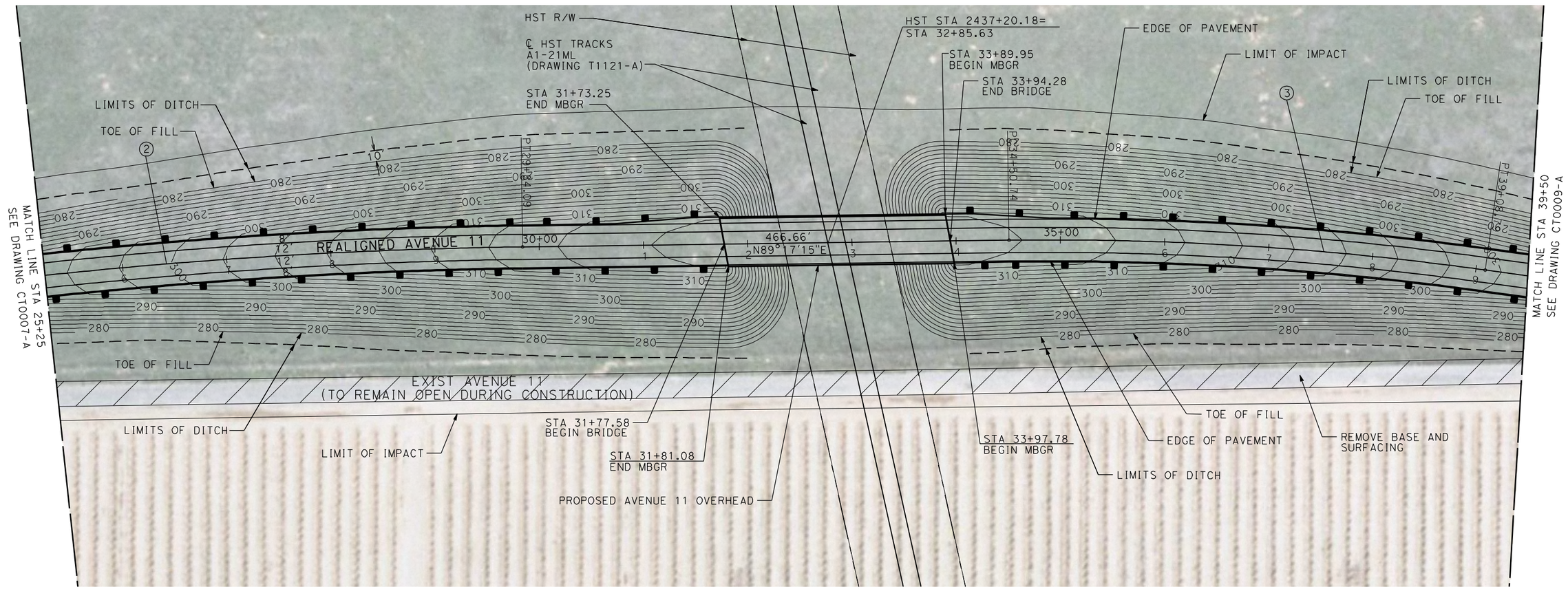
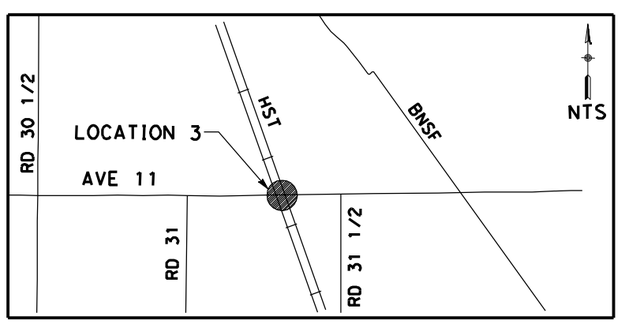
3	3000.00′	8°44′53″	229.47′	458.05′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A THROUGH CT1008-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

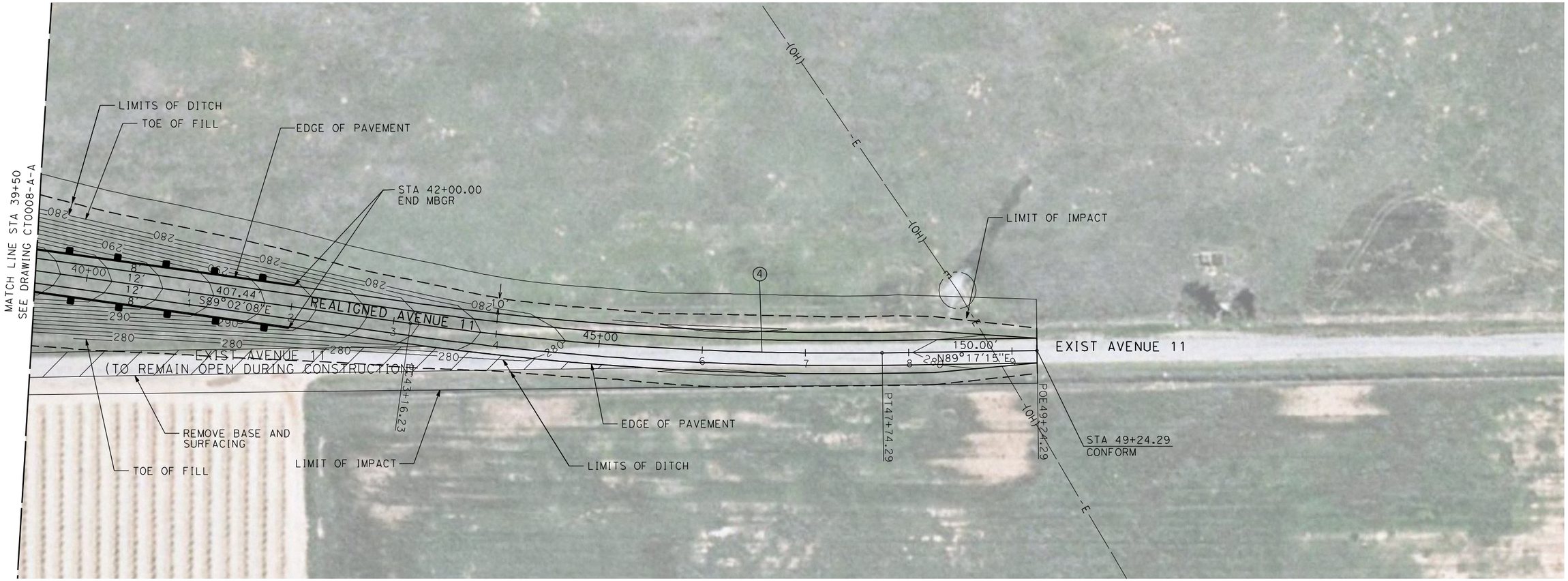
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 11
LAYOUT
SHEET 2 OF 3

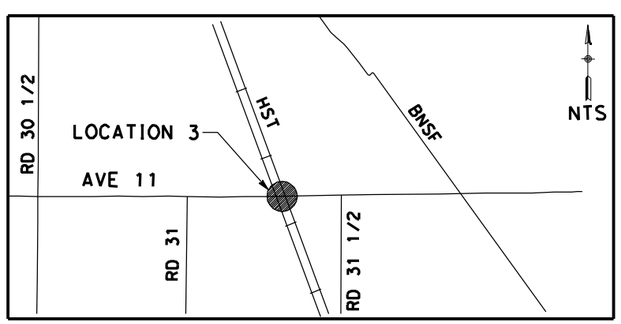
CONTRACT NO. HST06-007
DRAWING NO. CT0008-A
SCALE AS SHOWN
SHEET NO. ### OF ###

2/16/2012 12:04:49 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\MF-CT-0008-A_REV2.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
4	3000.00'	8°44'53"	229.47'	458.05'	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A THROUGH CT1008-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 11
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0009-A
SCALE AS SHOWN
SHEET NO. OF ###

2/16/2012 12:05:17 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\MF-CT-0009-A_REV2.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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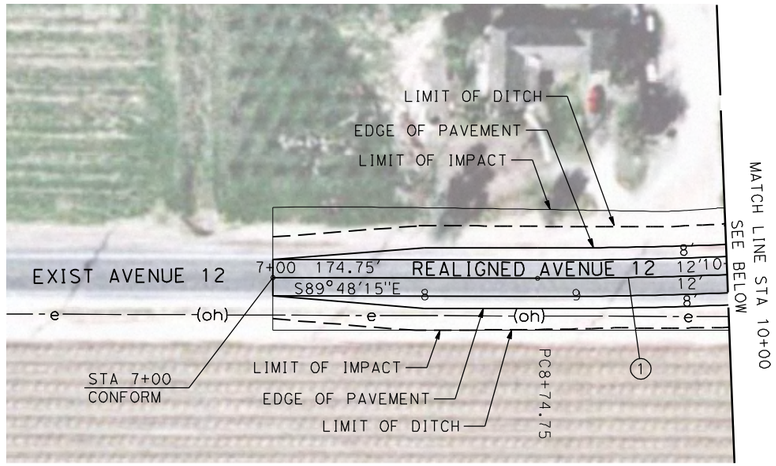
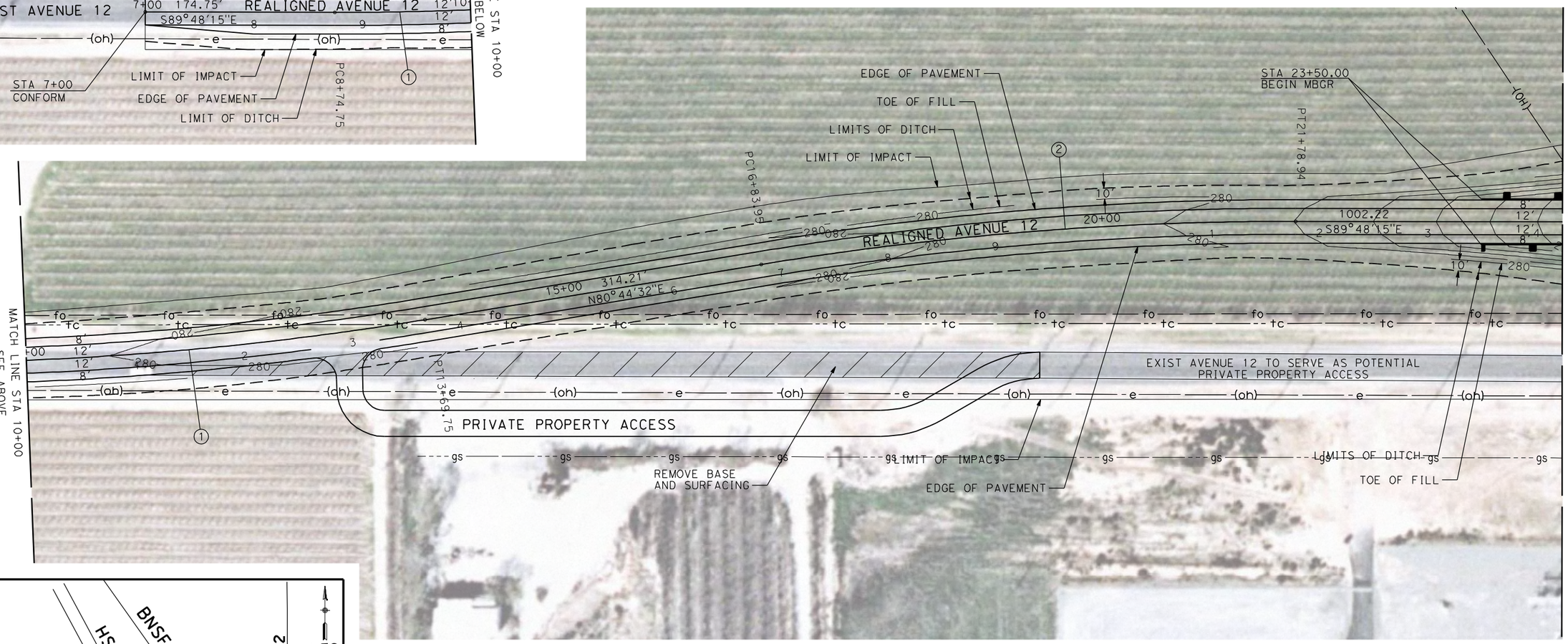
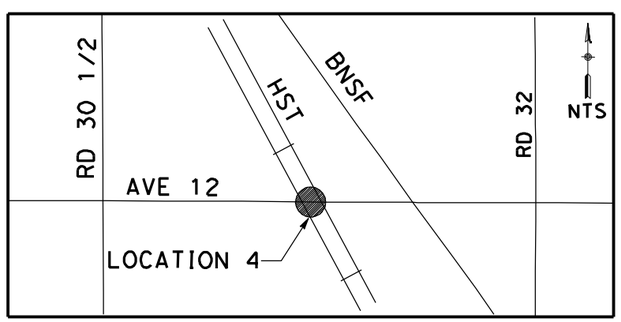
2	3000.00′	9°27′13″	248.06′	494.99′	45 MPH







NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A THROUGH CT1011-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 12
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0010-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CURVE DATA

NO.	R	Δ	T	L	V
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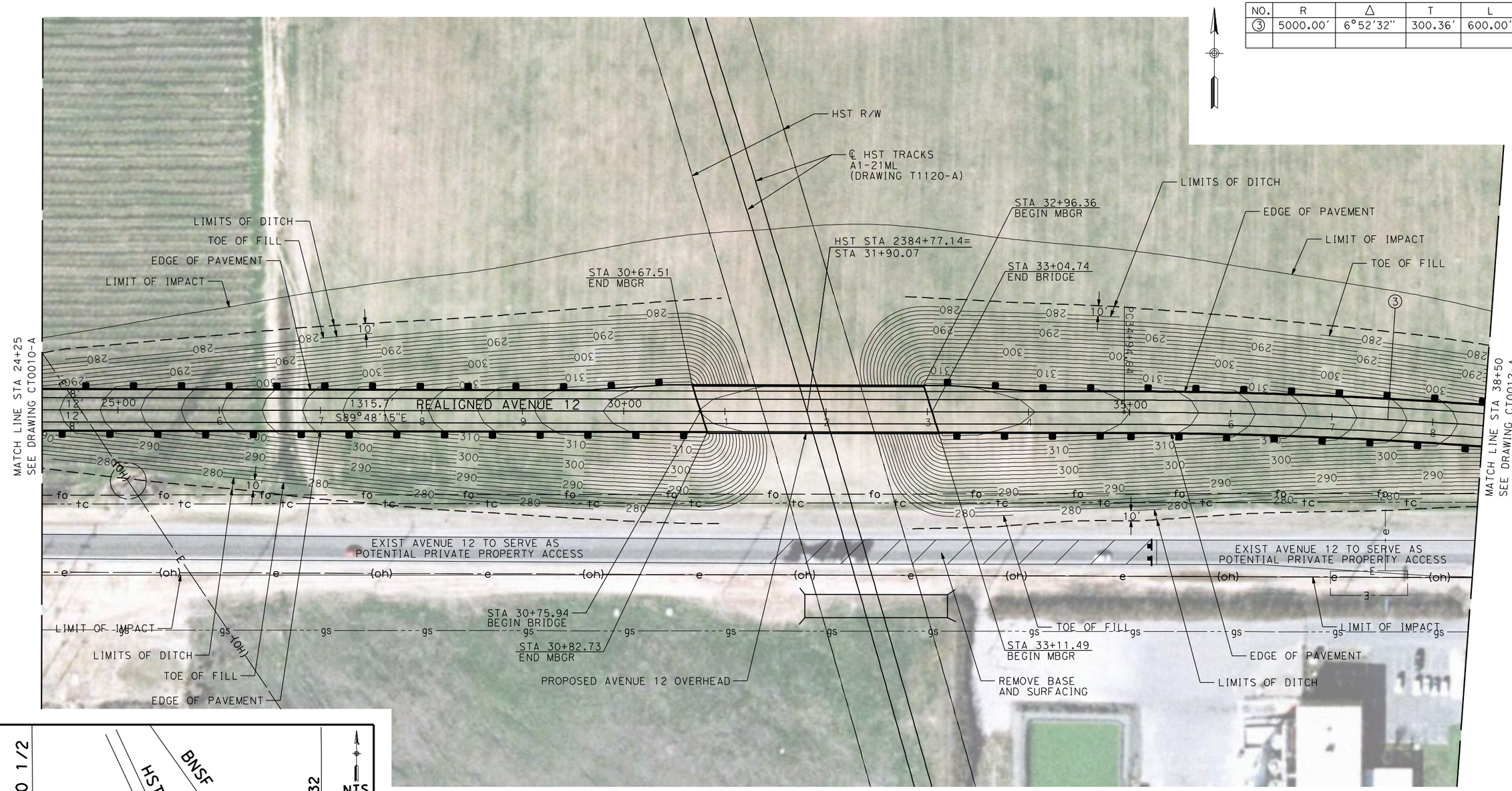

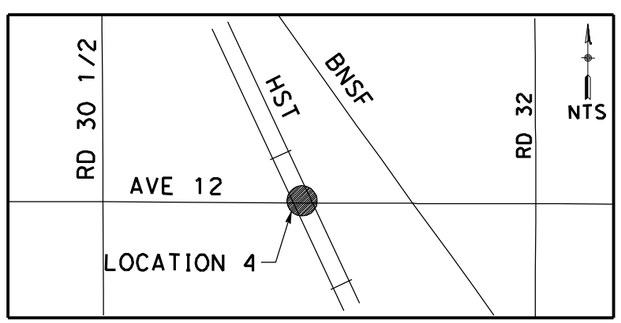

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A THROUGH CT1011-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 12
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0011-A
SCALE AS SHOWN
SHEET NO. ### OF ###

gibsonr1 2/28/2012 2:38:55 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\15% ROADWAY REVISIONS\SHEET UPDATES FOR CRAIG 2-28-12\SHEETS\PLAN\MF-CT-0011-A_REV2.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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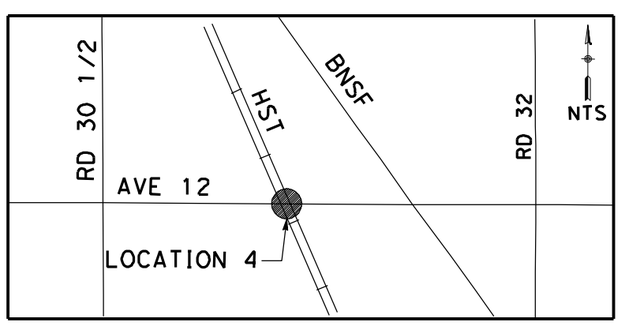
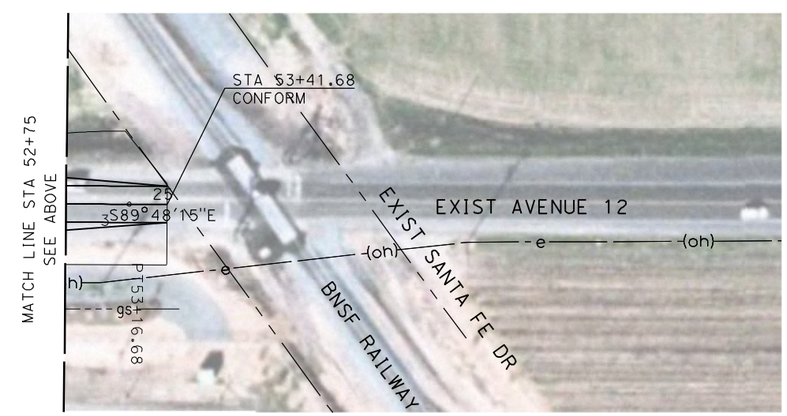
4	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A THROUGH CT1011-A.



50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 12
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0012-A
SCALE AS SHOWN
SHEET NO. ### OF ###

gibsonr1 2/28/2012 2:44:36 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\15% ROADWAY REVISIONS\SHEET UPDATES FOR CRAIG 2-28-12\SHEETS\PLAN\MF-CT-0012-A_REV2.dgn

CURVE DATA

NO.	R	Δ	T	L	V
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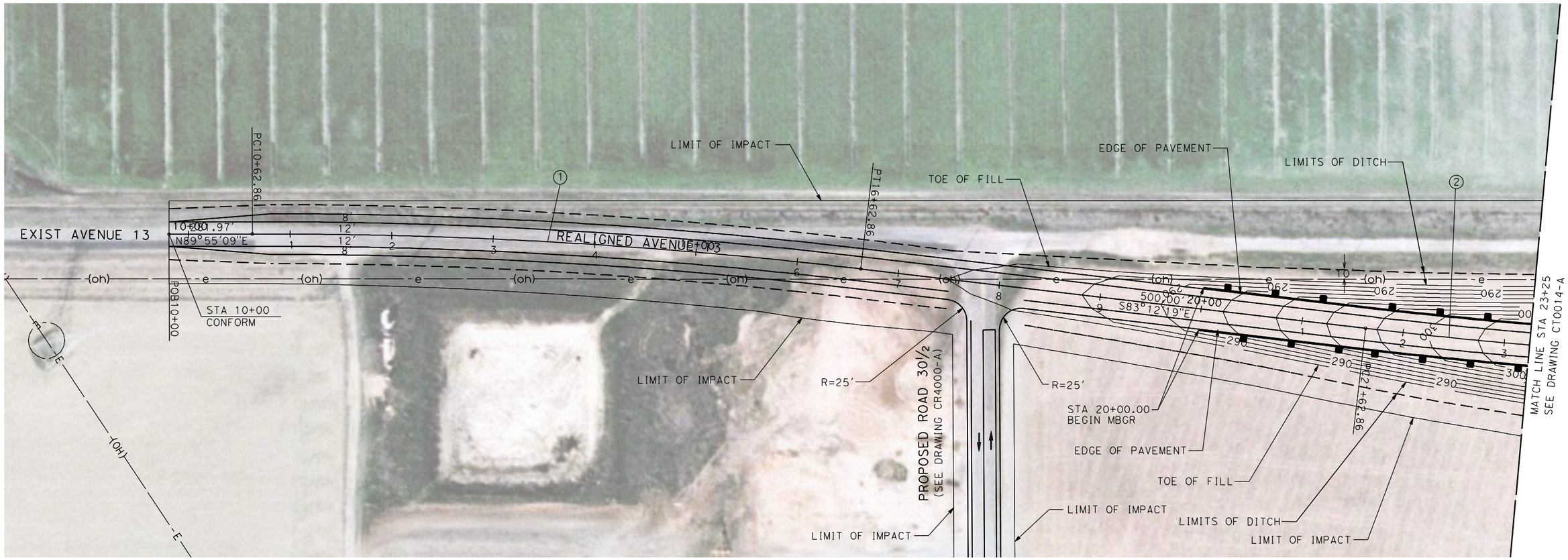
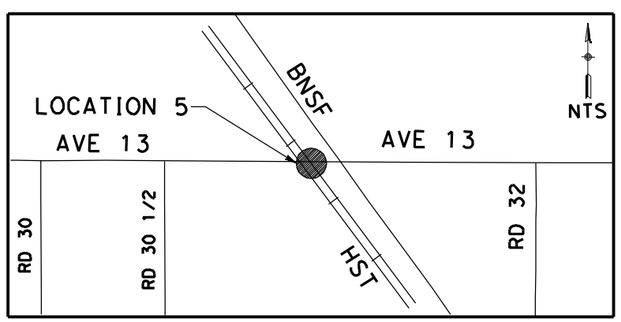
2	5000.00′	6°52′32″	300.36′	600.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 1 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0013-A
SCALE AS SHOWN
SHEET NO. OF ###

2/16/2012 12:07:01 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\MF-CT-0013-A_REV2.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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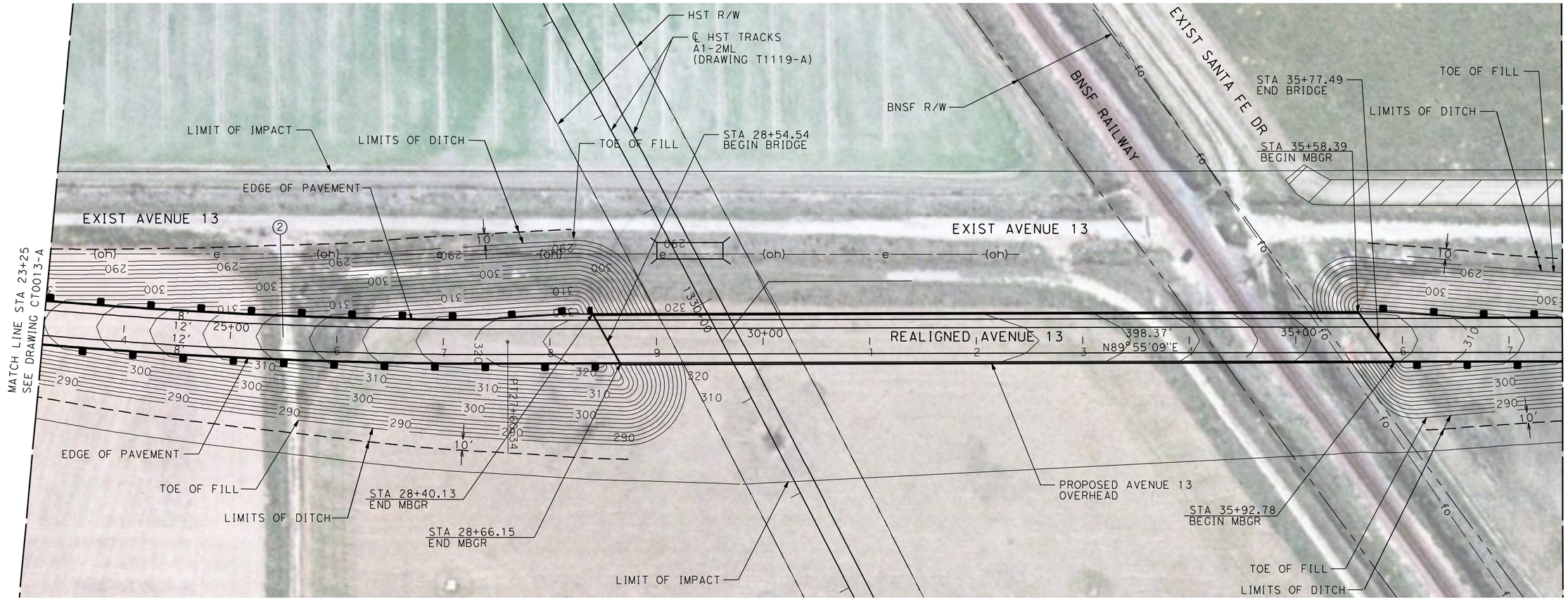

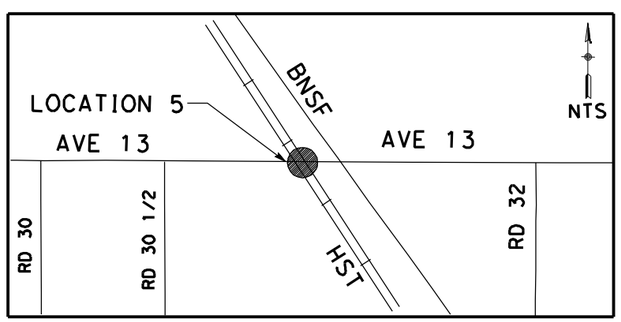

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 2 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0014-A
SCALE AS SHOWN
SHEET NO. OF ###

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GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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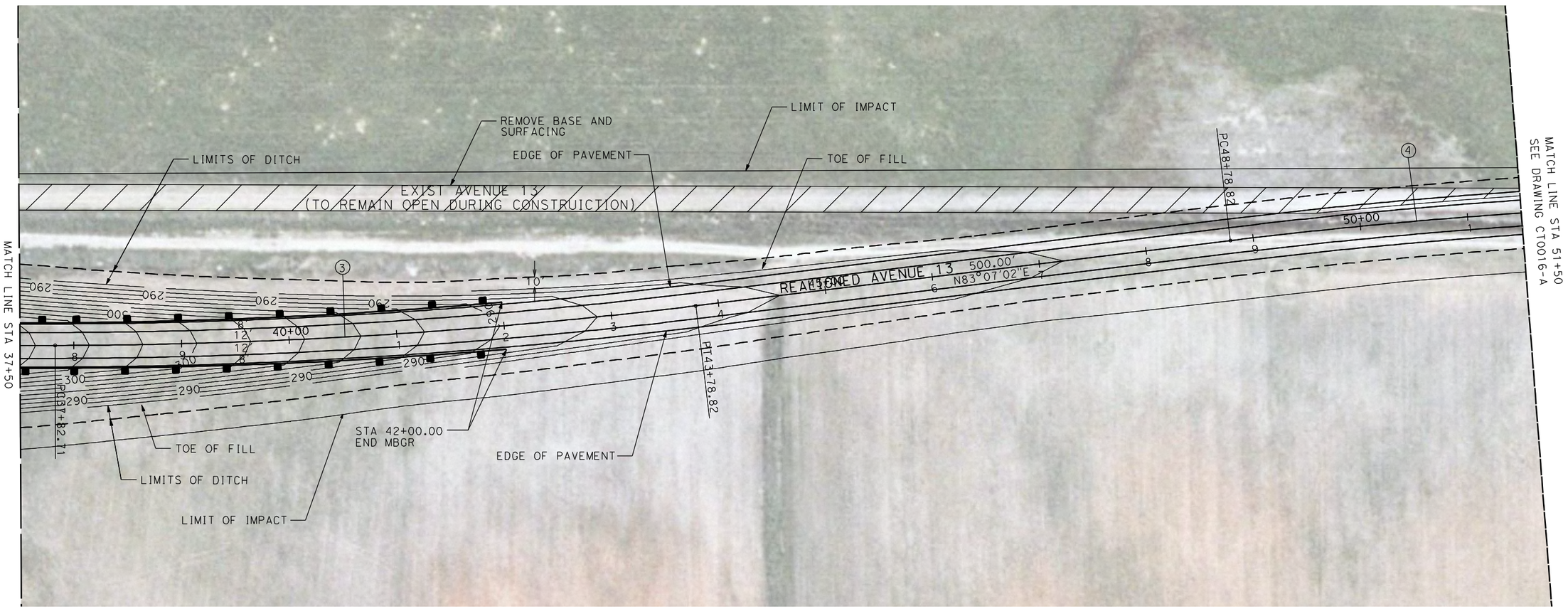
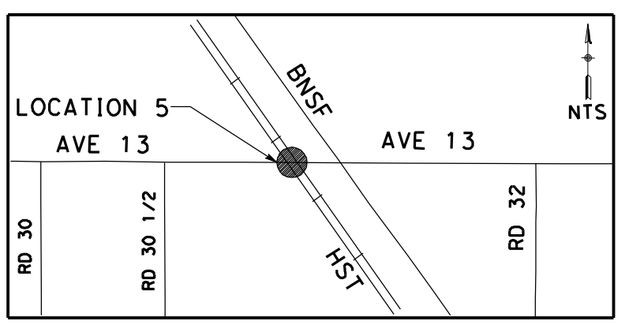
4	5000.00′	6°52′32″	300.36′	600.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1″=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 3 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0015-A
SCALE AS SHOWN
SHEET NO. OF ###

2/16/2012 12:07:49 PM I:\CHSR\60022962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\MF-CT-0015-A_REV2.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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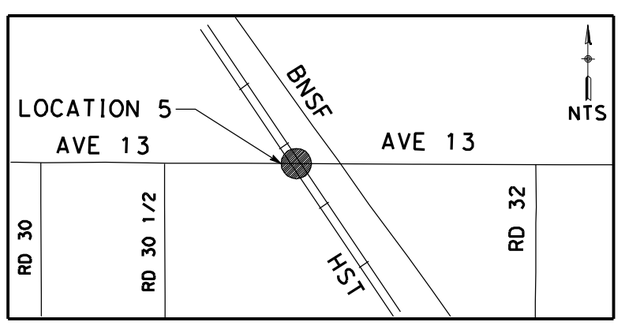


NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.

50 0 50 100
1″=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

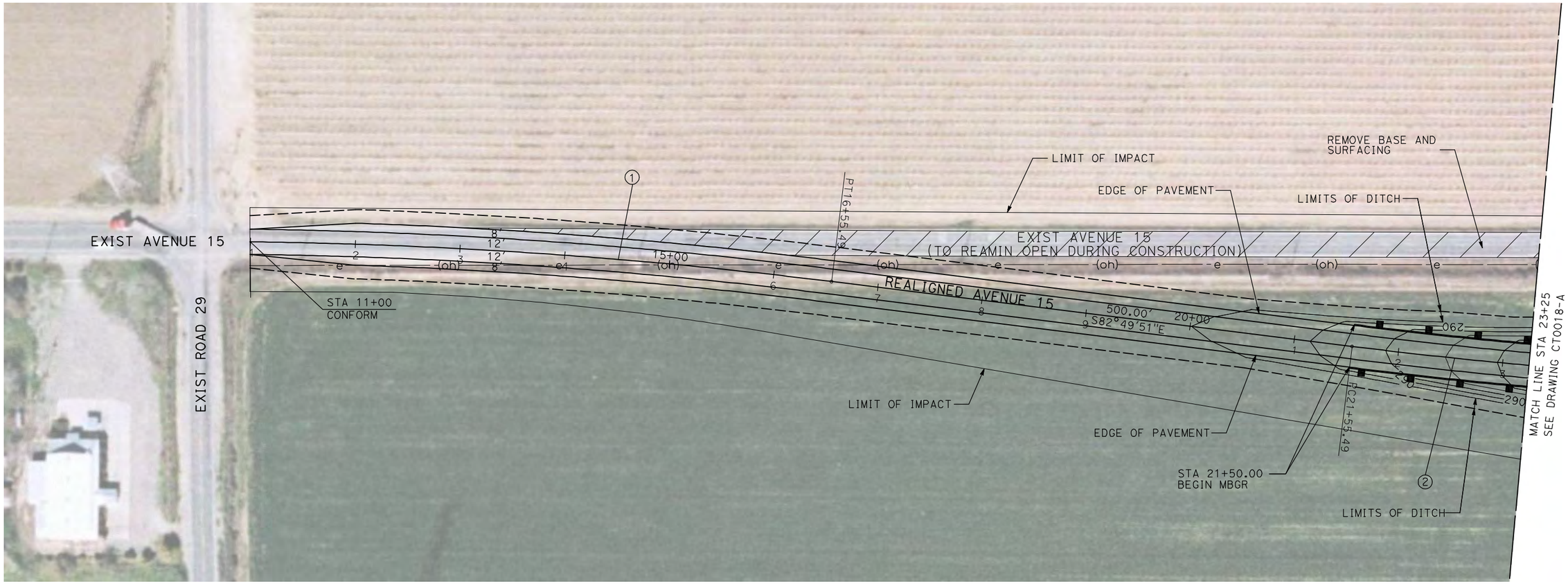
GRADE SEPARATION - AVENUE 13
LAYOUT
SHEET 4 OF 4

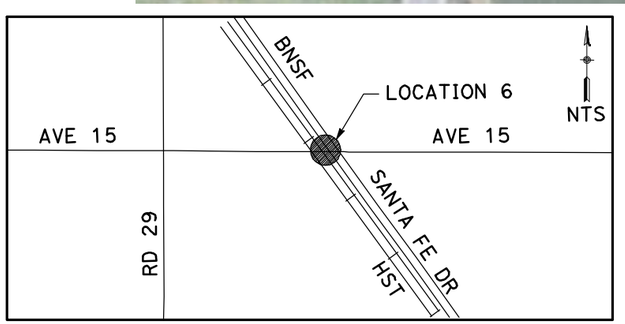
CONTRACT NO. HST06-007
DRAWING NO. CT0016-A
SCALE AS SHOWN
SHEET NO. OF ###

GibsonR1 2/16/2012 12:08:14 PM I:\CHSR\6002962\Task-03_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\MF-CT-0016-A_REV2.dgn

CURVE DATA

NO.	R	Δ	T	L	V
1	5000.00′	6°52′32"	300.36′	600.00′	45 MPH
2	5000.00′	6°52′32"	300.36′	600.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A THROUGH CT1017-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

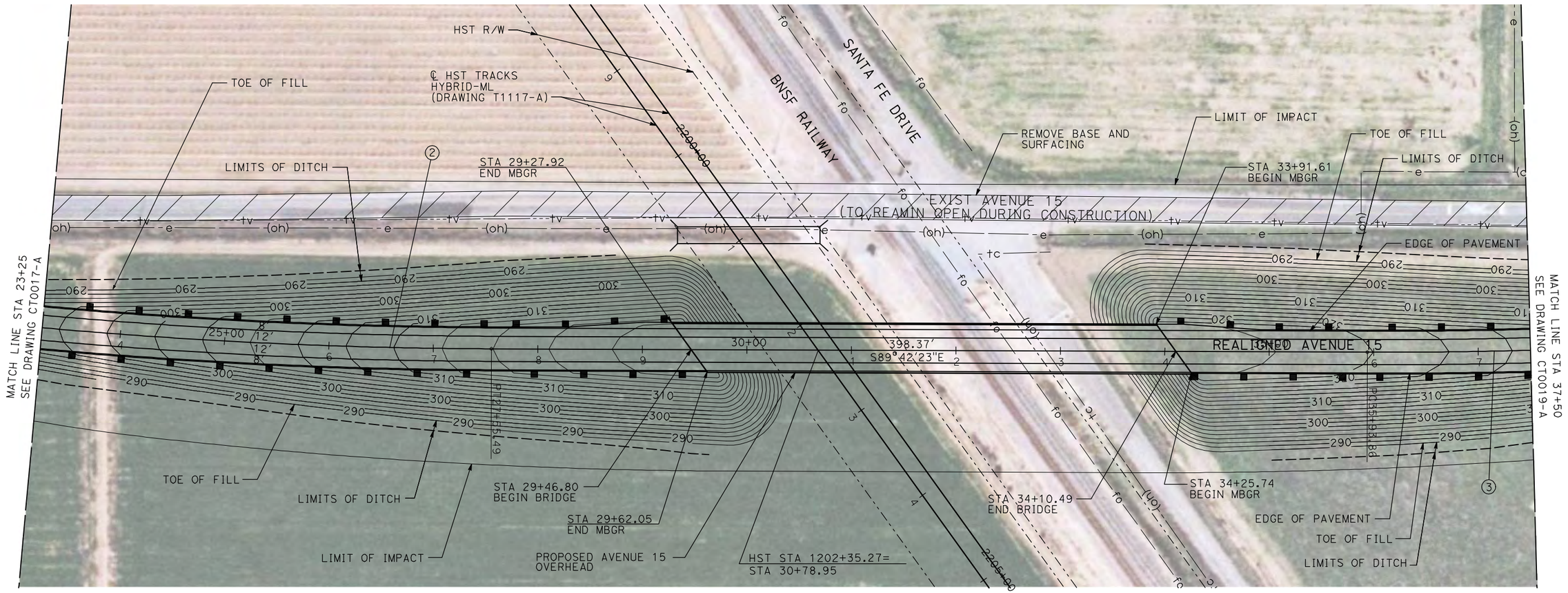
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15
LAYOUT
SHEET 1 OF 3

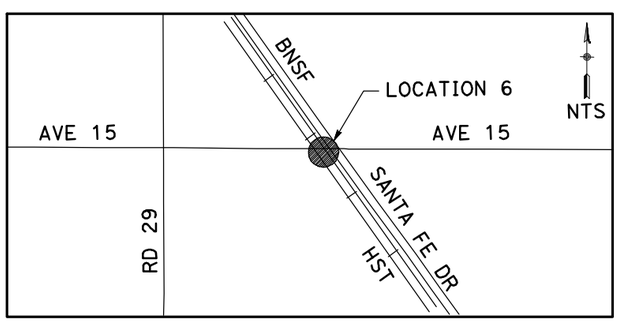
CONTRACT NO. HST06-007
DRAWING NO. CT0017-A
SCALE AS SHOWN
SHEET NO. OF ###

5/1/2011 1:34:28 PM I:\chsr\60022962\task-02_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 1 - Hybrid Grade Separation\Layout\MF-CT-0017-A.dgn
GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
2	5000.00′	6°52′32"	300.36′	600.00′	45 MPH
3	5000.00′	6°52′32"	300.36′	600.00′	45 MPH





NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A THROUGH CT1017-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

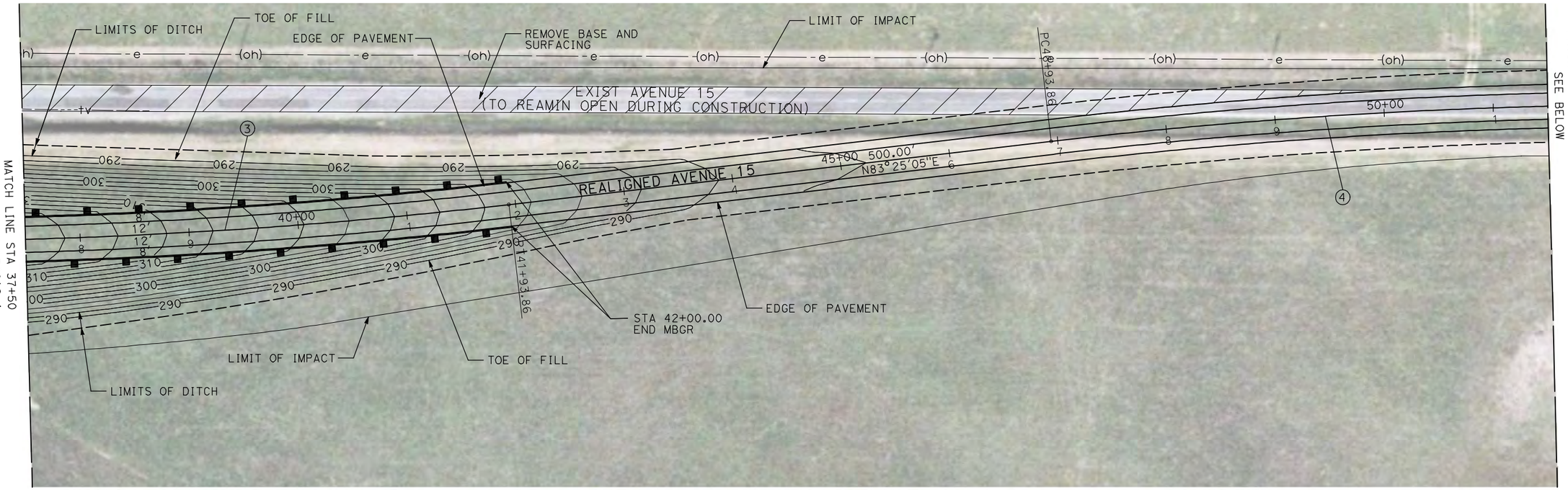
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0018-A
SCALE AS SHOWN
SHEET NO. OF ###

5/1/2011 1:34:34 PM I:\cnsr\60022962\task-02_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 1 - Hybrid Grade Separation\Layout\MF-CT-0018-A.dgn
GibsonR1

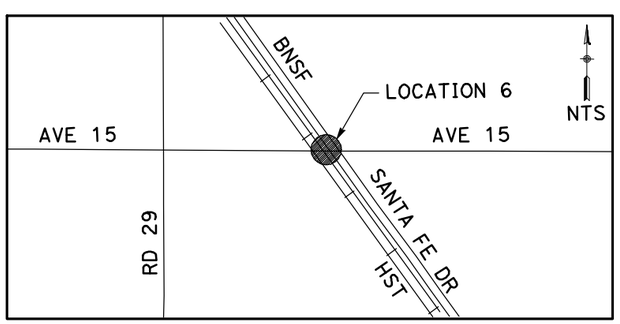
CURVE DATA

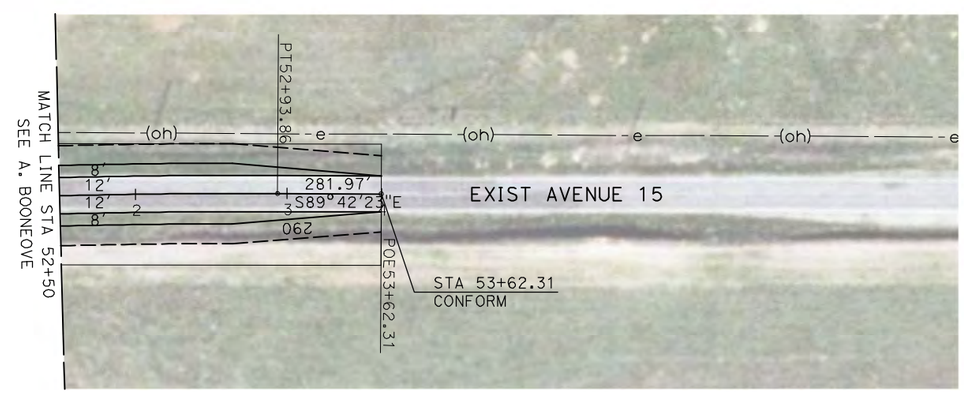
NO.	R	Δ	T	L	V
3	5000.00′	6°52′32"	300.36′	600.00′	45 MPH
4	5000.00′	6°52′32"	300.36′	600.00′	45 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A THROUGH CT1017-A.





50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0019-A
SCALE AS SHOWN
SHEET NO. OF ###

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CURVE DATA

NO.	R	Δ	T	L	V
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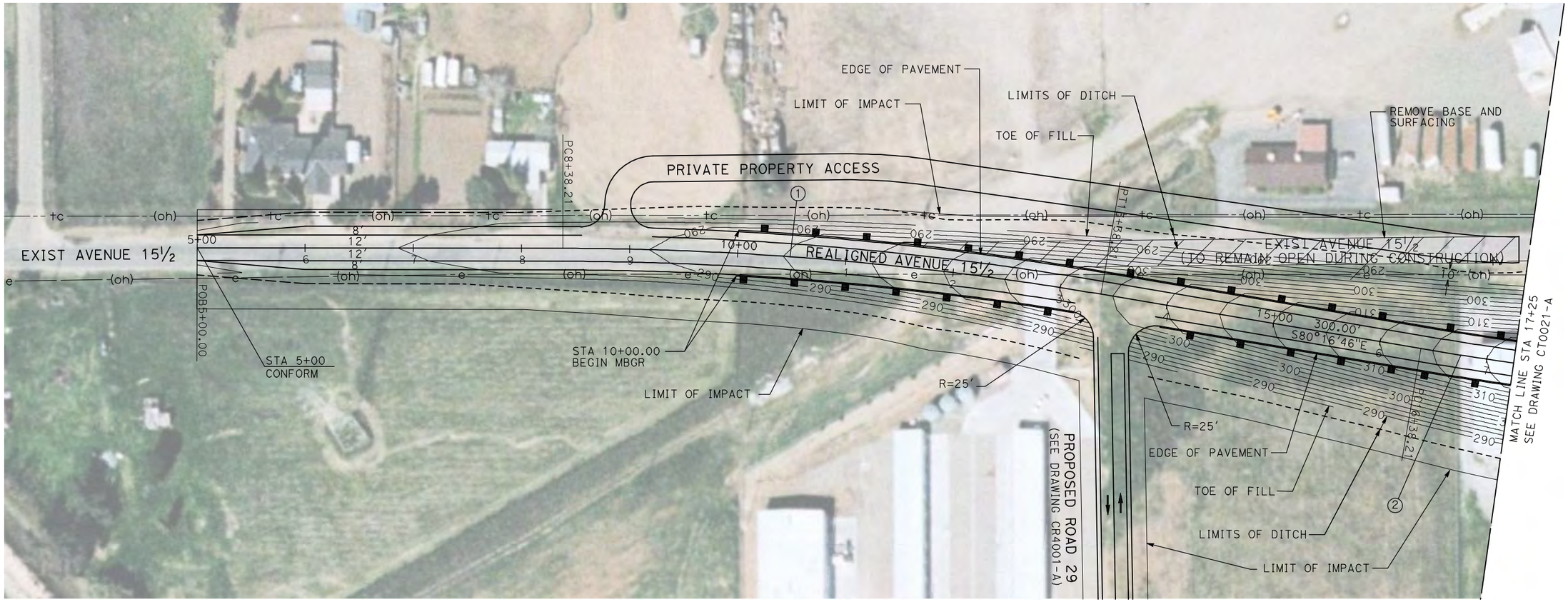

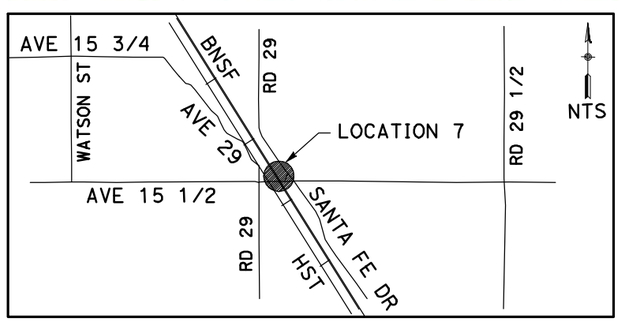

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0020-A
SCALE AS SHOWN
SHEET NO. OF ###

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GibsonR1

CURVE DATA

NO.	R	Δ	T	L	V
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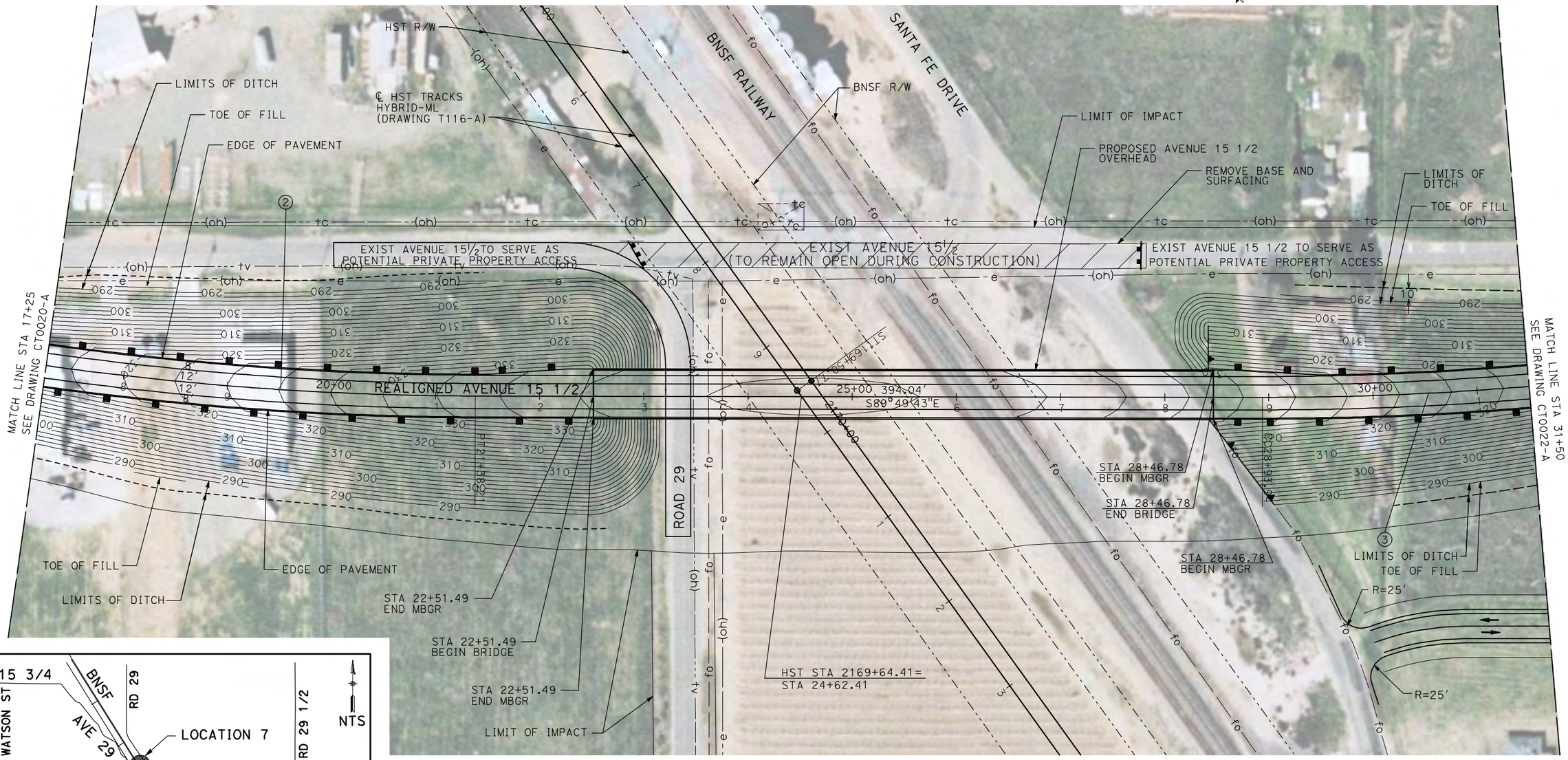

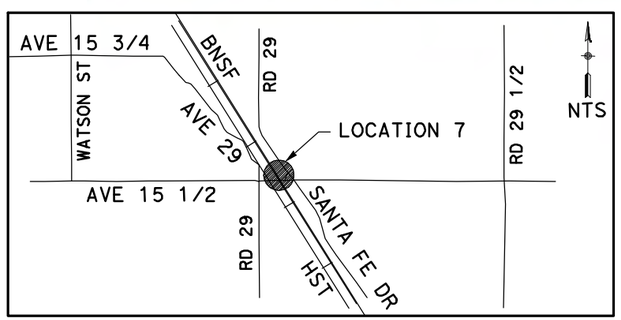

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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Sacramento, CA 95811
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0021-A
SCALE AS SHOWN
SHEET NO. OF ###

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CURVE DATA

NO.	R	Δ	T	L	V
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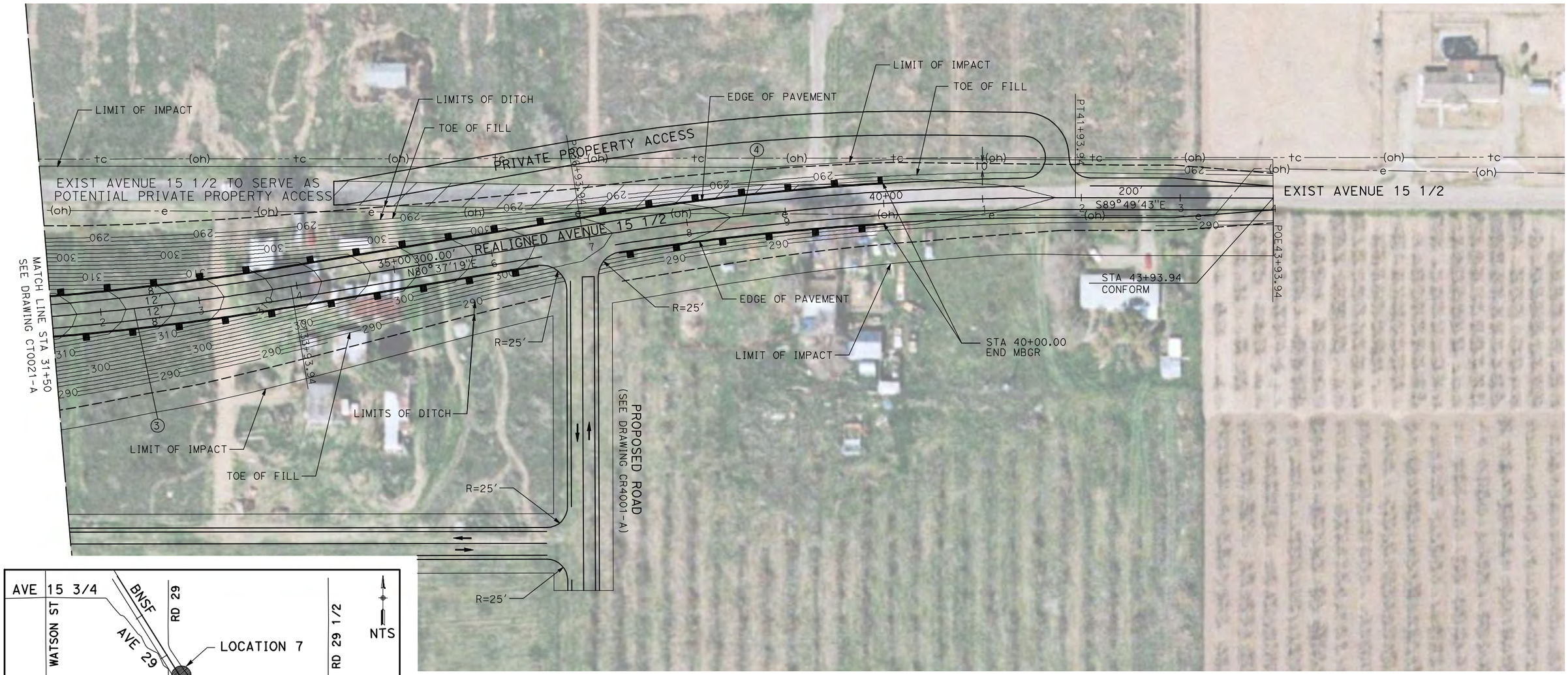

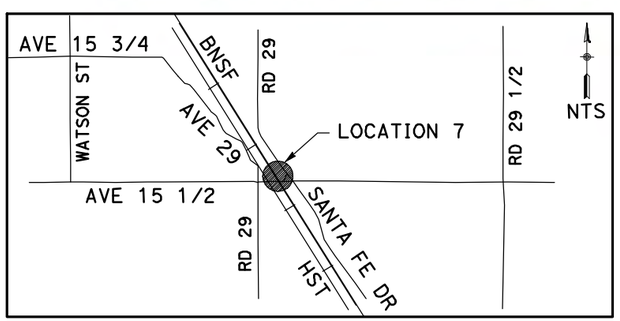

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0022-A
SCALE AS SHOWN
SHEET NO. OF ###

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CURVE DATA

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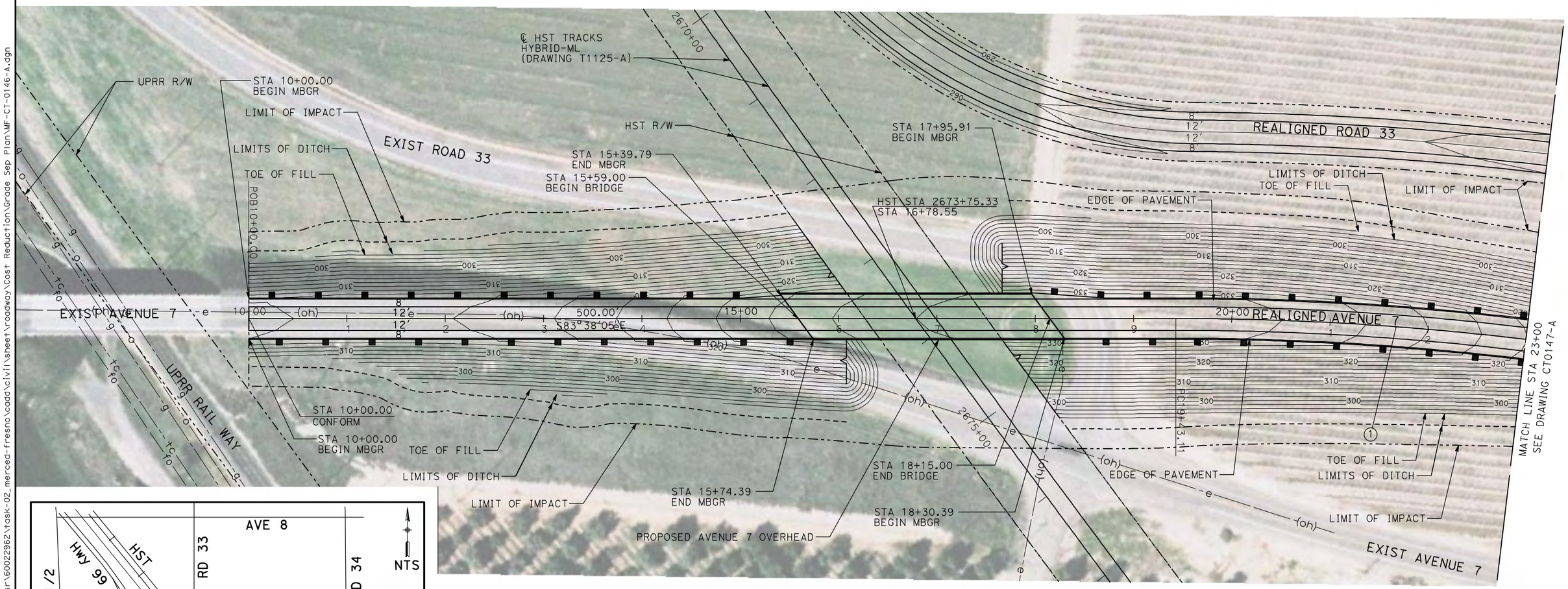

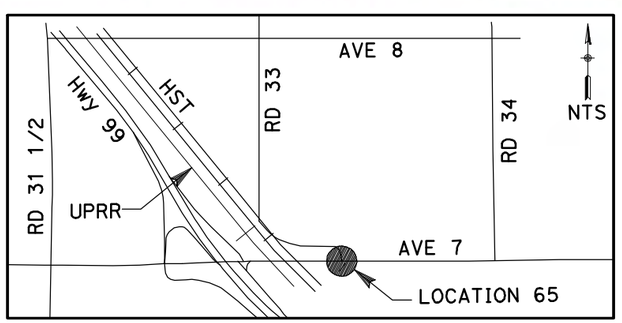

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 7
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0146-A
SCALE AS SHOWN
SHEET NO. OF ###

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CURVE DATA

NO.	R	Δ	T	L	V
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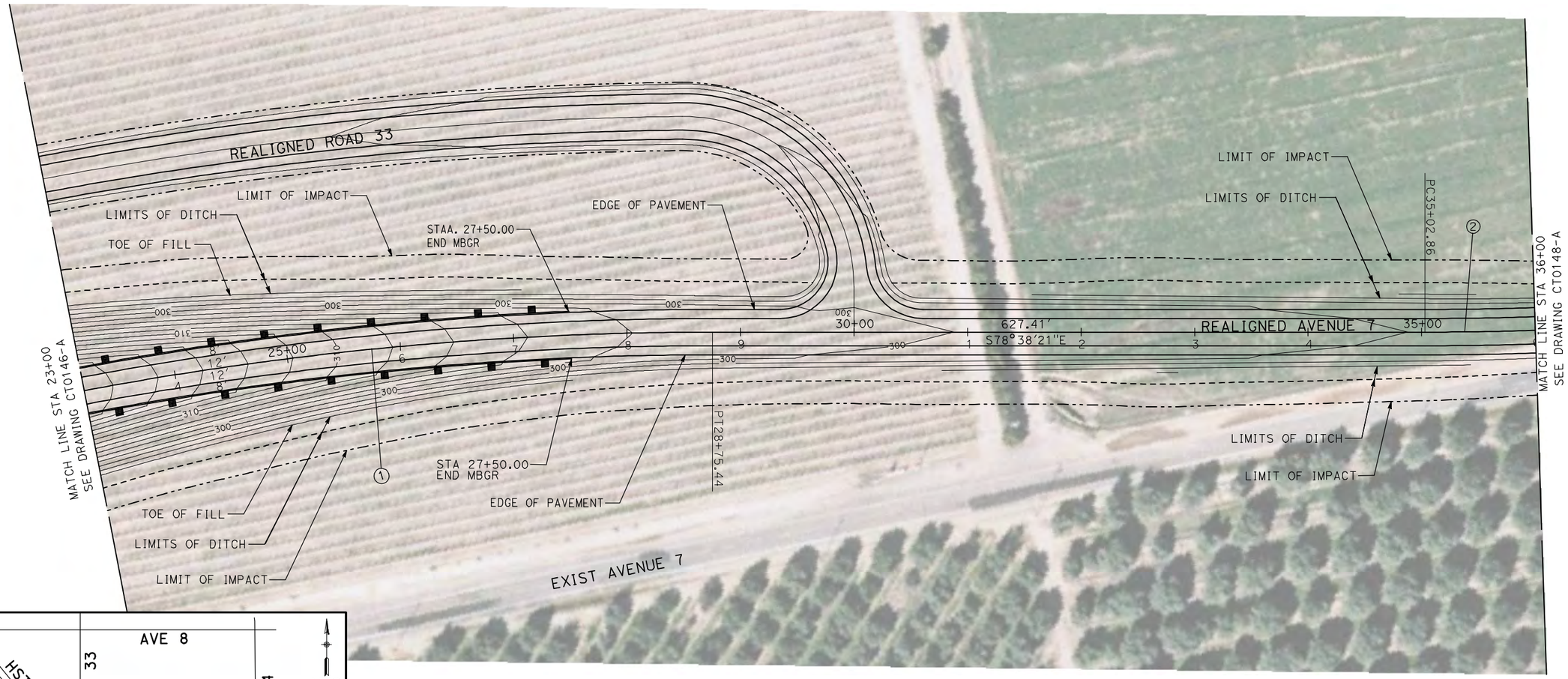

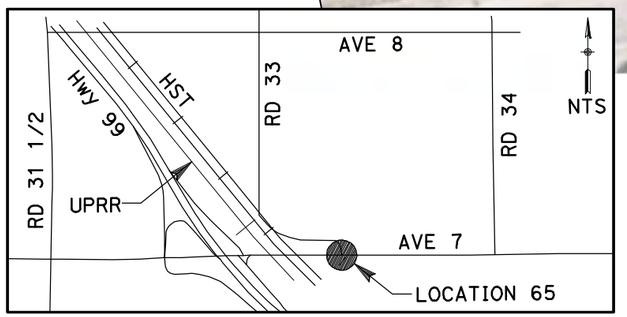

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 7
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0147-A
SCALE AS SHOWN
SHEET NO. OF ###

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CURVE DATA

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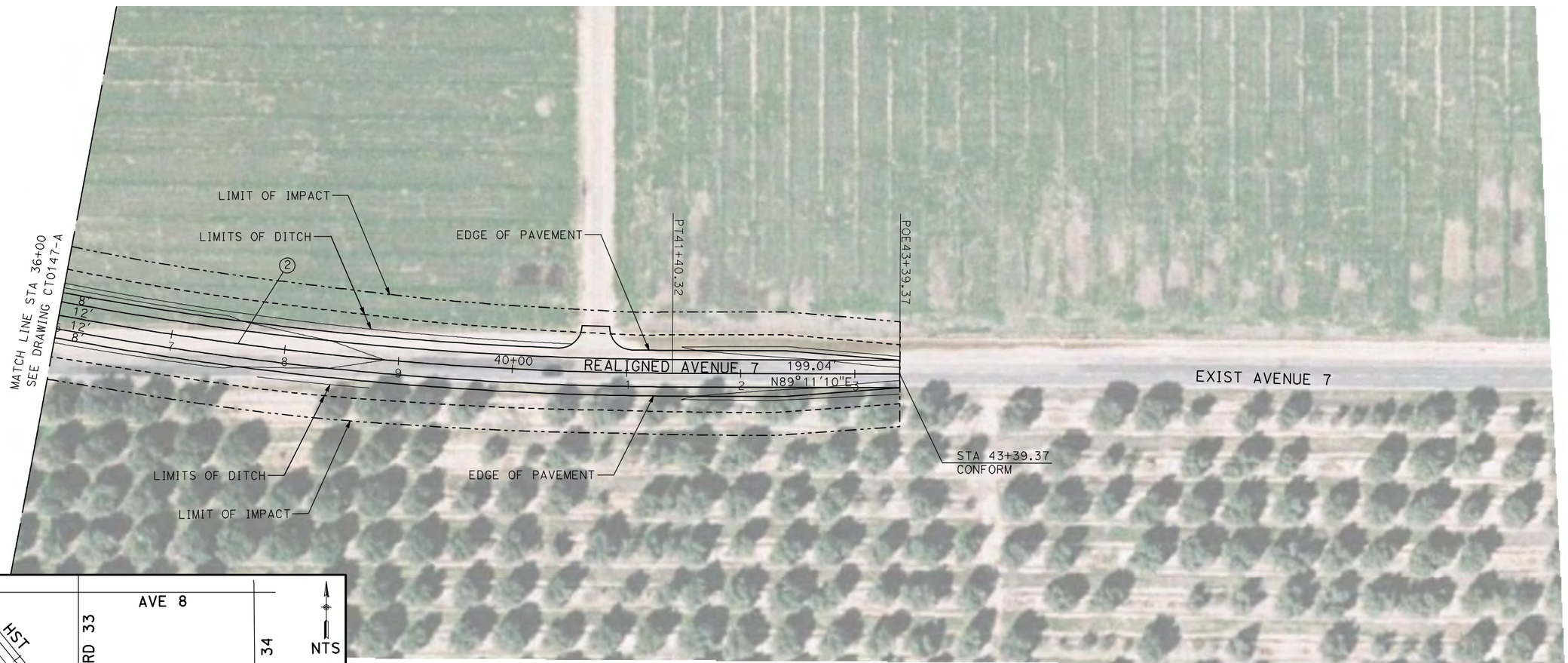

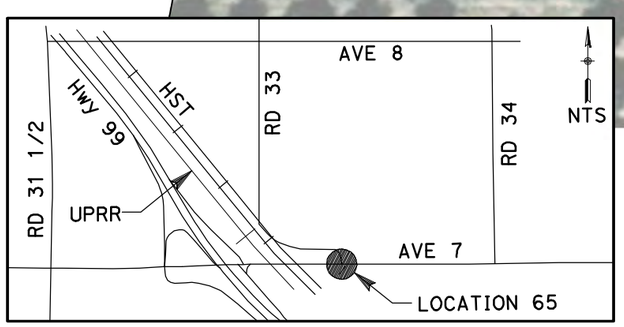

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.

50 0 50 100
1"=50′

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 7
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0148-A
SCALE AS SHOWN
SHEET NO. OF ###

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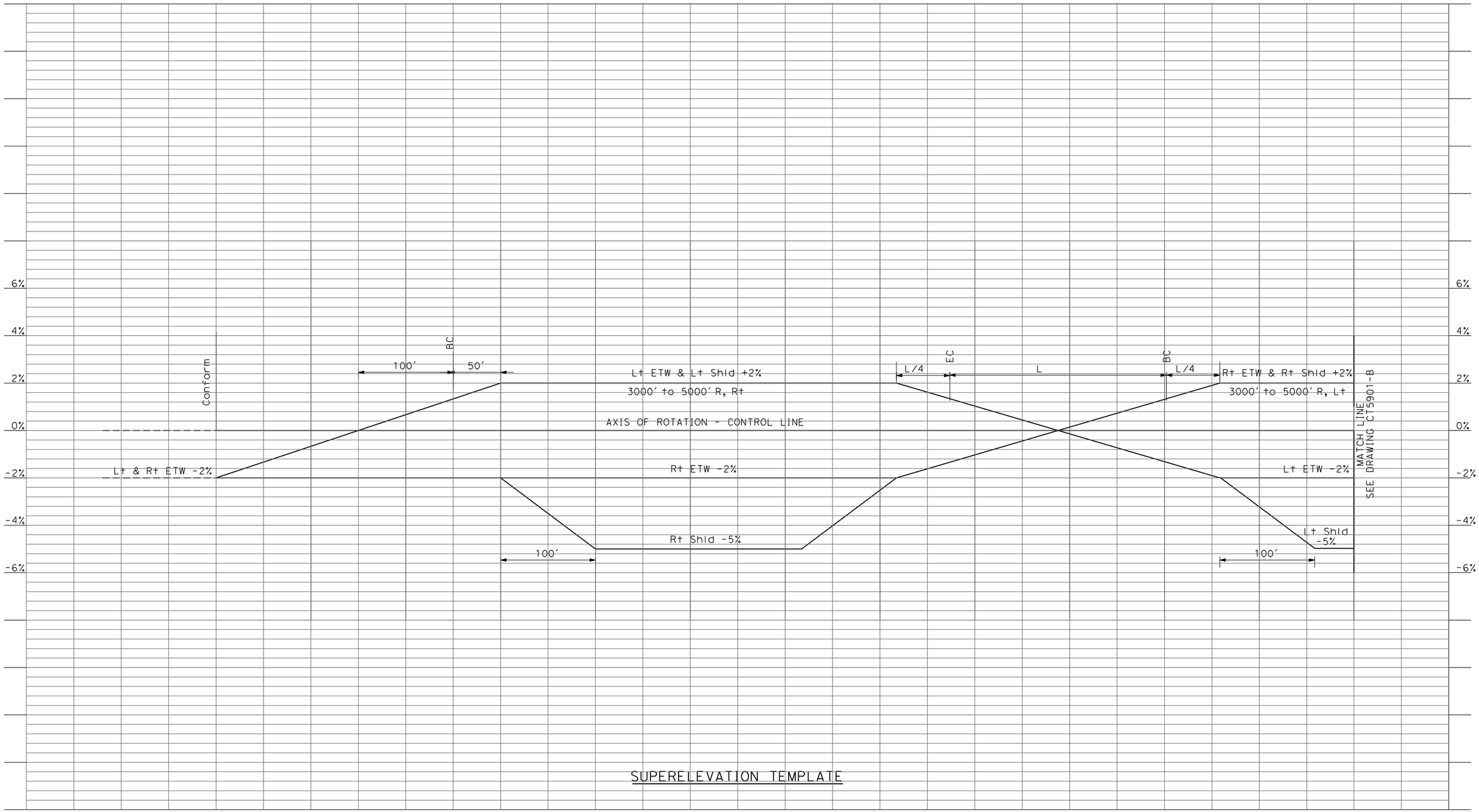

SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5900-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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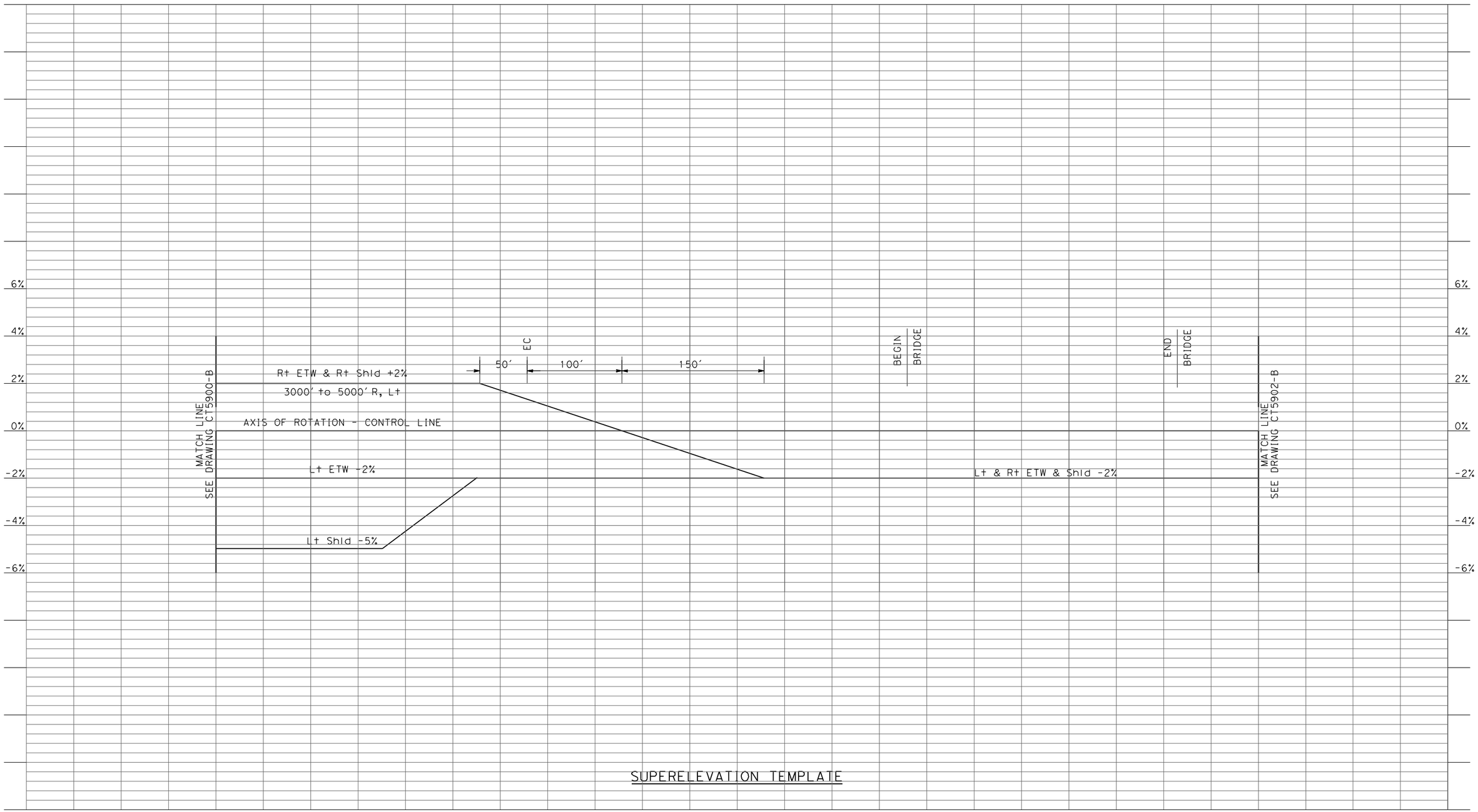
oyeled



SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5901-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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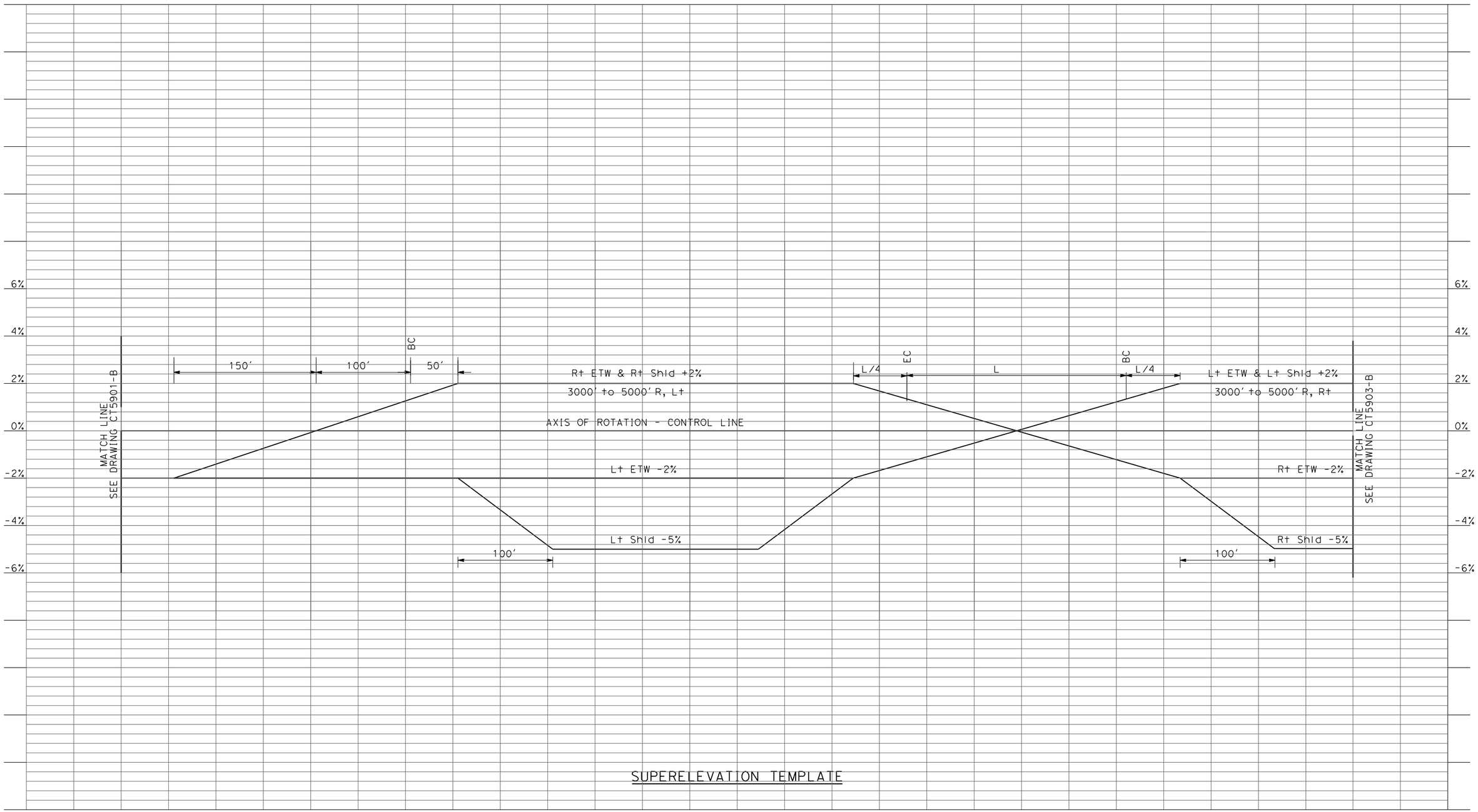
oyeled



SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5902-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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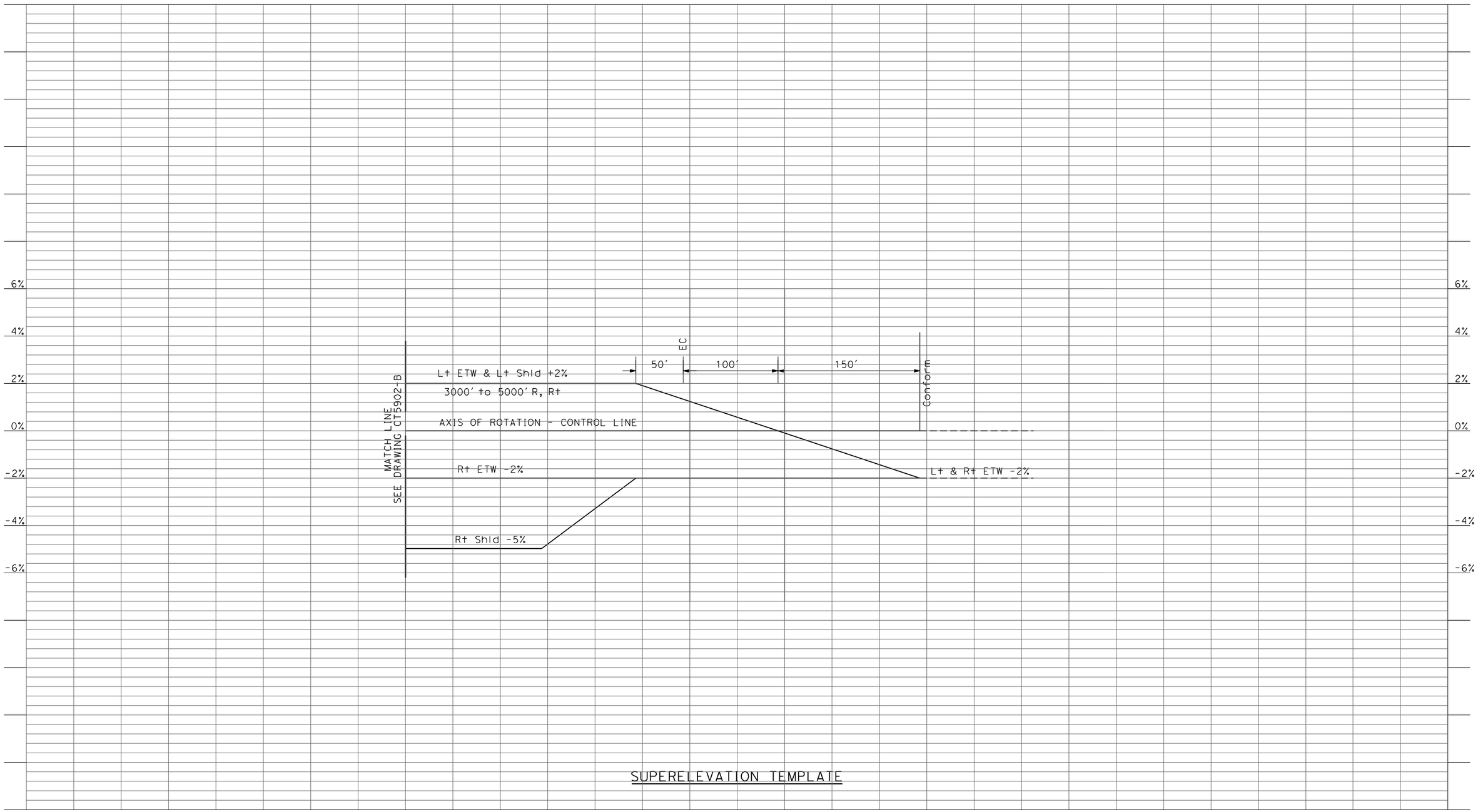
oyeled



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR99 - (HYBRID)
GRADE SEPARATION
SUPERELEVATION TEMPLATE
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5903-B
SCALE AS SHOWN
SHEET NO. ### OF ###

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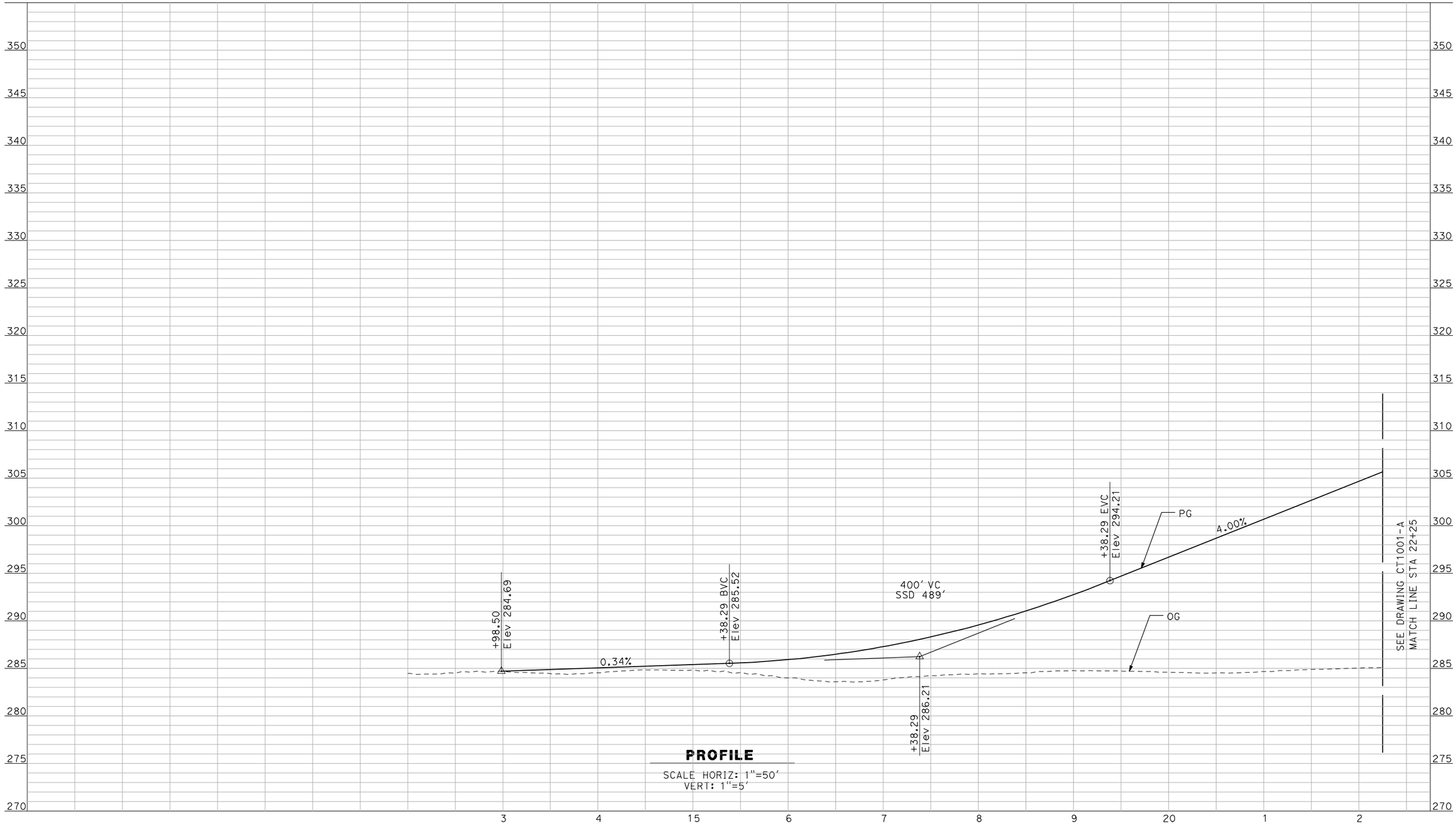

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 9
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1000-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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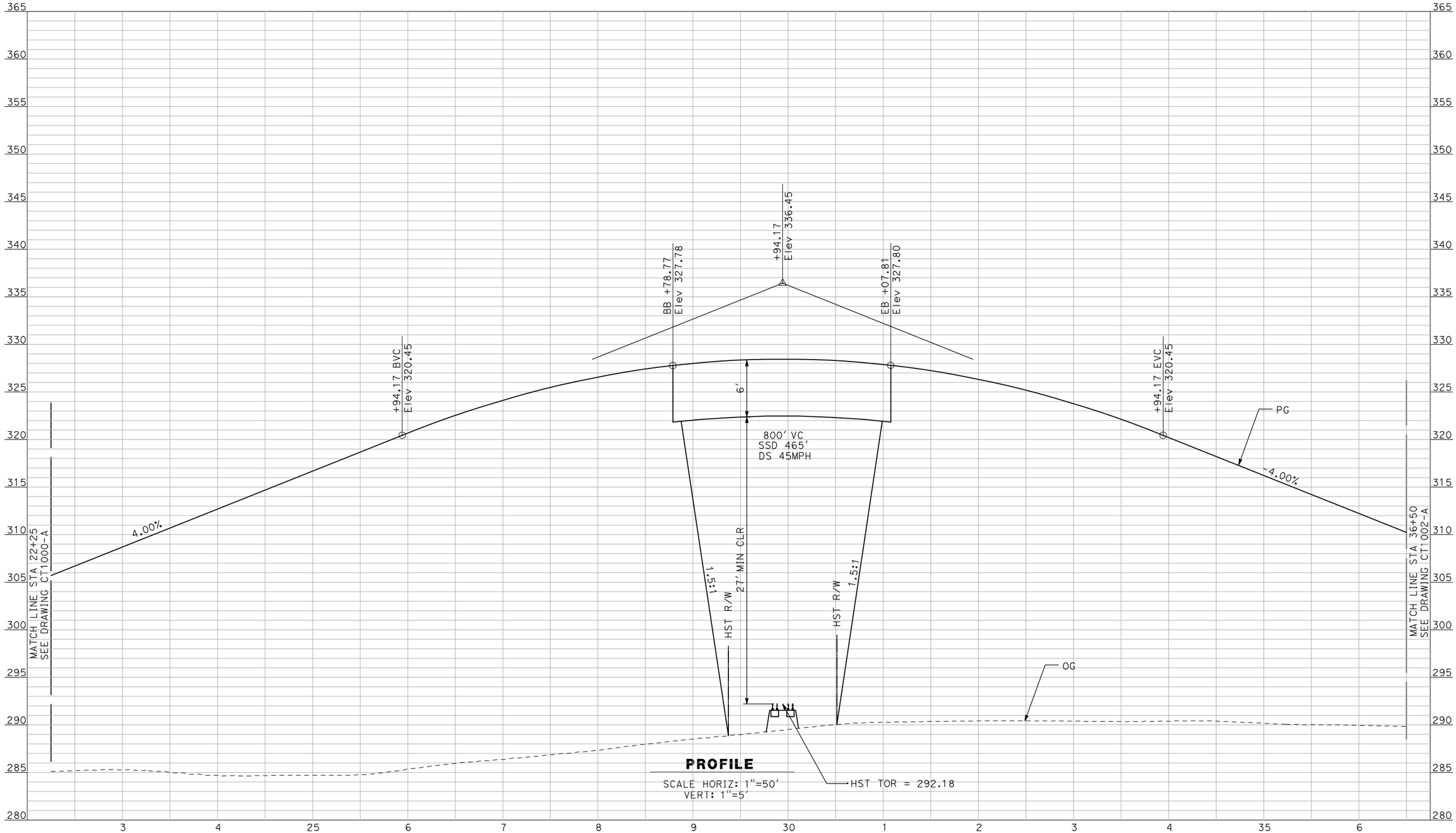

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 9
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1001-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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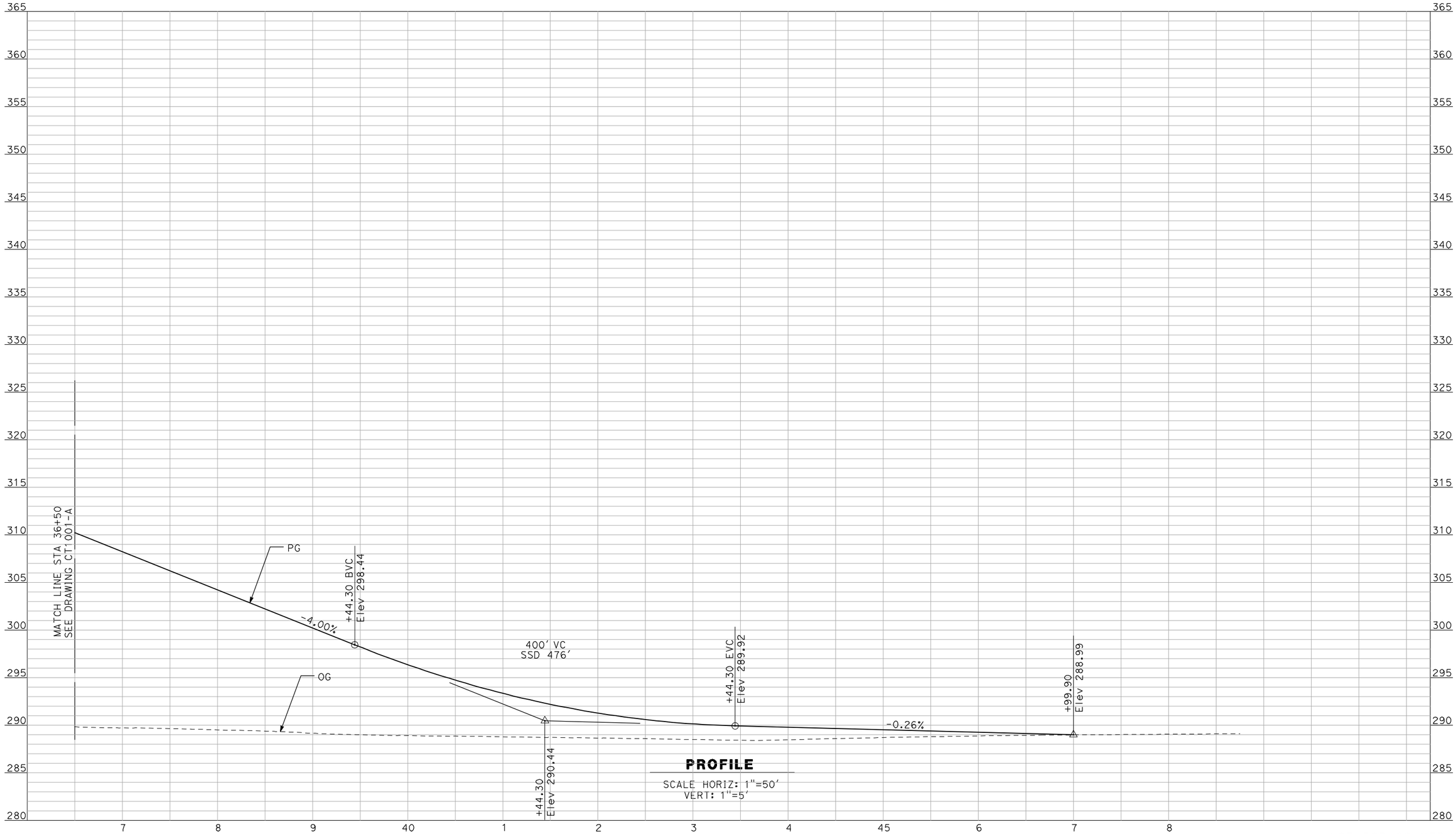

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 9
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1002-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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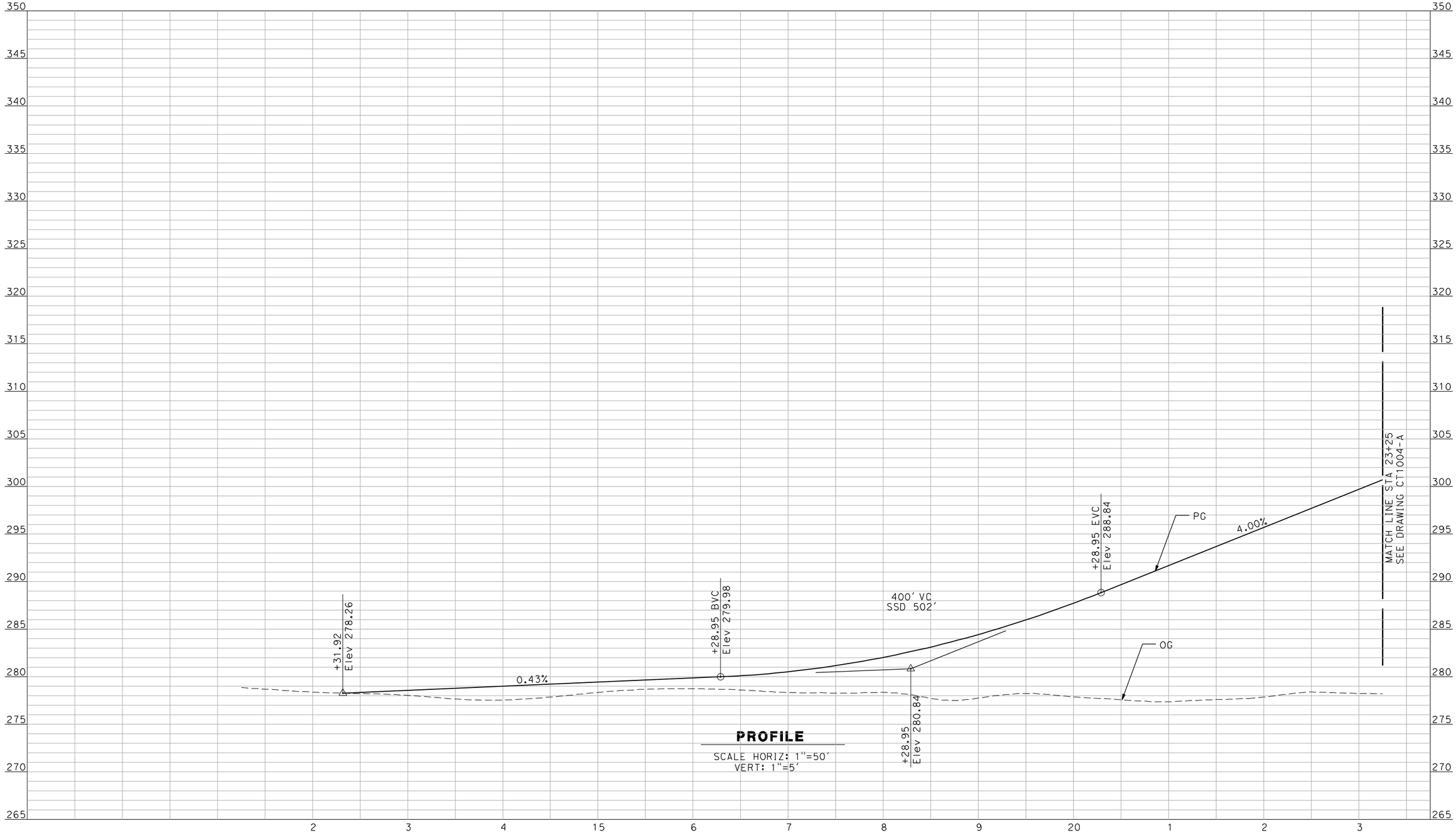

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
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SUBMITTAL

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CONSTRUCTION

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Sacramento, CA 95811

CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - AVENUE 10
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1003-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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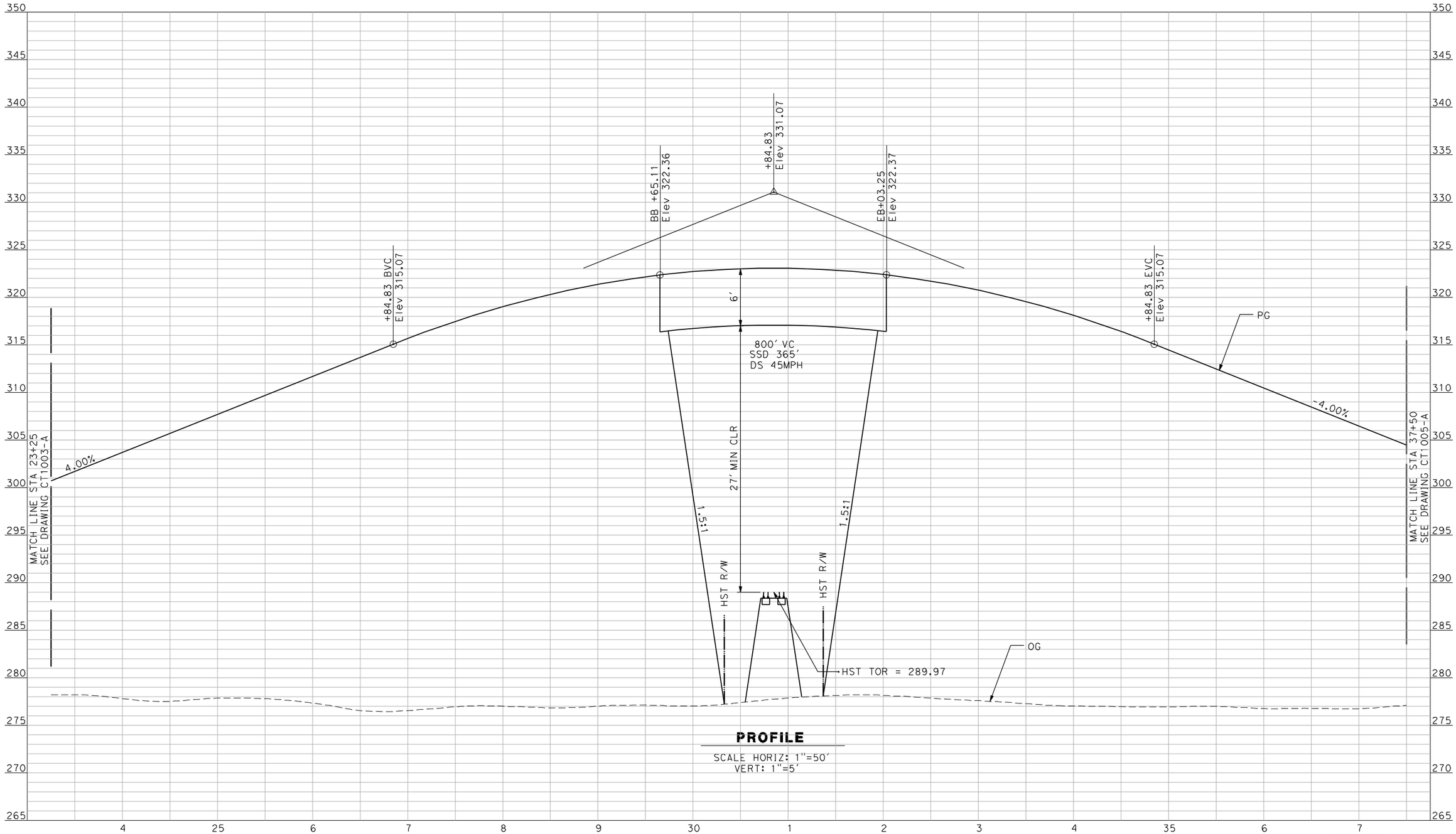

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
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2020 L Street, Suite 300
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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - AVENUE 10
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1004-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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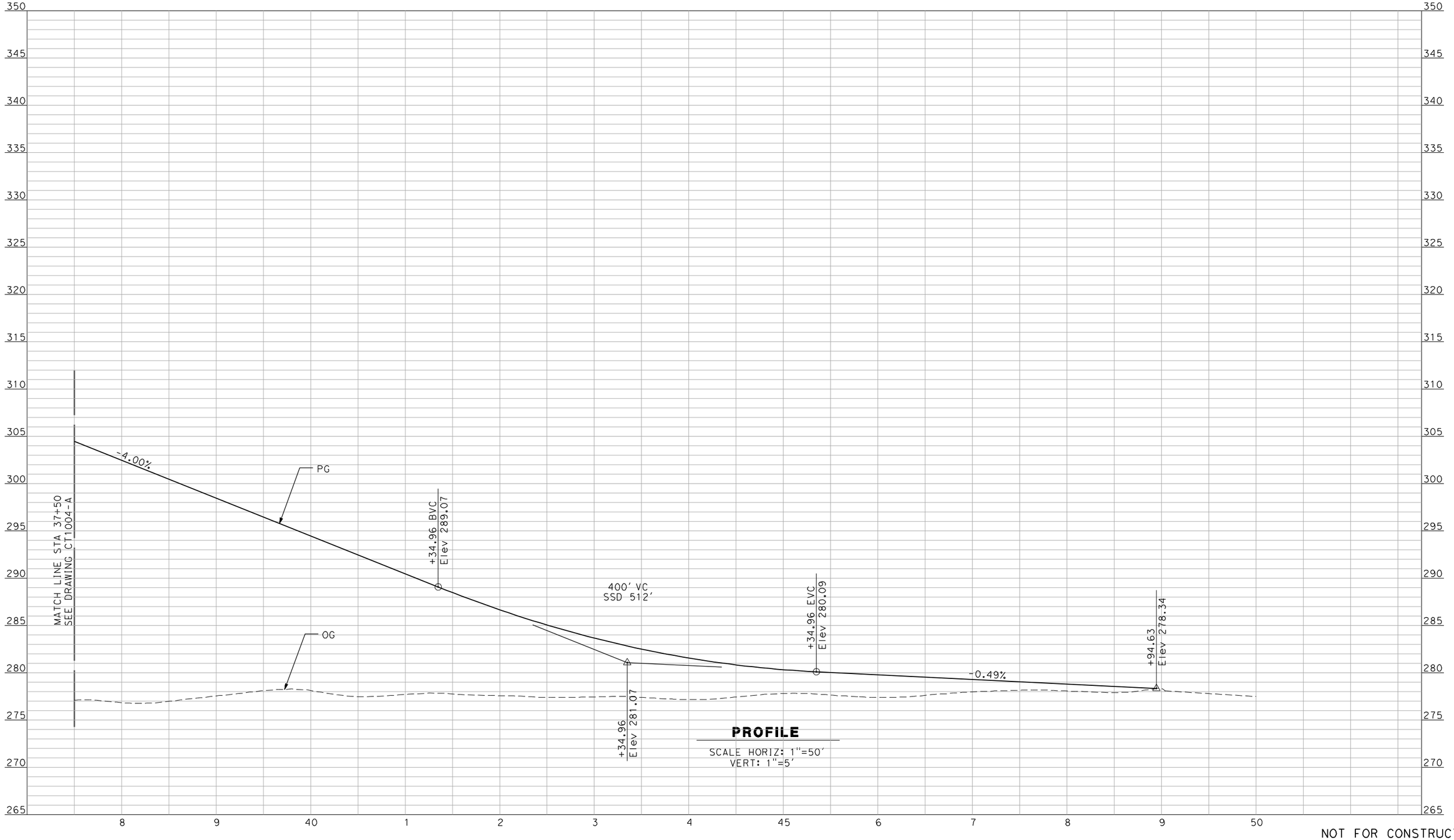
GibsonR1



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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DATE 02/17/2012

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BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - AVENUE 10
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1005-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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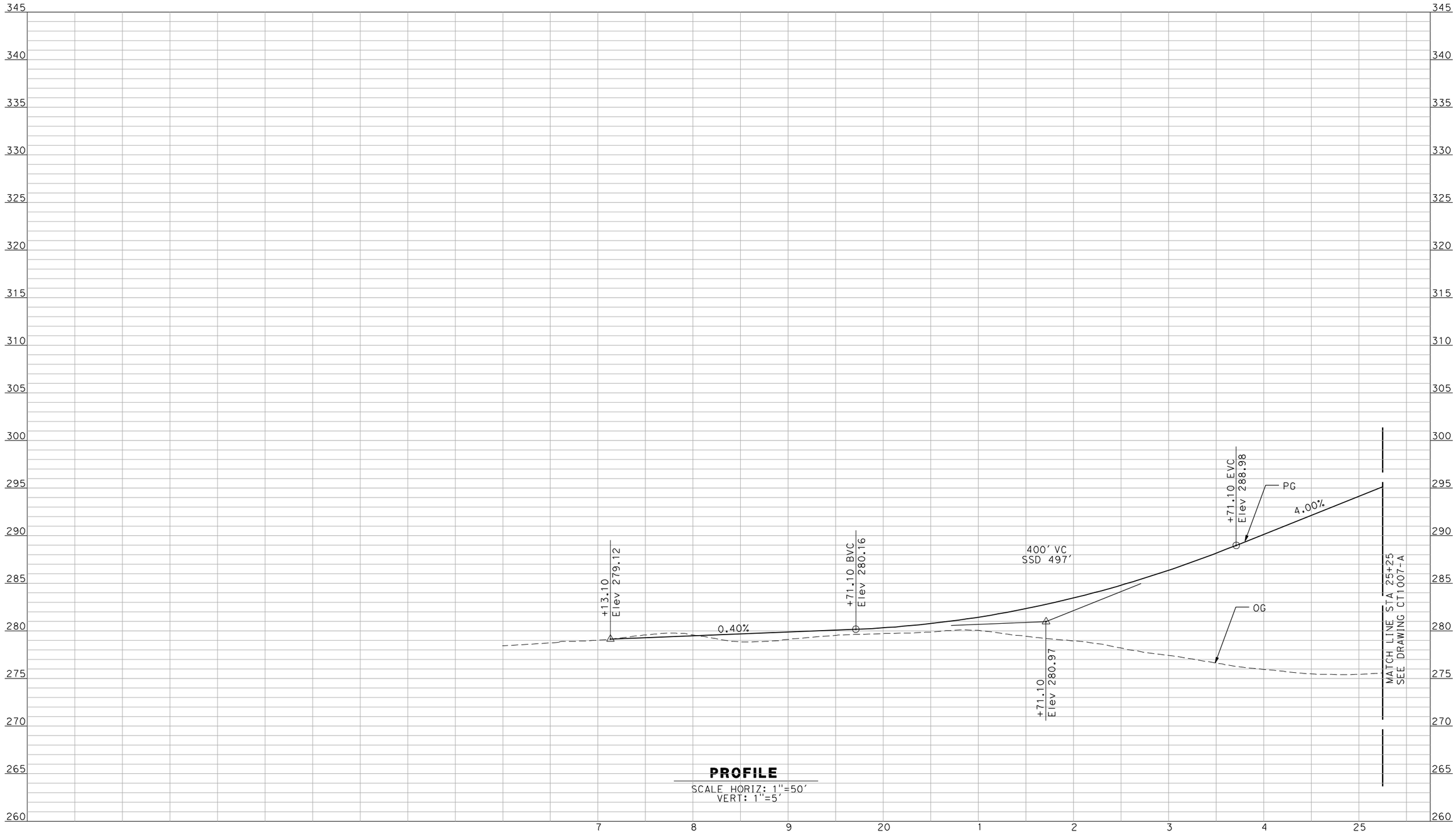

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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GRADE SEPARATION - AVENUE 11
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1006-A
SCALE AS SHOWN
SHEET NO. OF ###

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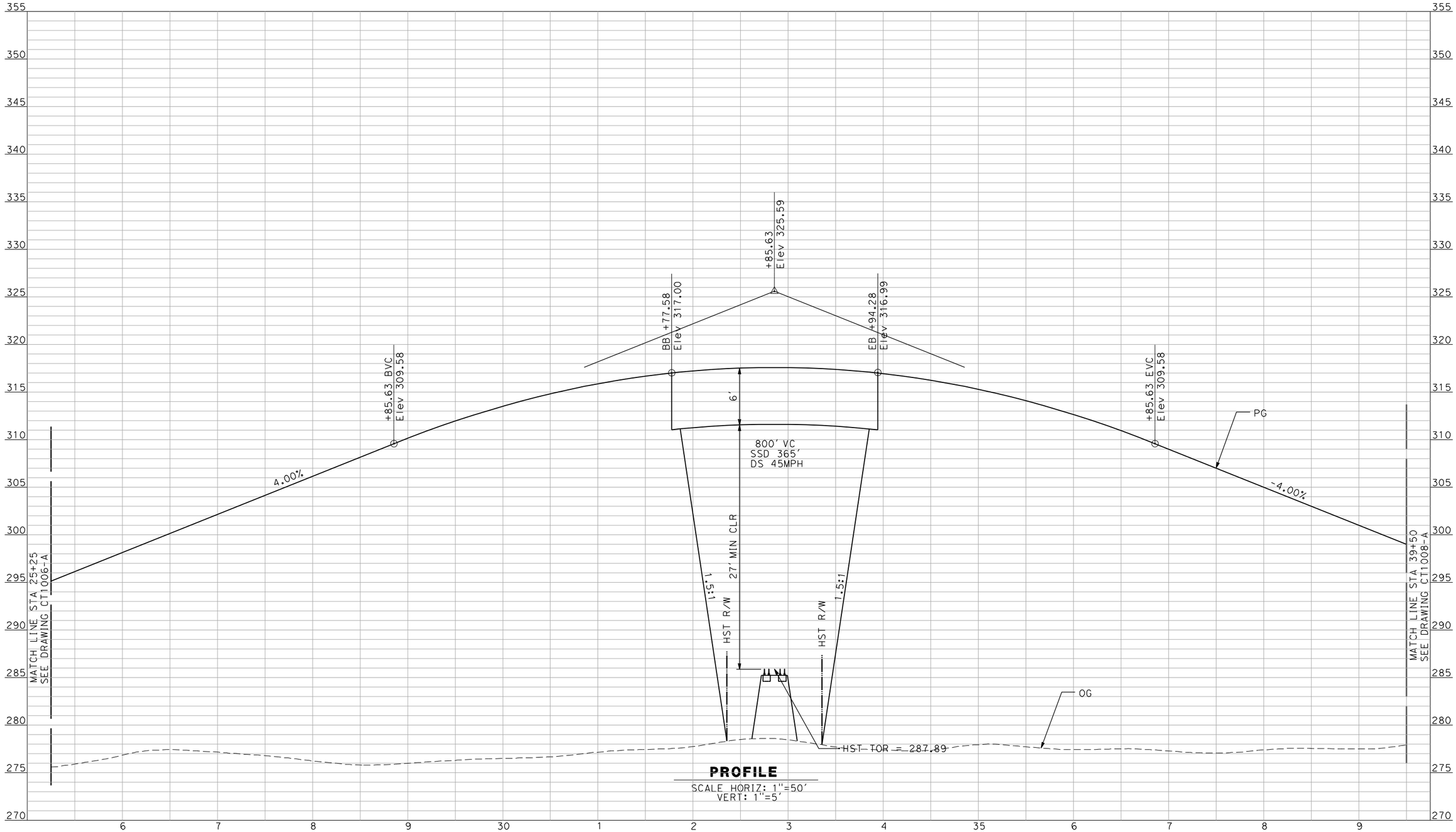

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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MERCED TO FRESNO

GRADE SEPARATION - AVENUE 11
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1007-A
SCALE AS SHOWN
SHEET NO. OF ###

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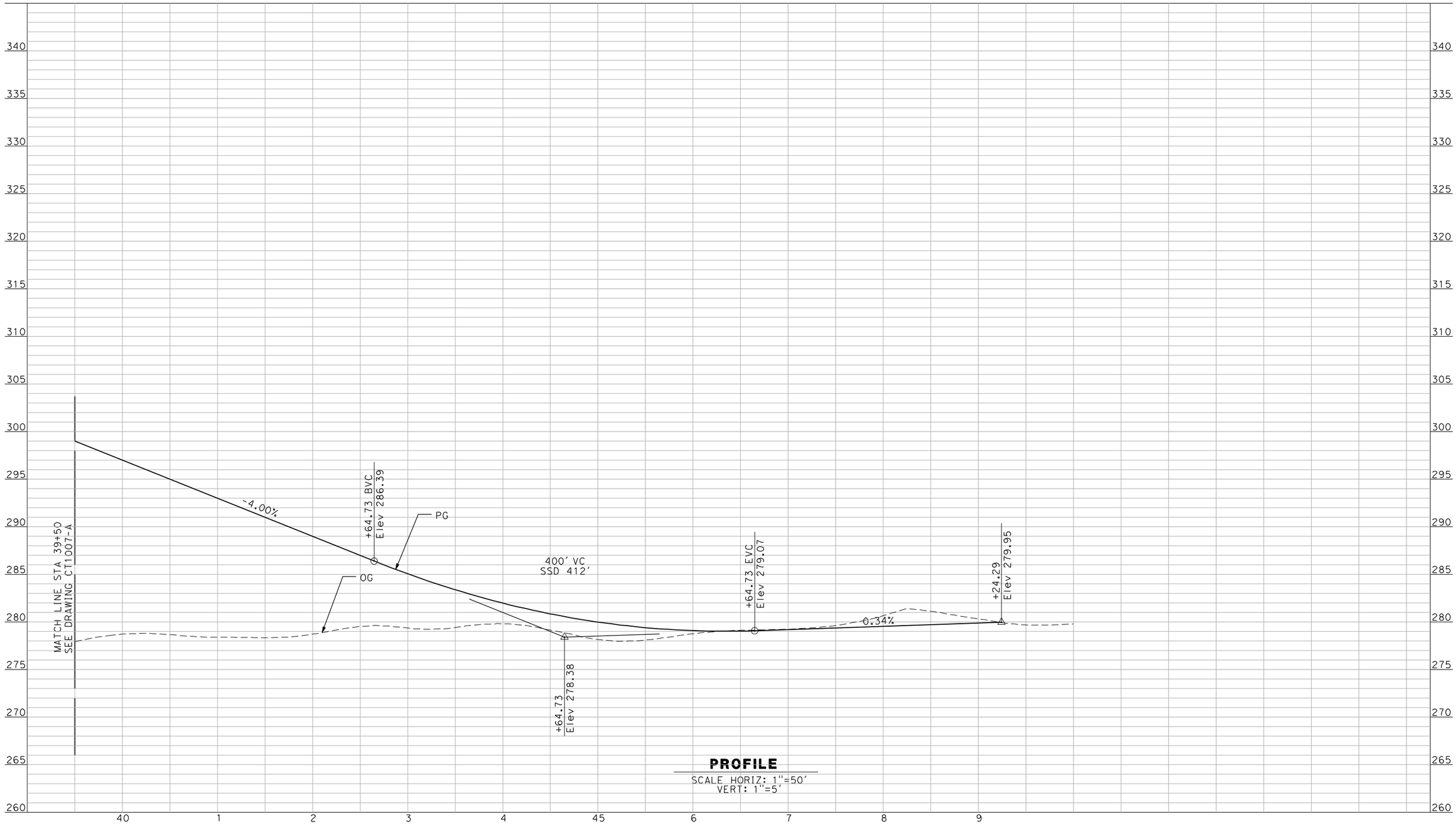
GibsonR1



PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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GRADE SEPARATION - AVENUE 11
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1008-A
SCALE AS SHOWN
SHEET NO. OF ###

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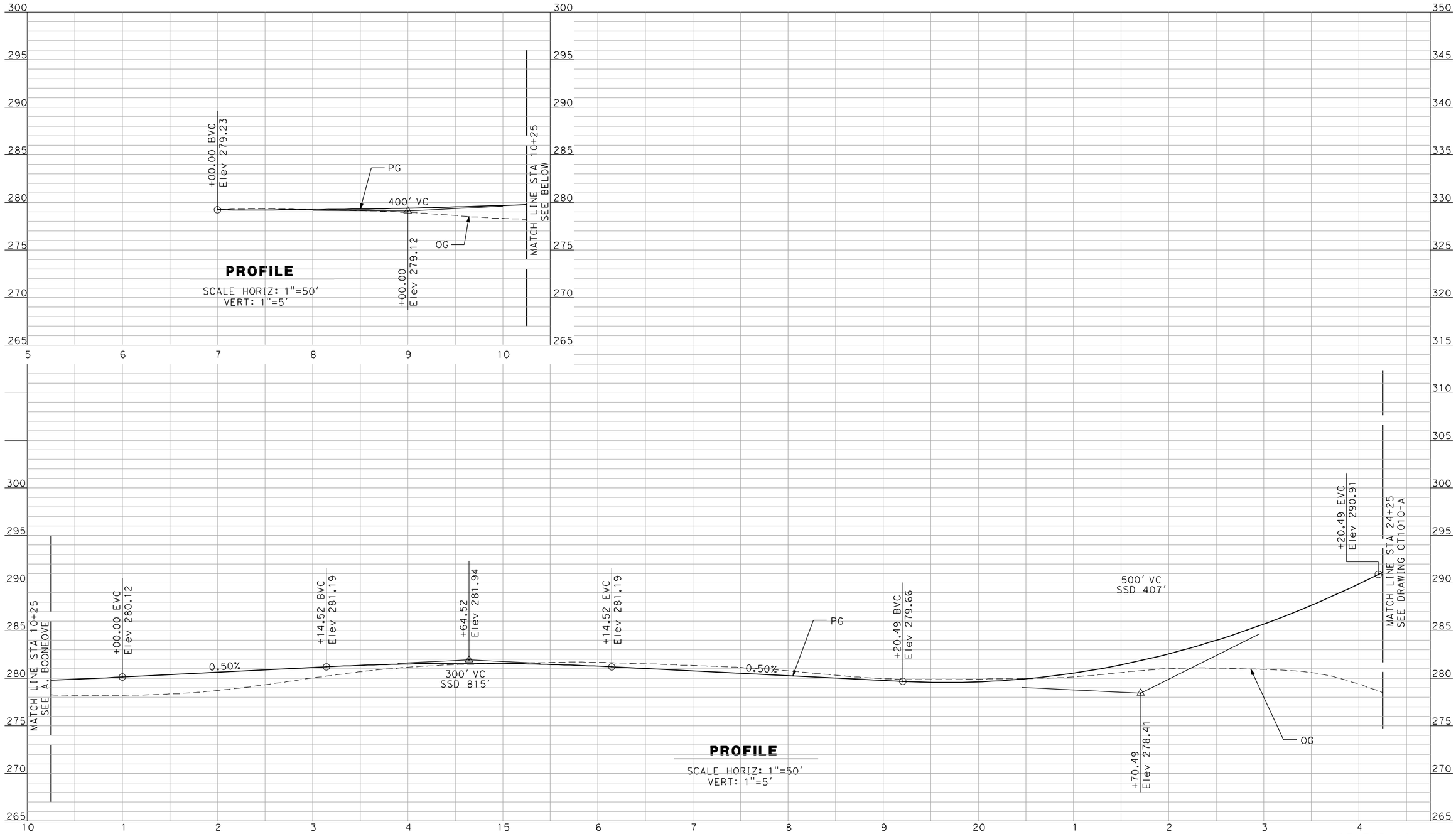

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 12
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1009-A
SCALE AS SHOWN
SHEET NO. OF ###

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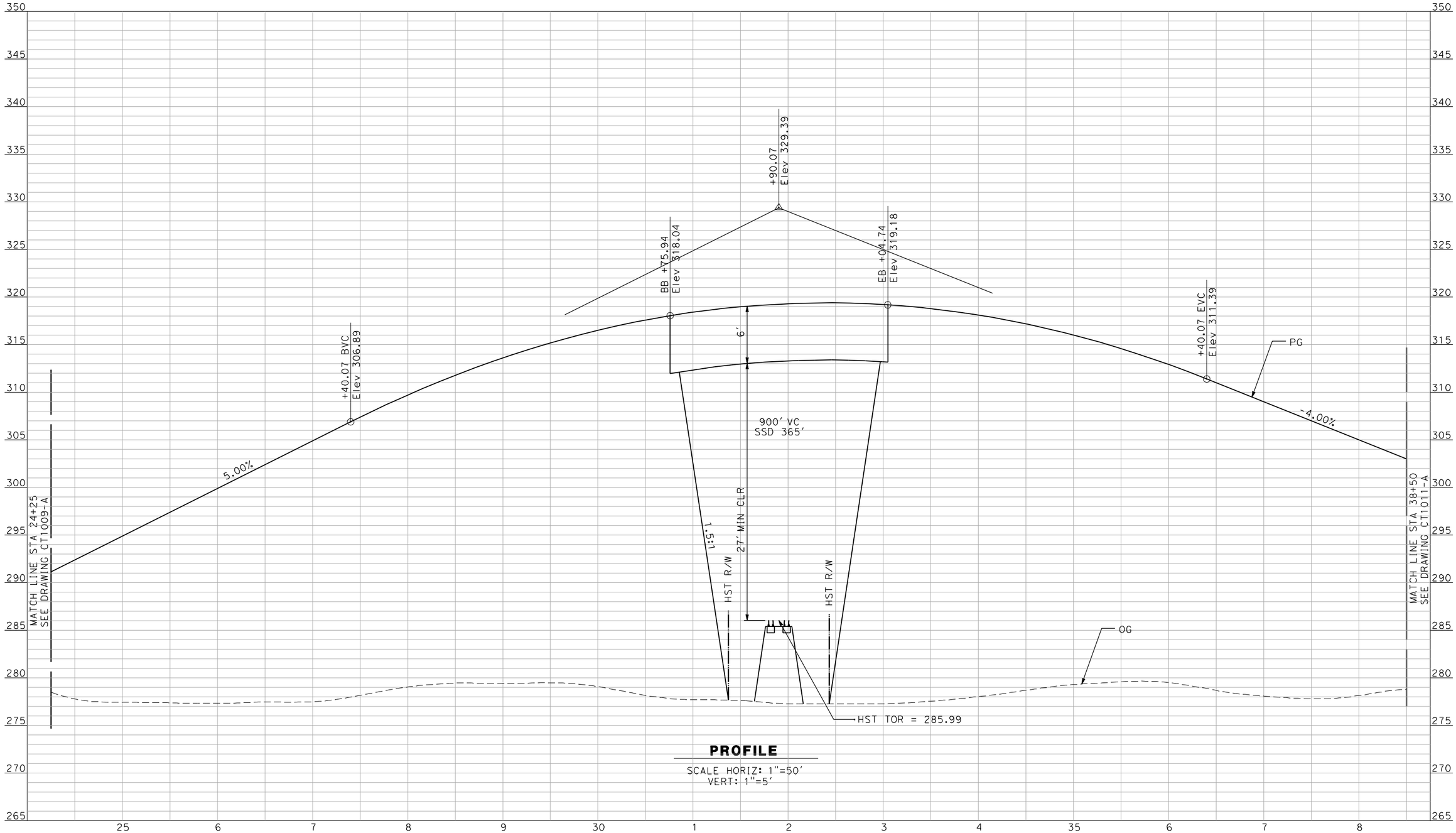

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CHECKED BY J. ZANDIAN
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DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 12
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1010-A
SCALE AS SHOWN
SHEET NO. OF ###

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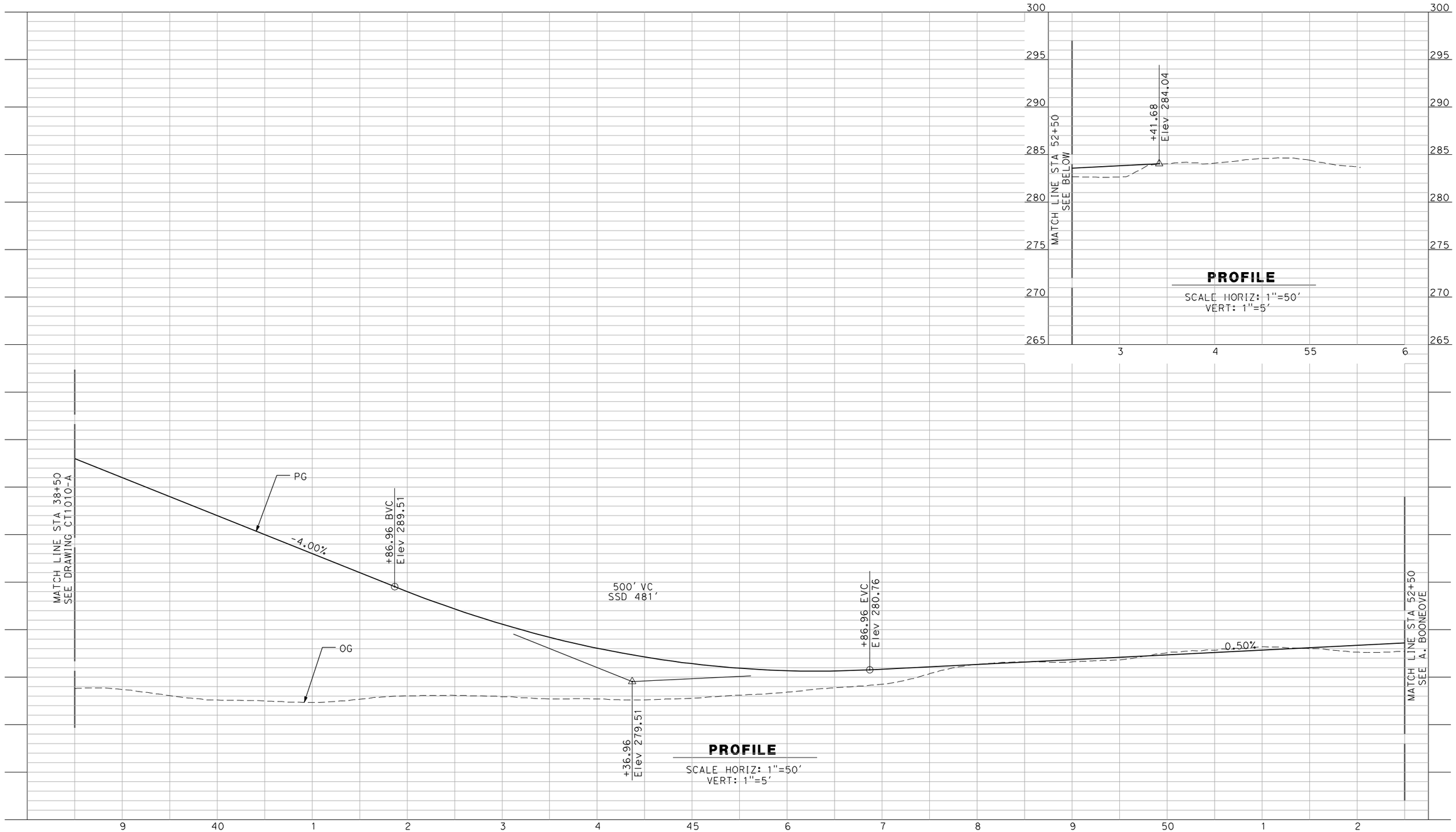

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 12
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1011-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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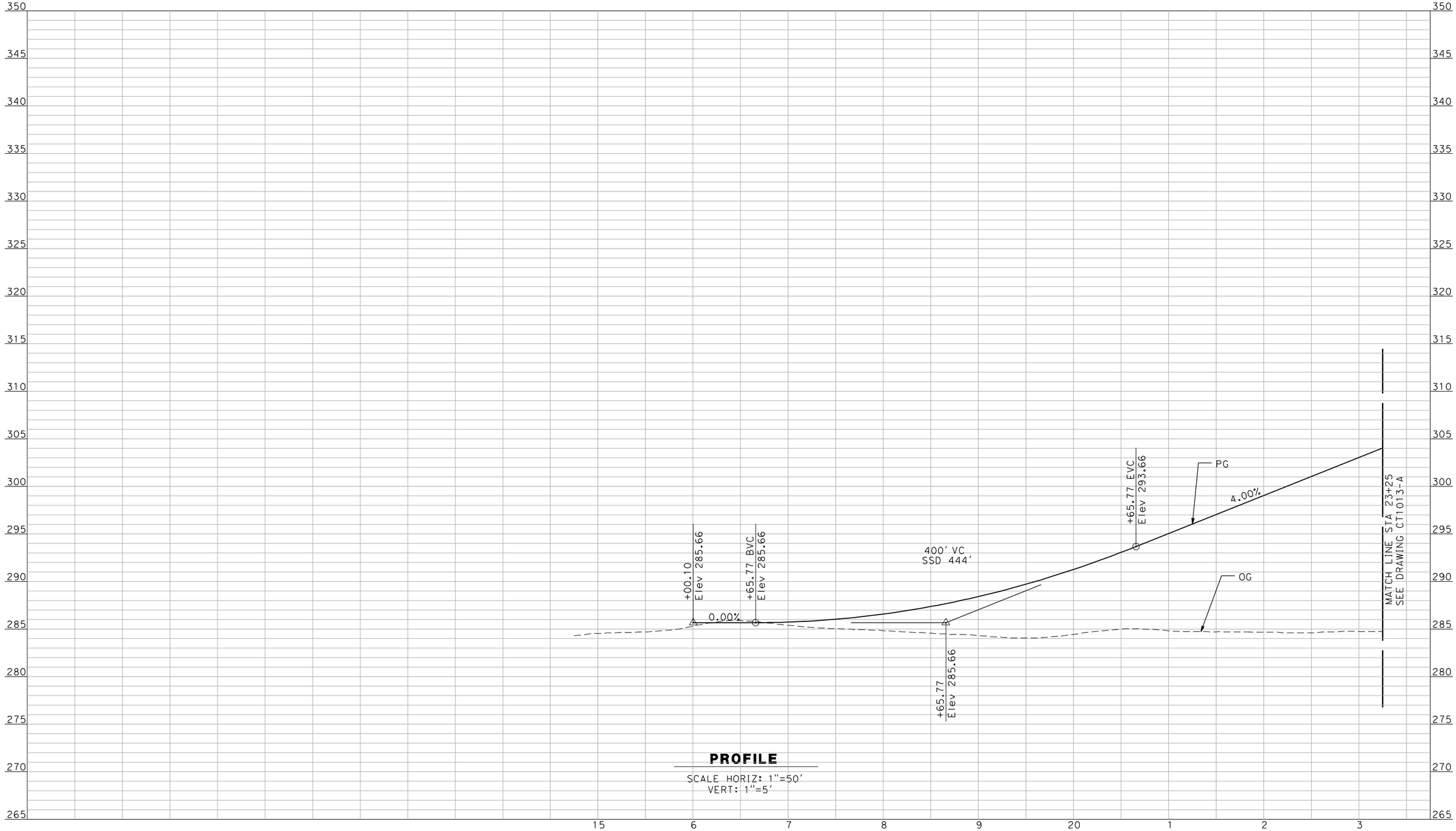

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - AVE 21 WYE
GRADE SEPARATION - AVENUE 13
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1012-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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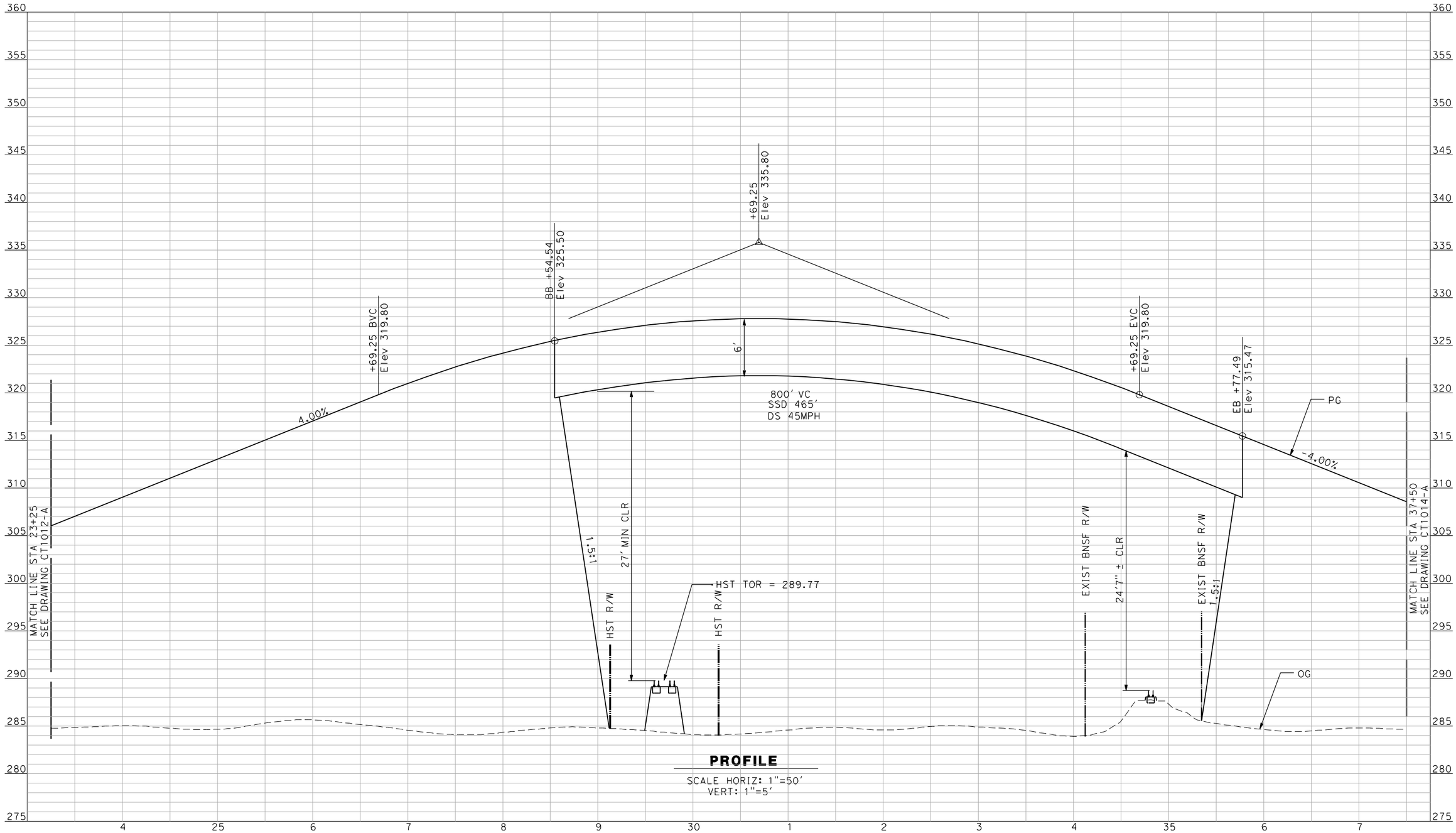

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 13
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1013-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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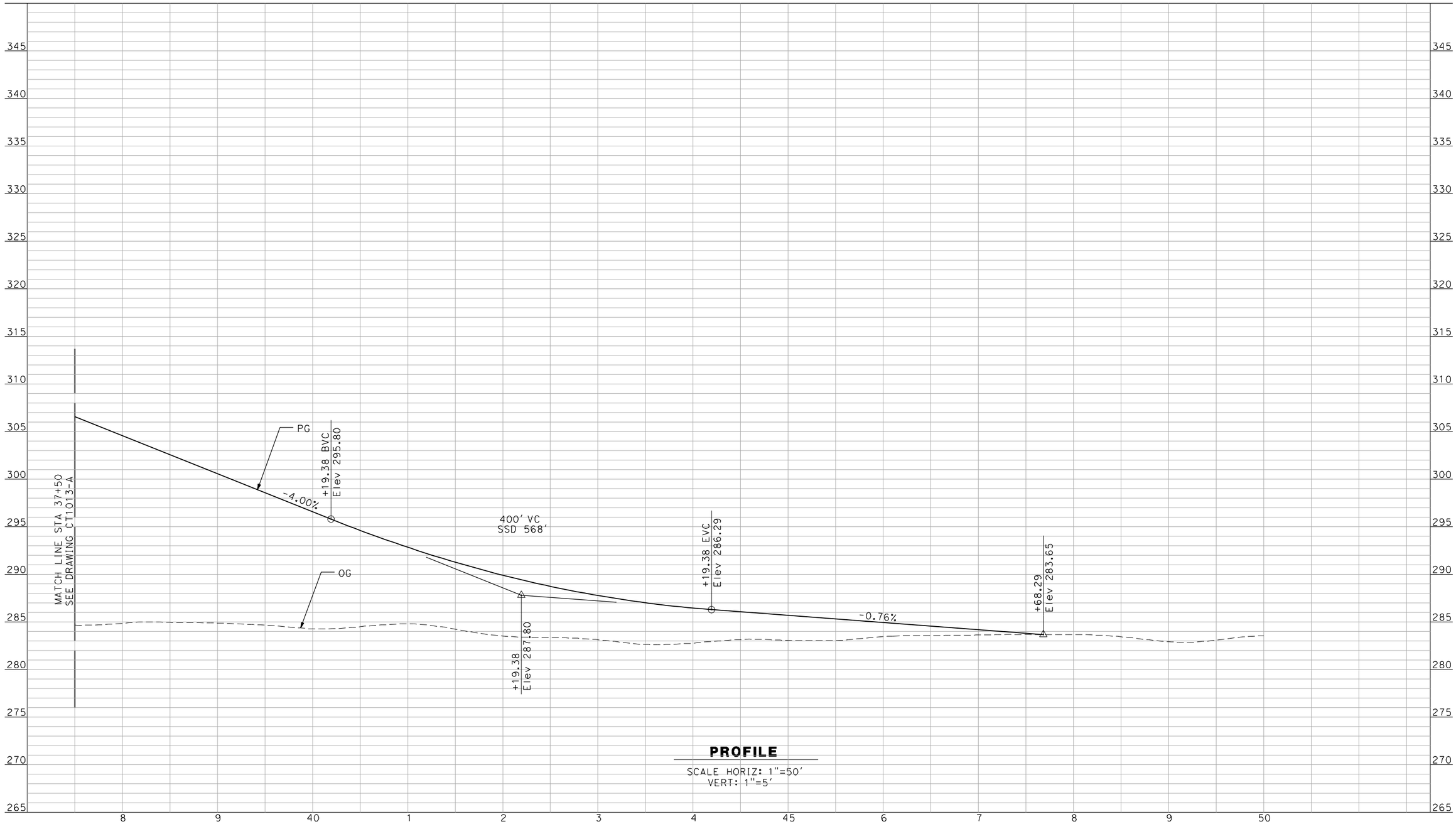

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 13
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1014-A
SCALE AS SHOWN
SHEET NO. OF ###

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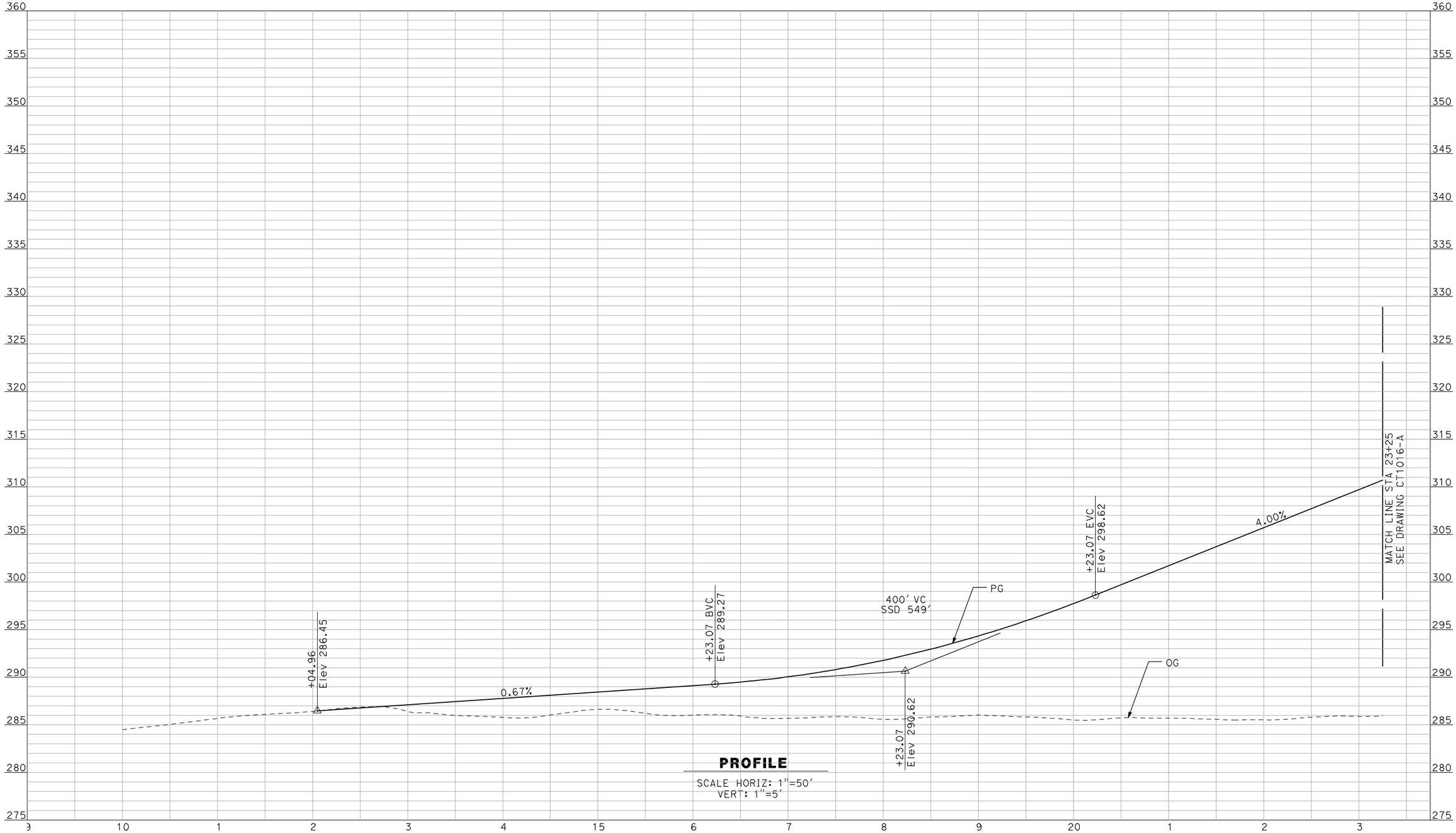

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1015-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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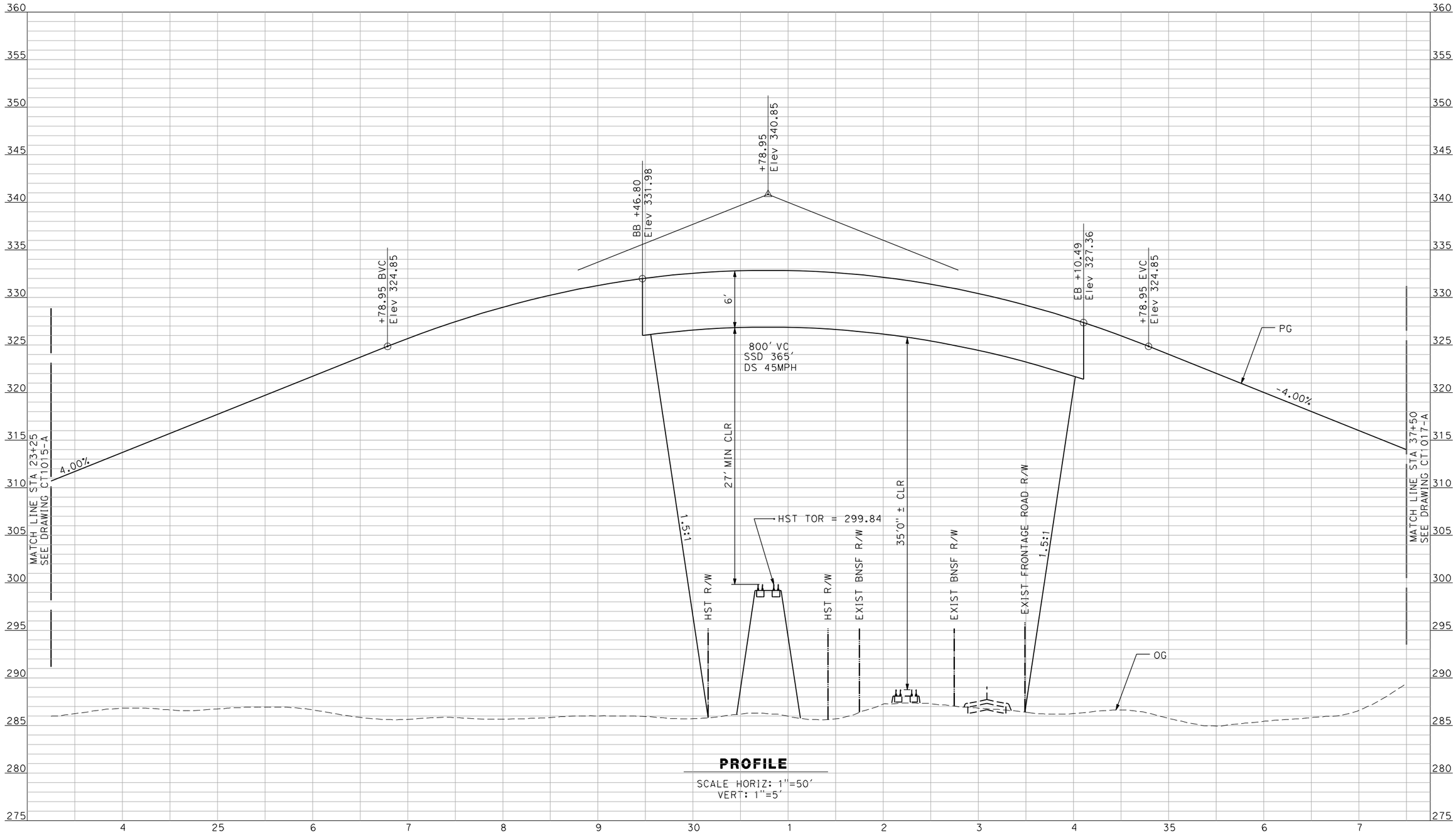

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
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IN CHARGE A. BOONE
DATE 06/30/2011

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HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 15
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1016-A
SCALE AS SHOWN
SHEET NO. OF ###

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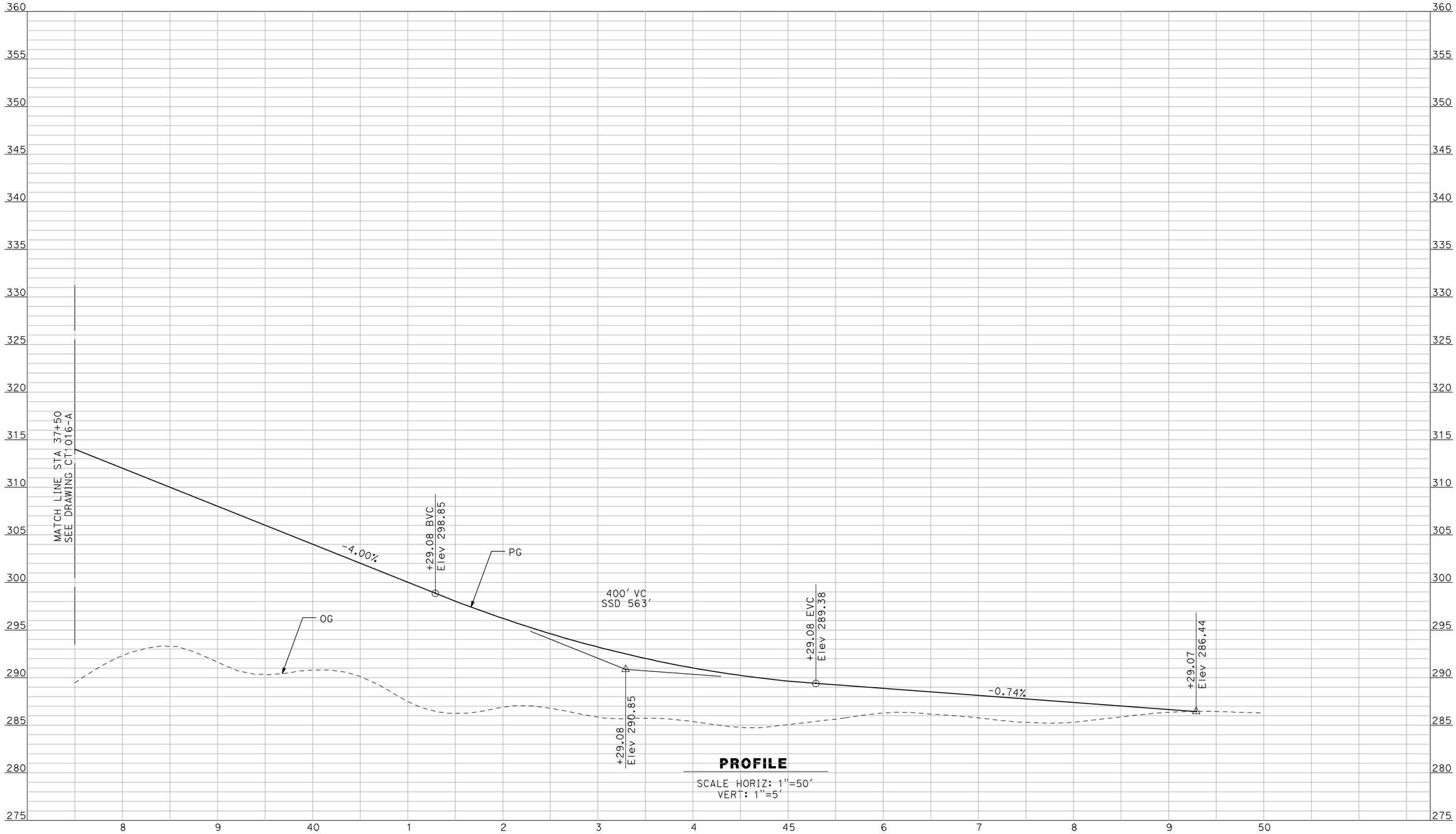

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1017-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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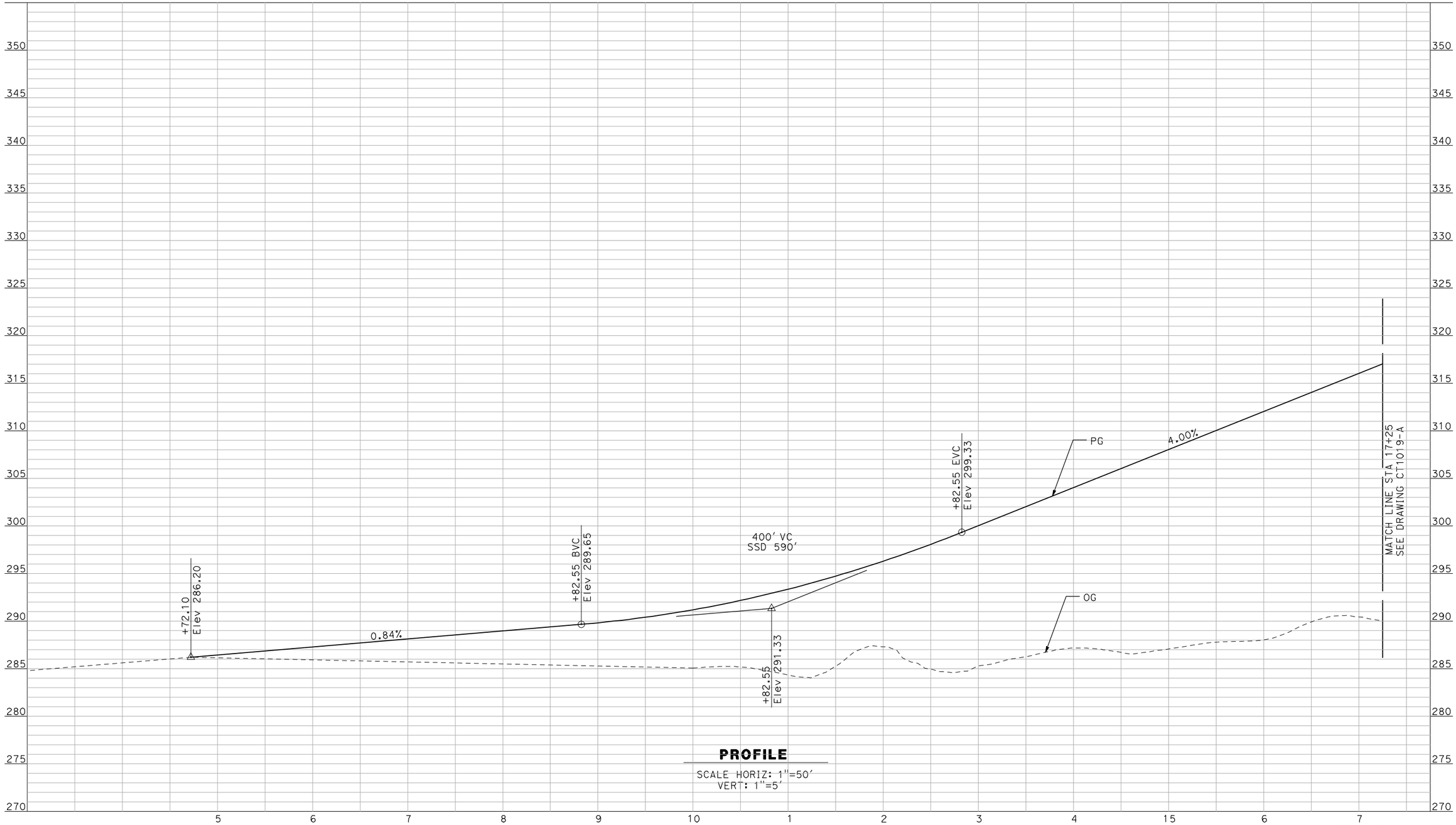

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1018-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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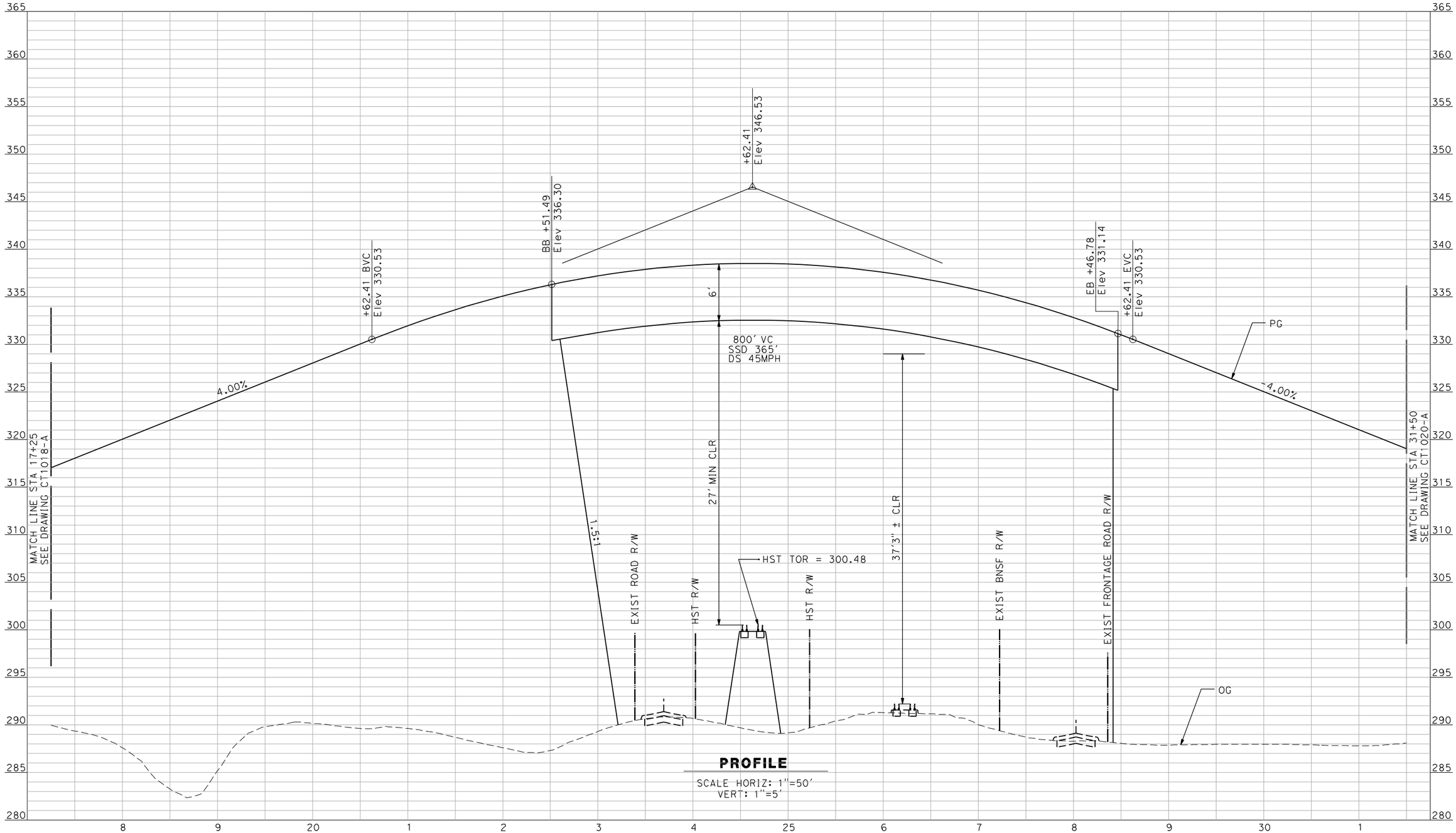

PROFILE

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VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 06/30/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO

BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1019-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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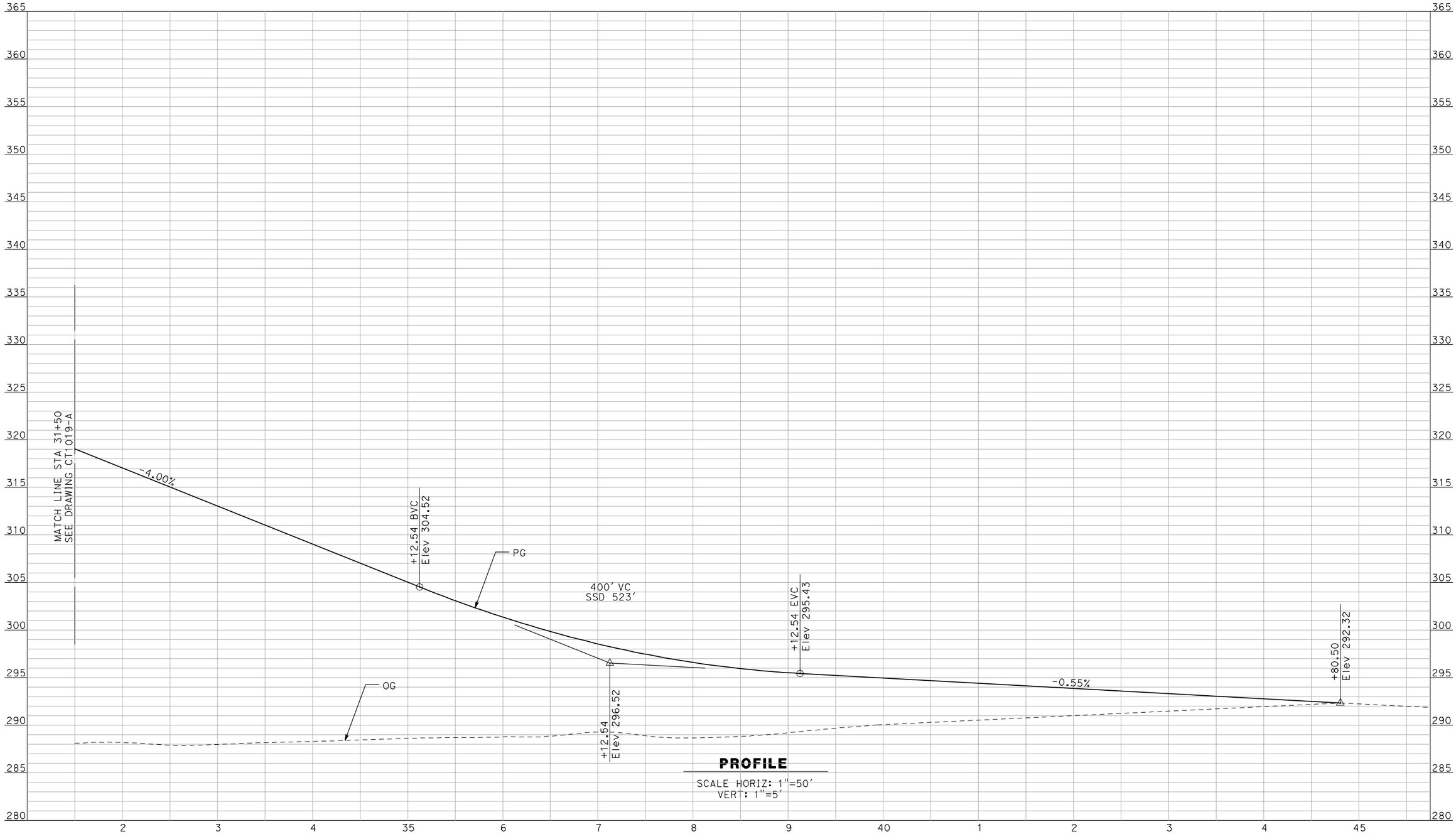

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
GRADE SEPARATION - AVENUE 15 1/2
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1020-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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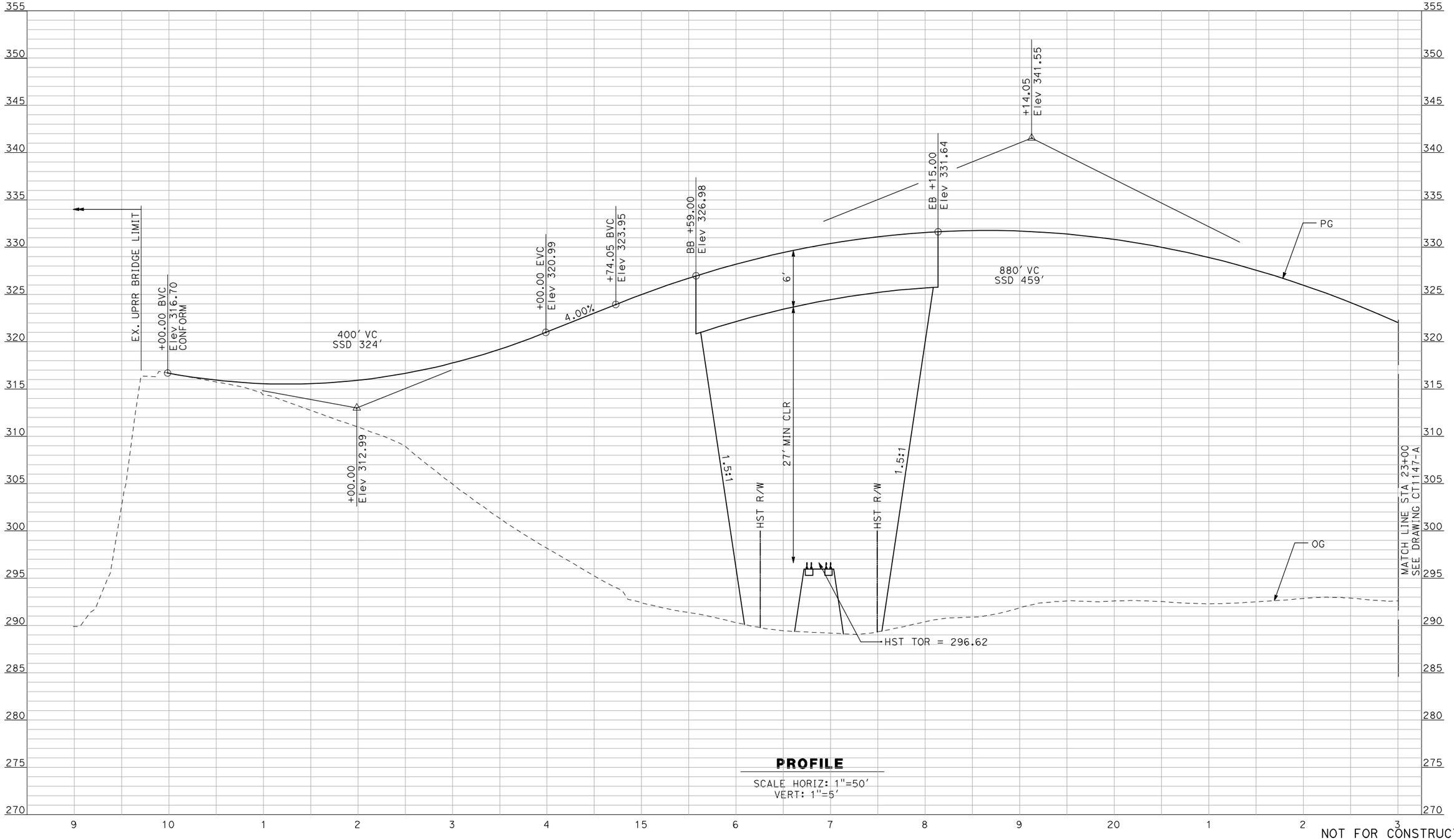

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 7
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1146-A
SCALE AS SHOWN
SHEET NO. OF ###

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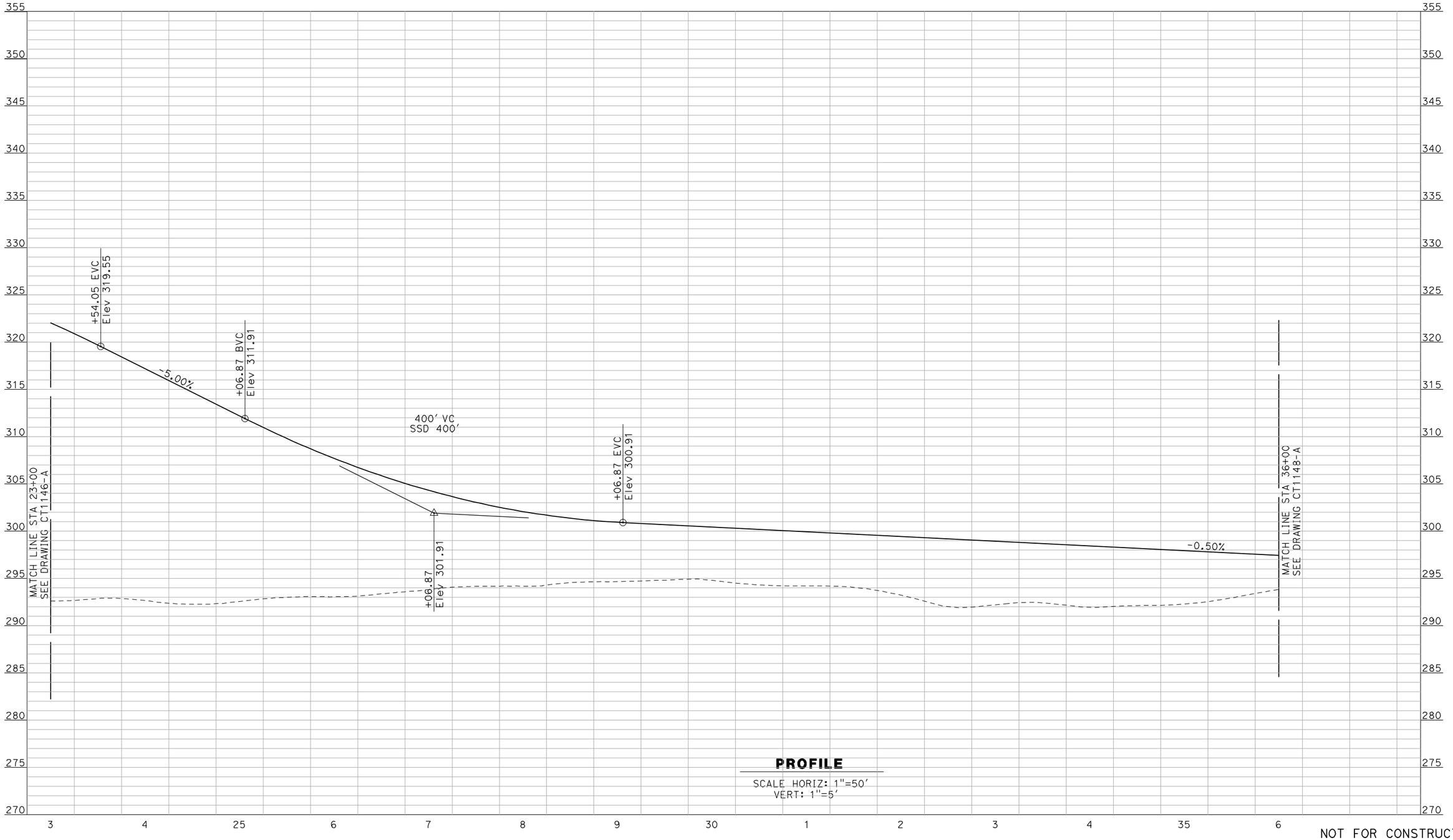

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 7
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1147-A
SCALE AS SHOWN
SHEET NO. OF ###

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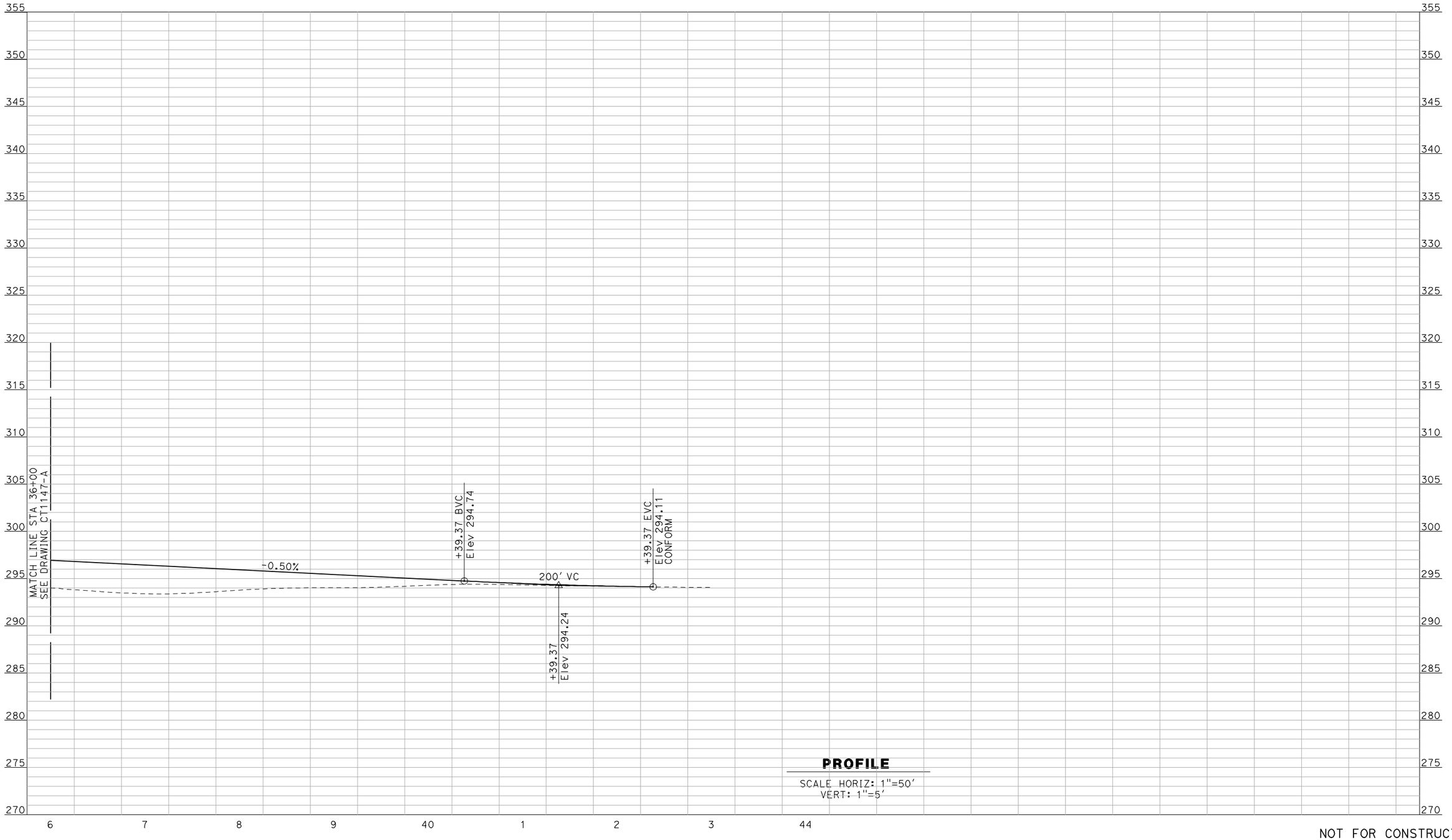

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 7
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1148-A
SCALE AS SHOWN
SHEET NO. OF ###

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SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
		ROADWAY BRIDGE STRUCTURE PLAN			
		HYBRID ALTERNATIVE/AVENUE 24			
			GENERAL		
	SB1301	HYBRID ALTERNATIVE	AVENUE 24	INDEX OF DRAWINGS	SHEET 1 OF 1
	SB1302	HYBRID ALTERNATIVE	AVENUE 24	STRUCTURE INDEX MAP	SHEET 1 OF 1
			OVERHEAD BRIDGES		
	ST1001	BNSF MAIN LINE	AVENUE 21	AVENUE 9 OVERHEAD	PLANNING STUDY
	ST1002	BNSF MAIN LINE	AVENUE 21	AVENUE 10 OVERHEAD	PLANNING STUDY
	ST1003	BNSF MAIN LINE	AVENUE 21	AVENUE 11 OVERHEAD	PLANNING STUDY
	ST1004	BNSF MAIN LINE	AVENUE 21	AVENUE 12 OVERHEAD	PLANNING STUDY
	ST1005	BNSF MAIN LINE	AVENUE 21	AVENUE 13 OVERHEAD	PLANNING STUDY-SHEET 1 OF 2
	ST1005A	BNSF MAIN LINE	AVENUE 21	AVENUE 13 OVERHEAD	PLANNING STUDY-SHEET 2 OF 2
	ST1006	BNSF MAIN LINE	AVENUE 21	AVENUE 15 OVERHEAD	PLANNING STUDY
	~~ST1007~~	~~BNSF MAIN LINE~~	~~AVENUE 21~~	~~AVENUE 15½ OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1009~~	~~BNSF MAIN LINE~~	~~AVENUE 21~~	~~AVENUE 17 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1010~~	~~BNSF MAIN LINE - HYBRID~~	~~AVENUE 21~~	~~ROAD 27 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1011~~	~~BNSF MAIN LINE - HYBRID~~	~~AVENUE 21~~	~~ROAD 26 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1035~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~AVENUE 20 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1036~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~AVENUE 20½ OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1037~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~AVENUE 20½ OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1038~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~ROAD 24 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1039~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~ROAD 24 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1040~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~ROAD 22 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1041A~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~ROAD 20 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1042~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~ROAD 16 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1043~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~ROAD 15 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1047~~	~~BNSF MAIN LINE~~	~~AVENUE 24~~	~~ROAD 9 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1160~~	~~HYBRID MAIN LINE/WYE CONNECTION~~	~~AVENUE 24~~	~~ROAD 10 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1121~~	~~BNSF MAIN LINE - HYBRID~~	~~AVENUE 24~~	~~ROAD 13 OVERHEAD~~	~~PLANNING STUDY-SHEET 1 OF 2~~
	~~ST1161~~	~~UPRR/SR 99 MERCED CONNECTION - HYBRID~~	~~AVENUE 24~~	~~ROAD 13 OVERHEAD~~	~~PLANNING STUDY-SHEET 2 OF 2~~
	~~ST1133~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 24~~	~~AVENUE 25 OVERHEAD~~	~~PLANNING STUDY-SHEET 1 OF 2~~
	~~ST1134~~	~~UPRR/SR 99 WYE CONNECTION~~	~~AVENUE 24~~	~~AVENUE 25 OVERHEAD~~	~~PLANNING STUDY-SHEET 2 OF 2~~
	~~ST1135~~	~~UPRR/SR 99 WYE & MERCED CONNECTIONS~~	~~AVENUE 24~~	~~AVENUE 26 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1136~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 24~~	~~CROSS ROAD OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1139~~	~~UPRR/SR 99 MERCED DO - HYBRID & WYE CONNECTION~~	~~AVENUE 24~~	~~SANDY MUSH ROAD OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1180~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~G STREET OVERHEAD~~	~~PLANNING STUDY~~
	ST1070	BNSF MAIN LINE	AVENUE 21	AVENUE 7 OVERHEAD	PLANNING STUDY

"Drawings lined Out are not
Included for Procurement Purposes Only"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

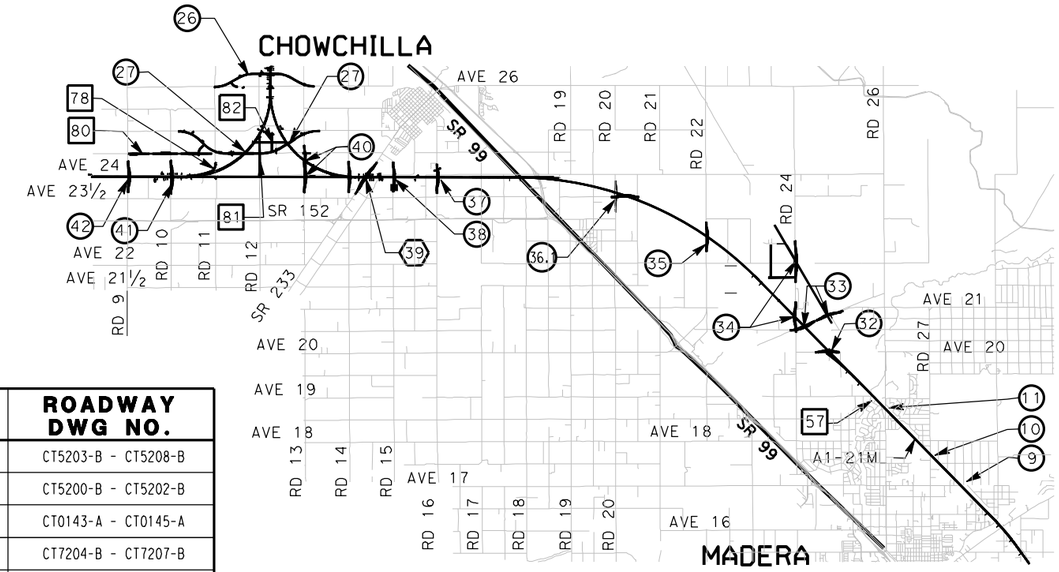
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 24
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1301
SCALE No scale
SHEET NO. OF

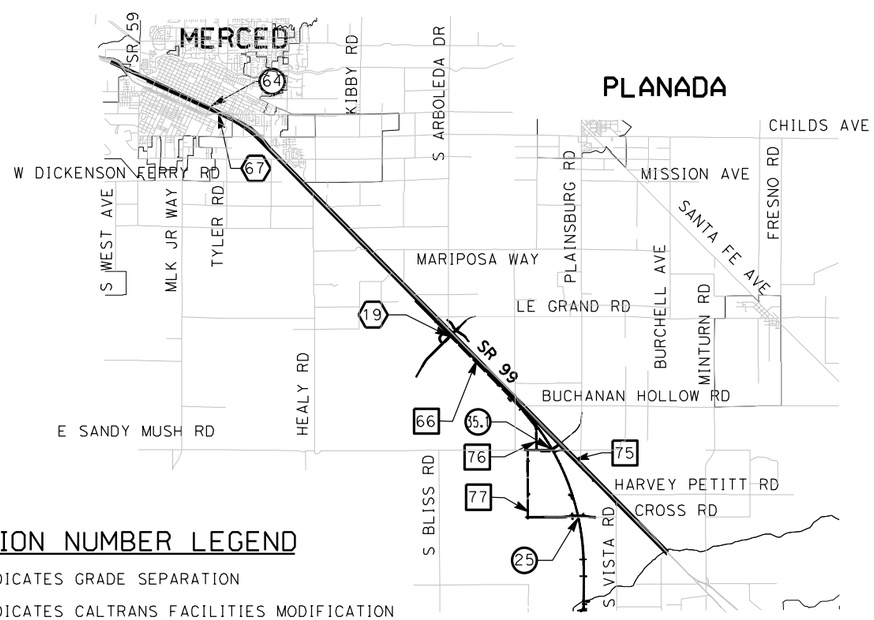
2/23/2012 10:17:39 AM \\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\WF-SB-1301.dgn
cisnerose

LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
1	AVENUE 9 OVERHEAD	ST1001	CT0001-A - CT0003-A
2	AVENUE 10 OVERHEAD	ST1002	CT0004-A - CT0006-A
3	AVENUE 11 OVERHEAD	ST1003	CT0007-A - CT0009-A
4	AVENUE 12 OVERHEAD	ST1004	CT0010-A - CT0012-A
5	AVENUE 13 OVERHEAD	ST1005	CT0013-A - CT0016-A
6	AVENUE 15 OVERHEAD	ST1006	CT0017-A - CT0019-A
7	AVENUE 15½ OVERHEAD	ST1007	CT0020-A - CT0022-A
9	AVENUE 17 OVERHEAD	ST1009	CT0026-A - CT0028-A
10	ROAD 27 OVERHEAD	ST1010	CT0029-A - CT0031-A
11	ROAD 26 OVERHEAD	ST1011	CT0032-A - CT0034-A
25	CROSS ROAD OVERHEAD	ST1136	CT5238-B - CT5240-B
26	AVENUE 26 OVERHEAD	ST1135	CT5227-B - CT5236-B
27	AVENUE 25 OVERHEAD	ST1133 & ST1134	CT5209-B - CT5225-B
32	AVENUE 20 OVERHEAD	ST1035	CT0113-A - CT0115-A
33	AVENUE 20½ OVERHEAD	ST1036 & ST1037	CT0116-A - CT0118-A
34	ROAD 24 OVERHEAD	ST1038 & ST1039	CT0119-A - CT0121-A
35	ROAD 22 OVERHEAD	ST1040	CT0122-A - CT0124-A
36.1	ROAD 20 OVERHEAD	ST1041A	CT0125-A - CT0127-A
37	ROAD 16 OVERHEAD	ST1042	CT0128-A - CT0130-A
38	ROAD 15 OVERHEAD	ST1043	CT0131-A - CT0133-A

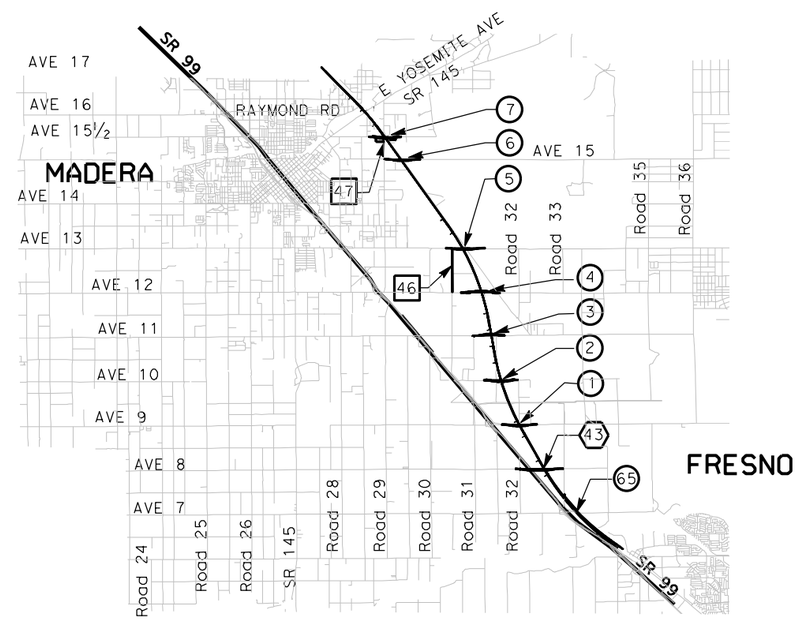
LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
40	ROAD 13 OVERHEAD	ST1121 & ST1161	CT5203-B - CT5208-B
41	ROAD 10 OVERHEAD	ST1160	CT5200-B - CT5202-B
42	ROAD 9 OVERHEAD	ST1047	CT0143-A - CT0145-A
35.1	SANDY MUSH ROAD OVERHEAD	ST1139	CT7204-B - CT7207-B
64	G STREET OVERHEAD	ST1180	CT0149-A
65	AVENUE 7 OVERHEAD	ST1070	



VICINITY MAP 2



VICINITY MAP 1



VICINITY MAP 3

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

9000 0 9000 18000
GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. Lee
DRAWN BY E. CISNEROS
CHECKED BY J. ZANDIAN
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

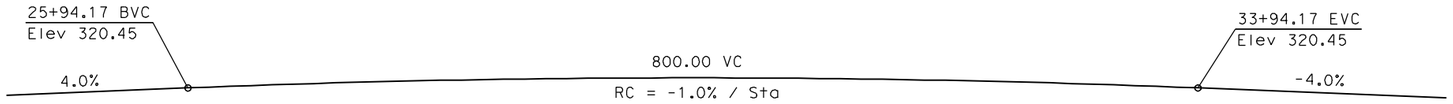
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

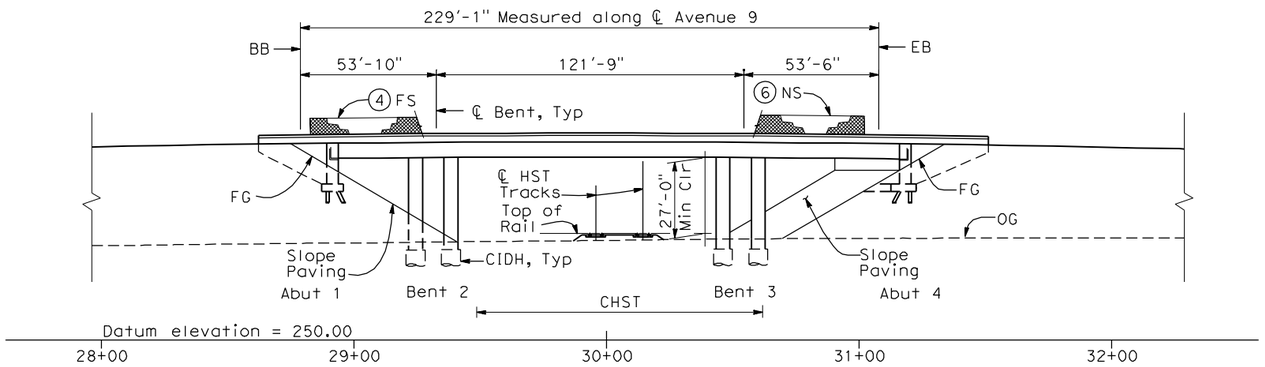
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 24
STRUCTURE INDEX MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1302
SCALE As shown
SHEET NO. OF

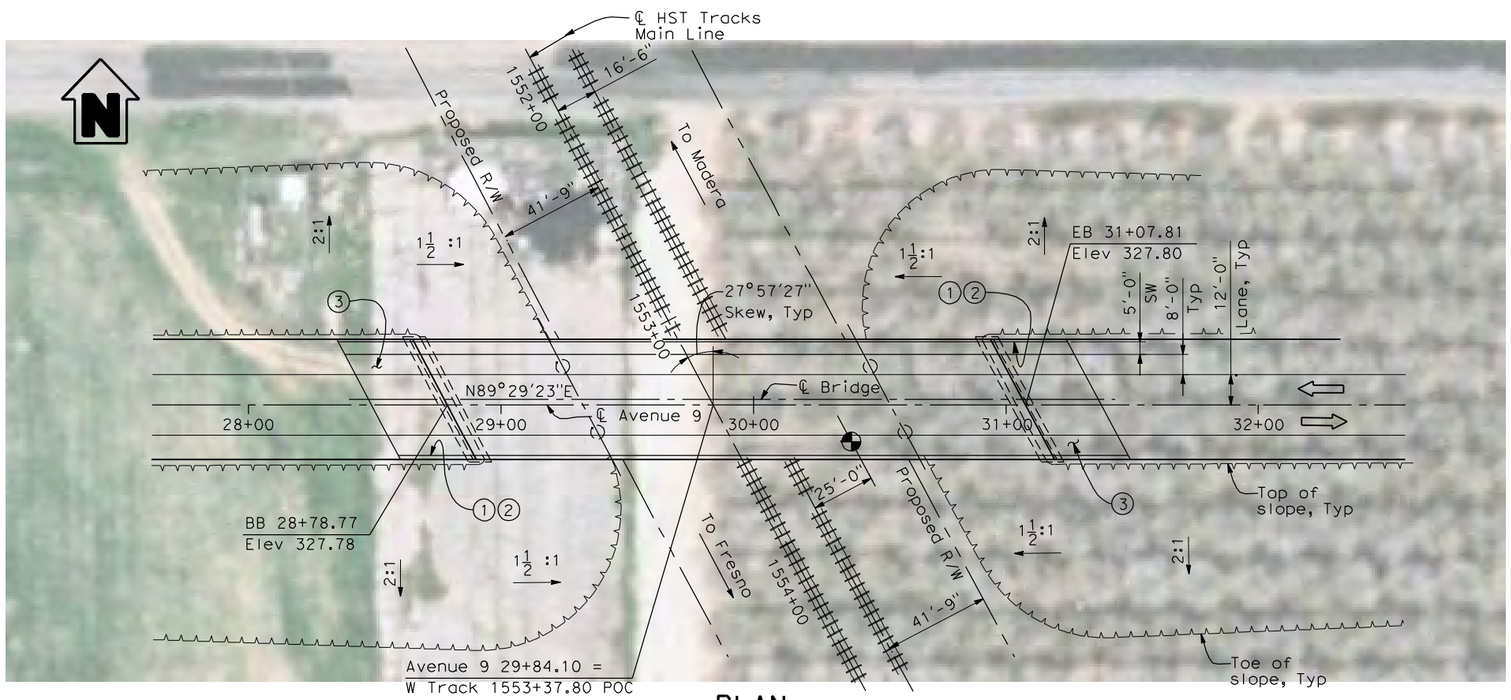
\\usscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\15%_Grade Structures_Revisions\SB1302.dgn 2/16/2012 2:12:34 PM cisnerose



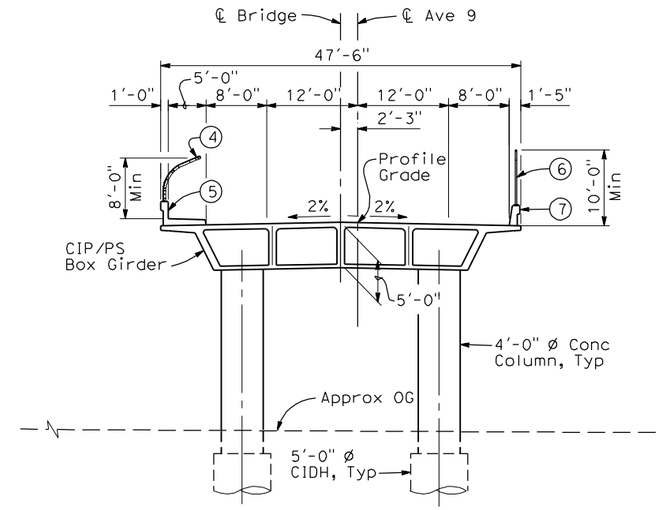
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 9 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 9 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	229'-1"
WIDTH	=	47'-6"
AREA	=	10,880 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 1

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 9 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1001
SCALE As shown
SHEET NO. OF

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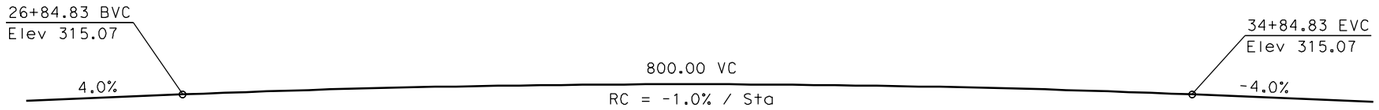
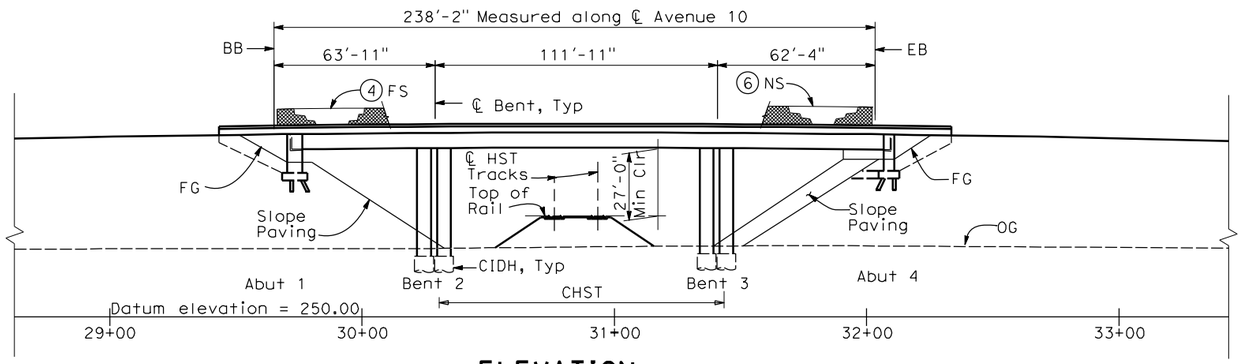


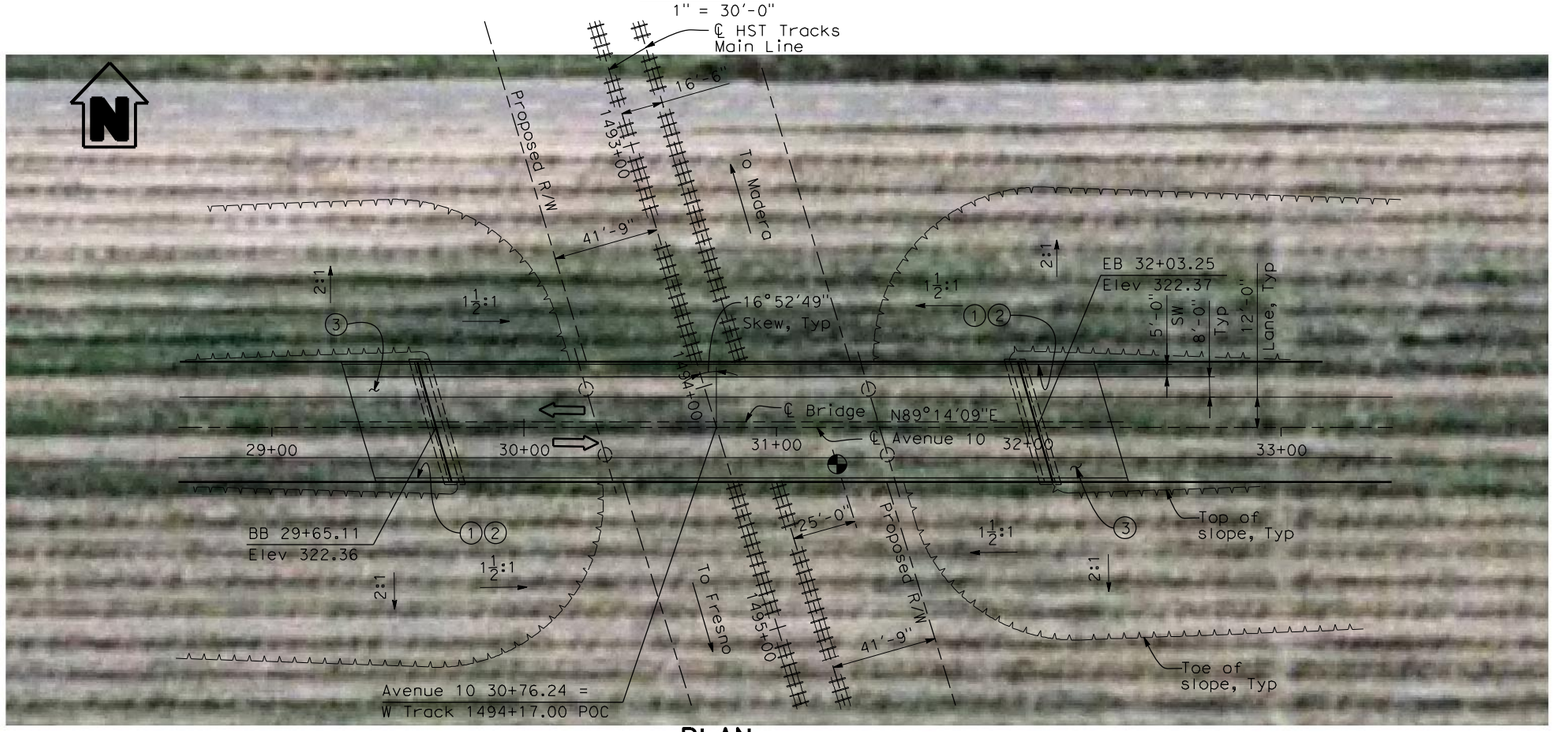
PROFILE GRADE

NTS



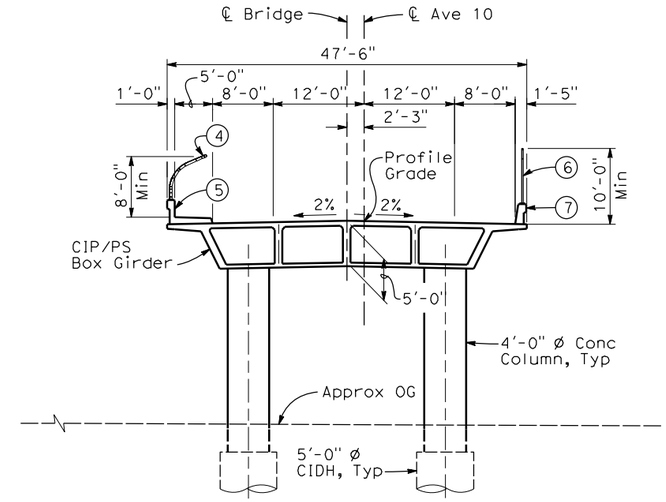
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 10 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 10 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

⊕ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	238'-2"
WIDTH	=	47'-6"
AREA	=	11,312 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 2

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 10 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1002
SCALE As shown
SHEET NO. OF

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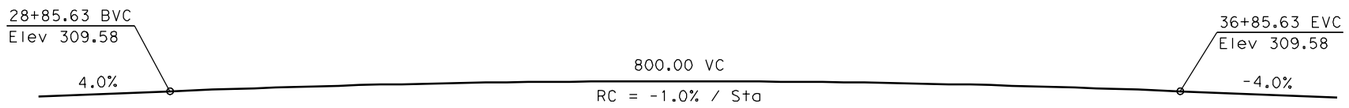
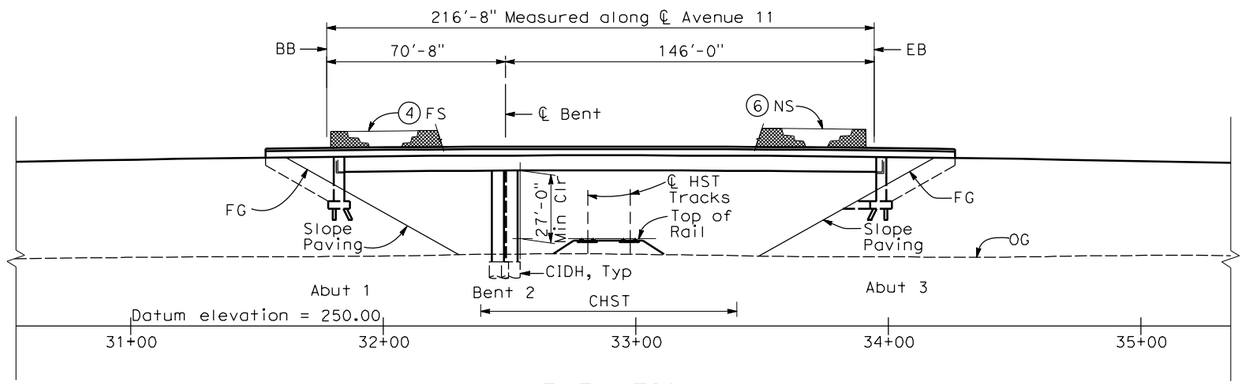


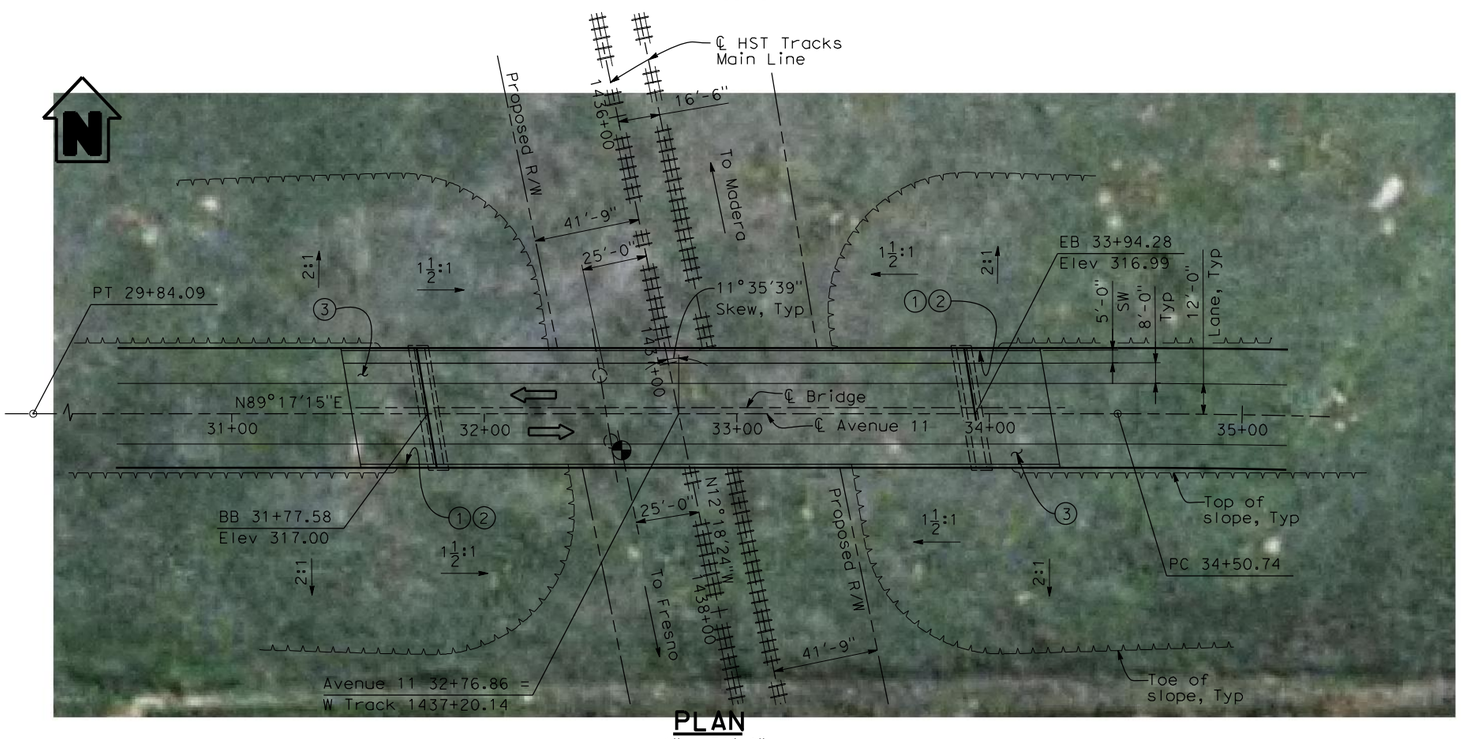
PROFILE GRADE

NTS



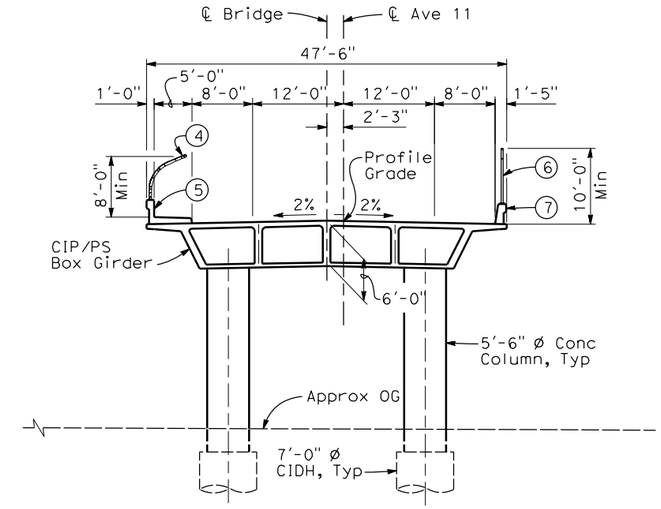
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 11 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 11 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	216'-8"
WIDTH	=	47'-6"
AREA	=	10,294 ft^2
COST/ ☐FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 3

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

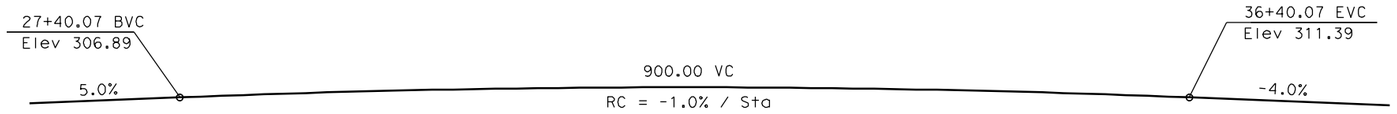
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

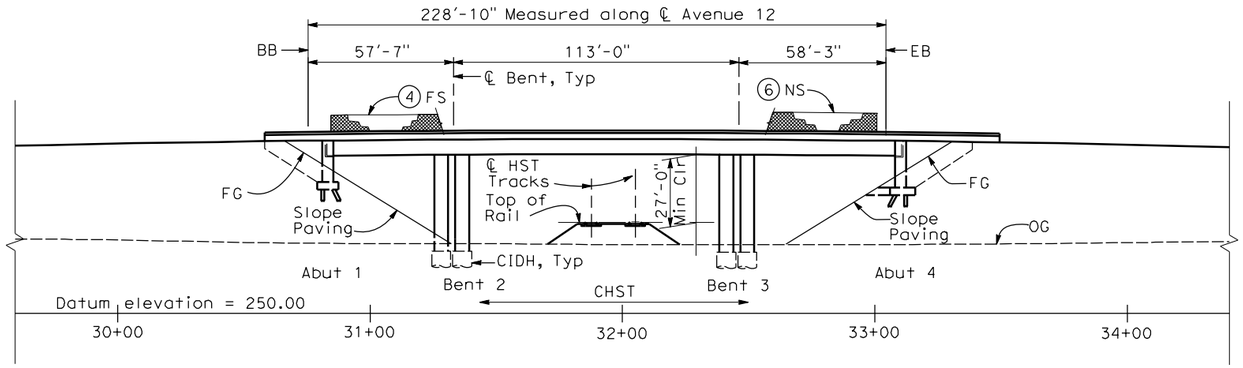
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 11 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1003
SCALE As shown
SHEET NO. OF

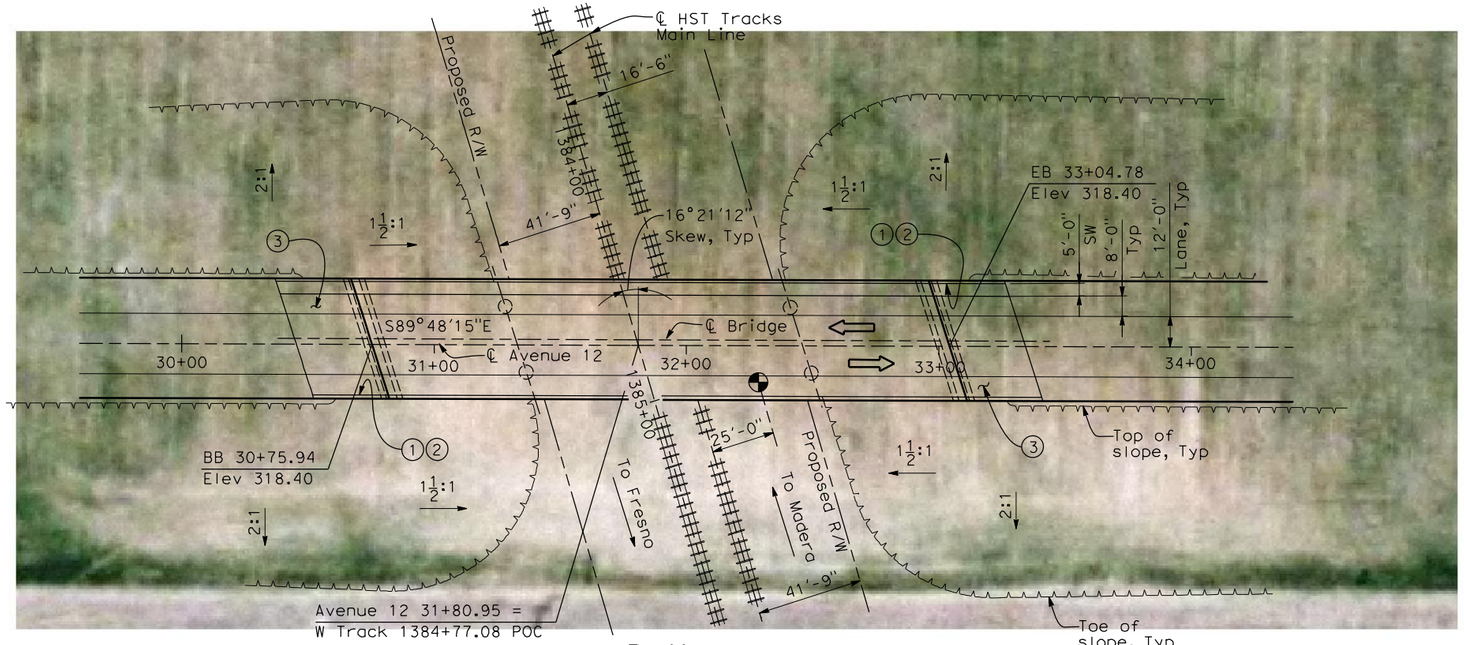
cisnerose 1/12/2012 7:04:36 PM \\usscrifp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\W-ML-ST-OH_Ave 11.dgn



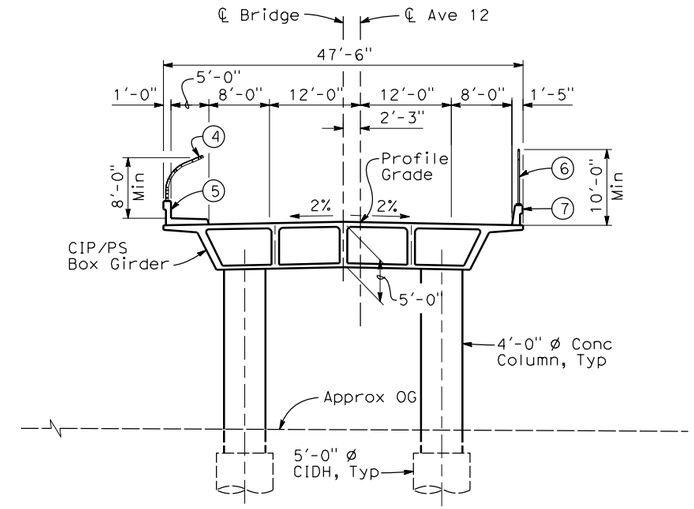
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION
1" = 10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 12 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 12 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	228'-10"
WIDTH	=	47'-6"
AREA	=	10,870 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 4

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

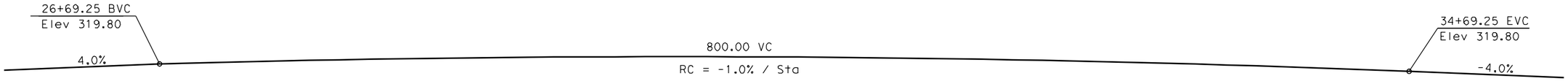
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 12 OVERHEAD
PLANNING STUDY

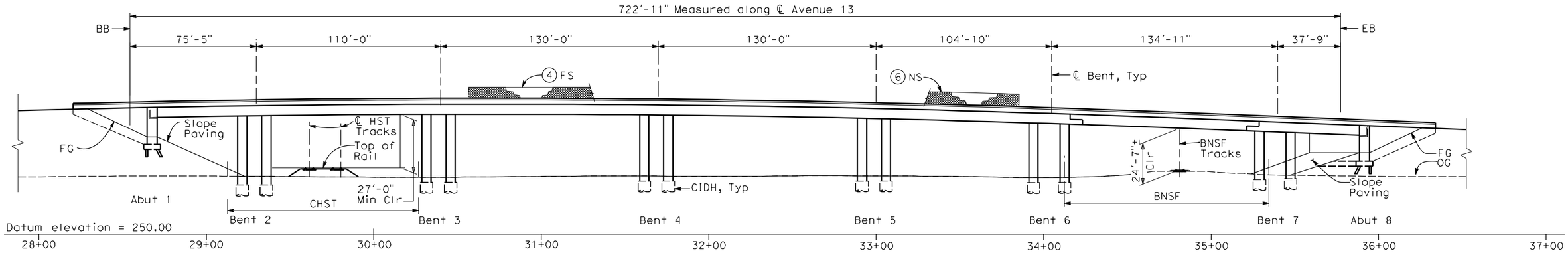
CONTRACT NO. HSR06-007
DRAWING NO. ST1004
SCALE As shown
SHEET NO. OF

cisnerose 1/12/2012 7:05:32 PM \\uscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\W-ML-ST-OH_Ave 12.dgn



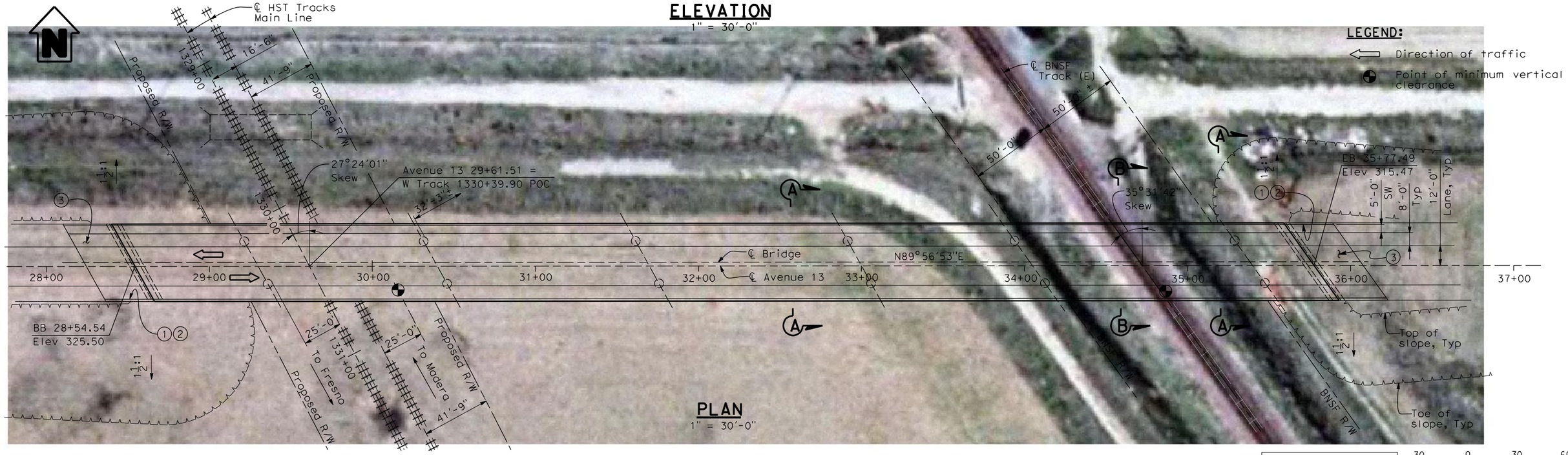
PROFILE GRADE

NTS



ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"

LOCATION 5

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

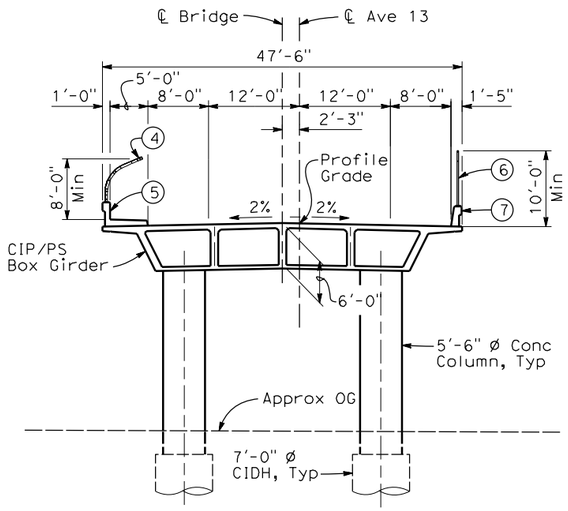
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 13 OVERHEAD
PLANNING STUDY - SHEET 1 OF 2

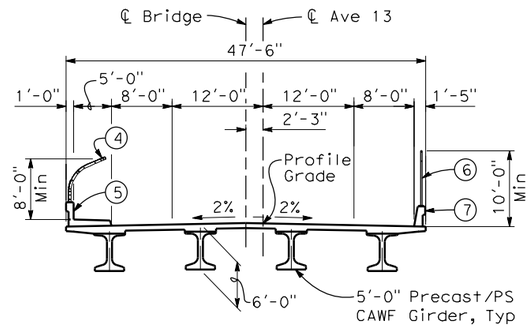
CONTRACT NO. HSR06-007
DRAWING NO. ST1005
SCALE As shown
SHEET NO. OF

cisnerose 1/12/2012 7:06:32 PM \\uscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\W-ML-ST-OH_Ave 13.dgn



SECTION A-A

1"=10'-0"



SECTION B-B

1"=10'-0"

DATE OF ESTIMATE	
BRIDGE REMOVAL =	
STRUCTURE DEPTH =	6'-0"
LENGTH =	722'-11"
WIDTH =	47'-6"
AREA =	28,860 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY =	
TOTAL COST =	

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 13 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 13 to be determined.
9. Existing underground and overhead utilities to be determined.

LOCATION 5

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

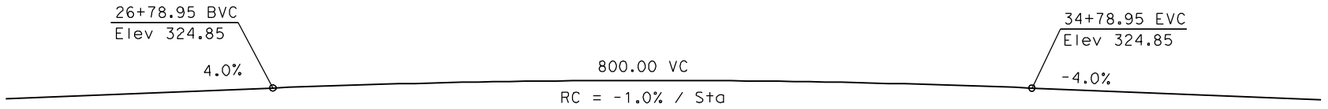
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 13 OVERHEAD
PLANNING STUDY - SHEET 2 OF 2

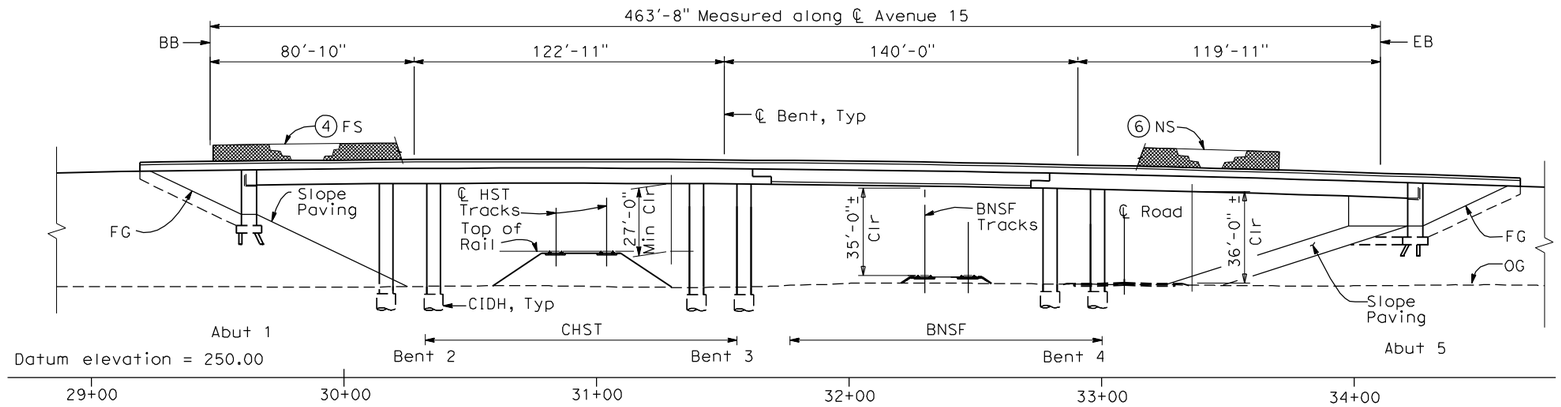
CONTRACT NO. HSR06-007
DRAWING NO. ST1005A
SCALE As shown
SHEET NO. OF

1/12/2012 7:07:31 PM \\uscr1fp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Struct\Sheet\W-ML-ST-OH_Ave 13a.dgn
cisnerose

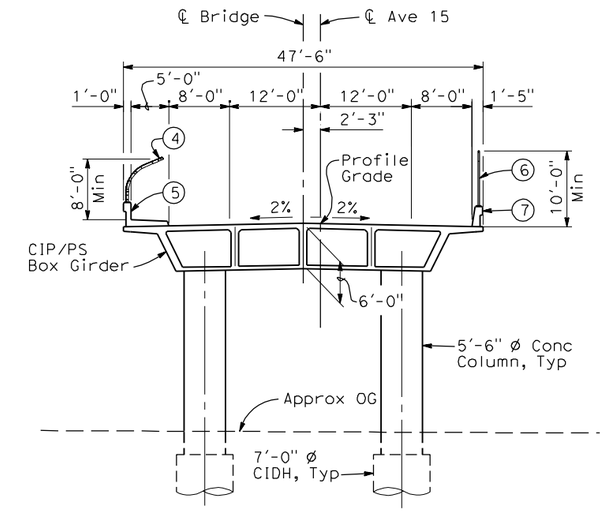


PROFILE GRADE
NTS

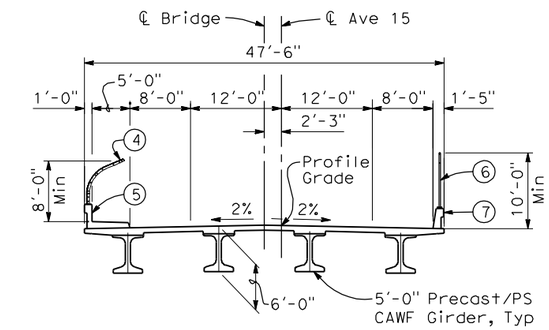
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	463'-8"
WIDTH	=	47'-6"
AREA	=	22,026 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



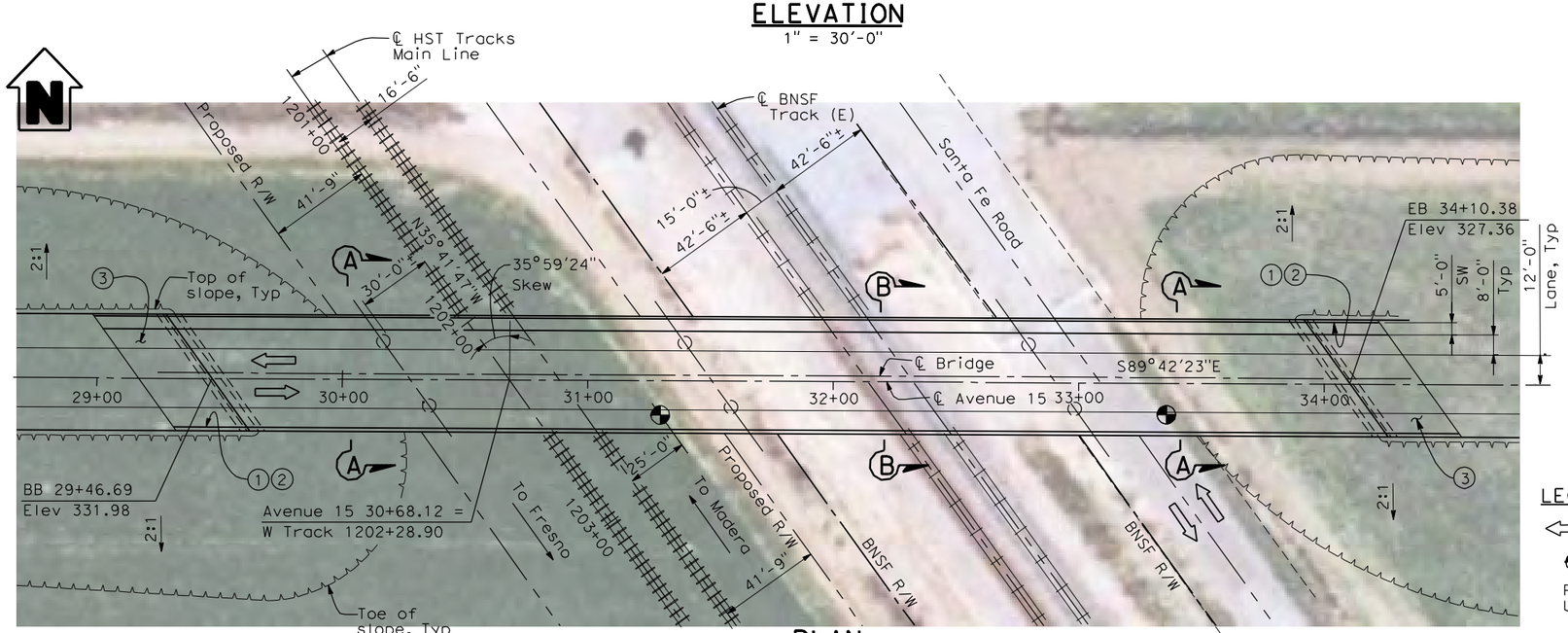
ELEVATION
1" = 30'-0"



SECTION A-A
1"=10'-0"



SECTION B-B
1"=10'-0"



PLAN
1" = 30'-0"

LEGEND:
- Direction of traffic
- Point of minimum vertical clearance
- Pt = Petroleum
- UG = Underground

NOTES:
1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 15 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 15 to be determined.
9. Existing underground and overhead utilities to be determined.

LOCATION 6

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

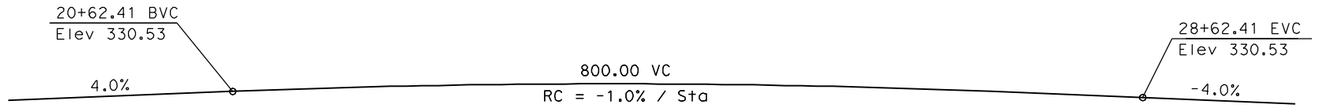
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 15 OVERHEAD
PLANNING STUDY

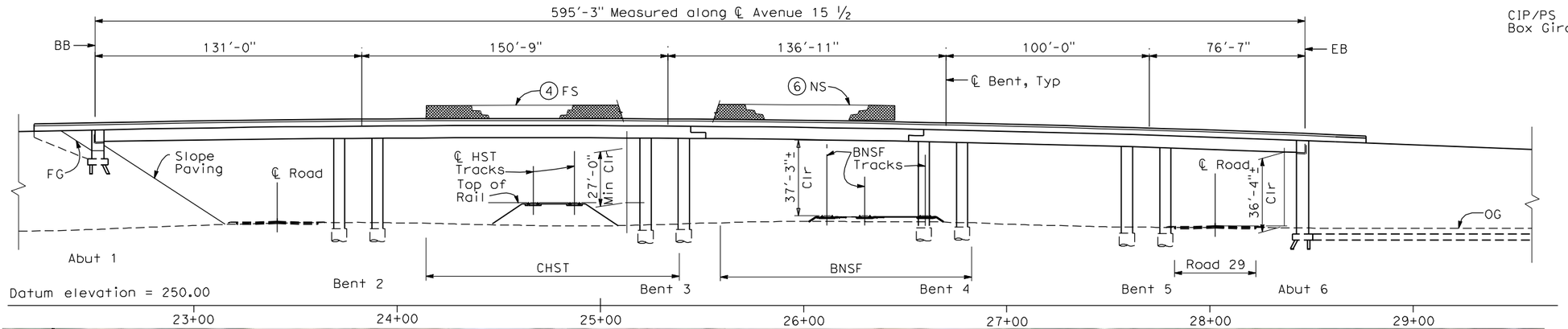
CONTRACT NO. HSR06-007
DRAWING NO. ST1006
SCALE As shown
SHEET NO. OF

cisnerose 4/28/2011 4:42:18 PM I:\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\A1\15% cost reduction submittal\GradeStructure\A1-21ML2\W-ML-ST-OH_Ave 15.dgn

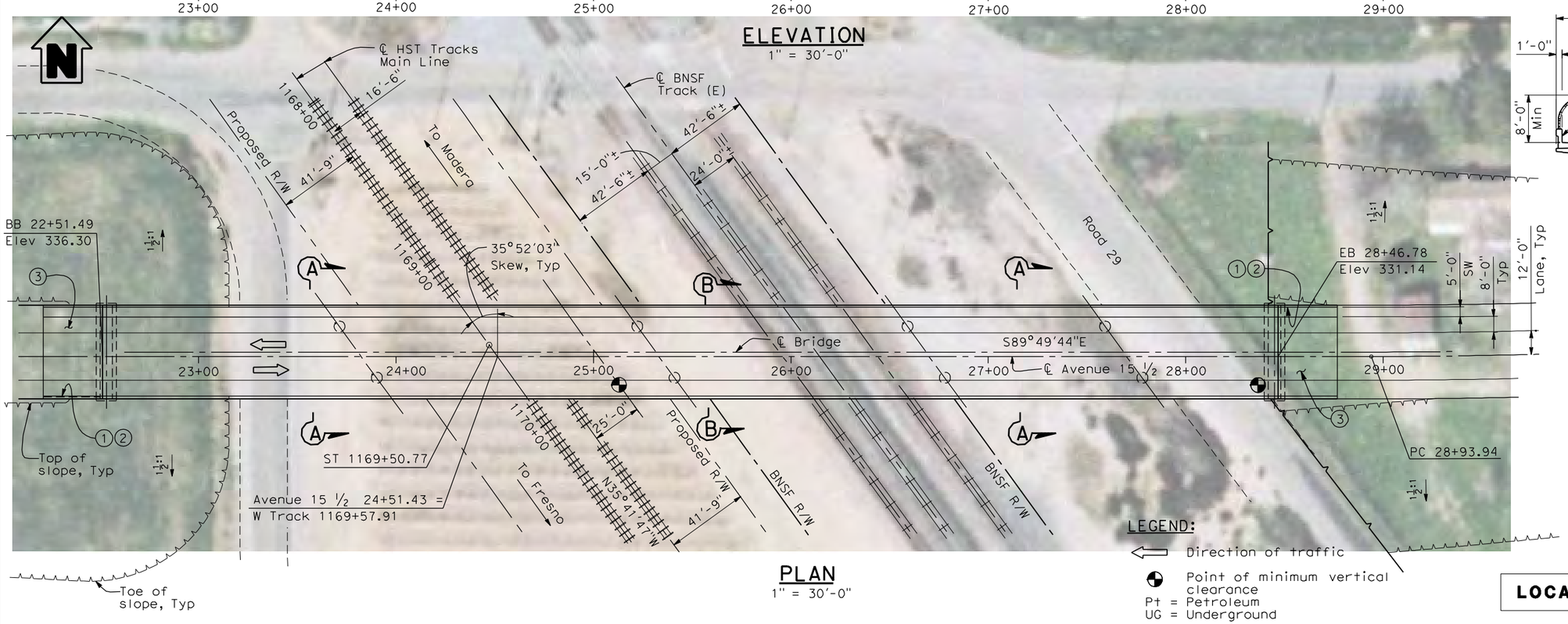
DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	595'-3"
WIDTH	=	47'-6"
AREA	=	28,280 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



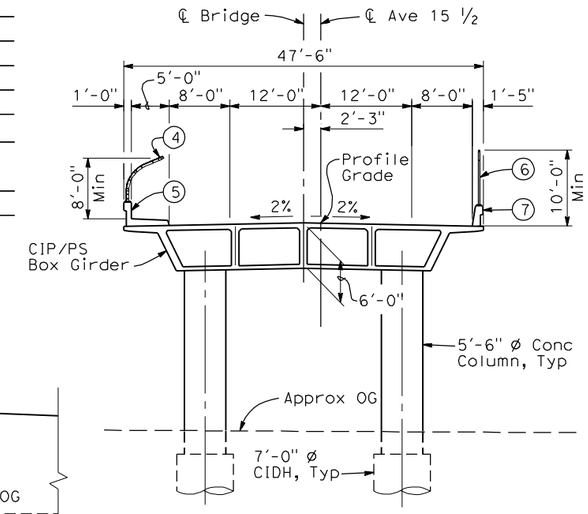
PROFILE GRADE
NTS



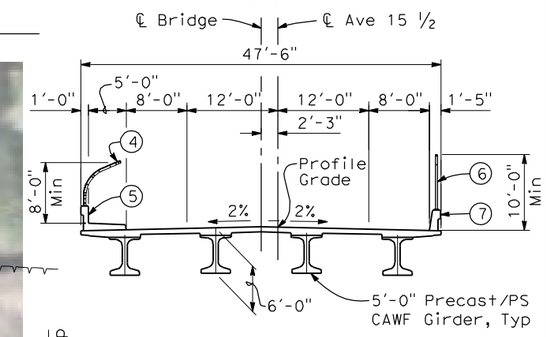
ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



SECTION A-A
1"=10'-0"



SECTION B-B
1"=10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 15 ½ OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 15 ½ to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

Pt = Petroleum

UG = Underground

LOCATION 7

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

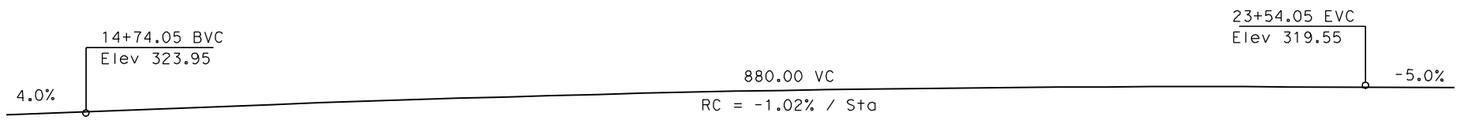
AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 15½ OVERHEAD
PLANNING STUDY

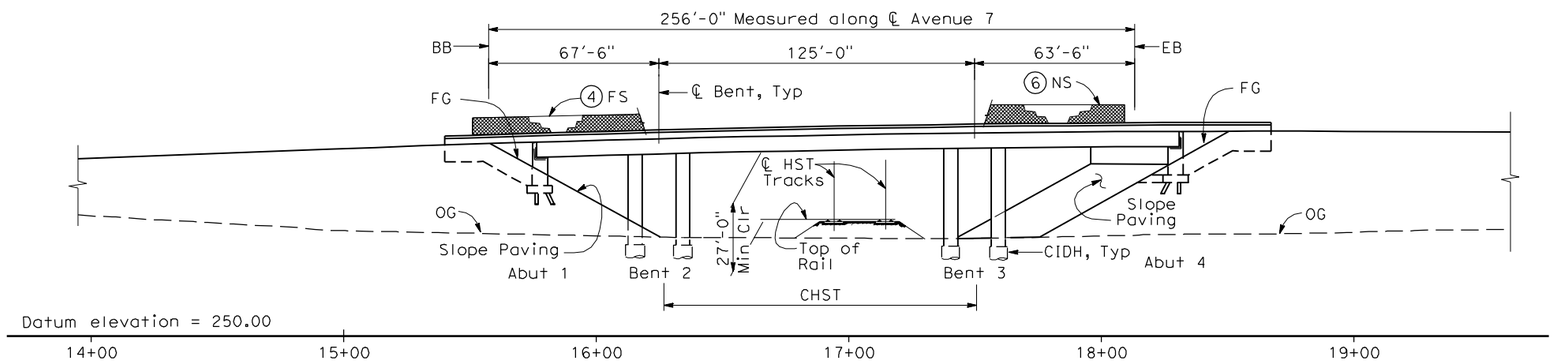
CONTRACT NO. HSR06-007
DRAWING NO. ST1007
SCALE As shown
SHEET NO. OF

cisnerose 4/28/2011 4:45:39 PM I:\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\A1\15% cost reduction submittal\GradeStructure\A1-21ML2\W-ML-ST-OH_Ave 15.5.dgn



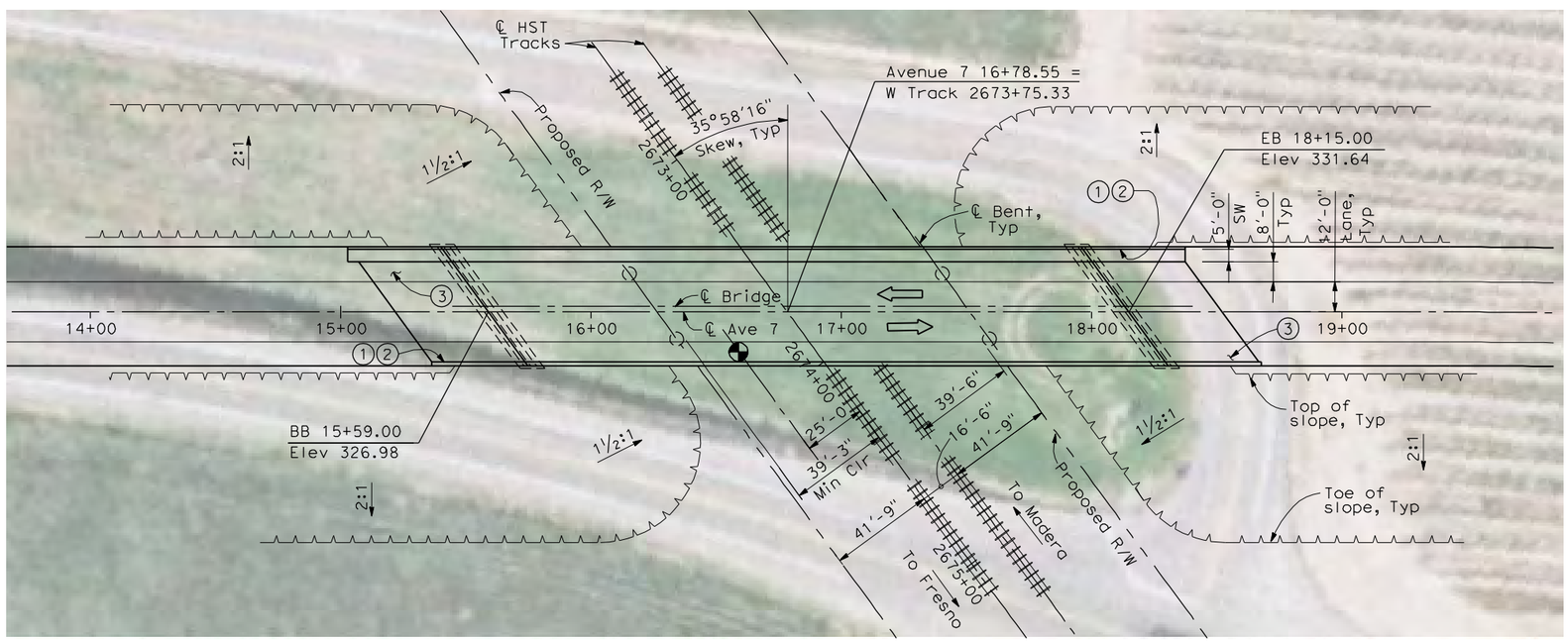
PROFILE GRADE

NTS



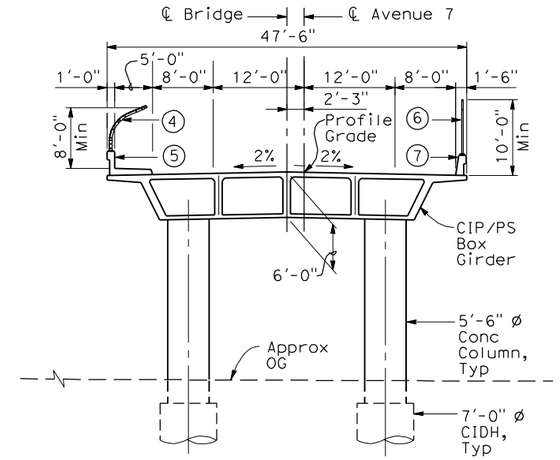
ELEVATION

1" = 30'-0"



PLAN

1" = 30'-0"



TYPICAL SECTION

1"=10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 7 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 7 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	256'-0"
WIDTH	=	47'-6"
AREA	=	12,160 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 65

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY J. HODELL
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 7 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1070
SCALE AS SHOWN
SHEET NO. OF

cisnerose 4/30/2011 4:29:54 PM I:\CHSR\60022962\Task-02_Merced-Fresno\CADD\Struct\Sheet\APS\A1\15% cost reduction submittal\GradeStructureFrom OaklandNW-MF-ST1070.dgn

CALIFORNIA HIGH-SPEED TRAIN

Roadway Plans

"Excerpts of Record Set
For Procurement Purposes Only.
Avenue 17 to Veterans Blvd"

Record Set

15% Design Submittal

Merced to Fresno Section

Volume 2: Caltrans Facilities Modifications

HYBRID Alternative

May 2011

CALIFORNIA
High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
				GENERAL		
		B7190-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 1
		B7191-B	HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B7200-B	HYBRID		INDEX MAP	SHEET 1 OF 2
		B7201-B	HYBRID		INDEX MAP	SHEET 2 OF 2
		~~CB7200-B~~	~~UPRR/SR99 MAINLINE DO/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB7201-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD - INTERCHANGE~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB7202-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~LE GRAND RD - INTERCHANGE~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		~~CB7203-B~~	~~UPRR/SR99 MAINLINE DO/MERCED DO - (HYBRID)~~	~~UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2~~	~~KEY MAP~~	~~SHEET 1 OF 1~~
		CT7190-B	HYBRID	HIGHWAY	TYPICAL CROSS SECTIONS	SHEET 1 OF 2
		~~CT7191-B~~	~~HYBRID~~	~~HIGHWAY~~	~~TYPICAL CROSS SECTIONS~~	~~SHEET 2 OF 2~~
		CT7192-B	HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
				LAYOUT		
~~43~~		~~CT2000-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 8~~	~~LAYOUT~~	~~SHEET 1 OF 4~~
43		CT2001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 1 OF 3
43		CT2002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 2 OF 3
43		CT2003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 3 OF 3
~~44~~		~~CT2004-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - SR 145~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~44~~		~~CT2005-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - SR 145~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~44~~		~~CT2006-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - SR 145~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
~~39~~		~~CT7200-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~LAYOUT~~	~~SHEET 1 OF 4~~
~~39~~		~~CT7201-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~LAYOUT~~	~~SHEET 2 OF 4~~
~~39~~		~~CT7202-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~LAYOUT~~	~~SHEET 3 OF 4~~
~~39~~		~~CT7203-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~LAYOUT~~	~~SHEET 4 OF 4~~
~~35.1~~		~~CT7204-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 1 OF 4~~
~~35.1~~		~~CT7205-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 2 OF 4~~
~~35.1~~		~~CT7206-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 3 OF 4~~
~~35.1~~		~~CT7207-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 4 OF 4~~
~~19~~		~~CT7208-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 1 OF 5~~
~~19~~		~~CT7209-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 2 OF 5~~
~~19~~		~~CT7210-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 3 OF 5~~
~~19~~		~~CT7211-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 4 OF 5~~
~~19~~		~~CT7212-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~LAYOUT~~	~~SHEET 5 OF 5~~
~~19~~		~~CT7213-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP~~	~~LAYOUT~~	~~SHEET 1 OF 2~~
~~19~~		~~CT7214-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP~~	~~LAYOUT~~	~~SHEET 2 OF 2~~
~~39~~		~~CT7215-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2~~	~~LAYOUT~~	~~SHEET 1 OF 3~~
~~39~~		~~CT7216-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2~~	~~LAYOUT~~	~~SHEET 2 OF 3~~
~~39~~		~~CT7217-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2~~	~~LAYOUT~~	~~SHEET 3 OF 3~~
				PROFILE		
~~43~~		~~CT3000-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - AVENUE 8~~	~~PROFILE~~	~~SHEET 1 OF 4~~
43		CT3001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 1 OF 3
43		CT3002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 2 OF 3
43		CT3003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 3 OF 3
~~44~~		~~CT3004-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - SR 145~~	~~PROFILE~~	~~SHEET 1 OF 3~~
~~44~~		~~CT3005-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - SR 145~~	~~PROFILE~~	~~SHEET 2 OF 3~~
~~44~~		~~CT3006-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~GRADE SEPARATION - SR 145~~	~~PROFILE~~	~~SHEET 3 OF 3~~
~~39~~		~~CT8200-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~PROFILE~~	~~SHEET 1 OF 4~~
~~39~~		~~CT8201-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~PROFILE~~	~~SHEET 2 OF 4~~
~~39~~		~~CT8202-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~PROFILE~~	~~SHEET 3 OF 4~~
~~39~~		~~CT8203-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1~~	~~PROFILE~~	~~SHEET 4 OF 4~~
~~35.1~~		~~CT8204-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 1 OF 4~~
~~35.1~~		~~CT8205-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 2 OF 4~~
~~35.1~~		~~CT8206-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 3 OF 4~~
~~35.1~~		~~CT8207-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~SANDY MUSH RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 4 OF 4~~
~~19~~		~~CT8208-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 1 OF 5~~
~~19~~		~~CT8209-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 2 OF 5~~
~~19~~		~~CT8210-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 3 OF 5~~
~~19~~		~~CT8211-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 4 OF 5~~
~~19~~		~~CT8212-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION - LE GRAND RD INTERCHANGE~~	~~PROFILE~~	~~SHEET 5 OF 5~~
~~19~~		~~CT8213-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP~~	~~PROFILE~~	~~SHEET 1 OF 4~~
~~19~~		~~CT8214-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP~~	~~PROFILE~~	~~SHEET 2 OF 4~~
~~19~~		~~CT8215-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP~~	~~PROFILE~~	~~SHEET 3 OF 4~~
~~19~~		~~CT8216-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP~~	~~PROFILE~~	~~SHEET 4 OF 4~~
~~39~~		~~CT8217-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2~~	~~PROFILE~~	~~SHEET 1 OF 3~~
~~39~~		~~CT8218-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2~~	~~PROFILE~~	~~SHEET 2 OF 3~~
~~39~~		~~CT8219-B~~	~~BNSF MAINLINE/MERCED DO - (HYBRID)~~	~~UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2~~	~~PROFILE~~	~~SHEET 3 OF 3~~

~~"Drawings lined Out are not Included for Procurement Purposes Only"~~

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY C. DELOS REYES
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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MERCED TO FRESNO
HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B7190-B
SCALE NONE
SHEET NO. ### OF ###

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ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

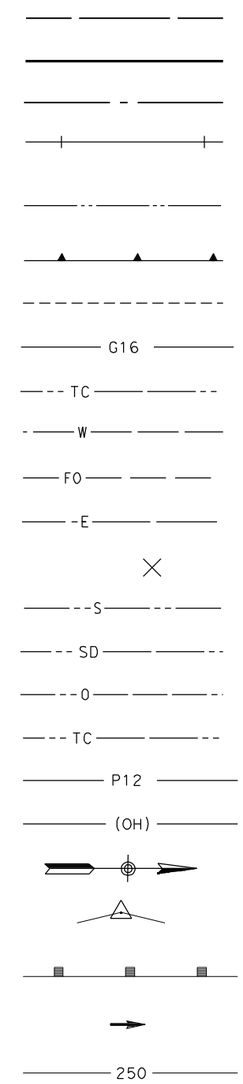
VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS



	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B7191-B
SCALE NO SCALE
SHEET NO. ### OF ###

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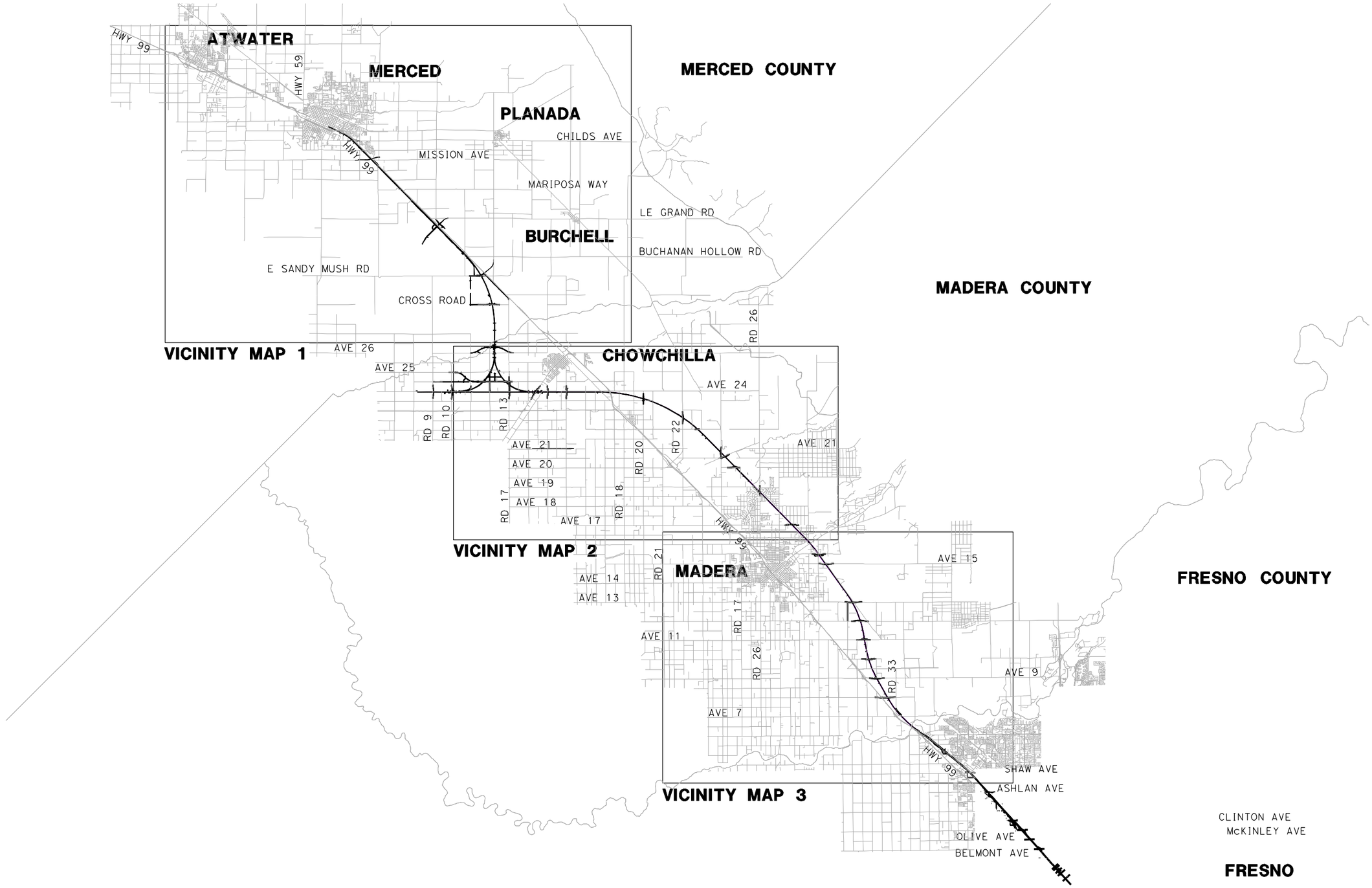

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. AYELE
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
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INDEX MAP
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B7200-B
SCALE NO SCALE
SHEET NO. ### OF ###

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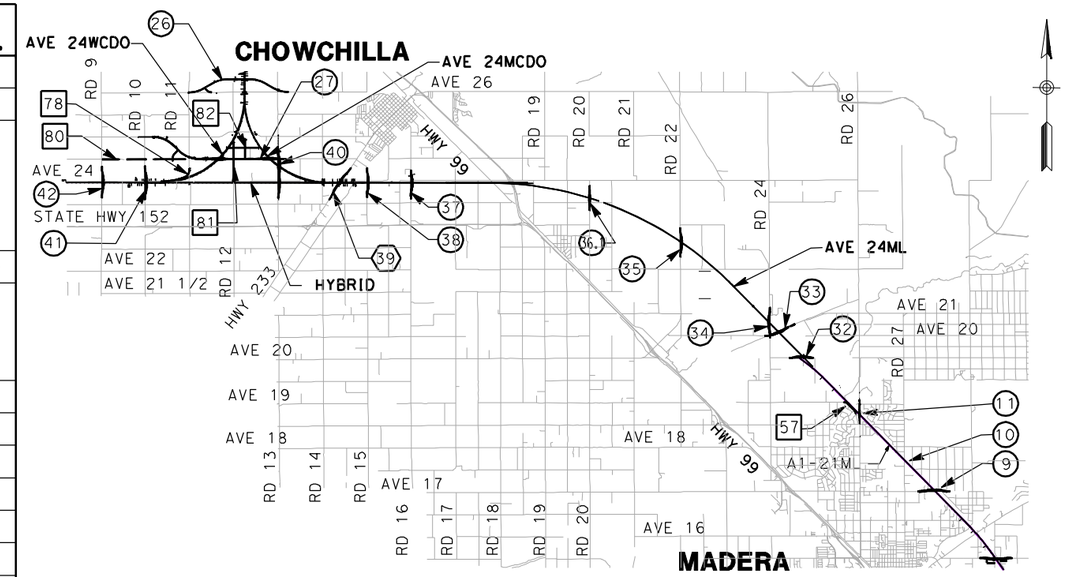
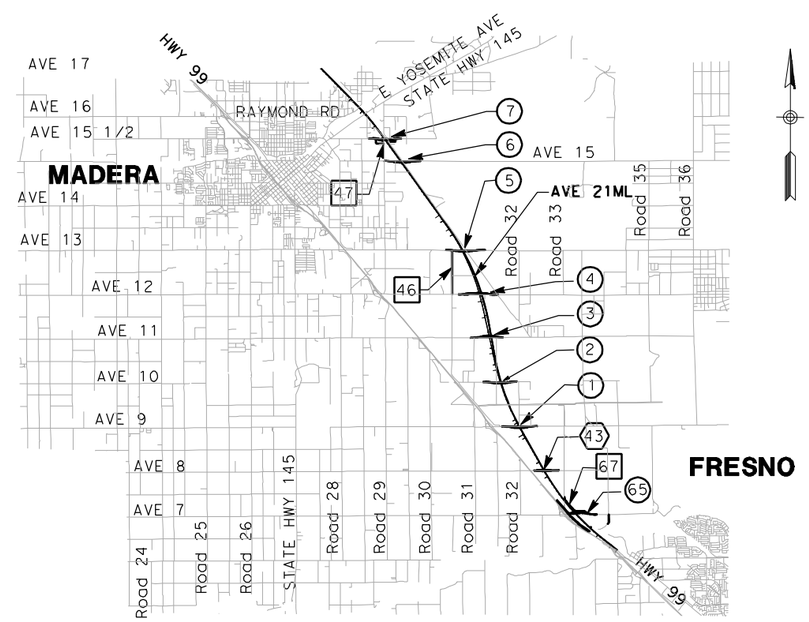
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	
19	GRADE SEPARATION - LE GRAND INTERCHANGE	CT7208-B - CT7214-B	ST1114
25	GRADE SEPARATION - CROSS ROAD	CT5238-B - CT5240-B	ST1136
26	GRADE SEPARATION - AVENUE 26 ALT 1	CT5227-B - CT5236-B	ST1135
	UNDERPASS - AVENUE 26 ALT 2	CT5246-B - CT5248-B	
27	GRADE SEPARATION - AVENUE 25	CT5210-B - CT5221-B	ST1133 - ST1134
32	GRADE SEPARATION - AVENUE 20	CT0113-A - CT0115-A	ST1035
33	GRADE SEPARATION - AVENUE 20 1/2	CT0116-A - CT0118-A	ST1036 - ST1037
34	GRADE SEPARATION - ROAD 24	CT0119-A - CT0121-A	ST1038 - ST1039
35	GRADE SEPARATION - ROAD 22	CT0122-A - CT0124-A	ST1040
35.1	SANDY MUSH RD INTERCHANGE	CT7204-B - CT7207-B	ST1142
36.1	GRADE SEPARATION - ROAD 22	CT0125.1-A - CT0127.1-A	ST1041

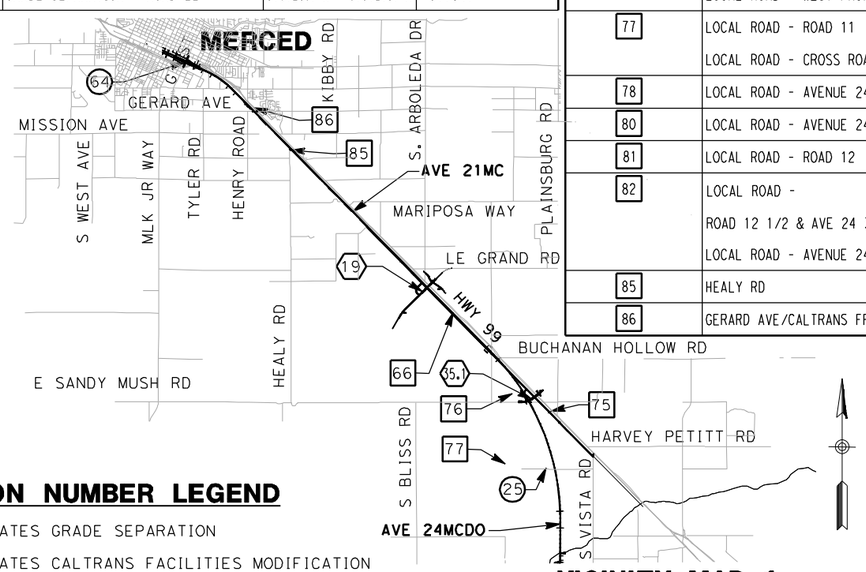
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
37	GRADE SEPARATION - ROAD 16	CT0128-A - CT0130-A	ST1042
38	GRADE SEPARATION - ROAD 15	CT0131-A - CT0133-A	ST1043
39	GRADE SEPARATION - ROBERTSON BLVD (SR233) ALT 1	CT7200-B - CT7203-B	ST1150
	UNDERPASS - ROBERTSON BLVD (SR233) ALT 2	CT7215-B - CT7217-B	
40	GRADE SEPARATION - ROAD 13	CT5203-B - CT5207-B	ST1121 & ST1139
41	GRADE SEPARATION - ROAD 10 ALT 1	CT5200-B - CT5202-B	ST1160
	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	CT5249-B - CT5251-B	ST1160
42	GRADE SEPARATION - ROAD 9	CT0143-A - CT0145-A	ST1120
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	
43	CALTRANS - AVENUE 8	CT2000-A - CT2002-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
57	LOCAL ROAD - HANOVER DR	CR4012-A	
66	PROPOSED WEST FRONTAGE ROAD	CR9204-B - CR9207-B	
67	LOCAL ROAD - ROAD 33	CR4018-A	
75	LOCAL ROAD - WEST FRONTAGE ROAD	CR9200-B - CR9201-B	
76	LOCAL ROAD - SANDY MUSH ROAD	CR9210-B	
	LOCAL ROAD - WEST FRONTAGE ROAD	CR9202-B - CR9203-B	
77	LOCAL ROAD - ROAD 11	CR9208-B - CR9209-B	
	LOCAL ROAD - CROSS ROAD	CR9211-B	
78	LOCAL ROAD - AVENUE 24	CR9217-B - CR9218-B	
80	LOCAL ROAD - AVENUE 24 1/2	CR9212-B - CR9213-B	
81	LOCAL ROAD - ROAD 12	CR9214-B	
82	LOCAL ROAD - ROAD 12 1/2 & AVE 24 3/4	CR9215-B	
	LOCAL ROAD - AVENUE 24 3/4	CR9216-B	
85	HEALY RD	CR9219-B	
86	GERARD AVE/CALTRANS FRONTAGE RD	CR9220-B	



VICINITY MAP 2



VICINITY MAP 3



VICINITY MAP 1

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

FOR ROADWAY STRUCTURES SEE STRUCTURAL INDEX MAPS

9000 0 9000 18000
GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY T. WALTZ
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 02/17/2012

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
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INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B7201-B
SCALE NO SCALE
SHEET NO. ### OF ###

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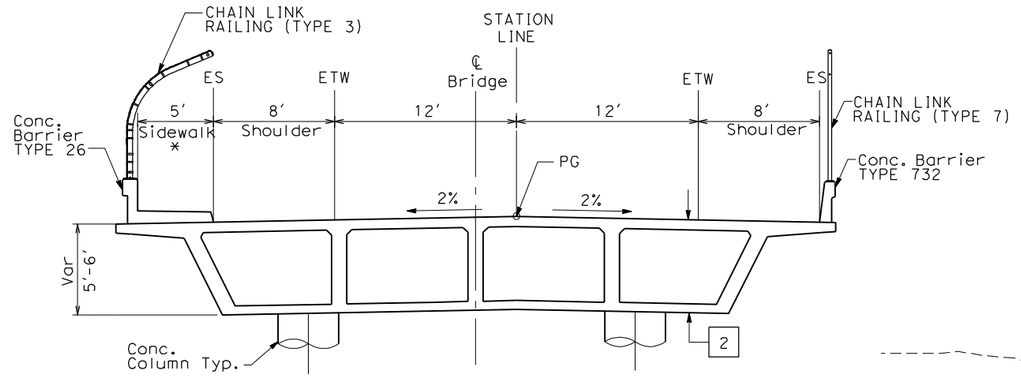
NOTES:

1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.

*SIDEWALK SHOWN ON WESTBOUND SIDE, EASTBOUND SIMILAR SEE LAYOUT SHEETS FOR DETAILS.



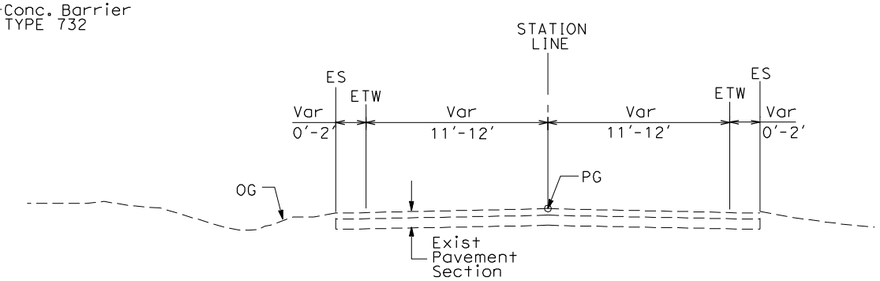
OVERHEAD STRUCTURE

SEE STRUCTURAL PLANS

STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

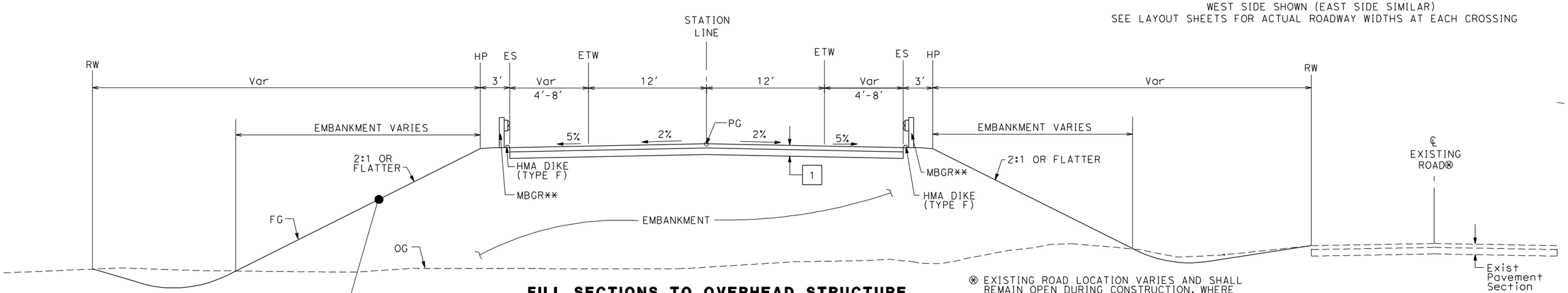
2 — CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)



EXISTING LOCAL ROAD

WEST SIDE SHOWN (EAST SIDE SIMILAR)

SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING

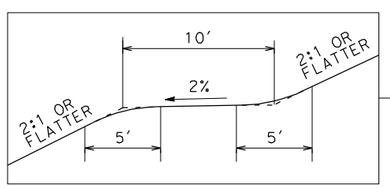


FILL SECTIONS TO OVERHEAD STRUCTURE

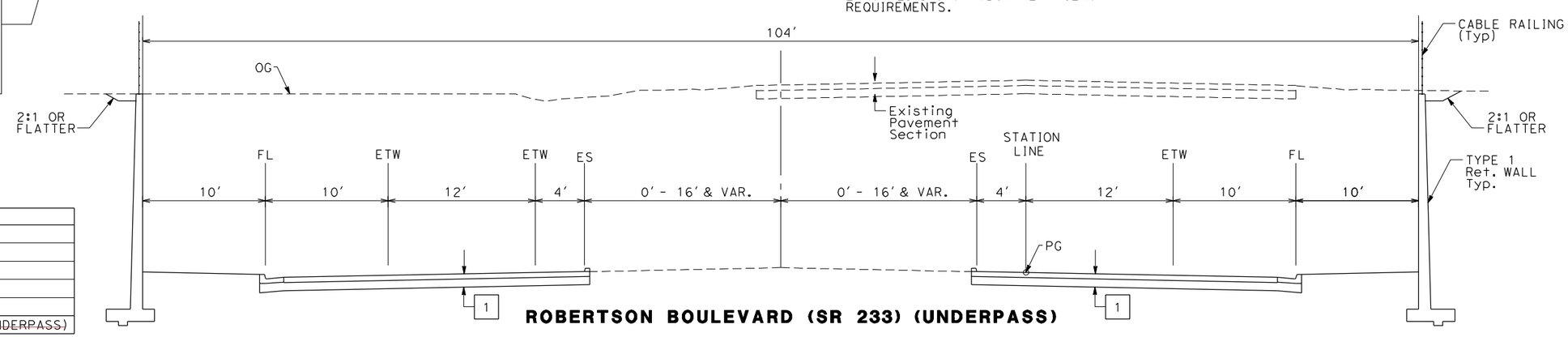
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.

** EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



BENCHING DETAIL



ROBERTSON BOULEVARD (SR 233) (UNDERPASS)

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT A2, AVE 24 WYE OPTION & WEST CHOWCHILLA OPTION:

NO.	STREET NAME
~~1~~	~~SR233 (ROBERTSON BOULEVARD)~~
~~2~~	~~LE GRAND~~
~~3~~	~~E. SANDY MUSH ROAD~~
~~4~~	~~AVENUE 11~~
5	AVENUE 8
~~6~~	~~SR 233 (ROBERTSON BOULEVARD UNDERPASS)~~

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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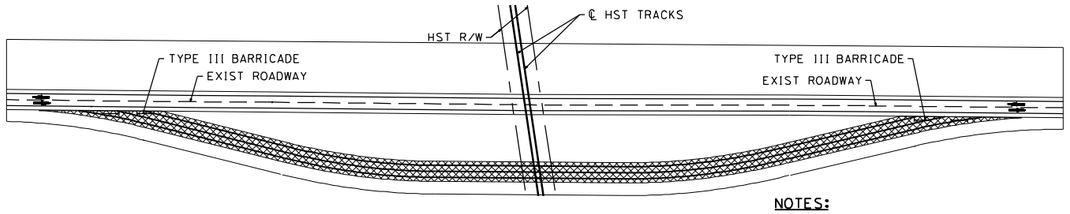
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
HIGHWAY
TYPICAL CROSS SECTIONS
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT7190-B
SCALE NTS
SHEET NO. ### OF ###

4/27/2011 7:20:02 PM p:\60022962\task 02_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 2b - hybrid caltrans facilites\Typical Section\CT7190-B.dgn
ayeled

STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN
CENTERED PROPOSED ALIGNMENT

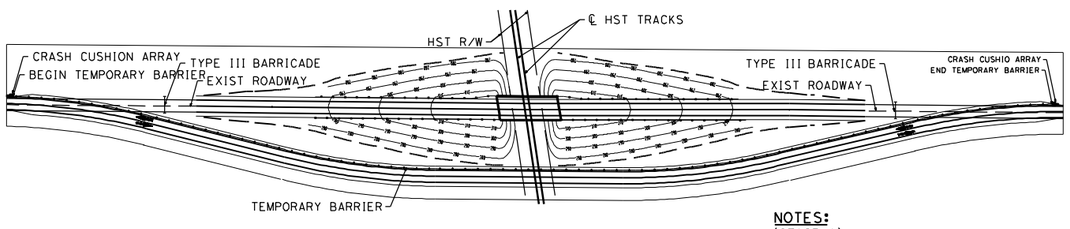


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT TEMPORARY DETOUR ROAD

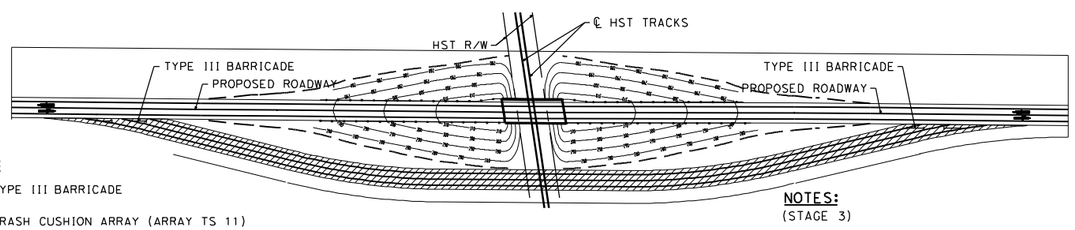


STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO TEMPORARY DETOUR ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 3)

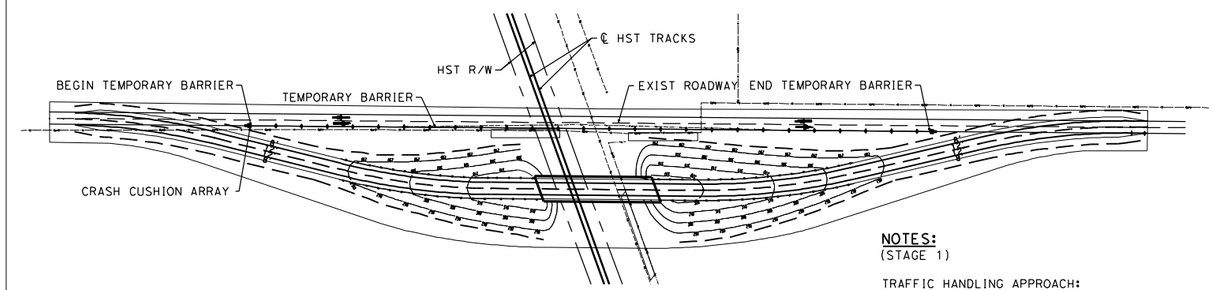
NOTES:
(STAGE 3)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-REMOVE TEMPORARY DETOUR ROAD

LEGEND:
- TYPE III BARRICADE
- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- CONSTRUCT TEMPORARY ROAD
- REMOVE TEMPORARY ROAD

STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN
SHIFTED PROPOSED ALIGNMENT

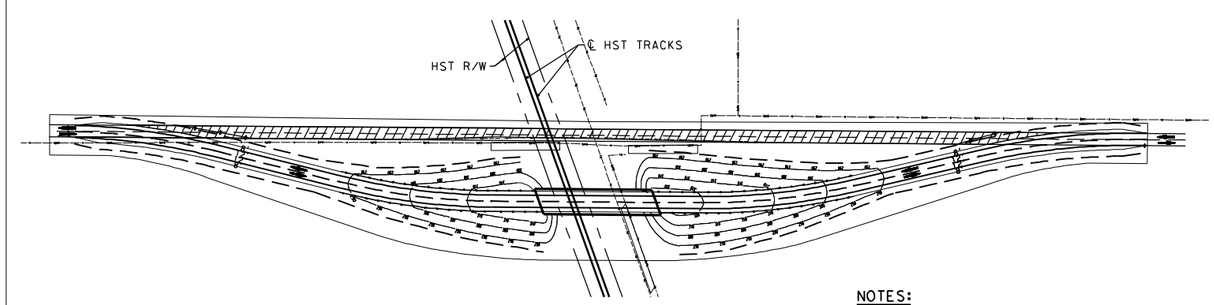


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE BASE AND SURFACING OF EXIST ROAD

LEGEND:
- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
DRAWN BY
CHECKED BY
IN CHARGE
DATE 07/27/2011

RECORD SET
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AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL STAGE CONSTRUCTION &
TRAFFIC HANDLING APPROACH
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. CT7192-B
SCALE NO SCALE
SHEET NO. ### OF ###

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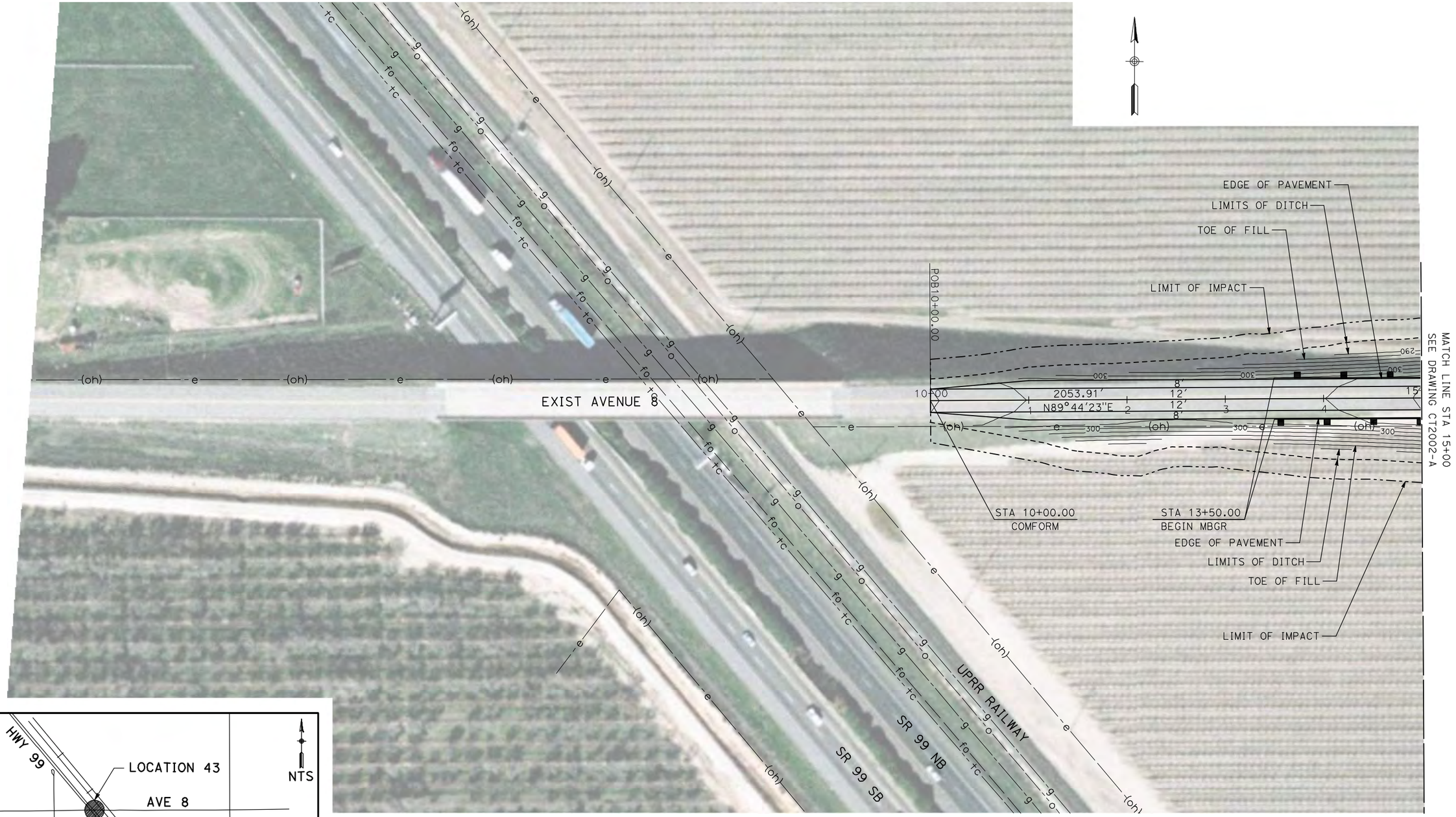

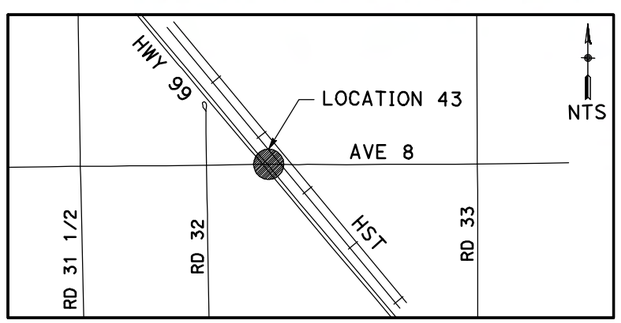

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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2020 L Street, Suite 300
Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 8
LAYOUT
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT2001-A
SCALE AS SHOWN
SHEET NO. OF ###

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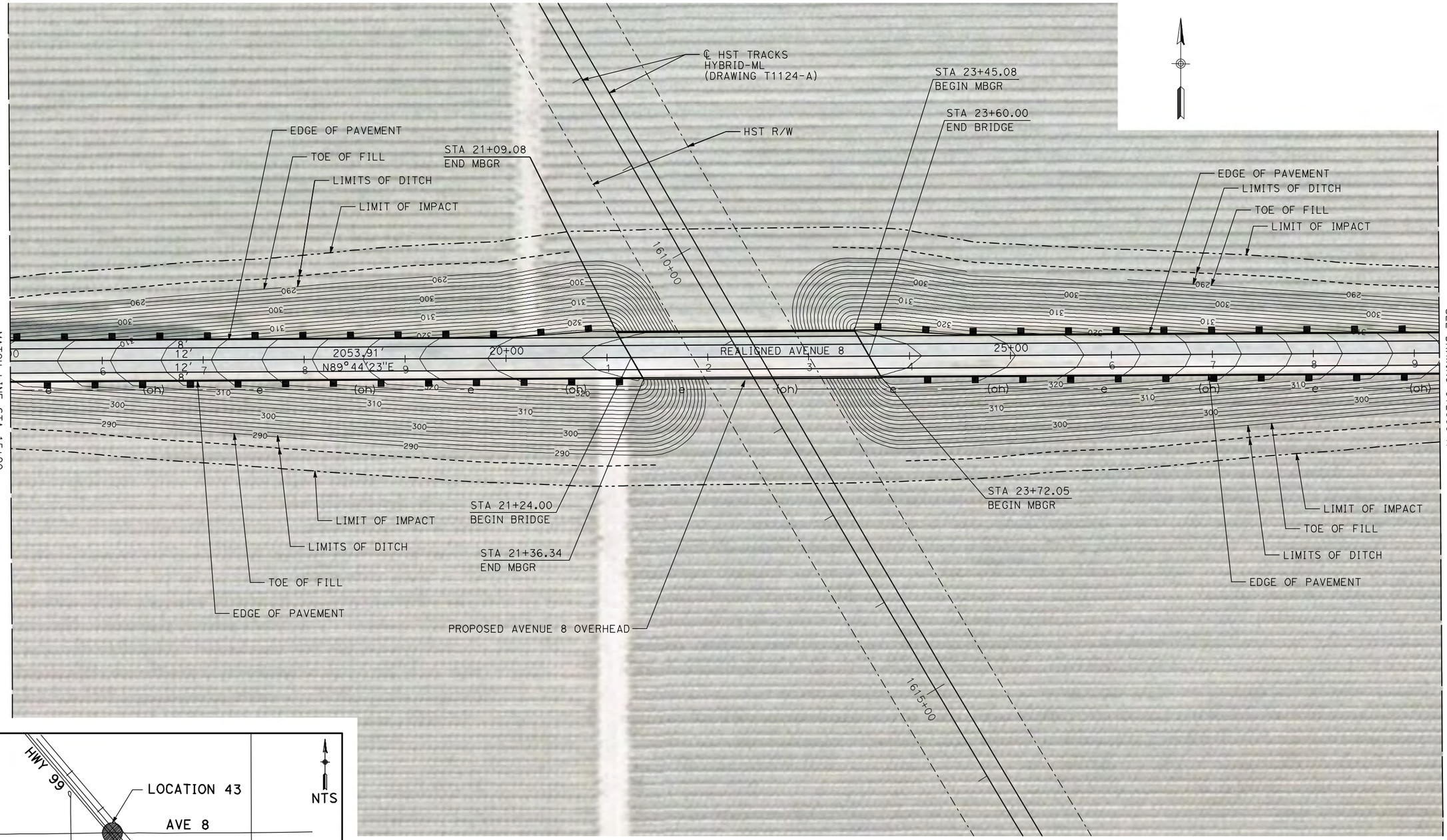

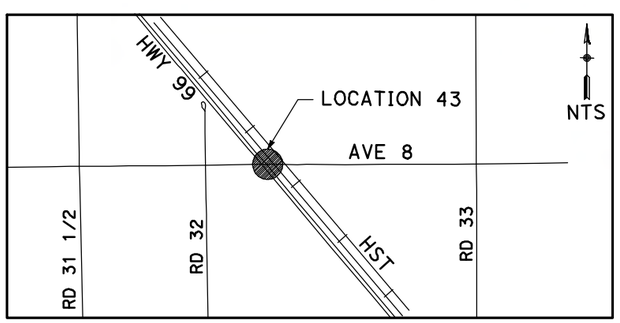

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 8
LAYOUT
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT2002-A
SCALE AS SHOWN
SHEET NO. OF ###

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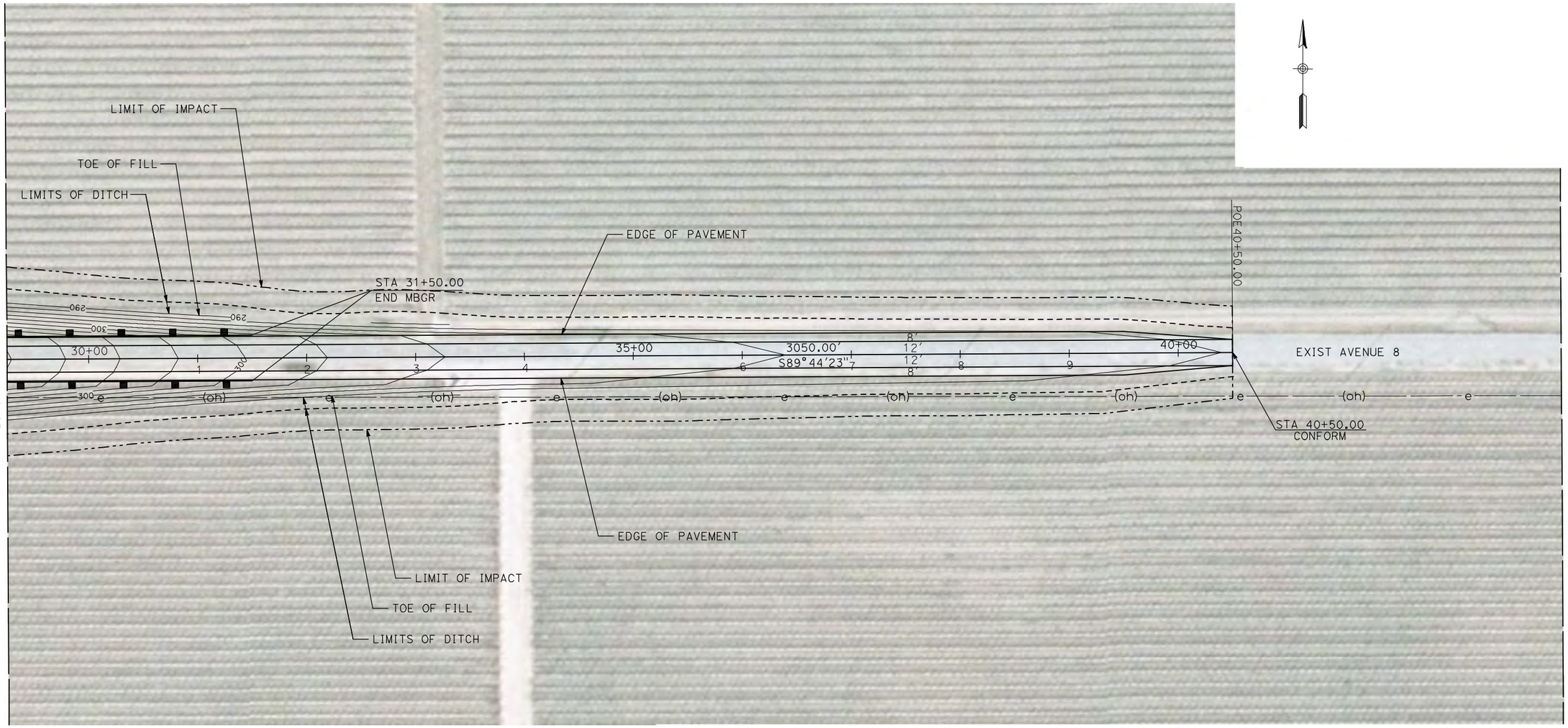

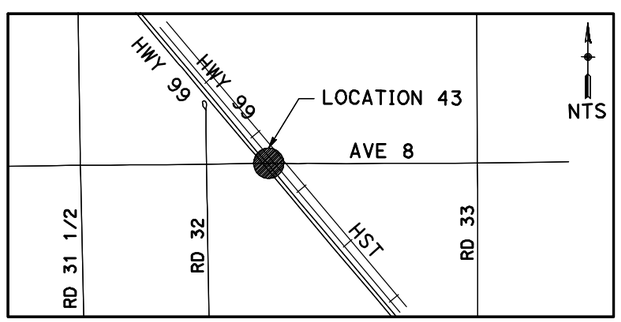

NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.

50 0 50 100
1"=50'

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - HYBRID
GRADE SEPARATION - AVENUE 8
LAYOUT
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT2003-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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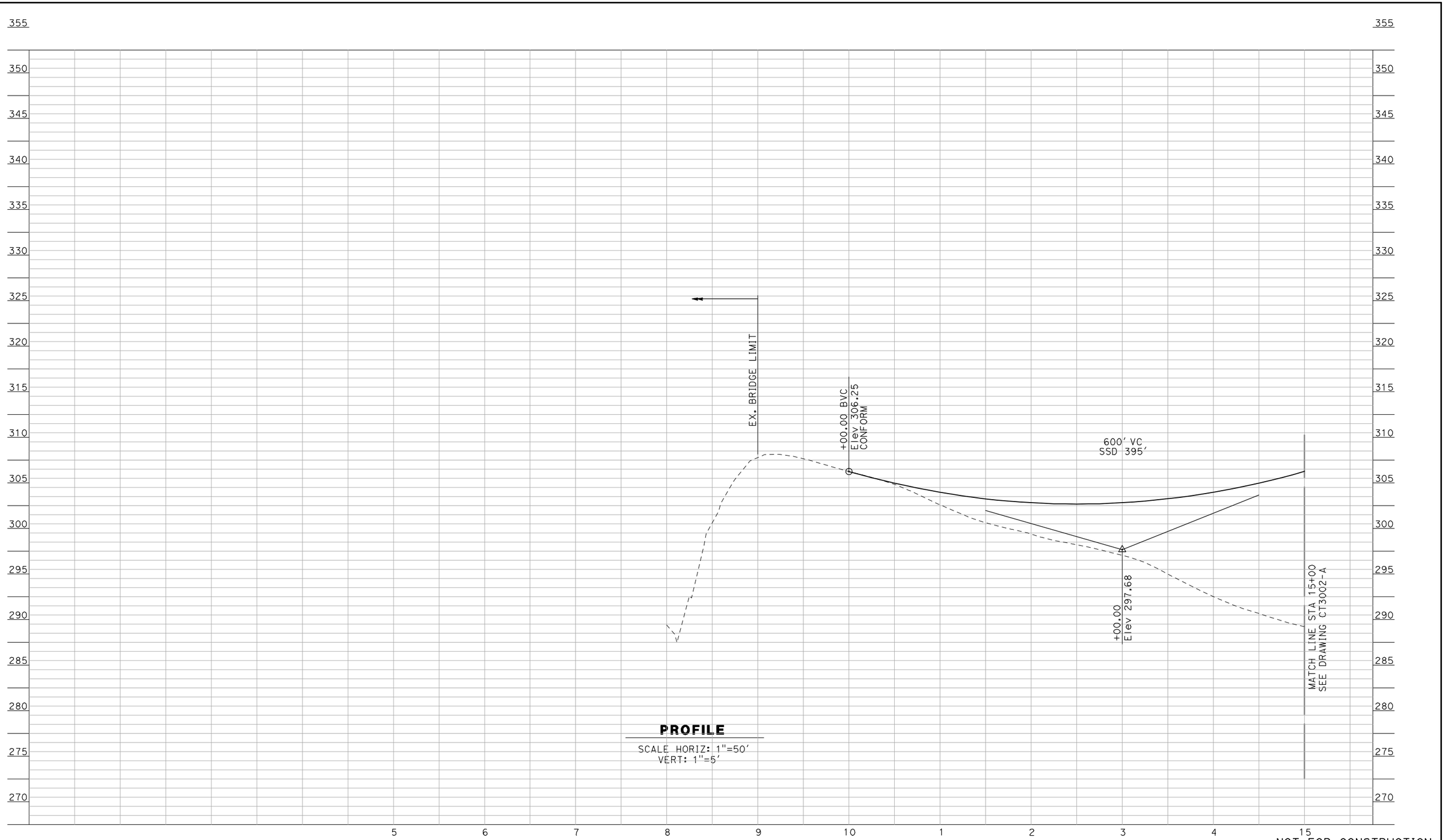

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY F. DEMARCO
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IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 8
PROFILE
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3001-A
SCALE AS SHOWN
SHEET NO. OF ###

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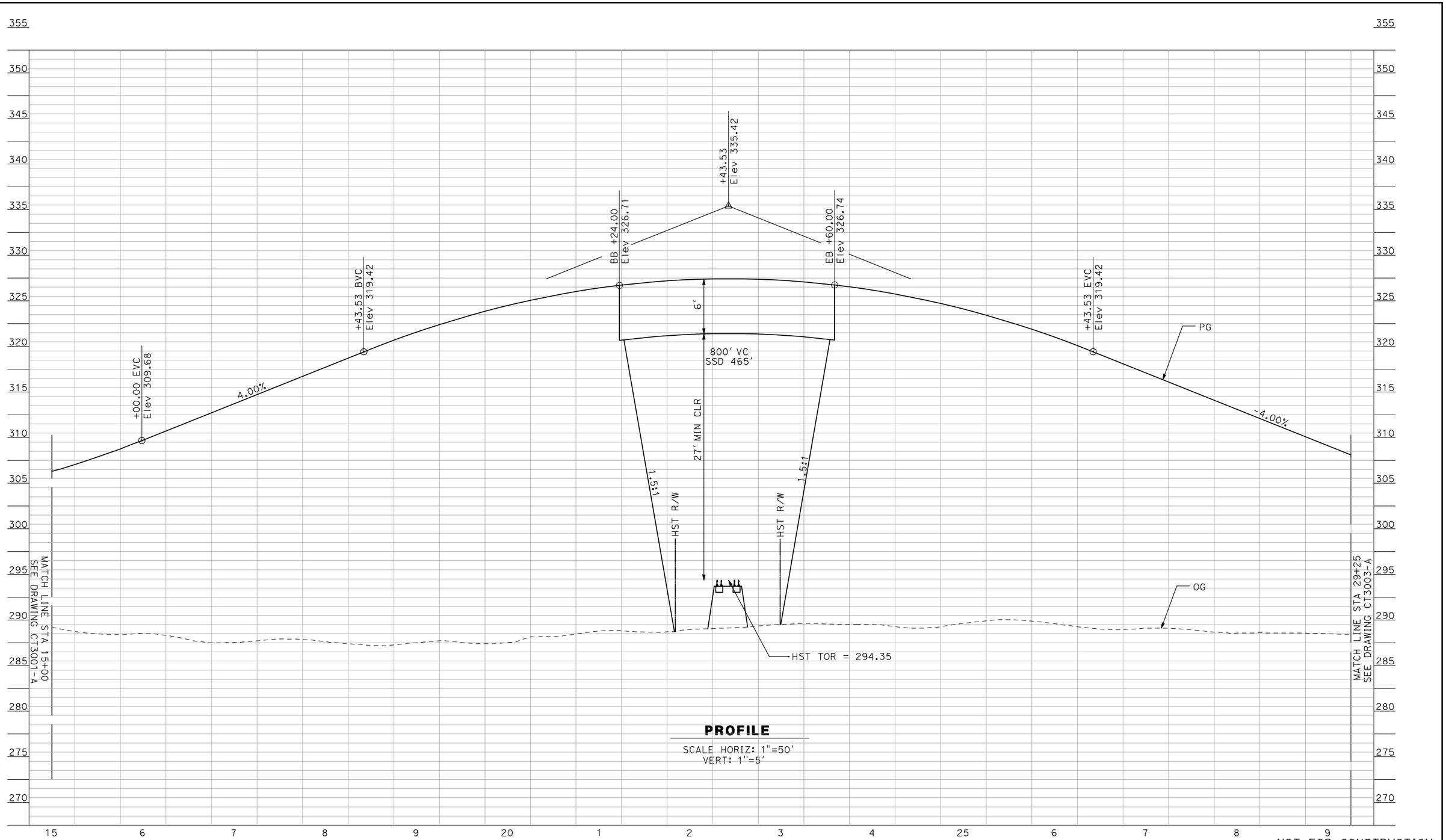

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

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FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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CHECKED BY A. SILVER
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DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 8
PROFILE
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3002-A
SCALE AS SHOWN
SHEET NO. OF ###

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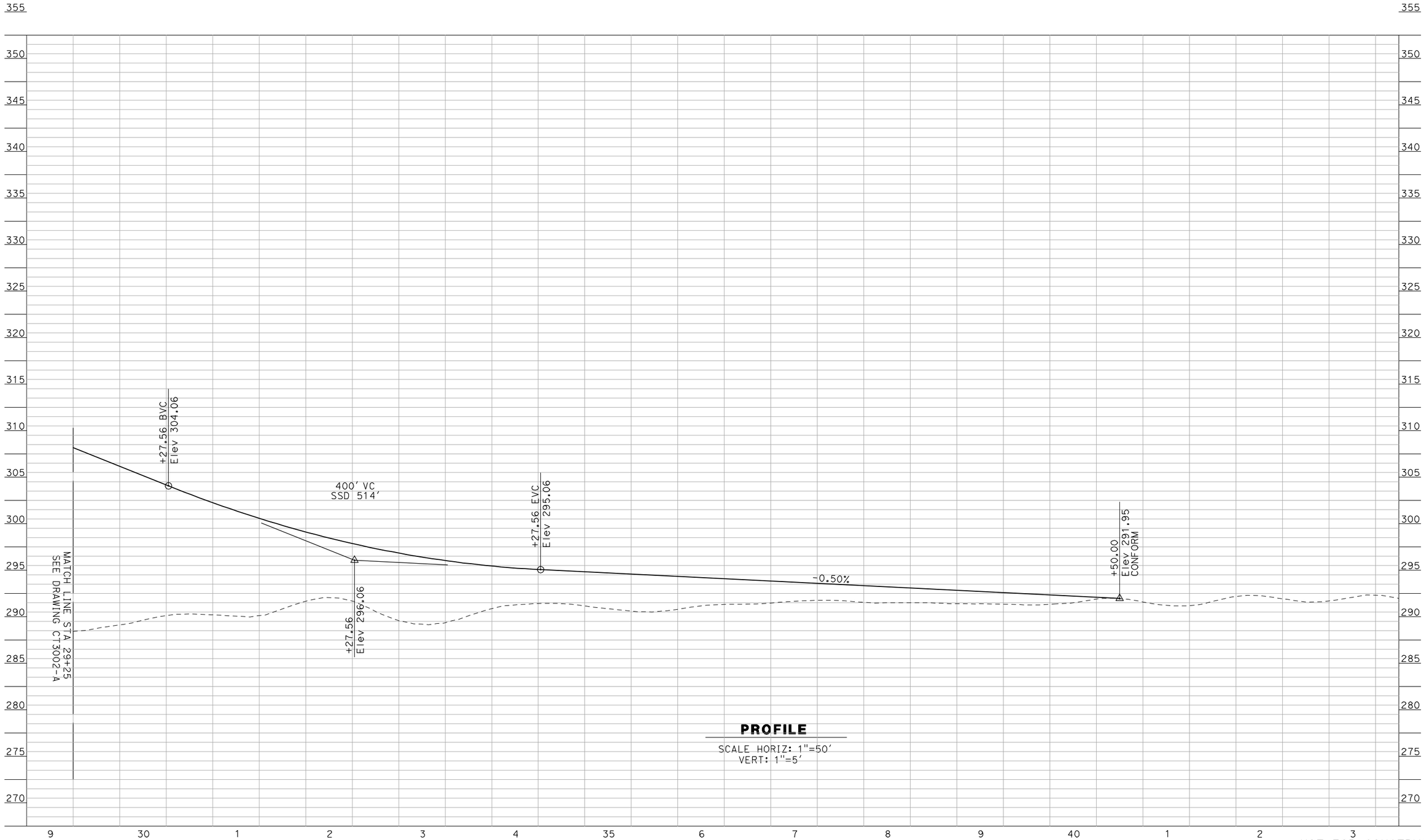

PROFILE

SCALE HORIZ: 1"=50'
VERT: 1"=5'

NOT FOR CONSTRUCTION
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAINLINE - HYBRID
GRADE SEPARATION - AVENUE 8
PROFILE
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3003-A
SCALE AS SHOWN
SHEET NO. OF ###

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SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
		ROADWAY BRIDGE STRUCTURE PLAN			
		HYBRID ALTERNATIVE/AVENUE 24			
			GENERAL		
	SB1311	HYBRID ALTERNATIVE	AVENUE 24	INDEX OF DRAWINGS	SHEET 1 OF 1
	SB1312	HYBRID ALTERNATIVE	AVENUE 24	STRUCTURE INDEX MAP	SHEET 1 OF 1
			OVERHEAD BRIDGES		
	ST1000	BNSF MAIN LINE	AVENUE 21	AVENUE 8 OVERHEAD	PLANNING STUDY
	~~ST1150~~	~~BNSF MAIN LINE/HYBRID~~	~~AVENUE 24~~	~~SR 233 OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1114~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~LE GRAND ROAD OVERHEAD~~	~~PLANNING STUDY~~
	~~ST1181~~	~~UPRR/SR 99 MERCED CONNECTION~~	~~AVENUE 21~~	~~SR 99 SOUTHBOUND OVERHEAD~~	~~PLANNING STUDY~~

"Drawings lined Out are not
Included for Procurement Purposes Only"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. Boone
DATE 04/29/2011

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 24
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1311
SCALE No scale
SHEET NO. OF

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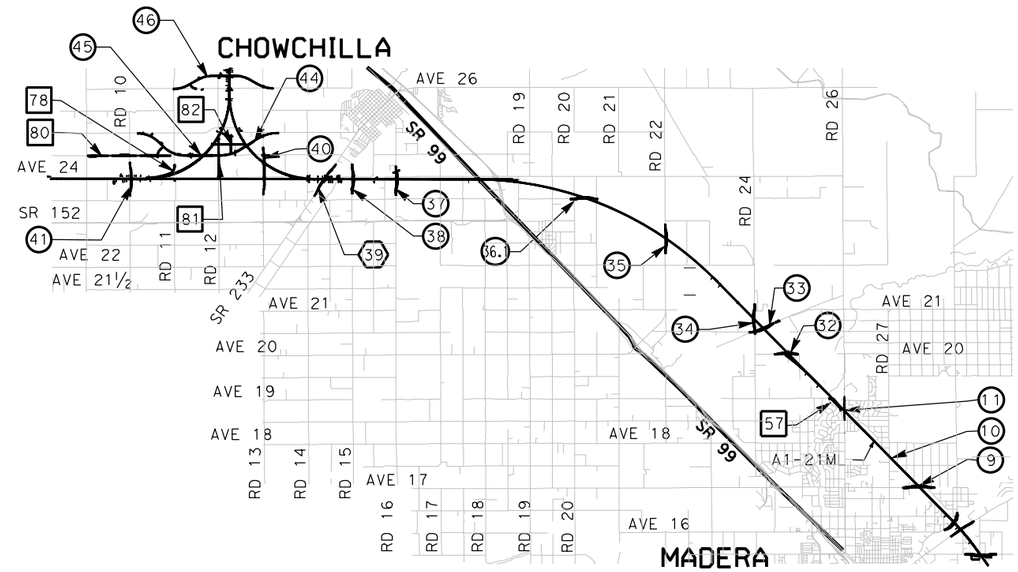
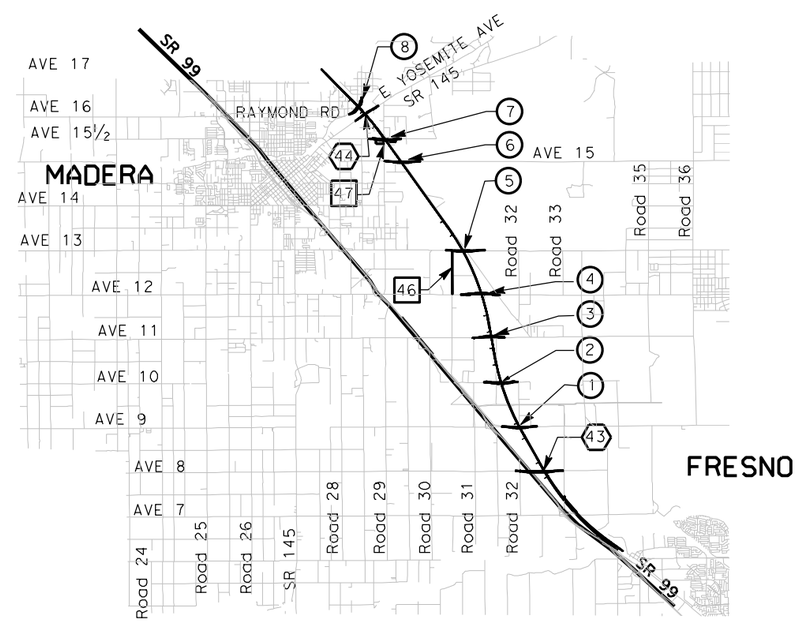
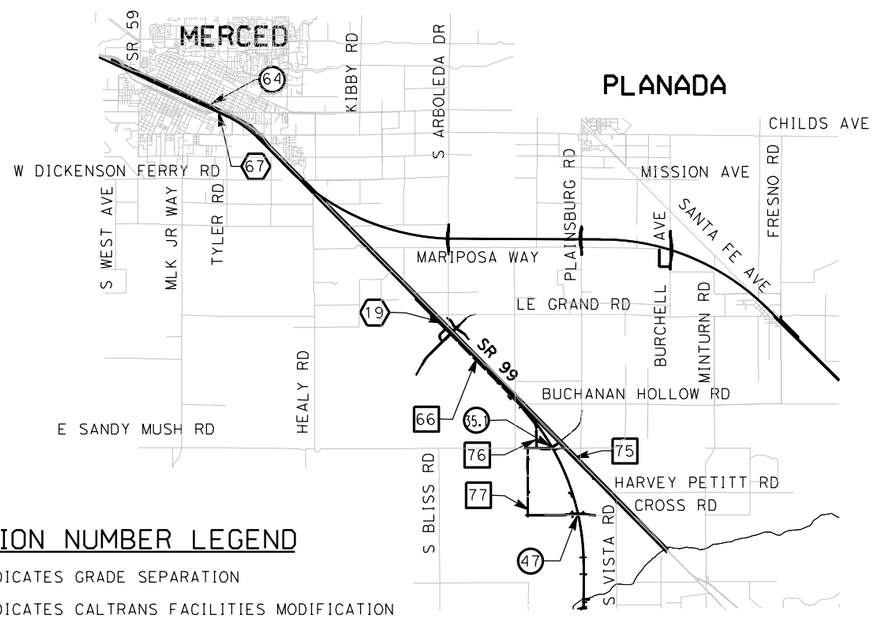
LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
43	AVENUE 8 OVERHEAD	ST1000	CT2000-A - CT2002-A
39	SR 233 OVERHEAD	ST1150	CT7200-B - CT7203-B
19	LE GRAND ROAD OVERHEAD	ST1114	CT7208-B - CT7214-B
67	SR 99 SOUTHBOUND OVERHEAD	ST1181	



VICINITY MAP 2



VICINITY MAP 3



VICINITY MAP 1

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

9000 0 9000 18000

GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HR	JR	AB	

DESIGNED BY H. Lee
DRAWN BY E. CISNEROS
CHECKED BY J. ZANDIAN
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
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Sacramento, CA 95811

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID ALTERNATIVE
AVENUE 24
STRUCTURE INDEX MAP
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1312
SCALE As shown
SHEET NO. OF

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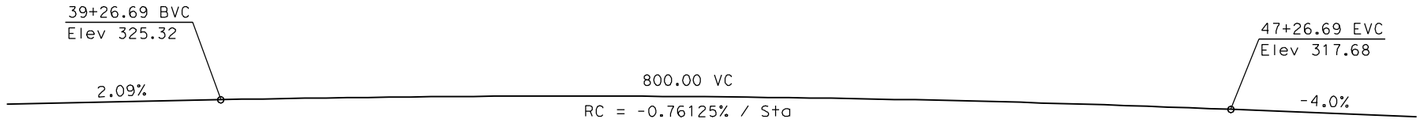
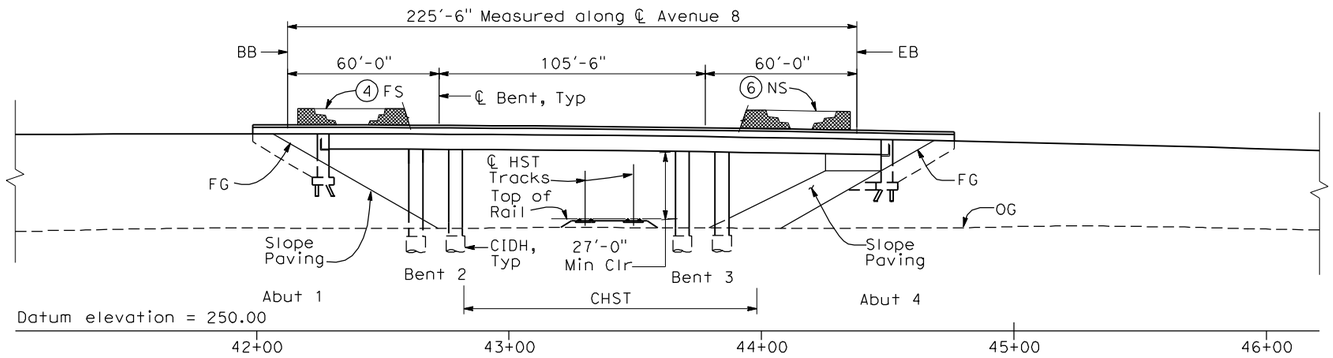
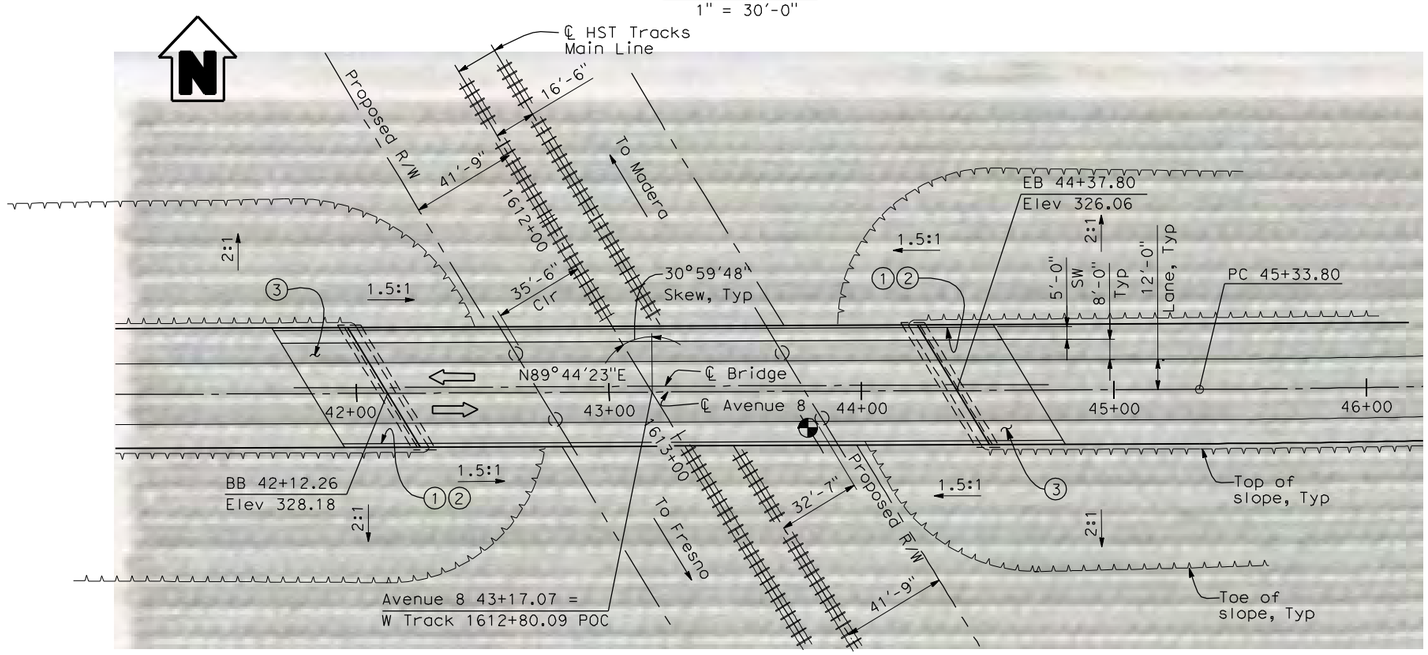
cisnerose



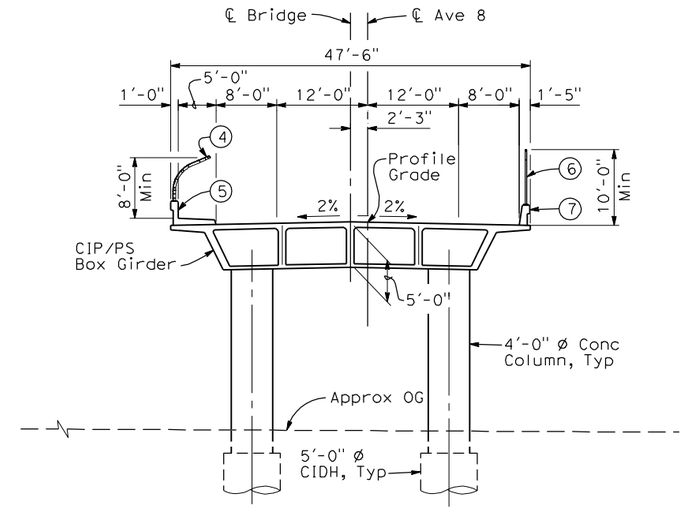
PROFILE GRADE
NTS



ELEVATION
1" = 30'-0"



PLAN
1" = 30'-0"



TYPICAL SECTION
1"=10'-0"

NOTES:

1. Paint "Bridge No. XX-XX"
2. Paint "Avenue 8 OH"
3. Structure Approach Slab Type N (30S)
4. Chain Link Railing Type 3
5. Concrete Barrier Type 26 (Mod)
6. Chain Link Railing Type 7 (Mod)
7. Concrete Barrier Type 732
8. Bearing of Avenue 8 to be determined.
9. Existing underground and overhead utilities to be determined.

LEGEND:

⇦ Direction of traffic

◐ Point of minimum vertical clearance

DATE OF ESTIMATE		
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	225'-6"
WIDTH	=	47'-6"
AREA	=	10,713 ft²
COST/ □FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

LOCATION 43

30 0 30 60
1"=30'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET 15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

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CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE
AVENUE 21
AVENUE 8 OVERHEAD
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1000
SCALE As shown
SHEET NO. OF

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CALIFORNIA HIGH-SPEED TRAIN

Roadway Plans

"Excerpts of Record Set
For Procurement Purposes Only.
Avenue 17 to Veterans Blvd"

Record Set

15% Design Submittal

Merced to Fresno Section

Volume 3: Local Road Relocations

HYBRID Alternative

May 2011

CALIFORNIA
High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
GENERAL						
		B9190-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 1
		B9191-B	HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B9200-B	HYBRID		INDEX MAP	SHEET 1 OF 2
		B9201-B	HYBRID		INDEX MAP	SHEET 2 OF 2
		~~CB9200-B~~	~~BNSF MAINLINE/WYE/MERCED DO - (HYBRID)~~	~~LOCAL & FRONTAGE RD~~	~~KEY MAP~~	~~SHEET 1 OF 2~~
		~~CB9201-B~~	~~UPRR/SR99 WYE/MERCED DO - (HYBRID)~~	~~LOCAL & FRONTAGE RD~~	~~KEY MAP~~	~~SHEET 2 OF 2~~
		CR9190-B	HYBRID	LOCAL ROADS	TYPICAL CROSS SECTIONS	SHEET 1 OF 2
		~~CR9191-B~~	~~HYBRID~~	~~LOCAL ROADS~~	~~TYPICAL CROSS SECTIONS~~	~~SHEET 2 OF 2~~
		CR9192-B	HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
LAYOUT						
46		CR4000-A	BNSF MAIN LINE - (HYBRID)	LOCAL ROAD - ROAD 30 1/2	LAYOUT	SHEET 1 OF 1
47		CR4001-A	BNSF MAIN LINE - (HYBRID)	LOCAL ROAD - ROAD 29	LAYOUT	SHEET 1 OF 1
~~57~~		~~CR4012-A~~	~~BNSF MAIN LINE - (HYBRID)~~	~~LOCAL ROAD - HANOVER~~	~~LAYOUT~~	~~SHEET 1 OF 1~~
67		CR4018-A	BNSF MAIN LINE - (HYBRID)	LOCAL ROAD - ROAD 33	LAYOUT	SHEET 1 OF 1
~~75~~		~~CR9200-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~75~~		~~CR9201-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~76~~		~~CR9202-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~76~~		~~CR9203-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~66~~		~~CR9204-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~PROPOSED WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~66~~		~~CR9205-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~PROPOSED WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~66~~		~~CR9206-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~PROPOSED WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~66~~		~~CR9207-B~~	~~UPRR/SR99 MERCED - (HYBRID)~~	~~PROPOSED WEST FRONTAGE ROAD~~	~~LAYOUT~~	
~~77~~		~~CR9208-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - ROAD 11~~	~~LAYOUT~~	
~~77~~		~~CR9209-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - ROAD 11~~	~~LAYOUT~~	
~~76~~		~~CR9210-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - SANDY MUSH ROAD~~	~~LAYOUT~~	~~STA 30+00 TO STA 33+00~~
~~77~~		~~CR9211-B~~	~~UPRR/SR99 MERCED DO - (HYBRID)~~	~~LOCAL ROAD - CROSS ROAD~~	~~LAYOUT~~	~~STA 120+00 TO STA 140+00~~
80		CR9212-B	UPRR/SR99 MAINLINE/WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24 1/2	LAYOUT	
80		CR9213-B	UPRR/SR99 WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24 1/2	LAYOUT	
81		CR9214-B	UPRR/SR99 MAINLINE/WYE DO - (HYBRID)	LOCAL ROAD - ROAD 12	LAYOUT	STA 50+00 TO 95+58.26 & STA 71+00 TO 81+00
82		CR9215-B	UPRR/SR99 MERCED DO - (HYBRID)	LOCAL ROAD - ROAD 12 1/2 & AVENUE 24 3/4	LAYOUT	STA 81+00 TO STA 96+00
82		CR9216-B	UPRR/SR99 MERCED/WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24 3/4	LAYOUT	STA 96+00 TO STA 109+18.38
78		CR9217-B	BNSF MAINLINE /WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24	LAYOUT	STA 75+00 TO STA 100+00
78		CR9218-B	BNSF MAINLINE/WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24	LAYOUT	STA 100+00 TO STA 116+86.44
85		CR9219-B	UPRR/SR99 MERCED - (HYBRID)	HEALY ROAD	LAYOUT	
86		CR9220-B	UPRR/SR99 MERCED - (HYBRID)	GERARD AVENUE/CALTRANS FRONTAGE ROAD	LAYOUT	

"Drawings lined Out are not
Included for Procurement Purposes Only"

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IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL
INDEX OF DRAWINGS
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B9190-B
SCALE NONE
SHEET NO. ### OF ###

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ABBREVIATIONS

ALIGNMENT

HORIZONTAL

BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR

VERTICAL

BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
℄	CENTER LINE
CL	CENTERLINE, CLASS
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER OPTIC
UPRR	UNION PACIFIC RAILROAD
VAR	VARIES
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
G16	GAS LINE (16")
TC	COMMUNICATION LINE
W	WATER LINE
FO	FIBER OPTIC LINE
E	ELECTRICAL LINE
	ELECTRICAL TOWER
S	SEWER LINE
SD	STORM DRAIN LINE
O	FUEL LINE
TC	TELEPHONE LINE
P12	PETROLEUM LINE (12")
(OH)	OVERHEAD
	NORTH ARRROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
250	PROPOSED CONTOUR

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DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL
ABBREVIATIONS, SYMBOLS AND NOTES
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B9191-B
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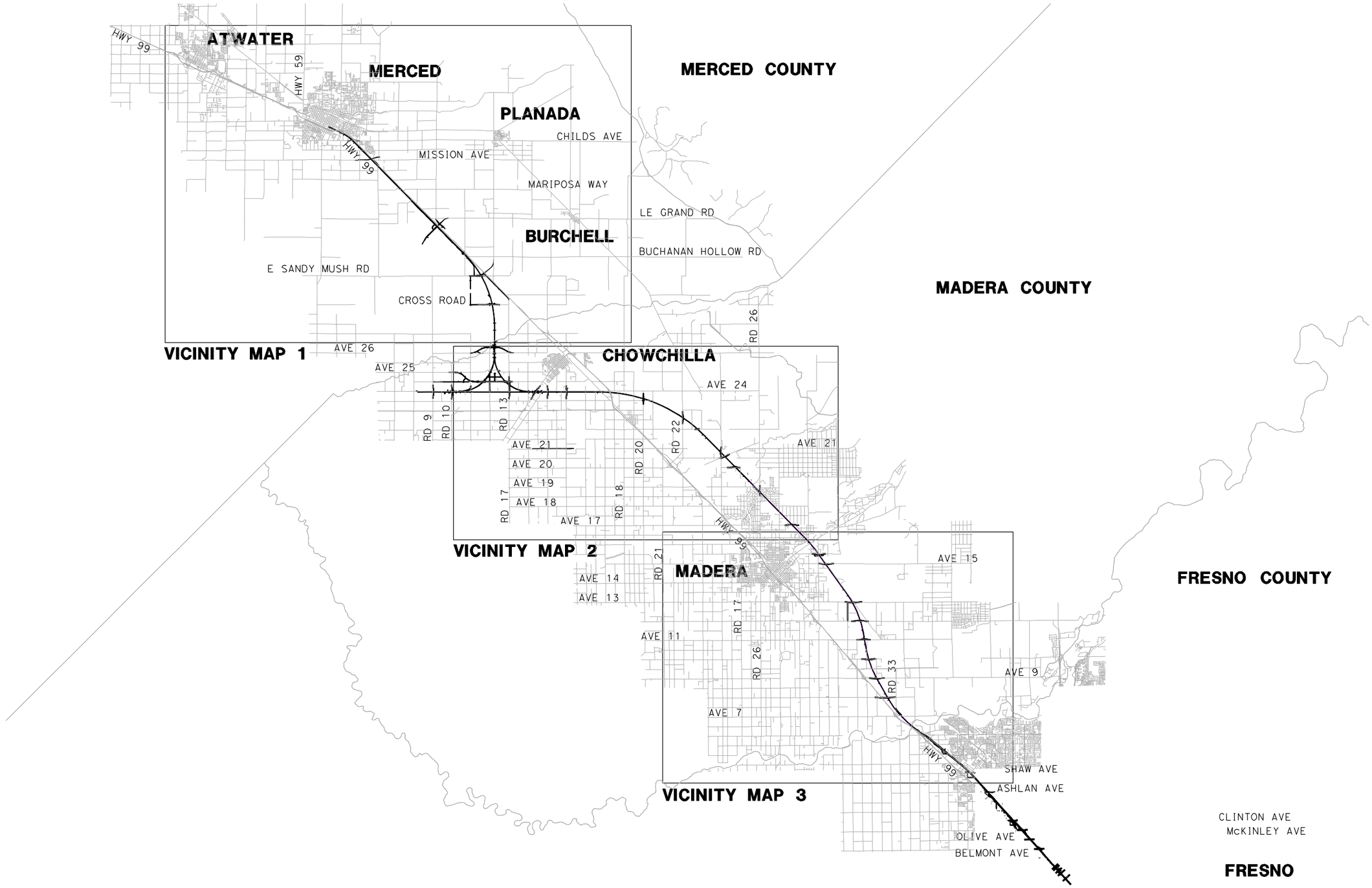

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID

INDEX MAP
SHEET 1 OF 2

CONTRACT NO. HSR06-007
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SCALE NO SCALE
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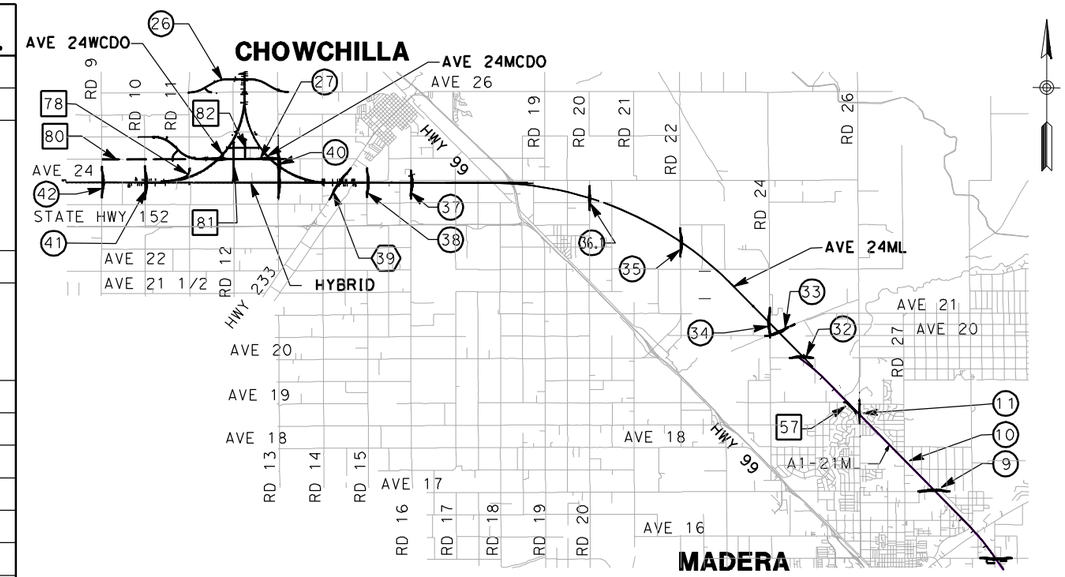
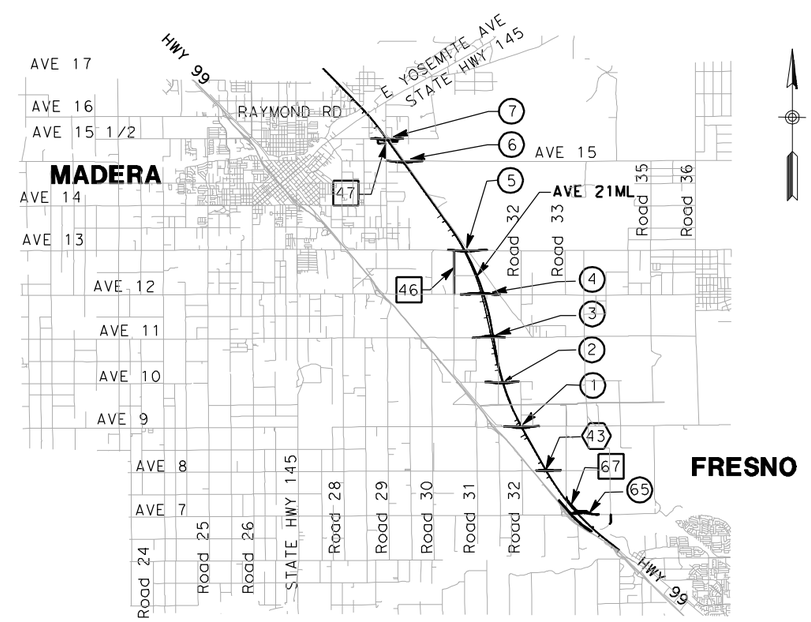
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	
19	GRADE SEPARATION - LE GRAND INTERCHANGE	CT7208-B - CT7214-B	ST1114
25	GRADE SEPARATION - CROSS ROAD	CT5238-B - CT5240-B	ST1136
26	GRADE SEPARATION - AVENUE 26 ALT 1	CT5227-B - CT5236-B	ST1135
	UNDERPASS - AVENUE 26 ALT 2	CT5246-B - CT5248-B	
27	GRADE SEPARATION - AVENUE 25	CT5210-B - CT5221-B	ST1133 - ST1134
32	GRADE SEPARATION - AVENUE 20	CT0113-A - CT0115-A	ST1035
33	GRADE SEPARATION - AVENUE 20 1/2	CT0116-A - CT0118-A	ST1036 - ST1037
34	GRADE SEPARATION - ROAD 24	CT0119-A - CT0121-A	ST1038 - ST1039
35	GRADE SEPARATION - ROAD 22	CT0122-A - CT0124-A	ST1040
35.1	SANDY MUSH RD INTERCHANGE	CT7204-B - CT7207-B	ST1142
36.1	GRADE SEPARATION - ROAD 22	CT0125.1-A - CT0127.1-A	ST1041

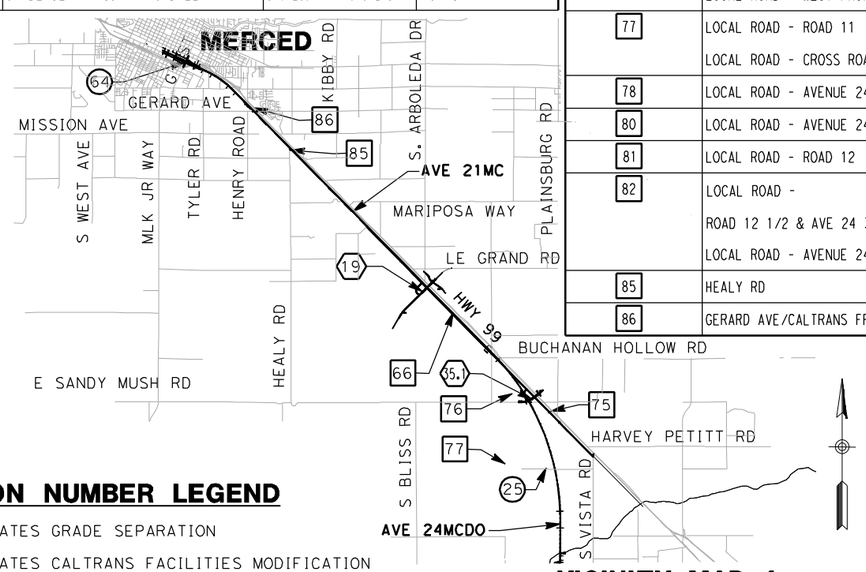
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
37	GRADE SEPARATION - ROAD 16	CT0128-A - CT0130-A	ST1042
38	GRADE SEPARATION - ROAD 15	CT0131-A - CT0133-A	ST1043
39	GRADE SEPARATION - ROBERTSON BLVD (SR233) ALT 1	CT7200-B - CT7203-B	ST1150
	UNDERPASS - ROBERTSON BLVD (SR233) ALT 2	CT7215-B - CT7217-B	
40	GRADE SEPARATION - ROAD 13	CT5203-B - CT5207-B	ST1121 & ST1139
41	GRADE SEPARATION - ROAD 10 ALT 1	CT5200-B - CT5202-B	ST1160
	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	CT5249-B - CT5251-B	ST1160
42	GRADE SEPARATION - ROAD 9	CT0143-A - CT0145-A	ST1120
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	
43	CALTRANS - AVENUE 8	CT2000-A - CT2002-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
57	LOCAL ROAD - HANOVER DR	CR4012-A	
66	PROPOSED WEST FRONTAGE ROAD	CR9204-B - CR9207-B	
67	LOCAL ROAD - ROAD 33	CR4018-A	
75	LOCAL ROAD - WEST FRONTAGE ROAD	CR9200-B - CR9201-B	
76	LOCAL ROAD - SANDY MUSH ROAD	CR9210-B	
	LOCAL ROAD - WEST FRONTAGE ROAD	CR9202-B - CR9203-B	
77	LOCAL ROAD - ROAD 11	CR9208-B - CR9209-B	
	LOCAL ROAD - CROSS ROAD	CR9211-B	
78	LOCAL ROAD - AVENUE 24	CR9217-B - CR9218-B	
80	LOCAL ROAD - AVENUE 24 1/2	CR9212-B - CR9213-B	
81	LOCAL ROAD - ROAD 12	CR9214-B	
82	LOCAL ROAD - ROAD 12 1/2 & AVE 24 3/4	CR9215-B	
	LOCAL ROAD - AVENUE 24 3/4	CR9216-B	
85	HEALY RD	CR9219-B	
86	GERARD AVE/CALTRANS FRONTAGE RD	CR9220-B	



VICINITY MAP 2



VICINITY MAP 3



VICINITY MAP 1

LOCATION NUMBER LEGEND

(X) - INDICATES GRADE SEPARATION

⟨X⟩ - INDICATES CALTRANS FACILITIES MODIFICATION

[X] - INDICATES LOCAL ROAD RELOCATION

FOR ROADWAY STRUCTURES SEE STRUCTURAL INDEX MAPS

9000 0 9000 18000
GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
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IN CHARGE A. BOONE
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
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INDEX MAP
SHEET 2 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. B9201-B
SCALE NO SCALE
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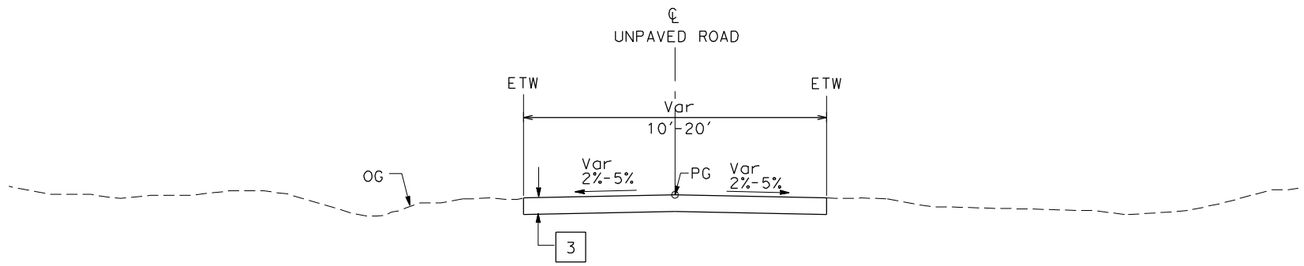
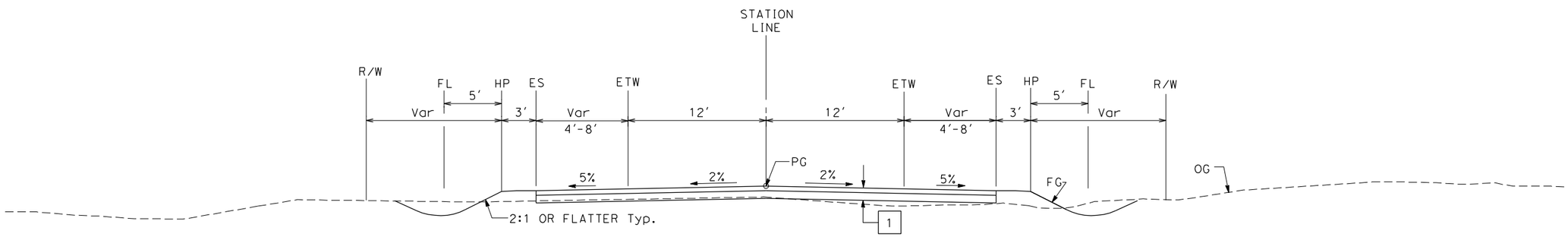
STRUCTURAL SECTIONS:

1 — HMA TYPE A
AB CLASS 2

3 — AB CLASS 2



UNPAVED ROAD (TYP)
SEE LAYOUT SHEETS
FOR ACTUAL ROADWAY WIDTHS



2-LANE FRONTAGE ROAD
SEE LAYOUT SHEETS
FOR ACTUAL SHOULDER WIDTHS

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IN CHARGE A. BOONE
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HYBRID
LOCAL ROADS
TYPICAL CROSS SECTIONS
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR9190-B
SCALE NTS
SHEET NO. ### OF ###

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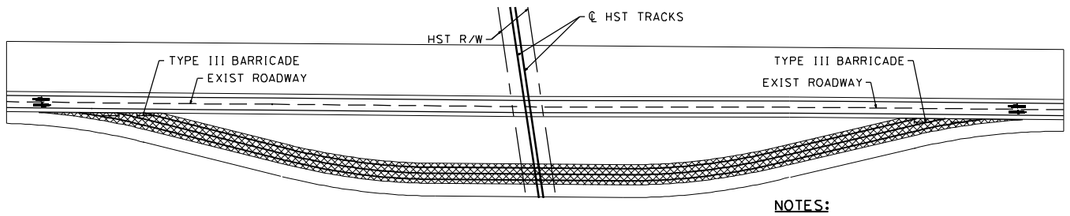
STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN
CENTERED PROPOSED ALIGNMENT

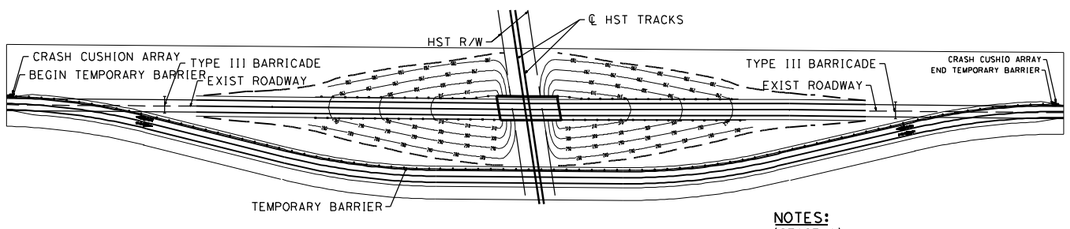


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT TEMPORARY DETOUR ROAD

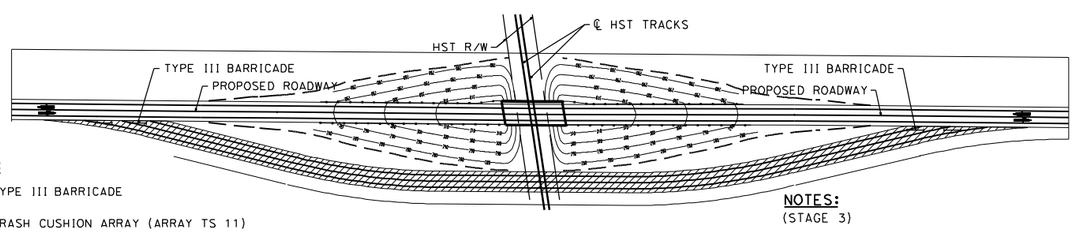


STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO TEMPORARY DETOUR ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 3)

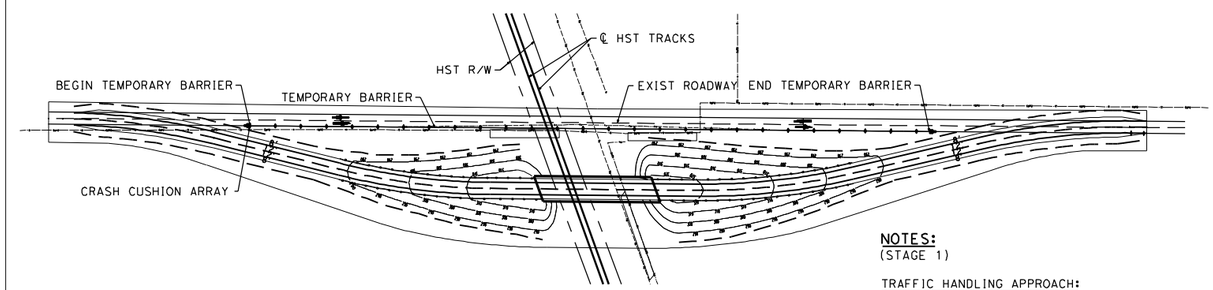
NOTES:
(STAGE 3)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-REMOVE TEMPORARY DETOUR ROAD

LEGEND:
- TYPE III BARRICADE
- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- CONSTRUCT TEMPORARY ROAD
- REMOVE TEMPORARY ROAD

STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN
SHIFTED PROPOSED ALIGNMENT

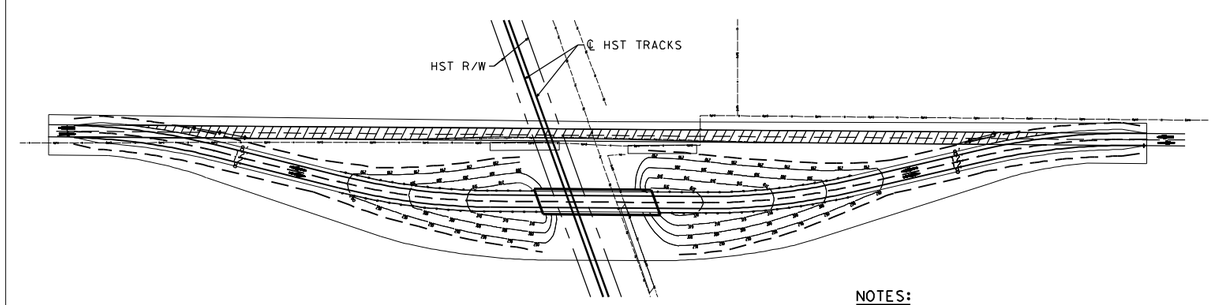


STAGE CONSTRUCTION (STAGE 1)

NOTES:
(STAGE 1)

TRAFFIC HANDLING APPROACH:
- TRAFFIC TO REMAIN ON EXISTING ROAD

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT NEW GRADE SEPARATION EMBANKMENT
-CONSTRUCT NEW GRADE SEPARATION STRUCTURE
-CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:
(STAGE 2)

TRAFFIC HANDLING APPROACH:
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY

STAGE CONSTRUCTION ACTIVITIES:
-CONSTRUCT REALIGNED ROAD CONFORMS
-COMPLETE DRAINAGE FACILITIES
-REMOVE BASE AND SURFACING OF EXIST ROAD

LEGEND:
- CRASH CUSHION ARRAY (ARRAY TS 11)
- TEMPORARY BARRIER (TYPE K)
- DIRECTION OF TRAVEL
- REMOVE BASE AND SURFACING (EXIST ROAD)

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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
HYBRID
GENERAL STAGE CONSTRUCTION &
TRAFFIC HANDLING APPROACH
SHEET 1 OF 1

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SHEET NO. ### OF ###

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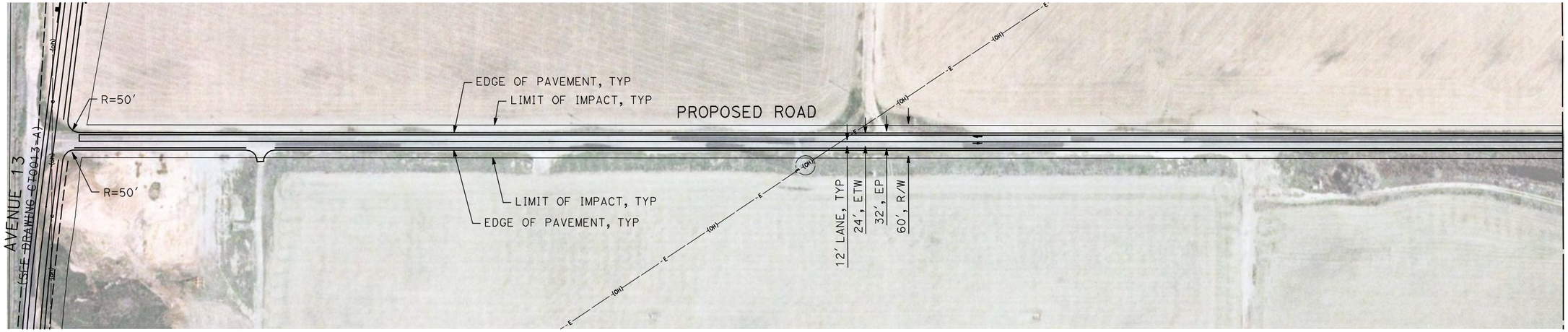

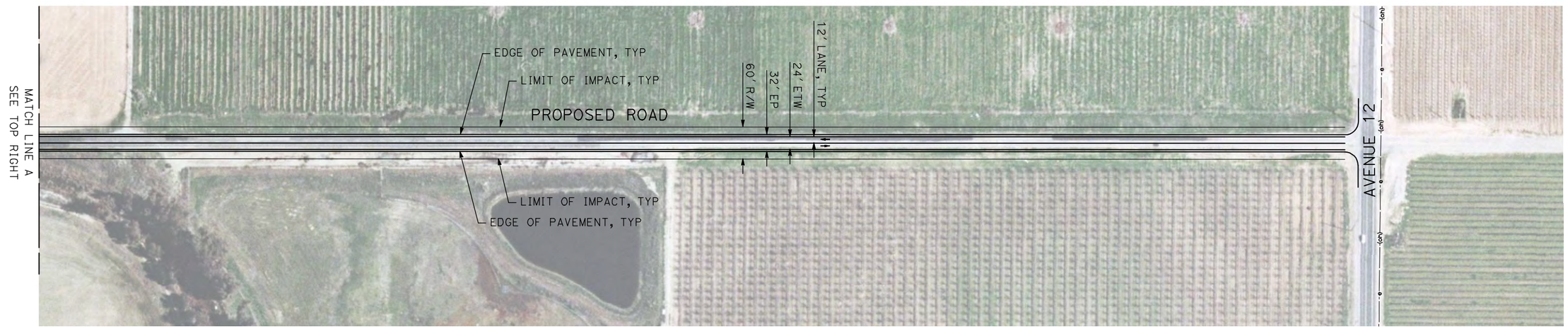

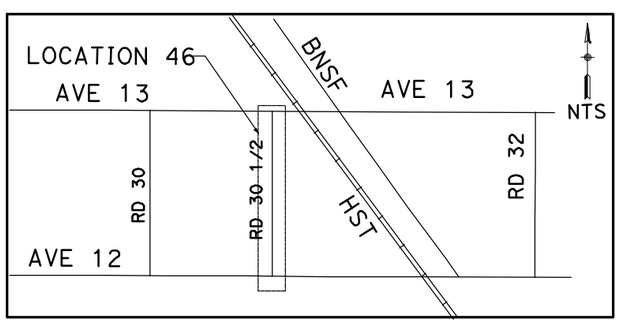

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GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
LOCAL ROAD - ROAD 30 1/2
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4000-A
SCALE AS SHOWN
SHEET NO. OF ###

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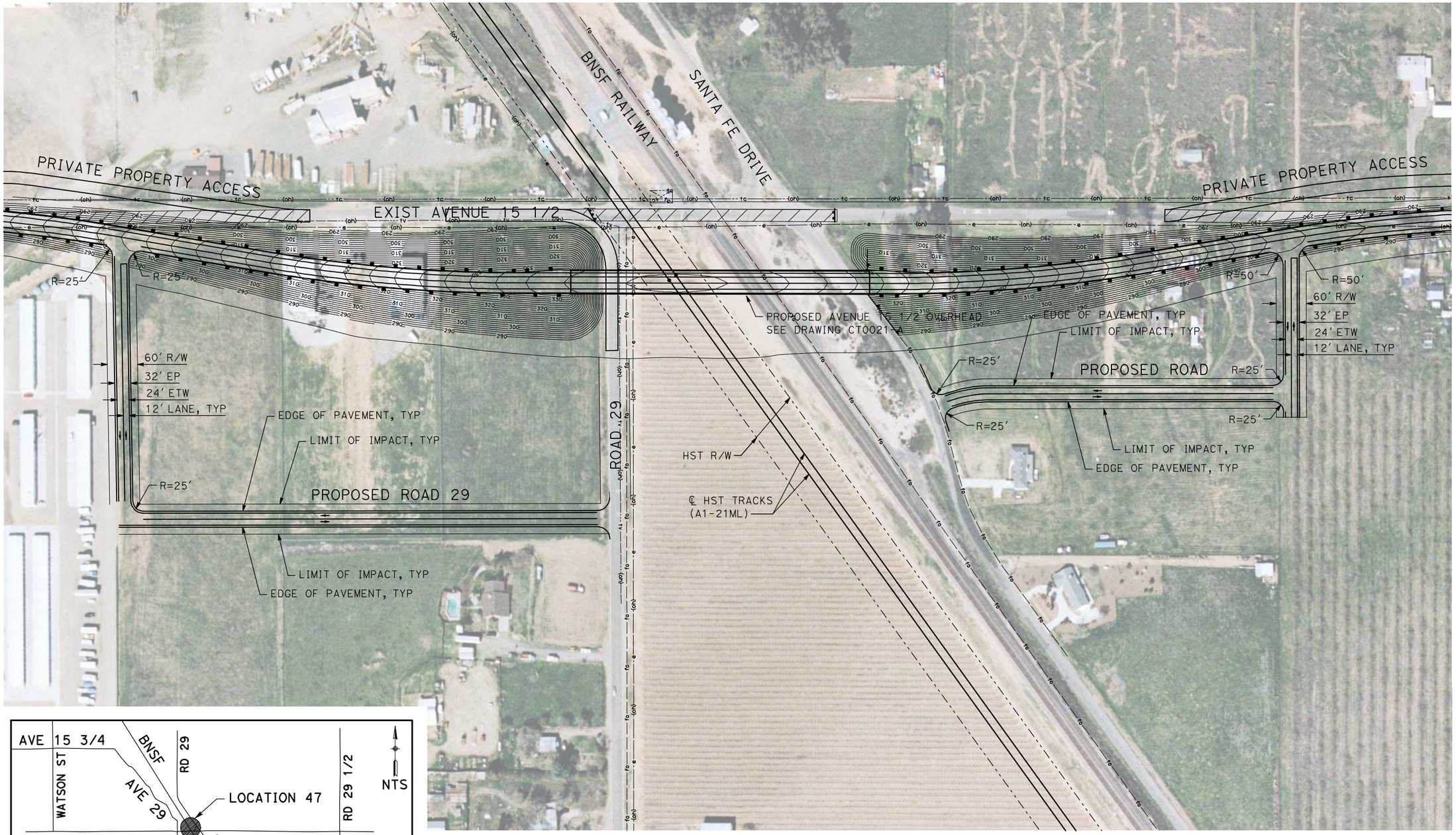
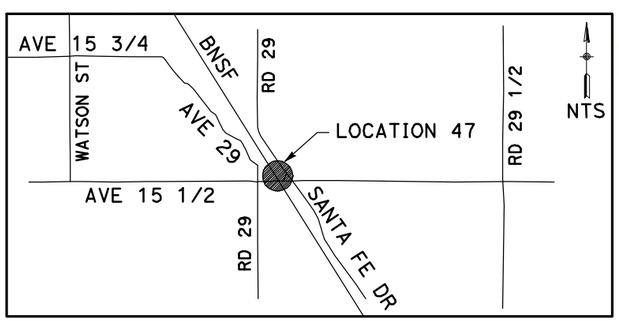
GibsonR1





100 0 100 200
GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
15% DESIGN SUBMITTAL

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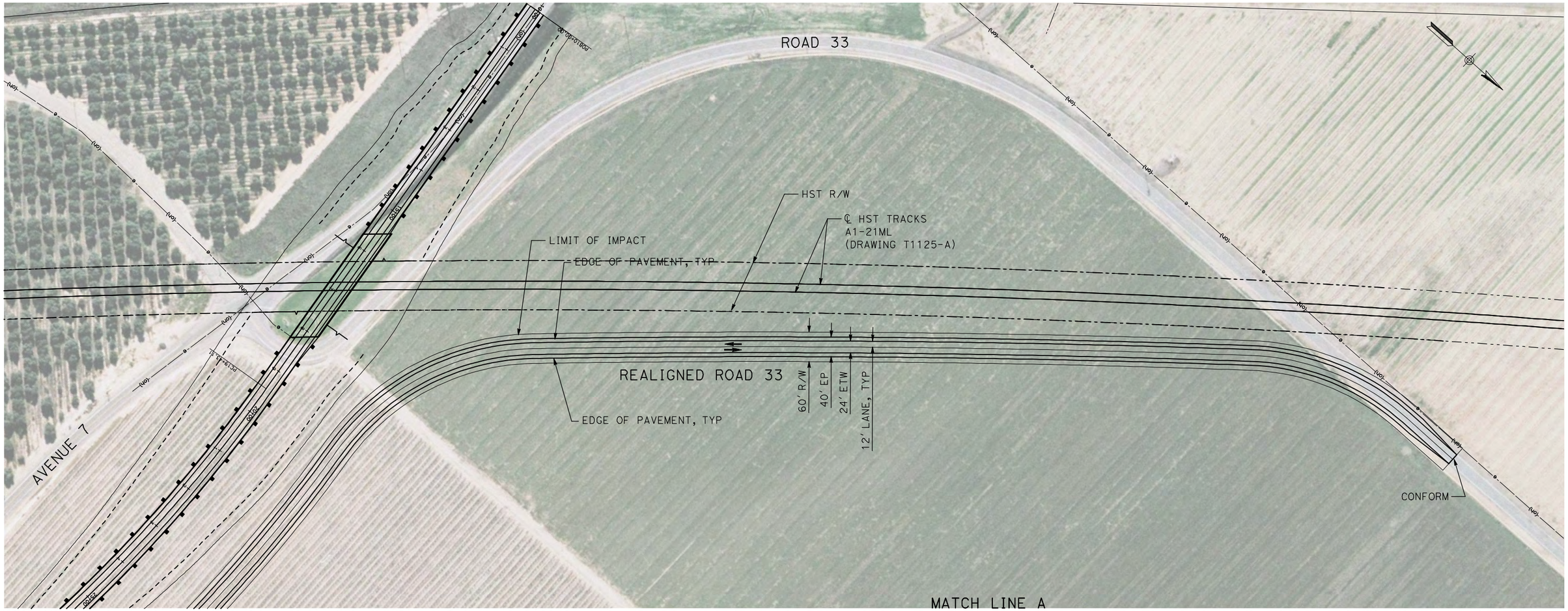
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

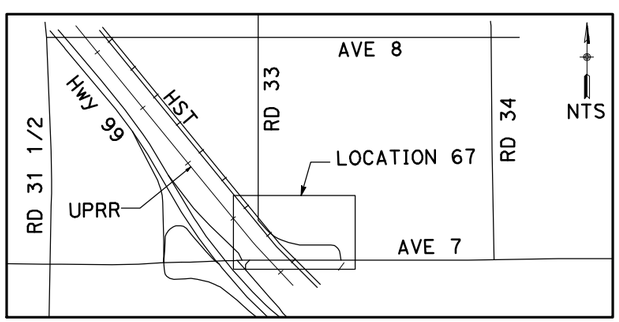
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

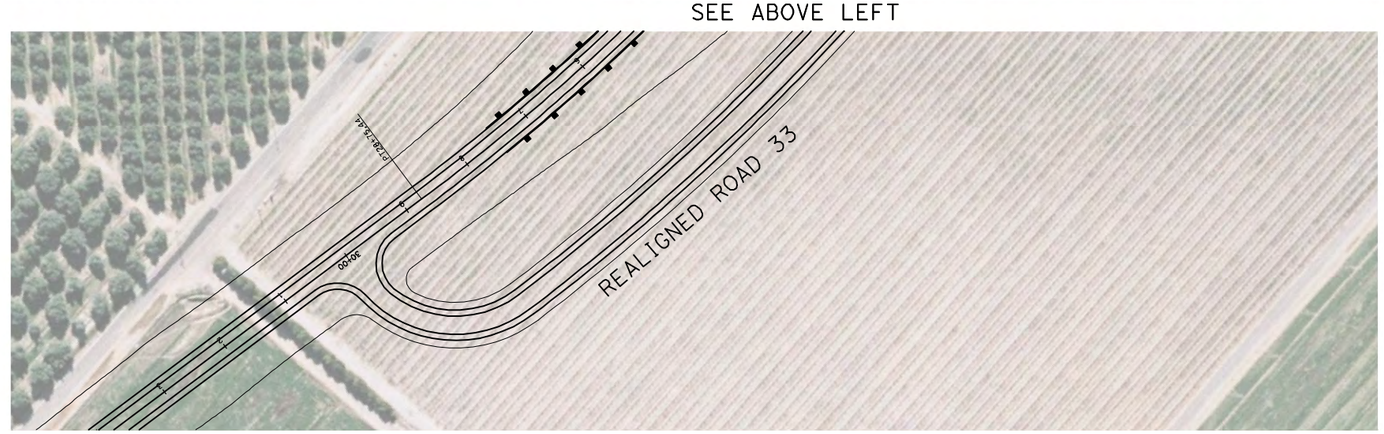
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MAIN LINE - (HYBRID)
LOCAL ROAD - ROAD 29
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4001-A
SCALE AS SHOWN
SHEET NO. OF ###

GibsonR1 5/1/2011 1:52:56 PM i:\chsr\60022962\task-02_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 3 - Hybrid Local Roads\Layout\MF-CR-4001-A.dgn







100 0 100 200
GRAPHIC SCALE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
BNSF MERCED CONNECTION - AVE 24 WYE
LOCAL ROAD - ROAD 33
LAYOUT
SHEET 1 OF 1

CONTRACT NO. HST06-007
DRAWING NO. CR4018-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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CALIFORNIA HIGH-SPEED TRAIN

Traction Power Plans

"Excerpts of Record Set
For Procurement Purposes Only.
Avenue 17 to Veterans Blvd"

Record Set
15% Design Submittal
Merced to Fresno Section

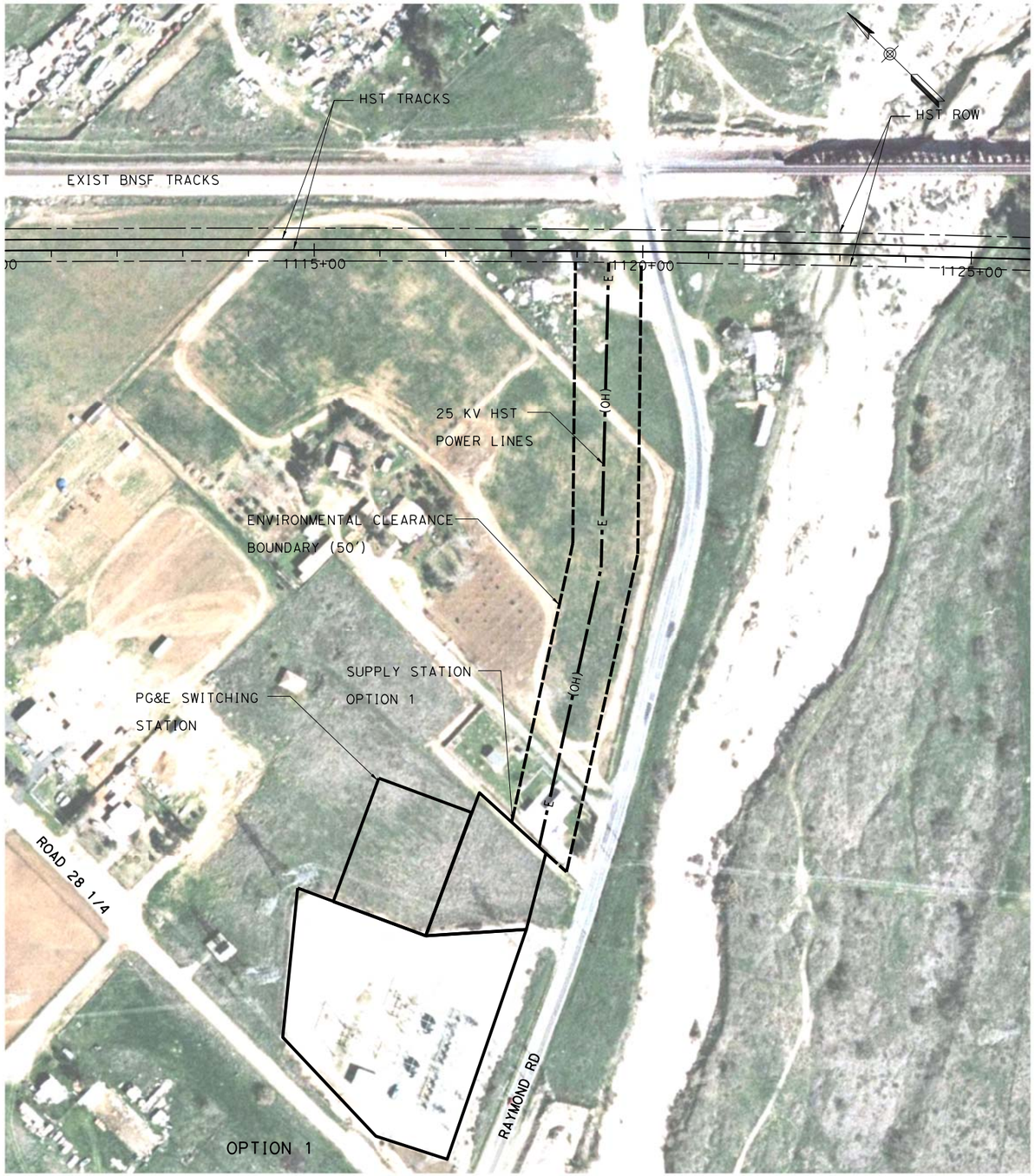
Traction Power Facilities

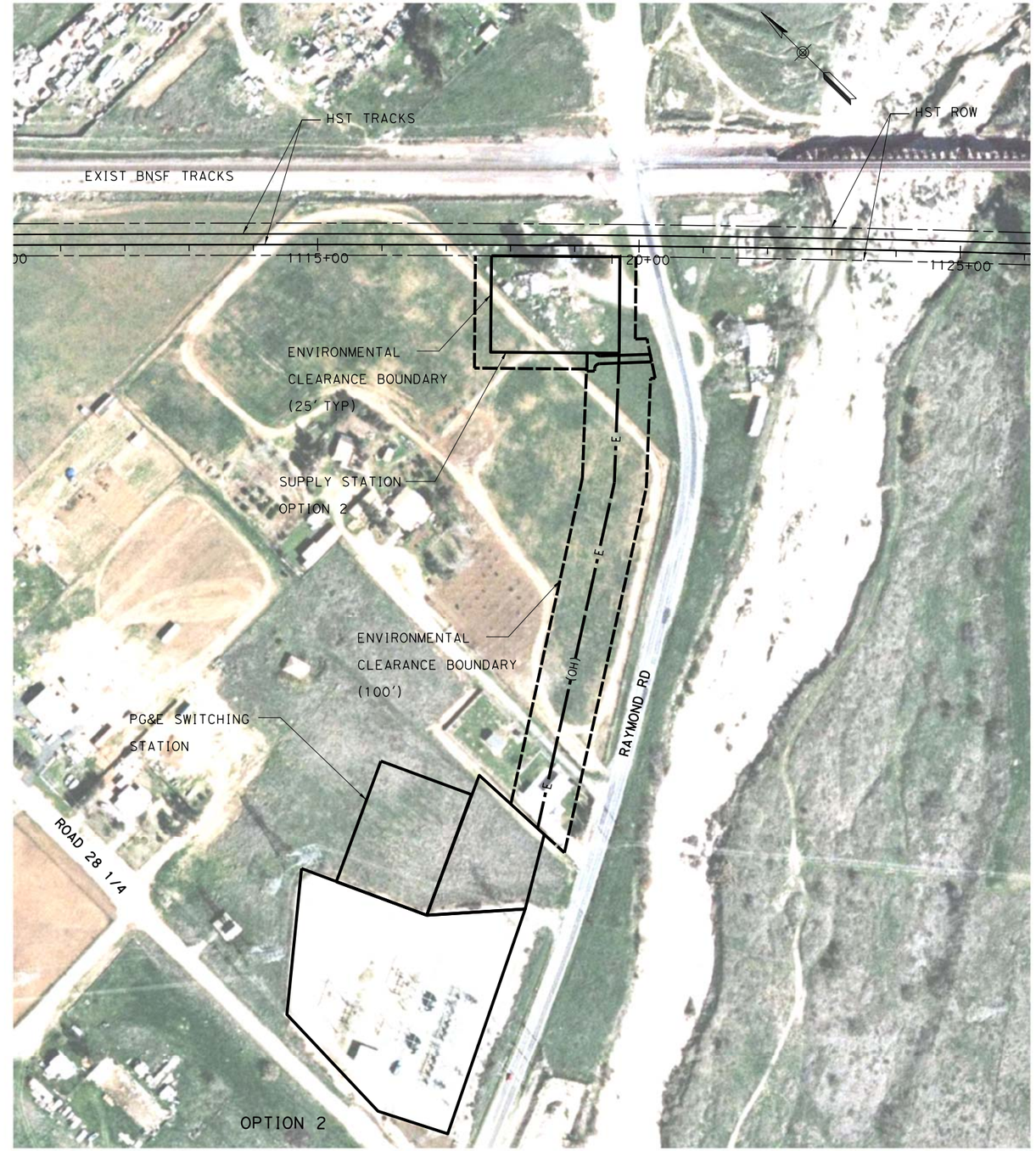
~~BNSF~~, ~~UPRR/SR99~~ and Hybrid Alternatives

May 2011

CALIFORNIA
High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration





100 0 100 200
1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. ABERE
DRAWN BY T. ABERE
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
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Sacramento, CA 95811
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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

ALTERNATIVE HYBRID
TRACTION POWER SUPPLY SITES
SUPPLY STATION #2
STA. "A1-21-ML" 1119+00

CONTRACT NO. HSR06-007
DRAWING NO. YJ1008-H
SCALE AS SHOWN
SHEET NO. OF ###

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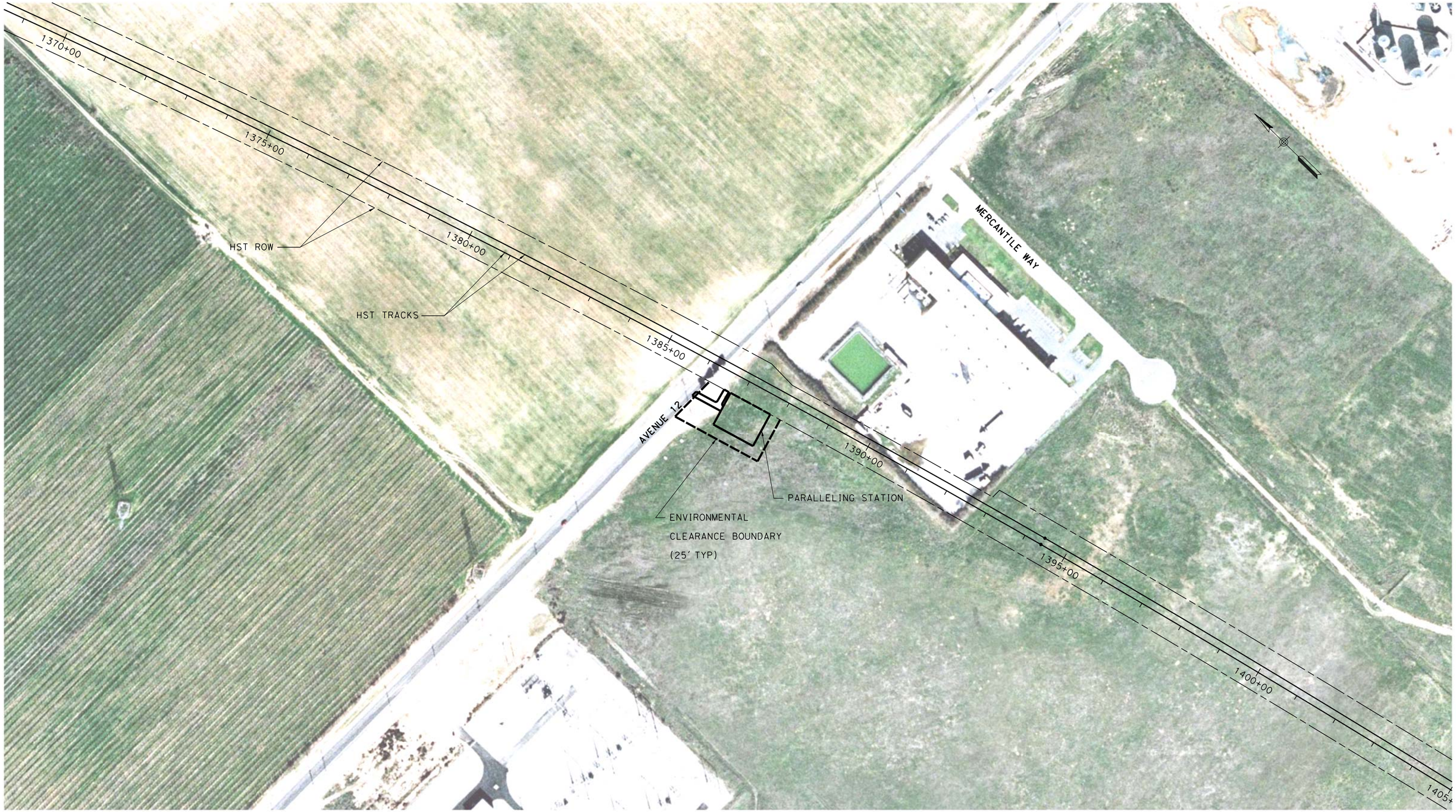

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. ABERE
DRAWN BY T. ABERE
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

ALTERNATIVE HYBRID
TRACTION POWER SUPPLY SITES
PARALLELING STATION #6
STA. 'A1-21ML' 1385+00

CONTRACT NO. HSR06-007
DRAWING NO. YJ1009-H
SCALE AS SHOWN
SHEET NO. OF ###

shieldsa 2/16/2012 9:59:22 AM \\usscr1fp001\cadd\chsr\60022962\Task-03_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\TPSS\MF-YJ1009-H.dgn

	ID	TYPE	LOCATION	DWG. NO.
	~~SS1~~	~~SUPPLY STATION~~	~~A2-24MC 5880~~+00	~~YJ1001-H~~
	~~PS1~~	~~PARALLELING STATION~~	~~A2-24MC 5662~~+00	~~YJ1002-H~~
	~~PS2~~	~~PARALLELING STATION~~	~~A2-24MC 5390~~+00	~~YJ1003-H~~
*	~~SW1~~	~~SWITCHING STATION~~	~~A2-24MC 5127~~+56	~~YJ1004-H~~
	~~PS3~~	~~PARALLELING STATION~~	~~A1-24ML 1406~~+00	~~YJ1005-H~~
	~~PS4~~	~~PARALLELING STATION~~	~~A1-24ML 1640~~+00	~~YJ1006-H~~
	~~PS5~~	~~PARALLELING STATION~~	~~A1-24ML 1861~~+00	~~YJ1007-H~~
	~~SS2~~	~~SUPPLY STATION~~	~~A1-21ML 1119~~+00	~~YJ1008-H~~
	PS6	PARALLELING STATION	A1-21ML 1385+00	YJ1009-H
	PS7	PARALLELING STATION	A1-21ML 1650+00	YJ1010-H
	SW2	SWITCHING STATION	A1-FR 1866+80	YJ1011-H
*	~~SW1.1~~	~~SWITCHING STATION~~	~~A1-24ML 1168~~+60	
	~~SW21~~	~~SWITCHING STATION~~	~~A2-24WC 222~~+00	~~YJ1012-H~~
	~~PS1.1~~	~~PARALLELING STATION~~	~~A2-24ML 960~~+00	~~YJ1013-H~~

* SAME LOCATION SERVES BOTH ALIGNMENTS

"Drawings lined Out are not
Included for Procurement Purposes Only"

10000 0 10000 20000

1"=10000'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. ABERE
DRAWN BY T. ABERE
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/15/2011

RECORD SET
15% DESIGN SUBMITTAL

NOT FOR CONSTRUCTION

AECOM Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

ALTERNATIVE HYBRID
TRACTION POWER SUPPLY SITES
KEY PLAN

CONTRACT NO. HSR06-007
DRAWING NO. YB0100-H
SCALE -
SHEET NO. OF ###

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AbereT

100 0 100 200
1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. ABERE
DRAWN BY T. ABERE
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/15/2011

RECORD SET
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Sacramento, CA 95811
CH2MHILL

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

ALTERNATIVE HYBRID
TRACTION POWER SUPPLY SITES
PARALLELING STATION #7
STA. 'A1-21ML' 1650+00

CONTRACT NO. HSR06-007
DRAWING NO. YJ1010-H
SCALE AS SHOWN
SHEET NO. OF ###

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