

# CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report/Environmental Impact Statement

DRAFT

Merced to Fresno Section  
Draft EIR-EIS

**Volume III:**

**Section C – Alignment Plans**

BNSF Alternative with Ave 24 Wye

August 2011



**CALIFORNIA**  
High-Speed Rail Authority



**U.S. Department of Transportation**  
Federal Railroad Administration



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SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
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	T3018-A	FRESNO SUBSECTION	ALIGNMET F1	CROSS SECTIONS	
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	T3020-A	FRESNO SUBSECTION	ALIGNMET F1	CROSS SECTIONS	
	T3021-A	FRESNO SUBSECTION	ALIGNMET F1	CROSS SECTIONS	
	T3022-A	FRESNO SUBSECTION	ALIGNMET F1	CROSS SECTIONS	
	T3023-A	FRESNO SUBSECTION	ALIGNMET F1	CROSS SECTIONS	
	T3024-A	FRESNO SUBSECTION	ALIGNMET F1	CROSS SECTIONS	
	T3025-A	FRESNO SUBSECTION	ALIGNMET F1	CROSS SECTIONS	
	T1300-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 892+89.69 TO STA 930+00
	T1301-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 930+00 TO STA 985+00
	T1302-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 985+00 TO STA 1040+00
	T1303-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1040+00 TO STA 1095+00
	T1304-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1095+00 TO STA 1150+00
	T1305-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1150+00 TO STA 1205+00
	T1306-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1205+00 TO STA 1260+00
	T1307-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1260+00 TO STA 1315+00
	T1308-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1315+00 TO STA 1370+00
	T1309-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1370+00 TO STA 1425+00
	T1310-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1425+00 TO STA 1480+00
	T1311-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1480+00 TO STA 1535+00
	T1312-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1535+00 TO STA 1590+00
	T1313-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1590+00 TO STA 1645+00
	T1314-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1645+00 TO STA 1700+00
	T1315-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1700+00 TO STA 1755+00
	T1316-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1755+00 TO STA 1810+00
	T1317-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1810+00 TO STA 1865+00
	T1318-A	BNSF MAIN LINE	AVENUE 24	PLAN AND PROFILE	STA 1865+00 TO STA 1890+17.44
	T1111-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 890+17.44 TO STA 920+00
	T1112-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 920+00 TO STA 975+00
	T1113-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 975+00 TO STA 1030+00
	T1114-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1030+00 TO STA 1085+00
	T1115-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1085+00 TO STA 1140+00
	T1116-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1140+00 TO STA 1195+00
	T1117-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1195+00 TO STA 1250+00
	T1118-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1250+00 TO STA 1305+00
	T1119-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1305+00 TO STA 1360+00
	T1120-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1360+00 TO STA 1415+00
	T1121-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1415+00 TO STA 1470+00
	T1122-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1470+00 TO STA 1525+00
	T1123-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1525+00 TO STA 1580+00
	T1124-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1580+00 TO STA 1635+00
	T1125-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1635+00 TO STA 1690+00
	T1126-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1690+00 TO STA 1734+69.26

SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
	T1127-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1713+98 TO STA 1748+00
	T1128-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1748+00 TO STA 1803+00
	T1129-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1803+00 TO STA 1858+00
	T1130-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1858+00 TO STA 1913+00
	T1131-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1913+00 TO STA 1968+00
	T1132-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 1968+00 TO STA 2023+00
	T1133-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 2023+00 TO STA 2072+36.08
	T2133-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 100+00 TO STA 128+00
	T2134-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 128+00 TO STA 156+00
	T2135-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 156+00 TO STA 184+00
	T2136-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 184+00 TO STA 212+00
	T2137-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 212+00 TO STA 240+00
	T2138-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 240+00 TO STA 268+00
	T2139-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 268+00 TO STA 282+00
	T2140-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 282+00 TO STA 296+00
	T2141-A	BNSF MAIN LINE		PLAN AND PROFILE	STA 296+00 TO STA 310+00
	T2142-A	FRESNO SUBSECTION - MARIPOSA STATION	ALIGNMET F1	PLAN AND PROFILE	STA 310+00 TO STA 324+00
	T2143-A	FRESNO SUBSECTION - MARIPOSA STATION	ALIGNMET F1	PLAN AND PROFILE	STA 324+00 TO STA 338+00
	T1200-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4302+03.01 TO STA 4345+00
	T1201-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4345+00 TO STA 4400+00
	T1202-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4400+00 TO STA 4455+00
	T1203-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4455+00 TO STA 4510+00
	T1204-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4510+00 TO STA 4565+00
	T1205-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4565+00 TO STA 4620+00
	T1206-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4620+00 TO STA 4675+00
	T1207-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4675+00 TO STA 4730+00
	T1208-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4730+00 TO STA 4785+00
	T1209-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4785+00 TO STA 4840+00
	T1210-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4840+00 TO STA 4895+00
	T1211-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4895+00 TO STA 4950+00
	T1212-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 4950+00 TO STA 5005+00
	T1213-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5005+00 TO STA 5060+00
	T1214-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5060+00 TO STA 5115+00
	T1215-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5115+00 TO STA 5170+00
	T1216-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5170+00 TO STA 5225+00
	T1217-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5225+00 TO STA 5280+00
	T1218-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5280+00 TO STA 5335+00
	T1219-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5335+00 TO STA 5390+00
	T1220-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5390+00 TO STA 5445+00
	T1221-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5445+00 TO STA 5500+00
	T1222-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5500+00 TO STA 5555+00
	T1223-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5555+00 TO STA 5610+00
	T1224-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5610+00 TO STA 5665+00
	T1225-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5665+00 TO STA 5720+00
	T1226-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5720+00 TO STA 5775+00
	T1227-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5775+00 TO STA 5830+00
	T1228-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5830+00 TO STA 5885+00
	T1229-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5885+00 TO STA 5940+00
	T1230-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5940+00 TO STA 5995+00
	T1231-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 5995+00 TO STA 6050+00
	T1232-A	BNSF MERCED CONNECTION	AVE 21 / AVE 24	PLAN AND PROFILE	STA 6050+00 TO STA 6066+17.71
	T1350-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 104+65.02 TO STA 130+00
	T1351-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 130+00 TO STA 185+00
	T1352-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 185+00 TO STA 240+00
	T1353-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 240+00 TO STA 295+00
	T1354-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 295+00 TO STA 350+00
	T1355-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 350+00 TO STA 405+00
	T1356-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 405+00 TO STA 460+00
	T1357-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 460+00 TO STA 515+00
	T1358-A	BNSF WYE - NB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 515+00 TO STA 566+78.51
	T1370-A	BNSF WYE - SB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 500+00 TO STA 525+00
	T1371-A	BNSF WYE - SB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 525+00 TO STA 580+00
	T1372-A	BNSF WYE - SB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 580+00 TO STA 635+00
	T1373-A	BNSF WYE - SB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 635+00 TO STA 690+00
	T1374-A	BNSF WYE - SB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 690+00 TO STA 745+00
	T1375-A	BNSF WYE - SB CONNECTION	AVENUE 24	PLAN AND PROFILE	STA 745+00 TO STA 800+00

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
T. WALTZ  
CHECKED BY  
A. SHIELDS  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF ALIGNMENT  
AVENUE 24  
INDEX OF DRAWINGS  
SHEET 1 OF 1

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



**ABBREVIATIONS**

**ALIGNMENT**

<u>HORIZONTAL</u>	
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

<u>VERTICAL</u>	
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
CL	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
	EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
	GAS LINE (16")
	COMMUNICATION LINE
	WATER LINE
	FIBER OPTIC LINE
	ELECTRICAL LINE
	ELECTRICAL TOWER
	SEWER LINE
	STORM DRAIN LINE
	FUEL LINE
	TELEPHONE LINE
	PETROLEUM LINE (12")
	OVERHEAD
	NORTH ARROW
	PVI
	POTENTIAL NOISE BARRIER

NOTES:

- 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.
- SEE STRUCTURE PLANS FOR LIMITS AND DETAILS OF VIADUCTS, STREAM CROSSINGS, RETAINING WALLS AND OTHER HST STRUCTURES.
- SEE ROADWAY PLANS FOR ROADWAY RELOCATIONS, GRADE SEPARATIONS, AND MODIFICATIONS TO STATE HIGHWAY FACILITIES.
- UTILITIES INDICATED ON THE PLANS ARE FOR REFERENCE ONLY. SEE "UTILITIES CONFLICT MEMO" FOR ADDITIONAL INFORMATION AND PROPOSED RELOCATION CONCEPTS.
- 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 IMPROVEMENTS.

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. CHAN
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE 07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

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

**CH2M HILL**



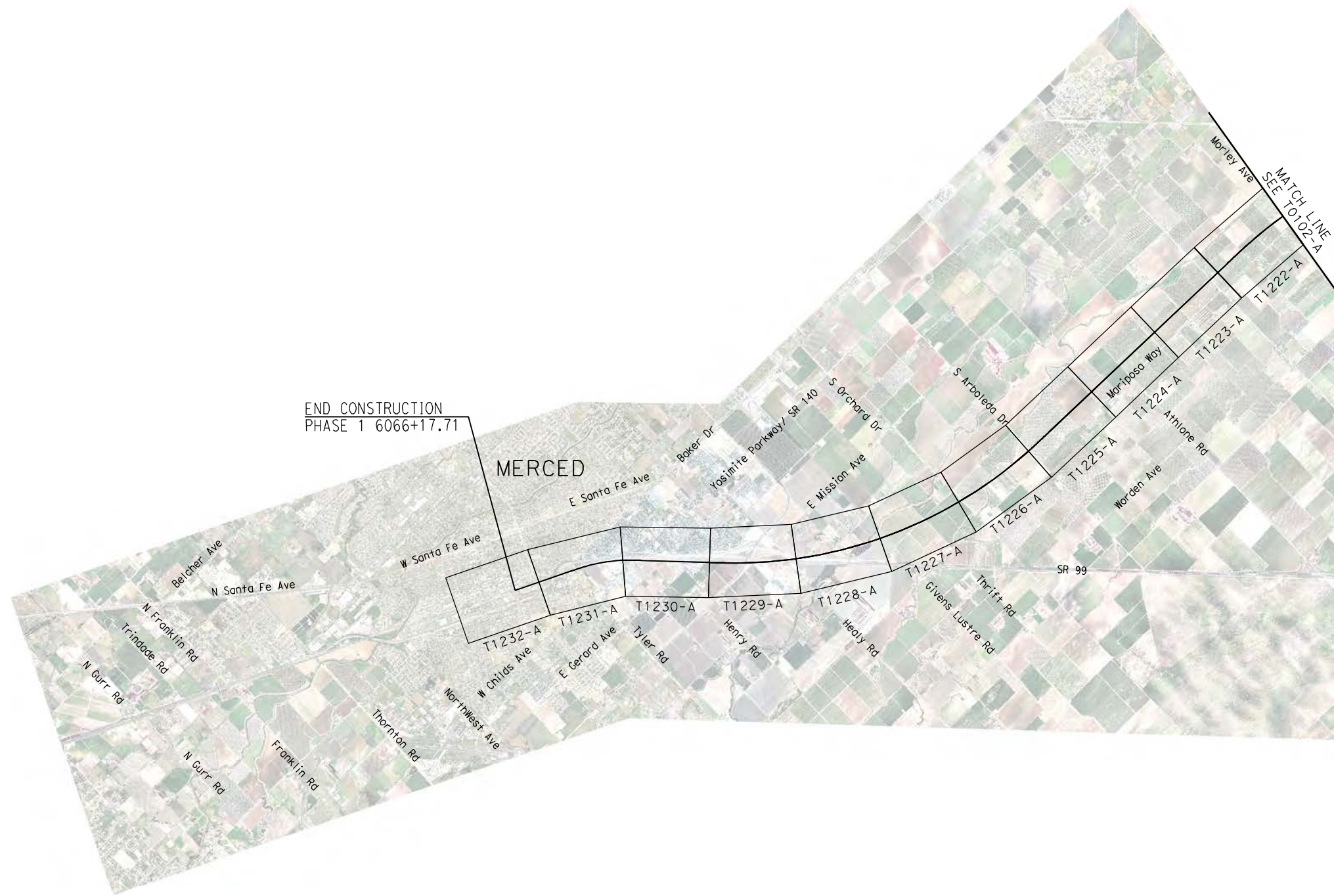
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

GENERAL

ABBREVIATIONS, SYMBOLS AND NOTES

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

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15% DESIGN  
SUBMITTAL**

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CONSTRUCTION**



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

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T0101-A  
SCALE  
NO SCALE  
SHEET NO.  
### OF ###



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REV	DATE	BY	CHK	APP	DESCRIPTION

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A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
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DATE  
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**SUBMITTAL**

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**CONSTRUCTION**

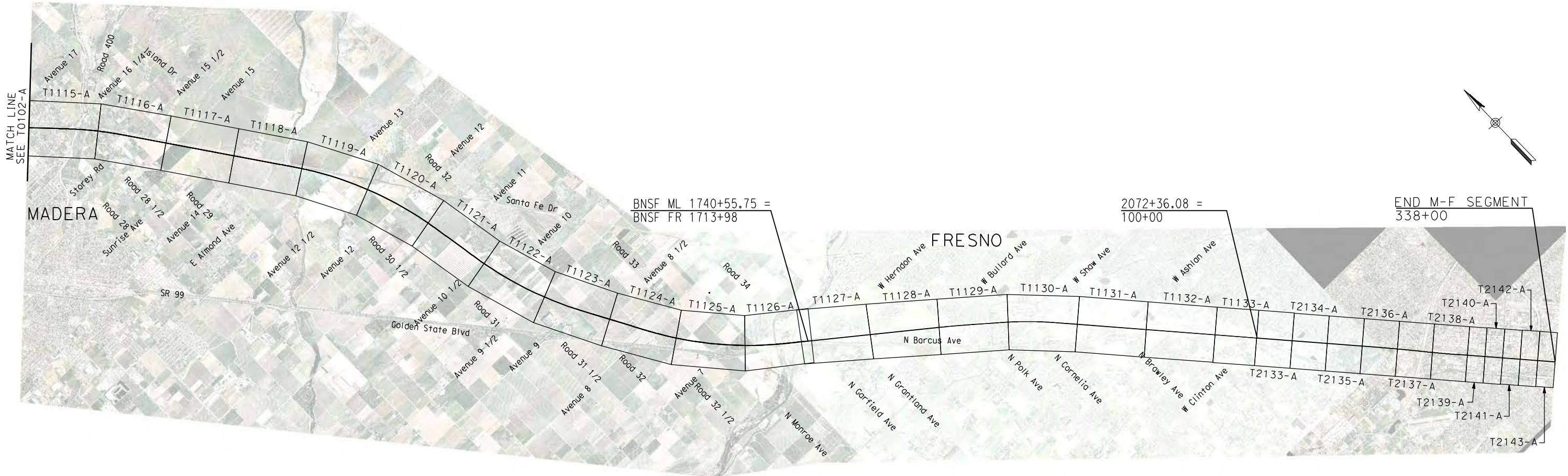


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF ALIGNMENT  
AVENUE 24  
KEY MAP  
SHEET 2 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T0102-A  
SCALE  
NO SCALE  
SHEET NO.  
### OF ###



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
F. DeMARCO  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

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CONSTRUCTION**



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

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T103  
SCALE  
NO SCALE  
SHEET NO.  
### OF ###



TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-BNSF MAIN LINE AVE 24 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
BNSF225	250	40500	4.00	2.17	1300	1389+35.83	1723+31.35	T1309-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-BNSF MAIN LINE AVE 24 NB

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
BNSF101	250	28016.50	6.00	2.93	2000	646+46.22	890+30.92	T-1107-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-BNSF 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
BNSF202	250	28000	6.00	2.93	2000	1106+38.05	1169+50.77	T1115-A
BNSF203	250	28000.0	6.00	2.93	2000	1288+03.95	1432+77.00	T1118-A
BNSF204	250	28016.5	6.00	2.93	2000	1452+42.23	1566+35.87	T1121-A
BNSF205	250	28016.5	6.00	2.93	2000	1599+58.86	1734+68.17	T1124-A
BNSF206	250	42995.5	3.25	2.56	1199.87	1708+55.57	1748+44.15	T1127-A
BNSF207	250	43000	3.25	2.56	1200	1852+76.45	1927+63.38	T1130-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-BNSF MAIN LINE NB

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
BNSF102	250	28016.5	6.00	2.93	2000	1106+50.94	1169+66.78	T1115-A
BNSF103	250	28016.5	6.00	2.93	2000	1288+19.38	1433+00.37	T1118-A
BNSF104	250	28000	6.00	2.93	2000	1452+65.60	1566+53.12	T1121-A
BNSF105	250	28000	6.00	2.93	2000	1593+78.25	1734+18.05	T1121-A
BNSF106	250	43012	3.25	2.56	1200	1708+55.57	1748+44.15	T1127-A
BNSF107	250	43016.5	3.25	2.56	1200	1852+76.45	1927+63.38	T1130-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-BNSF MERCED CONNECTION 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
BNSF109	150	32000			220	4302+03.01	4313+91.12	T1200-A
BNSF110	150	24000	1.25	2.50	220	4313+91.12	4323+70.19	T1200-A
BNSF111	250	28000	6.00	2.93	2000	4363+79.98	4453+67.52	T1202-A
BNSF112	250	43016.5	3.00	2.81	1100	4856+00.90	4897+66.79	T1210-A
BNSF113	250	28000	6.00	2.93	2000	4996+88.68	5109+38.05	T1212-A
BNSF114	250	28000	6.00	2.93	2000	5308+84.67	5547+08.45	T1218-A
BNSF115	250	28016.5	6.00	2.93	2000	5701+78.02	5942+55.78	T1225-A
BNSF116	150	10000	6.00	2.64	1000	5982+81.29	6029+03.10	T1230-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-BNSF MERCED CONNECTION NB

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
BNSF109	150	32000			220	4302+03.01	4313+11.12	T1200-A
BNSF110	150	23992.86	1.25	2.50	220	4313+11.12	4323+70.19	T1200-A
BNSF211	250	28000	6.00	2.93	2000	3366+51.75	3456+39.30	T1202-A
BNSF212	250	43000	3.00	2.81	1100	3855+88.42	3897+53.13	T1210-A
BNSF213	250	28016.5	6.00	2.93	2000	3996+75.02	4109+29.85	T1212-A
BNSF214	250	28016.5	6.00	2.93	2000	4308+76.46	4547+13.11	T1218-A
BNSF215	250	28000	6.00	2.93	2000	4701+82.68	4942+47.44	T1225-A
BNSF216	150	10000	6.00	2.64	1000	4971+57.33	5039+96.02	T1225-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - BNSF WYE - SB CONNECTION AVE 24

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
BNSF128	150	32000			220	500+00.00	510+31.98	T1370-A
BNSF129	150	24024.54	1.25	2.50	220	510+31.98	518+63.11	T1370-A
BNSF130	145	9800	6.00	2.58	1200	648+85.18	857+24.00	T1373-A
BNSF131	150	32000			220	886+55.05	896+06.40	T1377-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - BNSF WYE - NB CONNECTION AVE 24

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
BNSF228	150	32000			220	104+65.02	116+52.45	T1350-A
BNSF229	150	24020.25	1.25	2.50	220	116+52.45	126+31.88	T1350-A
BNSF230	150	10000	6.00	3.00	1200	252+29.89	467+11.71	T1353-A
BNSF231	150	24020.25	1.25	2.50	220	545+10.84	554+90.50	T1358-A
BNSF232	150	32000			220	554+90.50	566+78.51	T1358-A

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
DRAWN BY
CHECKED BY
IN CHARGE
DATE
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF ALIGNMENT  
AVENUE 24  
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	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		1843+35	AG6	
1843+35		1893+95	RF3	
1893+95		1958+00	AG6	
1958+00		2072+36	AG7	
UPRR/SR 99 WCDO/HYBRID MC SB	5061+66	5015+00	WYE1	
	5015+00	5235+00	AG4	
	5235+00	5285+00	WYE 1	
	5288+00	5556+91	AG2	
UPRR/SR 99 WCDO/HYBRID MC NB	5058+80	5110+00	WYE1	
	5110+00	5121+00	EL2	
	5121+00	5127+00	RF2	
	5127+00	5235+00	AG4	
	5235+00	5285+00	WYE1	
	5285+00	5597+00	AG2	
UPRR/SR 99-21MC	5556+98	5910+00	AG1	
	5910+00	5916+50	TR2	
	5916+50	5917+60	CC1	
	5917+60	5925+00	TR2	
	5925+00	5977+70	AG1	
	5977+70	5989+20	TR2	
	5989+20	5990+20	CC1	
	5990+20	6003+00	TR2	
	6003+00	6022+00	AG1	
	6022+00	6040+60	TR2	
	6040+60	6042+90	CC1	
	6042+90	6052+50	TR1	
	6052+50	6066+20	AG5	
	UPRR/SR 99 WCDO/HYBRID WC NB	148+82	205+00	WYE1
		205+00	211+00	EL2
211+00		219+00	RF2	
219+00		313+50	AG4	
313+50		320+00	RF2	
320+00		330+00	EL2	
330+00		382+25	WYE1	
UPRR/SR 99 WCDO/HYBRID WC SB	524+67	570+00	WYE1	
	570+00	695+00	AG4	
	695+00	738+88	WYE1	

ALTERNATIVE HYBRID AVENUE 21				
ALIGNMENT	BEGIN STATION	END STATION	SECTION	
HYBRID 21	892+90	330+00	AG2	
	330+00	430+00	WYE1	
	430+00	565+00	AG2	
	565+00	580+00	RF2	
	580+00	630+00	EL1	
	630+00	640+00	RF2	
	640+00	680+00	WYE1	
	680+00	868+87=	AG2	
	1865+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		1843+35	AG6	
1843+35		1893+95	RF3	
1893+95		1958+00	AG6	
1958+00		2072+36	AG7	
HYBRID MC SB - 21	200+20	250+00	WYE1	
	250+00	290+00	EL2	
	290+00	377+99	EL1	
	HYBRID MC NB - 21	500+00	550+00	WYE1
550+00		590+00	EL2	
590+00		677+40	EL1	
UPRR/SR 99-21MC		4907+27	4975+00	EL1
	4975+00	5045+00	WYE2	
	5045+00	5385+00	EL1	
	5385+00	5425+00	RF2	
	5425+00	5910+00	AG1	
	5910+00	5915+50	TR2	
	5915+50	5916+60	CC1	
	5916+60	5924+00	TR2	
	5924+00	5977+70	AG1	
	5977+70	5989+30	TR2	
UPRR/SR 99-21WC NB	505+00	610+00	WYE1	
	610+00	619+50	EL2	
	619+50	628+35	RF1	
	628+35	714+80	AG4	
	714+80	724+20	RF1	
	724+20	780+00	EL2	
	780+00	846+94	WYE2	
	UPRR/SR 99-21WC SB	105+00	180+00	WYE1
		180+00	298+80	AG4
		298+80	313+21	RF1
		313+21	340+00	EL2
		340+00	397+52	WYE2

ALTERNATIVE BNSF AVENUE 21			
ALIGNMENT	BEGIN STATION	END STATION	SECTION
BNSF-21ML	267+41	562+00	AG2
	562+00	582+61	RF2
	582+61	634+76	EL1
	634+76	665+80	RF2
	665+80	859+40	AG2
	859+40	881+05	RF2
	881+05	925+00	EL1
	925+00	985+00	WYE1
	985+00	1042+75	EL1
	1042+75	1060+00	RF2
	1060+00	1305+00	AG1
	1305+00	1685+00	AG2
	1685+00	1696+00	RF2
	1667+59	1731+50	EL1
	1731+50	1741+00	EL5
	BNSF-FR	1713+98	1737+00
1737+00		1764+78	EL7
1764+78		1767+00	EL8
1767+00		1788+84	RF3
1788+84		1843+35	AG6
1843+35		1893+95	RF3
1893+95		1958+00	AG6
1958+00		2072+36	AG7
BNSF-21WC NB	105+85	205+00	WYE2
	205+00	220+66	EL2
	220+66	230+00	RF1
	230+00	357+00	AG4
	357+00	371+02	RF1
	371+02	383+00	EL2
BNSF-21WC SB	383+00	474+09	WYE1
	500+00	550+00	WYE2
	550+00	720+00	AG4
BNSF-MC	4302+03	4345+02	EL2
	4345+02	4351+00	RF1
	4351+00	4405+00	WYE1
	4405+00	5296+45	AG1
	5269+45	5266+88	RF2
	5266+88	5352+88	EL3
	5352+88	5371+50	RF2
	5371+50	5850+85	AG1
	5850+85	5866+57	RF2
	5866+57	5960+00	EL1
	5960+00	5967+00	RF2
	5967+00	5977+70	AG1
	5977+70	5989+20	TR2
	5989+20	5990+20	CC1
	5990+20	6003+00	TR2
BNSF-24ML	892+90	1185+00	AG2
	1185+00	1235+00	WYE1
	1235+00	1332+20	AG2
	1332+20	1350+84	RF2
	1350+84	1430+00	WYE2
	1430+00	1431+49	EL1
	1431+49	1451+90	RF2
	1451+90	1864+25	AG2
	1864+25	1881+05	RF2
	1881+05	1890+17	EL1
BNSF-24WC NB	104+65	195+00	WYE2
	195+00	220+66	EL2
	220+66	227+55	RF1
	227+55	400+70	AG4
	400+70	438+00	RF1
	438+00	450+00	EL2
	450+00	477+55	WYE1
	477+55	508+20	RF1
BNSF-24WC SB	500+00	582+14	WYE2
	582+14	592+75	RF1
	592+75	840+00	AG4
	840+00	896+06	WYE1

ALTERNATIVE BNSF AVENUE 24				
ALIGNMENT	BEGIN STATION	END STATION	SECTION	
BNSF-24ML	892+90	1185+00	AG2	
	1185+00	1235+00	WYE1	
	1235+00	1332+20	AG2	
	1332+20	1350+84	RF2	
	1350+84	1430+00	WYE2	
	1430+00	1431+49	EL1	
	1431+49	1451+90	RF2	
	1451+90	1864+25	AG2	
	1864+25	1881+05	RF2	
	1881+05	1890+17	EL1	
	BNSF-24WC NB	104+65	195+00	WYE2
		195+00	220+66	EL2
		220+66	227+55	RF1
		227+55	400+70	AG4
		400+70	438+00	RF1
		438+00	450+00	EL2
450+00		477+55	WYE1	
477+55		508+20	RF1	
BNSF-24WC SB	500+00	582+14	WYE2	
	582+14	592+75	RF1	
	592+75	840+00	AG4	
	840+00	896+06	WYE1	

ALTERNATIVE UPRR/SR 99 AVENUE 21				
ALIGNMENT	BEGIN STATION	END STATION	SECTION	
UPRR/SR 99-21ML	270+60	604+70	AG2	
	604+70	626+28	RF2	
	626+28	715+00	EL1	
	715+00	805+00	WYE1	
	805+00	1294+33	EL1	
	1294+33	1305+00	RF2	
	1305+00	1570+00	AG1	
	1570+00	1593+20	TR2	
	1593+20	1594+10	CC1	
	1594+10	1610+00	TR2	
	1610+00	1615+00	AG1	
	1615+00	1622+00	RF2	
	1622+00	1635+00	EL1	
	1635+00	1633+24	EL5	
	UPRR/SR 99-FR	1713+98	1737+00	EL6
		1737+00	1764+78	EL7
1764+78		1767+00	EL8	
1767+00		1788+84	RF3	
1788+84		1843+35	AG6	
1843+35		1893+95	RF3	
1893+95		1958+00	AG6	
1958+00		2072+36	AG7	
UPRR/SR 99-21WC NB	505+00	610+00	WYE1	
	610+00	619+50	EL2	
	619+50	628+35	RF1	
	628+35	714+80	AG4	
	714+80	724+20	RF1	
	724+20	780+00	EL2	
	780+00	846+94	WYE2	
	UPRR/SR 99-21WC SB	105+00	180+00	WYE1
180+00		298+80	AG4	
298+80		313+21	RF1	
313+21		340+00	EL2	
340+00		397+52	WYE2	
UPRR/SR 99-21MC	4586+50	4670+00	WYE1	
	4670+00	4796+00	AG1	
	4796+00	4810+00	RF2	
	4810+00	4975+00	EL1	
	4975+00	5045+00	WYE2	
	5045+00	5385+00	EL1	
	5385+00	5425+00	RF2	
	5425+00	5910+00	AG1	
	5910+00	5915+50	TR2	
	5915+50	5916+60	CC1	
	5916+60	5924+00	TR2	
	5924+00	5977+70	AG1	
	5977+70	5989+30	TR2	
	5989+30	5990+40	CC1	
	5990+40	6003+00	TR2	
UPRR/SR 99-24WC NB	705+00	775+00	WYE1	
	775+00	921+72	AG4	
	921+72	1062+85	AG2	
	1062+85	1130+00	AG4	
	1130+00	1191+24	WYE 1	
	UPRR/SR 99-24MC	4760+15	4845+00	WYE2
		4845+00	4907+25	EL1

ALTERNATIVE UPRR/SR 99 AVENUE 24			
ALIGNMENT	BEGIN STATION	END STATION	SECTION
UPRR/SR 99-24ML	917+20	965+00	AG2
	965+00	1030+00	WYE1
	1030+00	1330+00	AG2
	1330+00	1380+00	RF2
	1380+00	1515+00	EL1
	1515+00	1590+00	EL5
	1590+00	1753+40	EL1
	UPRR/SR 99-24WC NB	105+00	205+00
205+00		220+00	EL2
220+00		227+00	RF1
227+00		349+90	AG4
349+90		494+12	AG2
494+12		521+00	AG4
521+00		527+00	RF1
527+00		555+00	EL2
555+00		626+90	WYE1
UPRR/SR 99-24WC SB		705+00	775+00
	775+00	921+72	AG4
	921+72	1062+85	AG2
	1062+85	1130+00	AG4
	1130+00	1191+24	WYE 1
UPRR/SR 99-24MC	4760+15	4845+00	WYE2
	4845+00	4907+25	EL1

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**

DRAWN BY  
**A. SHIELDS**

CHECKED BY  
**A. BOONE**

IN CHARGE  
**A. BOONE**

DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

GENERAL

TYPICAL SECTION LIMITS

CONTRACT NO.  
HSR06-007

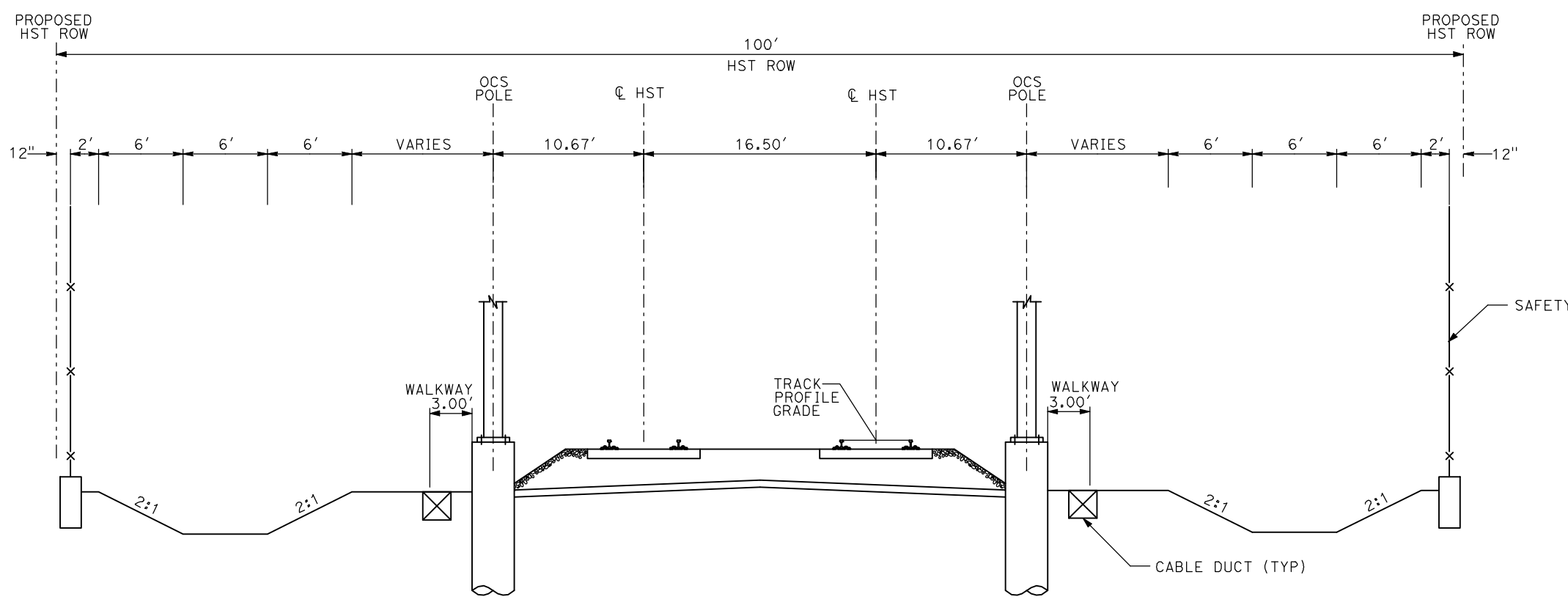
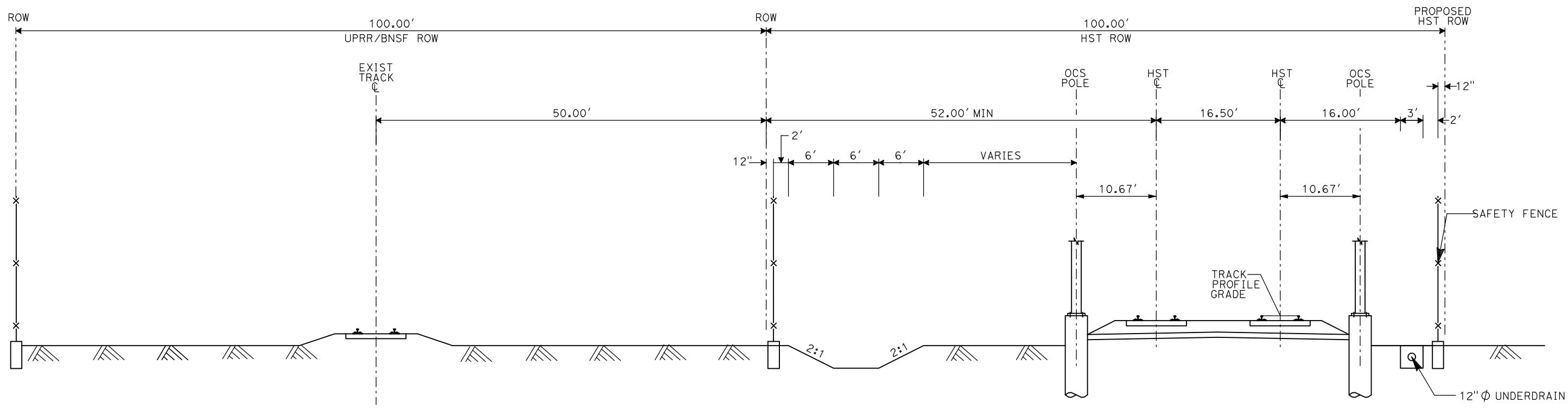
DRAWING NO.  
T3000-A

SCALE  
NO SCALE

SHEET NO.  
### OF ###



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- 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.
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
C. VALADAO  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

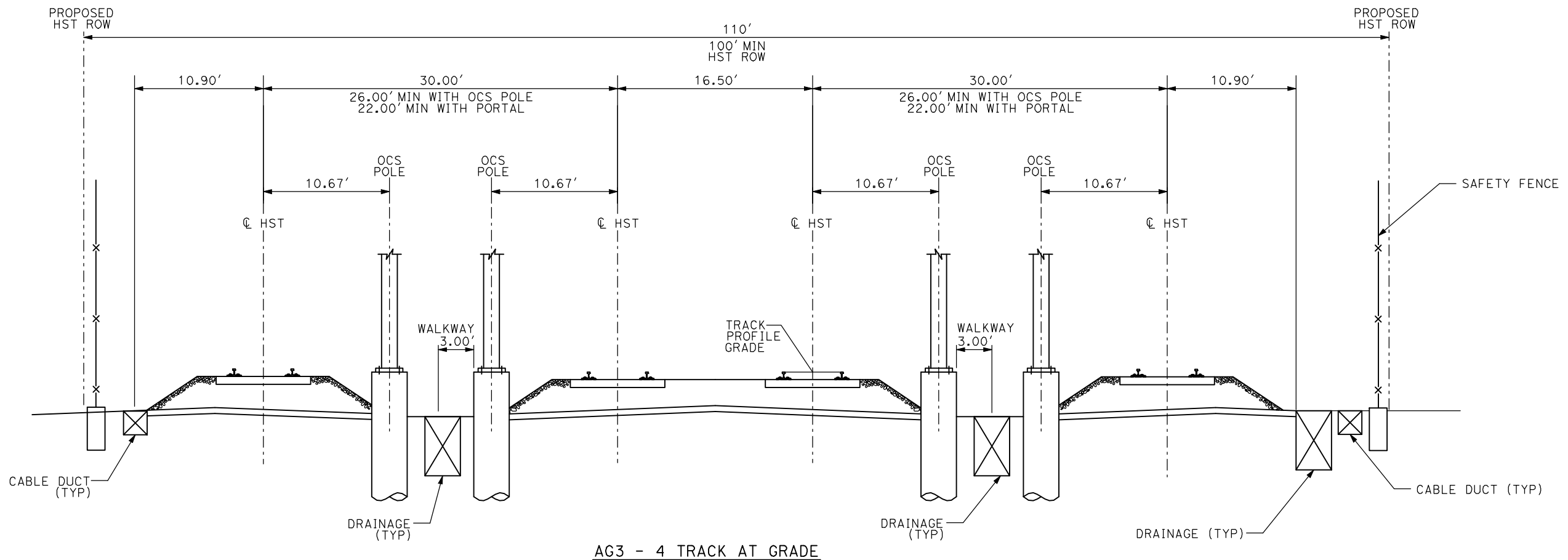
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**CONSTRUCTION**



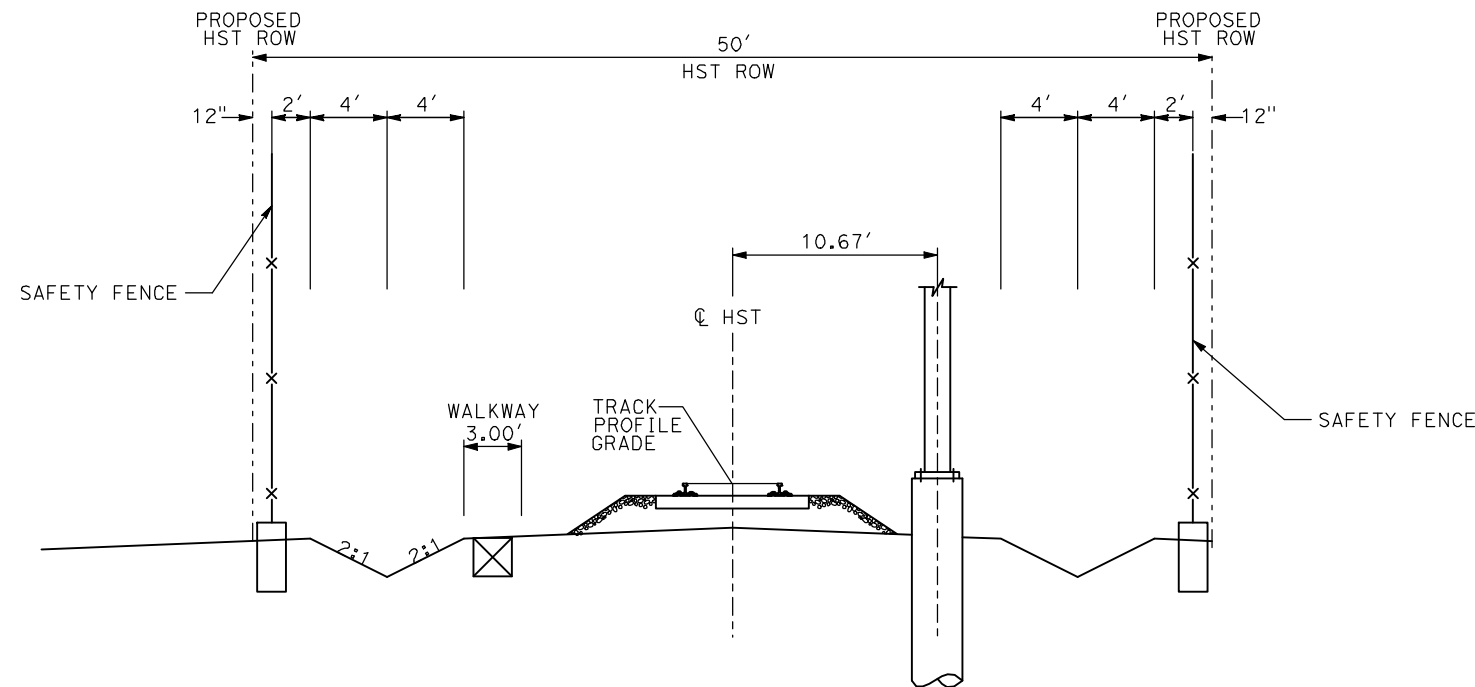
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 1 OF 17

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



AG3 - 4 TRACK AT GRADE



AG4 - SINGLE 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.
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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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  
07/20/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

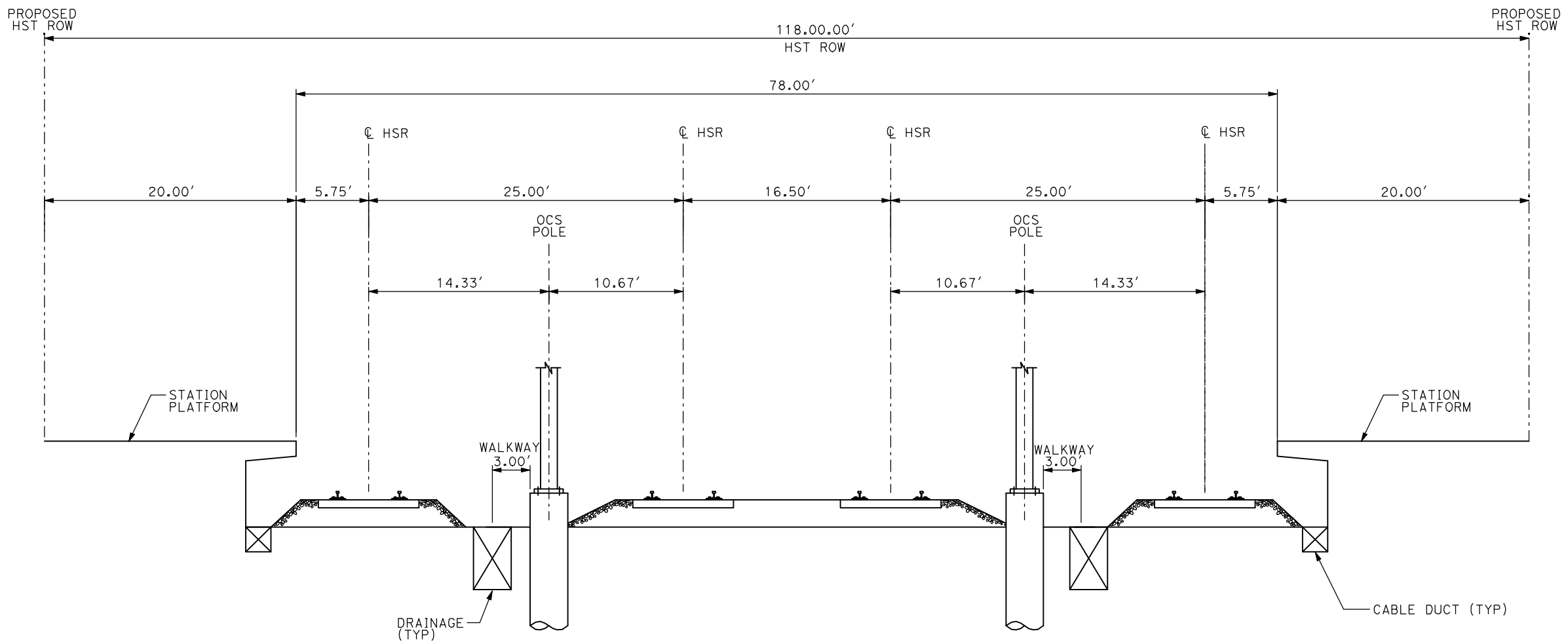


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 2 OF 17

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T3002-A  
SCALE  
NO SCALE  
SHEET NO.  
OF ###





AG5 - 4 TRACK AT GRADE MERCED STATION

- 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.
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

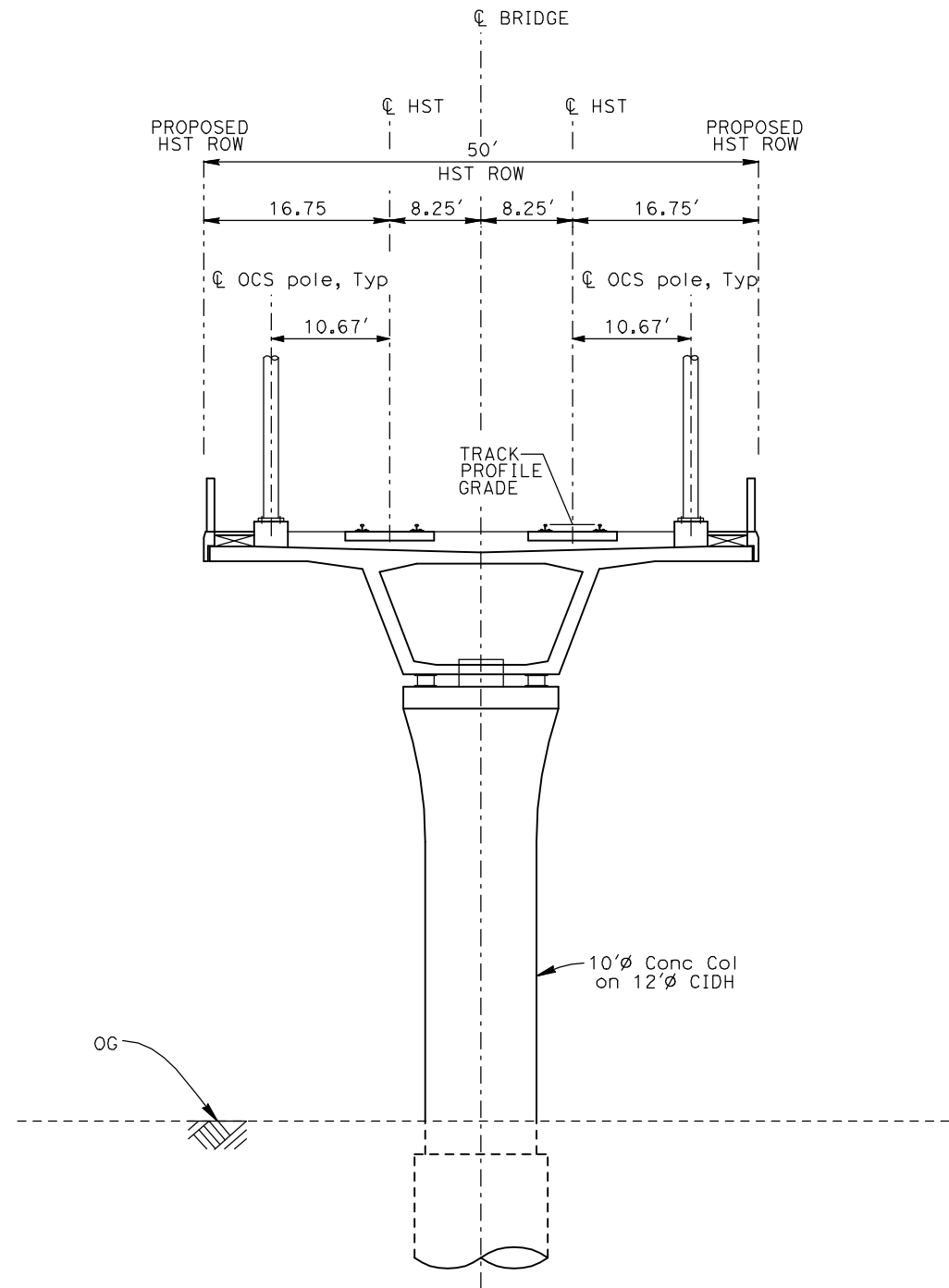
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CONSTRUCTION**



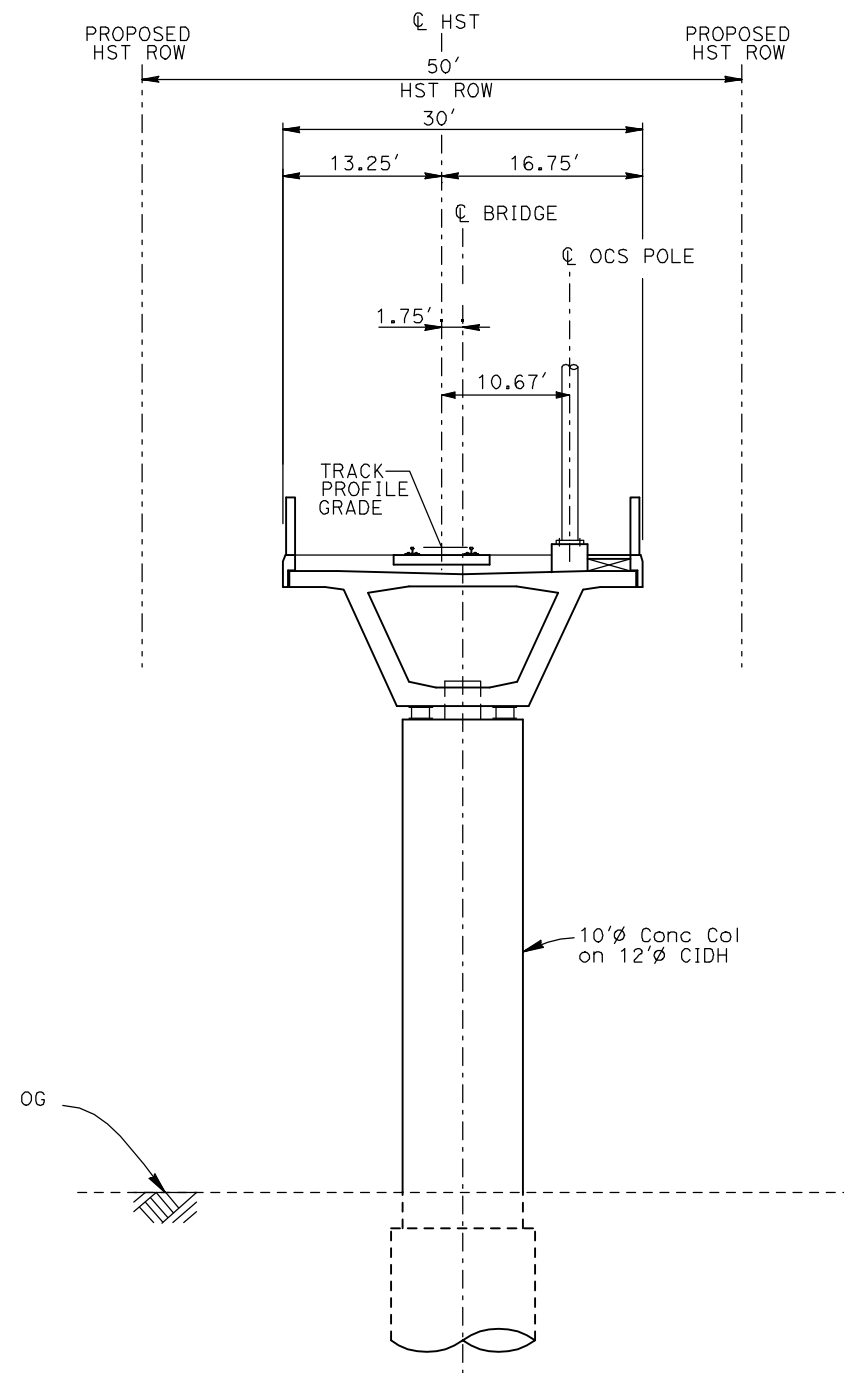
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 3 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3003-A
SCALE NO SCALE
SHEET NO. OF ###



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.
  4. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



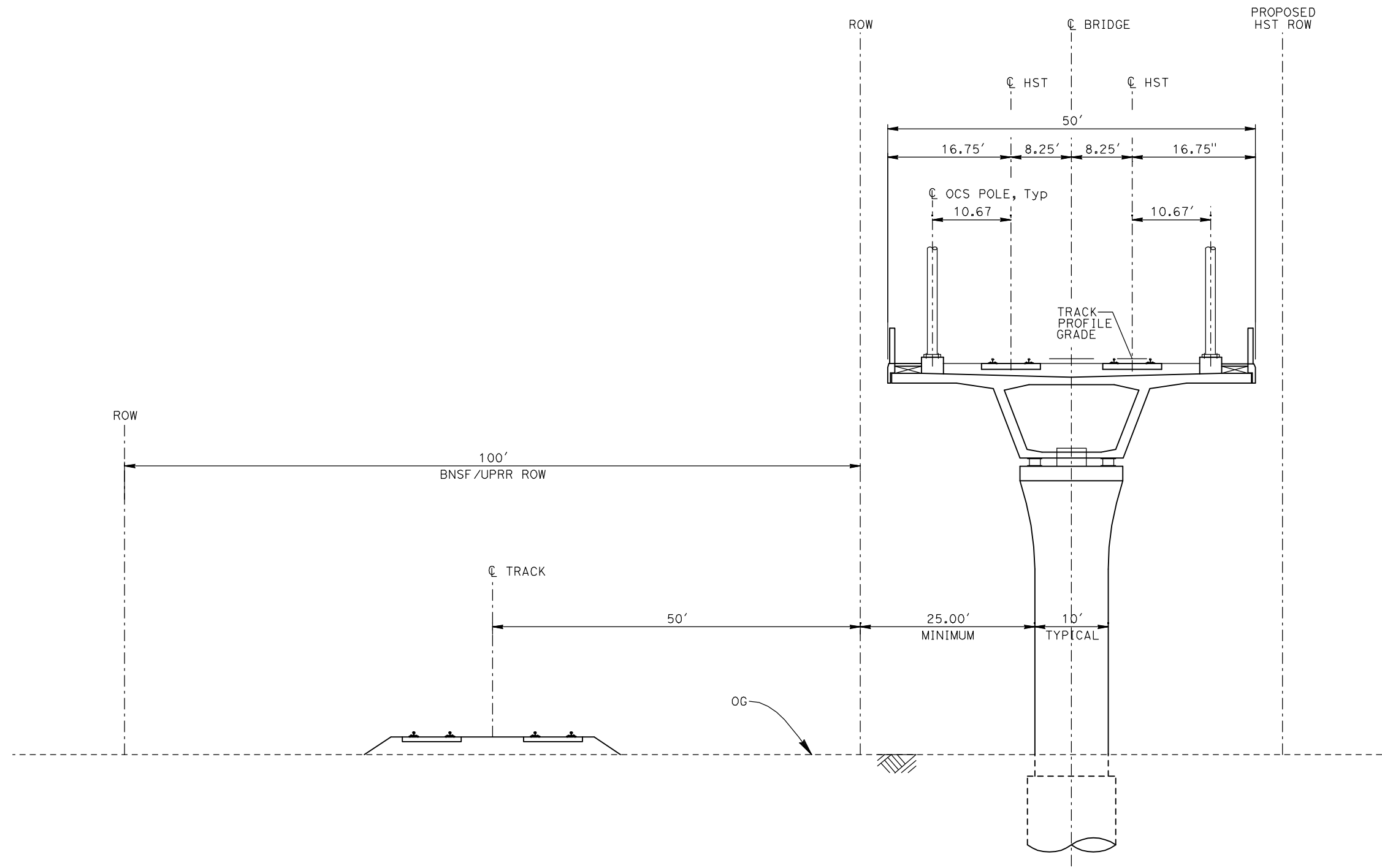
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 4 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3004-A
SCALE NO SCALE
SHEET NO. OF ###



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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.
  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.
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
C. VALADAO  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

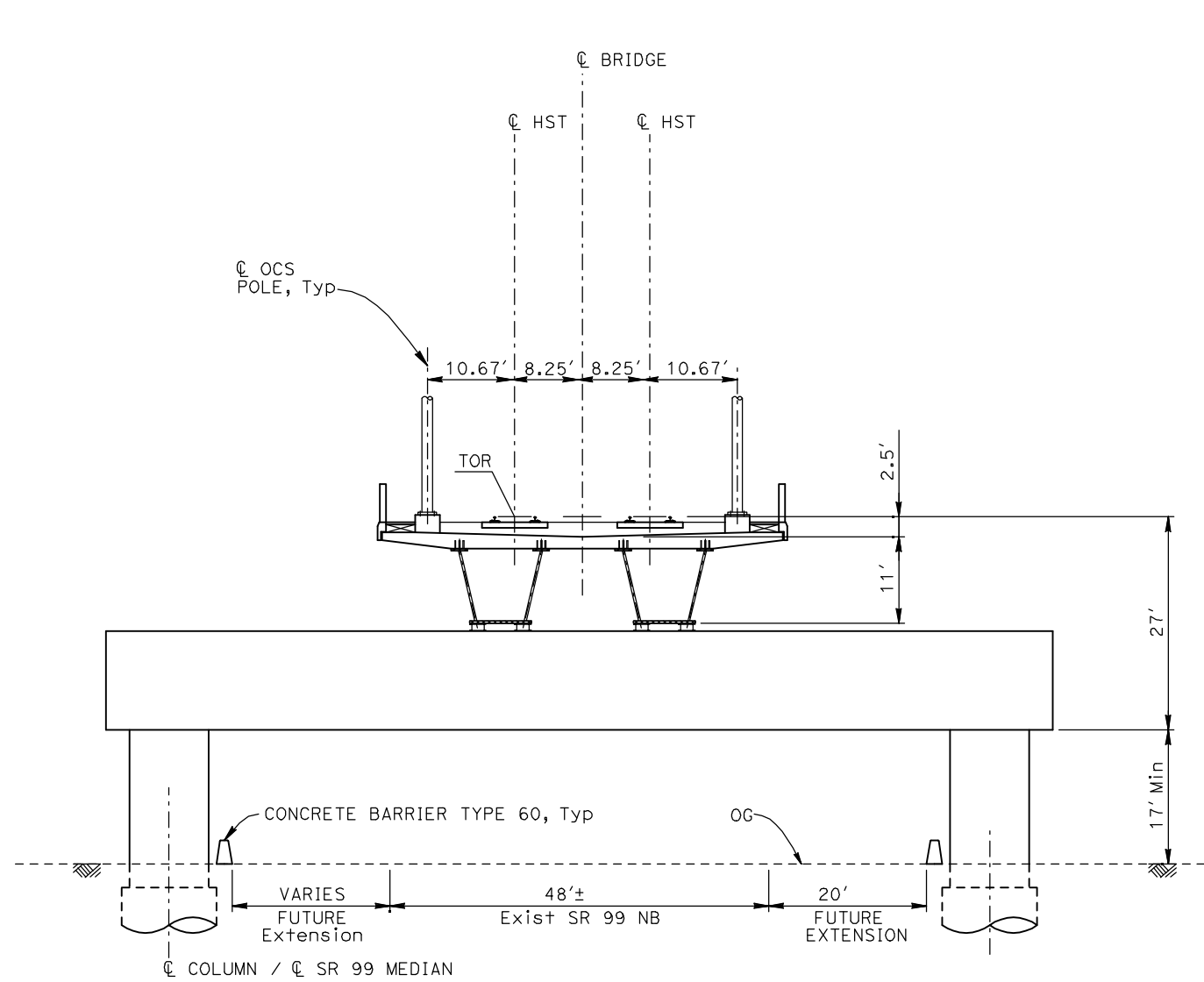


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

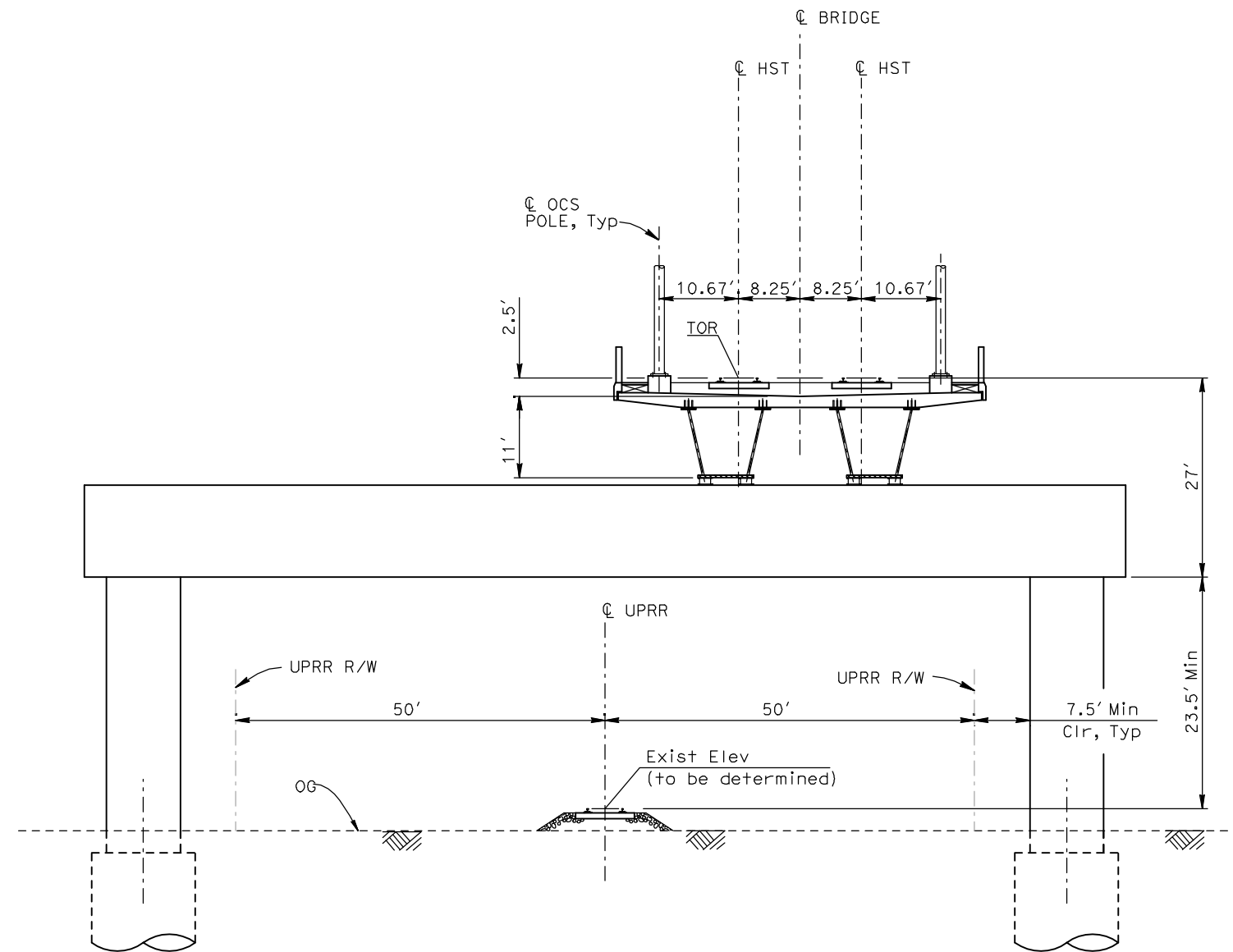
TYPICAL SECTIONS  
SHEET 5 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3005-A
SCALE NO SCALE
SHEET NO. OF ###

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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.
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
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C. VALADAO  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

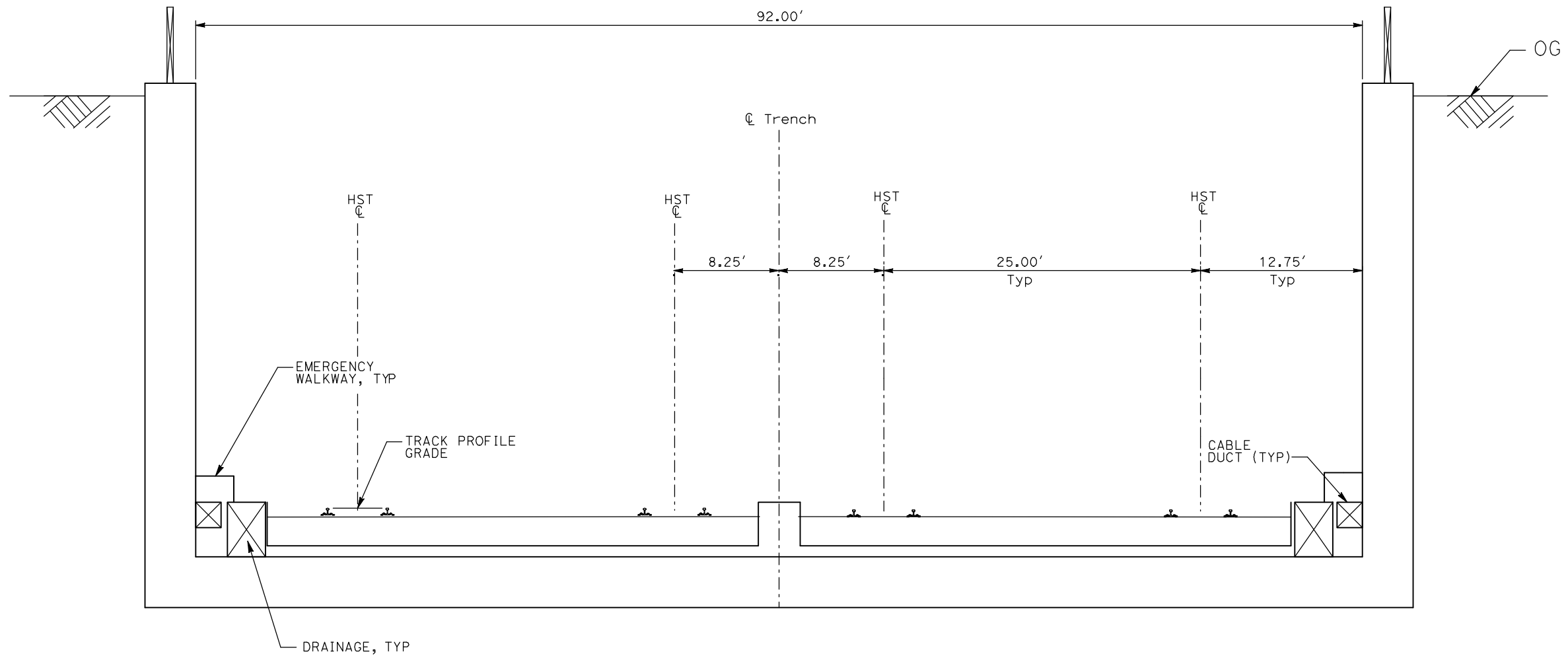
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CONSTRUCTION**



**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 ###



TR1 - 4 TRACK TRENCH STATION APPROACH

- 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.
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



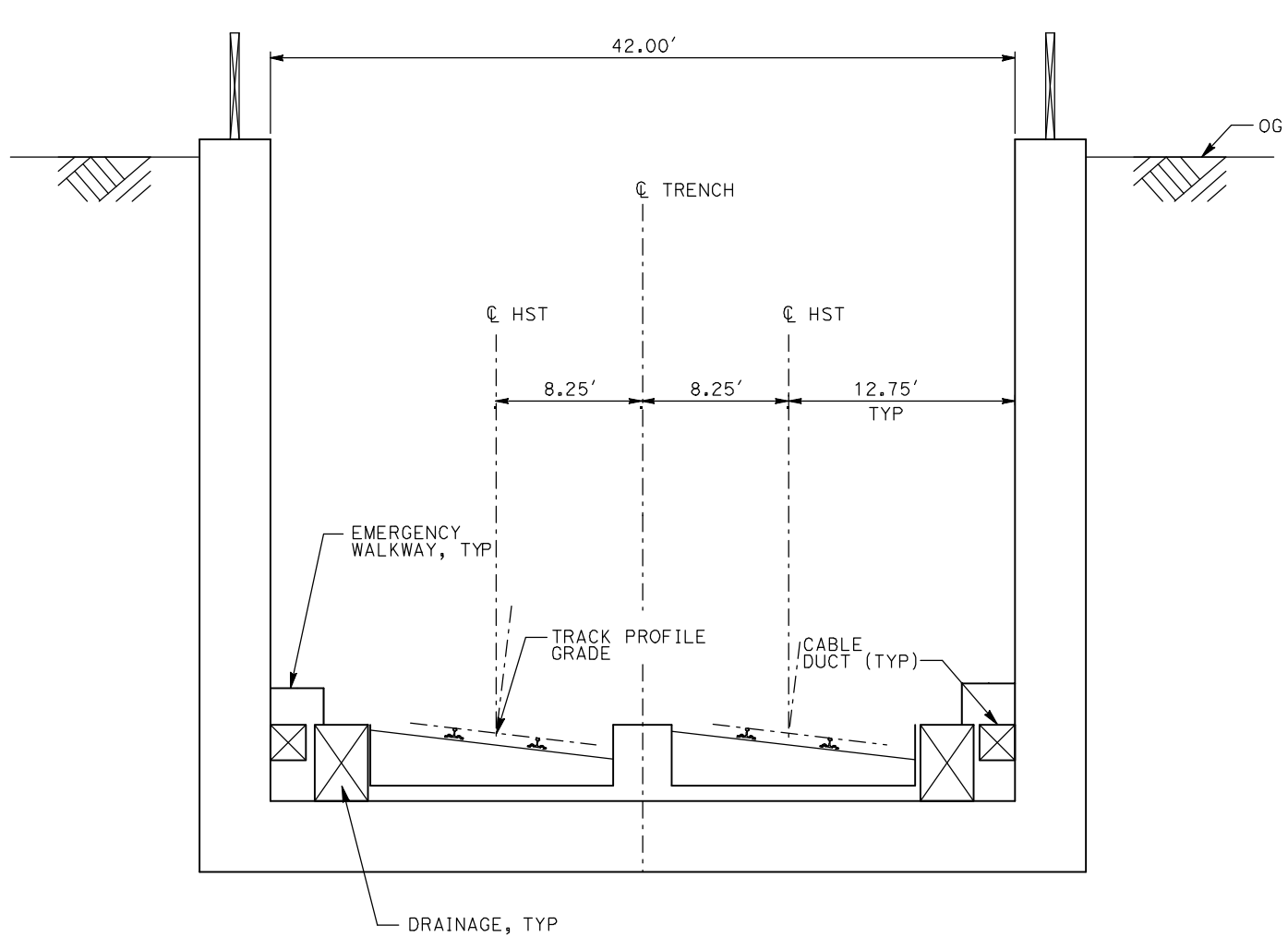
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 7 OF 17

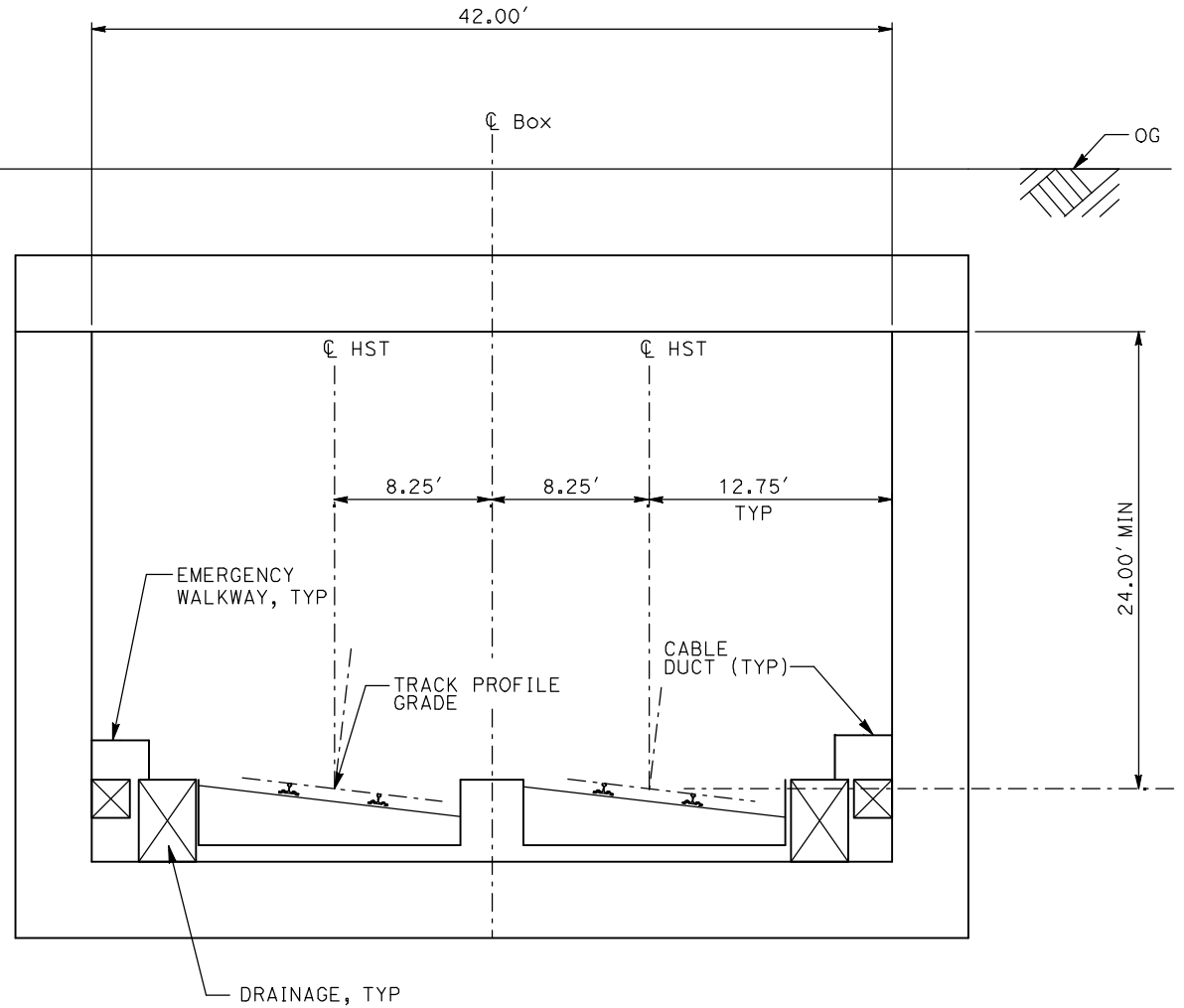
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HSR06-007  
DRAWING NO.  
T3007-A  
SCALE  
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SHEET NO.  
OF ###

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ShieldsA



TR2 - 2 TRACK TRENCH



CC1 - 2 TRACK CUT AND COVER CLOSED BOX

- 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.
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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DRAWN BY  
C. VALADAO  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

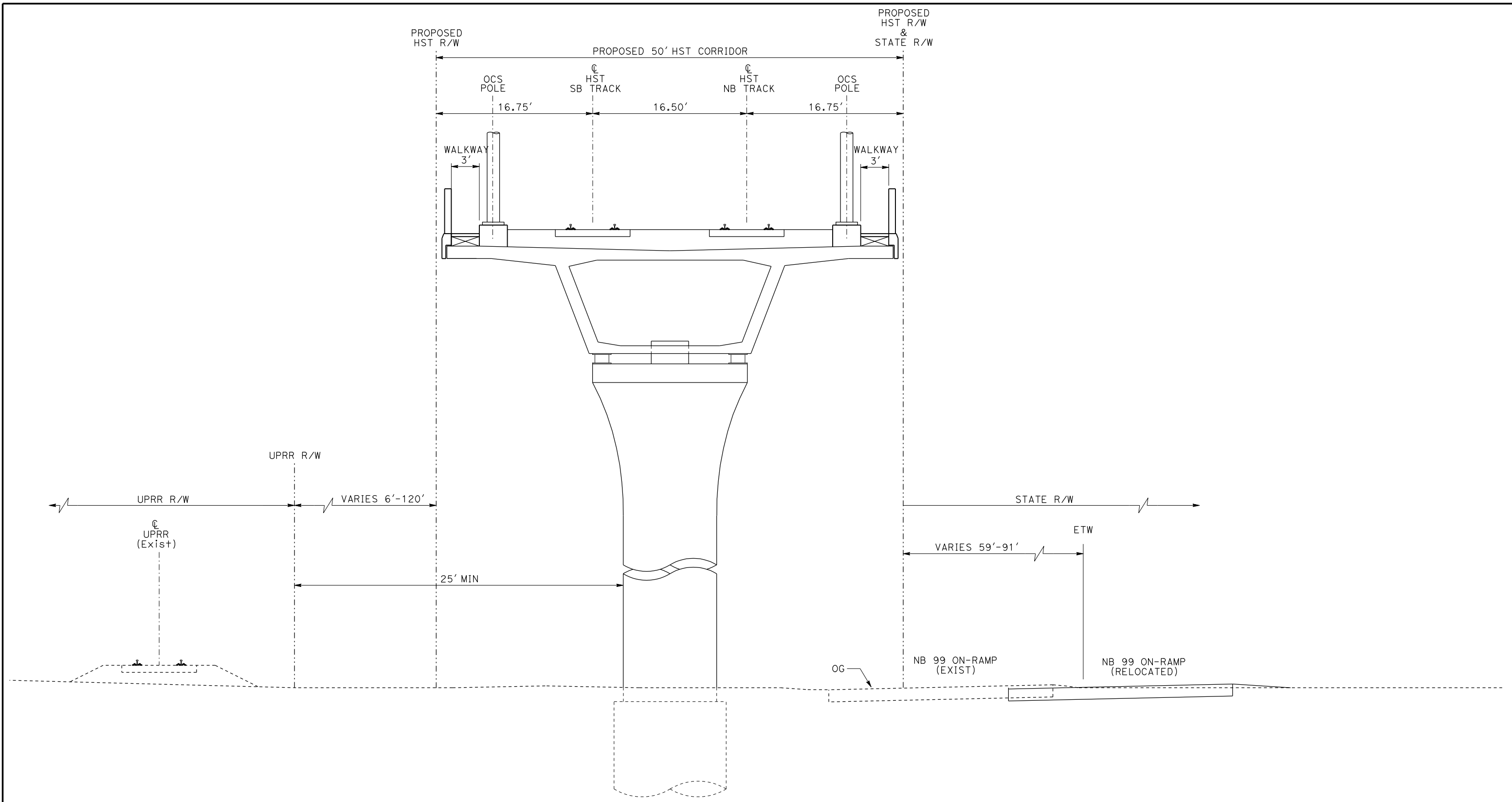


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 8 OF 17

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T3008-A  
SCALE  
NO SCALE  
SHEET NO.  
OF ###





EL6 - DOUBLE TRACK ELEVATED ADJACENT TO UPRR

NOTE:  
 POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.  
 FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE  
 ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

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

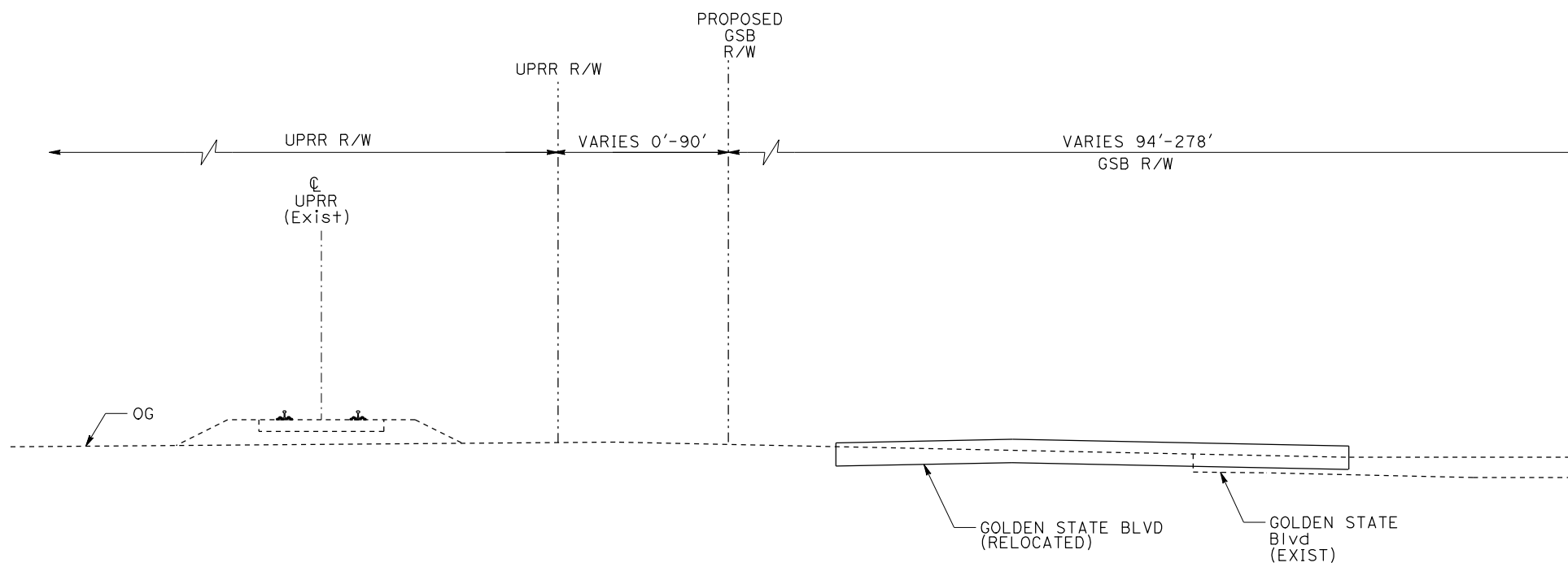
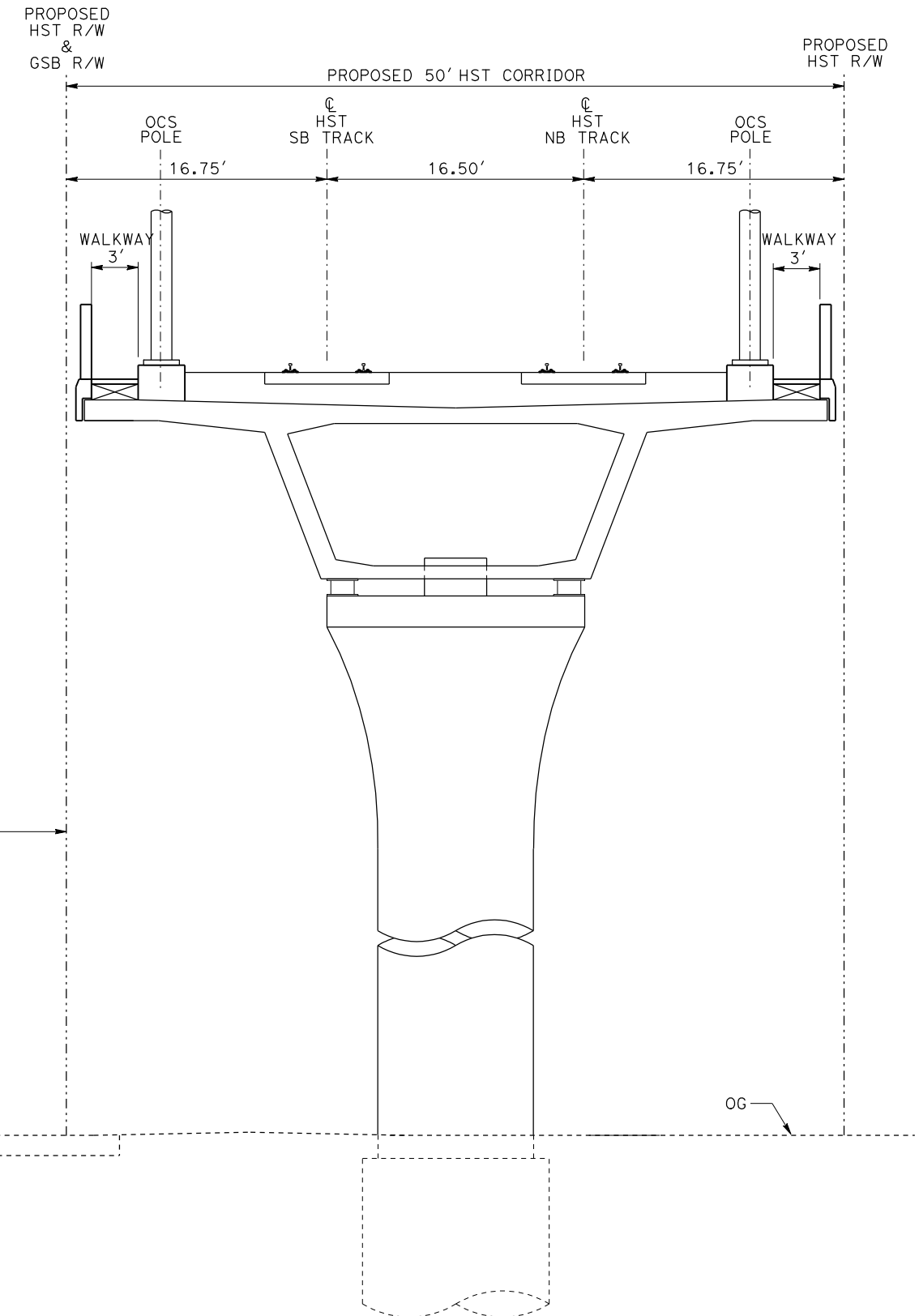
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**15% DESIGN**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**



**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.



EL7 - DOUBLE TRACK ELEVATED ADJACENT TO GOLDEN STATE BOULEVARD

NOTE:  
 POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.  
 FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE  
 ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

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

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

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

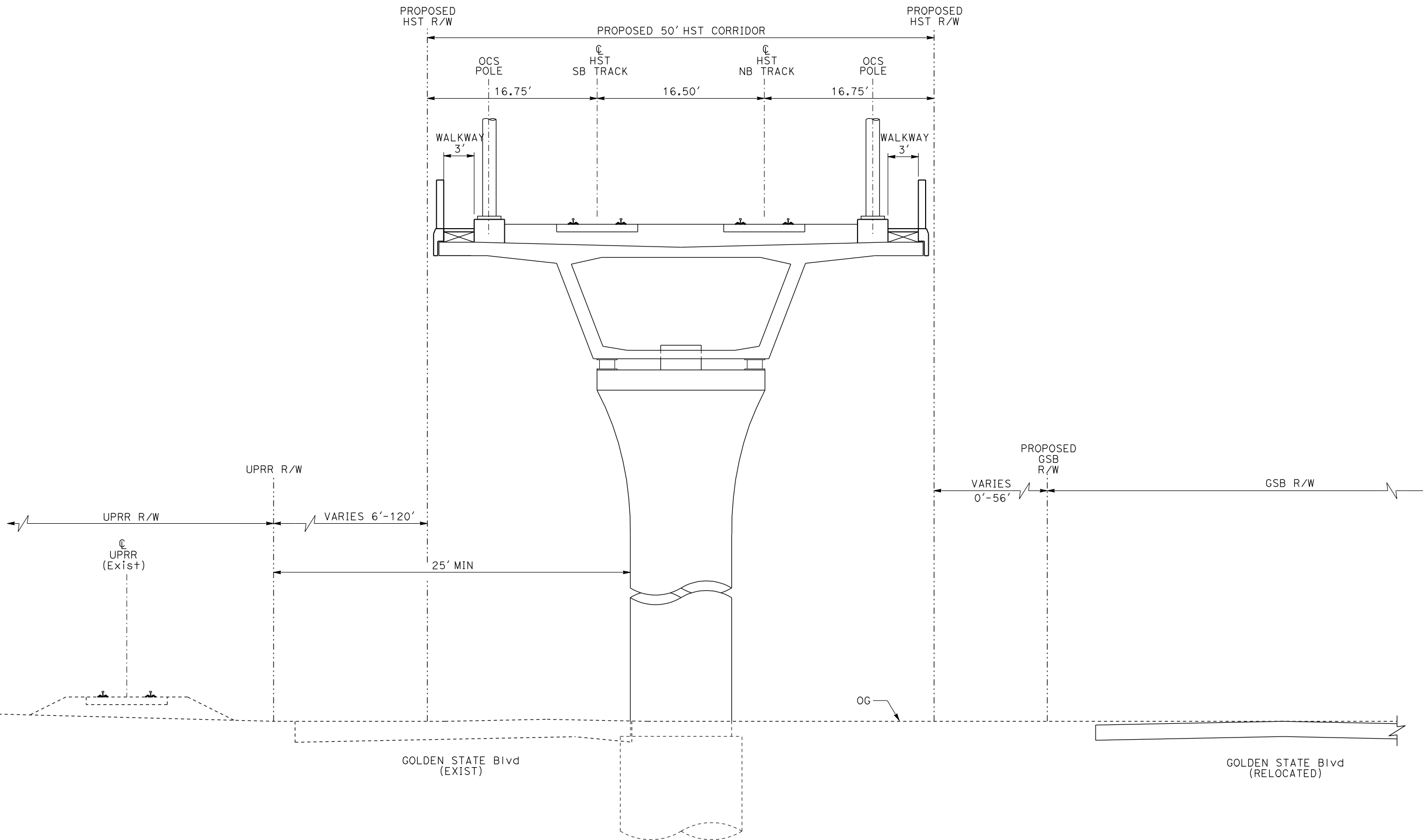
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
  
 TYPICAL SECTIONS  
 SHEET 10 OF 17

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

DATE PLOTTED => 21-JUL-2011  
 TIME PLOTTED => 12:44



EL8 - DOUBLE TRACK ELEVATED BETWEEN UPRR AND GOLDEN STATE BOULEVARD

NOTE:  
 POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.  
 FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE  
 ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

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

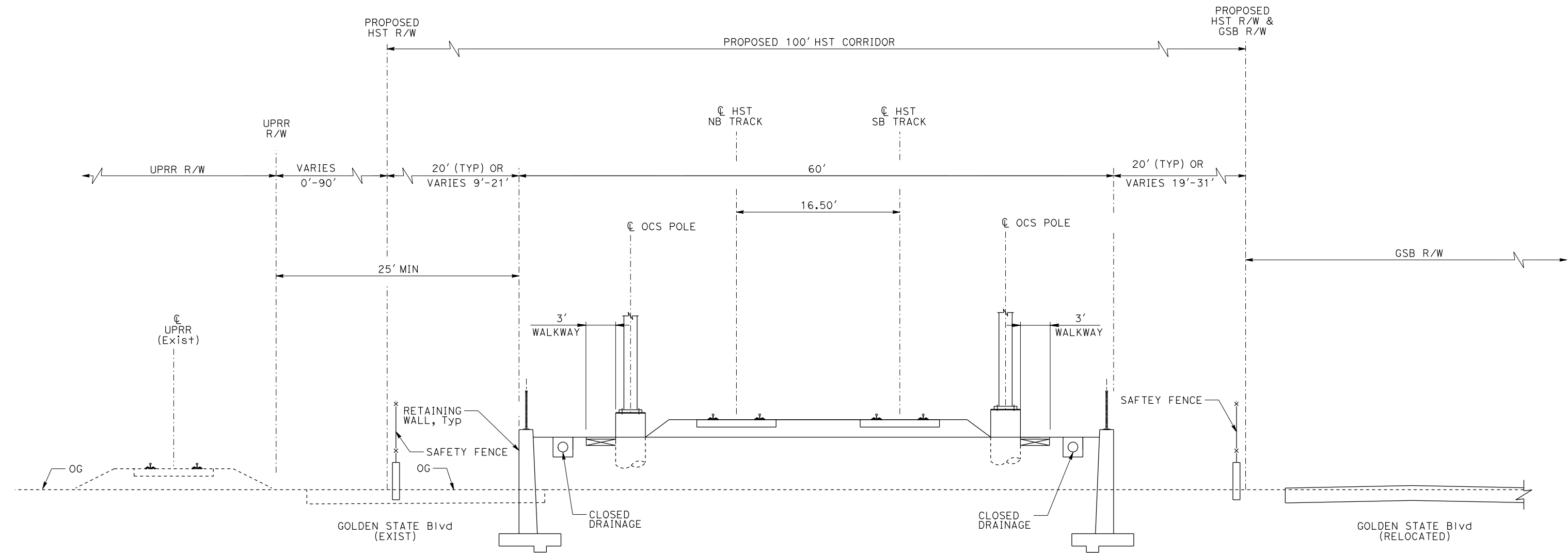
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**CONSTRUCTION**



**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 => 21-JUL-2011  
 TIME PLOTTED => 12:45



RF3 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

NOTE:

POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.  
FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE  
ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

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

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

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

**CH2MHILL**

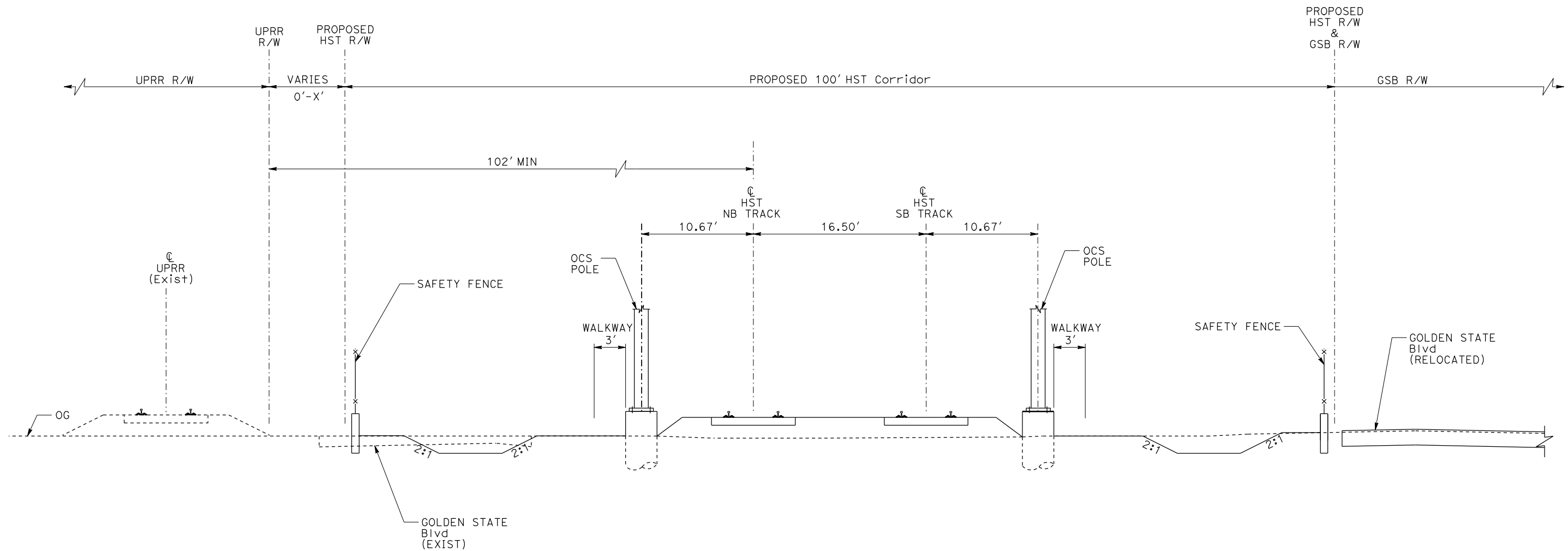


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

TYPICAL SECTION  
SHEET 12 OF 17

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





AG6 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

NOTE:

POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

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

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

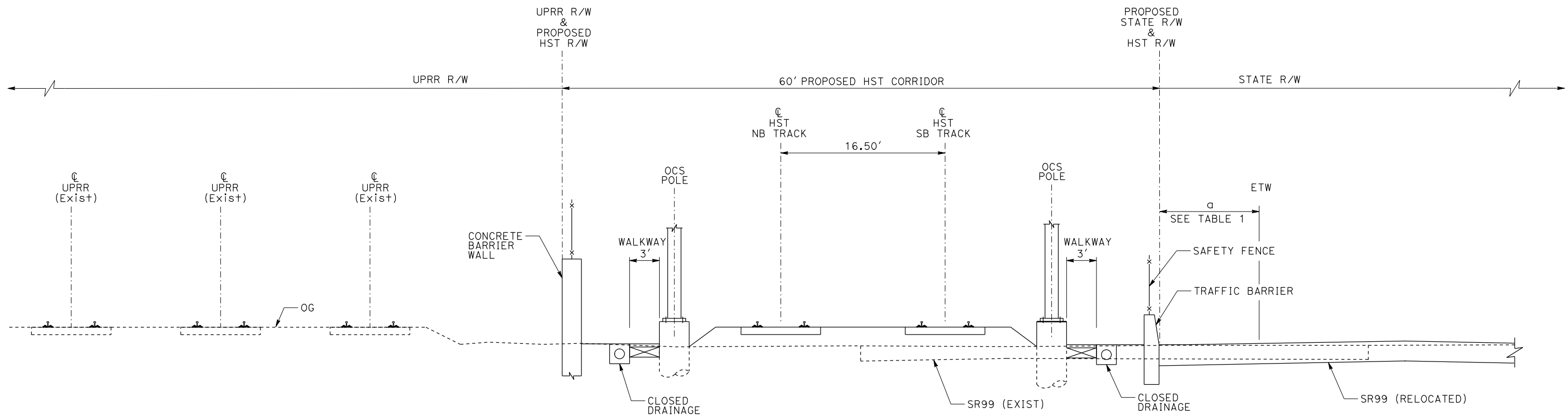
TYPICAL SECTION  
SHEET 13 OF 17

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

DATE PLOTTED => 21-JUL-2011  
TIME PLOTTED => 12:49

TABLE 1

$a > 30'$	NO TRAFFIC BARRIER
$4' < a < 30'$	TRAFFIC BARRIER



AG7 - DOUBLE TRACK BETWEEN UPRR AND STATE ROUTE 99

NOTE:

POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
L. PROCTOR  
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S. LEONG  
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J. VALSECCHI  
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SUBMITTAL**

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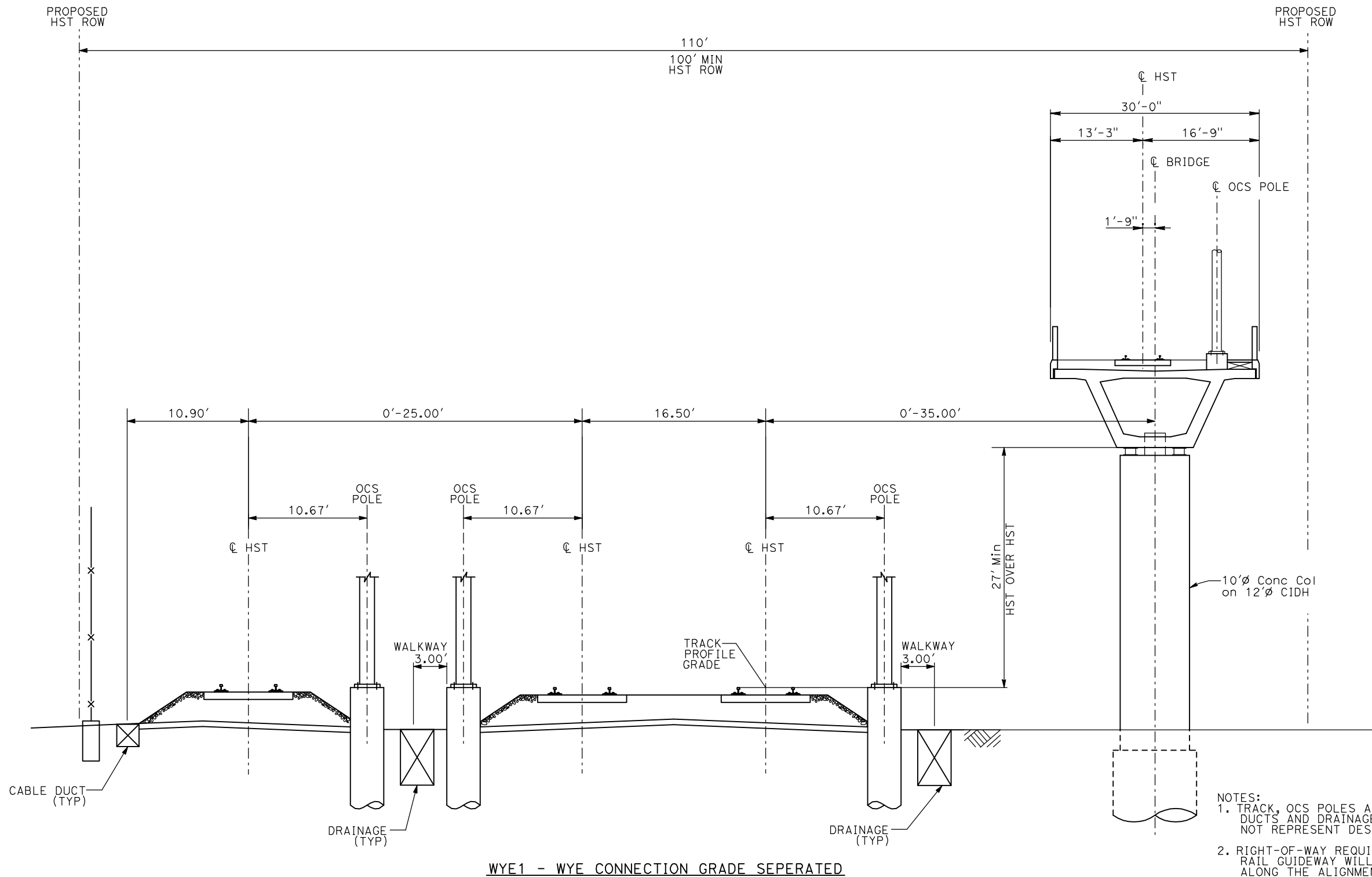
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTION  
SHEET 14 OF 17

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



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- 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.
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A. SHIELDS  
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C. VALADAO  
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A. BOONE  
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A. BOONE  
DATE  
07/20/2011

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**CONSTRUCTION**

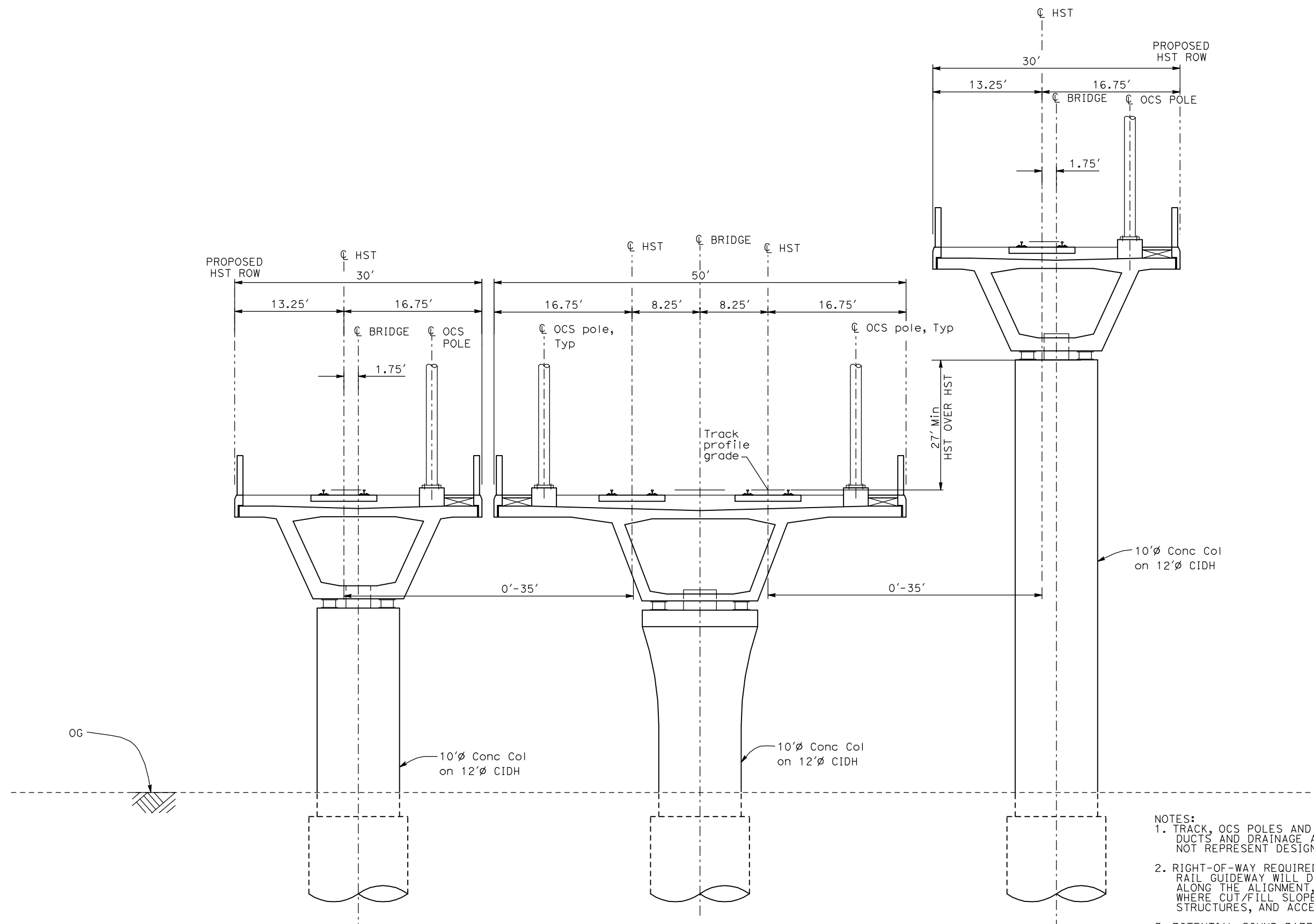


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 15 OF 17

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T3015-A  
SCALE  
NO SCALE  
SHEET NO.  
OF ###

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WYE2 - WYE CONNECTION GRADE SEPERATED

- 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.
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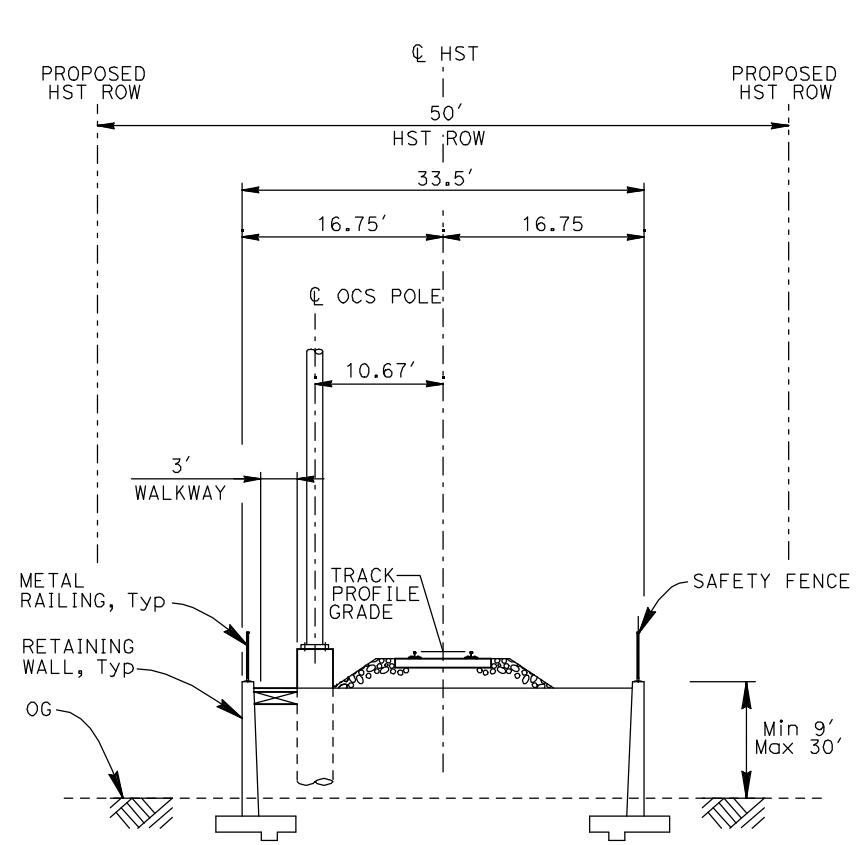


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

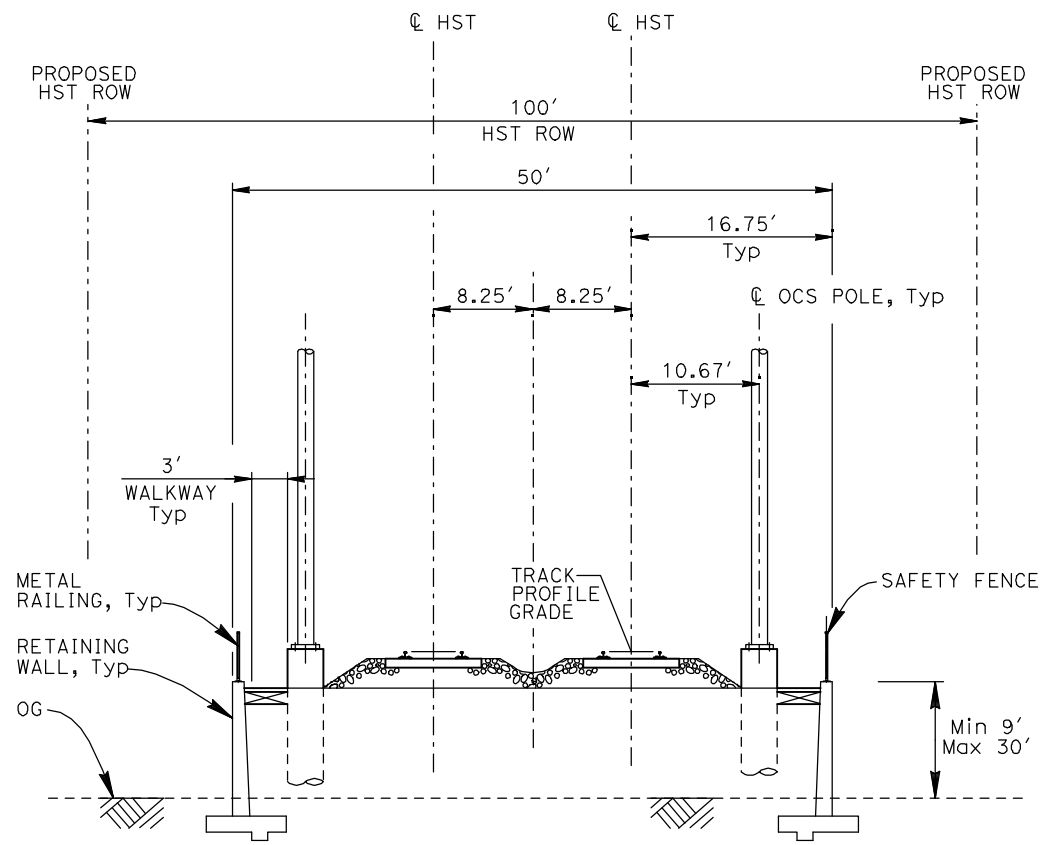
TYPICAL SECTIONS  
SHEET 16 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3016-A
SCALE NO SCALE
SHEET NO. OF ###

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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.
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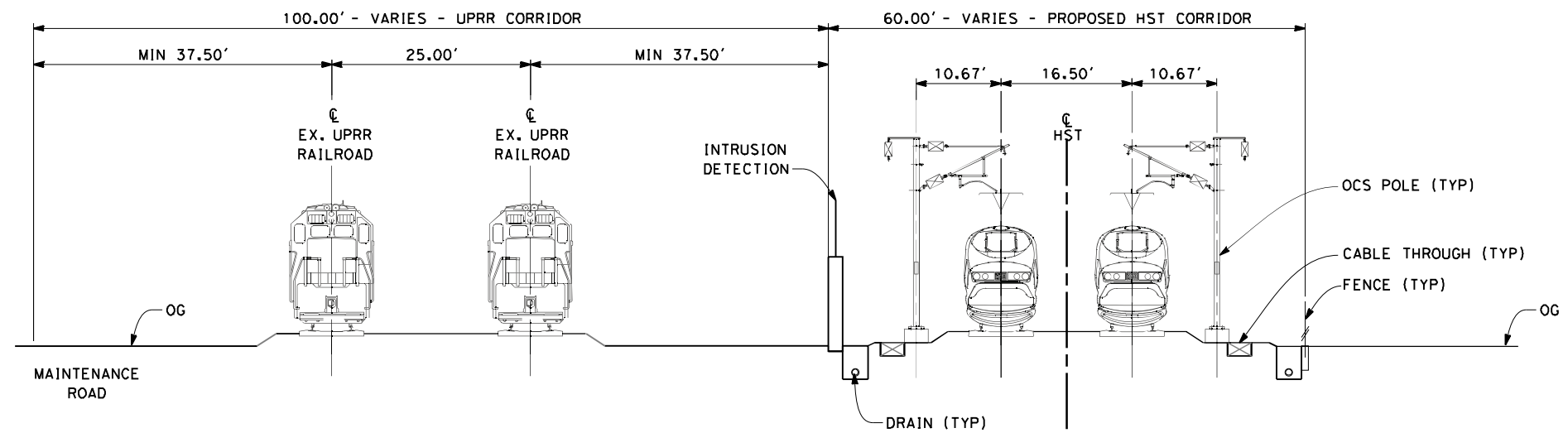
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 17 OF 17

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

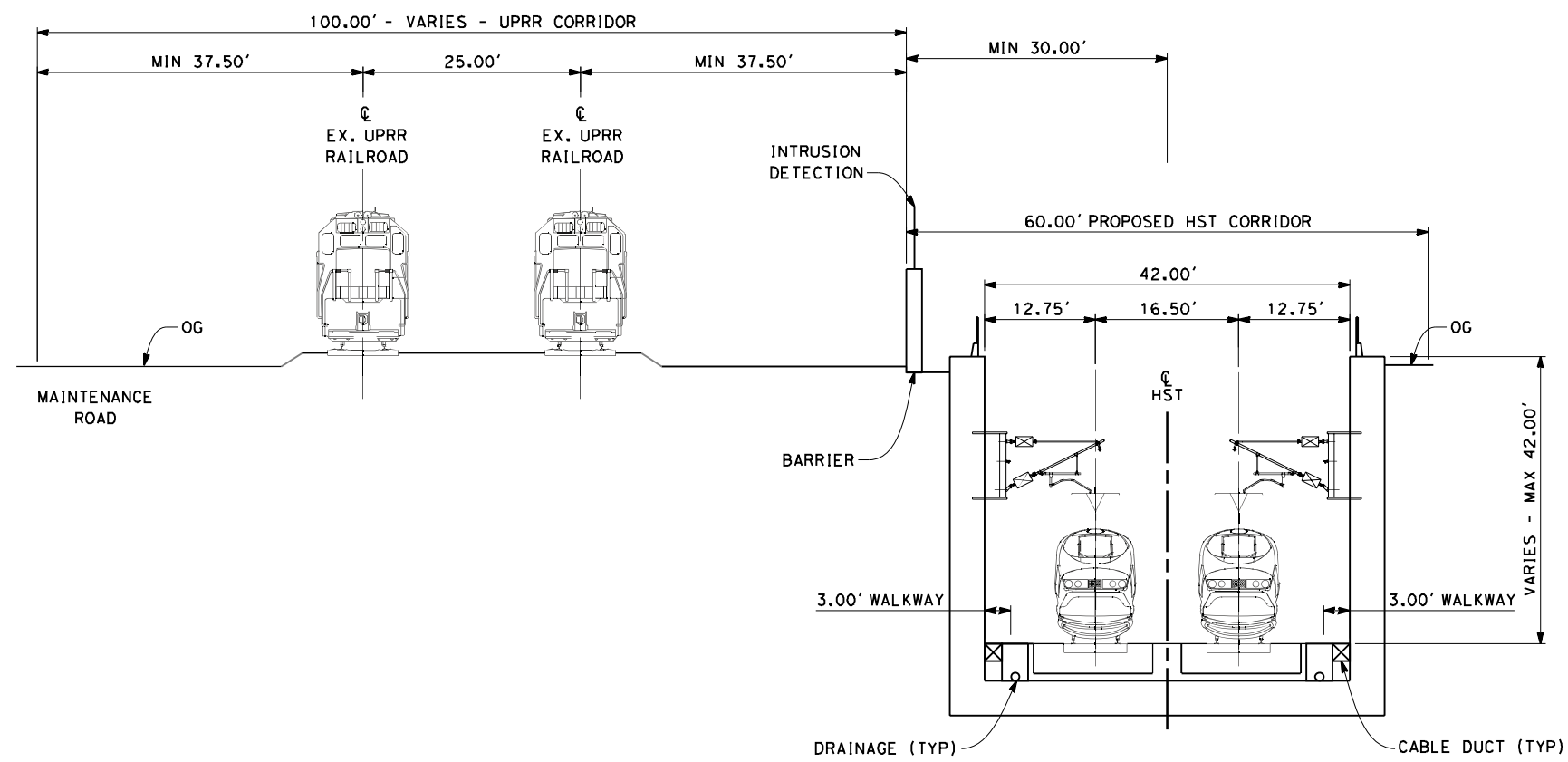


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**SECTION 1**

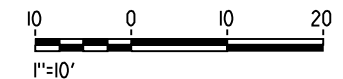
TWIN TRACK AT GRADE 60FT ROW ADJACENT TO UPRR  
STA 100+00 THROUGH STA 182+00



**SECTION 2**

TWIN TRACK IN TRENCH  
STA 196+00 THROUGH STA 260+00

- NOTES:
1. TRACKFORM SHOWN IS INDICATIVE
  2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
  3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES
  4. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
E. CAQUIAS  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
05/13/11

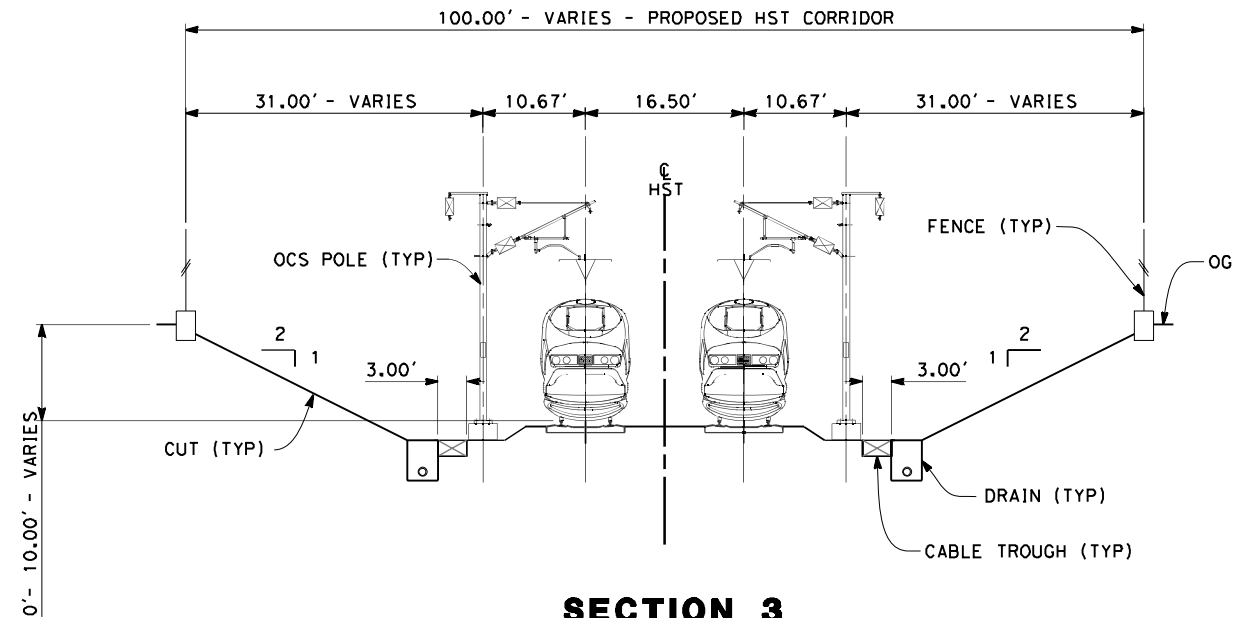
**RECORD SET 15%  
DESIGN SUBMISSION**  
  
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

CONTRACT NO.  
HSR 06-0003  
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AS SHOWN  
 SHEET NO.  
XX OF XX

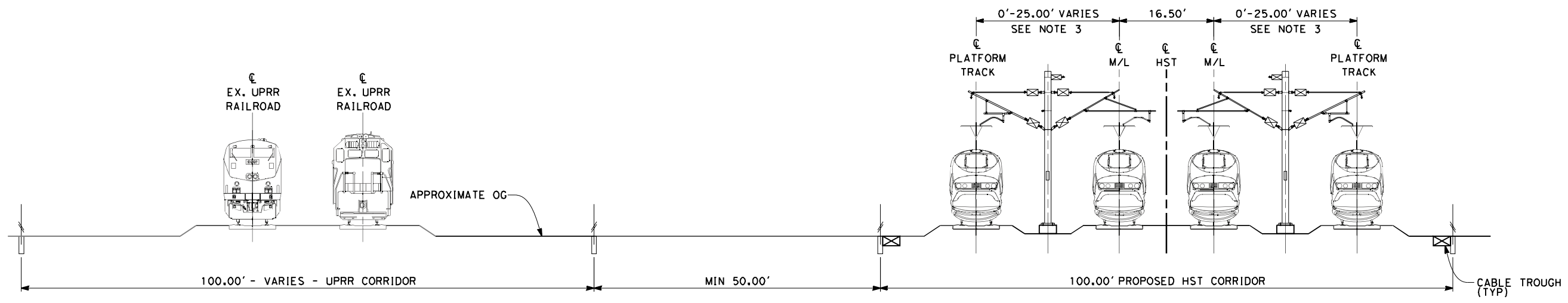
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**SECTION 3**

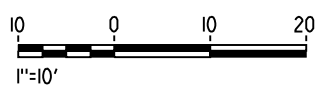
TWIN TRACK IN OPEN CUT  
 STA 260+00 THROUGH STA 264+25  
 STA 260+00 THROUGH STA 270+74 (KERN OPTION)

- NOTES:
1. TRACKFORM SHOWN IS INDICATIVE
  2. SUPERELEVATION IS NOT SHOWN THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES
  3. DISTANCE BETWEEN TRACKS VARIES FROM 0-25.00' THROUGH TURNOUTS AND REVERSE TO PARALLEL.
  4. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS



**SECTION 4**

4 TRACK AT GRADE STATION APPROACH  
 STA 264+25 THROUGH STA 285+84  
 STA 286+84 THROUGH STA 287+20  
 STA 301+30 THROUGH STA 302+00  
 STA 320+25 THROUGH STA 324+25  
 STA 270+74 THROUGH STA 285+84 (KERN OPTION)  
 STA 286+84 THROUGH STA 293+70 (KERN OPTION)  
 STA 307+80 THROUGH STA 308+50 (KERN OPTION)  
 STA 326+75 THROUGH STA 334+00 (KERN OPTION)



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
E. CAQUIAS  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
06/30/11

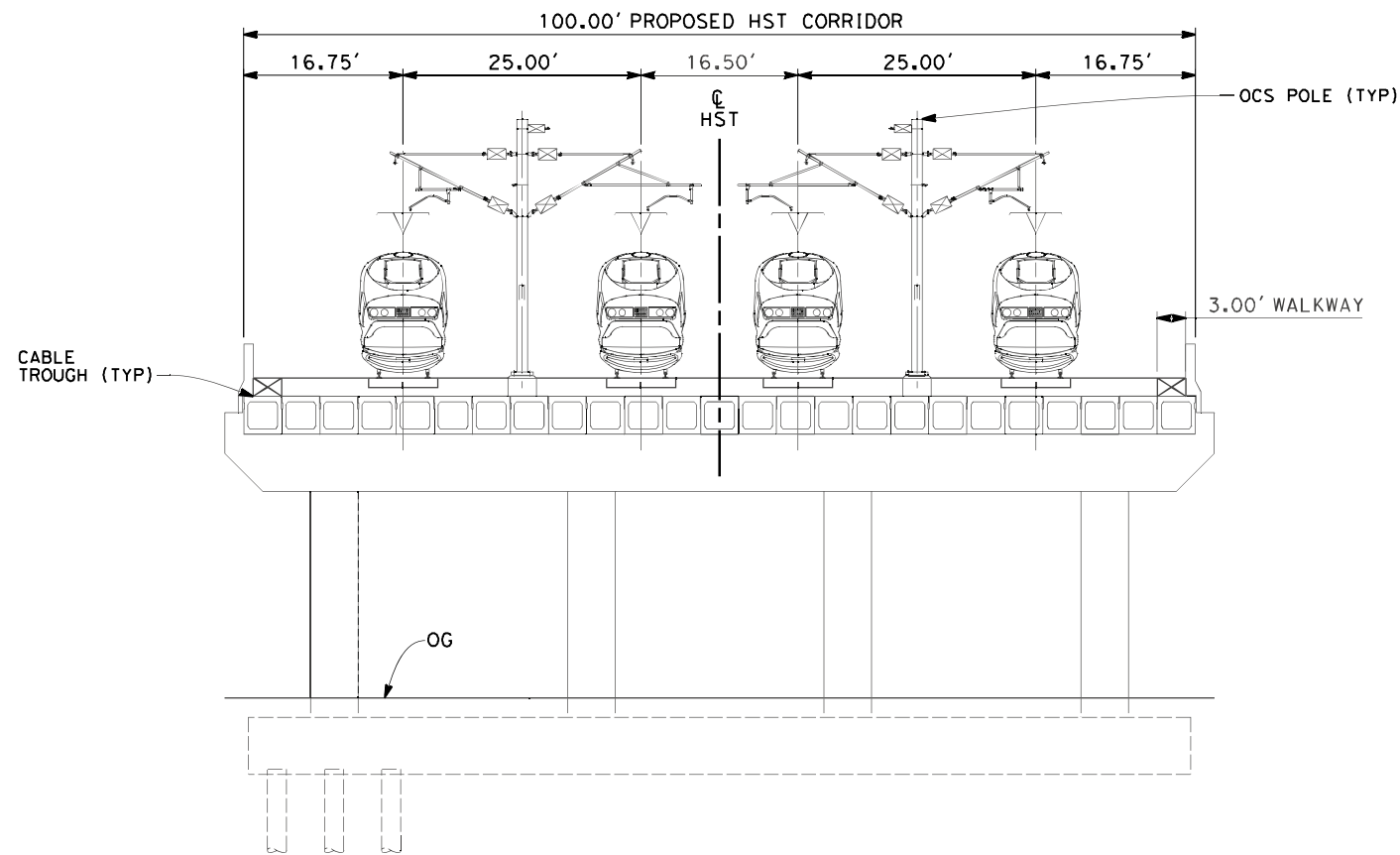
**RECORD SET 15%  
 DESIGN SUBMISSION**  
 NOT FOR  
 CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
T3019-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
XX OF XX

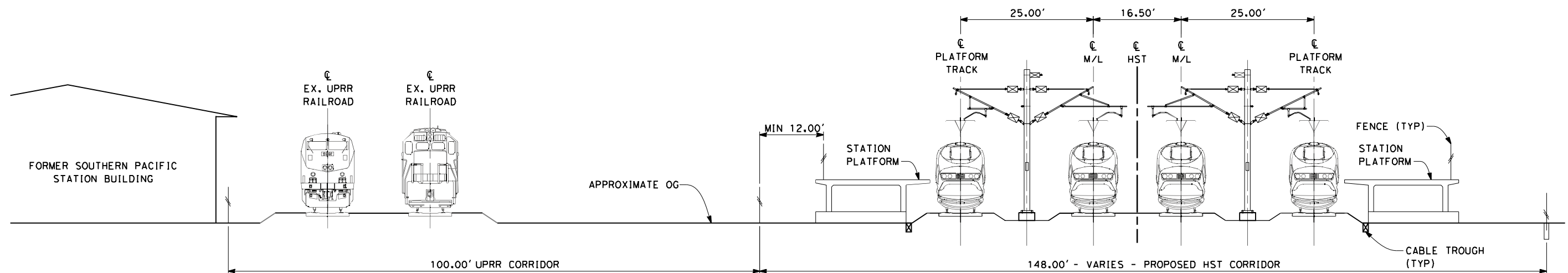
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**SECTION 5**

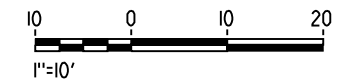
TWIN TRACK - BOX GIRDER BRIDGE  
 STA 285+84 THROUGH STA 286+84

- NOTES:
1. TRACKFORM SHOWN IS INDICATIVE
  2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS



**SECTION 6**

4 TRACK AT GRADE PLATFORMS  
 STA 287+20 THROUGH STA 301+30  
 STA 293+70 THROUGH STA 307+80 (KERN OPTION)



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
 K. SEYMOUR  
 DRAWN BY  
 E. CAQUIAS  
 CHECKED BY  
 D. HUNT  
 IN CHARGE  
 A. LUFT  
 DATE  
 06/30/11

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

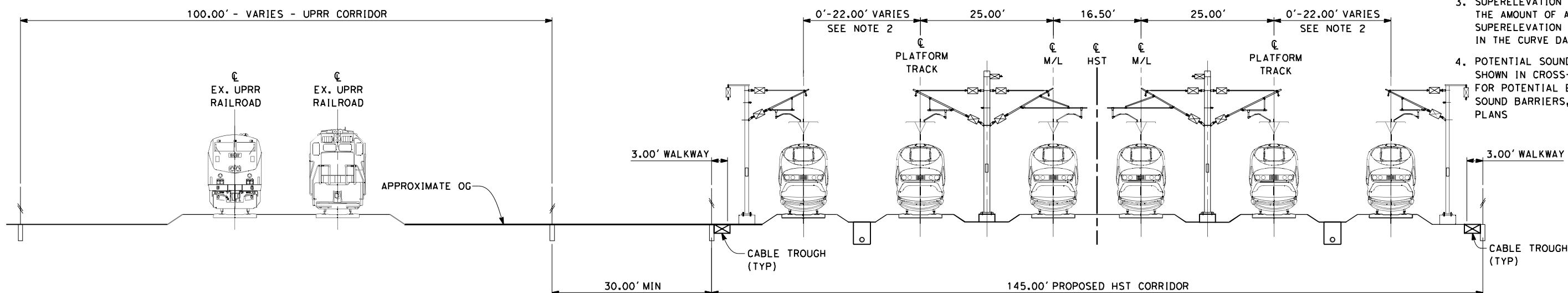


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

CONTRACT NO.  
 HSR 06-0003  
 DRAWING NO.  
 T3020-A  
 SCALE  
 AS SHOWN  
 SHEET NO.  
 XX OF XX



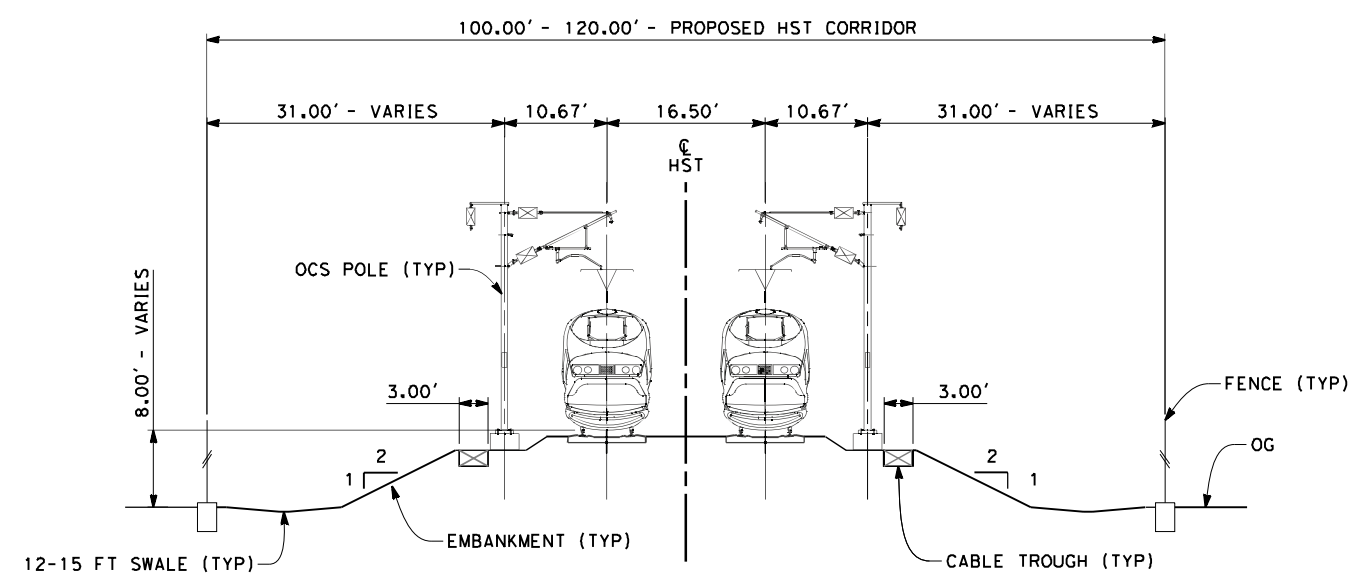
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- NOTES:**
1. TRACKFORM SHOWN IS INDICATIVE
  2. DISTANCE BETWEEN TRACKS VARIES FROM 0-22.00' THROUGH TURNOUTS AND REVERSE TO PARALLEL.
  3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES
  4. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS

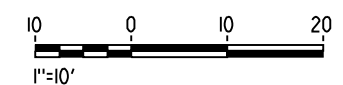
**SECTION 7**

6 TRACK AT GRADE INCLUDING STORAGE TRACKS  
 STA 302+00 THROUGH STA 320+25  
 STA 308+50 THROUGH STA 326+75 (KERN OPTION)



**SECTION 8**

TWIN TRACK AT GRADE 100FT ROW  
 STA 324+25 THROUGH STA 338+50



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
E. CAQUIAS  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
06/30/11

**RECORD SET 15%  
 DESIGN SUBMISSION**

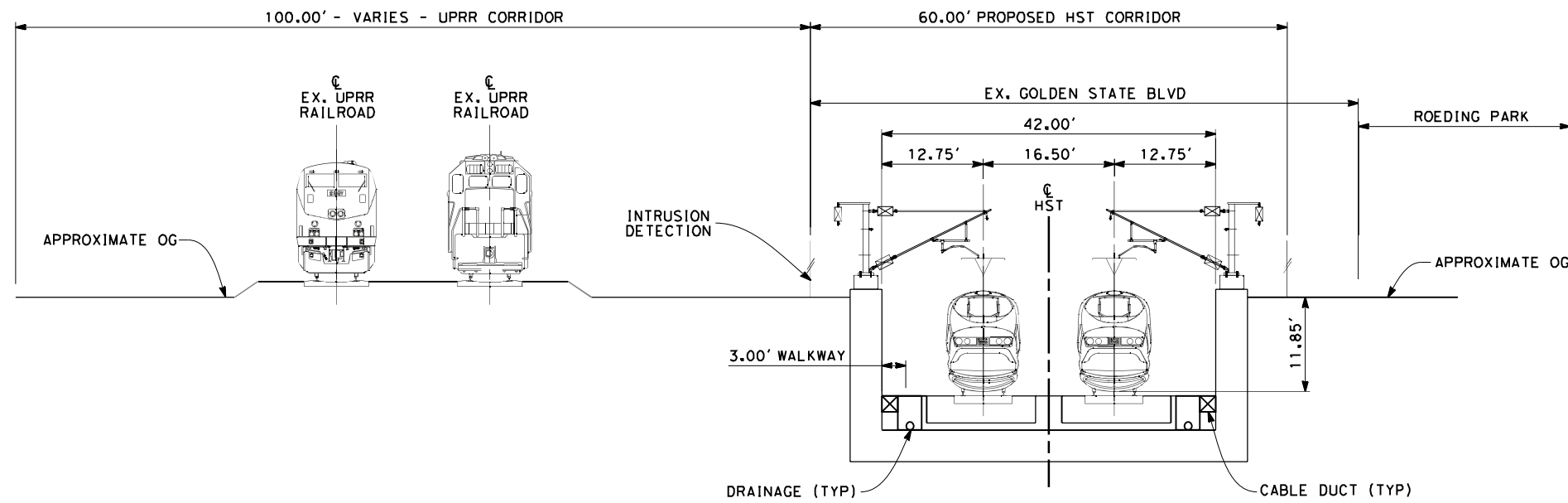
**NOT FOR  
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

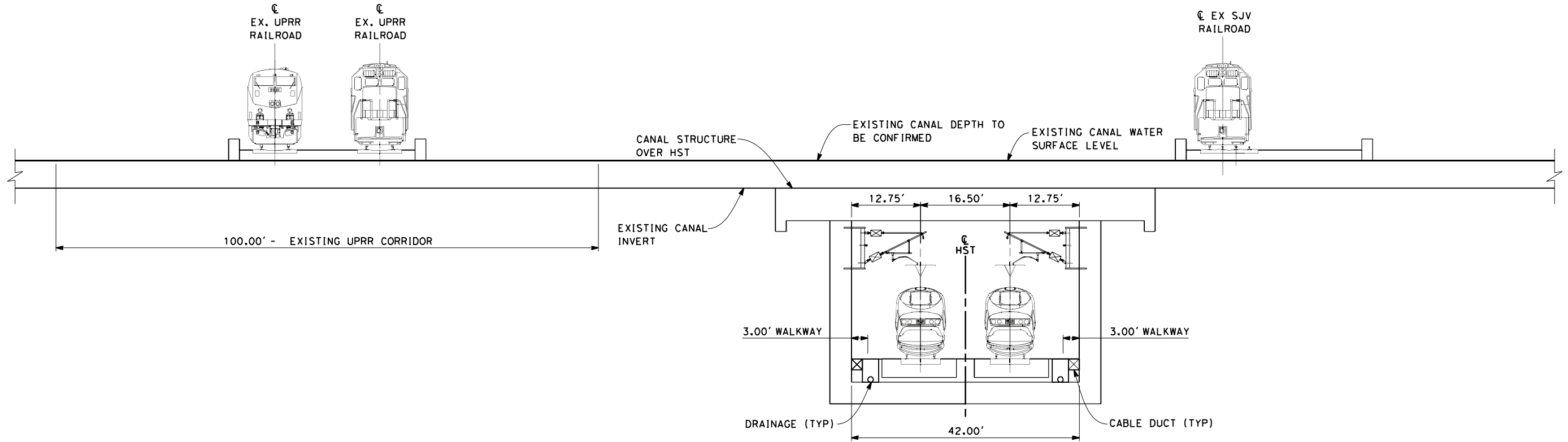
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**SECTION 13**

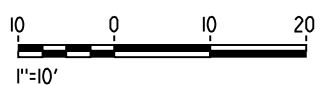
TWIN TRACK IN TRENCH ADJACENT TO UPRR AND ROEDING PARK STA 195+00



**SECTION 14**

TWIN TRACK IN TRENCH UNDER CANAL STA 228+30

- NOTES:
1. TRACKFORM SHOWN IS INDICATIVE
  2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
  3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES
  4. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
E. CAQUIAS  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
05/13/11

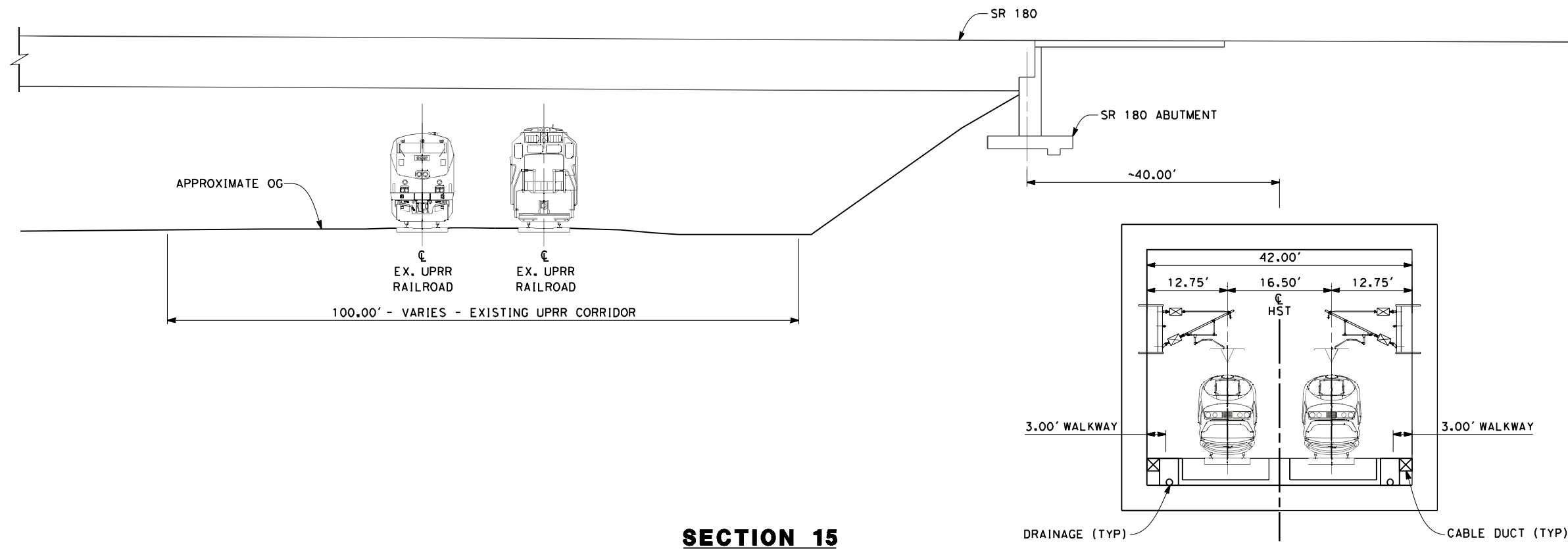
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DESIGN SUBMISSION**  
  
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
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 SCALE  
AS SHOWN  
 SHEET NO.  
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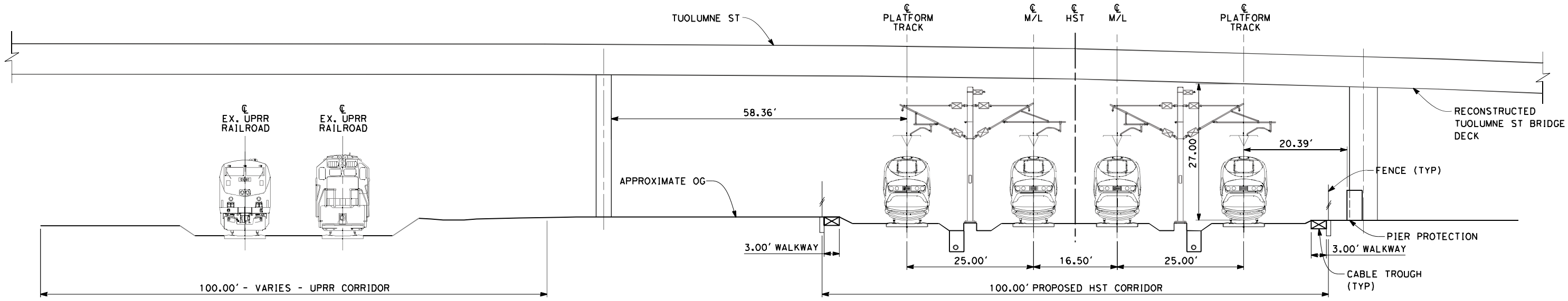
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**SECTION 15**

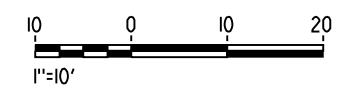
TWIN TRACK IN BOX ADJACENT TO SR-180 ABUTMENT  
STA 232+00

- NOTES:
1. TRACKFORM SHOWN IS INDICATIVE
  2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
  3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES
  4. FOR SECTION 16 OCS POLES TO BE SPACED BEFORE & AFTER BRIDGE. POSITIONS ARE INDICATIVE
  5. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS



**SECTION 16**

4 TRACK AT GRADE STATION APPROACH UNDER TUOLUMNE ST  
STA 276+50  
STA 276+50 (KERN OPTION)



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
E. CAQUIAS  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
05/13/11

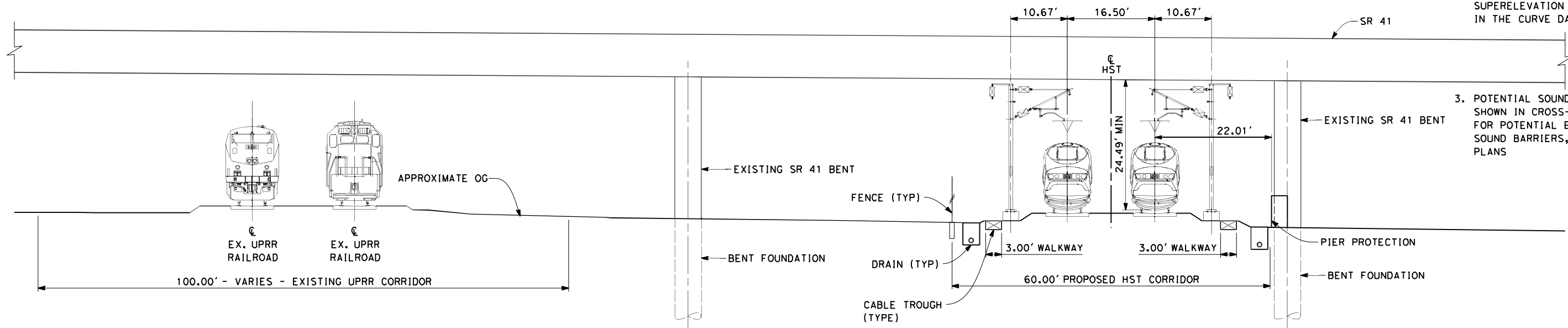
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DESIGN SUBMISSION**  
  
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

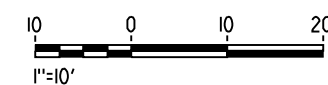
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 DRAWING NO.  
T3023-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
XX OF XX

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- NOTES:
1. TRACKFORM SHOWN IS INDICATIVE
  2. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS

**SECTION 17**  
 TWIN TRACK UNDER SR-41  
 STA 333+00  
 STA 333+00 (KERN OPTION)



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
 K. SEYMOUR  
 DRAWN BY  
 E. CAQUIAS  
 CHECKED BY  
 D. HUNT  
 IN CHARGE  
 A. LUFT  
 DATE  
 06/30/11

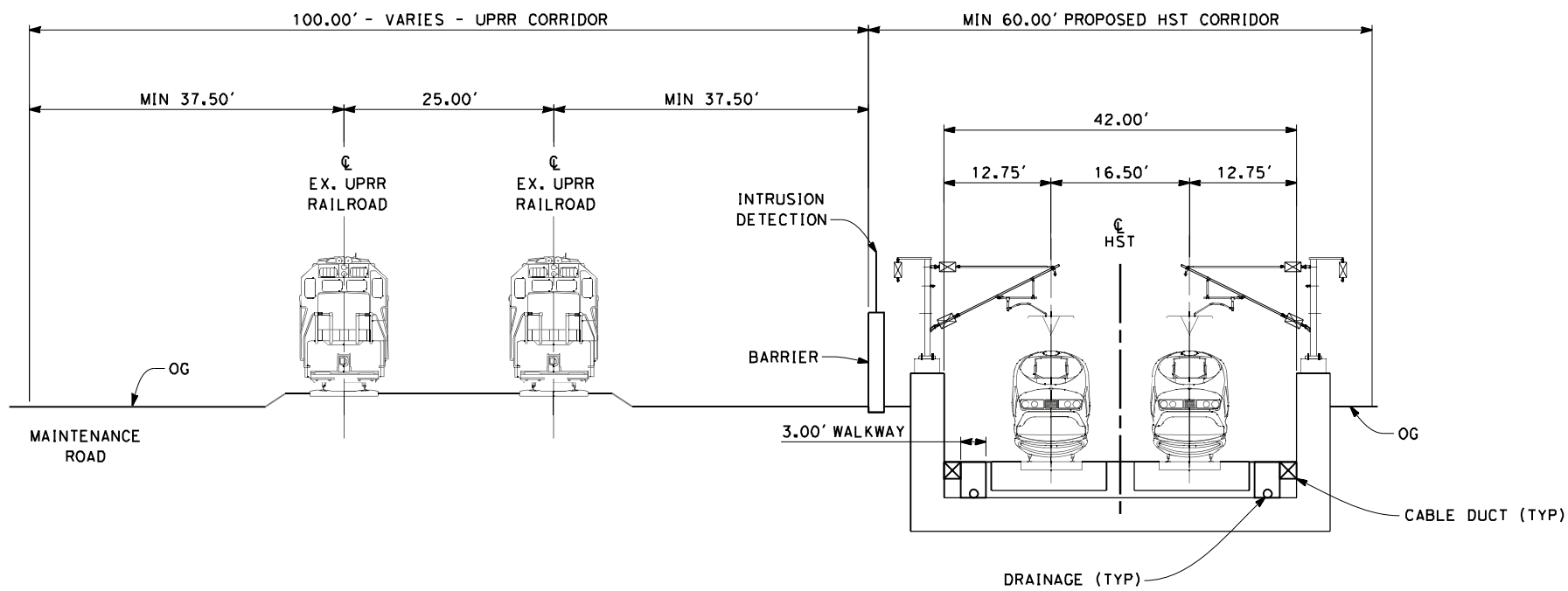
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 DESIGN SUBMISSION**  
  
**NOT FOR  
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

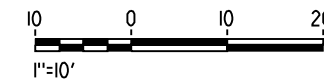
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**SECTION 19**  
 TWIN TRACK IN TRENCH  
 STA 182+00 THROUGH STA 196+00

- NOTES:
1. TRACKFORM SHOWN IS INDICATIVE
  2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL CROSS SECTIONS
  3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS-SECTION(S). FOR POTENTIAL EXTENTS OF SOUND BARRIERS, SEE ALIGNMENT PLANS.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
 K. SEYMOUR  
 DRAWN BY  
 E. CAQUIAS  
 CHECKED BY  
 D. HUNT  
 IN CHARGE  
 A. LUFT  
 DATE  
 06/30/11

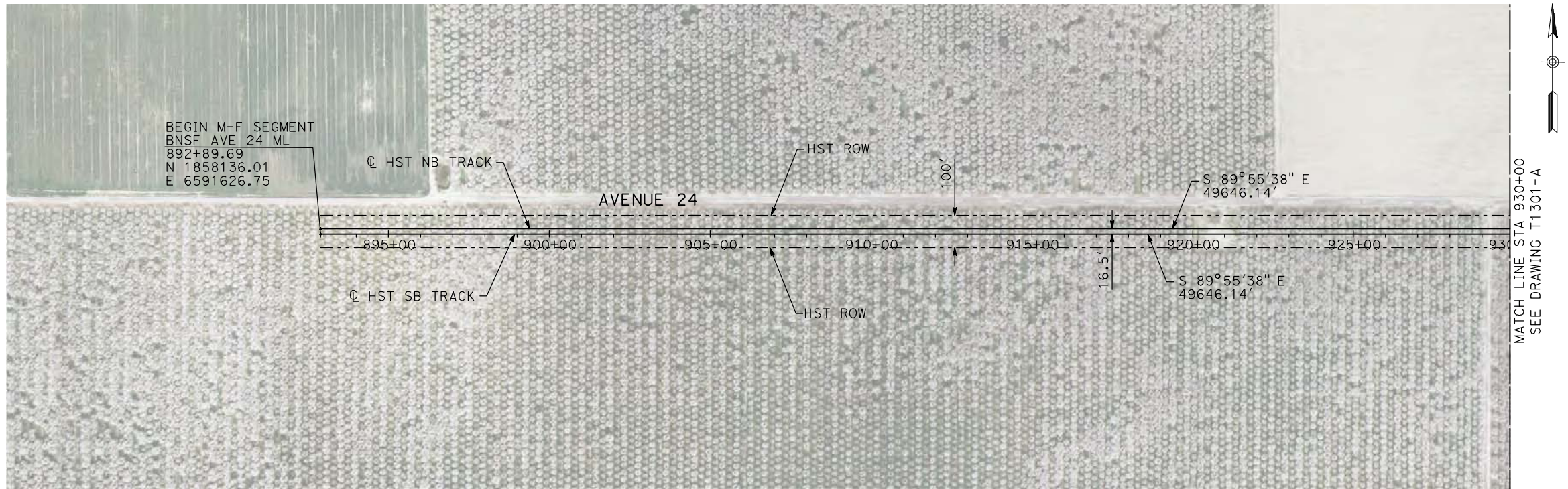
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 DESIGN SUBMISSION**  
  
**NOT FOR  
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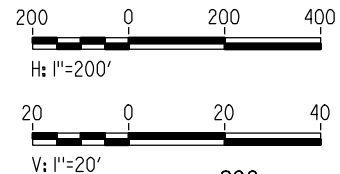
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 FRESNO SUBSECTION  
 ALIGNMENT F1  
 CROSS SECTIONS

CONTRACT NO.  
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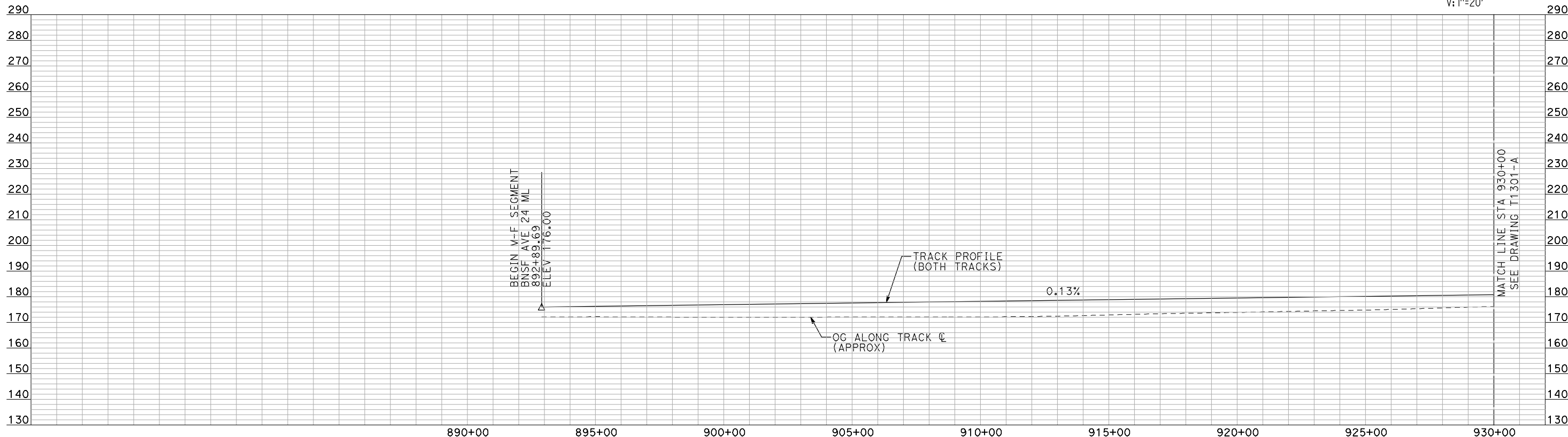




**PLAN**



- 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.



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 892+89.69 TO STA 930+00

CONTRACT NO.  
HSR06-007

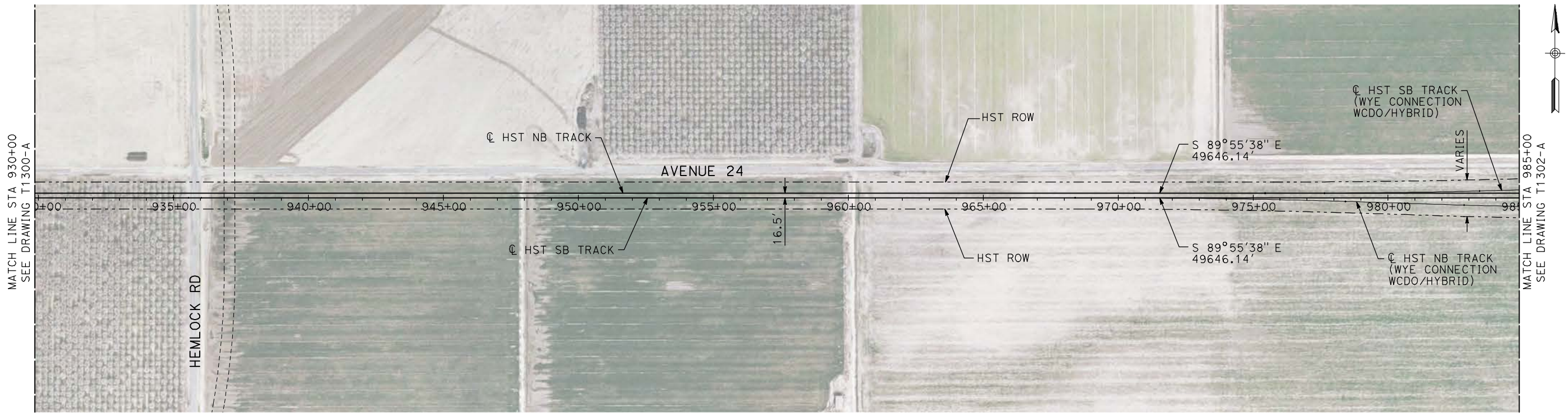
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SCALE  
AS SHOWN

SHEET NO.  
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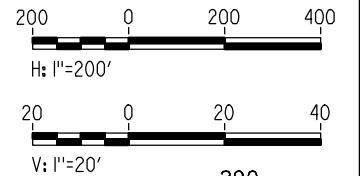
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- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

**PLAN**



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



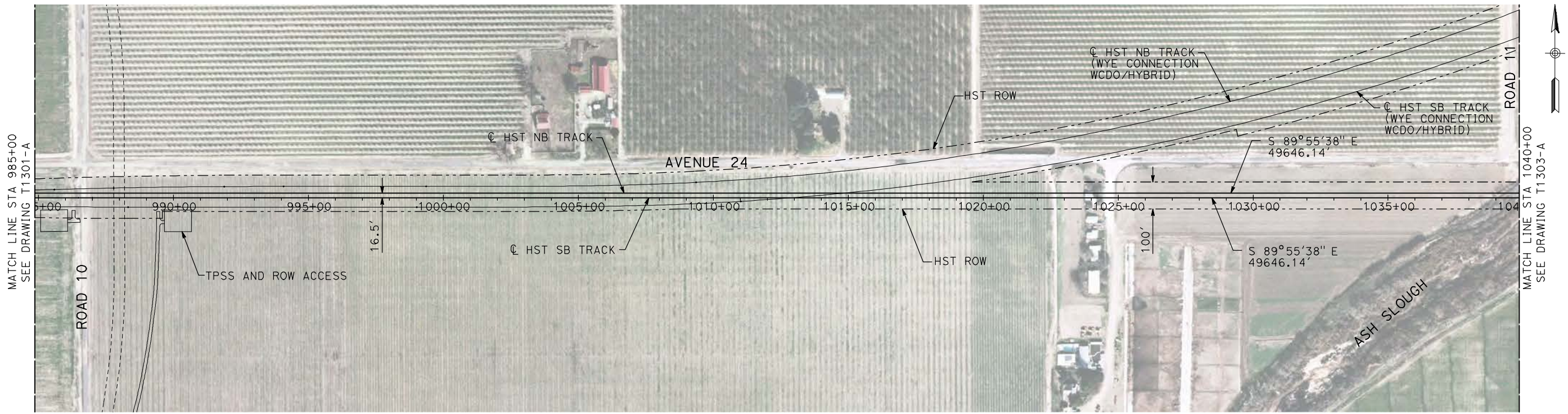
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 930+00 TO STA 985+00

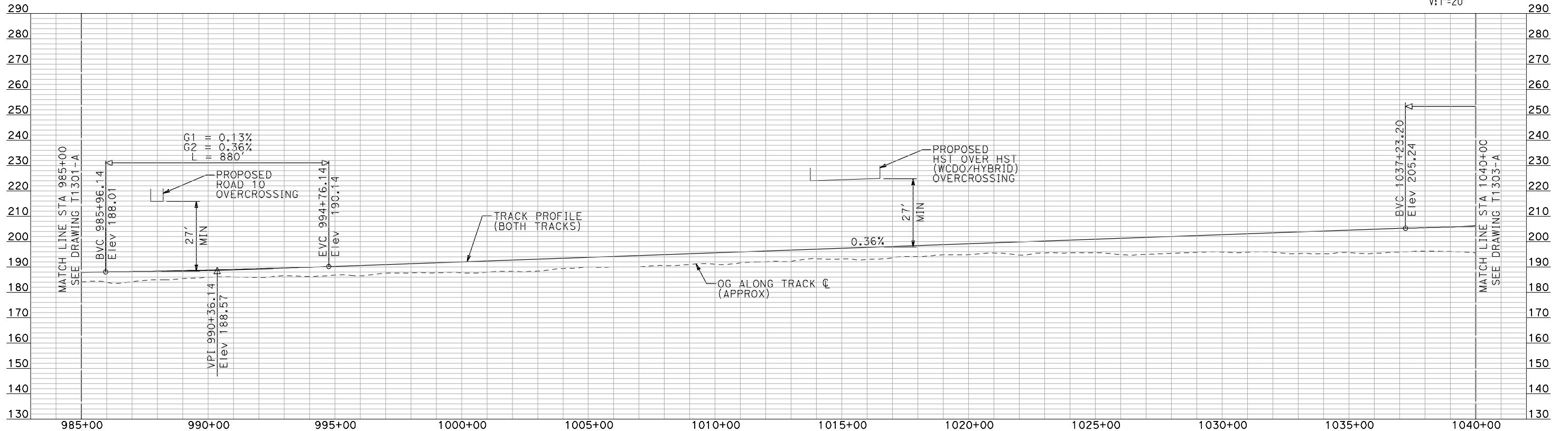
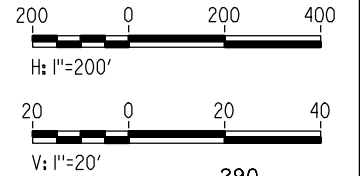
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DRAWING NO.  
T1301-A  
SCALE  
AS SHOWN  
SHEET NO.  
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- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



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

7/21/2011 11:29:14 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_24\WF-T-1302-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



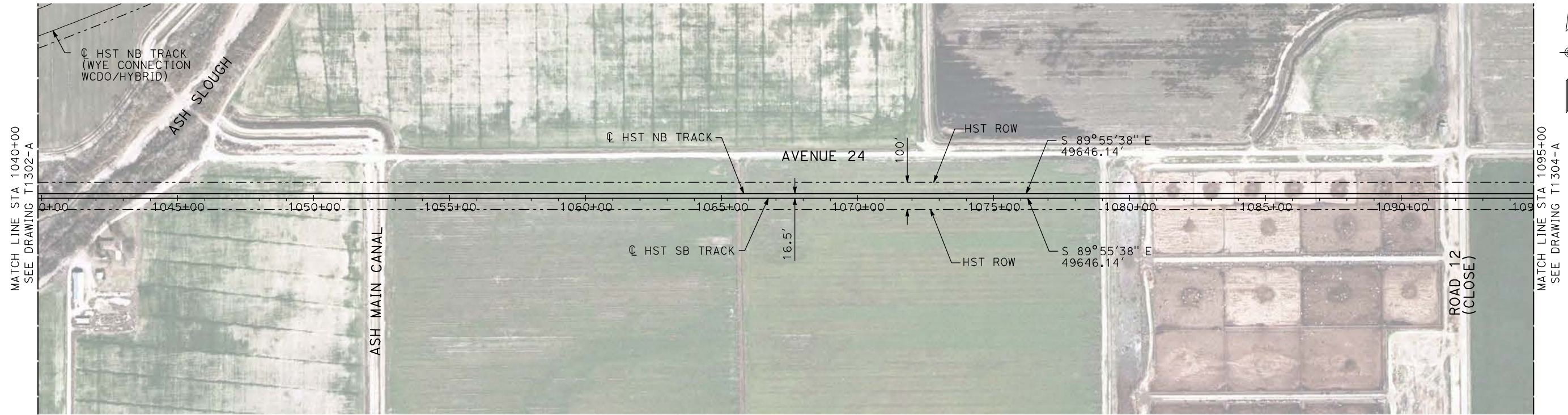
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 985+00 TO STA 1040+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1302-A  
SCALE  
AS SHOWN  
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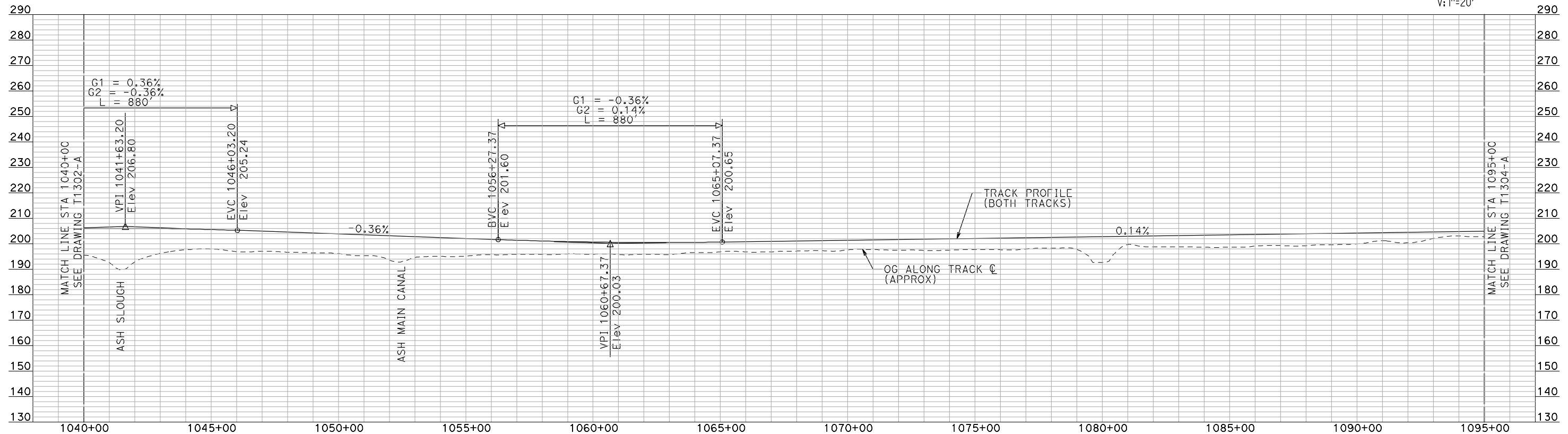
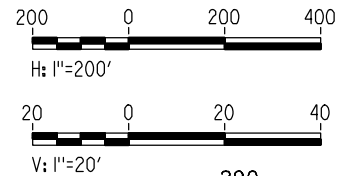


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**PLAN**

- 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.



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

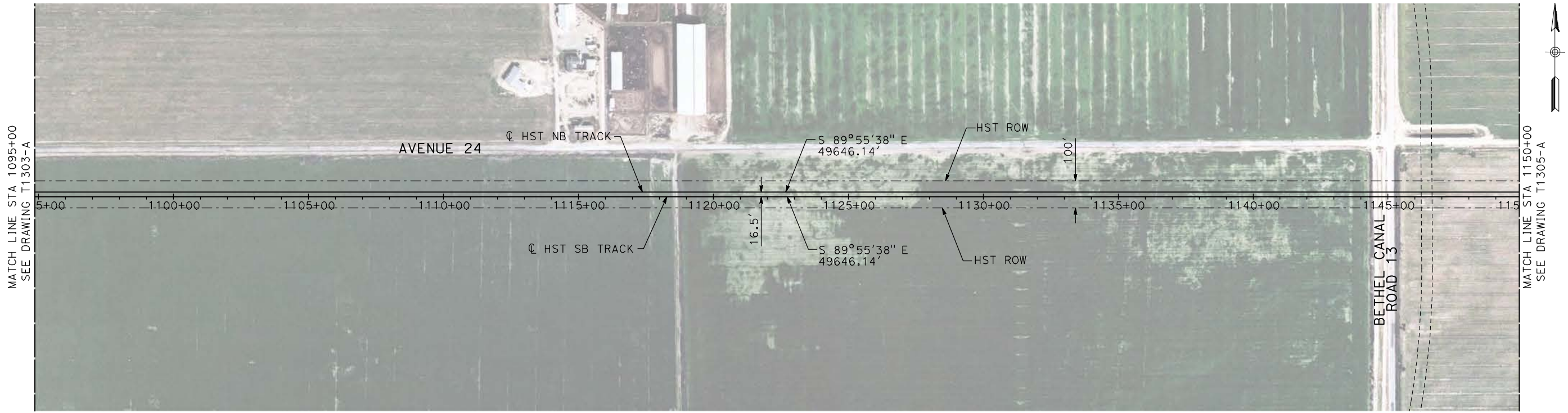
**NOT FOR  
CONSTRUCTION**



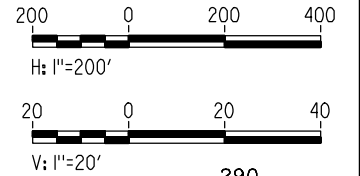
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1040+00 TO STA 1095+00

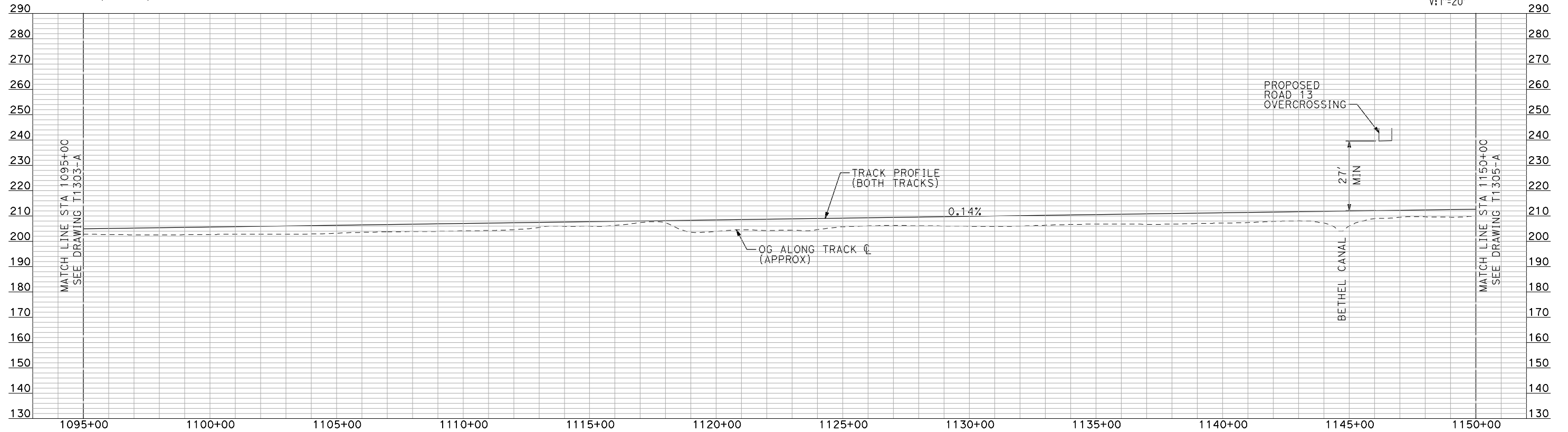
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1303-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



**PLAN**



- NOTES:**
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**PROFILE**

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

7/21/2011 11:30:11 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\BNSF\_AVE 24\MF-T-1304-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

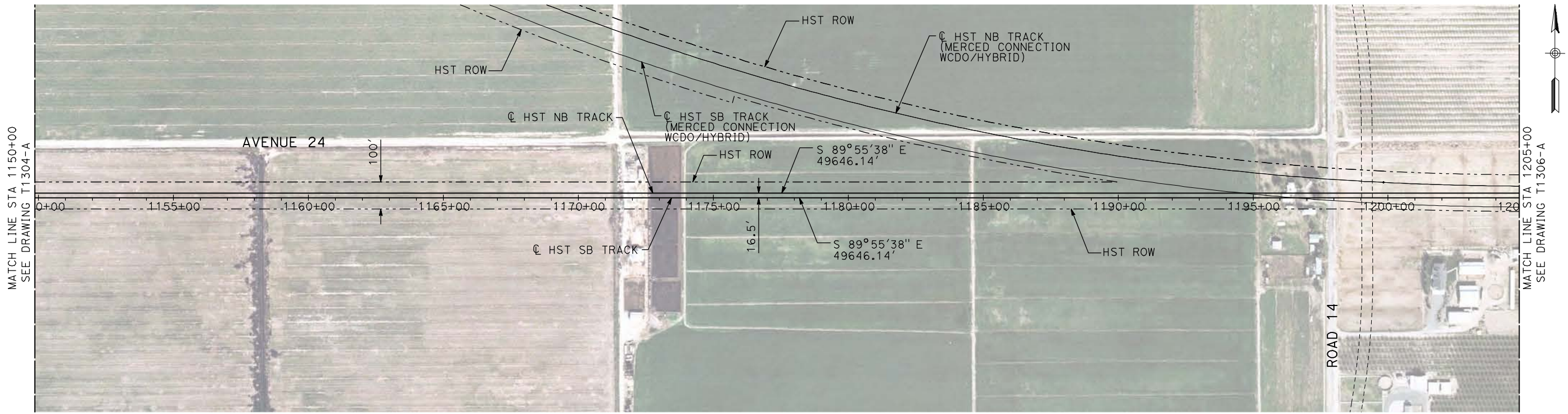


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1095+00 TO STA 1150+00

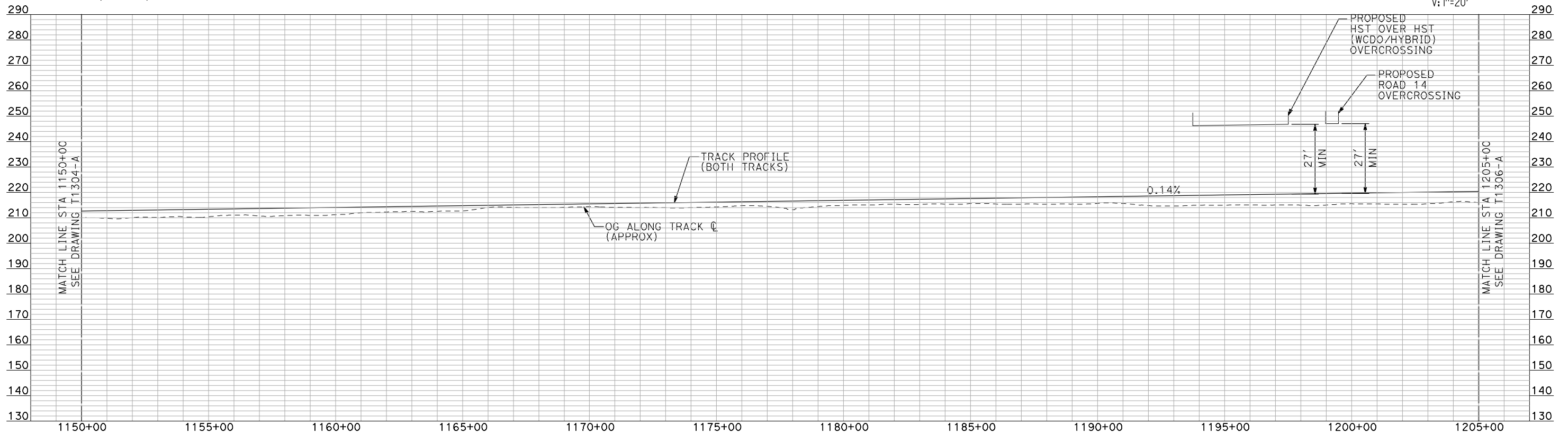
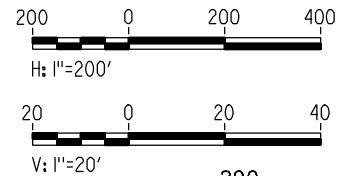
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1304-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###





**PLAN**

- NOTES:
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**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

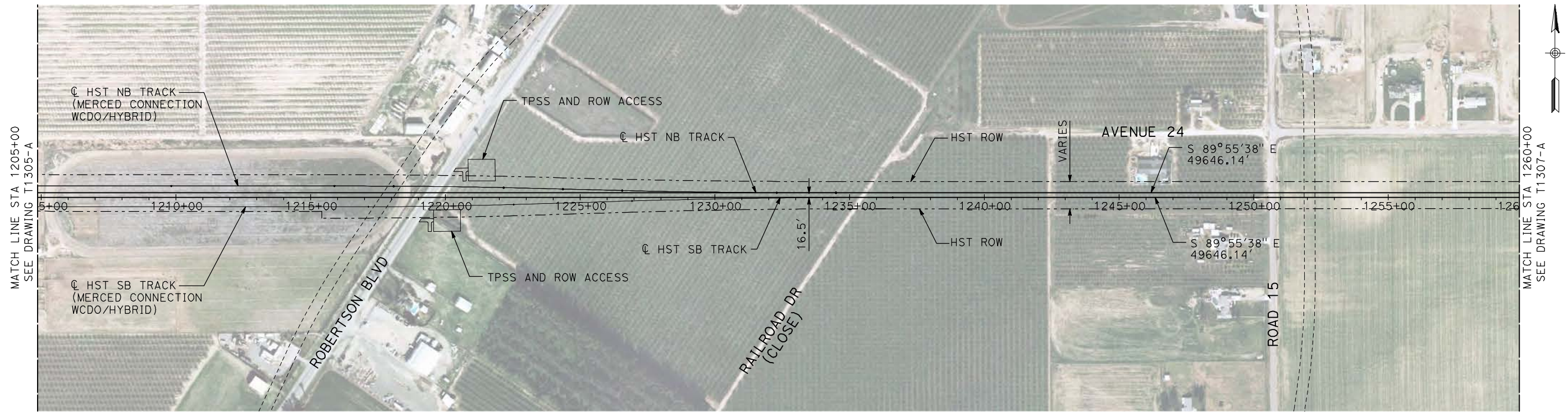


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1150+00 TO STA 1205+00

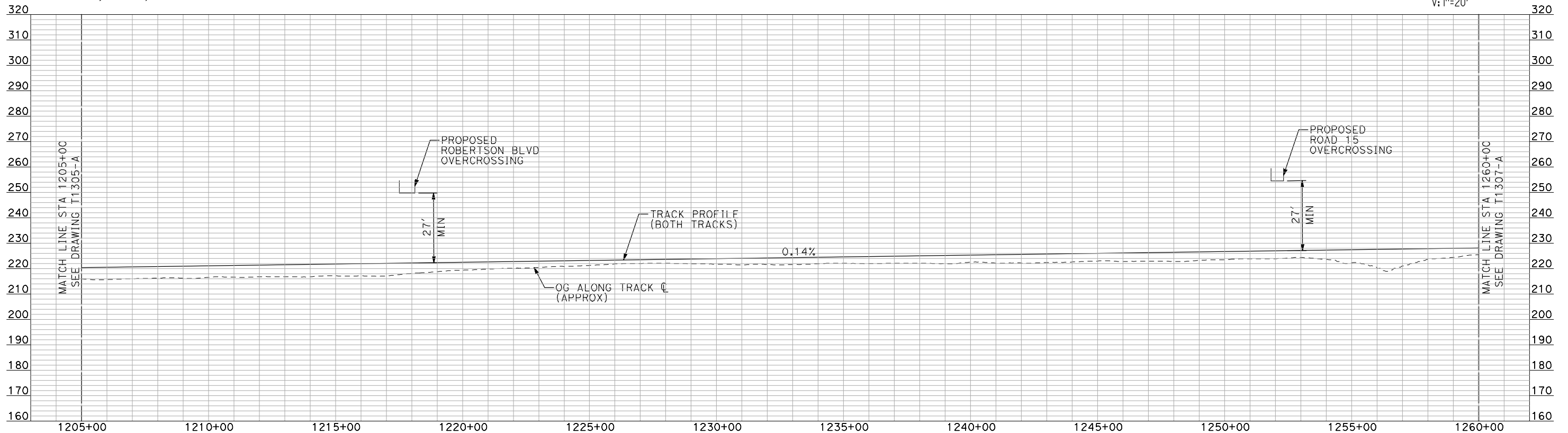
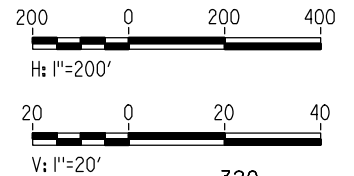
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DRAWING NO.  
T1305-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###





**PLAN**

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**PROFILE**

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

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

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

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1205+00 TO STA 1260+00

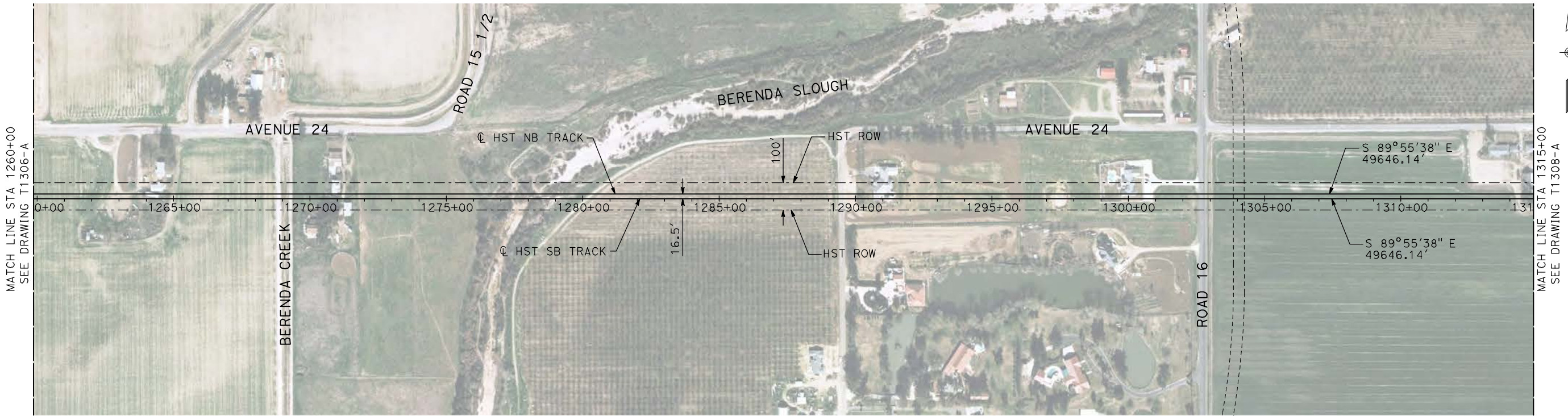
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DRAWING NO.  
T1306-A  
SCALE  
AS SHOWN  
SHEET NO.  
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REV	DATE	BY	CHK	APP	DESCRIPTION

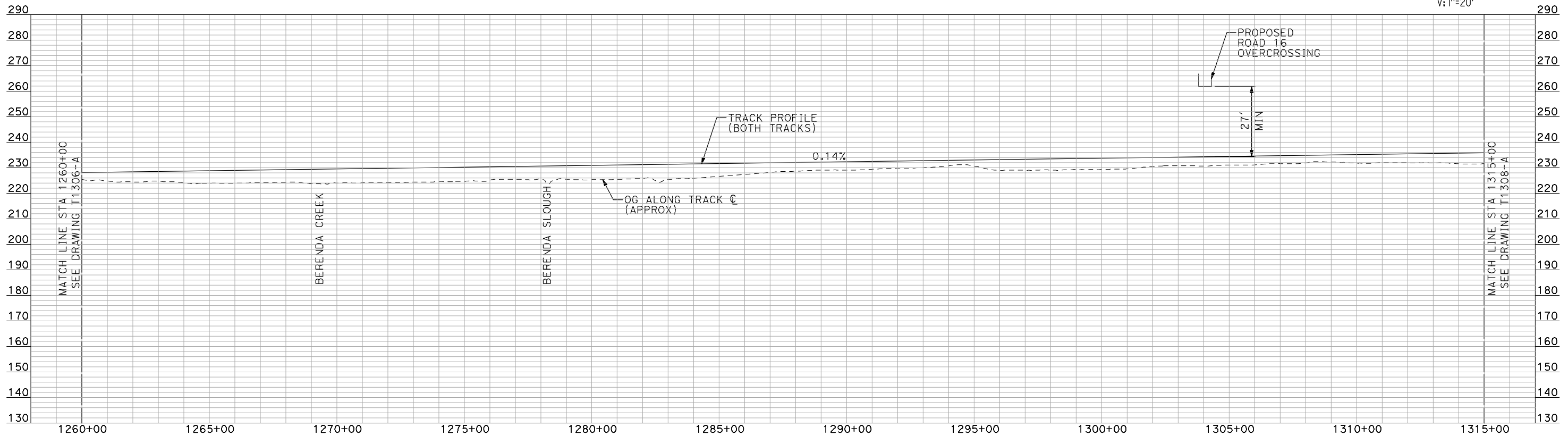
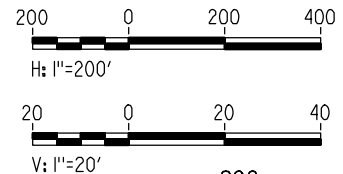


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**PLAN**



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

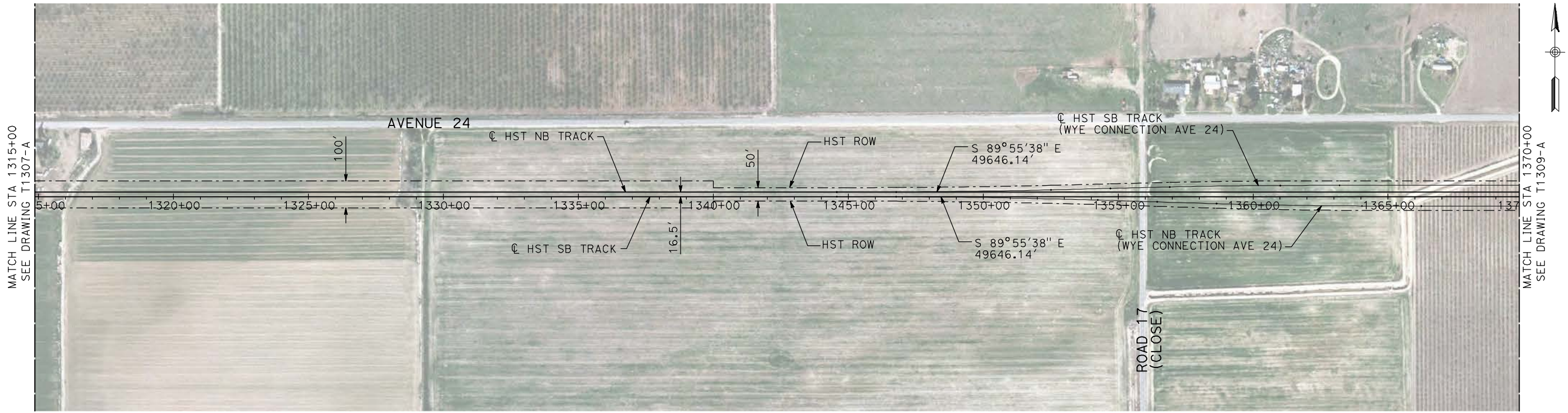


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

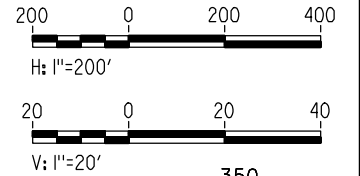
BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1260+00 TO STA 1315+00

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

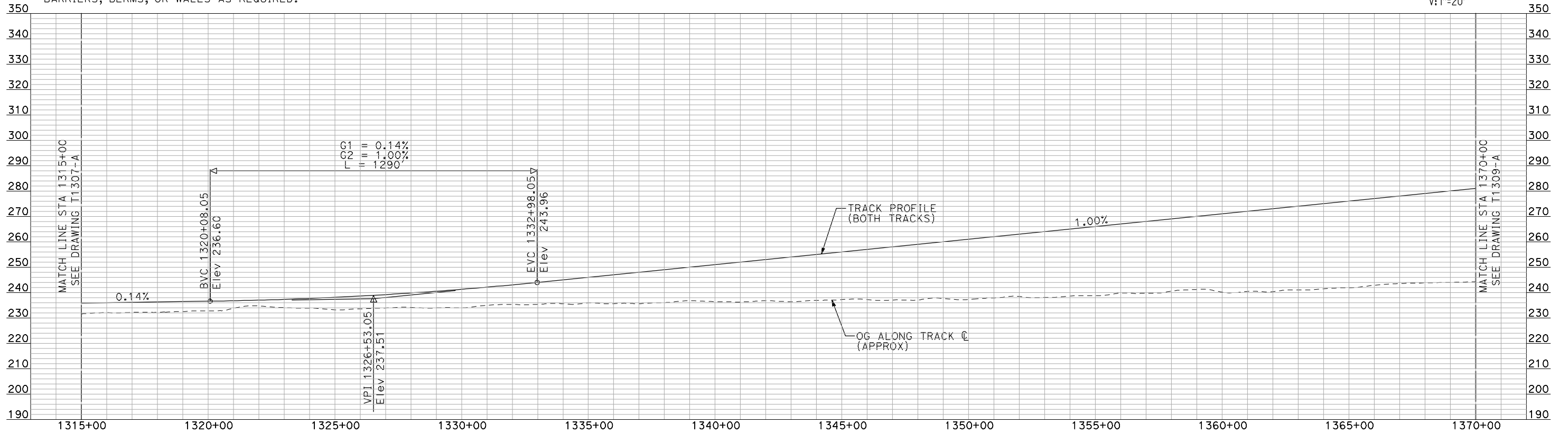




**PLAN**



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**PROFILE**

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

7/21/2011 11:32:03 AM i:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\BNSF\_AVE 24\MF-T-1308-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

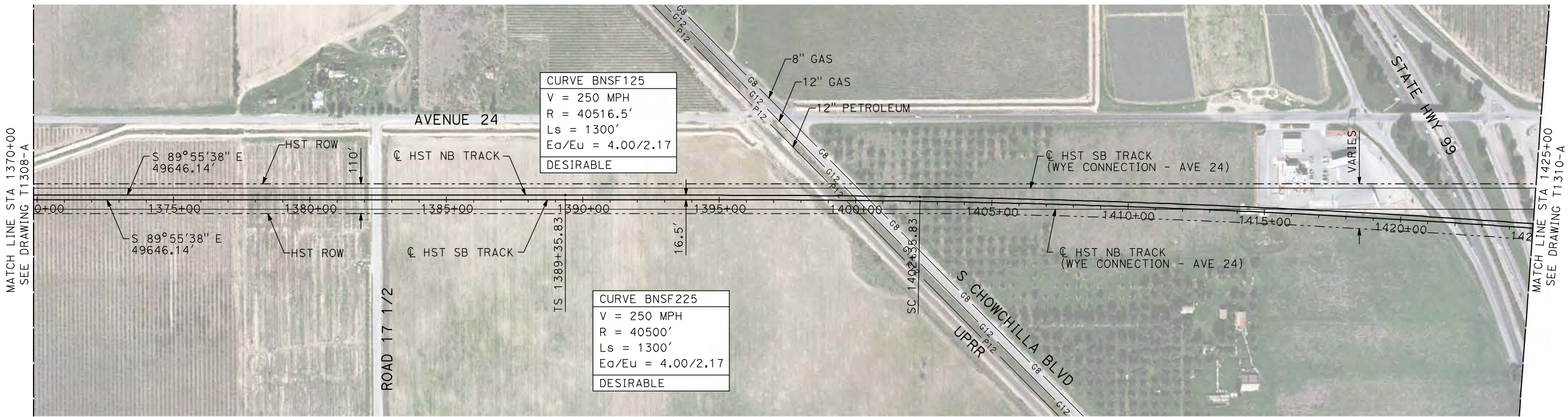


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1315+00 TO STA 1370+00

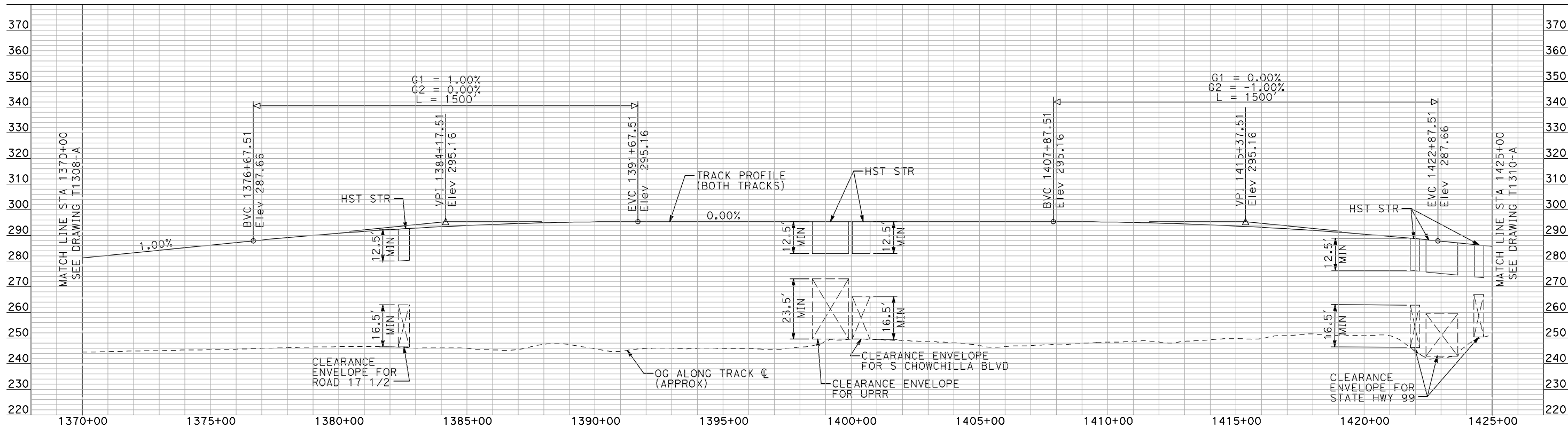
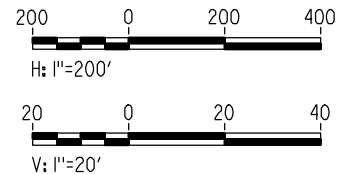
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1308-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###





**PLAN**

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**PROFILE**

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

7/21/2011 11:32:31 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_24\WF-T-1309-A.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1370+00 TO STA 1425+00

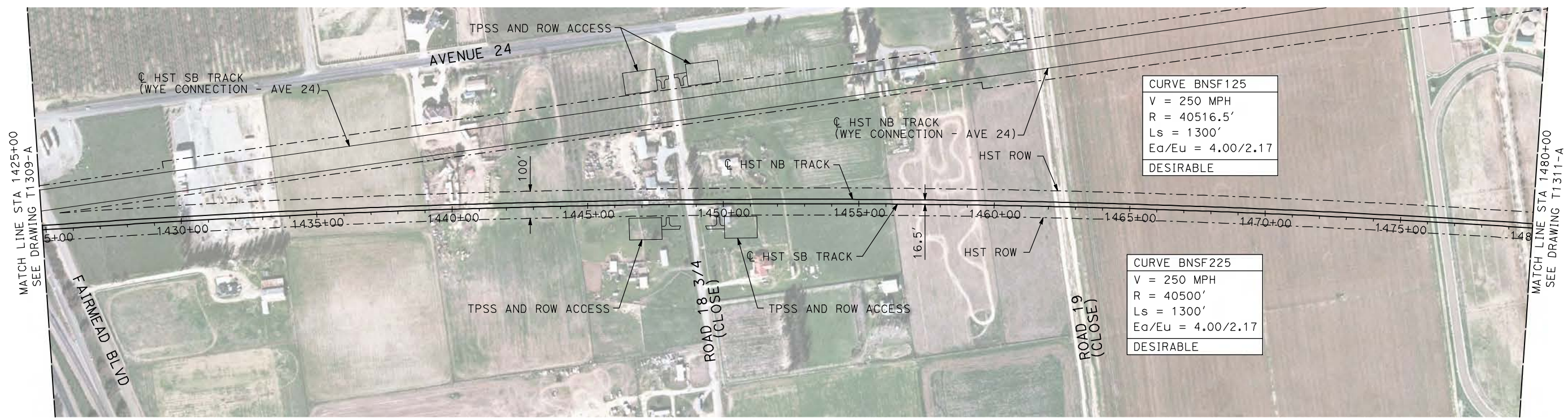
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HSR06-007

DRAWING NO.  
T1309-A

SCALE  
AS SHOWN

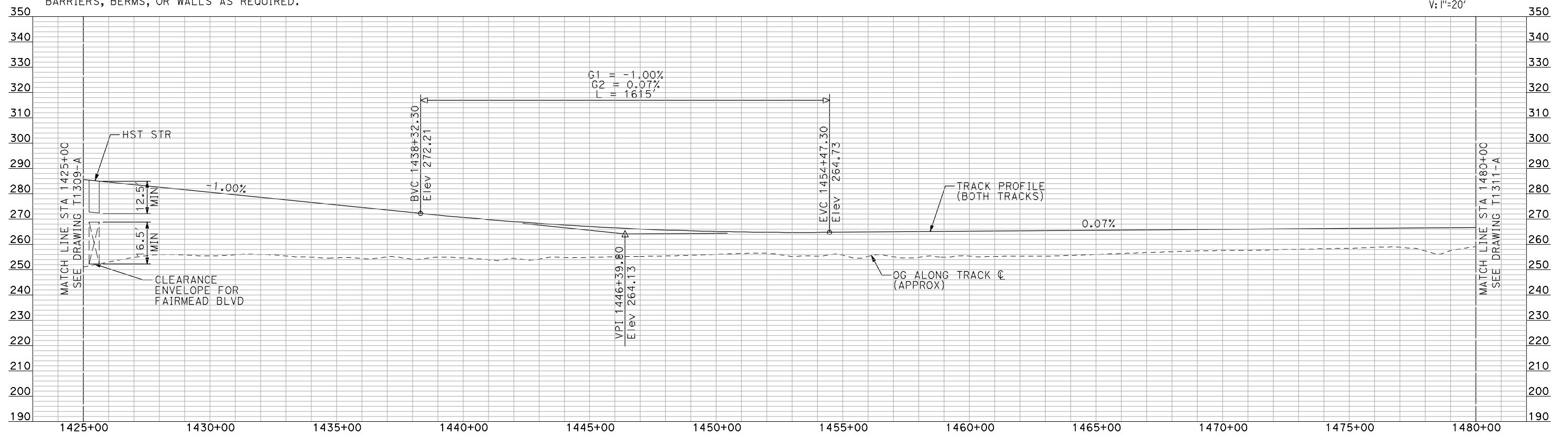
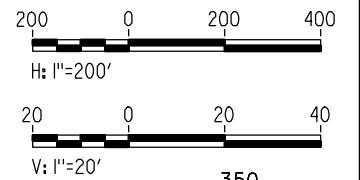
SHEET NO.  
### OF ###





**PLAN**

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**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
 DRAWN BY  
H. SULLIVAN  
 CHECKED BY  
A. BOONE  
 IN CHARGE  
A. BOONE  
 DATE  
07/20/2011

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

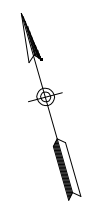
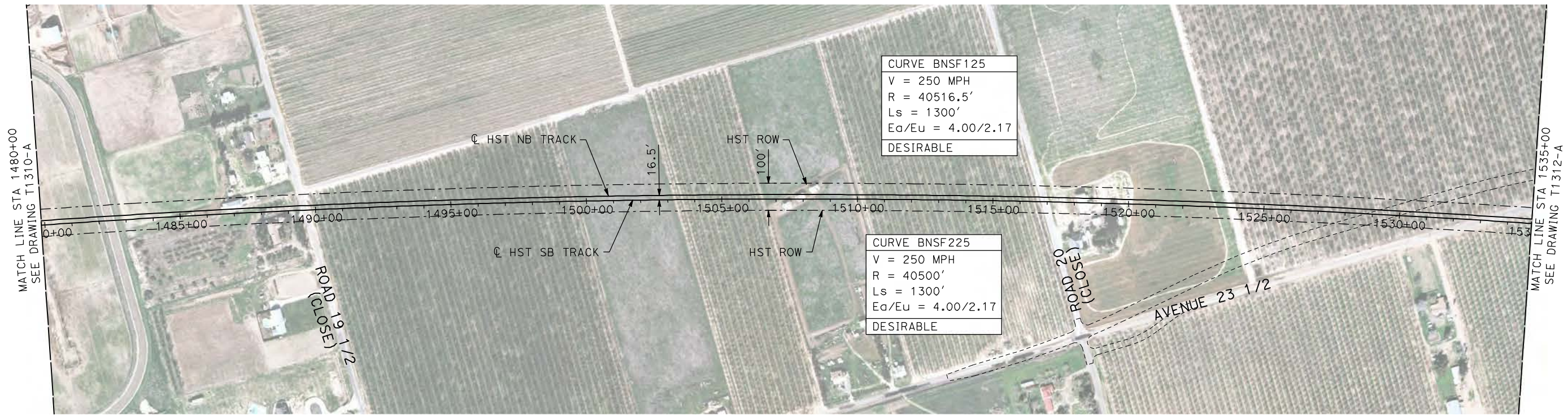


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
 AVENUE 24  
 PLAN AND PROFILE  
 STA 1425+00 TO STA 1480+00

CONTRACT NO.  
HSR06-007  
 DRAWING NO.  
T1310-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###

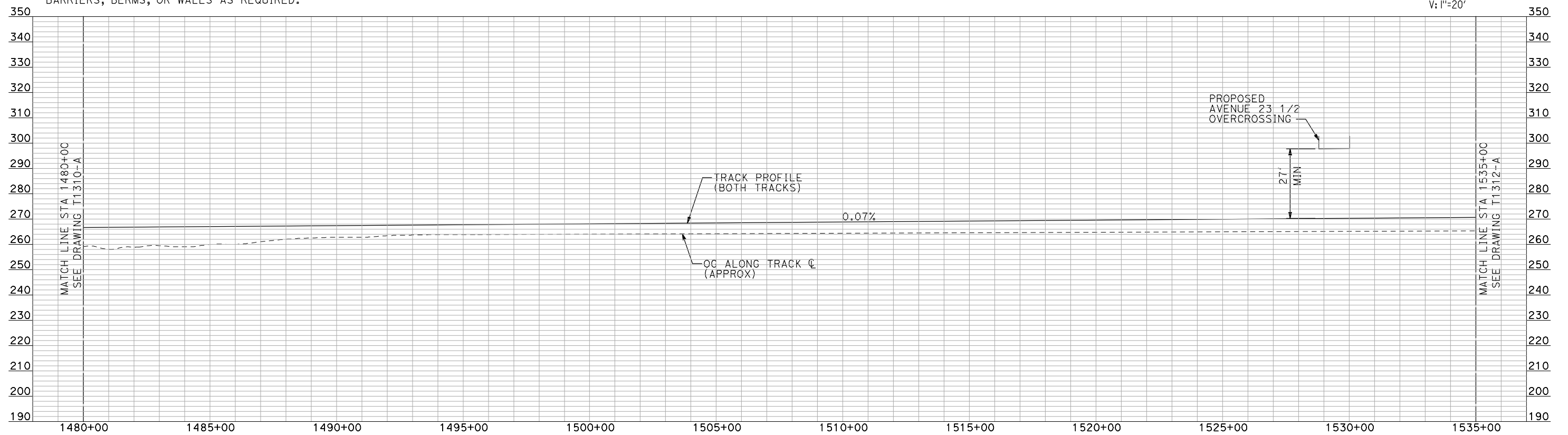
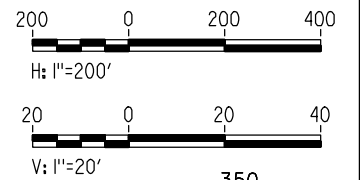


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**PLAN**



**PROFILE**

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
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**H. SULLIVAN**  
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**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

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**CONSTRUCTION**



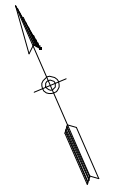
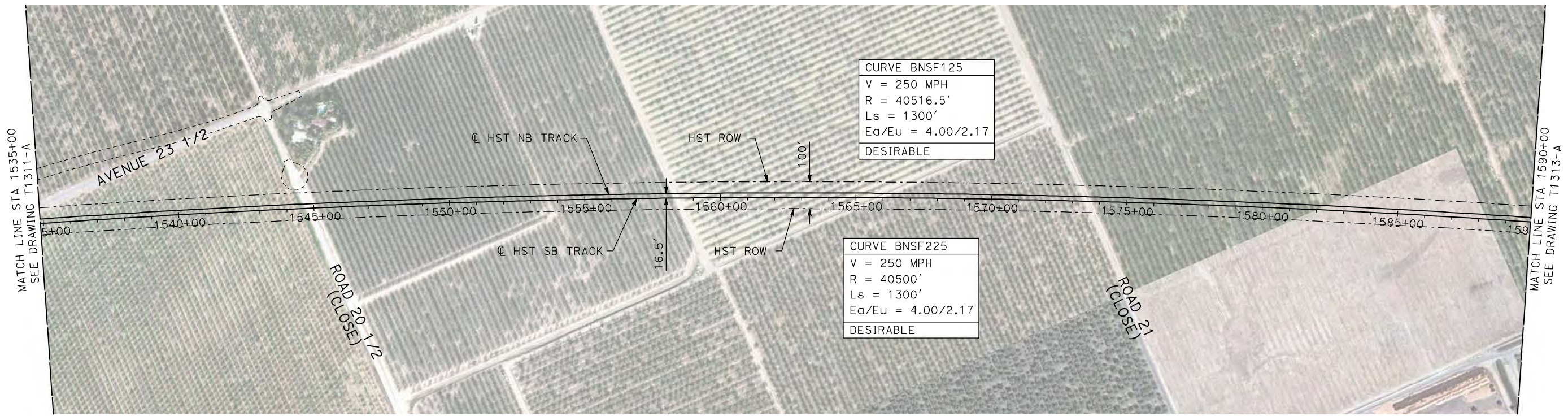
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1480+00 TO STA 1535+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1311-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

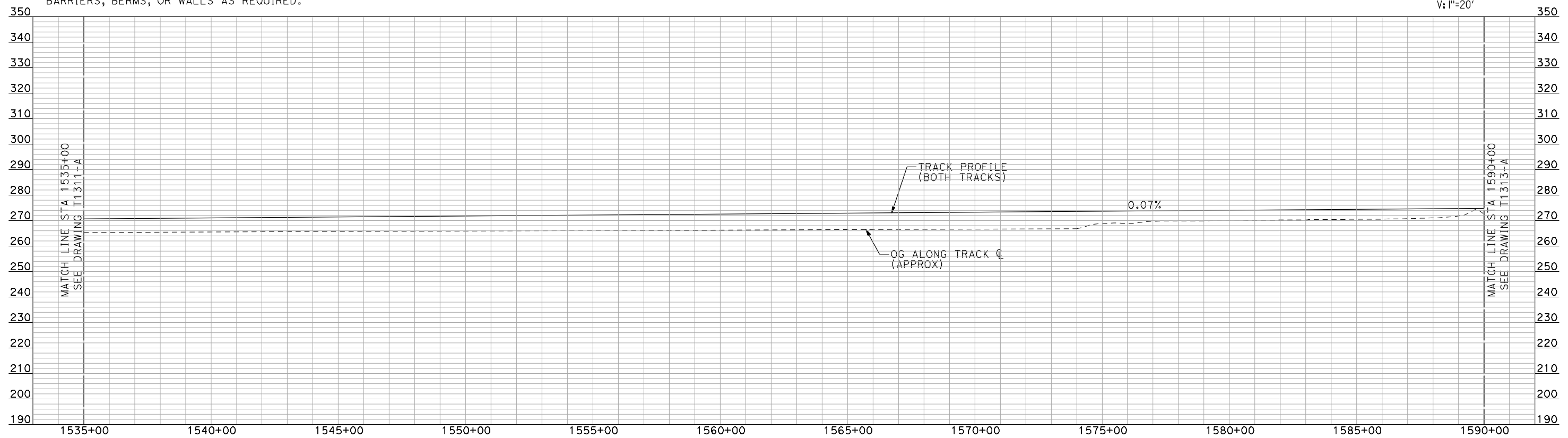
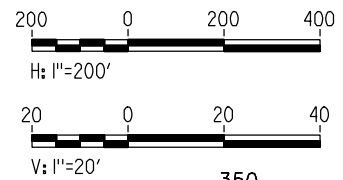


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**PLAN**

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**PROFILE**

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
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**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



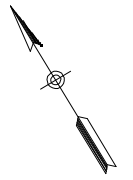
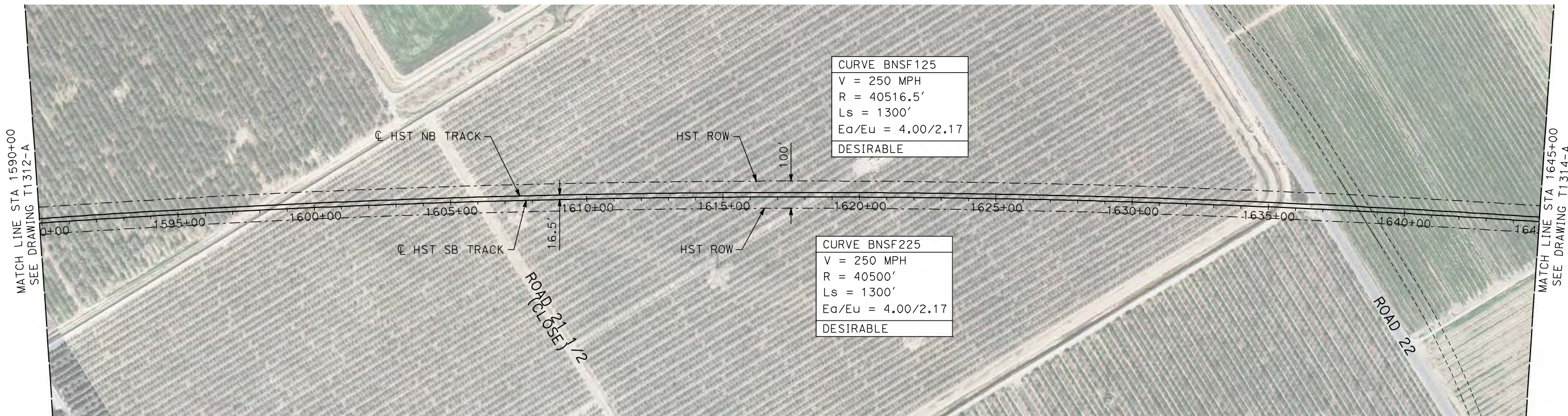
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1535+00 TO STA 1590+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
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SCALE  
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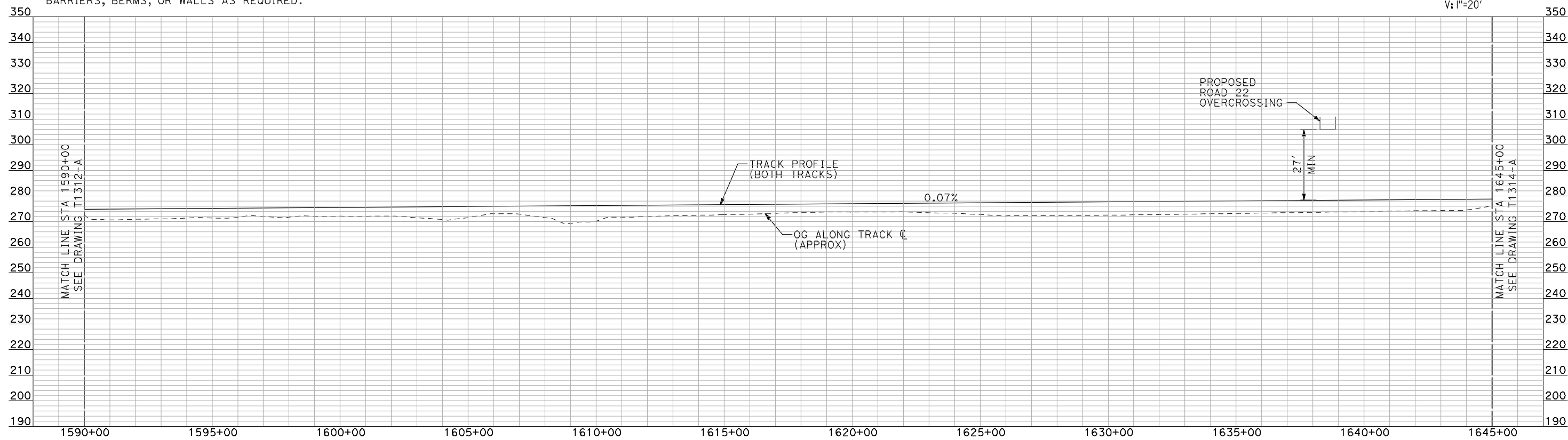
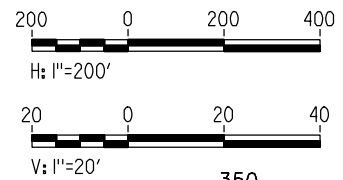


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**PLAN**



**PROFILE**

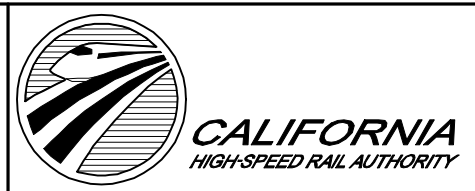
"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
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DATE  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



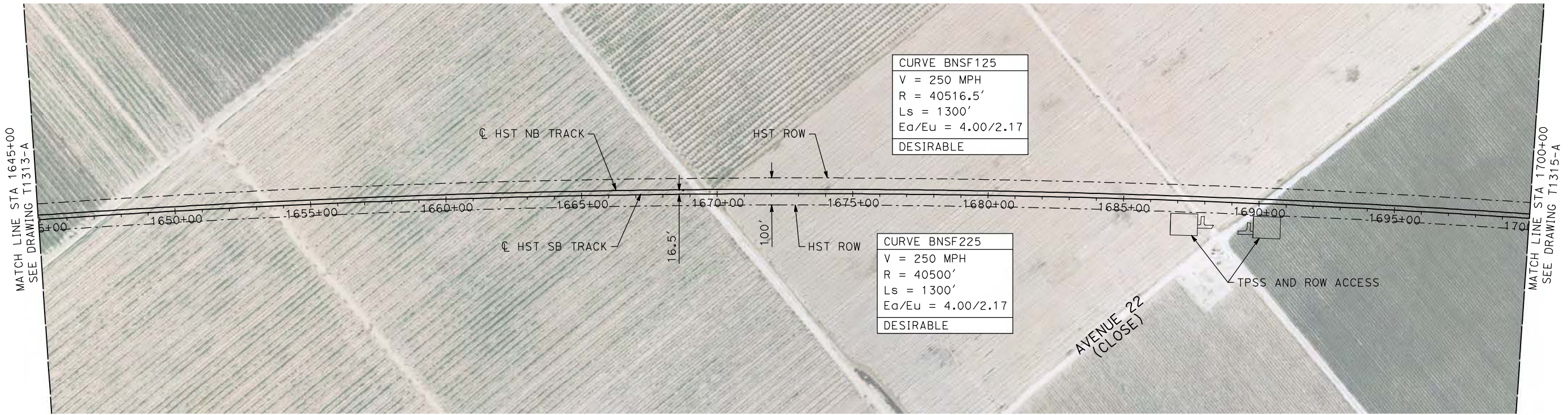
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1590+00 TO STA 1645+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1313-A  
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AS SHOWN  
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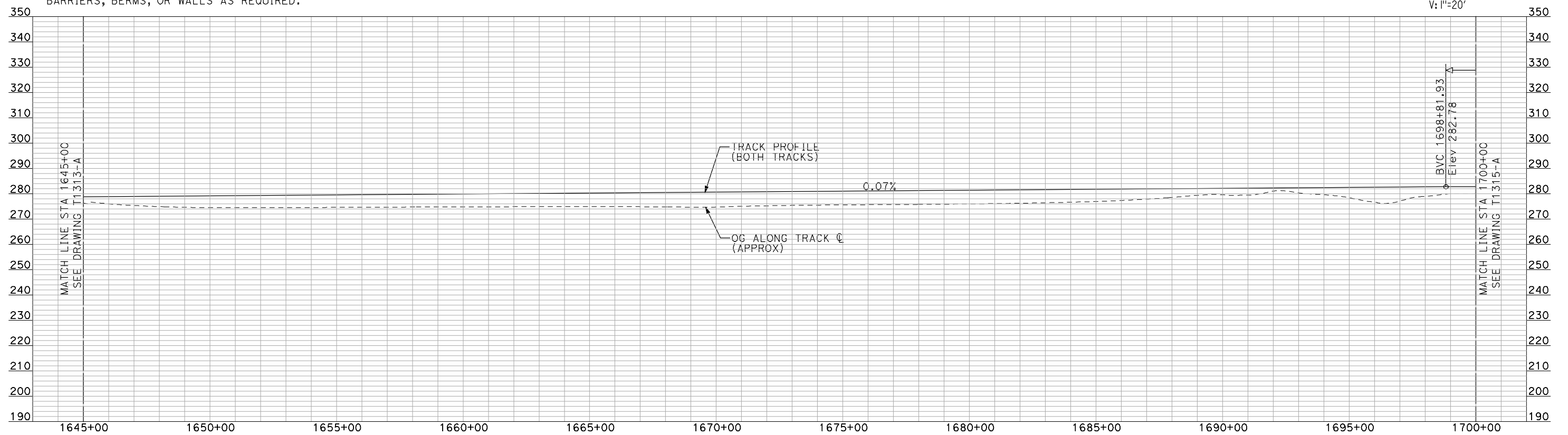


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**PLAN**

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**NOT FOR  
CONSTRUCTION**



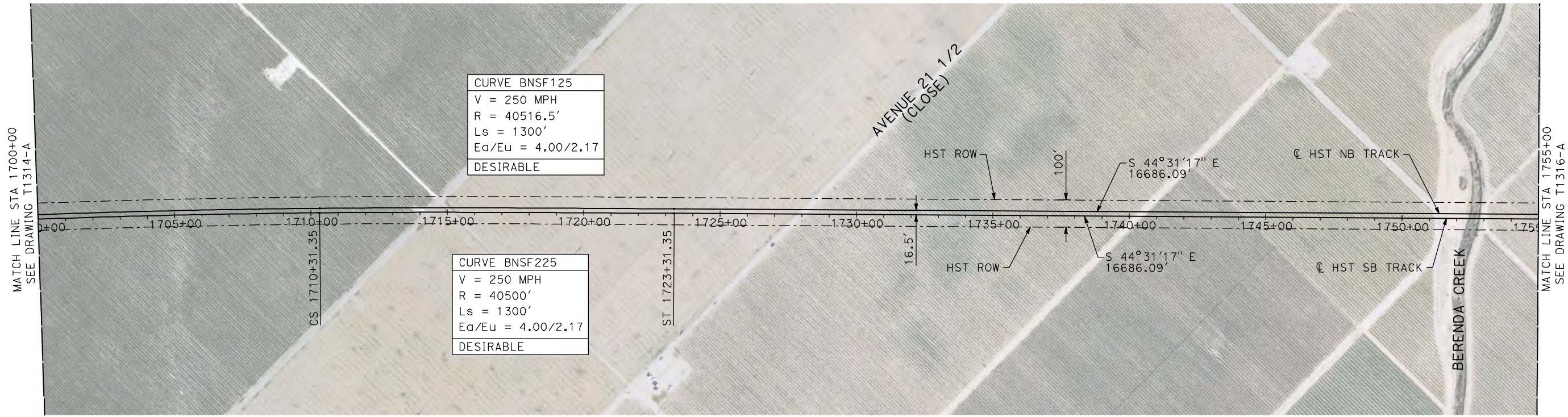
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1645+00 TO STA 1700+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1314-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

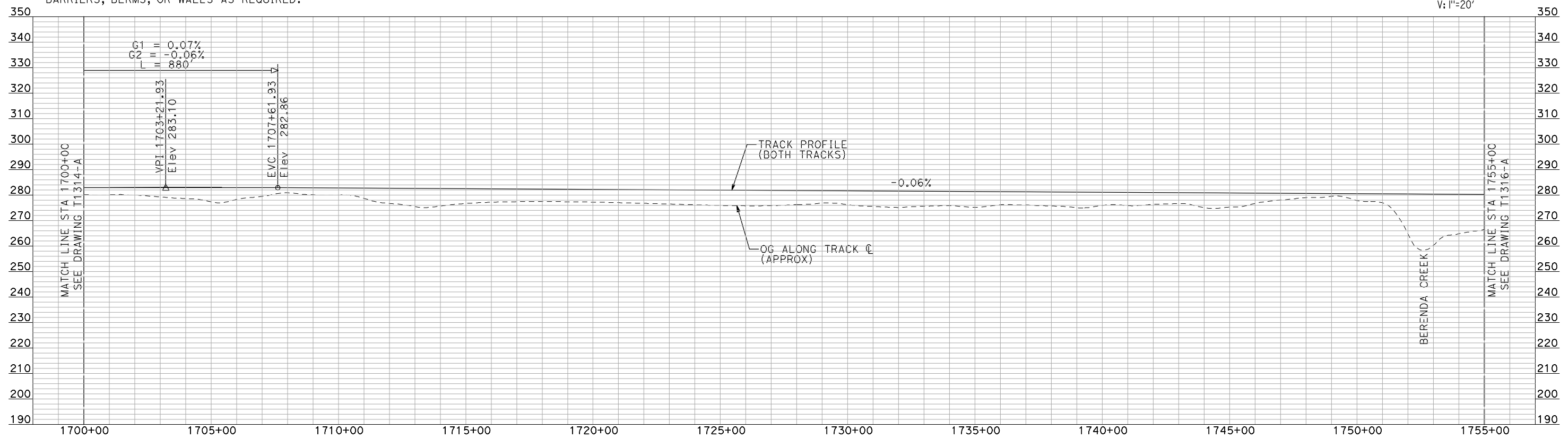
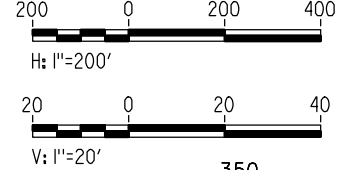


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

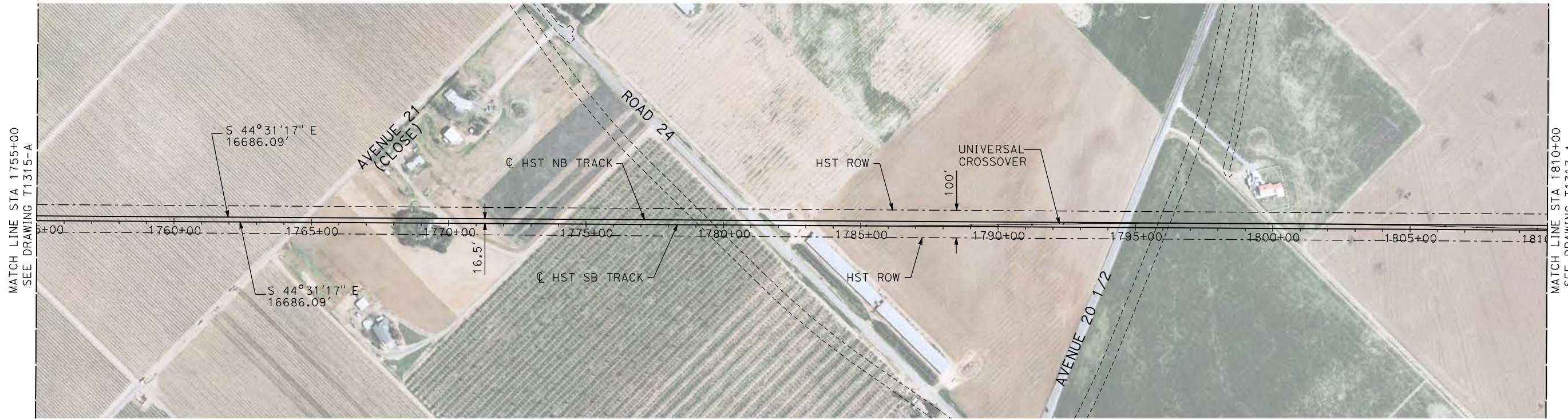


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

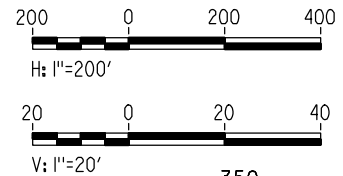
BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1700+00 TO STA 1755+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1315-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

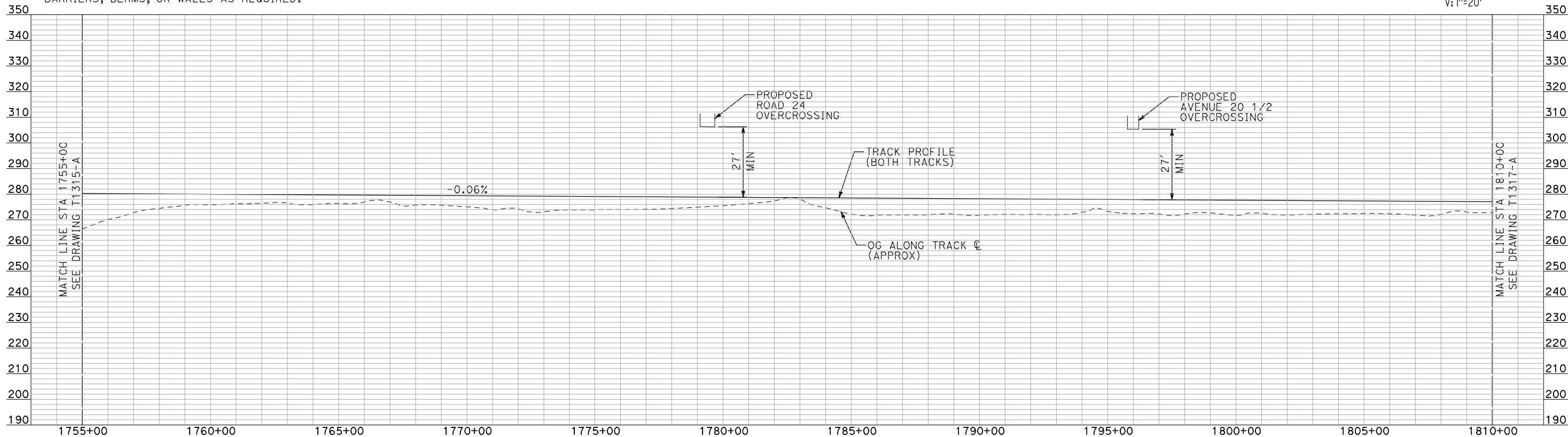




**PLAN**



- 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.



**PROFILE**

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

7/21/2011 11:36:13 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\BNSF\_AVE 24\MF-T-1316-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

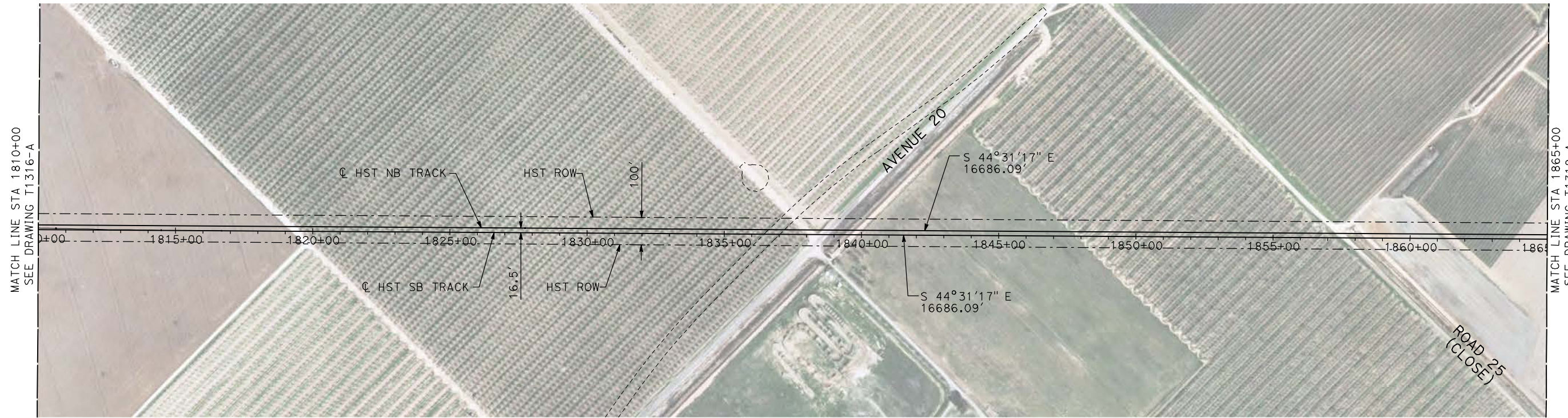


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

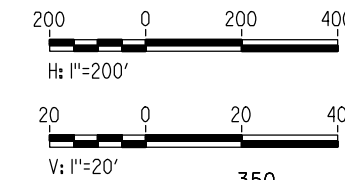
BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1755+00 TO STA 1810+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1316-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

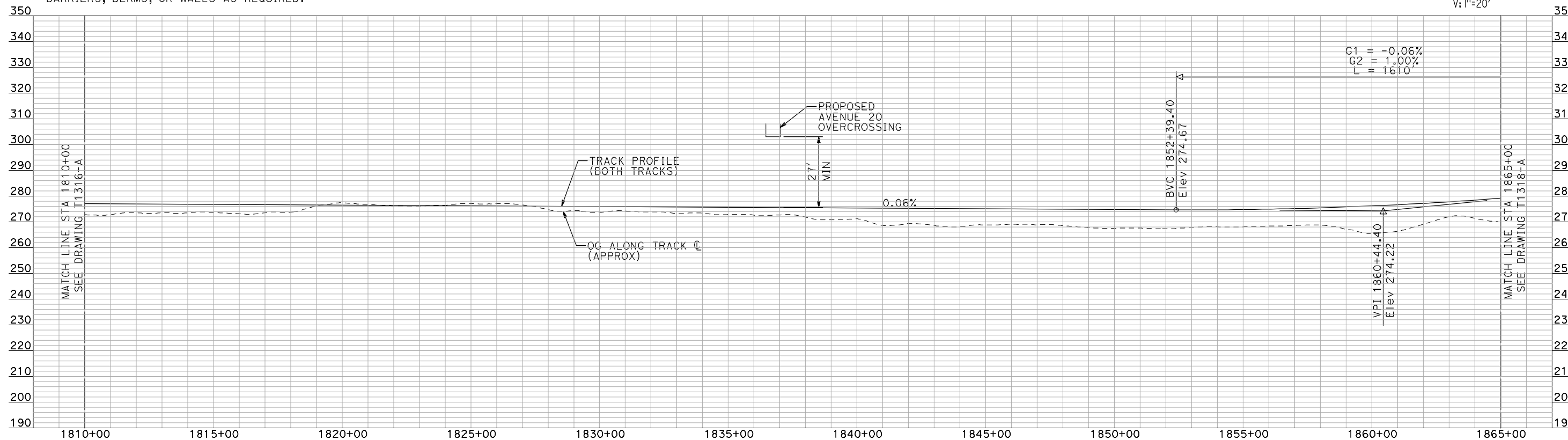




**PLAN**



- 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.



**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



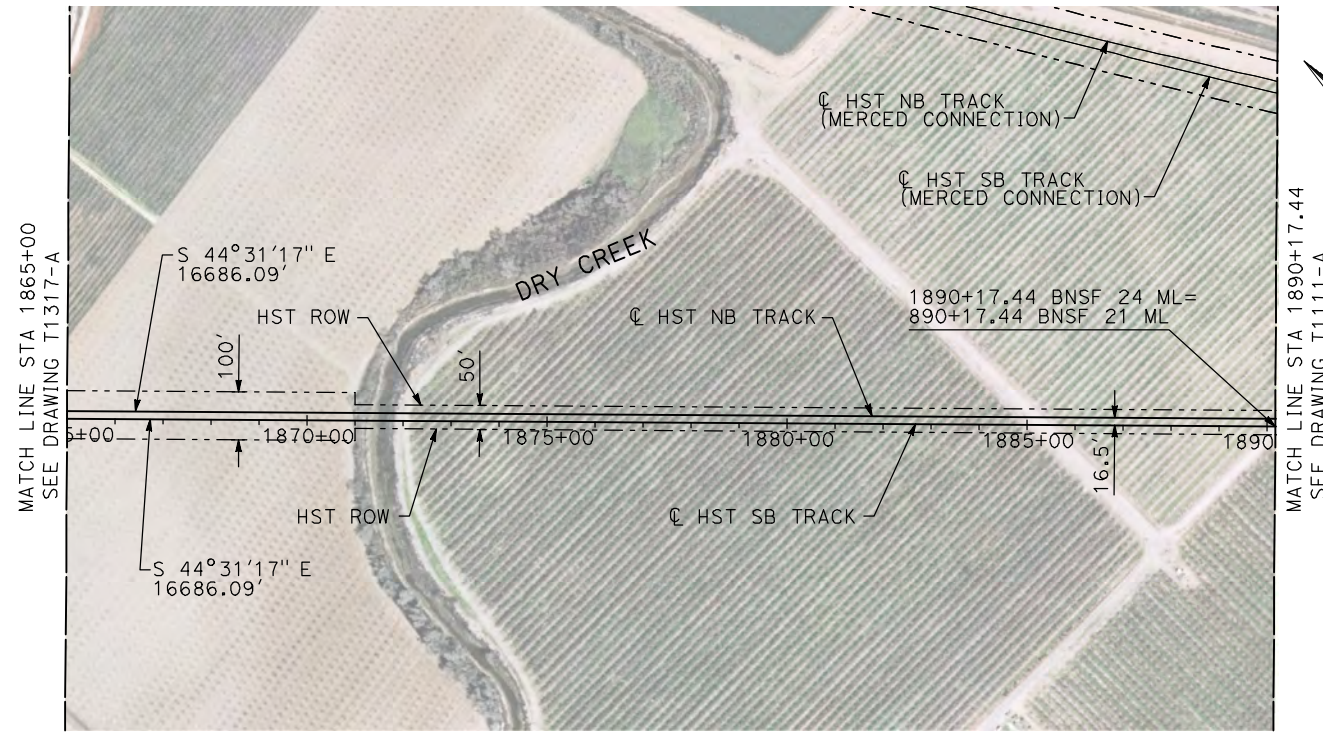
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1810+00 TO STA 1865+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1317-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

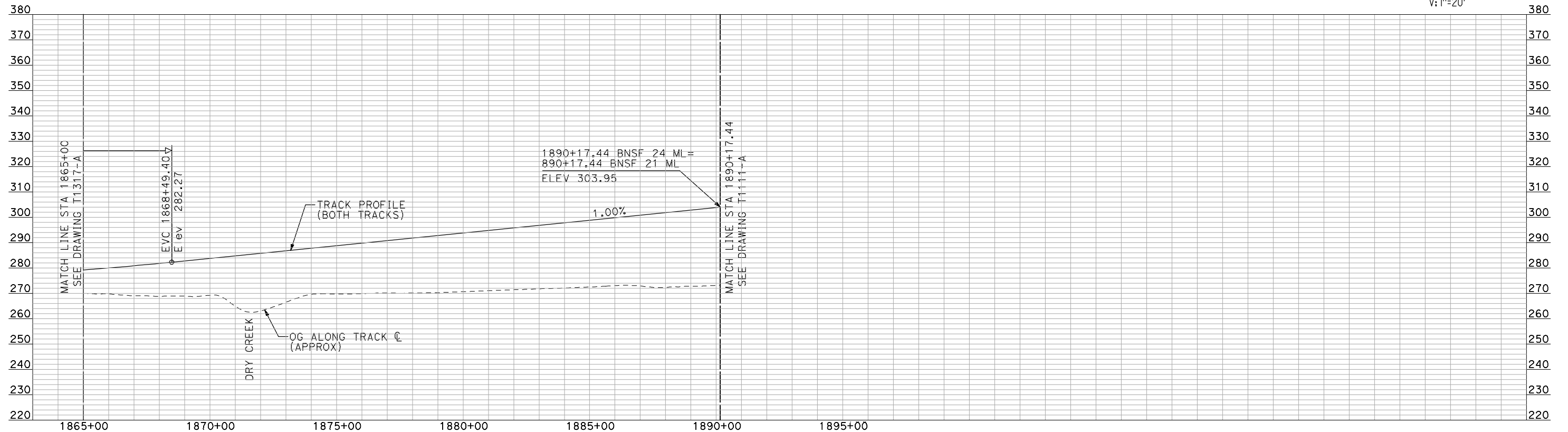
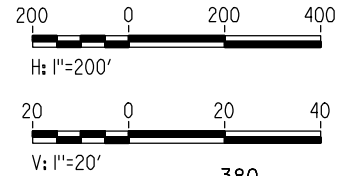


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

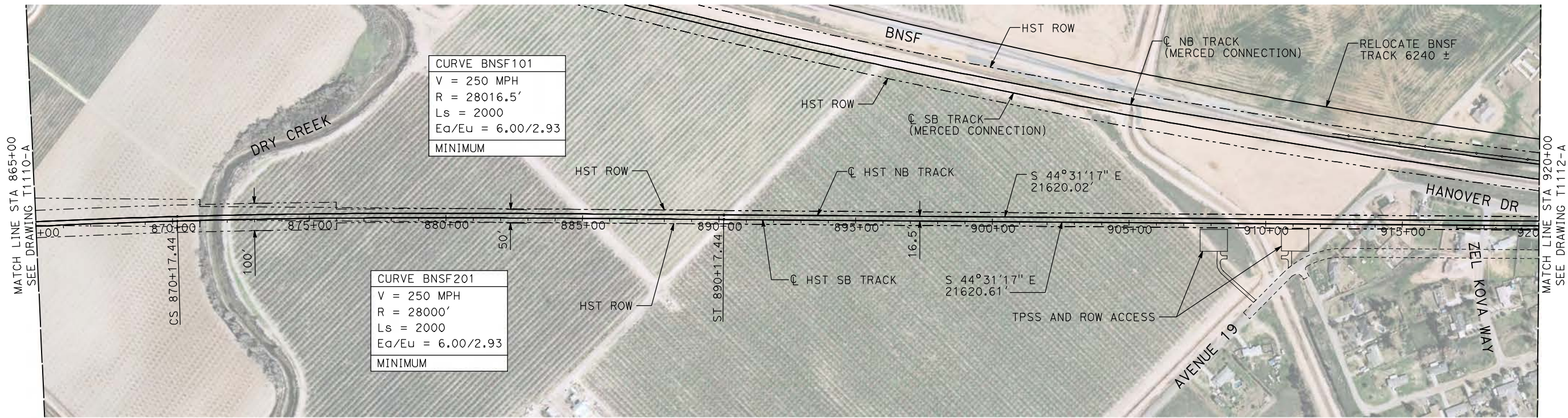


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE  
AVENUE 24  
PLAN AND PROFILE  
STA 1865+00 TO STA 1890+17.44

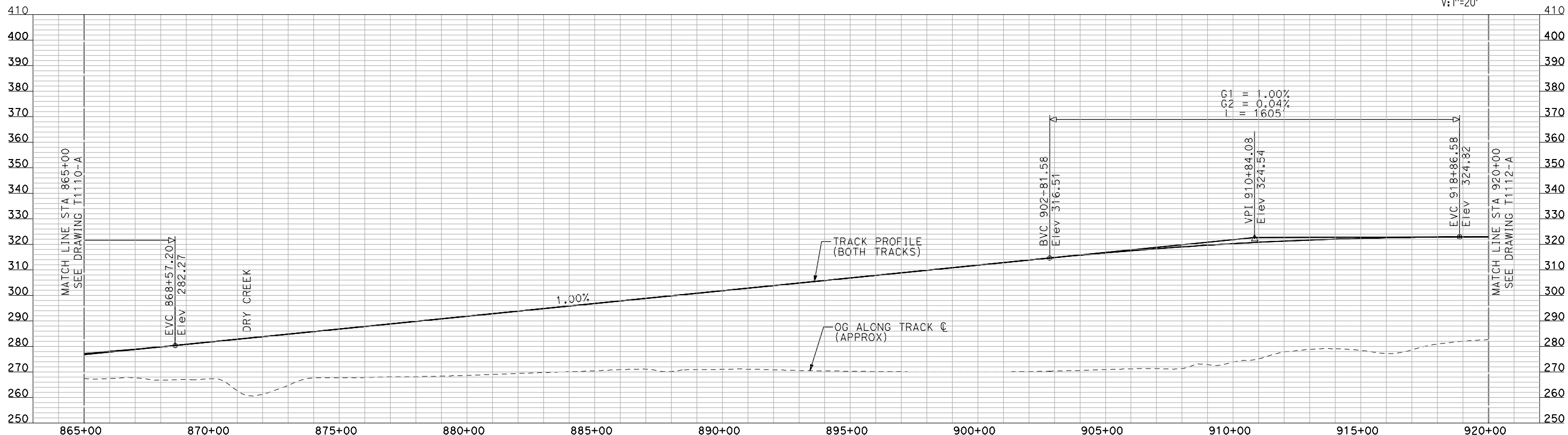
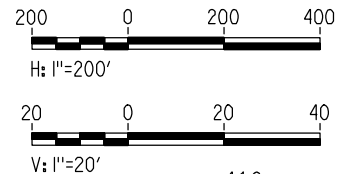
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1318-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###





- 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.
  3. FOR CONTROLLING CLEARANCE ENVELOPE SEE T-1112-A.

**PLAN**



**PROFILE**

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

7/21/2011 11:38:02 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_21\WF-T-1111-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
 DRAWN BY  
H. SULLIVAN  
 CHECKED BY  
A. BOONE  
 IN CHARGE  
A. BOONE  
 DATE  
07/20/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

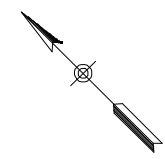
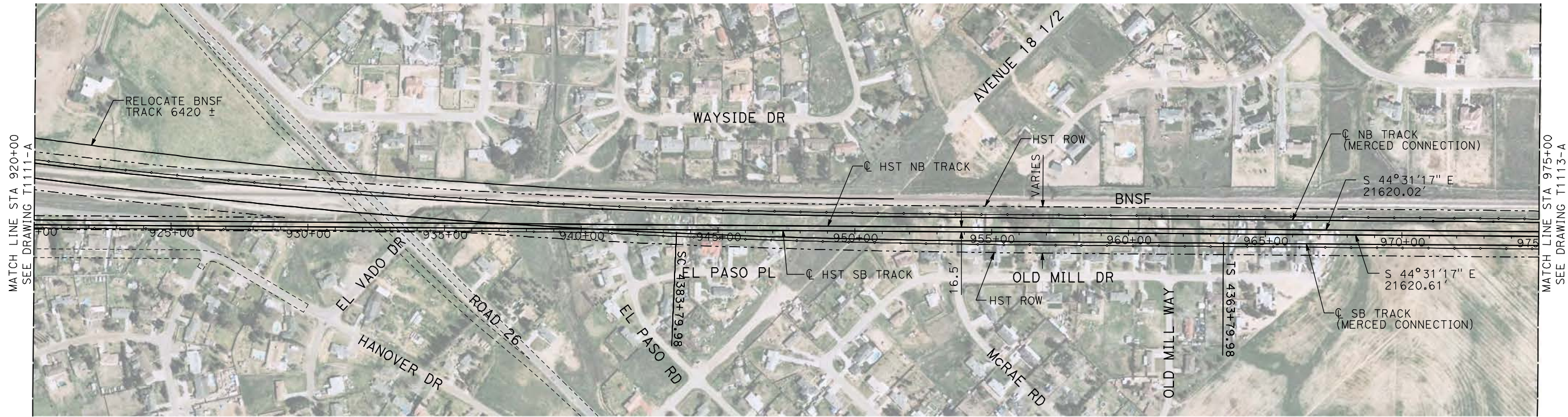
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
 PLAN AND PROFILE  
 STA 865+00 TO STA 920+00

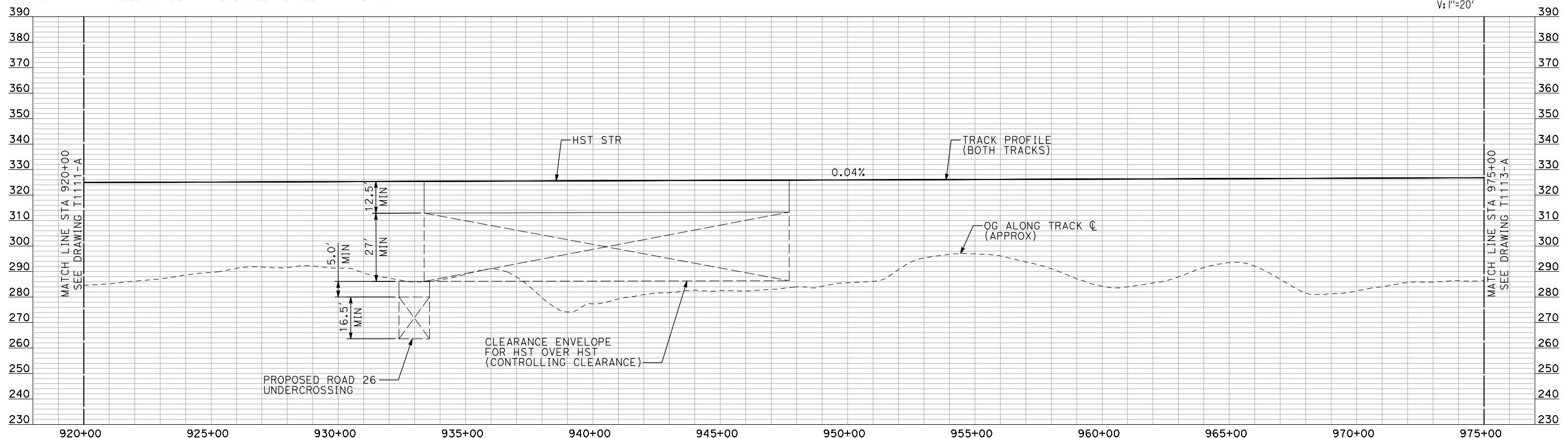
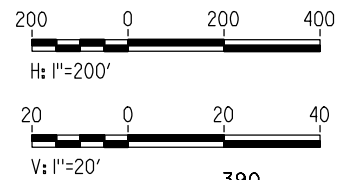
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HSR06-007  
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T1111-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###





- 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.
  3. FOR CONTROLLING CLEARANCE ENVELOPE SEE T-1112-A.

**PLAN**



**PROFILE**

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

7/21/2011 11:38:50 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_21\MF-T-1112-A.dgn machadoc

REV	DATE	BY	CHK	APP	DESCRIPTION

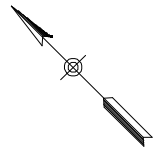
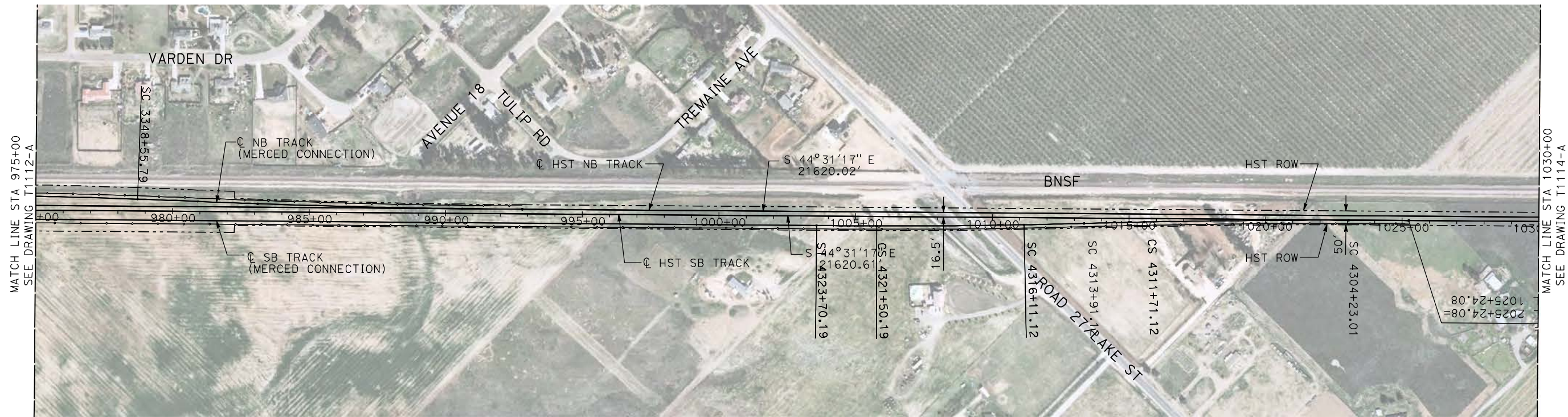
DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
PLAN AND PROFILE  
STA 920+00 TO STA 975+00

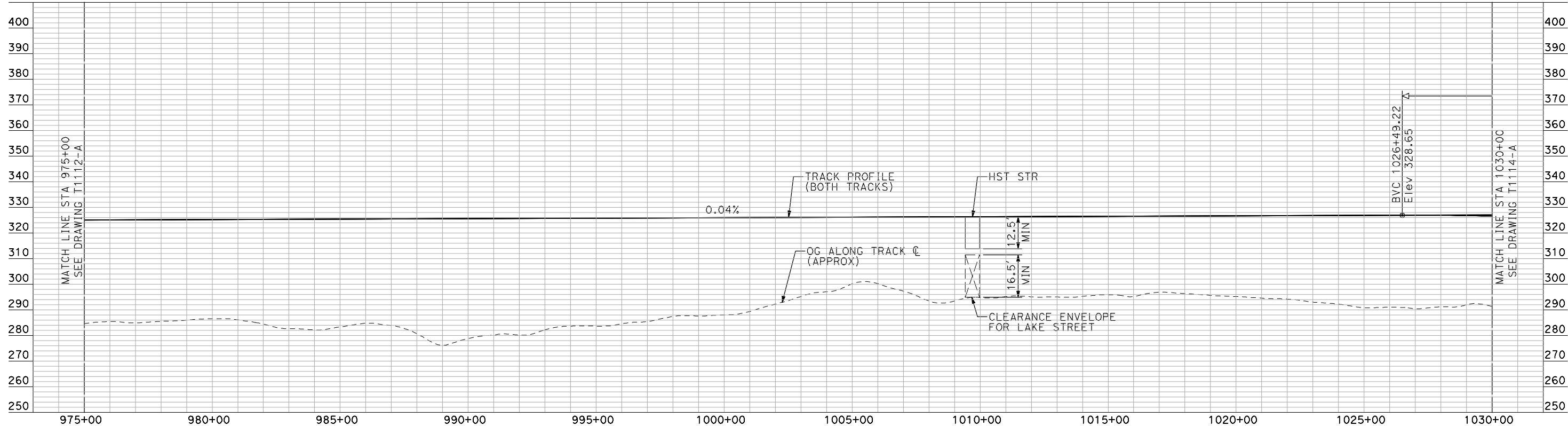
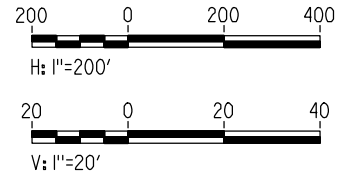
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1112-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###





- NOTES:
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.
  3. FOR CONTROLLING CLEARANCE ENVELOPE, SEE T-1112-A.

**PLAN**



**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



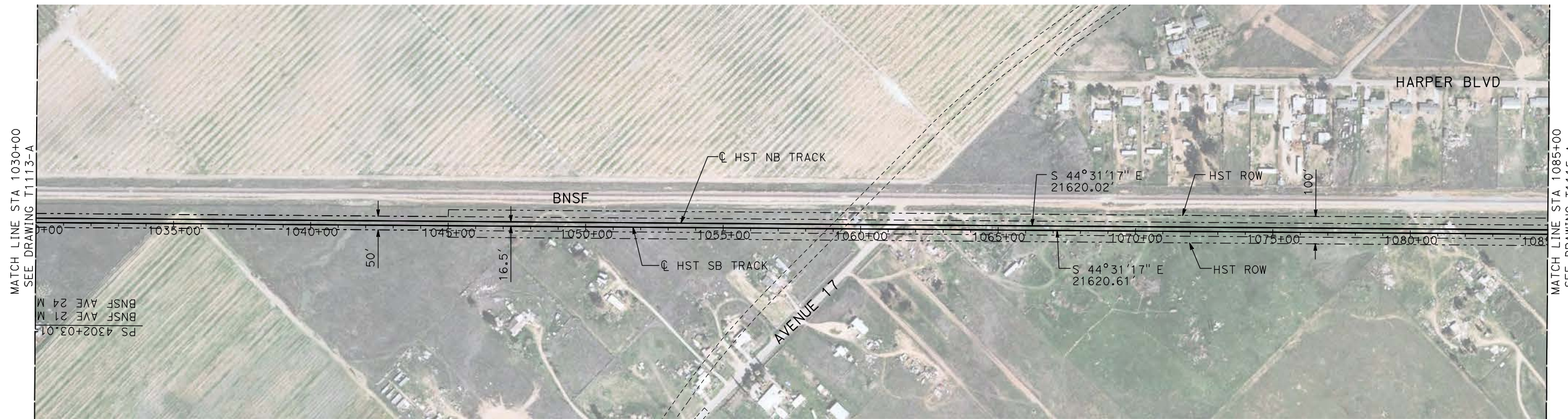
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE

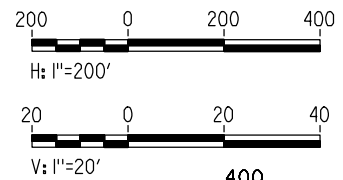
PLAN AND PROFILE  
STA 975+00 TO STA 1030+00

CONTRACT NO. HSR06-007
DRAWING NO. T1113-A
SCALE AS SHOWN
SHEET NO. ### OF ###

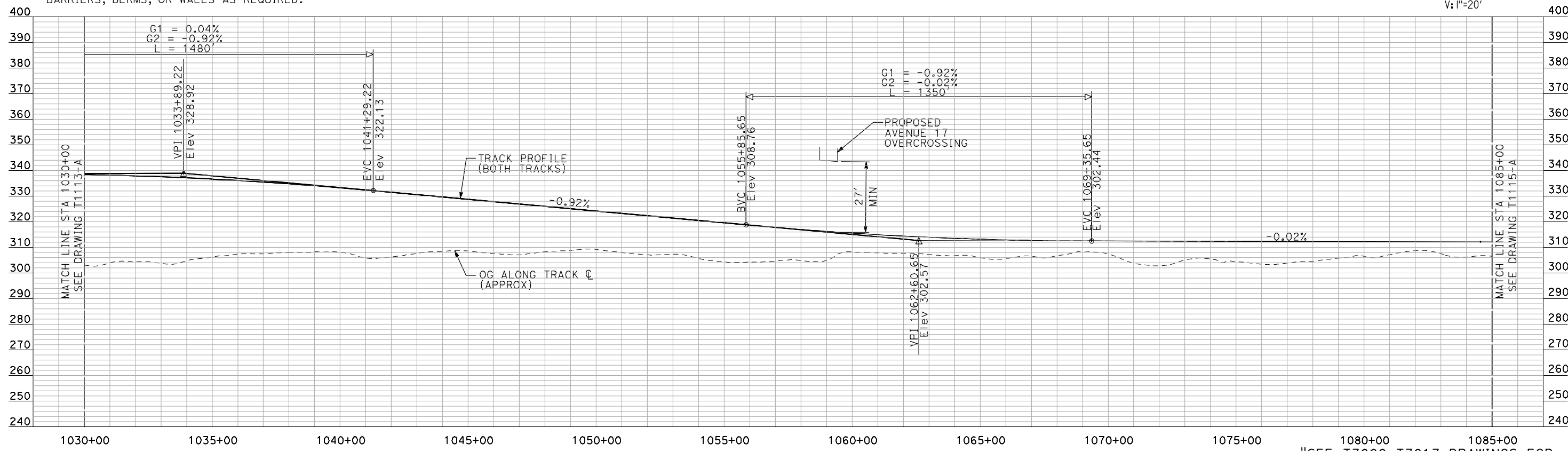




**PLAN**



- NOTES:**
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAINLINE

PLAN AND PROFILE  
STA 1030+00 TO STA 1085+00

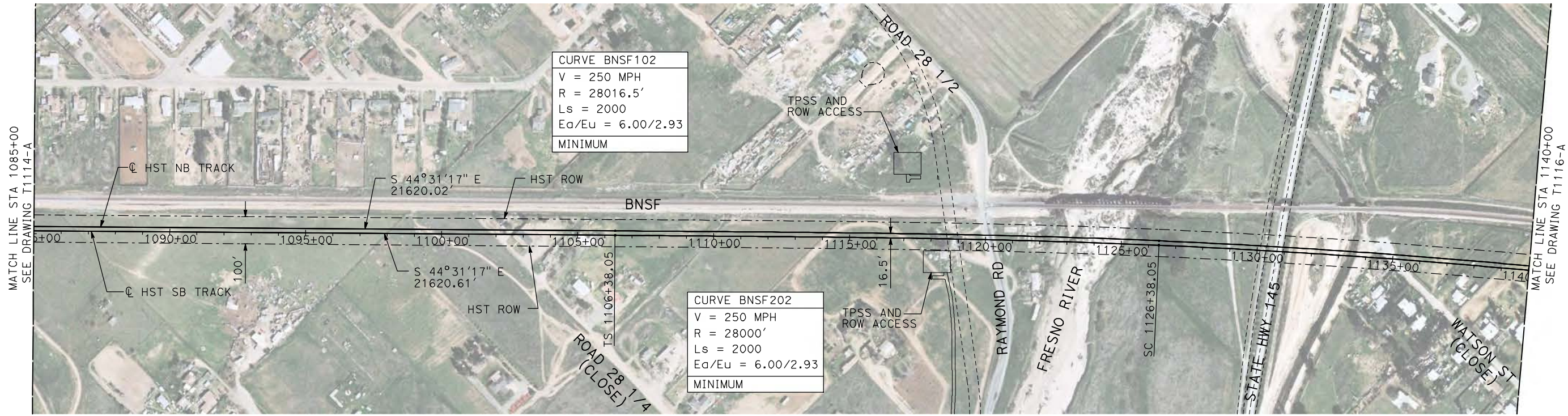
CONTRACT NO.  
HSR06-007

DRAWING NO.  
T1114-A

SCALE  
AS SHOWN

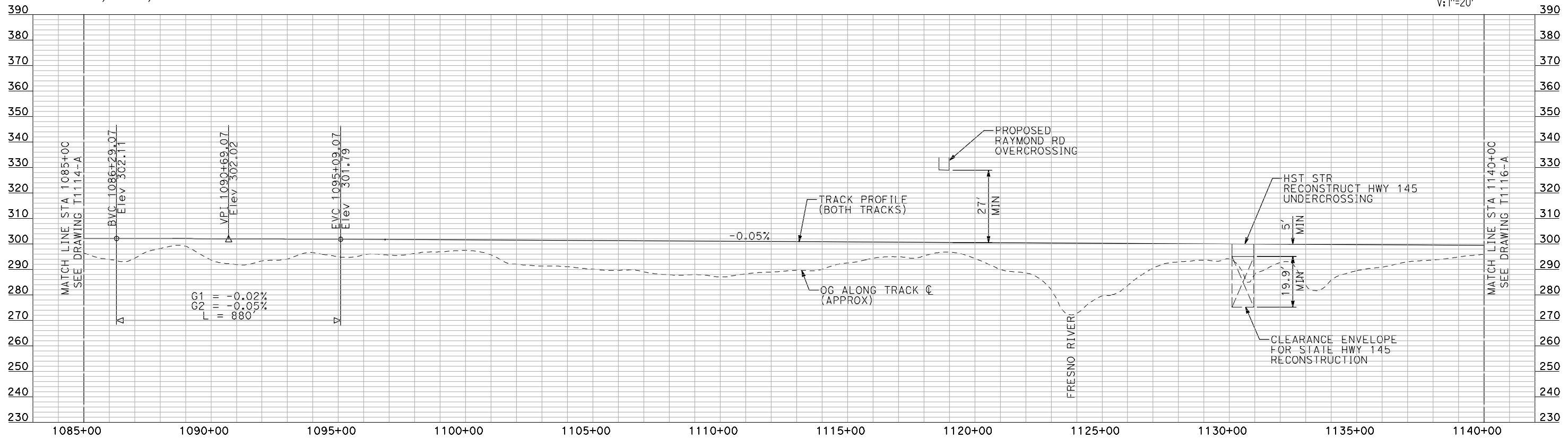
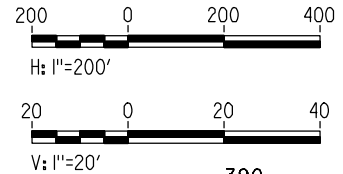
SHEET NO.  
### OF ###





**PLAN**

- NOTES:
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

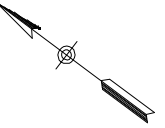
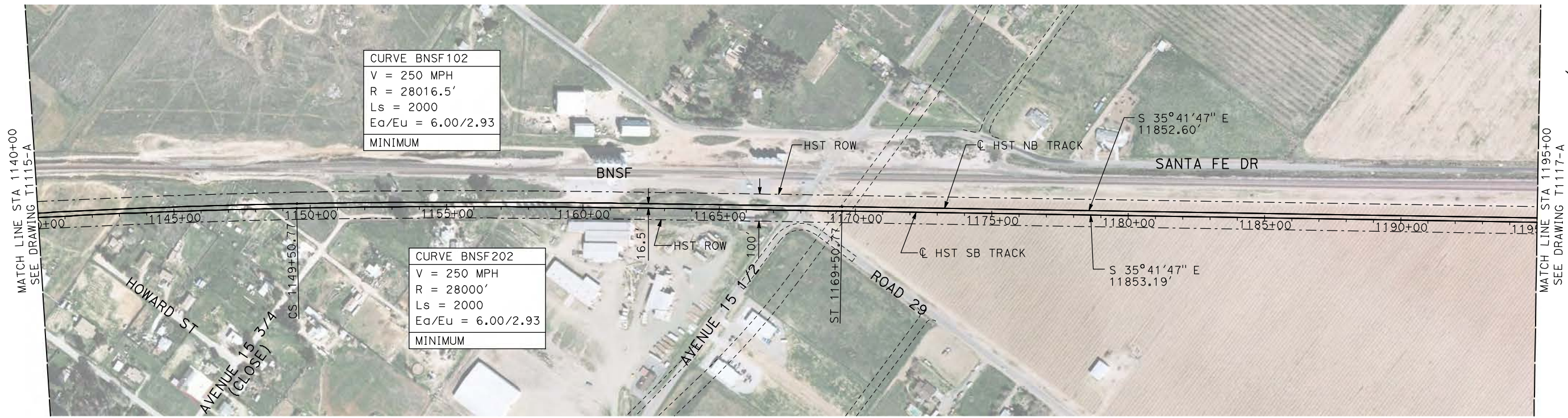
BNSF MAIN LINE

PLAN AND PROFILE  
STA 1085+00 TO STA 1140+00

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

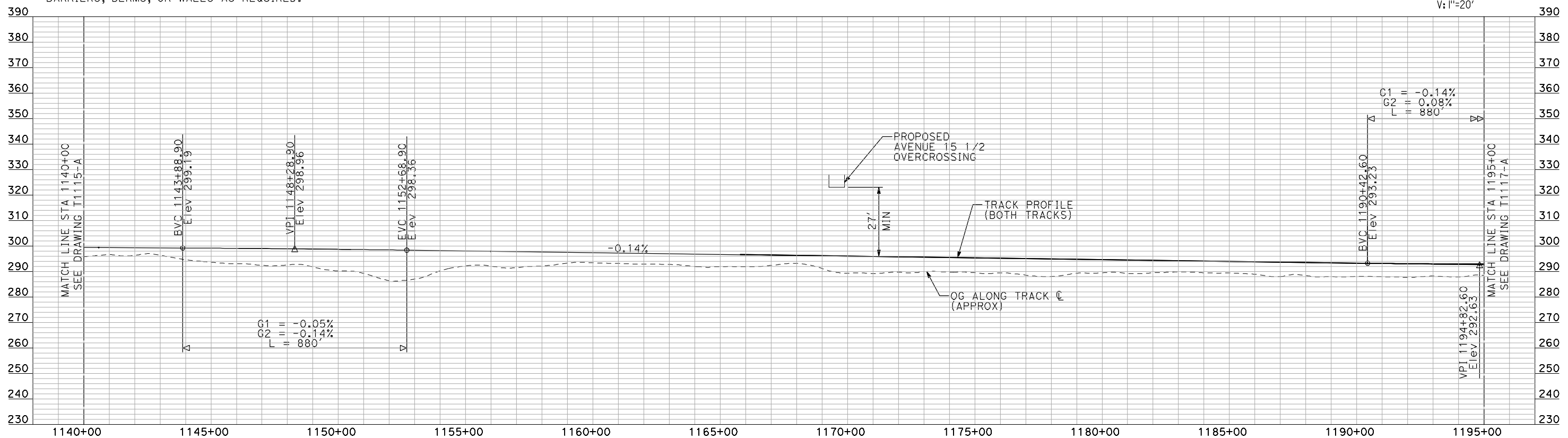
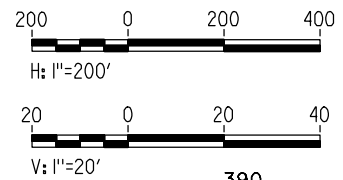


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- NOTES:**
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**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

**BNSF MAIN LINE**

PLAN AND PROFILE  
STA 1140+00 TO STA 1195+00

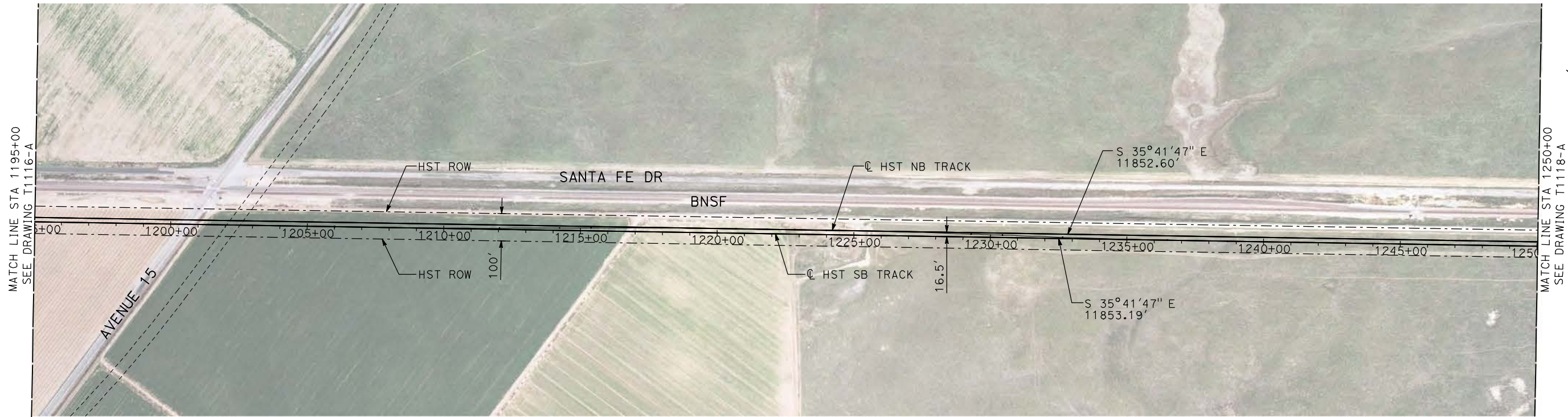
CONTRACT NO.  
HSR06-007

DRAWING NO.  
T1116-A

SCALE  
AS SHOWN

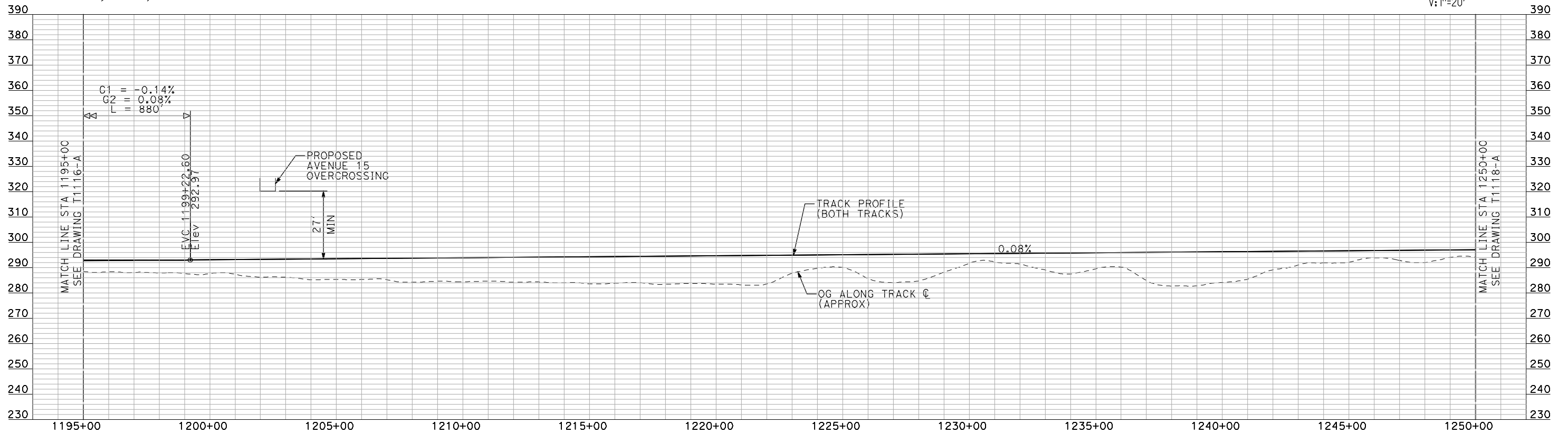
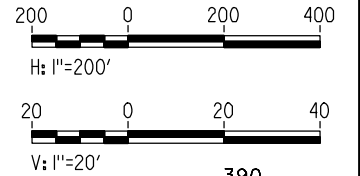
SHEET NO.  
### OF ###





- NOTES:
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

**PLAN**



**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

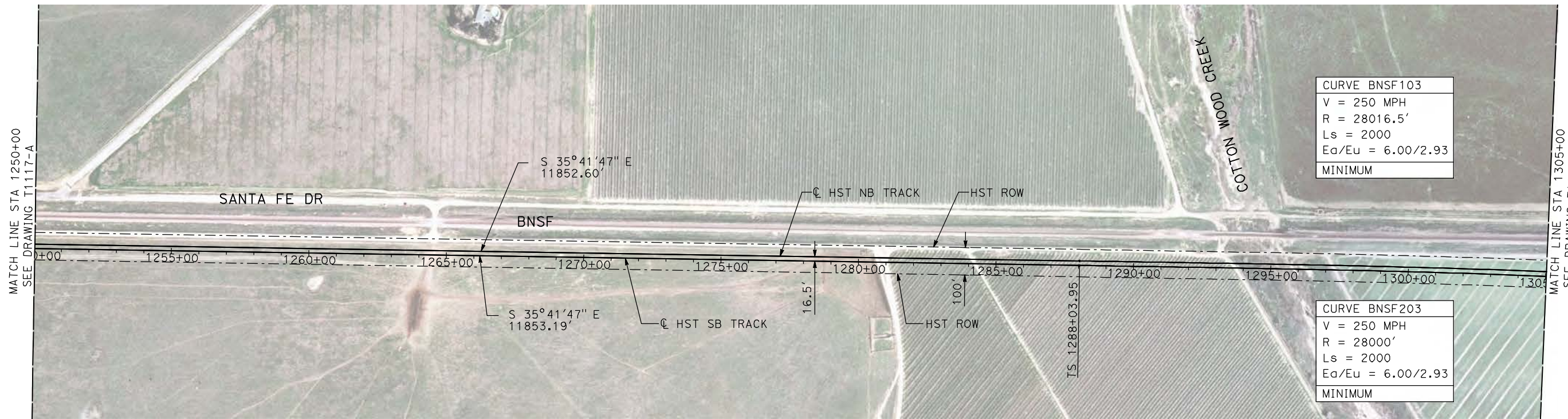
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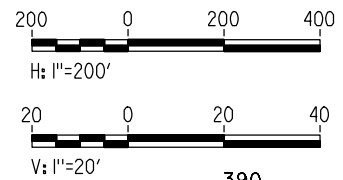
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
PLAN AND PROFILE  
STA 1195+00 TO STA 1250+00

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

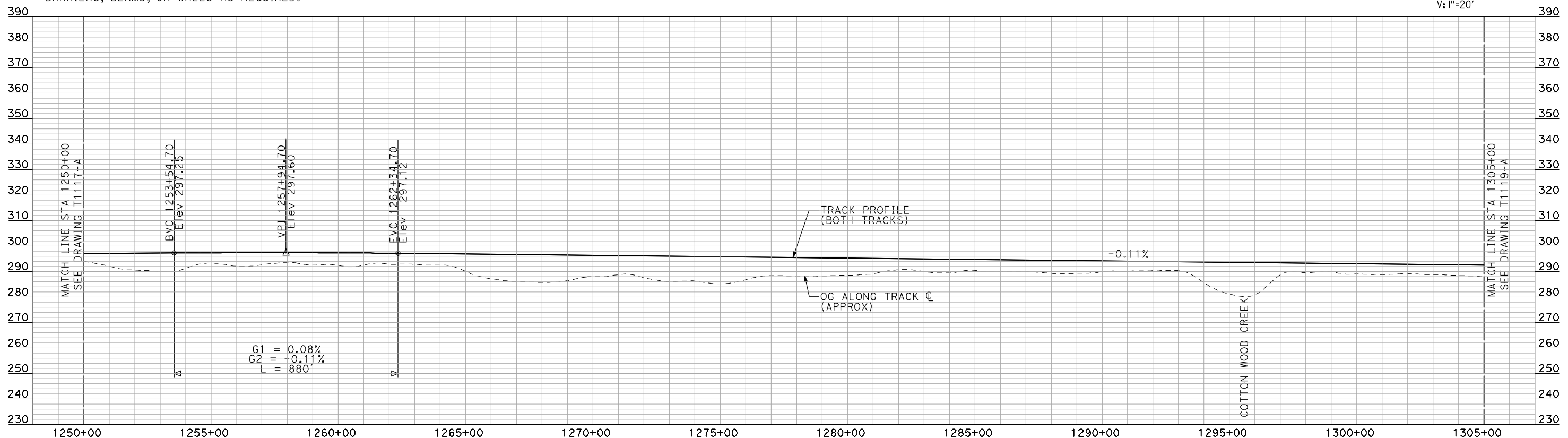




**PLAN**



- 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.



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF MAIN LINE

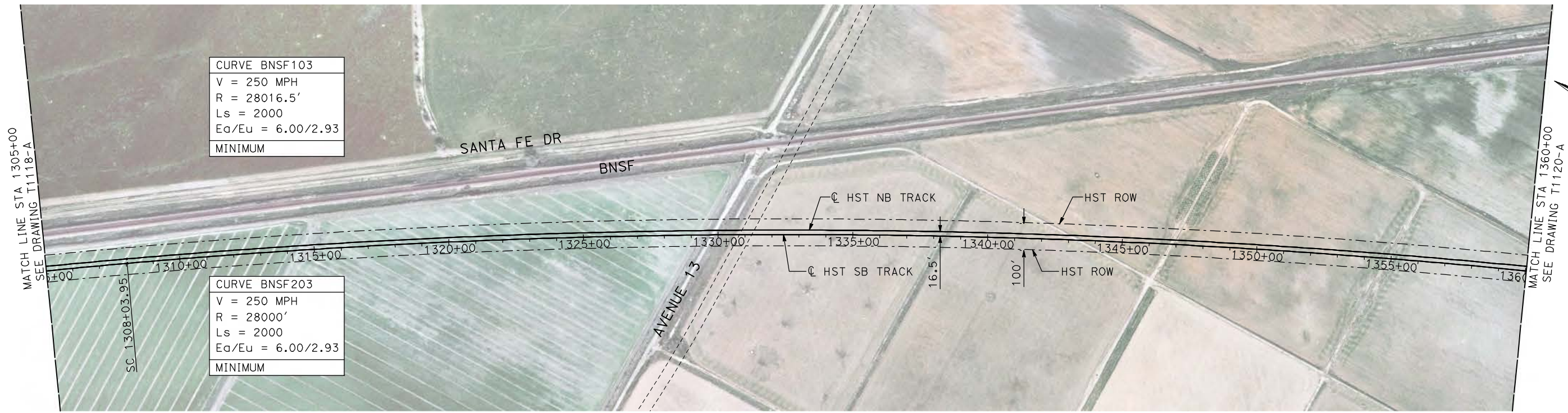
PLAN AND PROFILE  
STA 1250+00 TO STA 1305+00

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

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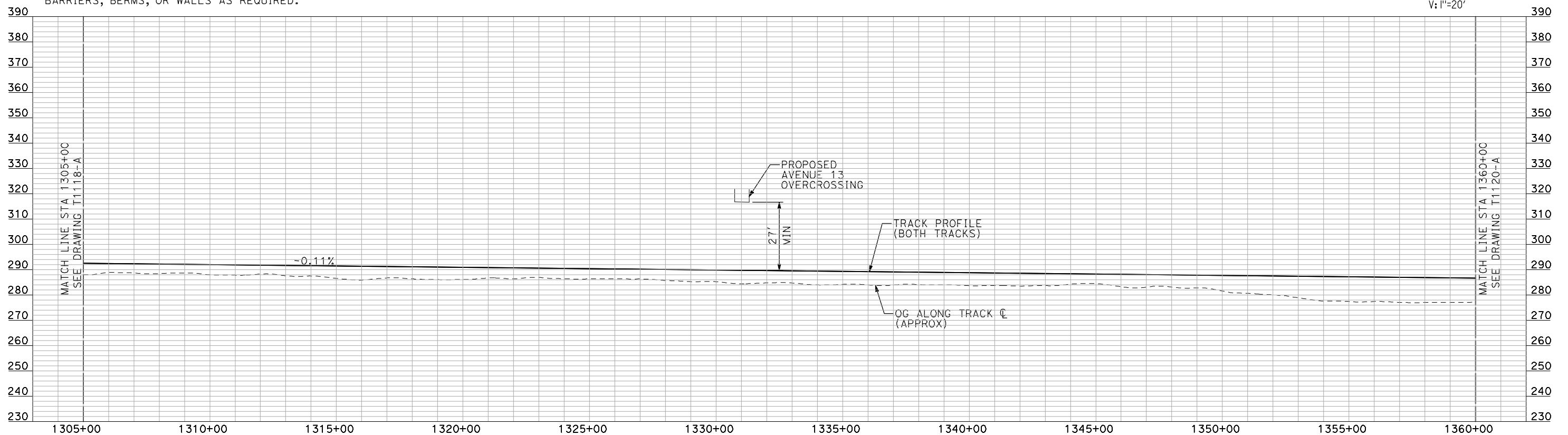
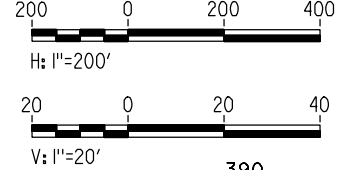


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- NOTES:**
- ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  - TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS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

**PLAN**



**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  
07/20/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

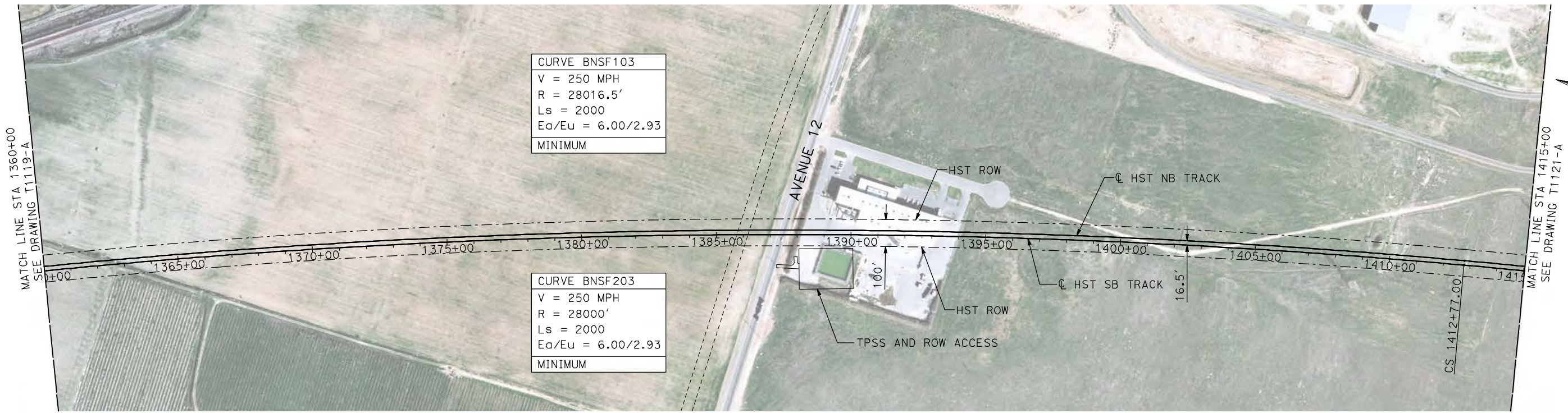


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
 PLAN AND PROFILE  
 STA 1305+00 TO STA 1360+00

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



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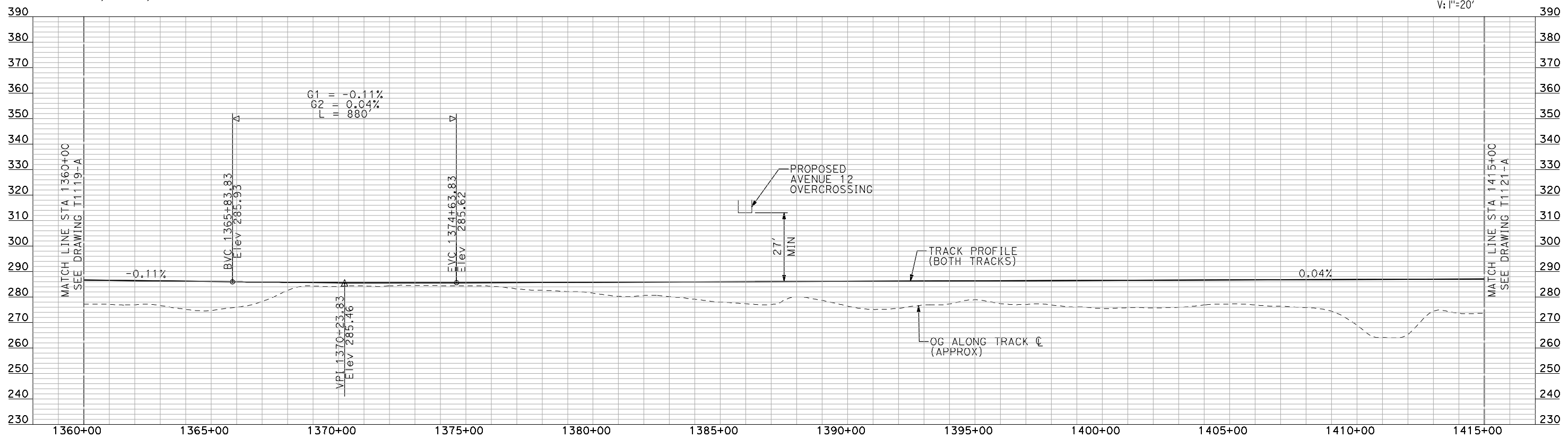
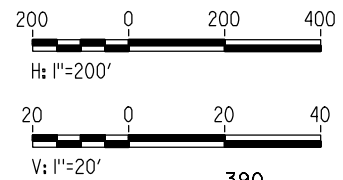


CURVE BNSF103  
 V = 250 MPH  
 R = 28016.5'  
 Ls = 2000  
 Ea/Eu = 6.00/2.93  
 MINIMUM

CURVE BNSF203  
 V = 250 MPH  
 R = 28000'  
 Ls = 2000  
 Ea/Eu = 6.00/2.93  
 MINIMUM

- 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**



**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  
07/20/2011

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
 PLAN AND PROFILE  
 STA 1360+00 TO STA 1415+00

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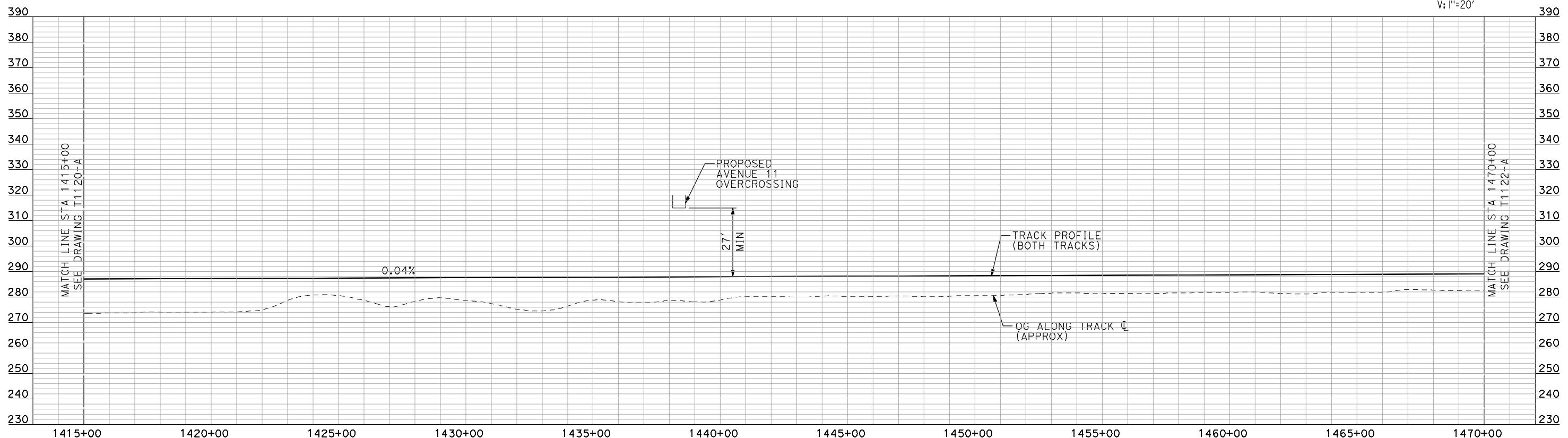
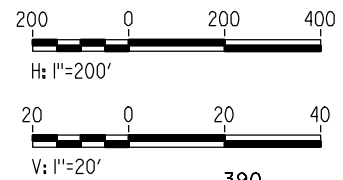


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- NOTES:**
- ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  - TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF MAIN LINE

PLAN AND PROFILE  
STA 1415+00 TO STA 1470+00

CONTRACT NO.  
HSR06-007

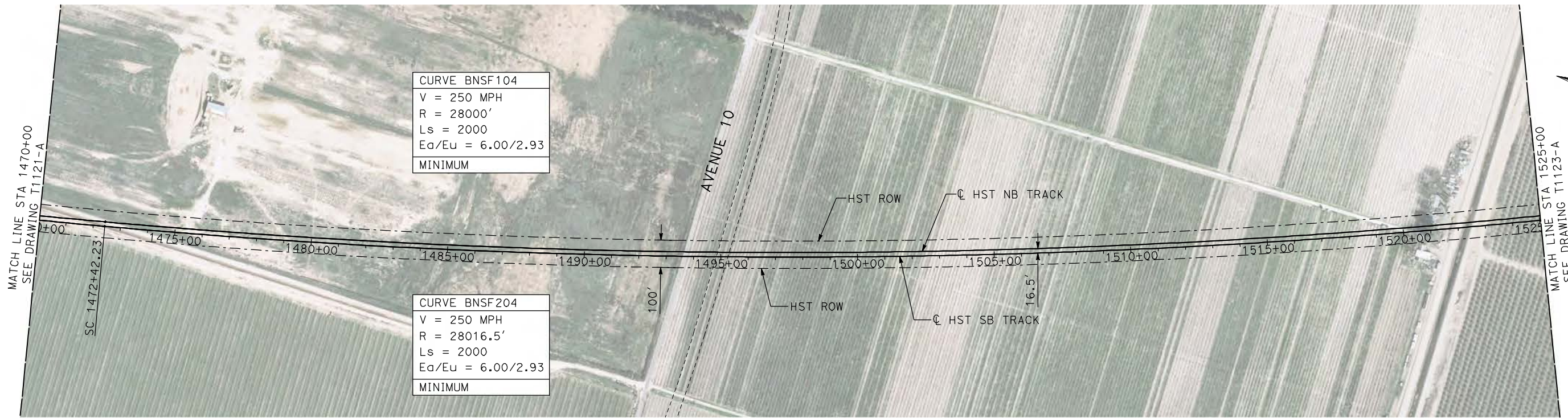
DRAWING NO.  
T1121-A

SCALE  
AS SHOWN

SHEET NO.  
### OF ###

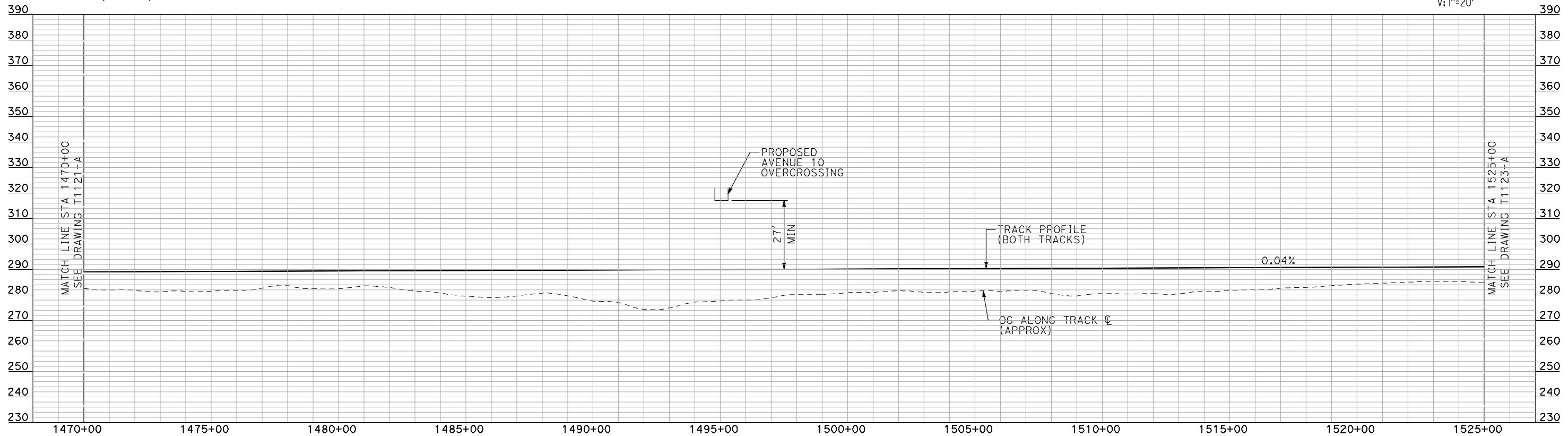
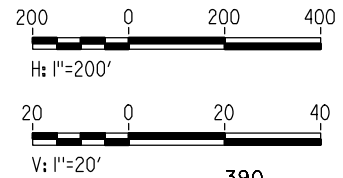


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**PLAN**

- 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.



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

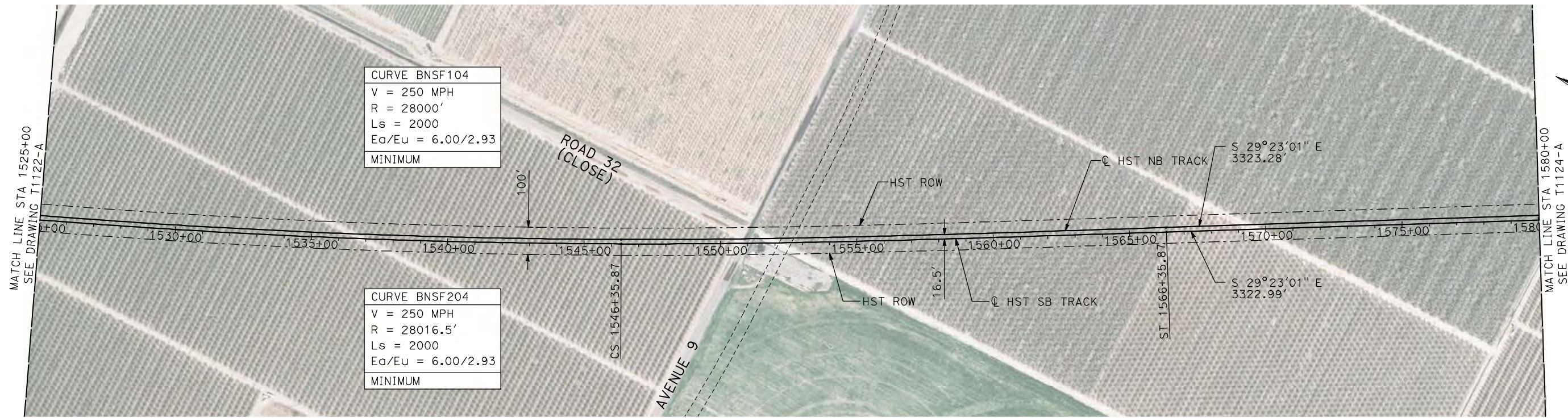
BNSF MAIN LINE

PLAN AND PROFILE  
STA 1470+00 TO STA 1525+00

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

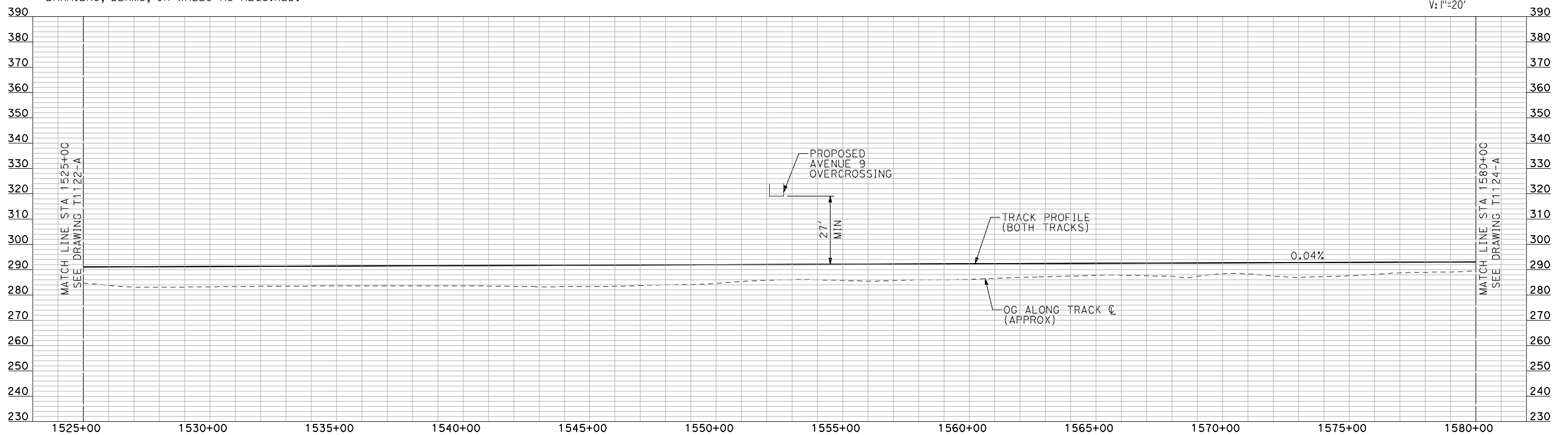
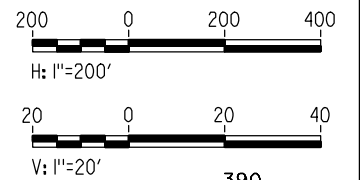


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

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

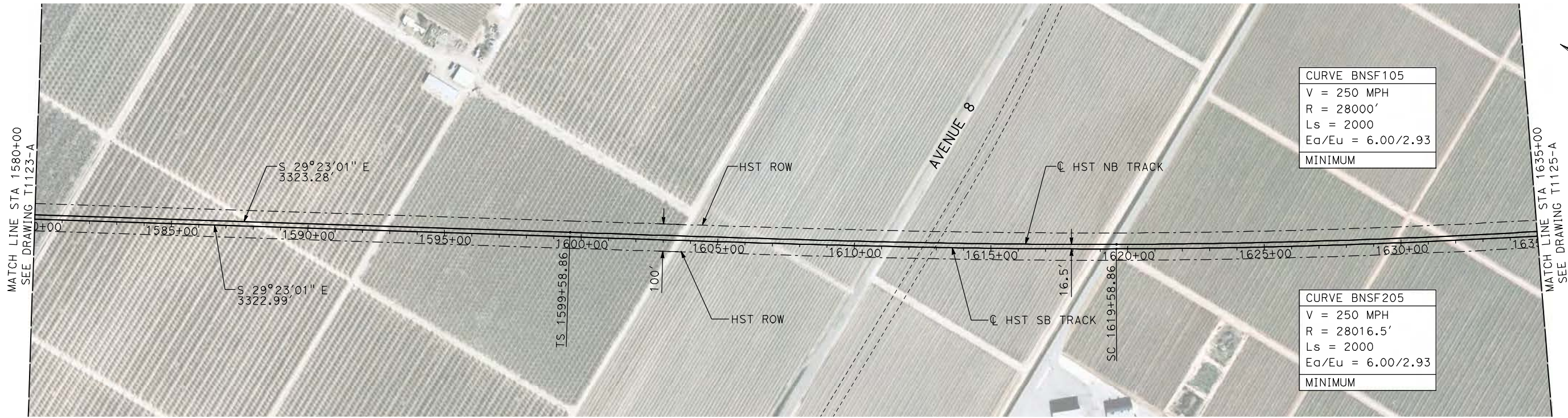
**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
PLAN AND PROFILE  
STA 1525+00 TO STA 1580+00

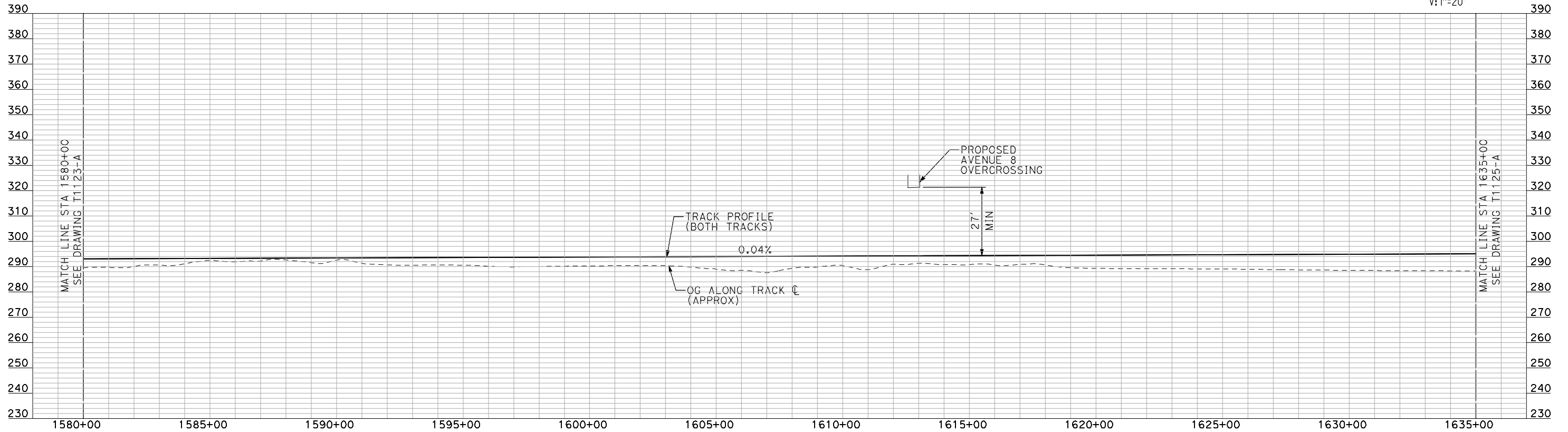
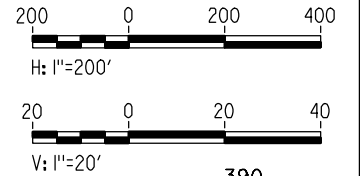
CONTRACT NO. HSR06-007
DRAWING NO. T1123-A
SCALE AS SHOWN
SHEET NO. ### OF ###





- 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**



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF MAIN LINE

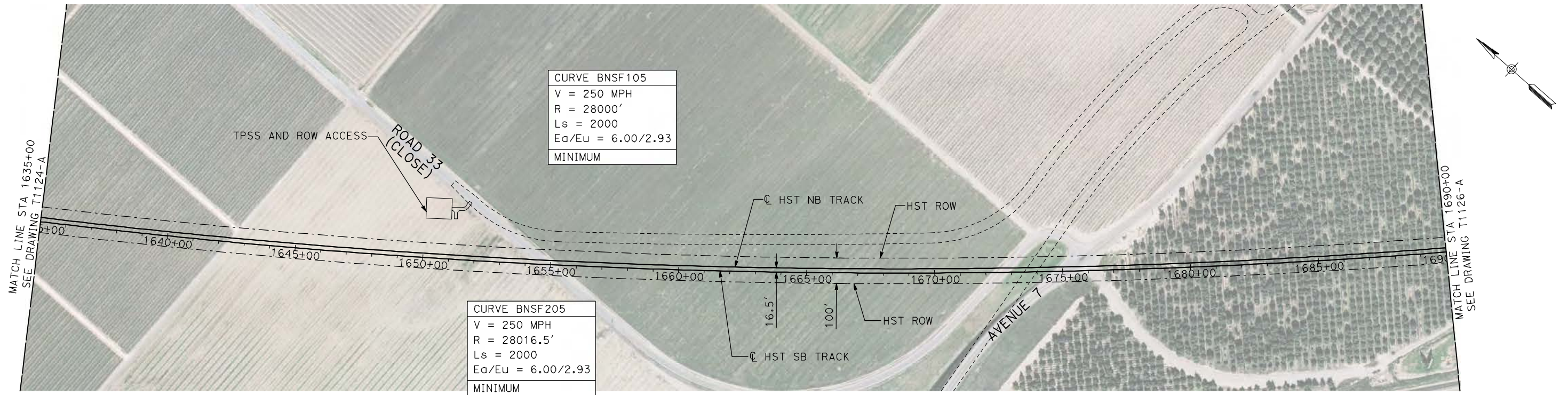
PLAN AND PROFILE  
STA 1580+00 TO STA 1635+00

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

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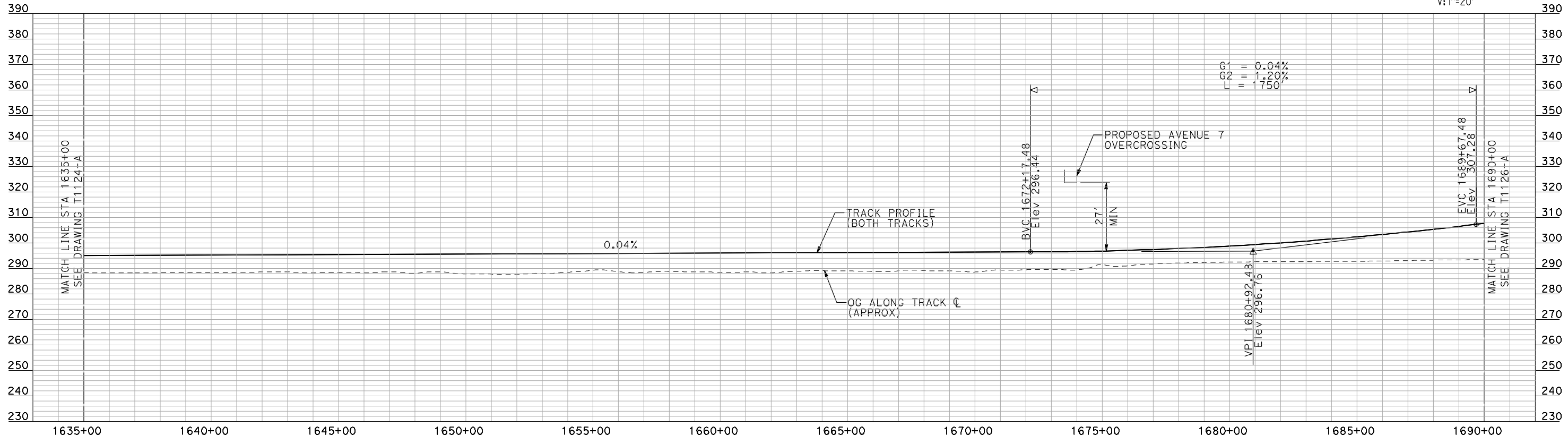
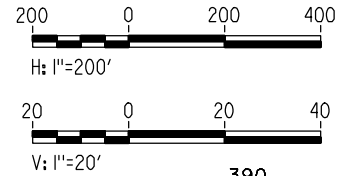


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- NOTES:**
- ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  - TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

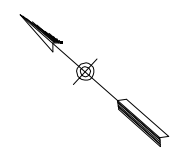
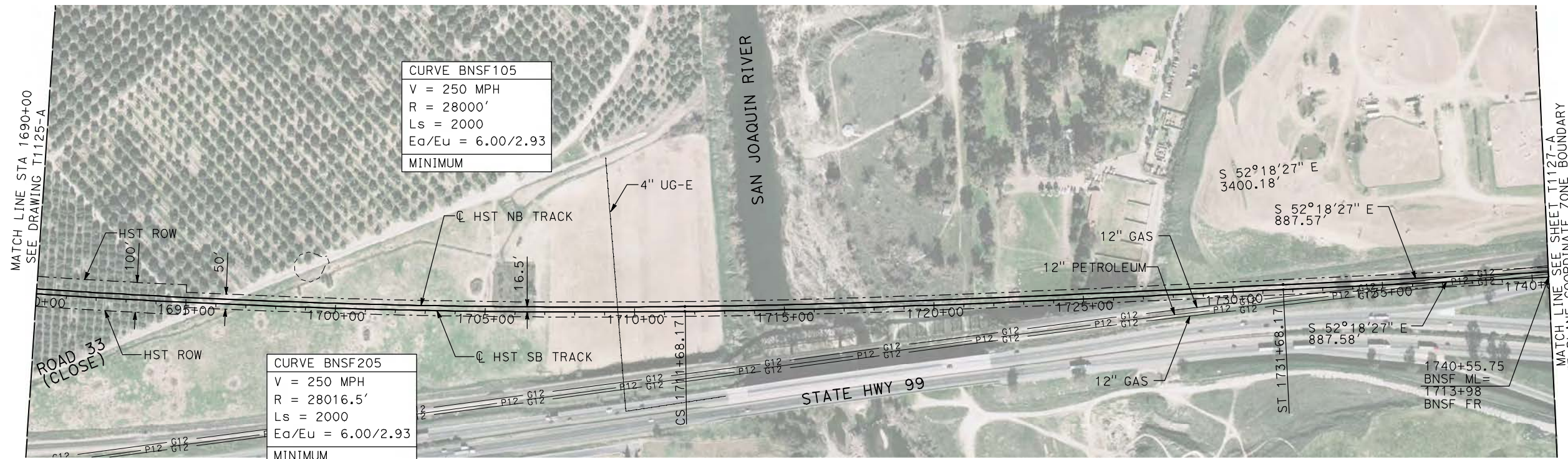


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
 PLAN AND PROFILE  
 STA 1635+00 TO STA 1690+00

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

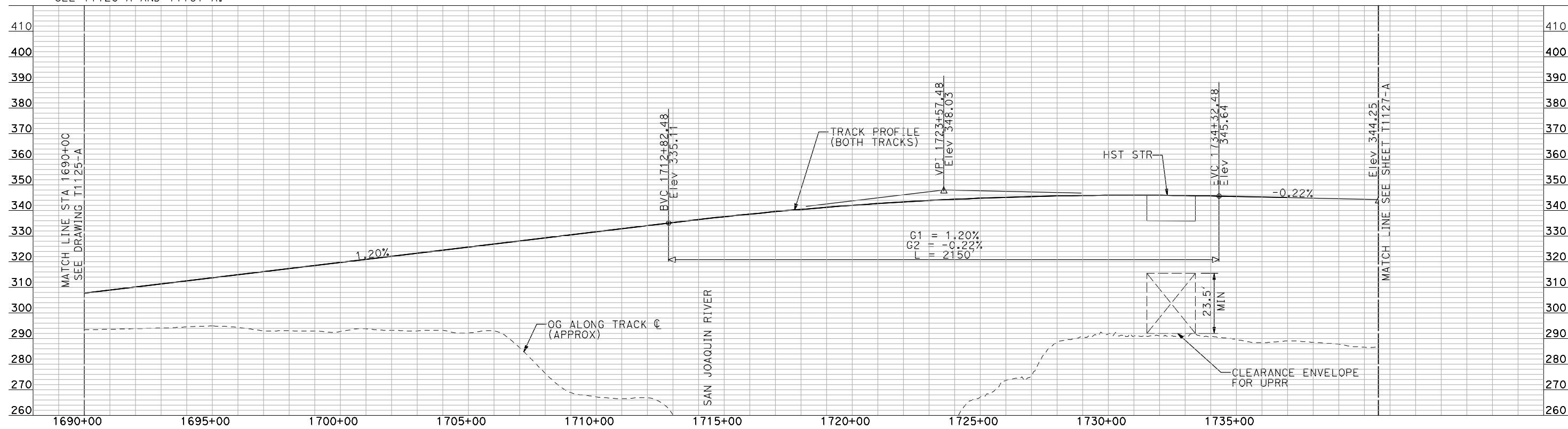
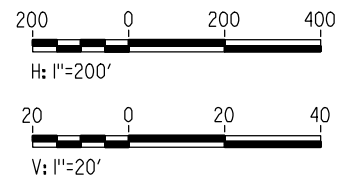


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.
  3. FOR CONTROLLING CLEARANCE ENVELOPE, SEE T1128-A AND T1131-A.

**PLAN**



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

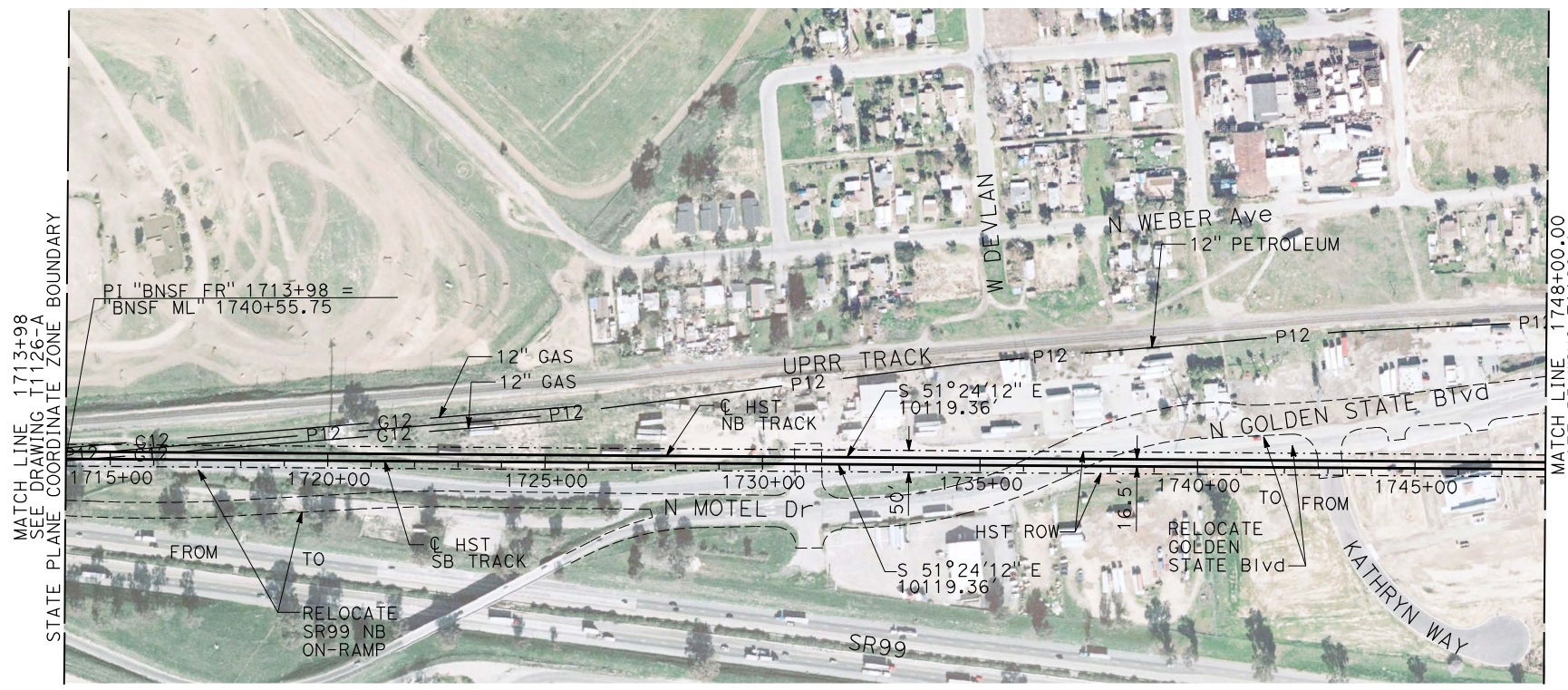
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
PLAN AND PROFILE  
STA 1690+00 TO STA 1740+55.75

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

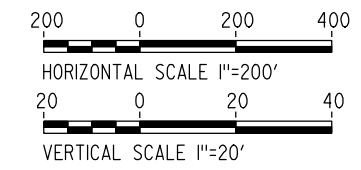




**PLAN**

**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.



**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  
**JULY 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 TRAIN PROJECT**  
**MERCED TO FRESNO**

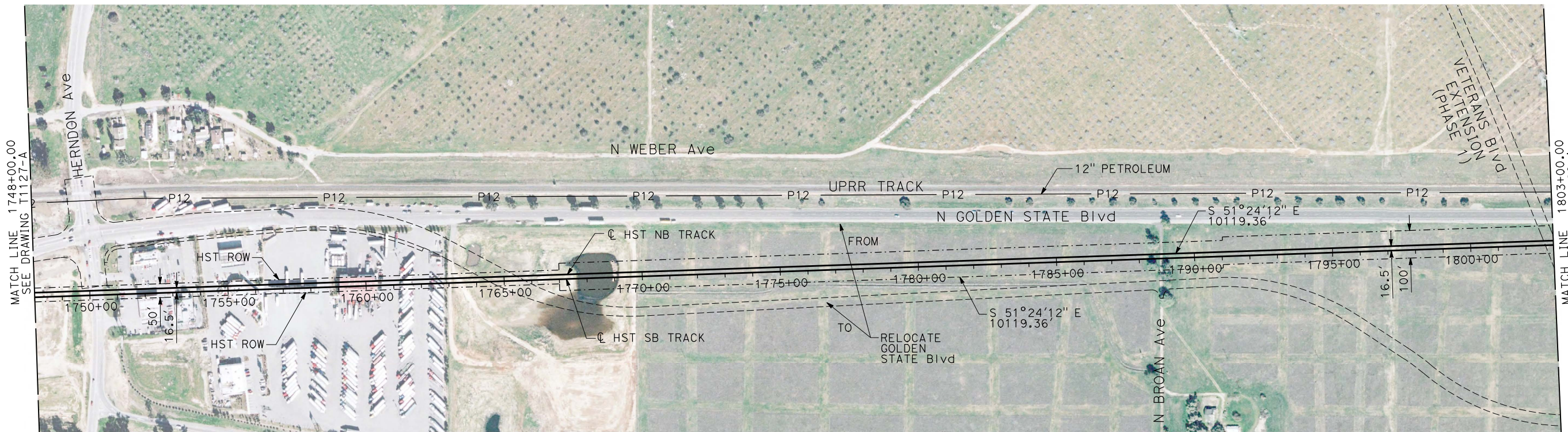
BNSF MAIN LINE

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 => 20-JUL-2011  
TIME PLOTTED => 13:13

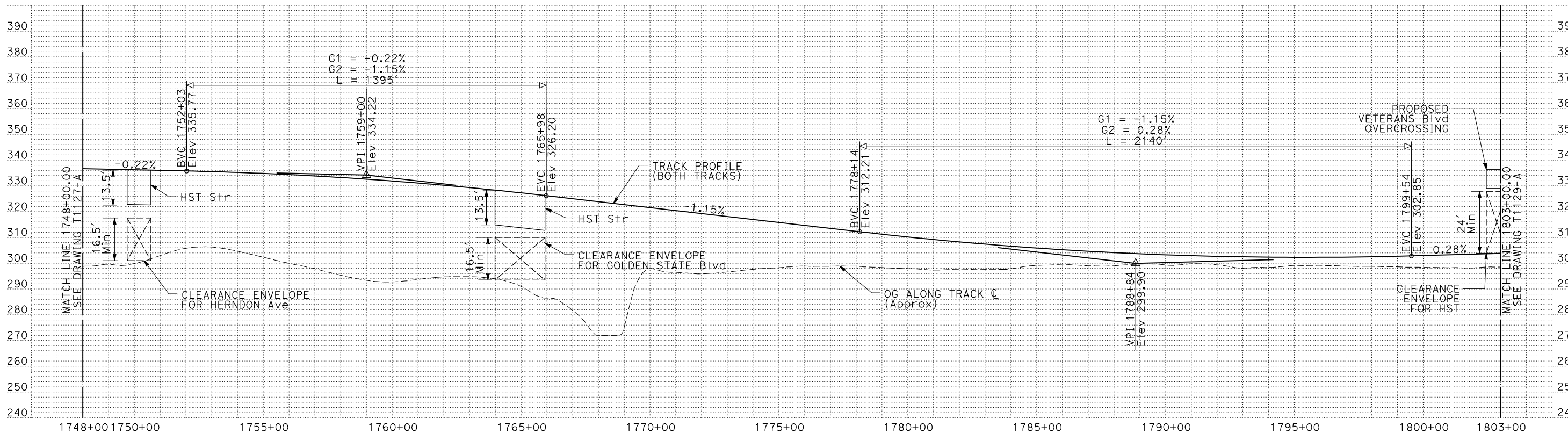
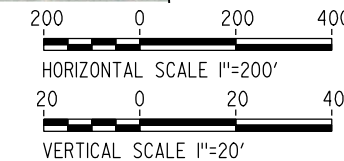




NOTES:

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



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  
JULY 2011

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



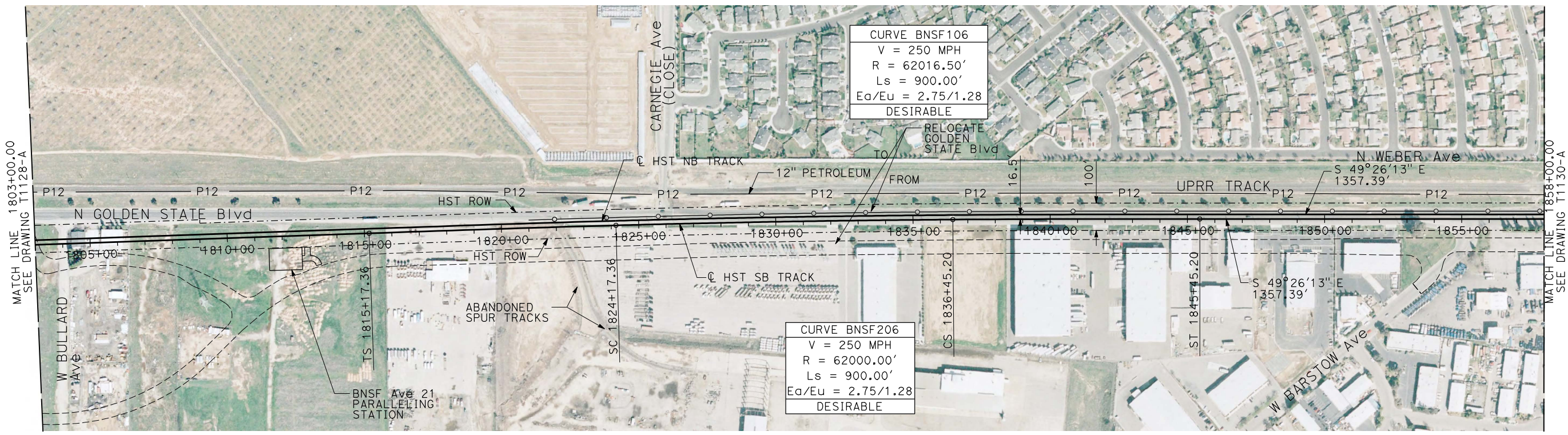
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MAIN LINE

PLAN AND PROFILE  
STA 1748+00 TO STA 1803+00

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

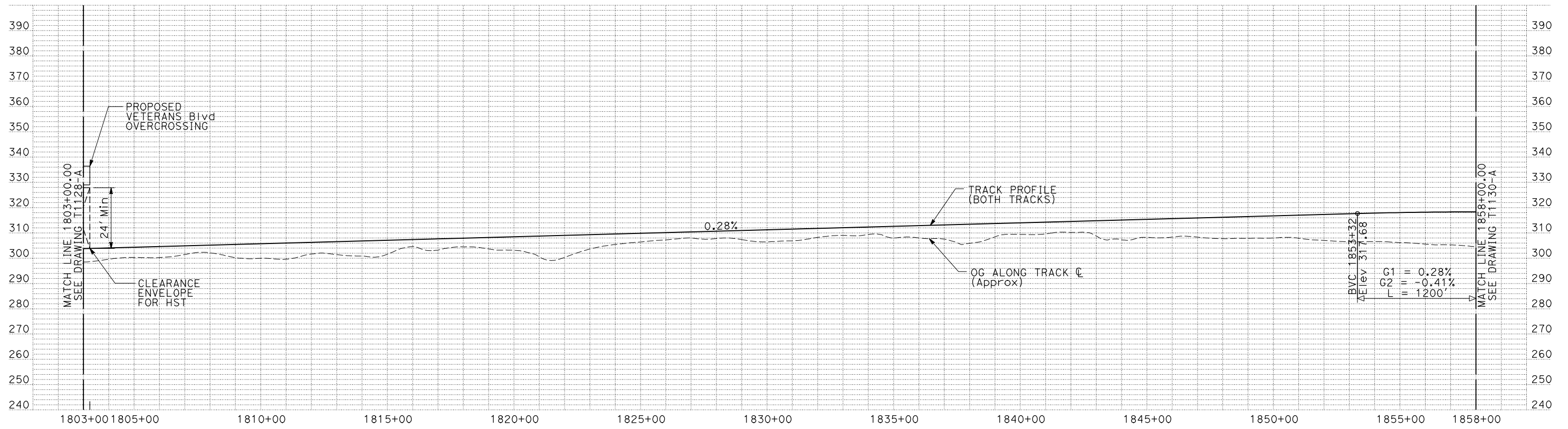
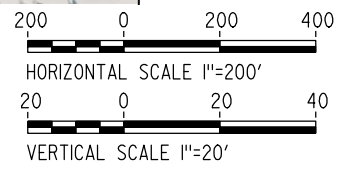




**PLAN**

**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.



**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  
**JULY 2011**

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



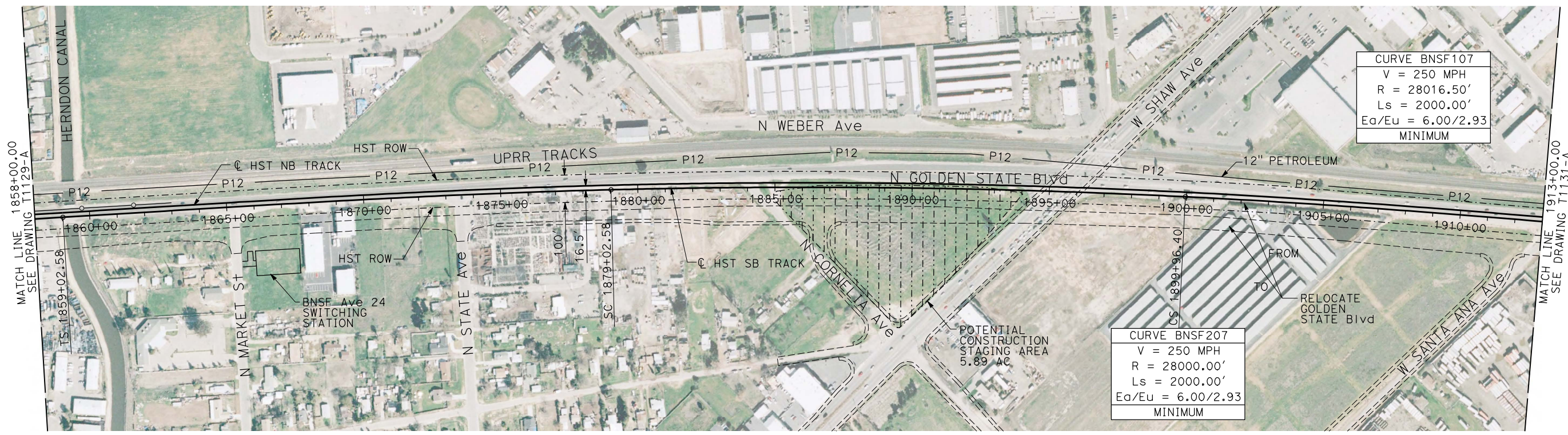
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
  
BNSF MAIN LINE  
  
PLAN AND PROFILE  
STA 1803+00 TO STA 1858+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1129-A  
SCALE  
AS SHOWN  
SHEET NO.

DATE PLOTTED => 20-JUL-2011  
TIME PLOTTED => 13:35

USERNAME => lwebster  
DGN FILE => MF-T-1129-A1-E





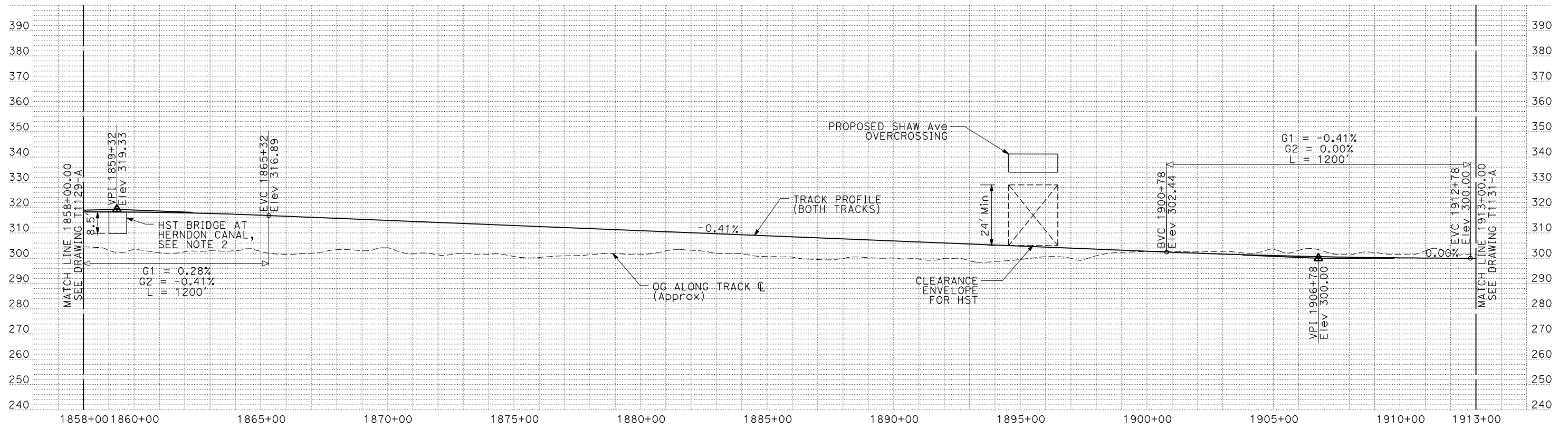
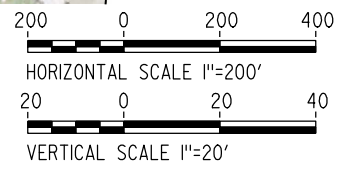
CURVE BNSF107  
 V = 250 MPH  
 R = 28016.50'  
 Ls = 2000.00'  
 Ea/Eu = 6.00/2.93  
 MINIMUM

CURVE BNSF207  
 V = 250 MPH  
 R = 28000.00'  
 Ls = 2000.00'  
 Ea/Eu = 6.00/2.93  
 MINIMUM

**PLAN**

**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.
3. A MINIMUM OF 2 FEET OF FREEBOARD ABOVE THE LEVEE TOP IS ASSUMED AT HERNDON CANAL.



**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  
JULY 2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MAIN LINE

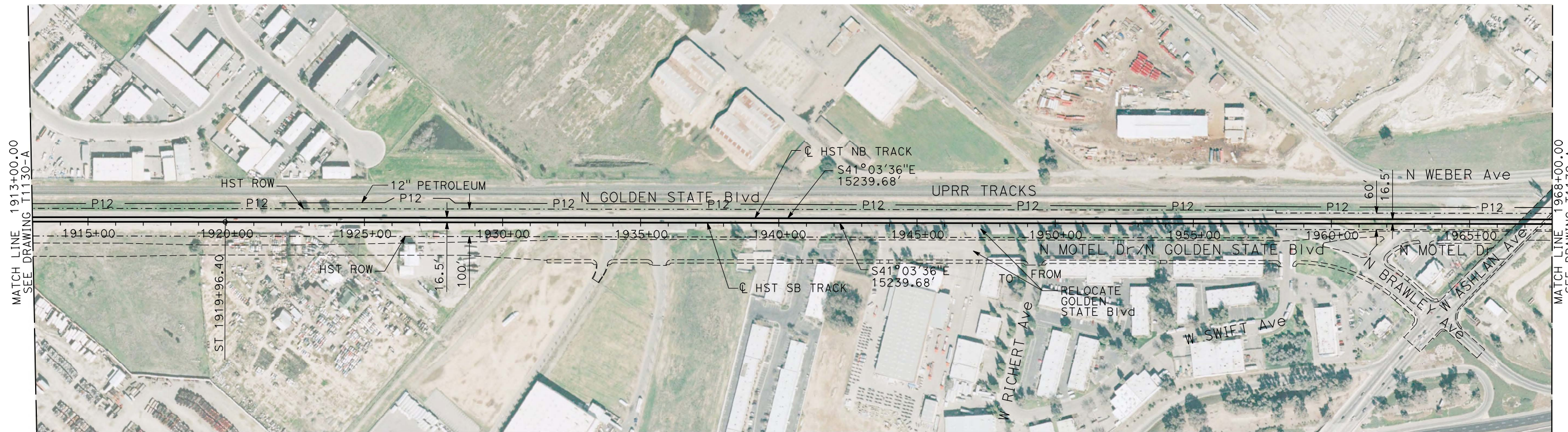
PLAN AND PROFILE  
 STA 1858+00 TO STA 1913+00

CONTRACT NO.	HSR06-007
DRAWING NO.	T1130-A
SCALE	AS SHOWN
SHEET NO.	

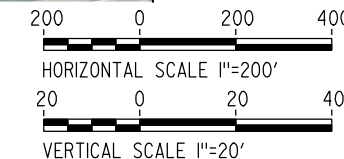
DATE PLOTTED => 20-JUL-2011  
 TIME PLOTTED => 13:41

USERNAME => lwebster  
 DGN FILE => MF-T-1130-A1-E



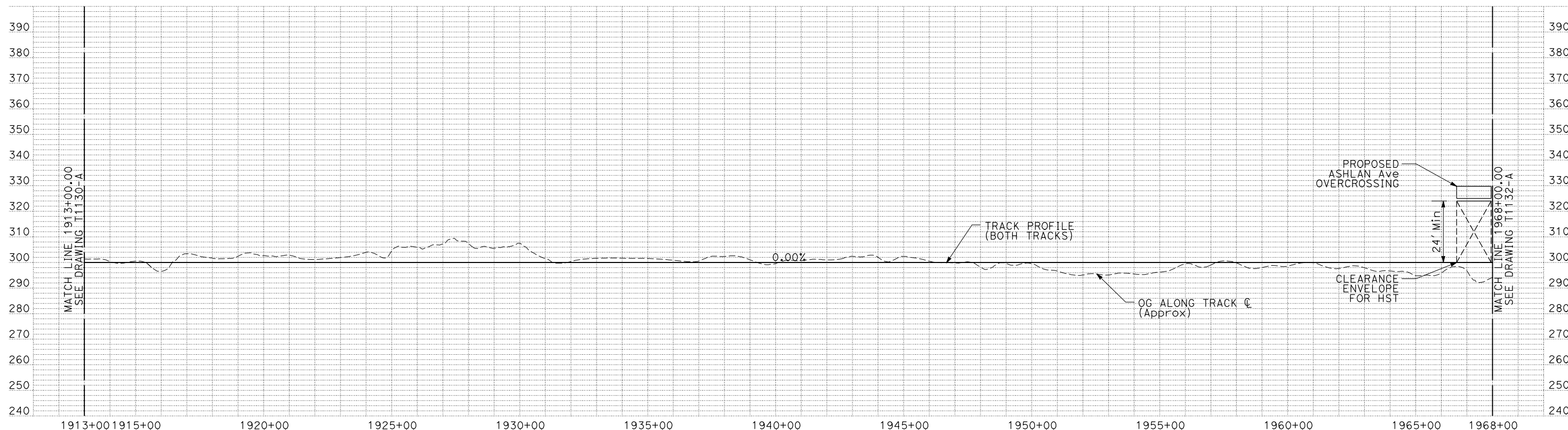


**PLAN**



**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.



**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  
**JULY 2011**

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



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

BNSF MAIN LINE  
PLAN AND PROFILE  
STA 1913+00 TO STA 1968+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1131-A  
SCALE  
AS SHOWN  
SHEET NO.

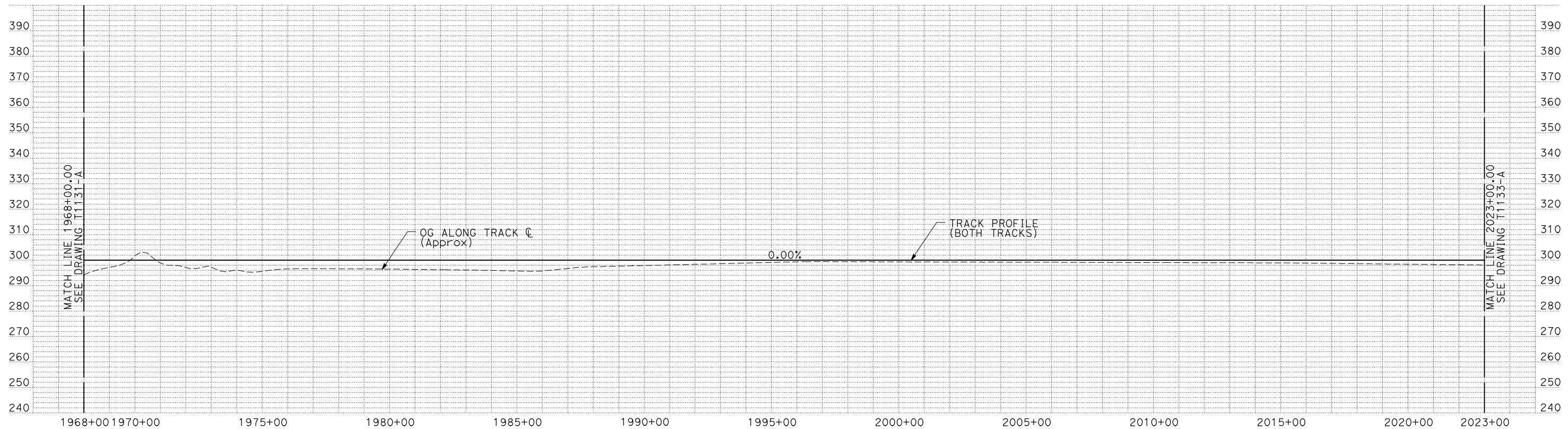
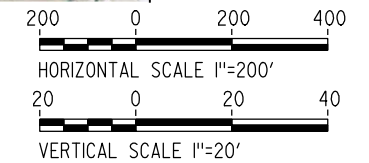




**PLAN**

**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.



**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  
JULY 2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MAIN LINE

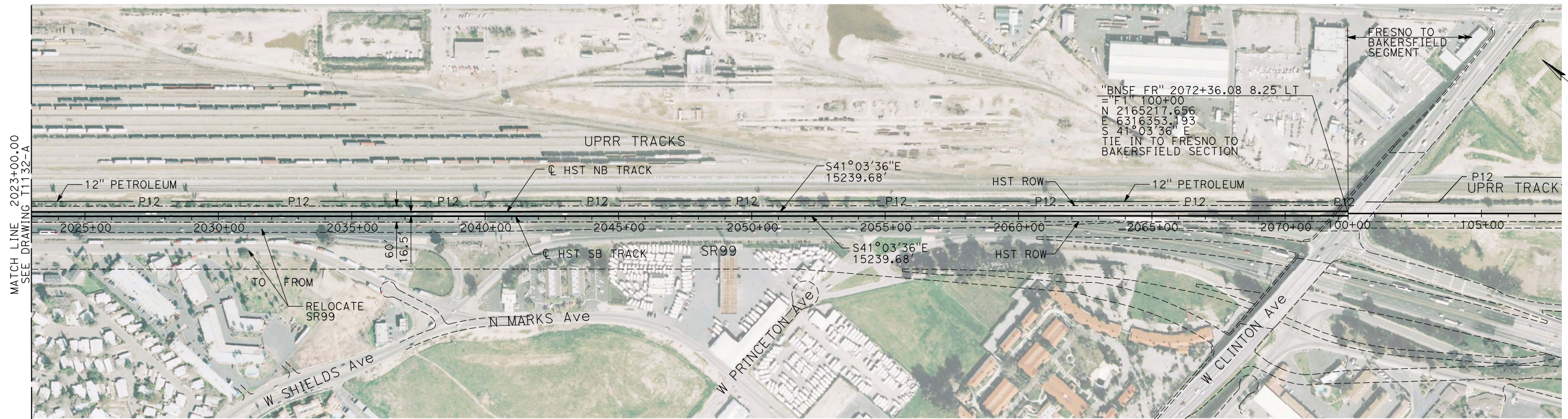
PLAN AND PROFILE  
STA 1968+00 TO STA 2023+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1132-A  
SCALE  
AS SHOWN  
SHEET NO.

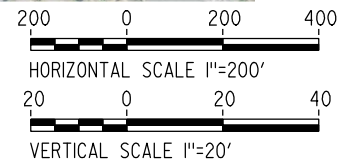
DATE PLOTTED => 20-JUL-2011  
TIME PLOTTED => 16:03

USERNAME => lwebster  
DGN FILE => MF-T-1132-A1-E



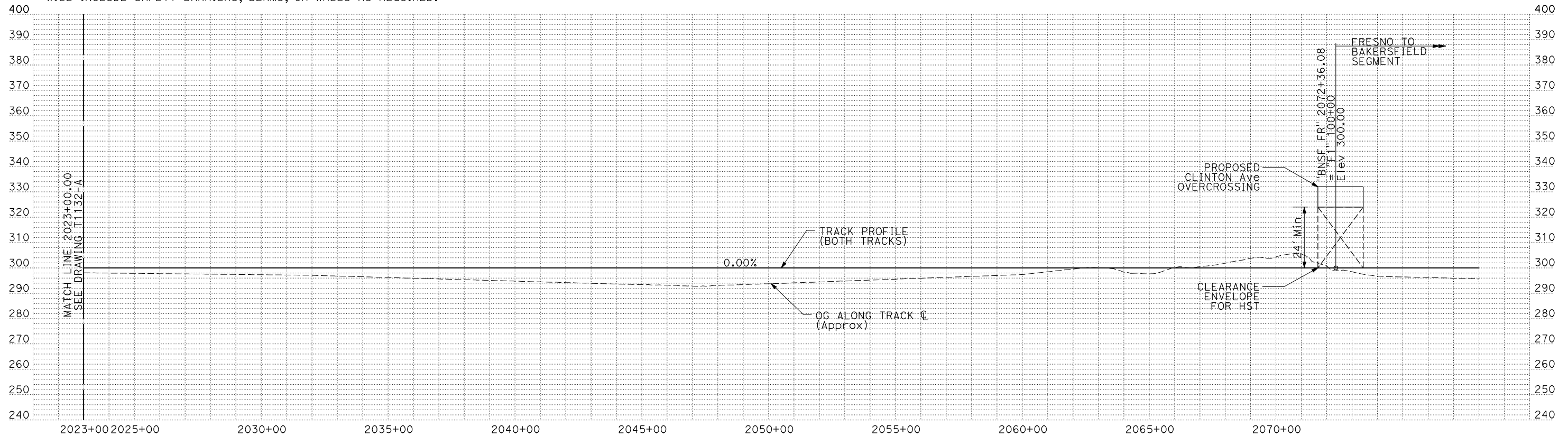


**PLAN**



**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.



**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  
JULY 2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF MAIN LINE

PLAN AND PROFILE  
STA 2023+00 TO STA 2072+36.08

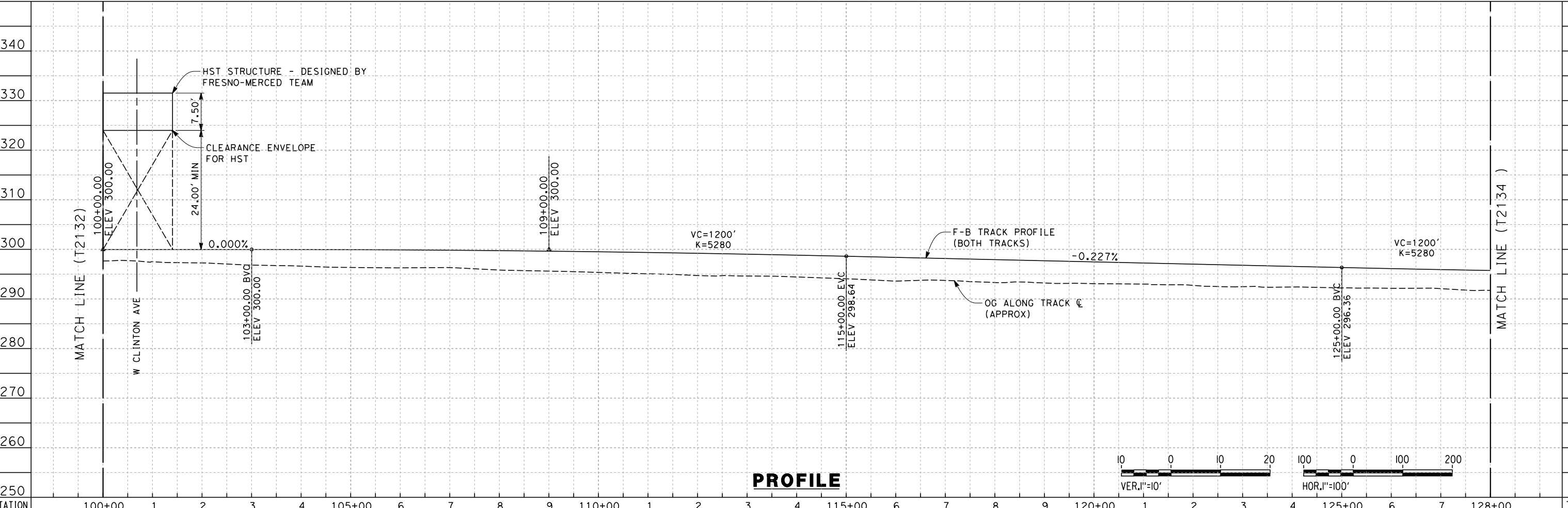
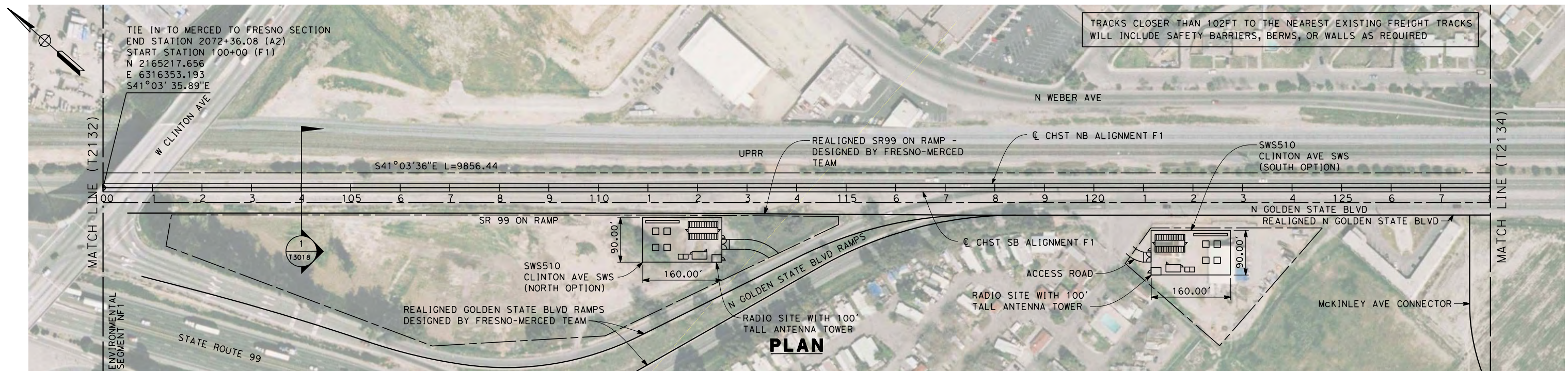
CONTRACT NO.	HSR06-007
DRAWING NO.	T1133-A
SCALE	AS SHOWN
SHEET NO.	

DATE PLOTTED => 20-JUL-2011  
TIME PLOTTED => 16:07

USERNAME => lwebster  
DGN FILE => MF-T-1133-A1-E



7/22/2011 10:33:40 AM 0:\1315177\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2133-A-F1.dgn  
 frank.palermo



STATION	100+00	1	2	3	4	105+00	6	7	8	9	110+00	1	2	3	4	115+00	6	7	8	9	120+00	1	2	3	4	125+00	6	7	128+00	TOTAL
Exc																														
Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**K. SEYMOUR**  
 DRAWN BY  
**P. TONKIN**  
 CHECKED BY  
**D. HUNT**  
 IN CHARGE  
**A. LUFT**  
 DATE  
**06/30/11**

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

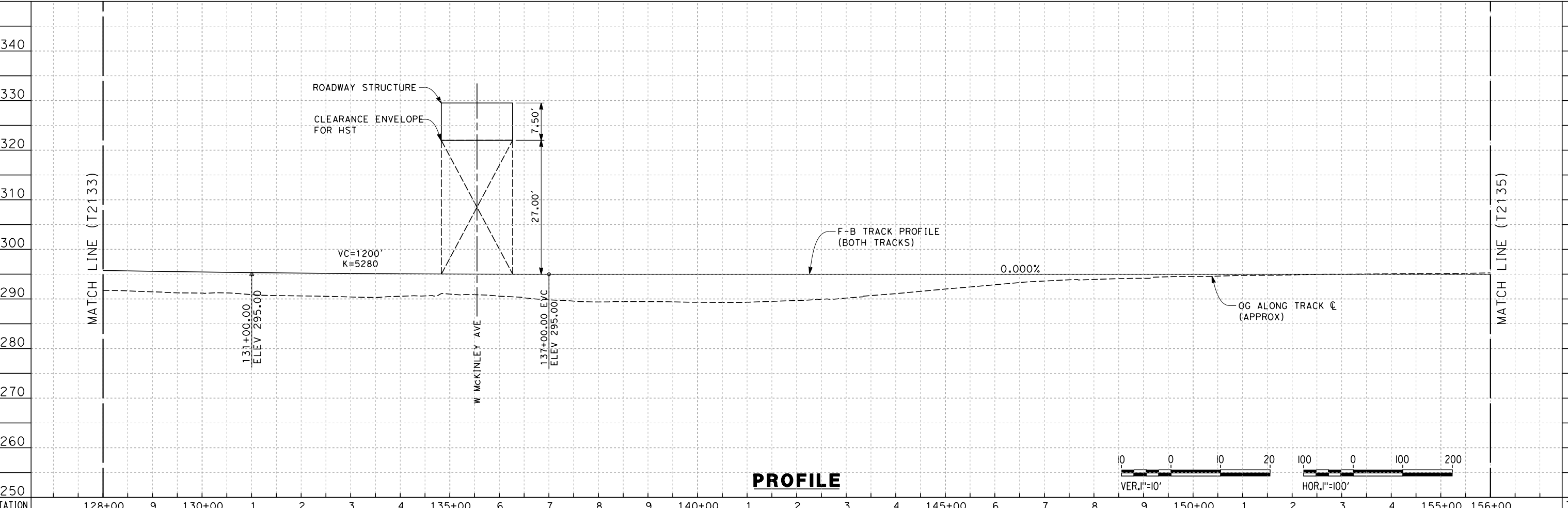
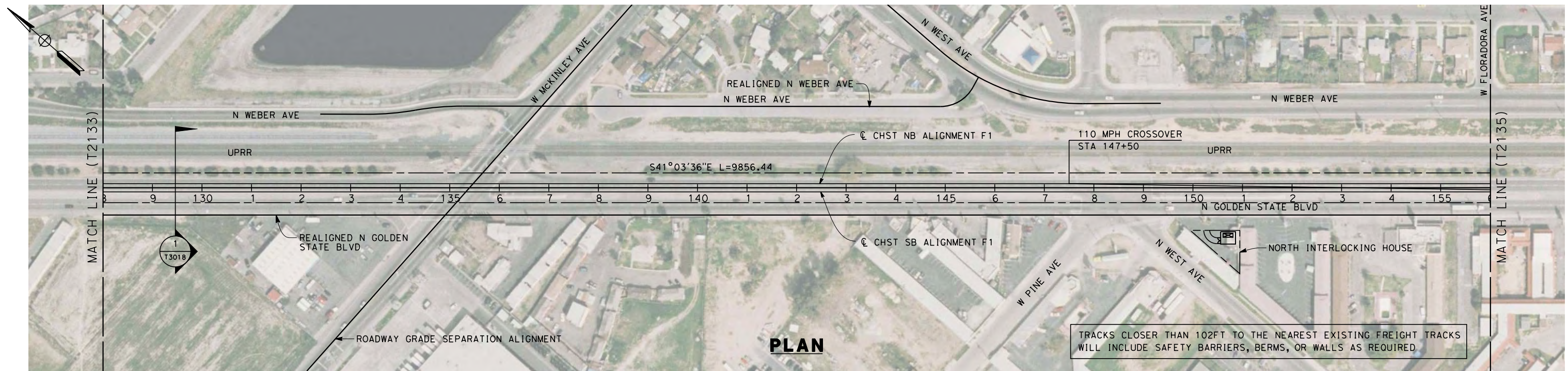


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
 MERCED TO FRESNO**  
 BNSF MAIN LINE  
  
 PLAN AND PROFILE  
 STA. 100+00 TO 128+00

CONTRACT NO.  
 HSR 06-0003  
 DRAWING NO.  
 T2133-A  
 SCALE  
 AS SHOWN  
 SHEET NO.  
 ### OF ###



7/22/2011 10:33:43 AM 0:\1315177\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2134-A-F1.dgn  
 frank.palermo



STATION	128+00	9	130+00	1	2	3	4	135+00	6	7	8	9	140+00	1	2	3	4	145+00	6	7	8	9	150+00	1	2	3	4	155+00	156+00	TOTAL
Exc																														
Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
P. TONKIN  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
06/30/11

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

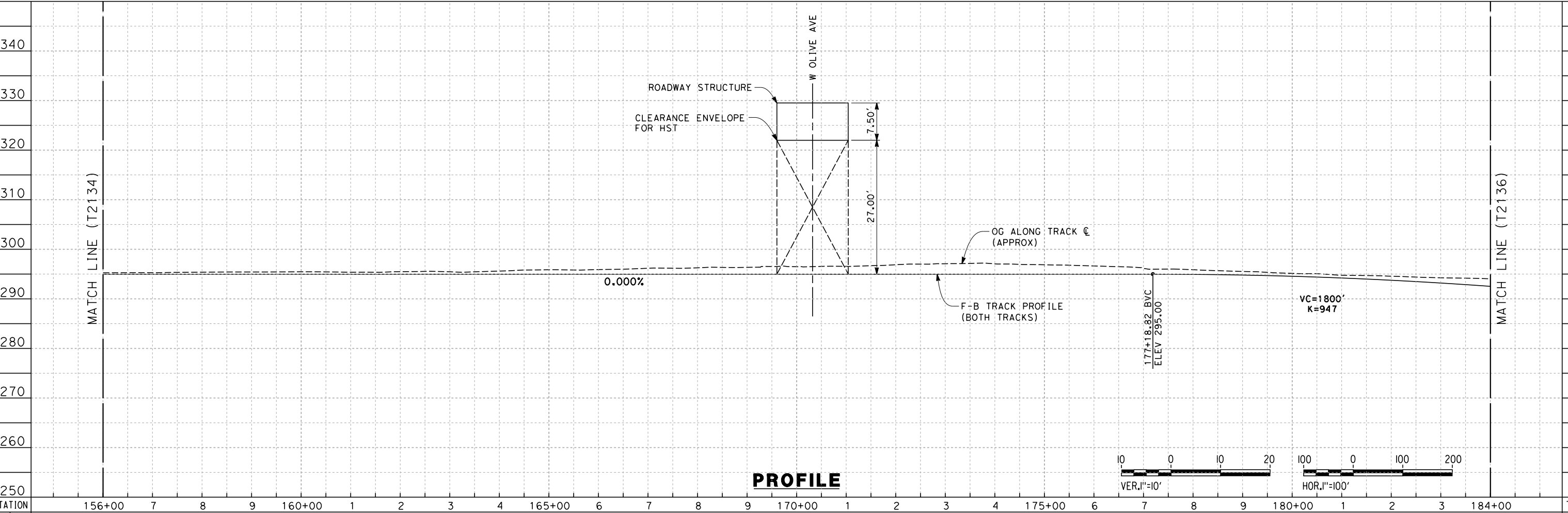
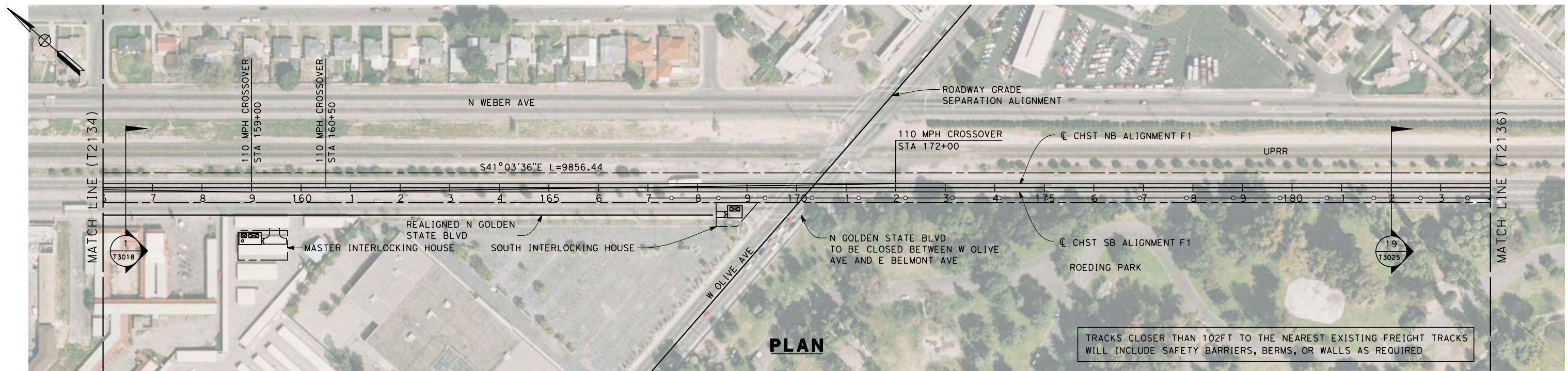


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
 BNSF MAIN LINE  
  
 PLAN AND PROFILE  
 STA. 128+00 TO 156+00

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
T2134-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###



7/22/2011 10:33:46 AM O:\1315177\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2135-A-F1.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
DRAWN BY  
P. TONKIN  
CHECKED BY  
D. HUNT  
IN CHARGE  
A. LUFT  
DATE  
06/30/11

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

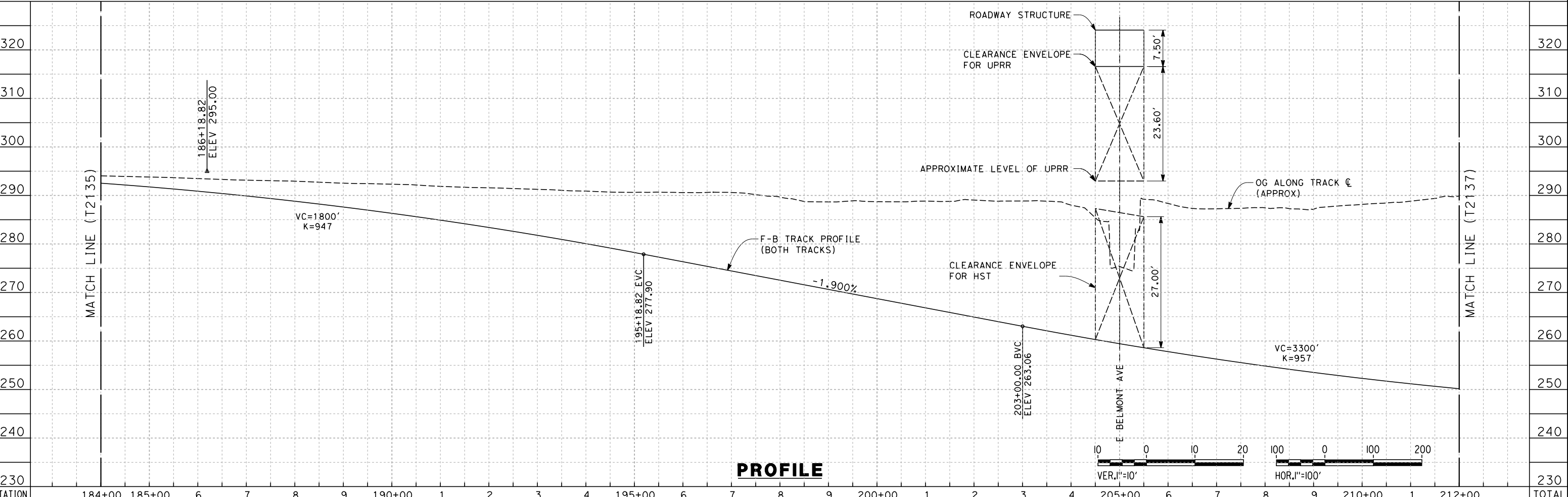
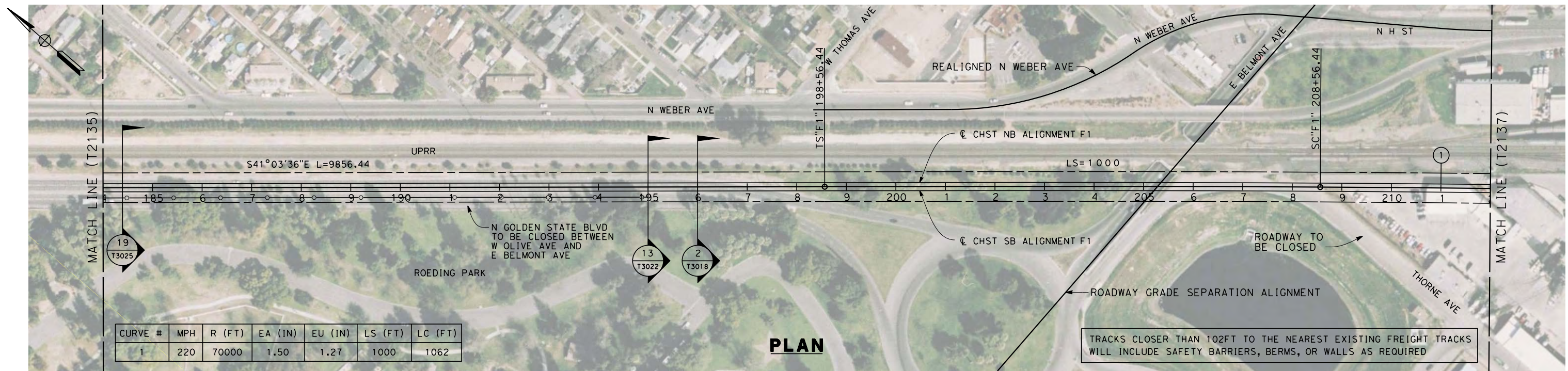


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE  
  
PLAN AND PROFILE  
STA. 156+00 TO 184+00

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
T2135-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



7/22/2011 10:33:49 AM 0:\1315177\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\NSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2136-A-F1.dgn  
 frank.palermo



STATION	184+00	185+00	6	7	8	9	190+00	1	2	3	4	195+00	6	7	8	9	200+00	1	2	3	4	205+00	6	7	8	9	210+00	1	212+00	TOTAL
Exc																														
Emb																														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
P. TONKIN  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
06/30/11

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

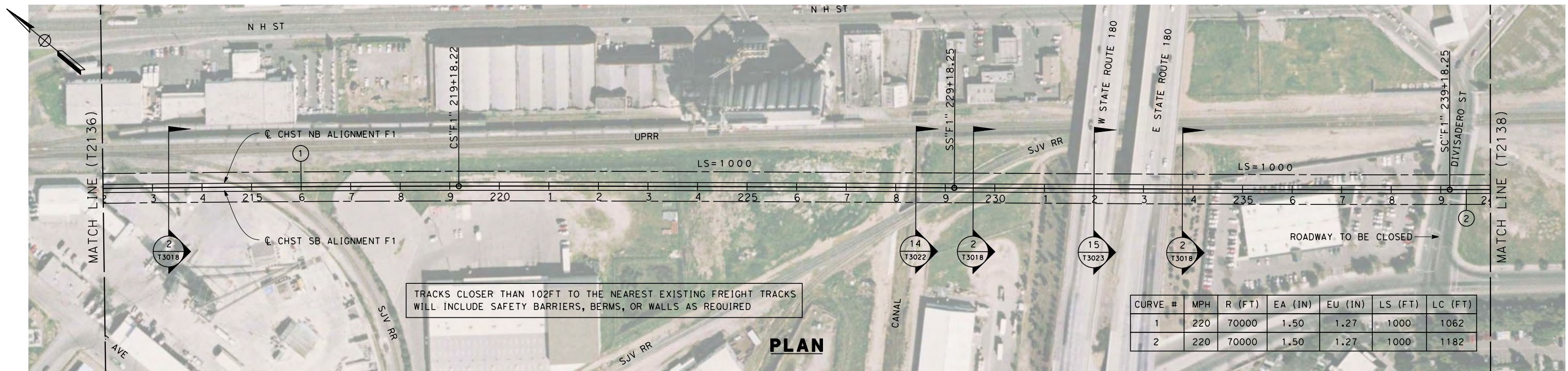


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
 PLAN AND PROFILE  
 STA. 184+00 TO 212+00

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
T2136-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###

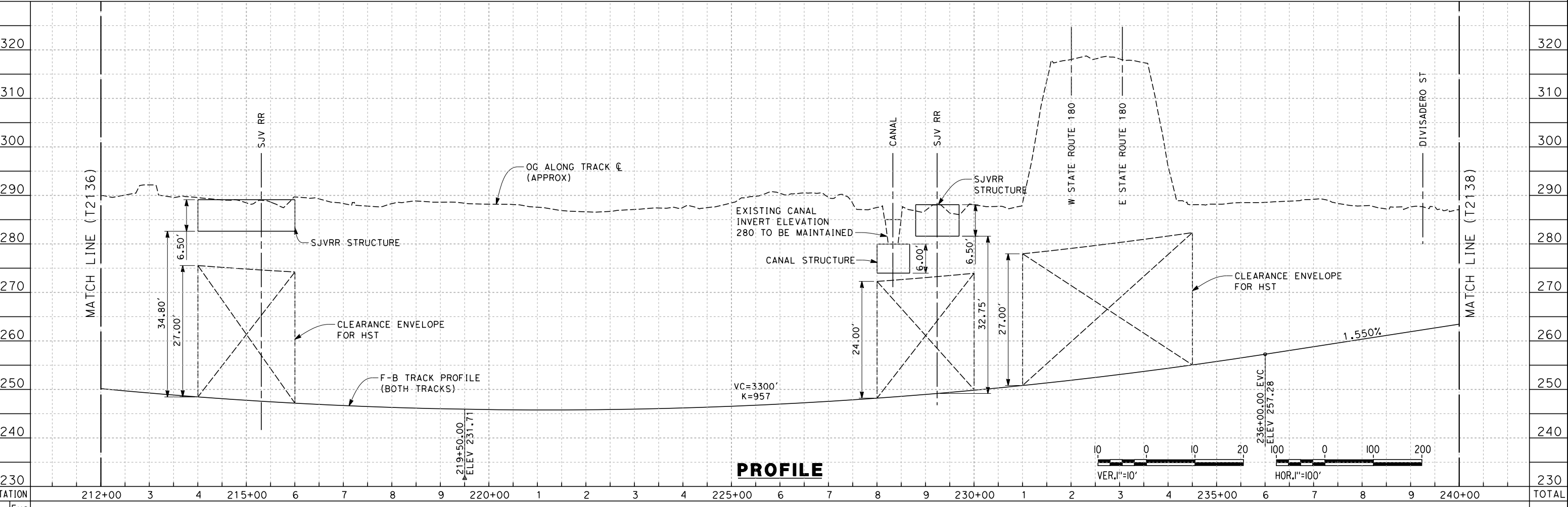


7/22/2011 10:33:51 AM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2137-A-F1.dgn



TRACKS CLOSER THAN 102FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED

**PLAN**



**PROFILE**

STATION	212+00	3	4	215+00	6	7	8	9	220+00	1	2	3	4	225+00	6	7	8	9	230+00	1	2	3	4	235+00	6	7	8	9	240+00	TOTAL
Exc																														
Emb																														

DESIGNED BY  
K. SEYMOUR  
DRAWN BY  
P. TONKIN  
CHECKED BY  
D. HUNT  
IN CHARGE  
A. LUFT  
DATE  
06/30/11

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

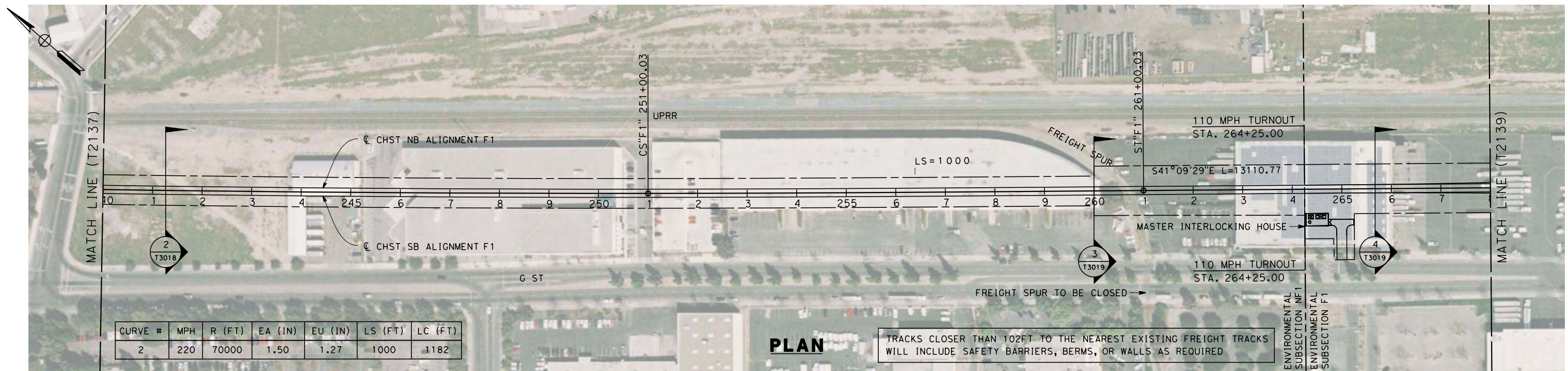


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE  
PLAN AND PROFILE  
STA. 212+00 TO 240+00

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
T2137-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

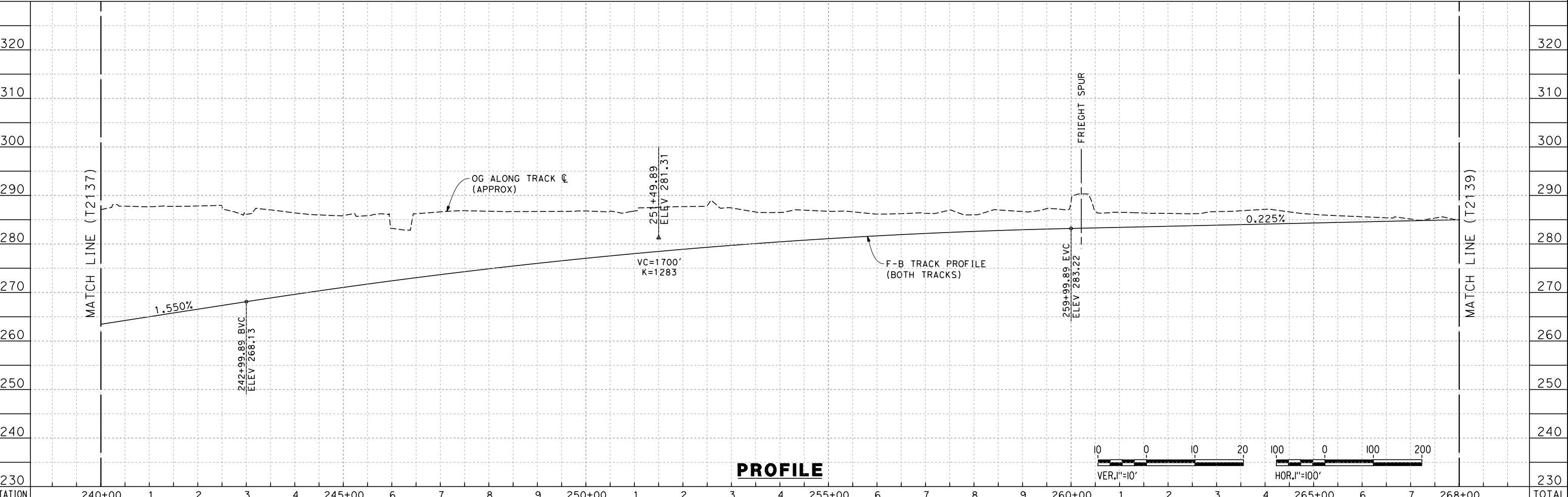


7/22/2011 10:33:54 AM O:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2138-A-F1.dgn

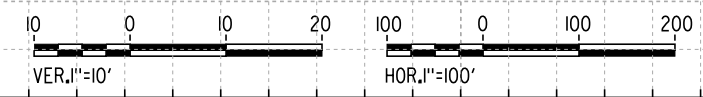


**PLAN**

TRACKS CLOSER THAN 102FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED



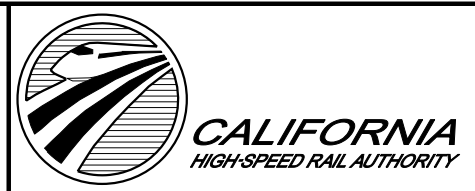
**PROFILE**



STATION	240+00	1	2	3	4	245+00	6	7	8	9	250+00	1	2	3	4	255+00	6	7	8	9	260+00	1	2	3	4	265+00	6	7	268+00	TOTAL	
Exc																															
Emb																															

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
P. TONKIN  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
06/30/11

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



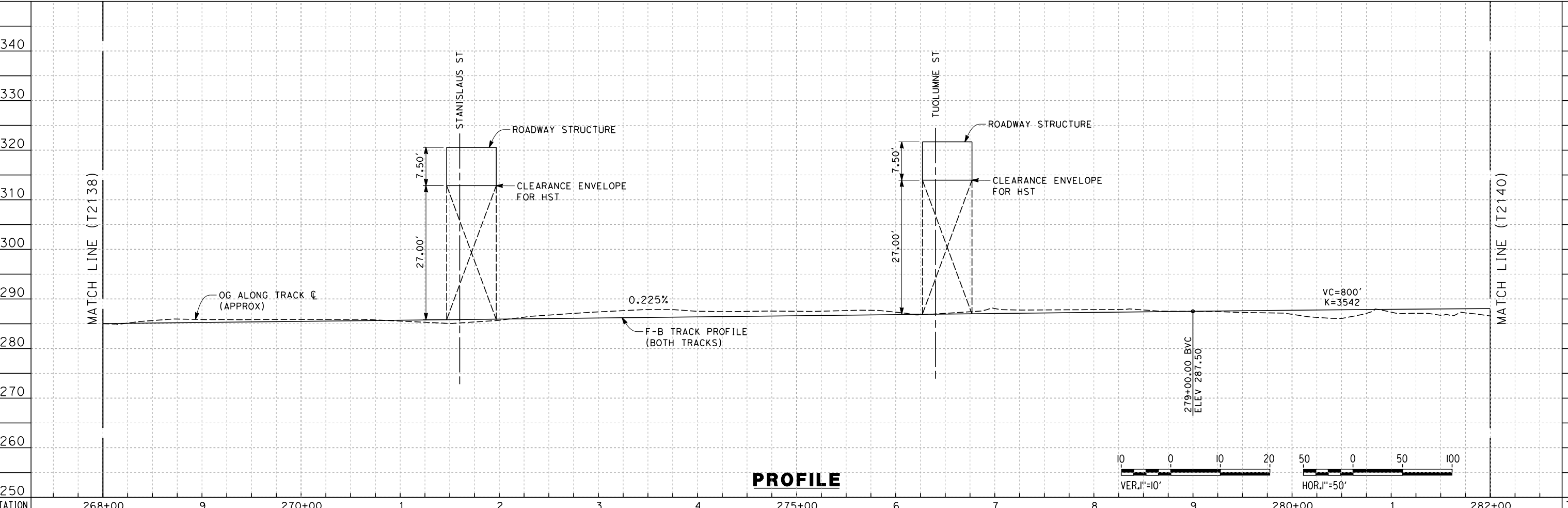
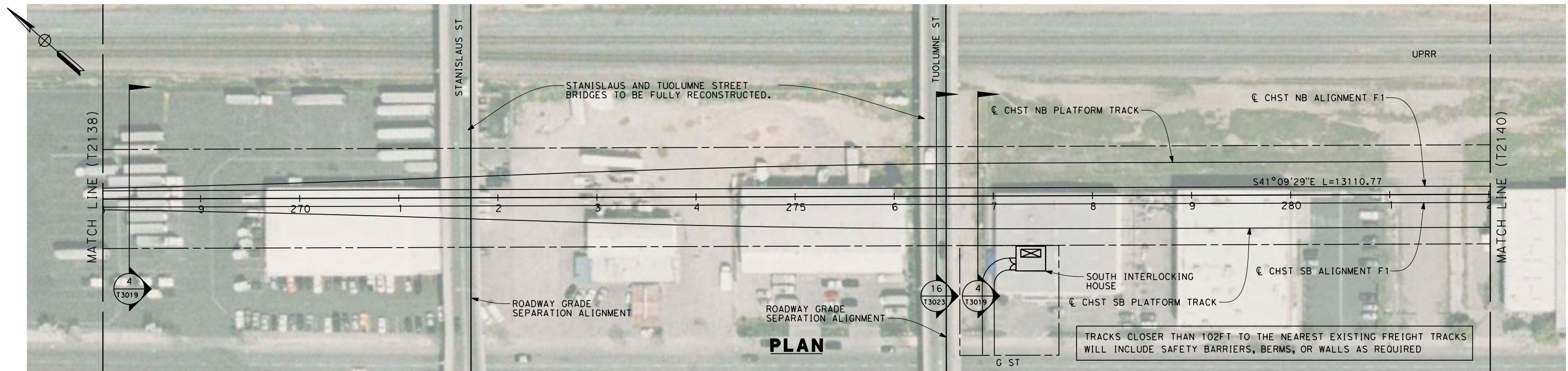
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
  
 PLAN AND PROFILE  
 STA. 240+00 TO 268+00

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
T2138-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###

REV	DATE	BY	CHK	APP	DESCRIPTION



7/22/2011 10:33:58 AM O:\1315177\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2139-A-F1.mxd



STATION	268+00	9	270+00	1	2	3	4	275+00	6	7	8	9	280+00	1	282+00	TOTAL
Exc																
Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
DRAWN BY  
P. TONKIN  
CHECKED BY  
D. HUNT  
IN CHARGE  
A. LUFT  
DATE  
06/30/11

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

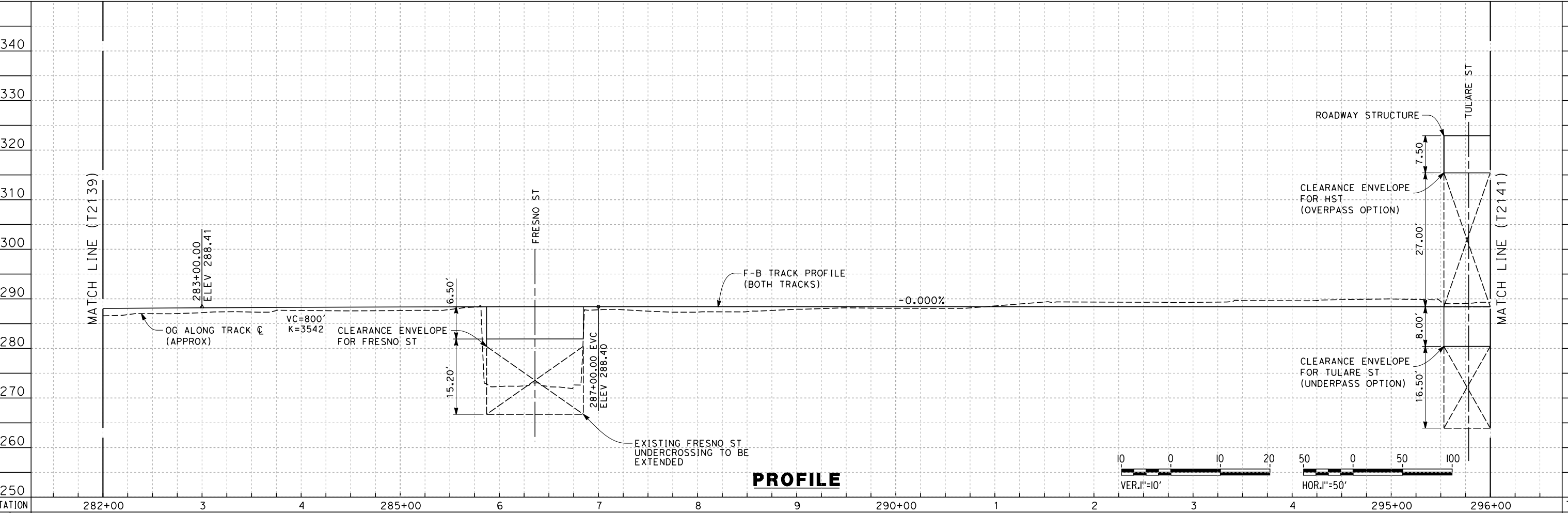
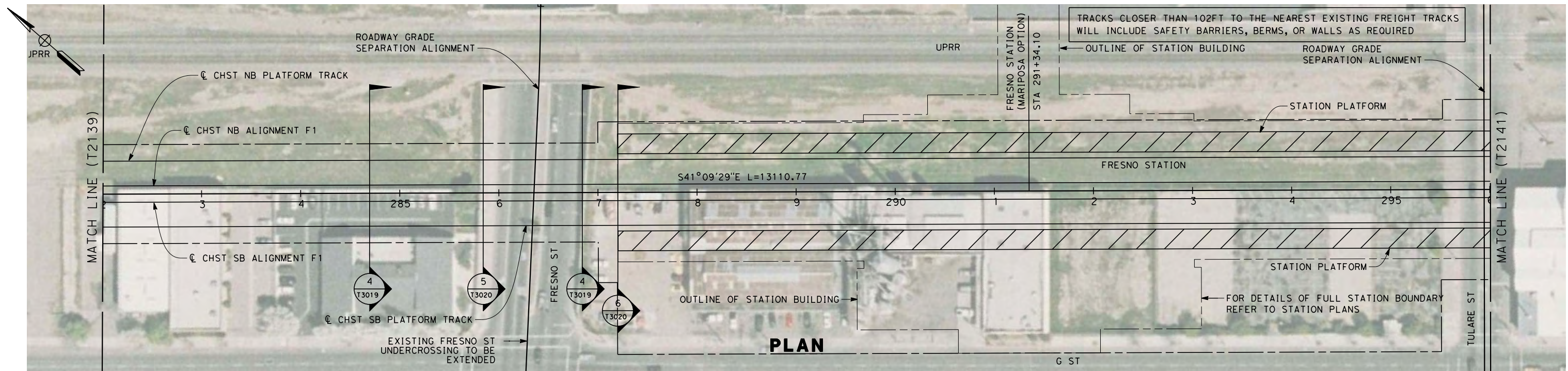


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE  
  
PLAN AND PROFILE  
STA. 268+00 TO 282+00

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
T2139-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



7/22/2011 10:34:00 AM 0:\1315177\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR Alignment - Ave 21\FB-T2140-A-F1.m.dgn



STATION	282+00	3	4	285+00	6	7	8	9	290+00	1	2	3	4	295+00	296+00	TOTAL
Exc																
Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
DRAWN BY  
P. TONKIN  
CHECKED BY  
D. HUNT  
IN CHARGE  
A. LUFT  
DATE  
06/30/11

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

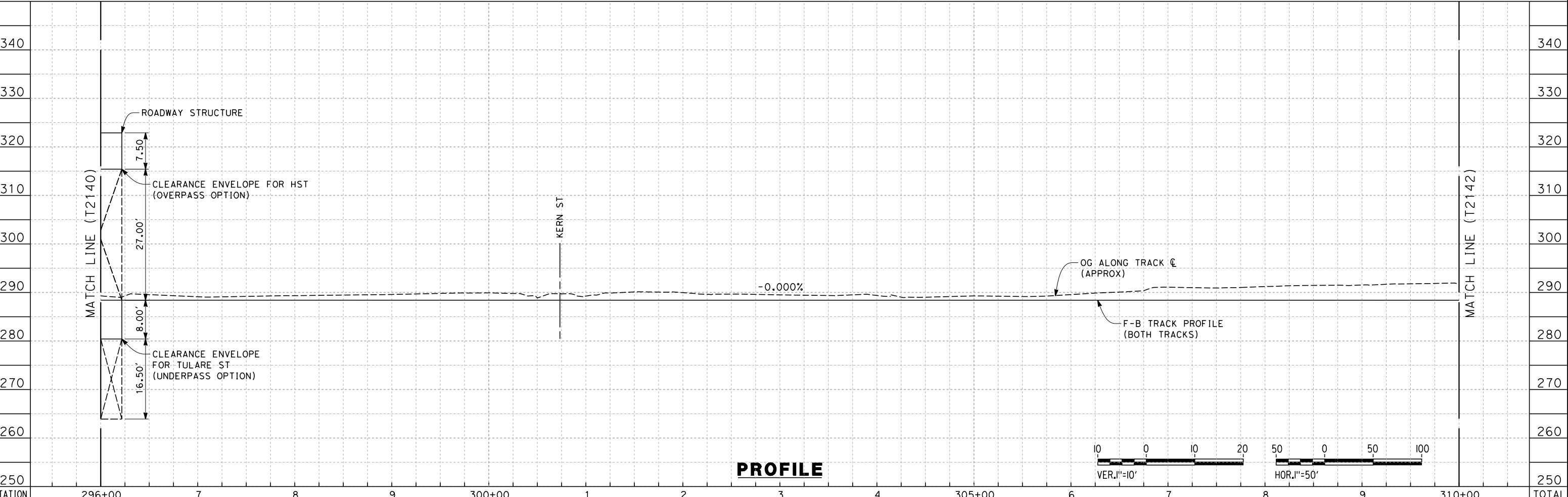
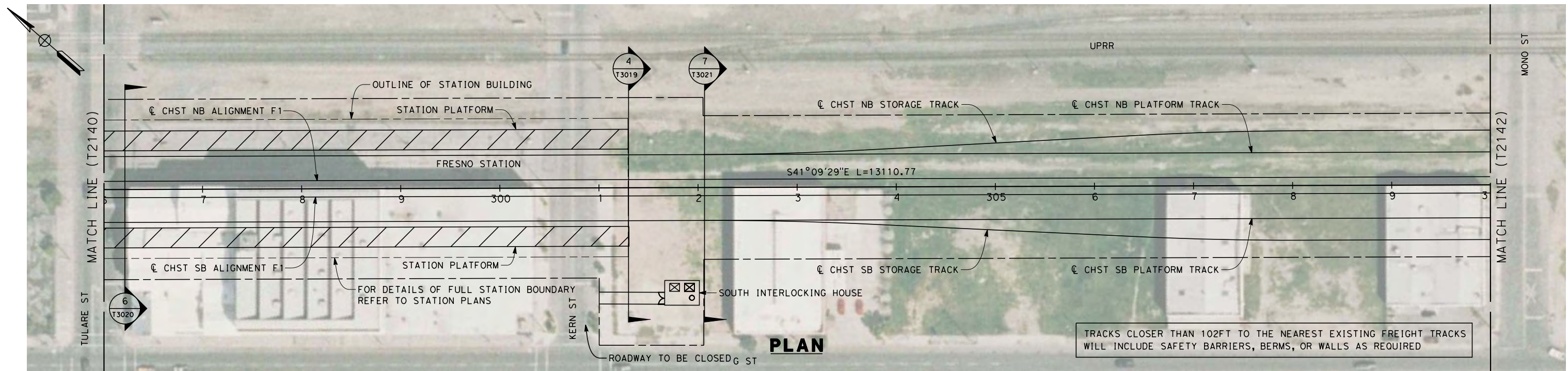


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE  
  
PLAN AND PROFILE  
STA. 282+00 TO 296+00

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
T2140-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



7/22/2011 10:34:02 AM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2141-A-F1.mxd  
 frank.palermo



STATION	296+00	7	8	9	300+00	1	2	3	4	305+00	6	7	8	9	310+00	TOTAL
Exc																
Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
P. TONKIN  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
06/30/11

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

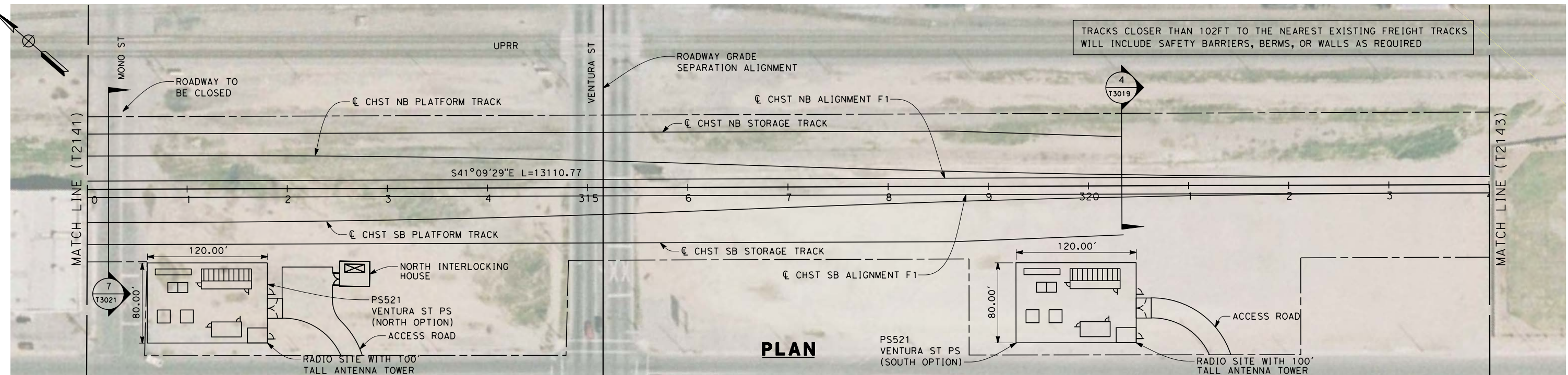


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
 BNSF MAIN LINE  
  
 PLAN AND PROFILE  
 STA. 296+00 TO 310+00

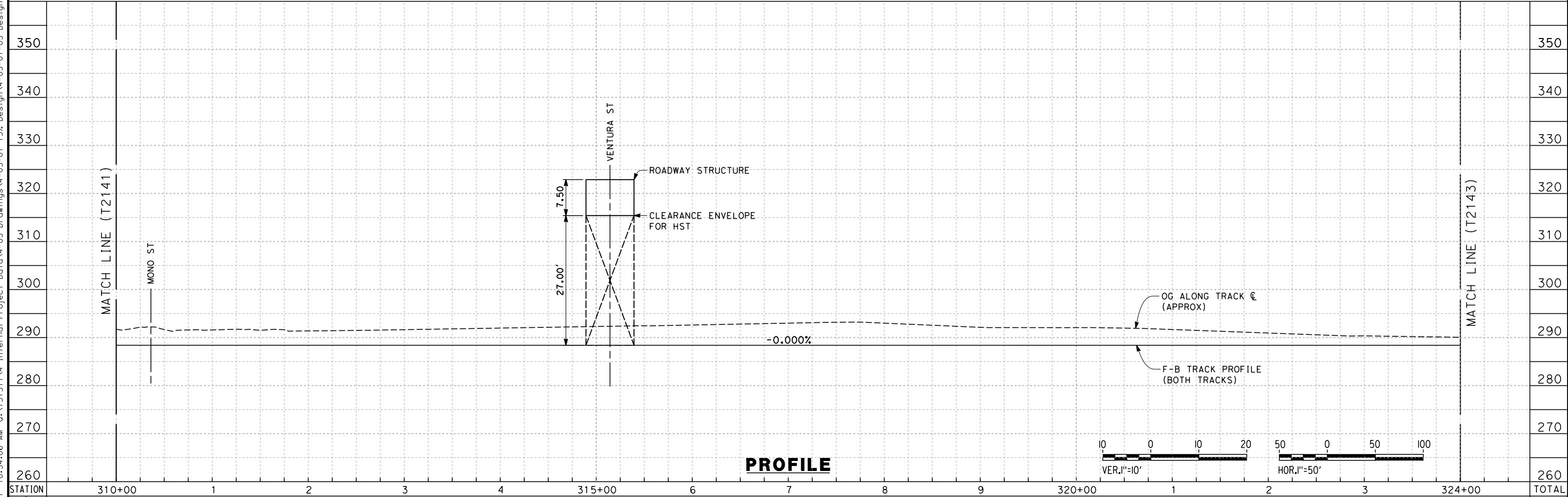
CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
T2141-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###



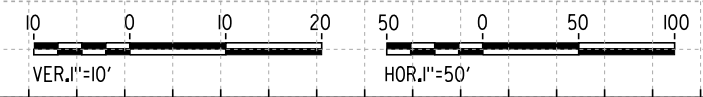
7/22/2011 10:34:06 AM 0:\131577\4 Internal Project Data\4-03 Drawings\4-03-01 15% Design\4-03-01-05 Design Sheets\Rail\HSR 15% Design\AECOM\BNSF Alignment - Ave 21\FB-T2142-A-F1.m.dgn



**PLAN**



**PROFILE**



STATION	310+00	1	2	3	4	315+00	6	7	8	9	320+00	1	2	3	324+00	TOTAL
Exc																
Emb																

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
 DRAWN BY  
P. TONKIN  
 CHECKED BY  
D. HUNT  
 IN CHARGE  
A. LUFT  
 DATE  
05/13/11

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

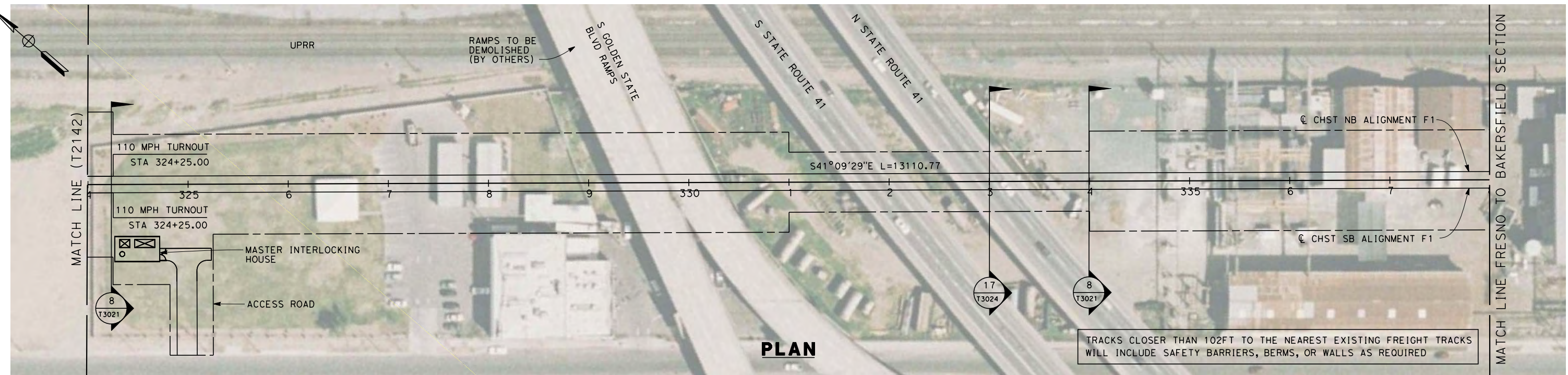


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
  
 PLAN AND PROFILE  
 STA. 310+00 TO 324+00

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
T2142-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
XX OF XX

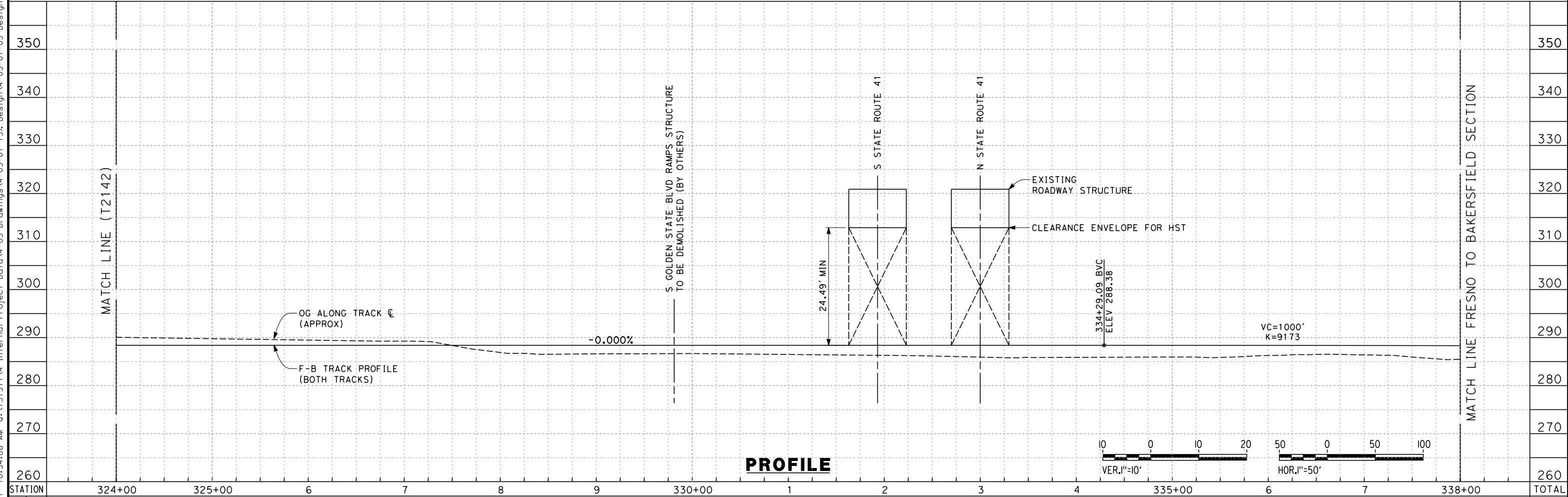


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 frank.palermo



**PLAN**

TRACKS CLOSER THAN 102FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED



**PROFILE**

STATION	324+00	325+00	6	7	8	9	330+00	1	2	3	4	335+00	6	7	338+00	TOTAL
CY	Exc	Emb														

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
 K. SEYMOUR  
 DRAWN BY  
 P. TONKIN  
 CHECKED BY  
 D. HUNT  
 IN CHARGE  
 A. LUFT  
 DATE  
 05/13/11

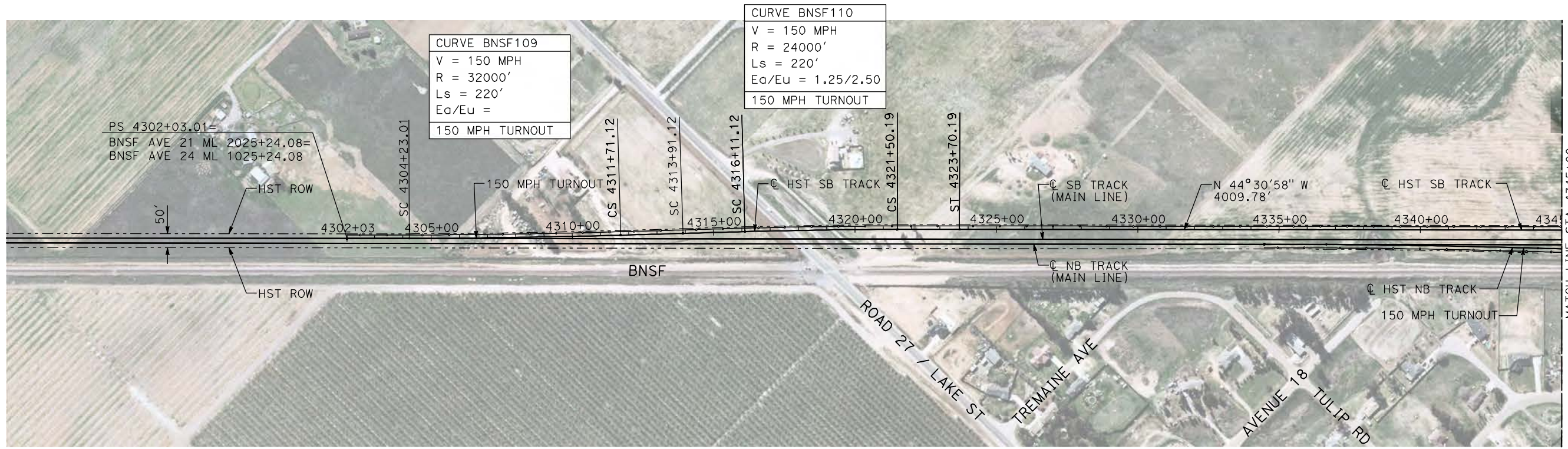
**RECORD SET 15%  
 DESIGN SUBMISSION**  
  
**NOT FOR  
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE  
  
 PLAN AND PROFILE  
 STA. 324+00 TO 338+00

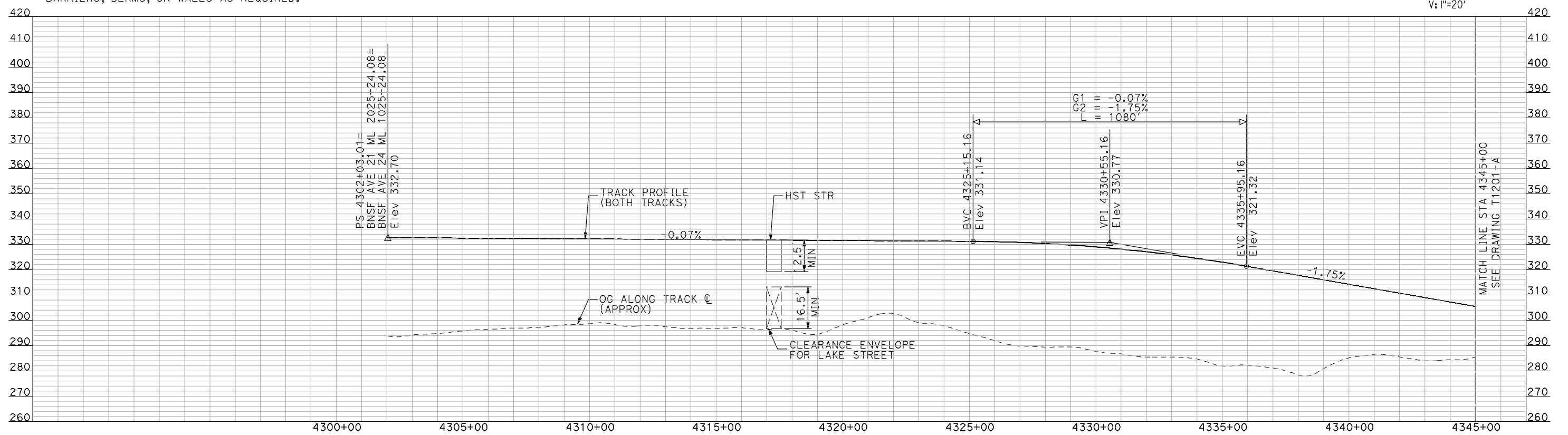
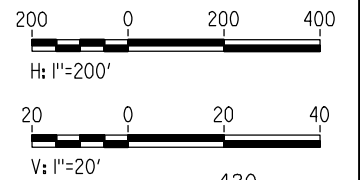
CONTRACT NO.  
 HSR 06-0003  
 DRAWING NO.  
 T2143-A  
 SCALE  
 AS SHOWN  
 SHEET NO.  
 XX OF XX





**PLAN**

- 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.



**PROFILE**

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

7/21/2011 11:54:39 AM I:\CHSR\60022962\Task-02\_Merced-Fresno\cadd\Civil\Sheet\TRACKWORK\DEIR\BNSF\_AVE\_21\WF-T-1200-A.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4302+03.01 TO STA 4345+00

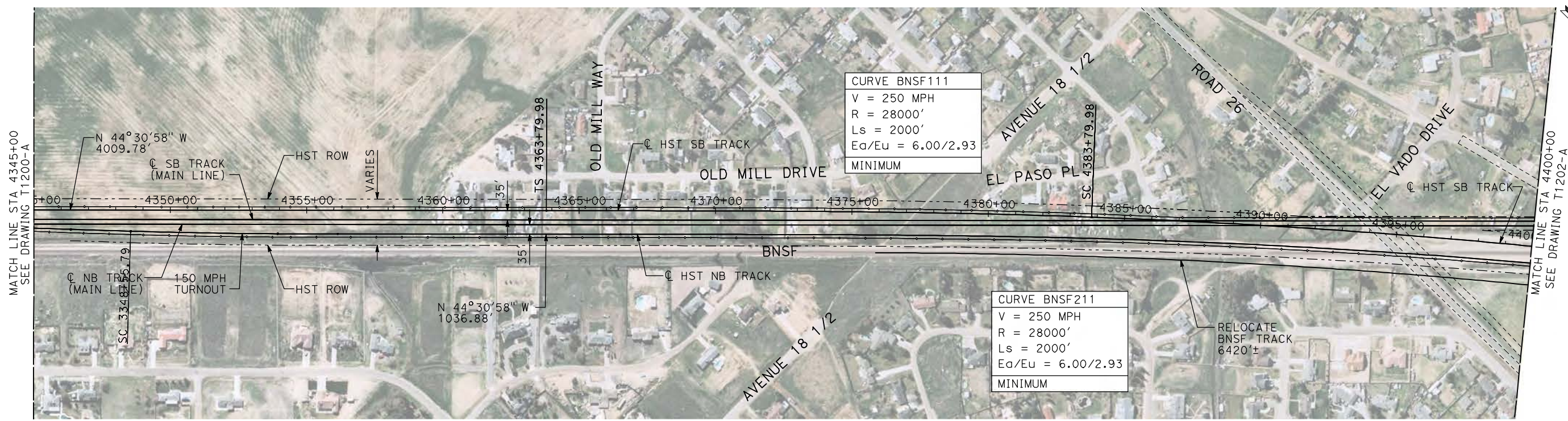
CONTRACT NO.  
HSR06-007

DRAWING NO.  
T1200-A

SCALE  
AS SHOWN

SHEET NO.  
### OF ###

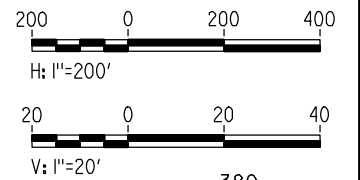




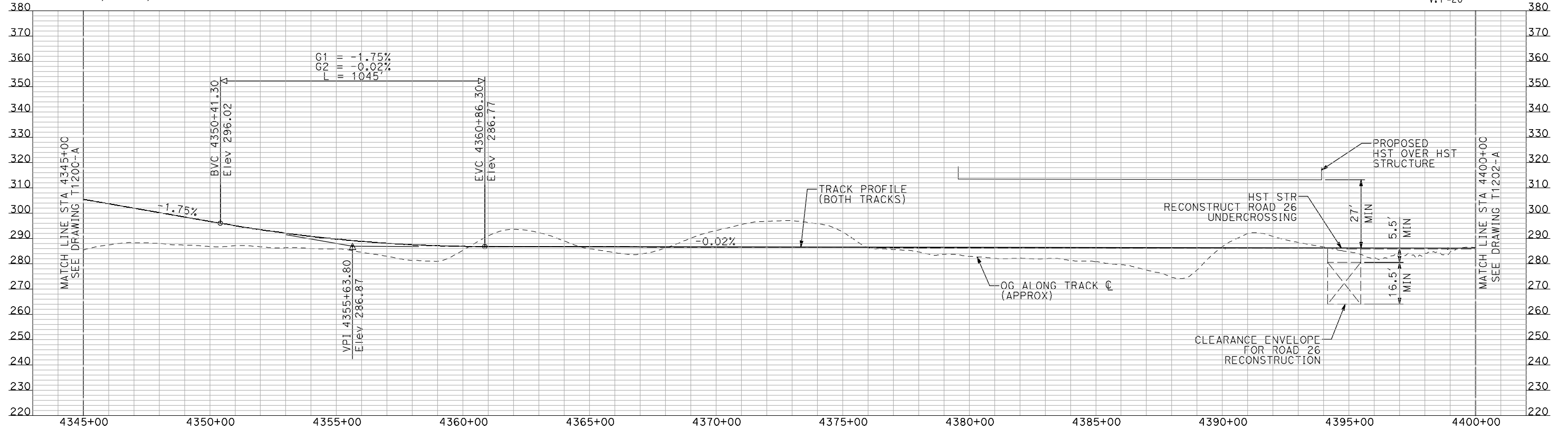
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 V = 250 MPH  
 R = 28000'  
 Ls = 2000'  
 Ea/Eu = 6.00/2.93  
 MINIMUM

CURVE BNSF211  
 V = 250 MPH  
 R = 28000'  
 Ls = 2000'  
 Ea/Eu = 6.00/2.93  
 MINIMUM

**PLAN**



- 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.



**PROFILE**

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

7/21/2011 11:55:26 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_21\WF-T-1201-A.dgn

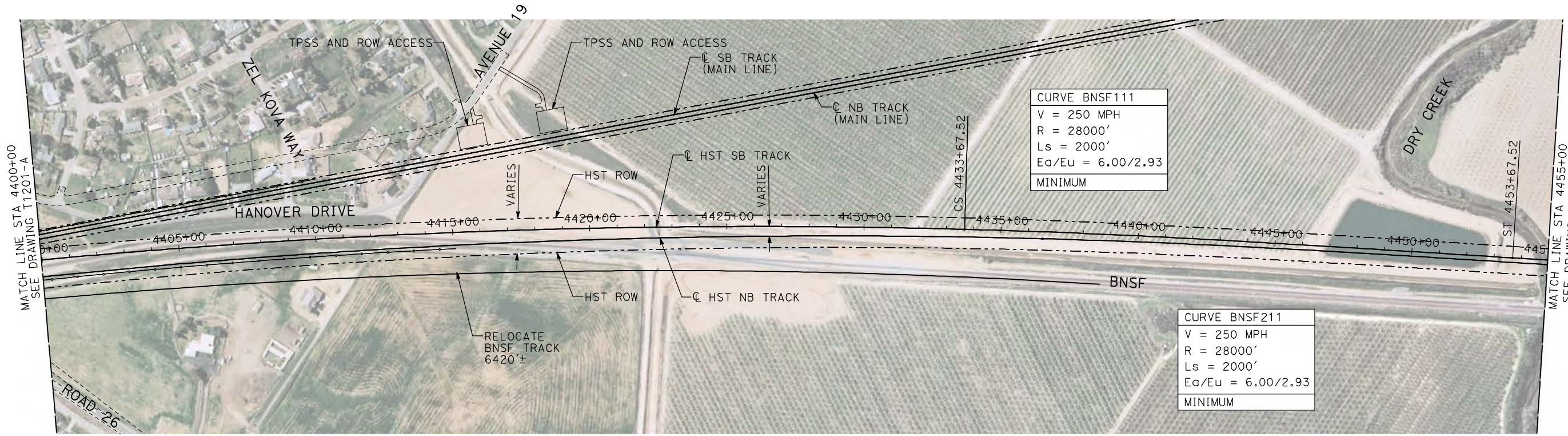
DESIGNED BY A. SHIELDS	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	 <small>Technical Services, Inc.        2020 L Street, Suite 300        Sacramento, CA 95811</small> 	 <b>CALIFORNIA</b> <small>HIGH-SPEED RAIL AUTHORITY</small>
DRAWN BY H. SULLIVAN			
CHECKED BY A. BOONE			
IN CHARGE A. BOONE			
DATE 07/20/2011			

CONTRACT NO. HSR06-007
DRAWING NO. T1201-A
SCALE AS SHOWN
SHEET NO. ### OF ###

<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b> BNSF MERCED CONNECTION AVE 21 / AVE 24 PLAN AND PROFILE STA 4345+00 TO STA 4400+00					
REV	DATE	BY	CHK	APP	DESCRIPTION

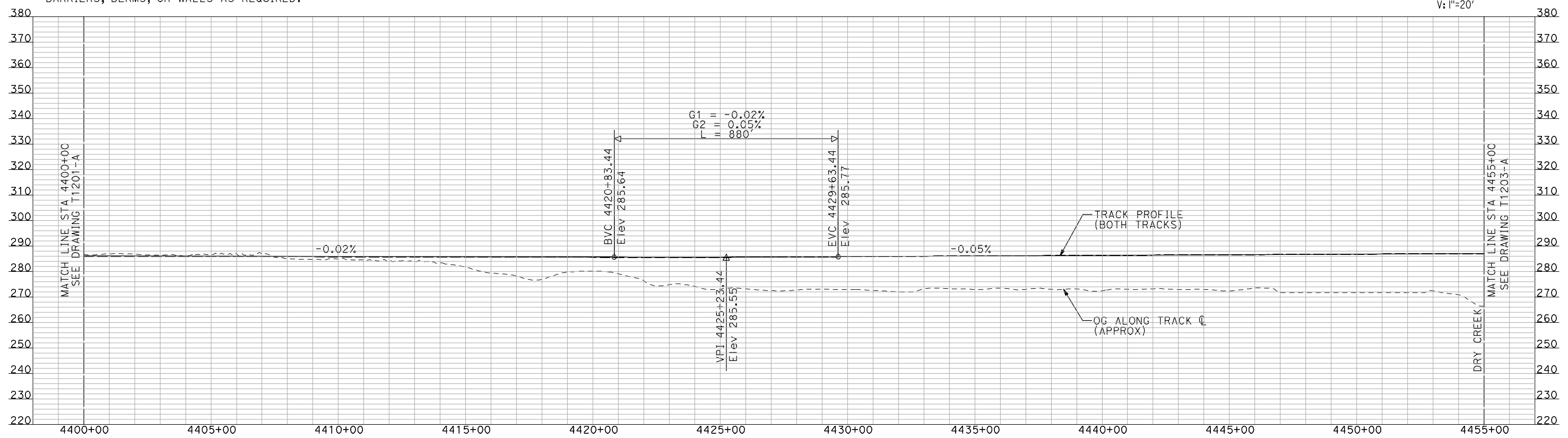
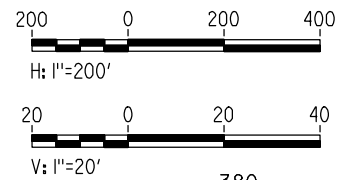


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

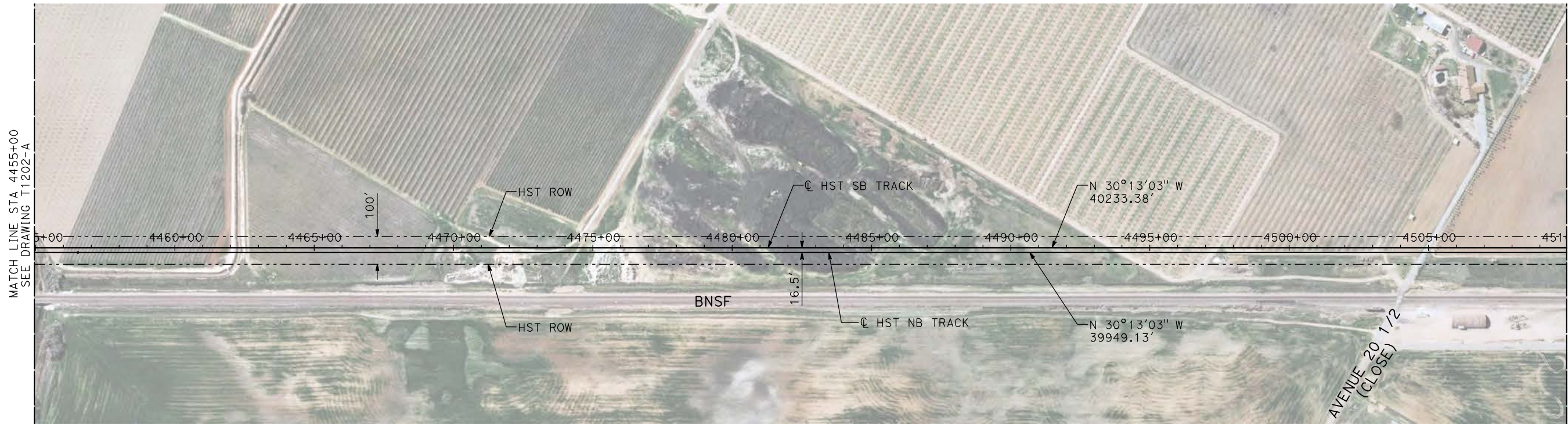


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4400+00 TO STA 4455+00

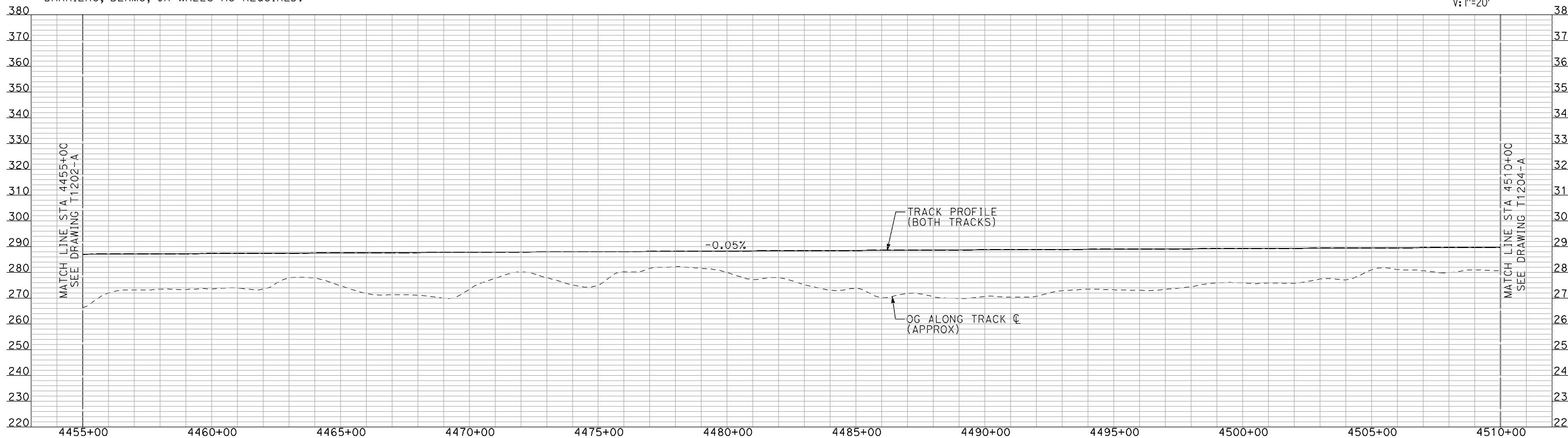
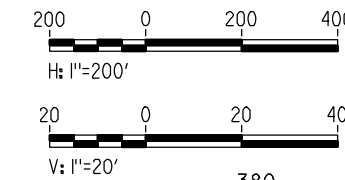
CONTRACT NO. HSR06-007
DRAWING NO. T1202-A
SCALE AS SHOWN
SHEET NO. ### OF ###





**PLAN**

- 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.



**PROFILE**

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

7/21/2011 11:57:00 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_21\WF-T-1203-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

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

**CH2M HILL**



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

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4455+00 TO STA 4510+00

CONTRACT NO.  
HSR06-007

DRAWING NO.  
T1203-A

SCALE  
AS SHOWN

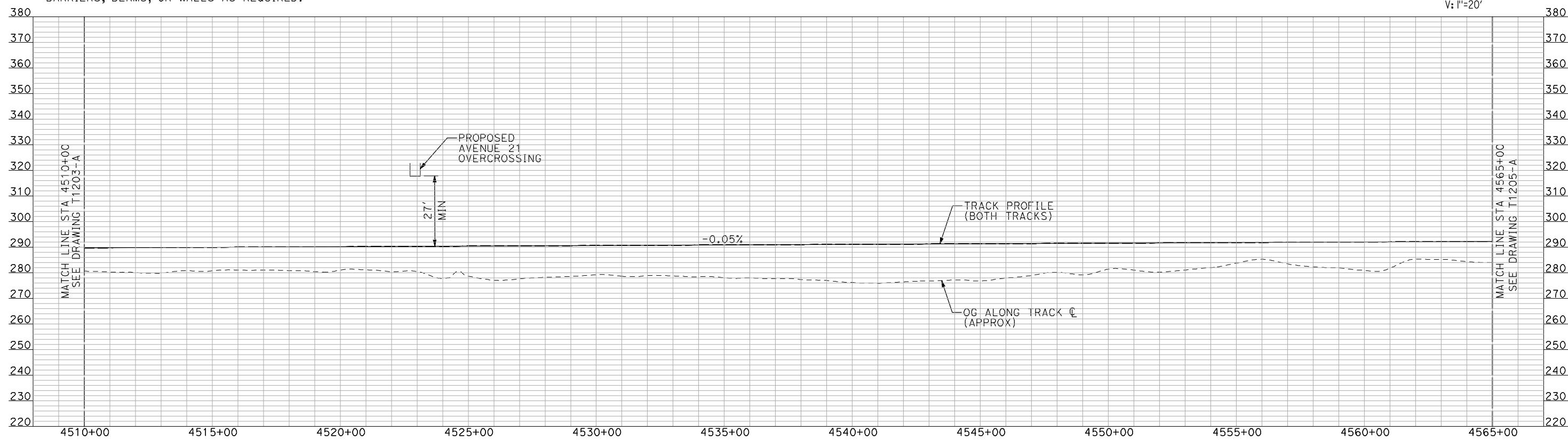
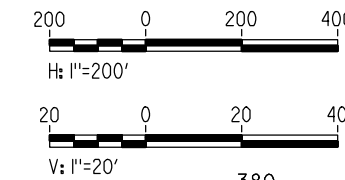
SHEET NO.  
### OF ###





- 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**



**PROFILE**

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

7/21/2011 11:57:43 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_21\WF-T-1204-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

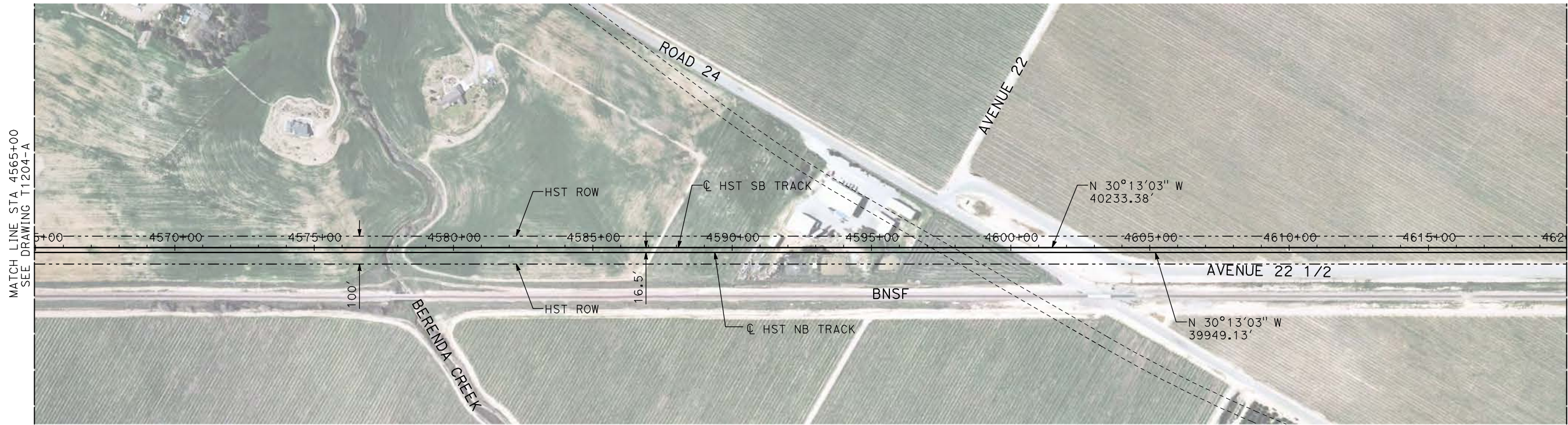


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4510+00 TO STA 4565+00

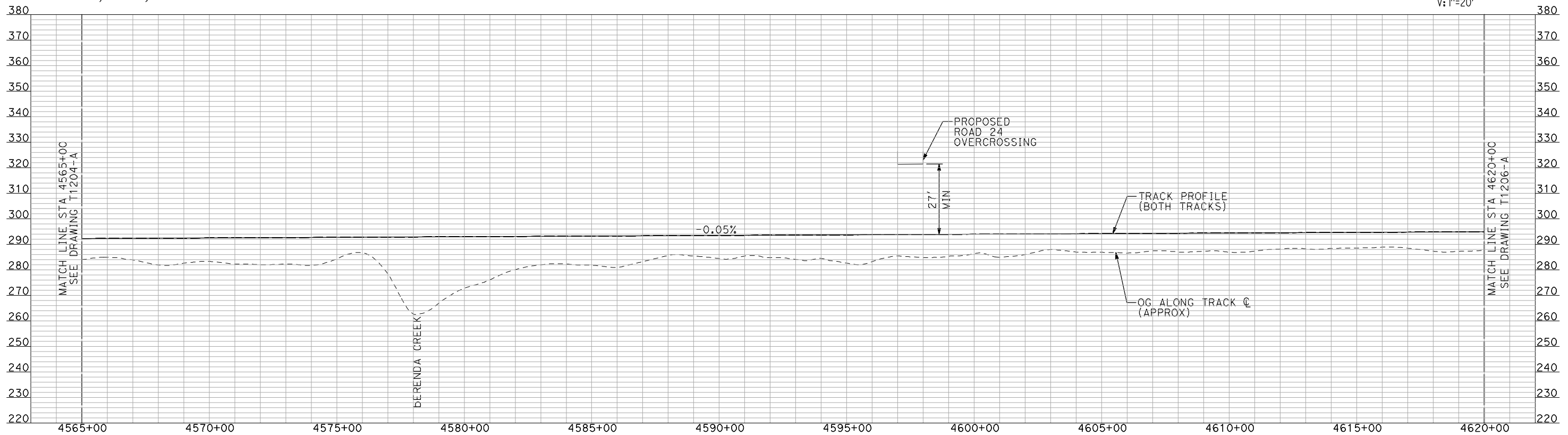
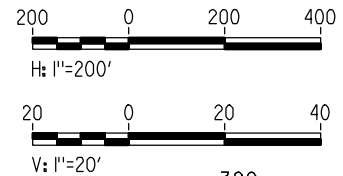
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1204-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###





- 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**



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

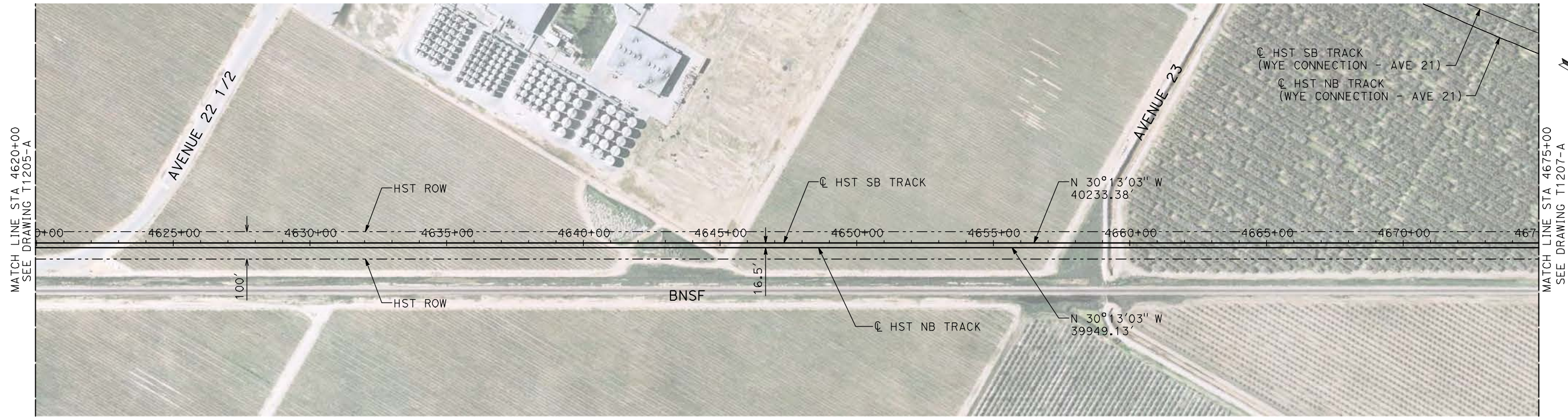
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4565+00 TO STA 4620+00

CONTRACT NO.	HSR06-007
DRAWING NO.	T1205-A
SCALE	AS SHOWN
SHEET NO.	### OF ###

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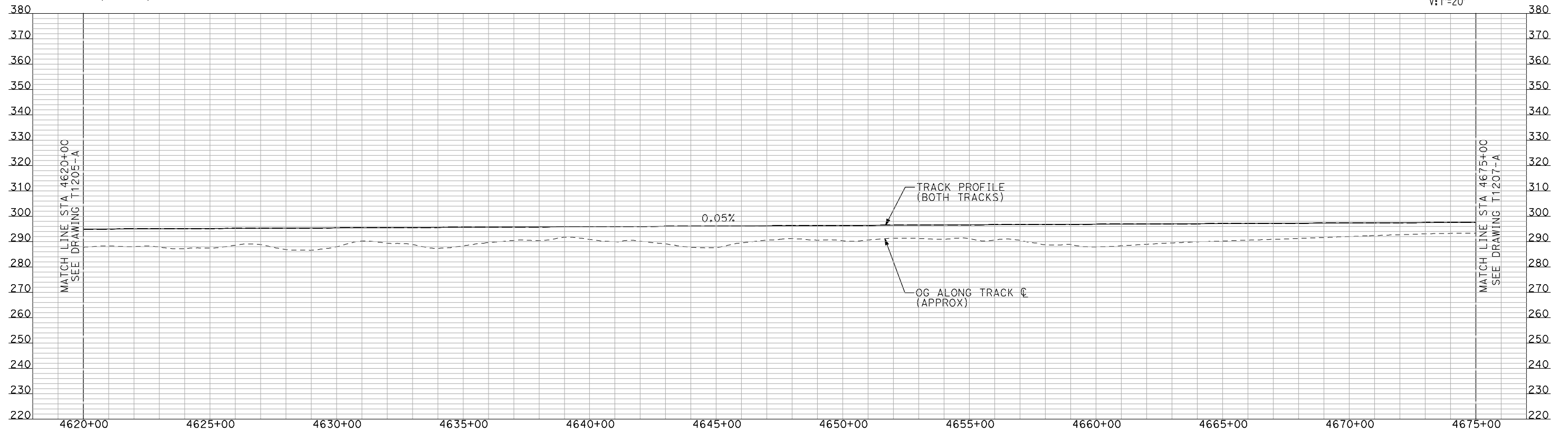
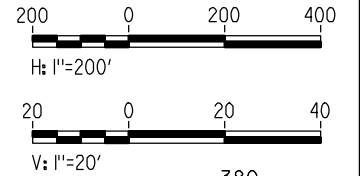


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4620+00 TO STA 4675+00

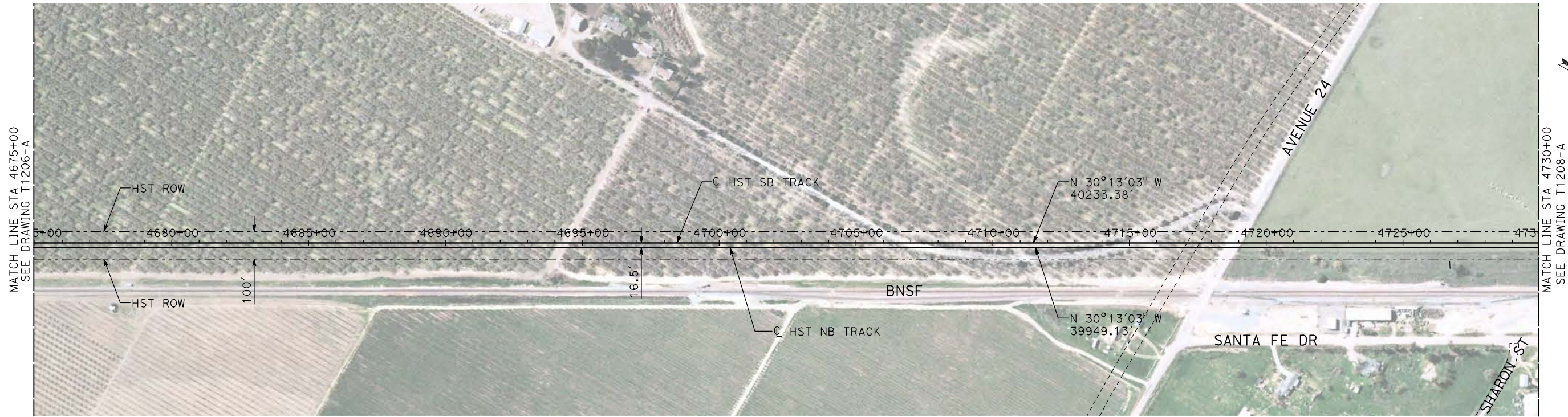
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DRAWING NO.  
T1206-A

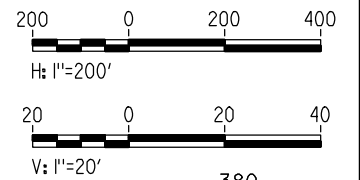
SCALE  
AS SHOWN

SHEET NO.  
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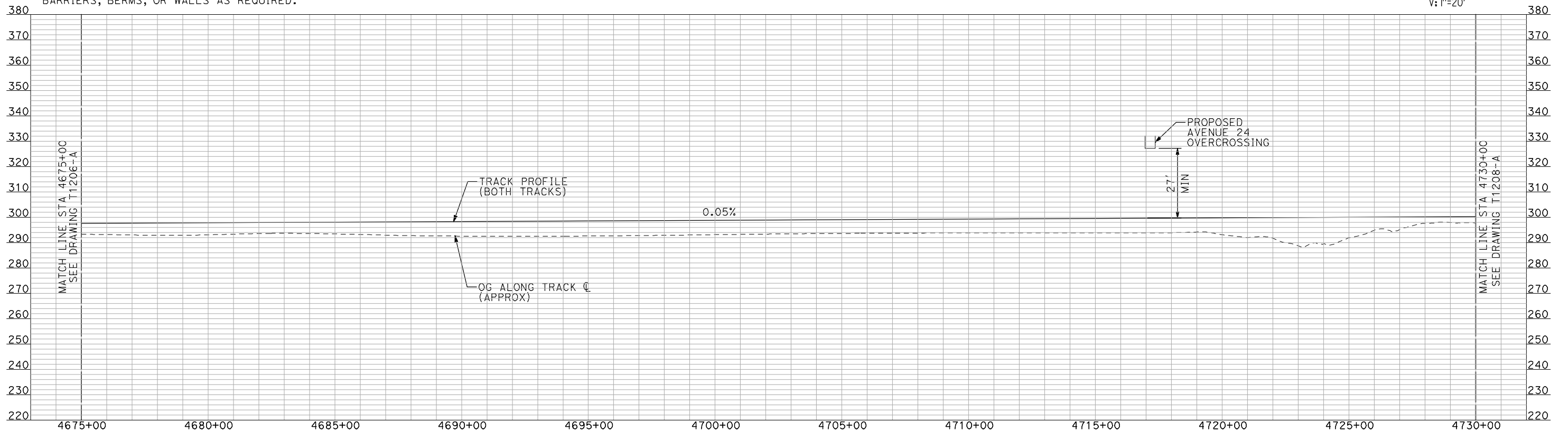




**PLAN**



- 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.



**PROFILE**

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

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

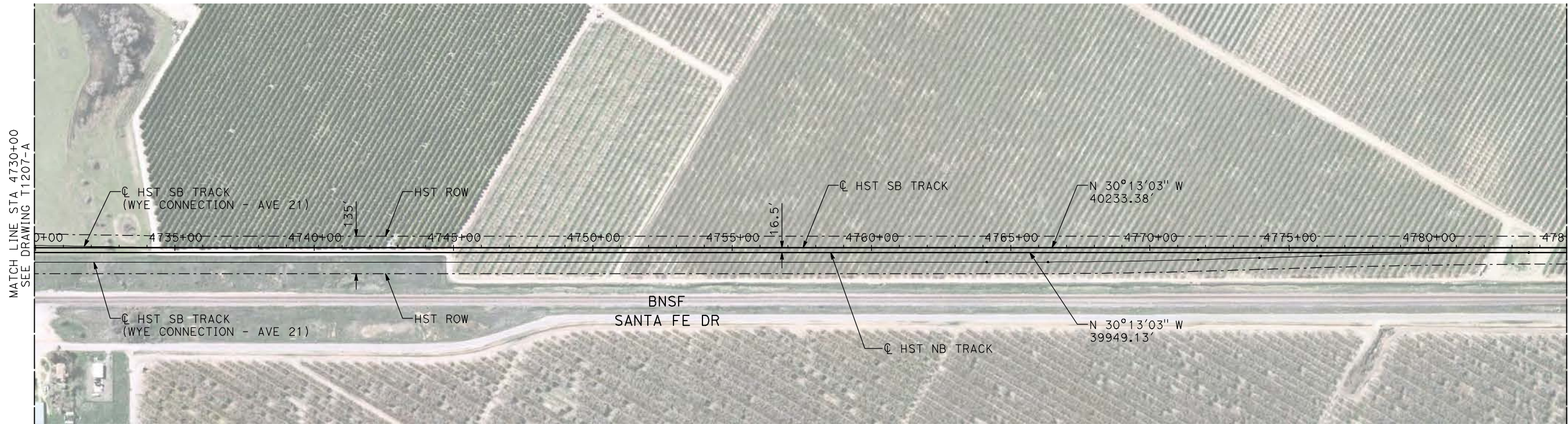
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4675+00 TO STA 4730+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1207-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

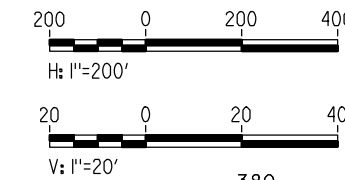
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REV	DATE	BY	CHK	APP	DESCRIPTION

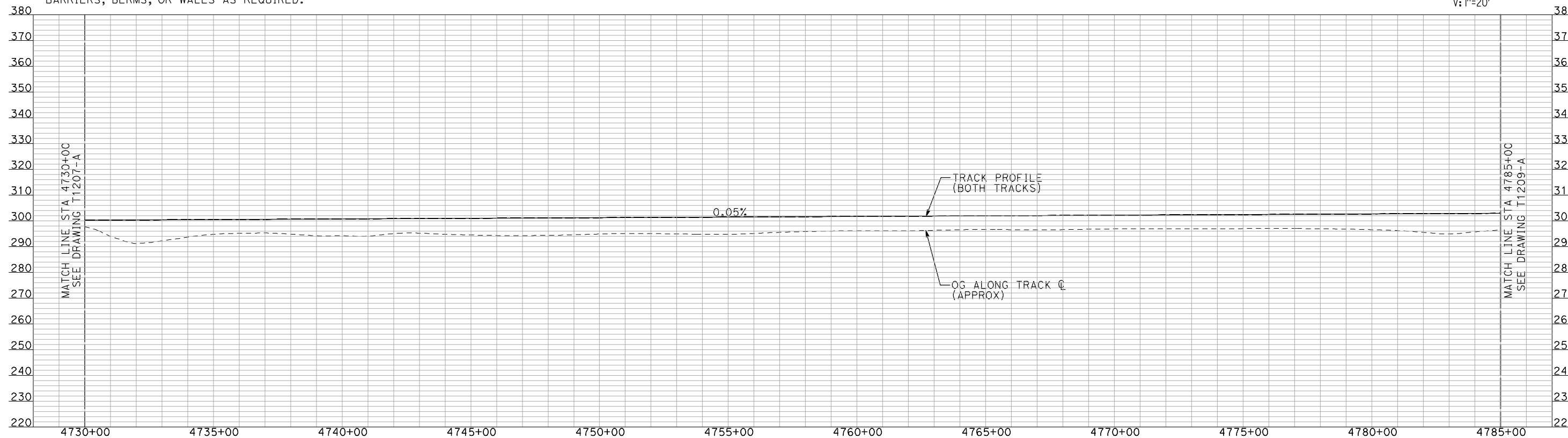




**PLAN**



- 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.



**PROFILE**

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

7/21/2011 12:00:32 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_21\MF-T-1208-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

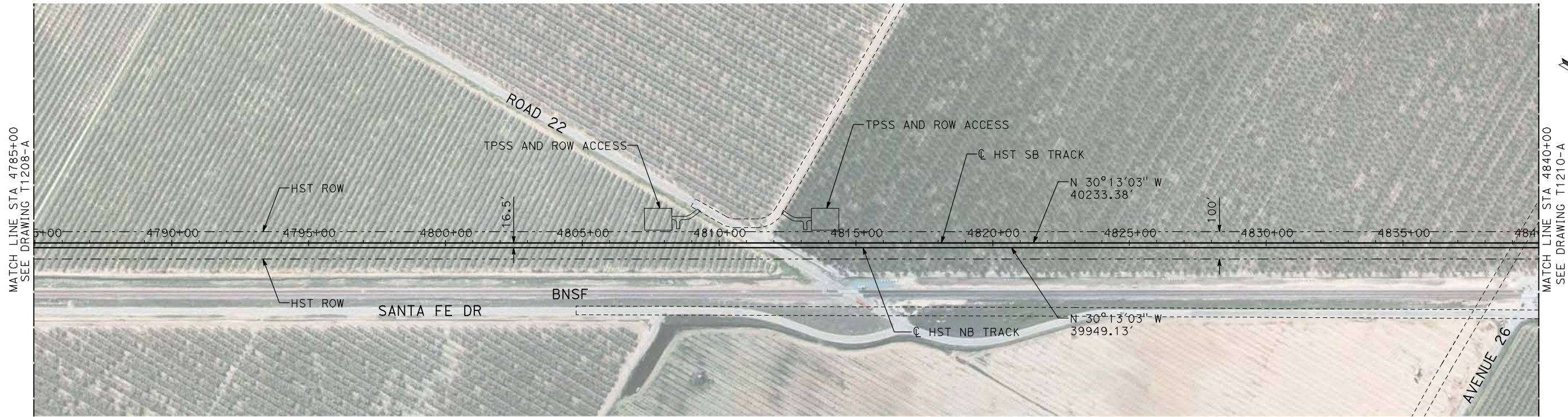


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

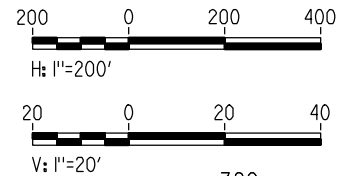
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4730+00 TO STA 4785+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1208-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

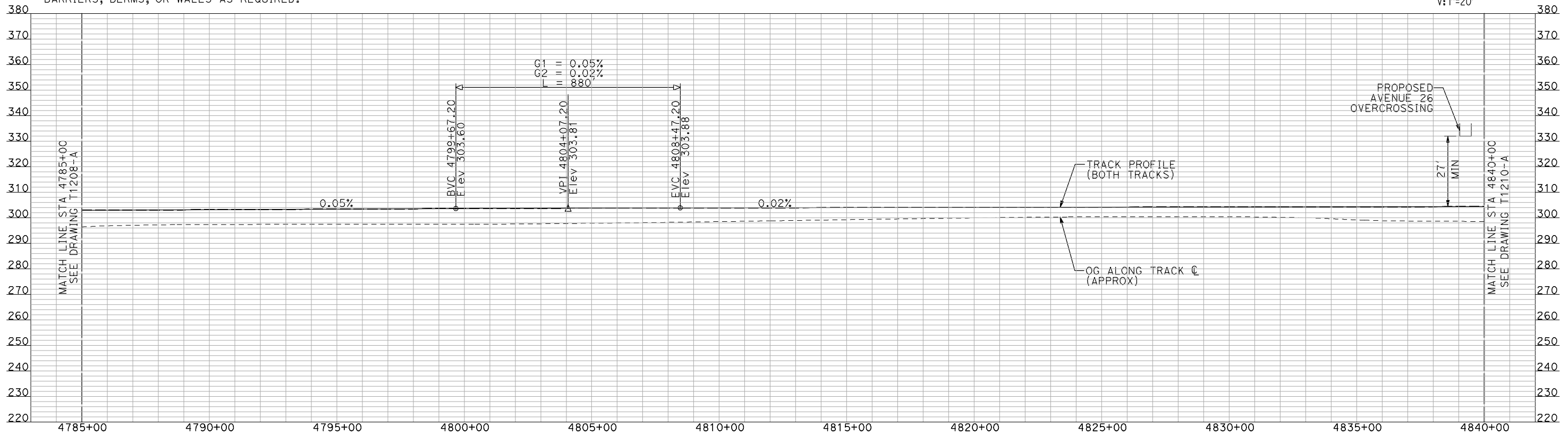




**PLAN**



- 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.



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



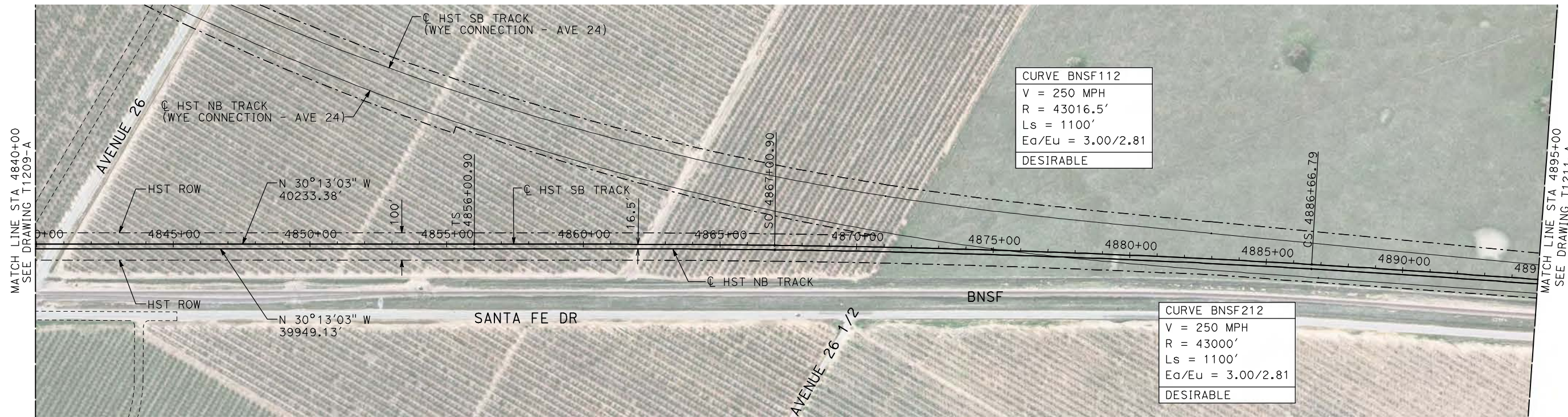
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4785+00 TO STA 4840+00

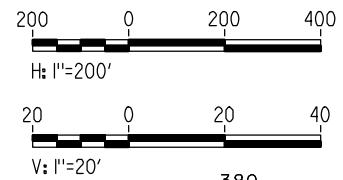
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1209-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

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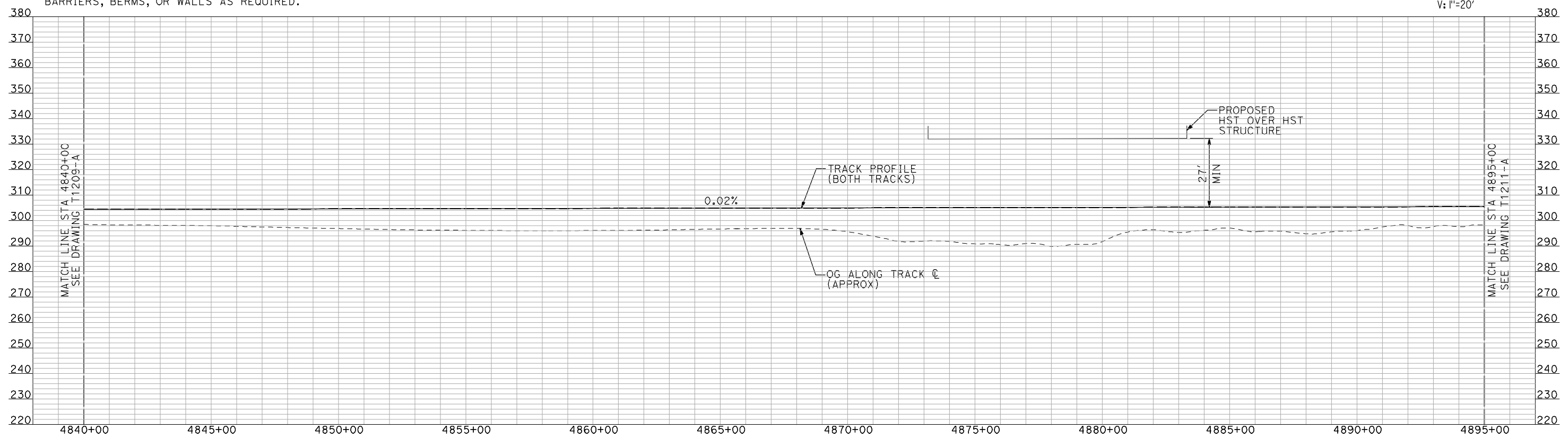




**PLAN**



- 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.



**PROFILE**

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

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DESIGNED BY A. SHIELDS	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	 <small>Technical Services, Inc.</small> 2020 L Street, Suite 300 Sacramento, CA 95811 	 <b>CALIFORNIA</b> <small>HIGH-SPEED RAIL AUTHORITY</small>
DRAWN BY H. SULLIVAN			
CHECKED BY A. BOONE			
IN CHARGE A. BOONE			
DATE 07/20/2011			

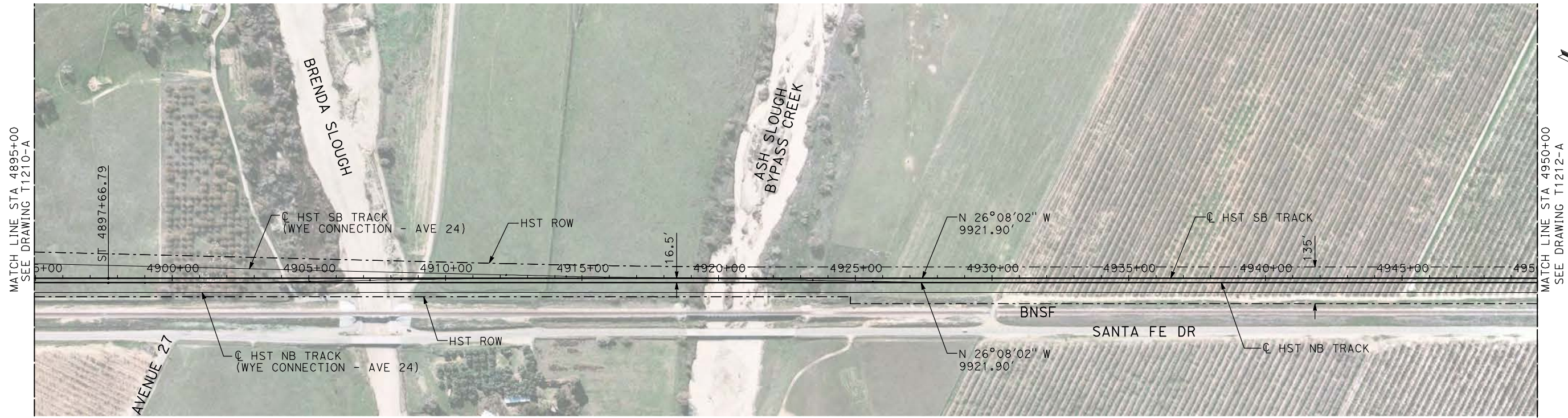
CONTRACT NO.	HSR06-007
DRAWING NO.	T1210-A
SCALE	AS SHOWN
SHEET NO.	### OF ###

<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b> BNSF MERCED CONNECTION AVE 21 / AVE 24 PLAN AND PROFILE STA 4840+00 TO STA 4895+00
--

<b>REVISIONS</b> REV    DATE    BY    CHK    APP    DESCRIPTION

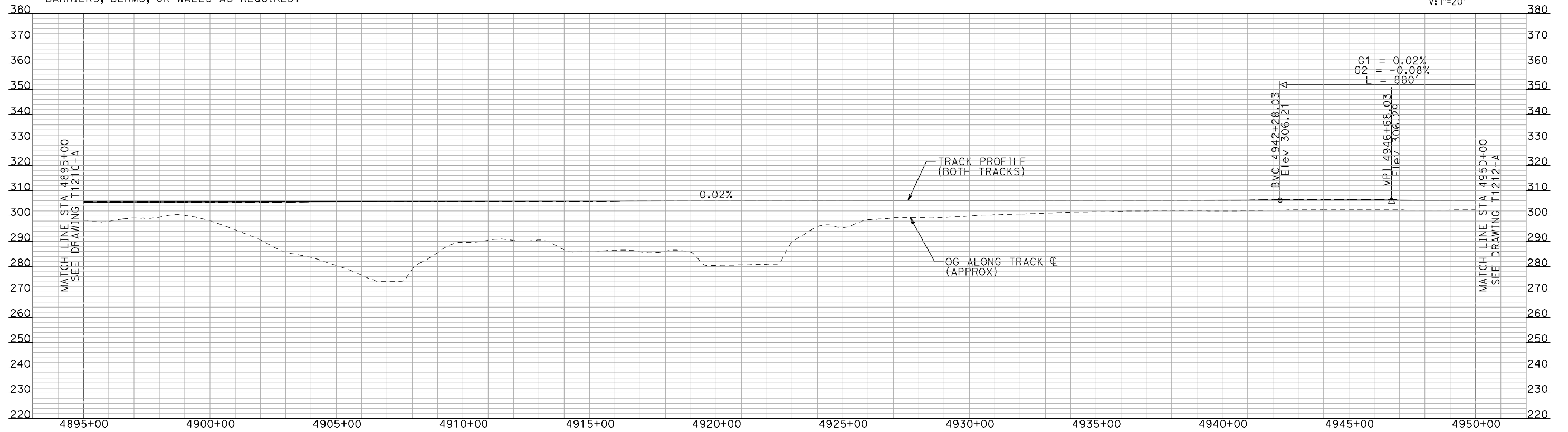
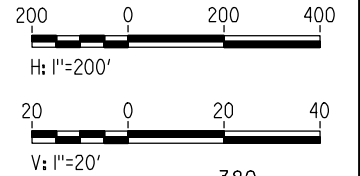


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 4895+00 TO STA 4950+00

CONTRACT NO.  
HSR06-007

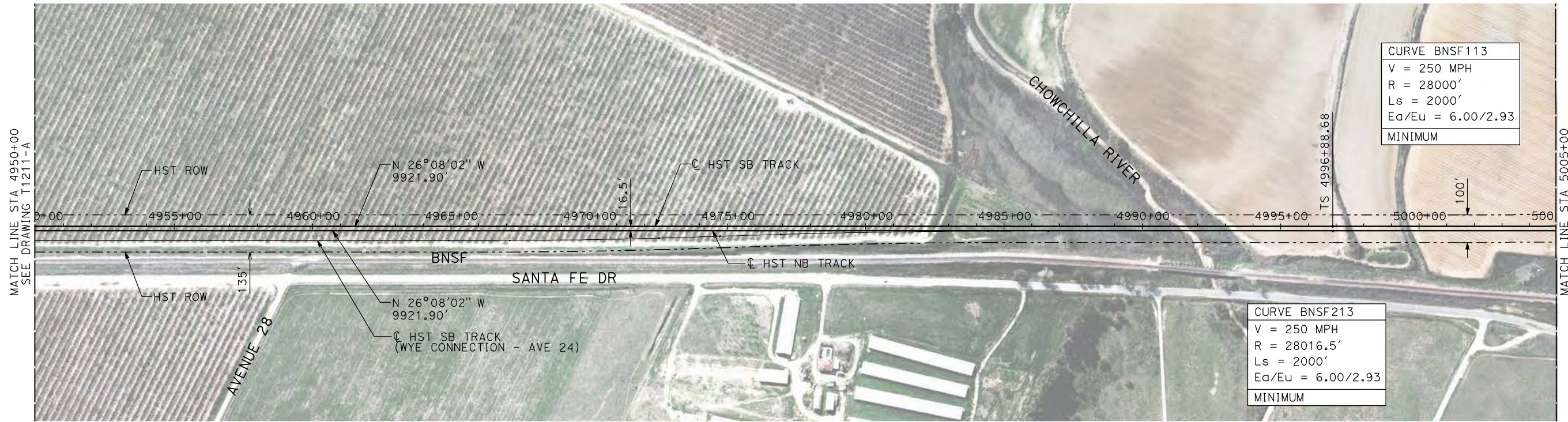
DRAWING NO.  
T1211-A

SCALE  
AS SHOWN

SHEET NO.  
### OF ###

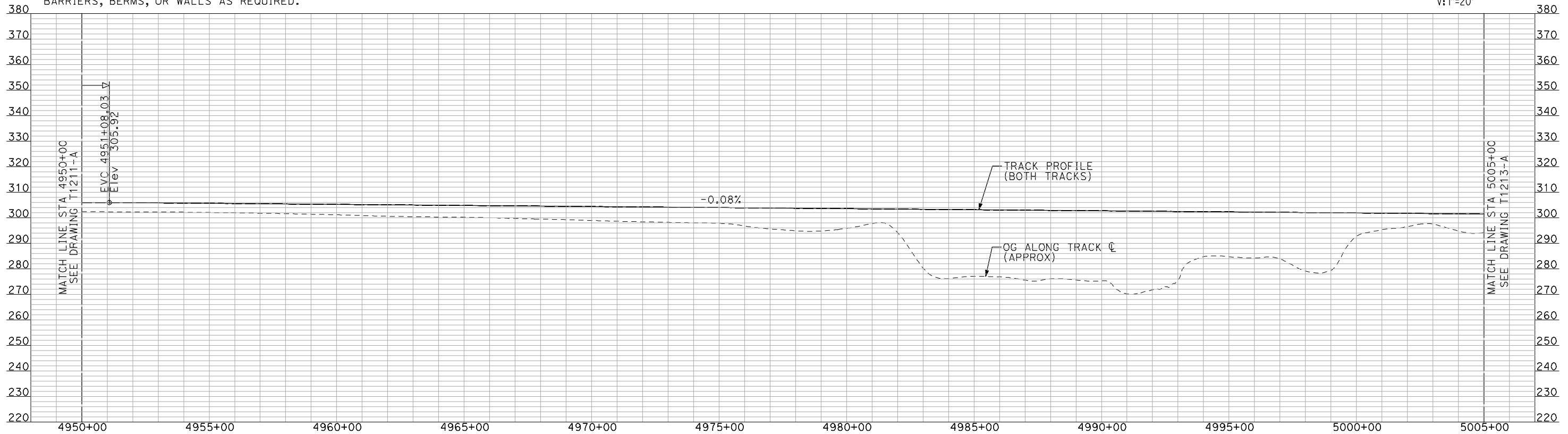
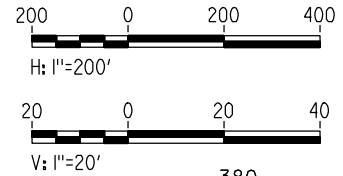


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

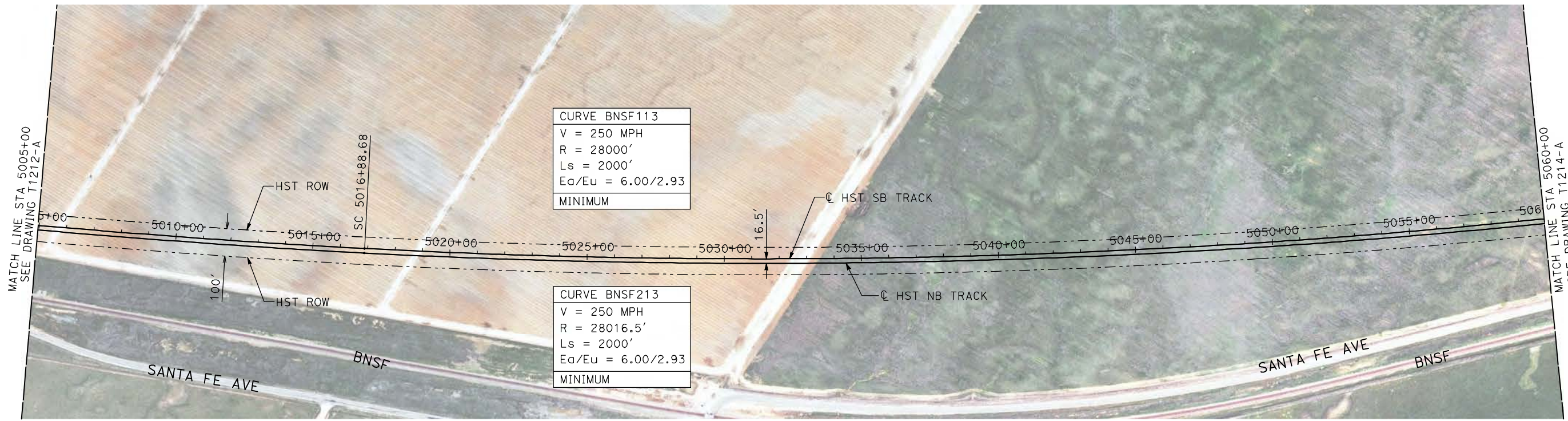


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MERCED CONNECTION  
 AVE 21 / AVE 24  
 PLAN AND PROFILE  
 STA 4950+00 TO STA 5005+00

CONTRACT NO.  
HSR06-007  
 DRAWING NO.  
T1212-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###

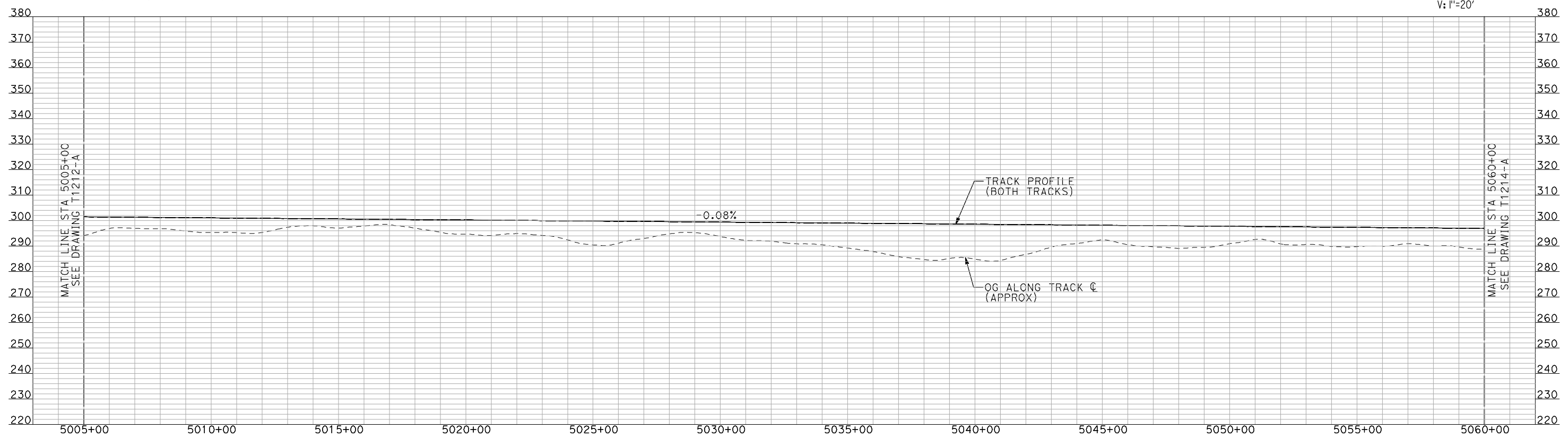
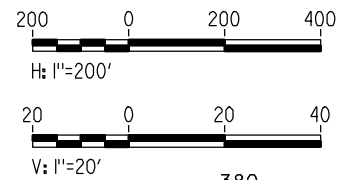


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**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



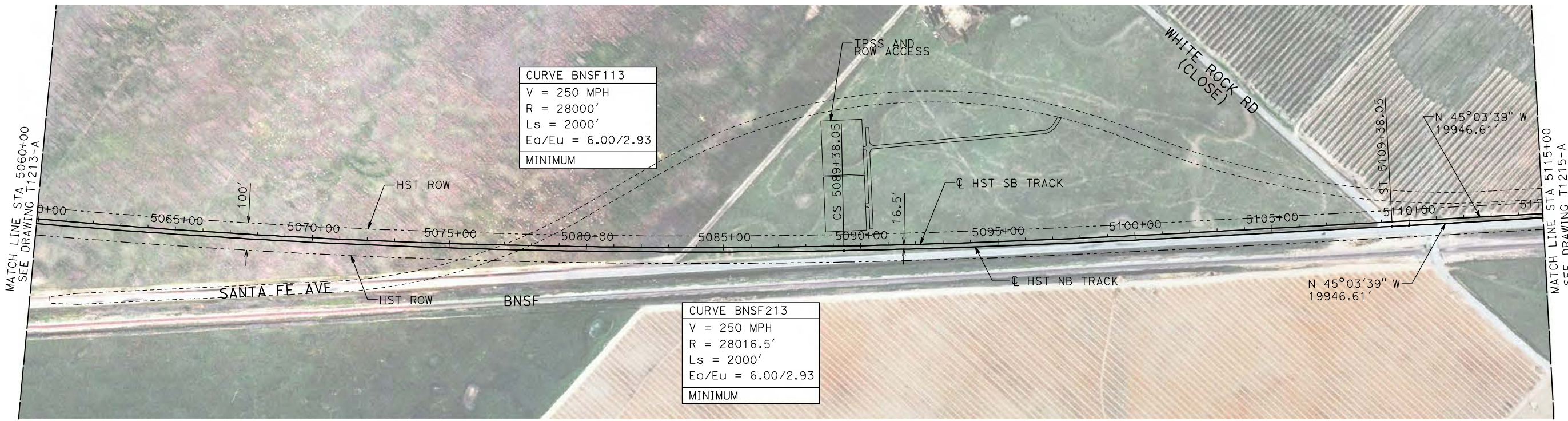
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5005+00 TO STA 5060+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1213-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

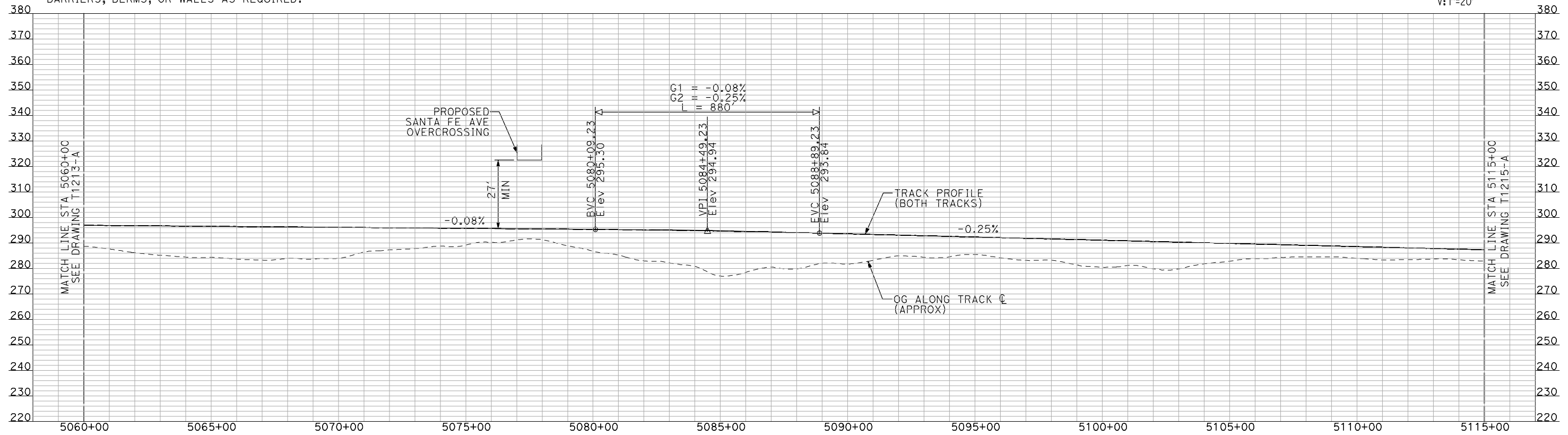
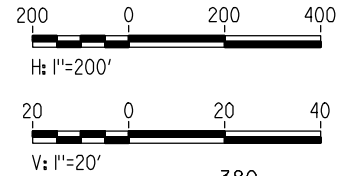


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**PLAN**

- 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.



**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  
07/20/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

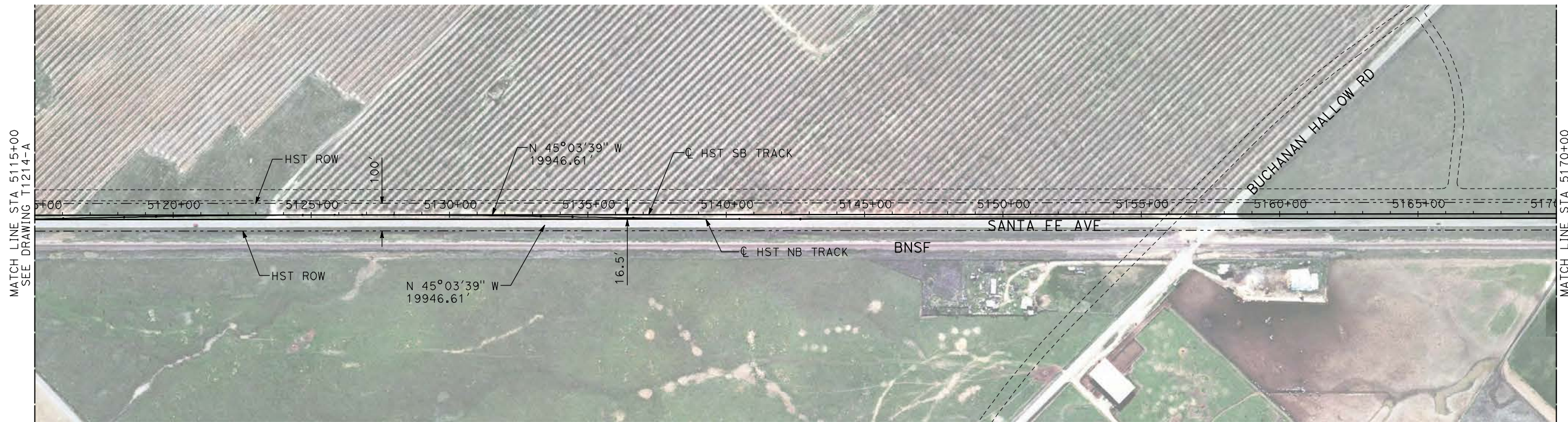
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MERCED CONNECTION  
 AVE 21 / AVE 24  
 PLAN AND PROFILE  
 STA 5060+00 TO STA 5115+00

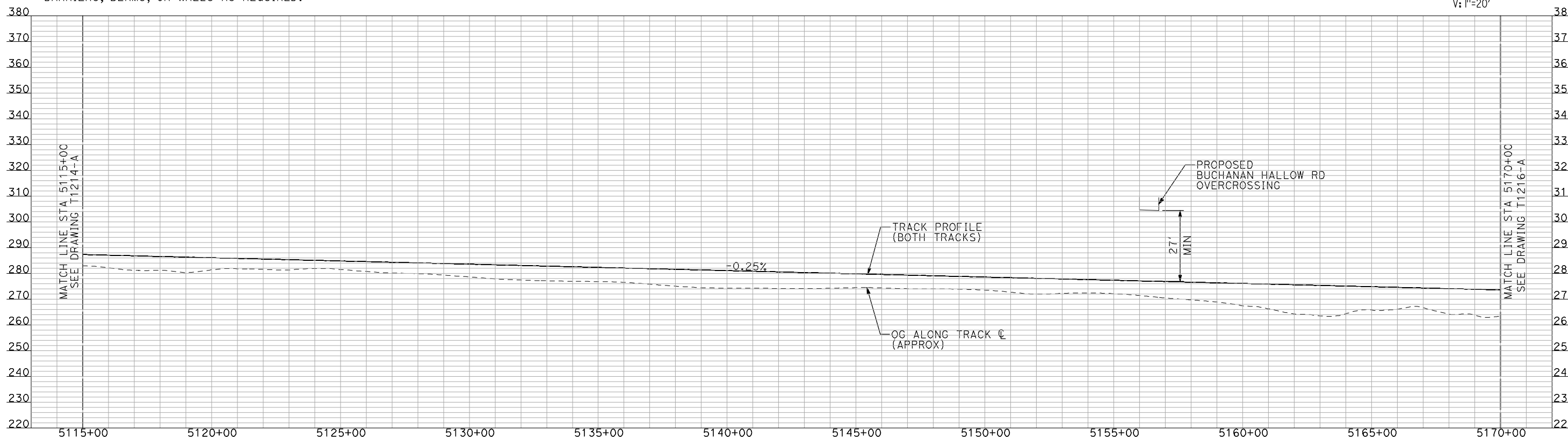
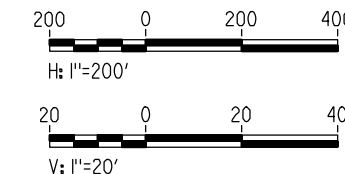
CONTRACT NO.  
HSR06-007  
 DRAWING NO.  
T1214-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###





- NOTES:
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

**PLAN**



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



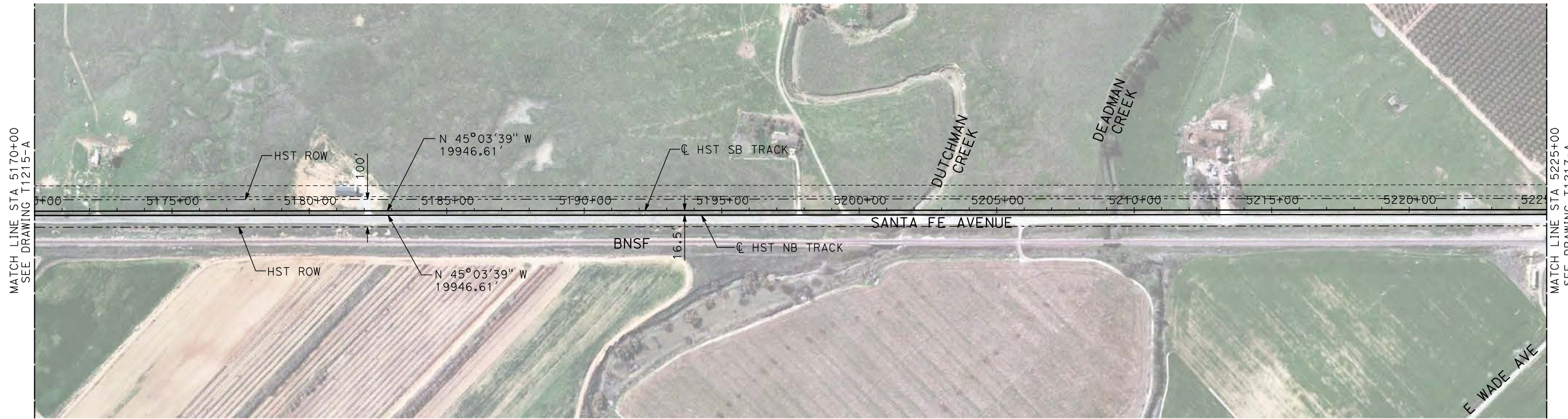
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5115+00 TO STA 5170+00

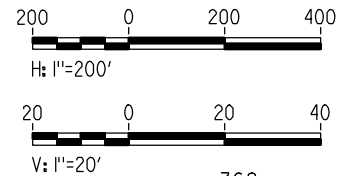
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DRAWING NO. T1215-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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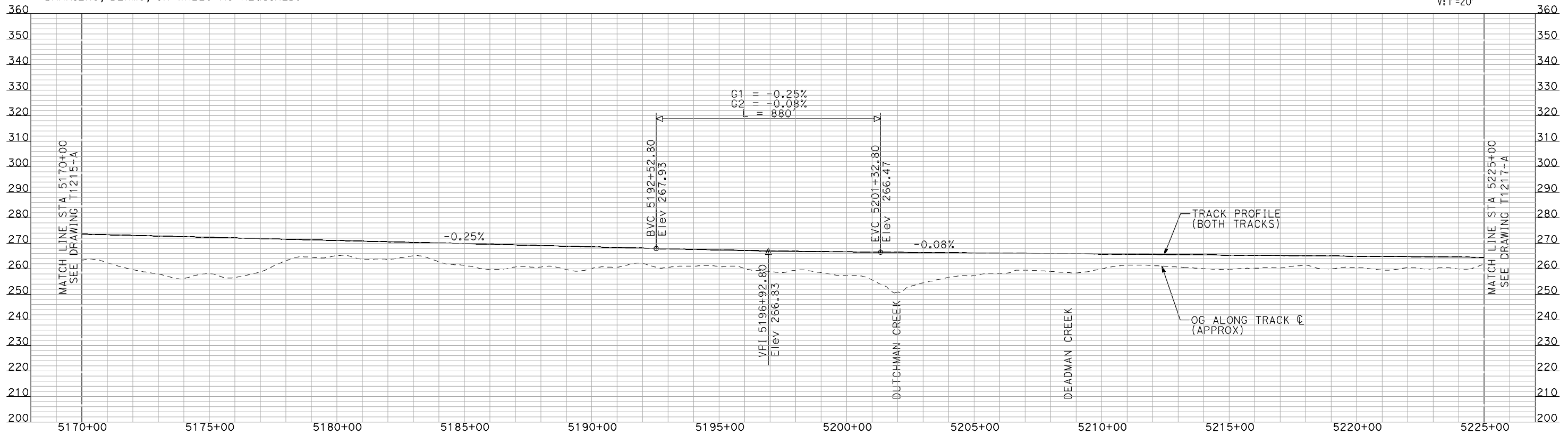




**PLAN**



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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



**PROFILE**

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

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



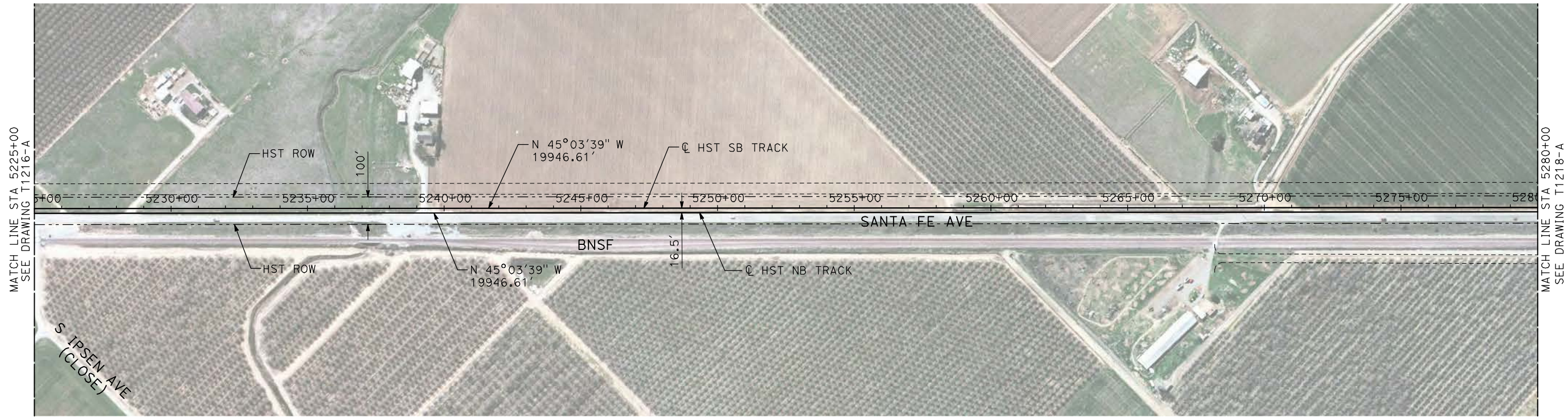
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5170+00 TO STA 5225+00

CONTRACT NO.	HSR06-007
DRAWING NO.	T1216-A
SCALE	AS SHOWN
SHEET NO.	### OF ###

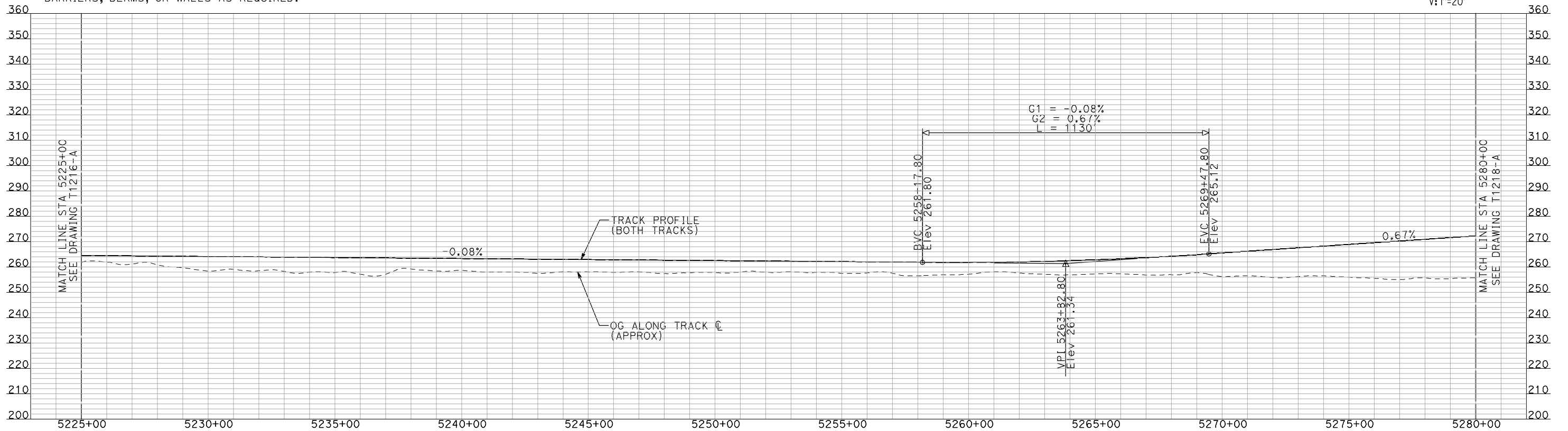
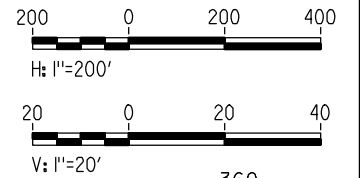


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**PLAN**

- NOTES:
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5225+00 TO STA 5280+00

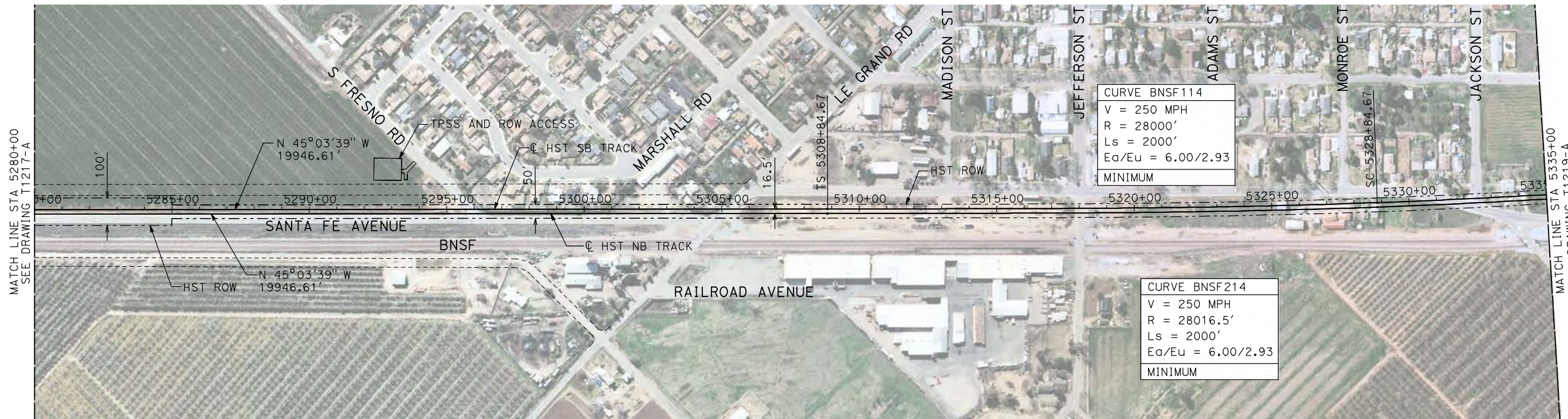
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HSR06-007

DRAWING NO.  
T1217-A

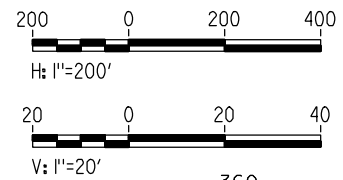
SCALE  
AS SHOWN

SHEET NO.  
### OF ###

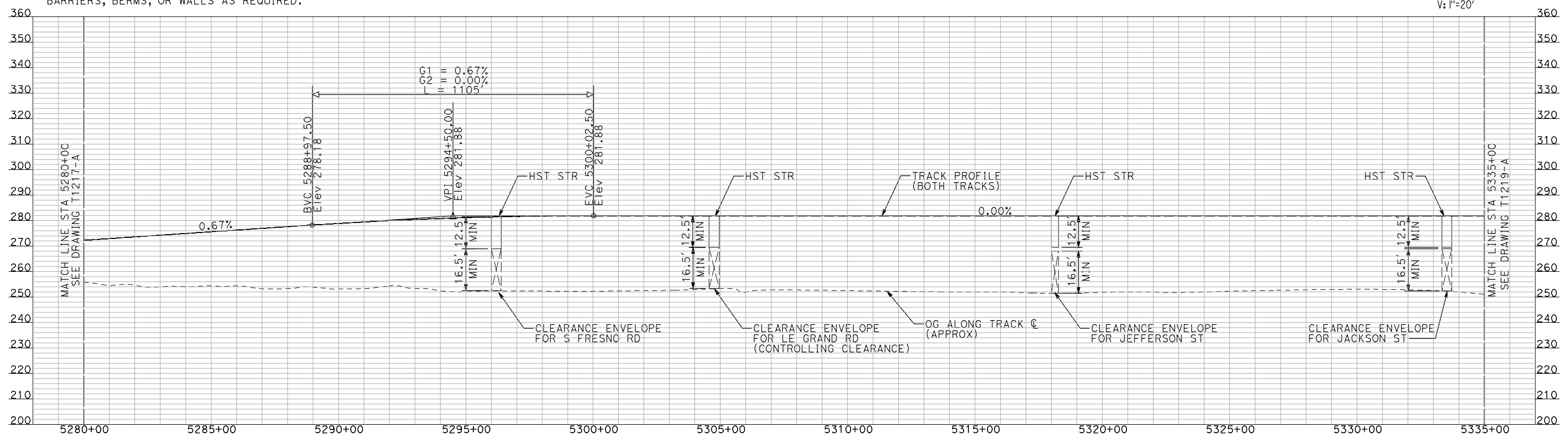




**PLAN**



- NOTES:**
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

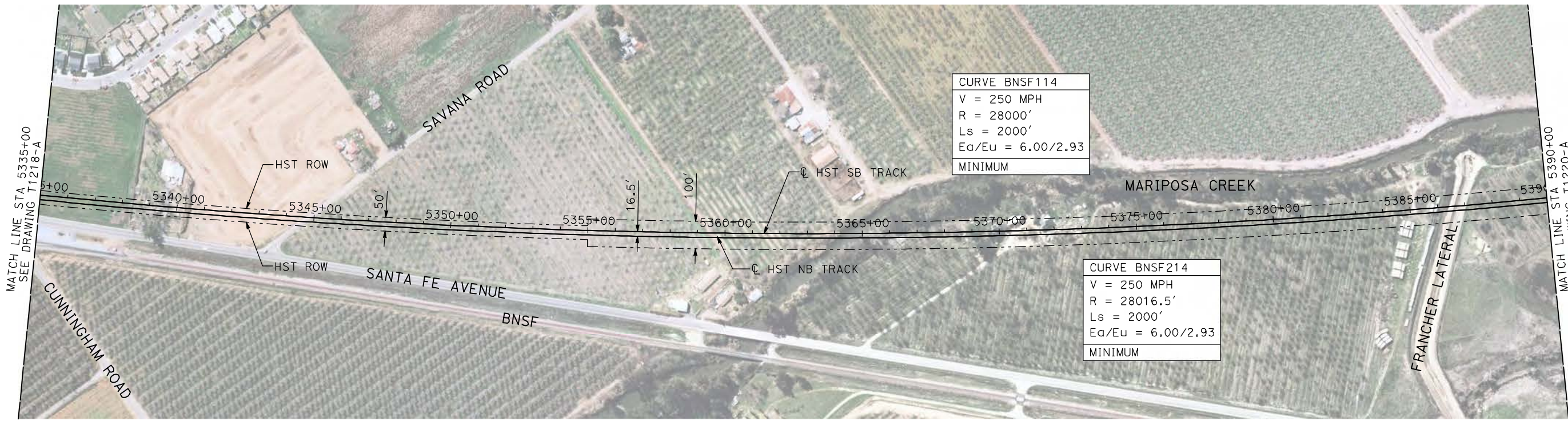
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5280+00 TO STA 5335+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1218-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

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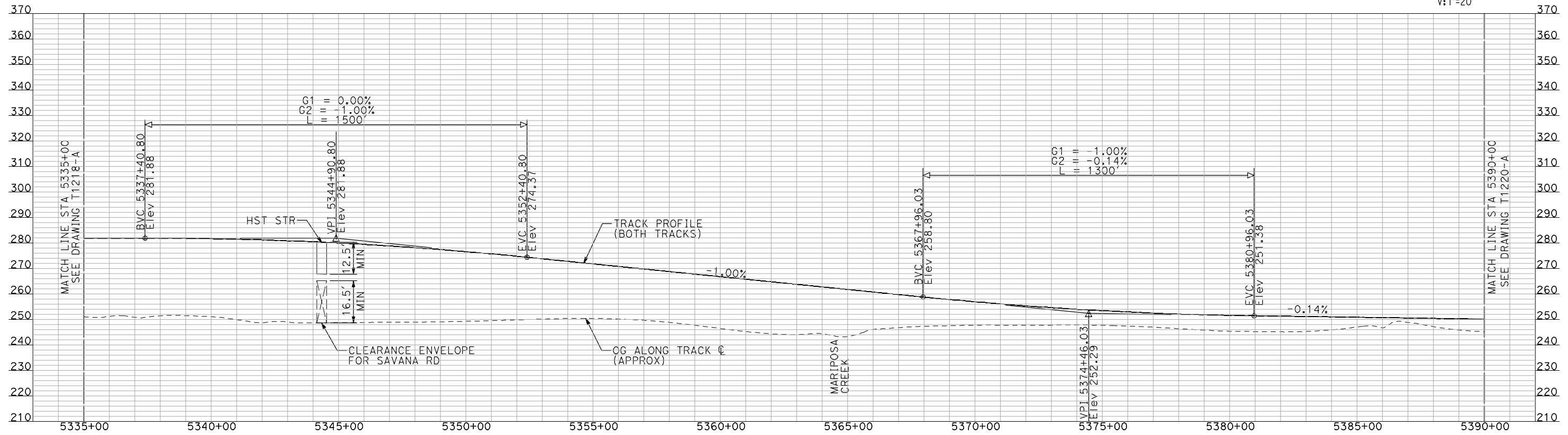
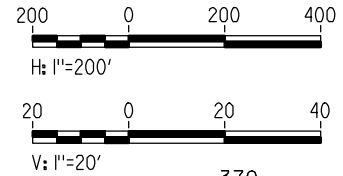


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.
  3. FOR CONTROLLING CLEARANCE, SEE T1218-A.

**PLAN**



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



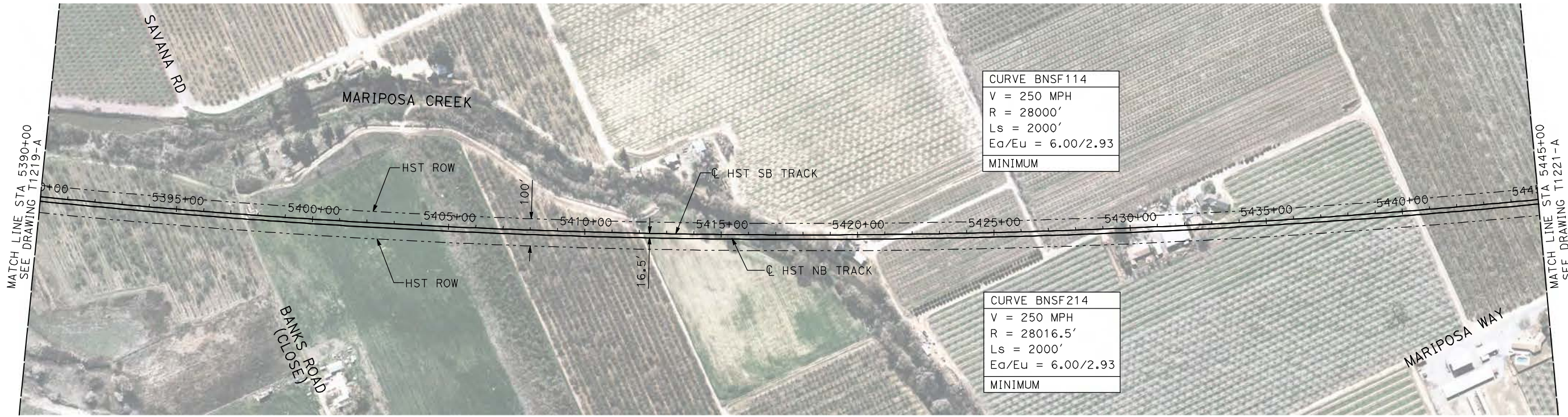
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5335+00 TO STA 5390+00

CONTRACT NO.	HSR06-007
DRAWING NO.	T1219-A
SCALE	AS SHOWN
SHEET NO.	### OF ###



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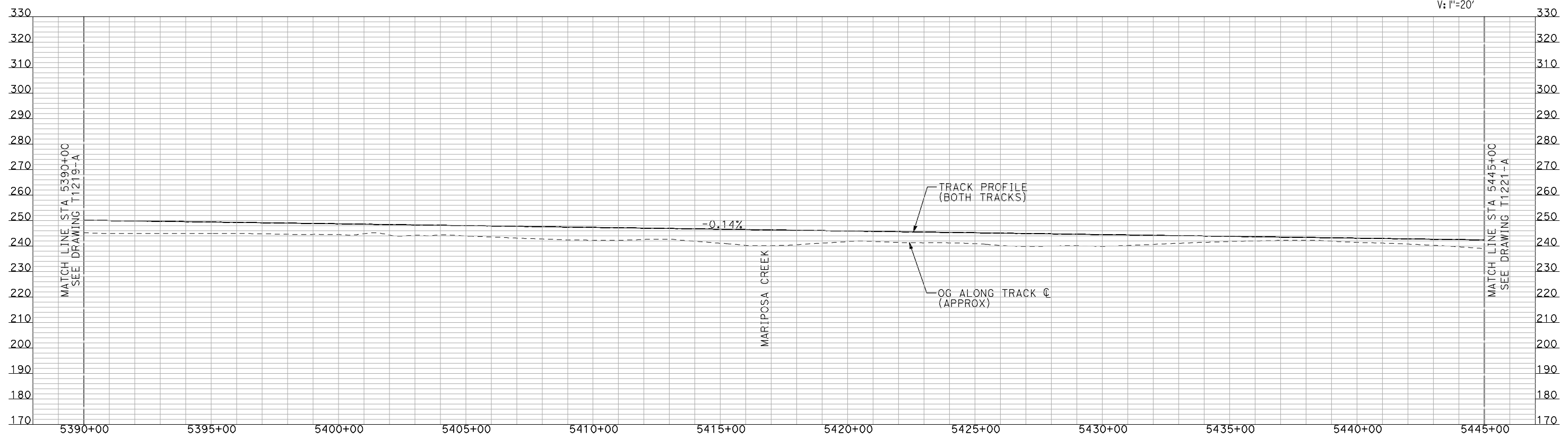
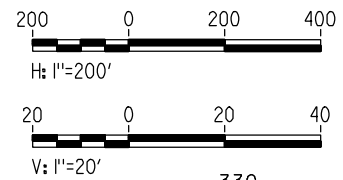


CURVE BNSF114  
 V = 250 MPH  
 R = 28000'  
 Ls = 2000'  
 Ea/Eu = 6.00/2.93  
 MINIMUM

CURVE BNSF214  
 V = 250 MPH  
 R = 28016.5'  
 Ls = 2000'  
 Ea/Eu = 6.00/2.93  
 MINIMUM

- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
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**PLAN**



**PROFILE**

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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
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H. SULLIVAN  
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A. BOONE  
 IN CHARGE  
A. BOONE  
 DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



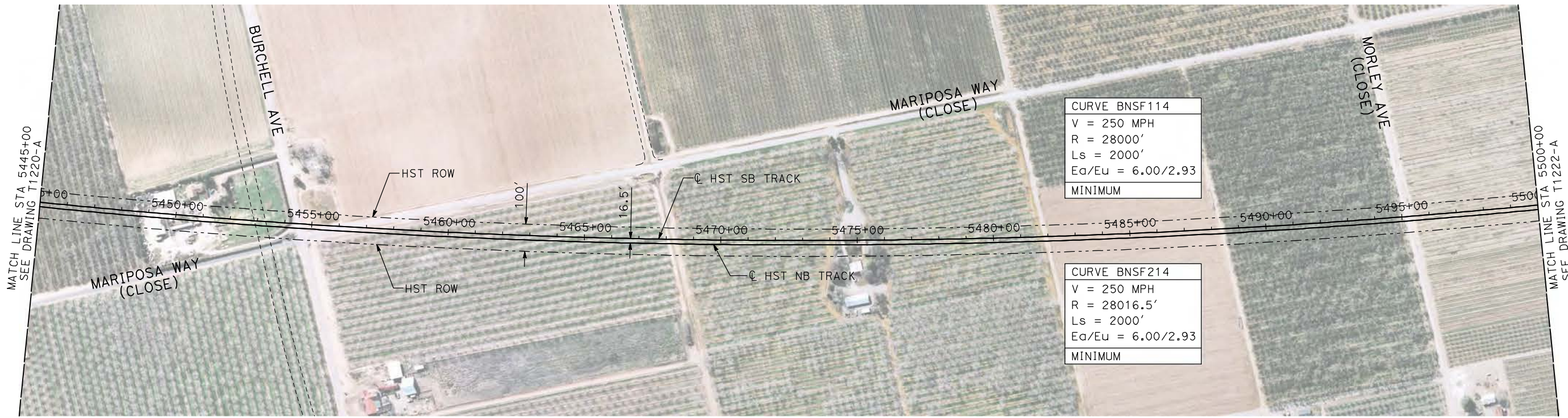
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
 AVE 21 / AVE 24  
 PLAN AND PROFILE  
 STA 5390+00 TO STA 5445+00

CONTRACT NO.  
HSR06-007  
 DRAWING NO.  
T1220-A  
 SCALE  
AS SHOWN  
 SHEET NO.  
### OF ###

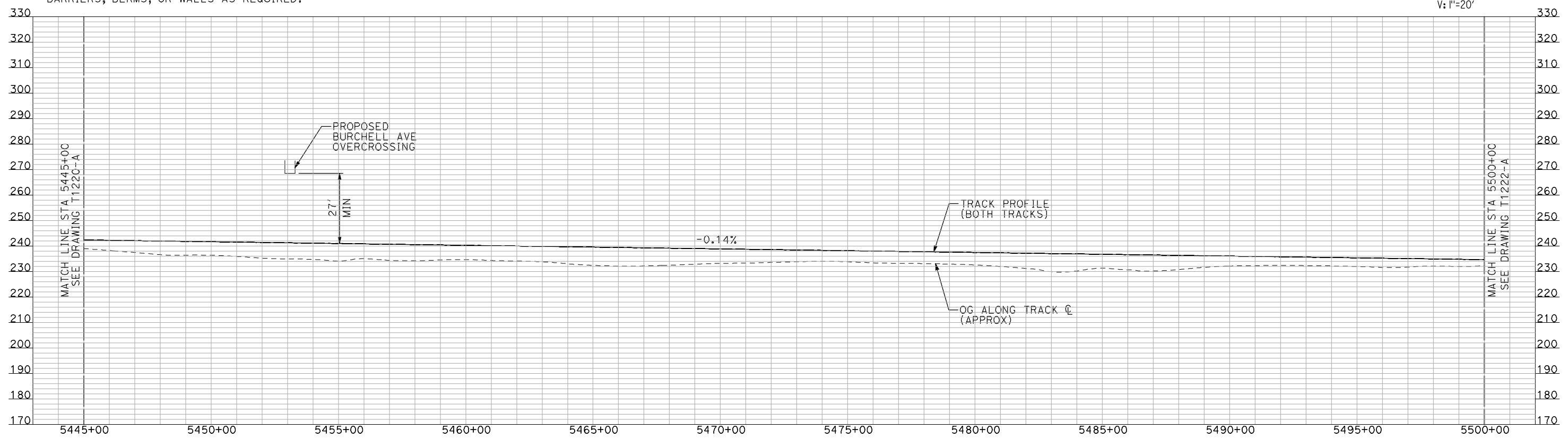
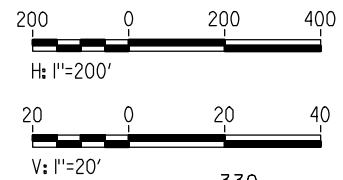


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- NOTES:**
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  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5445+00 TO STA 5500+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1221-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

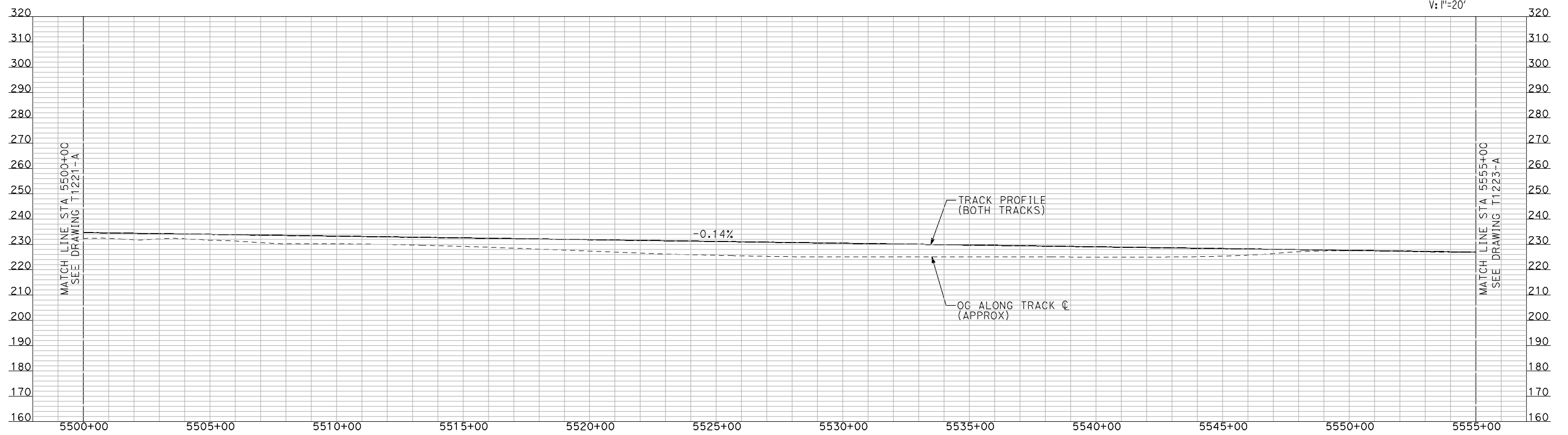
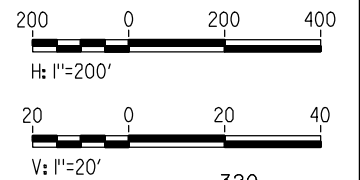


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



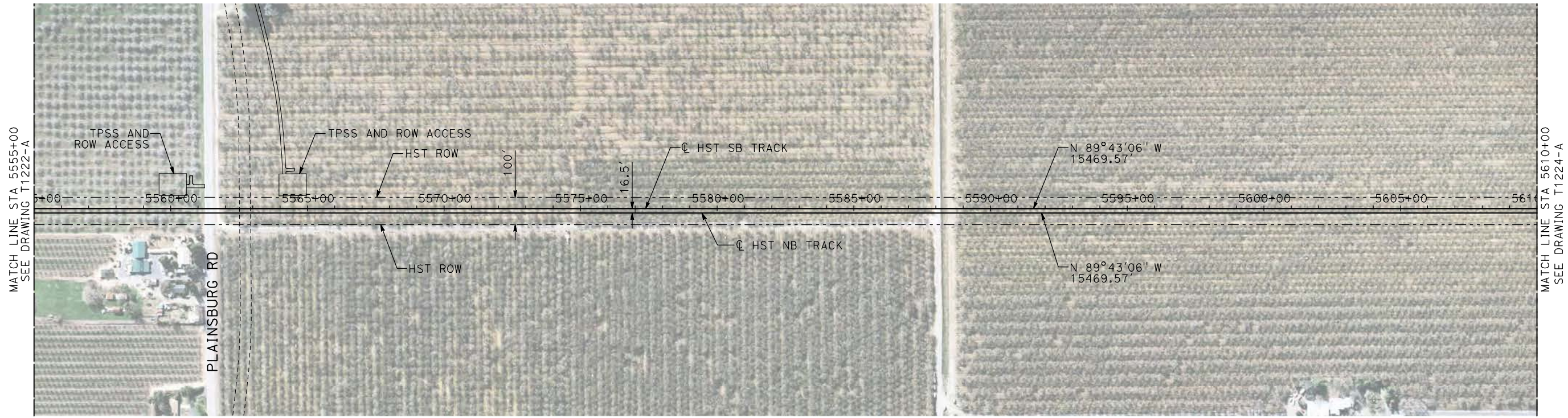
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5500+00 TO STA 5555+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1222-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

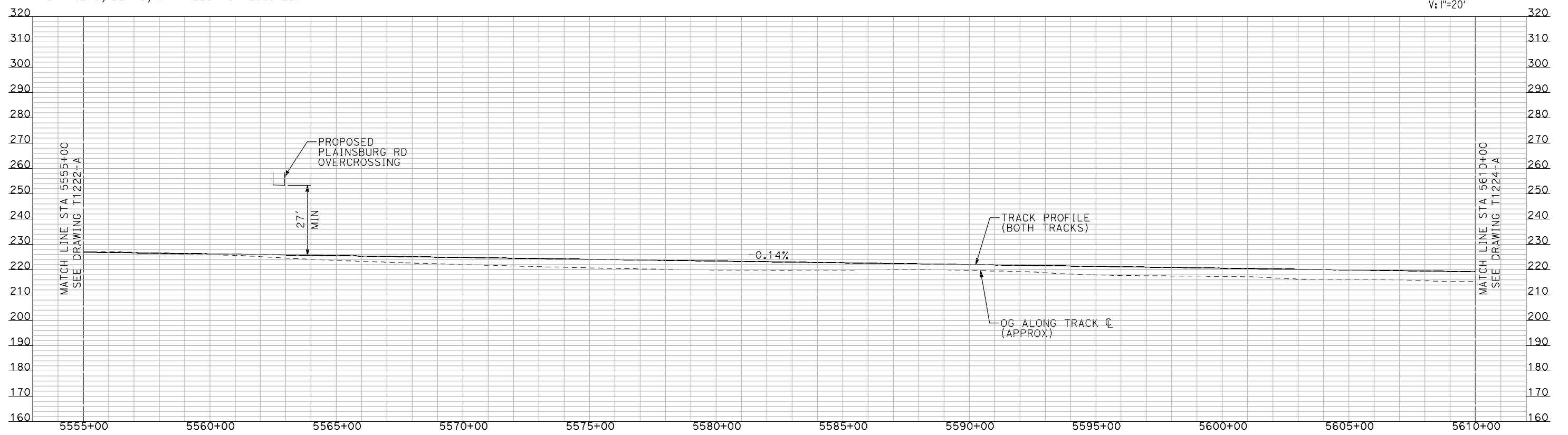
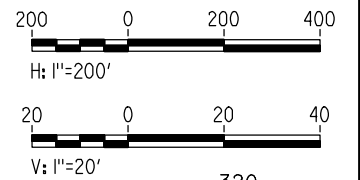


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



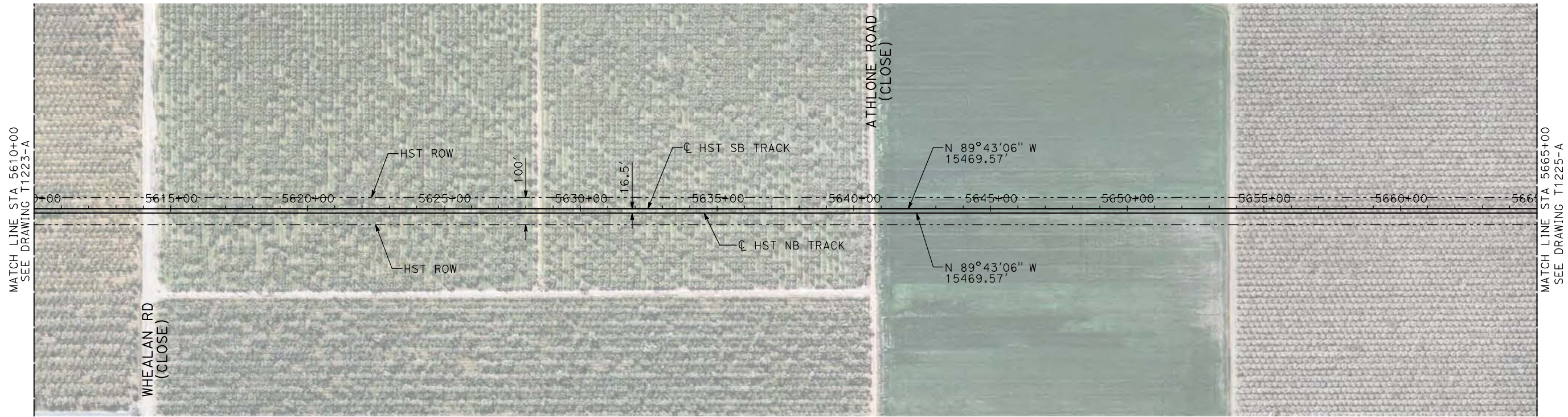
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5555+00 TO STA 5610+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1223-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

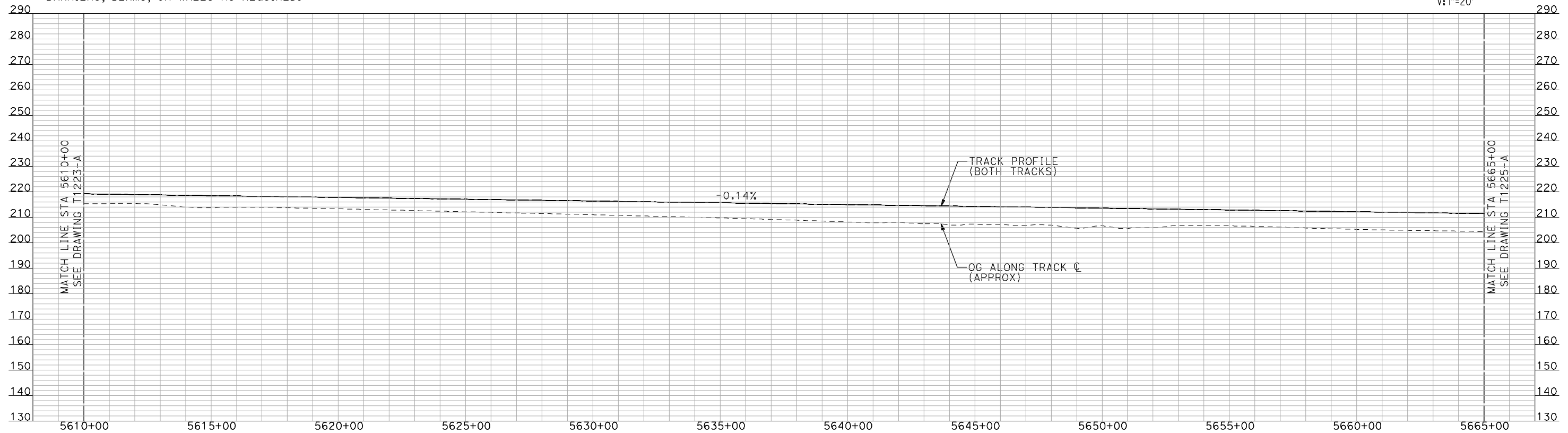
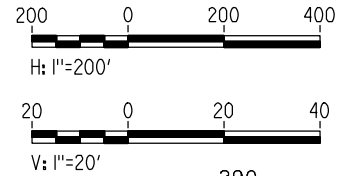


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

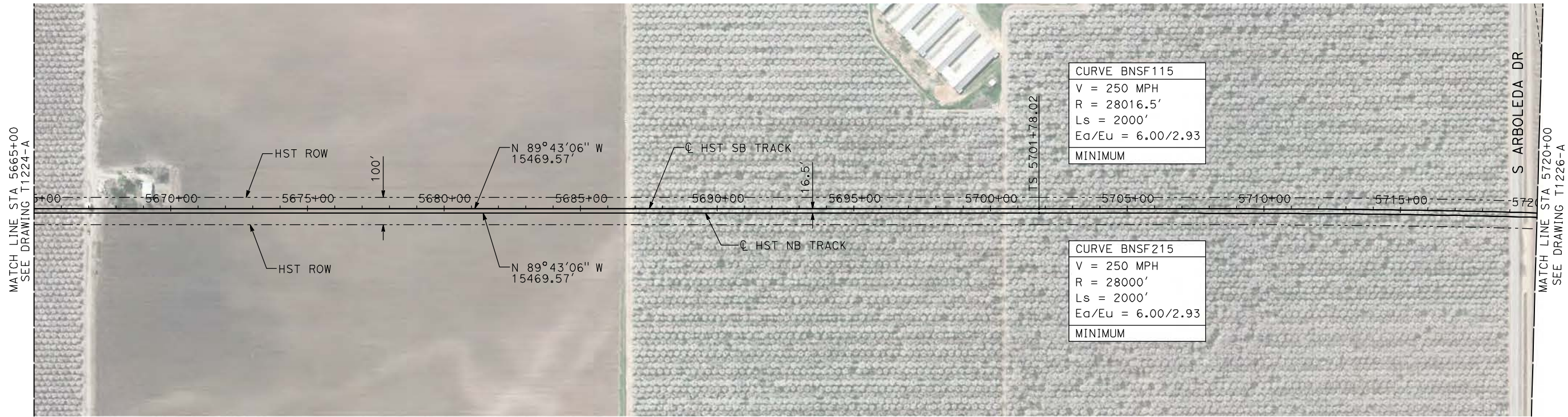


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5610+00 TO STA 5665+00

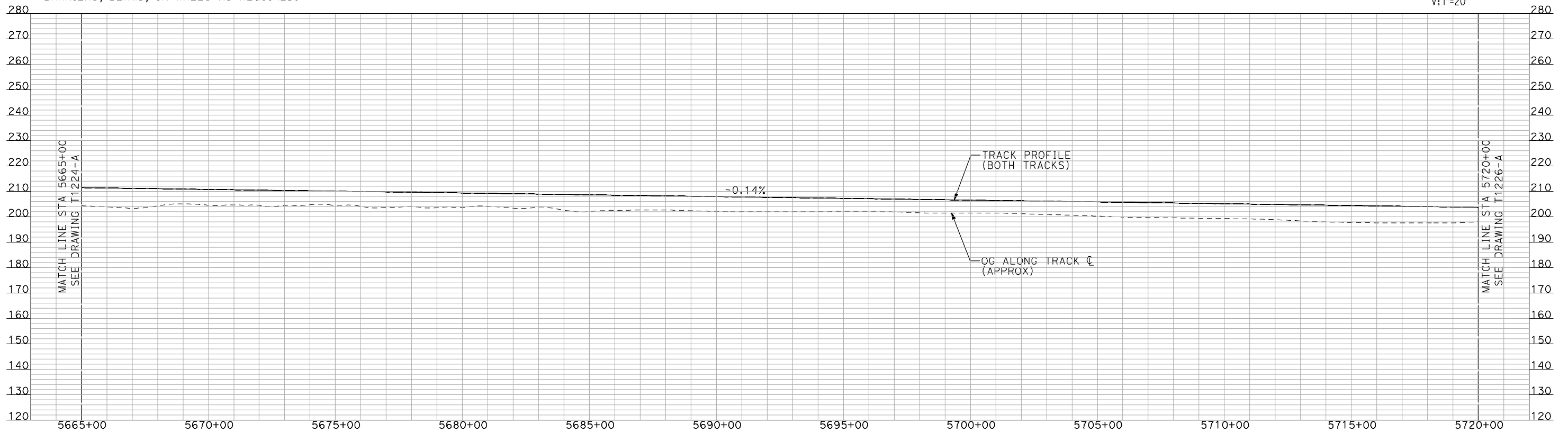
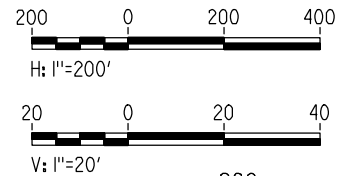
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1224-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###





- 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**



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

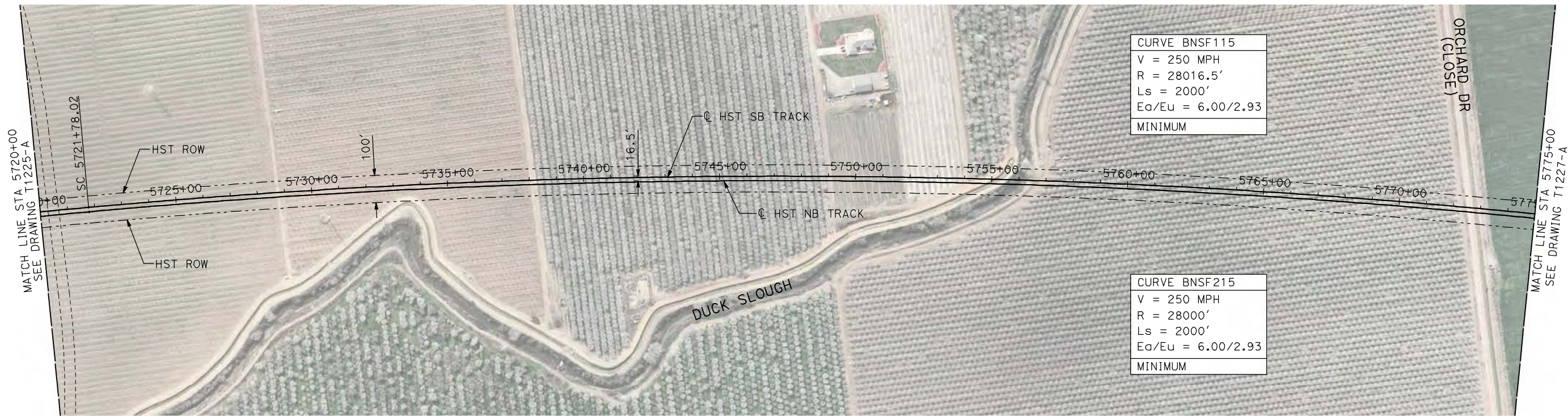
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5665+00 TO STA 5720+00

CONTRACT NO. HSR06-007
DRAWING NO. T1225-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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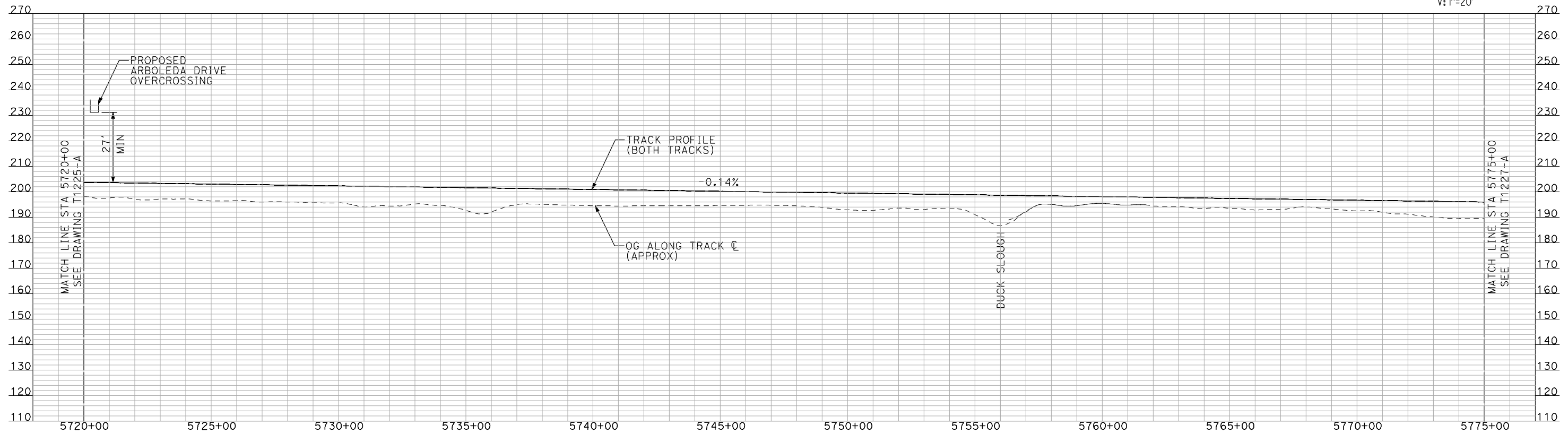
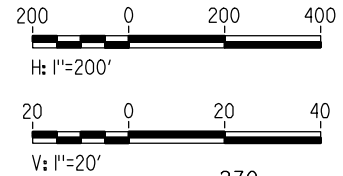


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



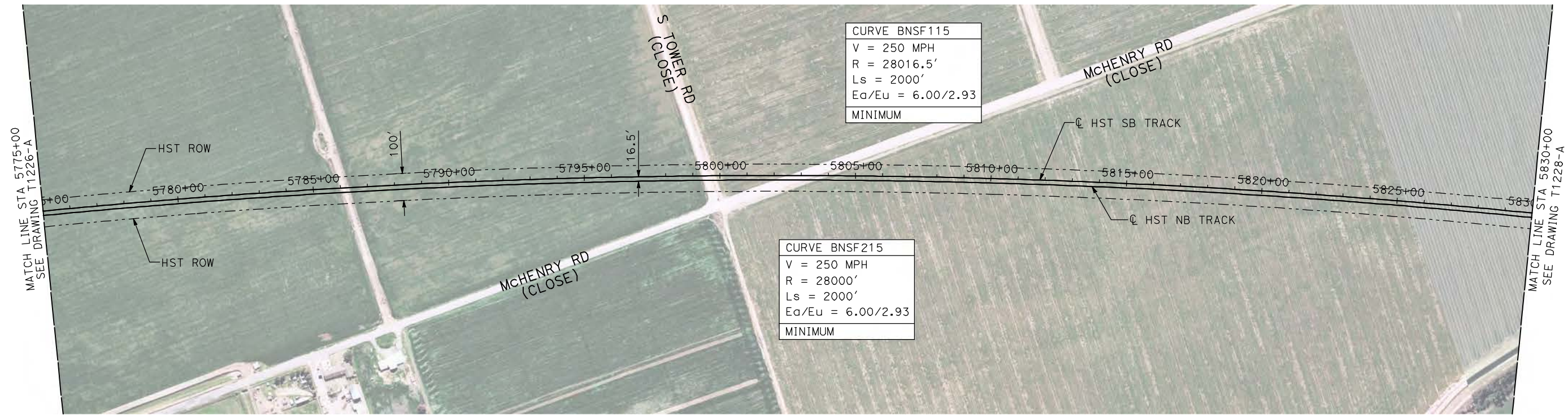
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5720+00 TO STA 5775+00

CONTRACT NO. HSR06-007
DRAWING NO. T1226-A
SCALE AS SHOWN
SHEET NO. ### OF ###

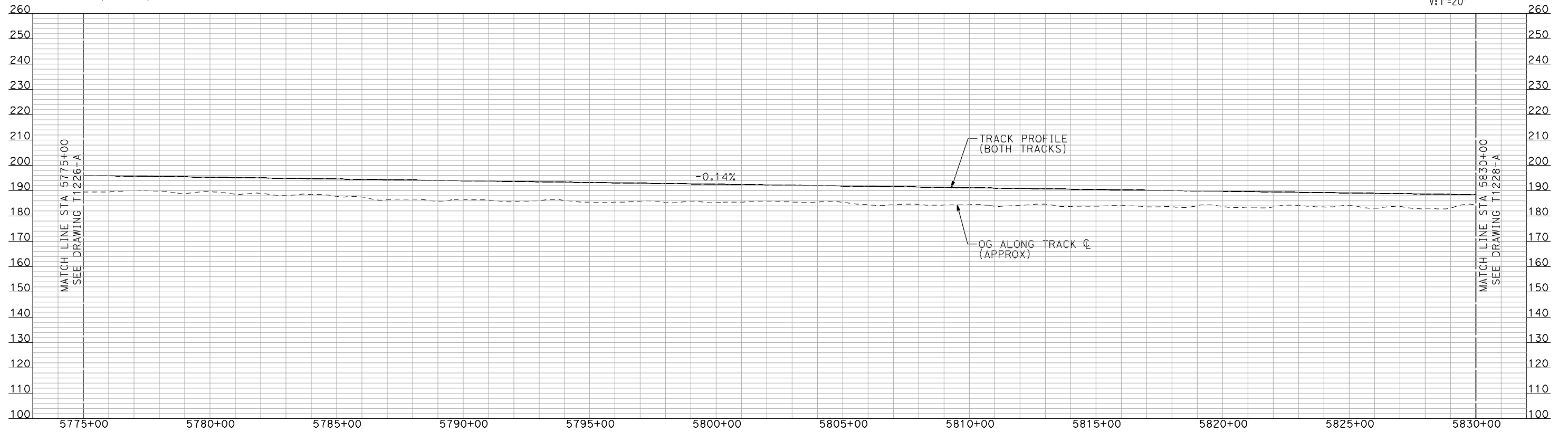
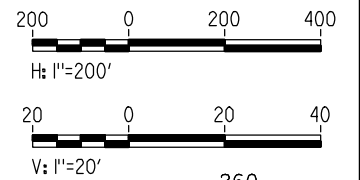


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



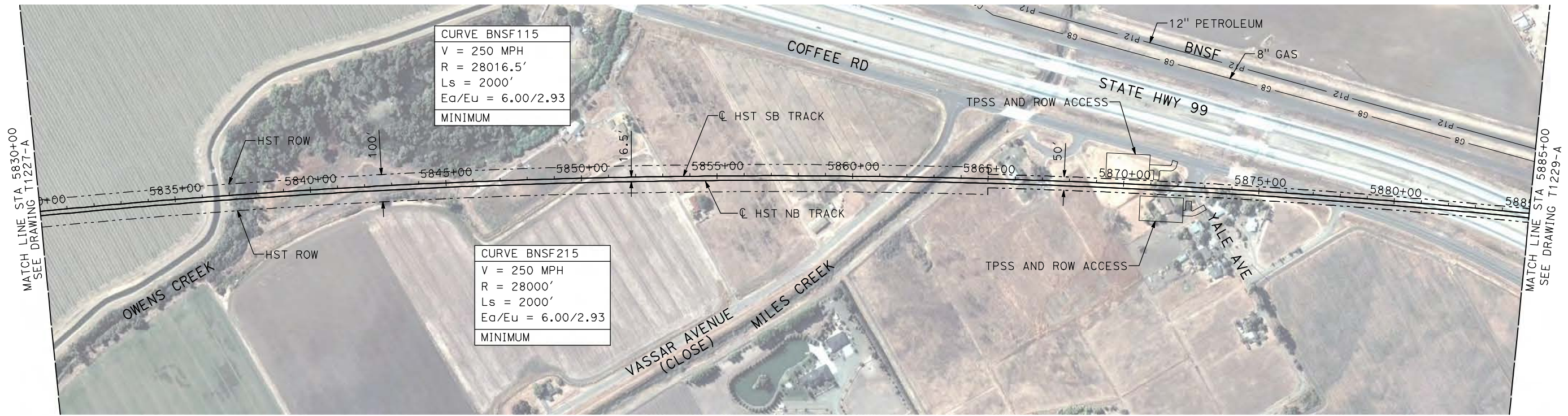
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5775+00 TO STA 5830+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1227-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

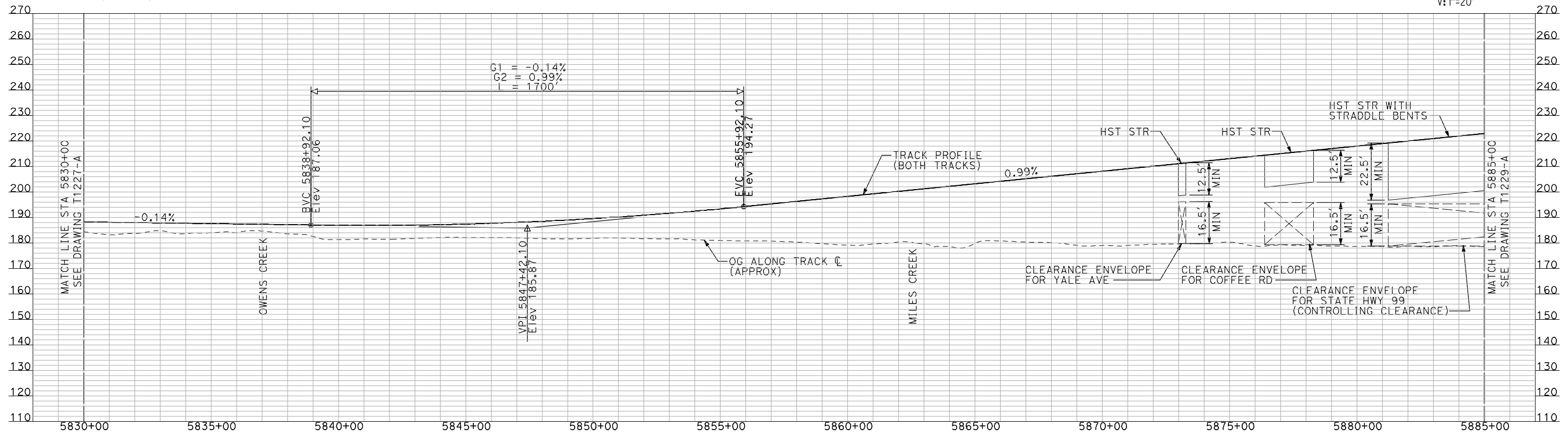
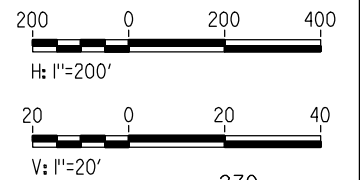


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

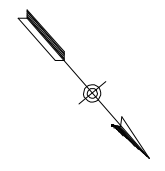
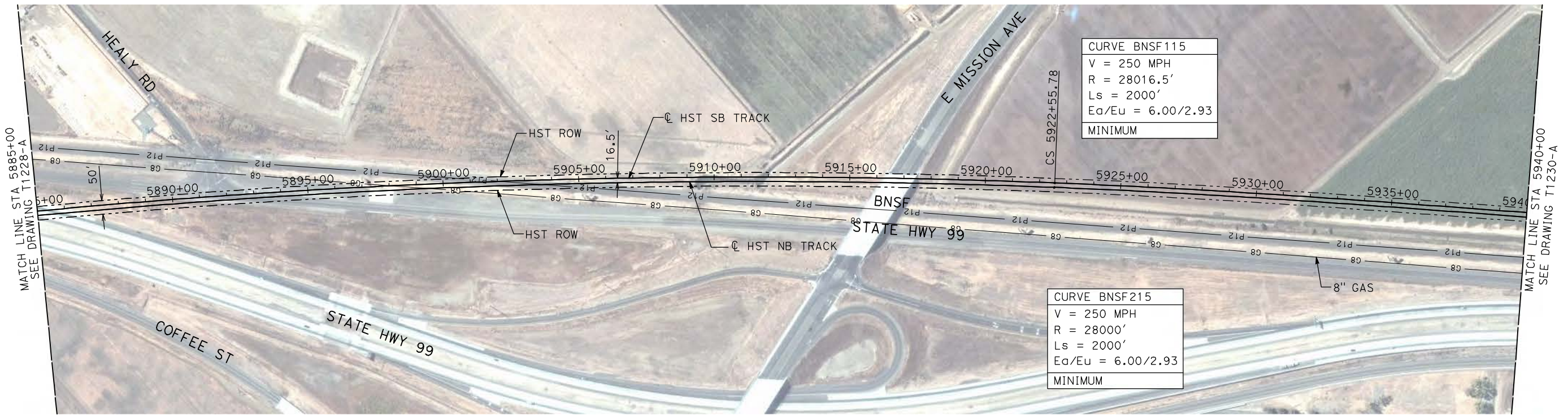


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5830+00 TO STA 5885+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1228-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

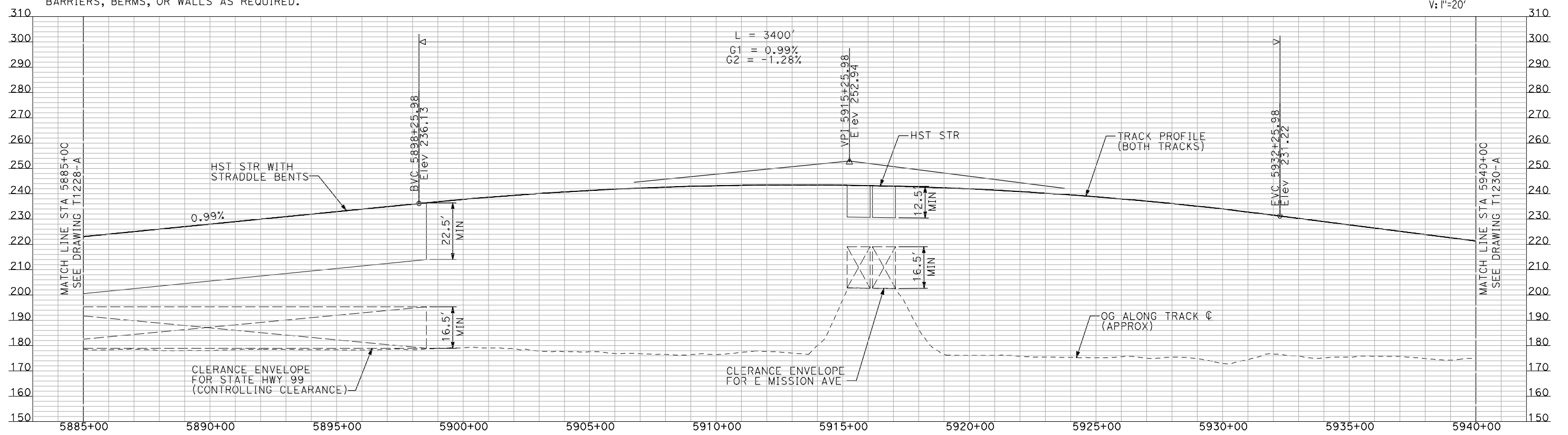
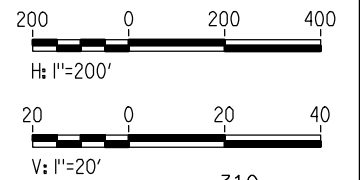


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- NOTES:**
- ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  - TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF MERCED CONNECTION  
 AVE 21 / AVE 24  
 PLAN AND PROFILE  
 STA 5885+00 TO STA 5940+00

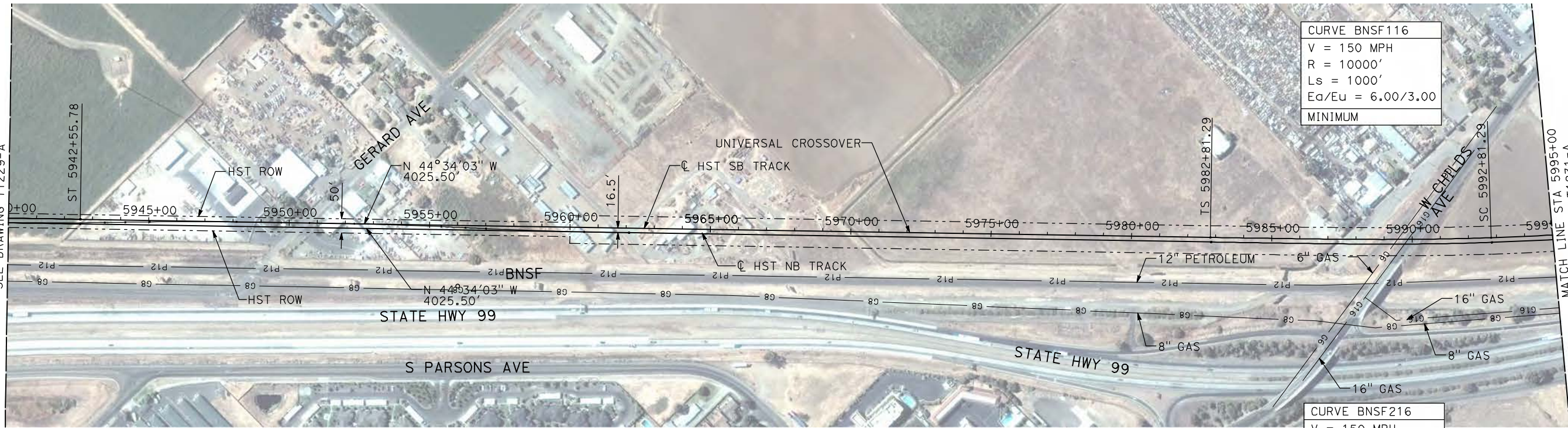
CONTRACT NO.  
HSR06-007

DRAWING NO.  
T1229-A

SCALE  
AS SHOWN

SHEET NO.  
### OF ###

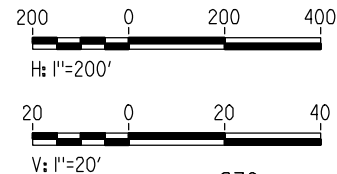




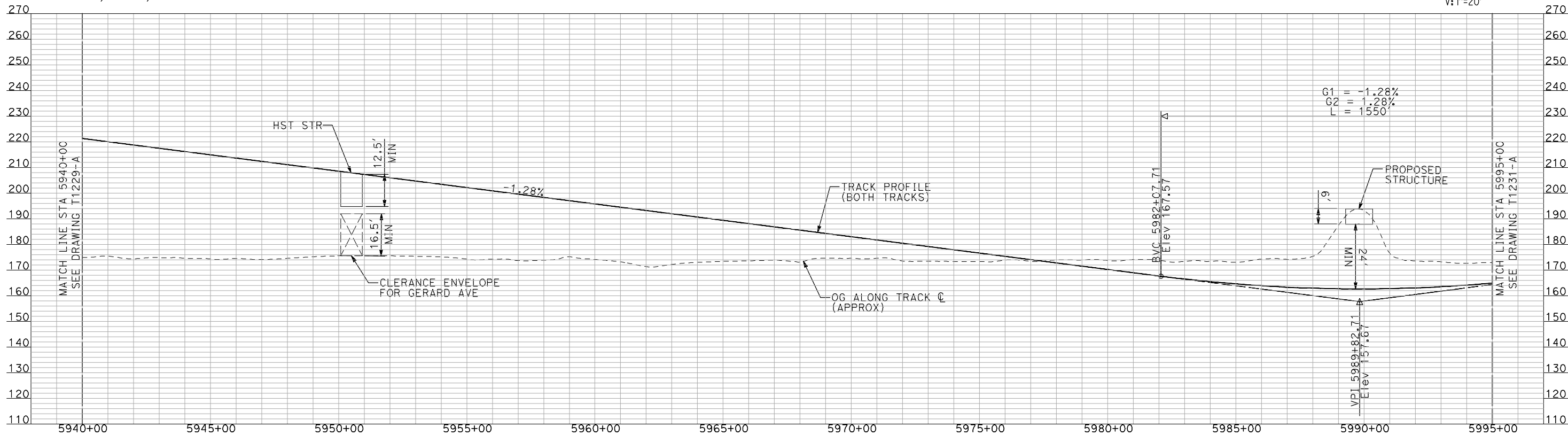
CURVE BNSF116  
 V = 150 MPH  
 R = 10000'  
 Ls = 1000'  
 Ea/Eu = 6.00/3.00  
 MINIMUM

CURVE BNSF216  
 V = 150 MPH  
 R = 10016.5'  
 Ls = 1000'  
 Ea/Eu = 6.00/3.00  
 MINIMUM

**PLAN**



- 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.



**PROFILE**

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

7/21/2011 12:17:04 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave 21\MF-T-1230-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
 DRAWN BY  
H. SULLIVAN  
 CHECKED BY  
A. BOONE  
 IN CHARGE  
A. BOONE  
 DATE  
07/20/2011

**RECORD SET  
 15% DESIGN  
 SUBMITTAL**

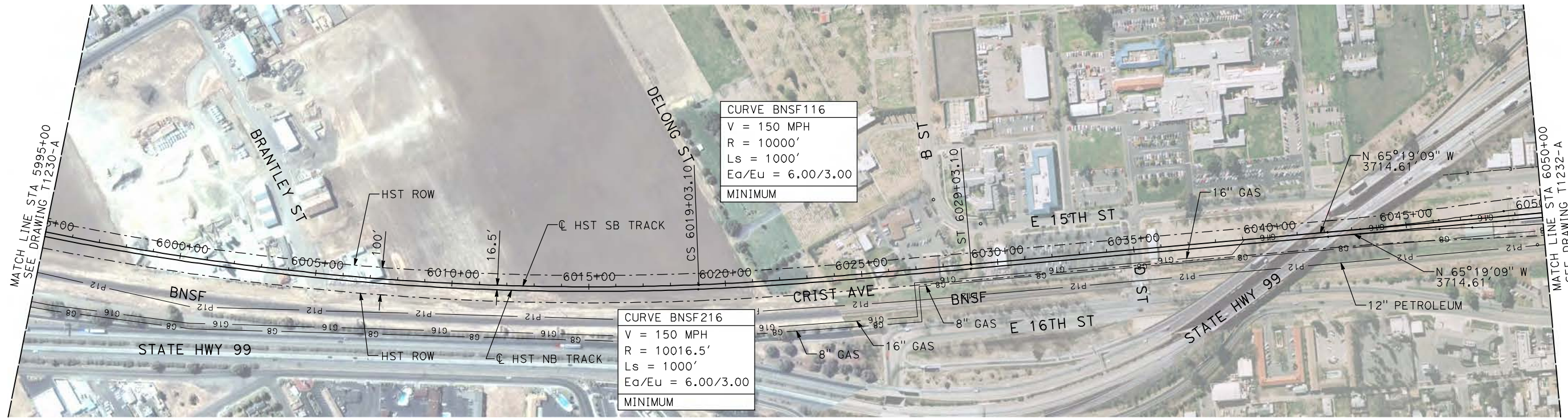
**NOT FOR  
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
 MERCED TO FRESNO**  
 BNSF MERCED CONNECTION  
 AVE 21 / AVE 24  
 PLAN AND PROFILE  
 STA 5940+00 TO STA 5995+00

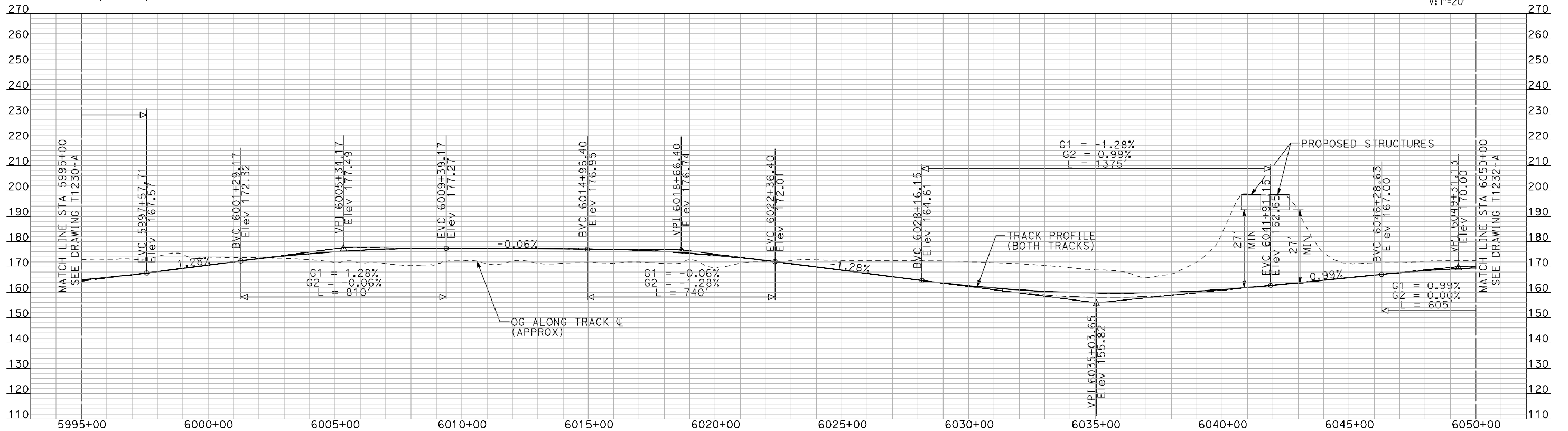
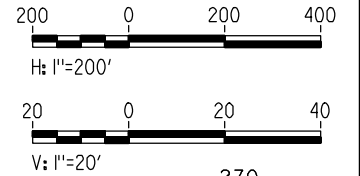
CONTRACT NO.	HSR06-007
DRAWING NO.	T1230-A
SCALE	AS SHOWN
SHEET NO.	### OF ###





**PLAN**

- 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.



**PROFILE**

7/21/2011 12:17:46 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave 21\MF-T-1231-A.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

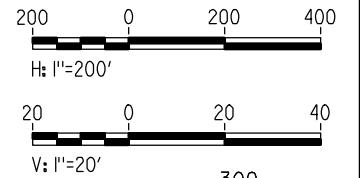
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 5995+00 TO STA 6050+00

CONTRACT NO. HSR06-007
DRAWING NO. T1231-A
SCALE AS SHOWN
SHEET NO. ### OF ###

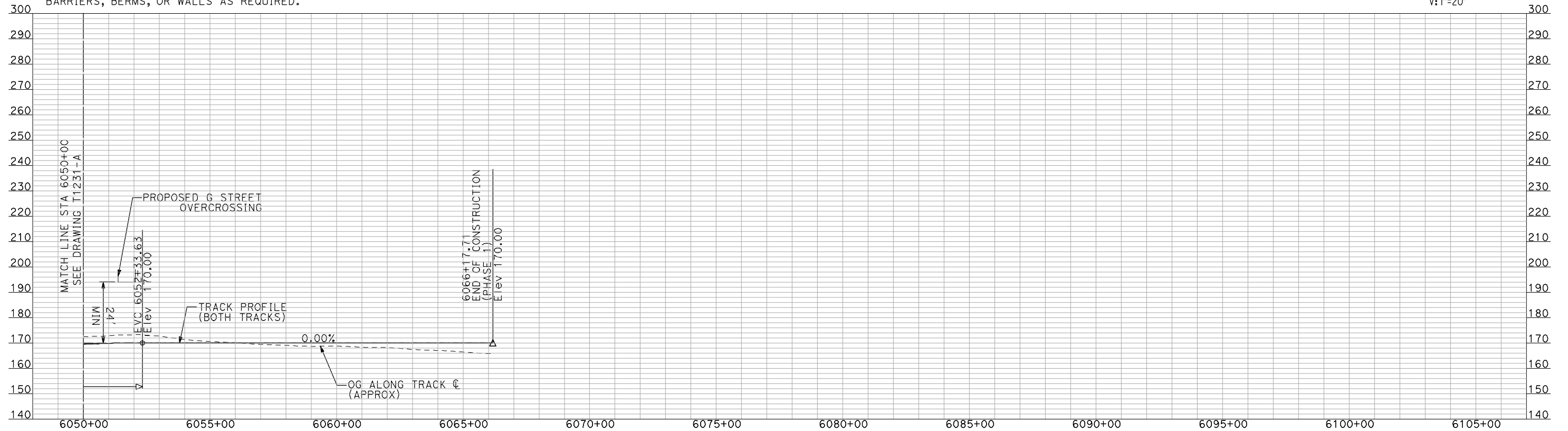




**PLAN**



- 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.



**PROFILE**

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

7/21/2011 12:18:29 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave 21\MF-T-1232-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

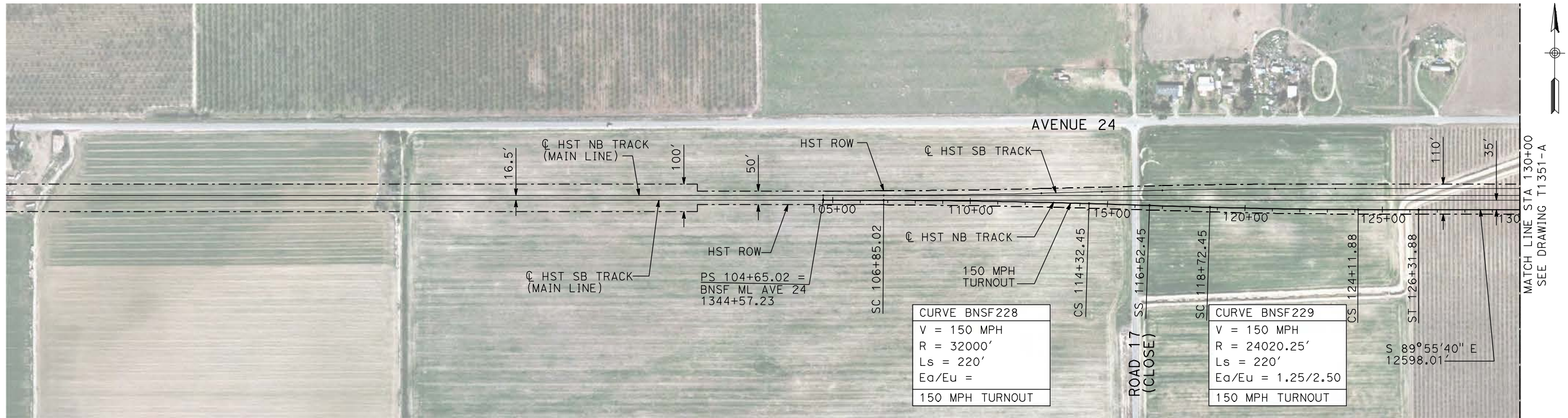


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

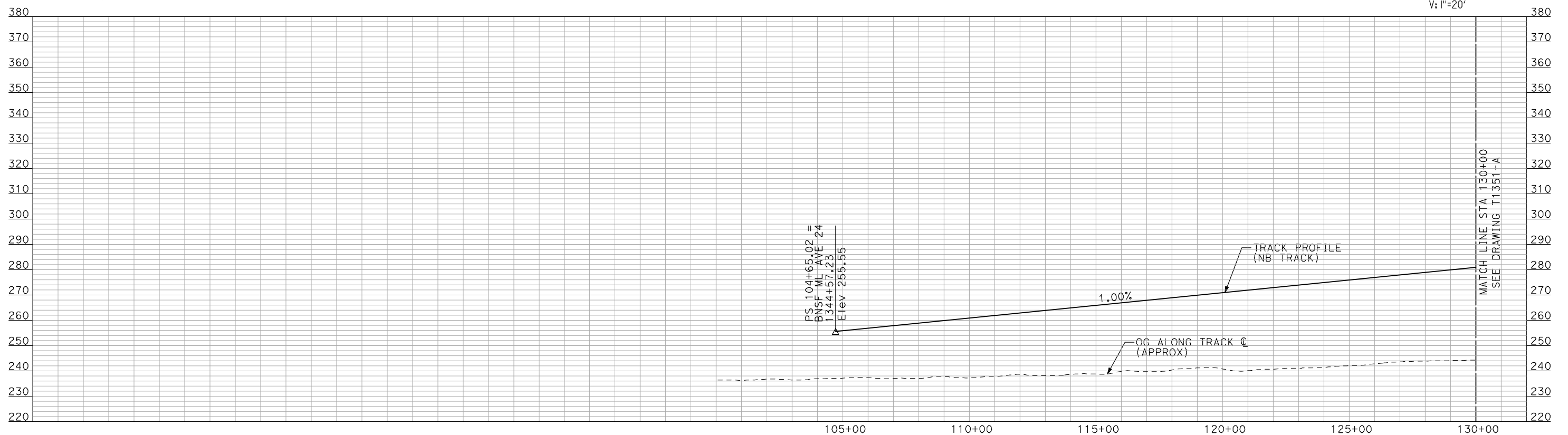
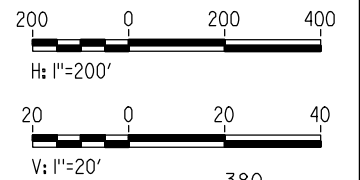
BNSF MERCED CONNECTION  
AVE 21 / AVE 24  
PLAN AND PROFILE  
STA 6050+00 TO STA 6066+17.71

CONTRACT NO.	HSR06-007
DRAWING NO.	T1232-A
SCALE	AS SHOWN
SHEET NO.	### OF ###





- 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.



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

7/21/2011 12:21:26 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_24\WF-T-1350-A.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS

DRAWN BY  
H. SULLIVAN

CHECKED BY  
A. BOONE

IN CHARGE  
A. BOONE

DATE  
07/20/2011

**RECORD SET**  
15% DESIGN SUBMITTAL

**NOT FOR CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF WYE - NB CONNECTION  
 AVENUE 24  
 PLAN AND PROFILE  
 STA 104+65.02 TO STA 130+00

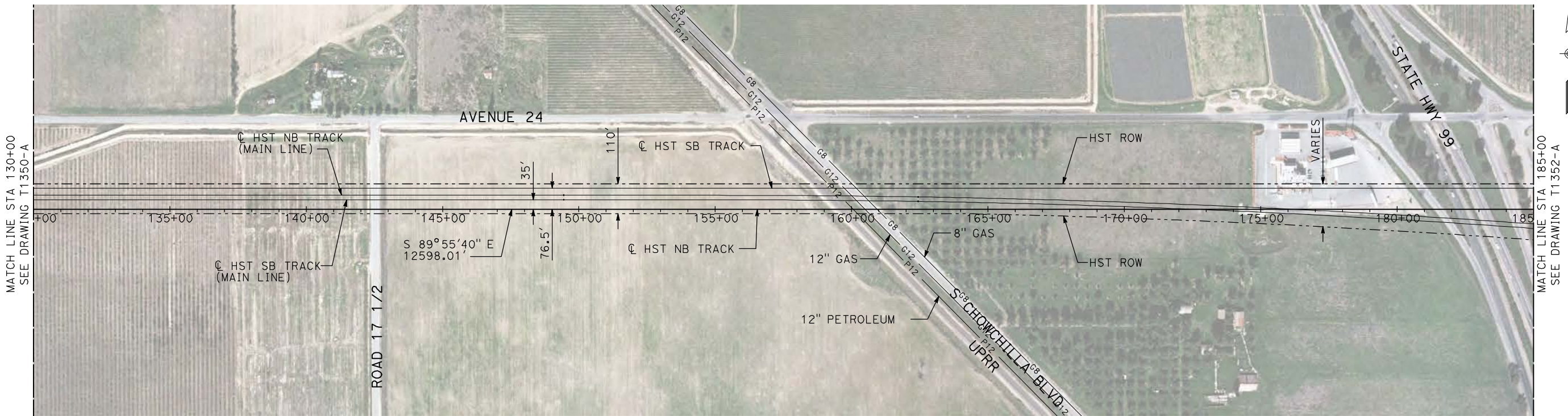
CONTRACT NO.  
HSR06-007

DRAWING NO.  
T1350-A

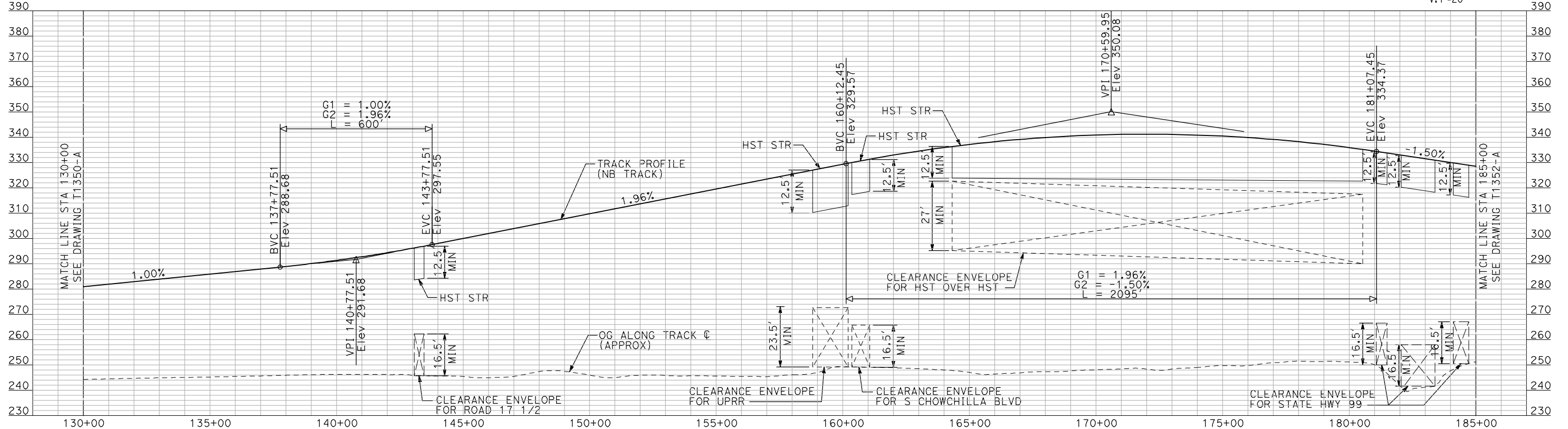
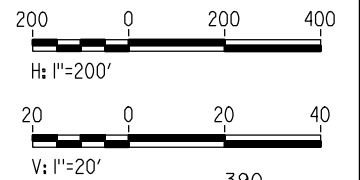
SCALE  
AS SHOWN

SHEET NO.  
### OF ###





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



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

7/21/2011 12:21:55 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\BNSF\_AVE 24\MF-T-1351-A.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS

DRAWN BY  
H. SULLIVAN

CHECKED BY  
A. BOONE

IN CHARGE  
A. BOONE

DATE  
07/20/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



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

BNSF WYE - NB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 130+00 TO STA 185+00

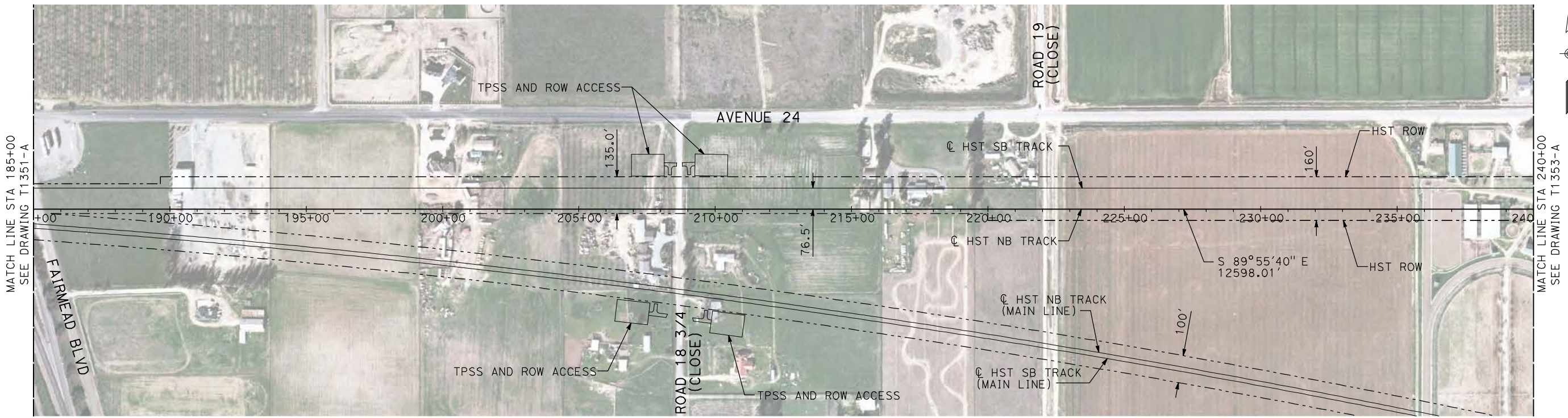
CONTRACT NO.  
HSR06-007

DRAWING NO.  
T1351-A

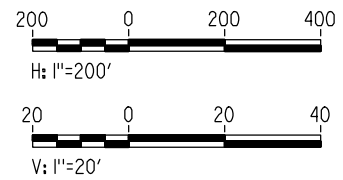
SCALE  
AS SHOWN

SHEET NO.  
### OF ###

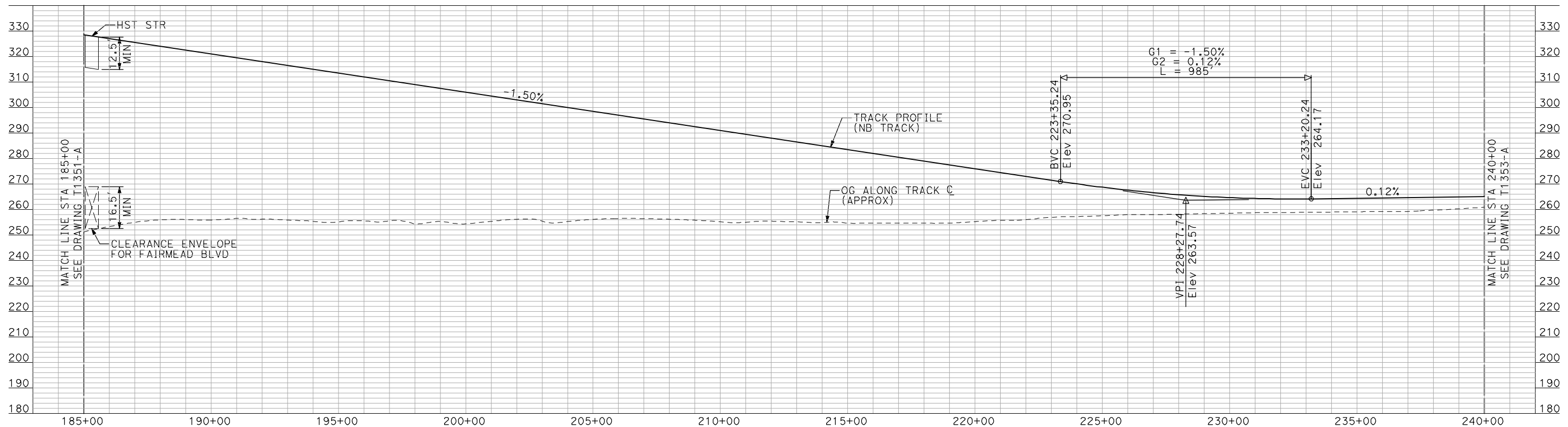




**PLAN**



- 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.



**PROFILE**

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

DESIGNED BY A. SHIELDS	HSR06-007
DRAWN BY H. SULLIVAN	T1351-A
CHECKED BY A. BOONE	AS SHOWN
IN CHARGE A. BOONE	### OF ###
DATE 07/20/2011	DESCRIPTION

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

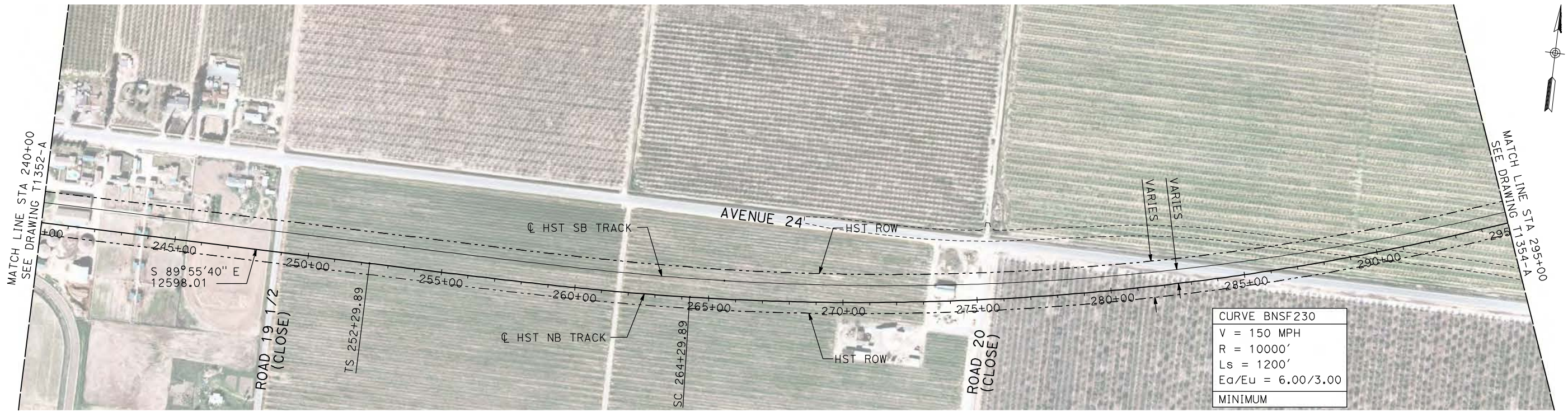
BNSF WYE - NB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 185+00 TO STA 240+00

CONTRACT NO. HSR06-007
DRAWING NO. T1352-A
SCALE AS SHOWN
SHEET NO. ### OF ###

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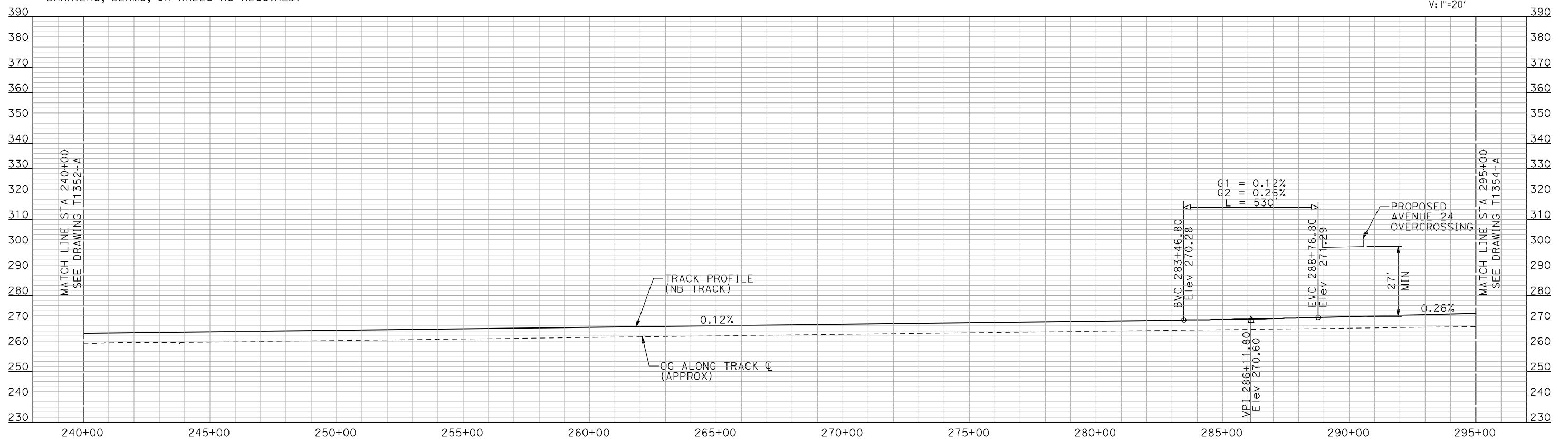
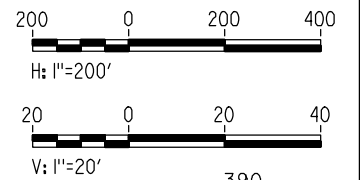


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

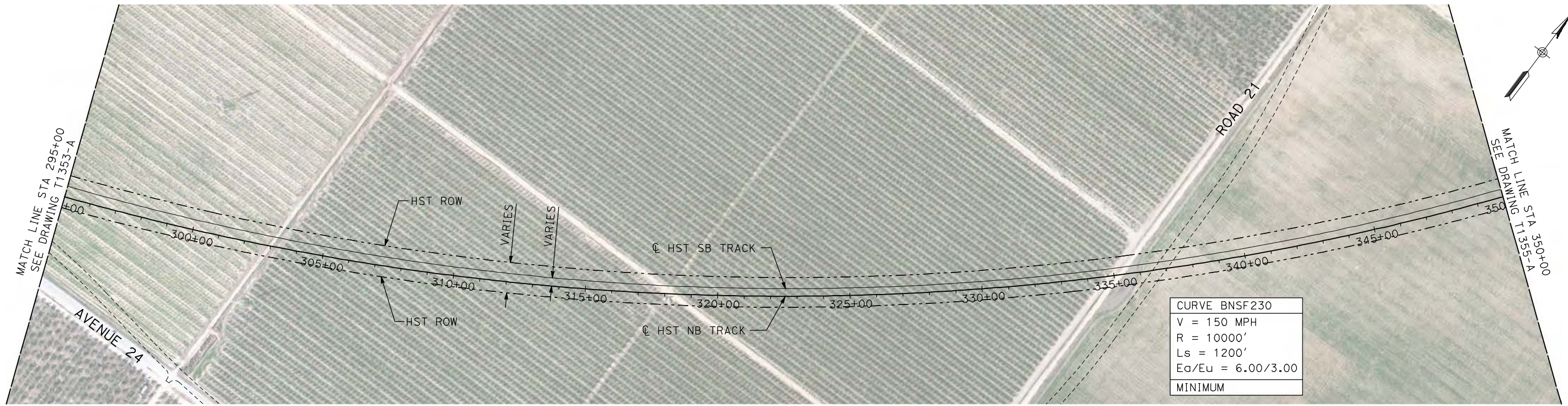


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF WYE - NB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 240+00 TO STA 295+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1353-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

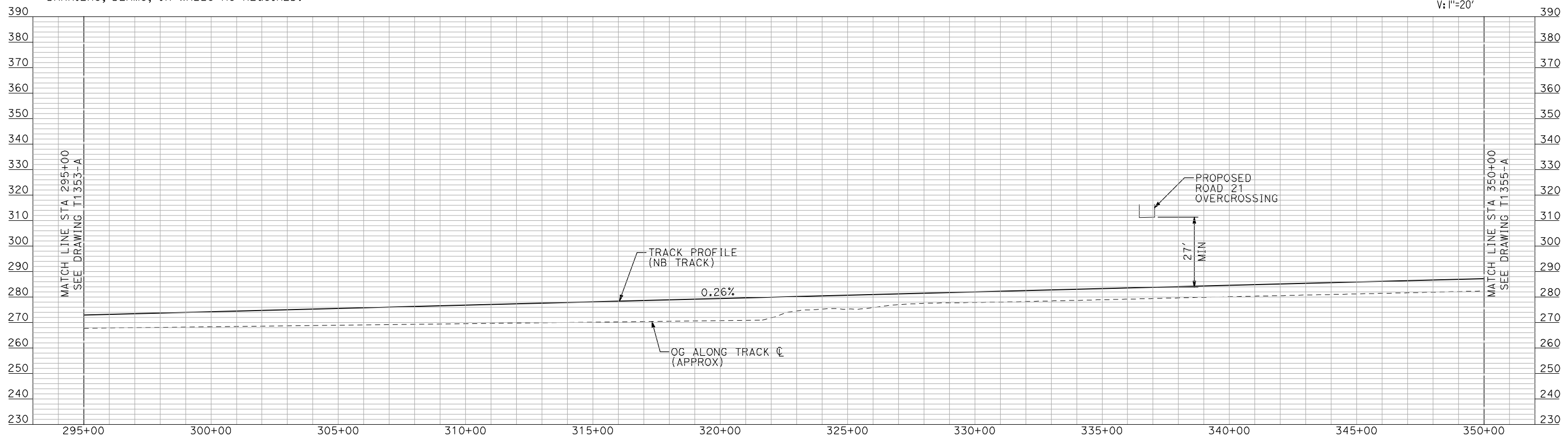
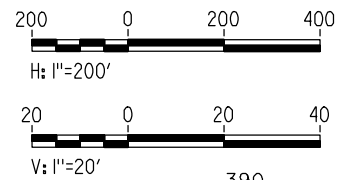


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

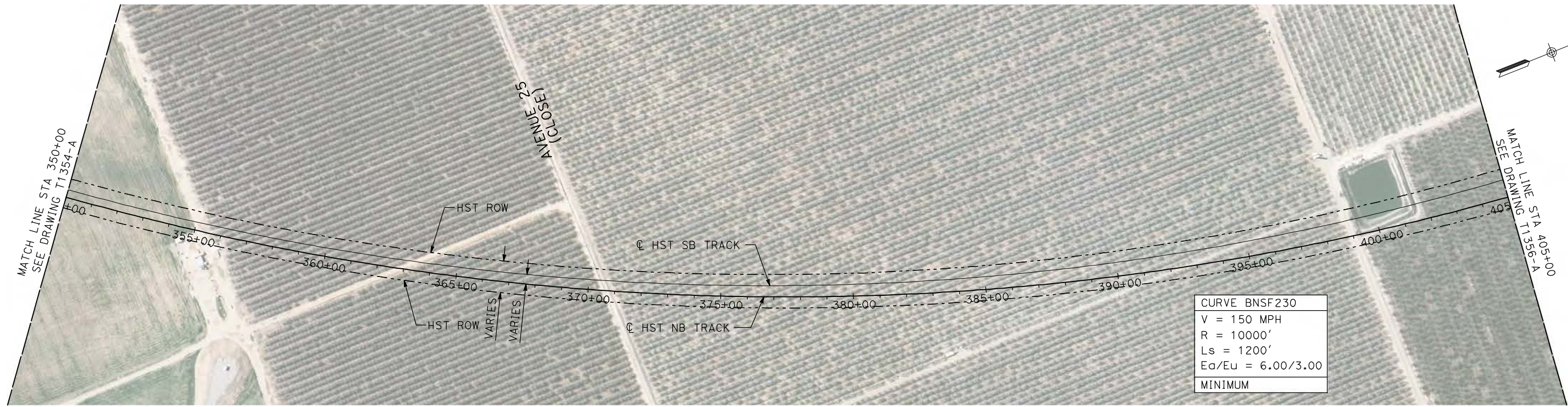


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF WYE - NB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 295+00 TO STA 350+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1354-A  
SCALE  
AS SHOWN  
SHEET NO.  
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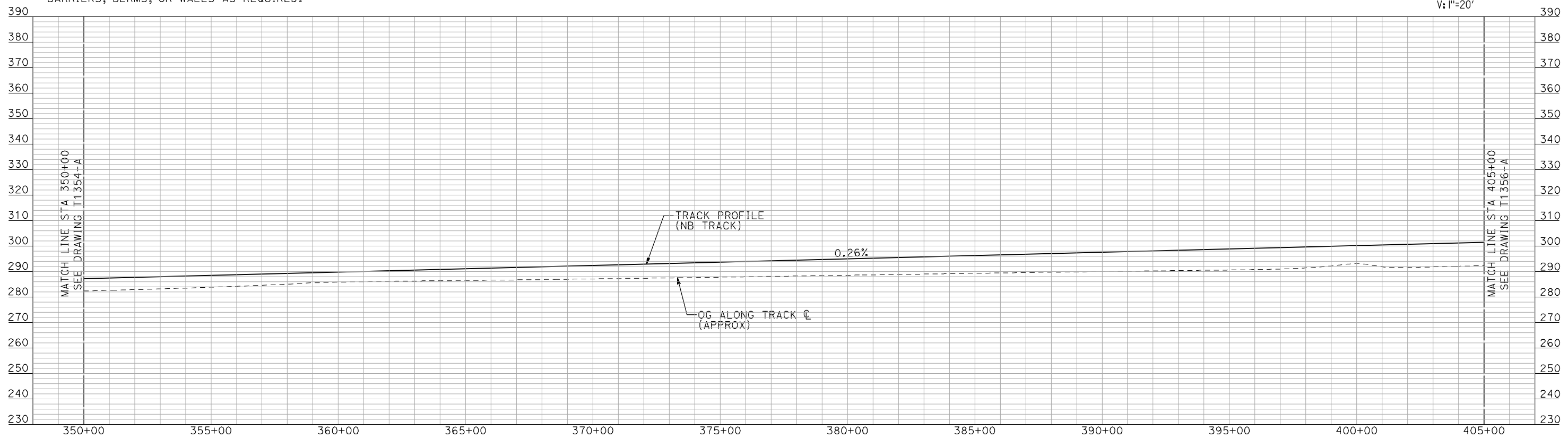
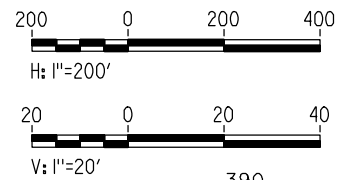


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



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

BNSF WYE - NB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 350+00 TO STA 405+00

CONTRACT NO.  
HSR06-007

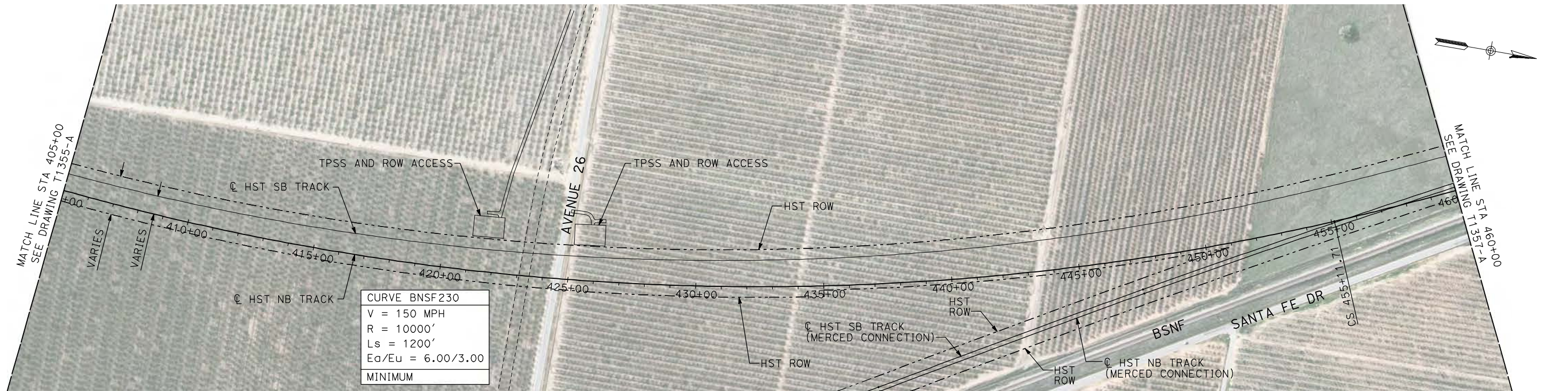
DRAWING NO.  
T1355-A

SCALE  
AS SHOWN

SHEET NO.  
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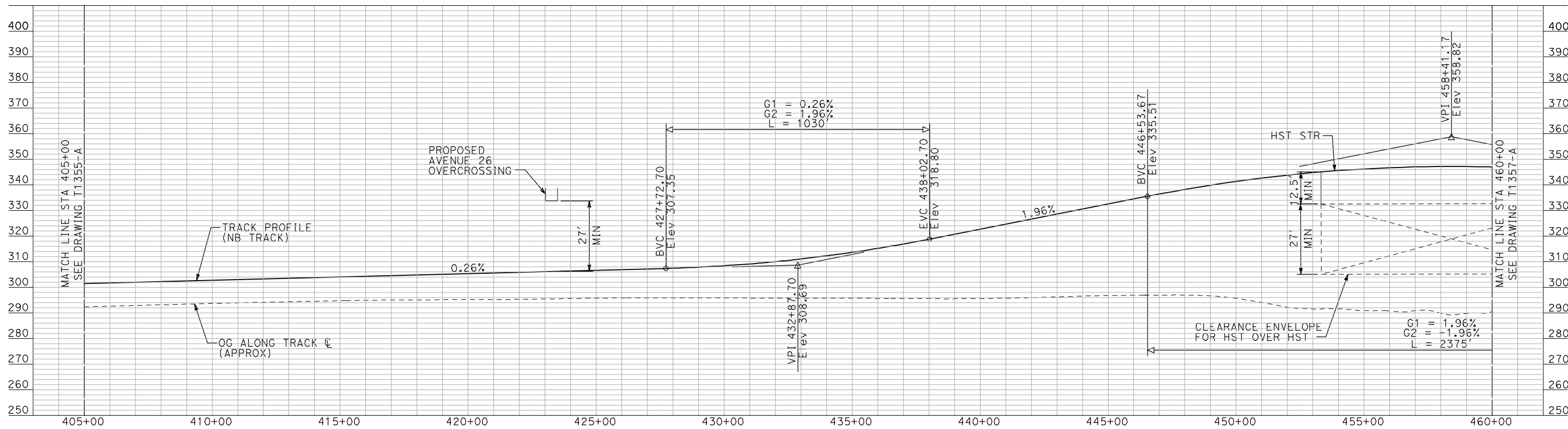
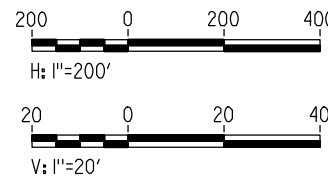


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- NOTES:**
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS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

**PLAN**



"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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

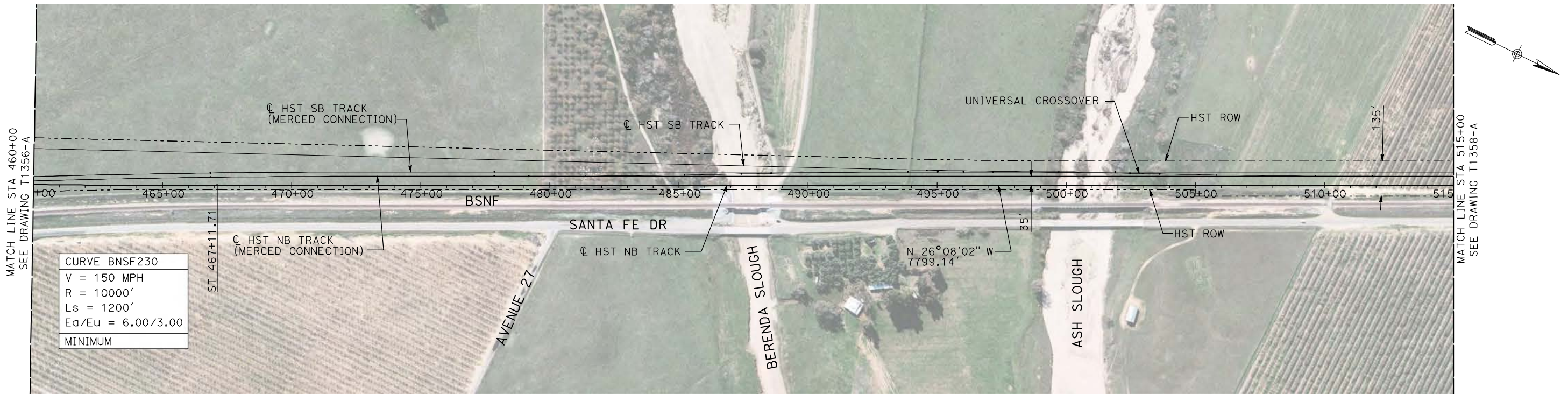
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF WYE - NB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 405+00 TO STA 460+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1356-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

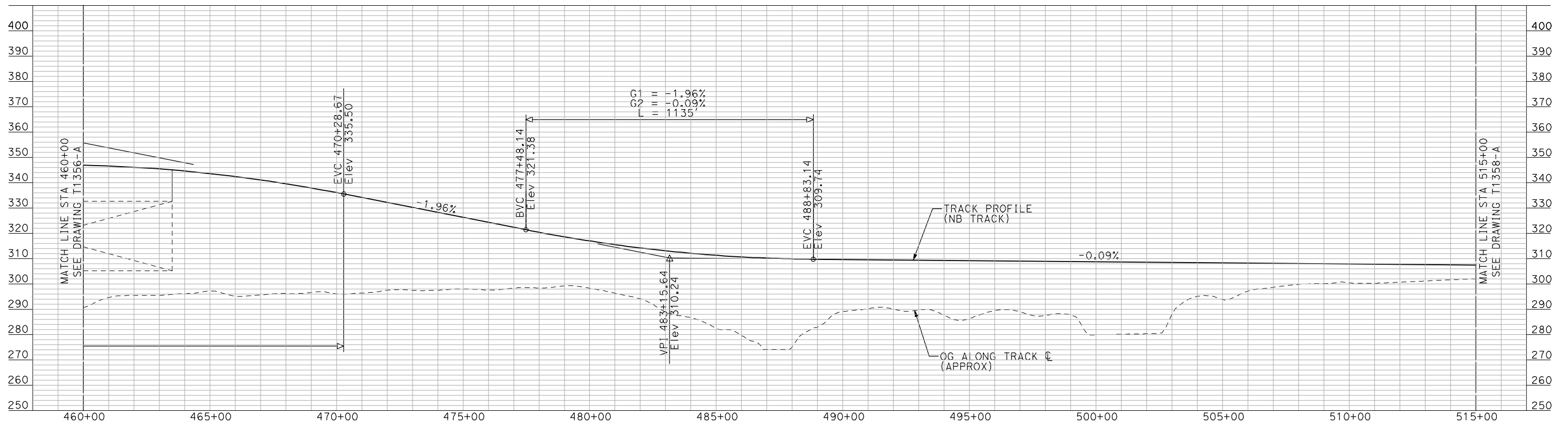
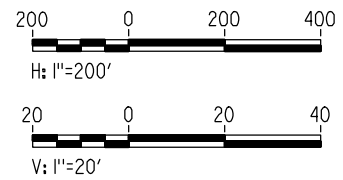




CURVE BNSF230  
 V = 150 MPH  
 R = 10000'  
 Ls = 1200'  
 Ea/Eu = 6.00/3.00  
 MINIMUM

- 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**



**PROFILE**

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

7/21/2011 12:24:53 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\BNSF\_AVE 24\MF-T-1357-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
 DRAWN BY  
H. SULLIVAN  
 CHECKED BY  
A. BOONE  
 IN CHARGE  
A. BOONE  
 DATE  
07/20/2011

**RECORD SET  
 15% DESIGN  
 SUBMITTAL**

**NOT FOR  
 CONSTRUCTION**

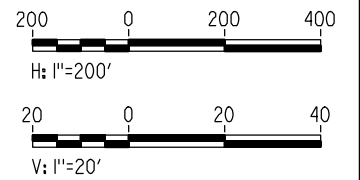
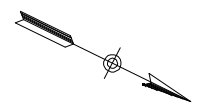


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
 MERCED TO FRESNO**

BNSF WYE - NB CONNECTION  
 AVENUE 24  
 PLAN AND PROFILE  
 STA 460+00 TO STA 515+00

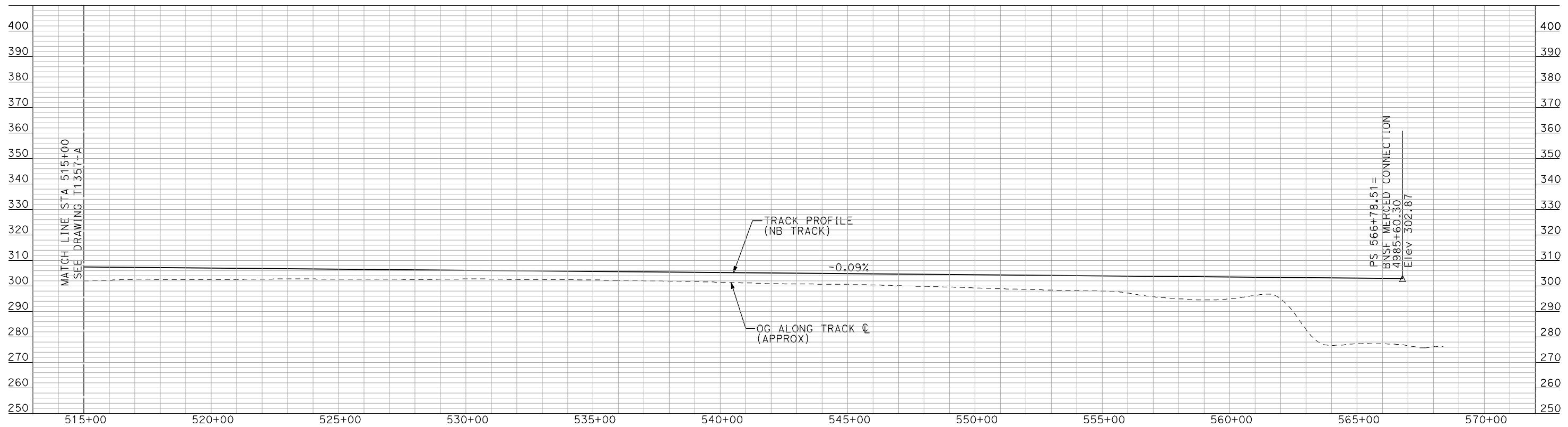
CONTRACT NO. HSR06-007
DRAWING NO. T1357-A
SCALE AS SHOWN
SHEET NO. ### OF ###





- 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**



**PROFILE**

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

7/21/2011 12:25:24 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_24\WF-T-1358-A.dgn machadoe

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
**A. SHIELDS**  
DRAWN BY  
**H. SULLIVAN**  
CHECKED BY  
**A. BOONE**  
IN CHARGE  
**A. BOONE**  
DATE  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

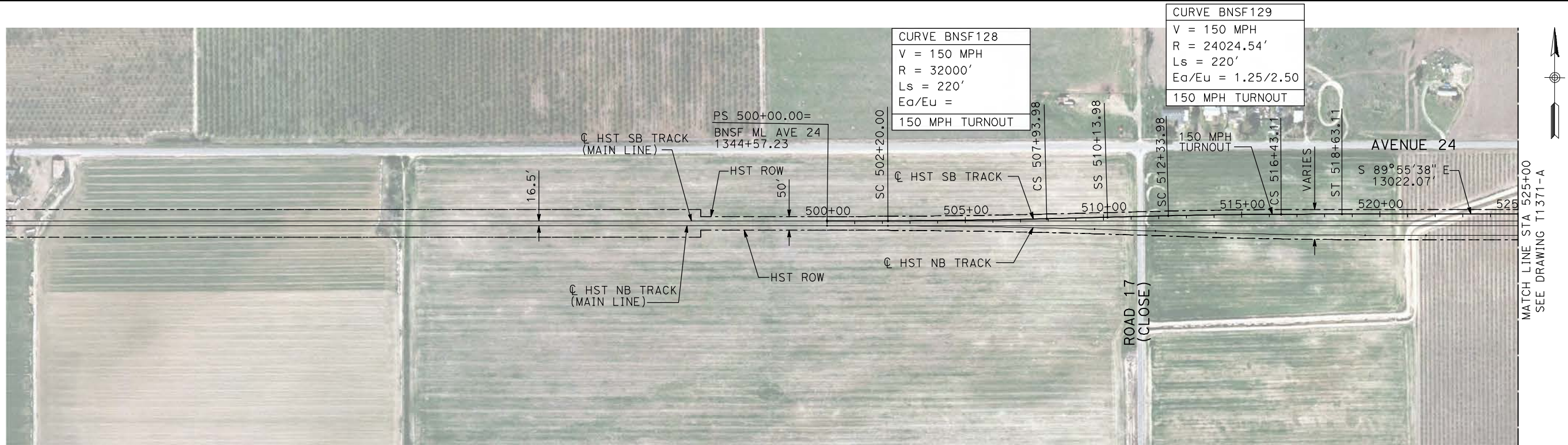
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF WYE - NB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 515+00 TO STA 566+78.51

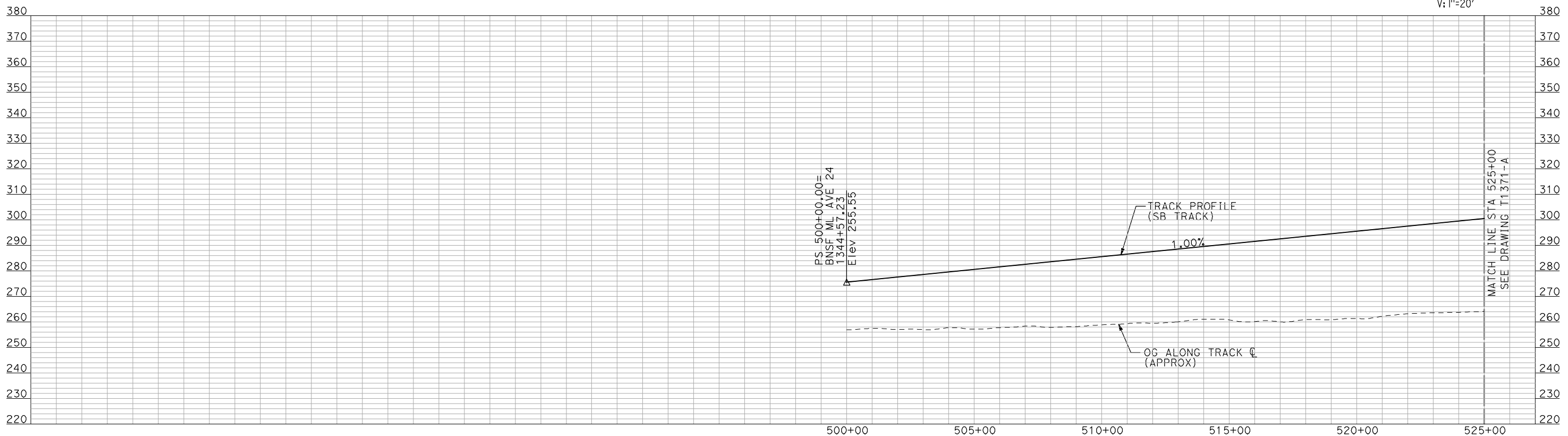
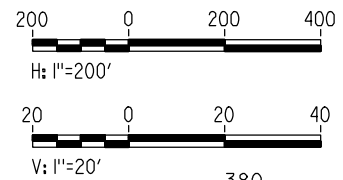
CONTRACT NO. HSR06-007
DRAWING NO. T1358-A
SCALE AS SHOWN
SHEET NO. ### OF ###





**PLAN**

- 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.



**PROFILE**

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

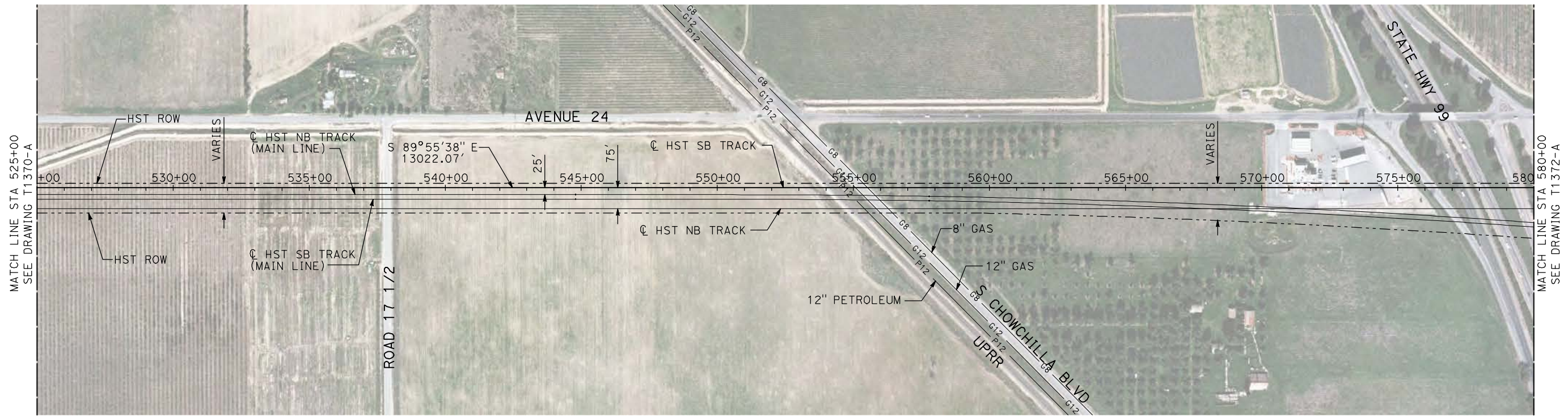
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DESIGNED BY A. SHIELDS	RECORD SET 15% DESIGN SUBMITTAL	 		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b> BNSF WYE - SB CONNECTION AVENUE 24 PLAN AND PROFILE STA 500+00 TO STA 525+00	CONTRACT NO. HSR06-007
DRAWN BY H. SULLIVAN	NOT FOR CONSTRUCTION				DRAWING NO. T1370-A
CHECKED BY A. BOONE					SCALE AS SHOWN
IN CHARGE A. BOONE					SHEET NO. ### OF ###
DATE 07/20/2011					

REV	DATE	BY	CHK	APP	DESCRIPTION

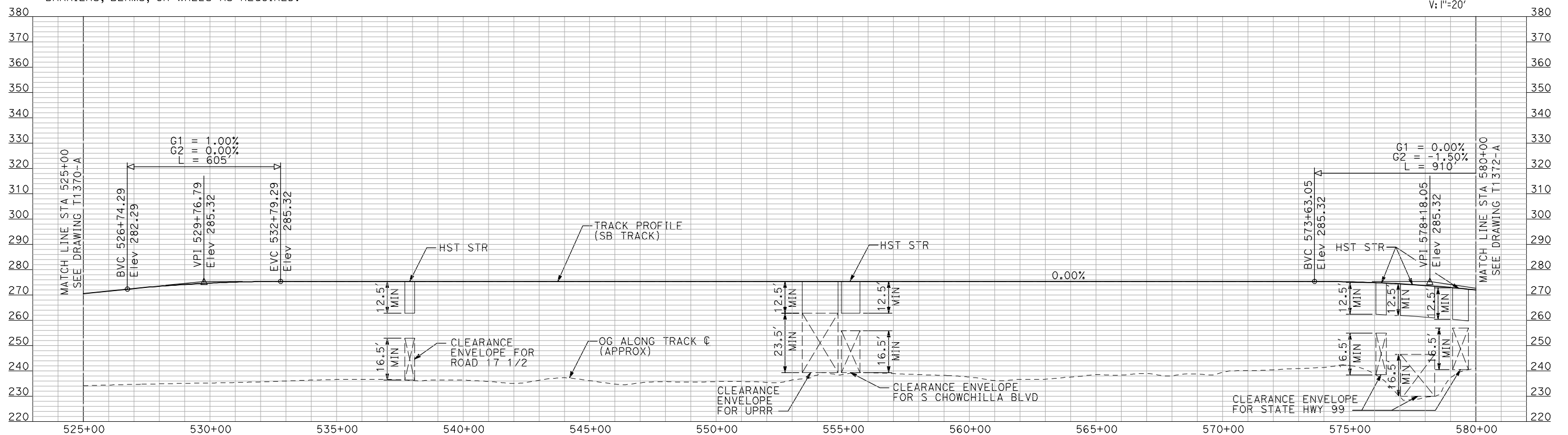
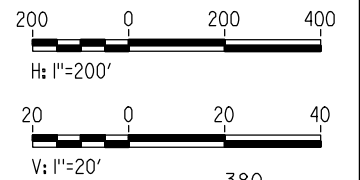


7/21/2011 12:26:23 PM i:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\BNSF\_AVE 24\MF-T-1371-A.dgn machadoe



**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



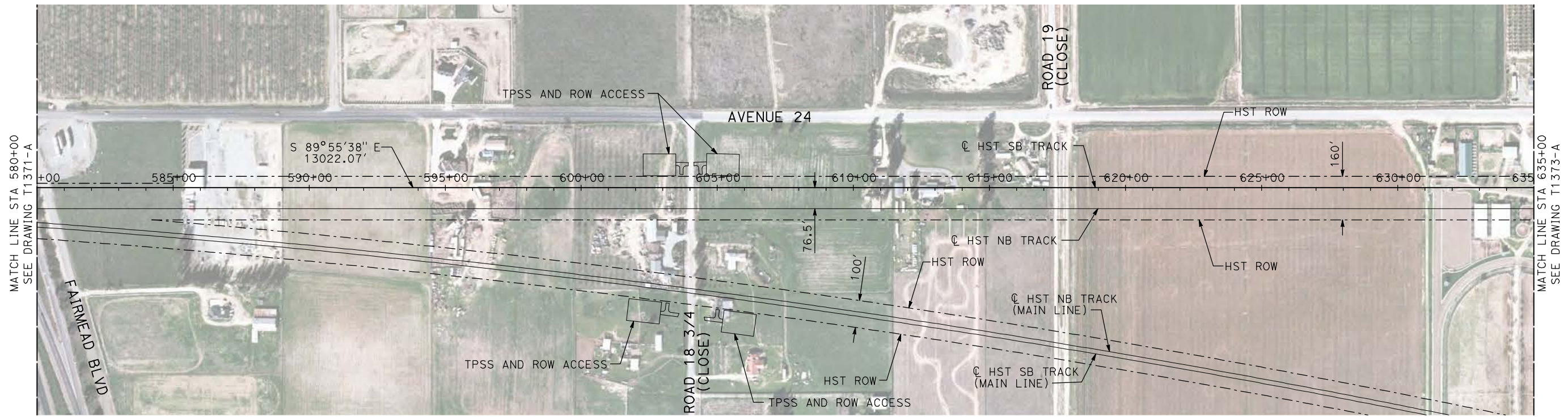
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF WYE - SB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 525+00 TO STA 580+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1371-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

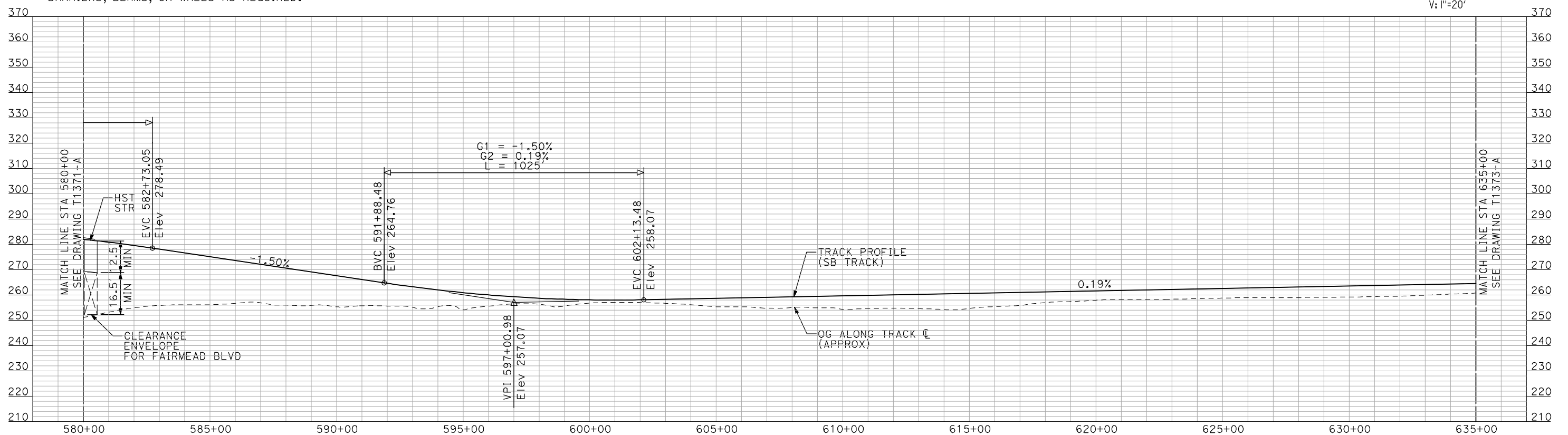
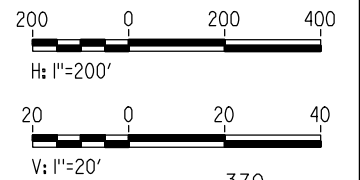


7/21/2011 12:26:51 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\BNSF\_AVE 24\MF-T-1372-A.dgn



**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

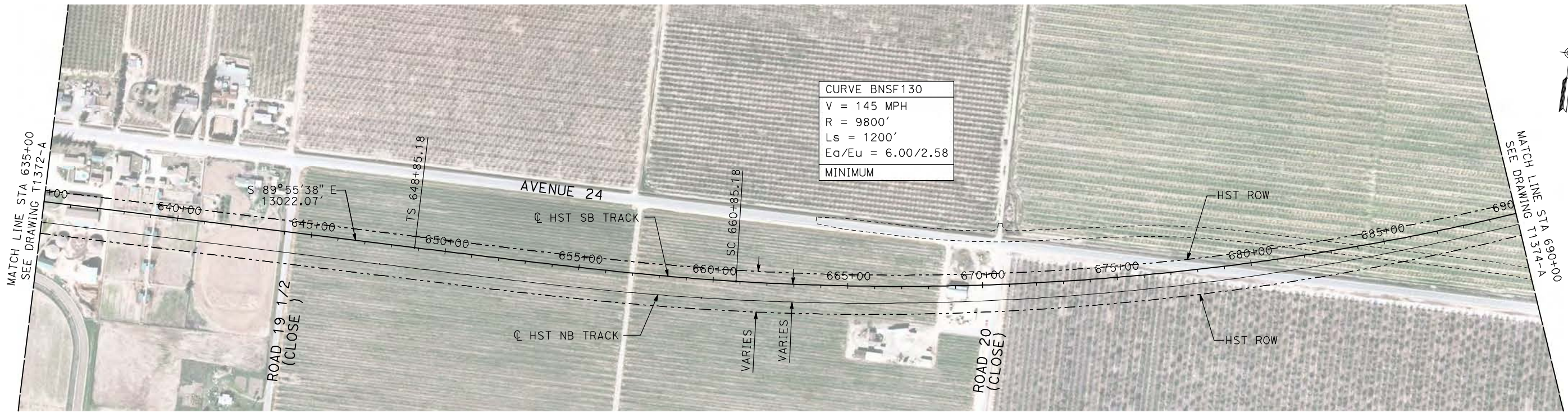


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF WYE - SB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 580+00 TO STA 635+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1372-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

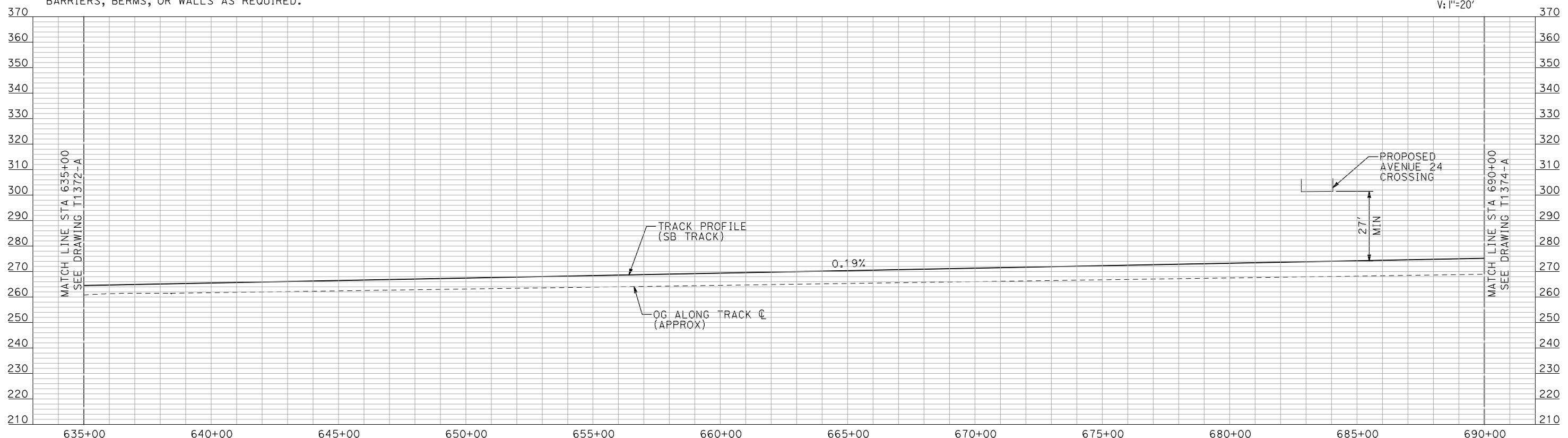
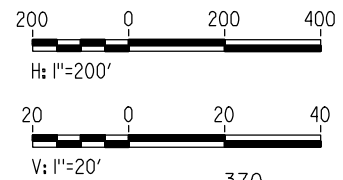


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**PLAN**

- 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.



**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  
**07/20/2011**

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

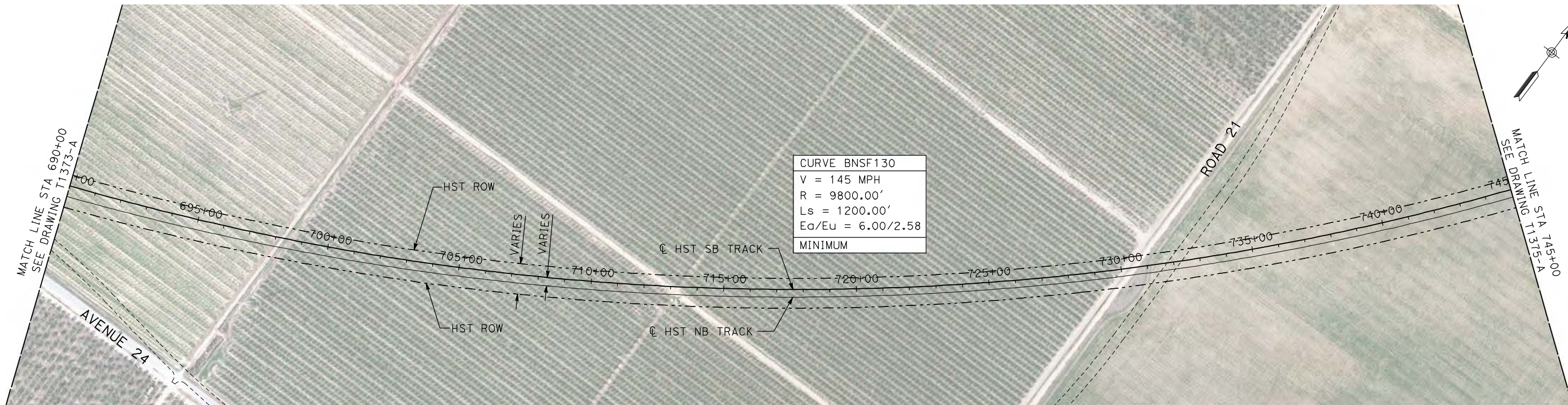
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF WYE - SB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 635+00 TO STA 690+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1373-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

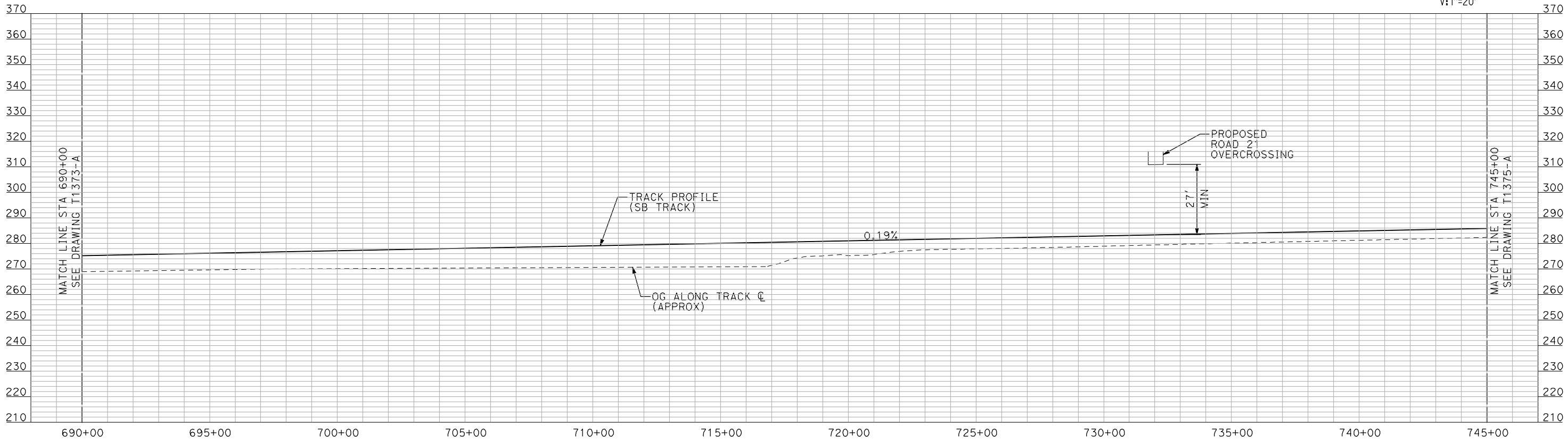
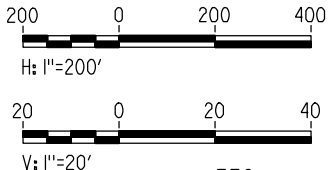




CURVE BNSF 130  
 V = 145 MPH  
 R = 9800.00'  
 Ls = 1200.00'  
 Ea/Eu = 6.00/2.58  
 MINIMUM

- 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**



**PROFILE**

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

7/21/2011 12:27:52 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\deir\bnsf\_ave\_24\WF-T-1374-A.dgn machadoe

DESIGNED BY A. SHIELDS	<b>RECORD SET 15% DESIGN SUBMITTAL</b>  <b>NOT FOR CONSTRUCTION</b>				
DRAWN BY H. SULLIVAN					
CHECKED BY A. BOONE					
IN CHARGE A. BOONE					
DATE 07/20/2011					
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
 DRAWN BY  
H. SULLIVAN  
 CHECKED BY  
A. BOONE  
 IN CHARGE  
A. BOONE  
 DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

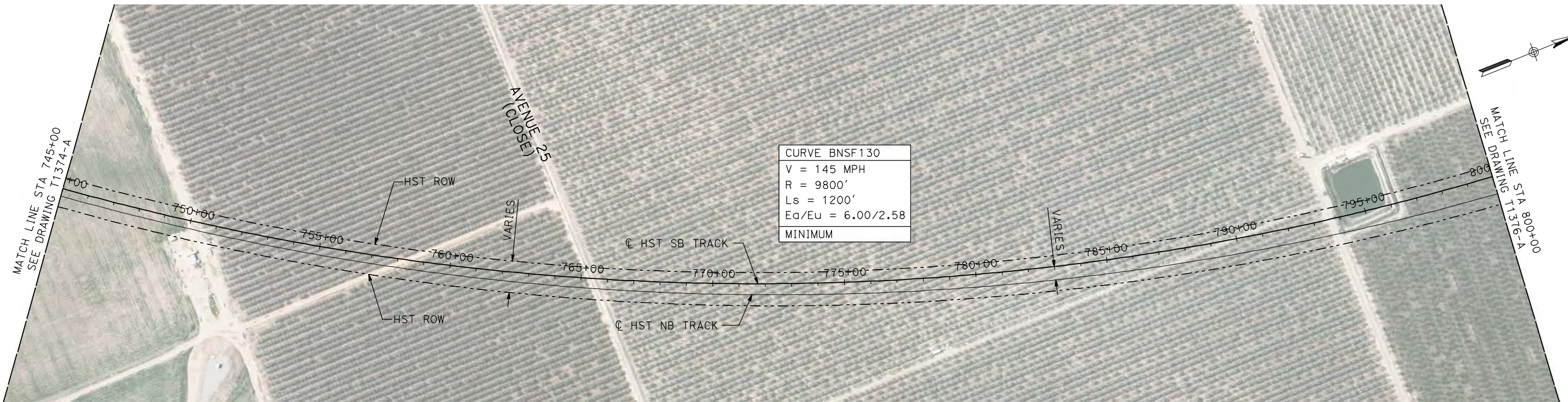


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
 MERCED TO FRESNO**  
 BNSF WYE - SB CONNECTION  
 AVENUE 24  
 PLAN AND PROFILE  
 STA 690+00 TO STA 745+00

CONTRACT NO. HSR06-007
DRAWING NO. T1374-A
SCALE AS SHOWN
SHEET NO. ### OF ###

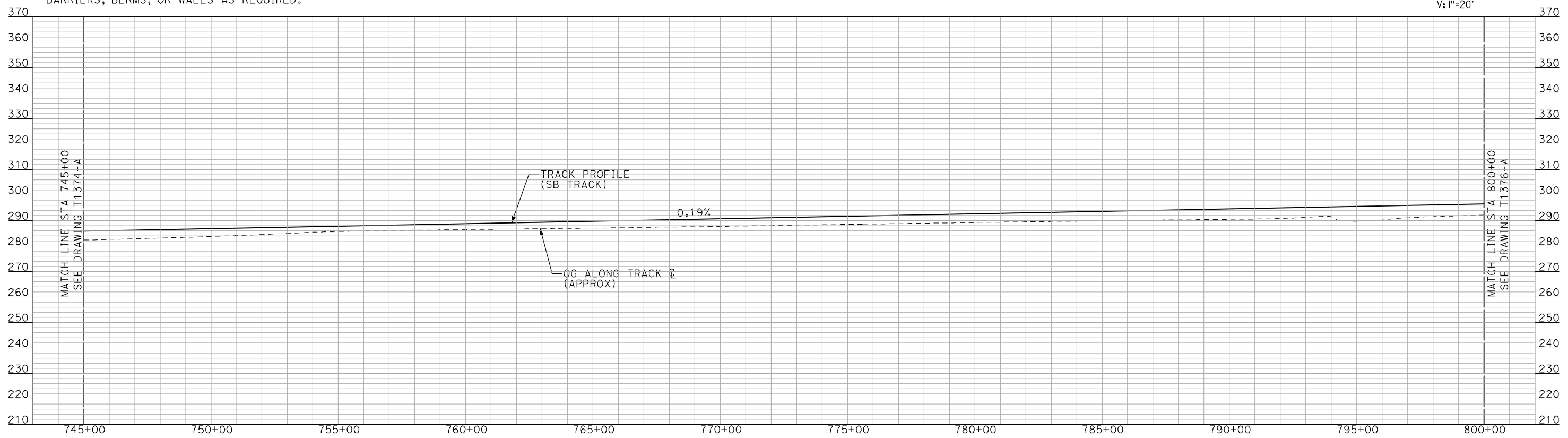
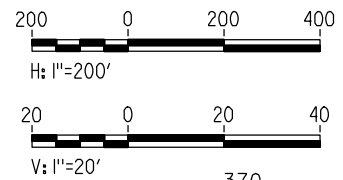


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**PLAN**

- 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.



**PROFILE**

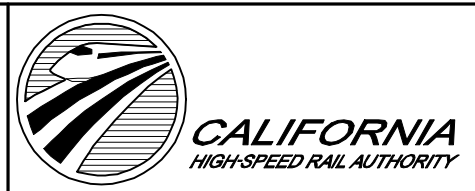
"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



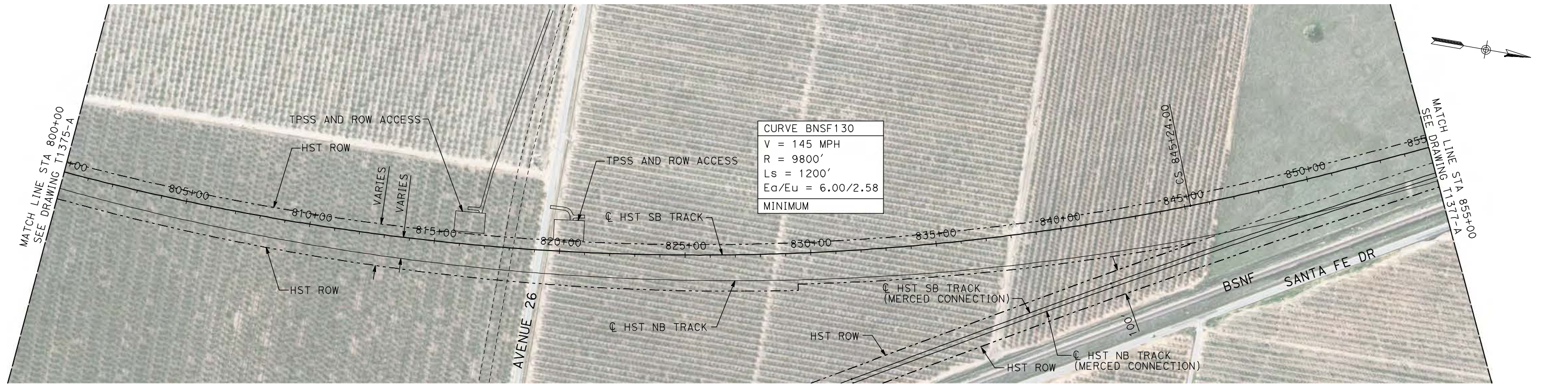
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF WYE - SB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 745+00 TO STA 800+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1375-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

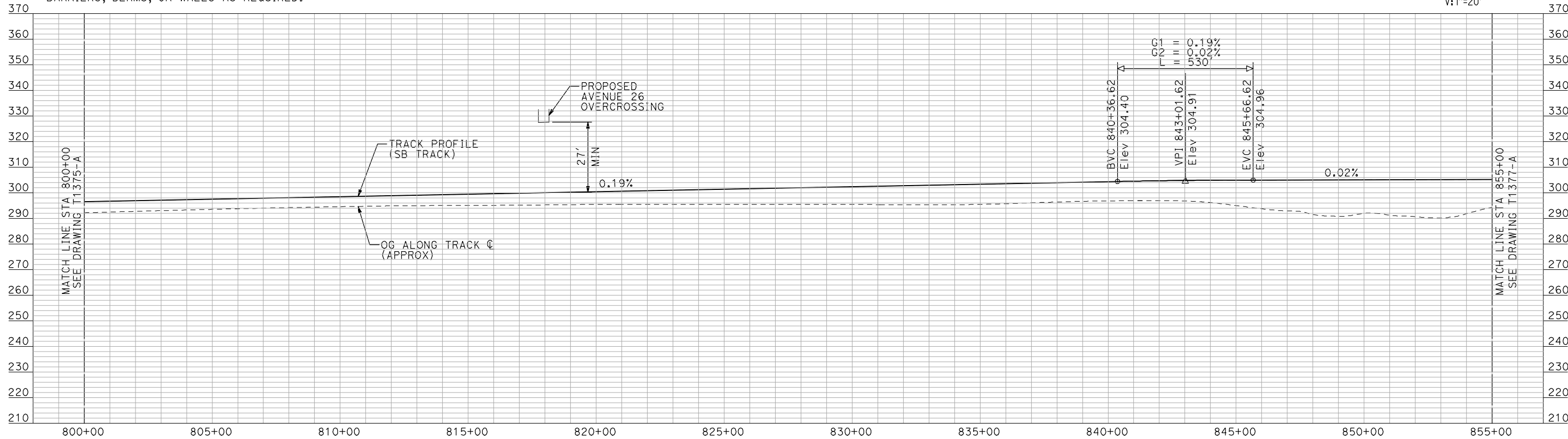
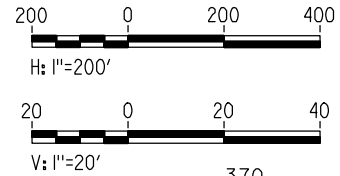


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**PLAN**

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



**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  
07/20/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

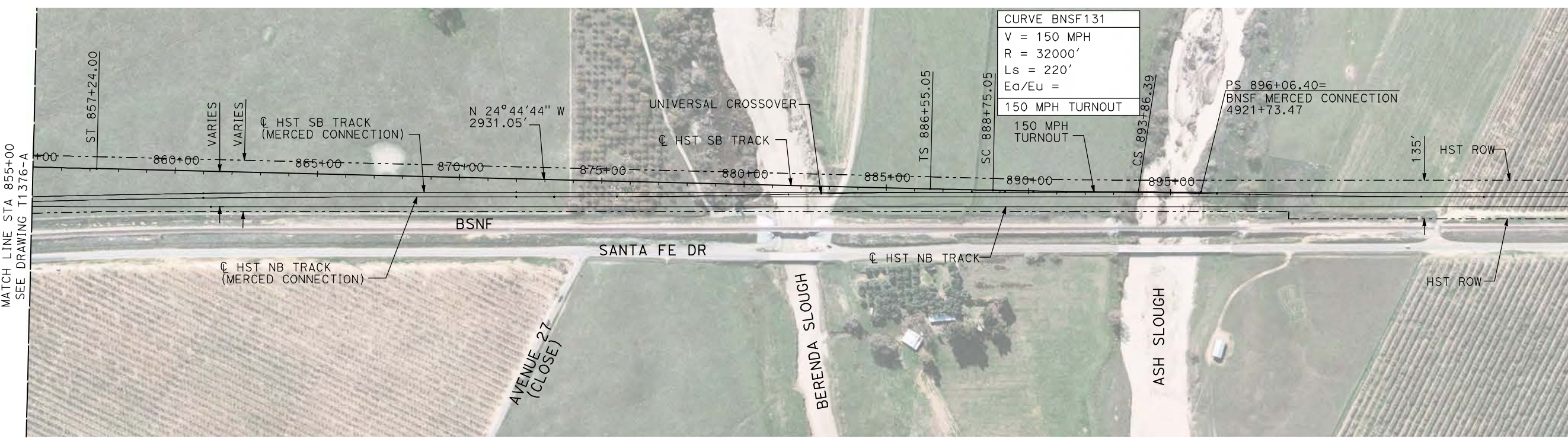


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF WYE - SB CONNECTION  
AVENUE 24  
PLAN AND PROFILE  
STA 800+00 TO STA 855+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1376-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

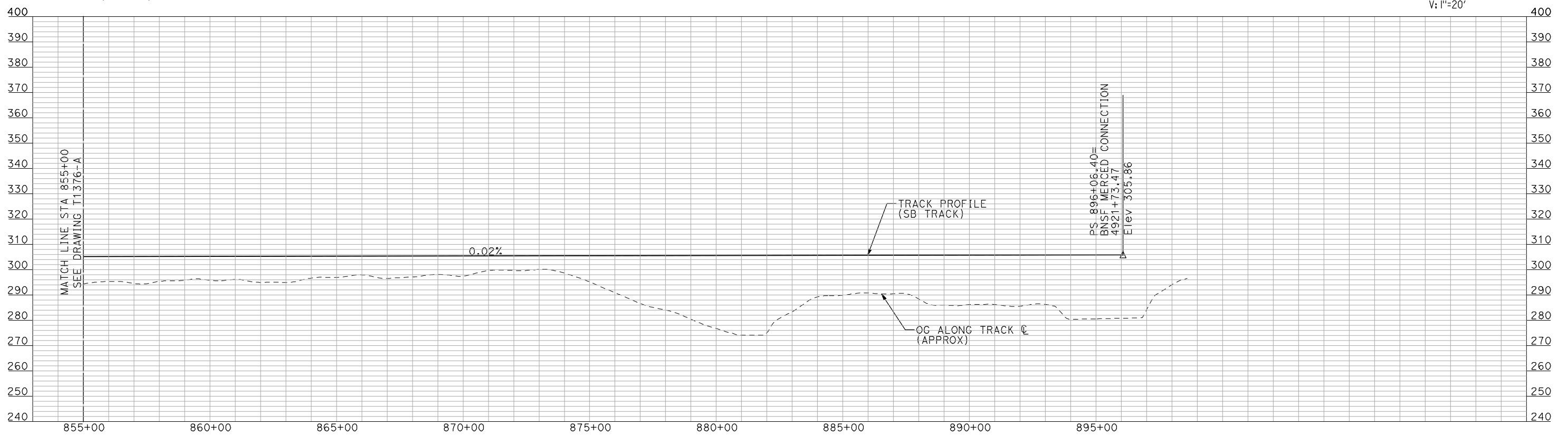
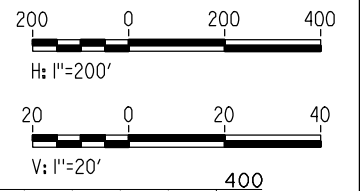




CURVE BNSF131  
 V = 150 MPH  
 R = 32000'  
 Ls = 220'  
 Ea/Eu =

**PLAN**

- 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.



**PROFILE**

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

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DESIGNED BY A. SHIELDS	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	 <small>Technical Services, Inc.          2020 L Street, Suite 300          Sacramento, CA 95811</small> 	 <b>CALIFORNIA</b> <small>HIGH-SPEED RAIL AUTHORITY</small>	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b> BNSF WYE - SB CONNECTION AVENUE 24 PLAN AND PROFILE STA 855+00 TO STA 896+06.40	CONTRACT NO. HSR06-007
DRAWN BY H. SULLIVAN					DRAWING NO. T1377-A
CHECKED BY A. BOONE					SCALE AS SHOWN
IN CHARGE A. BOONE					SHEET NO. ### OF ###
DATE 07/20/2011					

REV	DATE	BY	CHK	APP	DESCRIPTION