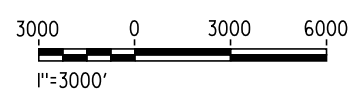


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| LEGEND |                           |
|--------|---------------------------|
|        | EXISTING FREIGHT RAILROAD |
|        | PROPOSED CHST             |



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DESIGNED BY  
M. FISHER  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
KEY MAP

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1870  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 14



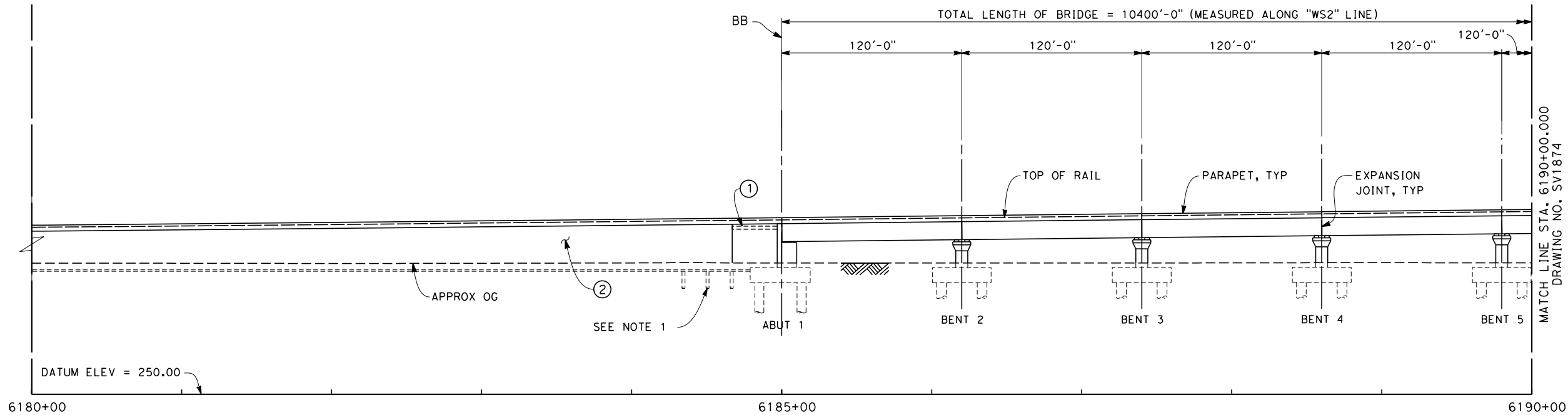
BVC 6156+73.77  
ELEV 352.11

EVC 6184+73.77  
ELEV 366.06

2800' VC  
R/C = 0.043% /STA

1.100 %

**TOP OF RAIL "WS2" LINE**  
NO SCALE



**ELEVATION**  
SCALE 1" = 40'

**NOTES**

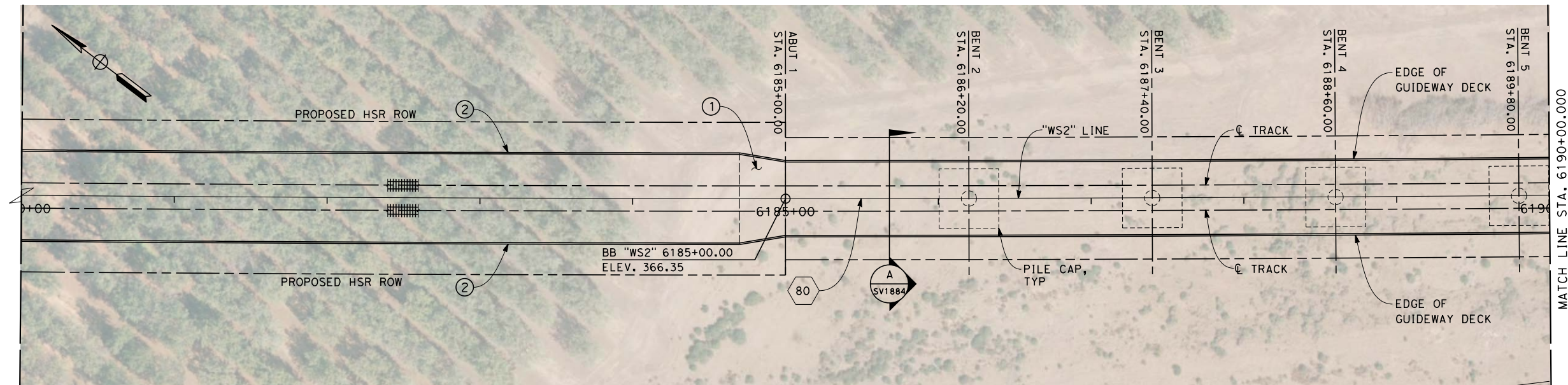
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST  
IN-SITU  
STEEL TRUSS - INSITU, SLID  
OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND  
INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**LEGEND:**

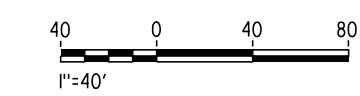
- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

80  
R = 60000.00'  
Δ = 13° 44' 37.1"  
T = 7230.9'  
L = 14392.3'



**PLAN**  
SCALE 1" = 40'



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DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
PLAN AND ELEVATION

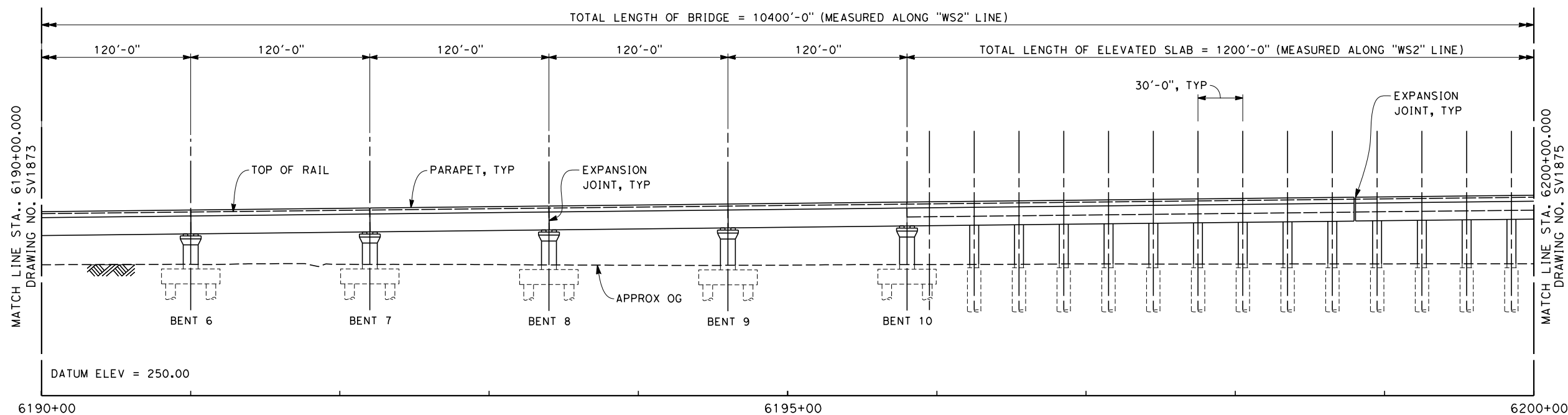
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1873  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 14

EVC 6184+73.77  
ELEV 366.06

BVC 6218+93.99  
ELEV 403.69

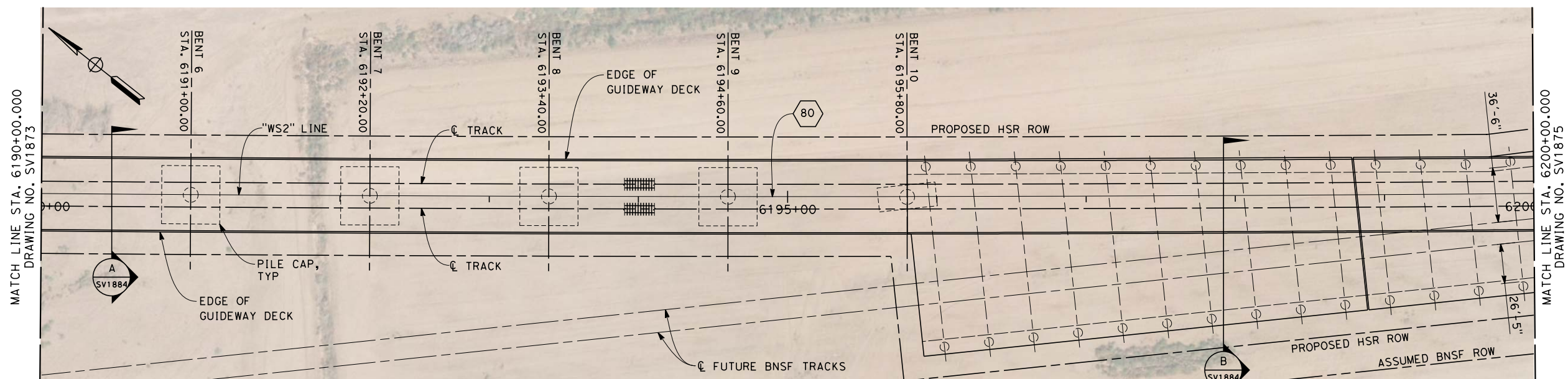
1.100 %

**TOP OF RAIL "WS2" LINE**  
NO SCALE



**ELEVATION**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



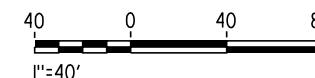
**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

⑧ 80

R = 60000.00'  
Δ = 13° 44' 37.1"  
T = 7230.9'  
L = 14392.3'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

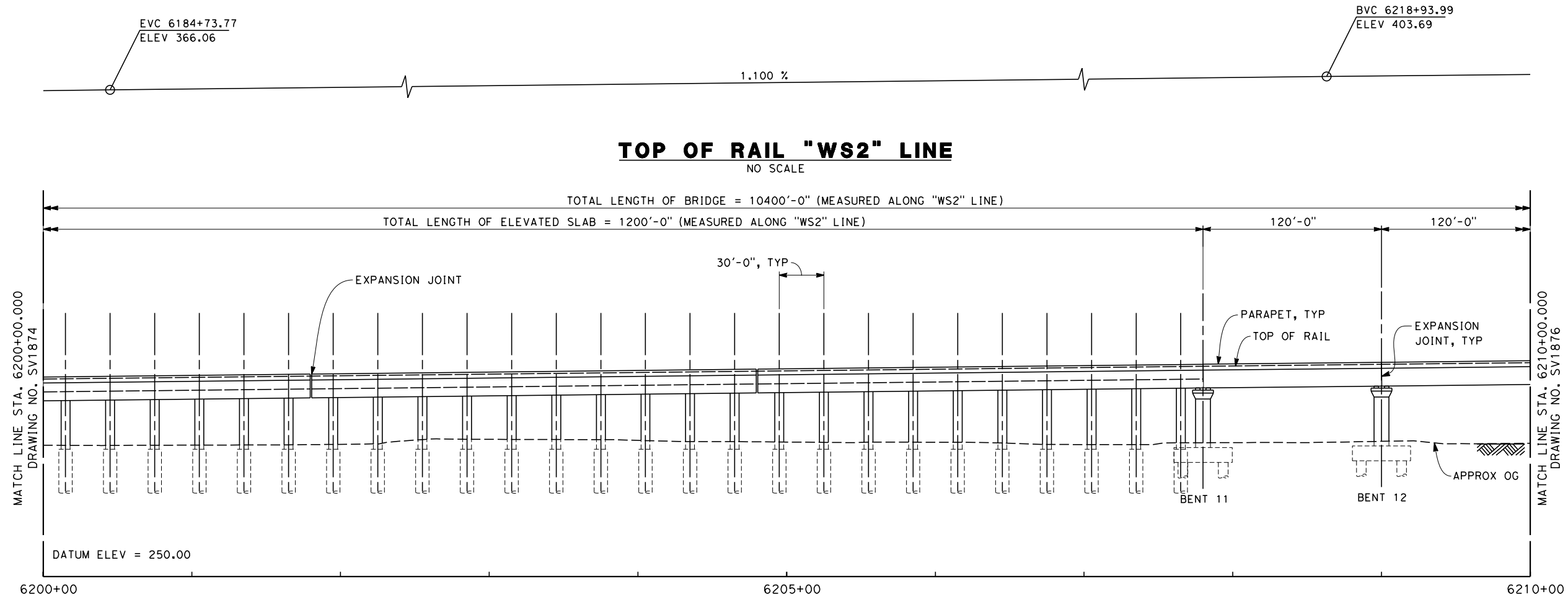
DRAWING NO.  
SV1874

SCALE  
AS SHOWN

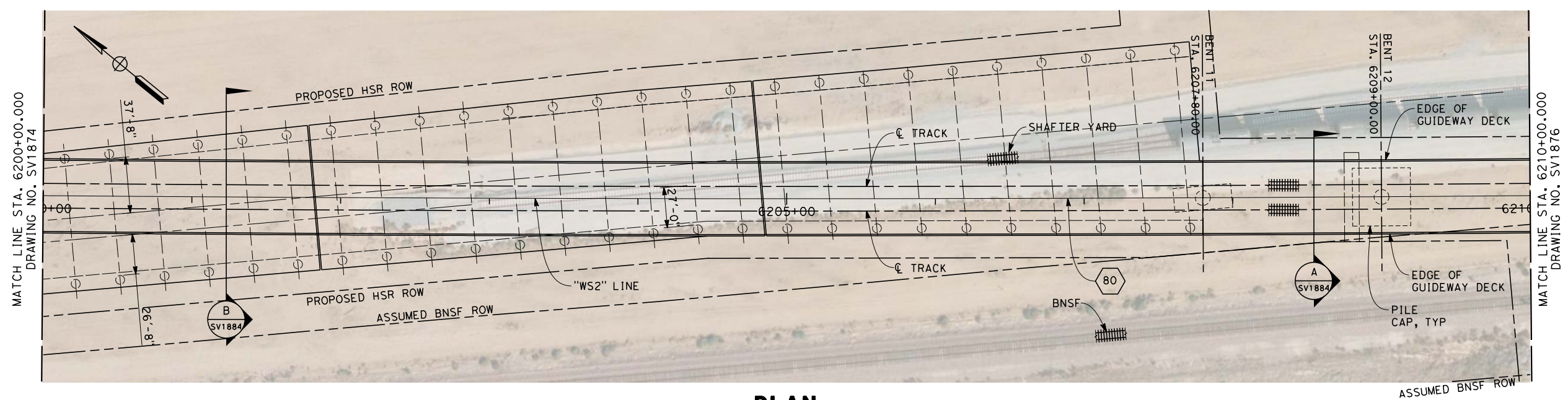
SHEET NO.  
3 OF 14



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**ELEVATION**  
SCALE 1" = 40'



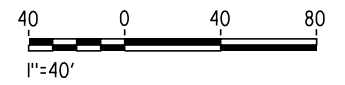
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

80

R = 60000.00'  
 $\Delta = 13^\circ 44' 37.1"$   
 T = 7230.9'  
 L = 14392.3'



| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |
|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 WASCO-SHAFTER BYPASS SUBSECTION  
 ALIGNMENT WS2  
 WASCO VIADUCT  
 PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV1875

SCALE  
AS SHOWN

SHEET NO.  
4 OF 14



EVC 6184+73.77  
ELEV 366.06

BVC 6218+93.99  
ELEV 403.69

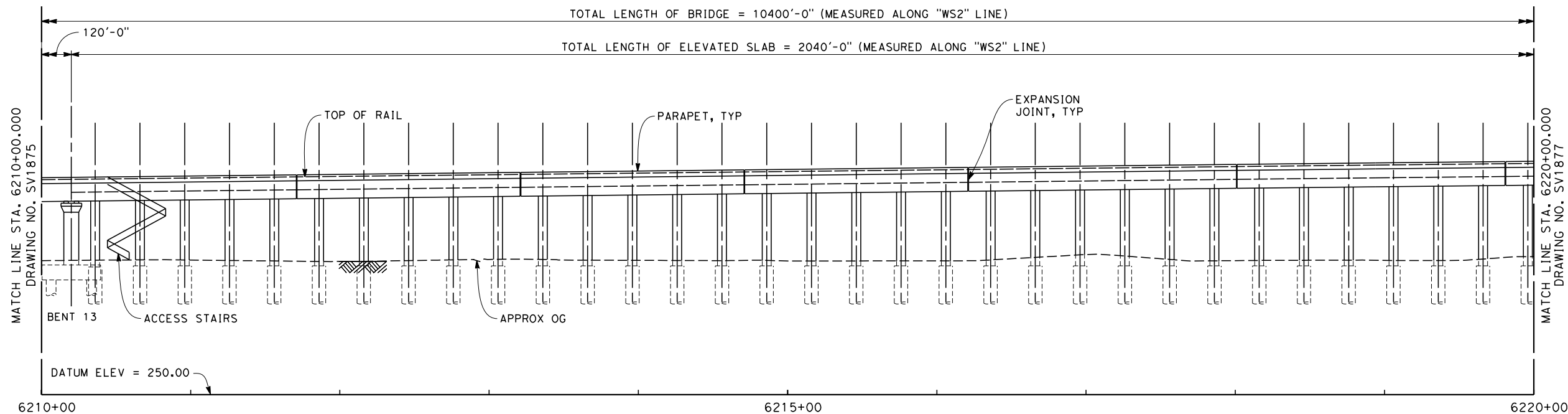
1.100 %

**TOP OF RAIL "WS2" LINE**

NO SCALE

TOTAL LENGTH OF BRIDGE = 10400'-0" (MEASURED ALONG "WS2" LINE)

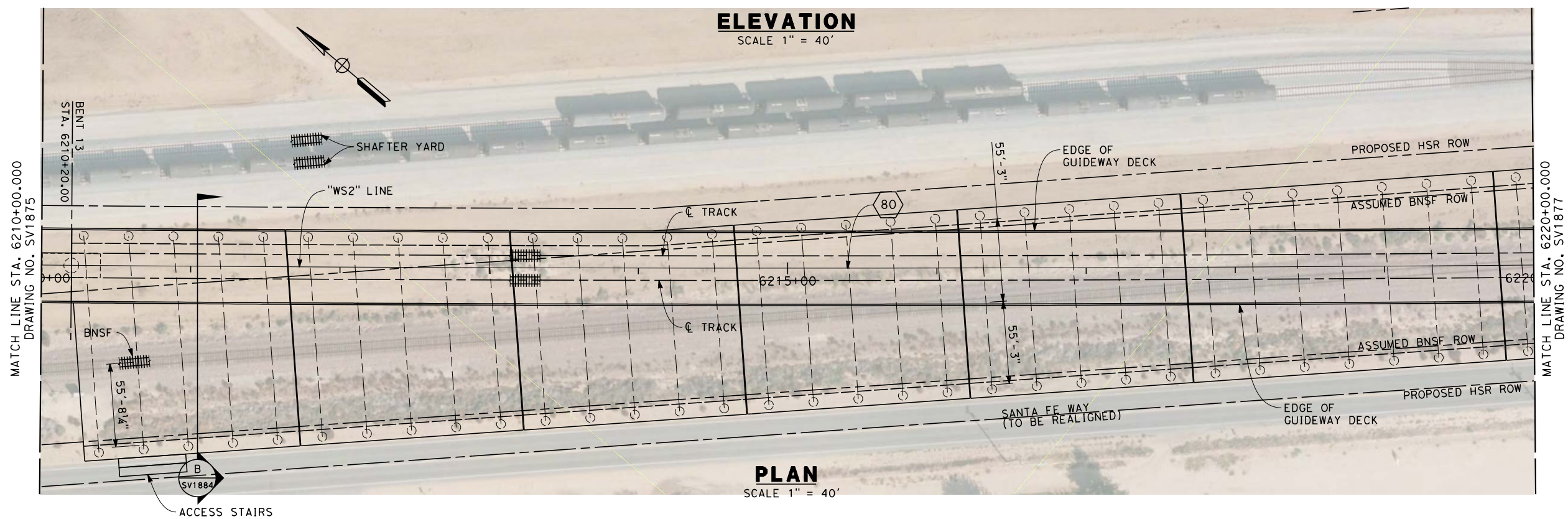
TOTAL LENGTH OF ELEVATED SLAB = 2040'-0" (MEASURED ALONG "WS2" LINE)



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**ELEVATION**

SCALE 1" = 40'



**PLAN**

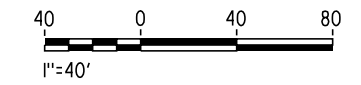
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

80

R = 60000.00'  
Δ = 13° 44' 37.1"  
T = 7230.9'  
L = 14392.3'



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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**

**FRESNO TO BAKERSFIELD**

WASCO-SHAFTER BYPASS SUBSECTION

ALIGNMENT WS2

WASCO VIADUCT

PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV1876

SCALE  
AS SHOWN

SHEET NO.  
5 OF 14



BVC 6218+93.99  
ELEV 403.69

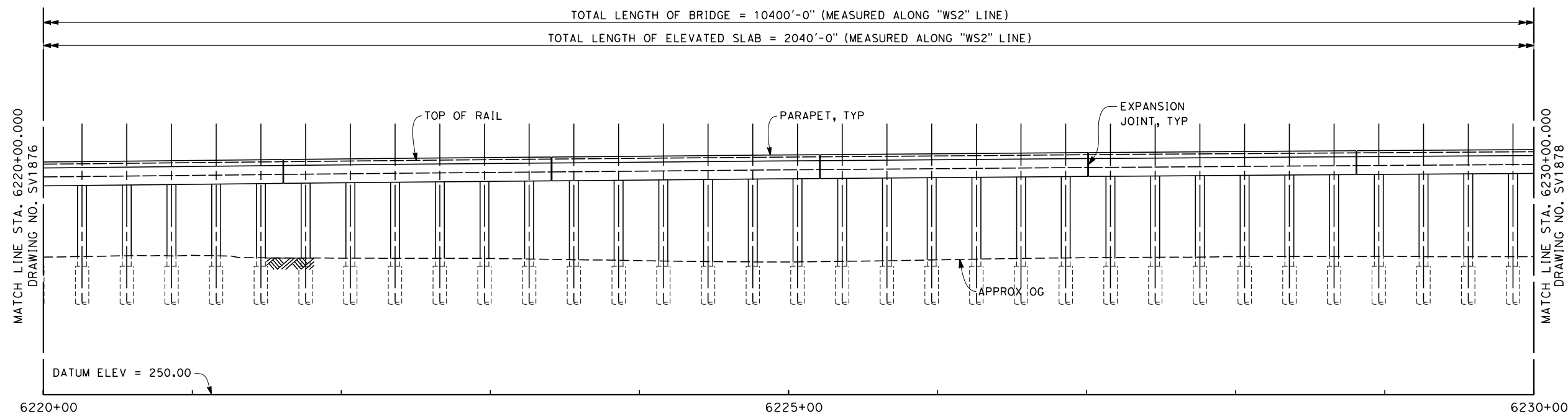
EVC 6275+93.99  
ELEV 394.46

5700' VC  
R/C = -0.044% /STA

**TOP OF RAIL "WS2" LINE**  
NO SCALE

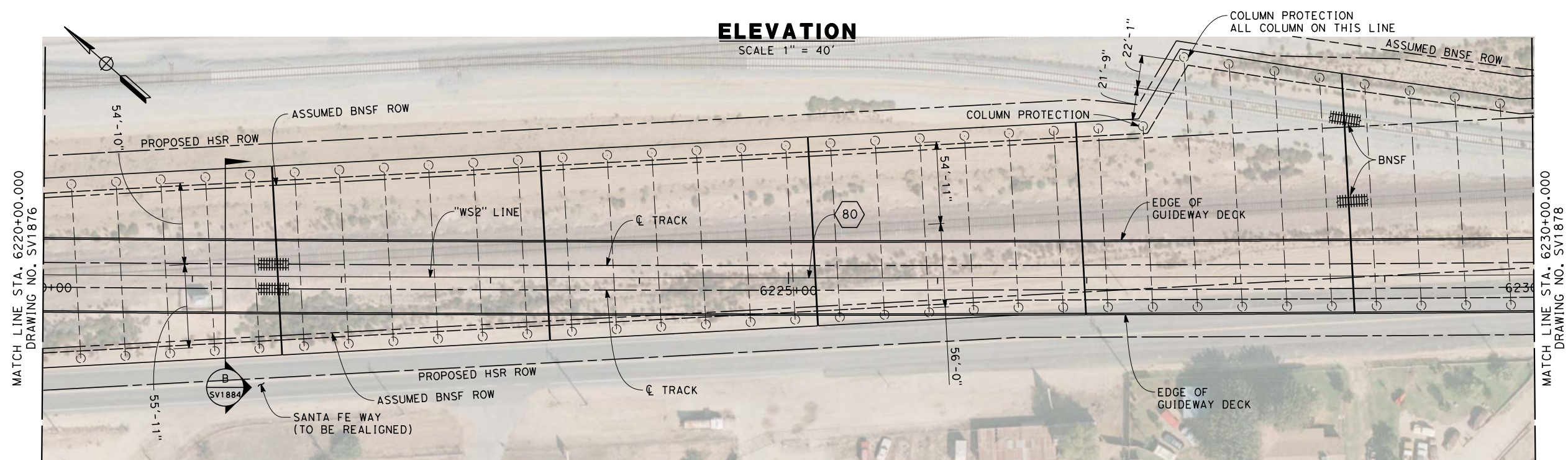
TOTAL LENGTH OF BRIDGE = 10400'-0" (MEASURED ALONG "WS2" LINE)

TOTAL LENGTH OF ELEVATED SLAB = 2040'-0" (MEASURED ALONG "WS2" LINE)



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**ELEVATION**  
SCALE 1" = 40'



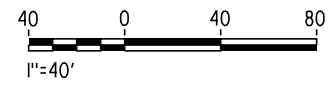
- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

⑧

R = 60000.00'  
Δ = 13° 44' 37.1"  
T = 7230.9'  
L = 14392.3'

**PLAN**  
SCALE 1" = 40'



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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV1877

SCALE  
AS SHOWN

SHEET NO.  
6 OF 14

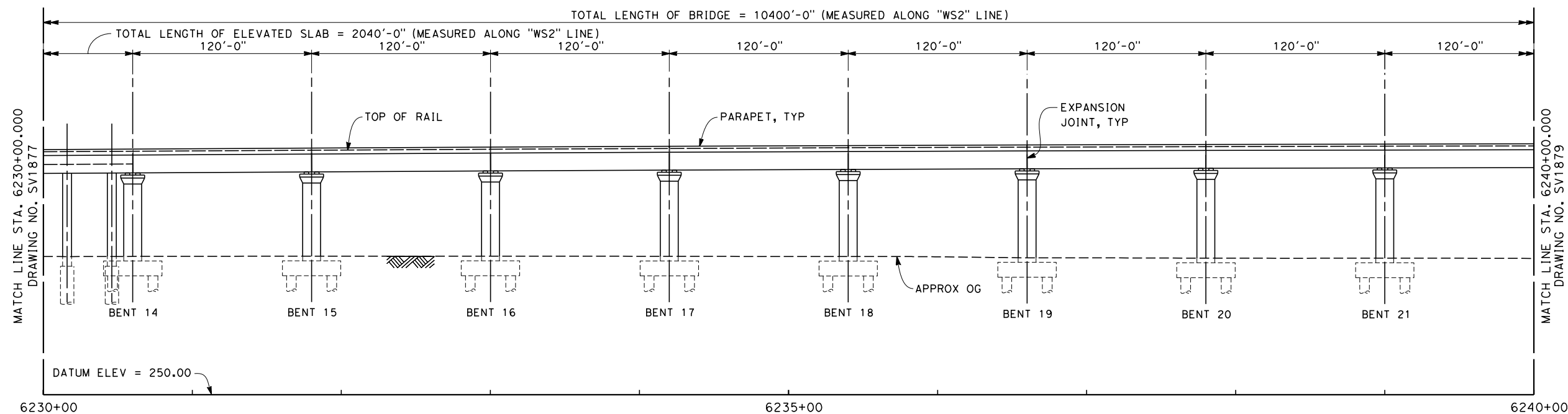


BVC 6218+93.99  
ELEV 403.69

EVC 6275+93.99  
ELEV 394.46

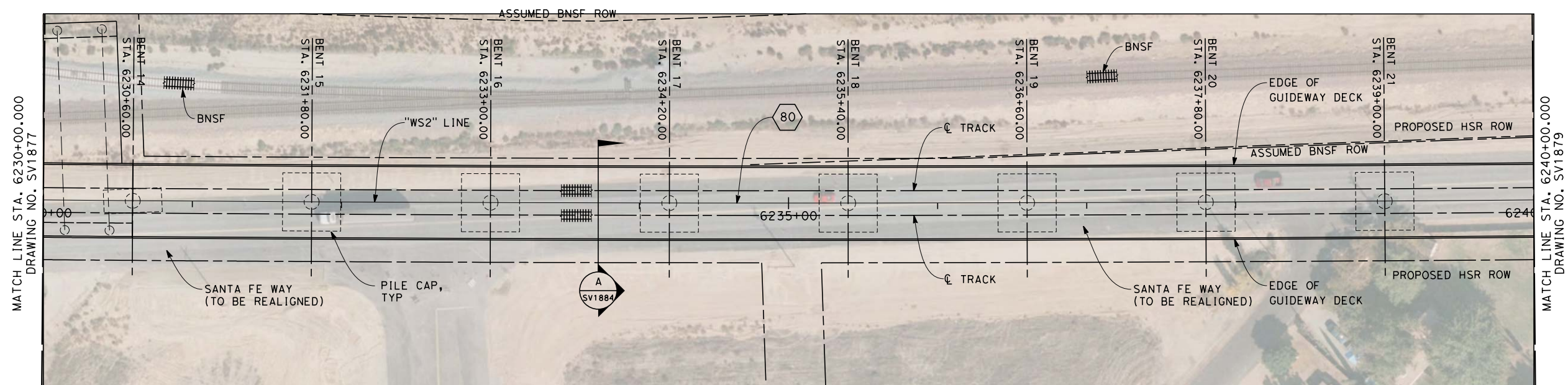
5700' VC  
R/C = -0.044% /STA

**TOP OF RAIL "WS2" LINE**  
NO SCALE



**ELEVATION**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



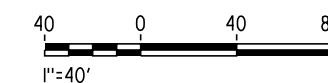
**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

80

R = 60000.00'  
Δ = 13° 44' 37.1"  
T = 7230.9'  
L = 14392.3'



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|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV1878

SCALE  
AS SHOWN

SHEET NO.  
7 OF 14

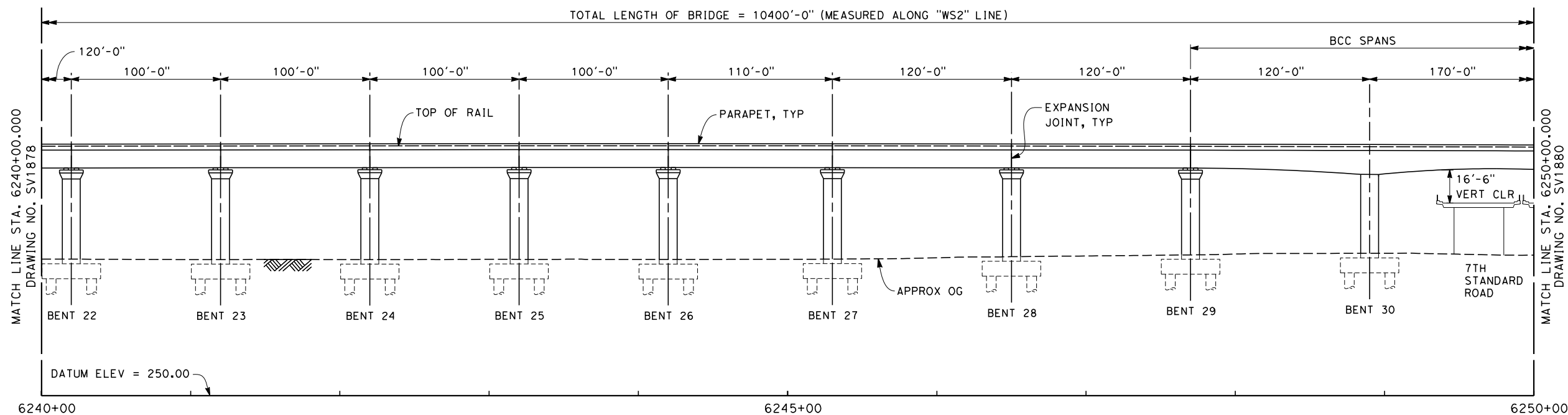


BVC 6218+93.99  
ELEV 403.69

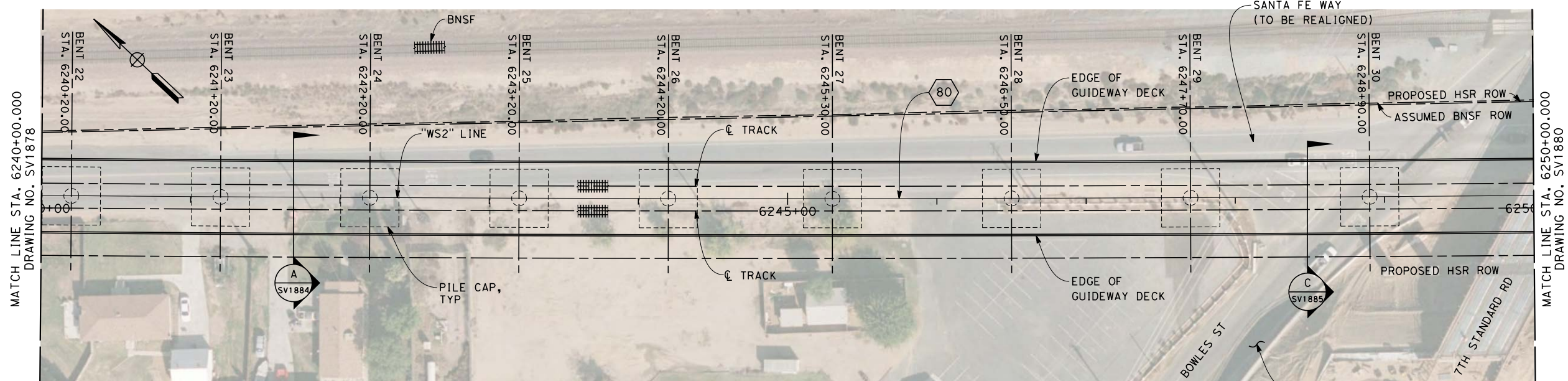
EVC 6275+93.99  
ELEV 394.46

5700' VC  
R/C = -0.044% /STA

**TOP OF RAIL "WS2" LINE**  
NO SCALE



**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES**

- NOT ALL PILES SHOWN
- PILE LENGTH TO BE DETERMINED
- SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
  - STEEL TRUSS - INSITU, SLID OR LAUNCHED
  - ELEVATED SLABS - PC BEAM AND INSITU SLAB
- UTILITY LOCATIONS TO BE DETERMINED
- ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

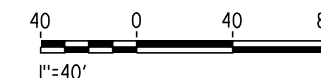
**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

80

R = 60000.00'  
Δ = 13° 44' 37.1"  
T = 7230.9'  
L = 14392.3'



Nadine.Hutton 12/12/2013 7:30:19 PM c:\pwworking\hmm\external\nadine.hutton-arup.com\dms72605\FB-SV-1879-WS2.dgn

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV1879

SCALE  
AS SHOWN

SHEET NO.  
8 OF 14



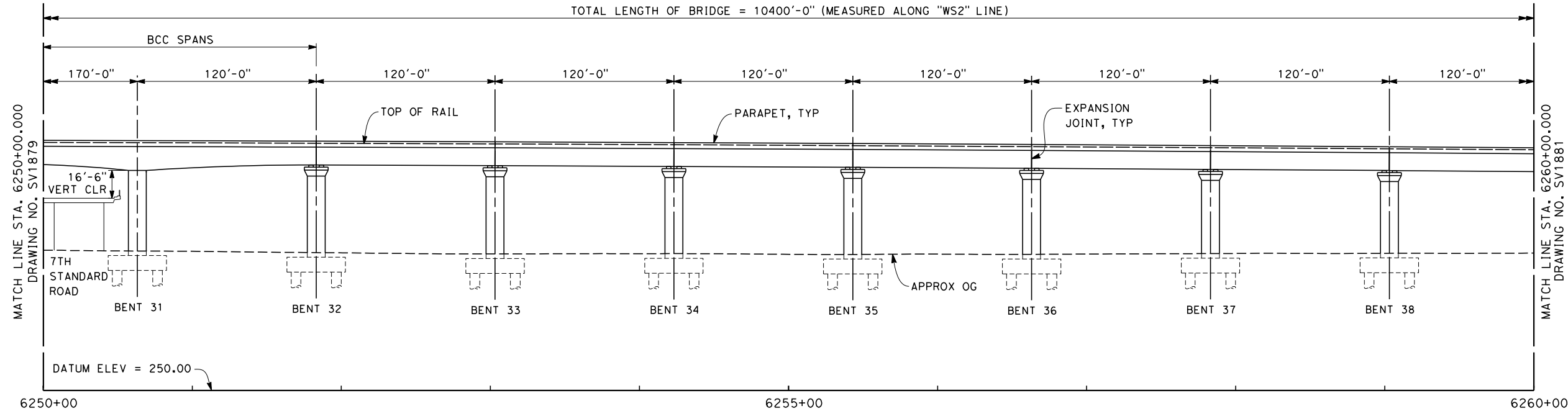
BVC 6218+93.99  
ELEV 403.69

EVC 6275+93.99  
ELEV 394.46

5700' VC  
R/C = -0.044% /STA

**TOP OF RAIL "WS2" LINE**  
NO SCALE

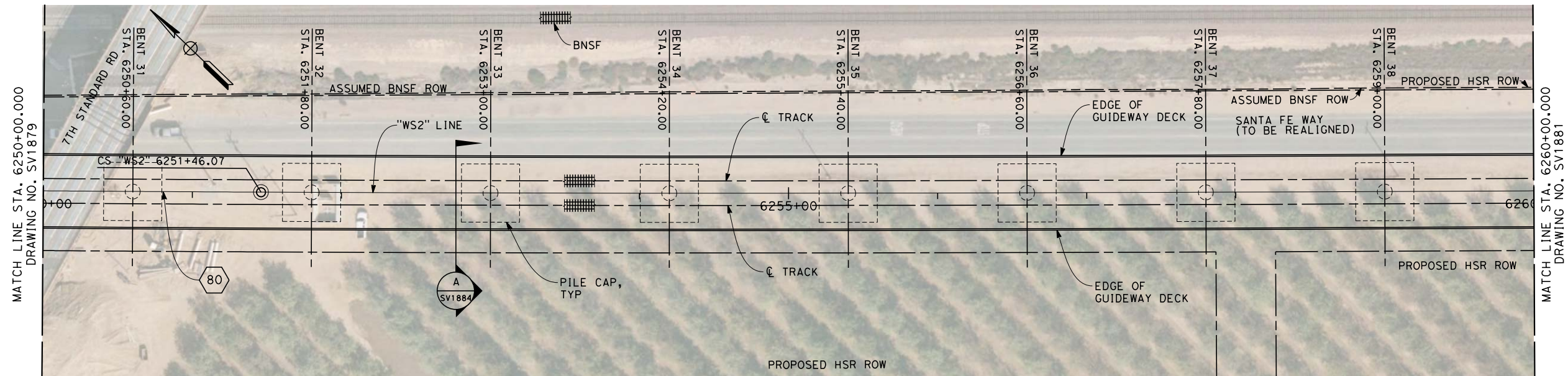
TOTAL LENGTH OF BRIDGE = 10400'-0" (MEASURED ALONG "WS2" LINE)



**ELEVATION**  
SCALE 1" = 40'

**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**PLAN**  
SCALE 1" = 40'

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

80  
R = 60000.00'  
Δ = 13° 44' 37.1"  
T = 7230.9'  
L = 14392.3'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1880  
SCALE  
AS SHOWN  
SHEET NO.  
9 OF 14









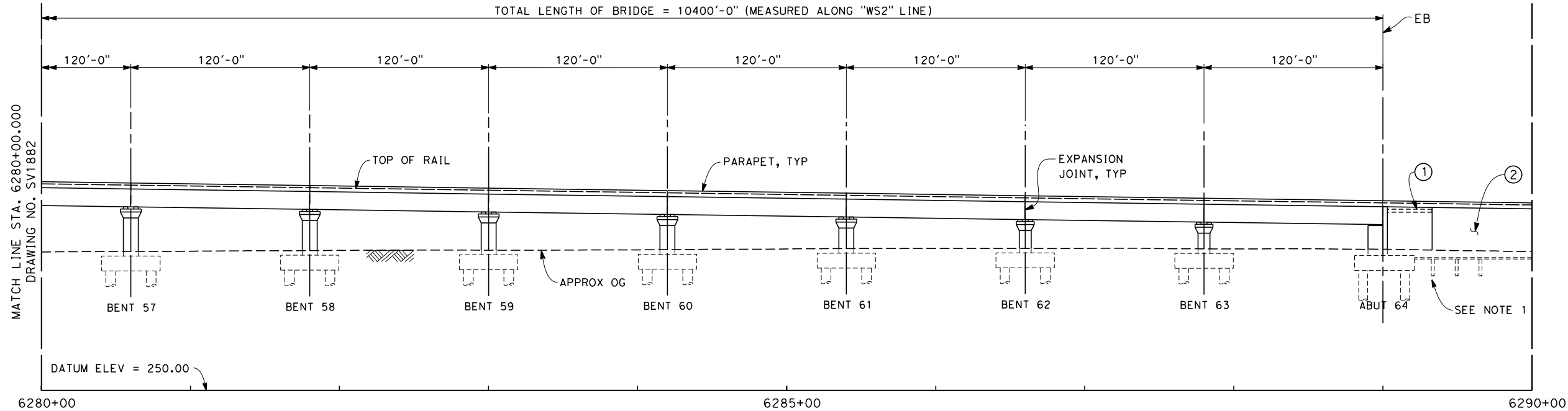
EVC 6275+93.99  
ELEV 394.46

BVC 6287+93.99  
ELEV 377.38

-1.423 %

**TOP OF RAIL "WS2" LINE**  
NO SCALE

TOTAL LENGTH OF BRIDGE = 10400'-0" (MEASURED ALONG "WS2" LINE)



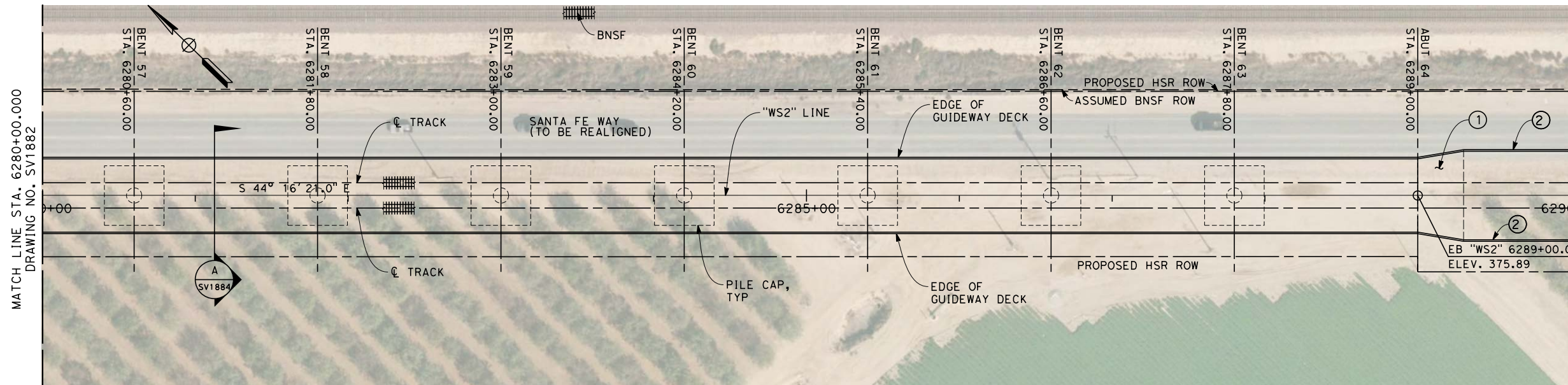
**ELEVATION**  
SCALE 1" = 40'

**NOTES**

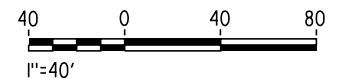
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



**PLAN**  
SCALE 1" = 40'



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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

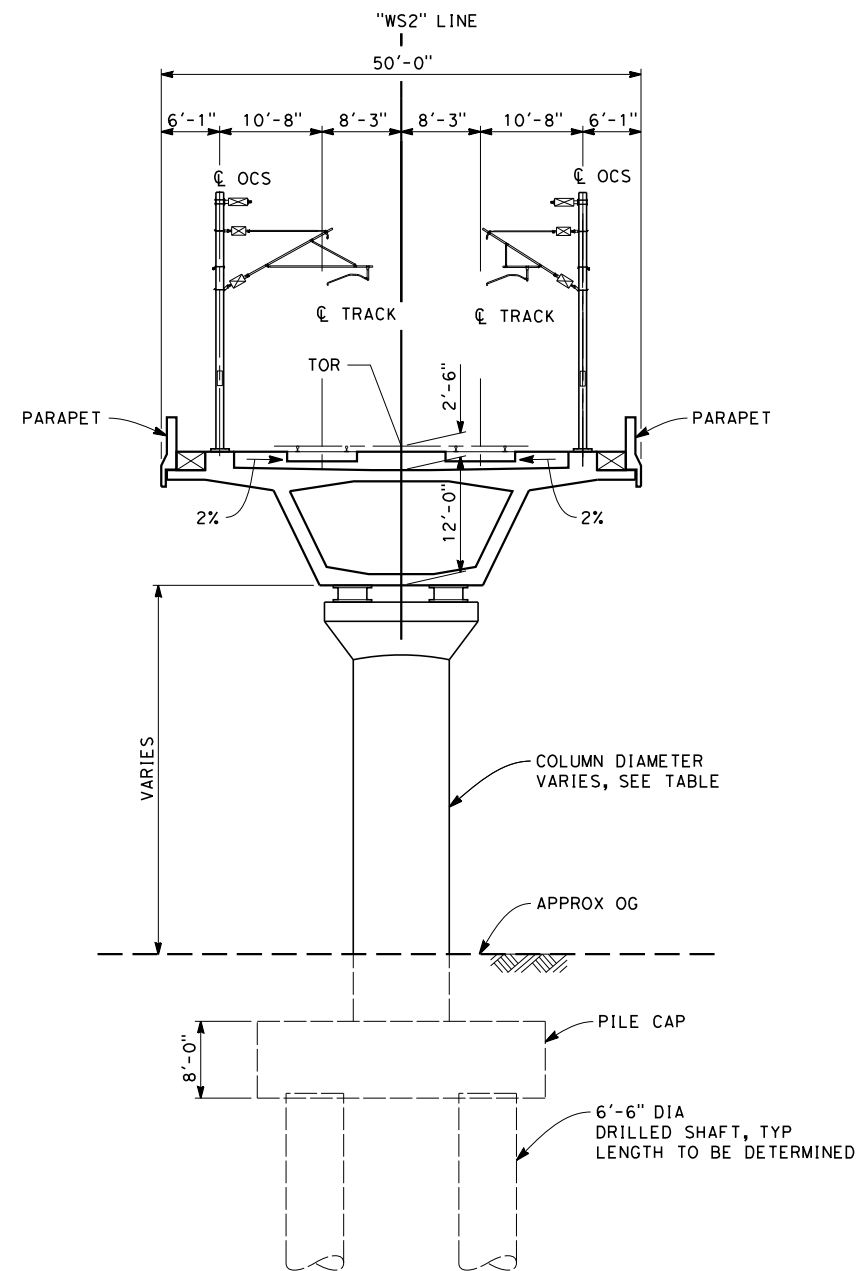
**RECORD SET 15%  
DESIGN SUBMISSION**  
  
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1883  
SCALE  
AS SHOWN  
SHEET NO.  
12 OF 14

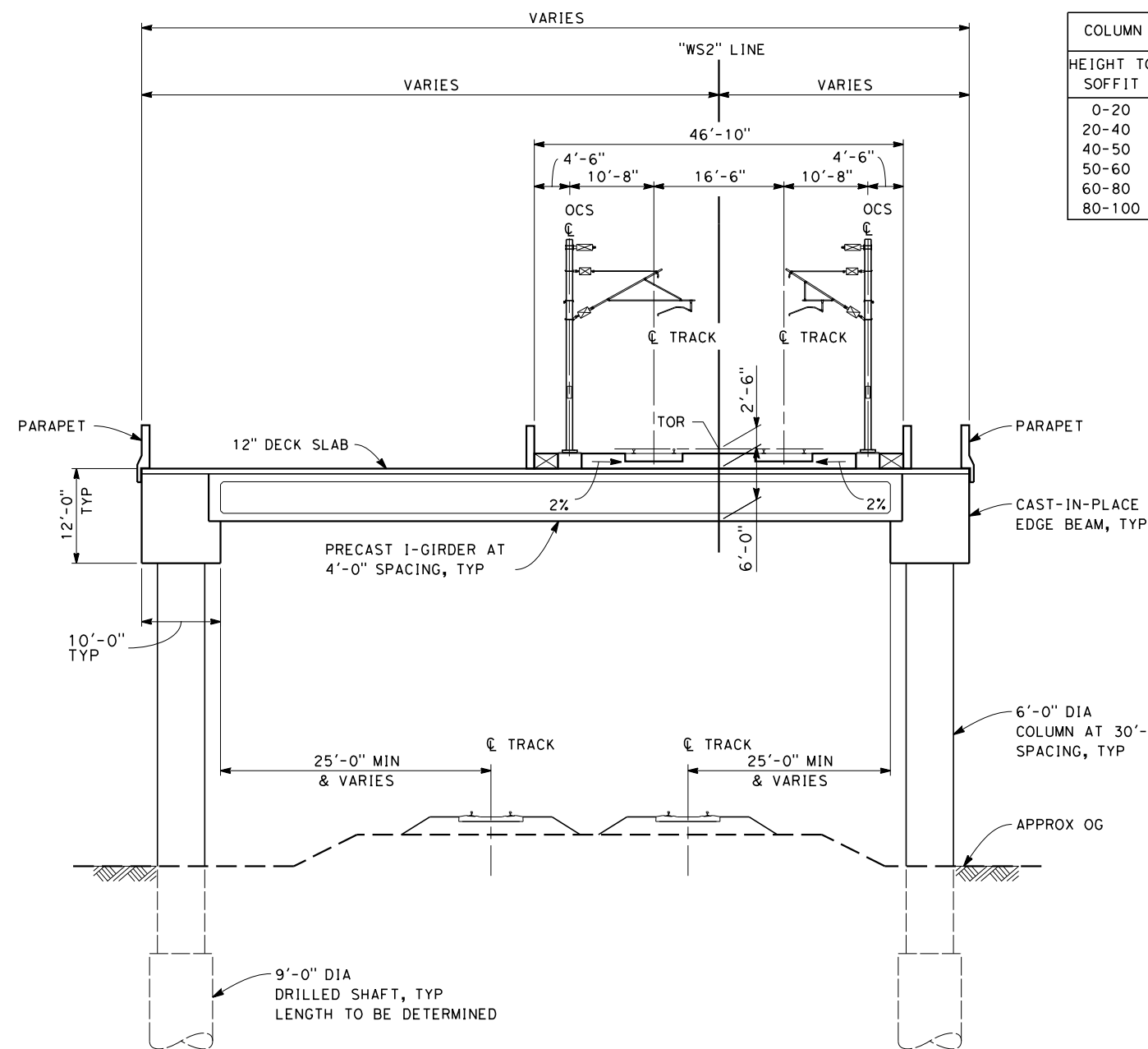




**SECTION A**

SCALE: 1" = 10'

STA 6185+00 THROUGH 6195+80  
 STA 6207+80 THROUGH 6210+20  
 STA 6230+60 THROUGH 6247+70  
 STA 6251+80 THROUGH 6289+00

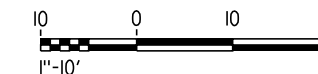


**SECTION B**

SCALE: 1" = 10'

STA 6195+80 THROUGH 6207+80  
 STA 6210+20 THROUGH 6230+60

| COLUMN DIAMETERS |          |
|------------------|----------|
| HEIGHT TO SOFFIT | DIAMETER |
| 0-20             | 8 FT     |
| 20-40            | 10 FT    |
| 40-50            | 12 FT    |
| 50-60            | 15 FT    |
| 60-80            | 20 FT    |
| 80-100           | 25 FT    |



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

|                            |
|----------------------------|
| DESIGNED BY<br>M. FISHER   |
| DRAWN BY<br>F. PALERMO     |
| CHECKED BY<br>A. ARMSTRONG |
| IN CHARGE<br>R. COFFIN     |
| DATE<br>12/31/13           |

**RECORD SET 15%  
 DESIGN SUBMISSION**

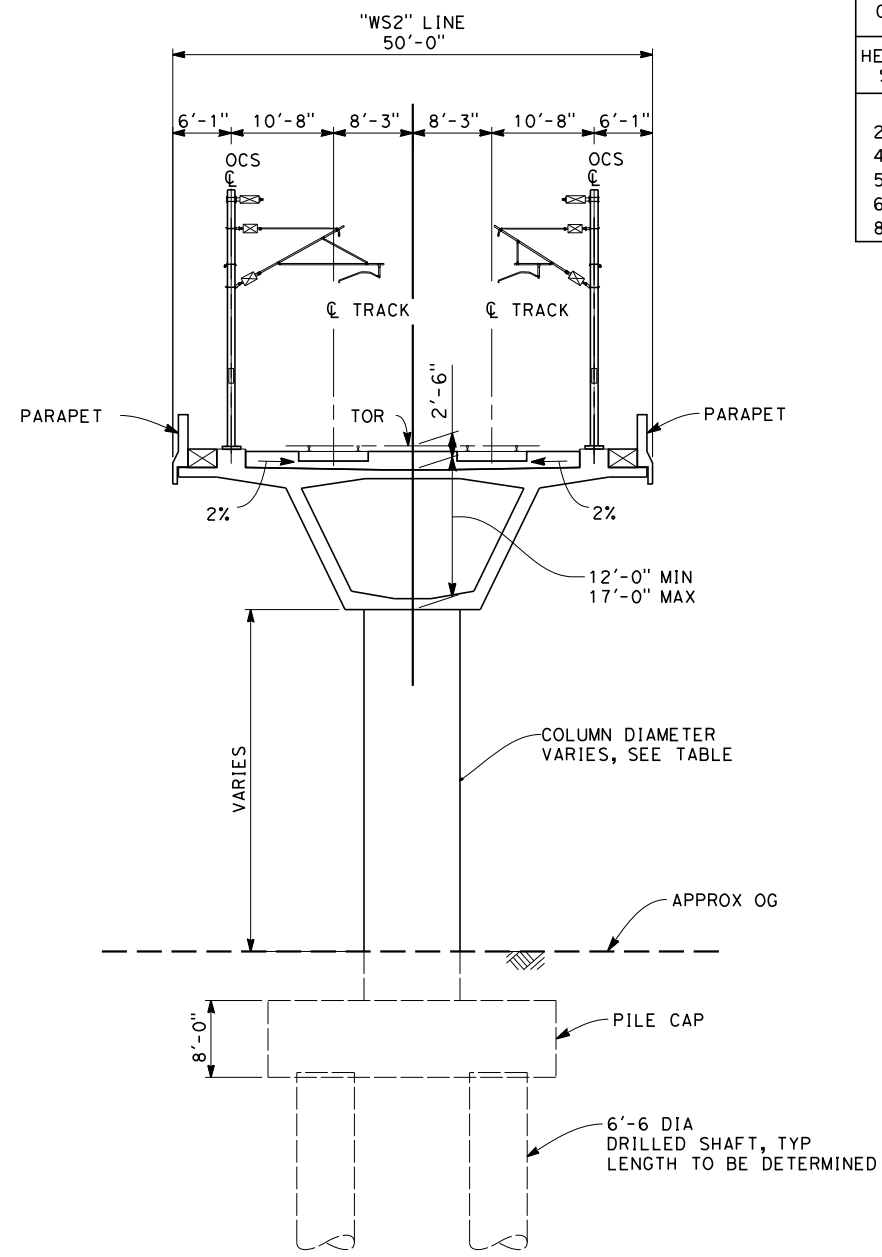
**NOT FOR  
 CONSTRUCTION**



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

WASCO-SHAFTER BYPASS SUBSECTION  
 ALIGNMENT WS2  
 WASCO VIADUCT  
 TYPICAL SECTIONS

|                             |
|-----------------------------|
| CONTRACT NO.<br>HSR 06-0003 |
| DRAWING NO.<br>SV1884       |
| SCALE<br>AS SHOWN           |
| SHEET NO.<br>13 OF 14       |



| COLUMN DIAMETERS |          |
|------------------|----------|
| HEIGHT TO SOFFIT | DIAMETER |
| 0-20             | 8 FT     |
| 20-40            | 10 FT    |
| 40-50            | 12 FT    |
| 50-60            | 15 FT    |
| 60-80            | 20 FT    |
| 80-100           | 25 FT    |

**SECTION C**  
SCALE: 1" = 10'

STA 6247+70 THROUGH 6251+80



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
WASCO-SHAFTER BYPASS SUBSECTION  
ALIGNMENT WS2  
WASCO VIADUCT  
TYPICAL SECTIONS

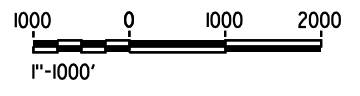
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1885  
SCALE  
AS SHOWN  
SHEET NO.  
14 OF 14



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| LEGEND |   |
|--------|---|
|        | WESTSIDE PARKWAY/<br>CENTENNIAL CORRIDORS/<br>HAGEMAN RD GRADE SEPARATION |
|        | EXISTING FREIGHT<br>RAILROAD  |
|        | PROPOSED CHST/<br>FREIGHT RAILROAD/<br>REALIGNED ROAD                     |



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |
|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
J. VALENZUELA  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**

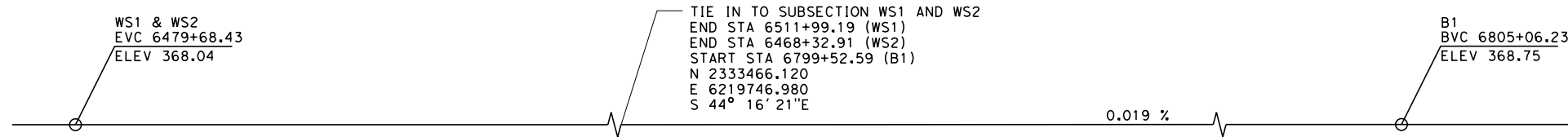


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
HAGEMAN ROAD UNDERPASS  
KEY MAP

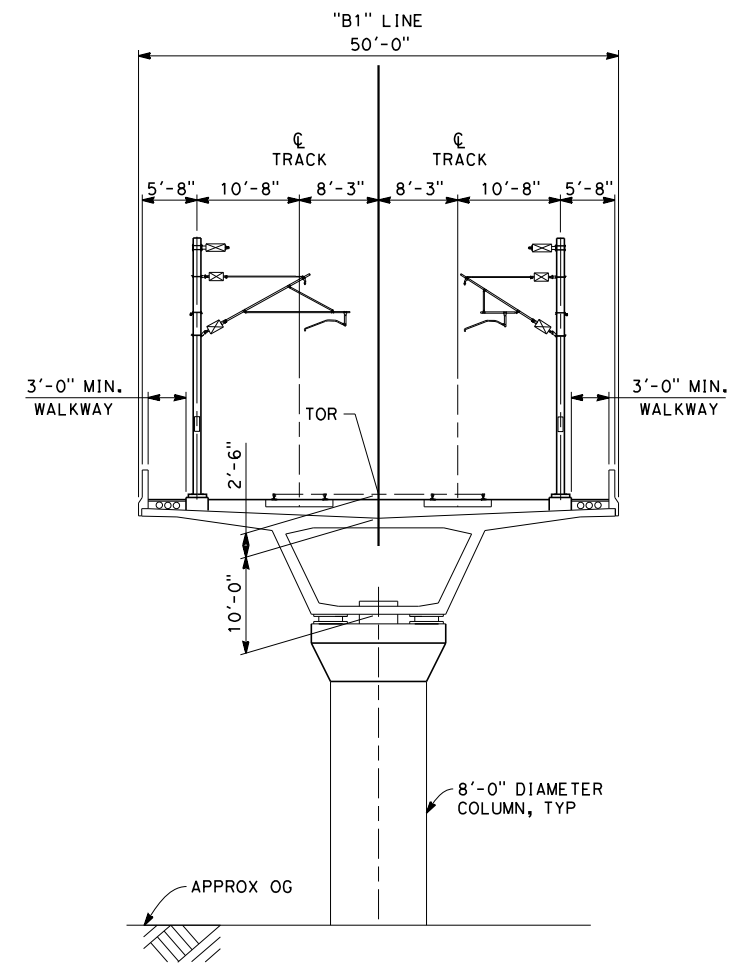
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1810  
SCALE  
AS SHOWN  
SHEET NO.  
1 OF 2



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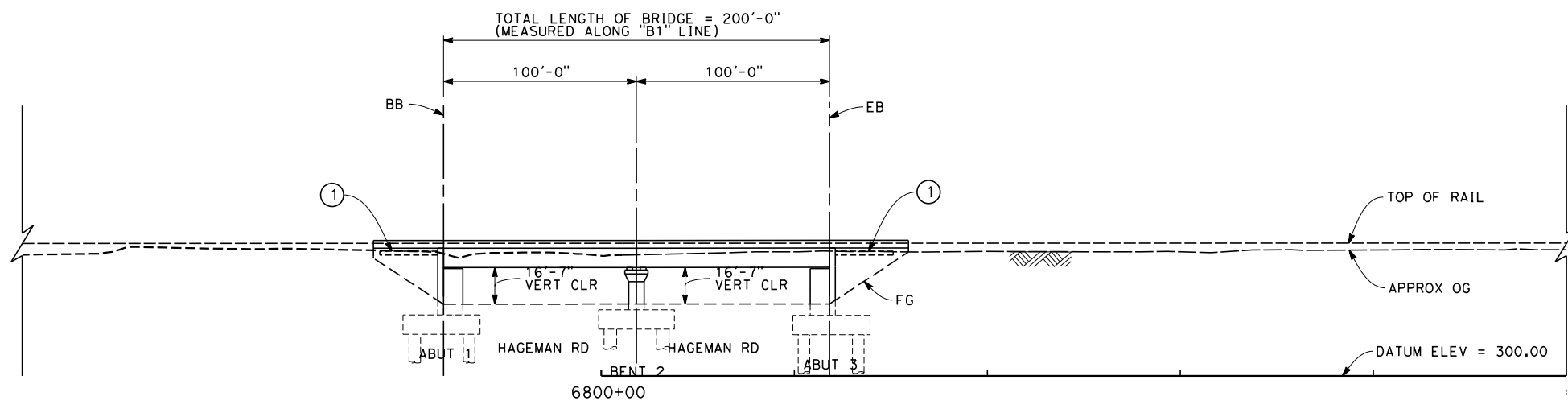
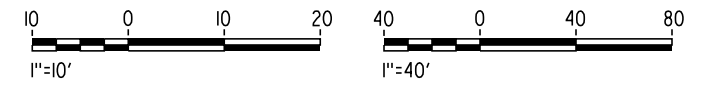
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NO SCALE



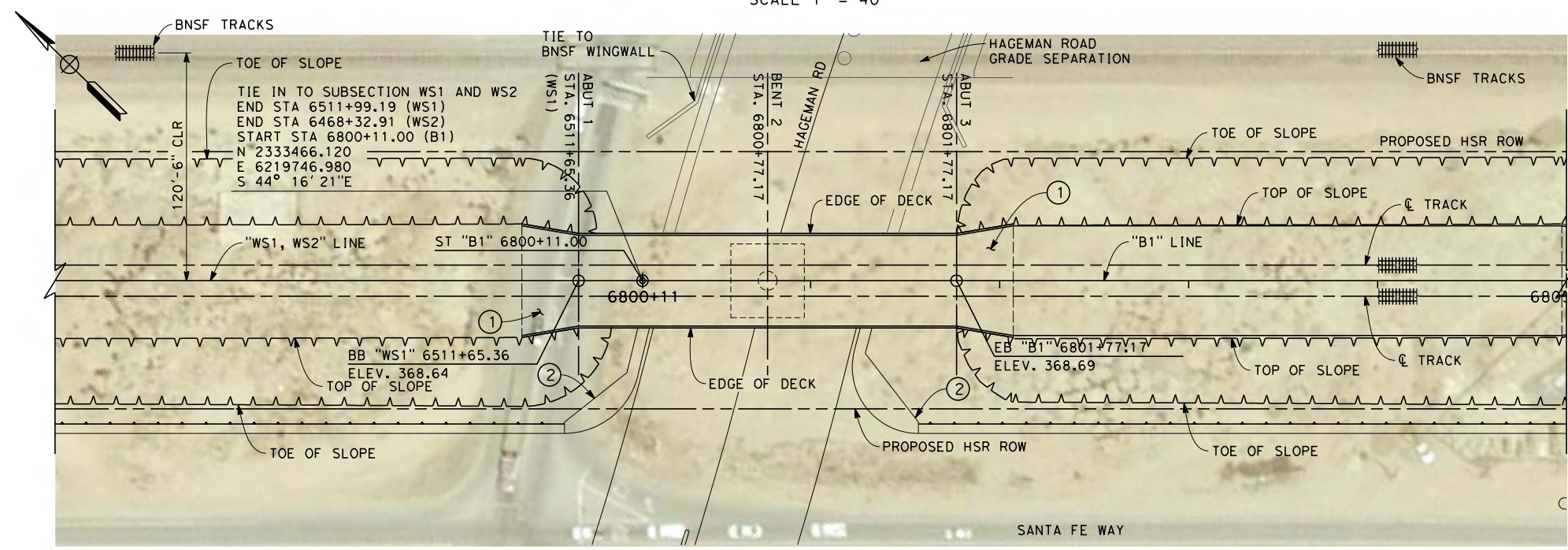
**TYPICAL SECTION**  
SCALE: 1" = 10'

NOTE:  
1. PILE LENGTH TO BE DETERMINED.

- LEGEND:  
 (1) STRUCTURE APPROACH SLAB  
 (2) RETAINING WALL



**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
 DRAWN BY  
J. VALENZUELA  
 CHECKED BY  
A. ARMSTRONG  
 IN CHARGE  
R. COFFIN  
 DATE  
12/31/13

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

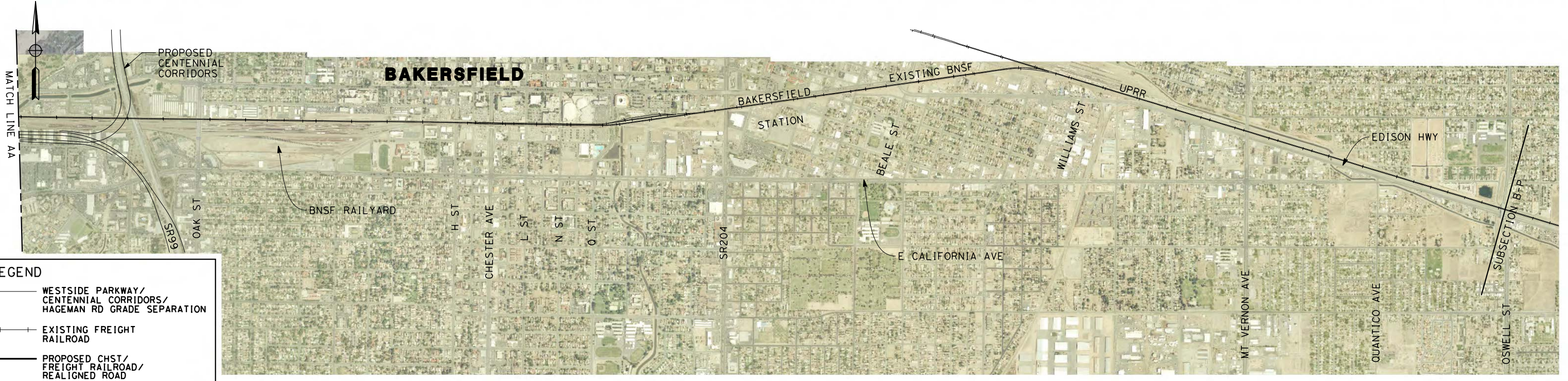
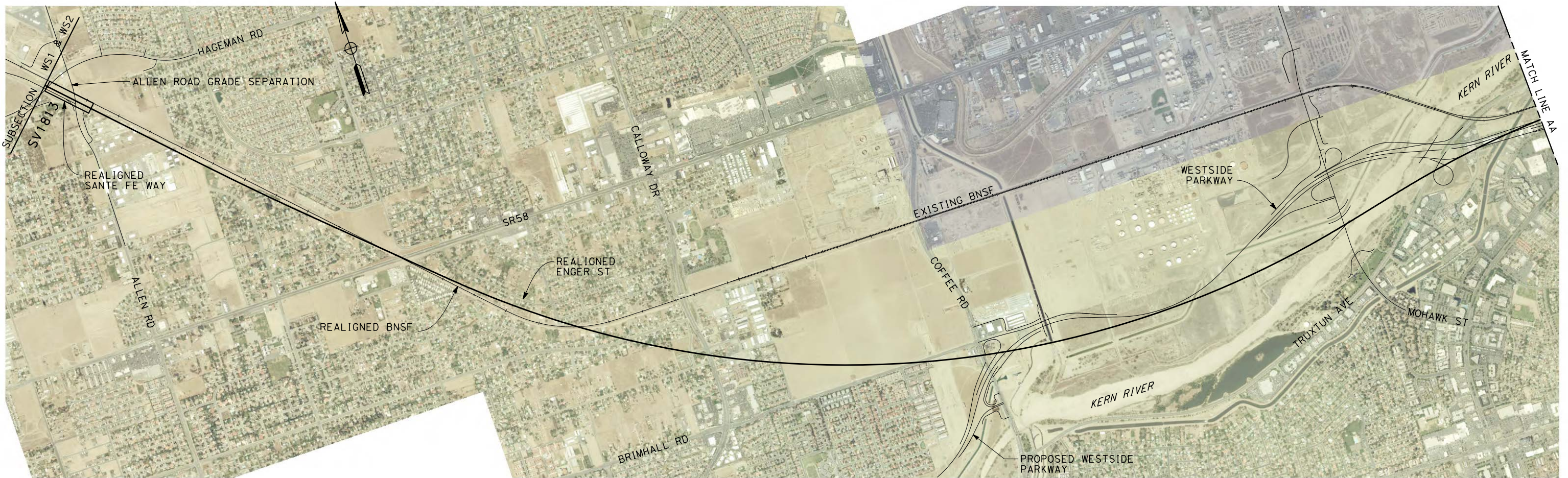


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 HAGEMAN ROAD UNDERPASS  
 PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
SV1811  
 SCALE  
AS SHOWN  
 SHEET NO.  
2 OF 2

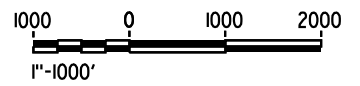


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**LEGEND**

- WESTSIDE PARKWAY/  
CENTENNIAL CORRIDORS/  
HAGEMAN RD GRADE SEPARATION
- EXISTING FREIGHT  
RAILROAD
- PROPOSED CHST/  
FREIGHT RAILROAD/  
REALIGNED ROAD



| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |
|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**J. VALENZUELA**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 ALLEN ROAD UNDERPASS  
 KEY MAP

CONTRACT NO.  
HSR 06-0003

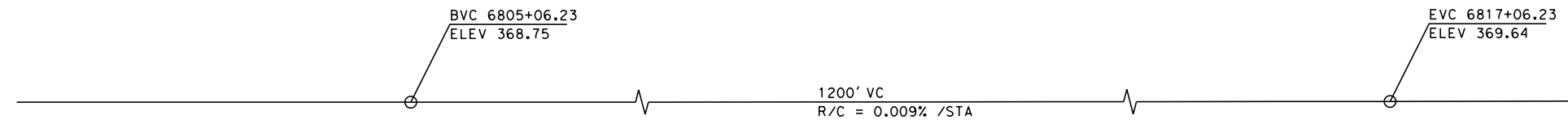
DRAWING NO.  
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SCALE  
AS SHOWN

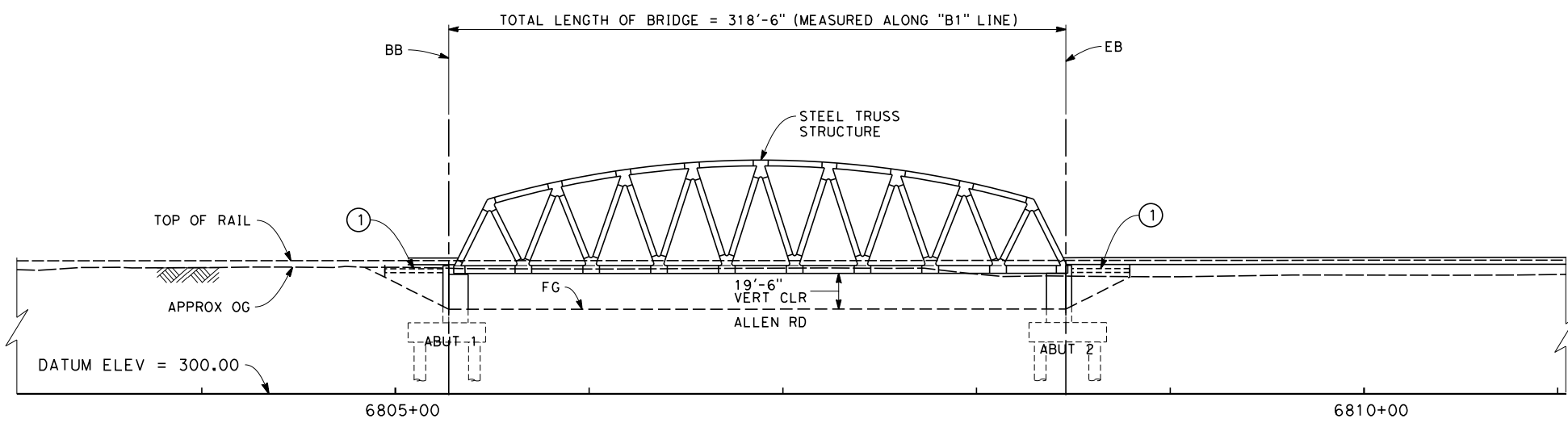
SHEET NO.  
1 OF 2



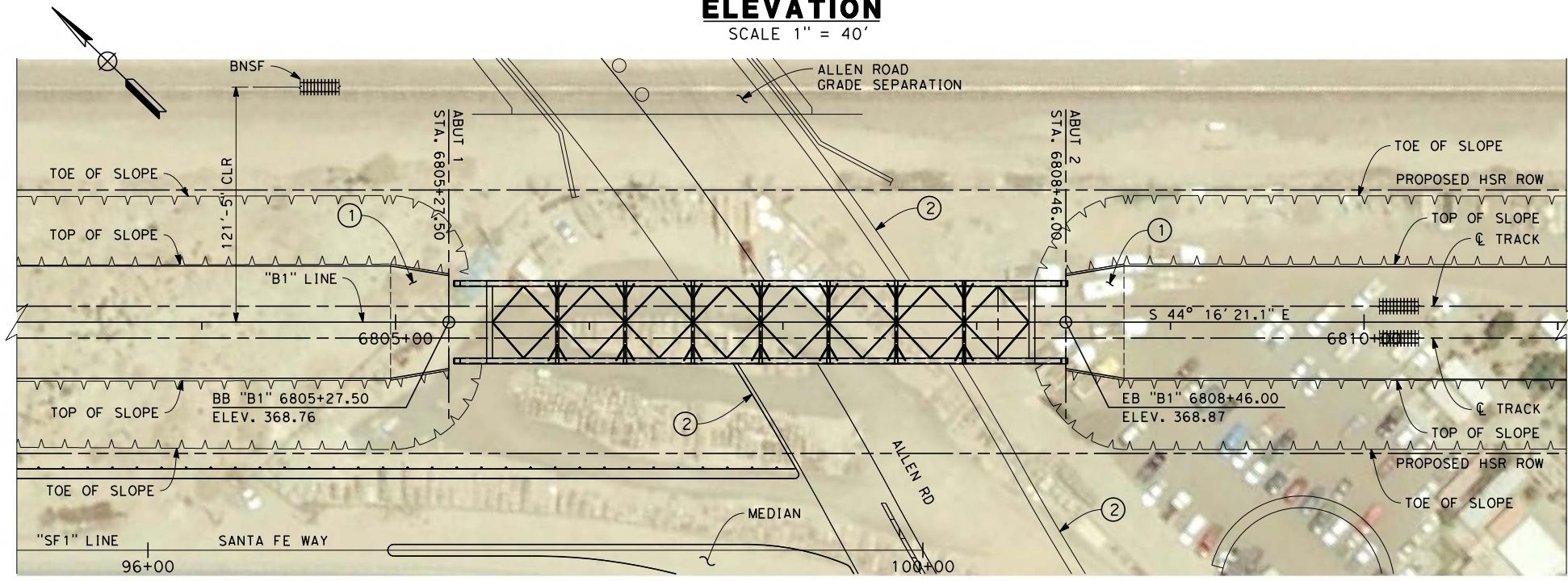
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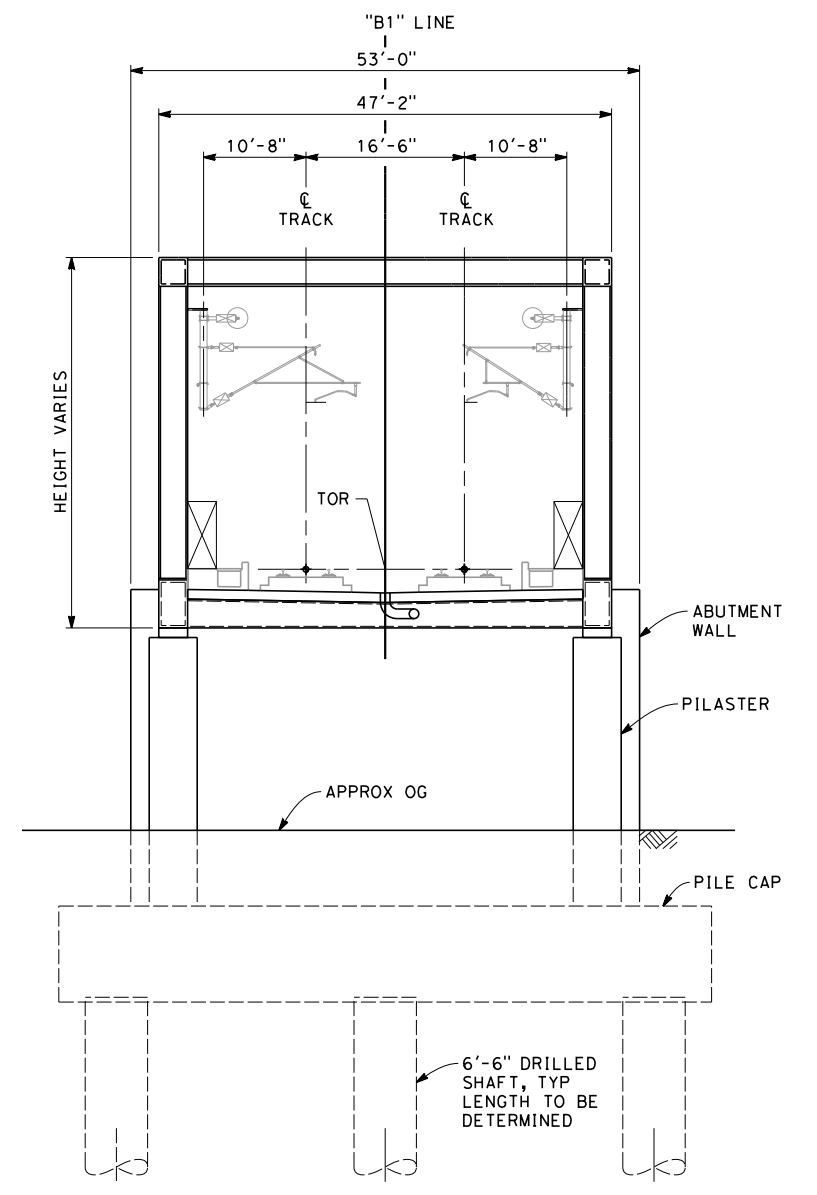
**TOP OF RAIL "B1" LINE**  
NO SCALE



**ELEVATION**  
SCALE 1" = 40'



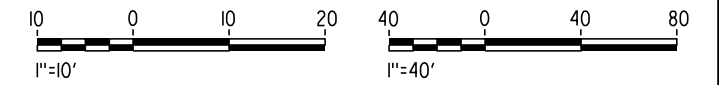
**PLAN**  
SCALE 1" = 40'



**TYPICAL SECTION**  
SCALE: 1" = 10'

NOTE:  
1. PILE LENGTH TO BE DETERMINED.

LEGEND:  
① STRUCTURE APPROACH SLAB  
② RETAINING WALL



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
J. VALENZUELA  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

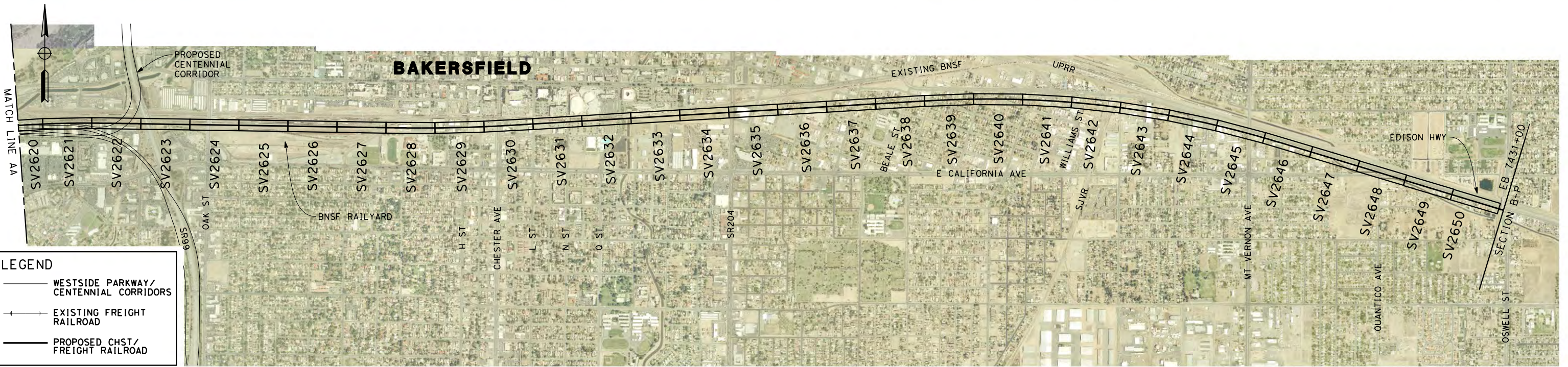
**RECORD SET 15%  
DESIGN SUBMISSION**  
  
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
ALLEN ROAD UNDERPASS  
PLAN AND ELEVATION

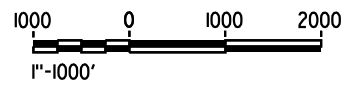
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV1813  
SCALE  
AS SHOWN  
SHEET NO.  
2 OF 2





**LEGEND**

- WESTSIDE PARKWAY/  
CENTENNIAL CORRIDORS
- EXISTING FREIGHT  
RAILROAD
- PROPOSED CHST/  
FREIGHT RAILROAD



frank.palermo 12/28/2013 3:43:59 PM c:\pwworking\hmm\external\frank.palermo01-arup.com\d0133365\FB-SV-2600-B1.dgn

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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
 DRAWN BY  
F. PALERMO  
 CHECKED BY  
A. ARMSTRONG  
 IN CHARGE  
R. COFFIN  
 DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 KEY MAP

CONTRACT NO.  
HSR 06-003  
 DRAWING NO.  
SV2600  
 SCALE  
AS SHOWN  
 SHEET NO.  
1 OF 57



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

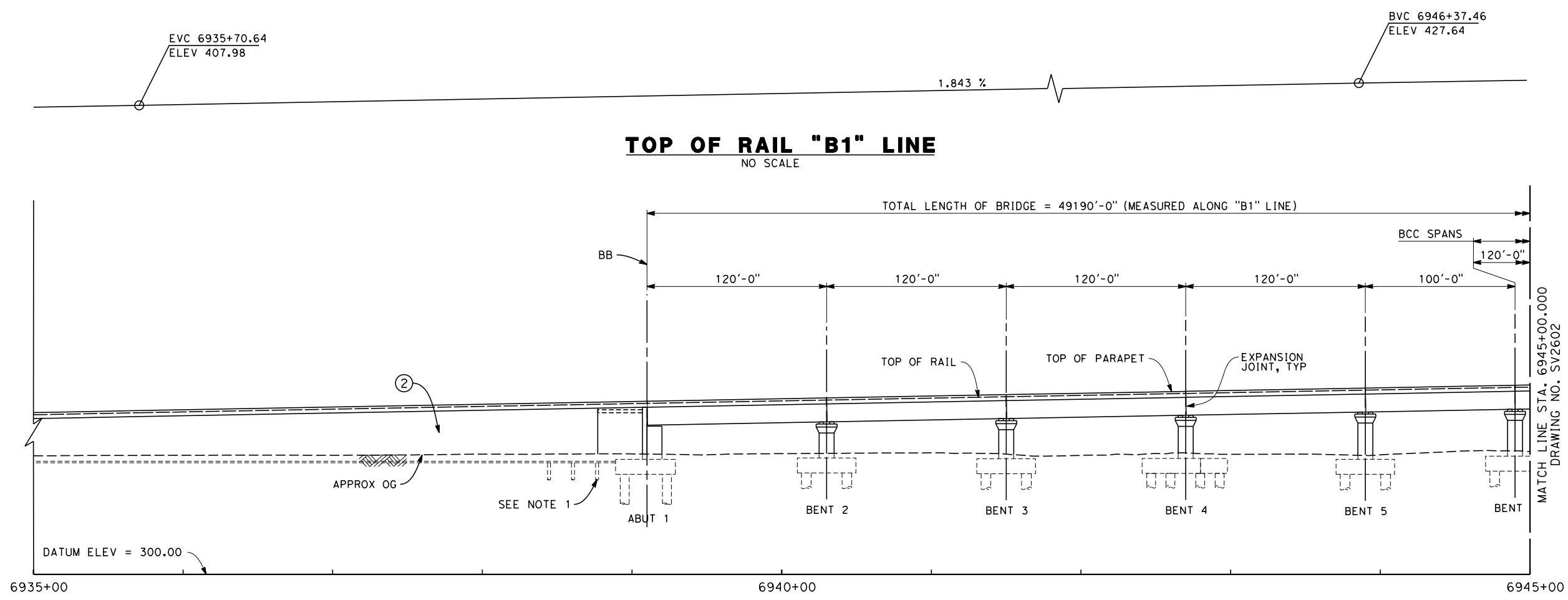
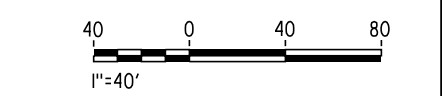
②3

R = 19508.25'

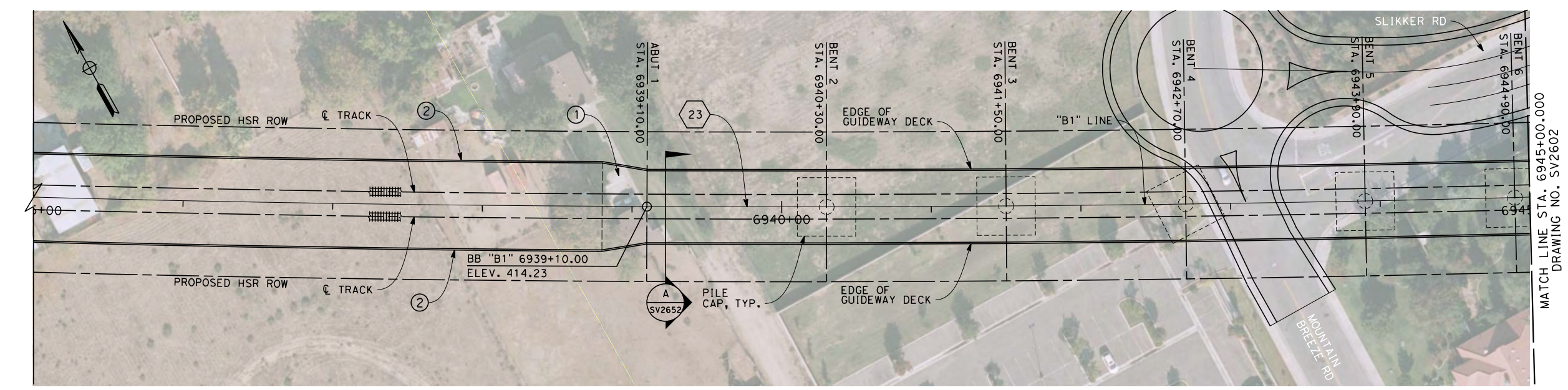
Δ = 50° 22' 43.5"

T = 9175.5'

L = 17153.1'



**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

jojo.valenzuela 12/30/2013 2:11:32 PM c:\pwworking\hmm\external\jojo.valenzuela-arup.com\d0133365\FB-SV-2601-B1.dgn

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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2601

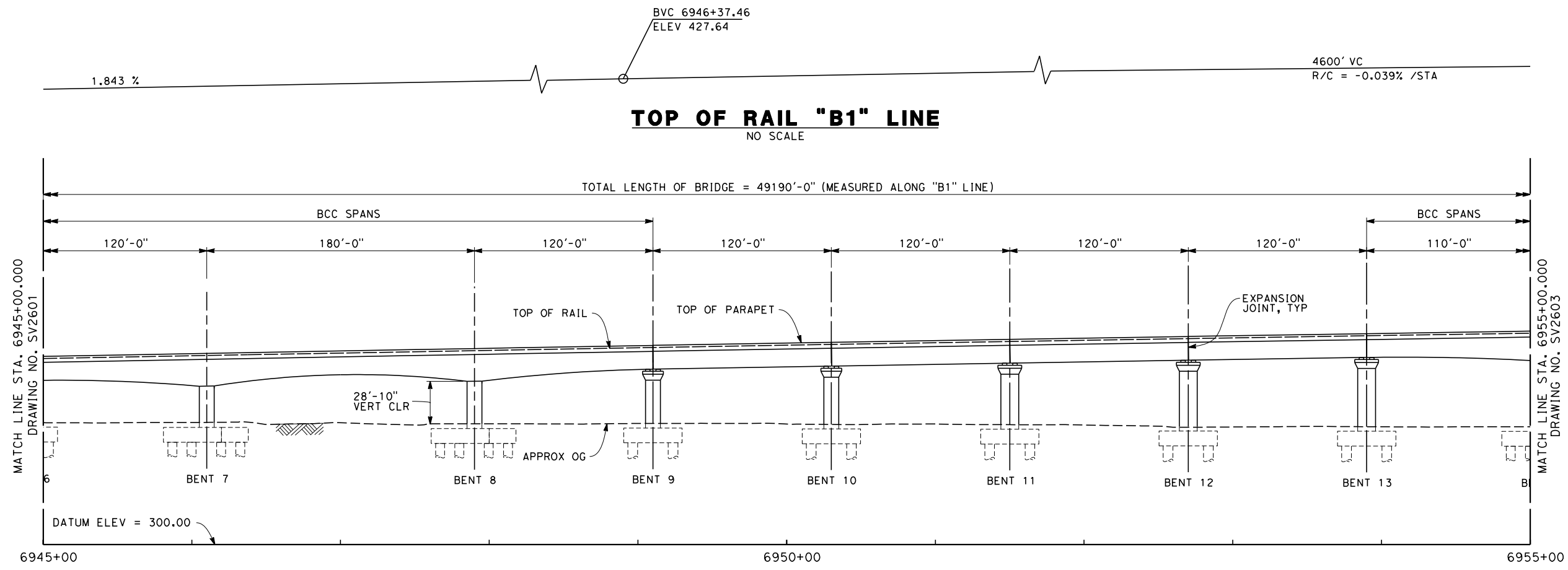
SCALE  
AS SHOWN

SHEET NO.  
2 OF 57

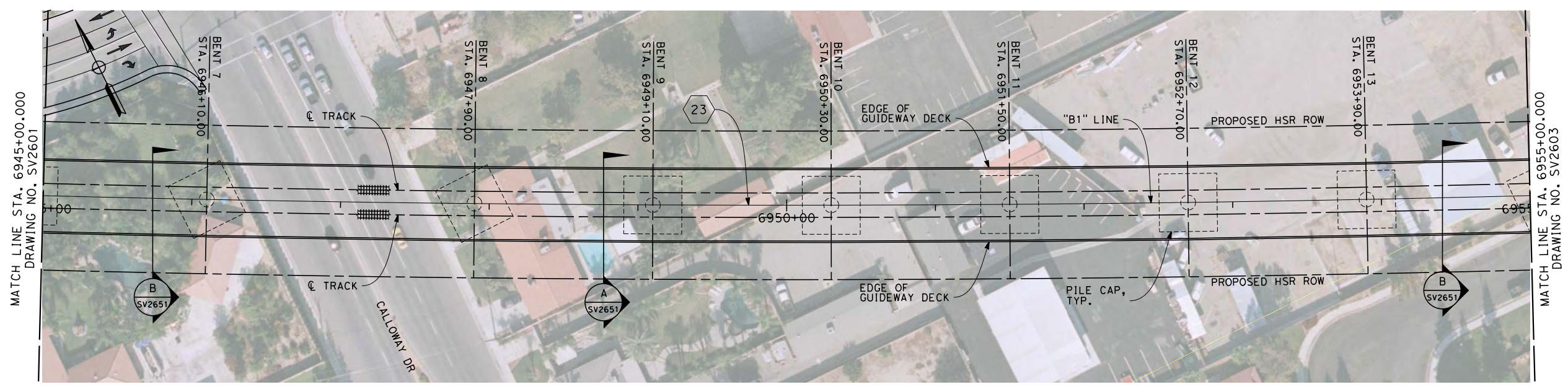


**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
 SIMPLE SPANS - MSS OR FLPM  
 CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
 STEEL TRUSS - INSITU, SLID OR LAUNCHED  
 ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

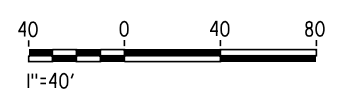
**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

23

R = 19508.25'  
 $\Delta = 50^\circ 22' 43.5''$   
 T = 9175.5'  
 L = 17153.1'



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DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

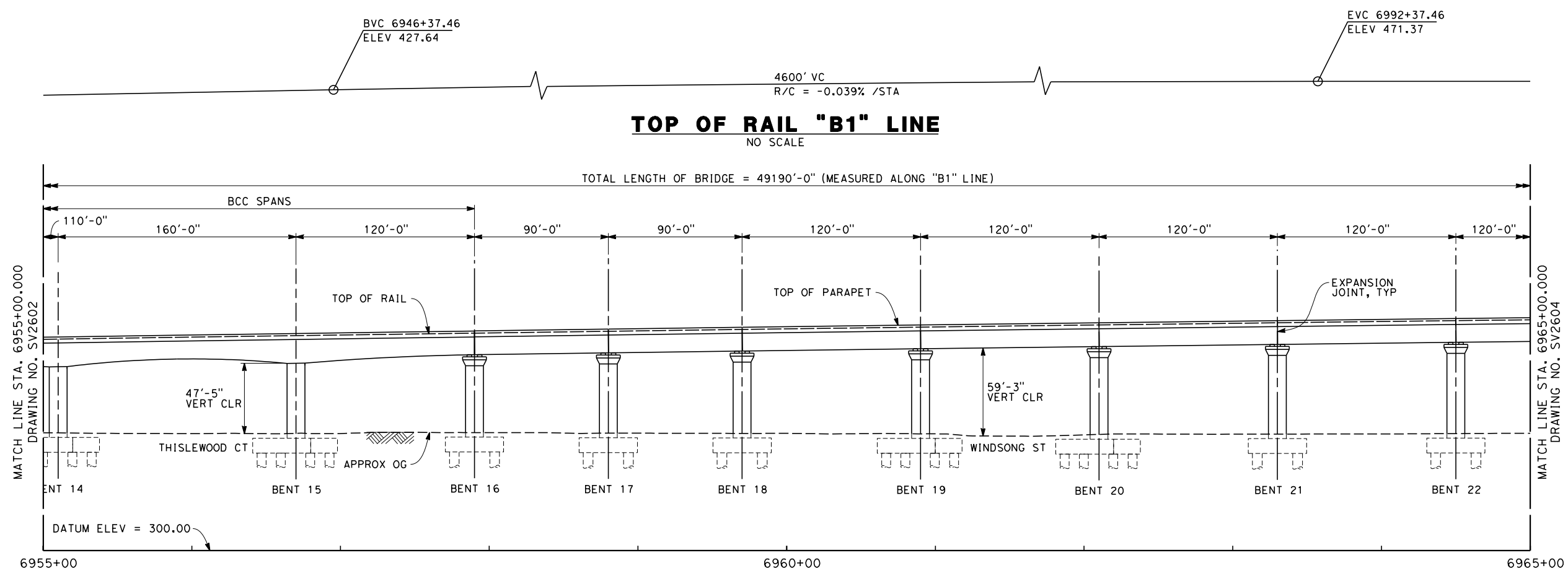
CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2602

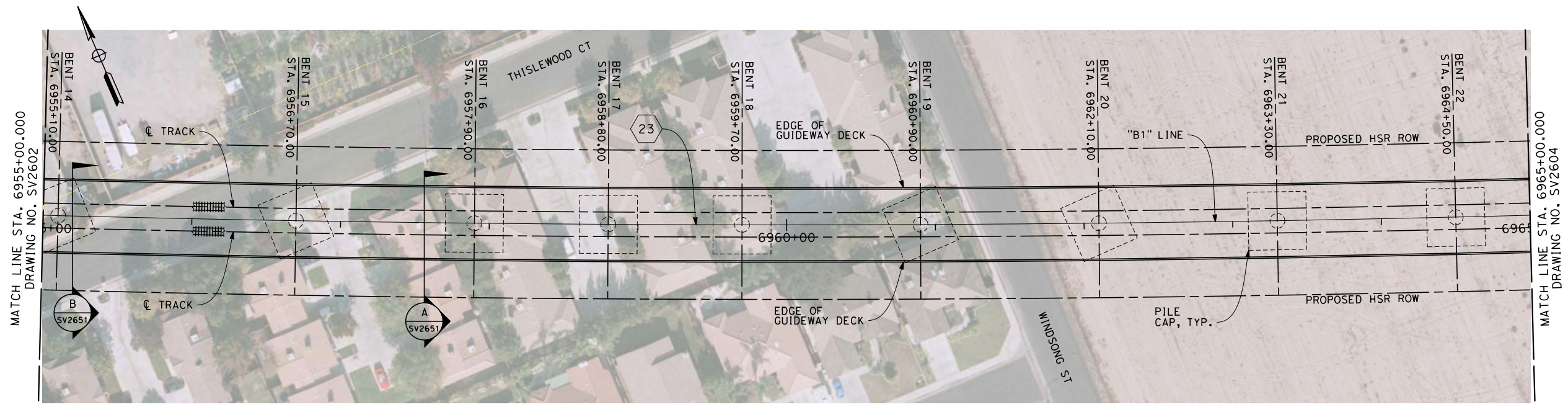
SCALE  
AS SHOWN

SHEET NO.  
3 OF 57

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

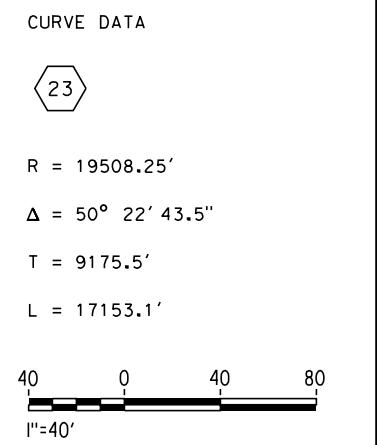


**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

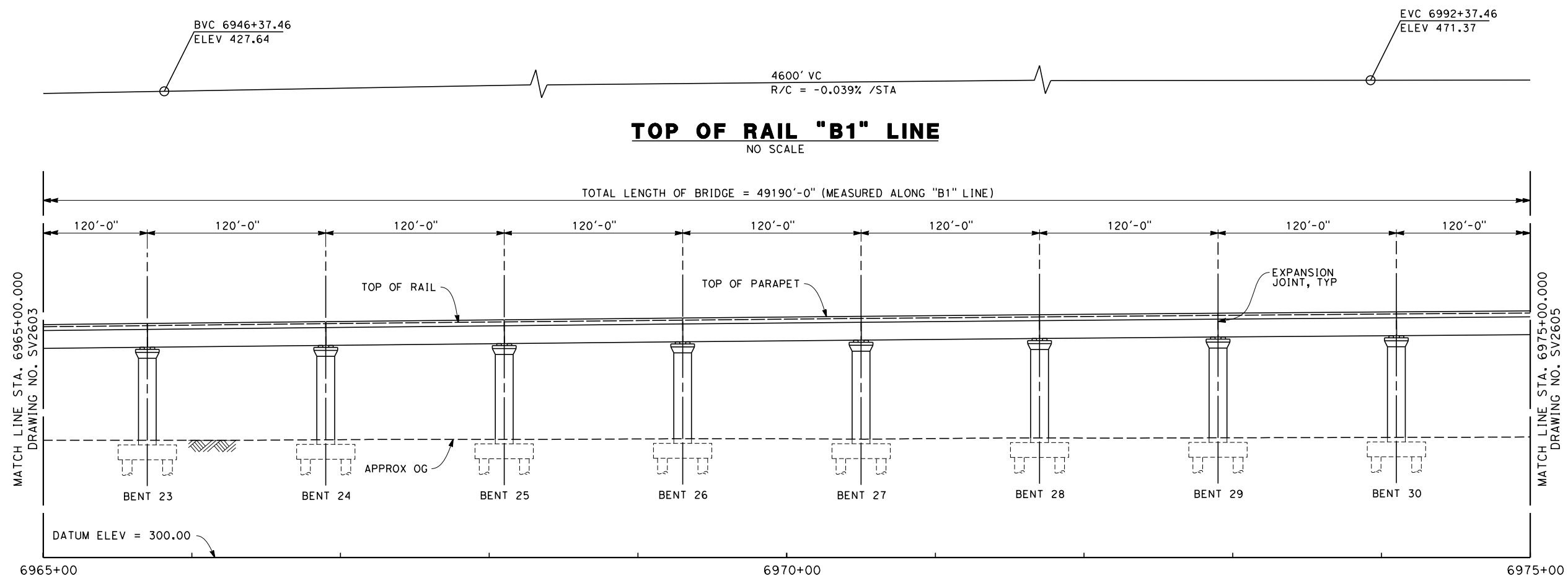
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SCALE  
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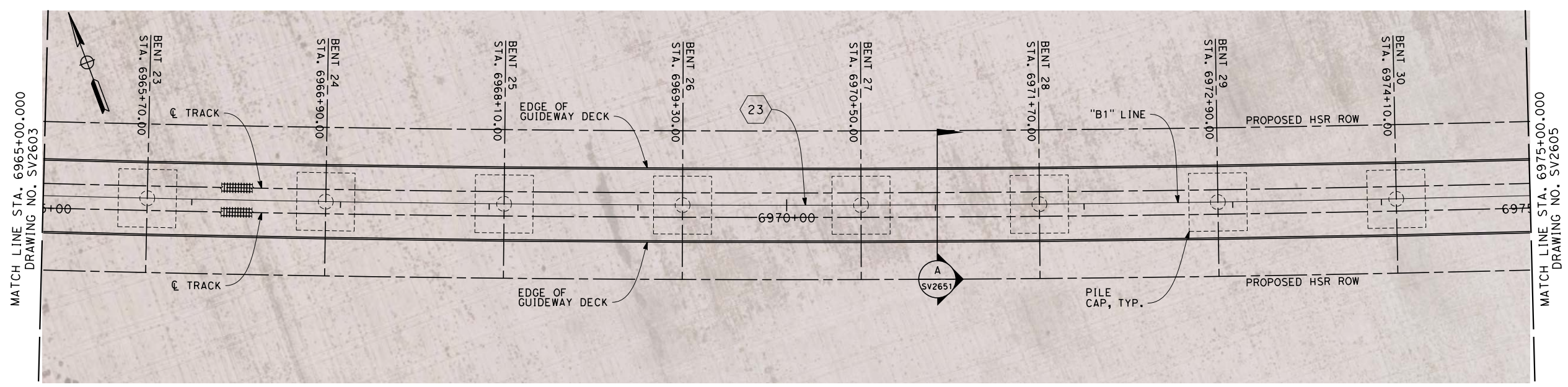
SHEET NO.  
4 OF 57



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

23

R = 19508.25'

Δ = 50° 22' 43.5"

T = 9175.5'

L = 17153.1'

40 0 40 80  
1"=40'

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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

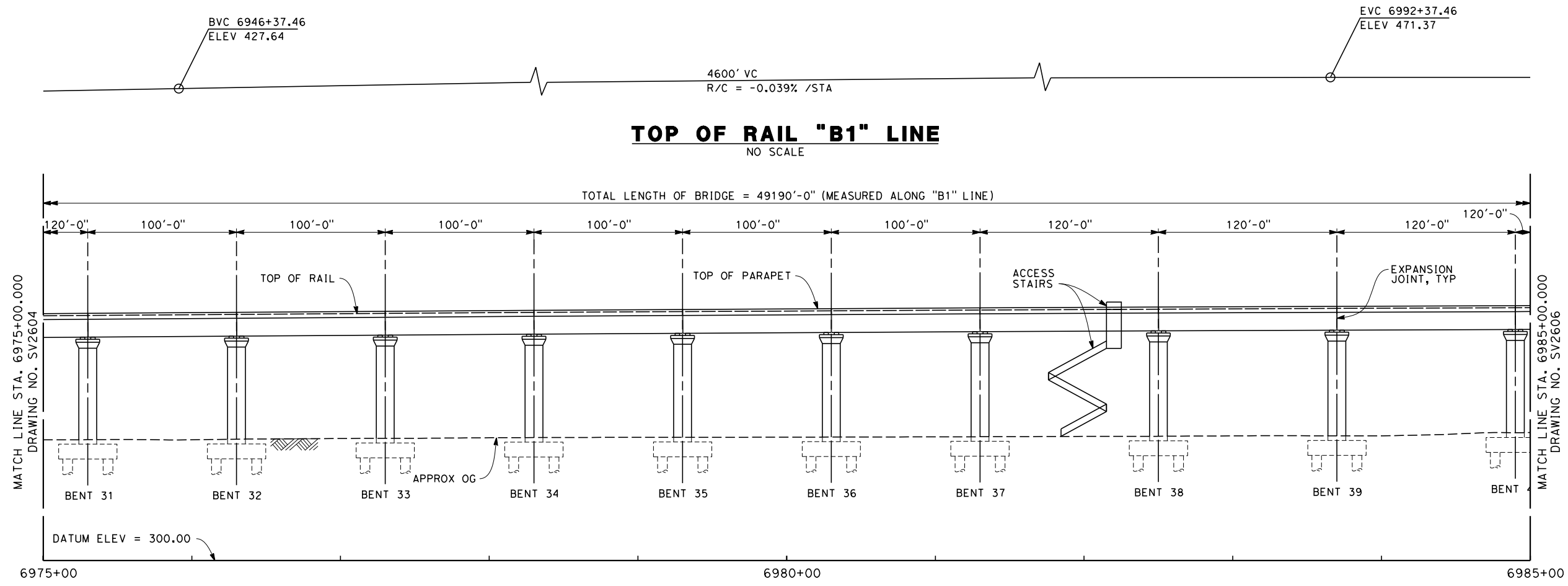
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SV2604

SCALE  
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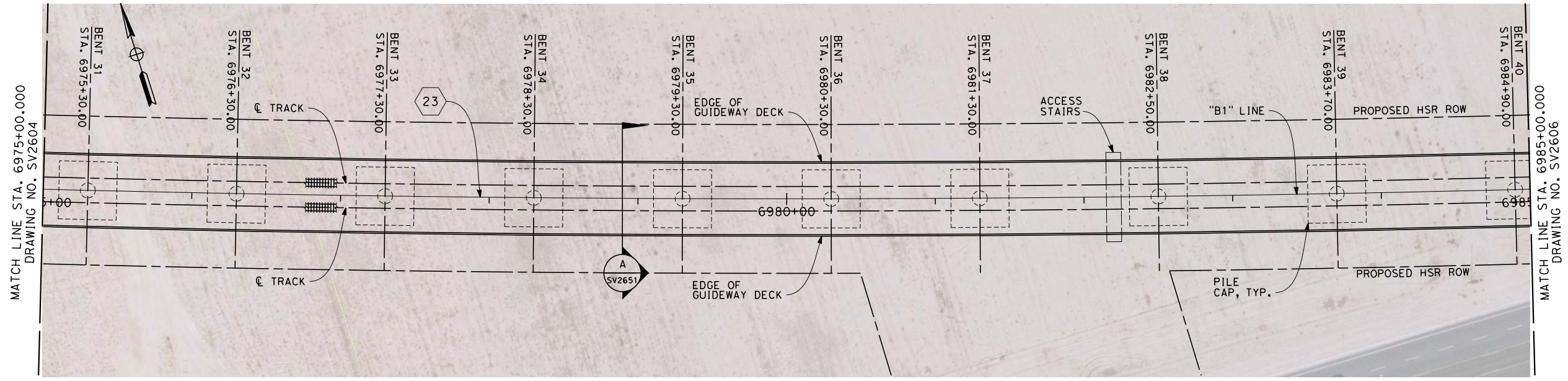
SHEET NO.  
5 OF 57



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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- NOTES**
- NOT ALL PILES SHOWN
  - PILE LENGTH TO BE DETERMINED
  - SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  - UTILITY LOCATIONS TO BE DETERMINED
  - ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②3

R = 19508.25'  
 Δ = 50° 22' 43.5"  
 T = 9175.5'  
 L = 17153.1'

40 0 40 80  
 1"=40'

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2605

SCALE  
AS SHOWN

SHEET NO.  
6 OF 57



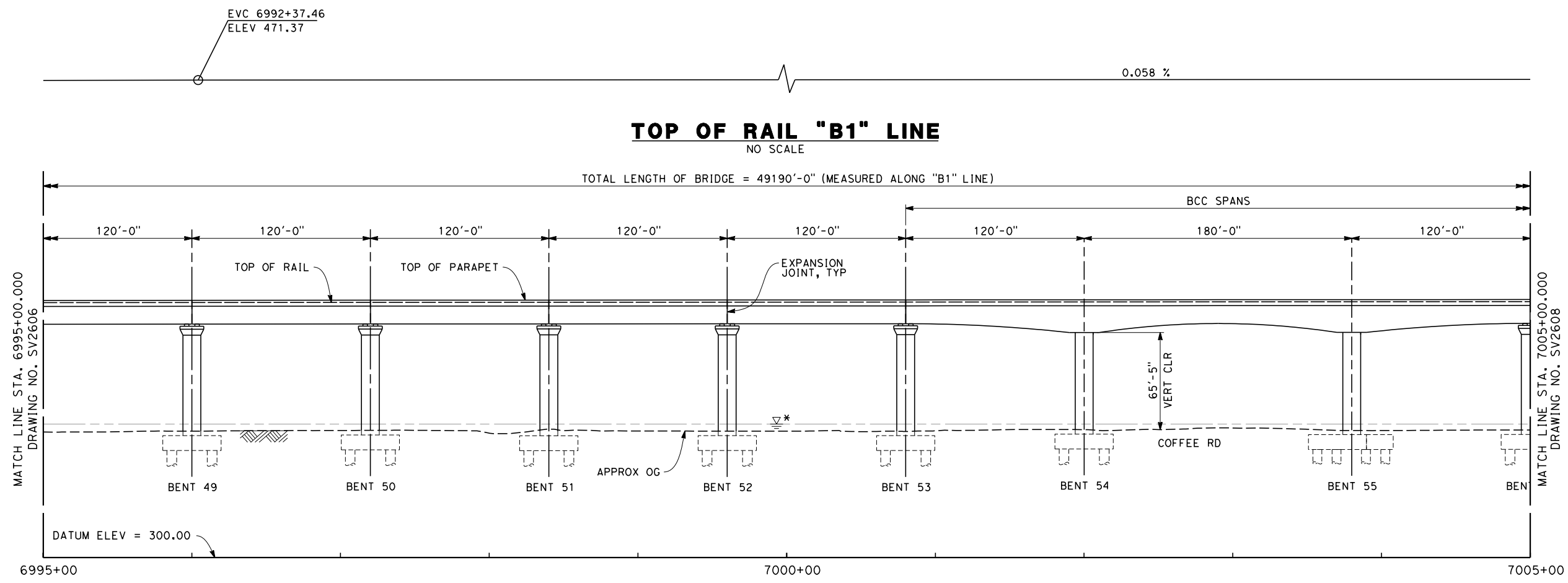




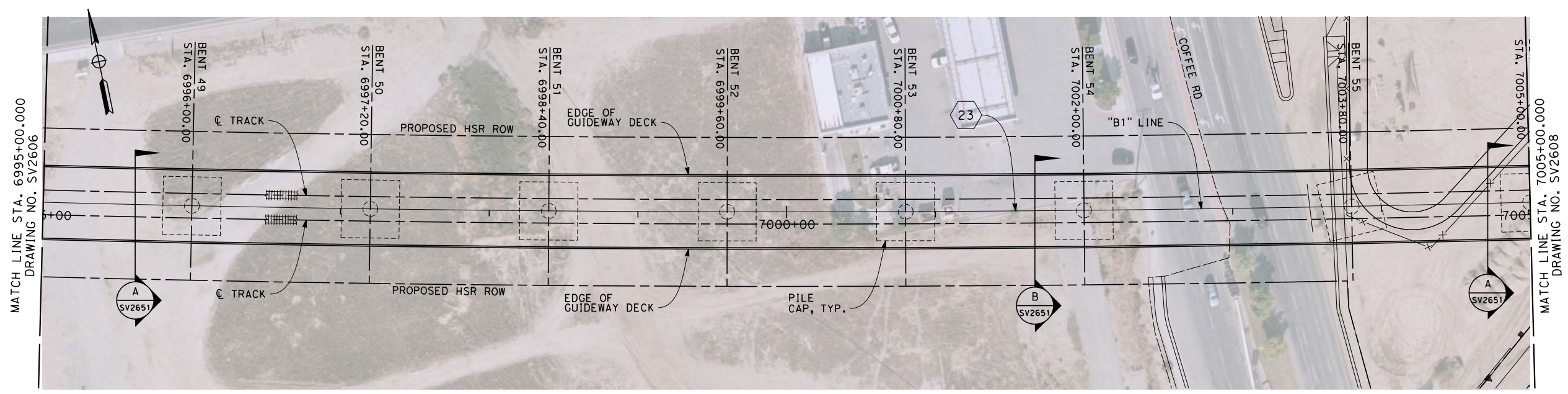
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**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
  - STEEL TRUSS - INSITU, SLID OR LAUNCHED
  - ELEVATED SLABS - PC BEAM AND INSITU SLAB
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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

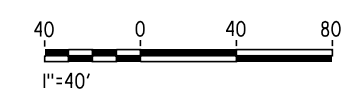
②3

R = 19508.25'

Δ = 50° 22' 43.5"

T = 9175.5'

L = 17153.1'



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |
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|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

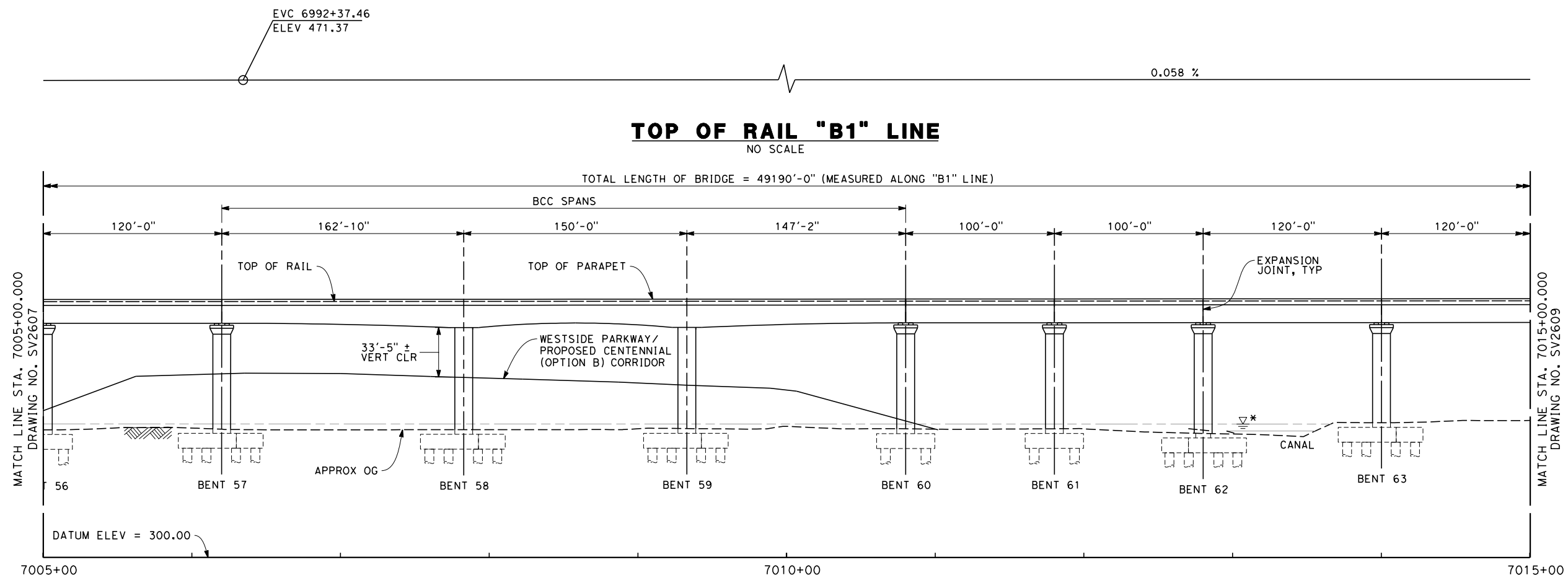
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SCALE  
AS SHOWN

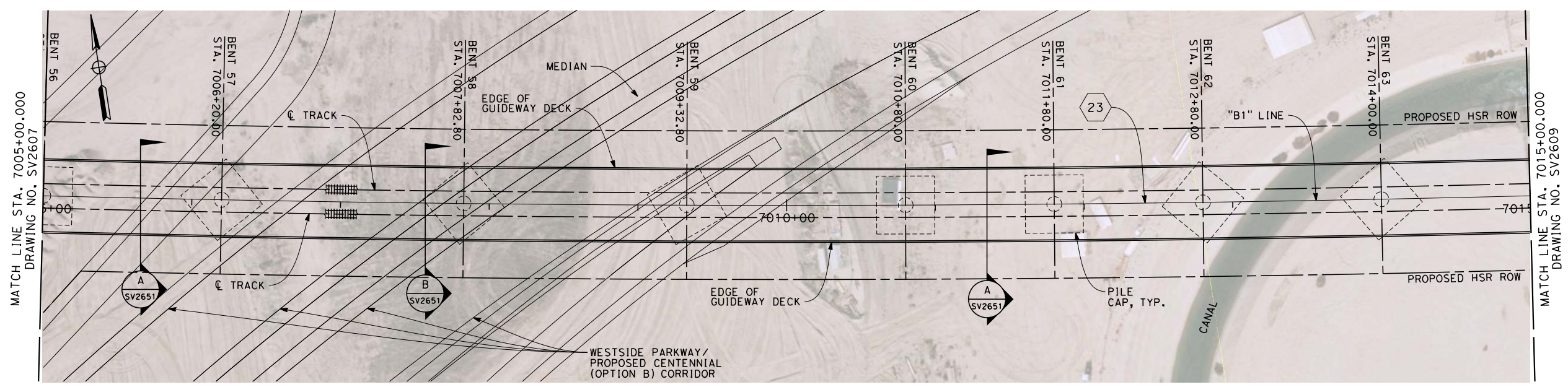
SHEET NO.  
8 OF 57



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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②3

R = 19508.25'

Δ = 50° 22' 43.5"

T = 9175.5'

L = 17153.1'

Scale: 40 0 40 80  
1"=40'

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
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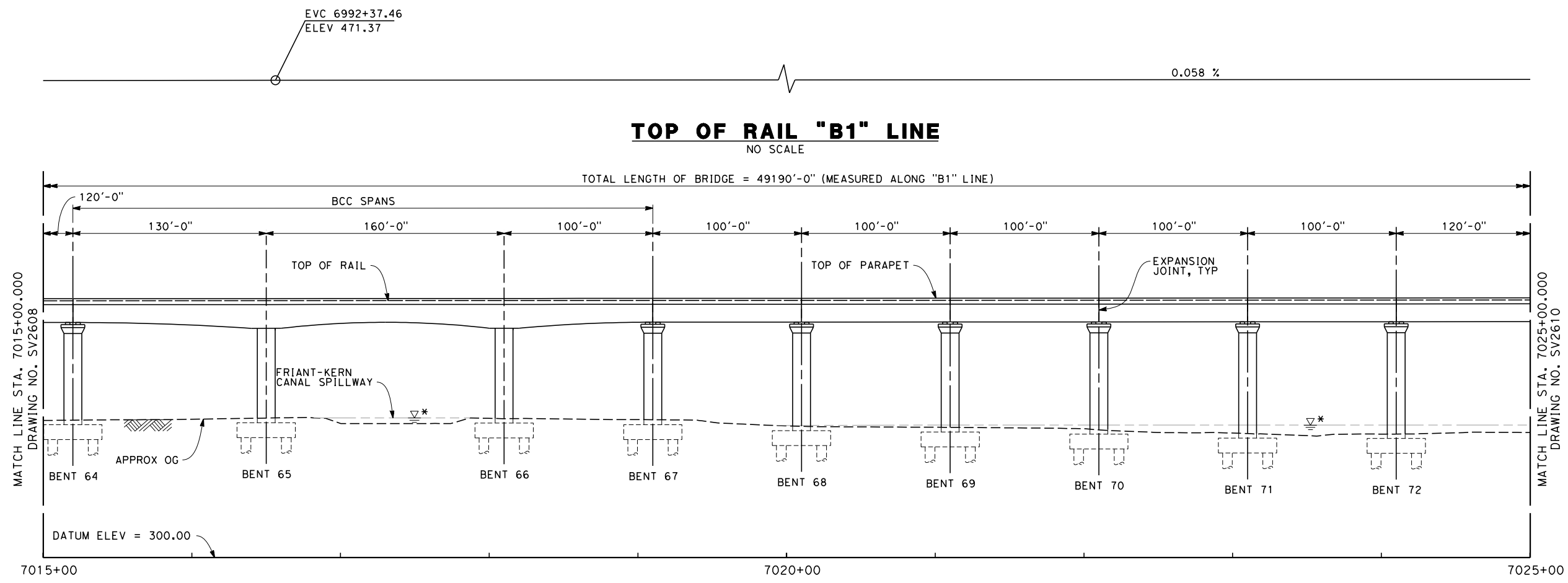
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9 OF 57

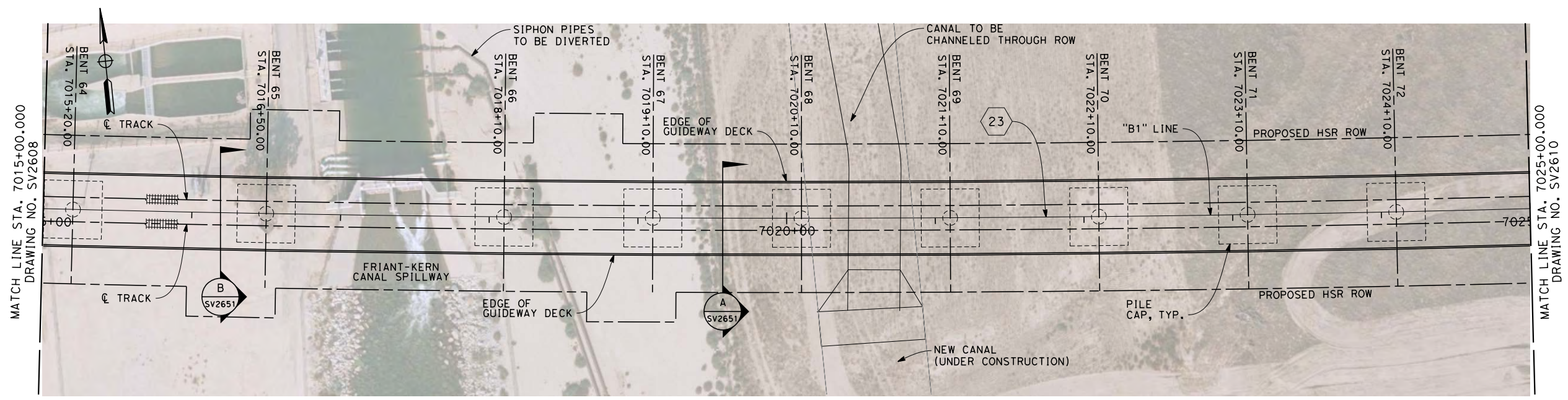


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- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

23

R = 19508.25'

Δ = 50° 22' 43.5"

T = 9175.5'

L = 17153.1'

40 0 40 80  
1"=40'

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2609

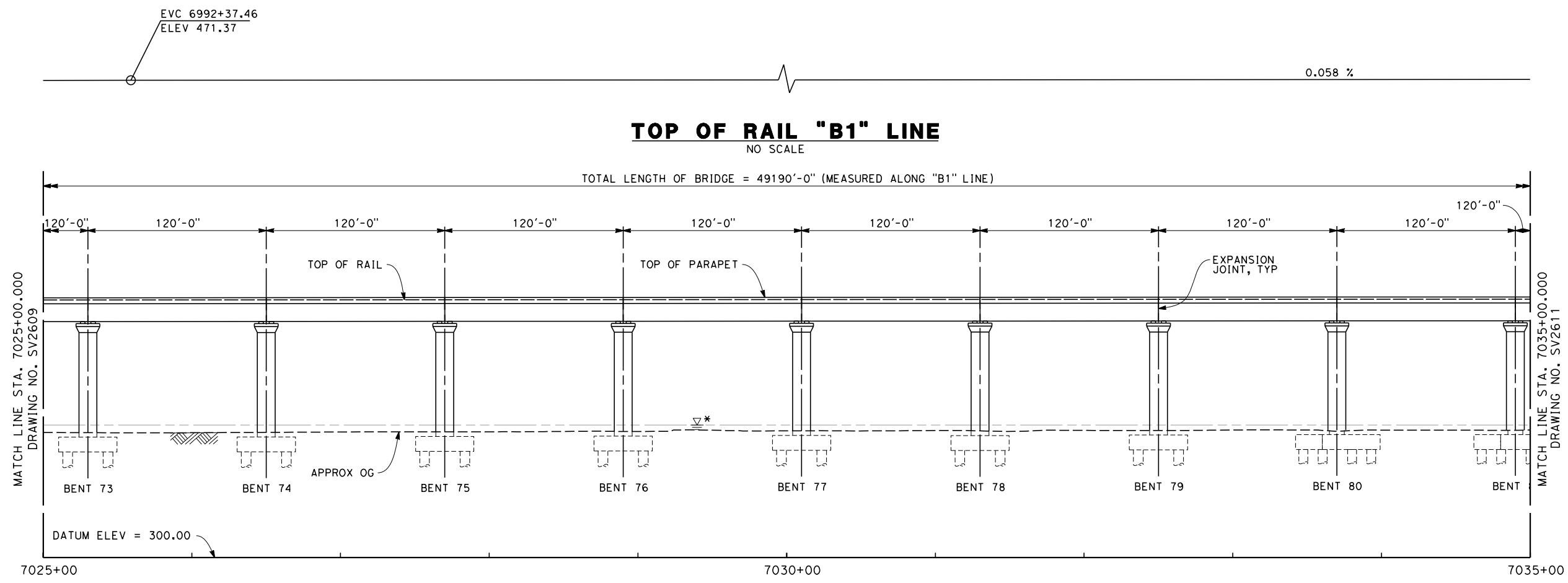
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10 OF 57

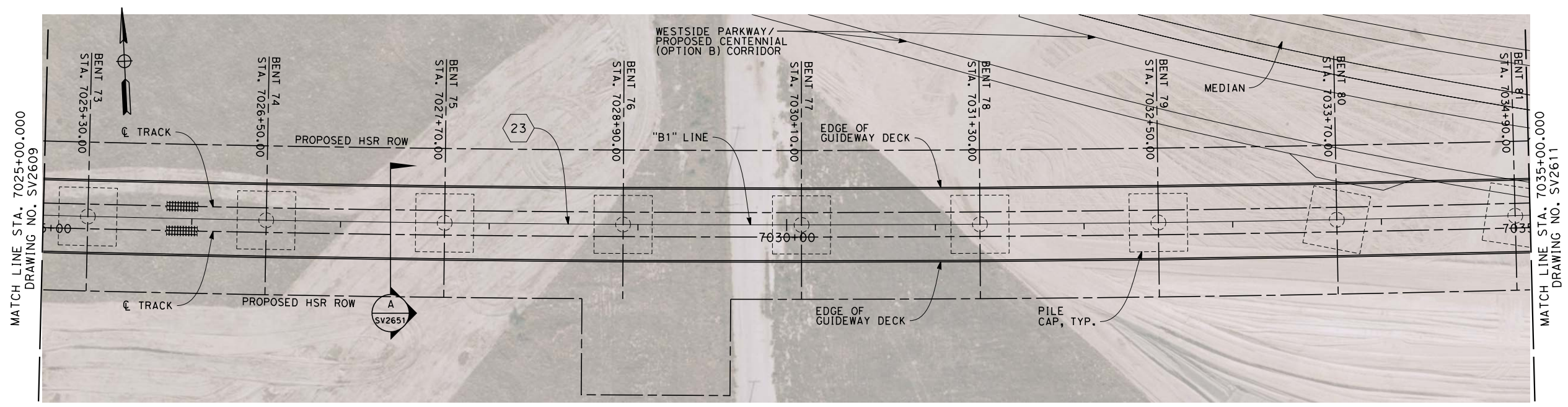


**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
 SIMPLE SPANS - MSS OR FLPM  
 CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
 STEEL TRUSS - INSITU, SLID OR LAUNCHED  
 ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

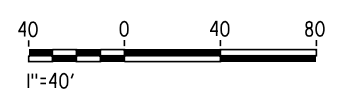
**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②3

R = 19508.25'  
 Δ = 50° 22' 43.5"  
 T = 9175.5'  
 L = 17153.1'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

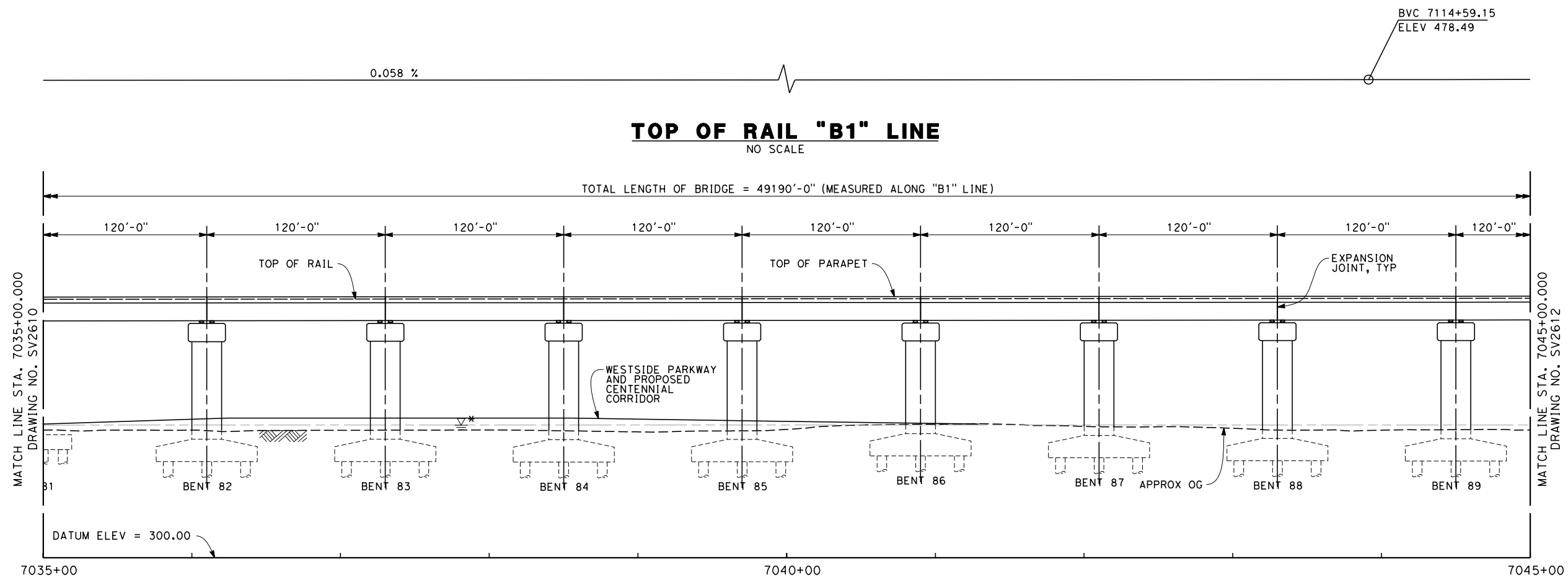
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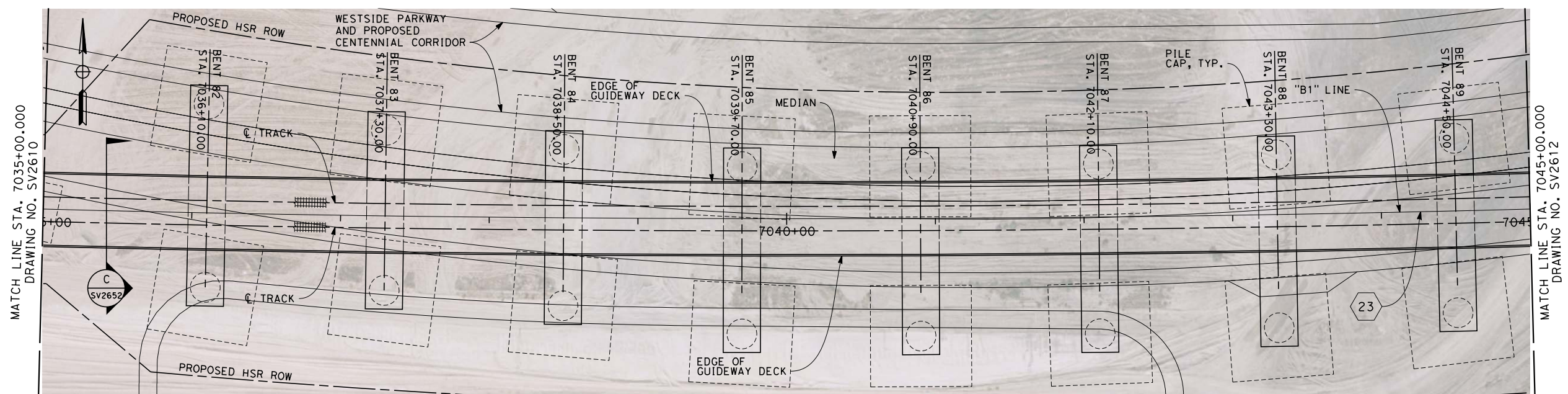
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11 OF 57



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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

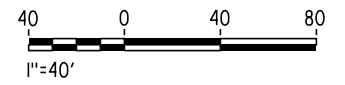
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON  
 SIMPLE SPANS - MSS OR FLPM  
 CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
 STEEL TRUSS - INSITU, SLID OR LAUNCHED  
 ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

⬡ 23

R = 19508.25'  
 Δ = 50° 22' 43.5"  
 T = 9175.5'  
 L = 17153.1'



| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
 DESIGN SUBMISSION**

**NOT FOR  
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2611

SCALE  
AS SHOWN

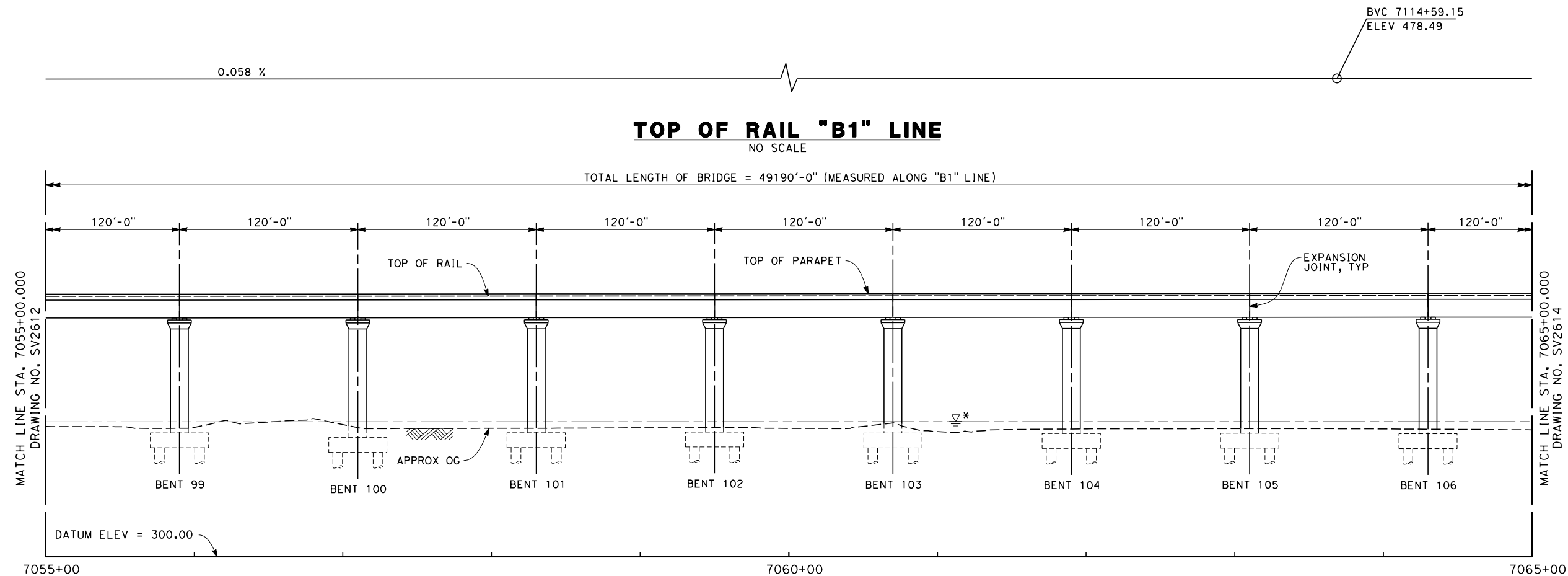
SHEET NO.  
12 OF 57



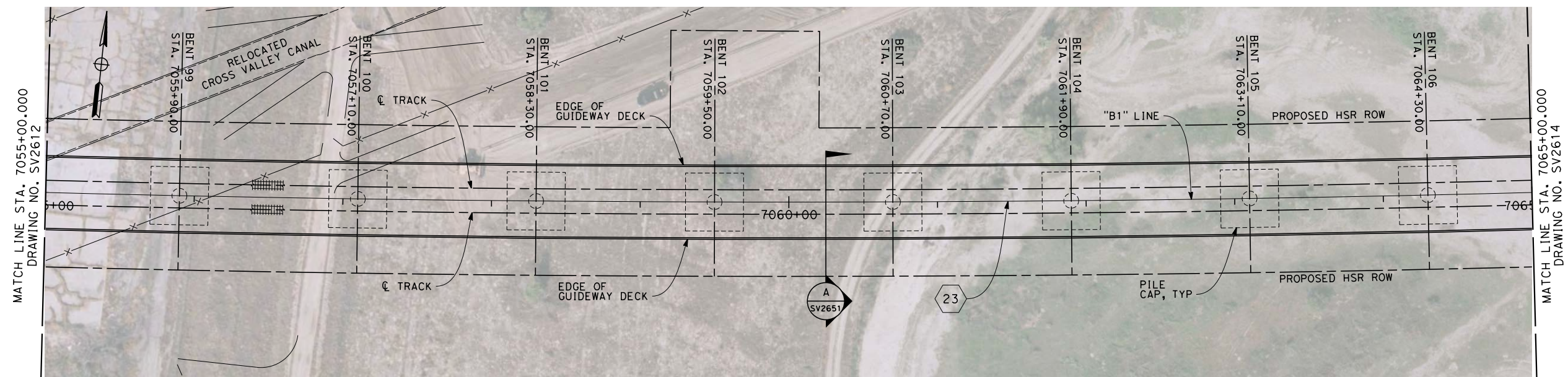




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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

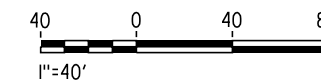
②3

R = 19508.25'

Δ = 50° 22' 43.5"

T = 9175.5'

L = 17153.1'



| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |
|     |      |    |     |     |             |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2613

SCALE  
AS SHOWN

SHEET NO.  
14 OF 57





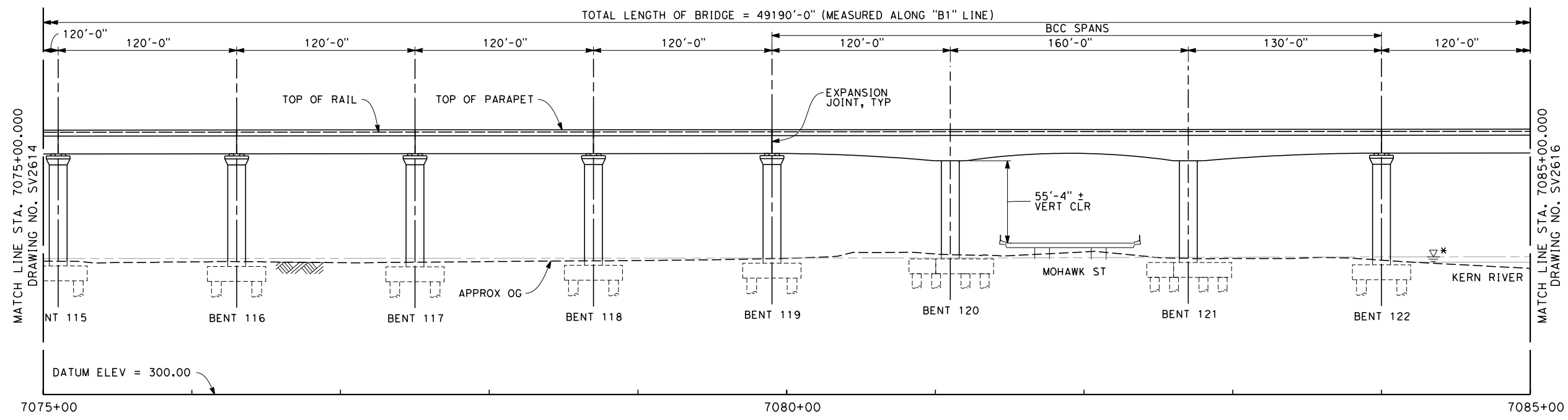


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BVC 7114+59.15  
ELEV 478.49

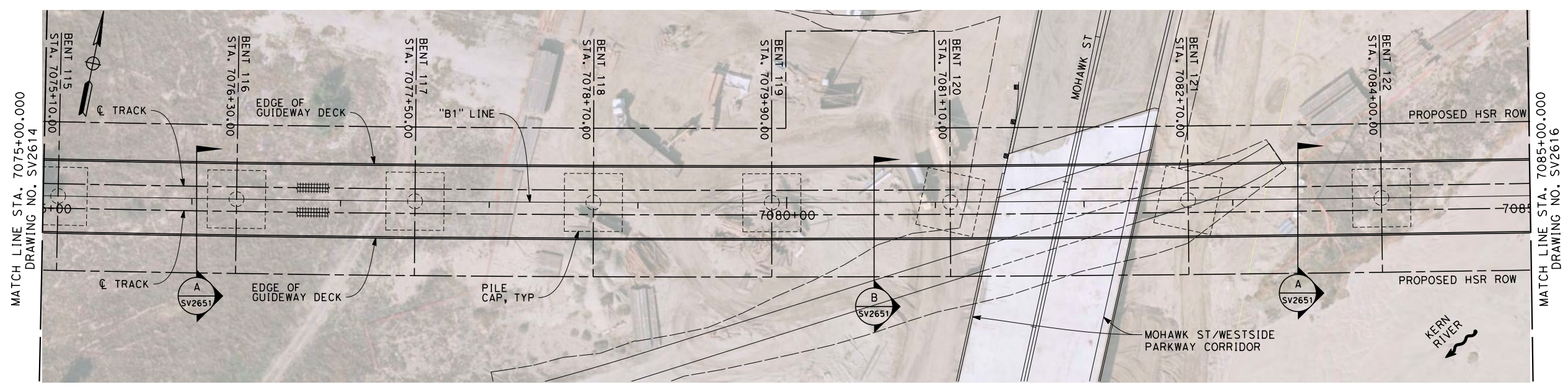
0.058 %

**TOP OF RAIL "B1" LINE**  
NO SCALE



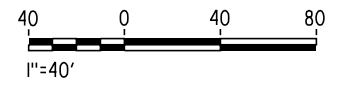
**ELEVATION**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**

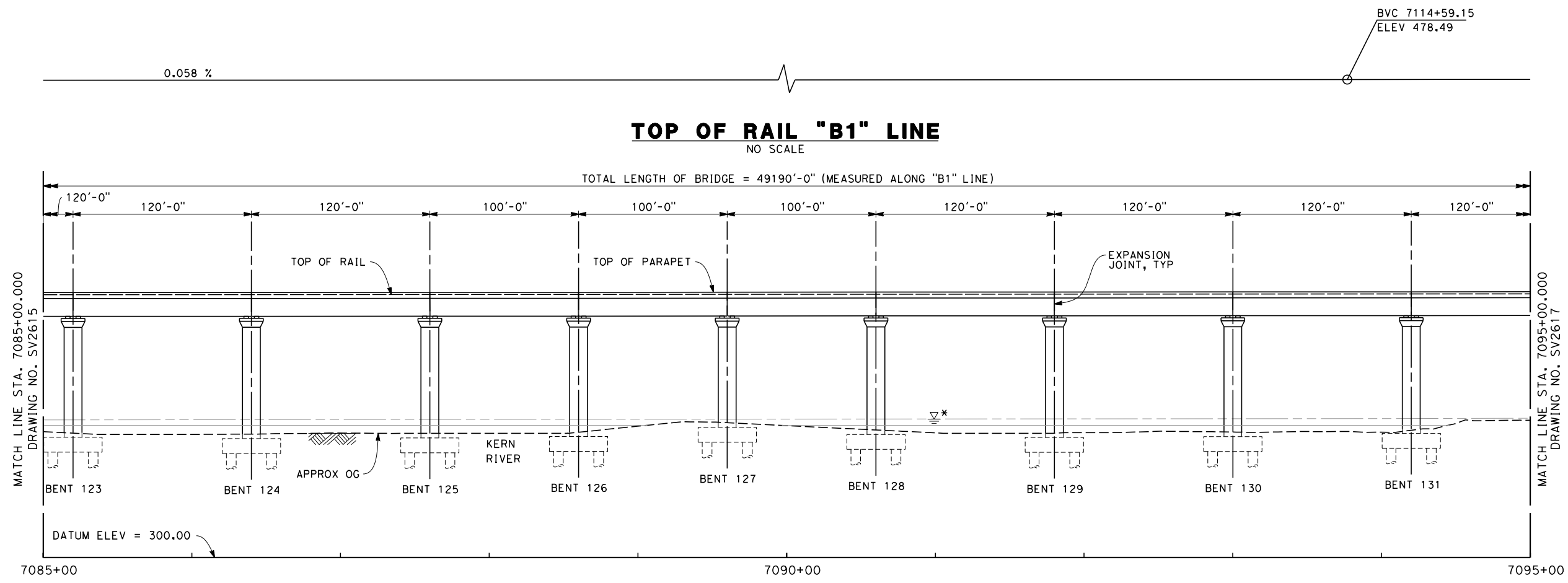


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

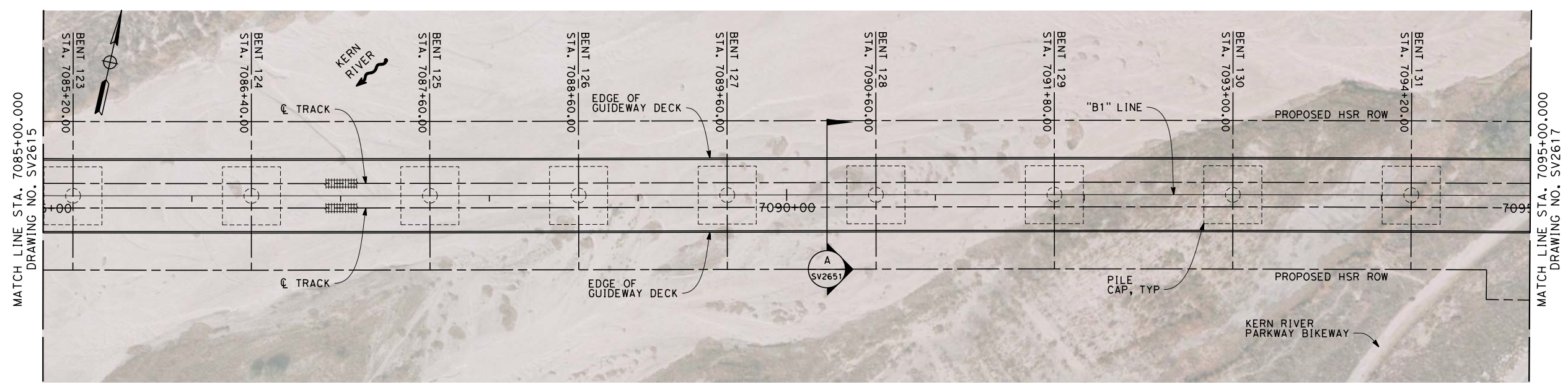
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2615  
SCALE  
AS SHOWN  
SHEET NO.  
16 OF 57



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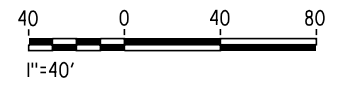
**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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

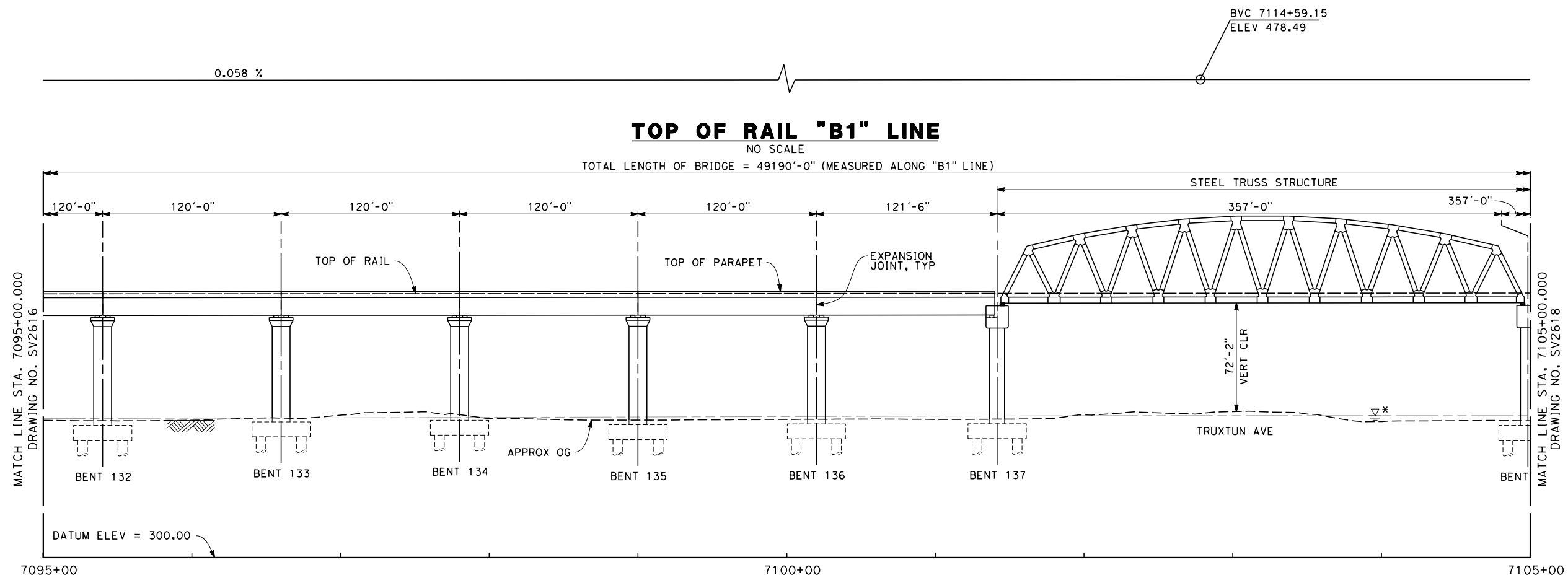


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

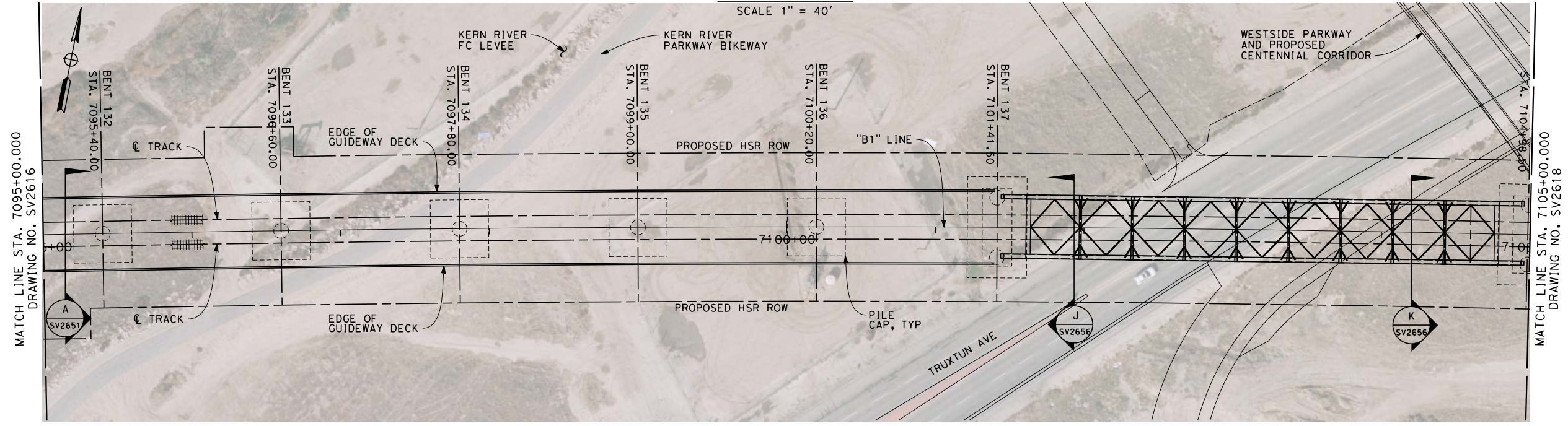
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HSR 06-0003  
DRAWING NO.  
SV2616  
SCALE  
AS SHOWN  
SHEET NO.  
17 OF 57



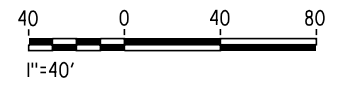
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**ELEVATION**  
SCALE 1" = 40'



- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2617  
SCALE  
AS SHOWN  
SHEET NO.  
18 OF 57



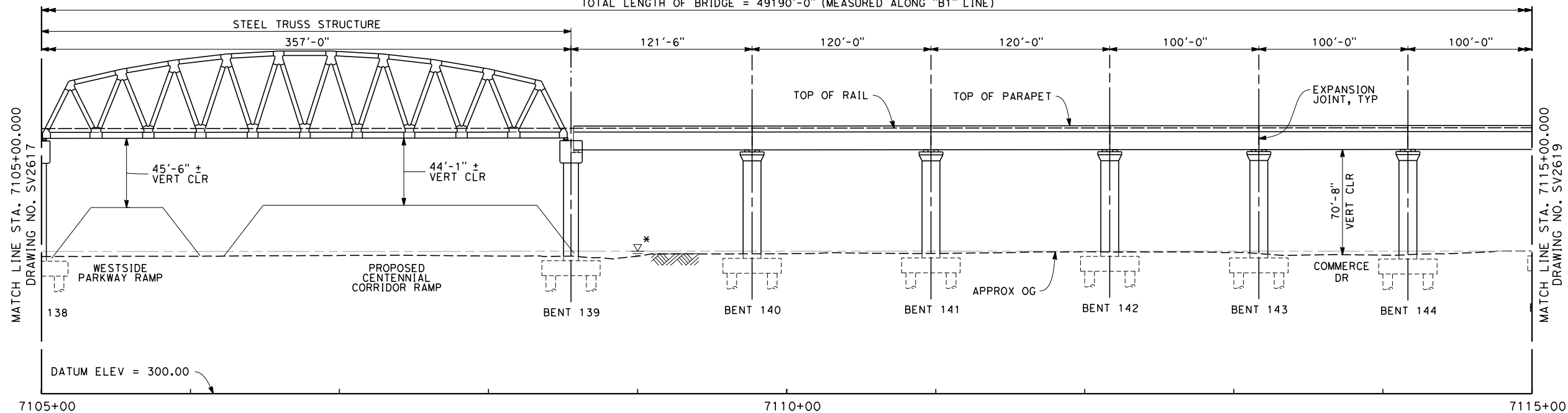
0.058 %

BVC 7114+59.15  
ELEV 478.49

### TOP OF RAIL "B1" LINE

NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)

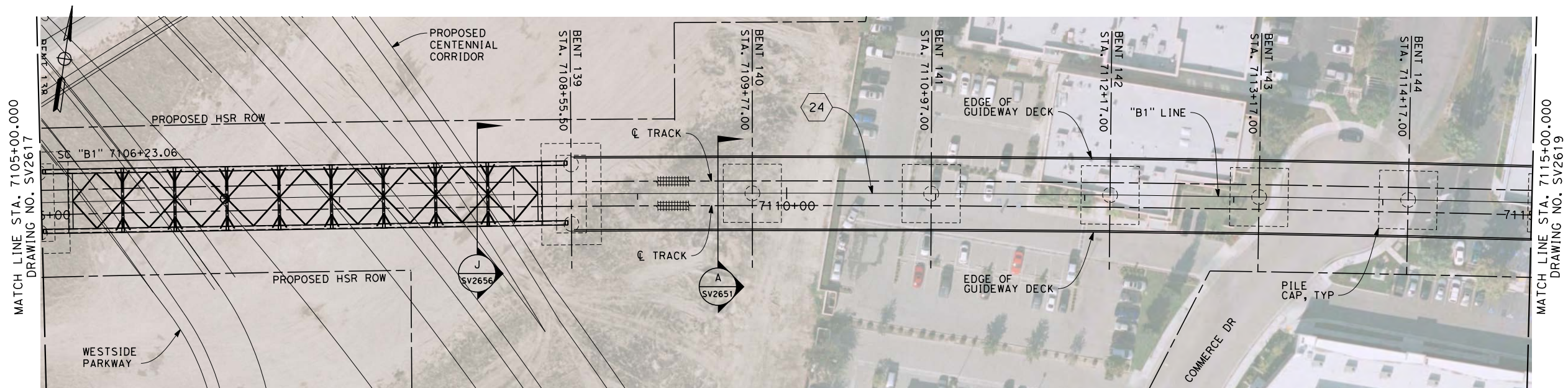


### ELEVATION

SCALE 1" = 40'

### NOTES

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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### PLAN

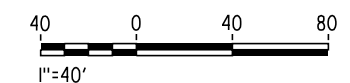
SCALE 1" = 40'

### LEGEND:

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

### CURVE DATA

②4  
R = 19508.25'  
Δ = 07° 51' 31.2"  
T = 1340.0'  
L = 2675.7'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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

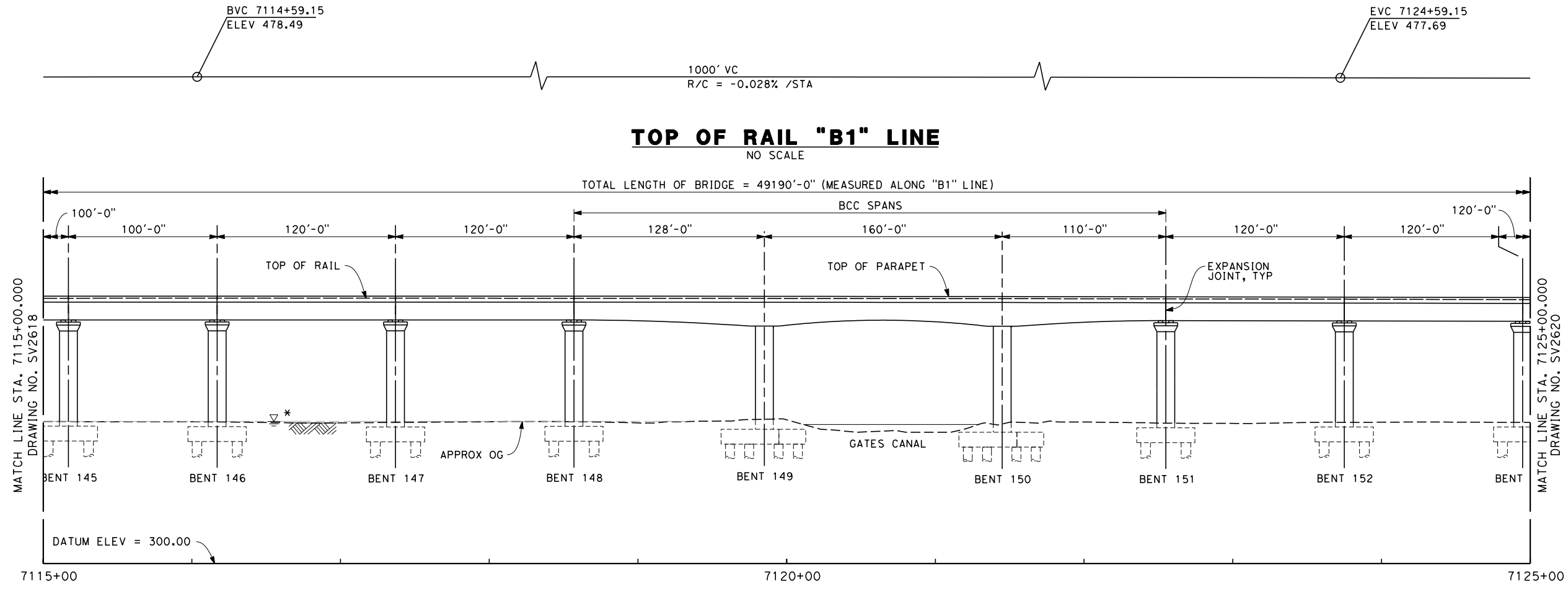


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

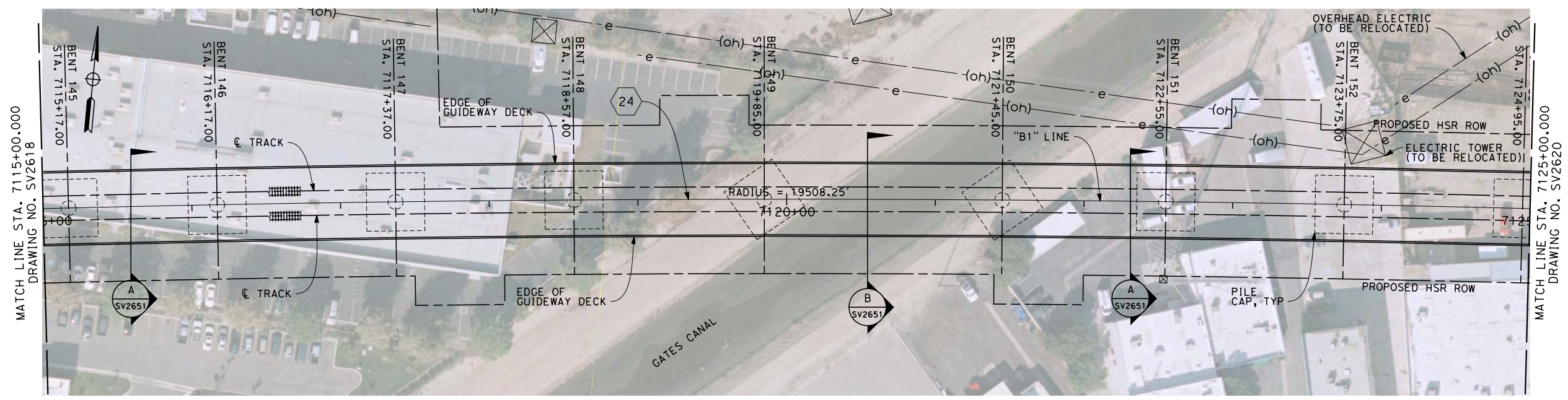
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2618  
SCALE  
AS SHOWN  
SHEET NO.  
19 OF 57



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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- NOTES**
- NOT ALL PILES SHOWN
  - PILE LENGTH TO BE DETERMINED
  - SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  - UTILITY LOCATIONS TO BE DETERMINED
  - ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".
- CURVE DATA**
- ②4
- R = 19508.25'
- Δ = 07° 51' 31.2"
- T = 1340.0'
- L = 2675.7'
- Scale: 40 0 40 80  
1"=40'

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2619

SCALE  
AS SHOWN

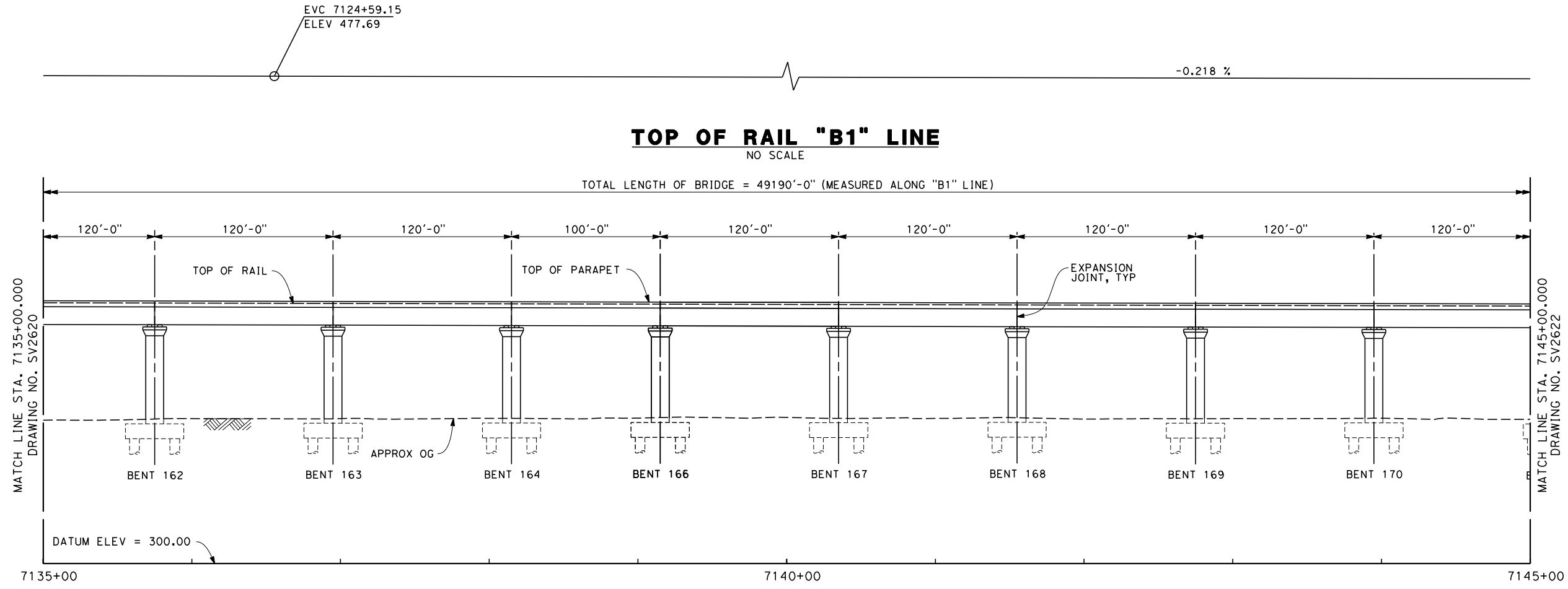
SHEET NO.  
20 OF 57



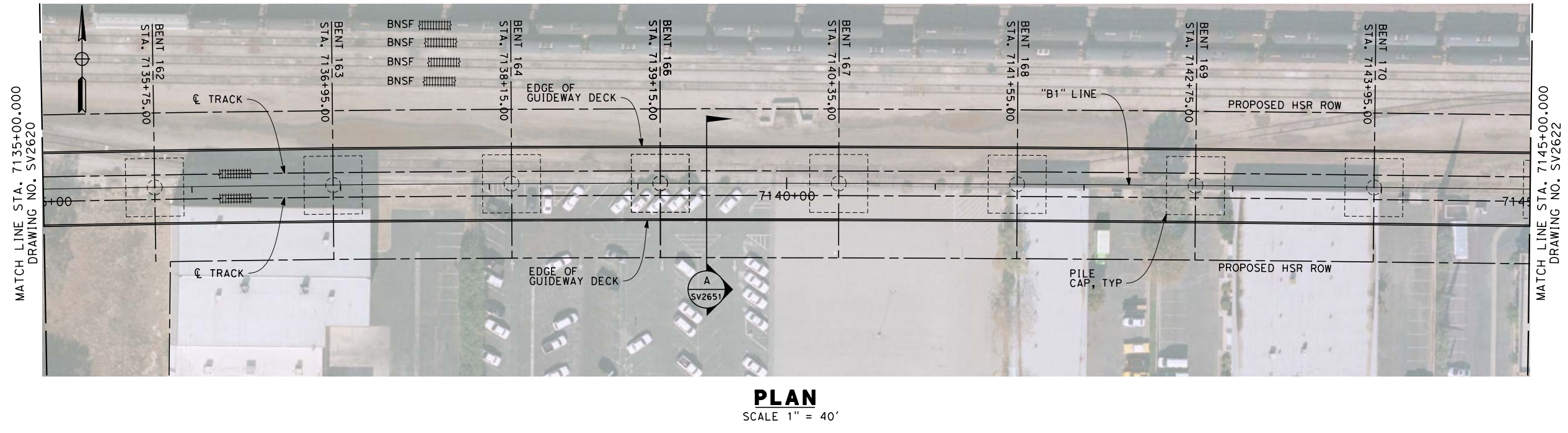




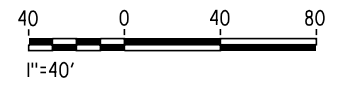
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- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2621

SCALE  
AS SHOWN

SHEET NO.  
22 OF 57



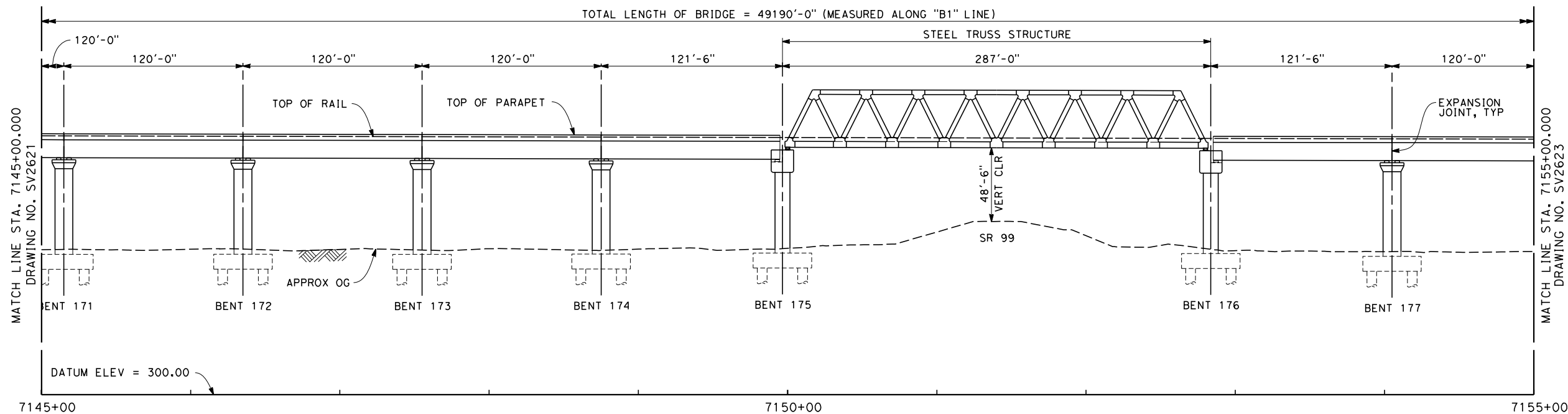
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EVC 7124+59.15  
ELEV 477.69

-0.218 %

**TOP OF RAIL "B1" LINE**  
NO SCALE

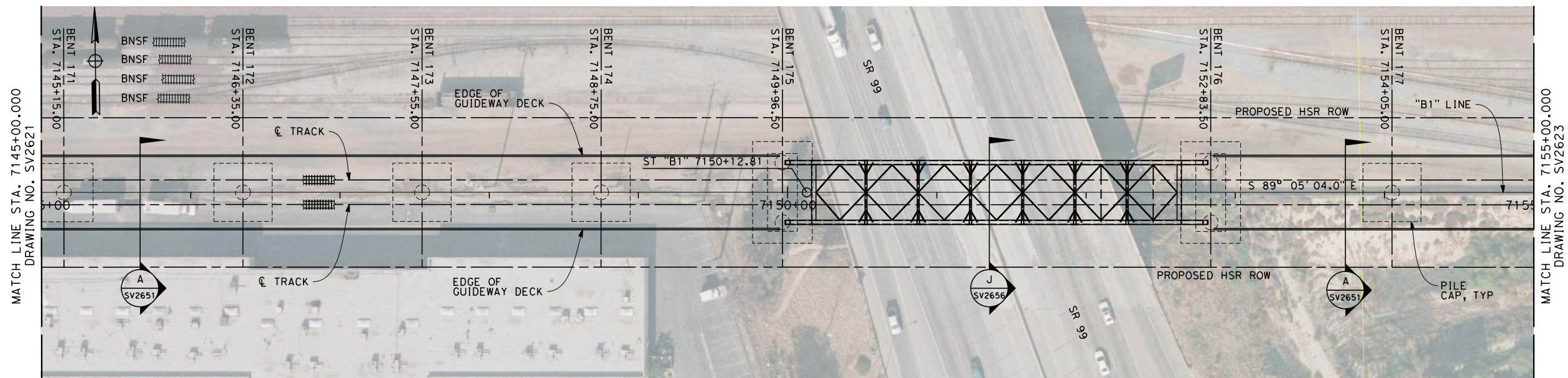
TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



**ELEVATION**  
SCALE 1" = 40'

**NOTES**

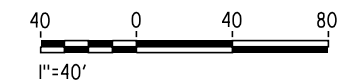
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
  - STEEL TRUSS - INSITU, SLID OR LAUNCHED
  - ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**PLAN**  
SCALE 1" = 40'

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**  
DRAWN BY  
**F. PALERMO**  
CHECKED BY  
**A. ARMSTRONG**  
IN CHARGE  
**R. COFFIN**  
DATE  
**12/31/13**

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

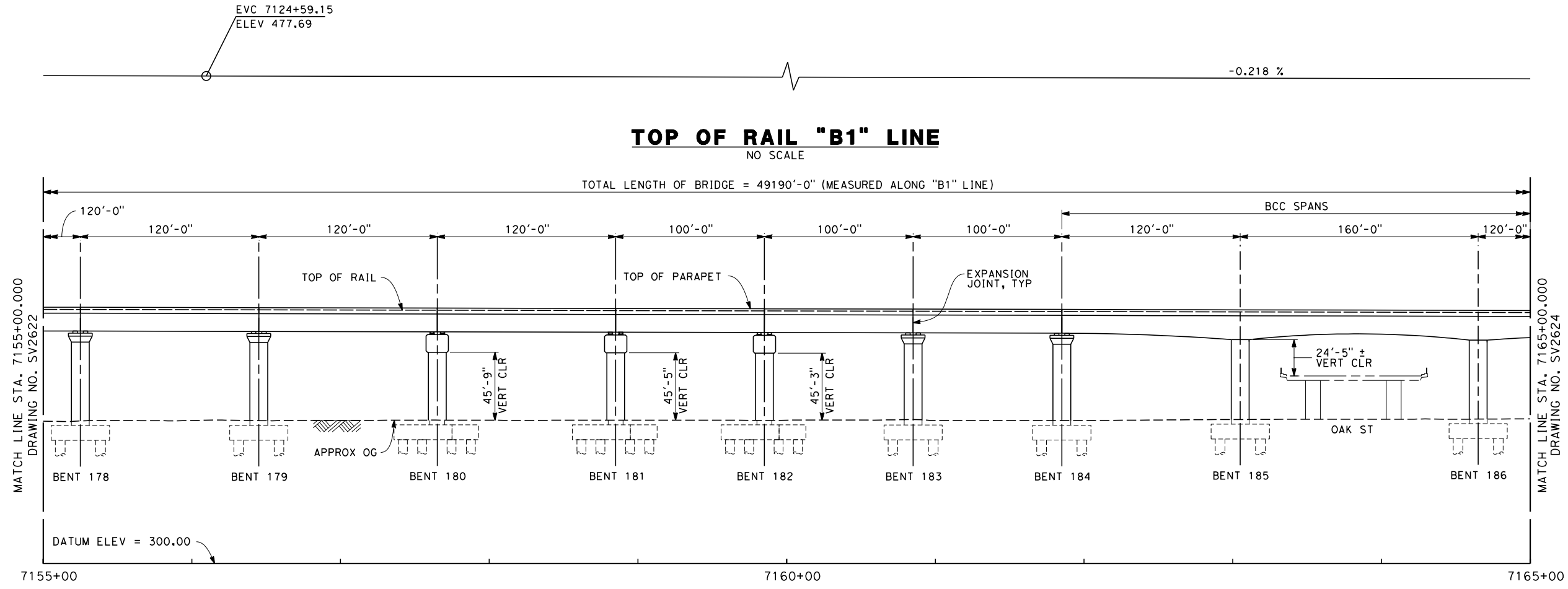


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

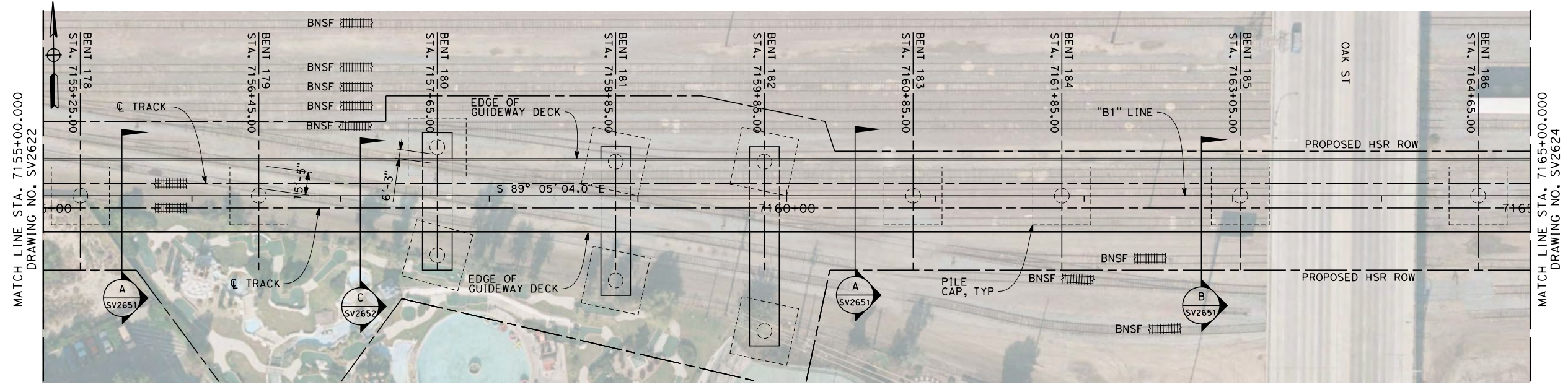
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2622  
SCALE  
AS SHOWN  
SHEET NO.  
23 OF 57



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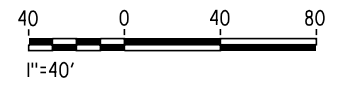
**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |
|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

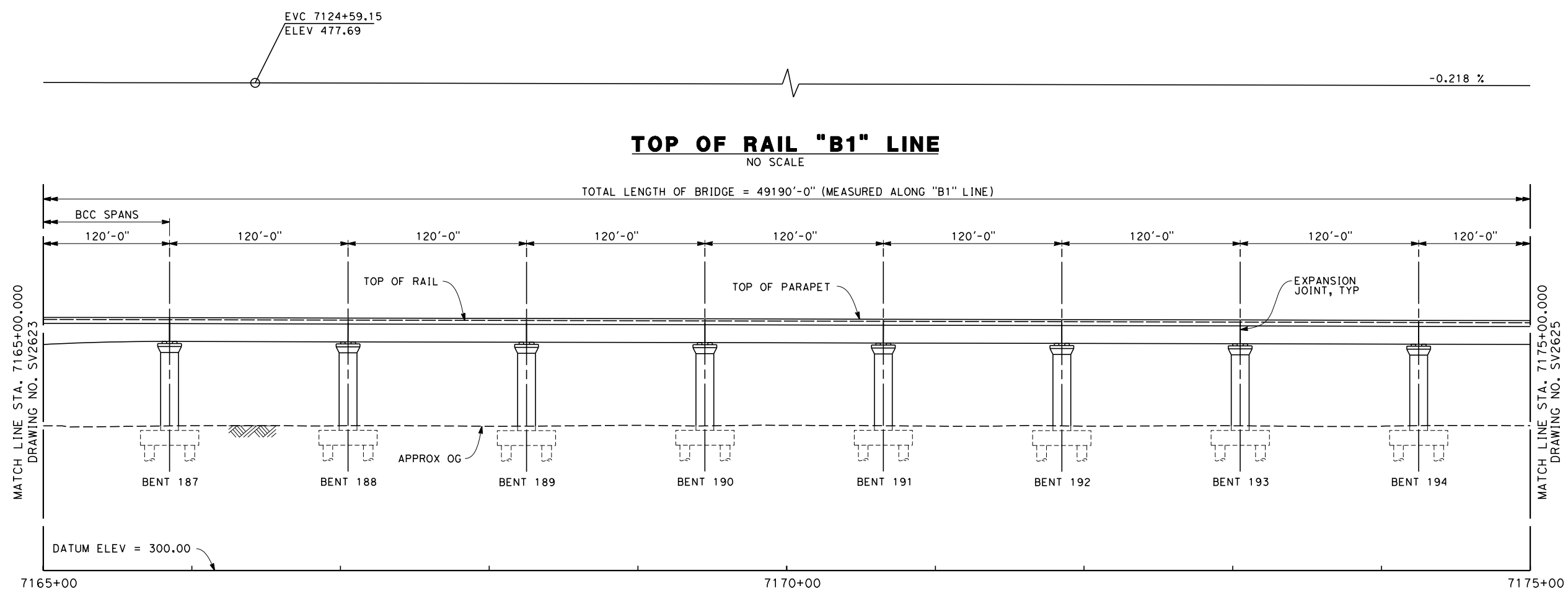
DRAWING NO.  
SV2623

SCALE  
AS SHOWN

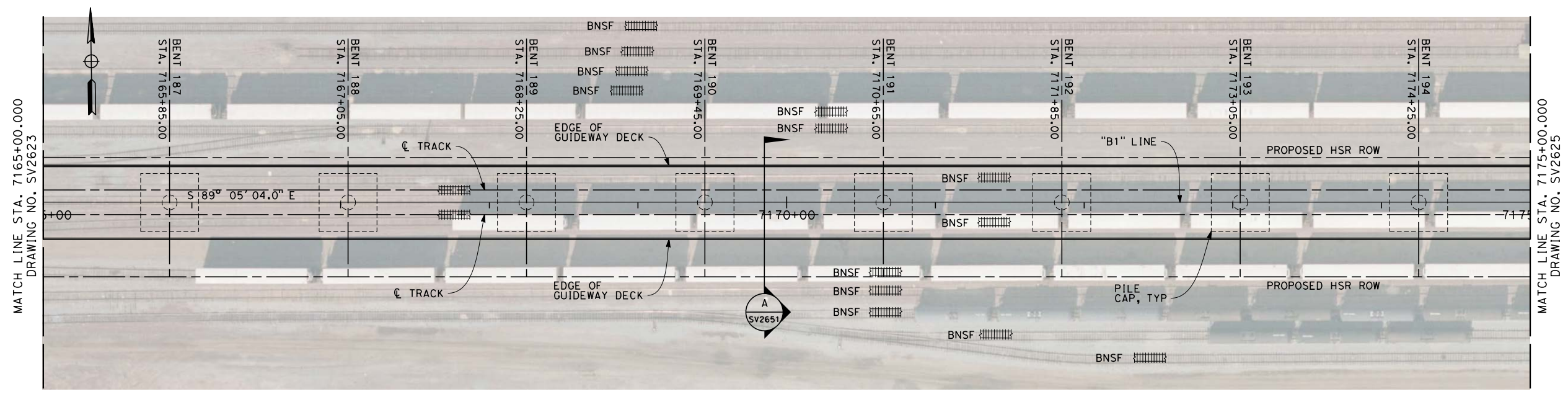
SHEET NO.  
24 OF 57



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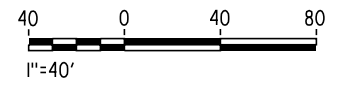


**ELEVATION**  
SCALE 1" = 40'



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

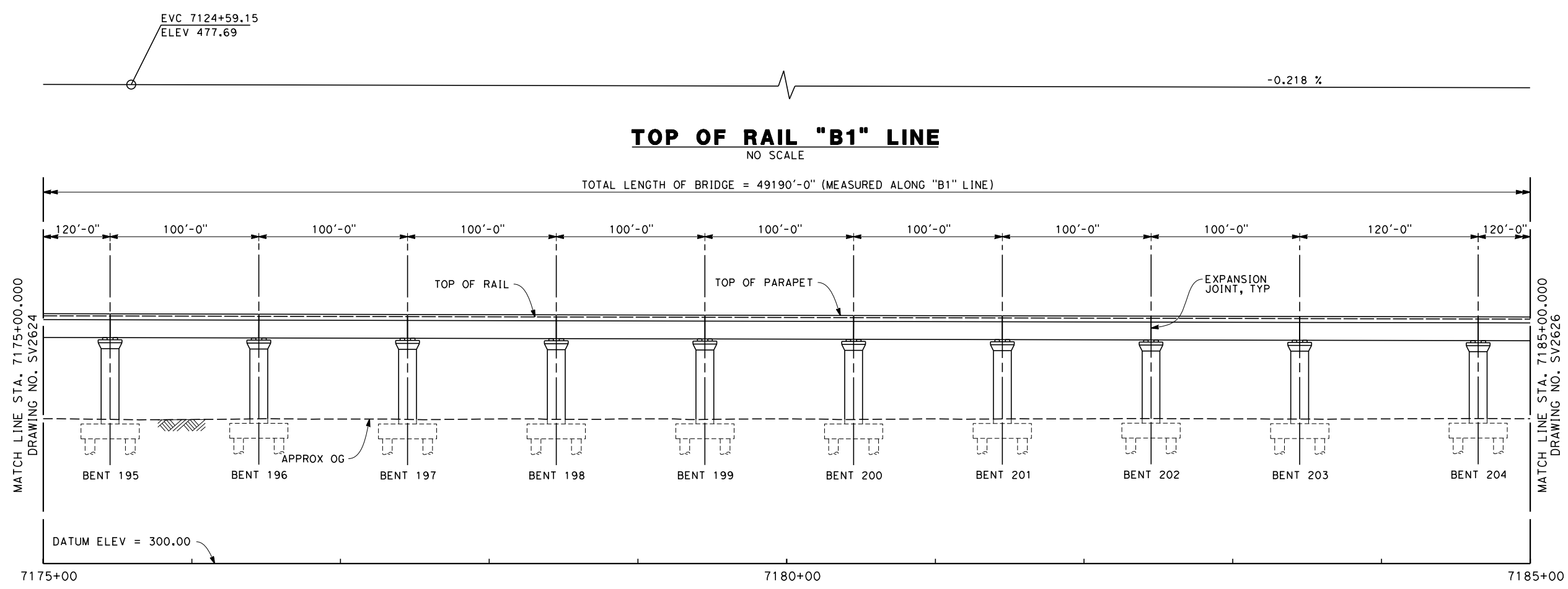
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SCALE  
AS SHOWN

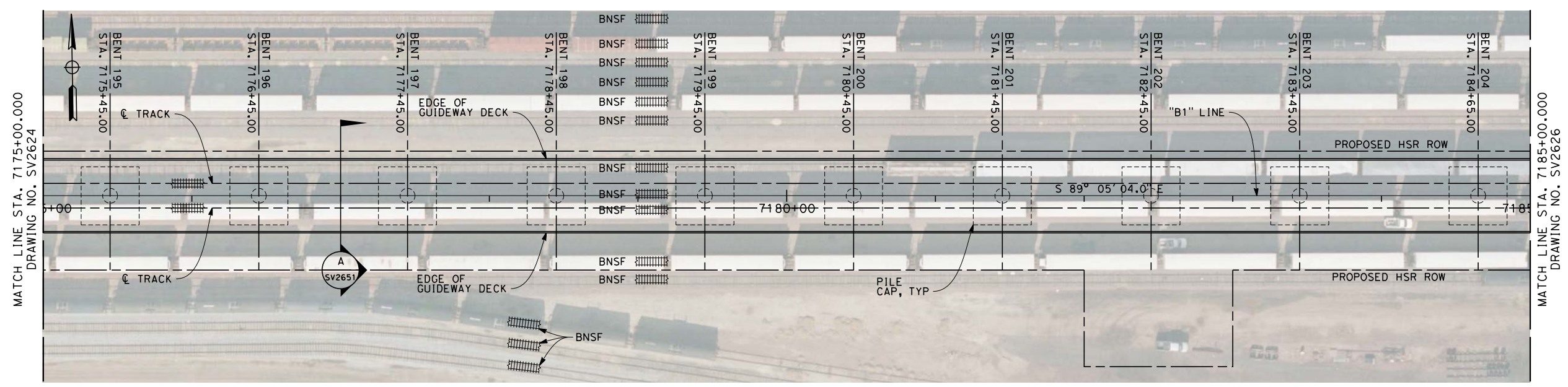
SHEET NO.  
25 OF 57



- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
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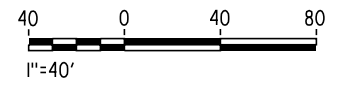


**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2625  
SCALE  
AS SHOWN  
SHEET NO.  
26 OF 57



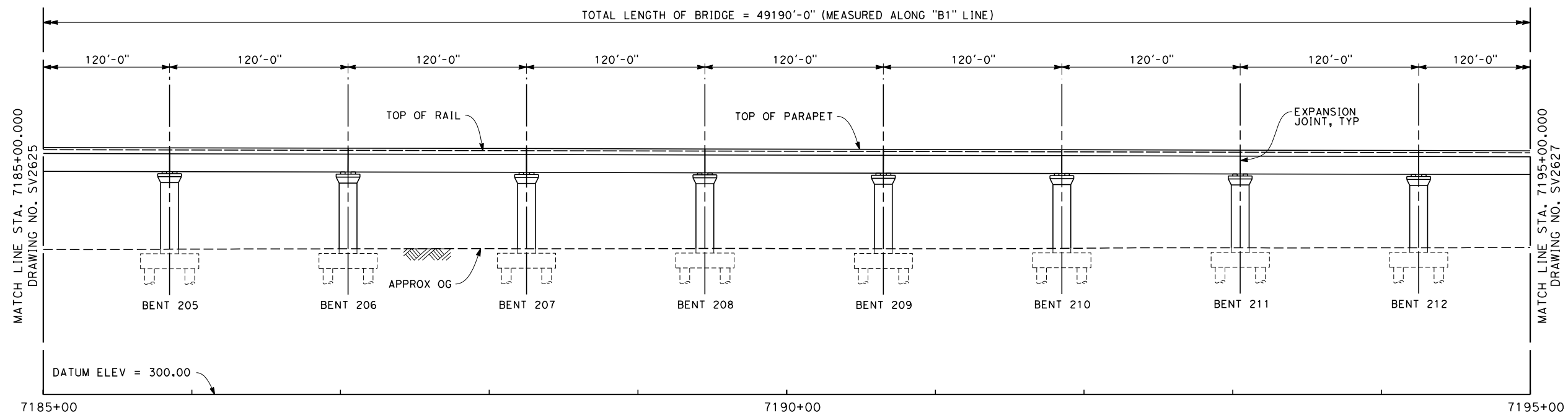
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BVC 7246+46.50  
ELEV 451.09

-0.218 %

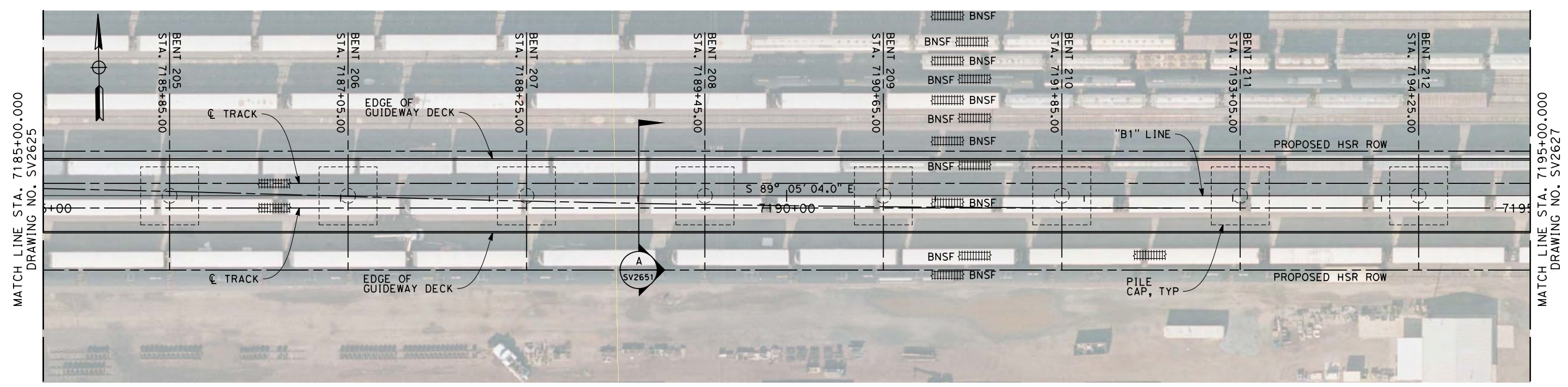
**TOP OF RAIL "B1" LINE**  
NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



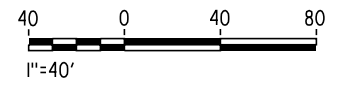
**ELEVATION**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
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**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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

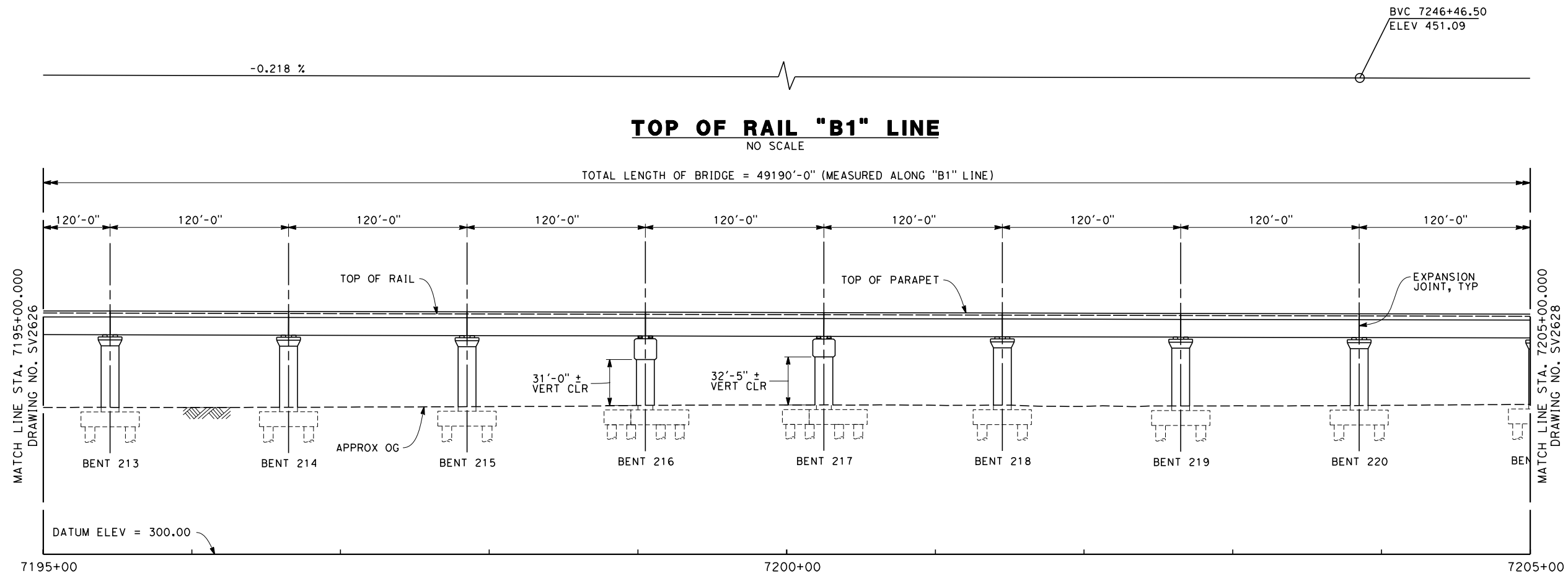


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

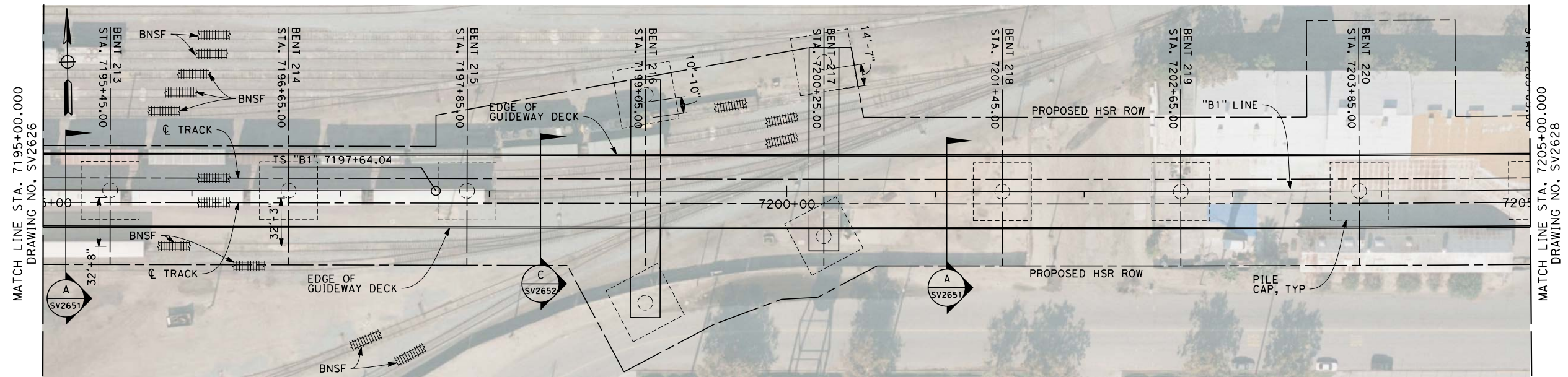
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DRAWING NO.  
SV2626  
SCALE  
AS SHOWN  
SHEET NO.  
27 OF 57



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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
  - STEEL TRUSS - INSITU, SLID OR LAUNCHED
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**LEGEND:**

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- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY  
M. FISHER  
 DRAWN BY  
F. PALERMO  
 CHECKED BY  
A. ARMSTRONG  
 IN CHARGE  
R. COFFIN  
 DATE  
12/31/13

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

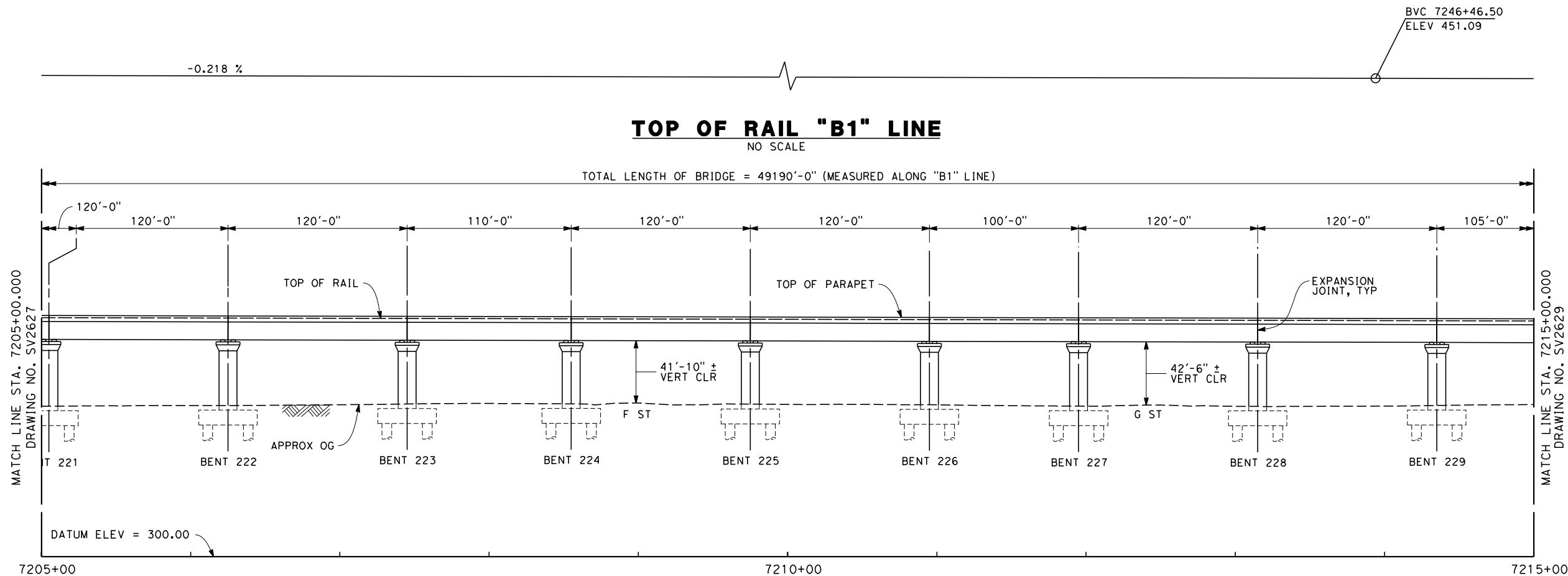


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

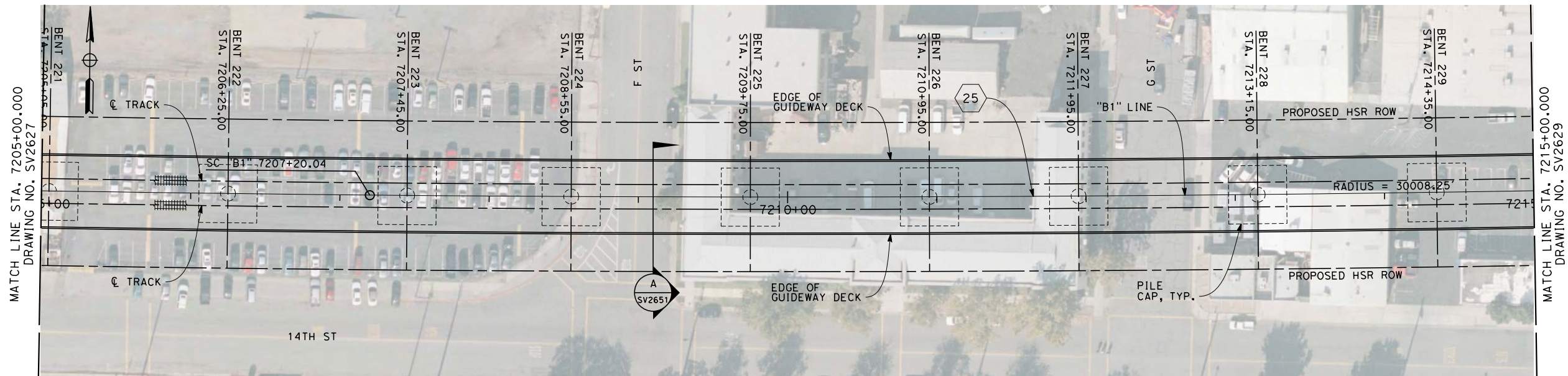
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 DRAWING NO.  
SV2627  
 SCALE  
AS SHOWN  
 SHEET NO.  
28 OF 57



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**ELEVATION**  
 SCALE 1" = 40'



**PLAN**  
 SCALE 1" = 40'

**NOTES**

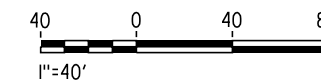
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
 SIMPLE SPANS - MSS OR FLPM  
 CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
 STEEL TRUSS - INSITU, SLID OR LAUNCHED  
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**LEGEND:**

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- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②5  
 R = 30008.25'  
 Δ = 02° 27' 55.4"  
 T = 645.7'  
 L = 1291.2'



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
 M. FISHER  
 DRAWN BY  
 F. PALERMO  
 CHECKED BY  
 A. ARMSTRONG  
 IN CHARGE  
 R. COFFIN  
 DATE  
 12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
 FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

CONTRACT NO.  
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 SCALE  
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 SHEET NO.  
 29 OF 57

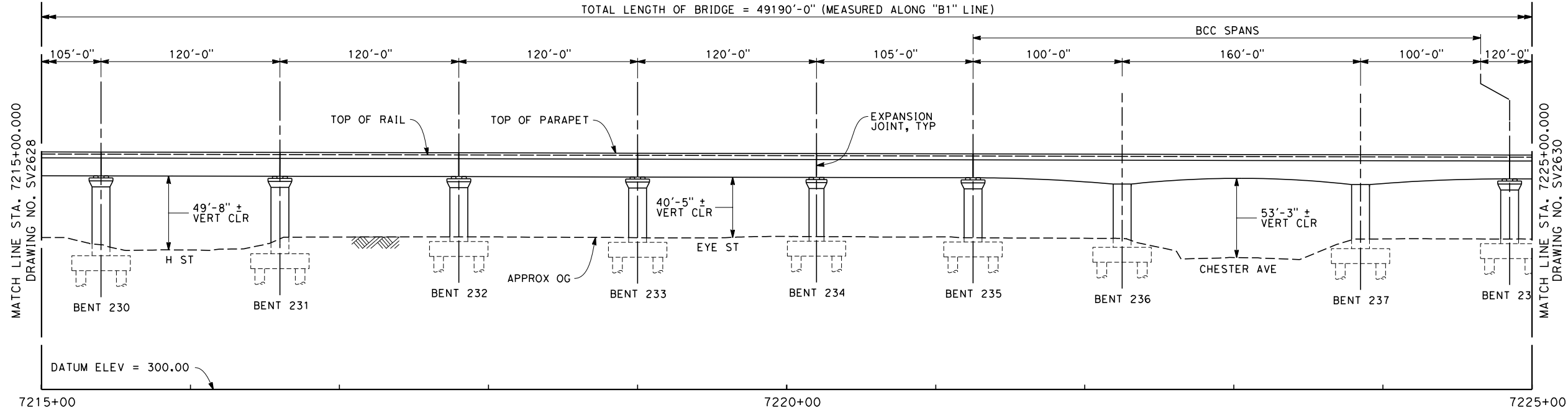


-0.218 %

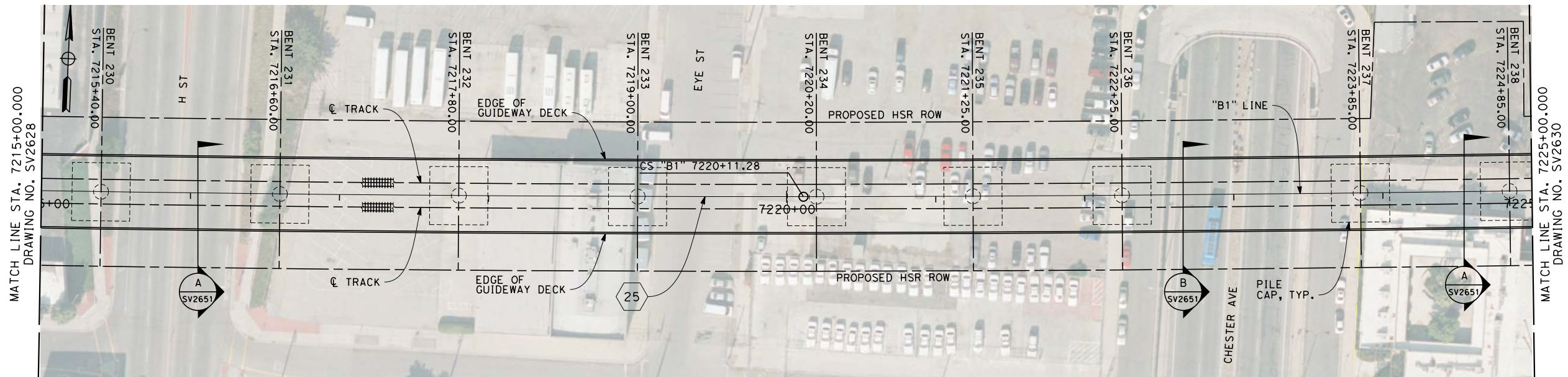
BVC 7246+46.50  
ELEV 451.09

**TOP OF RAIL "B1" LINE**  
NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES**

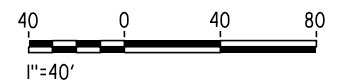
- NOT ALL PILES SHOWN
- PILE LENGTH TO BE DETERMINED
- SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
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**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

25  
R = 30008.25'  
Δ = 02° 27' 55.4"  
T = 645.7'  
L = 1291.2'



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DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2629  
SCALE  
AS SHOWN  
SHEET NO.  
30 OF 57



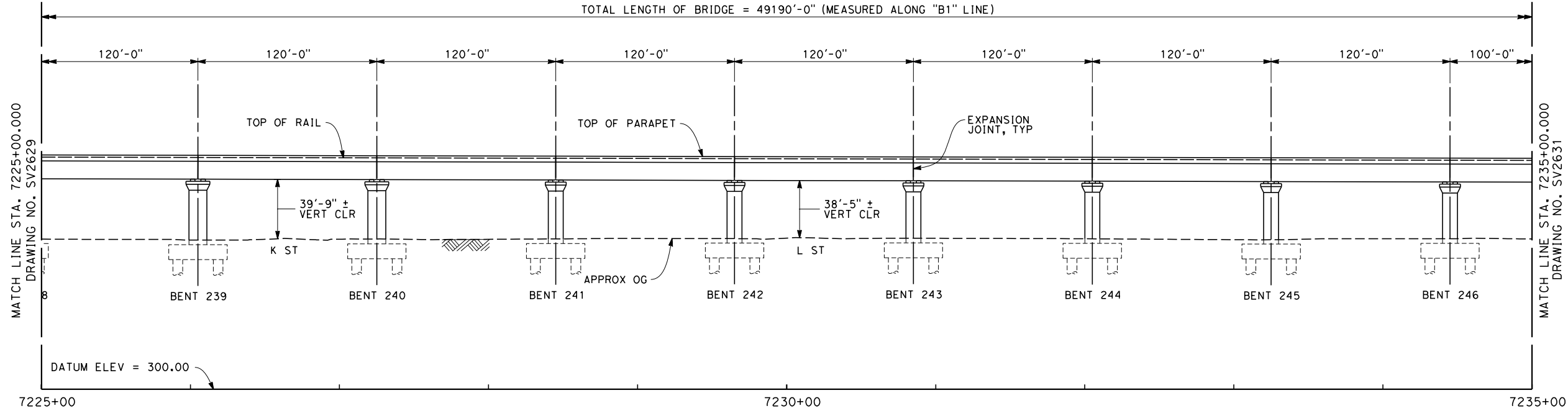
-0.218 %

BVC 7246+46.50  
ELEV 451.09

**TOP OF RAIL "B1" LINE**

NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



**ELEVATION**

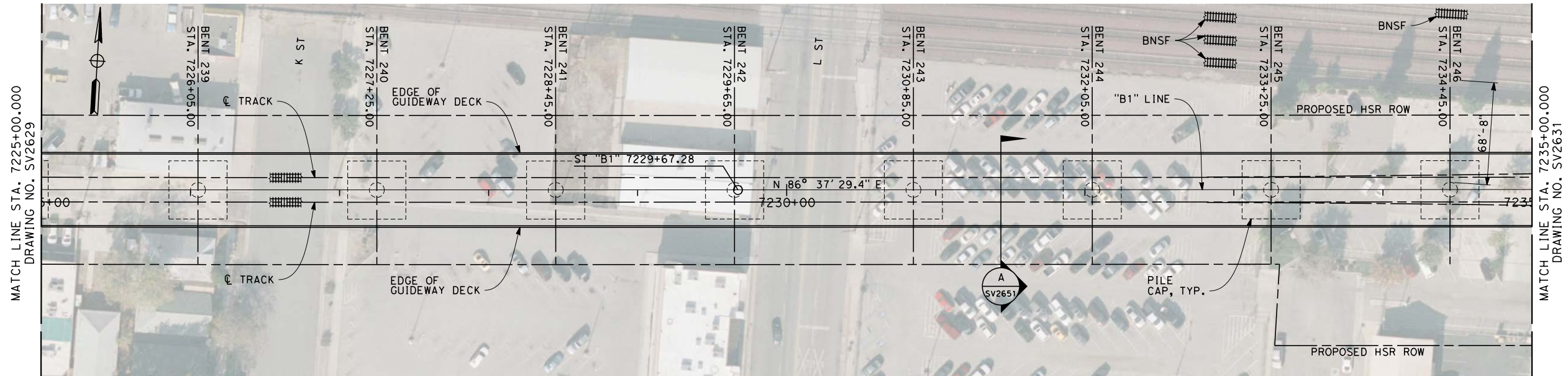
SCALE 1" = 40'

**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
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**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



**PLAN**

SCALE 1" = 40'



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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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

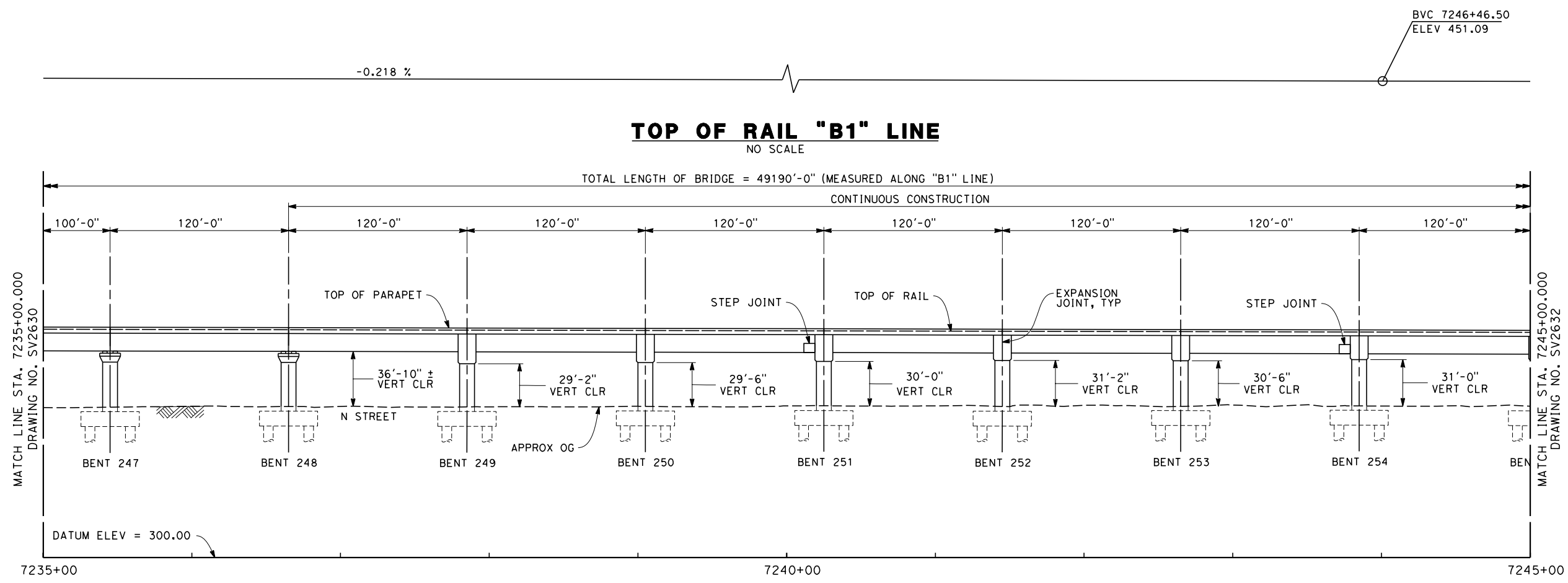


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

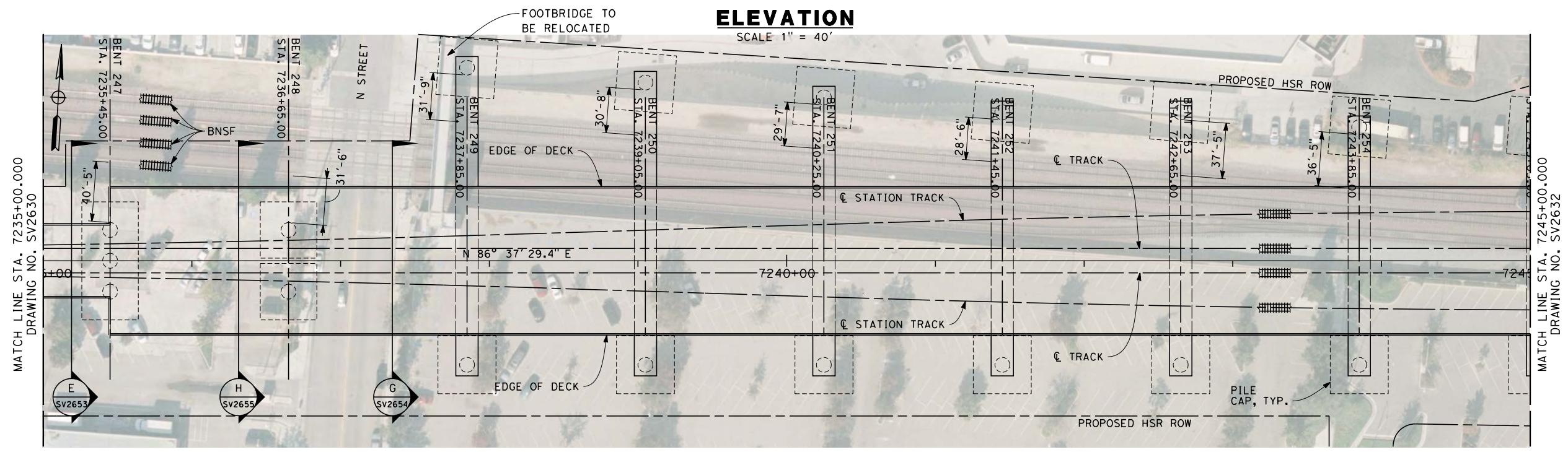
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HSR 06-0003  
DRAWING NO.  
SV2630  
SCALE  
AS SHOWN  
SHEET NO.  
31 OF 57



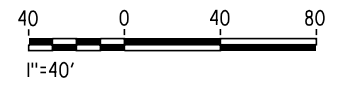
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- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
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- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**

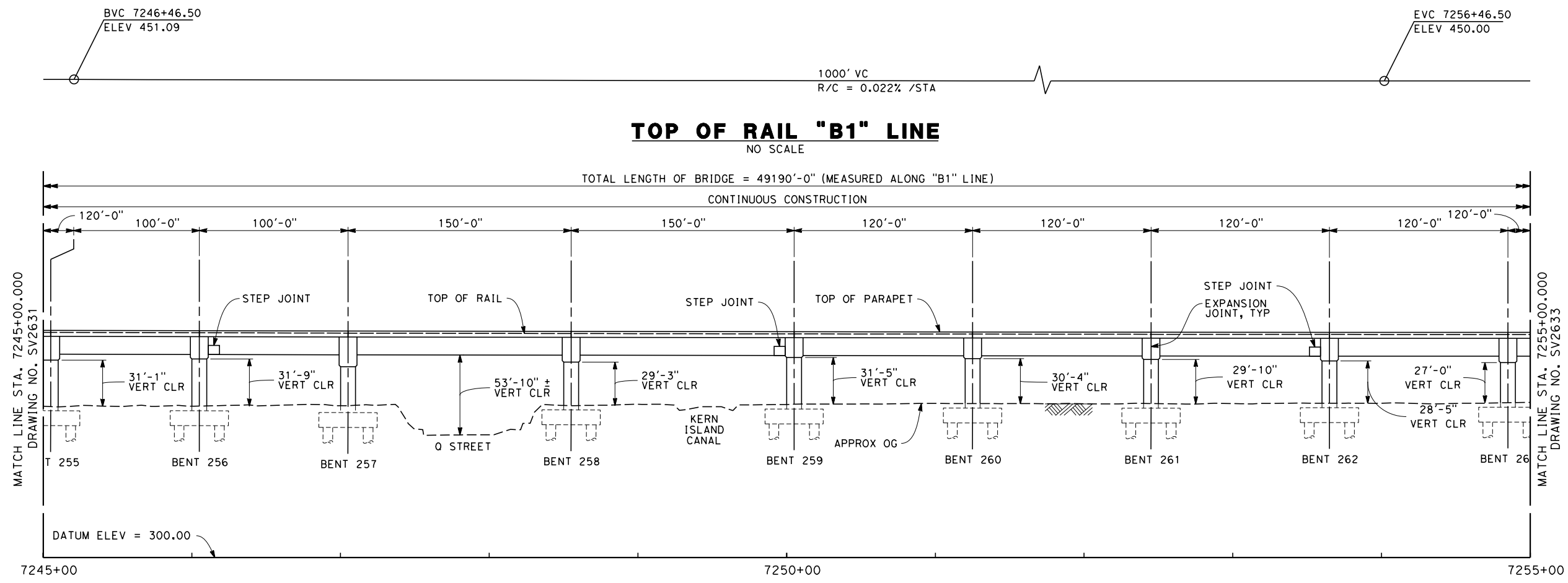


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

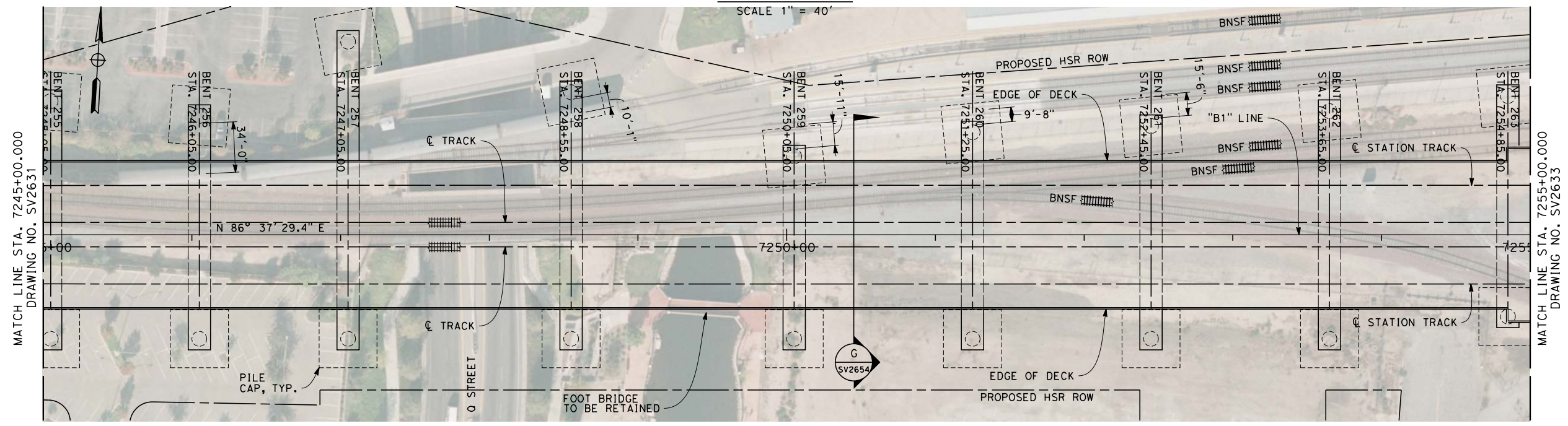
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SV2631  
SCALE  
AS SHOWN  
SHEET NO.  
32 OF 57



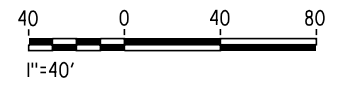
- NOTES**
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**ELEVATION**  
SCALE 1" = 40'



- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

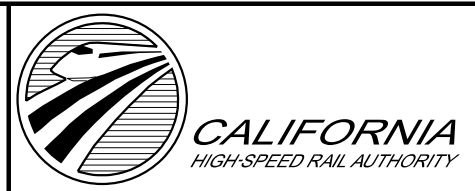
CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2632

SCALE  
AS SHOWN

SHEET NO.  
33 OF 57



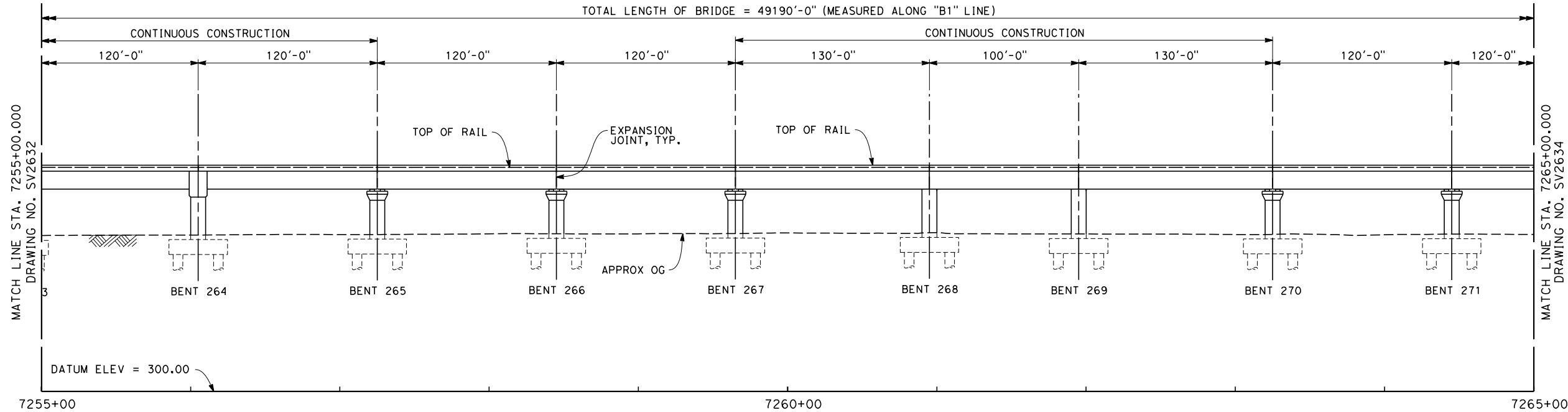
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EVC 7256+46.50  
ELEV 450.00

0.000 %

**TOP OF RAIL "B1" LINE**  
NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)

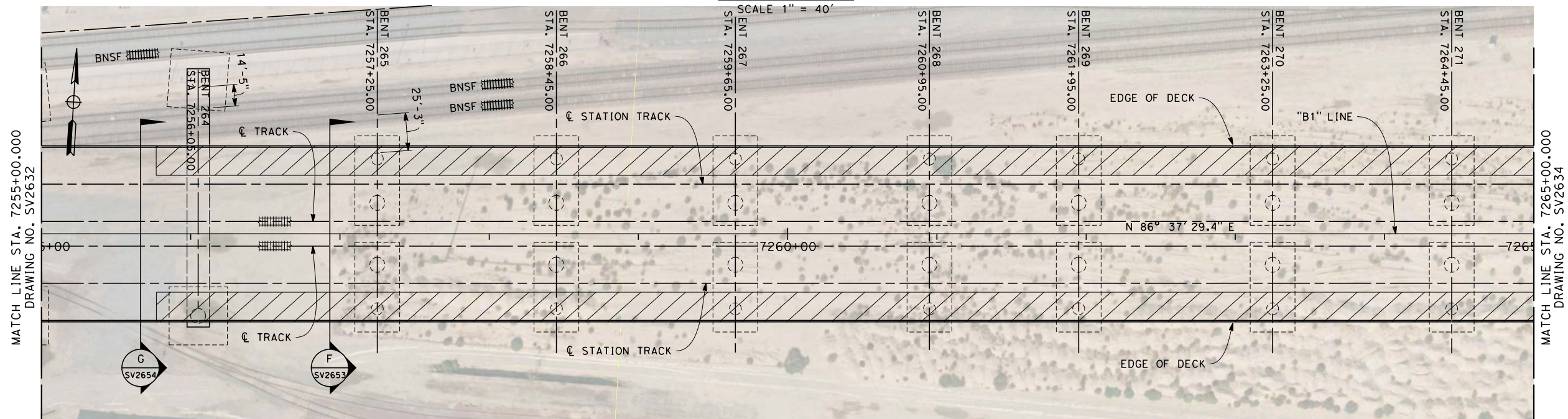


**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**ELEVATION**

SCALE 1" = 40'

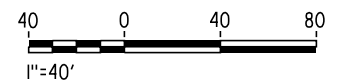


**PLAN**

SCALE 1" = 40'

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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

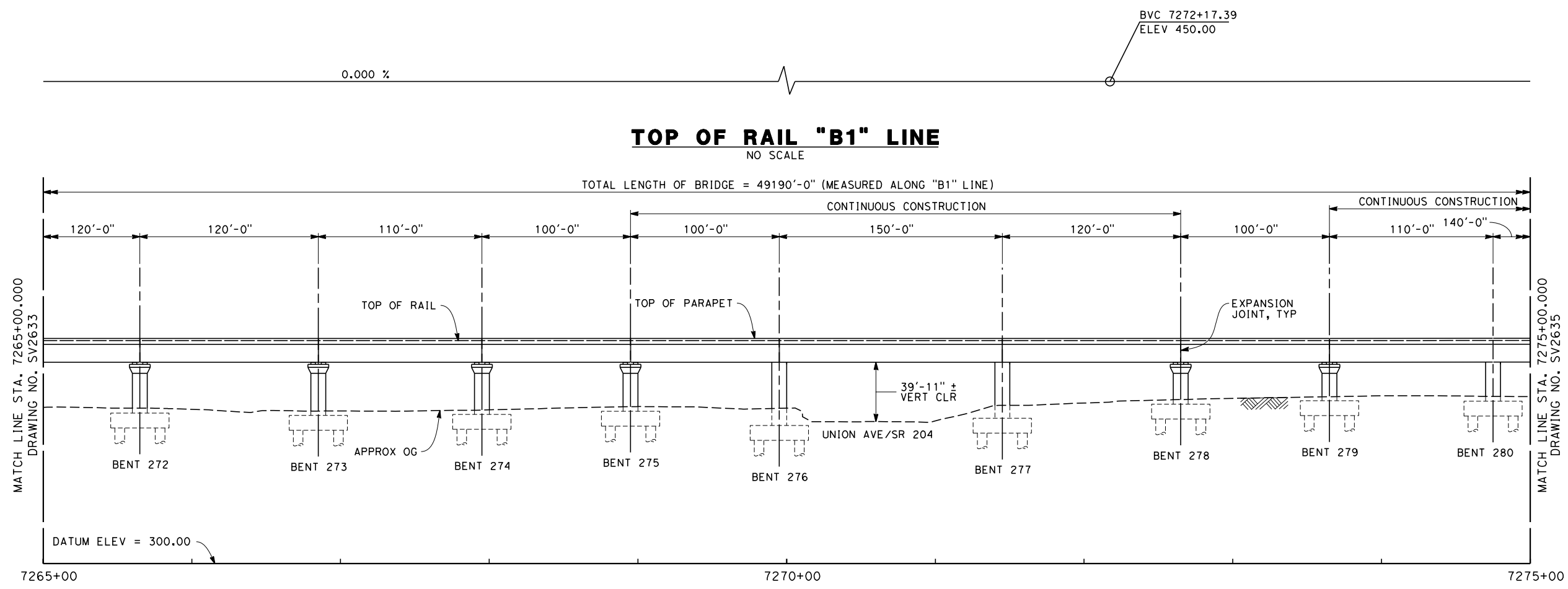


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2633  
SCALE  
AS SHOWN  
SHEET NO.  
34 OF 57

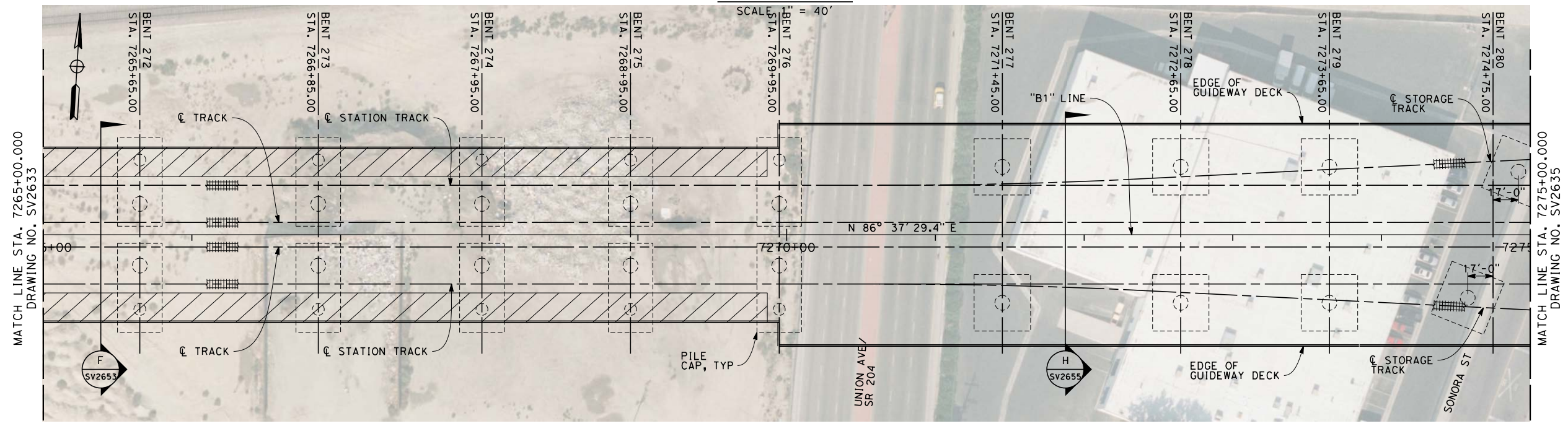


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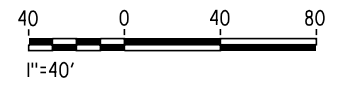
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**ELEVATION**



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2634

SCALE  
AS SHOWN

SHEET NO.  
35 OF 57

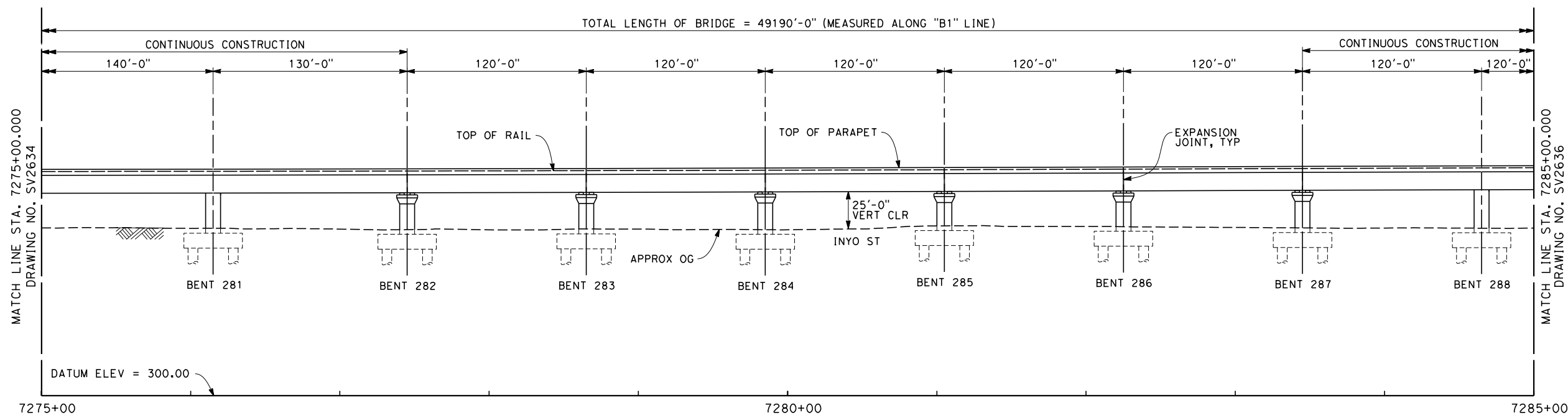


BVC 7272+17.39  
ELEV 450.00

EVC 7282+17.39  
ELEV 451.68

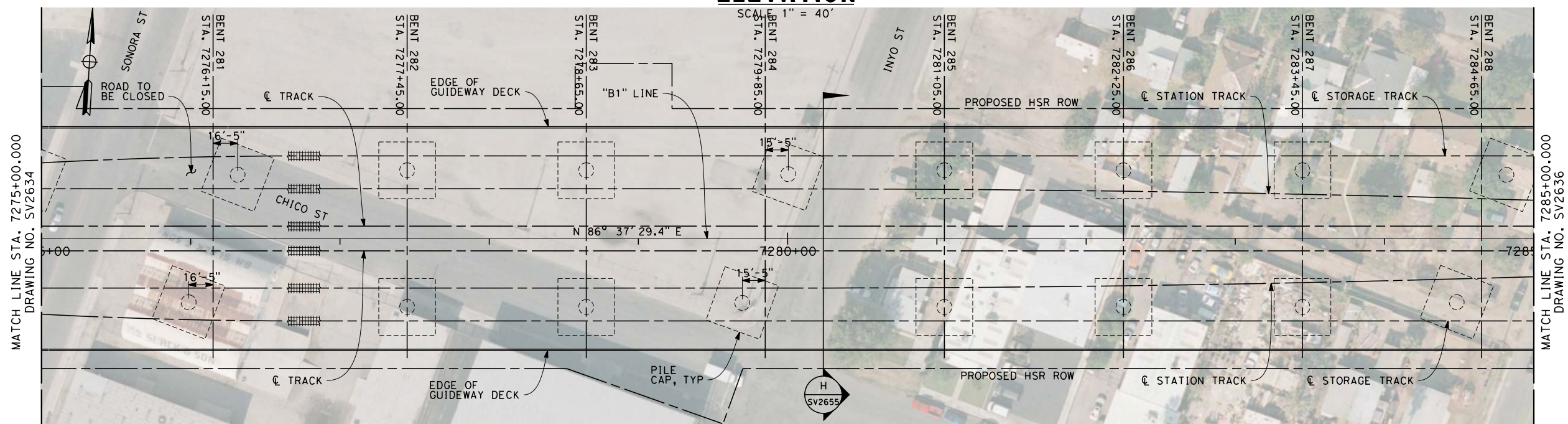
1000' VC  
R/C = 0.034% /STA

**TOP OF RAIL "B1" LINE**  
NO SCALE



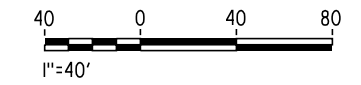
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
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**ELEVATION**



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2635  
SCALE  
AS SHOWN  
SHEET NO.  
36 OF 57

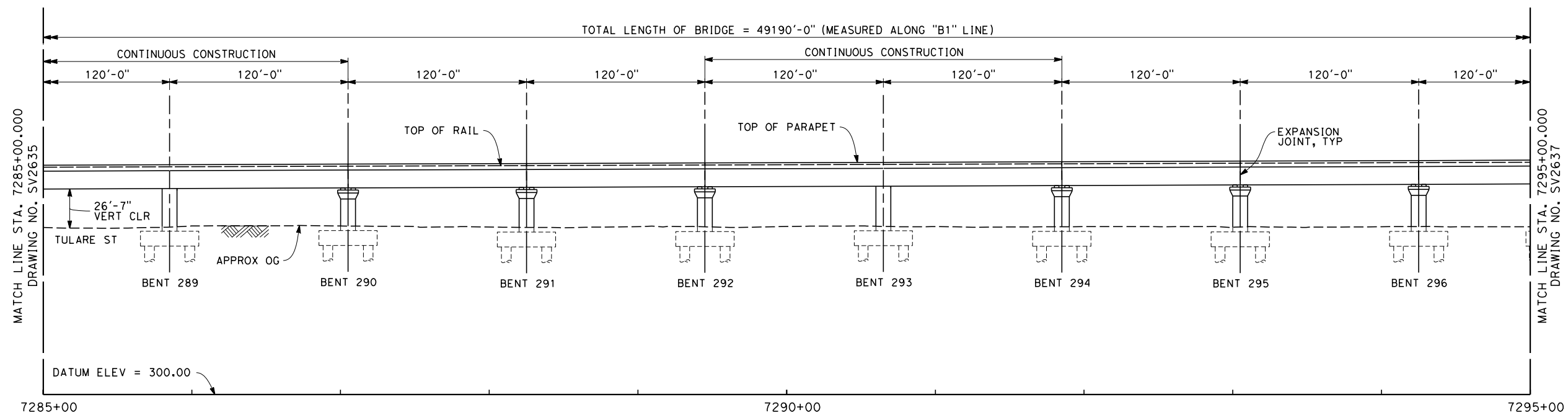


EVC 7282+17.39  
ELEV 451.68

0.337 %

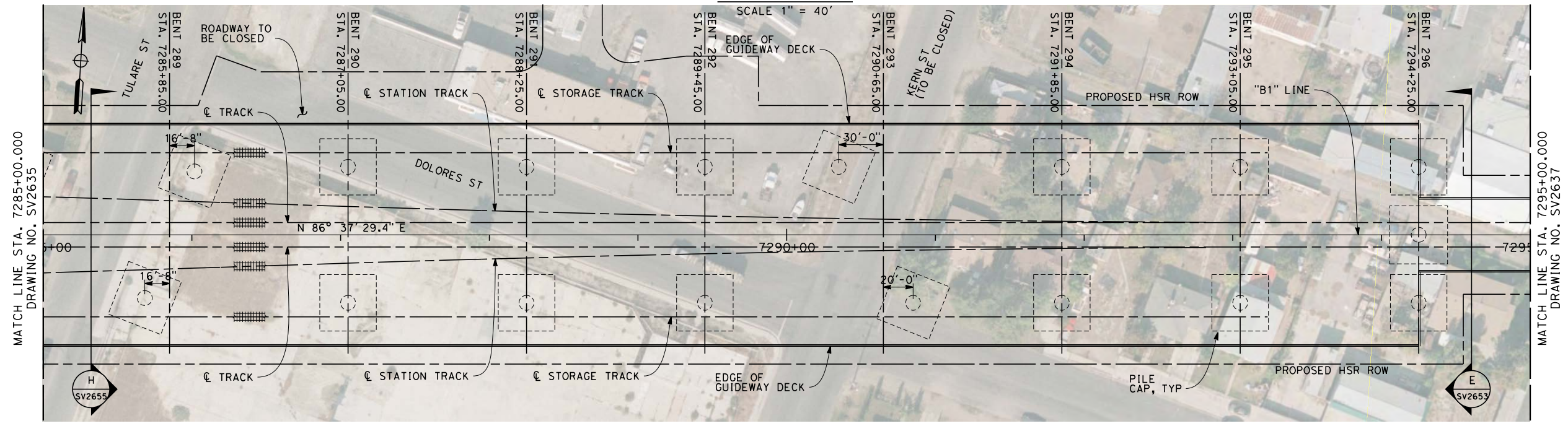
### TOP OF RAIL "B1" LINE

NO SCALE



- #### NOTES
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
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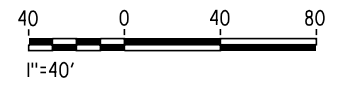
### ELEVATION



### PLAN

SCALE 1" = 40'

- #### LEGEND:
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**

**FRESNO TO BAKERSFIELD**

BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2636

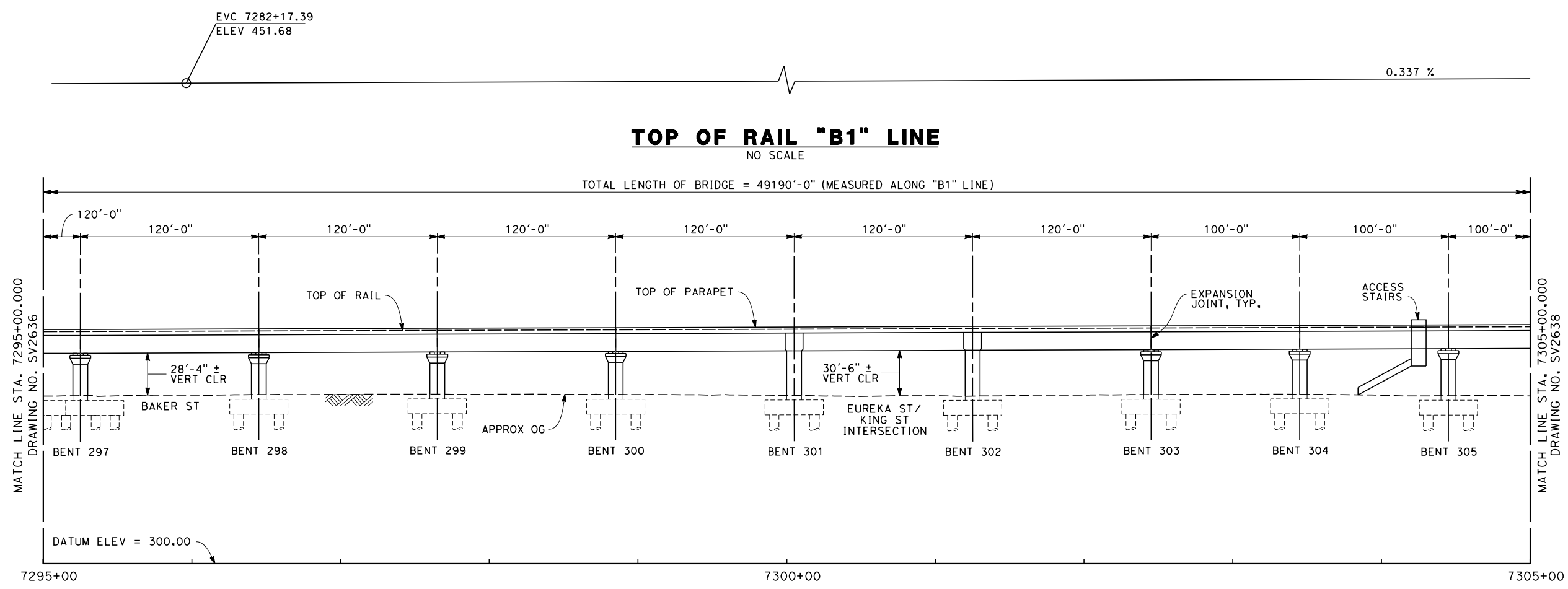
SCALE  
AS SHOWN

SHEET NO.  
37 OF 57

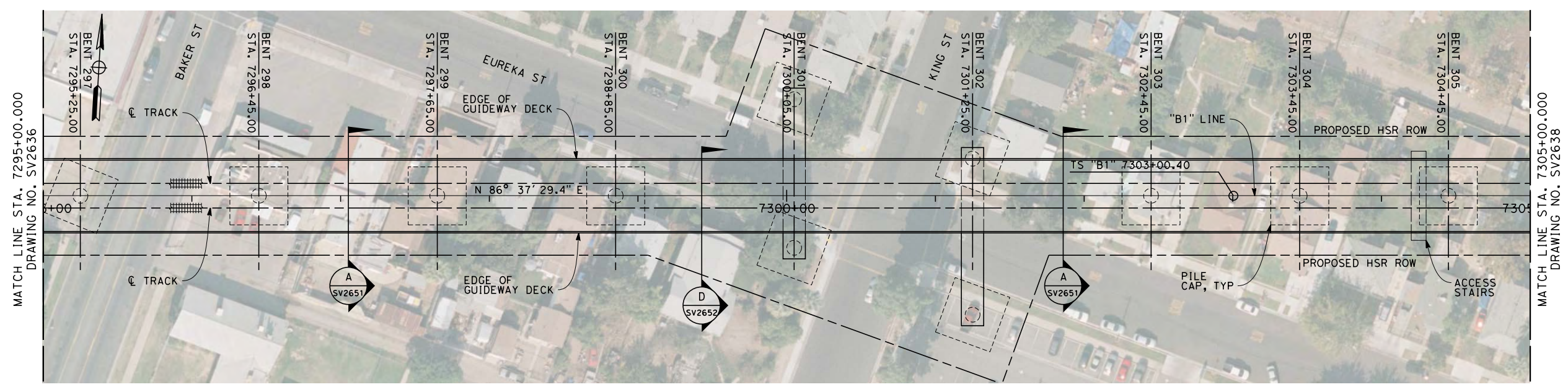


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- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

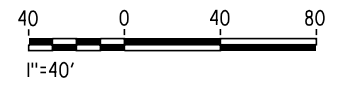


**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2637

SCALE  
AS SHOWN

SHEET NO.  
38 OF 57



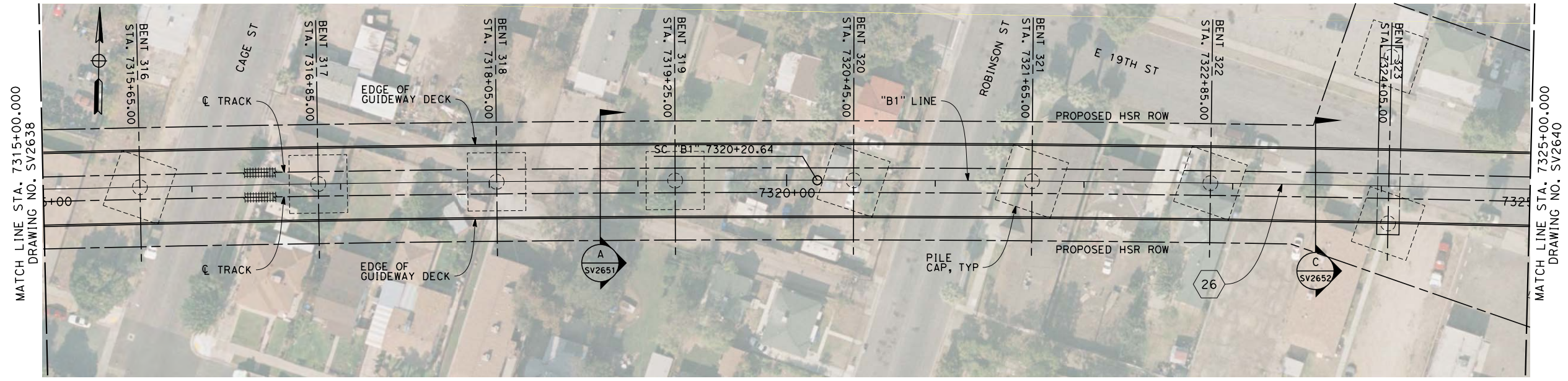
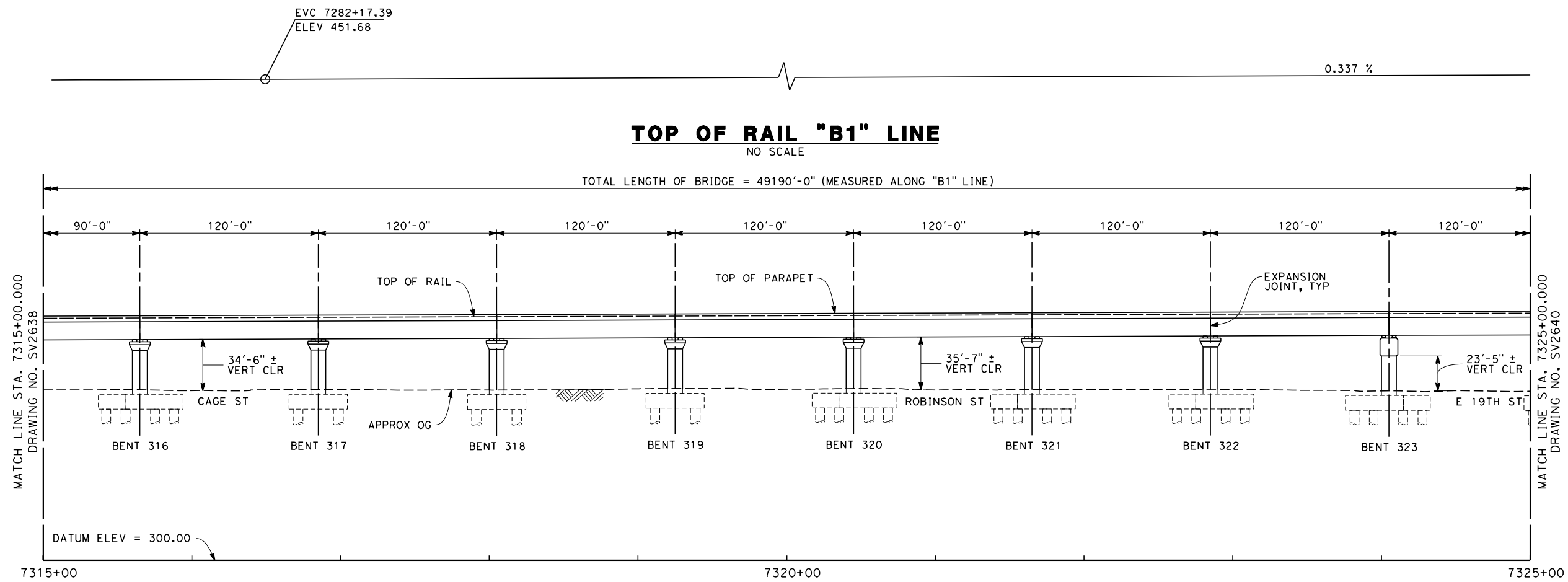




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**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
  - STEEL TRUSS - INSITU, SLID OR LAUNCHED
  - ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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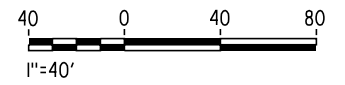


**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②6  
 R = 20008.34'  
 Δ = 15° 18' 48.5"  
 T = 2689.9'  
 L = 5347.6'



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY  
M. FISHER  
 DRAWN BY  
F. PALERMO  
 CHECKED BY  
A. ARMSTRONG  
 IN CHARGE  
R. COFFIN  
 DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
SV2639  
 SCALE  
AS SHOWN  
 SHEET NO.  
40 OF 57

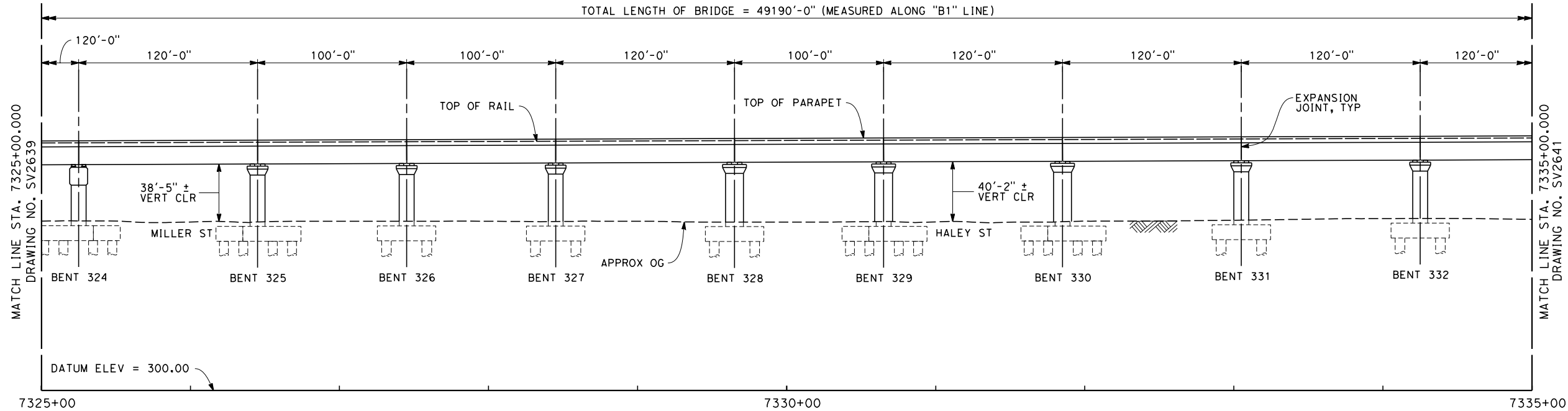


EVC 7282+17.39  
ELEV 451.68

0.337 %

**TOP OF RAIL "B1" LINE**  
NO SCALE

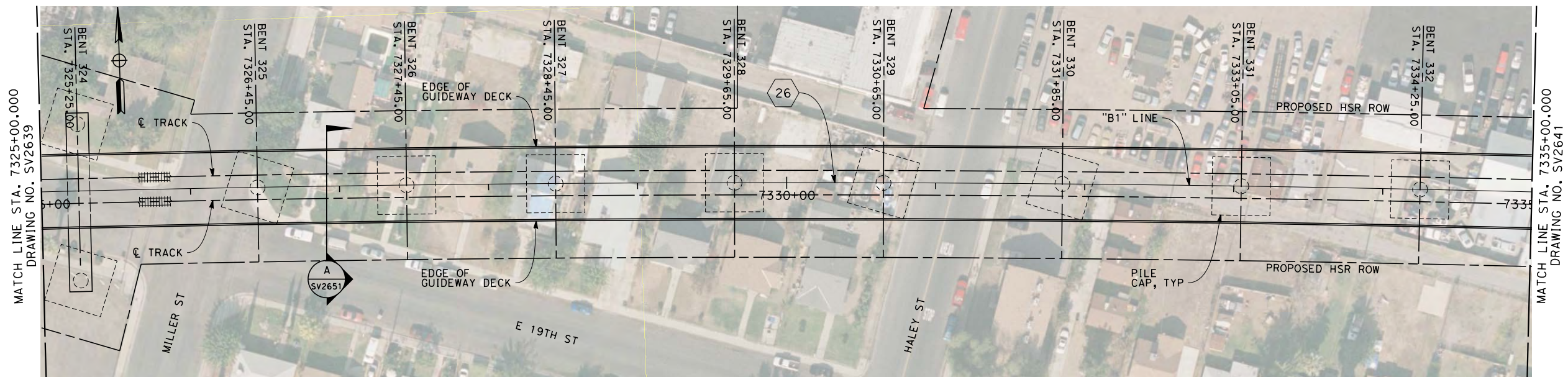
TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



**ELEVATION**  
SCALE 1" = 40'

**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



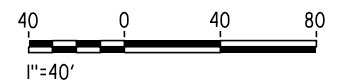
**PLAN**  
SCALE 1" = 40'

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②6  
R = 20008.34'  
Δ = 15° 18' 48.5"  
T = 2689.9'  
L = 5347.6'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2640  
SCALE  
AS SHOWN  
SHEET NO.  
41 OF 57

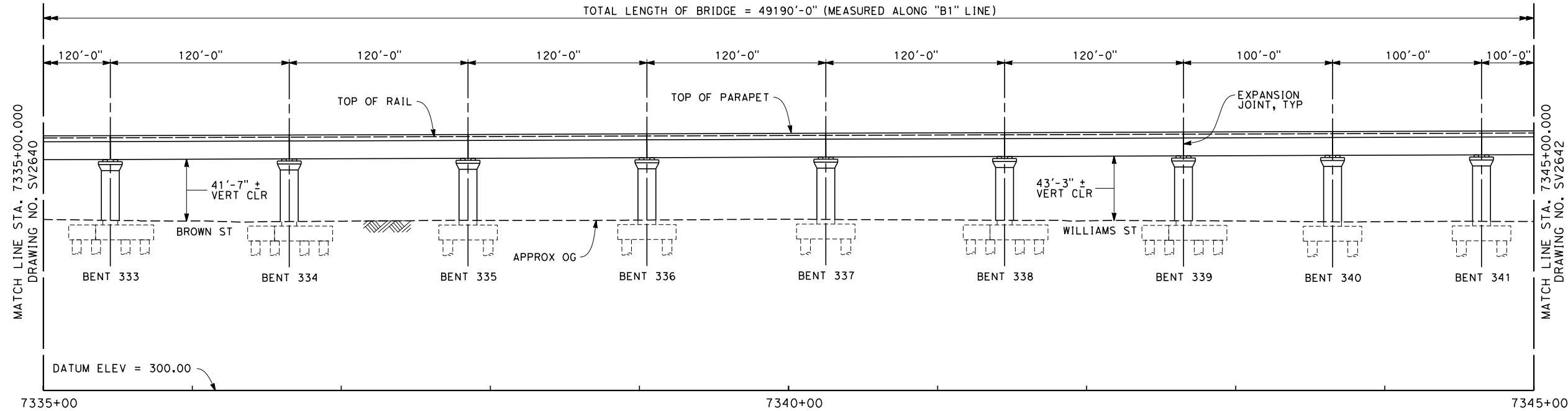


EVC 7282+17.39  
ELEV 451.68

0.337 %

**TOP OF RAIL "B1" LINE**  
NO SCALE

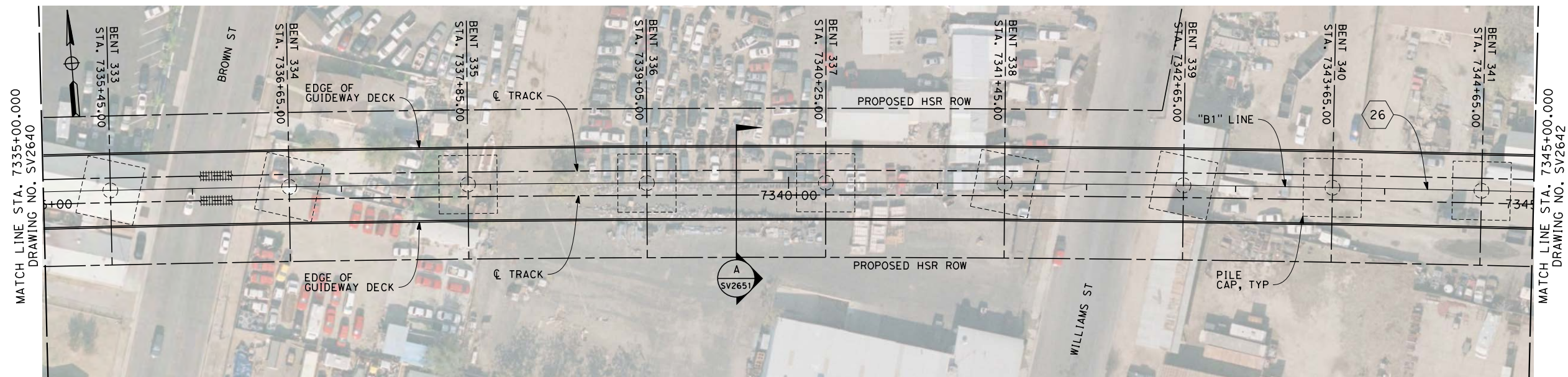
TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



**ELEVATION**  
SCALE 1" = 40'

**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
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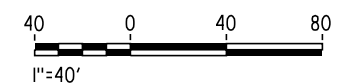
**PLAN**  
SCALE 1" = 40'

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②6  
R = 20008.34'  
Δ = 15° 18' 48.5"  
T = 2689.9'  
L = 5347.6'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**  
DRAWN BY  
**F. PALERMO**  
CHECKED BY  
**A. ARMSTRONG**  
IN CHARGE  
**R. COFFIN**  
DATE  
**12/31/13**

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

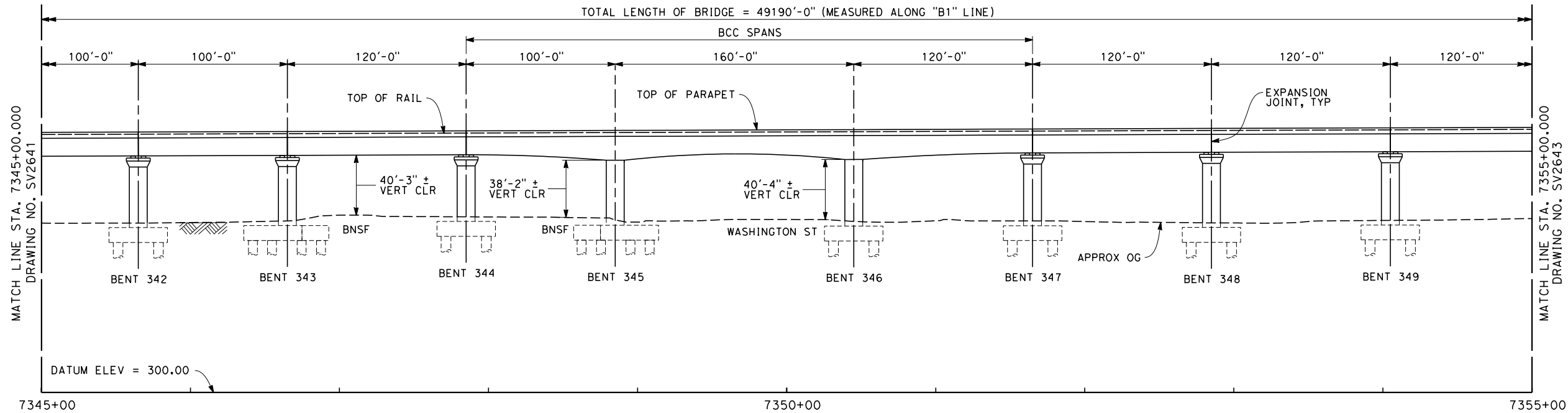
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2641  
SCALE  
AS SHOWN  
SHEET NO.  
42 OF 57



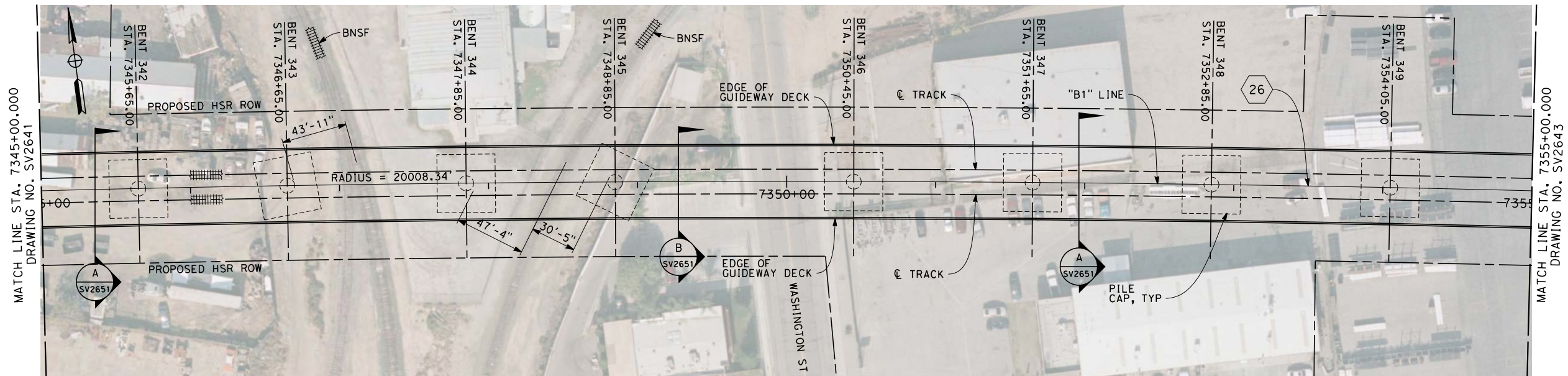
EVC 7282+17.39  
ELEV 451.68

0.337 %

**TOP OF RAIL "B1" LINE**  
NO SCALE



**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES**

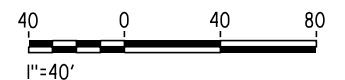
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU STEEL TRUSS - INSITU, SLID OR LAUNCHED
  - ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②6  
R = 20008.34'  
Δ = 15° 18' 48.5"  
T = 2689.9'  
L = 5347.6'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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

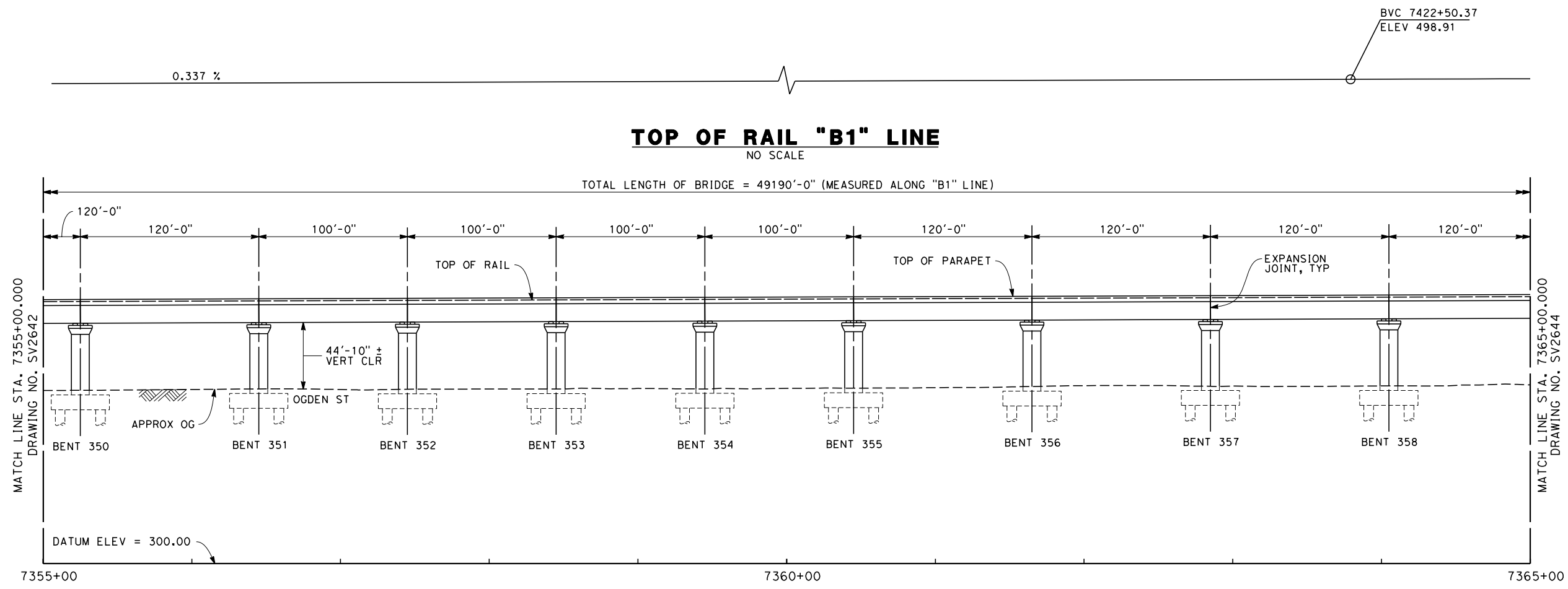


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

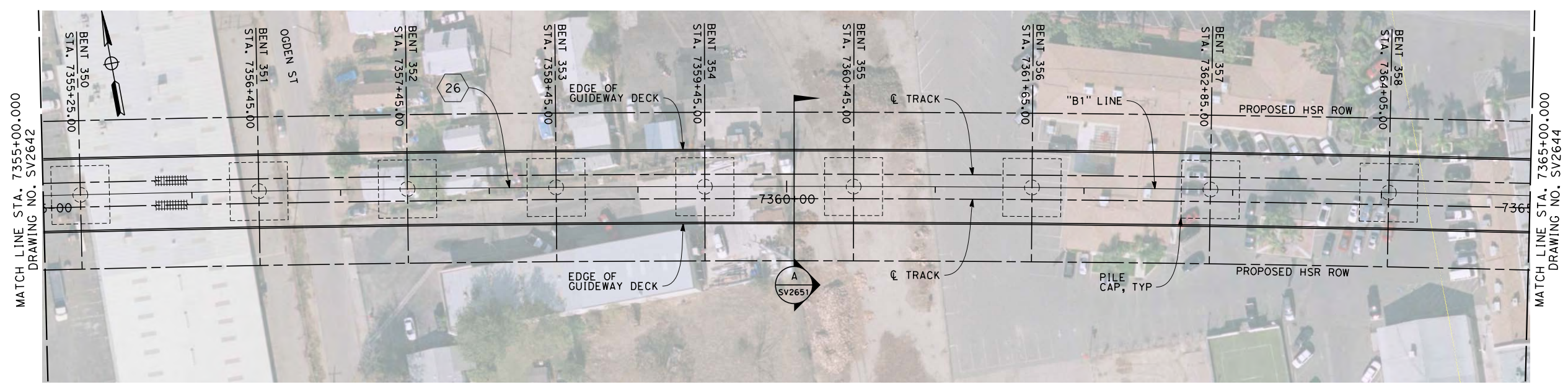
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2642  
SCALE  
AS SHOWN  
SHEET NO.  
43 OF 57



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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

26

R = 20008.34'

Δ = 15°18'48.5"

T = 2689.9'

L = 5347.6'

40 0 40 80  
1"=40'

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER

DRAWN BY  
F. PALERMO

CHECKED BY  
A. ARMSTRONG

IN CHARGE  
R. COFFIN

DATE  
12/31/13

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

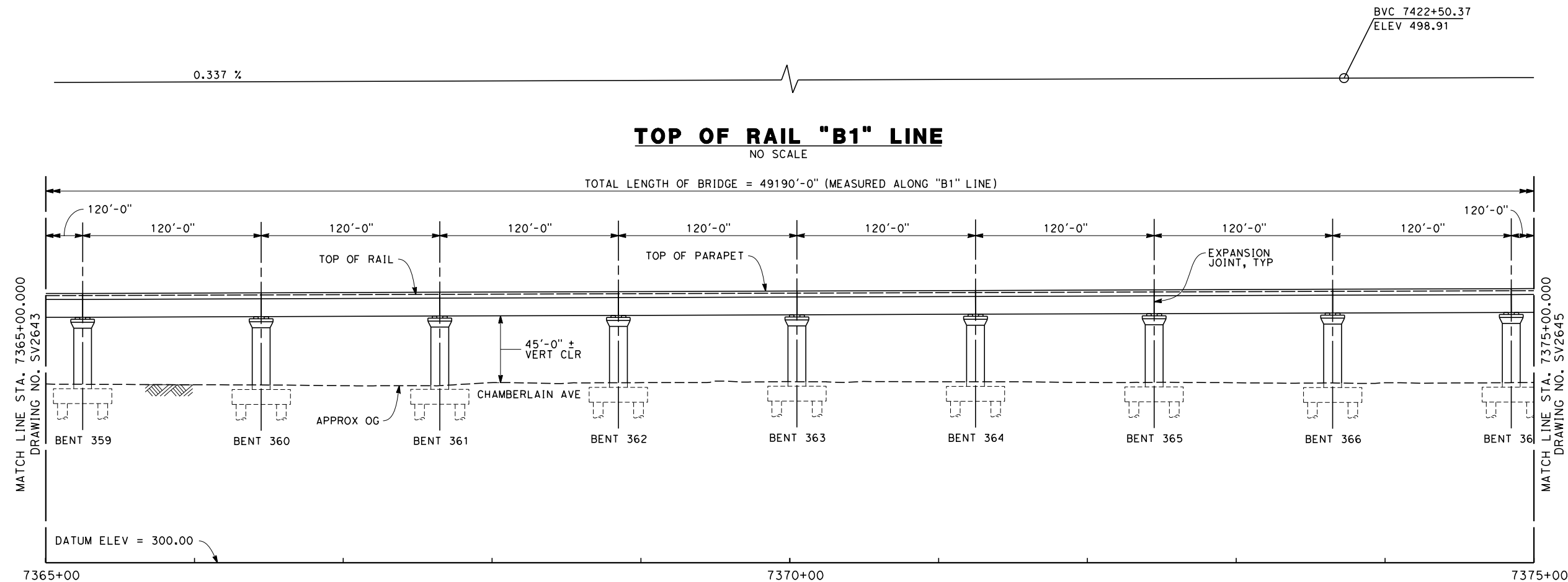
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SV2643

SCALE  
AS SHOWN

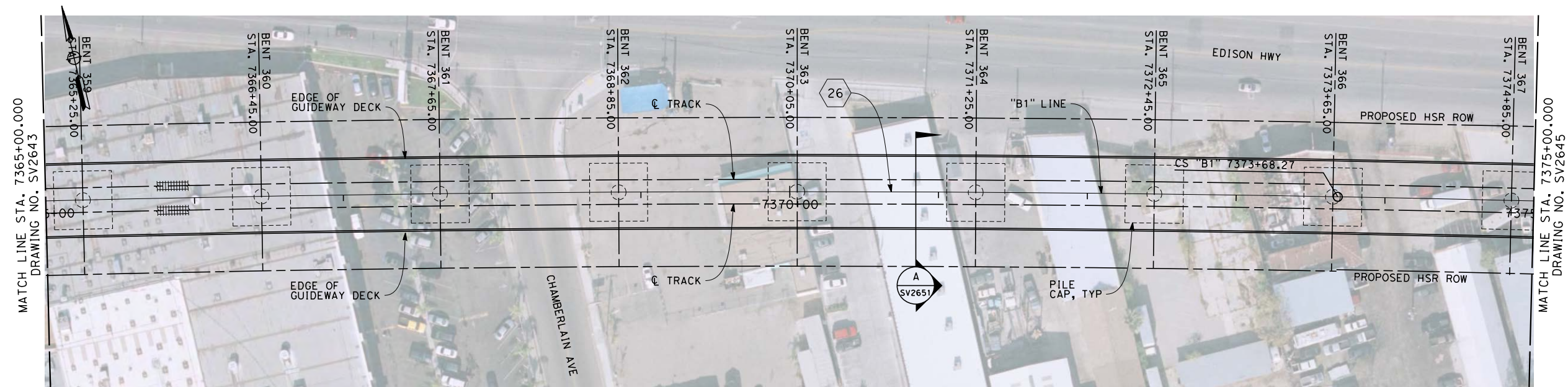
SHEET NO.  
44 OF 57



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**ELEVATION**  
SCALE 1" = 40'



**NOTES**

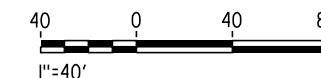
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
  - STEEL TRUSS - INSITU, SLID OR LAUNCHED
  - ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".

**CURVE DATA**

②6  
R = 20008.34'  
Δ = 15°18'48.5"  
T = 2689.9'  
L = 5347.6'



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |
|     |      |    |     |     |             |
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2644

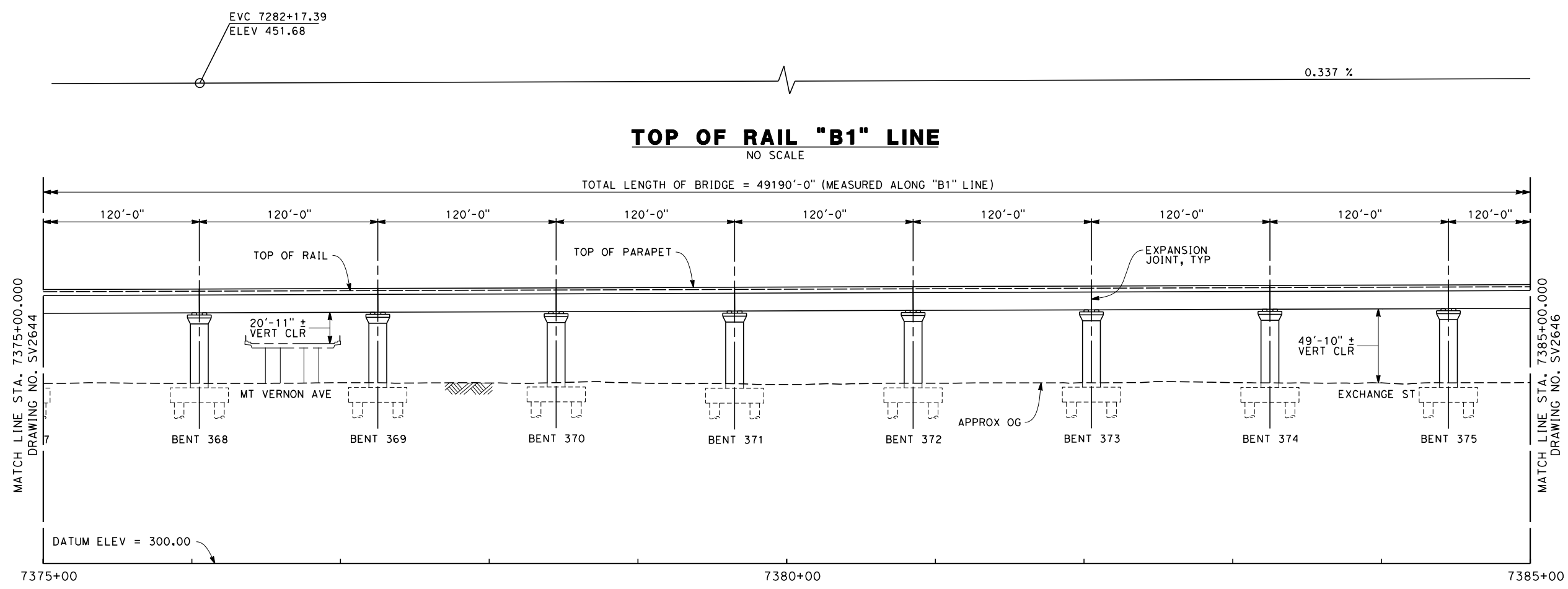
SCALE  
AS SHOWN

SHEET NO.  
45 OF 57

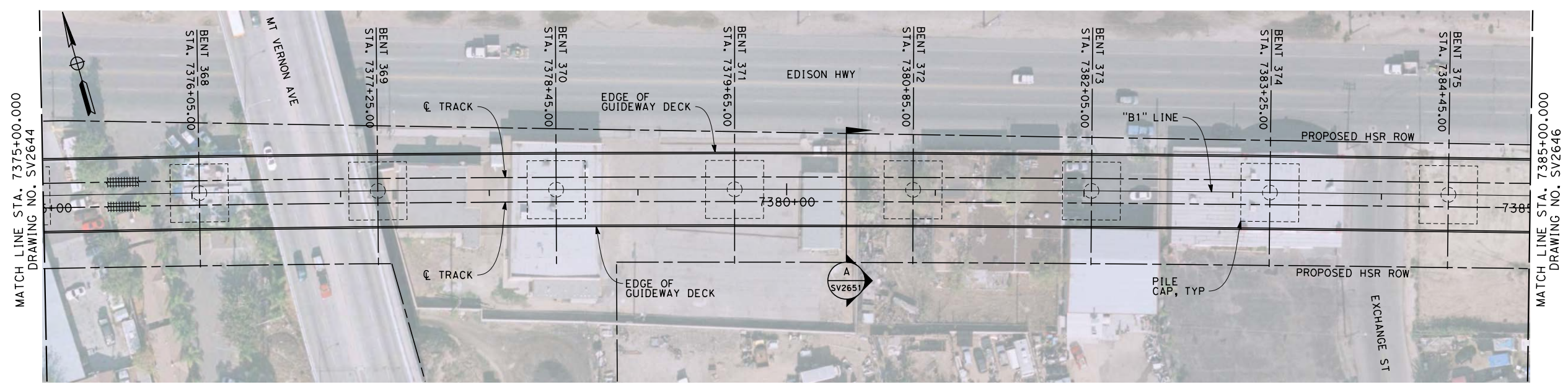


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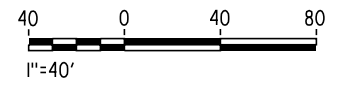
- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.



**ELEVATION**  
SCALE 1" = 40'



- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

DRAWING NO.  
SV2645

SCALE  
AS SHOWN

SHEET NO.  
46 OF 57



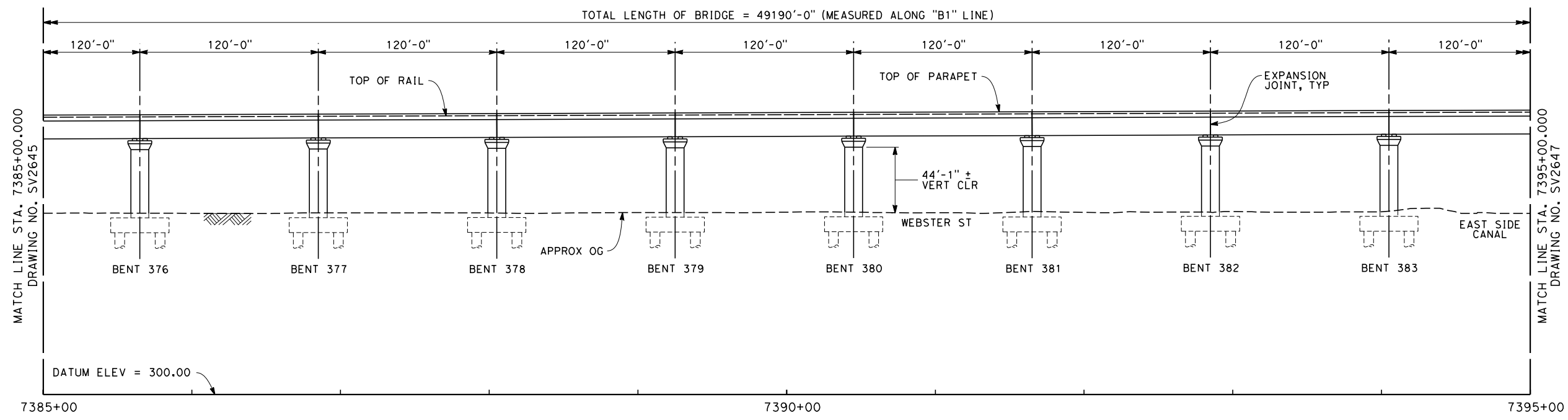
0.337 %

BVC 7422+50.37  
ELEV 498.91

### TOP OF RAIL "B1" LINE

NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)

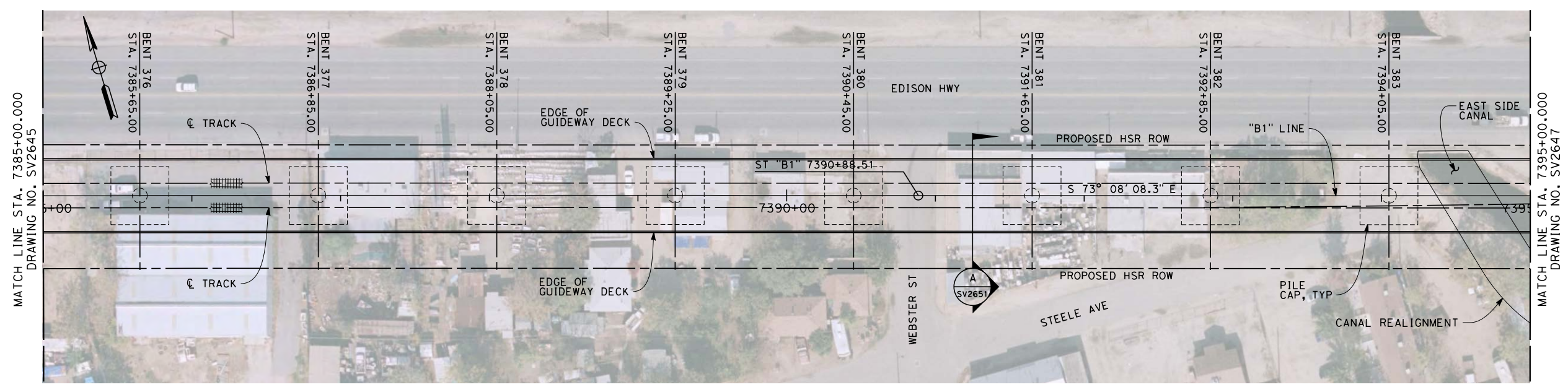


### ELEVATION

SCALE 1" = 40'

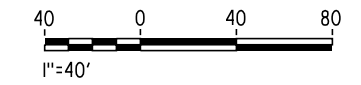
- #### NOTES
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON
    - SIMPLE SPANS - MSS OR FLPM
    - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
    - STEEL TRUSS - INSITU, SLID OR LAUNCHED
    - ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- #### LEGEND:
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



### PLAN

SCALE 1" = 40'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**

DRAWN BY  
**F. PALERMO**

CHECKED BY  
**A. ARMSTRONG**

IN CHARGE  
**R. COFFIN**

DATE  
**12/31/13**

**RECORD SET 15%  
DESIGN SUBMISSION**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003

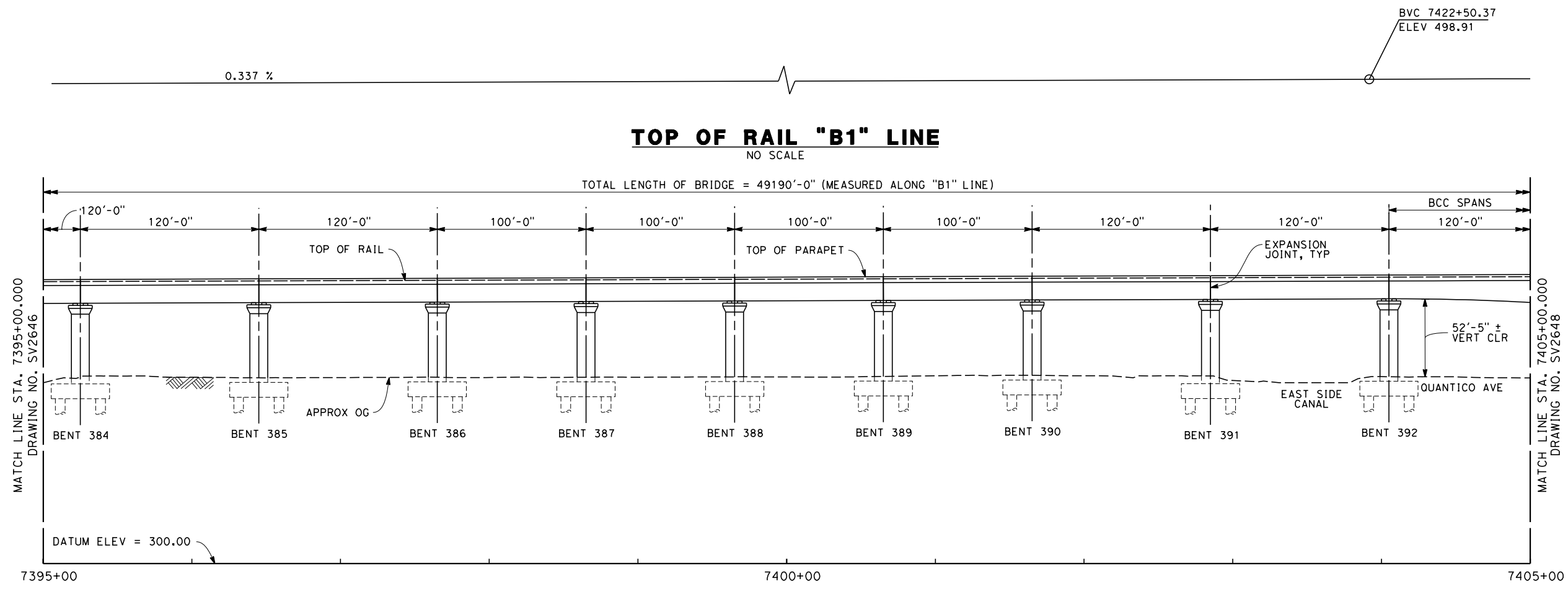
DRAWING NO.  
SV2646

SCALE  
AS SHOWN

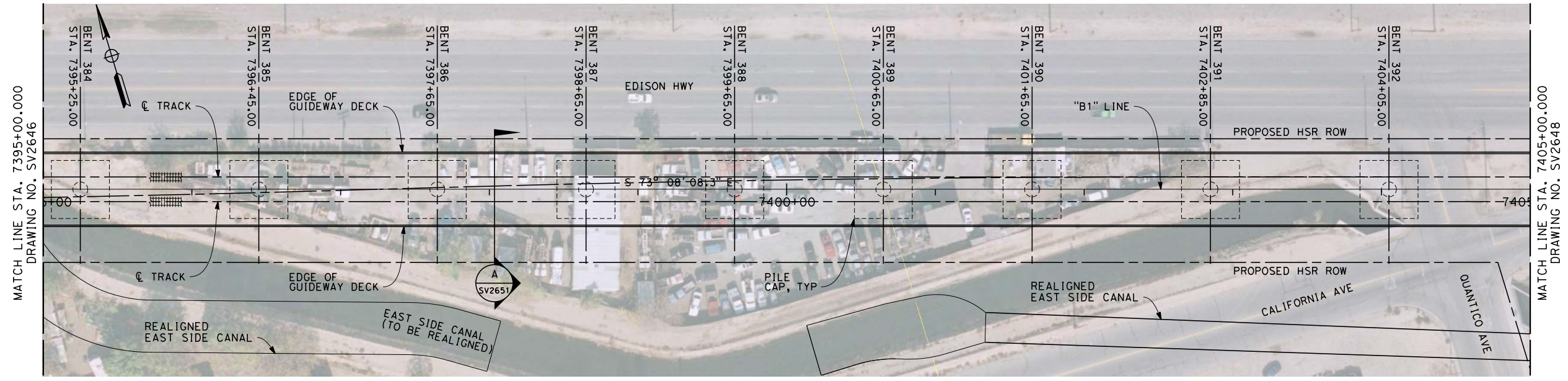
SHEET NO.  
47 OF 57



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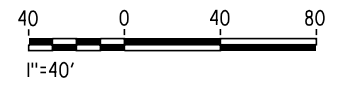
**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

- NOTES**
1. NOT ALL PILES SHOWN
  2. PILE LENGTH TO BE DETERMINED
  3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
  4. UTILITY LOCATIONS TO BE DETERMINED
  5. ACCESS STAIRWAYS ARE PROVIDED AT SYSTEMS SITES (APPROX. 2.5 MILE INTERVALS). LADDER ACCESS TO VIADUCTS IS PROVIDED AT 2500 FT INTERVALS WITH ACCESS ROAD AND TURNING CIRCLE WHERE NECESSARY.

- LEGEND:**
- ① STRUCTURE APPROACH SLAB
  - ② RETAINING WALL
  - \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

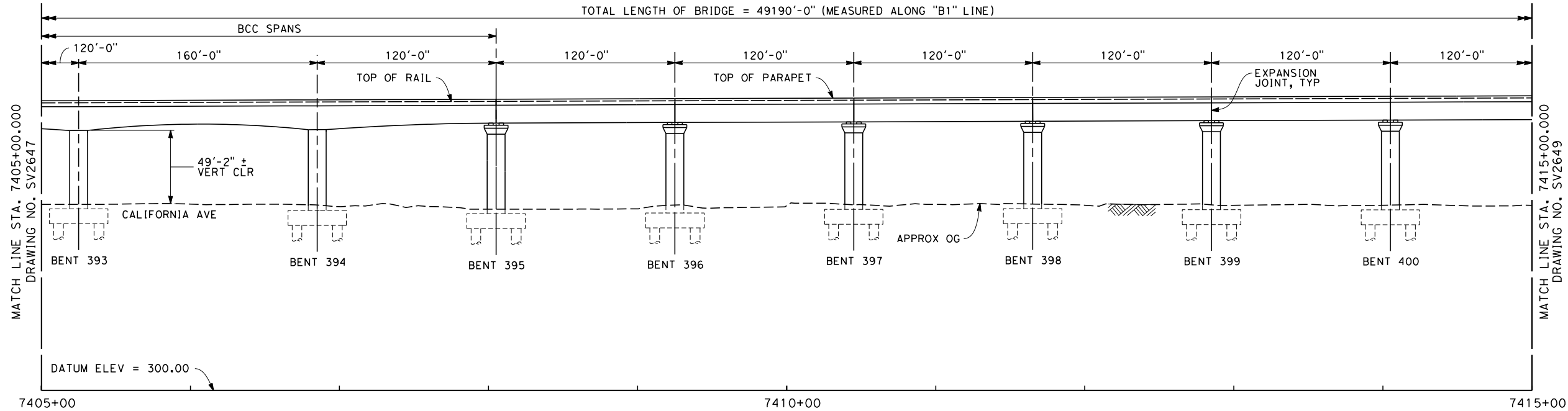
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2647  
SCALE  
AS SHOWN  
SHEET NO.  
48 OF 57

0.337 %

BVC 7422+50.37  
ELEV 498.91

**TOP OF RAIL "B1" LINE**  
NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



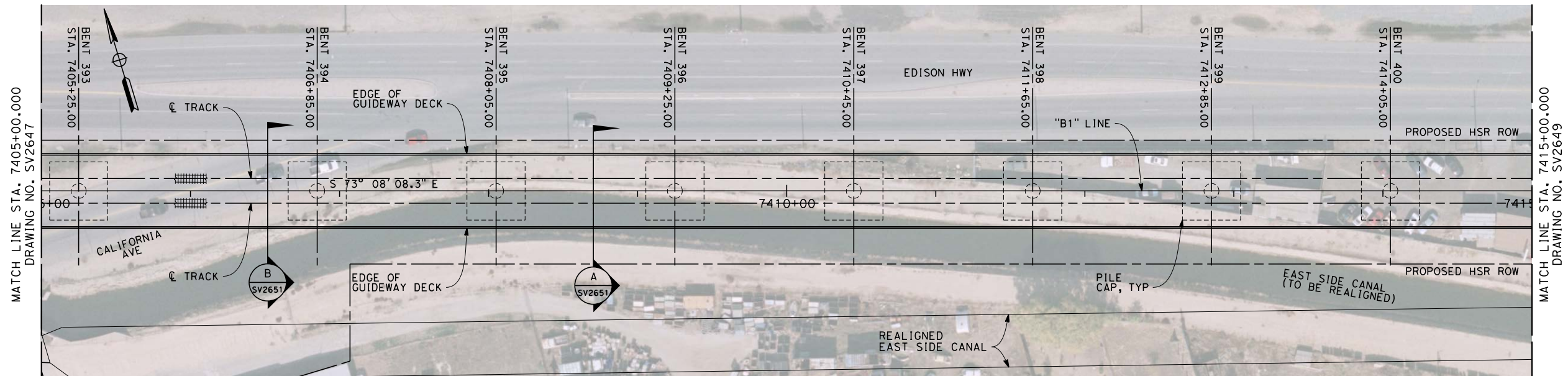
**ELEVATION**  
SCALE 1" = 40'

**NOTES**

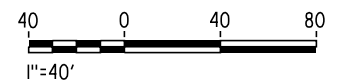
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



**PLAN**  
SCALE 1" = 40'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2648  
SCALE  
AS SHOWN  
SHEET NO.  
49 OF 57

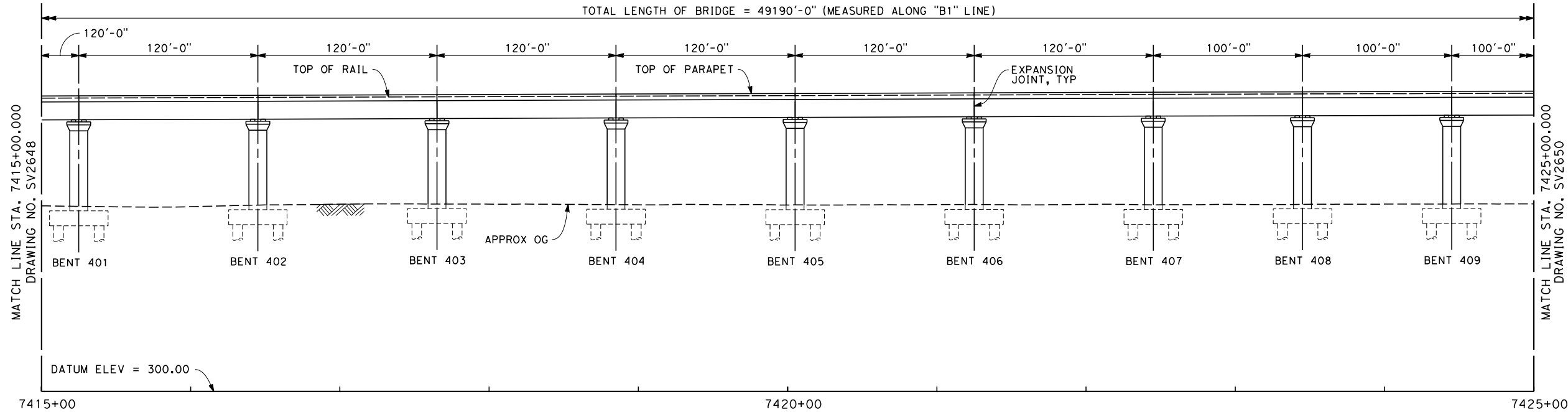


0.337 %

BVC 7422+50.37  
ELEV 498.91

**TOP OF RAIL "B1" LINE**  
NO SCALE

TOTAL LENGTH OF BRIDGE = 49190'-0" (MEASURED ALONG "B1" LINE)



**ELEVATION**  
SCALE 1" = 40'

**NOTES**

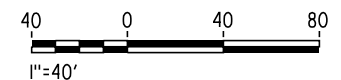
1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON
  - SIMPLE SPANS - MSS OR FLPM
  - CONTINUOUS SPANS - BCC - PRECAST IN-SITU
  - STEEL TRUSS - INSITU, SLID OR LAUNCHED
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**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



**PLAN**  
SCALE 1" = 40'



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| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|     |      |    |     |     |             |

DESIGNED BY  
M. FISHER  
DRAWN BY  
F. PALERMO  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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

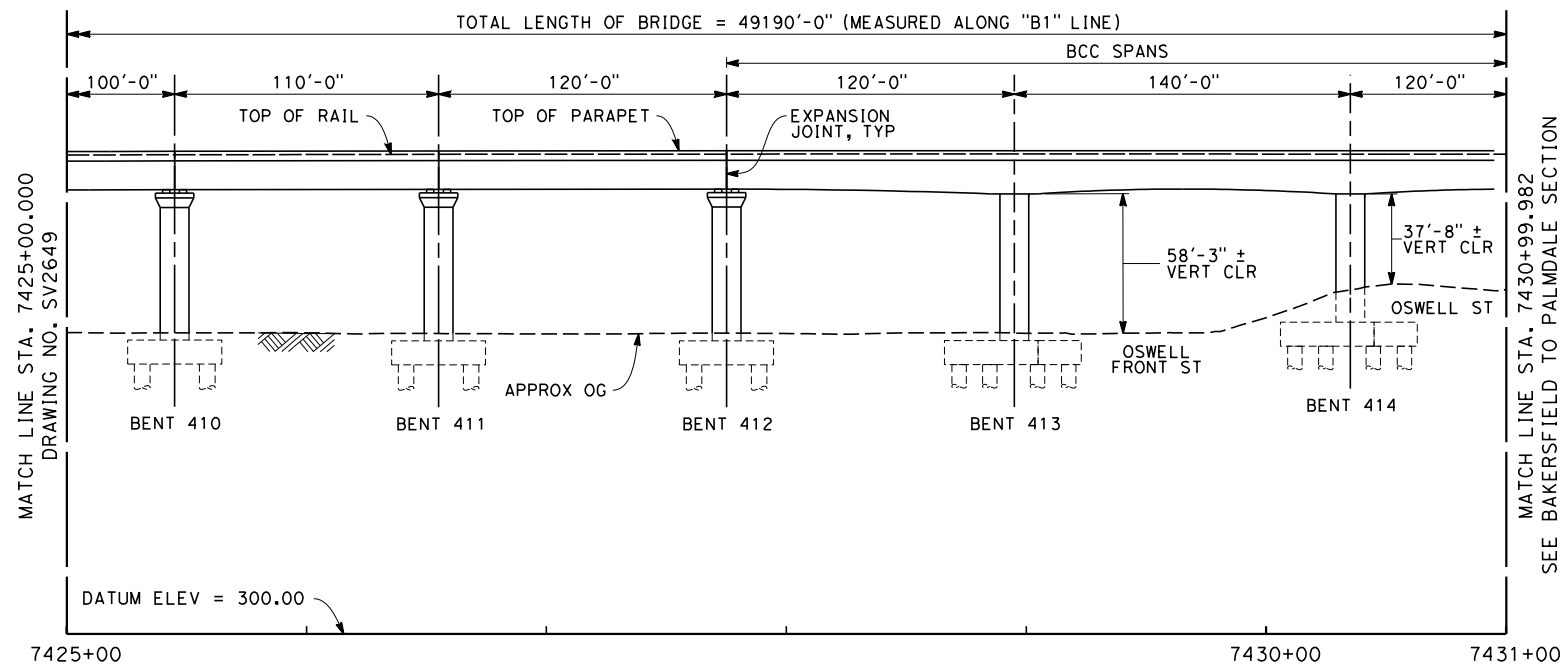


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

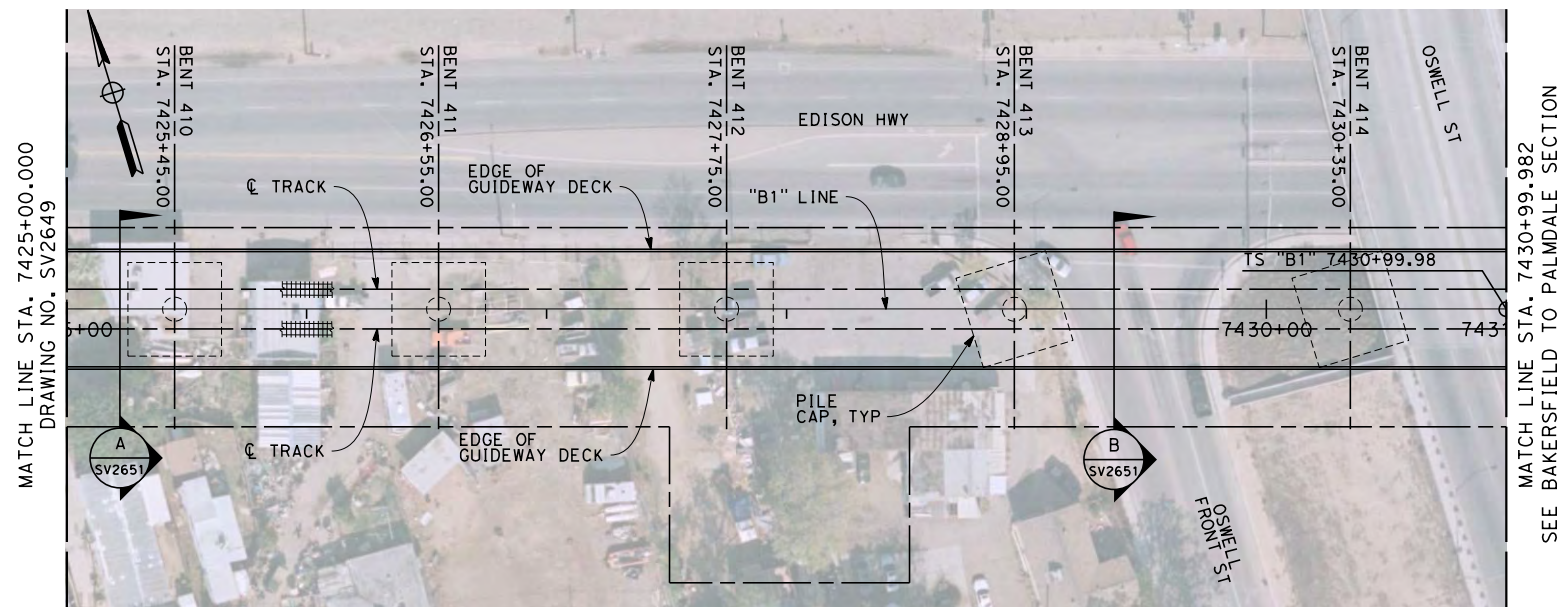
CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2649  
SCALE  
AS SHOWN  
SHEET NO.  
50 OF 57



**TOP OF RAIL "B1" LINE**  
NO SCALE



**ELEVATION**  
SCALE 1" = 40'



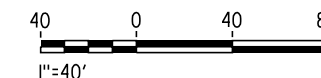
**PLAN**  
SCALE 1" = 40'

**NOTES**

1. NOT ALL PILES SHOWN
2. PILE LENGTH TO BE DETERMINED
3. SUPERSTRUCTURE CONSTRUCTION, UON  
SIMPLE SPANS - MSS OR FLPM  
CONTINUOUS SPANS - BCC - PRECAST IN-SITU  
STEEL TRUSS - INSITU, SLID OR LAUNCHED  
ELEVATED SLABS - PC BEAM AND INSITU SLAB
4. UTILITY LOCATIONS TO BE DETERMINED
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**LEGEND:**

- ① STRUCTURE APPROACH SLAB
- ② RETAINING WALL
- \* ESTIMATED 100-YEAR FLOOD ELEVATION, SEE "FRESNO TO BAKERSFIELD CORRIDOR HYDROLOGY, HYDRAULICS AND DRAINAGE 15% DRAFT REPORT".



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|     |      |    |     |     |             |

DESIGNED BY  
**M. FISHER**  
DRAWN BY  
**F. PALERMO**  
CHECKED BY  
**A. ARMSTRONG**  
IN CHARGE  
**R. COFFIN**  
DATE  
**12/31/13**

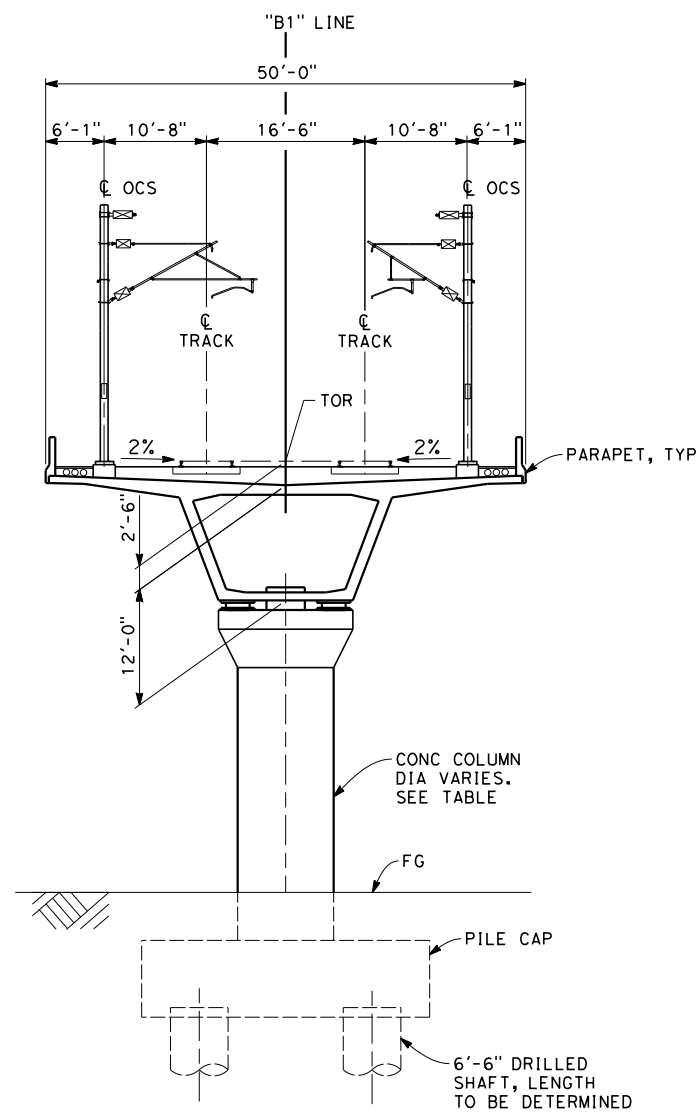
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DESIGN SUBMISSION**  
  
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**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
PLAN AND ELEVATION

|                             |
|-----------------------------|
| CONTRACT NO.<br>HSR 06-0003 |
| DRAWING NO.<br>SV2650       |
| SCALE<br>AS SHOWN           |
| SHEET NO.<br>51 OF 57       |



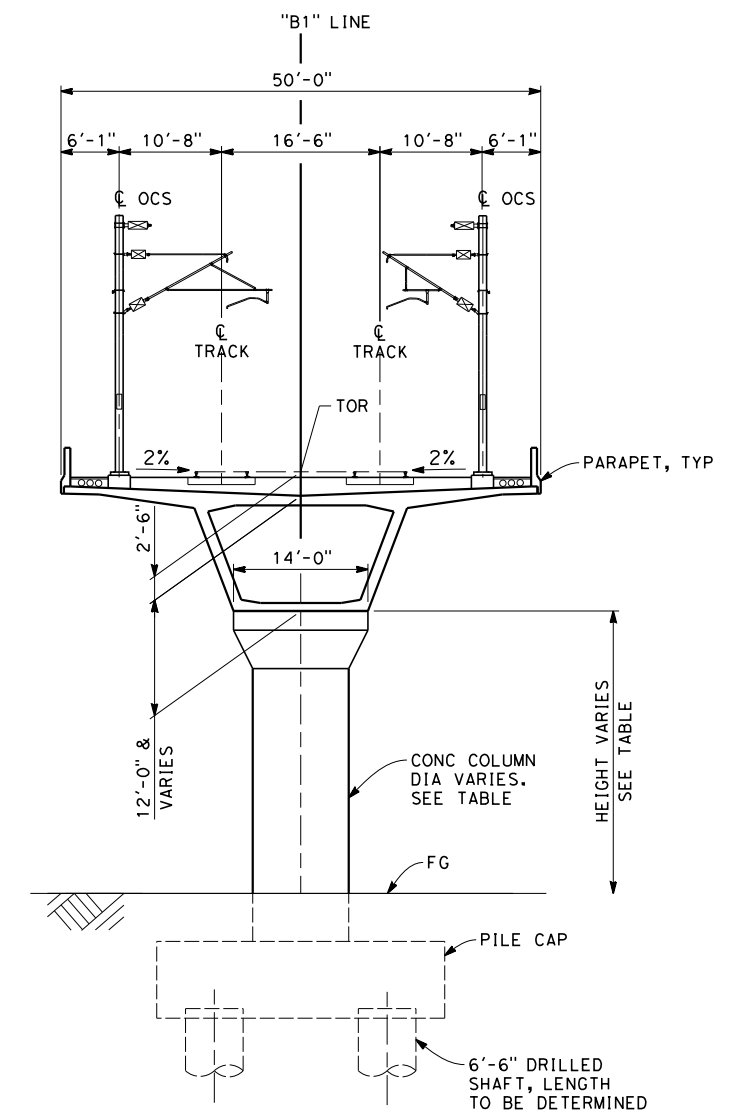


**SECTION A**

SCALE: 1"=10'

|                             |                             |
|-----------------------------|-----------------------------|
| STA 6939+10 THROUGH 6944+90 | STA 7152+84 THROUGH 7157+65 |
| STA 6949+10 THROUGH 6953+90 | STA 7159+85 THROUGH 7161+85 |
| STA 6957+90 THROUGH 6987+30 | STA 7165+85 THROUGH 7199+05 |
| STA 6993+60 THROUGH 7000+80 | STA 7200+25 THROUGH 7221+25 |
| STA 7005+00 THROUGH 7006+20 | STA 7224+85 THROUGH 7234+45 |
| STA 7010+80 THROUGH 7015+20 | STA 7295+25 THROUGH 7298+85 |
| STA 7019+10 THROUGH 7034+10 | STA 7302+45 THROUGH 7310+55 |
| STA 7048+10 THROUGH 7079+90 | STA 7313+85 THROUGH 7322+55 |
| STA 7084+00 THROUGH 7101+42 | STA 7326+45 THROUGH 7347+85 |
| STA 7108+56 THROUGH 7118+57 | STA 7351+65 THROUGH 7427+75 |
| STA 7122+55 THROUGH 7149+97 |                             |

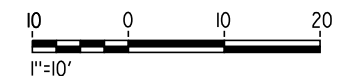
| COLUMN DIAMETERS |          |
|------------------|----------|
| HEIGHT TO SOFFIT | DIAMETER |
| 0-20             | 8 FT     |
| 20-40            | 10 FT    |
| 40-50            | 12 FT    |
| 50-60            | 15 FT    |
| 60-80            | 20 FT    |
| 80-100           | 25 FT    |



**SECTION B**

SCALE: 1"=10'

|                             |
|-----------------------------|
| STA 6944+90 THROUGH 6949+10 |
| STA 6953+90 THROUGH 6957+90 |
| STA 6989+70 THROUGH 6993+60 |
| STA 7000+80 THROUGH 7005+00 |
| STA 7006+20 THROUGH 7010+80 |
| STA 7015+20 THROUGH 7019+10 |
| STA 7079+90 THROUGH 7084+00 |
| STA 7118+57 THROUGH 7122+55 |
| STA 7161+85 THROUGH 7165+85 |
| STA 7221+25 THROUGH 7224+85 |
| STA 7347+85 THROUGH 7351+65 |
| STA 7427+45 THROUGH 7431+00 |



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|                            |
|----------------------------|
| DESIGNED BY<br>M. FISHER   |
| DRAWN BY<br>D. ORIZA       |
| CHECKED BY<br>A. ARMSTRONG |
| IN CHARGE<br>R. COFFIN     |
| DATE<br>12/31/13           |

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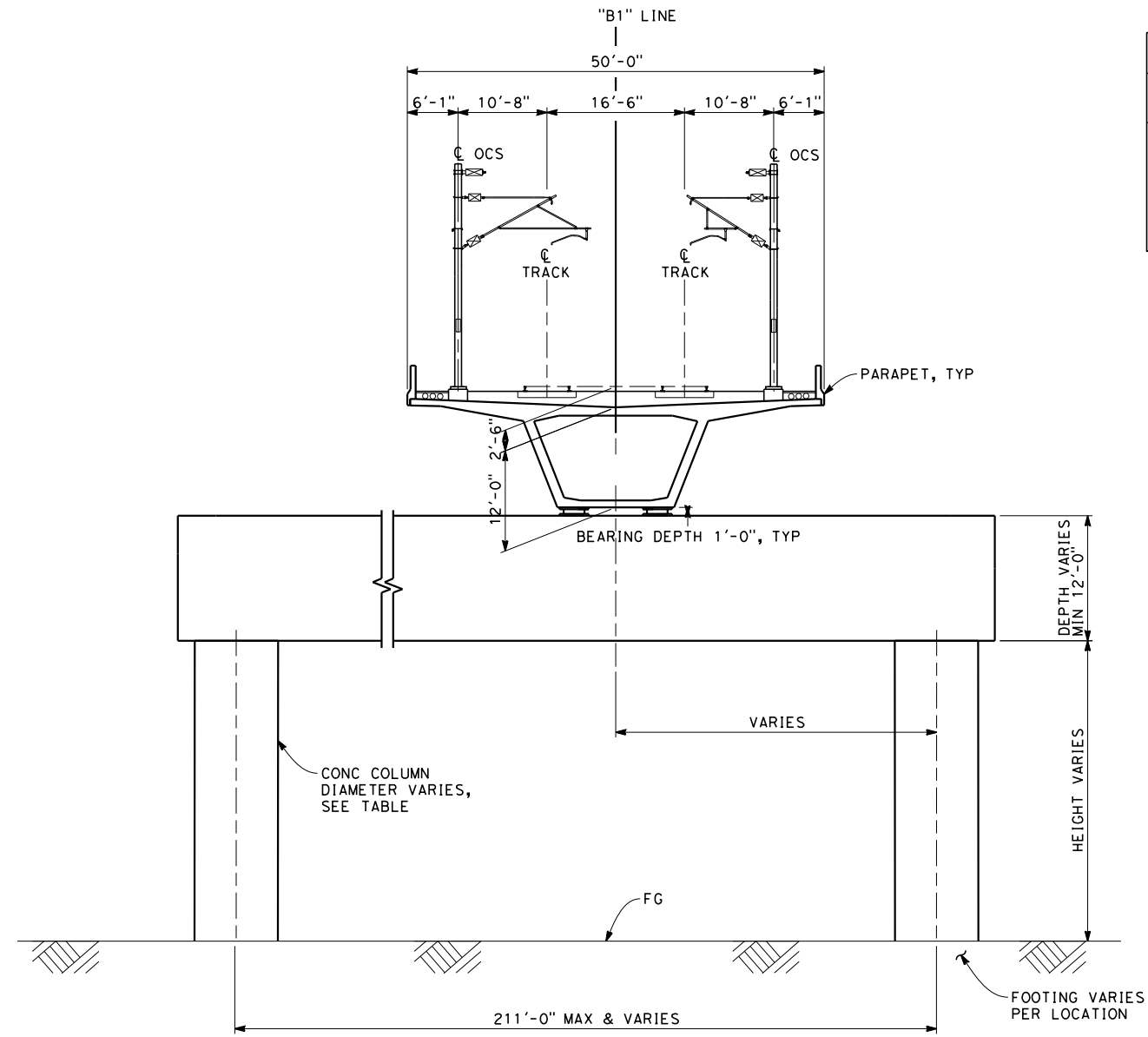
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**

BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
TYPICAL SECTIONS

|                             |
|-----------------------------|
| CONTRACT NO.<br>HSR 06-0003 |
| DRAWING NO.<br>SV2651       |
| SCALE<br>AS SHOWN           |
| SHEET NO.<br>52 OF 57       |

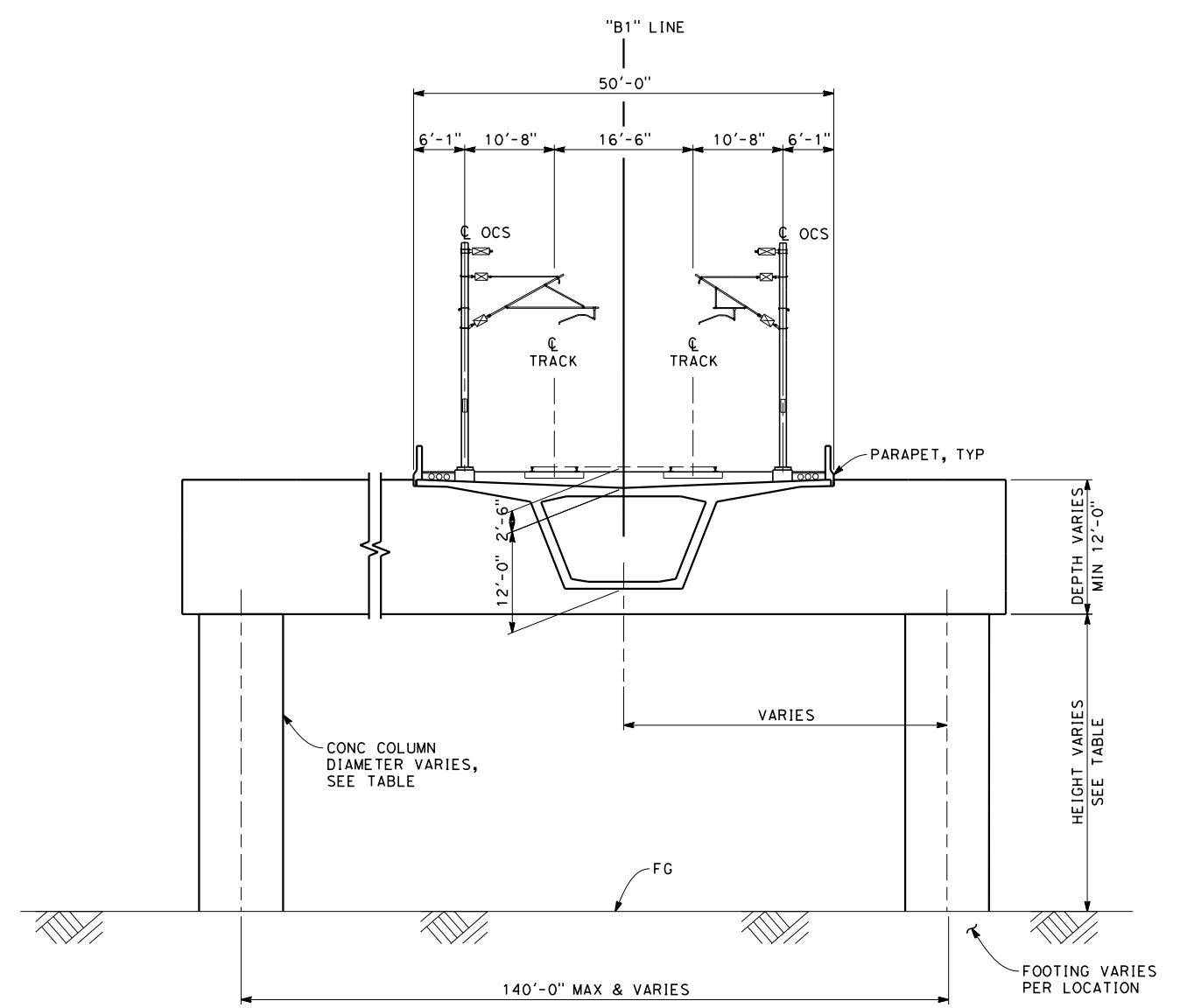
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| COLUMN DIAMETERS |          |
|------------------|----------|
| HEIGHT TO SOFFIT | DIAMETER |
| 0-20             | 8 FT     |
| 20-40            | 10 FT    |
| 40-50            | 12 FT    |
| 50-60            | 15 FT    |
| 60-80            | 20 FT    |
| 80-100           | 25 FT    |



**SECTION C**  
SCALE: 1"=10'

STA 6987+30 THROUGH 6989+70  
 STA 7034+90 THROUGH 7048+10  
 STA 7157+65 THROUGH 7159+85  
 STA 7199+05 THROUGH 7200+25  
 STA 7322+85 THROUGH 7322+73



**SECTION D**  
SCALE: 1"=10'

STA 7298+85 THROUGH 7301+25  
 STA 7310+55 THROUGH 7312+95



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 DRAWN BY  
D. ORIZA  
 CHECKED BY  
A. ARMSTRONG  
 IN CHARGE  
R. COFFIN  
 DATE  
12/31/13

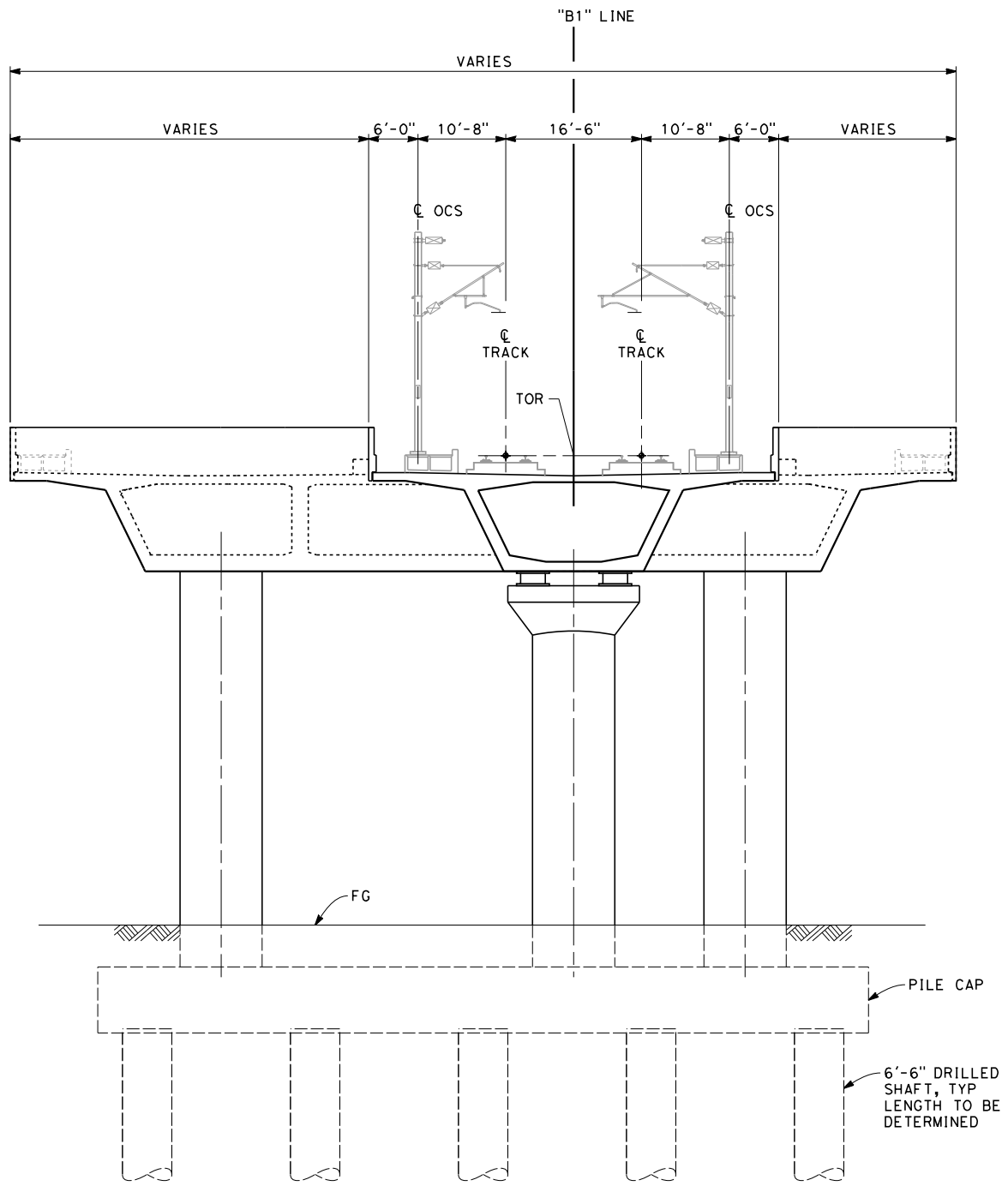
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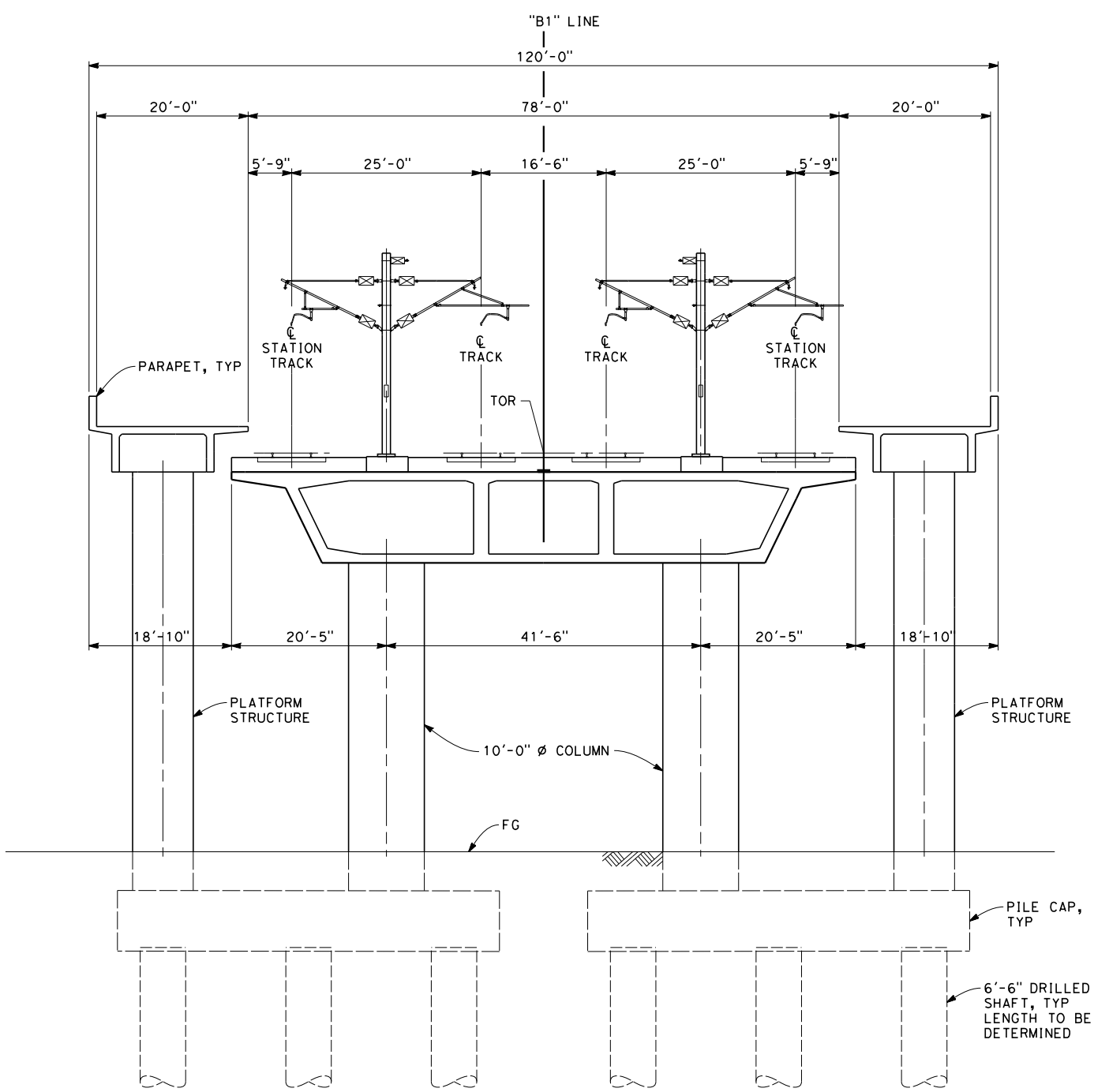
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 FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 TYPICAL SECTIONS

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
SV2652  
 SCALE  
AS SHOWN  
 SHEET NO.  
53 OF 57

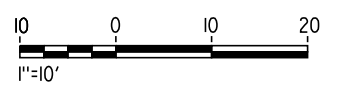




**SECTION E**  
 SCALE: 1"=10'  
 STA 7235+45  
 STA 7294+25



**SECTION F**  
 SCALE: 1"=10'  
 STA 7257+25 THROUGH 7271+45



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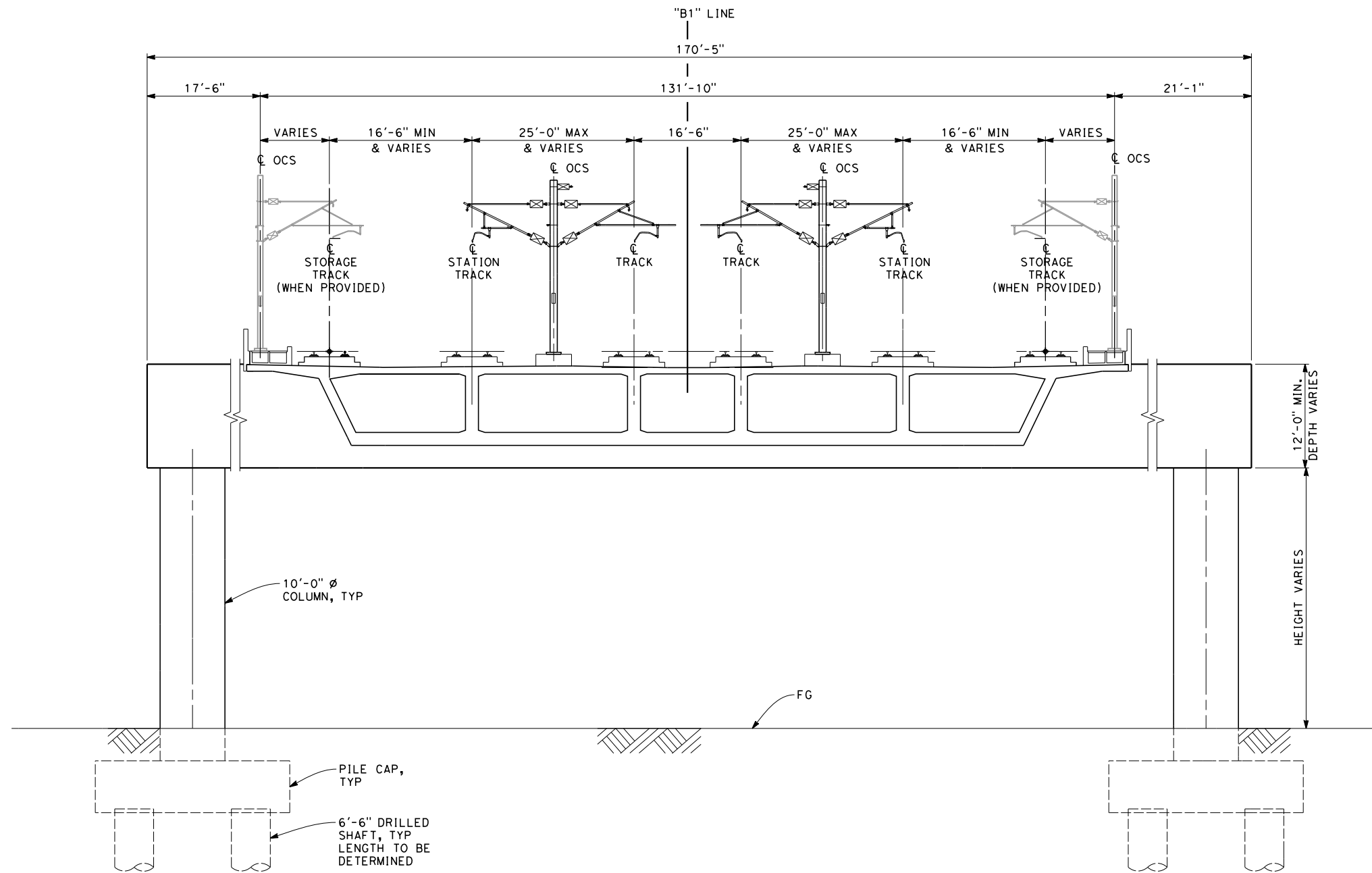
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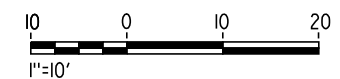
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
 FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 TYPICAL SECTIONS

CONTRACT NO.  
HSR 06-0003  
 DRAWING NO.  
SV2653  
 SCALE  
AS SHOWN  
 SHEET NO.  
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**SECTION G**  
SCALE: 1"=10'

STA 7237+85 THROUGH 7256+05



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DESIGNED BY  
M. FISHER  
DRAWN BY  
D. ORIZA  
CHECKED BY  
A. ARMSTRONG  
IN CHARGE  
R. COFFIN  
DATE  
12/31/13

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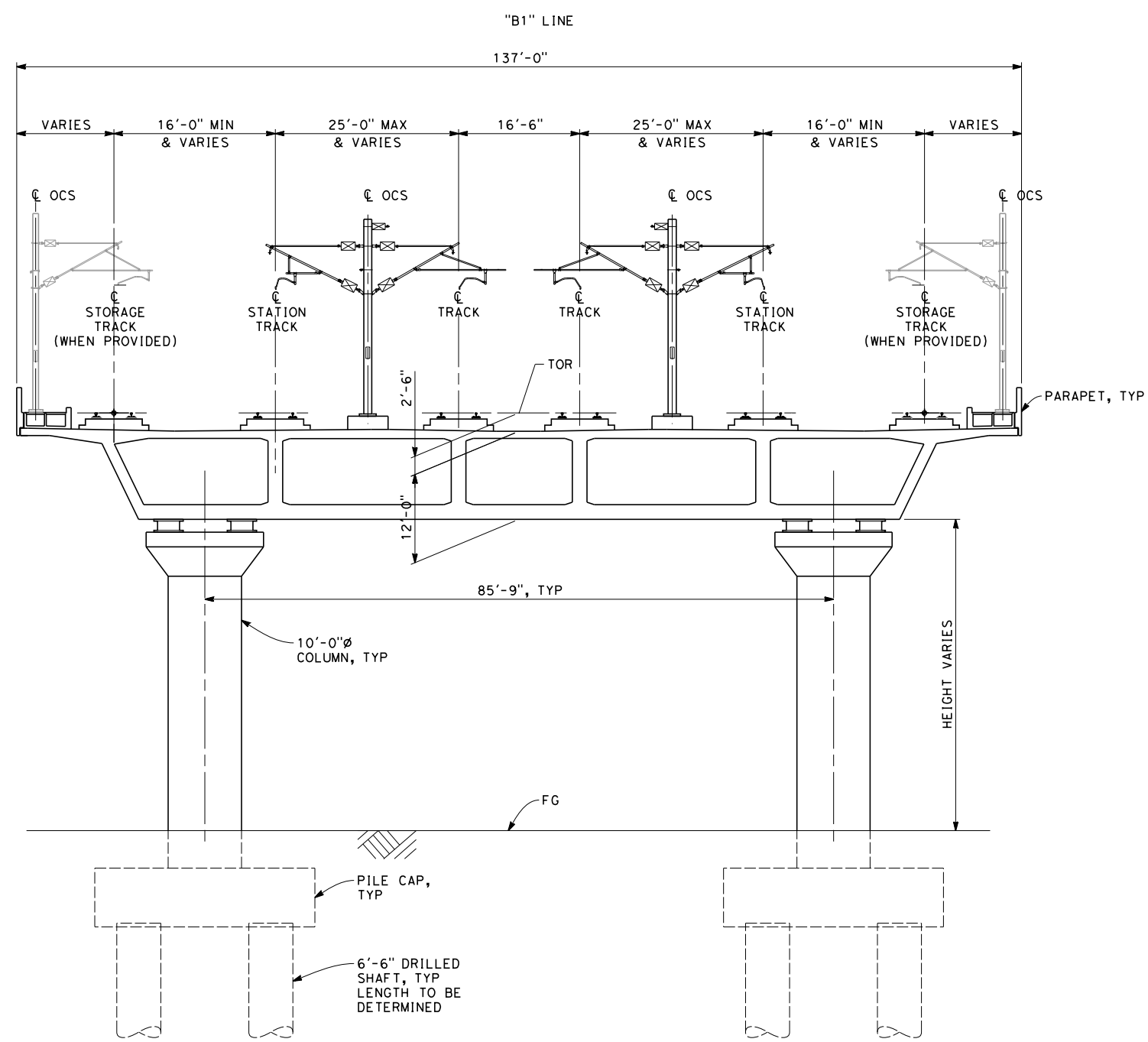


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
FRESNO TO BAKERSFIELD**  
BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
TYPICAL SECTIONS

CONTRACT NO.  
HSR 06-0003  
DRAWING NO.  
SV2654  
SCALE  
AS SHOWN  
SHEET NO.  
55 OF 57



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**SECTION H**

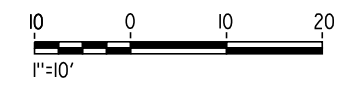
SCALE: 1"=10'

STA 7271+45 THROUGH 7236+65

**SECTION I**

SCALE: 1"=10'

NOT USED



| REV | DATE | BY | CHK | APP | DESCRIPTION |
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M. FISHER  
 DRAWN BY  
D. ORIZA  
 CHECKED BY  
A. ARMSTRONG  
 IN CHARGE  
R. COFFIN  
 DATE  
12/31/13

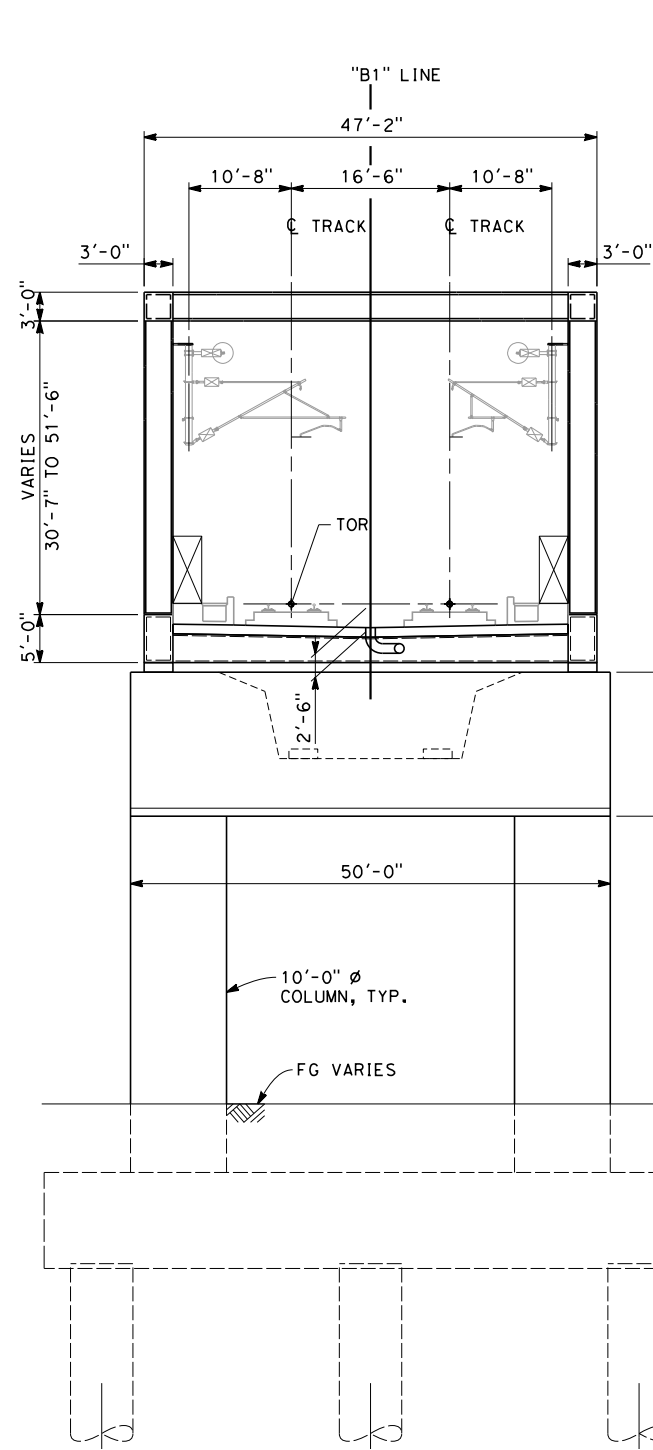
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**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
 FRESNO TO BAKERSFIELD**  
 BAKERSFIELD URBAN SUBSECTION  
 ALIGNMENT B1  
 BAKERSFIELD VIADUCT  
 TYPICAL SECTIONS

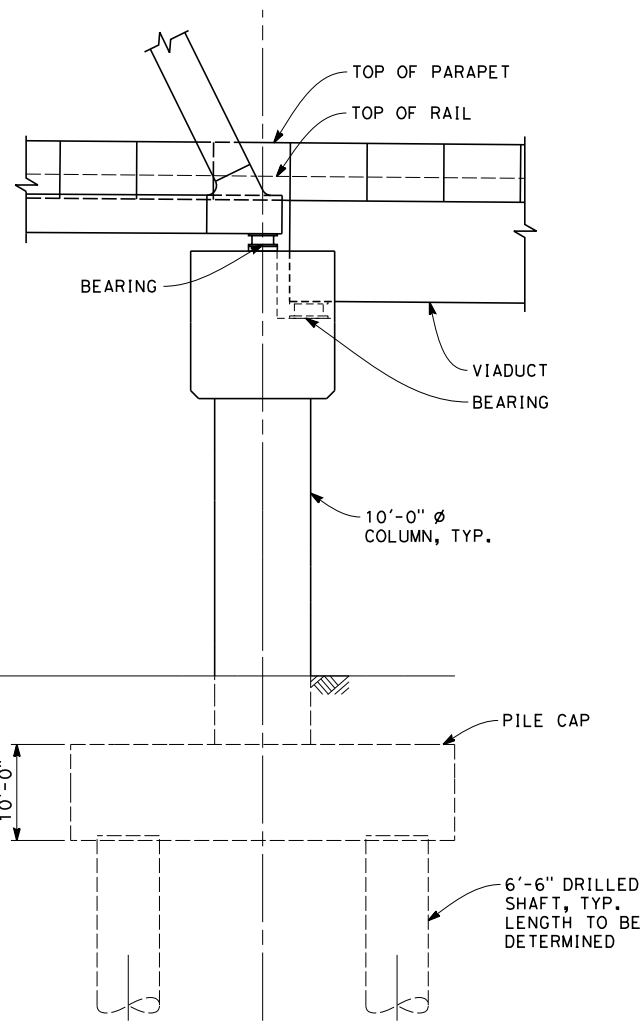
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 DRAWING NO.  
SV2655  
 SCALE  
AS SHOWN  
 SHEET NO.  
56 OF 57

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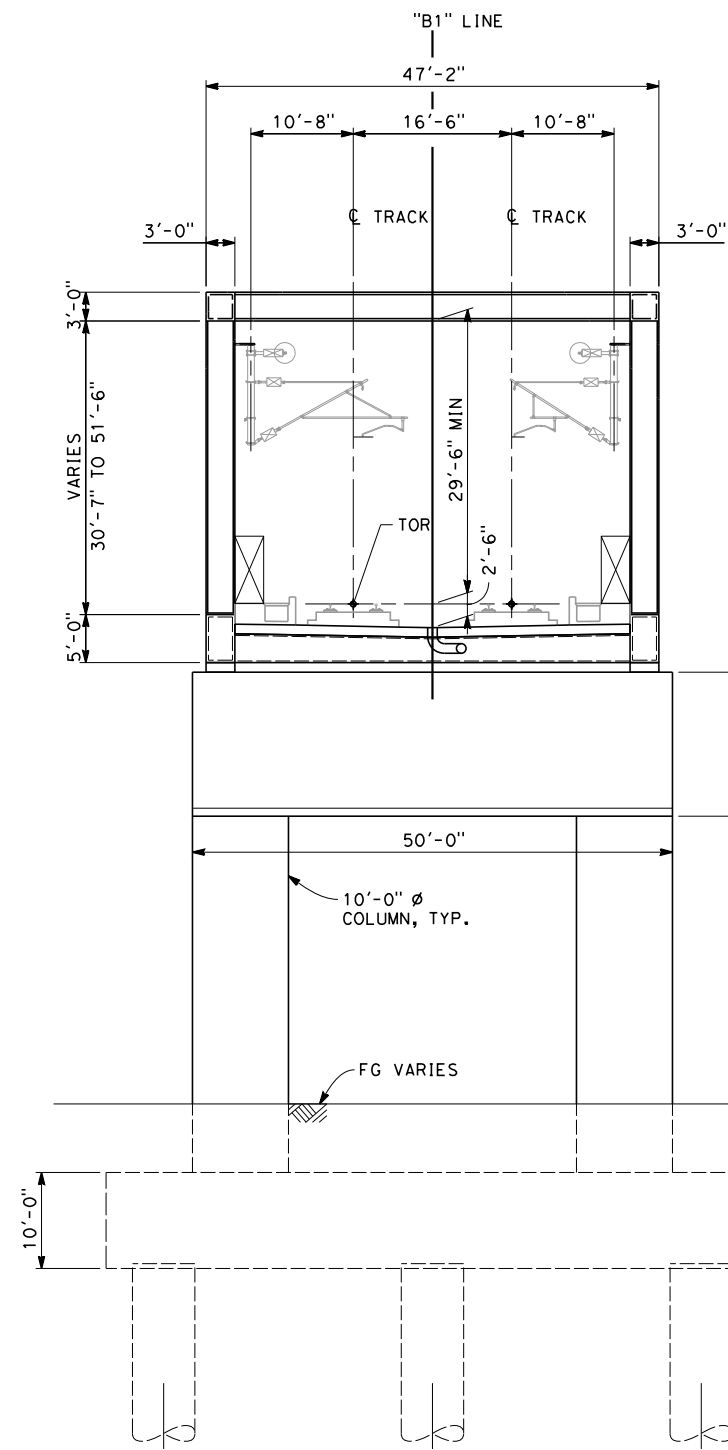


**SECTION J**  
SCALE: 1"=10'

STA 7101+41.50 (BENT 137)  
STA 7108+55.50 (BENT 139)  
STA 7149+96.50 (BENT 175)  
STA 7152+83.50 (BENT 176)

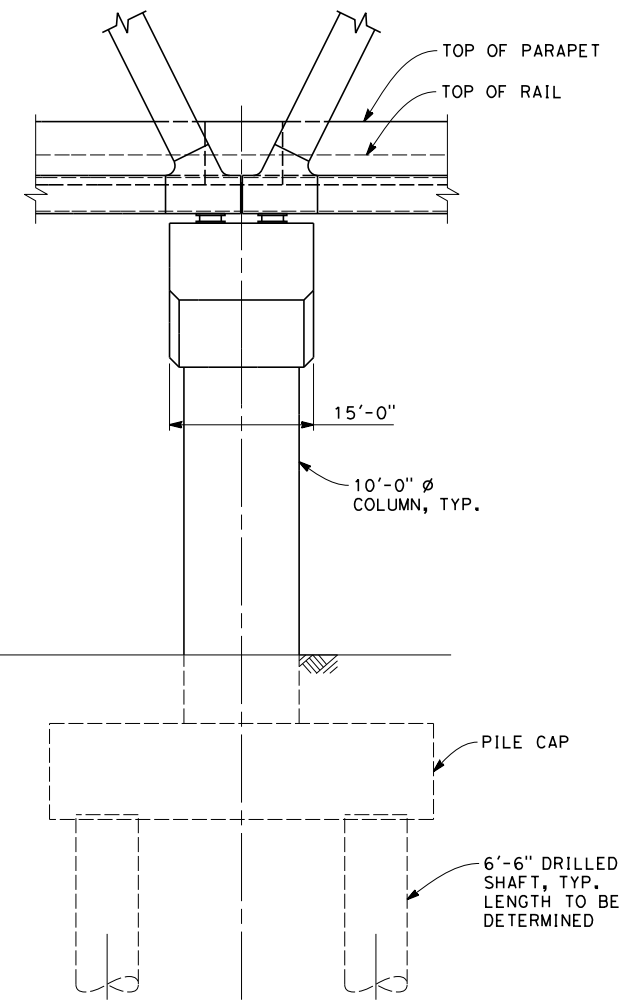


**SECTION J-J**  
SCALE: 1"=10'



**SECTION K**  
SCALE: 1"=10'

STA 7104+90.50 (BENT 138)



**SECTION K-K**  
SCALE: 1"=10'



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| DESIGNED BY<br>M. FISHER   |
| DRAWN BY<br>D. ORIZA       |
| CHECKED BY<br>A. ARMSTRONG |
| IN CHARGE<br>R. COFFIN     |
| DATE<br>12/31/13           |

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

BAKERSFIELD URBAN SUBSECTION  
ALIGNMENT B1  
BAKERSFIELD VIADUCT  
TYPICAL SECTIONS

|                             |
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| CONTRACT NO.<br>HSR 06-0003 |
| DRAWING NO.<br>SV2656       |
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