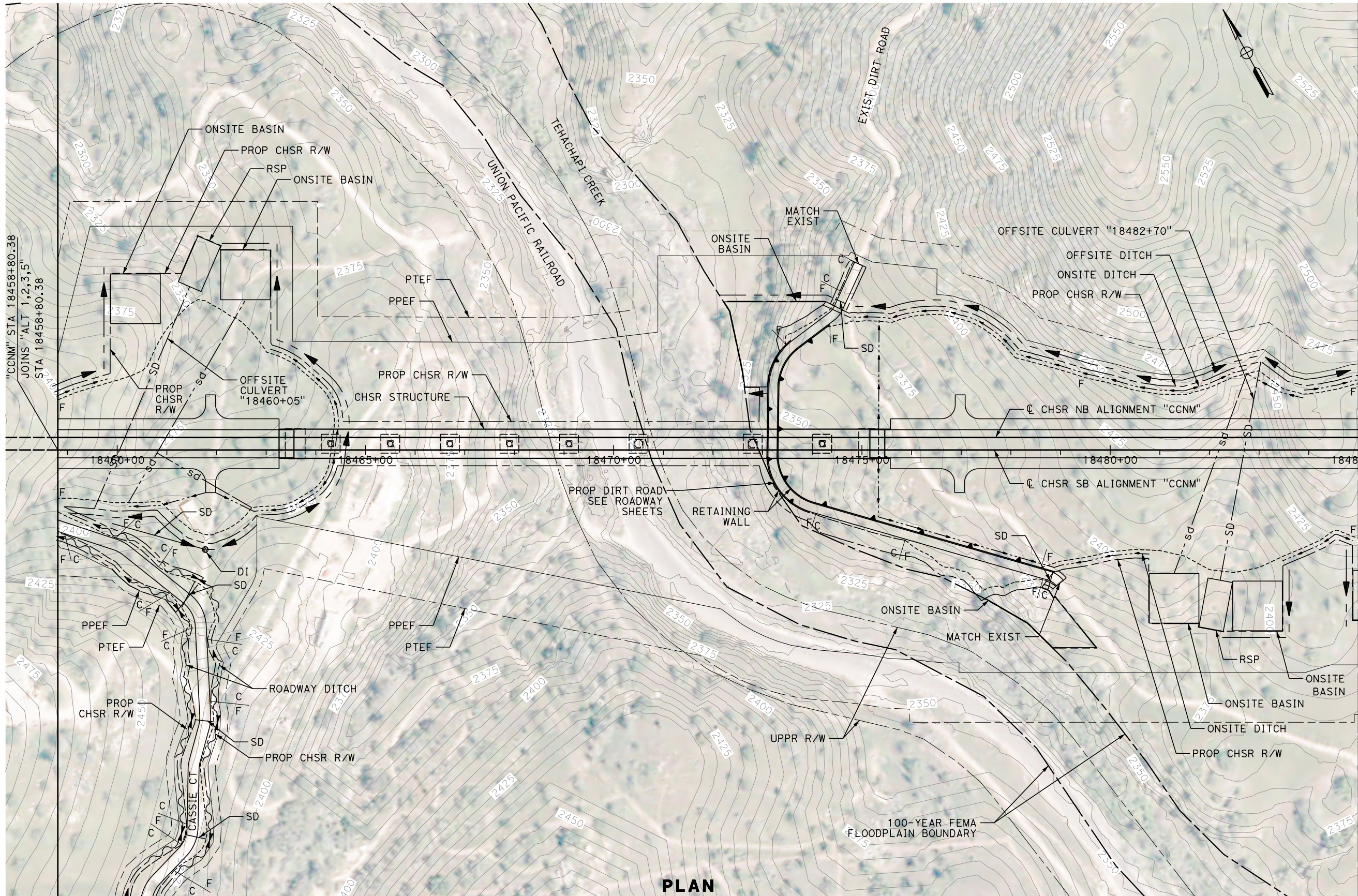


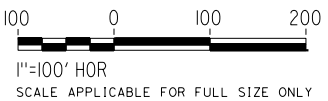
Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\G\BP-CV-G4601

5:13:40 PM

Glenn.Yamanaka@tylin.com 1/13/2021



MATCH LINE ( CV-G4602 )



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18458+80 TO 18485+00

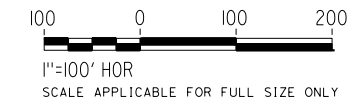
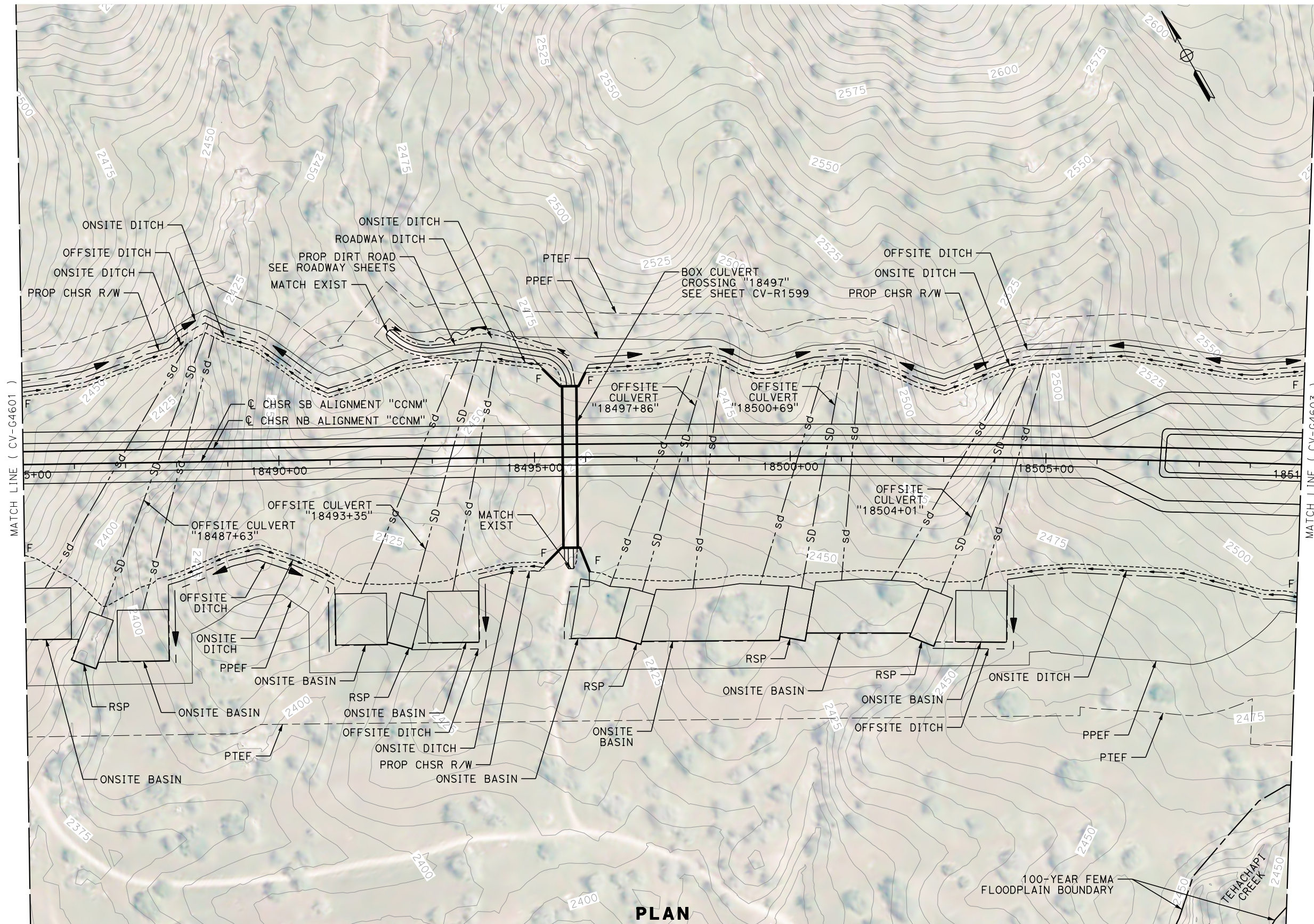
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4601  
SCALE  
AS SHOWN  
SHEET NO.  
66



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\BP-CV-G4602

5:15:29 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**

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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18485+00 TO 18510+00

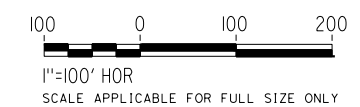
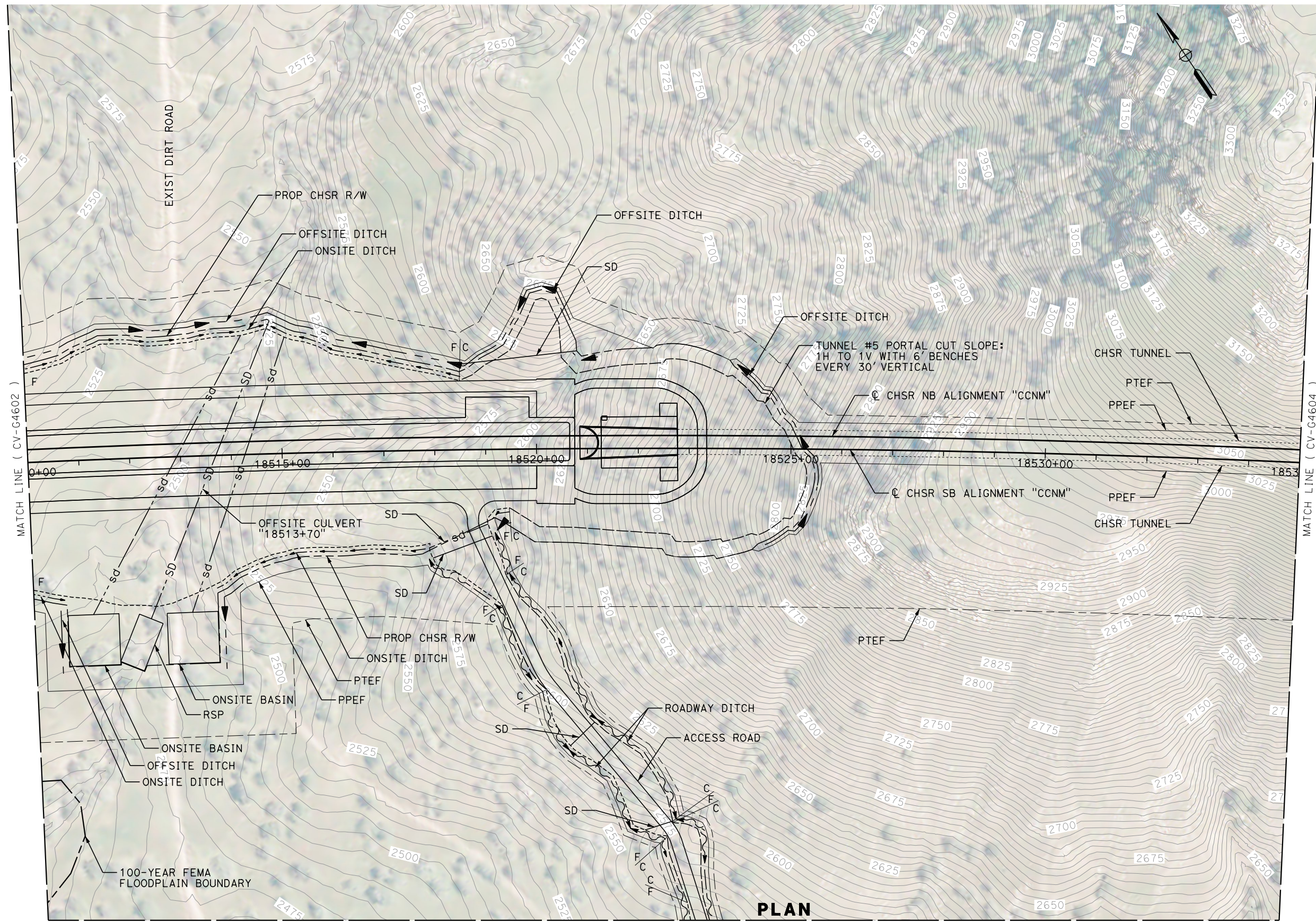
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4602  
SCALE  
AS SHOWN  
SHEET NO.  
67



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\BP-CV-G4603

5:13:40 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**

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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18510+00 TO 18535+00

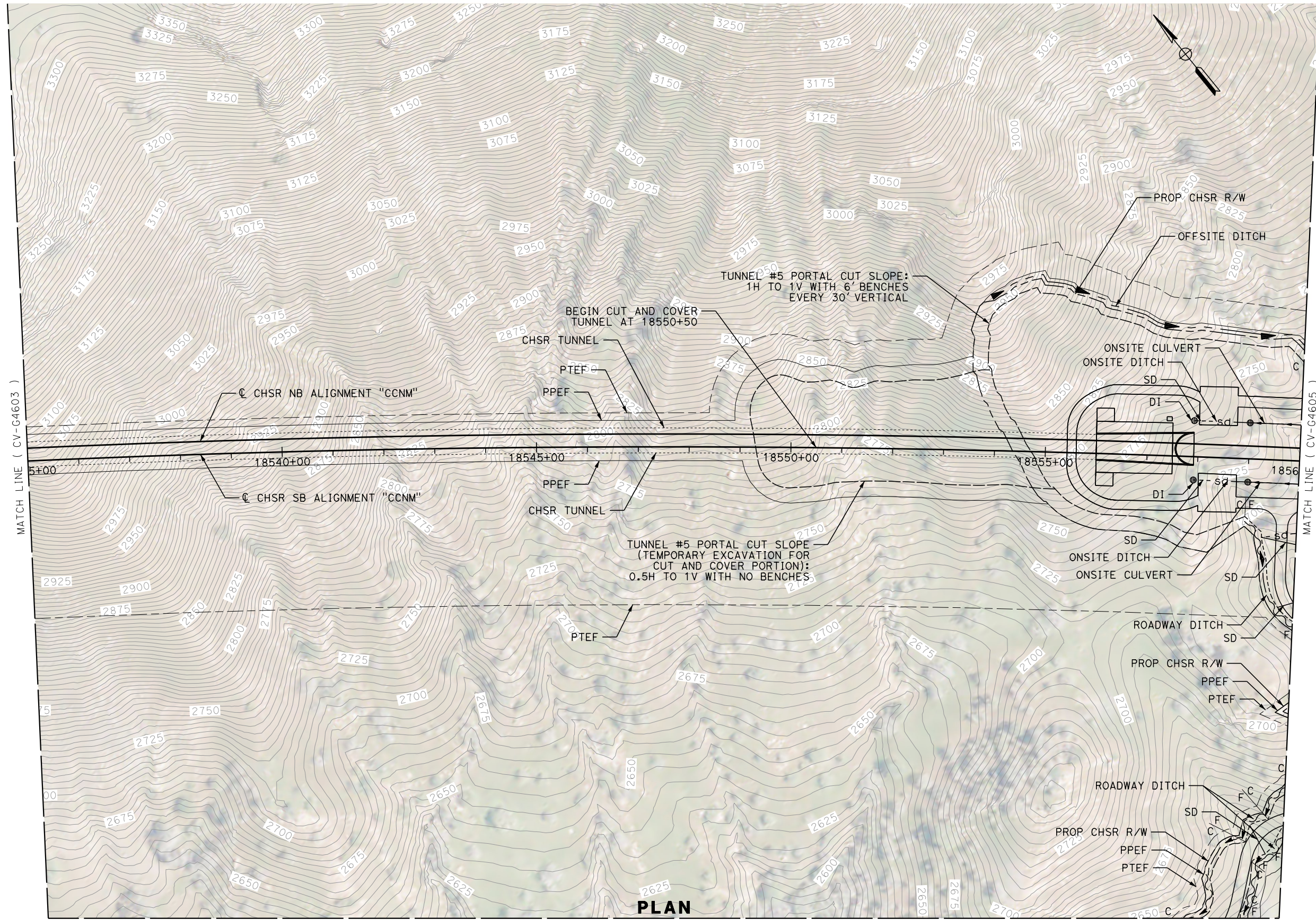
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4603  
SCALE  
AS SHOWN  
SHEET NO.  
68



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\G\BP-CV-G4604

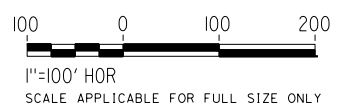
5:14:44 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**

MATCH LINE ( CV-G4617 )



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18535+00 TO 18560+00

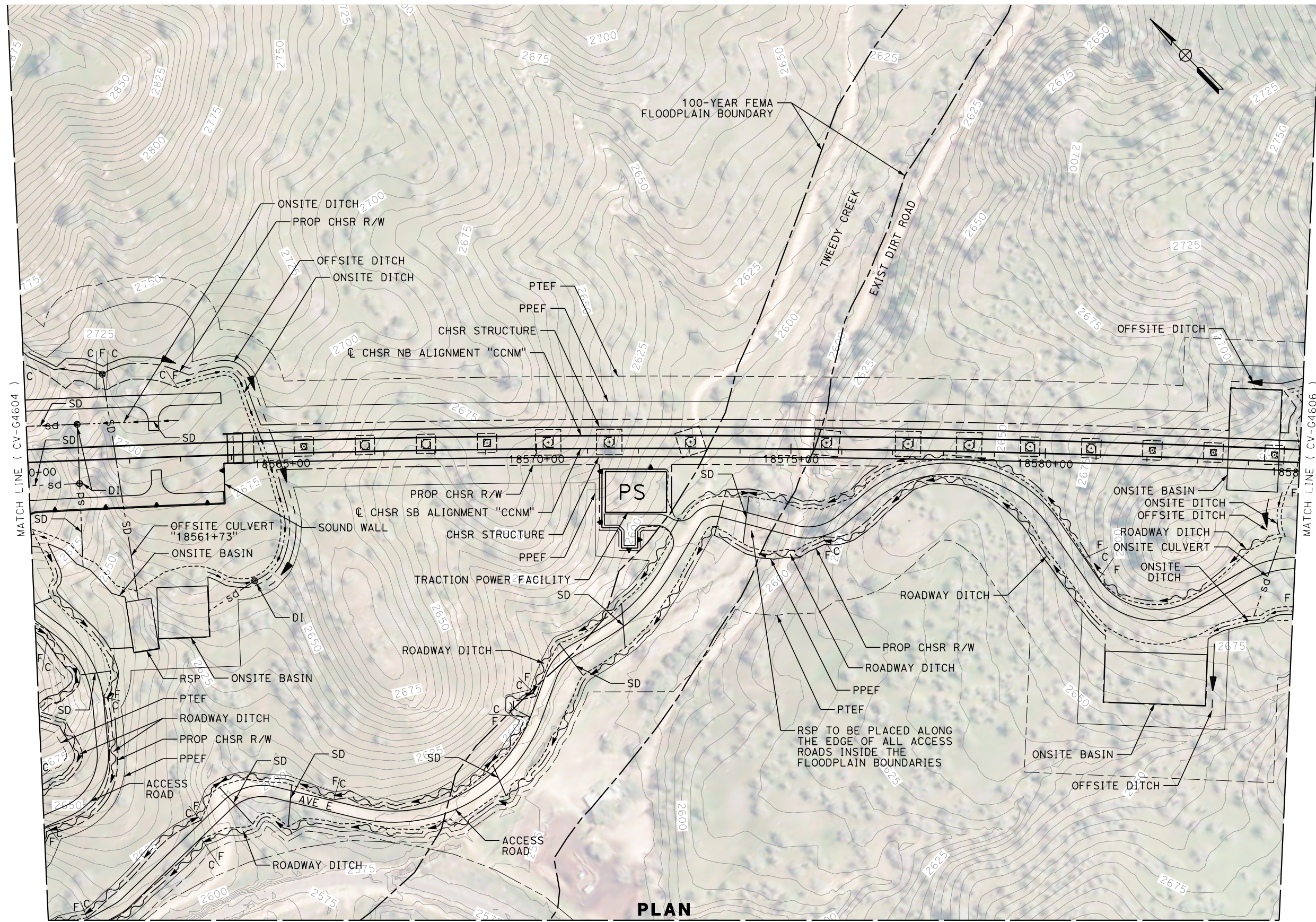
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4604  
SCALE  
AS SHOWN  
SHEET NO.  
69



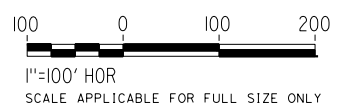
Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\CV\BP-CV-G4605

5:13:38 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18560+00 TO 18585+00

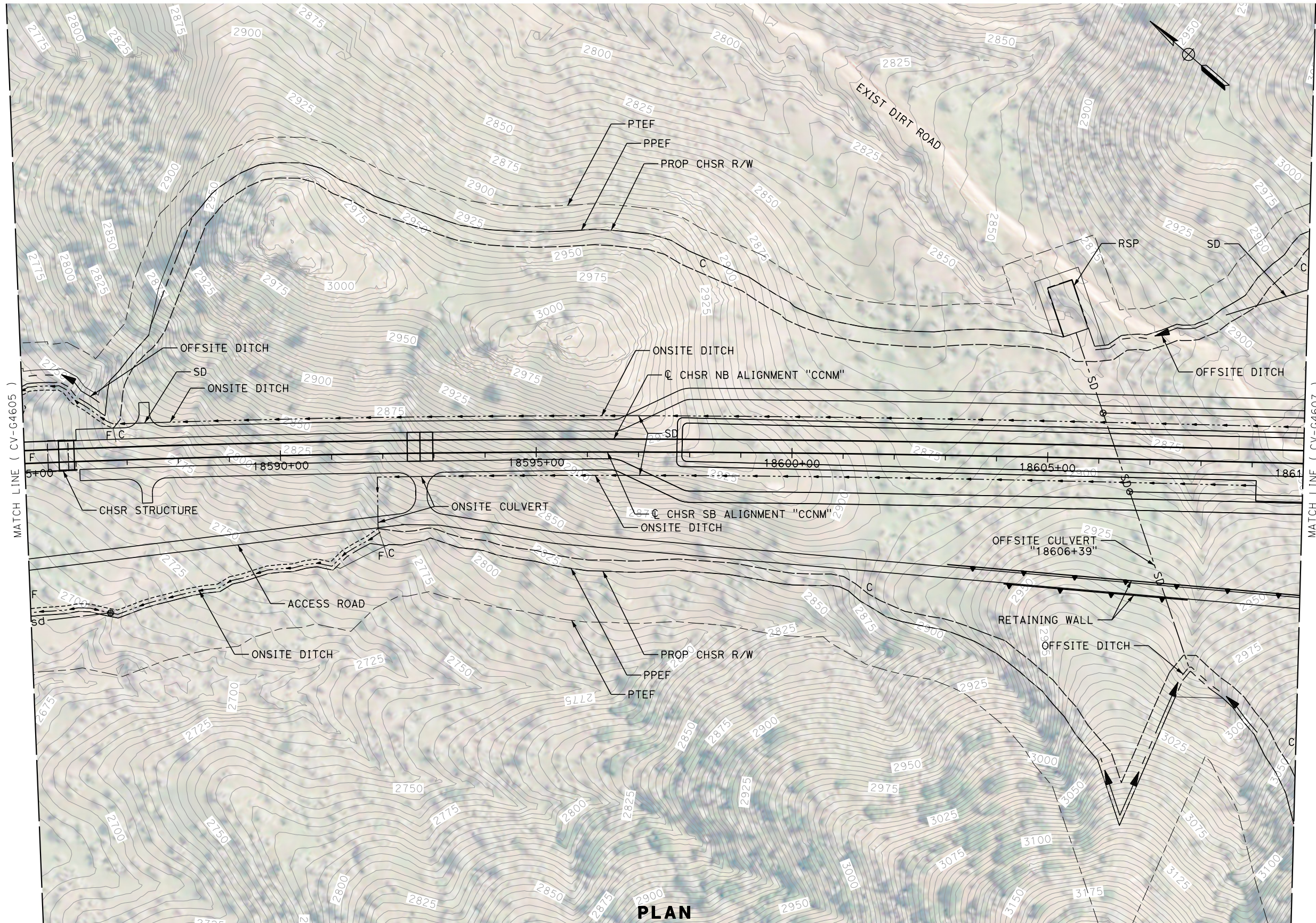
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4605  
SCALE  
AS SHOWN  
SHEET NO.  
70



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\CV\G\BP-CV-G4606

5:14:48 PM

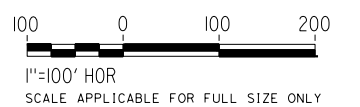
Glenn.Yamanaka@tylin.com 1/13/2021



MATCH LINE ( CV-G4605 )

MATCH LINE ( CV-G4607 )

**PLAN**



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18585+00 TO 18610+00

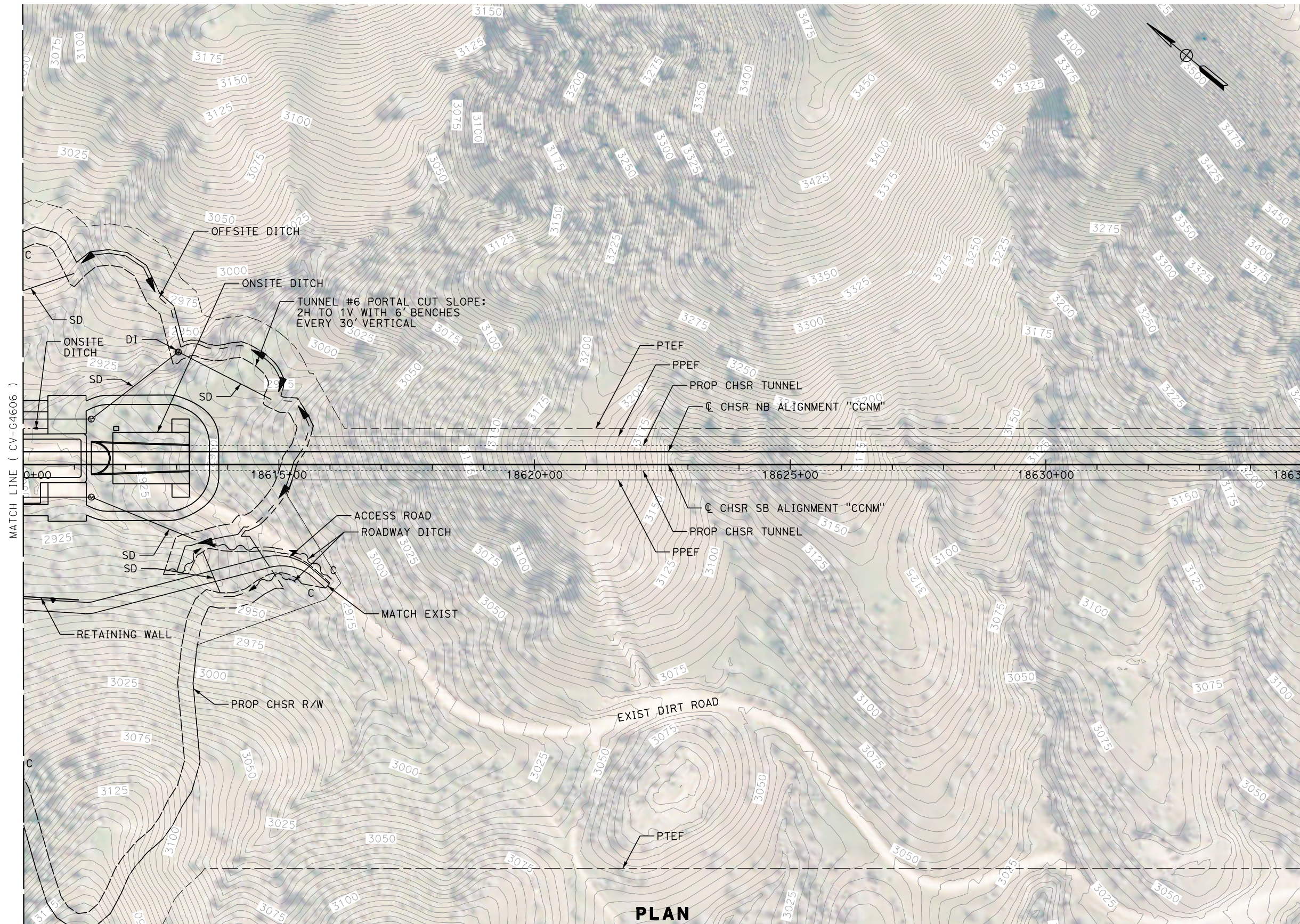
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4606  
SCALE  
AS SHOWN  
SHEET NO.  
71



Projects\701206.00\_CHSRBP\00\_CADD\_Sheet\_Files\CCNM\CV\BP-CV-G4607

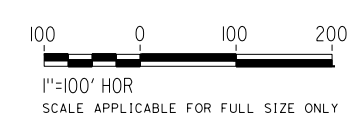
5:13:34 PM

Glenn.Yamanaka@tylin.com 1/13/2021



MATCH LINE ( CV-G4606 )

MATCH LINE ( CV-G4608 )



**PLAN**

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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18610+00 TO 18635+00

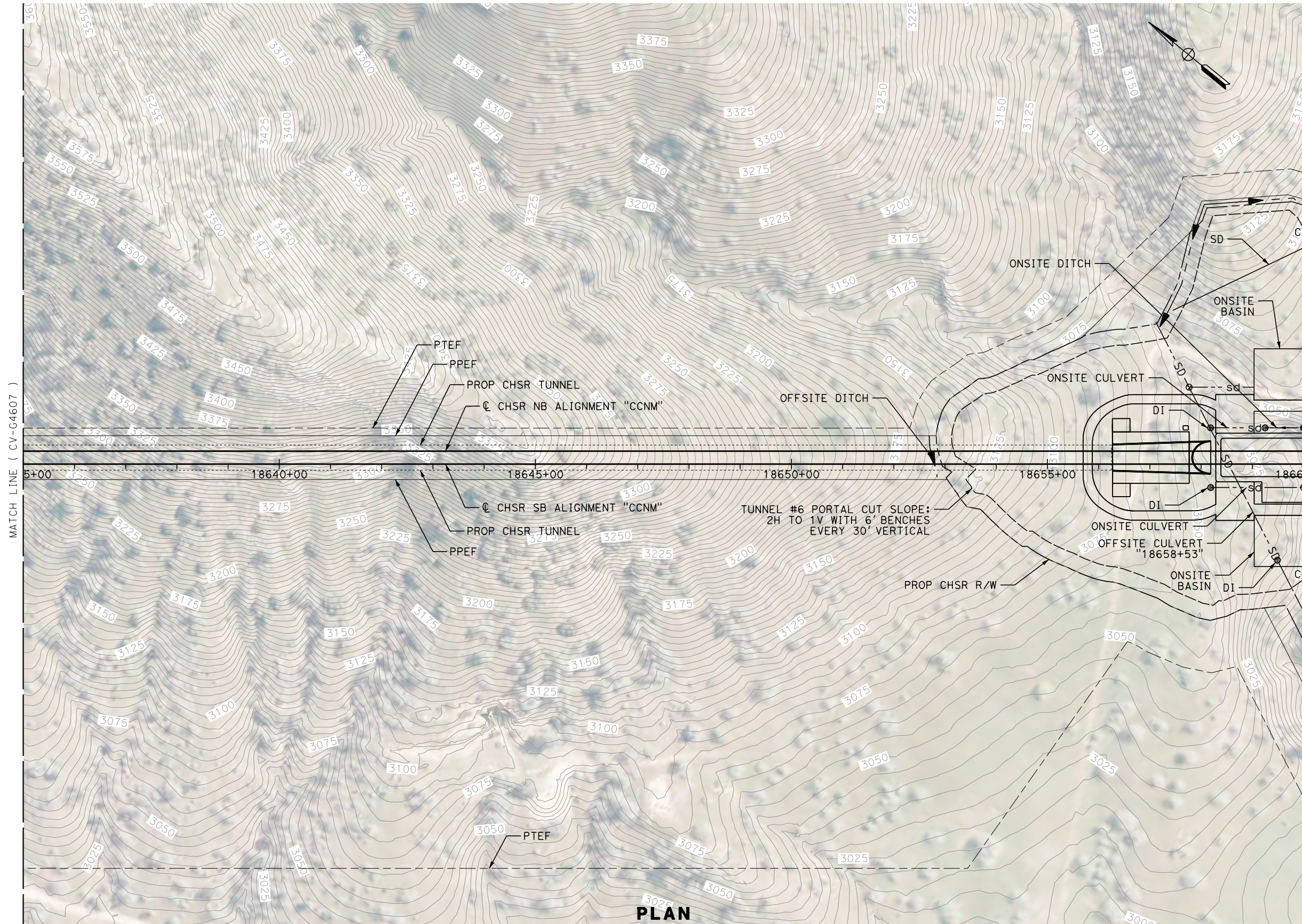
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4607  
SCALE  
AS SHOWN  
SHEET NO.  
72



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\CV\BP-CV-G4608

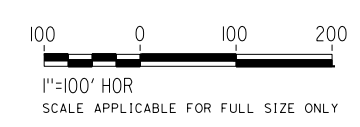
5:16:06 PM

Glenn.Yamanaka@tylin.com 1/13/2021



MATCH LINE ( CV-G4607 )

MATCH LINE ( CV-G4609 )



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18635+00 TO 18660+00

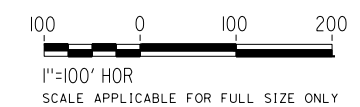
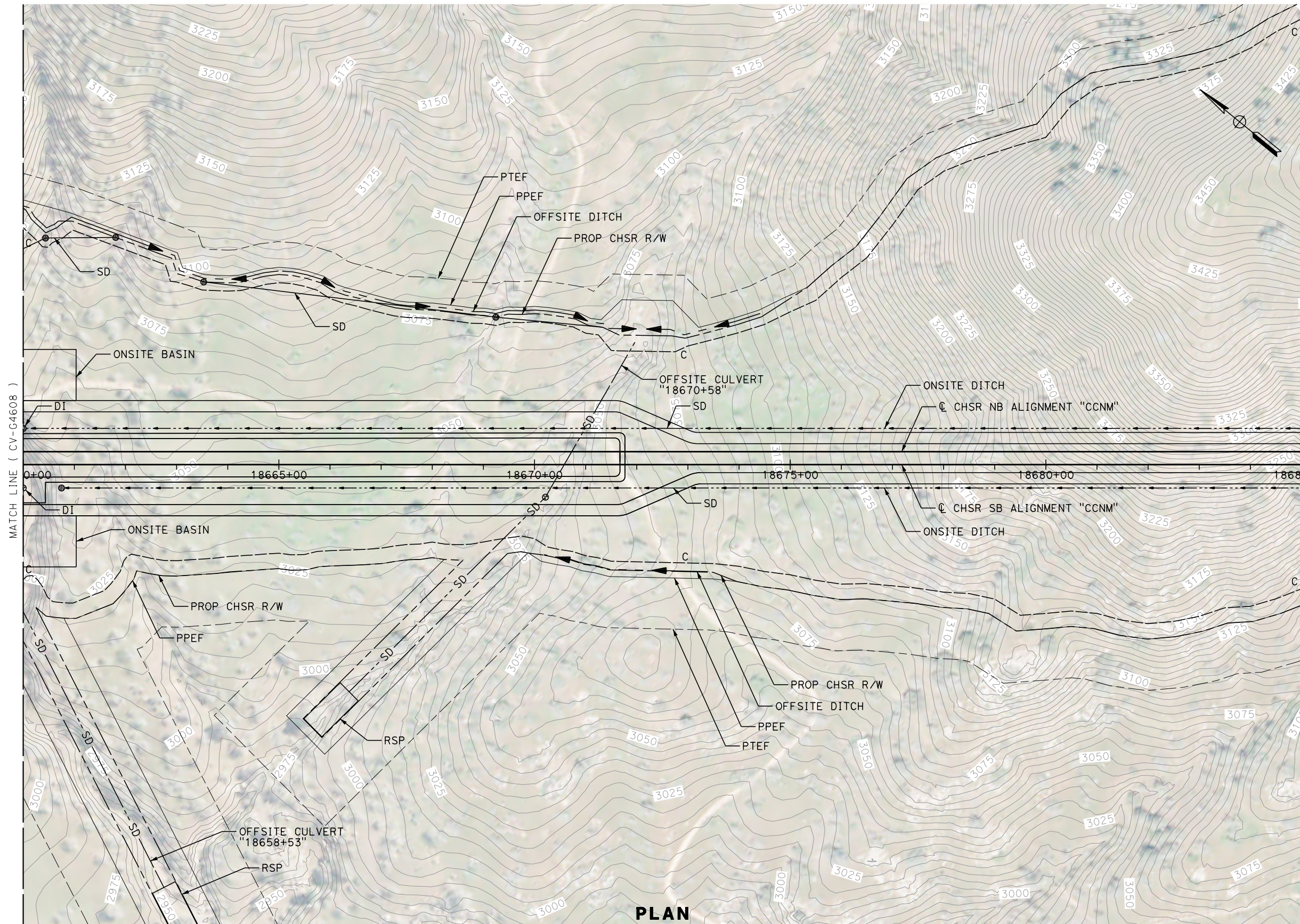
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4608  
SCALE  
AS SHOWN  
SHEET NO.  
73



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\CV\G\BP-CV-G4609

5:13:39 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**

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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

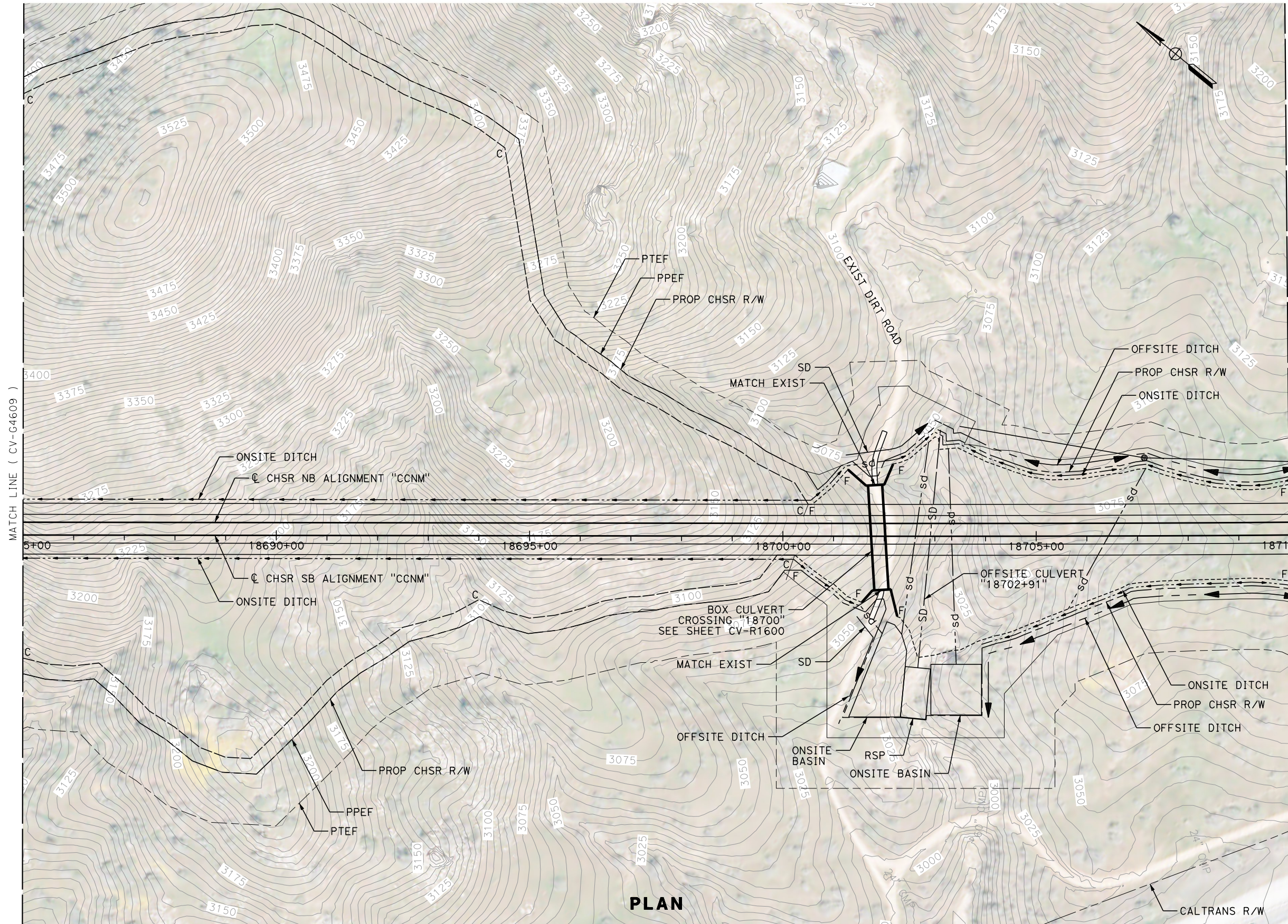


**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

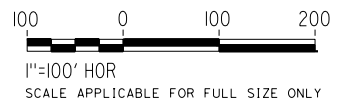
CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18660+00 TO 18685+00

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4609  
SCALE  
AS SHOWN  
SHEET NO.  
74





**PLAN**



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18685+00 TO 18710+00

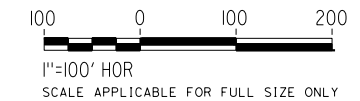
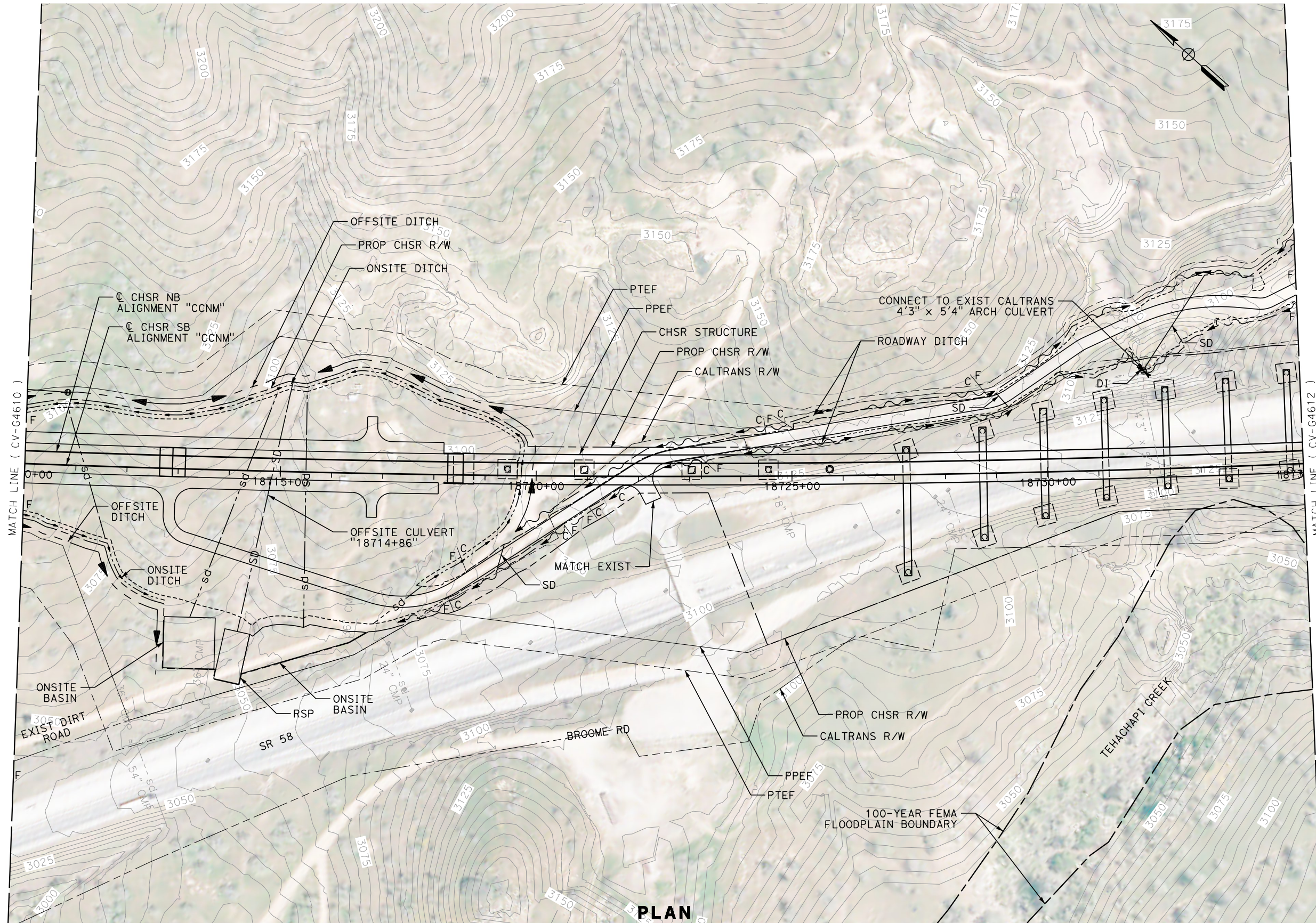
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4610  
SCALE  
AS SHOWN  
SHEET NO.  
75



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\CV\BP-CV-G4611

5:13:39 PM

Glenn.Yamanaka@tylin.com 1/13/2021



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18710+00 TO 18735+00

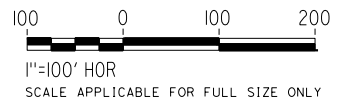
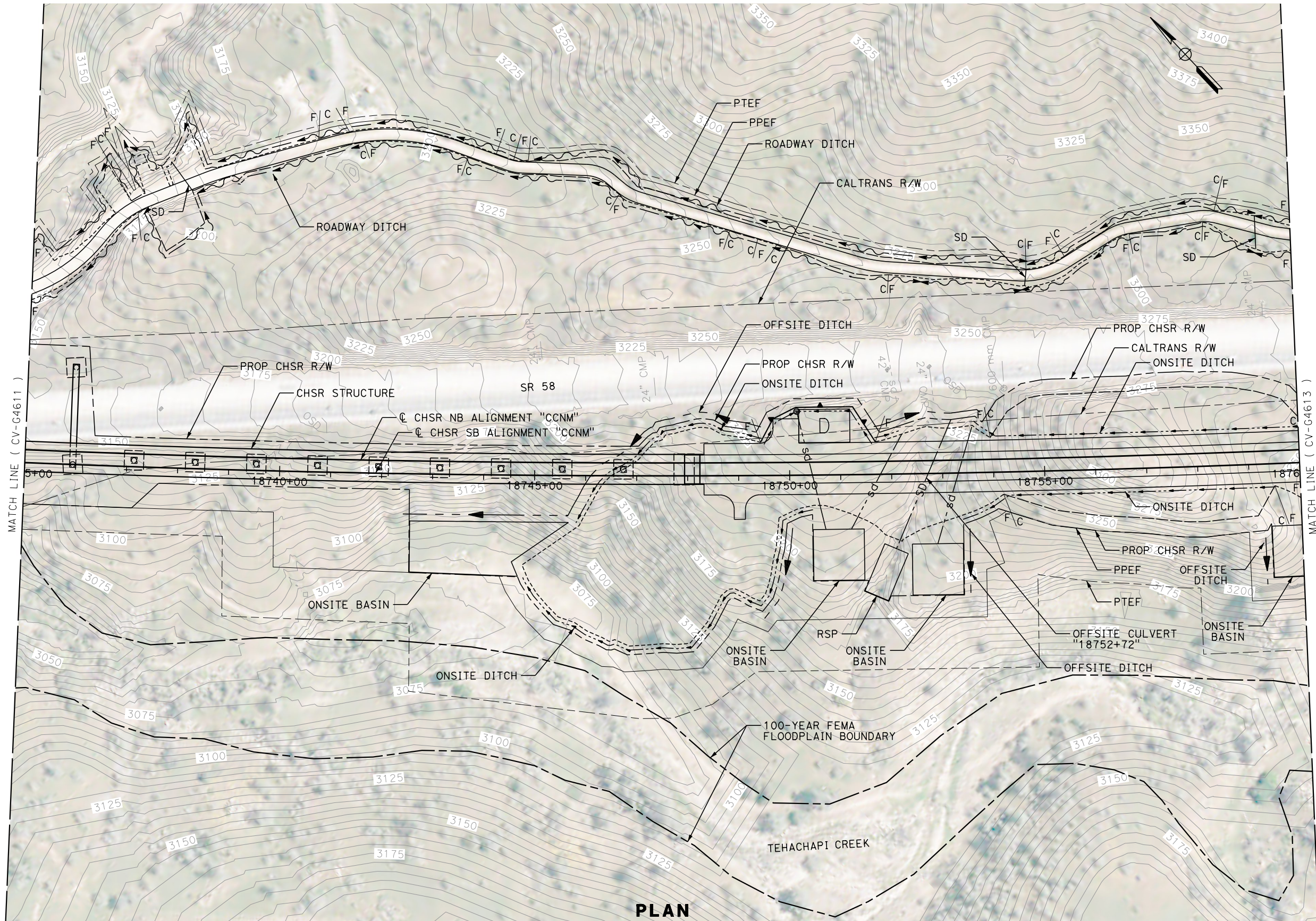
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4611  
SCALE  
AS SHOWN  
SHEET NO.  
76



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\BP-CV-G4612

5:15:37 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**

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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18735+00 TO 18760+00

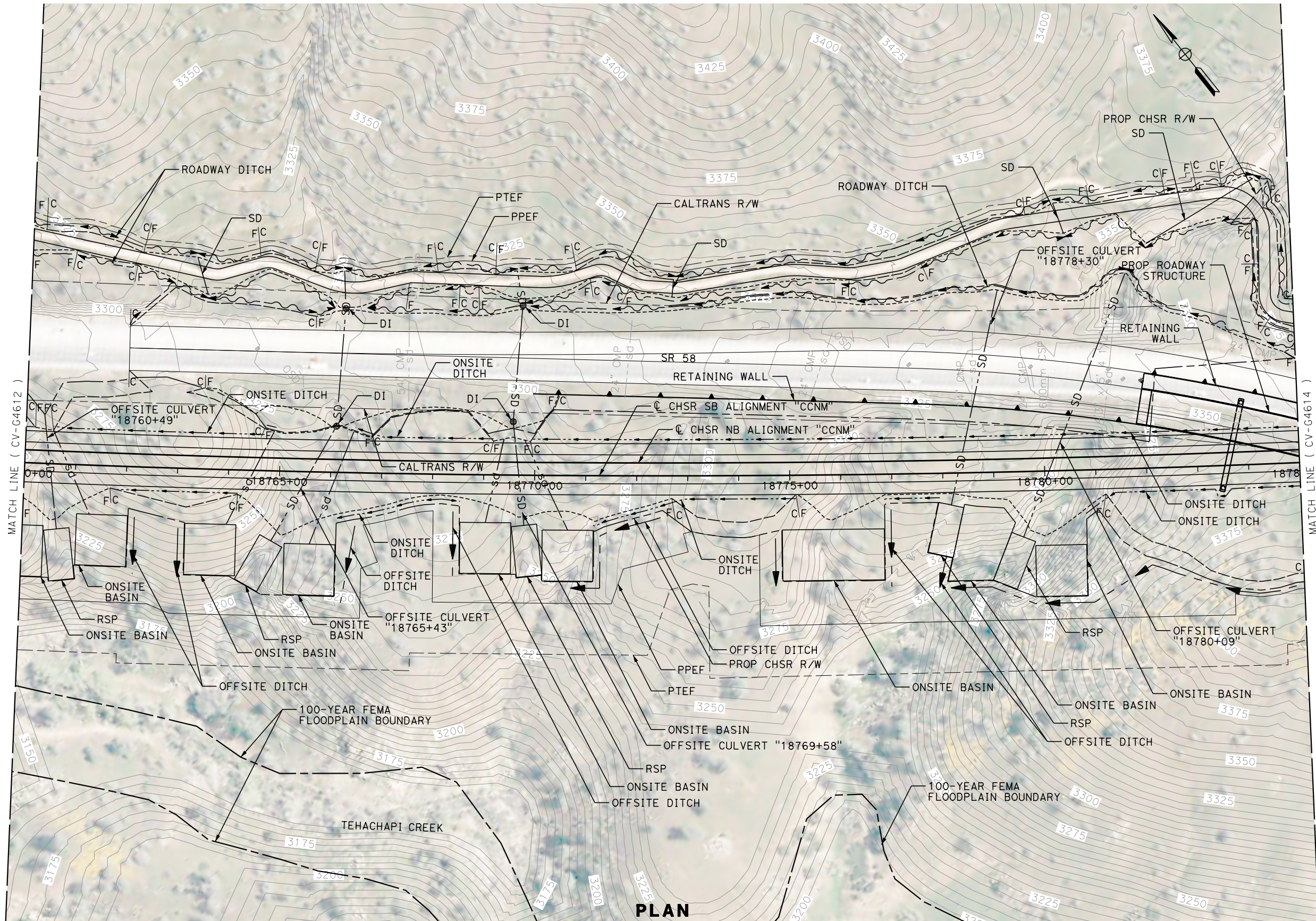
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4612  
SCALE  
AS SHOWN  
SHEET NO.  
77



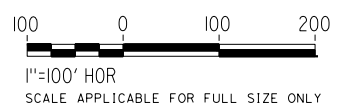
Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\G\BP-CV-G4613

5:14:41 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18760+00 TO 18785+00

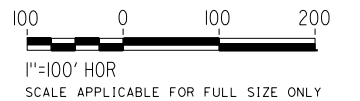
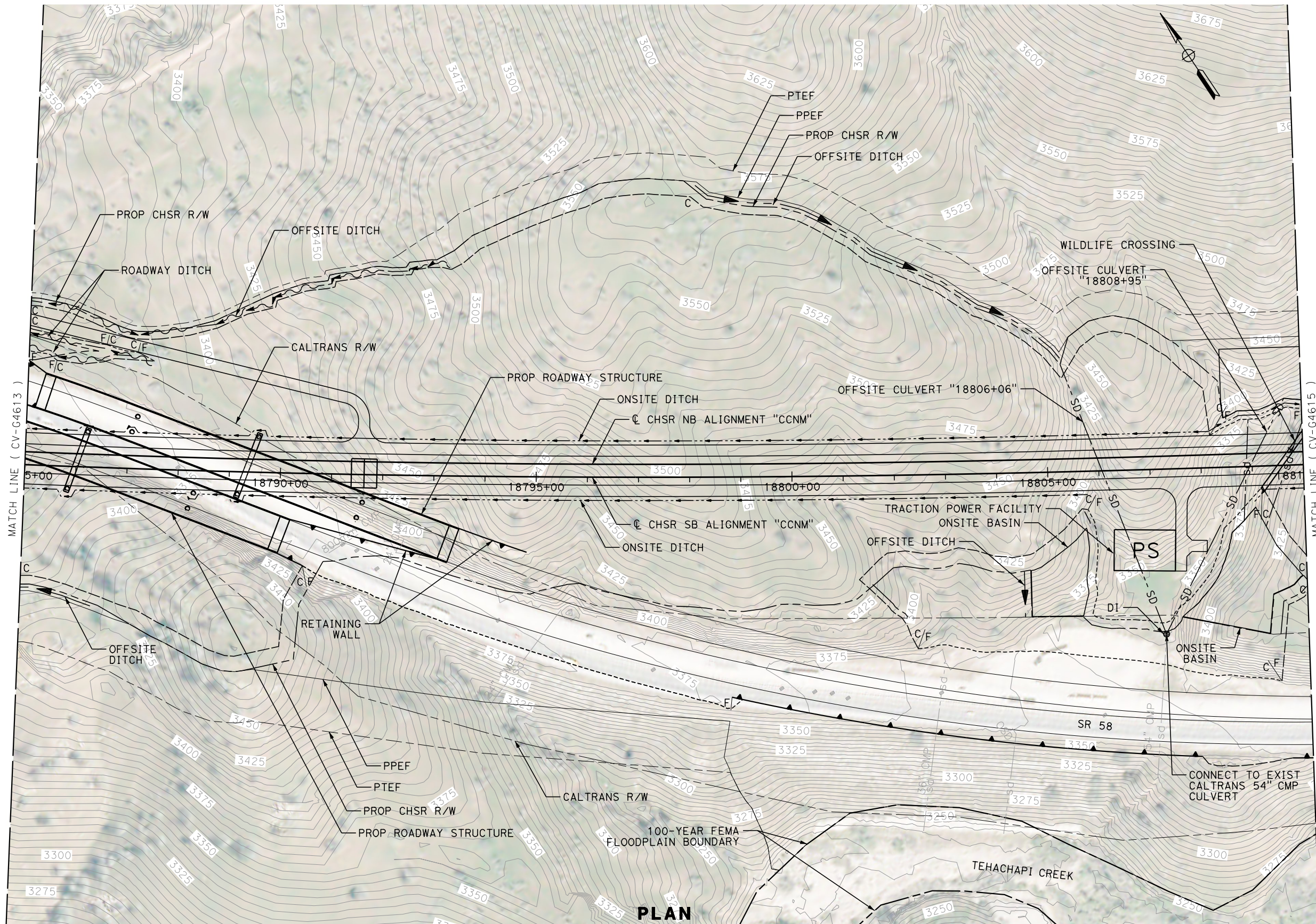
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4613  
SCALE  
AS SHOWN  
SHEET NO.  
78



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\CV\G\BP-CV-G4614

5:11:05 PM

Glenn.Yamanaka@tylin.com 1/13/2021



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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18785+00 TO 18810+00

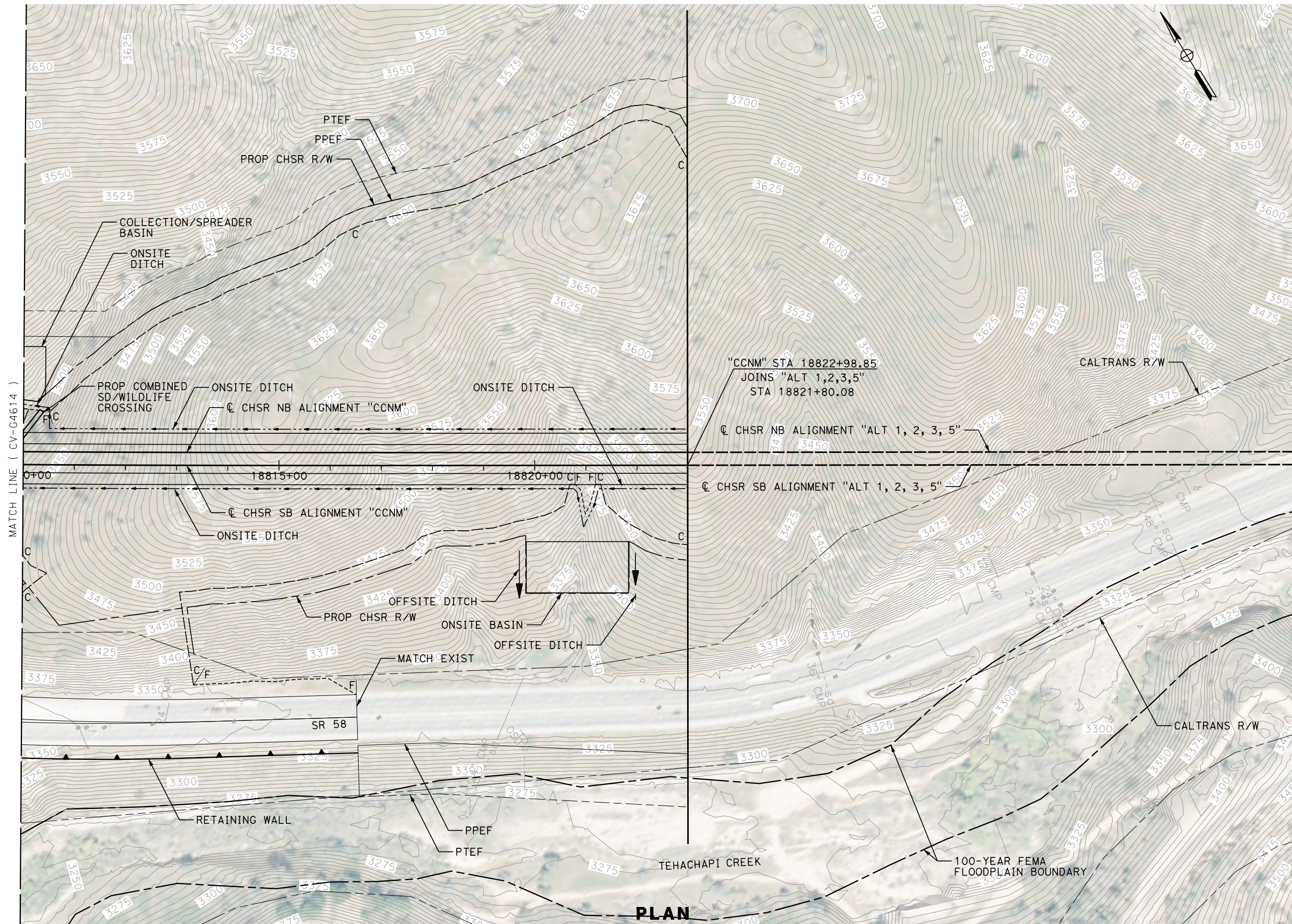
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4614  
SCALE  
AS SHOWN  
SHEET NO.  
79



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\BP-CV-G4615

5:14:37 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**

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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
STA 18810+00 TO 18822+99

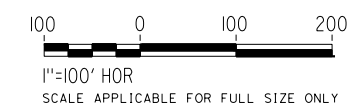
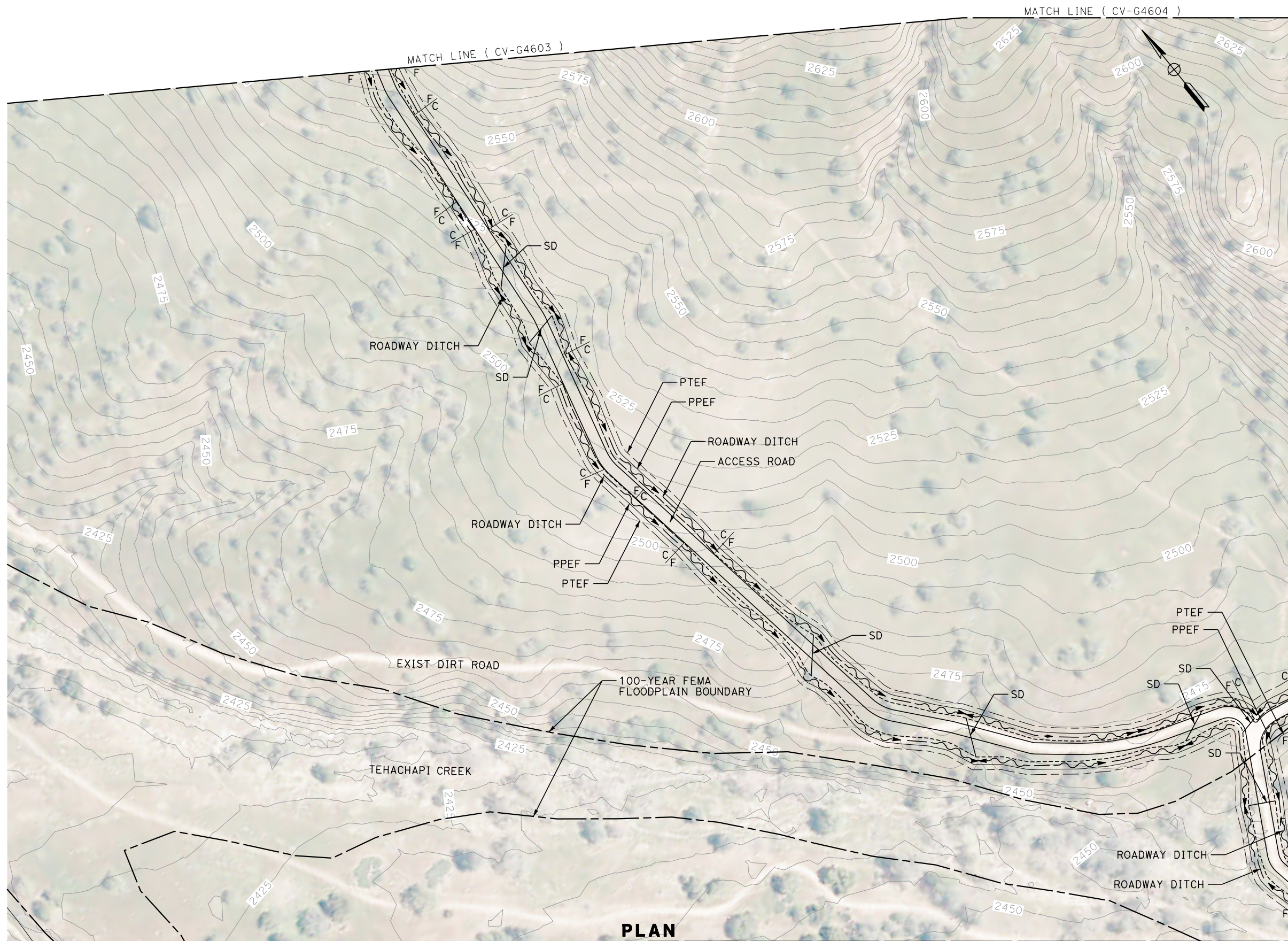
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4615  
SCALE  
AS SHOWN  
SHEET NO.  
80



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\G\BP-CV-G4616

5:24:13 PM

Glenn.Yamanaka@tylin.com 1/13/2021



**PLAN**

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

DESIGNED BY  
**G. YAMANAKA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



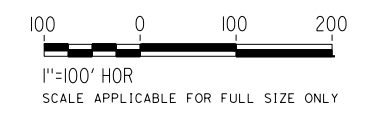
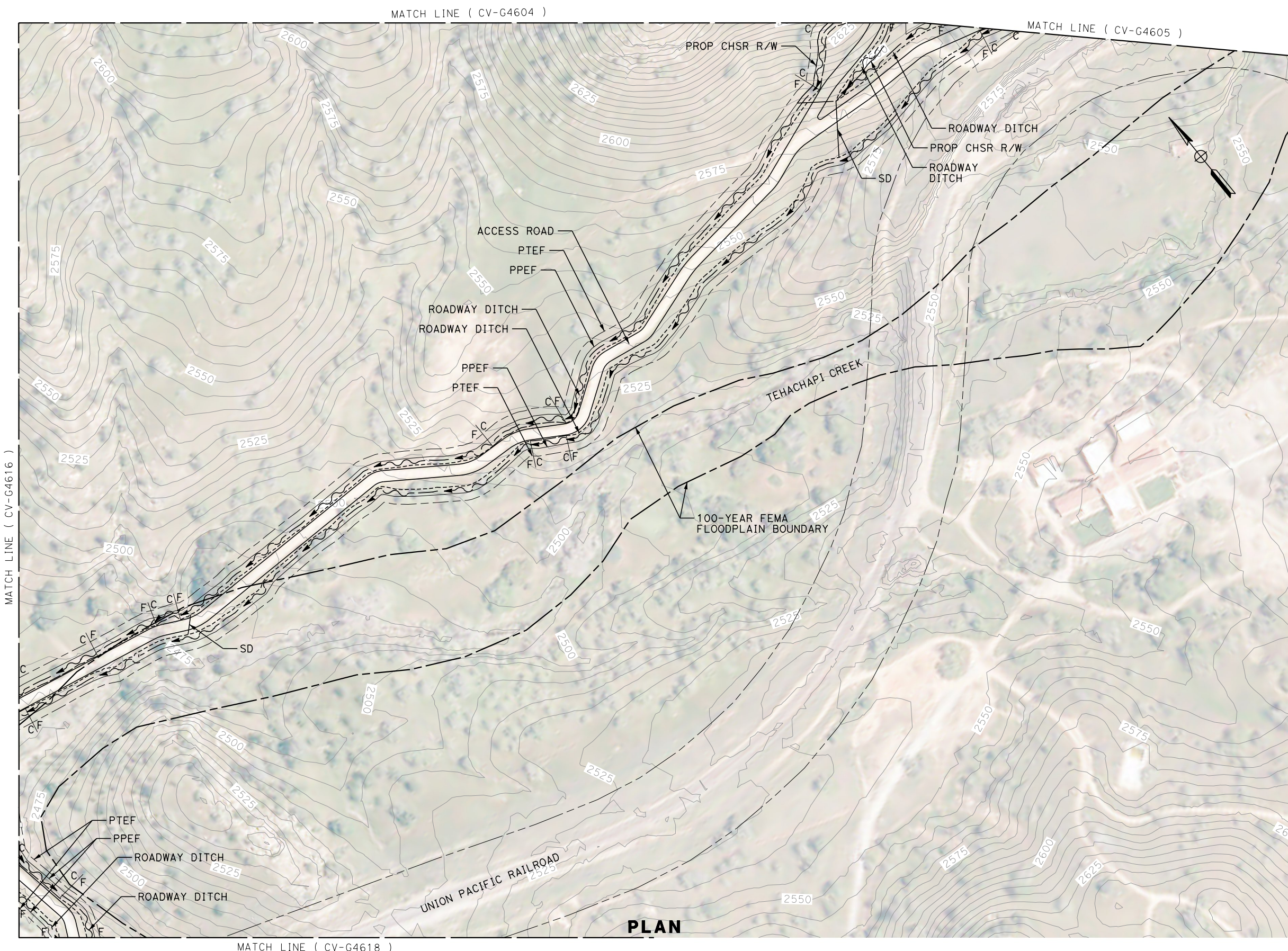
**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
ACCESS ROAD STA 18519+00

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
CV-G4616  
SCALE  
AS SHOWN  
SHEET NO.  
81



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\BP-CV-G4617  
 Glenn.Yamanaka@tylin.com 1/13/2021 5:11:421 PM



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

DESIGNED BY  
**G. YAMANAKA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**G. CAMPBELL**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD  
 PECD  
 SUBMITTAL**  
  
**NOT FOR  
 CONSTRUCTION**



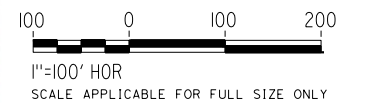
**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 GRADING AND DRAINAGE  
 PLAN  
 ACCESS ROAD STA 18560+00

CONTRACT NO.  
 HSR13-44  
 DRAWING NO.  
 CV-G4617  
 SCALE  
 AS SHOWN  
 SHEET NO.  
 82



MATCH LINE ( CV-G4616 )

MATCH LINE ( CV-G4617 )



MATCH EXIST

Projects\701206\00\_CHSRBP\00\_CADD\Sheet Files\CCNM\CV\BP-CV-G4618

5:24:02 PM

Glenn.Yamanaka@tylin.com 1/13/2021

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

DESIGNED BY  
**G. YAMANAKA**

DRAWN BY  
**A. RIVERA**

CHECKED BY  
**G. CAMPBELL**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GRADING AND DRAINAGE  
PLAN  
ACCESS ROAD STA 18519+00

CONTRACT NO.  
HSR13-44

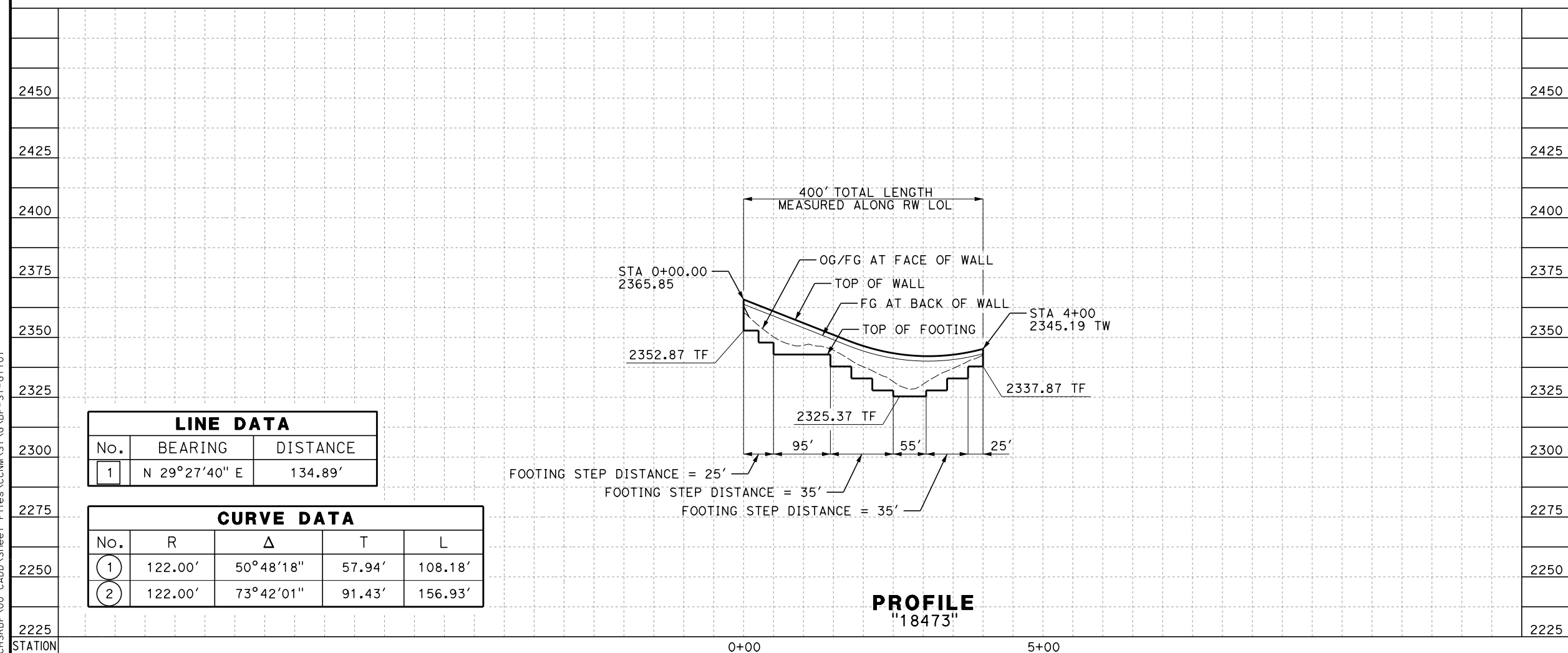
DRAWING NO.  
CV-G4618

SCALE  
AS SHOWN

SHEET NO.  
83

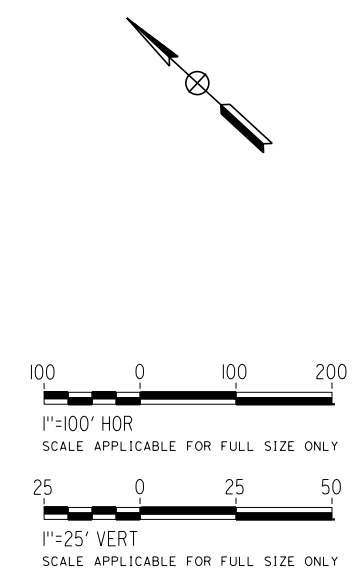
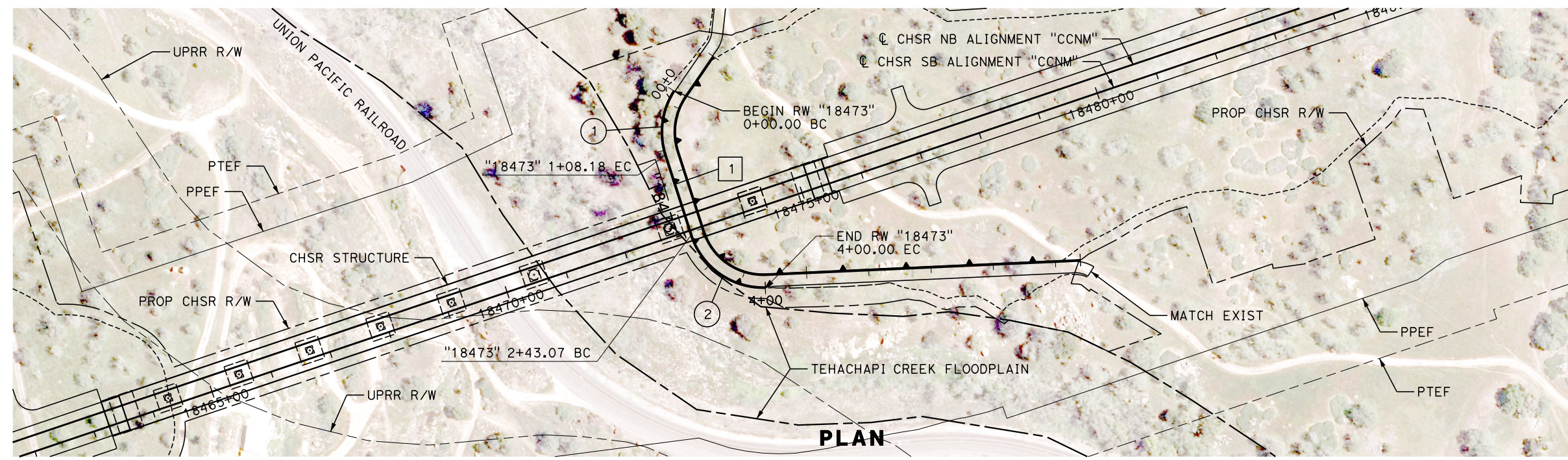
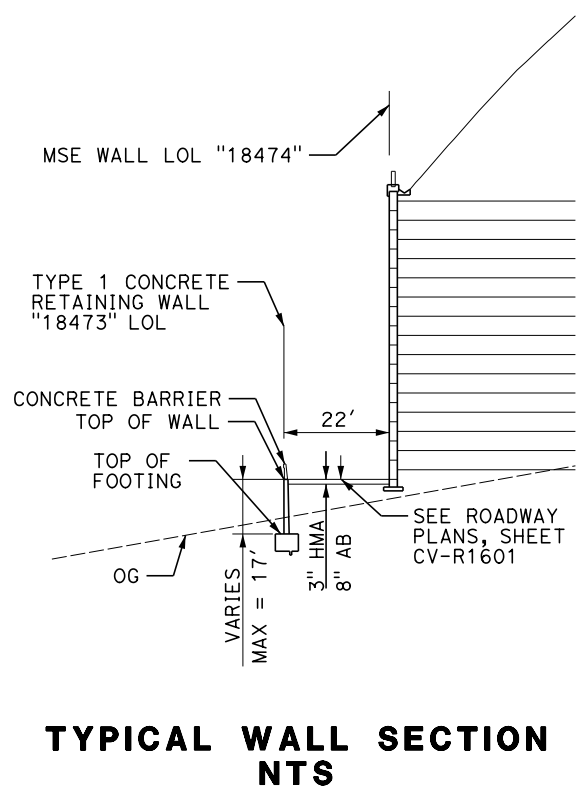


Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\G\BP-ST-G1101  
 eia.ina.balcalwin@tylin.com 9:57:42 PM



| LINE DATA |               |          |
|-----------|---------------|----------|
| No.       | BEARING       | DISTANCE |
| 1         | N 29°27'40" E | 134.89'  |

| CURVE DATA |         |           |        |         |
|------------|---------|-----------|--------|---------|
| No.        | R       | Δ         | T      | L       |
| 1          | 122.00' | 50°48'18" | 57.94' | 108.18' |
| 2          | 122.00' | 73°42'01" | 91.43' | 156.93' |



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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**G. CAMPBELL**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**



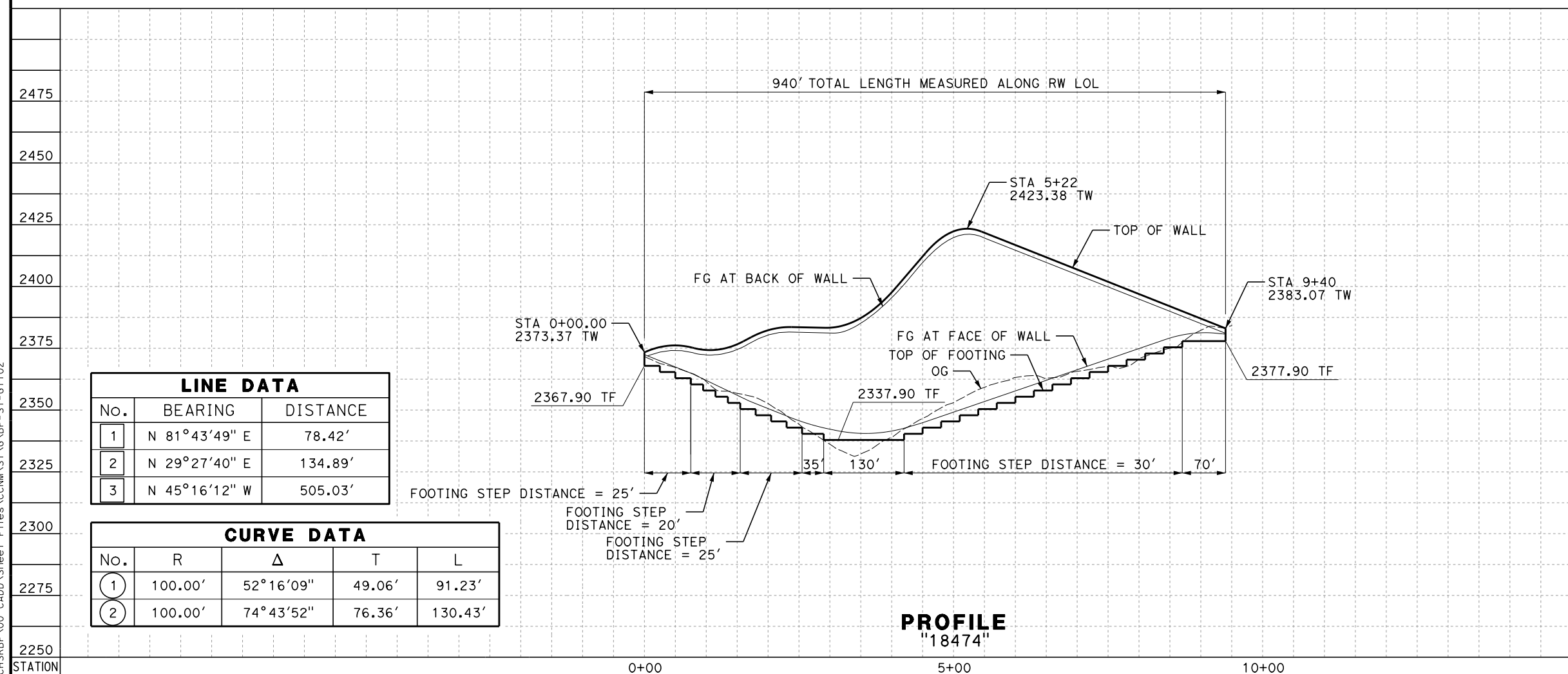
**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 RETAINING WALL  
 18473  
 PLAN AND PROFILE

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
ST-G1101  
 SCALE  
AS SHOWN  
 SHEET NO.  
84



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\STAG\BP-ST-G1102

e:\a\ba\calwin\01212020\09 9:57:29 PM

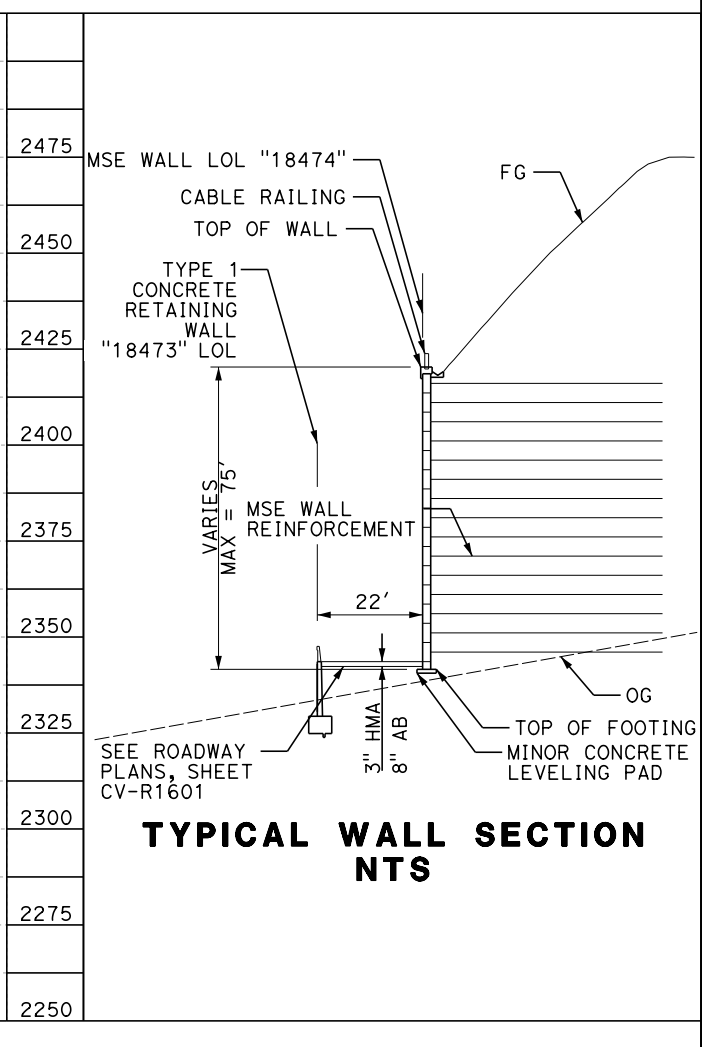


| LINE DATA |               |          |
|-----------|---------------|----------|
| No.       | BEARING       | DISTANCE |
| 1         | N 81°43'49" E | 78.42'   |
| 2         | N 29°27'40" E | 134.89'  |
| 3         | N 45°16'12" W | 505.03'  |

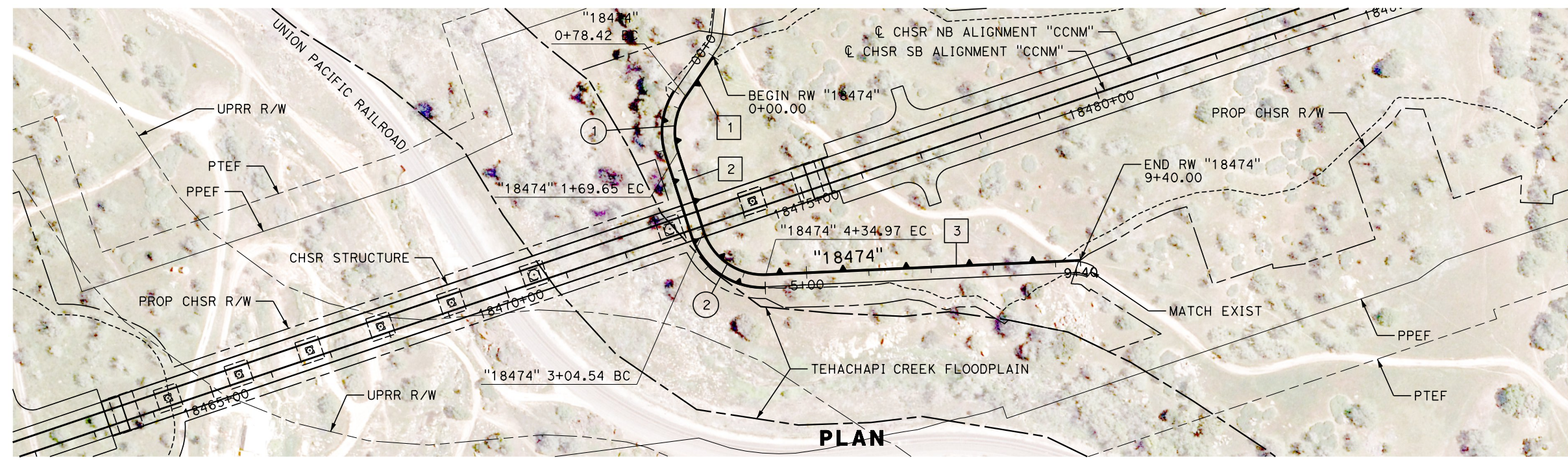
| CURVE DATA |         |           |        |         |
|------------|---------|-----------|--------|---------|
| No.        | R       | Δ         | T      | L       |
| 1          | 100.00' | 52°16'09" | 49.06' | 91.23'  |
| 2          | 100.00' | 74°43'52" | 76.36' | 130.43' |

FOOTING STEP DISTANCE = 25'  
 FOOTING STEP DISTANCE = 20'  
 FOOTING STEP DISTANCE = 25'

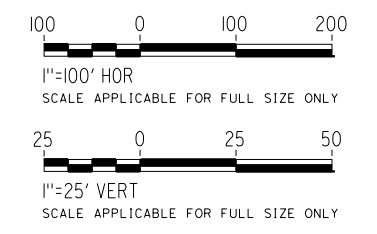
**PROFILE**  
"18474"



**TYPICAL WALL SECTION**  
NTS



**PLAN**

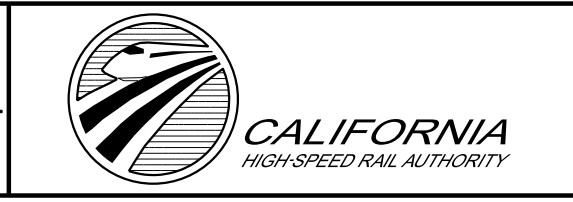


| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------|----|-----|-----|-------------|
|     |      |    |     |     |             |

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**G. CAMPBELL**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



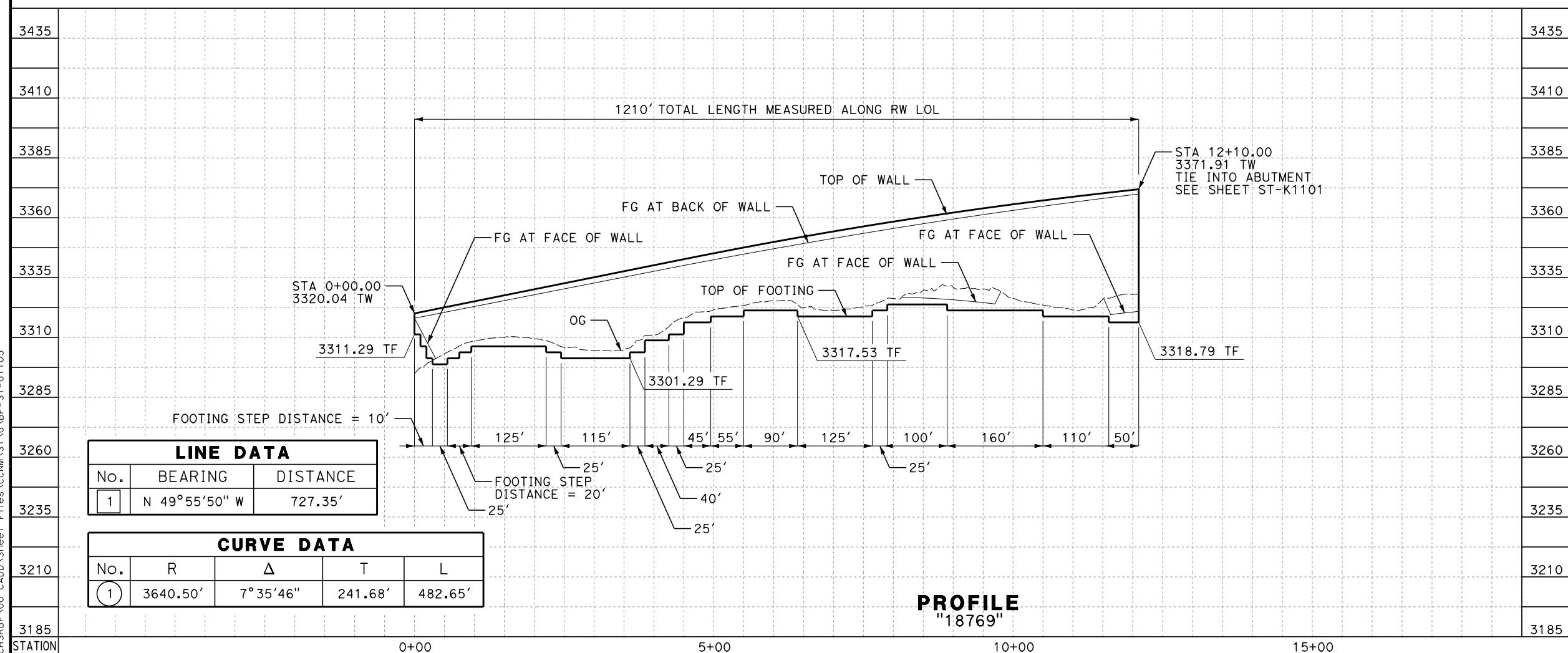
**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 RETAINING WALL  
 18474  
 PLAN AND PROFILE

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
ST-G1102  
 SCALE  
AS SHOWN  
 SHEET NO.  
85



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST-G\BP-ST-G1103

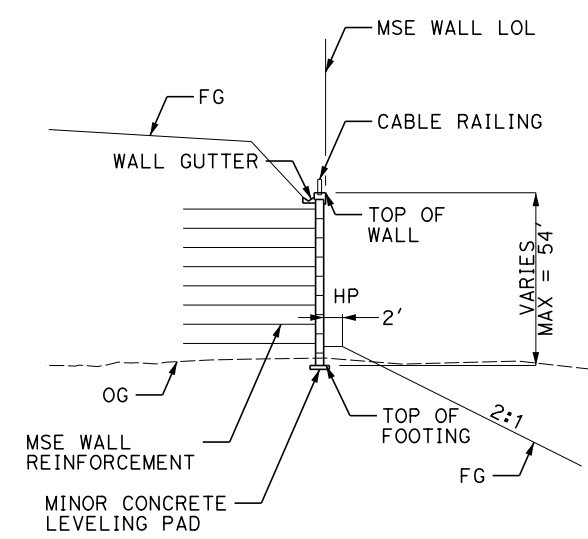
e:\a\ba\calwin\01212020\09 9:57:26 PM



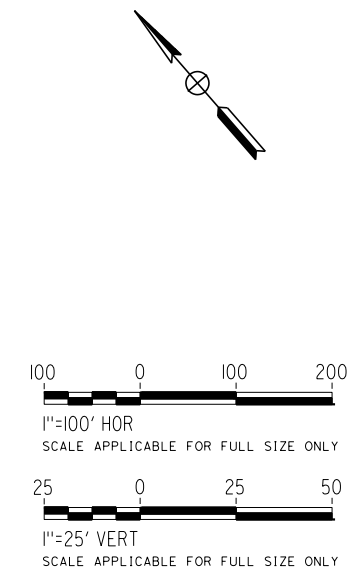
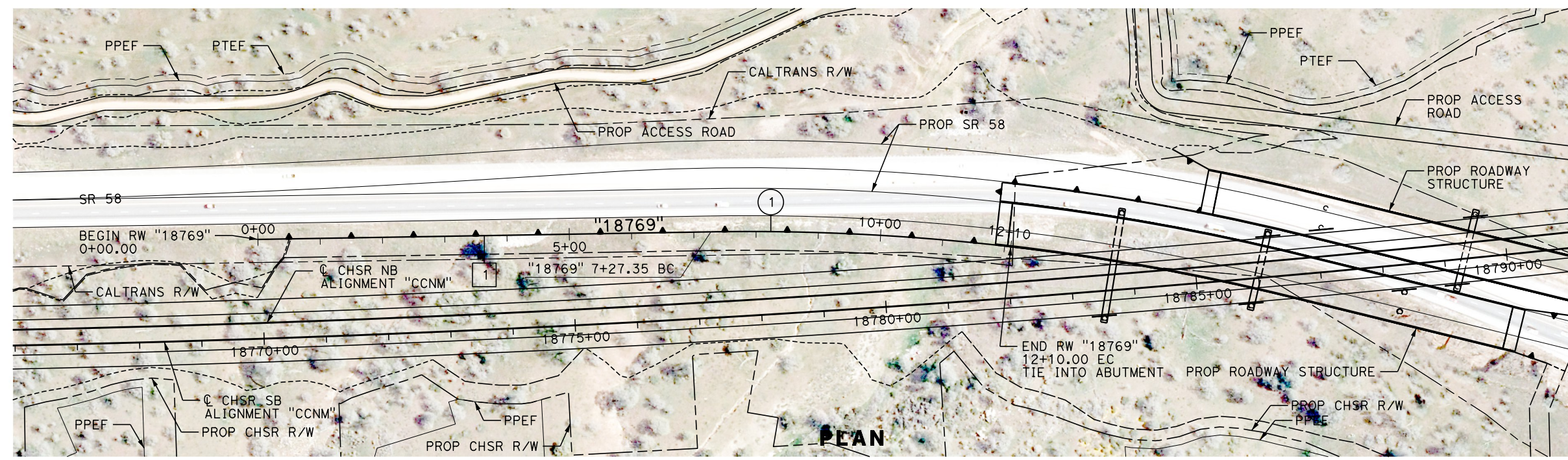
| LINE DATA |               |          |
|-----------|---------------|----------|
| No.       | BEARING       | DISTANCE |
| 1         | N 49°55'50" W | 727.35'  |

| CURVE DATA |          |          |         |         |
|------------|----------|----------|---------|---------|
| No.        | R        | Δ        | T       | L       |
| 1          | 3640.50' | 7°35'46" | 241.68' | 482.65' |

**PROFILE**  
"18769"



**TYPICAL WALL SECTION**  
**NTS**



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

DESIGNED BY  
**A. RIVERA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**G. CAMPBELL**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

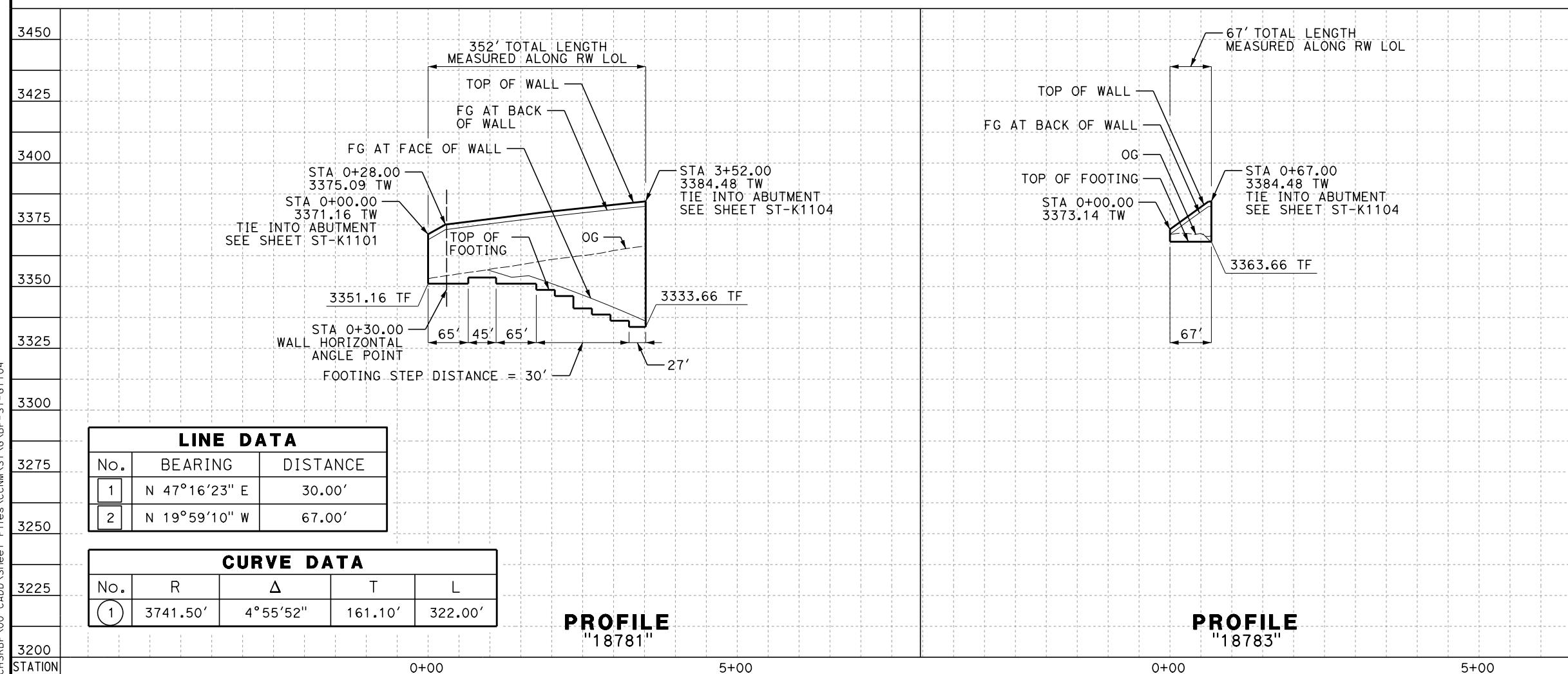


**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
RETAINING WALL  
18769 (STATE ROUTE 58)  
PLAN AND PROFILE

CONTRACT NO.  
**HSR13-44**  
DRAWING NO.  
**ST-G1103**  
SCALE  
**AS SHOWN**  
SHEET NO.  
**86**

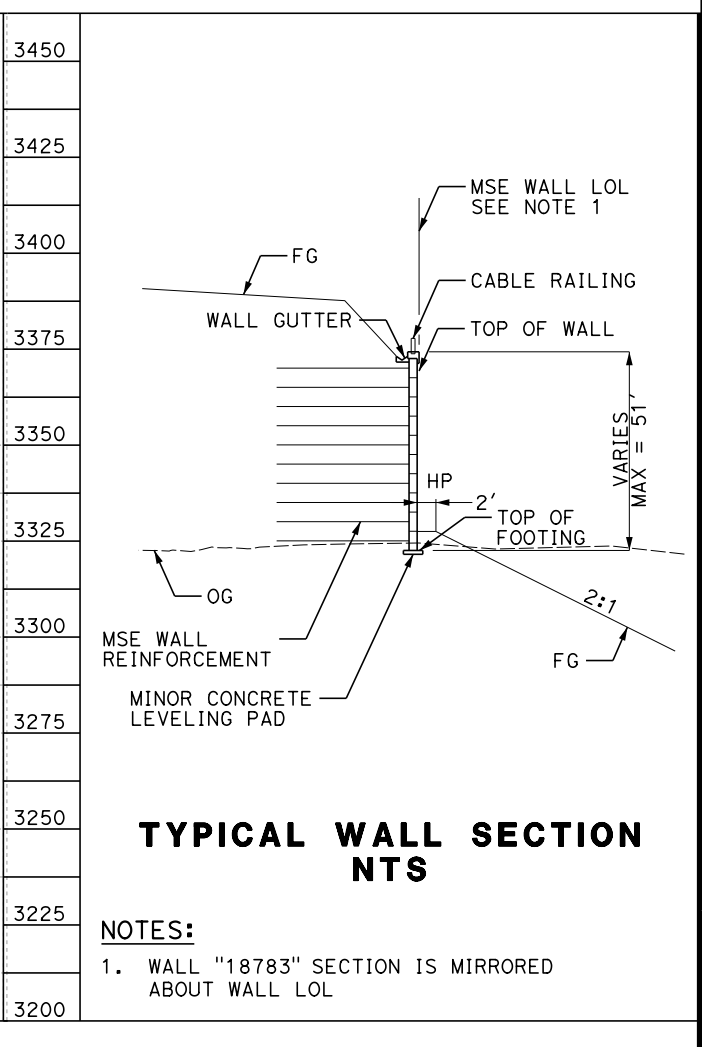


Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\G\BP-ST-G1104  
 eia\ina.balclawin@tylin.com 9:57:27 PM



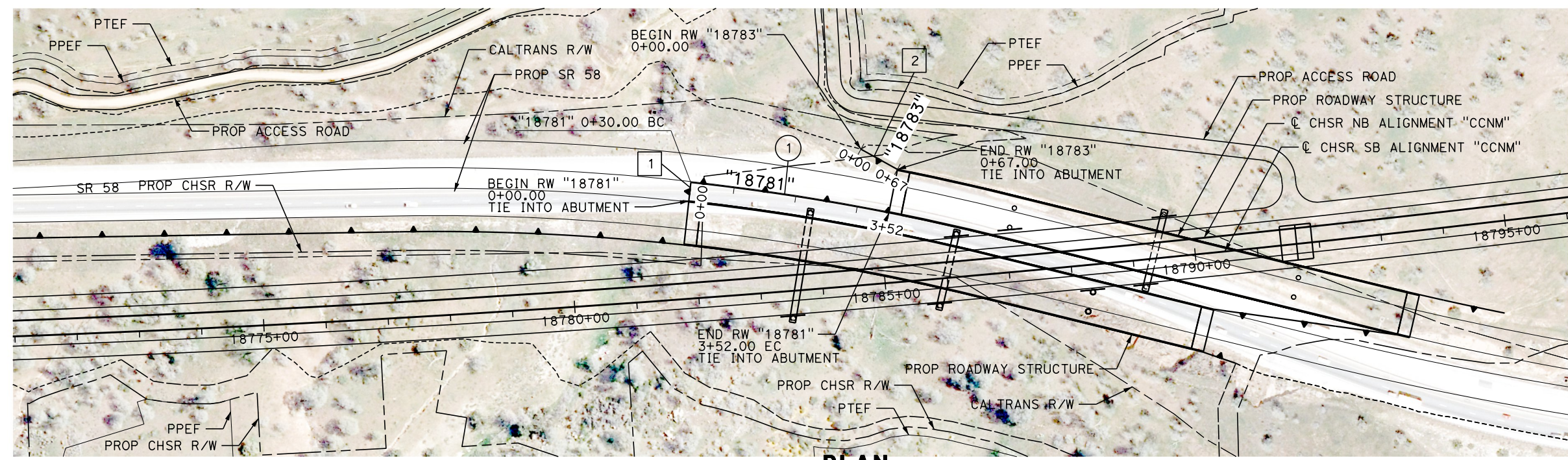
| LINE DATA |               |          |
|-----------|---------------|----------|
| No.       | BEARING       | DISTANCE |
| 1         | N 47°16'23" E | 30.00'   |
| 2         | N 19°59'10" W | 67.00'   |

| CURVE DATA |          |          |         |         |
|------------|----------|----------|---------|---------|
| No.        | R        | Δ        | T       | L       |
| 1          | 3741.50' | 4°55'52" | 161.10' | 322.00' |

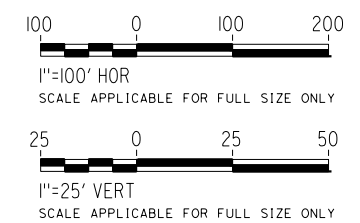


**TYPICAL WALL SECTION NTS**

- NOTES:**
- WALL "18783" SECTION IS MIRRORED ABOUT WALL LOL



**PLAN**



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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**G. CAMPBELL**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**



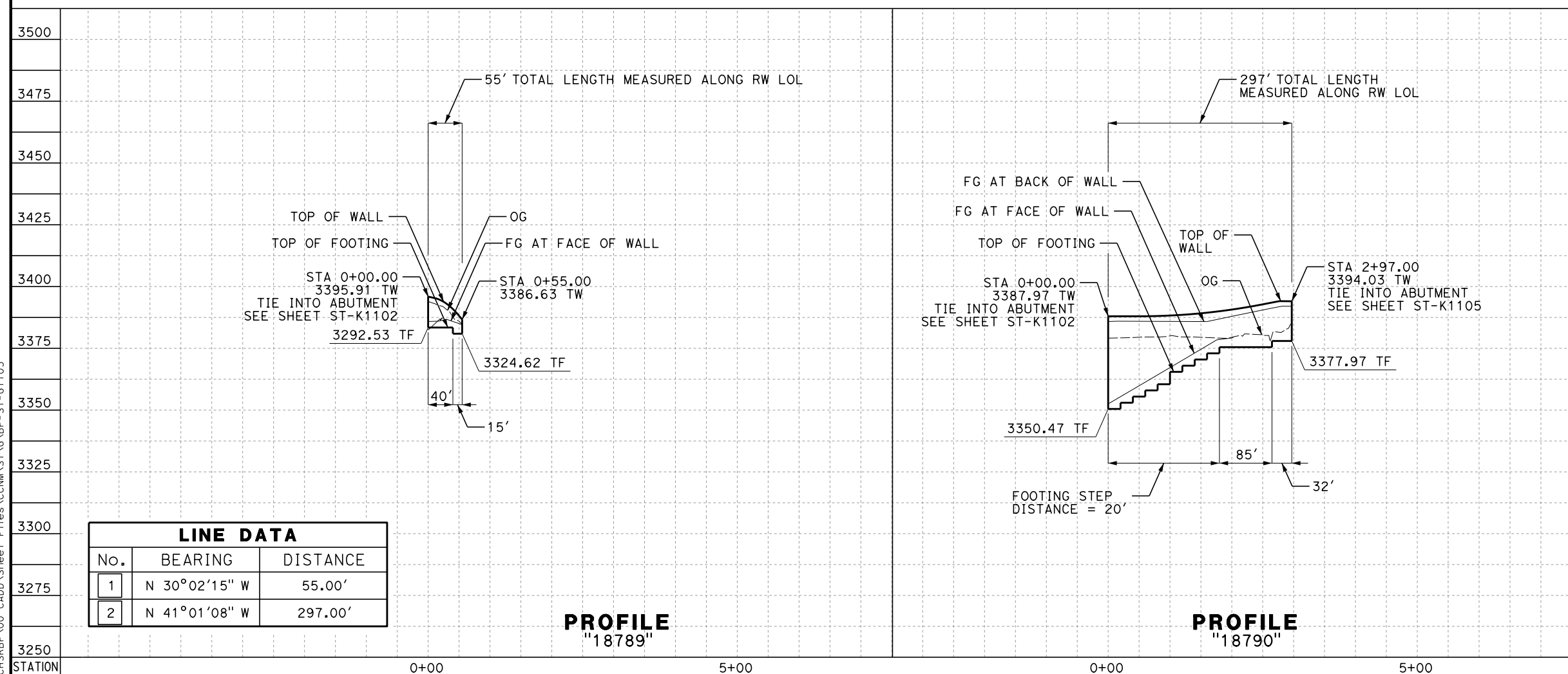
**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 RETAINING WALL  
 18781 AND 18783 (STATE ROUTE 58)  
 PLAN AND PROFILE

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
ST-G1104  
 SCALE  
AS SHOWN  
 SHEET NO.  
87

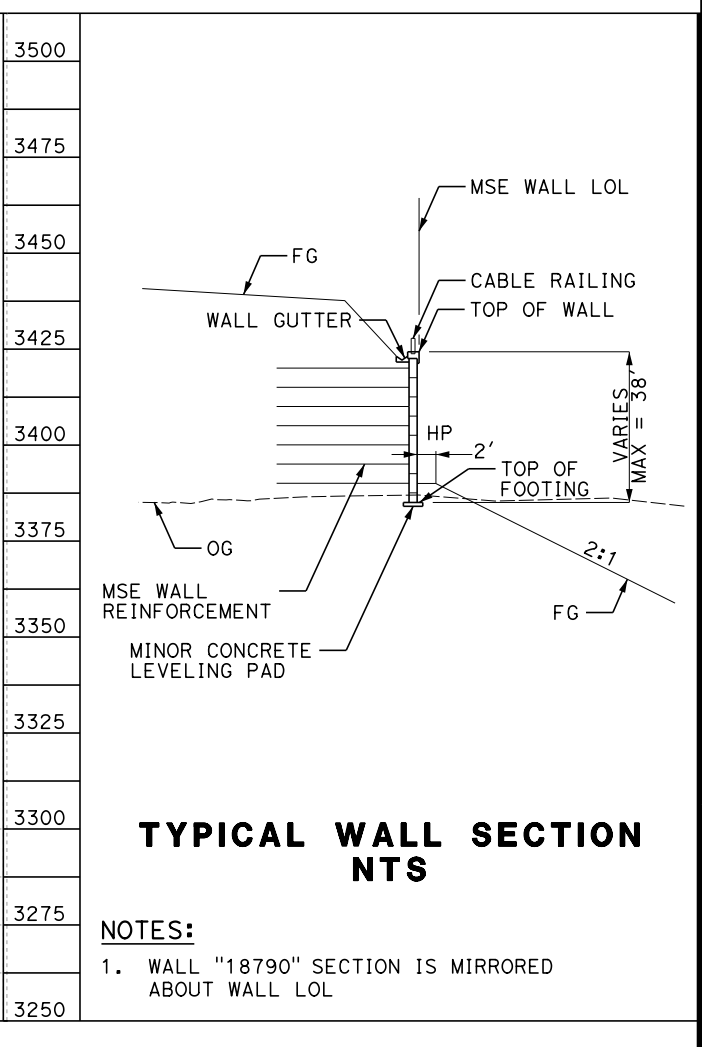


Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\G\BP-ST-G1105

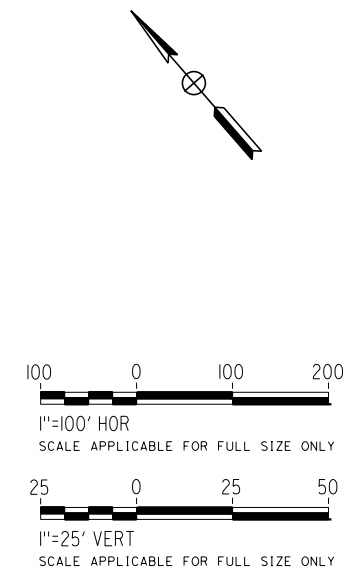
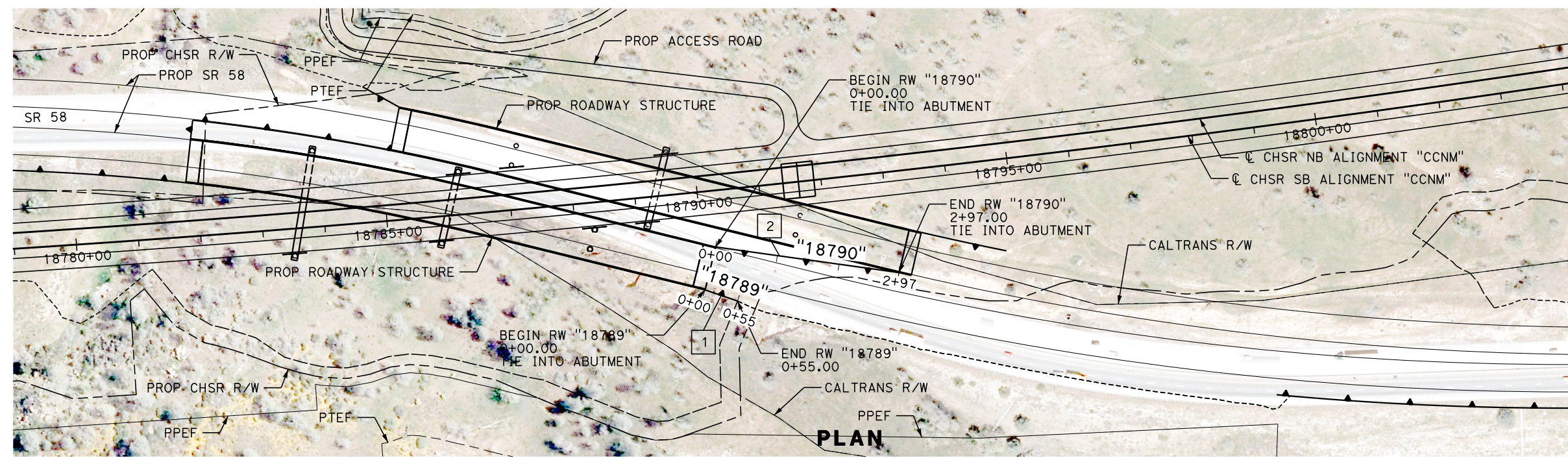
e:\a\ba\calwin\01212020\09:57:30 PM



| LINE DATA |               |          |
|-----------|---------------|----------|
| No.       | BEARING       | DISTANCE |
| 1         | N 30°02'15" W | 55.00'   |
| 2         | N 41°01'08" W | 297.00'  |



**NOTES:**  
 1. WALL "18790" SECTION IS MIRRORED ABOUT WALL LOL



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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**G. CAMPBELL**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR CONSTRUCTION**

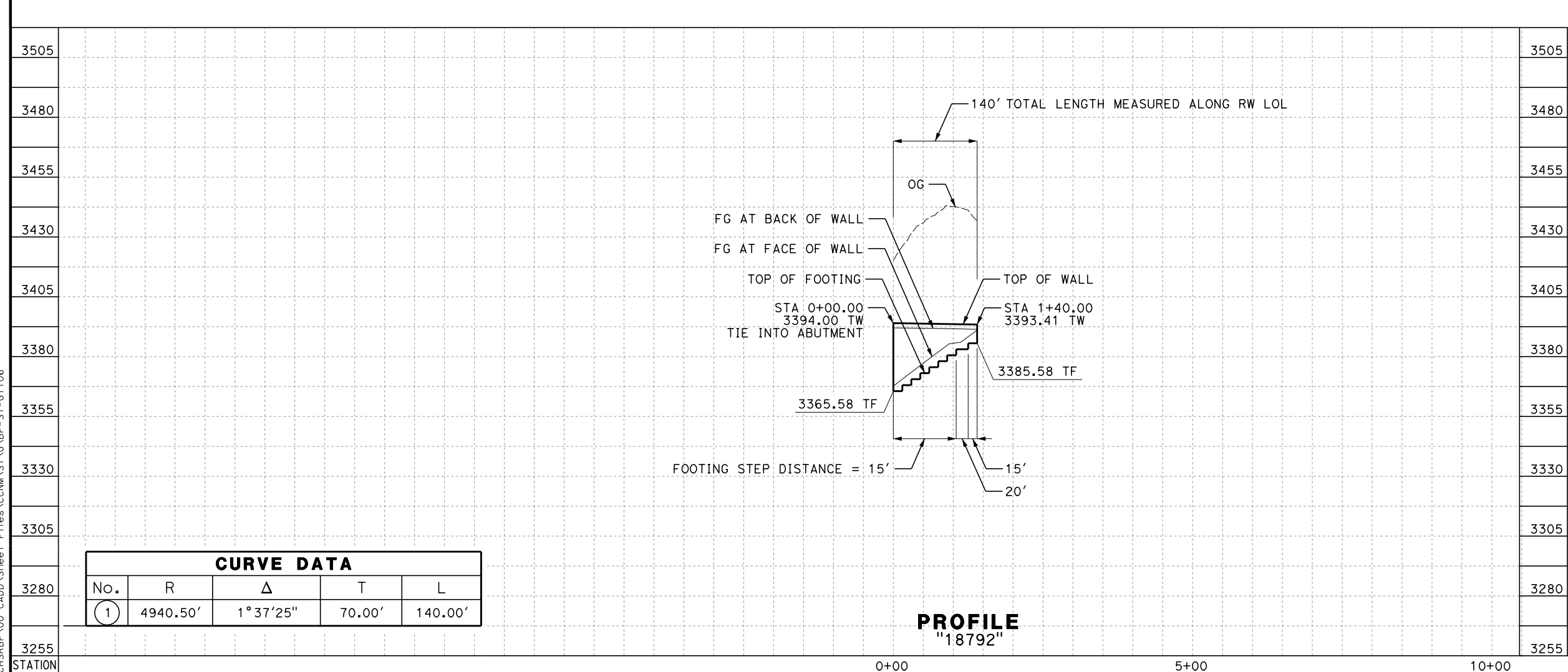


**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 RETAINING WALL  
 18789 AND 18790 (STATE ROUTE 58)  
 PLAN AND PROFILE

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
ST-G1105  
 SCALE  
AS SHOWN  
 SHEET NO.  
88

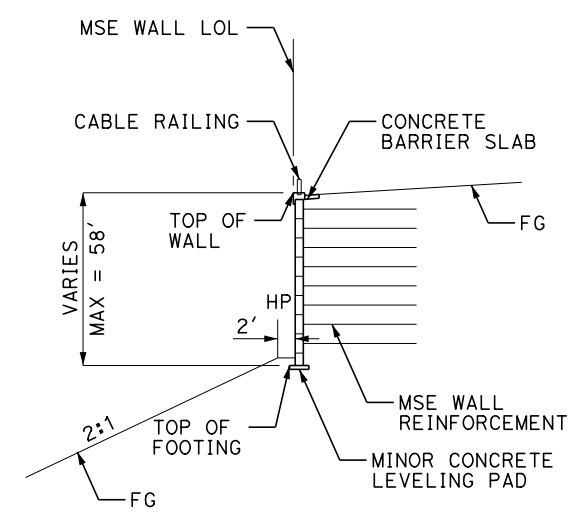


Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\G\BP-ST-G1106  
 eia.ina.balcalwin@tylin.com 9:57:28 PM

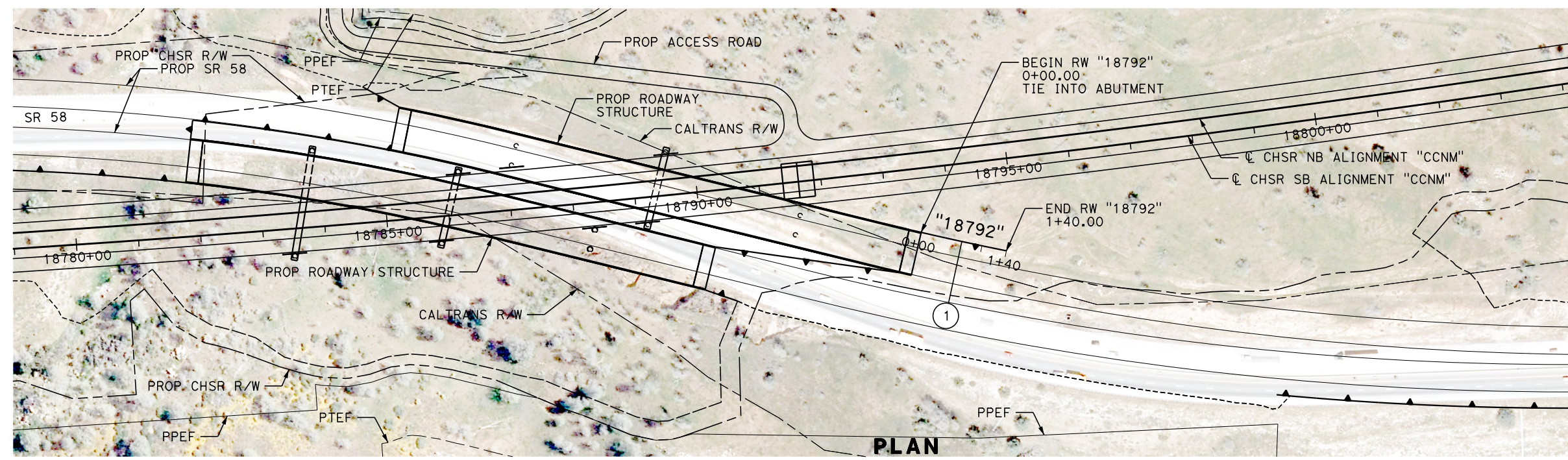


| CURVE DATA |          |          |        |         |
|------------|----------|----------|--------|---------|
| No.        | R        | Δ        | T      | L       |
| 1          | 4940.50' | 1°37'25" | 70.00' | 140.00' |

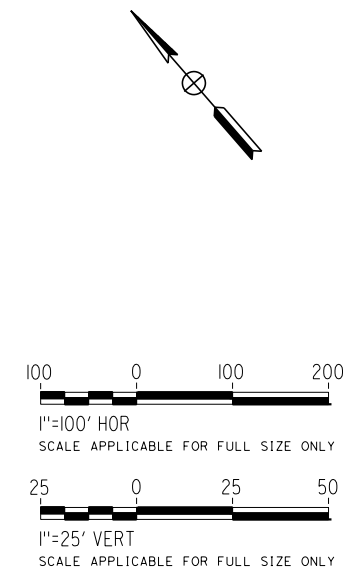
**PROFILE**  
"18792"



**TYPICAL WALL SECTION**  
**NTS**



**PLAN**



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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**G. CAMPBELL**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**

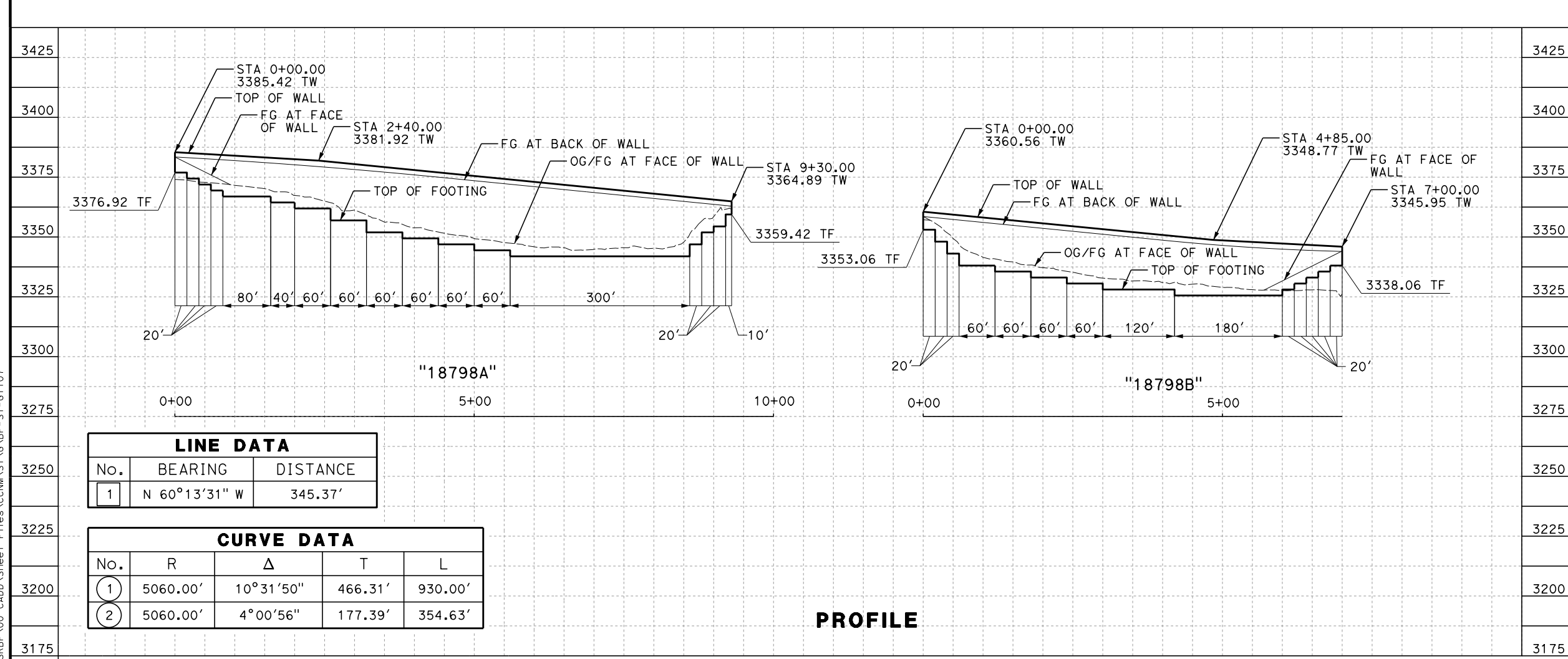


**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 RETAINING WALL  
 18792 (STATE ROUTE 58)  
 PLAN AND PROFILE

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
ST-G1106  
 SCALE  
AS SHOWN  
 SHEET NO.  
89



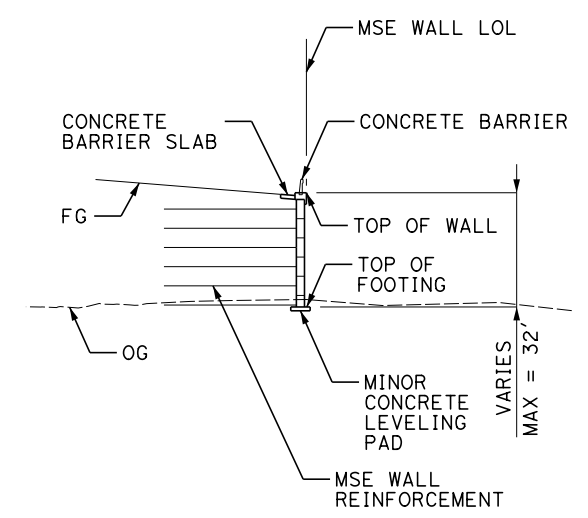
Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\G\BP-ST-G1107  
 eia:na.baldwin@tylin.com 9:57:26 PM



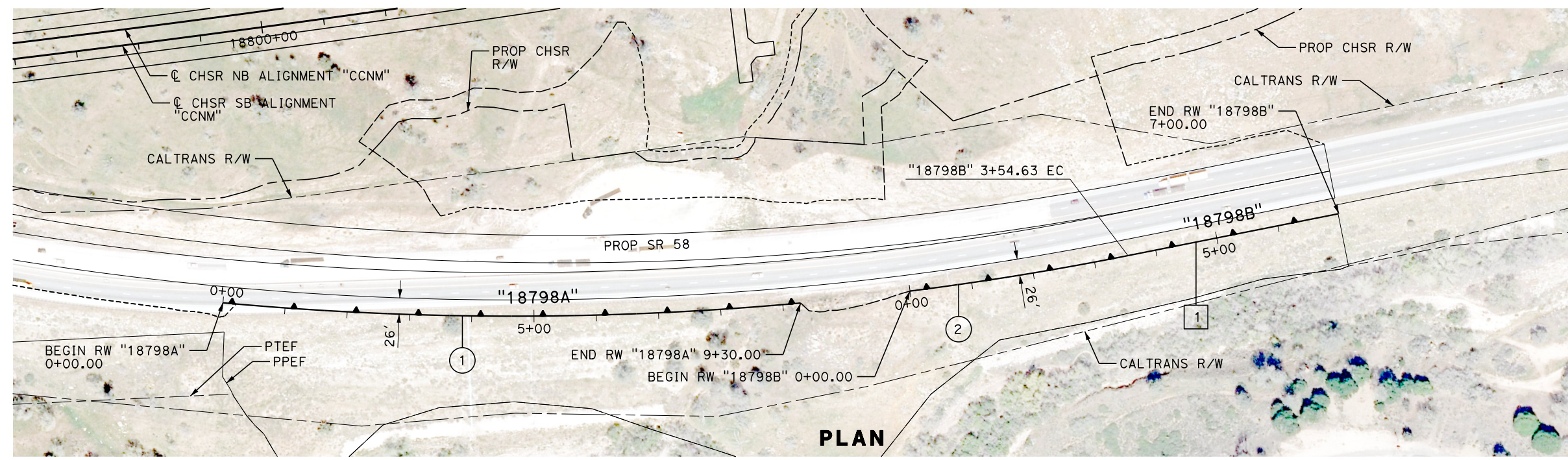
| LINE DATA |               |          |
|-----------|---------------|----------|
| No.       | BEARING       | DISTANCE |
| 1         | N 60°13'31" W | 345.37'  |

| CURVE DATA |          |           |         |         |
|------------|----------|-----------|---------|---------|
| No.        | R        | Δ         | T       | L       |
| 1          | 5060.00' | 10°31'50" | 466.31' | 930.00' |
| 2          | 5060.00' | 4°00'56"  | 177.39' | 354.63' |

**PROFILE**



**TYPICAL WALL SECTION NTS**



**PLAN**

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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**G. CAMPBELL**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 RETAINING WALL  
 18798A (STATE ROUTE 58)  
 PLAN AND PROFILE

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
ST-G1107  
 SCALE  
AS SHOWN  
 SHEET NO.  
90



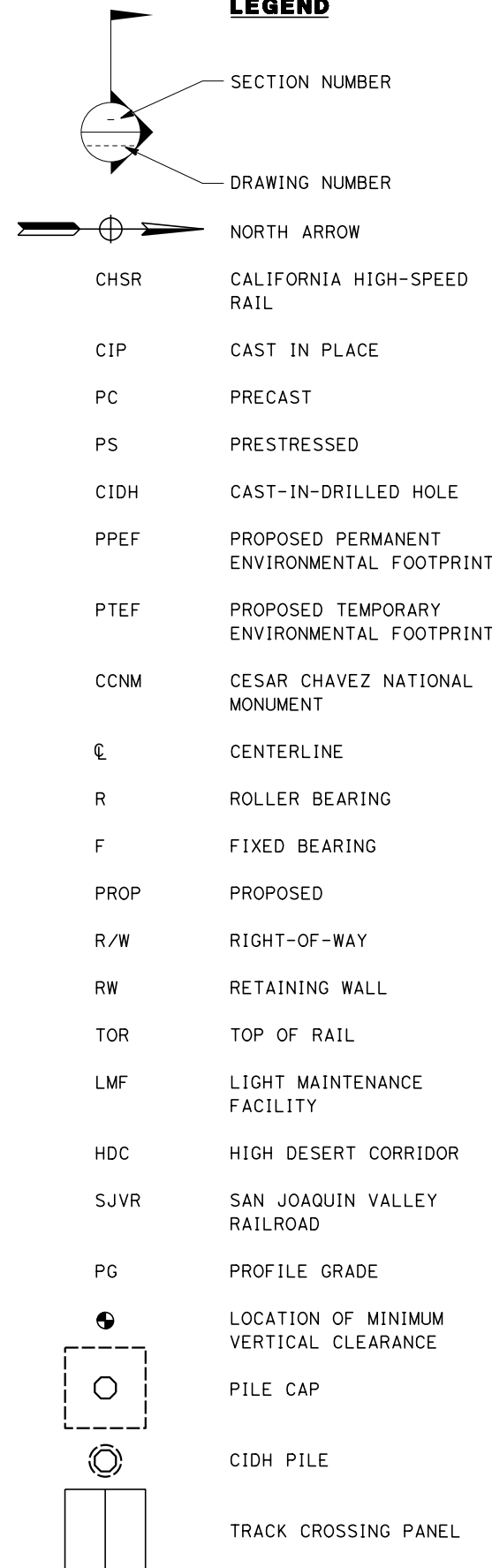
Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J0001.dgn

10:01:43 PM

1/11/2021

yihong.wang@tylin.com

**LEGEND**



- ① CONCRETE BARRIER INTRUSION PROTECTION
- ② CONCRETE BARRIER TYPE 742
- ③ CONCRETE BARRIER TYPE 732SW
- ④ SOLID METAL FENCE ON CONCRETE BARRIER WITHOUT SIDEWALK. SEE NOTE K.
- ⑤ STRUCTURE APPROACH SLAB
- ⑥ RETAINING WALL
- ⑦ SOLID METAL FENCE ON CONCRETE BARRIER WITH SIDEWALK
- ⑧ CONCRETE BARRIER TYPE 732
- ⑨ METAL HANDRAILING
- ⑩ CHAIN LINK FENCE

**GENERAL NOTES**

- A. UTILITY LOCATIONS TO BE DETERMINED.
- B. FOR DETAILS NOT NOTED ON PLAN AND ELEVATION SHEETS, SEE TYPICAL SECTION SHEETS FOR TRACK STRUCTURES.
- C. GRADE ELEVATIONS SHOWN ARE AT TOP OF RAIL.
- D. ALL COLUMNS ARE NORMAL TO THE STATION LINE UNLESS OTHERWISE SHOWN.
- E. REFER TO TRACK ALIGNMENT DRAWINGS FOR CURVE AND TANGENT INFORMATION.
- F. NOT ALL PILES ARE SHOWN.
- G. PILE SIZES AND LENGTHS TO BE DETERMINED.
- H. SUPERSTRUCTURE CONSISTS OF PRECAST CONCRETE GIRDERS UNLESS OTHERWISE NOTED.
- I. BEARINGS ARTICULATION FOR PC GIRDER SPANS ARE FIXED-ROLLER AT OPPOSING SPAN ENDS UNLESS OTHERWISE NOTED.
- J. REFER TO ROADWAY DRAWINGS FOR GEOMETRIC INFORMATION OF ROADWAY STRUCTURES.
- K. EXTEND SOLID FENCE 30 FEET FROM CENTERLINE OF OUTERMOST TRACK OR 10 FEET BEYOND THE OUTERMOST ENERGIZED CONDUCTOR OR COMPONENT, WHICHEVER IS GREATER.
- L. REFER TO TRACK ALIGNMENT DRAWINGS FOR LIMITS OF RETAINING WALLS, UNLESS OTHERWISE SHOWN.
- M. PROPOSED 4" CHSR FIRE WATER PIPELINE ROUTES THROUGH STRUCTURES FROM STATION 18035+00 TO STATION 19590+00.
- N. PROPOSED CHSR ELECTRIC POWER CONDUIT ROUTES THROUGH STRUCTURES FROM STATION 18035+00 TO STATION 19590+00.

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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

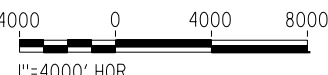
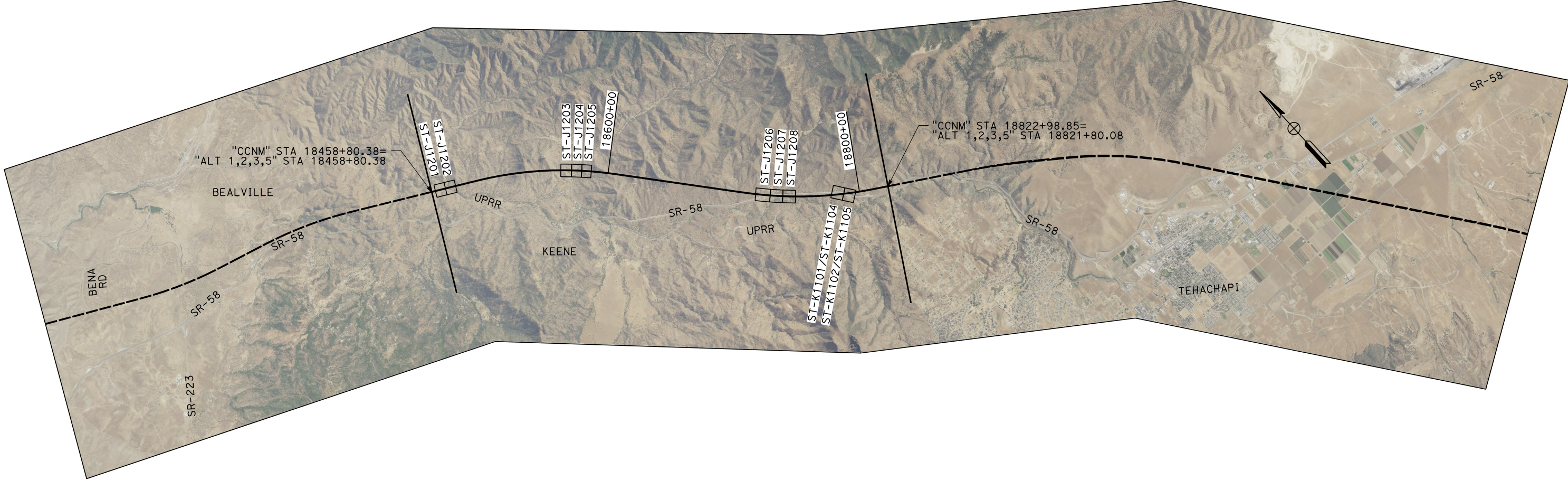
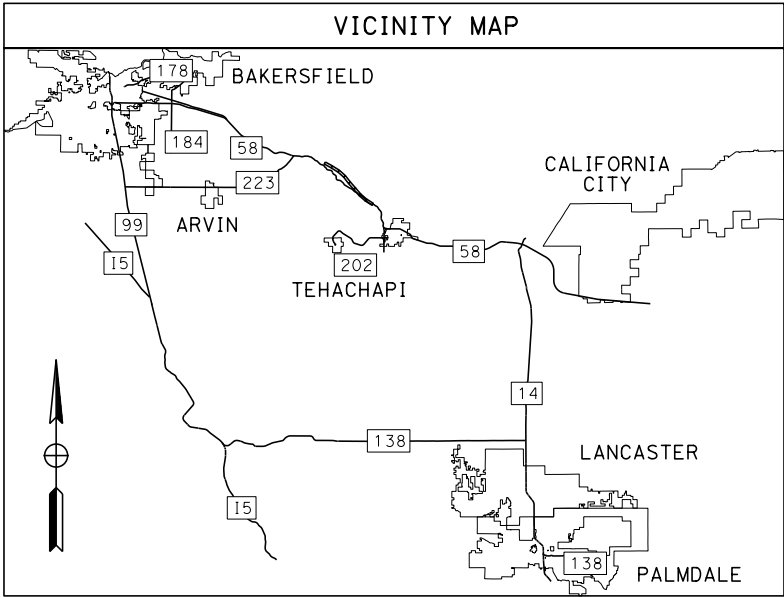


**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TRACK AND ROADWAY STRUCTURES  
GENERAL NOTES AND LEGEND

CONTRACT NO.  
**HSR13-44**  
DRAWING NO.  
**ST-J0001**  
SCALE  
**NO SCALE**  
SHEET NO.  
**91**



# CCNM DESIGN OPTION



Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J0002.dgn  
 1/11/2021 10:11:37 PM  
 yihong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**  
 DRAWN BY  
**Y. WANG**  
 CHECKED BY  
**R. BARTON**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD  
 PEPD  
 SUBMITTAL**  
  
**NOT FOR  
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 TRACK AND ROADWAY STRUCTURES  
 KEY MAP

CONTRACT NO.  
**HSR13-44**  
 DRAWING NO.  
**ST-J0002**  
 SCALE  
**AS SHOWN**  
 SHEET NO.  
**92**

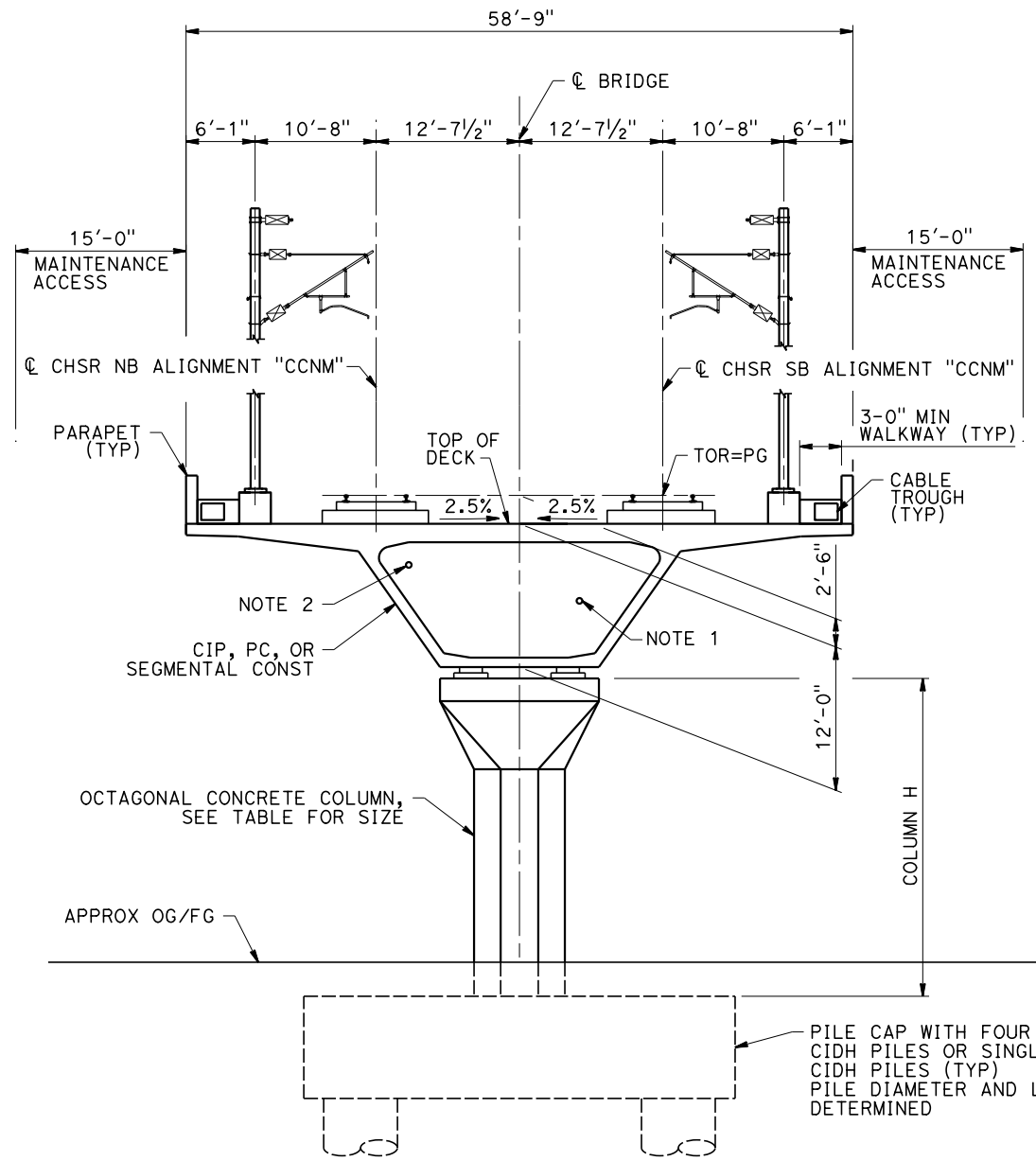


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J0003.dgn

10:01:56 PM

1/11/2021

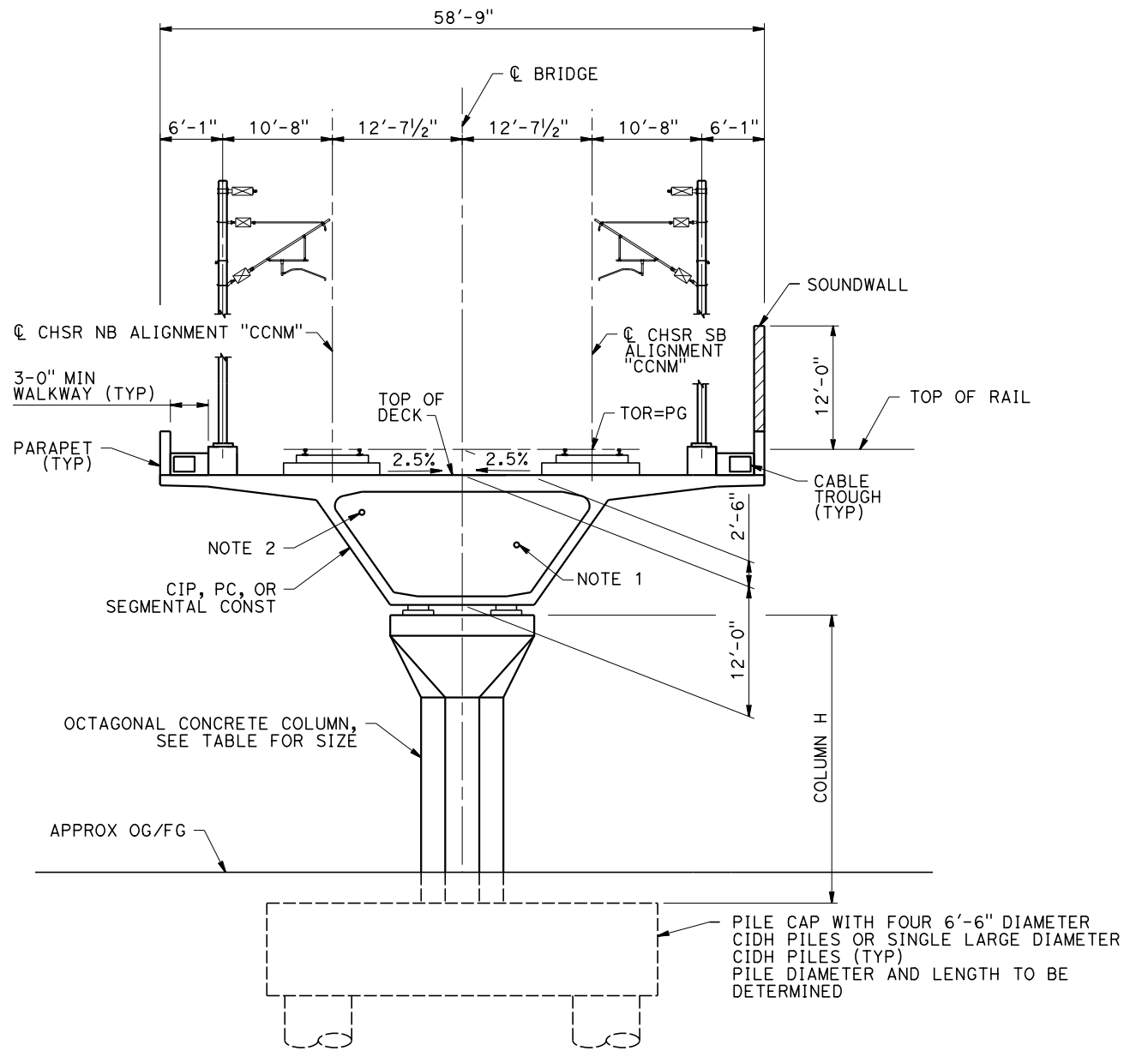
yihong.wang@tylin.com



**SECTION A-1**

SCALE: 1/2"=1'-0"

| COLUMN SIZE |      |
|-------------|------|
| COLUMN H    | SIZE |
| 0-29'       | 8'   |
| 30-40'      | 10'  |
| 40-60'      | 12'  |
| 60-100'     | 14'  |
| 100-150'    | 16'  |



**SECTION A-2**

SCALE: 1/2"=1'-0"

NOTE:

1. PROPOSED 4" CHSR WATERLINE FROM STATION 18035+00 TO 19590+00.
2. PROPOSED CHSR ELECTRICAL POWER FROM STATION 18035+00 TO 19590+00.

- STA 18564+23 TO STA 18571+43 (CCNM DESIGN OPTION)  
 STA 18577+30 TO STA 18585+67 (CCNM DESIGN OPTION)

- STA 18463+56 TO STA 18469+10 (CCNM DESIGN OPTION)  
 STA 18474+20 TO STA 18475+16 (CCNM DESIGN OPTION)  
 STA 18718+57 TO STA 18719+44 (CCNM DESIGN OPTION)  
 STA 18724+54 TO STA 18725+74 (CCNM DESIGN OPTION)  
 STA 18735+94 TO STA 18747+94 (CCNM DESIGN OPTION)

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

|                                     |
|-------------------------------------|
| DESIGNED BY<br><b>R. GOLCHOBIAN</b> |
| DRAWN BY<br><b>Y. WANG</b>          |
| CHECKED BY<br><b>R. BARTON</b>      |
| IN CHARGE<br><b>G. CAMPBELL</b>     |
| DATE<br><b>01/29/2021</b>           |

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
GENERAL  
TYPICAL SECTIONS  
SHEET 1 OF 3

|                          |
|--------------------------|
| CONTRACT NO.<br>HSR13-44 |
| DRAWING NO.<br>ST-J0003  |
| SCALE<br>AS SHOWN        |
| SHEET NO.<br>93          |

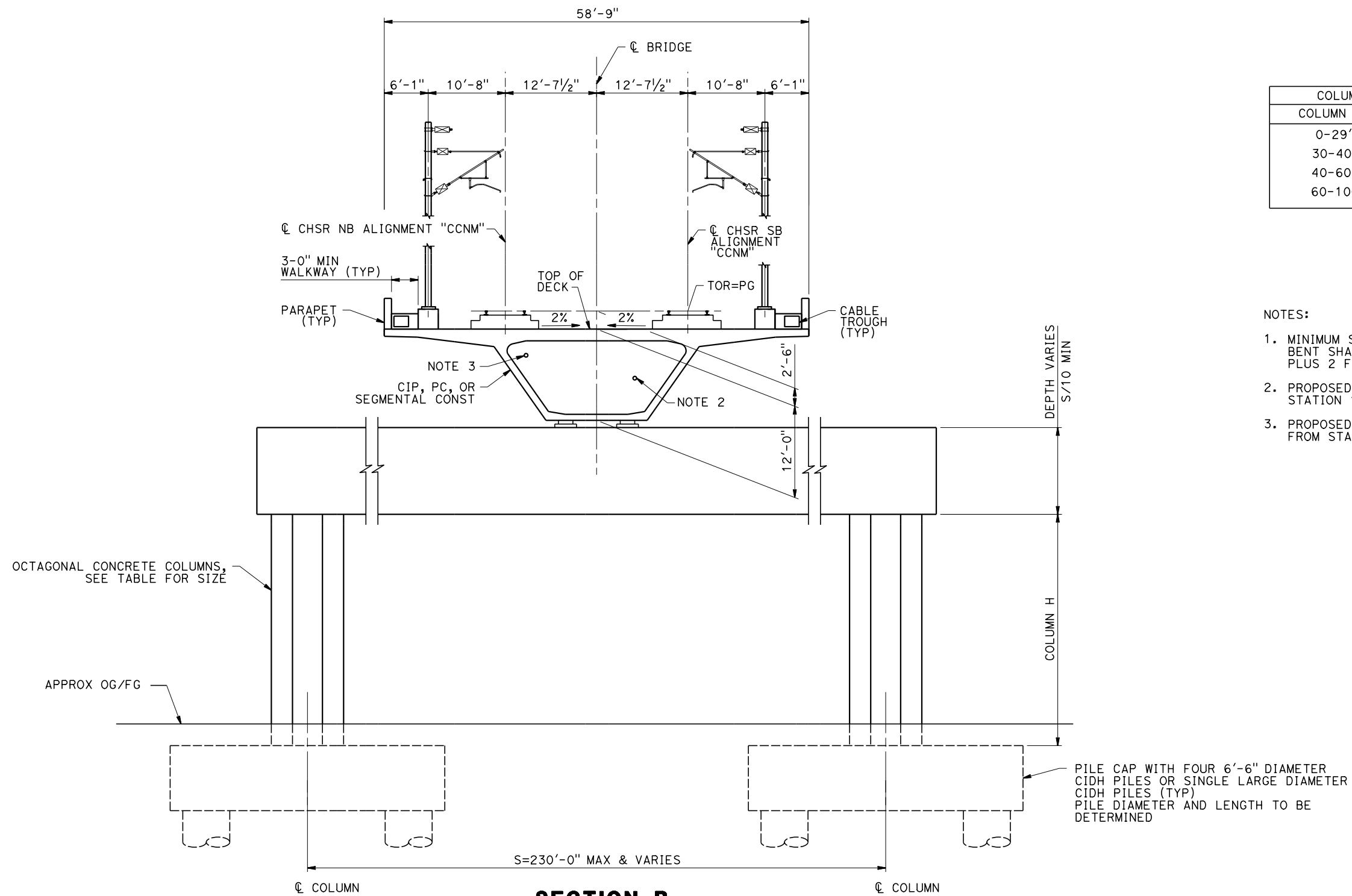


Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\ST\BP-ST-J0004.dgn

10:01:57 PM

1/11/2021

yihong.wang@tylin.com



| COLUMN SIZE |      |
|-------------|------|
| COLUMN H    | SIZE |
| 0-29'       | 8'   |
| 30-40'      | 10'  |
| 40-60'      | 12'  |
| 60-100'     | 14'  |

- NOTES:
1. MINIMUM SEAT WIDTH OF STRADDLE BENT SHALL BE EQUAL TO COLUMN SIZE PLUS 2 FT.
  2. PROPOSED 4" CHSR WATERLINE FROM STATION 18035+00 TO 19590+00.
  3. PROPOSED CHSR ELECTRICAL POWER FROM STATION 18035+00 TO 19590+00.

PILE CAP WITH FOUR 6'-6" DIAMETER CIDH PILES OR SINGLE LARGE DIAMETER CIDH PILES (TYP)  
PILE DIAMETER AND LENGTH TO BE DETERMINED

**SECTION B**  
SCALE: 1/2"=1'-0"

STA 18725+74 TO STA 18735+94 (CCNM DESIGN OPTION)

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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
GENERAL  
TYPICAL SECTIONS  
SHEET 2 OF 3

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
ST-J0004  
SCALE  
AS SHOWN  
SHEET NO.  
94

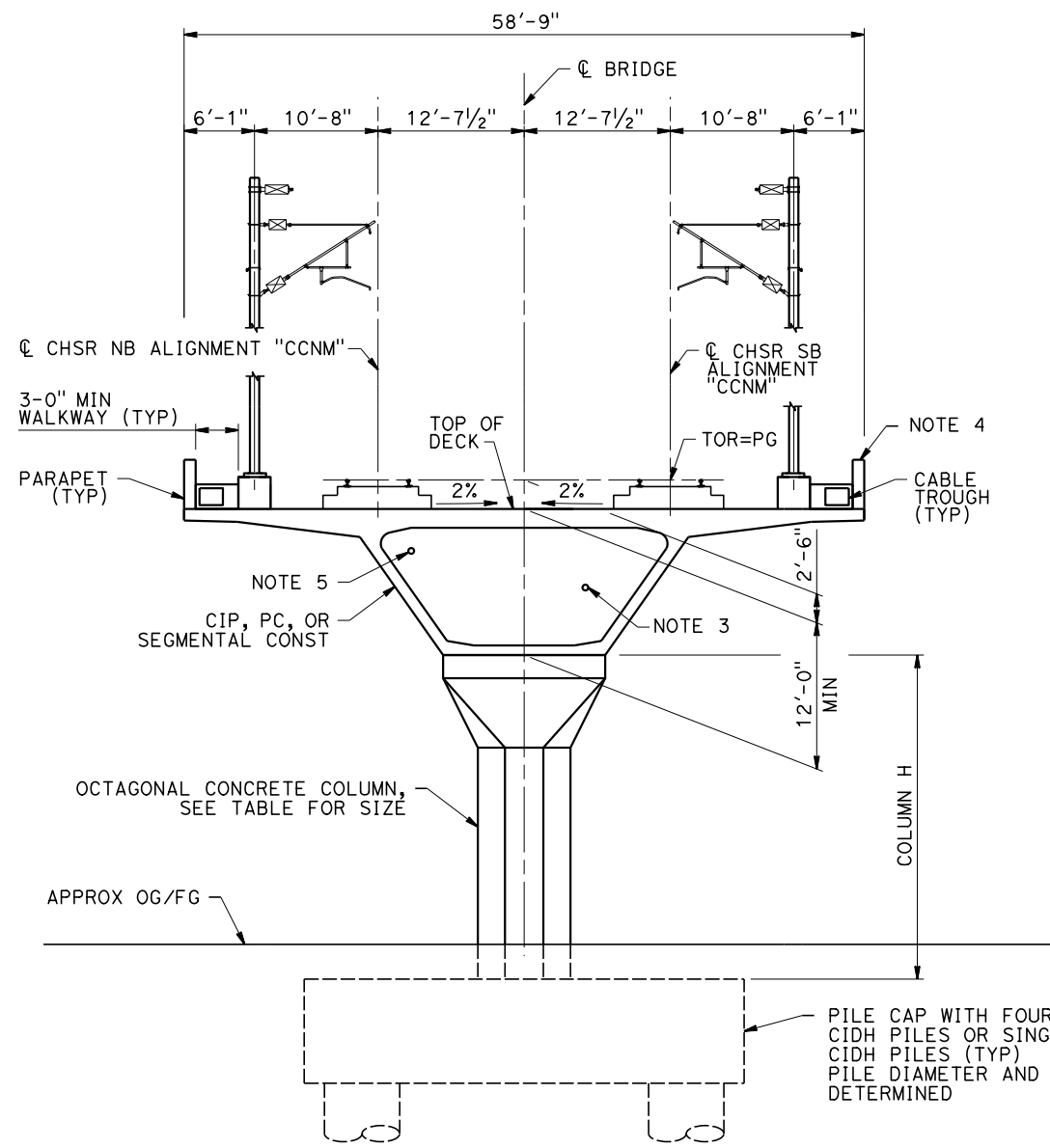


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J0005.dgn

10:01:41 PM

1/11/2021

yihong.wang@tylin.com



**SECTION C**

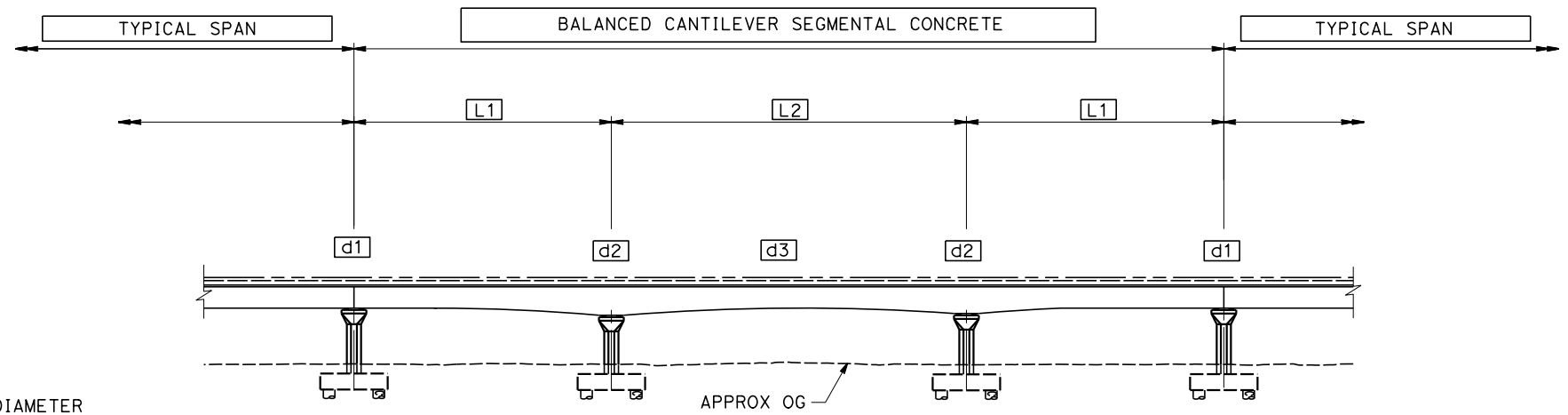
SCALE: 1/2"=1'-0"

STA 18469+10 TO STA 18474+20 (CCNM DESIGN OPTION)  
 STA 18571+43 TO STA 18577+30 (CCNM DESIGN OPTION)  
 STA 18719+44 TO STA 18724+54 (CCNM DESIGN OPTION) - NOTE 4

| COLUMN SIZE |      |
|-------------|------|
| COLUMN H    | SIZE |
| 0-29'       | 8'   |
| 30-40'      | 10'  |
| 40-60'      | 12'  |
| 60-100'     | 14'  |
| 100-150'    | 16'  |

**NOTES:**

- GIRDER SIDE SLOPE VARIES DEPENDING ON STRUCTURE DEPTH AT SUPPORT.
- WHERE 4-SPAN ARRANGEMENTS ARE SHOWN, THERE ARE 2 CENTER SPANS AND 3 CENTER COLUMNS WITH STRUCTURE DEPTH EQUAL TO d2 ABOVE THE COLUMNS.
- PROPOSED 4" CHSR WATERLINE FROM STATION 18035+00 TO 19590+00.
- SOUNDWALL ON BARRIER NOT SHOWN FOR CLARITY. SEE SECTION A-2 ON DRAWING ST-J0003.
- PROPOSED CHSR ELECTRICAL POWER FROM STATION 18035+00 TO 19590+00.



**BALANCED CANTILEVER SEGMENTAL**

SCALE: 1/4"=1'-0"

d1 = 12'-0"  
 d2 = L2/12  
 d3 = L2/20

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

|                                     |
|-------------------------------------|
| DESIGNED BY<br><b>R. GOLCHOBIAN</b> |
| DRAWN BY<br><b>Y. WANG</b>          |
| CHECKED BY<br><b>R. BARTON</b>      |
| IN CHARGE<br><b>G. CAMPBELL</b>     |
| DATE<br><b>01/29/2021</b>           |

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
 GENERAL  
 TYPICAL SECTIONS  
 SHEET 3 OF 3

|                          |
|--------------------------|
| CONTRACT NO.<br>HSR13-44 |
| DRAWING NO.<br>ST-J0005  |
| SCALE<br>AS SHOWN        |
| SHEET NO.<br>95          |



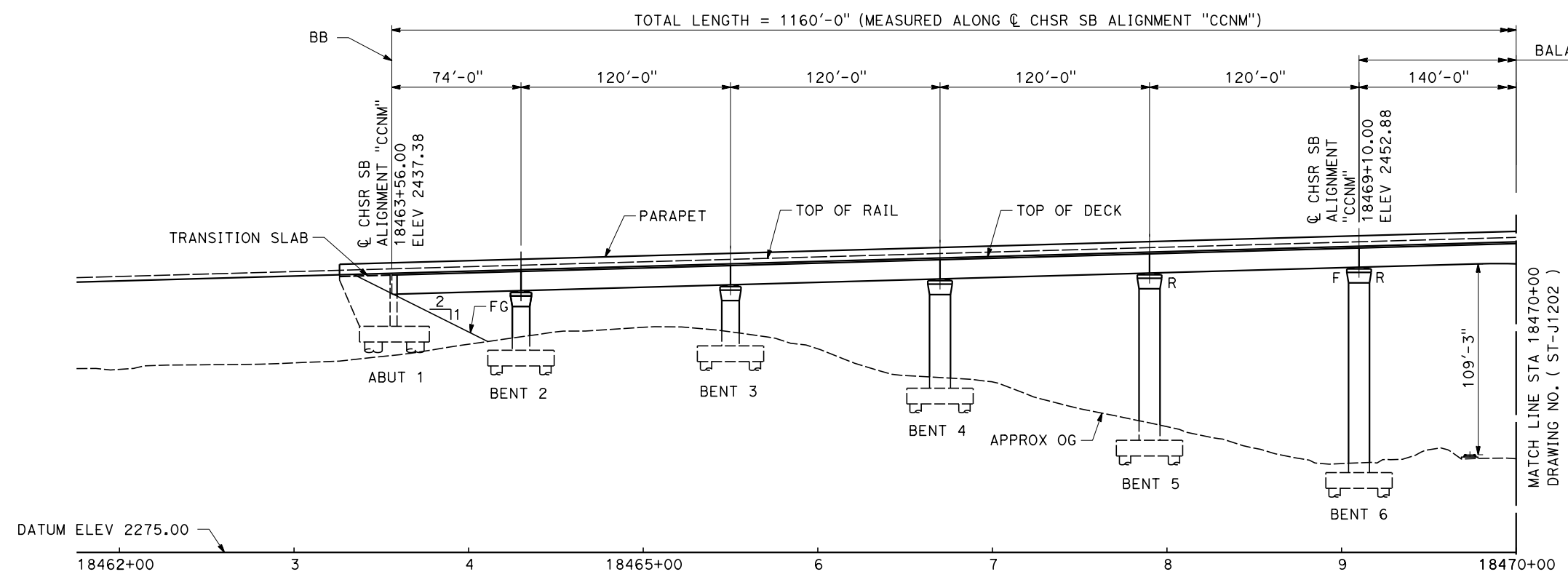
18458+80.38  
ELEV 2424.07

+2.80%

**TOP OF RAIL @ CHSR SB ALIGNMENT "CCNM"**

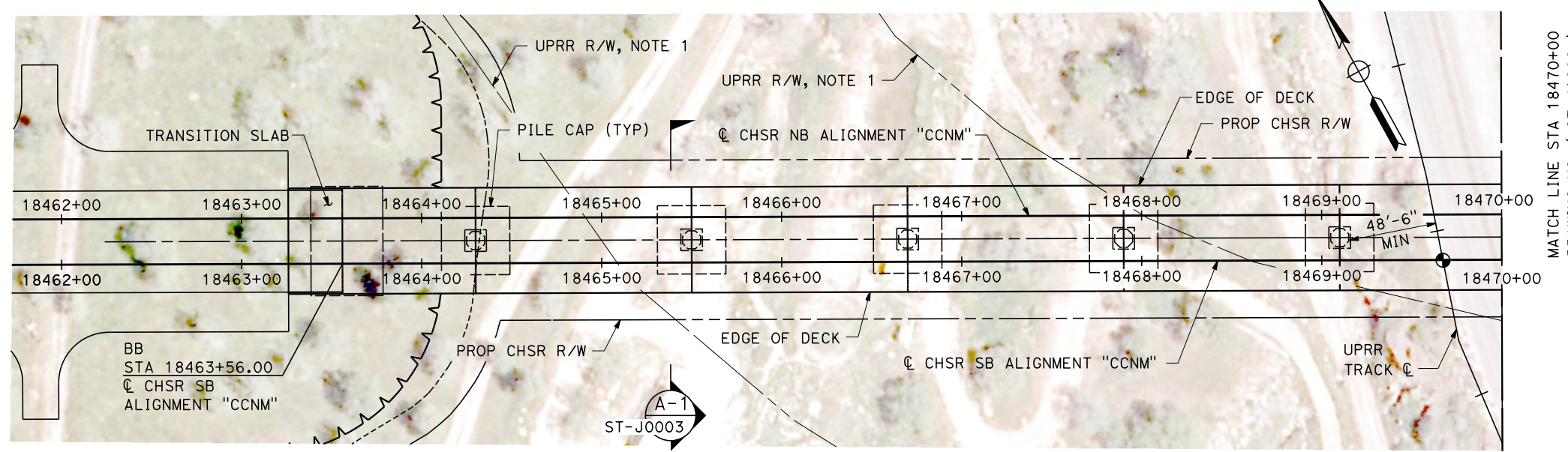
NO SCALE

18671+00.00 BVC  
ELEV 3017.87

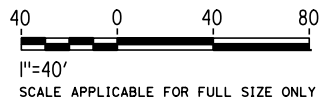


**PROFILE**  
SCALE 1"= 40'

NOTE:  
1. RECORD RIGHT-OF-WAY IS NOT CORRECT IN RELATION TO THE LOCATION OF RAILROAD TRACKS.



**PLAN**  
SCALE 1"= 40'



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1201.dgn  
1/11/2021 10:00:47 PM yihong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**

DRAWN BY  
**Y. WANG**

CHECKED BY  
**R. BARTON**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18463+56 TO 18475+16  
PLAN AND ELEVATION

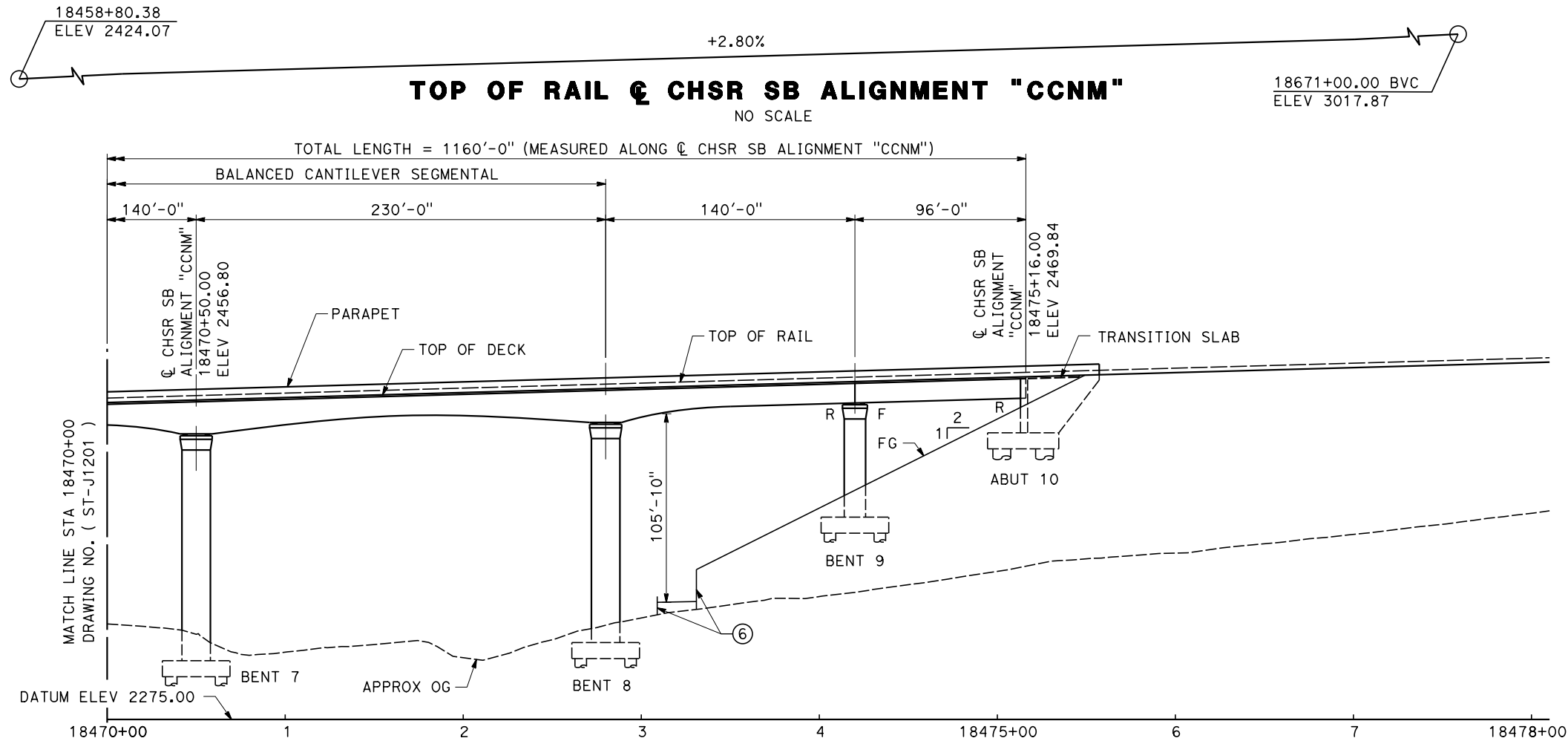
CONTRACT NO.  
HSR13-44

DRAWING NO.  
ST-J1201

SCALE  
AS SHOWN

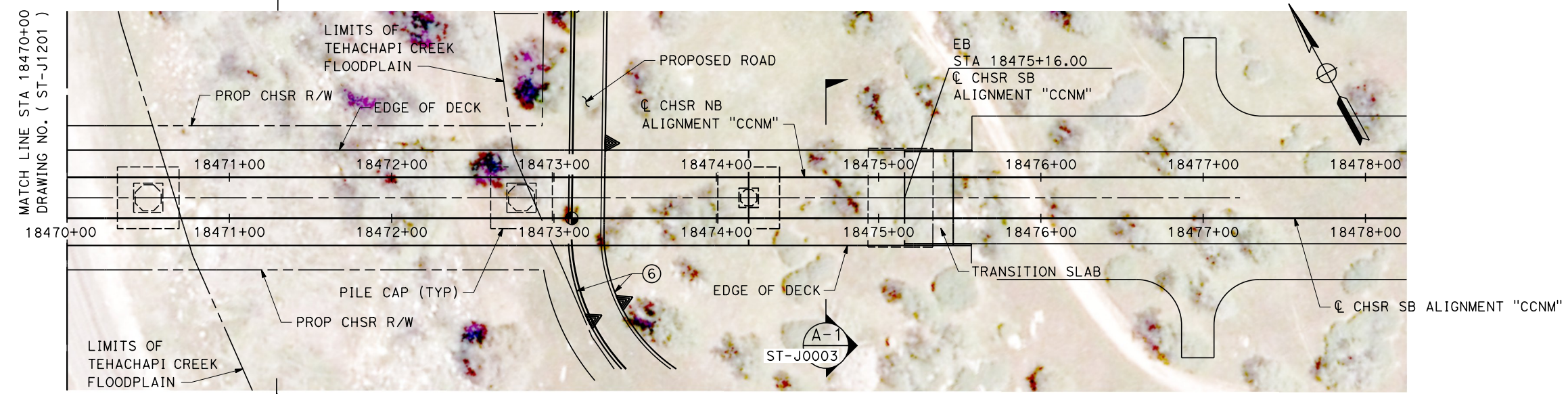
SHEET NO.  
96



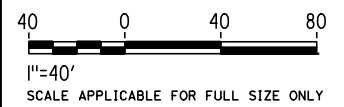


**LEGEND**  
⑥ SEE DRAWING ST-J0001

**PROFILE**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1202.dgn  
10:00:48 PM  
1/11/2021  
y.hong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**

DRAWN BY  
**Y. WANG**

CHECKED BY  
**R. BARTON**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18463+56 TO 18475+16  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44

DRAWING NO.  
ST-J1202

SCALE  
AS SHOWN

SHEET NO.  
97



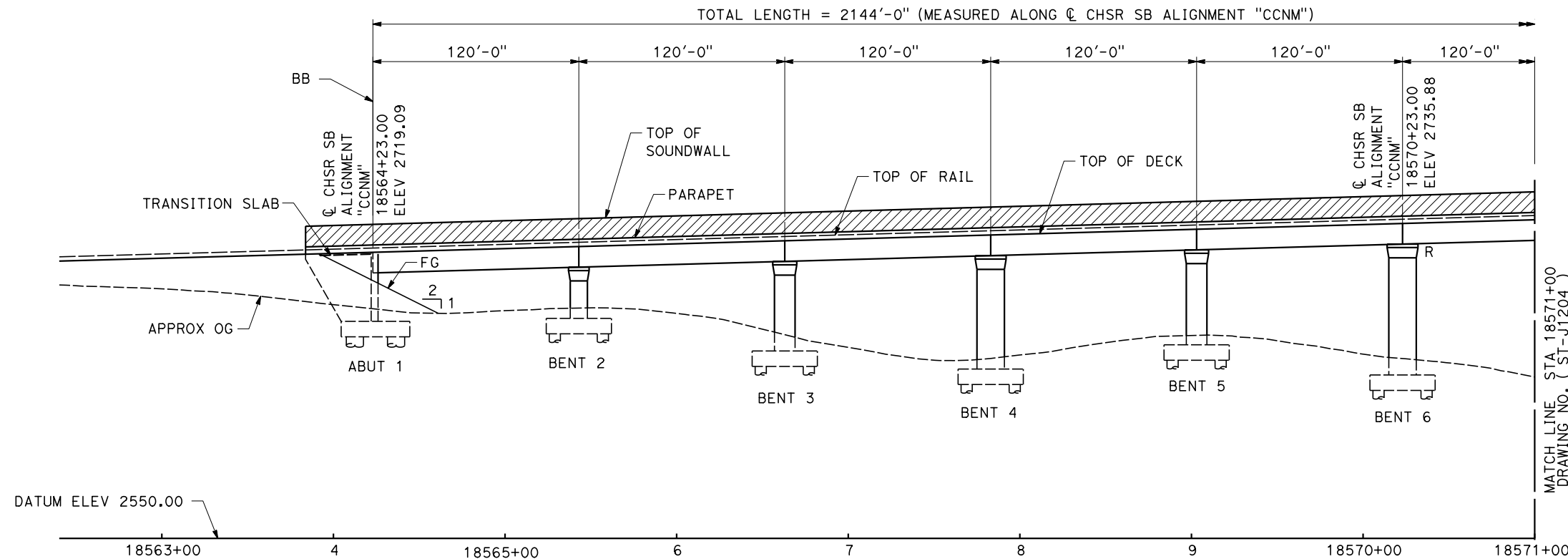
18458+80.38  
ELEV 2424.07

18671+00.00 BVC  
ELEV 3017.87

+2.80%

**TOP OF RAIL & CHSR SB ALIGNMENT "CCNM"**

NO SCALE

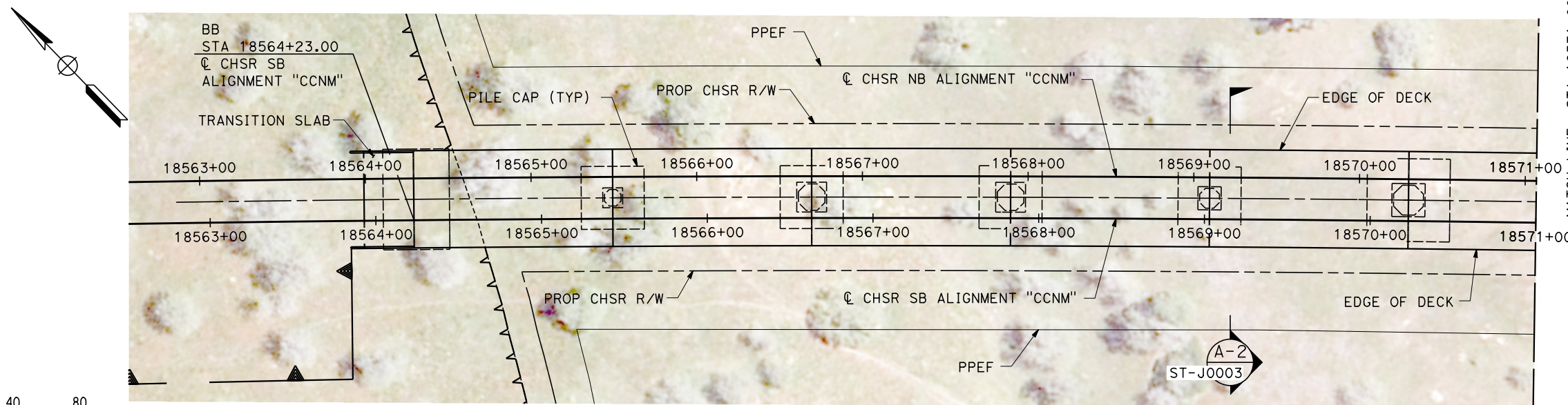


**LEGEND**

SOUNDWALL

**ELEVATION**

SCALE 1" = 40'



**PLAN**

SCALE 1" = 40'



1"=40'  
SCALE APPLICABLE FOR FULL SIZE ONLY

Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1203.dgn

10:00:52 PM

1/11/2021

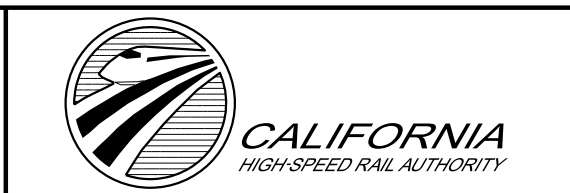
yihong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18564+23 TO 18585+67  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
ST-J1203  
SCALE  
AS SHOWN  
SHEET NO.  
98



18458+80.38  
ELEV 2424.07

18671+00.00 BVC  
ELEV 3017.87

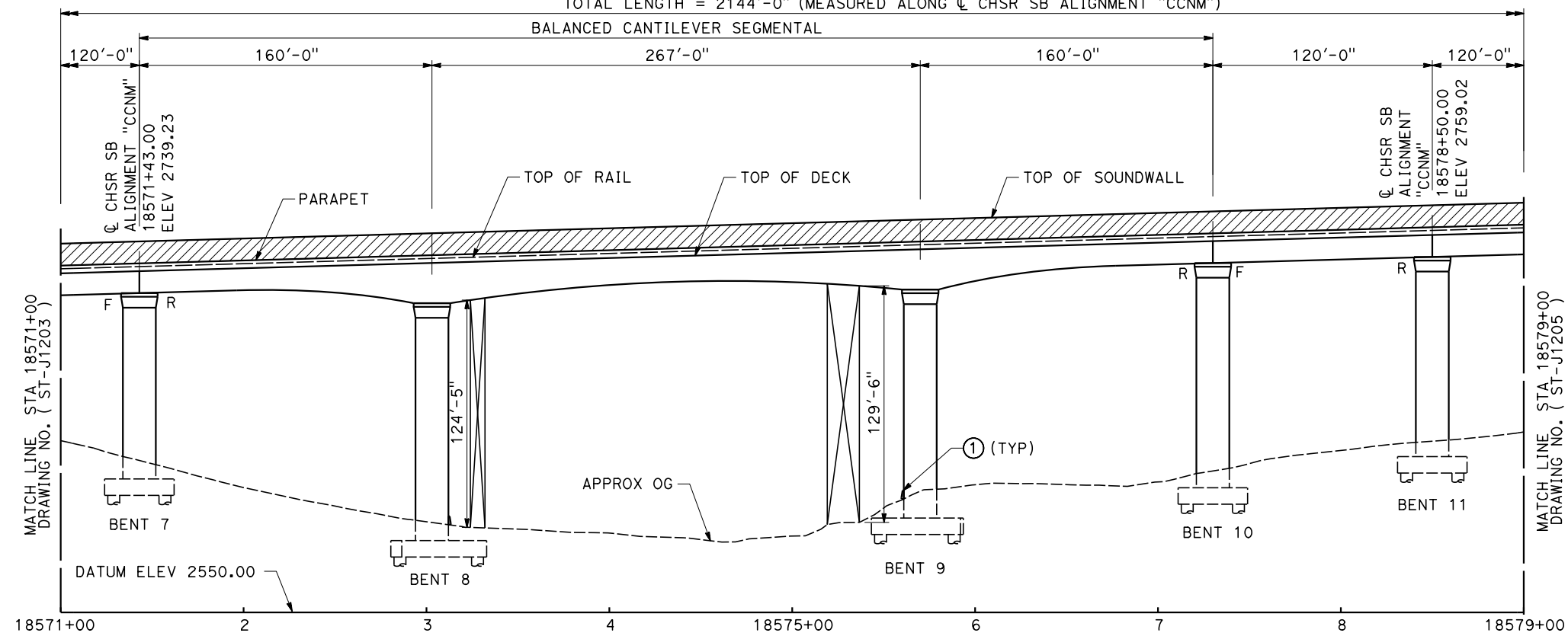
+2.80%

**TOP OF RAIL @ CHSR SB ALIGNMENT "CCNM"**

NO SCALE

TOTAL LENGTH = 2144'-0" (MEASURED ALONG @ CHSR SB ALIGNMENT "CCNM")

BALANCED CANTILEVER SEGMENTAL



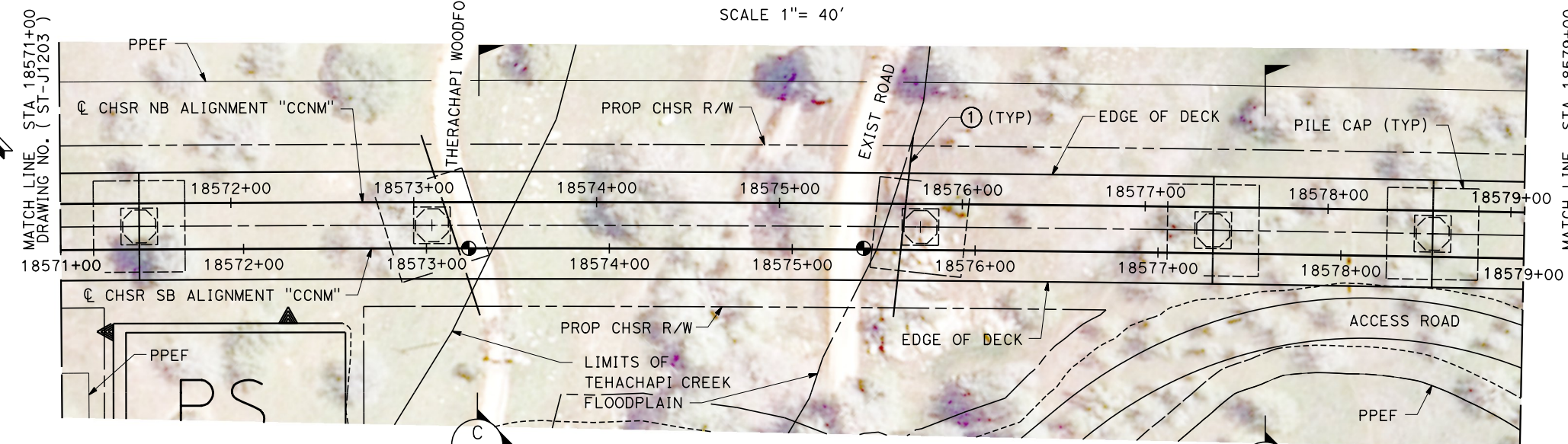
**ELEVATION**

SCALE 1" = 40'

**LEGEND**

① SEE DRAWING ST-J0001

SOUNDWALL



**PLAN**

SCALE 1" = 40'



1"=40'  
SCALE APPLICABLE FOR FULL SIZE ONLY

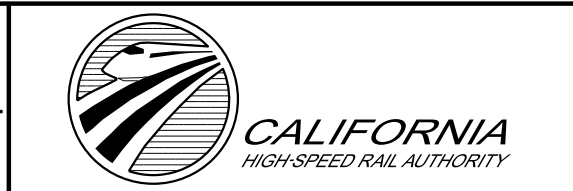
Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1204.dgn  
1/11/2021 10:00:49 PM y.hong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18564+23 TO 18585+67  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
ST-J1204  
SCALE  
AS SHOWN  
SHEET NO.  
99



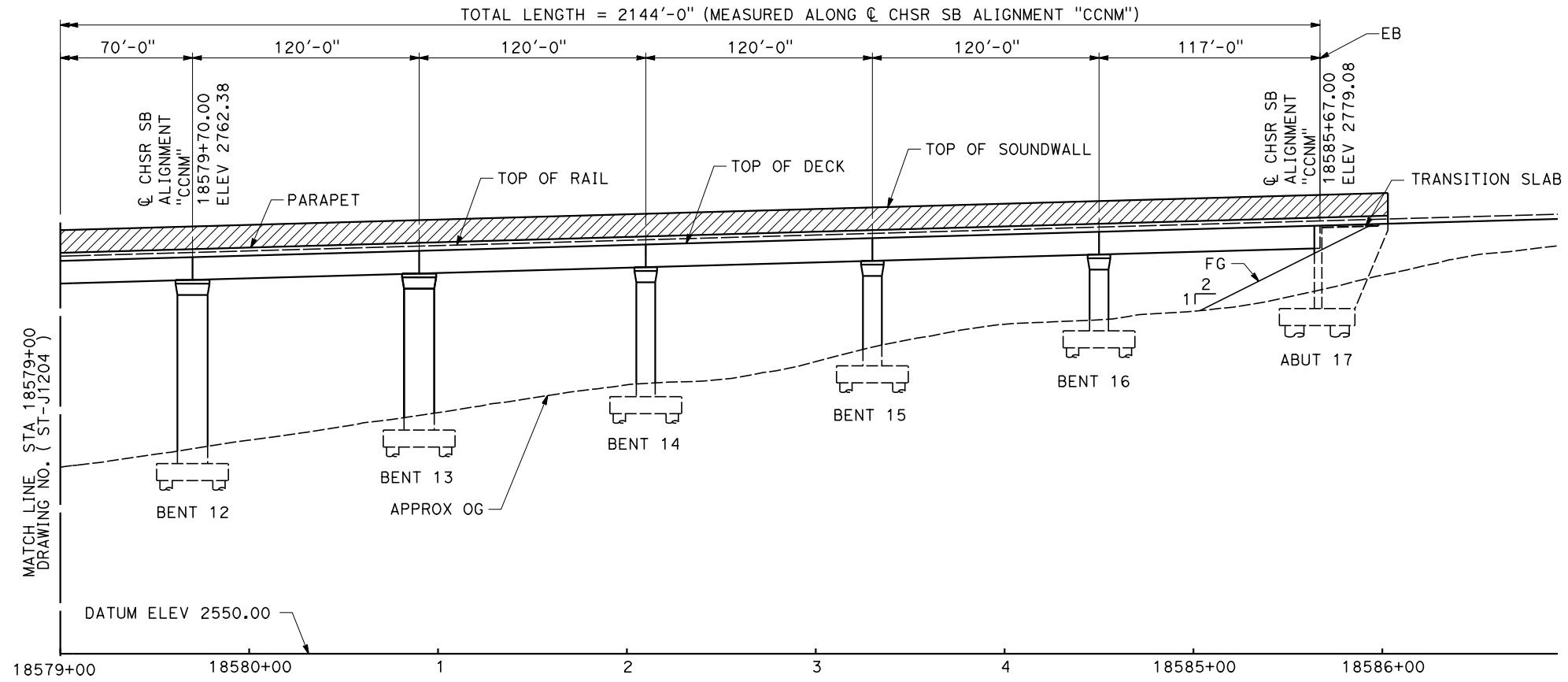
18458+80.38  
ELEV 2424.07

18671+00.00 BVC  
ELEV 3017.87

+2.80%

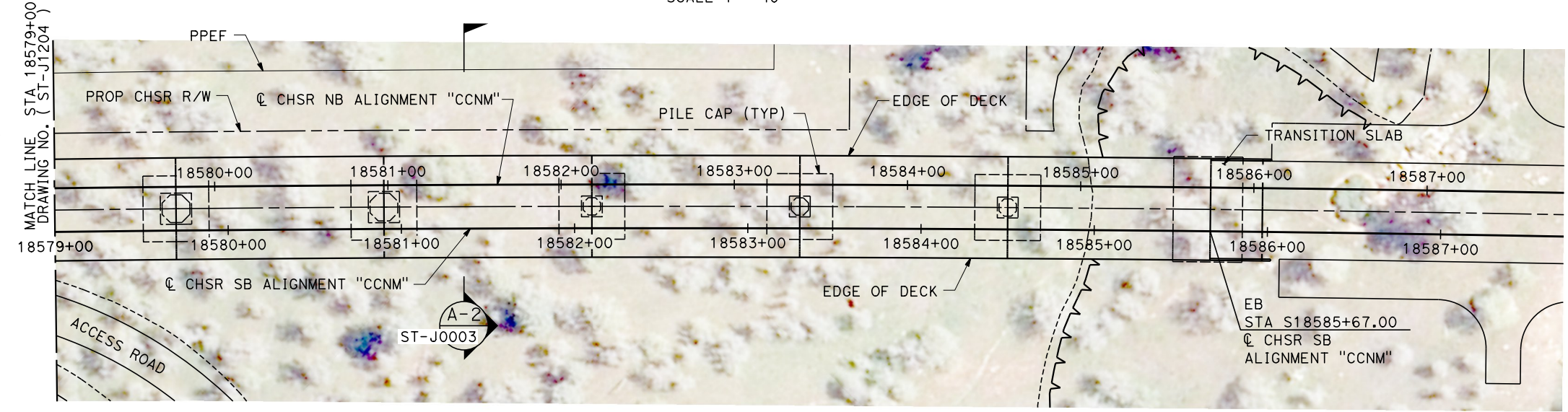
**TOP OF RAIL @ CHSR SB ALIGNMENT "CCNM"**

NO SCALE



**ELEVATION**

SCALE 1" = 40'



**PLAN**

SCALE 1" = 40'



1" = 40'  
SCALE APPLICABLE FOR FULL SIZE ONLY

Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1205.dgn  
1/11/2021 10:00:56 PM yihong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**TYLIN INTERNATIONAL**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18564+23 TO 18585+67  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
ST-J1205  
SCALE  
AS SHOWN  
SHEET NO.  
100



18683+00.00 EVC  
ELEV 3051.25

+2.76%

**TOP OF RAIL & CHSR SB ALIGNMENT "CCNM"**

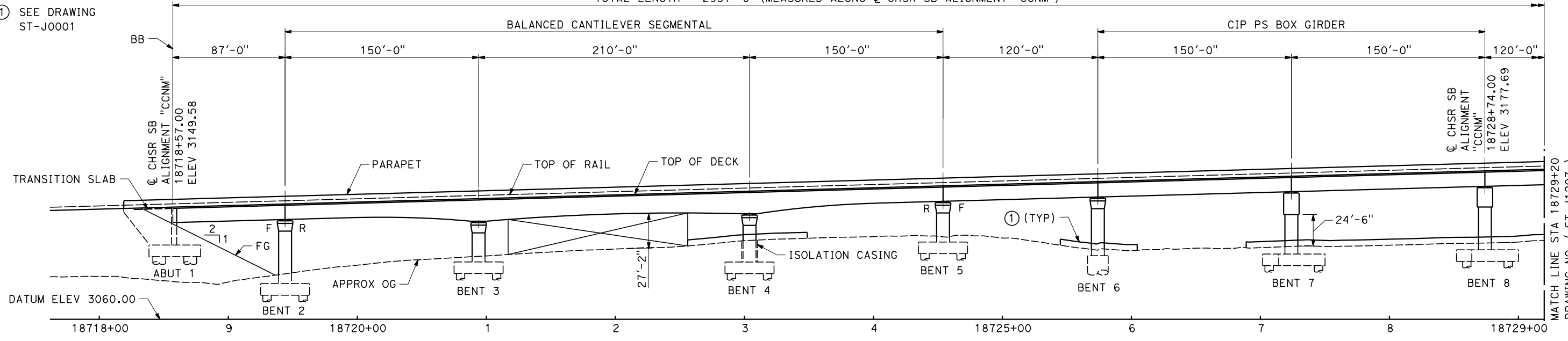
NO SCALE

18769+00.00 BVC  
ELEV 3288.99

**LEGEND**

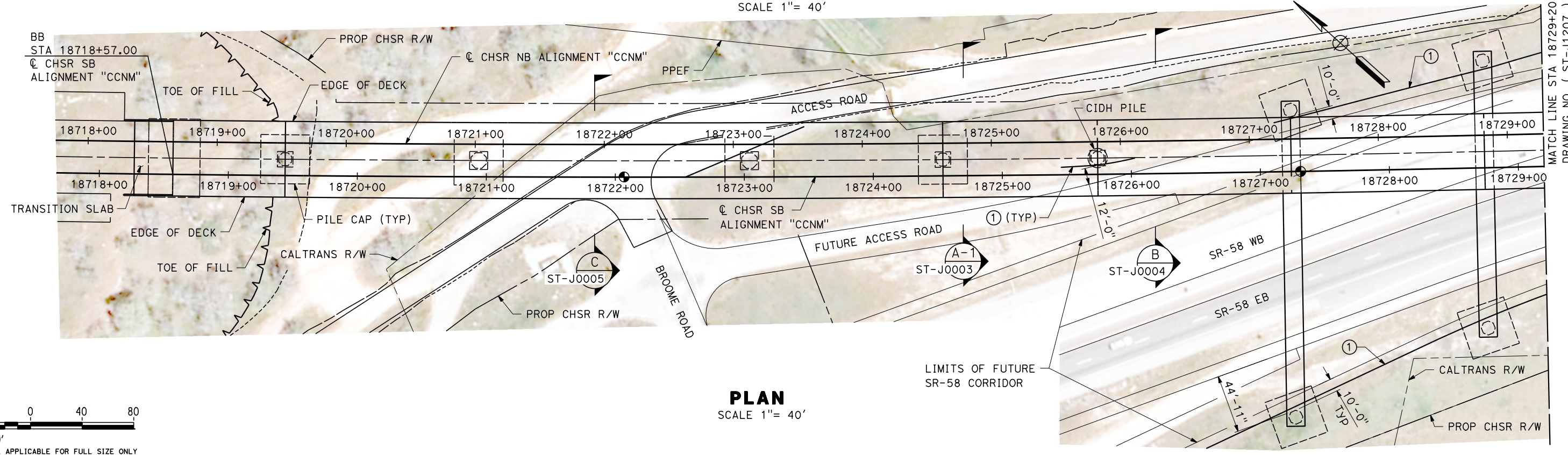
① SEE DRAWING  
ST-J0001

TOTAL LENGTH = 2937'-0" (MEASURED ALONG & CHSR SB ALIGNMENT "CCNM")



**ELEVATION**

SCALE 1" = 40'



**PLAN**

SCALE 1" = 40'



1"=40'  
SCALE APPLICABLE FOR FULL SIZE ONLY

Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1206.dgn

10:00:56 PM

1/11/2021

y.hong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**

DRAWN BY  
**Y. WANG**

CHECKED BY  
**R. BARTON**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18718+57 TO 18747+94  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44

DRAWING NO.  
ST-J1206

SCALE  
AS SHOWN

SHEET NO.  
101



18683+00.00 EVC  
ELEV 3051.25

+2.76%

18769+00.00 BVC  
ELEV 3288.99

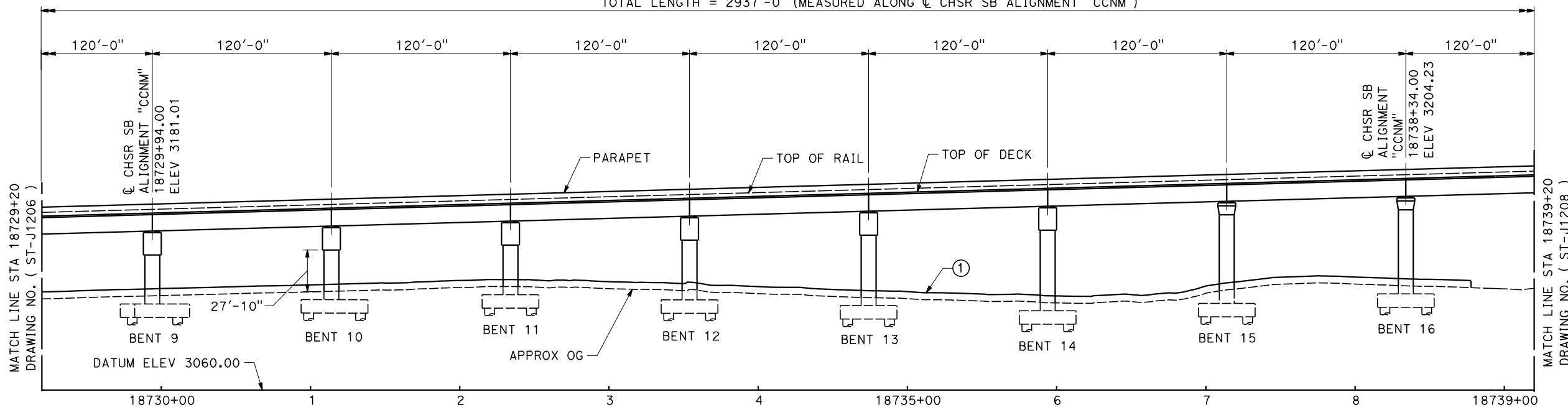
### TOP OF RAIL & CHSR SB ALIGNMENT "CCNM"

NO SCALE

TOTAL LENGTH = 2937'-0" (MEASURED ALONG & CHSR SB ALIGNMENT "CCNM")

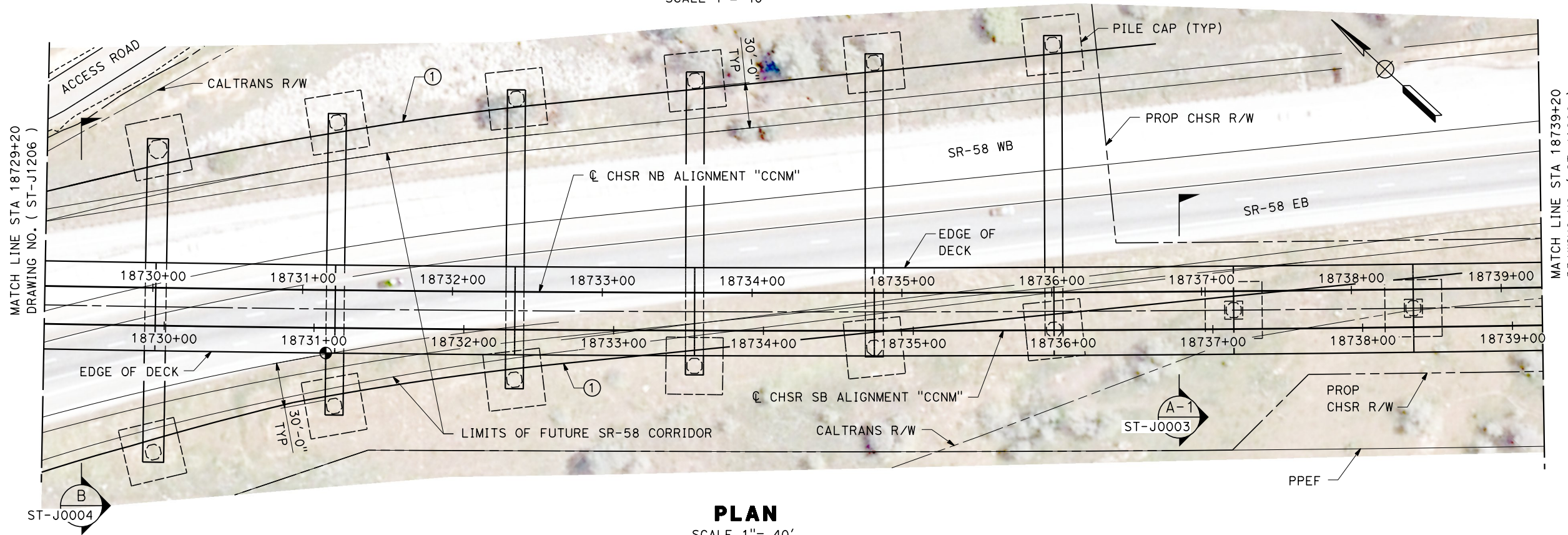
#### LEGEND

① SEE DRAWING  
ST-J0001



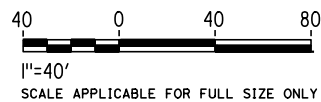
### ELEVATION

SCALE 1" = 40'



### PLAN

SCALE 1" = 40'



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1207.dgn

10:01:14 PM

1/11/2021

y.hong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**

DRAWN BY  
**Y. WANG**

CHECKED BY  
**R. BARTON**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18718+57 TO 18747+94  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44

DRAWING NO.  
ST-J1207

SCALE  
AS SHOWN

SHEET NO.  
102



18683+00.00 EVC  
ELEV 3051.25

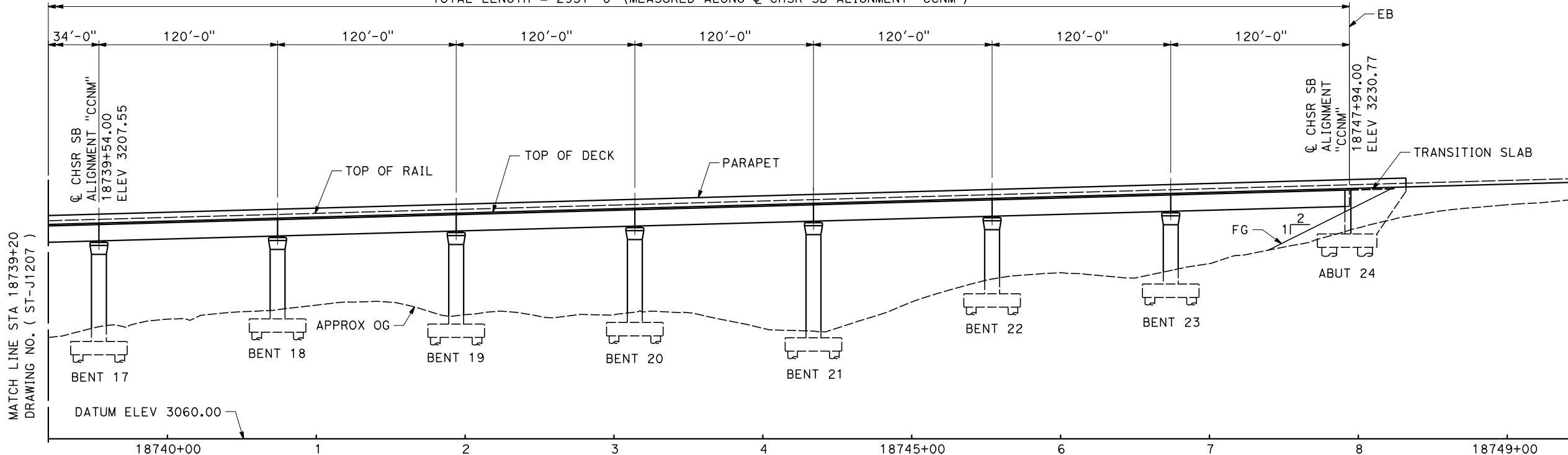
+2.76%

18769+00.00 BVC  
ELEV 3288.99

**TOP OF RAIL & CHSR SB ALIGNMENT "CCNM"**

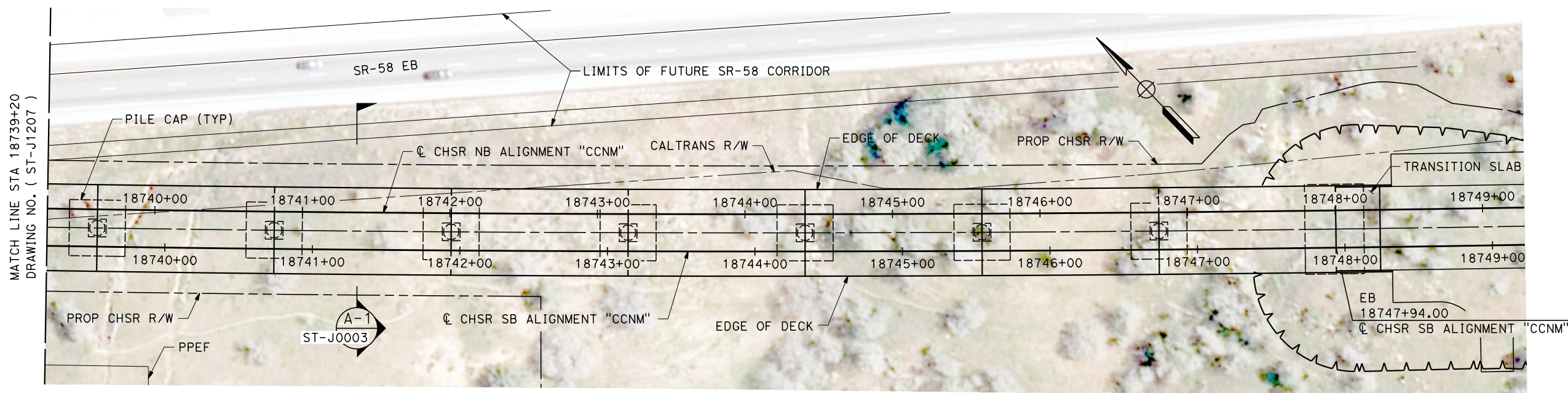
NO SCALE

TOTAL LENGTH = 2937'-0" (MEASURED ALONG & CHSR SB ALIGNMENT "CCNM")



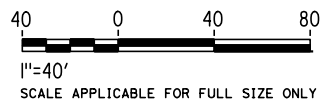
**ELEVATION**

SCALE 1"= 40'



**PLAN**

SCALE 1"= 40'



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-J1208.dgn

10:01:19 PM

1/11/2021

y.hong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**

DRAWN BY  
**Y. WANG**

CHECKED BY  
**R. BARTON**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACK STRUCTURES  
VIADUCT STATION 18718+57 TO 18747+94  
PLAN AND ELEVATION

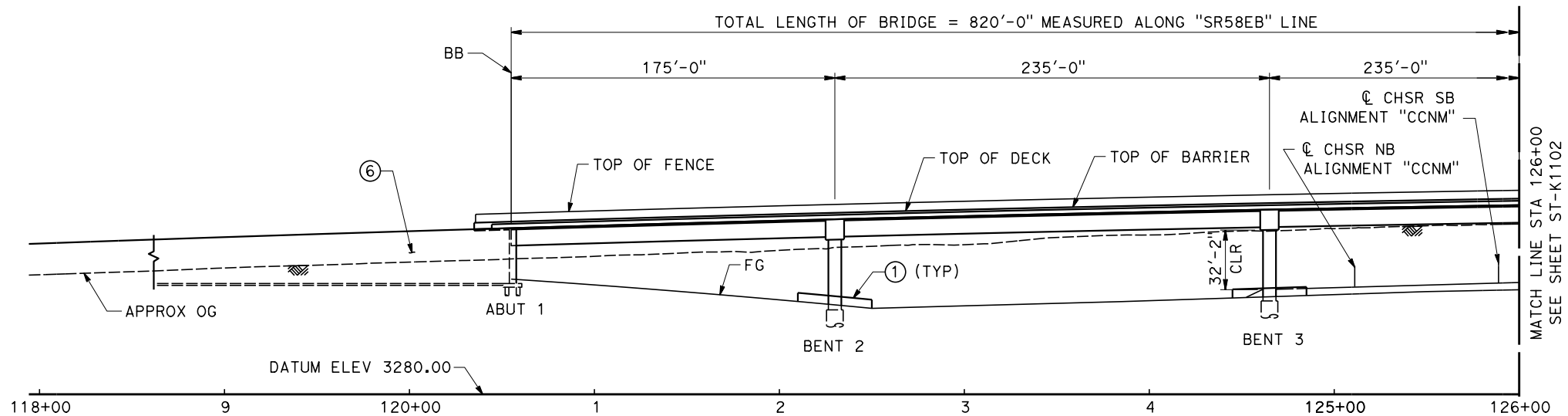
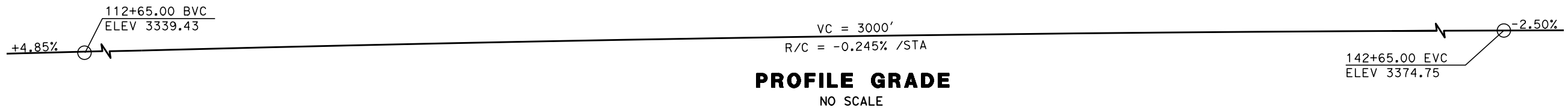
CONTRACT NO.  
HSR13-44

DRAWING NO.  
ST-J1208

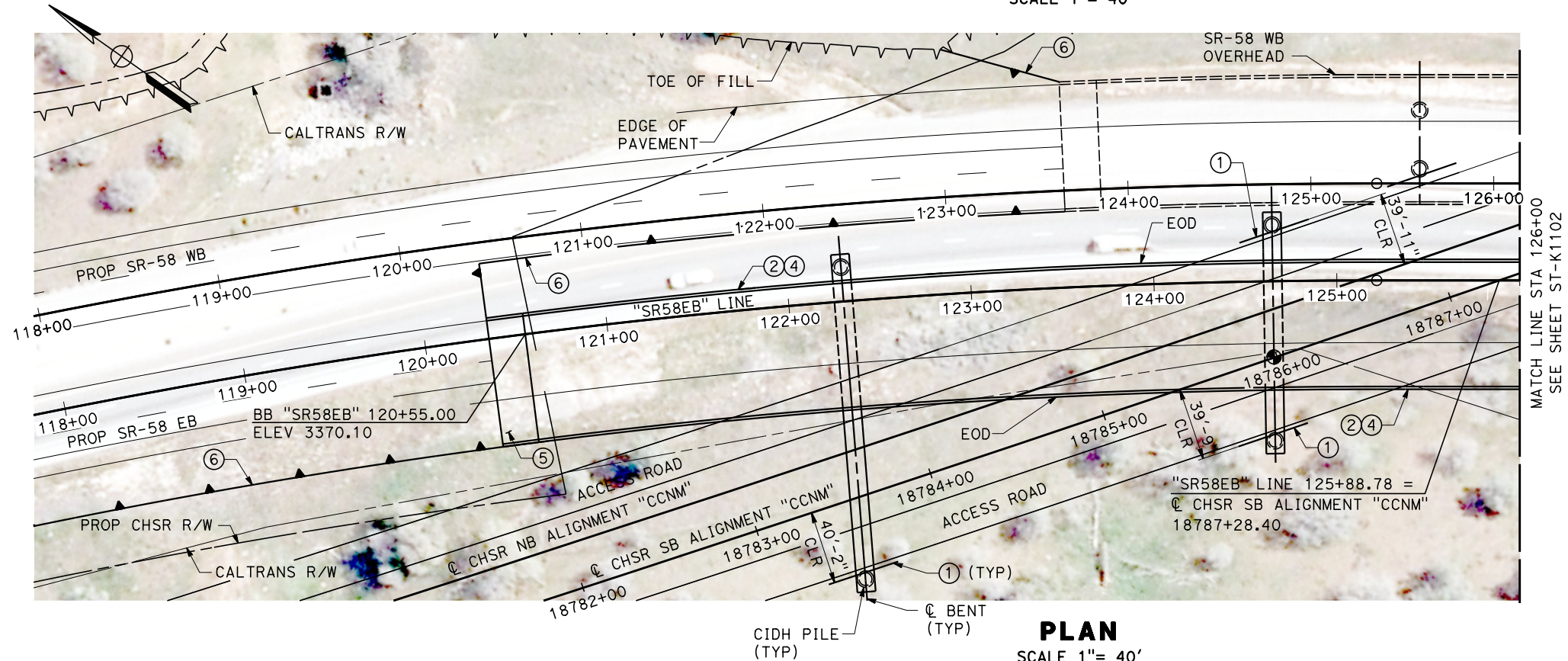
SCALE  
AS SHOWN

SHEET NO.  
103



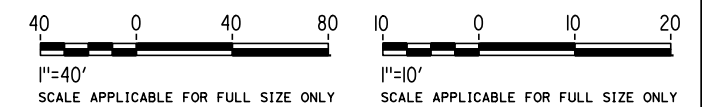


**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**LEGEND**  
⊕ SEE DRAWING ST-J0001



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-K1101.dgn  
1/11/2021 10:01:29 PM yihong.wang@tylin.com

|                                     |                                      |             |  |  |  |
|-------------------------------------|--------------------------------------|-------------|--|--|--|
| DESIGNED BY<br><b>R. GOLCHOBIAN</b> | <b>RECORD<br/>PEPD<br/>SUBMITTAL</b> | BY          |  |  |  |
| DRAWN BY<br><b>Y. WANG</b>          |                                      | CHK         |  |  |  |
| CHECKED BY<br><b>R. BARTON</b>      |                                      | APP         |  |  |  |
| IN CHARGE<br><b>G. CAMPBELL</b>     |                                      | DESCRIPTION |  |  |  |
| DATE<br><b>01/29/2021</b>           | <b>NOT FOR<br/>CONSTRUCTION</b>      |             |  |  |  |



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
ROADWAY STRUCTURES  
SR 58 EB OVERHEAD  
PLAN AND ELEVATION

|                                 |
|---------------------------------|
| CONTRACT NO.<br><b>HSR13-44</b> |
| DRAWING NO.<br><b>ST-K1101</b>  |
| SCALE<br><b>AS SHOWN</b>        |
| SHEET NO.<br><b>104</b>         |

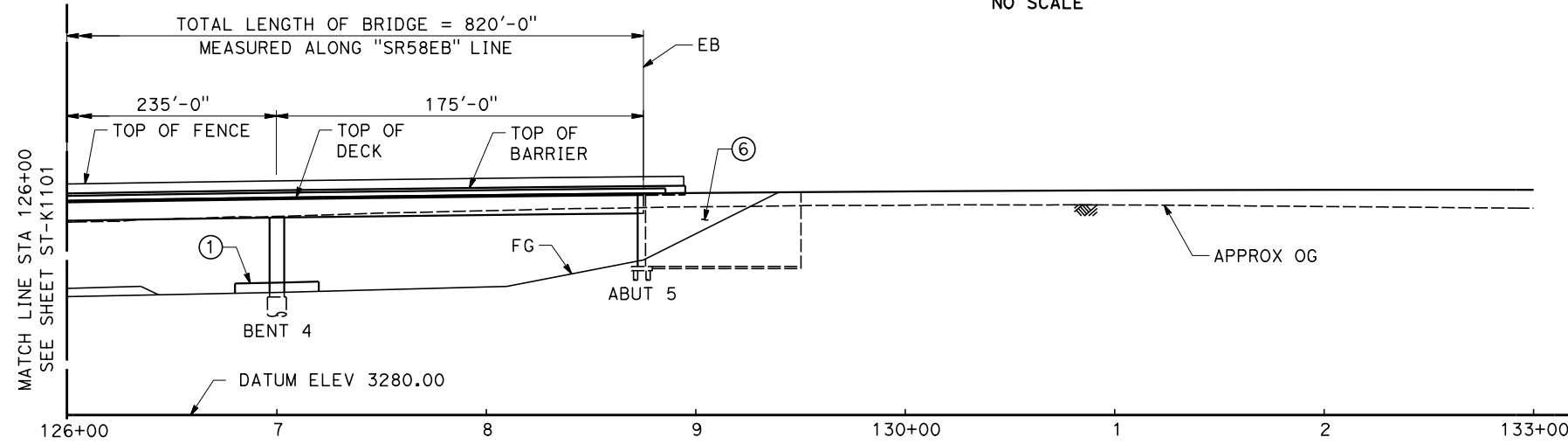


112+65.00 BVC  
ELEV 3339.43

VC = 3000'  
R/C = -0.245% /STA

142+65.00 EVC  
ELEV 3374.75

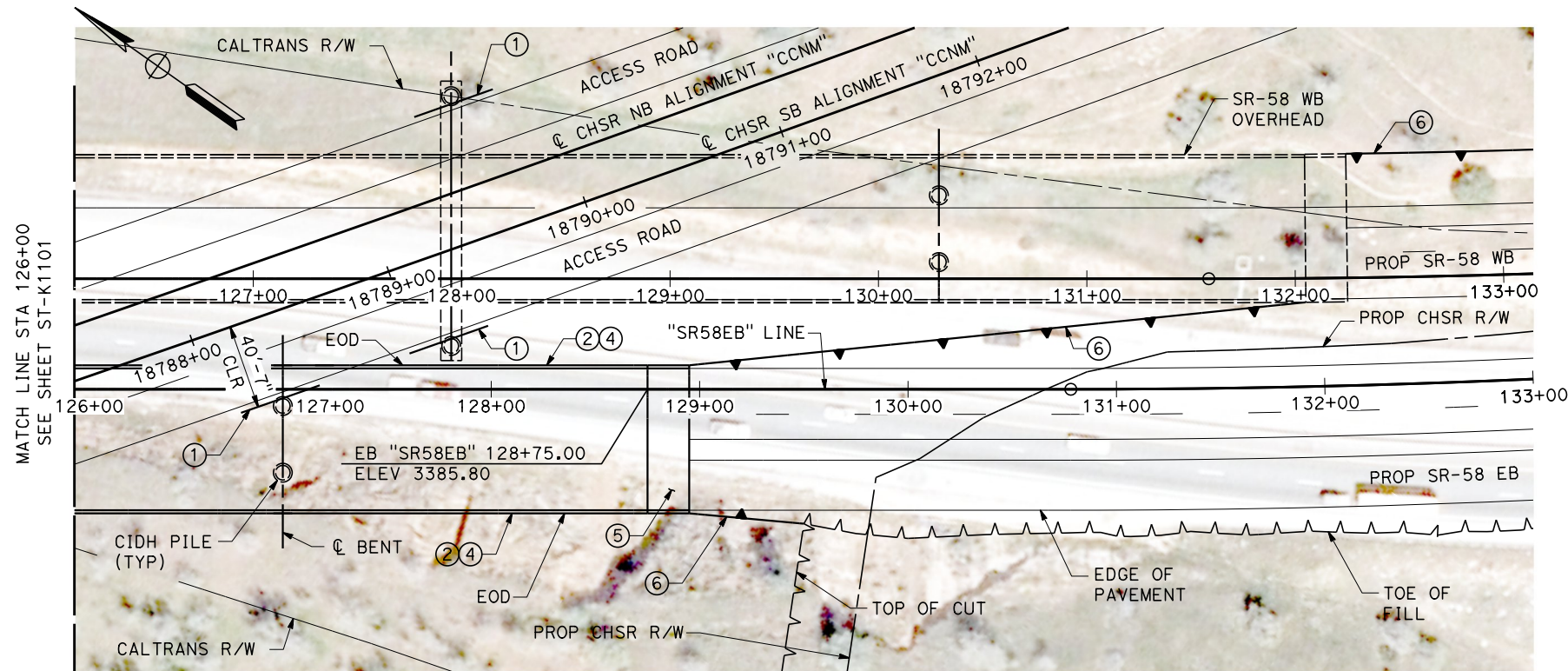
**PROFILE GRADE**  
NO SCALE



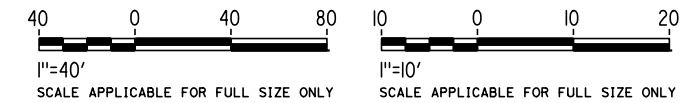
**ELEVATION**  
SCALE 1"= 40'

**LEGEND**

(#) SEE DRAWING ST-J0001



**PLAN**  
SCALE 1"= 40'



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-K1102.dgn

10:01:22 PM

1/11/2021

yihong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
ROADWAY STRUCTURES  
SR 58 EB OVERHEAD  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
ST-K1102  
SCALE  
AS SHOWN  
SHEET NO.  
105

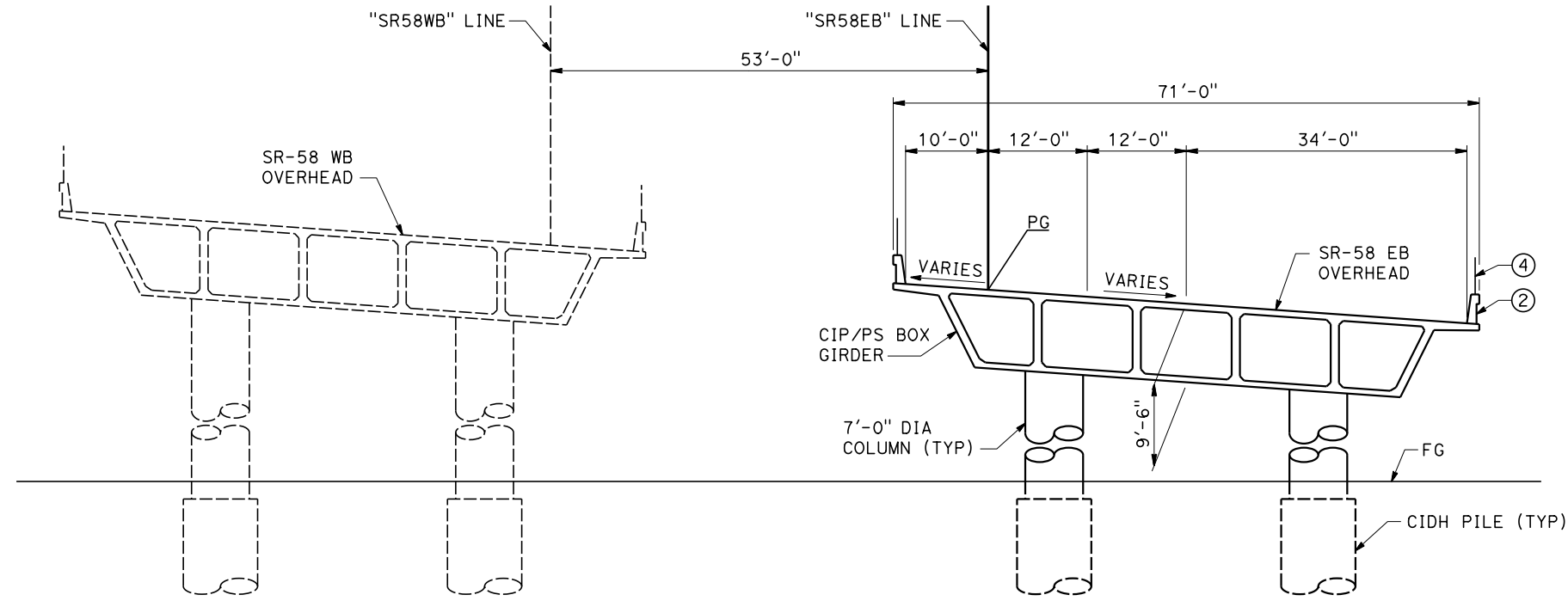


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-K1103.dgn

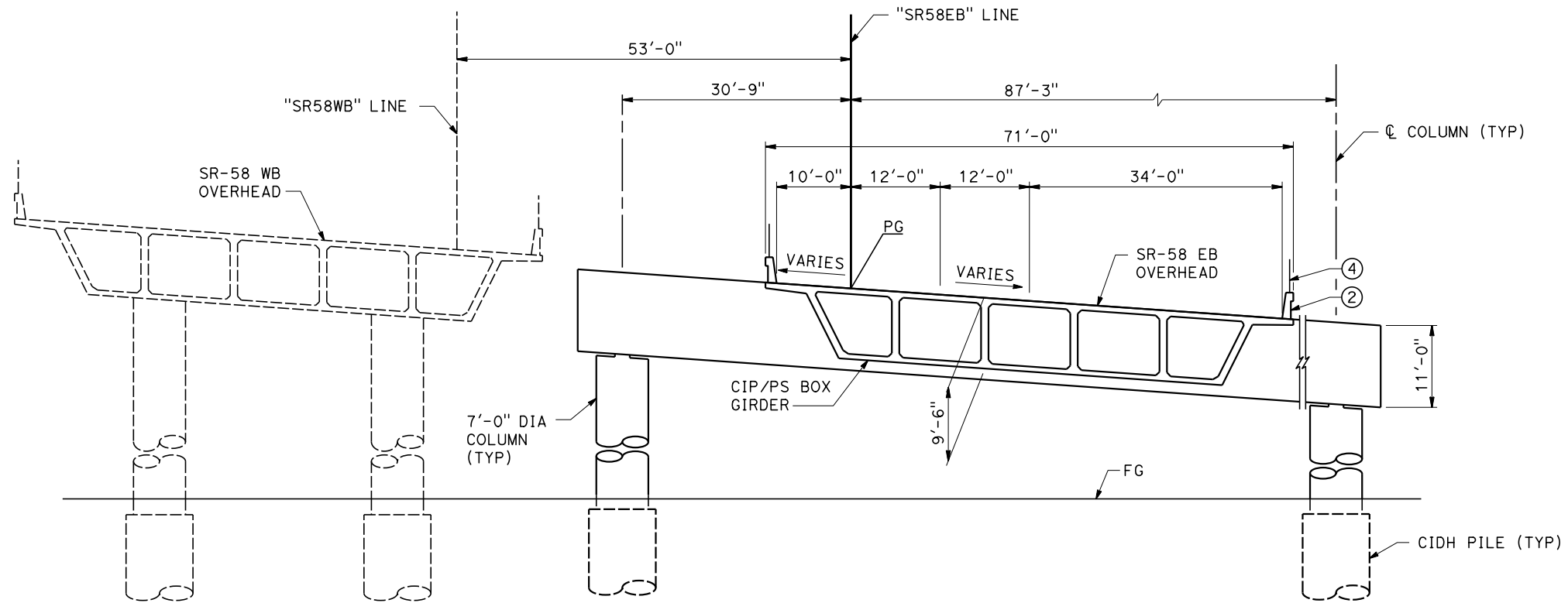
10:01:25 PM

1/11/2021

yihong.wang@tylin.com



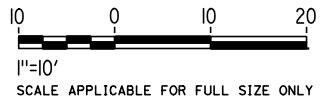
SECTION AT BENT 4



SECTION AT BENT 3  
**TYPICAL SECTION**  
SCALE 1" = 10'

**LEGEND**

Ⓢ SEE DRAWING ST-J0001



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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

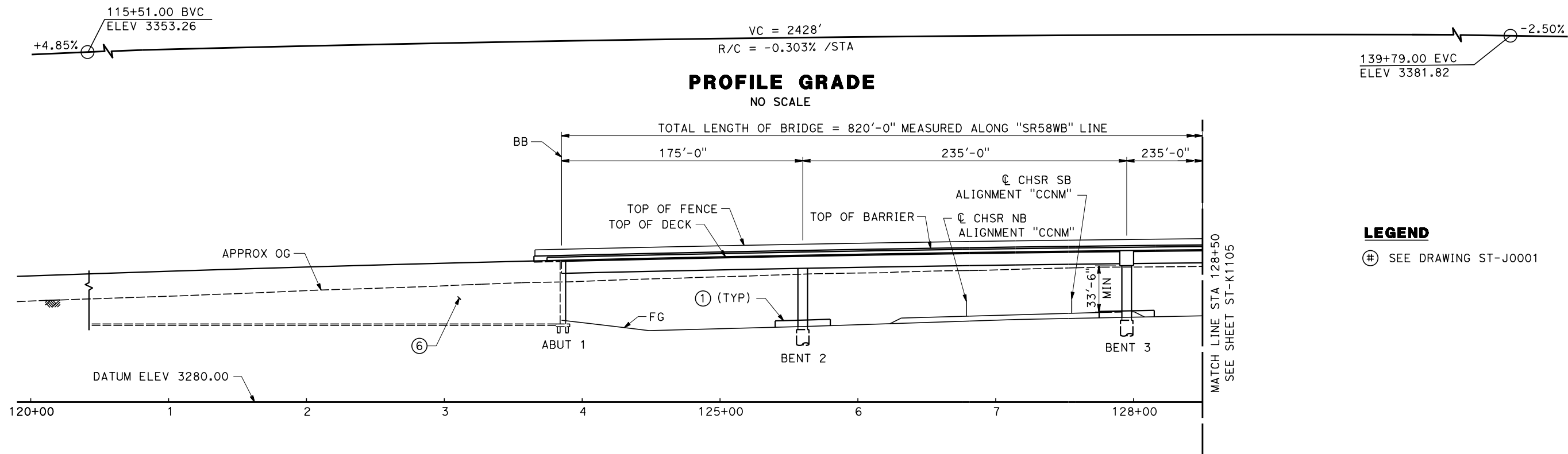


**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
ROADWAY STRUCTURES  
SR 58 EB OVERHEAD  
TYPICAL SECTION

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
ST-K1103  
SCALE  
AS SHOWN  
SHEET NO.  
106





**PROFILE GRADE**

NO SCALE

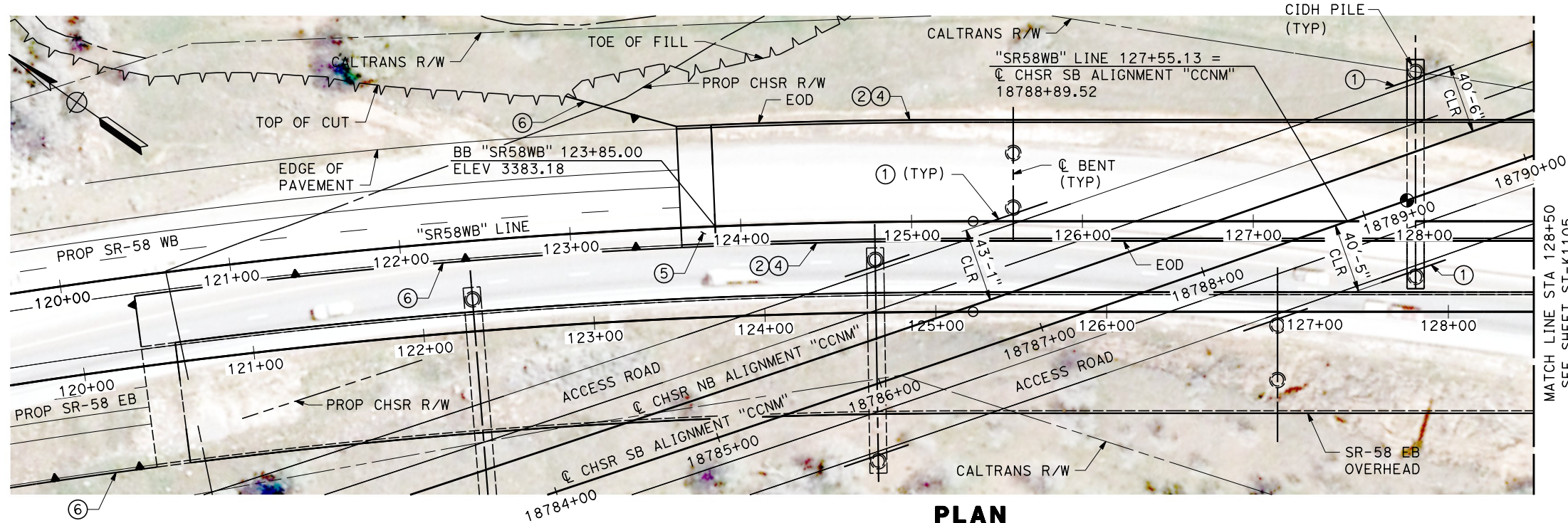
TOTAL LENGTH OF BRIDGE = 820'-0" MEASURED ALONG "SR58WB" LINE

**LEGEND**

⊕ SEE DRAWING ST-J0001

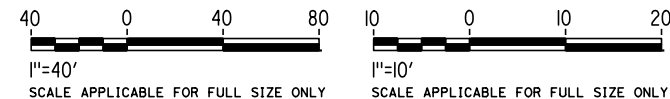
**ELEVATION**

SCALE 1" = 40'



**PLAN**

SCALE 1" = 40'



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-K1104.dgn

1/11/2021 10:40:31 PM

y.hong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**  
DRAWN BY  
**Y. WANG**  
CHECKED BY  
**R. BARTON**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

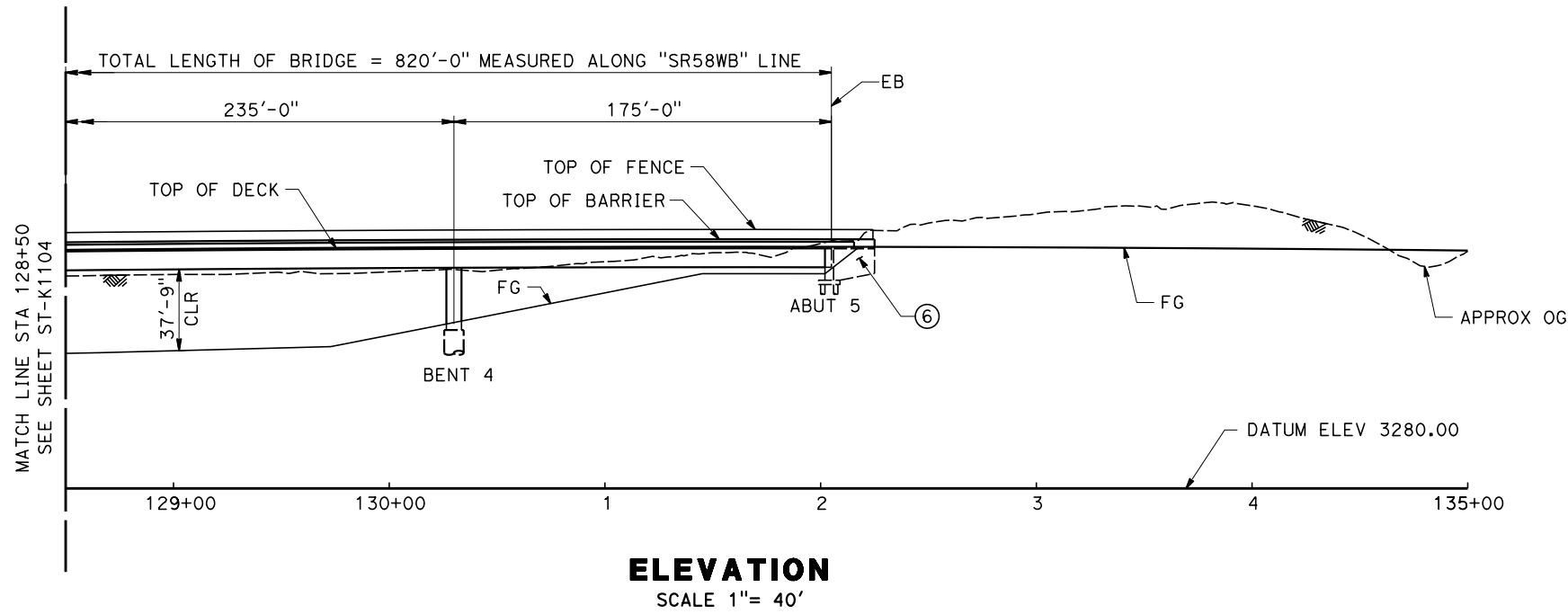
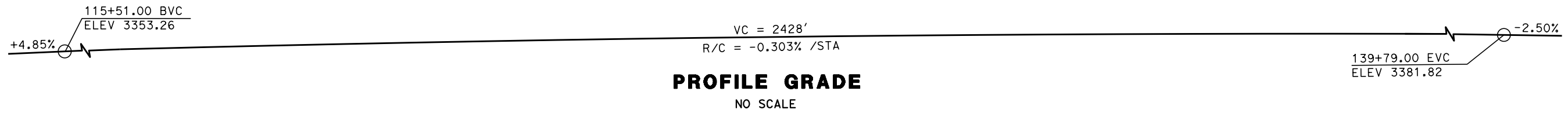


**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
ROADWAY STRUCTURES  
SR 58 WB OVERHEAD  
PLAN AND ELEVATION

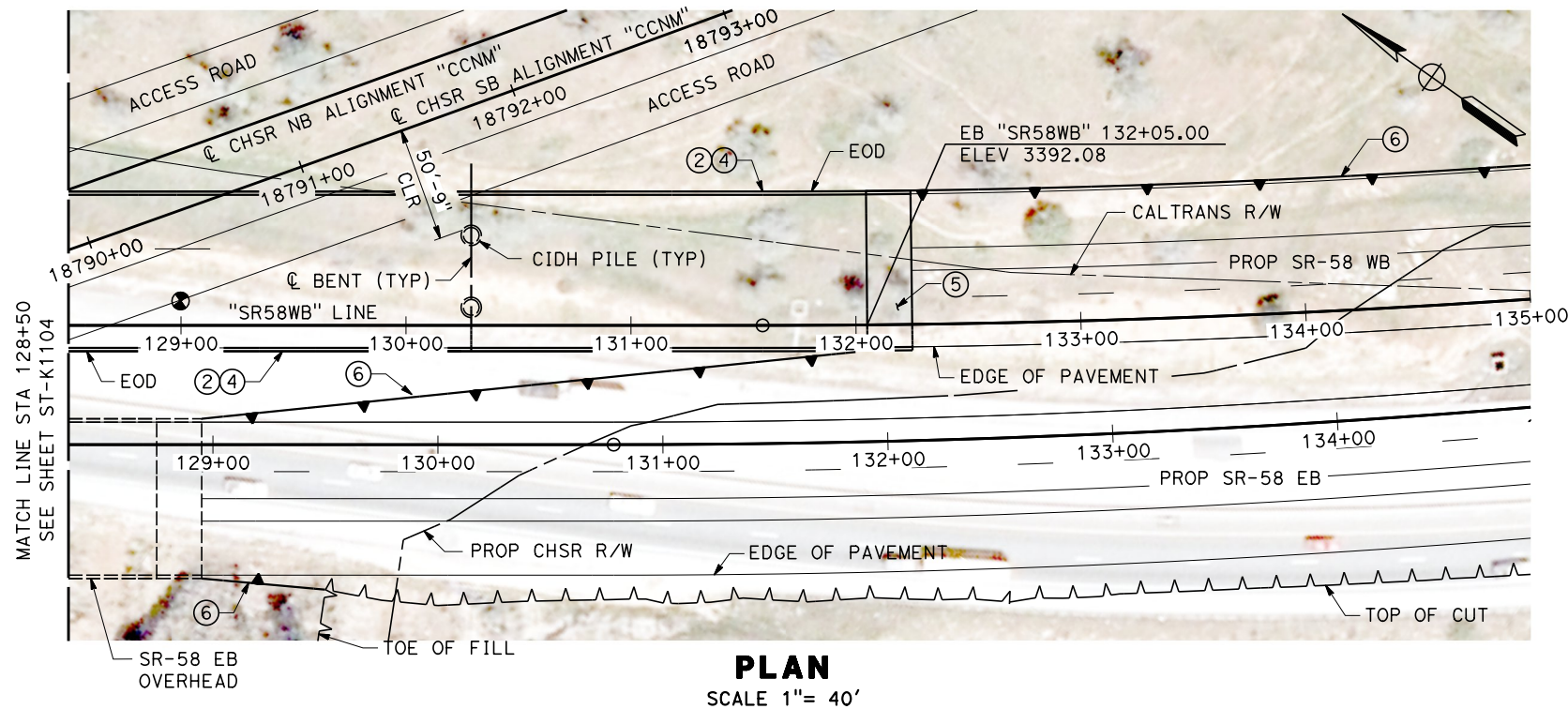
CONTRACT NO.  
HSR13-44  
DRAWING NO.  
ST-K1104  
SCALE  
AS SHOWN  
SHEET NO.  
107





#### LEGEND

⊕ SEE DRAWING ST-J0001



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-K1105.dgn

1/11/2021 10:01:31 PM

1/11/2021

yihong.wang@tylin.com

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

DESIGNED BY  
**R. GOLCHOBIAN**

DRAWN BY  
**Y. WANG**

CHECKED BY  
**R. BARTON**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**TYLIN INTERNATIONAL**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
ROADWAY STRUCTURES  
SR 58 WB OVERHEAD  
PLAN AND ELEVATION

CONTRACT NO.  
HSR13-44

DRAWING NO.  
ST-K1105

SCALE  
AS SHOWN

SHEET NO.  
108

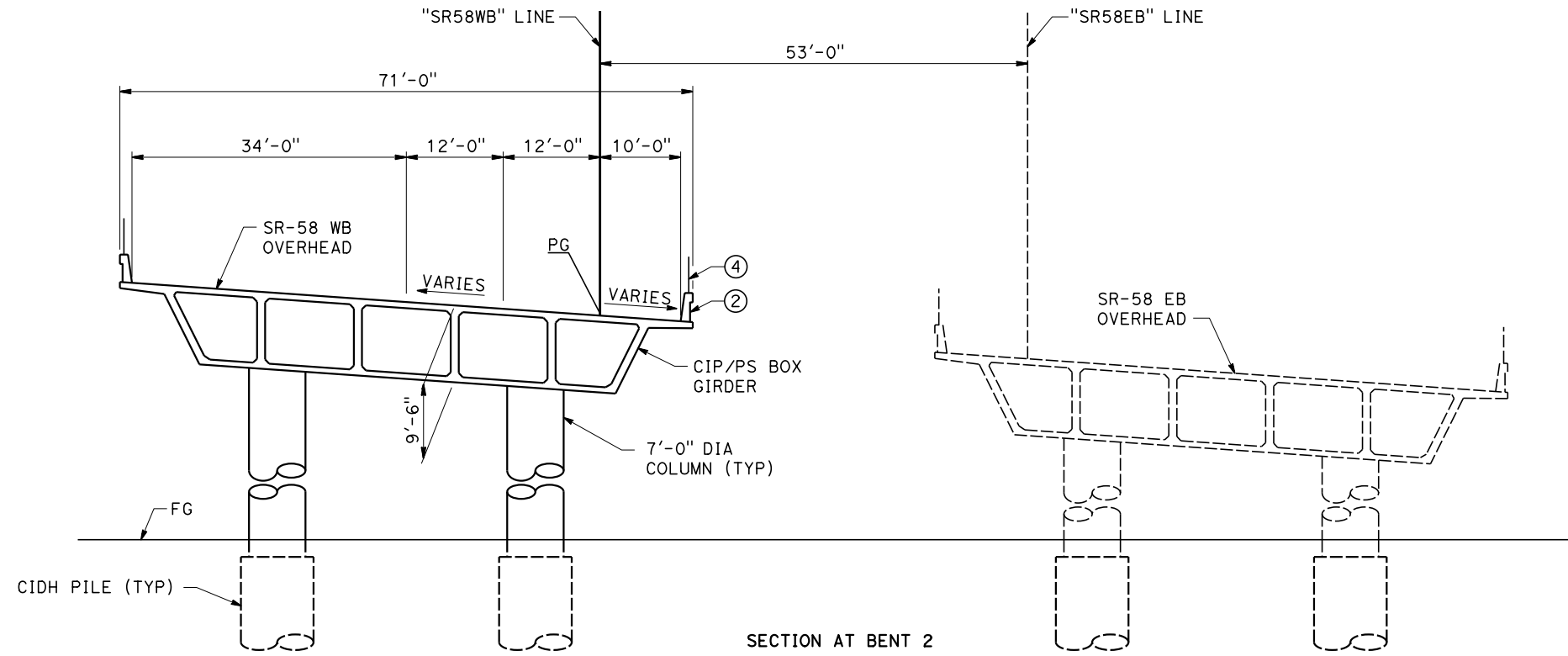


Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\ST\BP-ST-K1106.dgn

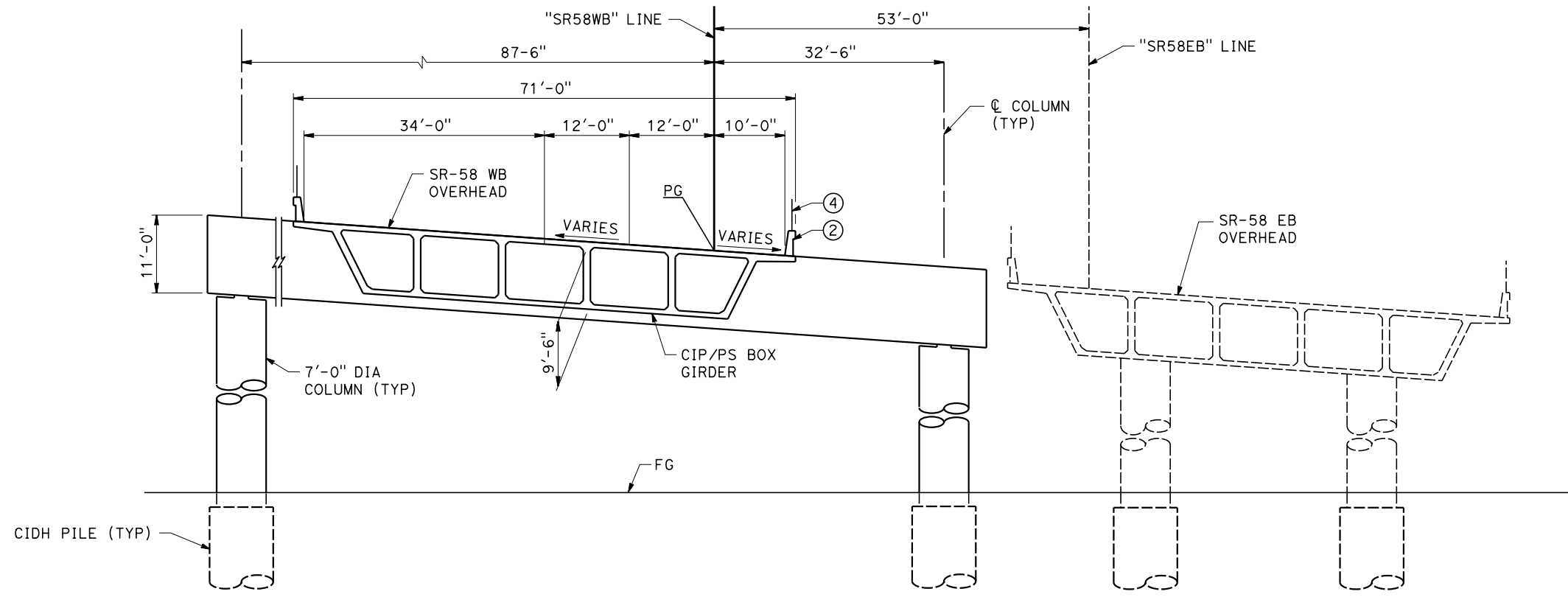
10:01:45 PM

1/11/2021

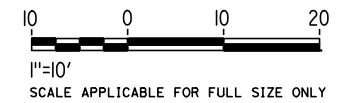
yihong.wang@tylin.com



**LEGEND**  
 (⊕) SEE DRAWING ST-J0001



SECTION AT BENT 3  
**TYPICAL SECTION**  
 SCALE 1"= 10'



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

DESIGNED BY  
**R. GOLCHOBIAN**  
 DRAWN BY  
**Y. WANG**  
 CHECKED BY  
**R. BARTON**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD  
 PEPD  
 SUBMITTAL**

**NOT FOR  
 CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
 BAKERSFIELD TO PALMDALE**


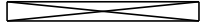
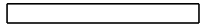
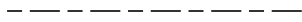


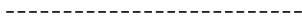

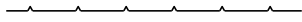






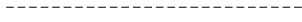







CCNM DESIGN OPTION  
 ROADWAY STRUCTURES  
 SR 58 WB OVERHEAD  
 TYPICAL SECTION

CONTRACT NO.  
**HSR13-44**  
 DRAWING NO.  
**ST-K1106**  
 SCALE  
**AS SHOWN**  
 SHEET NO.  
**109**






**LEGEND:**

**PLAN**

-  NORTH ARROW
-  VIADUCT
-  TUNNEL
-  PROPOSED RIGHT OF WAY
-  EXIST RIGHT OF WAY
-  LIMITS OF EXCAVATION (CUT)
-  LIMITS OF EMBANKMENT (FILL)
-  FAULT ZONE
-  EXIST RETAINING WALL
-  PPEF
-  PROPOSED COLUMN
-  PROPOSED FENCE
-  PROPOSED PHASE BREAK
-  PROPOSED RETAINING WALL
-  PROPOSED TUNNEL
-  PTEF
-  PROPOSED TURNOUT
-  SRS  
STANDALONE RADIO SITE
-  A  
TRAIN CONTROL SYSTEM SITE A
-  B  
TRAIN CONTROL SYSTEM SITE B
-  D  
TRAIN CONTROL SYSTEM SITE D
-  E  
TRAIN CONTROL SYSTEM SITE E
-  TRACK CROSSING PANEL

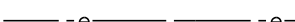




**PLAN**

-  SS  
SUPPLY STATION
-  SWS  
SWITCHING STATION
-  PS  
PARALLELING STATION

**CROSS SECTION**

-  AR FENCE

**UTILITIES**

-  -e- EXISTING ELECTRICAL TRANSMISSION
-  EXISTING ELECTRICAL TRANSMISSION TOWER
-  -E- PROPOSED TRACTION POWER SUPPLY LINE
-  -gs- EXISTING GAS LINE
-  -sd- EXISTING STORM DRAIN

Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TP\BP-TP-B0101

1/13/2021 7:18:06 PM

eja@tylin.com

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

DESIGNED BY  
**A. RIVERA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**S. LANDOLT**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



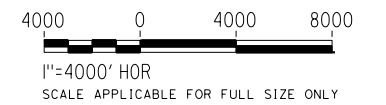
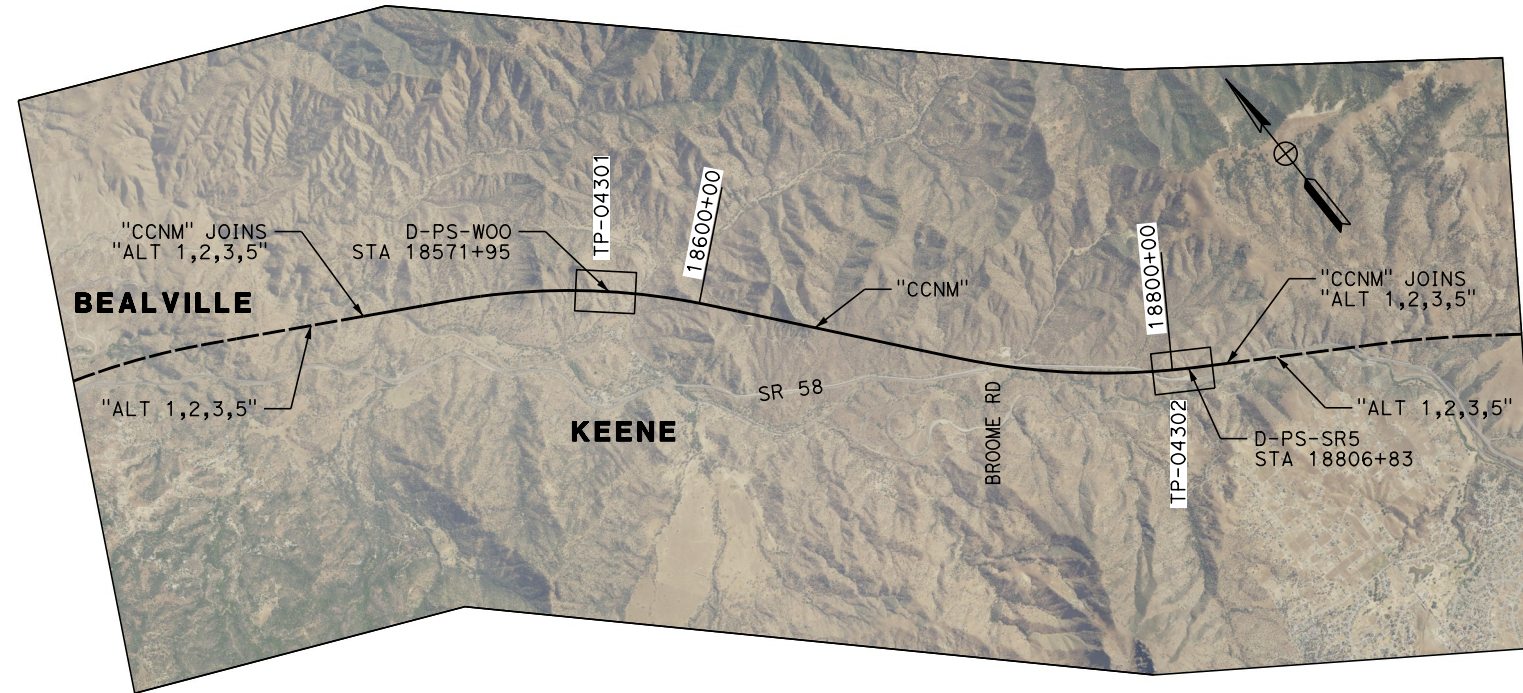
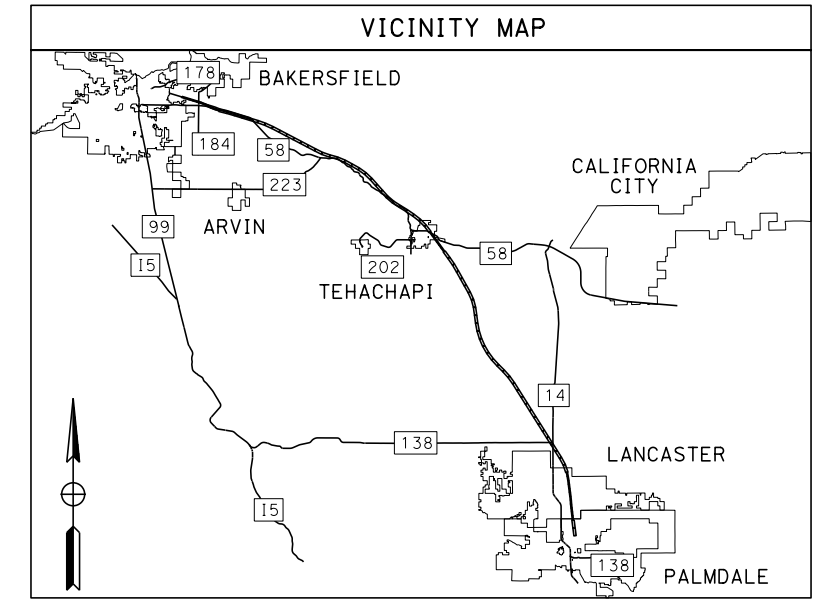
**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACTION POWER GENERAL  
LEGEND  
SHEET 1 OF 1

|                          |
|--------------------------|
| CONTRACT NO.<br>HSR13-44 |
| DRAWING NO.<br>TP-B0101  |
| SCALE<br>NO SCALE        |
| SHEET NO.<br>110         |



# CCNM DESIGN OPTION



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TP\BP-TP-B0102

7:24:58 PM

e.laina.baldwin@tylin.com  
1/13/2021

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

DESIGNED BY  
**A. RIVERA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**S. LANDOLT**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

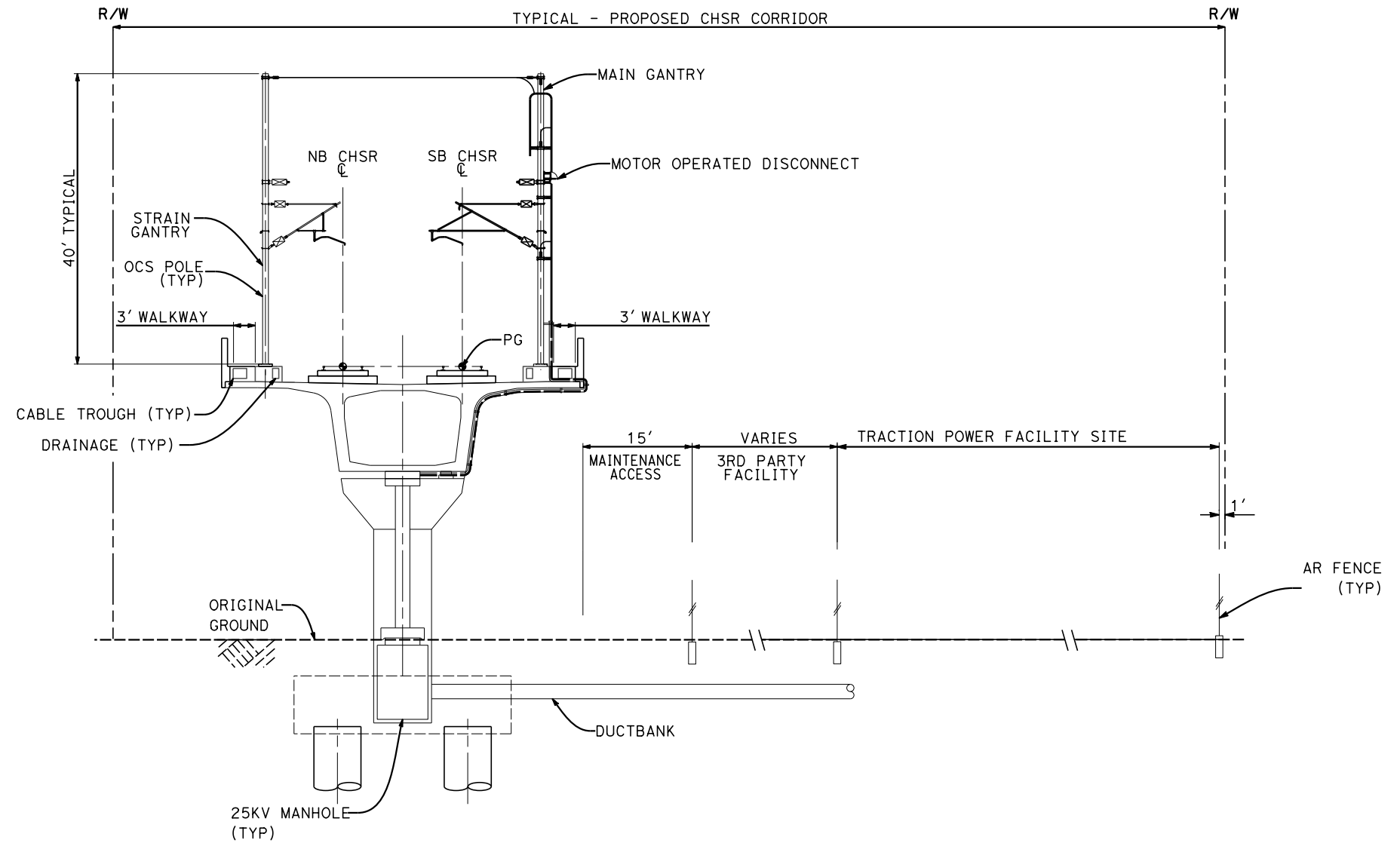


**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACTION POWER GENERAL  
KEY MAP  
SHEET 1 OF 1

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
TP-B0102  
SCALE  
AS SHOWN  
SHEET NO.  
111





**SECTION A**

STA 18571+95 PARALLELING STATION



**NOTES:**

1. FOR STRUCTURAL DIMENSIONS SEE STRUCTURAL CROSS SECTIONS.
2. TRACKFORM SHOWN IS INDICATIVE.
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE TABLES.
4. SECTION IS REPRESENTATIVE; DOES NOT ACCURATELY PORTRAY TRACK PROFILE RELATIVE TO EXISTING GROUND.

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

|                                 |
|---------------------------------|
| DESIGNED BY<br><b>A. RIVERA</b> |
| DRAWN BY<br><b>A. RIVERA</b>    |
| CHECKED BY<br><b>S. LANDOLT</b> |
| IN CHARGE<br><b>G. CAMPBELL</b> |
| DATE<br><b>01/29/2021</b>       |

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACTION POWER GENERAL  
TYPICAL SECTIONS  
SHEET 1 OF 2

|                                 |
|---------------------------------|
| CONTRACT NO.<br><b>HSR13-44</b> |
| DRAWING NO.<br><b>TP-B3101</b>  |
| SCALE<br><b>AS SHOWN</b>        |
| SHEET NO.<br><b>112</b>         |

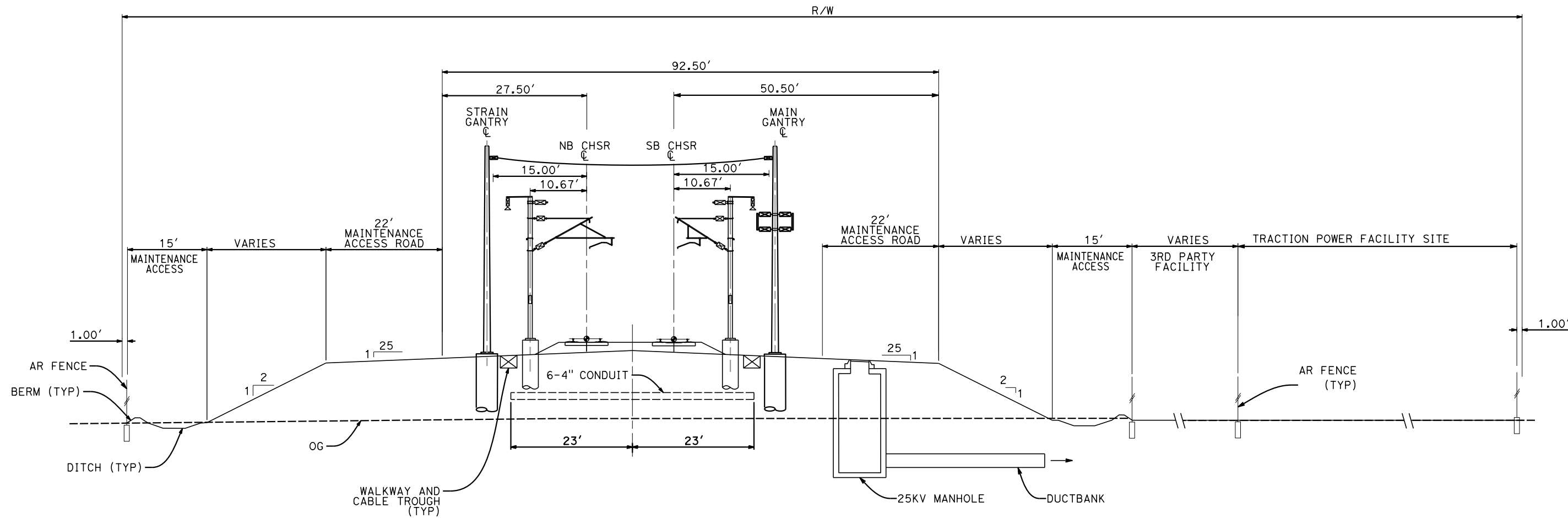


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TP\BP-TP-B3102

7:25:07 PM

1/13/2021

eja@tylin.com

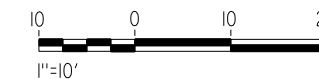


**SECTION B**

STA 18806+83 PARALLELING STATION

**NOTES:**

1. FOR STRUCTURAL DIMENSIONS SEE STRUCTURAL CROSS SECTIONS.
2. TRACKFORM SHOWN IS INDICATIVE.
3. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE TABLES.
4. SECTION IS REPRESENTATIVE; DOES NOT ACCURATELY PORTRAY TRACK PROFILE RELATIVE TO EXISTING GROUND.



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

DESIGNED BY  
**A. RIVERA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**S. LANDOLT**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



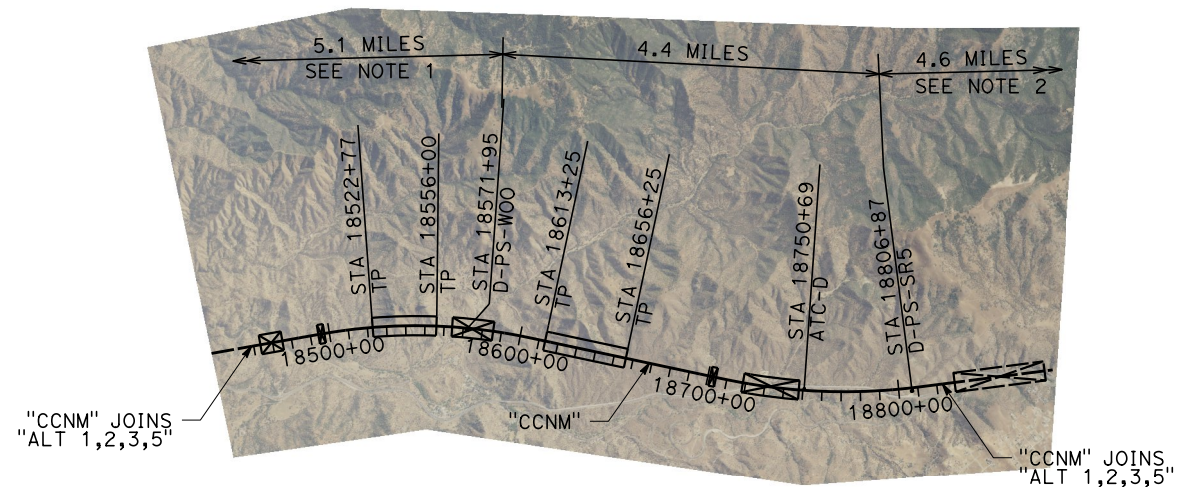
**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TRACTION POWER GENERAL  
TYPICAL SECTIONS  
SHEET 2 OF 2

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
TP-B3102  
SCALE  
AS SHOWN  
SHEET NO.  
113

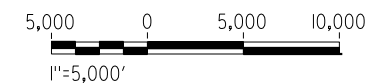


# CCNM DESIGN OPTION



**NOTES:**

1. SEE "ALT 1,2,3,5" FOR D-PS-BEA STA 18302+00.
2. SEE "ALT 1,2,3,5" FOR D-SS-CHA STA 19050+00.



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TP\BP-TP-D0101

7:22:40 PM

1/13/2021

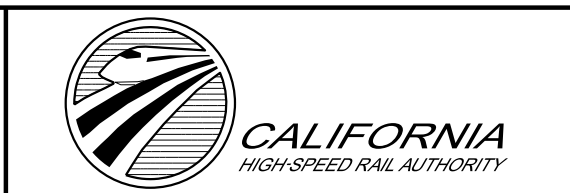
eja.ana.baldwin@tylin.com

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

DESIGNED BY  
**A. RIVERA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**S. LANDOLT**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TRACTION POWER FACILITY LAYOUT

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
TP-D0101  
SCALE  
AS SHOWN  
SHEET NO.  
114

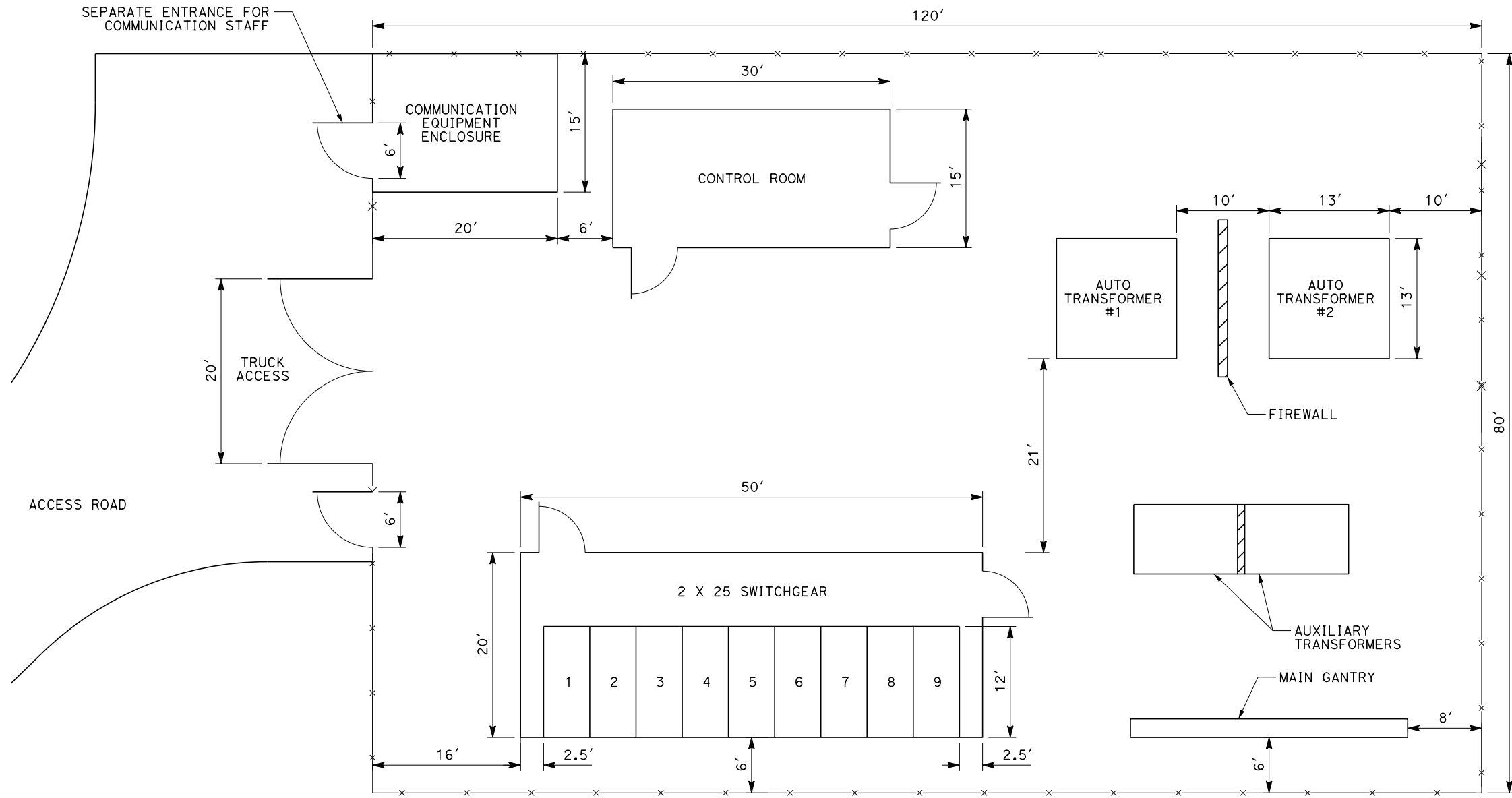


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TP\BP-TP-E4101

7:25:56 PM

1/13/2021

eia@tylin.com



**NOTES:**

1. THIS IS A TYPICAL LAYOUT AND THE ORIENTATION OF THE STATION WITH RESPECT TO TRACK, LOCATION OF UTILITY SUPPLY CIRCUITS, EQUIPMENT, AND ROAD ACCESS TO BE DETERMINED ON A SITE-BY-SITE BASIS.
2. THE MAIN GANTRY POSITION SHALL BE PARALLEL AND ADJACENT TO THE TRACK.
3. THERE WILL BE A STRAIN GANTRY LOCATED WITHIN THE RAILROAD R/W, PARALLEL TO AND ON THE OPPOSITE SIDE OF THE TRACK WITH FOOTPRINTS EXACTLY EQUAL TO THAT OF THE MAIN GANTRY.
4. IF THE TPF IS LOCATED AWAY FROM THE TRACK, THE MAIN GANTRY WILL BE LOCATED WITHIN THE RAILROAD R/W, PARALLEL TO AND TOWARDS TPF SIDE OF THE TRACK. IN THIS CASE AN ADDITIONAL 40' WIDE STRIP OF LAND WILL BE REQUIRED FROM THE TPF TO THE RAILROAD R/W FOR LAYING UNDERGROUND DUCT BANKS AND MANHOLES.
5. THE COMMUNICATION EQUIPMENT ROOM SHALL HOUSE COMMUNICATION INTERFACE EQUIPMENT FOR SCADA SYSTEM AND OTHER WAYSIDE COMMUNICATION EQUIPMENT.
6. THE GANTRIES SHALL BE 40' HIGH.
7. THIS LAYOUT IS PER TM 3.1.1.3-D AND SHOWN HERE FOR REFERENCE AND COMPLETENESS.



**PLAN**

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

DESIGNED BY  
**A. RIVERA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**S. LANDOLT**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TYPICAL LAYOUT  
PARALLELING STATION  
WITH 2 AUTOTRANSFORMERS

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
TP-E4101  
SCALE  
AS SHOWN  
SHEET NO.  
115

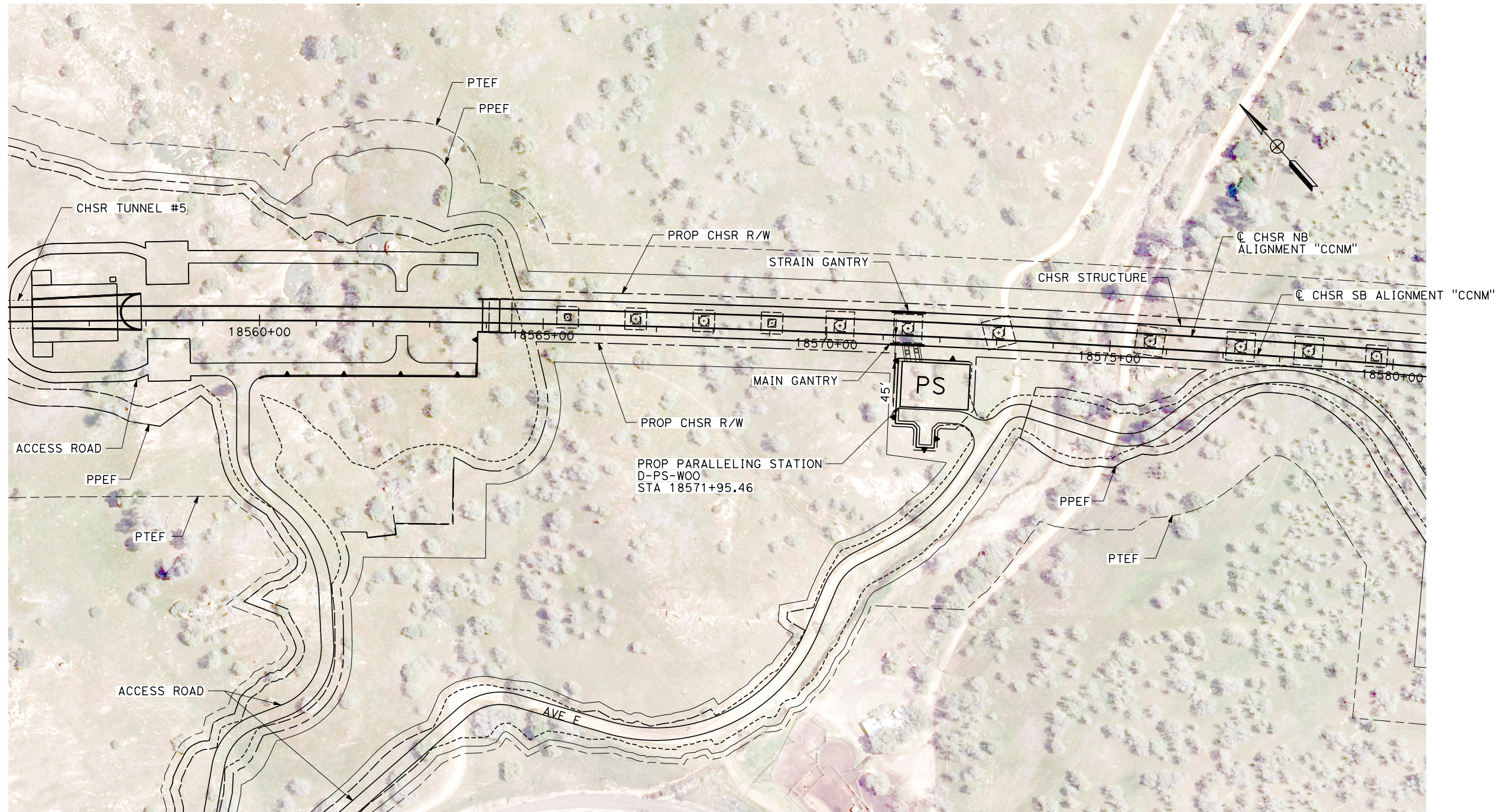


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TP\BP-TP-04301

7:26:03 PM

1/13/2021

eia@na.baldwin@tylin.com



### PLAN

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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**S. LANDOLT**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

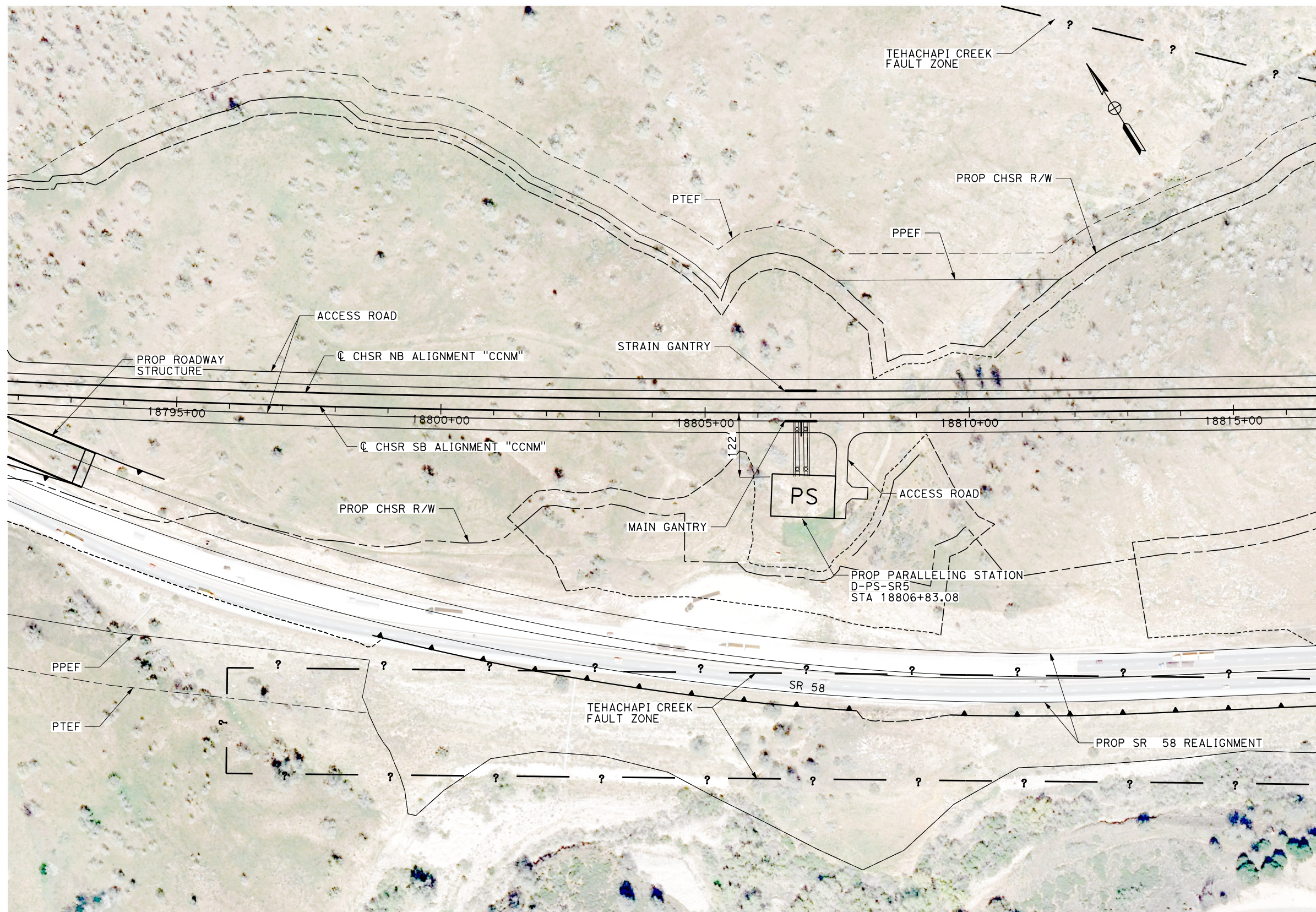
**NOT FOR  
CONSTRUCTION**



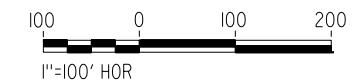
**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 TRACTION POWER SITE PLAN  
 PROPOSED PARALLELING STATION 3

CONTRACT NO.  
**HSR13-44**  
 DRAWING NO.  
**TP-04301**  
 SCALE  
**AS SHOWN**  
 SHEET NO.  
**116**





**PLAN**



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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**S. LANDOLT**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**




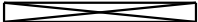


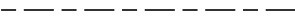







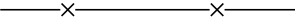


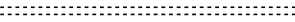
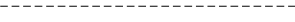







**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 TRACTION POWER SITE PLAN  
 PROPOSED PARALLELING STATION 4

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
TP-04302  
 SCALE  
AS SHOWN  
 SHEET NO.  
117



**LEGEND:**

**PLAN**

-  NORTH ARROW
-  BRIDGE
-  VIADUCT
-  TUNNEL
-  PROPOSED RIGHT OF WAY
-  EXIST RIGHT OF WAY
-  LIMITS OF EXCAVATION (CUT)
-  LIMITS OF EMBANKMENT (FILL)
-  FAULT ZONE
-  EXIST RETAINING WALL
-  PPEF
-  PROPOSED COLUMN
-  PROPOSED FENCE
-  PROPOSED PHASE BREAK
-  PROPOSED RETAINING WALL
-  PROPOSED TUNNEL
-  PTEF
-  PROPOSED TURNOUT
-  SRS  
STANDALONE RADIO SITE - SIZE: 40' X 25'
-  AUTOMATIC TRAIN CONTROL SYSTEM SITE A - SIZE: 70' X 35'
-  AUTOMATIC TRAIN CONTROL SYSTEM SITE B - SIZE: 30' X 35'
-  AUTOMATIC TRAIN CONTROL SYSTEM SITE D - SIZE: 100' X 65'
-  AUTOMATIC TRAIN CONTROL SYSTEM SITE E - SIZE: 110' X 65'
-  TRACK CROSSING PANEL

**PLAN**

 -E- PROPOSED TRACTION POWER SUPPLY LINE

Projects\701206\_00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TC\BP-TC-B0101

1/20/2021 2:01:02 AM

1/20/2021 2:01:02 AM

ics\_user\_17609

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

DESIGNED BY  
**A. RIVERA**  
DRAWN BY  
**A. RIVERA**  
CHECKED BY  
**S. LANDOLT**  
IN CHARGE  
**G. CAMPBELL**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



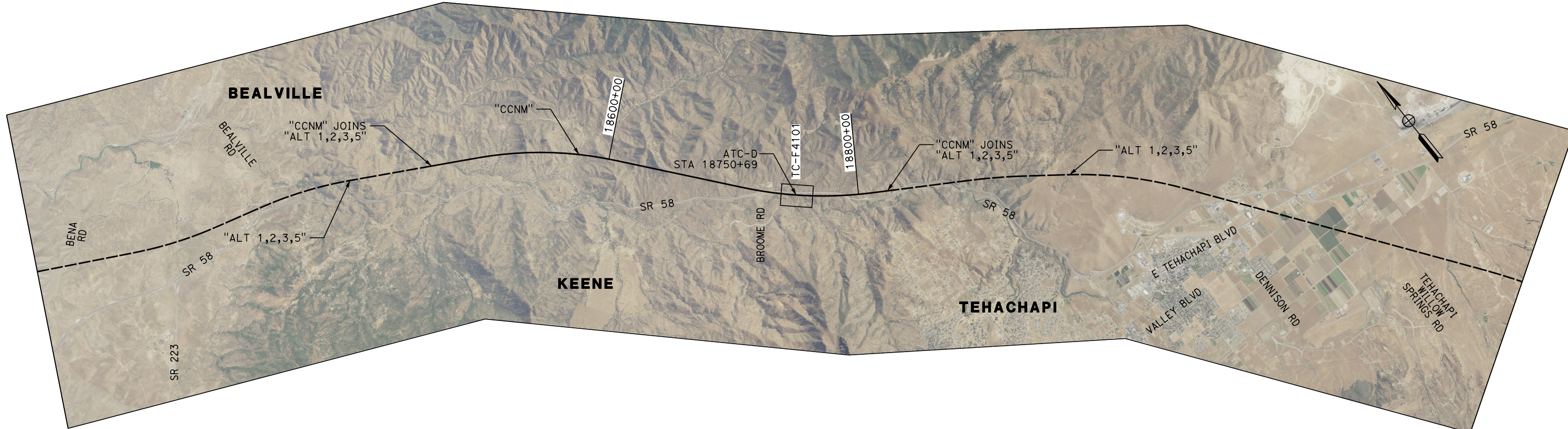
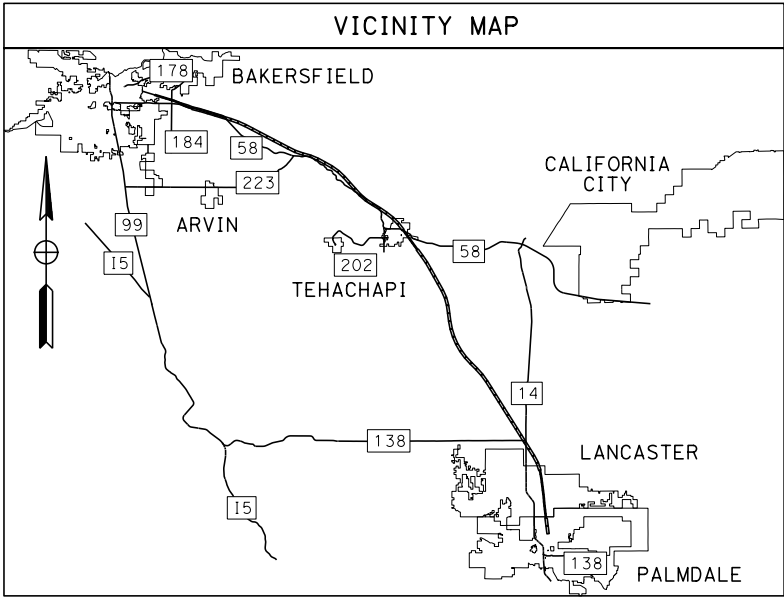
**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
AUTOMATIC TRAIN CONTROL GENERAL  
ABBREVIATIONS AND LEGEND  
SHEET 1 OF 1

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
TC-B0101  
SCALE  
NO SCALE  
SHEET NO.  
118



# CCNM DESIGN OPTION

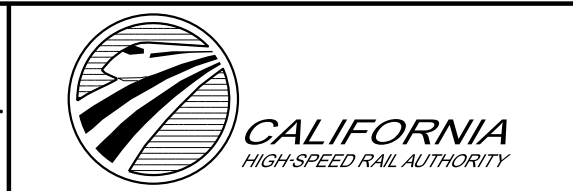


Projects\701206.00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TC\BP-TC-B0102  
 \_ics\_user\_17609 1/20/2021 2:01:28 AM

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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**S. LANDOLT**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
 CCNM DESIGN OPTION  
 AUTOMATIC TRAIN CONTROL GENERAL  
 KEY MAP  
 SHEET 1 OF 1

CONTRACT NO.  
**HSR13-44**  
 DRAWING NO.  
**TC-B0102**  
 SCALE  
**AS SHOWN**  
 SHEET NO.  
**119**

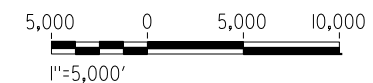


# CCNM DESIGN OPTION



**NOTES:**

1. TP (TUNNEL PORTAL) SITES HAVE RADIO ANTENNAS.
2. SEE "ALT 1,2,3,5" FOR ATC-D STA 18302+00.
3. SEE "ALT 1,2,3,5" FOR ATC-E STA 19208+50.



Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TC\BP-TC-D0101

2:01:21 AM

1/20/2021

jcs\_user\_17609

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

DESIGNED BY  
**A. RIVERA**

DRAWN BY  
**A. RIVERA**

CHECKED BY  
**S. LANDOLT**

IN CHARGE  
**G. CAMPBELL**

DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
AUTOMATIC TRAIN CONTROL LAYOUT

CONTRACT NO.  
HSR13-44

DRAWING NO.  
TC-D0101

SCALE  
AS SHOWN

SHEET NO.  
120

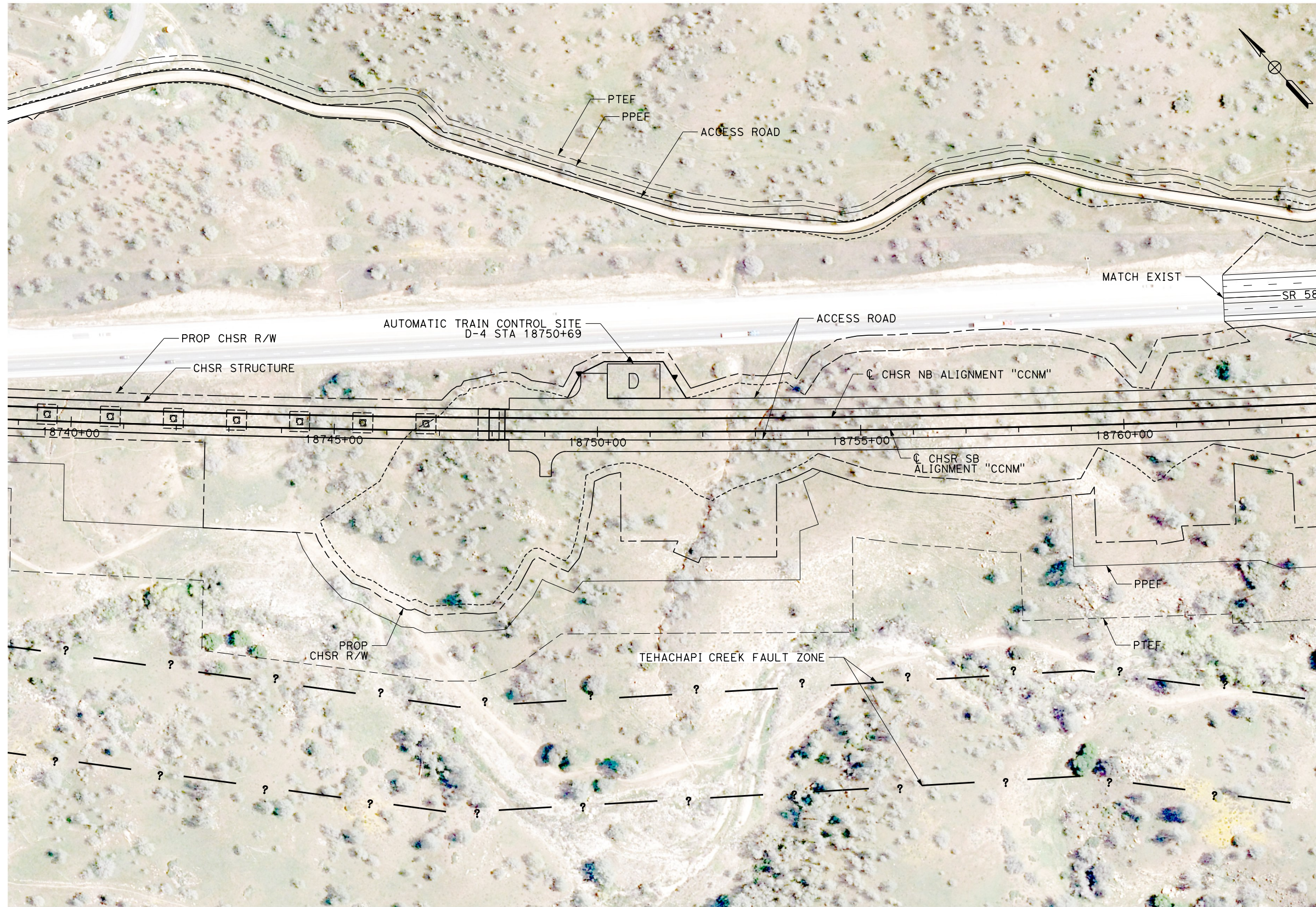


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TC\BP-TC-F4101

2:06:58 AM

1/20/2021

\_ics\_user\_17609



- 1. SITE D SIZE: 100' X 65'.



**PLAN**

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

DESIGNED BY  
**A. RIVERA**  
 DRAWN BY  
**A. RIVERA**  
 CHECKED BY  
**S. LANDOLT**  
 IN CHARGE  
**G. CAMPBELL**  
 DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**

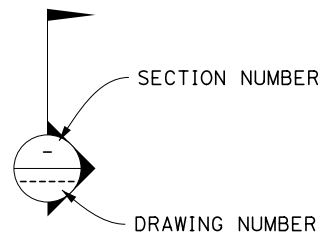
CCNM DESIGN OPTION  
 AUTOMATIC TRAIN CONTROL SITE PLAN  
 SITE @ 18750+69

CONTRACT NO.  
HSR13-44  
 DRAWING NO.  
TC-F4101  
 SCALE  
AS SHOWN  
 SHEET NO.  
121









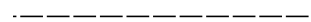
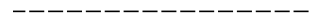











**LEGEND:**

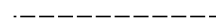

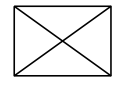
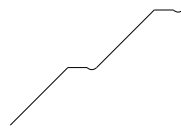
**PLAN**

- 

SECTION NUMBER

DRAWING NUMBER
  -  CURVE DATA (ALIGNMENTS, ROADWAYS)
  -  CURVE DATA (STRUCTURES)
  -  LINE DATA (ALIGNMENTS, ROADWAYS)
  -  NORTH ARROW
  -  PROPOSED RIGHT OF WAY
  -  PROPOSED TEMPORARY ENVIRONMENTAL FOOTPRINT (PTEF)
  -  PROPOSED PERMANENT ENVIRONMENTAL FOOTPRINT (PEF)
  -  EXISTING RIGHT OF WAY
  -  LIMITS OF EXCAVATION (CUT)
  -  LIMITS OF EMBANKMENT (FILL)
  -  FAULT ZONE
  -  EXISTING RETAINING WALL
  -  PROPOSED RETAINING WALL
  -  TUNNEL EXCAVATION LIMITS
  -  TRACK CROSSING PANEL
- UTILITIES**
-  EXISTING ELECTRICAL TRANSMISSION
  -  EXISTING ELECTRICAL TRANSMISSION TOWER
  -  EXISTING STORM DRAIN
  -  EXISTING GAS LINE

**PROFILE**

-  ORIGINAL GROUND
-  PROPOSED CHSR ELEVATION
-  STRUCTURAL CLEARANCE ENVELOPE
-  FACE EXCAVATION (CUT AND BENCH)

**GENERAL NOTES**

1. ROADWAY IMPROVEMENTS NOT PART OF THIS SET.
2. FOR PROPOSED RETAINING WALL SEE SHEET SERIES ST-G.

Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TNBP-TN-B0101.dgn

3:17:55 AM

1/20/2021

jcs\_user\_17609

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

DESIGNED BY  
**Z. SKOVAJSOVA**

DRAWN BY  
**N. FORTEZ**

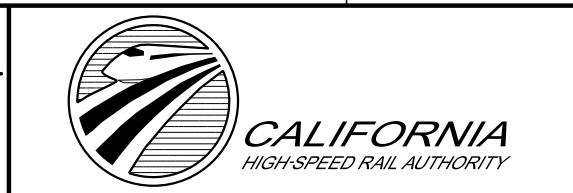
CHECKED BY  
**R. KUNDU**

IN CHARGE  
**J. MORRISON**

DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TUNNEL LEGEND

CONTRACT NO.  
HSR13-44

DRAWING NO.  
TN-B0101

SCALE  
NO SCALE

SHEET NO.  
122



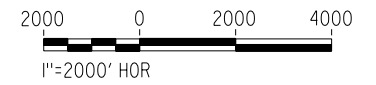
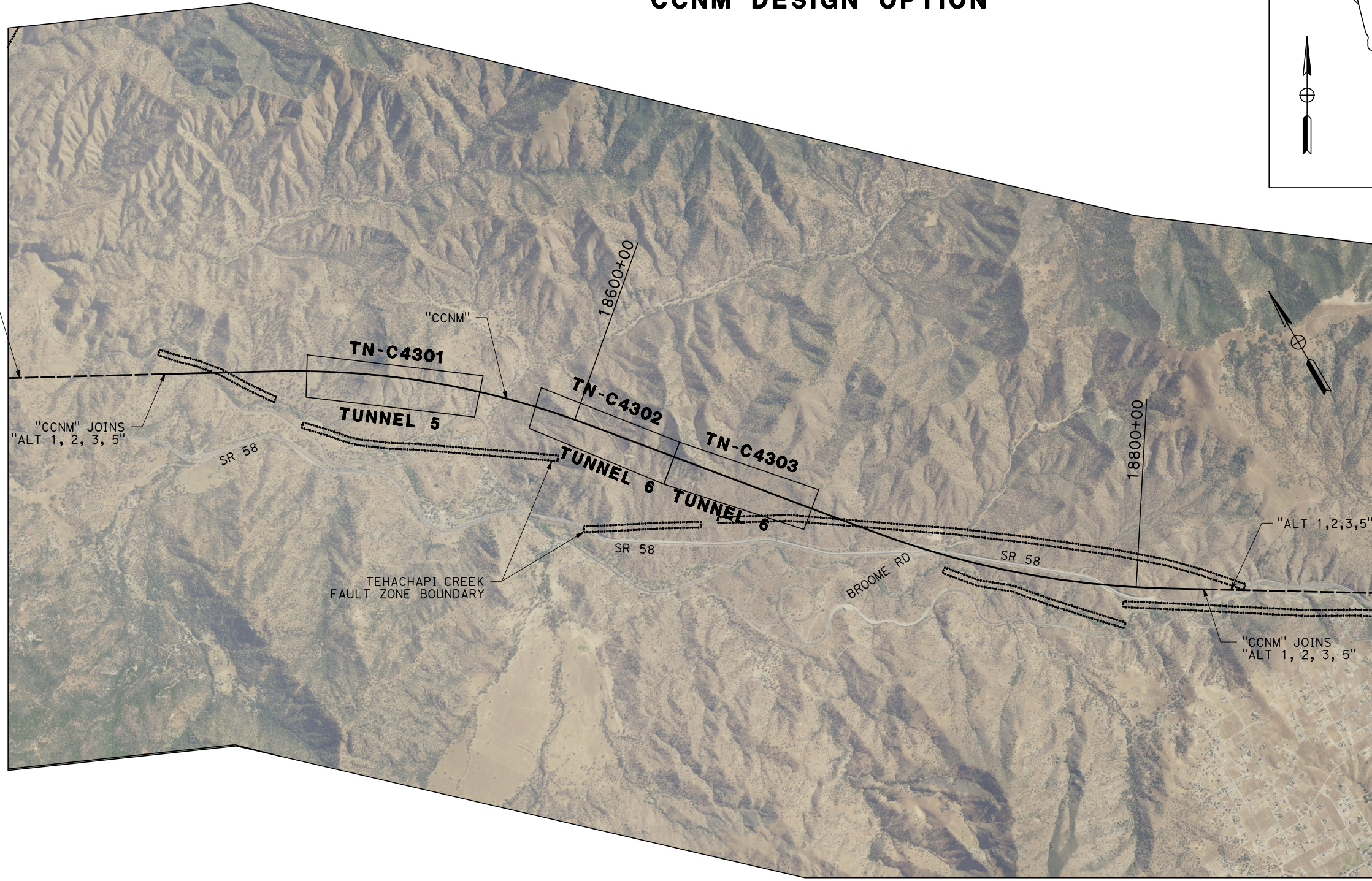
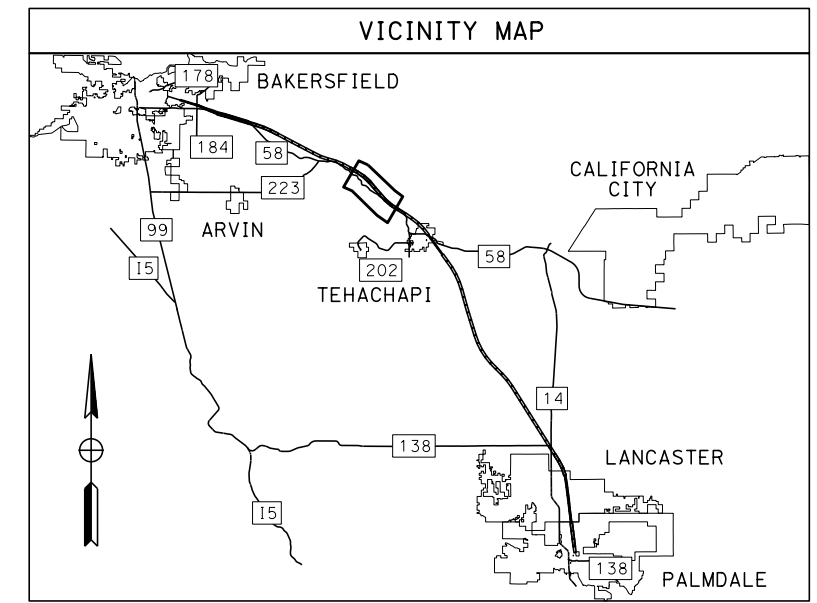
Projects\701206.00\_CHSRBP\00\_CADD\Sheet\_Files\CCNM\TNBP-TN-B0102.dgn

3:15:15 AM

1/20/2021

ics\_user\_17609

# CCNM DESIGN OPTION



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

DESIGNED BY  
**Z. SKOVAJSOVA**  
DRAWN BY  
**N. FORTEZ**  
CHECKED BY  
**R. KUNDU**  
IN CHARGE  
**J. MORRISON**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
KEY MAP - ALIGNMENT TUNNELS

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
TN-B0102  
SCALE  
AS SHOWN  
SHEET NO.  
123

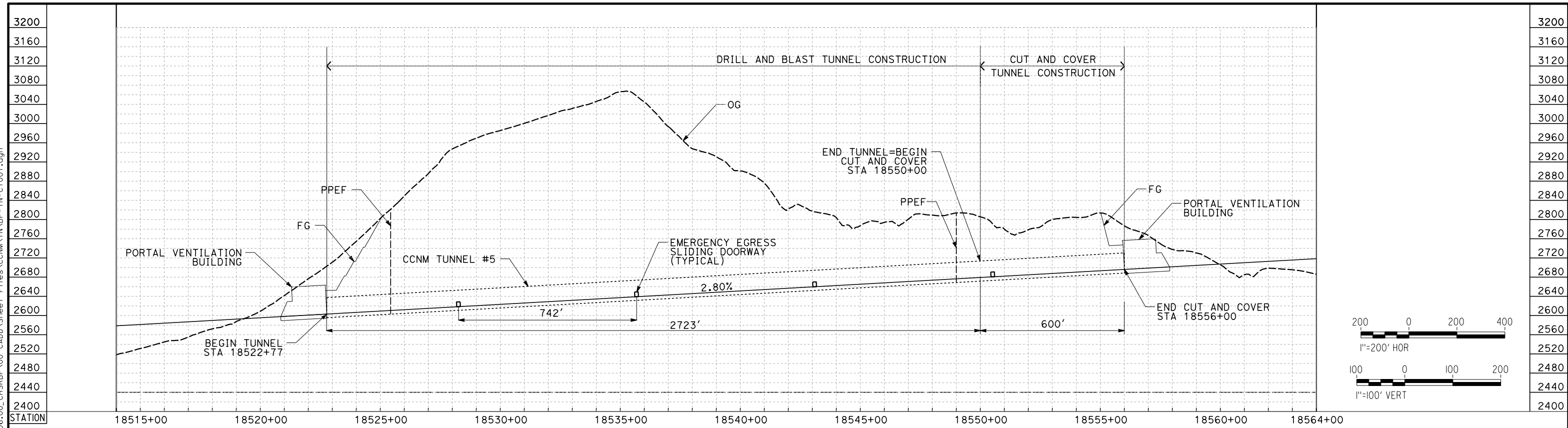


Projects\701206\_00\_CHSRBP\_00\_CADD\Sheet Files\CCNM\TNBP-TN-C1001.dgn

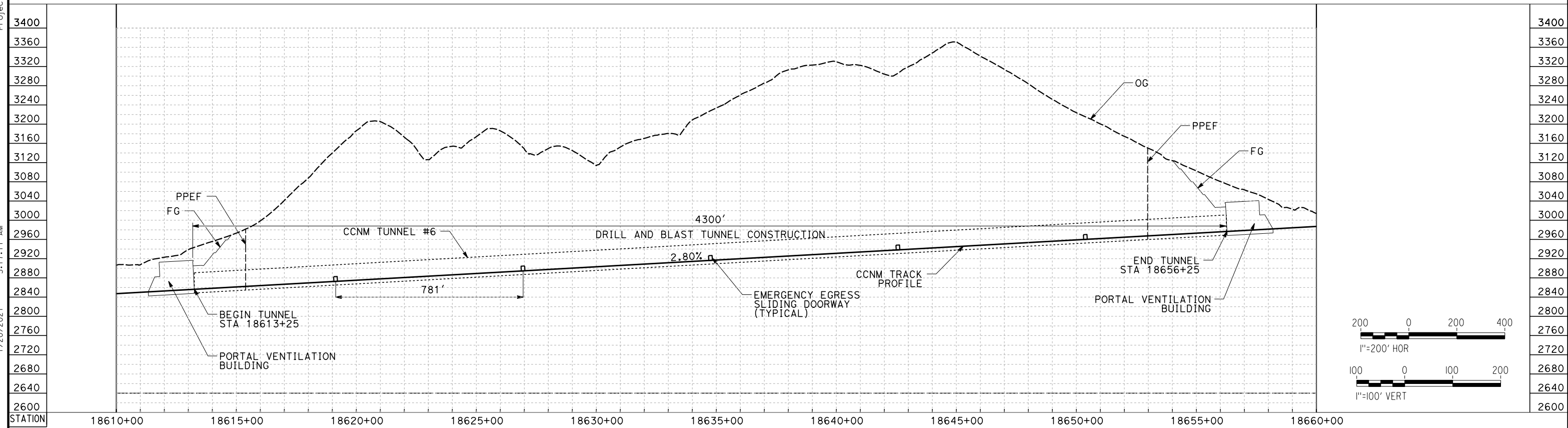
3:17:11 AM

1/20/2021

jcs\_user\_17609



**TUNNEL 5**



**TUNNEL 6**

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

DESIGNED BY  
**Z. SKOVAJSOVA**  
DRAWN BY  
**N. FORTEZ**  
CHECKED BY  
**R. KUNDU**  
IN CHARGE  
**J. MORRISON**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TUNNEL PROFILE - TUNNEL 5 AND 6

CONTRACT NO.  
**HSR13-44**  
DRAWING NO.  
**TN-C1001**  
SCALE  
**AS SHOWN**  
SHEET NO.  
**124**



Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TNBP-TN-C4301.dgn

3:18:52 AM

1/20/2021

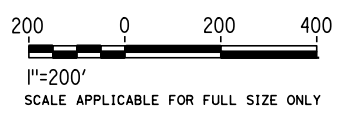
ics\_user\_17609



**NOTES:**

1. FAULT ZONE LOCATIONS ARE APPROXIMATE, TO BE CONFIRMED.
2. FOR PROFILE INFORMATION SEE SHEET TN-C1001.
3. PROPOSED 4" WATER LINE PARALLELS ALIGNMENT FROM STATION 18458+80 TO 18822+99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.
4. PROPOSED ELECTRICAL SERVICE PARALLELS ALIGNMENT FROM STATION 18758+80 TO 18822.99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.

**PLAN**



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

DESIGNED BY  
**Z. SKOVAJSOVA**  
DRAWN BY  
**N. FORTEZ**  
CHECKED BY  
**R. KUNDU**  
IN CHARGE  
**J. MORRISON**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

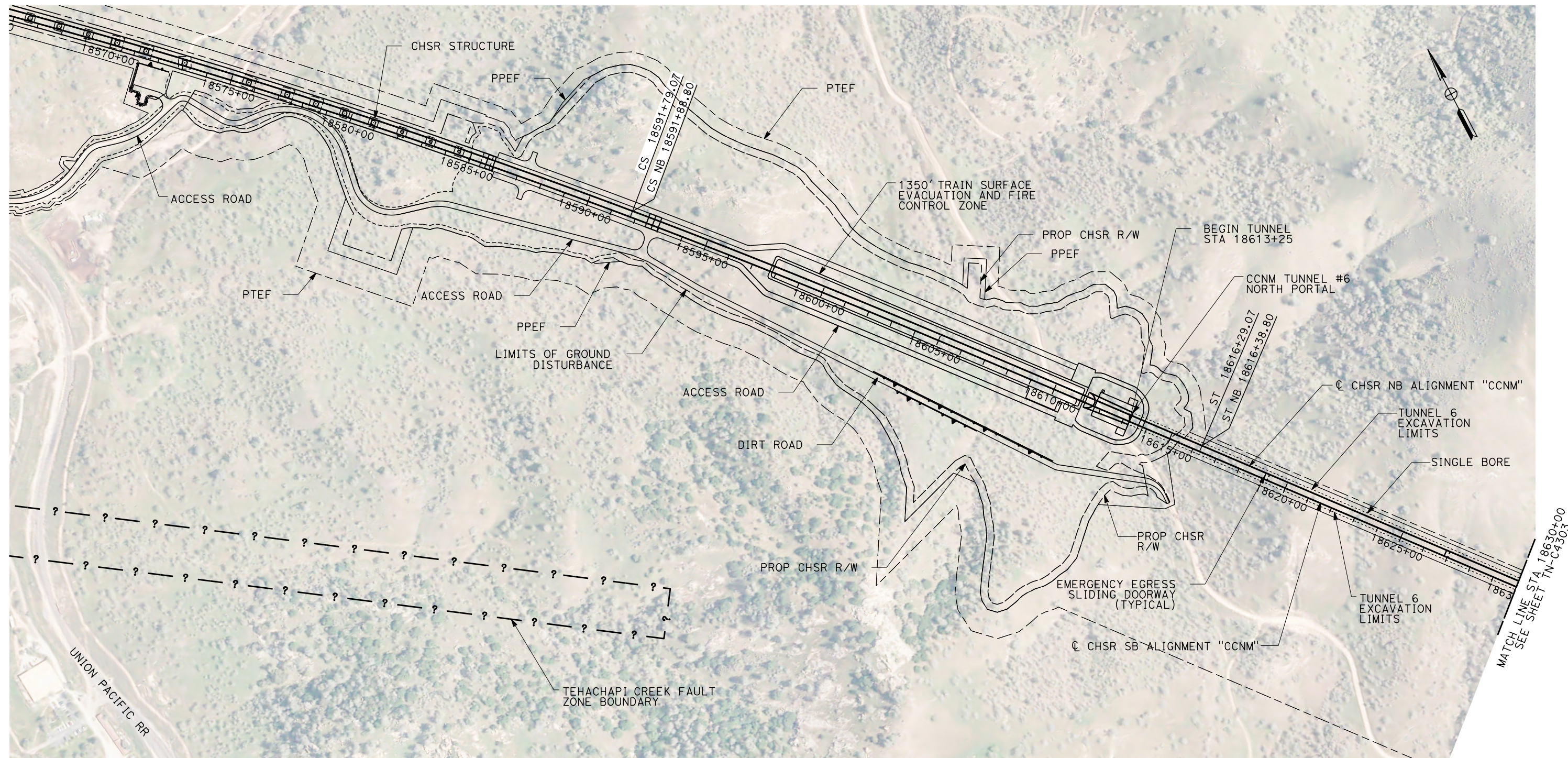
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**  
**BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TUNNEL 5 - NORTH AND SOUTH PORTALS  
STA 18505+00 TO STA 18566+00

CONTRACT NO.  
HSR13-44  
DRAWING NO.  
TN-C4301  
SCALE  
AS SHOWN  
SHEET NO.  
125

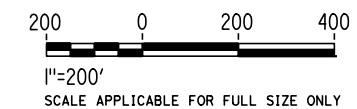




**PLAN**

**NOTES:**

1. FAULT ZONE LOCATIONS ARE APPROXIMATE, TO BE CONFIRMED.
2. FOR PROFILE INFORMATION SEE SHEET TN-C1001.
3. PROPOSED 4" WATER LINE PARALLELS ALIGNMENT FROM STATION 18458+80 TO 18822+99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.
4. PROPOSED ELECTRICAL SERVICE PARALLELS ALIGNMENT FROM STATION 18758+80 TO 18822+99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.



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

|                                     |
|-------------------------------------|
| DESIGNED BY<br><b>Z. SKOVAJSOVA</b> |
| DRAWN BY<br><b>N. FORTEZ</b>        |
| CHECKED BY<br><b>R. KUNDU</b>       |
| IN CHARGE<br><b>J. MORRISON</b>     |
| DATE<br><b>01/29/2021</b>           |

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFILED TO PALMDALE**

CCNM DESIGN OPTION  
TUNNEL 6 - NORTH PORTAL  
STA 18566+00 TO STA 18630+00

|                                 |
|---------------------------------|
| CONTRACT NO.<br><b>HSR13-44</b> |
| DRAWING NO.<br><b>TN-C4302</b>  |
| SCALE<br><b>AS SHOWN</b>        |
| SHEET NO.<br><b>126</b>         |

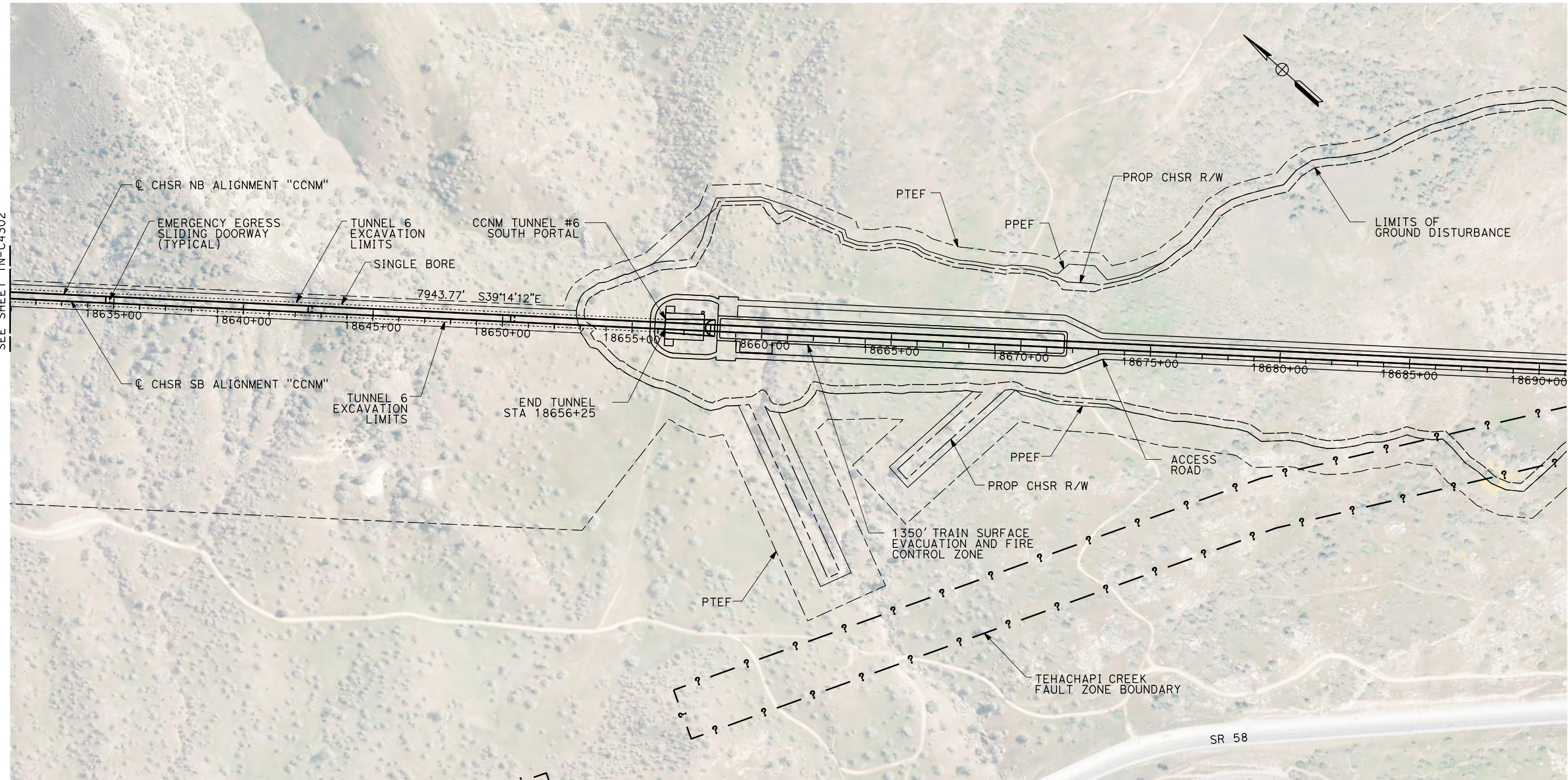


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TNBP-TN-C4303.dgn

3:18:05 AM

1/20/2021

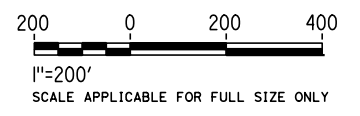
jcs\_user\_17609



**PLAN**

**NOTES:**

1. FAULT ZONE LOCATIONS ARE APPROXIMATE, TO BE CONFIRMED.
2. FOR PROFILE INFORMATION SEE SHEET TN-C1001.
3. PROPOSED 4" WATER LINE PARALLELS ALIGNMENT FROM STATION 18458+80 TO 18822+99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.
4. PROPOSED ELECTRICAL SERVICE PARALLELS ALIGNMENT FROM STATION 19758+80 TO 18822+99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.



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

DESIGNED BY  
**Z. SKOVAJSOVA**  
DRAWN BY  
**N. FORTEZ**  
CHECKED BY  
**R. KUNDU**  
IN CHARGE  
**J. MORRISON**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT  
BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TUNNEL 6 - SOUTH PORTAL  
STA 18630+00 TO STA 18690+00

CONTRACT NO.  
**HSR13-44**  
DRAWING NO.  
**TN-C4303**  
SCALE  
**AS SHOWN**  
SHEET NO.  
**127**

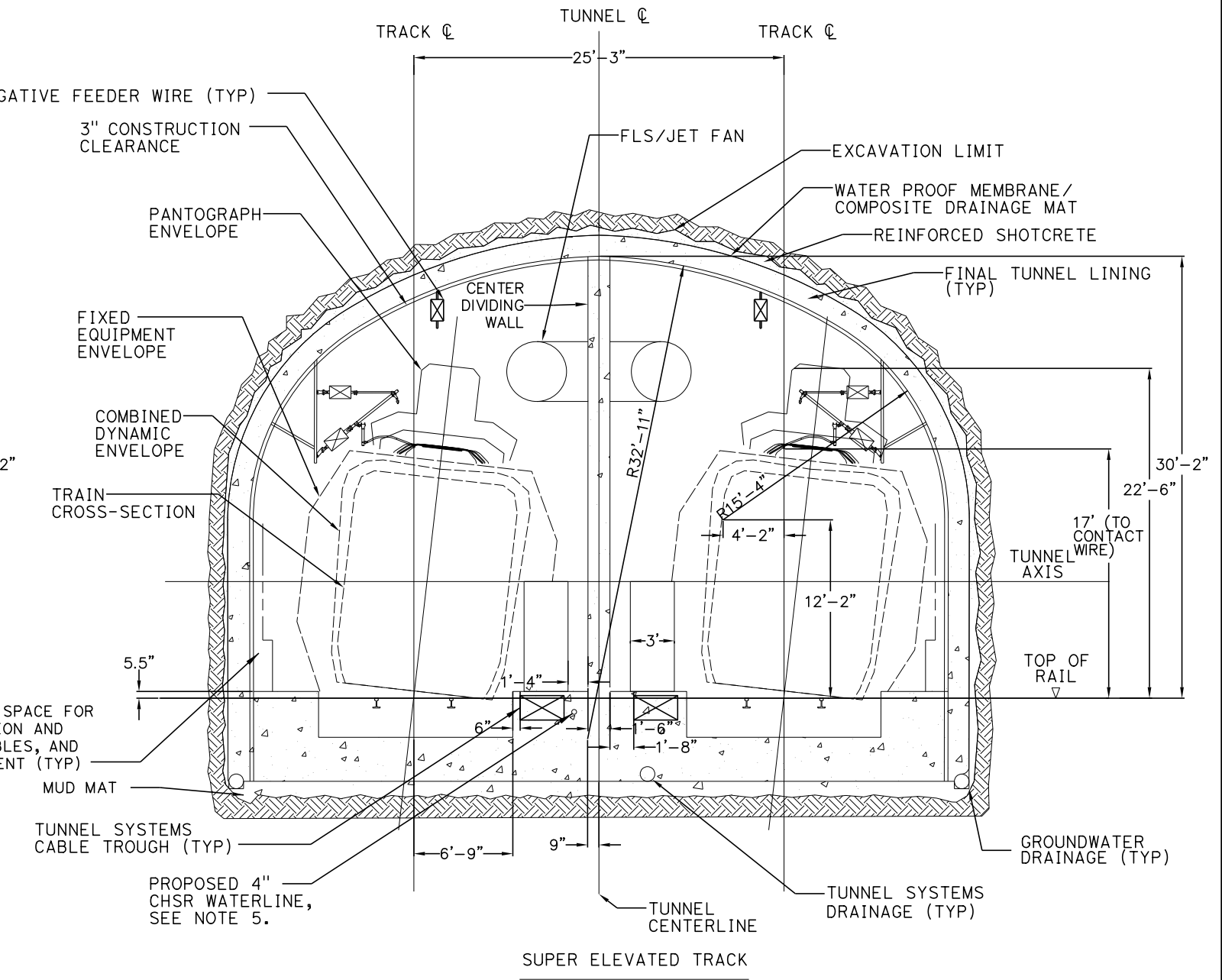
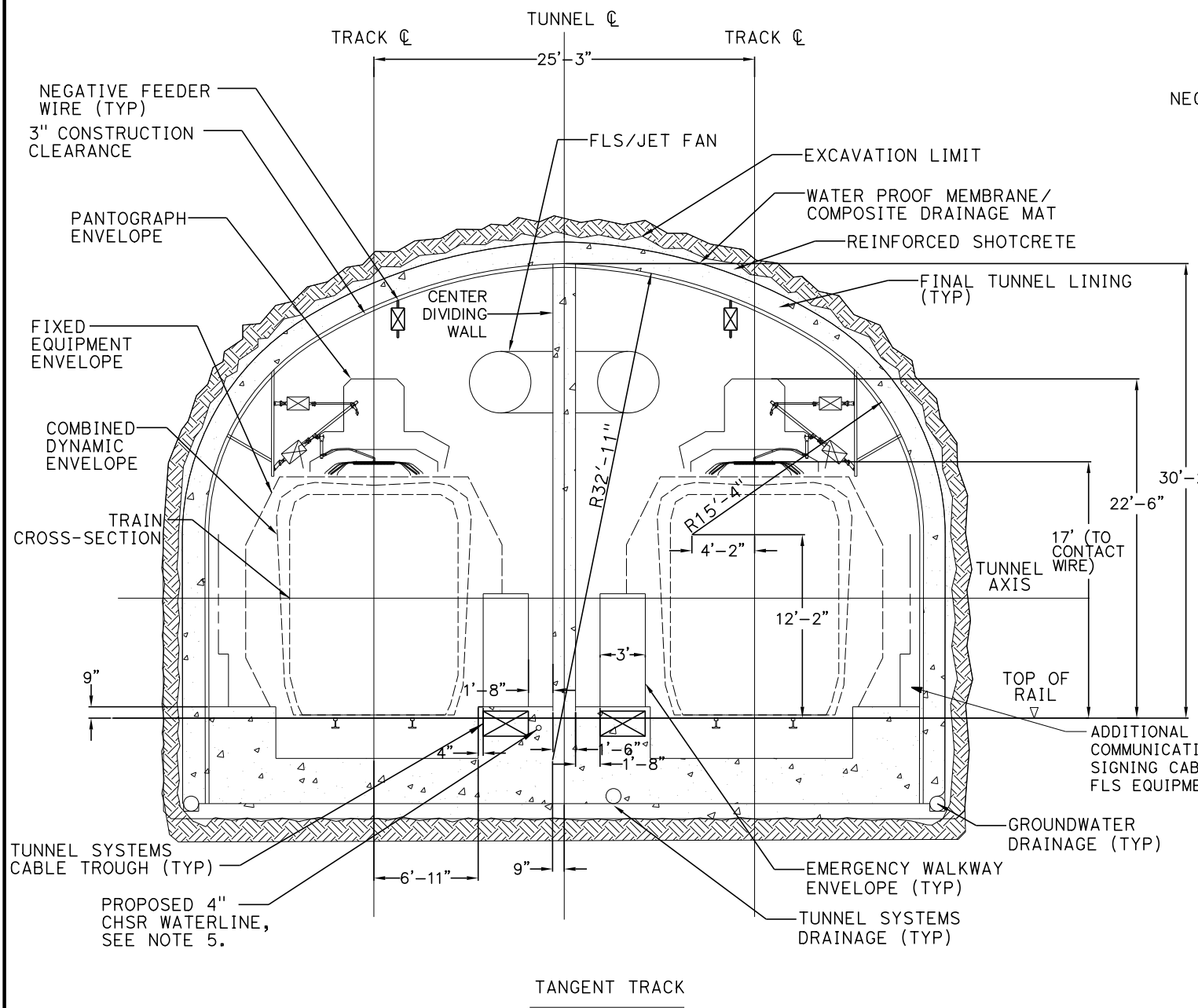


Projects\701206\_00\_CHSRBP\_00\_CADD\Sheet Files\CCNM\TNBP-TN-D3001.dgn

3:17:44 AM

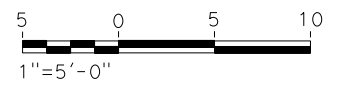
1/20/2021

ics\_user\_17609



**GENERAL NOTES:**

1. DRILL AND BLAST METHOD IS IDENTIFIED FOR THE 15% IN-PROGRESS DESIGN OF DOUBLE TRACK TUNNEL FOR TUNNEL 5 AND 6 IN HARD ROCK UNITS.
2. EXCAVATION, GROUND SUPPORT, LINING THICKNESS AND WATERTIGHTNESS PROVISIONS WILL BE OPTIMIZED BASED ON SITE INVESTIGATION RESULTS AND TUNNEL-SPECIFIC DESIGN WORK.
3. TYPICAL CROSS-SECTION REQUIRES FURTHER STUDY TO EVALUATE DYNAMIC AIRFLOW/PRESSURE LEVELS UNDER HIGH SPEED OPERATING CONDITIONS, AND TO FURTHER REFINE SPACE ALLOTTED FOR STRUCTURES, EQUIPMENT, AND EGRESS.
4. CENTER DIVIDING WALL SHALL CONFORM TO NFPA 130 AND HAVE A 2 HOUR FIRE RATING.
5. THE COMPOSITE VEHICLE STATIC AND DYNAMIC ENVELOPES SHOWN FOLLOW TM1.1.10-A AND C.
6. PROPOSED 4" WATER LINE PARALLELS ALIGNMENT FROM STATION 18458+80 TO 18822+99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.



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

DESIGNED BY  
**Z. SKOVAJSOVA**  
DRAWN BY  
**N. FORTEZ**  
CHECKED BY  
**R. KUNDU**  
IN CHARGE  
**J. MORRISON**  
DATE  
**01/29/2021**

**RECORD SET**  
**PEPD**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**

**BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TUNNEL DRILL AND BLAST METHOD  
SINGLE TUNNEL CLEARANCE DIAGRAM

CONTRACT NO.  
HSR13-44

DRAWING NO.  
TN-D3001

SCALE  
AS SHOWN

SHEET NO.  
128

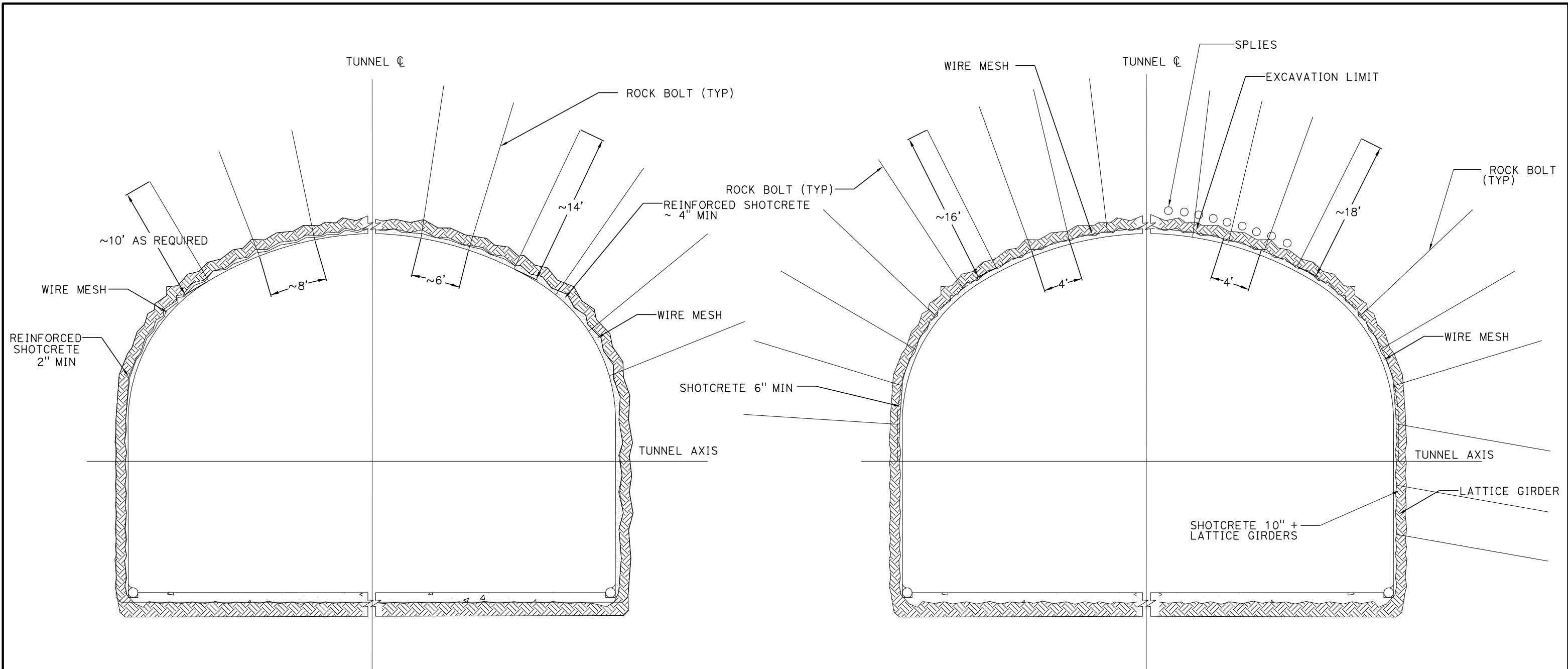


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TNBP-TN-D3002.dgn

3:19:00 AM

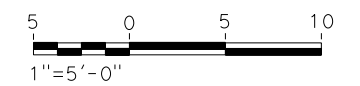
1/20/2021

jcs\_user\_17609



**GENERAL NOTES:**

1. A DRILL AND BLAST OPTION IS IDENTIFIED FOR THE 15% IN-PROGRESS DESIGN OF TWIN, SINGLE TRACK TUNNELS FOR TUNNEL 5 AND 6 IN HARD ROCK UNITS.
2. EXCAVATION, GROUND SUPPORT, LINING THICKNESS AND WATERTIGHTNESS PROVISIONS WILL BE OPTIMIZED BASED ON SITE INVESTIGATION RESULTS AND TUNNEL-SPECIFIC DESIGN WORK.
3. TYPICAL CROSS-SECTION REQUIRES FURTHER STUDY TO EVALUATE DYNAMIC AIRFLOW/PRESSURE LEVELS UNDER HIGH SPEED OPERATING CONDITIONS, AND TO FURTHER REFINE SPACE ALLOTTED FOR STRUCTURES, EQUIPMENT, AND EGRESS.
4. CLASS I AND II MAY BE EXCAVATED FULL FACE. CLASS III MAY REQUIRE HEADING AND BENCH EXCAVATION WITH FACE SUPPORT AS REQUIRED. CLASS IV MAY REQUIRE TOP HEADING AND BENCH WITH SIDE SLASH, SPILES, AND FACE SUPPORT AS NEEDED. CLASS IV MAY REQUIRE A CHANGE IN EXCAVATION METHOD TO AN SEM CONSTRUCTION ALTERNATIVE.
5. THE COMPOSITE VEHICLE STATIC AND DYNAMIC ENVELOPES SHOWN FOLLOW TM1.1.10-A AND C.



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

DESIGNED BY  
**Z. SKOVAJSOVA**  
DRAWN BY  
**N. FORTEZ**  
CHECKED BY  
**R. KUNDU**  
IN CHARGE  
**J. MORRISON**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**

**BAKERSFIELD TO PALMDALE**  
CCNM DESIGN OPTION  
TUNNEL DRILL AND BLAST METHOD  
SINGLE TUNNEL - INITIAL SUPPORT

CONTRACT NO.  
**HSR13-44**

DRAWING NO.  
**TN-D3002**

SCALE  
**AS SHOWN**

SHEET NO.  
**129**

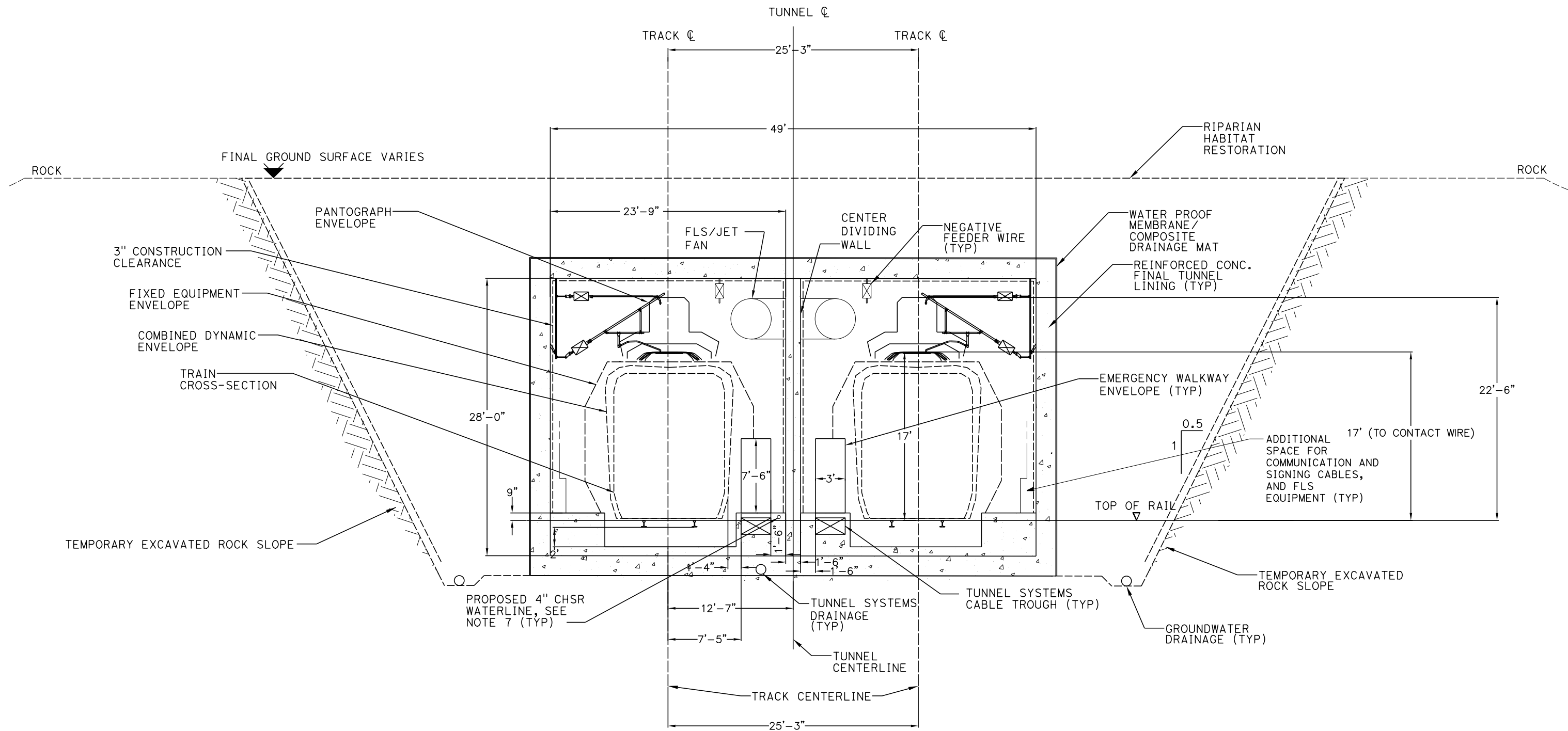


Projects\701206\_00\_CHSRBP\00\_CADD\Sheet Files\CCNM\TNBP-TN-D3003.dgn

4:26:19 AM

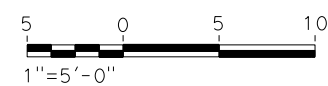
1/20/2021

jcs\_user\_17609



**GENERAL NOTES:**

1. TEMPORARY SLOPE AND BENCH GEOMETRIES SHOWN ARE BASED ON GUIDANCE PROVIDED IN TM 2.6.7.
2. SLOPE PROTECTION, DRAINAGE, STRUCTURAL DIMENSIONS, AND STABILIZATION PROVISIONS WILL BE DEVELOPED BASED ON SITE INVESTIGATION RESULTS AND SLOPE-SPECIFIC DESIGN WORK.
3. TYPICAL CROSS-SECTION REQUIRES FURTHER STUDY TO EVALUATE DYNAMIC AIRFLOW/PRESSURE LEVELS UNDER HIGH SPEED OPERATING CONDITIONS, AND TO FURTHER REFINE SPACE ALLOTTED FOR STRUCTURES, EQUIPMENT, AND EGRESS.
4. EXCAVATION, GROUND SUPPORT, LINING AND WATERTIGHTNESS PROVISIONS WILL BE OPTIMIZED BASED ON SITE INVESTIGATION RESULTS AND CUT AND COVER-SPECIFIC DESIGN WORK.
5. CUT AND COVER BOX TYPICAL SECTION TO BE USED AT TUNNEL 5 STATIONS 18550+00 TO 18556+00.
6. CENTER DIVIDING WALL SHALL CONFORM TO NFPA 130 AND HAVE A 2 HOUR FIRE RATING.
7. PROPOSED 4" WATER LINE PARALLELS ALIGNMENT FROM STATION 18458+80 TO 18822+99. IN THE TUNNEL IT IS INSTALLED BELOW THE EMERGENCY WALKWAY.



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

DESIGNED BY  
**Z. SKOVAJSOVA**  
DRAWN BY  
**N. FORTEZ**  
CHECKED BY  
**R. KUNDU**  
IN CHARGE  
**J. MORRISON**  
DATE  
**01/29/2021**

**RECORD SET  
PEPD  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED RAIL PROJECT**

**BAKERSFIELD TO PALMDALE**

CCNM DESIGN OPTION  
TUNNEL CUT AND COVER BOX  
CLEARANCE DIAGRAM - TANGENT TRACK

CONTRACT NO.  
**HSR13-44**

DRAWING NO.  
**TN-D3003**

SCALE  
**AS SHOWN**

SHEET NO.  
**130**