

Appendix C.
Typical Cross Sections

This summary presents guidance for geometric design as it pertains to horizontal and vertical alignment elements as well as track layouts at Caltrain Stations. There are guidelines and values for three types of design criteria: Desirable, Minimum and Exceptional as described in the Technical Memorandum: *Alignment Design Standards for High Speed Train Operation* by the California High Speed Rail Authority.

This appendix includes various typical sections that can be used for configurations throughout the corridor and are conceptual. These sections support the various vertical design options (at grade, elevated, below grade, and tunnel). For the at grade sections, two configurations for the electrification system (Overhead Contact System) are shown. There are also sample construction staging concepts shown for various vertical design options such that requirements for temporary construction easements could be identified.

The various typical sections are summarized and arranged by the minimum right-of-way required for the final configuration. These typical sections can be used with the existing Right-of-Way schematics in Appendix J. These sections also include transition sections which are required to move from one vertical design option to another. The Minimum Right-of Way Requirements schematics depict typical sections that correspond with the detailed typical sections, where Caltrain and California High-speed Train tracks may be elevated, at grade, below grade, or in transition along the corridor. The specified right of way widths (designated in the color scheme) also correlates to the Plan and Profile Drawings (shown in Appendix B) that shows existing rail right of way along the corridor. A 5' utility easement is considered in the dimensioned ROW widths. Temporary construction easements are not factored in these ROW dimensions. There are total of 3 minimum right-of-way exhibits for:

- Mainline Track
- Stations - Center Island or Inboard Platforms
- Stations - Outboard Platforms

Main Line

- HST - Track spacing is 16 feet 6 inches (center to center) – Desirable
- HST – Track spacing is 15 feet (center to center) – Minimum
- HST – Track spacing is 14 feet (center to center) - Exceptional
- Caltrain – Track spacing is 15 feet (center to center)
- Track spacing between mainline track and sidings is 25 feet.

Utility Easement

Third party utilities (fiber optic, etc) will be consolidated in a 5 feet utility easement.

MINIMUM RIGHT-OF-WAY REQUIREMENTS

	<60'	60' - 69'	70' - 79'	80' - 89'	90' - 99'	100' - 104'	105' - 114'	115' - 124'	125' - 150'	151' - 215'	≥216'
ELEVATED (AERIAL / BERM)											
TRANSITION ZONE - ELEVATED TO AT-GRADE (MIN LENGTH REQ = 6,280')											
AT-GRADE (ROAD OVER OR ROAD UNDER)											
TRANSITION ZONE - AT-GRADE - BELOW GRADE (MIN LENGTH REQ = 6,280')											
BELOW GRADE (CUT AND COVER BOX/TRENCH)											
TRANSITION ZONE - TRENCH - BORED/ MINED TUNNEL											
BELOW GRADE (CUT AND COVER BOX - BORED / MINED TUNNEL)											

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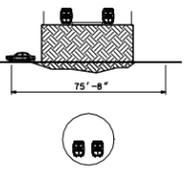
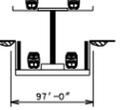
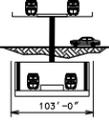
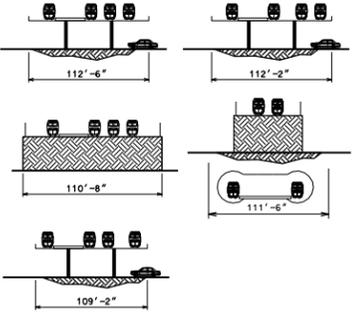
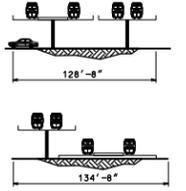
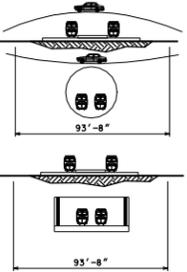
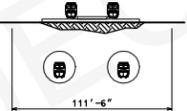
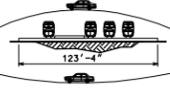
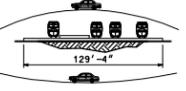
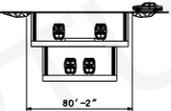
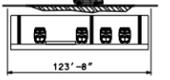
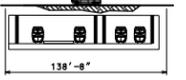
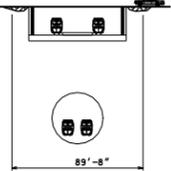
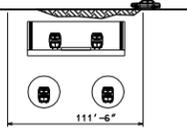
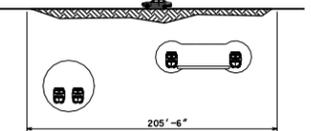
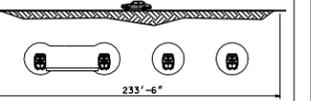
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
 MINIMUM RIGHT-OF-WAY REQUIREMENT EXHIBIT
 MAINLINE
 03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	1 OF 1

MINIMUM RIGHT-OF-WAY REQUIREMENTS

	<60'	60' -69'	70' -79'	80' -89'	90' -99'	100' -104'	105' -114'	115' -124'	125' -150'	151' -215'	≥216'
ELEVATED (AERIAL / BERM)											
TRANSITION ZONE- ELEVATED TO AT-GRADE (MIN LENGTH REQ = 6,280')											
AT-GRADE (ROAD OVER OR ROAD UNDER)											
TRANSITION ZONE- AT-GRADE- BELOW GRADE (MIN LENGTH REQ = 6,280')											
BELOW GRADE (CUT AND COVER BOX/TRENCH)											
TRANSITION ZONE- TRENCH - BORED/ MINED TUNNEL											
BELOW GRADE (CUT AND COVER BOX -BORED / MINED TUNNEL)											

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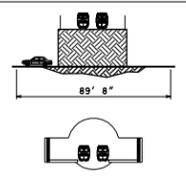
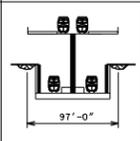
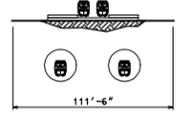
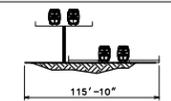
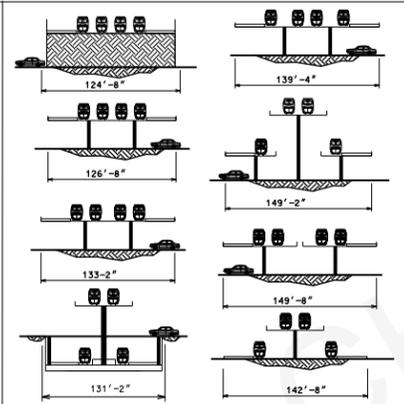
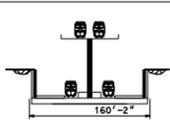
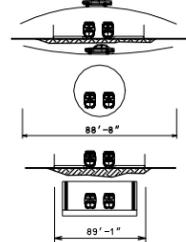
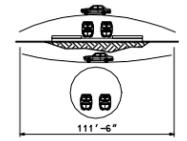
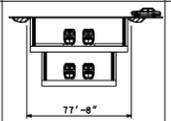
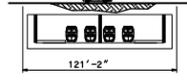
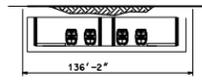
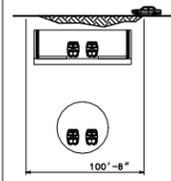
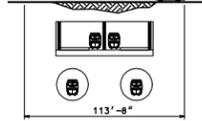
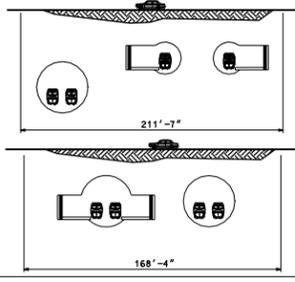
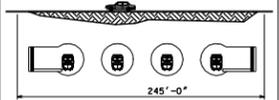


CALIFORNIA HIGH-SPEED TRAIN PROJECT
 MINIMUM RIGHT-OF-WAY REQUIREMENT EXHIBIT
 STATIONS
 CENTER ISLAND OR INBOARD PLATFORMS
 03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	1 OF 2

MINIMUM RIGHT-OF-WAY REQUIREMENTS

	<60'	60'-69'	70'-79'	80'-89'	90'-99'	100'-104'	105'-114'	115' - 124'	125' - 150'	151'-215'	≥216'
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ELEVATED (AERIAL / BERM)											
TRANSITION ZONE- ELEVATED TO AT-GRADE (MIN LENGTH REQ = 6,280')											
AT-GRADE (ROAD OVER OR ROAD UNDER)											
TRANSITION ZONE- AT-GRADE- BELOW GRADE (MIN LENGTH REQ = 6,280')											
BELOW GRADE (CUT AND COVER BOX/TRENCH)											
TRANSITION ZONE- TRENCH - BORED/ MINED TUNNEL											
BELOW GRADE (CUT AND COVER BOX -BORED / MINED TUNNEL)											

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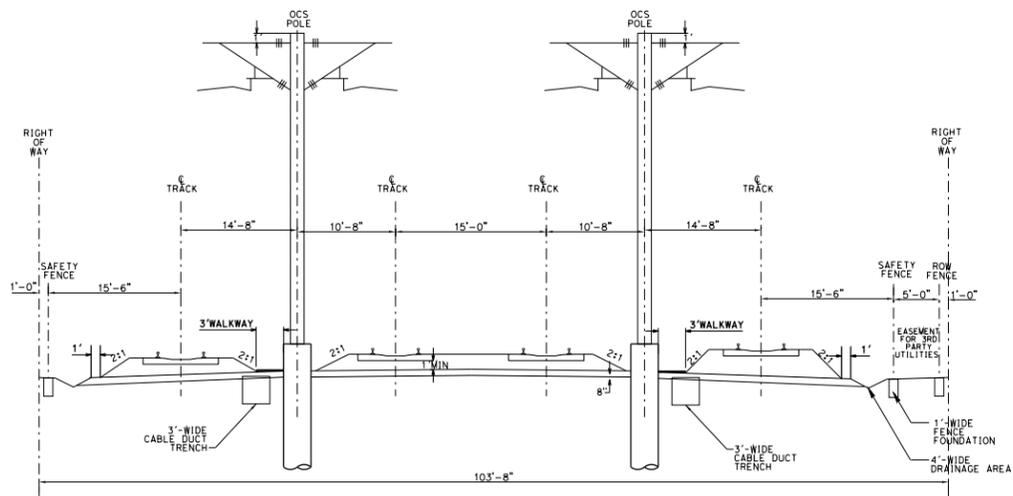
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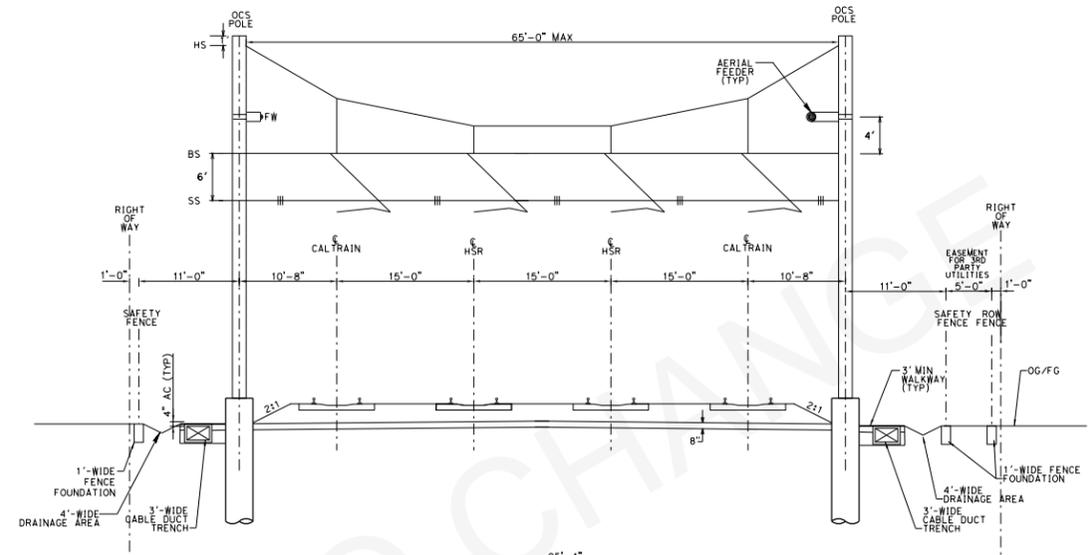


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 STATIONS
 OUTBOARD PLATFORMS
 03/24/2010

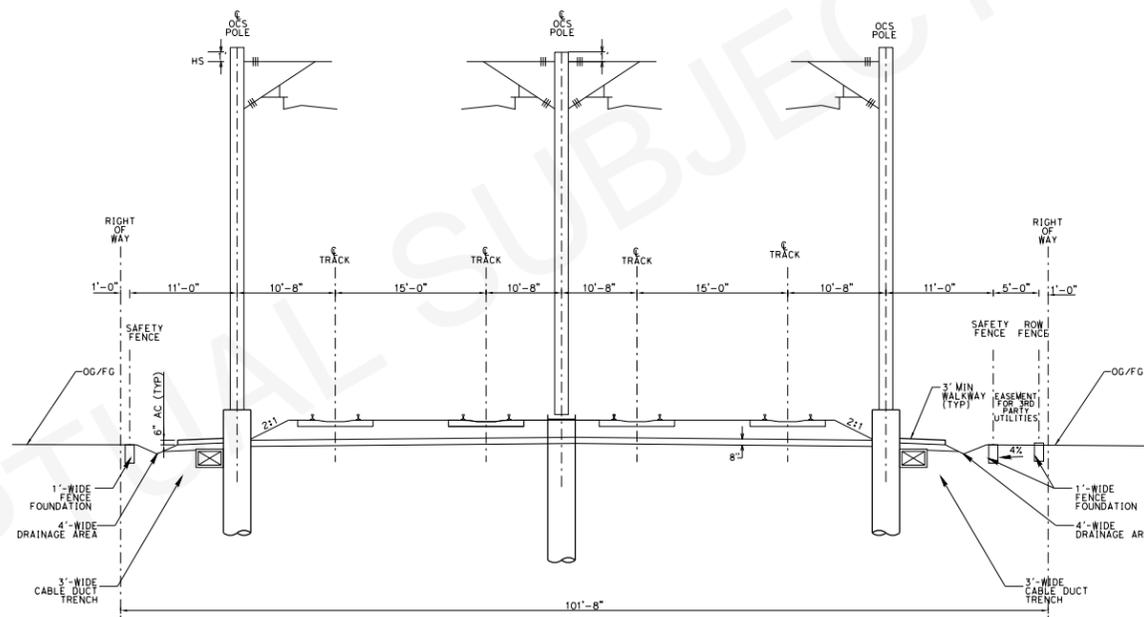
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SCALE	
SHEET NO.	2 OF 2



FOUR-TRACK AT GRADE
(AG-1)



FOUR-TRACK AT GRADE
(AG-2)



FOUR-TRACK AT GRADE
(AG-3)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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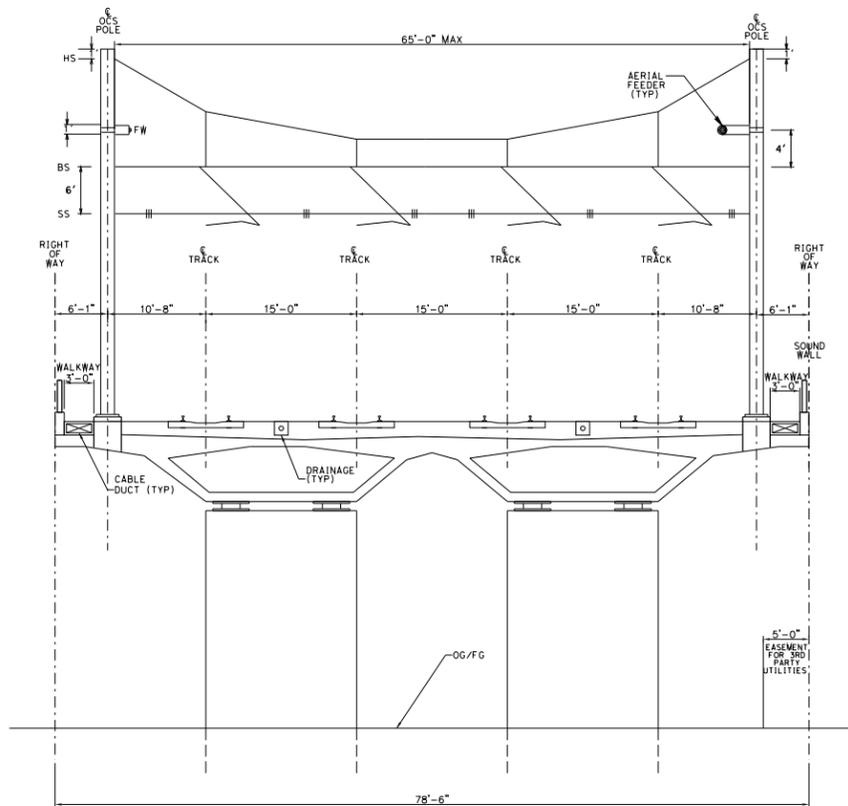
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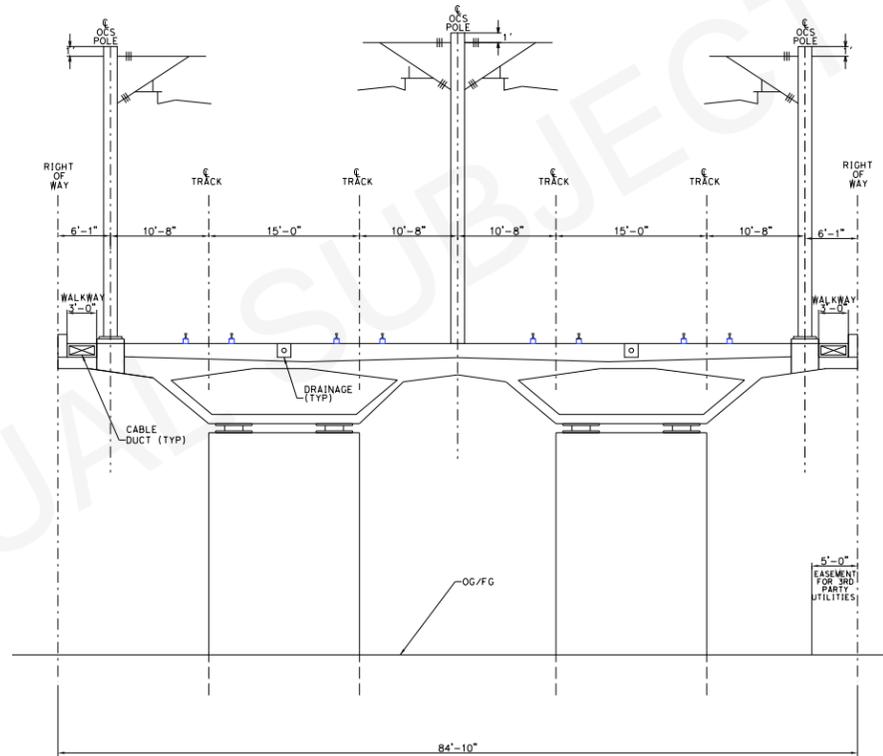
CALIFORNIA HIGH-SPEED TRAIN PROJECT

AT-GRADE
DRAFT TYPICAL SECTIONS
03/24/2010

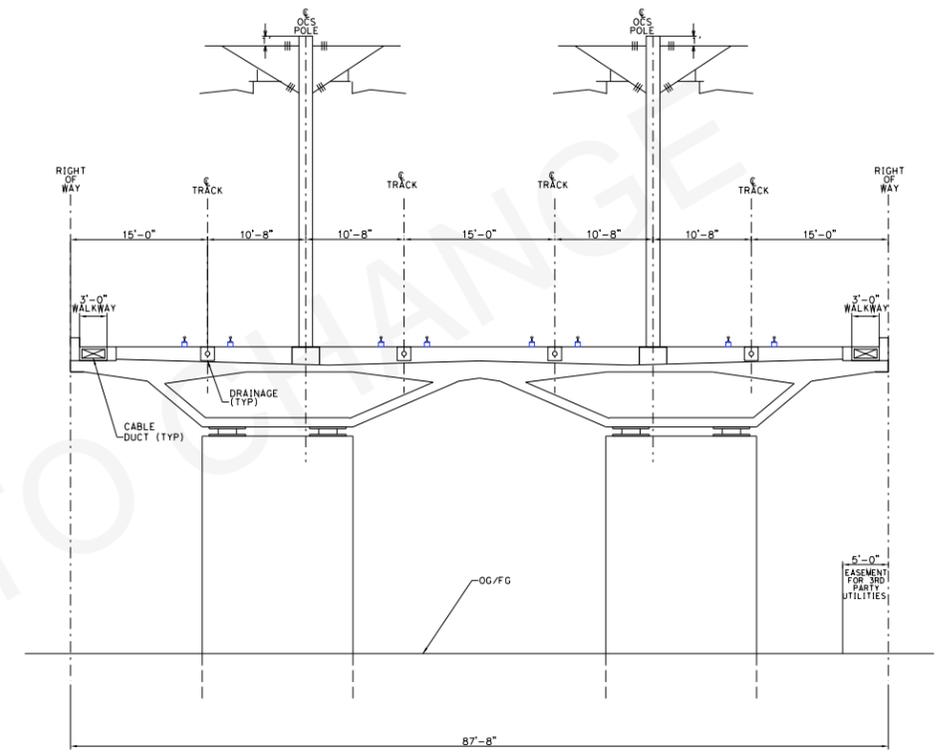
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SCALE	
SHEET NO.	1 OF 24



FOUR-TRACK STRUCTURE (S-1)

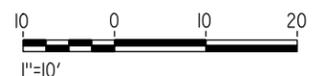


FOUR-TRACK STRUCTURE (S-2)



FOUR-TRACK STRUCTURE (S-3)

- NOTES:
 1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

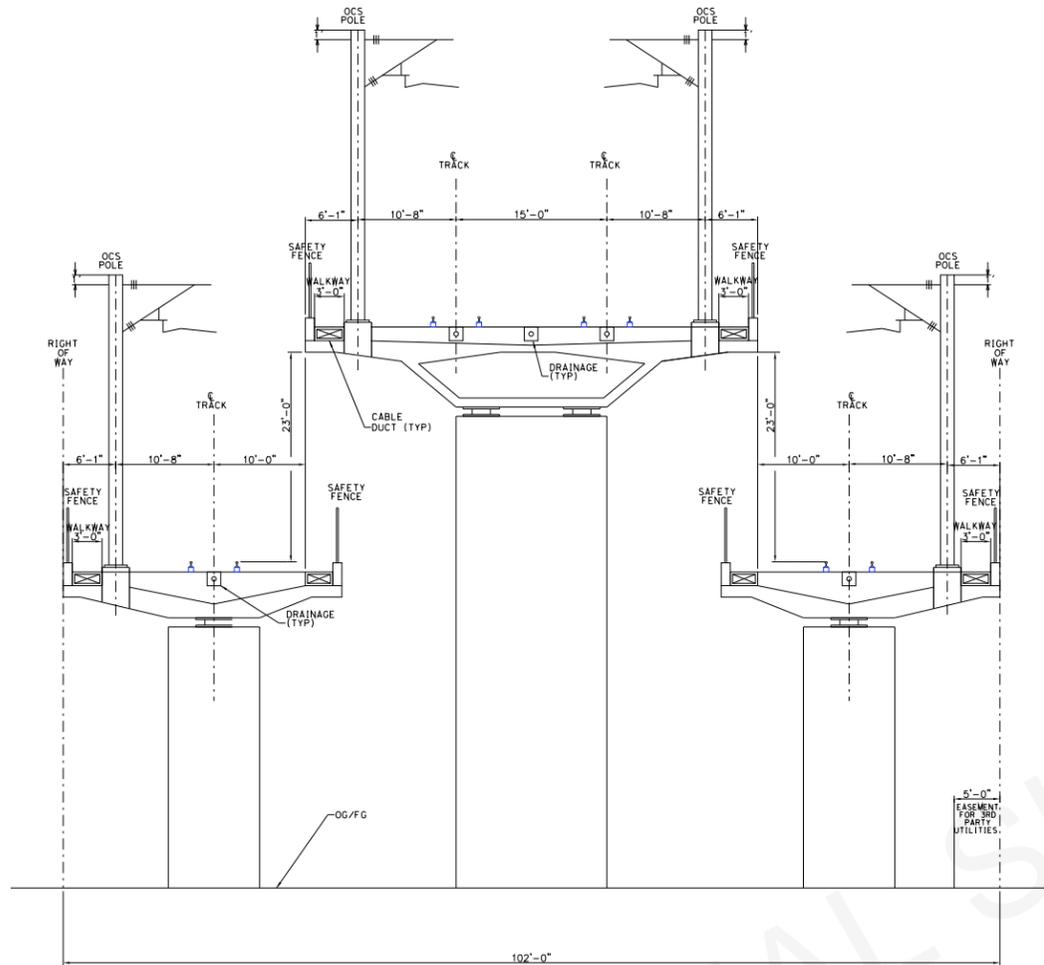
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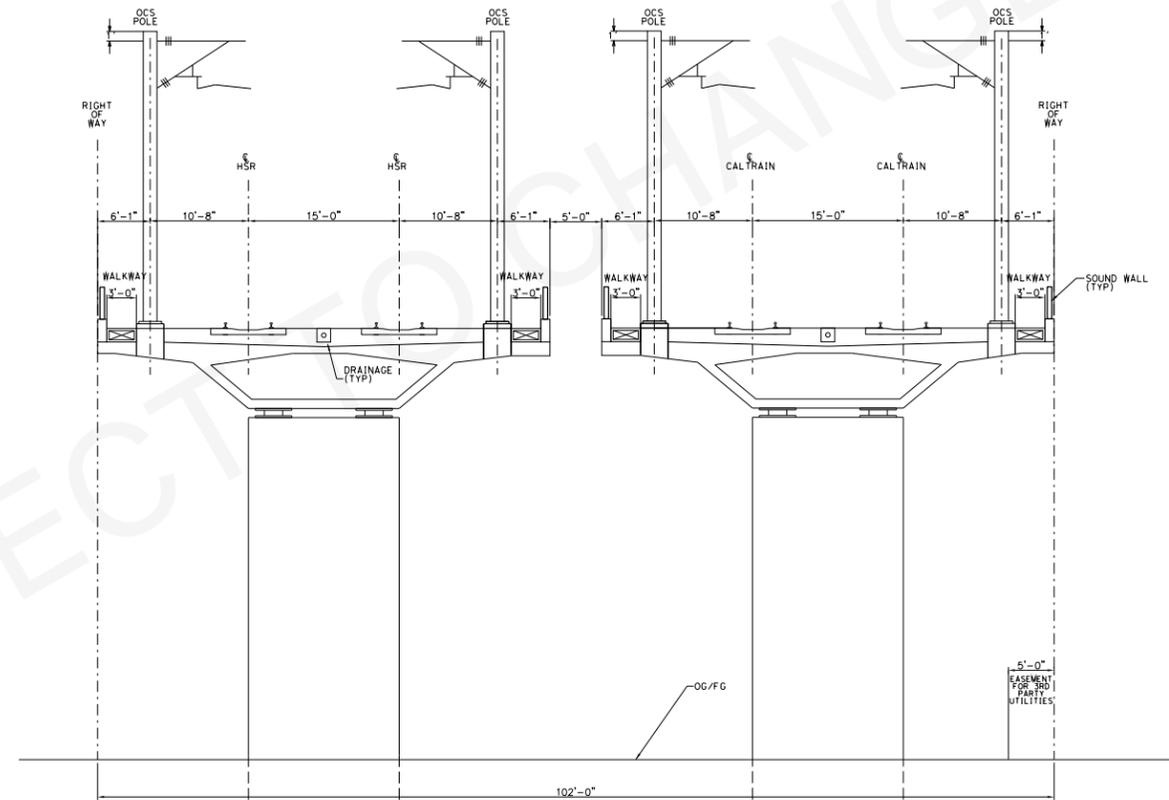


CALIFORNIA HIGH-SPEED TRAIN PROJECT
 STRUCTURAL
 DRAFT TYPICAL SECTIONS
 03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	2 OF 24



TWO-SINGLE TRACK STRUCTURE WITH
DOUBLE TRACK STRUCTURE
(S-4)



TWO-DOUBLE TRACK STRUCTURE
(S-5)

NOTES:

1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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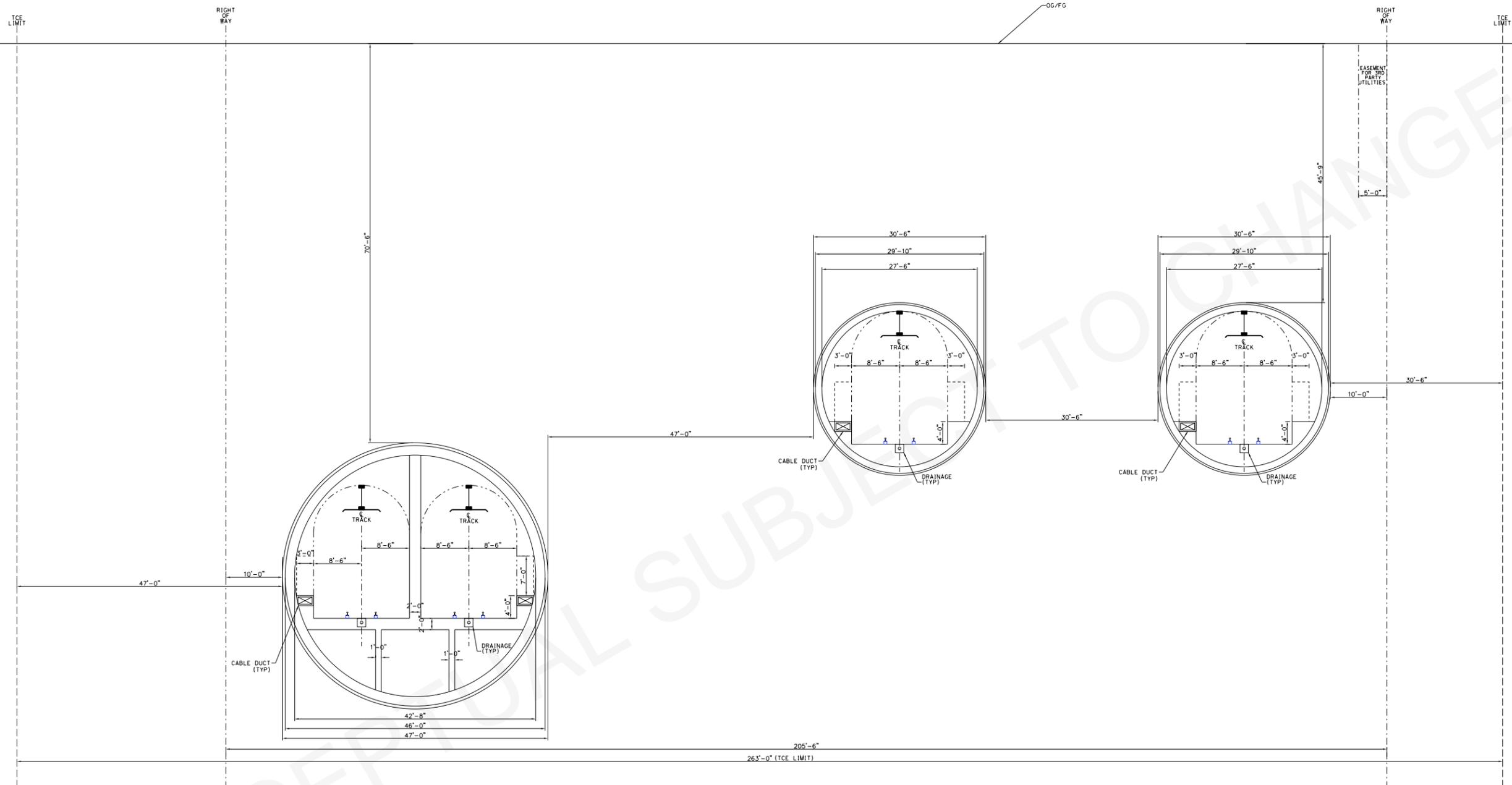
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CALIFORNIA HIGH-SPEED TRAIN PROJECT

STRUCTURAL
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	3 OF 24



TWO-SINGLE TRACK TUNNELS AND
DOUBLE TRACK TUNNEL
(T-1)

NOTES:

- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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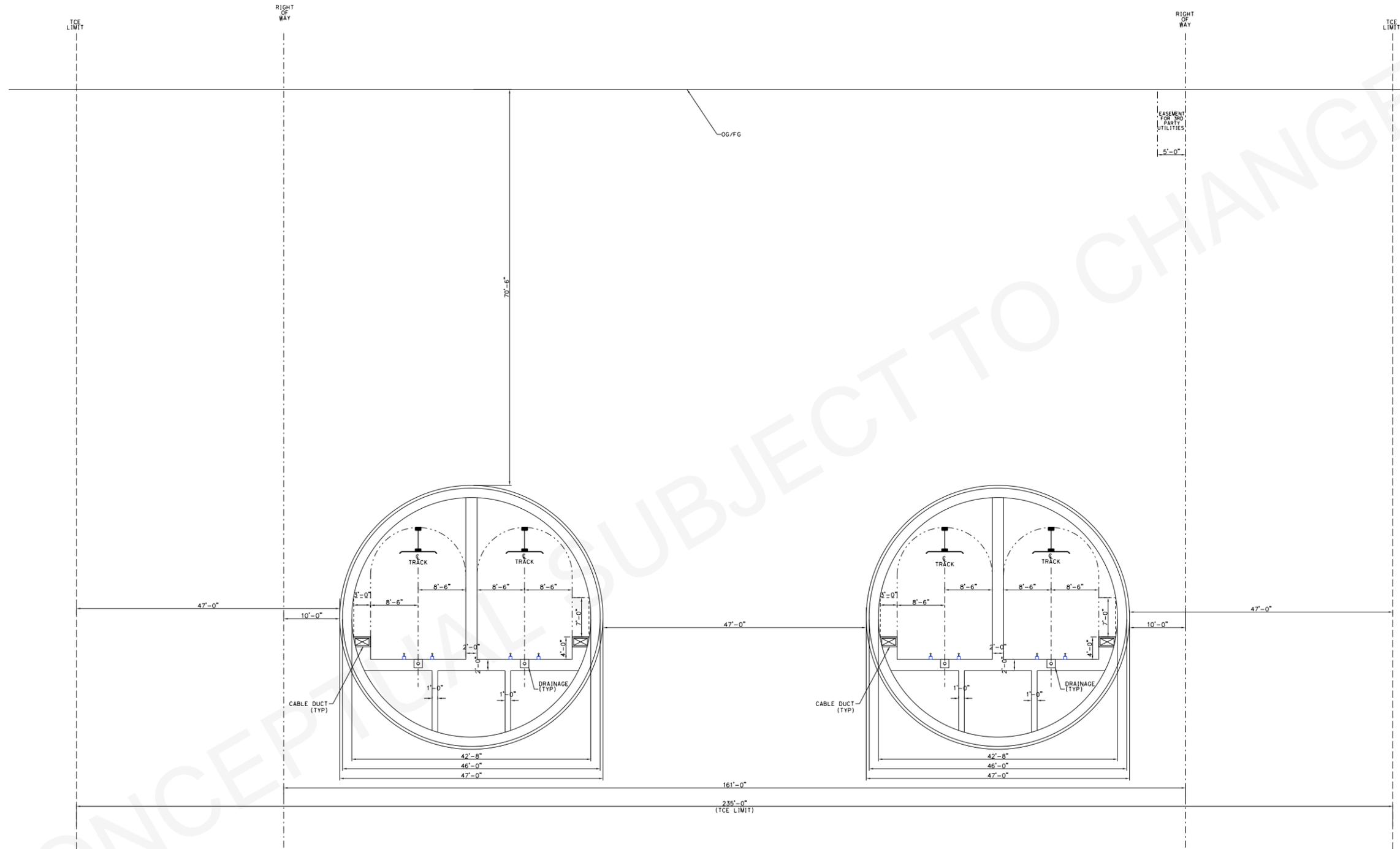
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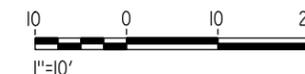
CALIFORNIA HIGH-SPEED TRAIN PROJECT
 TUNNEL
 DRAFT TYPICAL SECTIONS
 03/24/2010

CONTRACT NO.	
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SCALE	
SHEET NO.	4 OF 24



NOTES:
 1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.

TWO-DOUBLE TRACK TUNNELS
 (T-2)



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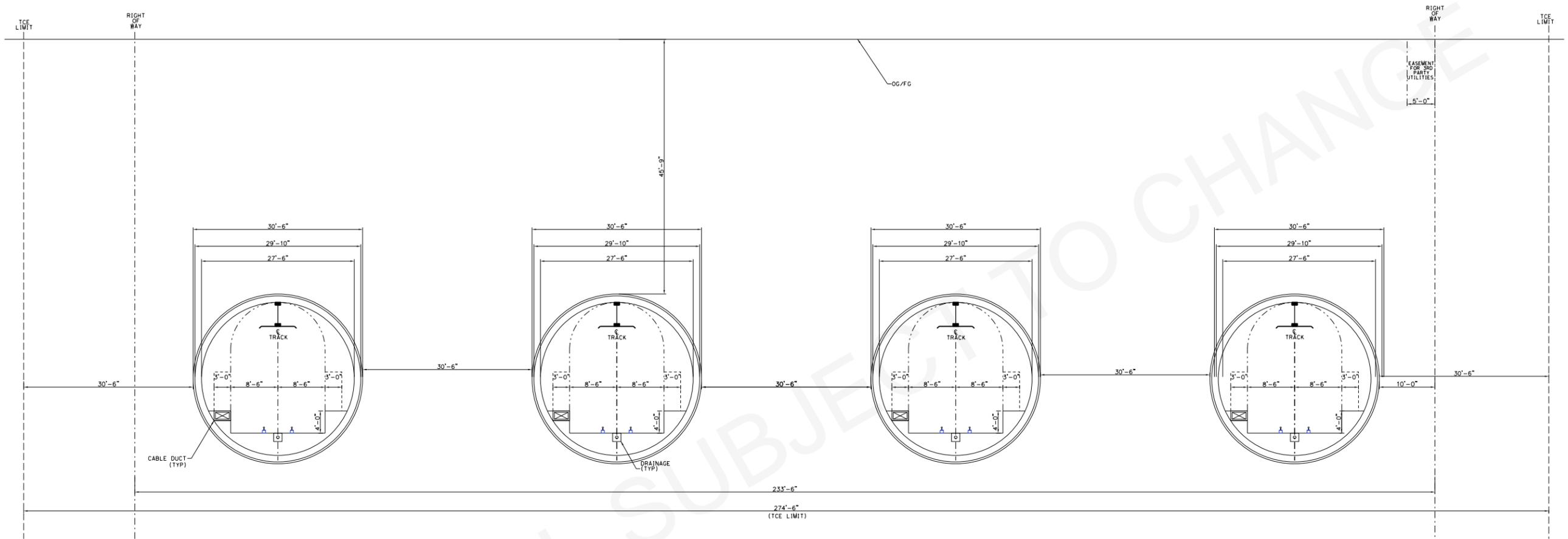
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CALIFORNIA HIGH-SPEED TRAIN PROJECT

TUNNEL
 DRAFT TYPICAL SECTIONS
 03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	5 OF 24



FOUR-SINGLE TRACK TUNNELS
(T-3)

- NOTES:
1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 26.



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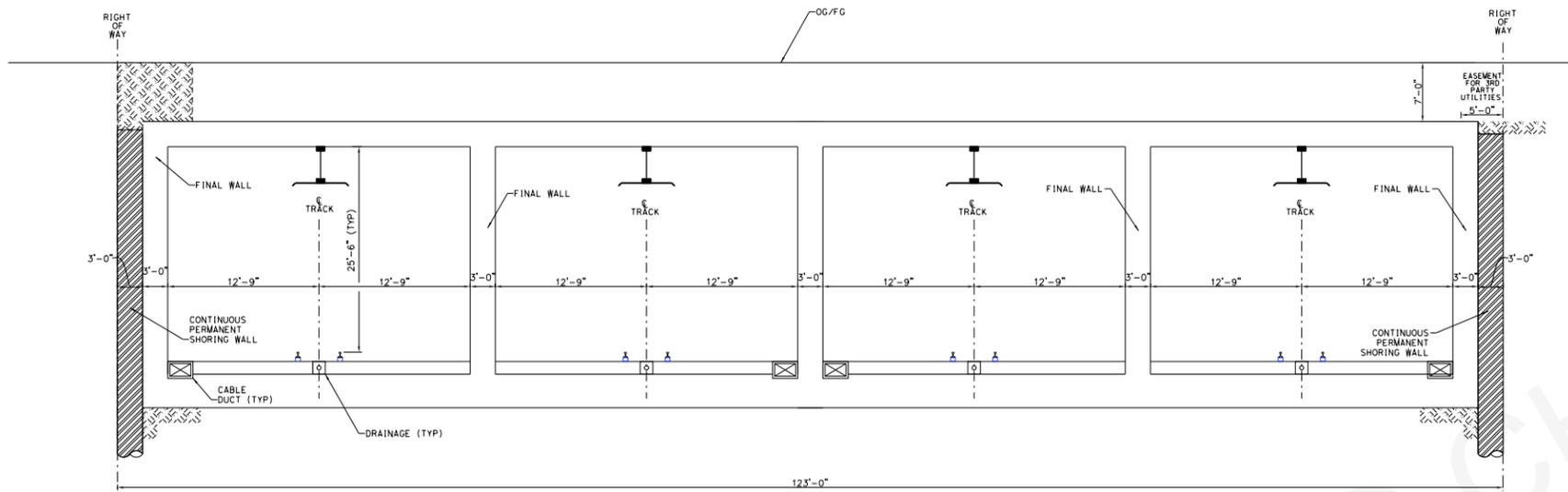
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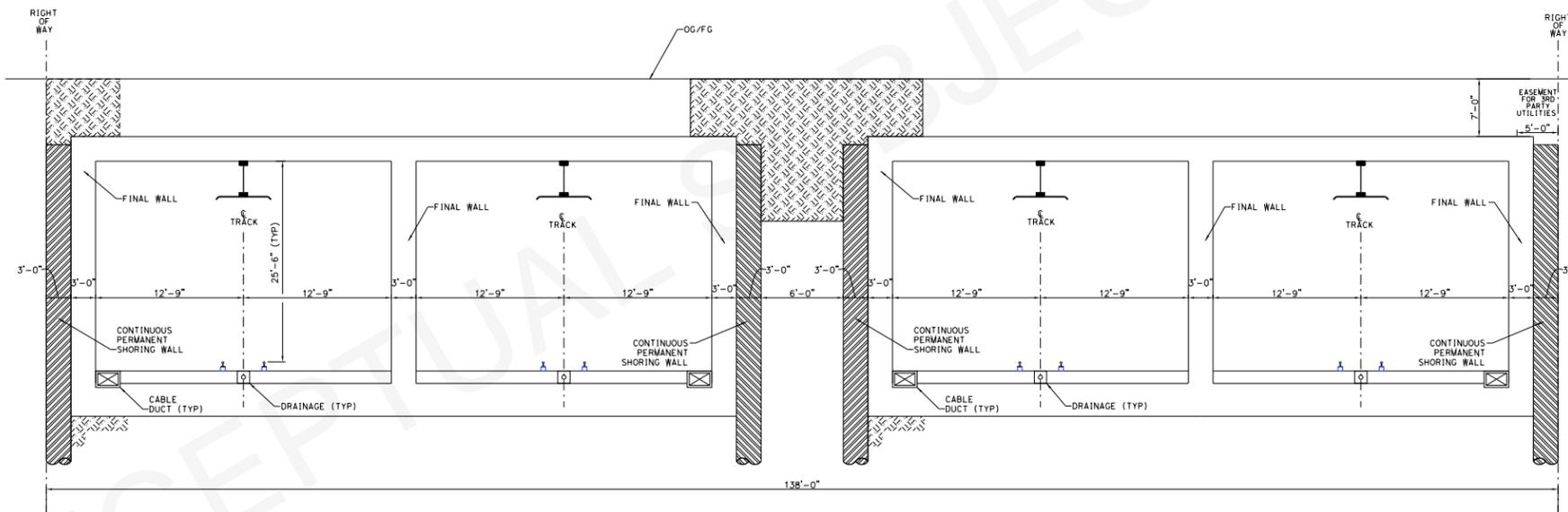


CALIFORNIA HIGH-SPEED TRAIN PROJECT
TUNNEL
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	6 OF 26



FOUR TRACK CUT/COVER BOX
(CCB-1)



TWO-DOUBLE TRACK CUT/COVER BOX
(CCB-2)

- NOTES:
1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

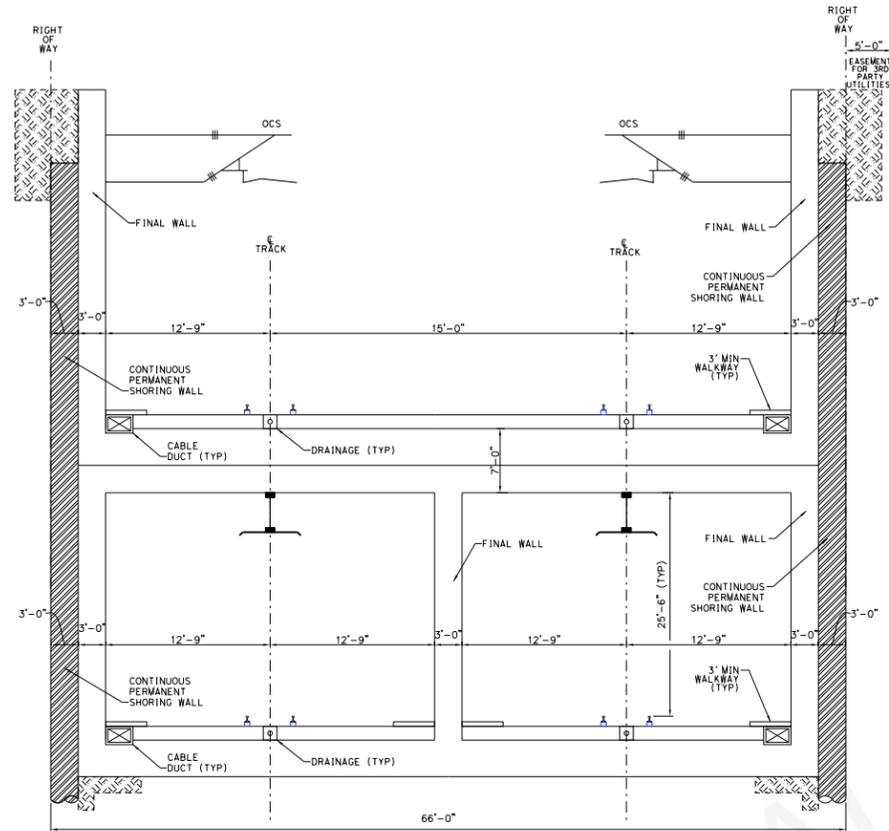
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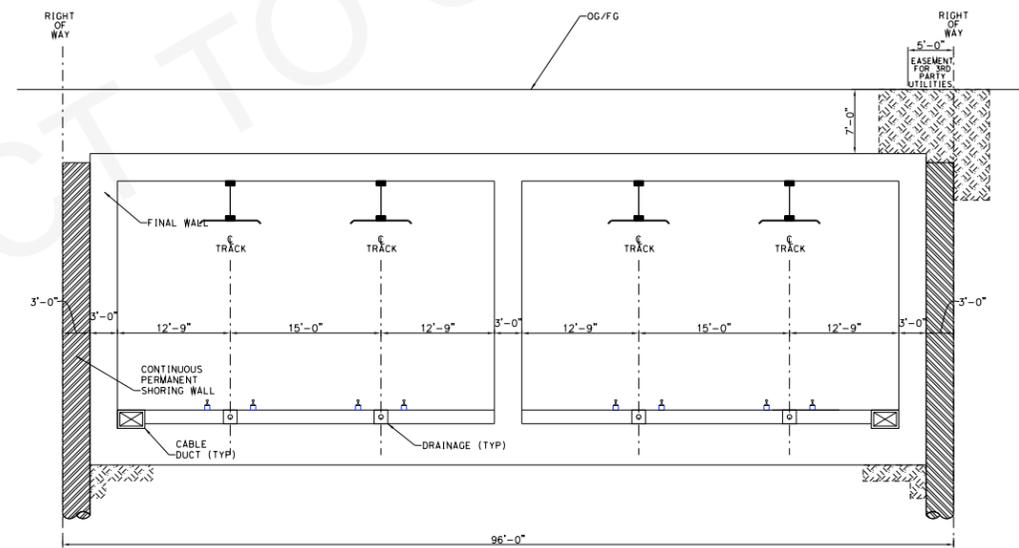


CALIFORNIA HIGH-SPEED TRAIN PROJECT
CUT/COVER BOX
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	7 OF 24

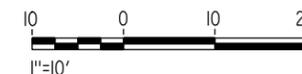


DOUBLE DECK WITH DOUBLE TRACK CUT/COVER BOX (CCB-3)



FOUR TRACK CUT/COVER BOX (CCB-4)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE	
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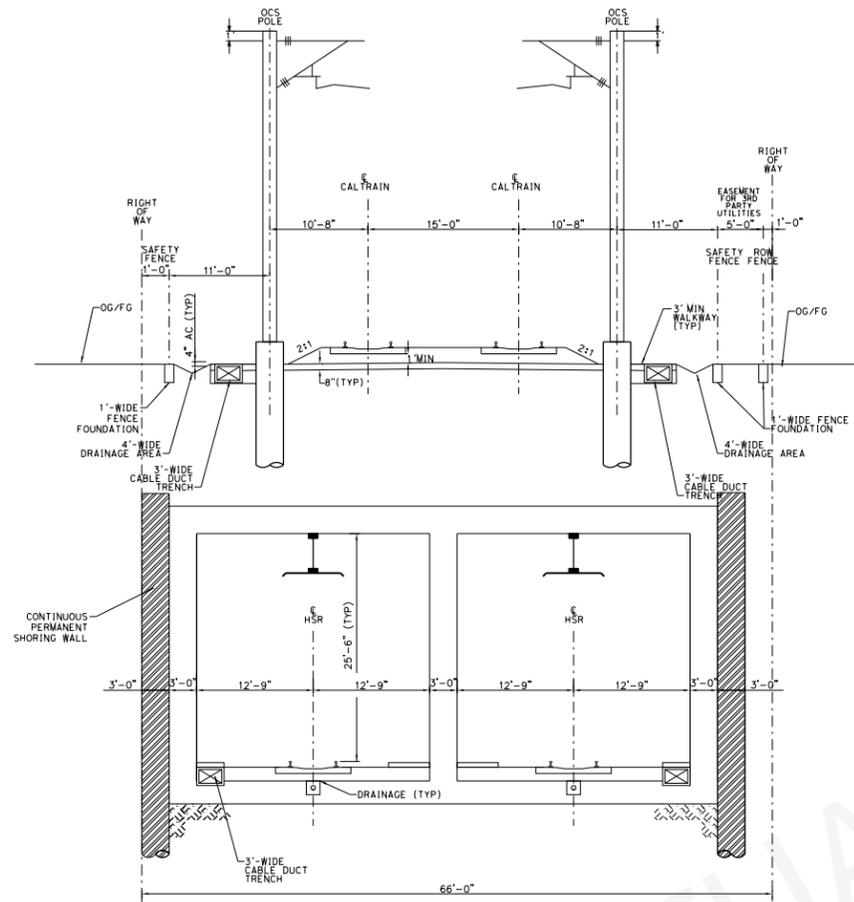
CALIFORNIA HIGH-SPEED TRAIN PROJECT

CUT/COVER BOX
DRAFT TYPICAL SECTIONS
03/24/2010

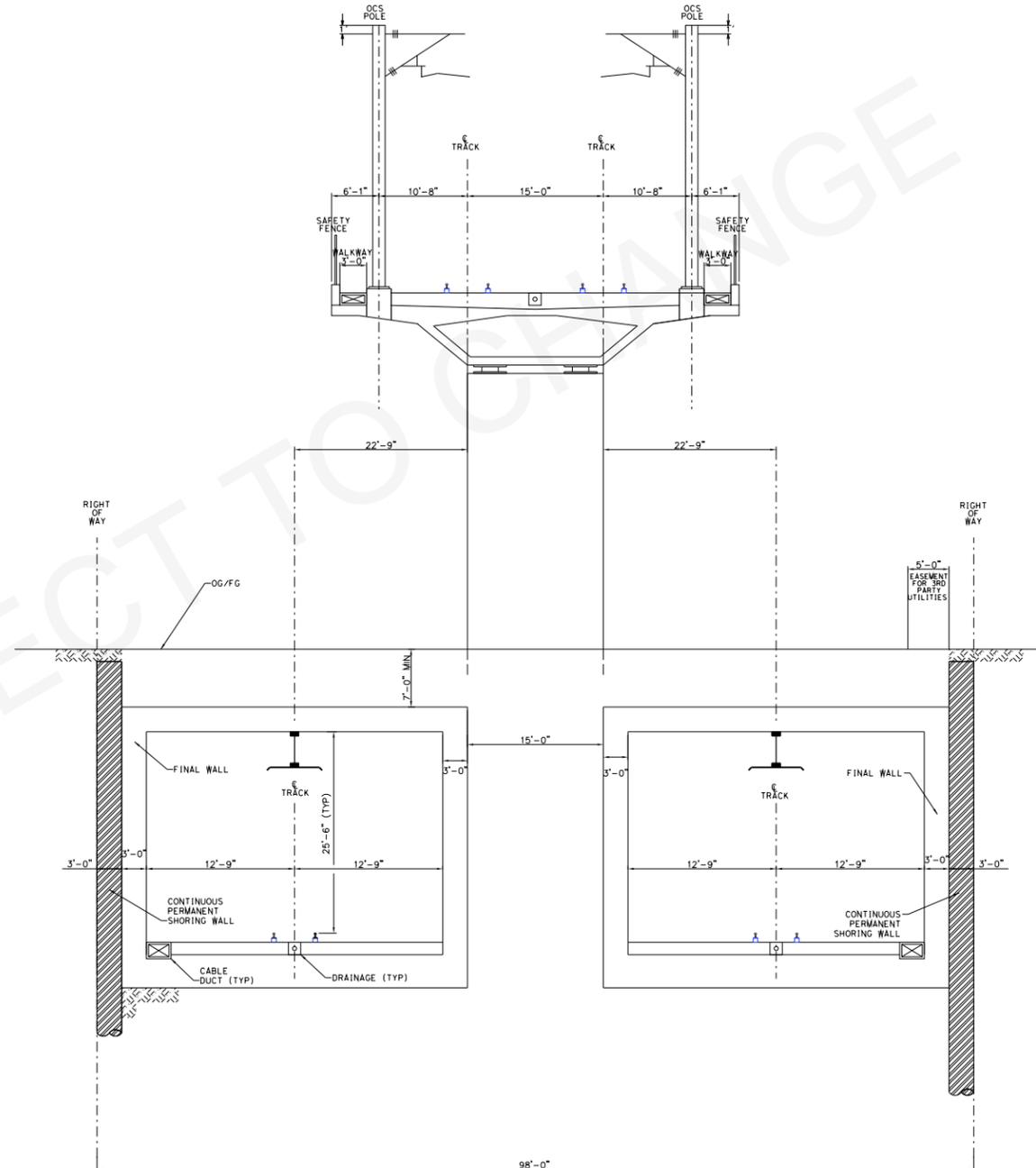
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SCALE	
SHEET NO.	8 OF 24

NOTES:

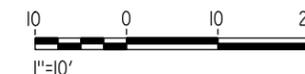
1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



DOUBLE TRACK AT GRADE WITH
DOUBLE CUT/COVER BOX
(AG-CCB-1)



DOUBLE TRACK STRUCTURE WITH
DOUBLE CUT/COVER BOX
(S-CCB-1)



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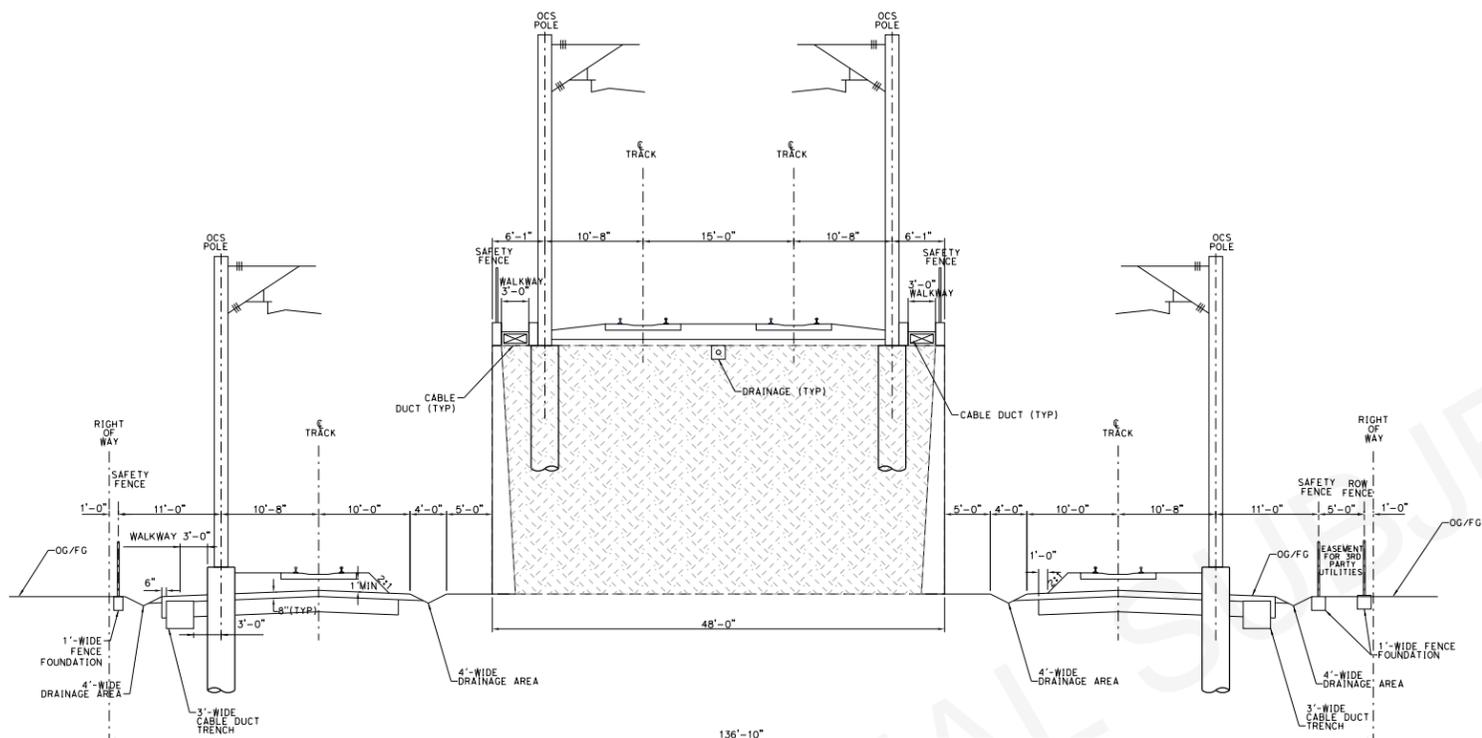
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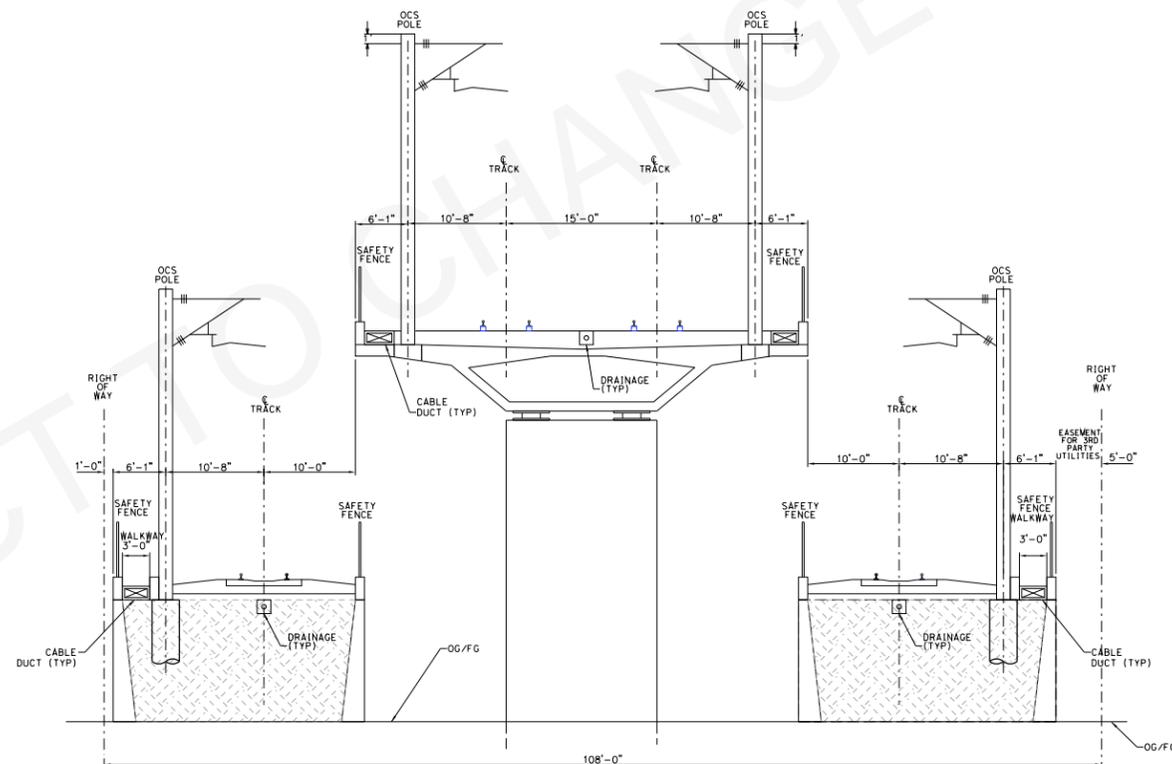
CALIFORNIA HIGH-SPEED TRAIN PROJECT

COMBINATION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	9 OF 24



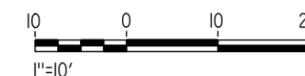
DOUBLE TRACK ON RETAINED FILL WITH
TWO-SINGLE TRACK AT GRADE
(RF-AG)



TWO-SINGLE TRACK ON RETAINED FILL WITH
DOUBLE TRACK STRUCTURE
(RF-S)

NOTES:

- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

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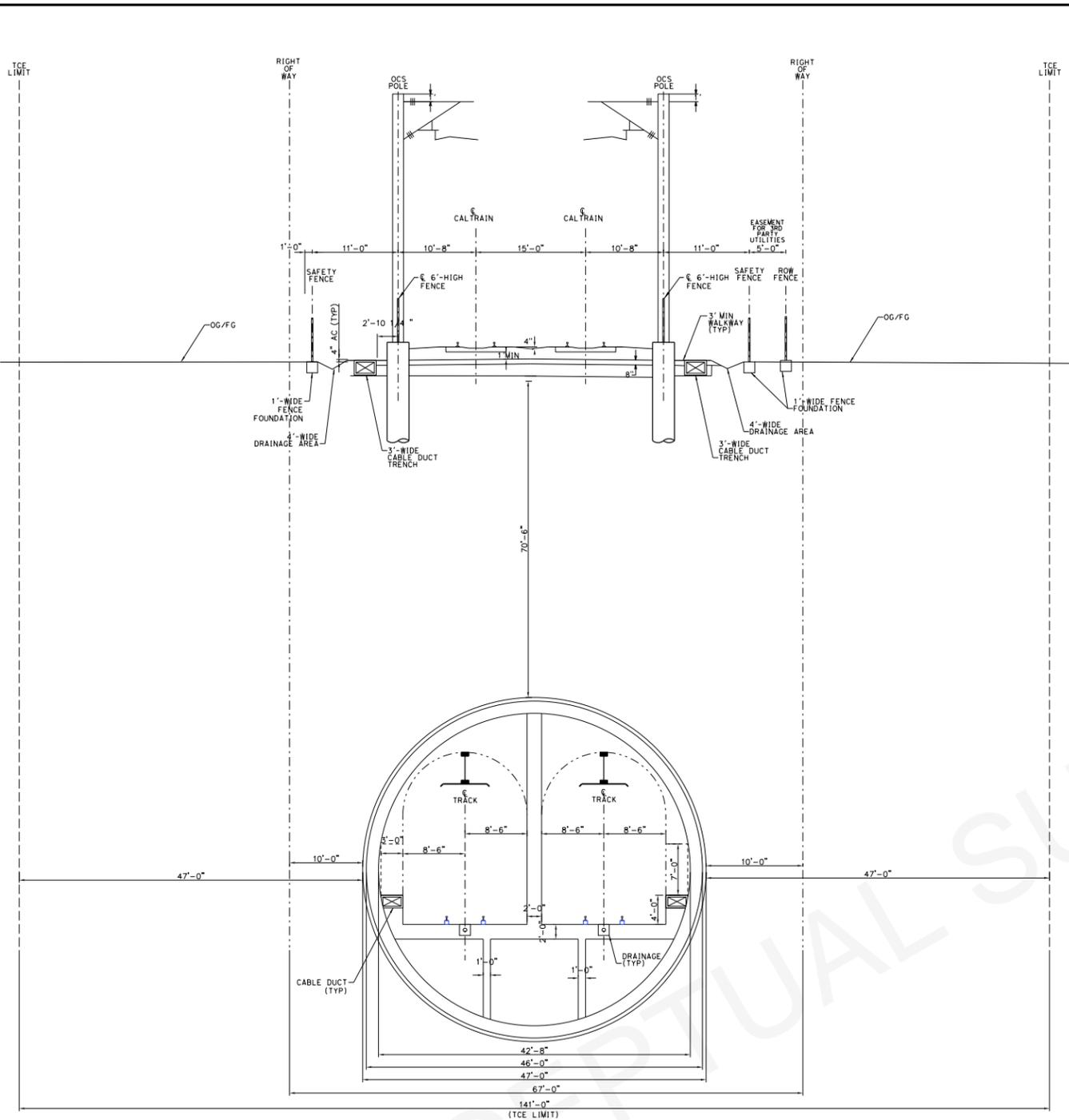
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DATE	



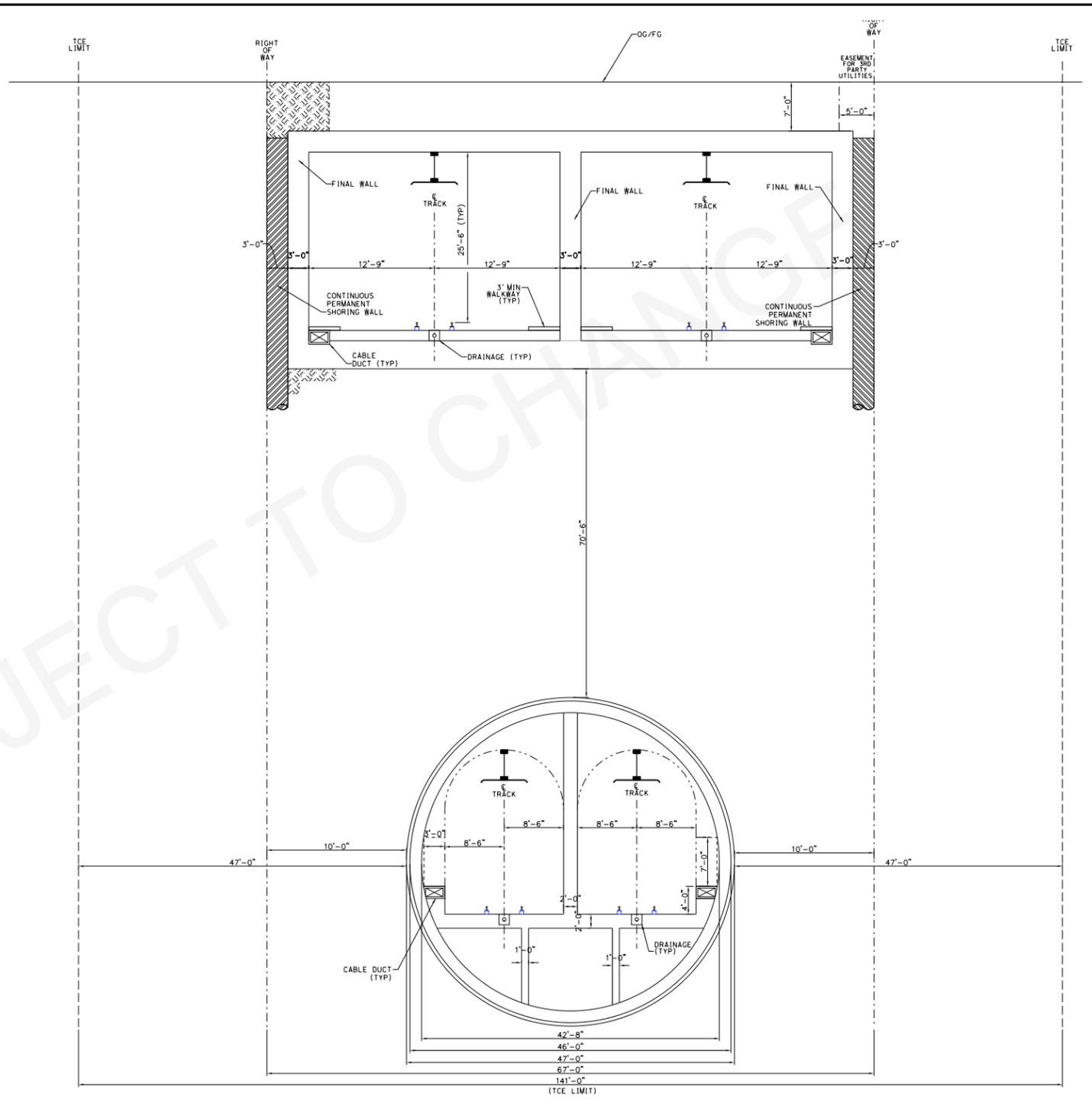
CALIFORNIA HIGH-SPEED TRAIN PROJECT

COMBINATION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	10 OF 24



DOUBLE TRACK AT GRADE WITH
DOUBLE TRACK IN TUNNEL
(AG-T-1)



DOUBLE TRACK CUT/COVER BOX WITH
DOUBLE TRACK IN TUNNEL
(CCB-T-1)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

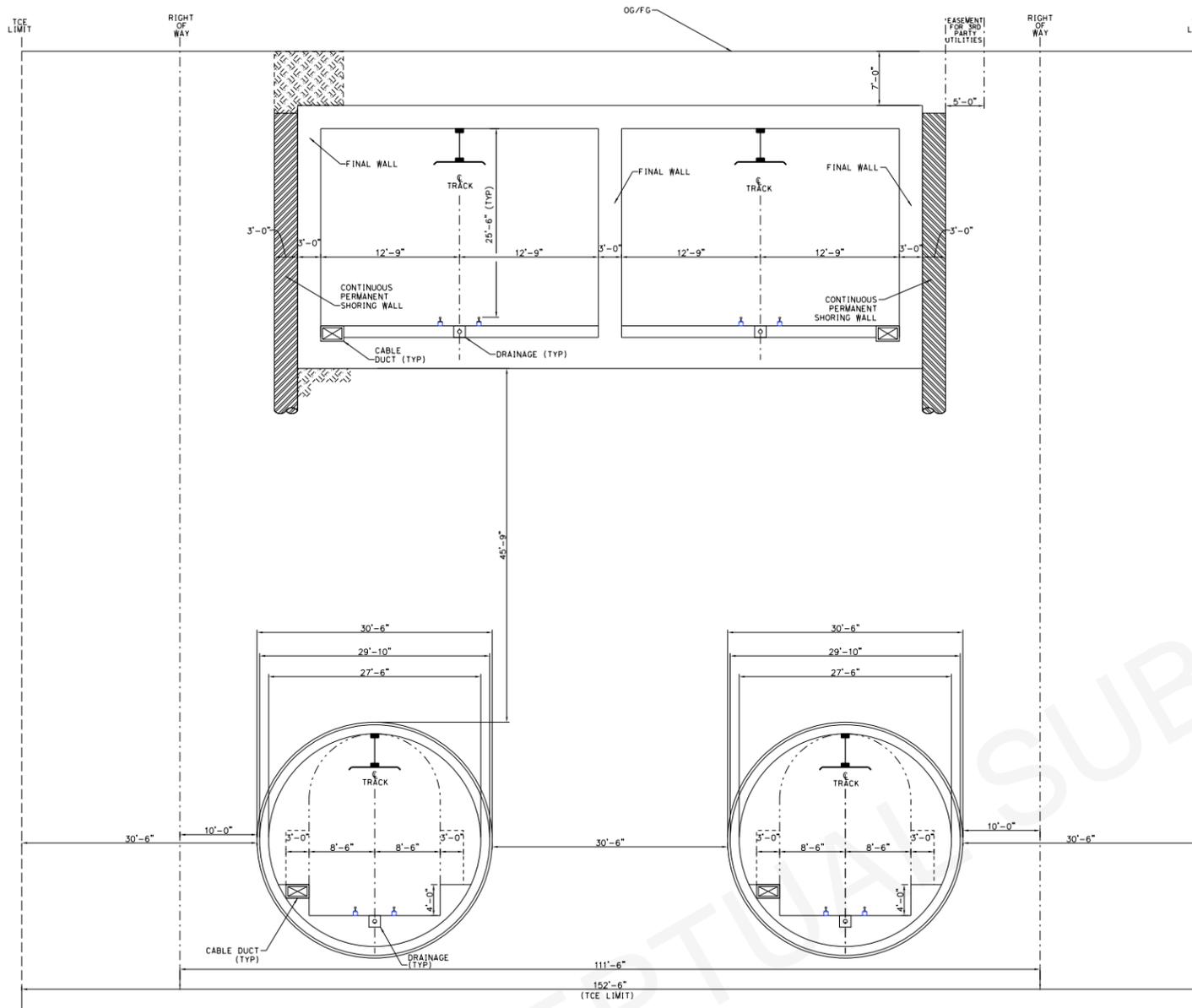
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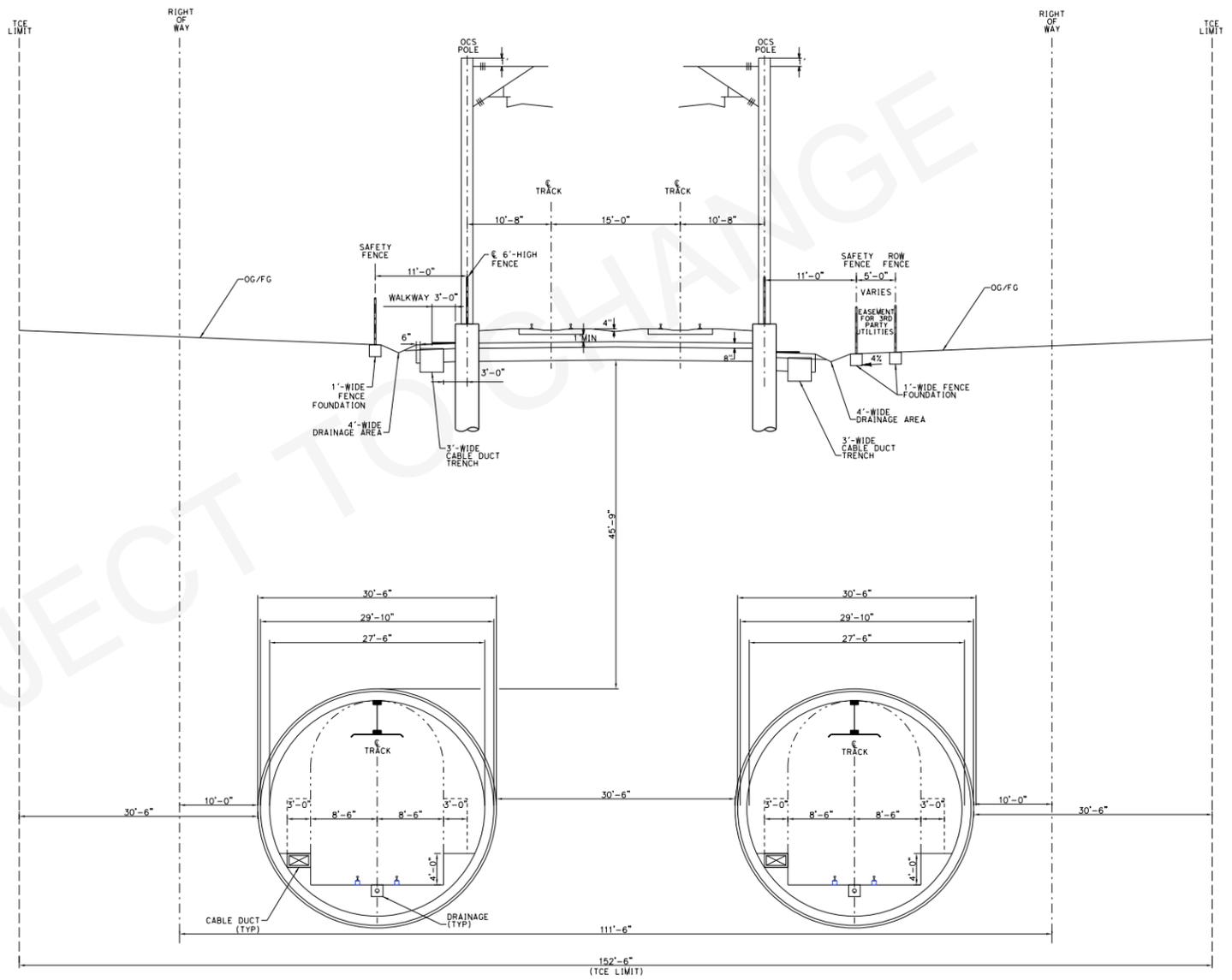
CALIFORNIA HIGH-SPEED TRAIN PROJECT

COMBINATION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	11 OF 24



DOUBLE TRACK CUT/COVER BOX WITH
TWO-SINGLE TRACK TUNNELS
(CCB-T-2)



DOUBLE TRACK AT GRADE WITH
TWO-SINGLE TRACK TUNNELS
(AG-T-2)

NOTES:

1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



\$USER \$ DATE \$ \$TIME \$ \$FILES \$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	
DRAWN BY	
CHECKED BY	
IN CHARGE	
DATE	



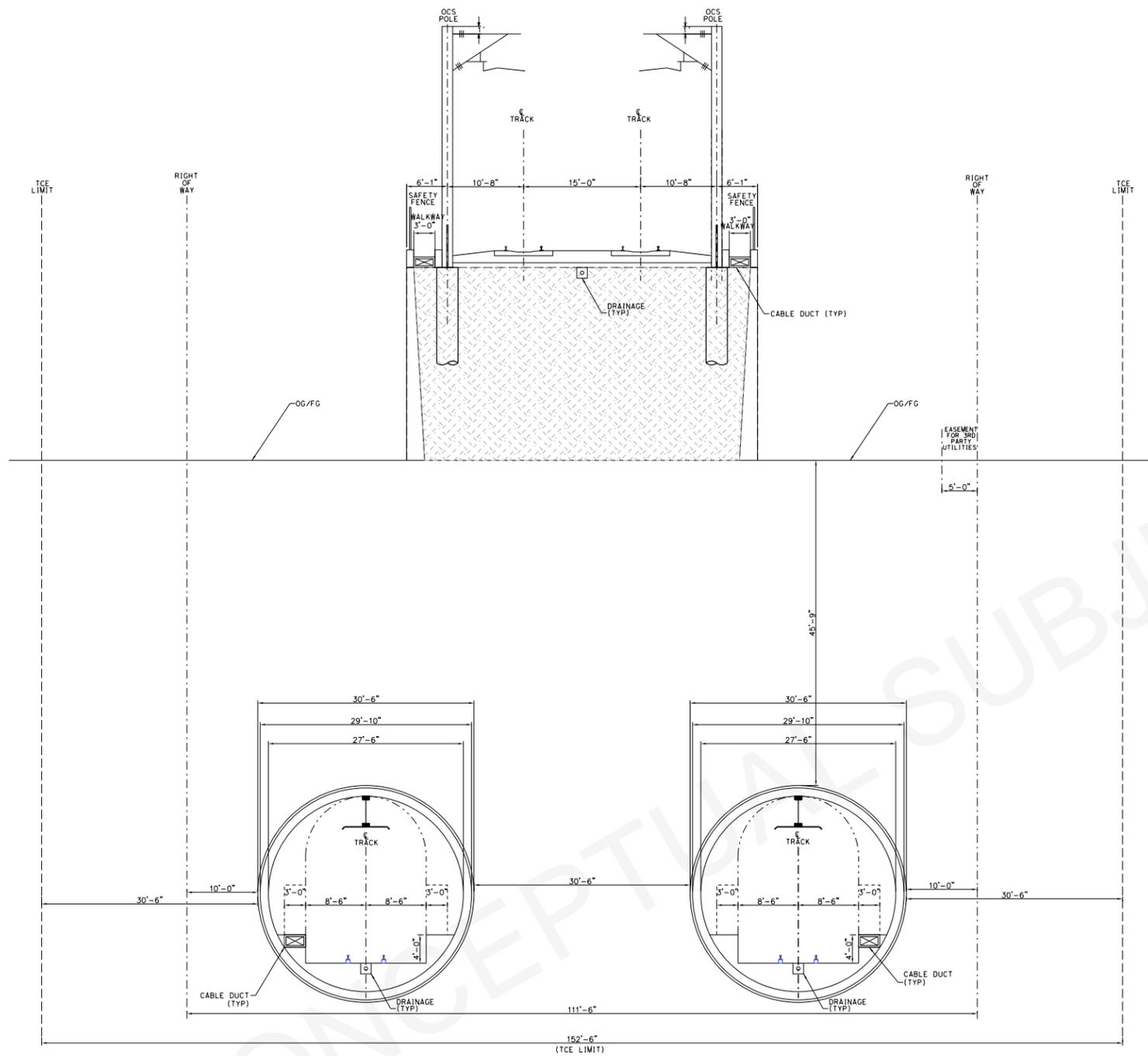
CALIFORNIA HIGH-SPEED TRAIN PROJECT

COMBINATION
DRAFT TYPICAL SECTIONS
03/24/2010

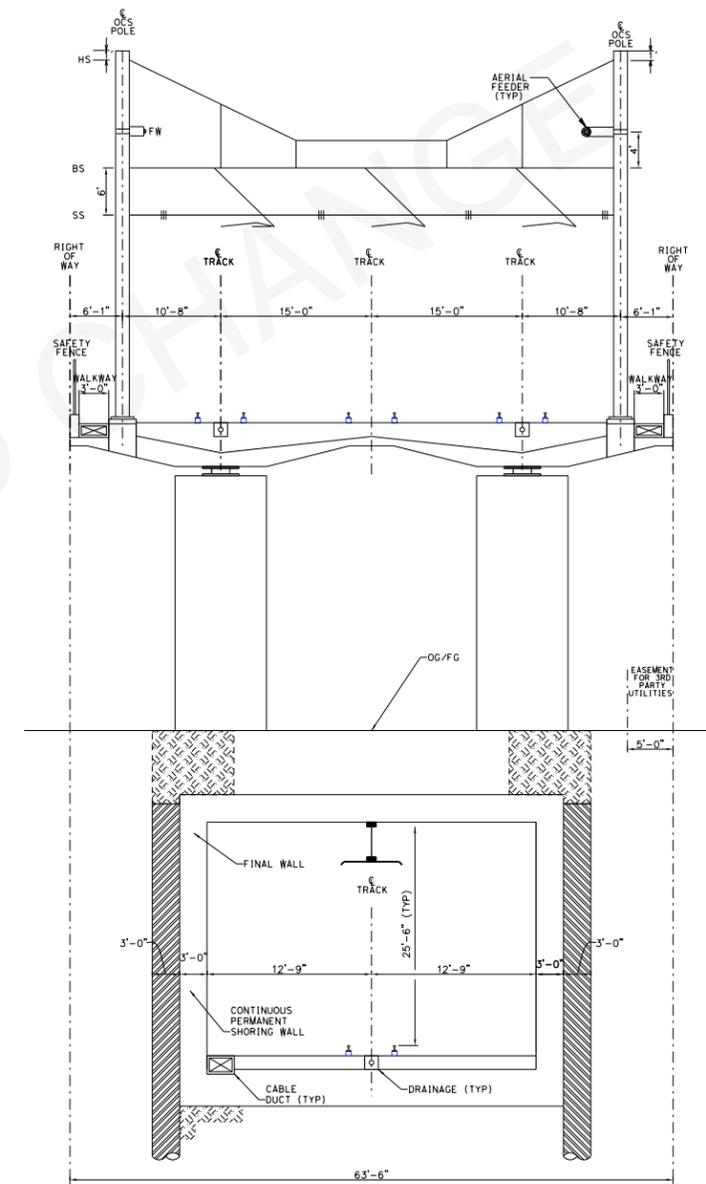
CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	12 OF 24

NOTES:

- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



DOUBLE TRACK ON RETAINED FILL WITH
TWO-SINGLE TRACK TUNNELS
(RF-T-1)



TRIPLE TRACK STRUCTURE WITH
SINGLE TRACK CUT/COVER BOX
(S-CCB-2)



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

REV	DATE	BY	CHK	APP	DESCRIPTION

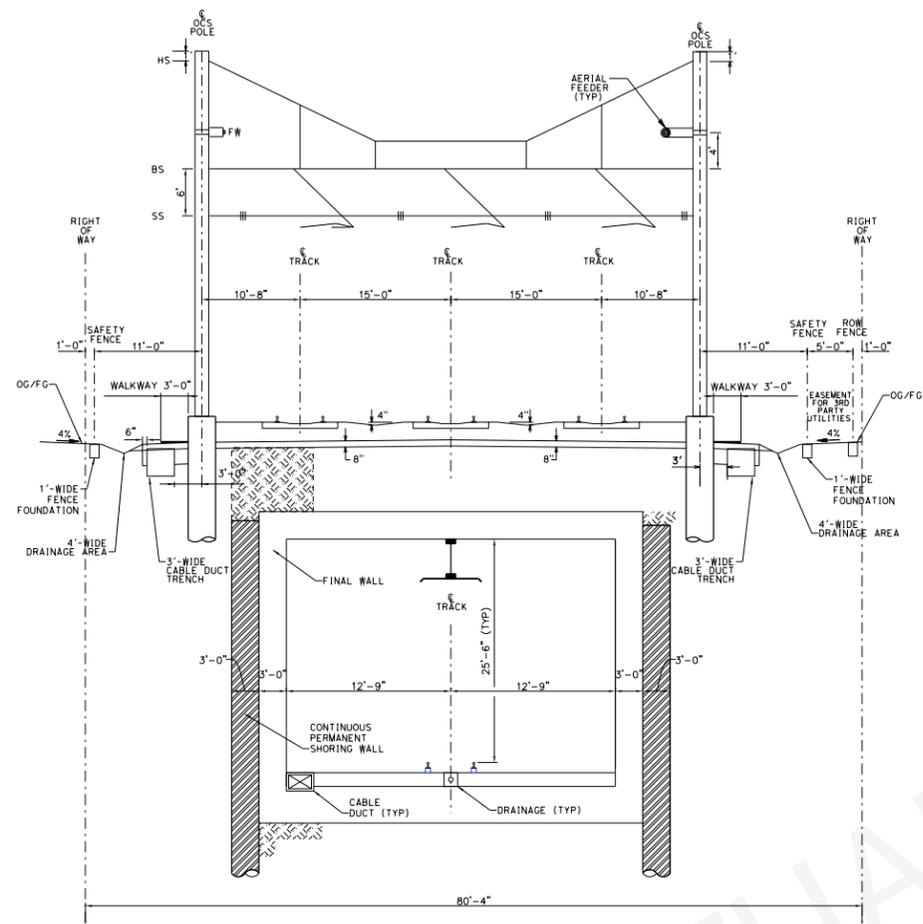
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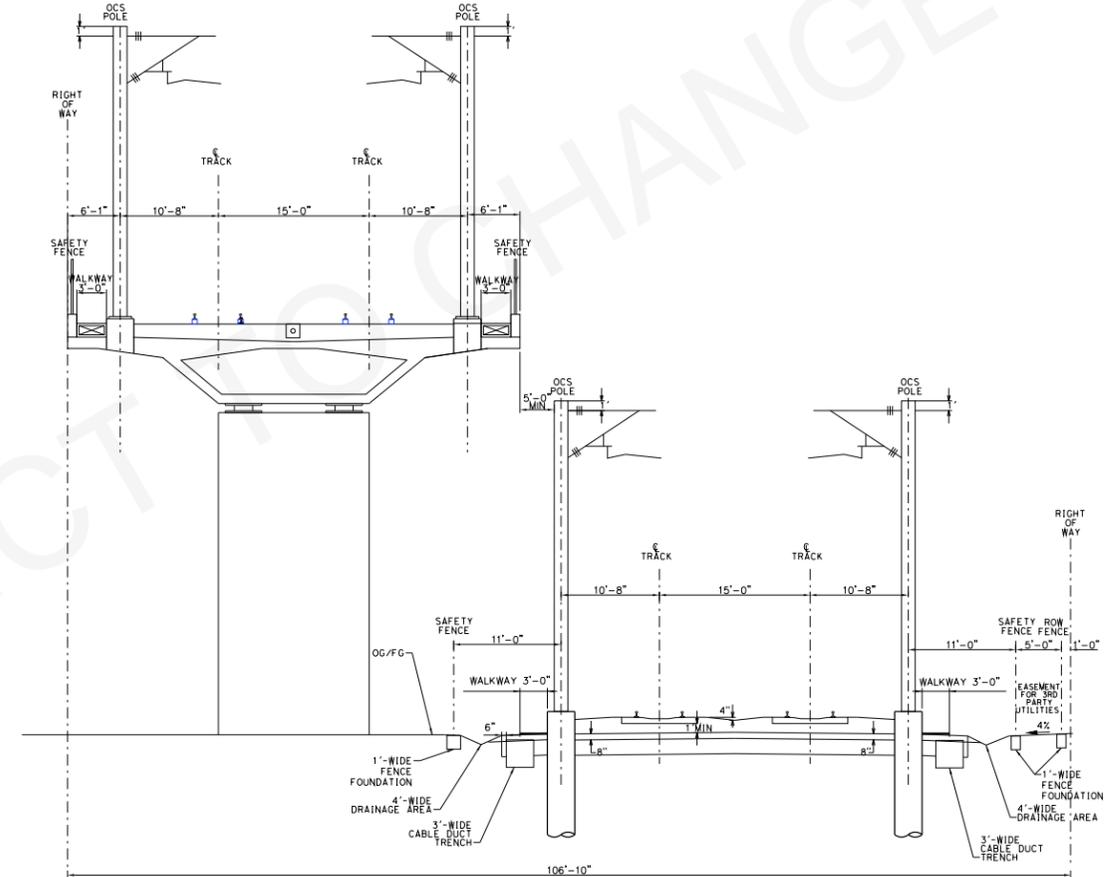
CALIFORNIA HIGH-SPEED TRAIN PROJECT

COMBINATION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	13 OF 24

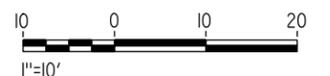


TRIPLE TRACK AT GRADE WITH
SINGLE TRACK CUT/COVER BOX
(AG-CCB-2)



DOUBLE TRACK STRUCTURE WITH
DOUBLE TRACK AT GRADE
(S-AG-1)

- NOTES:
1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	
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DATE	

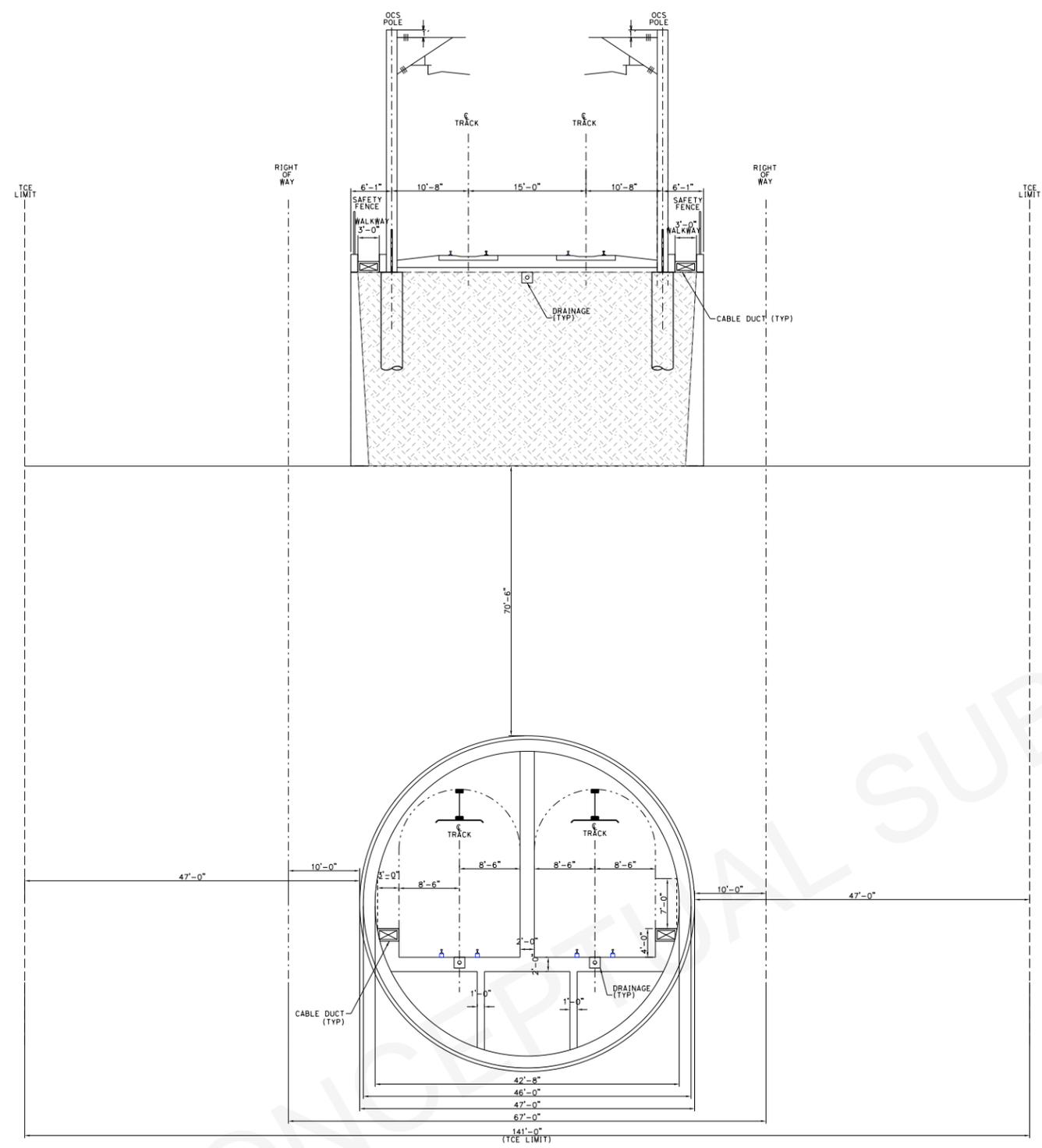


CALIFORNIA HIGH-SPEED TRAIN PROJECT

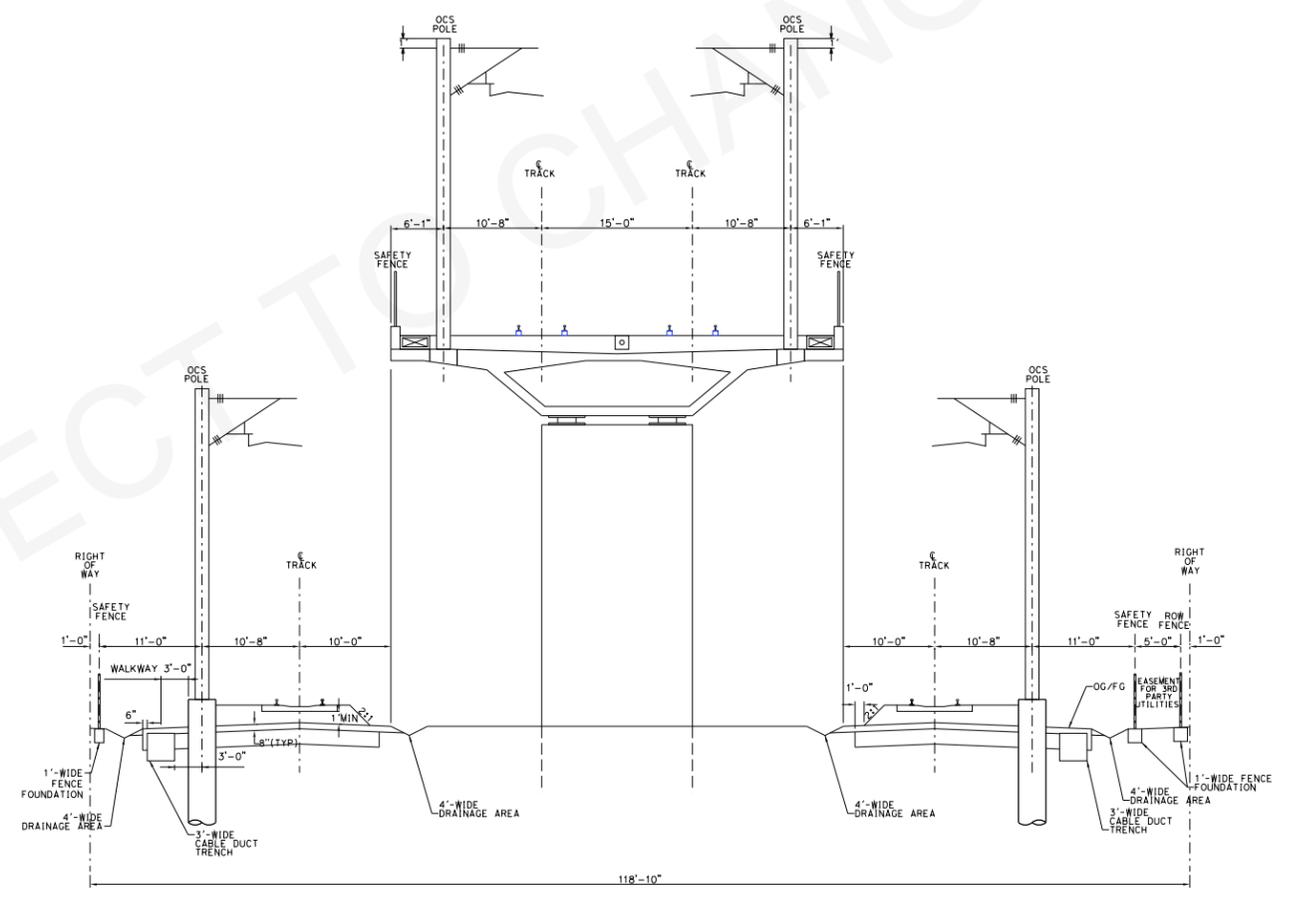
COMBINATION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	14 OF 24

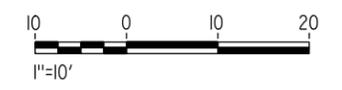
NOTES:
 1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



DOUBLE TRACK ON RETAINED FILL WITH
 DOUBLE TRACK IN TUNNEL
 (RF-T-2)



DOUBLE TRACK STRUCTURE WITH
 TWO-SINGLE TRACK AT GRADE
 (S-AG-2)



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

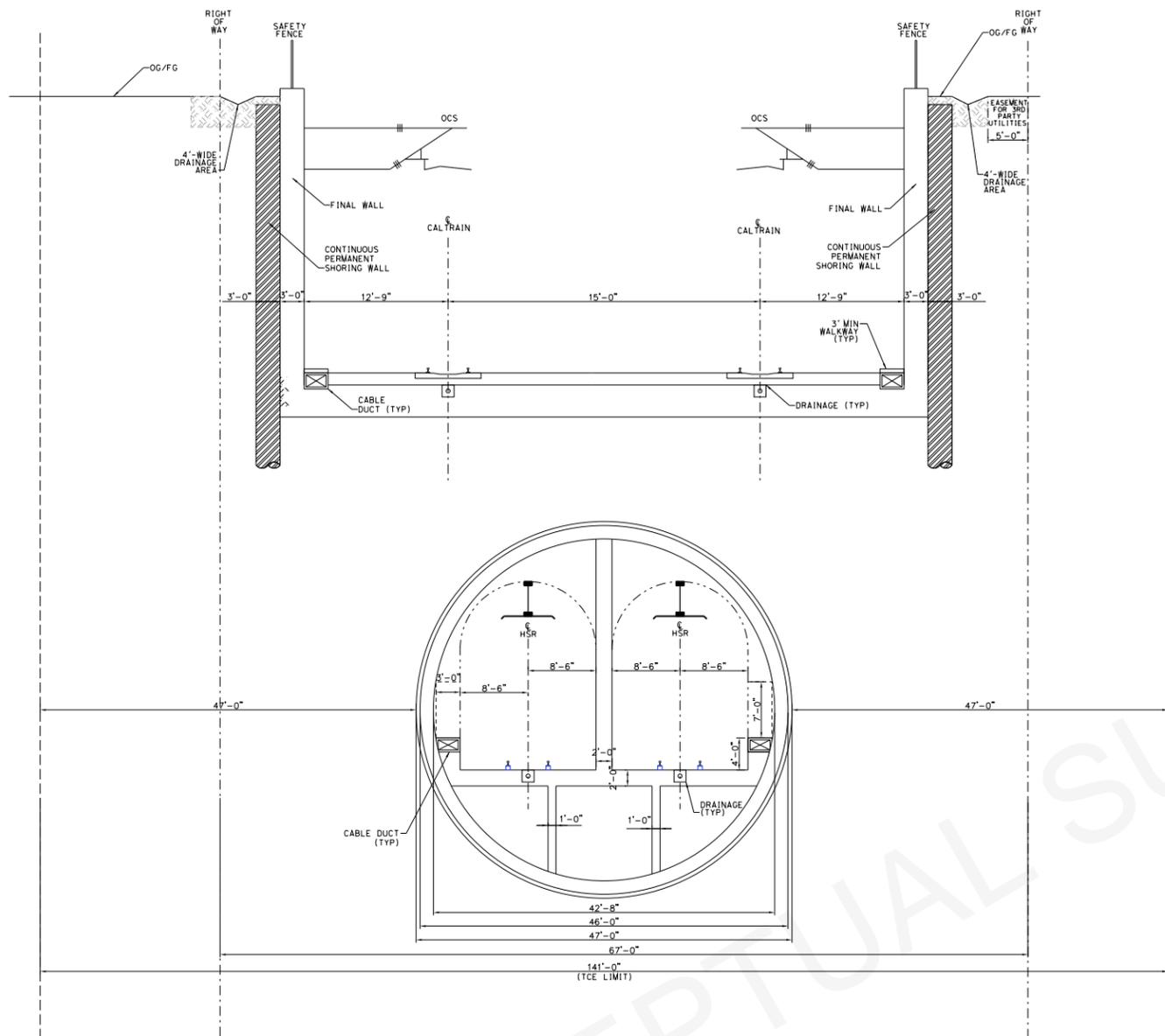
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IN CHARGE	
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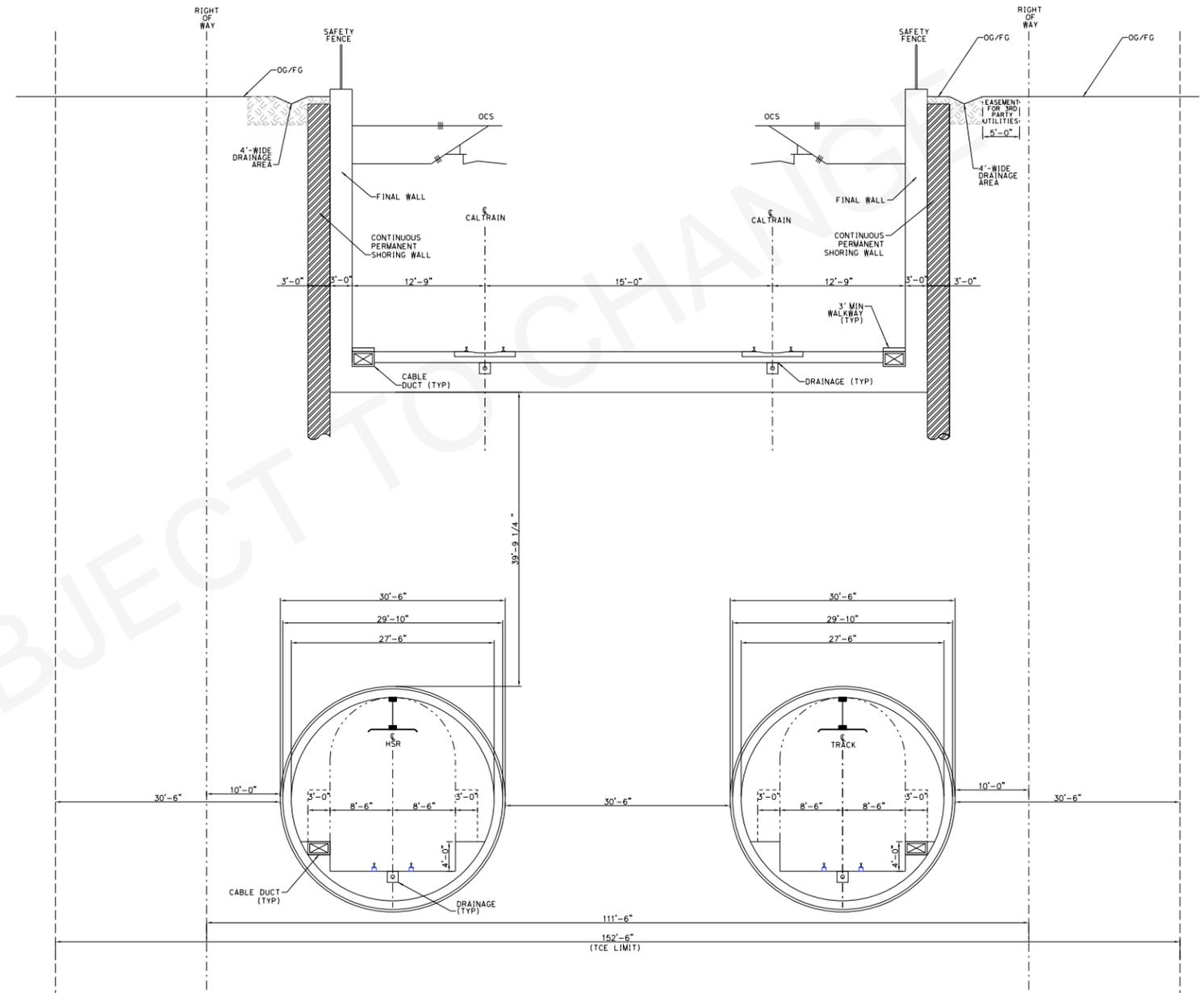


CALIFORNIA HIGH-SPEED TRAIN PROJECT
 COMBINATION
 DRAFT TYPICAL SECTIONS
 03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	15 OF 24



DOUBLE TRACK TRENCH WITH
DOUBLE TRACK TUNNEL
(TNCH-T-1)



DOUBLE TRACK TRENCH WITH
TWO-SINGLE TRACK TUNNELS
(TNCH-T-2)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

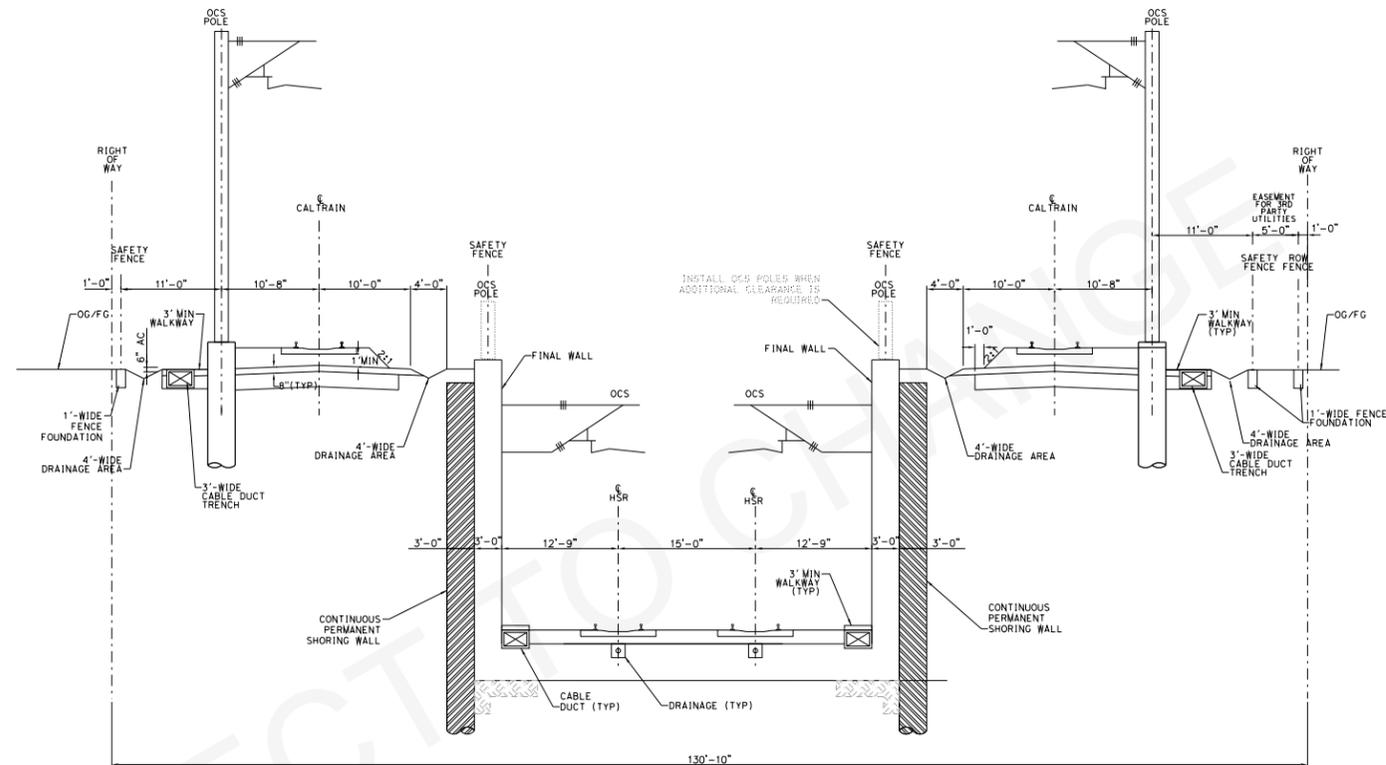
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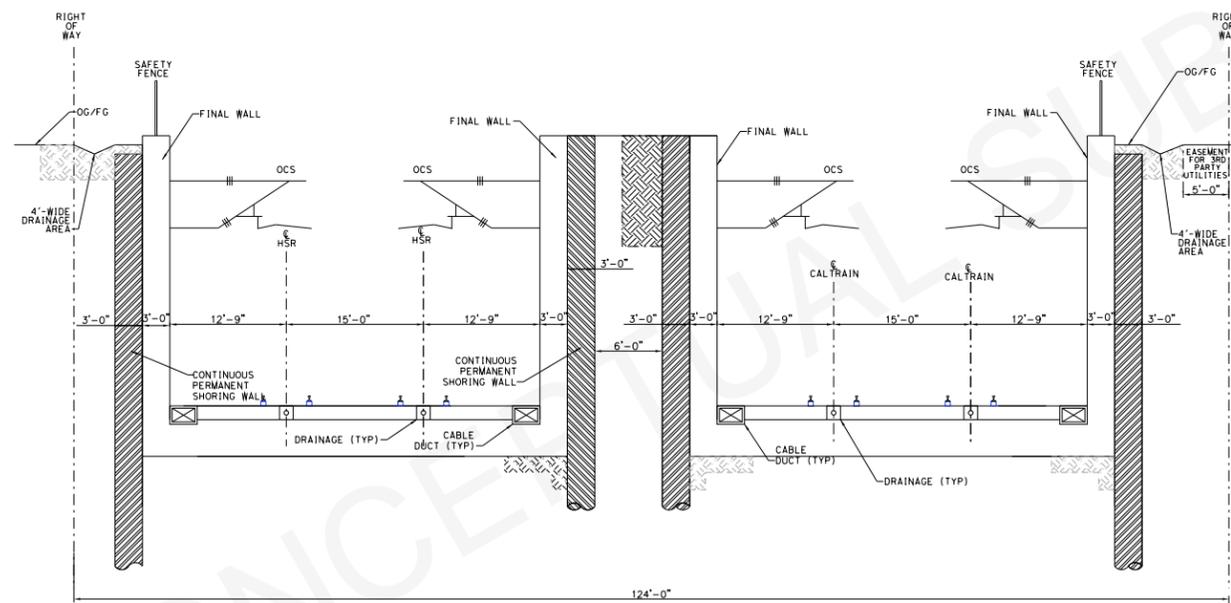
CALIFORNIA HIGH-SPEED TRAIN PROJECT

TRANSITION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	16 OF 24



TWO-SINGLE TRACKS AT GRADE WITH
DOUBLE TRACK TRENCH
(AG-TNCH-1)



TWO DOUBLE TRACK TRENCHES
(TNCH-1)

NOTES:

- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

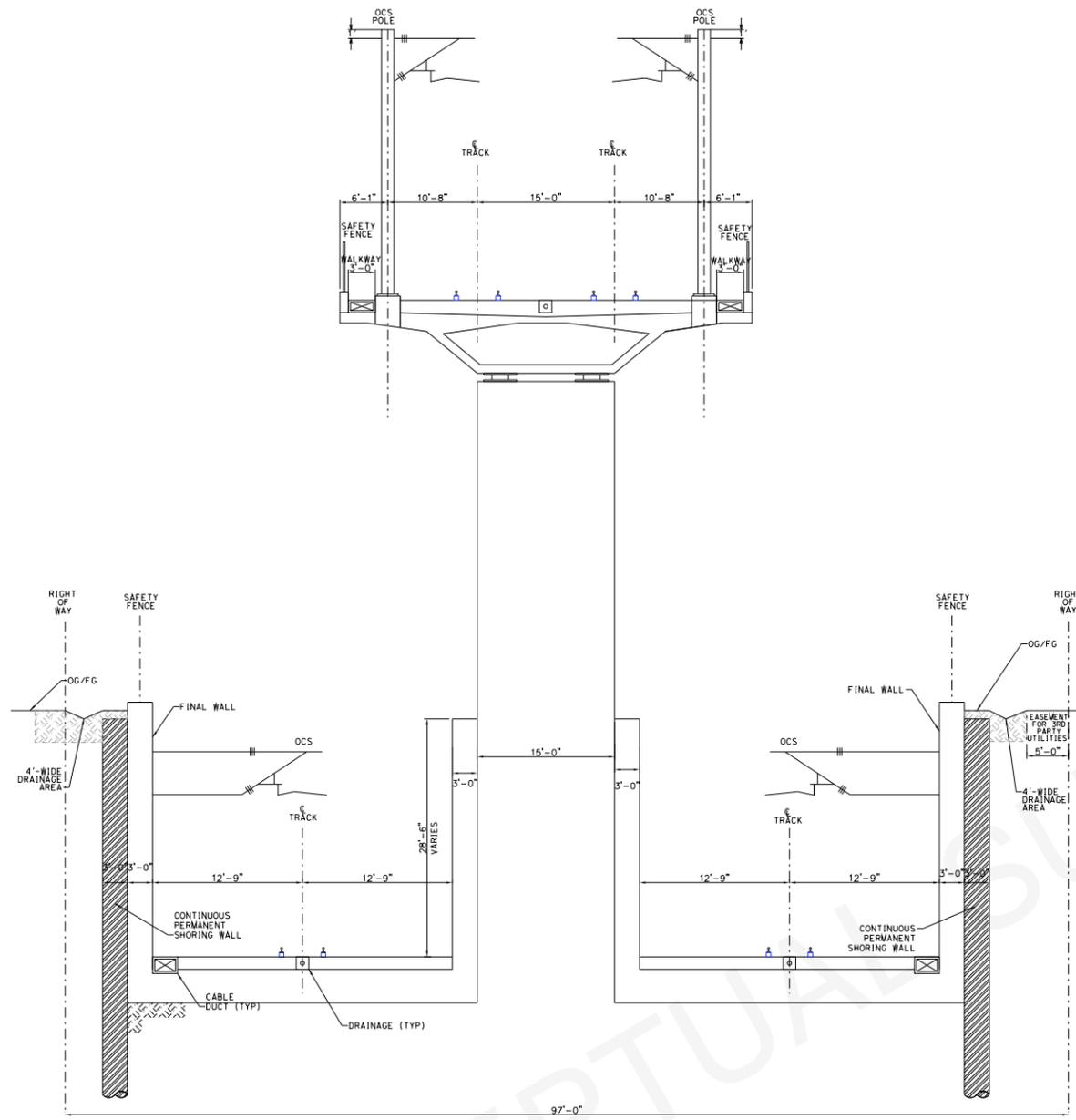
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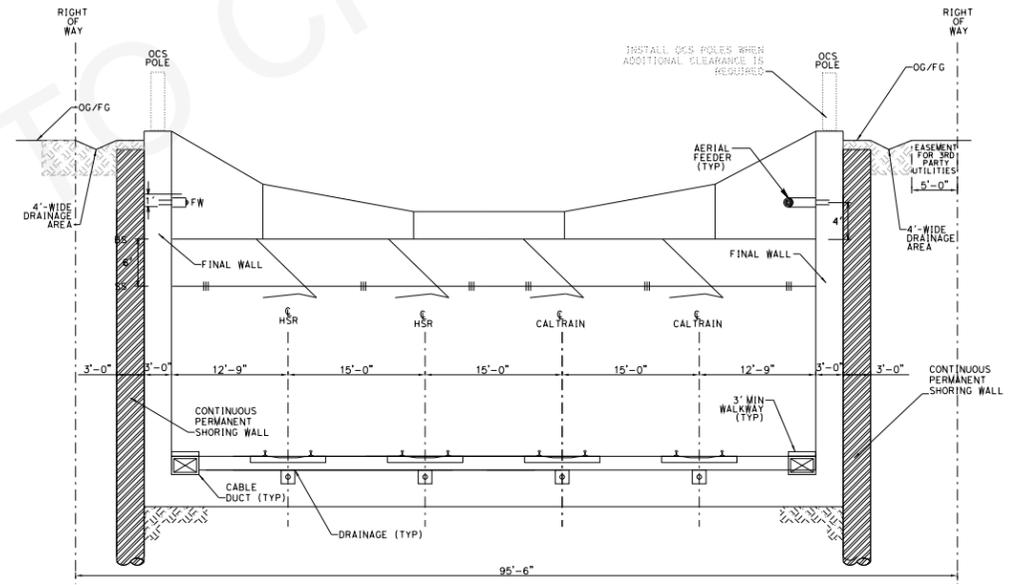
CALIFORNIA HIGH-SPEED TRAIN PROJECT

TRANSITION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	17 OF 24



DOUBLE TRACK STRUCTURE WITH TWO-SINGLE TRACK TRENCH (S-TNCH-1)



FOUR TRACK TRENCH (TNCH-2)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

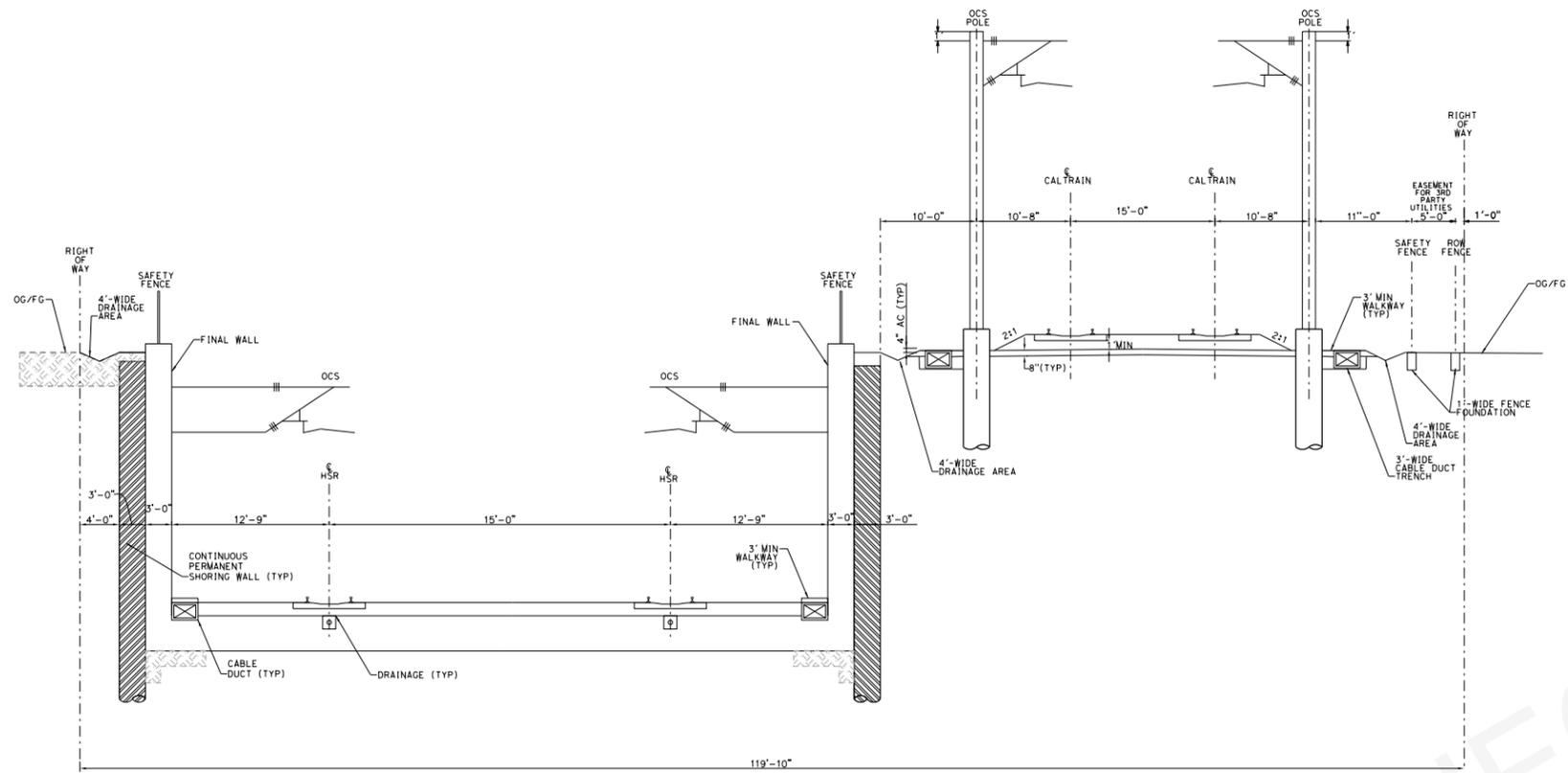
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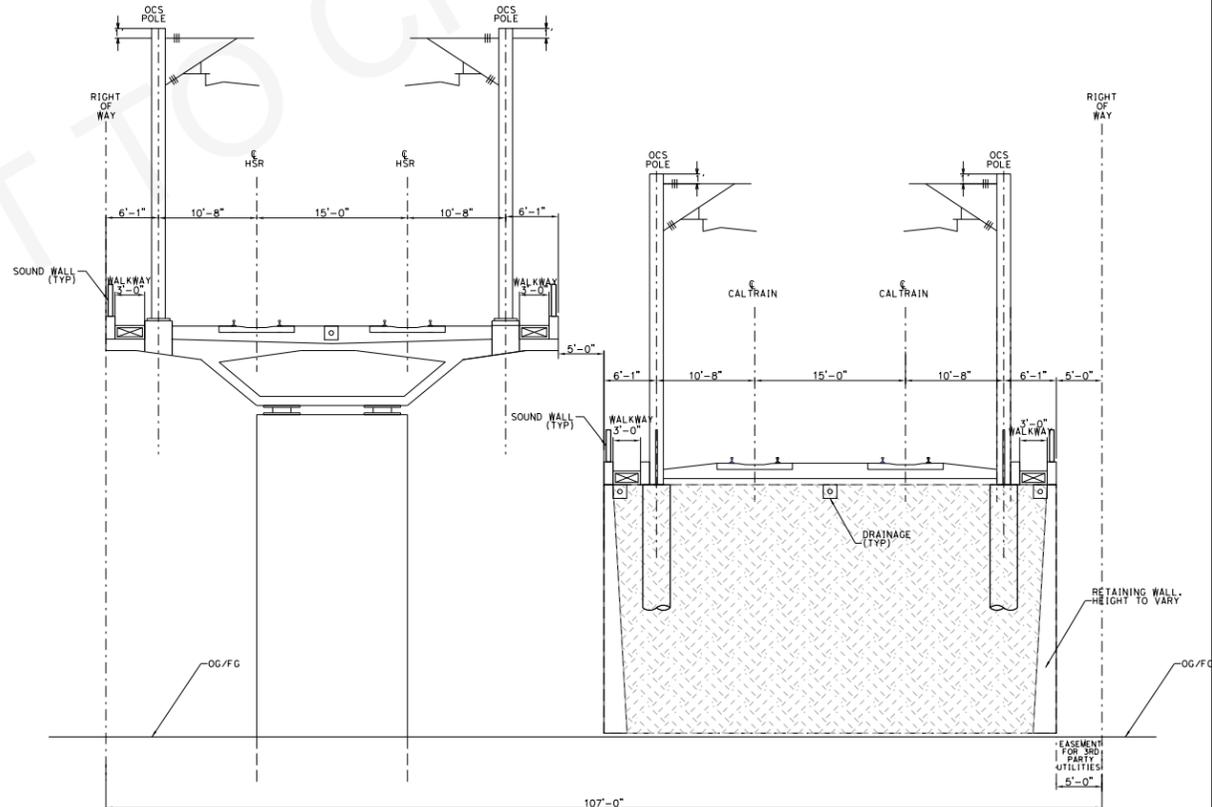
CALIFORNIA HIGH-SPEED TRAIN PROJECT

TRANSITION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	18 OF 24



DOUBLE TRACK TRENCH WITH
DOUBLE TRACK AT GRADE
(AG-TNCH-2)



DOUBLE TRACK STRUCTURE
DOUBLE TRACK RETAIN FILL
(S-RF-2)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

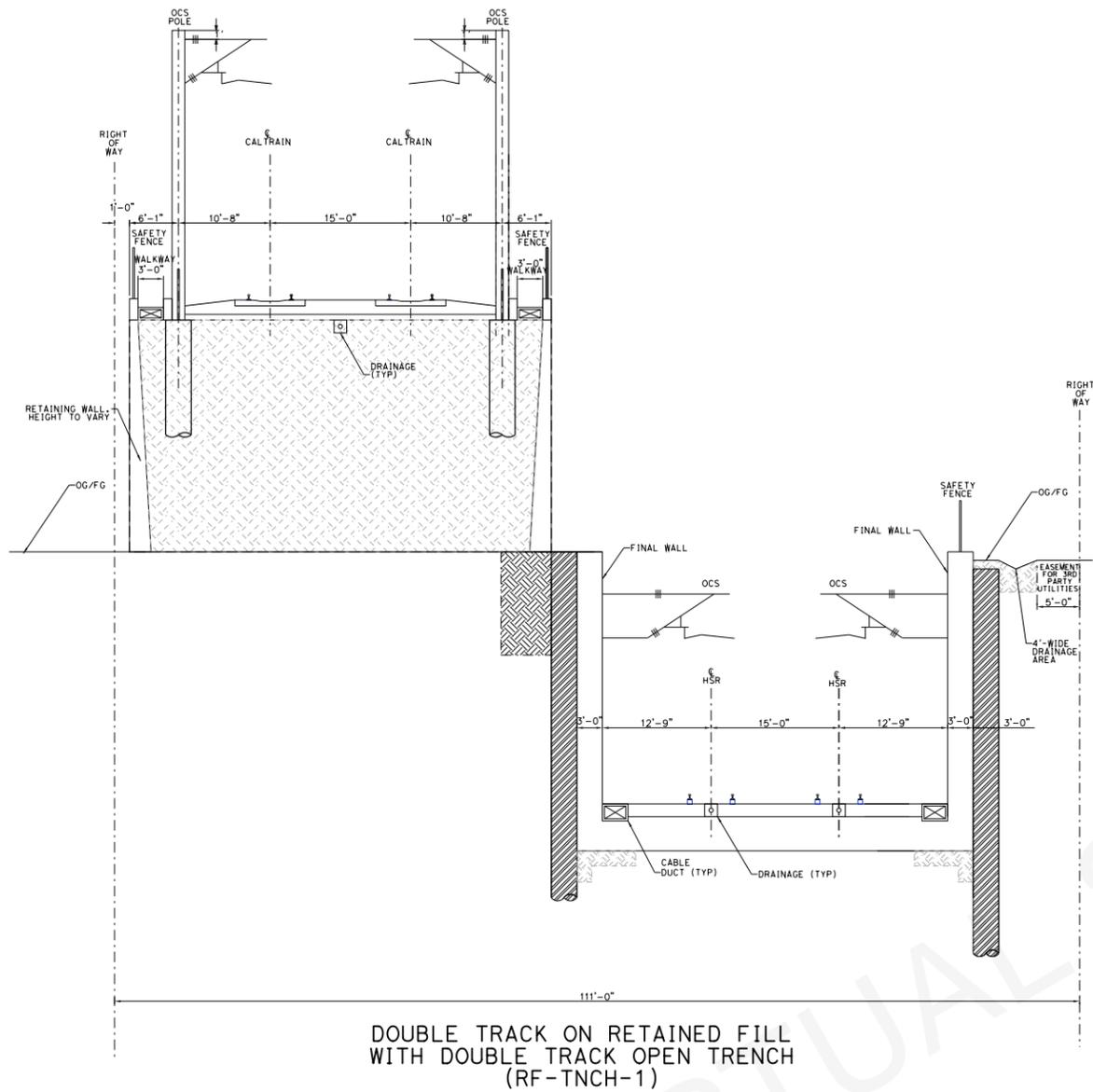
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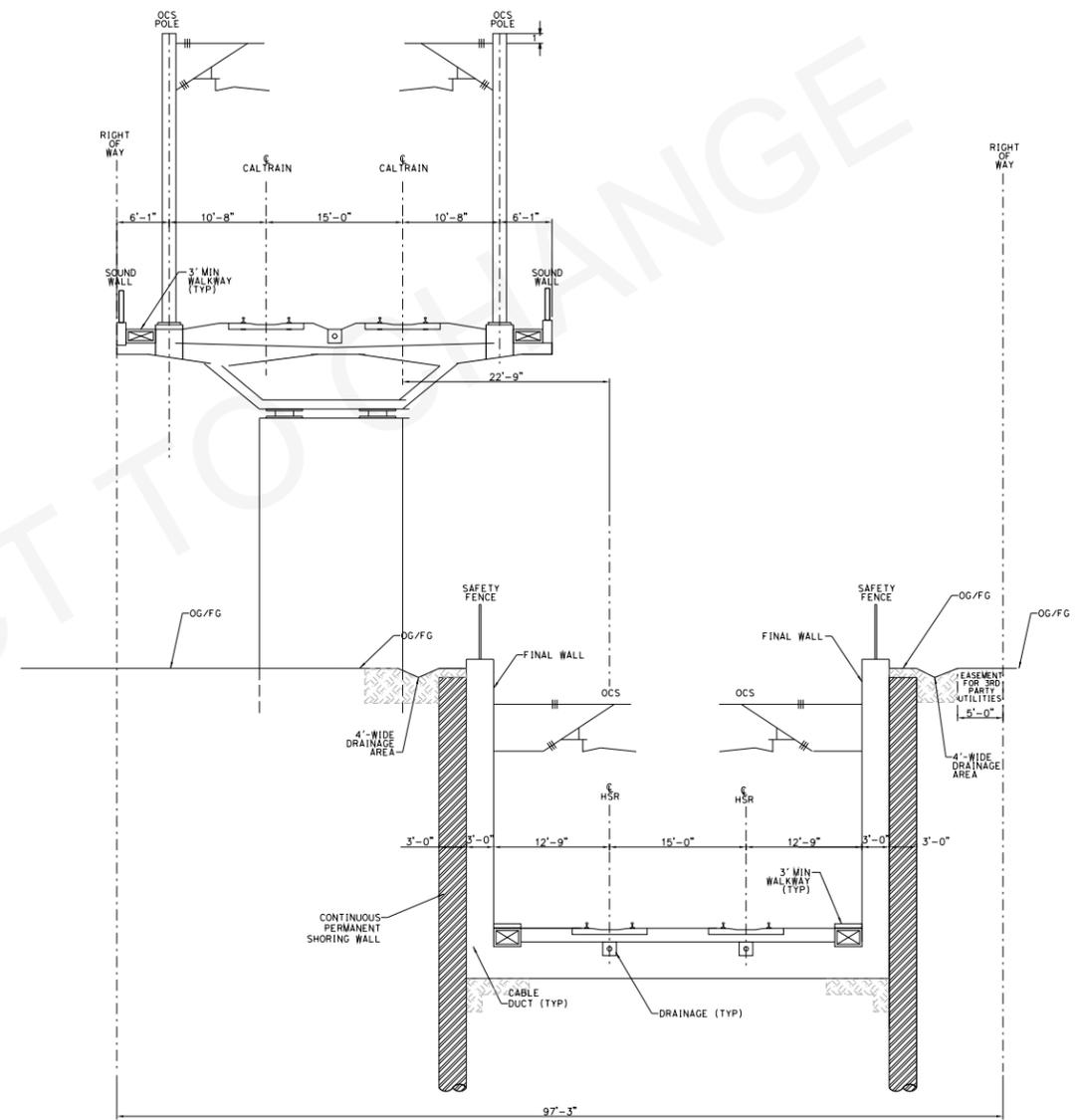
CALIFORNIA HIGH-SPEED TRAIN PROJECT

TRANSITION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	19 OF 24



DOUBLE TRACK ON RETAINED FILL WITH DOUBLE TRACK OPEN TRENCH (RF-TNCH-1)



DOUBLE TRACK STRUCTURE WITH DOUBLE TRACK TRENCH (S-TNCH-2)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

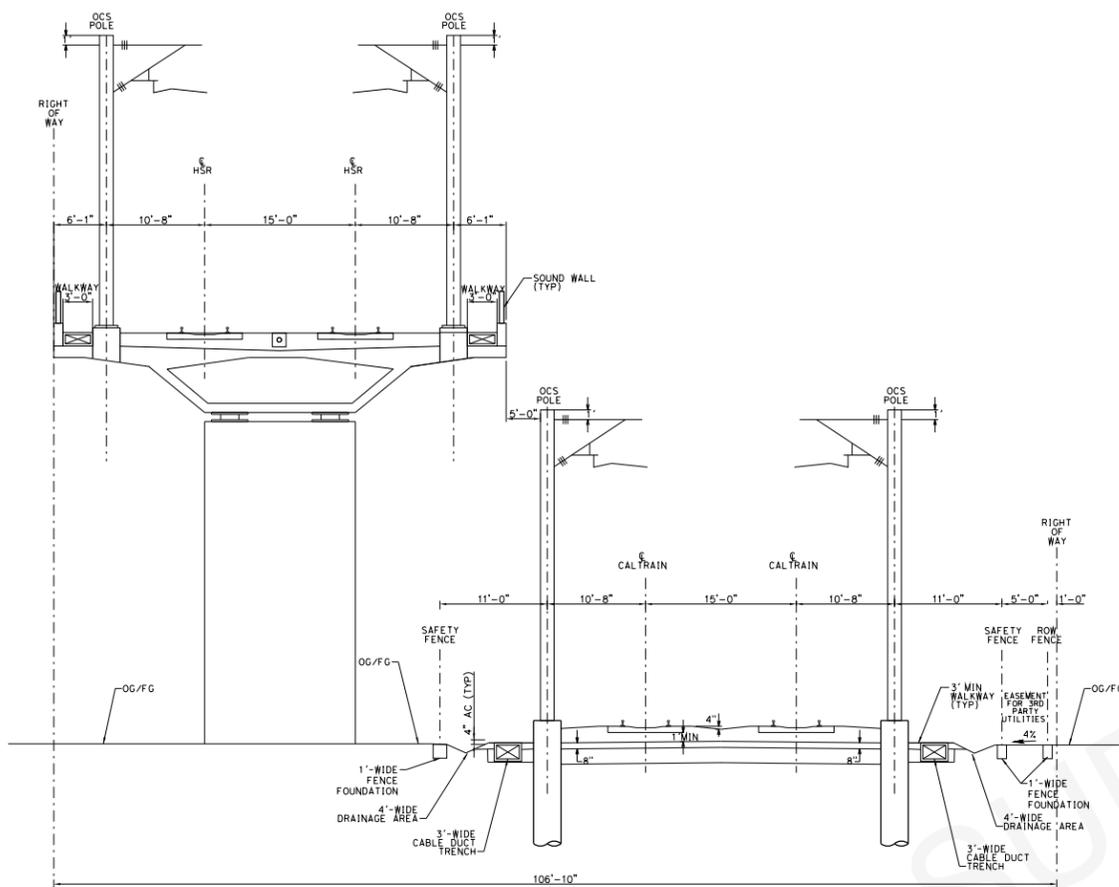
DESIGNED BY	
DRAWN BY	
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DATE	



CALIFORNIA HIGH-SPEED TRAIN PROJECT

TRANSITION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	20 OF 24



DOUBLE TRACK STRUCTURE WITH
DOUBLE TRACK AT GRADE
(S-AG-3)

NOTES:
1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

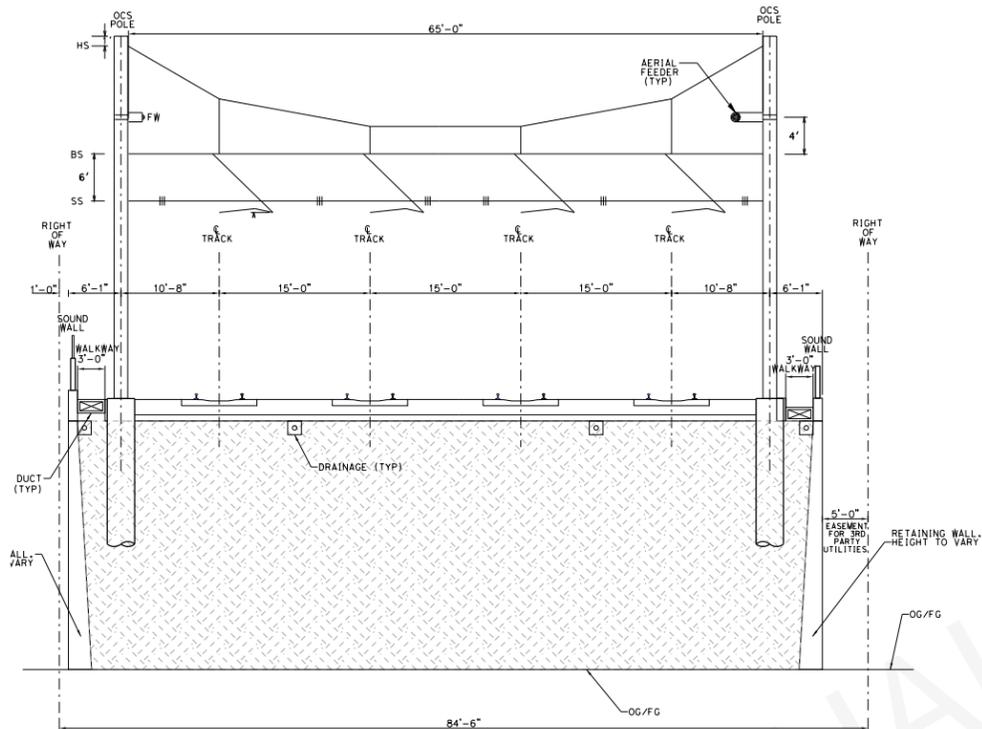
REV	DATE	BY	CHK	APP	DESCRIPTION

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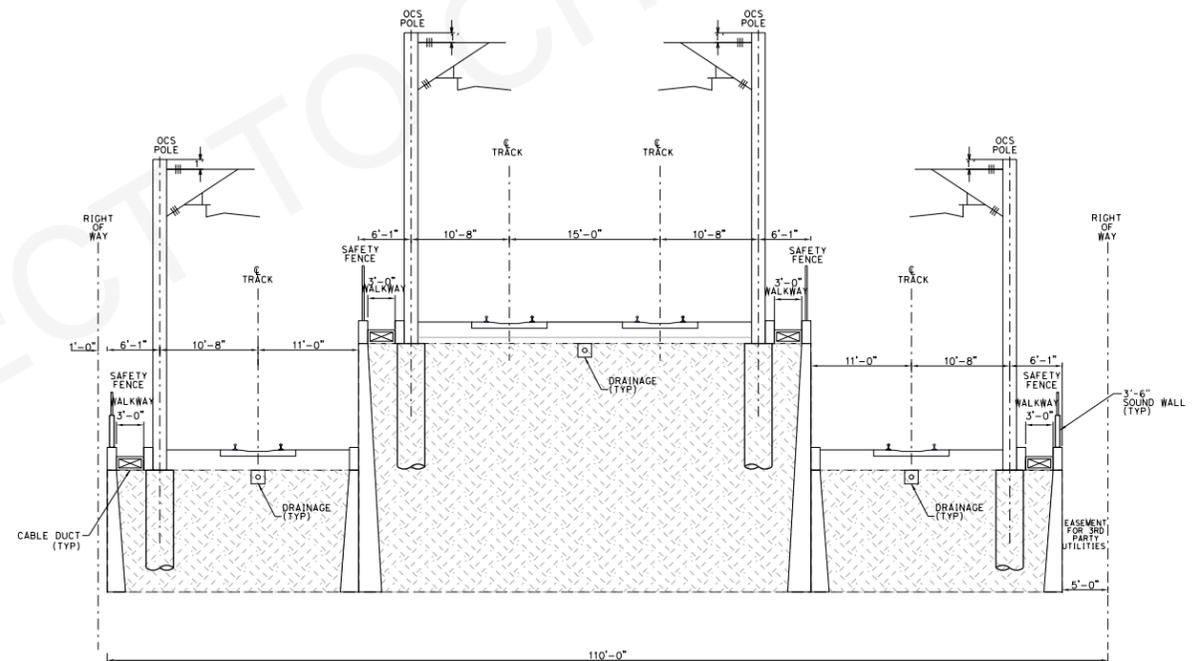


CALIFORNIA HIGH-SPEED TRAIN PROJECT
TRANSITION
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	21 OF 24

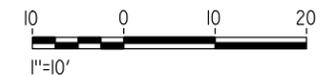


FOUR TRACK ELEVATED ON RETAINED FILL (RF-1)



TWO-SINGLE TRACK ON RETAINED FILL WITH DOUBLE TRACK ON RETAINED FILL (RF-2)

- NOTES:
- FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

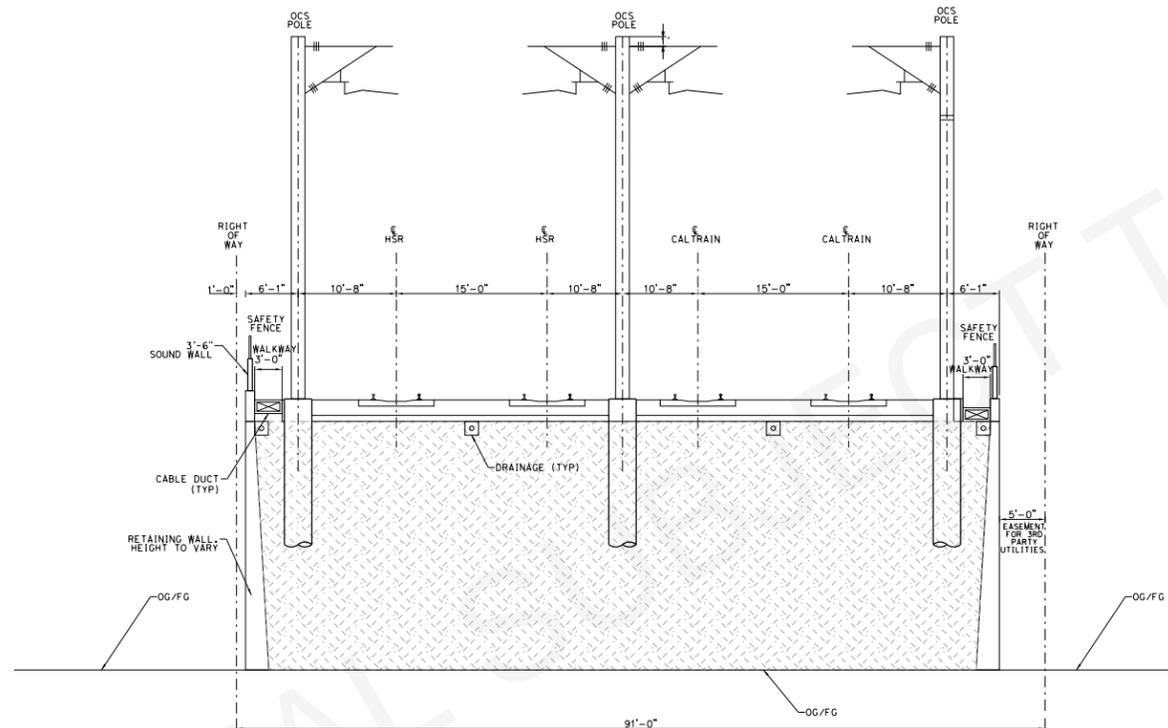
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CALIFORNIA HIGH-SPEED TRAIN PROJECT

RETAINED FILL
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	22 OF 24



FOUR TRACK ELEVATED ON RETAINED FILL
(RF-3)



- NOTES:
1. FOR TYPICAL SECTIONS AT ROADWAY CROSSINGS REFER TO SHEET 24.



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

REV	DATE	BY	CHK	APP	DESCRIPTION

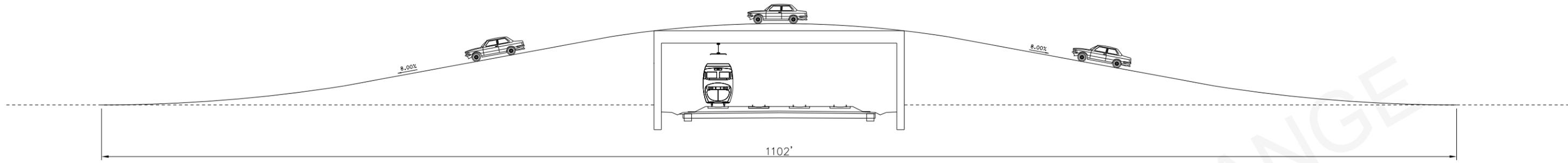
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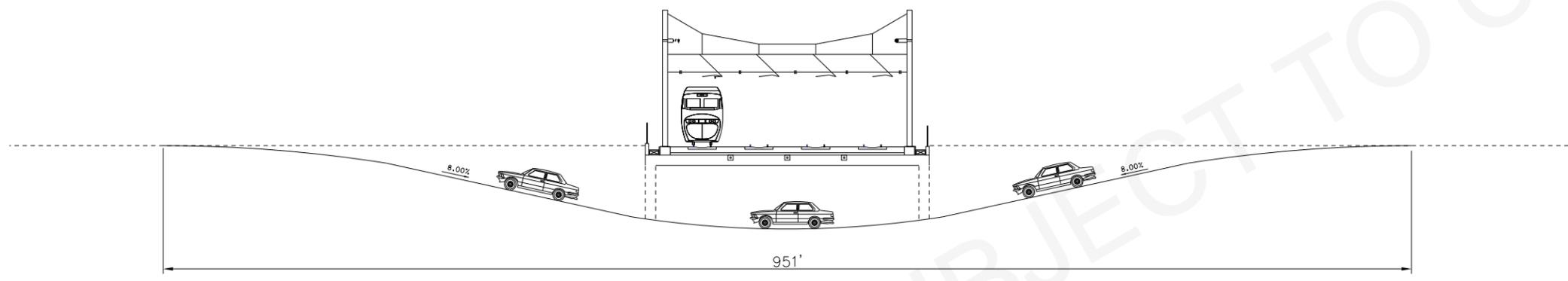
CALIFORNIA HIGH-SPEED TRAIN PROJECT

RETAINED FILL
DRAFT TYPICAL SECTIONS
03/24/2010

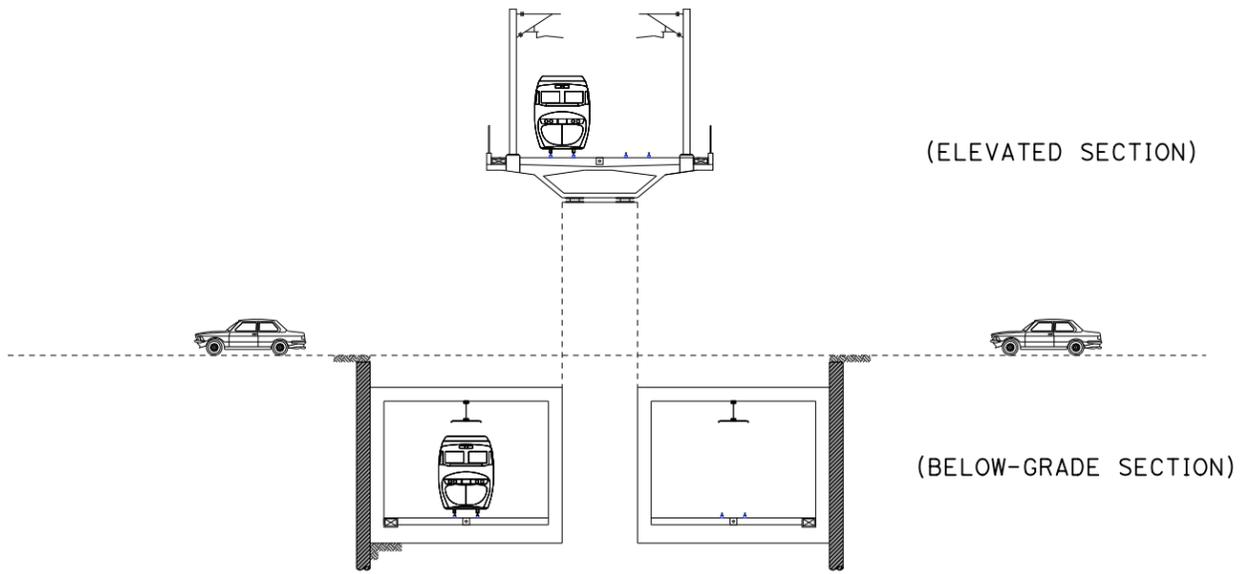
CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	23 OF 24



ROAD OVER RAIL
(CR-1)



ROAD UNDER RAIL
(CR-2)



ROAD AT GRADE
(CR-3)

(ELEVATED SECTION)

(BELOW-GRADE SECTION)

NOTE:
REFER TO TYPICAL SECTIONS SHEETS FOR THE DIFFERENT AT-GRADE,
BELOW-GRADE AND ELEVATED SECTIONS OPTIONS.

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

REV	DATE	BY	CHK	APP	DESCRIPTION

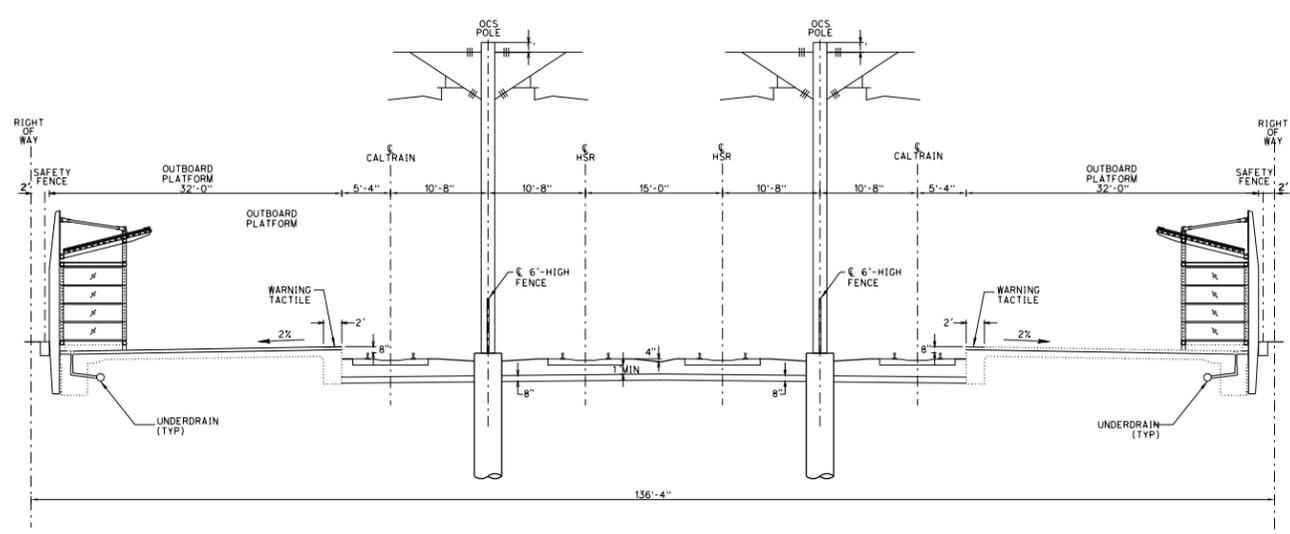
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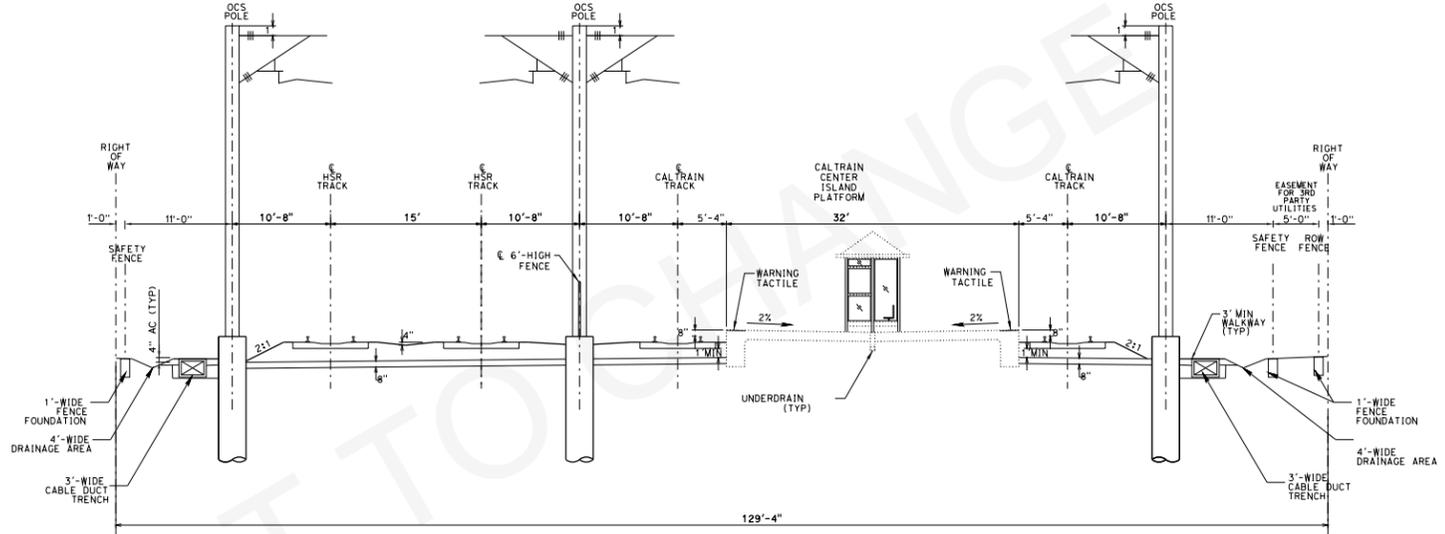
CALIFORNIA HIGH-SPEED TRAIN PROJECT

CROSSING
DRAFT TYPICAL SECTIONS
03/24/2010

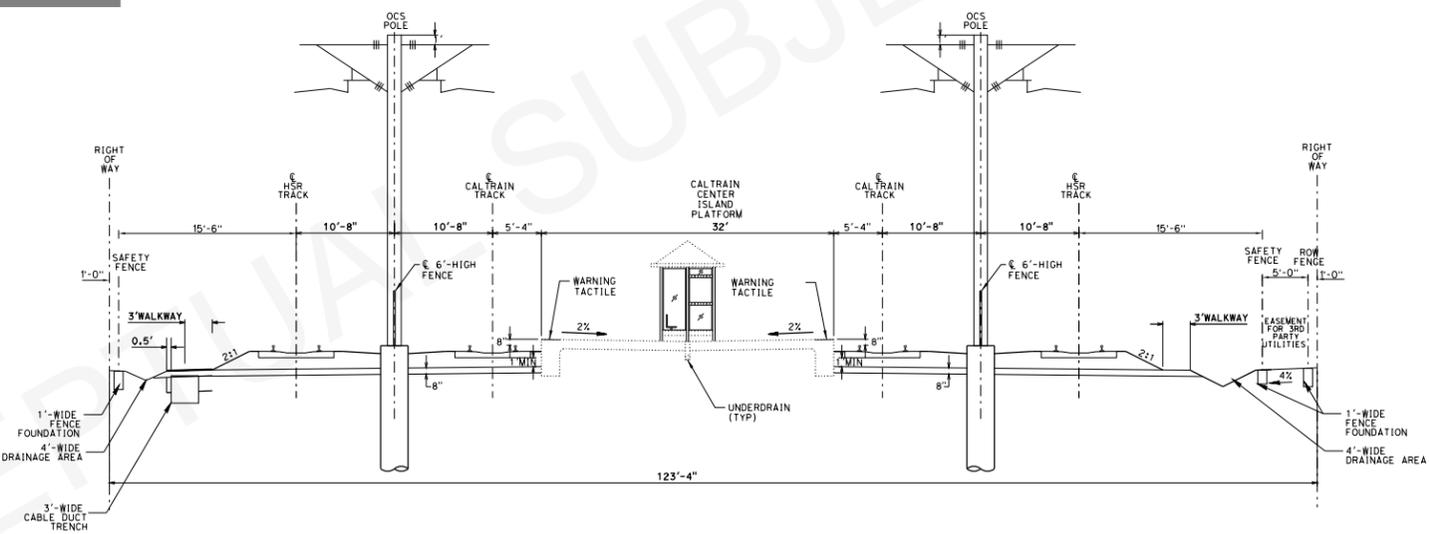
CONTRACT NO.	
DRAWING NO.	
SCALE	NTS
SHEET NO.	24 OF 24



TYPICAL CALTRAIN-ONLY STATION
OUTBOARD PLATFORM
(STA-1)



TYPICAL CALTRAIN-ONLY STATION
CENTER ISLAND PLATFORM
(STA-2)



TYPICAL CALTRAIN-ONLY STATION
CENTER ISLAND PLATFORM
(STA-3)

NOT TO SCALE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

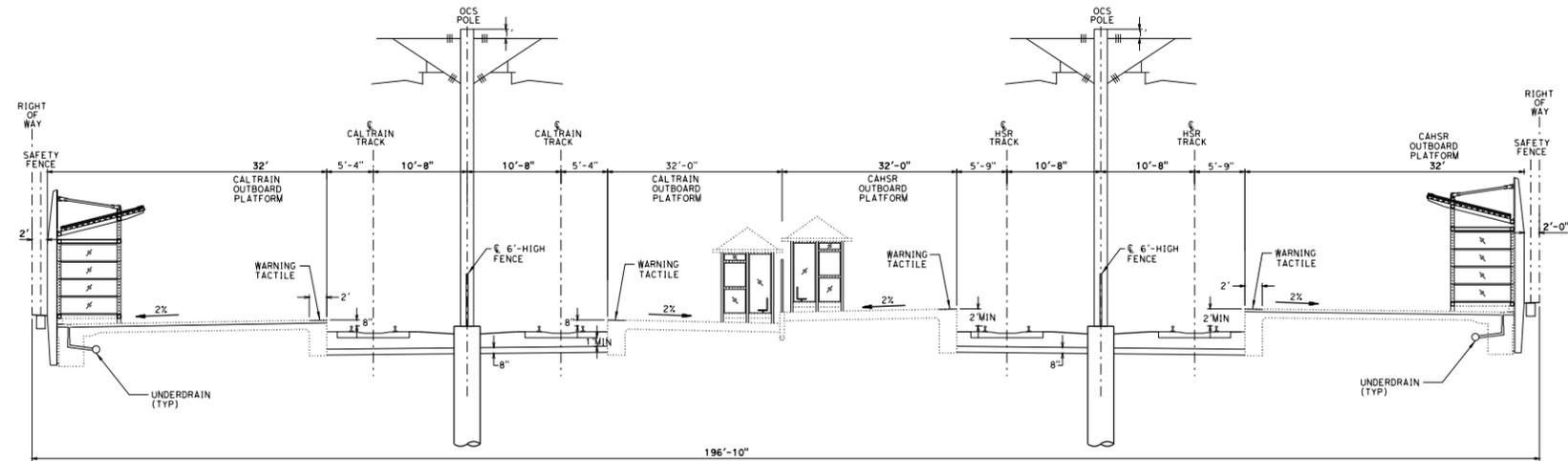
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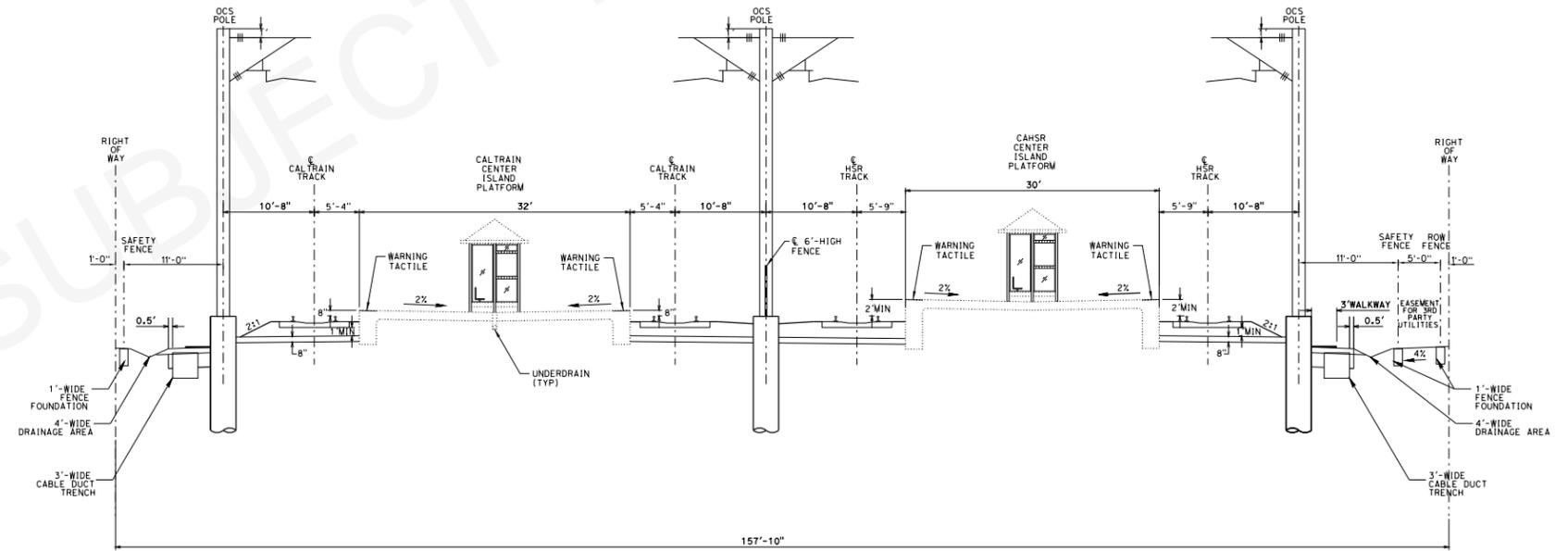
CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	1 OF 9



TYPICAL CALTRAIN/CAHSR STATION
OUTBOARD PLATFORM
(STA-4)



TYPICAL CALTRAIN/CAHSR STATION
CENTER ISLAND PLATFORM
(STA-5)

NOT TO SCALE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

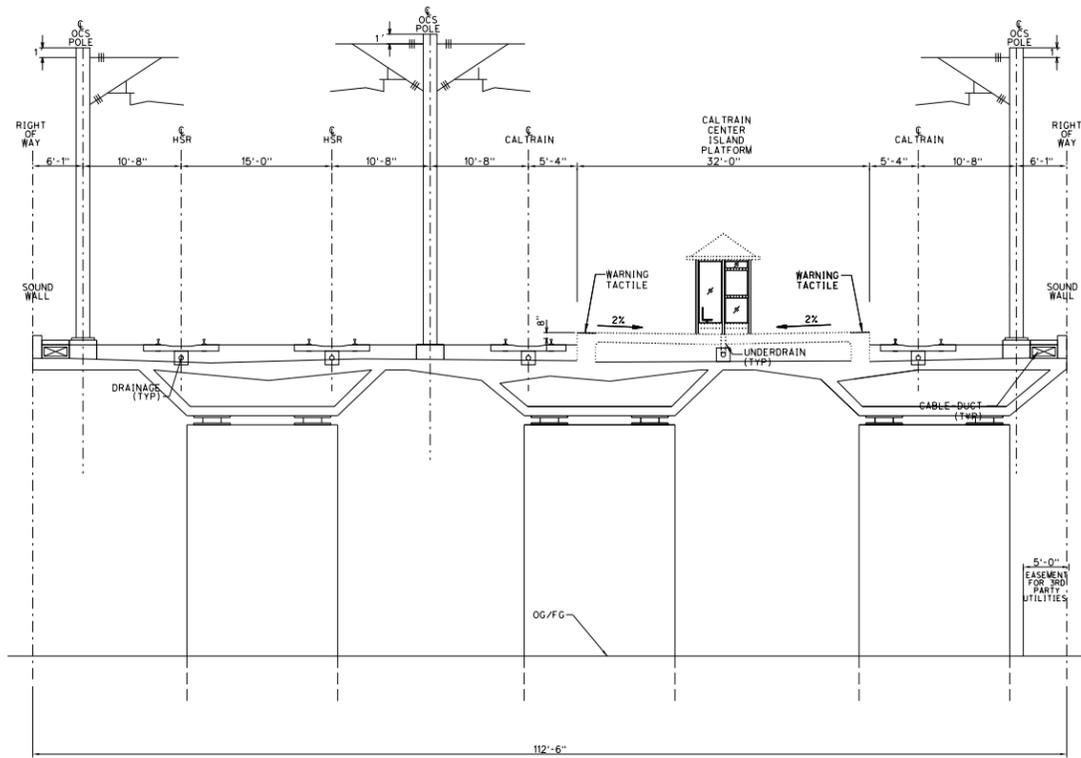
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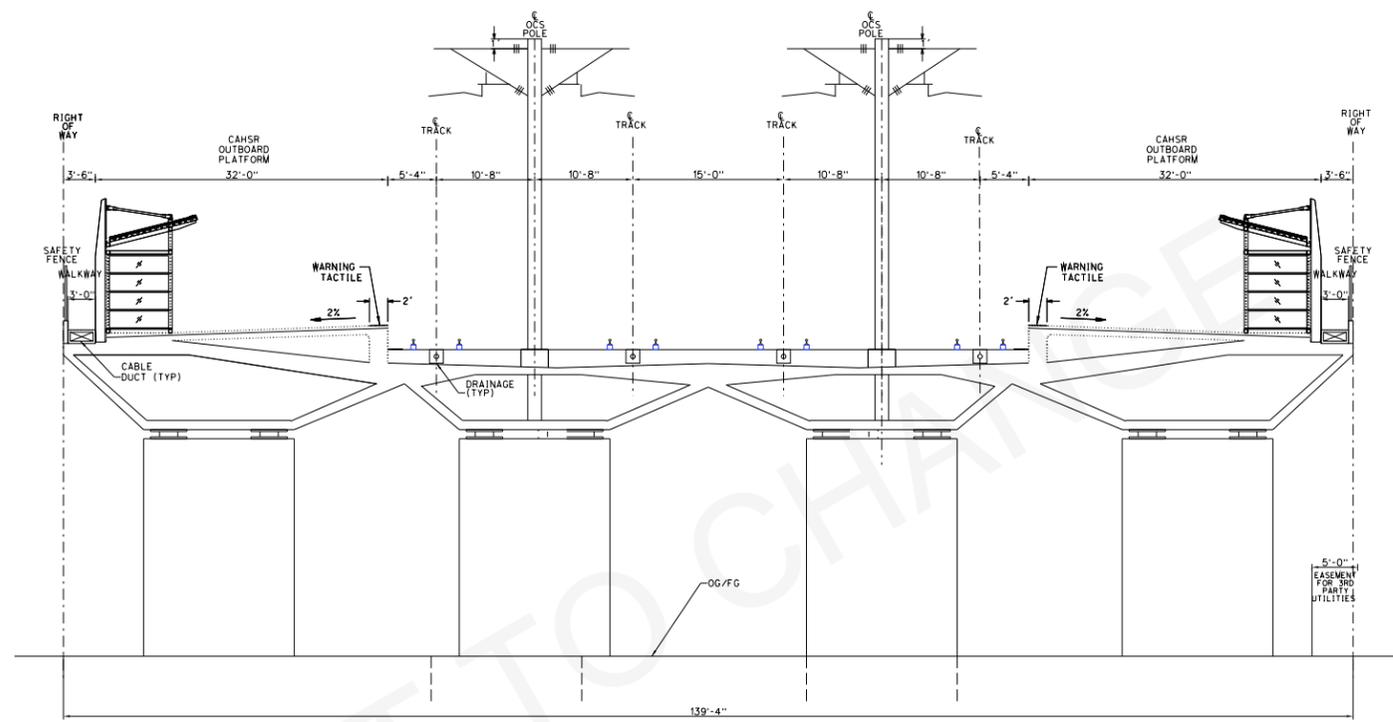
CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
DRAFT TYPICAL SECTIONS
03/24/2010

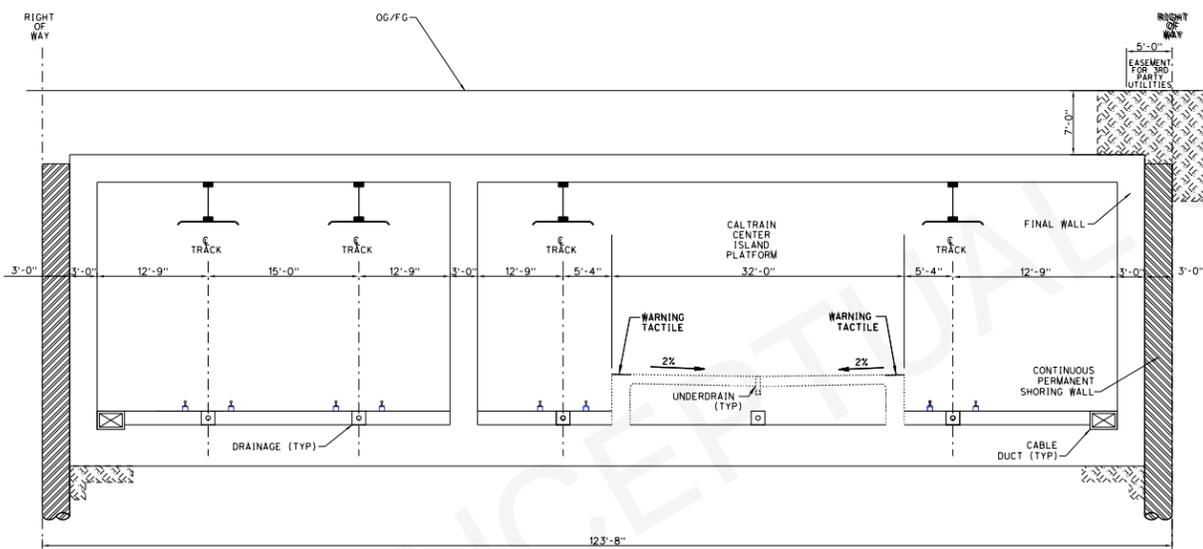
CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	2 OF 9



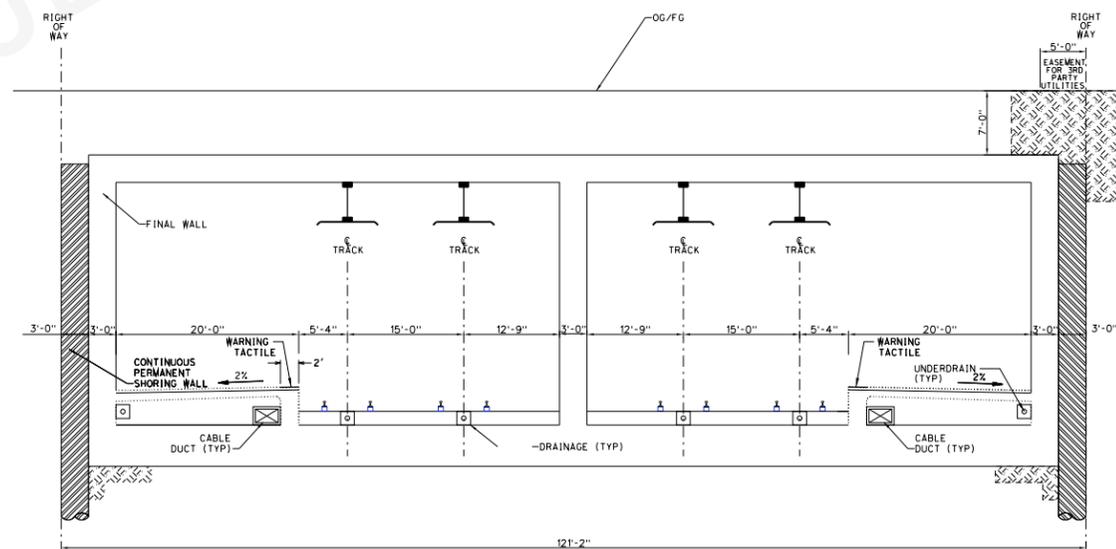
TYPICAL CALTRAIN-ONLY RAISED STATION
CENTER ISLAND PLATFORM
(STA-6)



TYPICAL CALTRAIN-ONLY RAISED STATION
OUTBOARD PLATFORM
(STA-7)



TYPICAL CALTRAIN-ONLY TUNNEL STATION
CENTER ISLAND PLATFORM
(STA-8)



TYPICAL CALTRAIN-ONLY TUNNEL STATION
OUTBOARD PLATFORM
(STA-9)

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

REV	DATE	BY	CHK	APP	DESCRIPTION

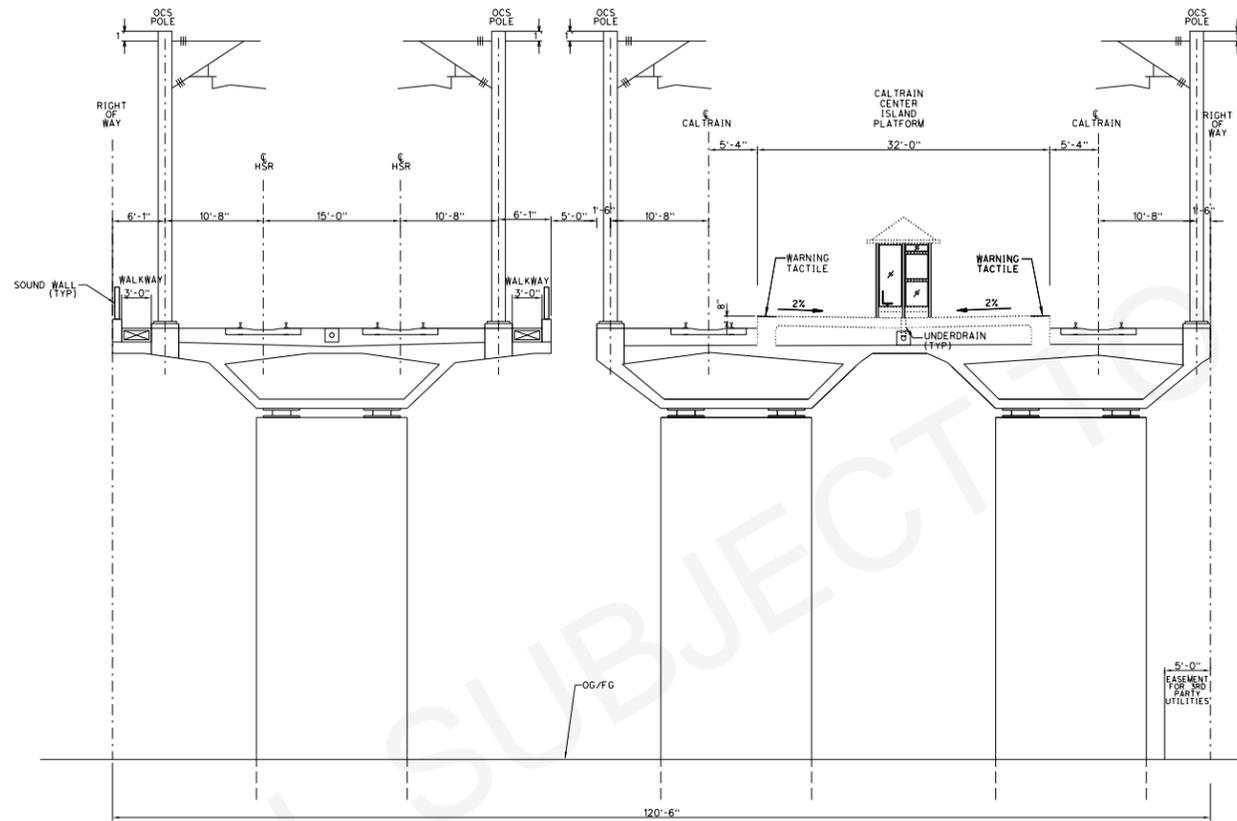
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DATE	



CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	3 OF 9



TYPICAL CALTRAIN-ONLY ELEVATED STATION
 CENTER ISLAND PLATFORM
 (STA-10)



CONCEPTUAL SUBJECT TO CHANGE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

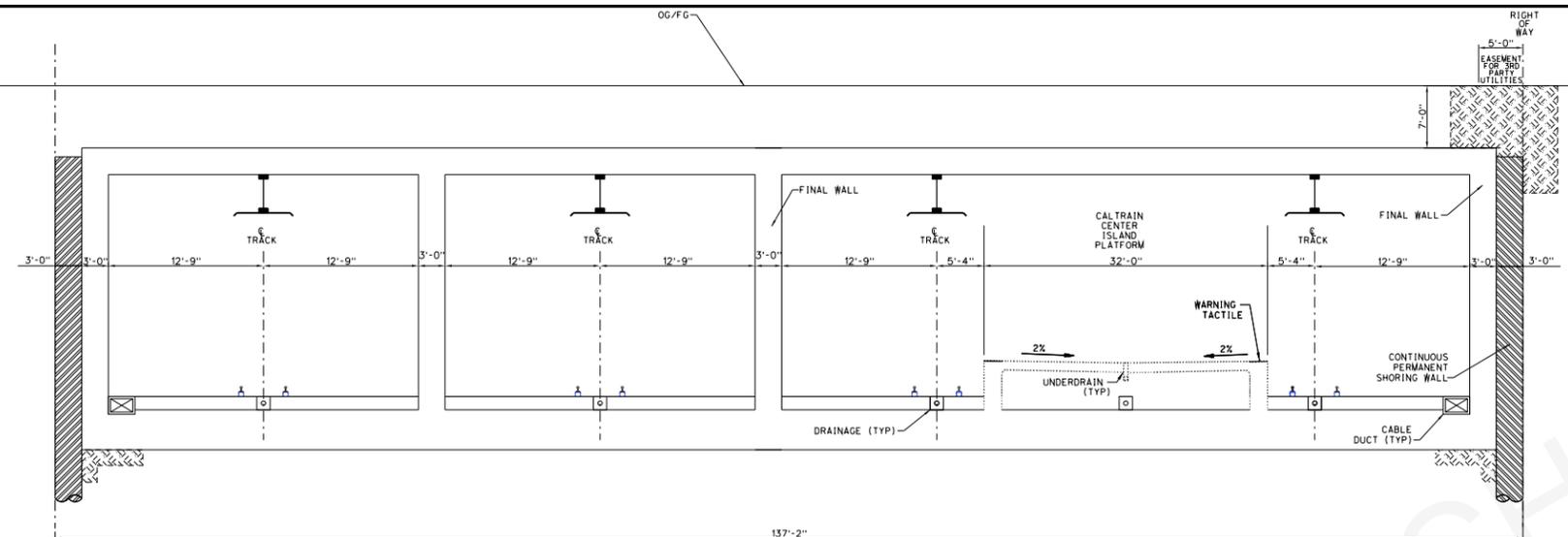
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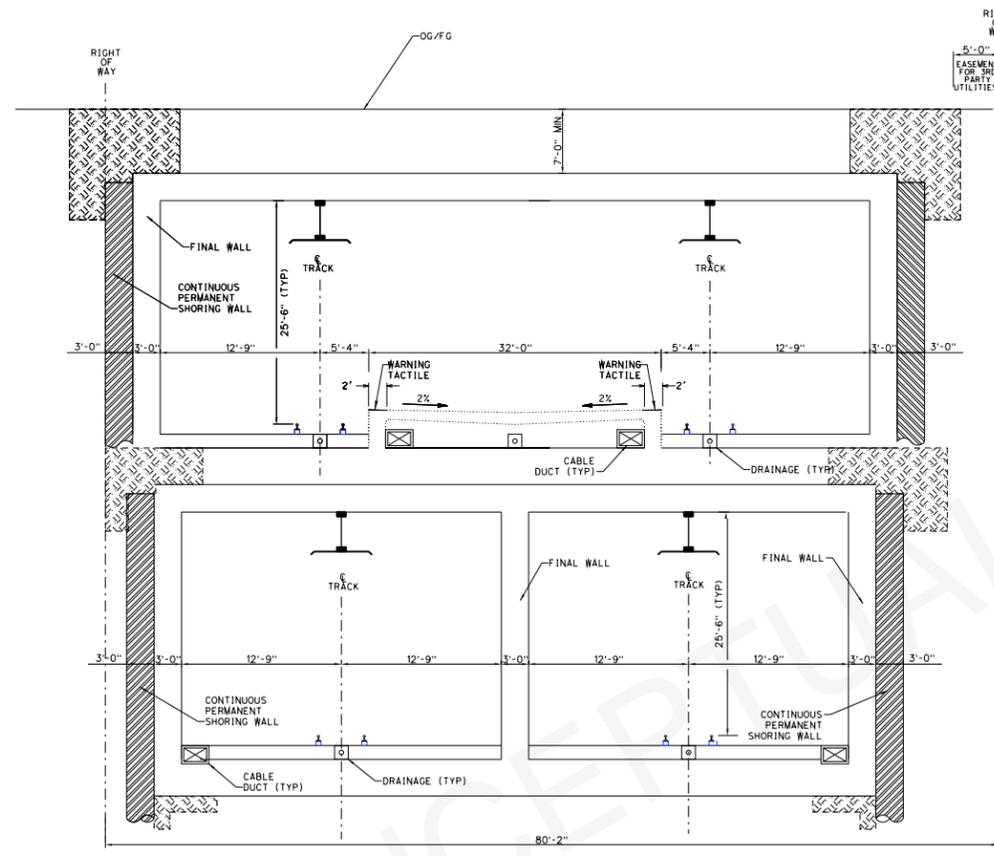
CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
 DRAFT TYPICAL SECTIONS
 03/24/2010

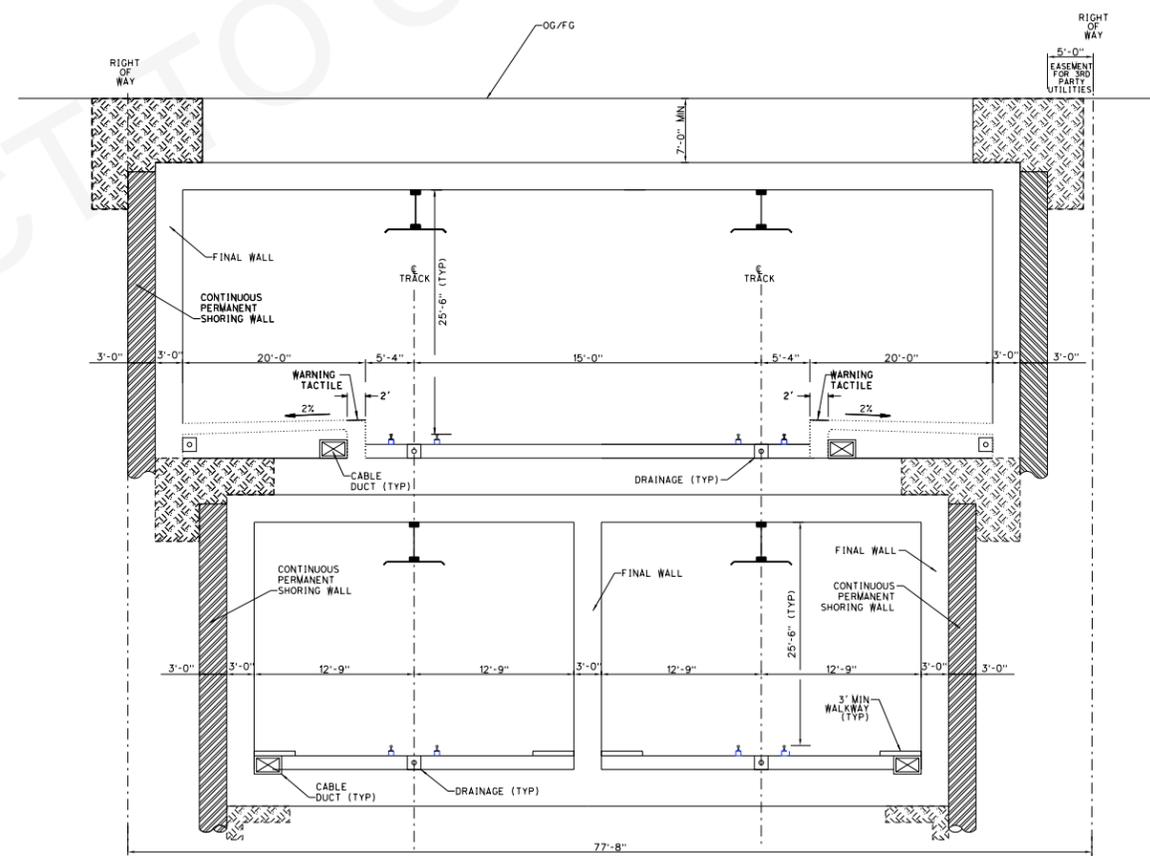
CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	4 OF 9



TYPICAL CALTRAIN-ONLY CUT AND COVER STATION
CENTER ISLAND PLATFORM
(STA-11)



TYPICAL CALTRAIN-ONLY STACKED CUT AND COVER STATION
CENTER ISLAND PLATFORM
(STA-12)



TYPICAL CALTRAIN-ONLY STACKED CUT AND COVER STATION
OUTBOARD PLATFORM
(STA-13)

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

REV	DATE	BY	CHK	APP	DESCRIPTION

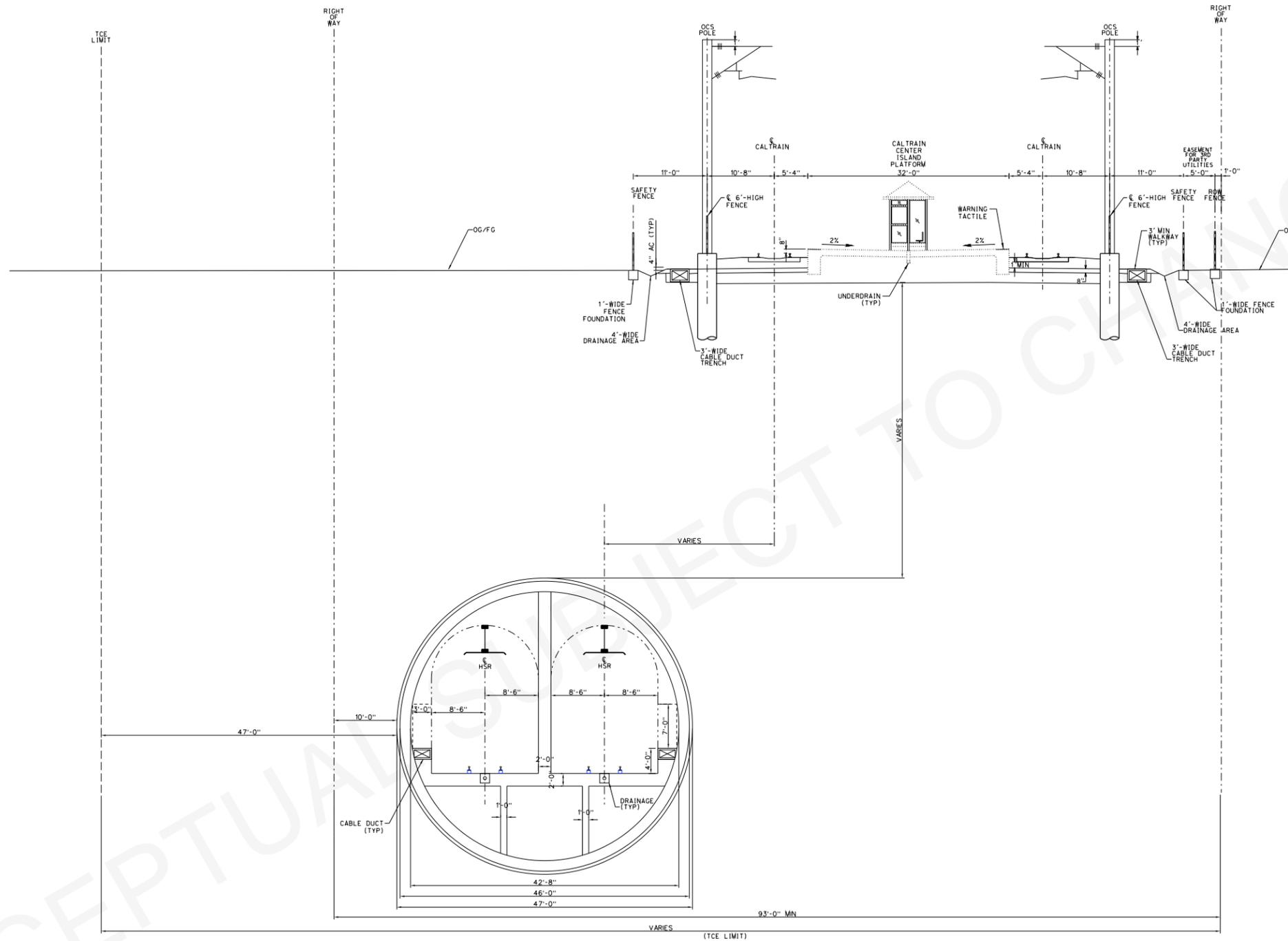
DESIGNED BY	
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CHECKED BY	
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DATE	



CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	5 OF 9



TYPICAL CALTRAIN-ONLY AT GRADE STATION
 CENTER ISLAND PLATFORM WITH HSR TUNNEL
 (STA-14)



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

REV	DATE	BY	CHK	APP	DESCRIPTION

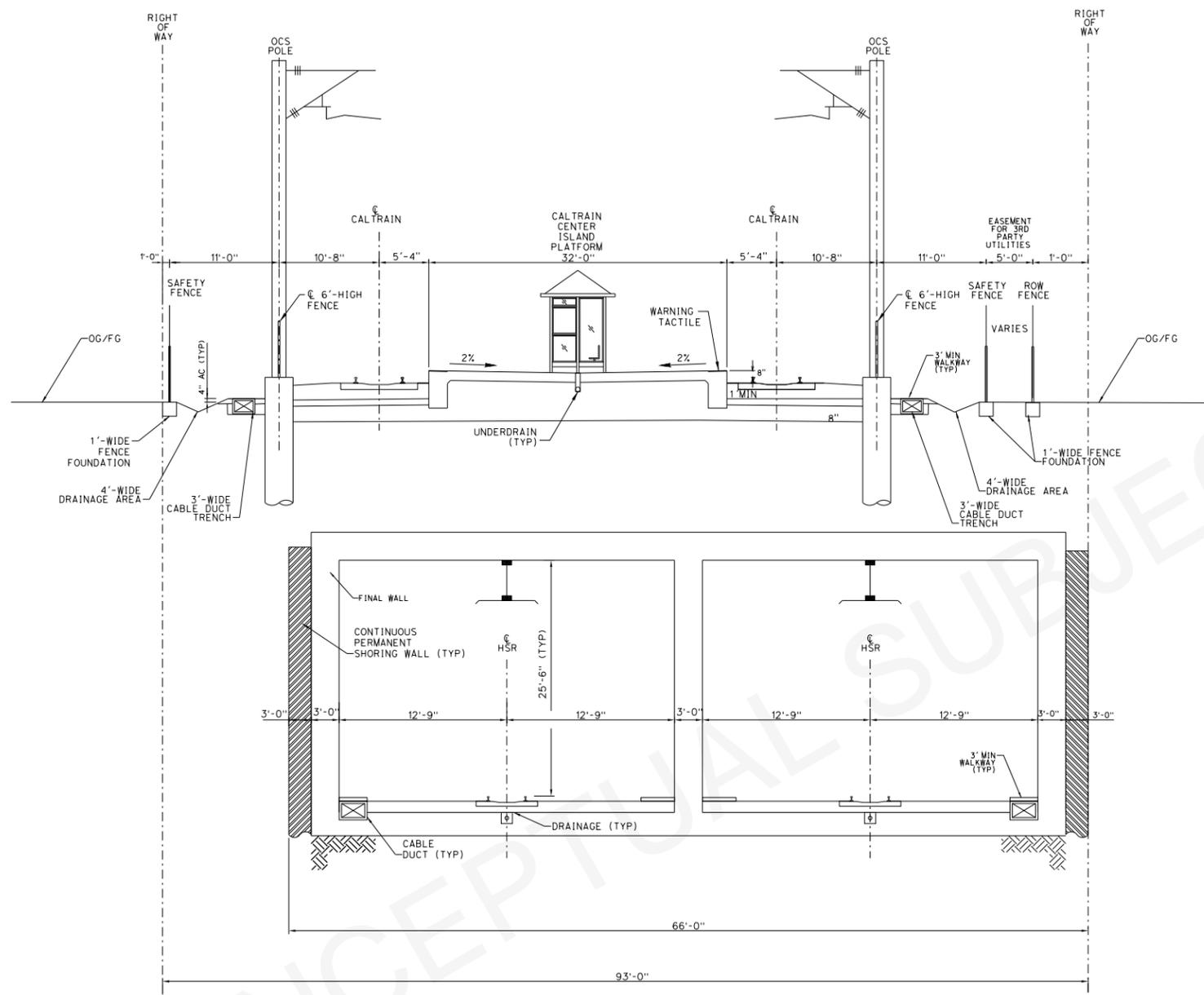
DESIGNED BY	
DRAWN BY	
CHECKED BY	
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CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
 DRAFT TYPICAL SECTIONS
 03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	6 OF 9



TYPICAL CALTRAIN-ONLY AT GRADE STATION
 CENTER ISLAND PLATFORM WITH HSR CUT AND COVER BOX
 (STA-15)

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

REV	DATE	BY	CHK	APP	DESCRIPTION

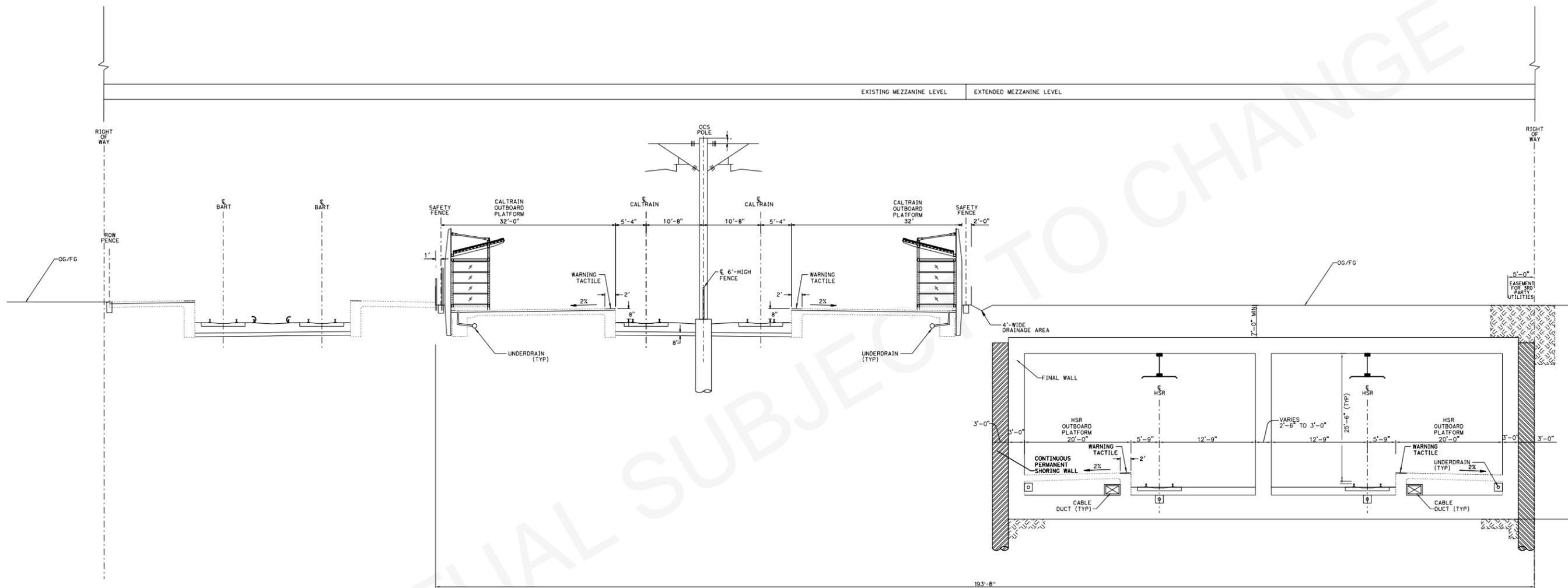
DESIGNED BY	
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CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
 DRAFT TYPICAL SECTIONS
 03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	7 OF 9



TYPICAL CALTRAIN AT GRADE OUTBOARD STATION
WITH HSR CUT AND COVER BOX OUTBOARD STATION
(STA-16)

HST MILLBRAE STATION

CONCEPTUAL SUBJECT TO CHANGE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

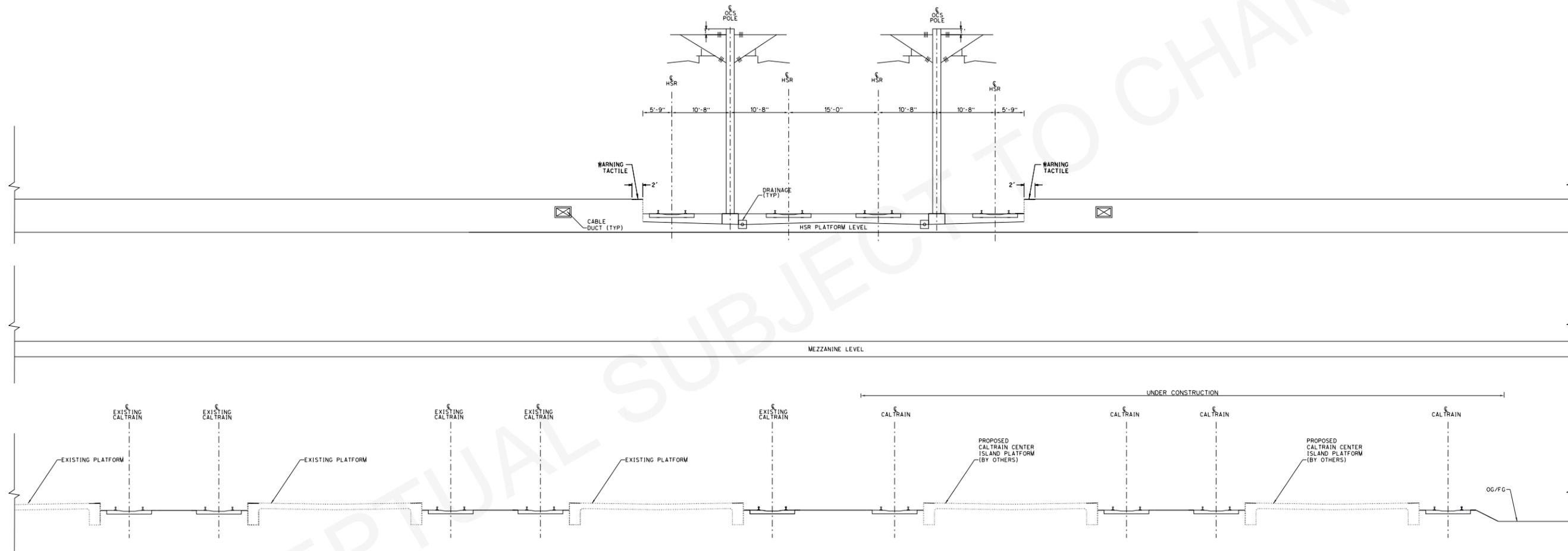
DESIGNED BY	
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CHECKED BY	
IN CHARGE	
DATE	



CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
DRAFT TYPICAL SECTIONS
03/24/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	8 OF 9



TYPICAL HSR 4-TRACK RAISED STRUCTURE OUTBOARD STATION
WITH CALTRAIN 9-TRACK AT GRADE STATION
(STA-17)

HST SAN JOSE DIRIDON STATION
(ELEVATED)

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

REV	DATE	BY	CHK	APP	DESCRIPTION

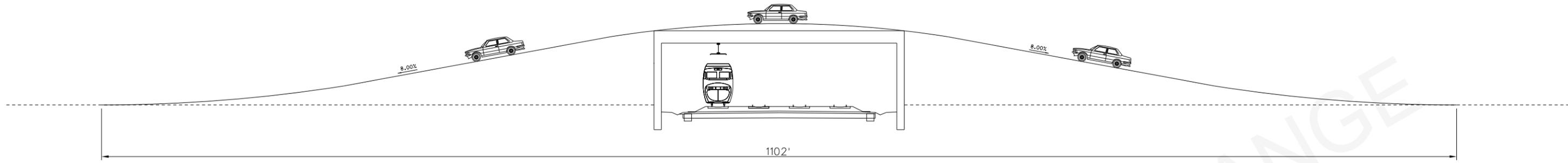
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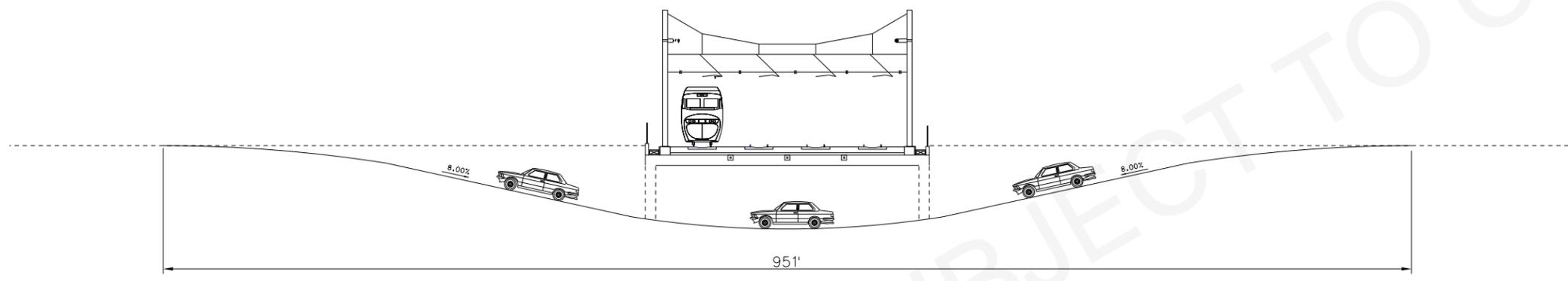
CALIFORNIA HIGH-SPEED TRAIN PROJECT

STATIONS
DRAFT TYPICAL SECTIONS
03/24/2010

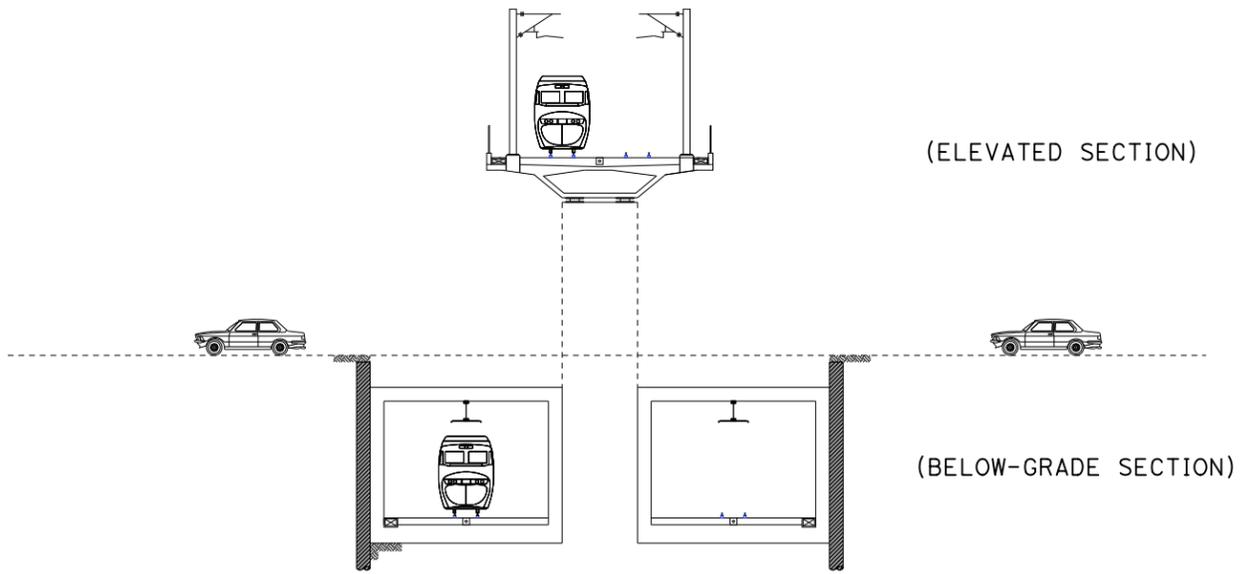
CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	9 OF 9



ROAD OVER RAIL
(CR-1)



ROAD UNDER RAIL
(CR-2)



ROAD AT GRADE
(CR-3)

NOTE:
REFER TO TYPICAL SECTIONS SHEETS FOR THE DIFFERENT AT-GRADE,
BELOW-GRADE AND ELEVATED SECTIONS OPTIONS.

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

REV	DATE	BY	CHK	APP	DESCRIPTION

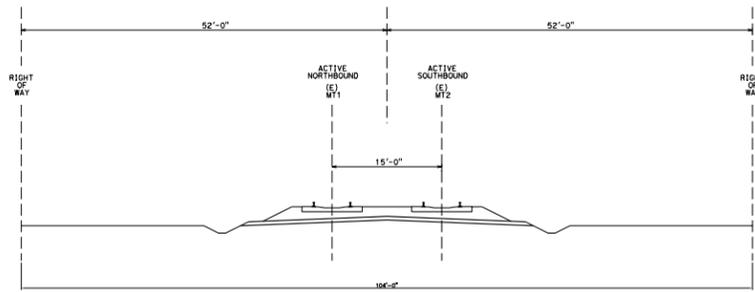
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DATE	



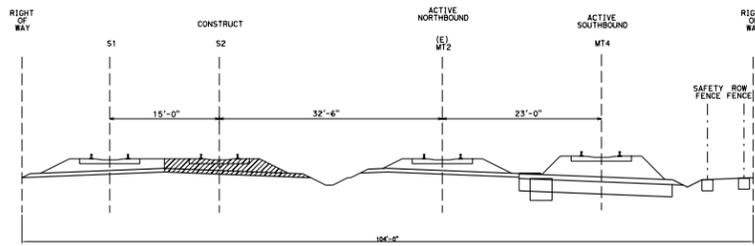
CALIFORNIA HIGH-SPEED TRAIN PROJECT

CROSSING
DRAFT TYPICAL SECTIONS
03/24/2010

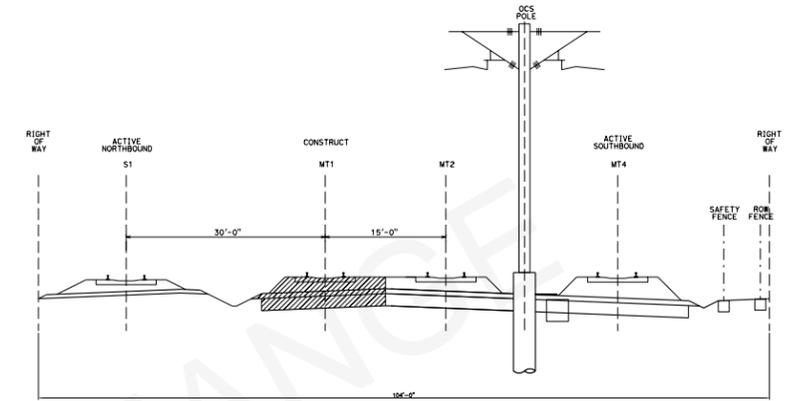
CONTRACT NO.	
DRAWING NO.	
SCALE	NTS
SHEET NO.	24 OF 24



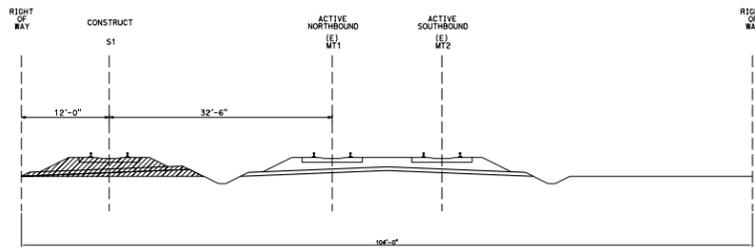
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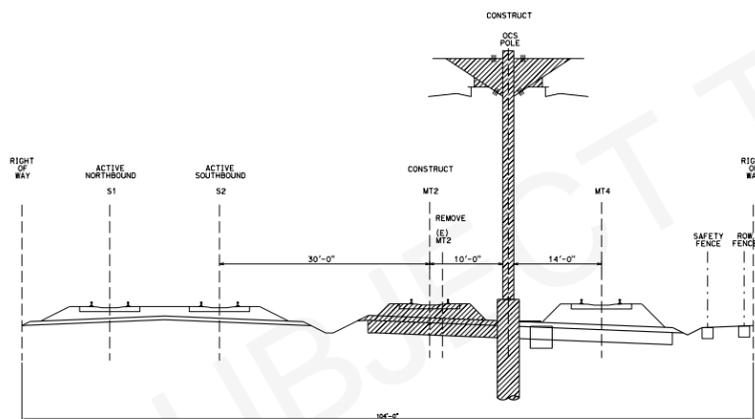
STAGE 4



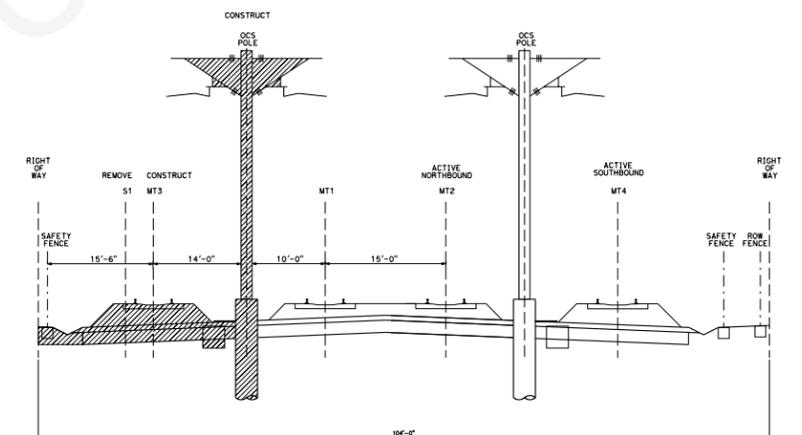
STAGE 7



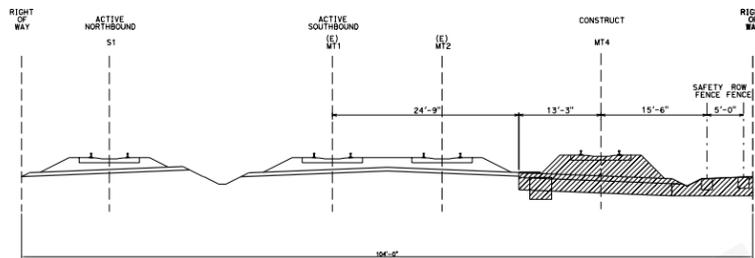
STAGE 1



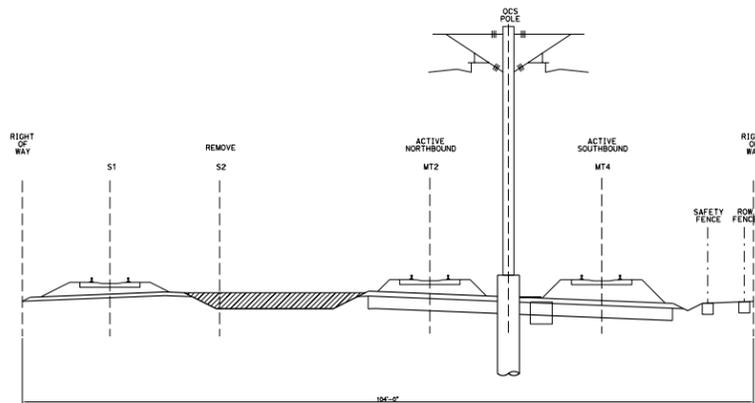
STAGE 5



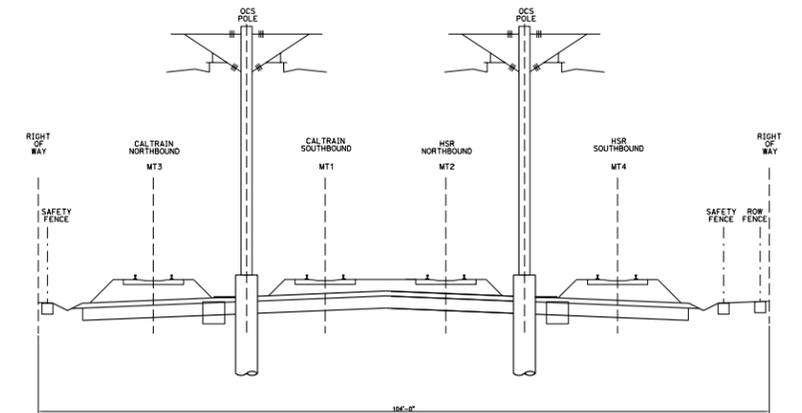
STAGE 8



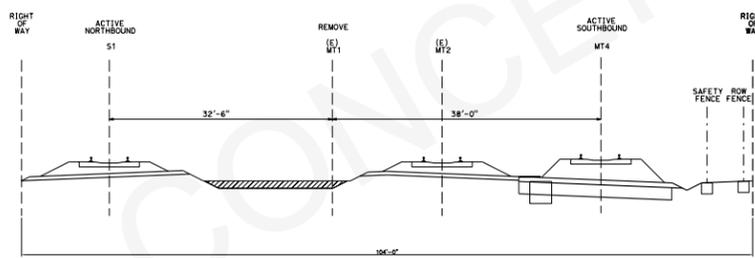
STAGE 2



STAGE 6



STAGE 9
CONSTRUCTION COMPLETE



STAGE 3

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

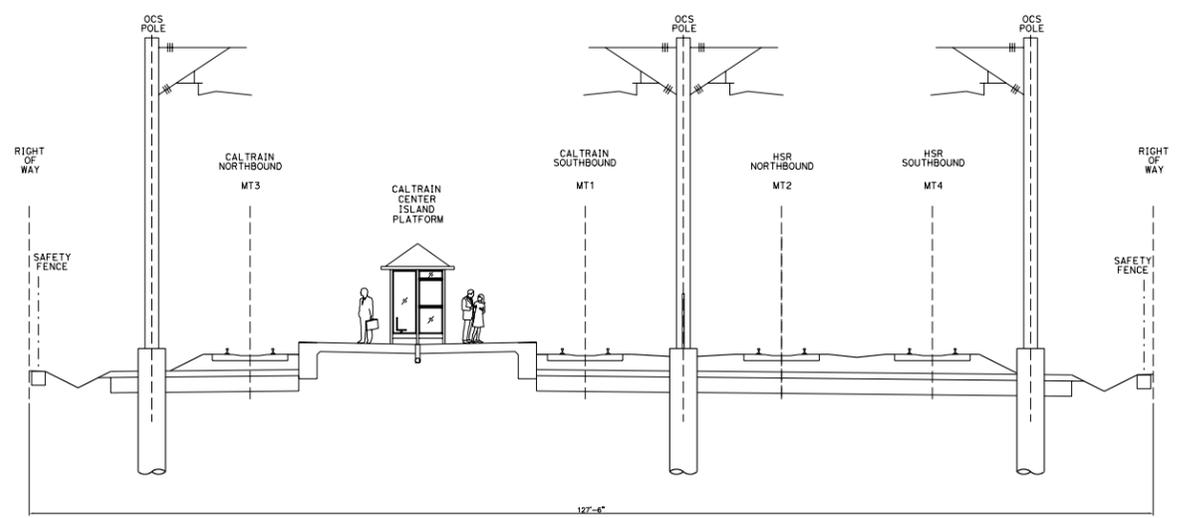
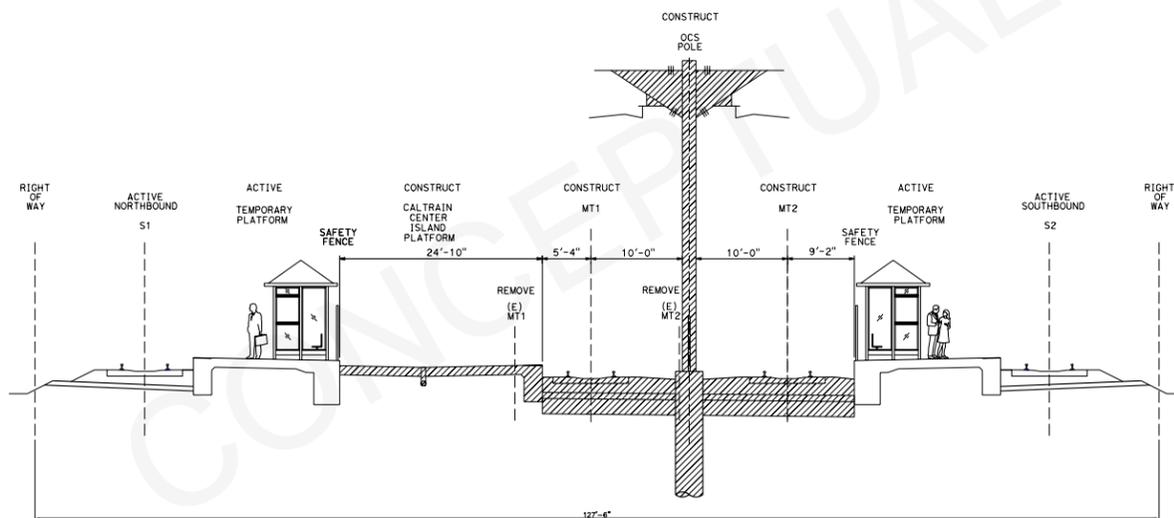
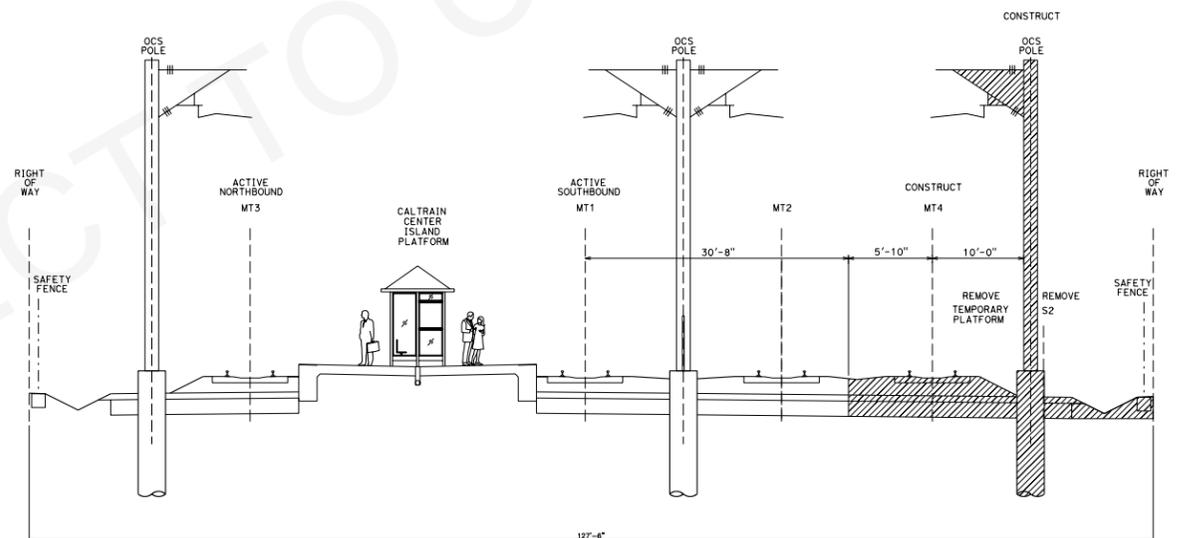
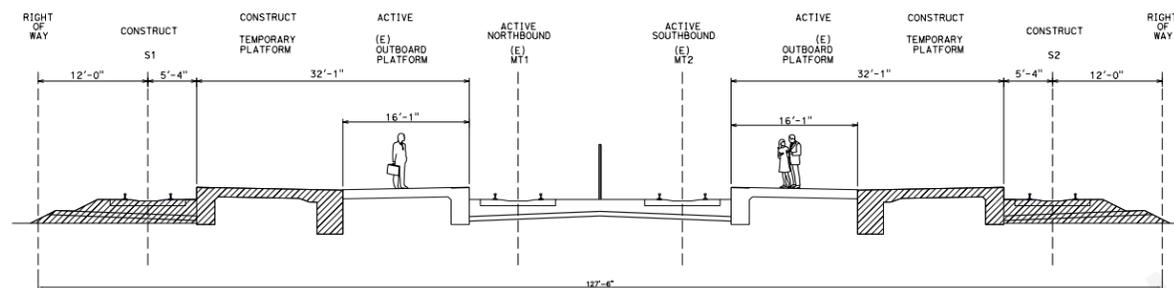
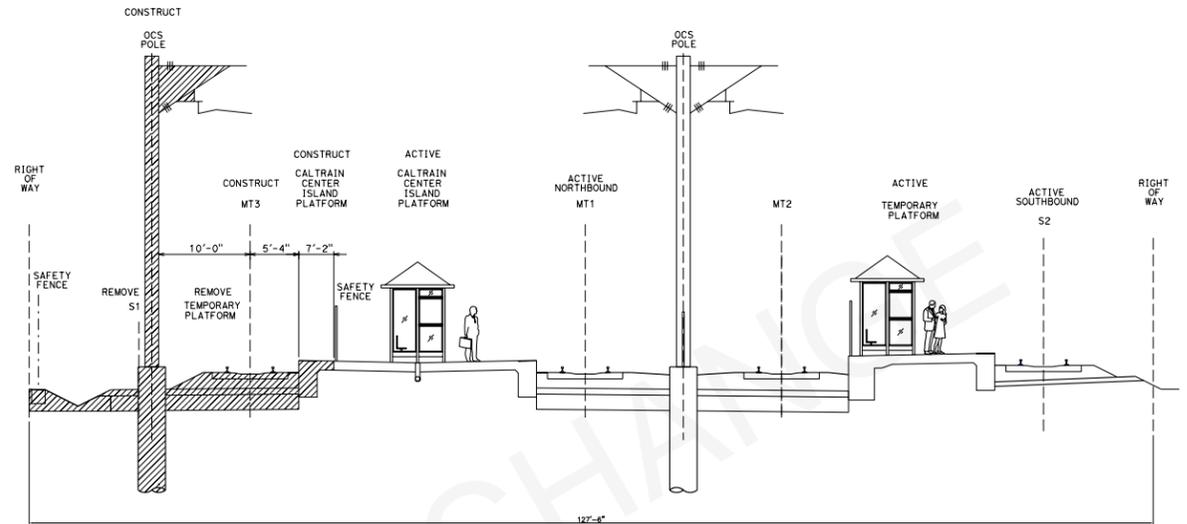
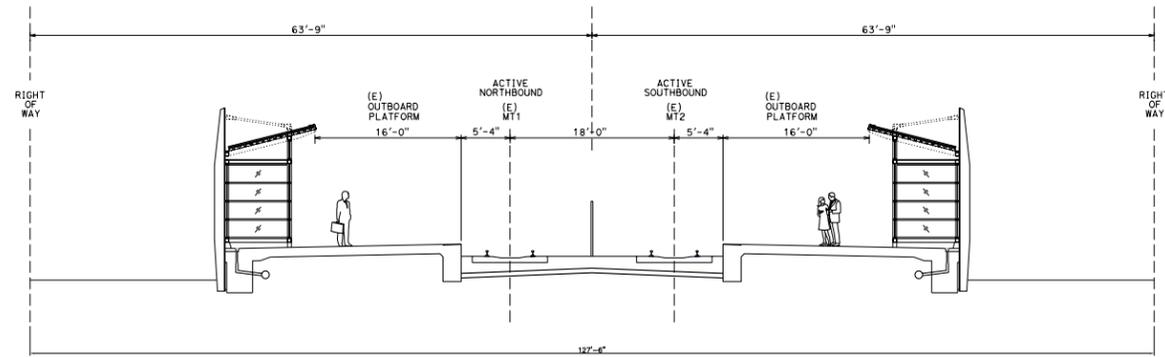
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IN CHARGE	
DATE	



CALIFORNIA HIGH-SPEED TRAIN PROJECT
 DRAFT TYPICAL SECTIONS - STAGING
 AT-GRADE
 02/19/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	1 OF 5



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

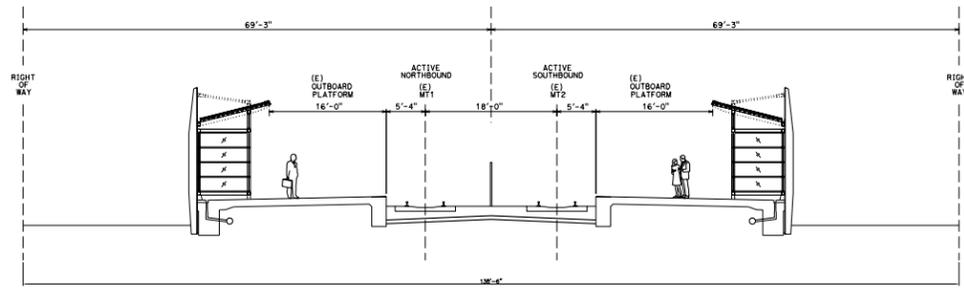
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	
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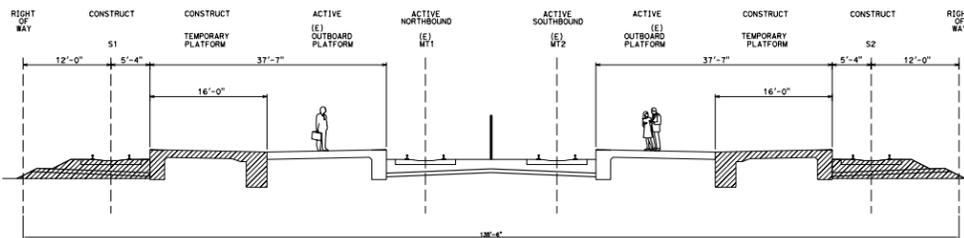


CALIFORNIA HIGH-SPEED TRAIN PROJECT
TYPICAL STATION E
 DRAFT TYPICAL SECTIONS - STAGING
 AT-GRADE
 CALTRAIN STATION WITH CENTER ISLAND PLATFORM
 02/19/2010

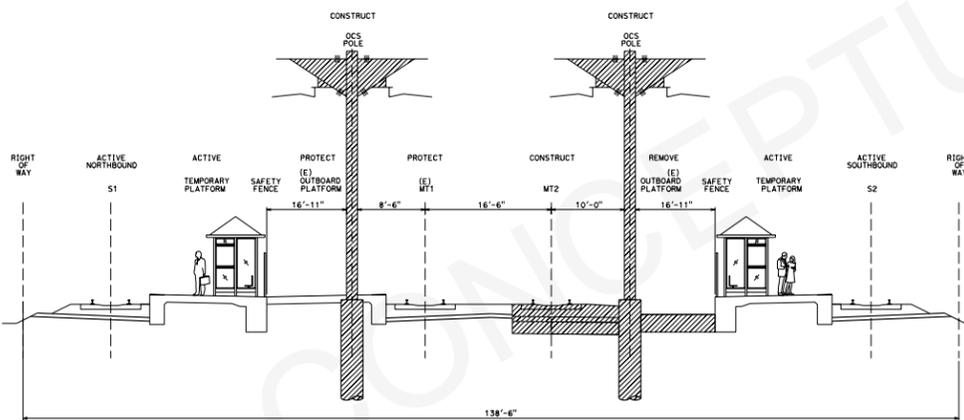
CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	2 OF 5



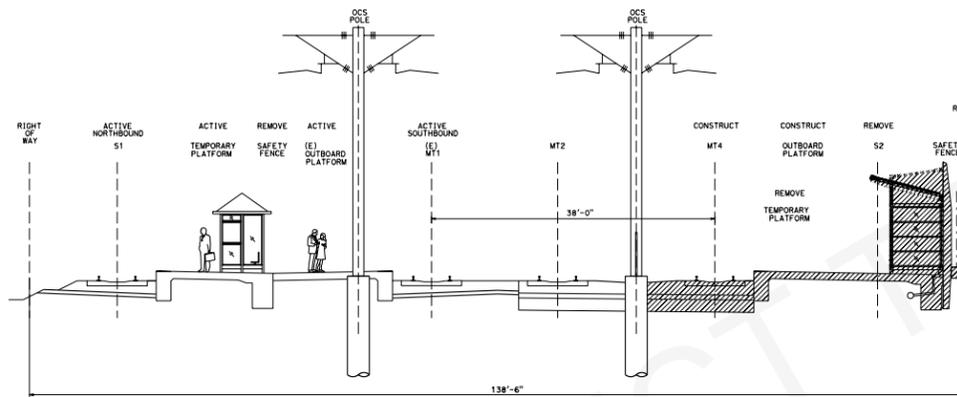
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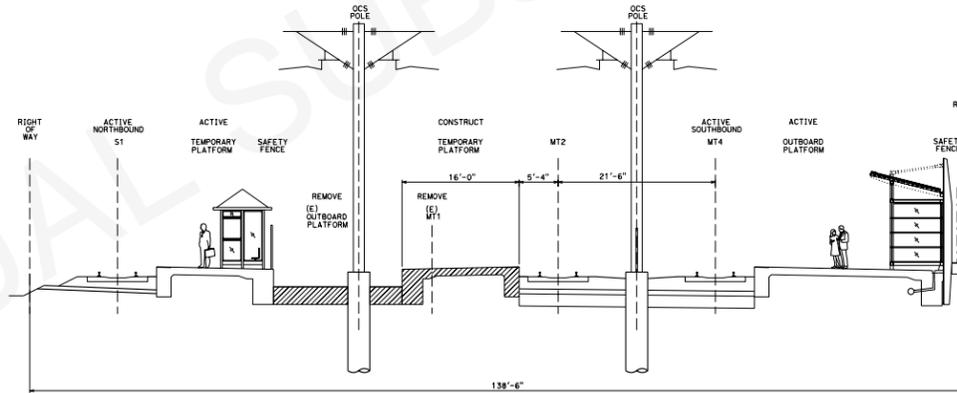
STAGE 1



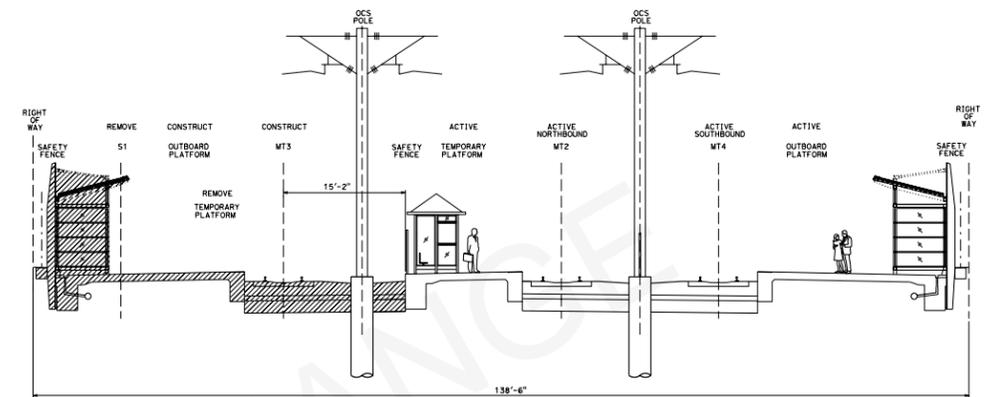
STAGE 2



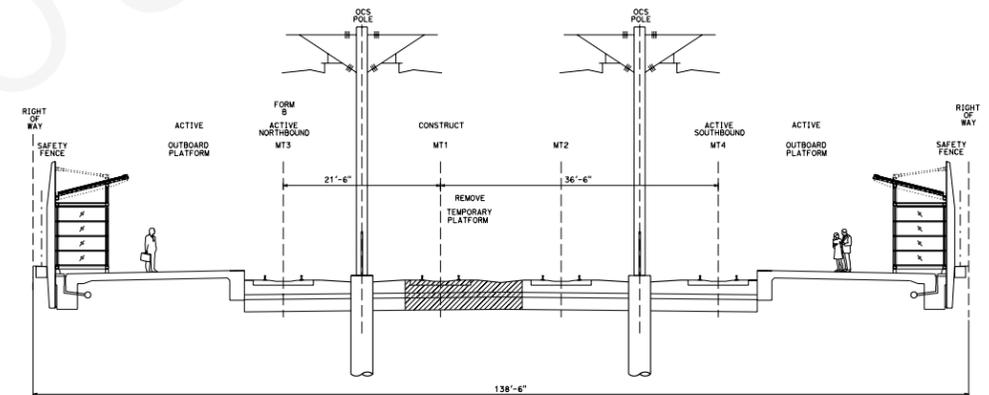
STAGE 3



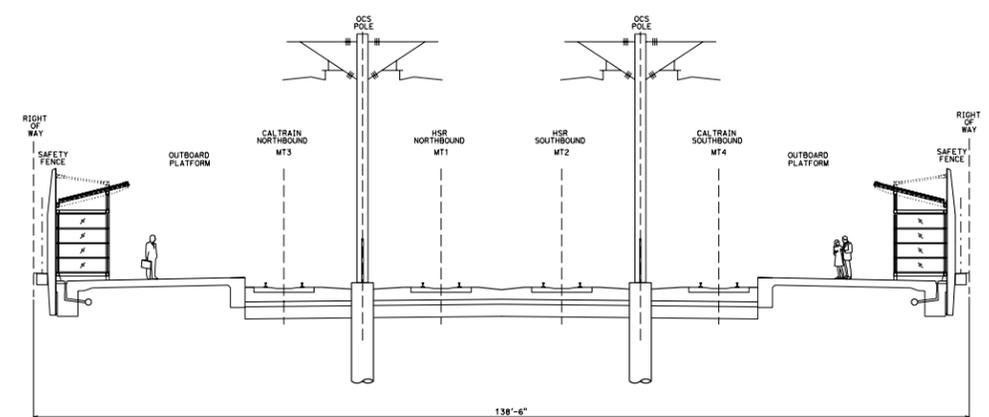
STAGE 4



STAGE 5



STAGE 6



STAGE 7
CONSTRUCTION COMPLETE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

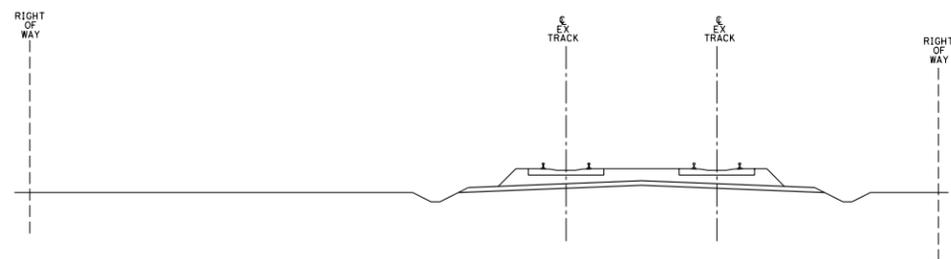
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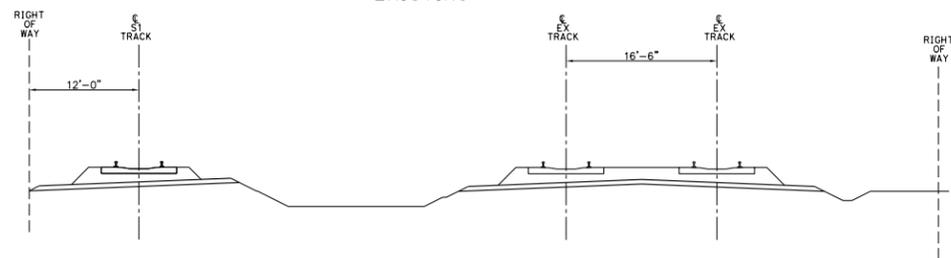
CALIFORNIA HIGH-SPEED TRAIN PROJECT

DRAFT TYPICAL SECTIONS - STAGING
AT-GRADE
CALTRAIN STATION WITH OUTBOARD PLATFORMS
02/19/2010

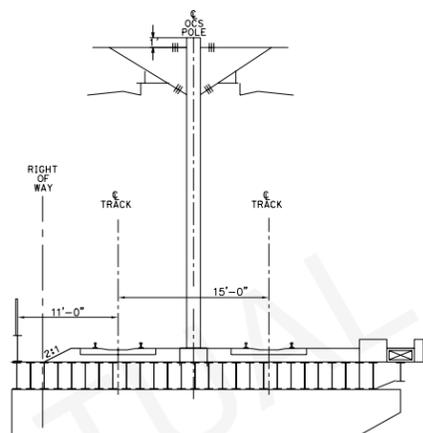
CONTRACT NO.	
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SCALE	
SHEET NO.	3 OF 5



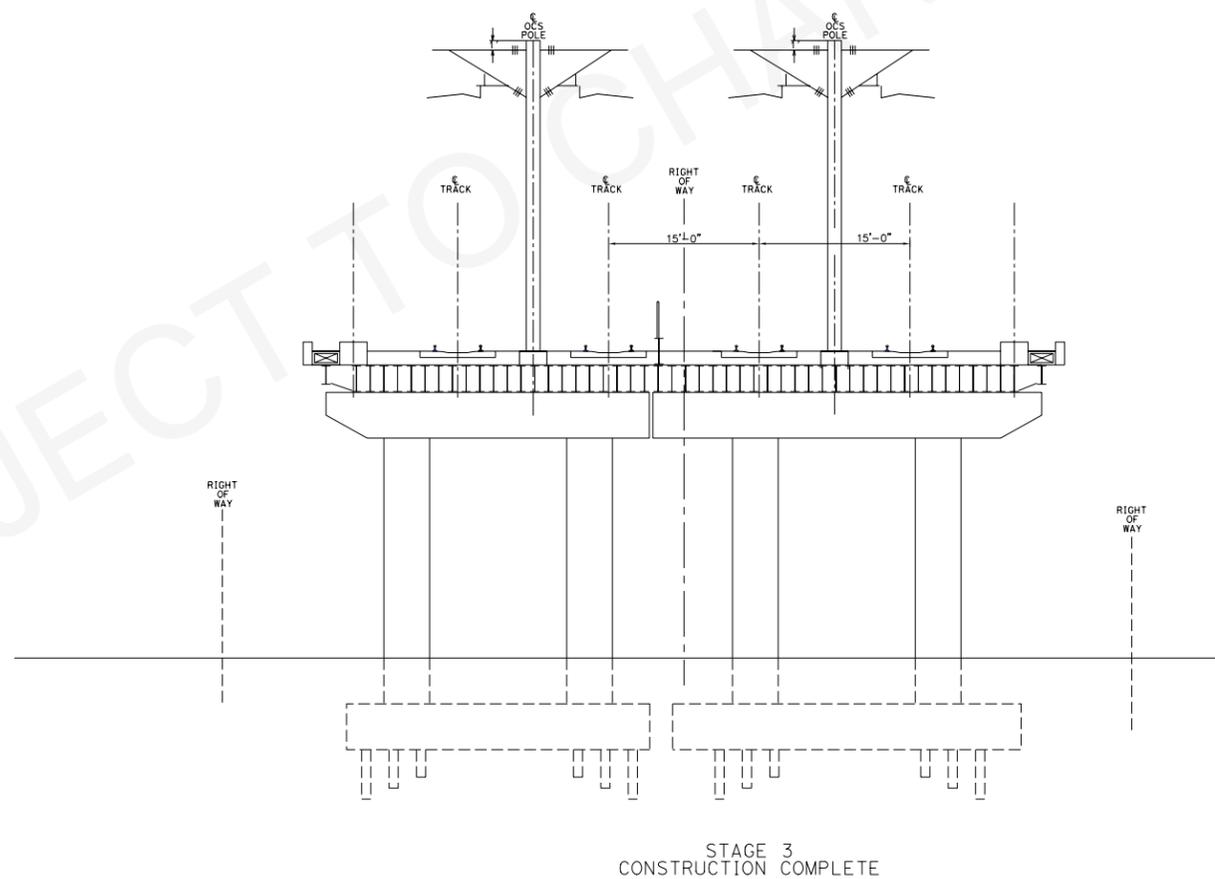
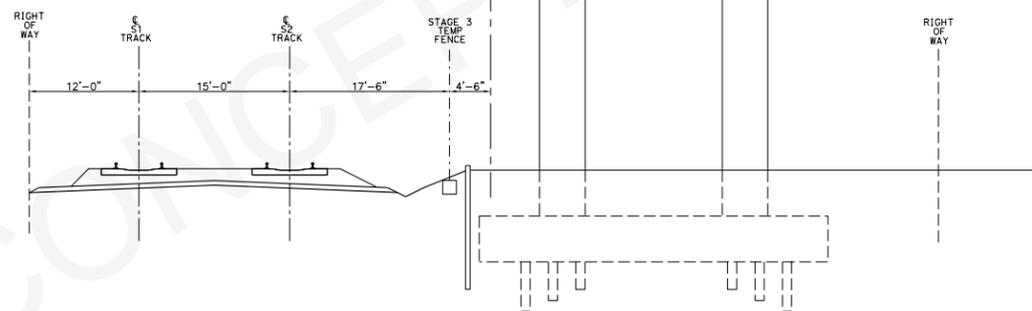
STAGE 0
EXISTING



STAGE 1



STAGE 2



STAGE 3
CONSTRUCTION COMPLETE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

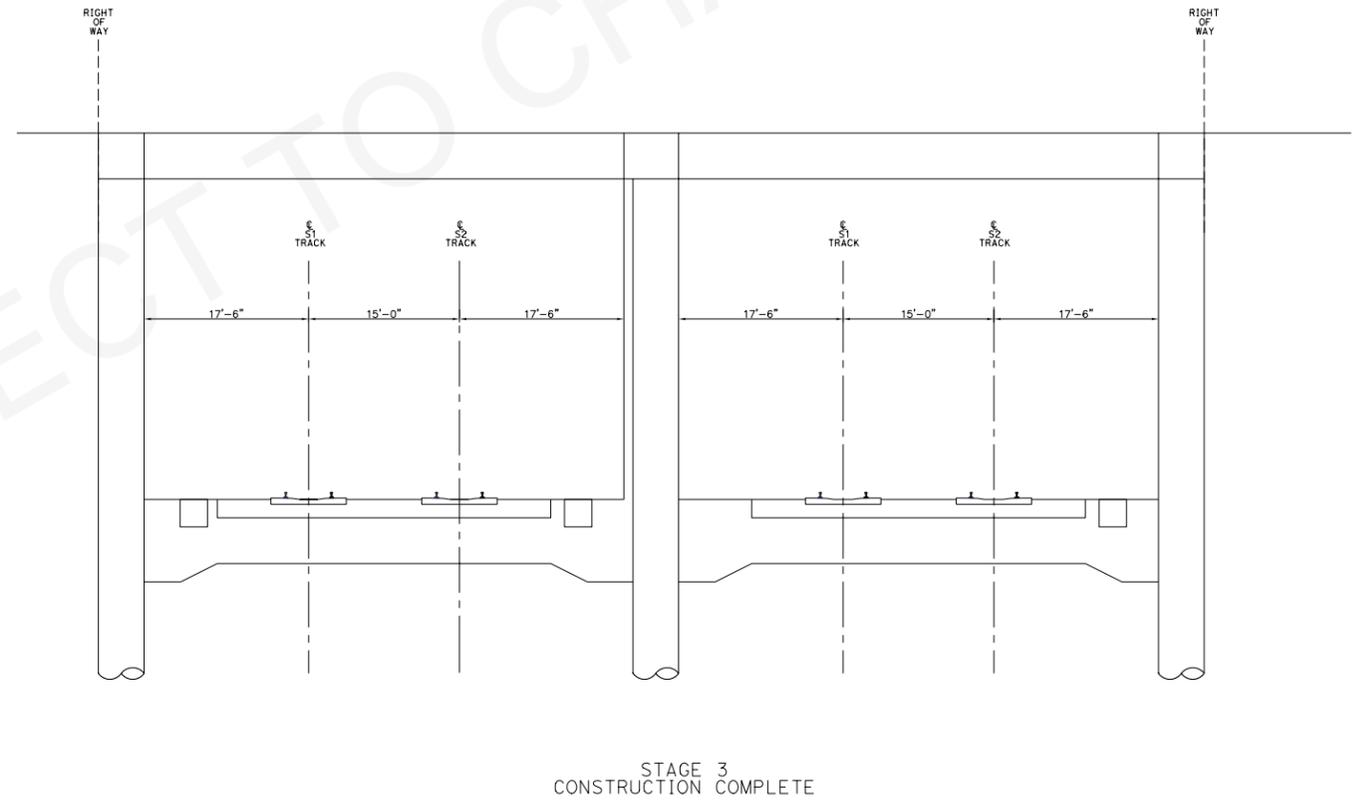
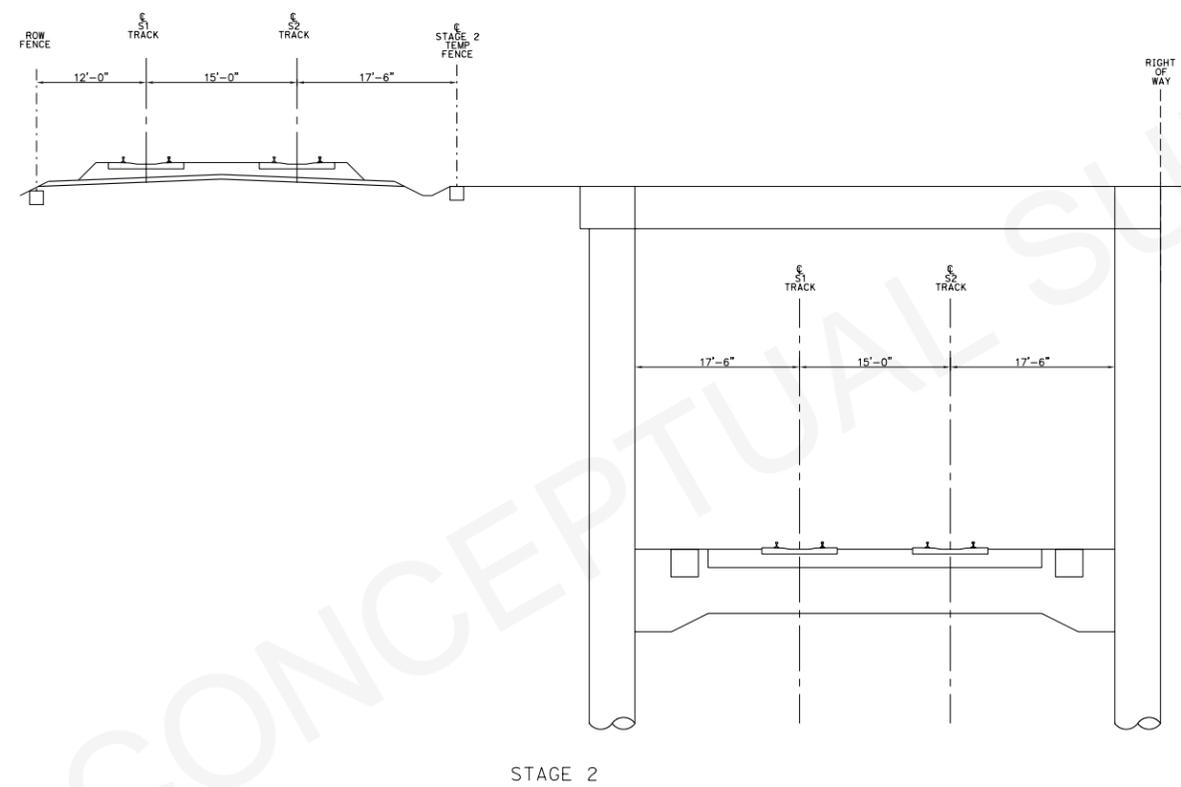
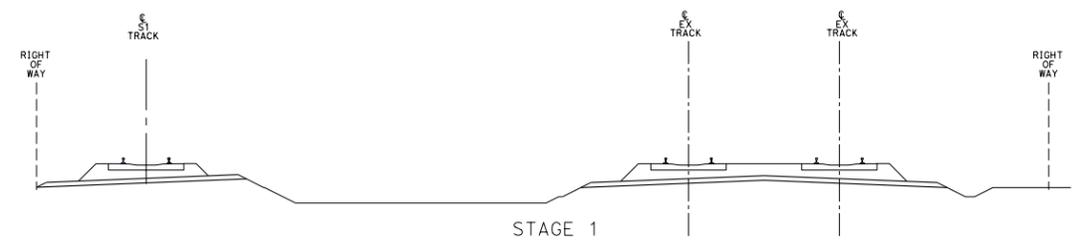
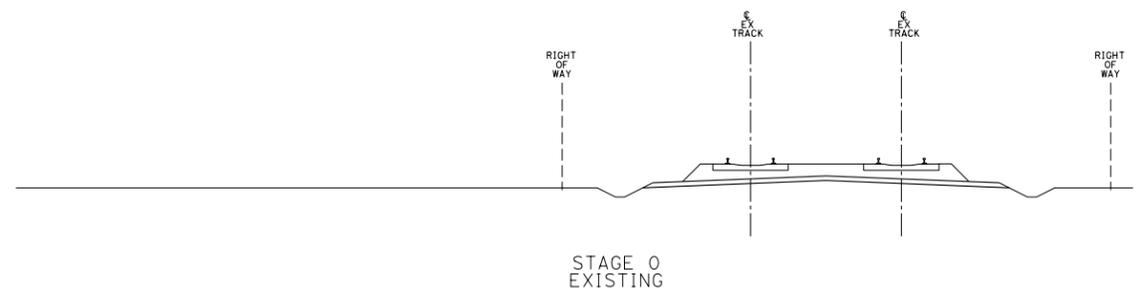
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CALIFORNIA HIGH-SPEED TRAIN PROJECT

DRAFT TYPICAL SECTIONS - STAGING
ELEVATED STRUCTURE
02/19/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	4 OF 5



CONCEPTUAL SUBJECT TO CHANGE

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

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE	
DATE	



CALIFORNIA HIGH-SPEED TRAIN PROJECT

DRAFT TYPICAL SECTIONS - STAGING
BELOW GRADE
02/19/2010

CONTRACT NO.	
DRAWING NO.	
SCALE	
SHEET NO.	5 OF 5