EXHIBIT H

DRAWER	SHEET NO.

COUNTY OF SAN JOAQUIN

DEPARTMENT OF PUBLIC WORKS
STOCKTON, CALIFORNIA

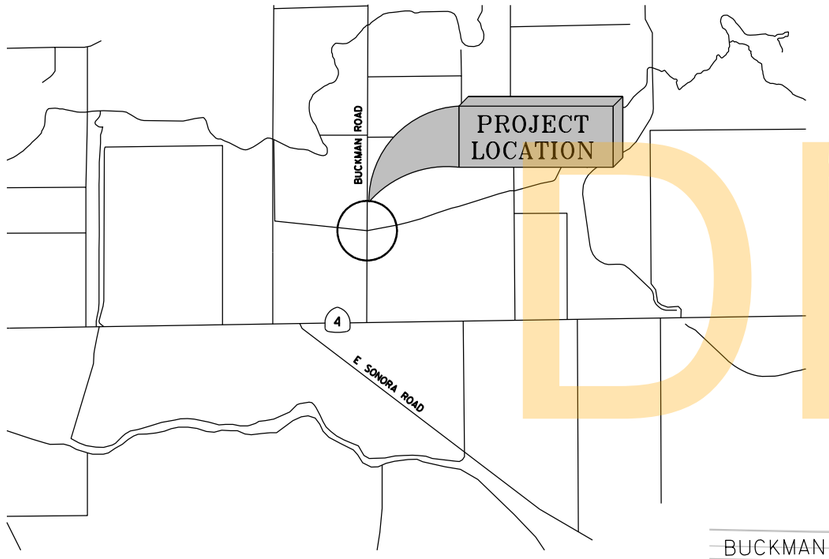
PROJECT PLANS FOR

BUCKMAN ROAD BRIDGE NO. 29C-0227 REPLACEMENT AT DUCK CREEK

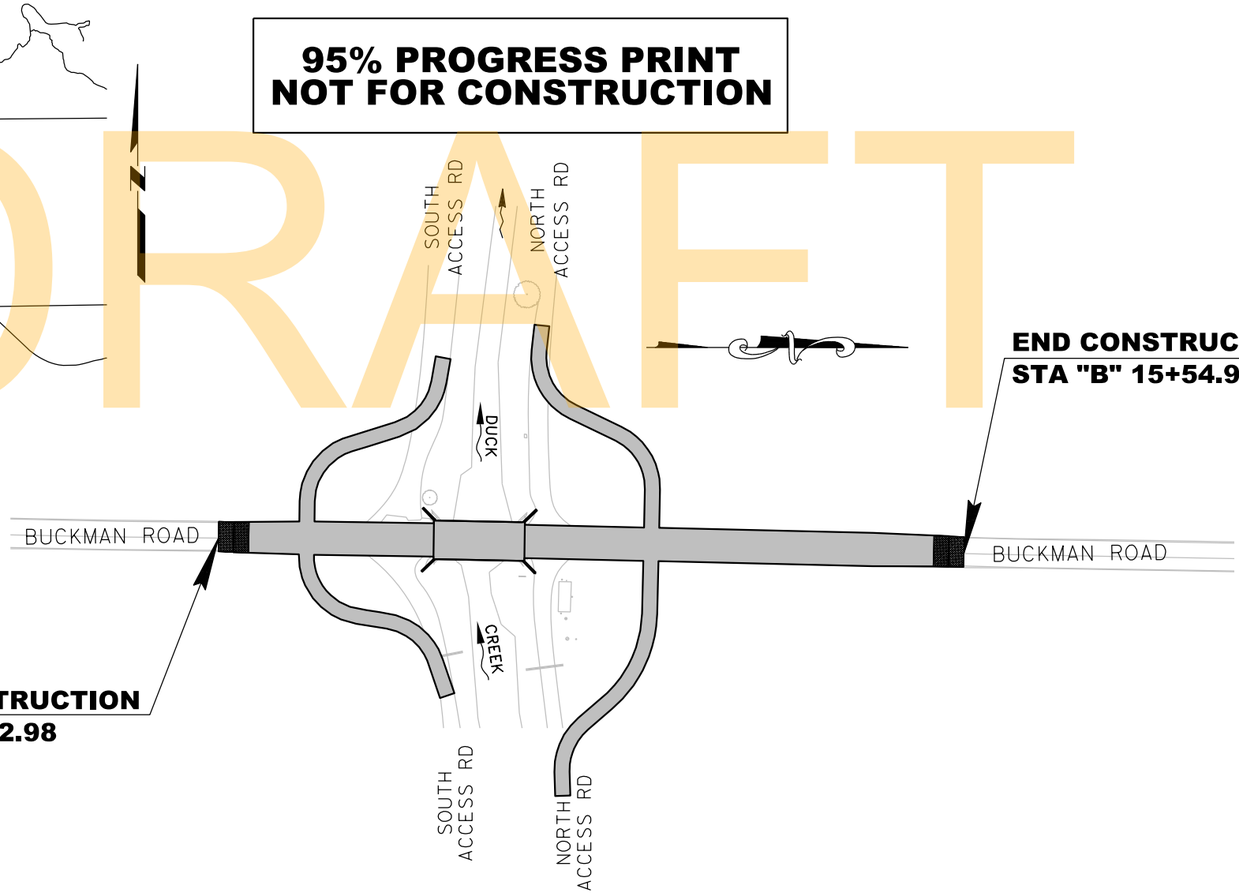
FEDERAL AID PROJECT NO. BRLS-5929 (245)

TO BE SUPPLEMENTED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION
STANDARD PLANS AND STANDARD SPECIFICATIONS DATED 2018 AND SAN JOAQUIN COUNTY
IMPROVEMENT STANDARDS DATED DECEMBER 2014 AND MODIFIED MAY 2015

95% PROGRESS PRINT
NOT FOR CONSTRUCTION



VICINITY MAP
NTS



END CONSTRUCTION
STA "B" 15+54.96

BEGIN CONSTRUCTION
STA "B" 10+62.98

PROJECT LOCATION MAP
NTS

The Contractor shall possess a Class A license at the time this contract is awarded.

USA NORTH 811 Call Before You Dig

COUNTY OF SAN JOAQUIN

Submitted _____, 2020

KRIS BALAJI, PMP, P.E.

DIRECTOR OF PUBLIC WORKS

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

ROB BURNS
Registered Civil Engineer

INDEX OF SHEETS

APPLICABLE STANDARDS PLANS

A3 A-C	RSP B0-1	T3 A-B
A10 A-H	B0-3	T9, T13, T17
A20A	B0-5	T51-T67
RSP A20B	B6-21	RS1-RS41
A24 D	B7-1	
RSP A24E	B9-6	
A 62 A-C	B11-60	
RSP A73B	B11-61	
A87B	D87D	

ABBREVIATIONS

(In addition to abbreviation shown on Standard Plan A3A, A3B, and A3C and Standard Specification 1-1.106 Abbreviation)

NTS	= Not to Scale
Rdwy	= Roadway
SJ Co Std	= San Joaquin County Standard
San	= Sanitary
SP	= Standard Plans
SDI	= Storm Drain Inlet
AP	= Angle Point
mph	= Mile Per Hour
CAS	= Construction Area Sign
PCMS	= Portable Changeable Message Sign

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	T-1		TITLE SHEET			n/a		

BUCKMAN ROAD BRIDGE NO. 29C-0227
BRIDGE REPLACEMENT PROJECT
(Buckman Road Bridge at Duck Creek)
FEDERAL AID PROJECT NO. BRLS-5929 (245)

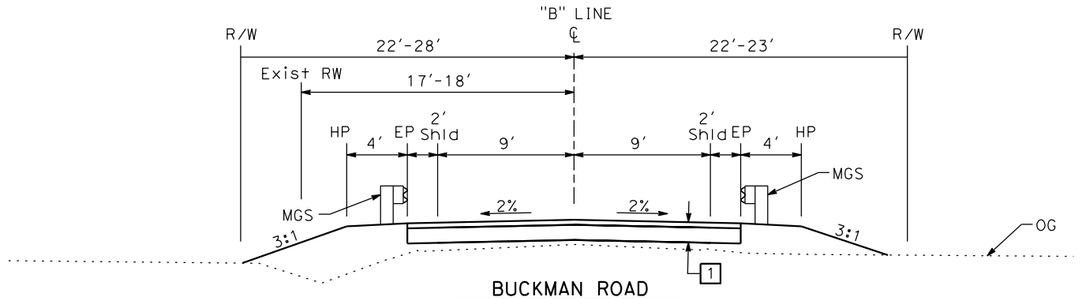
COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
1810 EAST HAZELTON AVENUE
STOCKTON, CALIFORNIA 95205
PHONE: (209) 468 - 3000
FAX: (209) 468 - 2999

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

SHEET NO.
1 of 28

EXHIBIT H

DRAWER	SHEET NO.



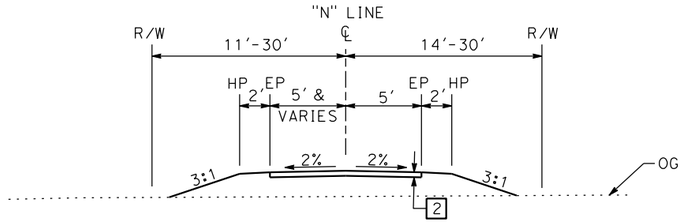
BUCKMAN ROAD

"B" STA 12+65.0 TO STA 13+48.6

LEGEND

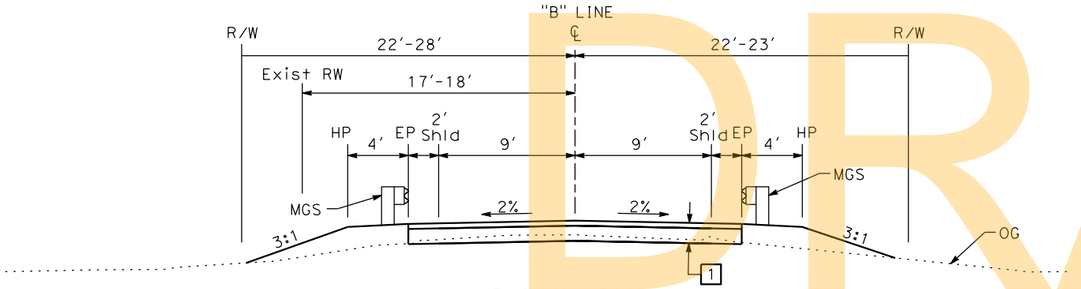
1 4" HMA (Type A)
12" AB (Class 2)

2 4" AB (CLASS 2)



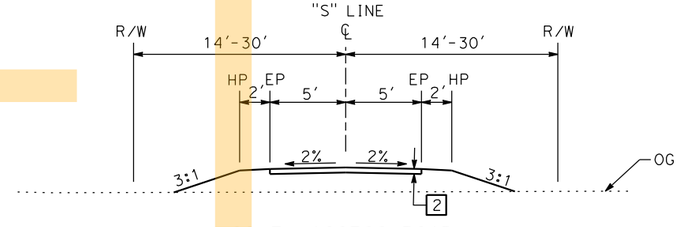
NORTH ACCESS ROAD

"N" STA 50+00.0 TO STA 53+66.5



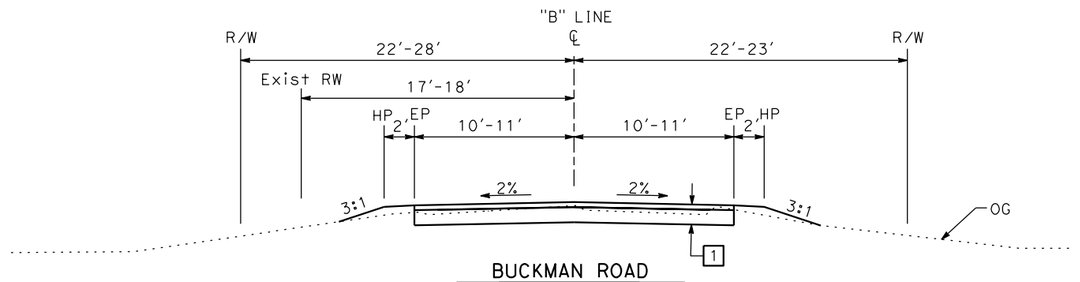
BUCKMAN ROAD

"B" STA 11+21.1 TO STA 12+05.0



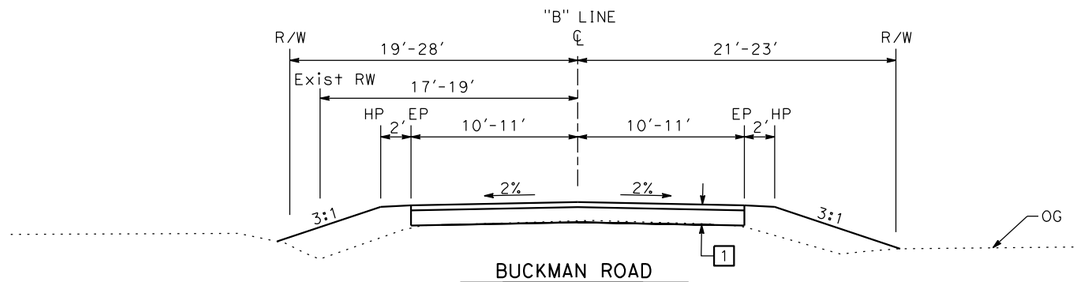
SOUTH ACCESS ROAD

"S" STA 30+00.0 TO STA 33+23.6



BUCKMAN ROAD

"B" STA 10+72.8 TO STA 11+21.1



BUCKMAN ROAD

"B" STA 13+48.6 TO STA 15+45.0

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	X-1		TYPICAL SECTIONS			n/a		

REGISTERED PROFESSIONAL ENGINEER
R. E. Burns
No. 6289
Exp. 3-31-20
CIVIL
STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
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1810 EAST HAZELTON AVENUE
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DOKKEN ENGINEERING
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FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

SHEET NO.
2 of 28

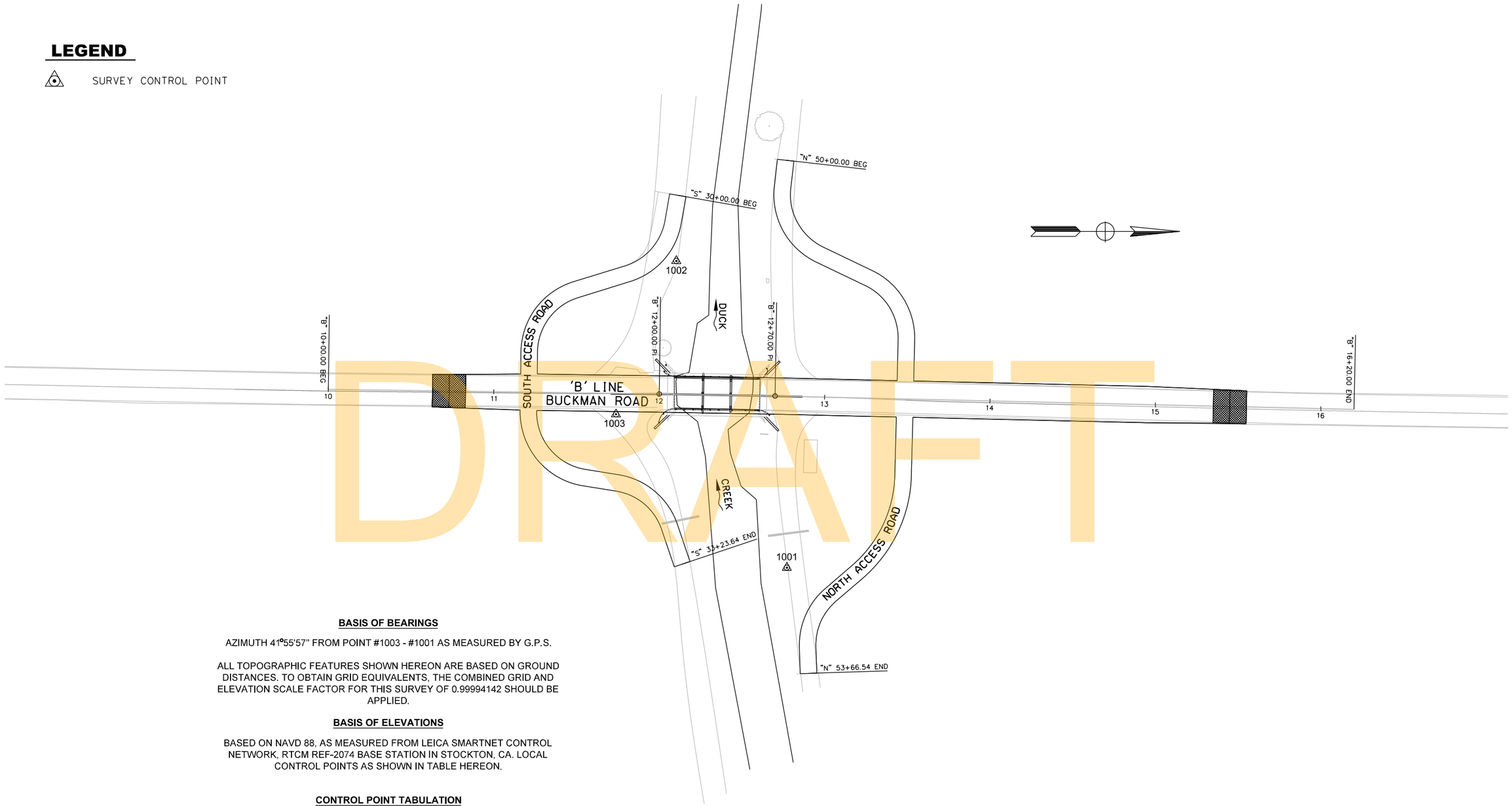
PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

EXHIBIT H

DRAWER	SHEET NO.

LEGEND

SURVEY CONTROL POINT



BASIS OF BEARINGS

AZIMUTH 41°55'57" FROM POINT #1003 - #1001 AS MEASURED BY G.P.S.

ALL TOPOGRAPHIC FEATURES SHOWN HEREON ARE BASED ON GROUND DISTANCES. TO OBTAIN GRID EQUIVALENTS, THE COMBINED GRID AND ELEVATION SCALE FACTOR FOR THIS SURVEY OF 0.99994142 SHOULD BE APPLIED.

BASIS OF ELEVATIONS

BASED ON NAVD 88, AS MEASURED FROM LEICA SMARTNET CONTROL NETWORK, RTCM REF-2074 BASE STATION IN STOCKTON, CA. LOCAL CONTROL POINTS AS SHOWN IN TABLE HEREON.

CONTROL POINT TABULATION

POINT	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
1001	2162864.388	6424148.239	"B" LINE	12+78.980	103.630	117.74	MS RB 1/2"
1002	2162797.573	6423962.760	"B" LINE	12+09.219	80.601	116.36	MS RB 1/2"
1003	2162761.129	6424055.484	"B" LINE	11+74.073	12.655	118.00	

PLAN

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	CD-1		SURVEY CONTROL			1"=30'		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — CIVIL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
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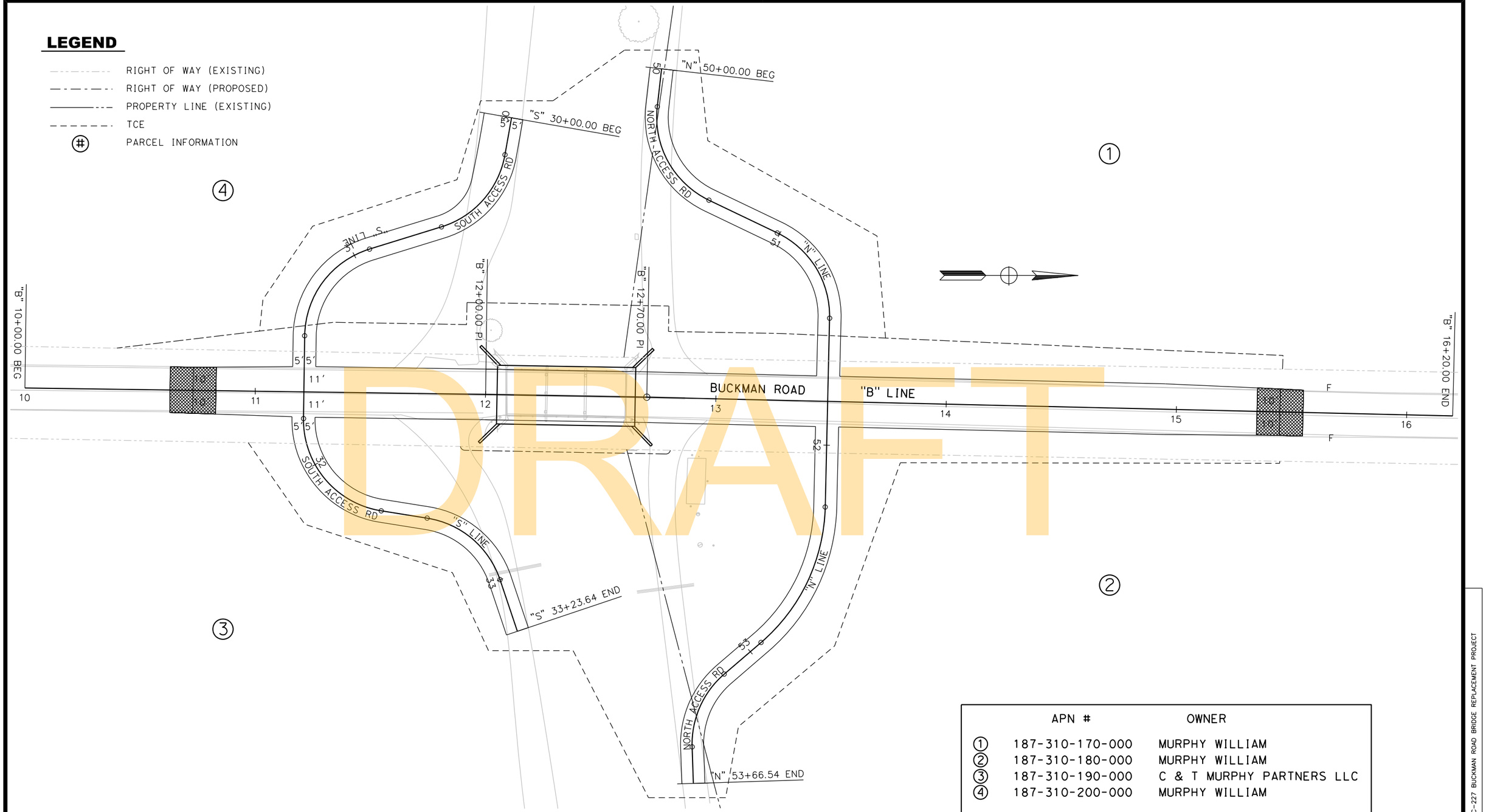
EXHIBIT H

DRAWER	SHEET NO.

LEGEND

- RIGHT OF WAY (EXISTING)
- RIGHT OF WAY (PROPOSED)
- PROPERTY LINE (EXISTING)
- TCE
- (#) PARCEL INFORMATION



	APN #	OWNER
1	187-310-170-000	MURPHY WILLIAM
2	187-310-180-000	MURPHY WILLIAM
3	187-310-190-000	C & T MURPHY PARTNERS LLC
4	187-310-200-000	MURPHY WILLIAM

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	RW-1		RIGHT OF WAY LAYOUT			1"=20'		

RECEIVED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — CIVIL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

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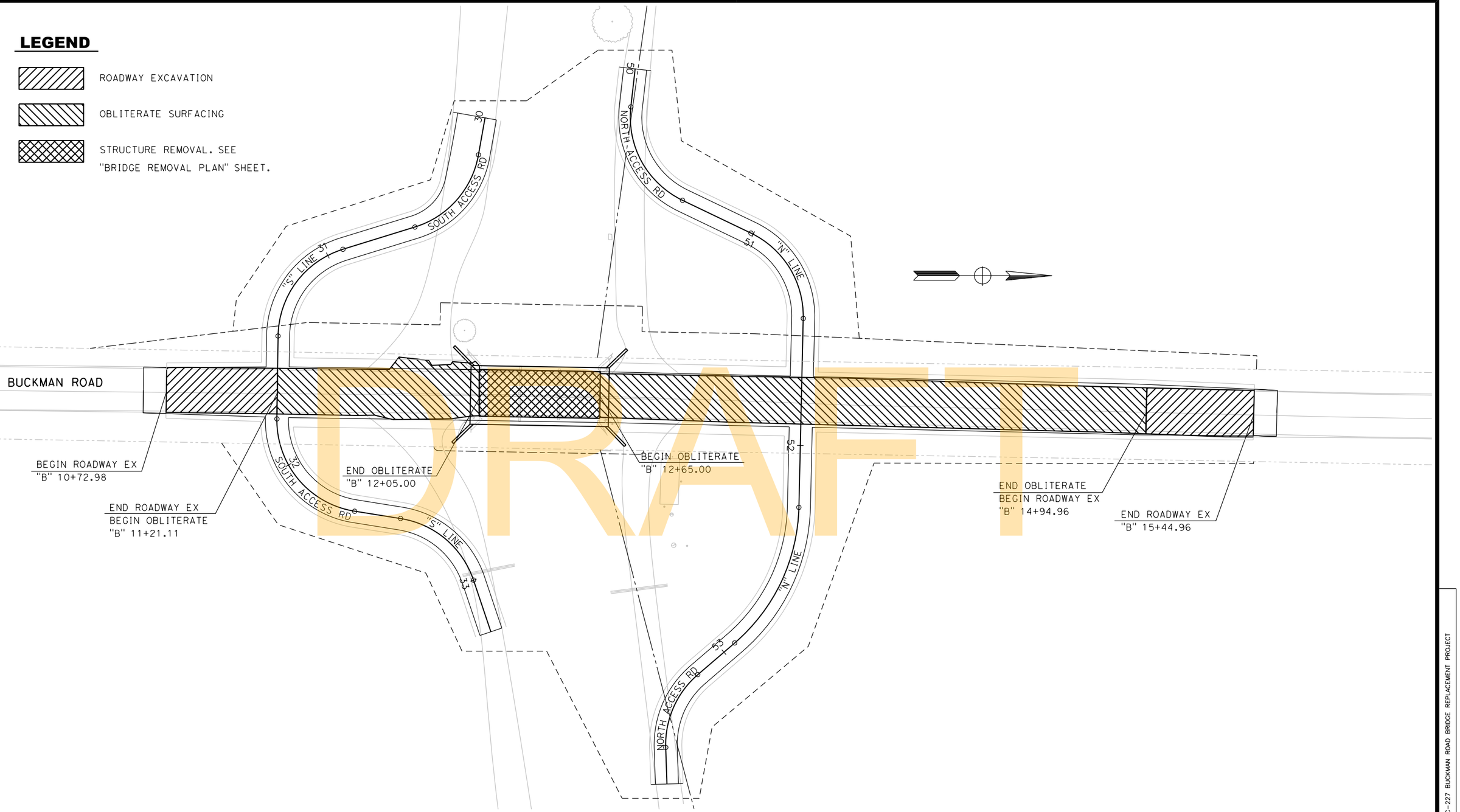
EXHIBIT H

DRAWER	SHEET NO.

LEGEND

- ROADWAY EXCAVATION
- OBLITERATE SURFACING
- STRUCTURE REMOVAL. SEE "BRIDGE REMOVAL PLAN" SHEET.



PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	R-1		DEMOLITION & REMOVAL			1"=20'		

RECORD PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
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SHEET NO.
5 of 28

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

EXHIBIT H

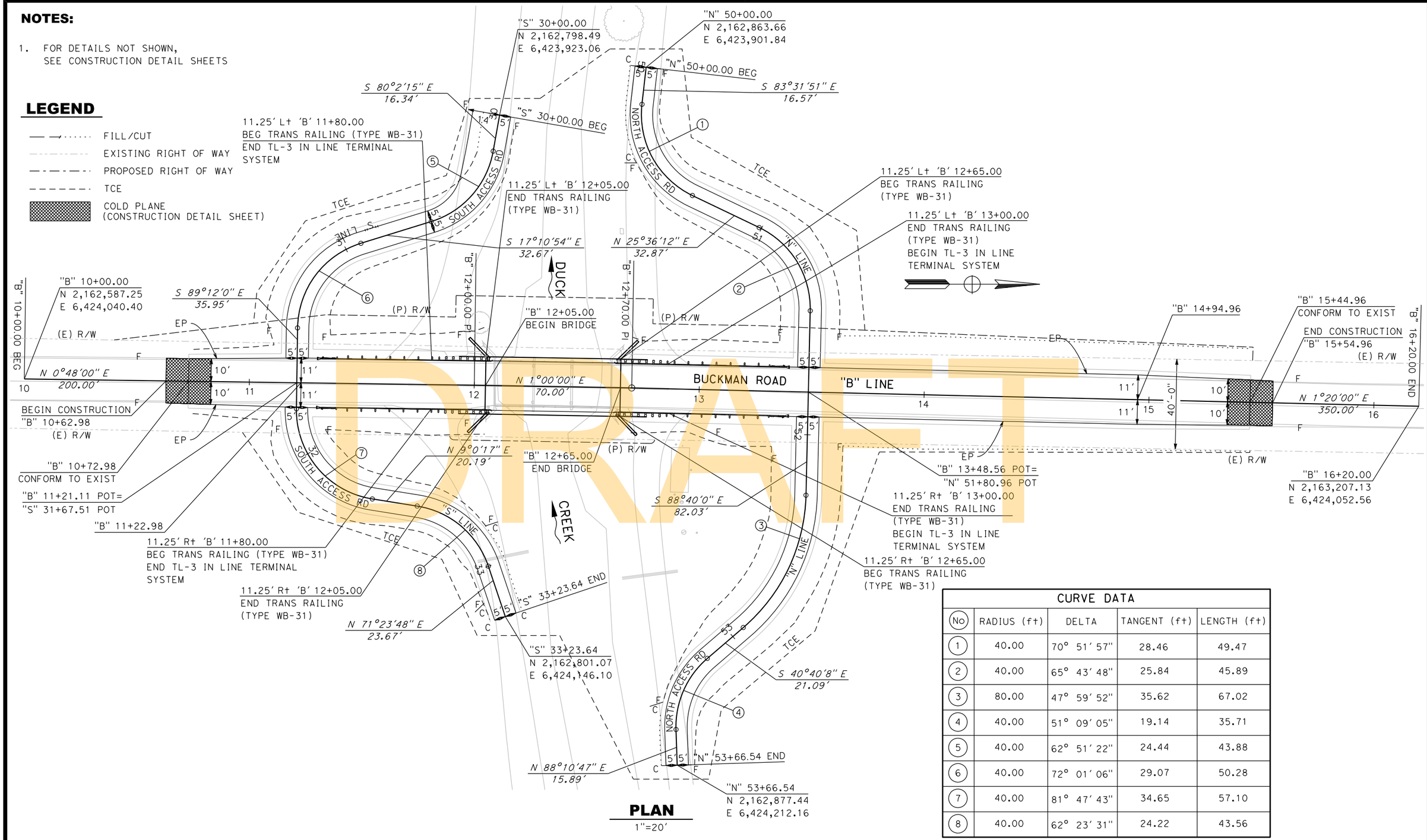
DRAWER	SHEET NO.

NOTES:

1. FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAIL SHEETS

LEGEND

- FILL/CUT
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- TCE
- COLD PLANE (CONSTRUCTION DETAIL SHEET)



PLAN
1"=20'

CURVE DATA				
No	RADIUS (ft)	DELTA	TANGENT (ft)	LENGTH (ft)
1	40.00	70° 51' 57"	28.46	49.47
2	40.00	65° 43' 48"	25.84	45.89
3	80.00	47° 59' 52"	35.62	67.02
4	40.00	51° 09' 05"	19.14	35.71
5	40.00	62° 51' 22"	24.44	43.88
6	40.00	72° 01' 06"	29.07	50.28
7	40.00	81° 47' 43"	34.65	57.10
8	40.00	62° 23' 31"	24.22	43.56

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	L-1		LAYOUT			1"=20'		

RECEIVED PROFESSIONAL ENGINEER R. E. Burns No. 6289 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
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SHEET NO.
6 of 28

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

EXHIBIT H

DRAWER	SHEET NO.

"B" LINE PROFILE

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	×	×
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	P-1		PROFILE			H: 1"=20' V: ⅛"=1'-0"		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
1810 EAST HAZELTON AVENUE
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FOLSOM, CA 95630
PHONE: (916) 858-0642
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EXHIBIT H

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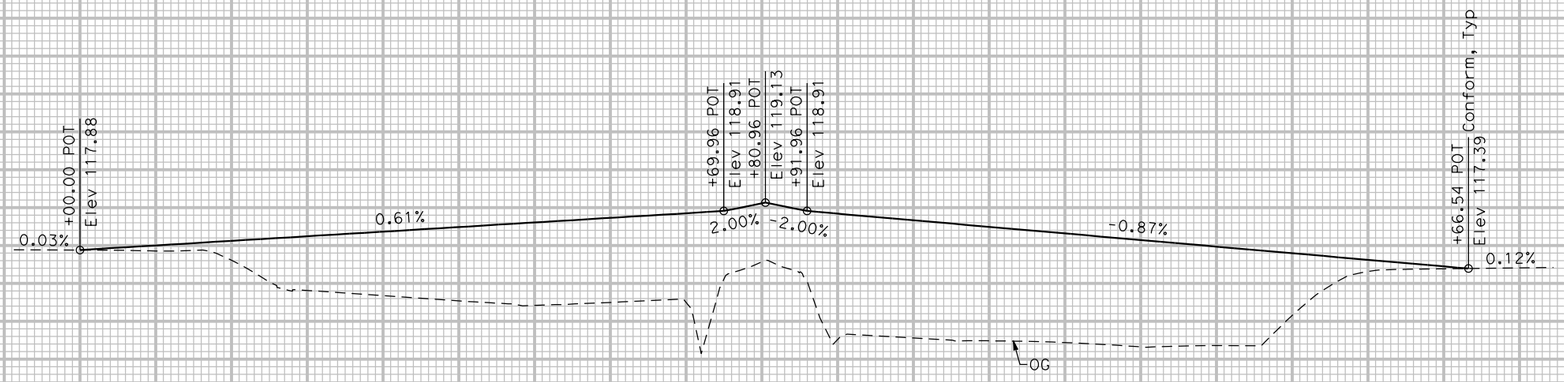
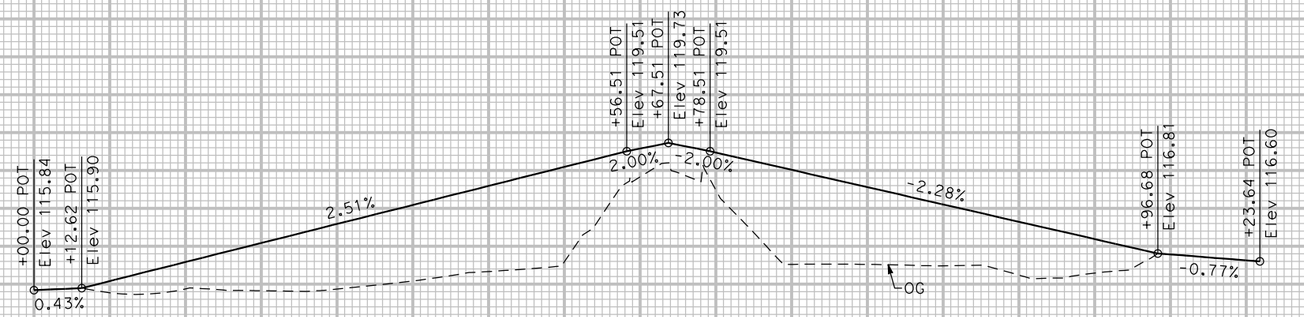


"N" LINE PROFILE



"S" LINE PROFILE

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	P-2		PROFILE			H:1"=20' V:½"=1'-0"		

RECEIVED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
1810 EAST HAZELTON AVENUE
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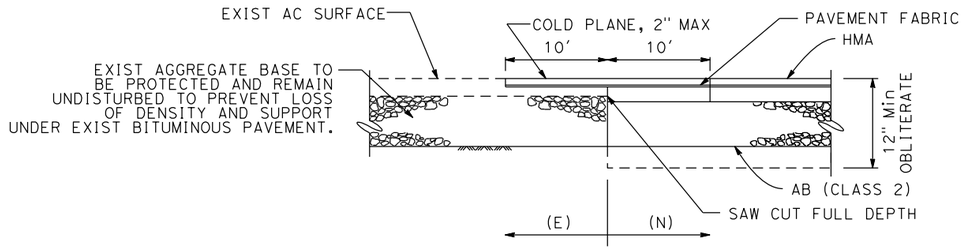
SHEET NO.
8 of 28

EXHIBIT H

DRAWER	SHEET NO.



HMA PAVEMENT CONFORM DETAIL

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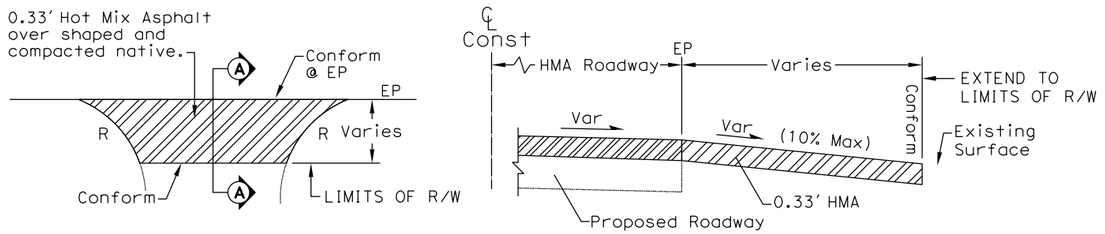

TYPE E

SECTION A-A

ACCESS ROAD CONFORM DETAILS

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	C-1		CONSTRUCTION DETAILS					

RECORDED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
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SHEET NO.
9 of 28

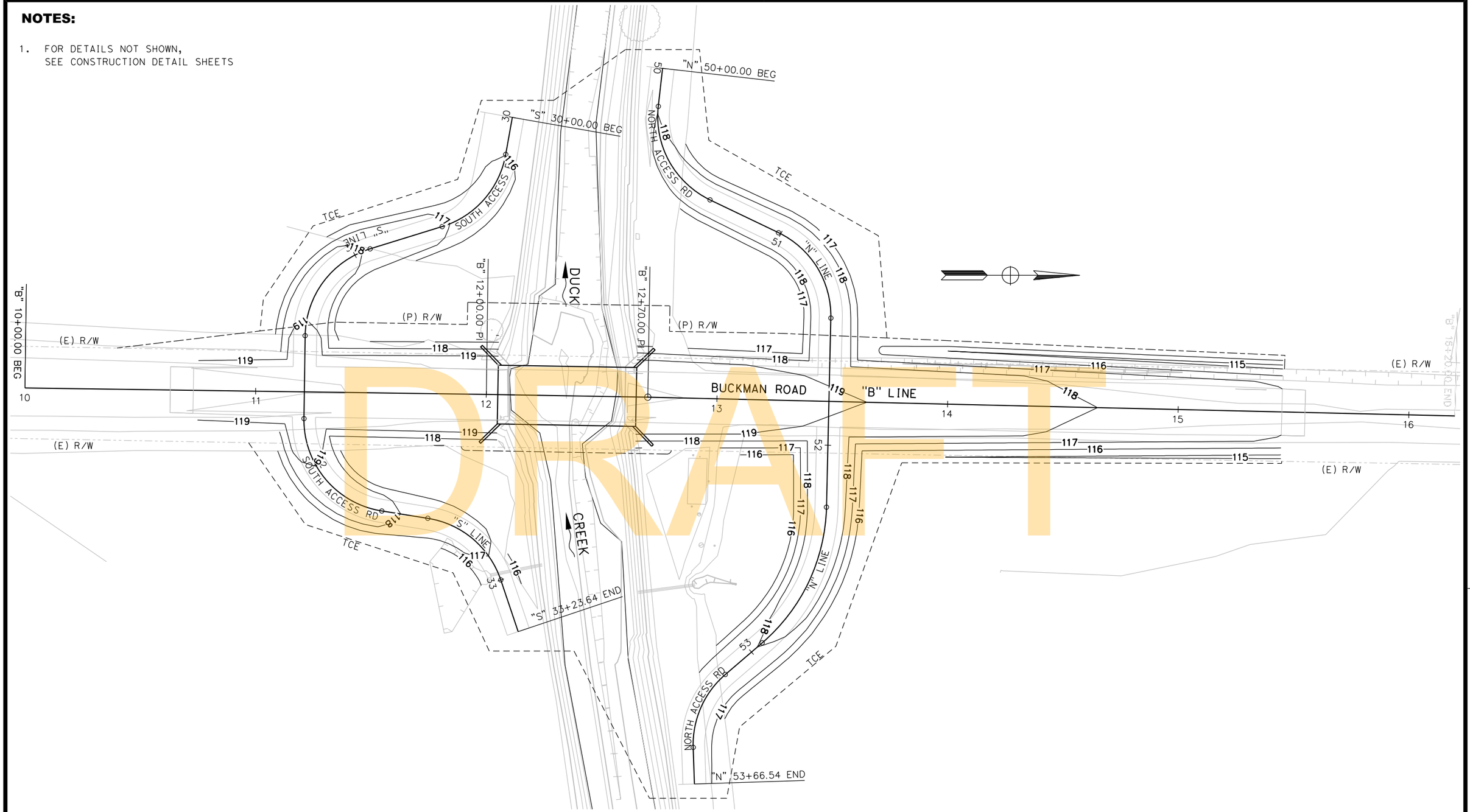
PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

EXHIBIT H

DRAWER	SHEET NO.

NOTES:

1. FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAIL SHEETS



PLAN

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	G-1		CONTOUR GRADING			1"=20'		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — CIVIL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
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SHEET NO.
10 of 28

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

EXHIBIT H

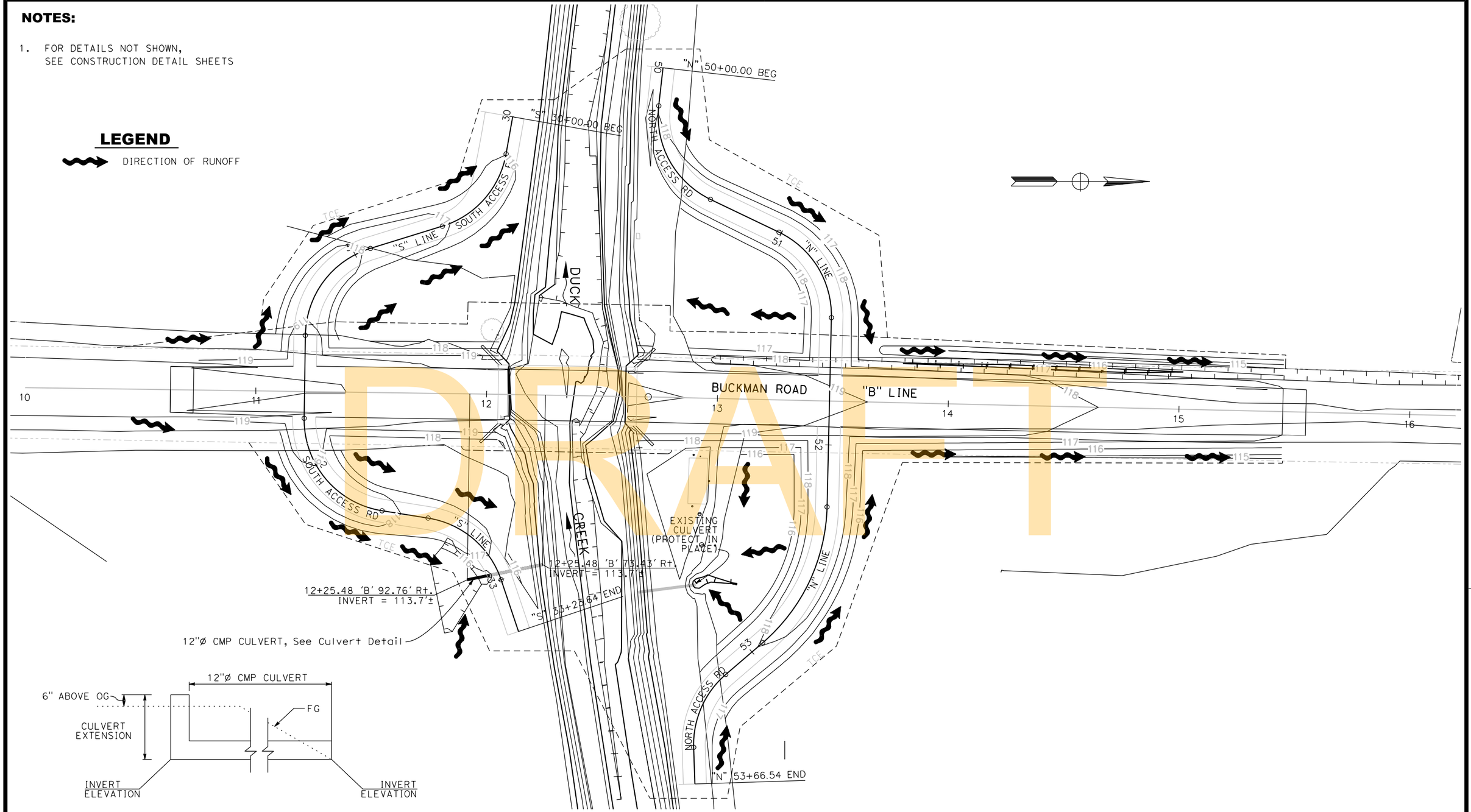
DRAWER	SHEET NO.

NOTES:

1. FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAIL SHEETS

LEGEND

DIRECTION OF RUNOFF



PLAN

CULVERT DETAIL

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	×	×
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	D-1		DRAINAGE PLAN			1"=20'		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
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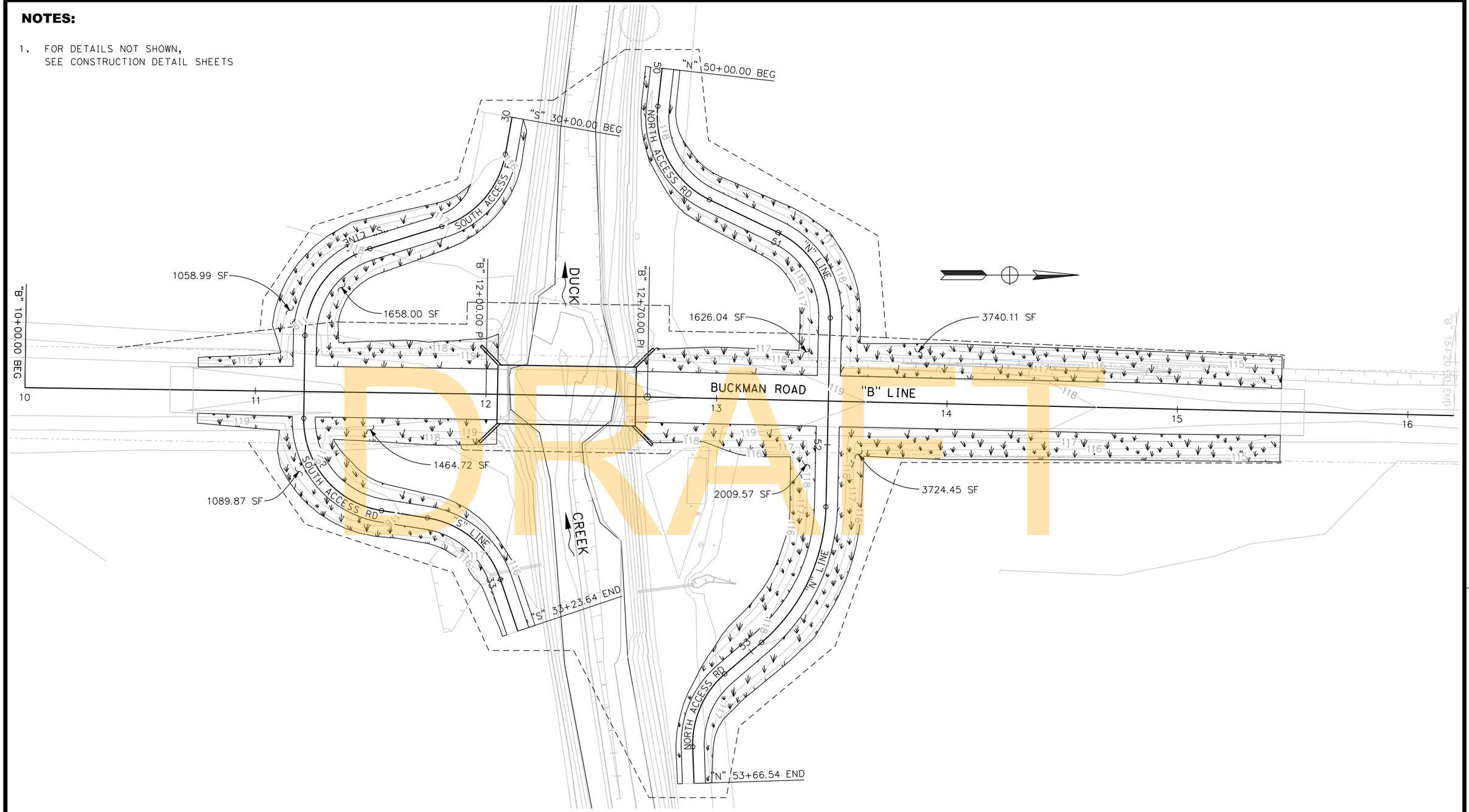
NOTES:

1. FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAIL SHEETS



PLAN

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	TE-1		TEMPORARY EROSION CONTROL			1"=20'		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — CIVIL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
1810 EAST HAZELTON AVENUE
STOCKTON, CALIFORNIA 95205
PHONE: (209) 468 - 3000
FAX: (209) 468 - 2999

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

SHEET NO.
12 of 28

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

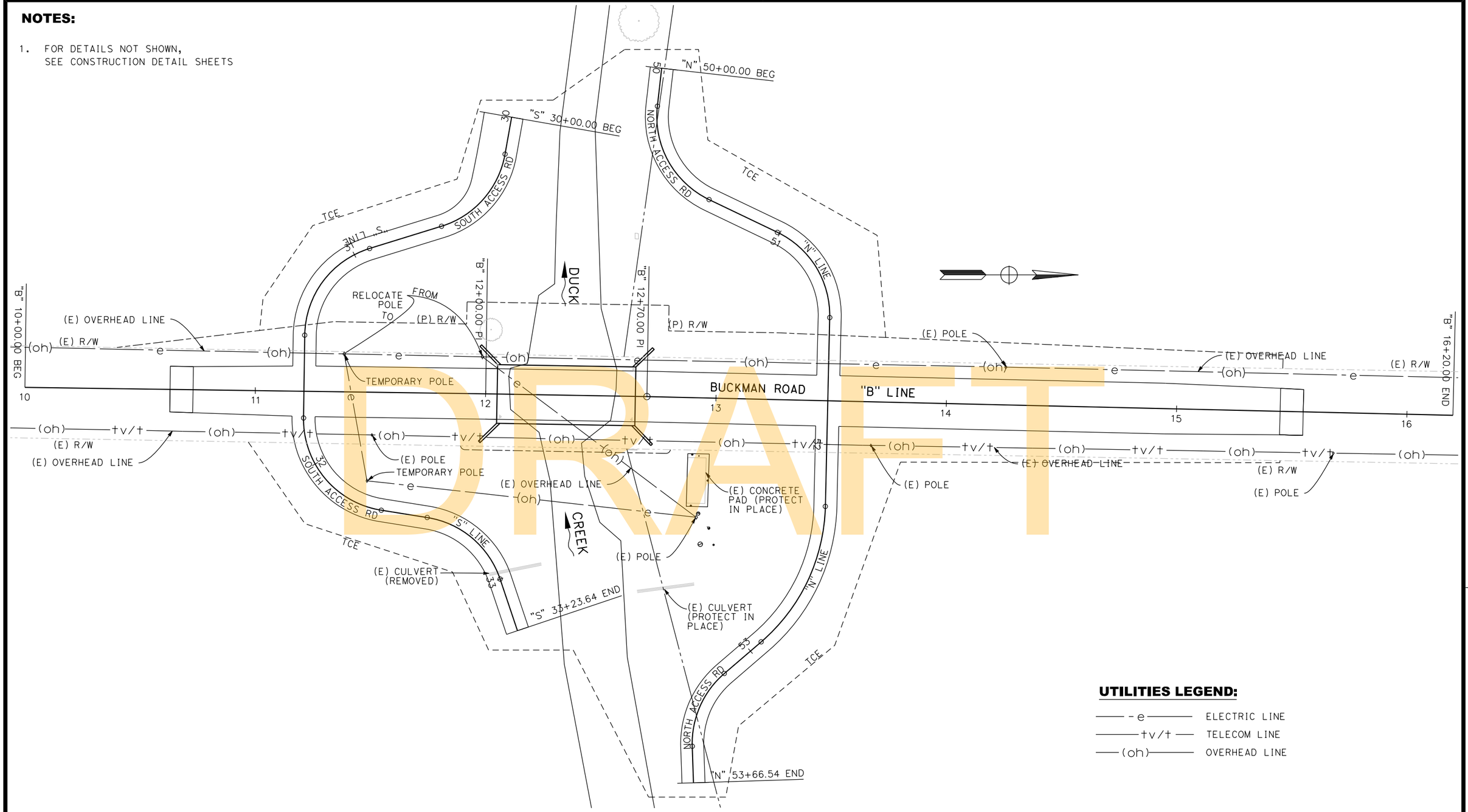
$FILEABBREV$

EXHIBIT H

DRAWER	SHEET NO.

NOTES:

1. FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAIL SHEETS



PLAN

UTILITIES LEGEND:

——— -e ——— ELECTRIC LINE
——— +v/+ ——— TELECOM LINE
——— (oh) ——— OVERHEAD LINE

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	U-1		UTILITY PLAN			1"=20'		

R. E. Burns, No. 6289, Exp. 3-31-20, Structural, Registered Professional Engineer, State of California

95% PLANS

Rob Burns

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SHEET NO.
13 of 28

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

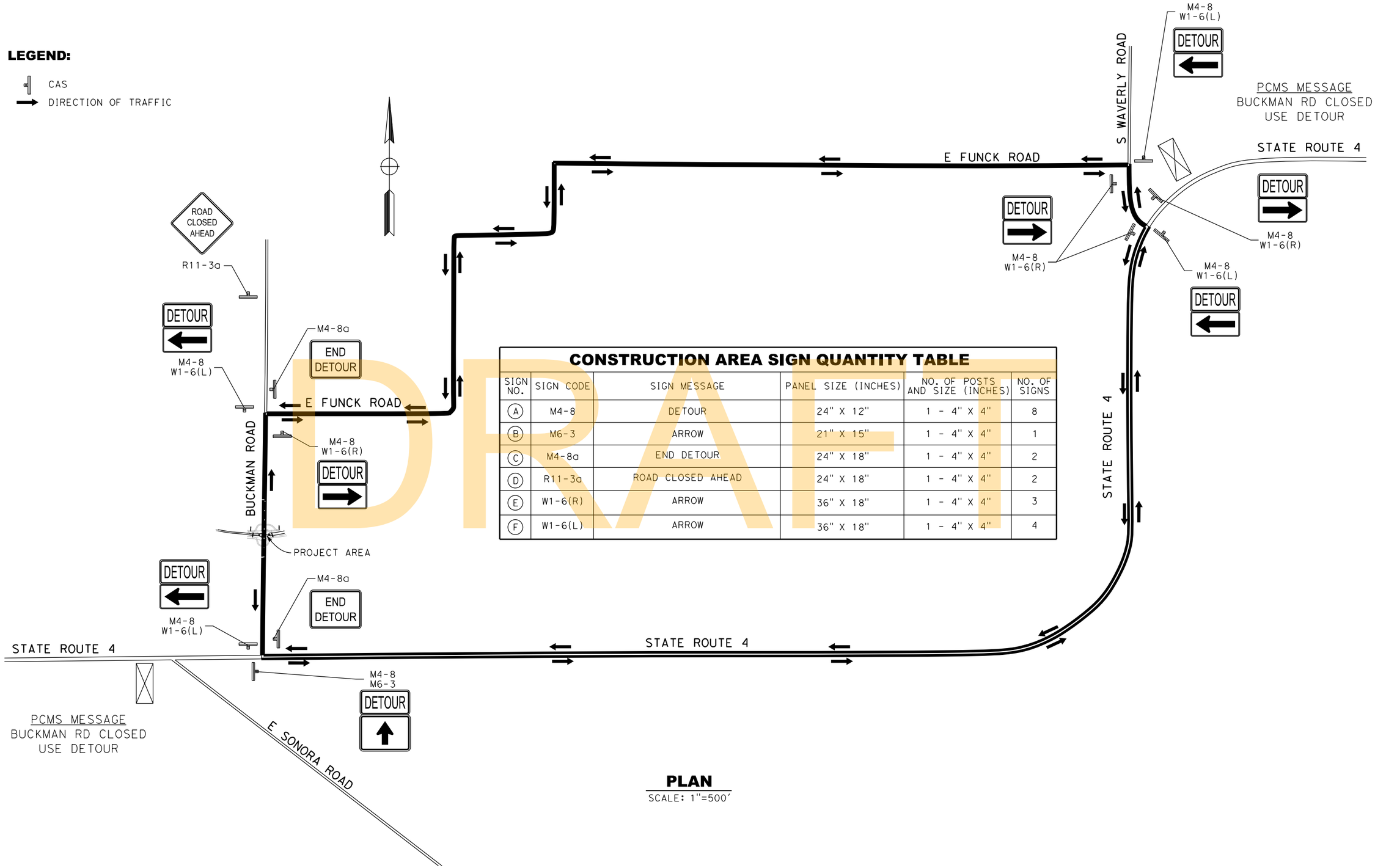
EXHIBIT H

DRAWER	SHEET NO.

LEGEND:

CAS

DIRECTION OF TRAFFIC



CONSTRUCTION AREA SIGN QUANTITY TABLE

SIGN NO.	SIGN CODE	SIGN MESSAGE	PANEL SIZE (INCHES)	NO. OF POSTS AND SIZE (INCHES)	NO. OF SIGNS
(A)	M4-8	DETOUR	24" X 12"	1 - 4" X 4"	8
(B)	M6-3	ARROW	21" X 15"	1 - 4" X 4"	1
(C)	M4-8a	END DETOUR	24" X 18"	1 - 4" X 4"	2
(D)	R11-3a	ROAD CLOSED AHEAD	24" X 18"	1 - 4" X 4"	2
(E)	W1-6(R)	ARROW	36" X 18"	1 - 4" X 4"	3
(F)	W1-6(L)	ARROW	36" X 18"	1 - 4" X 4"	4

PLAN

SCALE: 1"=500'

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	DE-1		DETOUR PLAN					

REGISTERED PROFESSIONAL ENGINEER R. E. Burns No. 6289 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA

95% PLANS

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EXHIBIT H

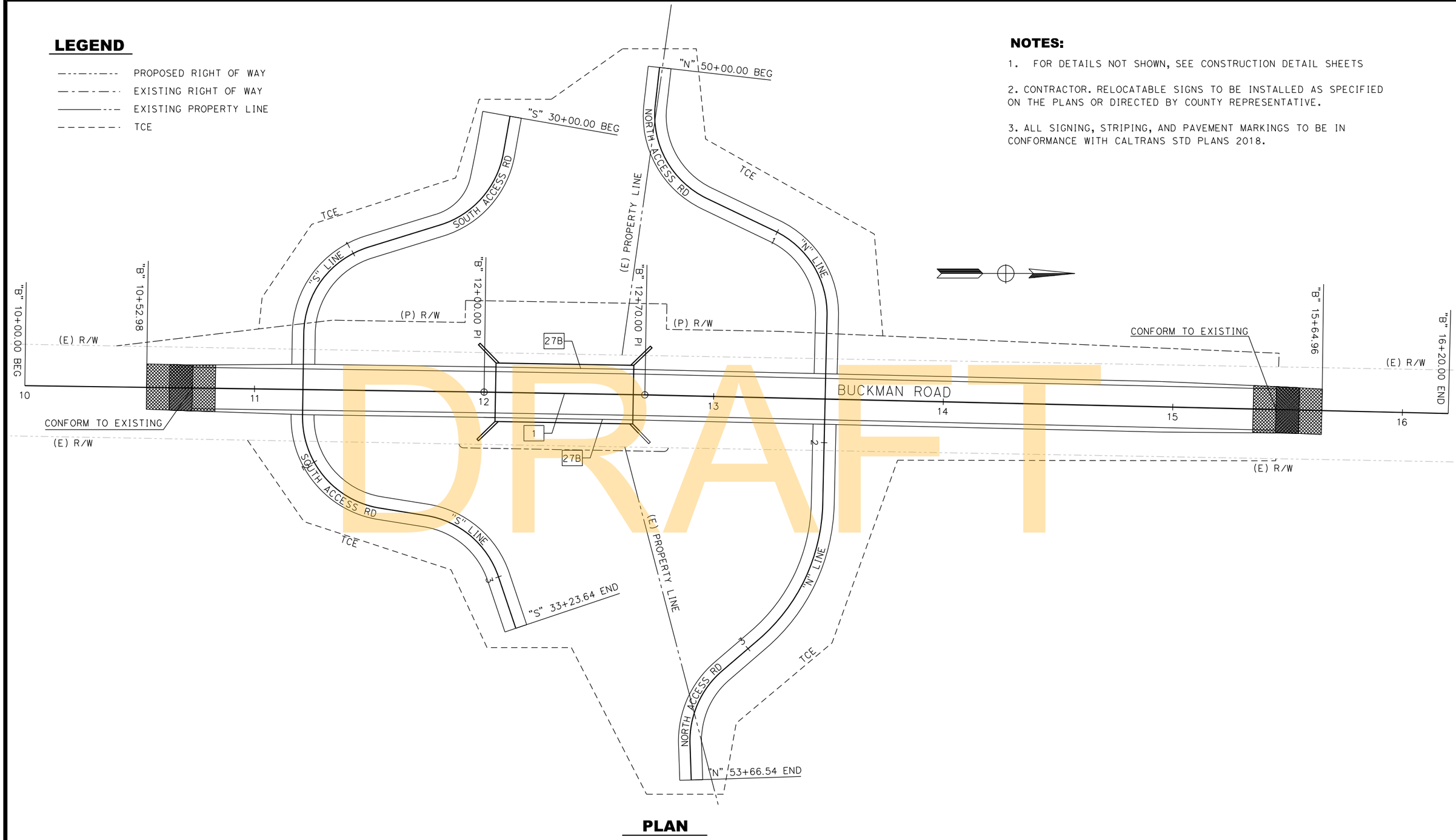
DRAWER	SHEET NO.

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- TCE

NOTES:

1. FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAIL SHEETS
2. CONTRACTOR. RELOCATABLE SIGNS TO BE INSTALLED AS SPECIFIED ON THE PLANS OR DIRECTED BY COUNTY REPRESENTATIVE.
3. ALL SIGNING, STRIPING, AND PAVEMENT MARKINGS TO BE IN CONFORMANCE WITH CALTRANS STD PLANS 2018.



PLAN

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	PD-1		PAVEMENT DELINEATION			1"=20'		

REGISTERED PROFESSIONAL ENGINEER R. E. Burns No. 6289 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA

95% PLANS

Rob Burns

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SHEET NO. 15 of 28

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

$DATE$

$FILEABBREV$

DRAWER	SHEET NO.

ROADWAY QUANTITIES

LOCATION	HOT MIX ASPHALT (TYPE A)	AGGREGATE BASE (CLASS 2)	COLD PLANE ASPHALT CONCRETE PAVEMENT	HOT MIX ASPHALT (LEVELING)	ROAD EXCAVATION	IMPORT BORROW	OBLITERATE SURFACING
	TON	CY	SQYD	TON	CY	CY	SQYD
"B" LINE	180	334	89	0	200	400	663
"N" LINE	0	40	0	0	11	419	0
"S" LINE	0	46	0	0	12	215	0
TOTAL	180	420	89	0	222	1033	663

PAVEMENT DELINEATION QUANTITIES

DETAIL NO.	FROM	TO	6" YELLOW PAINT TRAFFIC STRIPE	6" WHITE LINE
			LF	LF
1	"B" 10+52.98	"B" 15+64.96	512	
27B	"B" 10+52.98	"B" 15+64.96		1024
		TOTAL	512	1024

TRAFFIC HANDLING SIGN QUANTITIES

SHEET NO.	STAGE	SIGN CODE AND MESSAGE						
		M4-8 "DETOUR"	M6-3 ARROW	M4-8a "END DETOUR"	R11-3a "ROAD CLOSED AHEAD"	W1-6(R) ARROW	W1-6(L) ARROW	PCMS MESSAGE
15	STAGE 1	8	1	2	2	3	4	2
TOTAL		8	1	2	2	3	4	2

MGS QUANTITIES

SHEET NO.	FROM	TO	WB31 TRANSITION RAILING	TL-3 IN-LINE TERMINAL SYSTEM
			EA	EA
6	"B" 11+80.00	"B" 12+05.00	2	2
6	"B" 12+65.00	"B" 13+00.00	2	2
		TOTAL	4	4

(N) - NOT A PAY ITEM, FOR INFORMATION ONLY

$DATE$

$FILEABBREV$

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Richard Sanders	Q-1		ROADWAY QUANTITIES					

REGISTERED PROFESSIONAL ENGINEER R. E. Burns No. 6289 Exp. 3-31-20 CIVIL STATE OF CALIFORNIA

95% PLANS

Rob Burns

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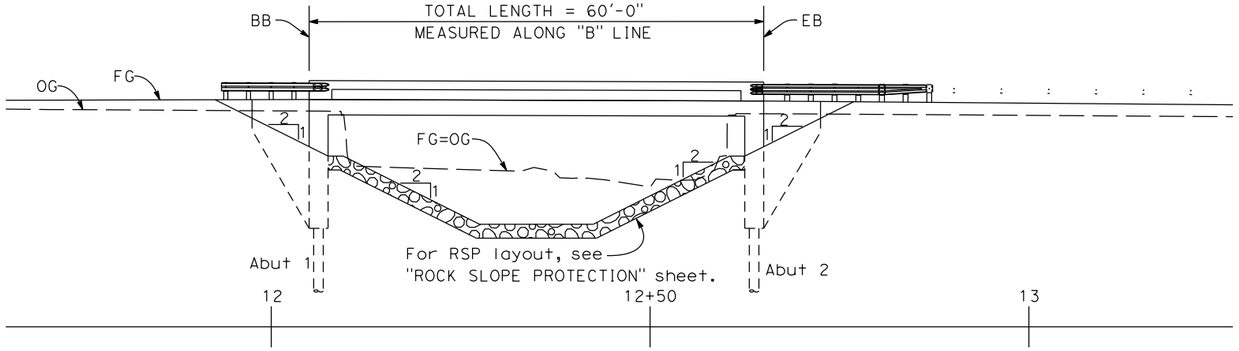
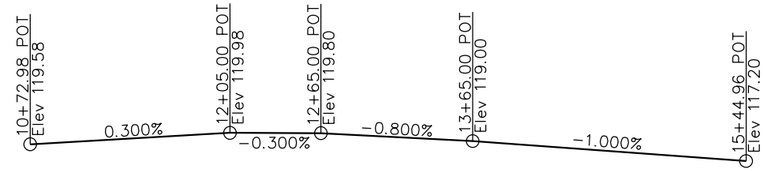
FAX: (916) 858-0643

PROJECT NAME: 29C-227 BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT

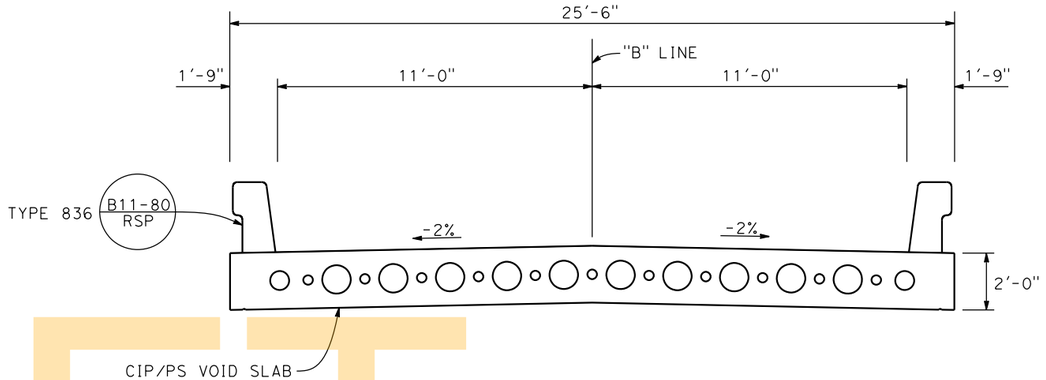
EXHIBIT H



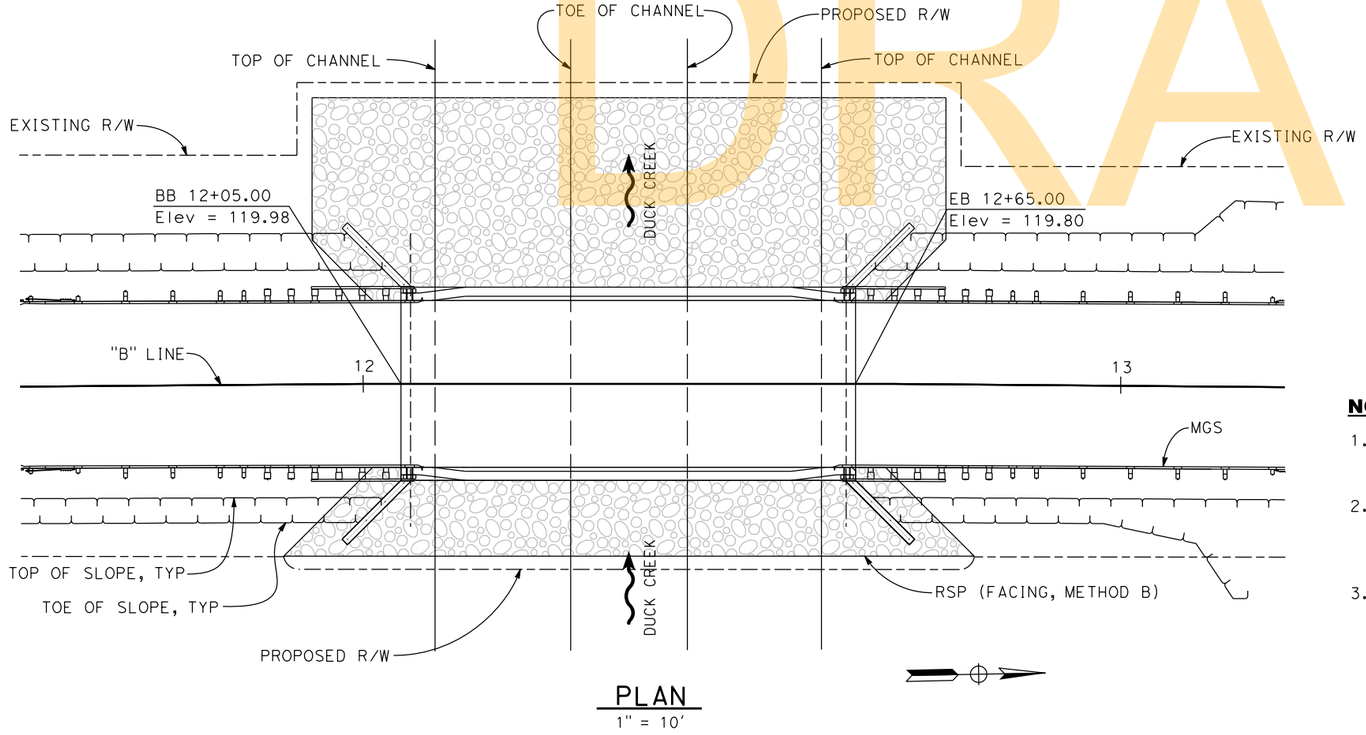
ELEVATION
1" = 10'



PROFILE GRADE
NO SCALE



TYPICAL SECTION
3/8" = 1'-0"



PLAN
1" = 10'

NOTES:

1. For "Hydrologic Summary", see "FOUNDATION PLAN" sheet.
2. For General Notes, Quantities & Index To Plans, see "INDEX TO PLANS" sheet.
3. The contractor shall verify all controlling field dimensions before ordering or fabricating any material.

STANDARD PLANS DATED 2018

Sheet No.	Title
A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND - LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND - LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND - LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND - LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND - LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
RSP B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
RSP B2-8	PILE DETAILS-CLASS 200
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B8-5	CAST-IN-PLACE POST-TENSIONED GIRDER DETAILS
B9-4	STRUCTURE APPROACH - TYPE EQ(10)
B9-5	STRUCTURE APPROACH - SLAB DETAILS
B9-6	STRUCTURE APPROACH - DRAINAGE DETAILS
B11-47	CABLE RAILING
B11-80	CONCRETE BARRIER TYPE 836

STANDARD PLAN SHEET No.

DETAIL No.

PROJECT NAME:

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	×	×
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-1		**GENERAL PLAN**			NA		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

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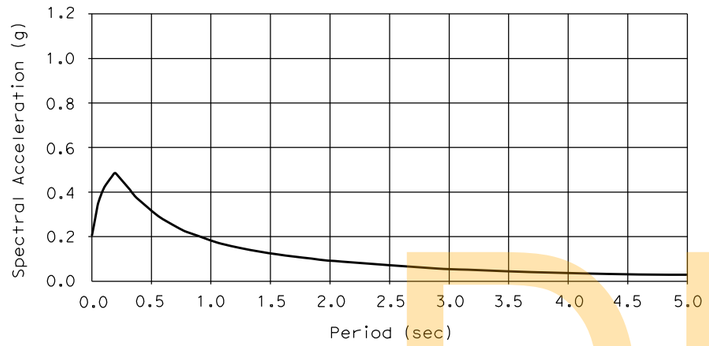
SHEET NO.
17 of 28

EXHIBIT H

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:	AASHTO LRFD Bridge Design Specifications, 6th Edition with California Amendments, preface dated January 2014
SEISMIC DESIGN:	CALTRANS SEISMIC DESIGN CRITERIA (SDC) Version 1.7, April 2013
DEAD LOAD:	Includes 0.035 ksf for future wearing surface
LIVE LOAD:	HL-93, Caltrans' "Low Boy" and CA P-15 Permit, design vehicular loads.
SEISMIC LOAD:	ARS Online Version 2.3.06 with V_{S30} = 483.1 m/s and with near fault adjustments



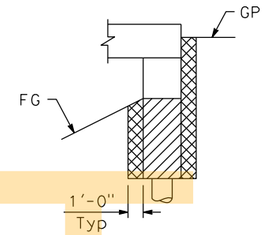
REINFORCED CONCRETE:	f_y = 60 ksi
	f'_c = 3.6 ksi
	n = 8
PRESTRESSED CONCRETE:	See "PRESTRESSING NOTES" on "TYPICAL SECTION" sheet.

STRUCTURAL CONCRETE, BRIDGE (f'c = 3,600 psi)

STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER), SEE "PRESTRESSING NOTES" ON "TYPICAL SECTION" SHEET FOR CONCRETE STRENGTH

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE



LIMITS OF STRUCTURE EXCAVATION (TYPE D)

NO SCALE

Denotes Structure Excavation (Bridge Type D)

Denotes Structure Backfill

INDEX TO PLANS

QUANTITIES

Item	Total	
FURNISH STEEL PIPE PILE	540	LF
DRIVE PILE (CLASS 200)(ALTERNATIVE W)	12	EA
STRUCTURE EXCAVATION (TYPE D)	160	CY
STRUCTURE BACKFILL (BRIDGE)	74	CY
PRESTRESSING CAST-IN-PLACE-CONCRETE	1	LS
STRUCTURAL CONCRETE, BRIDGE	91	CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	126	CY
JOINT SEAL (MR 1/2")	51	LF
BAR REINFORCING STEEL (BRIDGE)	42000	LB
BAR REINFORCING STEEL (EPOXY COATED)	2200	LB
BRIDGE REMOVAL	1	LS
CONCRETE BARRIER (TYPE 836)	120	LF
ROCK SLOPE PROTECTION (FACING, METHOD B)	310	CY

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-2		INDEX TO PLANS			NA		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

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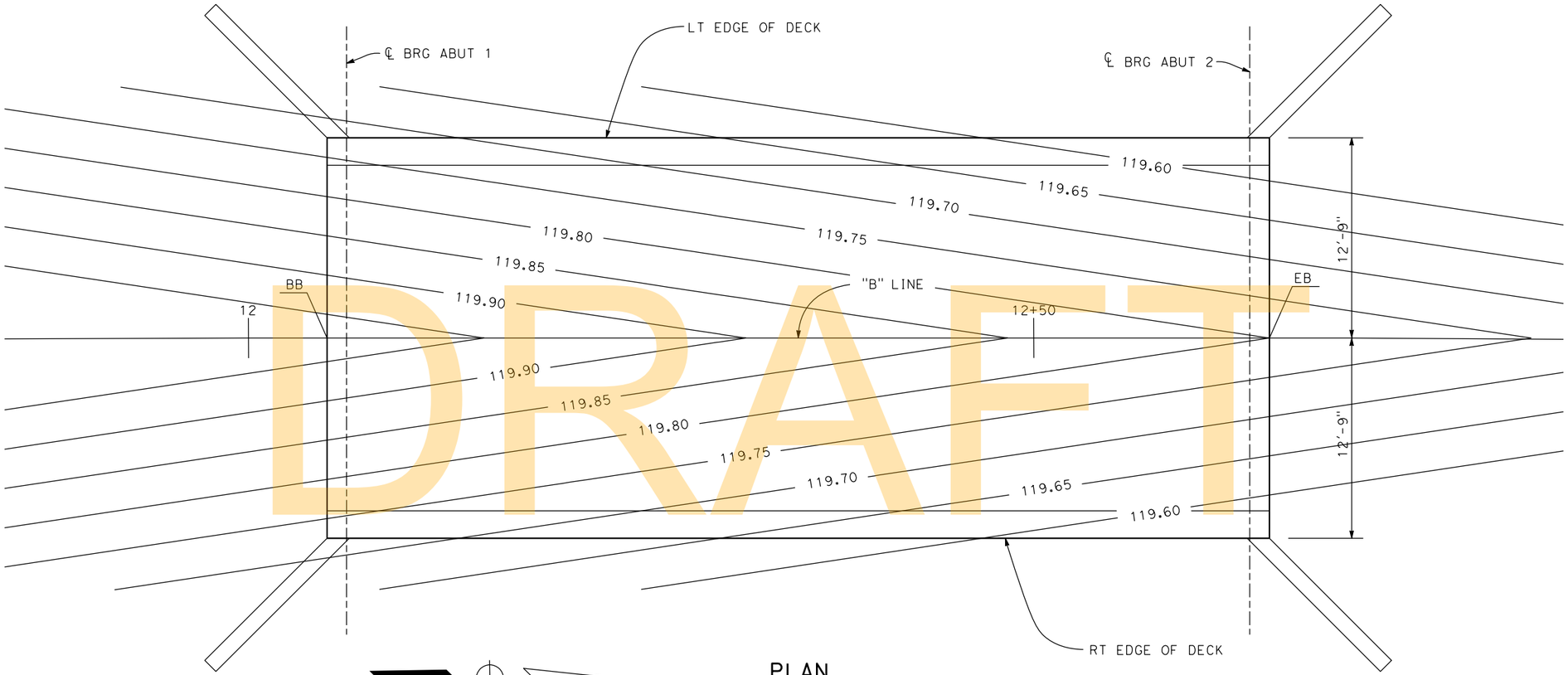
SHEET NO. 18 of 28

PROJECT NAME:

EXHIBIT H



PLAN
1/4" = 1'-0"

NOTES:

1. CONTOURS DO NOT INCLUDE CAMBER
2. CONTOUR INTERVAL IS 0.05'

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-3		**DECK CONTOURS**			NA		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

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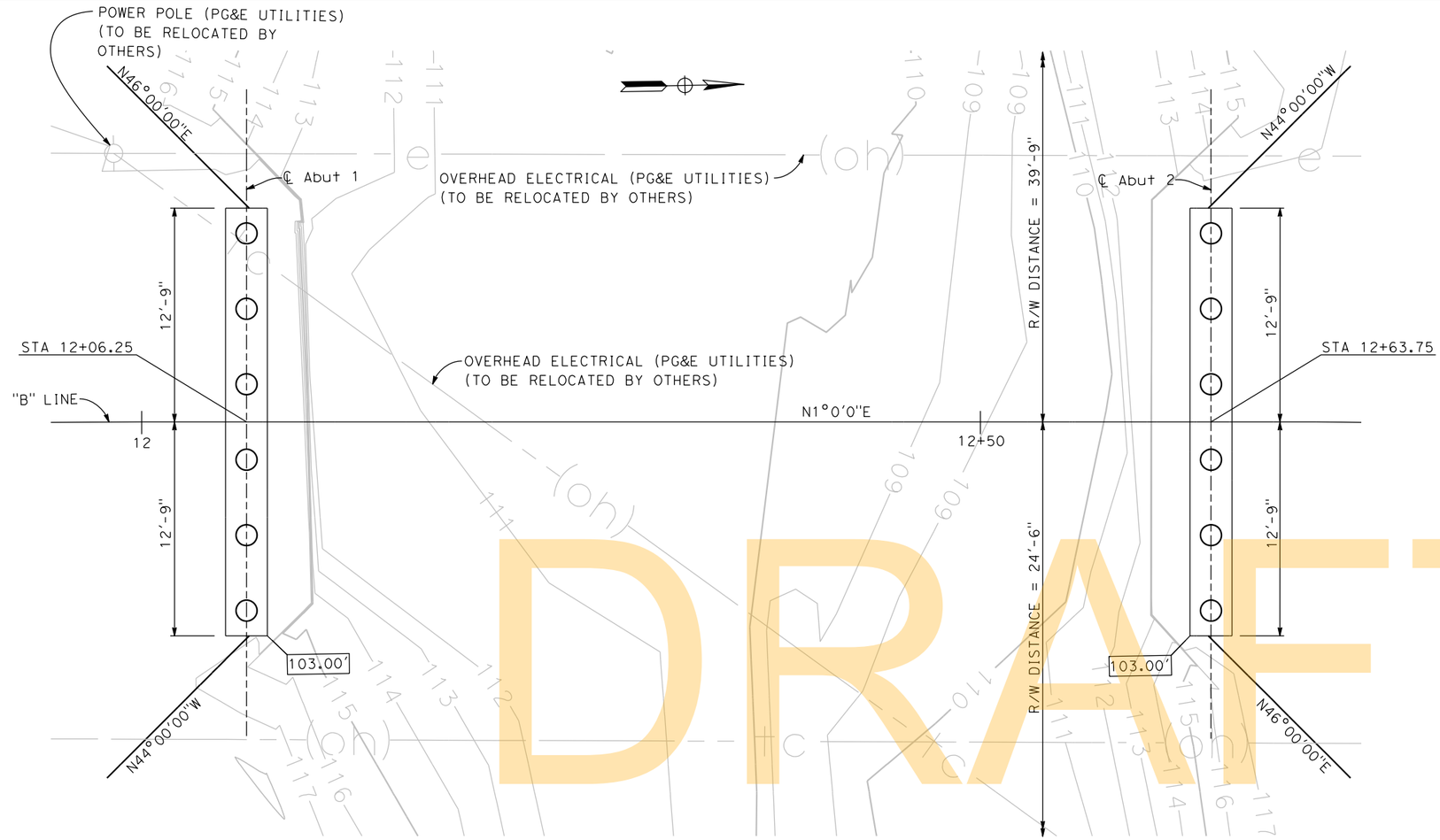
SHEET NO.
19 of 28

PROJECT NAME:

EXHIBIT H



PLAN
1/4" = 1'-0"

LEGEND:

Denotes bottom of abutment stem elevation

NOTE:

The contractor shall verify all controlling field dimensions before ordering or fabricating any material

PILE DATA TABLE							
PILE LOCATION	PILE TYPE	DESIGN LOADING SERVICE	NOMINAL RESISTANCE (kips)		DESIGN TIP ELEVATION (FT)	SPECIFIED TIP ELEVATION (FT)	REQUIRED NOMINAL DRIVING RESISTANCE (KIPS)
			COMPRESSION	TENSION			
ABUT 1	CLASS 200 (Alt. W)		400	0	80.0(a), 78.0(b)	78.0	400
ABUT 2	CLASS 200 (Alt. W)		400	0	80.0(a), 78.0(b)	78.0	400

Design tip elevation are controlled by the following demands: (a)Compression, (b) Lateral Load

The Specificed Tip Elevation shall not be raised above the design tip elevations for tension load, lateral load and tolerable settlement.

HYDROLOGIC SUMMARY				
STRUCTURE	50 YEAR		100 YEAR	
	WSE	FREEBOARD	WSE	FREEBOARD
EXISTING	117.8 FT.	-1.55 FT.	118.2 FT.	-1.95 FT.
REPLACEMENT	117.4 FT.	0.15 FT.	117.5 FT.	0.045 FT.

SCOUR DATA TABLE			
SUPPORT LOCATION	LONG TERM SCOUR	SHORT TERM SCOUR, FT	TOTAL SCOUR, FT
N ABUTMENT 1	1.0	5.7	6.7
S ABUTMENT 2	1.0	4.9	5.9

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-4		**FOUNDATION PLAN**			NA		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

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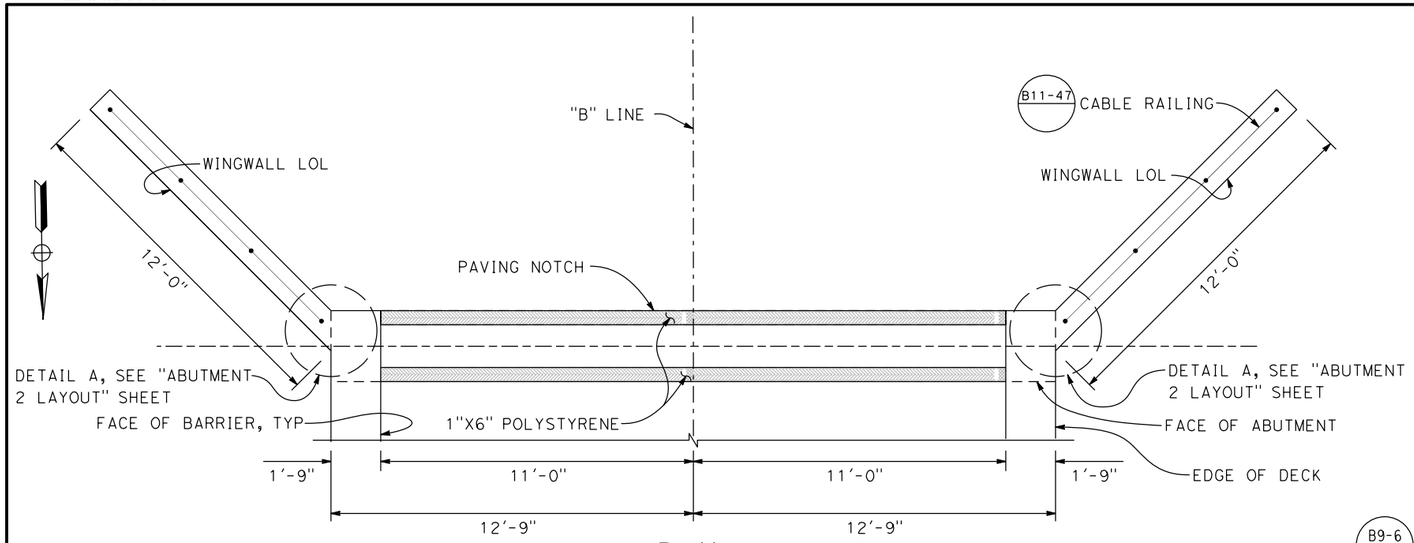
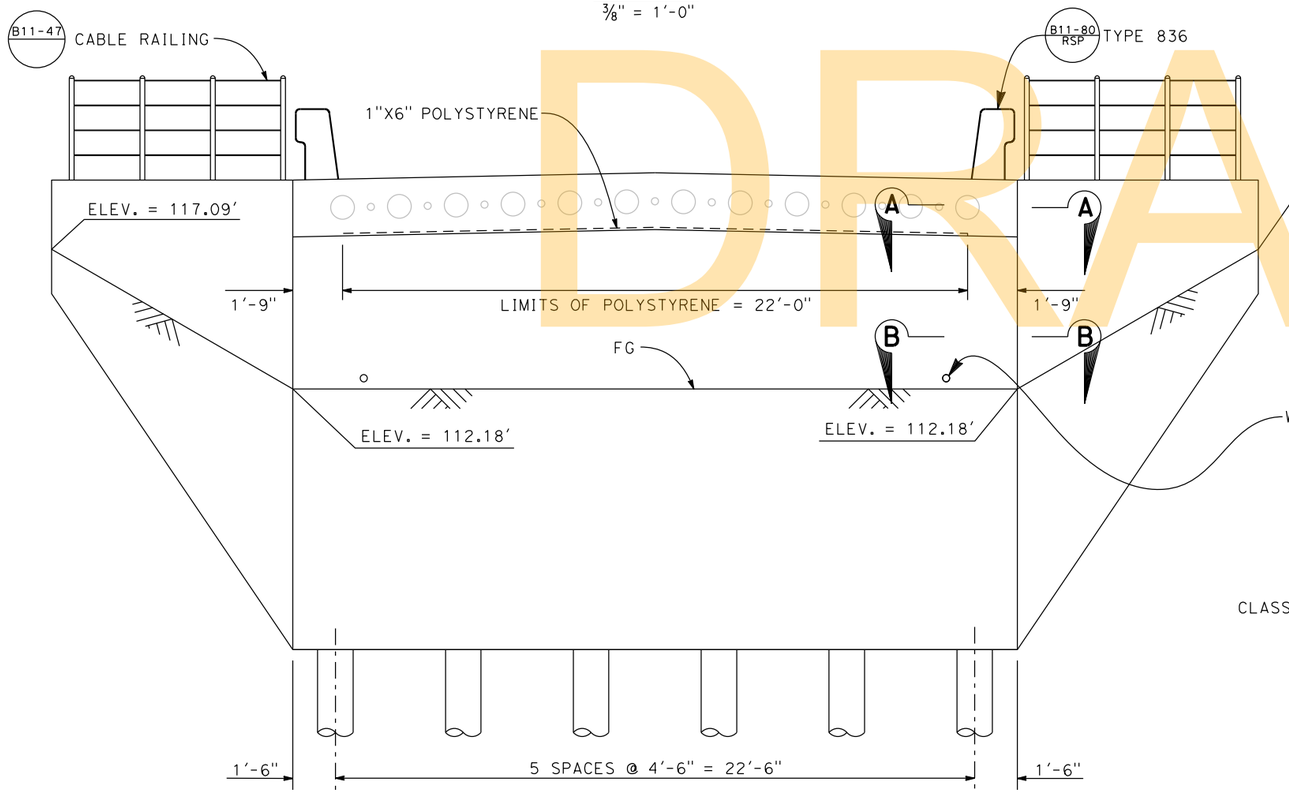
SHEET NO.
20 of 28

PROJECT NAME:

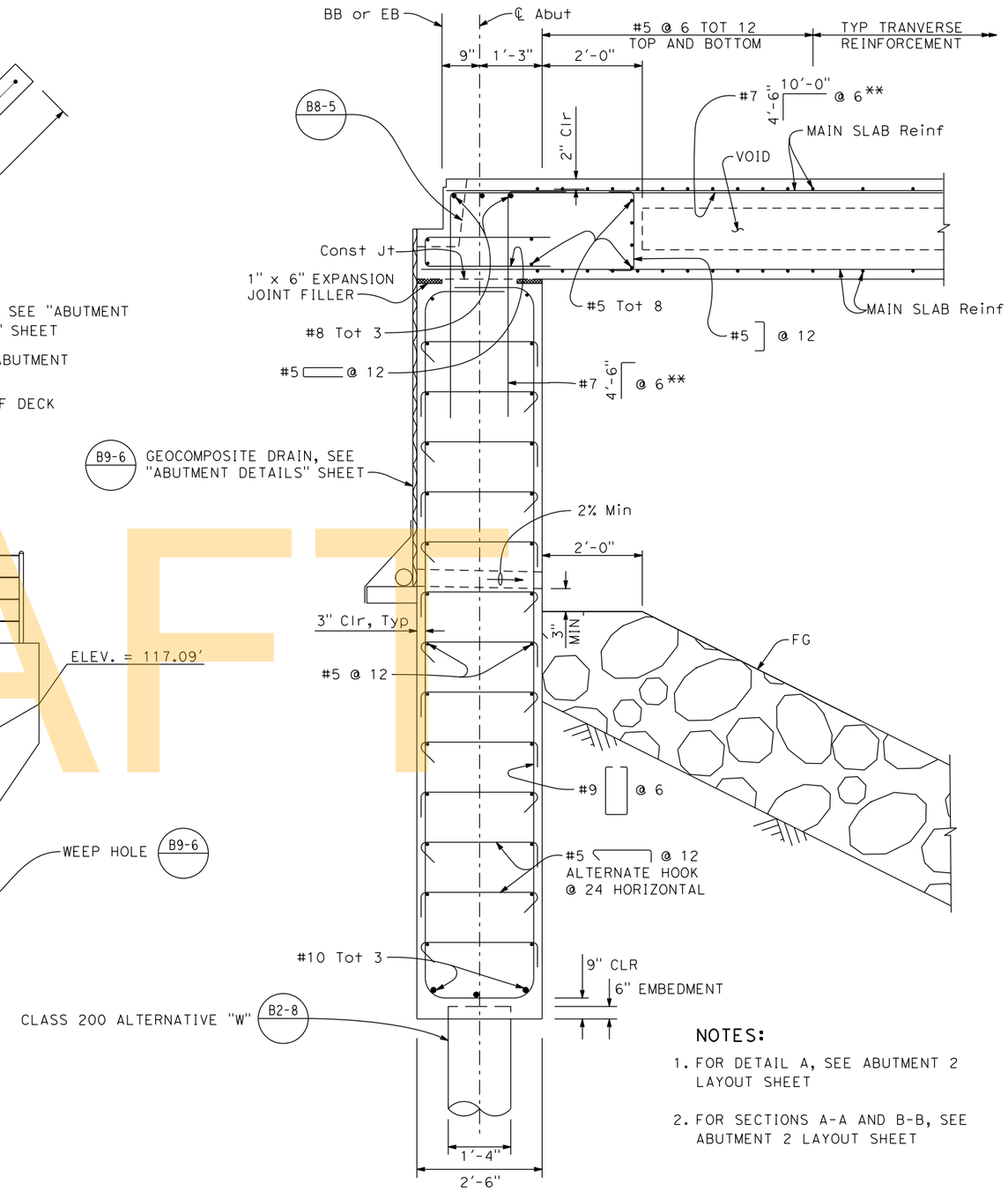
EXHIBIT H



PLAN
3/8" = 1'-0"



ELEVATION
3/8" = 1'-0"



TYPICAL ABUTMENT SECTION
3/4" = 1'-0"

** EPOXY COATED

NOTES:

1. FOR DETAIL A, SEE ABUTMENT 2 LAYOUT SHEET
2. FOR SECTIONS A-A AND B-B, SEE ABUTMENT 2 LAYOUT SHEET

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-5		**ABUTMENT 1 LAYOUT**			NA		

R. E. Burns No. 6289 Exp. 3-31-20 STRUCTURAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

95% PLANS

Rob Burns

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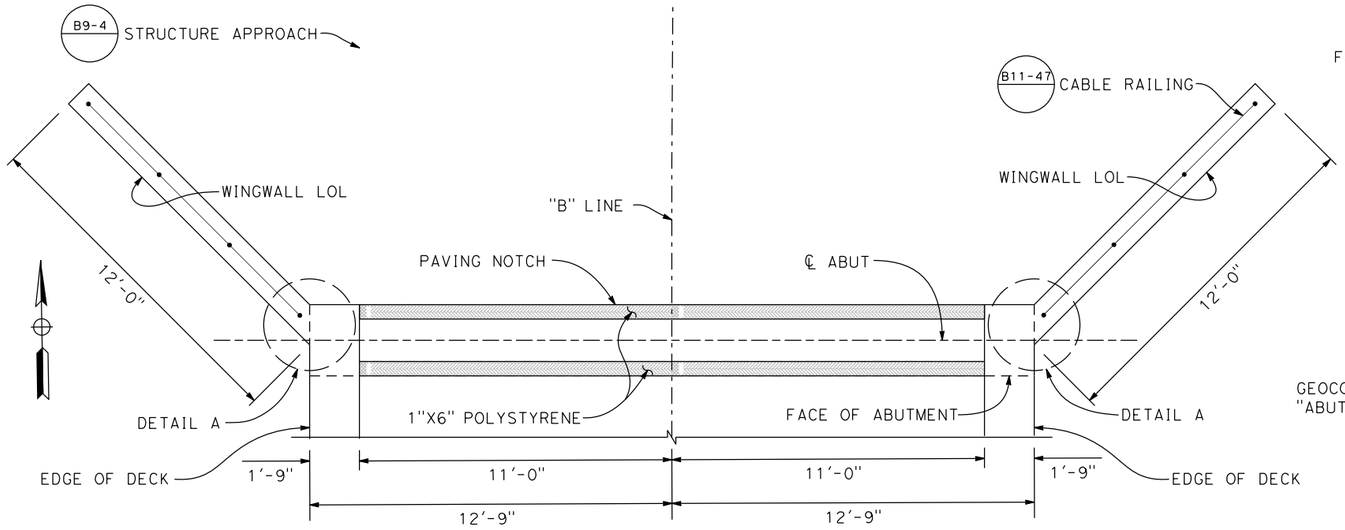
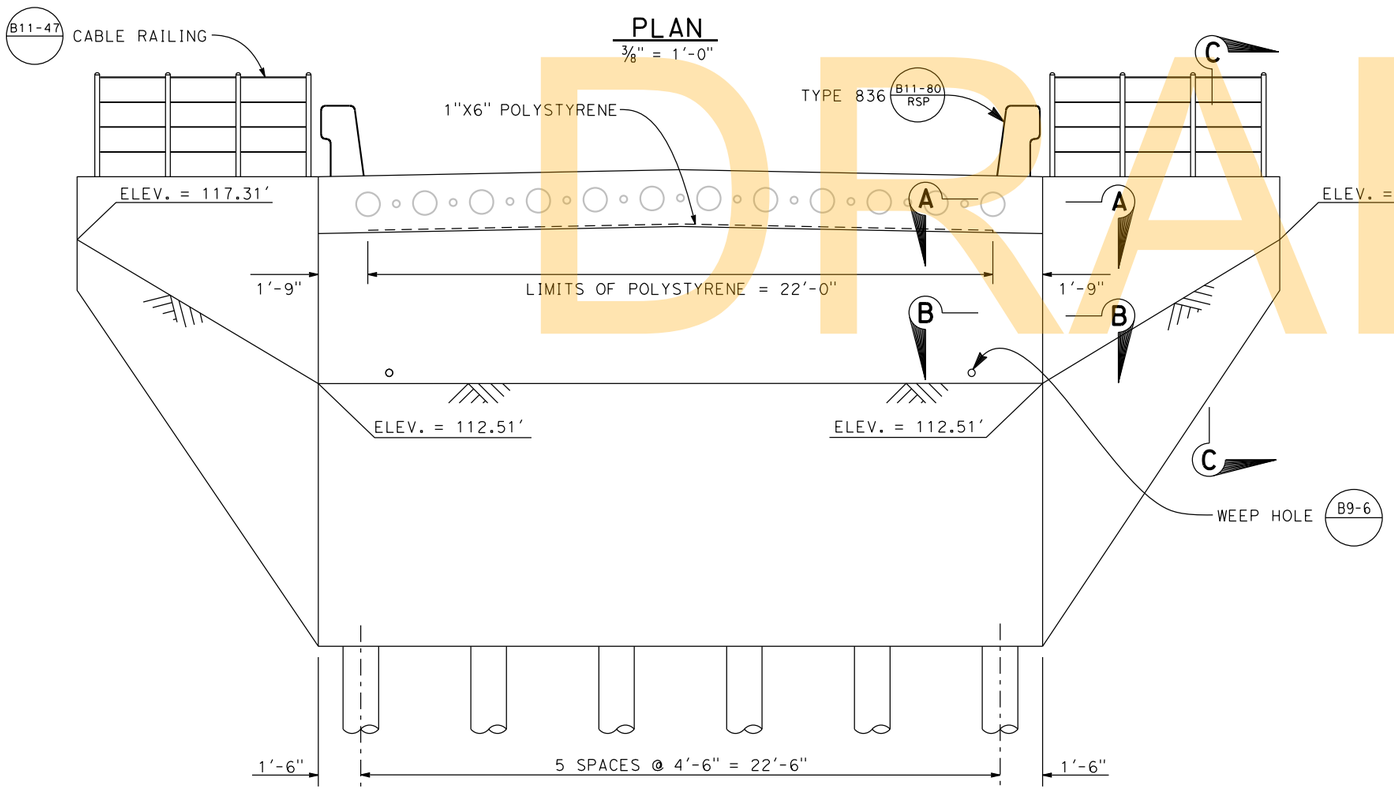
SHEET NO. 21 of 28

PROJECT NAME:

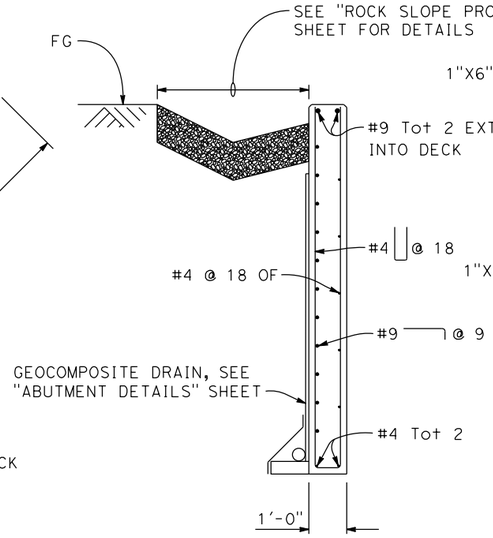
EXHIBIT H



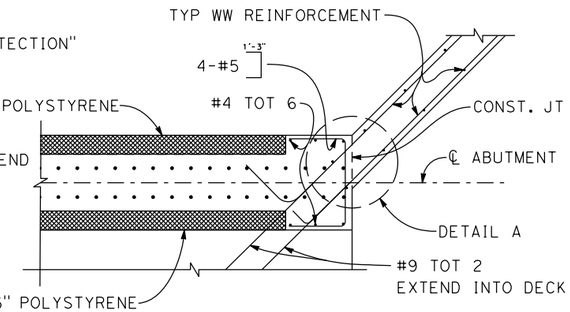
PLAN
3/8" = 1'-0"



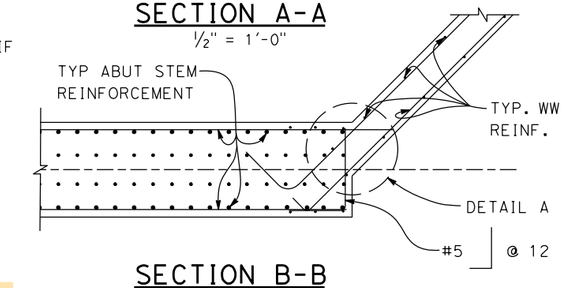
ELEVATION
3/8" = 1'-0"



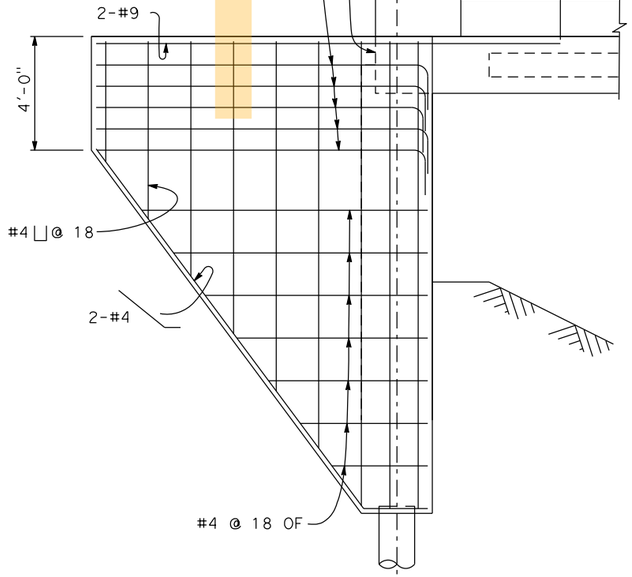
SECTION C-C
1/2" = 1'-0"



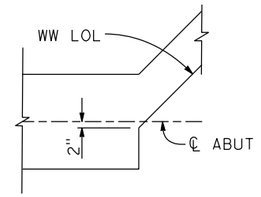
SECTION A-A
1/2" = 1'-0"



SECTION B-B
1/2" = 1'-0"



WINGWALL ELEVATION
3/8" = 1'-0"



DETAIL A
1/2" = 1'-0"

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-6		**ABUTMENT 2 LAYOUT**			NA		

R. E. Burns
No. 6289
Exp. 3-31-20
STRUCTURAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

95% PLANS

Rob Burns

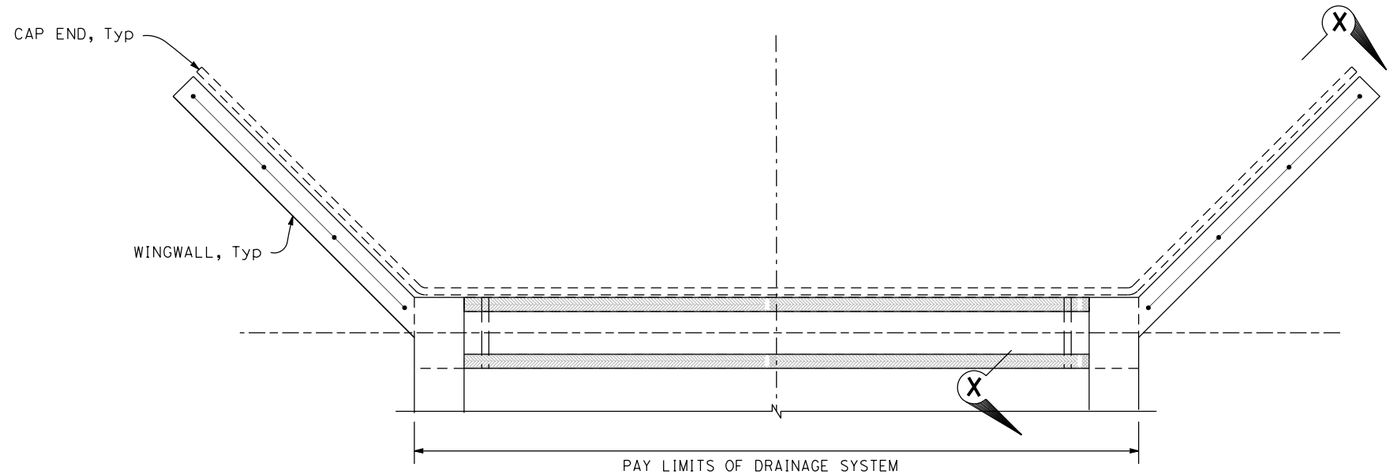
COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC
WORKS BRIDGE DIVISION
1810 EAST HAZELTON AVENUE
STOCKTON, CALIFORNIA 95205
PHONE: (209) 468 - 3000
FAX: (209) 468 - 2999

DOKKEN ENGINEERING
110 BLUE RAVINE ROAD #200
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

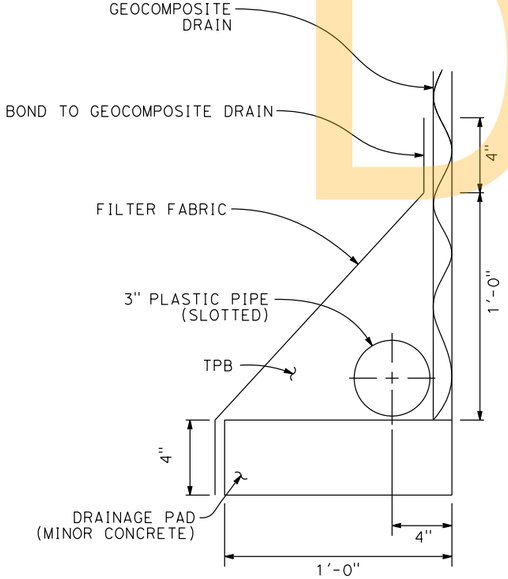
SHEET NO.
22 of 28

PROJECT NAME:

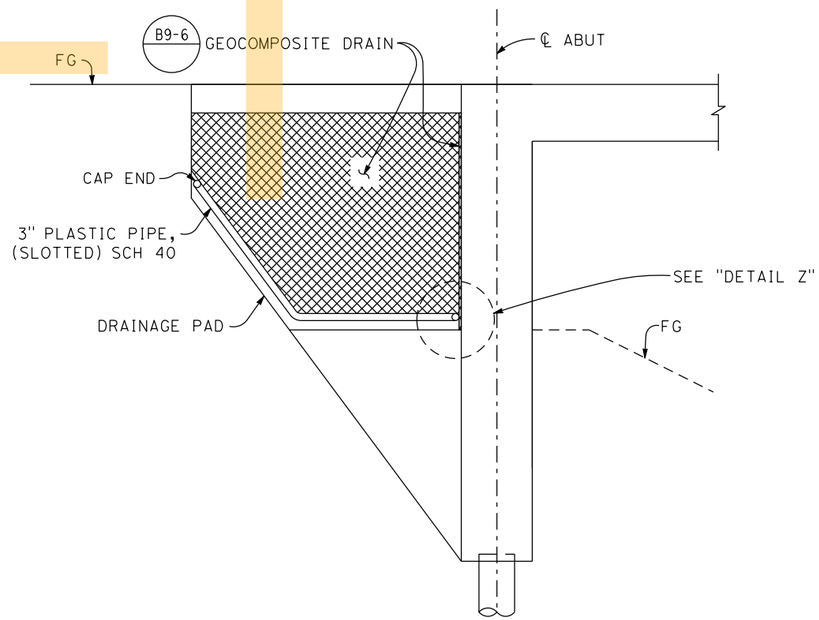
EXHIBIT H



PLAN
3/8" = 1'-0"



DETAIL Z
3" = 1'-0"



SECTION X-X
3/8" = 1'-0"

PROJECT NAME:

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-7		**ABUTMENT DRAINAGE DETAILS**			NA		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns, No. 6289, Exp. 3-31-20, STRUCTURAL, STATE OF CALIFORNIA

95% PLANS

Rob Burns

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DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
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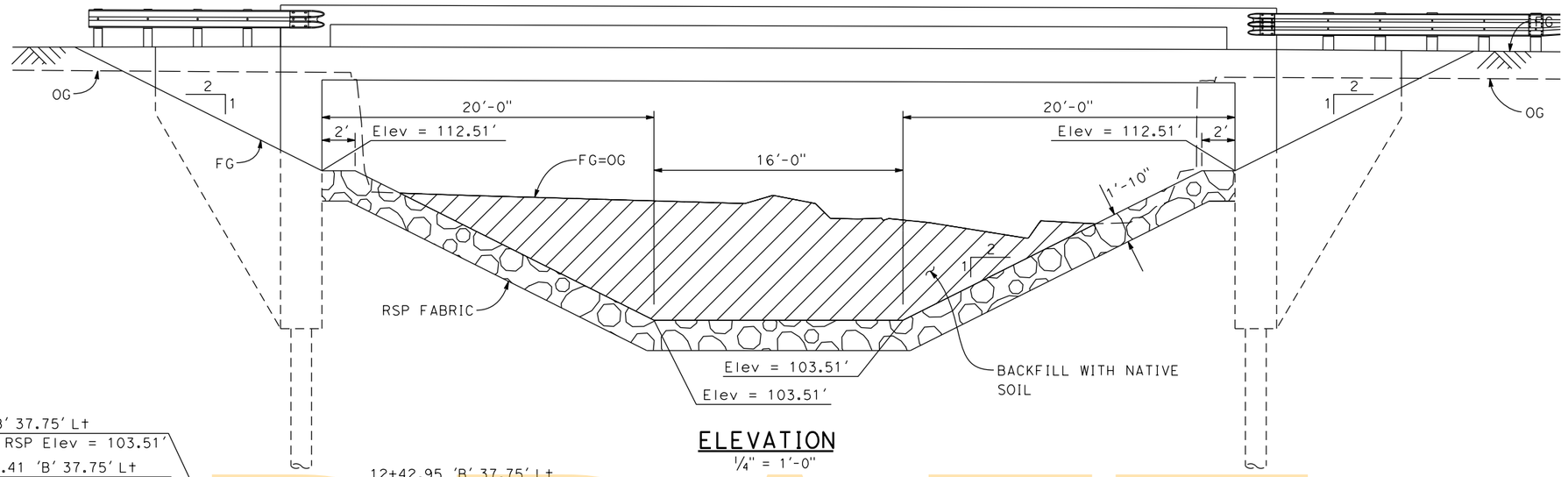
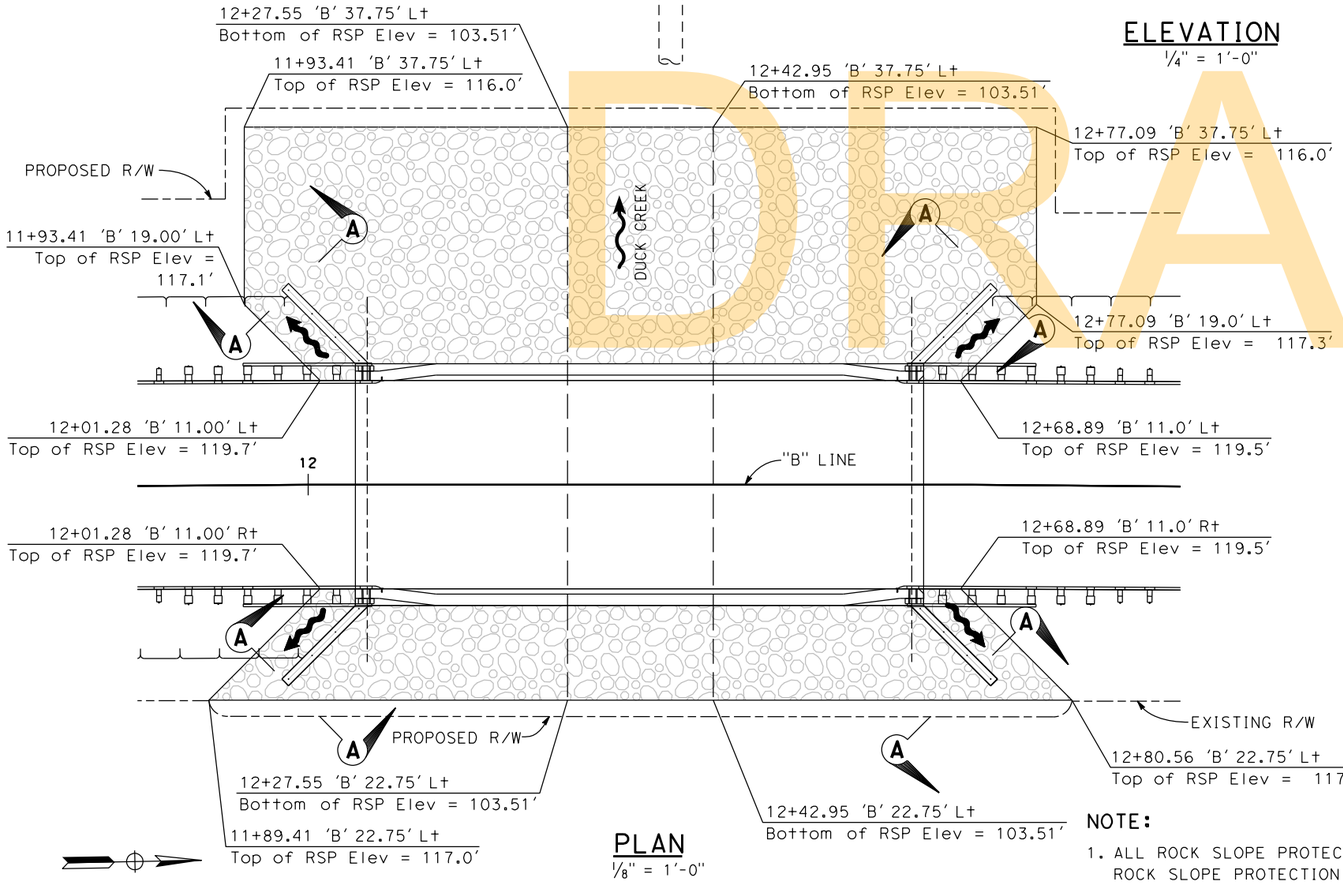
SHEET NO.
23 of 28

EXHIBIT H



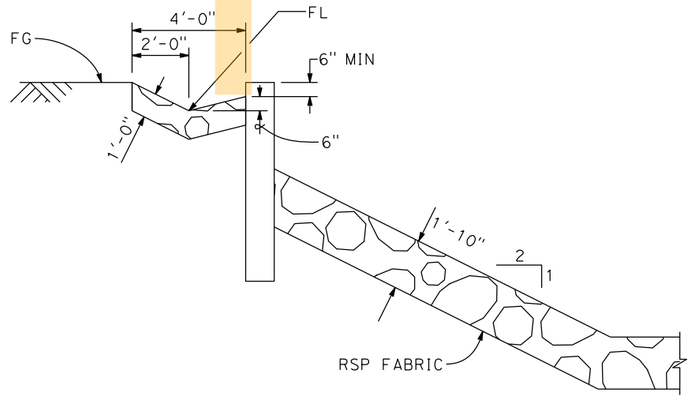
ELEVATION

1/4" = 1'-0"



PLAN

1/8" = 1'-0"



SECTION A-A

3/8" = 1'-0"

NOTE:

1. ALL ROCK SLOPE PROTECTION (RSP) SHALL BE CALTRANS ROCK SLOPE PROTECTION (FACING, METHOD B)

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-8		**ROCK SLOPE PROTECTION**			*NA*		

R. E. Burns No. 6289 Exp. 3-31-20 STRUCTURAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

95% PLANS

Rob Burns

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DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
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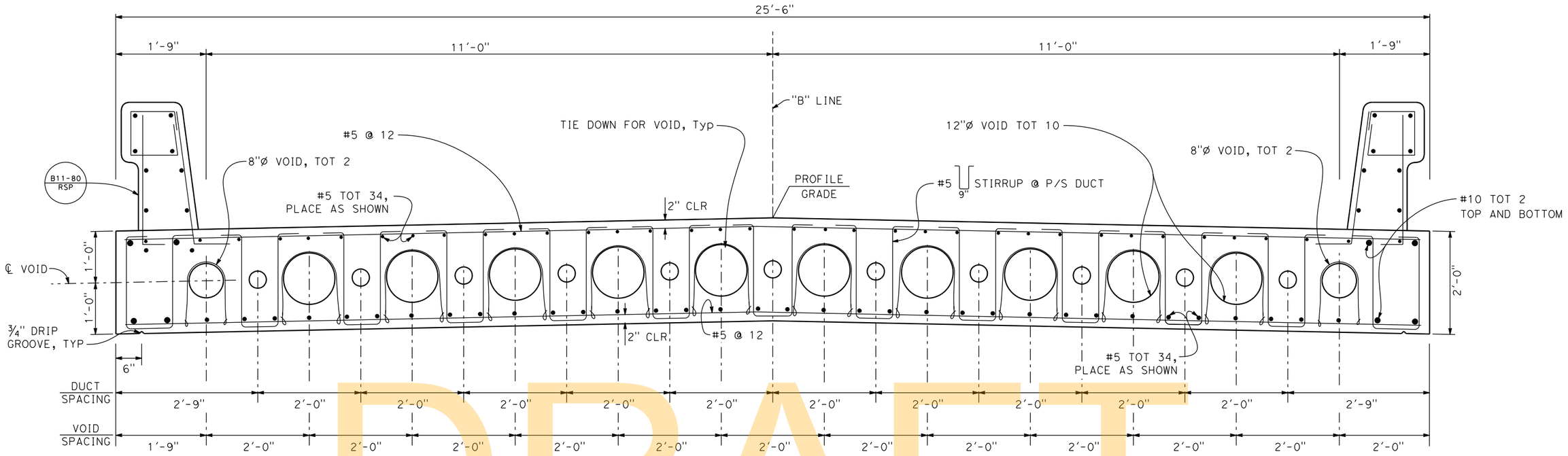
FOLSOM, CA 95630
PHONE: (916) 858-0642
FAX: (916) 858-0643

SHEET NO. 24 of 28

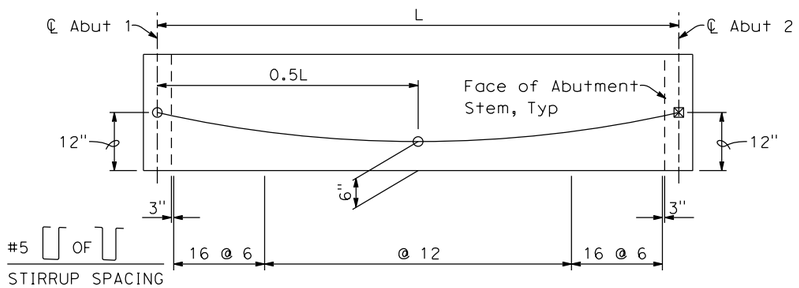
PROJECT NAME:

EXHIBIT H



TYPICAL SECTION

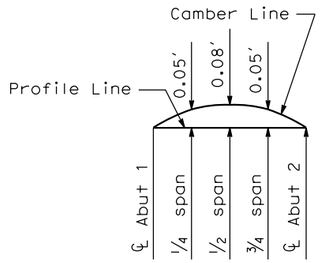
1" = 1'-0"



CABLE PATH

NO SCALE

⊠ DENOTES POINT OF NO MOVEMENT



CAMBER DIAGRAM

NO SCALE

Does not include allowance for falsework settlement

PRESTRESSING NOTES

270 KSI low Relaxation Strand:

P_{jack} = 7000 kips

Anchor Set = ⅜ in.

Total Number of Ducts = 11

The final force ratio (larger divided by smaller) between any two ducts shall not exceed exceed the ratio of 10 to 9

Concrete: f'_c = 5.0 ksi @ 28 days

f'_{ci} = 3.5 ksi @ time of stressing

Contractor shall submit elongation calculations based on initial stress at

⊠ = 0.927 times jacking stress.

k = 0.0002 μ = 0.15

One end stressing shall be performed from Abut 1

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-9		**TYPICAL SECTION NO.1**			NA		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

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DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
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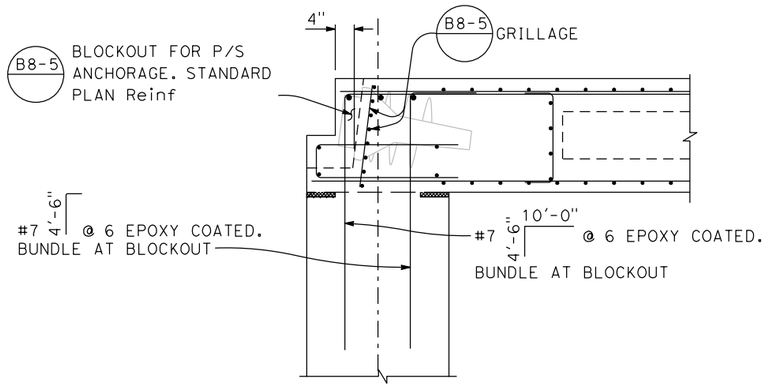
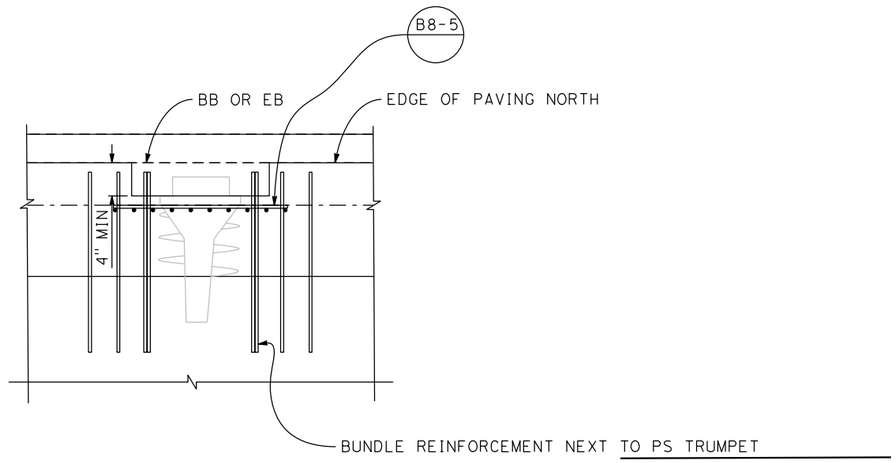
PHONE: (916) 858-0642
FAX: (916) 858-0643

SHEET NO. 25 of 28

PROJECT NAME:

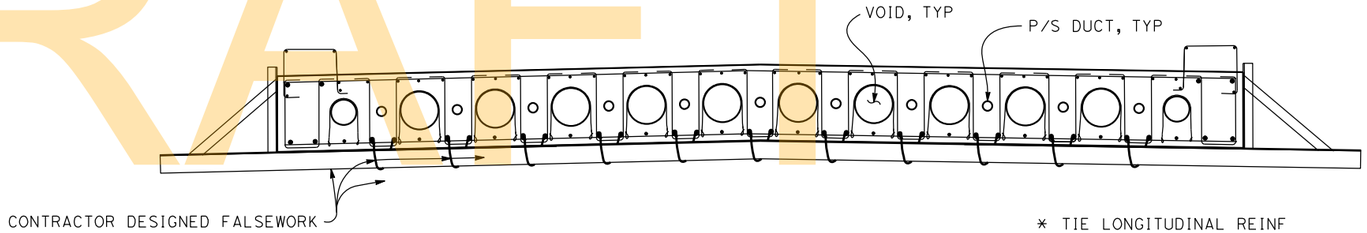
EXHIBIT H





PRESTRESS ANCHORAGE DETAIL

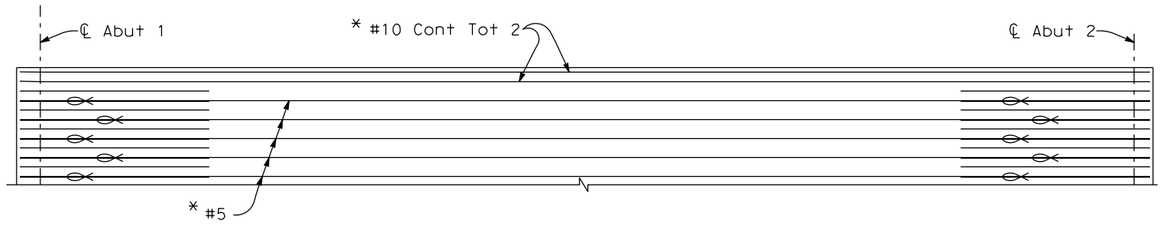
¾" = 1'-0"



VOID HOLD DOWN DETAIL

½" = 1'-0"

* TIE LONGITUDINAL REINF DOWN TO FALSEWORK TO PREVENT VOIDS FROM LIFTING REINFORCEMENT



TOP SLAB REINFORCEMENT

¼" = 1'-0"

PROJECT NAME:

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	×	×
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-10		**TYPICAL SECTION NO.2**			*NA*		

REGISTERED PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
1810 EAST HAZELTON AVENUE
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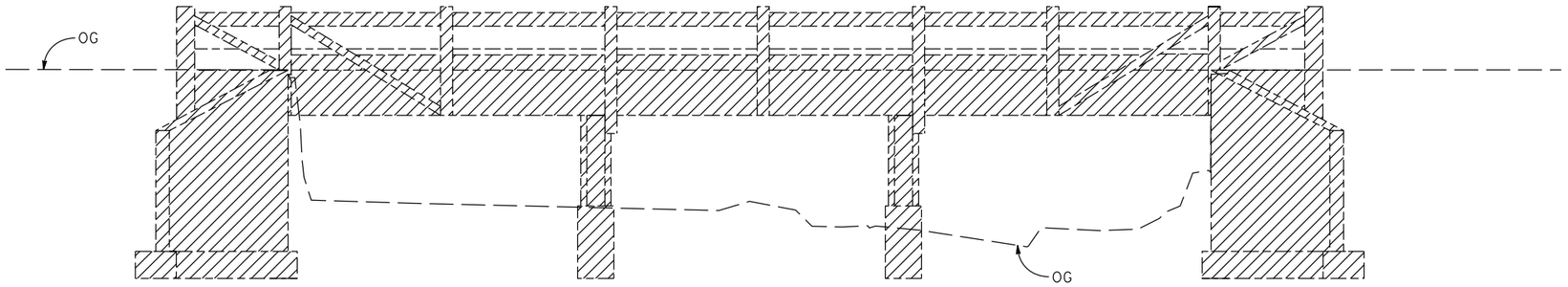
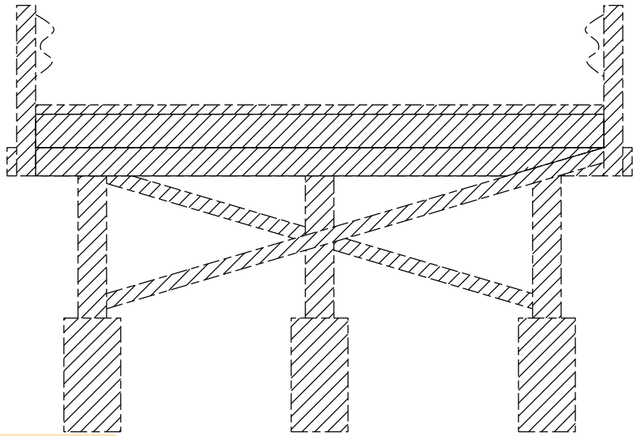
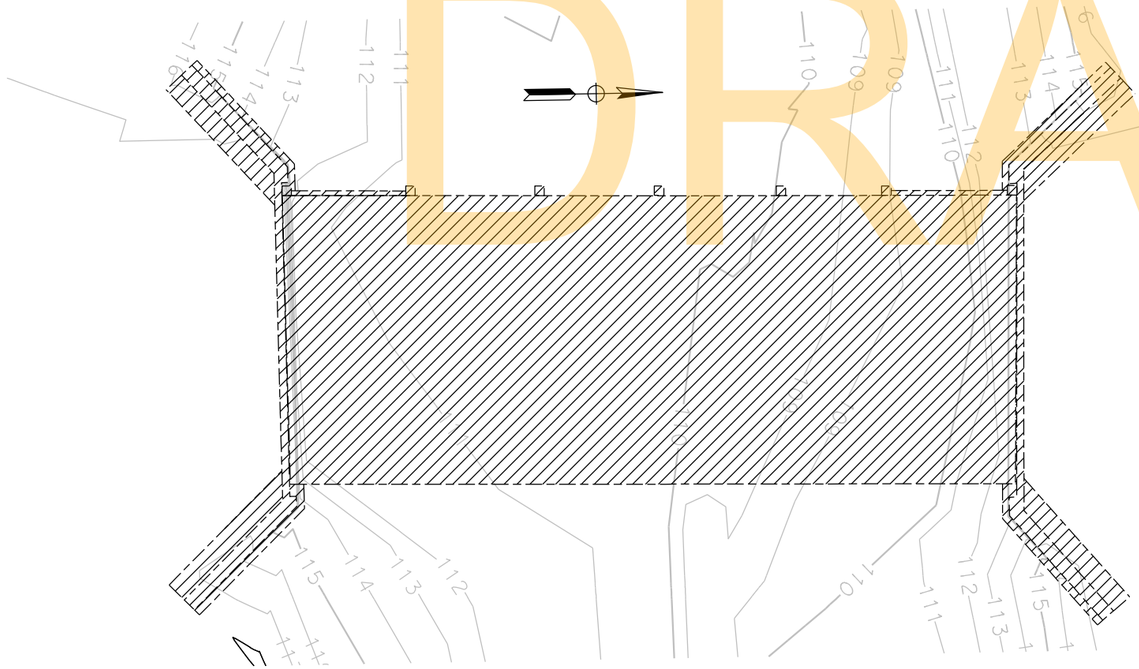
EXHIBIT H



ELEVATION
NO SCALE



TYPICAL SECTION
NO SCALE



PLAN
NO SCALE

LEGEND:

Denotes bridge removal

Denotes existing structure

PROJECT ENGINEER	DATE		CHECKED	DATE	SUBMITTED	DATE	APPROVED	DATE
Rob Burns	1/31/20		J. Nottnagel	1/31/20	95% Submittal	1/31/20	x	x
DRAWER	SHEET NO.		SHEET NAME			SCALE		
Michael Hendry	S-11		**BRIDGE REMOVAL PLAN**			NA		

PROFESSIONAL ENGINEER — R. E. Burns — No. 6289 — Exp. 3-31-20 — STRUCTURAL — STATE OF CALIFORNIA

95% PLANS

Rob Burns

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS BRIDGE DIVISION
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PHONE: (916) 858-0642
FAX: (916) 858-0643

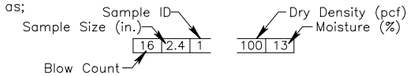
SHEET NO.
27 of 28

PROJECT NAME:

EXHIBIT H

NOTES:

1. Field classification of soils was in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual 2010.
2. Legends sheets are not included in plan set. See Caltrans Standard Plans, 2010 Edition, sheets A10F, A10G (soil legends), and A10H (rock legend). Sample Moisture and Dry Density are shown on the boring logs as;



3. Standard Penetration tests were performed in accordance with ASTM D 1586 using an automated drop system. Drill rods were 1 5/8–inch diameter "A"–rods; sampler was driven with brass liners.
4. Where indicated by an asterisk (*) the number of blows shown is for only that fraction of the initial 0.5 ft. "seating drive" interval penetrated.
5. If laboratory tests are not shown as being performed, the soil descriptions presented in the LOTB are based solely on the visual practices described in the before mentioned Manuals.
6. The length of each sampled interval is shown graphically on the boring log.
7. Consistency of soils shown in ( ) where estimated.
8. Groundwater surface (GWS) reflect the fluid level in the borings on the specified date. Groundwater surface is subject to seasonal fluctuations and may occur at higher or lower elevations depending on the conditions at any particular time.
9. Boring elevations are assumed.
11. The "Log of Test Borings" drawing is included with plans in accordance with Section 2–1.06B of Caltrans "Standard Specifications", 2010.

BENCHMARKS

BENCHMARK# MH–230 ELEV. XX.XX NAVD XX
DESCRIPTION: X, NORTHING XX, EASTING XX.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	SJ	C.R.	X.X/X.X		

REGISTERED ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

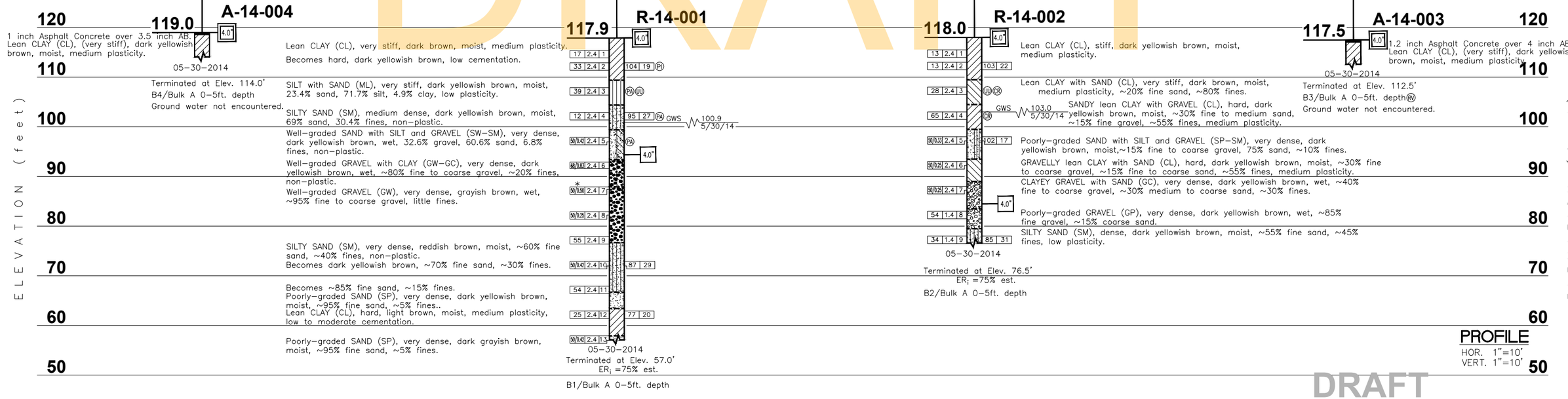
REGISTERED PROFESSIONAL ENGINEER — David J. Morrell — No. 60578 — Exp. 12/31/14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

BLACKBURN CONSULTING
2491 BOATMAN AVENUE
WEST SACRAMENTO, CA 95691 FILE No. 2510.x 002

MARK THOMAS & COMPANY, INC.
7300 FOLSOM BLVD., SUITE 203
SACRAMENTO, CA 95826

PLAN
1" = 10'



PROFILE
HOR. 1"=10'
VERT. 1"=10'

X DESIGN OVERSIGHT	DRAWN BY	M. ROBERTSON	K. A. CHAPMAN FIELD INVESTIGATION BY:	PREPARED FOR THE COUNTY OF SAN JOAQUIN DEPARTMENT OF PUBLIC WORKS	X PROJECT ENGINEER
XX/XX/XX SIGN OFF DATE	CHECKED BY	D. MORRELL	DATE: MAY 2014		

BRIDGE NO. XXC–XXXX
POST MILE XX.X

BUCKMAN ROAD BRIDGE AT DUCK CREEK

LOG OF TEST BORINGS

GS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: X
PROJECT NUMBER & PHASE: X
CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
XX/XX/XX				28	28

FILE => $REQUEST

8/20/2014 2510.x 002 Buckman Rd Bridge at Duck Crk LOTB.dwg
USERNAME => $USER DATE PLOTTED => $DATE TIME PLOTTED => $TIME

EXHIBIT H

SET NO. _____

SAN JOAQUIN COUNTY
DEPARTMENT OF PUBLIC WORKS

BOOK 2 of 3

NOTICE TO BIDDERS AND SPECIAL PROVISIONS

FOR

COUNTY CONTRACT NO. XXXXXX

BUCKMAN ROAD BRIDGE REPLACEMENT PROJECT
FEDERAL-AID PROJECT NO. BRLO-5929(245)

For use in Connection with Standard Specifications and Standard Plans Dated 2018 of the California Department of Transportation, and the Labor Surcharge and Equipment Rental Rates In effect on the date the work is accomplished.

June 11, 2021

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SAN JOAQUIN COUNTY
Buckman Road Bridge Replacement Project

The various portions of the Contract Documents have been prepared under the direction of the following licensed Civil Engineers, in accordance with California Business and Professions Code §6735.

ROADWAY AND STRUCTURE

_____

Registered Civil Engineer Date

SAN JOAQUIN COUNTY

Buckman Road Bridge Replacement Project

Table of Contents

STANDARD PLANS LIST

The standard plan sheets applicable to this Contract include those listed below. The applicable revised standard plans (RSPs) listed below are included in the project plans.

ABBREVIATIONS, LINES, SYMBOLS, AND LEGEND

A3A	**Abbreviations (Sheet 1 of 3)**
A3B	**Abbreviations (Sheet 2 of 3)**
A3C	**Abbreviations (Sheet 3 of 3)**
A10A	**Legend - Lines and Symbols (Sheet 1 of 5)**
A10B	**Legend - Lines and Symbols (Sheet 2 of 5)**
A10C	**Legend - Lines and Symbols (Sheet 3 of 5)**
A10D	**Legend - Lines and Symbols (Sheet 4 of 5)**
A10E	**Legend - Lines and Symbols (Sheet 5 of 5)**
A10F	**Legend - Soil (Sheet 1 of 2)**
A10G	**Legend - Soil (Sheet 2 of 2)**
A10H	**Legend - Rock**

PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS

A20A	**Pavement Markers and Traffic Lines - Typical Details**
RSP A20B	**Pavement Markers and Traffic Lines - Typical Details**

EXCAVATION AND BACKFILL

A62A	**Excavation and Backfill - Miscellaneous Details**
A62B	**Limits of Payment for Excavation and Backfill - Bridge Surcharge and Wall**
A62C	**Limits of Payment for Excavation and Backfill - Bridge**

OBJECT MARKERS, DELINEATORS, CHANNELIZERS, AND BARRICADES

A73C	**Delineators, Channelizers and Barricades**

MIDWEST GUARDRAIL SYSTEM - CONNECTION DETAILS AND TRANSITION RAILING TO BRIDGE RAILINGS, ABUTMENTS AND WALLS

RSP A77U4	**Midwest Guardrail System - Transition Railing (Type WB-31)**

TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN

T3A	**Temporary Railing (Type K)**
T3B	**Temporary Railing (Type K)**

TEMPORARY WATER POLLUTION CONTROL

T56	**Temporary Water Pollution Control Details (Temporary Fiber Roll)**
T58	**Temporary Water Pollution Control Details (Temporary Construction Entrance)**
T59	**Temporary Water Pollution Control Details (Temporary Concrete Washout Facility)**
T65	**Temporary Water Pollution Control Details (Temporary High-Visibility Fence)**

BRIDGE DETAILS

RSP B0-1	**Bridge Details**
B0-3	**Bridge Details**
B0-5	**Bridge Details**

PILES

RSP B2-8	**Pile Details - Class 200**

JOINT SEALS

B6-21	**Joint Seals (Maximum Movement Rating = 2")**

CAST-IN-PLACE POST-TENSIONED GIRDER

B8-5	**Cast-In-Place Post-Tensioned Girder Details**

CHAIN LINK RAILING, CABLE RAILING AND TUBULAR HAND RAILING

RSP B11-47	**Cable Railing**

ADDITIONAL BRIDGE CONCRETE BARRIERS

RSP B11-79	**Concrete Barrier Type 836 Details No. 1**
RSP B11-80	**Concrete Barrier Type 836 Details No. 2**

ROADSIDE SIGNS

RS1	**Roadside Signs - Typical Installation Details No. 1**
RS2	**Roadside Signs - Wood Post - Typical Installation Details No. 2**

BID ITEM LIST- CONTRACT NO. XXXXXX
BUCKMAN ROAD BRIDGE REPLACEMENT *FEDERAL-AID PROJECT NO. BRLO-5929(245)*
(Not to be used for bidding purposes)

ITEM NO.	ITEM CODE	P-F	ITEM	UNIT OF MEASURE	ESTIMATED QUANTITY
1	050000		CONSTRUCTION SURVEY	LS	1
2	070030		LEAD COMPLIANCE PLAN	LS	1
3	090020		MOBILIZATION	LS	1
4	120090		CONSTRUCTION AREA SIGNS	LS	1
5	120100		TRAFFIC CONTROL SYSTEM	LS	1
6	128652		PORTABLE CHANGEABLE MESSAGE SIGN	EA	2
7	130305		WATER POLLUTION CONTROL	LS	1
8	131201		TEMPORARY CREEK DIVERSION SYSTEM	LS	1
9	170103		CLEARING AND GRUBBING	LS	1
10	170200		REMOVE TREE	EA	24
11	190101		ROADWAY EXCAVATION	CY	230
12	192020	F	STRUCTURE EXCAVATION (TYPE D)	CY	160
13	193003	F	STRUCTURE BACKFILL (BRIDGE)	CY	164
14	198010		IMPORTED BORROW	CY	970
15	198050		EMBANKMENT	CY	1,200
16	210430		HYDROSEED	SQFT	13,300
17	260203		CLASS 2 AGGREGATE BASE (CY)	CY	500
18	390132		HOT MIX ASPHALT (TYPE A)	TON	250
19	39304		GEOSYNTHETIC PAVEMENT INTERLAYER (PAVING FABRIC)	SQYD	90
20	398200		COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	89
21	490782		FURNISH PILING (CLASS 200) (ALTERNATIVE W)	LF	540
22	490783		DRIVE PILE (CLASS 200) (ALTERNATIVE W)	EA	12
23	500001		PRESTRESSING CAST-IN-PLACE CONCRETE	LS	1
24	510053	F	STRUCTURAL CONCRETE, BRIDGE	CY	91
25	510054	F	STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	CY	126
26	519081		JOINT SEAL (MR 1/2")	LF	51
27	520102	F	BAR REINFORCING STEEL (BRIDGE)	LB	42,000
28	600097		BRIDGE REMOVAL	LS	1
29	665012		12" CORRUGATED STEEL PIPE (.079" THICK)	LF	70
30	723070		ROCK SLOPE PROTECTION (150 lb, Class III, METHOD B) (CY)	CY	310
31	729011		ROCK SLOPE PROTECTION FABRIC (CLASS 8)	SQYD	520
32	782200		OBLITERATE SURFACING	SQYD	3,060
33	810230		PAVEMENT MARKER (RETROREFLECTIVE)	EA	82
34	839521	F	CABLE RAILING	LF	44
35	839543		TRANSITION RAILING (TYPE WB-31)	EA	4

EXHIBIT H

ITEM NO.	ITEM CODE	P-F	ITEM	UNIT OF MEASURE	ESTIMATED QUANTITY
36	839584		ALTERNATIVE IN-LINE TERMINAL SYSTEM	EA	4
37	394090		CONCRETE BARRIER (TYPE 836)	LF	120
38	394074		4" TWO-COMPONENT PAINT TRAFFIC STRIPE	LF	1,968
39	393004		4" TWO-COMPONENT PAINT TRAFFIC STRIPE (BROKEN 17-7)	LF	984

BID PRICE $ _____

(ITEMS 1-39)

COMPANY NAME _____

Notes:: LS = Lump Sum
SQFT = Square Feet
SQYD = Square Yard
LF = Linear Feet
EA= Each
LB = Pounds
TON = Tons
CY = Cubic Yard

ORGANIZATION

Special provisions are under headings that correspond with the main-section headings of the *Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *Standard Specifications*.

Each special provision begins with a revision clause that describes or introduces a revision to the *Standard Specifications* as revised by any revised standard specification.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the *Standard Specifications* for any other reference to a paragraph of the *Standard Specifications*.

^^

DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to section 1-1.05:

Whenever in the Standard Specifications, Special Provisions, Notice to Contractor, Proposal, Contract, or other contract documents the following terms are used, the intent and meaning will be interpreted as follows:

State	San Joaquin County
Department	San Joaquin County Department of Public Works
Director	Board of Supervisors, San Joaquin County
Engineer	The Director of Public Works/ San Joaquin County, acting either directly or through properly authorized agent or consultants.
District	San Joaquin County Department of Public Works

Wherever in these documents the words "County" or "Agency" appear, it shall be understood to refer to and indicate the San Joaquin County, a general law county, existing under and by virtue of the laws of the State of California.

Add to section 1-1.07:

Board, Council, and Agency: The officer or body constituting the awarding authority of the agency.

^^

2 BIDDING

Add between the 1st and 2nd paragraphs of section 2-1.06B:

The Department makes the following supplemental project information available:

Supplemental Project Information

Means	Description
Included in the *Information Handout*	Foundation Reports and As Builts Cooperative Agreement Between The County Of San Joaquin and the South San Joaquin Irrigation District for the Buckman Road Bridge Replacement Project
Available as specified in the *Standard Specifications*	Cross Sections
Included with the project plans	Log of Test Borings

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5 CONTROL OF WORK

Replace all four paragraphs of section 5-1.26 with:

You are responsible for all construction surveys. Place stakes and marks under Chapter 12, "Construction Surveys," of the Caltrans *Surveys Manual*.

^^

6 CONTROL OF MATERIALS

Add to section 6-1.03 of the RSS:

6-1.03B Submittals

6-1.03B(1) General

Not Used

6-1.03B(2) Work Plan

For local material, such as rock, gravel, earth, structure backfill, pervious backfill, imported borrow, and culvert bedding, obtained from a (1) noncommercial source, or (2) source not regulated under California jurisdiction, submit a local material plan for each material at least 60 days before placing the material. The local material plan must include:

1. Certification signed by you and an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

   I am aware local material from a noncommercial source or a source not regulated under CA jurisdiction must be sampled and analyzed for pH and lead and may require sampling and analysis under section 6-1.03B(3) for other constituents of concern based on the land use history. I am aware that local material sources must not contain ADL at concentrations greater than 80 mg/kg total lead or equal to or greater than 5 mg/L soluble lead as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II. I am aware that a maximum quantity of material may be excavated at the site based on the minimum number of samples taken before excavating at the site under section 6-1.03B(3).

2. Land use history of the local material location and surrounding property
3. Sampling protocol
4. Number of samples per volume of local material
5. QA and QC requirements and procedures
6. Qualifications of sampling personnel
7. Stockpile history
8. Name and address of the analytical laboratory that will perform the chemical analyses
9. Analyses that will be performed for lead and pH
10. Other analyses that will be performed for possible hazardous constituents based on:
    10.1. Source property history
    10.2. Land use adjacent to source property
    10.3. Constituents of concern in the ground water basin where the job site is located

The plan must be sealed and signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State.

If the plan requires revisions, the Engineer provides comments. Submit a revised plan within 7 days of receiving comments. Allow 7 days for the review.

6-1.03B(3) Analytical Test Results

At least 15 days before placing local material, submit analytical test results for each local material obtained from a noncommercial source or a source not regulated under CA jurisdiction. The analytical test results must include:

1. Certification signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

   > The analytical testing described in the local material plan has been performed. I performed a statistical analysis of the test results using the US EPA's ProUCL software with the applicable 95 percent upper confidence limit. I certify that the material from the local material source is suitable for unrestricted use at the job site, it has a pH above 5.0, does not contain soluble lead in concentrations equal to or greater than 5mg/l as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II, does not contain lead in concentrations above 80 mg/kg total lead, is free from all other contaminants identified in the local material plan, and will comply with the job site's basin plan and water quality objectives of the RWQCB.

2. Chain of custody of samples
3. Analytical results no older than 1 year
4. Statistical analysis of the data using US EPA’s ProUCL software with a 95 percent upper confidence limit
5. Comparison of sample results to hazardous waste concentration thresholds and the RWQCB's basin plan requirements and water quality objectives for the job site location

6-1.03B(4) Sample and Analysis

Sample and analyze local material from a (1) noncommercial source or (2) source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at the (1) noncommercial material source or (2) a source not regulated under CA jurisdiction, collect the minimum number of samples and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000-40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Analyze the samples using the US EPA's ProUCL software with a 95 percent upper confidence limit. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is free of possible contaminants identified in the local material plan
5. Complies with the RWQCB's basin plan for the job site location
6 Complies with the RWQCB's water quality objectives for the job site location

6-1.03C Local Material Management

Do not place local material until authorized.

If the Engineer determines the appearance, odor, or texture of any delivered local material suggests possible contamination, sample and analyze the material. The sampling and analysis is change order work unless (1) hazardous waste is discovered or (2) the analytical test results indicate the material does not comply with section 6-1.03B(3).

Dispose of noncompliant local material at an appropriately permitted CA Class I, CA Class II or CA Class III facility. You are the generator of noncompliant local material.

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Replace Section 7-1.02K(6)(j)(iii) of the RSS for Section 7-1.02K(6)(j)(iii) with:

7-1.02K(6)(j)(iii) Unregulated Earth Material Containing Lead

Section 7-1.02K(6)(j)(iii) includes specifications for handling, removing, and disposing of unregulated earth material containing lead. Management of this material exposes workers to health hazards that must be addressed in your lead compliance plan. This material contains average lead concentrations below 80 mg/kg total lead and below 5 mg/L soluble lead and is not regulated by DTSC as a hazardous substance or a hazardous waste. This material does not require disposal at a permitted landfill or solid waste disposal facility. The RWQCB has jurisdiction over reuse of this material at locations outside the job site limits.

Manage regulated earth material containing lead under sections 14-11.08 and 14-11.09.

Unregulated earth material containing lead is present on the job site at the following locations:

Location	Element of work	Depth

Unregulated earth material exists throughout the job site.

Lead is typically found within the top 2 feet of material within the highway. Reuse all of the excavated material on the right-of-way. Haul and place the surplus excavated material on the right-of-way at _____.

Unregulated earth material containing lead has been detected to a depth of ___within the job site. Unregulated levels of lead found range from less than ___ to ___ mg/kg total lead with an average concentration of ___ mg/kg total lead as analyzed by EPA test method 6010 or EPA test method 7000 series and based upon a 95 percent upper confidence limit. Unregulated levels of lead on the job site have a predicted average soluble concentration of ___ mg/L as analyzed by the California Waste Extraction Test and based upon a 95 percent upper confidence limit.

Handle the material under all applicable laws, rules, and regulations, including those of the following agencies:

1. Cal/OSHA
2. CA RWQCB, Region_____
3. _____
4. _____

Manage the material as shown in the following table.

Earth Material Management

Location	Depth	Management requirements

If unregulated material is disposed of:

1. Submit at least 15 days before disposal, the form titled "Agreement between a Contractor Working on State Facilities and a Real Property Owner for Disposing Construction-related Material Suitable for Use on Residential Zoned Property" which discloses the lead concentration of the material to the receiving property owner and obtains authorization for disposal on the property. Give a copy of the signed form to the property owner.
2. You are responsible for any additional sampling and analysis required by the receiving property owner.

If you choose to dispose of unregulated material at a commercial landfill:

1. Transport it to a Class III or Class II landfill appropriately permitted to receive the material
2. You are responsible for identifying the appropriately permitted landfill to receive the material and for all associated trucking and disposal costs, including any additional sampling and analysis required by the receiving landfill

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8 PROSECUTION AND PROGRESS

Add to the end of section 8-1.10C:

Damages for untimely completion of work by the specified date is your responsibility. No additional compensation will be made for work suspension to the next work season.

Liquidated damages for failure to restore the canal and suspend in-water work by the specified date are $15,000 per day, for each day needed to complete a work part in excess of the specified completion date for the work part.

^^^
^^^

DIVISION II GENERAL CONSTRUCTION

10 GENERAL

Replace *Reserved* in section 10-1.03 with:

You may work within channel banks only from October 31 to February 28 of any year.

Restore the channel and banks prior to March 15.

In-water work includes area from bank to bank. If in-water work will not be completed prior to March 15, submit a plan to suspend ongoing work within the banks.

The Engineer may request the written plan if, at the sole discretion of the Engineer, he assesses in-water-work will not be completed by March 15th. The plan must be submitted no later than February 14th.

The plan must contain the following information:

1) Description of work which will be performed to restore the canal;
2) Description of the extent of contract work already completed and which will be completed prior to March 15th;
3) Detailed information of the contract activities that remain to be completed after March 15th;
4) Photographs of both the current work completed and the proposed site for continued work.

No in-water work of any kind may be performed between March 15 and October 31 without prior approval from the South San Joaquin Irrigation District and the Engineer. Uncompleted work will be suspended until the following October 31.

The Contractor's attention is directed to Section 8-1.10C Failure to Complete Work Parts by Specified Dates.

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12 TEMPORARY TRAFFIC CONTROL

12-1 GENERAL

12-1.01 GENERAL, add:

Submit a construction area Traffic Control Plan, for approval by the Engineer, at least 10 working days prior to start of work.

12-1.04 PAYMENT, add:

Payment for transportation of flaggers is limited to transportation necessary within the job site.

When you and the Engineer mutually agree that a pilot car is warranted for public safety and convenience, the cost of furnishing and operating the pilot car must be considered as part of the flagging costs, equally shared by you and the Department.

Hourly wage rates, that are to be equally shared by you and the Department, are limited to the governing California Prevailing Wage or Federal Minimum Wage rates.

12-3 TEMPORARY TRAFFIC CONTROL DEVICES

12-3.11 CONSTRUCTION AREA SIGNS

12.3.11A General

12-3.11A(1) Summary, replace paragraph 1 with:

Section 12-3.11 includes specifications for placing, installing, maintaining, and removing construction area signs.

Unless otherwise described, advance warning and detour signs (when applicable) outside of the construction zone will be furnished, installed, and maintained by County forces. Applicable Advanced Warning Signs and/or Detour Plan will either be available in the appendix of these Project specifications or as supplemental information on www.bidexpress.com.

2-3.11B Materials

12-3.11B(5) General Information Signs, replace "Reserved" with:

When the plans indicate that construction funding identification or other general information signs are to be installed by County forces, you must maintain and relocate said signs as necessary, or as directed by the Engineer.

After project completion, salvage the signs and deliver them to the Department's Corporation Yard located at 1810 East Hazelton Avenue, Stockton, California. Contact Public Works' Dispatch at (209) 468-3074 to make arrangements to have County personnel receive the salvaged materials.

12-3.11D Payment, replace "Not Used" with:

Full compensation for maintaining, relocating, salvaging, and delivering signs, Type III Barricades and Temporary Railing (Type K) will be considered as included in the **Traffic Control System** bid item and no separate payment will be made therefor.

12-3.32 PORTABLE CHANGEABLE MESSAGE SIGNS

12-3.32A(1) Summary, replace paragraph 1 with:

Section 12-3.32 is applicable when the contract includes a bid item for portable changeable message signs. Said section includes specifications for placing, maintaining, and removing portable changeable message signs.

12-3.32C Construction, add between paragraphs 10 and 11:

Display portable changeable message signs 7 calendar days prior to commencement of work. Traffic Control Plan must indicate the proposed locations of advanced warning portable changeable message signs.

12-3.32D Payment, replace "Not Used" with:

Payment quantity for **Portable Changeable Message Sign** is measured by the unit from actual count.

12-4 MAINTAINING TRAFFIC

12-4.01 GENERAL

12-4.01C Construction, replace paragraph 1 with "Not Used."

12-4.02 TRAFFIC CONTROL SYSTEMS

12-4.02A(1) Summary, replace paragraph 1 with:

Section 12-4.02 includes specifications for providing traffic control systems to close traffic lanes with stationary and moving lane closures.

12-4.02A(3)(d) Traffic Break Schedule, delete.

12-4.02C(2) Lane Closure System

12-4.02C(2)(a) General, delete.

12-4.02C(3) Closure Requirements and Charts

12-4.02C(3)(a) General, replace section with "Reserved."

Replace *Reserved* in section 12-4.02C(3)(d) with:

Do not the close the road until needed to remove the existing bridge and construct the new bridge.

Revise **Section 12-4.02C(3)(k)** title to **"Conventional Highway Lane Requirements,"** and add**:**

Unless otherwise described, a minimum of 1 paved traffic lane, not less than 10 feet in width, must be open for use by public traffic at all times. When construction operations are not actively in progress, not less than 2 such lanes must be open to public traffic.

Only streets receiving an application of slurry seal are allowed to be closed to traffic for a maximum of four hours. To avoid inconveniencing an entire area, streets to be slurry sealed must not be closed simultaneously.

On roadways with 2 or more traffic lanes in each direction, conduct traffic operations with at least 1 paved traffic lane open in each direction at all times.

Under one-way reversing traffic control operations, you may stop traffic in one direction for periods not to exceed 10 minutes. After each stoppage, all accumulated traffic for that direction must pass through the work zone before another stoppage is made.

Revise **Section 12-4.02C(3)(m)** title to **"Road Closure Requirements,"** and add:

When road closure is indicated on the plans, divert through traffic around the project. Unless specific restrictions are indicated on the plans, or elsewhere within these special provisions, local traffic must be permitted to pass through construction operations at all times with as little inconvenience and delay as possible.

12-4.02C(7) Traffic Control System Requirements

12-4.02C(7)(a) General, replace paragraph 1 with:

When placing traffic stripes and pavement markers, control traffic with stationary or moving lane closures. During other activities, control traffic using stationary lane closures.

12-4.02C(7)(b) Stationary Closures, add after paragraph 2:

For traffic under one-way control on unpaved areas, the cones shown along the centerline need not be placed.

If the pilot car is used for traffic control, the cones shown along the centerline need not be placed. The pilot car must have radio contact with personnel in the work area. Operate the pilot car through the traffic control zone at a speed not greater than 25 miles per hour.

12-4.02D Payment, replace section with:

Traffic Control System, other than work considered as flagging costs, is paid for at the contract lump sum price.

The requirements in section 4-1.05, "Changes and Extra Work," for payment adjustment do not apply to Traffic Control System. Adjustments in compensation for Traffic Control System will be made for an increase or decrease in traffic control work if ordered and will be made on the basis of the cost of the necessary increased or decreased traffic control. The adjustment will be made on a force account basis for increased work and estimated on the same basis in the case of decreased work.

A traffic control system required by change order work is paid for as a part of the change order work.

12-6 TEMPORARY PAVEMENT DELINEATION

12-6.01 GENERAL, replace paragraph 1 with:

Section 12-6 includes specifications for placing, applying, maintaining, and removing temporary pavement delineation.

12-6.03 CONSTRUCTION

12-6.03A General, replace sentence 2 of paragraph 1 with:

Temporary pavement delineation must consist of a lane line, centerline, and pavement markings for traveled ways open to traffic.

12-6.03B Temporary Lane Line and Centerline Delineation, add between paragraphs 2 and 3:

Cement the markers to the surfacing with the adhesive recommended by the manufacturer, except do not use epoxy adhesive to place pavement markers in areas where removal of the markers will be required.

Temporary lane line delineation placed on portland cement concrete pavement must consist of a white traffic stripe supplemented by a black-contrast traffic stripe and clear retroreflective pavement markers. Place the temporary lane line and clear retroreflective pavement markers longitudinally at intervals not exceeding 48 feet. The black contrast stripe and clear retroreflective pavement markers may remain in place at locations where you will be placing permanent pavement delineation.

12-6.03C Temporary Edge Line Delineation, replace lines 1.1 and 2.1 of paragraph 1 with:

1.1 Solid traffic stripe tape of the same color and detail as the stripe being replaced

2.1 Solid traffic stripe tape of the same color and detail as the stripe being replaced

12-6.03C Temporary Edge Line Delineation, replace paragraph 2 with:

You may apply temporary traffic stripe paint of the same color as the stripe being replaced instead of solid temporary traffic stripe tape where the removal of the temporary traffic stripe is not required.

12-6.03C Temporary Edge Line Delineation, add to start of paragraph 4:

Channelizers used for temporary edge line delineation must be one of the 36-inch, orange surface-mounted types, and on the Authorized Material List.

12-6.03D Temporary Traffic Stripe, Pavement Marking, and Pavement Markers

12-6.03D(1) General, replace “Reserved” with:

If pavement markings are obliterated and temporary pavement delineation to replace the markings is not shown, apply temporary pavement markings prior to opening traveled ways to traffic.

12-6.03D(4) Temporary Pavement Marking Tape, add to end of paragraph 1:

Temporary pavement marking tape must be the same color and dimensions as the pavement marking detail being replaced, or as superseded by a subsequent traffic pattern or new striping detail.

12-6.03D(5) Temporary Pavement Marking Paint, add to end of paragraph 1:

Temporary pavement marking paint must be the same color and dimensions as the pavement marking detail being replaced, or as superseded by a subsequent traffic pattern or new striping detail.

12-6.04 PAYMENT, add between paragraphs 1 and 2:

In Section 84, "Markings," references made to 6-inch stripe must be revised to 4-inch stripe unless otherwise indicated on the plans. Application rates defined for materials placed per linear foot under Section 84 must be revised based on the width of the striping and marking as defined on the project plans.

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13 WATER POLLUTION CONTROL

13-1 GENERAL

13-1.01 GENERAL

13-1.01A Summary, add:

This project is anticipated to disturb **between 1 and 5 acres** of soil.

13-1.01B Definitions, add:

Department: When used in reference to manuals and General Permits, Department must mean San Joaquin County Department of Public Works.

13-3 STORMWATER POLLUTION PREVENTION PLAN

Add to the end of section 13-3.01A:

This project's risk level is 2.

13-3.01C Submittals

13-3.01C(2)(a) General, replace paragraph 1 with:

Within 7 days of Contract approval:

1. Submit 3 copies of your SWPPP for review. You may assign a QSD other than the WPC manager to develop the SWPPP. Allow 5 days for the Department's review. The Engineer provides comments and specifies the date when the review stopped if revisions are required.
2. Change and resubmit a revised SWPPP within 5 days of receiving the Engineer's comments. The Department's review resumes when a complete SWPPP has been resubmitted.
3. When the Engineer authorizes the SWPPP, submit an electronic copy and 4 printed copies of the authorized SWPPP.
4. If the RWQCB requires review of the authorized SWPPP, the Engineer submits the authorized SWPPP to the RWQCB for its review and comments.
5. If the Engineer requests changes to the SWPPP based on the RWQCB's comments, amend the SWPPP within 5 days.

Upon approval of SWPPP by Engineer, Contractor must submit Permit Registration Documents (PRDs) on the State's online "SMARTS" system for any project that will disturb one acre or more of earth, or any projects that involve a smaller disturbance, but is part of a larger project plan. The Contractor must register with the State as a data submitter and must submit online the required PRDs including: the online NOI form; risk level determination information; a Storm Water Pollution Prevention Plan (SWPPP); a site map; and a vicinity map. The County will be the Legally Responsible Person (LRP) and will establish an LRP-account and certify the PRD submittals once they have been uploaded by the Contractor.

Contractor must provide payment of fees. Fees are calculated per acre of disturbed area as determined by the SWRCB. The SWPPP must comply with the requirements of the Construction General Permit. Further information regarding filing a NOI, calculating fees and preparing a SWPPP can be obtained from the SWRCB. Call the SWRCB at 916-341-5536 and 1-(866)-563-3107 or visit the website at http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml for more information on the General Permit and associated requirements.

13-3.04 Payment, add:

When there are no separate bid items for **Rain Event Action Plan**, **Storm Water Sampling and Analysis Day**, and **Storm Water Annual Report**, payment for said items will be

considered as included in the various items of work involved and no additional payment will be made therefor.

Payment for preparing the PRD and PRD fees must all be considered as included in the contract lump sum price paid for **Prepare Storm Water Pollution Prevention Plan.**

Implementation of said plan must be considered as included in the contract lump sum price paid for **Water Pollution Control**.

For each failure to submit a completed storm water annual report, the Department withholds $10,000. This withhold is in addition to other performance failure withholds.

13-4 JOB SITE MANAGEMENT

13-4.04 Payment, replace "Not Used" with:

Unless there is a separate bid item, **Job Site Management** must be considered as included in the contract lump sum price paid for **Water Pollution Control.**

13-7.03D Payment, replace section with:

Installation, relocation, and maintenance of construction entrances or roadways is borne by the Contractor.

Replace section 13-12 with:

13-12 TEMPORARY CREEK DIVERSION SYSTEMS

13-12.01 GENERAL

13-12.01A Summary

Section 13-12 includes specifications for constructing, maintaining, reconstructing, and removing temporary creek diversion system (TCDS), and restoring creek bed to original condition. The temporary diversion system is used to divert upstream water flows to allow construction in a dry or dewatered location.

13-12.01B Definitions

Not Used

13-12.01C Submittals

Submit a certificate of compliance for:

1.
2.
3.

13-12.01C(1) Temporary Creek Diversion System Plan

Within 20 days of Contract approval, submit 3 copies of the Temporary Creek Diversion System Plan (TCDSP). The TCDSP must include:

1. Installation and removal process, including equipment, platforms for equipment, and access locations.
2. Anticipated flow rates.
3. Calculations supporting the sizing of piping, channels, pumps, or other conveyance by using FHWA HY-8 or other equivalent method. Calculate the discharge water flow rate and velocity anticipated where it discharges on any erodible surface, so its conveyance does not cause erosion within the project or at the discharge to the water body. Temporary culverts attached to banks, walls, or other

locations must be designed to hold the full weight of the culvert at capacity and restrain the culvert for any expected hydraulic forces.
4. Plans showing locations of diversion, including layouts, cross sections, and elevations.
5. Materials proposed for use, including MSDS if applicable.
6. Operation and maintenance procedures for the TCDS.
7. Restoration plans showing before and after conditions, including photos of existing conditions for areas disturbed during the installation, operation, and removal of the TCDS.
8. Monitoring and reporting plan to ensure applicable water quality objectives are met. This includes schedule of work including Temporary BMP implementation as part of the Construction Site BMP strategy, and SWPPP or WPCP as applicable. Use with section 13-3.01A.
9. Details of the pumping system, if used, including power source, debris handling, fish screens, and monitoring requirements.
10. Fish passage plan, following the Caltrans Fish Passage Design for Road Crossings, CA Department of Fish and Wildlife (CDFW), CA Salmonid Stream Habitat Restoration Manual, and National Marine Fisheries Service (NMFS), Guidelines for Salmonid Passage at Stream Crossings, as required by the applicable PLACs.
11 The TCDS design must demonstrate how it will comply with section 13-12.03A, water tightness, and prevent seepage.
12. Contingency plan to remove workers, equipment, materials, fuels, and any other work items that will cause pollution or violation of PLACs during a rain event out of the flow area. Develop the contingency plan for when a 12-inch freeboard cannot be maintained and overtopping of the coffer dams may occur.

If revisions are required, the Engineer notifies you of the date when the review stopped and provides comments. Submit a revised TCDSP within 15 days of receiving the comments. The Department's review resumes when a complete TCDSP has been resubmitted.

Submit an electronic copy on a read-only CD, DVD, or other Engineer-authorized data storage device and 4 printed copies of the authorized TCDSP.

If the RWQCB or other regulatory agency requires review of the authorized TCDSP, the Engineer submits it to the RWQCB for review and comment. If the Engineer orders changes to the TCDSP based on the RWQCB's comments, submit a revised TCDSP within 10 days.

All submittals which include plans, specifications, and calculations must be sealed and signed by a civil engineer registered in the State.

13-12.01D Quality Assurance

Not Used

13-12.02 MATERIALS

13-12.02A Gravel

Gravel must:

1. Be river run gravel obtained from a river or creek bed with gradation of 100 percent passing a 3/4 inch sieve and 0% passing a 3/8 inch sieve
2. Be clean, hard, sound, durable, uniform in quality, and free of any detrimental quantity of soft, thin, elongated or laminated pieces, disintegrated material, organic matter, or other deleterious substances
3. Be composed entirely of particles that have no more than 1 fractured face
4. Have a cleanliness value of at least 85, as determined by California Test 227

13-12.02B Impermeable Plastic Membrane

Impermeable plastic membrane must be:

1. Single ply, commercial quality, polyethylene with a minimum thickness of 10 mils complying with ASTM D2103. You must use stronger plastic membrane if required as part of design to resist hydraulic forces.
2. Free of holes, punctures, tears or other defects that compromise the impermeability of the material.
3. Suitable for use as an impermeable membrane.

4. Resistant to UV light, retaining a minimum grab breaking load of 70 percent after 500 hours under ASTM D4355.

13-12.02C Gravel-Filled Bags

Gravel-filled bags must comply with section 13-5.02G.

The 2nd paragraph of section 13-5.02G does not apply.

13-12.02D Plastic Pipes

Plastic pipe must comply with section 61-3.01 and must:

1. Be clean, uncoated, in good condition free of rust, paint oil dirt or other residues that could potentially contribute to water pollution
2. Be adequately supported for planned loads
3. Use watertight joints under section 61-2.01.
4 Be made of a material or combination of materials that are suitable for clean water and which do not contain banned, hazardous or unlawful substances
5. For temporary pipes not reused on the project you may use the following materials:
   5.1. PVC closed-profile wall pipe must comply with ASTM F1803
   5.2. PVC solid wall pipe must comply with ASTM D3034, ASTM F679, AWWA C900, AWWA C905, or ASTM D2241 and cell class 12454 defined by ASTM D1784
   5.3. HDPE solid wall pipe must comply with AASHTO M 326 and ASTM F714
   5.4. Polyethylene large-diameter-profile wall sewer and drain pipe must comply with ASTM F894

13-12.02E Rock

Rock layer must comply with the table titled *Rock Gradation for 7-inch-thick Layer* in section 72-4.02.

13-12.02F Pumping System

Pumping system must:

1. Comply with section 74-2.02B
2. Be equipped with secondary containment
3. Be free of fuel and oil leaks
4. Meet intake screen regulatory requirements

13-12.02G Seepage Pumping System

If seepage occurs in the dewatered work area, the water must be removed by sump pumps as part of the TCDS.

Seepage pumping system must:

1. Comply with section 74-2.02B
2. Ensure discharge water conform with PLACs or is treated on site
3. Be free of fuel and oil leaks

13-12.02H Discharge Water Energy Dissipation and Erosion Control

Discharge water from pumps, pipes, ditches, or other conveyances must have BMPs to dissipate the flows and velocity of water discharged from the temporary diversion system if erosion would otherwise occur.

Energy dissipation measures:

1. May be plastic sheeting, flared end sections, rubber matting, or other materials appropriate for the design hydraulics
2. Must be anchored to prevent movement by expected flows
3. Must be removed when the TCDS is removed

13-12.03 CONSTRUCTION

13-12.03A General

Construction, use and removal of the TCDS is restricted to the time period from _____to _____. If the work cannot be completed during the initial restricted time period _____, remove TCDS, restore the creek to original flow condition, and reconstruct the TCDS after _____ of the following year. No work is allowed within the stream except during the restricted time period.

Do not use motorized equipment or vehicles in areas of flowing or standing water for the construction or removal of the TCDS in compliance with section 13-4.03.

Remove vegetation to ground level and clear away debris.

Place temporary or permanent fill as allowed by PLACs.

Place rock at outlet of diversion pipe under section 72-4.03, except motorized vehicles and equipment must not be used in areas of flowing or standing water.

Do not construct or reconstruct TCDS if the 72-hour forecasts predict a 50 percent or greater chance of rain in the project area.

Stop allwork and remove all material and equipment from the creek between upstream and downstream cofferdams if the 72-hour forecasts predict a 50 percent or greater chance of rain in the project area and the predicted rainfall is estimated to produce a flow rate exceeding the design capacity of the TCDS.

If the required freeboard cannot be maintained and overtopping may occur, implement contingency plan to remove all workers, equipment, and potential sources of pollution from the dry working area of the creek bed.

The TCDS must be constructed within the temporary impact footprint as described in the environmental commitments.

Lap and join joints between the edges of impermeable plastic membrane with commercial-quality waterproof tape with minimum 4-inch lapping at the edges.

Seal openings or penetrations through the impermeable plastic membrane with commercial quality waterproof tape.

The TCDS must be water tight to keep the work area dry for construction and prevent the creation of pollutants. Maintain all portions of the TCDS and fix leaks as soon as they are discovered.

Contact water agencies that discharge to the construction area to ensure that unexpected water is not discharged during construction which could compromise the TCDS.

13-12.03B Maintenance

Maintain the TCDS to provide a minimum freeboard of 12 inches between the water surface and the impermeable top of the cofferdams.

Do not discharge runoff from existing or proposed drainage systems into the dry work area between the cofferdams. Runoff from these systems may be connected to the diversion pipe or conveyed by pipes downstream of the cofferdam.

Prevent leaks in the TCDS. Provide seepage pumps as necessary and keep the work area dry to prevent the creation of sediment-laden water.

Repair holes, rips and voids in the impermeable plastic membrane with commercial-quality waterproof tape. Replace impermeable plastic membrane when patches or repairs compromise the impermeability of the material.

Repair TCDS within 24 hours after the damage occurs.

Prevent debris from entering the TCDS and receiving water.

Remove and immediately replace gravel, gravel-filled bags, impermeable plastic membrane, or plastic pipes contaminated by construction activities.

Remove sediment deposits and debris from the TCDS as needed. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water, under sections 19-1.01 and 19-2.03 B.

13-12.03C Removal

When no longer required, remove all components of TCDS. Return the creek bed and banks to the original condition.

Do not excavate the native creek material. Backfill ground disturbance, including holes and depressions caused by the installation and removal of the TCDS with gravel. Maintain the original line and grade of the creek bed.

13-12.04 PAYMENT

Not Used

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14 ENVIRONMENTAL STEWARDSHIP

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DIVISION III EARTHWORK AND LANDSCAPE

17 GENERAL

17-2 CLEARING AND GRUBBING

17-2.03 CONSTRUCTION

17-2.03A General, replace paragraphs 4 and 5 with:

Prior to applying any surface seals or performing any paving, reconstruction, repairs, and/or shoulder backing operations, clear and grub the entire length of the job site to the limits shown on the plans and as specified in the Standard Specifications and these Special Provisions.

Payment for removal of trees with diameter over 4" at 4-feet above OG.is not included in the payment for Clear and Grub.

Unless otherwise indicated on the plans, orchards, vineyards, and/or other cultivated areas must be protected in place.

17-2.03B Clearing, replace section with:

For roadway areas without existing curb or sidewalk:

1. Clear the area above the ground of all objectionable material including: trees, vines, logs, upturned stumps, downed trees, plants, brush grass, weeds, concrete, masonry, and cold-mix asphalt concrete along edge of pavement.

2. Tree branches extending over the roadway pavement and which hang within 15 feet of the finished grade must be cut off in a workmanship like manner. Cut other branches to give each tree a balanced appearance. Pruning must include removal of deadwood, suckers, and broken and bruised branches 1 inch or larger in diameter. Cut off branches close to the trunk in accordance with section 20-3.01C(2), "Pruning."

3. Trim oversized vegetation/trees that obstruct the visibility of traffic control devices and construction area signs.

For roadway areas with existing curb and/or sidewalk:

1. Clear and grubbing consists of removing objectionable material from curb, gutter, and sidewalks construction areas.

2. Unless otherwise shown on the plans, only trim oversized vegetation/trees that obstruct the visibility of traffic control devices and construction area signs.

3. All shade and ornamental trees behind said existing facilities must be preserved unless otherwise designated on the plans for removal.

4. Plants and lawn must be preserved adjacent to new shoulder construction where natural ground surface and finished grade are compatible, unless otherwise designated on the plans or directed by the Engineer.

Unless otherwise shown on the plans, existing driveway pipe culverts will remain in place.

17-2.03D Disposal of Materials, replace paragraph 1 with:

Unless the contract includes a bid item for Duff as specified in section 21-2.02B, "Duff," dispose (off-site) of objectionable materials resulting from clearing and grubbing activities.

17-2.04 PAYMENT, replace "Not Used" with:

Clearing and Grubbing, as described, is paid for at the contract lump sum price. When existing driveway pipe culverts are shown on the plans to be removed or salvaged, full compensation for the shown work, must be considered as included in the Clearing and Grubbing pay item.

When the contract does not include a separate bid item for clearing and grubbing, clear and grub only what is necessary in order to perform the specified construction operations. Full compensation for said work must be considered as included in the contract prices paid for the various items of work involved.

Replace Section 17-3 *RESERVED* with the following

17-3.01 GENERAL

Section 17-3 includes general specifications for tree removals within the project area.

17-3.02 MATERIALS

Not Used

17-3.03 CONSTRUCTION

Remove trees completely, including stumps and roots, within the county right-of-way lines and as shown on the plans.

17-3.04 PAYMENT

Remove tree is measured and paid for by the each.

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19 EARTHWORK

19-1 GENERAL

19-1.03 CONSTRUCTION

19-1.03C Grade Tolerance, replace with:

The surface of the grading plane must not be more than 0.05 foot above or below the grade established by the Engineer.

Before grade is approved by the Engineer, all earthwork (including driveways and slopes) must be compacted to grade.

19-2 ROADWAY EXCAVATION

19-2.01A GENERAL

19-2.01A Summary, add to end of list in paragraph 1:

5. Breaking up of existing pavement

19-2.04 PAYMENT, add after paragraph 6:

Ditch excavation, as described, is paid for as **Roadway Excavation** unless a separate bid item is shown on the Bid Item List.

19-3 STRUCTURE EXCAVATION AND BACKFILL

Add to the end of section 19-3.01A:

Structure backfill includes constructing the geocomposite drain system. The systems must comply with section 68-7.

19-3.03 CONSTRUCTION

Add to the beginning of section 19-3.03B(1):

For footings at locations with structure excavation (Type D), ground or surface water is expected to be encountered but seal course concrete is not needed.

19-3.03E Structure Backfill

19-3.03E(1) General, replace sentence 3 of paragraph 1 with:

Backfill layers must be at most 0.67 foot thick.

19-3.03E(1) General, replace paragraphs 5 and 6 with:

Ponding and jetting will not be permitted.

19-3.03E(1) General, add between paragraphs 7 and 8:

Compaction and Material Requirements: Unless otherwise shown on the plans, the compaction and material requirements within the limits of structure backfill for pipes and arches must be as follows:

(a) From the bottom of the trench to one-half of the outside diameter of the pipe must be no less than 95 percent relative compaction.

(b) From one-half the outside diameter of the pipe to 3 feet below finish grade must be no less than 85 percent relative compaction. Backfill material must be selected material from structure excavation.

(c) From 3 feet below finish grade to the finish grade of pavement must be no less than 95 percent relative compaction.

(d) From 3 feet below finish grade to the finish grade outside of pavement must be no less than 90 percent relative compaction.

Unless otherwise specified, structure backfill outside of the paved portions of the roadway must be native material selected for its resistance to erosion.

19-3.04 PAYMENT, add:

When the contract does not include a separate bid item for **Structure Excavation or Structure Backfill**, full compensation for performing structure excavation and backfill must be considered as included in the contract prices paid for the various items of work involved.

Add to section 19-3.04:

Structure excavation for footings at locations not shown as structure excavation (Type D) and where ground or surface water is encountered is paid for as structure excavation (bridge).

Pervious backfill material placed within the limits of payment for bridges is paid for as structure backfill (bridge).

19-5 COMPACTION

19-5.03 CONSTRUCTION

19-5.03A General, add between paragraphs 1 and 2:

Relative compaction requirements will be as shown on the plans and/or indicated elsewhere in these Special Provisions. When not shown on the plans and/or not indicated elsewhere in these Special Provisions, compaction requirements will be 95 percent relative compaction.

19-5.03B Relative Compaction (95 Percent), delete item 2 in paragraph 1.

19-5.03C Relative Compaction (90 Percent), delete.

19-6 EMBANKMENT CONSTRUCTION

Add to the end of section 19-6.03A:

If an ordered change increases the quantity of excavation or decreases the quantity of embankment so that surplus excavation has to be disposed of, disposing of the surplus material is change order work.

If an ordered change either increases or decreases the quantity of borrow required to complete the planned embankments:

1. Supplying borrow to the job site is change order work.
2. Increase in embankment that requires an increase in borrow at the bid item price for embankment, as change order work or at the price of $0.50 per cubic yard. Agree with the Engineer on your payment method.
3. Increase in excavation that results in a decrease in borrow at the bid item price for excavation, but you must pay the Department the estimated cost of furnishing the quantity of the decrease in borrow, computed as if the work were performed on a force account basis. The Department deducts from sums due or that may become due you.
4. Department decrease the embankment quantity if there is a decrease in the borrow.

19-6.03C Placing and Compacting, add between paragraphs 3 and 4:

When the existing pavement is to be removed and used as embankment, the surfacing must be broken up into pieces not larger than 4 inches in greatest dimension. All surplus materials not to be salvaged or stockpiled material must be disposed of the right of way.

19-7 BORROW MATERIAL

19-7.02 MATERIALS

Add to section 19-7.02A:

Obtaining imported borrow includes the following:

1. Clearing and grubbing the material site.
2. Selecting material within the source.
3. Screening and wasting from 30 to 60 percent of the finer material.
4. Washing materials so that the imported borrow complies with the sand equivalent requirements.

19-7.02C Imported Borrow, add after paragraph 1:

Imported borrow must have a dry weight of not less than 100 pounds per cubic foot when compacted at 100 percent relative compaction.

Add to section 19-7.02C:

Imported borrow placed within 4 feet of the finished grade must have an R-value of at least 5.

Process the imported borrow to comply with the grading requirements.

- Maximum particle size of 1-inch, with at least 75 percent passing the No. 4 Sieve and at least 20 percent passing the No. 200 Sieve.
- Plasticity Index (ASTM D4318) less than 30.
- Expansive soil (Expansion Index > 50 and Sand Equivalent < 20) shall not be used as fill within 5 feet of abutment backwalls or wing walls.

Strip materials that adversely affect the imported borrow properties.

19-7.04 PAYMENT, add:

When the payment quantity of **Imported Borrow** is measured by weight, the measurement must be determined in accordance with Section 9-1.02D, “Quantities of Aggregate and Other Roadway Materials.”

Furnish the Engineer with weighmaster certified tickets at the point of delivery.

Said tickets must, at a minimum, include:

1. Name of Contractor and Material Producer
2. Project title and County
3. Truck number
4. Date and time of loading;
5. Gross, tare, and net weights; and weighmaster’s signature.

Material not used for construction must be deducted from payment quantities.

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DIVISION IV SUBBASES AND BASES
26 AGGREGATE BASES

26-1.02 MATERIALS

26-1.02A General, replace paragraph 2 with:

Aggregate base must be Class 2 meeting the 3/4-inch maximum aggregate grading.

26-1.04 PAYMENT, add:

Material not used for construction must be deducted from payment quantities.

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DIVISION V SURFACINGS AND PAVEMENTS
39 ASPHALT CONCRETE

39-1 GENERAL

39-1.02 MATERIALS, replace "Not Used" with:

Type of HMA to be produced and placed will be as shown on the plans and/or Bid Item List.

39-2 HOT MIX ASPHALT

39-2.01 GENERAL

39-2.01A(2) Definitions, revise definition of "miscellaneous areas" and add item 8 to said revised definition as follows:

miscellaneous areas: Areas outside and inside the traveled way and shoulders such as:

8. Skin patches on roadway

39-2.01A(3) Submittals

39-2.01A(3)(b) Job Mix Formula

39-2.01A(3)(b)(i) General, delete paragraph 3 and add:.

Submit Job Mix Formula Proposals for HMA mix designs before HMA production at least 10 working days prior to the construction start date.

39-2.01A(3)(c) Quality Control Plan, replace sentence 1 of paragraph 1 with:

QC plans are only required for all types of RHMA.

39-2.01A(4)(i)(ii) In-Place Density, replace section with:

The Engineer tests for Percent of Maximum Theoretical Density using California Test 375 (ASTM D2950 (c)), “Determining the In-Place Density and Relative Compaction of Hot Mix Asphalt Pavement Using Nuclear Gages,” and Maximum Theoretical Density (Rice) using California Test 309, “Method of Test for Determining Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt.” No single density result must represent more than the smaller of 500 tons or one day’s production. Any single density result below 91% or over 97% must be subject to a reduction in pay per the following table:

Reduced Payment Factors for Percent of Maximum Theoretical Density

HMA percent of maximum theoretical density	Reduced payment factor	HMA percent of maximum theoretical density	Reduced payment factor
91.0	0.0000	97.0	0.0000
90.9	0.0125	97.1	0.0125
90.8	0.0250	97.2	0.0250
90.7	0.0375	97.3	0.0375
90.6	0.0500	97.4	0.0500
90.5	0.0625	97.5	0.0625
90.4	0.0750	97.6	0.0750
90.3	0.0875	97.7	0.0875
90.2	0.1000	97.8	0.1000
90.1	0.1125	97.9	0.1125
90.0	0.1250	98.0	0.1250
89.9	0.1375	98.1	0.1375
89.8	0.1500	98.2	0.1500
89.7	0.1625	98.3	0.1625
89.6	0.1750	98.4	0.1750
89.5	0.1875	98.5	0.1875
89.4	0.2000	98.6	0.2000
89.3	0.2125	98.7	0.2125
89.2	0.2250	98.8	0.2250
89.1	0.2375	98.9	0.2375
89.0	0.2500	99.0	0.2500
<89.0	Remove and replace	>99.0	Remove and replace

39-2.01B(3) Asphalt Binder, replace paragraph 2 with:

Unless otherwise shown on the plans, the grade of asphalt binders for Type A HMA and RHMA-G must be PG 64-10 and PG 64-16, respectively.

39-2.01B(9) Geosynthetic Pavement Interlayer, replace paragraph 2 with:

The asphalt binder for geosynthetic pavement interlayer must be PG 70-10.

39-2.01B(10) Tack Coat, replace sentence 2 of paragraph 1 with:

Tack coat must be SS1h.

39-2.01B(11) Miscellaneous Areas and Dikes, replace items 1 and 2 of paragraph 1 with:

1. For miscellaneous areas, use 1/2-inch Type A HMA aggregate gradation and asphalt binder Grade PG-64-10, unless otherwise shown.

2. For dikes, use 3/8-inch Type A HMA aggregate gradation and asphalt binder Grade PG-64-10, unless otherwise shown.

39-2.01C Construction

39-2.01C(2) Spreading and Compacting Equipment

39-2.01C(2)(a) General, add after item 5 of paragraph 1:

6. A ski device is required for longitudinal control. The minimum length of the device must be 27 feet.

39-2.01C(3) Surface Preparation

39-2.01C(3)(a) General, add after paragraph 1:

Existing pavement markers must be removed and disposed of, unless otherwise shown on the plans. During the removal of ceramic type pavement markers, screens or other protective devices must be furnished to contain any fragments as provided for in Section 7-1.04, "Public Safety."

39-2.01C(3)(g) Geosynthetic Pavement Interlayer, add between sentences 1 and 2 of paragraph 1:

Binder must not be placed when weather conditions will not remain suitable to complete the placement of the interlayer and hot mix asphalt resurfacing.

39-2.01C(3)(g) Geosynthetic Pavement Interlayer, replace paragraph 2 with:

Before placing the interlayer or asphalt binder:

1. Spalled areas on the existing pavement surface, less than 4 square feet and less than four 4 inches deep, must be tack coated, filled with hot mix asphalt and compacted as directed by the Engineer. Compensation for this work is considered as included in the contract unit price paid for Hot Mix Asphalt and no separate payment will be made thereof.

2. Clean the pavement of loose and extraneous material.

Placement of the interlayer must be limited to 1,500 feet in advance of the paving machine during any work shift unless otherwise authorized by the Engineer.

A small quantity of hot mix asphalt of sand, to be determined by the Engineer, may be spread over the fabric immediately in advance of placing hot mix asphalt surfacing in order to prevent fabric from being picked up by construction equipment. If sand is chosen to prevent interlayer pickup, it must be spread evenly at a rate not to exceed 2 pounds per square yard. The sand must be rolled into the fabric prior to pacing and excess sand must be swept off.

39-2.01C(3)(g) Geosynthetic Pavement Interlayer, add before paragraph 3:

Where geosynthetic pavement interlayer is shown to be placed in milled areas, increase the binder application in milled areas by an additional 0.05-0.10 gallons per square yard.

39-2.01C(3)(g) Geosynthetic Pavement Interlayer, replace sentence 1 of paragraph 7 with:

Overlap the interlayer borders between 2 to 6 inches.

39-2.01C(5) Pavement Edge Treatments, add between paragraphs 3 and 4:

Prior to placing hot mix asphalt or concrete pavement for mainline, grade the shoulder material 1-foot minimum width where the tapered edge will be placed to provide a foundation that will support the placement of the tapered edge.

If additional shoulder material is needed for foundation, import Class 2 Aggregate Base (shoulder backing) to fill in areas of low spots to provide a foundation that will support the placement of the tapered edge.

39-2.01C(5) Pavement Edge Treatments, replace paragraphs 6 and 7 with**:**

For tapered edge treatment, the angle of the slope must not deviate by more than ± 10 degrees from the angle shown. The angle will be measured from the plane of the adjacent finished pavement surface.

39-2.01C(15)(b) Method Compaction, replace paragraph 1 with:

Use method compaction when placing HMA.

39-2.01D Payment, replace section with:

Payment quantity for furnishing, placing, and compacting all types of hot mix asphalt, as described, will be measured by weight or area, whichever is shown on the Bid Item List.

Full compensation for removing pavement markers must be considered as included in the contract price paid for the type of hot mix asphalt involved, as shown on the Bid Item List.

When geosynthetic pavement interlayer is shown on the plans, full compensation for furnishing and placing asphalt binder for the geosynthetic pavement interlayer, including milled areas, must be considered as included in the contract price paid for **Geosynthetic Pavement Interlayer (Paving Fabric)**.

Full compensation for constructing tapered edge treatments is included in the contract price paid for the type of hot mix asphalt involved, as shown on the Bid Item List. Payment will be deducted by five dollars ($5.00) for every linear foot of tapered edge treatment not in compliance with this special provision and plan details.

When the plans require **Hot Mix Asphalt (Leveling)** or **Place Hot Mix Asphalt (Miscellaneous Areas),** but the contract does not include separate (corresponding) bid items, payment quantity for paving a leveling course or miscellaneous areas will be measured and paid for under the bid item for the type of hot mix asphalt used to perform said work.

Hot mix asphalt used for advance leveling, as provided in 39-2.02C, “Construction," when ordered by the Engineer and not shown on the plans, will be paid for by Force

Account.

Payment quantity for imported shoulder backing for placement to support tapered pavement edge, as shown on the plans, is measured and paid for as Shoulder Backing.

39-2.02 TYPE A HOT MIX ASPHALT

39-2.02B(4)(b) Aggregate Gradations, replace sentence 1 and corresponding table of paragraph 1 with:

Hot Mix Asphalt (Type A) must comply with the 1/2-inch Type A HMA gradation table unless otherwise described.

39-2.02C Construction, replace sentences 1 and 2 and items 1 and 2 of paragraph 1 with:

Hot mix asphalt must be placed as follows:

1.

Total Thickness Shown on Plans[a]	No. of Layers	Top Layer Thickness (foot)		Next Lower Layer Thickness (foot)		All Other Lower Layer Thickness (foot)	
		Min.	Max.	Min.	Max.	Min.	Max.
0.24 - foot or less	1	–	–	–	–	–	–
0.25 - 0.29 foot	2	0.12	0.13	0.12	0.17	–	–
0.30 - 0.45 foot	2	0.15	0.20	0.15	0.25	–	–
0.46 - foot or more	b	0.15	0.20	0.15	0.25	0.15	0.4

a. When Geosynthetic Pavement Interlayer (Paving Fabric), mat or grid is shown to be placed between layers of HMA, the thickness of HMA above the Geosynthetic Pavement Interlayer (Paving Fabric) must be considered to be the "Total Thickness Shown on Plans" for the purpose of spreading and compacting the HMA above the Geosynthetic Pavement Interlayer (Paving Fabric). The minimum lift thickness of HMA over Geosynthetic Pavement Interlayer (Paving Fabric), mat or grid must be 0.12 foot.

b. At least 2 layers must be placed if total thickness is 0.45 - foot. At least 3 layers must be placed if total thickness is more than 0.45 - foot and less than 0.90 - foot. At least 4 layers must be placed if total thickness is 0.90 - foot or more. For Miscellaneous Areas or Pavement Repair, at least 2 layers must be placed if total thickness is 0.50 foot.

2. When hot mix asphalt gutters are designated on the plans, a string line or wire grade reference will be required to control longitudinal grade of the gutter. The gutter will be water

tested before acceptance. The maximum deviation from a true grade must not result in ponding water for depth exceeding 0.04 foot.

39-2.02C Construction, add:

Portable delineators in conformance with Section 12-3.04, "Portable Delineators," must be furnished and placed at a maximum spacing of 300 feet on tangents and 100 feet on curves along any edge of new surfacing which has a drop off of more than 0.10 foot. Delineators must be staggered when required on both sides of traffic.

39-2.03 RUBBERIZED HOT MIX ASPHALT–GAP GRADED

39-2.03B(4)(b) Aggregate Gradations, replace paragraph 1 with:

When RHMA-G is specified for use, the corresponding gradation must comply with the 1/2-inch RHMA-G gradation table unless otherwise described.

39 ASPHALT CONCRETE

39-3 EXISTING ASPHALT CONCRETE

39-3.04 COLD PLANING ASPHALT CONCRETE PAVEMENT

39-3.04A General, replace paragraph 3 with:

Unless stated otherwise, schedule cold planing activities so that not more than two calendar days elapse between the time the pavement is cold planed and the HMA is placed.

39-3.04B Materials, add to end of paragraph:

"… or as directed by the Engineer."

39-3.04C Construction

39-3.04C(2) Grade Control and Surface Smoothness, add to end of paragraph 5:

The depth, length, width, and shape of the cut must be as shown or as ordered by the Engineer. The final cut must result in a neat and uniform surface. Do not damage the remaining surface.

39-3.04C(3) Planed Material, add:

Any exposed sub-grade material must be compacted per Section 19-5, "Compaction," of the Standard Specifications, prior to paving operation.

Materials not to be salvaged must be disposed of outside of the right of way per the specifications at a permitted recycling facility, or in accordance with Section 5-1.20B(4), "Contractor–Property Owner Agreement."

39-3.04C(4) Temporary HMA Tapers, replace paragraph 1 with:

If a drop off between the existing roadway surfacing and the planed area at transverse joints is 1 inch or greater, construct a temporary HMA taper with a slope of 1:30 (vertical: horizontal), or as directed by the Engineer. Temporary HMA tapers for posted speeds that are higher than 45 mph must have a slope of 1:40, or as directed by the Engineer. Roads

with unposted speed limits will be assumed to have a speed limit of 55 mph. At a minimum, bump signs must be placed in the direction of travel and maintained until the planed road is paved to final grade.

If the planing operations result in a drop-off of 1.5 inches or greater along existing driveways, construct a temporary HMA taper at driveway locations by the end of each working day.

The temporary HMA taper at driveway locations must be:

1. Placed to the level of the existing roadway surfacing or gutter and tapered on a slope of 30:1 (horizontal: vertical) or flatter to the level of the planed area.
2. Compacted by any method that will produce a smooth riding surface.

39-3.04D Payment, replace "Not Used" with:

Payment quantity for **Cold Plane Pavement** is measured by the actual surface area of planed pavement. Pavement may include various types of roadway materials, including but not limited to: asphalt concrete, chip and slurry seals, other bituminous-based material, fabric, base, subbase, and/or earth material. Payment for removal of pavement markers, thermoplastic traffic stripe, painted traffic stripe, pavement markings, and compacting the exposed sub-grade within the area of cold planing is included in the payment for Cold Plane Pavement. Materials and placement of temporary HMA tapers will be paid for at the contract unit prices for HMA involved unless stated otherwise in these special provisions.

^^

DIVISION VI STRUCTURES

49 PILING

Add to section 49-1.03:

Expect difficult pile installation due to the conditions shown in the following table:

Pile location		Conditions
Bridge no.	Support location	
29C-0227	Abut 1 & 2	Proximity to overhead utilities; dense to very dense sands/gravels

Add to section 49-2.01A(3)(b):

Before installing driven piles, submit a driving system submittal for each pile type for each of the support locations or control zones shown in the following table:

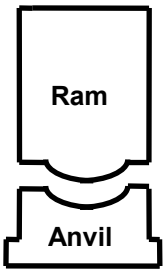
EXHIBIT H

Bridge no.	Pile type	Support location or control zone
29C-0227	Class 200, Alt W	Abut 1 based on boring R-14-001
29C-0227	Class 200, Alt W	Abut 2 based on boring R-14-002

CALIFORNIA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION LABORATORY

PILE AND DRIVING DATA FORM

Structure Name :_____ Contract No.:_____
_____ Project:_____
Structure No.:_____ Pile Driving Contractor or
Dist./Co./Rte./Post Mi:_____ Subcontractor_____(Pile Driven By)



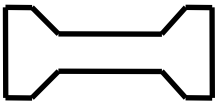
Hammer

Manufacturer:_____ Model:_____
Type:_____Serial No.:_____
Min Rated Energy: _____ at ___ Length of Stroke ____ Fuel Setting
Max Rated Energy: _____ at ___ Length of Stroke ____ Fuel Setting
Ram Weight:_____kips

Modifications: _____
_____
_____

Capblock (Hammer Cushion)

Material:_____
Thickness:_____in Area:_____in^2
Modulus of Elasticity - E:_____ksi
Coefficient of Restitution - e:_____

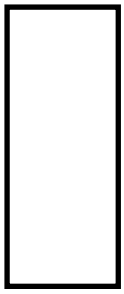


Pile Cap

[Helmet / Bonnet / Anvil Block / Drivehead] Weight: kips

Pile Cushion

Material:_____
Thickness:_____in Area: _____in^2
Modulus of Elasticity - E:_____ksi
Coefficient of Restitution - e:_____



Pile

Pile Type:_____
Length (In Leads):_____ft
Lb/ft.:_____Taper:_____
Wall Thickness:_____in
Cross Sectional Area:_____ in^2
Design Pile Capacity:_____kips
Description of Splice:_____
_____
Tip Treatment Description:_____
_____

DISTRIBUTE:

- ☐ Translab, Foundation Testing
- ☐ Translab, Geotechnical Design
- ☐ Resident Engineer

Note: If mandrel or follower is used to drive the pile, attach separate manufacturer's detail sheet(s) including weight and dimensions.

Submitted By:_____
Date:_____Phone No.:_____

Add to section 49-2.01C(3):

Drilling through the center of open-ended steel shells or steel pipe piles to attain the specified tip elevation may be necessary. The diameter of the drilled hole must be less than the inside diameter of the pile. Equipment or methods used for drilling holes must not cause quick soil conditions or cause scouring or caving of the hole. Drilling must not be used within 10 feet of the specified tip elevation. Do not drill before driving piles.

Add to section 49-2.01C(5):

If piles at Abutment 1 or 2 do not attain the nominal driving resistance at the specified tip elevation shown, the Engineer will select 2 piles or 25 percent of piles in the footing, whichever is greater, to stand 1 foot above specified cut-off elevation for a set period without driving. The set period must be at least 16 hours. Select piles with the lowest nominal driving resistance at end of initial driving at each support for restrike.

After the set period has elapsed, redrive the selected piles in the footing. Driving hammer must be warmed up before restrike begins by applying at least 20 blow counts to (1) another pile or (2) timber mats placed on the ground. Redriving consists of operating the driving hammer at full rated energy on the pile and calculating the nominal driving resistance of the pile. The pile penetration during restrike must be at least 2 inches.

If the nominal driving resistance is attained for each pile designated to be redriven, the remaining piles in that footing are considered satisfactory and further driving is not required. If redriving the designated piles demonstrates that the nominal driving resistance has not been attained, redrive all piles in the footing until the nominal driving resistance is attained.

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50 PRESTRESSING CONCRETE

Replace the 2nd paragraph of section 50-1.01C(3) with:

For initial review, submit 6 copies for structures other than railroad bridges

^^

51 CONCRETE STRUCTURES

Replace the 1st paragraph of section 51-1.01C(1) with:

Submit a deck placement plan for concrete bridge decks. Include in the placement plan your method and equipment for ensuring that the concrete bridge deck is kept damp by misting immediately after finishing the concrete surface.

^^

60 EXISTING STRUCTURES

Add to section 60-2.01A:

Remove the following structures or portions of structures:

Bridge no./Structure name	Description of work
29C0227 Buckman Road Bridge	Remove the superstructure, railing, abutments, piers, footings and wingwalls completely.

^^

DIVISION IX TRAFFIC CONTROL DEVICES

82-1 GENERAL

82-1.01 GENERAL

82-1.01A Summary, replace paragraph 2 with:

Signs must comply with the latest edition of the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) and FHWA publication *Standard Highway Signs and Markings*. Sign construction must also comply with the *California Sign Specifications and Federal Standard Highway Signs and Markings* book available at the Caltrans Traffic Operations website under signs and work zones.

82-2 SIGN PANELS

82-2.02 MATERIALS

82-2.02A General, replace item 1 of paragraph 2 with:

Phrase *Property of San Joaquin County*

82-2.02B Aluminum Sheeting, add between paragraphs 1 and 2:

Aluminum sheeting thickness must be a minimum of 0.070-inch.

82-2.02F Fiberglass-Reinforced Plastic Panels, delete.

82-2.04 PAYMENT, replace section with:

Payment quantity of sign panels is measured by the actual unit count of installed sign panels. Each sign panel, regardless of type or dimensions, will be considered as one unit. The measurement unit for multiple sign panels on one post is the number of sign panels installed on the post. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for all work involved in installing sign panels, complete in place, must be considered as included in the contract unit price paid for **Roadside Sign,** or the type of sign panel, whichever is shown on the Bid Item List.

^^

83 RAILINGS AND BARRIERS

83-2 METAL RAILINGS AND BARRIERS

Replace *Reserved* in section 83-2.02C(3) with:

The offset from the face of the Type WB-31 transition railing to the hinge point must be at least 3'-6".

The offset from the face of the adjacent midwest guardrail system to the hinge point must be transitioned from the offset at the Type WB-31 transition railing to 4'-0" using a ratio of 6:1.

83-2.04 TERMINAL SYSTEMS

83-2.04B Alternative In-Line Terminal Systems and **83-2.04C Alternative Flared Terminal Systems,** replace each “Reserved” section with:

Terminal systems must be compliant with the *Manual for Assessing Safety Hardware* (MASH) and on the current Caltrans *Authorized Materials List* (AML). Submit a certificate of compliance for terminal systems meeting MASH compliance.

Terminal systems must be furnished and installed in accordance with the manufacturer’s instructions and as described. Each terminal system installed must be identified by painting the type of terminal system in neat black letters and figures 2 inches high on the back side of the rail element between system posts number 4 and 5.

Excavated material to install terminal system must be disposed of outside the right-of way.

83-2.04D Payment, replace “Reserved” with:

Payment quantity of each type of terminal system, as described, is measured by the actual

count of each installed system.

^^

84 MARKINGS

84-2 TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-2.01 GENERAL

84-2.01A Summary, add:

References made to 6-inch stripe in Section 84 will be revised to 4-inch stripe unless specifically indicated on the plans. Application rates defined for materials placed per linear foot under Section 84 must be revised based on the width of striping or marking as defined on the project plans.

84-2.02 MATERIALS

84-2.02C Paint, replace section with:

The paint for traffic stripes and pavement markings must be acrylic water-based paint and comply with the specifications for the paint type and color shown in following table:

Paint Specifications

Property	White	Yellow	Test
Pigment – Percent by weight, minimum	62.0	62.0	ASTM D3723
Total Solids – Percent by weight, minimum	75.0	75.0	ASTM D2369
Nonvolatile vehicle – Percent by weight vehicle, minimum*	35.0	37.0	FTMS 4051
Viscosity, KU @ 77 degrees F	80 – 95	80 – 95	ASTM D562
Density, lb/gal, minimum	14.1	13.8	ASTM D1475
Volatile Organic Content	100	100	EPA Method 24

(VOC) – g/l maximum			
Contrast Ratio, 5 mils wet, minimum	.95	.95	ASTM D2805
Directional Reflectance Minimum	90.0	50.0	ASTM E1347
Dry Opacity – Minimum (5 mils wet)	0.95	0.95	ASTM D2805

* Binder – 100 percent acrylic cross-linking polymer, by weight, as determined by infrared analysis and other chemical analysis available to the Department. Refer to ASTM D 2205.

A. No-Pick-Up Time

1. Paint may not smear or track five minutes after application to the roadway using standard application equipment, at the mil thickness required, and with an ambient shaded temperature of at least 50 degrees F.

B. Additional Requirements

1. Free of lead or other related heavy metals. Refer to ASTM D5381.

Refer to ASTM D2743 and ASTM D5381 for tests used to verify paint samples meet ASTM requirements.

84-2.02D Glass Beads, replace section with:

Glass beads applied to paint must comply with the following specifications:

Gradation: The glass spheres must conform to the following gradations requirements when tested according with ASTM method D1214.

U.S. Mesh	**Microns**	**% Retained**
18	1000	5-15
30	600	20-35
50	300	55-75
100	150	0-5

Color / Clarity: Beads must be colorless / clear and free of carbon residues.

Roundness: All +20US Mesh beads must be 85% minimum rounds. Overall rounds must be 75% minimum. ASTM-1155 test method for all beads except the +20 US Mesh which are inspected visually.

Index of Refraction: Minimum 1.51 by oil immersion method.

Resistance to Acid: When place 10 g of the beads in a 100 mL beaker and cover with a 1N sulfuric acid. Let soak for 5 minutes. Rinse the beads 3 times with distilled water. Dry, then examine the beads under a microscope and compare with the untreated sample, the beads must not develop any surface haze or dulling.

Resistance to Calcium Chloride: When place 10 g of the beads in a 100 mL beaker and cover with a 1N calcium chloride solution. Let soak for 3 hours. Rinse the beads 3 times with distilled water. Dry, then examine the beads under a microscope and compare with the untreated sample, the beads must not develop any surface haze or dulling.

Resistance to Sodium Sulfide: When place 10 g of the beads in a glass stopper bottle and cover with a solution containing by weight 50% sodium sulfide, 48% distilled water, and 2% of an anionic wetting agent. Soak the beads for one hour and then rinse the beads 3 times with distilled water. Dry, then examine the beads under a microscope and compare with untreated sample, the sodium sulfide solution must not darken the beads.

Water Resistance: When place 10 g of the beads in a 20 x 80 mm extraction thimble. Place the thimble in a large (No. 3) Soxhlet extractor with a 125 mL boiling flask. Add 100 mL of distilled water, and reflux for two hours. Rinse the beads 3 times with distilled water. Remove the beads, dry, then examine the beads under a microscope and compare with untreated beads. Add five drops of one percent phenolphthalein indicator to the content of the boiling flask and titrate with 0.1N hydrochloric acid to the phenolphthalein indicator end point, the water must not produce dulling or hazing of the beads, and not more than 4.5 ml of 0.1N hydrochloric acid must be used for the titration.

Coating: *T-20 MR/AC-Waterborne Coating*

Arsenic, Antimony and Lead Content: The glass spheres must not contain more than 200 ppm (total) arsenic, 200 ppm (total) antimony, nor more than 200 ppm (total) lead, when tested according to EPA Methods 3052 and 6010B. Other suitable x-ray fluorescence spectrometry analysis methods may be used to screen samples of glass spheres for arsenic, antimony and lead content.

Appearance: A minimum of 85% of the beads by count must be colorless, true spheres, free of dark spots, milkiness, air inclusions and surface scratches when viewed under 20X magnification. The beads must be clean and free from foreign matter in accordance with high grade commercial practice.

84-2.03 CONSTRUCTION

84-2.03A General, add before paragraph 1:

Before obliterating or applying any surfacing over any existing traffic stripes, pavement markings, and pavement markers to be replaced at the same location, reference the stripes, markings, and markers. Include limits and transitions with control points to reestablish the new stripes, markings, and markers. Submit your references to the control points at least 5 working days before obliterating or applying any surfacing over the stripes, markings, and markers. It is your responsibility to preserve all reference control points.

Contact the Engineer a minimum of 2 days prior to the placement of stripes, pavement markings, and pavement markers to obtain approval for the alignment of traffic stripes and all layouts for pavement markings.

When installing the traffic striping and pavement markings, the Contractor must complete the following activities:

1. Establish control points at 100-foot intervals on tangent and at 50-foot intervals on curves.

2. Maintain the line within 2 inches of the established control points and mark the roadway between control points as needed.

    a. Remove paint that is not placed within tolerance of the established control points and replace at no cost to the Department.

    b. Maintain the line dimension within 10% of the width and length dimensions defined in Standard Drawings.

84-2.03C(3) Painted Traffic Stripes and Pavement Markings

84-2.03C(3)(a) General, replace paragraphs 13 through 17 with:

Painted traffic striping and pavement markings shall meet the following requirements:

A. Apply Pavement marking paint at the following wet mil thickness:

1. 20-25 wet mils for all longitudinal markings.

2. Approximate application rate for required mil thickness requirements:

a. 4-inch Solid Line – From 190 to 240 ft/gal

b. 4-inch Broken Line – From 760 to 960 ft/gal

c. 8-inch Solid Line – From 95 to 120 ft/gal.

B. No additional payment for pavement markings placed in excess of required wet mils in thickness or exceeding dimensional requirements outlined.

C. Glass Sphere (Beads) – Apply at least 7 lb/gal of paint, the full length and width of line and pavement markings.

D. Begin striping operations no later than 24 hours after ordered or approved by the Engineer.

E. Apply lines and pavement markings only when the ambient air and pavement temperature is 50 degrees F and rising for Acrylic Water Based Paint.

84-2.04 PAYMENT, replace section with:

The payment quantity for a painted traffic stripe is the length measured along the line of the painted traffic stripe without deductions for gaps in the broken traffic stripe.

A painted double traffic stripe consisting of two 4-inch-wide yellow stripes separated by a 3-inch-wide black stripe will be measured as 1 traffic stripe.

The payment quantity for a painted pavement marking is measured by the actual area covered.

84-9 EXISTING MARKINGS

84-9.03C Remove Traffic Stripes and Pavement Markings Containing Lead, replace "Reserved" with:

84-9.03C(1) General

Existing thermoplastic traffic stripes and pavement markings must be removed at existing locations within the project limits and as directed by the Engineer.

Attention is directed to Section 14-11.12, “Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue,” and Section 84-9, “Existing Markings,” and Section 13, "Water Pollution Control.”

The removed yellow thermoplastic must be disposed of at a Class 1 disposal facility in conformance with the requirements of the disposal facility operator within 30 days after accumulating 220 pounds of residue and dust. The Contractor must make necessary arrangements with the operator of the disposal facility to test the yellow thermoplastic residue as required by the facility and these special provisions. Testing must include, at a minimum, (1) Total Lead and Chromium by EPA Method 7000 series and (2) Soluble Lead and Chromium by California Waste Extraction Test. From the first 887 gallons of waste or portion thereof, if less than 887 gallons of waste are produced, a minimum of 4 randomly selected samples must be taken and analyzed. From each additional 222 gallons of waste or portion thereof, if less than 222 gallons are produced, a minimum of 1 additional random sample must be taken and analyzed. Submit the name and location of the disposal facility and analytical laboratory along with the testing requirements to the Engineer not less than 5 days prior to the start of removal of yellow thermoplastic. The analytical laboratory must be certified by the Department of Health Services Environmental Laboratory Accreditation Program. Test results must be provided to the Engineer for review prior to signing a waste profile as requested by the disposal facility, prior to issuing an EPA identification number, and prior to allowing removal of the waste from the site.

Prepare a project specific Lead Compliance Plan to prevent or minimize worker exposure to lead while handling removed yellow thermoplastic residue. Attention is directed to Title 8, California Code of Regulations, Section 1532.1, "Lead," for specific Cal-OSHA requirements when working with lead.

The Lead Compliance Plan must contain the elements listed in Title 8, California Code of Regulations, Section 1532.1(e)(2)(B). Before submission to the Engineer, the Lead Compliance Plan must be approved by an Industrial Hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene. Said plan must be submitted to the Engineer at least 7 days prior to beginning removal of yellow thermoplastic.

Prior to removing yellow thermoplastic, personnel who have no prior training, including County personnel, must complete a safety training program provided by the Contractor that meets the requirements of Title 8, California Code of Regulations, Section 1532.1, "Lead," and the Contractor's Lead Compliance Program.

Personal protective equipment, training, and washing facilities required by the Contractor's Lead Compliance Plan must be supplied to County personnel by the Contractor. The number of County personnel will be two.

Where grinding or other methods approved by the Engineer are used to remove yellow thermoplastic, the removed residue, including dust, must be contained and collected immediately. Sweeping equipment must not be used. Collection must be by a high efficiency particulate air (HEPA) filter equipped vacuum attachment operated concurrently with the removal operations or other equally effective methods approved by the Engineer.

The Lead Compliance Plan submittal must include a written work plan for the removal, storage, and disposal of yellow thermoplastic to the Engineer for approval not less than 15 days prior to the start of the removal operations. Removal operations must not be started until the Engineer has approved the work plan.

The removed yellow thermoplastic residue must be stored and labeled in covered containers. Labels must conform to the provisions of Title 22, California Code of Regulations, Sections 66262.31 and 66262.32. Labels must be marked with date when the waste is generated, the words "Hazardous Waste", composition and physical state of the waste (for example, asphalt grindings with thermoplastic), the word "Toxic", the name and address of the Engineer, the Engineer's telephone number, contract number, and Contractor or subcontractor. The containers must be a type approved by the United States Department of Transportation for the transportation and temporary storage of the removed residue. The containers must be handled so that no spillage will occur. The containers must be stored in a secured enclosure at a location within the project limits until disposal, as approved by the Engineer.

If the yellow thermoplastic residue is transported to a Class 1 disposal facility, a manifest must be used, and the transporter must be registered with the California Department of Toxic Substance Control. The Engineer will obtain the United States Environmental Protection Agency Identification Number and sign all manifests as the generator within 2 working days of receiving sample test results and approving the test methods.

Assume that the yellow thermoplastic removed is regulated under the Federal Resource Conservation and Recovery Act (RCRA). Additional disposal costs for removal of residue regulated under RCRA, as determined by test results required by the disposal facility, will be paid for as extra work as provided in Section 4-1.05, "Changes and Extra Work."
Nothing in these Special Provisions will relieve you of the responsibilities specified in Section 7-1.04, "Public Safety."

84-9.04 PAYMENT, replace with:

Payment quantity for **Remove Thermoplastic Traffic Stripe** is the measured length multiplied by:

1. 1.34 for a single 8-inch-wide traffic stripe
2. 2 for a double traffic stripe
3. 3 for a triple traffic stripe

Payment quantity for **Remove Thermoplastic Traffic Stripe** does not include the gaps in broken traffic stripes. Payment for removal of paint evident in a gap is included in the payment for remove traffic stripe of the type involved.

Payment quantity for **Remove Thermoplastic Pavement Marking** is the measured by the area parallel to ground surface.

A Lead Compliance Plan must be prepared and implemented for the removal of any and all yellow thermoplastic striping and markings. Payment quantity for **Lead Compliance Plan** is paid for at the lump sum price. When there is no separate bid item for Lead Compliance Plan, preparing and implementing said plan for the removal, storage, testing and disposal of

yellow thermoplastic, including compensation for the Certified Industrial Hygienist, and for providing personnel protective equipment, training, air monitoring, and medical surveillance, as specified, must be considered as included in the respective contract unit prices for **Remove Thermoplastic Traffic Stripe** and **Remove Thermoplastic Pavement Marking**.

When the Contract does not include separate bid items for the removal and disposal of thermoplastic traffic stripes and/or pavement markings, full compensation for the removal and disposal of thermoplastic traffic stripes and/or pavement markings and the preparation and implementation of a corresponding Lead Compliance Plan must all be considered as included in the various contract items of work involved.

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DIVISION XI MATERIALS

96 GEOSYNTHETICS

Add to section 96-1.02B:

Filter fabric for Rock Slope Protection must be Class A

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