REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	601	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND
GP	Poorly graded GRAVEL Poorly graded GRAVEL with SAND
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GP-GM	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND
GP-GC	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GM	SILTY GRAVEL SILTY GRAVEL with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL
SP	Poorly graded SAND Poorly graded SAND with GRAVEL
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SP-SM	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL
SP-SC	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SM	SILTY SAND SILTY SAND with GRAVEL
SC	CLAYEY SAND CLAYEY SAND with GRAVEL
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL
PT	PEAT
	COBBLES COBBLES and BOULDERS BOULDERS

Graphic/Symbol	Group Names
CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (PP) Pocket Penetrometer
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (TV) Pocket Torvane
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)
- (VS) Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE

Description		Size
Boulder		> 12"
Cobble		3" to 12"
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: I. G-Remmen, 8/08

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH

BRIDGE NO.
POST MILES

SOUND WALL NO. 3
LOG OF TEST BORINGS 3 OF 5

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rcsw3-3of5.dgn

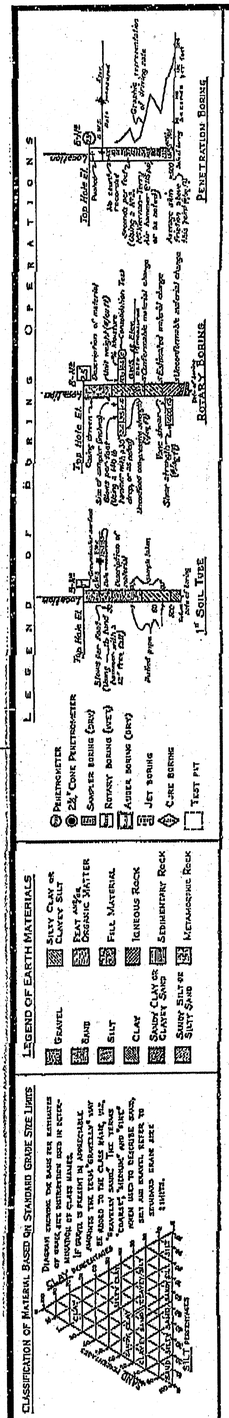
USERNAME => trpierce DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 11:24

FED. ROAD DIV. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
03	Sac	880	2-8/87	327	399

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE 5589

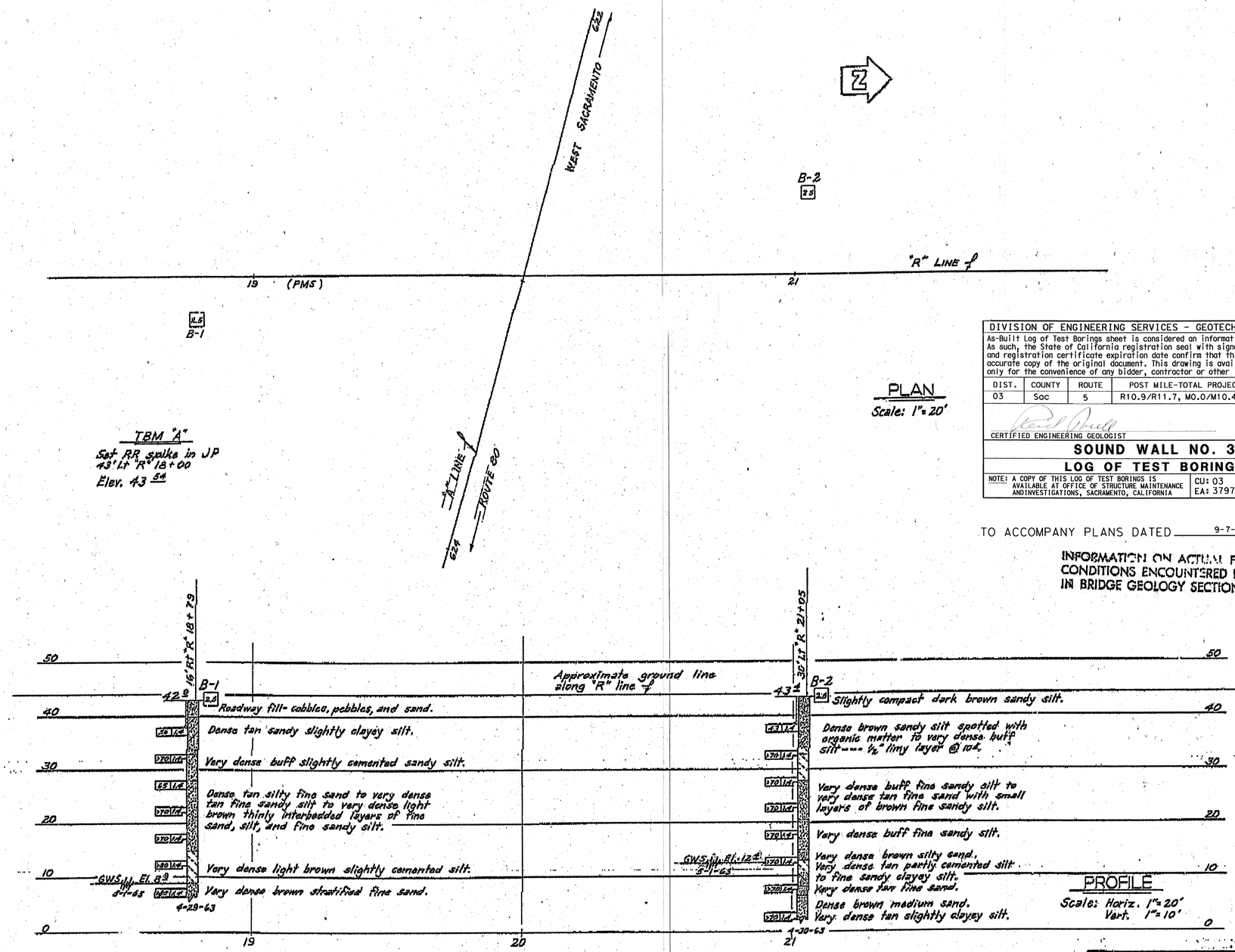
DATE APPROVED August 21, 1967



FIELD STUDY by G. Miller 4-63
DRAWN by R. Fridow 5-15-63
CHECKED by R. Reynolds 5-24-63
Approval Recommended: Chief, Bridge Design Section

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

327



DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Sac	5	R10.9/R11.7, M0.0/M10.4	602	1012

CERTIFIED ENGINEERING GEOLOGIST — DATE 1/31/08

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 3

LOG OF TEST BORINGS 4 OF 5

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

CU: 03
EA: 379701

BRIDGE No.
Sheet of

TO ACCOMPANY PLANS DATED 9-7-10

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

RALEY BOULEVARD OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 24-105 | POST MILE 7.6 | DRAWING 24103-9

SHEET 15 OF 15

Disregard prints bearing earlier numbers

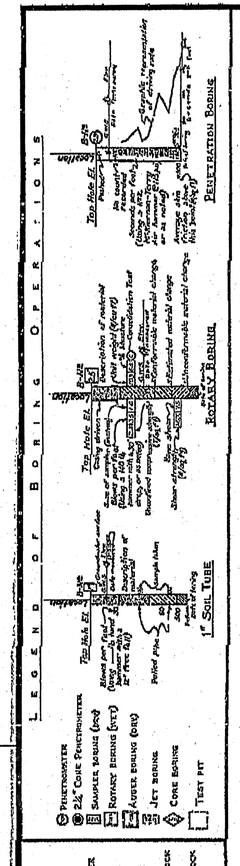
PRIL. DRAWING No. PR-24105-8 3/63 10/66 11/67

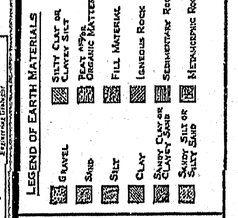
FED. ROAD DIST. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

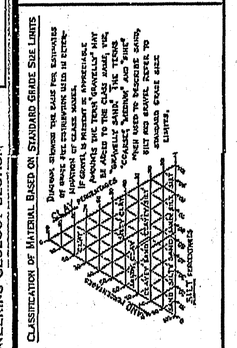
DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
03	Sac	880	2-7/7	312	393

BRANCH CHIEF — CIVIL ENGINEER — LICENSE EXPIRES

DATE APPROVED August 21, 1967





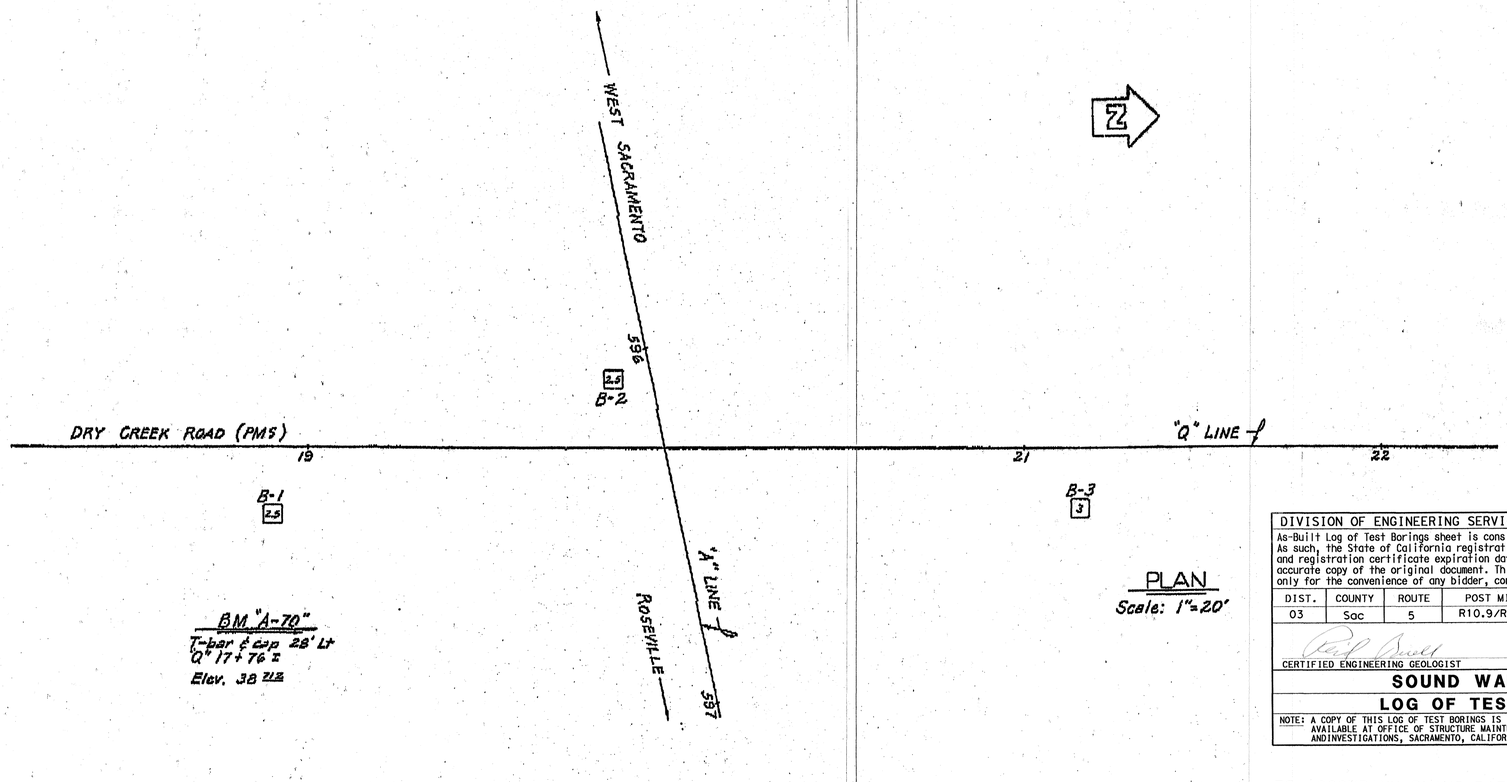


NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	by: S. Allison	4-63
DRAWN	by: K. Endow	3-14-63
CHECKED	by: D. Reynolds	5-28-63

Approximate Scale

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION



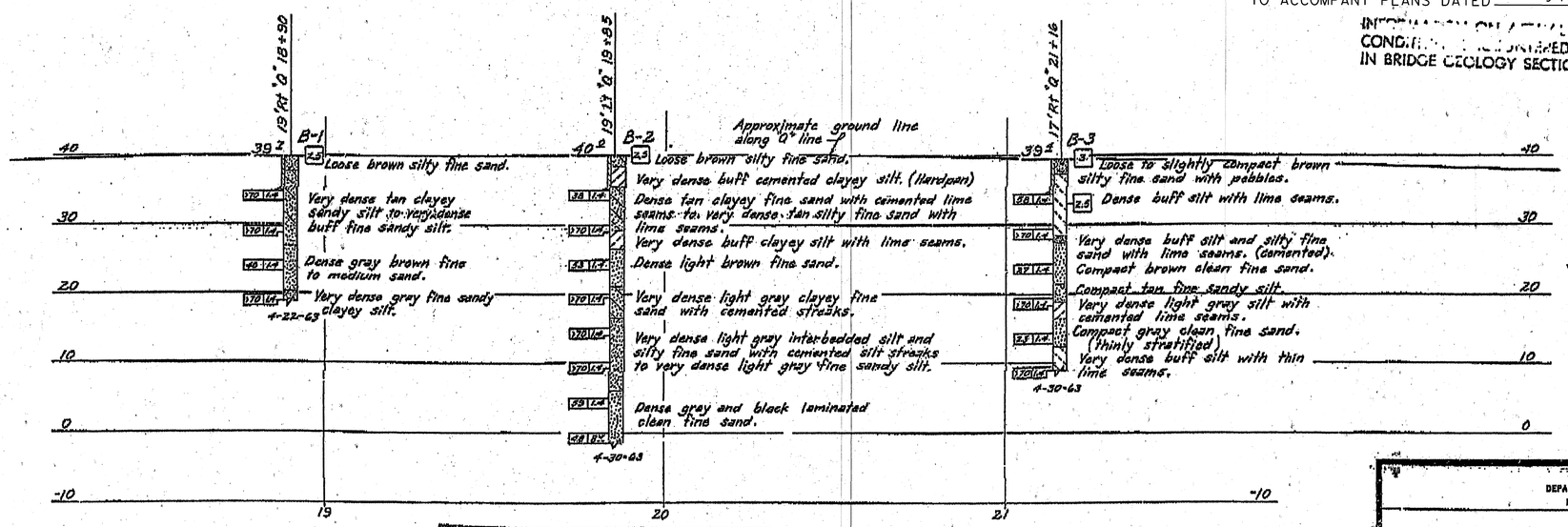
PLAN
Scale: 1"=20'

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Sac	5	R10.9/R11.7, M0.0/M10.4	603	1012
CERTIFIED ENGINEERING GEOLOGIST			DATE 10/30/08		
SOUND WALL NO. 3					
LOG OF TEST BORINGS 5 OF 5					
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA		CU: 03 EA: 379701		BRIDGE No.	
				Sheet	of

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 9-7-10

INFORMATION ON MATERIAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION



PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE April, 1963

SHEET	OF
15	15

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

DRY CREEK ROAD OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 24-104	Post Mile 7.1	DRAWING 24104-21

Disregard prints bearing earlier numbers → PREL. DRAWING No. PR-24104-7 | 3/5/68 | 12/1/66 | 12/5/67

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 30000961

312

337970rcsw3-5of5.tif

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	604	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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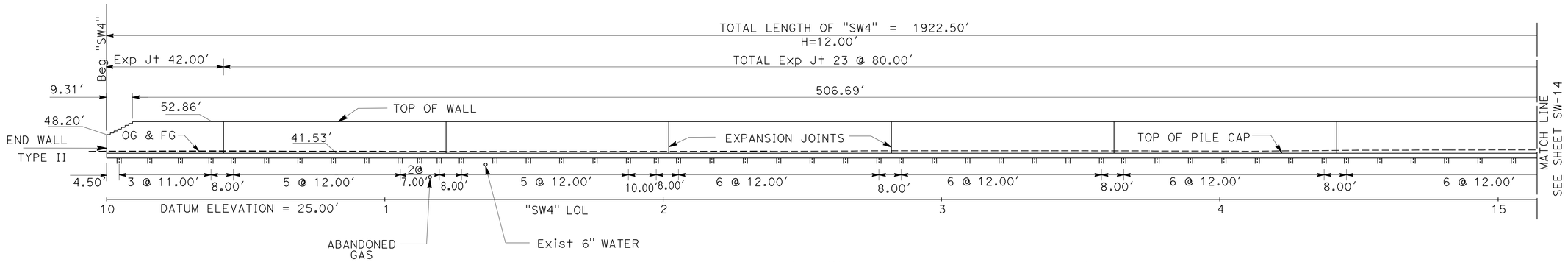

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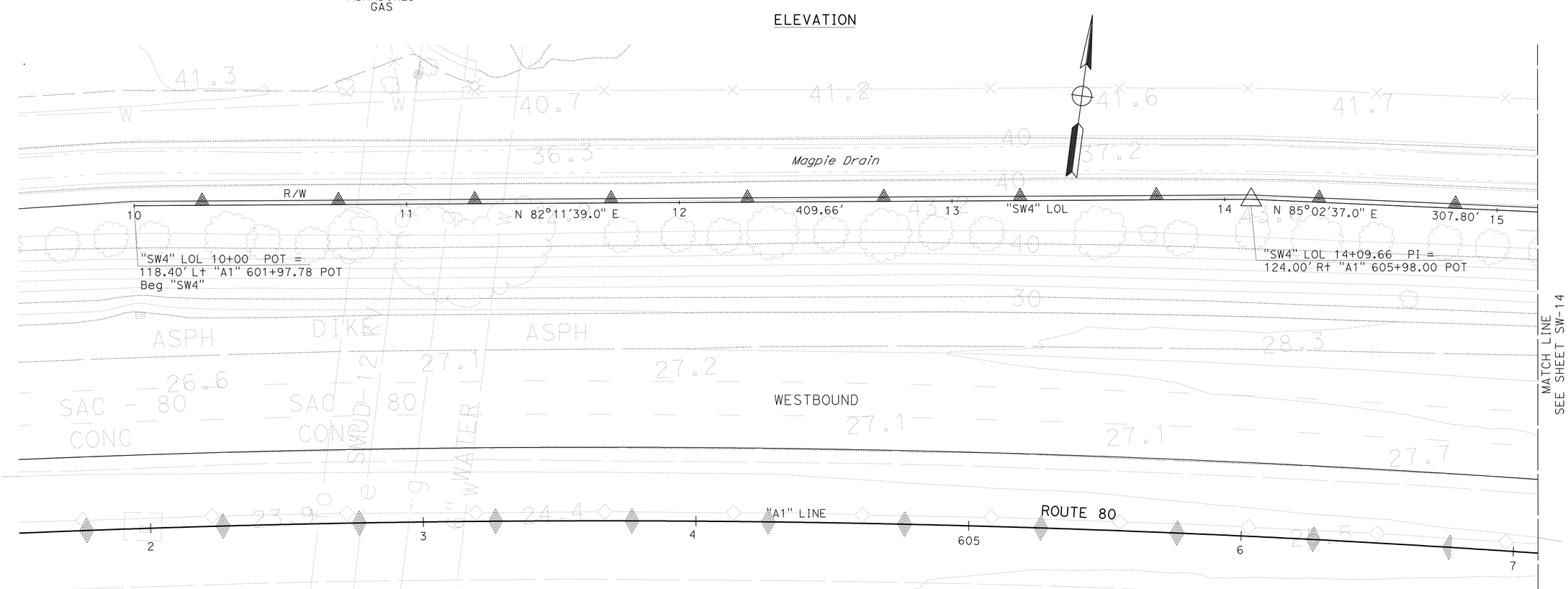

PLAN

SOUND WALL PLAN

SOUND WALL No. 4

SCALE: 1" = 20'

SW-13

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 11:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	605	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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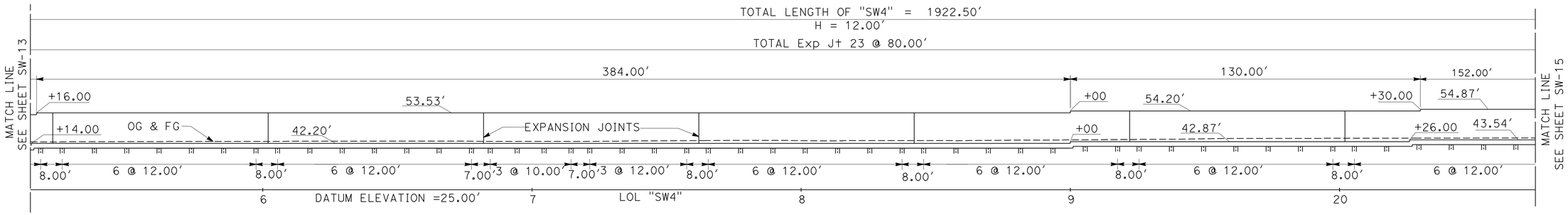
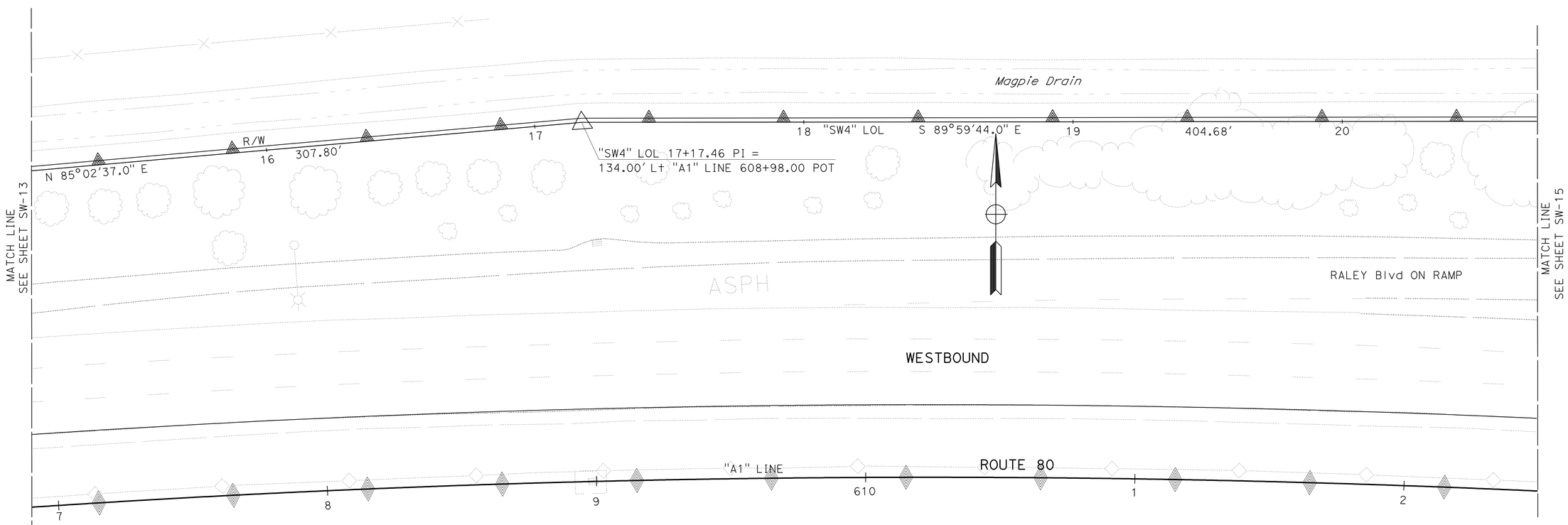


ELEVATION



PLAN

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN

SOUND WALL No. 4

SCALE: 1" = 20'

SW-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 11:24

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
USERNAME => trpierce
DGN FILE => 33797urd014.dgn
CU 03255
EA 3797U1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	606	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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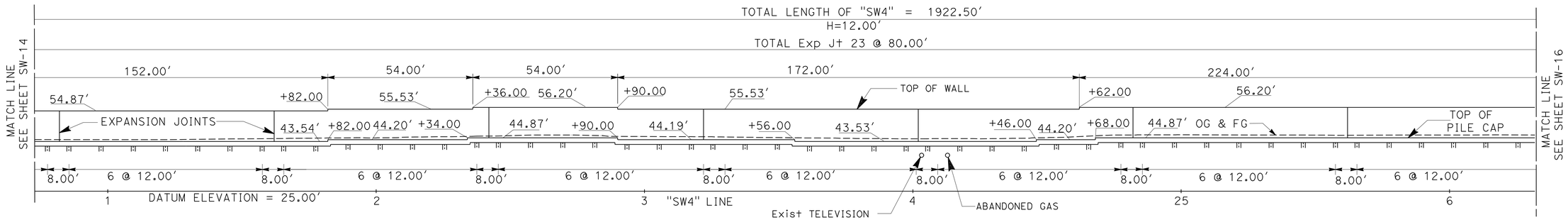
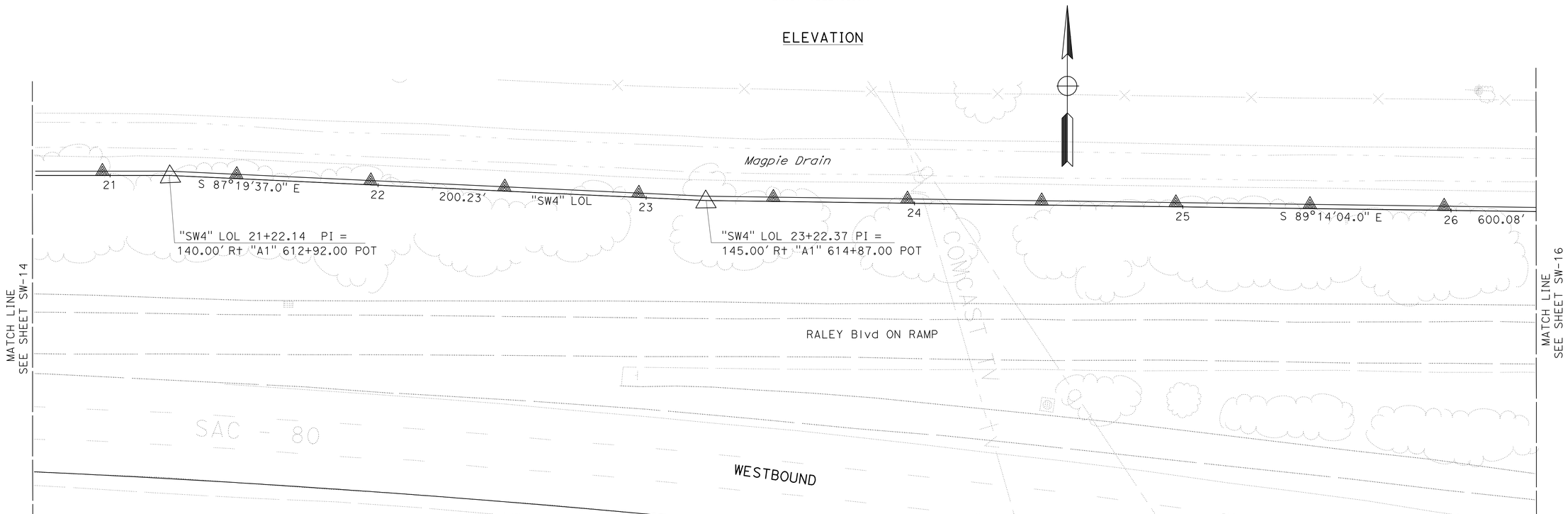


ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 4

SCALE: 1" = 20'

SW-15

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 11:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	607	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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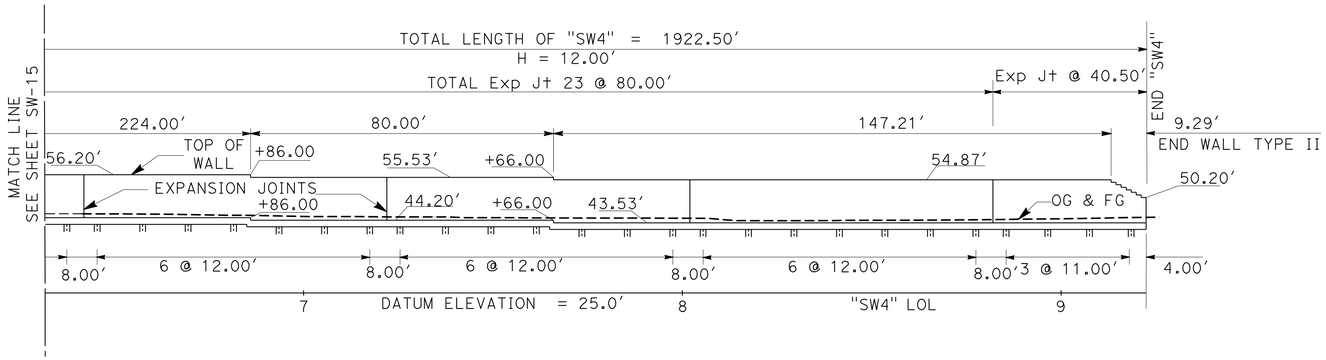
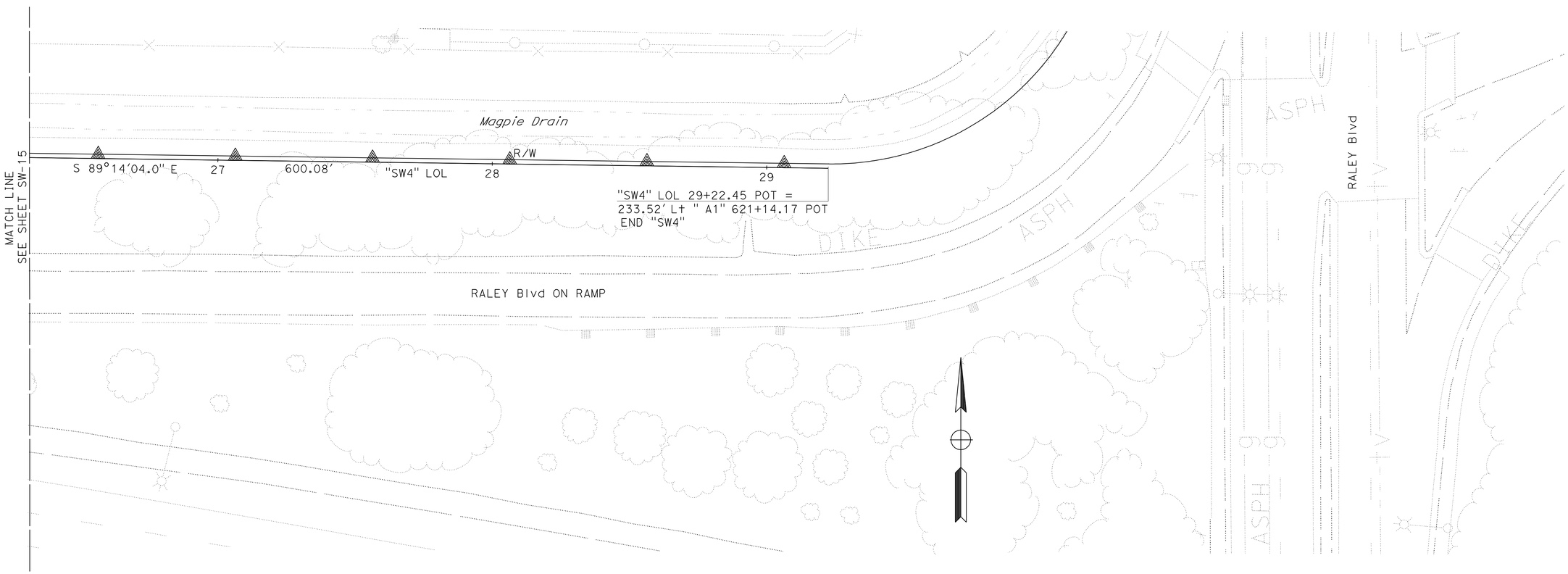


ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 4

SCALE: 1" = 20'

SW-16

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

REVISED BY	DATE REVISED

A.S.RANDHAWA — CALCULATED-DESIGNED BY
AMY FONG — CHECKED BY
CYRUS HUI — FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 11:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	608	1012

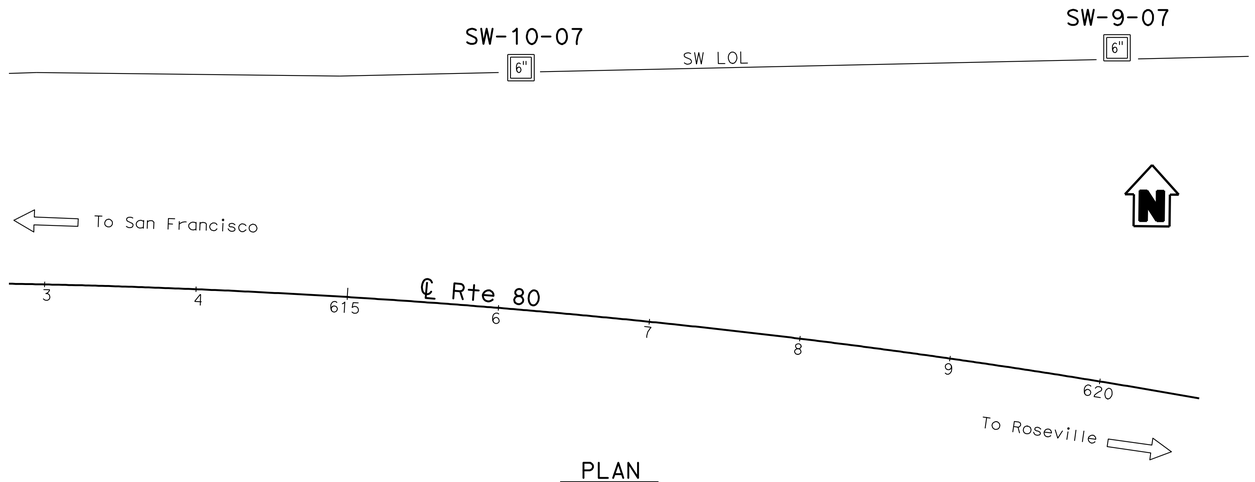
CERTIFIED ENGINEERING GEOLOGIST 10-30-08

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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

This LOTB sheet was generally prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007).



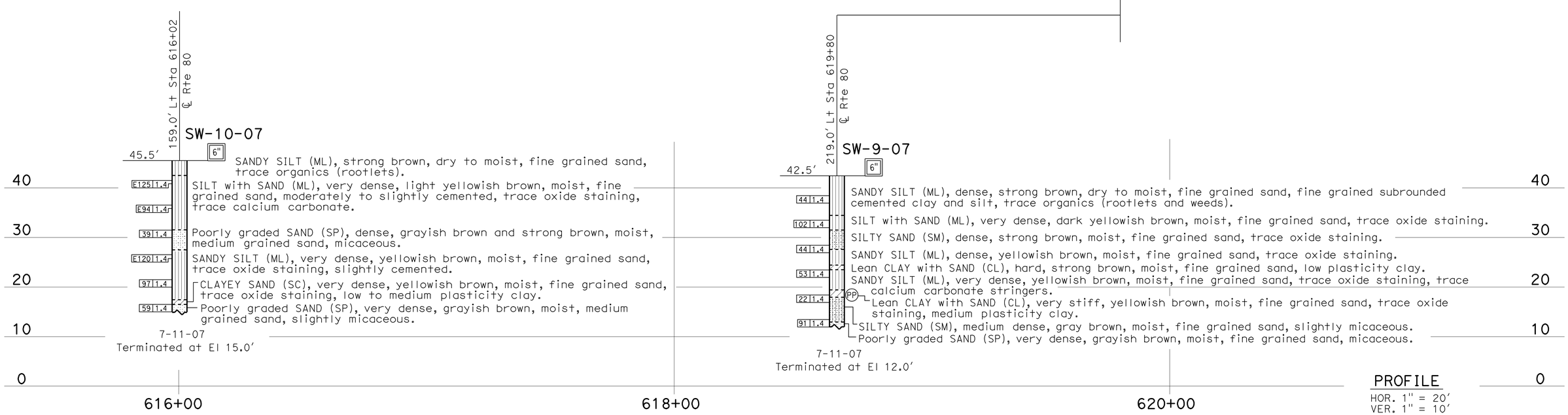
PLAN
1" = 50'

BENCH MARK

Approximate boring elevations were derived from District Survey maps.

NOTES:

1. All test borings were advanced using a hollow stem auger.
2. No ground water encountered during field investigation.
3. The descriptions and classifications of soil, including consistency and relative density descriptors, used by the field personnel for the exploration boreholes shown on these sheets are generally based on the "Soil and Rock Logging, Classification, and Presentation Manual," Division of Engineering Services, Geotechnical Services, (June 2007).
4. Soil colors were determined using Munsell Soil Color Charts (1994, Revised Edition).
5. All Test borings utilized a Safety Hammer to advance the sampler using a 140 lb hammer with a 30 inch drop. The SPT N-values shown on the Log of Test Boring (LOTB) sheets were actual values recorded in the field. The relative/apparent density descriptors shown on the LOTB sheets are based on the actual SPT N-values recorded in the field. Consistency descriptors shown on the LOTB sheets are based on the actual SPT N-values or the pocket penetrometer readings.
6. E = Blow count for 1.0 foot penetration extrapolated from blow count for less than 1.0 foot (due to change in material or hard driving).



PROFILE
HOR. 1" = 20'
VER. 1" = 10'

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 4 LOG OF TEST BORINGS 1 OF 4
FUNCTIONAL SUPERVISOR NAME: Roy Bibbens	DRAWN BY: I. G-Remmen, 8/08 CHECKED BY: J. Martin	FIELD INVESTIGATION BY: J. Martin			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rdsw4-1of4.dgn

USERNAME => trpierce DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 11:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	609	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS

Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

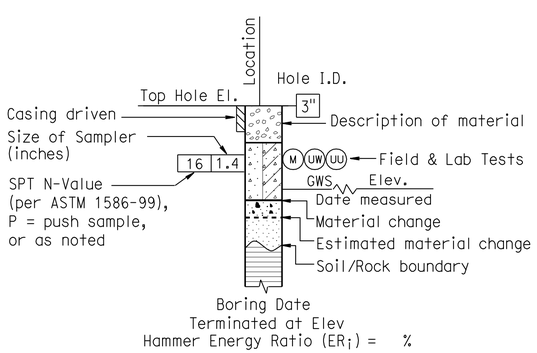
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring
Size	R P	Rotary drilled boring Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778-95)
⬚	O	Other

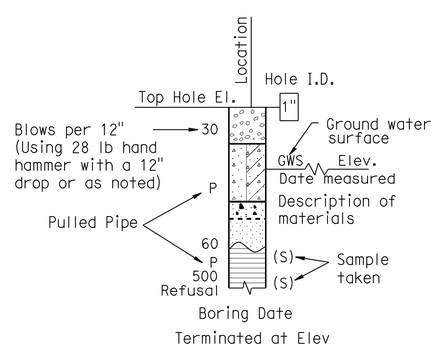
Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS

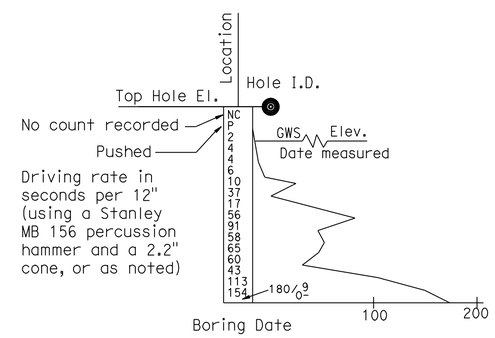
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



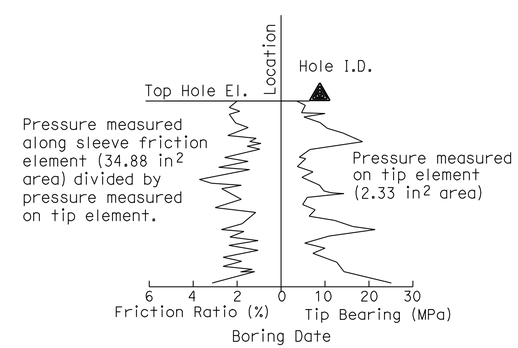
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 4 LOG OF TEST BORINGS 2 OF 4
	PREPARED BY: I. G-Remmen, 8/08				

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rdsw4-2of4.dgn

USERNAME => tripierce DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 11:25

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	610	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND
GP	Poorly graded GRAVEL Poorly graded GRAVEL with SAND
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GP-GM	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND
GP-GC	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GM	SILTY GRAVEL SILTY GRAVEL with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL
SP	Poorly graded SAND Poorly graded SAND with GRAVEL
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SP-SM	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL
SP-SC	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SM	SILTY SAND SILTY SAND with GRAVEL
SC	CLAYEY SAND CLAYEY SAND with GRAVEL
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL
PT	PEAT
	COBBLES COBBLES and BOULDERS BOULDERS

Graphic/Symbol	Group Names
CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (PP) Pocket Penetrometer
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (TV) Pocket Torvane
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)
- (VS) Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE

Description		Size
Boulder		> 12"
Cobble		3" to 12"
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: I. G-Remmen, 8/08

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH

BRIDGE NO.
POST MILES

SOUND WALL NO. 4
LOG OF TEST BORINGS 3 OF 4

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rdsw4-3of4.dgn

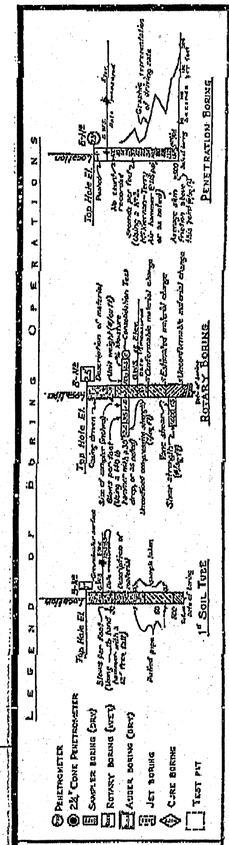
USERNAME => trpierce DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 11:25

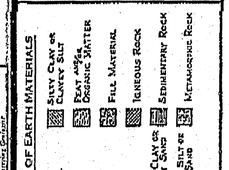
FED. ROAD DIV. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

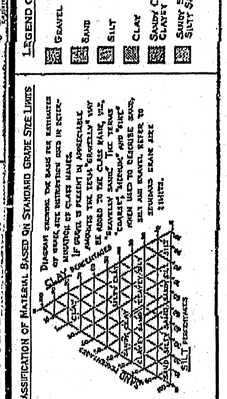
DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
03	Sac	880	2-8/17	327	393

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE 5285

DATE APPROVED August 21, 1967





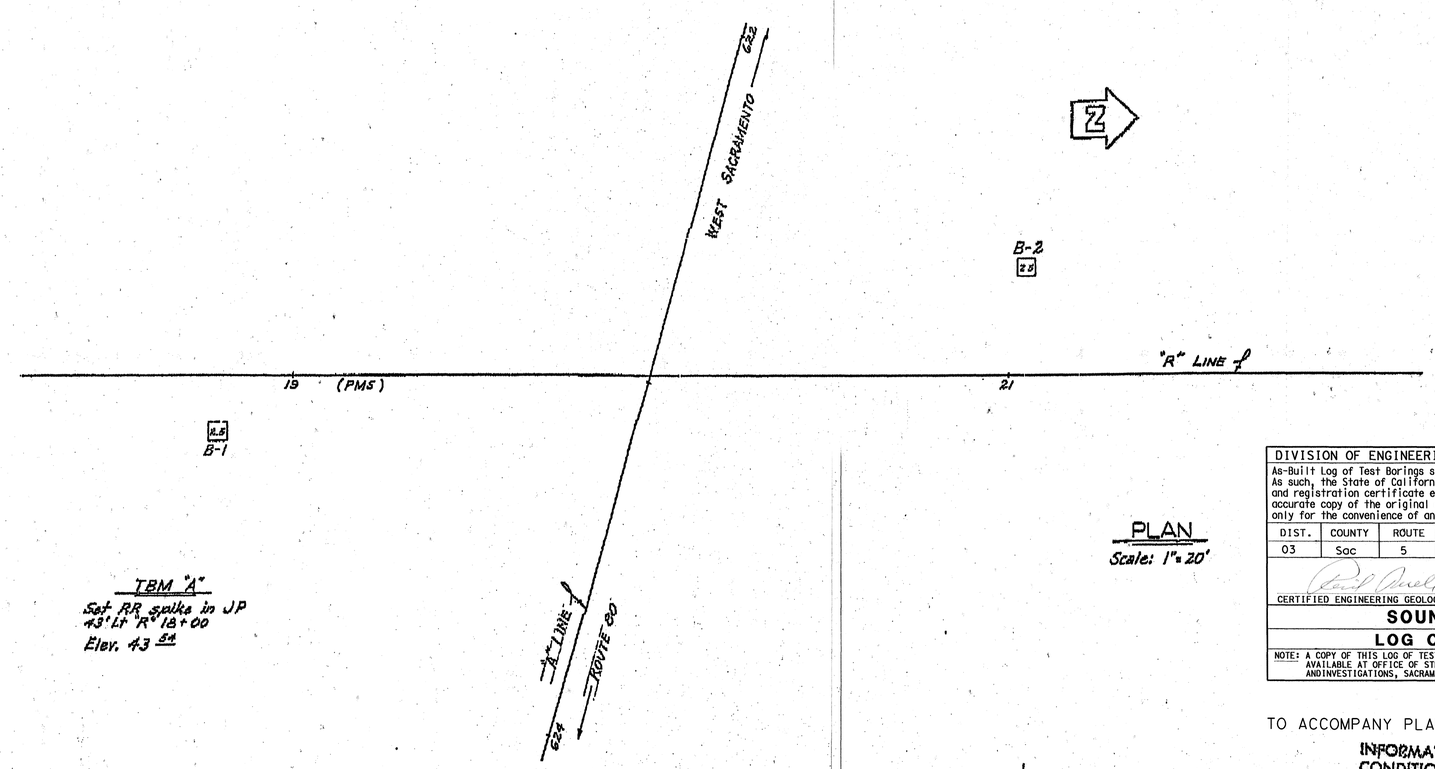


NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	G. Miller	4-63
DRAWN	K. Erdow	5-15-63
CHECKED	A. Reynolds	5-24-63

Approval Recommended: Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION



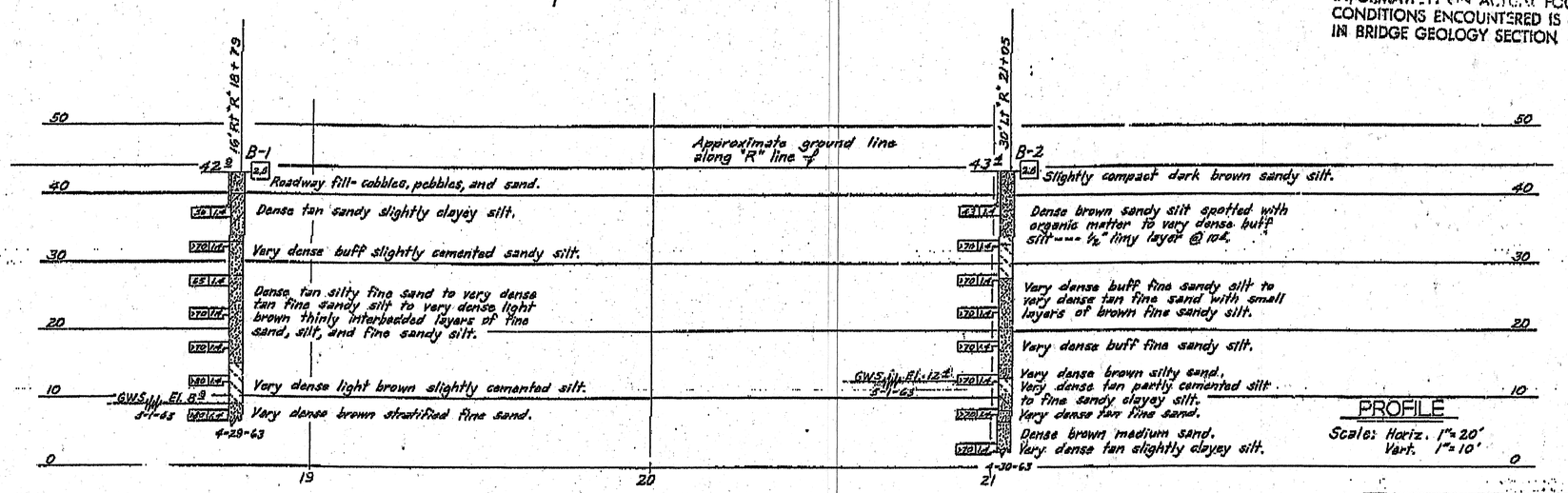
PLAN
Scale: 1" = 20'

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Sac	5	R10.9/R11.7, M0.0/M10.4	611	1012
CERTIFIED ENGINEERING GEOLOGIST			DATE 10/30/08		
SOUND WALL NO. 4					
LOG OF TEST BORINGS 4 OF 4					
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA		CU: 03 EA: 379701	BRIDGE No.		
			Sheet	of	

PROFESSIONAL GEOLOGIST
Reid Buell
No. 1481
Exp. 4-30-09
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 9-7-10

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 10'

SHEET 15A OF 16

AS BUILT PLANS
Contract No. 03-072644
Date Completed 2-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

RALEY BOULEVARD OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 24-105	Post MILE 7.6	DRAWING 2410 5-9

Disregard prints bearing earlier numbers → PRIL. DRAWING No. PR-24105-8

327

337970rdsw4-4of4.tif

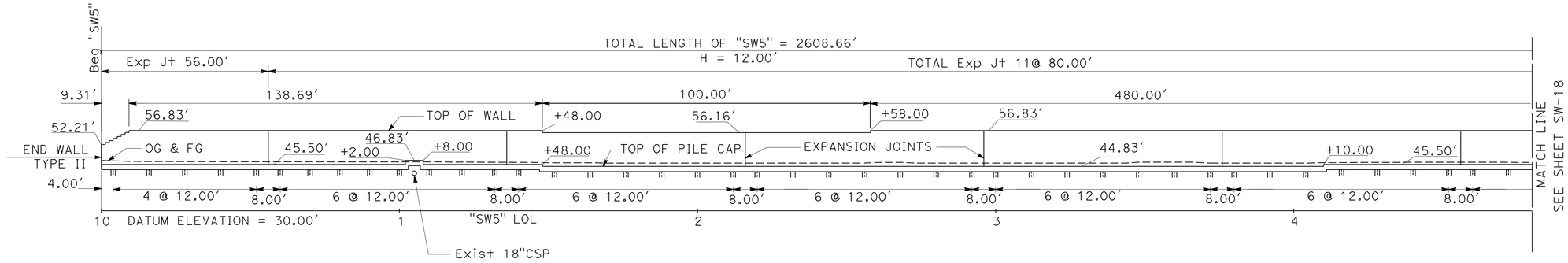
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	612	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

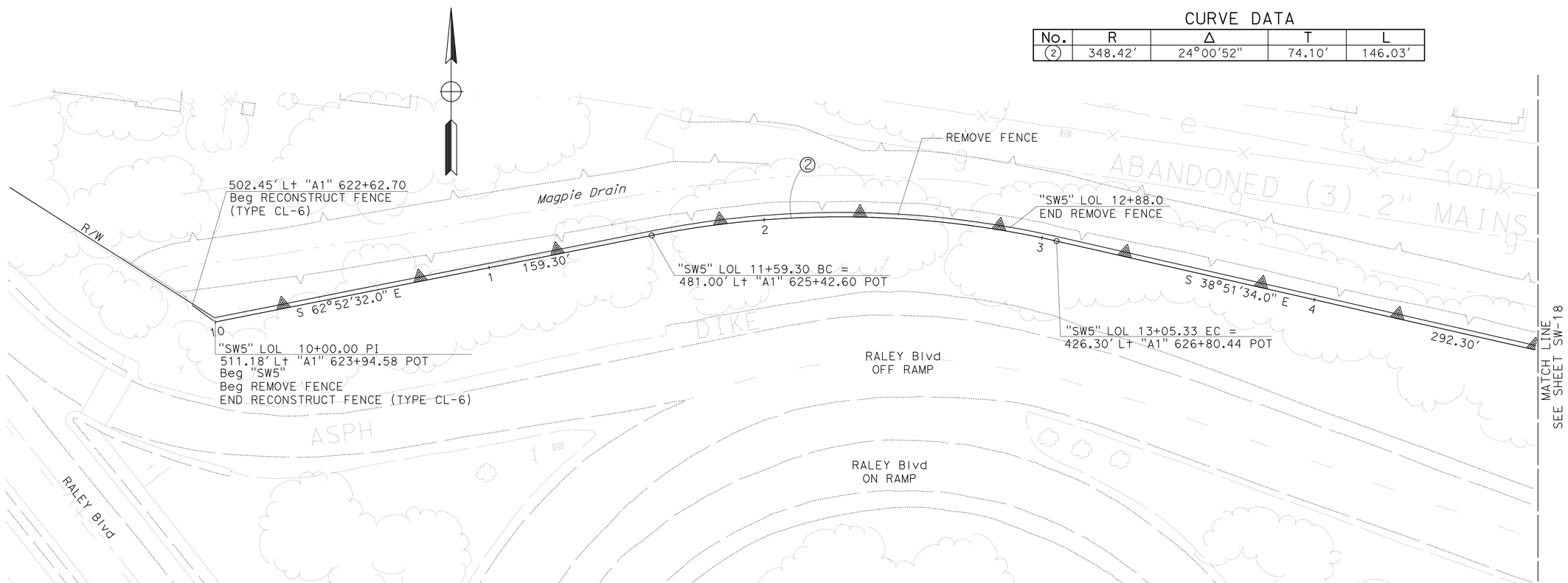
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ELEVATION

CURVE DATA

No.	R	Δ	T	L
2	348.42'	24°00'52"	74.10'	146.03'



PLAN

SOUND WALL PLAN
SOUND WALL No. 5
SCALE: 1" = 20'

SW-17

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 11:25

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	613	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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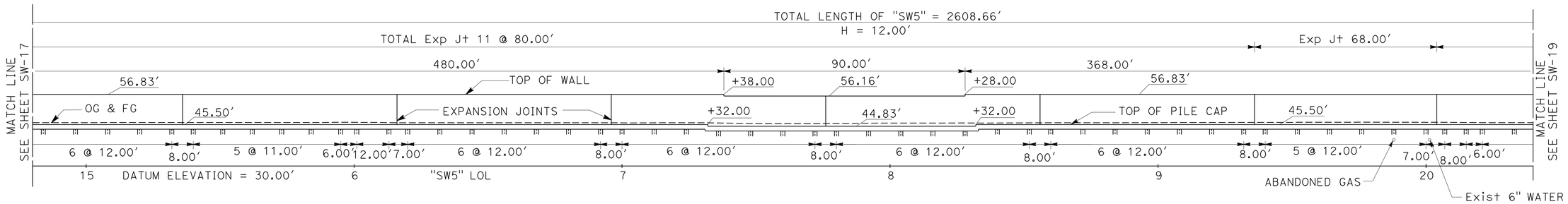
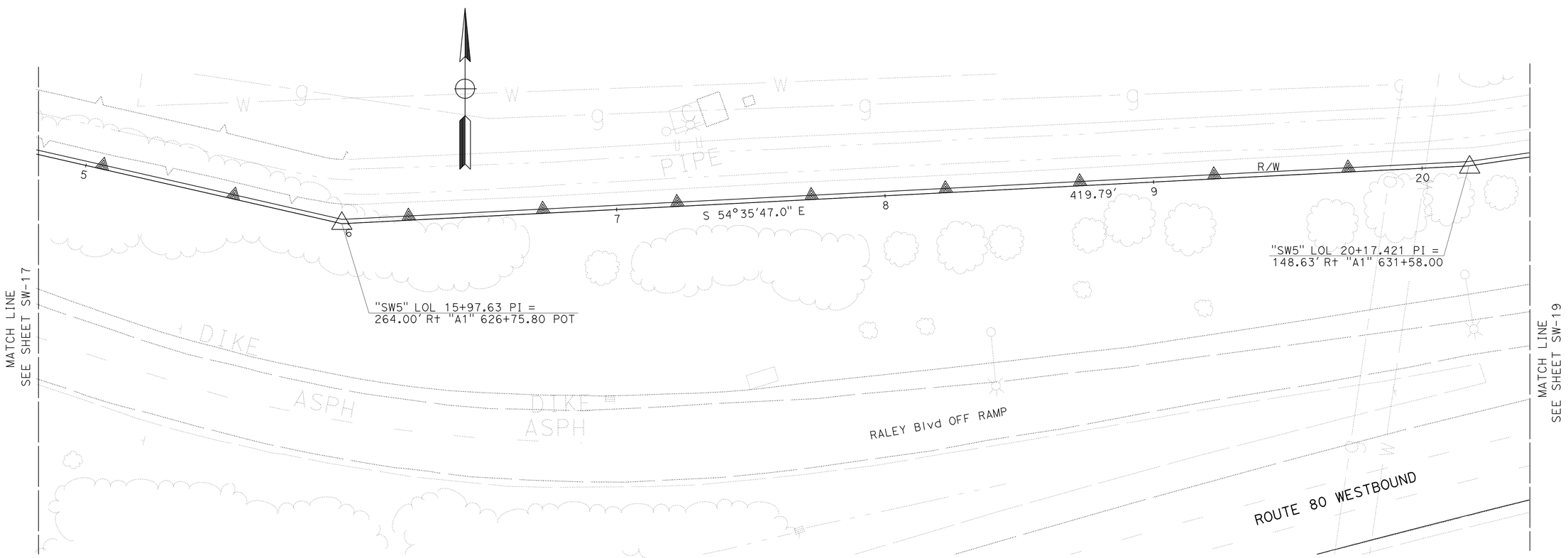


ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 5

SCALE: 1" = 20'

SW-18

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:39

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	614	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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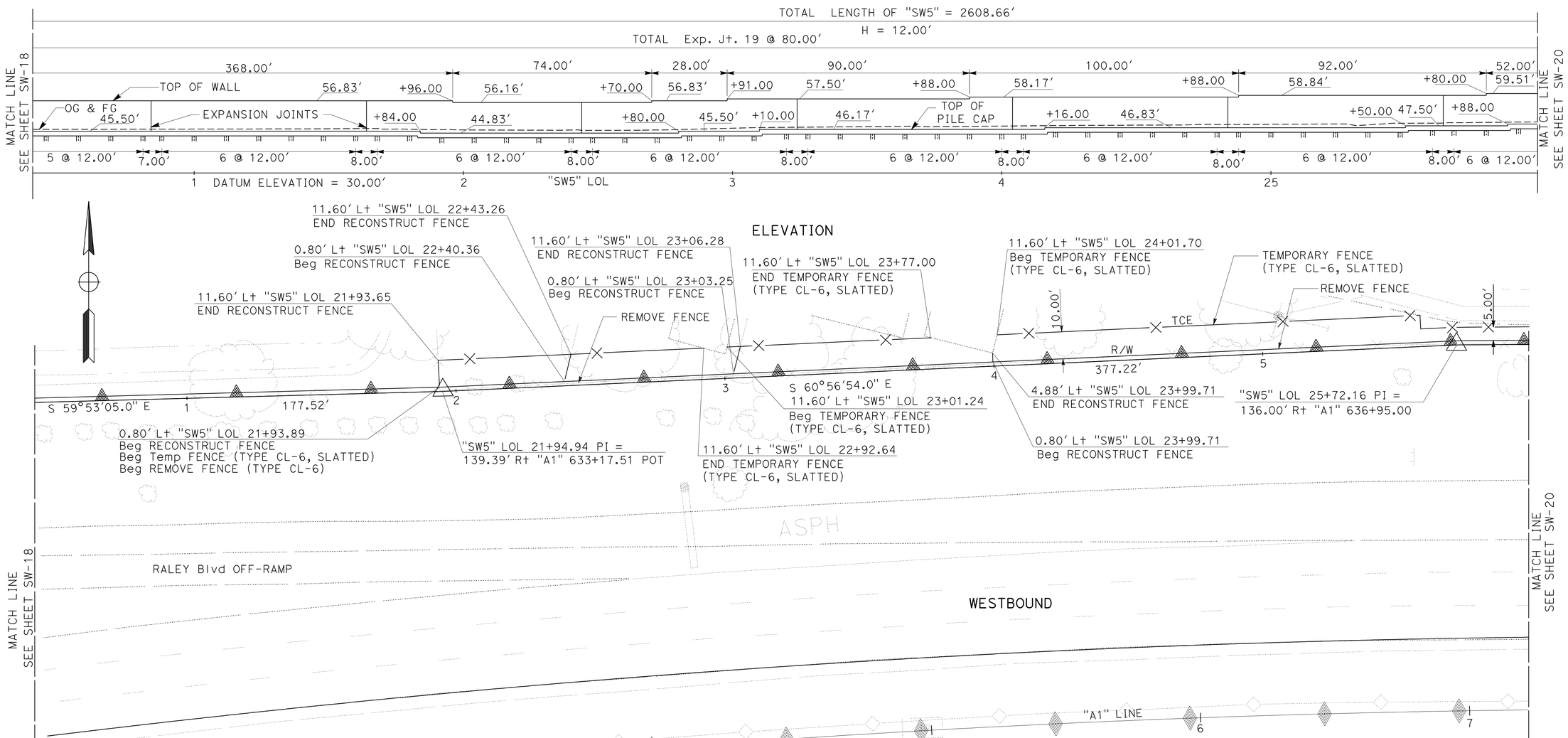

PLAN

SOUND WALL PLAN

SOUND WALL No. 5

SCALE: 1" = 20'

SW-19

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

REVISED BY	DATE REVISED

A.S.RANDHAWA — CALCULATED-DESIGNED BY
AMY FONG — CHECKED BY
CYRUS HUI — FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 08:39

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	615	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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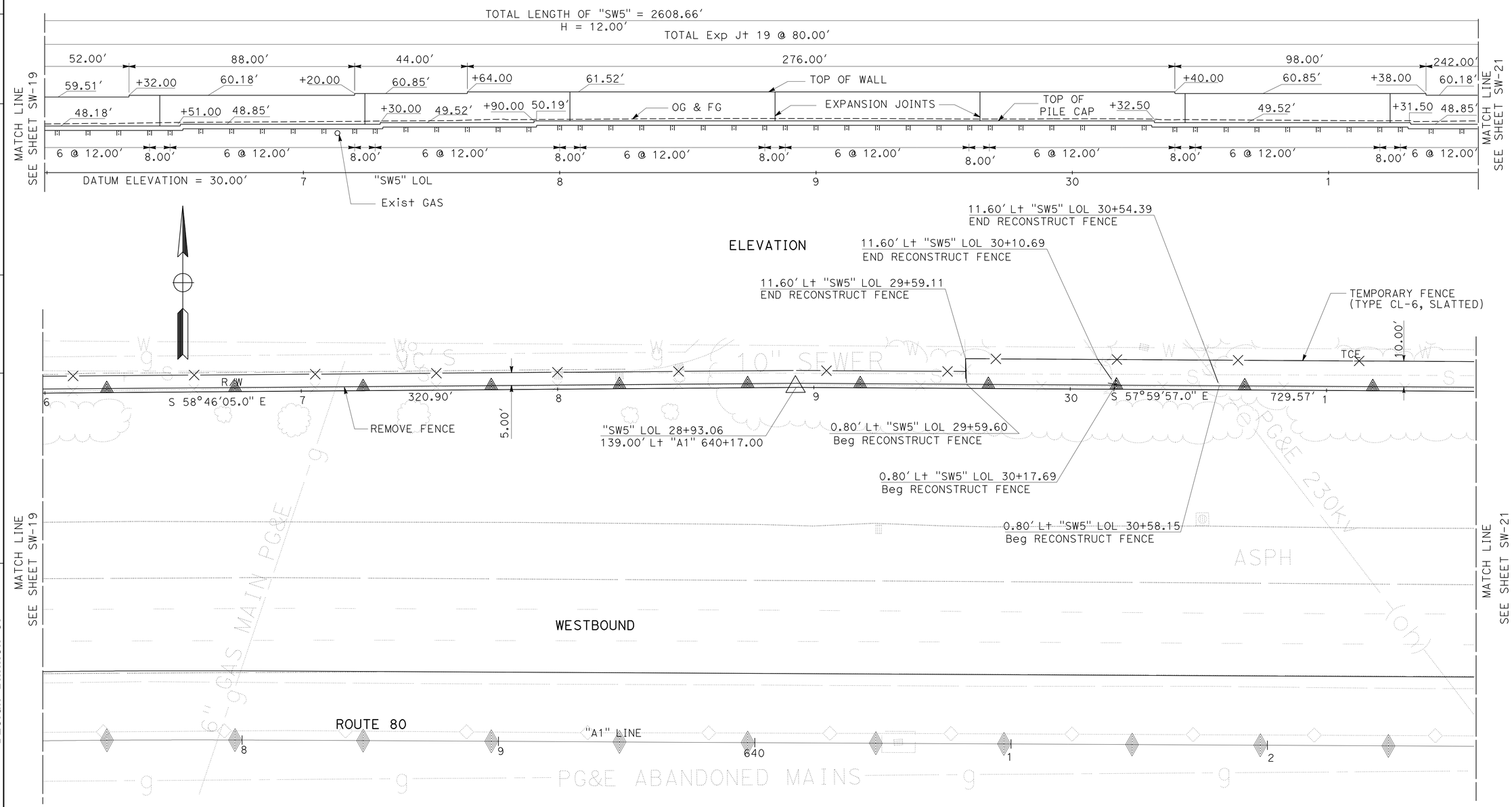

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN
SOUND WALL No. 5
SCALE: 1" = 20'

SW-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:39

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	616	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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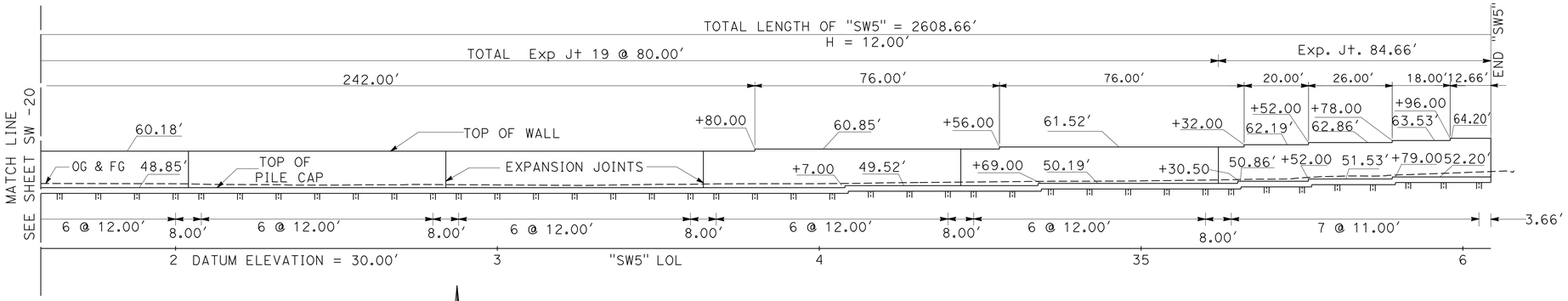
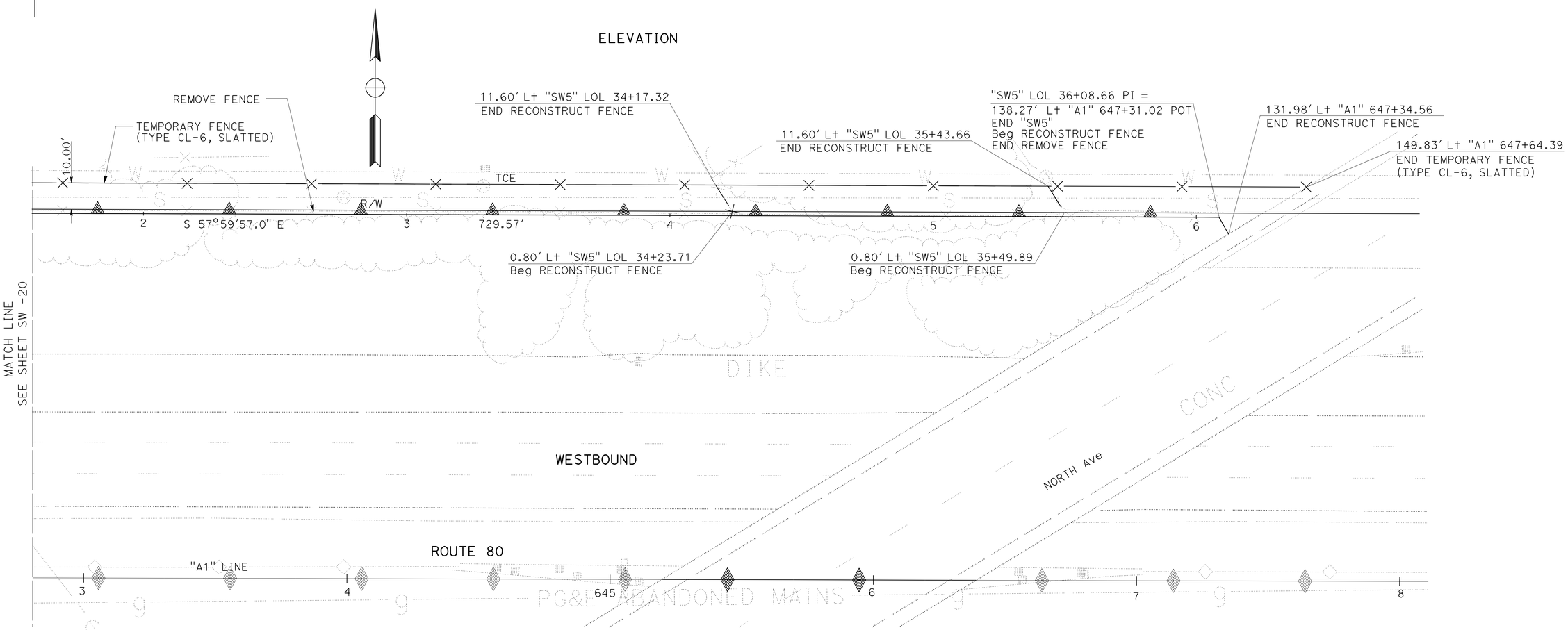


ELEVATION



PLAN

SOUND WALL PLAN
SOUND WALL No. 5

SCALE: 1" = 20'

SW-21

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	617	1012

Reid Buell 10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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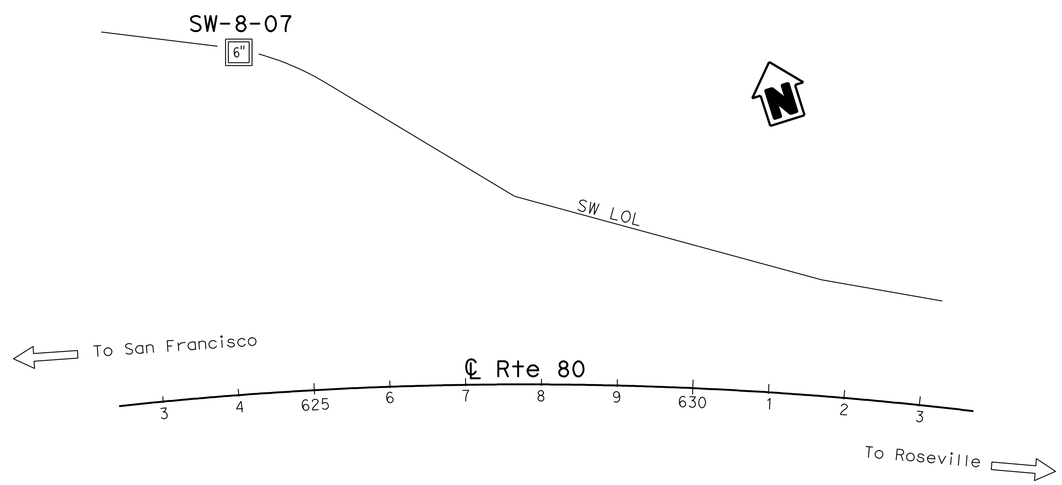
This LOTB sheet was generally prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007).



BENCH MARK

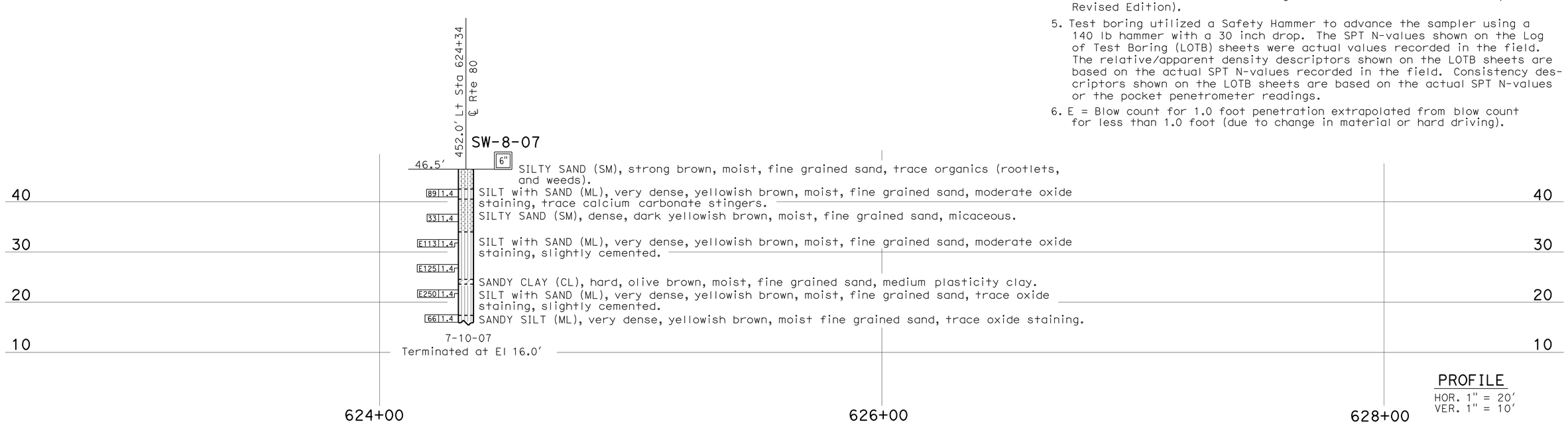
Approximate boring elevation was derived from District Survey maps.

PLAN

1" = 100'

NOTES:

1. Test boring was advanced using a hollow stem auger.
2. No ground water encountered during field investigation.
3. The descriptions and classifications of soil, including consistency and relative density descriptors, used by the field personnel for the exploration boreholes shown on these sheets are generally based on the "Soil and Rock Logging, Classification, and Presentation Manual," Division of Engineering Services, Geotechnical Services, (June 2007).
4. Soil colors were determined using Munsell Soil Color Charts (1994, Revised Edition).
5. Test boring utilized a Safety Hammer to advance the sampler using a 140 lb hammer with a 30 inch drop. The SPT N-values shown on the Log of Test Boring (LOTB) sheets were actual values recorded in the field. The relative/apparent density descriptors shown on the LOTB sheets are based on the actual SPT N-values recorded in the field. Consistency descriptors shown on the LOTB sheets are based on the actual SPT N-values or the pocket penetrometer readings.
6. E = Blow count for 1.0 foot penetration extrapolated from blow count for less than 1.0 foot (due to change in material or hard driving).



PROFILE

HOR. 1" = 20'
VER. 1" = 10'

ENGINEERING SERVICES		GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	SOUND WALL NO. 5
FUNCTIONAL SUPERVISOR	DRAWN BY: I. G-Remmen, 8/08	FIELD INVESTIGATION BY:		DESIGN BRANCH	POST MILES	LOG OF TEST BORINGS 1 OF 5
NAME: Roy Bibbens	CHECKED BY: J. Martin	J. Martin				

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-30-08

SHEET OF

FILE => 337970resw5-1of5.dgn

USERNAME => trmartin DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 08:40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	618	1012

CERTIFIED ENGINEERING GEOLOGIST 10-30-08

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS

Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

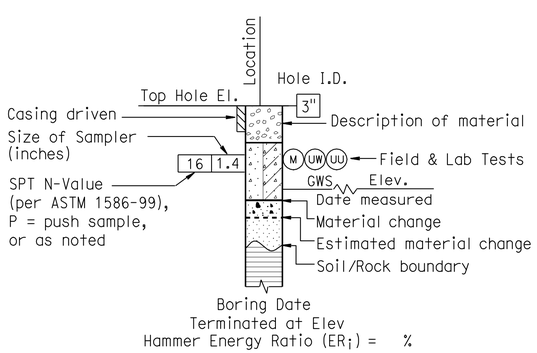
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring
Size	R P	Rotary drilled boring Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778-95)
⬚	O	Other

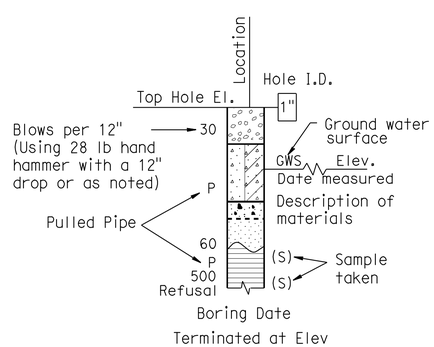
Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS

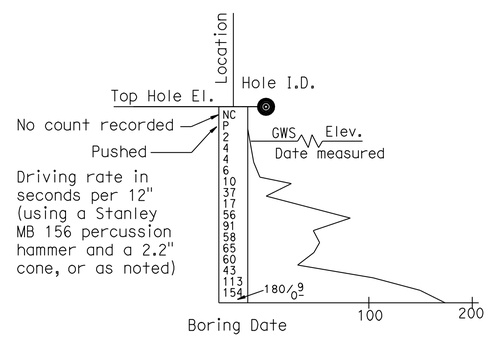
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



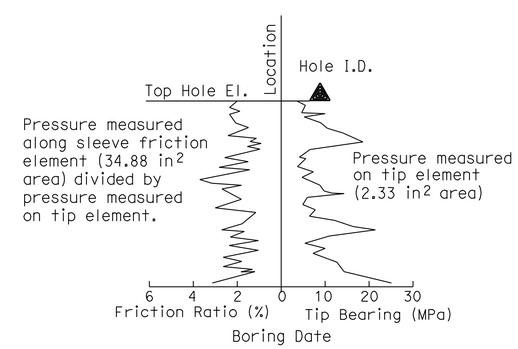
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 5 LOG OF TEST BORINGS 2 OF 5
	PREPARED BY: I. G-Remmen, 8/08		CU 03 EA 379701		

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970resw5-2of5.dgn

USERNAME => trmartin DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 08:40

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	619	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

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PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly graded GRAVEL Poorly graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly graded SAND Poorly graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL		
SP-SC	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (PP) Pocket Penetrometer
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (TV) Pocket Torvane
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)
- (VS) Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE

Description		Size
Boulder		> 12"
Cobble		3" to 12"
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: I. G-Remmen, 8/08

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH

BRIDGE NO.
POST MILES

SOUND WALL NO. 5
LOG OF TEST BORINGS 3 OF 5

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970resw5-3of5.dgn

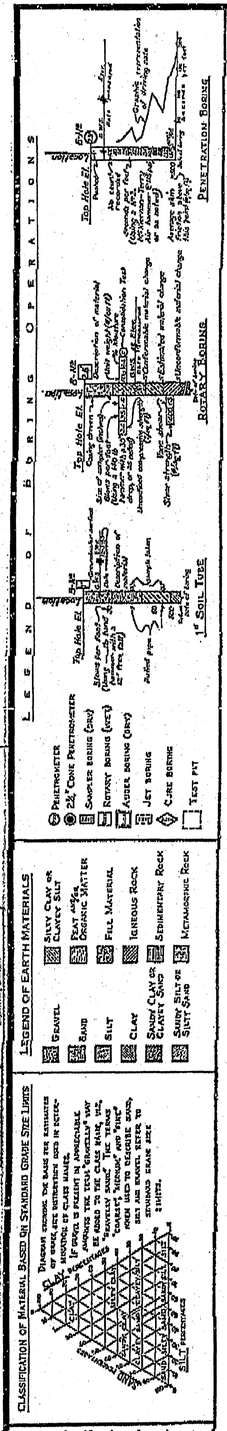
USERNAME => trmartin DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 08:40

FED. ROAD DIV. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
03	Sac	880	2-5/87	327	393

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE NO.

DATE APPROVED August 21, 1987



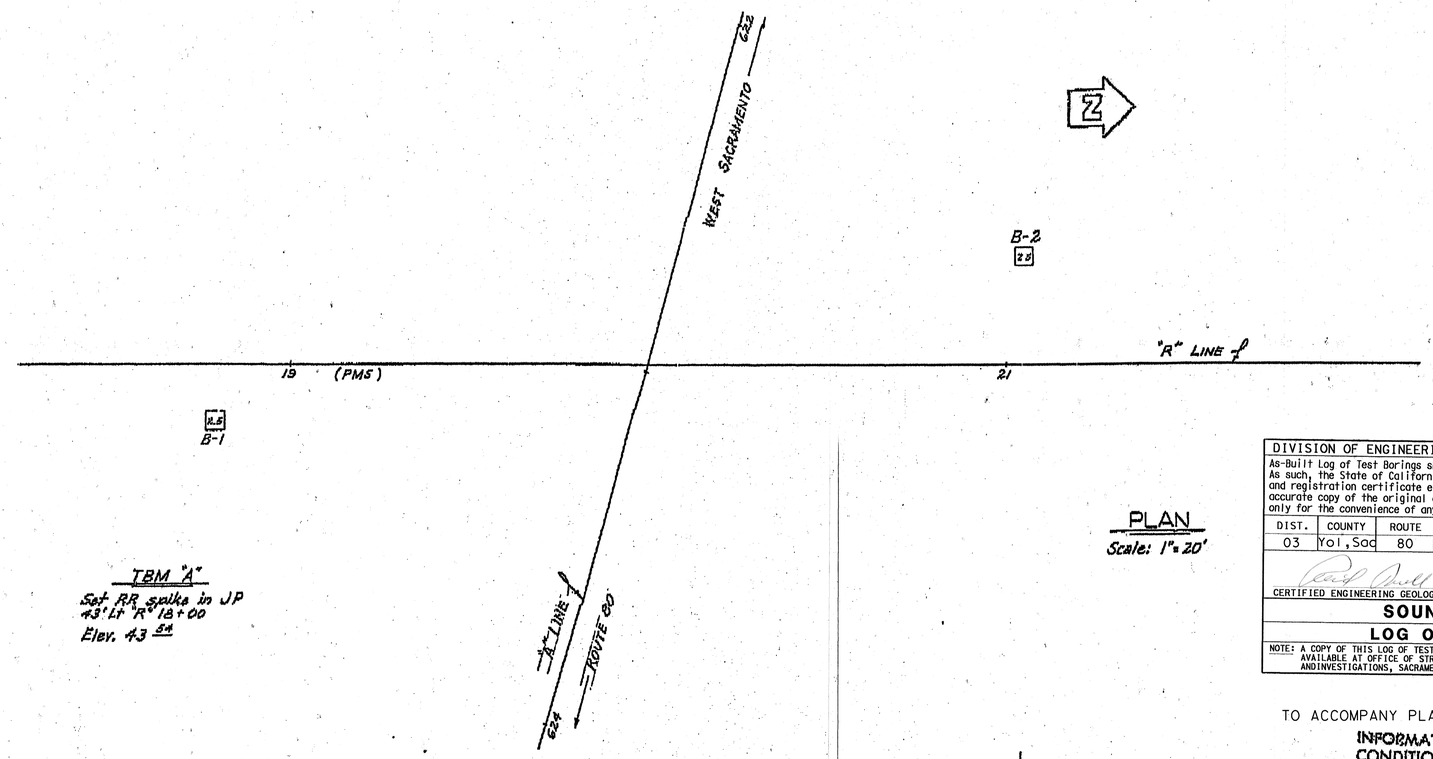
NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	G. Miller 4-63
DRAWN	K. Fridow 5-15-63
CHECKED	R. Reynolds 5-24-63

Approval Recommended by: Bridge Engineer

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

327



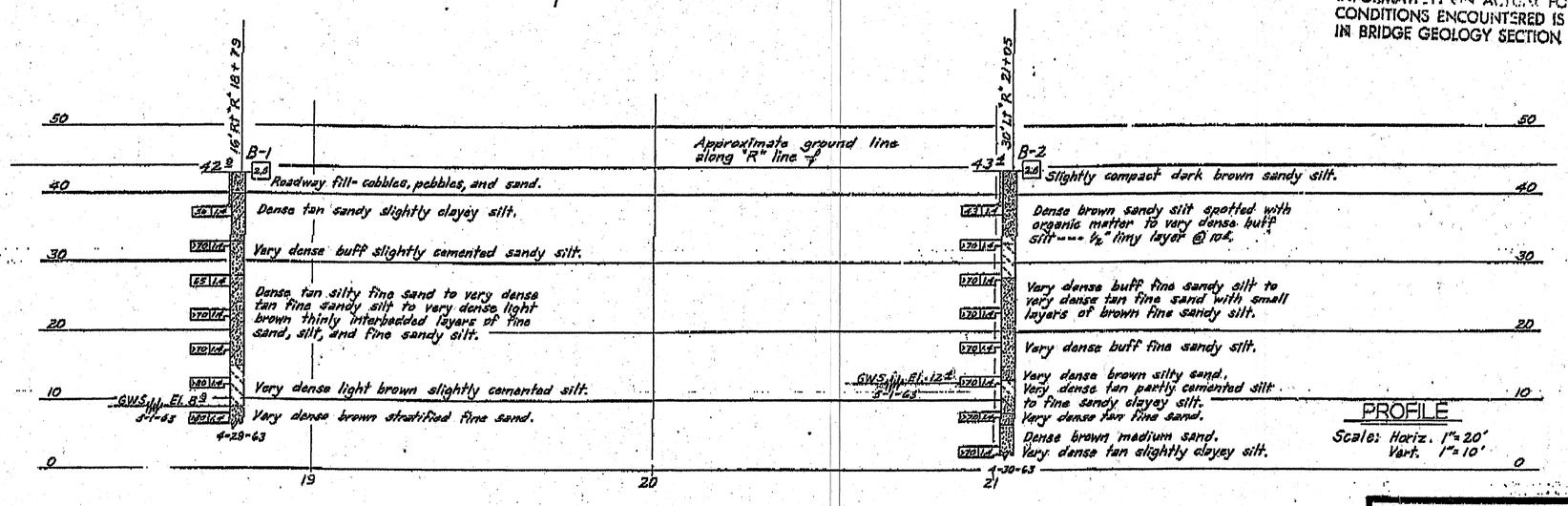
PLAN
Scale: 1" = 20'

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol, Sac	80	R10.9/R11.7, M0.0/M10.4	620	1012
CERTIFIED ENGINEERING GEOLOGIST			DATE 10/30/08		
SOUND WALL NO. 5					
LOG OF TEST BORINGS 4 OF 5					
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA			CU: 03 EA: 379701	BRIDGE No.	
				Sheet	of

PROFESSIONAL GEOLOGIST
Reid Buell
No. 1481
Exp. 4-30-09
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 9-7-10

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 10'

SHEET 15 OF 15

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

RALEY BOULEVARD OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 24-105	Post MILE 7.6	DRAWING 24105-9

Disregard prints bearing earlier numbers

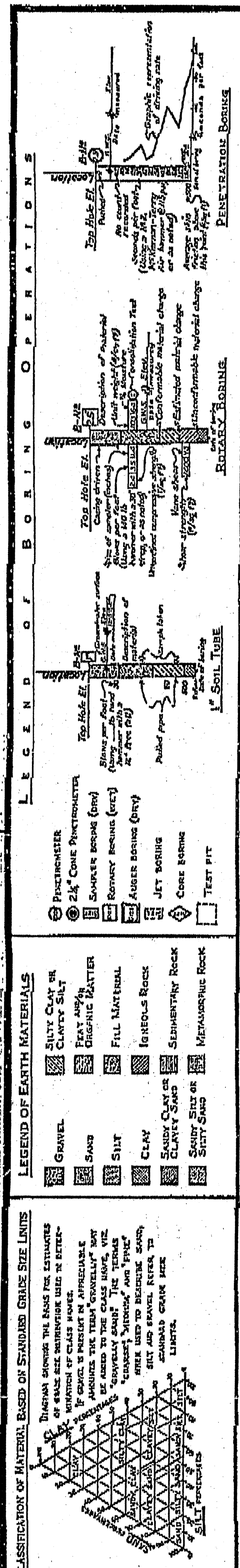
PREL. DRAWING No. PR-24105-8

337970resw5-4of5.tif

FED. ROAD DIV. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE		SHEET No.	TOTAL SHEETS
03	Sac	880	22/8.7	344	395

DATE APPROVED August 21, 1967

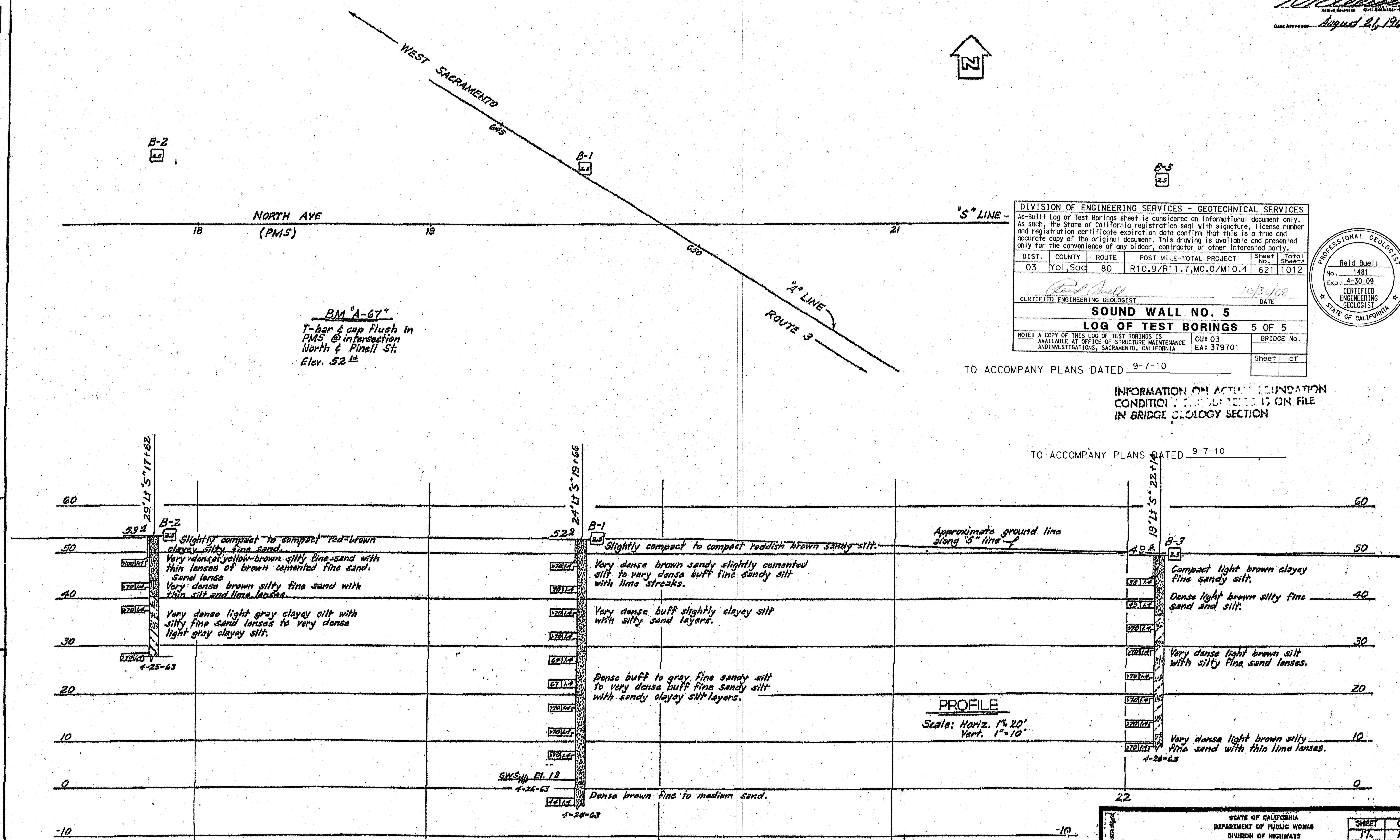


NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	By S. Allison 4-63
DRAWN	By K. Endow 5-17-63
CHECKED	By R. Reynolds 5-28-63

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

344



DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES					
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DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol,Sac	80	R10.9/R11.7,M0.0/M10.4	621	1012
CERTIFIED ENGINEERING GEOLOGIST				DATE 10/30/08	
SOUND WALL NO. 5					
LOG OF TEST BORINGS 5 OF 5					
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE ANDINVESTIGATIONS, SACRAMENTO, CALIFORNIA			CU: 03 EA: 379701	BRIDGE No.	
				Sheet	of

PROFESSIONAL GEOLOGIST
Reid Buell
No. 1481
Exp. 4-30-09
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 9-7-10

INFORMATION ON ACTU... ...UNDATION CONDITIO... ... IS ON FILE IN BRIDGE G...OLOGY SECTION

TO ACCOMPANY PLANS DATED 9-7-10

AS BUILT PLANS
Contract No. 03-072-644
Date Completed 8-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 17 OF 17

NORTH AVENUE OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 24-106 | POST MILE 8.0 | DRAWING 24106-13

Disregard prints bearing earlier numbers → PREL. DRAWING No. PR- 4/64/1964 7/1/67

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	622	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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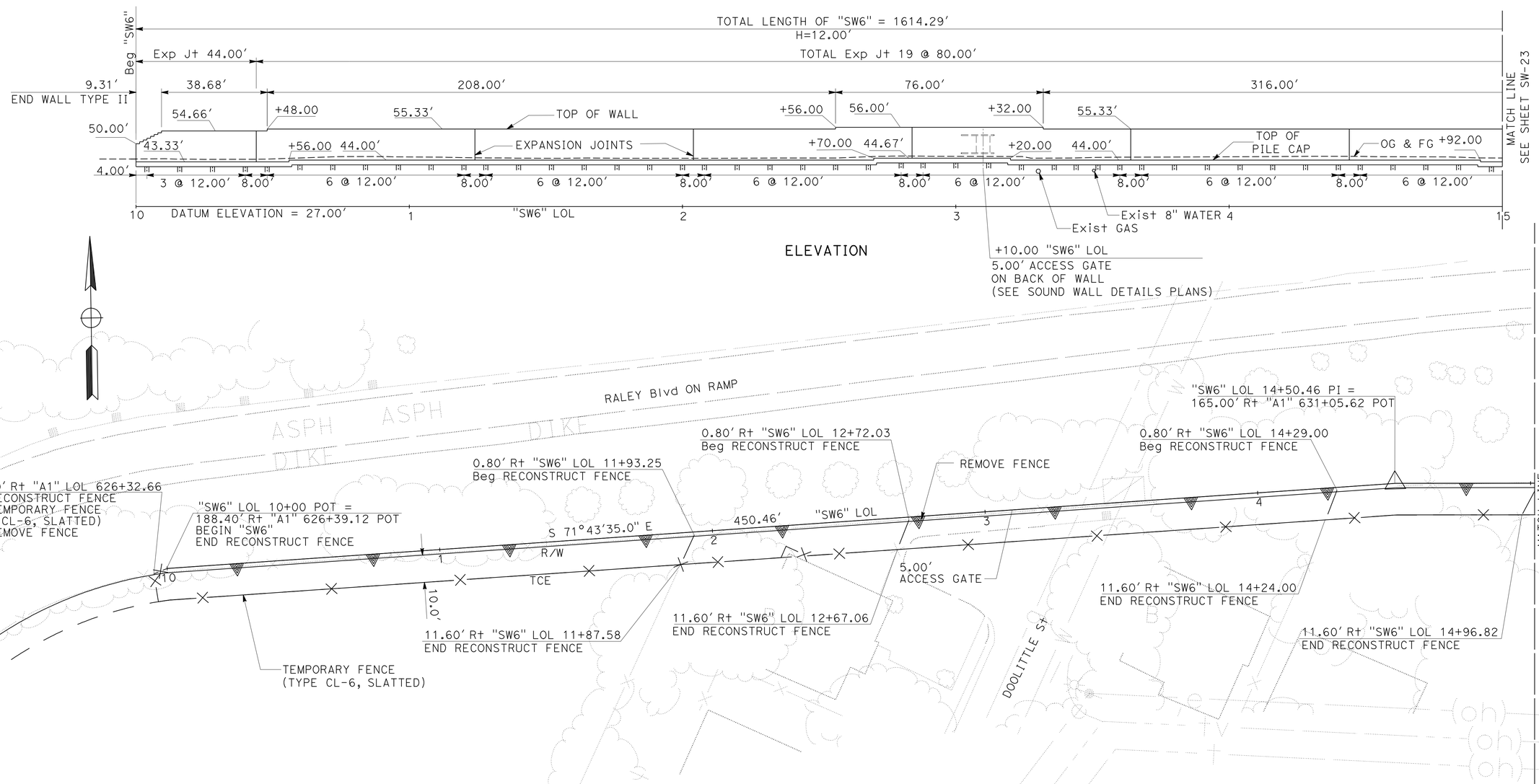

SOUND WALL PLAN

SOUND WALL No. 6

SCALE: 1" = 20'

SW-22

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

REVISED BY | DATE REVISED

A.S.RANDHAWA | AMY FONG

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 09:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	623	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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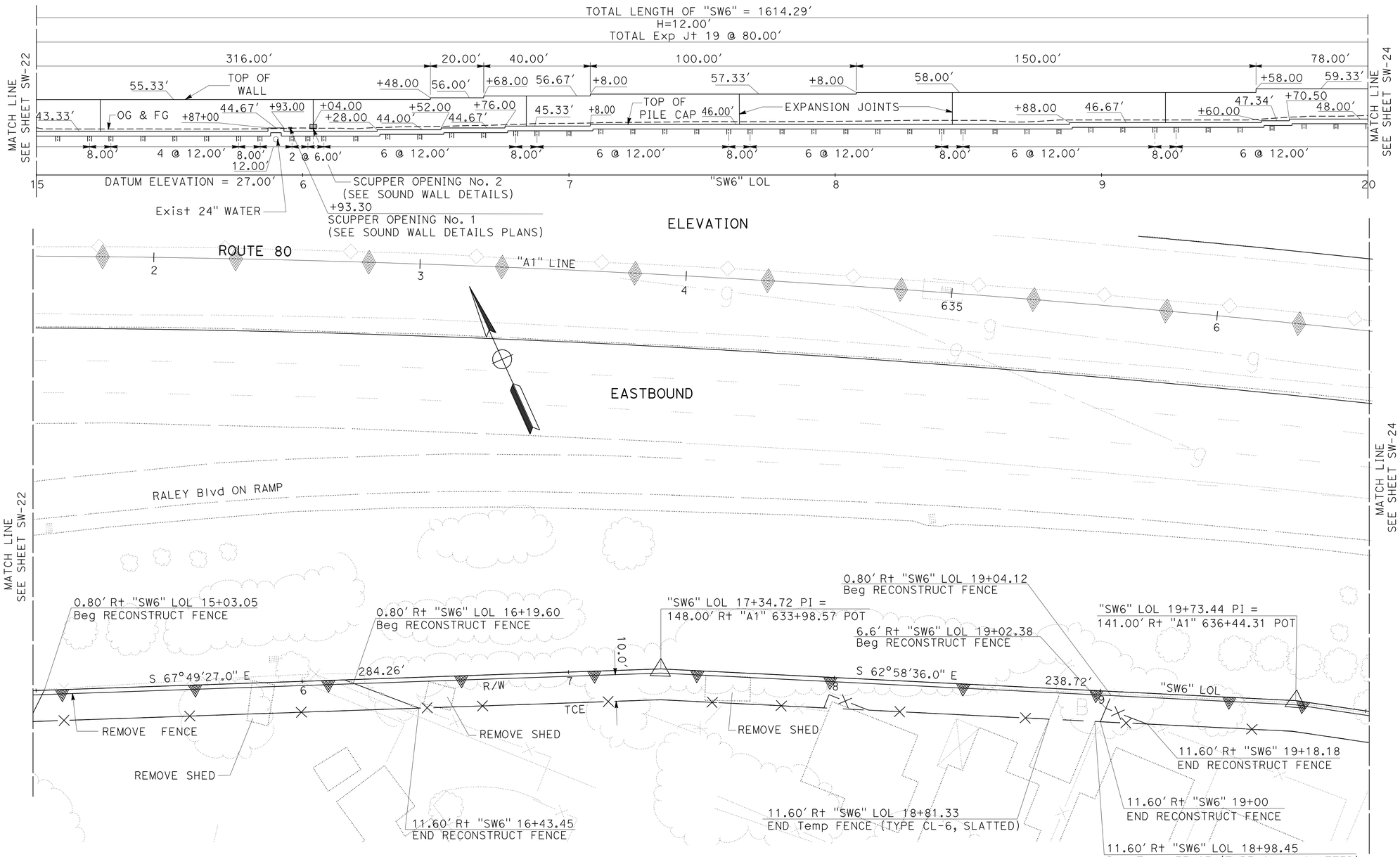

SOUND WALL PLAN
SOUND WALL No. 6
SCALE: 1" = 20'

SW-23

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

REVISED BY | DATE REVISED
A.S.RANDHAWA | AMY FONG
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 09:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	624	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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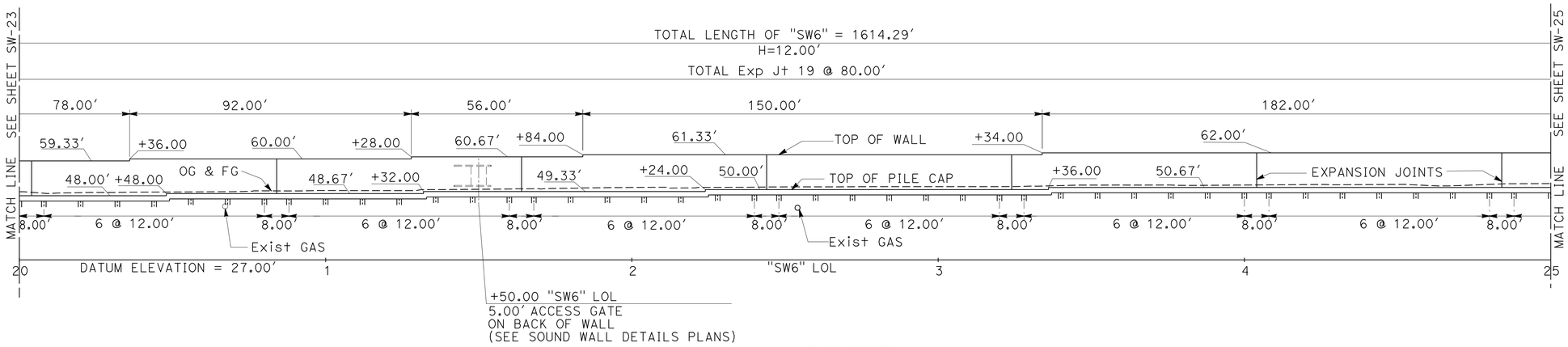
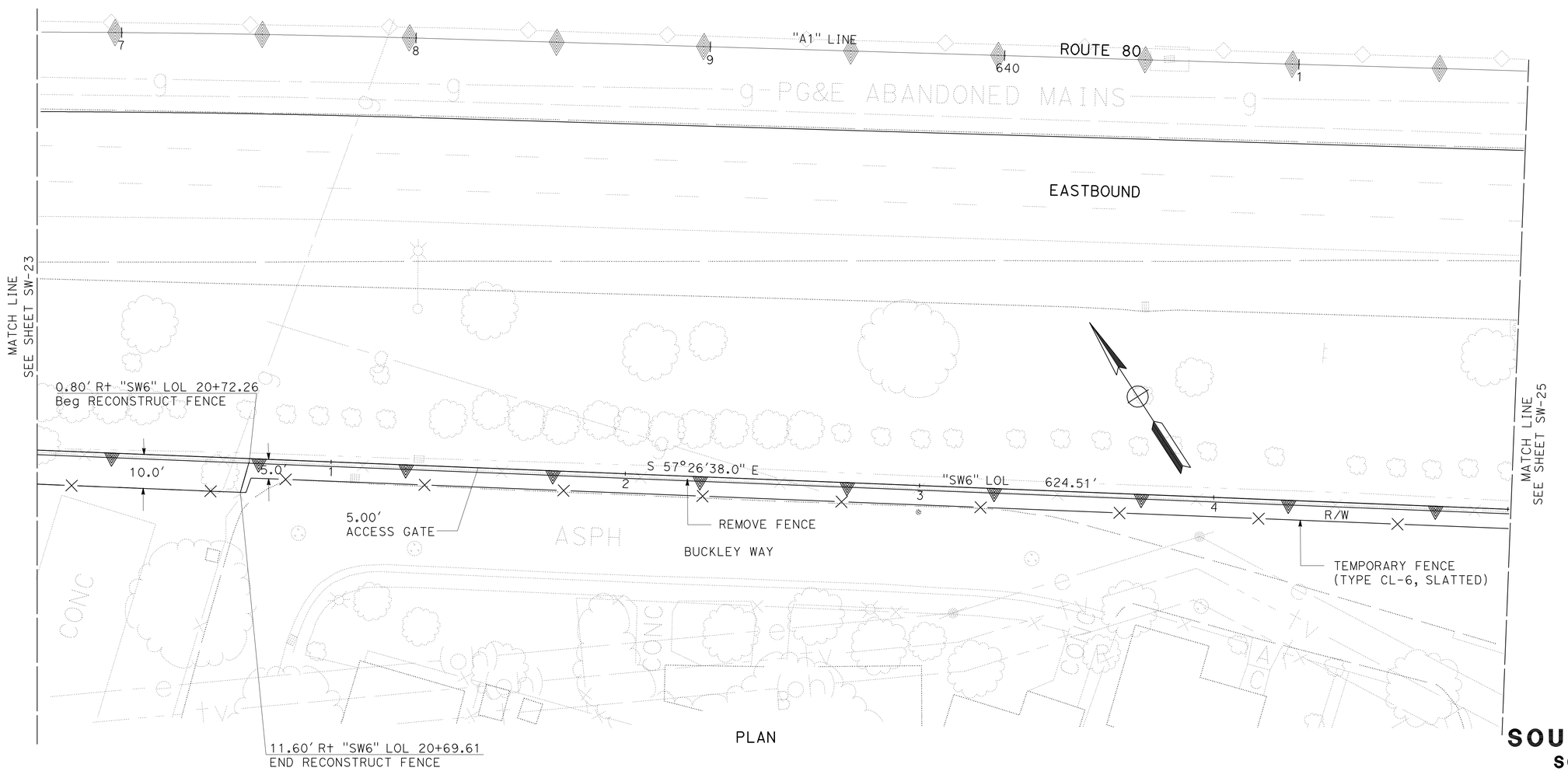


ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 6

SCALE: 1" = 20′

SW-24

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 09:25

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	625	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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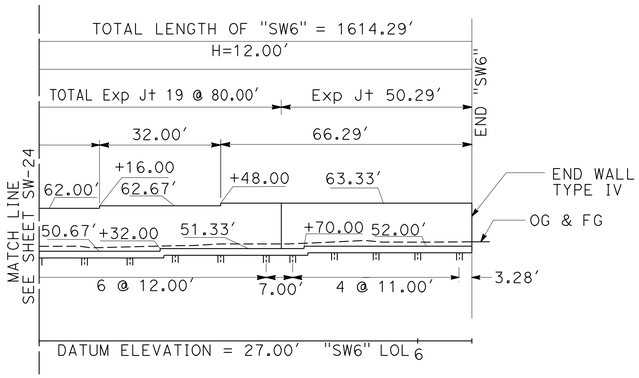
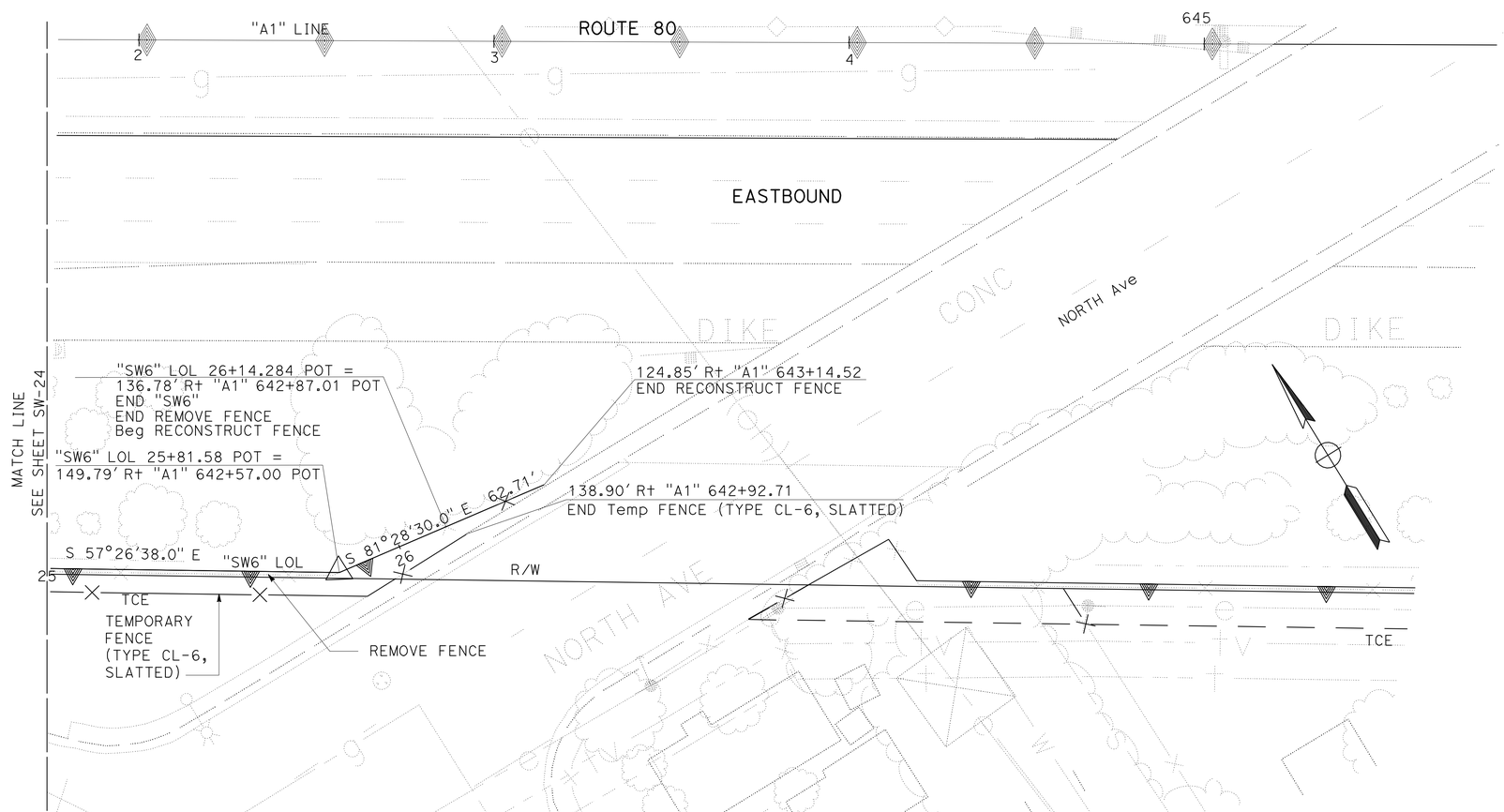


ELEVATION



PLAN

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN

SOUND WALL No. 6

SCALE: 1" = 20'

SW-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 04-FEB-2011
00-00-00 TIME PLOTTED => 09:25

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	626	1012

Reid Buell 10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

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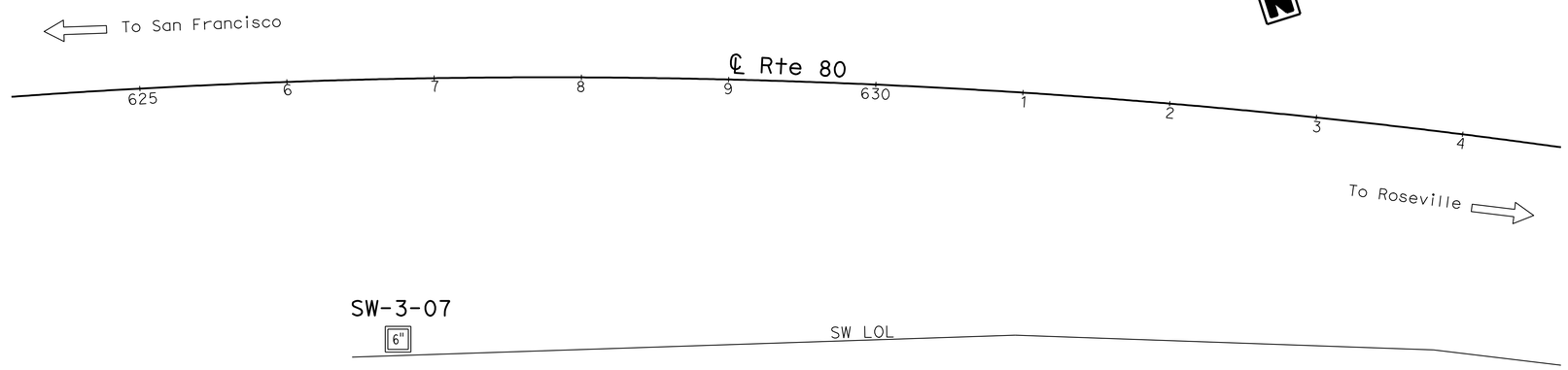
PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

This LOTB sheet was generally prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007).



BENCH MARK

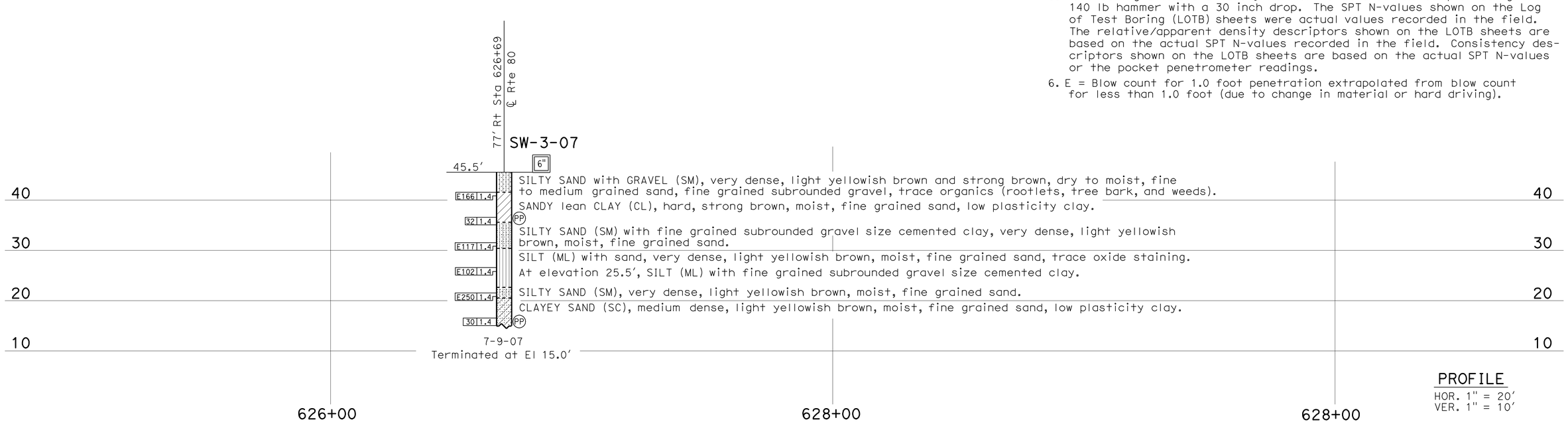
Approximate boring elevation was derived from District Survey maps.

PLAN

1" = 50′

NOTES:

1. Test boring was advanced using a hollow stem auger.
2. No ground water encountered during field investigation.
3. The descriptions and classifications of soil, including consistency and relative density descriptors, used by the field personnel for the exploration boreholes shown on these sheets are generally based on the "Soil and Rock Logging, Classification, and Presentation Manual," Division of Engineering Services, Geotechnical Services, (June 2007).
4. Soil colors were determined using Munsell Soil Color Charts (1994, Revised Edition).
5. Test boring utilized a Safety Hammer to advance the sampler using a 140 lb hammer with a 30 inch drop. The SPT N-values shown on the Log of Test Boring (LOTB) sheets were actual values recorded in the field. The relative/apparent density descriptors shown on the LOTB sheets are based on the actual SPT N-values recorded in the field. Consistency descriptors shown on the LOTB sheets are based on the actual SPT N-values or the pocket penetrometer readings.
6. E = Blow count for 1.0 foot penetration extrapolated from blow count for less than 1.0 foot (due to change in material or hard driving).



PROFILE

HOR. 1" = 20′
VER. 1" = 10′

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 6 LOG OF TEST BORINGS 1 OF 5
FUNCTIONAL SUPERVISOR NAME: Roy Bibbens	DRAWN BY: I. G-Remmen, 8/08 CHECKED BY: J. Martin	FIELD INVESTIGATION BY: J. Martin	CU 03 EA 379701	DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08	REVISION DATES / SHEET / OF

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

FILE => 337970rfsw6-1of5.dgn

USERNAME => trcarrol DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:25

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	627	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS

Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

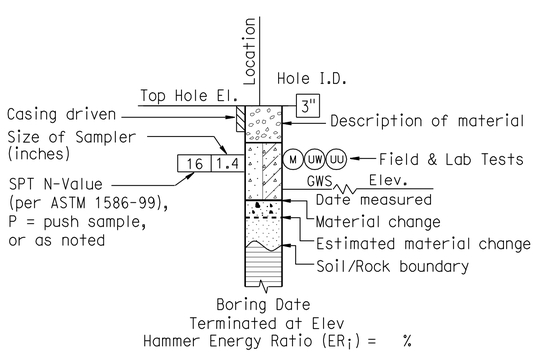
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring
Size	R P	Rotary drilled boring Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778-95)
⬚	O	Other

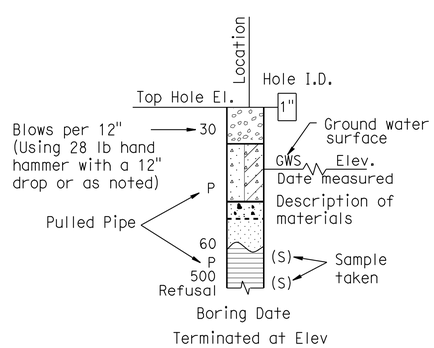
Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS

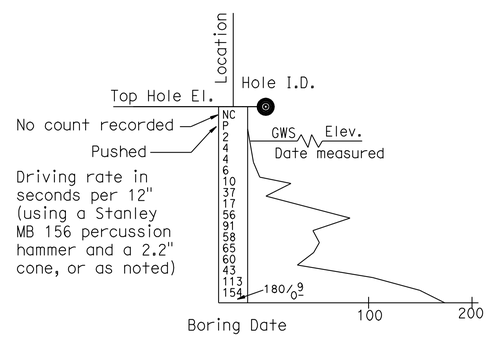
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



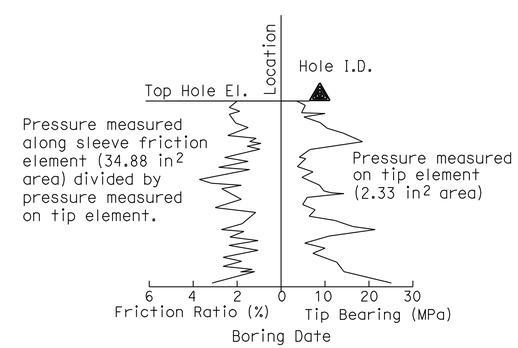
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 6 LOG OF TEST BORINGS 2 OF 5
	PREPARED BY: I. G-Remmen, 8/08				

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rfsw6-2of5.dgn

USERNAME => trcarol DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:25

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	628	1012

CERTIFIED ENGINEERING GEOLOGIST 10-30-08

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND
GP	Poorly graded GRAVEL Poorly graded GRAVEL with SAND
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GP-GM	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND
GP-GC	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GM	SILTY GRAVEL SILTY GRAVEL with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL
SP	Poorly graded SAND Poorly graded SAND with GRAVEL
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SP-SM	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL
SP-SC	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SM	SILTY SAND SILTY SAND with GRAVEL
SC	CLAYEY SAND CLAYEY SAND with GRAVEL
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL
PT	PEAT
	COBBLES COBBLES and BOULDERS BOULDERS

Graphic/Symbol	Group Names
CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (PP) Pocket Penetrometer
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (TV) Pocket Torvane
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)
- (VS) Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE

Description		Size
Boulder		> 12"
Cobble		3" to 12"
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: I. G-Remmen, 8/08

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH

BRIDGE NO.
POST MILES

SOUND WALL NO. 6
LOG OF TEST BORINGS 3 OF 5

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rfsw6-3of5.dgn

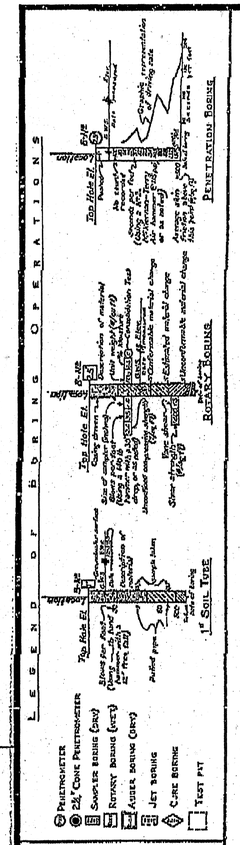
USERNAME => trcarol DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:25

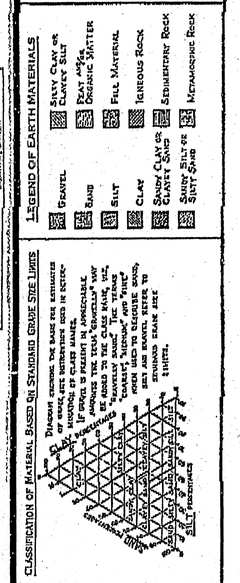
FED. ROAD DIV. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	SECTION	BRIDGE No.	TOTAL SHEETS
03	Sac	880	2-B	327	393

BRIDGE ENGINEER — CIVIL ENGINEER—SUPERVISING

DATE APPROVED August 26, 1967





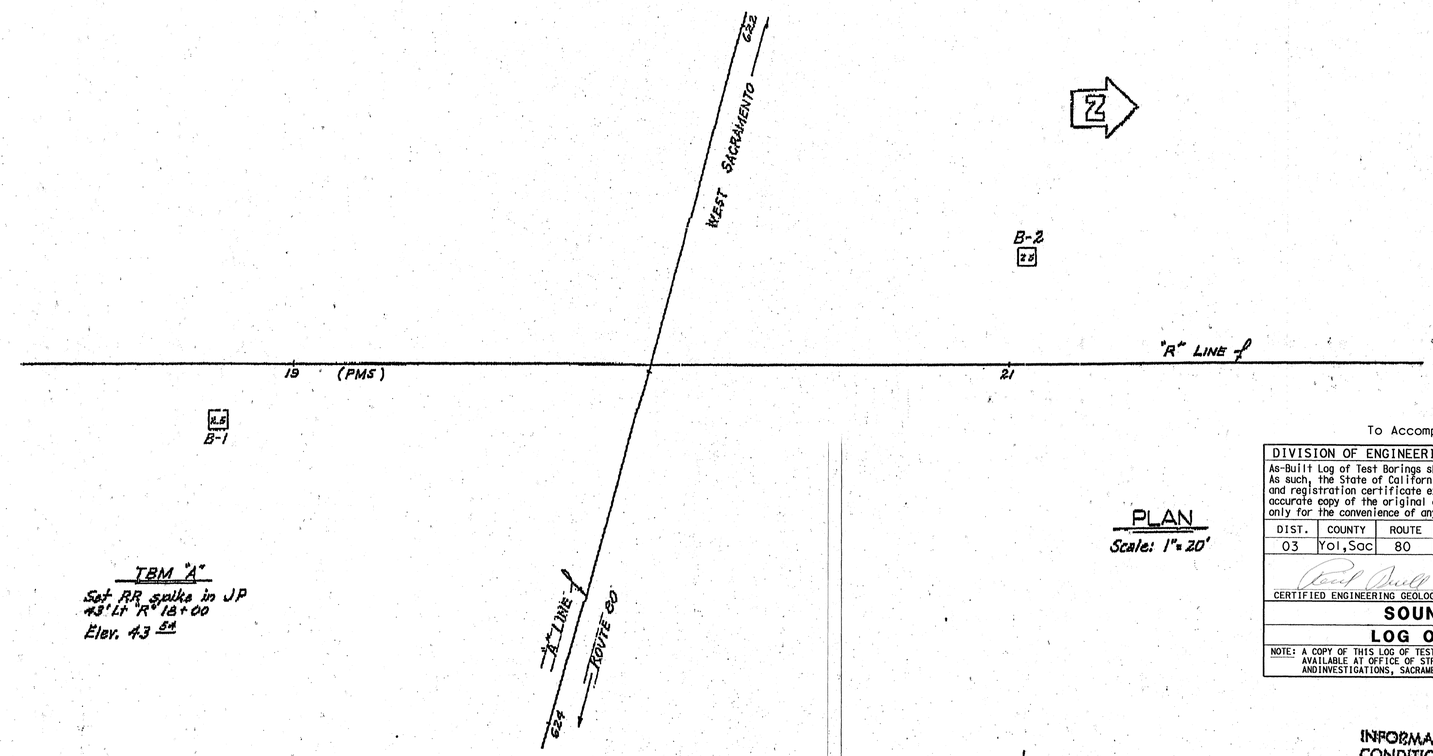
NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	by G. Miller	4-63
DRAWN	by K. Endow	5-15-63
CHECKED	by G. Reynolds	5-21-63

Approval Recommended by [signature] Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

327



To Accompany Plans Dated 9-7-10

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol, Sac	80	R10.9/R11.7, M0.0/M10.4	629	1012

CERTIFIED ENGINEERING GEOLOGIST — DATE 10/30/08

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 6

LOG OF TEST BORINGS 4 OF 5

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

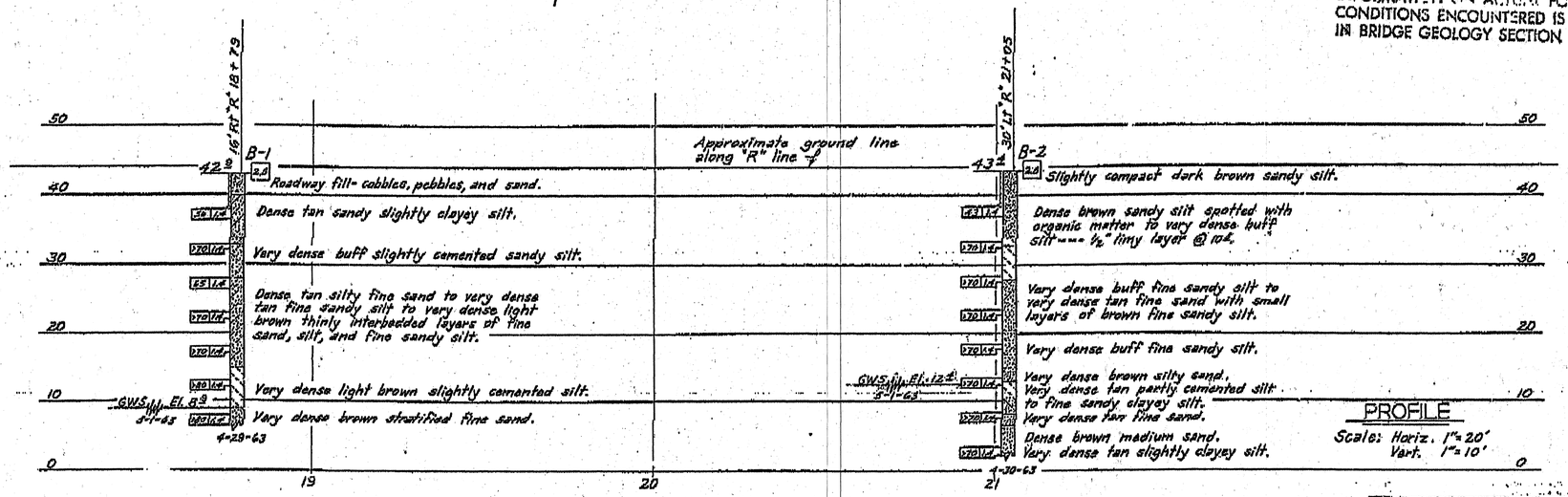
CU: 03
EA: 379701

BRIDGE No.

Sheet of

PLAN
Scale: 1" = 20'

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 10'

SHEET 15 OF 15

AS BUILT PLANS
Contract No. 03-072-644
Date Completed 8-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

RALEY BOULEVARD OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 24-105	POST MILE 7.6	DRAWING 24105-9

Disregard prints bearing earlier numbers

PRIL. DRAWING No. PR-24105-8

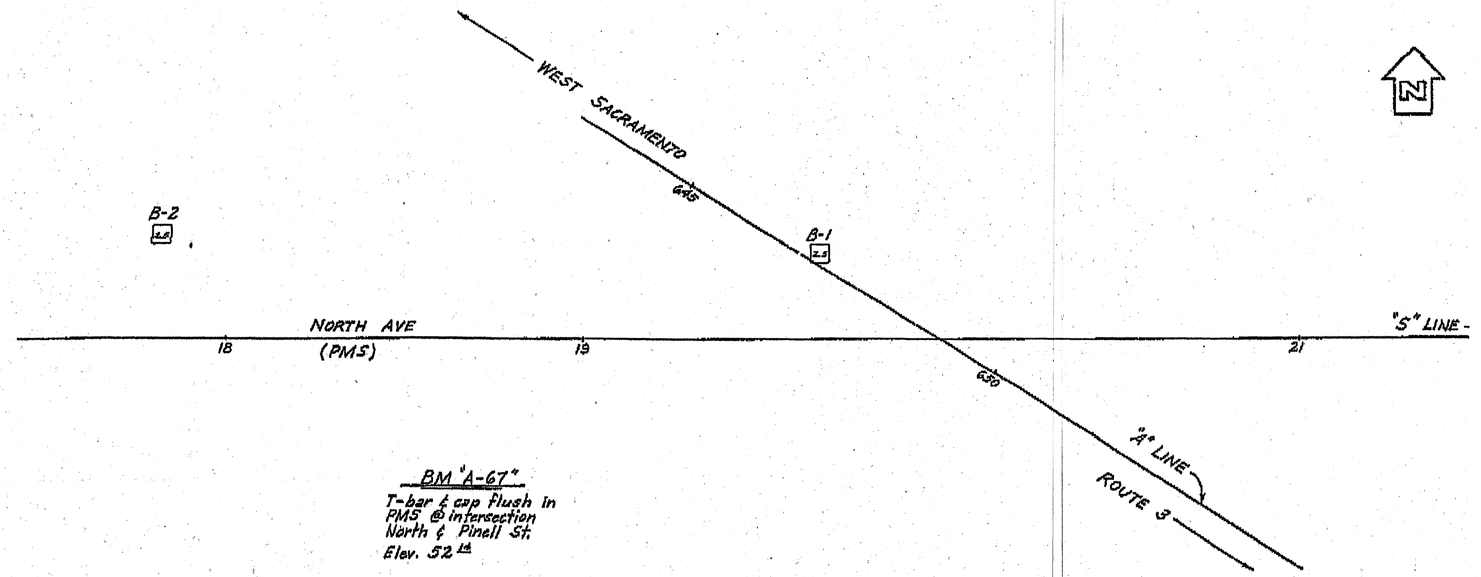
337970rfsw6-4of5.tif

FED. ROAD DIV. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE		SHEET No.	TOTAL SHEETS
03	Sac	80	9.4/R7	344	345

Bridge Engineer — Civil Engineer — Architect

Date Approved August 26, 1967



To Accompany Plans Dated 9-7-10

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol, Sac	80	R10.9/R11.7, M0.0/M10.4	630	1012

CERTIFIED ENGINEERING GEOLOGIST — DATE 1/30/08

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 6

LOG OF TEST BORINGS 5 OF 5

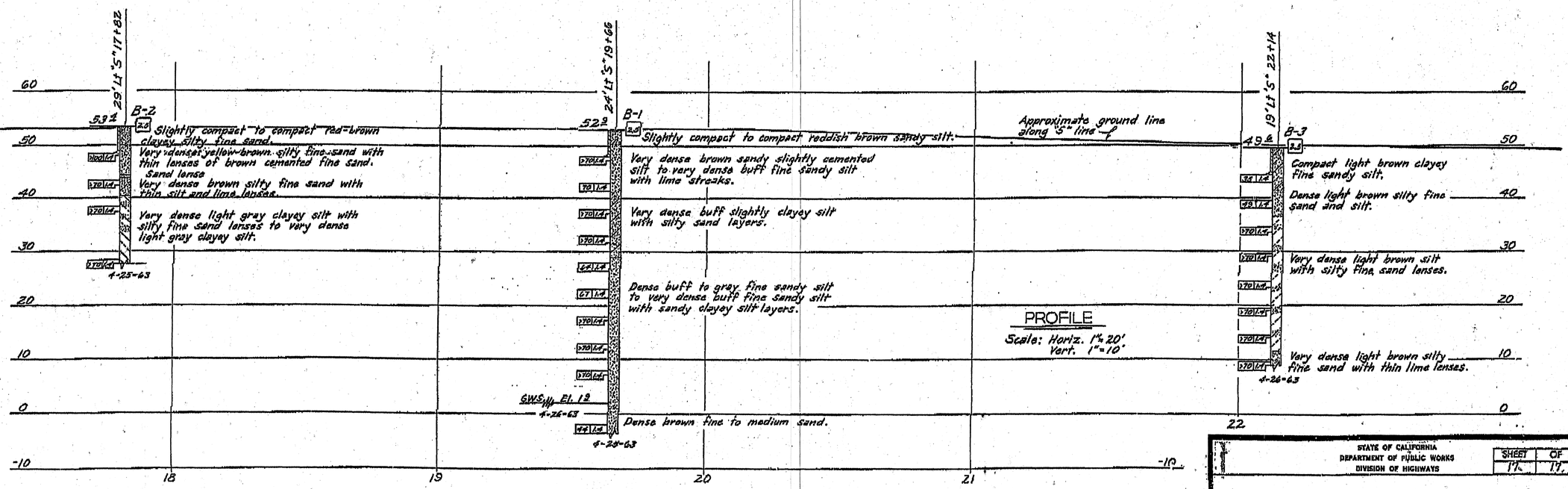
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

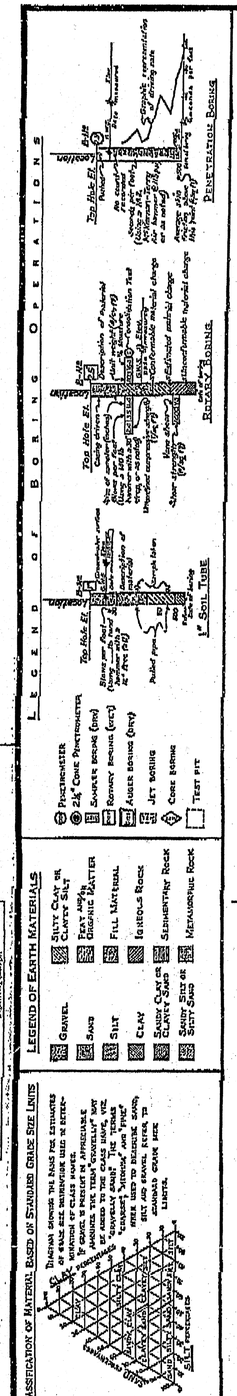
CU: 03
EA: 379701

BRIDGE No.

Sheet of

INFORMATION ON ACTUAL FOUNDATION CONDITIONS FROM TESTS IS ON FILE IN BRIDGE GEOLOGY SECTION





NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

FIELD STUDY	W. S. ALLISON 4-63
DRAWN	W. K. ENGLOW 5-17-63
CHECKED	W. R. REYNOLDS 5-28-63

Approval Recommended by R. Schuchardt — Bridge Engineer

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

34#

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET	OF
17	17

NORTH AVENUE OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 24-106 | POST MILE 8.0 | DRAWING 24106-13

Disregard prints bearing earlier numbers → PREL. DRAWING No. PR-

337970rfsw6-5of5.tif

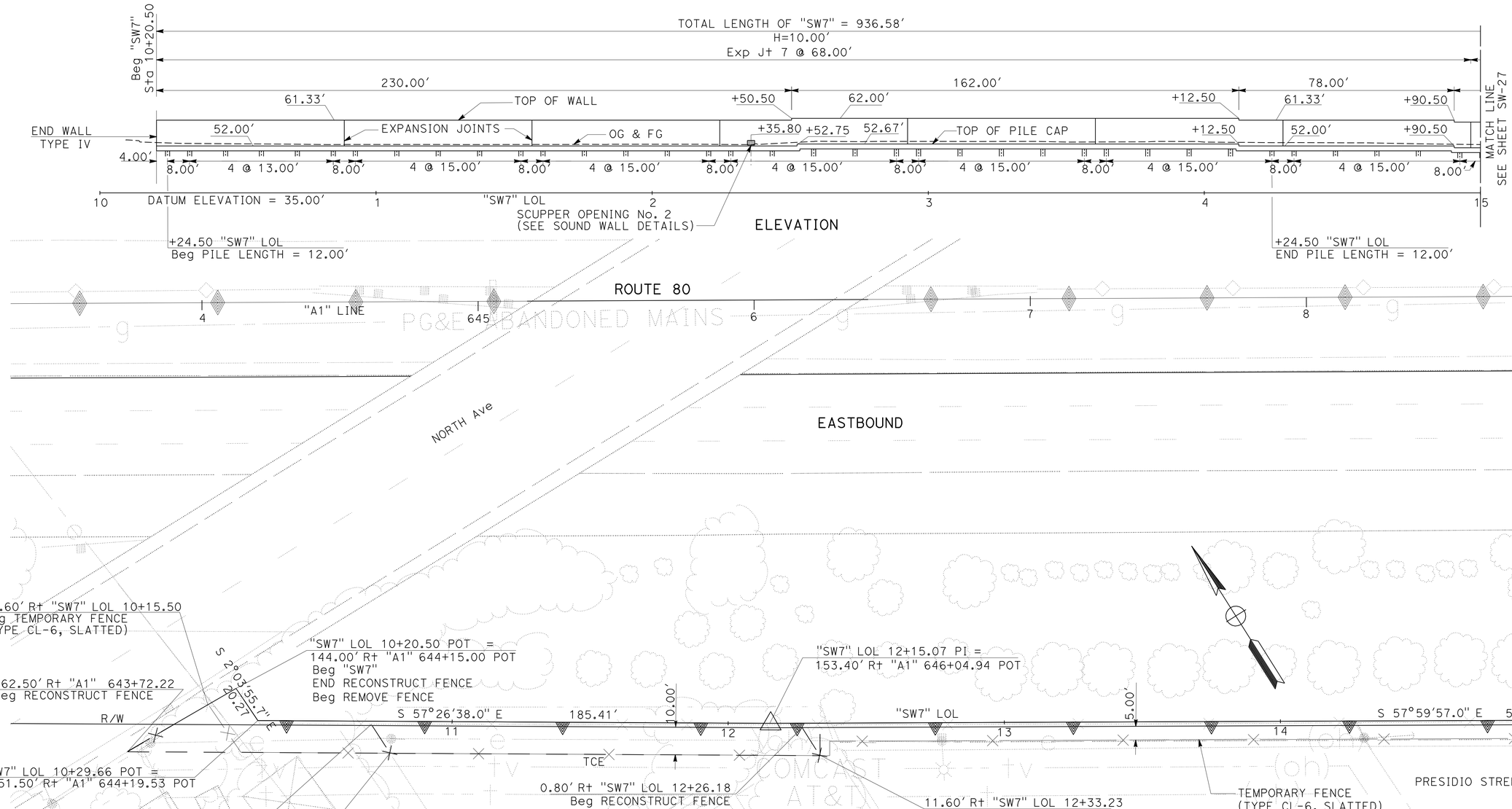
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	631	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.



SOUND WALL PLAN

SOUND WALL No. 7

SCALE: 1" = 20'

SW-26

REVISED BY	DATE REVISED
A.S.RANDHAWA	AMY FONG
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 09:25

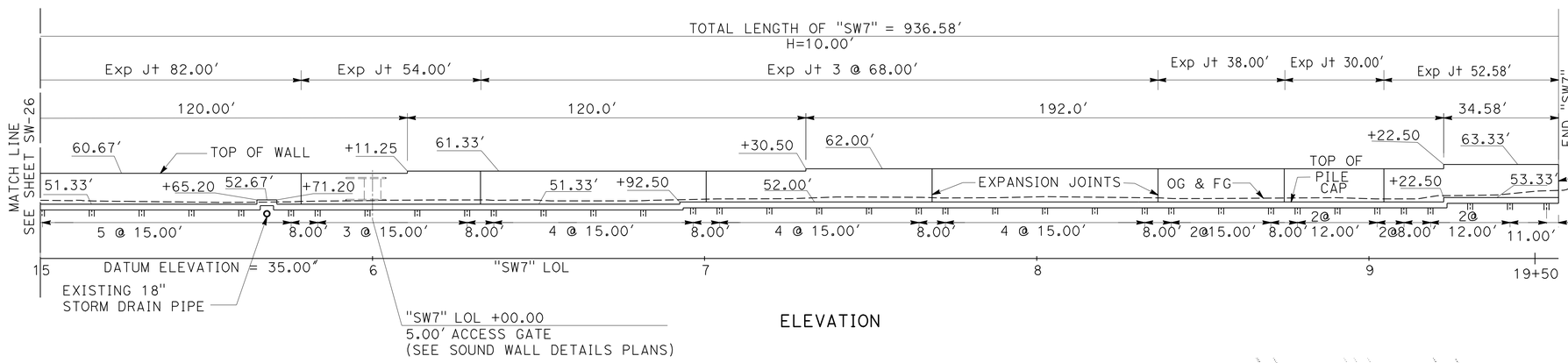
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	632	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

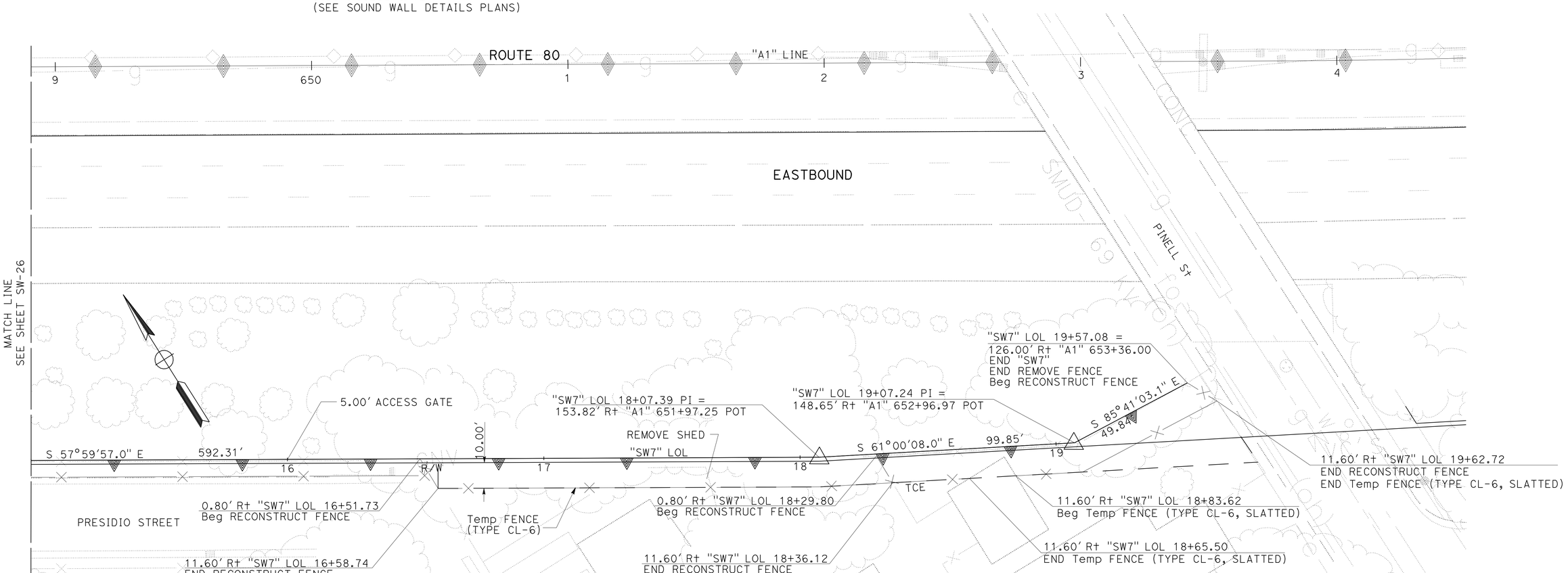
9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.



ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 7

SCALE: 1" = 20′

SW-27

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY / DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 09:26

FED. ROAD DIV. No.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE		SHEET No.	TOTAL SHEETS
03	Sac	80	22/27	344	997

Bridge Engineer — Civil Engineer-Architect-Engineer

Date Approved August 24, 1967

To Accompany Plans Dated 9-7-10

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol,Sac	80	R10.9/R11.7,M0.0/M10.4	633	1012
CERTIFIED ENGINEERING GEOLOGIST			10/30/08 DATE		

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 7

LOG OF TEST BORINGS 1 OF 2

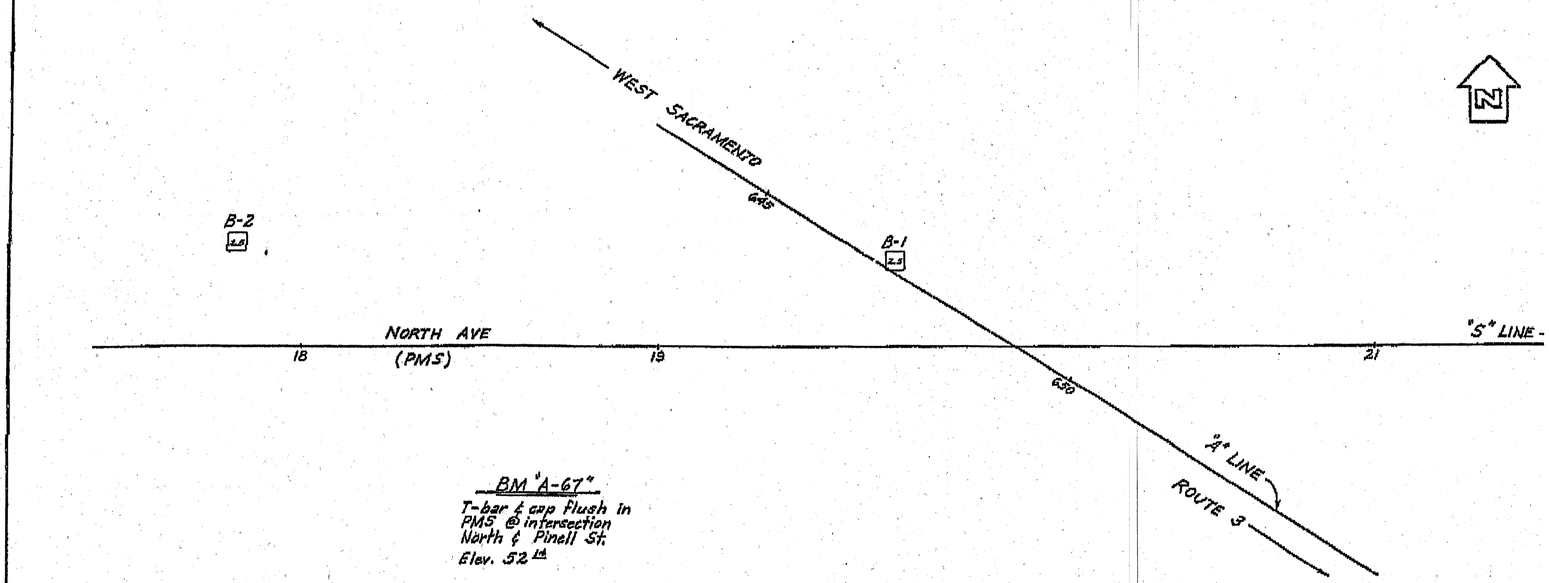
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

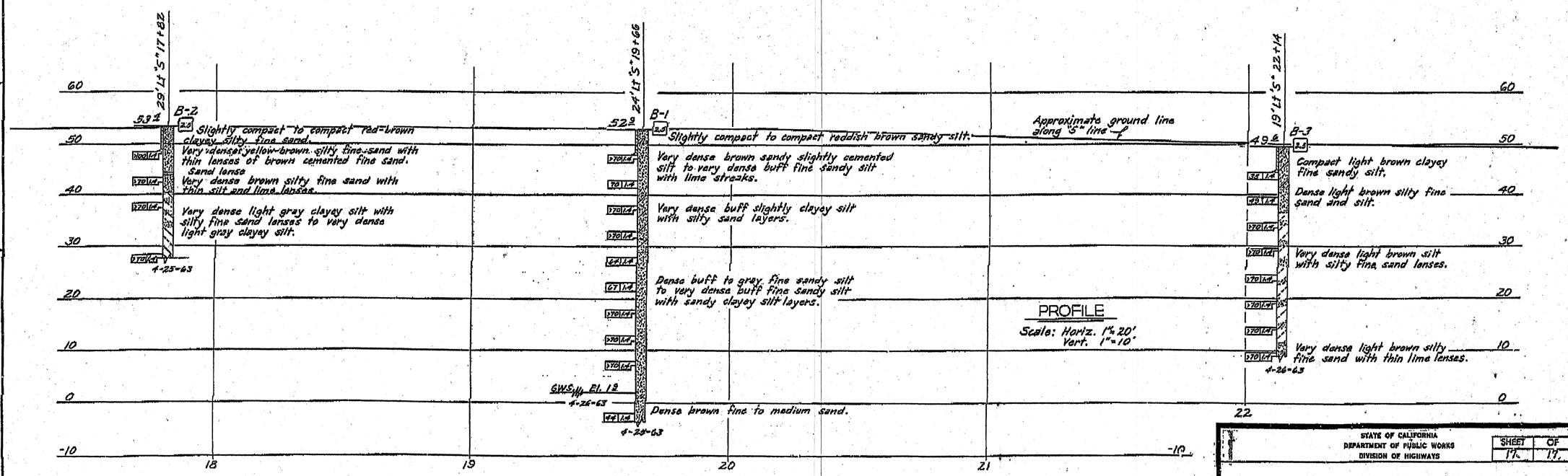
CU: 03
EA: 379701

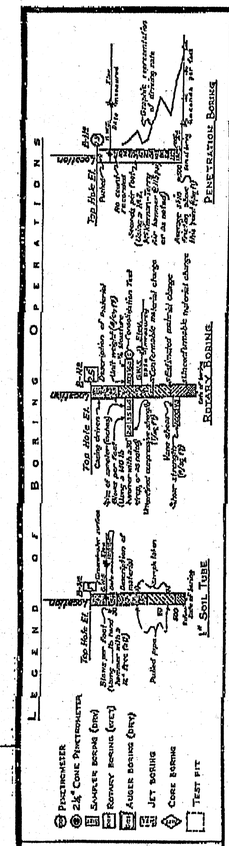
BRIDGE No.

Sheet of

INFORMATION ON ACTUAL FOUNDATION CONDITIONS [illegible] IS ON FILE IN BRIDGE GEOLOGY SECTION







FIELD STUDY	by S. Allison 4-63
DRAWN	by K. Endsley 5-17-63
CHECKED	by R. Reynolds 3-28-63

Attest: Bridge Engineer — Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET	OF
14	17

NORTH AVENUE OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 24-106	POST MILE 8.0	DRAWING 24106-13

Disregard prints bearing earlier numbers → PREL. DRAWING No. PR-

337970rgsw7-1of2.tif

FED. ROAD DIV. No.	STATE	F.A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

Dist.	County	Route		Sheet No.	Total Sheets
03	Sac	80	R10.9/R11.7	357	575

Chief Engineer — Long Range Planning — Engineer Geology

DATE ENGINEER August 21, 1967

To Accompany Plans Dated 9-7-10

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol, Sac	80	R10.9/R11.7, M0.0/M10.4	634	1012

Reid Buell — 10/30/08

CERTIFIED ENGINEERING GEOLOGIST — DATE

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 7

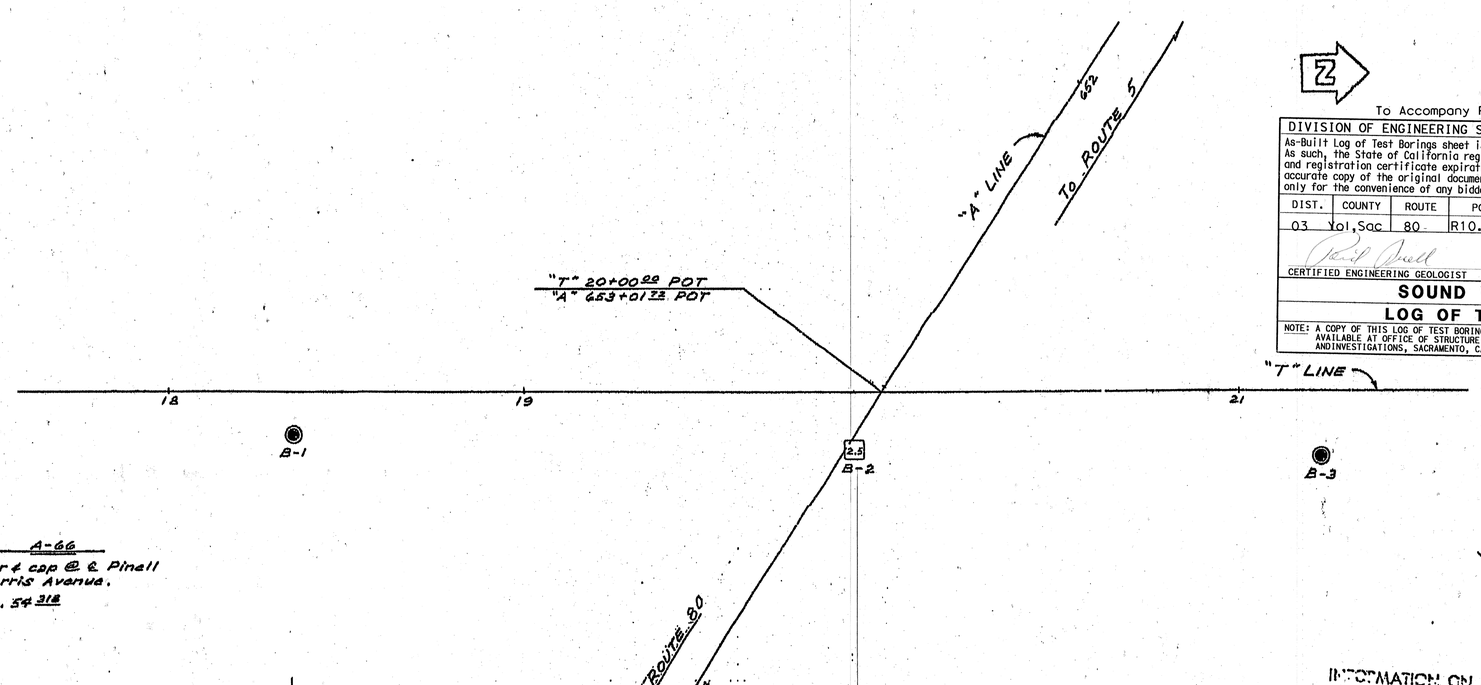
LOG OF TEST BORINGS 2 OF 2

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

CU: 03
EA: 379701

BRIDGE No.

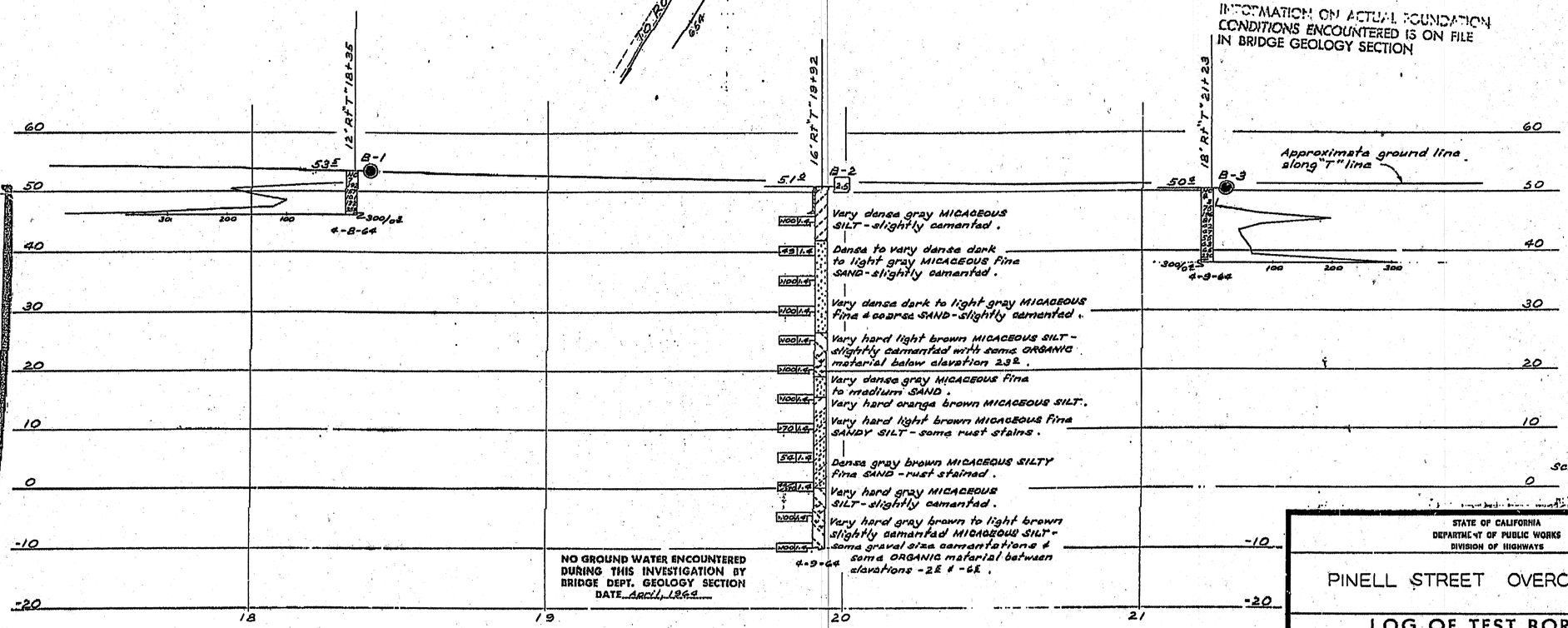
Sheet of



A-66
T-bar & cap @ E. Pinell & Harris Avenue.
Elev. 54.318

PLAN
Scale: 1" = 20'

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION



PROFILE
Scale: Horiz. 1" = 20'
Vert. 1" = 10'

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE April, 1964

LEGEND OF BORING OPERATIONS

- Penetrometer
- 2¼" Cone Penetrometer
- Sampler Boring (Auger)
- Rotary Boring (Wet)
- Auger Boring (Dry)
- Jet Boring
- Core Boring
- Test Pit

Penetration Boring

Rotary Boring

1" Soil Tube

LEGEND OF EARTH MATERIALS

- Gravel
- Sand
- Silt
- Clay
- Sandy Clay or Clayey Sand
- Sandy Silt or Silty Sand
- Silty Clay or Clayey Silt
- Peat and Organic Matter
- Fill Material
- Igneous Rock
- Sedimentary Rock
- Metamorphic Rock

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

Diagram showing the basis for estimates of grain size distribution based on sieve sizes. "Gravelly" may be added to the class name, viz., "Gravelly Sand" if the material is estimated to contain 15% or more gravel. Notes to describe sand, silt and gravel sizes, to "coarse", "medium" and "fine" when need to describe sand, silt and gravel sizes within these limits.

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

AS BUILT PLANS
Contract No. 03-072-644
Date Completed 8-70
Document No. 2000961

FIELD STUDY	By F. Nelson 8-24-64
DRAWN	By K. Endow 8-24-64
CHECKED	By M. Heaney 8-26-64

Approval Recommended By: [signature]

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

359

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET	OF
15	15

PINELL STREET OVERCROSSING

LOG OF TEST BORINGS

SCALE	BRIDGE	POST MILE	DRAWING
As Noted	24-204	8.2	24204-8

03208
072641

Disregard prints bearing earlier numbers → PREL. DRAWING NO. PR-24204-8/12/66

337970rgsw7-2of2.tif

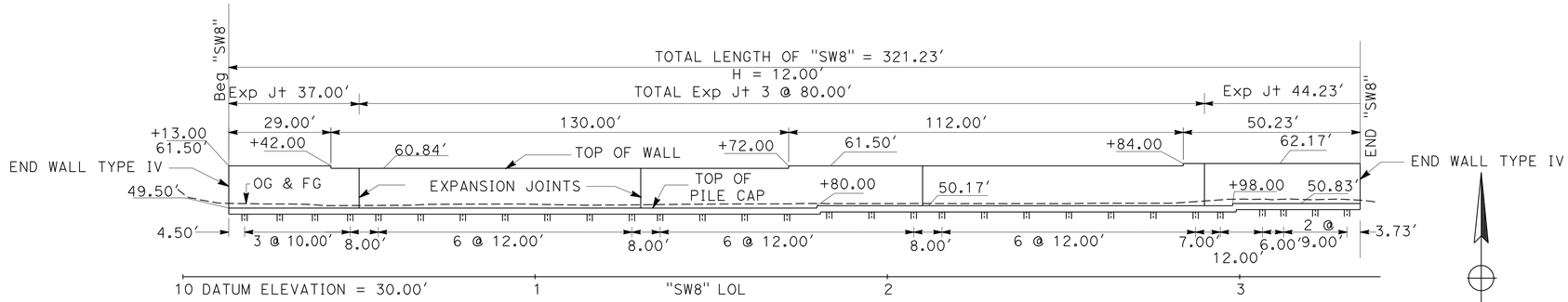
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	635	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

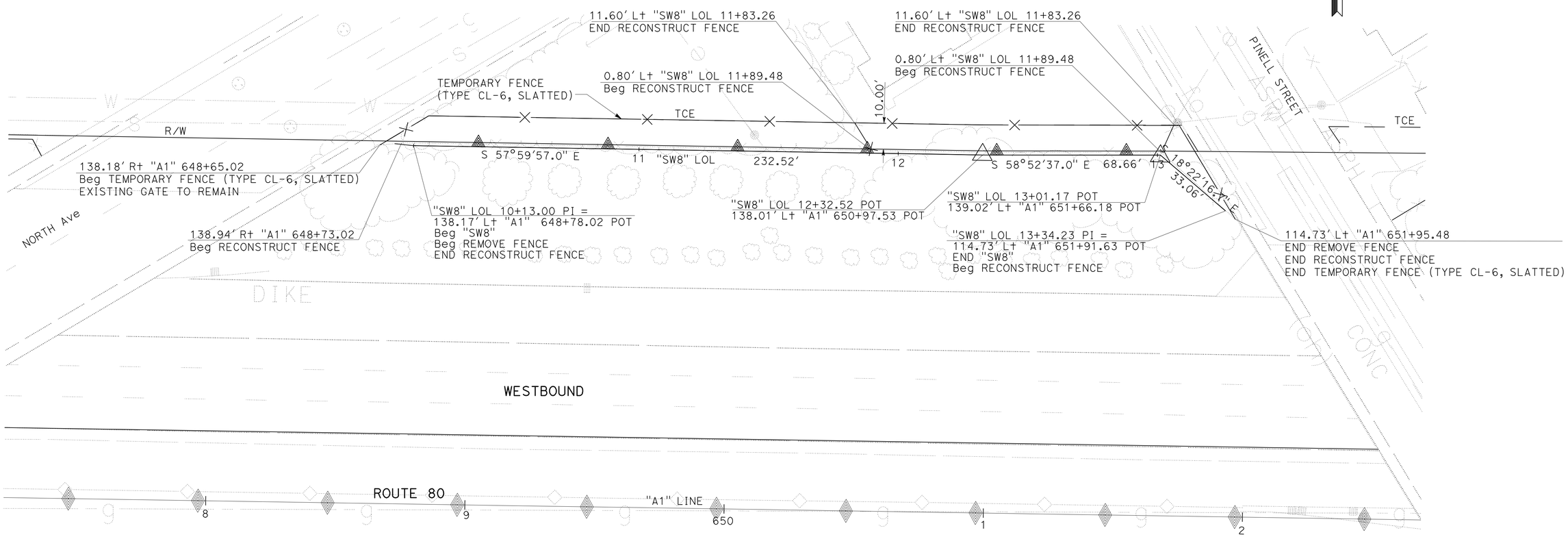
9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.



ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 8

SCALE: 1" = 20'

SW-28

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
FUNCTIONAL SUPERVISOR: CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

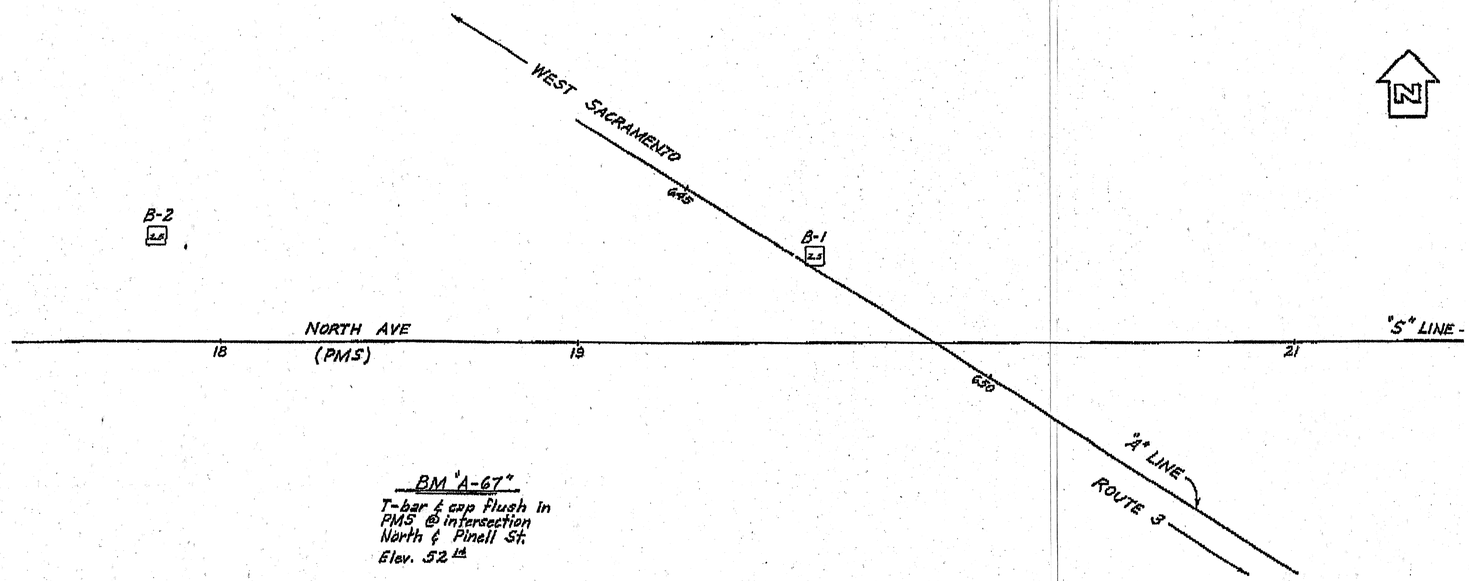
LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 09:26

FED. ROAD DIV. No.	STATE	F.A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE		SHEET No.	TOTAL SHEETS
03	Sac	880	9.2/10.7	314	997

Bridge Engineer — Civil Engineer — Highway Engineer

Date Approved August 24, 1967



BM "A-67"
T-bar & cap flush in PMS @ intersection North & Pinell St.
Elev. 52.14

To Accompany Plans Dated 9-7-10

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol,Sac	80	R10.9/R11.7,M0.0/M10.4	636	1012

Reid Buell — CERTIFIED ENGINEERING GEOLOGIST — DATE 10/30/08

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 8

LOG OF TEST BORINGS 1 OF 2

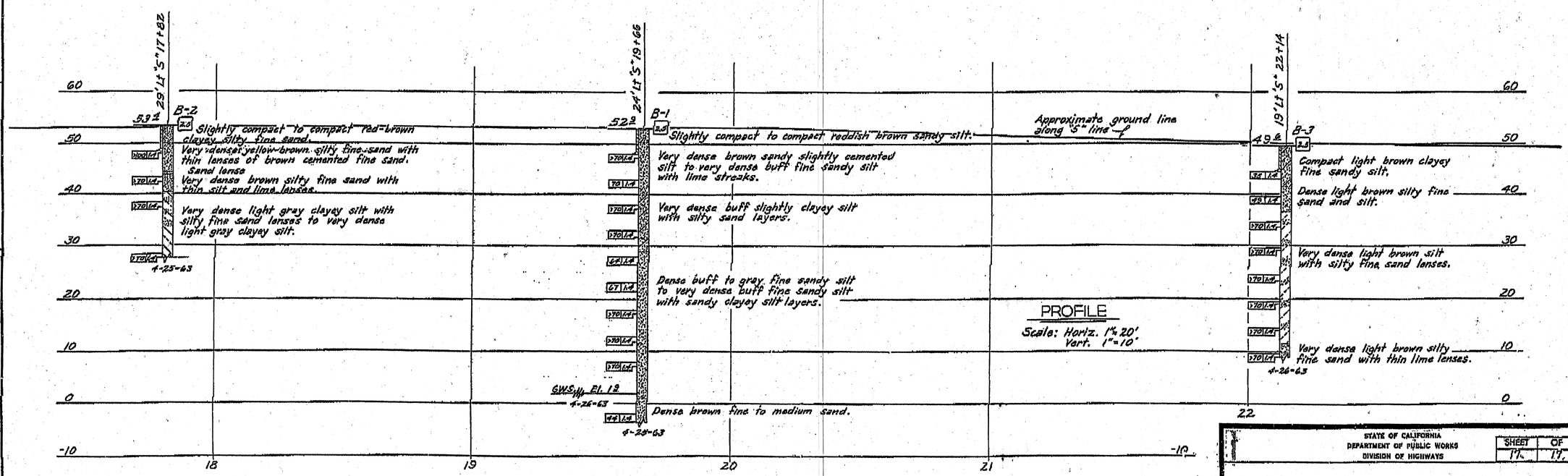
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

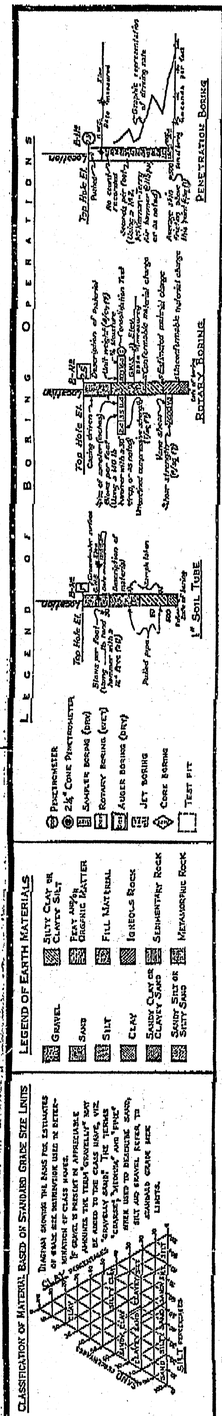
CU: 03
EA: 379701

BRIDGE No.

Sheet of

INFORMATION ON ACTUAL FOUNDATION CONDITIONS [illegible] IS ON FILE IN BRIDGE GEOLOGY SECTION





FIELD STUDY	by S. Allison 4-63	
DRAWN	by K. Endom 5-17-63	
CHECKED	by R. Reynolds 5-28-63	

Approved Recommended by: R. Reynolds — Principal Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 30000961

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET	OF
17	17

NORTH AVENUE OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 24-106 | POST MILE 8.0 | DRAWING 24106-13

Disregard prints bearing earlier numbers → PREL. DRAWING No. PR-

34

337970rhsw8-1of2.tif

FED. ROAD DIST. NO.	STATE	F.A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.			

Dist.	County	Route		Sheet No.	Total Sheets
03	Sac	80	23/16.7	157	395

August 21, 1967

To Accompany Plans Dated 9-7-10

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

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DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol, Sac	80	R10.9/R11.7, M0.0/M10.4	637	1012

Reid Buell 10/30/08
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

SOUND WALL NO. 8

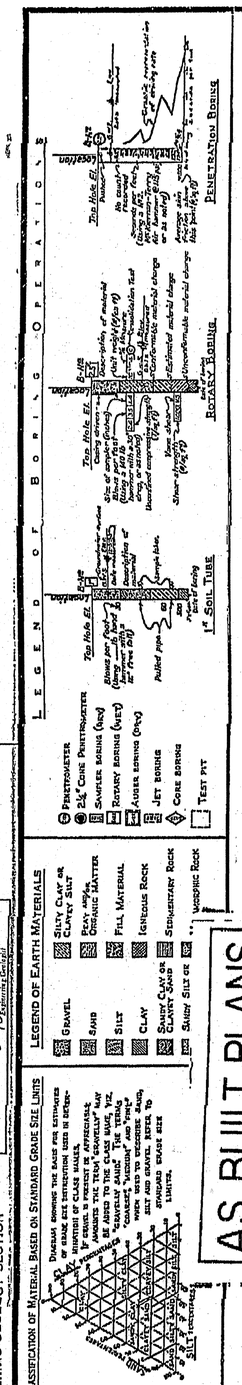
LOG OF TEST BORINGS 2 OF 2

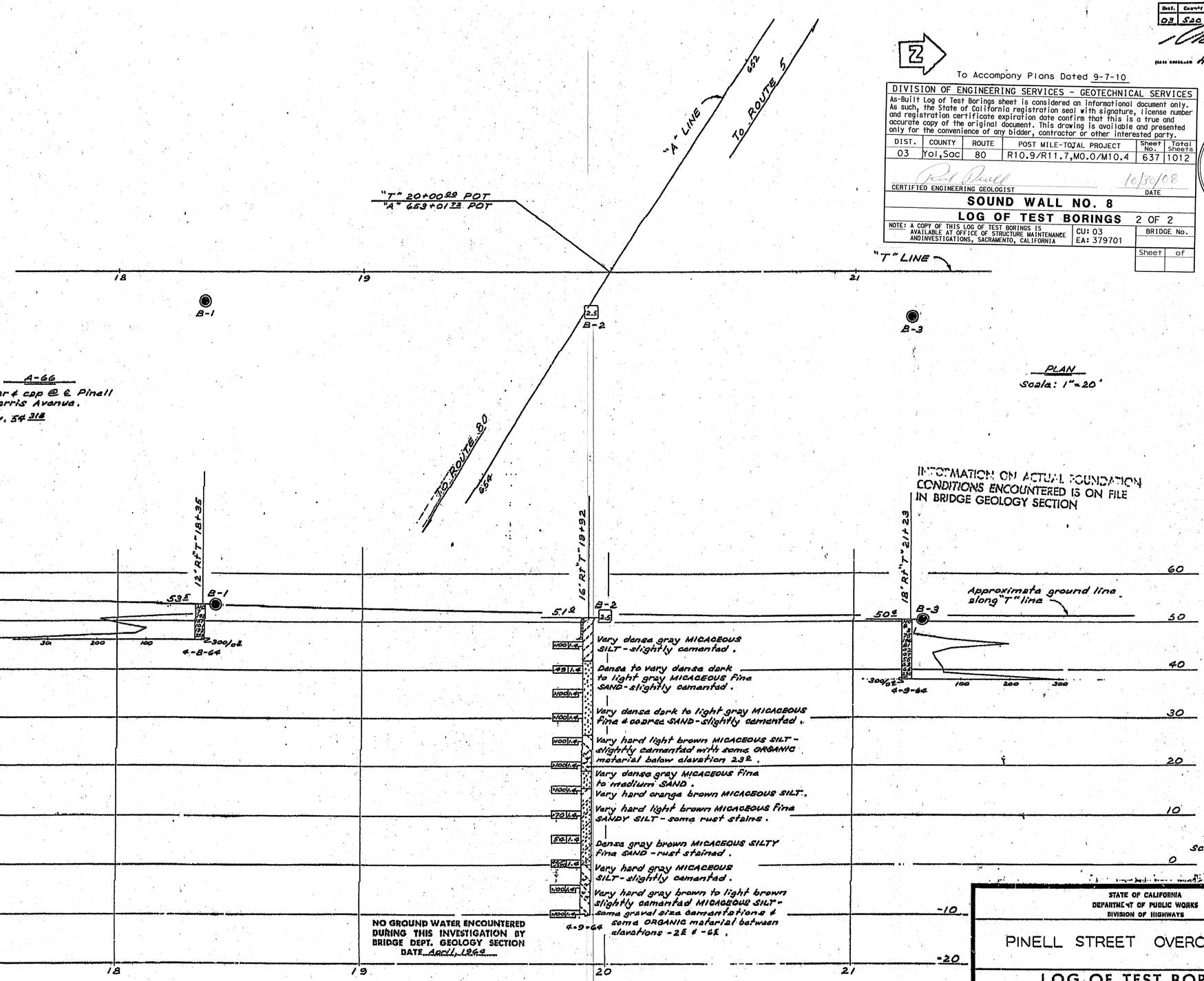
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

CU: 03
EA: 379701

BRIDGE No.

Sheet	of





AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 3000961

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE April, 1964

FIELD STUDY	by: T. Nelson 8-64
DRAWN	by: K. Endow 8-24-64
CHECKED	by: M. Heaney 5-66

Approval Recommended by: Chief, Bridge Geology Section

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

359

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET	OF
15	15

PINELL STREET OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 24-204	POST MILE 8.2	DRAWING 24204-8

03208
072641

Blueprint prints bearing earlier numbers → PREL. DRAWING NO. PR-24204-07/1/66

337970rhsw8-2of2.tif

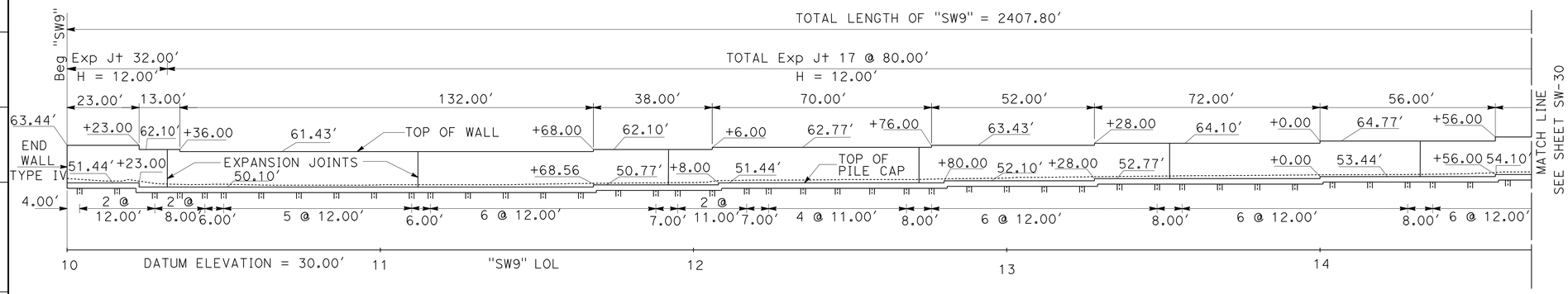
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	638	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

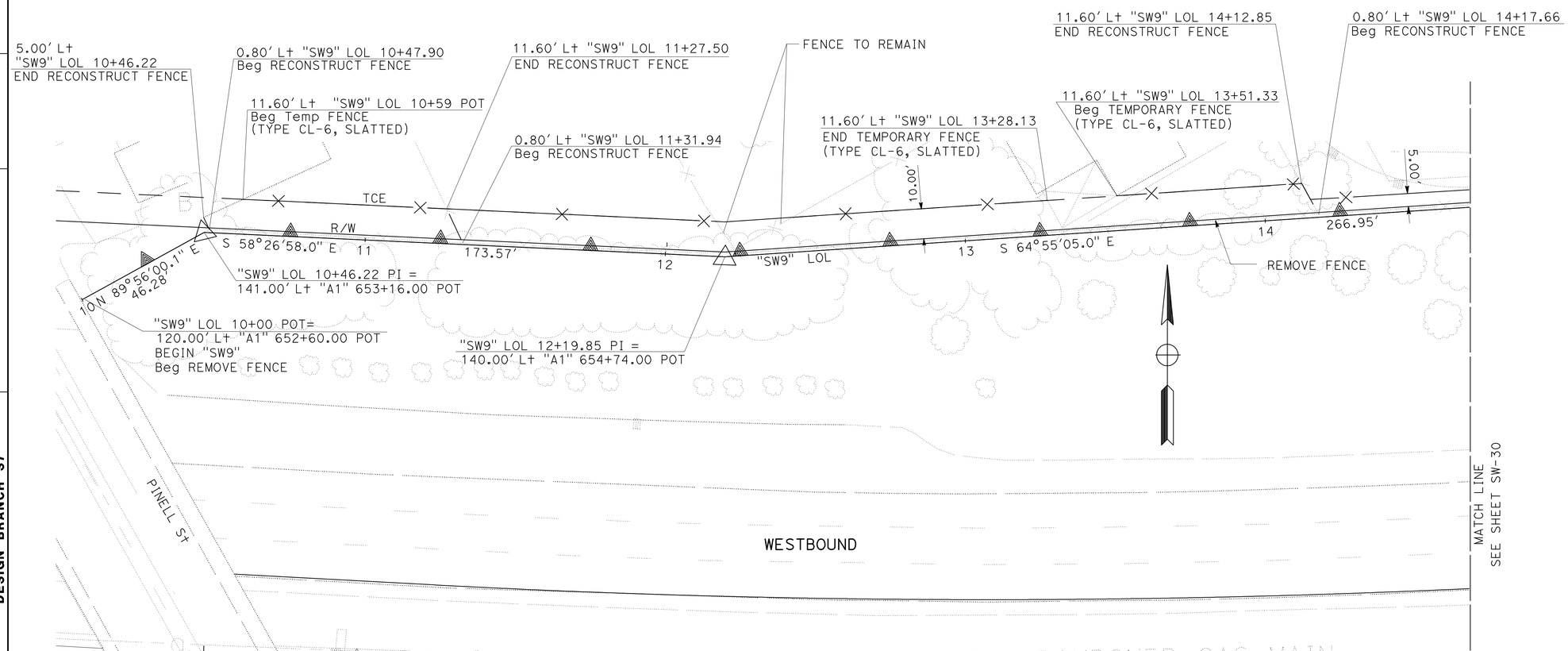
9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.



ELEVATION



PLAN

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN

SOUND WALL No. 9

SCALE: 1" = 20'

SW-29

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	639	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
A. Y. FONG
No. 64343
Exp 6-30-11
CIVIL
STATE OF CALIFORNIA

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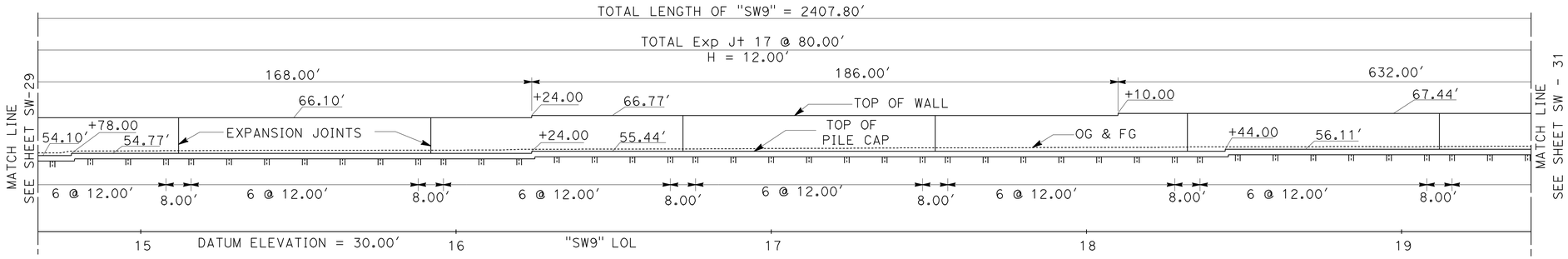
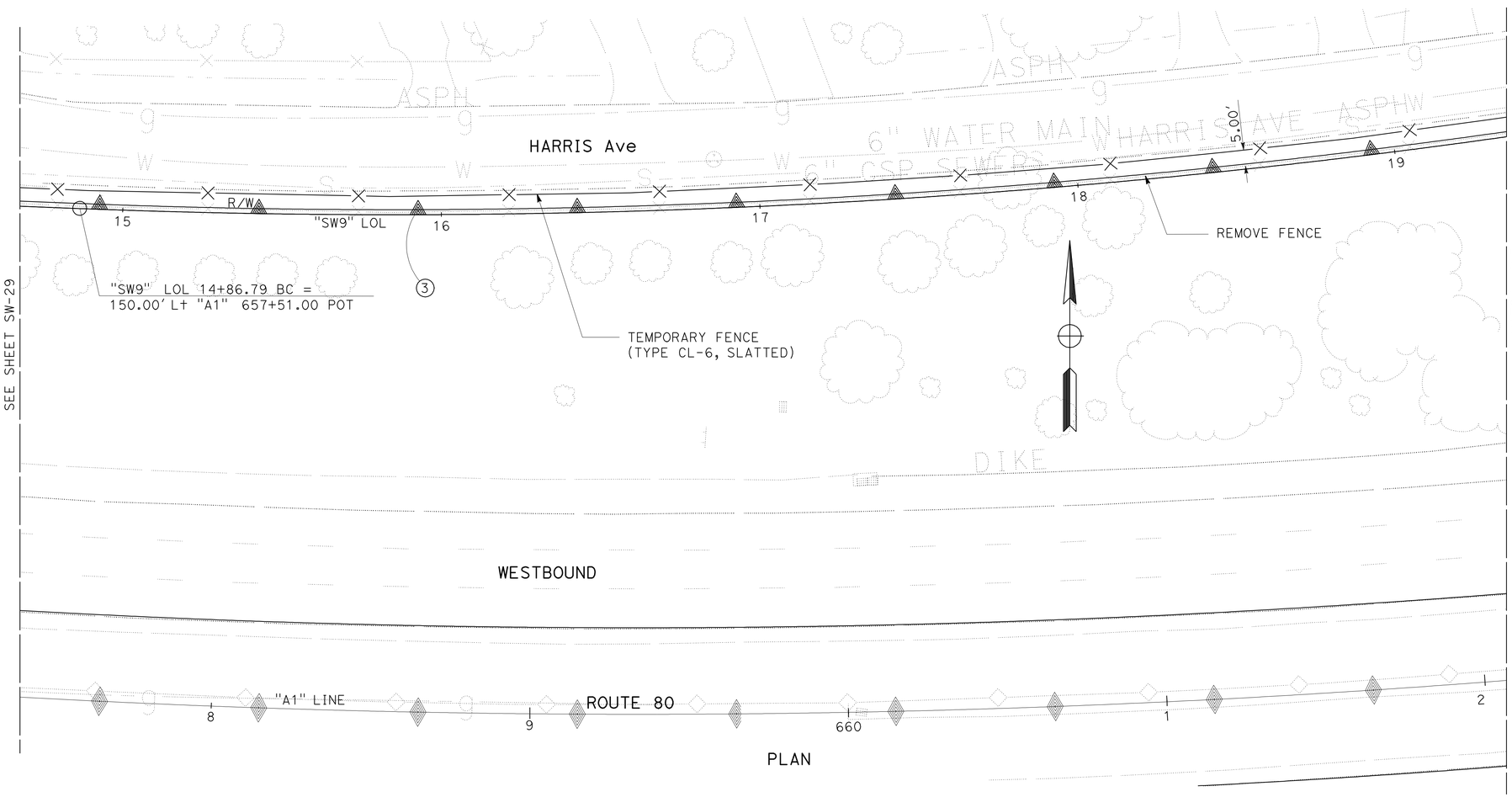


ELEVATION



PLAN

CURVE DATA

No.	R	Δ	T	L
3	2501.47'	23°13'59"	514.23'	1014.33'

SOUND WALL PLAN

SOUND WALL No. 9

SCALE: 1" = 20'

SW-30

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

REVISED BY | DATE REVISED

A.S.RANDHAWA | AMY FONG

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 09:40

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	640	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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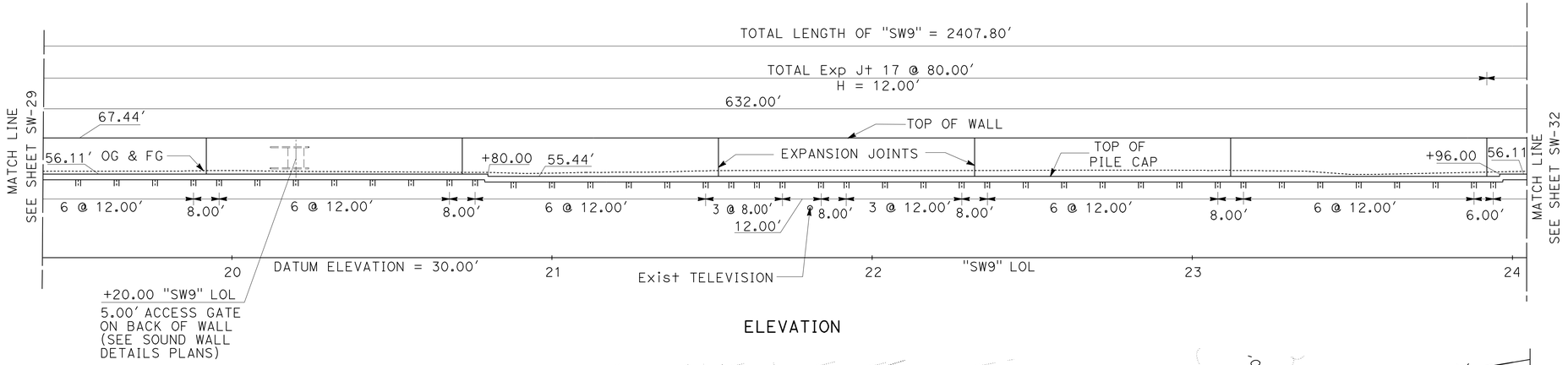
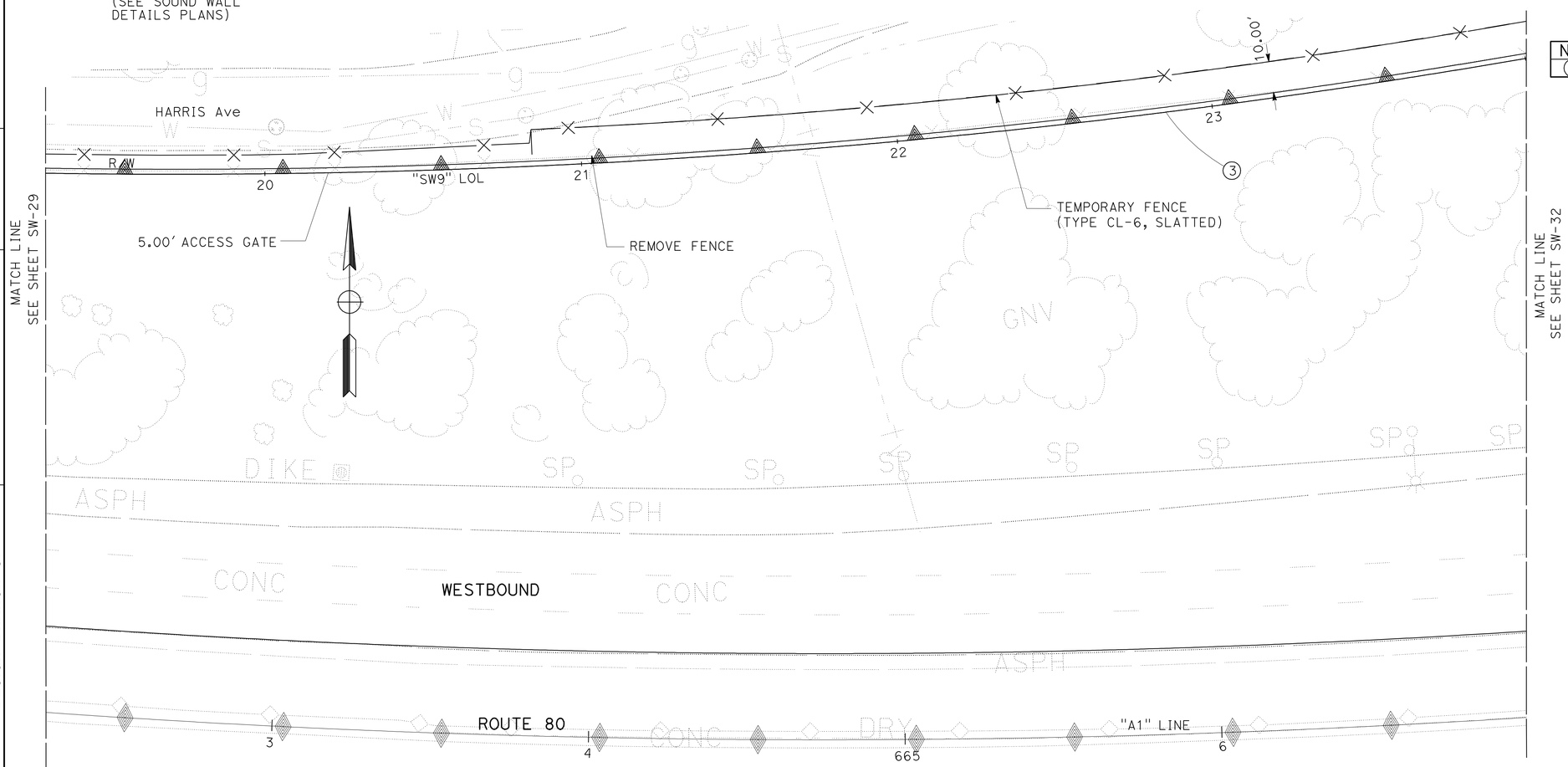


ELEVATION

CURVE DATA

No.	R	Δ	T	L
3	2501.47'	23°13'59"	514.23'	1014.33'



PLAN

SOUND WALL PLAN

SOUND WALL No. 9

SCALE: 1" = 20'

SW-31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 09:40

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	641	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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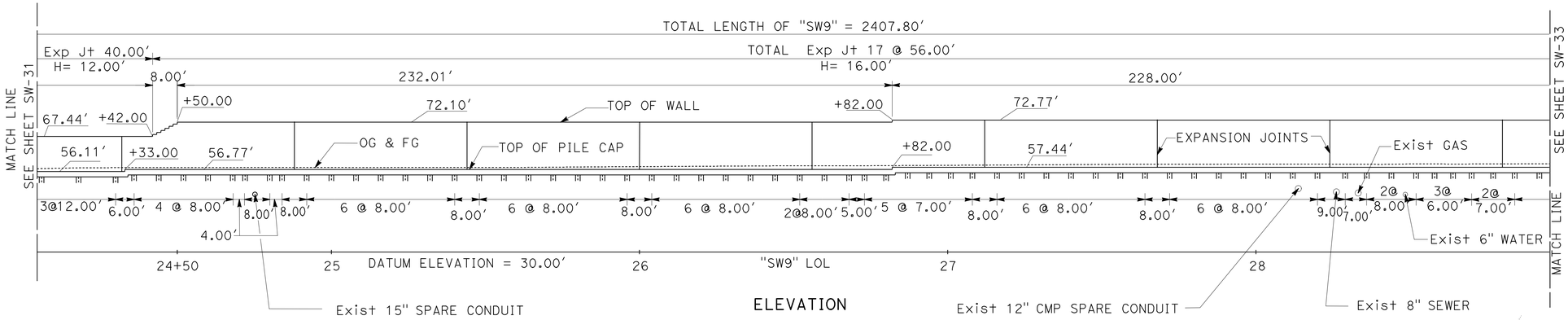
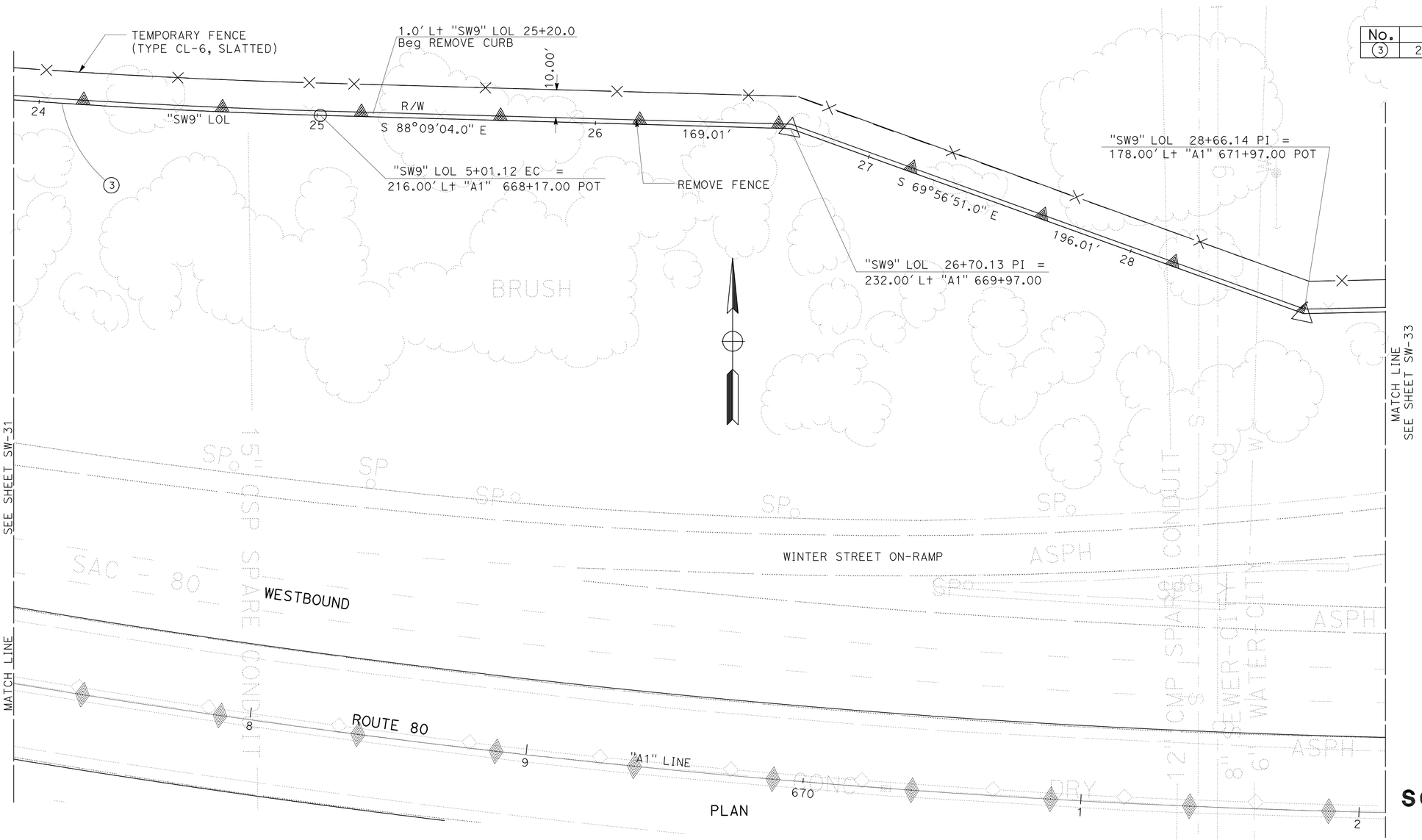


ELEVATION

CURVE DATA

No.	R	Δ	T	L
3	2501.47'	23°13'59"	514.23'	1014.33'



PLAN

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN

SOUND WALL No. 9

SCALE: 1" = 20'

SW-32

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 09:40

BORDER LAST REVISED 4/11/2008 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s135318 | DGN FILE => 3379 7uri032.dgn | CU 03255 | EA 3797U1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	642	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 CIVIL STATE OF CALIFORNIA

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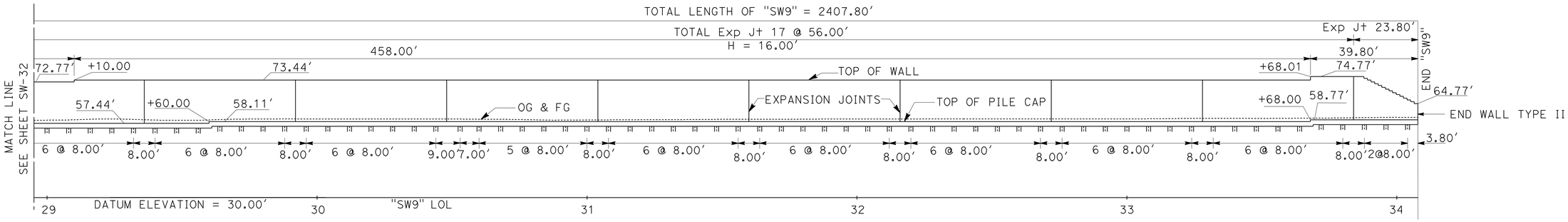
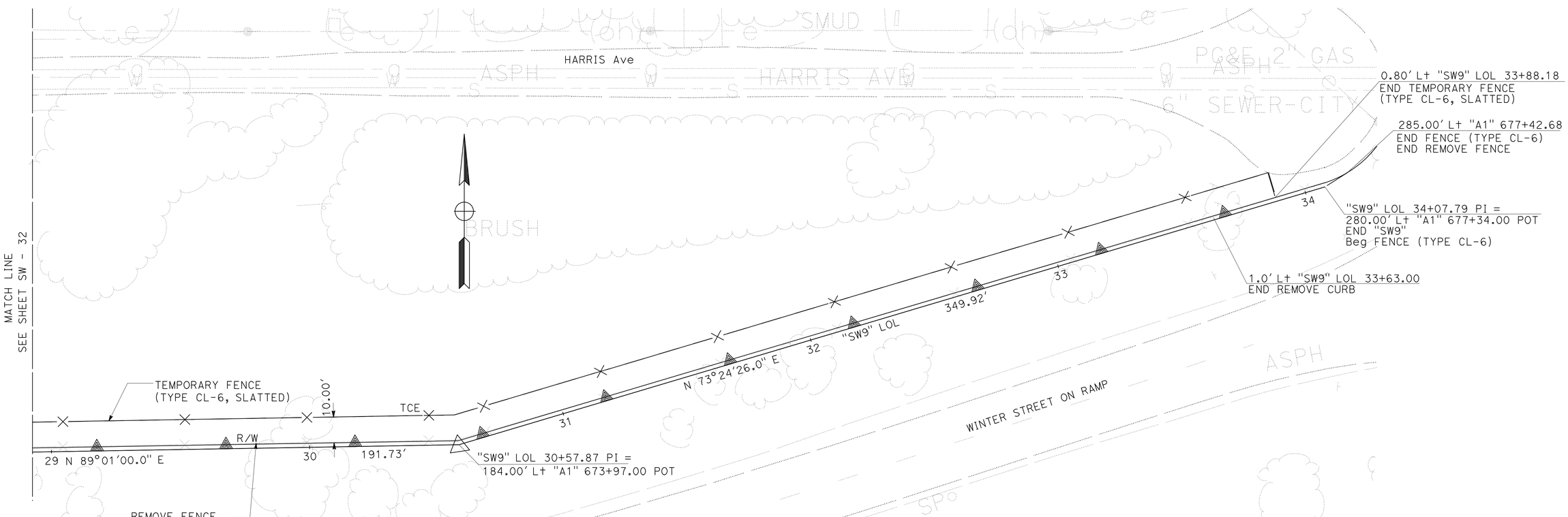


ELEVATION



PLAN

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN
SOUND WALL No. 9
SCALE: 1" = 20'

SW-33

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	643	1012

CERTIFIED ENGINEERING GEOLOGIST 10-30-08

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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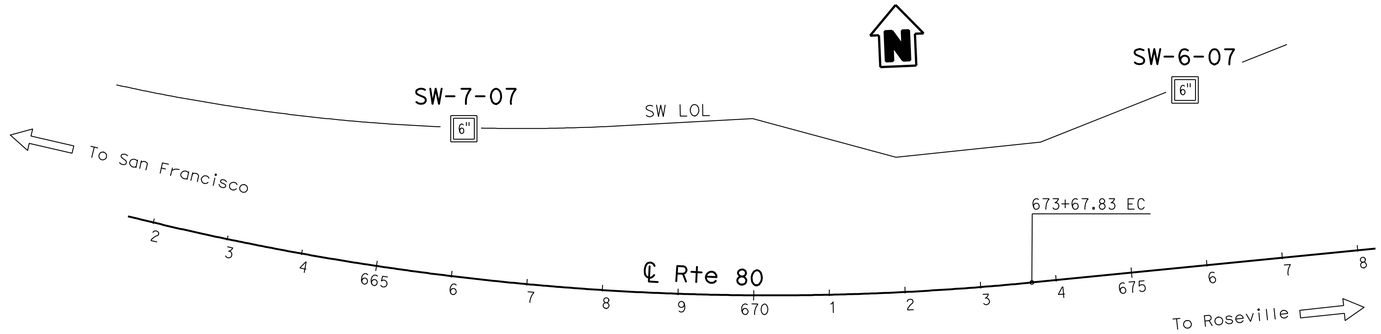
This LOTB sheet was generally prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007).



BENCH MARK

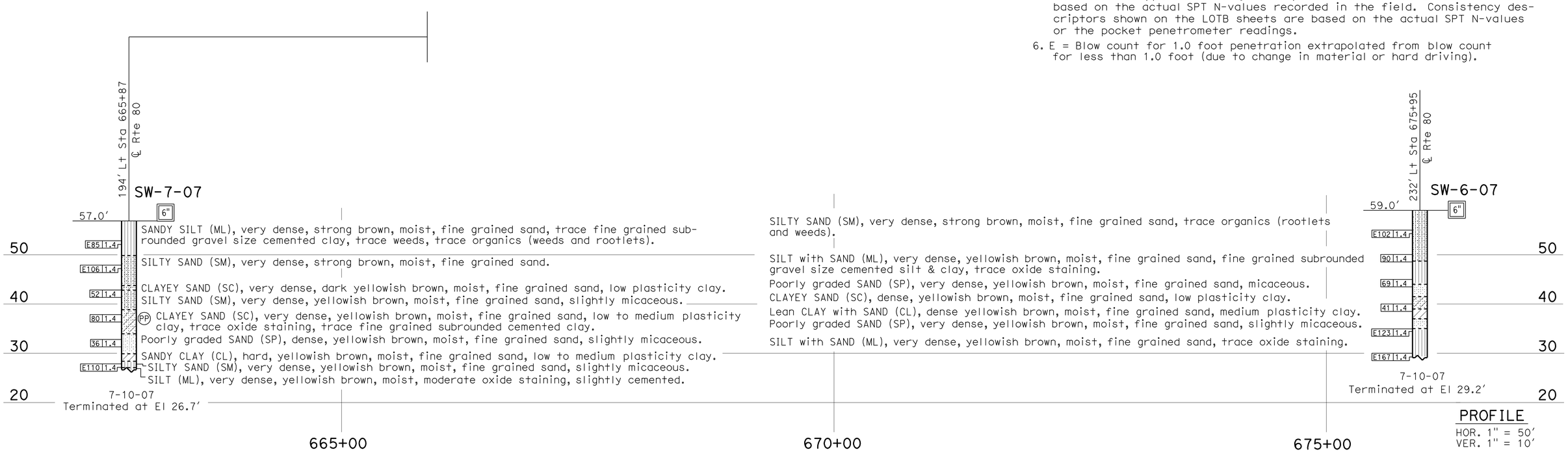
Approximate boring elevations were derived from District Survey maps.

PLAN

1" = 100'

NOTES:

1. All test borings were advanced using a hollow stem auger.
2. No ground water encountered during field investigation.
3. The descriptions and classifications of soil, including consistency and relative density descriptors, used by the field personnel for the exploration boreholes shown on these sheets are generally based on the "Soil and Rock Logging, Classification, and Presentation Manual," Division of Engineering Services, Geotechnical Services, (June 2007).
4. Soil colors were determined using Munsell Soil Color Charts (1994, Revised Edition).
5. All Test borings utilized a Safety Hammer to advance the sampler using a 140 lb hammer with a 30 inch drop. The SPT N-values shown on the Log of Test Boring (LOTB) sheets were actual values recorded in the field. The relative/apparent density descriptors shown on the LOTB sheets are based on the actual SPT N-values recorded in the field. Consistency descriptors shown on the LOTB sheets are based on the actual SPT N-values or the pocket penetrometer readings.
6. E = Blow count for 1.0 foot penetration extrapolated from blow count for less than 1.0 foot (due to change in material or hard driving).



PROFILE

HOR. 1" = 50'
VER. 1" = 10'

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	SOUND WALL NO. 9
FUNCTIONAL SUPERVISOR	DRAWN BY: I. G-Remmen, 8/08	FIELD INVESTIGATION BY:	DESIGN BRANCH	POST MILES	LOG OF TEST BORINGS 1 OF 5
NAME: Roy Bibbens	CHECKED BY: J. Martin	J. Martin			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970risw9-1of5.dgn

USERNAME => s135318 DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:40

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	644	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

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PROFESSIONAL GEOLOGIST
Reid Buell
No. 1481
Exp. 4-30-09
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS

Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

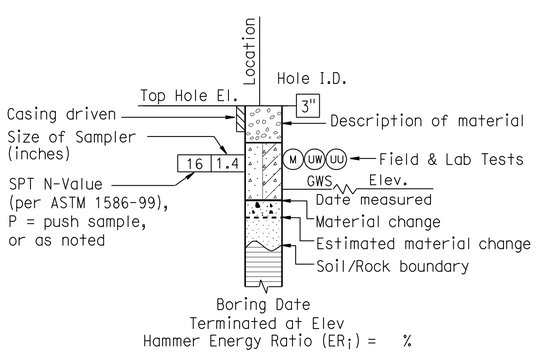
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring
Size	R P	Rotary drilled boring Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778-95)
⬚	O	Other

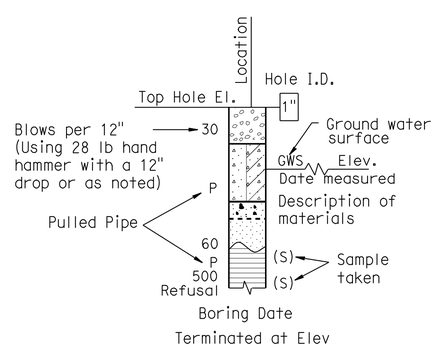
Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS

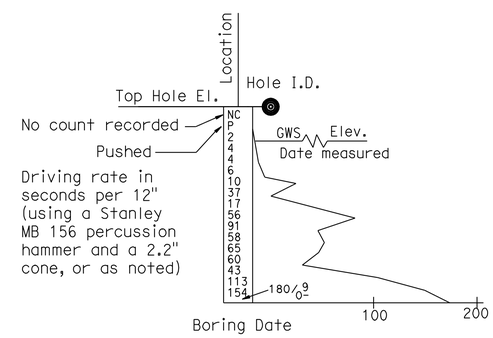
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



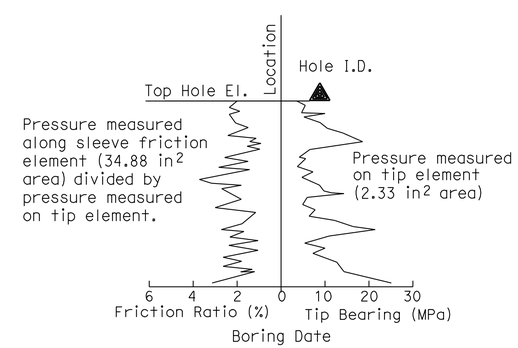
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 9
	PREPARED BY: I. G-Remmen, 8/08				LOG OF TEST BORINGS 2 OF 5

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970risw9-2of5.dgn

USERNAME => s135318 DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:40

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	645	1012

CERTIFIED ENGINEERING GEOLOGIST 10-30-08

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly graded GRAVEL Poorly graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly graded SAND Poorly graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL		
SP-SC	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (PP) Pocket Penetrometer
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (TV) Pocket Torvane
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)
- (VS) Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE

Description		Size
Boulder		> 12"
Cobble		3" to 12"
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: I. G-Remmen, 8/08

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH

BRIDGE NO.
POST MILES

SOUND WALL NO. 9
LOG OF TEST BORINGS 3 OF 5

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970risw9-3of5.dgn

USERNAME => s135318 DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:40

FED. ROAD DIV. NO.	STATE	F. A. PROJECT NO	SHEET NO	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE		SHEET NO.	TOTAL SHEETS
03	Sac	80	2-3-67	357	395

August 21, 1967

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol,Sac	80	R10.9/R11.7,M0.0/M10.4	646	1012

CERTIFIED ENGINEERING GEOLOGIST — DATE 1/10/08

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 9

LOG OF TEST BORINGS 4 OF 5

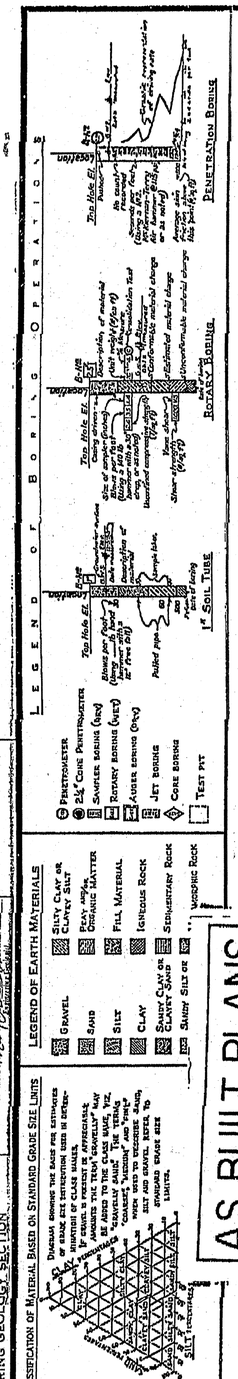
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

CU: 03
EA: 379701

BRIDGE No.

Sheet of

TO ACCOMPANY PLANS DATED 9-7-10



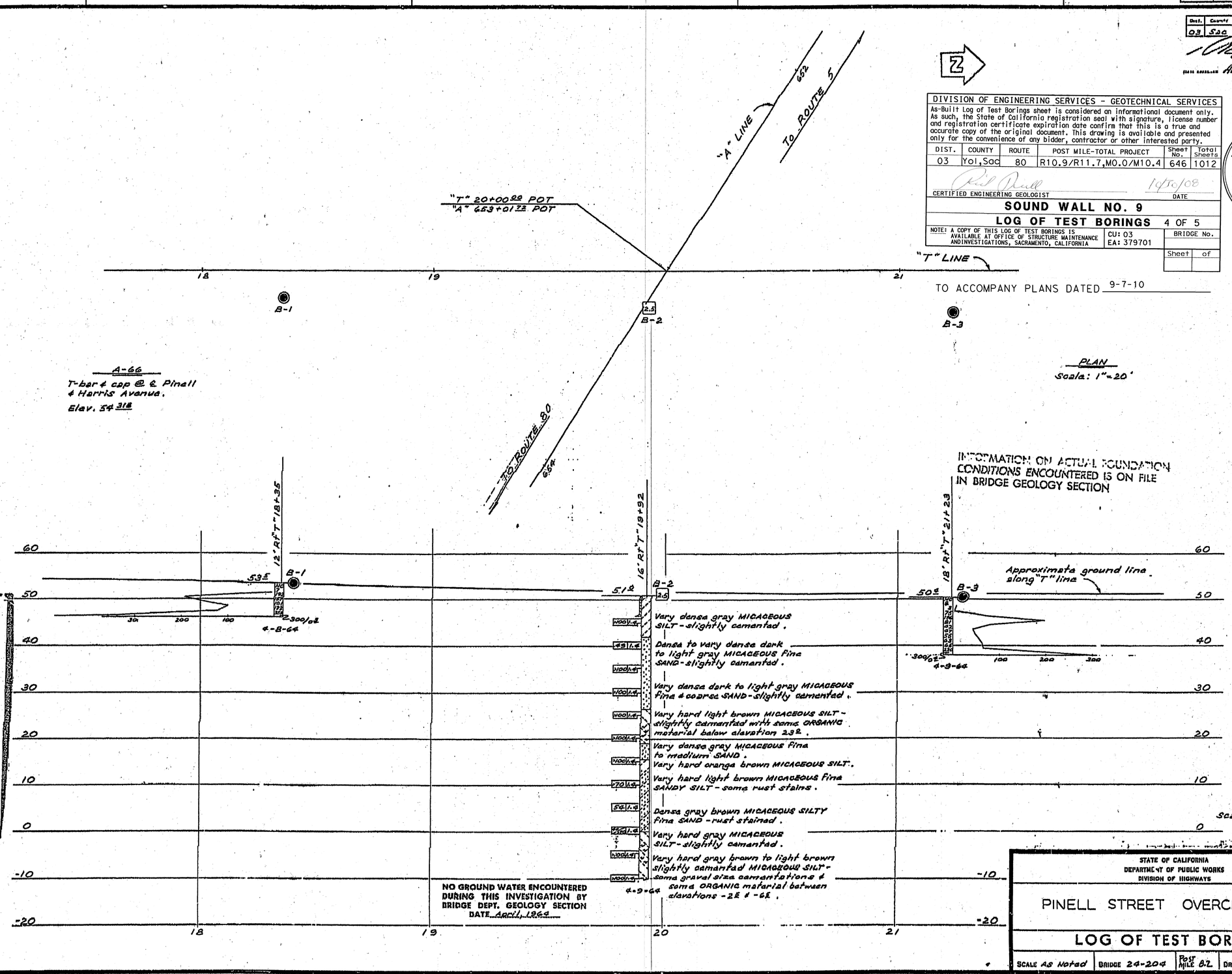
FIELD STUDY	By: T. Nelson 4-66
DRAWN	By: K. Endow 4-24-66
CHECKED	By: M. Hazelwood 5-66

Approval Recommended By: [signature]

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

359

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 3000961



NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET	OF
15	15

PINELL STREET OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 24-204	POST MILE 8.2	DRAWING 24204-8

03208
072641

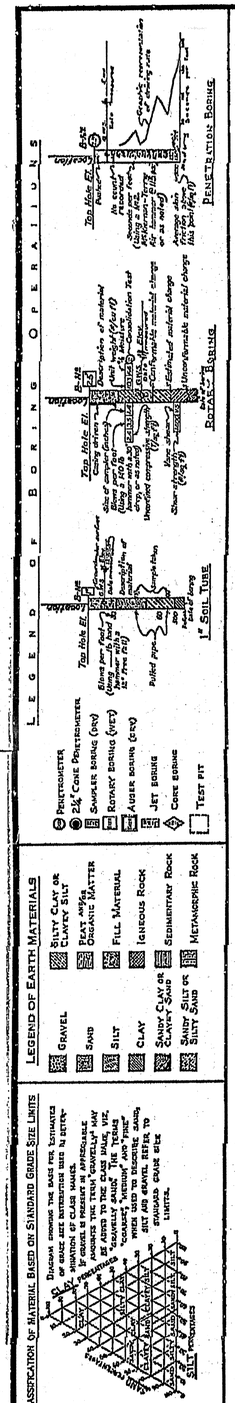
Disregard prints bearing earlier numbers → PREL. DRAWING NO. PR-24204-8/Ly/Ac

337970risw9-4of5.tif

DIV. NO.	STATE	F.A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	P.M.	SHEET NO.	TOTAL SHEETS
03	Sac	80	R10.9/R11.7, M0.0/M10.4	148	284

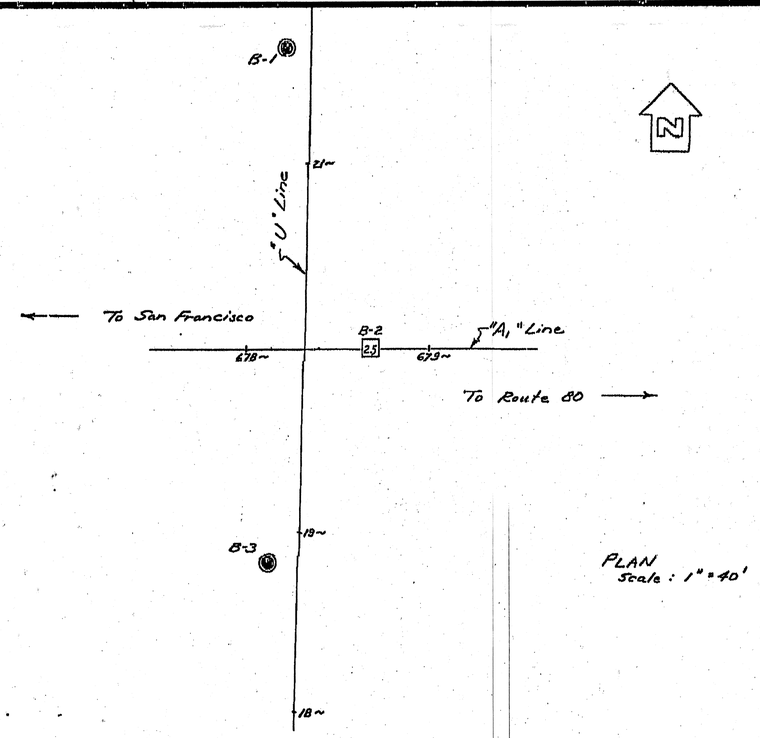
Date Approved March 18, 1968



FIELD STUDY By: G. Miller 5-63
DRAWN By: M. Heavey 8-17-66
CHECKED By: Keller 11-13-66
Approved Recommended by: Engineering Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

148



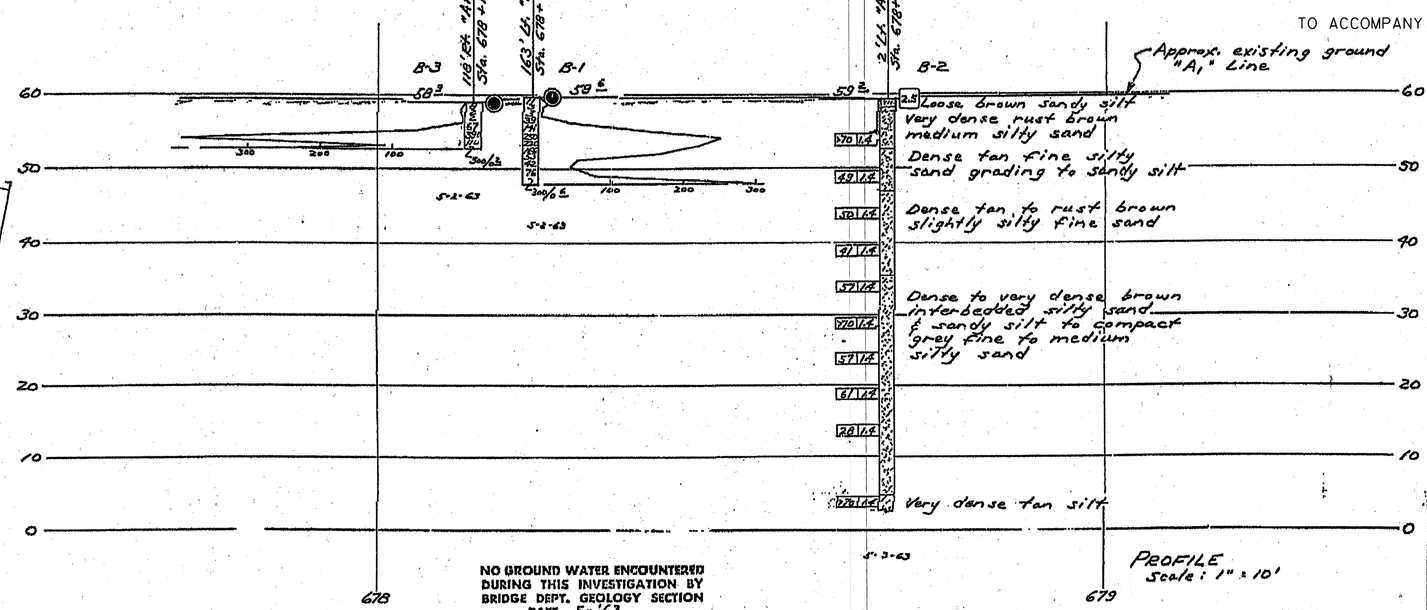
TBM "C"
Top RR spike in JP
19' Rt. Sta. 19 + 92 "U" Line.
Elev. 60.53

PLAN
Scale: 1" = 40'

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol, Sac	80	R10.9/R11.7, M0.0/M10.4	647	1012
CERTIFIED ENGINEERING GEOLOGIST			DATE 10/30/09		
SOUND WALL NO. 9					
LOG OF TEST BORINGS				5 OF 5	
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA		CU: 03 EA: 379701		BRIDGE No. Sheet of	

PROFESSIONAL GEOLOGIST
Reid Buell
No. 1481
Exp. 4-30-09
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 9-7-10



PROFILE
Scale: 1" = 10'

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION

AS BUILT PLANS
Contract No. 03-082734
Date Completed 6-8-70
Document No. 30000962

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE 5-'63

SHEET	OF
125	127

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

WINTERS STREET UNDERCROSSING

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 24-205 R/L | POST MILE 8.7 | DRAWING 24205-8

03208
082731

Divergent prints bearing earlier numbers → PREL. DRAWING No. PR-24205-8

337970risw9-5of5.tif

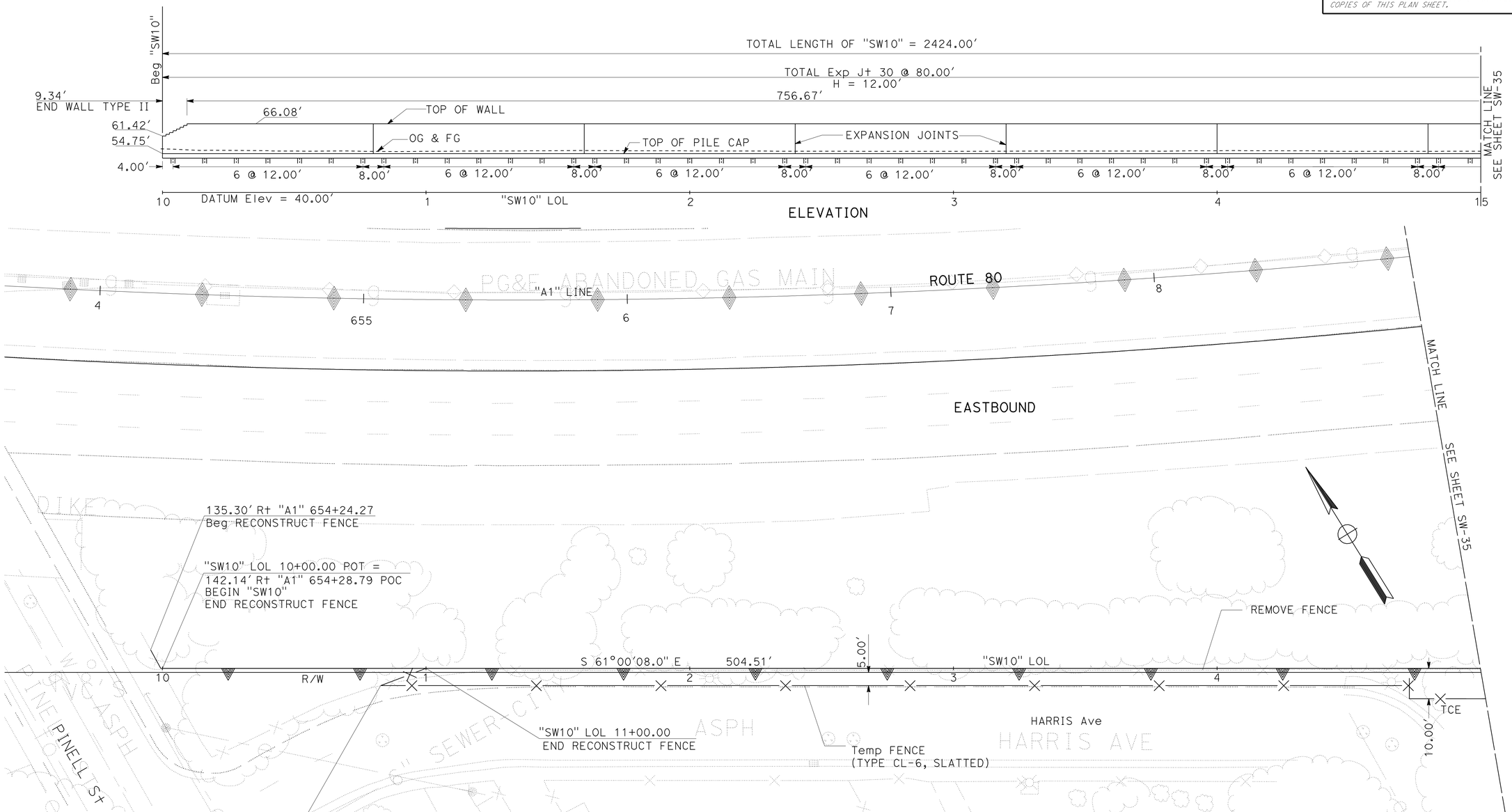
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	648	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.



PLAN

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN
SOUND WALL No. 10
SCALE: 1" = 20'

SW-34

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
FUNCTIONAL SUPERVISOR: CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7
Caltrans

LAST REVISION 00-00-00 DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	649	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

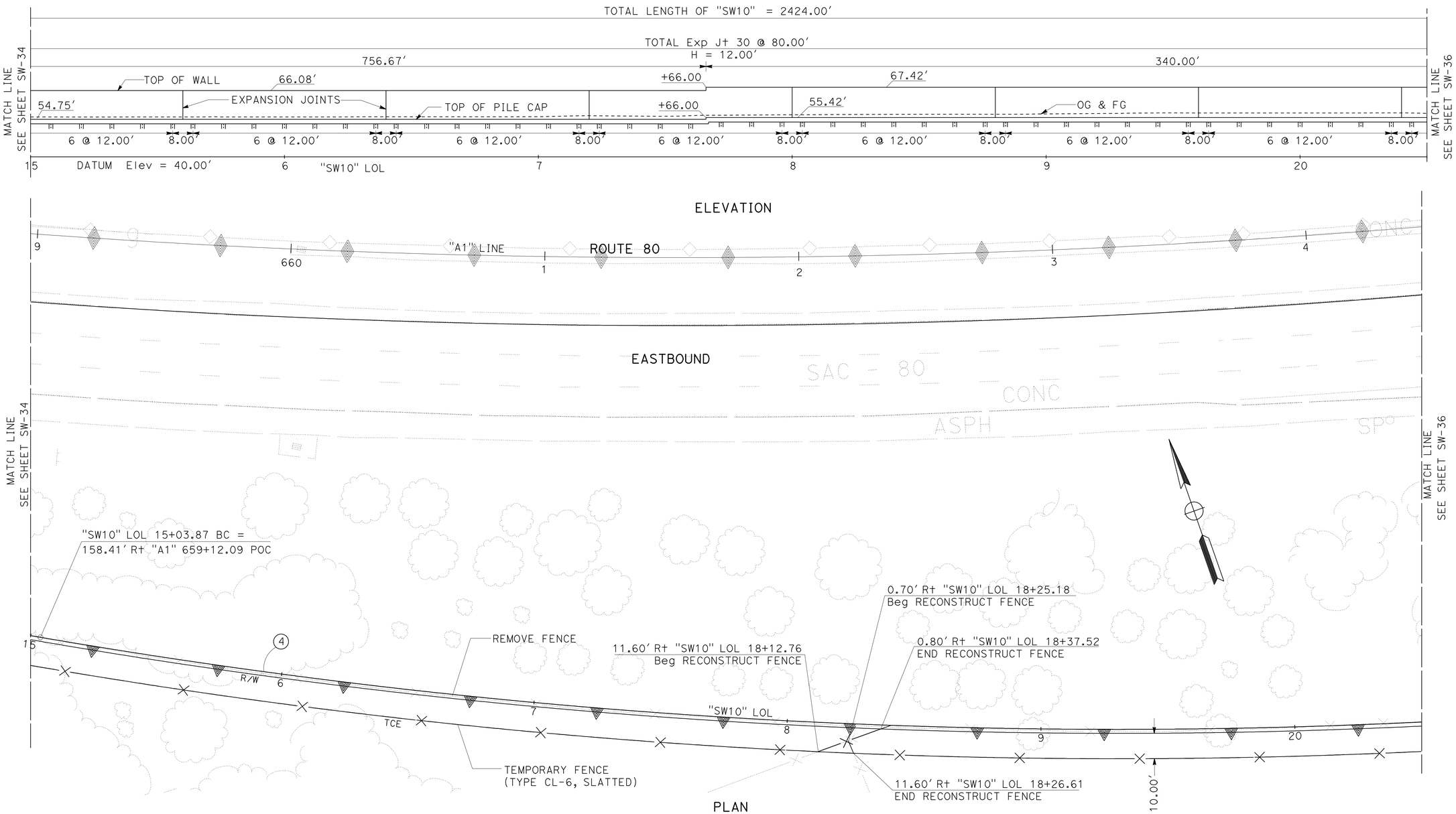
9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.

CURVE DATA

No.	R	Δ	T	L
4	2498.30′	18°15′10″	401.34′	795.88′



SOUND WALL PLAN

SOUND WALL No. 10

SCALE: 1" = 20′

SW-35

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 09:03

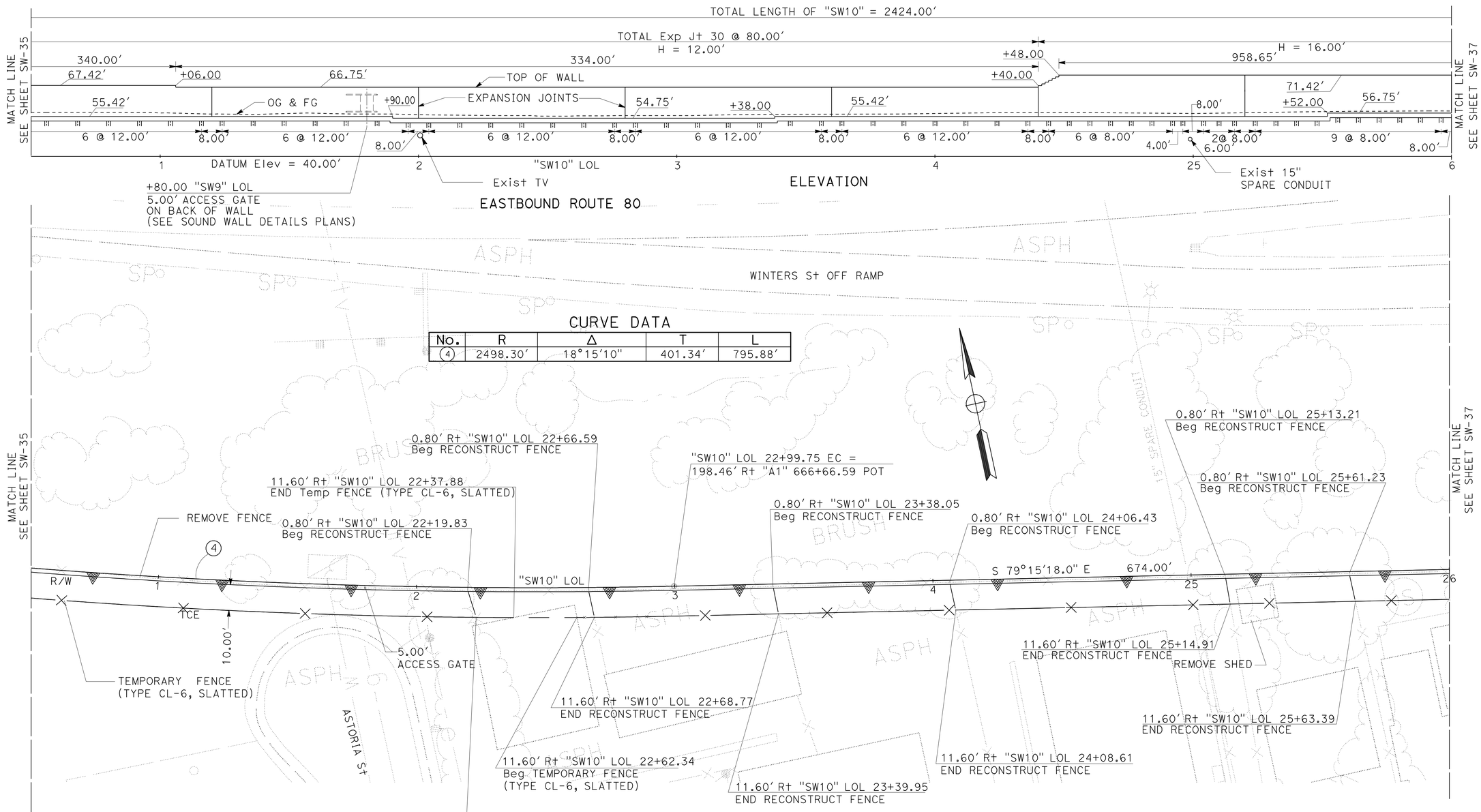
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	650	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.



CURVE DATA

No.	R	Δ	T	L
4	2498.30'	18°15'10"	401.34'	795.88'

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

SOUND WALL PLAN
SOUND WALL No. 10
SCALE: 1" = 20'

SW-36

REVISED BY | DATE REVISED
A.S.RANDHAWA | AMY FONG
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 09:03

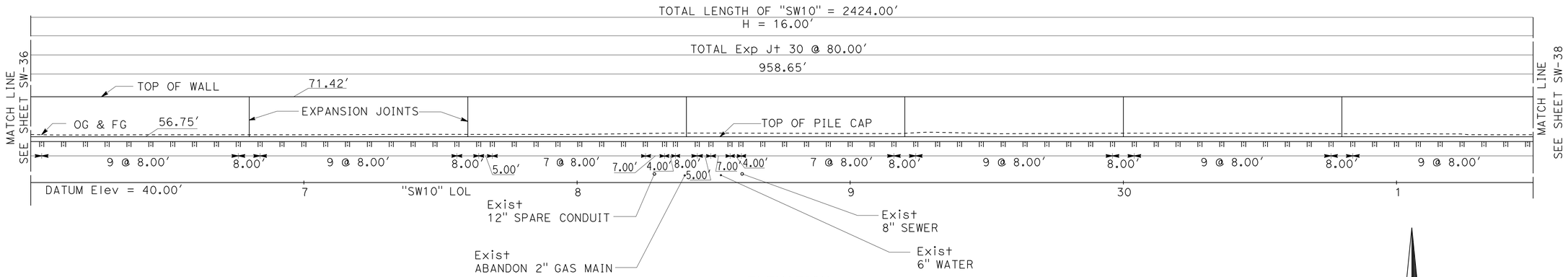
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	651	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

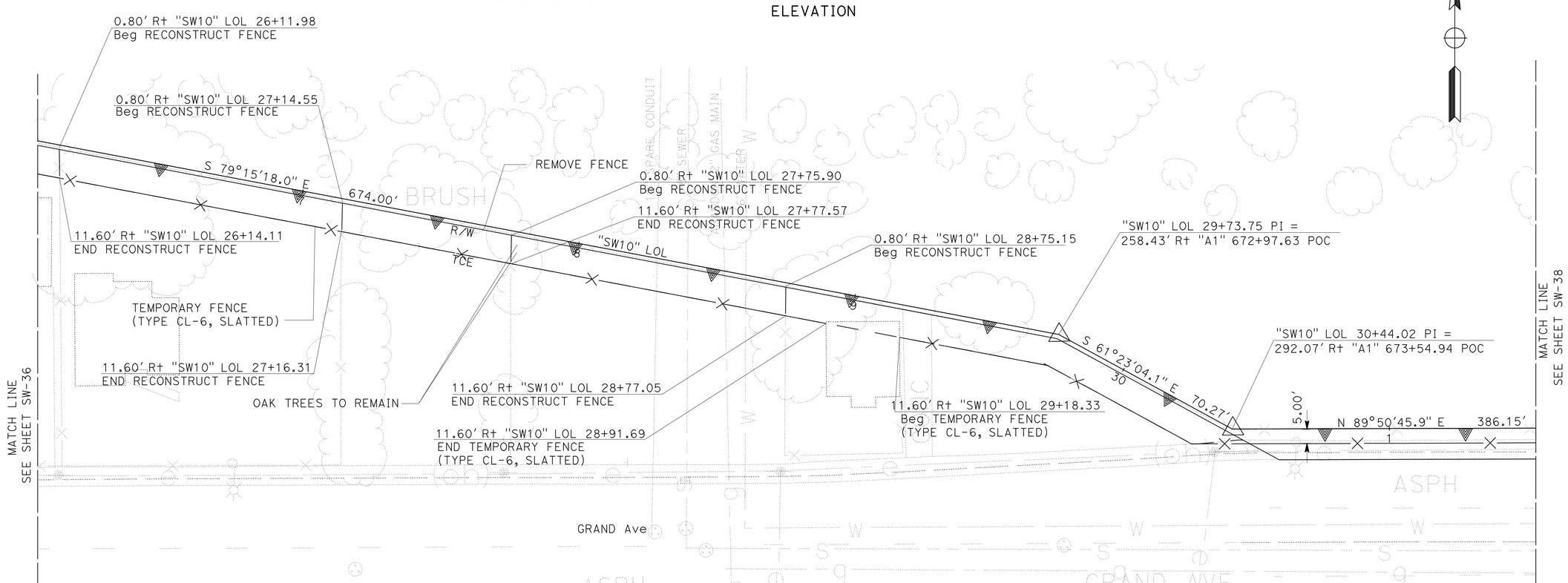
9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
A. Y. FONG
No. 64343
Exp 6-30-11
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.



ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 10

SCALE: 1" = 20'

SW-37

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 09:03

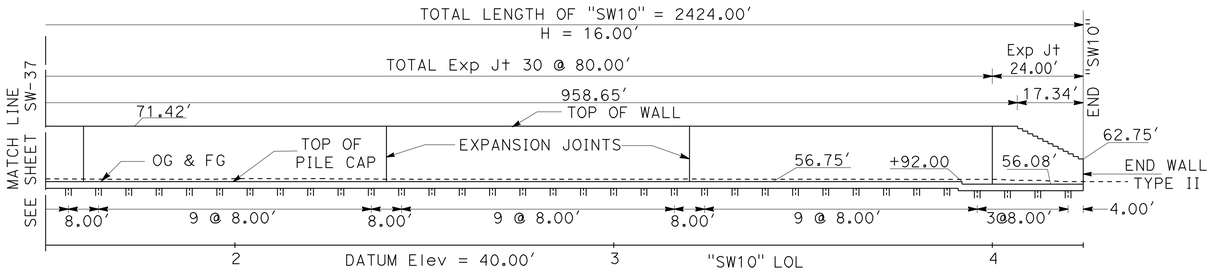
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	652	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

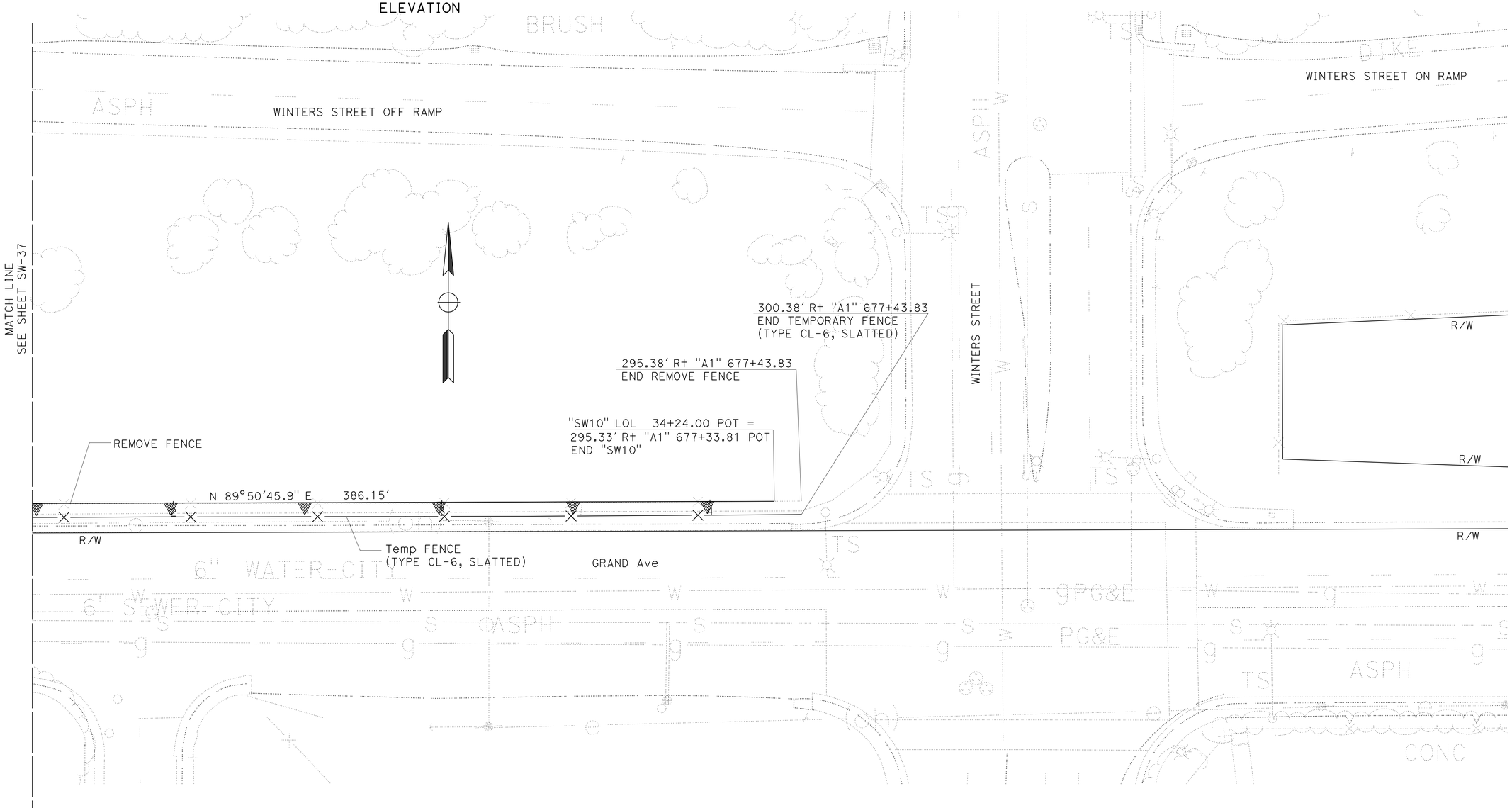
9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp 6-30-11 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.



ELEVATION



PLAN

SOUND WALL PLAN

SOUND WALL No. 10

SCALE: 1" = 20'

SW-38

THIS PLAN ACCURATE FOR SOUND WALL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S.RANDHAWA
CHECKED BY: AMY FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 09:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	653	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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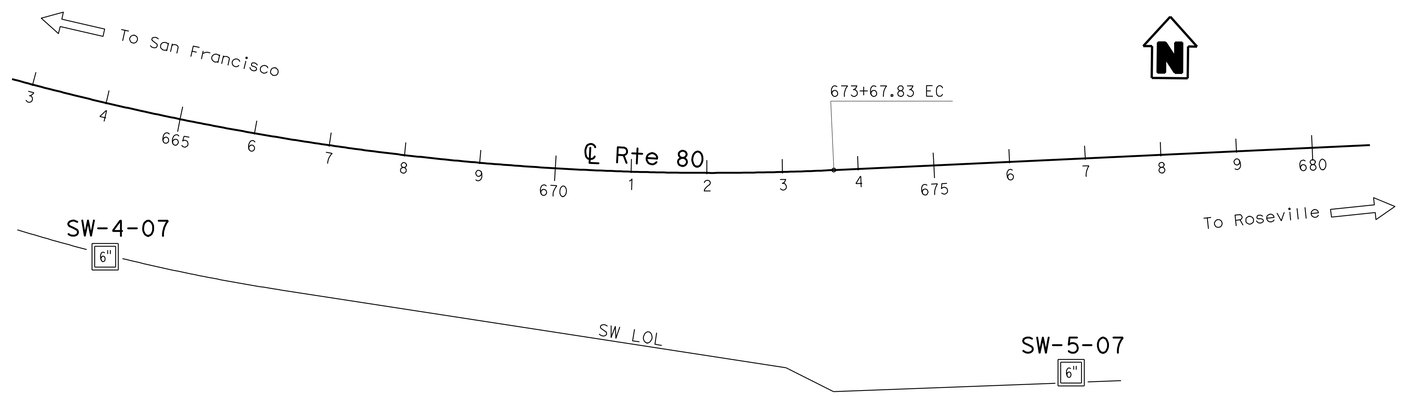
This LOTB sheet was generally prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007).



BENCH MARK

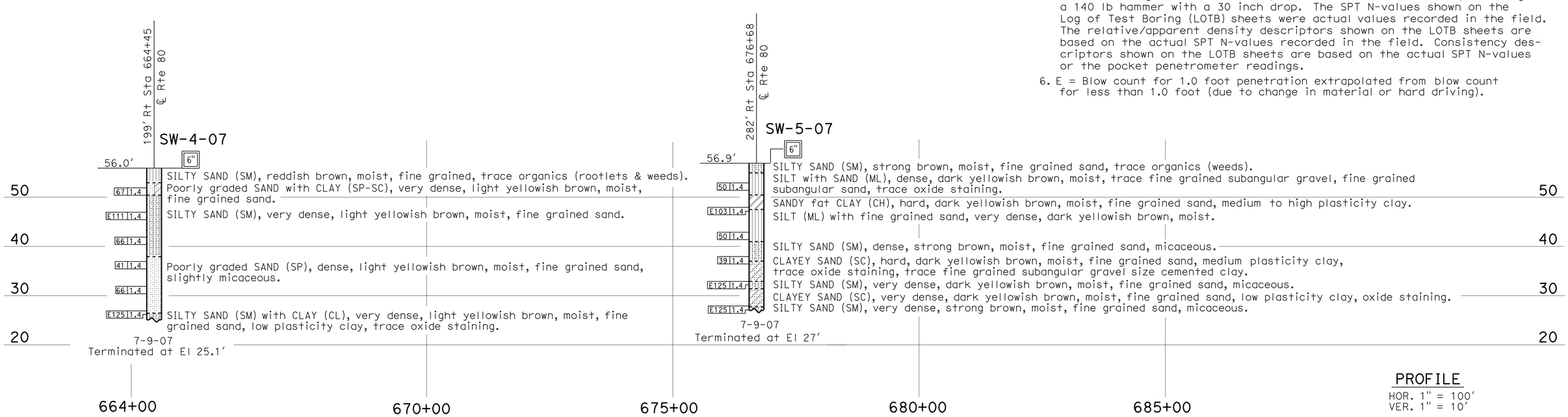
Approximate boring elevations were derived from District Survey maps.

PLAN

1" = 100'

NOTES:

1. All test borings were advanced using a hollow stem auger.
2. No ground water encountered during field investigation.
3. The descriptions and classifications of soil, including consistency and relative density descriptors, used by the field personnel for the exploration boreholes shown on these sheets are generally based on the "Soil and Rock Logging, Classification, and Presentation Manual," Division of Engineering Services, Geotechnical Services, (June 2007).
4. Soil colors were determined using Munsell Soil Color Charts (1994, Revised Edition).
5. All Test borings utilized a Safety Hammer to advance the sampler using a 140 lb hammer with a 30 inch drop. The SPT N-values shown on the Log of Test Boring (LOTB) sheets were actual values recorded in the field. The relative/apparent density descriptors shown on the LOTB sheets are based on the actual SPT N-values recorded in the field. Consistency descriptors shown on the LOTB sheets are based on the actual SPT N-values or the pocket penetrometer readings.
6. E = Blow count for 1.0 foot penetration extrapolated from blow count for less than 1.0 foot (due to change in material or hard driving).



PROFILE

HOR. 1" = 100'
VER. 1" = 10'

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 10 LOG OF TEST BORINGS 1 OF 5
FUNCTIONAL SUPERVISOR NAME: Roy Bibbens	DRAWN BY: I. G-Remmen, 8/08 CHECKED BY: J. Martin	FIELD INVESTIGATION BY: J. Martin			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rjsw10-1of5.dgn

USERNAME => rtrim DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	654	1012

10-30-08
CERTIFIED ENGINEERING GEOLOGIST

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS

Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

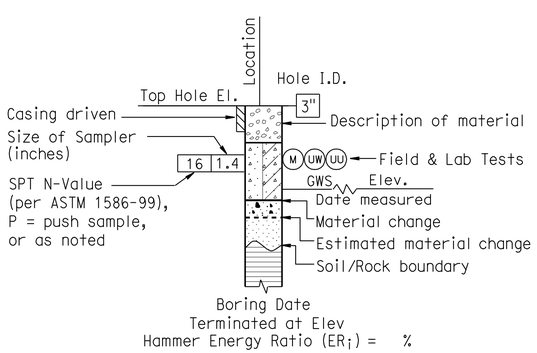
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring
Size	R P	Rotary drilled boring Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778-95)
⬚	O	Other

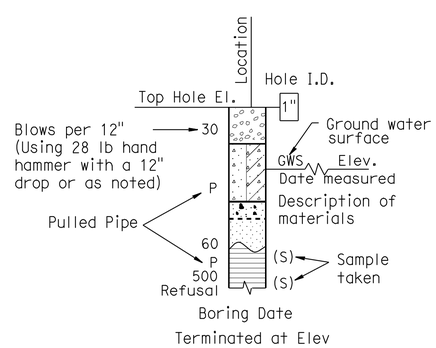
Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS

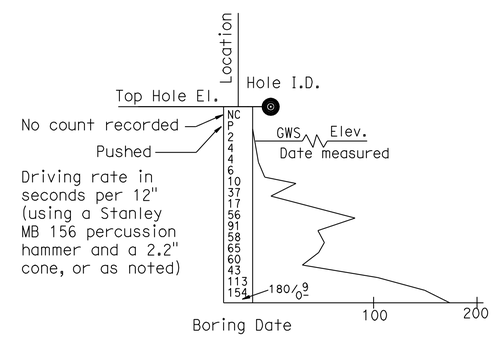
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



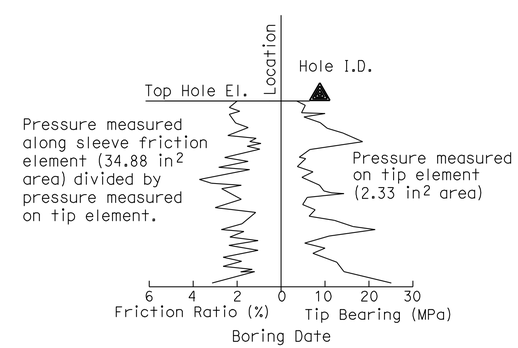
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. / POST MILES	SOUND WALL NO. 10 LOG OF TEST BORINGS 2 OF 5
	PREPARED BY: I. G-Remmen, 8/08				

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rjsw10-2of5.dgn

USERNAME => trtim DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:03

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	655	1012

CERTIFIED ENGINEERING GEOLOGIST 10-30-08

9-7-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST Reid Buell No. 1481 Exp. 4-30-09 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND
GP	Poorly graded GRAVEL Poorly graded GRAVEL with SAND
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GP-GM	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND
GP-GC	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)
GM	SILTY GRAVEL SILTY GRAVEL with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL
SP	Poorly graded SAND Poorly graded SAND with GRAVEL
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SP-SM	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL
SP-SC	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)
SM	SILTY SAND SILTY SAND with GRAVEL
SC	CLAYEY SAND CLAYEY SAND with GRAVEL
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL
PT	PEAT
	COBBLES COBBLES and BOULDERS BOULDERS

Graphic/Symbol	Group Names
CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (PP) Pocket Penetrometer
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (TV) Pocket Torvane
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)
- (VS) Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE

Description		Size
Boulder		> 12"
Cobble		3" to 12"
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

ENGINEERING SERVICES

GEOTECHNICAL SERVICES
PREPARED BY: I. G-Remmen, 8/08

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH

BRIDGE NO.
POST MILES

SOUND WALL NO. 10
LOG OF TEST BORINGS 3 OF 5

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 03
EA 379701

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-30-08

REVISION DATES | SHEET | OF

FILE => 337970rjsw10-3of5.dgn

USERNAME => trtim DATE PLOTTED => 04-FEB-2011 TIME PLOTTED => 09:03

FED. ROAD DIV. No.	STATE	F. A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.			

Dist.	County	Route		Sheet No.	Total Sheets
03	Sac	880	8.2/8.7	357	525

August 21, 1967

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol,Sac	80	R10.9/R11.7,M0.0/M10.4	656	1012

CERTIFIED ENGINEERING GEOLOGIST — DATE 10/30/08

PROFESSIONAL GEOLOGIST — Reid Buell — No. 1481 — Exp. 4-30-09 — CERTIFIED ENGINEERING GEOLOGIST — STATE OF CALIFORNIA

SOUND WALL NO. 10

LOG OF TEST BORINGS 4 OF 5

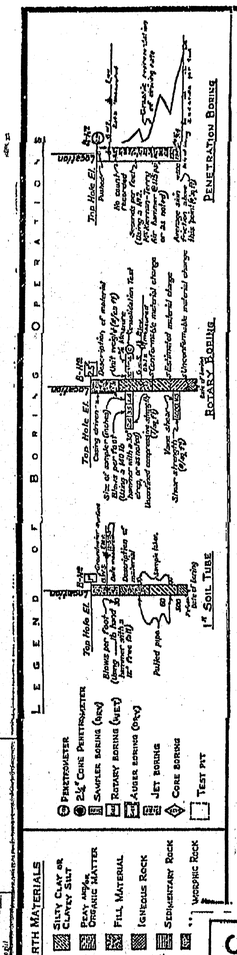
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

CU: 03
EA: 379701

BRIDGE No.

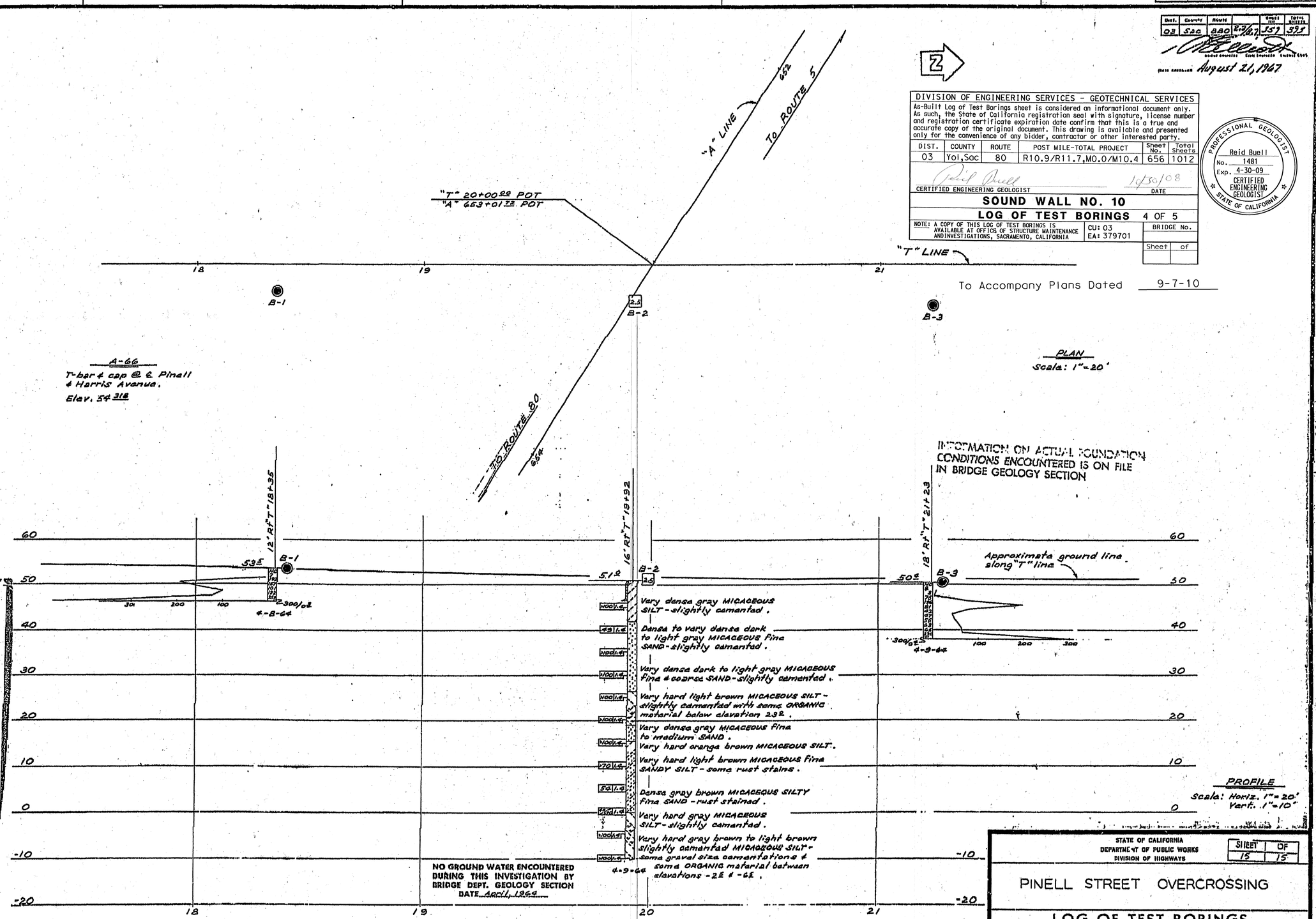
Sheet of

To Accompany Plans Dated 9-7-10



NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

AS BUILT PLANS
Contract No. 03-072644
Date Completed 8-70
Document No. 3000961



NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE April, 1964

FIELD STUDY	By T. Nelson 8-26-64
DRAWN	By K. Endow 8-26-64
CHECKED	By M. Hennessy 8-26

Approval Recommended By — Bridge Engineer

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SHEET 15 OF 15

PINELL STREET OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 24-204 | POST MILE 8.2 | DRAWING 24204-8

03208
072641

Disregard prints bearing earlier numbers

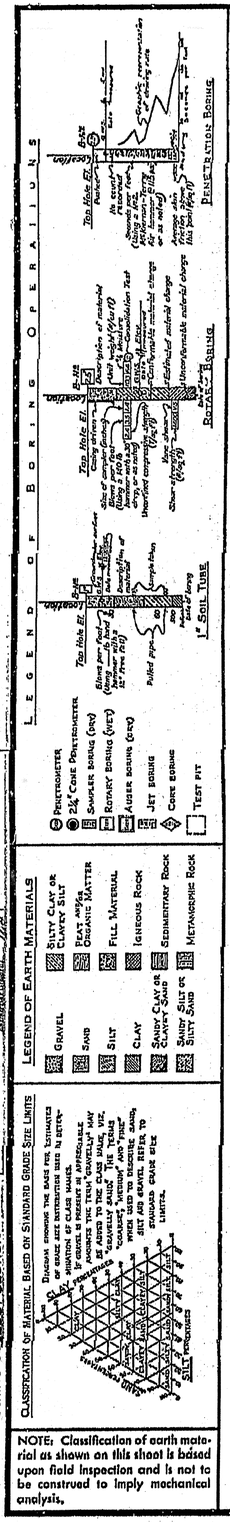
PREL. DRAWING No. PR-24204-8

359

337970rjsw10-4of5.tif

DIST.	COUNTY	ROUTE	P.M.	SHEET NO.	TOTAL SHEETS
03	Sac	80	R11.1	140	252

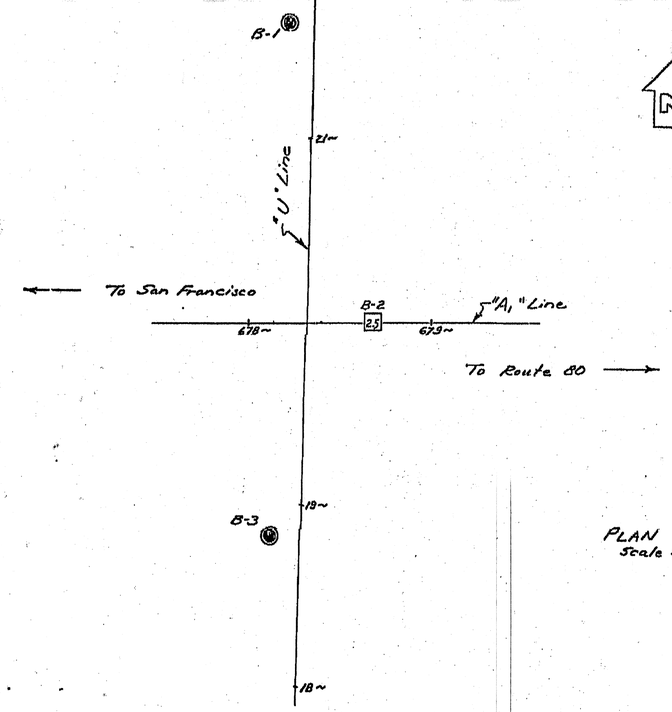
DIV. NO.	STATE	F.A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.			



FILE STUDY by G. Miller 5-63
DRAWN by M. Hearey 6-27-66
CHECKED by Keller 11-12-66
Approval Recommended by [signature] Bridge Geologist

BRIDGE DEPARTMENT
ENGINEERING GEOLOGY SECTION

148



TBM "C"
Top RR spike in JP
19' Rt. Sta. 19 + 92 "U" Line.
Elev. 60.53

PLAN
Scale: 1" = 40'

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES					
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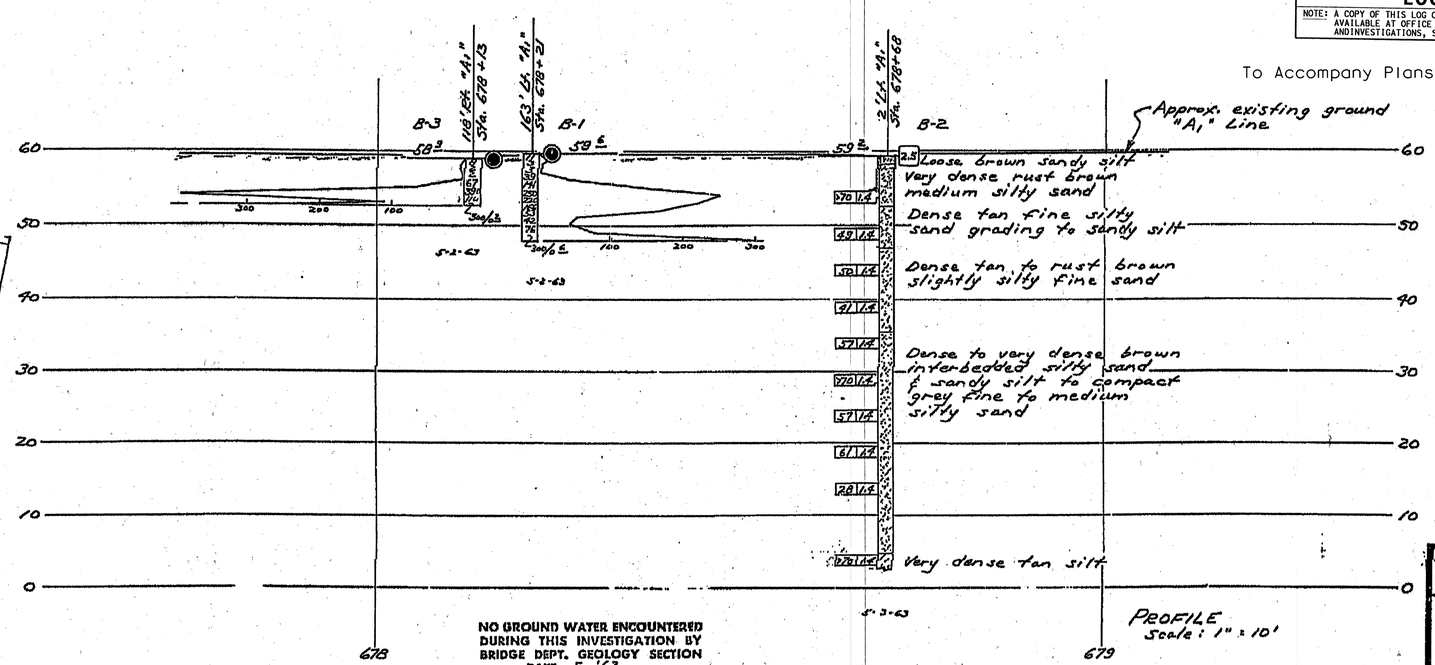
DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
03	Yol,Sac	80	R10.9/R11.7,M0.0/M10.4	657	1012
CERTIFIED ENGINEERING GEOLOGIST			10/30/08 DATE		
SOUND WALL NO. 10					
LOG OF TEST BORINGS 5 OF 5					
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA		CU: 03 EA: 379701		BRIDGE No.	
				Sheet	of

PROFESSIONAL GEOLOGIST
Reid Buell
No. 1481
Exp. 4-30-09
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

To Accompany Plans Dated 9-7-10



AS BUILT PLANS
Contract No. 03-082731
Date Completed 6-8-70
Document No. 30000962

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE 5-'63

INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION

PROFILE
Scale: 1" = 10'

SHEET	OF
172	172

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

WINTERS STREET UNDERCROSSING

LOG OF TEST BORINGS

SCALE As Noted | BRIDGE 24-205 R/L | POST MILE B7 | DRAWING 24205-8

03208
082731

Disregard prints bearing earlier numbers

PREL. DRAWING NO. PR-24205-R/L | Rev/Date | Rev/Date | Rev/Date

337970rjsw10-5of5.tif

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	658	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp. 6-30-11 CIVIL STATE OF CALIFORNIA

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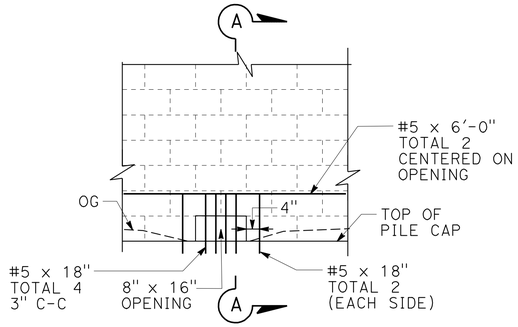
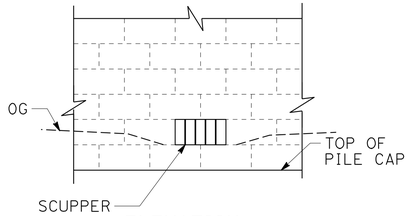
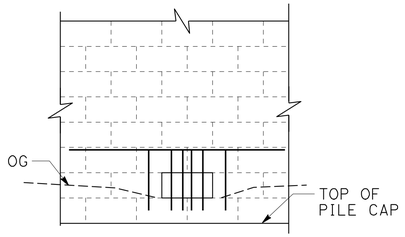


FIRST COURSE DETAIL

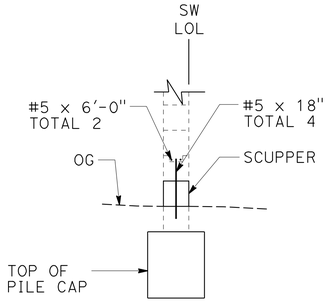


ELEVATION



SECOND COURSE (Max) DETAIL

SEE FIRST COURSE DETAIL FOR DETAILS NOT SHOWN

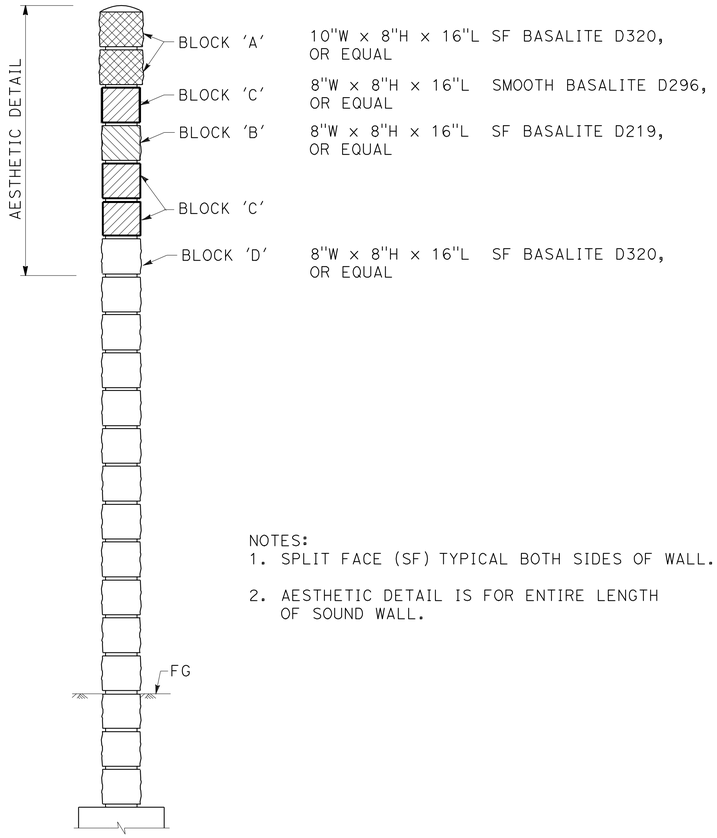


SECTION A-A

SCUPPER OPENING No. 1 DETAIL

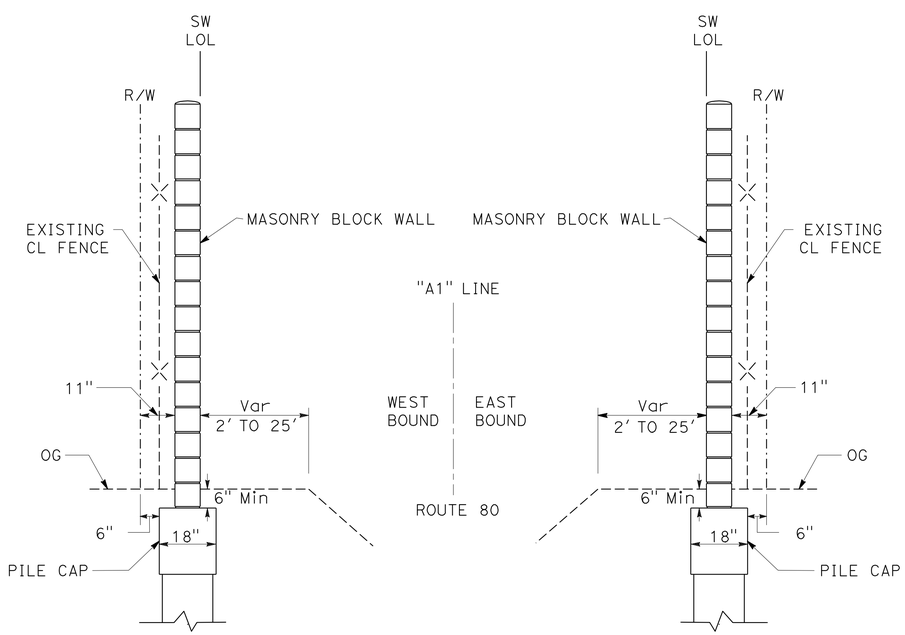
SOUND WALL No. 2, 3, 5, 6, 7, 9 & 10

NOTE: PLACE AT LEAST TWO SCUPPERS PER PROPERTY, LOCATED IN FINISH GRADE LOW AREAS TO DRAIN SPACED AT LEAST 20 FEET ON CENTER.



NOTES:
1. SPLIT FACE (SF) TYPICAL BOTH SIDES OF WALL.
2. AESTHETIC DETAIL IS FOR ENTIRE LENGTH OF SOUND WALL.

AESTHETIC DETAIL



TYPICAL SECTION

SOUND WALL No. 1 TO 10

SOUND WALL DETAILS

NO SCALE

SW-39

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
A.S. RANDHAWA	A. FONG

FUNCTIONAL SUPERVISOR: CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

LAST REVISION 00-00-00 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 08:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	659	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
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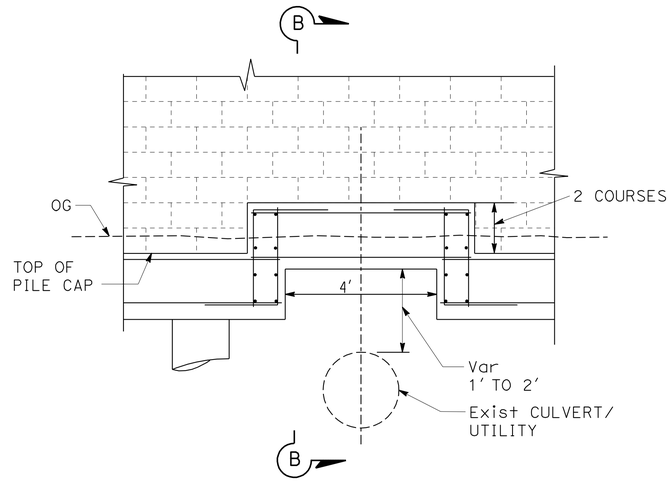
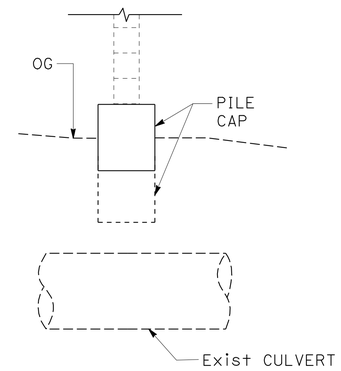


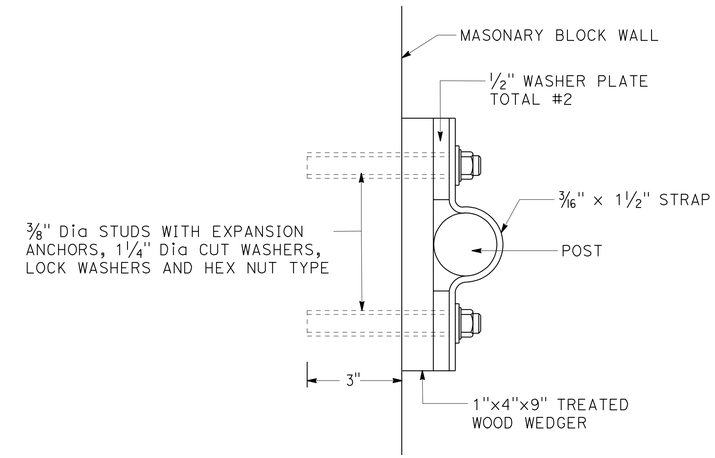
NOTE: FOR PILE CAP REINFORCEMENT REFER TO MASONRY BLOCK ON PILE CAP STEP DETAILS.



SECTION B-B

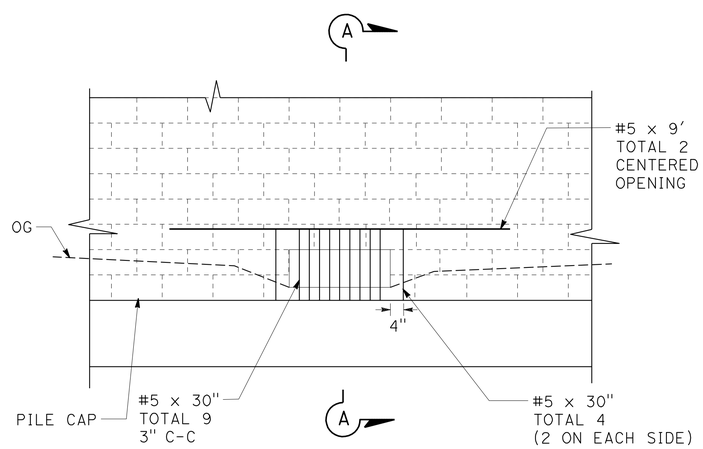
CROSSING UTILITY DETAIL

SOUND WALL No. 5, 6 & 7
"SW5" 11+05
"SW6" 15+90
"SW7" 15+68.2

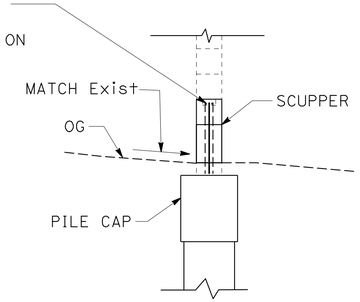


POST CONNECTION DETAIL

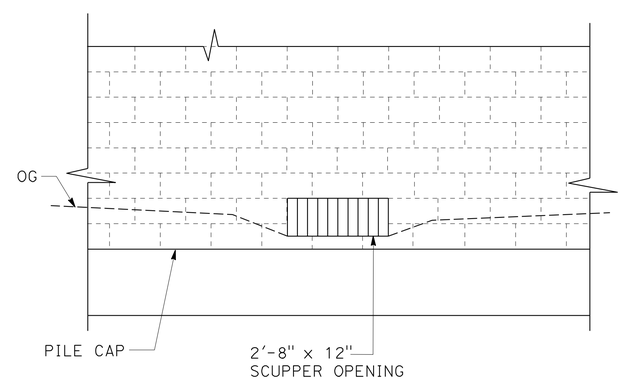
SOUND WALL No. 2, 3, 5, 6, 7, 8, 9 & 10



ELEVATION VIEW No. 1



SECTION A-A



ELEVATION VIEW No. 2

SCUPPER OPENING No. 2 DETAIL

SOUND WALL No. 6 & 7
"SW6" 16+04.00
"SW7" 12+35.80

SOUND WALL DETAILS

NO SCALE

SW-40

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	660	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp. 6-30-11 CIVIL STATE OF CALIFORNIA

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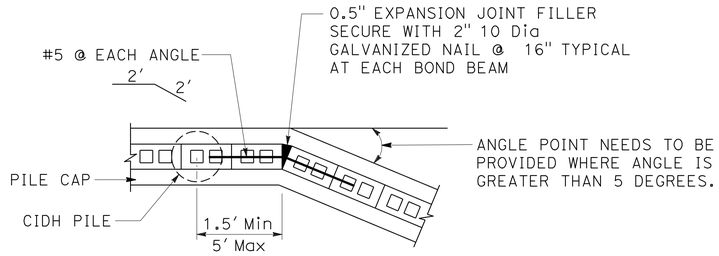
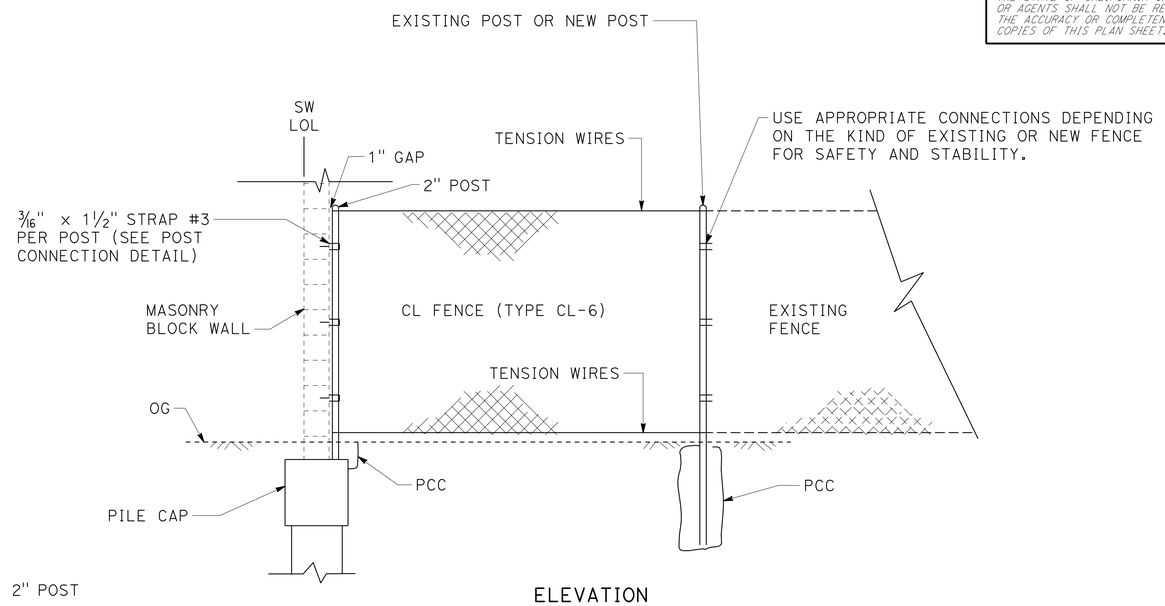
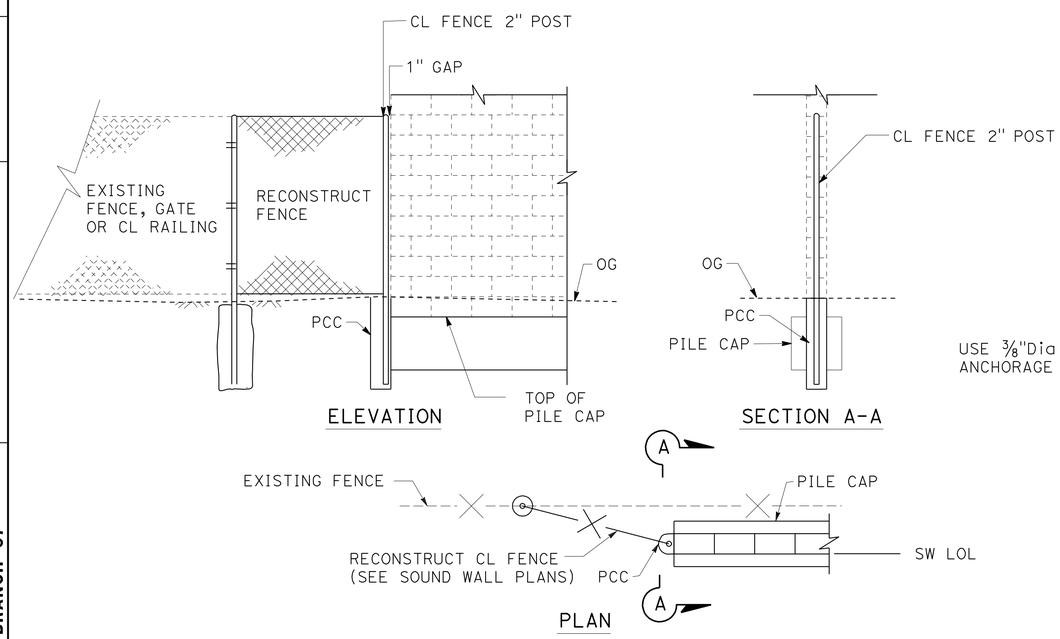


ANGLE POINT

WALL REINFORCEMENT NOT SHOWN
SOUND WALL No. 1 TO 10



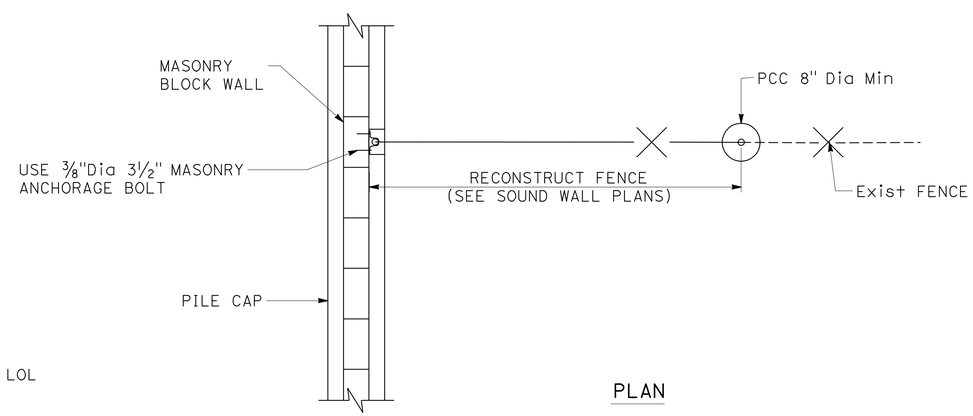
ELEVATION



RECONSTRUCT FENCE

EXIST CL FENCE CONNECTION DETAILS

WALL REINFORCEMENT NOT SHOWN
SEE REVISED Std PLANS A85 FOR DETAILS NOT SHOWN ALSO
SEE ANGULAR CL FENCE CONNECTION ON THIS SHEET
SOUND WALL No. 1, 2, 3, 5, 6, 7, 8, 9 & 10



PLAN

RECONSTRUCT FENCE

ANGULAR CL FENCE CONNECTION DETAIL

WALL REINFORCEMENT NOT SHOWN
SEE REVISED Std PLANS A85 FOR DETAILS NOT SHOWN
SOUND WALL No. 2, 3, 5, 6, 7, 8, 9 & 10

SOUND WALL DETAILS

NO SCALE

SW-41

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	661	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
A. Y. FONG
No. 64343
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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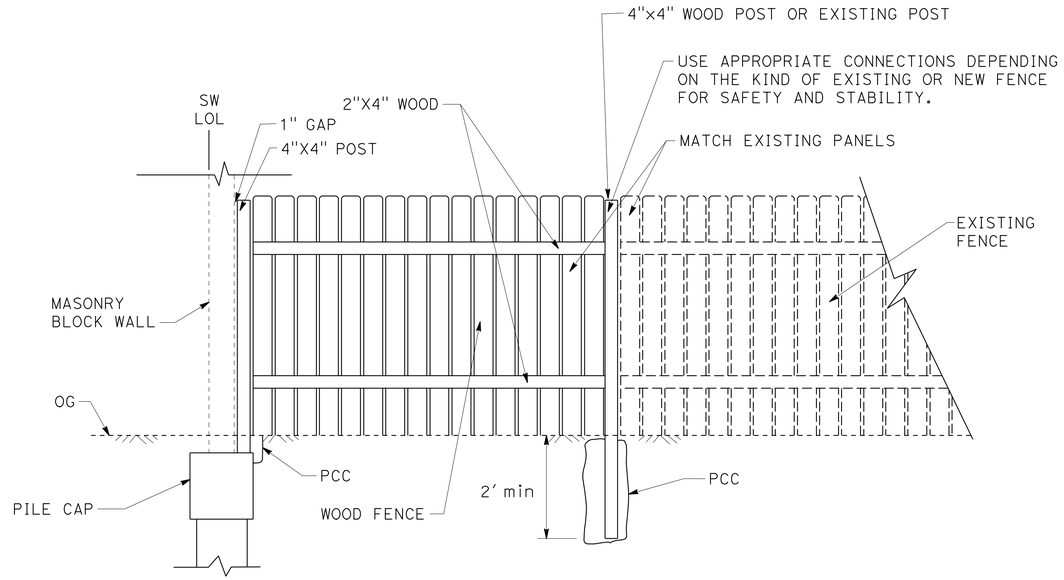
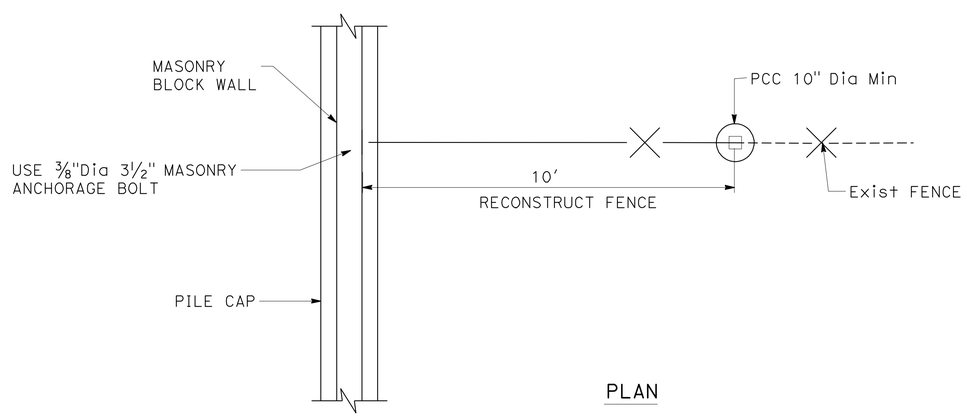


ELEVATION



PLAN

RECONSTRUCT FENCE

WOOD FENCE CONNECTION DETAIL

WALL REINFORCEMENT NOT SHOWN

SOUND WALL No. 2, 3, 5, 6, 7, 8, 9 & 10

SOUND WALL DETAILS

NO SCALE

SW-42

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	662	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp. 6-30-11 CIVIL STATE OF CALIFORNIA

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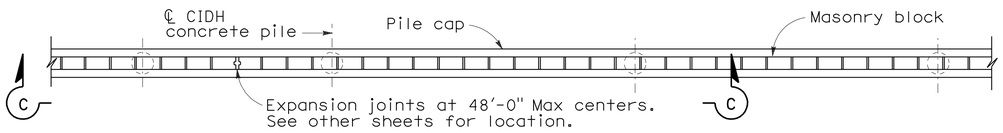
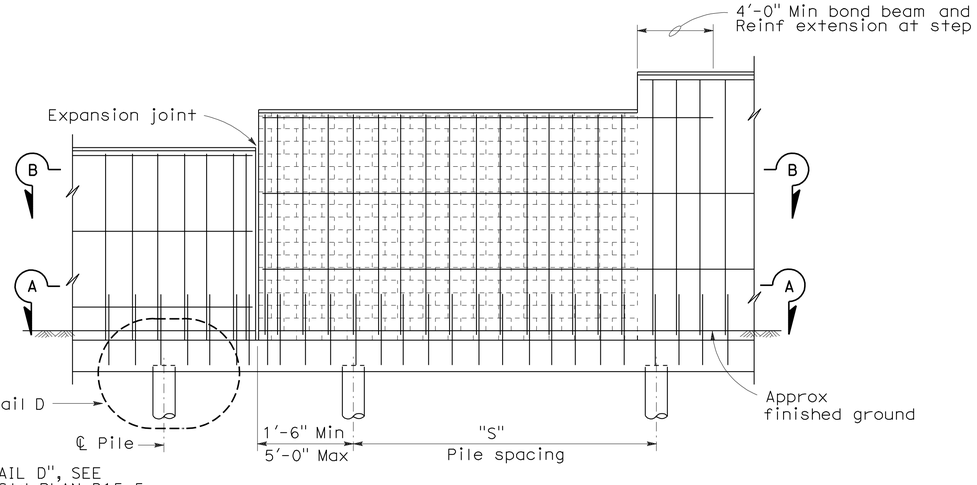


PLAN

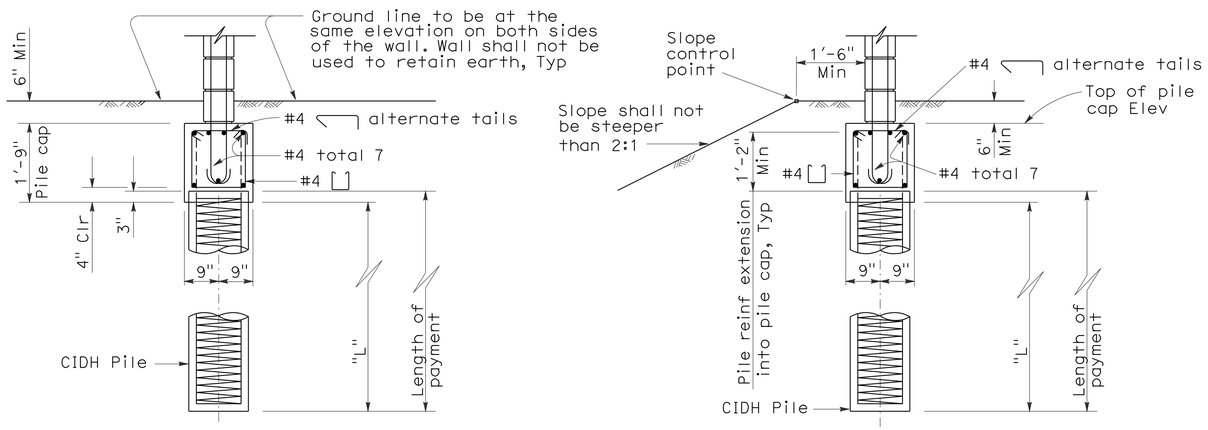


NOTE:
FOR "DETAIL D", SEE REVISED Std PLAN B15-5

ELEVATION C-C

NOTE I : FOR DETAILS NOT SHOWN, SEE REVISED STANDARD PLAN B15-4 AND B15-5.

NOTE II: SEE REVISED STANDARD PLANS B15-9 FOR OTHER DETAILS.



CASE 1

For details not shown, see Case 2.
Level ground (±10%) on one side of the sound wall.

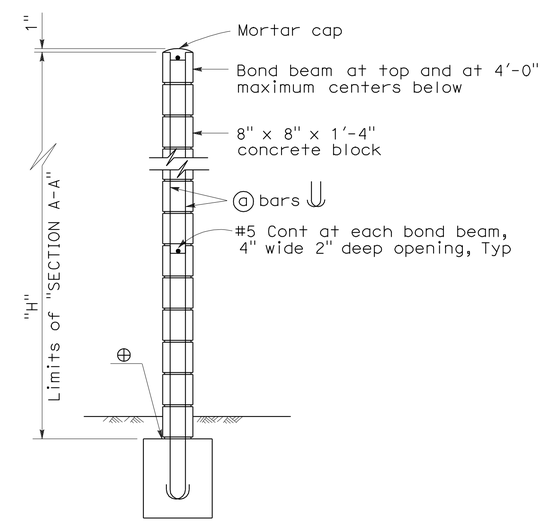
CASE 2

For details not shown, see Case 1.
Level ground (±10%) on one side of the sound wall and sloping ground on the opposite side.

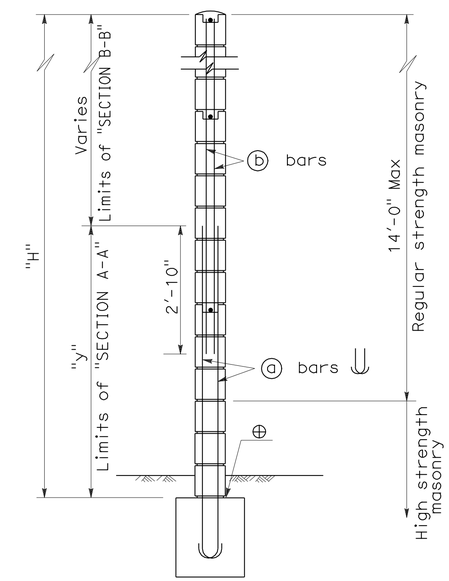
PILE CAP SECTION

SOUND WALL REINFORCEMENT TABLE

Maximum "H"	ⓐ bars @ 1'-4" Max	ⓑ bars @ 1'-4" Max	"Y"	f'm (psi)	Compressive Strength of CMU (psi)	Maximum "H"
10'-0"	#4	——	——	1500	1900	10'-0"
12'-0"	#5	#4	6'-0"	1500	1900	12'-0"
16'-0"	#6	#4	10'-0"	2000	2800	16'-0"



H=10'-0"



H=12'-0" THRU H=16'-0"

For details not shown, see H=10'-0".

TYPICAL SECTION

⊕ Full mortar bed at bottom of wall.

SOUND WALLS No. 1 TO 10

SOUND WALL MASONRY BLOCK ON PILE CAP DETAILS

NO SCALE

SW-43

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	663	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp. 6-30-11 CIVIL STATE OF CALIFORNIA

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GENERAL NOTES:

A. For type of block and joint finish, see other sheets.

B. When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-12 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.

C. Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.

D. For intermediate wall heights that are between the "H's" given, use the tabular information for the next higher "H".

E. Masonry strengths are listed in the "SOUND WALL REINFORCEMENT TABLE". See Standard Plan B15-3.

DESIGN NOTES:

DESIGN

Uniform Building Code, 1997 Edition
and the Bridge Design Specifications.

DESIGN WIND LOAD

20 psf

DESIGN SEISMIC LOAD

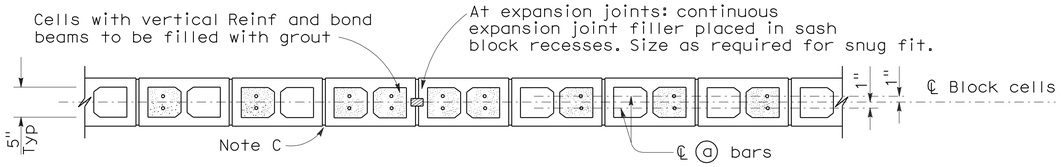
0.57 Dead load

REINFORCED CONCRETE

f'c = 3.6 ksi
fy = 60 ksi

CONCRETE MASONRY

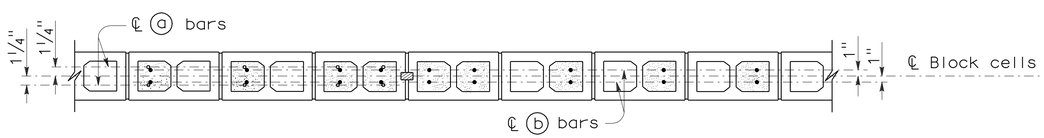
REGULAR STRENGTH	HIGH STRENGTH	
f'm = 1500 psi	f'm = 2000 psi	f'm = 2500 psi
fb = 495 psi	fb = 660 psi	fb = 830 psi
fs = 24,000 psi	fs = 24,000 psi	fs = 24,000 psi
n = 25.8	n = 19.3	n = 15.5



SECTION A-A

For details not shown, see other sections.

H=10'-0"



SECTION A-A **SECTION B-B**

For details not shown, see other sections.

H=12'-0" THRU H=16'-0"

SOUND WALL MASONRY BLOCK ON PILE CAP DETAILS

NO SCALE

SW-44

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	664	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

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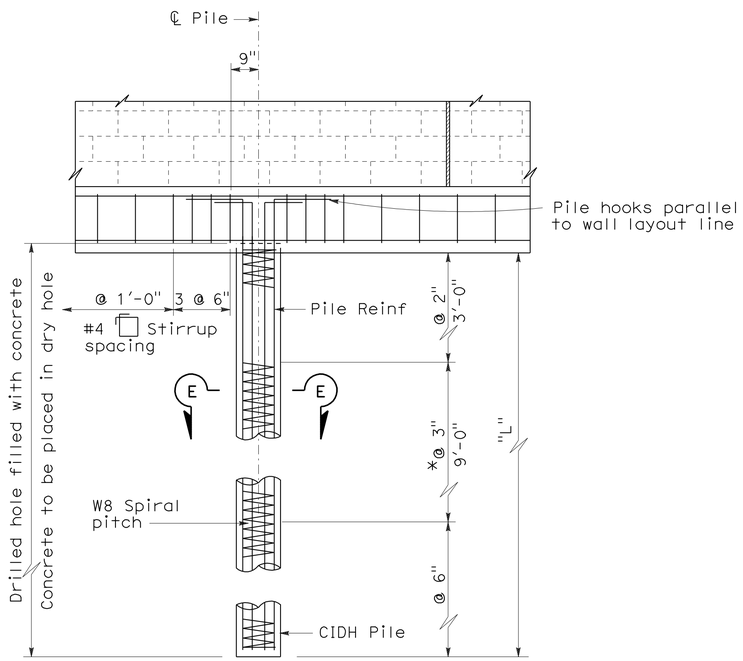
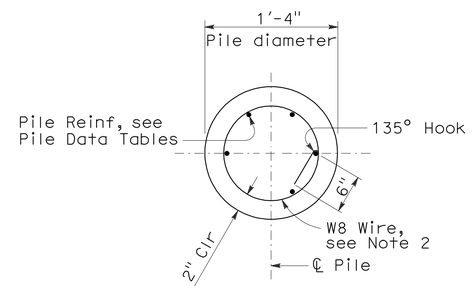
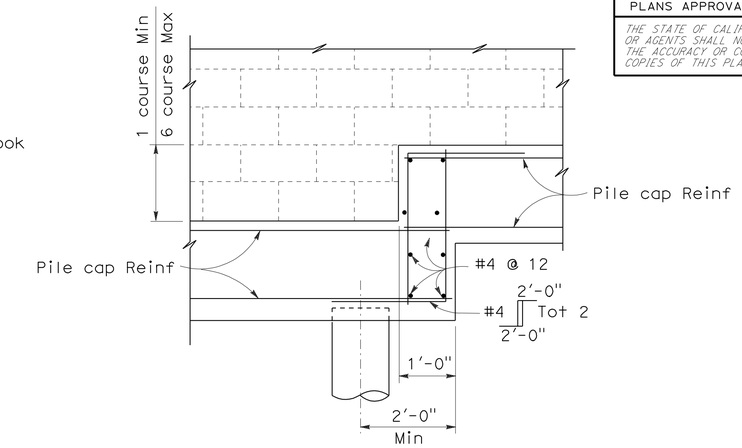


DETAIL D

* @ 2" at option of Contractor



SECTION E-E



PILE CAP STEP DETAIL

NOTES:

1. For details not shown, see Revised Standard Plans B15-3 and B15-4.
2. Lapped splices in spiral reinforcement shall be lapped at least 80 wire diameters. Spiral reinforcement at splices and at ends shall be terminated with a 135° hook with a 6" tail hooked around a longitudinal bar.

CASE 1 - PILE DATA TABLE			
Maximum H	θ = 30 Min		
	S	L	Pile Reinf
10'-0"	16'-0"	8'-0"	#7 Tot 6
12'-0"	16'-0"	9'-6"	#8 Tot 7
16'-0"	13'-0"	10'-6"	#8 Tot 7

Case 1 - Level ground (±10%) on both sides of the sound wall.

CASE 2 - PILE DATA TABLE						
Maximum H	θ = 30 Min			θ = 35 Min		
	S	L	Pile Reinf	S	L	Pile Reinf
10'-0"	15'-0"	16'-0"	#8 Tot 7	16'-0"	12'-0"	#7 Tot 7
12'-0"	12'-0"	16'-0"	#8 Tot 7	15'-0"	13'-6"	#8 Tot 7
16'-0"	8'-0"	16'-0"	#8 Tot 7	11'-0"	14'-0"	#8 Tot 7

Case 2 - Level ground (±10%) on traffic side of the sound wall and sloping ground on opposite side.

SOUND WALL MASONRY BLOCK ON PILE CAP DETAILS

NO SCALE

SW-45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	665	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
A. Y. FONG
No. 64343
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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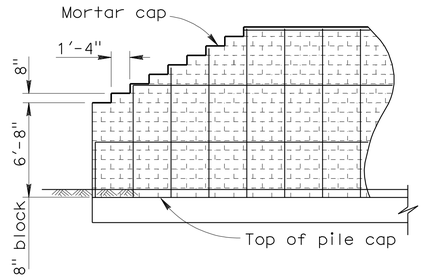
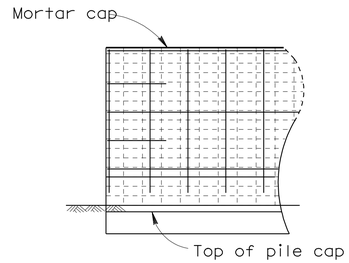


TYPE II

SOUND WALL No. 1, 2, 3, 4, 5, 6, 9 & 10



TYPE IV

SOUND WALL No. 2, 3, 5, 6, 7, 8 & 9

END OF WALL DETAILS

NOTES:

1. 1'-0" wide block not allowed within 6'-0" of profile grade.
2. For structural details, see other sheets.
3. The end of the wall details may be used with any of the standard supporting foundations for masonry block.

SOUND WALL MASONRY BLOCK MISCELLANEOUS DETAILS

NO SCALE

SW-46

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI

CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG

REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	666	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

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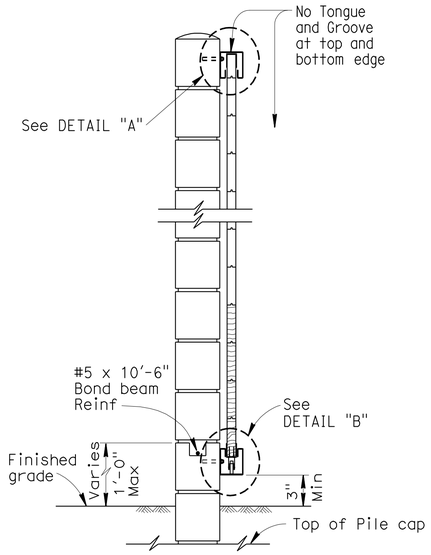
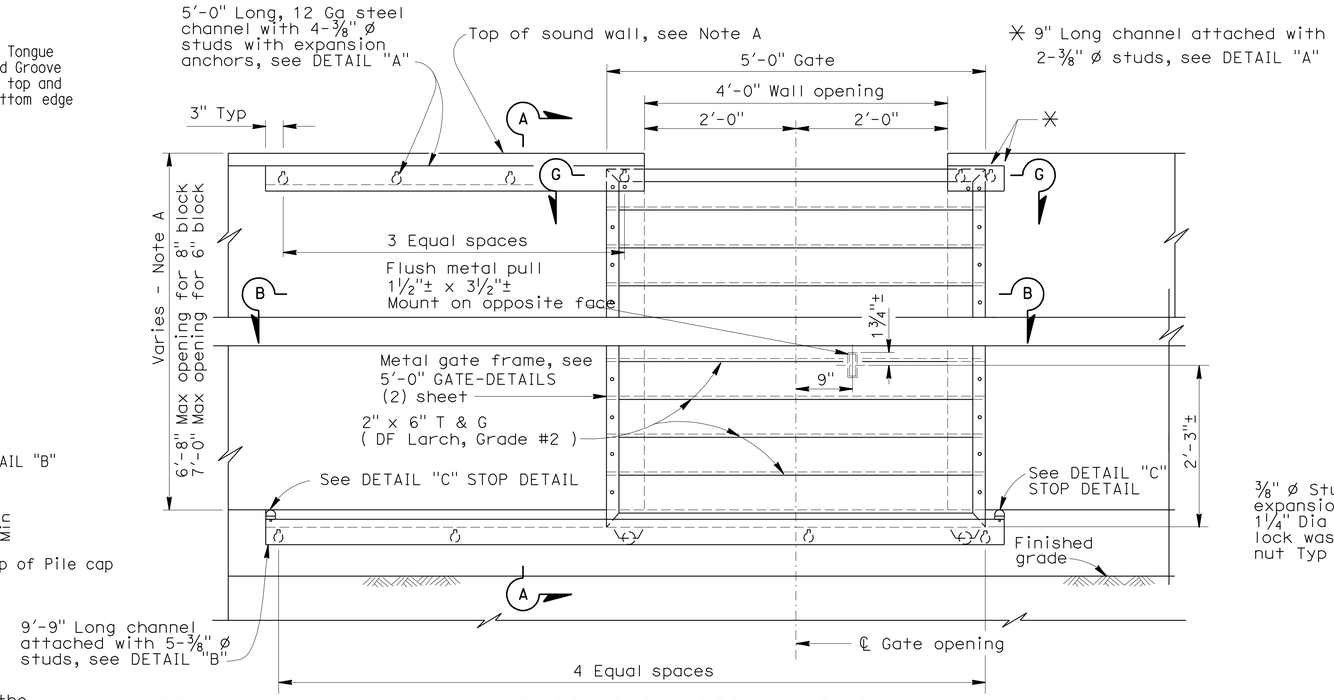
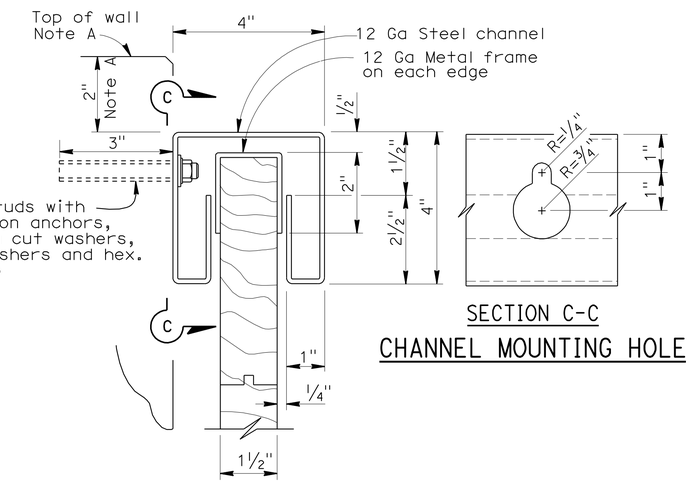


SECTION A-A



GATE ELEVATION - BACK



SECTION C-C
CHANNEL MOUNTING HOLE

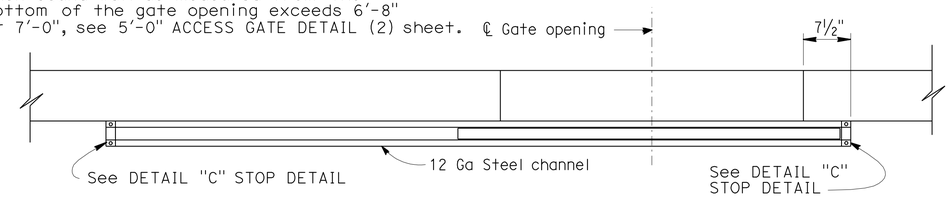
DETAIL "A"

NOTE:

Those blocks upon which the supporting steel channels are mounted shall be smooth faced on the mounting side

NOTE A:

When sound wall as measured from the bottom of the gate opening exceeds 6'-8" or 7'-0", see 5'-0" ACCESS GATE DETAIL (2) sheet.



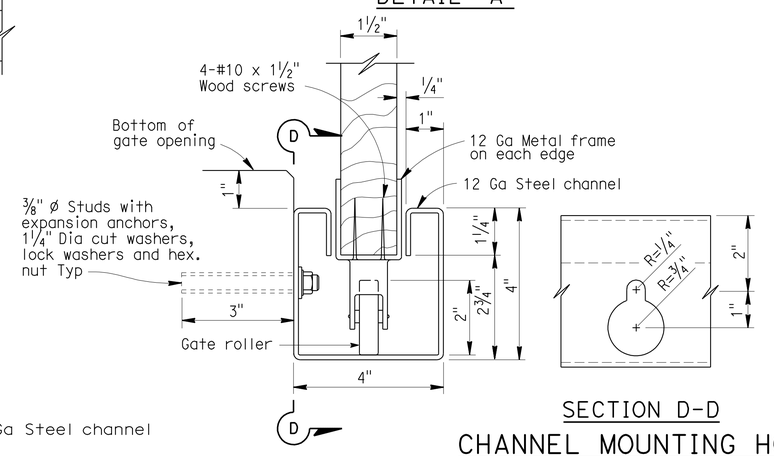
SECTION B-B

NOTES:

All wood to be stained. All hardware to be galvanized.
All structural metal to be galvanized after fabrication.

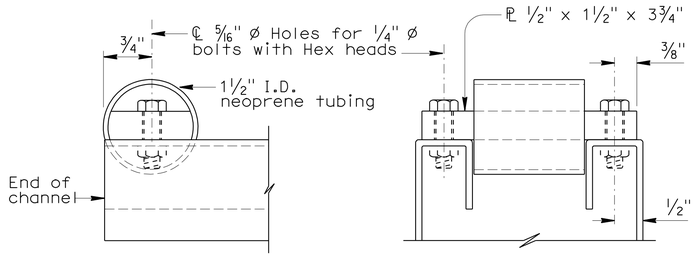
Gate mounted on sloping grade shall be oriented to be in closed position when at lower grade point.

Two masonry cells adjacent to each side of gate to be reinforced and grouted.



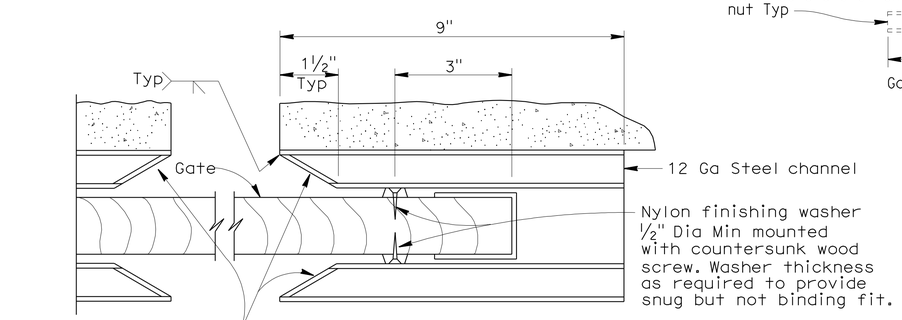
DETAIL "B"

SECTION D-D
CHANNEL MOUNTING HOLE



SIDE VIEW END VIEW

DETAIL "C" STOP DETAIL



SECTION G-G

For location of nylon finishing washers, see Standard Plan B15-11.

SOUND WALL MASONRY BLOCK ON FOOTING OR PILE CAP 5'-0" ACCESS GATE DETAIL (1)

NO SCALE

SW-47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

Caltrans

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A. FONG
CHECKED BY
REVISED BY
DATE REVISED
A.S. RANDHAWA

LAST REVISION 00-00-00
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	667	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A. Y. FONG No. 64343 Exp. 6-30-11 CIVIL STATE OF CALIFORNIA

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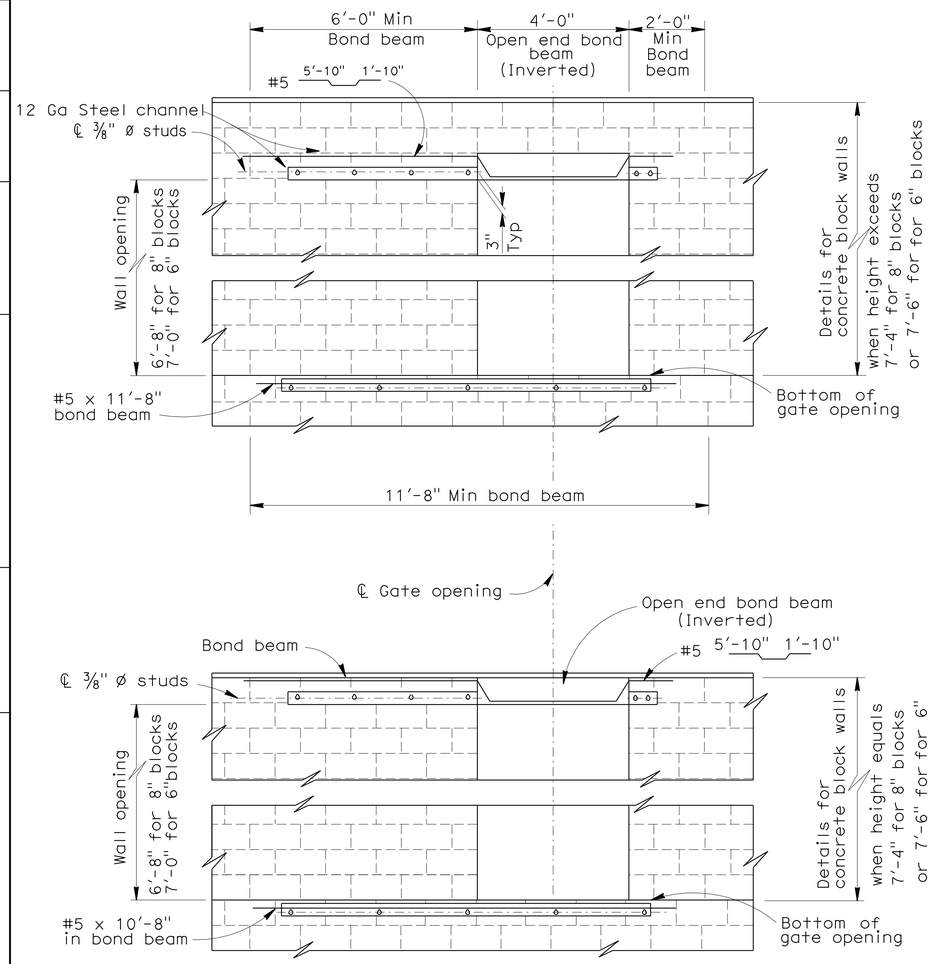
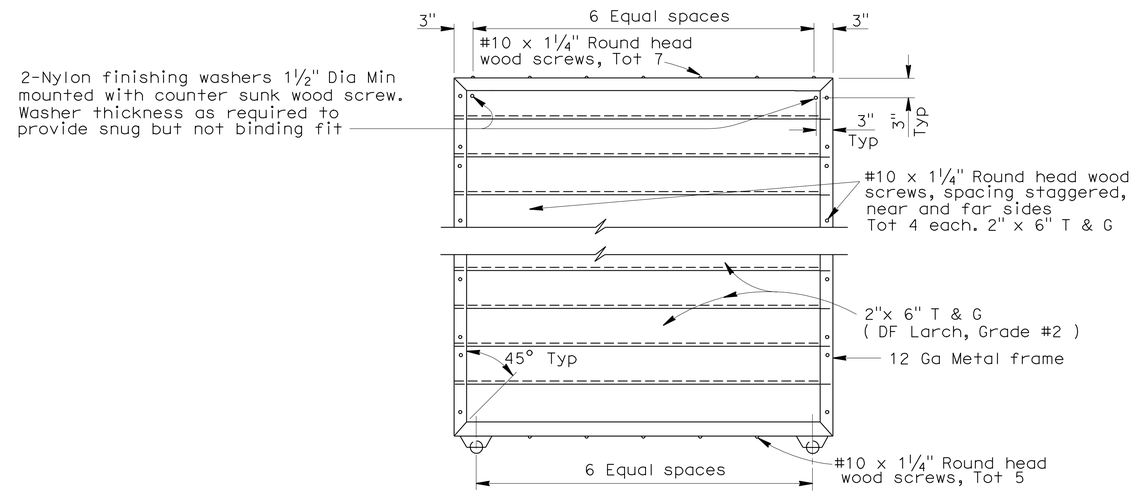


PART ELEVATION (BACK)

For details not shown, see above.



ELEVATION - METAL FRAME

SOUND WALL MASONRY BLOCK ON FOOTING OR PILE CAP 5'-0" ACCESS GATE DETAIL (2)

NO SCALE

SW-48

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER 6-15-10 DATE

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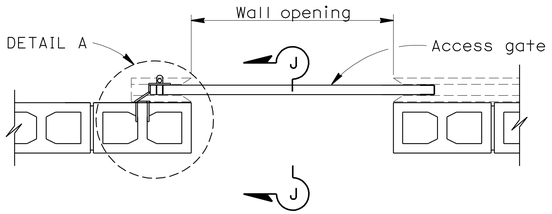
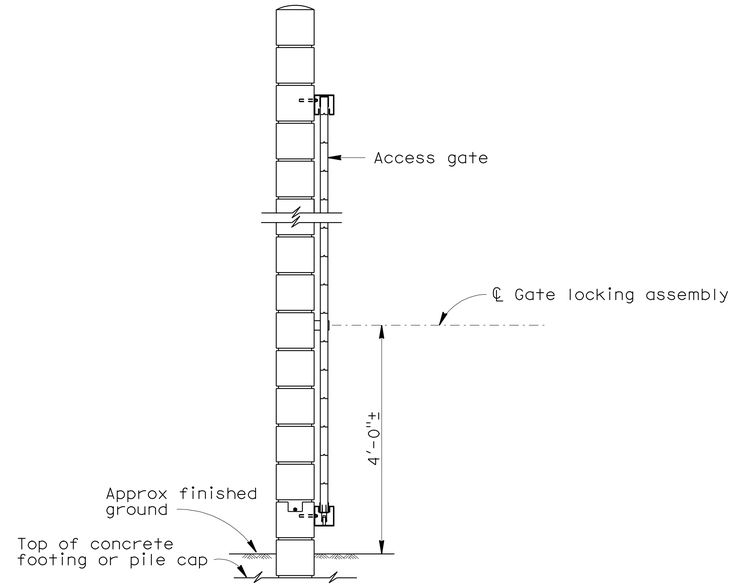
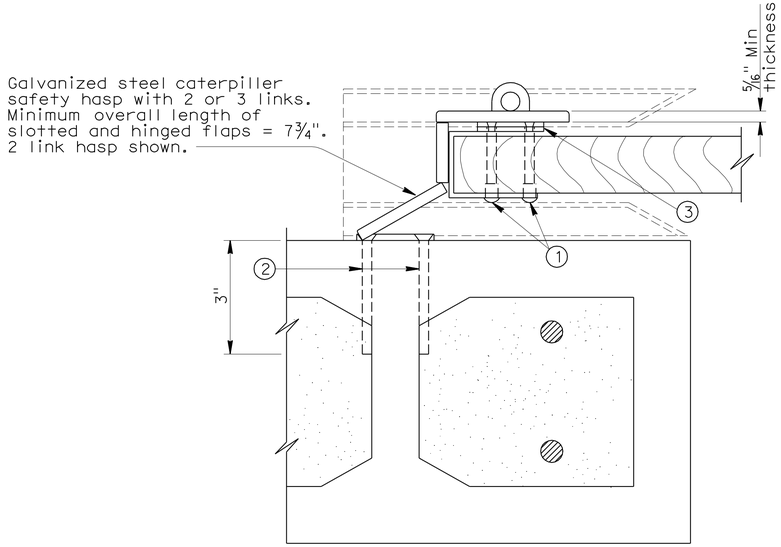


PLAN
LOCK ON
GATE SIDE OF WALL



MASONRY ON PILE CAP

SECTION J-J



DETAIL A

NOTES:

1. Masonry anchors to be installed after the grout in the block cells has attained specified strength.
2. Contractor may submit alternative gate locking assemblies for approval by the Engineer.
3. See other sheets for gate details.

(1) 4 - sex bolts with ¼" - 20 flat head corrosion resistant machine screws.

(2) 4 - ¼" ø x 3" long flat head sleeve type corrosion resistant masonry anchors.

(3) Galvanized shim plate. Size as required to match hasp staple plate±. Thickness as required for sex bolt fit up.

SOUND WALL MASONRY BLOCK ACCESS GATE LOCKING DETAILS

NO SCALE

SW-49

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
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LAST REVISION 00-00-00
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03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	669	1012

REGISTERED CIVIL ENGINEER 6-15-10 DATE

9-7-10
PLANS APPROVAL DATE

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SOUND WALLS

SOUND WALL	16" CIDH Conc PILING (SOUND WALL)	SOUND WALL (MASONRY BLOCK)	ACCESS GATE (SOUND WALL)	MINOR Conc (SOUND WALL)
	LF	SQFT	EA	CY
SW1	2,976	23,754		204
SW2	1,456	11,842		100
SW3	3,620	29,076	2	258
SW4	2,096	21,797		187
SW5	3,712	29,803		254
SW6	2,304	18,512	2	157
SW7	1,008	8,939	1	92
SW8	480	3,675		32
SW9	4,064	31,350	1	235
SW10	4,032	31,126	1	236
TOTAL	25,748	209,874	7	1755

FENCE (SOUND WALL ONLY)

SOUND WALL	REMOVE FENCE	RECONSTRUCT FENCE	Temp FENCE (TYPE CL-6 SLATTED)	CHAIN LINK FENCE (TYPE CL-6)
	LF	LF	LF	LF
SW1	190			4
SW2	710	61	710	
SW3	2654	287	1953	
SW4				
SW5	1703	121	1366	
SW6	1660	154	1634	
SW7	937	111	940	
SW8	327	36	331	
SW9	2490	26	2327	11
SW10	2352	180	2333	
SUBTOTAL	13,023*	975	11,594	15*

*SEE SUMMARY OF QUANTITIES FOR TOTAL

REMOVE CURB

LOCATION	REMOVE CURB
	LF
"SW9" 25+20 TO 33+63	850
SUBTOTAL	850**

**SEE SUMMARY OF QUANTITIES FOR TOTAL

REMOVE SHED

LOCATION	LS	DESCRIPTION
VARIOUS	1	SHED TO BE REMOVED FOR SOUNDWALL CONSTRUCTION
TOTAL	1	

SOUND WALL QUANTITIES

SW-50

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: A.S. RANDHAWA
CHECKED BY: A. FONG
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 08:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	670	1012

LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT T. CHRIS JOHNSON No. 5102 Signature 8-31-10 Renewal Date 6-15-10 Date STATE OF CALIFORNIA

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ABBREVIATIONS

AMEND — amendment
B & B — balled and burlapped
Dia — diameter
EA — each
lb — pound
oz. — ounce
Ft — foot/feet
SQFT — square feet
CF — cubic feet
Gal — Gallon
Max — maximum
Min — minimum
NCN — no common name
No. — number
Pkt — packet
PLT ESTB - plant establishment
Pvmt — pavement
R/W — right of way
SF — state furnished
TRVD — traveled

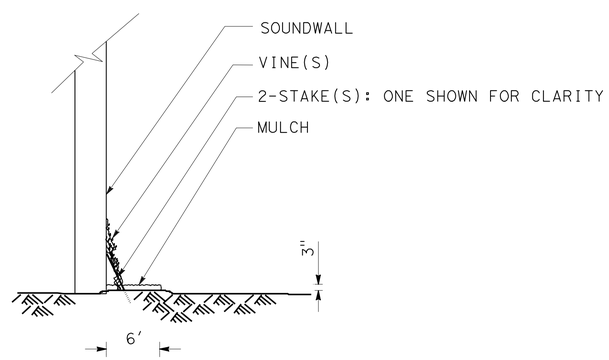
PLANT LIST AND PLANTING SPECIFICATIONS

PLANT GROUP	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY EACH	HOLE SIZE (INCH) Dia	HOLE SIZE (INCH) DEPTH	BASIN TYPE	IRON SULFATE ①	SOIL AMEND ①	COMMERCIAL FERTILIZER ① PLANTING	COMMERCIAL FERTILIZER ① PLT ESTB	BASIN MULCH	STAKING	PLANTING LIMITS MINIMUM DISTANCE (Ft) FROM TRVD WAY	PVMT	FENCE	WALL	PAVED DITCH	EARTH DITCH	ON CENTER (Ft)	REMARKS
A	1		FICUS PUMILA 'MINIMA'	CREEPING FIG	No. 1	415	②	②	III	--	0.5 CF	1 Pkt	2 Oz	2 CF	⑥	20	--	--	⑥	10	10	10	VINE
	2		PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	No. 1	400	②	②	III	--	0.5 CF	1 Pkt	2 Oz	2 CF	⑥	20	--	--	⑥	13	15	10	VINE
	3		XYLOSMA CONGESTUM	SHINY XYLOSMA	No. 1	21	②	②	II	--	0.5 CF	1 Pkt	2 Oz	2 CF	--	--	15	15	10	10	12	10	SHRUB
	4		PHOTINIA X FRASERI	RED-TIPPED PHOTINIA	No. 1	15	②	②	II	--	0.5 CF	1 Pkt	2 Oz	2 CF	--	--	15	15	10	10	12	10	SHRUB
B	5		QUERCUS WISLIZENII	INTERIOR LIVE OAK	No. 5	145	18	24	II	--	1.0 CF	2 Pkt	2 Oz	2 CF	⑥	30	--	15	15	10	10	20	TREE

NOTE:
Underlined portions of botanical name indicate abbreviations used on Planting Plans.

APPLICABLE WHEN CIRCLED:

① - Quantities shown are "per plant" unless shown as SQFT or SQYD application rates.
② - Sufficient to receive root ball.
3 - Does not apply to mulch areas.
4 - As shown on plans.
5 - Unless otherwise shown on plans.
⑥ - See detail.
7 - See Special Provisions.



TYPICAL MULCH PLACEMENT DETAIL (NTS)

THIS PLAN ACCURATE FOR PLANTING WORK ONLY.

PLANT LIST
NO SCALE
PL-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
SENIOR LANDSCAPE ARCHITECT KENNETH MURRAY
CALCULATED-DESIGNED BY T. CHRIS JOHNSON
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:22

NOTE: FOR COMPLETE RIGHT OF WAY ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	671	1012

LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

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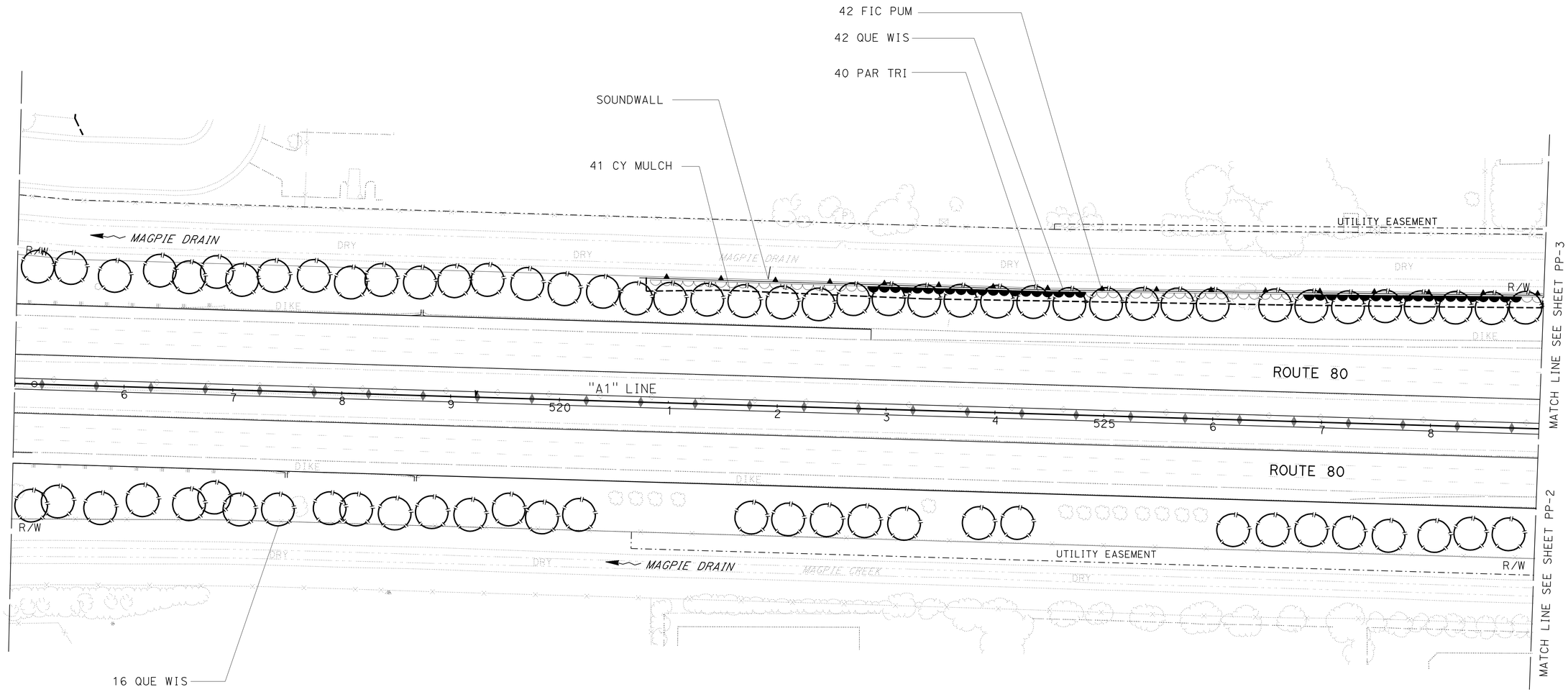
LEGEND

------- MULCH AREA



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PLANTING PLAN

SCALE: 1" = 50'

PP-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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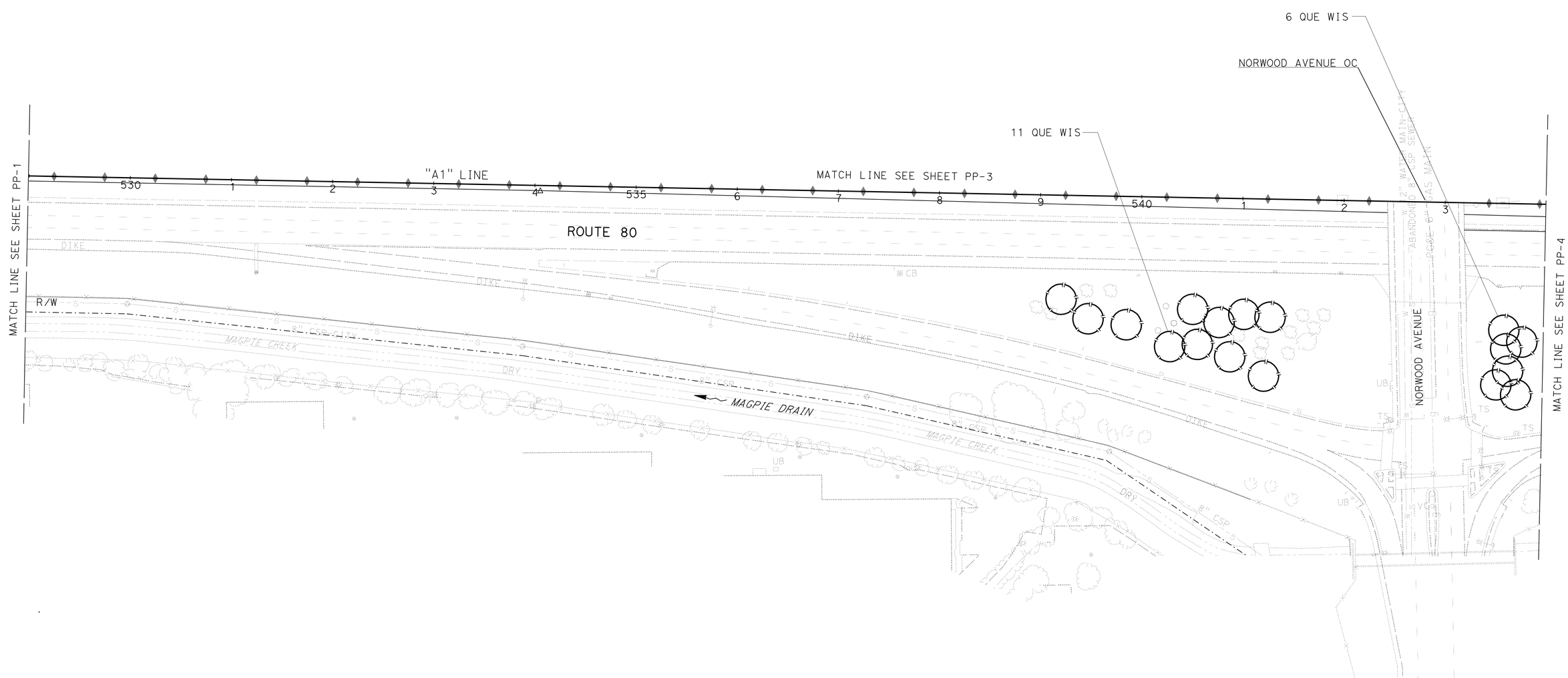

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PLANTING PLAN

SCALE: 1" = 50′ **PP-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

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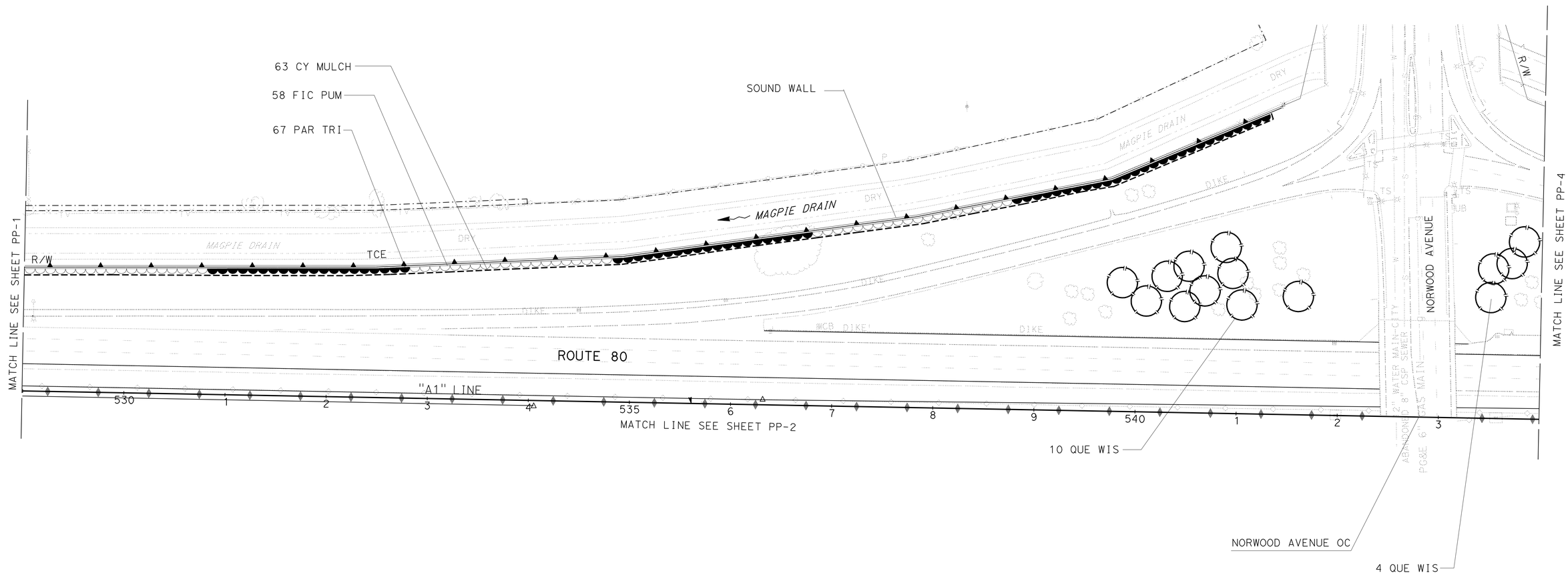

PLANTING PLAN

SCALE: 1" = 50'

PP-3

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Caltrans

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CALCULATED-DESIGNED BY: T. CHRIS JOHNSON
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REVISED BY
DATE REVISED

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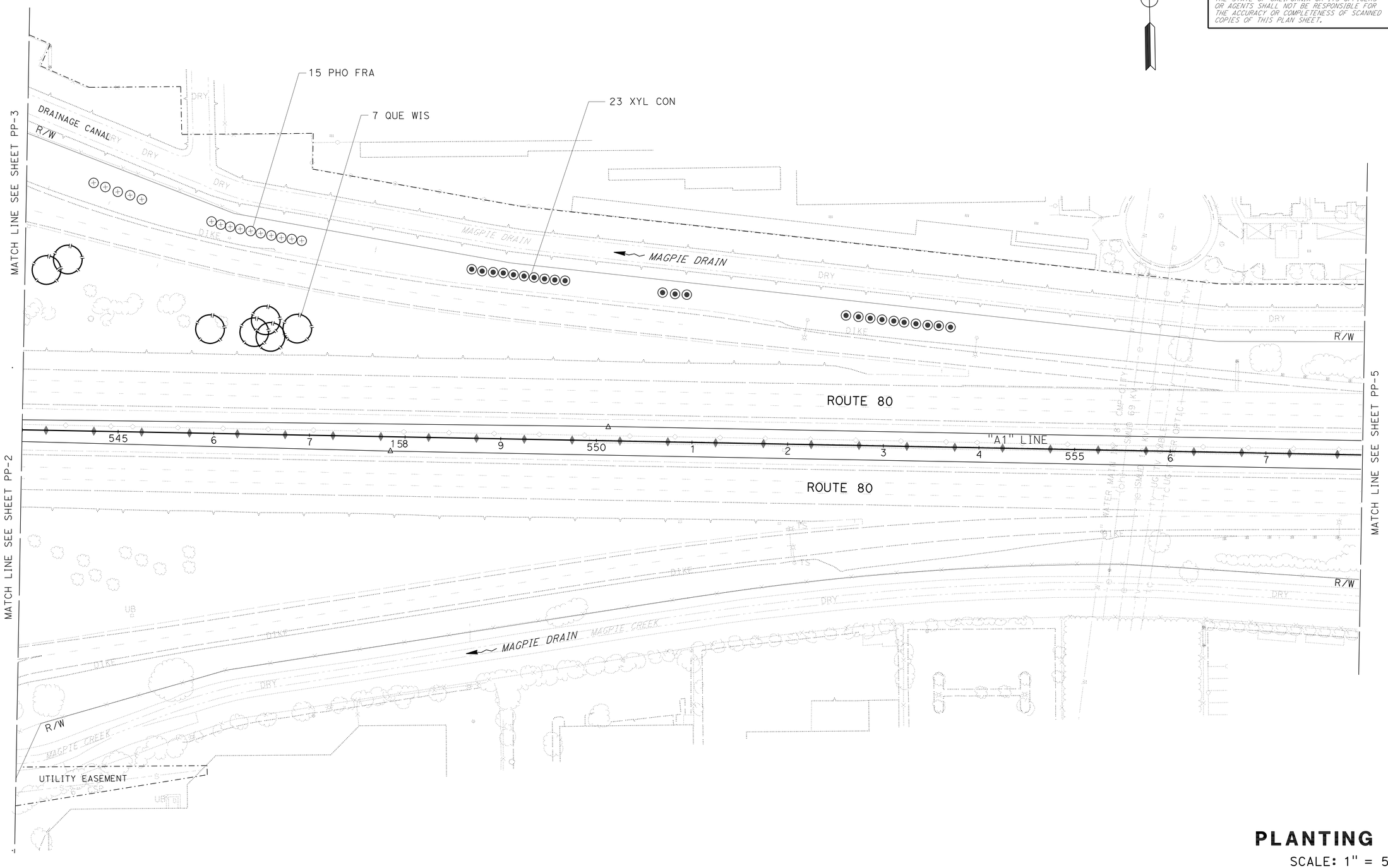

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PLANTING PLAN

SCALE: 1" = 50'

PP-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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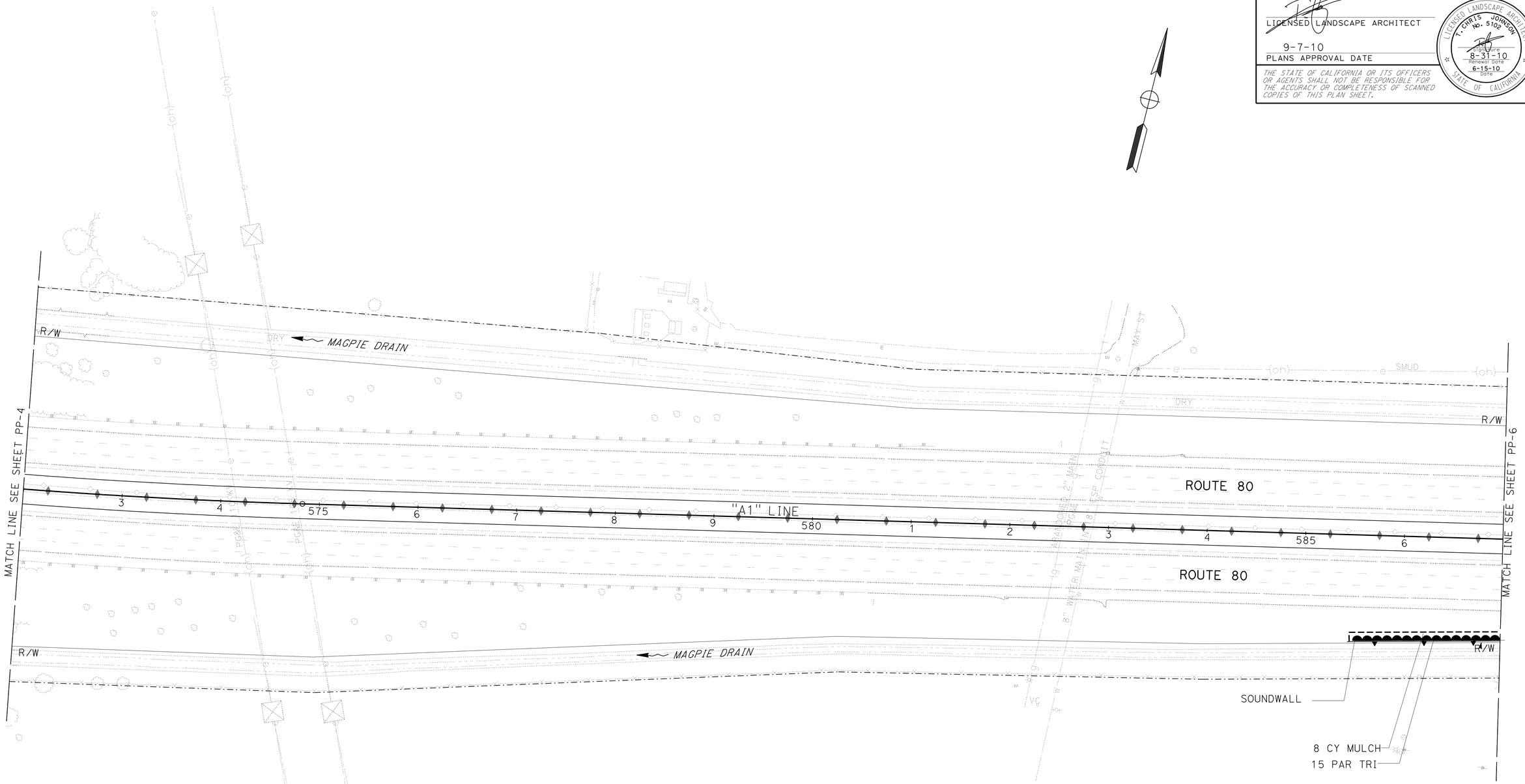

PLANTING PLAN

SCALE: 1" = 50'

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PP-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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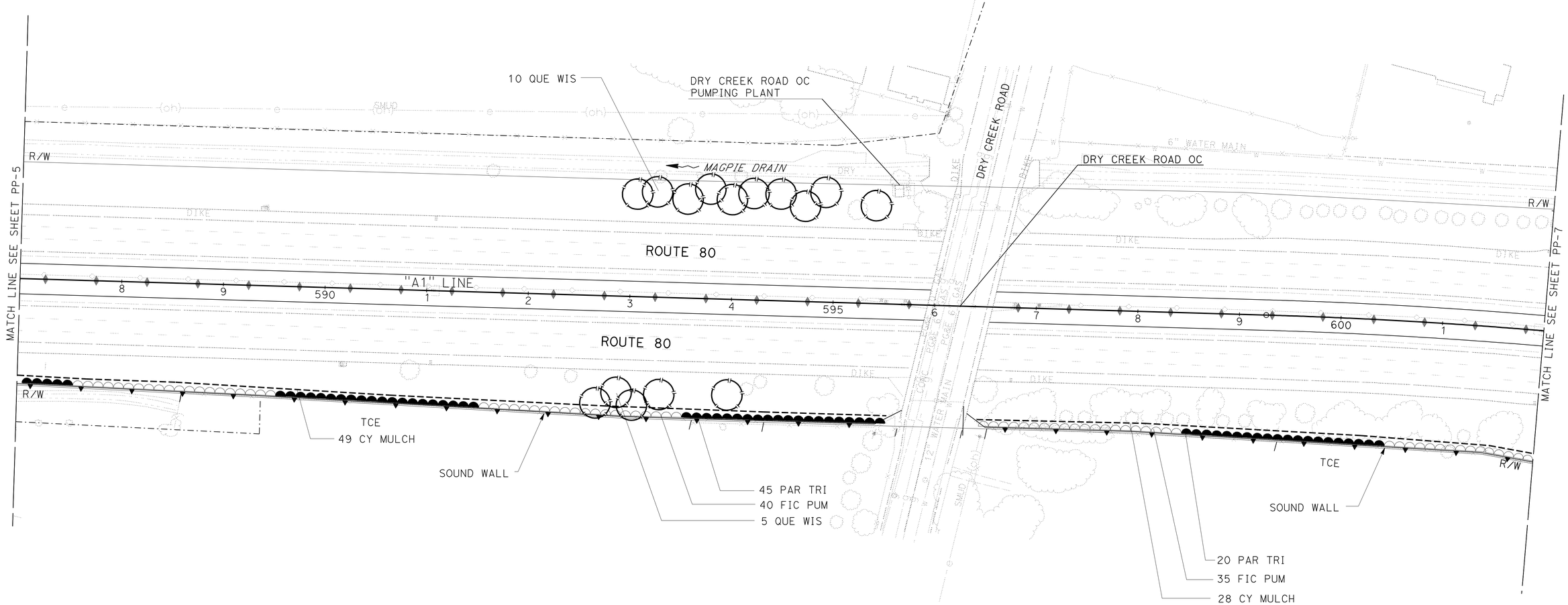

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PLANTING PLAN

SCALE: 1" = 50'

PP-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

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TIME PLOTTED => 13:23

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => trmikesl

DGN FILE => 33797uti006.dgn

CU 03343

EA 3797U1

NOTE: FOR COMPLETE RIGHT OF WAY ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	677	1012

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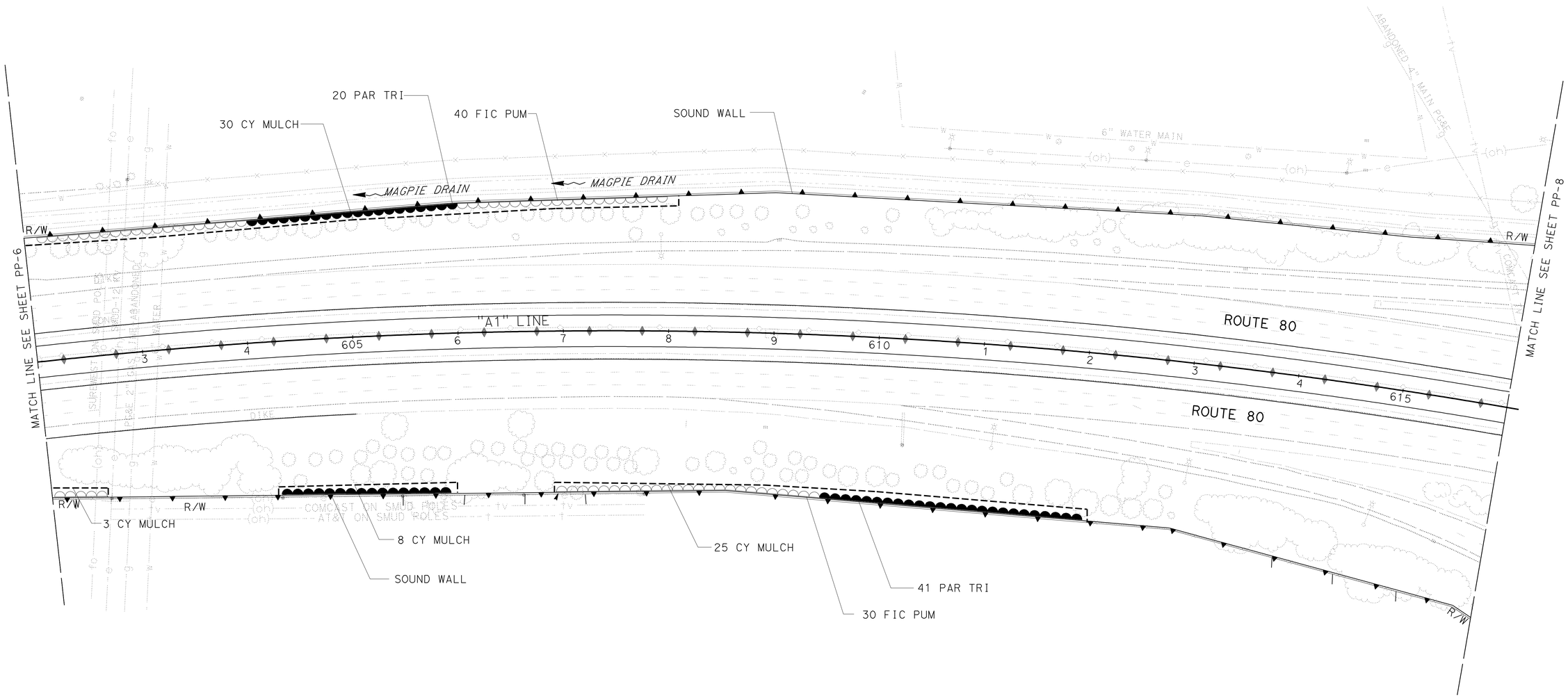

PLANTING PLAN

SCALE: 1" = 50'

PP-7

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CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

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03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	678	1012

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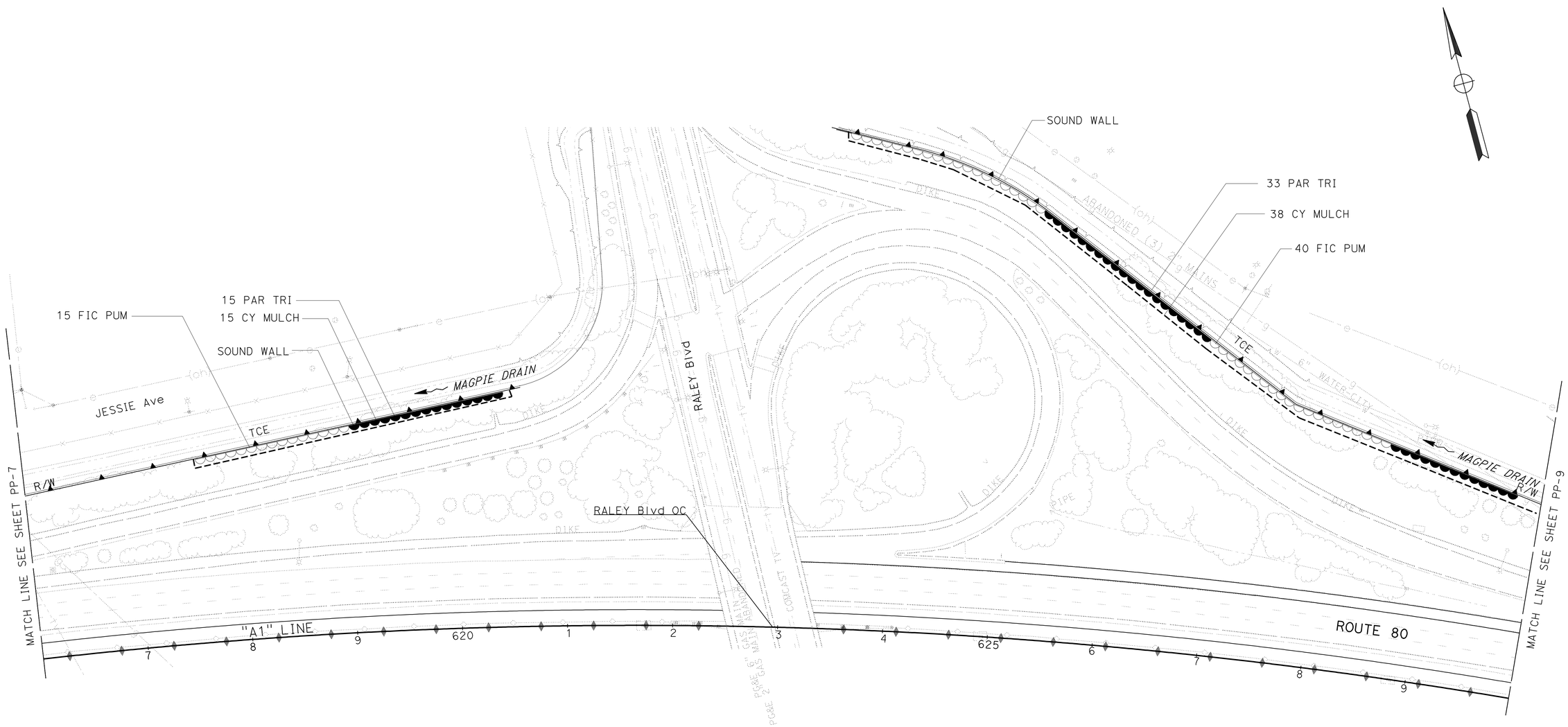

PLANTING PLAN

SCALE: 1" = 50'

PP-8

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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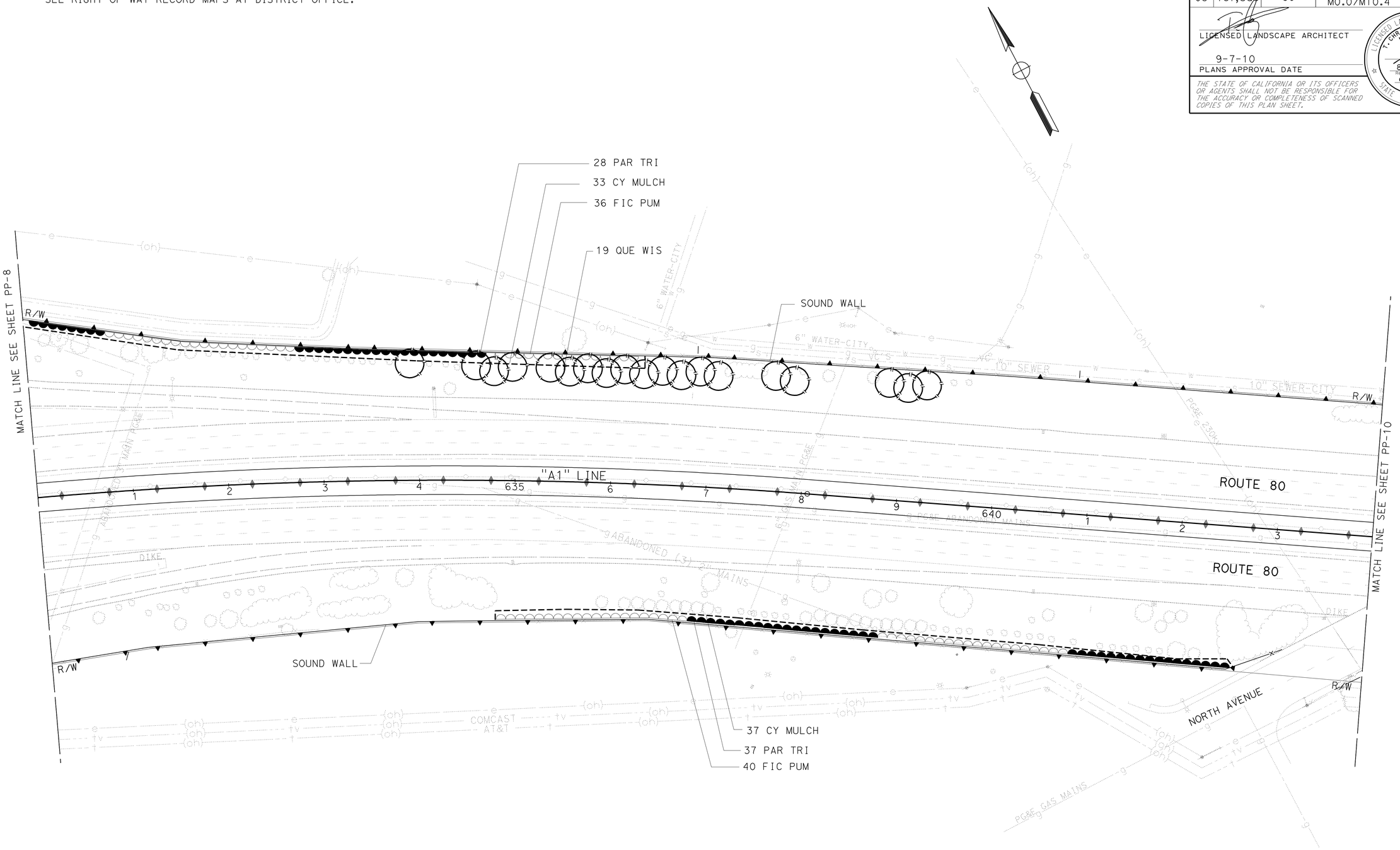

PLANTING PLAN

SCALE: 1" = 50'

PP-9

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

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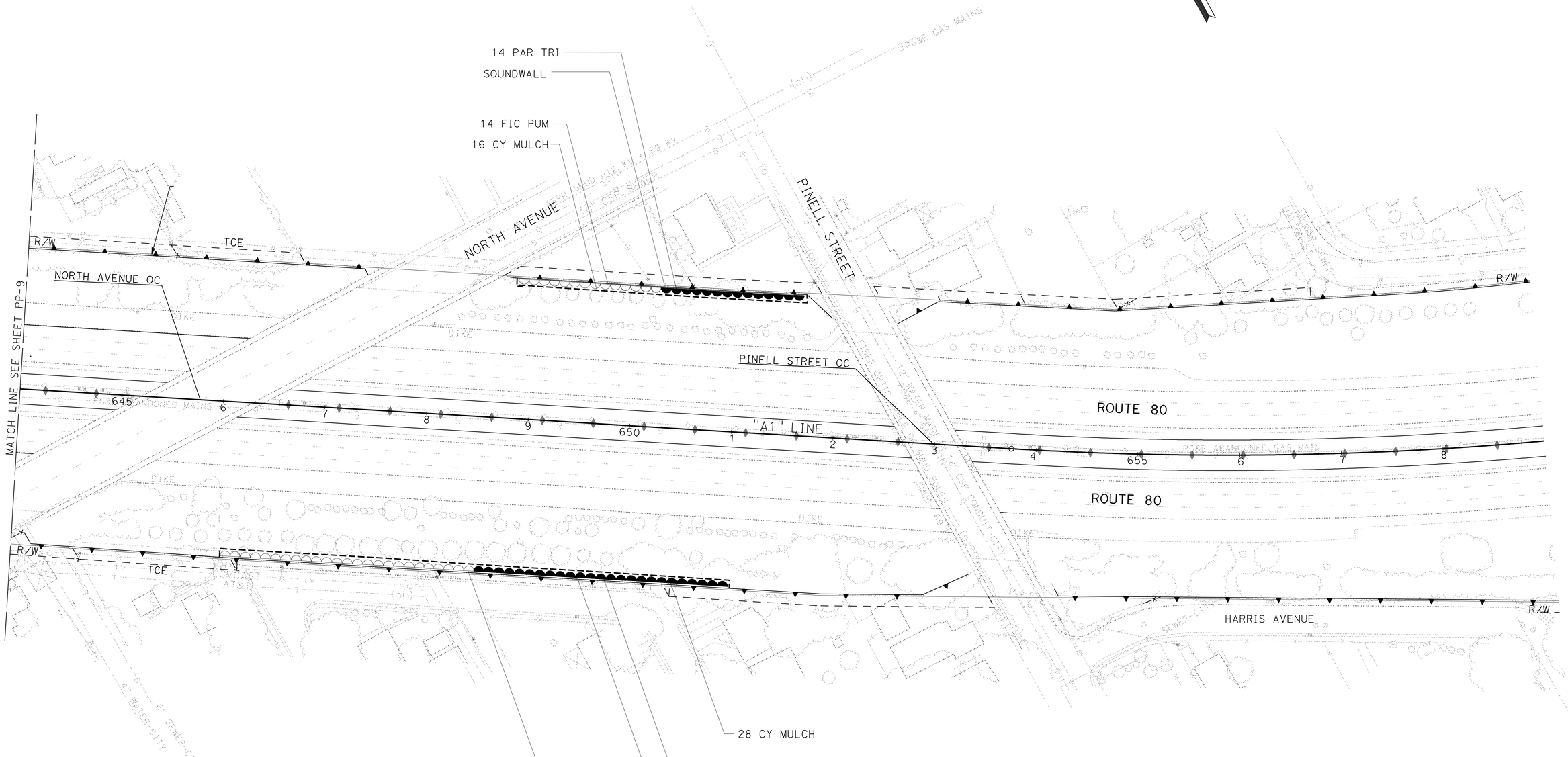

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PLANTING PLAN

SCALE: 1" = 50'

PP-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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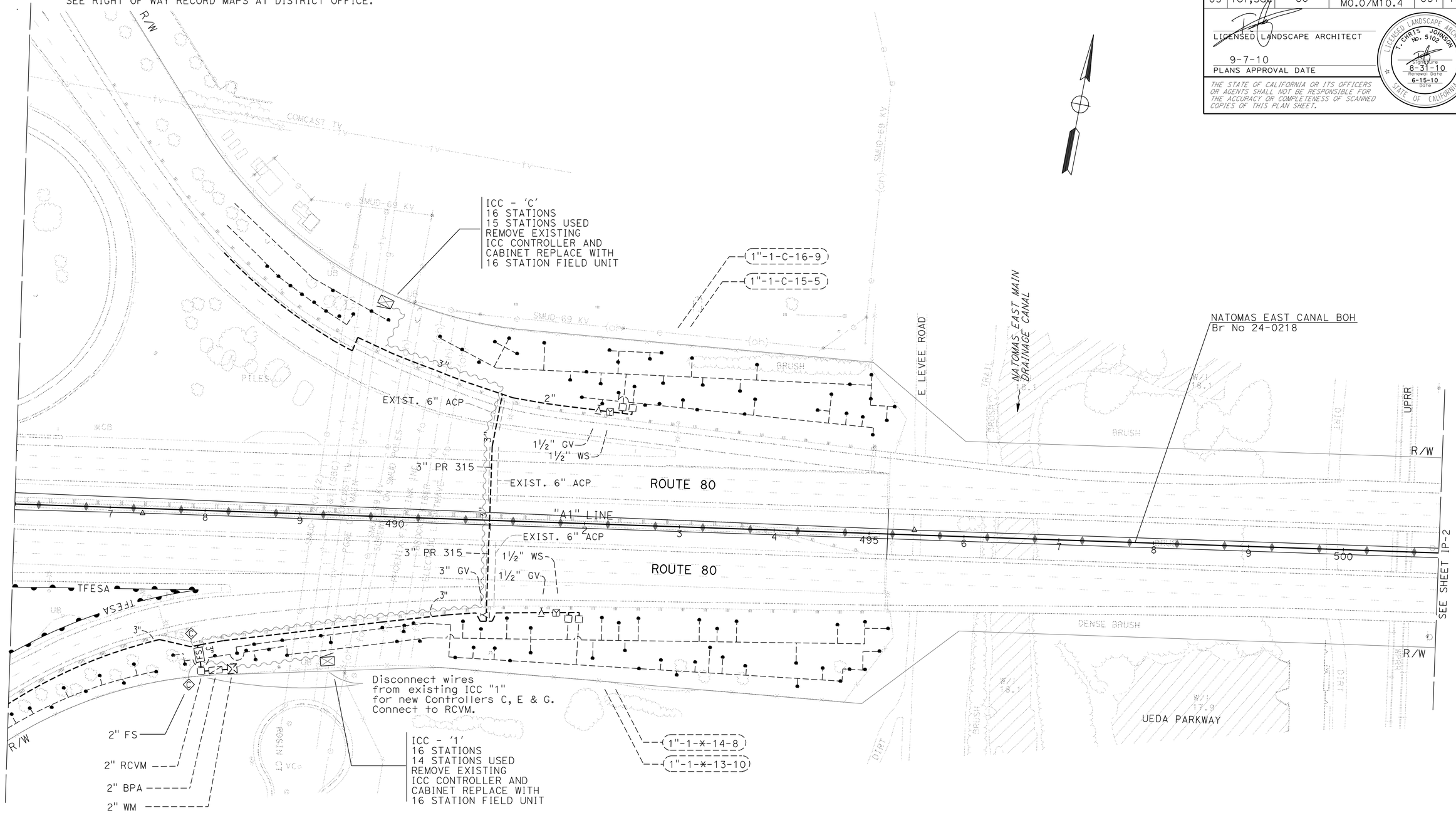

IRRIGATION PLAN

SCALE: 1" = 50'

IP-1

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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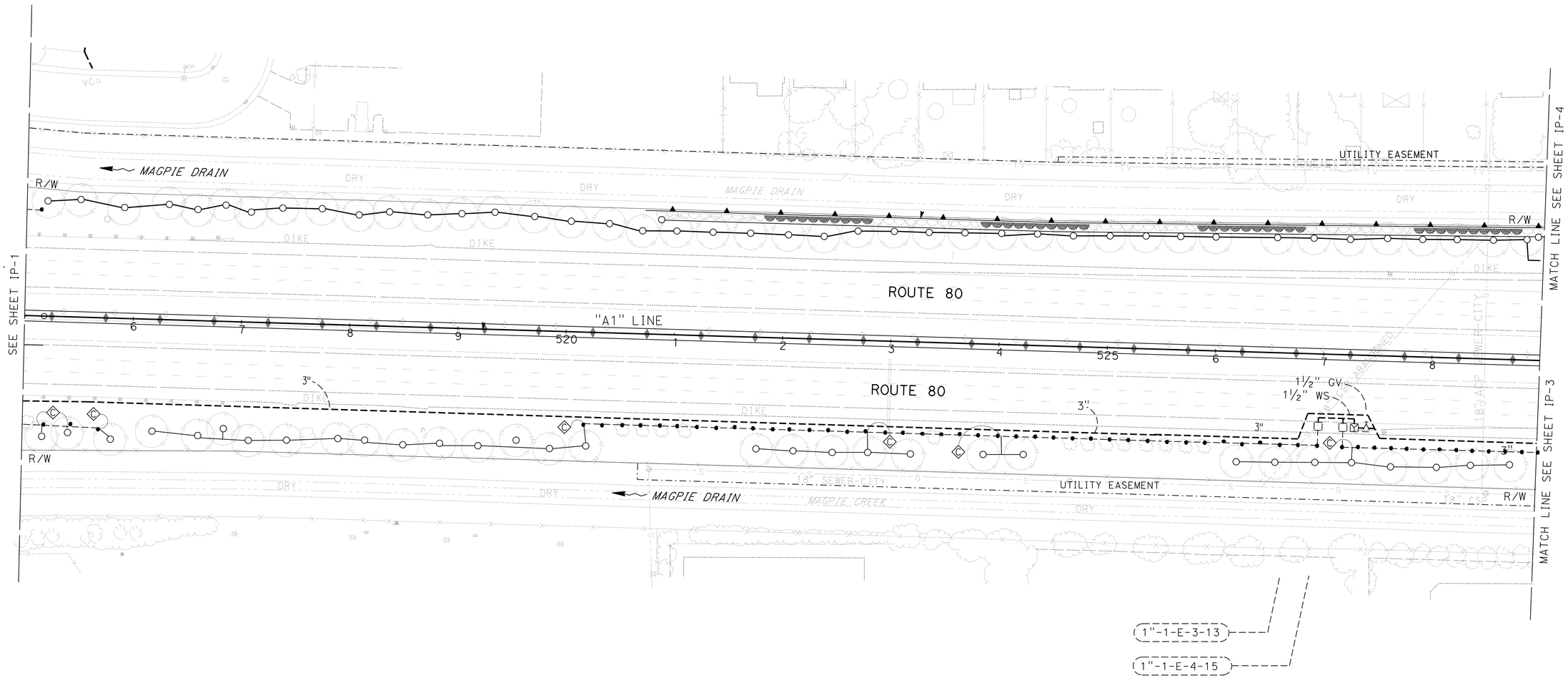

IRRIGATION PLAN

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IP-2

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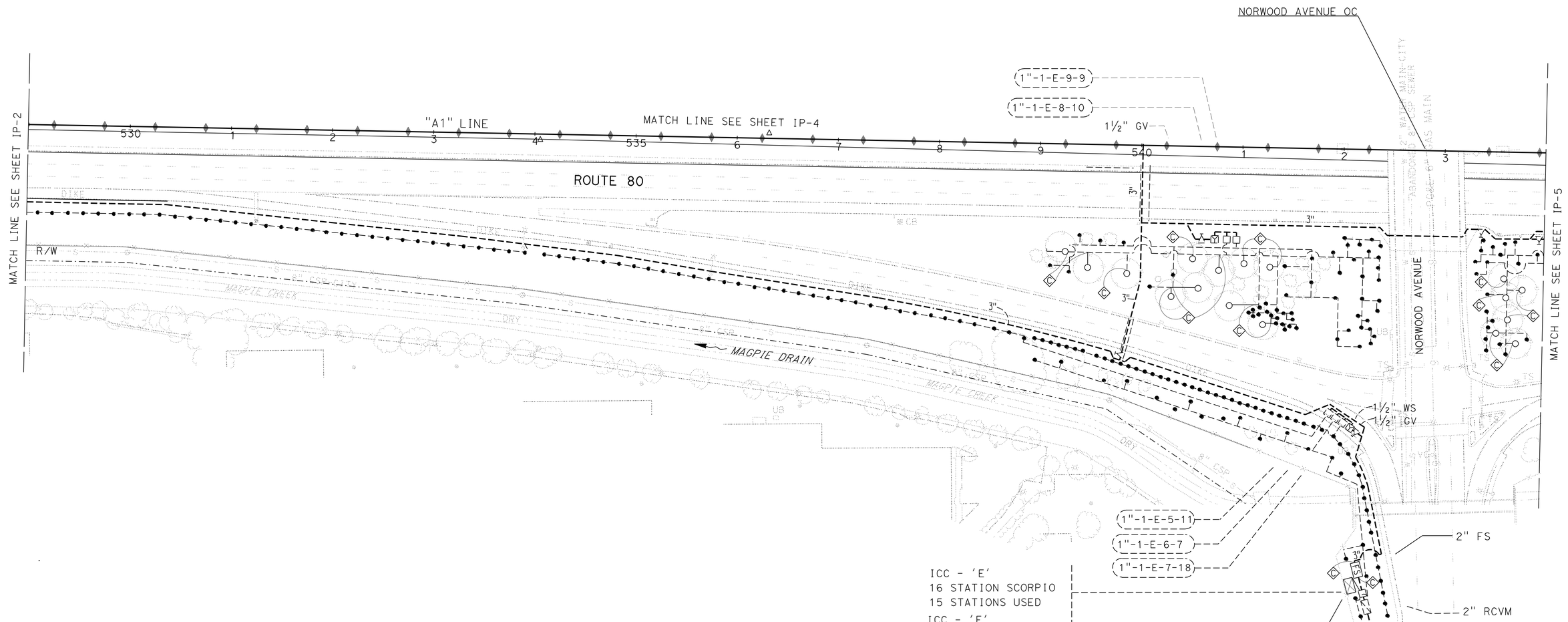
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
T. CHRIS JOHNSON
No. 5102
Signature
8-31-10
Renewal Date
6-15-10
Date
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.

NOTE: FOR COMPLETE RIGHT OF WAY ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

IRRIGATION PLAN

SCALE: 1" = 50'

IP-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 13:24

NOTE: FOR COMPLETE RIGHT OF WAY ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	684	1012

LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT T. CHRIS JOHNSON No. 5102 Signature 8-31-10 Renewal Date 6-15-10 Date STATE OF CALIFORNIA

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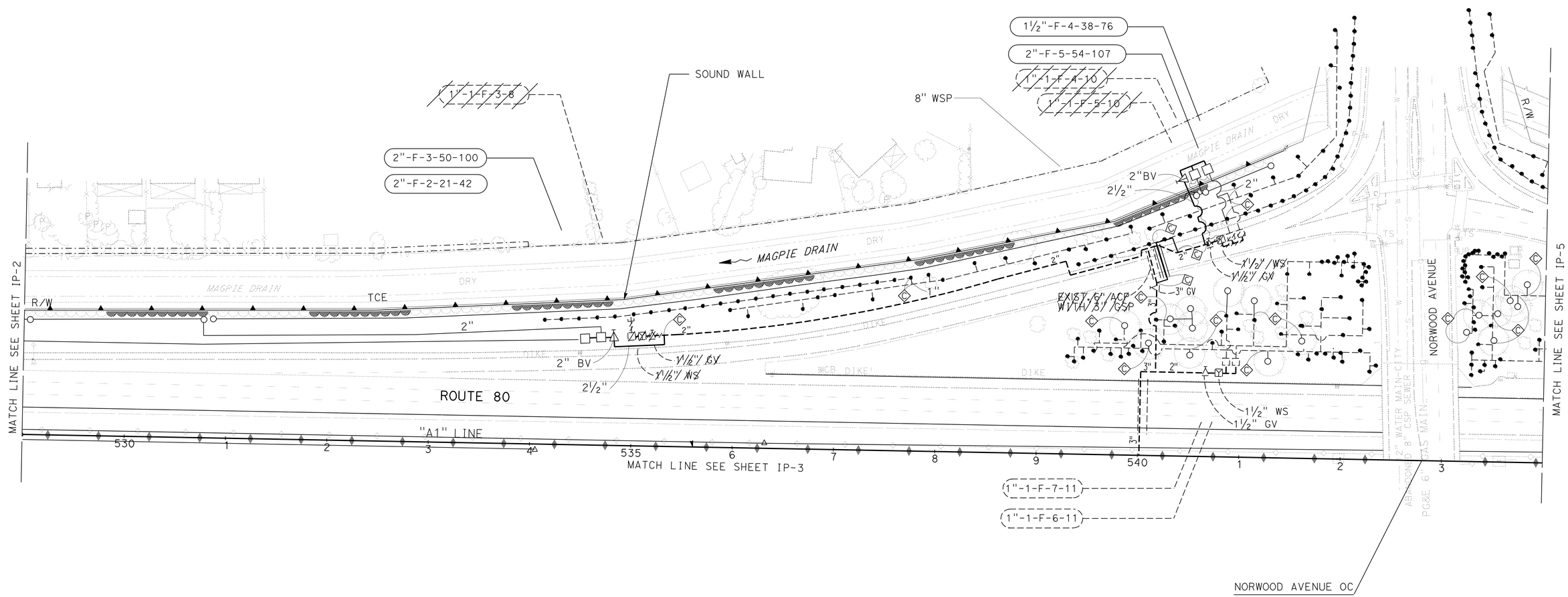

IRRIGATION PLAN

SCALE: 1" = 50'

IP-4

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

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LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT T. CHRIS JOHNSON No. 5102 Signature 8-31-10 Renewal Date 6-15-10 Date STATE OF CALIFORNIA

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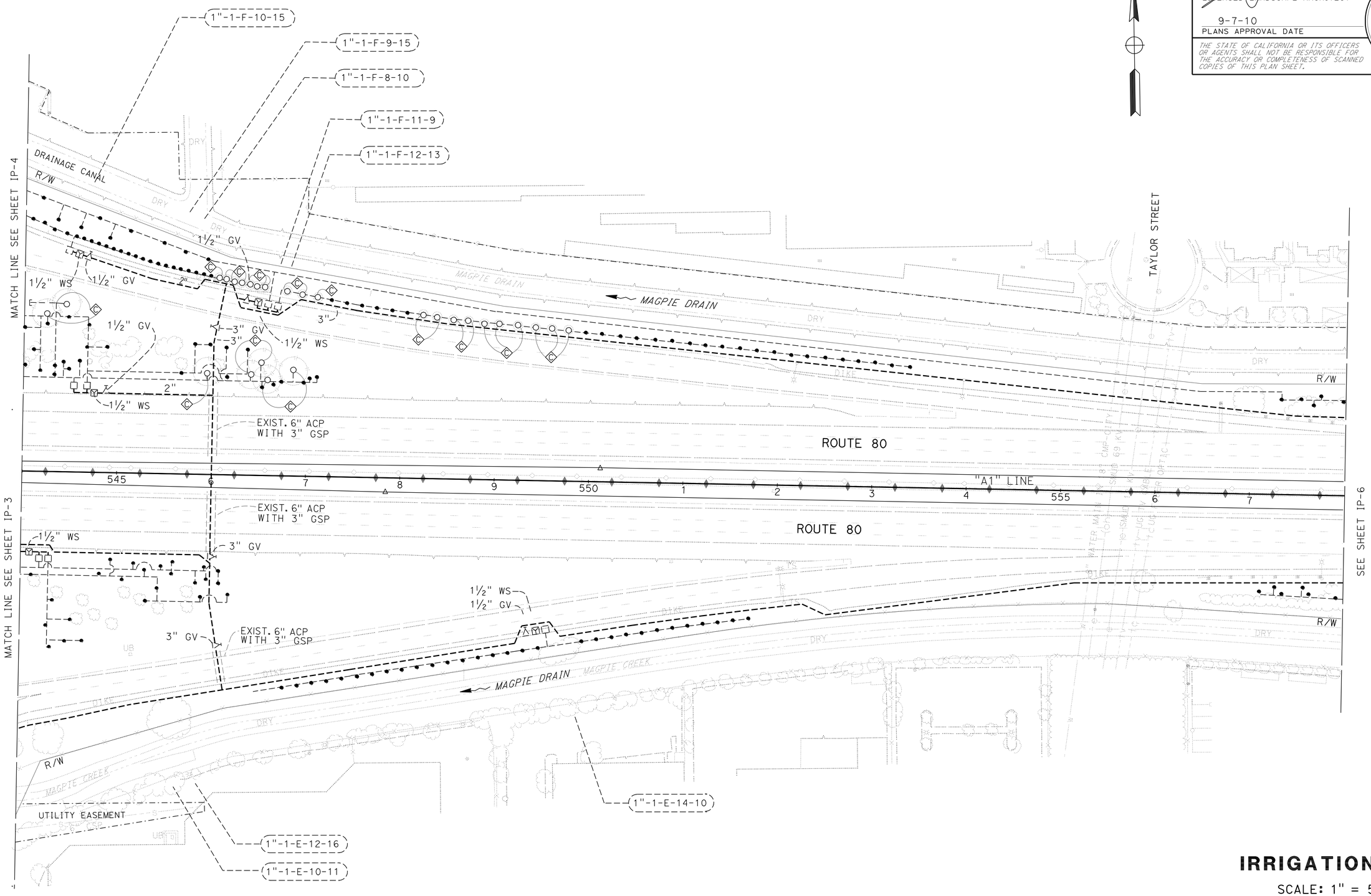

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

IRRIGATION PLAN

SCALE: 1" = 50'

IP-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	686	1012

LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT T. CHRIS JOHNSON No. 5102 Signature 8-31-10 Renewal Date 6-15-10 Date STATE OF CALIFORNIA

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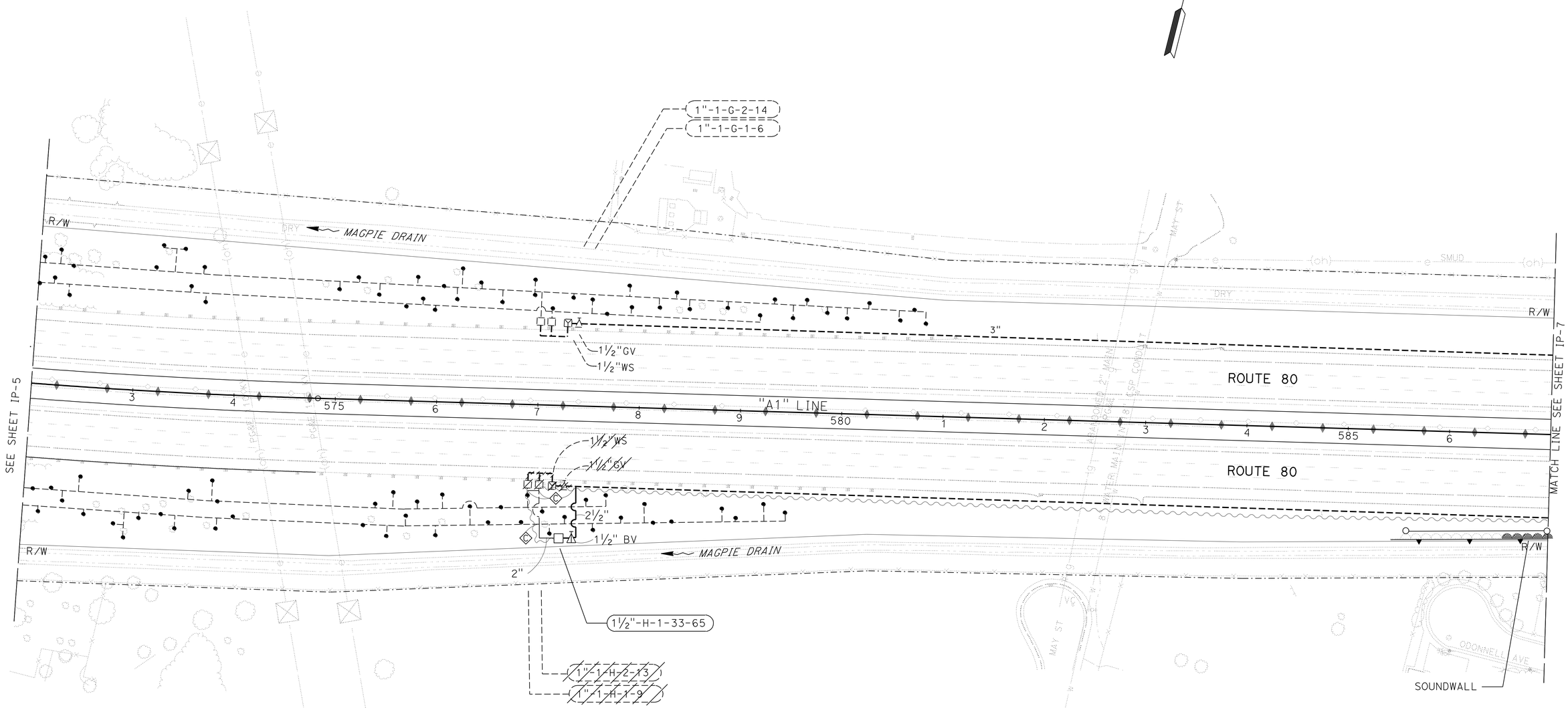

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

IRRIGATION PLAN

SCALE: 1" = 50'

IP-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

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LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
T. CHRIS JOHNSON
No. 5102
Signature
8-31-10
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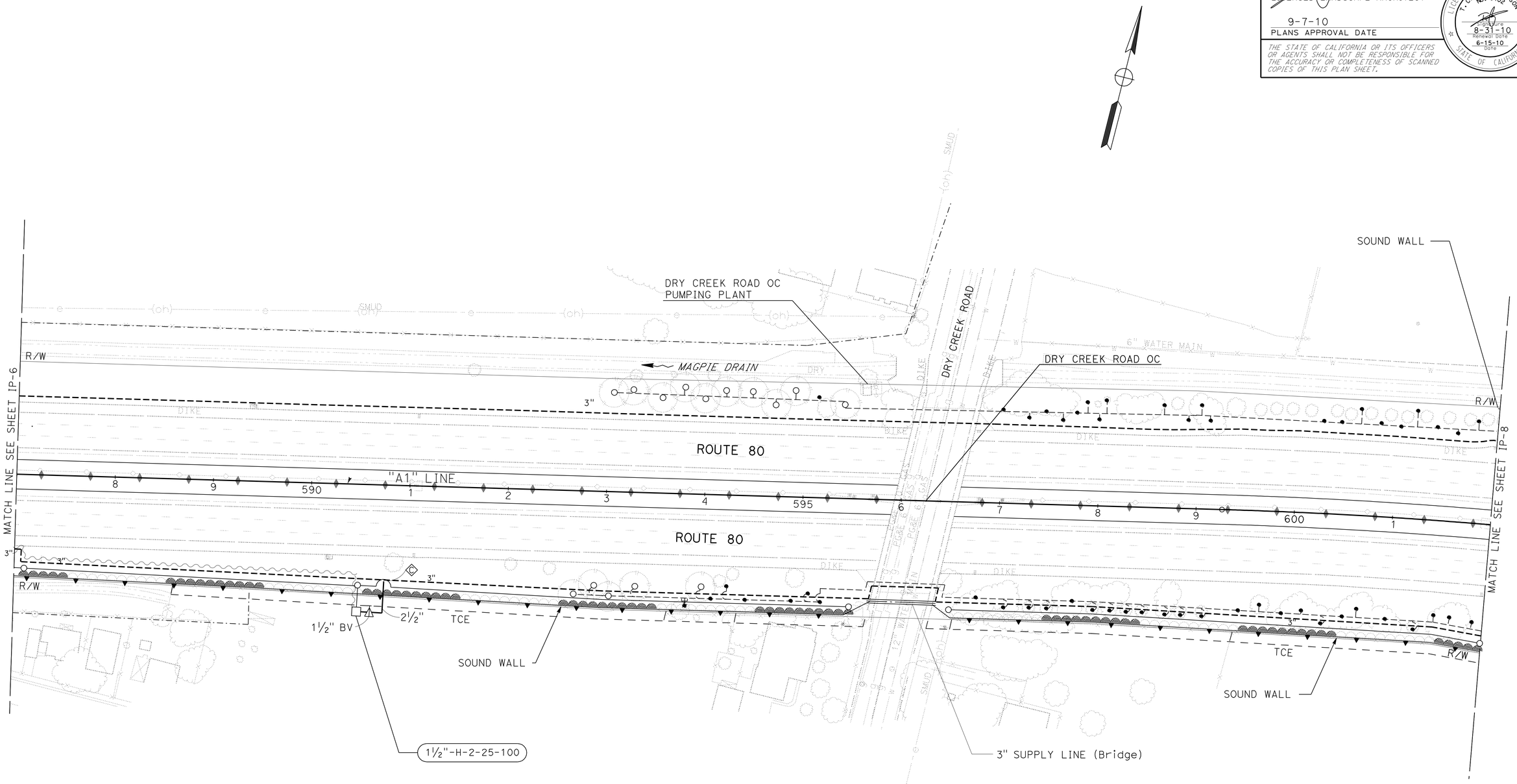

IRRIGATION PLAN

SCALE: 1" = 50'

IP-7

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

REVISED BY | DATE REVISED

T. CHRIS JOHNSON — CALCULATED-DESIGNED BY

CHECKED BY

SENIOR LANDSCAPE ARCHITECT
KENNETH MURRAY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 13:24

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT T. CHRIS JOHNSON No. 5102 Signature 8-31-10 Renewal Date 6-15-10 Date STATE OF CALIFORNIA

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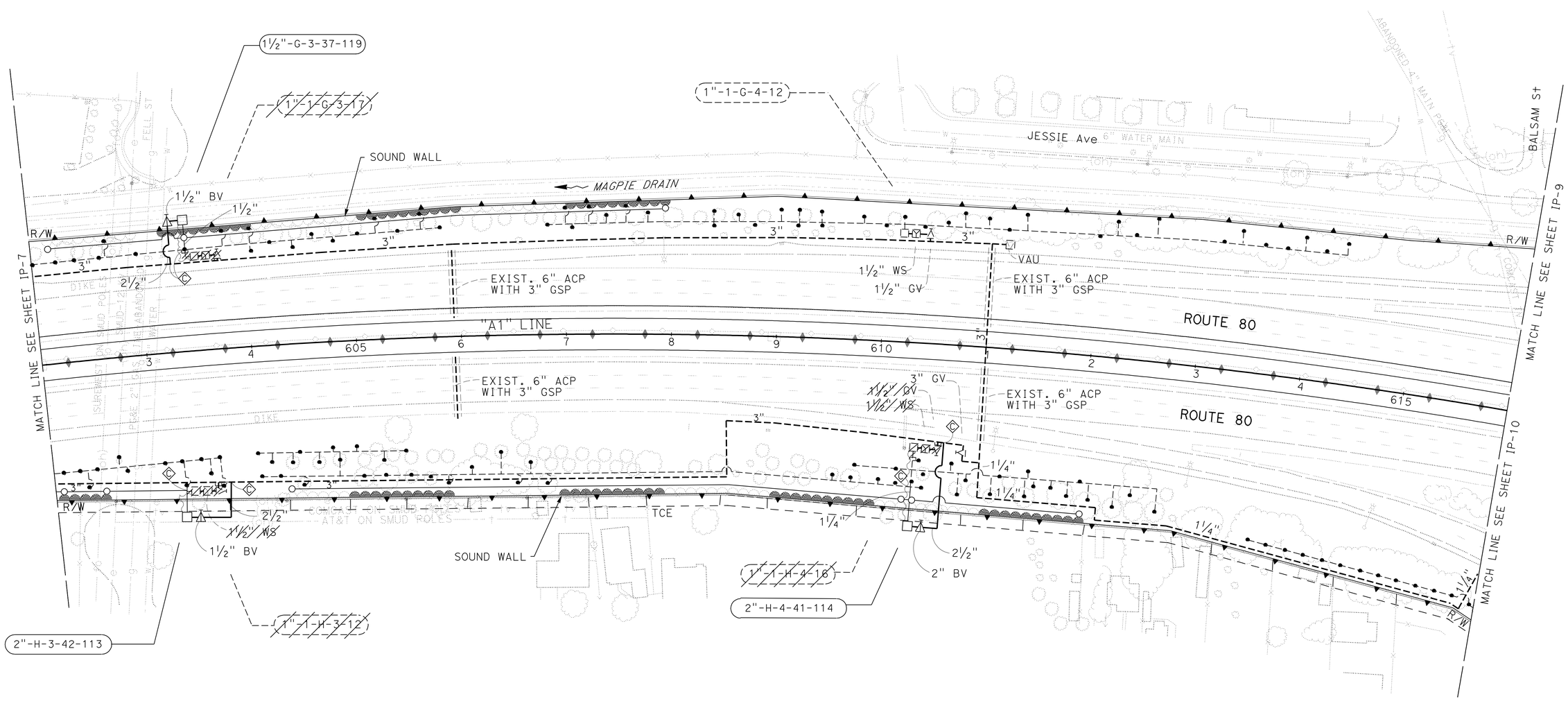

IRRIGATION PLAN

SCALE: 1" = 50'

IP-8

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

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LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT T. CHRIS JOHNSON No. 5102 Signature 8-31-10 Renewal Date 6-15-10 Date STATE OF CALIFORNIA

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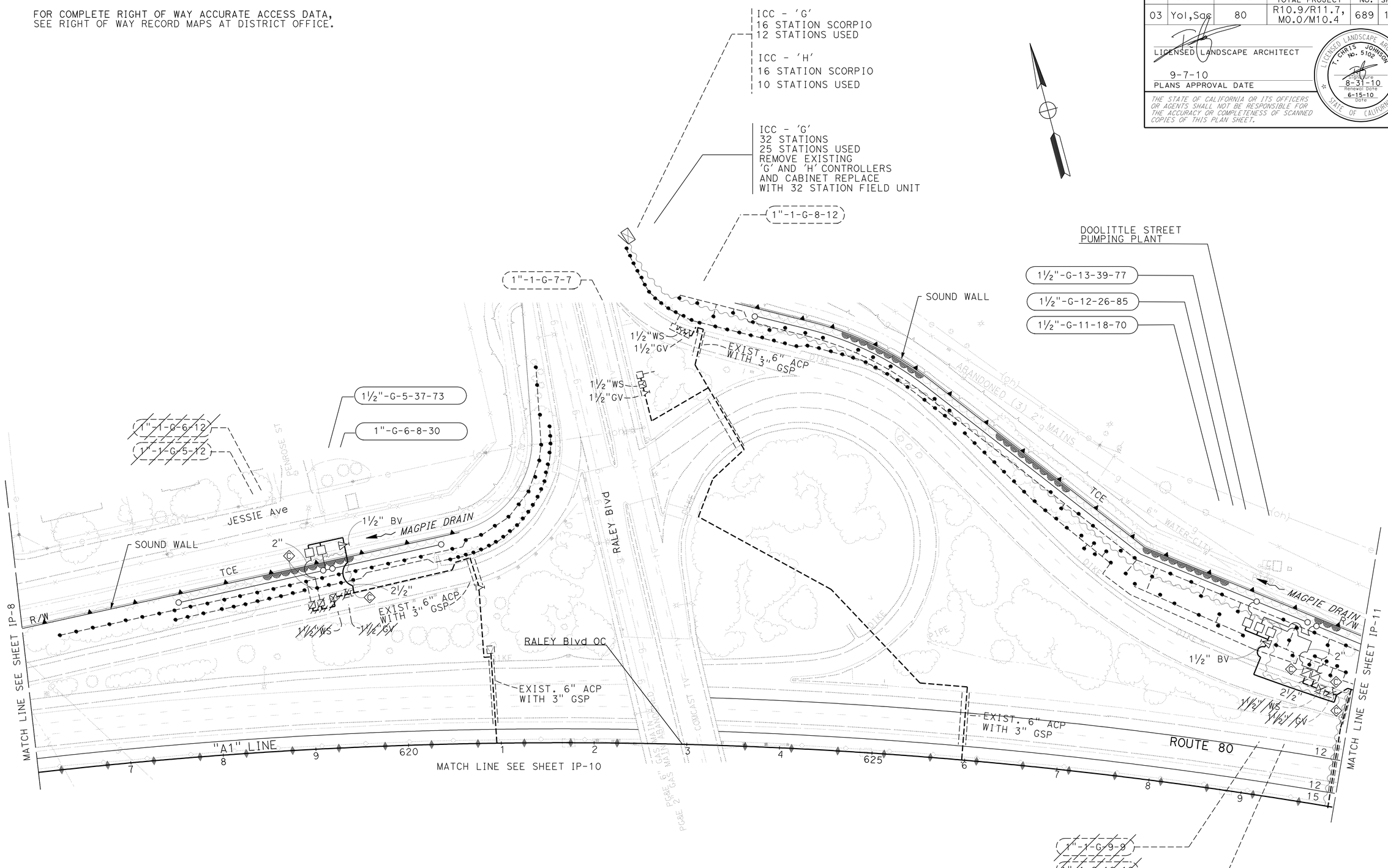

IRRIGATION PLAN

SCALE: 1" = 50'

IP-9

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

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LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT T. CHRIS JOHNSON No. 5102 Signature 8-31-10 Renewal Date 6-15-10 Date STATE OF CALIFORNIA

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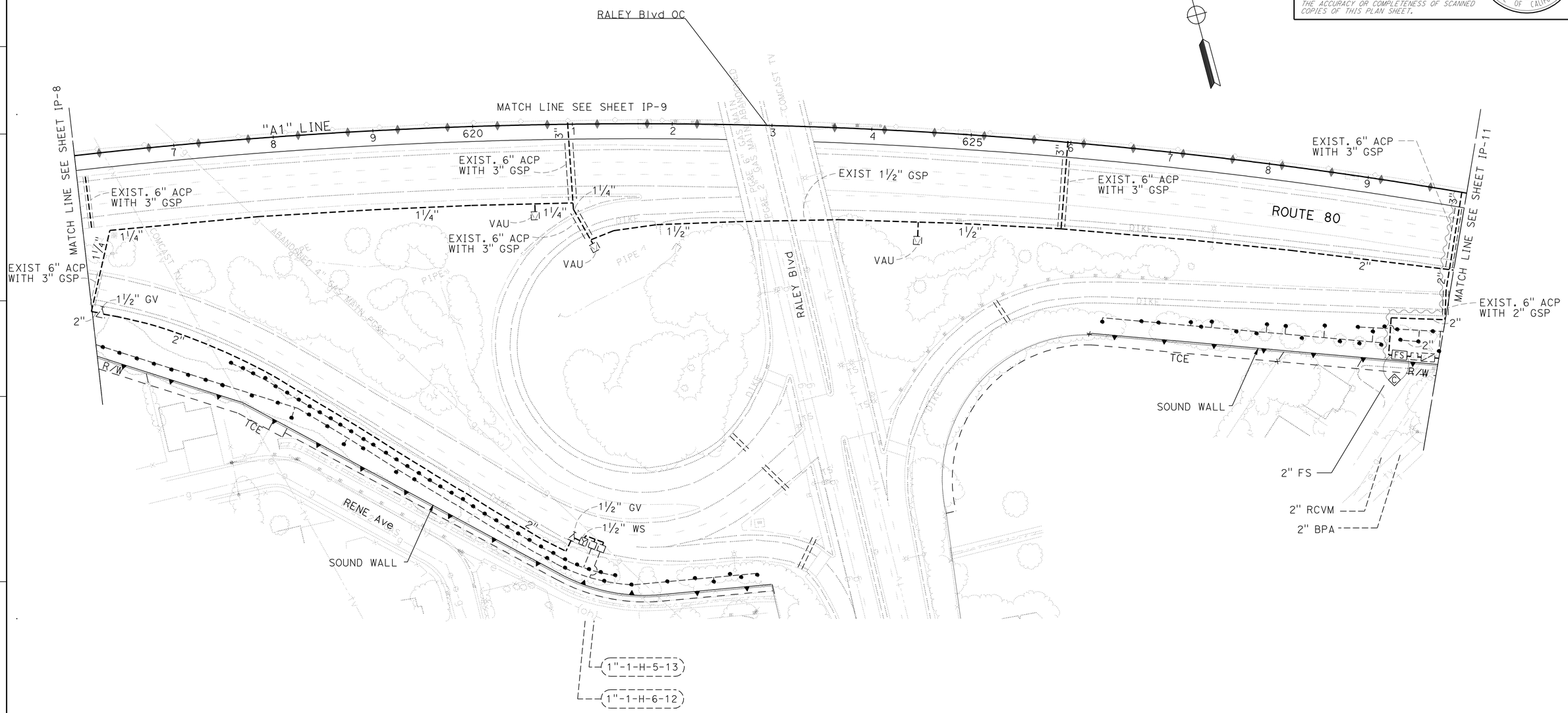

IRRIGATION PLAN

SCALE: 1" = 50'

IP-10

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY.

REVISED BY | DATE REVISED
T. CHRIS JOHNSON
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT
KENNETH MURRAY
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
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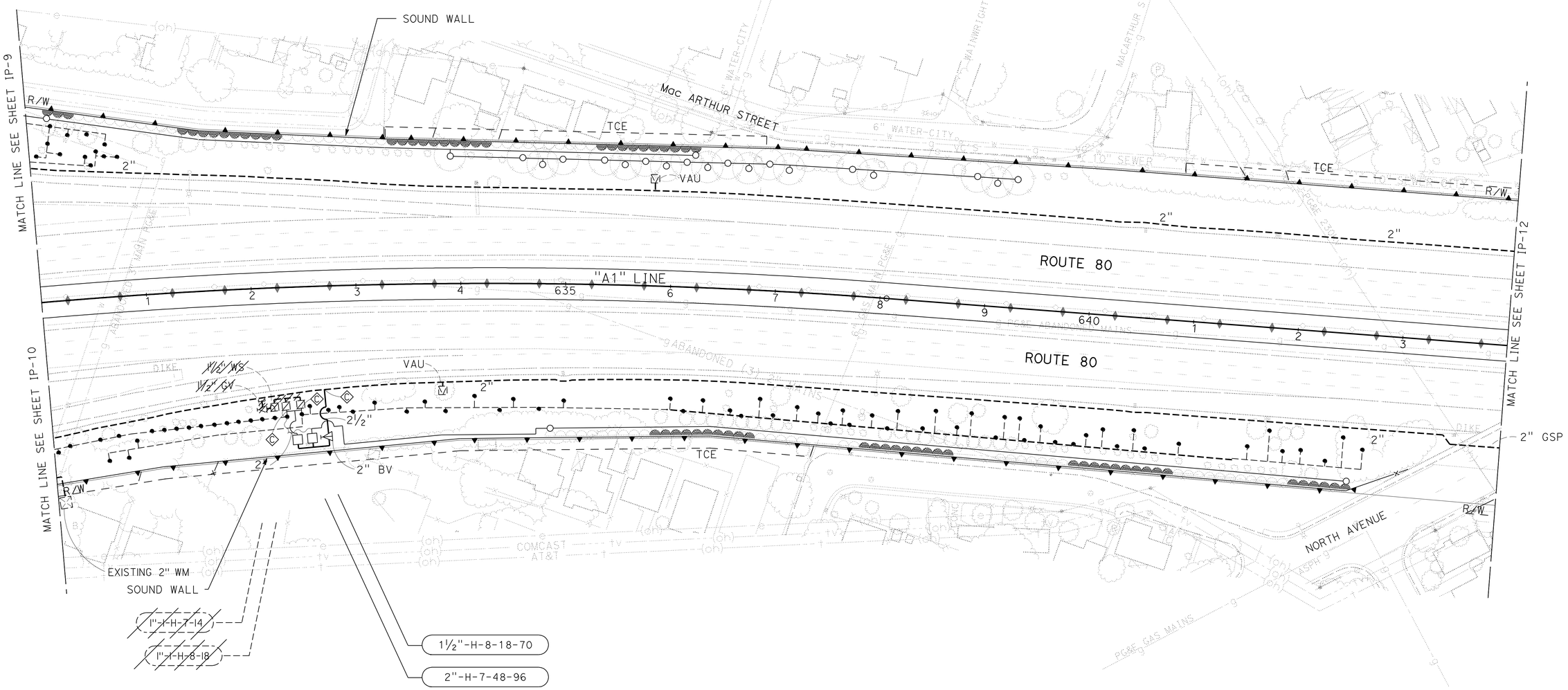

IRRIGATION PLAN

SCALE: 1" = 50'

IP-11

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:25

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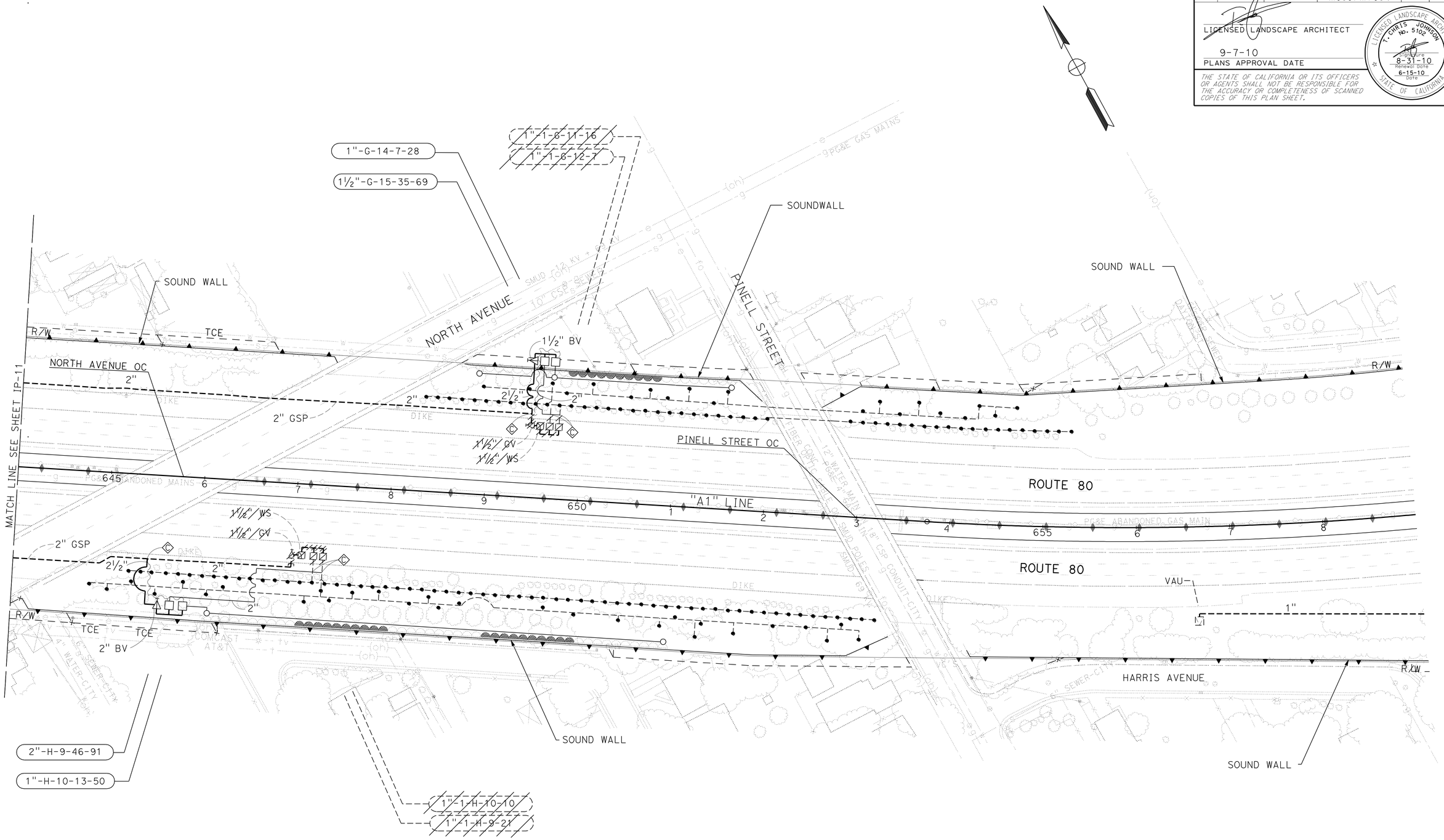

IRRIGATION PLAN

SCALE: 1" = 50'

THIS PLAN ACCURATE FOR IRRIGATION WORK ONLY

IP-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

SENIOR LANDSCAPE ARCHITECT: KENNETH MURRAY

CALCULATED-DESIGNED BY: T. CHRIS JOHNSON

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:25

NOTE:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	693	1012

LICENSED LANDSCAPE ARCHITECT

9-7-10
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
T. CHRIS JOHNSON
No. 5102
Signature
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SPRINKLER SCHEDULE

SYMBOL	TYPE	DESCRIPTION	SPRAY PATTERN	OPERATING PRESSURE (PSI)	PRESSURE COMPENSATING	PLUS/MINUS 5% ② DISCHARGE: GALLONS PER MINUTE (GPM)	GALLONS PER HOUR (GPH)	RADIUS (Ft)	WIDTH x LENGTH (Ft)	MATERIAL	INLET CONNECTION (NPT INCH)	POSITIVE-LOCKING ADJ ARC STOP	BACKSPLASH PREVENTER	DIFFUSER PIN	DISTANCE CONTROL FLAP	ADJ DISCHARGE	RISER: TYPE	MATERIAL: PLASTIC	GALVANIZED	SIZE (IPS INCH)	HEIGHT (INCH)	FLOW SHUTOFF DEVICE	⑤ SWING JOINT (TYPE)	RISER SUPPORT	SPRINKLER PROTECTOR (TYPE)	REMARKS
O	C-2	FLOOD BUBBLER	--	20-90	X	0.5	--	--	--	PL	0.25	--	--	--	--	--	V	X	--	.25	--	--	--	--	--	See Note 6
O	C-2	FLOOD BUBBLER	--	20-90	X	0.25	--	--	--	PL	0.25	--	--	--	--	--	V	X	--	.25	--	--	--	--	--	See Notes 7 & 8

X IN BOX DENOTES REQUIREMENT

APPLICABLE WHEN CIRCLED BELOW:

1 - See Special Provisions.
② - If a pressure compensating device is specified, the discharge and radii shown reflect its use.
3 - Arc Stop shall be fitted with a nut and bolt.
4 - Vinyl-coated cast iron housing.
5 - Swing Joints required adjacent to shoulders, curbs, sidewalks, and dikes.
6 - Unless otherwise shown on plans.

ABBREVIATIONS

F — full circle
P — part circle
F/P — full/part circle
Q — quarter circle
T — third circle
H — half circle
TT — two third circle
TQ — three quarter circle
CST — center strip
SST — side strip
EST — end strip
Ft — feet/foot
GPM — gallons per minute
GPH — gallons per hour
Adj — adjustable
PL — plastic
B/B — brass/bronze
B/PL — brass/plastic
B/B/PL — brass/bronze/plastic
NPT — national pipe thread
IPS — iron pipe size
PSI — pounds per square inch

NOTES:

1. NEW SUPPLY LINE (MAIN) IS PLACED A MINIMUM OF 5 FEET FROM THE ROOT BALL OF NEW VINES

2. NEW SUPPLY LINE (LATERAL) IS PLACED A MINIMUM OF 3 FEET FROM THE ROOT BALL OF NEW VINES

3. CONNECTIONS BETWEEN THE SUPPLY LINE (MAIN) AND THE REMOTE CONTROL VALVES ARE THE SAME SIZE AS THE MAXIMUM SUPPLY LINE (LATERAL) SIZE, SUPPLIED AT THAT POINT.

4. THE DISTANCE BETWEEN THE MANIFOLD COMPONENTS, RCV'S AND BALL VALVES ARE A MINIMUM OF 3 FEET AND SHALL NOT EXCEED 5 FEET.

5. NEW REMOTE CONTROL VALVES ON SLOPES LESS THAN 3:1 ARE PLACED A MINIMUM OF 20 FEET TO THE EDGE OF PAVEMENT, UNLESS BEHIND CURBS, SIDEWALKS OR GUARD RAILS. WHERE SPACE IS LIMITED VALVES ARE PLACED A MINIMUM OF 3 FEET FROM THE SOUND WALL OR R/W FENCE.

6. NEW TREES AND SHRUBS ARE INSTALLED ALONG EXISTING IRRIGATION LINES. EXISTING IRRIGATION HEADS AND/OR CAPS ARE REPLACED WITH NEW RISER AND .5 GPM BUBBLER AT TREES.

7. BUBBLERS AND/OR CAPS LOCATED AT EXISTING PLANT MATERIAL ALONG SAME LINE AS NEW TREES ARE REPLACED WITH NEW RISERS AND .25 GPM BUBBLERS.

8. NEW VINES ON SOUNDWALLS RECEIVE .25 GPM BUBBLERS.

IRRIGATION CROSSOVERS

LOCATION: LINE	STATION	SIDE: L+	R+	CONDUIT TYPE ⑤ SIZE (INCH): 8	LENGTH (LF)	(N) WATER LINE CROSSOVER SIZE (INCH)	(N) SPRINKLER CONTROL CROSSOVER SIZE (INCH)
A1	540+28	X		34		2	2
TOTAL							

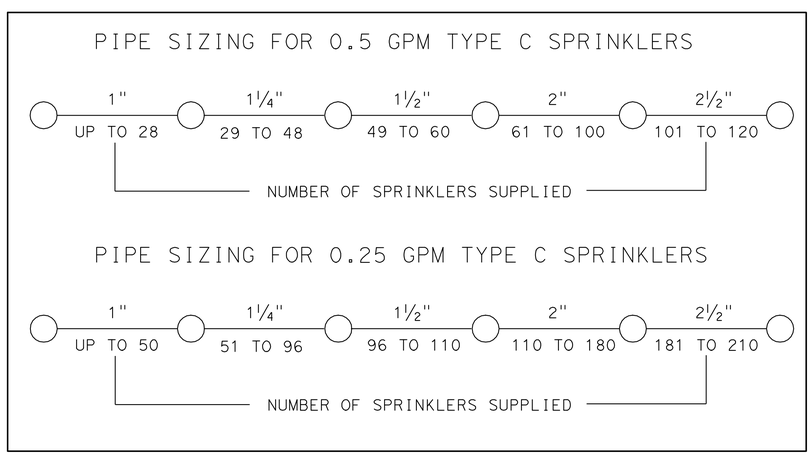
(N) - NOT A SEPARATE PAY ITEM FOR INFORMATION ONLY
X - DENOTES REQUIREMENT

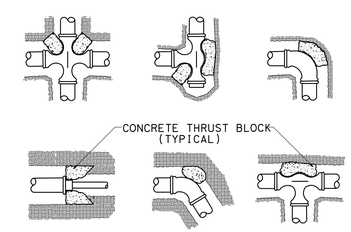
CONDUIT TYPE:

(Applicable when circled below and shown under the 'CONDUIT TYPE' column heading)

1 BITUMINOUS COATED CORRUGATED STEEL PIPE (0.064 INCH THICK)
2 CORRUGATED STEEL PIPE (0.064 INCH THICK)
3 CORRUGATED HIGH DENSITY POLYETHYLENE PIPE
4 ALTERNATIVE CONDUIT
⑤ WELDED STEEL PIPE

PIPE SIZING CHART





THRUST BLOCKS

NO SCALE

LANDSCAPE DETAILS

LD-1

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
SENIOR LANDSCAPE ARCHITECT
KENNETH MURRAY
CALCULATED-DESIGNED BY
CHECKED BY
T. CHRIS JOHNSON
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 03-FEB-2011
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	694	1012

H. Golban 6-15-10
REGISTERED ELECTRICAL ENGINEER

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER H.GOLBAN No. E 17928 Exp.9-30-10 ELECT STATE OF CALIFORNIA

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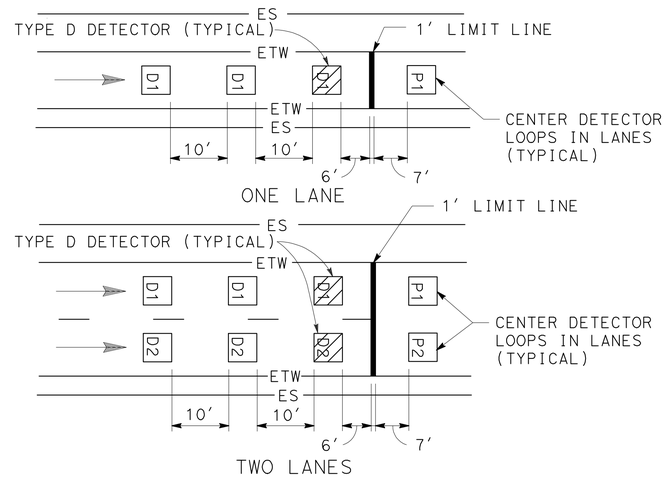
LEGEND:

V FIBER OPTIC VAULT

EXISTING	PROPOSED	
M	M	METER SOCKET
		PHOTOELECTRIC UNIT
		AUTO-TEST SWITCH
C	C	CONTACTOR
		YAGI ANTENNA

ABBREVIATIONS:

CIC - PROPOSED CAMERA INTERCONNECT CABLE
cic - EXISTING CAMERA INTERCONNECT CABLE
fsl - EXISTING FLUORESCENT LIGHTING FIXTURE
TC - TELEPHONE CABLE
STC - SCREENED TRANSMISSION CABLE
GPRS - GENERAL POCKET RADIO SYSTEM
PAS - PIEZO AXLE SENSOR



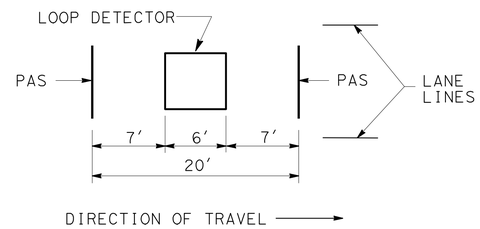
RAMP DETECTOR DESIGNATION:

D = DEMAND DETECTOR
P = PASSAGE DETECTOR
Q = QUEUE DETECTOR
F = OFF-RAMP DETECTOR

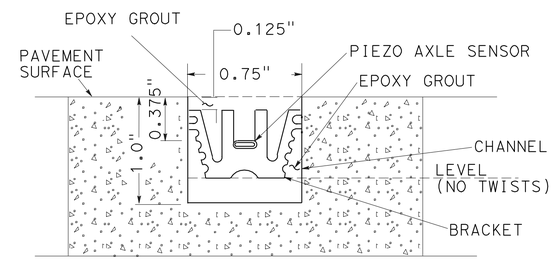
1 = FIRST LANE FROM LEFT
2 = SECOND LANE FROM LEFT

D-2

DETAIL RM
RAMP METERING STATION



TYPICAL LANE LAYOUT FOR PAS AND LOOP DETECTOR

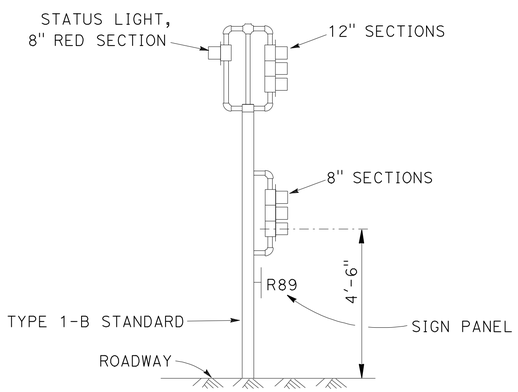


SECTION A-A

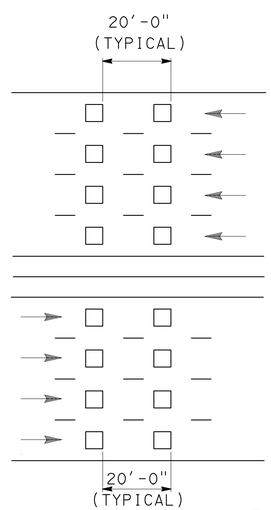
PAS DESIGNATION

P E 1 - 1

LANE NUMBER
1 ENTERING PAS
2 LEAVING PAS
N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND
PAS



DETAIL A
RAMP METER SIGNAL



TRAFFIC MONITORING STATION NOTES

FREEWAY MAINLINE DETECTOR DESIGNATION:

N = NORTHBOUND LANES (NB)
S = SOUTHBOUND LANES (SB)
E = EASTBOUND LANES (EB)
W = WESTBOUND LANES (WB)

NUMBER OF LANES FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC:

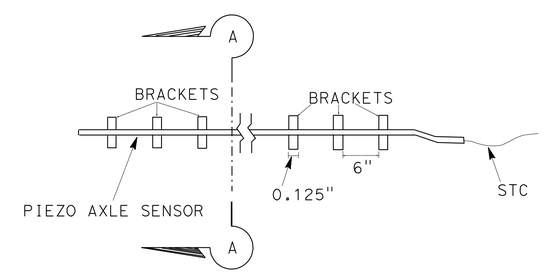
1 = FIRST LANE FROM LEFT
2 = SECOND LANE FROM LEFT
3 = THIRD LANE FROM LEFT
4 = FOURTH LANE FROM LEFT

NUMBER OF DETECTOR IN THE SAME LANE:

1 = ENTERING DETECTOR
2 = LEAVING DETECTOR

N 3-2

DETAIL TM
TRAFFIC MONITORING STATION



PIEZO AXLE SENSOR INSTALLATION

MODIFY TRAFFIC MONITORING STATION RAMP METERING SYSTEM

SCALE: 1" = 50'

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN SACRAMENTO
Caltrans

FUNCTIONAL SUPERVISOR: NELSON LEE
CALCULATED-DESIGNED BY: YOUNG TON
CHECKED BY: HABIB GOLBAN
REVISED BY / DATE REVISED

LAST REVISION 08-09-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 13:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	695	1012

H. Golban 6-15-10
REGISTERED ELECTRICAL ENGINEER

9-7-10
PLANS APPROVAL DATE

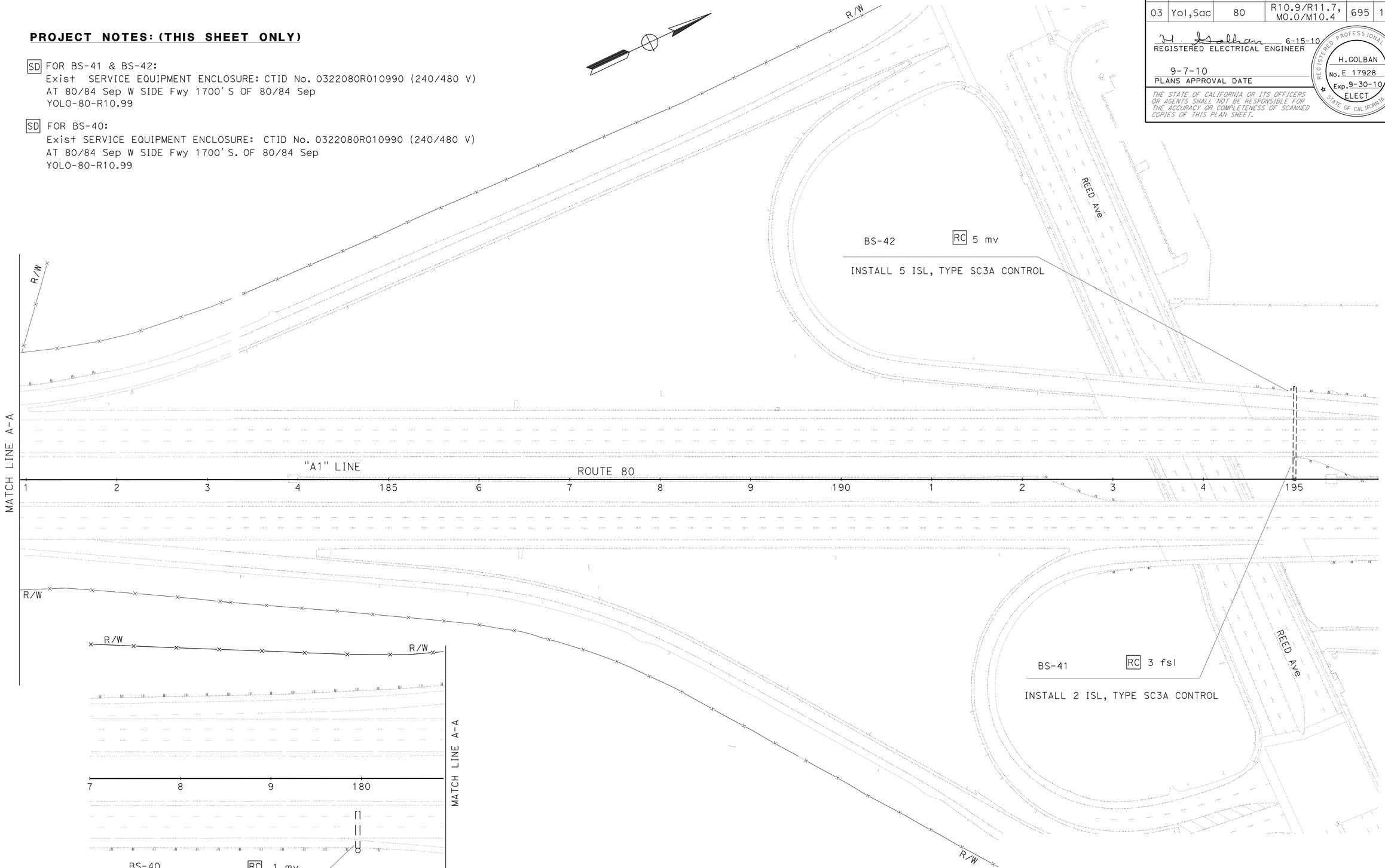
REGISTERED PROFESSIONAL ENGINEER
H.GOLBAN
No. E 17928
Exp. 9-30-10
ELECT
STATE OF CALIFORNIA

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.

PROJECT NOTES: (THIS SHEET ONLY)

SD FOR BS-41 & BS-42:
Exist SERVICE EQUIPMENT ENCLOSURE: CTID No. 0322080R010990 (240/480 V)
AT 80/84 Sep W SIDE Fwy 1700' S OF 80/84 Sep
YOLO-80-R10.99

SD FOR BS-40:
Exist SERVICE EQUIPMENT ENCLOSURE: CTID No. 0322080R010990 (240/480 V)
AT 80/84 Sep W SIDE Fwy 1700' S. OF 80/84 Sep
YOLO-80-R10.99



MODIFY LIGHTING AND SIGN ILLUMINATION

SCALE: 1" = 50'

E-2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN
SACRAMENTO
Caltrans

FUNCTIONAL SUPERVISOR: NELSON LEE
CALCULATED-DESIGNED BY: YOUNG TON
CHECKED BY: HABIB GOLBAN
REVISED BY
DATE REVISED

LAST REVISION 08-09-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	696	1012

H. Golban 6-15-10
REGISTERED ELECTRICAL ENGINEER

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER H. GOLBAN No. E 17928 Exp. 9-30-10 ELECT STATE OF CALIFORNIA

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PROJECT NOTES: (THIS SHEET ONLY)

SD FOR AS-245 AND AS-246:
Exist SERVICE EQUIPMENT ENCLOSURE: CTID No. 0324080M000420 (120/240 V).

1 3"C, 3#6, 1#8, 1 STATE-FURNISHED HARNESS No. 4, 1 STATE-FURNISHED HARNESS No. 5, AND 1 TC.

2 2-3"C, REMOVE 12 dlc, ADD 12 DLC, 1 CAT-5E.

3 INSTALL STATE-FURNISHED 334 CABINET AND MODEL 170 CONTROLLER UNIT FOR CHANGEABLE MESSAGE SIGN. INSTALL DEVICE SERVER (NETWORK TO SERIAL CARD), ETHERNET POWER CONTROLLER, POWER STRIP, 1 8-PORT ETHERNET SWITCH, 1 DATA SURGE SUPPRESSOR, 2 ETHERNET EXTENDERS, 1 HALF SHELF. INSTALL GPRS MODEM INSIDE THE CONTROLLER CABINET AND GPRS ANTENNA ON THE TOP OF CONTROLLER CABINET.

4 INSTALL STATE-FURNISHED MODEL 500 LED CMS ON SINGLE POST TYPE BALANCED BUTTERFLY SIGN STRUCTURE IN MEDIAN FOR EB TRAFFIC. (REFER TO STANDARD PLANS S105 - S108). EXACT LOCATION AND ORIENTATION OF CMS WILL BE DETERMINED BY THE ENGINEER.

5 Exist TYPE E SERVICE.
SERVICE No. 03-SP-A-202
MODIFIED LOAD:
1200 W TMS & CCTV CONTROLLER
348 W SIGN ILLUMINATION
3000 W CMS
400 W RWIS

6 RS Exist VIDEO ENCODER UNIT (VEU). INSTALL 1 VIDEO ENCODER UNIT (VEU), 1 POWER ETHERNET CONTROLLER, 2 ETHERNET EXTENDERS, 1 8-PORT SWITCH, 1-900 MHz SPREAD SPECTRUM MODEM, 1 DATA SUPPRESSOR, AND 1 CATV SURGE IN THE EXISTING CONTROLLER CABINET.

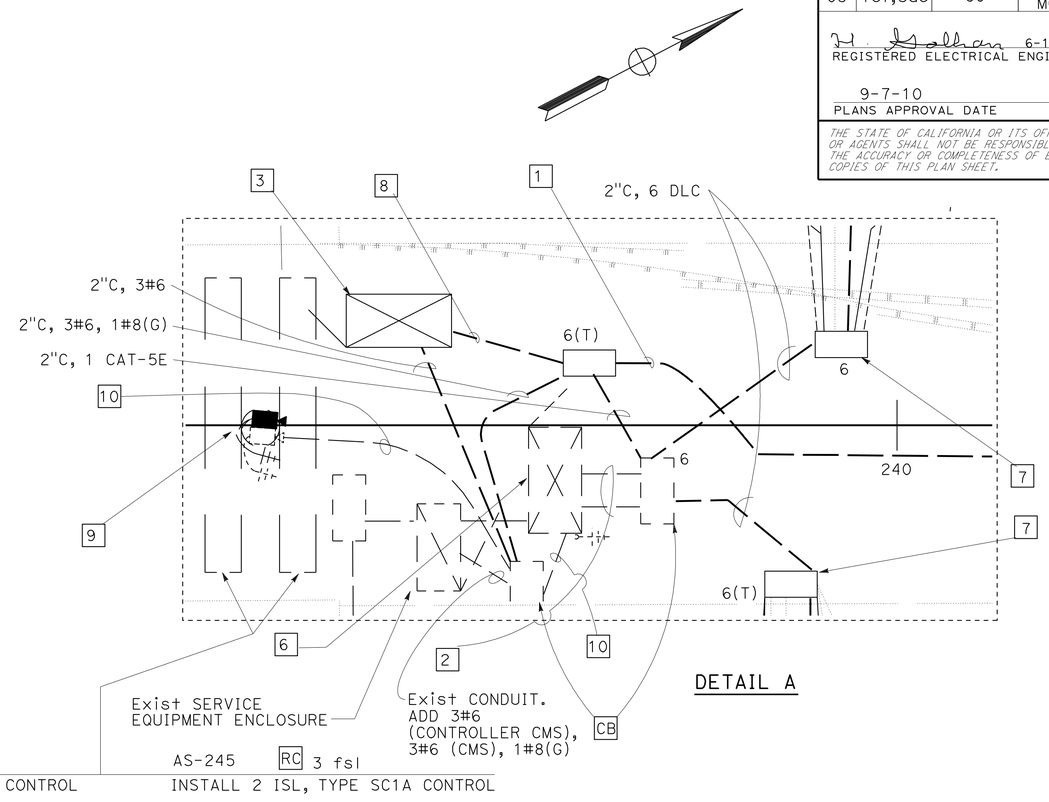
7 AB EXISTING LOOP CONDUCTORS. RC pb.

8 2-3"C, 1 STATE-FURNISHED HARNESS No. 4 AND 1 STATE-FURNISHED HARNESS No. 5, 1 CAT-5E OUTDOOR-RATED CABLE, 1 TC.

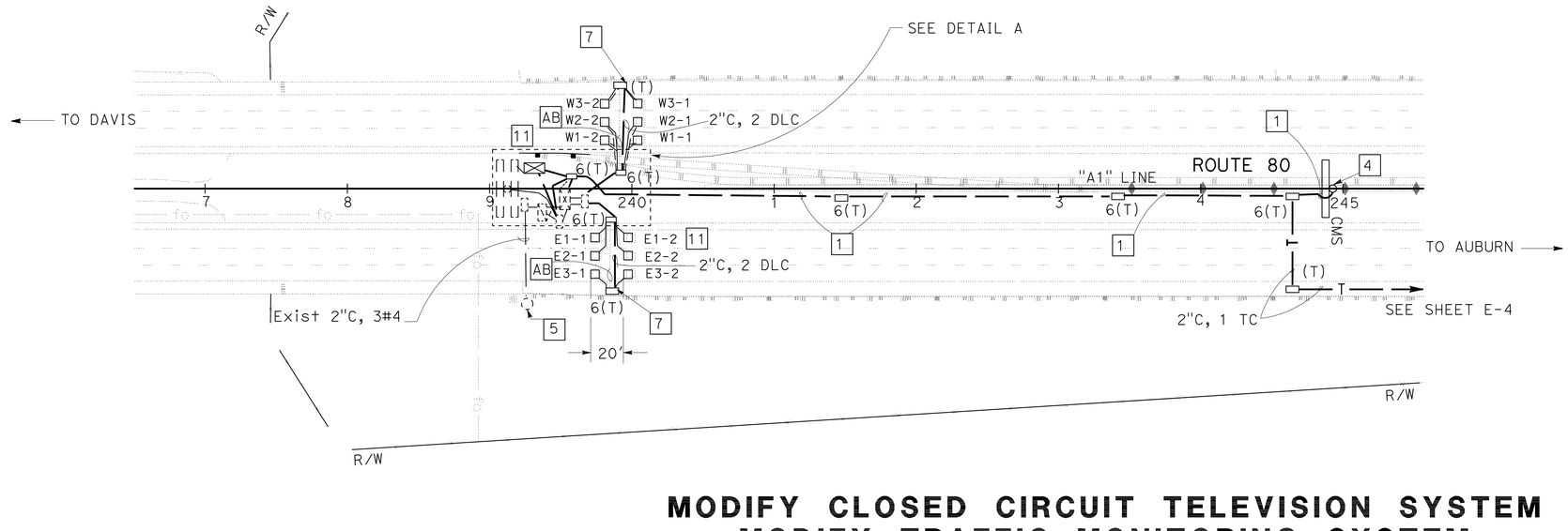
9 RS Exist CCTV CAMERA, cic, YAGI ANTENNA AND CABLE. INSTALL NEW CCTV CAMERA, CIC, YAGI ANTENNA AND CABLE ON CCTV POLE.

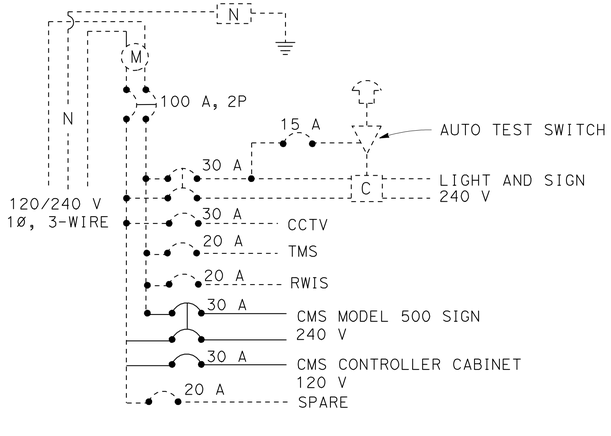
10 Exist CONDUIT. RC cic, YAGI CABLE. ADD CIC, YAGI CABLE.

11 SEE DETAIL TM ON SHEET E-1.



DETAIL A





120/240 V SERVICE WIRING DIAGRAM

SYSTEM No. 0324080M000420

MODIFY CLOSED CIRCUIT TELEVISION SYSTEM
MODIFY TRAFFIC MONITORING SYSTEM
MODIFY LIGHTING AND SIGN ILLUMINATION
CHANGEABLE MESSAGE SIGN SYSTEM

SCALE: 1" = 50'

E-3

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN SOUTH
DESIGN BRANCH S7

FUNCTIONAL SUPERVISOR: NELSON LEE
CALCULATED-DESIGNED BY: YOUNG TON
CHECKED BY: H. GOLBAN
REVISED BY
DATE REVISED

LAST REVISION 08-09-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	697	1012

H. Golban 6-15-10
REGISTERED ELECTRICAL ENGINEER DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER H.GOLBAN No. E 17928 Exp. 9-30-10 ELECT. STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

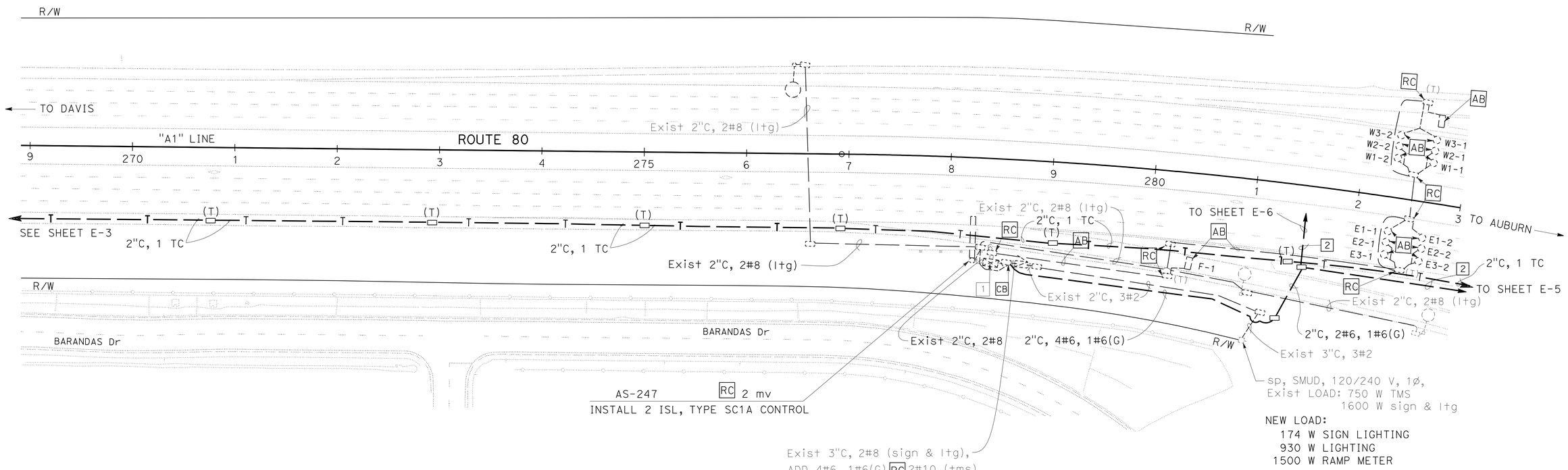
PROJECT NOTES: (THIS SHEET ONLY)

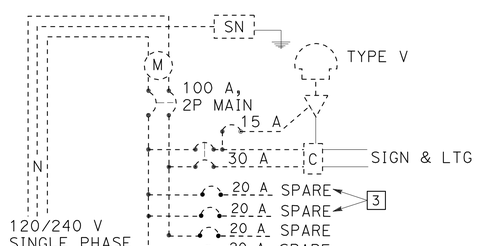
1 RS Exist 334 CABINET AND ITS COMPONENTS.

2 2"C, 2#6, 1#6(G).

SD FOR AS-247:
Exist SERVICE EQUIPMENT ENCLOSURE: CTID No. 0324080M001401 (120/240 V)
SP ON EB 80 OFF-RAMP TO W EL CAMINO Ave
SAC-80-M1.401.

3 RS CB. INSTALL 30 A FOR RAMP METER.
LABEL CB'S RM WESTBOUND AND RM EASTBOUND LOOP ACCORDINGLY.





EXISTING SERVICE WIRING DIAGRAM

CTID No. 0324080M001401

MODIFY LIGHTING AND SIGN ILLUMINATION
MODIFY TRAFFIC MONITORING SYSTEM
RAMP METERING SYSTEM

SCALE: 1" = 50'

E-4

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY | DATE REVISED
YOUNG TON | HABIB GOLBAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | NELSON LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN
SACRAMENTO
Caltrans

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LAST REVISION DATE PLOTTED => 03-FEB-2011
08-09-10 TIME PLOTTED => 13:26

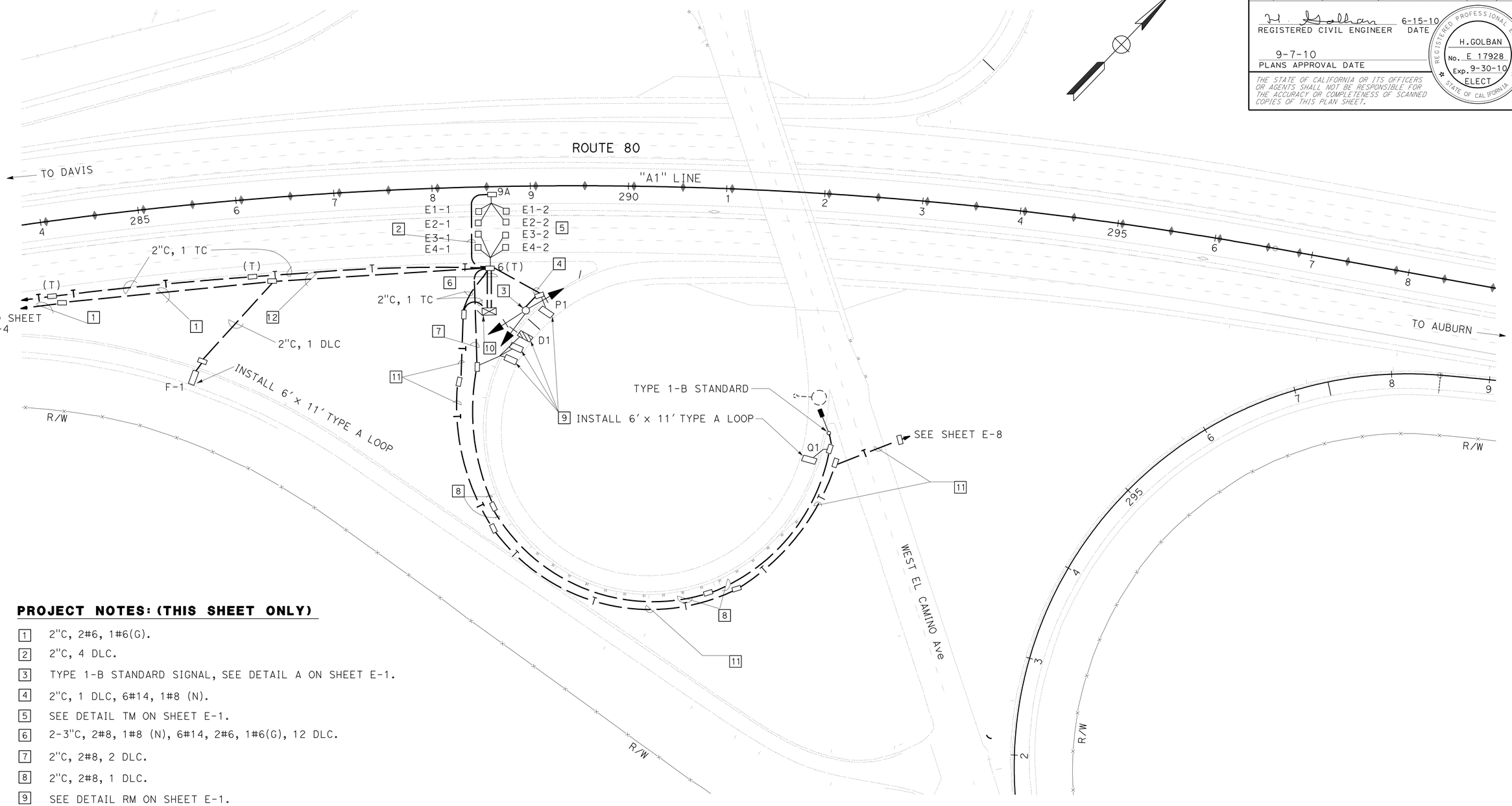
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	698	1012

H. Golban 6-15-10
REGISTERED CIVIL ENGINEER DATE

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.GOLBAN
No. E 17928
Exp. 9-30-10
ELECT
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.



PROJECT NOTES: (THIS SHEET ONLY)

1. 2"C, 2#6, 1#6(G).
2. 2"C, 4 DLC.
3. TYPE 1-B STANDARD SIGNAL, SEE DETAIL A ON SHEET E-1.
4. 2"C, 1 DLC, 6#14, 1#8 (N).
5. SEE DETAIL TM ON SHEET E-1.
6. 2-3"C, 2#8, 1#8 (N), 6#14, 2#6, 1#6(G), 12 DLC.
7. 2"C, 2#8, 2 DLC.
8. 2"C, 2#8, 1 DLC.
9. SEE DETAIL RM ON SHEET E-1.
10. INSTALL STATE-FURNISHED 334 CONTROLLER CABINET AND MODEL 2070 RAMP METERING CONTROLLER UNIT. INSTALL 1 8-PORT ETHERNET SWITCH, 2 ETHERNET EXTENDERS, 1 POWER STRIP, 1 ETHERNET POWER CONTROLLER, 2 HALF SHELVES, 5 OUTDOOR-RATED CAT-5E CABLES, AND 1 DATA SURGE SUPPRESSOR.
11. 2"C, 2 TC.
12. 2"C, 2#6, 1#6(G), 2 DLC.

SD Exist SERVICE EQUIPMENT ENCLOSURE: CTID No. 0324080M001401 (SEE SHEET E-4).

RAMP METERING SYSTEM

SCALE: 1" = 50'

E-5

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN
SACRAMENTO
Caltrans

FUNCTIONAL SUPERVISOR: NELSON LEE
CALCULATED-DESIGNED BY: HABIB GOLBAN
CHECKED BY:
REVISED BY: YOUNG TON
DATE REVISED:

LAST REVISION 08-09-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	699	1012

H. Golban 6-15-10
REGISTERED ELECTRICAL ENGINEER

9-7-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER H. GOLBAN No. E 17928 Exp. 9-30-10 ELECT STATE OF CALIFORNIA

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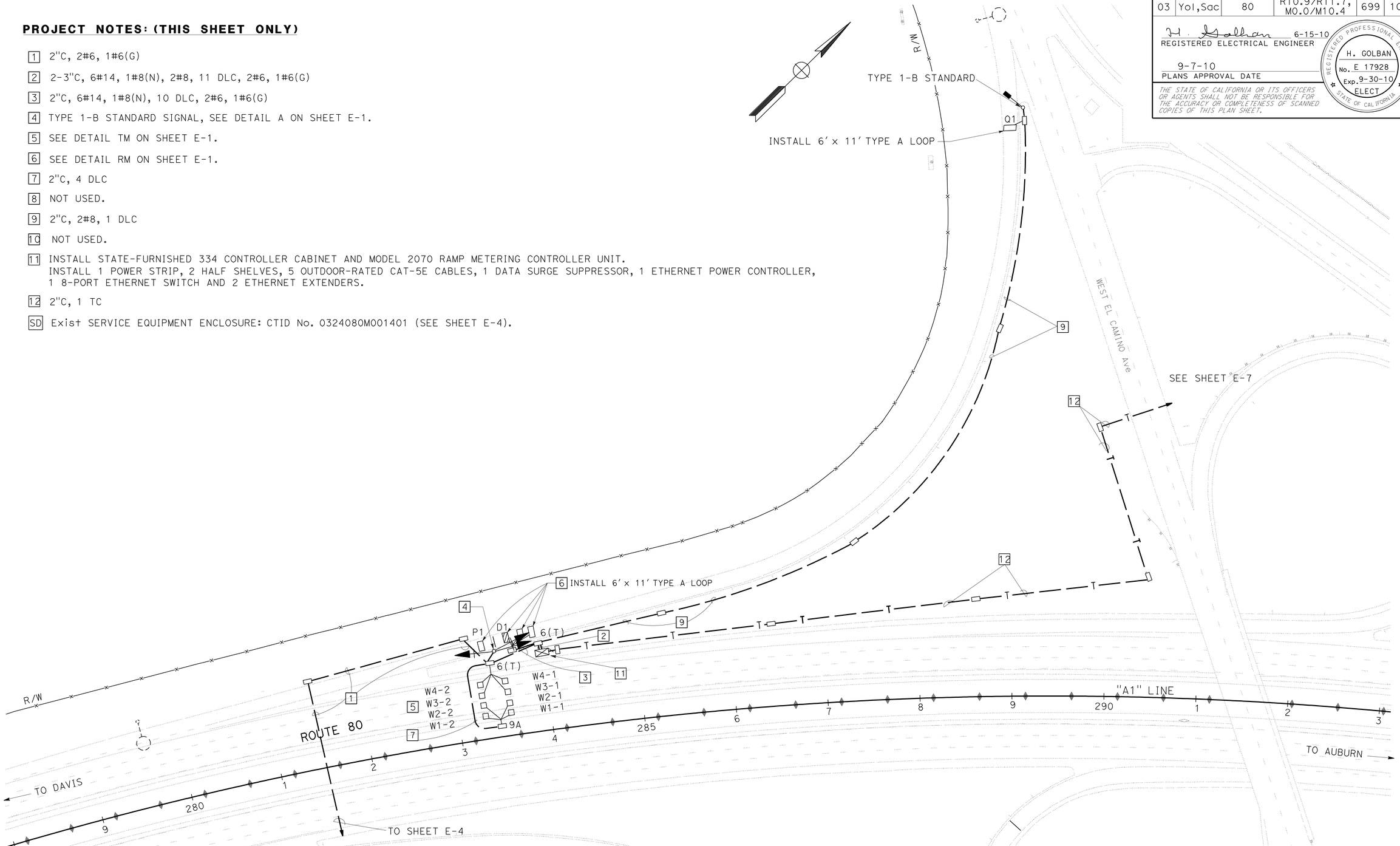
PROJECT NOTES: (THIS SHEET ONLY)

1. 2"C, 2#6, 1#6(G)
2. 2-3"C, 6#14, 1#8(N), 2#8, 11 DLC, 2#6, 1#6(G)
3. 2"C, 6#14, 1#8(N), 10 DLC, 2#6, 1#6(G)
4. TYPE 1-B STANDARD SIGNAL, SEE DETAIL A ON SHEET E-1.
5. SEE DETAIL TM ON SHEET E-1.
6. SEE DETAIL RM ON SHEET E-1.
7. 2"C, 4 DLC
8. NOT USED.
9. 2"C, 2#8, 1 DLC
10. NOT USED.
11. INSTALL STATE-FURNISHED 334 CONTROLLER CABINET AND MODEL 2070 RAMP METERING CONTROLLER UNIT. INSTALL 1 POWER STRIP, 2 HALF SHELVES, 5 OUTDOOR-RATED CAT-5E CABLES, 1 DATA SURGE SUPPRESSOR, 1 ETHERNET POWER CONTROLLER, 1 8-PORT ETHERNET SWITCH AND 2 ETHERNET EXTENDERS.
12. 2"C, 1 TC

SD Exist SERVICE EQUIPMENT ENCLOSURE: CTID No. 0324080M001401 (SEE SHEET E-4).



RAMP METERING SYSTEM

SCALE: 1" = 50'

E-6

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN SACRAMENTO

FUNCTIONAL SUPERVISOR: NELSON LEE
CALCULATED-DESIGNED BY: YOUNG TON
CHECKED BY: HABIB GOLBAN
REVISED BY
DATE REVISED

LAST REVISION 08-09-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Yol,Sac	80	R10.9/R11.7, M0.0/M10.4	700	1012

H. Golban 6-15-10
REGISTERED ELECTRICAL ENGINEER

9-7-10
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REGISTERED PROFESSIONAL ENGINEER H.GOLBAN No. E 17928 Exp. 9-30-10 ELECT STATE OF CALIFORNIA

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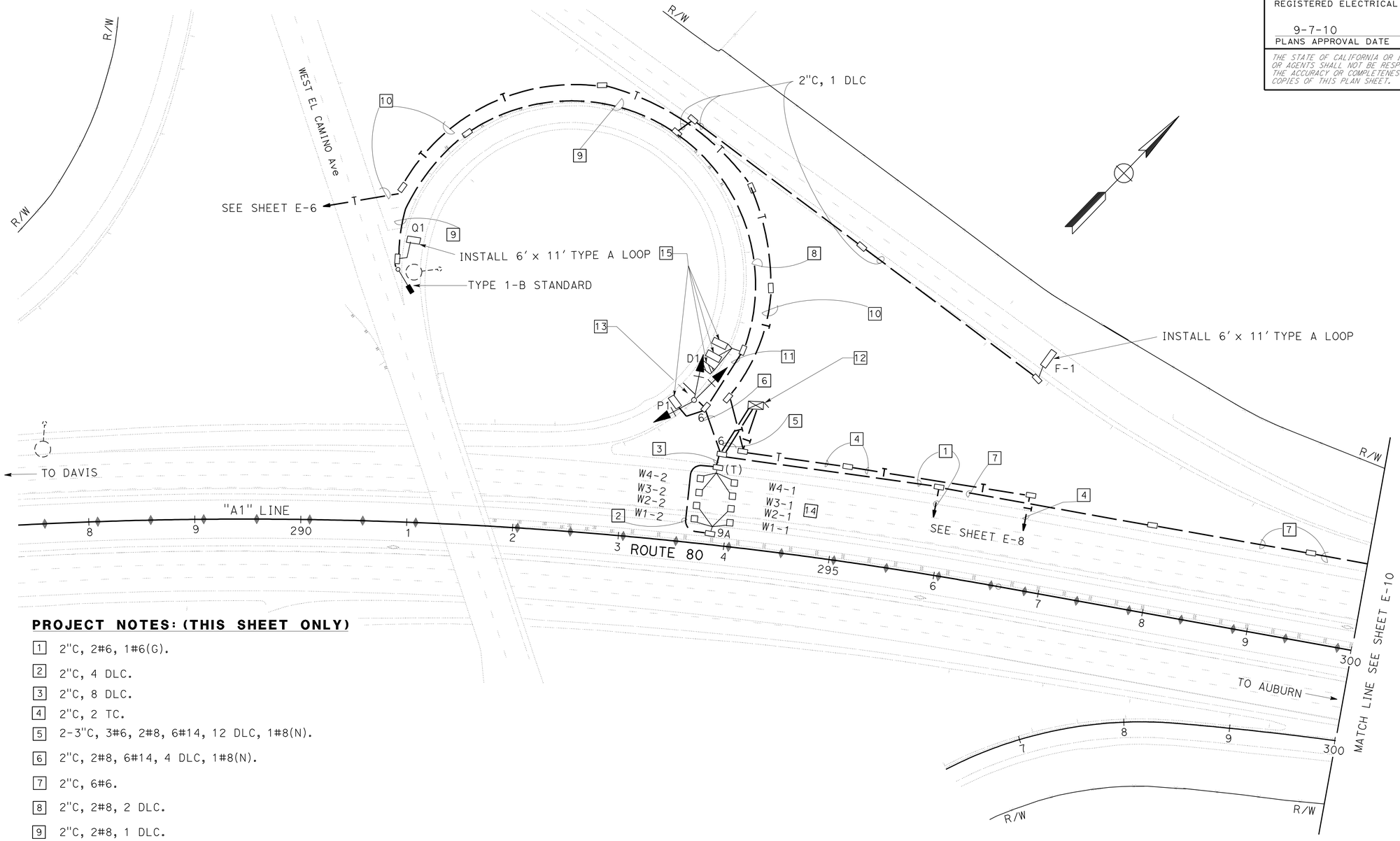

PROJECT NOTES: (THIS SHEET ONLY)

1. 2"C, 2#6, 1#6(G).
2. 2"C, 4 DLC.
3. 2"C, 8 DLC.
4. 2"C, 2 TC.
5. 2-3"C, 3#6, 2#8, 6#14, 12 DLC, 1#8(N).
6. 2"C, 2#8, 6#14, 4 DLC, 1#8(N).
7. 2"C, 6#6.
8. 2"C, 2#8, 2 DLC.
9. 2"C, 2#8, 1 DLC.
10. 2"C, 1 TC.
11. 2"C, 2#8, 3 DLC.
12. INSTALL STATE-FURNISHED 334 CONTROLLER CABINET AND MODEL 2070 RAMP METERING CONTROLLER UNIT. INSTALL 1 POWER STRIP, 2 HALF SHELVES, 5 OUTDOOR-RATED CAT-5E CABLES, 1 DATA SURGE SUPPRESSOR, 1 ETHERNET POWER CONTROLLER, 1 8-PORT ETHERNET SWITCH AND 2 ETHERNET EXTENDERS.
13. TYPE 1-B STANDARD SIGNAL, SEE DETAIL A ON SHEET E-1.
14. SEE DETAIL TM ON SHEET E-1.
15. SEE DETAIL RM ON SHEET E-1.

SD Exist SERVICE EQUIPMENT ENCLOSURE: CTID No. 0324080M001402 (SEE SHEET E-10).

THIS PLAN IS ACCURATE FOR ELECTRICAL ONLY.

RAMP METERING SYSTEM

SCALE: 1" = 50'

E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN SACRAMENTO

FUNCTIONAL SUPERVISOR: NELSON LEE
CALCULATED-DESIGNED BY: YOUNG TON
CHECKED BY: HABIB GOLBAN
REVISED BY
DATE REVISED

LAST REVISION 08-09-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 13:27