Caltrans State Route 101 Willits Bypass April 2, 2014 Inspection Findings
Inspected by Brendan Thompson and Kason Grady, North Coast Regional Water Quality Control Board
Time of Inspection: ~9:00 a.m. to 3:30 p.m., clear weather, one day after rain
Caltrans EA No.: 01-262004, Risk Level 3, WDID No. 1B12045WNME
See “Willits Map” at end of document for Area locations.

Area 1, “U1 Line,” Photo 1 through Photo 19, West of Hwy 101, Southern-Most Project Limits, South Haehl Creek Watershed, Water Quality Monitoring Stations WQ01 and WQ03

Photo 1: Final grade slope in “U1” area, west of 101, South Haehl Creek watershed. Rilling was evident. Fiber rolls and bonded fiber matrix with seed had been applied last year. Caltrans and contractor staff noted that the slopes could only be repaired by regrading, which has not been done due to the saturated soil conditions and lack of access.

Photo 2: Final grade slope in “U1” area, west of 101, South Haehl Creek watershed. A large portion of the slope failed in an area that exhibits evidence of pre-project slope failure. According to Caltrans staff, this failure had started 2-3 weeks before the inspection. Caltrans staff also mentioned that their geotechnical engineers were working on a solution.

Photo 3: Looking north. The inactive roadway in the U1 area had been covered with plastic and gravel bags for erosion control. The plastic had been placed just before the previous rain event. The Flatiron representative said that placement of plastic resulted in an NTU decrease of “thousands” at the discharge point shown in Photo 13. The slopes to the left were finished to final grade last year, whereas the slopes on the right are still scheduled to be excavated. The slope failure shown in Photo 2 is on the middle-left of this photo.

Photo 4: A close up of the slope failure shown in Photo 2. A rock-lined drainage ditch had been constructed to carry stormwater from the top of slope. Photo 5 shows disturbed conditions at the top of the slope.

Photo 5: Top of disturbed slope shown in Photo 4. Only one gravel bag check dam and no effective erosion control was present. The rock in the bottom of the picture is the top of the rock-lined drainage ditch shown in Photo 4.

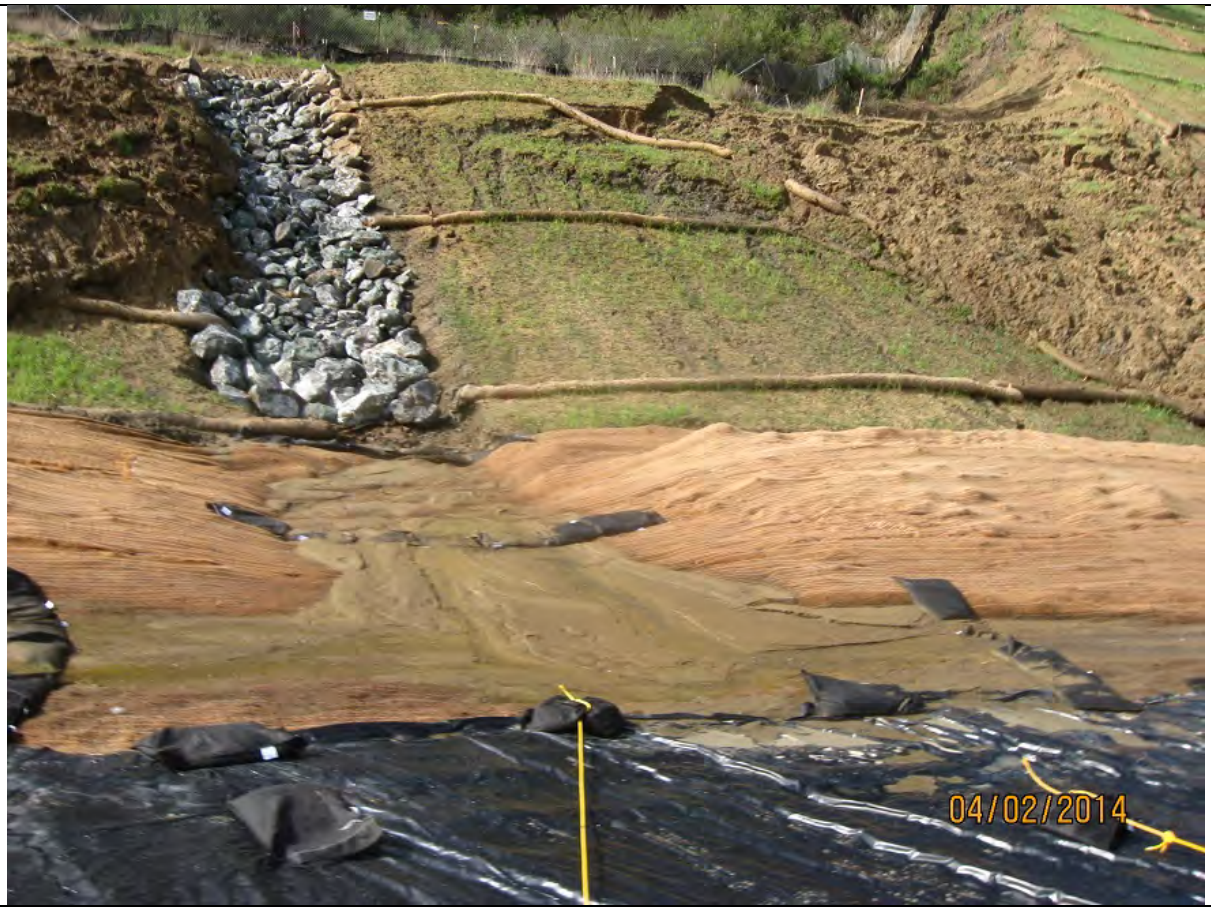


Photo 6: Significant amounts of sediment had been transported from the top of the slope and the failed slope area. This entire area drains to the basin shown in Photo 12.

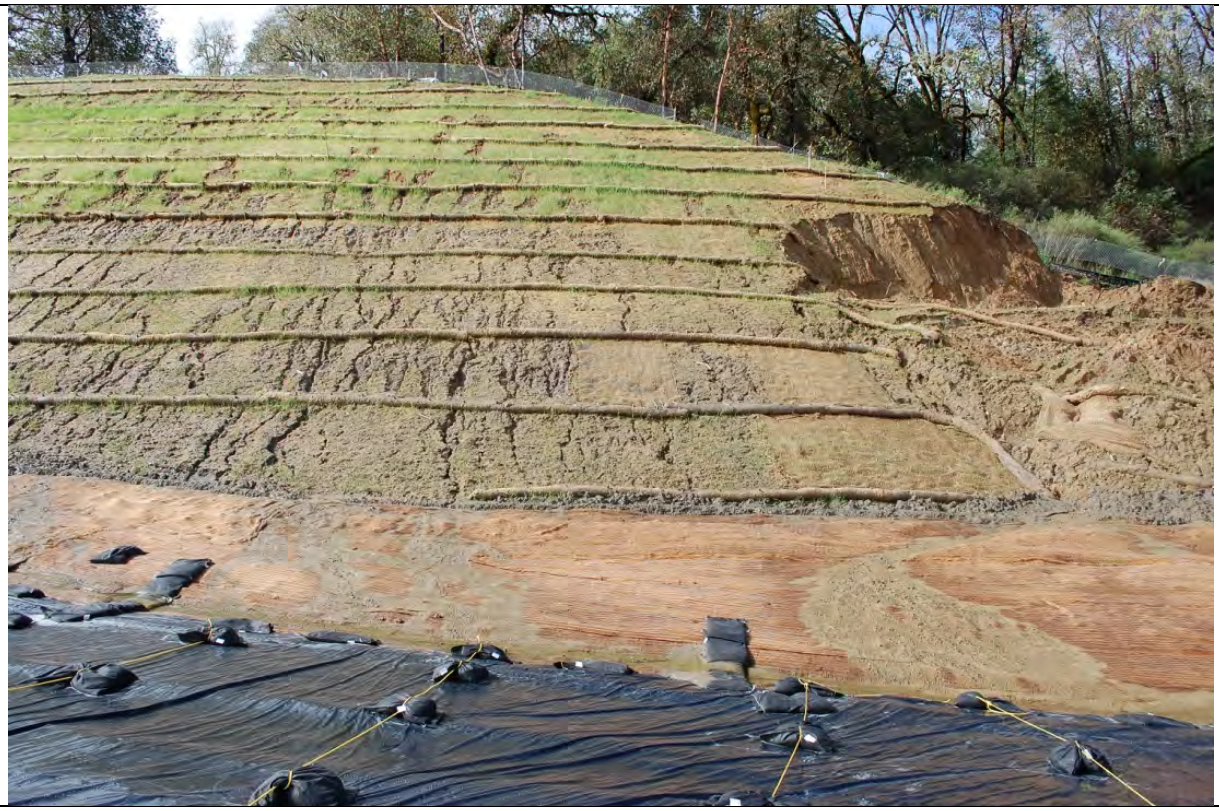


Photo 7: Just north of the slope area shown in Photo 1. Note rilling and associated sediment flows.

Photo 8: View of slope failure across a large area covered with plastic as a temporary erosion control fix.

Photo 9: Finished slope just north of the slope failure. This is one of the few slope locations with rolled erosion control fabric. The fabric was placed sometime after the early February 2014 rain event. A new slope failure is starting at the top left of the slope where the tree shadow is. The ad hoc storm water basin is visible right center.

Photo 10: A close-up of gullying on the slope shown in Photo 9, with the storm water basin below.

Photo 11: A view of the gullied, finished slope with rock-lined drainage ditch, above the storm water basin. The temporary plastic was covered with muddy water, likely residual from higher basin levels. Note failing fiber rolls. Before the plastic had been placed, sediment was removed from the basin and spread over the surrounding area to provide greater basin storage volume.

Photo 12: A close-up view of the stormwater basin excavated last year to handle flows from the eroding finished slopes. The basin drains through a perforated drain pipe surrounded by gravel (center of photo).

Photo 13: The basin shown in Photo 12 discharges to this drainage inlet on Hwy 101 before being carried under the highway to the basin shown in Photo 21.

Photo 14: Part of a rock and dirt stockpile approximately across from the area shown in Photo 11. Runoff from the plastic sheeting was causing erosion adjacent the edge of the sheeting.

Photo 15: Standing on the shoulder of 101 looking west at the U1 line area. Failure of erosion and sediment control BMPs evident on the temporary slope. The gravel in the foreground was added after the early February 2014 rain event as a sediment control measure. This is part of the same gravel strip as shown in Photo 16.

Photo 16: Looking north along the shoulder of Hwy 101 where gravel was placed as a sediment control. The road slopes downward and the gravel extends to the location of a drain inlet (see Photo 17) that transports stormwater under the freeway to the basin shown in Photo 28.

Photo 17: A view of the drain inlet mentioned in Photo 16. A view of the stormwater basin mentioned in Photo 18

Area 2, "U2 Line," Photo 1 through Photo 19, East of Hwy 101, Southern-Most Project Limits, South Haehl Creek Watershed, Water Quality Monitoring Stations WQ01 and WQ03

Photo 18: A view across the highway, looking east, at the largest stormwater basin (hereinafter "Basin 1." Water discharges directly from this basin into South Haehl Creek. Caltrans has been using water trucks, like the one seen in the distance, to pump and truck turbid water from this and other basins to the Willits Wastewater Treatment Facility. Contractor staff said that three, 5,000 gallon water trucks were being operated throughout the day (and 4 the previous day) and could transport approximately one load per hour.

Photo 19: A view across the highway, looking east, at two more areas where stormwater is stored before discharging to South Haehl Creek. The basin in the foreground discharges to Basin 1 and the one in the background discharges to both the basin in Photo 18 and during periods of overflow, directly into South Haehl Creek as described in Photo 54.

Photo 20: Just southeast of the area shown in Uncontrolled flow is eroding through previously applied straw erosion control. The erosion starts beyond the stockpiled material and adjacent the Highway. This concentrated flow path must be controlled.

Photo 21: Looking west at Hwy 101. This basin receives all flow from the basin shown in Photo 12 and discharges into the drainage system shown in Photo 27. This basin is eroding as seen in the top left of the photo, just to the left of the rock-slope protection. This basin must be stabilized.

Photo 22: This area is just south of the main entrance-way to Area 1 and between the existing Hwy 101 and the basin shown in Photo 21. This area is without and requires erosion and sediment control. Photo 23 shows erosive conditions resulting from this uncontrolled run-on.

Photo 23: Just north of the basin shown in Photo 21. Erosion from uncontrolled run-on.

Photo 24: Looking northeast at the “U2” fill area, just east of main entrance to Area 2. Sediment transport was evident throughout the area despite the recently placed straw erosion control.

Photo 25: A view of the storm water basin on the east side of the “U2” line. This basin discharges directly to South Haehl Creek and receives storm water runoff from the east side of the future northbound Haehl interchange off-ramp.

Photo 26: Looking north on the U2 line toward the basin shown in Photo 27 and Photo 28. Sediment had inundated this check dam during the previous rain event and gullying occurred downstream as a result.

Photo 27: West side of U2 line, looking north toward the storm water basin shown in Photo 26. An attempt had been made to intercept drainage from the ditch shown in Photo 26, by installing the smaller black plastic pipe, but storm water scoured beneath the pipe and eroded the earthen ditch immediately downstream.

Photo 28: This basin receives flow from the disturbed area west of Hwy 101, the basin in Photo 21 and discharges to Basin 1.

Photo 29: The outlet of the basin shown in Photo 28.

Photo 30: Ineffective erosion and drainage control and gullying on the west side of the U2 line.

Photo 31: A view of Basin 1, looking north. The channel was eroding/eroded below the outlet seen in the foreground. This channel must be appropriately stabilized to accommodate concentrated flow.

Photo 32: One of two outlets in Basin 1. This is a perforated riser pipe surrounded by gravel for sediment filtration.

Photo 33: At the top of Basin 1, southern side, looking west. This dirt area was unstabilized and eroding. This area and others around the basin must be stabilized.

Photo 34: At the northern end of Basin 1, looking west. This dirt area was unstabilized and eroding. This area must be stabilized.

Photo 35: At the top of Basin 1, northern side, looking west. This dirt area, and the area immediately to the south at the top of the basin was unstabilized and eroding. These areas must be stabilized.

Photo 36: Standing at the top of Basin 1, looking at the south bank of South Haehl Creek. The top rows of fiber rolls were inundated with sediment.

Photo 37: Standing at the top of Basin 1, looking at the south bank of South Haehl Creek. The area in the foreground with plastic sheeting is just upstream of the area shown in the previous photo. All plastic was recently placed to cover the eroding bank.

Photo 38: Standing just east of the previous photo, looking north at the temporary culvert for South Haehl Creek. The rock was placed after the early February 2014 rain event to protect the eroding the creek banks.

Photo 39: Inadequate erosion and sediment control on and adjacent to the roadway north of South Haehl Creek, looking north on the “U4” line.

Photo 40: Looking south toward South Haehl Creek, standing at approximately the same position used in Photo 39. Inadequate erosion and sediment control.

Photo 41: Looking south at Drainage System 24 before it enters a culvert and discharges to South Haehl Creek. There was inadequate erosion and sediment control in this area. This area must be stabilized.

Photo 42: Looking southeast at Drainage System 24 before it enters a culvert and discharges to South Haehl Creek. A large gully has formed developed into the channel, as seen in the center of the photo. The steel fence is the Caltrans right-of-way fence. Caltrans staff said they were limited to fixes within their right-of-way, however, the disturbance on the other side of the fence was created by Caltrans and is Caltrans's responsibility to stabilize.

Photo 43: Looking north at Drainage System 24.

Photo 44: Looking south toward South Haehl Creek, just south of Drainage System 24. The rebar was not moved, according to staff, because it was too heavy to move without heavy equipment.

Photo 45: A closer view of the area shown in Photo 44, upper right. This watercourse runs into Caltrans's project limits from the Schmidbauer property, just before discharging to South Haehl Creek. Because a stable drainage path to South Haehl Creek was not planned for and provided, drainage has eroded the creek bank and transported sediment to South Haehl Creek. A stable drainage path must be provided. Plans for the final drainage configuration must be approved by the Regonal Water Board. Biotechnical elements should be incorporated as appropriate.

Photo 46: Looking west at a material storage area, just south of South Haehl Creek at the bridge 0129 abutment. Inadequate erosion and seidment controls.

Photo 47: Looking east at a material storage area, just south of South Haehl Creek at the bridge 0129 abutment. Inadequate erosion and seidment controls. The concentrated flow path runs toward south Haehl Creek.

Photo 48: Looking east at a material storage area, just south of South Haehl Creek at the bridge 0129 abutment. Inadequate erosion and seidment controls. The eroding channel flows toward south Haehl Creek.

Photo 49: Drainage ditch on the west side of the U2 line, looking south. The slope was failing and eroding in several locations. Some of the slides are restricted to the top six inches, which corresponds to the depth of compost incorporation. This area drains to the basin shown in Photo 25.

Photo 50: Drainage ditch on the west side of the U2 line, looking north. Ditch incision and sediment transport was evident in several locations.

Photo 51: Looking north at the U2 line, south and upgradient of the area showin in Photo 50. The gravel road was significantly incised and sediment had been transported downstream to South Haehl Creek. The inlet is beneath the black plastic, shown in the lower left of the photo (see Photo 52).

Photo 52: A view of the inlet shown in Photo 51.

Photo 53: The U2 line downhill from the location shown in Photo 51. Caltrans staff noted that this segment of the gravel road had erosion problems similar to those shown above in Photo 51, but was recently fixed through installation of underdrains.

Photo 54: There was evidence that the basin shown in Photo 19 and Photo **55** overflowed down this slope, through the silt fence, and into South Haehl Creek. Erosion can be seen in the center-right of the photo. The silt fence shown in the distance was worn and requires replacement.

Photo 55: This basin primarily drains to Basin 1 through an inlet just to the lower right of the photo (see Photo 56), but will overflow directly to South Haehl Creek at the location in the upper left of the photo and as shown in Photo 54.

Photo 56: The outlet of the basin shown in Photo 55. A gravel bar has been added before the outlet for sediment filtration.

Area 3, "U3 Line," Photo 57, just south of South Haehl Creek

Photo 57: Looking north. Erosion and sediment transport and discharge off-site at the toe of slope along the U3 line. The contractor's Water Pollution Control Manager discussed plans to remove sediment and install erosion control fabric and gravel bag check dams within the channel. I do not know exactly where this off-site drainage discharges.

Area 5, “A” line, Berry Creek watershed

Photo 58: Sediment discharge seen in channel, center left, as a result of eroding embankment (see Photo 59)

Photo 59: Erosion of embankment discussed above in Photo **58**.

Area 5, North Haehl Creek watershed, Water Quality Monitoring Stations WQ04 & WQ05

Photo 60: Dishcarge of high pH water from the North Haehl Creek southern abutment. High pH water had been discharging for an unknown period of time as a result of storm water infiltration through concrete base aggregate. The pipe has since been capped to prevent discharge.

Area 7, Baechtel Creek watershed, Water Quality Monitoring Stations WQ06 & WQ07

Photo 61: Looking north at Bent 1 at Center Valley Road. The abutment recently had fiber rolls removed and must be replaced.

Photo 62: Looking south at disturbed area south of Bent 1. This large area has generally inadequate erosion and sediment controls. This area discharges to a tributary of Baechtel Creek at the location shown in Photo 63.

Photo 63: The lower drainage carries storm water from Caltrans disturbed soil areas shown in Photo 62, Photo 64, Photo 65, and Photo 66. It is visibly more turbid than the water from the adjacent drainage that is virtually unaffected by construction operations. Caltrans has been incorrectly representing site discharge by sampling at a location downstream of this confluence. Caltrans must capture representative site samples from a location upstream of this confluence.

Photo 64: Inadequate erosion control south of Bent 1.

Photo 65: Inadequate erosion control south of Bent 1.

Photo 66: Inadequate erosion control south of Bent 1.

Photo 67: Photo taken looking west at the southern boundary of Spare Time Supply. Vegetation debris is inappropriately stored in standing water and must be relocated.

Photo 68: Looking northeast at Rutledge Pond. No sediment control at the boundary of Rutledge Pond. Construction storm water has flowed uncontrolled into the pond all rainy season. Perimeter control must be installed.

Photo 69: Flatiron's crane had been vandalized twice, resulting in hydraulic fluid spills. Absorbent material was distributed throughout the area. The smell of petroleum product was strong. It had rained the previous two days and the tarps onsite at the time were not large enough to cover the entire spill area.

Photo 70: Absorbent material had been applied to absorb hydraulic fluid. Gravel bags along the perimeter appeared to have absorbed fluid. Caltrans must provide the Regional Water Board with information detailing the dates the hydraulic lines were cut as well as documentation of appropriate clean-up and disposal activities.

Photo 71: It appeared that fluid had drained from the spill area as indicated by the water mark on the asphalt. We communicated that the material, including the gravel bags must be disposed of immediately, subject to appropriate hazardous waste disposal protocol. Caltrans had not been notified of the incident and potential discharge.

Photo 72: Looking northwest. Sediment discharge to Baechtel Creek at Pier 4 as a result of inadequate erosion control and failed sediment control. Erosion and sediment control must be provided.

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	7	939

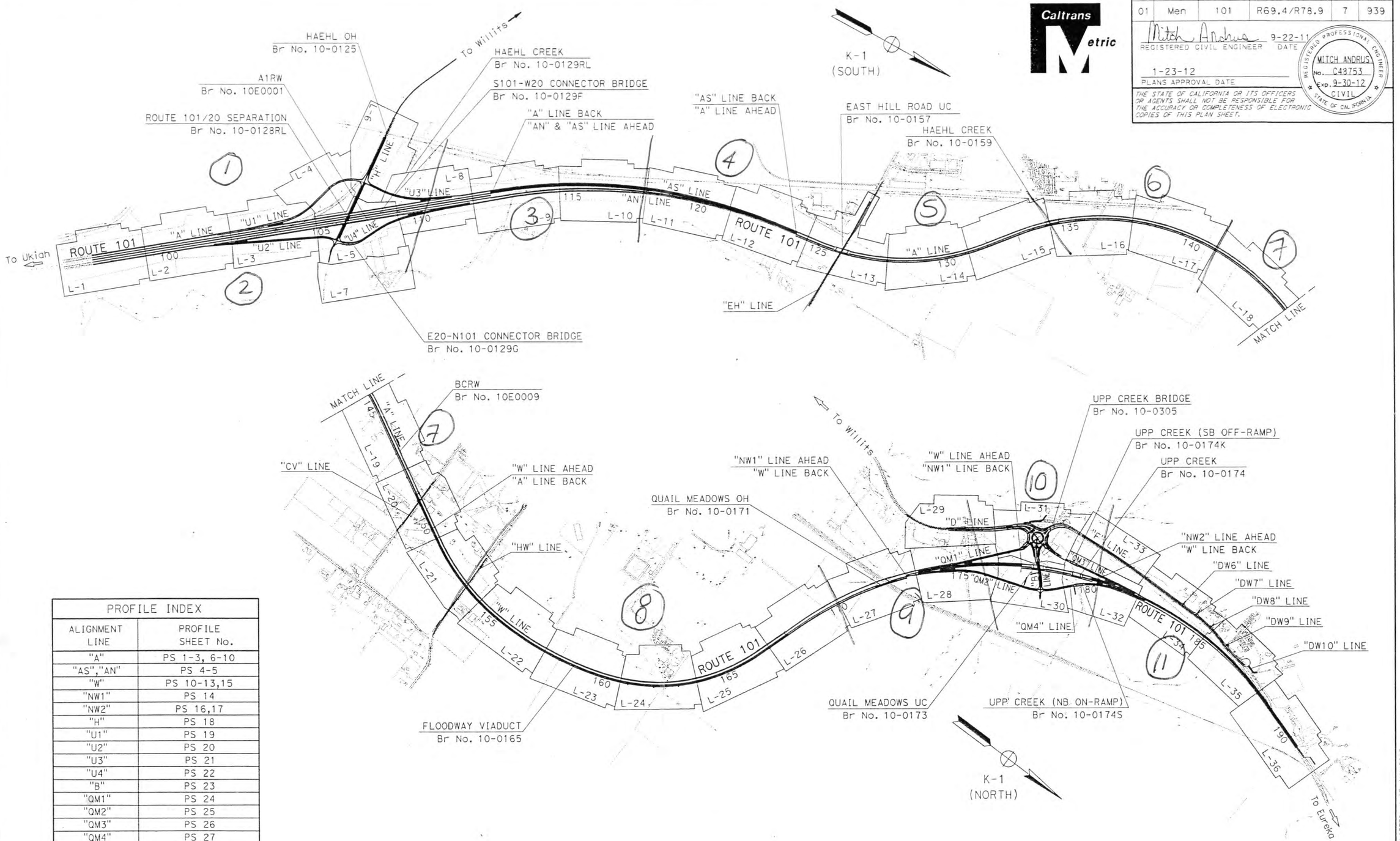
Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL — 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.

Caltrans Metric



PROFILE INDEX	
ALIGNMENT LINE	PROFILE SHEET No.
"A"	PS 1-3, 6-10
"AS","AN"	PS 4-5
"W"	PS 10-13,15
"NW1"	PS 14
"NW2"	PS 16,17
"H"	PS 18
"U1"	PS 19
"U2"	PS 20
"U3"	PS 21
"U4"	PS 22
"B"	PS 23
"QM1"	PS 24
"QM2"	PS 25
"QM3"	PS 26
"QM4"	PS 27
"F"	PS 28
"DW10"	PS 29

KEY MAP AND LINE INDEX

NO SCALE

K-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
MITCH ANDRUS	MELISSA HAURY	DOUGLAS S. JONES		

LAST REVISION 08-02-11 | DATE PLOTTED => 27-JAN-2012 | TIME PLOTTED => 13:54

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s123631
DGN FILE => 0100000005dd001.dgn

CU 03226 EA 262001