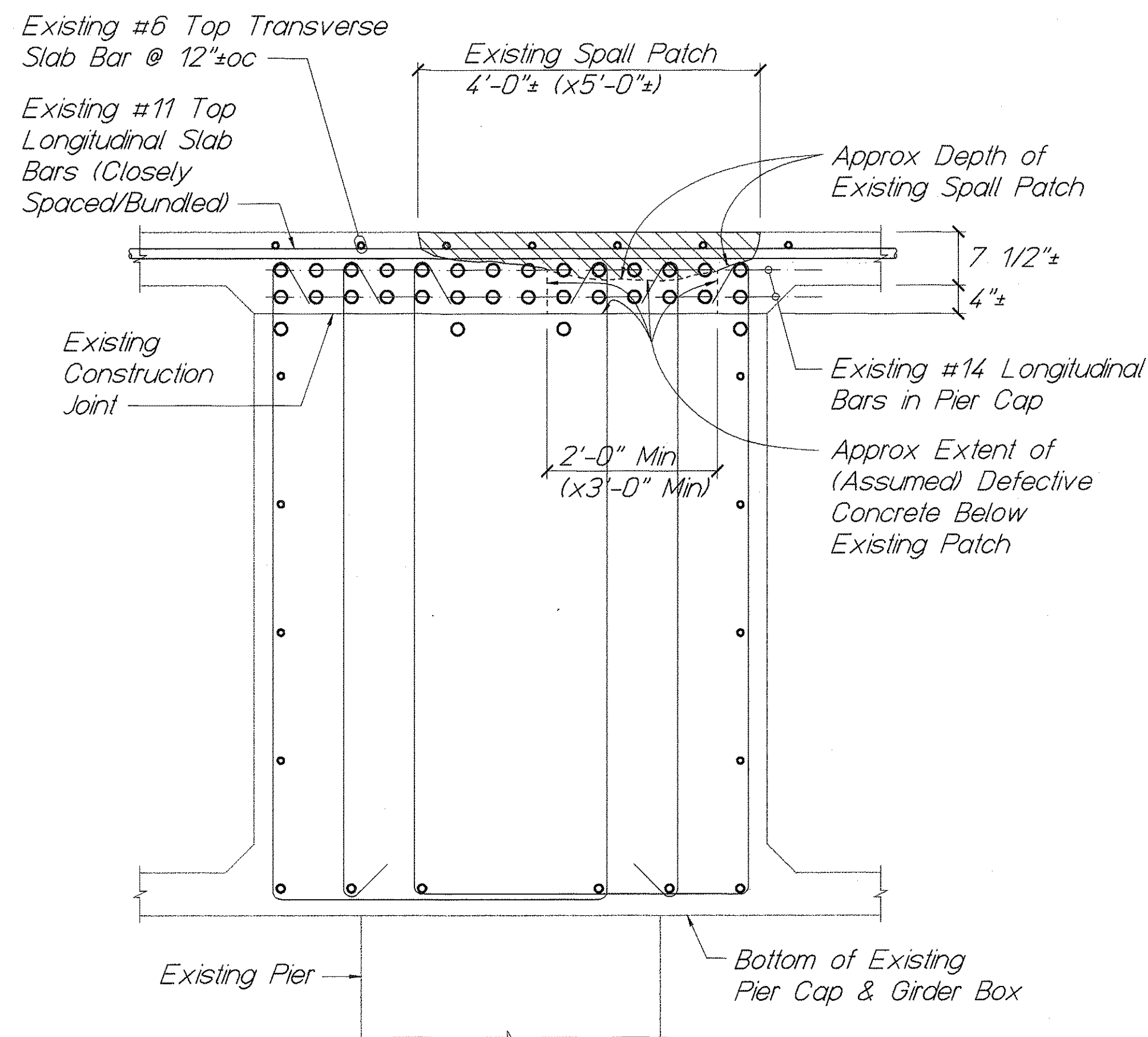
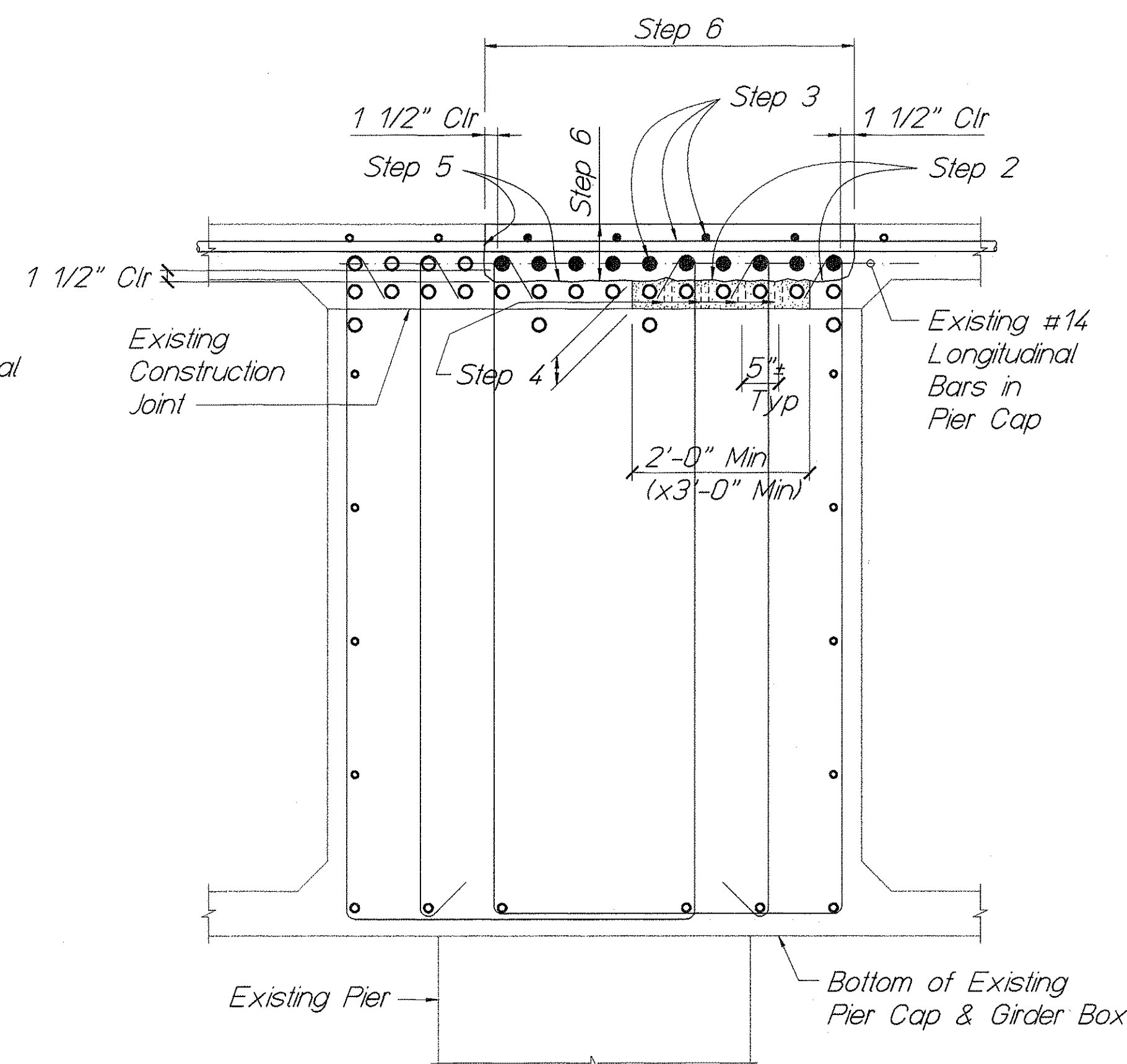
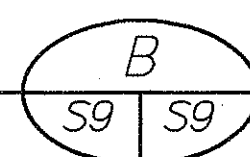


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-H1-1 (226)	2003	33	36



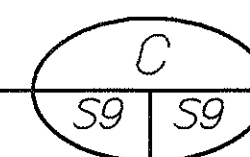
EXISTING CONDITION

3/4"=1'-0"

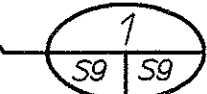


REPAIR DETAIL

3/4"=1'-0"

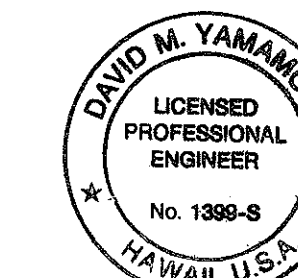


SEQUENCE OF TOP DECK SPALL REPAIR WORK :

- Step 1.
 - Provide Advance Public Notices, Ramp Closure Signs, Other Signs, Barriers, Cones, etc. as Required. Submit Traffic Control Plan.
 - Close Kapiolani Blvd Off-Ramp for Entire Duration of this Repair Work (Not sooner than 7:00 am Saturday to no later than 4:00 am Monday during one Weekend)
- Step 2. Remove Existing Concrete and Patch Materials to Expose Existing #14 Bars (Top Layer)
- Step 3. Protect All Existing Rebars From Damage. Sandblast to Shiny Metal. Apply Epoxy Rust Preventive Coating to Cleaned Surfaces of Rebars Just Prior to Placing Repair Concrete (Step 6). If the diameter of the #6 & #11 Rebars, after cleaning, are less than 5/8" and 1 1/4" respectively, repair per 
- Step 4. Drill 1"Ø Probe Holes @ 5"± oc Each Way, Down to Existing Construction Joint. Avoid Drilling Thru Rebars. Coring Will Not Be Permitted. Blow Debris and Water Out of Holes. Start Drilling Probe Holes at Suspect Area at 5"± x 5"± Grid Pattern, Progressing Outward Until the Suspected or the Defective Area is Covered with Holes and Surrounded by Holes Without Voids. Bid Shall Be Based on 60 Probe Holes. Pump Fluid H.S. Non-Shrink Grout into Drilled Holes and Any Cavities that are Encountered and Fill All Holes to the Top. Completely remove excess grout from the rebar and concrete surfaces to insure proper bonding of the repair concrete.
- Step 5. Flush surfaces with clean water to remove all dust and debris. Air blast with oil-free compressed air to remove all water before placing magnesium phosphate repair concrete.
- Step 6. Place Magnesium Phosphate Repair Concrete in the Repair Area not sooner than 12 hours after pumping the grout. Cure with plastic sheeting.
- Step 7. Do not allow traffic over the repaired surfaces until at least 6 hours after placing the magnesium phosphate repair concrete.

REINFORCING BAR WELDING NOTES :

- Welding shall conform to the current AWS D1.4. According to the original construction drawings, the existing reinforcing bars in the Pier 21 Cap conform to ASTM A15 Biller Steel Grade 40.
- Use E90XX electrodes for Shielded Metal Arc Welding.
- Use only qualified welders. Provide proof of welder's qualification to the Engineer for acceptance prior to welding.
- Do not perform any welding close enough to other bars to cause them to be damaged/weakened by heating.
- Employ an Independent Testing Agency to inspect and test welds in accordance with Special Provisions Section 512.

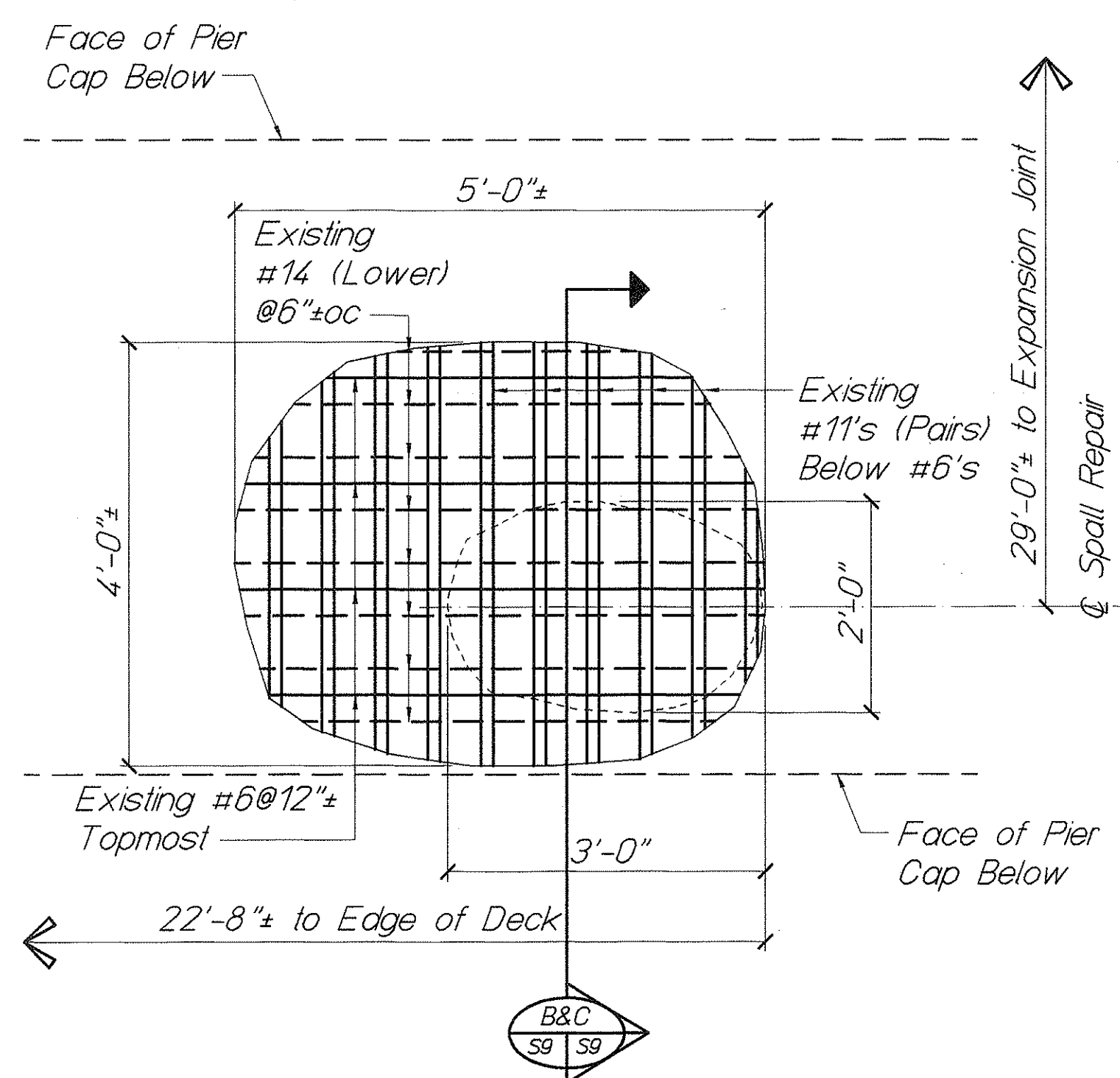
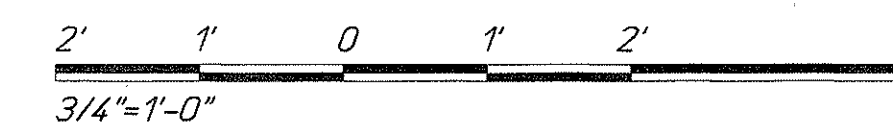


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

David M. Yamamoto

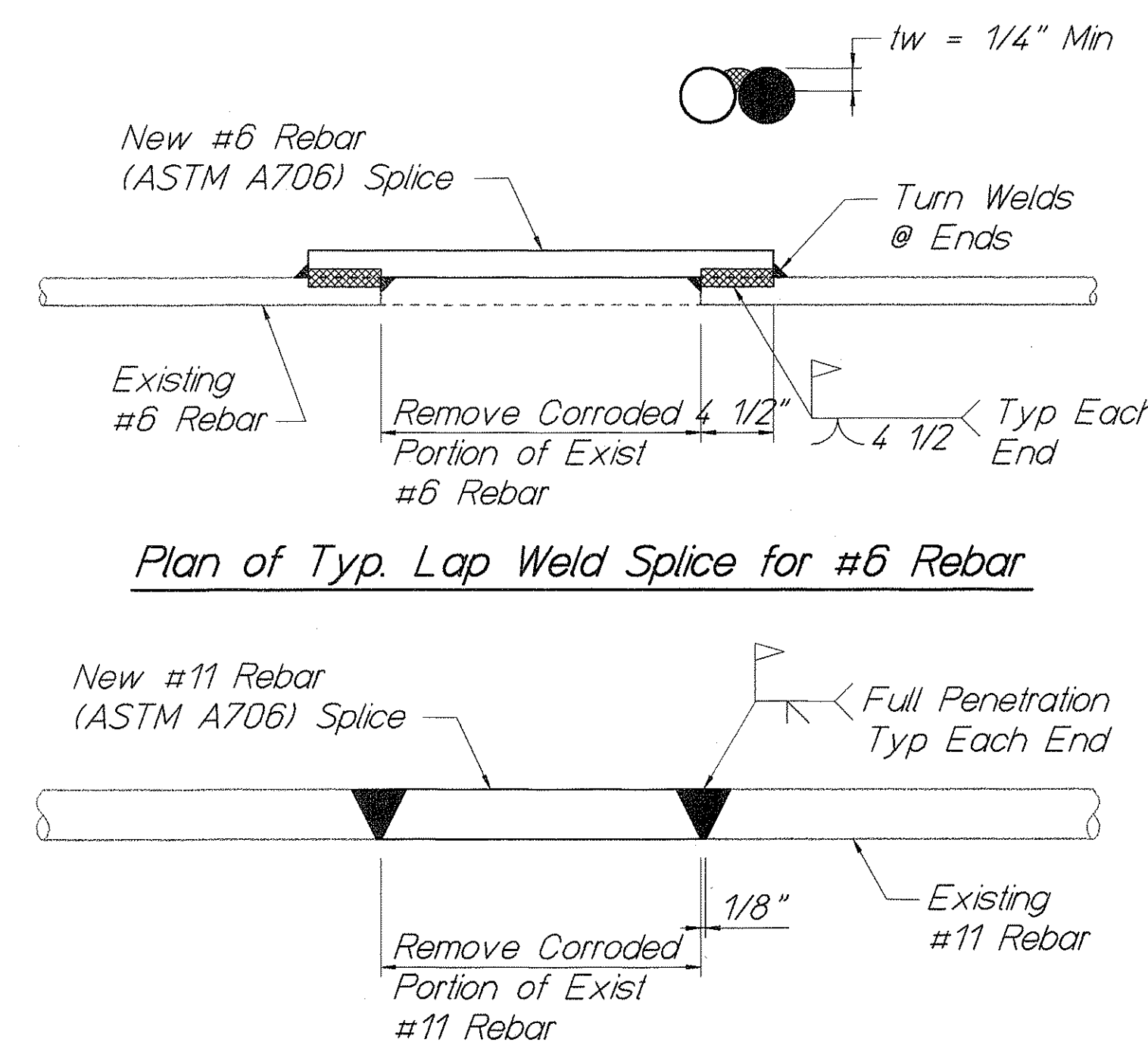
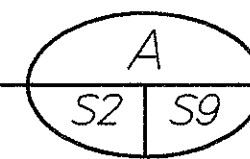
SATO & ASSOCIATES, INC.

GRAPHIC SCALE:



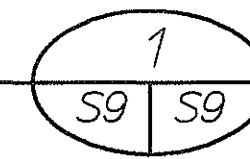
Spall Adj to Pier 21 PARTIAL PLAN

3/4"=1'-0"



WELD SPLICE DETAILS

NO SCALE



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NO.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TOP DECK SPALL REPAIR PLAN, DETAILS and NOTES

INTERSTATE ROUTE H-1, SEISMIC RETROFIT
KAPIOLANI INTERCHANGE, PHASE 2
FEDERAL AID PROJECT NO. BR-H1-1(226)

SCALE: 3/4" = 1'-0" DATE: SEPT 2002
SHEET No. S9 OF 9 SHEETS