



09 MAY 20 P2:33

STATE PROCUREMENT OFFICE
EMERGENCY PROCUREMENT REQUEST

STATE PROCUREMENT OFFICE
STATE OF HAWAII

- 1. TO: Chief Procurement Officer
- 2. FROM: Transportation/Highways Division/Oahu District

Department/Division/Agency

Pursuant to §103D-307, HRS, and Subchapter 10, Chapter 3-122, HAR, the Department requests approval for the following:

3. Date 4/21/2009 4. After the fact YES NO

5. Nature of the Emergency

There are 2 problem areas on the H-1, West bound: 1) is approximately 1-mile before the Makakilo offramp and the second 2) is at the Campbell Industrial Park offramp. Both of these areas have large cracks in the slabs; at the Makakilo location portions of the slab rock as large trucks drive over it. This could cause a serious crash if a piece of the slab becomes dislodged and is hit by a vehicle going 70 mph.

6. Vendor: Haron Construction, Inc
Address: 96-1197 Waihona St, Bldg E4
Pearl City, HI 96782-1978

7. Price:
\$750,000.00

8. Description of goods, services, or construction to be purchased

The damaged concrete slabs were removed and replaced with a thicker concrete slab, and secured into place with dowels.

9. Reason for Vendor Selection

A quick setting concrete was needed to minimize affect on traffic and Haron has recently done work for the DOT using a similar quick setting concrete.

10. Direct questions to: Michael K. Medeiros Phone: 831-6812

11. I certify that the information provided above is to the best of my knowledge, true and correct.

Department Head [Signature] Date 5/10/09

Reserved for SPO Use Only

12. Chief Procurement Officer's comments:

Approval is based on the department's determination that immediate emergency repairs were necessary to avoid injury to the general public and/or damage to private property. The department is reminded that emergency procurements \$2,500 or more are required to be posted on the Procurement Reporting System.

13. APPROVED DISAPPROVED NO ACTION REQUIRED

[Signature] 6/10/09
Chief Procurement Officer Date

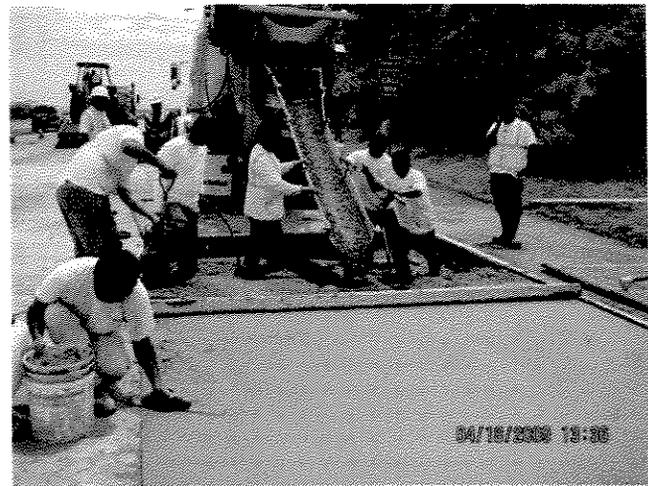
14. E.P.No. 09-0250

H1 REPAIRS, WEST BOUND MAKAKILO OFF-RAMP AND CAMPBELL INDUSTRIAL PARK OFF-RAMP EMERGENCY PROCUREMENT

The H-1 Freeway was shut down for emergency repairs over two weekends: 4/17 – 4/19 and 5/29 – 5/31. A section of the middle lane approximately ½-mile from the Makakilo off-ramp had cracked to the point that portions of the roadway had come loose and were observed rocking when heavy trucks traveled over them.

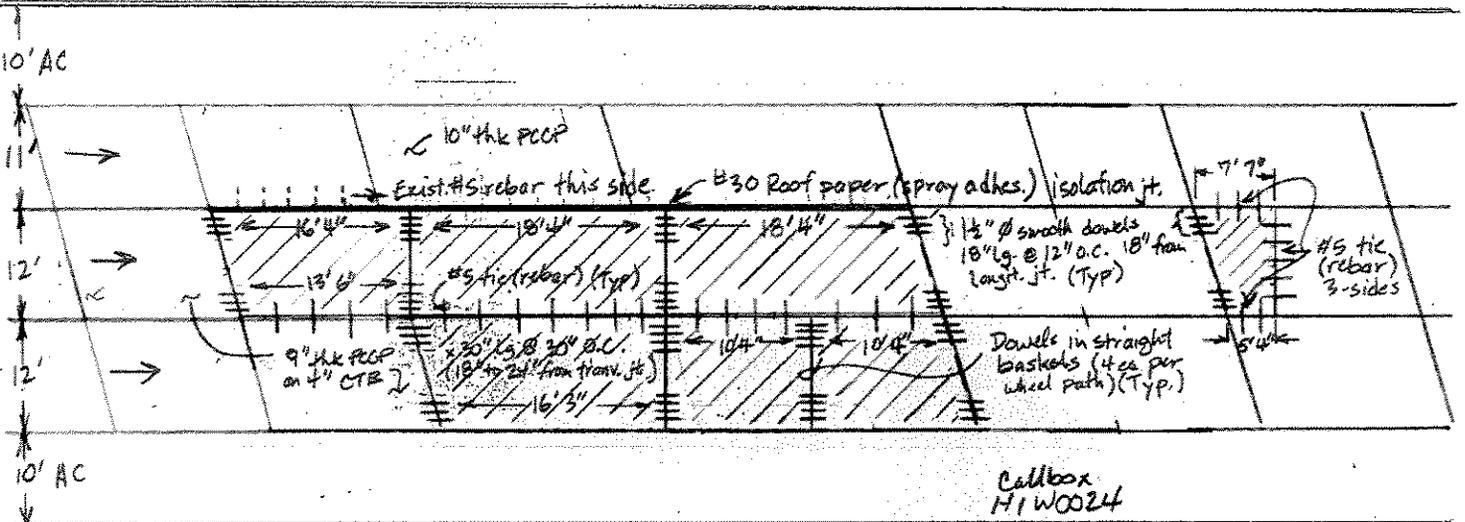
Subsequent site visits by HWY-L, Highways Division Material and Testing Laboratory determined that the areas were a safety hazard and needed to be repaired. HWY-L developed a repair plan for HWY-O. The plan called for use of a quick setting concrete and Haron Construction, who currently has a contract with the DOT and has previously worked with quick setting concrete material was selected for the job.

The Makakilo off-ramp was done first. Because of its proximity to Makakilo, in turns of impact to the motoring public this was the worse of the two areas. Although advance-warning signs were in place and PSA were done on both TV and radio, traffic was very heavy during this work. The middle lane was done first, then the right lane. Work started at 10:00 PM Friday, 4/17 and the middle lane was opened to traffic on Saturday night around 9:00 PM. The right lane was opened to traffic Sunday morning, 4/19 around 8:30 AM. Repair covered an area of 1051 square feet and approximately 50-CY of accelerated 650-flex concrete was used and there was a work force of approximately 20 people. The Campbell Industrial Park off-ramp was closed at 10:00 PM Friday, 5/29. This work involved only the right lane (an approximate area of 1392 square feet) and we were able to keep the exit open while working so the impact to traffic was nominal. The accelerated 650-flex concrete mix was used again, and approximately 60-CY were poured on Saturday, 5/31 morning around 10:00 AM. The lane was opened to traffic on Sunday, 5/31 around 9:00 AM. Again the work force was approximately 20 people.



H-1 Westbound Slab Replacement (PCCP) Center and Right Lanes, before Markakilo Off-ramp (Not to scale)

Median Barrier



Callbox
H1 WOOD 24

Field Notes + Lessons Learned

4-17-09 9:00p Closed 2 lanes from NS Rd Bridge (~1 mi). Traffic ~45 min. delay to midnight.
 ~10:30p Start sawcut + demo (late start due to traffic). Hydraulic hammer, 4 dumps, hoptoe. Perennial sawcut + core 30 holes (2" dia.)

4-18-09 Prior to 4:30a: Grade rolled (300# roller) - tamped edges + small PCCP. ~6:00a Coring and tie bars complete + dowels in place.
 7:00a Haw. Cont. notifies Type III NA (plant prob), substitute use of accel. 650 flex (450f, @ 12 hrs) using Type II cont. for both lane.
 ~8:30a 1st truck arrive. Dose w/ Rheoconcrete LWI (calcium nitrate) on site (~15 min. mix). ~9:00a 1st pair. Centerline 3 trucks, ~20 min spf
 10:00a: 3rd truck sampled, 10:30a. Complete centerline pour, ~12 noon strip forms, 12:30p sawcut transv. jts.
 1:00p: 4th truck arrives, dose + pour. 1:30p 2nd truck, 2:30p 3rd truck (final right lane pair). 2nd truck sampled
 6:00p: Haw. Cont. tested 1 beam @ $f_c = 506$ psi for info only.
 9:15p: Haw. Cont. tested 2 beams (1 Haw. Cont, 1 State) @ 485 + 418 psi (Avg. 451.5 psi). Approx age 11 hrs. Haw. Cont notified
 10:00p: Centerline opened, Right Lane remains closed. (OK to open centerline)

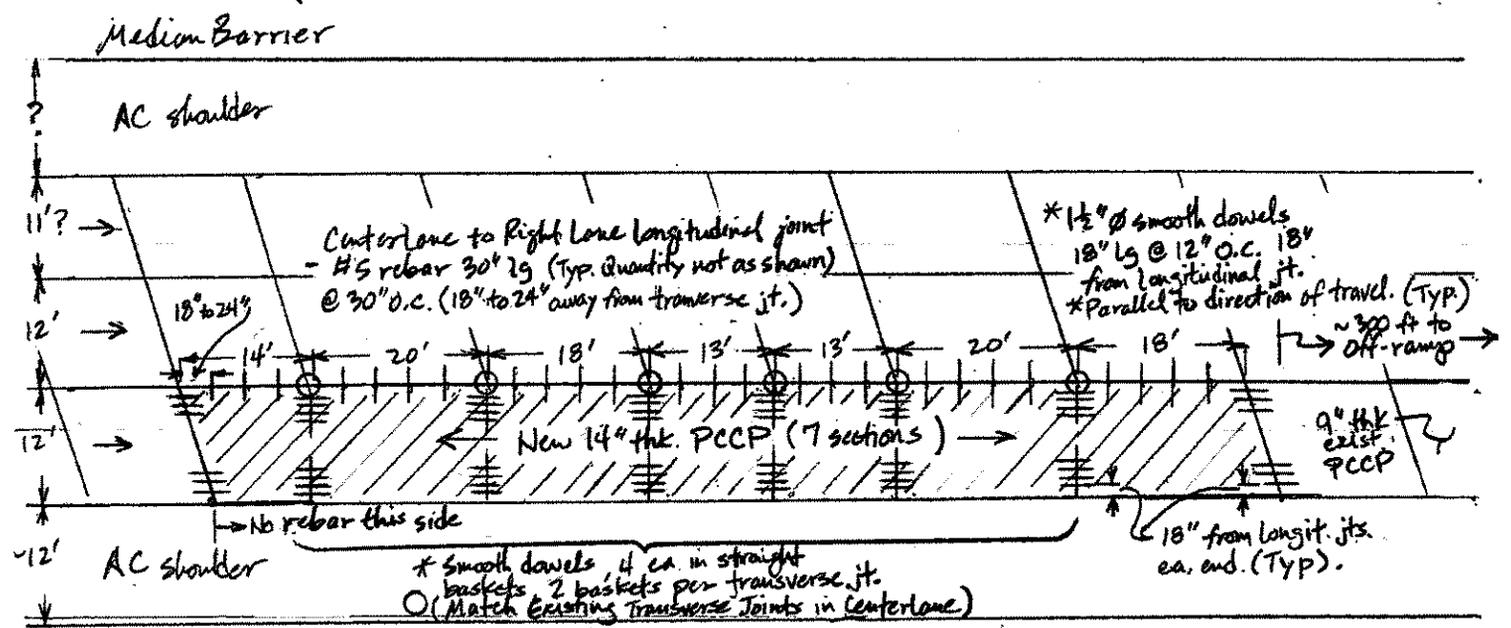
4-19-09 8:15a. State Lab test 2 beams from centerline @ 512 + 520 psi flex (Avg. 516 psi). Approx. age 18 hrs. Haw. Cont notified
 State stores 3 beam samples (2 centerline, 1 right lane) scheduled 14 day test. (OK to open centerline)

4-23-09 New slabs - no cracks observed from shoulder. Next Parr: Use fibers (same as Waimuku Bridge wide.), @ 400 psi flex in 8 hrs ±.

Construction Notes

1. Use early or rapid setting concrete, and submit concrete mix design for review. Finish matching existing PCCP. Use Lithium Cure D.O.T. curing compound with white pigment. ~~EF~~
2. Transverse Jts.: 1 1/2" dia. smooth davel, 18" long centered across joint*
 at mid-depth of PCCP slab. For dowels at construction joints at exist. PCCP slab, install dowels at depth of exist. slabs. Epoxy coat dowels. Rebar green epoxy coating meeting ASTM D3963 may be used. Lightly grease before pour
 *Critical that dowels are positioned in place parallel to the pavement surface and paving lane direction. Ends of dowels shall not deviate more than 0.01' from parallel in 9" length. [Dowel hole size betw. 1-3/4 to 2 in. dia. [Actual 2" dia. 2 men, 25± min./hole, sawcut transverse jts. after pour, 2 hrs+]
3. Longitudinal Jts.: #5 deformed bar (rebar), 30" long centered across joint at mid-depth of existing PCCP slab, perpendicular to longitudinal joint at a distance of 18" to 24" from transverse joint. Epoxy coat rebar same as smooth dowels above.
4. Spall Area #2: Repair area shall be squared. Sawcut edge of repair area 1 in. depth min. and at minimum width and length of 1 ft. chip-out interior of repair area with a light hammer < 30 #'s. Prepare and fill with early setting grout in accordance with manufacturer's recommendations or Type III cement concrete

H-1 Westbound Slab Replacement (PCCP) Right Lane before Campbell Industrial Off-ramp (Not to Scale)



Recommendations to expedite work and lane re-opening:

1. Prepare slab demolition before weekend closure by sawcut joint/sections (w/ lane closure) earlier.
2. Earlier strength cement concrete i.e. Type III or accelerated GSO flex w/ CMI and fiber. (Hawaiian cement mix used at Waimalu Bridge wide)

Construction Notes

1. Use early or rapid setting concrete, and submit concrete mix design for review. Finish matching existing PCCP. Use Lithium Cure D.O.T. curing compound with white pigment. *BS*
2. Lay plastic sheet on prepared grade before pour.
2. Transverse Jts.: 1 1/2" dia. smooth dowel, 18" long centered across joint*
at mid-depth of PCCP slab. For dowels at construction joints at exist. PCCP slab, install dowels at depth of exist. slabs. Epoxy coat dowels. Rebar green epoxy coating meeting ASTM D3963 may be used. Lightly grease before pour.
* Critical that dowels are positioned in place parallel to the pavement surface and paving lane direction. Ends of dowels shall not deviate more than 0.01' from parallel in 9" length. ♦ Dowel hole size betw. 1 3/4 to 2 in. dia.
3. Longitudinal Jts.: #5 deformed bar (rebar), 30" long centered across joint at mid-depth of existing PCCP slab, perpendicular to longitudinal joint at a distance of 18" to 24" from transverse joint. Epoxy coat rebar same as smooth dowels above.