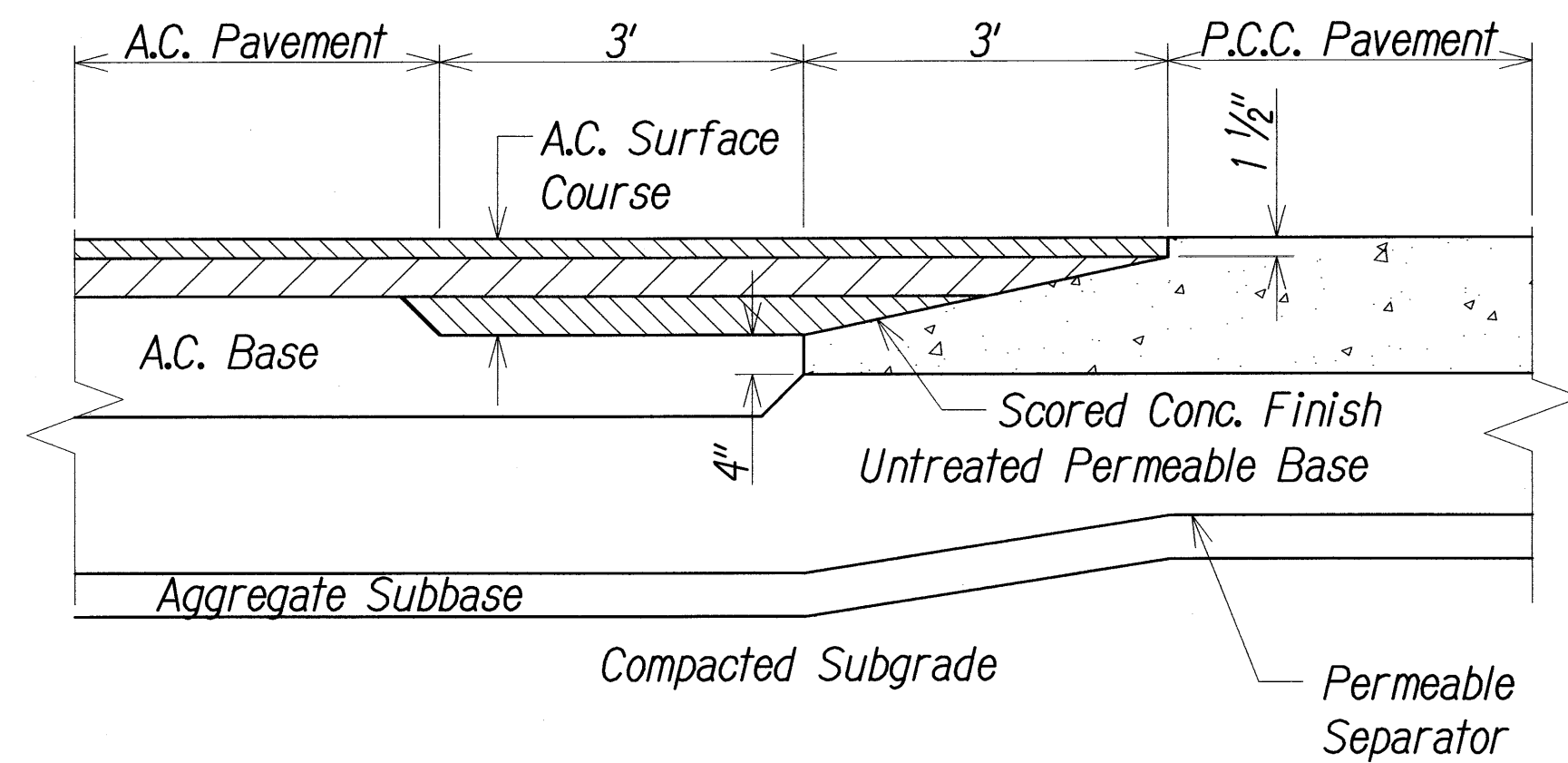


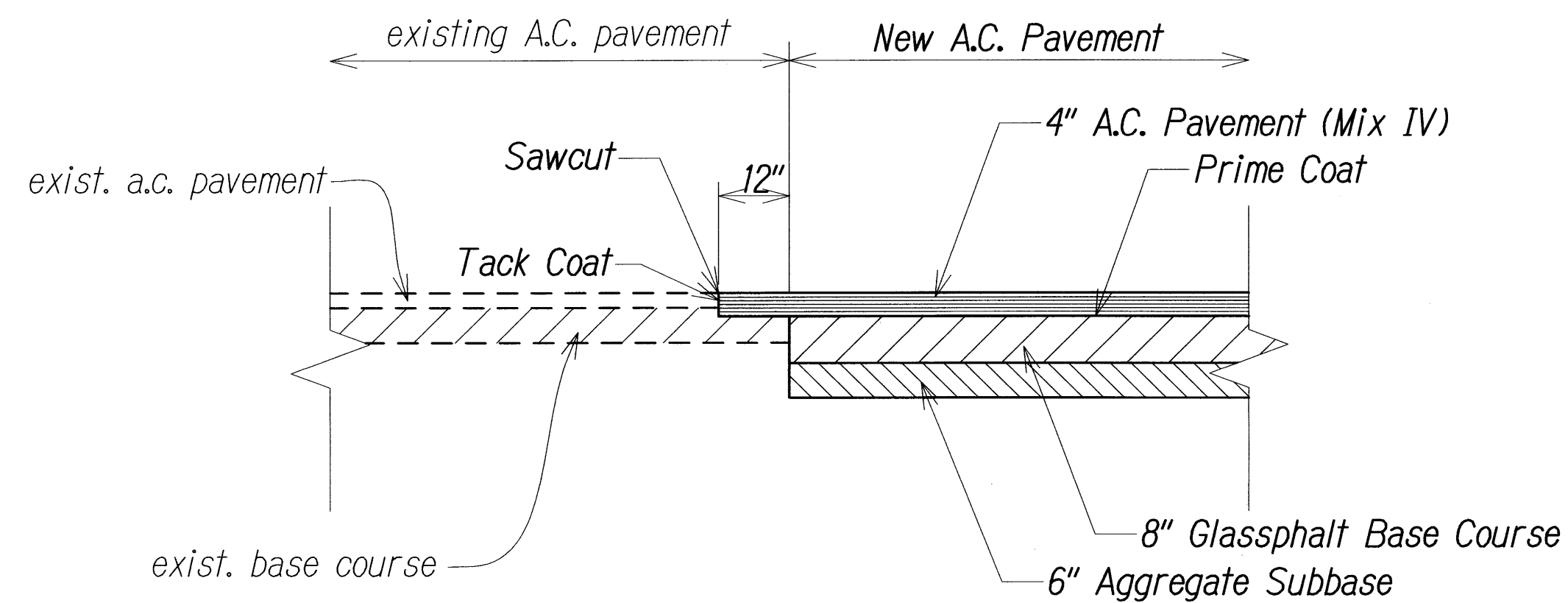
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-030-1(38)	2010	16	213



NOTE: This detail required on traffic and shoulder areas with > 35mph posted speed limits

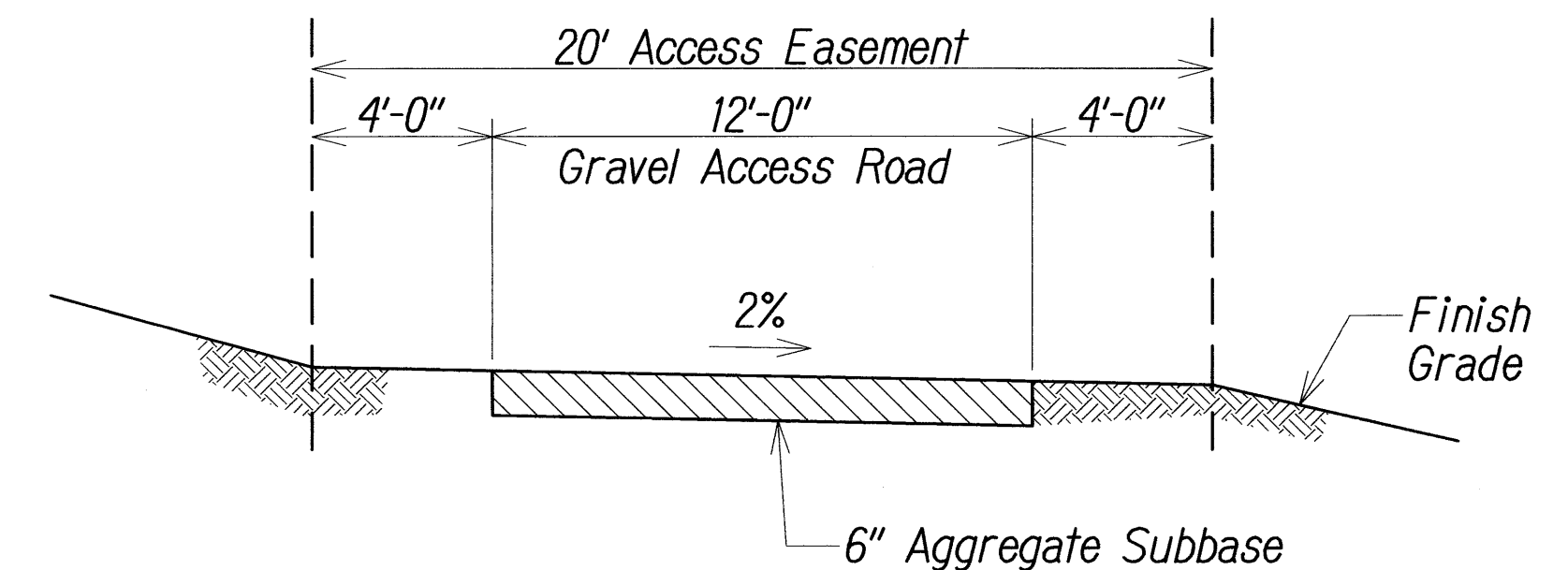
PCC-AC TRANSVERSE TRANSITION DETAIL
Not To Scale

1
16 | 16



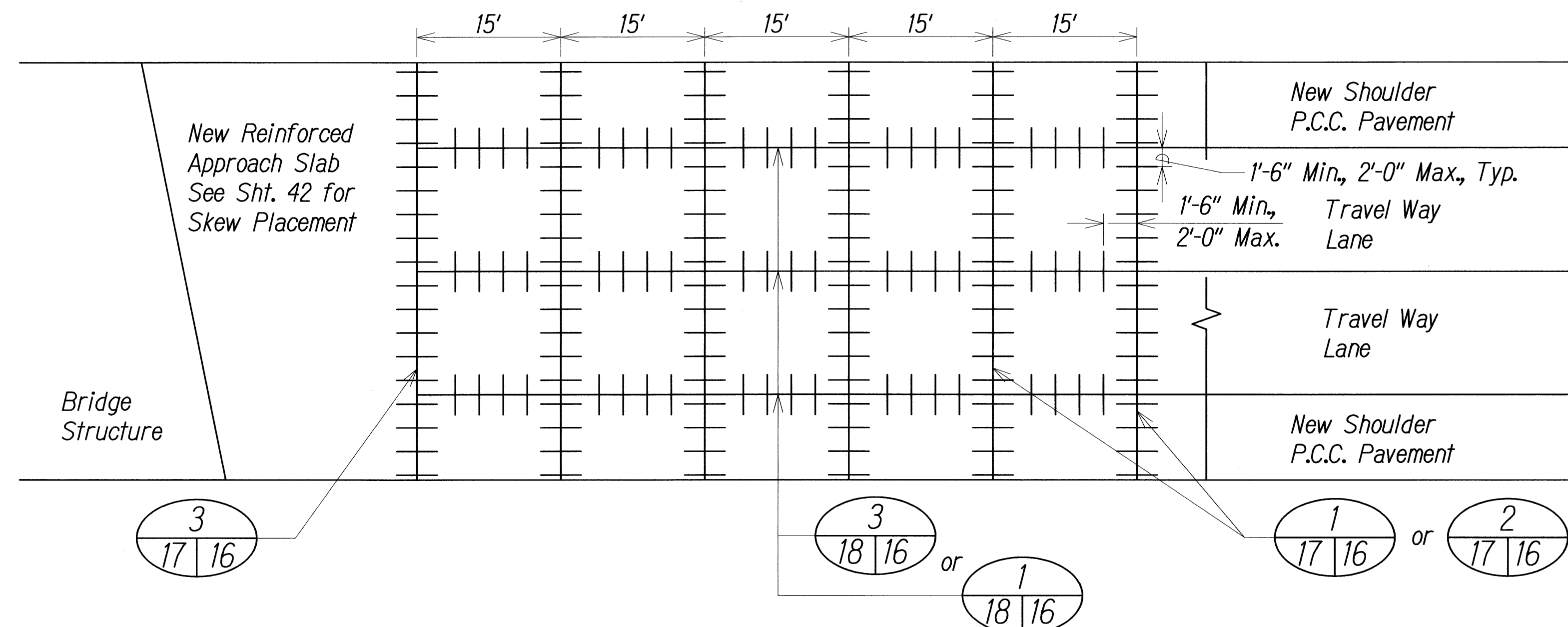
EXISTING A.C. AND NEW A.C. PAVEMENT CONNECTION
Scale: 1/2" = 1'-0"

2
16 | 16



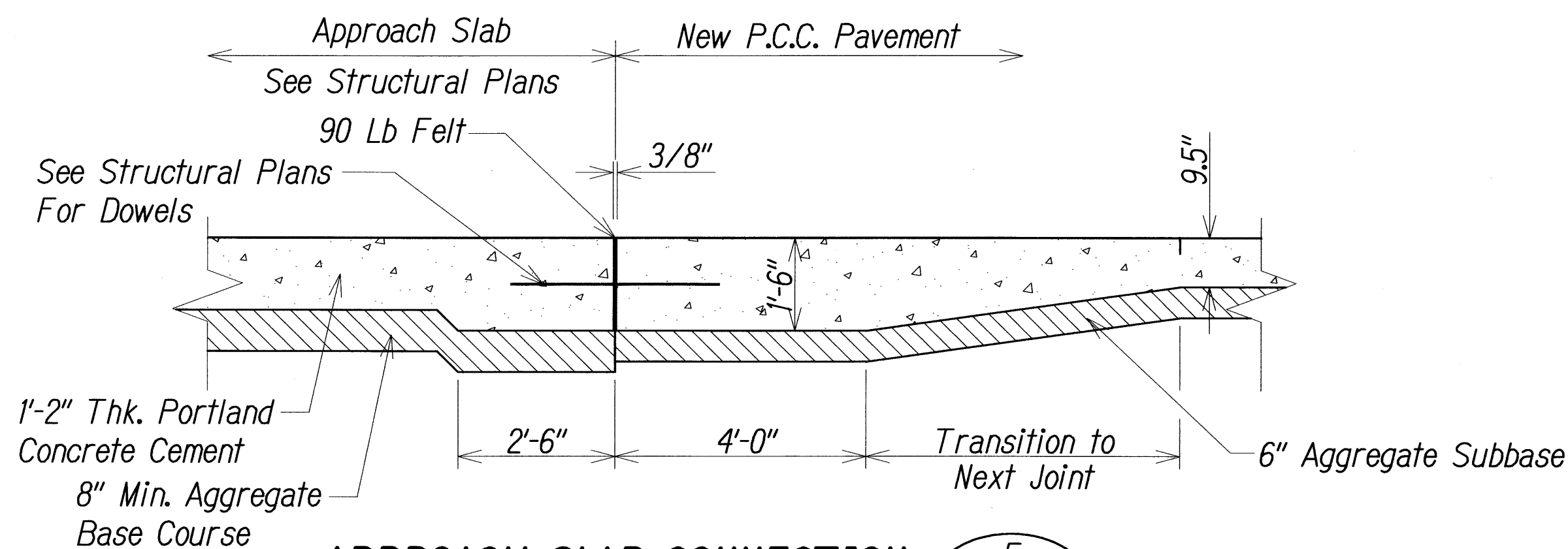
TYPICAL GRAVEL ACCESS ROAD DETAIL
Not To Scale

3
16 | 16



**TYPICAL JOINT LAYOUT PLAN
WITH PERPENDICULAR JOINTS**
Not To Scale

4
16 | 16

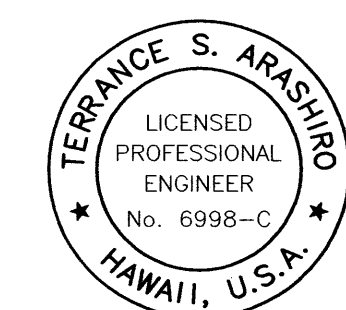


APPROACH SLAB CONNECTION
Not To Scale

5
16 | 16

NOTES:

- The dimensions shown are for a 12 foot wide travel way lane width. For other lane widths adjust the transverse joint spacing to obtain a length to width ratio of not greater than 1.25 for the travel way lane slabs.
- For travel way lanes, reinforce odd shaped slabs and slabs with mismatched joints. Odd shaped slabs are slabs with length to width ratios greater than 1.25, and other nonsquare shaped slabs. See sheet D-20 of the State Standard Plans. Triangular shaped slabs are considered odd-shaped slabs.
- For the shoulder, reinforcing is not required for slabs that exceed the length to width ratio of 1.25. Triangular shaped slabs shall have reinforcing.
- Locate transverse construction joints at a minimum distance of ten (10) feet and a maximum of fifteen (15) feet from the nearest planned contraction joint.
- Provide shop drawings for joint layout where obstructions such as manholes are encountered, and at intersections with other streets.
- Portland cement concrete pavement shall attain a minimum 14-day flexural strength, $f_r = 650$ psi.

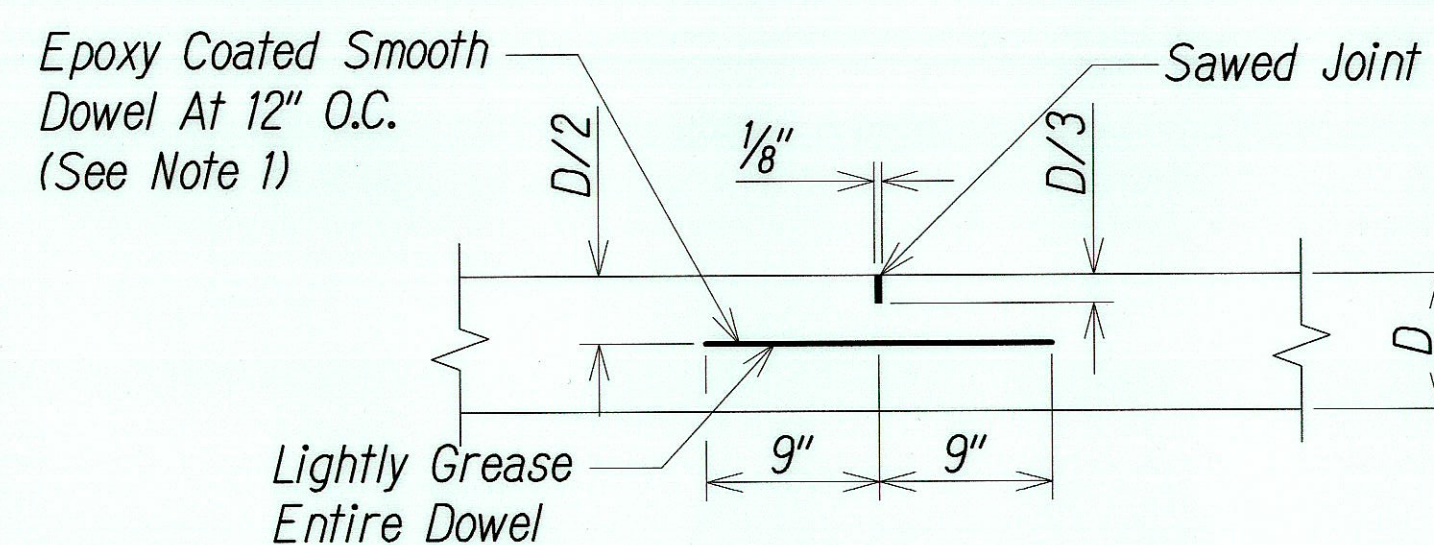


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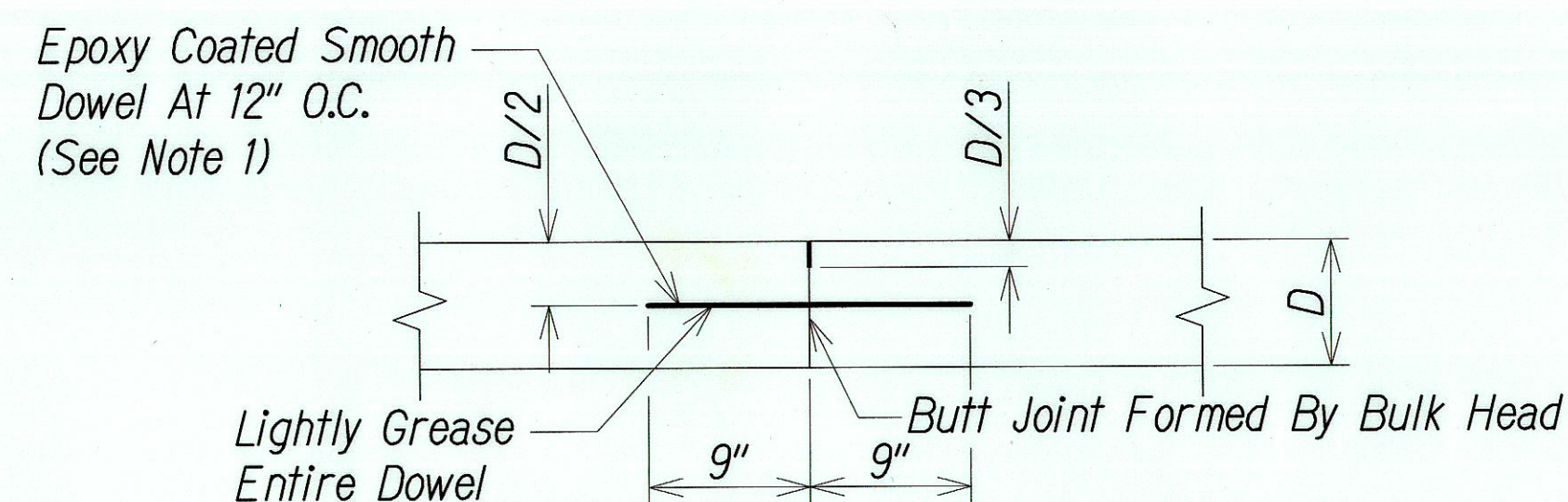
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PAVEMENT CONNECTION DETAILS	
HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1 Lahainaluna Rd. to Hokiokio Pl. Federal Aid Project NO. NH-030-1(38)	
Scale: As Shown	Date: November 23, 2009

SHEET No. 1 OF 3 SHEETS

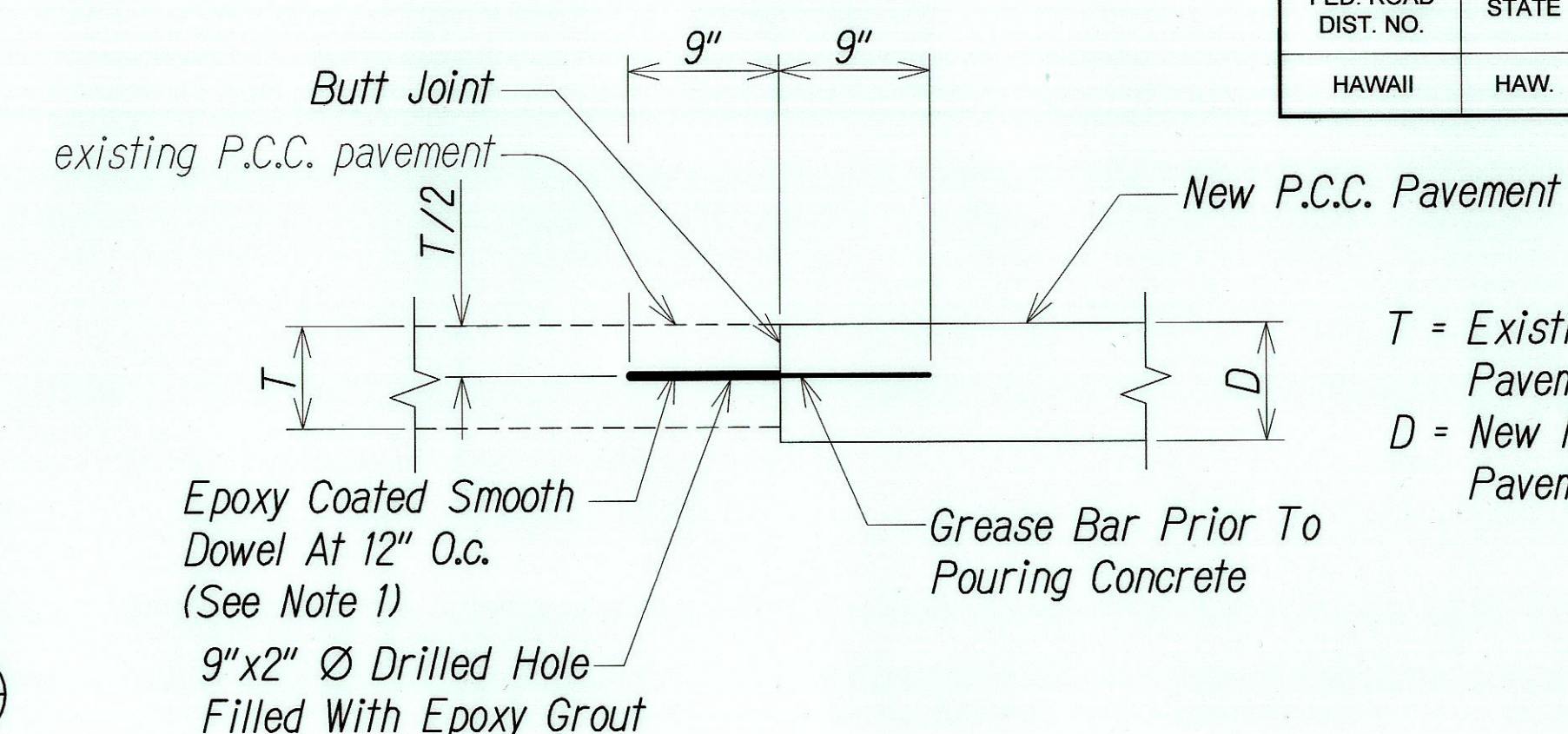
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-030-1(38)	2010	17	213



**TRANSVERSE CONTRACTION JOINT
FOR PERPENDICULAR JOINTS**
Not To Scale



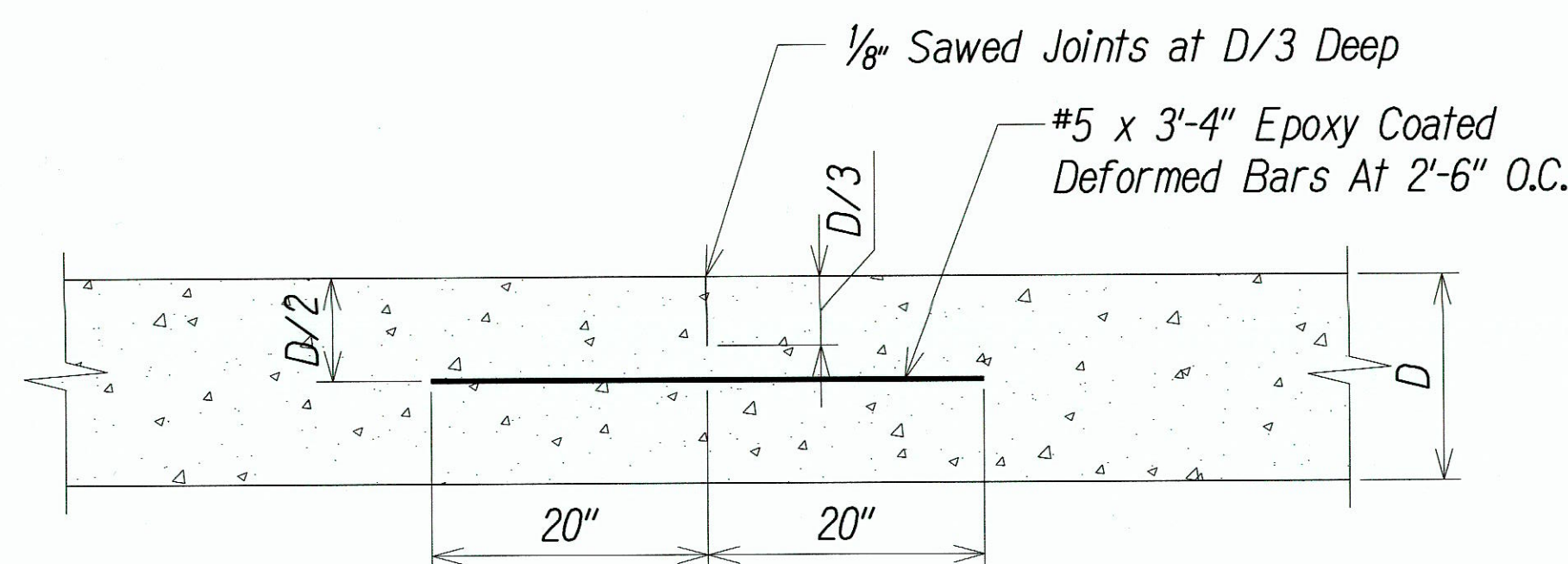
TRANSVERSE CONSTRUCTION JOINT
Not To Scale



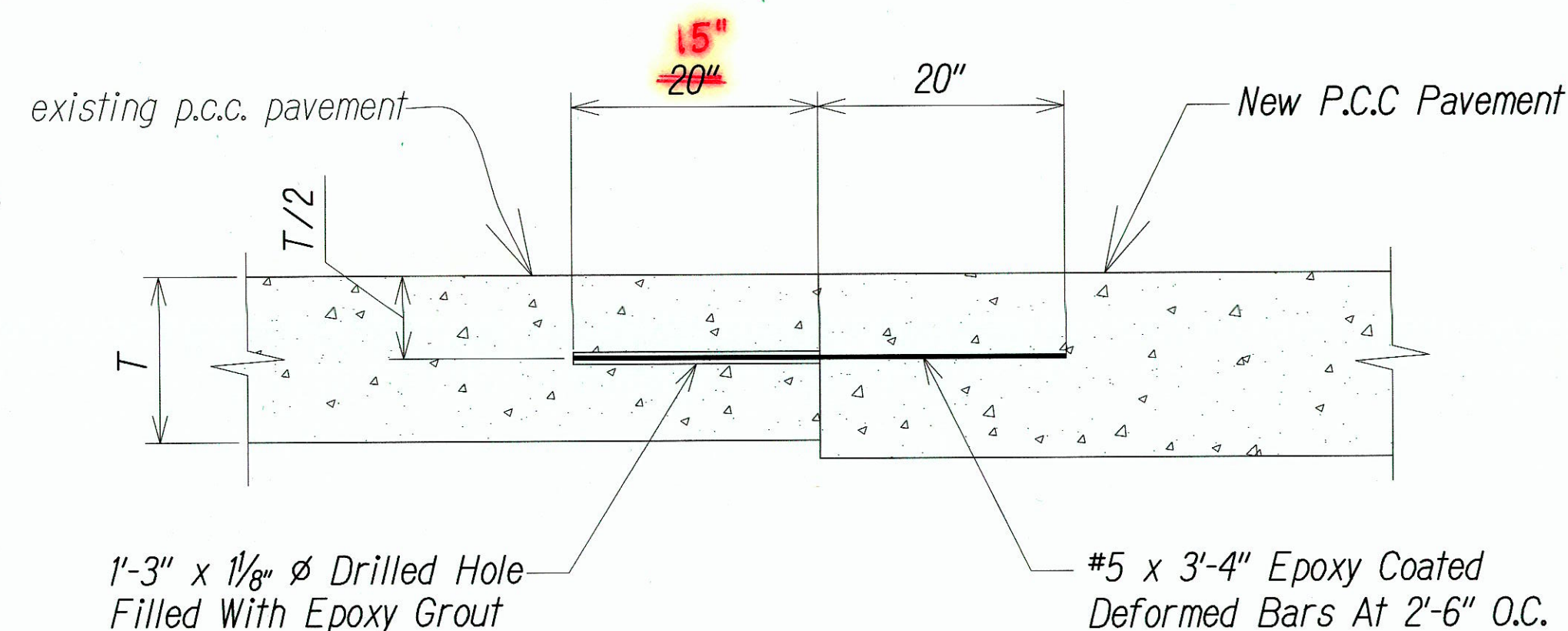
**TRANSVERSE CONSTRUCTION JOINT
AT EXISTING P.C.C. PAVEMENT**
Not To Scale

TRANSVERSE JOINT NOTES:

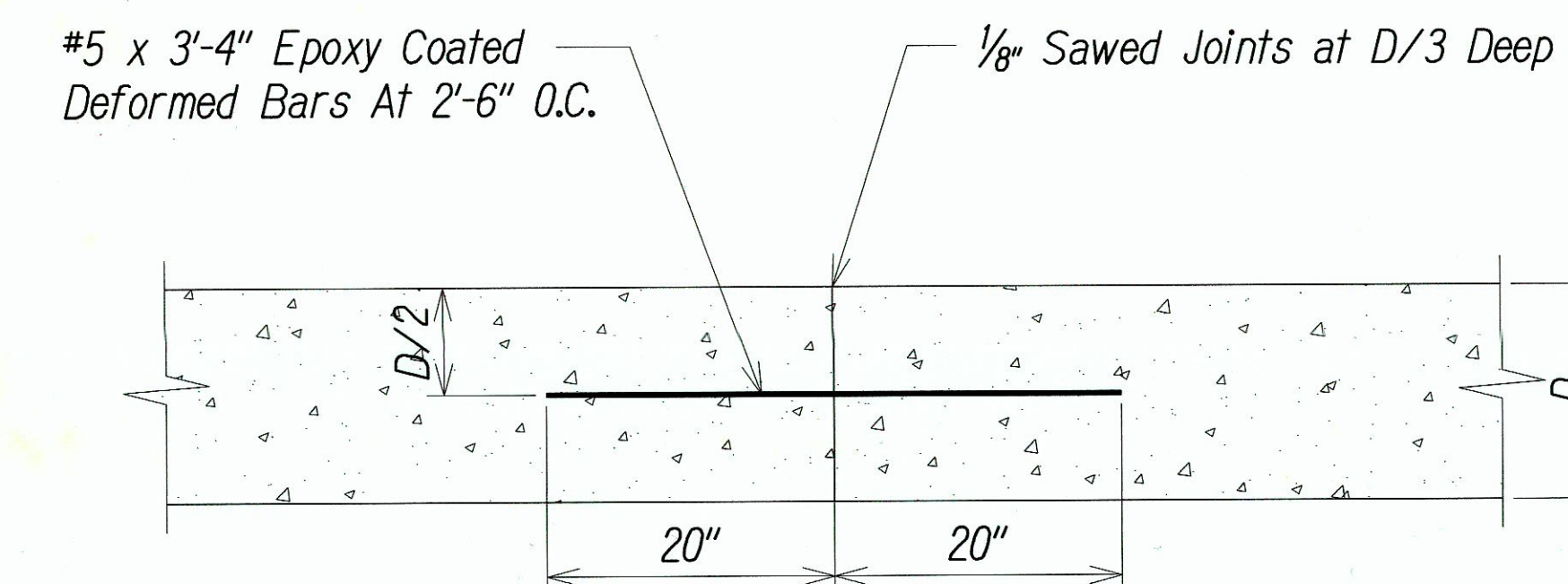
- Epoxy coated dowels shall conform to AASHTO M284 (ASTM A 775). For pavements with $d < 10"$, use $1 \frac{1}{4}"$ dia. x $1'-6"$ long dowels. For pavements with $d > 10"$, use $1 \frac{1}{2}"$ dia. x $1'-6"$ long dowels.
- Transverse construction joints shall be located at a minimum distance of 10 feet from the nearest transverse construction joint. Joint shall be perpendicular to paving lane.
- It is critical that dowels be positioned in place parallel to the pavement surface and paving lane direction to avoid future cracks in the P.C.C. pavement. The ends of dowels shall not deviate more than 0.01' from the parallel in 9" length.
- See Typical Joint Location and Layout Plan for Transverse Joint Spacing.
- The Contractor shall not damage the epoxy coating on the dowel in any way during shipment, handling, or placement. Damaged epoxy coated dowels shall be replaced at no cost to the State.



LONGITUDINAL CONTRACTION JOINT
Not to Scale



**LONGITUDINAL CONSTRUCTION JOINT
AT EXISTING P.C.C. PAVEMENT**
Not to Scale



LONGITUDINAL CONSTRUCTION JOINT
Not to Scale

LONGITUDINAL JOINT NOTES:

- Epoxy Coated Deformed Bars shall conform to AASHTO M 284M/M 284-03 and ASTM A 775/A 775M-01.
- Tiebars are to be located minimum distance of 18 inches from a transverse joint. Tiebars closer to the transverse joint may interfere with joint movement.
- The Contractor shall not damage the epoxy coating on the deformed bars in any way during shipment, handling, on placement. Damaged epoxy coating shall be repaired at no cost to the state.
- If fresh portland cement concrete is poured adjacent to existing portland cement concrete joint does not need to be rounded to $1/4"$ radius, as shown.



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HIGHWAYS DIVISION

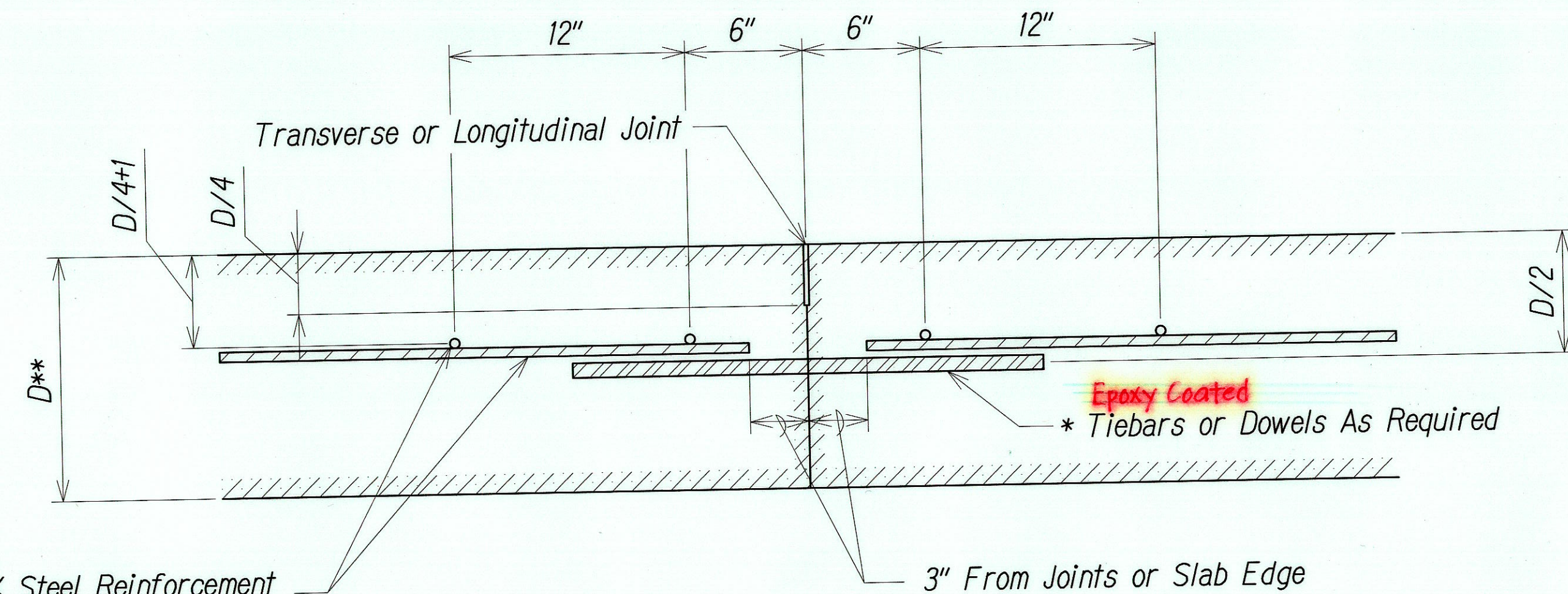
P.C.C. PAVEMENT DETAILS

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1
Lahainaluna Rd. to Hokiokio Pl.
Federal Aid Project NO. NH-030-1(38)

Scale: As Shown Date: November 23, 2009

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-030-1(38)	2010	18	213



Min. 0.06% Steel Reinforcement
Uniformly Distributed In Both
Directions = #3 Epoxy Coated @ 12" O.C.

**D Equals The P.C.C Pavement Thickness

REINFORCEMENT TYPICAL SECTION FOR ASYMMETRICAL SLABS

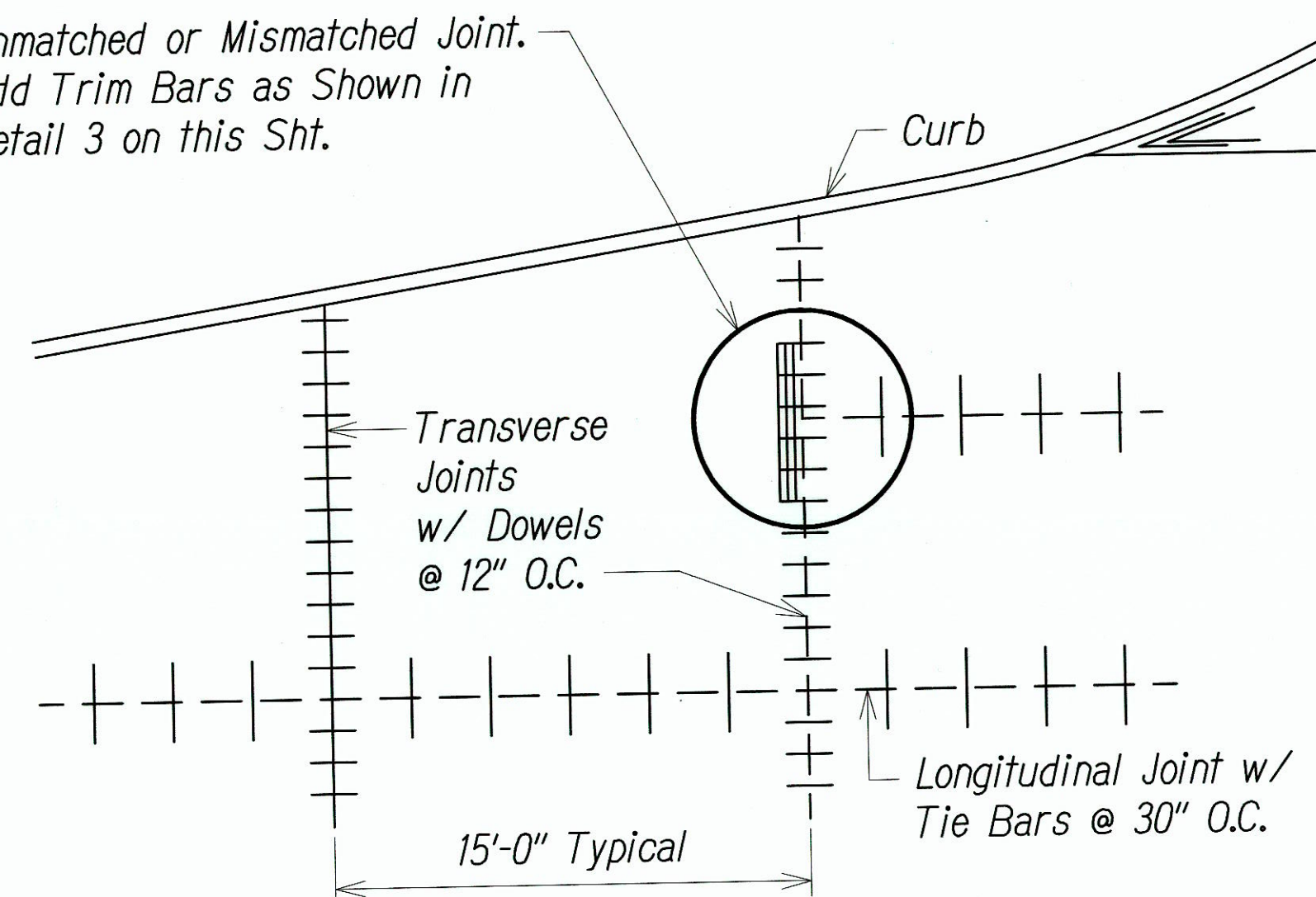
Not to Scale

1
18 | 18

* NOTES:

1. Dowels are used for perpendicular joint pattern and transverse construction joint.
2. Use tiebars for longitudinal joint.
3. For dowel or tiebar details and joint construction details, see applicable transverse or longitudinal joint details.
4. Adjust placement of reinforcing bars to avoid interfering with movement of the dowels.

Unmatched or Mismatched Joint.
Add Trim Bars as Shown in
Detail 3 on this Sht.

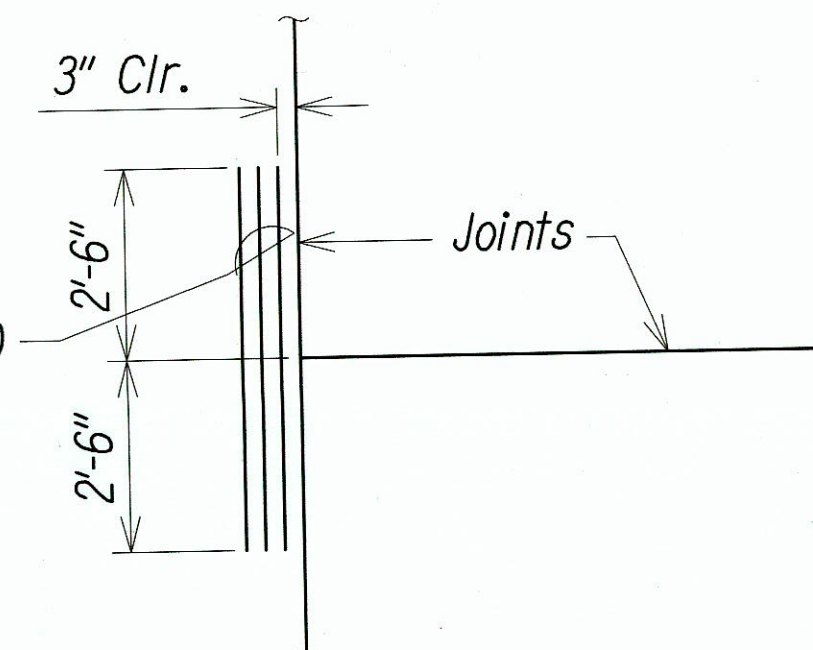


TYPICAL ADDED TRIM BAR DETAIL

Not to Scale

2
18 | 18

For P.C.C.:
3 - #5 x 5'-0" Long
@ 3" O.C., T&B, (6 Total)
For U.T.W.:
2 - #4 x 3'-0" Long
@ 3" O.C., Mid-Depth
(2 Total)



TYPICAL TRIM BAR DETAIL AT UNMATCHED OR MISMATCHED JOINTS

Not to Scale

3
18 | 18



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

P.C.C PAVEMENT DETAILS

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1
Lahainaluna Rd. to Hokiokio Pl.
Federal Aid Project NO. NH-030-1(38)

Scale: As Shown Date: November 23, 2009

SHEET No. 3 OF 3 SHEETS

"AS-BUILT"