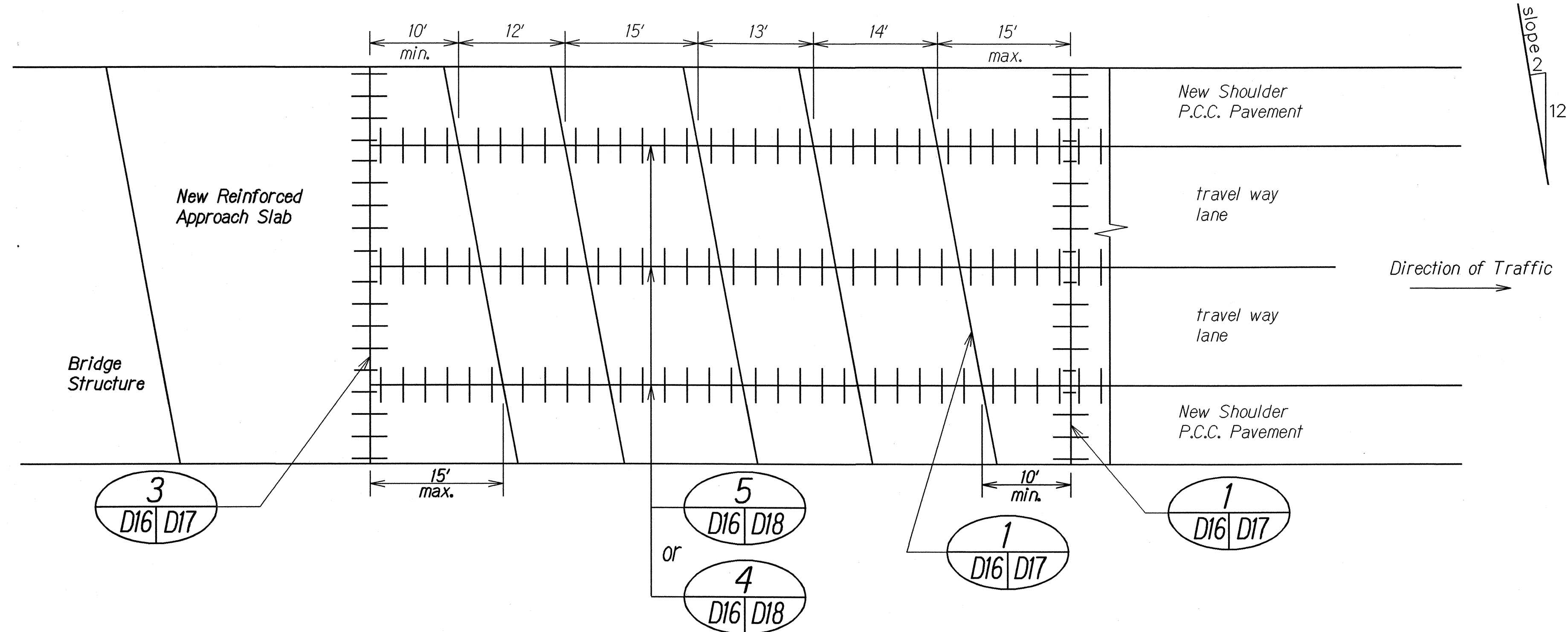


| FED. ROAD DIST. NO. | STATE | PROJ. NO.    | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HWY-0-01-05M | 2006        | 14        | 106          |

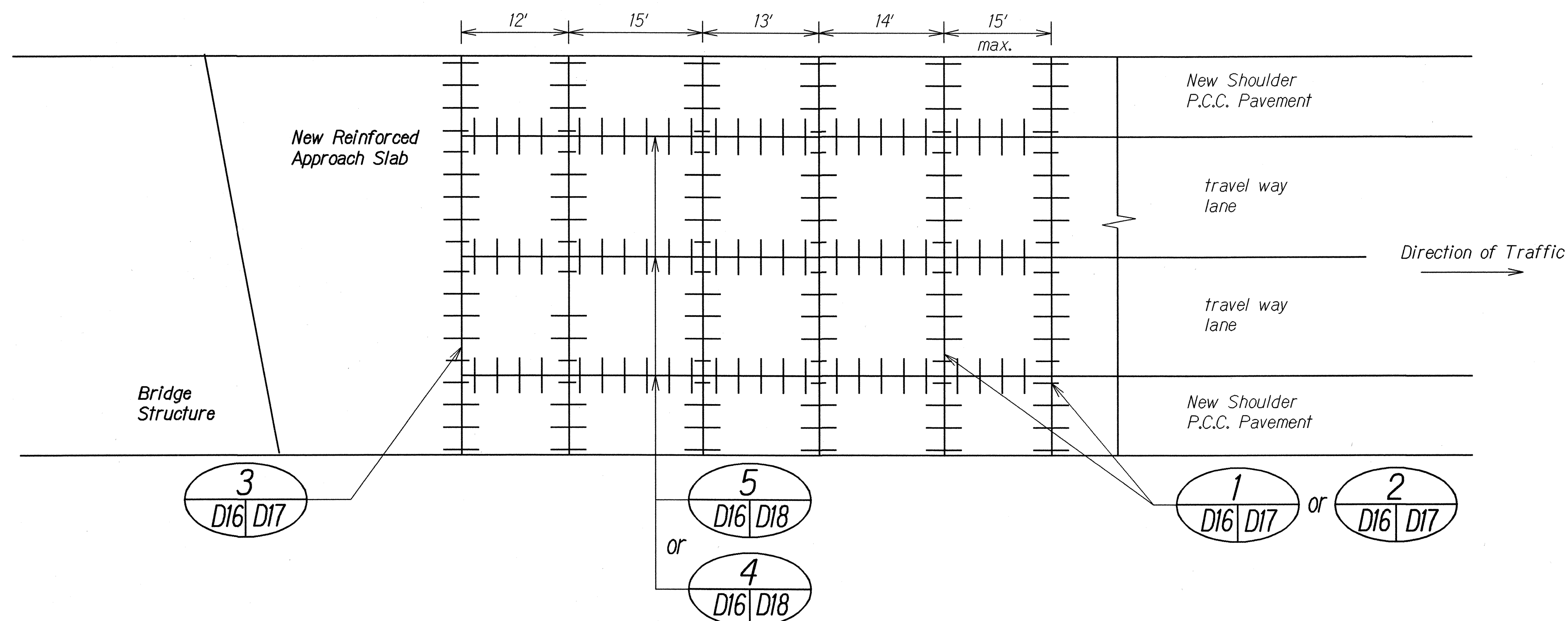


**TYPICAL JOINT LAYOUT PLAN WITH SKEWED JOINTS**

Not to Scale

**NOTES:**

1. 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.
2. Skew the typical transverse joint with a 2 foot offset counter clockwise from a perpendicular to the edge of pavement for every 12 feet along that perpendicular.
3. Space transverse joint at successive intervals at 12', 15', 13', and 14' in the direction of travel. Repeat for the remaining joints.
4. 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. Triangular shapes are not allowed.
5. For the shoulder, reinforcing is not required for slabs that exceed the length to width ration of 1.25. Triangular shapes are not allowed.
6. Locate transverse construction joints at a minimum distance of ten (10) feet and a maimum of fifteen (15) feet from the nearest planned constrction joint.
7. Provide shop drawings for joint layout where obstructions such as manholes are encountered, and at intersections with other streets.
8. For other Joint Requirements, See Section 411 of the Special Provisions and/or Standard Specifications



**TRANSVERSE JOINT TRANSITION  
ODD SKEW TO TYPICAL SKEW**

Not to Scale

|                   |       |
|-------------------|-------|
| DATE              | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY          | _____ |
| DESIGNED BY       | _____ |
| CHECKED BY        | _____ |
| NOTED BY          | _____ |
| SCALE             | _____ |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**P.C.C. PAVEMENT LAYOUT**

**AIEA ACCESS ROAD RESURFACING**

**MOANALUA ROAD**

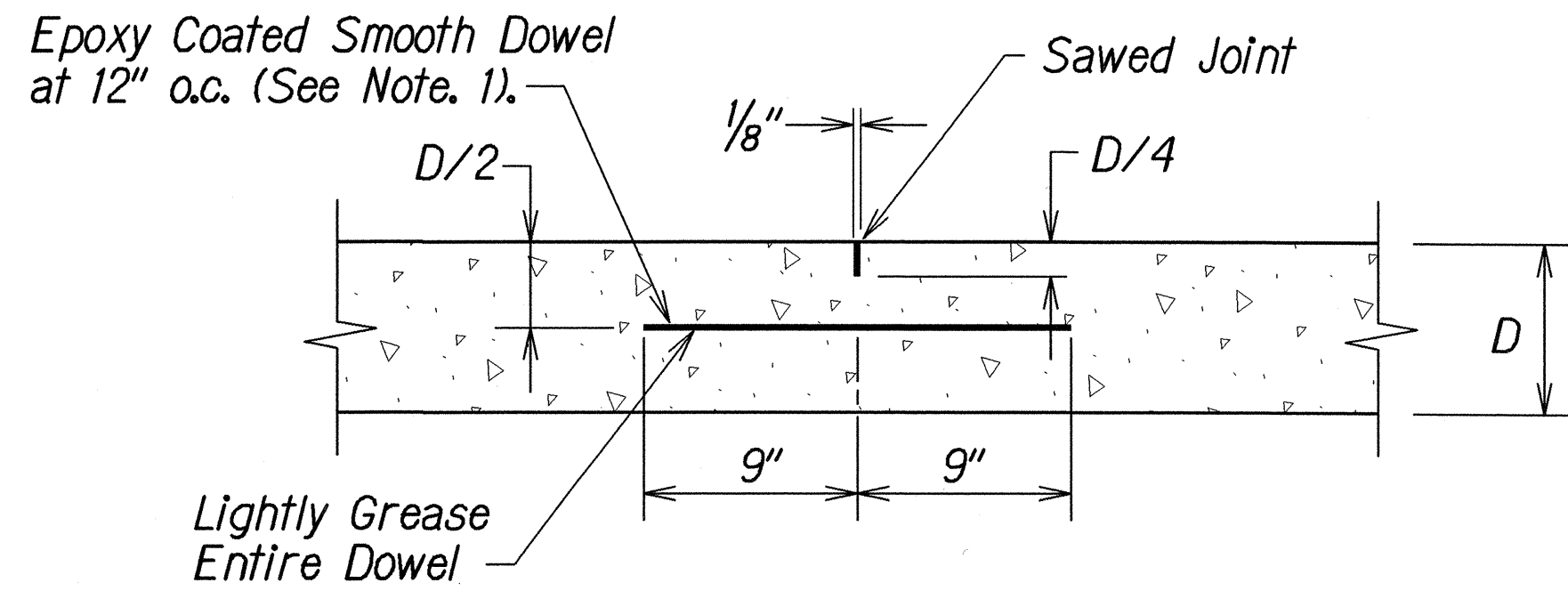
**TO KAMEHAMEHA HIGHWAY**

**Project No. HWY-0-01-05M**

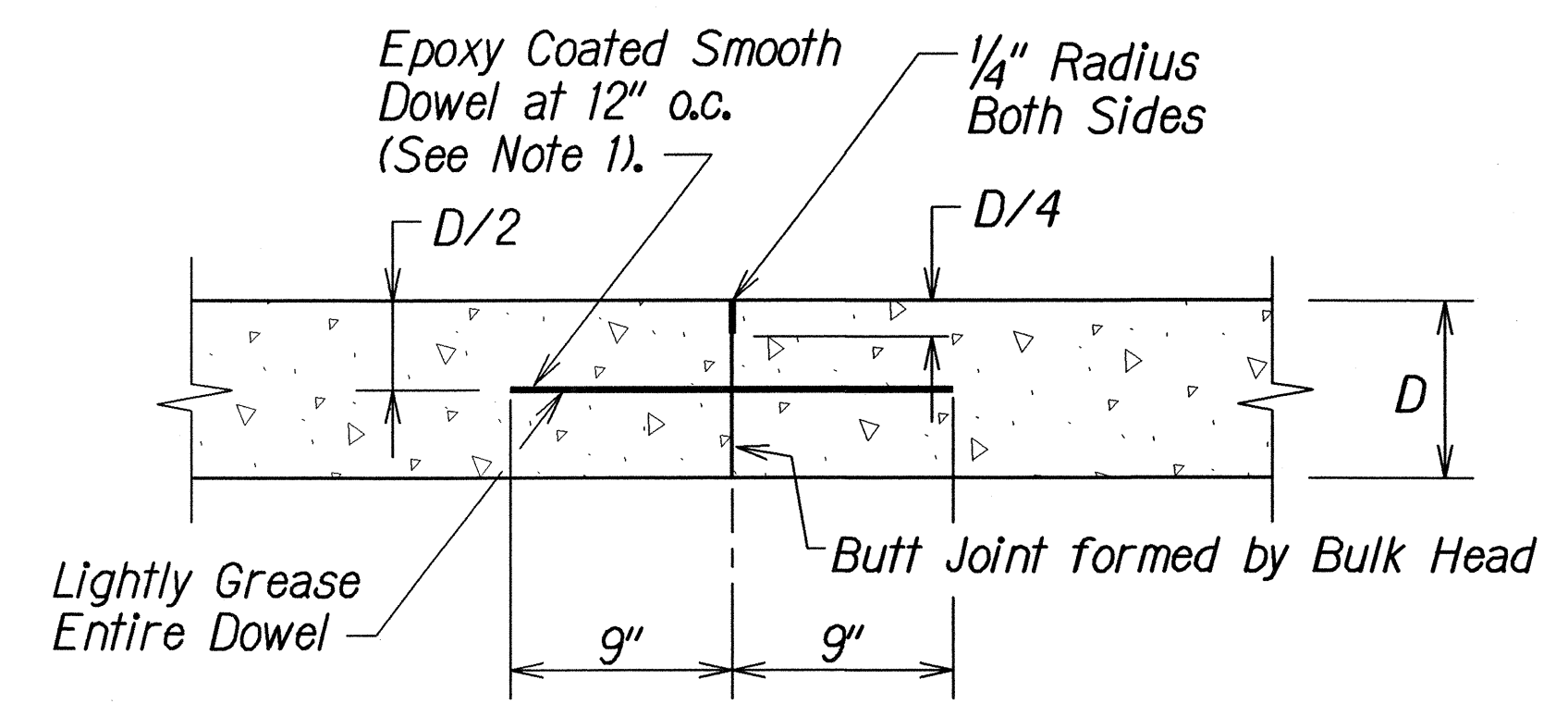
Scale: Not to Scale Date: June, 2005

SHEET No. 1 OF 1 SHEETS

| FED. ROAD DIST. NO. | STATE | PROJ. NO.    | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HWY-0-01-05M | 2006        | 15        | 106          |

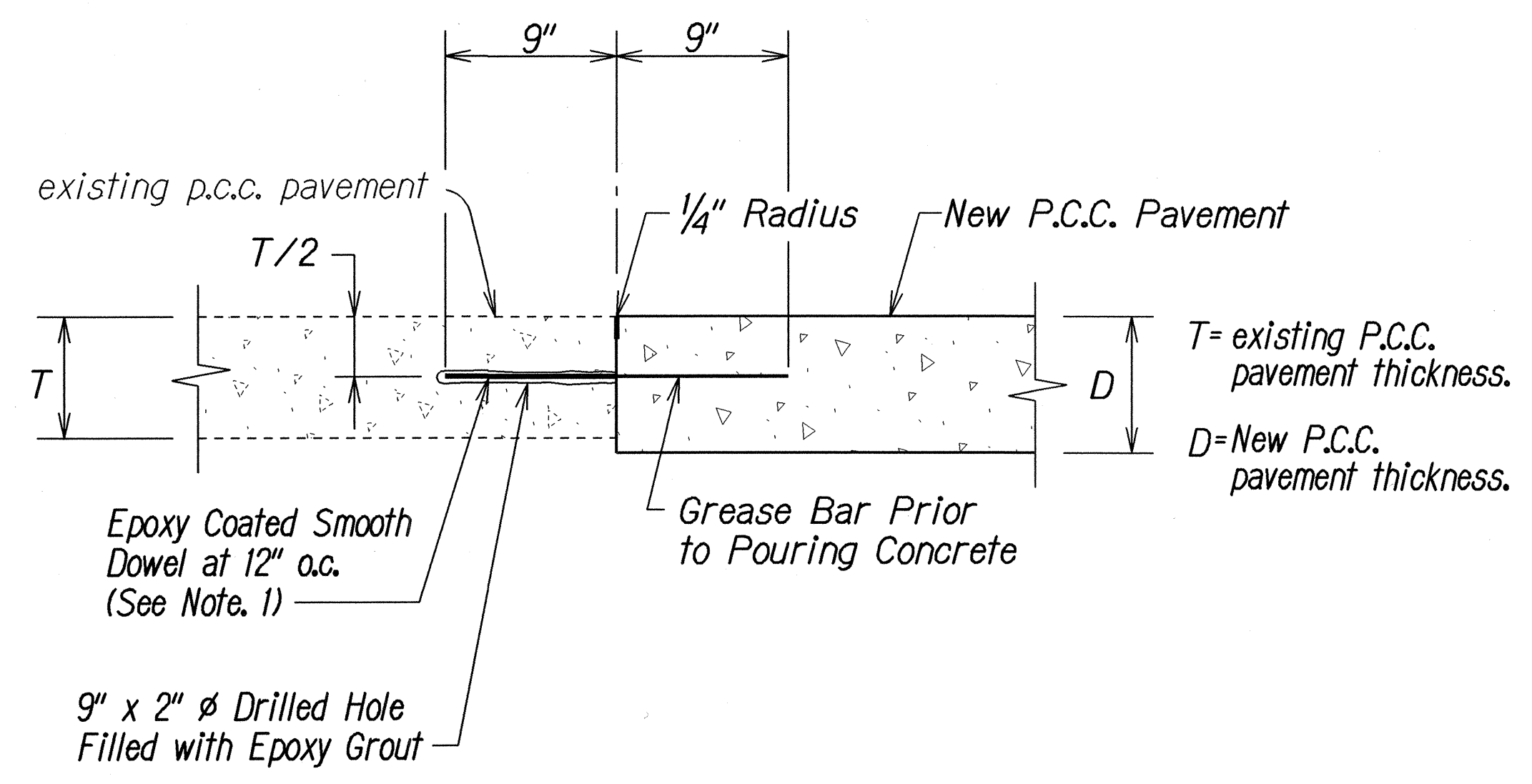


**TRANSVERSE CONTRACTION JOINT  
FOR PERPENDICULAR JOINTS**  
Not to Scale

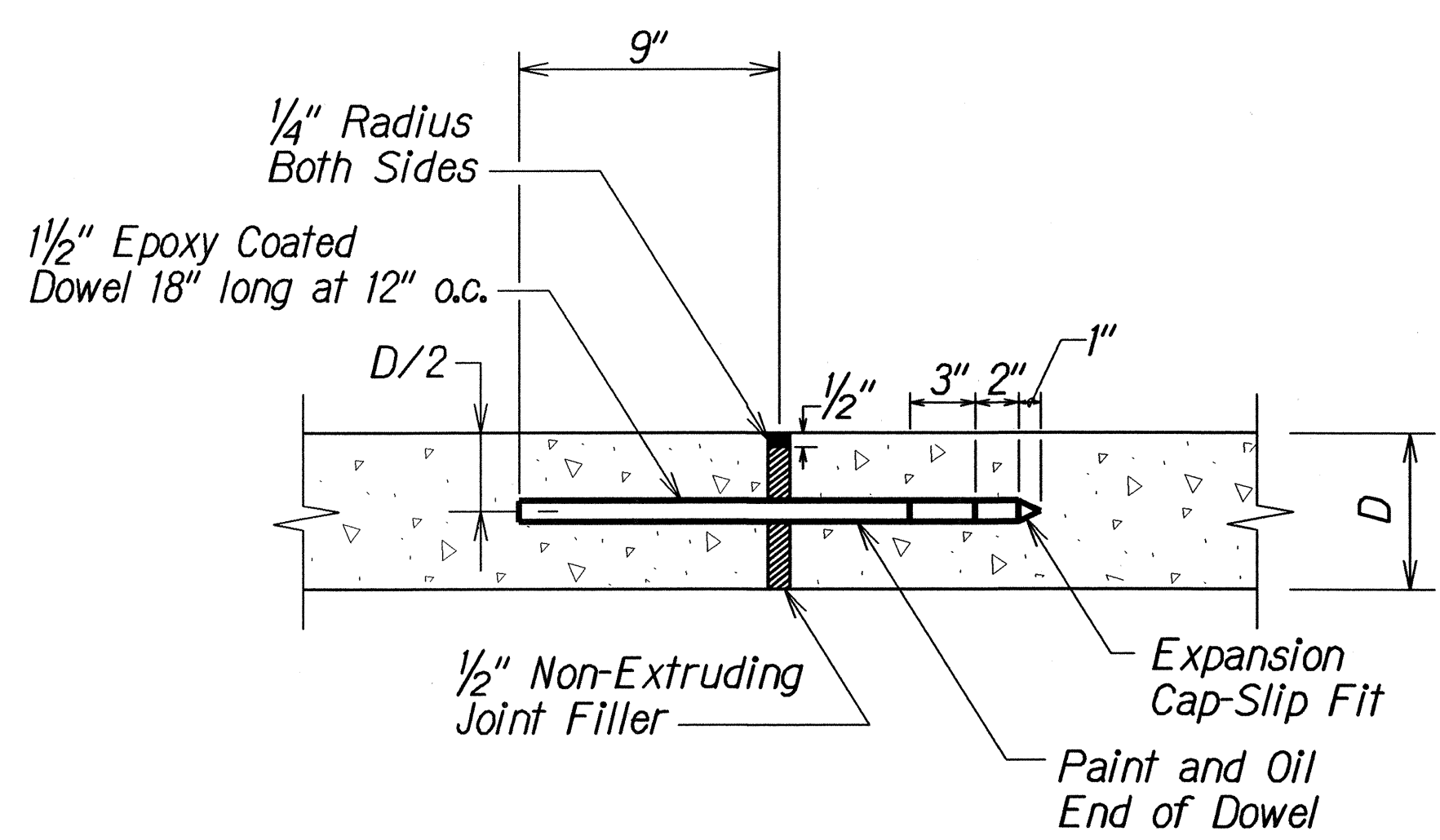


**TRANSVERSE CONSTRUCTION JOINT**  
Not to Scale

- NOTES:**
- Epoxy Coated Dowels shall Conform to AASHTO M284/M 284/M-95 Grade, 40 or 60. For pavements with  $D \leq 10"$ , use  $1\frac{1}{4}"$  X 1'-6" long dowels. For pavements with  $D > 10"$ , use  $1\frac{1}{2}"$  X 1'-6" long dowels.
  - Transverse Construction Joints shall be located at a Minimum Distance of 10 Feet from the Nearest Transverse Contraction 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 the 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.



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



**TRANSVERSE EXPANSION JOINT**  
Not to Scale

NOTE: Either one piece or threaded split type dowels may be used.

|                    |  |
|--------------------|--|
| DATE               |  |
| DESIGNED BY        |  |
| CHECKED BY         |  |
| NOTED BY           |  |
| PLANNED BY         |  |
| ORIGINAL PLAN      |  |
| 15-1aardpdrde2.dgn |  |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

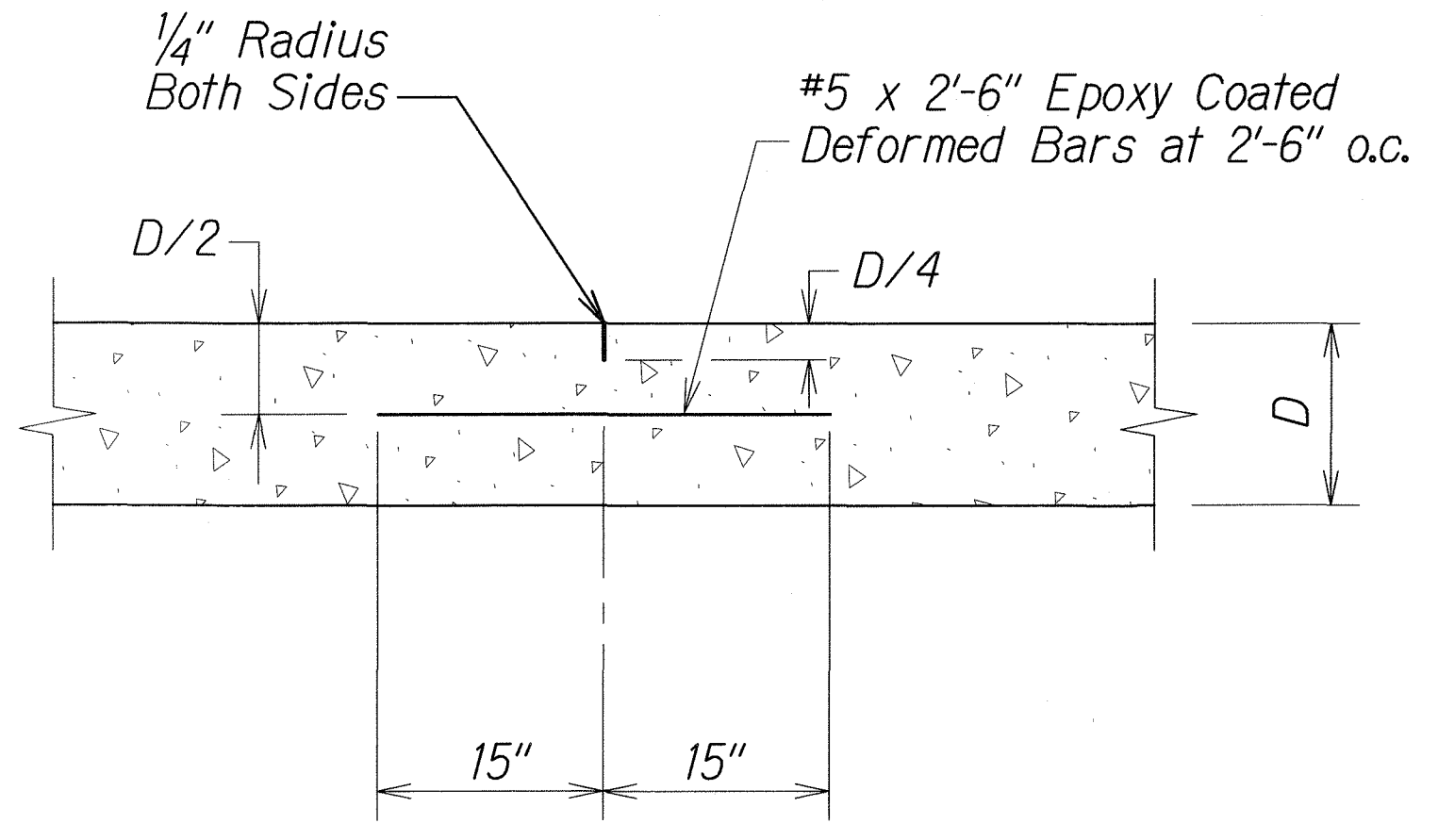
**P.C.C. PAVEMENT JOINT DETAILS**

AIEA ACCESS ROAD RESURFACING  
MOANALUA ROAD  
TO KAMEHAMEHA HIGHWAY  
Project No. HWY-0-01-05M

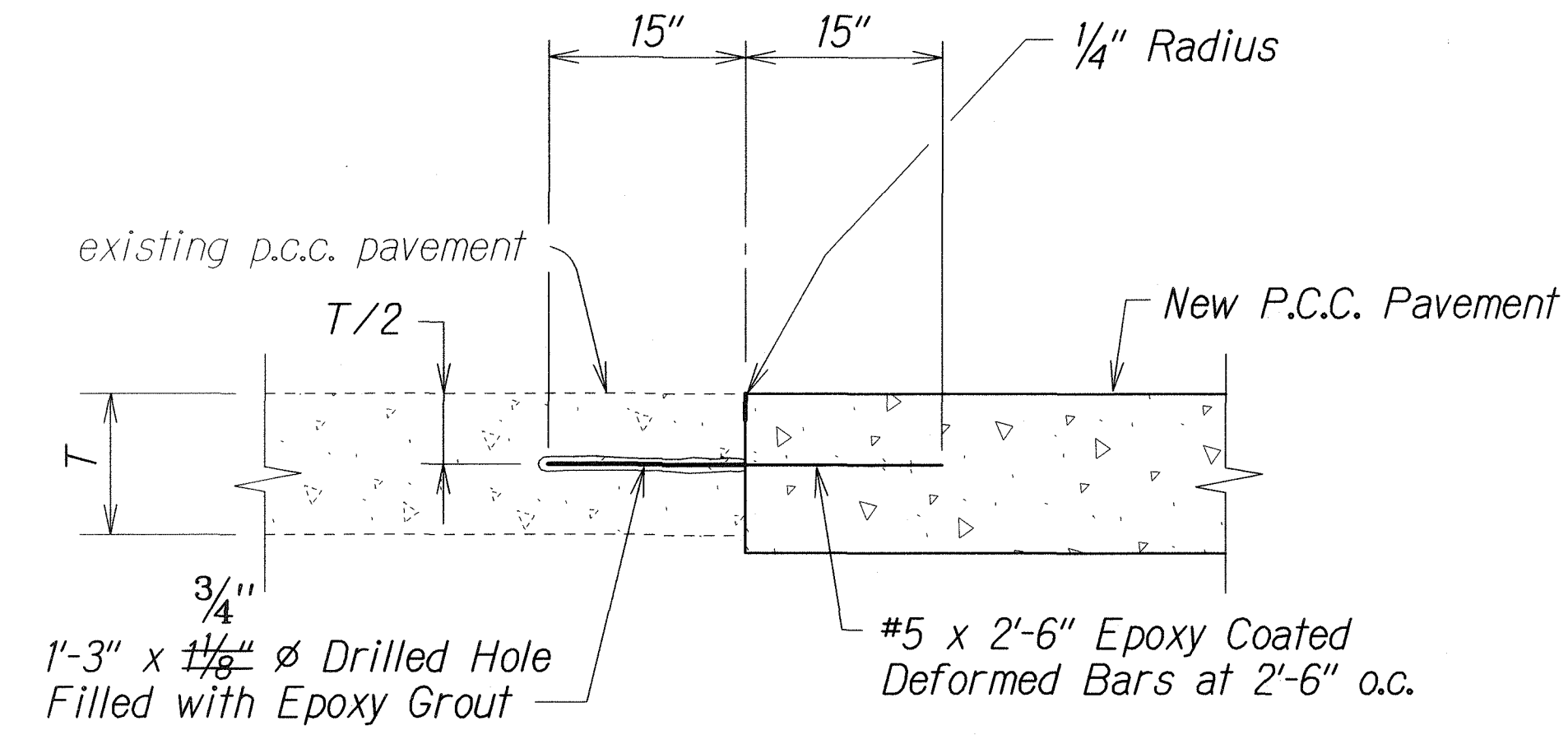
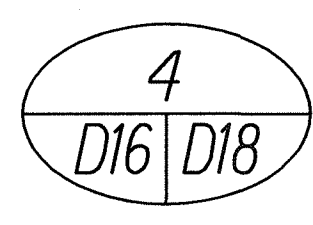
Not to Scale Date: June, 2005

SHEET No. 1 OF 1 SHEETS

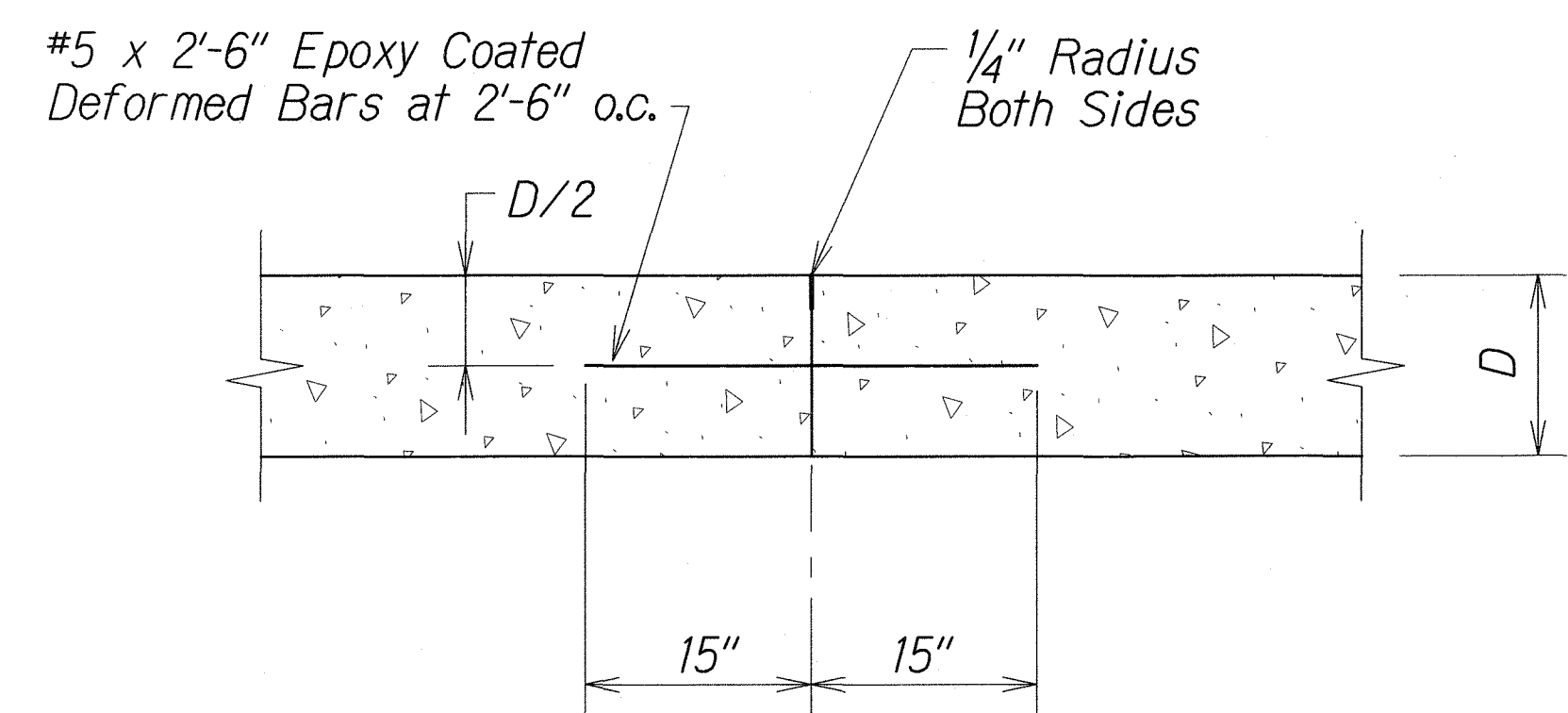
| FED. ROAD DIST. NO. | STATE | PROJ. NO.    | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HWY-0-01-05M | 2006        | 16        | 106          |



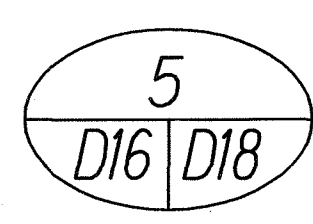
LONGITUDINAL CONTRACTION JOINT  
Not to Scale



LONGITUDINAL CONSTRUCTION JOINT  
AT EXISTING P.C.C. PAVEMENT  
OR EXISTING CURB AND GUTTER  
Not to Scale



LONGITUDINAL CONSTRUCTION JOINT  
Not to Scale



- NOTES:
- Epoxy Coated Deformed Bars shall Conform to AASHTO M284/M 284/M-95 Grade, 40.
  - Tiebars are to be located a minimum distance of 15 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 coated deformed bars shall be replaced at no cost to the State.
  - See Plan Sht. No. 19 for Joint Seal Detail.

|               |                   |      |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK     | DESIGNED BY       |      |
| 003510        | CHECKED BY        |      |
| 16-10-01-05M  |                   |      |

| LEGEND FOR AS-BUILT POSTINGS |                                     |
|------------------------------|-------------------------------------|
|                              | Squiggly line for as-built deletion |
|                              | Double line for as-built deletion   |
| Roadway                      | Text for as-built posting           |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**REINFORCING LAYOUT AND DETAILS**  
AIEA ACCESS ROAD RESURFACING  
MOANALUA ROAD  
TO KAMEHAMEHA HIGHWAY  
Project No. HWY-0-01-05M  
Not to Scale Date: June, 2005  
SHEET No. 1 OF 1 SHEETS