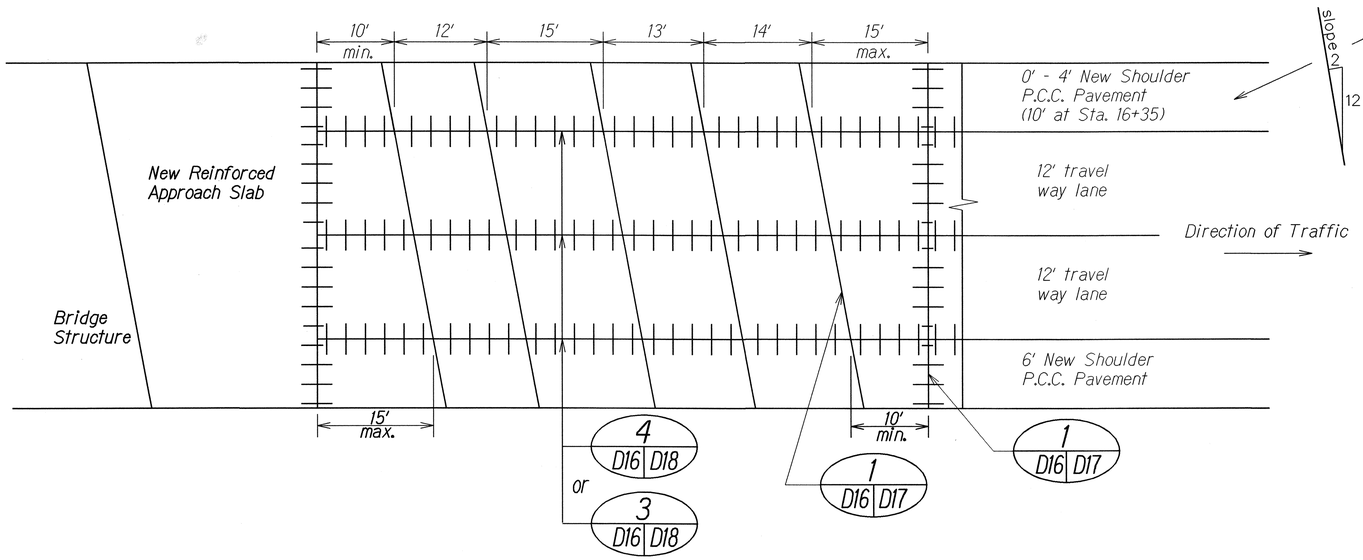
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H2-1(33)	2007	18	168



TYPICAL JOINT LAYOUT PLAN WITH SKEWED JOINTS

Not of 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. Reinforce odd-shaped slabs with 0.6% steel.
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 maximum of fifteen (15) feet from the nearest planned construction 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
9. Longitudinal joints only allowed at edges of travel lanes (centerline of lane markings).

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

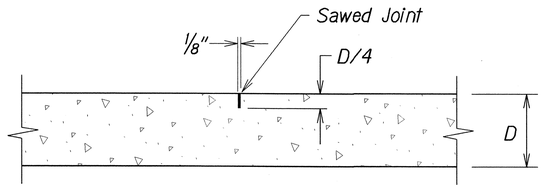
P.C.C. PAVEMENT LAYOUT

INTERSTATE ROUTE H-2 REHABILITATION
Waipio Interchange and Mililani Interchange
On/Off Ramps, Ka Uka Boulevard and
Meheula Parkway Overpasses, & Kipapa Stream Bridge
Federal Aid Project No. IM-H2-1(33)

Scale: Not to Scale Date: December, 2006

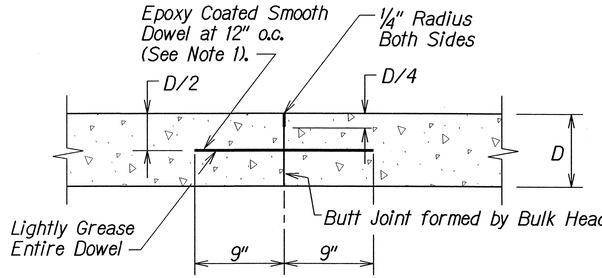
SHEET No. 1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H2-1(33)	2007	19	168



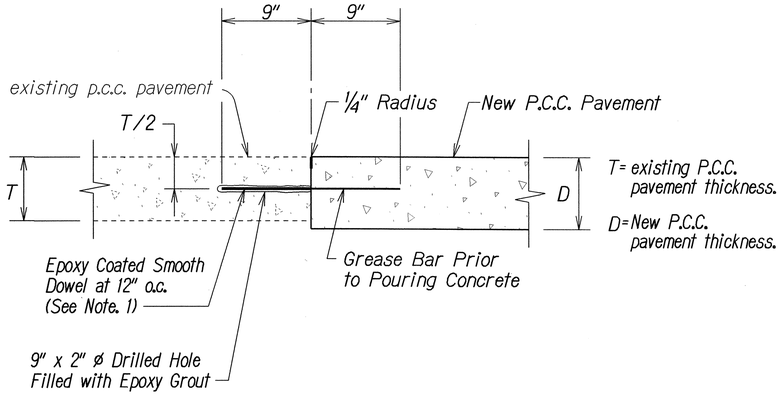
TRANSVERSE CONTRACTION JOINT
FOR PERPENDICULAR JOINTS
Not to Scale

1
D16 | D17



TRANSVERSE CONSTRUCTION JOINT
Not to Scale

2
D16 | D17



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

NOTES:

1. Epoxy Coated Dowels shall Conform to AASHTO M284/M 284/M-95 Grade, 40 or 60, use 1½" X 1'-6" long dowels.
2. 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.
3. 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.
4. See Typical Joint Location and Layout Plan for Transverse Joint Spacing.
5. The Contractor shall not damage the epoxy coating on the dowel in an way during shipment, handling, or placement. Damaged epoxy coated dowels shall be replaced at no cost to the State.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

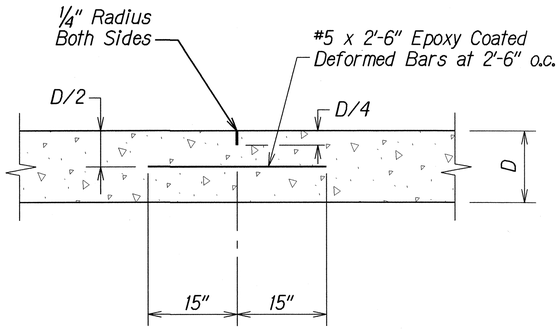
P.C.C. PAVEMENT JOINT DETAILS

INTERSTATE ROUTE H-2 REHABILITATION
Waipio Interchange and Mililani Interchange
On/Off Ramps, Ka Uka Boulevard and
Meheula Parkway Overpasses, & Kipapa Stream Bridge
Federal Aid Project No. IM-H2-1(33)

Not to Scale Date: December, 2006

SHEET No. 2 OF 5 SHEETS

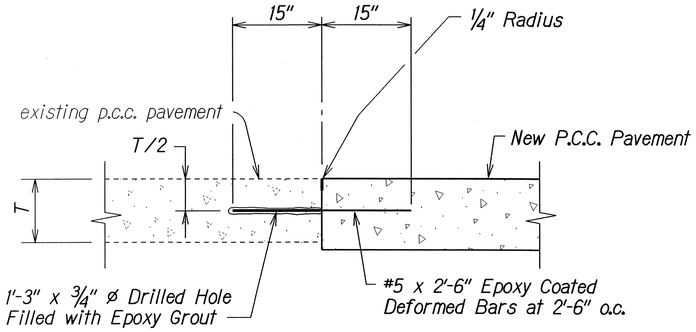
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H2-1(33)	2007	20	168



LONGITUDINAL CONTRACTION JOINT

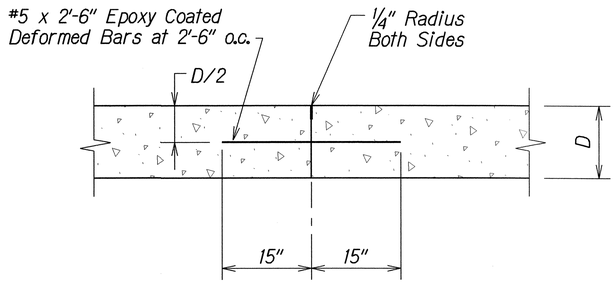
Not to Scale

3
D16 | D18



LONGITUDINAL CONSTRUCTION JOINT
AT EXISTING P.C.C. PAVEMENT
OR EXISTING CURB AND GUTTER

Not to Scale



LONGITUDINAL CONSTRUCTION JOINT

Not to Scale

4
D16 | D18

NOTES:

1. Epoxy Coated Deformed Bars shall Conform to AASHTO M284/M 284/M-95 Grade, 40.
2. 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.
3. 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.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

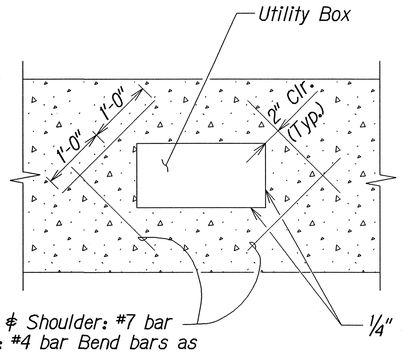
REINFORCING LAYOUT AND DETAILS

INTERSTATE ROUTE H-2 REHABILITATION
Waipio Interchange and Mililani Interchange
On/Off Ramps, Ka Uka Boulevard and
Meheula Parkway Overpasses, & Kipapa Stream Bridge
Project No. IM-H2-1(33)

Not to Scale Date: December, 2006

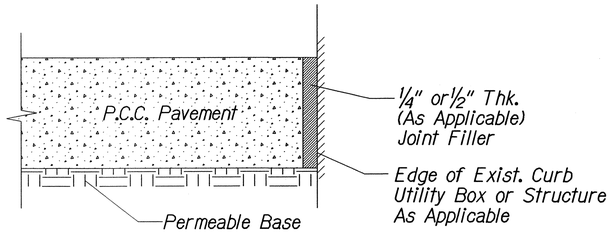
SHEET No. 3 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H2-1(33)	2007	21	168

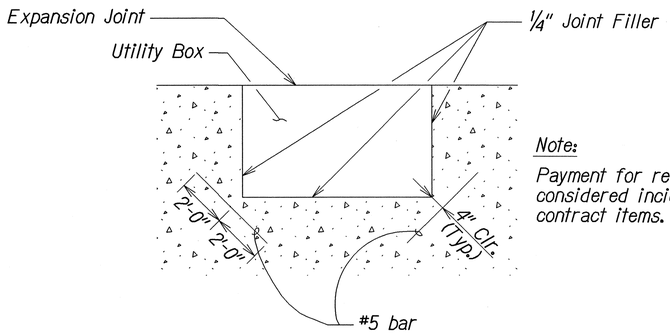


Note:
Payment for reinforcement will be considered incidental to various contract items.

Typical Reinforcement Around Utility Box In P.C.C. Pavement & Sidewalk
Scale: Not To Scale

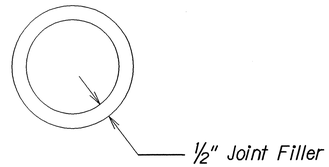


Isolation Joint Detail
Scale: Not To Scale



Note:
Payment for reinforcement will be considered incidental to various contract items.

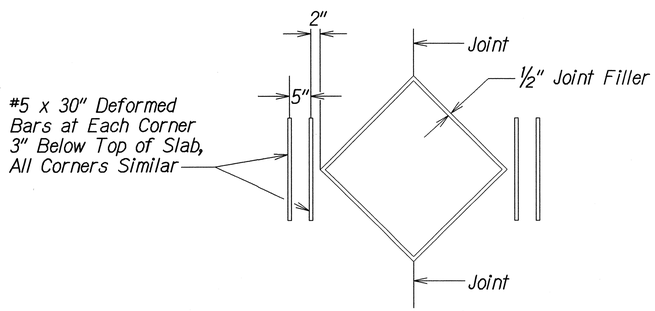
Typical Reinforcement Around Utility Box In P.C.C. Pavement & Sidewalk
Scale: Not To Scale



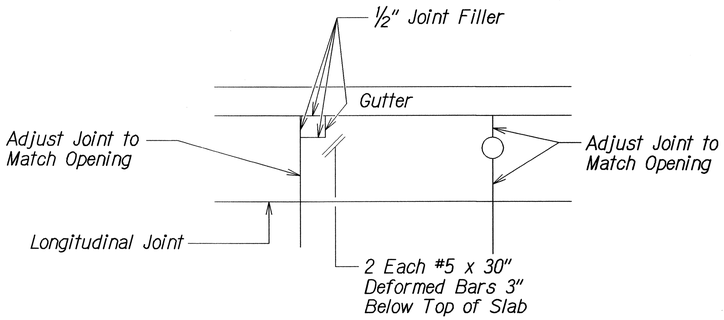
Circular Opening Detail
Scale: Not To Scale

Notes:

1. Install Isolation Joints to allow the slab to move independently of objects that will not move evenly with the slab to minimize stress in the slab.
2. Minimize the amount of openings within the slab to minimize the areas from which cracking can occur. Listed below are considerations that can minimize cracking from openings in the slab.
   a. Install reinforcing bars at the corners as shown below.
   b. Use circular openings.
   c. Install the openings along a joint.
3. Locate openings in the slab that require access in a manner that minimizes the number of travelway lanes that need to be shut down when accesing the openings.
4. Locate openings along joints and configured to minimize the amount of corners within the slab.
5. Avoid locating access openings along or near the longitudinal joints that seperate two travelway lanes.



Openings With Corners - Corners At A Joint Detail
Scale: Not To Scale



Openings Near Joints Detail
Scale: Not To Scale

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

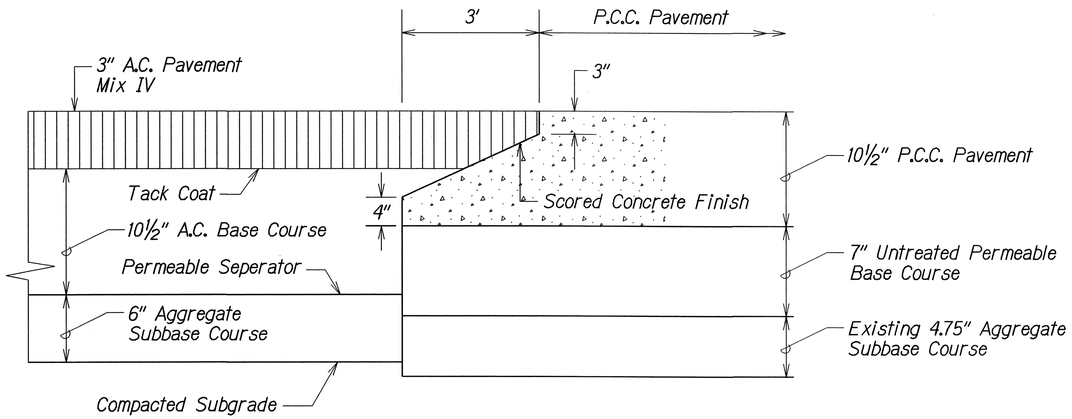
PAVEMENT DETAILS

INTERSTATE ROUTE H-2 REHABILITATION
Waipio Interchange and Mililani Interchange On/Off Ramps, Ka Uka Boulevard and Meheula Parkway Overpasses, & Kipapa Stream Bridge
Federal Aid Project No. IM-H2-1(33)

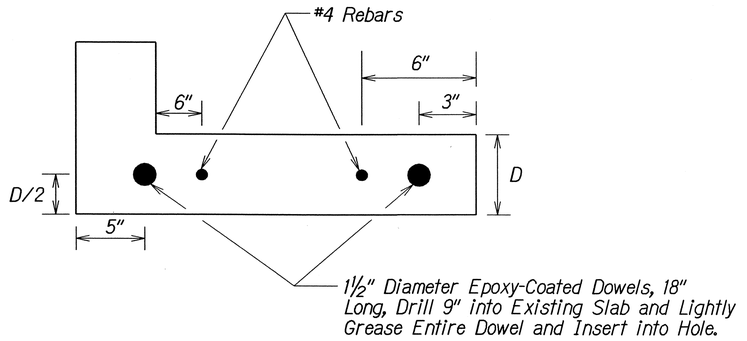
Scale: Not To Scale Date: December, 2006

SHEET No. 4 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H2-1(33)	2007	22	168



P.C.C. - A.C. Transverse Transition Detail
(For transition between Ramp MH-2
and Meheula Parkway)
Not To Scale



Construction Joint Detail
Not To Scale

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT DETAILS

INTERSTATE ROUTE H-2 REHABILITATION
Waipio Interchange and Mililani Interchange
On/Off Ramps, Ka Uka Boulevard and
Meheula Parkway Overpasses, & Kipapa Stream Bridge
Federal Aid Project No. IM-H2-1(33)

Scale: Not To Scale Date: December, 2006

SHEET No. 5 OF 5 SHEETS