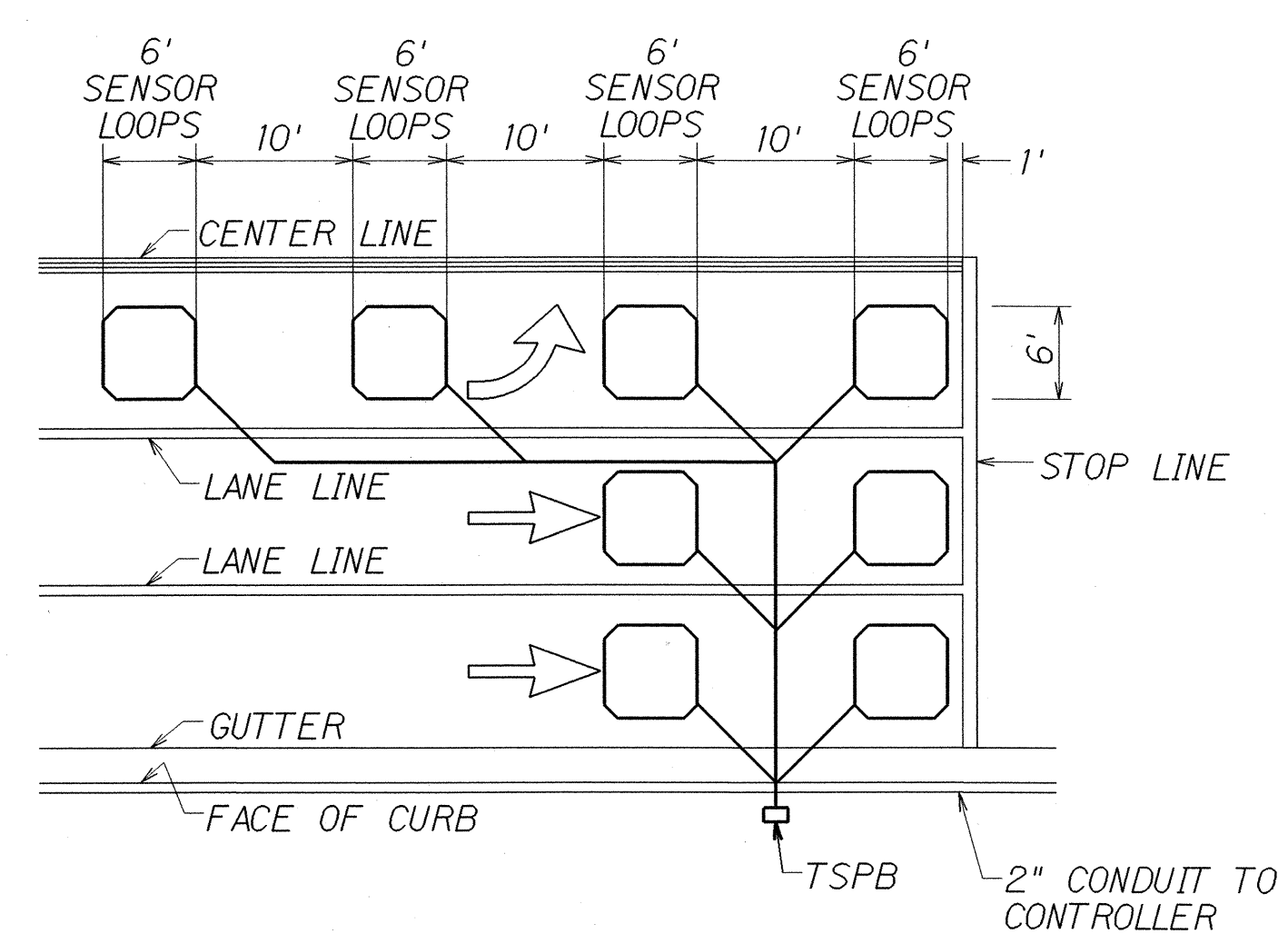
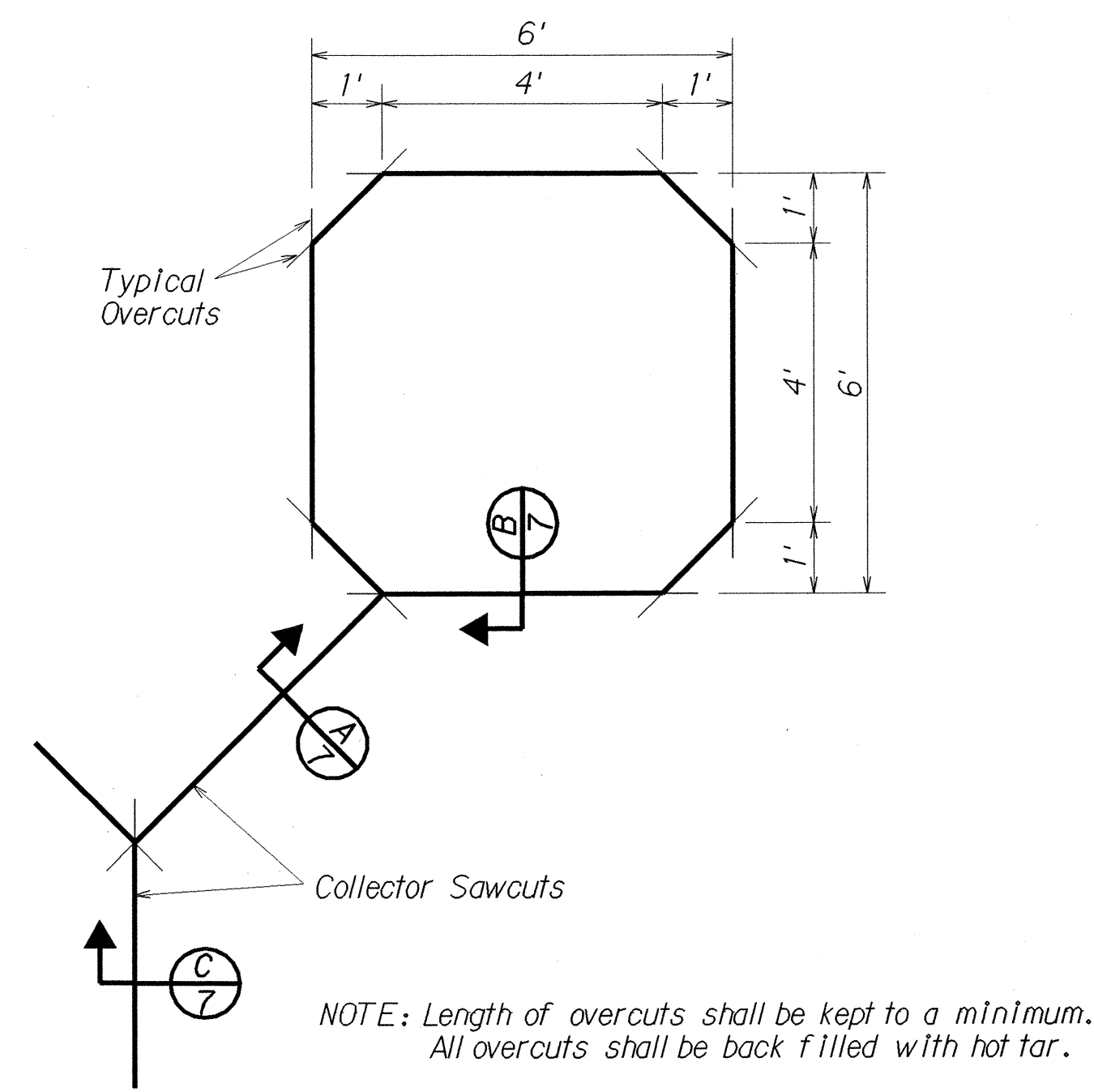


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-01 93A-02-01	2004	46	48

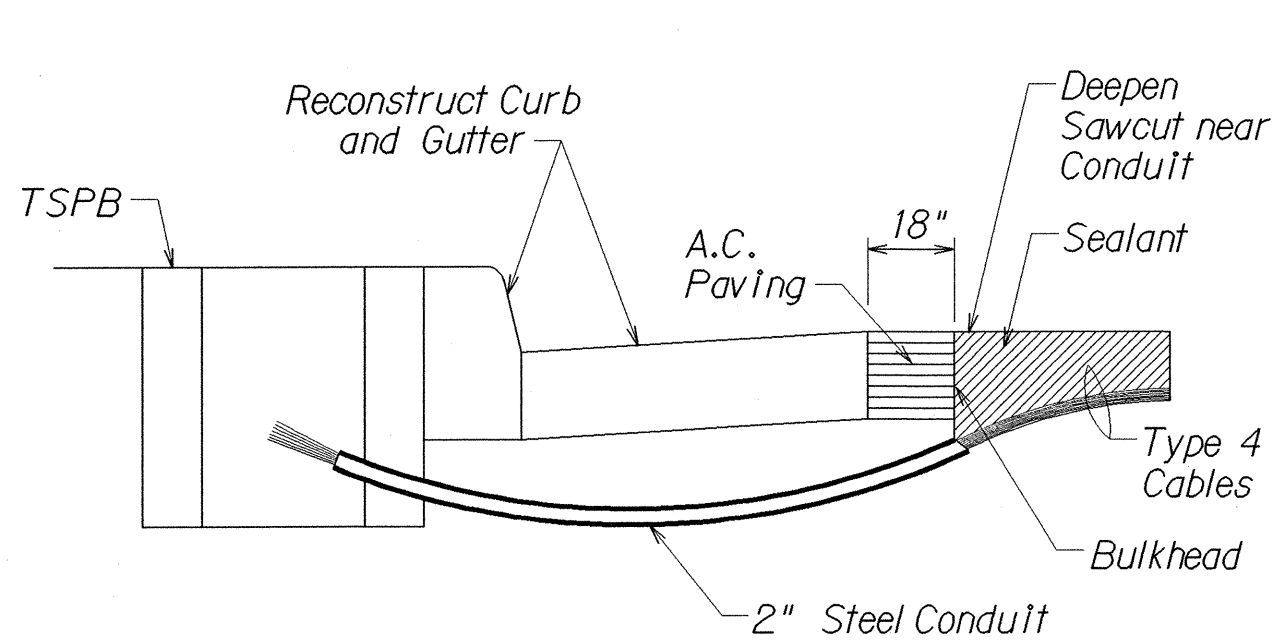
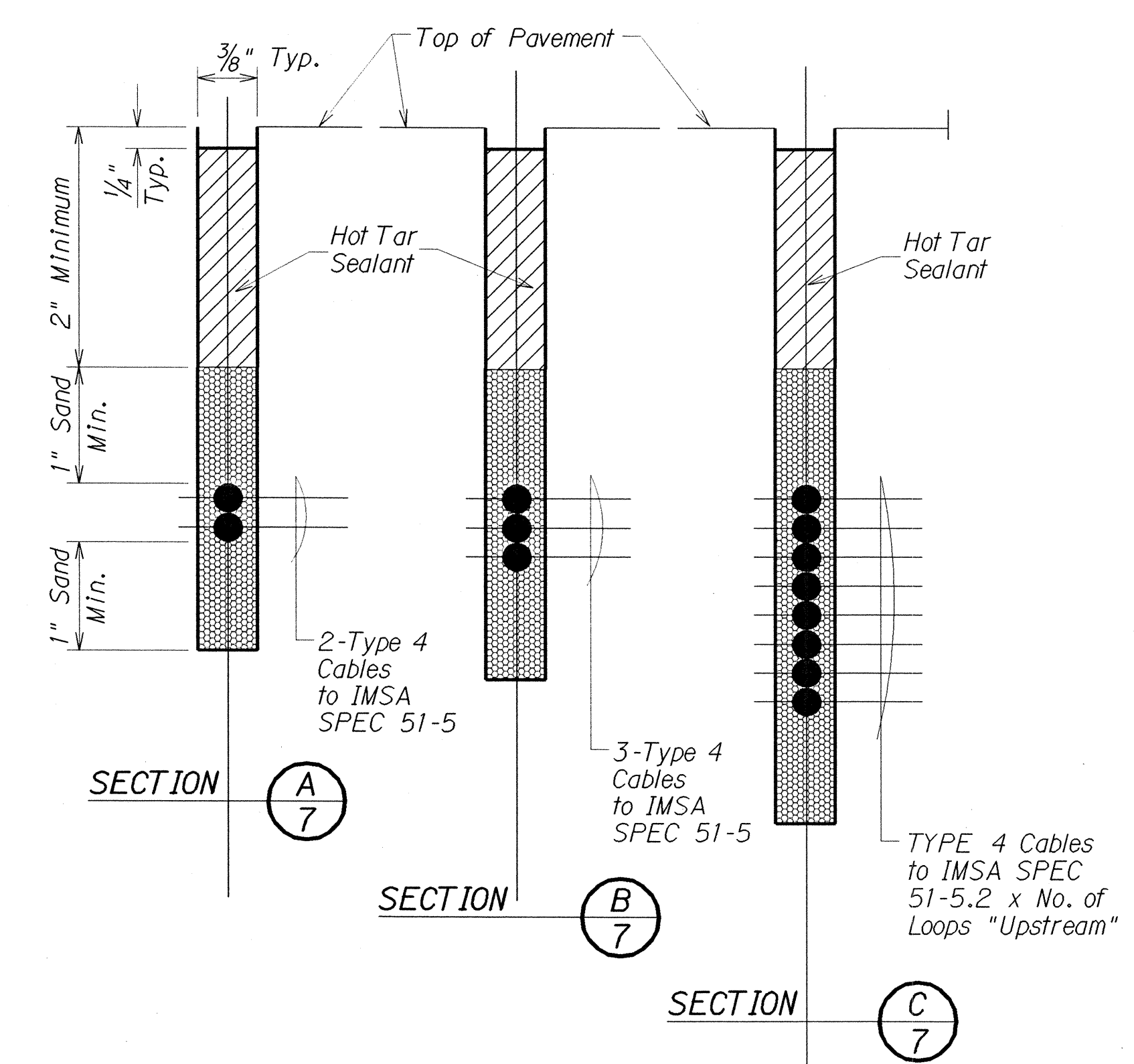


- NOTES:
1. Center sensor loops in lanes.
 2. Collector cables shall be twisted 2 turns per foot.
 3. Number of loops and locations vary. See project plans.
 4. Number and locations of collector sawcuts may be varied in the field to suit.

TYPICAL SENSOR LOOP LAYOUT

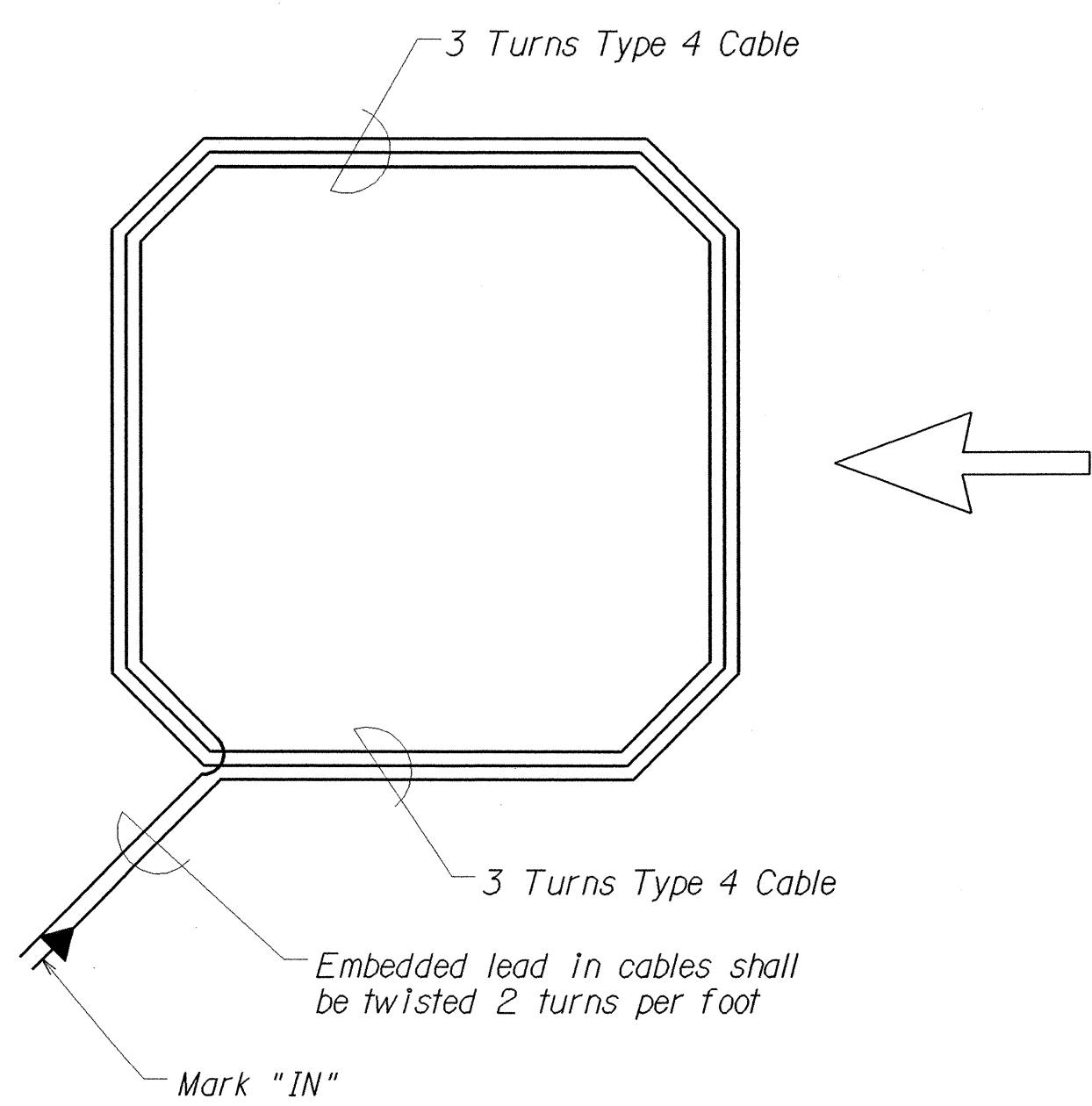


TYPICAL SENSOR LOOP SAWCUT DETAIL



- NOTES ON CONSTRUCTION AT END OF SAWCUT
1. Seal roadway end of conduit after installation of conductors.
 2. Install bulkhead across conduit trench.
 3. Place hot tar in sawcut.
 4. Backfill over conduit with new A.C.
 5. Reconstruct curb and gutter as required.

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

TYPES OF CABLES

- TYPE 1 Signal Loop Cable: Stranded No. 14, 26 conductors
- TYPE 2 Detector Lead-In Cable and Pedestrian Push Button Circuit Cable: Stranded, No. 14, 2 Conductors
- TYPE 3 Interconnect Cable: Solid No. 20, 12 Pairs
- TYPE 4 Loop Sensor Cable: Solid No. 12, Single Conductor to IMSA SPEC 51-5
- TYPE 5 Cable from Signal Loop to Signal Head: Stranded, No. 14, Single Conductor
- TYPE 6 Service Cable: Solid, No. 6, 3 Conductors

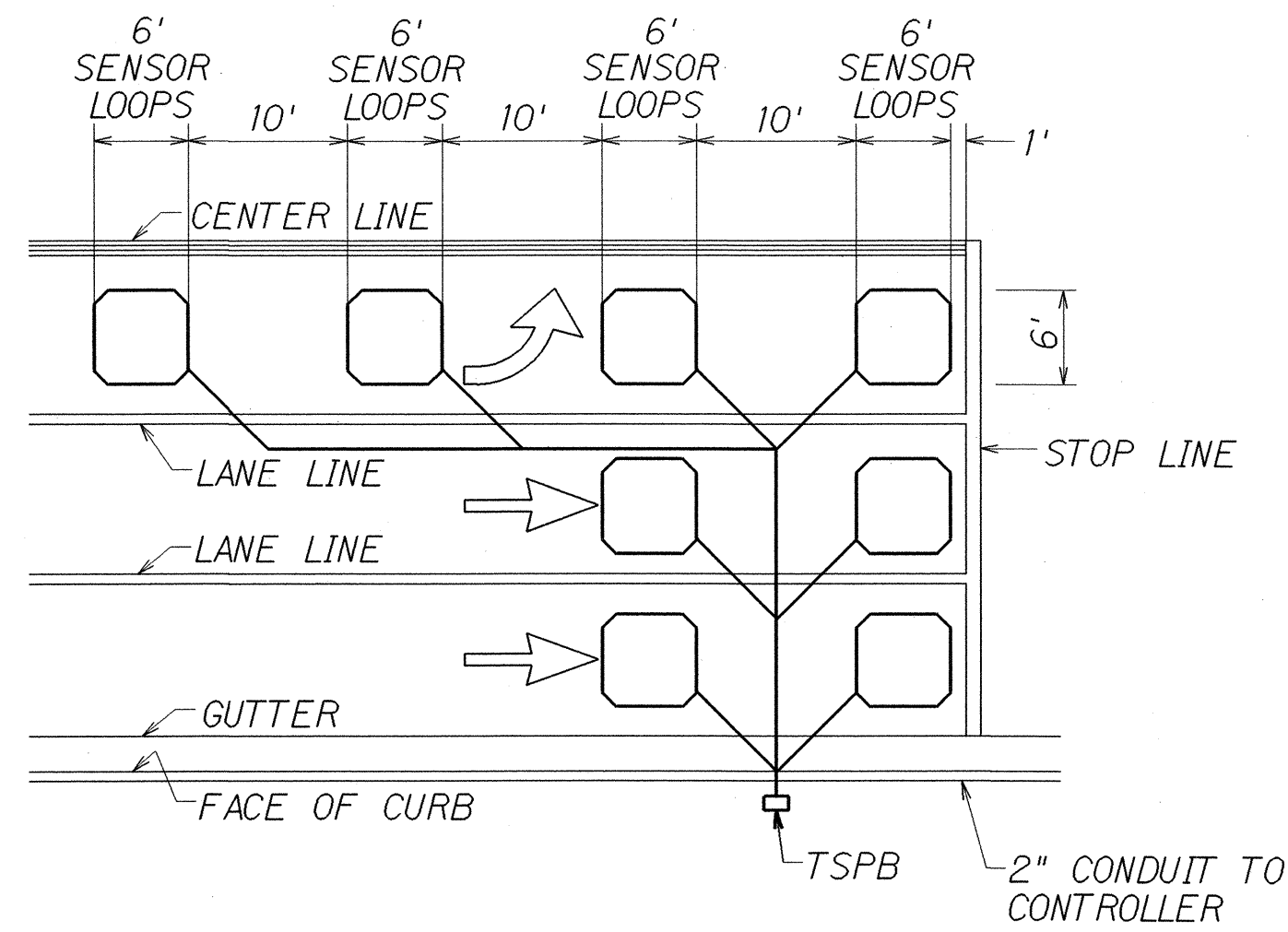
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS
FARRINGTON HIGHWAY DRAINAGE IMPROVEMENTS
Vicinity of Nanakuli Avenue to Nanakuli Stream and
Vicinity of Lualei Place to Princess Kahanu Avenue
Project Nos. 93A-01-01 & 93A-02-01
Not to Scale Date: Sept., 2002

SHEET No. 1 OF 1 SHEETS

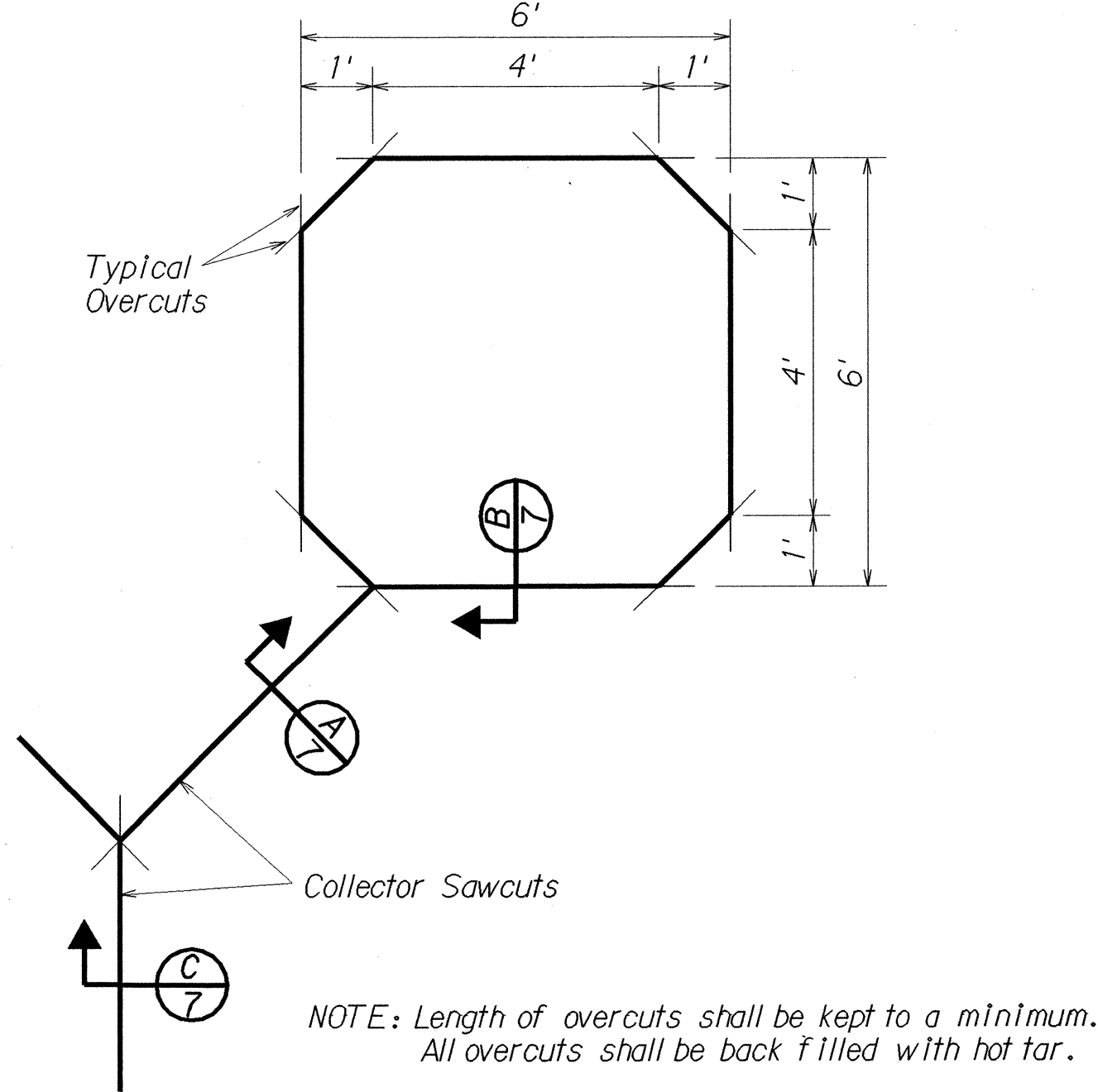
DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
REVISIONS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-01-01 93A-02-01	2004	47	48

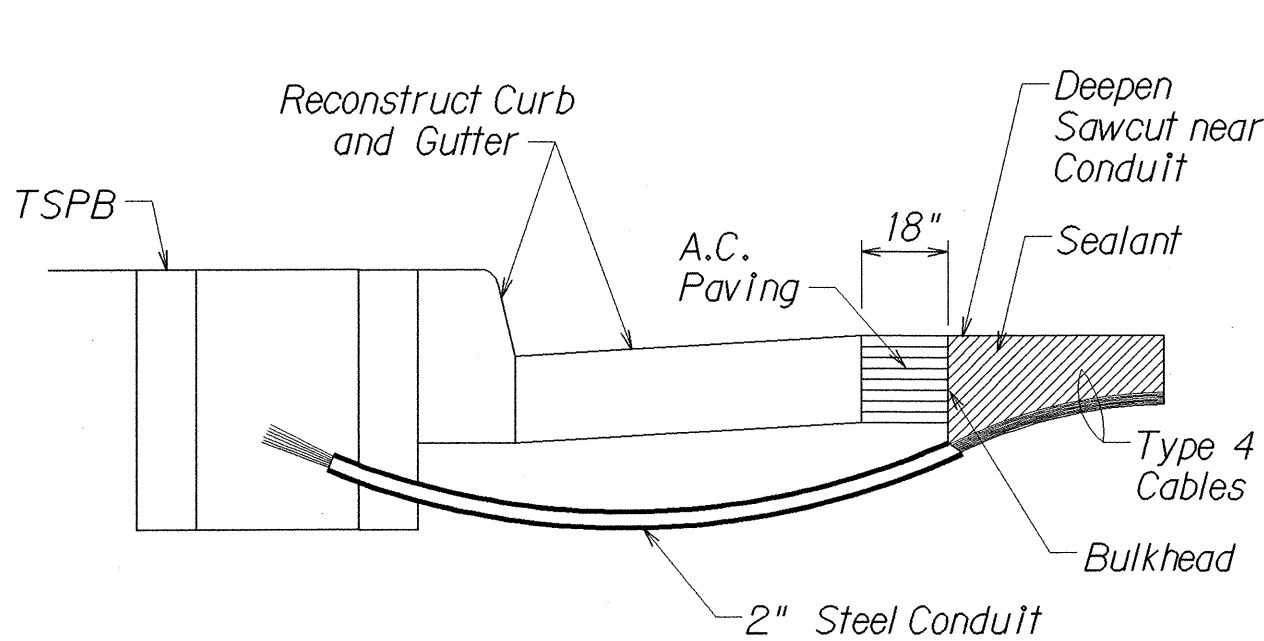
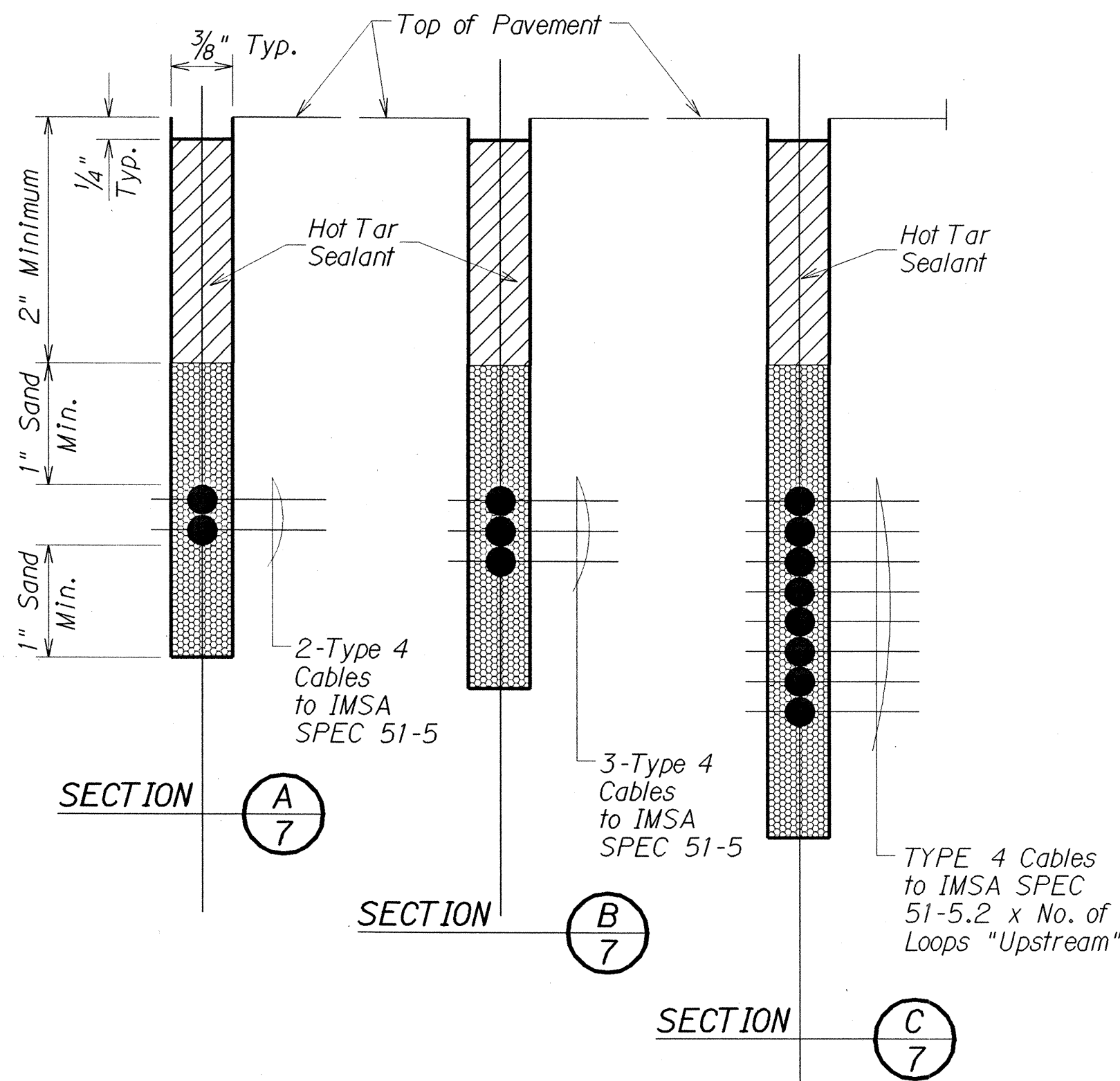


- NOTES:
1. Center sensor loops in lanes.
 2. Collector cables shall be twisted 2 turns per foot.
 3. Number of loops and locations vary. See project plans.
 4. Number and locations of collector sawcuts may be varied in the field to suit.

TYPICAL SENSOR LOOP LAYOUT

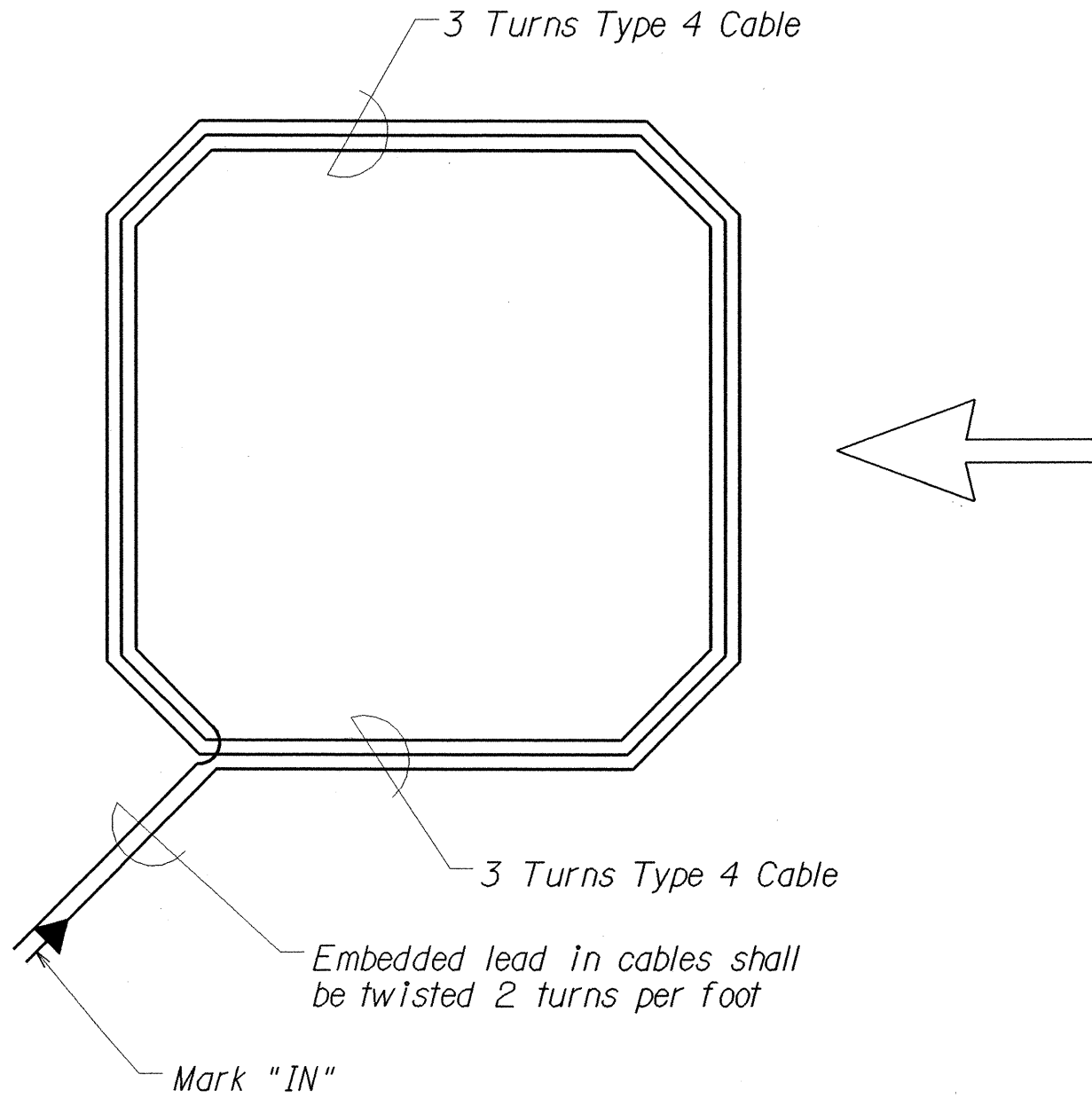


TYPICAL SENSOR LOOP SAWCUT DETAIL



- NOTES ON CONSTRUCTION AT END OF SAWCUT
1. Seal roadway end of conduit after installation of conductors.
 2. Install bulkhead across conduit trench.
 3. Place hot tar in sawcut.
 4. Backfill over conduit with new A.C.
 5. Reconstruct curb and gutter as required.

DETAIL OF SENSOR LOOP INSTALLATION
AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

TYPES OF CABLES

- TYPE 1 Signal Loop Cable: Stranded No. 14, 26 conductors
- TYPE 2 Detector Lead-In Cable and Pedestrian Push Button Circuit Cable: Stranded, No. 14, 2 Conductors
- TYPE 3 Interconnect Cable: Solid No. 20, 12 Pairs
- TYPE 4 Loop Sensor Cable: Solid No. 12, Single Conductor to IMSA SPEC 51-5
- TYPE 5 Cable from Signal Loop to Signal Head: Stranded, No. 14, Single Conductor
- TYPE 6 Service Cable: Solid, No. 6, 3 Conductors

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
CHECKED BY	
IN	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS
FARRINGTON HIGHWAY DRAINAGE IMPROVEMENTS
Vicinity of Nanakuli Avenue to Nanakuli Stream and
Vicinity of Lualei Place to Princess Kahanu Avenue
Project Nos. 93A-01-01 & 93A-02-01
Not to Scale Date: Sept., 2002

SHEET No. 1 OF 1 SHEETS