

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 75	84



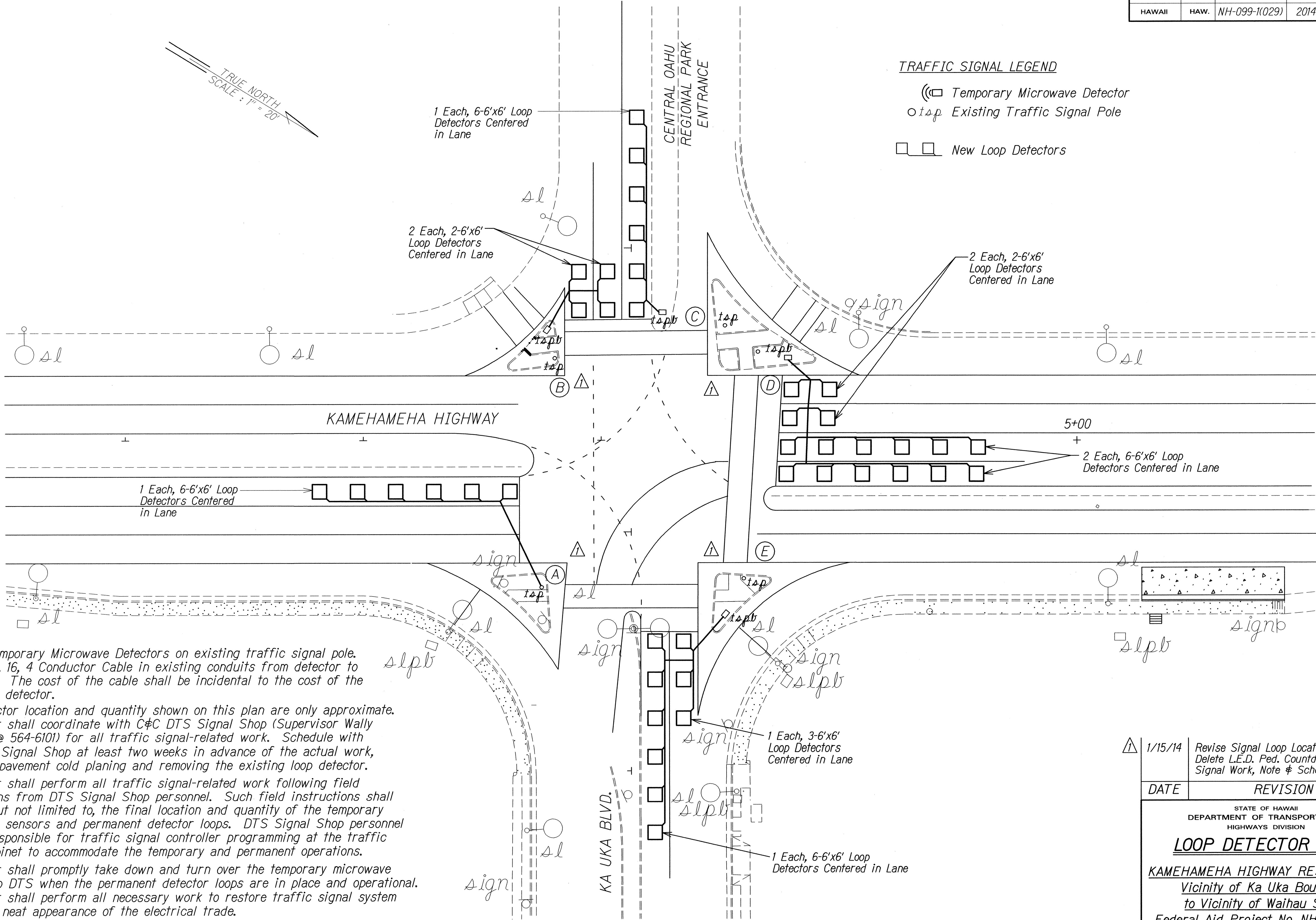
TRUE NORTH
SCALE: 1" = 20'

- TRAFFIC SIGNAL LEGEND
- Temporary Microwave Detector
 - Existing Traffic Signal Pole
 - New Loop Detectors

NOTES:

1. Install Temporary Microwave Detectors on existing traffic signal pole. Install No. 16, 4 Conductor Cable in existing conduits from detector to controller. The cost of the cable shall be incidental to the cost of the microwave detector.
2. Loop detector location and quantity shown on this plan are only approximate. Contractor shall coordinate with C&C DTS Signal Shop (Supervisor Wally Nakihiro @ 564-6101) for all traffic signal-related work. Schedule with C&C DTS Signal Shop at least two weeks in advance of the actual work, including pavement cold planing and removing the existing loop detector.
3. Contractor shall perform all traffic signal-related work following field instructions from DTS Signal Shop personnel. Such field instructions shall include, but not limited to, the final location and quantity of the temporary microwave sensors and permanent detector loops. DTS Signal Shop personnel will be responsible for traffic signal controller programming at the traffic signal cabinet to accommodate the temporary and permanent operations.
4. Contractor shall promptly take down and turn over the temporary microwave sensors to DTS when the permanent detector loops are in place and operational. Contractor shall perform all necessary work to restore traffic signal system back to a neat appearance of the electrical trade.

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

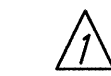
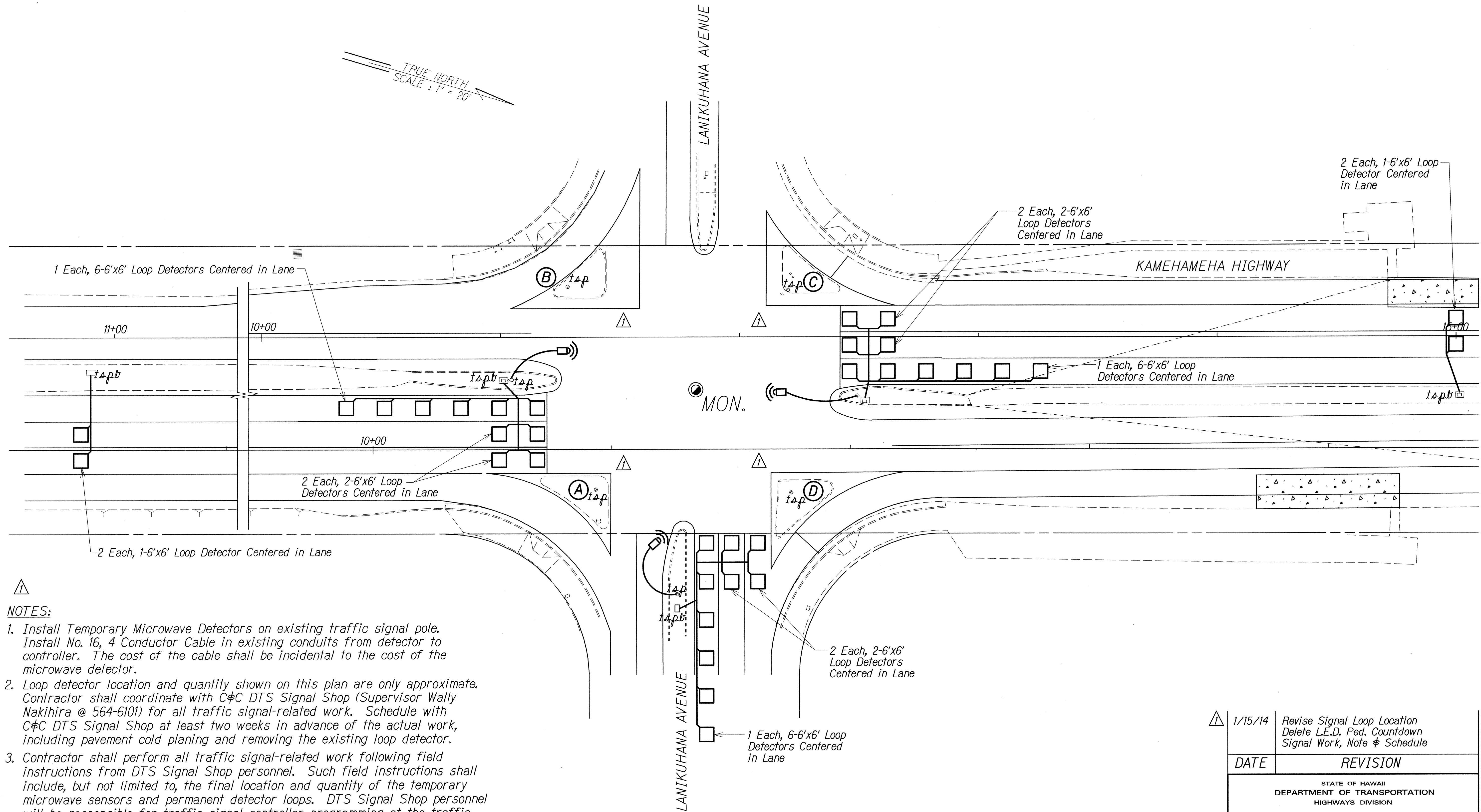


1/15/14	Revise Signal Loop Location Delete L.E.D. Ped. Countdown Signal Work, Note # Schedule
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
LOOP DETECTOR PLAN	
KAMEHAMEHA HIGHWAY RESURFACING Vicinity of Ka Uka Boulevard to Vicinity of Waihau Street Federal Aid Project No. NH-099-1(029)	
Scale: 1" = 20'	Date: JAN. 2014
SHEET No. T15 OF 24 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 76	84



TRUE NORTH
SCALE : 1" = 20'



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ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
DESIGNED BY	TRACED BY	
CHECKED BY	DESIGNED BY	
	CHECKED BY	

TRAFFIC SIGNAL LEGEND

- Ⓜ Temporary Microwave Detector
○ isp Existing Traffic Signal Pole
□ New Loop Detectors

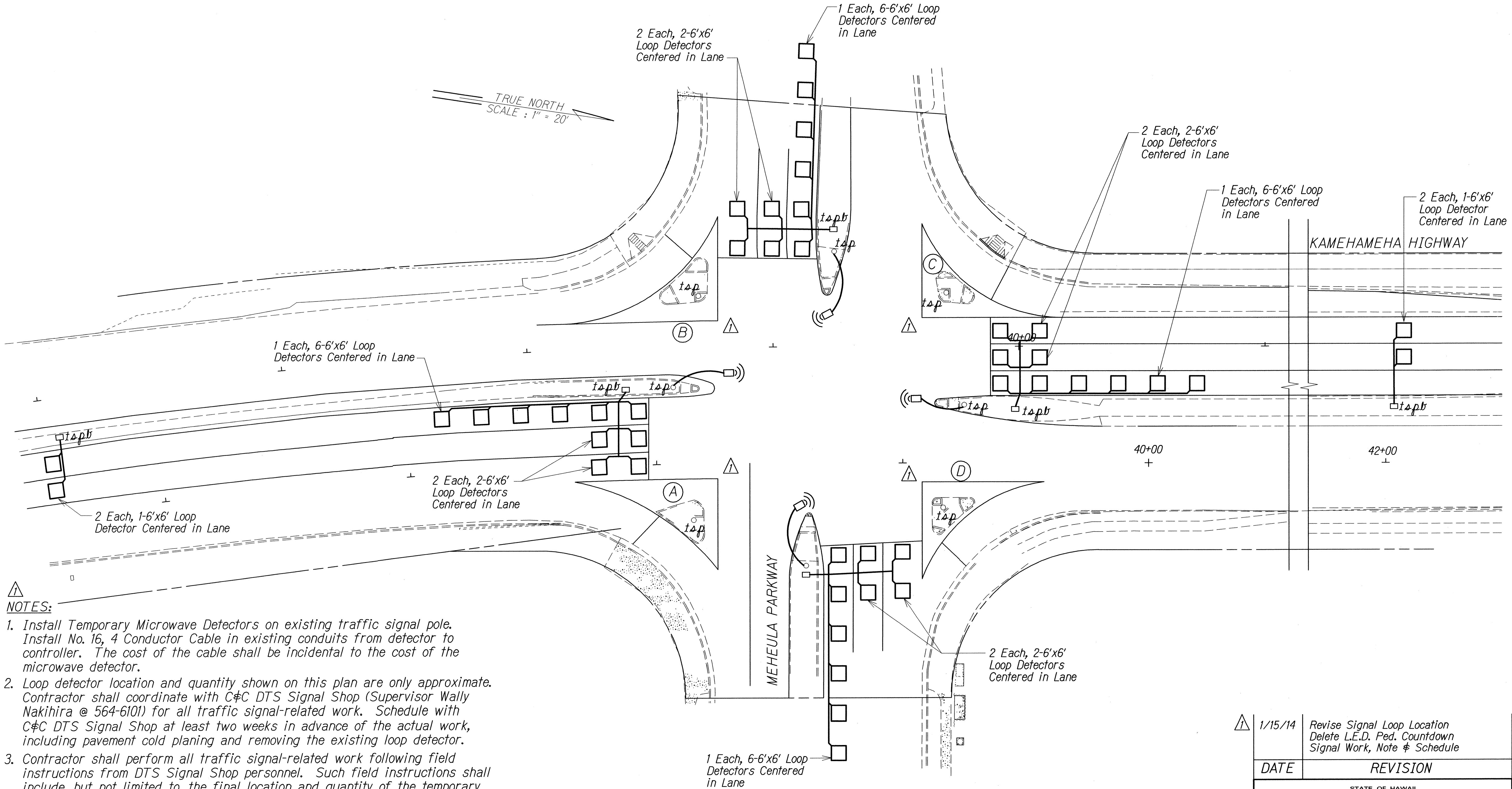


1/15/14
Revise Signal Loop Location
Delete L.E.D. Ped. Countdown
Signal Work, Note # Schedule

DATE REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
LOOP DETECTOR PLAN	
KAMEHAMEHA HIGHWAY RESURFACING Vicinity of Ka Uka Boulevard to Vicinity of Waihou Street Federal Aid Project No. NH-099-1(029)	
Scale: 1" = 20'	Date: JAN. 2014
SHEET No. 716 OF 24 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-099-1(029)	2014	ADD. 77	84



NOTES:

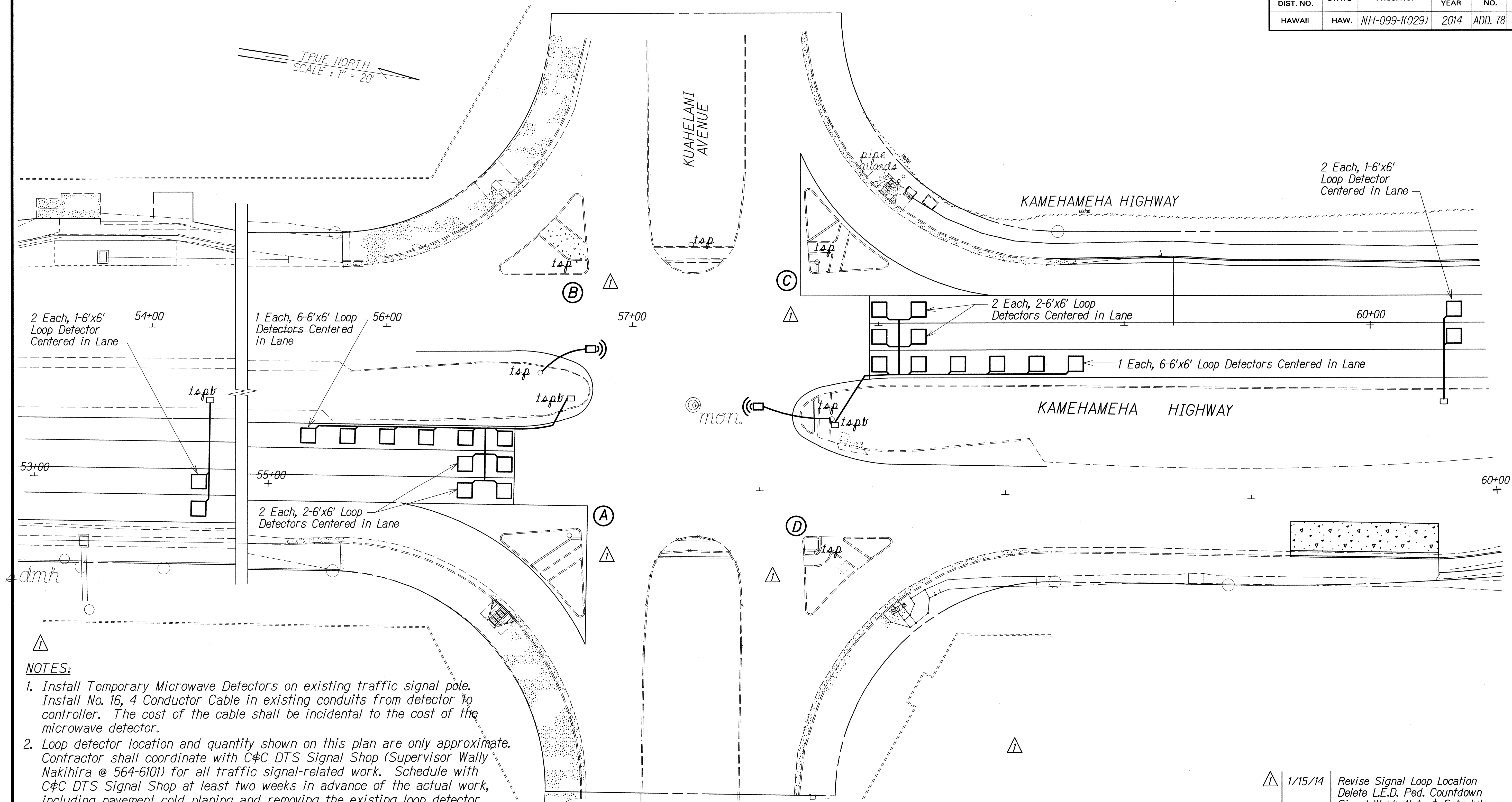
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TRAFFIC SIGNAL LEGEND

- Temporary Microwave Detector
- Existing Traffic Signal Pole
- New Loop Detectors

1/15/14	Revise Signal Loop Location Delete L.E.D. Ped. Countdown Signal Work, Note # Schedule
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
LOOP DETECTOR PLAN	
KAMEHAMEHA HIGHWAY RESURFACING Vicinity of Ka Uka Boulevard to Vicinity of Waihau Street Federal Aid Project No. NH-099-1(029)	
Scale: 1" = 20'	Date: JAN. 2014
SHEET No. T17 OF 24 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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TRAFFIC SIGNAL LEGEND

- Ⓜ Temporary Microwave Detector
- isp Existing Traffic Signal Pole
- New Loop Detectors

1/15/14	Revise Signal Loop Location Delete L.E.D. Ped. Countdown Signal Work, Note & Schedule
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DATE	REVISION
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LOOP DETECTOR PLAN
KAMEHAMEHA HIGHWAY RESURFACING
Vicinity of Ka Uka Boulevard
to Vicinity of Waihau Street
Federal Aid Project No. NH-099-1(029)

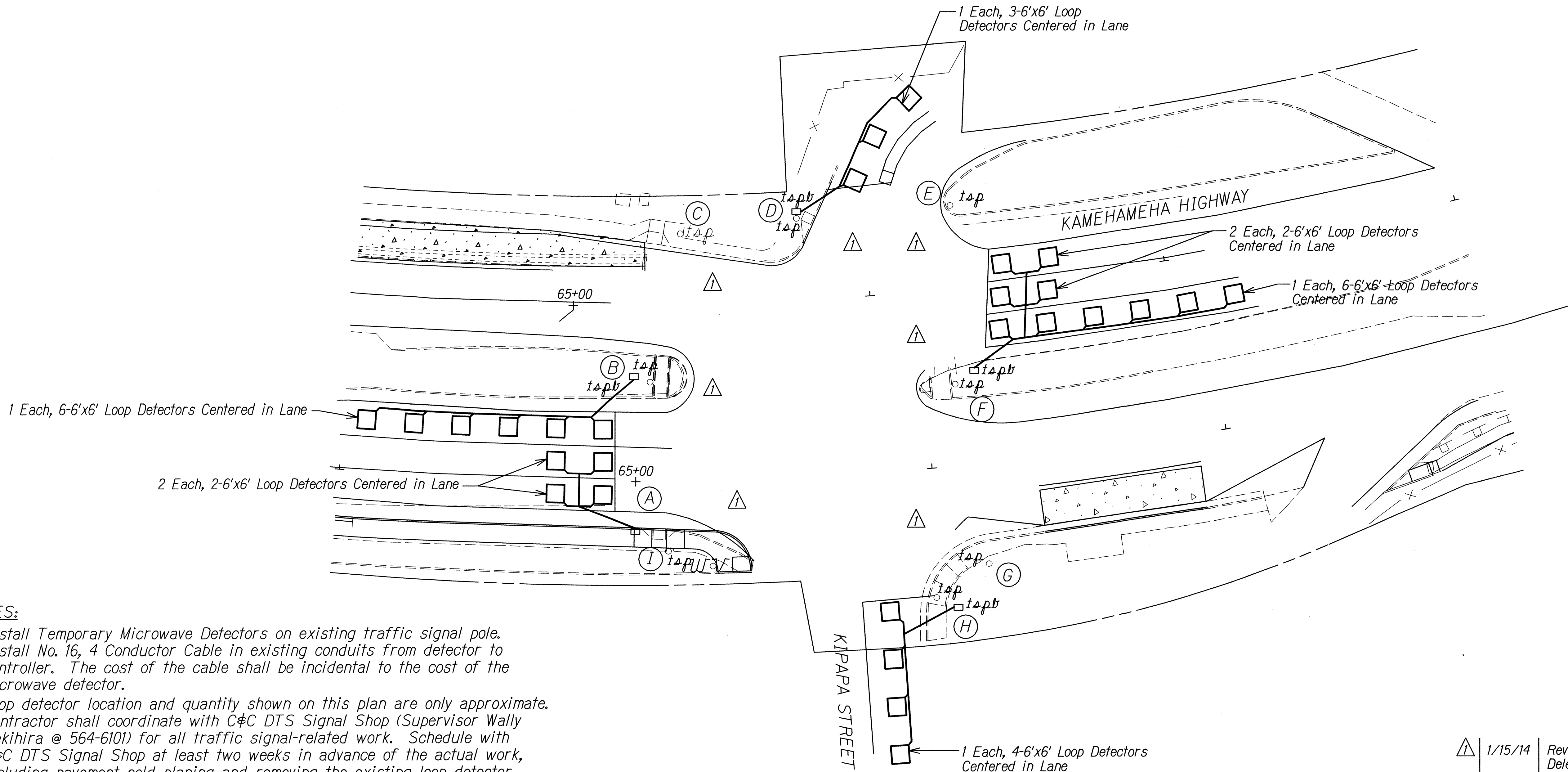
Scale: 1" = 20' Date: JAN. 2014

SHEET No. T18 OF 24 SHEETS

ORIGINAL PLAN	DATE
NOTED BY	DATE
DESIGNED BY	DATE
QUANTITIES BY	DATE
CHECKED BY	DATE



TRUE NORTH
SCALE: 1" = 20'



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TRAFFIC SIGNAL LEGEND

- Temporary Microwave Detector
 Existing Traffic Signal Pole
 New Loop Detectors



1/15/14
Revise Signal Loop Location
Delete L.E.D. Ped. Countdown
Signal Work, Note # Schedule

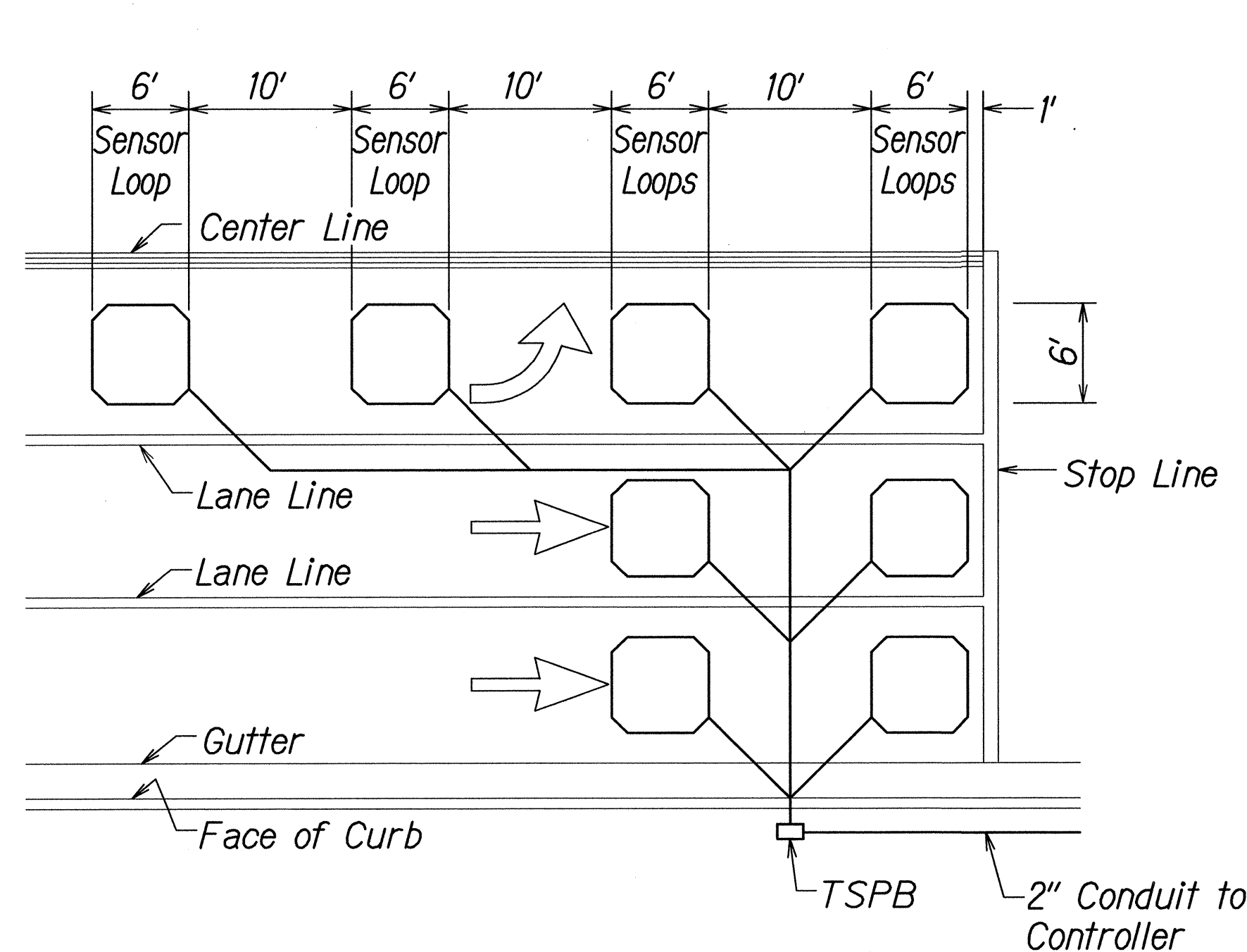
DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LOOP DETECTOR PLAN
KAMEHAMEHA HIGHWAY RESURFACING
Vicinity of Ka Uka Boulevard
to Vicinity of Waihou Street
Federal Aid Project No. NH-099-1(029)

Scale: 1" = 20' Date: JAN. 2014

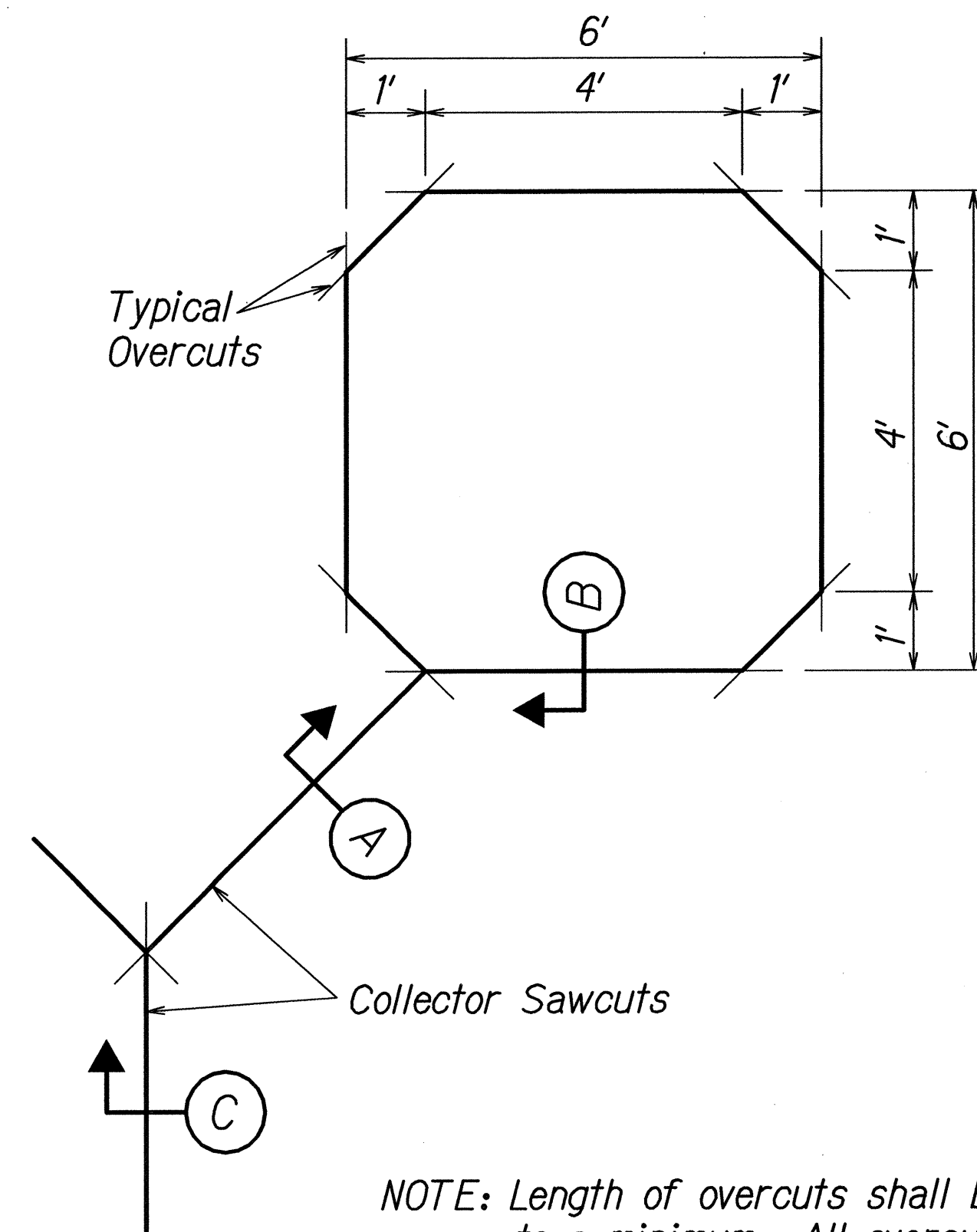
SHEET No. T19 OF 24 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
DESIGNED BY		
QUANTITIES BY		
CHECKED BY		



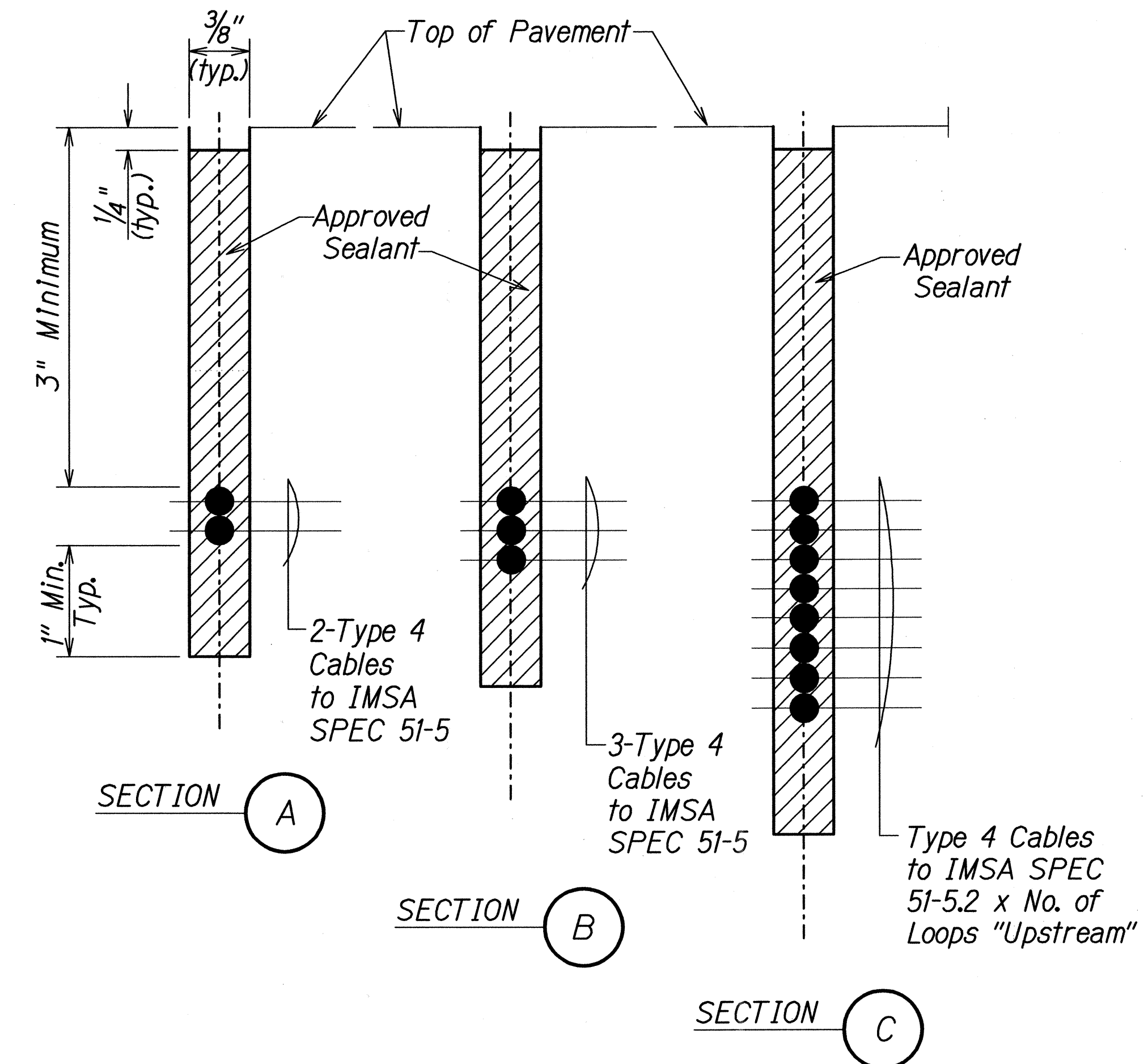
- NOTES:
1. Center sensor loops in lanes.
 2. Collector cables shall be twisted 2 turns per foot.
 3. Number of loops and locations vary. See project plans.
 4. Number and locations of collector sawcuts may be varied in the field to suit.

TYPICAL SENSOR LOOP LAYOUT



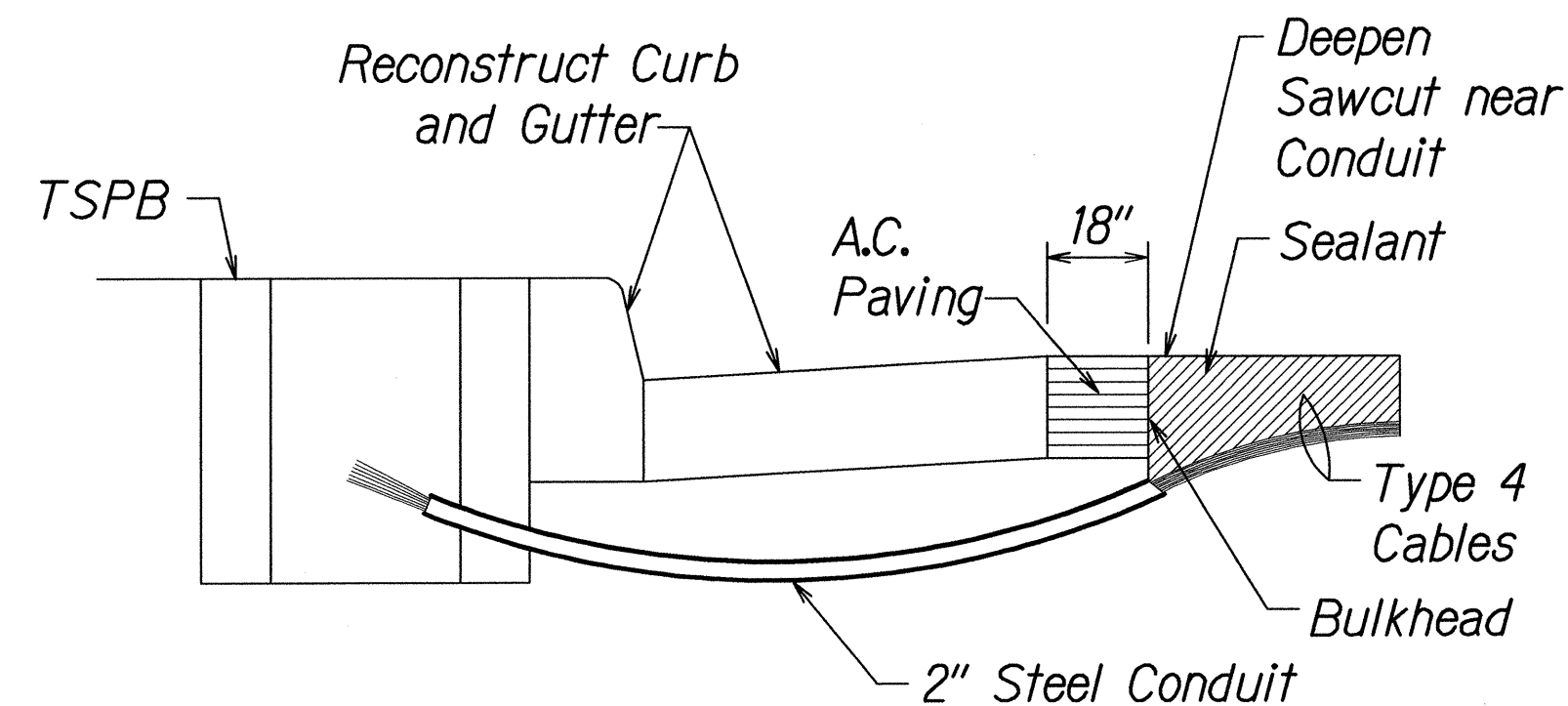
NOTE: Length of overcuts shall be kept to a minimum. All overcuts shall be back filled with hot tar.

TYPICAL SENSOR LOOP SAWCUT DETAIL



TYPICAL SECTION THROUGH SENSOR LOOP

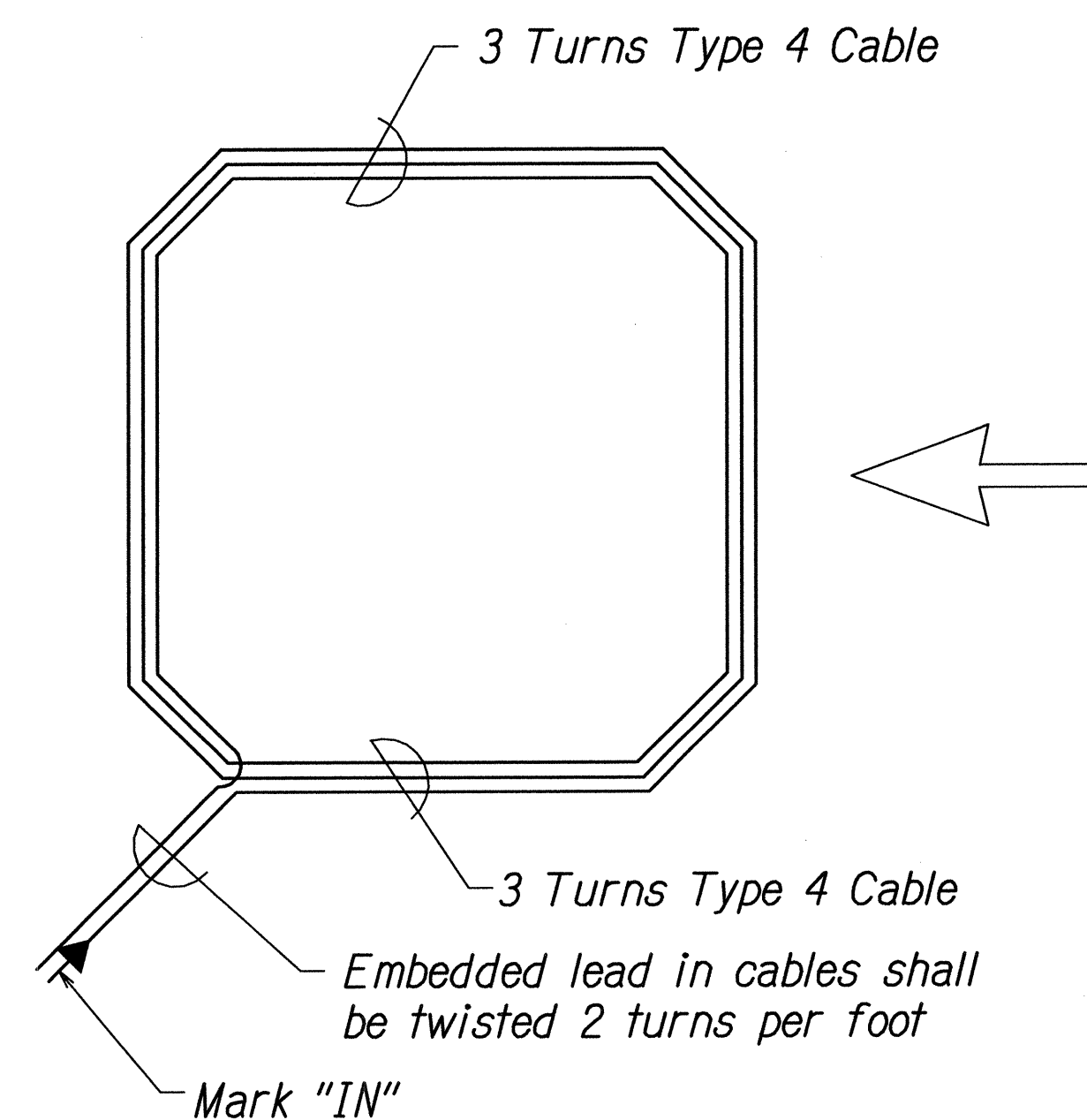
Not to Scale



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

Not to Scale

SURVEY PLOTTED BY	DATE
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NOTE BOOK	
REVISIONS	
DATE	
BY	
REASON	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS
KAMEHAMEHA HIGHWAY RESURFACING
Vicinity of Ka Uka Boulevard
to Vicinity of Waihau Street
Federal Aid Project No. NH-099-1(029)
Scale: As Shown Date: Sept. 2013

SHEET No. T20 OF 24 SHEETS