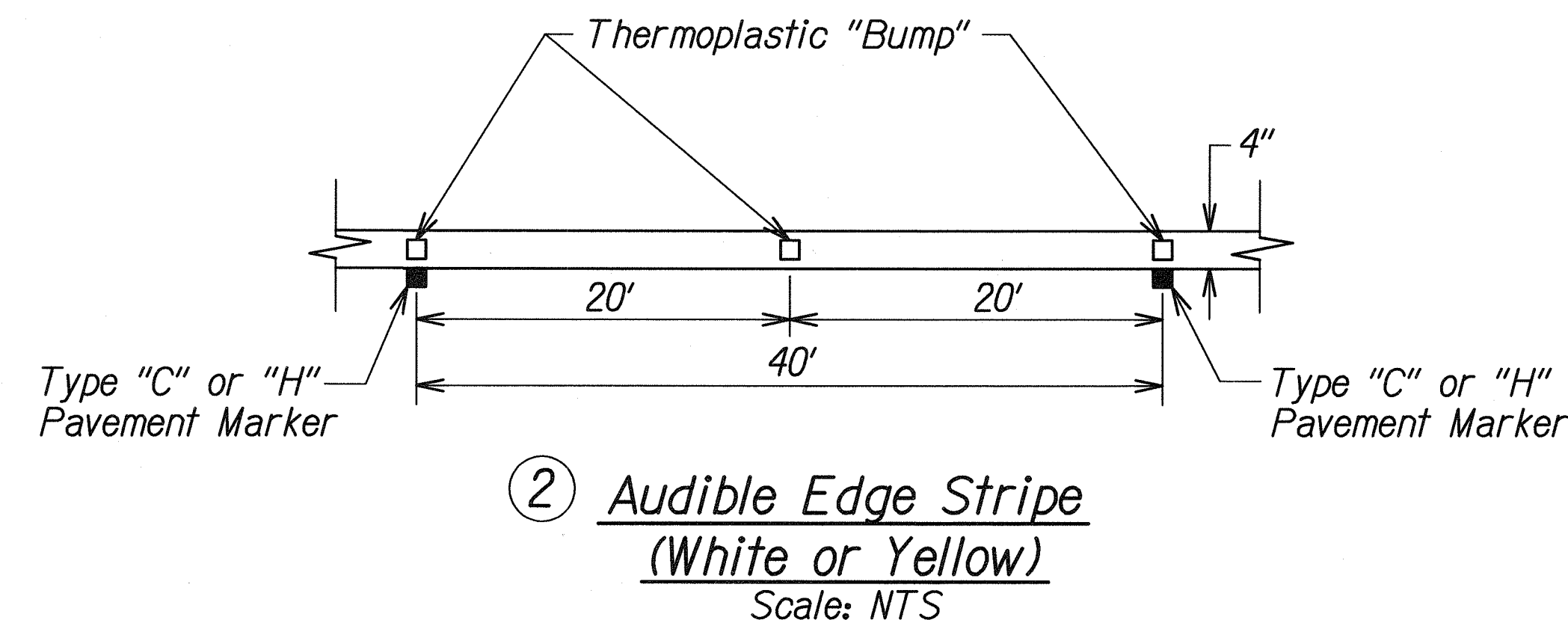
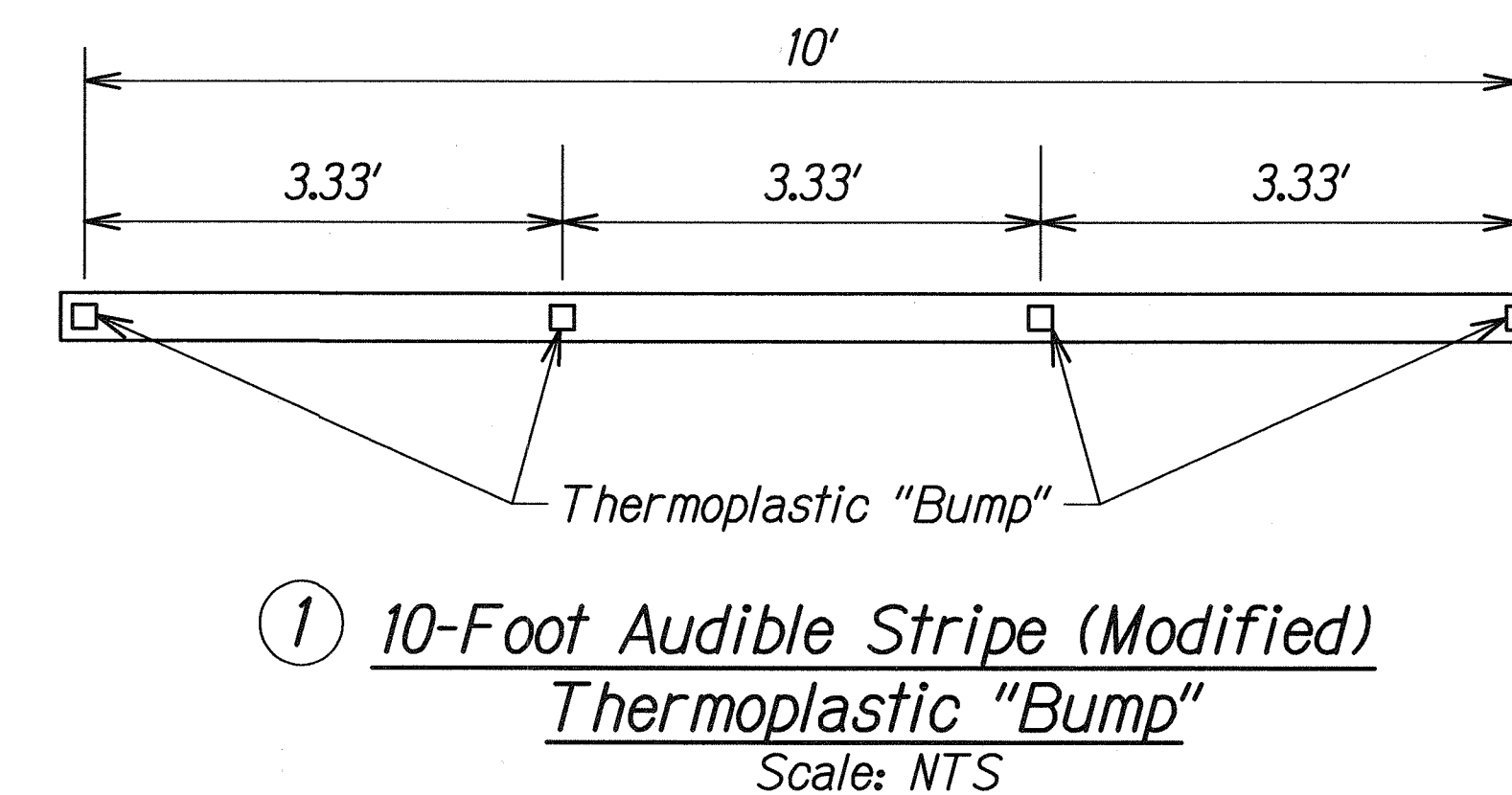
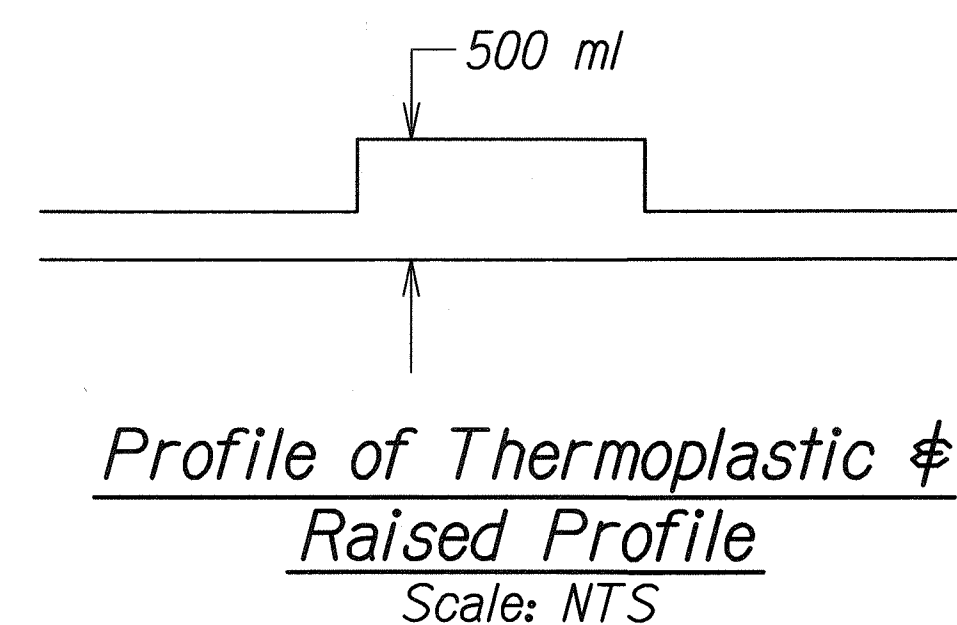
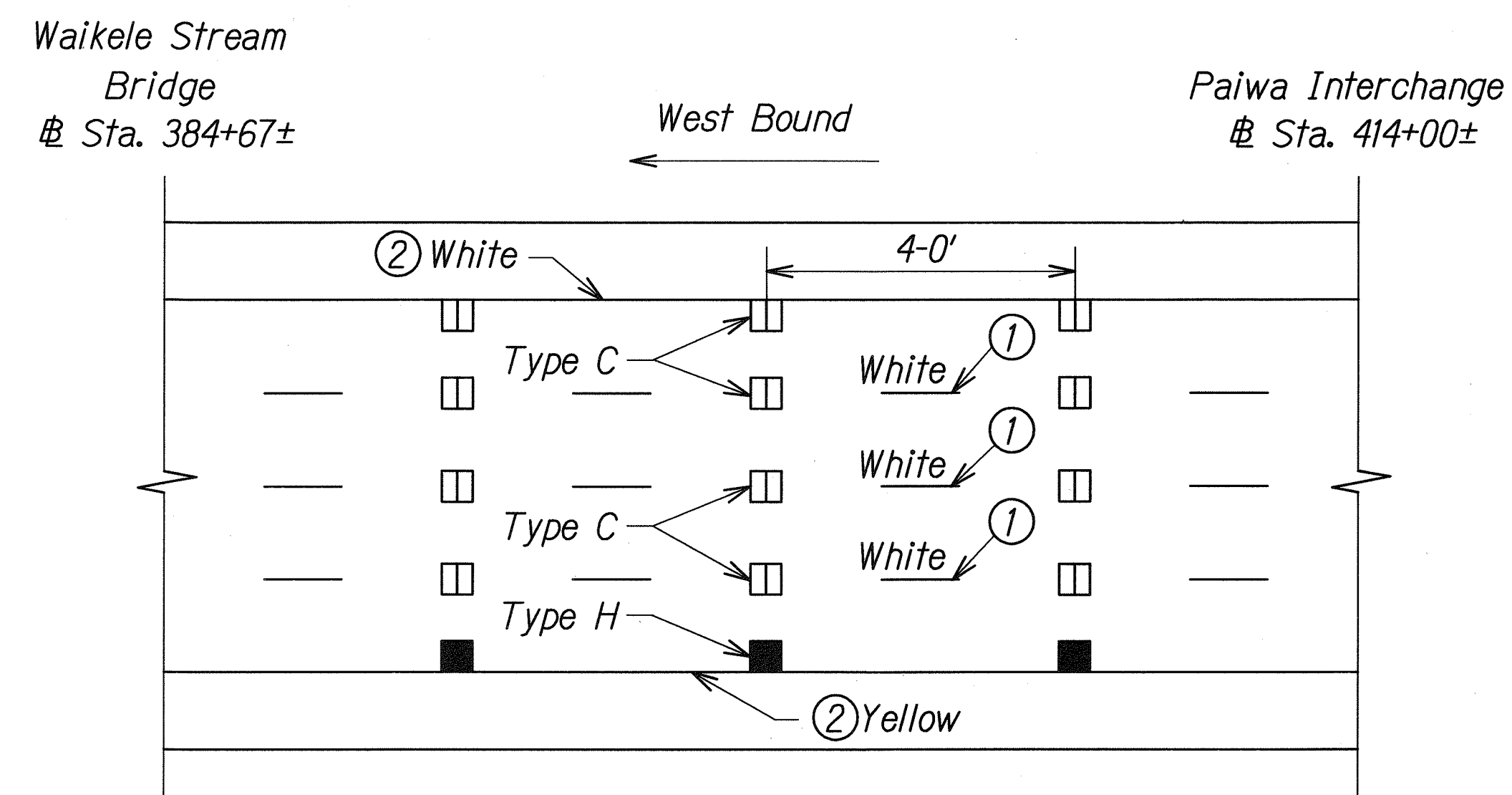


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-HI-1(256) | 2007 | 20 | 32 |



Note: This tracing prepared during "As-Built" posting.

| | | |
|---------------|-------------------|---------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK | DRAWN BY | 8/12/06 |
| DESIGNED BY | DESIGNED BY | |
| CHECKED BY | CHECKED BY | |
| | | |

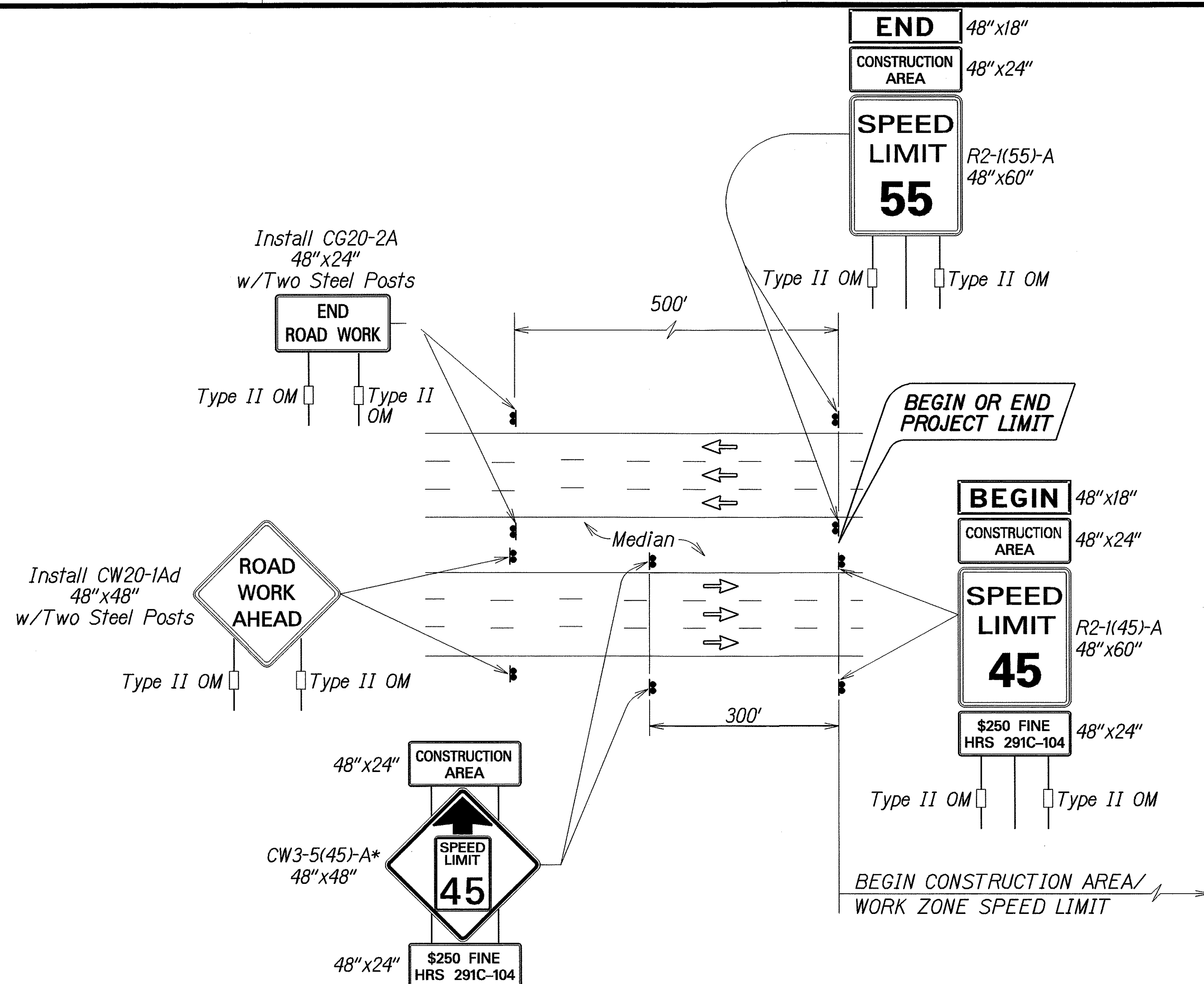
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING &
STRIPING PLAN

INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waialeke Stream Bridge to Waipahu Street
Federal Aid Project No. IM-HI-1(256)

Scale: 1"= 40'
Date: June 2006

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1M-HI-1(256) | 2007 | 19 | 32 |

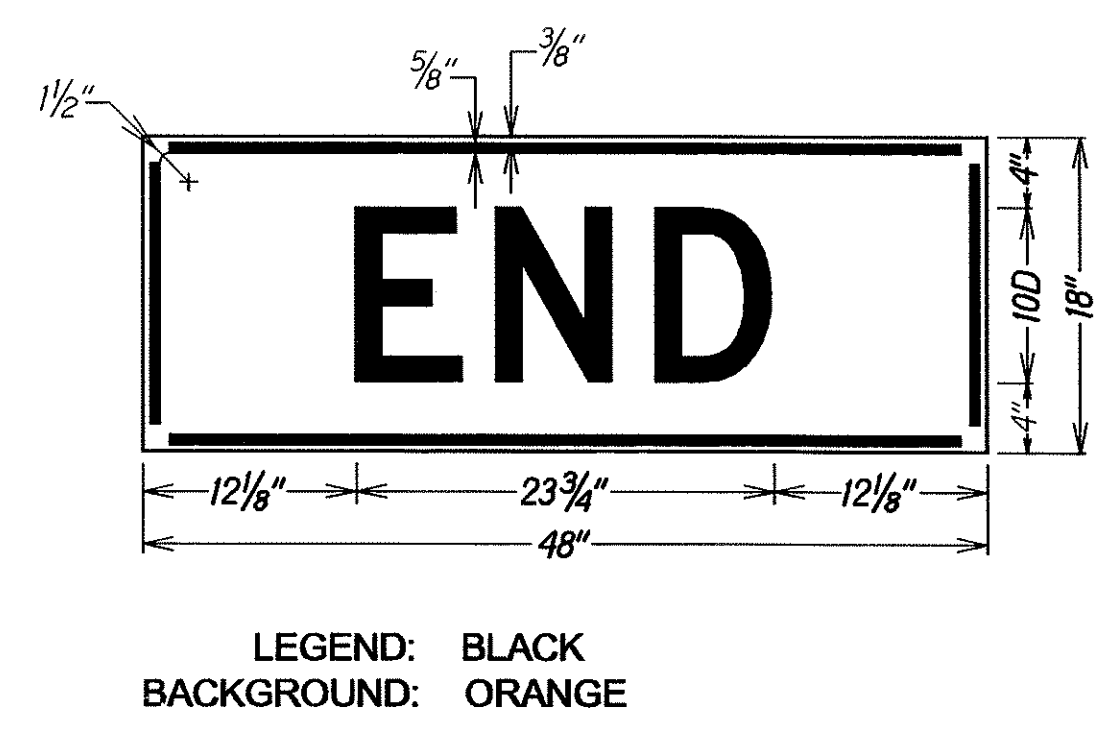
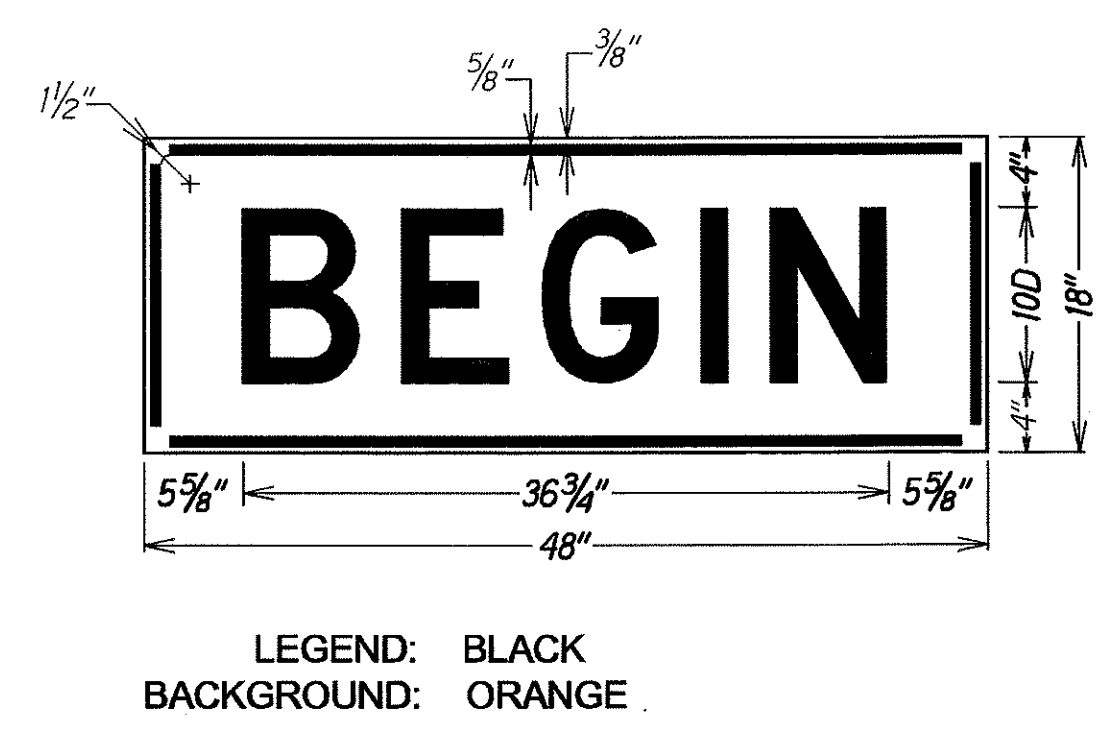
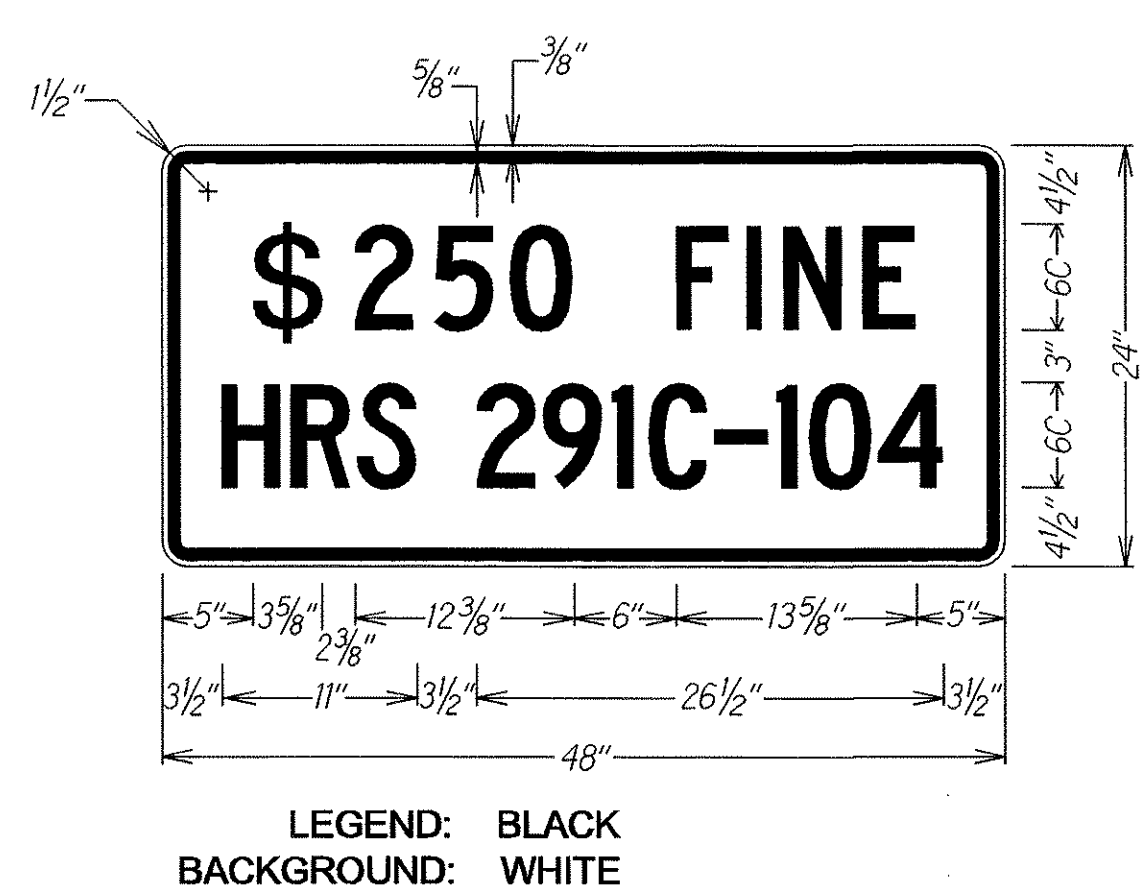
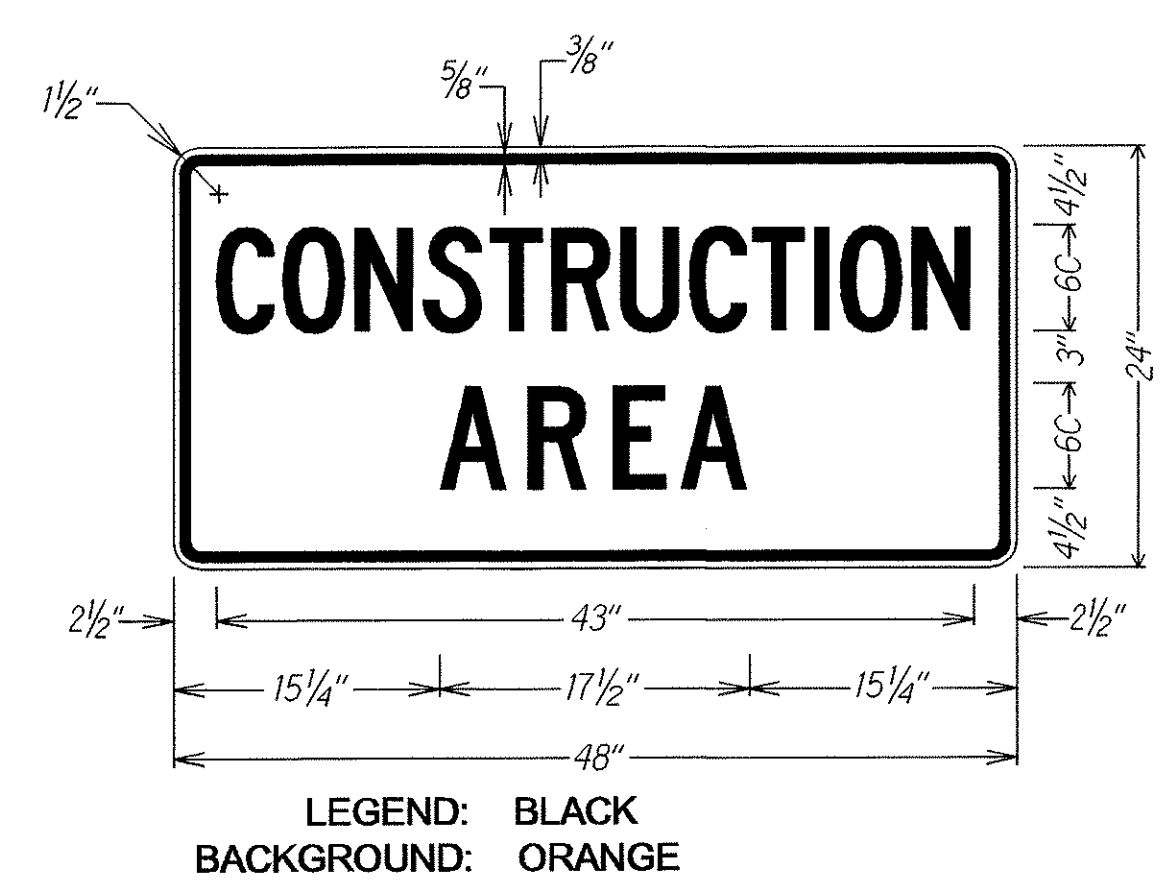


*Note:
 Legend: Black
 Background: Orange
 Speed Limit: Black on White

TYPICAL DETAIL FOR CONSTRUCTION SIGNS
 ON FREEWAY

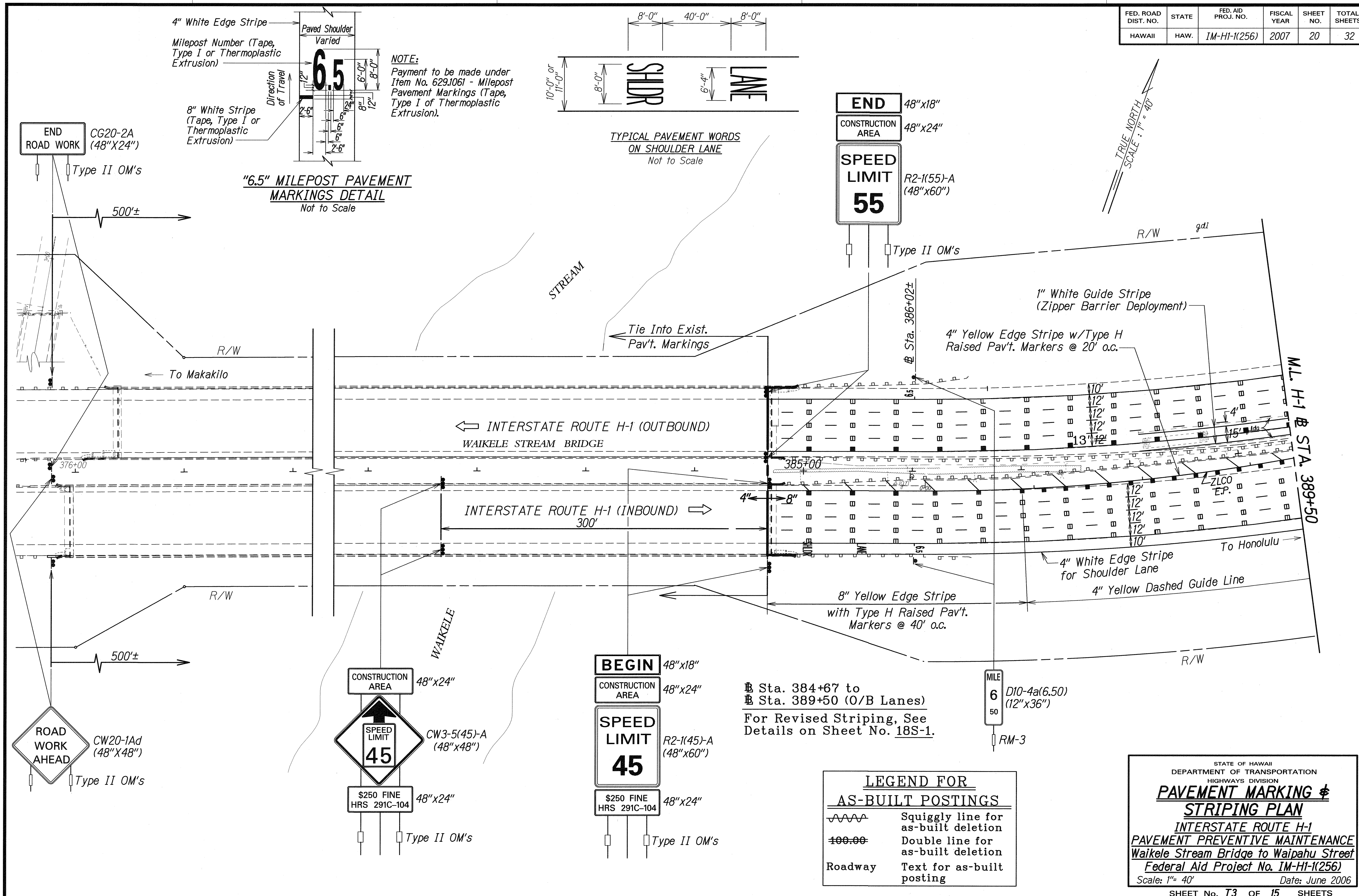
- Work Zone Note:**
1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/ construction phases (3 Days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions.
 2. All existing regulatory speed limit signs within the work zone/project limits shall be covered and work zone speed limit sign assemblies (R2-1(45)-A and CW3-5(45)-A with "CONSTRUCTION AREA" and "\$250 FINE HRS 291C-104" Supplemental Signs) shall be displayed during lane closure hours.
 3. Upon the removal of the lane closure, all work zone speed limit signs shall be covered and existing speed limit signs within the work zone/project limits shall be restored.
 4. Construction signs shall be installed on both the approaching and trailing ends of each work zone.
 5. Each construction sign shall have a minimum of two (2) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.1000, Traffic Control.
 6. All work zone speed sign assembly shall be mounted on three (3) 4.00 lbs./ft. galvanized flanged channel sign posts with a sign clearance height of five (5) feet. Sign stiffeners as specified by Standard Plan Sheet TE-02 shall be installed as needed or as directed by the Engineer.
 7. The daily covering and uncovering of existing regulatory speed limit signs along with the installation, maintenance, removal and daily covering and uncovering of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.1000, Traffic Control.

| | | |
|-------------------|------|---------|
| ORIGINAL PLAN | DATE | 1/25/06 |
| SURVEY PLOTTED BY | | |
| DRAWN BY | | |
| DESIGNED BY | | |
| CHECKED BY | | |
| NOTED BY | | |
| DATE | | |



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
FREEWAY WORK ZONE SIGNING
PLAN, NOTES & DETAILS
 INTERSTATE ROUTE H-1
 PAVEMENT PREVENTIVE MAINTENANCE
 Waialeale Stream Bridge to Waipahu Street
 Federal Aid Project No. 1M-HI-1(256)
 Not To Scale Date: June 2006
 SHEET No. T2 OF 15 SHEETS

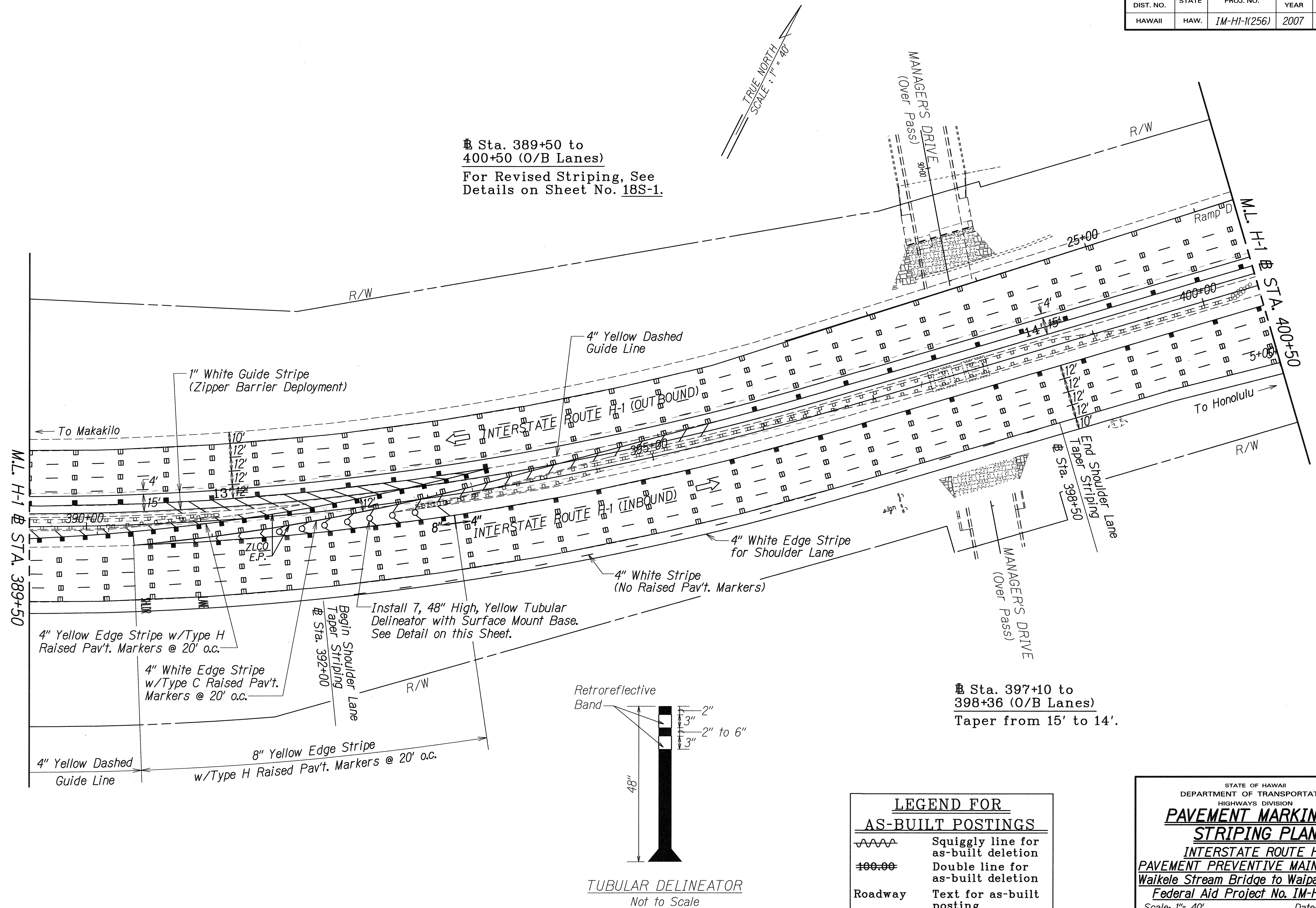
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-H1-1(256) | 2007 | 20 | 32 |



"AS-BUILT"

20

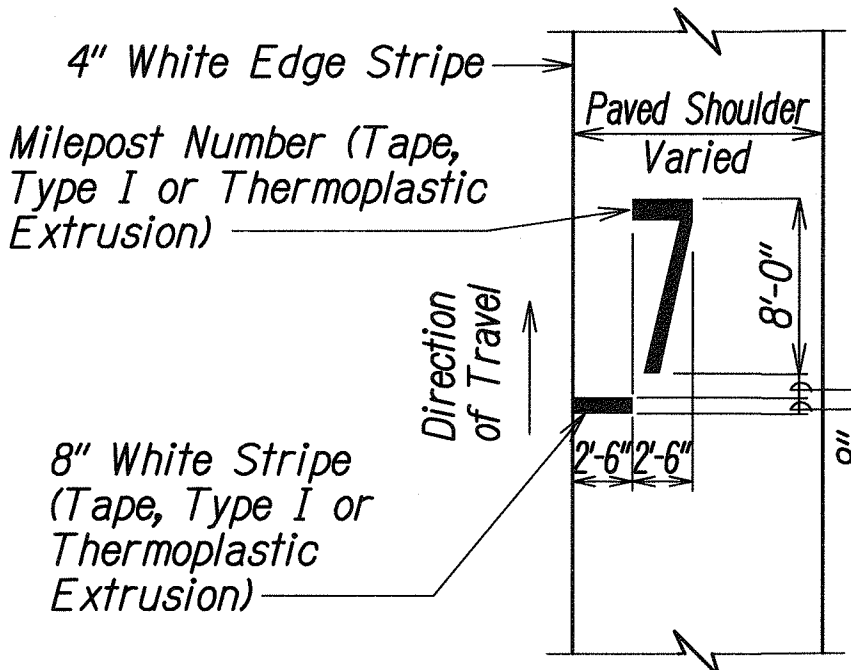
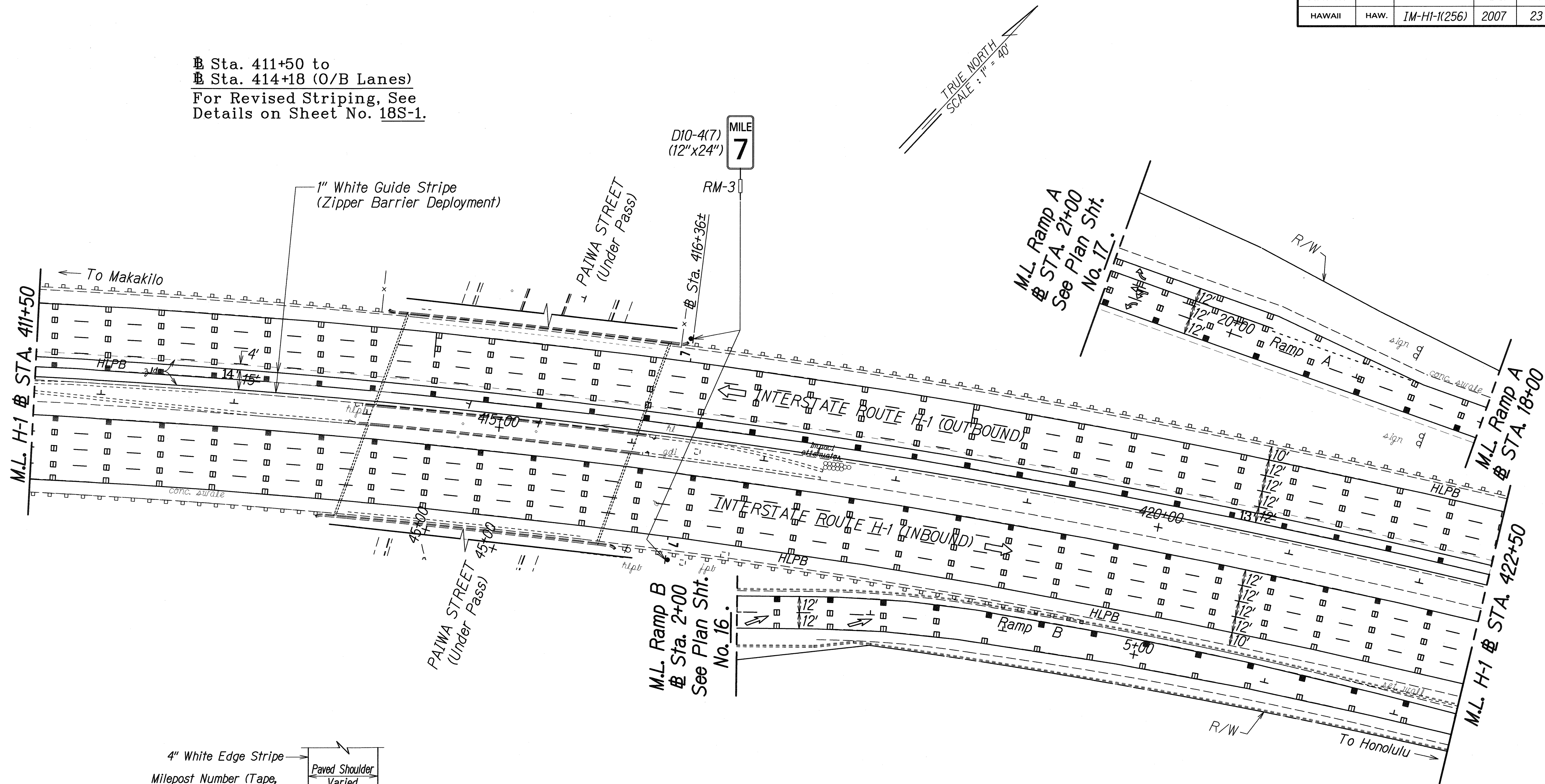
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-HI-1(256) | 2007 | 21 | 32 |



"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-HI-1(256) | 2007 | 23 | 32 |

Sta. 411+50 to
Sta. 414+18 (O/B Lanes)
For Revised Striping, See
Details on Sheet No. 18S-1.



NOTE:
Payment to be made under
Item No. 629.1061 - Milepost
Pavement Markings (Tape,
Type I or Thermoplastic
Extrusion).

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

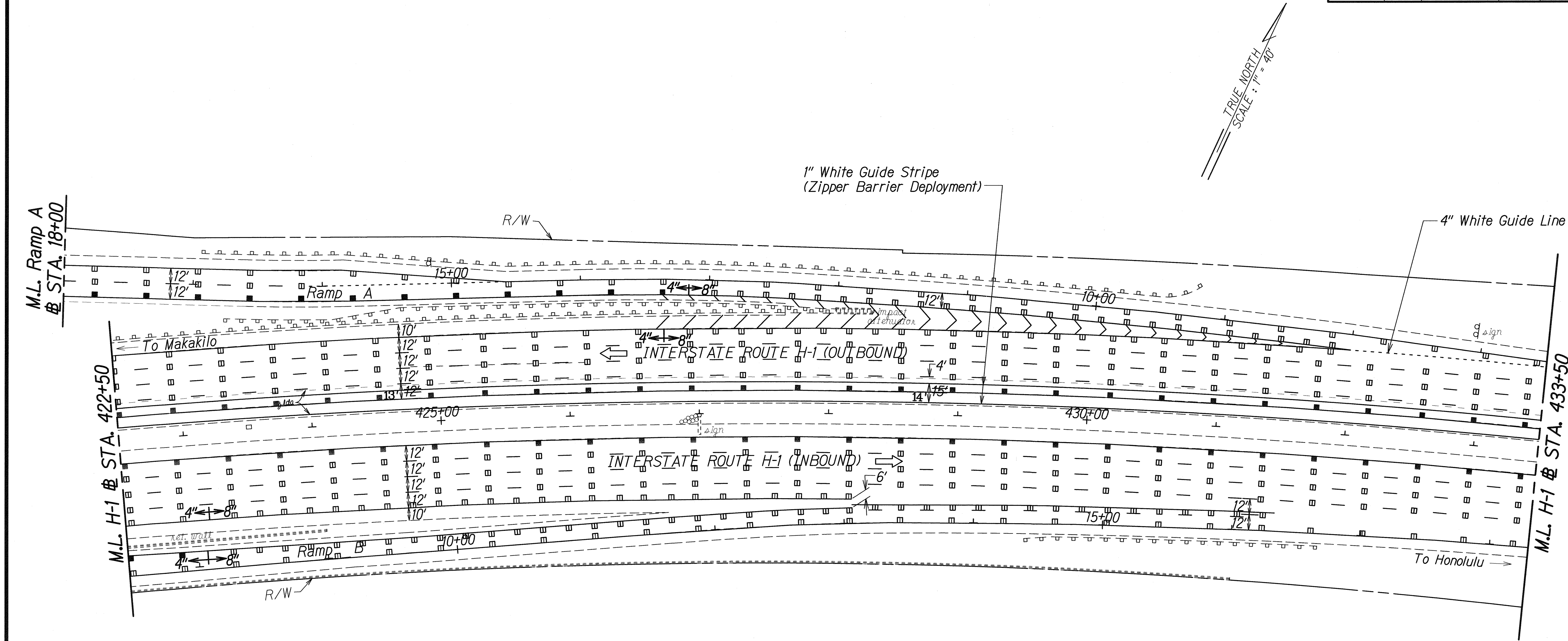
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING &
STRIPING PLAN

INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waialeale Stream Bridge to Waipahu Street
Federal Aid Project No. IM-HI-1(256)

Scale: 1"= 40'
Date: June 2006

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-H1-1(256) | 2007 | 24 | 32 |



| | |
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| SURVEY PLOTTED BY | DATE |
| DRAWN BY | 5/12/06 |
| TRACED BY | |
| NOTE BOOK | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
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| ORIGINAL PLAN | |
| PLAN | |
| NOTE BOOK | |
| QUANTITIES BY | |
| CHECKED BY | |

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

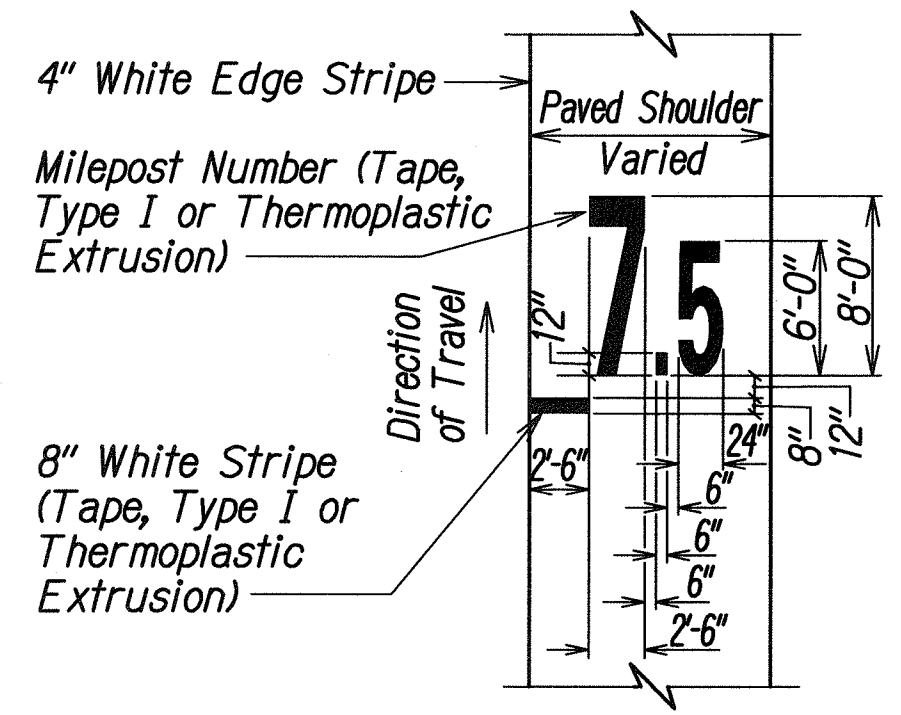
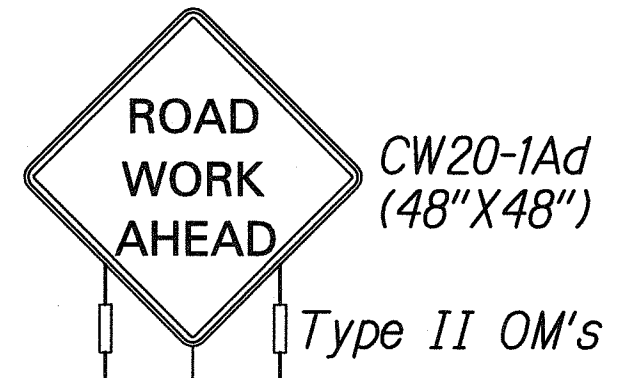
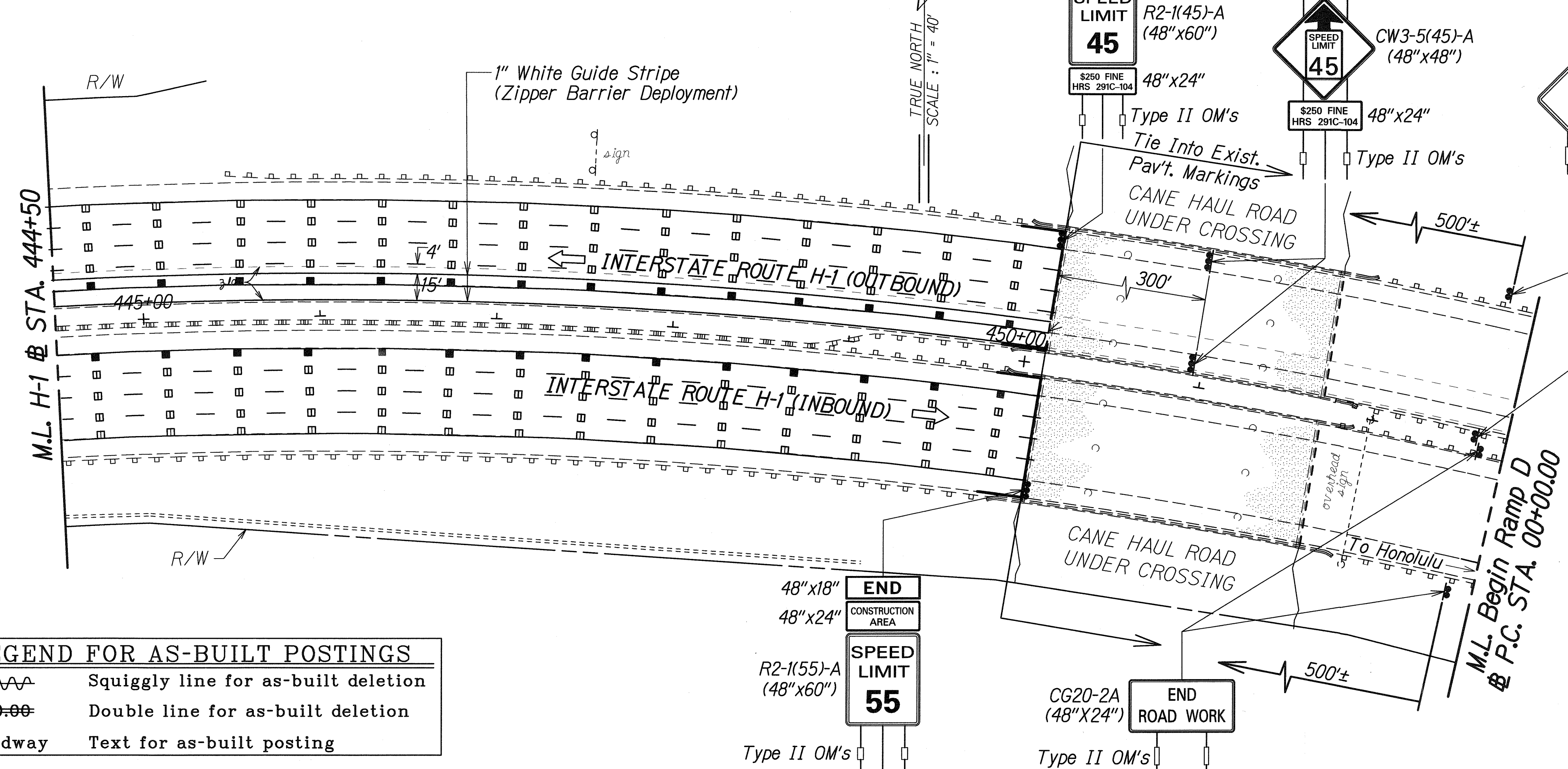
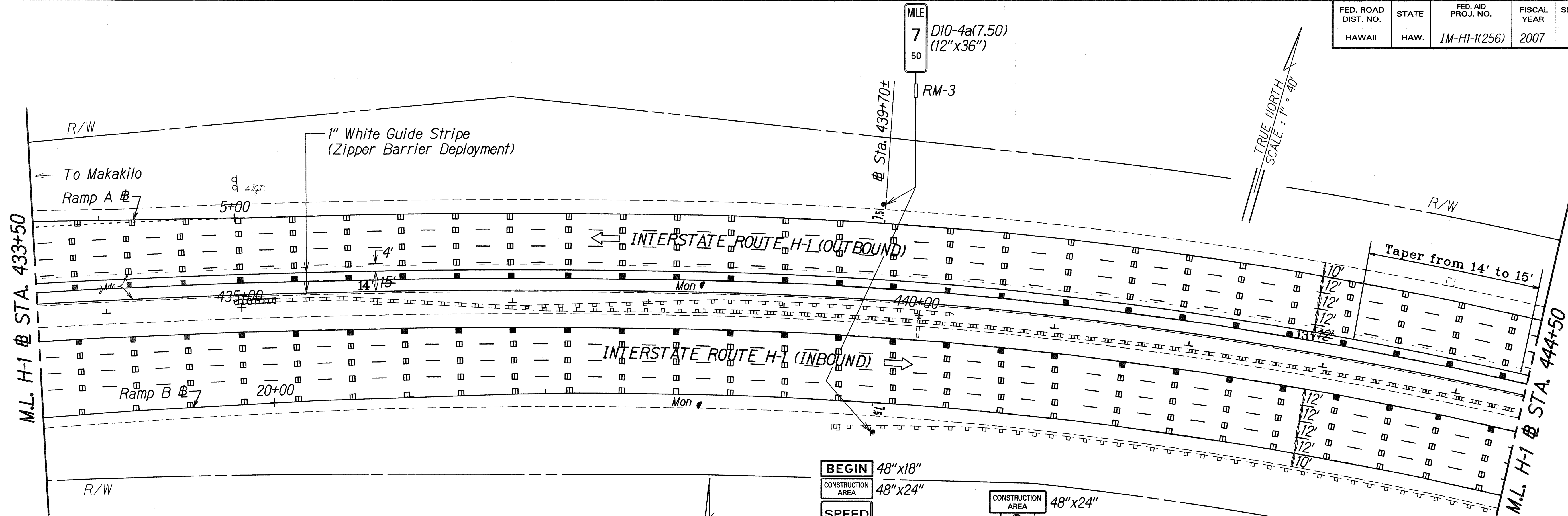
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & STRIPING PLAN

INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waialeale Stream Bridge to Waipahu Street
Federal Aid Project No. IM-H1-1(256)

Scale: 1"= 40'
Date: June 2006

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1M-HI-1(256) | 2007 | 25 | 32 |



"7.5\"/>

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & STRIPING PLAN

INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waialea Stream Bridge to Waipahu Street
Federal Aid Project No. 1M-HI-1(256)

Scale: 1"= 40' Date: June 2006

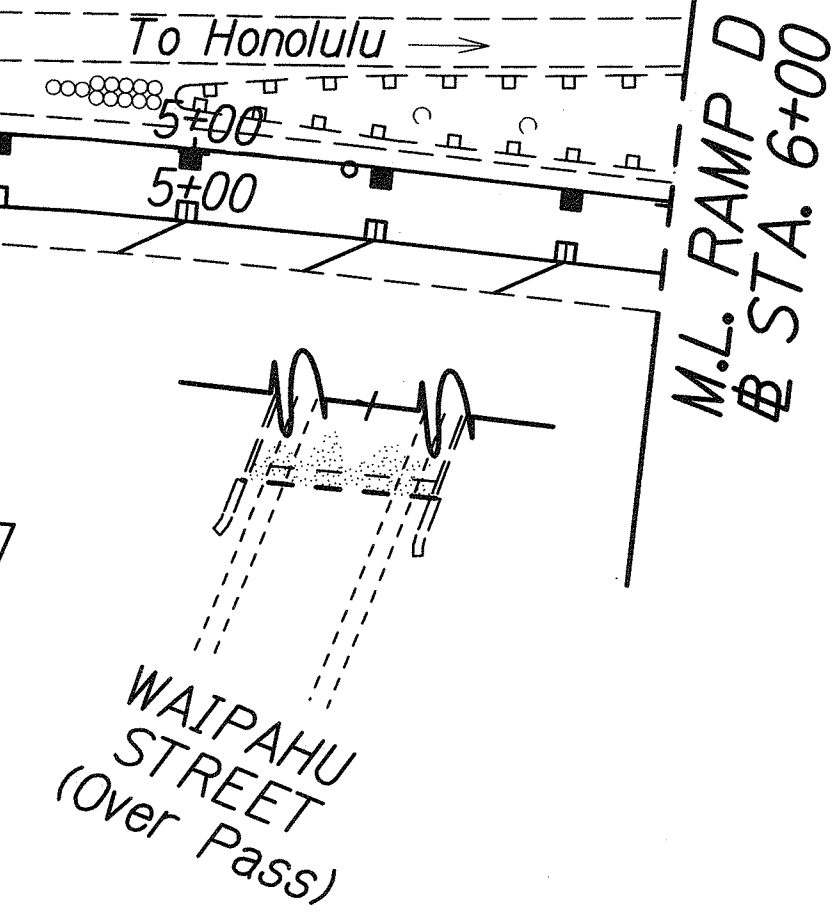
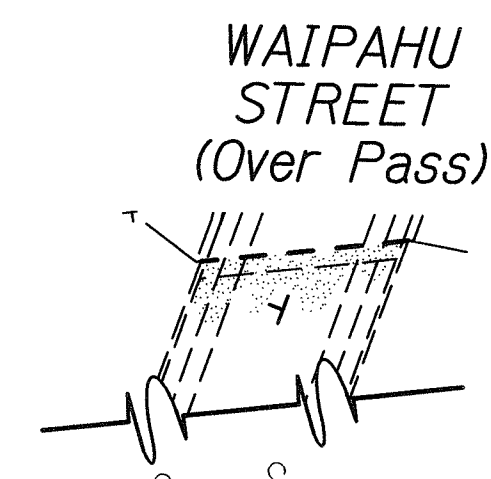
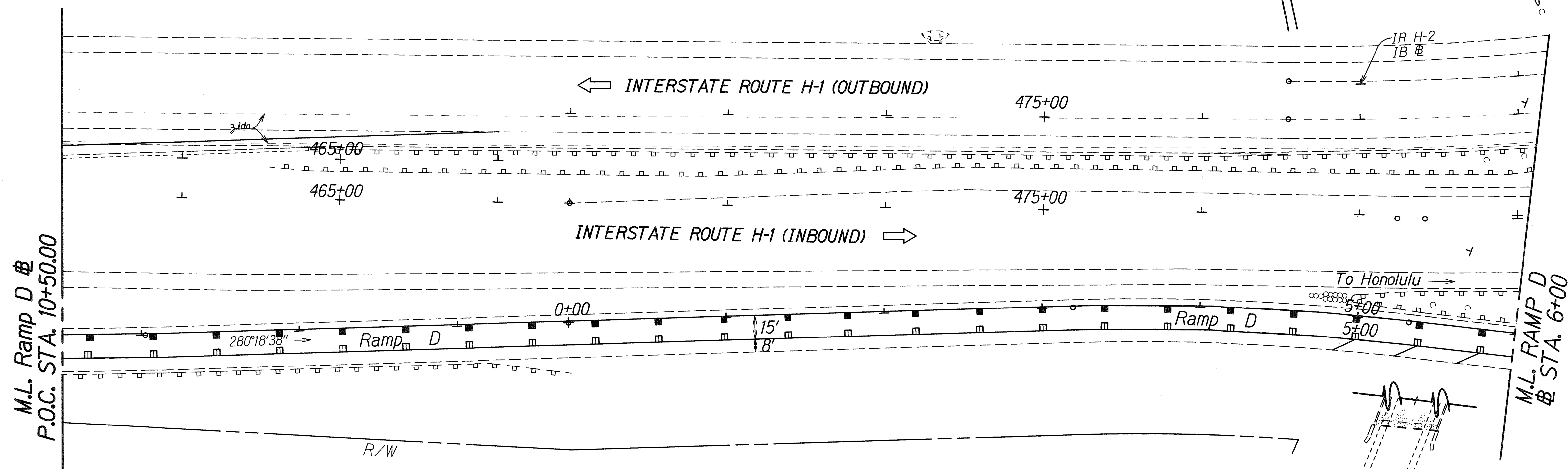
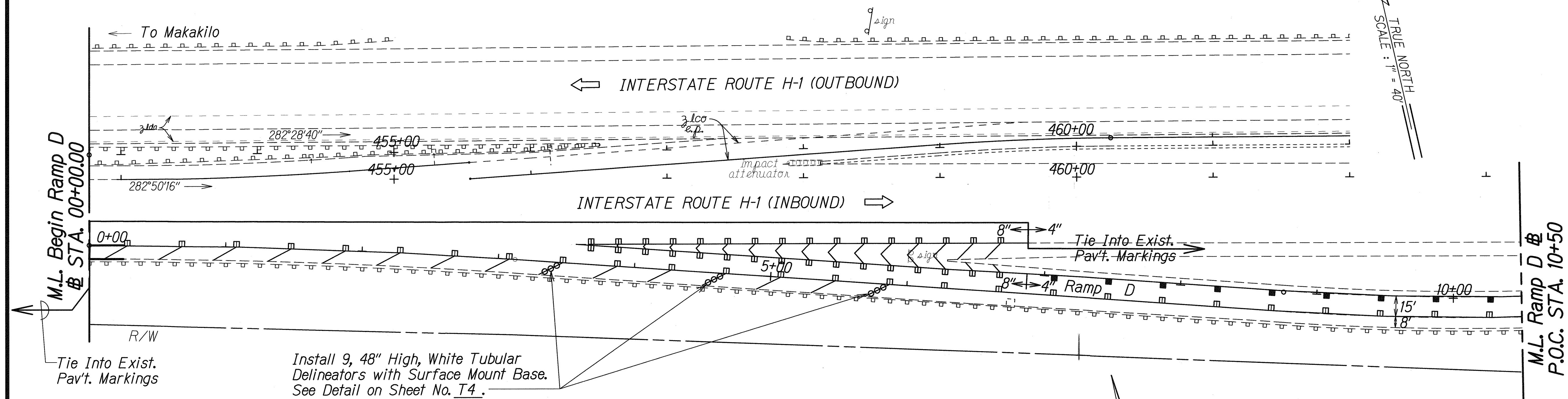
SHEET No. T8 OF 15 SHEETS

LEGEND FOR AS-BUILT POSTINGS

| | |
|--|-------------------------------------|
| | Squiggly line for as-built deletion |
| | Double line for as-built deletion |
| | Roadway Text for as-built posting |

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|-------------------|---------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | 6/14/06 |
| NOTE BOOK | |
| DESIGNED BY | P.C. |
| QUANTITIES BY | |
| CHECKED BY | |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1M-HI-1(256) | 2007 | 26 | 32 |



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|-------------------|-------------|-------------|
| SURVEY PLOTTED BY | DATE | 6/12/06 |
| DRAWN BY | DATE | 6/12/06 |
| NOTE BOOK | DESIGNED BY | P.C. |
| QUANTITIES BY | CHECKED BY | N. S. H. H. |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

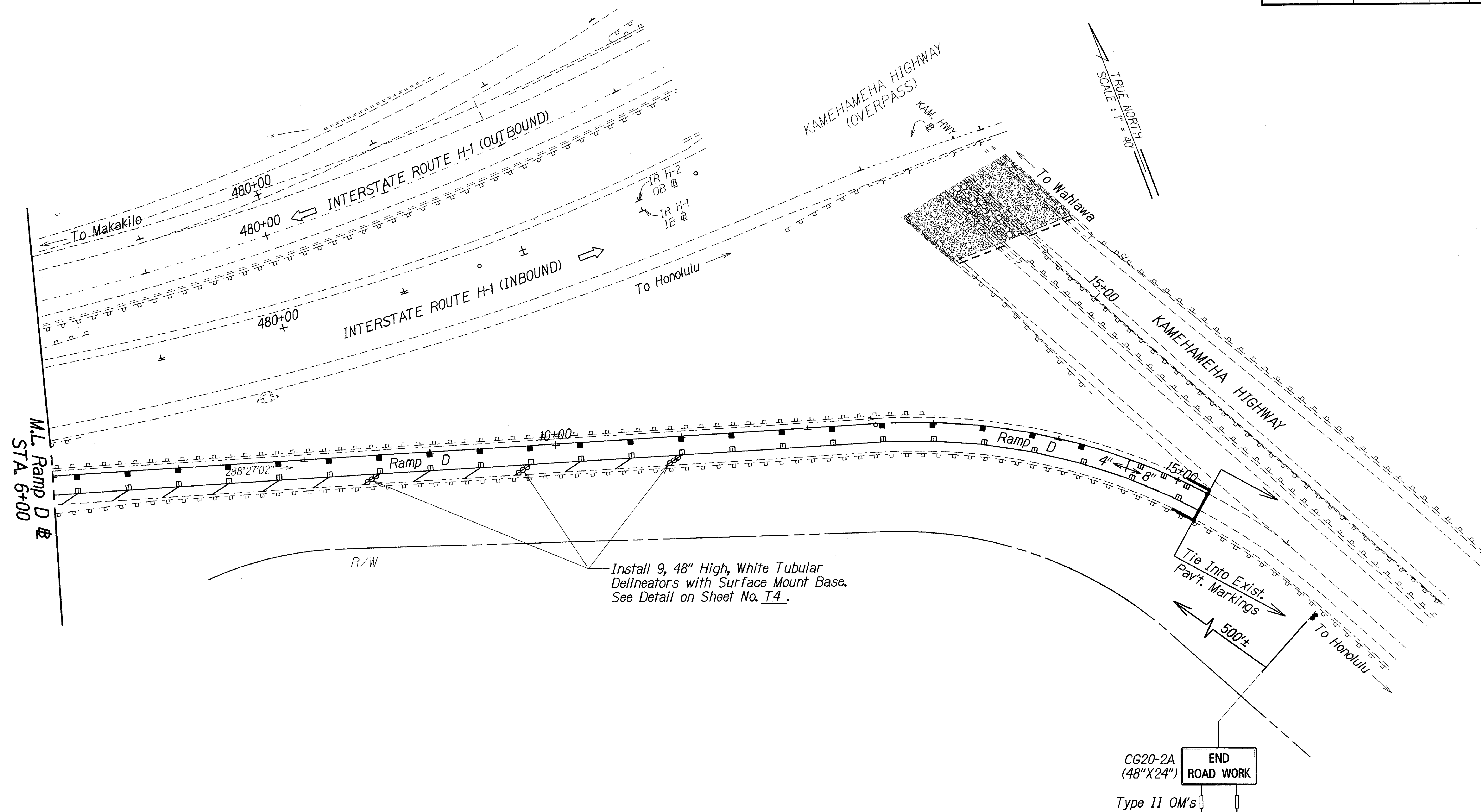
PAVEMENT MARKING & STRIPING PLAN

INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waialeale Stream Bridge to Waipahu Street
Federal Aid Project No. 1M-HI-1(256)

Scale: 1" = 40' Date: June 2006

SHEET No. 79 OF 15 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-HI-K256 | 2007 | 27 | 32 |



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| ORIGINAL PLAN | DATE | 6/4/06 |
| SURVEY PLOTTED BY | | |
| DRAWN BY | | |
| TRACED BY | | |
| NOTED BY | | |
| CHECKED BY | | |
| DATE | | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING

STRIPING PLAN

INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waialeale Stream Bridge to Waipahu Street
Federal Aid Project No. IM-HI-K256

Scale: 1" = 40' Date: June 2006

SHEET No. T10 OF 15 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-HI-1(256) | 2007 | 29 | 32 |

M.L. RAMP D @ STA. 13+00
See Plan Sheet No. 10.

TRUE NORTH
SCALE: 1" = 40'

ROAD WORK AHEAD
CW20-1Ad (48"X48")
Type II OM's

To Waiānae

Tie Into Exist. Pav't. Marking

PAIWA STREET

55+00
55+00

To Waikēle

To Honolulu
M.L. PAIWA STREET N.B.
STA. 47+00

STATE JURISDICTION
CITY JURISDICTION

END ROAD WORK
CG20-2A (48"X24")
Type II OM's

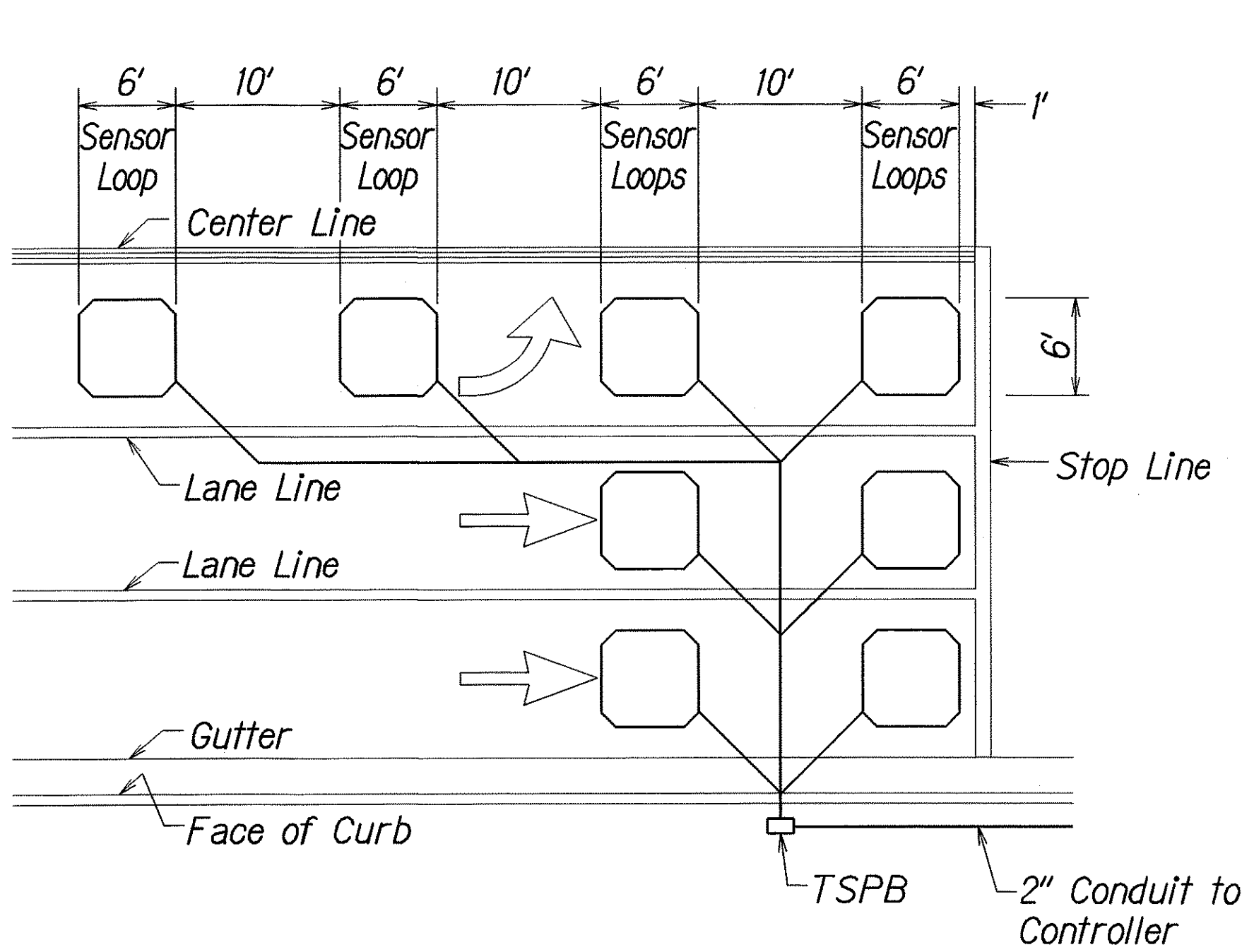
M.L. RAMP A @ STA. 21+00
See Plan Sheet No. 11.

| | |
|---------------|---------|
| DESIGNED BY | DATE |
| DRAWN BY | 6/14/06 |
| CHECKED BY | |
| NOTED BY | |
| QUANTITIES BY | |
| DATE | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PAVEMENT MARKING & STRIPING PLAN
INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waikēle Stream Bridge to Waipahu Street
Federal Aid Project No. IM-HI-1(256)
Scale: 1" = 40' Date: June 2006

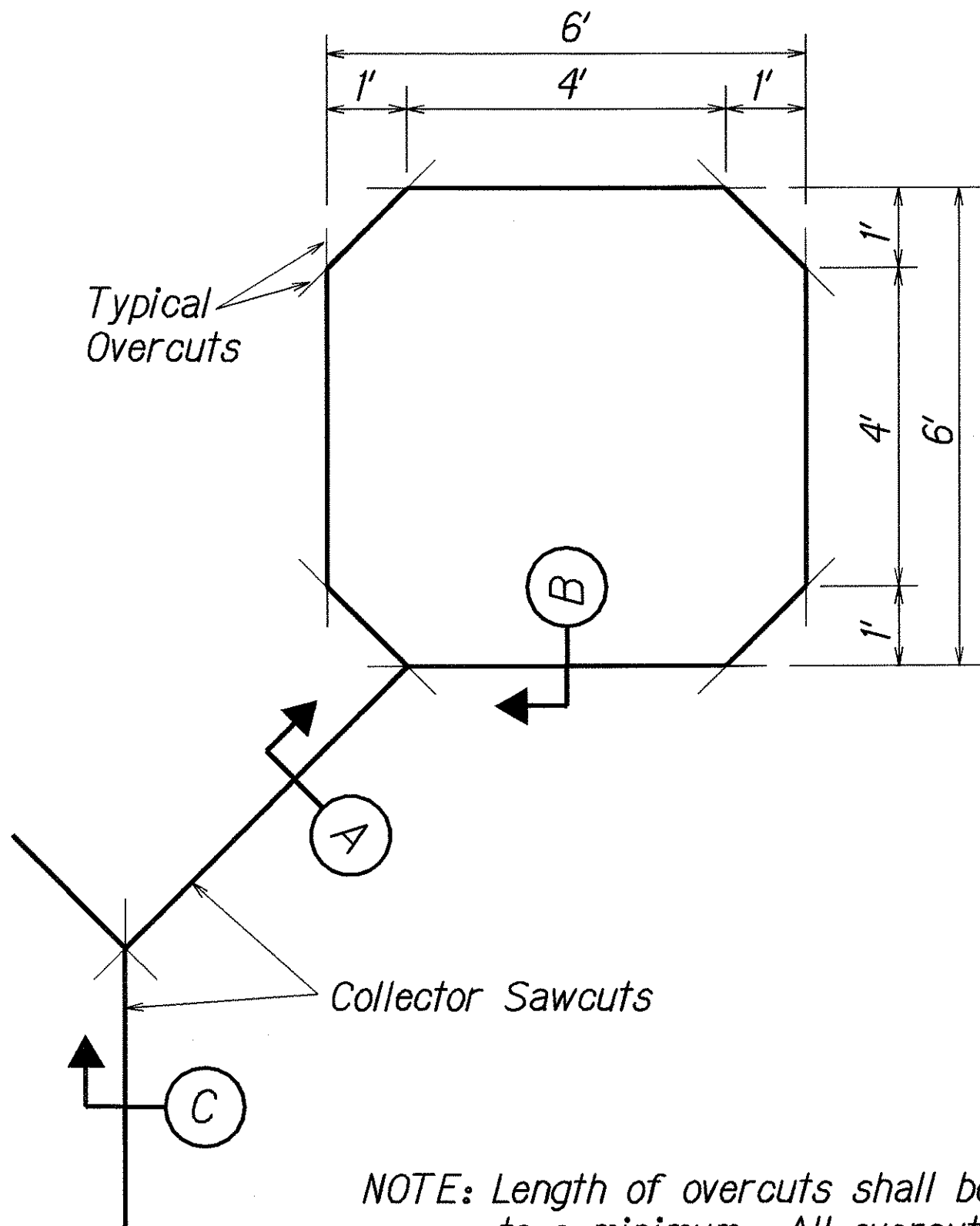
SHEET No. 112 OF 15 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1M-HI-1(256) | 2007 | 30 | 32 |



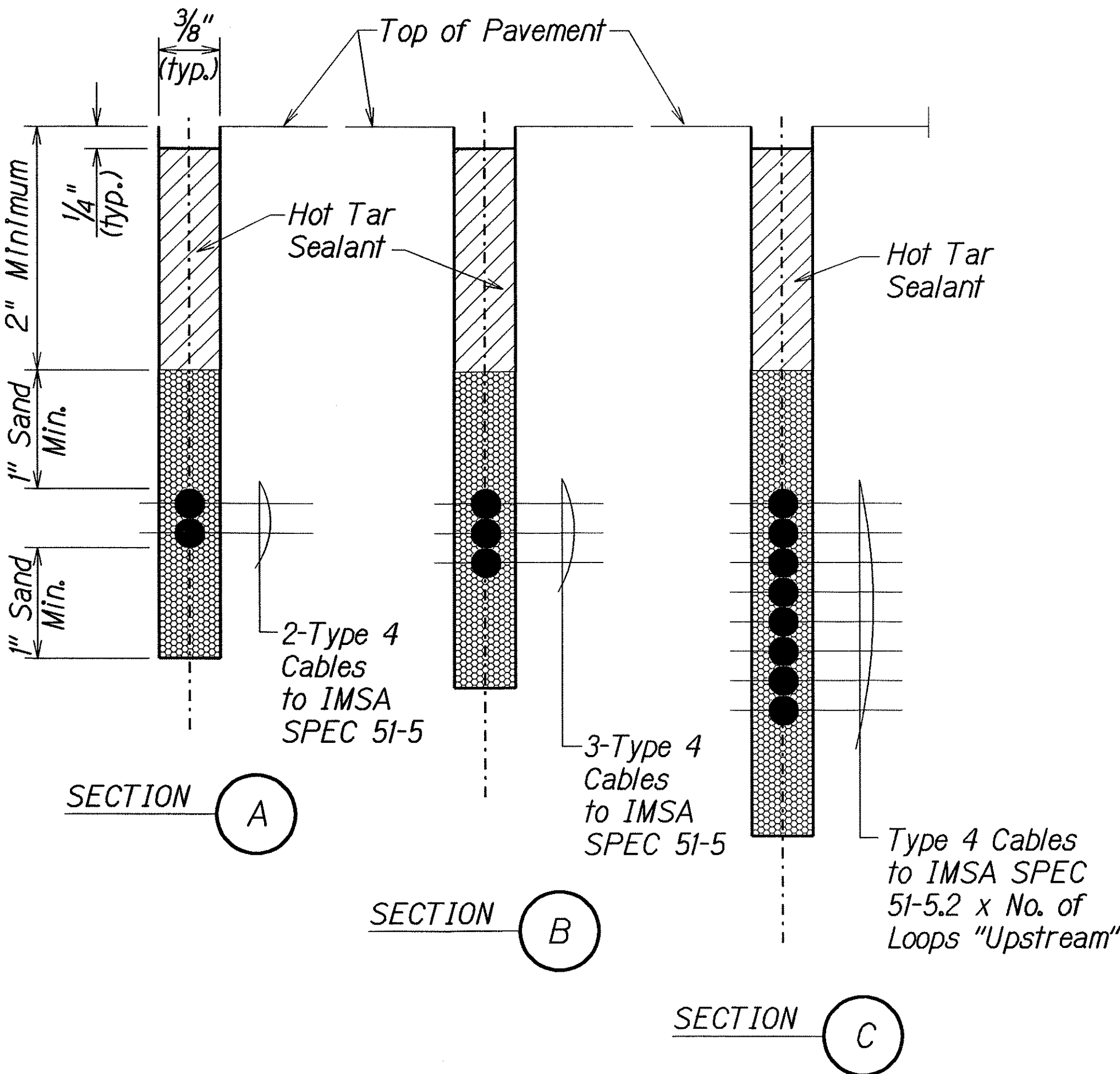
- NOTES:
- Center sensor loops in lanes.
 - Collector cables shall be twisted 2 turns per foot.
 - Number of loops and locations vary. See project plans.
 - Number and locations of collector sawcuts may be varied in the field to suit.

TYPICAL SENSOR LOOP LAYOUT

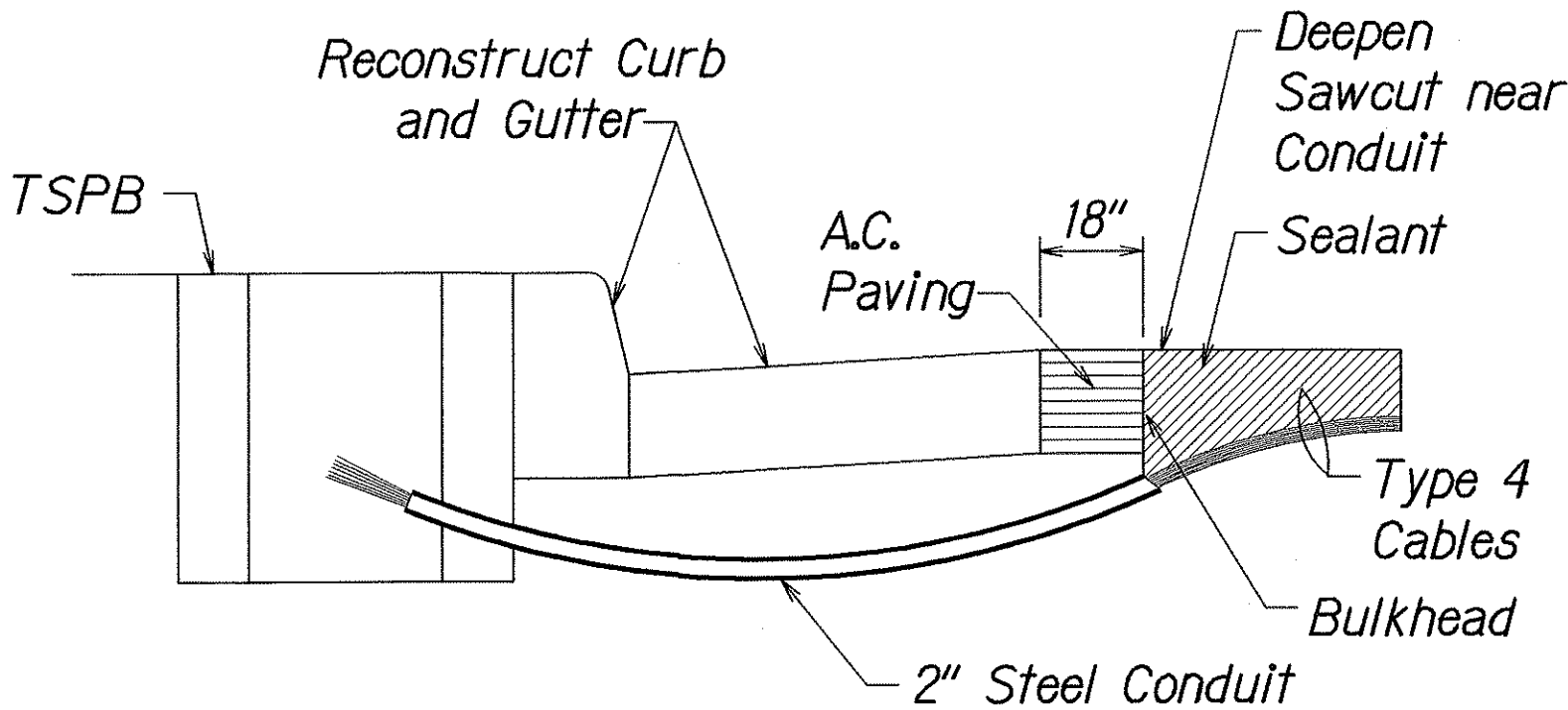


NOTE: Length of overcuts shall be kept to a minimum. All overcuts shall be back filled with hot tar.

TYPICAL SENSOR LOOP SAWCUT DETAIL

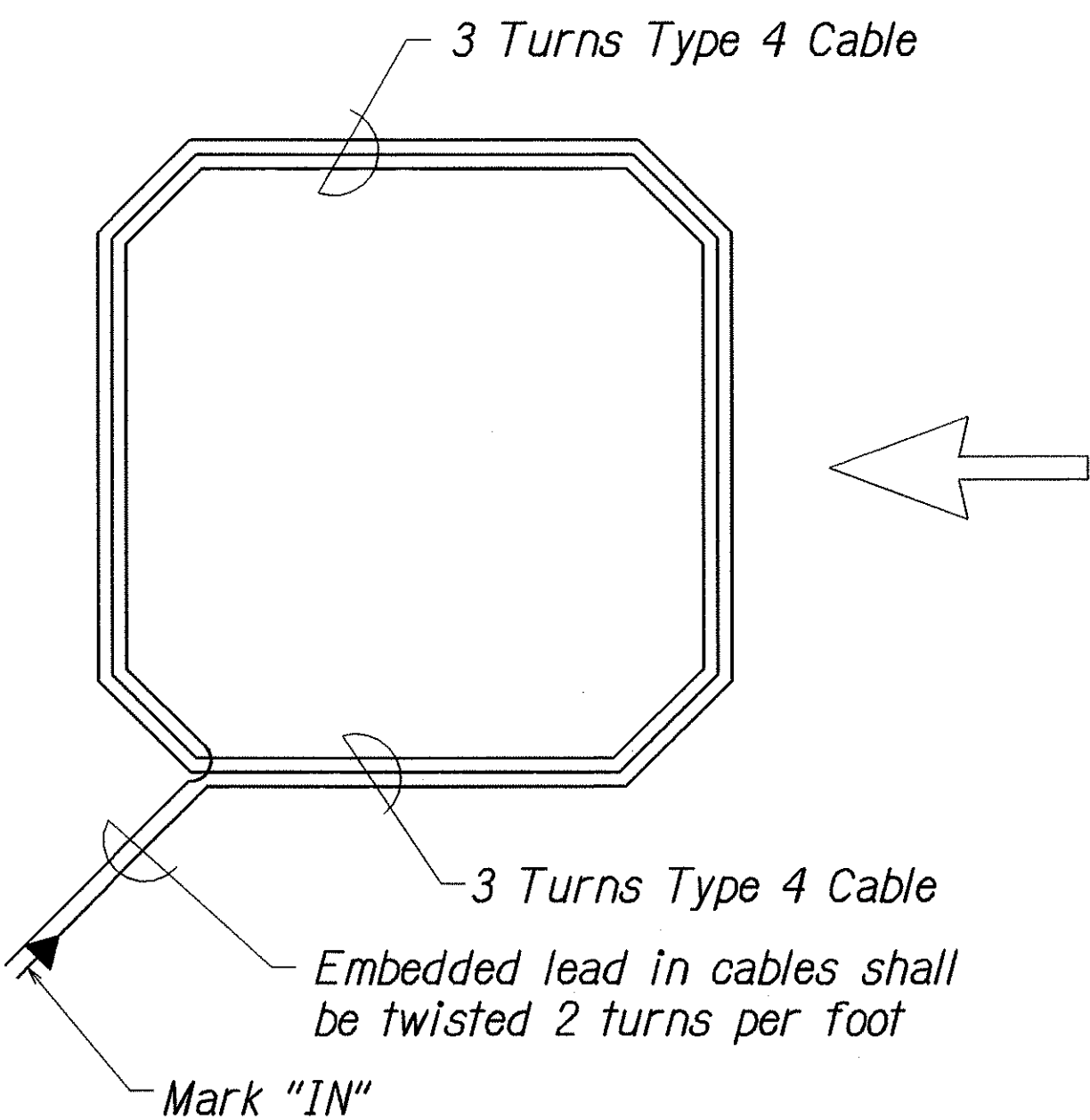


TYPICAL SECTION THROUGH SENSOR LOOP



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

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

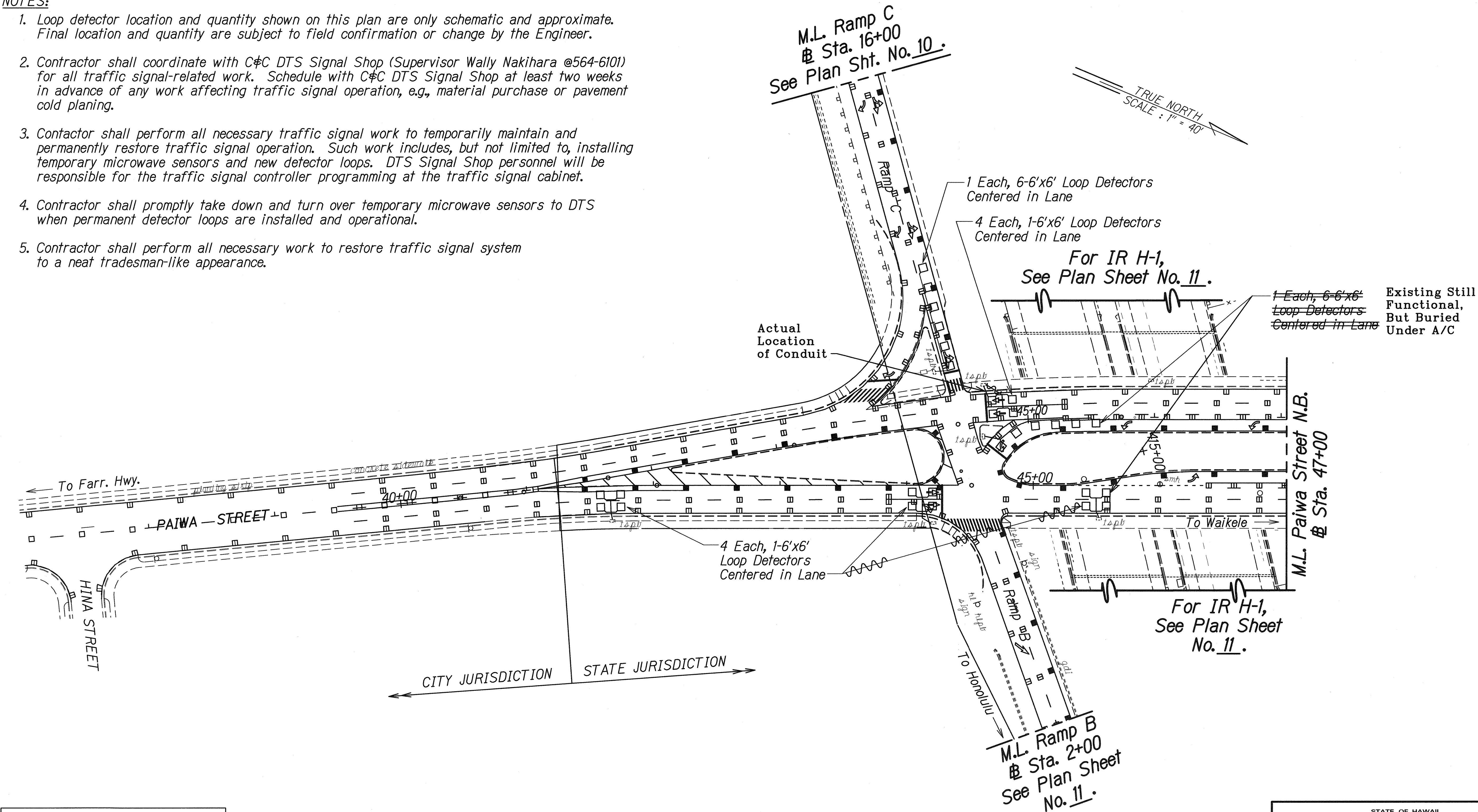
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS
INTERSTATE ROUTE H-1
PAVEMENT PREVENTIVE MAINTENANCE
Waialeale Stream Bridge to Waipahu Street
Federal Aid Project No. 1M-HI-1(256)
Not to Scale Date: June 2006

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | IM-H1-1(256) | 2007 | 31 | 32 |

NOTES:

1. Loop detector location and quantity shown on this plan are only schematic and approximate. Final location and quantity are subject to field confirmation or change by the Engineer.
2. Contractor shall coordinate with C&C DTS Signal Shop (Supervisor Wally Nakihara @564-6101) for all traffic signal-related work. Schedule with C&C DTS Signal Shop at least two weeks in advance of any work affecting traffic signal operation, e.g., material purchase or pavement cold planing.
3. Contactor shall perform all necessary traffic signal work to temporarily maintain and permanently restore traffic signal operation. Such work includes, but not limited to, installing temporary microwave sensors and new detector loops. DTS Signal Shop personnel will be responsible for the traffic signal controller programming at the traffic signal cabinet.
4. Contractor shall promptly take down and turn over temporary microwave sensors to DTS when permanent detector loops are installed and operational.
5. Contractor shall perform all necessary work to restore traffic signal system to a neat tradesman-like appearance.



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|-------------------|---------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | 5/14/06 |
| DESIGNED BY | |
| NOTED BY | |
| CHECKED BY | |

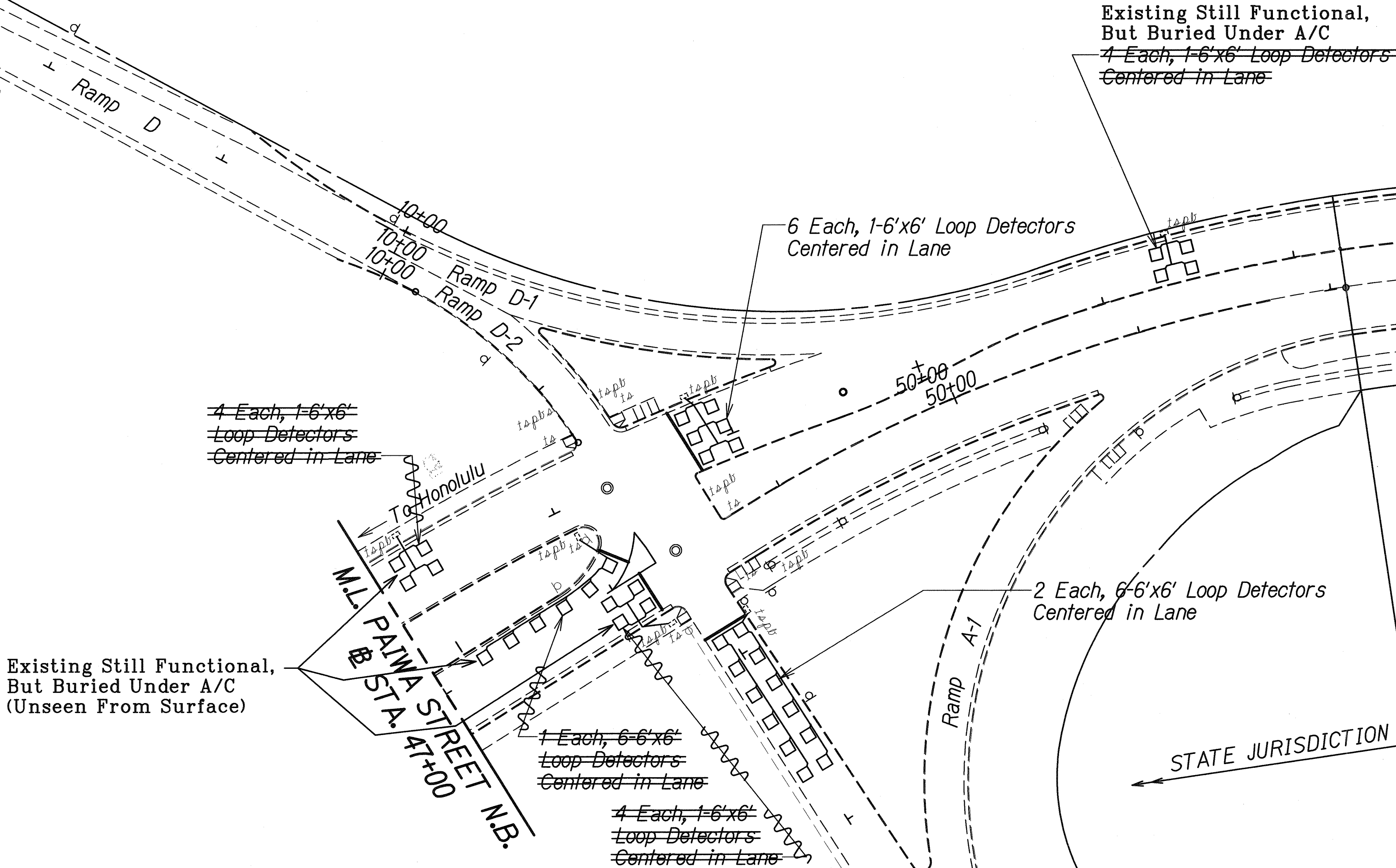
| LEGEND FOR AS-BUILT POSTINGS | |
|------------------------------|-------------------------------------|
| | Squiggly line for as-built deletion |
| | Double line for as-built deletion |
| | Text for as-built posting |

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|--|-----------------|
| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION | |
| LOOP DETECTOR PLAN | |
| INTERSTATE ROUTE H-1 PAVEMENT PREVENTIVE MAINTENANCE Waikale Stream Bridge to Waipahu Street Federal Aid Project No. IM-H1-1(256) | |
| Scale: 1"= 40' | Date: June 2006 |
| SHEET No. T14 OF 15 SHEETS | |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | 1M-H1-1(256) | 2007 | 32 | 32 |

M.L. RAMP D @ STA. 13+00
See Plan Sheet No. 10.

TRUE NORTH
SCALE : 1" = 40'



NOTES:

1. Loop detector location and quantity shown on this plan are only schematic and approximate. Final location and quantity are subject to field confirmation or change by the Engineer.
2. Contractor shall coordinate with C&C DTS Signal Shop (Supervisor Wally Nakihara @564-6101) for all traffic signal-related work. Schedule with C&C DTS Signal Shop at least two weeks in advance of any work affecting traffic signal operation, e.g., material purchase or pavement cold planing.
3. Contractor shall perform all necessary traffic signal work to temporarily maintain and permanently restore traffic signal operation. Such work includes, but not limited to, installing temporary microwave sensors and new detector loops. DTS Signal Shop personnel will be responsible for the traffic signal controller programming at the traffic signal cabinet.
4. Contractor shall promptly take down and turn over temporary microwave sensors to DTS when permanent detector loops are installed and operational.
5. Contractor shall perform all necessary work to restore traffic signal system to a neat tradesman-like appearance.

| | |
|-------------------|---------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | 6/12/06 |
| DESIGNED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| REFERENCE | |
| NO. 02/11/06/02 | |

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

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|--|-----------------|
| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION | |
| LOOP DETECTOR PLAN | |
| INTERSTATE ROUTE H-1 PAVEMENT PREVENTIVE MAINTENANCE Waikale Stream Bridge to Waipahu Street Federal Aid Project No. 1M-H1-1(256) | |
| Scale: 1"= 40' | Date: June 2006 |
| SHEET No. T15 OF 15 SHEETS | |

"AS-BUILT"