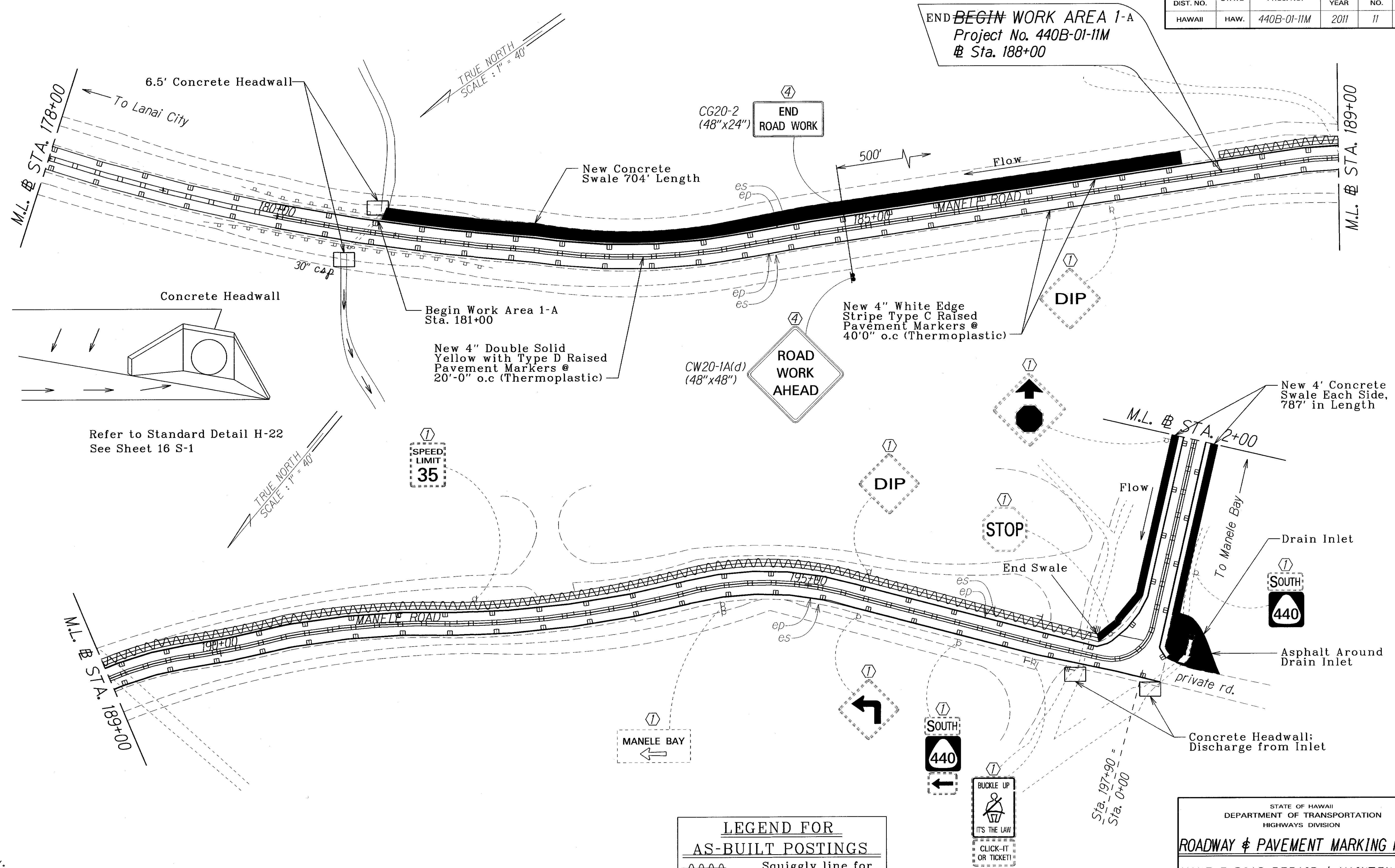


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	440B-01-11M	2011	11	16



Refer to Standard Detail H-22
See Sheet 16 S-1

KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. & Install New Sign(s) & Post(s)
- ④ Install New Sign(s) & Post(s)

LEGEND FOR AS-BUILT POSTINGS

~~~~~ Squiggly line for as-built deletion

100-00 Double line for as-built deletion

Roadway Text for as-built posting

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY & PAVEMENT MARKING PLAN**

**MANELE ROAD REPAIR & MAINTENANCE**

At Various Locations  
Project No. 440B-01-11M

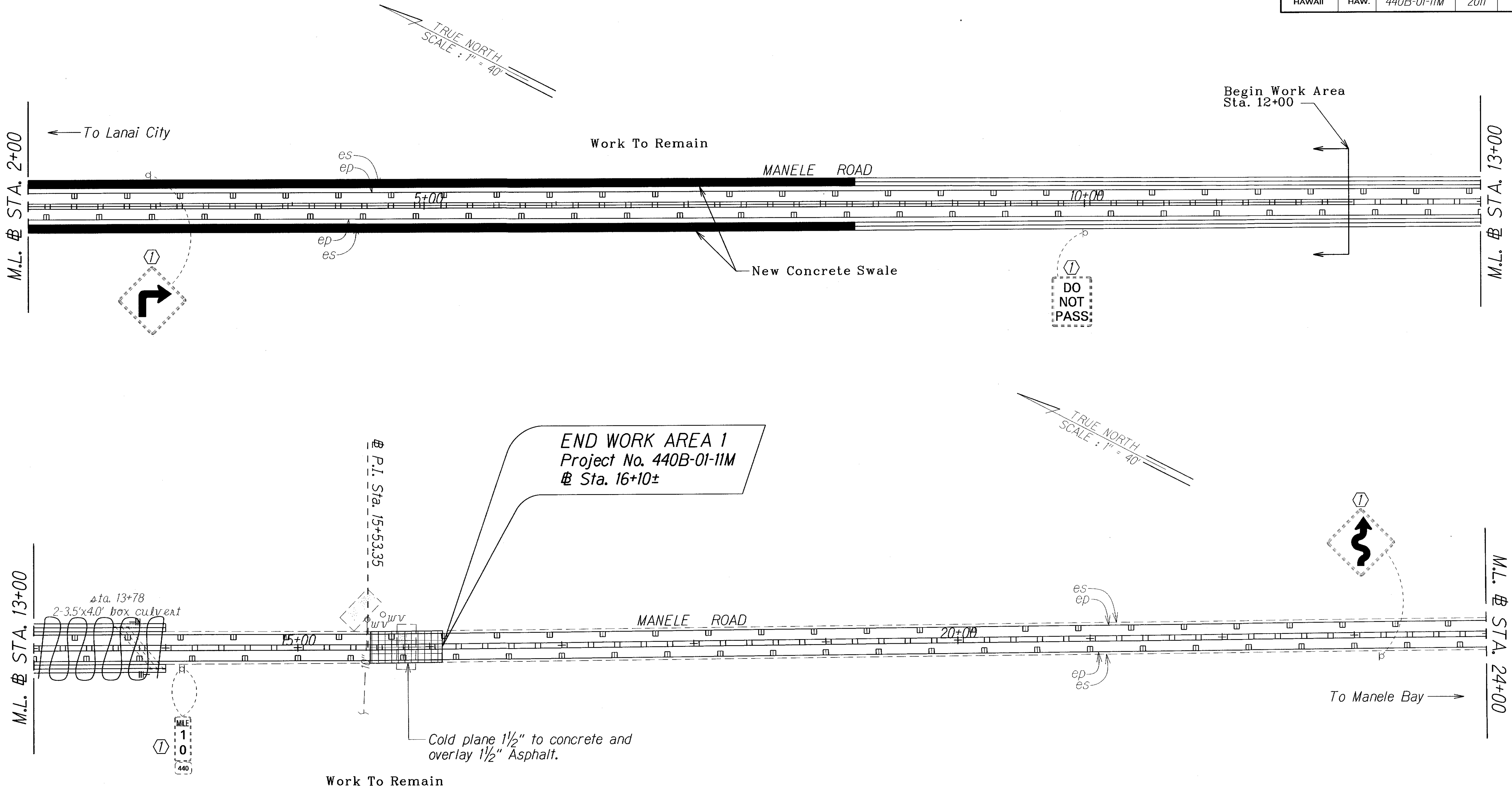
Scale: 1" = 40' Date: June, 2011

SHEET No. 1 OF 6 SHEETS

"AS-BUILT"



| FED. ROAD DIST. NO. | STATE | PROJ. NO.   | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 440B-01-11M | 2011        | 12        | 16           |



|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY          |      |
| TRACED BY         |      |
| NOTED BY          |      |
| CHECKED BY        |      |
| ORIGINAL PLAN     |      |
| NOTE BOOK         |      |
| DATE              |      |
| NO.               |      |

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

- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
  - ② Remove Exist. Sign(s) & Post(s)
  - ③ Remove Exist. & Install New Sign(s) & Post(s)
  - ④ Install New Sign(s) & Post(s)

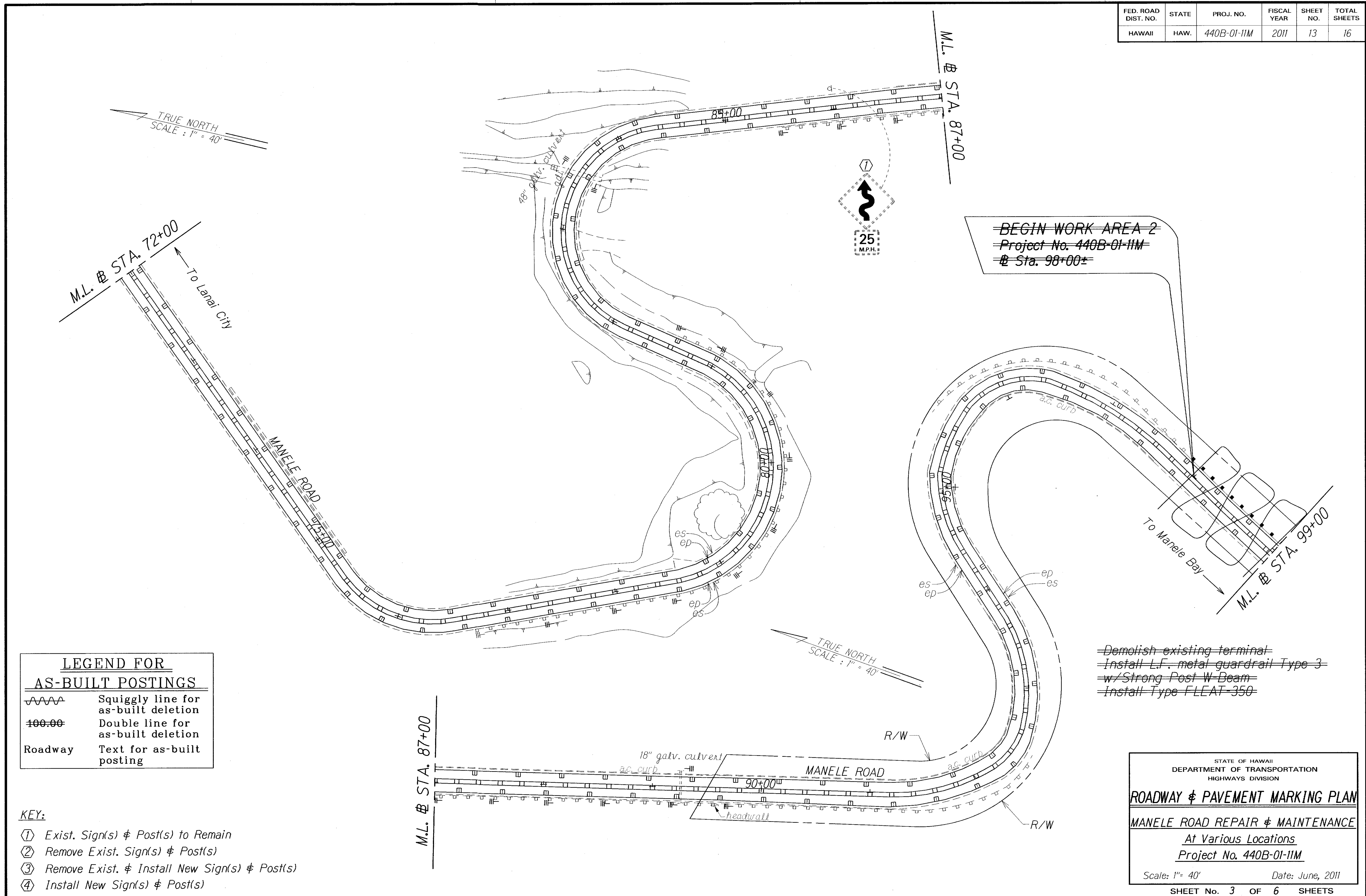
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ROADWAY & PAVEMENT MARKING PLAN  
MANELE ROAD REPAIR & MAINTENANCE  
At Various Locations  
Project No. 440B-01-11M  
Scale: 1"= 40'  
Date: June, 2011

SHEET No. 2 OF 6 SHEETS

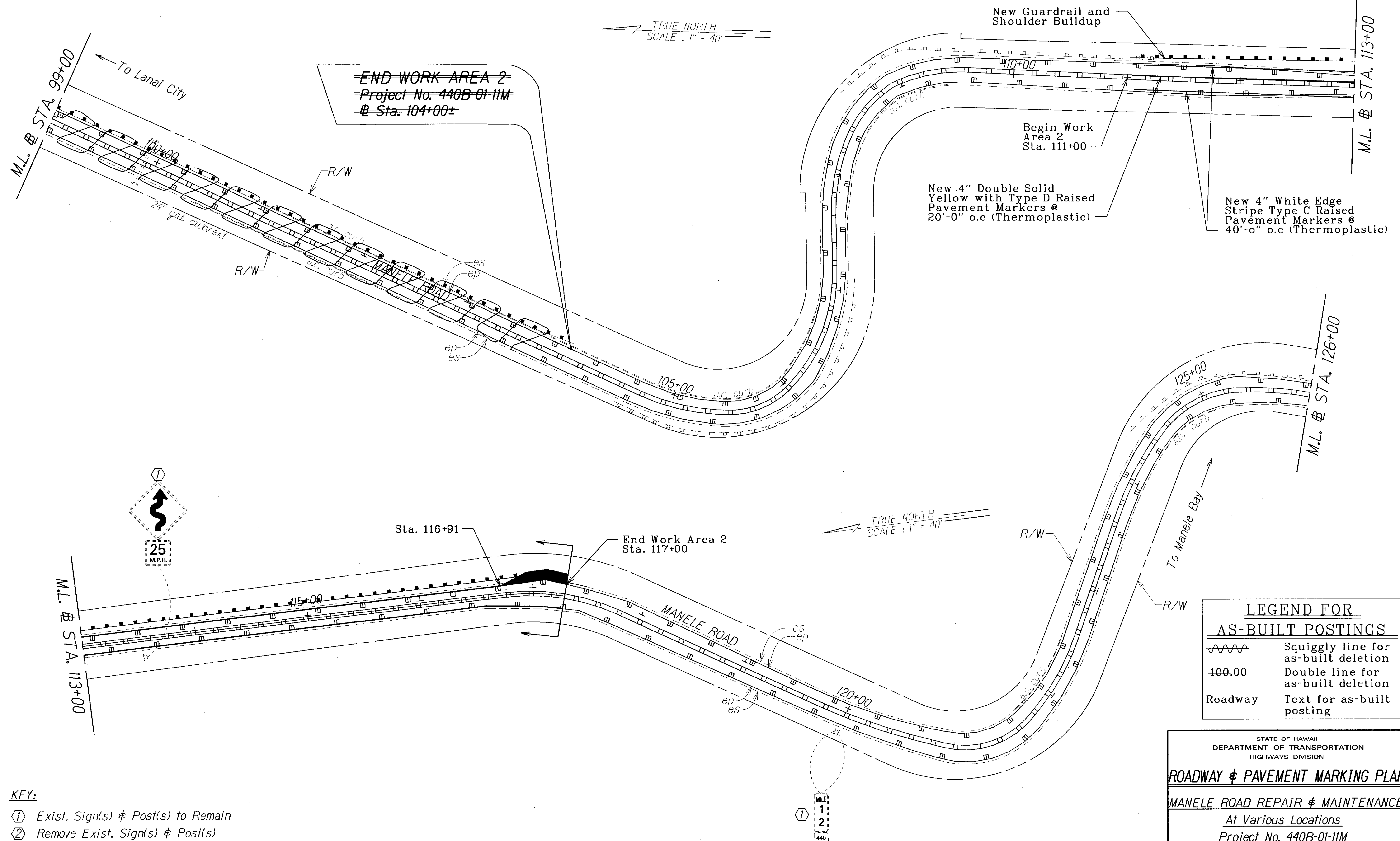


| FED. ROAD DIST. NO. | STATE | PROJ. NO.   | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 440B-01-11M | 2011        | 13        | 16           |





| FED. ROAD DIST. NO. | STATE | PROJ. NO.   | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 440B-01-11M | 2011        | 14        | 16           |



#### KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. & Install New Sign(s) & Post(s)
- ④ Install New Sign(s) & Post(s)

#### 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

**ROADWAY & PAVEMENT MARKING PLAN**

**MANELE ROAD REPAIR & MAINTENANCE**

*At Various Locations*

Project No. 440B-01-11M

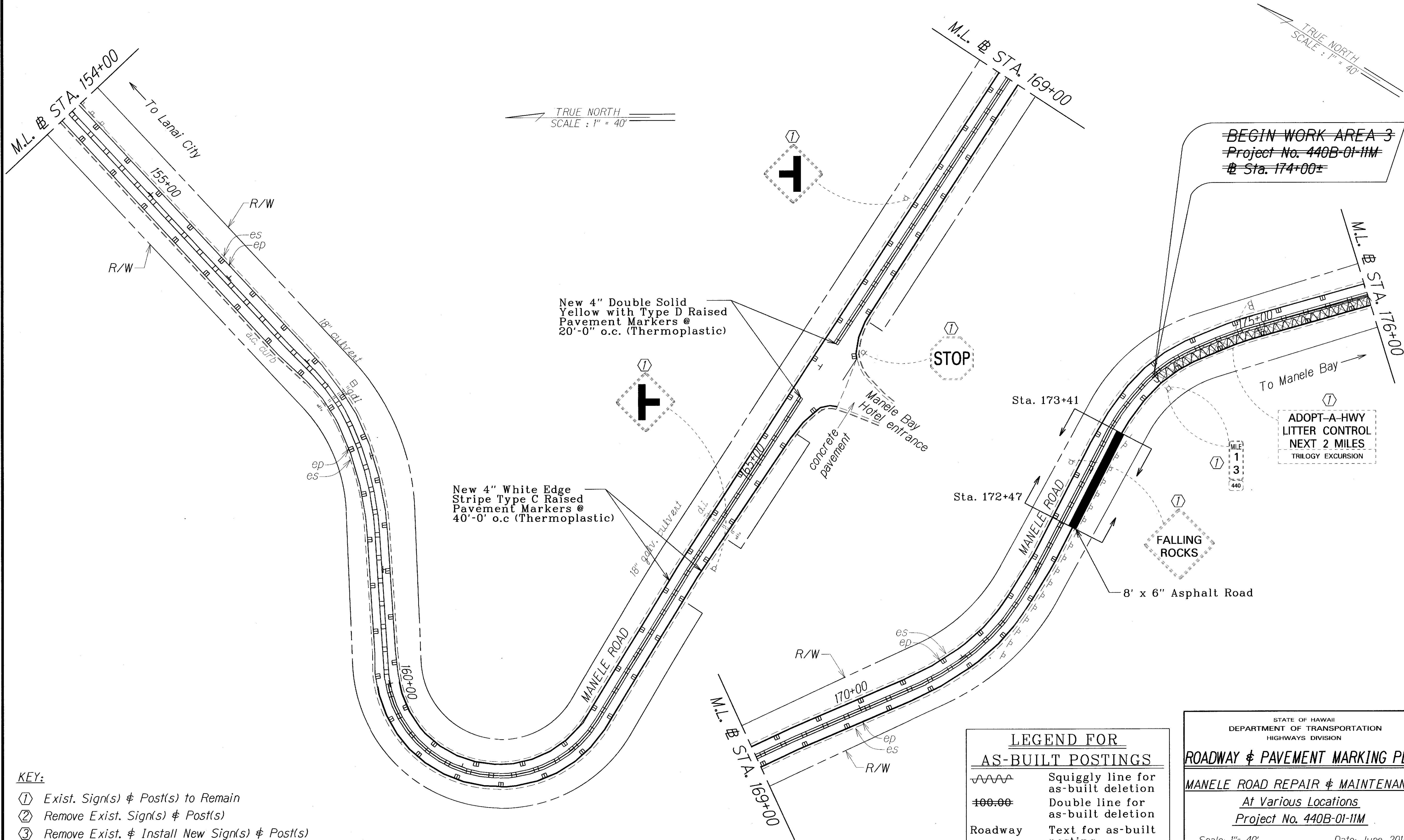
Scale: 1" = 40' Date: June, 2011

SHEET No. 4 OF 6 SHEETS

"AS-BUILT"



| FED. ROAD DIST. NO. | STATE | PROJ. NO.   | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 440B-01-11M | 2011        | 15        | 16           |



KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. & Install New Sign(s) & Post(s)
- ④ Install New Sign(s) & Post(s)

| LEGEND FOR<br>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

ROADWAY & PAVEMENT MARKING PLAN  
MANELE ROAD REPAIR & MAINTENANCE  
At Various Locations  
Project No. 440B-01-11M

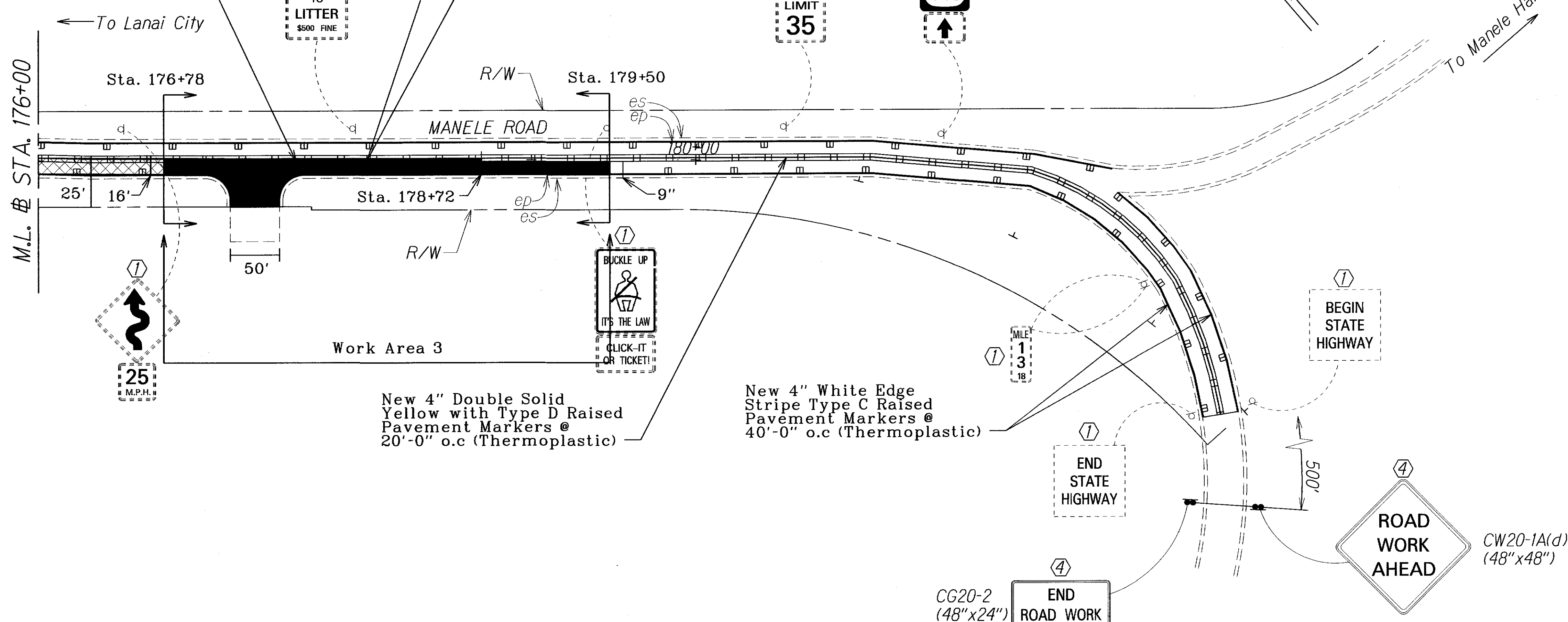
Scale: 1"= 40'  
Date: June, 2011  
SHEET No. 5 OF 6 SHEETS

|               |                   |      |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK     | DRAWN BY          |      |
| DESIGNED BY   | CHECKED BY        |      |
| CHECKED BY    |                   |      |



| FED. ROAD DIST. NO. | STATE | PROJ. NO.   | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 440B-01-11M | 2011        | 16        | 16           |

Asphalt on Road  
(16', 25' & 9' widths x 6" depth)



END WORK AREA 3  
Project No. 440B-01-11M  
# Sta. 178+00±

New 4" Double Solid  
Yellow with Type D Raised  
Pavement Markers @  
20'-0" o.c (Thermoplastic)

New 4" White Edge  
Stripe Type C Raised  
Pavement Markers @  
40'-0" o.c (Thermoplastic)

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

- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
  - ② Remove Exist. Sign(s) & Post(s)
  - ③ Remove Exist. & Install New Sign(s) & Post(s)
  - ④ Install New Sign(s) & Post(s)

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY & PAVEMENT MARKING PLAN**

**MANELE ROAD REPAIR & MAINTENANCE**  
At Various Locations  
Project No. 440B-01-11M

Scale: 1"= 40' Date: June, 2011

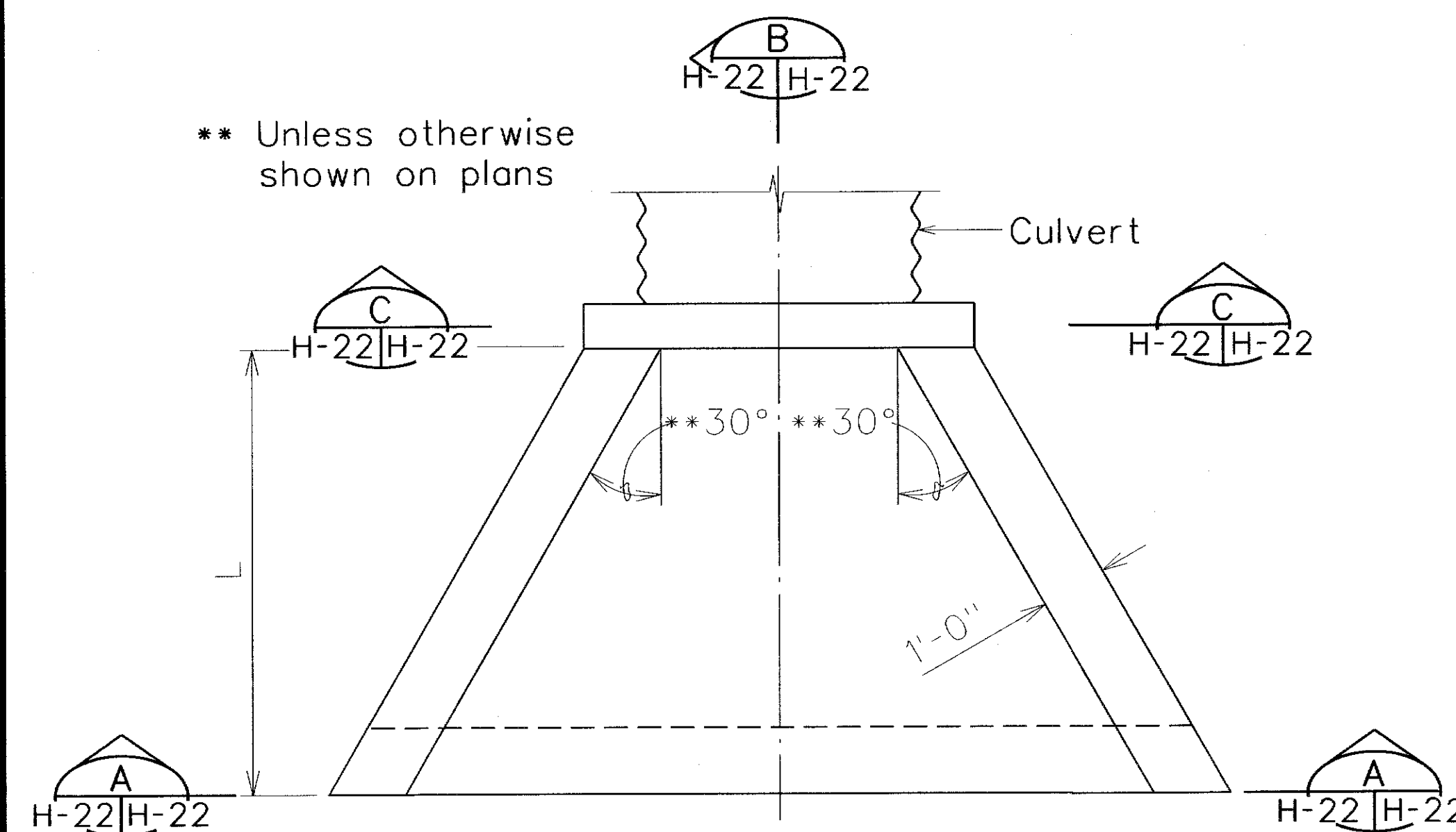
SHEET No. 6 OF 6 SHEETS

"AS-BUILT"

|               |                   |      |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK     | DRAWN BY          |      |
| DESIGNED BY   | CHECKED BY        |      |
| CHECKED BY    |                   |      |

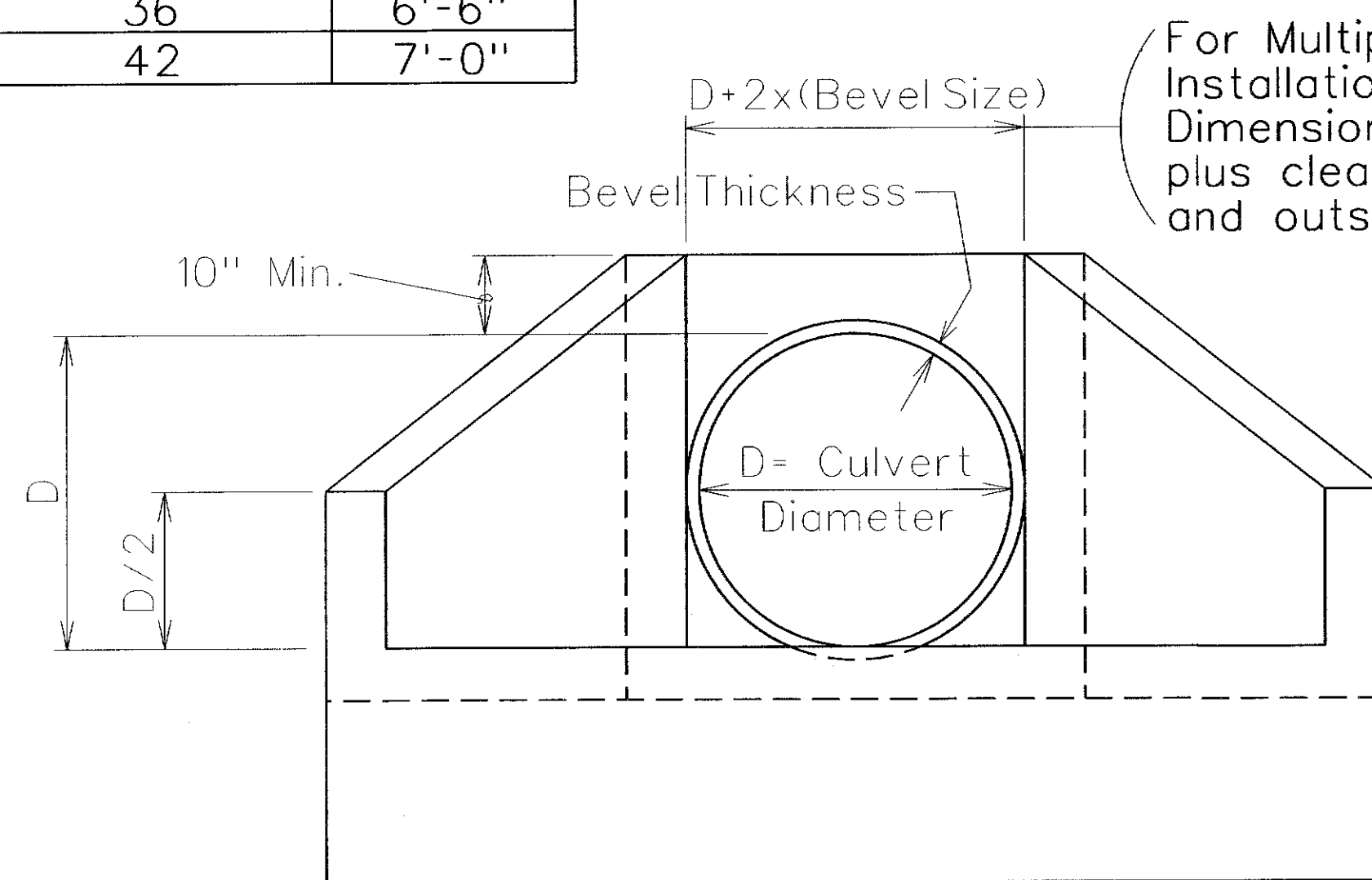


| FED. ROAD DIST. NO. | STATE | PROJ. NO.   | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 440B-01-11M | 2011        | 16 S-1    | 16           |



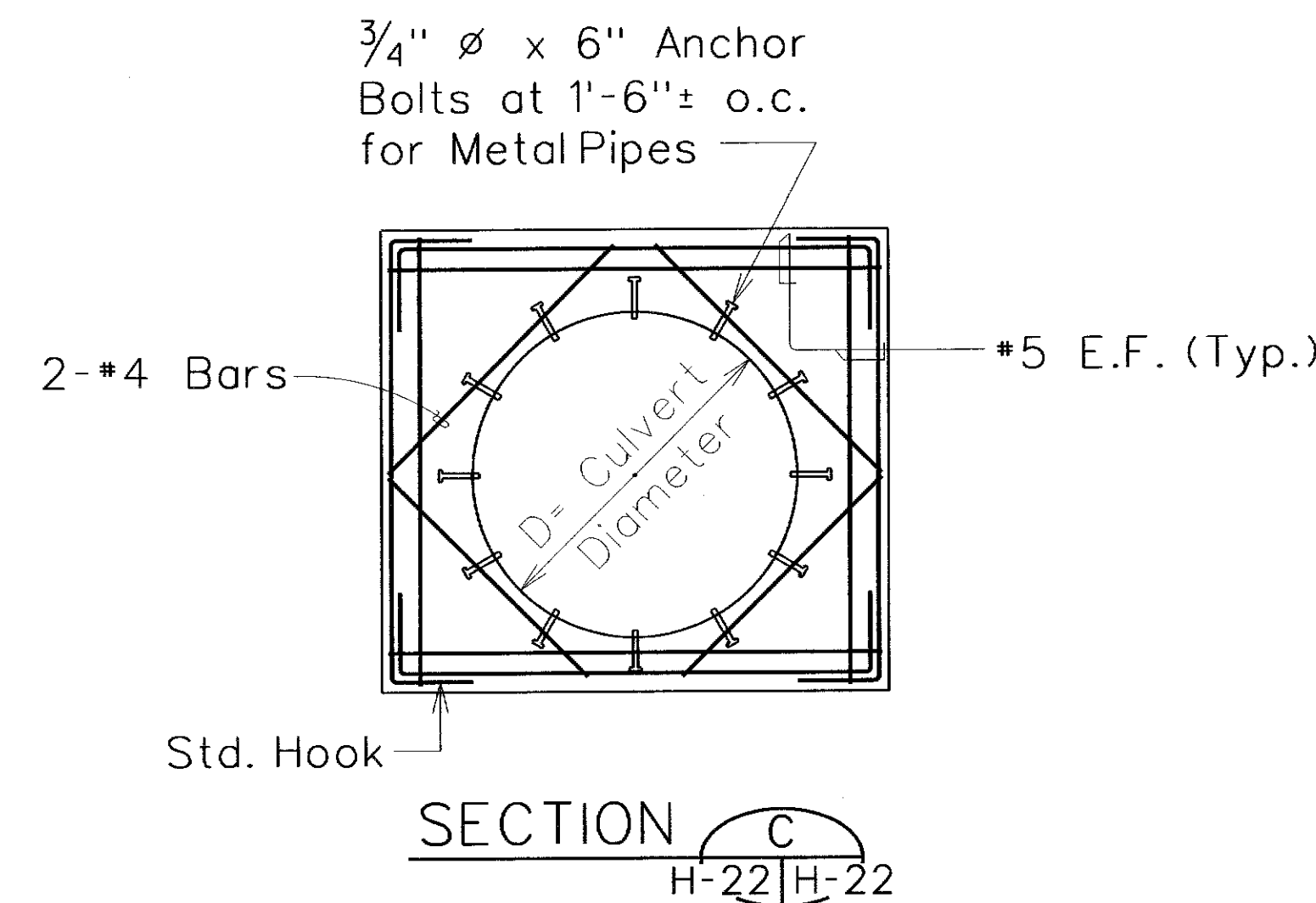
| Culvert Dia. D (Inches) | L (Min.) |
|-------------------------|----------|
| 18                      | 4'-0"    |
| 24                      | 5'-0"    |
| 30                      | 6'-0"    |
| 36                      | 6'-6"    |
| 42                      | 7'-0"    |

PLAN

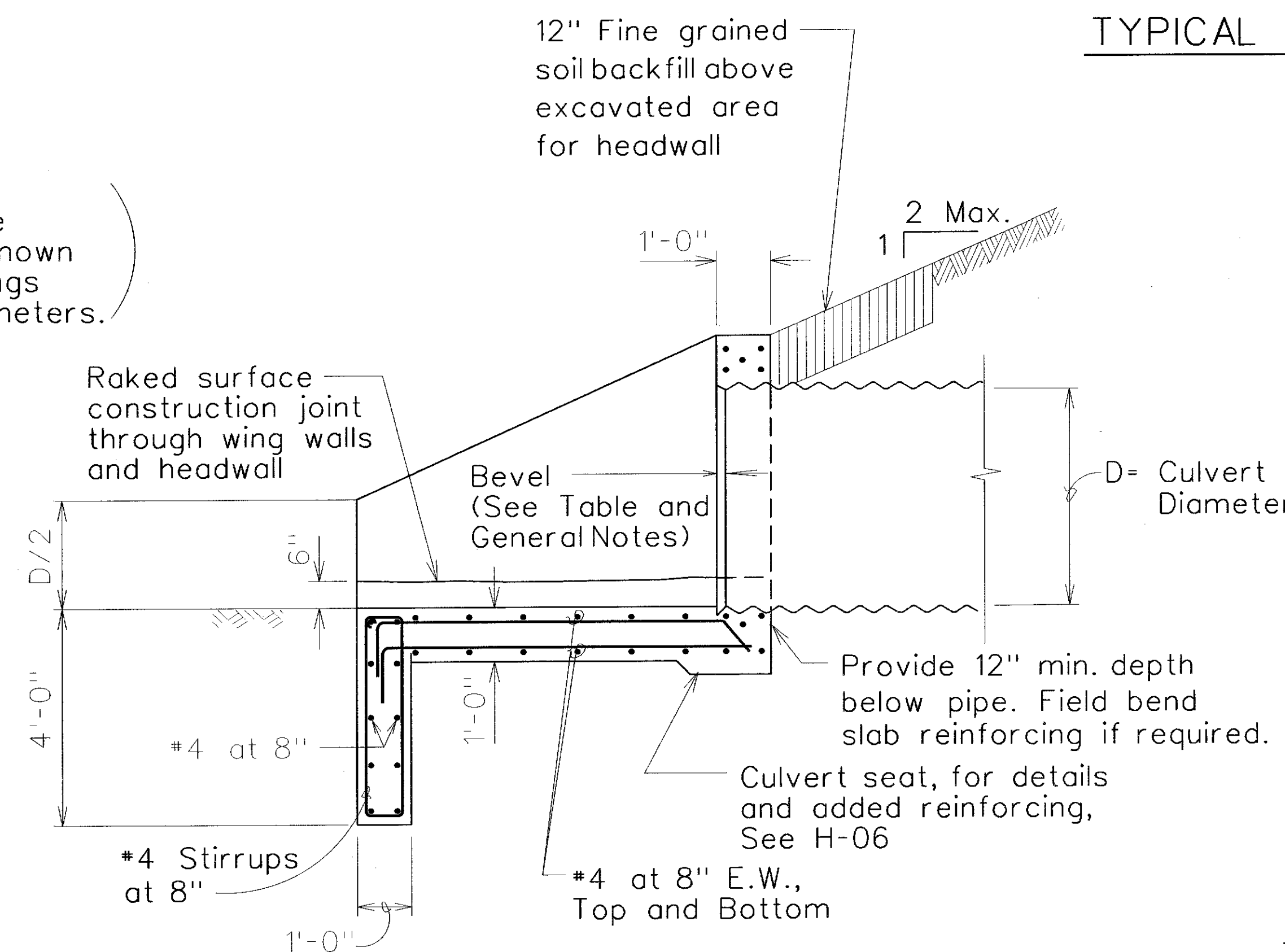


SECTION A  
H-22|H-22

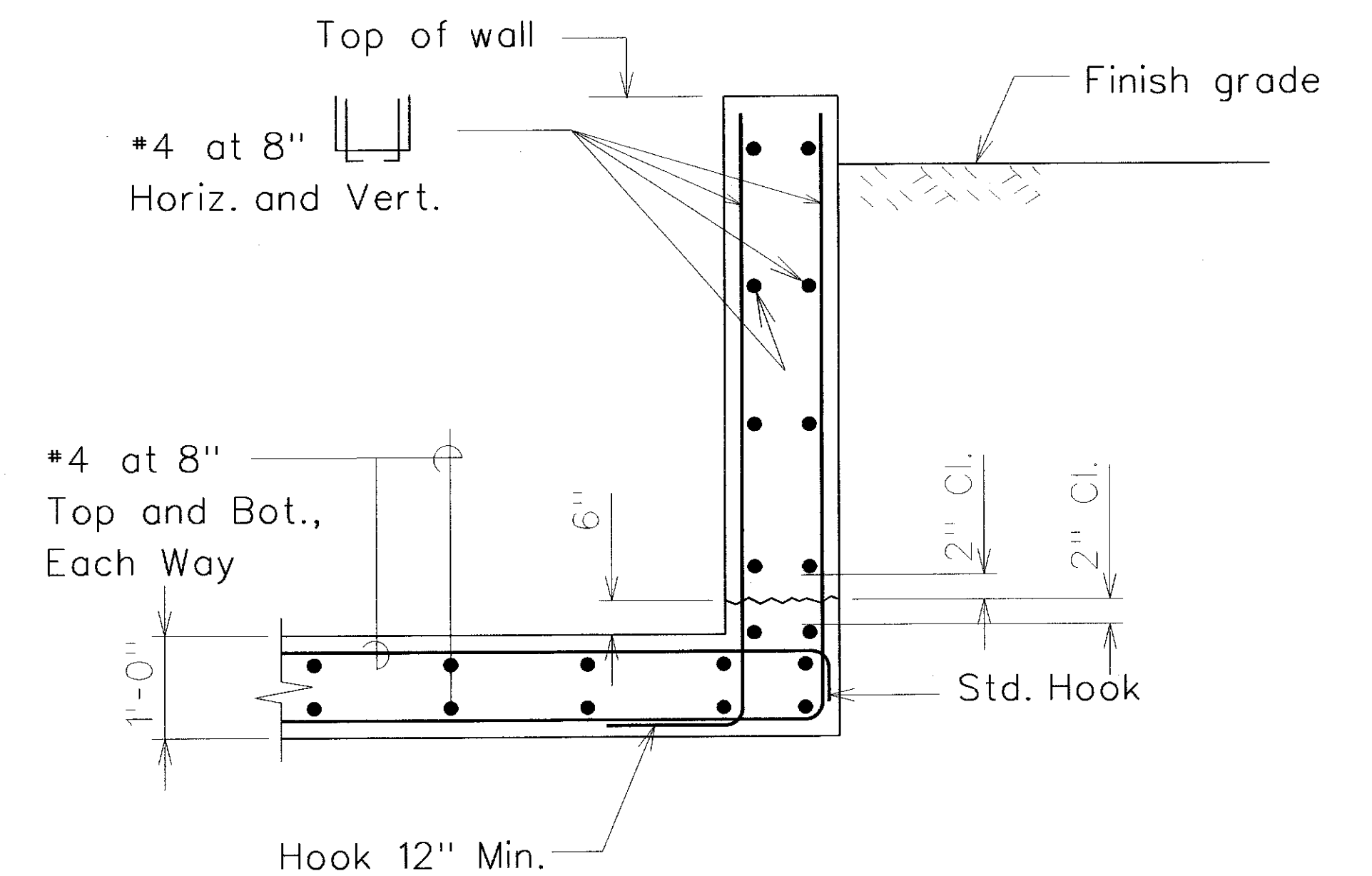
For Multiple Pipe Installations: Use Dimensions as shown plus clear spacings and outside diameters.



SECTION C  
H-22|H-22



SECTION B  
H-22|H-22



TYPICAL WING WALL REINFORCING SECTION

General Notes:

- Construct bevels  $\frac{1}{2}$  in./ft. of culvert diameter or rise. See H-21 for bevel detail.
- The groove or bellend of the concrete culvert may be used in place of the bevels.
- Anchor bolts shall be ASTM A307 and zinc coated.
- Design Criteria
  - Active Horizontal Pressure = 60 pcf (2 to 1 Sloping Backfill, Above Groundwater)
  - Active Vertical Pressure = 30 pcf (2 to 1 Sloping Backfill, Above Groundwater)
  - Strength Bearing Capacity = 2,500 psf
  - Inlet / Outlet Structures were not designed for Extreme Event Load Combination.
- See B-01 for additional notes.

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

| 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<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |
| <b>STANDARD PLAN</b>                                                 |
| <b>INLET/OUTLET STRUCTURE</b>                                        |
| MANELE ROAD REPAIR & MAINTENANCE                                     |
| At Various Locations                                                 |
| Project No. 440B-01-11M                                              |
| Scale: $\frac{1}{2}$ " = 1'                                          |
| Date: June, 2011                                                     |
| SHEET No. 6A OF 6A SHEETS                                            |

INLET/OUTLET STRUCTURE FOR CULVERT SIZES 18 IN. TO 42 IN. DIA.

"AS-BUILT"

16 S-1