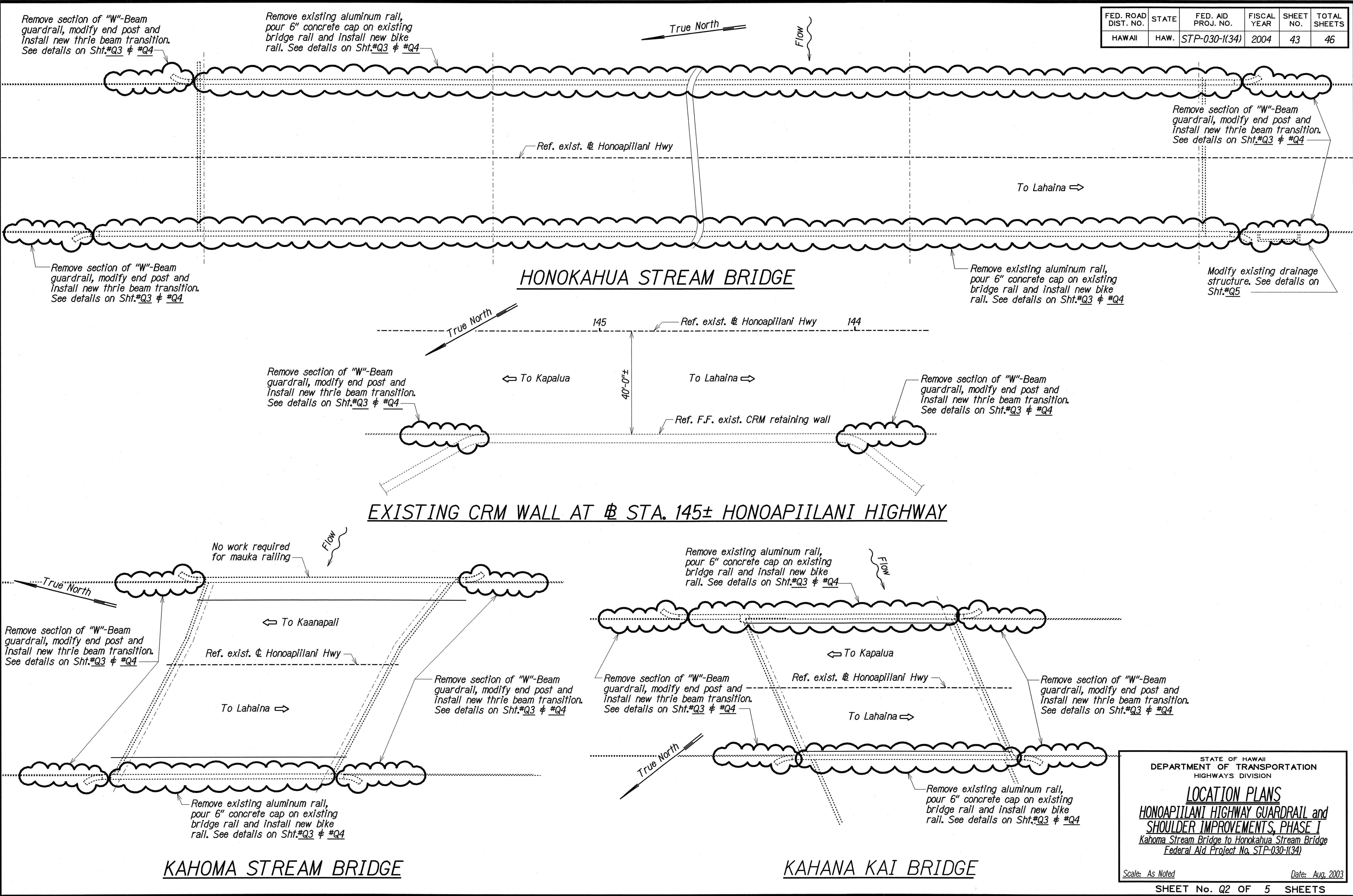


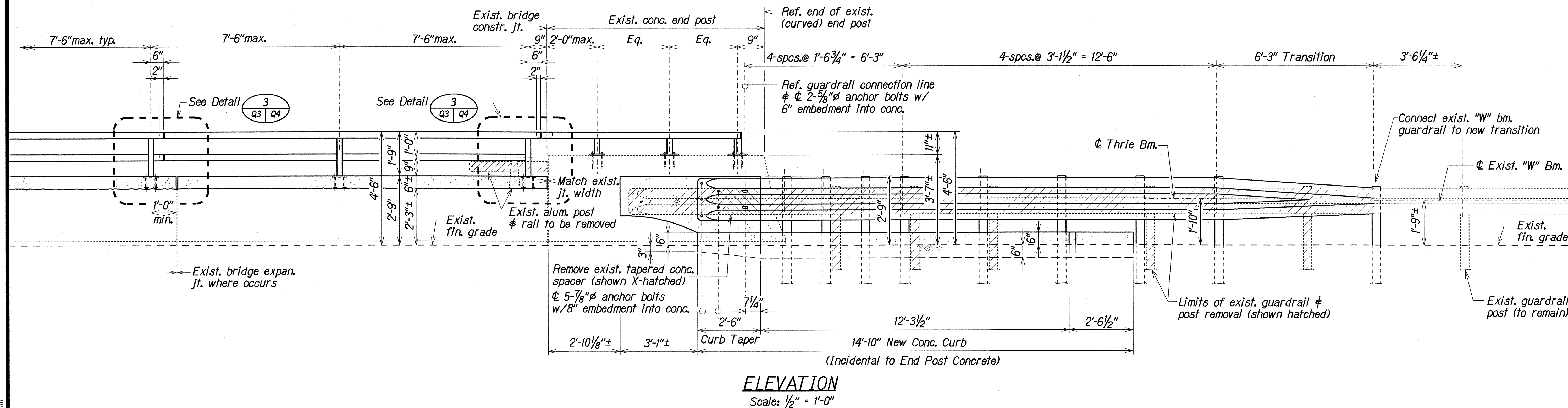
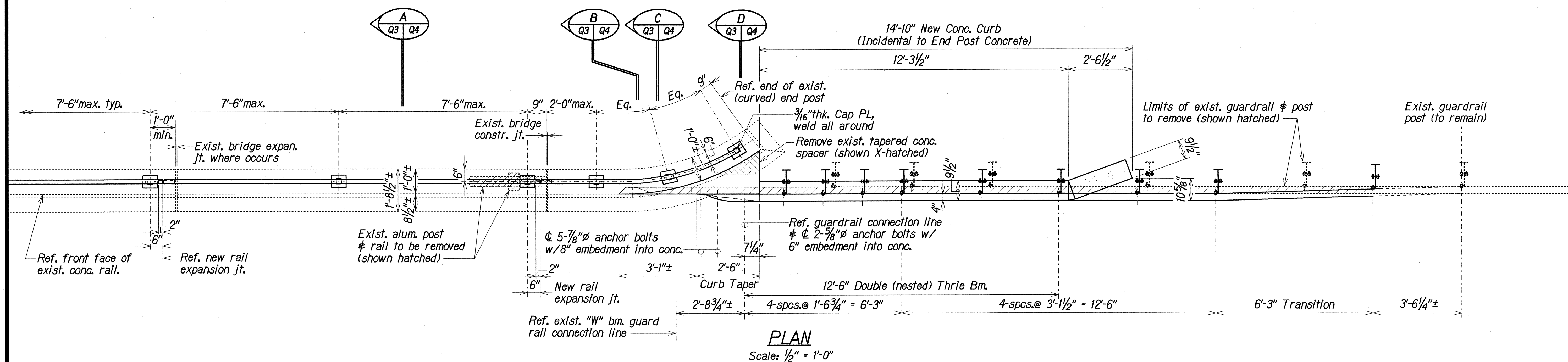
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-030-1(34)      | 2004        | 43        | 46           |



|               |          |     |
|---------------|----------|-----|
| ORIGINAL PLAN | DATE     | BY  |
| NOTE BOOK     | AUG 2003 | KSG |
| QUANTITIES BY | AUG 2003 | JWW |
| CHECKED BY    | AUG 2003 | PJS |

db4 d:\usr\2\ksg\jww\kaho2\honoapiilani\

| FED. ROAD<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO. | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| HAWAII                 | HAW.  | STP-030-1(34)         | 2004           | 44           | 46              |



TYPICAL END POST UPGRADE

|                  |                         |              |
|------------------|-------------------------|--------------|
| ORIGINAL<br>PLAN | SURVEY PLOTTED BY _____ | DATE _____   |
|                  | DRAWN BY _____          | KSG AUG 2003 |
|                  | DESIGNED BY _____       |              |
|                  | TRANDED BY _____        | JWW AUG 2003 |
|                  | QUANTITIES BY _____     | JWW AUG 2003 |
|                  | CHECKED BY _____        | PTS AUG 2003 |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL END POST UPGRADE**

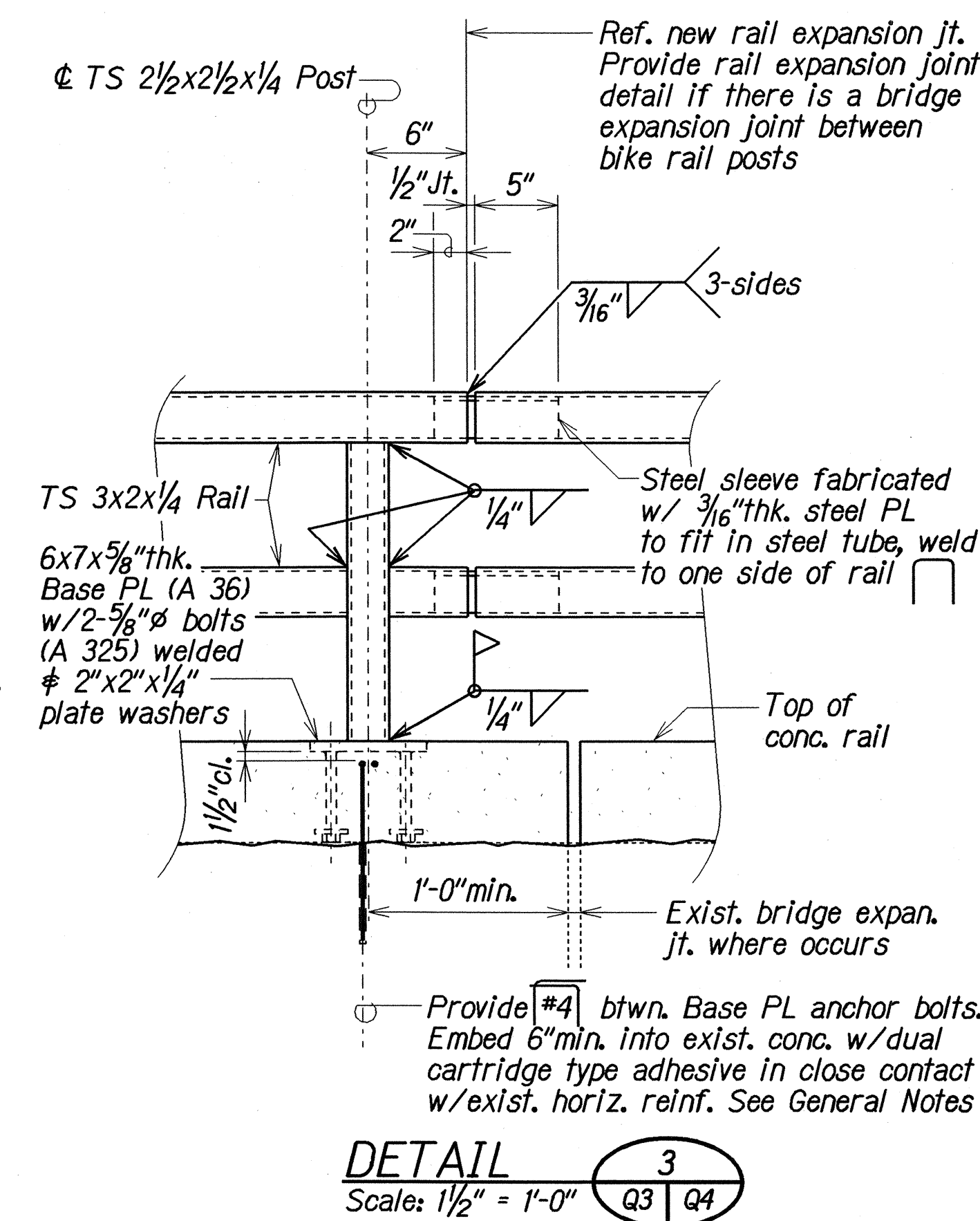
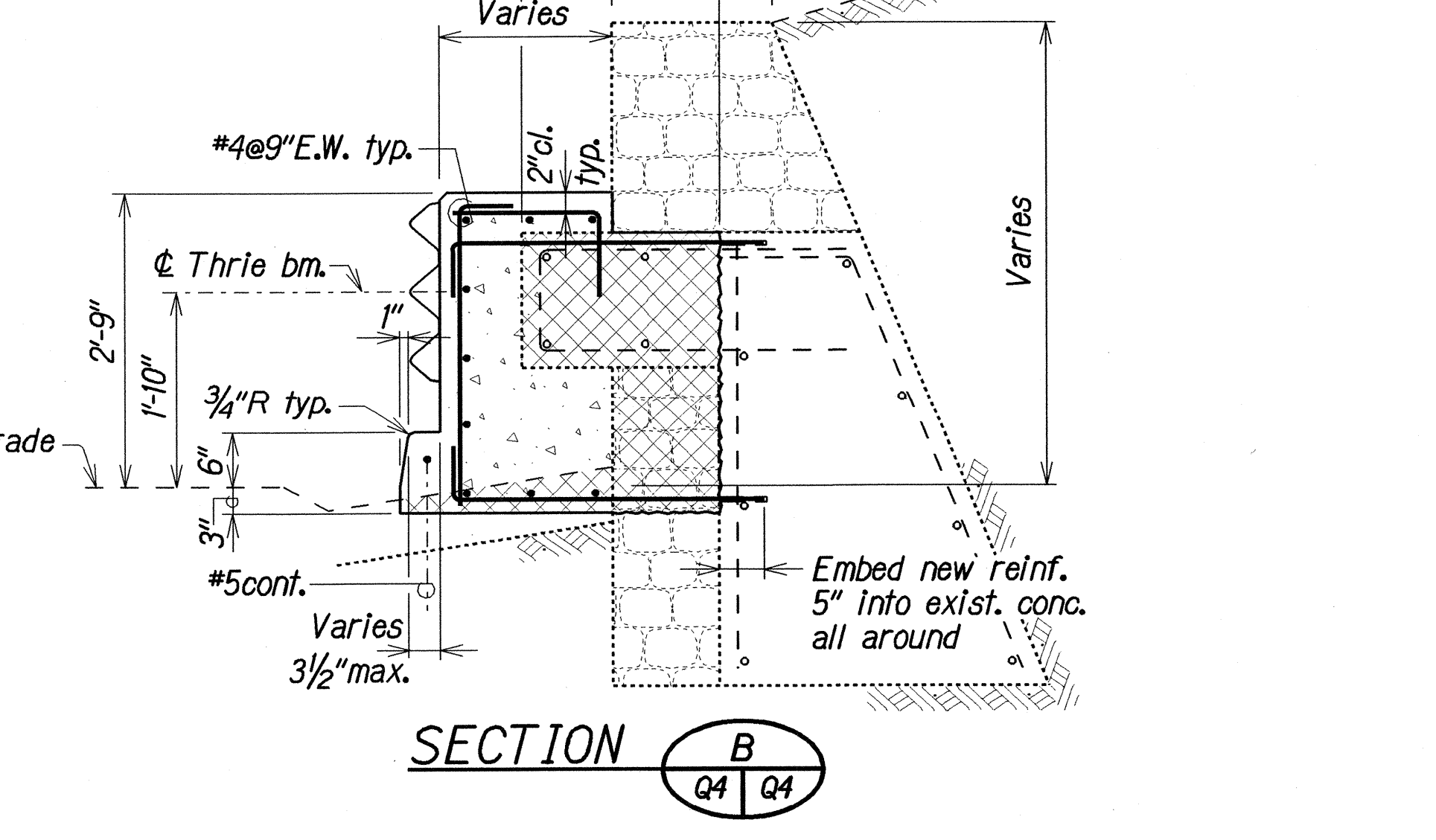
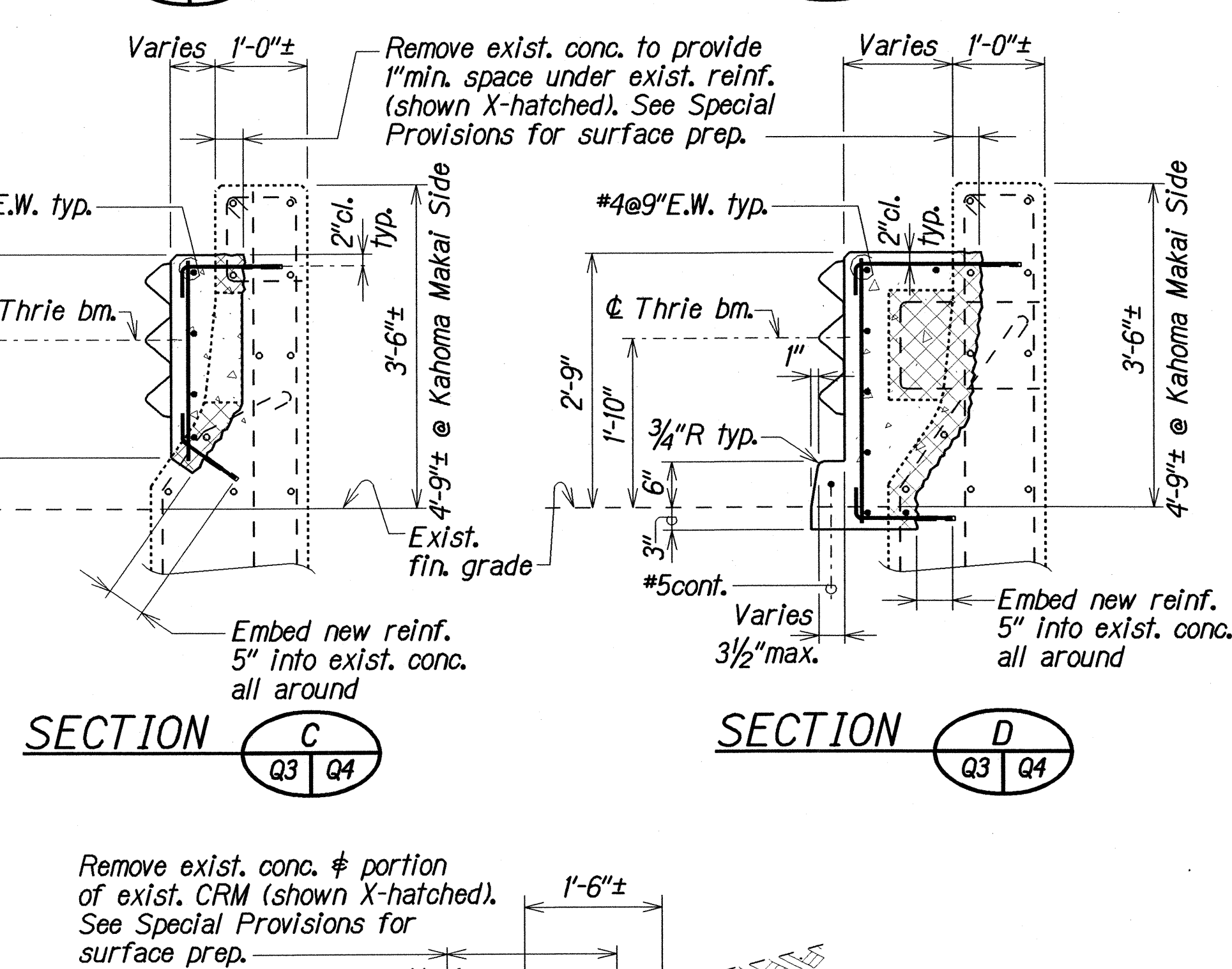
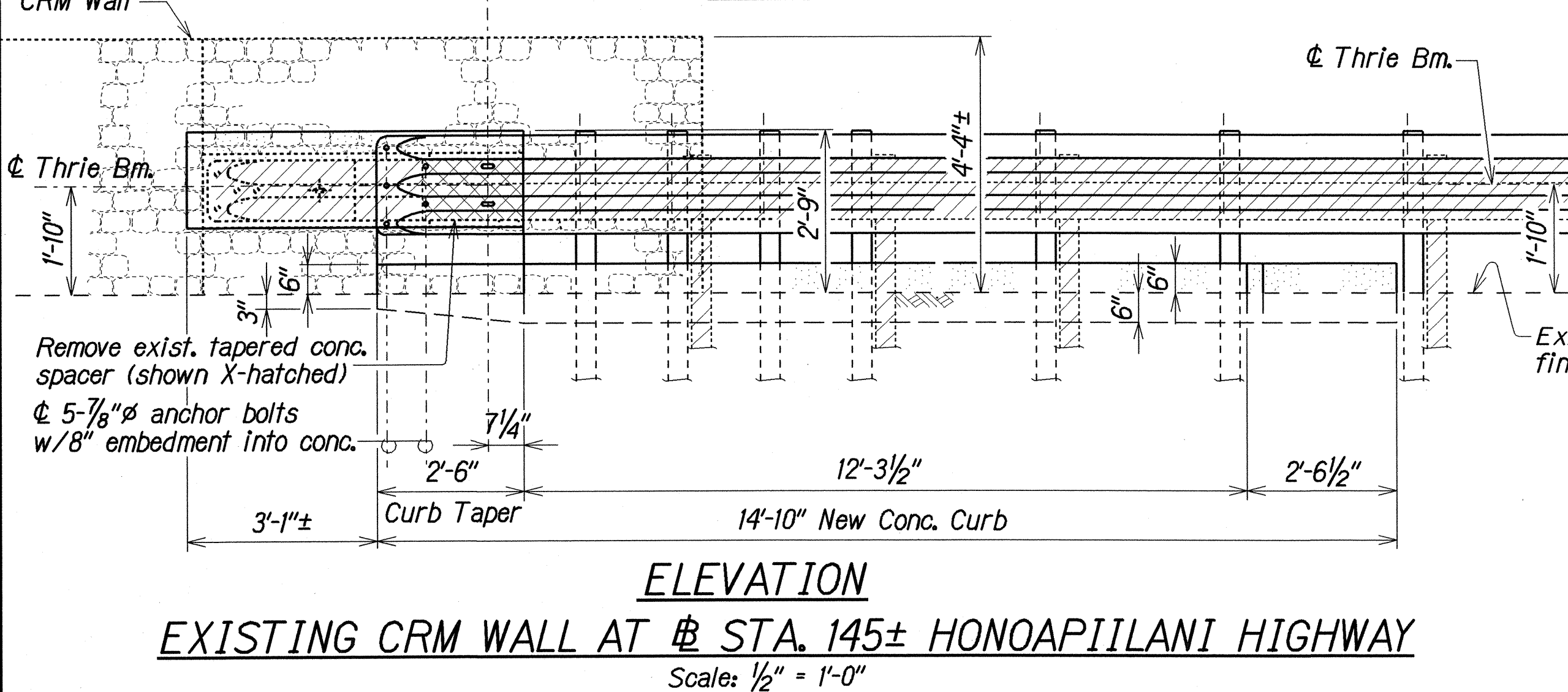
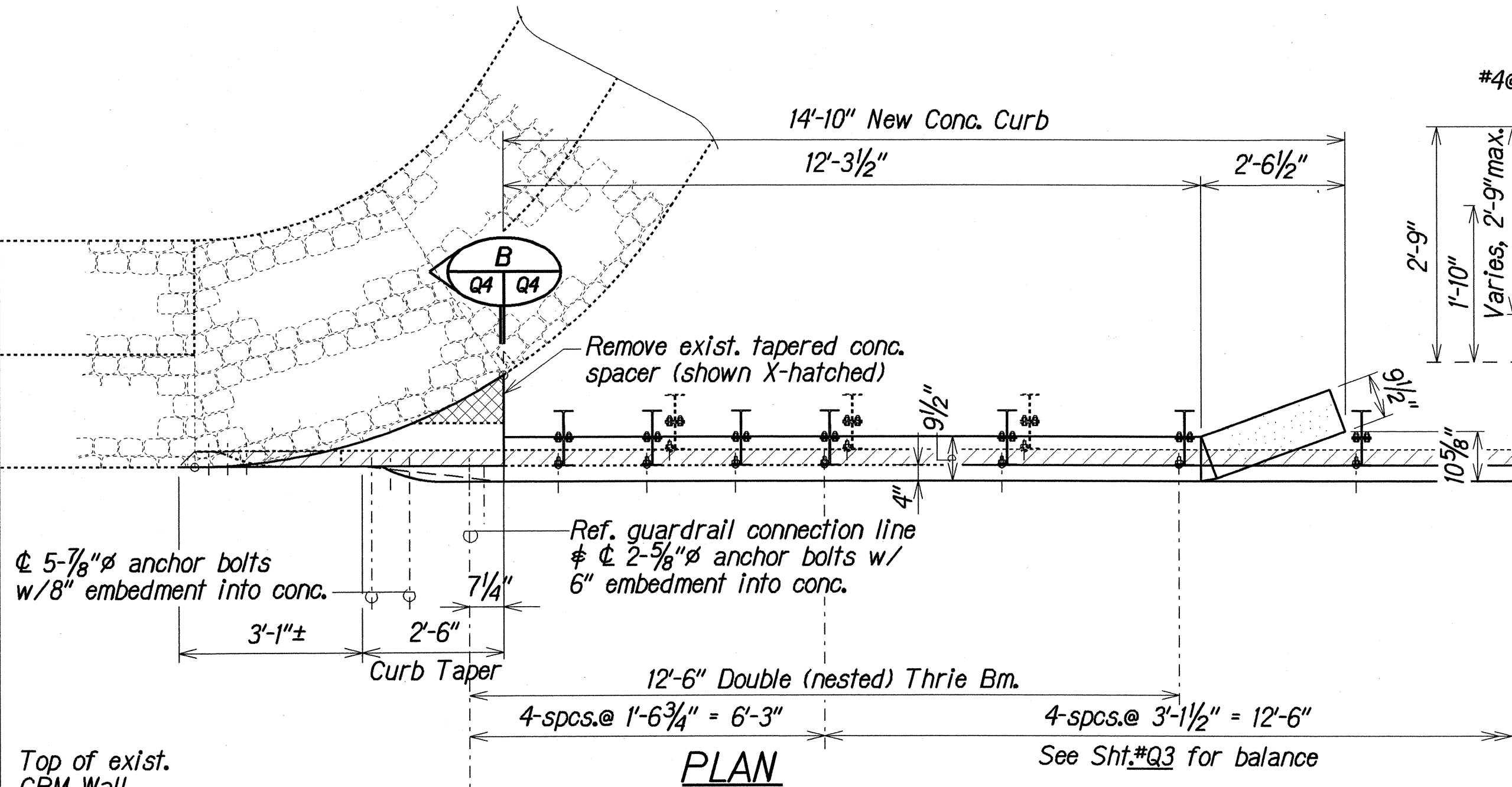
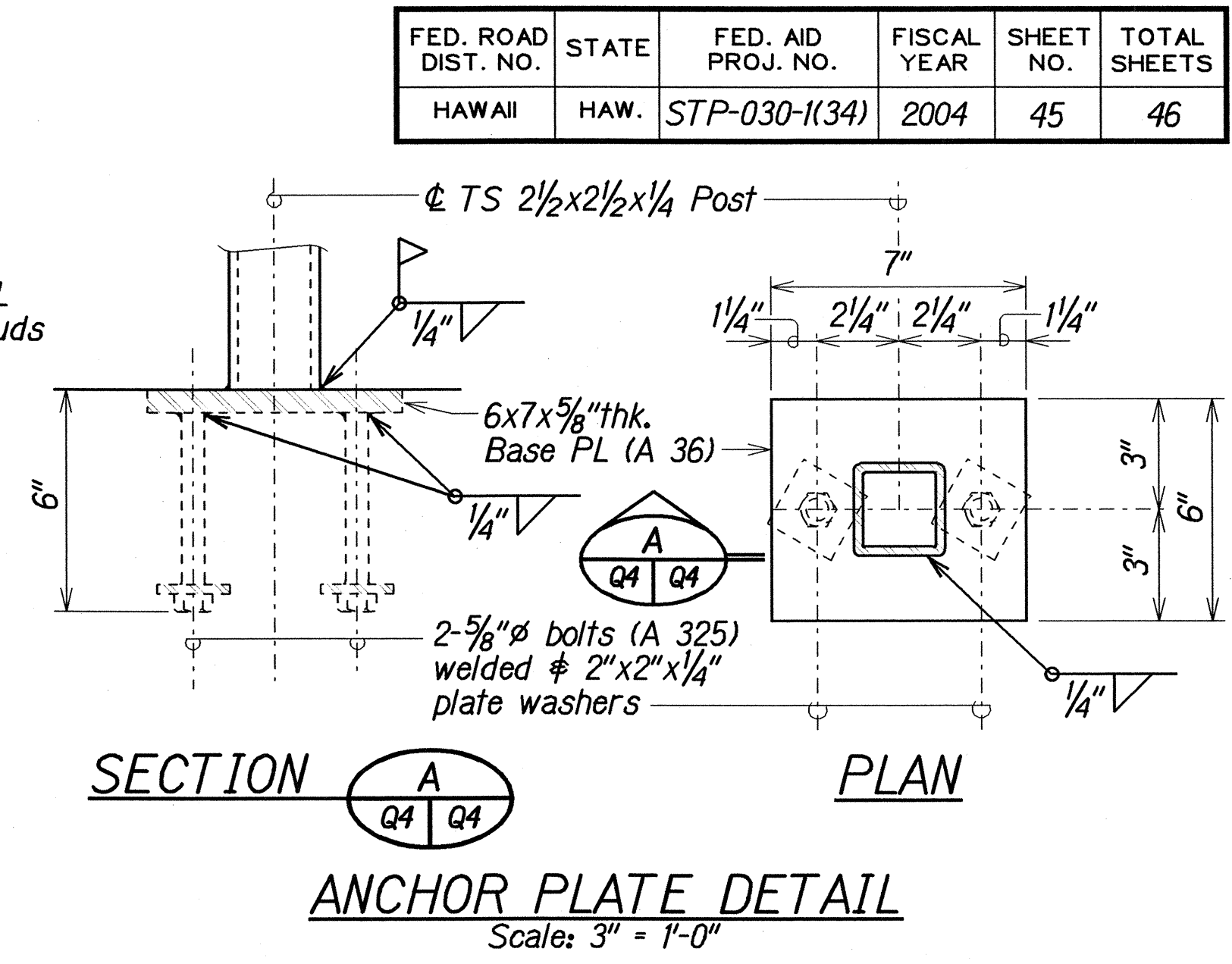
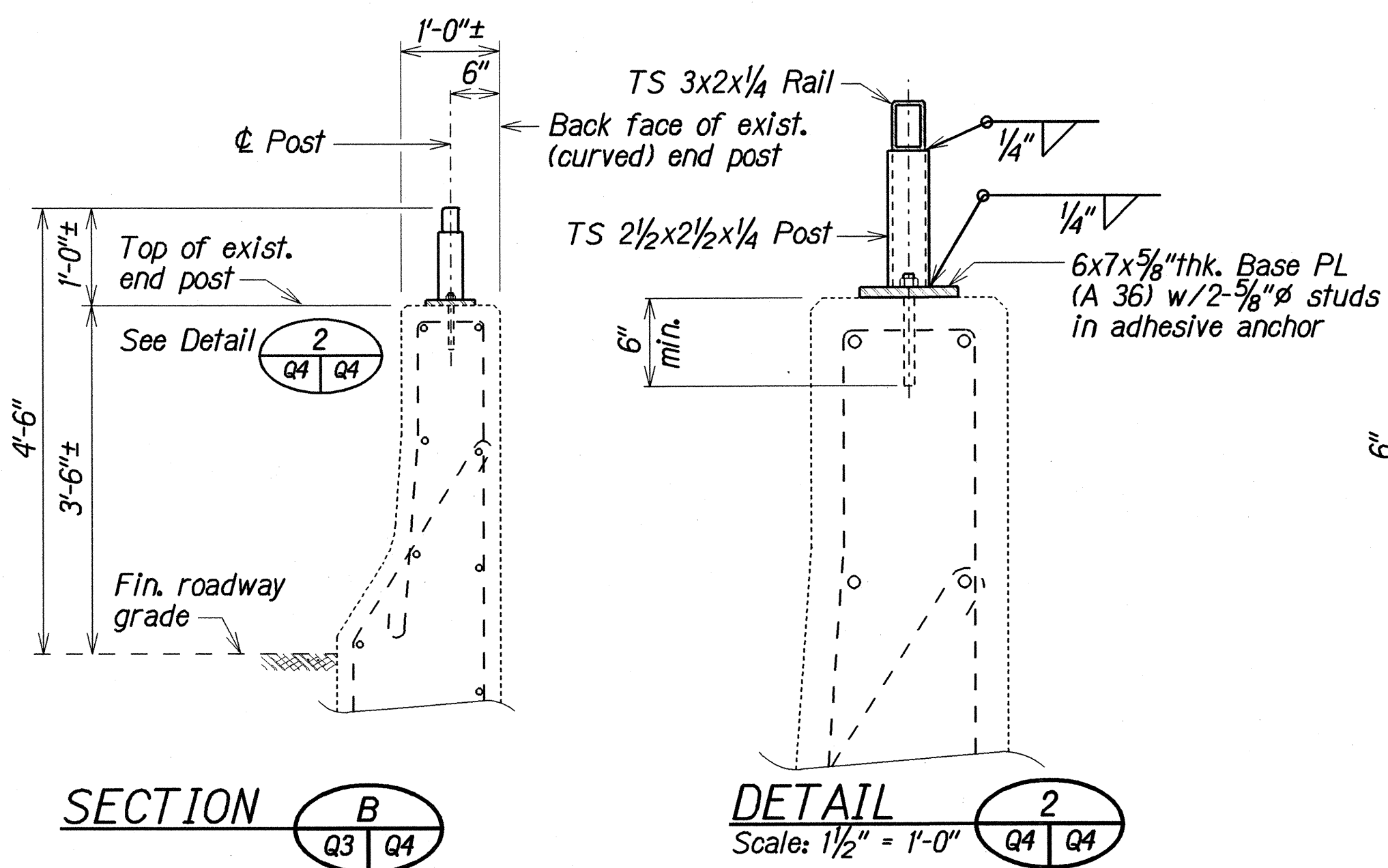
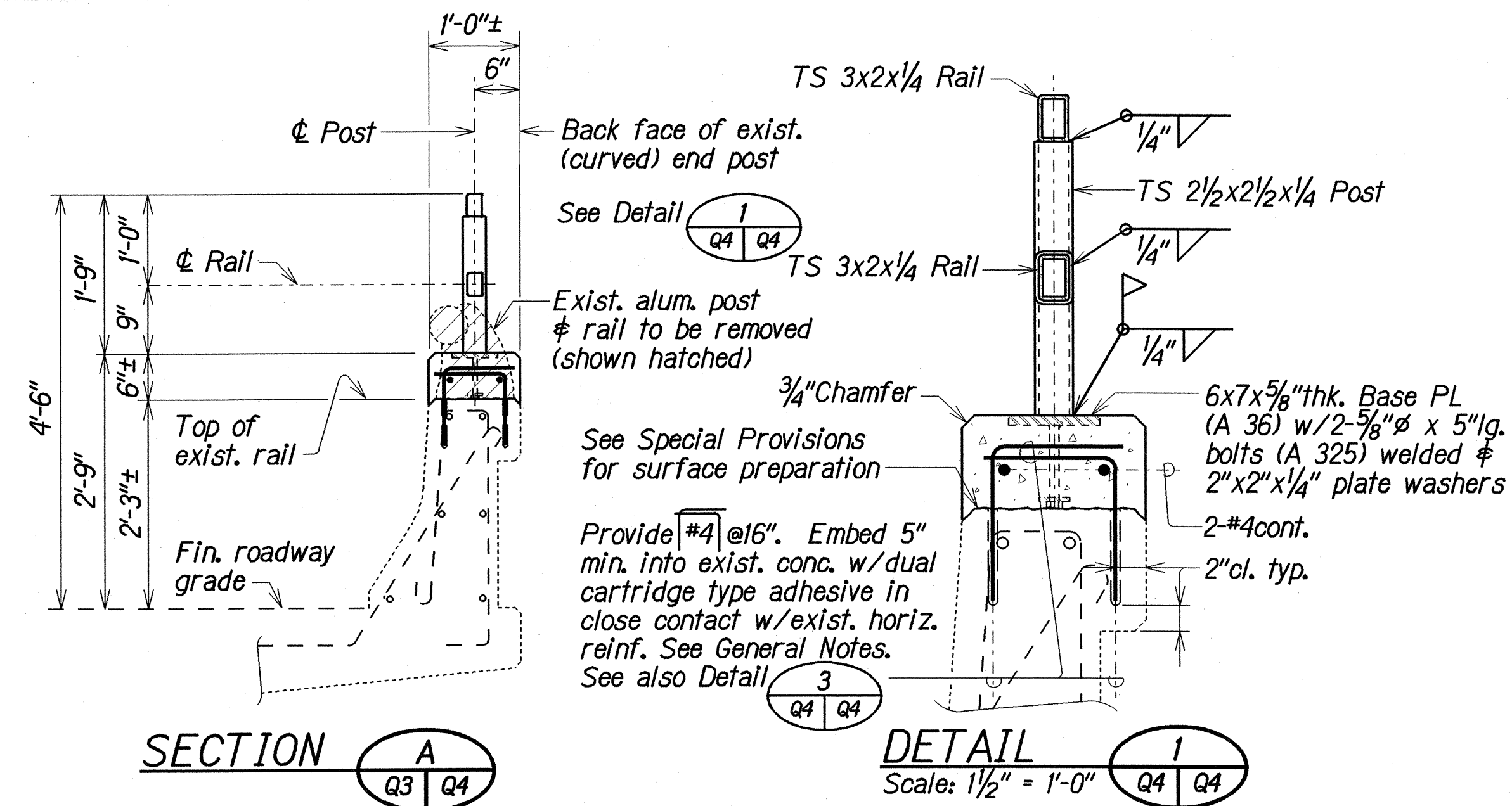
**HONOAPIILANI HIGHWAY GUARDRAIL and**  
**SHOULDER IMPROVEMENTS, PHASE I**  
*Kahoma Stream Bridge to Honokahua Stream Bridge*  
*Federal Aid Project No. STP-030-11(34)*

Scale: As Noted

Date: Aug, 2003

SHEET No. 03 OF 5 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-030-1(34)      | 2004        | 45        | 46           |



STATE OF HAWAII  
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HIGHWAYS DIVISION

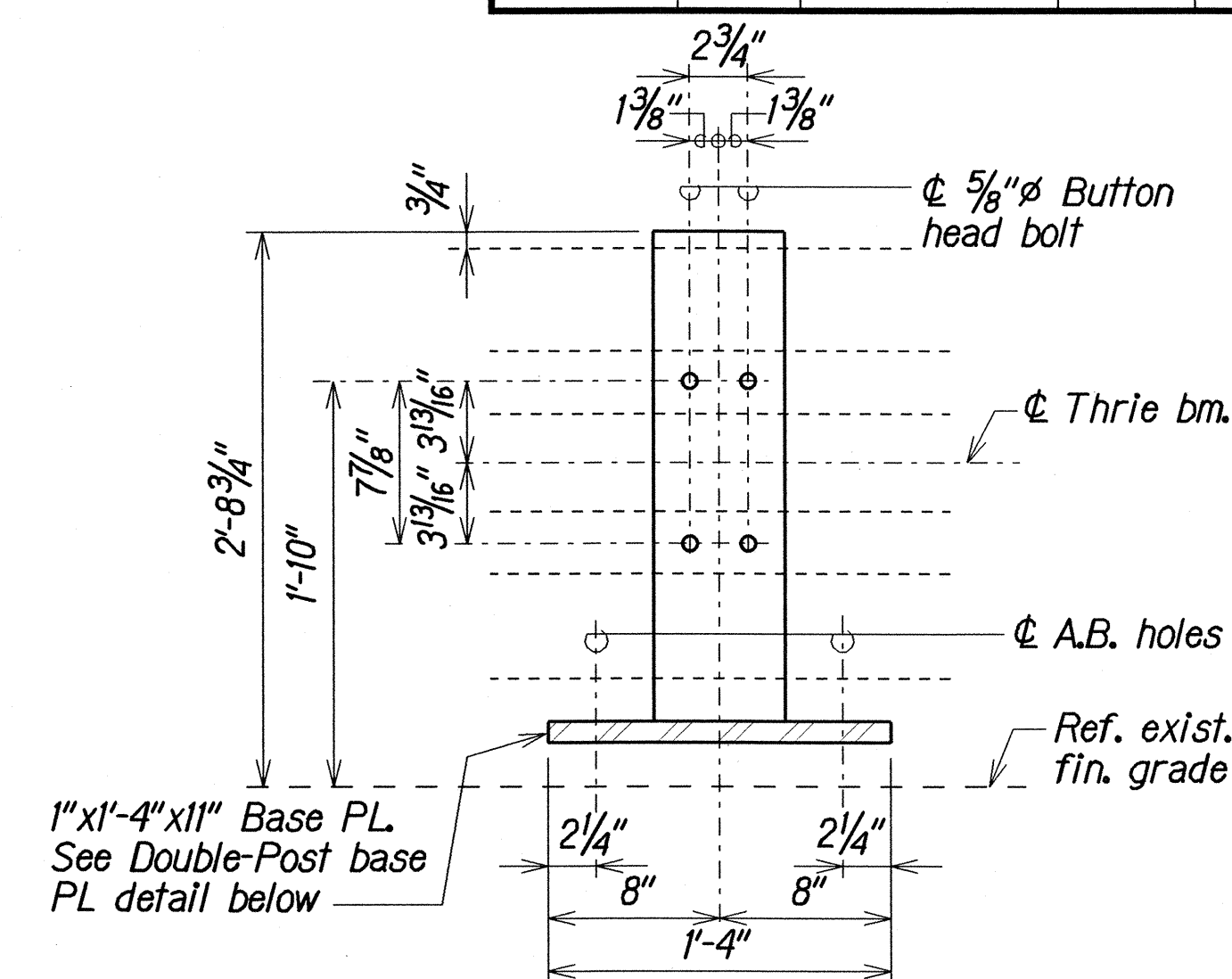
**TYPICAL SECTIONS and DETAILS**  
**HONOAPIILANI HIGHWAY GUARDRAIL and SHOULDER IMPROVEMENTS, PHASE I**  
Kahoma Stream Bridge to Honokahua Stream Bridge  
Federal Aid Project No. STP-030-1(34)

Scale: As Noted  
Date: Aug. 2003

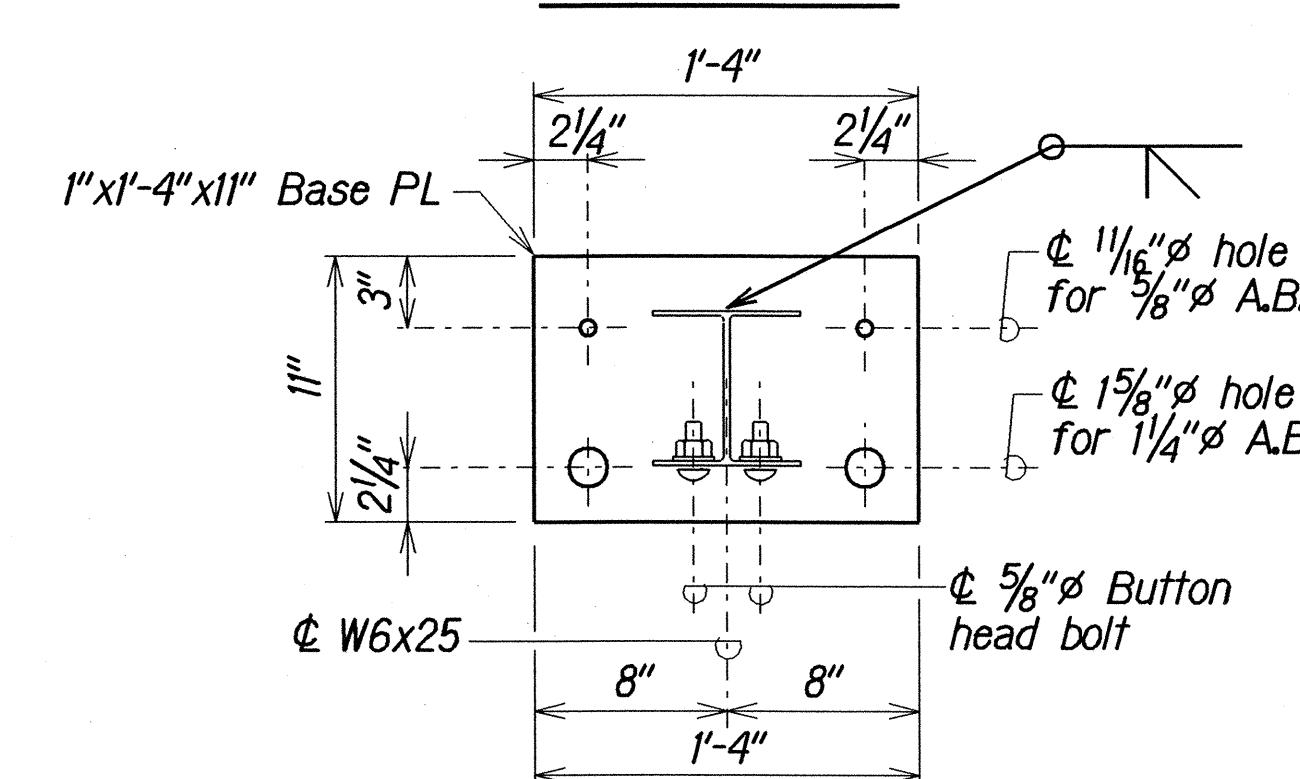
SHEET No. Q4 OF 5 SHEETS

Plan view of drainage structure showing dimensions and labels:

- 4'-0"
- 14'-0"± exist. drainage structure
- 3'-0"±
- Ref. end of exist. (curved) end post



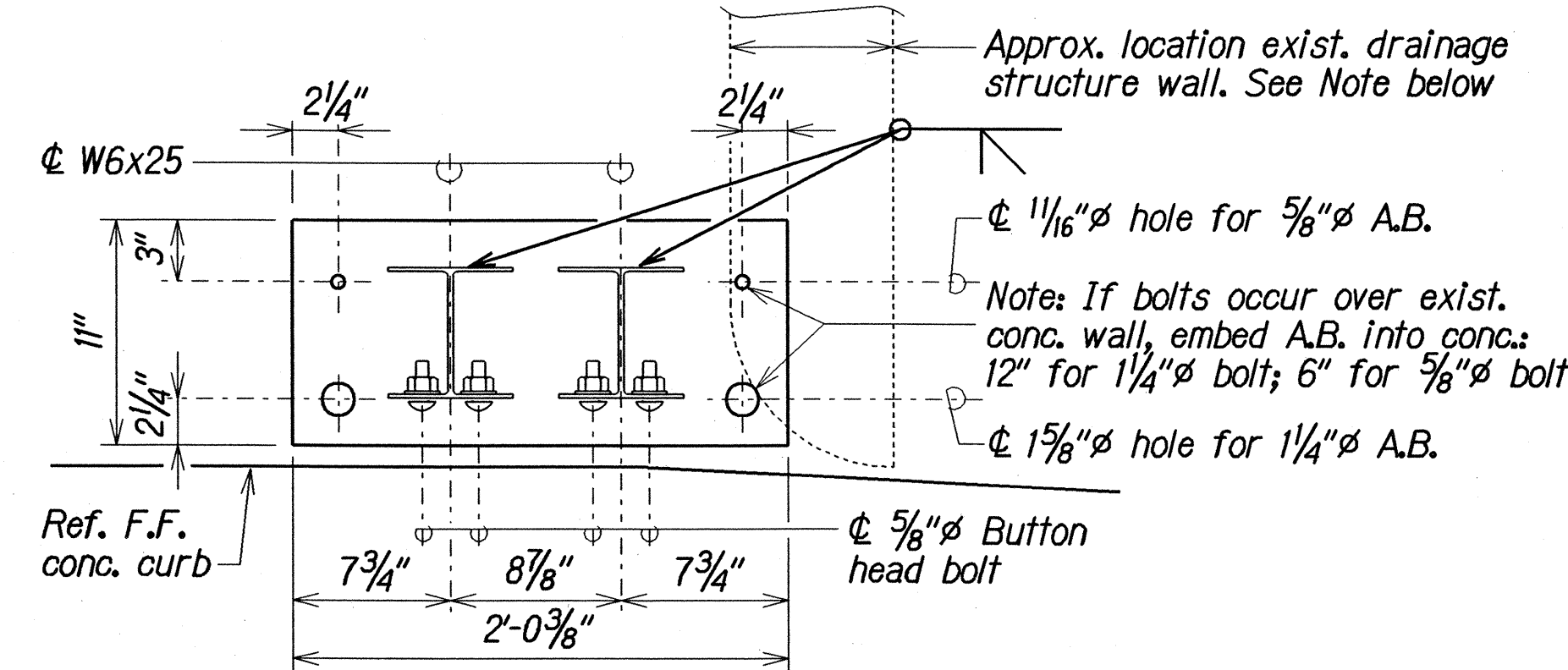
*ELEVATION*



ELEVATION

TYPICAL BASE PL DETAIL

— Approx. location exist. drainage structure wall. See Note below



Scale:  $1\frac{1}{2}'' = 1'-0''$

A diagram showing a semi-circle with its center labeled  $B$ .

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

UPGRADE DETAILS at EXISTING DRAINAGE  
STRUCTURE (HONOKAHUA STRM. BR.)  
HONOAPIILANI HIGHWAY GUARDRAIL and  
SHOULDER IMPROVEMENTS, PHASE I  
Kahoma Stream Bridge to Honokahua Stream Bridge  
Federal Aid Project No. STP-030-(I-34)

Scale: As Noted Date: Aug. 2003