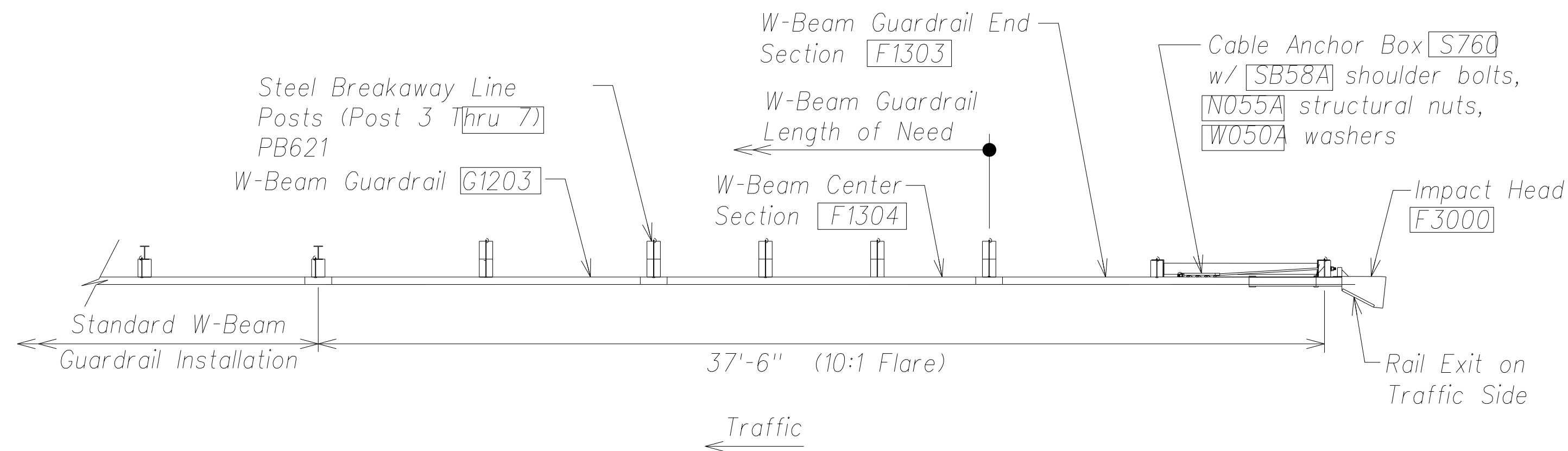
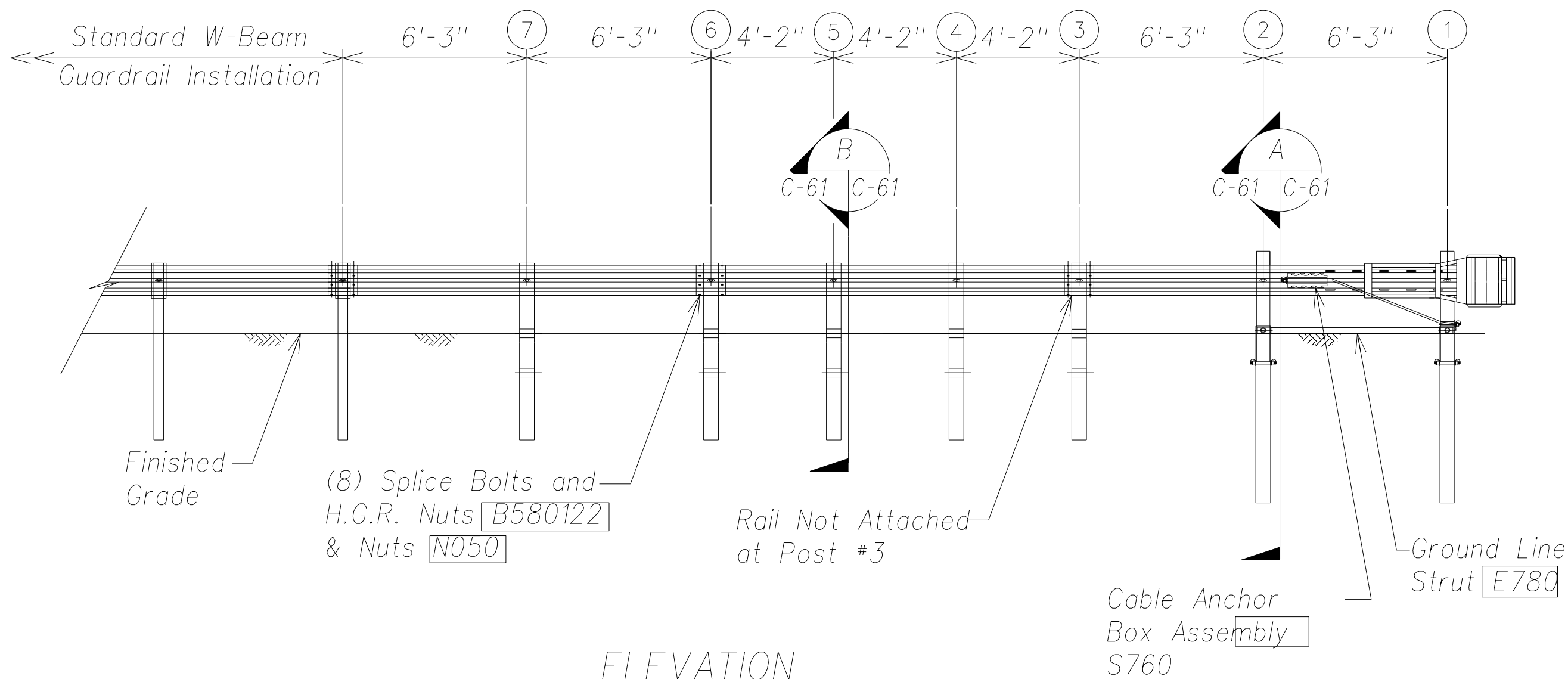


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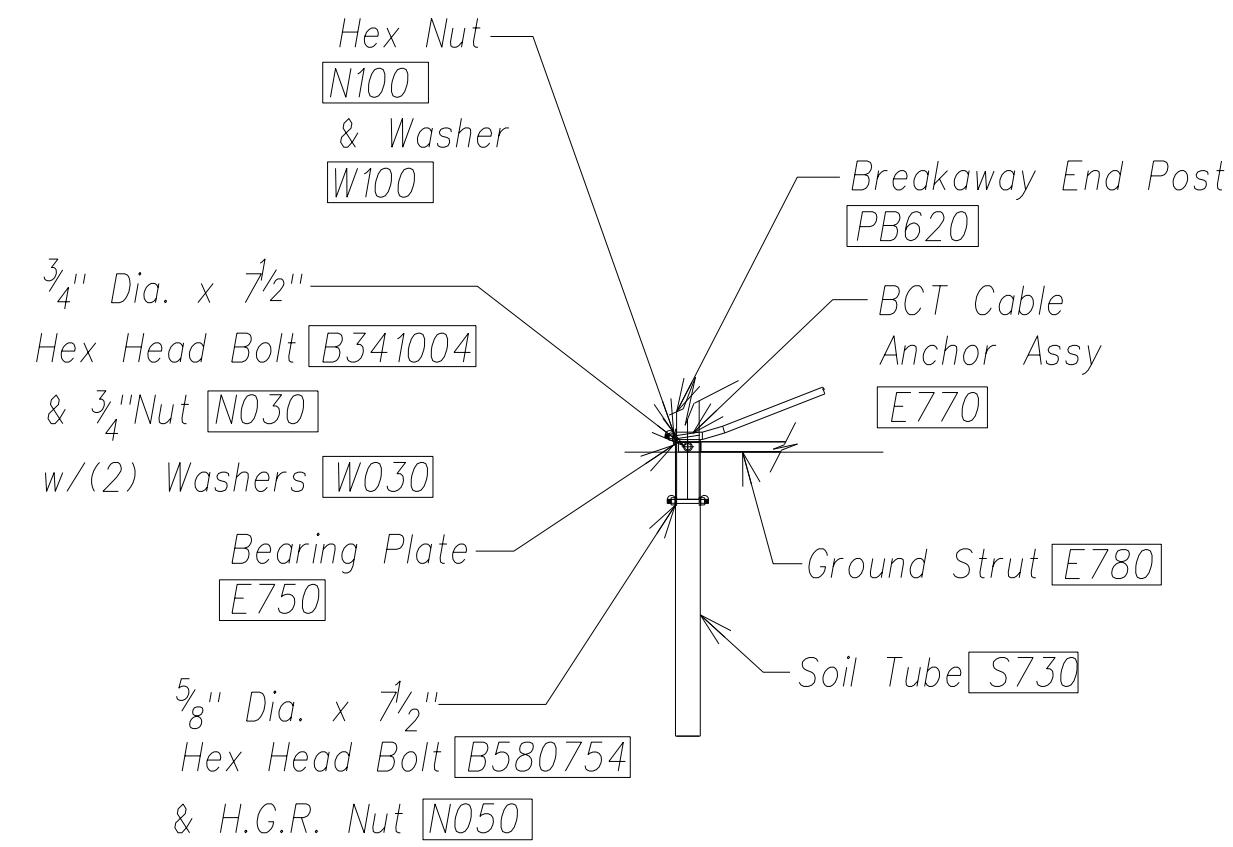
| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | ARR-050-1(036) | FY13/14 | Model | 141 |



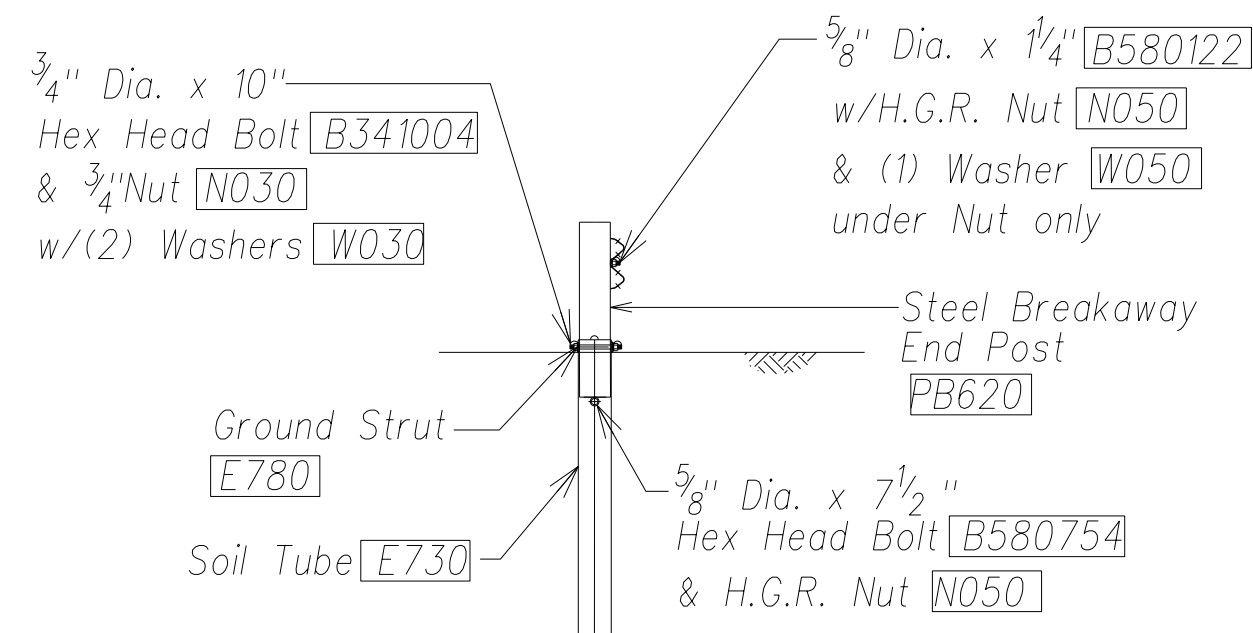
PLAN
Not to Scale



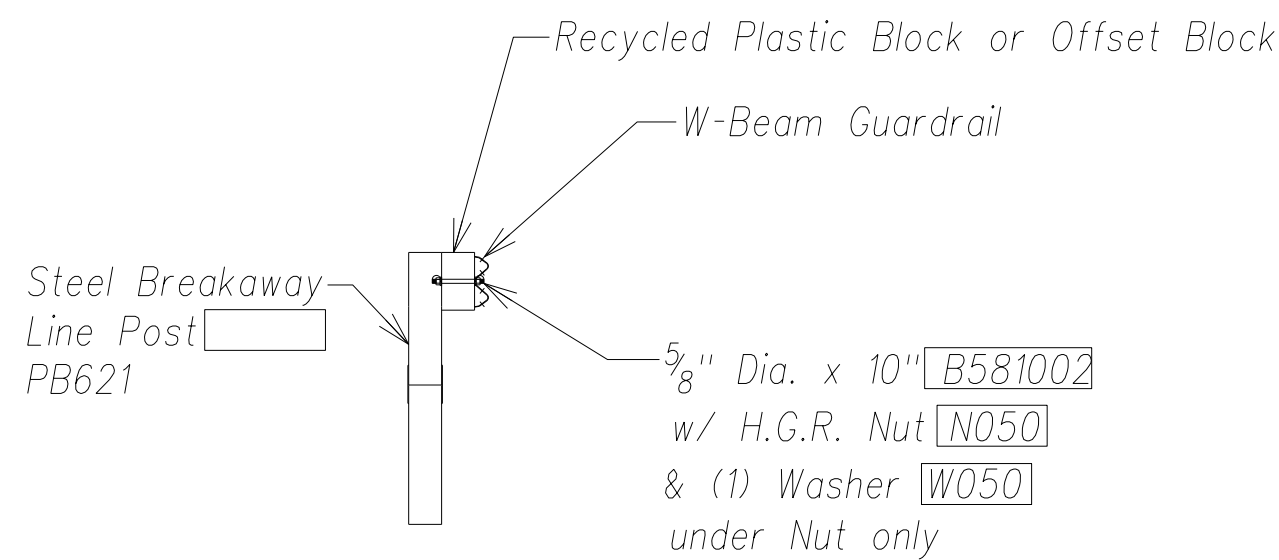
ELEVATION
Not to Scale



PARTIAL VIEW OF POST 1
Not to Scale



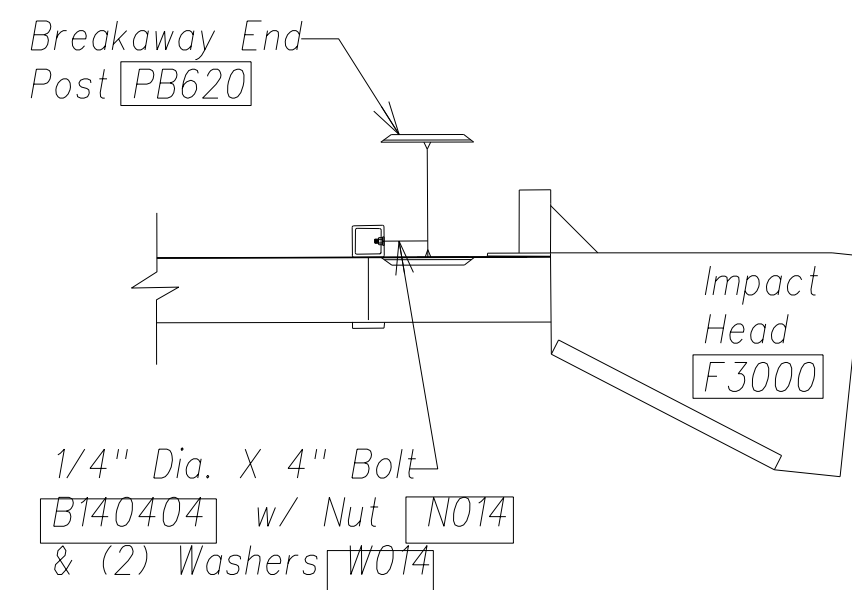
A SECTION @ Post #2
C-61 C-61 Not to Scale



B SECTION @ Post #3 to #7
C-61 C-61 Not to Scale

General Notes:

- Breakaway posts are required with the FLEAT Terminal.
- All bolts, nuts, cable assemblies, cable anchors and bearing plates shall be galvanized.
- The soil tube shall not protrude more than 4" above ground (measured along a 5' cord). Site grading may be necessary to meet this requirement.
- The soil tubes may be driven with an approved driving head. Soil tubes should not be driven with the post in the tube. If the tubes are placed in drilled holes, the backfill material must be satisfactorily compacted to prevent settlement.
- When rock is encountered during excavation, a 12" Dia. post hole, 20" deep may be used if approved by the engineer. Granular material will be placed in the bottom of the hole approx. 2-1/2" deep to provide drainage. The soil tubes will be field cut to length, placed in the hole and backfilled with adequately compacted material excavated from the hole.
- The breakaway cable assembly must be taut. A locking device, (vice grips or channel lock pliers) should be used to prevent the cable from twisting when tightening nuts.



IMPACT HEAD CONNECTING DETAIL
Not to Scale

| Item No. | Qty. | Bill of Materials |
|----------|------|--|
| F3000 | 1 | Impact head |
| F1303 | 1 | W-Beam guardrail end section, 12 Ga. |
| F1304 | 1 | W-Beam guardrail center section, 12 Ga. |
| G1203 | 1 | W-Beam guardrail, 12 Ga. |
| S730 | 2 | *Foundation soil tube, 6" x 8" x 72" |
| E750 | 1 | Bearing plate |
| S760 | 1 | Cable anchor box |
| E770 | 1 | BCT cable anchor assembly |
| E780 | 1 | Ground strut |
| PB620 | 2 | Steel breakaway end post |
| PB621 | 5 | Steel breakaway line post |
| | 5 | Recycled plastic blackout or offset block |
| Hardware | | |
| B580122 | 25 | 5/8" Dia. x 1 1/4" Splice bolt, post #2 |
| B580754 | 2 | 5/8" Dia. x 7 1/2" Hex bolt |
| B341004 | 2 | 3/4" Dia. x 10" Hex bolt |
| B581002 | 5 | 5/8" Dia. x 10" H.G.R. Bolt (post 3-7) |
| N050 | 32 | 5/8" Dia. H.G.R. Nut (splice 24, soil tubes 2, post 2 thru 7, 6) |
| N030 | 2 | 3/4" Dia. hex nut |
| W050 | 6 | H.G.R. washer |
| W030 | 4 | 3/4" I.D. washer |
| N100 | 2 | 1" Anchor cable hex nut |
| W100 | 2 | 1" Anchor cable washer |
| B140404 | 2 | 1/4" x 4" Hex bolt |
| N104 | 2 | 1/4" Hex nut |
| W104 | 4 | 1/4" Washer |
| SB58A | 8 | Cable anchor box shoulder bolt |
| N055A | 8 | 1/2" A325 Structural nut |
| W050A | 16 | 1 1/16" O.D. x 9/16" I.D. A325 Straight Washer |

Foundation Tube Options For Posts 1 & 2

- *6'-0" Split Foundation Tubes S730
- *6'-0" Solid Foundation Tubes E731
- *5'-0" Foundation Tubes S735 W/Soil Plates SP600
- *4'-6" Foundation Tubes E735 W/Soil Plates SP600



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE
April 30, 2016
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FLEAT 350 DETAILS

PHASE 1 - KAUMUALII HIGHWAY
LIHUE MILL BRIDGE TO RICE STREET

PHASE 3 - REHABILITATION OF LIHUE MILL
BRIDGE AND MAKAI WIDENING

Scale: As Shown Date: May 2, 2014

SHEET No. C-61 OF 82 SHEETS

"AS-BUILT"

MODEL