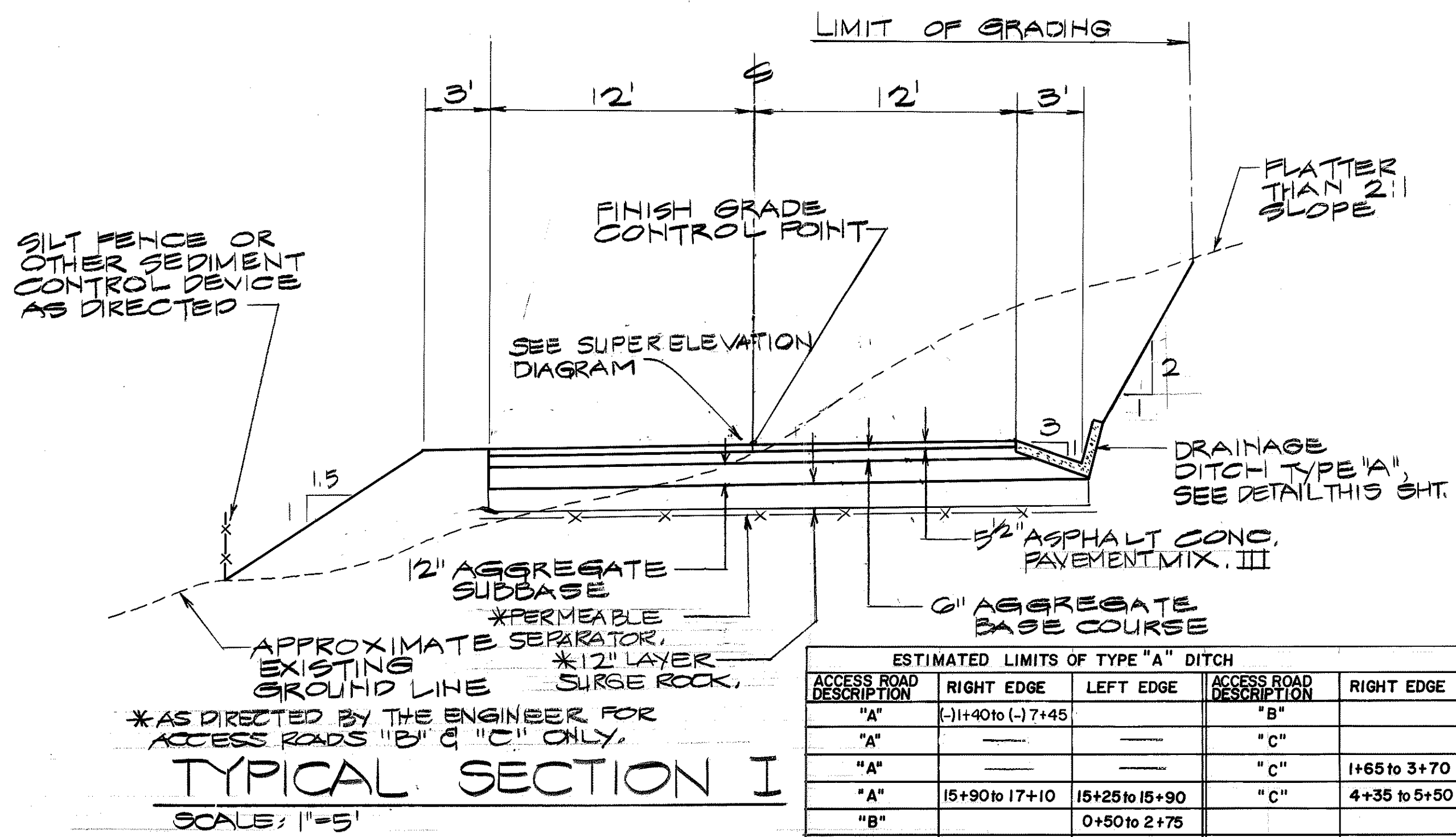
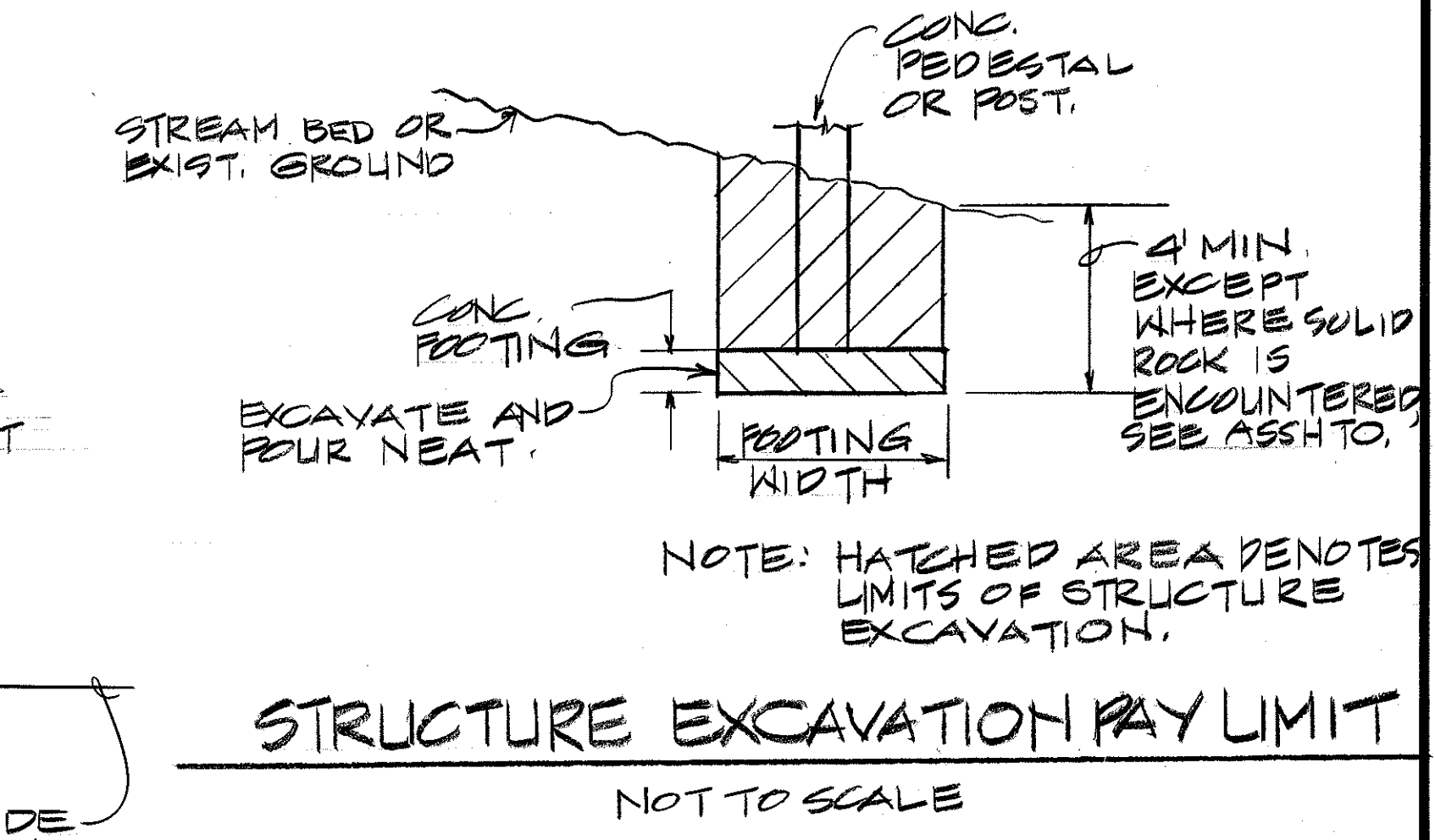
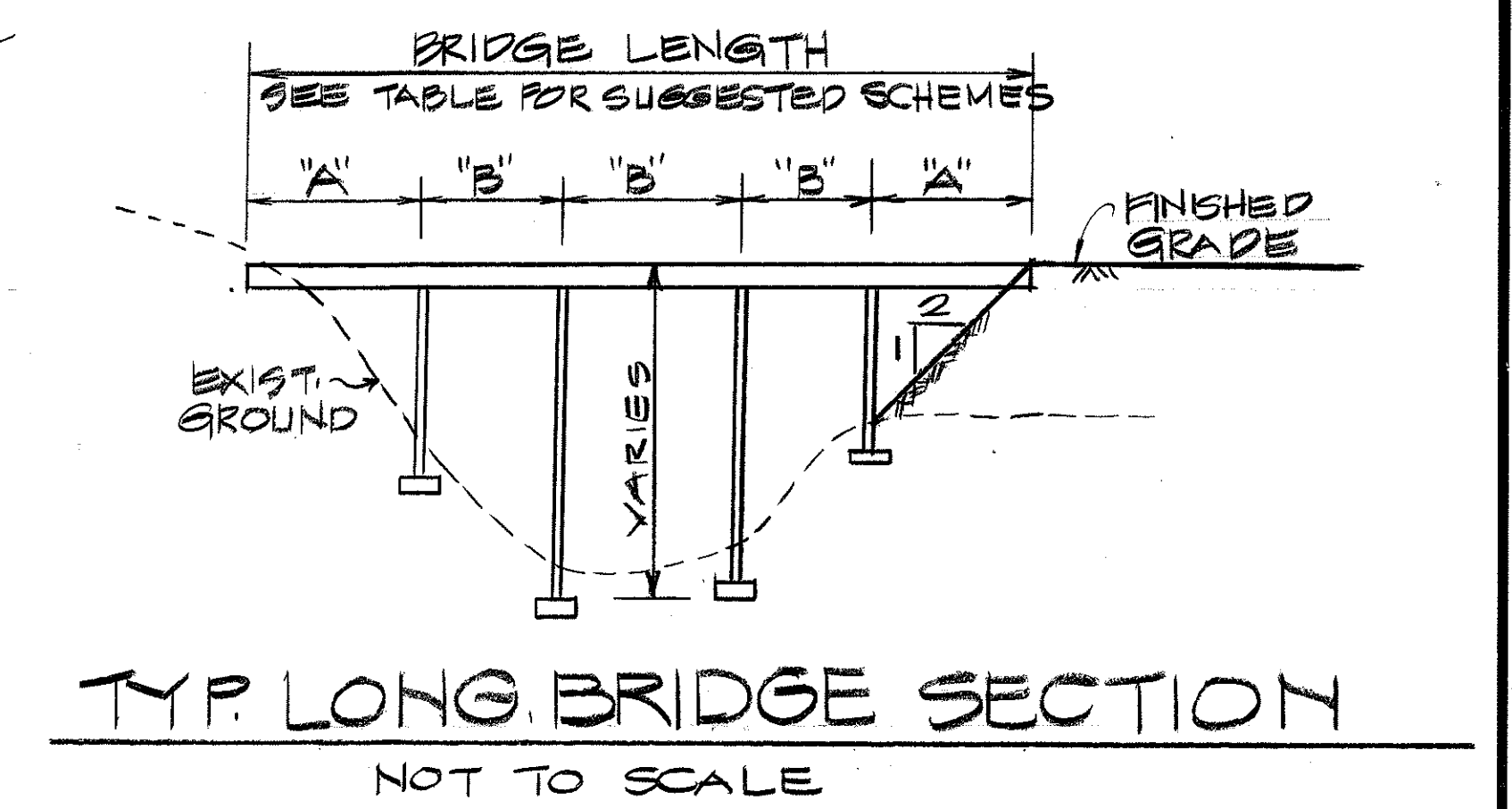
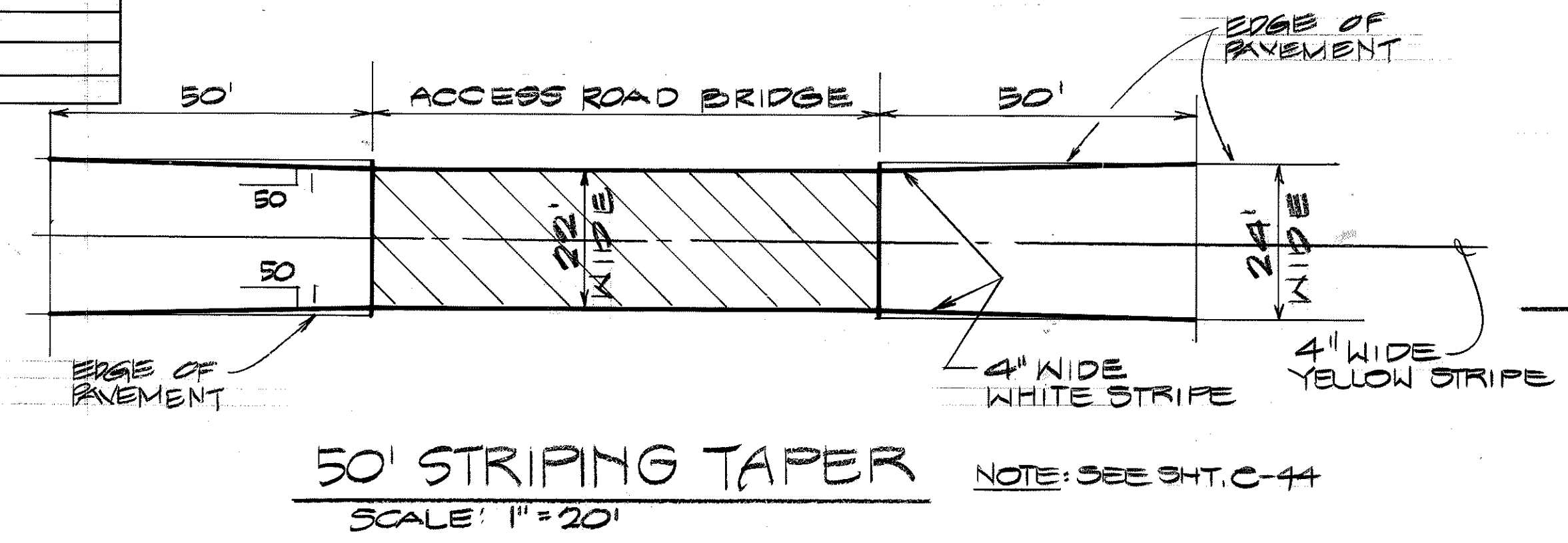
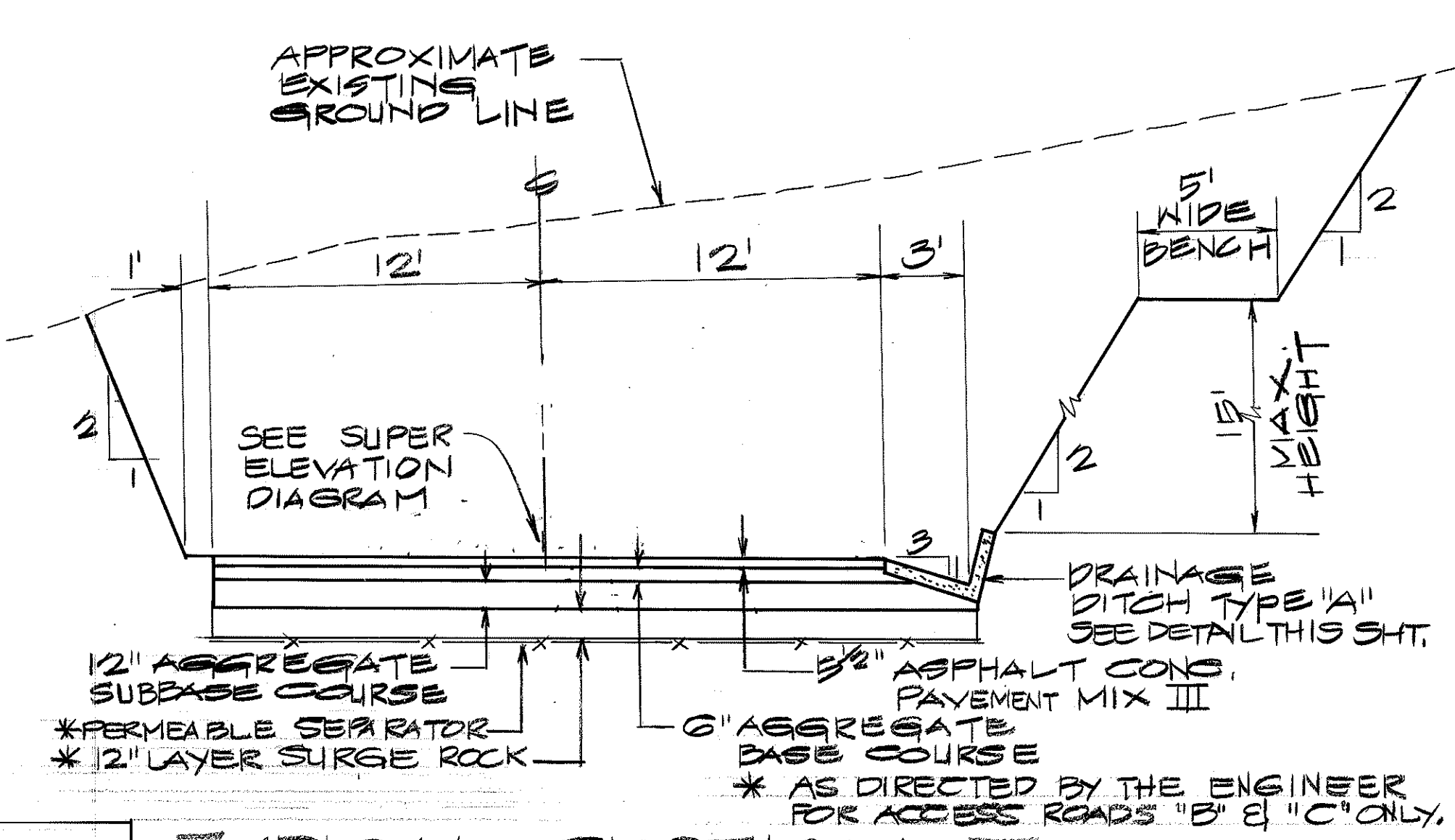


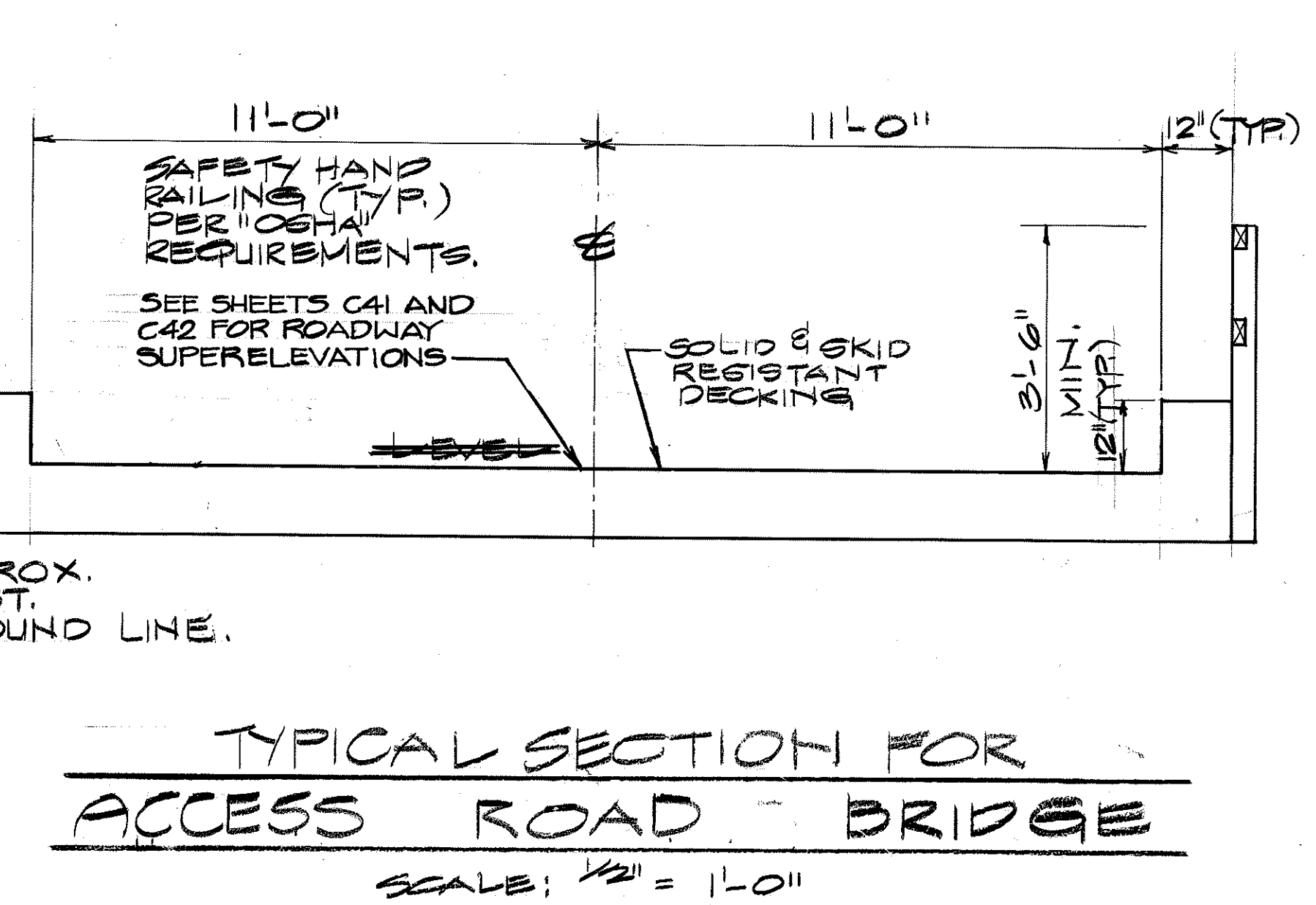
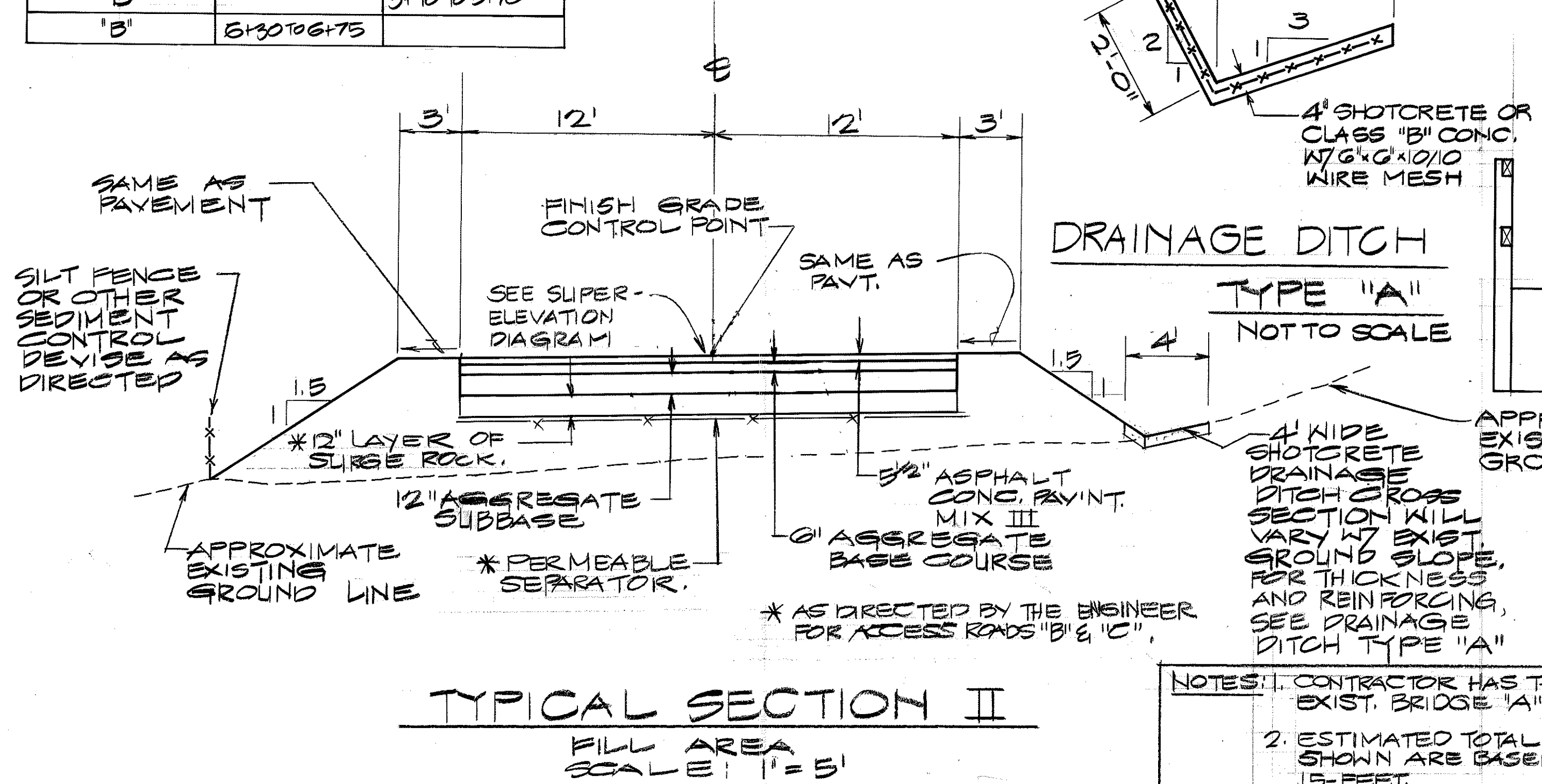


| ESTIMATED LIMITS OF TYPE "A" DITCH |                    |                |                         |              |                |
|------------------------------------|--------------------|----------------|-------------------------|--------------|----------------|
| ACCESS ROAD DESCRIPTION            | RIGHT EDGE         | LEFT EDGE      | ACCESS ROAD DESCRIPTION | RIGHT EDGE   | LEFT EDGE      |
| "A"                                | (-1)+40 to (-1)+45 |                | "B"                     |              | 12+35 to 13+75 |
| "A"                                |                    |                | "C"                     |              | 0+80 to 1+65   |
| "A"                                |                    |                | "C"                     | 1+65 to 3+70 |                |
| "A"                                | 15+90 to 17+10     | 15+25 to 15+90 | "C"                     | 4+35 to 5+50 |                |
| "B"                                |                    | 0+50 to 2+75   |                         |              |                |
| "B"                                | 1+50 to 2+20       |                |                         |              |                |
| "B"                                | 6+75 to 7+60       |                |                         |              |                |

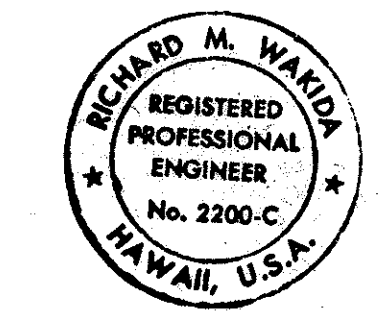
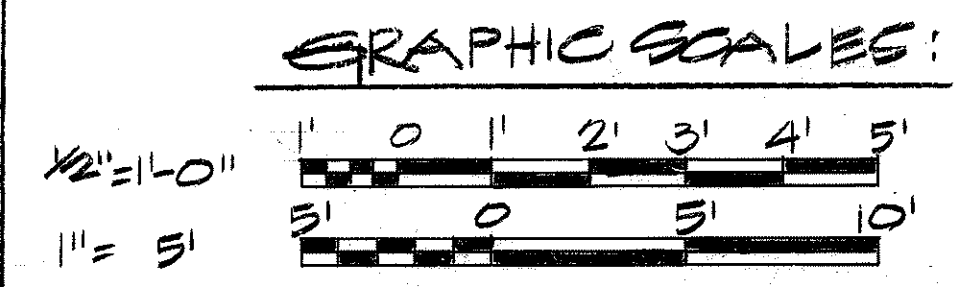
| ESTIMATED LIMITS OF 4'-WIDE SHOTCRETE DITCH FOR TYP. SECT. II |                 |                |                                 |                |               |
|---------------------------------------------------------------|-----------------|----------------|---------------------------------|----------------|---------------|
| ACCESS ROAD DESCRIPTION                                       | RIGHT EDGE      | LEFT EDGE      | ACCESS ROAD DESCRIPTION (CONT.) | RIGHT EDGE     | LEFT EDGE     |
| "A"                                                           | (-1)+40 to 0+70 |                | "B"                             |                | 8+25 to 11+00 |
| "A"                                                           | 3+56 to 5+60    |                | "B"                             | 11+75 to 11+80 |               |
| "A"                                                           | 8+40 to 10+70   |                | "C"                             | 0+00 to 0+95   |               |
| "A"                                                           |                 | 11+40 to 13+80 | "C"                             | 3+70 to 4+35   |               |
| "A"                                                           | 14+50 to 15+23  | 14+50 to 15+23 |                                 |                |               |
| "A"                                                           | 17+10 to 17+90  |                |                                 |                |               |
| "B"                                                           |                 | 3+90 to 5+70   |                                 |                |               |
| "B"                                                           | 6+30 to 6+75    |                |                                 |                |               |



| TABLE FOR SUGGESTED SCHEMES |                              |                |               |
|-----------------------------|------------------------------|----------------|---------------|
| DESCRIPTION                 | ESTIMATED BRIDGE LENGTH (FT) | NO. OF MODULES |               |
|                             |                              | "A" SPAN (FT)  | "B" SPAN (FT) |
| BRIDGE NO. 1                | 80                           | 1 x 80         | 1 x 80        |
| 2                           | 90                           | 2 x 45         | 1 x 90        |
| 3                           | 120                          | 3 x 40         | 2 x 60        |
| 4                           | 95                           | 2 x 47.5       | 1 x 95        |
| 5                           | 60                           | 1 x 60         | 1 x 60        |
| 6                           | 100                          | 2 x 50         | 1 x 100       |
| EXIST. BRIDGE "A"           | 60                           | 1 x 60         | 1 x 60        |
| "B"                         | 75-79                        | 2 x 37.5       | 1 x 75        |



- NOTES:
- CONTRACTOR HAS THE OPTION TO WIDEN OR REPLACE EXIST. BRIDGE "A" AND "B", SEE SHT. C-43.
  - ESTIMATED TOTAL BRIDGE LENGTH AND QUANTITIES SHOWN ARE BASED ON ASSUMED PIER HEIGHT ON 15-FOOT.
  - CONC. PEDESTAL OR POST SHALL BE PARALLEL WITH THE DIRECTION OF FLOW.



11-5-93 REVISED DITCH LIMITS AND ADDED SURGE ROCK & SEPARATOR. DATE: 11-5-93 REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

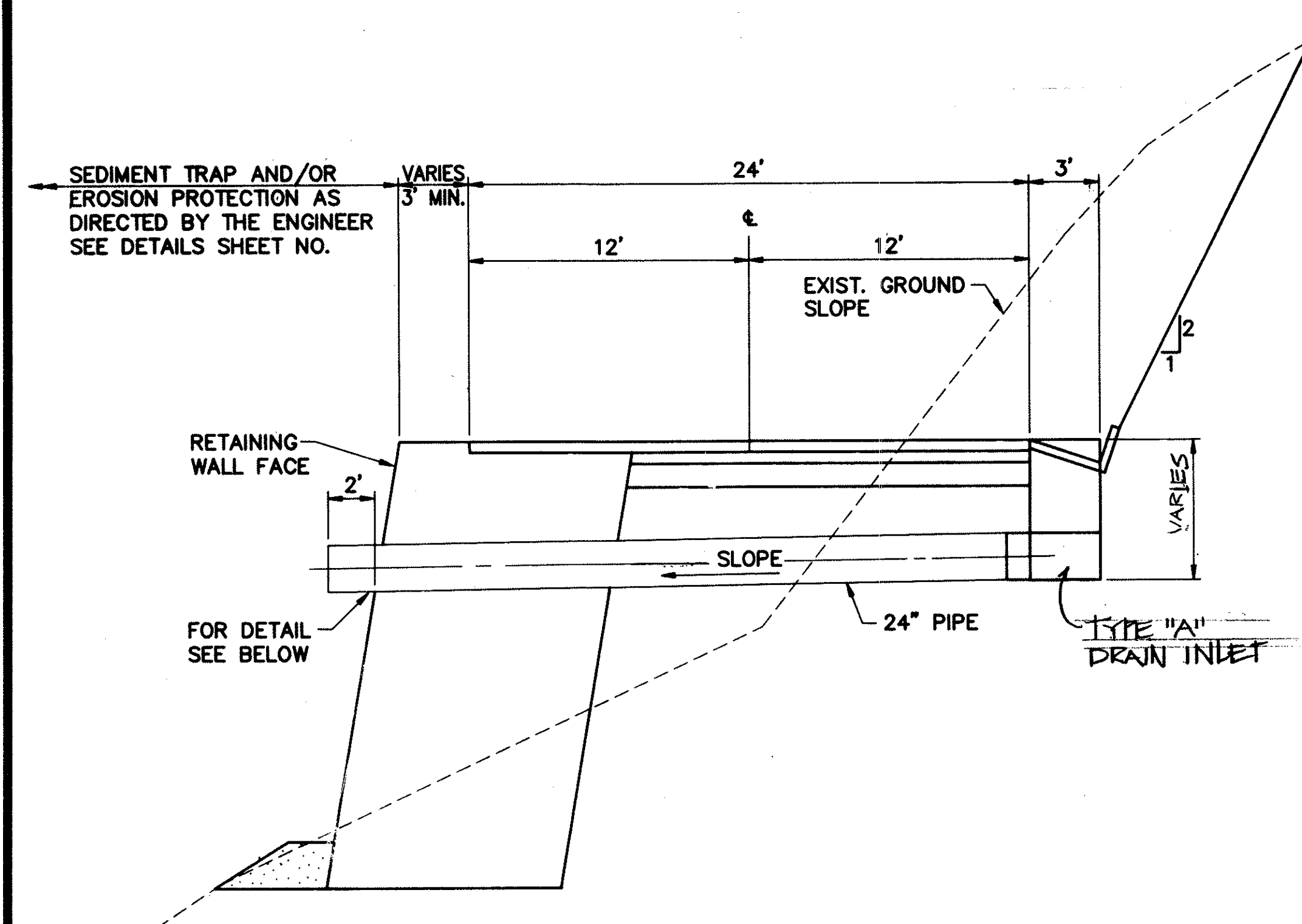
**TYPICAL ACCESS ROAD SECTIONS**

INTERSTATE ROUTE H-3  
F.A.I. PROJECT NO. I-H3-1(69) & (70)

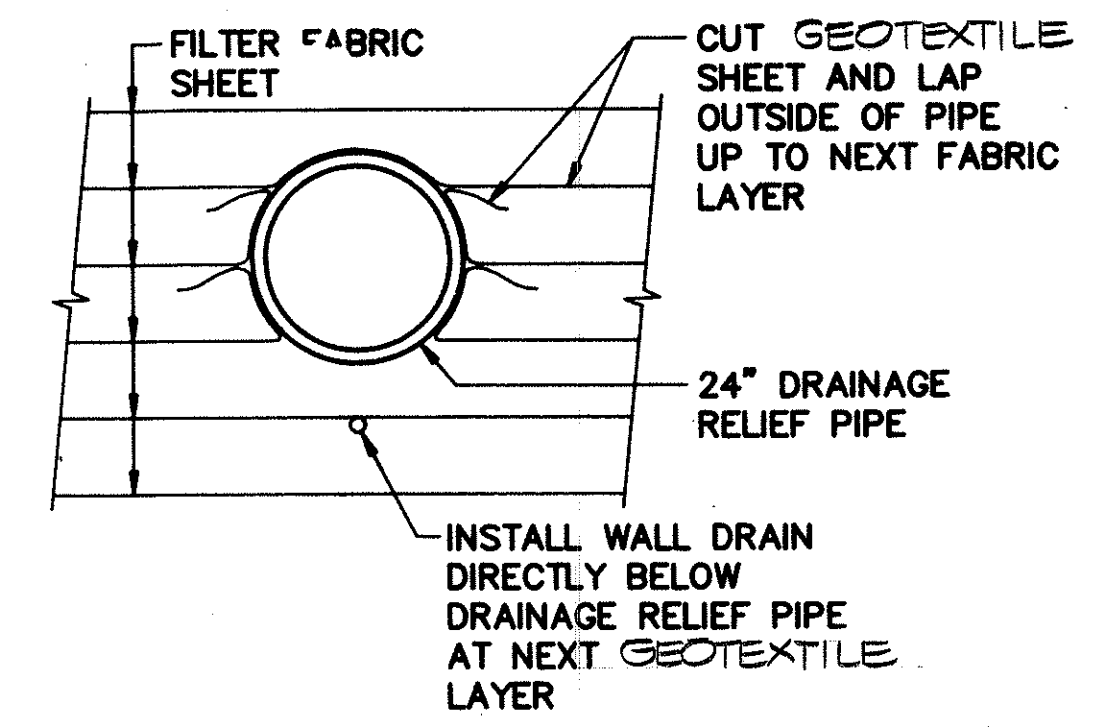
SCALE: AS SHOWN DATE: MARCH, 1992

SHEET No. 032 OF 95 SHEETS

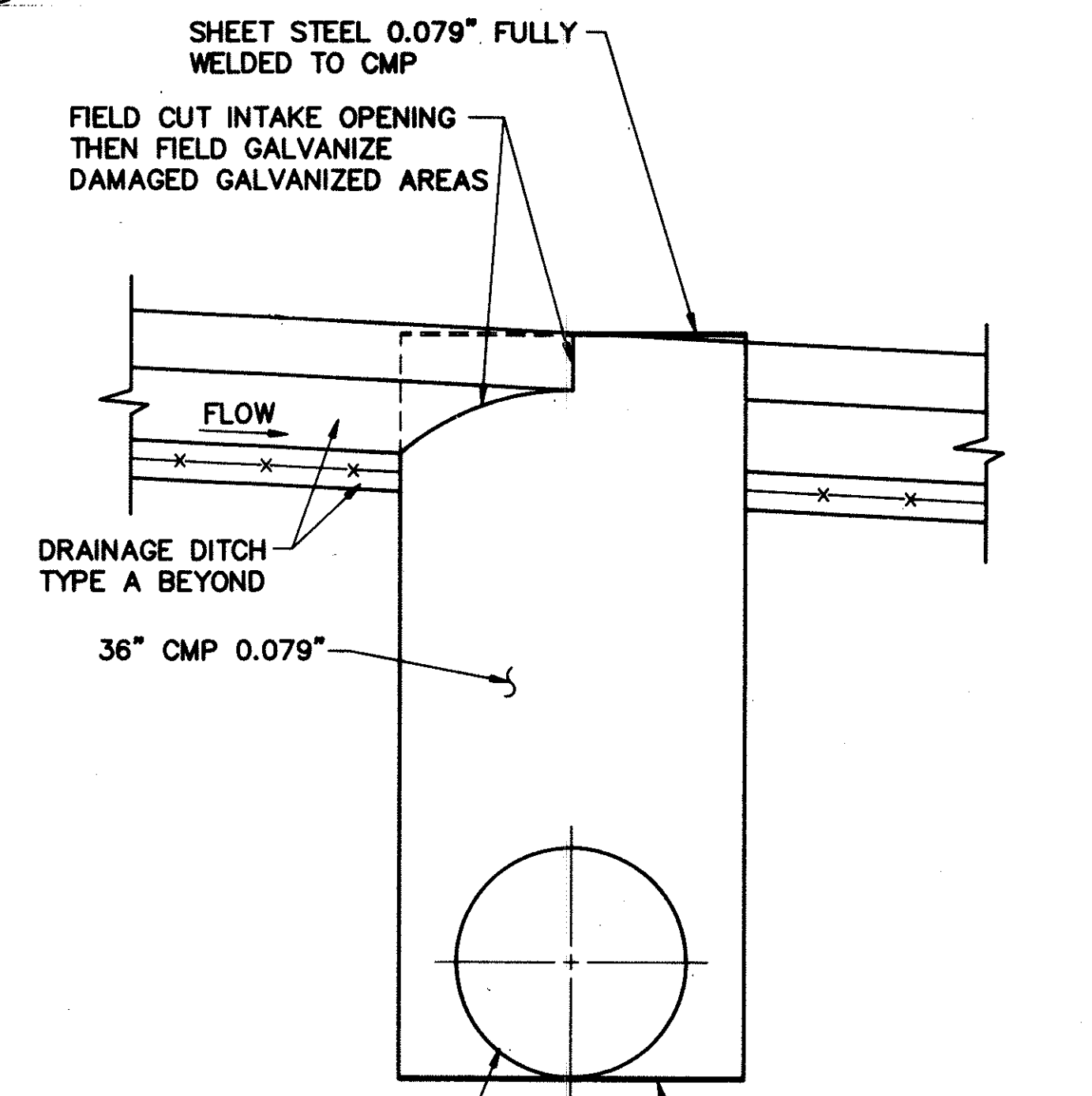
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | I-H3-1(69)         | 1992        | 36        | 325          |



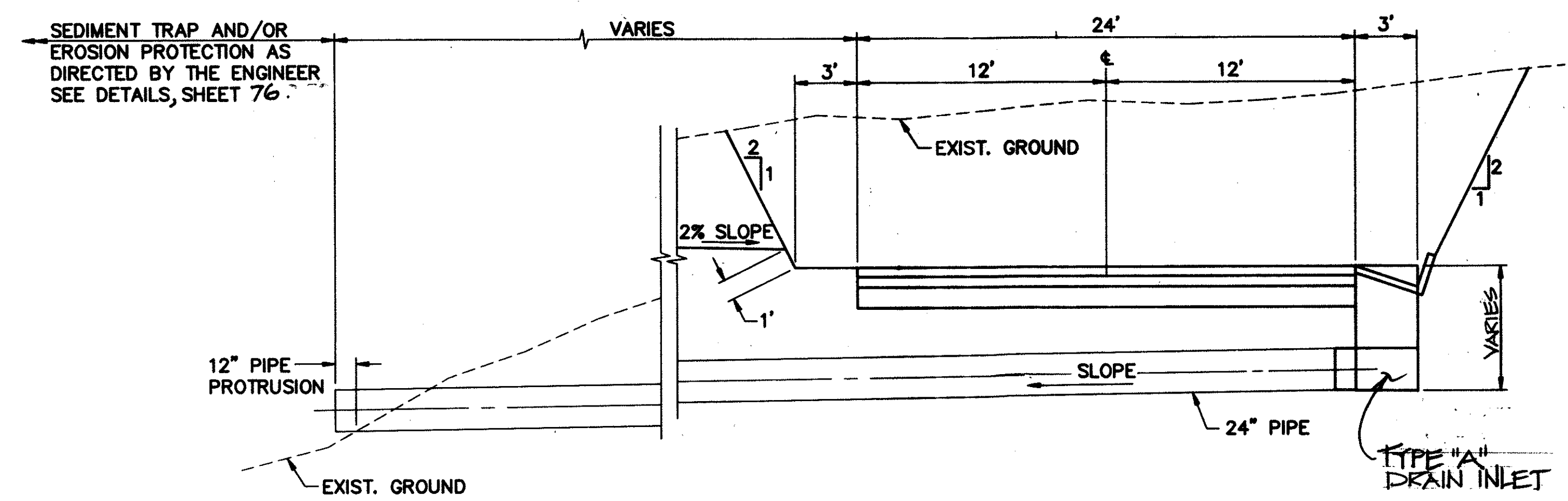
**TYPICAL DRAINAGE RELIEF PIPE  
RETAINING WALL SECTION**  
SCALE: 1" = 5'



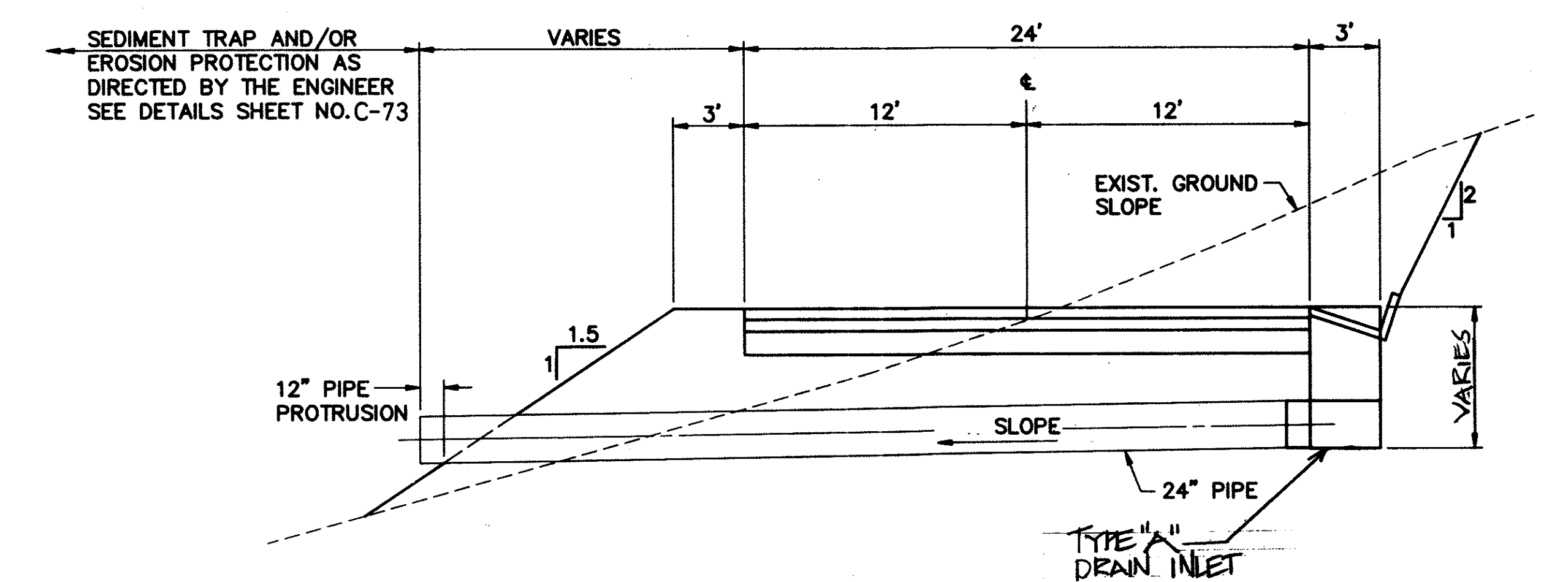
**DRAINAGE RELIEF PIPE IN  
FILTER FABRIC WALL**  
NOT TO SCALE



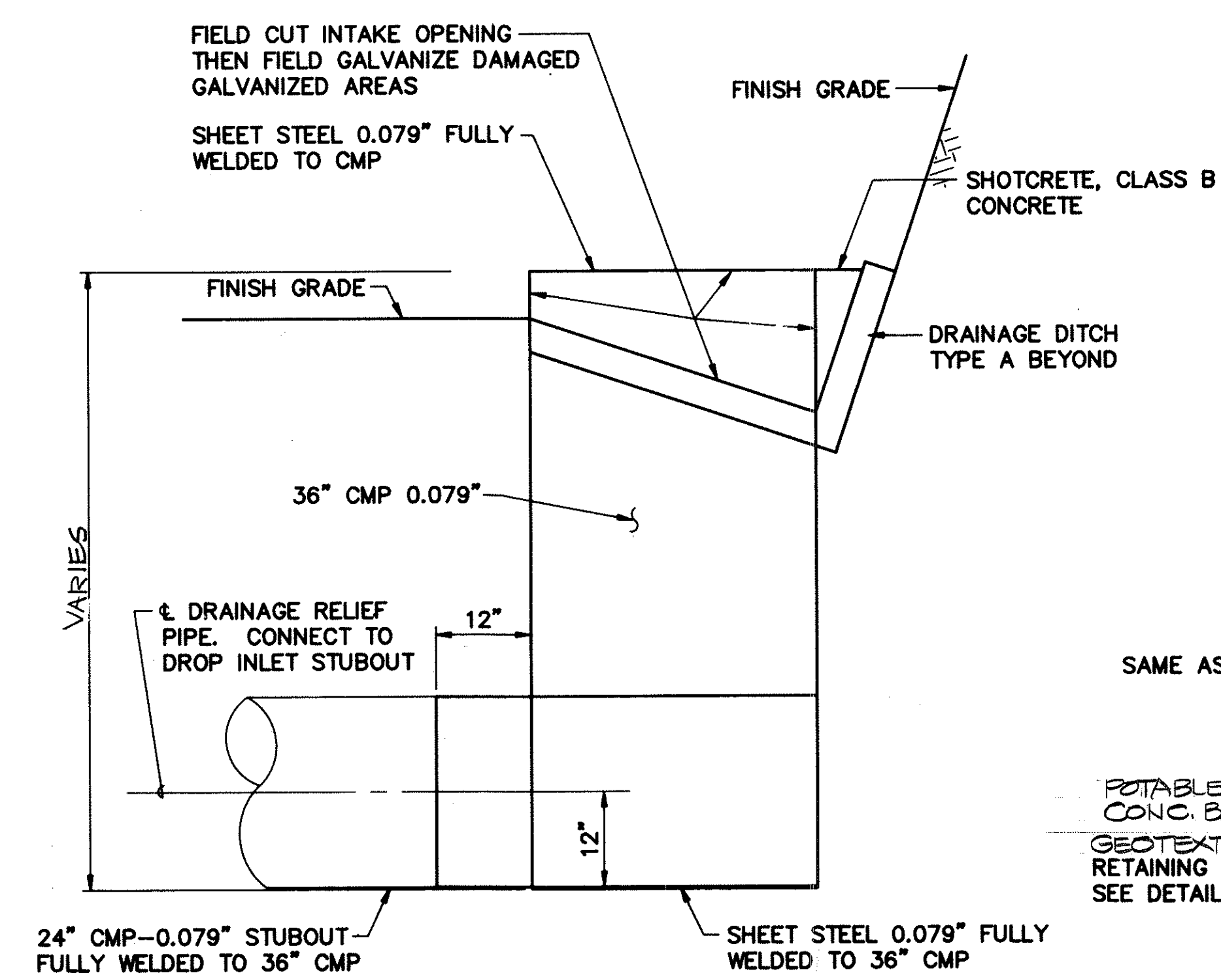
**SECTION**  
SCALE: 3/4" = 1'-0"



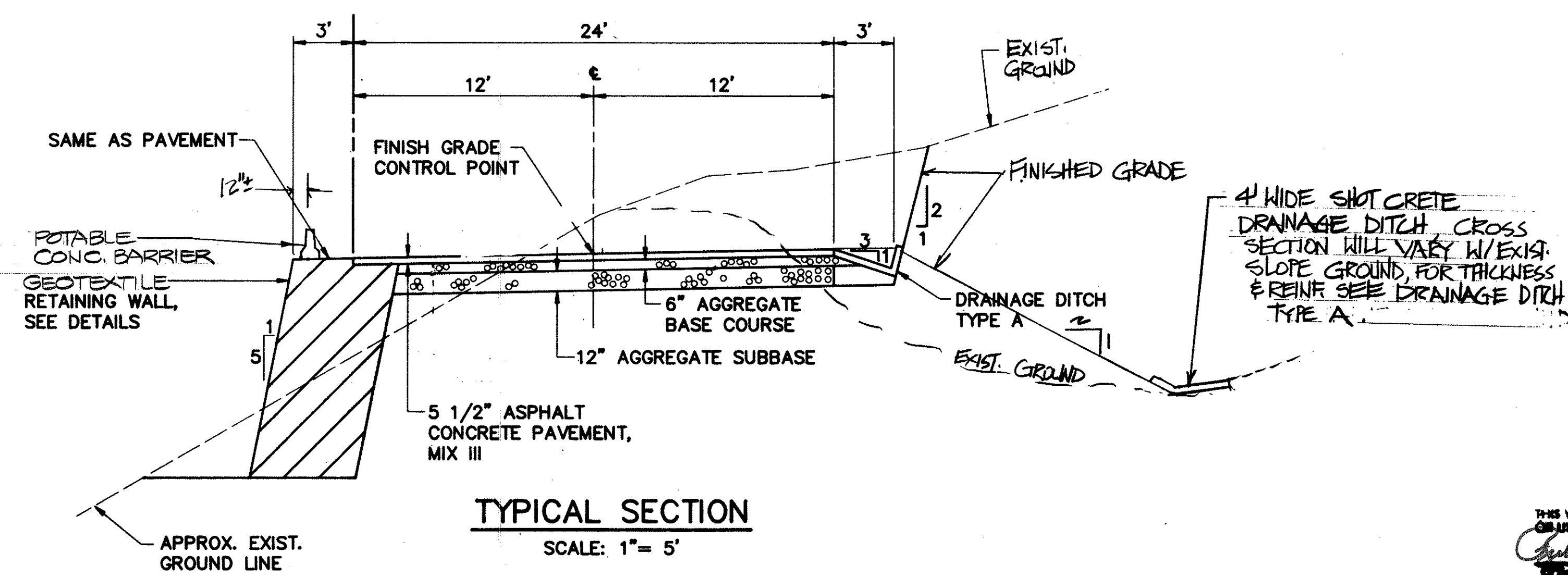
**TYPICAL DRAINAGE RELIEF PIPE  
CUT SECTION**  
SCALE: 1" = 5'



**TYPICAL DRAINAGE RELIEF PIPE  
FILL SECTION**  
SCALE: 1" = 5'



**TYPE "A" DRAIN INLET**  
SCALE: 3/4" = 1'-0"



**TYPICAL SECTION**  
SCALE: 1" = 5'

NOTE:  
IF THE CONTRACTOR ELECTS TO USE REINFORCED CONCRETE PIPE, A CONCRETE COLLAR (24" WIDE BY 6" THICK WITH REINFORCING) SHALL BE USED FOR THE CONNECTION TO THE CMP STUB FROM THE DROP INTAKE. PAYMENT FOR THE CONCRETE COLLAR SHALL BE INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION  
Richard M. Wilson 3/1/92  
DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL ACCESS ROAD  
DETAILS**

INTERSTATE ROUTE H-3  
F.A.I. PROJECT NO. I-H3-1(69) & (70)

SCALE: AS SHOWN      DATE: MARCH, 1992

SHEET No. 033 OF 95 SHEETS

|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY          |      |
| TRACED BY         |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |
| NO.               |      |