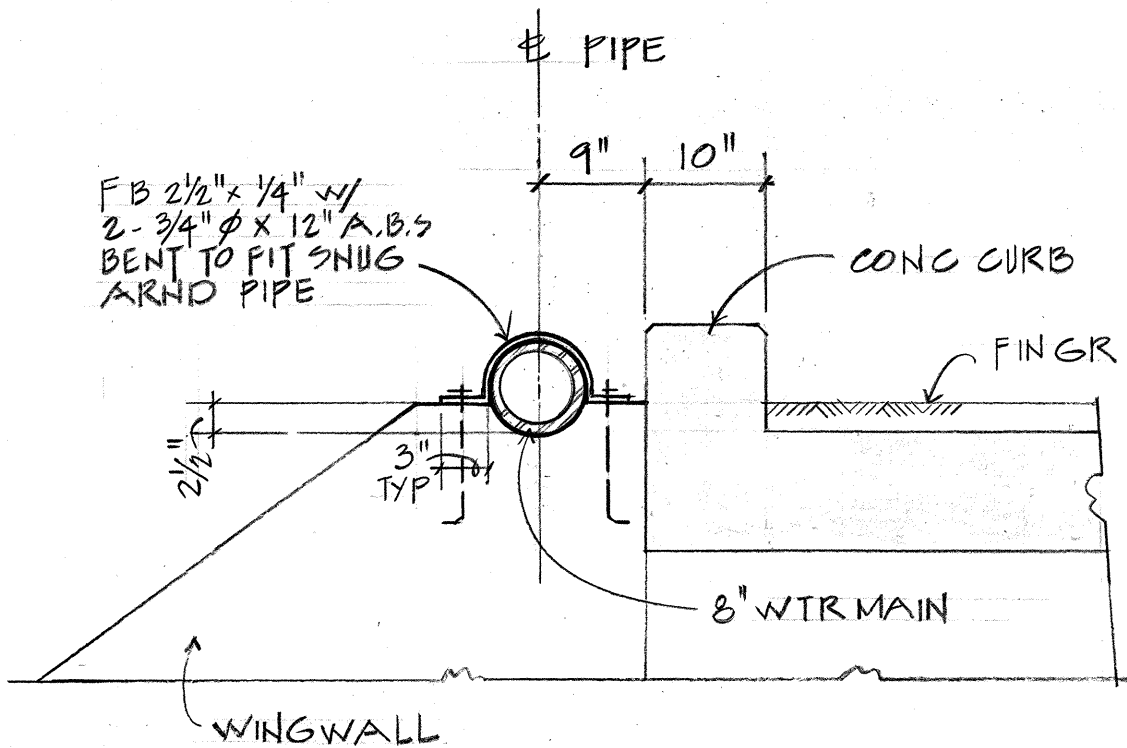
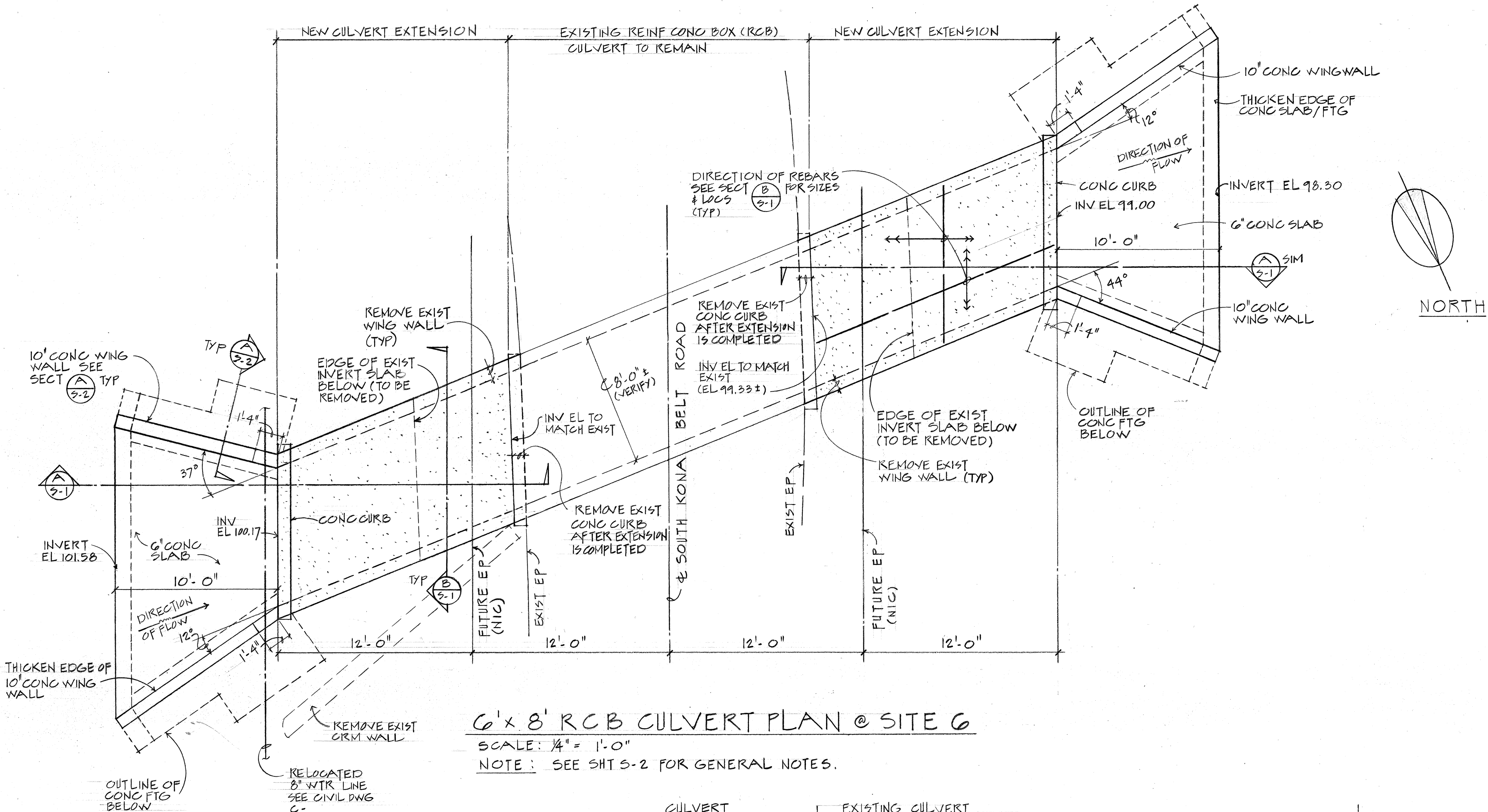


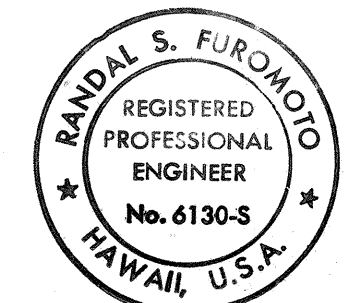
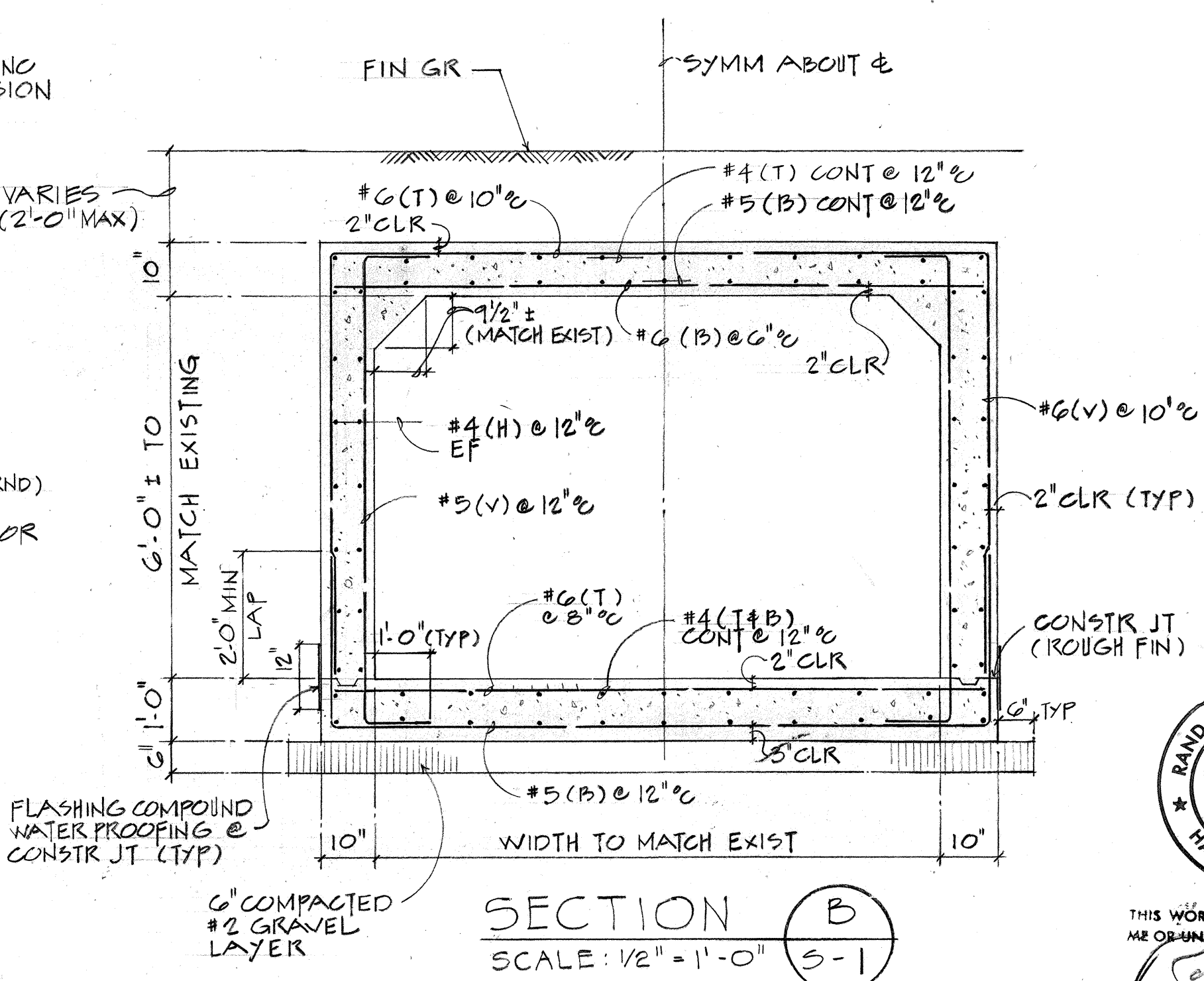
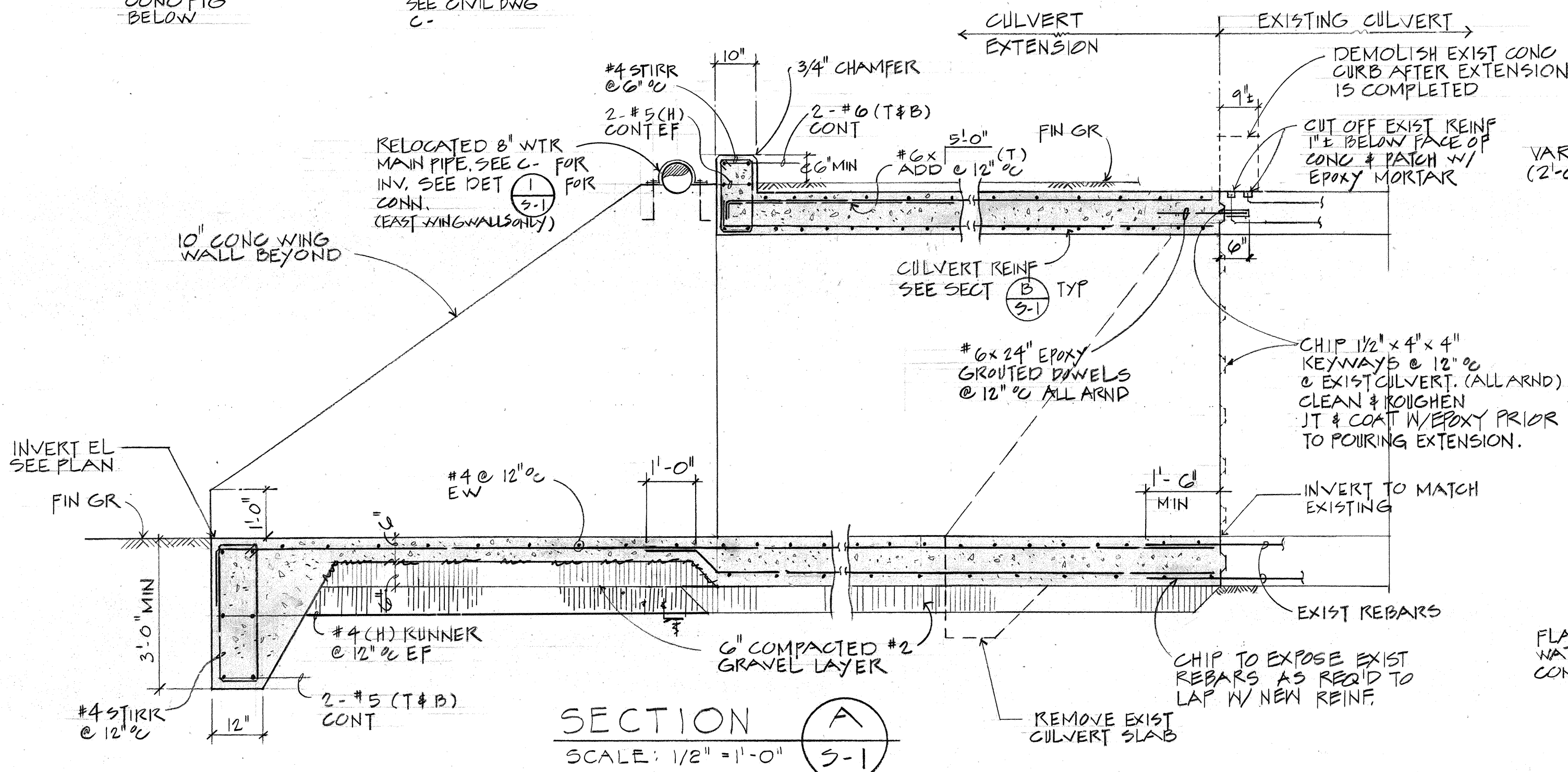
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	118C-01-01	1991	22	25



- WATERLINE STRAP NOTES**
1. Straps shall be hot-dipped galvanized after fabrication.
 2. All bolts and nuts shall be stainless steel.
 3. 8" 1/16 vertical bends at stations 0+23.8 and 0+43.8 shall be strapped down.

APPROVED:

[Signature] 4/2/91
MANAGER, DEPT. OF WATER SUPPLY (C.S.) DATE
COUNTY OF HAWAII



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
[Signature]
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

6' x 8' RCB CULVERT PLAN SECTION & DETAIL
SITE 6

HAWAII BELT ROAD
IMPROVEMENTS
PAPA TO HONAUNAU - UNIT 2
PROJECT NO. 118C-01-91

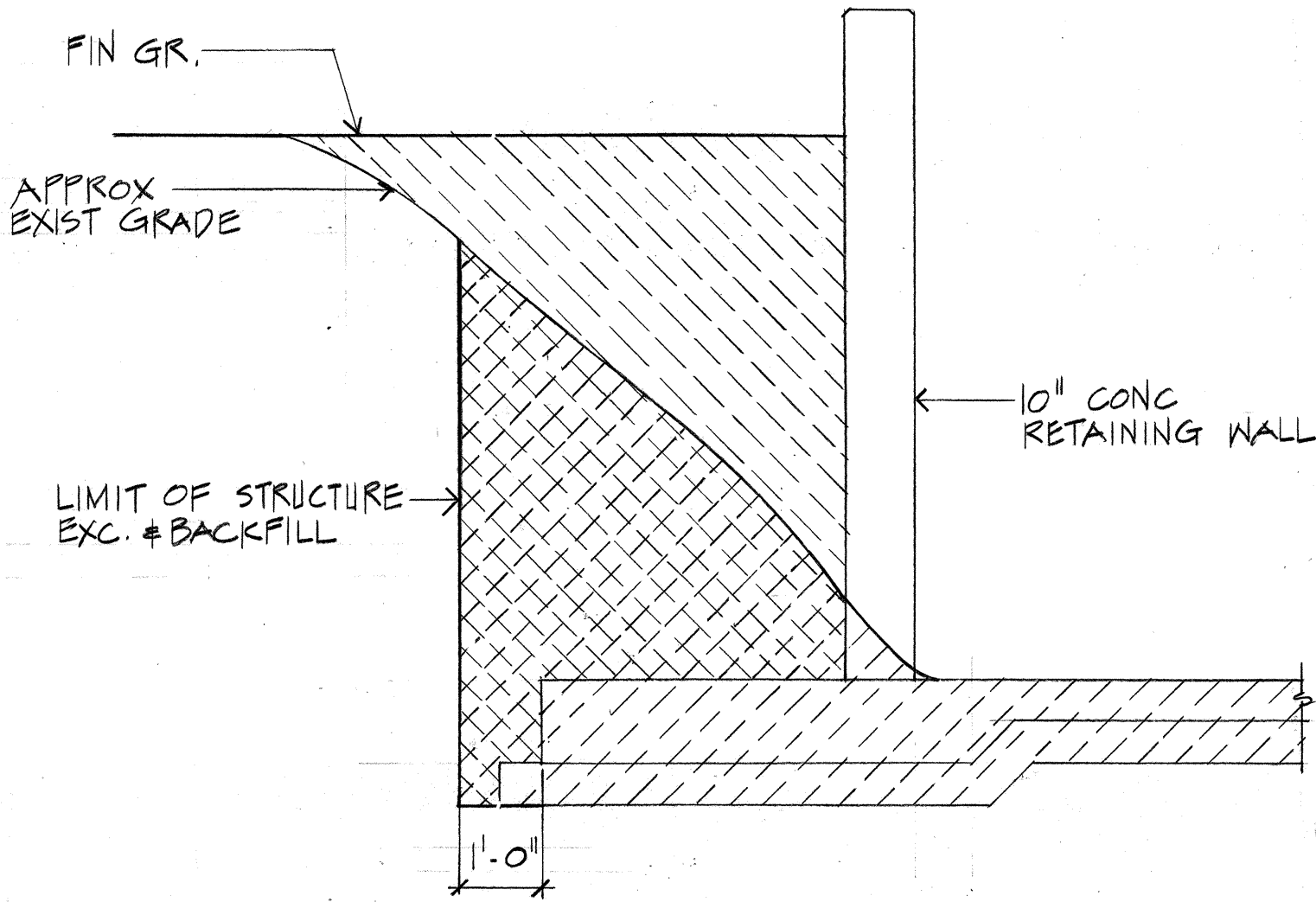
SHEET No. 5-1 OF 2 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	118C-01-01	1991	24	25

RETAINING WALL SCHEDULE

HEIGHT "H"	L	h	"a" BARS	"b" BARS
5'-0" TO 5'-6" ± MAX	5'-2"	3'-6"	#5 (T) @ 12" @	#5 (V) @ 12" @
LESS THAN 5'-0"	3'-2"	2'-6"	#4 (T) @ 12" @	#4 (V) @ 12" @



- GENERAL NOTES
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. ANY DISCREPANCIES AND/OR INCONSISTENCIES SHALL BE REPORTED TO THE ENGINEER FOR CLARIFICATION.
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING OF THE STRUCTURE FOR ALL LOADS THAT MAY BE IMPOSED UPON IT DURING CONSTRUCTION.

BASIC DESIGN LOADS

DEAD LOAD ACTUAL

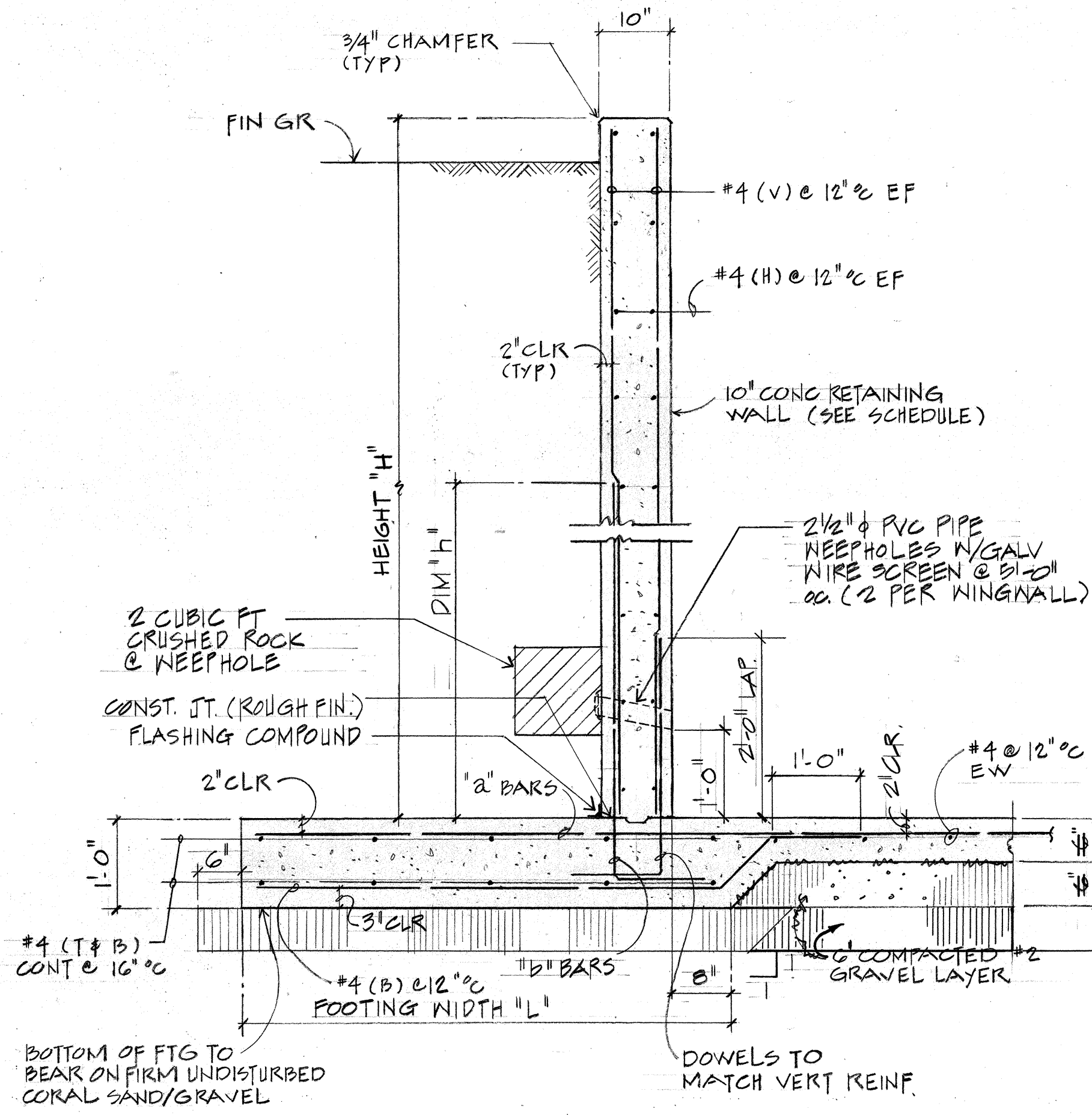
LIVE LOAD STANDARD HS 20-44 TRUCK AXLE LOADS.

- FOUNDATION NOTES
- FOUNDATIONS SHALL REST ON WELL COMPACTED MATERIAL. SOFT SPOTS OR EXPANSIVE CLAYEY SOIL SHALL BE REMOVED AND REPLACED WITH COMPACTED GRANULAR BACKFILL MATERIAL.
 - ALL FOOTING EXCAVATION, BACKFILL AND COMPACTION OPERATIONS SHALL BE OBSERVED BY A QUALIFIED SOILS ENGINEER DURING CONSTRUCTION TO CHECK ADEQUATE BEARING CAPACITY & COMPACTION.
 - ALLOWABLE SOIL BEARING PRESSURE: 3000 PSF (ASSUMED)

CONCRETE NOTES

- ALL CONCRETE SHALL BE NORMAL WEIGHT, HARDROCK CONCRETE DEVELOPING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI. MAXIMUM SIZE OF AGGREGATES SHALL BE 1". SLUMP SHALL BE BETWEEN 3" TO 4" FOR WALLS AND 2" TO 4" FOR OTHER WORK. A WATER REDUCING OR WATER REDUCING AND SET RETARDING ADMIXTURE CONFORMING TO ASTM C494 SHALL BE USED IN ALL CONCRETE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 40.
- LAP ALL BARS 40 BAR DIAMETERS AT SPLICES. STAGGER SPLICES WHEREVER POSSIBLE, UNLESS SHOWN OTHERWISE.

- DEMOLITION
- DEMOLITION OF PORTIONS OF THE EXISTING BOX CULVERT IS INCIDENTAL TO THE STRUCTURAL EXCAVATION FOR BOX CULVERT.



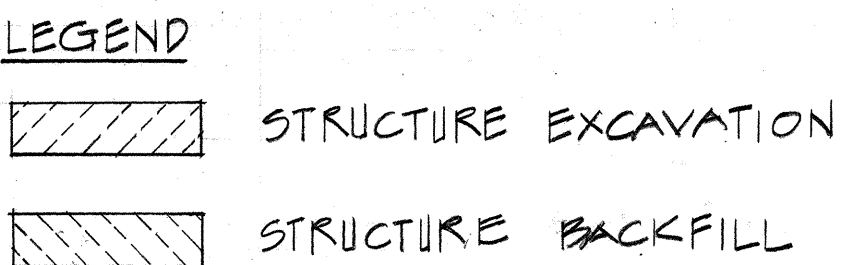
SECTION - RETAINING WALL

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

A

S-2

NOTE: SEE SECT (B) FOR STRUCTURE EXCAVATION & BACKFILL PAY LIMITS.

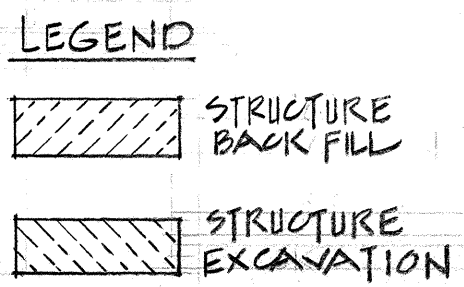
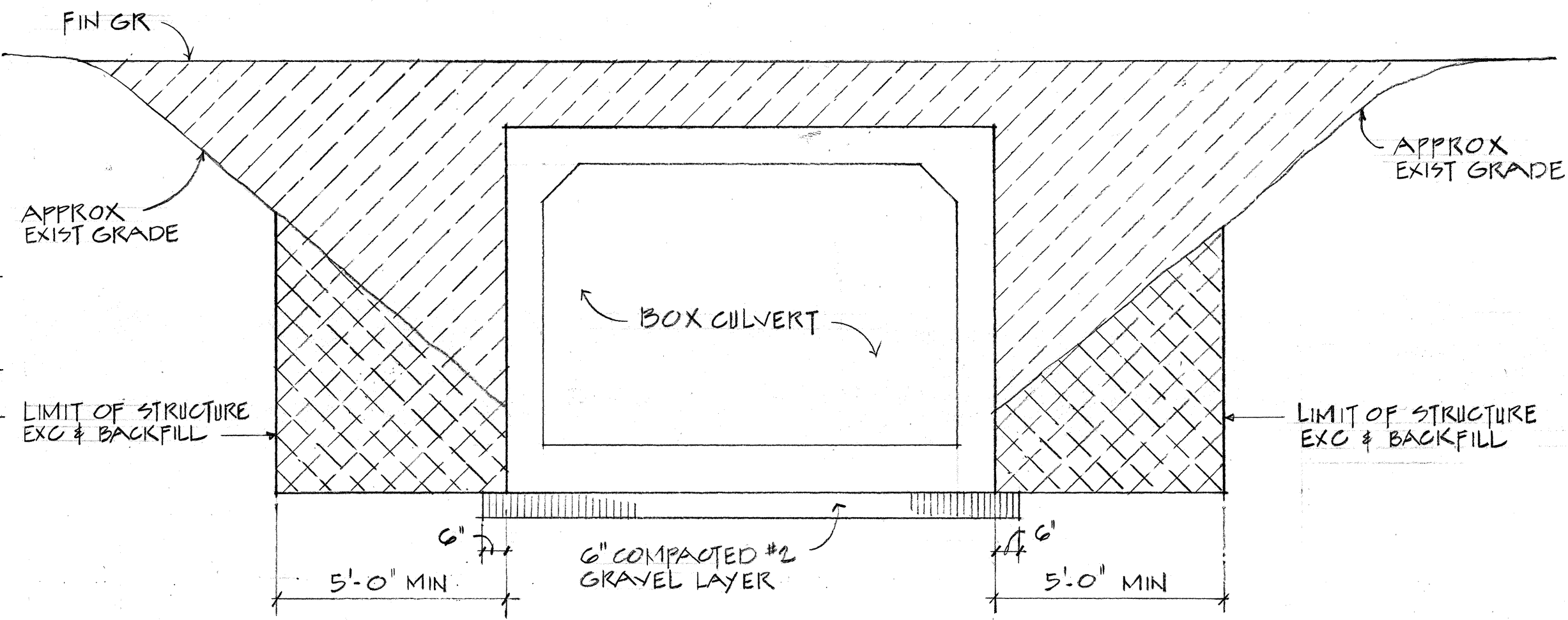


SECTION - STRUCTURE EXC. & BACKFILL

LIMITS

B

S-2

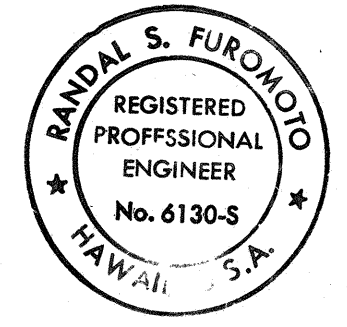


SECTION - STRUCTURE EXC. & BACKFILL

LIMITS

C

S-2



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SECTIONS & GENERAL NOTES
SITE 6

HAWAII BELT ROAD
IMPROVEMENTS
PAPA TO HONAUNAU - UNIT 2
PROJECT NO. 118C-01-91

SHEET NO. 24 OF 25 SHEETS

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	