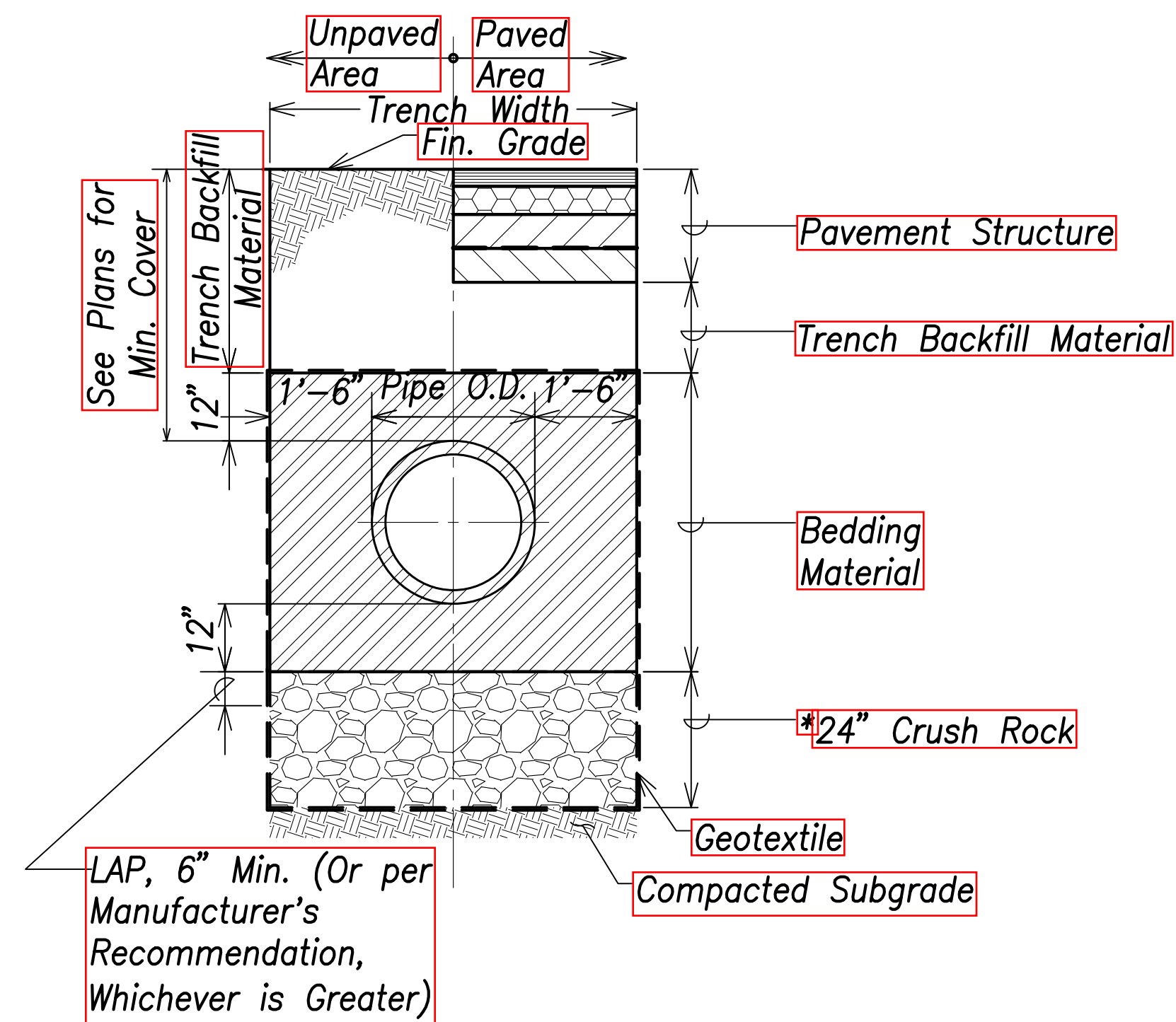
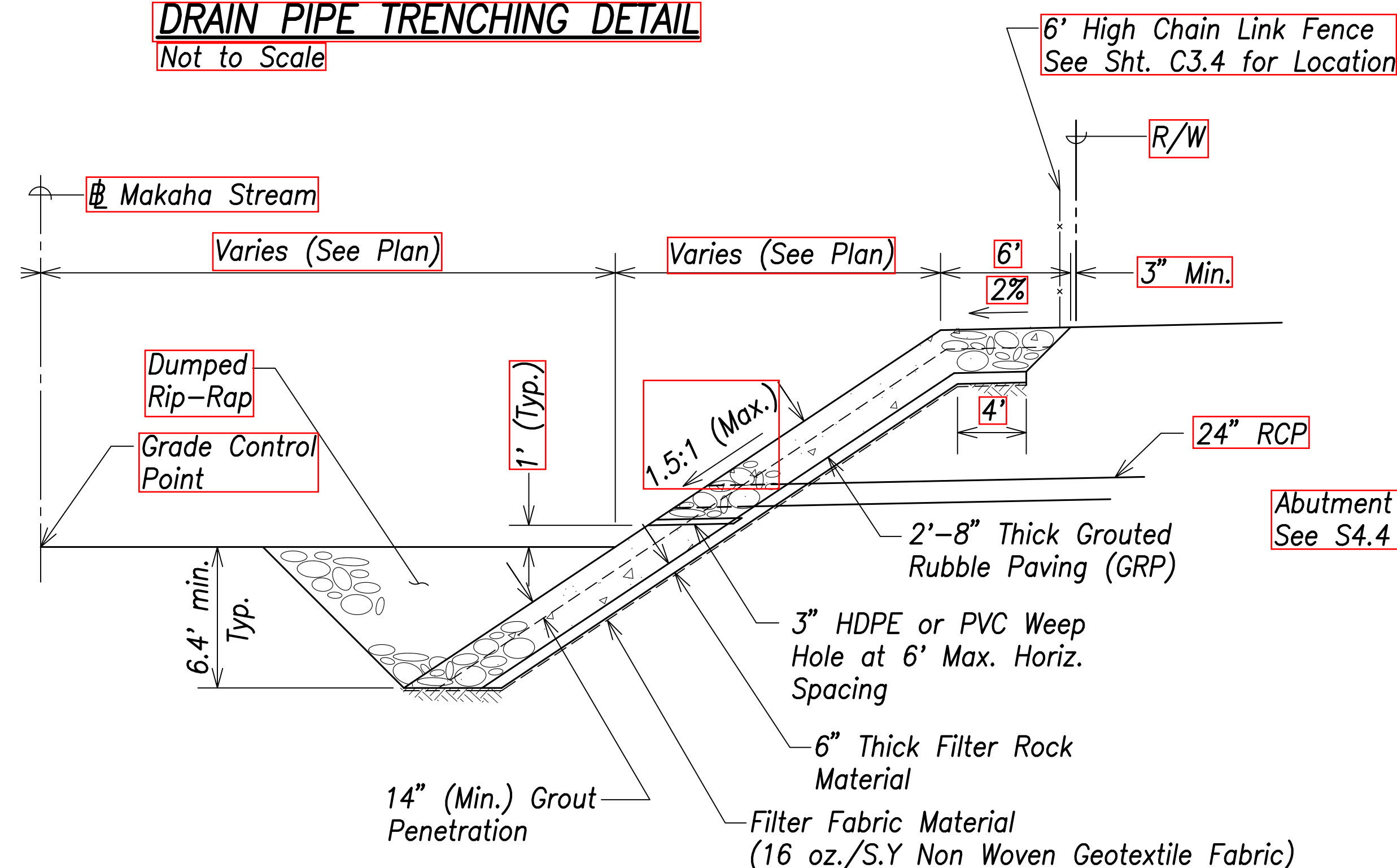


***Notes:**

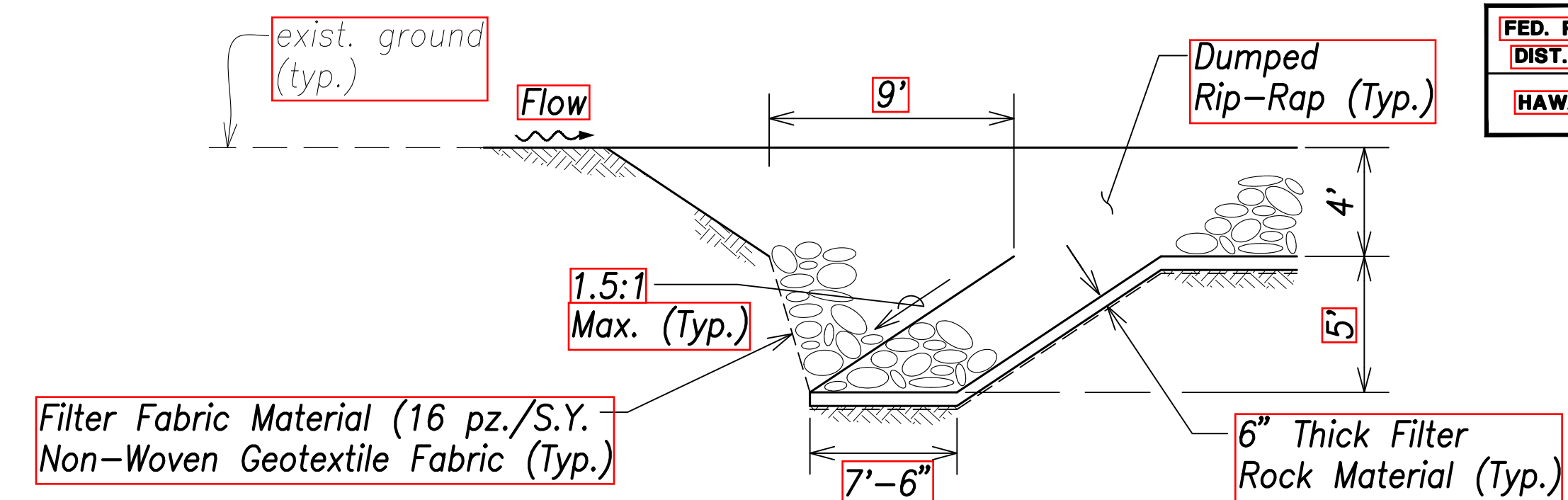
1. In Areas where the Invert of the Pipe Extends Below the Groundwater Level and Exposes the Loose Silty Sand, Over excavate to a Maximum Depth of 24-Inches. Replace Over-excavated Material with Crushed Rock. Envelope the Crushed Rock and Bedding Material with Geotextile Fabric.
2. Place Bedding Material 12-Inches Above the Pipe or Groundwater, whichever is Greater.



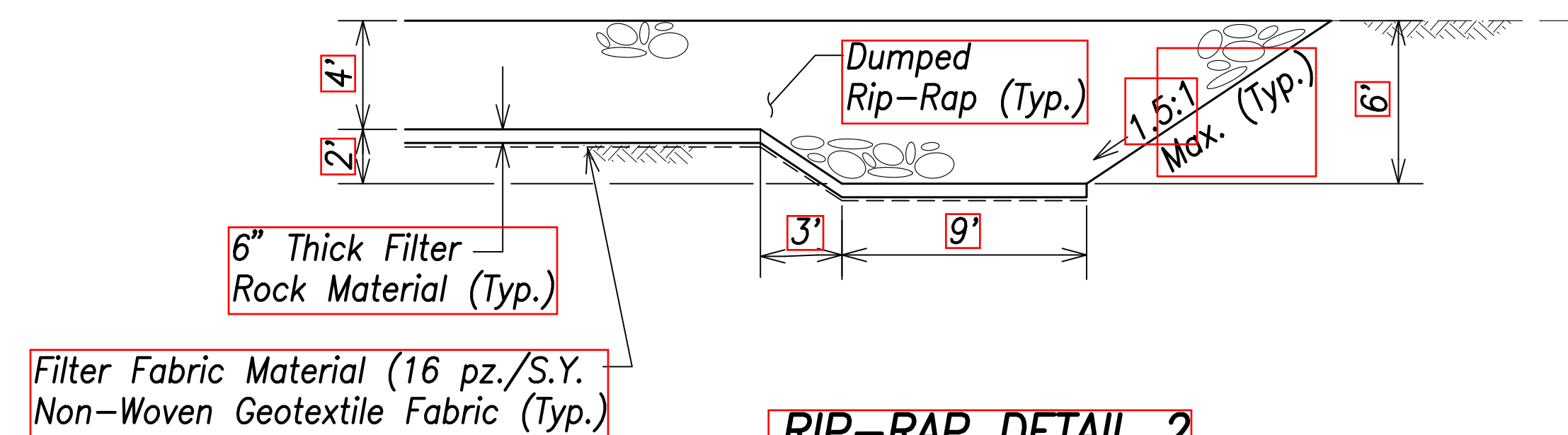
DRAIN PIPE TRENCHING DETAIL
Not to Scale



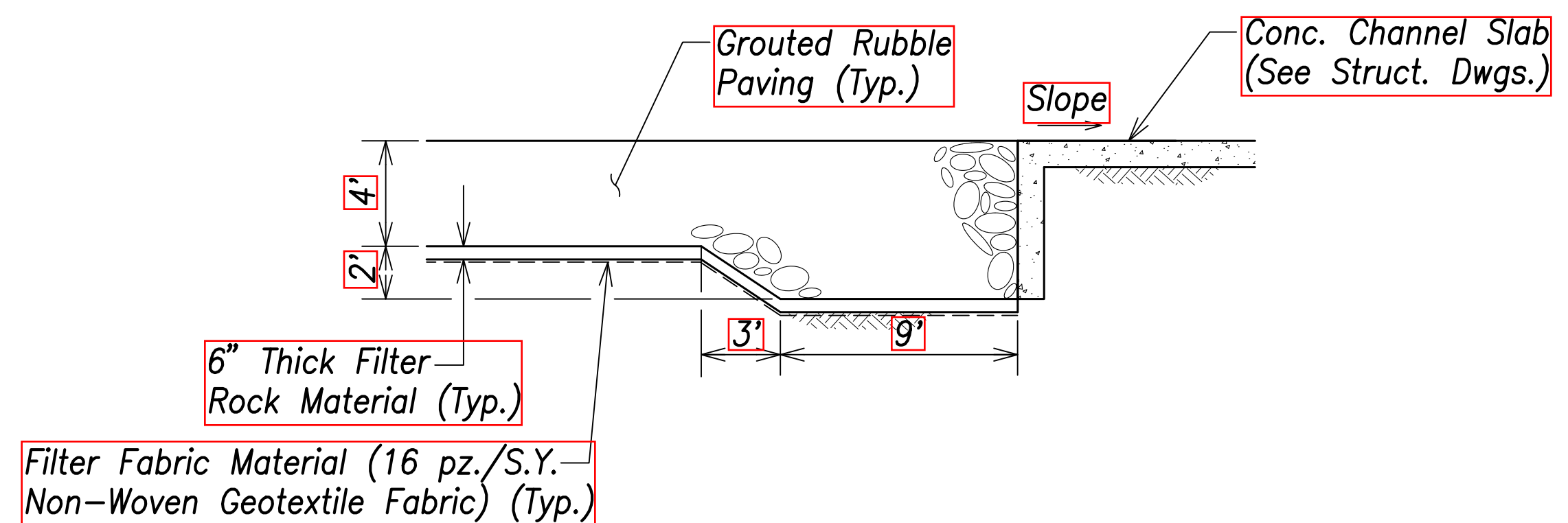
GRP WITH PIPE MITERED TO SLOPE
Not to Scale



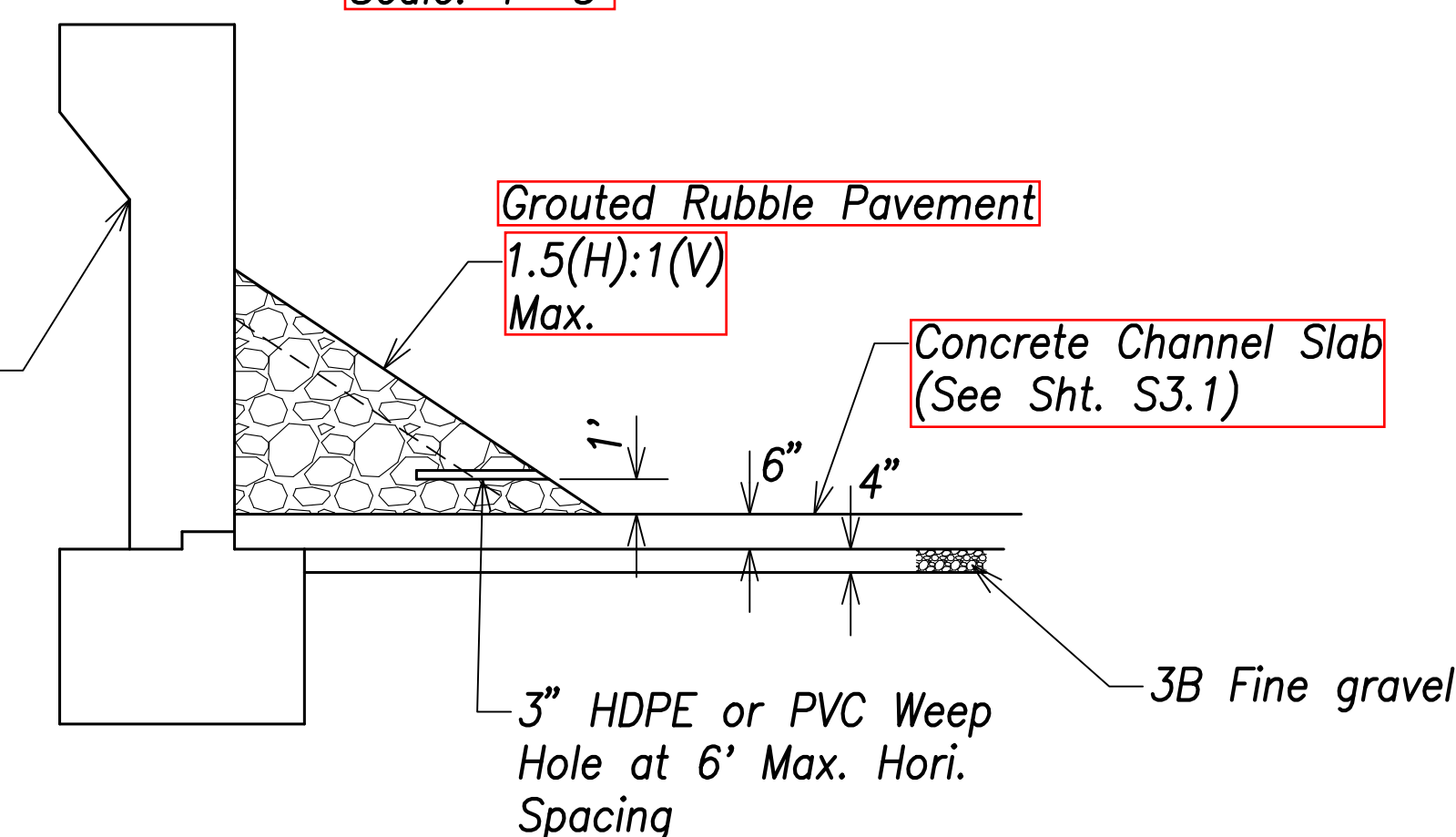
RIP-RAP DETAIL 1
Scale: 1"=5'



RIP-RAP DETAIL 2
Scale: 1"=5'



RIP RAP CONN. TO CHANNEL SLAB - MAKAHA STREAM
Scale: 1"=5'



DETAIL - SECTION "D"
Not to Scale

DATE	10/10/20
SURVEY PLOTTED BY	DAVID L. LEE
DRAWN BY	DAVID L. LEE
CHECKED BY	DAVID L. LEE
ORIGINAL PLAN	NO. 1
NOTE BOOK	NO. 1
CHECKED BY	DAVID L. LEE



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

Michael H. Okamoto April 30, 2022
SIGNATURE EXPIRATION DATE OF THE LICENSE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-093-1(20)	2020	44	168

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

FARRINGTON HIGHWAY
Replacement of Makaha Bridge No. 3 and Makaha Bridge 3A
F. A. Project No. BR-093-1(20)
Scale: As Shown Date: July 2020

SHEET No. C4.13 OF 168 SHEETS