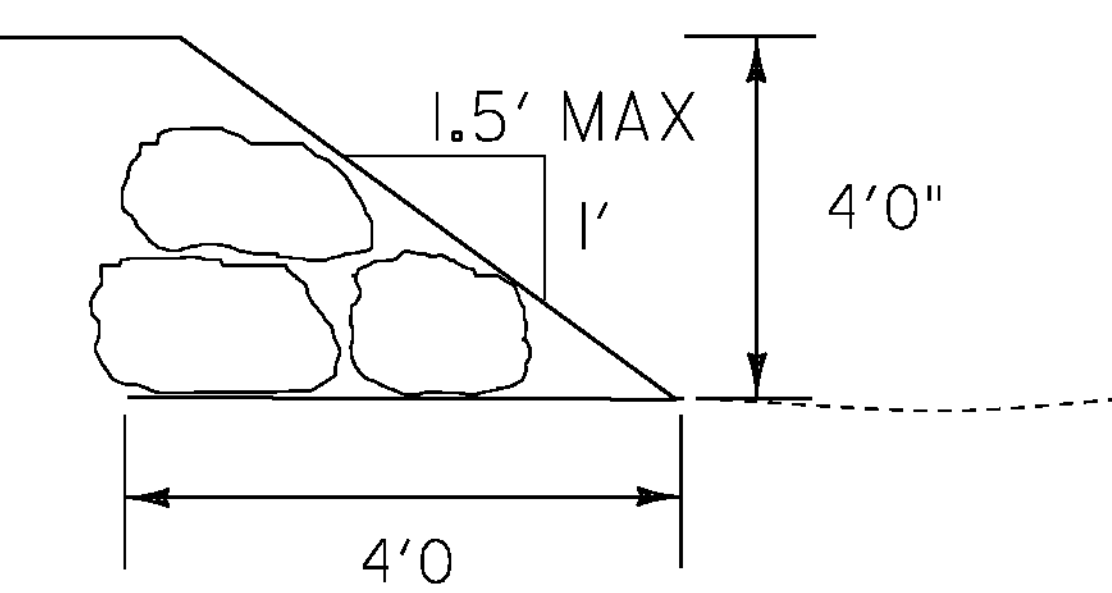
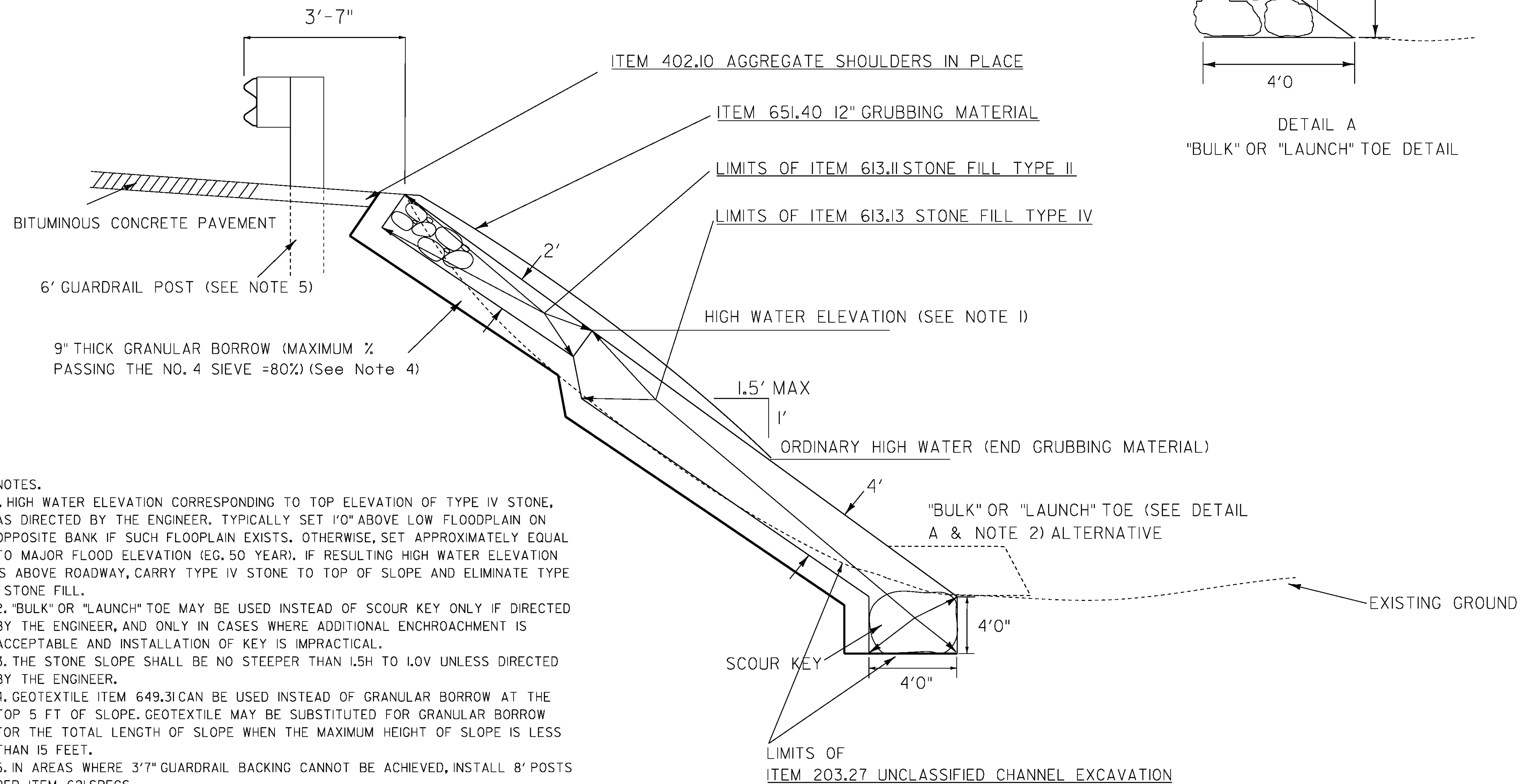


STONE FILL SLOPE PROTECTION



DETAIL A
"BULK" OR "LAUNCH" TOE DETAIL

NOTES.

1. HIGH WATER ELEVATION CORRESPONDING TO TOP ELEVATION OF TYPE IV STONE, AS DIRECTED BY THE ENGINEER. TYPICALLY SET 1'0" ABOVE LOW FLOODPLAIN ON OPPOSITE BANK IF SUCH FLOODPLAIN EXISTS. OTHERWISE, SET APPROXIMATELY EQUAL TO MAJOR FLOOD ELEVATION (EG. 50 YEAR). IF RESULTING HIGH WATER ELEVATION IS ABOVE ROADWAY, CARRY TYPE IV STONE TO TOP OF SLOPE AND ELIMINATE TYPE II STONE FILL.
2. "BULK" OR "LAUNCH" TOE MAY BE USED INSTEAD OF SCOUR KEY ONLY IF DIRECTED BY THE ENGINEER, AND ONLY IN CASES WHERE ADDITIONAL ENCHROACHMENT IS ACCEPTABLE AND INSTALLATION OF KEY IS IMPRACTICAL.
3. THE STONE SLOPE SHALL BE NO STEEPER THAN 1.5H TO 1.0V UNLESS DIRECTED BY THE ENGINEER.
4. GEOTEXTILE ITEM 649.31 CAN BE USED INSTEAD OF GRANULAR BORROW AT THE TOP 5 FT OF SLOPE. GEOTEXTILE MAY BE SUBSTITUTED FOR GRANULAR BORROW FOR THE TOTAL LENGTH OF SLOPE WHEN THE MAXIMUM HEIGHT OF SLOPE IS LESS THAN 15 FEET.
5. IN AREAS WHERE 3'7" GUARDRAIL BACKING CANNOT BE ACHIEVED, INSTALL 8' POSTS PER ITEM 621 SPECS

PROJECT NAME:	HARTFORD-RANDOLPH
PROJECT NUMBER:	ER 014-7(21)
FILE NAME:	PLOT DATE: 11-JUL-2013
PROJECT LEADER: CHRIS BUMP	DRAWN BY: ANDREW BERNIER
DESIGNED BY: ANDREW BERNIER	CHECKED BY: MICHELLE REDMOND
TYPICAL SHEETS	SHEET 3 OF 20