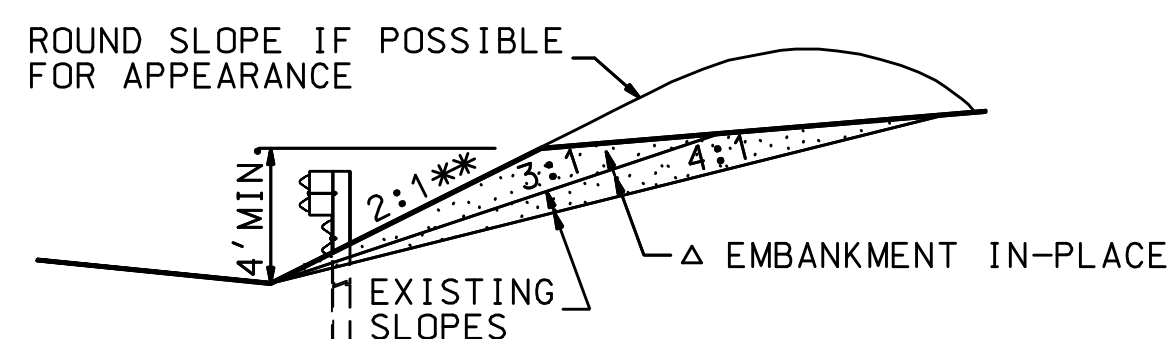
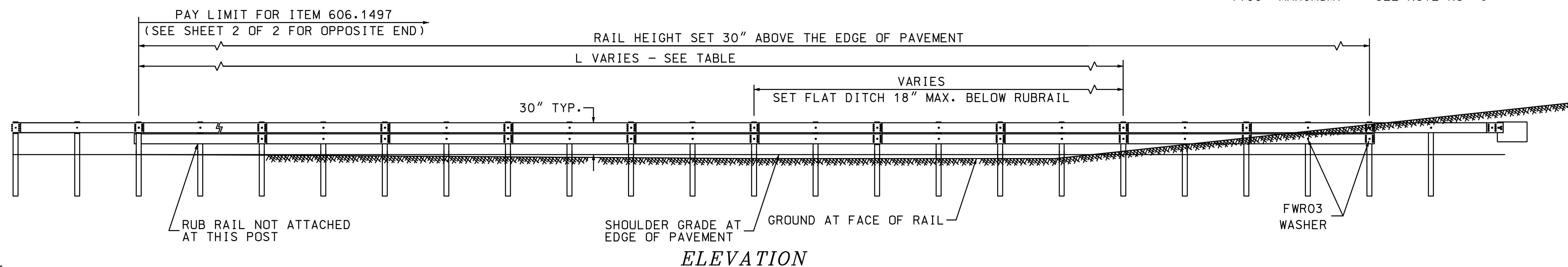
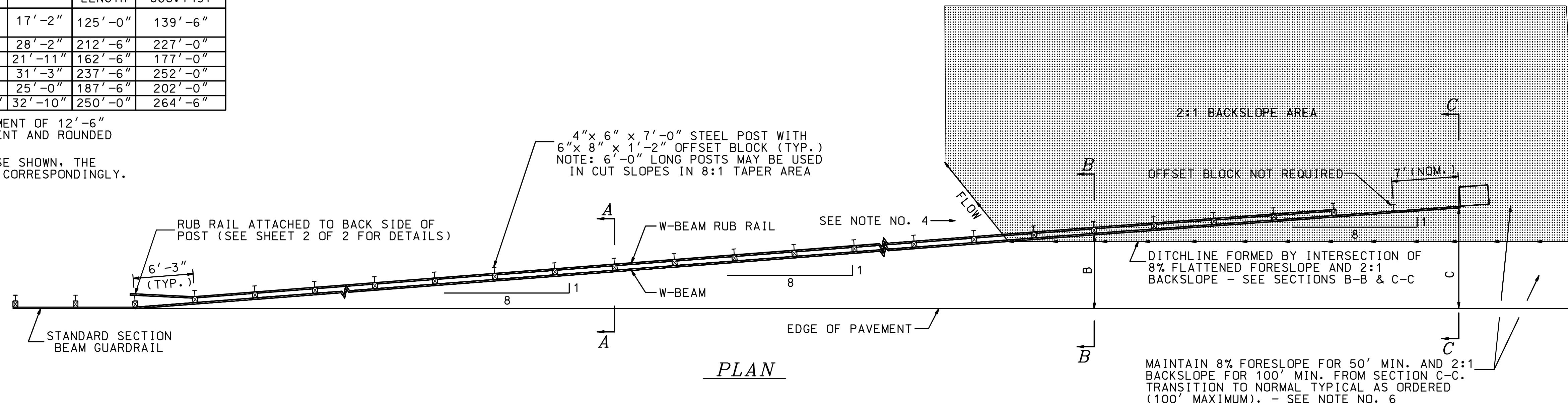


TYPICAL SECTION	TYPICAL DITCH WIDTH	L	B*	C*	RUB RAIL LENGTH	CALCULATED LENGTH ITEM 606.1497
11-4-4 (EARTH)	6'-0"	75'-0"	9'-5"	17'-2"	125'-0"	139'-6"
12-4-4 (EARTH)	6'-0"	75'-0"	9'-5"	17'-2"	125'-0"	139'-6"
12-10-10 (EARTH)	12'-0"	137'-6"	17'-2"	28'-2"	212'-6"	227'-0"
12-10-10 (ROCK)	10'-0"	100'-0"	12'-6"	21'-11"	162'-6"	177'-0"
12-10-12 (EARTH)	14'-6"	162'-6"	20'-4"	31'-3"	237'-6"	252'-0"
12-10-12 (ROCK)	12'-0"	125'-0"	15'-8"	25'-0"	187'-6"	202'-0"
12-10-12 (ROCK)	18'-0"	175'-0"	21'-10"	32'-10"	250'-0"	264'-6"

RAIL LENGTHS ROUNDED TO NEAREST INCREMENT OF 12'-6"  
 \* OFFSETS MEASURED FROM EDGE OF PAVEMENT AND ROUNDED TO NEAREST INCH  
 NOTE: FOR DITCH WIDTHS OTHER THAN THOSE SHOWN, THE LENGTHS AND OFFSETS WILL CHANGE CORRESPONDINGLY.

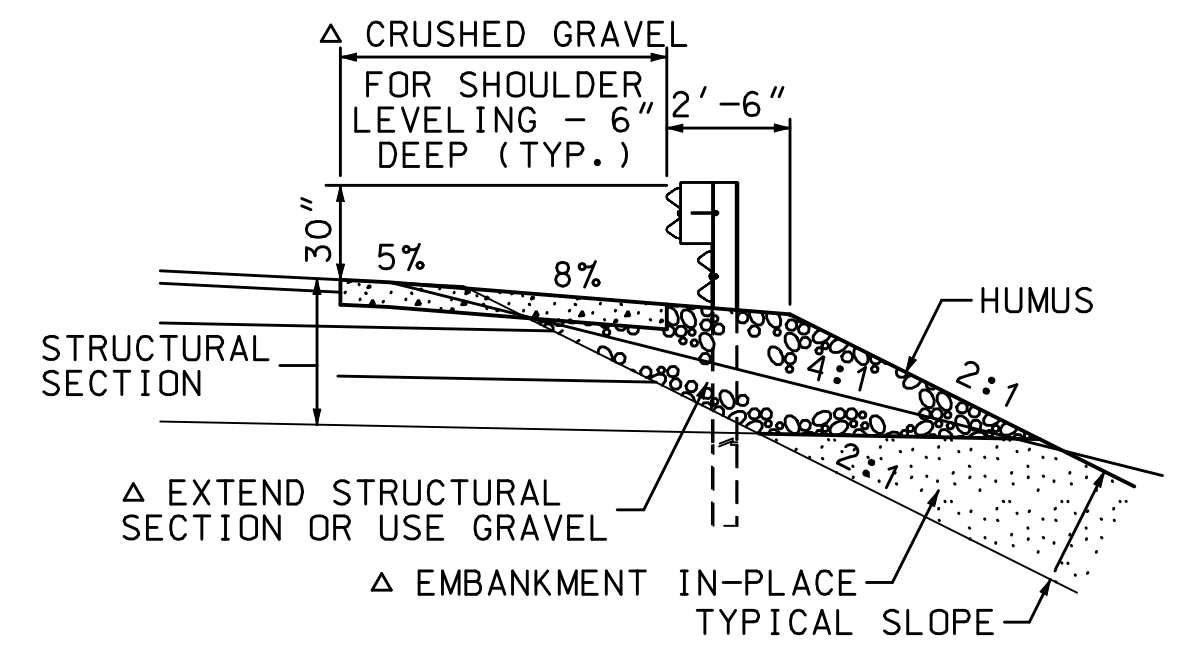


**SLOPE STEEPENING DETAIL**  
(WHERE REQUIRED)

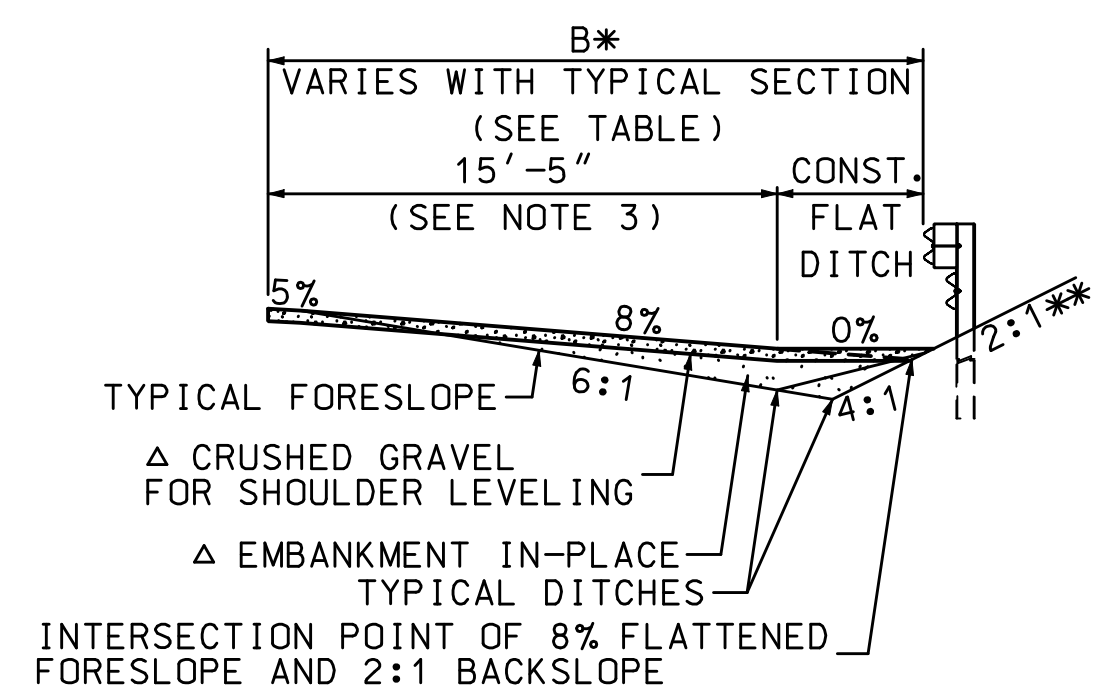
**40 MPH - 8:1 TAPER RATE**

**TERMINAL SECTION TYPE E-2 MODIFIED**

ITEM 606.1497 - BEAM GUARDRAIL TERMINAL SECTION, TYPE E-2 MODIFIED  
 PAID: LINEAR FOOT (INCLUDES RUB RAIL AND ANCHOR)  
 USE: AT BEGINNING OR END OF STANDARD SECTION GUARDRAIL

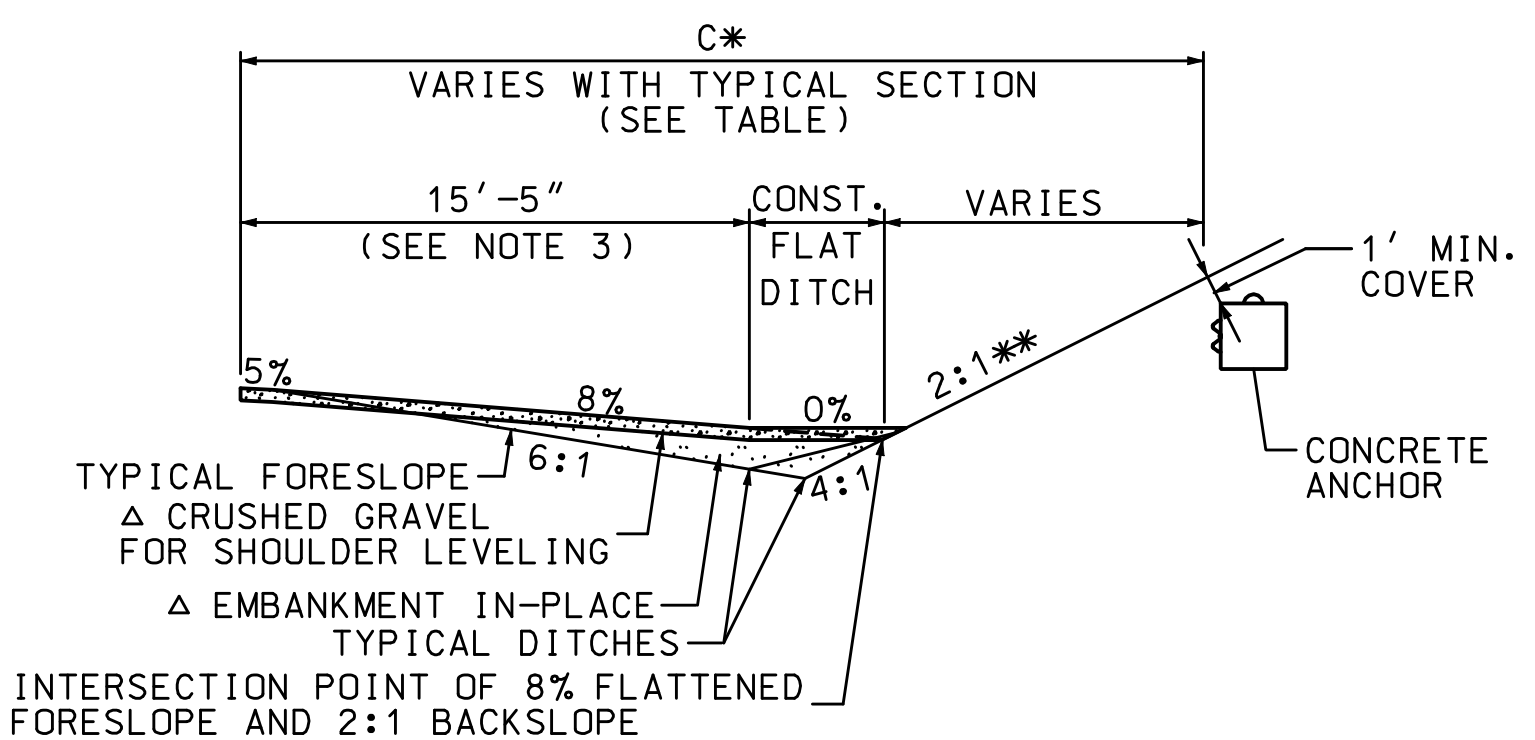


**SECTION A-A**



**SECTION B-B**

△ SEE NOTE 6 FOR ALL HATCHED AREAS



**SECTION C-C**

\*\* THE BACK SLOPE SHALL BE 2:1 OR STEEPER APPROACHING THE ANCHOR. IT IS NOT THE INTENT TO FLATTEN AN EXISTING BACKSLOPE THAT IS STEEPER THAN 2:1 UNLESS SO NOTED ON THE PLANS OR PROPOSAL.

**GENERAL NOTES**

1. THIS TERMINAL IS DESIGNED FOR USE PRIMARILY AT SITES WHERE THE TERRAIN CHANGES ABRUPTLY FROM A CUT TO A STEEP FILL, AND WHERE THEORETICAL LENGTH OF NEED WOULD EXTEND INTO THE CUT SECTION FOR A CONSIDERABLE DISTANCE. THE DESIGN SPEED FOR THIS TERMINAL IS 40 MPH.
2. SEE STANDARD NO. GR-6 FOR E-2 HARDWARE DETAILS. SEE STANDARDS NO. GR-1 OR GR-2 FOR ADDITIONAL DETAILS OF COMMON HARDWARE.
3. A RUB RAIL IS REQUIRED WHEN THE BOTTOM OF THE W-BEAM IS GREATER THAN 18" HIGH ABOVE THE GROUND. A MAXIMUM OFFSET FROM THE E.P. OF 15'-5" MAINTAINS A SINGLE RUB RAIL HEIGHT. FOR ANY PORTION OF A DITCH OFFSET GREATER THAN 15'-5" CONSTRUCT A FLAT BOTTOMED DITCH TO THE 2:1 BACK SLOPE.
4. CONSTRUCT OUTLET DITCH TO FIT SITE CONDITIONS OR USE DROP INLET AND PIPE IF LARGE FLOWS ARE ANTICIPATED OR IF DITCHLINE BECOMES FLATTER THAN 0.4% (PAY UNDER BID ITEMS).
5. FOR INSTALLATIONS IN ROCK CUT EARTH BERMS, EXCAVATE A SUFFICIENT QUANTITY OF ROCK TO PERMIT POST DRIVING, AND ANCHOR THE TERMINAL BY ONE OF THE FOLLOWING METHODS:  
 A) EXCAVATE ROCK TO PERMIT INSTALLATION OF PRECAST ANCHOR  
 B) CONSTRUCT CAST-IN-PLACE ANCHOR WITH SAME MASS AS PRECAST ANCHOR AND 4 S.F. CROSS-SECTIONAL AREA TO FACE OF ANCHOR (SUBSIDIARY TO ITEM 606.1497).  
 C) ATTACH W-BEAM TERMINAL CONNECTOR DIRECTLY TO ROCK FACE BY AN APPROVED ROCK BOLT METHOD (SUBSIDIARY TO ITEM 606.1497).
6. ANY COMMON EXCAVATION, EMBANKMENT IN-PLACE, AND CRUSHED GRAVEL FOR SHOULDER LEVELING REQUIRED WILL BE PAID UNDER ITEM 203.5596 - GUARDRAIL E-2 PLATFORMS. ROCK EXCAVATION WILL BE PAID AS ITEM 206.2 - ROCK STRUCTURE EXCAVATION.

**GUARDRAIL STANDARD**  
**BEAM GUARDRAIL TERMINAL**  
**SECTION TYPE E-2 MODIFIED 40**

**STANDARD NO. GR-8**

REVISION DATE
03-01-2006
06-16-2010

\*.DGN FILE NAME  
GR-8