

**ENGINEER'S NOTES:**

ONTIVEROS AND ASSOCIATES

SOIL DATA — INTERNAL ANGLE OF FRICTION  
 REINFORCED SOIL: 46°  
 RETAINED SOIL: 45°  
 FOUNDATION SOIL: 38°

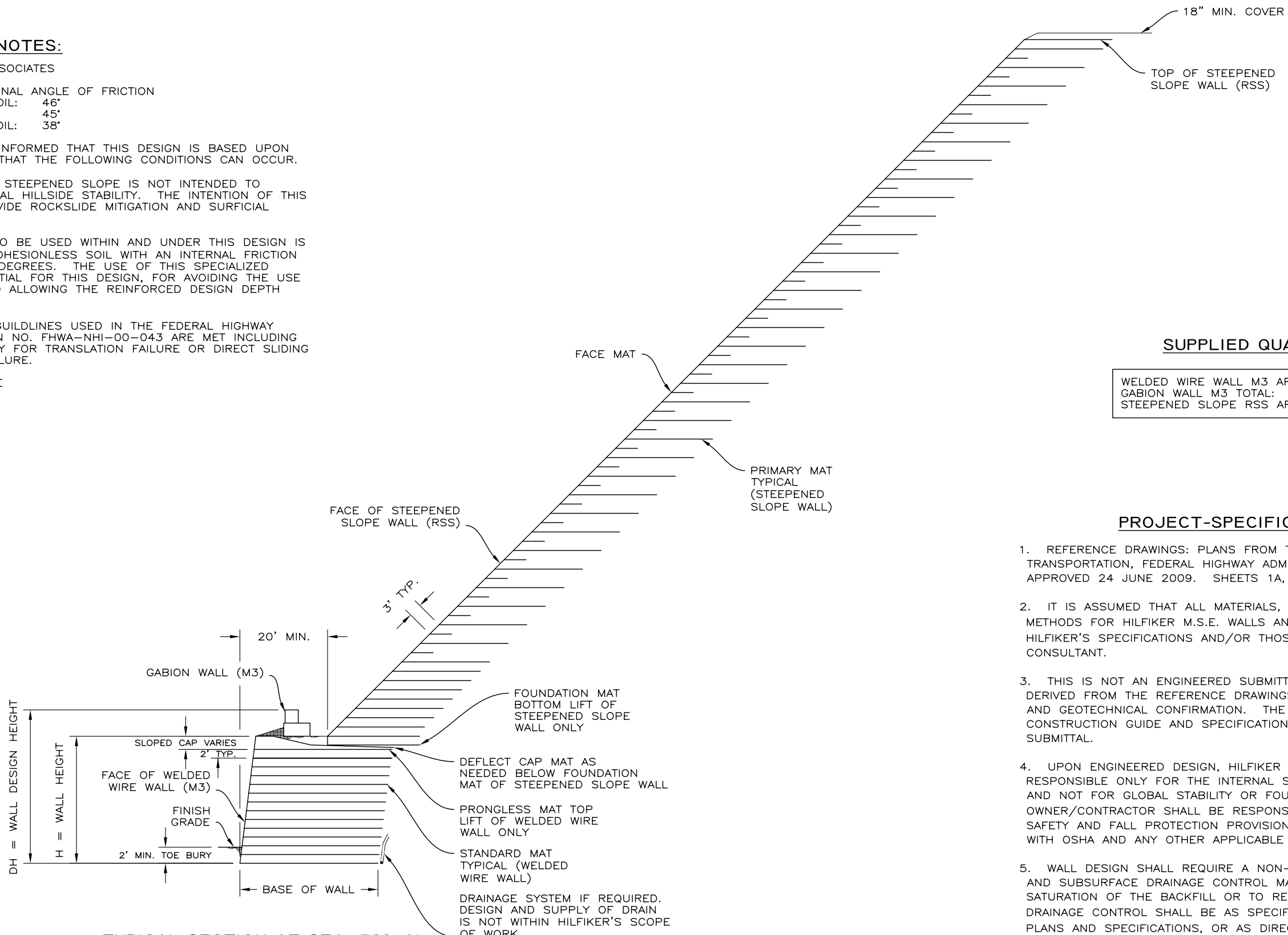
ODOT SHOULD BE INFORMED THAT THIS DESIGN IS BASED UPON THEIR AGREEMENT THAT THE FOLLOWING CONDITIONS CAN OCCUR.

1) THE REINFORCED STEEPENED SLOPE IS NOT INTENDED TO PROVIDE FOR GLOBAL HILLSIDE STABILITY. THE INTENTION OF THIS DESIGN IS TO PROVIDE ROCKSLIDE MITIGATION AND SURFICIAL SLOUGHING.

2) THE MATERIAL TO BE USED WITHIN AND UNDER THIS DESIGN IS A SAND/GRAVEL COHESIONLESS SOIL WITH AN INTERNAL FRICTION ANGLE OF 45-46 DEGREES. THE USE OF THIS SPECIALIZED MATERIAL IS ESSENTIAL FOR THIS DESIGN, FOR AVOIDING THE USE OF SOIL NAILS AND ALLOWING THE REINFORCED DESIGN DEPTH (+20') TO WORK.

3) MOST OF THE GUIDELINES USED IN THE FEDERAL HIGHWAY ADMIN. PUBLICATION NO. FHWA-NHI-00-043 ARE MET INCLUDING FACTORS OF SAFETY FOR TRANSLATION FAILURE OR DIRECT SLIDING AND PULL OUT FAILURE.

KIRK CESARETTI, PE



**TYPICAL SECTION AT STA. 728+01**  
 SCALE: 1" = 25'

**SUPPLIED QUANTITIES:**

WELDED WIRE WALL M3 AREA:	16,056 SF
GABION WALL M3 TOTAL:	1,398 CY
STEEPENED SLOPE RSS AREA:	101,352 SF

**PROJECT-SPECIFIC NOTES:**

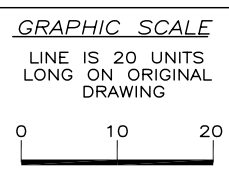
1. REFERENCE DRAWINGS: PLANS FROM THE OREGON DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, OREGON DIVISION APPROVED 24 JUNE 2009. SHEETS 1A, 2C-3, 9, GC-23, GC-24GC-26.
2. IT IS ASSUMED THAT ALL MATERIALS, BACKFILL AND CONSTRUCTION METHODS FOR HILFIKER M.S.E. WALLS AND/OR GABIONS WILL CONFORM TO HILFIKER'S SPECIFICATIONS AND/OR THOSE OF THE HILFIKER ENGINEERING CONSULTANT.
3. THIS IS NOT AN ENGINEERED SUBMITTAL. ALL INFORMATION HEREON IS DERIVED FROM THE REFERENCE DRAWINGS, AND IS SUBJECT TO GEOMETRIC AND GEOTECHNICAL CONFIRMATION. THE APPLICABLE HILFIKER CONSTRUCTION GUIDE AND SPECIFICATIONS ARE AN INTEGRAL PART OF THIS SUBMITTAL.
4. UPON ENGINEERED DESIGN, HILFIKER RETAINING WALLS SHALL BE RESPONSIBLE ONLY FOR THE INTERNAL STABILITY OF THE RETAINING WALL, AND NOT FOR GLOBAL STABILITY OR FOUNDATION BEARING CAPACITY. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOB SITE DRAINAGE, SAFETY AND FALL PROTECTION PROVISIONS FOR WORKERS IN COMPLIANCE WITH OSHA AND ANY OTHER APPLICABLE REQUIREMENTS.
5. WALL DESIGN SHALL REQUIRE A NON-SATURATED BACKFILL. SURFACE AND SUBSURFACE DRAINAGE CONTROL MAY BE REQUIRED TO PREVENT SATURATION OF THE BACKFILL OR TO RELIEVE HYDROSTATIC PRESSURES. DRAINAGE CONTROL SHALL BE AS SPECIFIED IN THE OWNER'S PROJECT PLANS AND SPECIFICATIONS, OR AS DIRECTED BY THE OWNER'S ENGINEER.

BID DUE: 5 NOV. 09

090914CW US 97 MODOC POINT TO HAGELSTEIN PARK

THIS DRAWING IS FURNISHED SOLELY FOR THE USE OF OR IN CONNECTION WITH THIS PROJECT AND THE PROPRIETARY INFORMATION SHOWN HEREON IS NOT TO BE TRANSMITTED TO ANY OTHER ORGANIZATION WITHOUT SPECIFIC AUTHORIZATION BY THE HILFIKER COMPANY. HILFIKER RETAINING WALLS ARE PROTECTED BY ONE OR MORE OF THE FOLLOWING PATENTS: 243,613; 243,697; 288,616; 4,117,686; 4,329,089; 4,324,508; 4,391,557; 4,505,821; 4,343,318; 4,661,023; 4,856,939; 4,929,125; 5,076,735; 5,647,695; 5,722,799; 5,733,072; 6,357,970B1; 6,874,975B2; 7,033,118B2; AND OTHERS. OTHER PATENTS PENDING (2008)

REV. NO.	DATE	BY	DESCRIPTION



PROJ. MGR. BH  
 ENGINEER  
 CADD BY AMJ

**HILFIKER RETAINING WALLS**

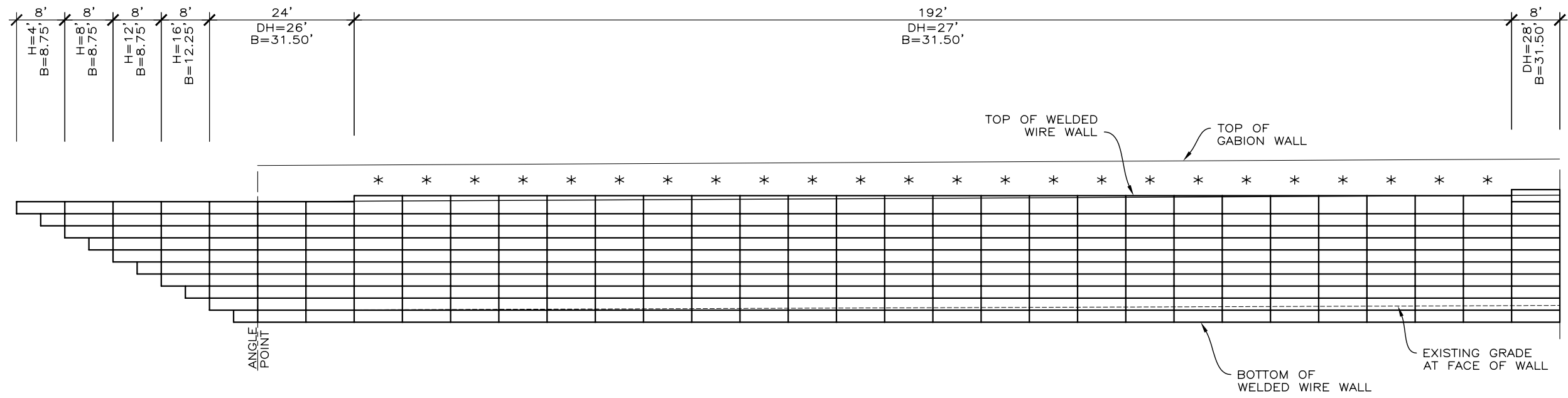
1902 Hilfiker Lane  
 Eureka, CA 95503-5711  
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 PH 707.443.5093 FAX 707.443.2891  
 WEB SITE www.hilfiker.com E-MAIL info@hilfiker.com

**SINCE 1902**  
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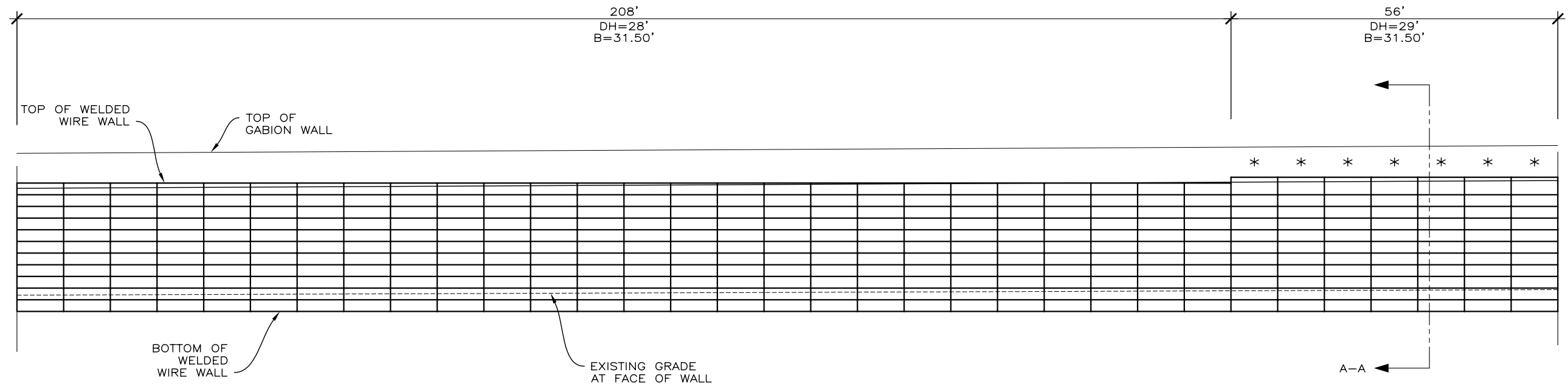
DWG DATE	28 OCT 09
REVISION DATE	
SCALE	NOTED

<b>FOR BIDDING PURPOSES ONLY</b>	
WELDED WIRE RETAINING WALL — 2' LIFT	
<b>US 97 MODOC POINT TO HAGELSTEIN PARK</b>	
OREGON DEPT. OF TRANSPORTATION THE DALLES, OR	
TYPICAL SECTION	

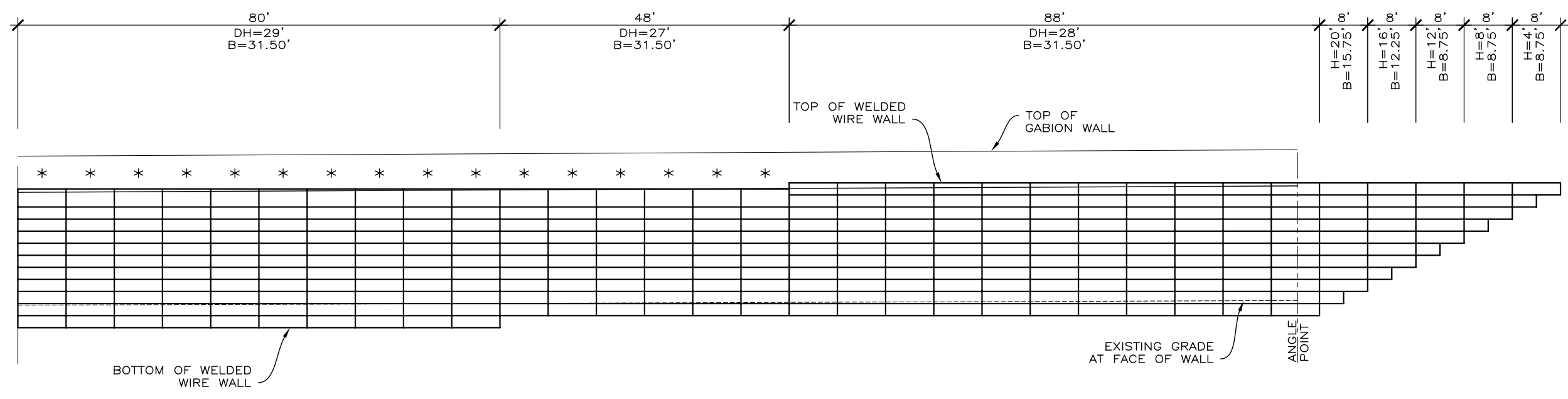
PROJECT NO.	090914CW
SHEET	1
OF	1



**DEVELOPED ELEVATION - WELDED WIRE/GABION WALL**  
SCALE: 1" = 20'



**DEVELOPED ELEVATION - WELDED WIRE/GABION WALL CONT'D**  
SCALE: 1" = 20'








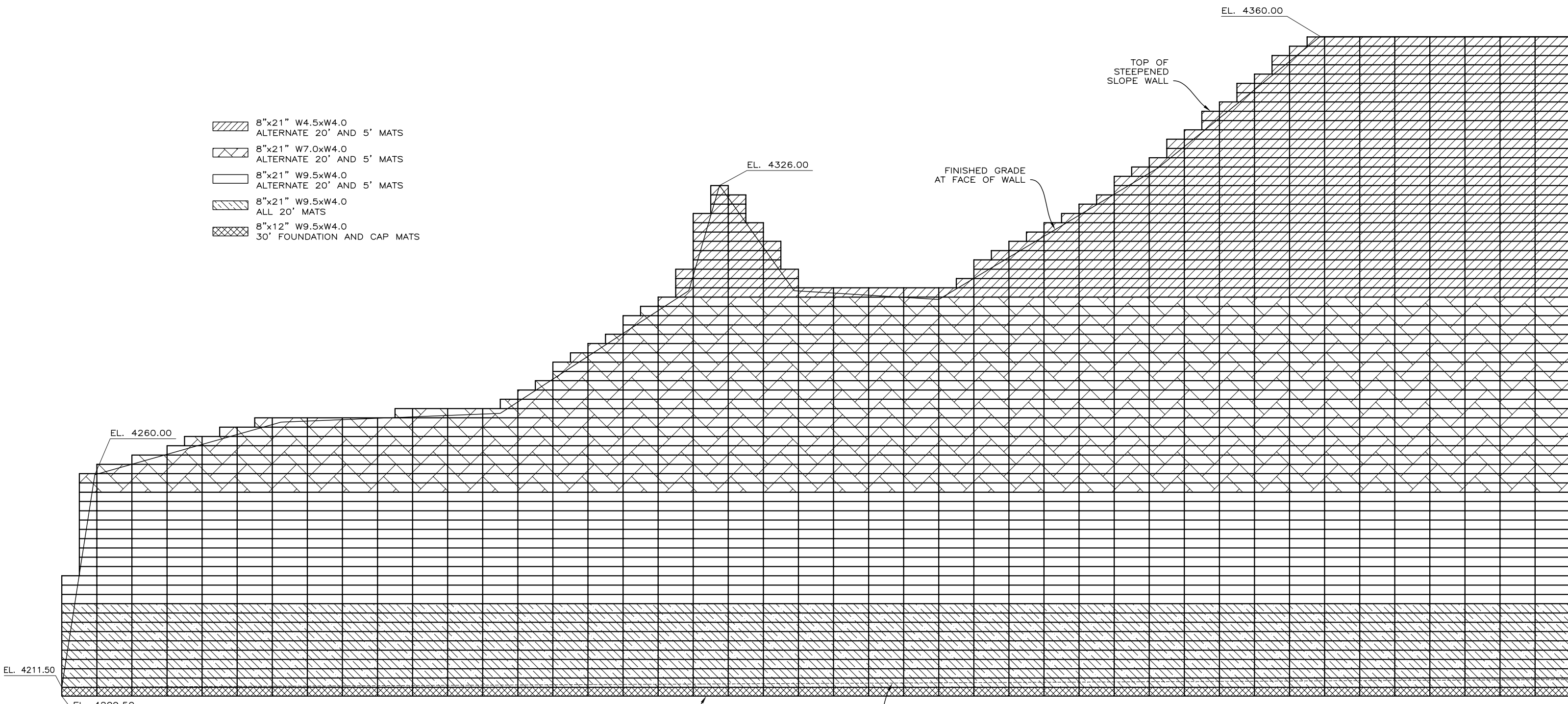
**DEVELOPED ELEVATION - WELDED WIRE/GABION WALL CONT'D**  
 SCALE: 1" = 20'

GABION WALL M3: GABIONS AT BEGINING AND END OF GABION WALL ARE NOT SHOWN.

090914CW US 97:MODOC POINT TO HAGELSTEIN  
 WWWALL M3 FACE AREA: 16,056 SQ. FT.  
 GABION WALL M3

12x6x3	116
12x3x3	116
6x6x3	3
6x3x3	3
<b>TOTAL:</b>	<b>1,398 CY</b>

-  8"x21" W4.5xW4.0 ALTERNATE 20' AND 5' MATS
-  8"x21" W7.0xW4.0 ALTERNATE 20' AND 5' MATS
-  8"x21" W9.5xW4.0 ALTERNATE 20' AND 5' MATS
-  8"x21" W9.5xW4.0 ALL 20' MATS
-  8"x12" W9.5xW4.0 30' FOUNDATION AND CAP MATS



BOTTOM OF STEEPENED SLOPE WALL

TOP OF WELDE WIRE WALL

FINISHED GRADE AT FACE OF WALL

TOP OF STEEPENED SLOPE WALL

DEVELOPED ELEVATION - STEEPENED SLOPE WALL  
 NOT TO SCALE

