

**DESIGN NOTES**

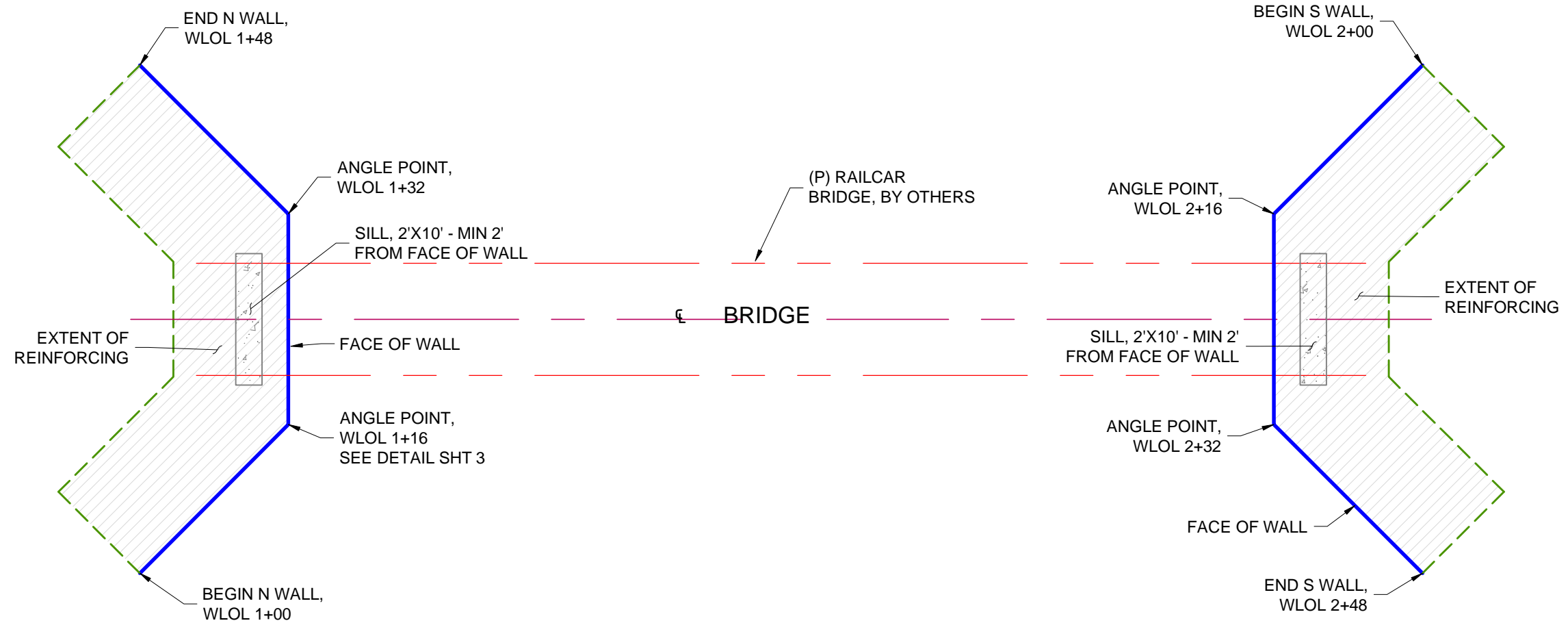
- Design is based on the assumption that backfill within the reinforced soil mass, methods of construction and quality of materials conform to the requirements of Hilfiker Retaining Walls.
- Assumed Soil Characteristics:  
 Wall Backfill:  
 Unit Weight: 125 pcf  
 Internal Friction Angle: 34°  
 Retained Backfill:  
 Unit Weight: 120 pcf  
 Internal Friction Angle: 32°  
 Foundation Soils:  
 Unit Weight: 135 pcf  
 Friction Angle for Sliding: 36°
- Loads: Flat Car Wt = 44 kips  
 Assumed Sill Footprint 2'x10' x2' Thick - 2' from Face of Wall  
 Worst Case Traffic Load = 48 kips  
 Applied Sill DL = 1100 psf  
 Applied Sill LL = 1200 psf  
  
 Worst Case Applied Bearing (8'H Section) = 2300 psf

- If actual characteristics, grades or dimensions of soil materials differ from those listed above or shown on the plans, Hilfiker Retaining walls shall be notified to evaluate the need to redesign.
- If during construction, the wall location, structure location or loads are different than that proposed in this plan set and calculation package, HRW shall be notified to evaluate the need for a redesign.
- The design requires a non-saturated backfill. Surface and sub-surface drainage control may be required to prevent saturation of the backfill or relieve hydrostatic pressures.

- Design Procedure:  
 Mechanically Stabilized Earth walls and Reinforced Soil Slopes, FHWA report No. FHWA-NHI-00-043 with Safety Factors based upon Par. 4.2.
- Hilfiker Retaining Walls shall be responsible only for the internal stability of the retaining wall.

**SUPPLIED QUANTITIES:**

NORTH WALL AREA:	288 FT <sup>2</sup>
SOUTH WALL AREA:	<b>288 FT<sup>2</sup></b>
TOTAL AREA	576 FT <sup>2</sup>



**PLAN VIEW**

SCALE: 1" = 20'



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HW 170206EW

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	6-5-17	KLC	Initial .pdf Release

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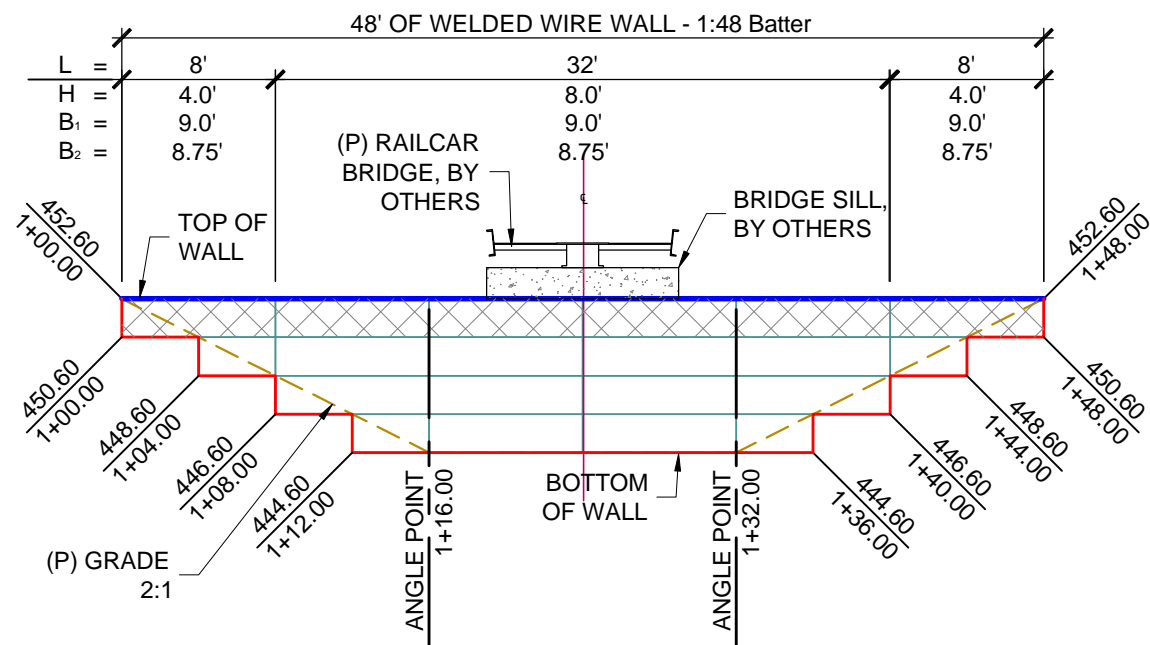
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Jeff Mack Bridge  
 MSE WELDED WIRE WALL  
 PLAN VIEW  
 & GENERAL NOTES

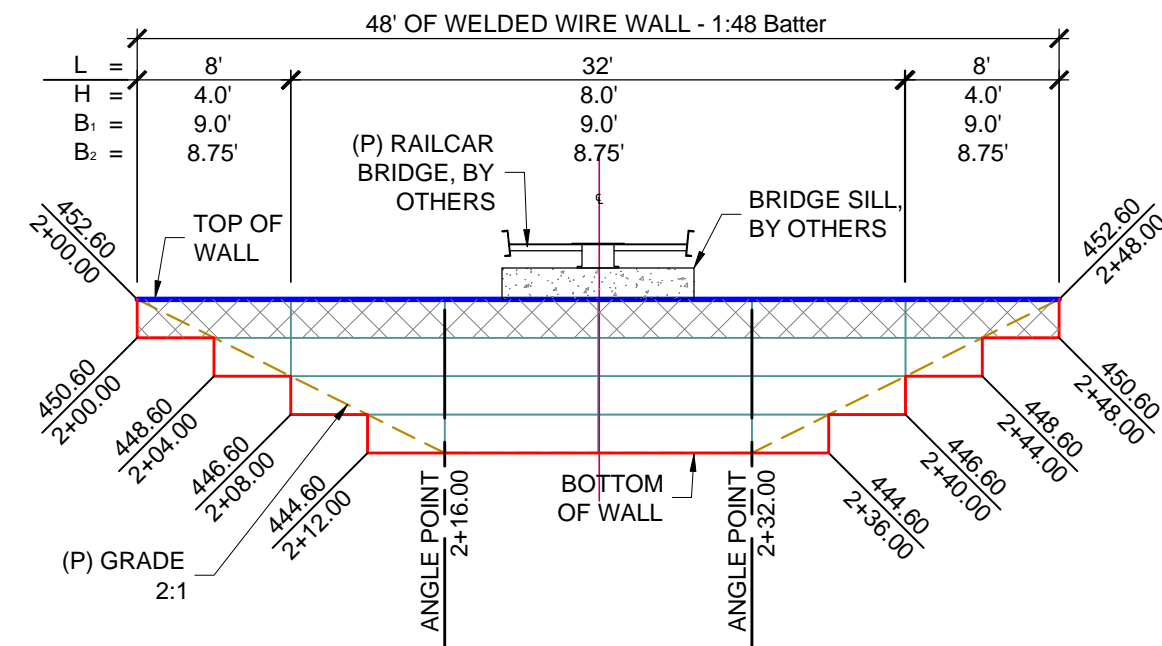
PROJECT	17-030
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DRAWN	KLC

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### ELEVATION VIEW N ABUT WALL - MSE WELDED WIRE WALL

SCALE: 1" = 10'



### ELEVATION VIEW S ABUT WALL - MSE WELDED WIRE WALL

SCALE: 1" = 10'

WELDED WIRE WALL PARAMETERS		
Height of Wall (H) ft	Length of Cap & Prongless Mats (B <sub>1</sub> ) ft	Base Length of Mats (B <sub>2</sub> ) ft
8'	9.0'	8.75'
Cap & Top Mats (B <sub>1</sub> ) are 8x12 W9.5x4.0 WWR (Type 1) Standard Mats (B <sub>2</sub> ) are: 8x21 W7.0x4.0 WWR (Type 2) Finish: Commercial Galvanized - 75 Year Service Life		

WALL WIRE TYPE LEGEND	
FINISH: COMMERCIAL GALVANIZED	
SERVICE LIFE: 75 YEARS	
	TYPE 1 - 8X12 W9.5x4.0 MATS
	TYPE 2 - 8x21 W7.0x4.0 MATS

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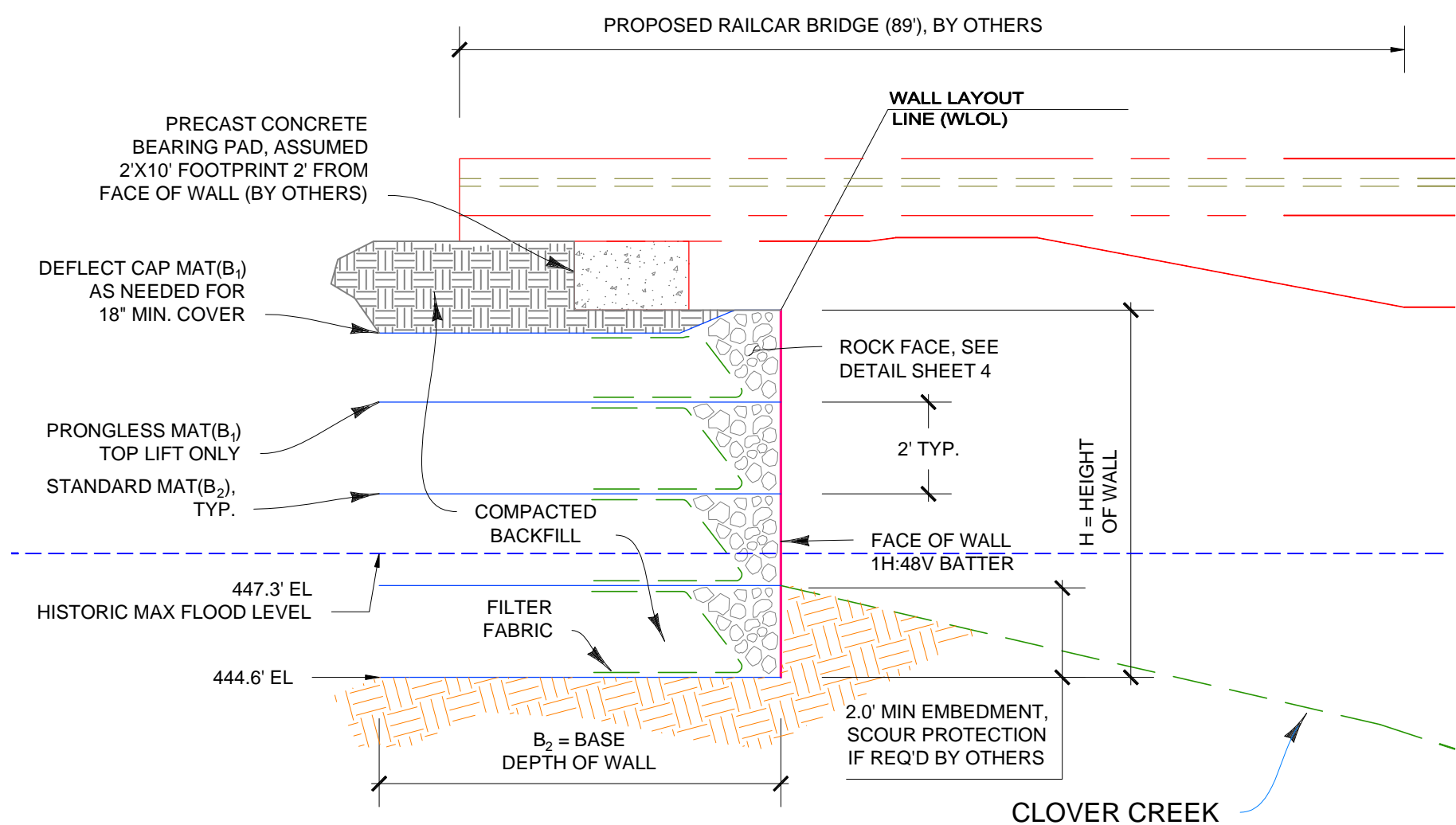
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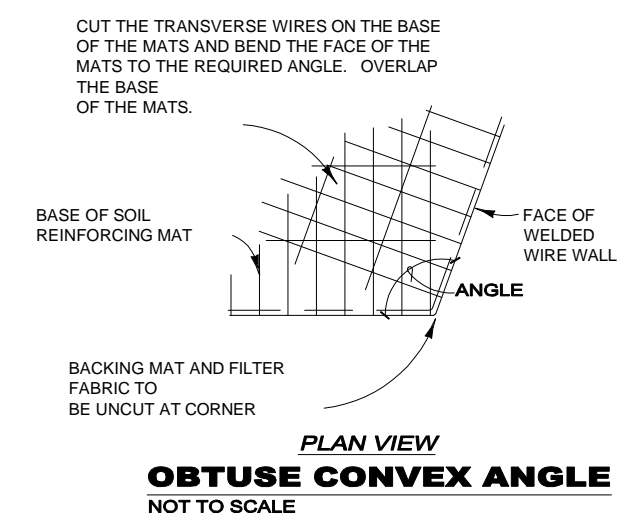
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 MSE WELDED WIRE WALL  
 ELEVATION VIEW

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**CROSS SECTION, TYP**  
SCALE: 1" = 5'



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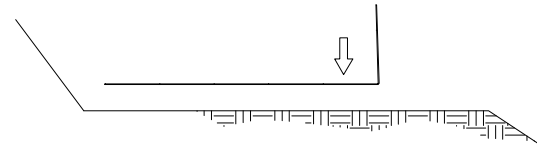
Jeff Mack Bridge

**MSE WELDED WIRE WALL  
CROSS SECTION  
& DETAILS**

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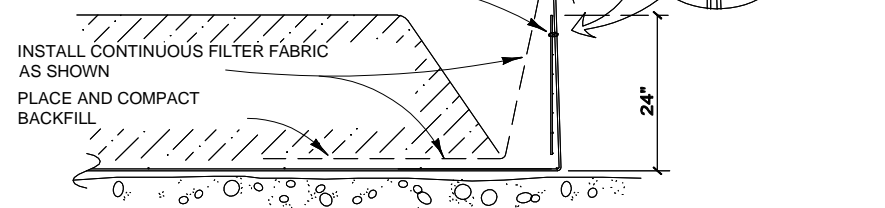
**STEP 1**

PLACE THE FIRST COURSE OF SOIL REINFORCEMENT MATS ON PREPARED FOUNDATION.



**STEP 2**

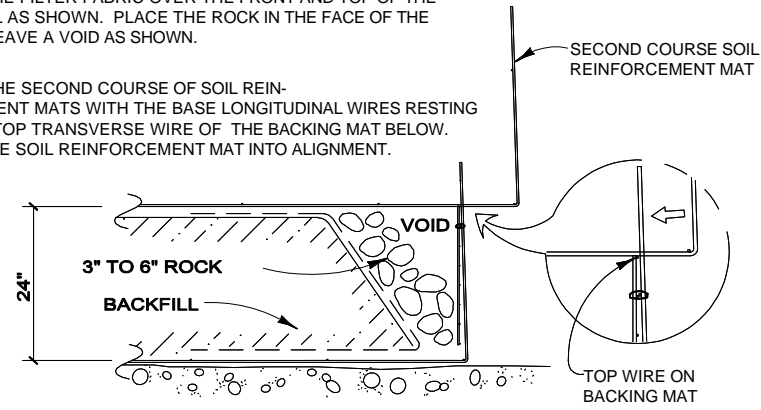
PLACE THE BACKING MAT AGAINST THE INSIDE FACE OF THE SOIL REINFORCEMENT MAT. CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP TRANSVERSE WIRE ON THE SOIL REINFORCEMENT MAT.



**STEP 3**

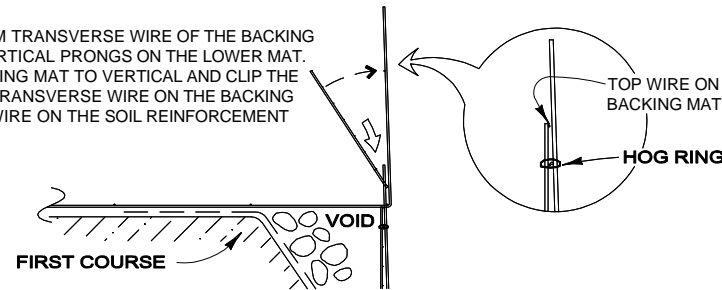
BRING THE FILTER FABRIC OVER THE FRONT AND TOP OF THE BACKFILL AS SHOWN. PLACE THE ROCK IN THE FACE OF THE WALL. LEAVE A VOID AS SHOWN.

PLACE THE SECOND COURSE OF SOIL REINFORCEMENT MATS WITH THE BASE LONGITUDINAL WIRES RESTING ON THE TOP TRANSVERSE WIRE OF THE BACKING MAT BELOW. SLIDE THE SOIL REINFORCEMENT MAT INTO ALIGNMENT.



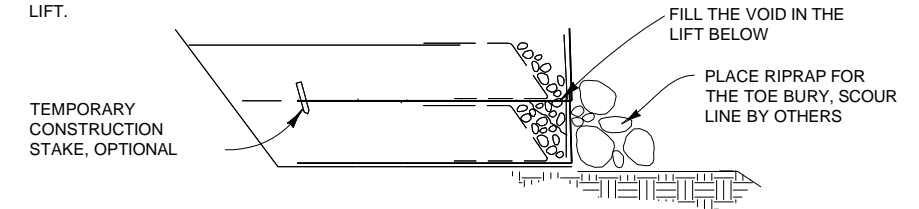
**STEP 4**

HOOK THE BOTTOM TRANSVERSE WIRE OF THE BACKING MAT OVER THE VERTICAL PRONGS ON THE LOWER MAT. ROTATE THE BACKING MAT TO VERTICAL AND CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP WIRE ON THE SOIL REINFORCEMENT MAT.



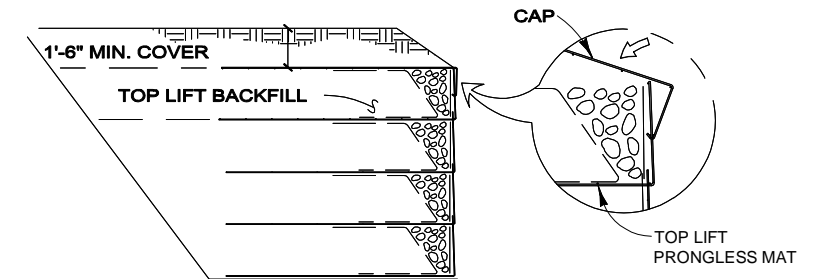
**STEP 5**

INSTALL THE FILTER FABRIC AS IN STEPS 2 AND 3. PLACE AND COMPACT THE BACKFILL AND ROCK TO THE BASE ELEVATION OF THE NEXT MAT. REPEAT STEPS 2 THROUGH 5 TO THE TOP LIFT.



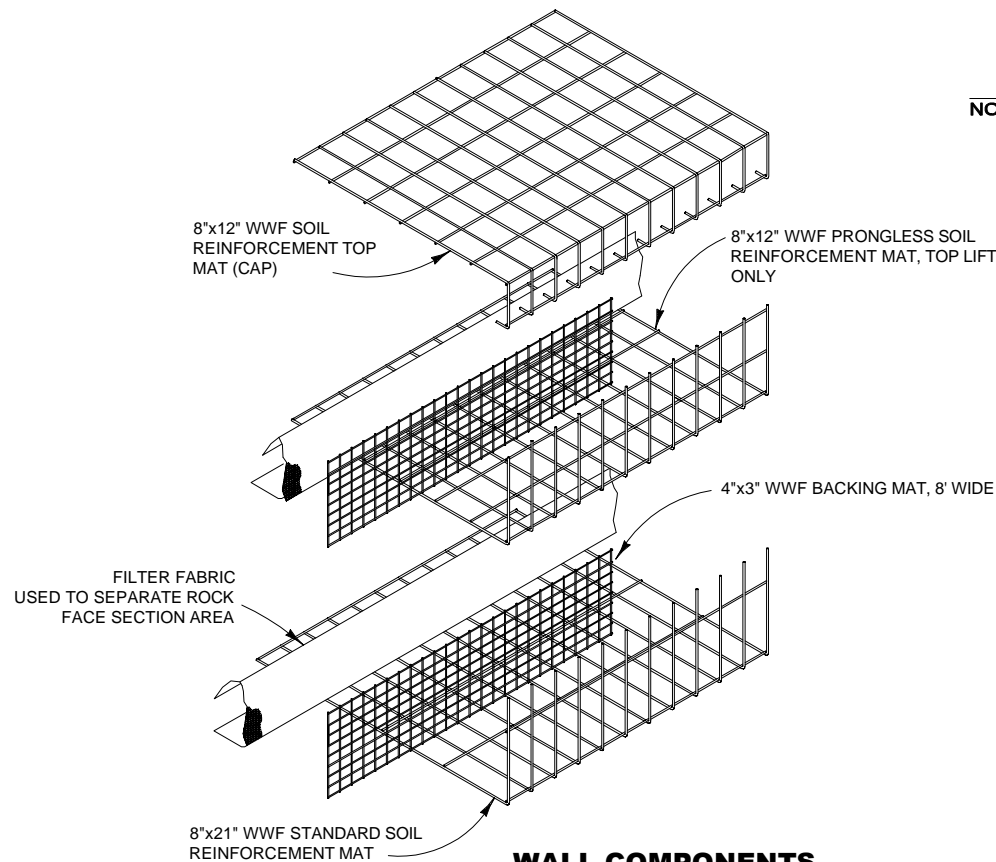
**STEP 6: TOP LIFT**

PLACE THE TOP LIFT PRONGLESS MAT, BACKING MAT AND FILTER FABRIC. PLACE AND COMPACT BACKFILL AND ROCK IN THE TOP LIFT. HOOK THE CAP OVER THE MIDDLE TRANSVERSE WIRE ON THE PRONGLESS MAT, AND ROTATE INTO PLACE. PLACE AND COMPACT COVER OVER TOP MAT TO 1'-6\"/>

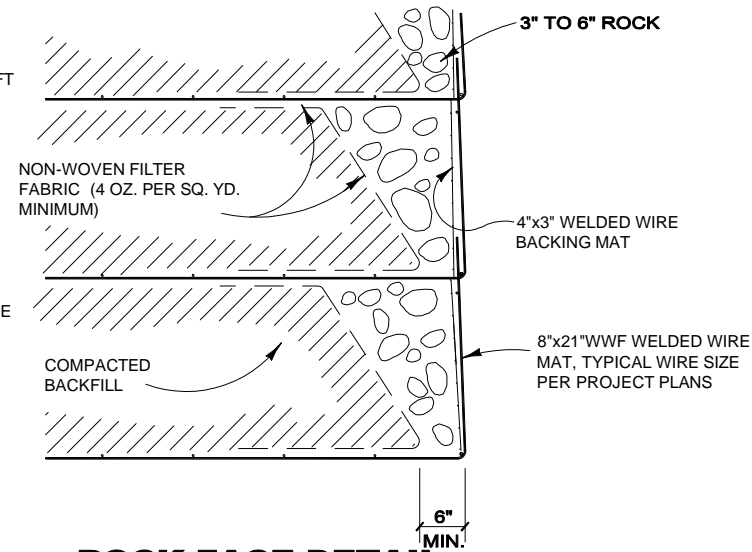


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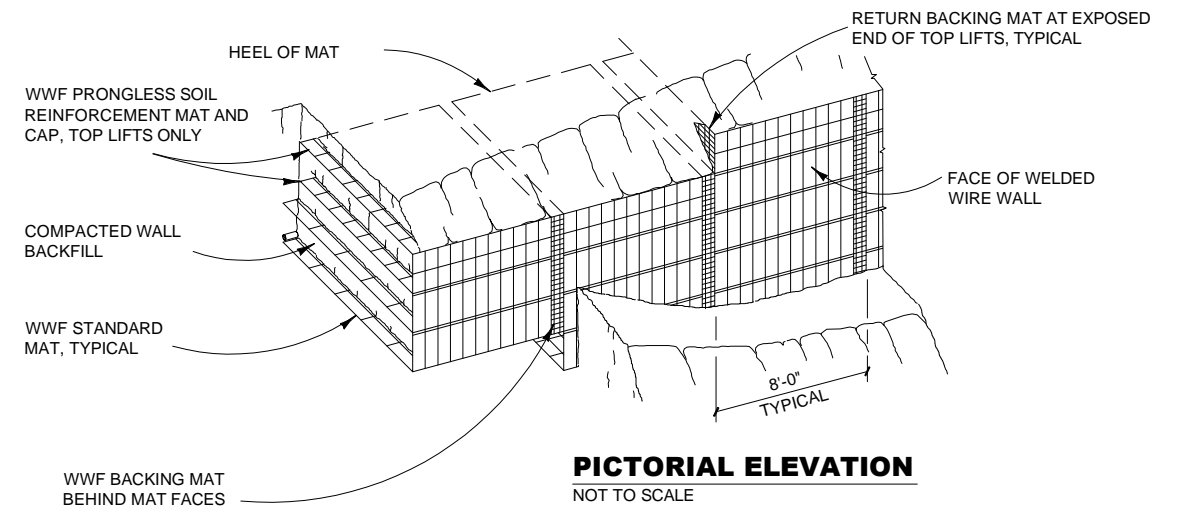
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**WALL COMPONENTS**  
NOT TO SCALE



**ROCK-FACE DETAIL**  
NOT TO SCALE



**PICTORIAL ELEVATION**  
NOT TO SCALE

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**MSE WELDED WIRE WALL  
CONSTRUCTION SEQUENCE &  
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