DESIGN NOTES

1. 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 FP'14 and the amending Special Contract Requirements.

2. Assumed Soil Characteristics:
   - Wall Backfill:
     - Unit Weight: 120 pcf
     - Internal Friction Angle: 34°
     - Cohesion = 0 psf
   - Retained Backfill:
     - Unit Weight: 120 pcf
     - Internal Friction Angle: 34°
     - Cohesion = 0 psf
   - Foundation Soils:
     - Unit Weight: 120 pcf
     - Friction Angle for Sliding: 34°
     - Cohesion = 0 psf

Worst Case Factored Bearing Pressure by MSE Wall- @ 18' Height - 4211 psf.

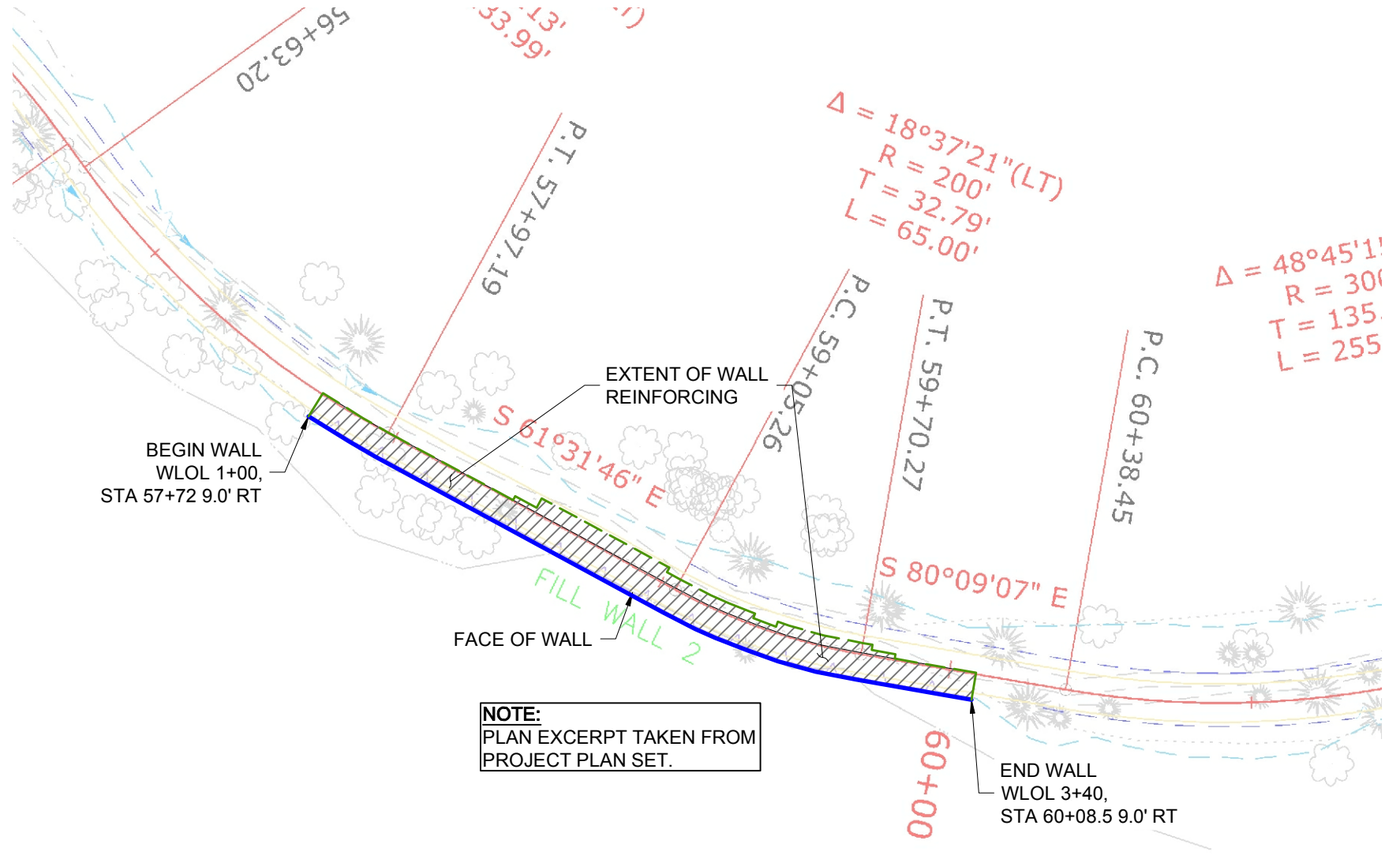
If actual characteristics, grades or dimensions of soil materials differ from those listed above or shown on the plans, Hilfiker Retaining walls shall be notified to evaluate the need to redesign.

3. 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.

4. 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.

5. Design Procedure:
   Mechanically Stabilized Earth walls and Reinforced Soil Slopes, FHWA report No. FHWA-NHI-00-043.

6. Hilfiker Retaining Walls shall be responsible only for the internal stability of the retaining wall.



NOTE:
PLAN EXCERPT TAKEN FROM PROJECT PLAN SET.

MSE WALL - PLAN VIEW

SCALE: 1" = 50'

SUPPLIED QUANTITIES:

MSE WALL AREA:	2,944 FT^2

KIRK L. CESARETTI — STATE OF WASHINGTON — 44942 — REGISTERED PROFESSIONAL ENGINEER

HW 180516AW

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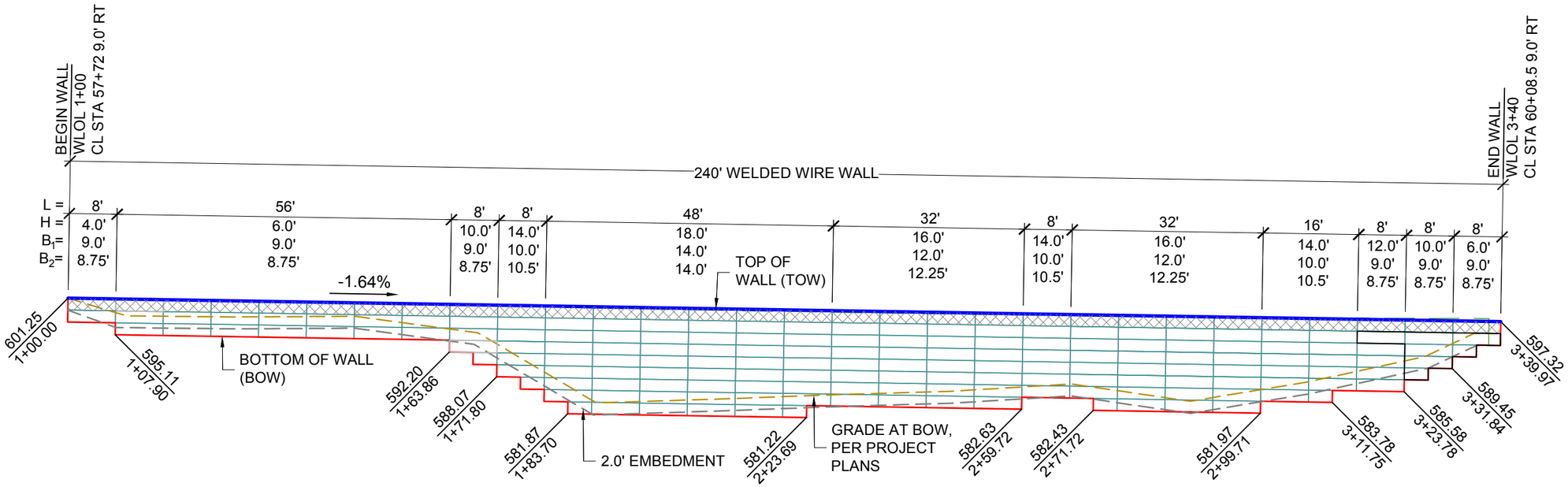
MSE WALL PLAN VIEW & GENERAL NOTES

PROJECT	18-032
DATE	6-12-18
DESIGN	KLC
DRAWN	KLC / IMS

SHT 1 OF 4



MSE WALL ELEVATION VIEW

SCALE: 1" = 20'

WALL WIRE TYPE LEGEND

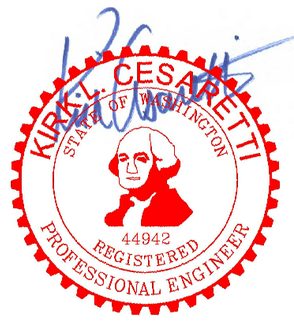
FINISH: HOT DIP GALVANIZED
SERVICE LIFE: 75 YEARS

TYPE 1 - 8X12 W7.0x3.5 MATS
TYPE 2 - 8x10.5 W7.0x3.5 MATS

WELDED WIRE WALL PARAMETERS		
Height of Wall (H) ft	Length of Cap & Prongless Mats (B_1) ft	Base Length of Mats (B_2) ft
≤12'	9.0'	8.75'
14'	10.0'	10.5'
16'	12.0'	12.25'
18'	14.0'	14.0'

Cap & Top Mats (B1) are 8x12 W7.0x3.5 WWR (Type 1)
Standard Mats (B2) are: 8x10.5 W7.0x3.5 WWR (Type 2)

Finish: Hot Dip Galvanized - 75 Year Service Life



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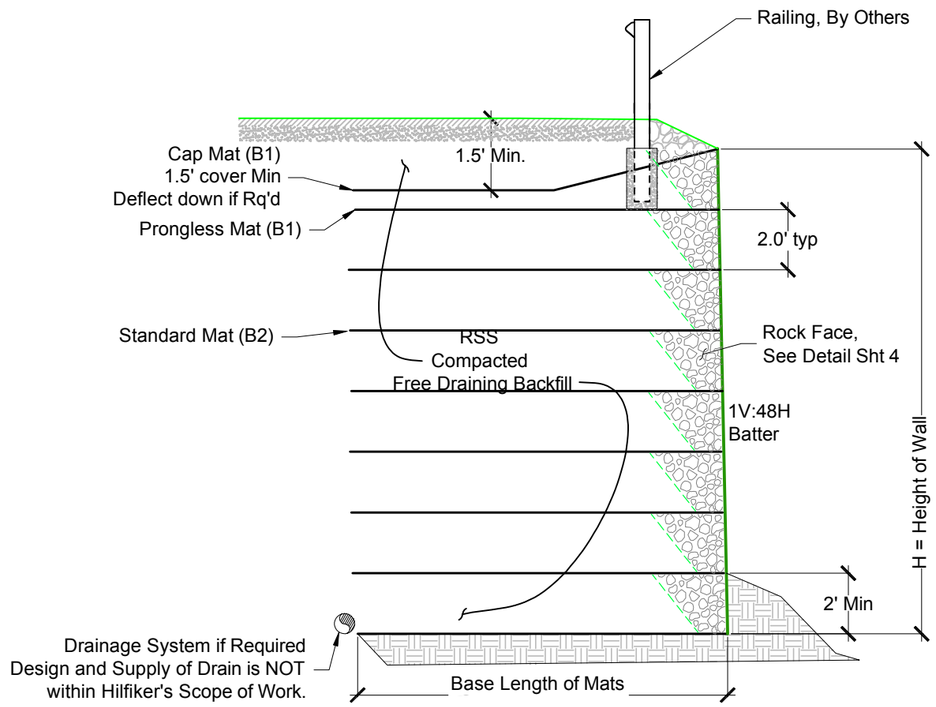
MSE WALL ELEVATION VIEW

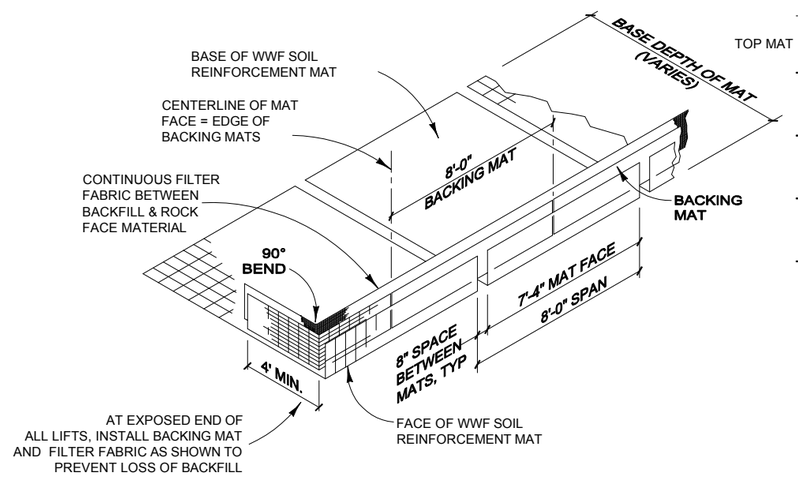
PROJECT 18-032
DATE 6-12-18
DESIGN KLC
DRAWN KLC / IMS

SHT 2 OF 4



MSE WALL - TYP CROSS SECTION

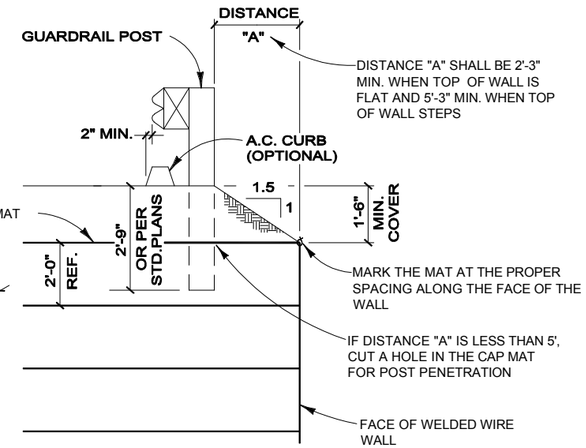
SCALE: 1" = 5'



ISOMETRIC VIEW

WELDED WIRE WALL COMPONENTS WITH RETURN MAT

NOT TO SCALE

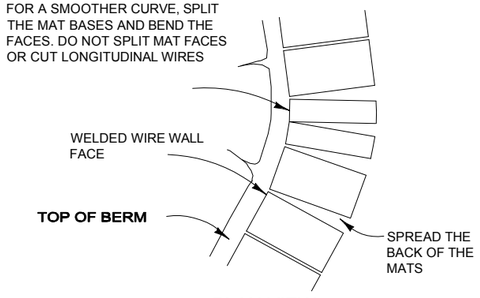


SECTION

GUARDRAIL DETAIL

NOT TO SCALE

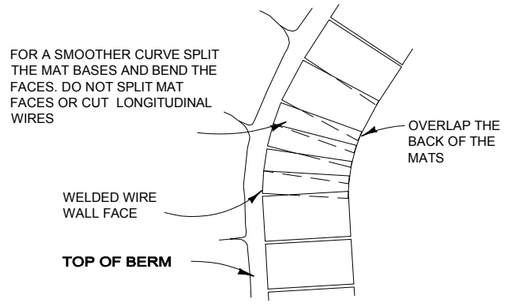
(FENCE DETAIL SIMILAR)



PLAN VIEW

CONCAVE CURVE

NOT TO SCALE



PLAN VIEW

CONVEX CURVE

NOT TO SCALE

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MSE WALL CROSS SECTION & DETAILS

PROJECT	18-032
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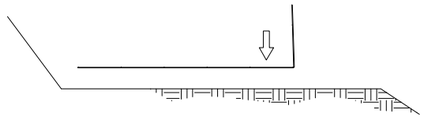
SHT 3 OF 4

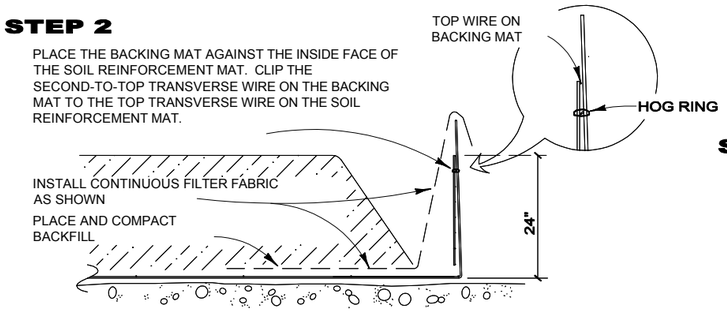
STEP 1

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



STEP 2

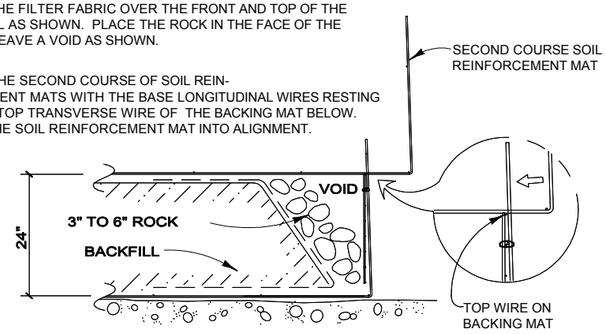
PLACE THE BACKING MAT AGAINST THE INSIDE FACE OF THE SOIL REINFORCEMENT MAT. CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP TRANSVERSE WIRE ON THE SOIL REINFORCEMENT MAT.



STEP 3

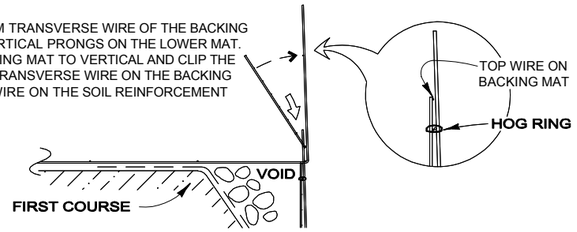
BRING THE FILTER FABRIC OVER THE FRONT AND TOP OF THE BACKFILL AS SHOWN. PLACE THE ROCK IN THE FACE OF THE WALL. LEAVE A VOID AS SHOWN.

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



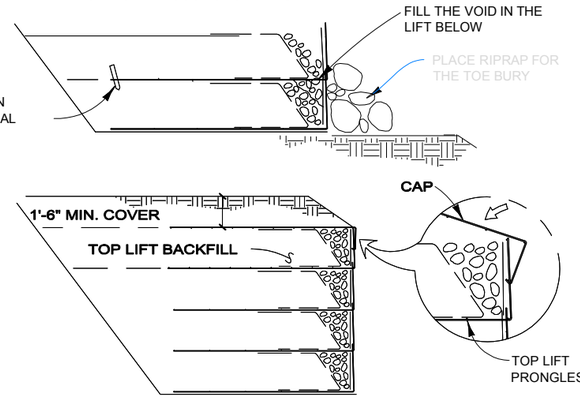
STEP 4

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.

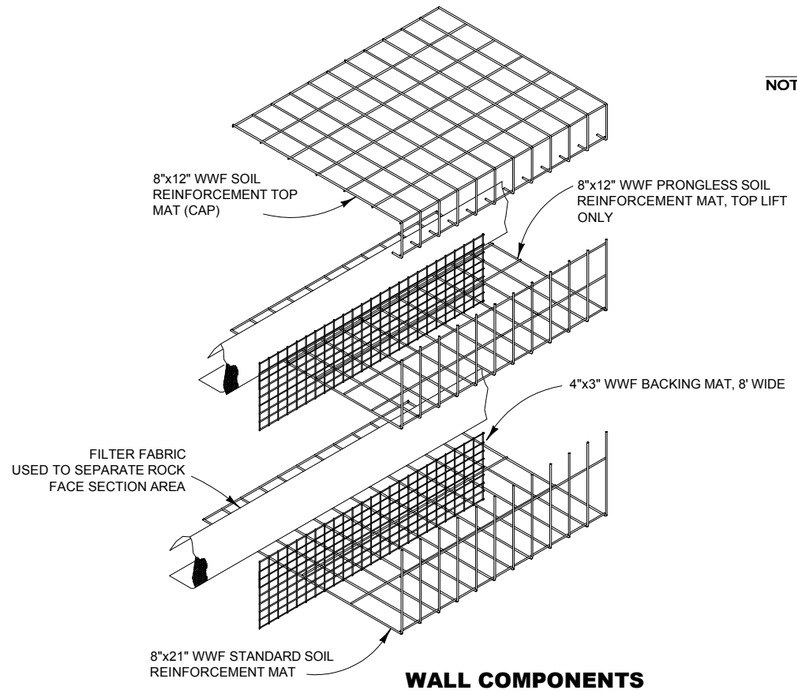


STEP 6: TOP LIFT

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" MINIMUM DEPTH.

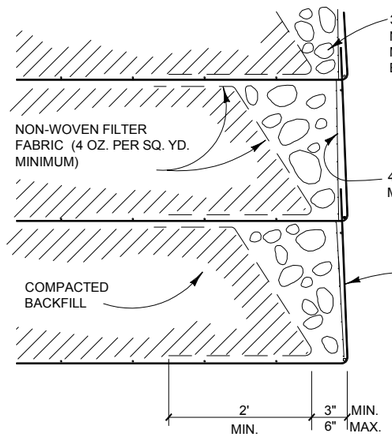
CONSTRUCTION SEQUENCE

NOT TO SCALE



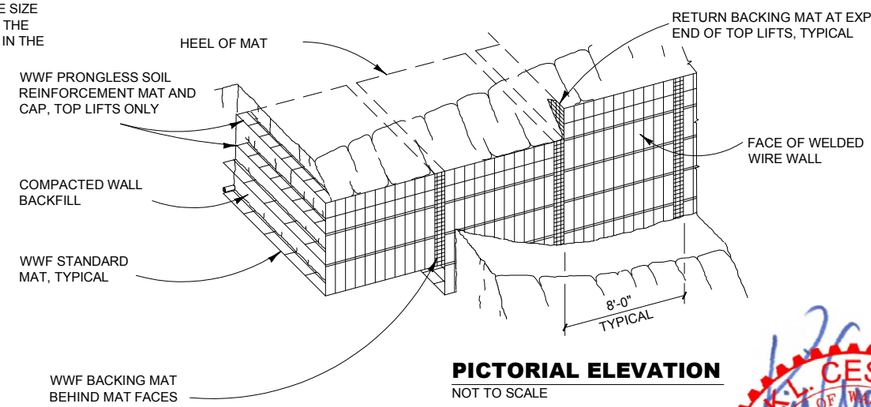
WALL COMPONENTS

NOT TO SCALE



ROCK-FACE DETAIL

NOT TO SCALE



PICTORIAL ELEVATION

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