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 Hilfiker Retaining Walls.

2. Assumed Soil Characteristics:
   - Wall Backfill:
     - Unit Weight: 130 pcf
     - Internal Friction Angle: 34°
     - Cohesion = 0 psf
   - Retained Backfill:
     - Unit Weight: 125 pcf
     - Internal Friction Angle: 32°
     - Cohesion = 0 psf
   - Foundation Soils:
     - Unit Weight: 112 pcf
     - Internal Friction Angle: 32°

   Worst Case Factored Bearing Pressure by MSE Wall- @ 24' Height - 5780 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.

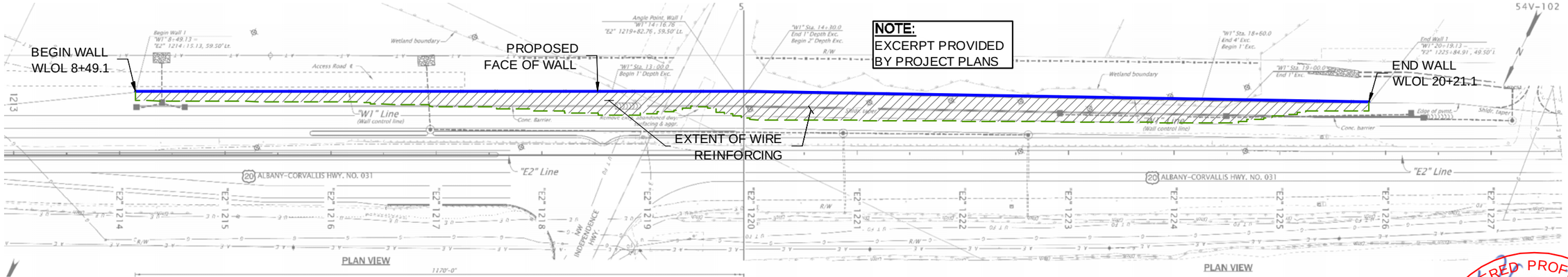
4. The design requires a non-saturated backfill. Surface and sub-surface drainage control may be required to prevent saturation of the backfill or relieve hydrostatic pressures.

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

6. 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.

7. 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 shall be responsible for global stability and foundation competence. The Owner is responsible for all job site drainage, safety and fall protection provisions for workers in compliance with OSHA and any other applicable requirements.

SUPPLIED QUANTITIES	
WALL NO.	FACE AREA
WALL 1	19,904 SQ. FT.



WALL 1 - PLAN VIEW

SCALE: 1" = 100'

REGISTERED PROFESSIONAL ENGINEER
82111PE
OREGON
NOVEMBER 12, 2008
KIRK CESARETTI

EXPIRATION DATE: 12/31/23

HW 210907EW

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REV.NO.	DATE	BY	DESCRIPTION
	02-01-22	KLC	Initial .pdf Release

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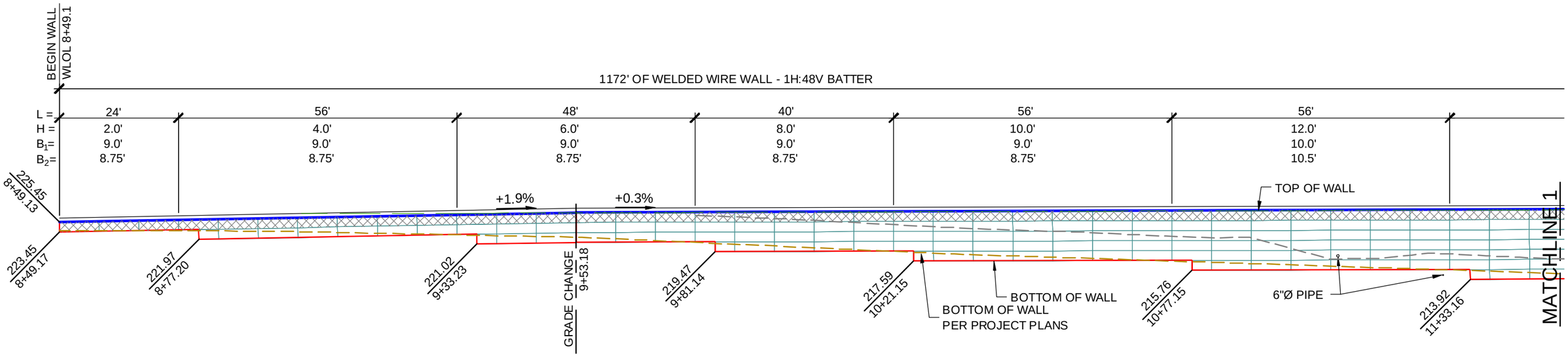
US20 Safety Upgrades (Albany to Corvallis)

MSE WELDED WIRE WALL
PLAN VIEW & GENERAL NOTES

PROJECT	22-010
DATE	02-01-22
DESIGN	KLC
DRAWN	KLC

SHT 1 OF 7



WELDED WIRE WALL PARAMETERS		
Height of Wall (H) ft	Length of Cap & Prongless Mats (B_1) ft	Base Length of Mats (B_2) ft
≤10'	9.0'	8.75'
12'	10.0'	10.5'
14'	12.0'	12.25'
16'	14.0'	14.0'
18'	15.0'	15.75'
20'	16.0'	17.5'
22'	18.0'	19.25'
24'	20.0'	21.0'

WALL 1 - ELEVATION (REAR) VIEW

SCALE: 1" = 20'

WALL WIRE TYPE LEGEND

FINISH: HOT DIP GALVANIZED
SERVICE LIFE: 75 YEARS

TYPE 1 - 8X12 W4.5x3.5 MATS
TYPE 2 - 8x21 W7.0x4.0 MATS
TYPE 3 - 8x21 W9.5x4.0 MATS

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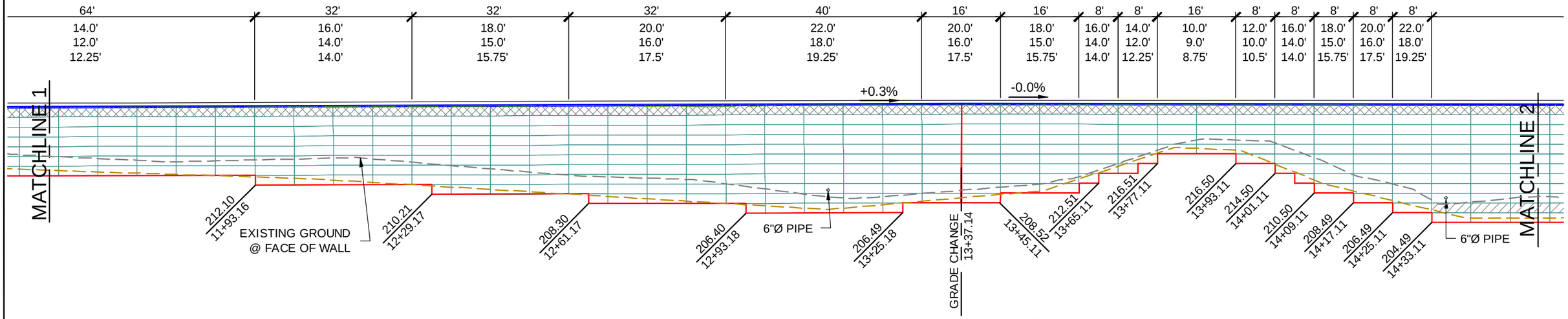
MSE WELDED WIRE WALL ELEVATION VIEW

PROJECT 22-010
DATE 02-01-22
DESIGN KLC
DRAWN KLC

SHT 2 OF 7

1172' OF WELDED WIRE WALL - 1H:48V BATTER



WALL 1 - ELEVATION (REAR) VIEW (CONT'D)

SCALE: 1" = 20'

WELDED WIRE WALL PARAMETERS		
Height of Wall (H) ft	Length of Cap & Prongless Mats (B_1) ft	Base Length of Mats (B_2) ft
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MSE WELDED WIRE WALL ELEVATION VIEW (CONT'D)

PROJECT 22-010
DATE 02-01-22
DESIGN KLC
DRAWN KLC
SHT 3 OF 7

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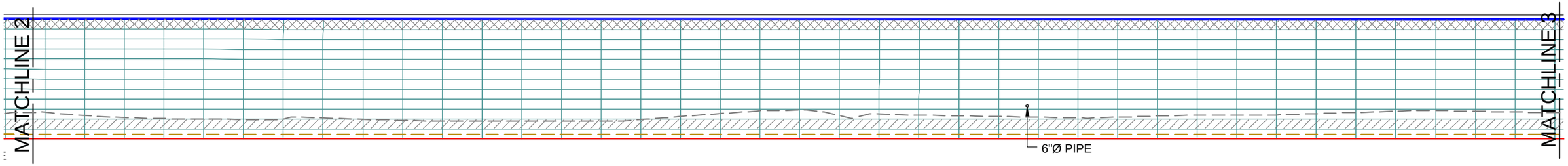
1172' OF WELDED WIRE WALL - 1H:48V BATTER

464'

24.0'
20.0'
21.0'



WALL 1 - ELEVATION (REAR) VIEW (CONT'D)

SCALE: 1" = 20'

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NOVEMBER 12, 2008
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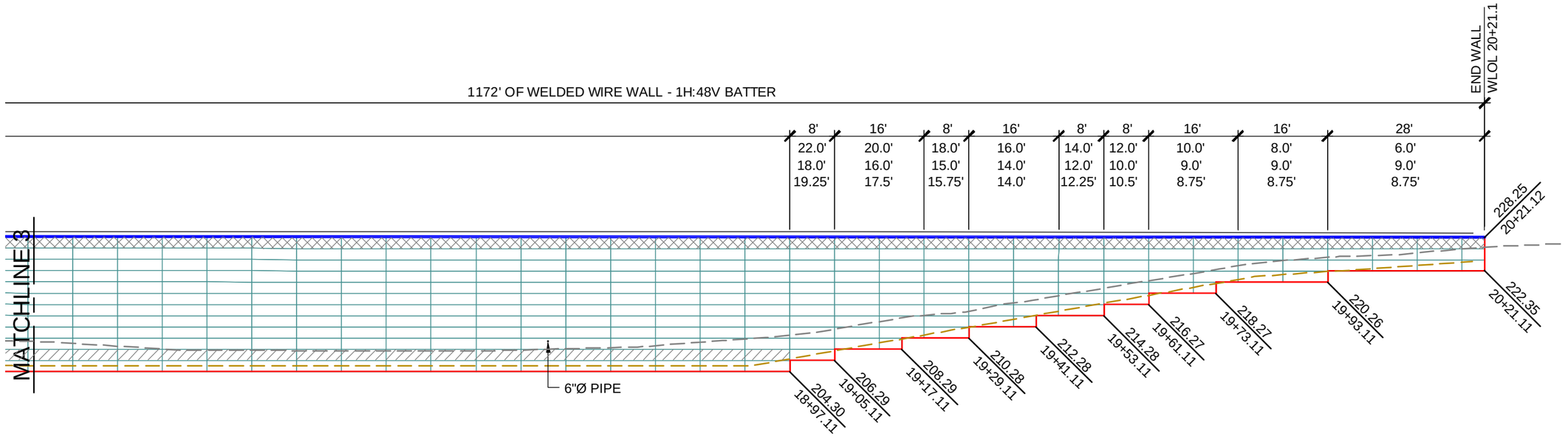
MSE WELDED WIRE WALL ELEVATION VIEW (CONT'D)

PROJECT 22-010
DATE 02-01-22
DESIGN KLC
DRAWN KLC

SHT 4 OF 7



WALL 1 - ELEVATION (REAR) VIEW (CONT'D)

SCALE: 1" = 20'

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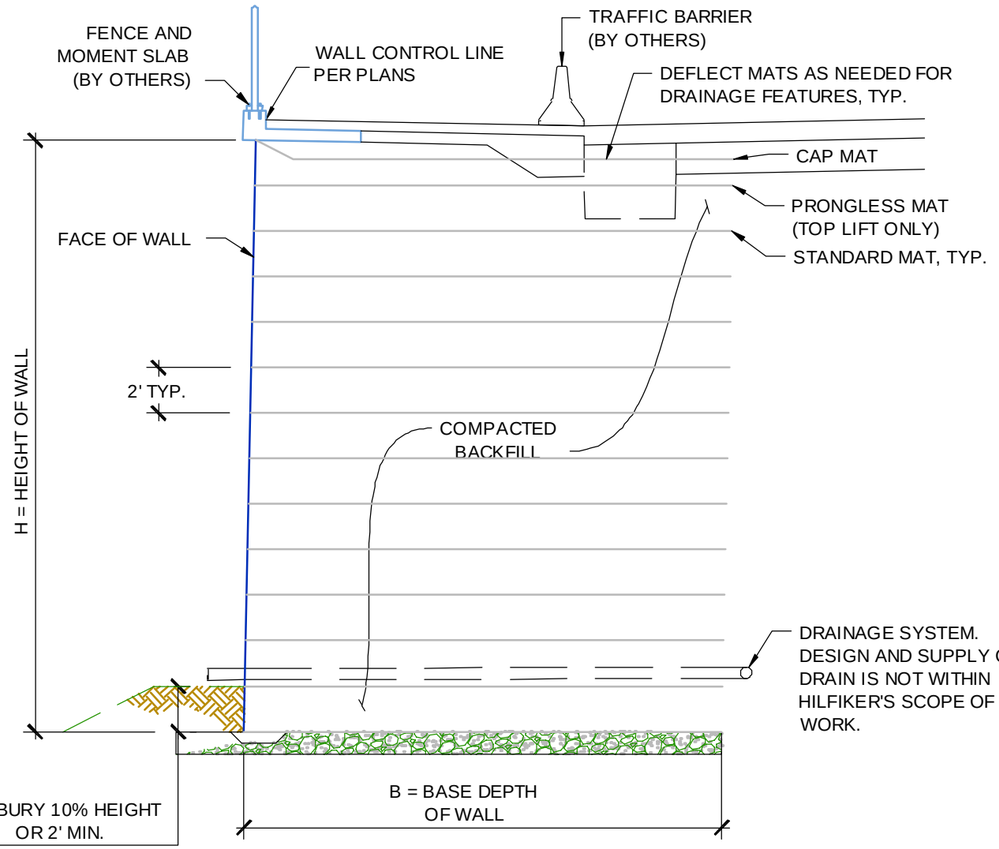
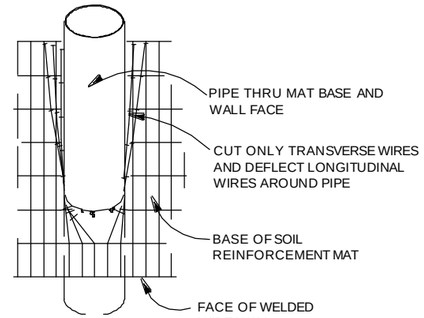
MSE WELDED WIRE WALL ELEVATION VIEW (CONT'D)

PROJECT 22-010
DATE 02-01-22
DESIGN KLC
DRAWN KLC
SHT 5 OF 7



CROSS SECTION, TYP

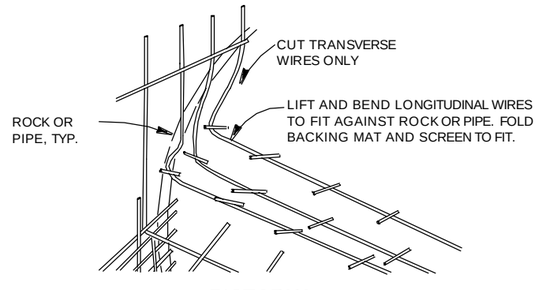
SCALE: 3" = 20'



PLAN VIEW

ANGLED PIPE PENETRATION

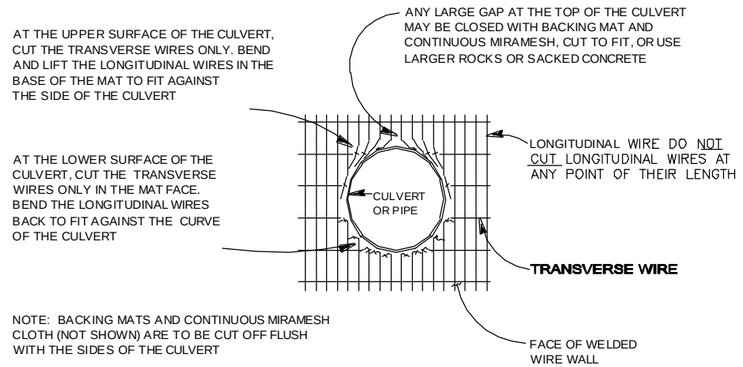
NOT TO SCALE



PICTORIAL

FITTING MATS TO OBSTRUCTION

NOT TO SCALE



ELEVATION

CULVERT THRU WALL FACE

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
82111PE
OREGON
NOVEMBER 12, 2008
KIRK CESARETTI

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US20 Safety Upgrades (Albany to Corvallis)

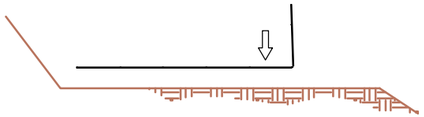
MSE WELDED WIRE WALL
CROSS SECTION & DETAILS

PROJECT	22-010
DATE	02-01-22
DESIGN	KLC
DRAWN	KLC

SHT 6 OF 7

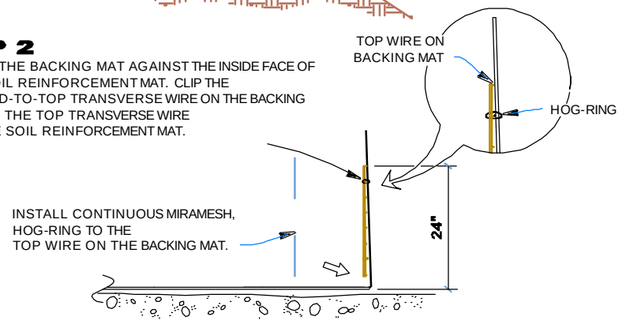
STEP 1

PLACE THE FIRST COURSE OF SOIL REINFORCEMENT MATS ON PREPARED FOUNDATION



STEP 2

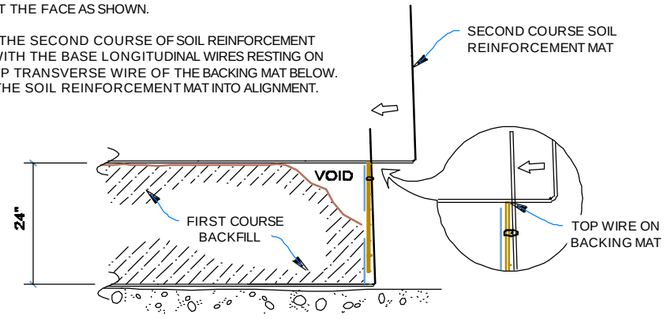
PLACE THE BACKING MAT AGAINST THE INSIDE FACE OF THE SOIL REINFORCEMENT MAT. CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP TRANSVERSE WIRE ON THE SOIL REINFORCEMENT MAT.



STEP 3

PLACE AND COMPACT THE BACKFILL IN LAYERS AND DENSITIES AS SPECIFIED IN THE PROJECT PLANS. LEAVE A VOID AT THE FACE 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.

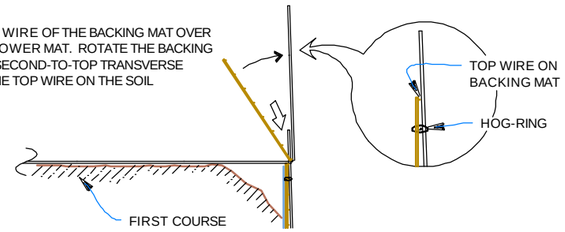


CONSTRUCTION SEQUENCE

NOT TO SCALE

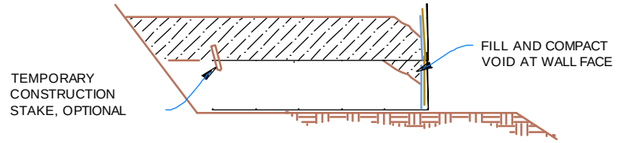
STEP 4

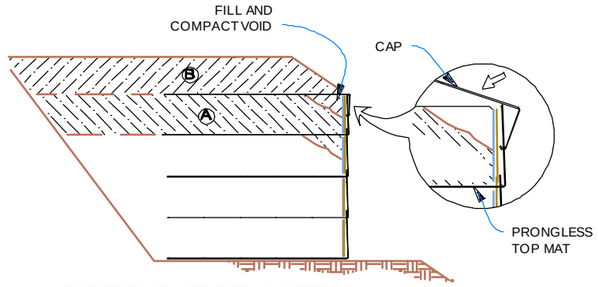
HOOK THE BOTTOM TRANSVERSE WIRE OF THE BACKING MAT OVER THE VERTICAL PRONGS ON THE LOWER MAT. ROTATE THE BACKING MAT TO VERTICAL AND CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP WIRE ON THE SOIL REINFORCEMENT MAT.



STEP 5

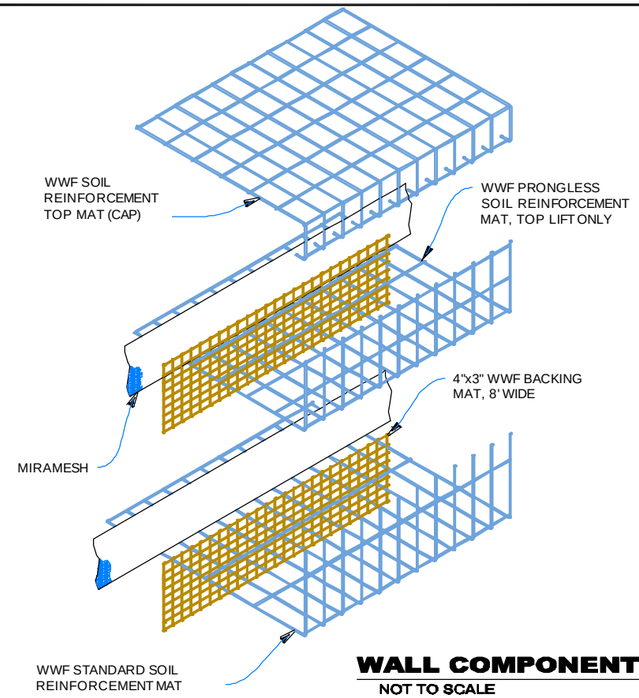
INSTALL THE CONTINUOUS MIRAMESH. PLACE AND COMPACT THE BACKFILL TO THE BASE ELEVATION OF THE NEXT MAT. REPEAT STEPS 3 THROUGH 5 TO THE TOP LIFT.





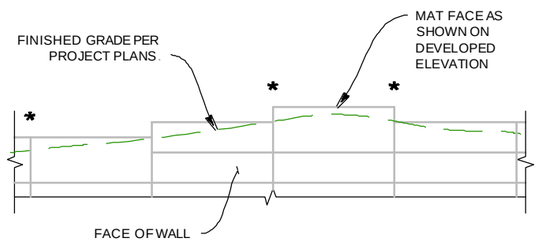
STEP 6: TOP LIFT

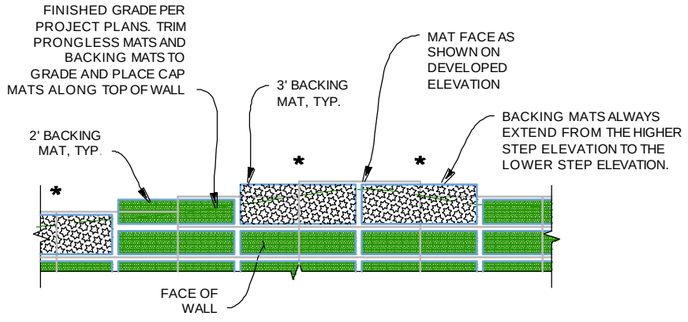
PLACE THE TOP LIFT PRONGLESS MAT, BACKING MAT AND CONTINUOUS MIRAMESH PLACE AND COMPACT BACKFILL IN AREA "A". HOOK THE CAP OVER THE MIDDLE TRANSVERSE WIRE ON THE PRONGLESS MAT, AND ROTATE INTO PLACE. BACKFILL "B" TO 1'-6" MIN. COVER OVER THE CAP.



WALL COMPONENTS

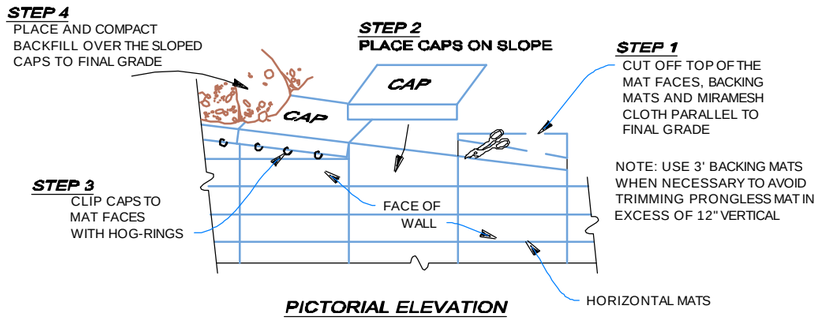
NOT TO SCALE





TRIMMING BACKING MATS ALONG TOP OF WALL

NOT TO SCALE



PICTORIAL ELEVATION

SLOPED CAP MAT DETAIL

NOT TO SCALE

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OREGON
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MSE WELDED WIRE WALL CONSTRUCTION SEQUENCE & DETAILS

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SHT 7 OF 7