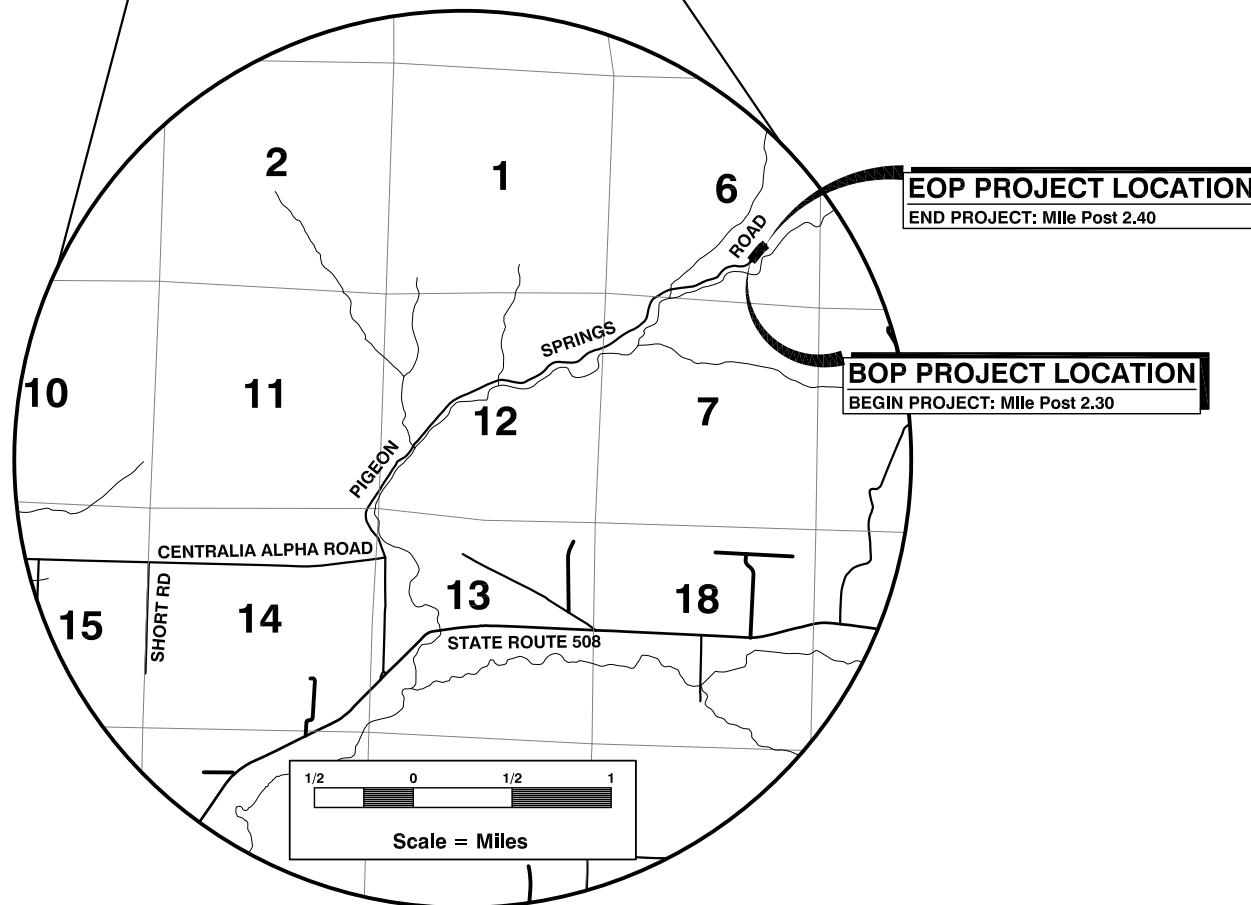
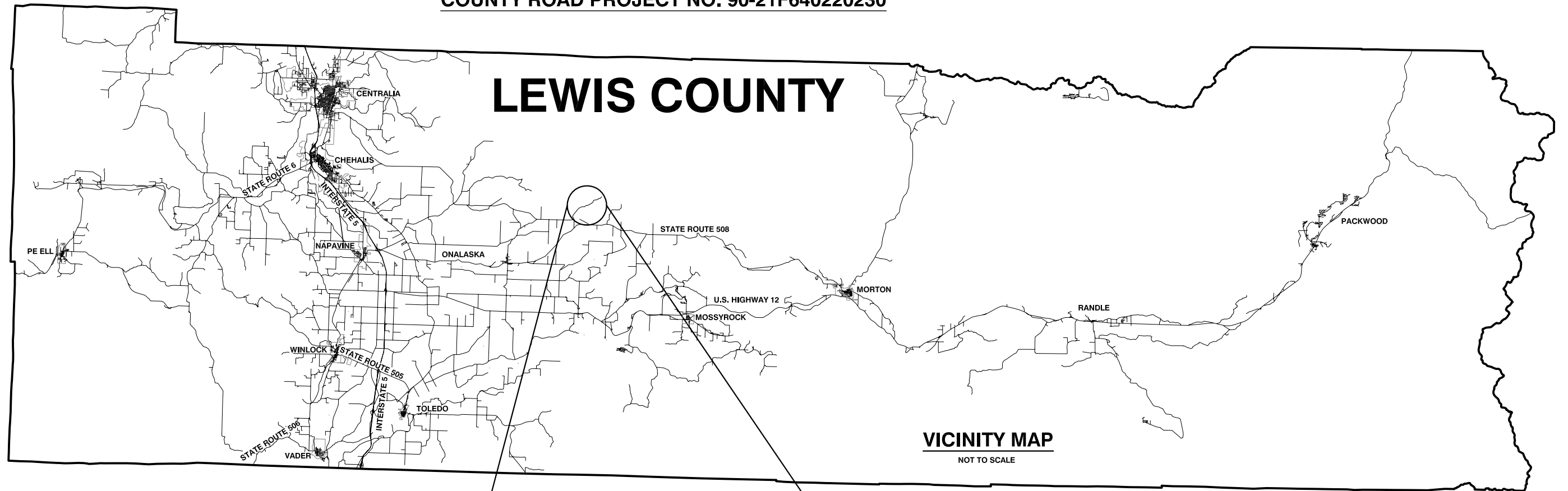


# PIGEON SPRINGS MP 2.30 SLIDE REPAIR

COUNTY ROAD PROJECT NO: 90-21F640220230



LEWIS COUNTY  
DEPARTMENT OF PUBLIC WORKS  
APPROVED FOR CONSTRUCTION:

Assistant County Engineer

04/26/2023  
Date

**COMMISSIONERS:**

SEAN D. SWOPE, DISTRICT 1  
LINDSEY R. POLLOCK, DVM, DISTRICT 2  
SCOTT J. BRUMMER, DISTRICT 3



**ENGINEERING-  
DESIGN SECTION**

**SHEET INDEX**

SHEET NO.	DESCRIPTION
1	VICINITY MAP AND SHEET INDEX
2	LEGEND AND SUMMARY OF QUANTITIES
3	ROADWAY SECTIONS
4-5	SITE PREPARATION/UTILITY PLAN
6-8	PLAN AND PROFILES
9	GRAVITY BLOCK WALL PLAN AND PROFILE
10	GRAVITY BLOCK WALL DETAILS
11	DETAILS
12-13	TESC PLAN
14	PAVING/PAVEMENT MARKING/ GUARDRAIL PLAN
15	PLANTING PLAN
16	TEMPORARY DETOUR AND TRAFFIC CONTROL PLAN

# LEGEND

## EXISTING FEATURES

- CONIFER TREE
- DECIDUOUS TREE
- SHRUB
- STUMP
- TELEPHONE RISER
- UTILITY POLE
- SIGN
- MAILBOX
- CULVERT
- MAG SPIKE AND WASHER
- HUB AND TACK
- MAG NAIL
- LC REBAR
- FOUND REBAR WITH LS CAP
- BORE HOLE
- GUY WIRE
- GATE

## SURVEY FEATURES

- POINT OF CURVATURE
- POINT OF INTERSECTION
- POINT OF TANGENT
- RIGHT OF WAY
- PROPERTY LINE
- TEMPORARY CONSTRUCTION EASEMENT

## NEW CONSTRUCTION FEATURES

- CONSTRUCTION NOTE
- NEW CULVERT
- HIGH VISIBILITY SILT FENCE
- CLEAR AND GRUB LIMITS
- FLOW LINE
- CUT
- FILL
- DESIGN ROADWAY CENTERLINE ALIGNMENT
- EDGE OF PAVEMENT
- FLOWLINE
- BEAM GUARDRAIL TYPE 31 - XX LONG POST
- BEAM GUARDRAIL TYPE 31
- SIGN
- HIGH VISIBILITY FENCE (AROUND TREE PERIMETER)

## GENERAL NOTES

1. SURVEY HORIZONTAL DATUM: WASHINGTON STATE PLANE, SOUTH GRID, NAD 83/91  
VERTICAL DATUM: NAVD '88
2. CONTRACTOR TO MAINTAIN INGRESS AND EGRESS FROM THE PROJECT SITE, AND PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.

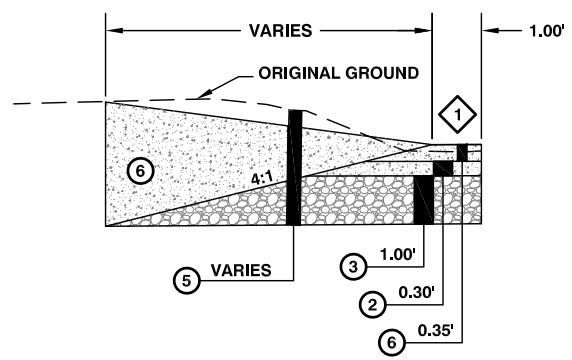
## SUMMARY OF QUANTITIES

ITEM NUMBER	STD. ITEM NO.	ITEM DESCRIPTION	TOTAL QUANTITY	UNIT
<b>PREPARATION</b>				
1	0001	MOBILIZATION	1	LUMP SUM
2	0025	CLEARING AND GRUBBING	0.36	ACRE
3	S.P.	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LUMP SUM
<b>GRADING</b>				
4	0310	ROADWAY EXCAVATION INCL. HAUL	1270	C.Y.
5	0431	GRAVEL BORROW INCL. HAUL	400	TON
<b>DRAINAGE</b>				
6	1086	QUARRY SPALLS	36	TON
7	1160	UNDERDRAIN PIPE 6 IN. DIAM.	62	L.F.
8	1170	DRAIN PIPE 6 IN. DIAM.	10	L.F.
9	1272	CL. IV REINF. CONC. CULV. PIPE 18 IN. DIAM.	63	L.F.
<b>STRUCTURE</b>				
10	4006	STRUCTURE EXCAVATION CLASS A INCL. HAUL	420	C.Y.
11	4013	SHORING OR EXTRA EXCAVATION CL. A	1	LUMP SUM
12	4025	GRAVEL BACKFILL FOR WALL	60	C.Y.
<b>SURFACING</b>				
13	5100	CRUSHED SURFACING BASE COURSE	1400	TON
14	5120	CRUSHED SURFACING TOP COURSE	525	TON
15	S.P.	SHOULDER FINISHING	0.22	MILE
<b>HOT MIX ASPHALT</b>				
16	S.P.	HMA CL. 3/8 IN. PG 58H-22 FIBER REINFORCED	290	TON
17	S.P.	HMA FOR APPROACH CL. 3/8 IN. PG58H-22 FIBER REINFORCED	10	TON
<b>EROSION CONTROL AND ROADSIDE PLANTING</b>				
18	6403	ESC LEAD	7	DAY
19	6422	SEEDING AND MULCHING	0.36	ACRE
20	6479	WATTLES	205	L.F.
21	6490	EROSION/WATER POLLUTION CONTROL	1	ESTIMATE
22	6502	COIR LOG	100	L.F.
23	6630	HIGH VISIBILITY FENCE	20	L.F.
24	6635	HIGH VISIBILITY SILT FENCE	605	L.F.
25	S.P.	PLANTING MITIGATION CONSTRUCTION	1	LUMP SUM
<b>TRAFFIC</b>				
26	6712	BEAM GUARDRAIL TYPE 31 - 9 FT LONG POST	193.75	L.F.
27	6713	BEAM GUARDRAIL TYPE 31 - 11 FT LONG POST	262.50	L.F.
28	6719	BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL	2	EACH
29	6757	BEAM GUARDRAIL TYPE 31	162.50	L.F.
30	6781	TEMPORARY BARRIER	185	L.F.
31	6806	PAINT LINE	1500	L.F.
32	6842	TEMPORARY STOP LINE - SHORT DURATION	20	L.F.
33	6971	PROJECT TEMPORARY TRAFFIC CONTROL	1	LUMP SUM
34	6982	CONSTRUCTION SIGNS CLASS A	267	S.F.
<b>OTHER ITEMS</b>				
35	7006	STRUCTURE EXCAVATION CLASS B INCL. HAUL	16	C.Y.
36	7014	GRAVEL BACKFILL FOR DRAIN	5	C.Y.
37	7164	GRAVITY BLOCK WALL	612.50	S.F.
38	7480	ROADSIDE CLEANUP	1	ESTIMATE
39	7530	CONSTRUCTION GEOTEXTILE FOR SEPARATION	55	S.Y.
40	7550	CONSTRUCTION GEOTEXTILE FOR UNDERGROUND DRAINAGE	35	S.Y.
41	7562	MAILBOX SUPPORT TYPE 1	1	EACH
42	7725	REIMBURSEMENT FOR THIRD PARTY DAMAGE	1	ESTIMATE
43	7736	SPCC PLAN	1	LUMP SUM

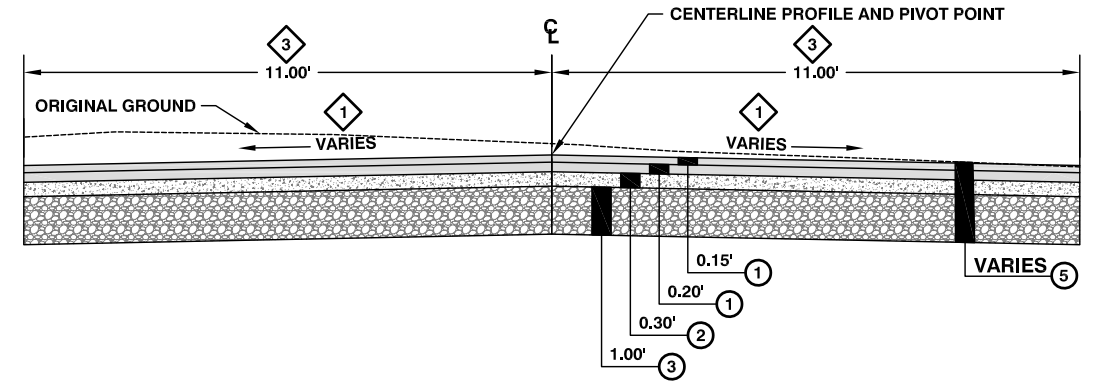
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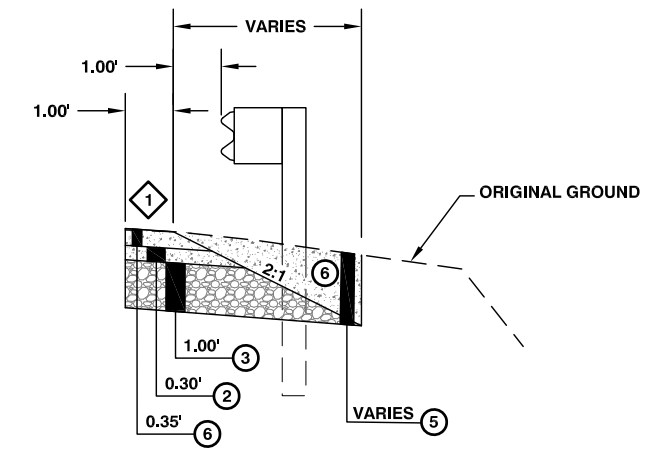
S:\Engineer\Design\PIGEON SPRINGS SLIDE MP 2.295\Drawings\PIGEON SPRINGS ROADWAY SECTIONS.WSR.dwg



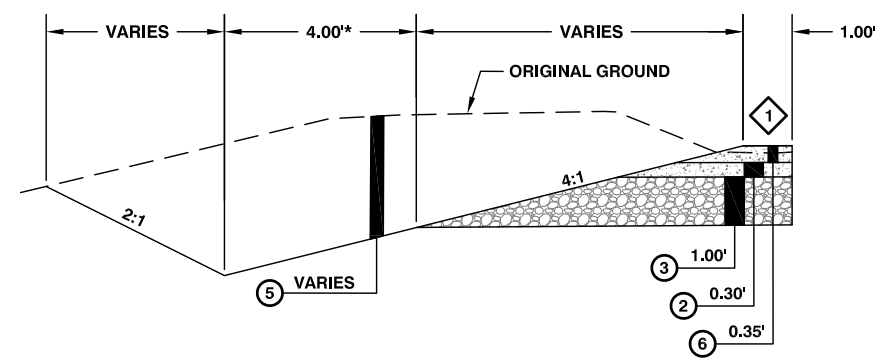
STA. 200+00.00 TO STA. 201+75.00 LEFT



**ROADWAY SECTION**  
STATION 200+00.00 TO STATION 205+00.00  
NOT TO SCALE



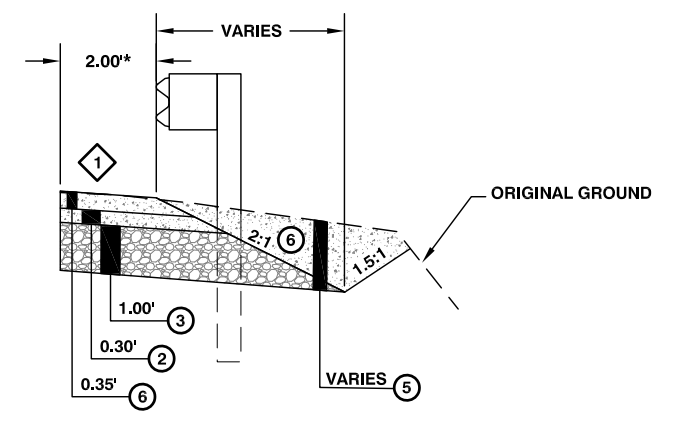
STA. 200+00.00 TO STA. 201+00.00 RIGHT



STA. 201+75.00 TO STA. 205+00.00 LEFT

- CONSTRUCTION NOTES**
- 1 CROSS SLOPE VARY THROUGH PROJECT, SEE SUPER ELEVATION DIAGRAMS
  - 2 ALL DEPTHS ARE COMPACTED DEPTH
  - 3 STA 200+00 - STA 200+40 AND STA 204+72.92 - STA 205+00.00 WIDTH VARIES TO MATCH INTO EXISTING
  - 4 STA 201+50.00 - 201+66.71 RIGHT AND STA 202+26.82 TO STA 202+50.00 SEE QUARRY SPALLS BLANKET DETAIL ON SHEET 11 OF 16
  - 5 STA 201+66.71 TO STA 202+26.82 SEE GRAVITY BLOCK WALL SECTIONS ON SHEET 10 OF 16
  - 6 SEE GRAVITY BLOCK WALL DETAILS ON SHEET 10 OF 16

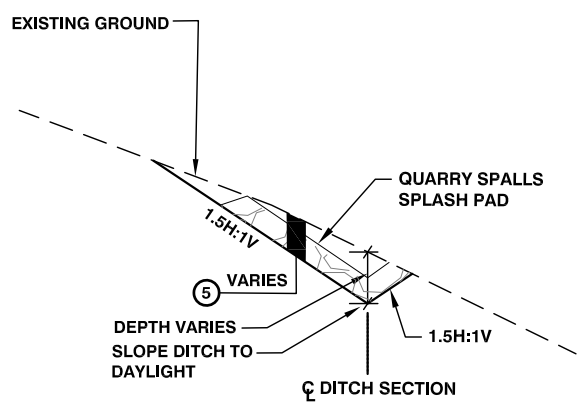
- LEGEND**
- 1 HMA CL. 3/8 IN. PG 58H-22 FIBER REINFORCED
  - 2 CRUSHED SURFACING TOP COURSE
  - 3 CRUSHED SURFACING BASE COURSE
  - 4 GRAVEL BORROW INCL. HAUL
  - 5 ROADWAY EXCAVATION INCL. HAUL
  - 6 SHOULDER FINISHING (CRUSHED SURFACING TOP COURSE)



STA. 201+00.00 TO STA. 201+50.00 RIGHT  
STA. 202+50.00 TO STA. 203+50.00 RIGHT

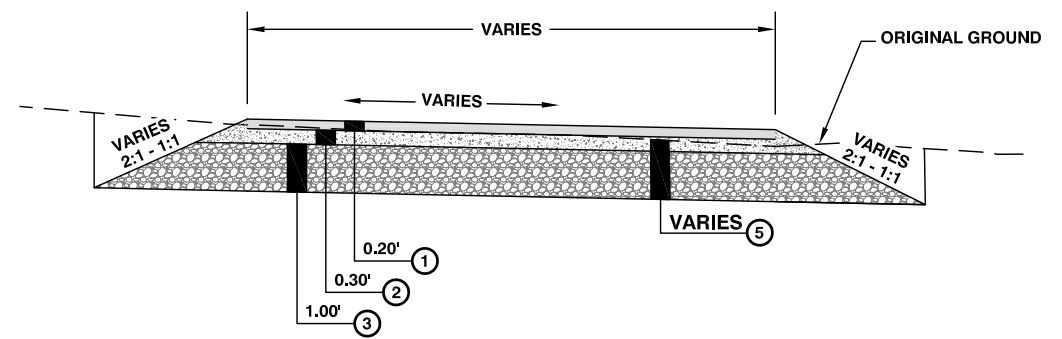
\*STA 201+00.00 TO STA 201+09.75 RIGHT  
SHOULDER WIDTH VARIES FROM 1.00' TO 2.00'

\*STA 201+84.20 LEFT AT CULVERT INLET WIDTH = 6.00'  
\*STA 204+75.00 TO STA 205+00.00 LEFT  
WIDTH VARIES FROM 4.00' TO 0.00'

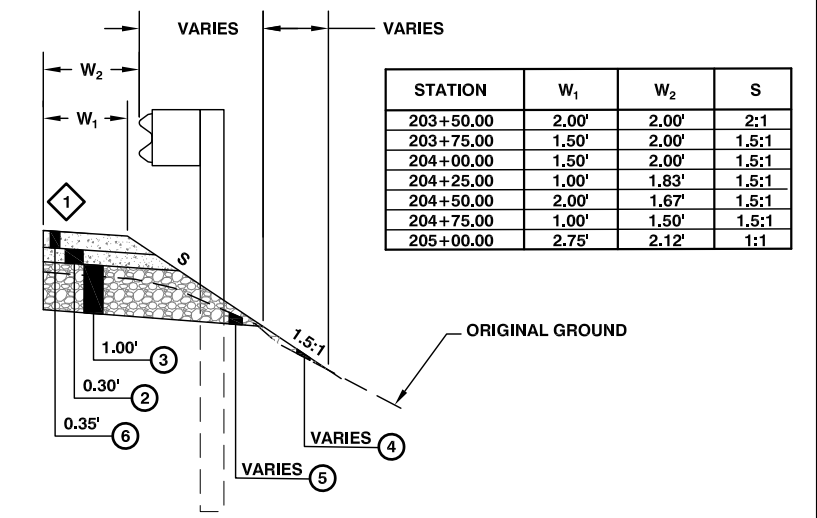


**CULVERT OUTFALL DITCH SECTION**

BEGIN STA 201+47.50, 23.15' RT; V-BOTTOM ELEV. 844.66  
END STA 201+54.31, 27.06' RT; V-BOTTOM ELEV. MATCH EXIST.  
NOT TO SCALE



**APPROACH PAVING SECTION**  
NOT TO SCALE



STA. 203+50.00 TO STA. 205+00.00 RIGHT

STATION	W <sub>1</sub>	W <sub>2</sub>	S
203+50.00	2.00'	2.00'	2:1
203+75.00	1.50'	2.00'	1.5:1
204+00.00	1.50'	2.00'	1.5:1
204+25.00	1.00'	1.83'	1.5:1
204+50.00	2.00'	1.67'	1.5:1
204+75.00	1.00'	1.50'	1.5:1
205+00.00	2.75'	2.12'	1:1

**Lewis County**  
Department of Public Works  
2025 N. E. KRESKY AVE.  
CHEHALIS WA 98532  
PHONE # (360) 740-1123  
FAX # (360) 740-2719

DESIGNED BY : WRA  
DRAWN BY : WRA  
CHECKED BY :  
DATE :

NO.	DATE	REVISION	BY	APP.

**PIGEON SPRINGS MP 2.30  
SLIDE REPAIR**

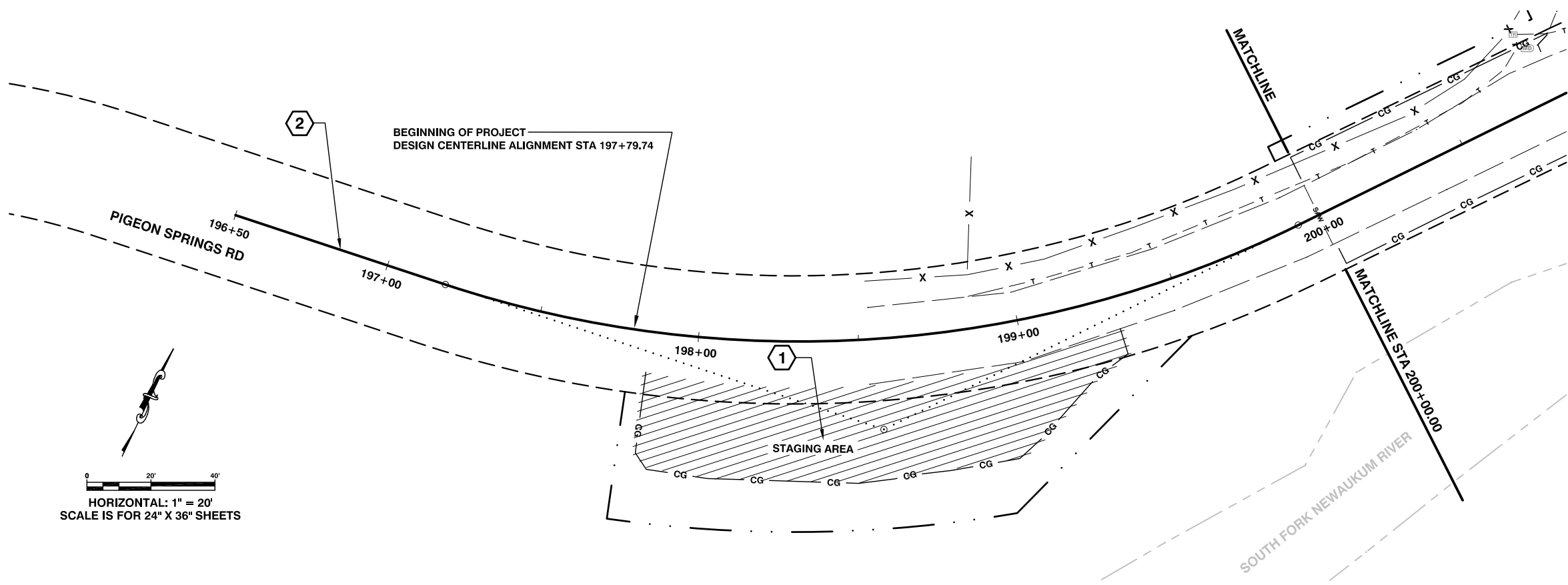
COUNTY ROAD PROJECT NO:  
90-21F640220230  
ROADWAY SECTIONS

SHEET  
**3**  
OF  
**16**

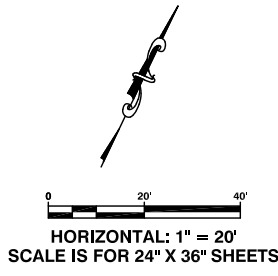


WESLEY R. ANDERSON, P.E.  
SENIOR ENGINEER / DESIGN  
Date: 04/25/2023

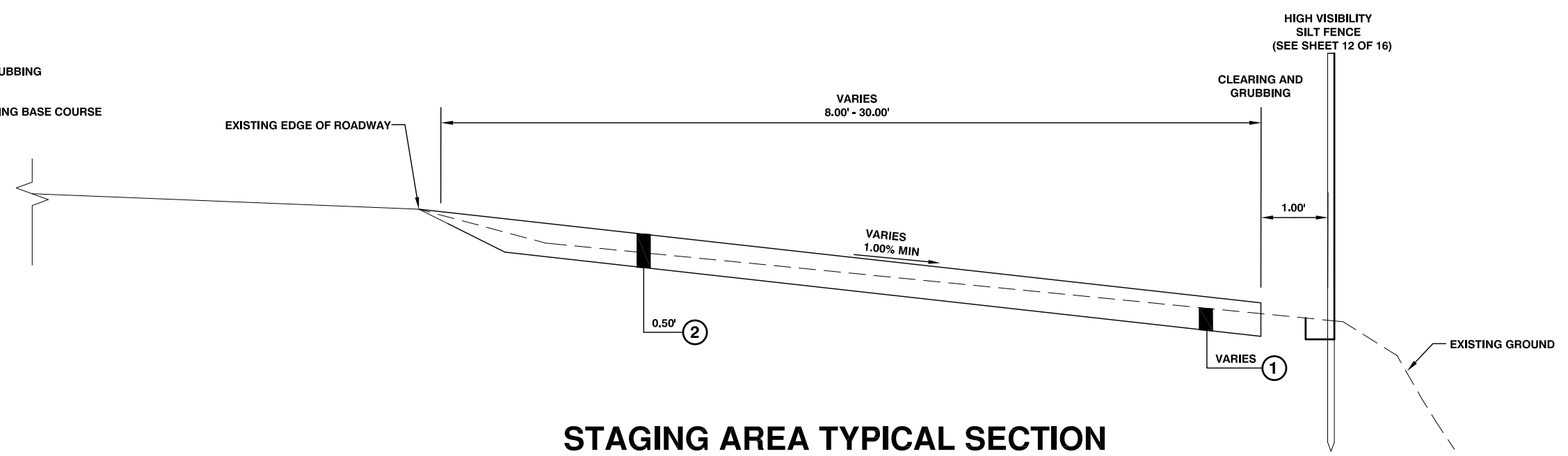




- CONSTRUCTION NOTES:**
- ① STA. 197+84.70 TO STA. 199+31.40 RIGHT STAGING AREA  
0.12 ACRE CLEARING AND GRUBBING  
178 TON CRUSHED SURFACING BASE COURSE  
SEE DETAIL THIS SHEET
  - ② SEE SHEETS 6 THRU 8 OF 16 FOR DESIGN CENTERLINE ALIGNMENT INFORMATION



- LEGEND**
- ① CLEARING AND GRUBBING
  - ② CRUSHED SURFACING BASE COURSE



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NO.	DATE	REVISION	BY	APP.

**PIGEON SPRINGS MP 2.30  
SLIDE REPAIR**

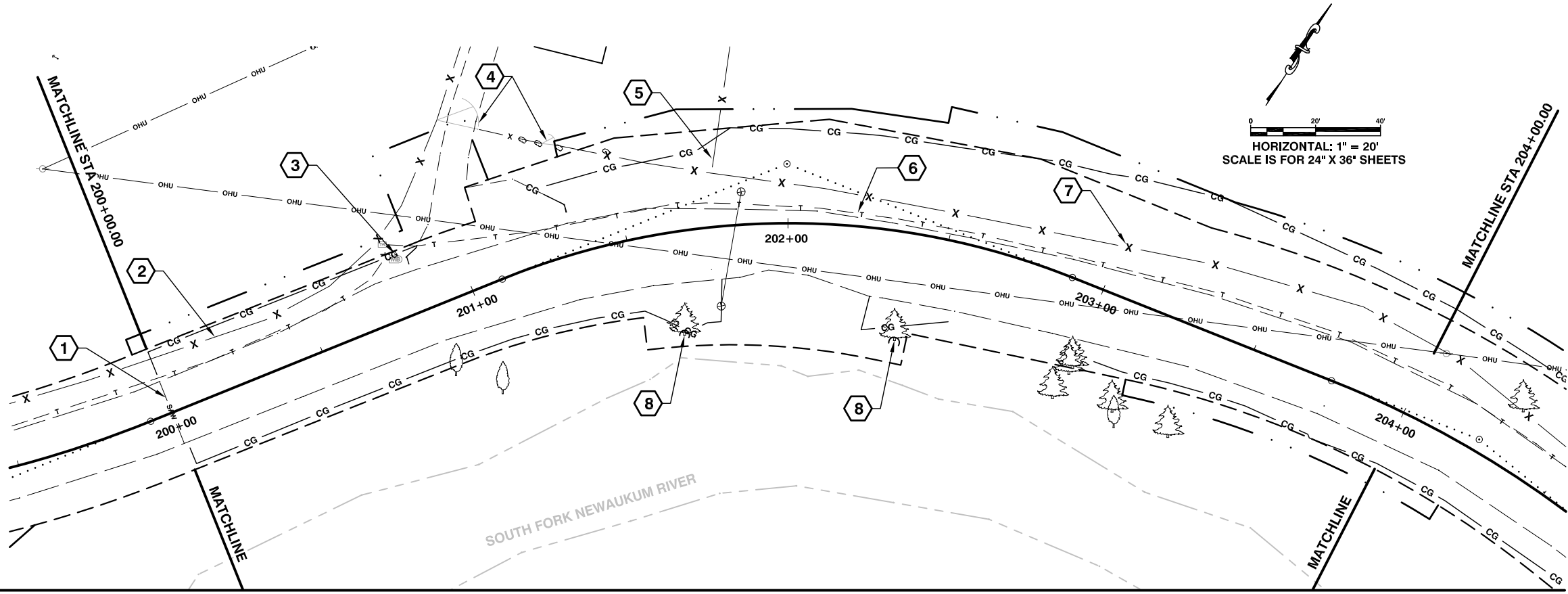
COUNTY ROAD PROJECT NO:  
90-21F640220230  
STA 196+57.97 TO STA 200+00  
SITE PREPARATION/UTILITY PLAN

SHEET  
**4**  
OF  
**16**

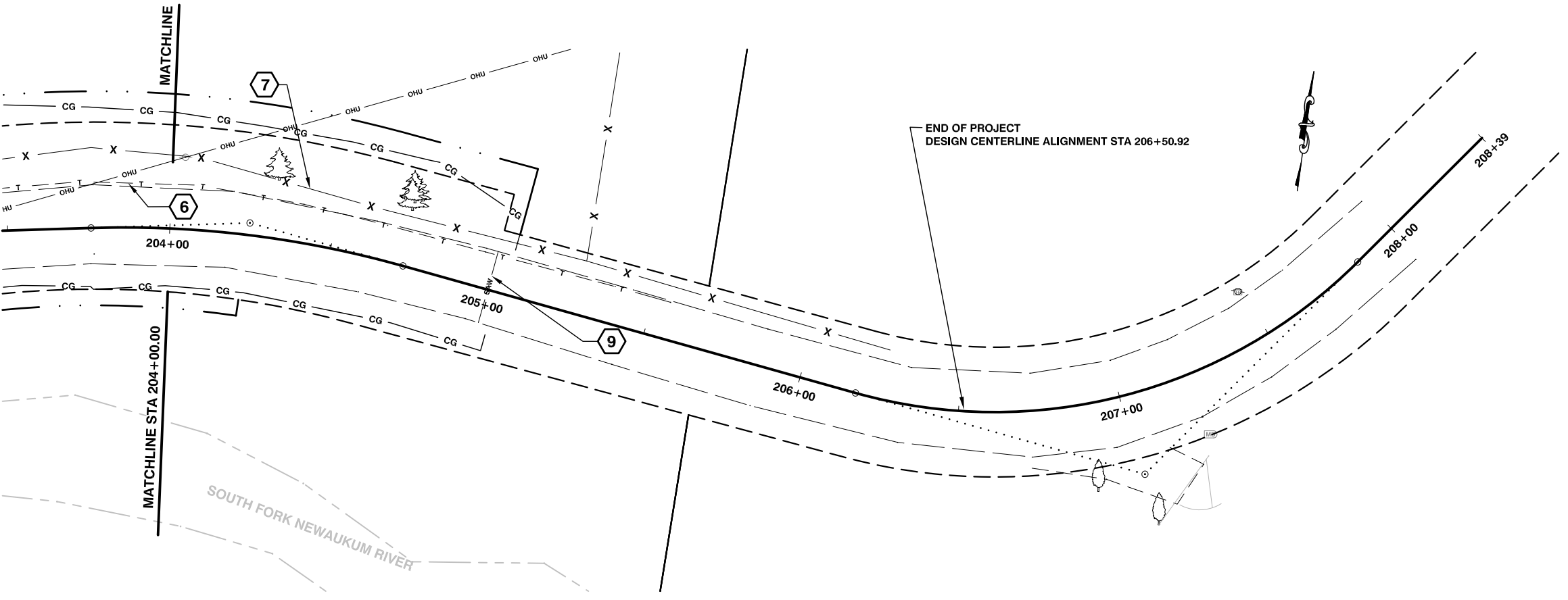


WESLEY R. ANDERSON, P.E.  
SENIOR ENGINEER / DESIGN  
Date: 04/25/2023





- CONSTRUCTION NOTES:**
- 1 STA 200+00.00  
SAWCUT INCIDENTAL TO ROADWAY EXCAVATION INCL. HAUL
  - 2 STA 200+00.00, 17.62' LT TO STA 200+66.71, 20.59' LT  
REMOVING WIRE FENCE  
SEE SPECIAL PROVISION REMOVAL OF STRUCTURES AND OBSTRUCTIONS
  - 3 STA 200+81.30 LEFT  
1 EACH MAILBOX SUPPORT TYPE 1 TO STA 200+90.00, 20.00' LT  
PLACE MAILBOX ON TEMPORARY STAND AS NEEDED  
SEE WSDOT STANDARD PLAN H-70.10-02
  - 4 PROTECT EXISTING GATE DURING CONSTRUCTION.  
DO NOT BLOCK ACCESS TO RESIDENCE.
  - 5 STA 201+77.84, 16.57' LT TO STA 201+80.89, 30.00' LT  
REMOVING WIRE FENCE  
SEE SPECIAL PROVISION REMOVAL OF STRUCTURES AND OBSTRUCTIONS
  - 6 UNDERGROUND PHONE UTILITY TO BE RELOCATED BY OTHERS
  - 7 STA 201+42.40, 30.64' LT TO STA 205+00.00, 16.09' LT  
REMOVING WIRE FENCE  
SEE SPECIAL PROVISION REMOVAL OF STRUCTURES AND OBSTRUCTIONS
  - 8 TREE TO BE PROTECTED AND REMAIN (36" CEDAR, 14" CEDAR)  
SEE TESC PLAN
  - 9 STA 205+00.00  
SAWCUT INCIDENTAL TO ROADWAY EXCAVATION INCL. HAUL
  - 10 SEE SHEETS 6, 7 AND 8 OF 16 FOR DESIGN CENTERLINE ALIGNMENT INFORMATION



QUANTITY TABULATION - SITE PREPARATION STA 200+00 - STA 208+39		
ITEM	QTY	UNIT
CLEARING AND GRUBBING	0.24	ACRE

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 Department of Public Works  
 2025 N. E. KRESKY AVE.  
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DESIGNED BY : WRA  
 DRAWN BY : WRA  
 CHECKED BY :  
 DATE :

NO.	DATE	REVISION	BY	APP.

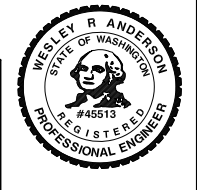
**PIGEON SPRINGS MP 2.30  
 SLIDE REPAIR**

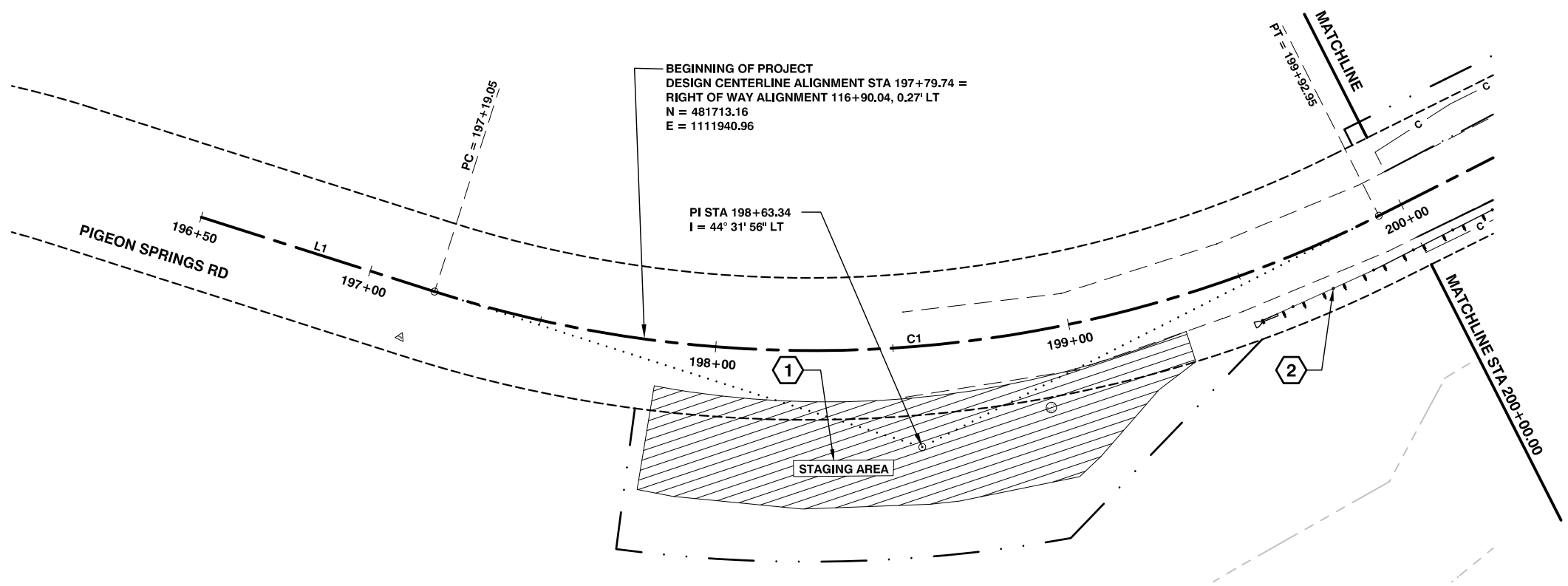
COUNTY ROAD PROJECT NO:  
 90-21F640220230  
 STA 200+00 TO STA 204+00  
 STA 204+00 TO STA 208+39  
 SITE PREPARATION/UTILITY PLAN

SHEET  
**5**  
 OF  
**16**

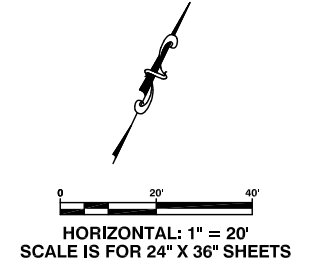


WESLEY R. ANDERSON, P.E.  
 SENIOR ENGINEER / DESIGN  
 Date: 04/25/2023





- CONSTRUCTION NOTES:**
- 1 STA. 197+84.70 TO STA. 199+31.40 RIGHT STAGING AREA SEE SHEET 4 OF 16
  - 2 SEE GUARDRAIL INFORMATION ON SHEET 14 OF 16



LINE TABLE: CENTERLINE ALIGNMENT		
LINE #	LENGTH	DIRECTION
L1	69.05	N81° 08' 33"E
L2	116.80	N36° 36' 37"E
L3	85.95	N80° 18' 49"E
L4	144.83	S82° 13' 02"E
L5	54.04	N37° 08' 48"E

CURVE TABLE: CENTERLINE ALIGNMENT				
CURVE #	R	L	D	T
C1	352.41	273.91	016° 15' 30"	144.29
C2	236.00	180.01	024° 16' 40"	94.64
C3	318.81	97.21	017° 58' 17"	48.98
C4	158.44	167.68	036° 09' 43"	92.65

BEGINNING OF PROJECT  
DESIGN CENTERLINE ALIGNMENT STA 197+79.74 =  
RIGHT OF WAY ALIGNMENT 116+90.04, 0.27' LT  
N = 481713.16  
E = 1111940.96

PI STA 198+63.34  
I = 44° 31' 56" LT

2025 N. E. KRESKY AVE.  
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PHONE # (360) 740-1123  
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CHECKED BY:  
DATE:

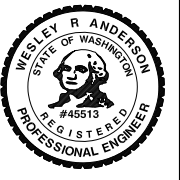
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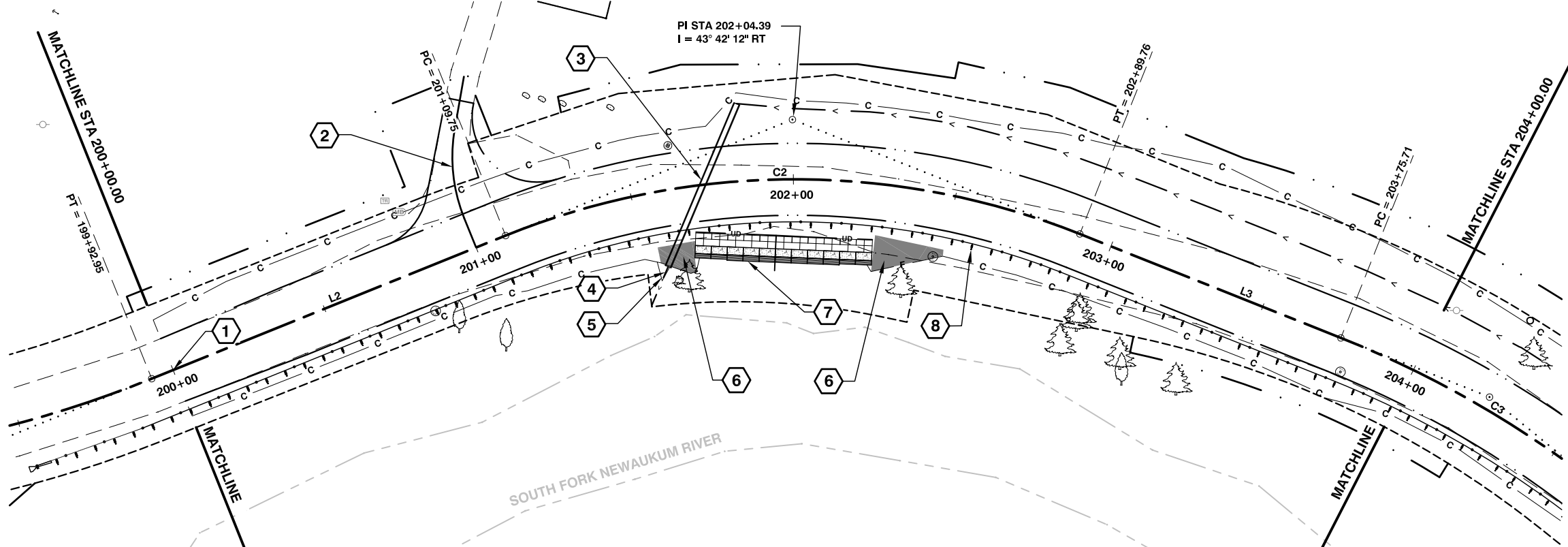
**PIGEON SPRINGS MP 2.30  
SLIDE REPAIR**

COUNTY ROAD PROJECT NO:  
90-21F640220230  
STA 196+57.97 TO STA 200+00  
PLAN SHEET

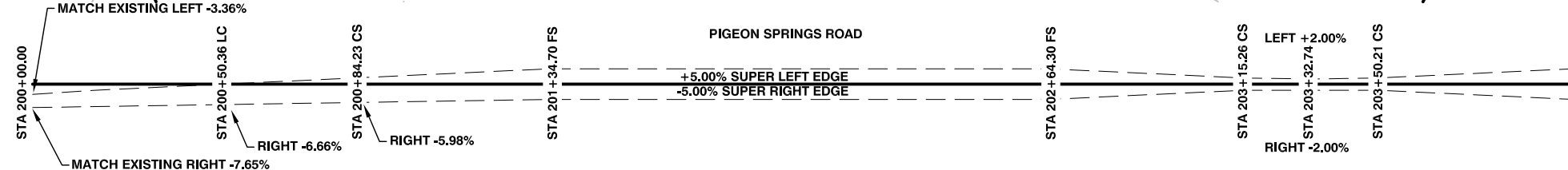
SHEET  
**6**  
OF  
**16**

WESLEY R. ANDERSON, P.E.  
SENIOR ENGINEER / DESIGN  
Date: 04/25/2023

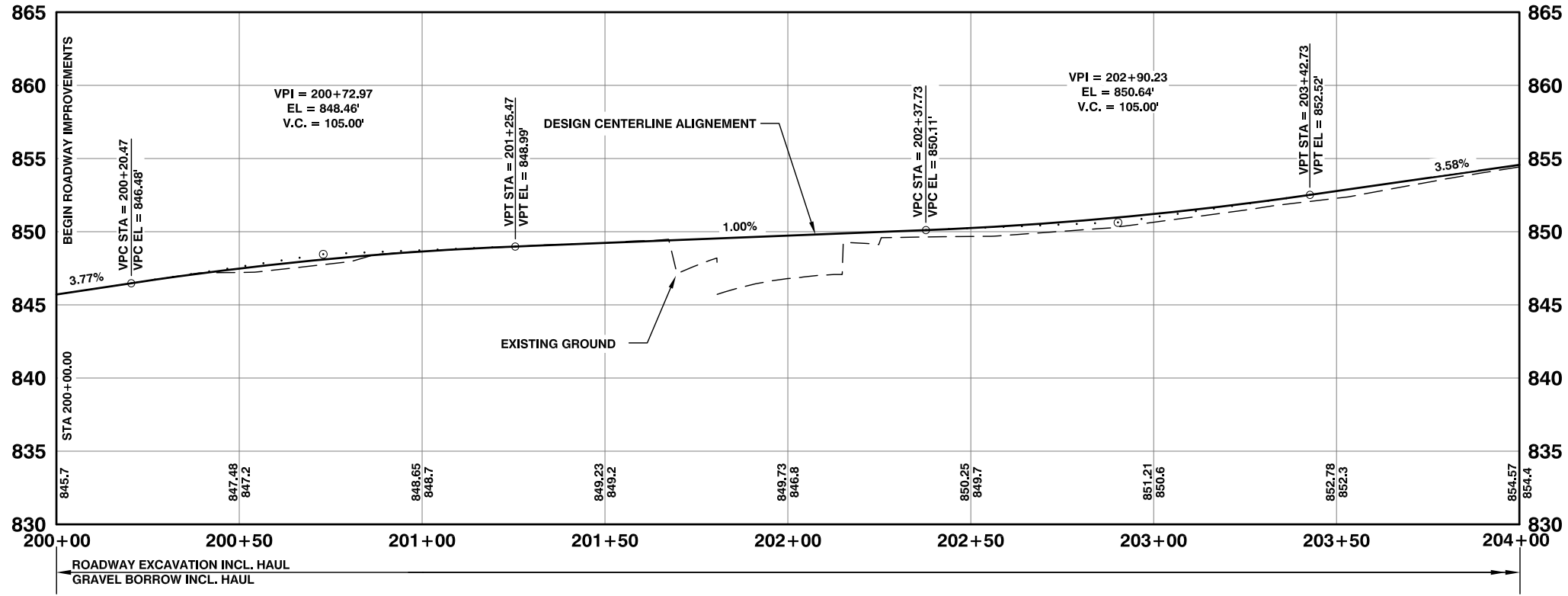




- CONSTRUCTION NOTES:**
- 1 STA 200+00.00  
BEGIN ROADWAY IMPROVEMENTS  
SEE ROADWAY SECTIONS SHEET 3 OF 16
  - 2 STA 201+00.00 LEFT  
CONSTRUCT DRIVEWAY  
SEE DRIVEWAY APPROACH DETAIL ON SHEET 11 OF 16
  - 3 STA 201+72.20  
CL. IV REINF. CONC. CULV. PIPE 18 IN. DIAM - 54 L.F.  
13 C.Y. STRUCTURE EXCAVATION CLASS B INCL. HAUL  
OUTLET INV. = EL 844.66 (STA 201+57.23, 23.15' RT)  
INLET INV. = EL 847.25 (STA 201+84.28, 23.66' LT)
  - 4 INSTALL QUARRY SPALL SPLASH PAD ON OUTLET  
1 TON QUARRY SPALLS
  - 5 CULVERT OUTFALL DITCH SECTION  
SEE SECTION ON SHEET 3 OF 16  
QUANTITIES INCIDENTAL TO ROADWAY EXCAVATION INCL. HAUL
  - 6 QUARRY SPALLS BLANKET DETAIL  
SEE DETAIL ON SHEET 11 OF 16
  - 7 GRAVITY BLOCK WALL  
SEE SHEET 9 OF 16
  - 8 SEE GUARDRAIL INFORMATION ON SHEET 14 OF 16



HORIZONTAL: 1" = 20'  
VERTICAL: 1" = 5'  
SCALE IS FOR 24" X 36" SHEETS



**LINE TABLE: CENTERLINE ALIGNMENT**

LINE #	LENGTH	DIRECTION
L1	69.05	N81° 08' 33"E
L2	116.80	N36° 36' 37"E
L3	85.95	N80° 18' 49"E
L4	144.83	S82° 13' 02"E
L5	54.04	N37° 08' 48"E

**CURVE TABLE: CENTERLINE ALIGNMENT**

CURVE #	R	L	D	T
C1	352.41	273.91	016° 15' 30"	144.29
C2	236.00	180.01	024° 16' 40"	94.64
C3	318.81	97.21	017° 58' 17"	48.98
C4	158.44	167.68	036° 09' 43"	92.65

**Lewis County**  
Department of Public Works  
2025 N. E. KRESKY AVE.  
CHEHALIS WA 98532  
PHONE # (360) 740-1123  
FAX # (360) 740-2719

DESIGNED BY : JDP  
DRAWN BY : JDP  
CHECKED BY :  
DATE :

NO.	DATE	REVISION	BY	APP.

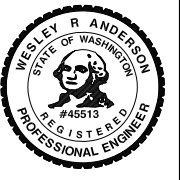
**PIGEON SPRINGS MP 2.30  
SLIDE REPAIR**

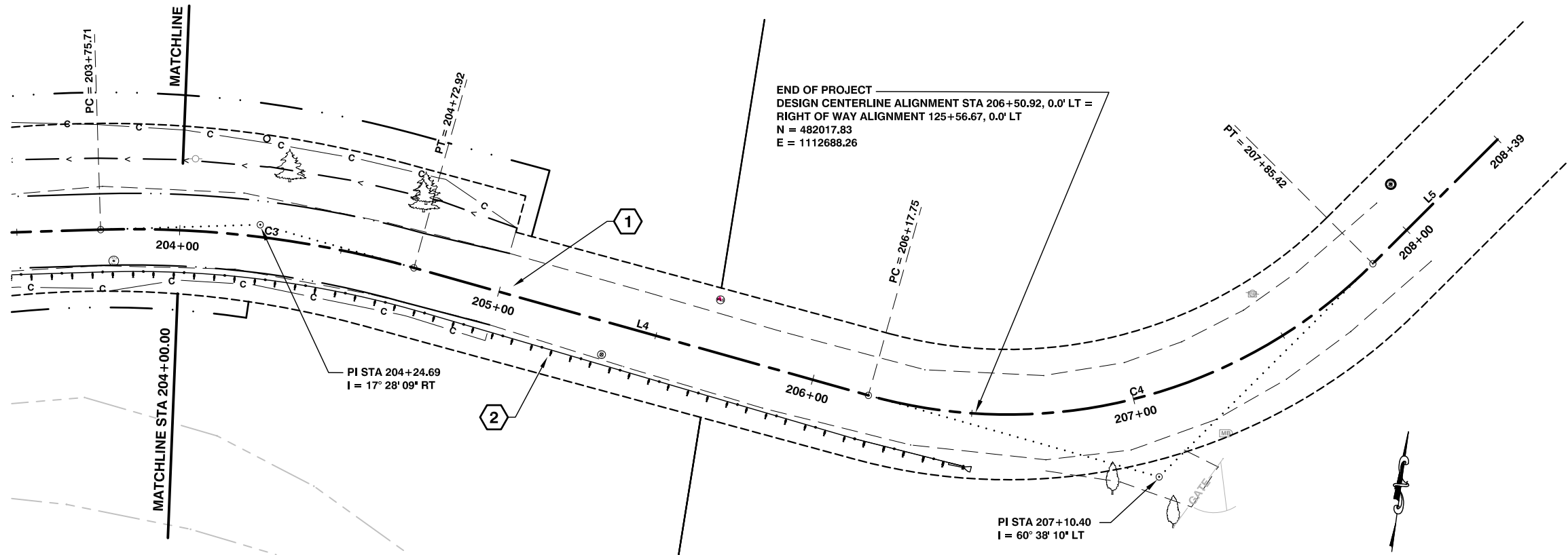
COUNTY ROAD PROJECT NO:  
90-21F640220230  
STA 200+00 TO STA 204+00  
PLAN AND PROFILE

SHEET  
**7**  
OF  
**16**



WESLEY R. ANDERSON, P.E.  
SENIOR ENGINEER / DESIGN  
Date: 04/25/2023

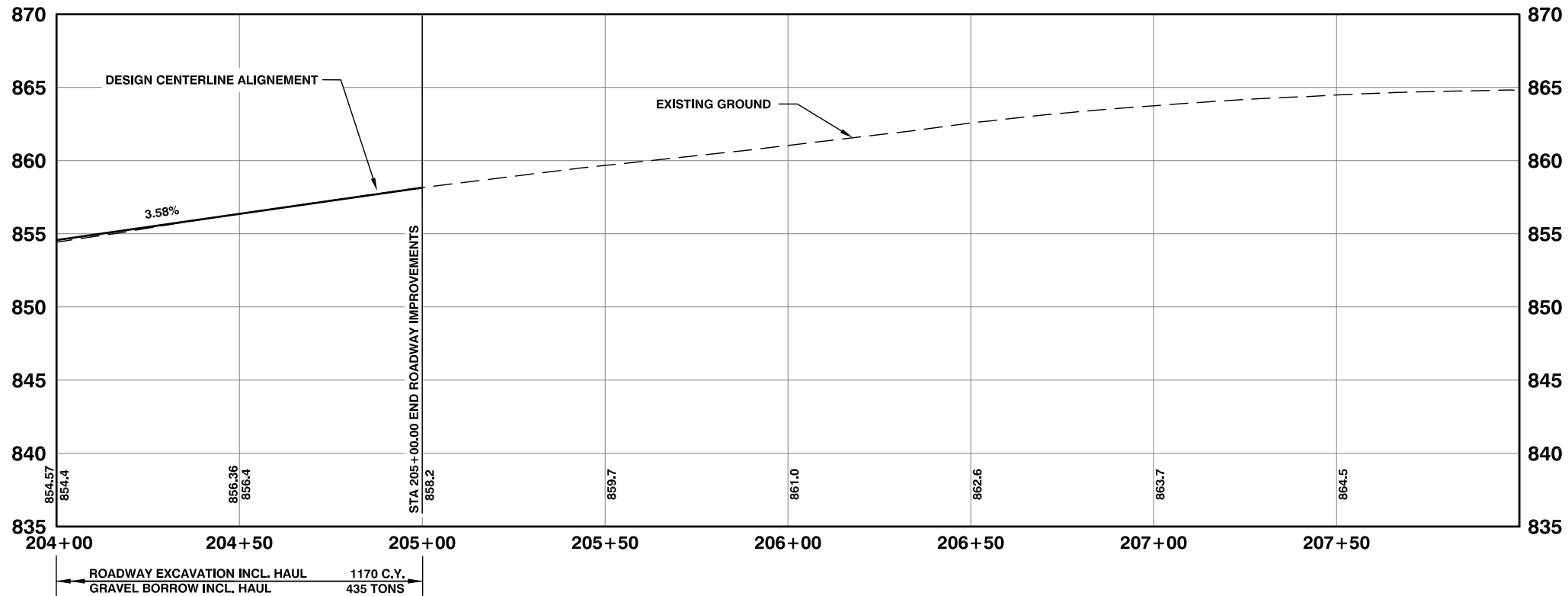
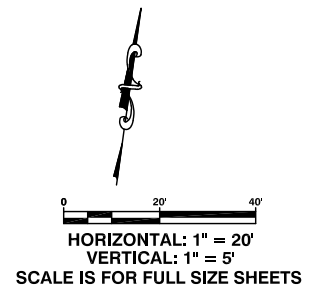
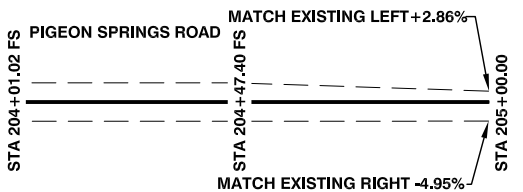




END OF PROJECT  
 DESIGN CENTERLINE ALIGNMENT STA 206+50.92, 0.0' LT =  
 RIGHT OF WAY ALIGNMENT 125+56.67, 0.0' LT  
 N = 482017.83  
 E = 1112688.26

CONSTRUCTION NOTES:

- 1 STA 205+00.00  
END ROADWAY IMPROVEMENTS  
SEE ROADWAY SECTIONS SHEET 3 OF 16
- 2 SEE GUARDRAIL INFORMATION ON SHEET 14 OF 16



LINE TABLE: CENTERLINE ALIGNMENT		
LINE #	LENGTH	DIRECTION
L1	69.05	N81° 08' 33"E
L2	116.80	N36° 36' 37"E
L3	85.95	N80° 18' 49"E
L4	144.83	S82° 13' 02"E
L5	54.04	N37° 08' 48"E

CURVE TABLE: CENTERLINE ALIGNMENT				
CURVE #	R	L	D	T
C1	352.41	273.91	016° 15' 30"	144.29
C2	236.00	180.01	024° 16' 40"	94.64
C3	318.81	97.21	017° 58' 17"	48.98
C4	158.44	167.68	036° 09' 43"	92.65

**Lewis County**  
 Department of Public Works  
 2025 N. E. KRESKY AVE.  
 CHEHALIS WA 98532  
 PHONE # (360) 740-1123  
 FAX # (360) 740-2719

DESIGNED BY : JDP  
 DRAWN BY : JDP  
 CHECKED BY :  
 DATE :

NO.	DATE	REVISION	BY	APP.

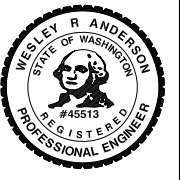
**PIGEON SPRINGS MP 2.30  
 SLIDE REPAIR**

COUNTY ROAD PROJECT NO:  
 90-21F640220230  
 STA 204+00 TO STA 208+39  
 PLAN AND PROFILE

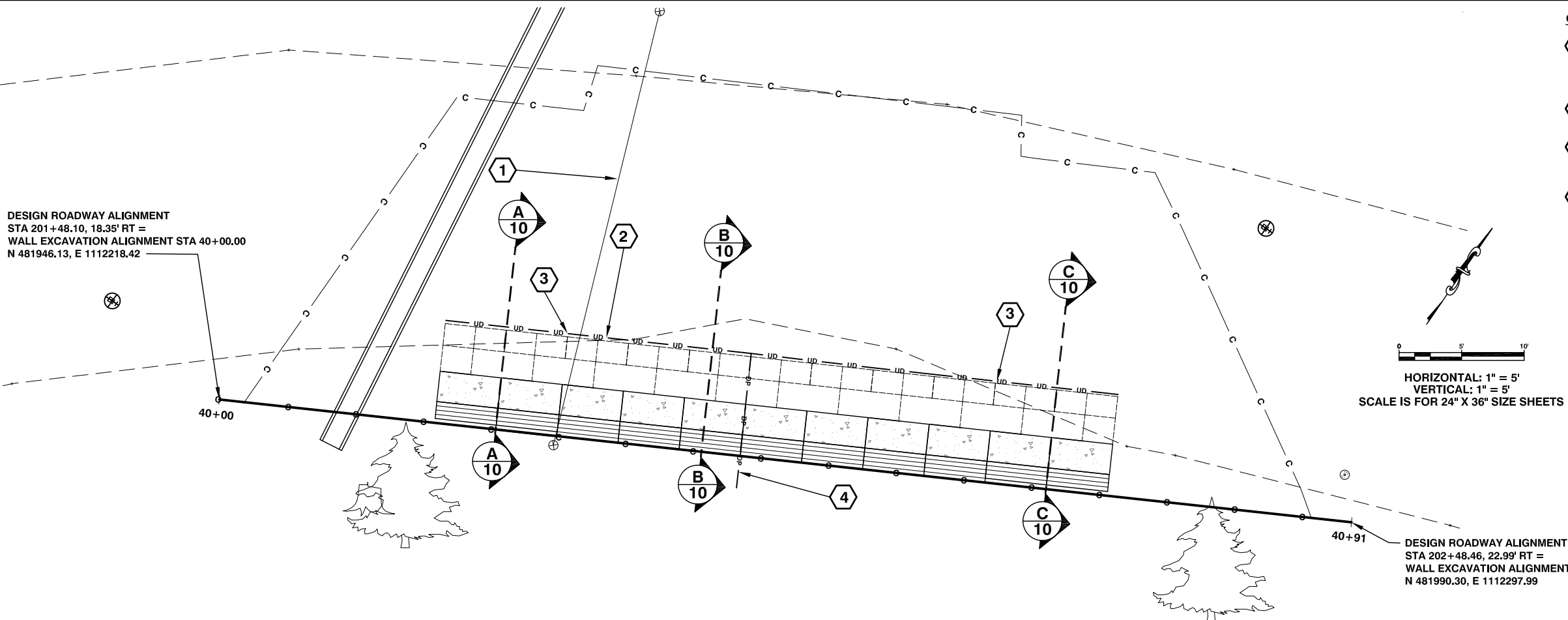
SHEET  
**8**  
 OF  
**16**



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 SENIOR ENGINEER / DESIGN  
 Date: 04/25/2023

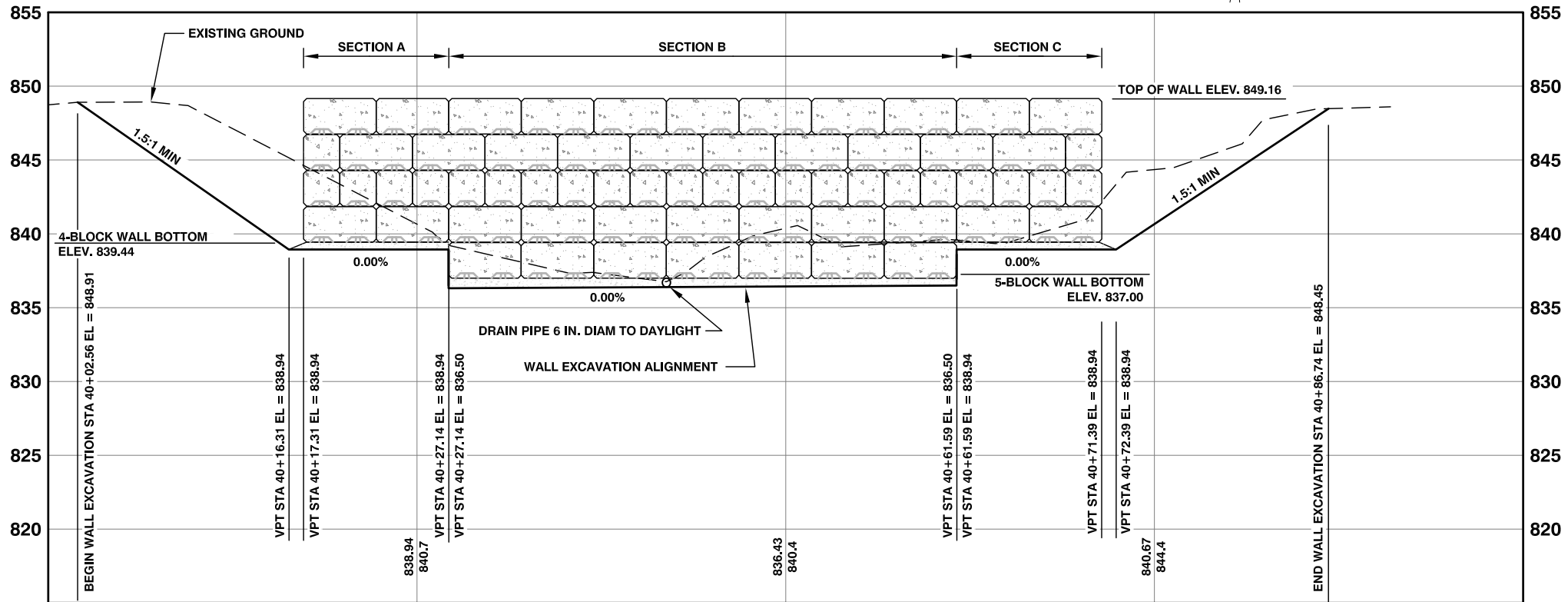






- CONSTRUCTION NOTES:**
- 1 STA 40+27.03  
REMOVE EXISTING 18 IN. DIAM. CMP PIPE - 36 L.F.  
3 C.Y. STRUCTURE EXCAVATION CLASS B INCL. HAUL  
SEE SPECIAL PROVISION REMOVAL OF STRUCTURES AND OBSTRUCTIONS
  - 2 INSTALL UNDERDRAIN PIPE 6 IN. DIAM. PER DETAIL SHEET 10 OF 16  
SEE TABLE THIS SHEET
  - 3 INSTALL UNDERDRAIN PIPE 6 IN. DIAM. VERTICALLY TO CONNECT PIPE FROM 4-BLOCK WALL TO 5-BLOCK WALL. BENDS AND FITTINGS ARE INCIDENTAL TO UNDERDRAIN PIPE 6 IN. DIAM. QUANTITY
  - 4 DRAIN PIPE 6 IN. DIAM TO DAYLIGHT  
SEE TABLE THIS SHEET

HORIZONTAL: 1" = 5'  
VERTICAL: 1" = 5'  
SCALE IS FOR 24" X 36" SIZE SHEETS



**UNDERDRAIN PIPE 6 IN. DIAM. SCHEDULE**

START		END		LENGTH
STA (OFFSET)	ELEV.	STA (OFFSET)	ELEV.	
40+16.31 (8.35' LT)	838.30	40+27.14 (8.35' LT)	838.30	11.0'
40+27.14 (8.35' LT)	838.30	40+27.14 (7.80' LT)	835.31	3.0'
40+27.14 (7.80' LT)	835.31	40+61.59 (7.80' LT)	835.31	35.0'
40+61.59 (7.80' LT)	835.81	40+61.59 (8.35' LT)	838.30	3.0'
40+61.59 (8.35' LT)	838.30	40+71.39 (8.35' LT)	838.30	10.0'

**DRAIN PIPE 6 IN. DIAM. SCHEDULE**

START		END		LENGTH
STA (OFFSET)	ELEV.	STA (OFFSET)	ELEV.	
40+41.85 (7.80' LT)	835.81	40+41.85 (2.20' RT)	835.50 (DAYLIGHT)	10.0'

40+00 → **STRUCTURE EXCAVATION CLASS A INCL. HAUL**  
CRUSHED SURFACING TOP COURSE  
GRAVEL BACKFILL FOR WALLS  
GRAVITY BLOCK WALL

40+50

41+00

440 C.Y.  
15 TONS  
60 C.Y.  
637.50 S.F.

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DATE :

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**PIGEON SPRINGS RD MP 2.30**  
**SLIDE REPAIR**

COUNTY ROAD PROJECT NO:  
90-21F640220230

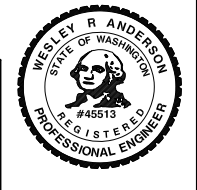
GRAVITY BLOCK WALL PLAN AND PROFILE

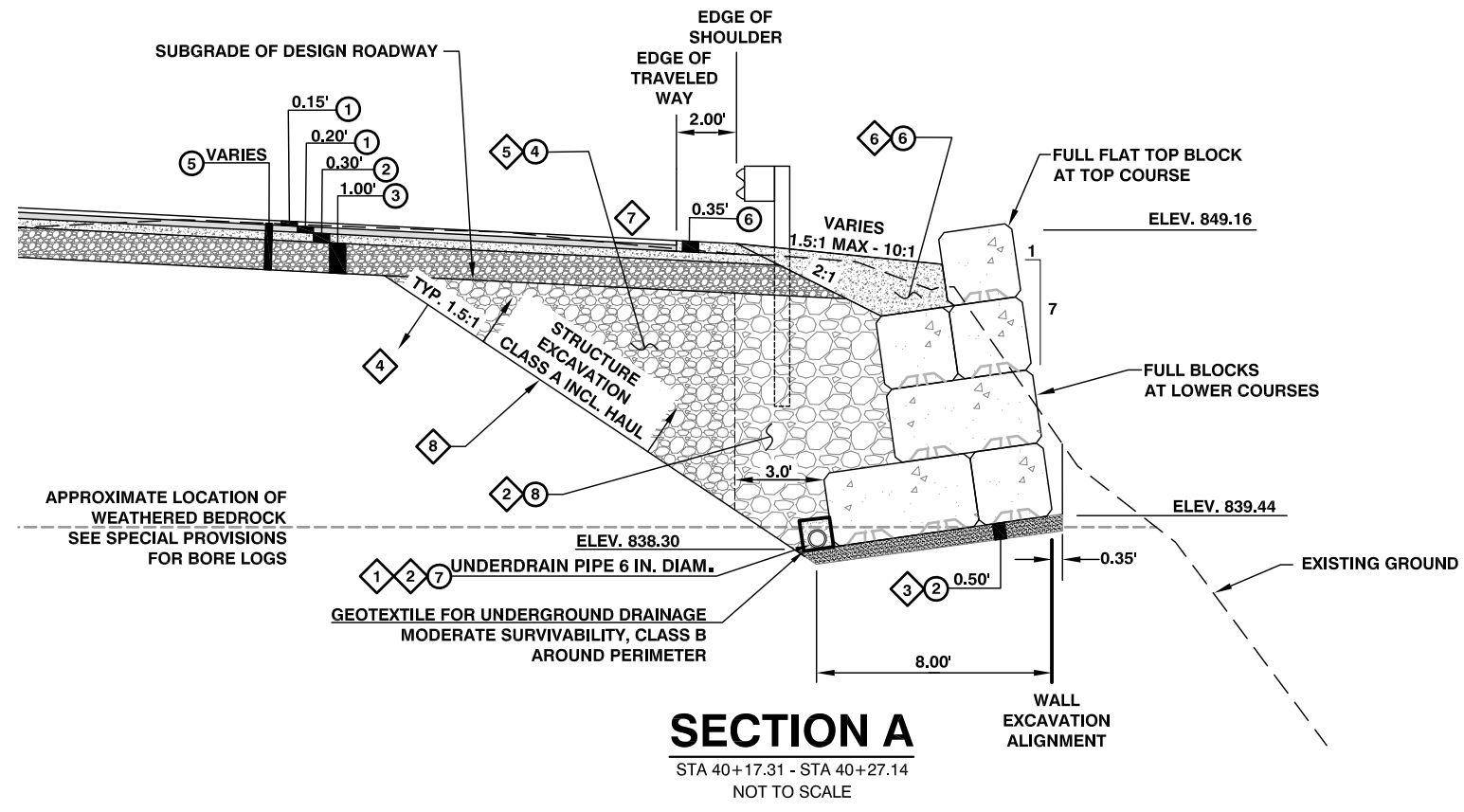
SHEET  
**9**  
OF  
**16**



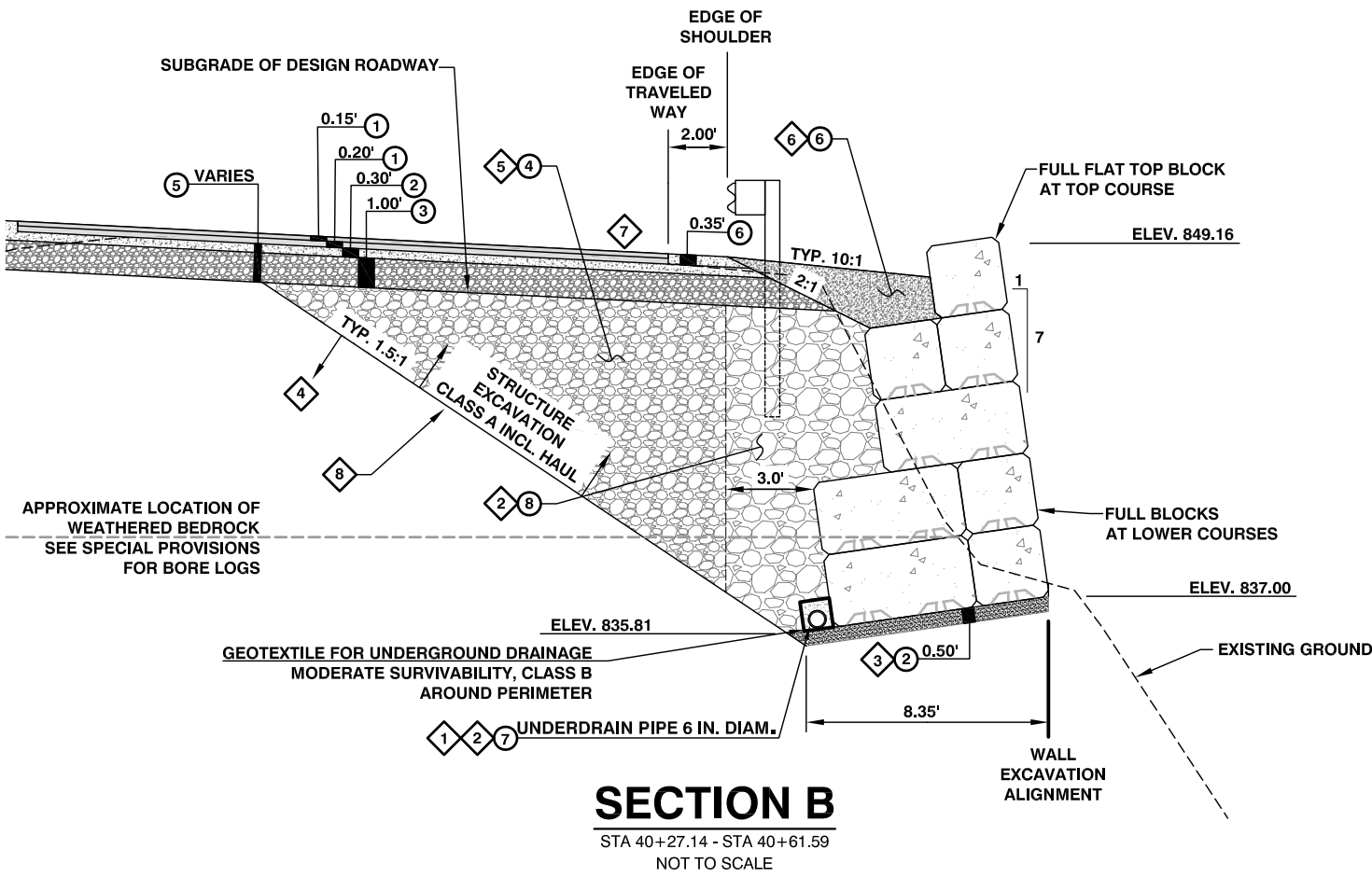
WESLEY R. ANDERSON, P.E.  
SENIOR ENGINEER / DESIGN

Date: 04/25/2023

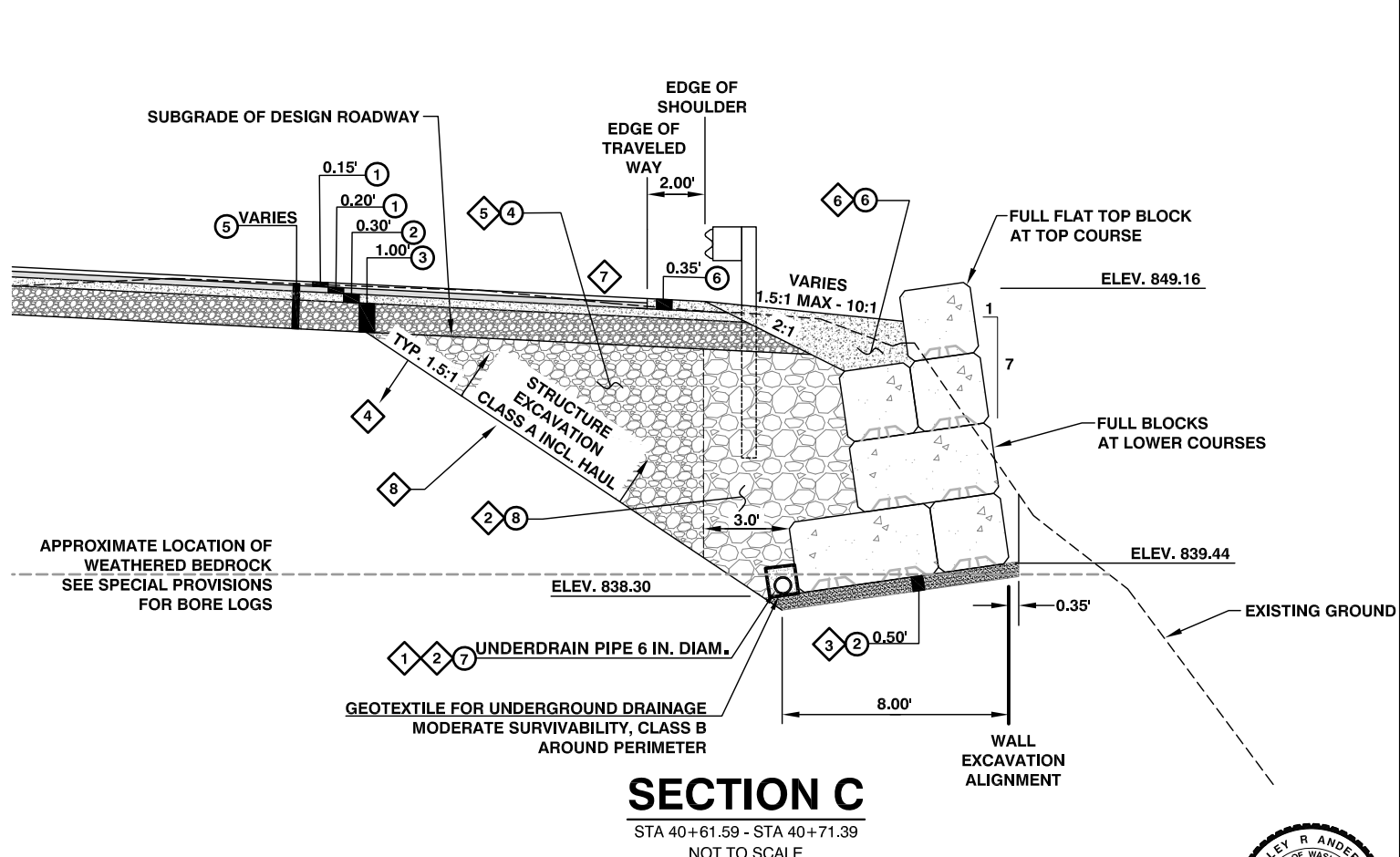




**SECTION A**  
STA 40+17.31 - STA 40+27.14  
NOT TO SCALE



**SECTION B**  
STA 40+27.14 - STA 40+61.59  
NOT TO SCALE



**SECTION C**  
STA 40+61.59 - STA 40+71.39  
NOT TO SCALE

- LEGEND**
- ① HMA CL. 3/8" IN. PG 58H-22 FIBER REINFORCED
  - ② CRUSHED SURFACING TOP COURSE
  - ③ CRUSHED SURFACING BASE COURSE
  - ④ GRAVEL BORROW INCL. HAUL
  - ⑤ ROADWAY EXCAVATION INCL. HAUL
  - ⑥ SHOULDER FINISHING (CRUSHED SURFACING TOP COURSE)
  - ⑦ GRAVEL BACKFILL FOR DRAINS
  - ⑧ GRAVEL BACKFILL FOR WALLS

- CONSTRUCTION NOTES**
- ① INSTALL UNDERDRAIN PIPE PER STANDARD PLAN D-4, CONDITION A OR CONDITION B WITH GEOTEXTILE
  - ② BACKFILL PER STANDARD SPECIFICATION 6-11.3(5)
  - ③ PREPARE FOUNDATION SUBGRADE IN ACCORDANCE WITH STANDARD SPECIFICATION 6-20.3(6)A
  - ④ SHORING OR EXTRA EXCAVATION CL. A REQUIRED IF ENGINEERED SLOPE IS FLATTER THAN 1.5:1 AS SHOWN
  - ⑤ COMPACT IN ACCORDANCE WITH METHOD B OF STANDARD SPECIFICATION 2-03.3(14)C
  - ⑥ CRUSHED SURFACING TOP COURSE USED AS SHOULDER FINISHING SHALL BE PLACED IN HORIZONTAL LAYERS NO MORE THAN 12 INCHES THICK, WITH EACH LAYER TAMPED AND GRADED SO THAT FINAL SETTLING WILL LEAVE THE BACKFILL FLUSH WITH SURROUNDING GROUND. MEASURED AND PAID UNDER SHOULDER FINISHING
  - ⑦ CROSS SLOPE VARY THROUGH PROJECT. SEE SUPER ELEVATION DIAGRAMS.
  - ⑧ TERRACE SLOPE PRIOR TO BACKFILL SEE SPECIAL PROVISION 8-24

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**PIGEON SPRINGS RD MP 2.30  
SLIDE REPAIR**

COUNTY ROAD PROJECT NO:  
90-21F640220230

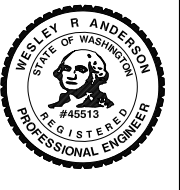
GRAVITY BLOCK WALL DETAILS

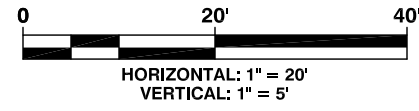
SHEET  
**10**  
OF  
**16**



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2 END OF APPROACH  
STA 0+46.19

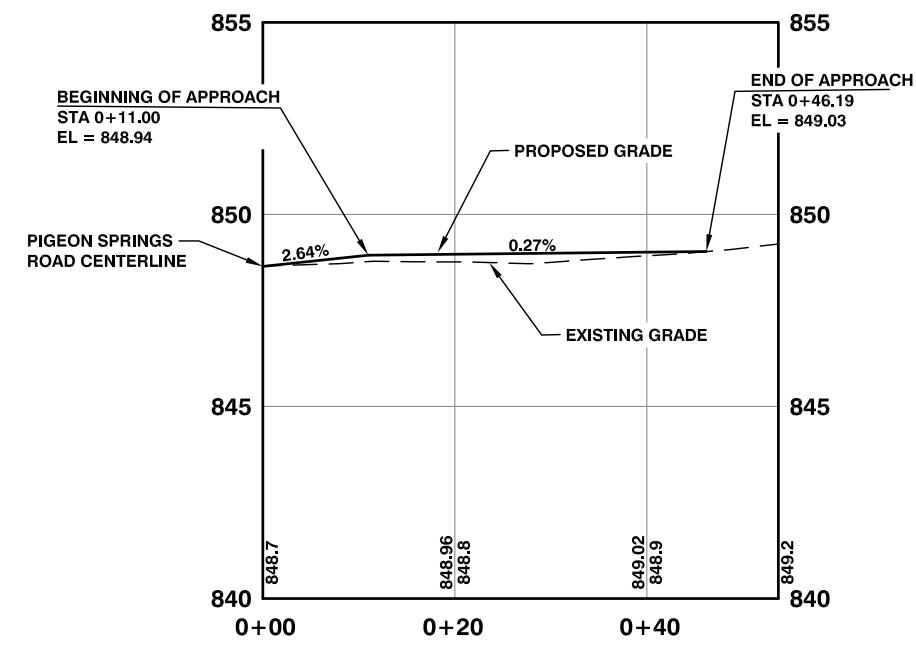
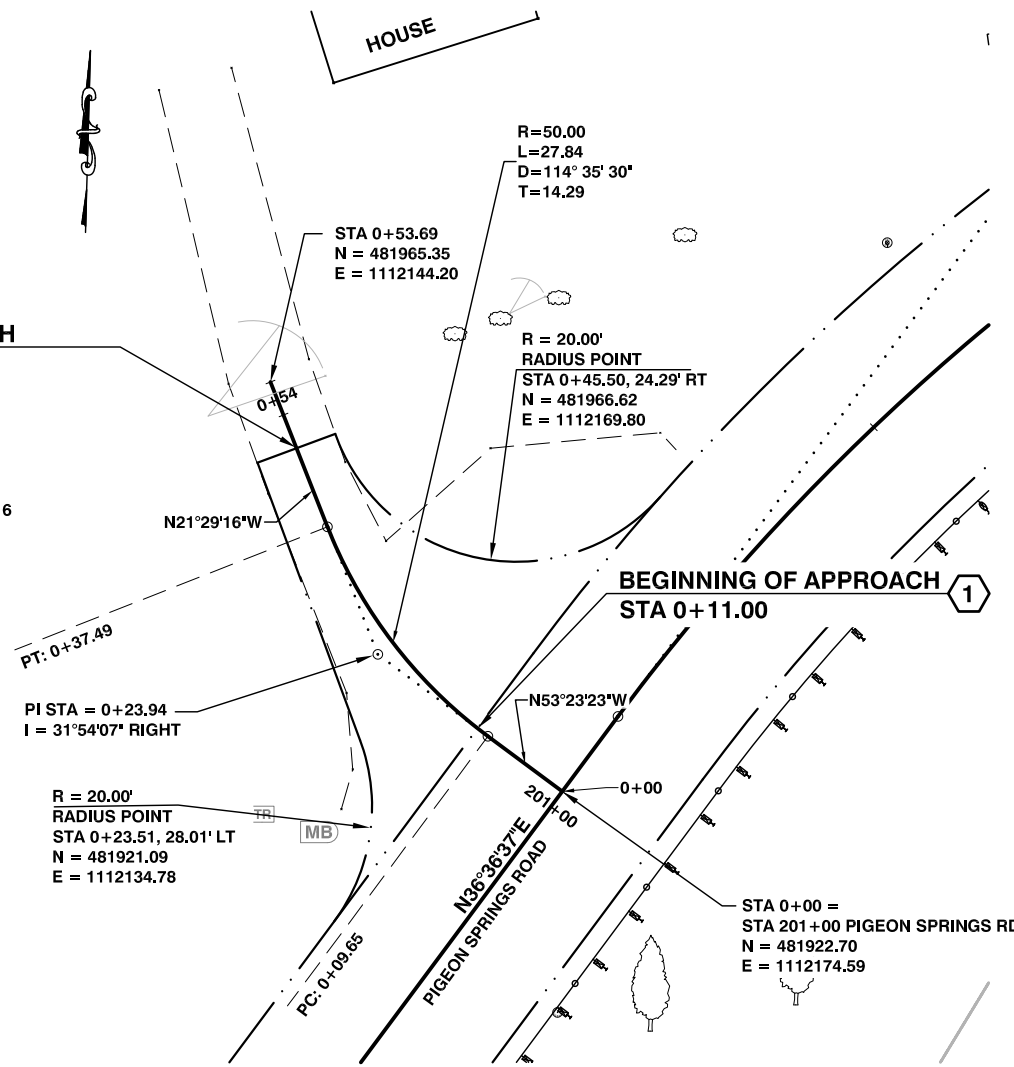
**CONSTRUCTION NOTES:**

- 1 STA 0+11.00 BEGIN APPROACH  
STA 0+11.00 TO STA 0+46.19 -  
SEE APPROACH PAVING SECTION ON SHEET 3 OF 16
- 2 STA 0+46.19 END APPROACH  
MATCH EXISTING GROUND  
TOTAL WIDTH AT END OF APPROACH = 8.64'

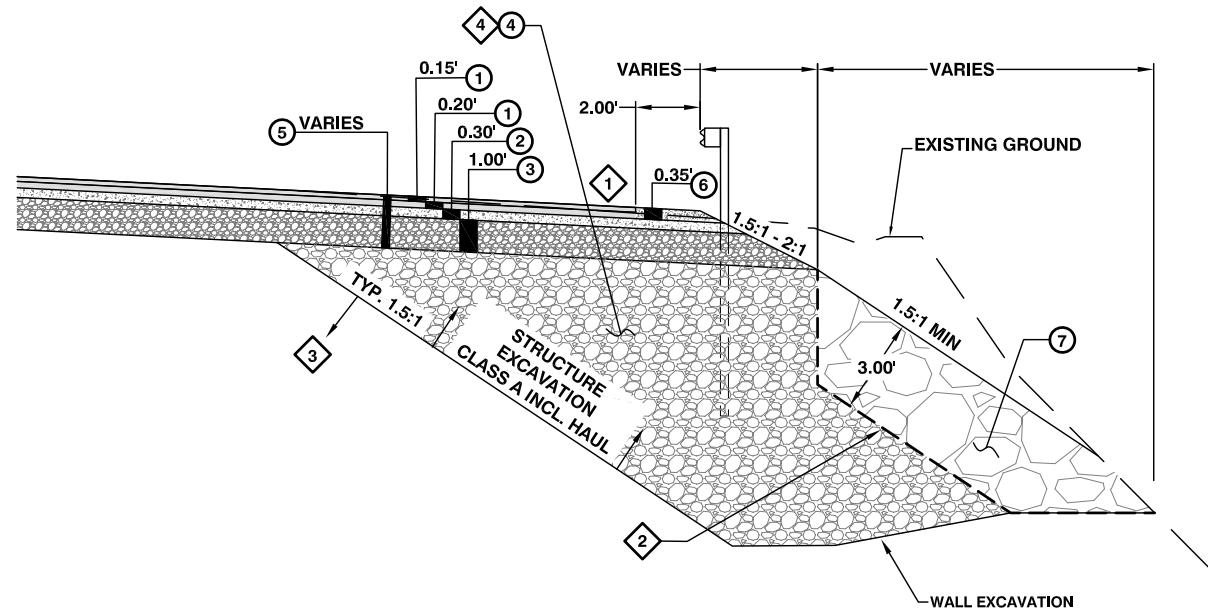
NOTE: APPROACH SLOPES WILL BE 2:1 OR  
FLATTER LEFT OR RIGHT

**APPROACH QUANTITIES**

- 40 CY ROADWAY EXCAVATION INCL. HAUL
- 52 TON CRUSHED SURFACING BASE COURSE
- 15 TON CRUSHED SURFACING TOP COURSE
- 10 TON HMA FOR APPROACH CL. 1/2 IN. PG 58H-22



**APPROACH DETAIL**  
NOT TO SCALE



**QUARRY SPALLS BLANKET DETAIL**

STATION 201+50.00 TO STATION 201+66.71 RIGHT  
STATION 202+26.82 TO STATION 202+50.00 RIGHT  
NOT TO SCALE

**CONSTRUCTION NOTES**

- 1 CROSS SLOPE VARY THROUGH PROJECT.  
SEE SUPER ELEVATION DIAGRAMS.
- 2 CONSTRUCTION GEOTEXTILE FOR SEPARATION  
PLACE CONSTRUCTION GEOTEXTILE FOR SEPARATION  
BETWEEN GRAVEL BORROW OR NATIVE SOIL AND  
QUARRY SPALLS.
- 3 SHORING OR EXTRA EXCAVATION CL. A  
REQUIRED IF ENGINEERED SLOPE IS  
FLATTER THAN 1.5:1 AS SHOWN
- 4 COMPACT IN ACCORDANCE WITH METHOD  
B OF STANDARD SPECIFICATION  
2-03.3(14)C

**LEGEND**

- 1 HMA CL. 3/8" IN. PG 58H-22 FIBER REINFORCED
- 2 CRUSHED SURFACING TOP COURSE
- 3 CRUSHED SURFACING BASE COURSE
- 4 GRAVEL BORROW INCL. HAUL
- 5 ROADWAY EXCAVATION INCL. HAUL
- 6 SHOULDER FINISHING  
(CRUSHED SURFACING TOP COURSE)
- 7 QUARRY SPALLS

NO.	DATE	REVISION	BY	APP.

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**PIGEON SPRINGS RD MP 2.30  
SLIDE REPAIR**

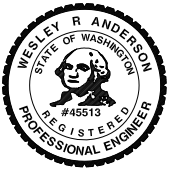
COUNTY ROAD PROJECT NO:  
90-21F640220230

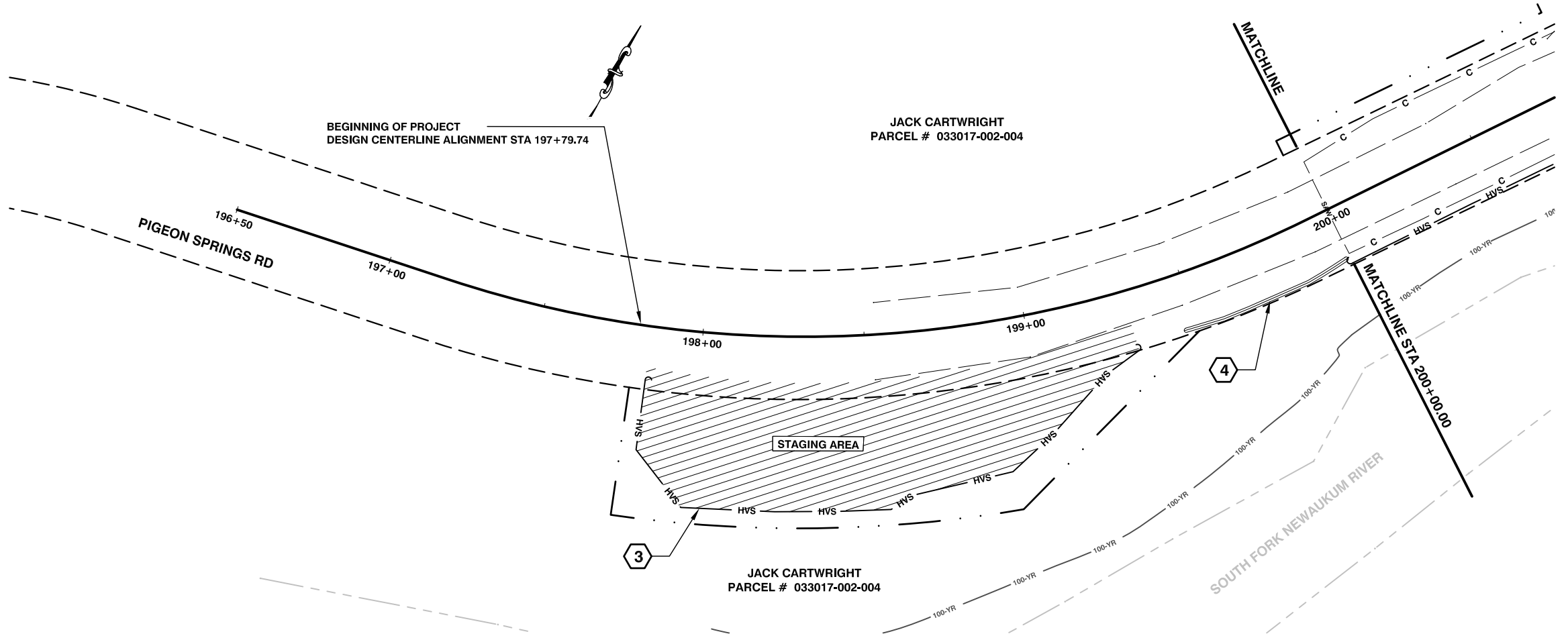
DETAILS

SHEET  
**11**  
OF  
**16**

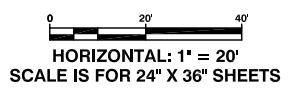


WESLEY R. ANDERSON, P.E.  
SENIOR ENGINEER / DESIGN  
Date: 04/25/2023



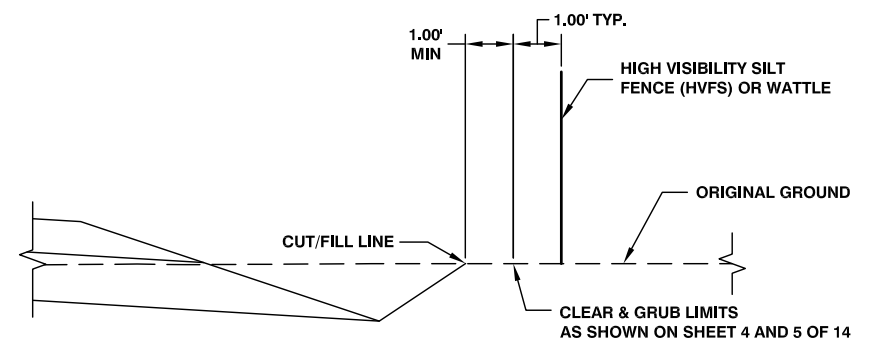


- CONSTRUCTION NOTES:**
- 1 THE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLAN IS A LIVING DOCUMENT AND SHALL BE UPDATED BY THE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) TO REFLECT FIELD CONDITIONS.
  - 2 SEE SHEETS 6, 7 AND 8 OF 16 FOR DESIGN CENTERLINE ALIGNMENT INFORMATION
  - 3 HIGH VISIBILITY SILT FENCE - 205 L.F. INSTALL PER WSDOT STANDARD PLAN I-30.17 SEE CLEAR & GRUB AND HVFS/WATTLE LAYOUT DETAIL THIS SHEET
  - 4 WATTLES - 55 L.F. INSTALL PER WSDOT STANDARD PLAN I-30.30 SEE CLEAR & GRUB AND HVFS/WATTLE LAYOUT DETAIL THIS SHEET



**TESC LEGEND**

	DESIGN CENTERLINE ALIGNMENT		HIGH VISIBILITY SILT FENCE
	RIGHT OF WAY		COIR LOG
	PROPERTY LINE		WATTLES
	TEMPORARY CONSTRUCTION EASEMENT		CUT
	EXISTING EDGE OF ROAD		FILL
	EXISTING DRIVEWAY		DITCH FLOW LINE
	STREAM		DRAIN PIPE
	100-YEAR WSE		UNDERDRAIN PIPE
	SAWCUT		NEW CULVERT
	EXISTING CULVERT (TO BE REMOVED)		HIGH VISIBILITY FENCE AROUND TREE
	EXISTING CONIFER TREE		STAGING AREA
	EXISTING DECIDUOUS TREE		
	EXISTING SHRUB		
	EXISTING STUMP		
	TREE TO BE REMOVED		



**CLEAR & GRUB AND HVFS/WATTLE LAYOUT DETAIL**

**Lewis County**  
Department of Public Works  
2025 N. E. KRESKY AVE.  
CHEHALIS WA 98532  
PHONE # (360) 740-1123  
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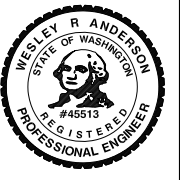
**PIGEON SPRINGS MP 2.30  
SLIDE REPAIR**

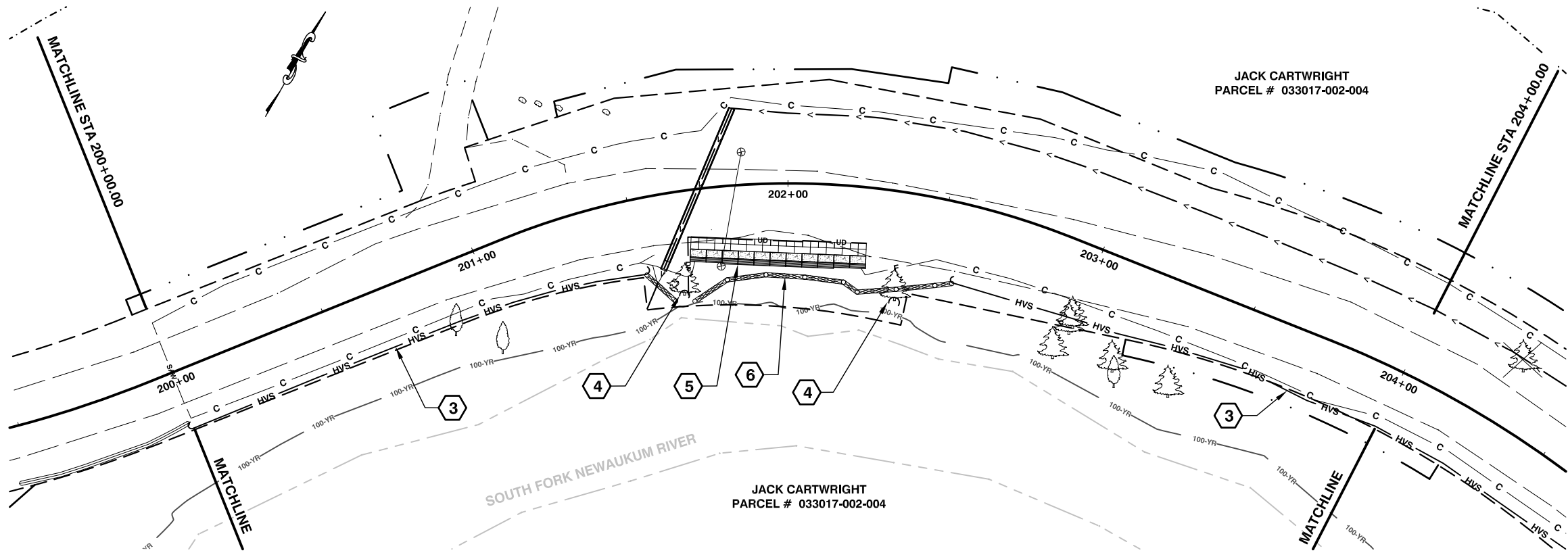
COUNTY ROAD PROJECT NO:  
90-21F640220230  
STA 196+57.97 TO STA 200+00  
TESC PLAN

SHEET  
**12**  
OF  
**16**

CALL 48 HOURS BEFORE YOU DIG  
1-800-424-5555  
"It's the Law"  
Utilities Underground Location Center

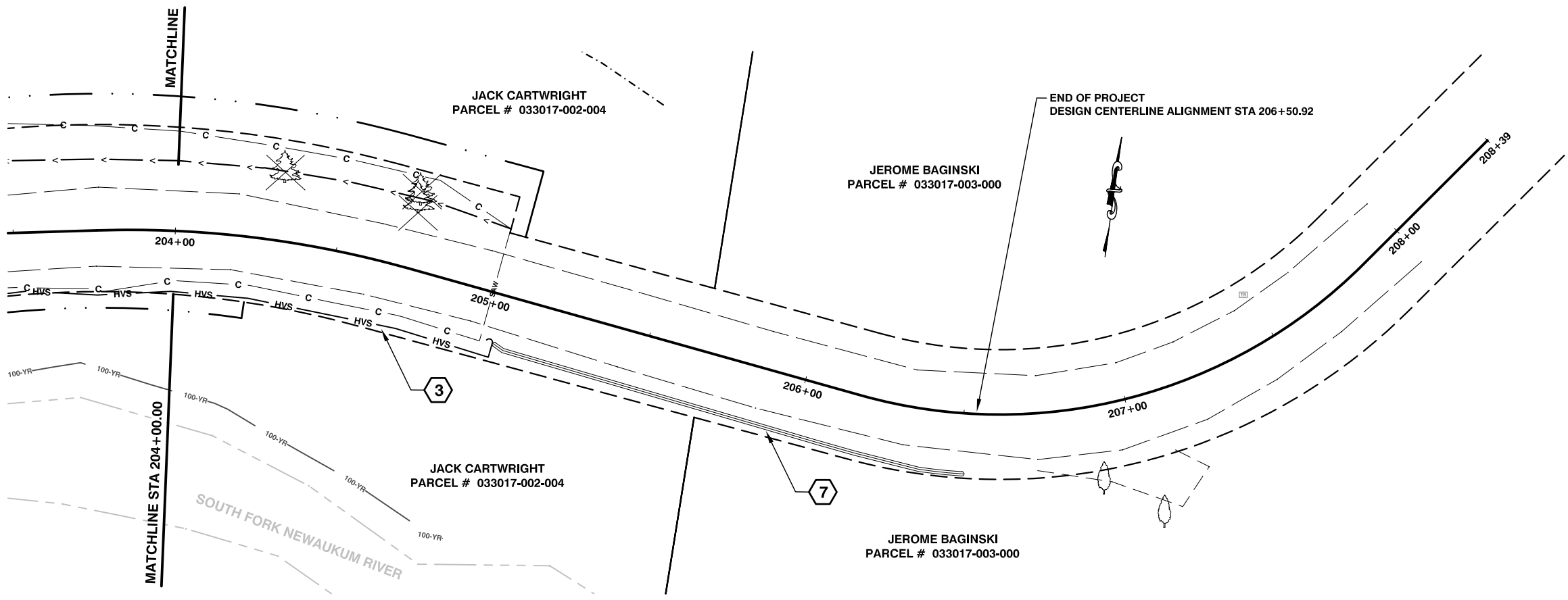
WESLEY R. ANDERSON, P.E.  
SENIOR ENGINEER / DESIGN  
Date: 04/25/2023





- CONSTRUCTION NOTES:**
- 1 THE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLAN IS A LIVING DOCUMENT AND SHALL BE UPDATED BY THE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) TO REFLECT FIELD CONDITIONS.
  - 2 SEE SHEETS 6, 7 AND 8 OF 16 FOR DESIGN CENTERLINE ALIGNMENT INFORMATION
  - 3 HIGH VISIBILITY SILT FENCE - 400 L.F. INSTALL PER WSDOT STANDARD PLAN I-30.17 SEE CLEAR & GRUB AND HVFS/WATTLE LAYOUT DETAIL ON SHEET 12 OF 16
  - 4 HIGH VISIBILITY FENCE - 20 L.F. PROTECT TREE. INSTALL HIGH VISIBILITY FENCE AROUND PERIMETER OF TREE
  - 5 GRAVITY BLOCK WALL SEE SHEET 9 AND 10 OF 16
  - 6 COIR LOG - 100 L.F. INSTALL PER WSDOT STANDARD PLAN I-50.20
  - 7 WATTLES - 150 L.F. INSTALL PER WSDOT STANDARD PLAN I-30.30 SEE CLEAR & GRUB AND HVFS/WATTLE LAYOUT DETAIL ON SHEET 12 OF 16

0 20' 40'  
 HORIZONTAL: 1" = 20'  
 SCALE IS FOR 24" X 36" SHEETS



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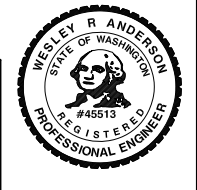
**PIGEON SPRINGS MP 2.30  
 SLIDE REPAIR**

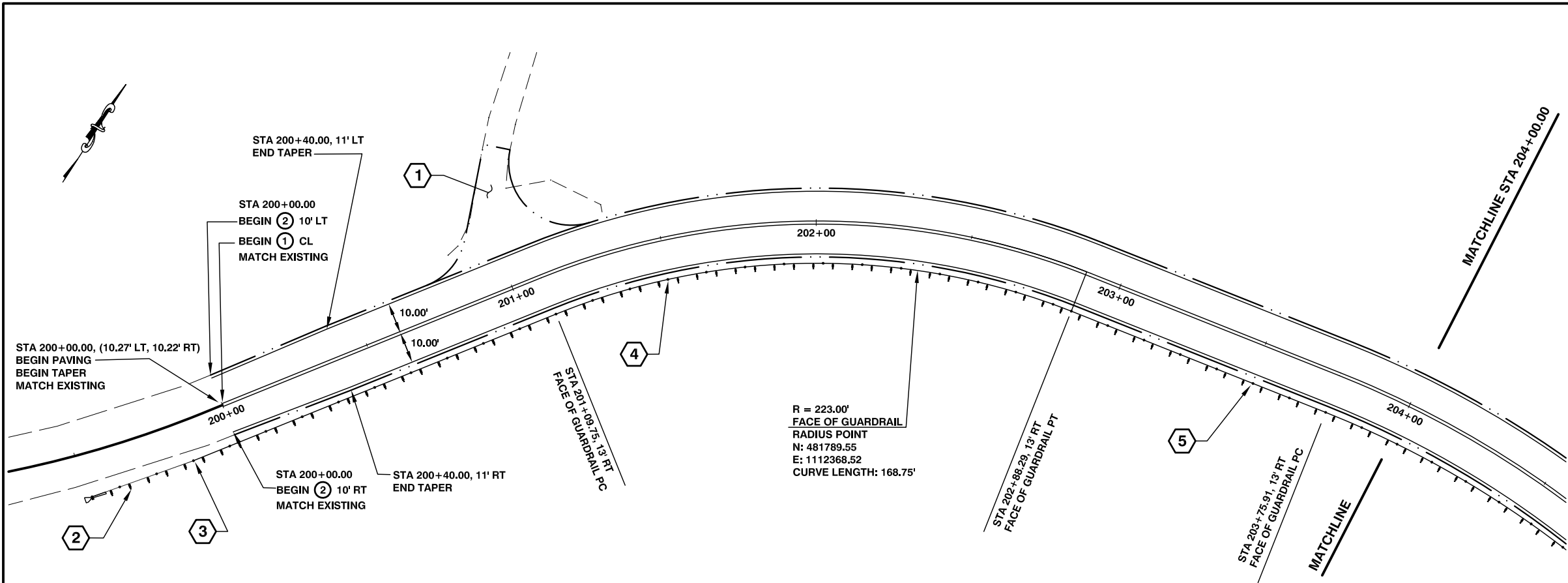
COUNTY ROAD PROJECT NO:  
 90-21F640220230  
 STA 200+00 TO STA 204+00  
 STA 204+00 TO STA 208+39  
 TESC PLAN

SHEET  
**13**  
 OF  
**16**



WESLEY R. ANDERSON, P.E.  
 SENIOR ENGINEER / DESIGN  
 Date: 04/25/2023





CONSTRUCTION NOTES:

- 1 SEE APPROACH DETAIL ON SHEET 11 OF 16
- 2 STA 199+51.94, 14.02' RT TO STA 199+85.04, 13.09' RT BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL - 1 EACH SEE WSDOT STANDARD PLAN C-22.45
- 3 STA 199+85.04, 13.09' RT TO STA 201+49.43, 13.00' RT BEAM GUARDRAIL TYPE 31 - 162.50 L.F. SEE ROADWAY SECTIONS SHEET 3 OF 16 SEE WSDOT STANDARD PLAN C-20.10
- 4 STA 201+49.43, 13.00' RT TO STA 203+50.91, 13.00' RT BEAM GUARDRAIL TYPE 31 - 9 FT LONG POST - 193.75 L.F. SEE ROADWAY SECTIONS SHEET 3 OF 16 SEE WSDOT STANDARD PLAN C-20.10
- 5 STA 203+50.91, 13.00' RT TO STA 206+17.31, 13.97' RT BEAM GUARDRAIL TYPE 31 - 11 FT LONG POST - 262.50 L.F. SEE ROADWAY SECTIONS SHEET 3 OF 16 SEE WSDOT STANDARD PLAN C-20.10
- 6 STA 206+17.31, 13.97' RT TO STA 206+48.69, 16.42' RT BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL - 1 EACH SEE WSDOT STANDARD PLAN C-22.45

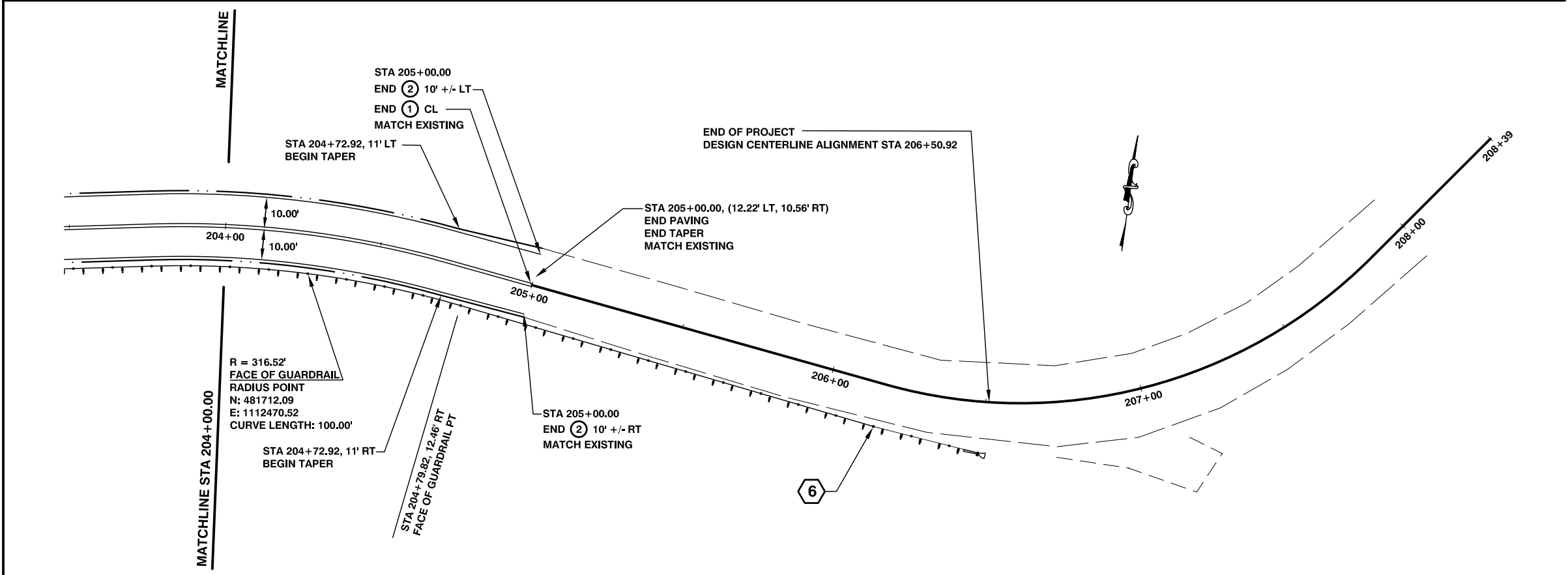


CHANNELIZATION LEGEND

- 1 PAINT LINE - DOUBLE YELLOW CENTERLINE - 500 L.F. PER WSDOT STANDARD PLAN M-20.10
- 2 PAINT LINE - EDGE LINE WHITE - 1,000 L.F. PER WSDOT STANDARD PLAN M-20.10

LEGEND

- DOUBLE YELLOW CENTER LINE
- EDGE LINE WHITE
- CONSTRUCTION NOTE
- CHANNELIZATION NOTE



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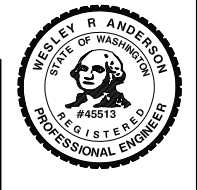
**PIGEON SPRINGS MP 2.30  
 SLIDE REPAIR**

COUNTY ROAD PROJECT NO:  
 90-21F640220230  
 STA 200+00 TO STA 208+39  
 PAVING/PAVEMENT MARKING/GUARDRAIL PLANS

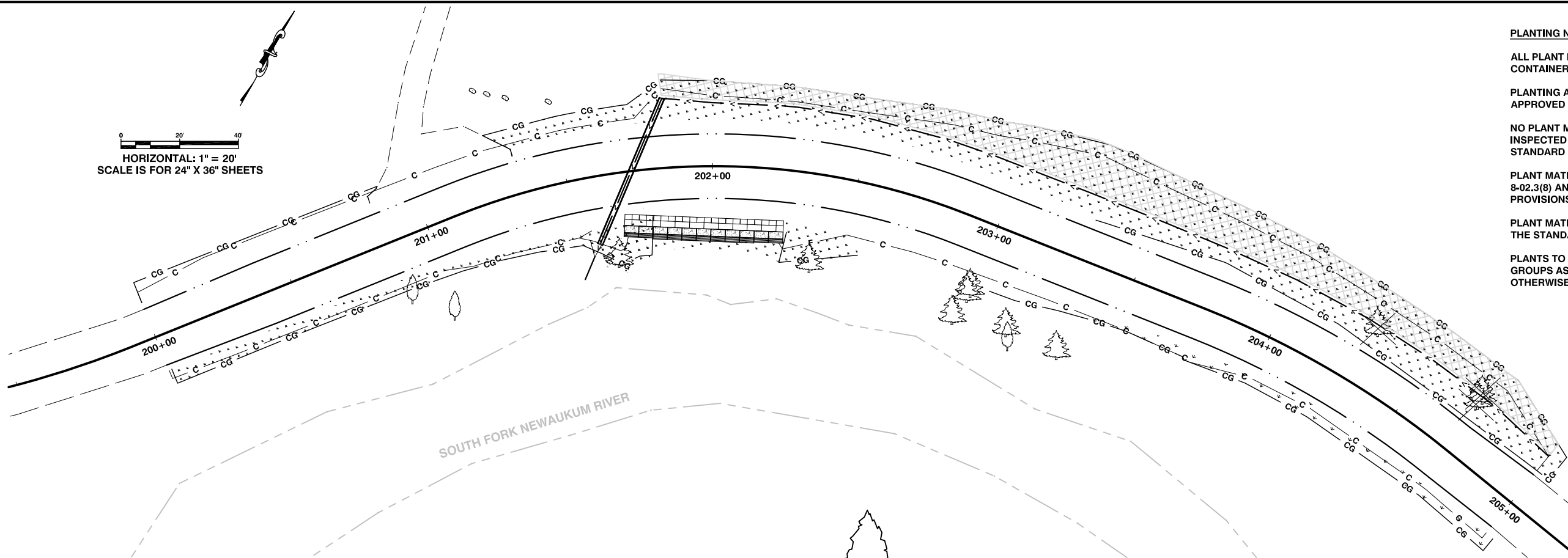
SHEET  
**14**  
 OF  
**16**



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 SENIOR ENGINEER / DESIGN  
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HORIZONTAL: 1" = 20'  
SCALE IS FOR 24" X 36" SHEETS



**PLANTING NOTES:**

ALL PLANT MATERIAL SHALL BE NURSERY GROWN STOCK. CONTAINER PLANT MATERIAL SHALL BE WELL-ROOTED IN POT.

PLANTING AREAS SHALL BE STAKED BY CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLANTING.

NO PLANT MATERIAL SHALL BE PLANTED UNTIL IT HAS BEEN INSPECTED AND APPROVED FOR PLANTING BY THE ENGINEER PER STANDARD SPECIFICATION 8-02.3(8).

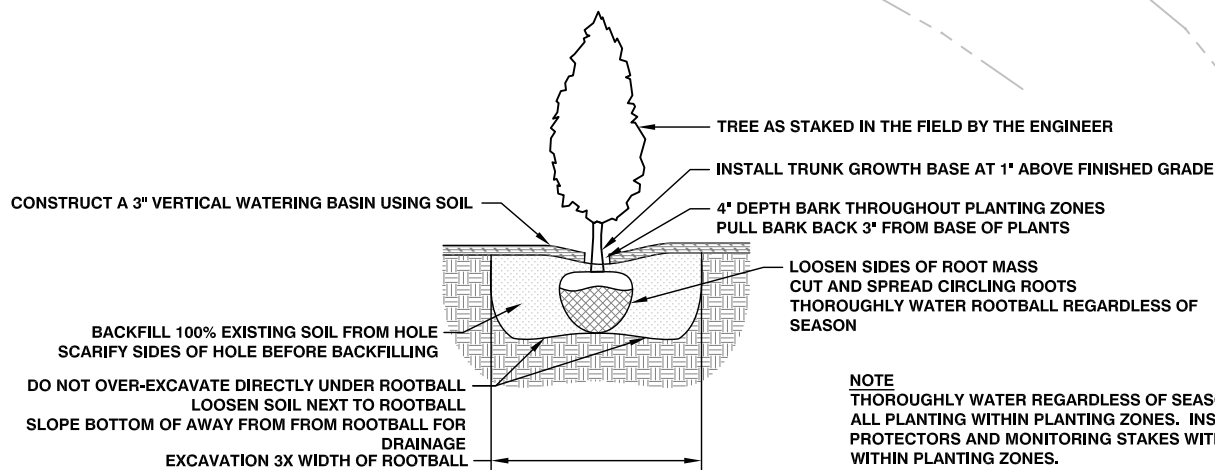
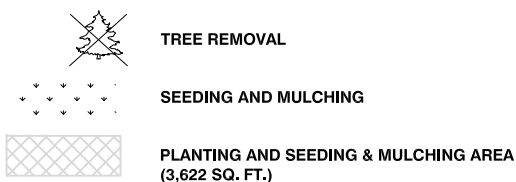
PLANT MATERIAL SHALL BE STORED AND HANDLED PER SECTION 8-02.3(8) AND 9-14.7(3) OF THE STANDARD AND SPECIAL PROVISIONS.

PLANT MATERIAL SHALL BE INSTALLED PER SECTION 8-02.3(8) OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

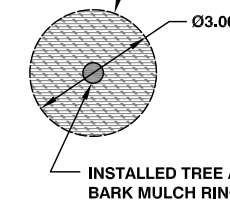
PLANTS TO BE RANDOMLY MIXED WITHIN DESIGNATED PLANT GROUPS AS APPROVED BY THE ENGINEER UNLESS SPECIFIED OTHERWISE.

**LEGEND**

	DESIGN ROADWAY CENTERLINE ALIGNMENT
	STREAM
	EXISTING EDGE OF ROAD
	EXISTING CONIFER TREE
	EXISTING DECIDUOUS TREE
	CUT
	FILL
	NEW EDGE OF PAVEMENT
	CLEARING AND GRUBBING



EDGE OF BARK MULCH RING 3" DEPTH LAYER AREA TO BE WEED FREE PRIOR TO PLACEMENT



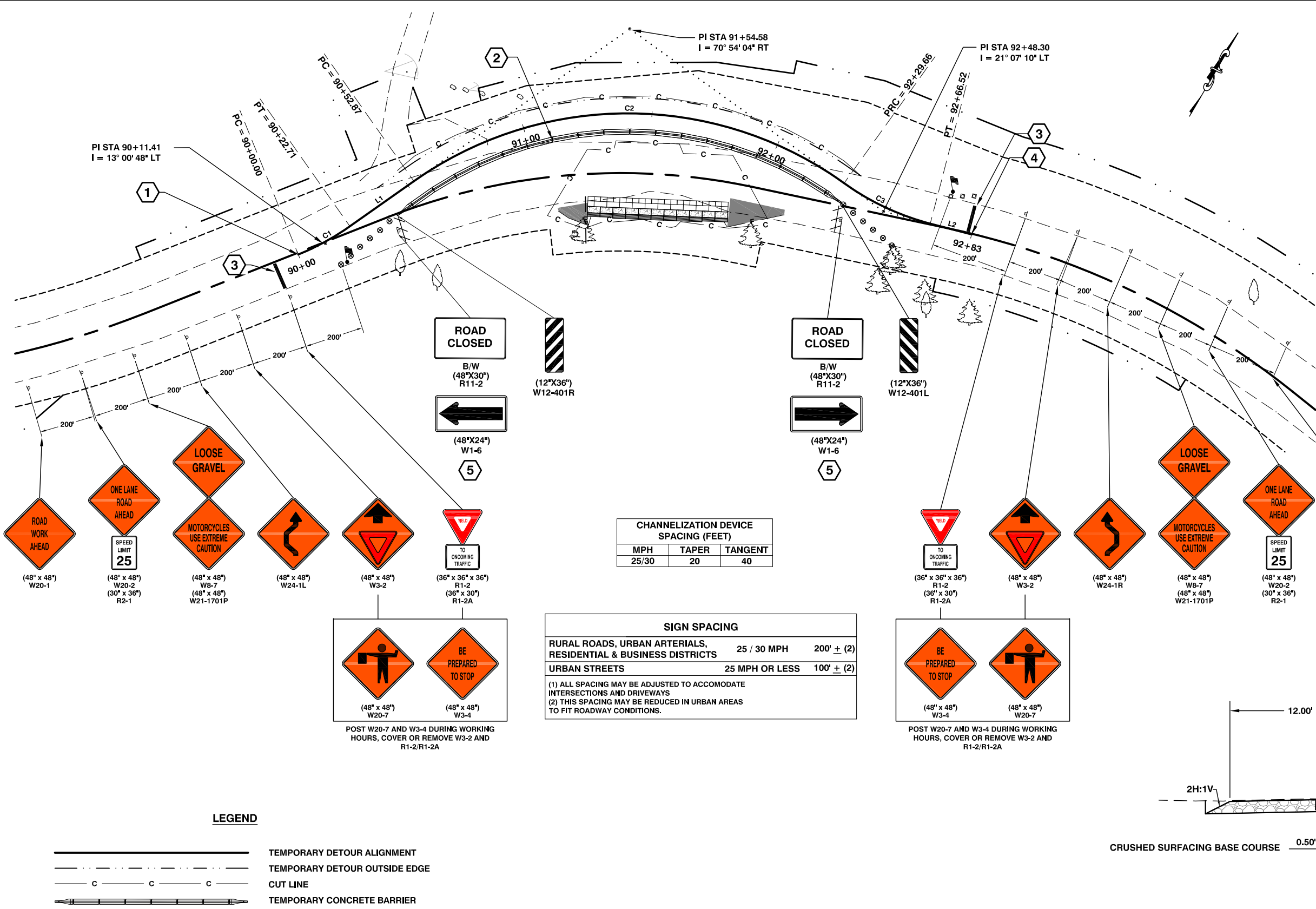
**PLANTING PLAN**

PLANTING ZONE	SCIENTIFIC NAME	COMMON NAME	TYPE	SIZE OF PLANTS (MATERIAL)	PLANTING DENSITY (SPACING)	PROPORTION OF PLANTING IN STRATA (%)	NUMBER OF PLANTS
RIPARIAN PLANTING ZONE	<i>Abies grandis</i>	Grand Fir	T	2 gallon container	12' on-center	40	6
	<i>Picea sitchensis</i>	Sitka Spruce	T	2 gallon container	12' on-center	20	3
	<i>Pseudotsuga menziesii</i>	Douglas Fir	T	2 gallon container	12' on-center	40	6
	<i>Acer circiniatum</i>	Vine Maple	S	1 gallon container	6' on-center	35	30
	<i>Corylus cornuta</i>	Beaked Hazelnut	S	1 gallon container	6' on-center	10	10
	<i>Oemleria cerasiformis</i>	Indian Plum	S	1 gallon container	6' on-center	20	17
	<i>Symphoricarpos albus</i>	Common Snowberry	S	1 gallon container	6' on-center	35	30

NO.	DATE	REVISION	BY	APP.







- CONSTRUCTION NOTES:**
- STA 90+00.00 TEMPORARY DETOUR = STA 200+52.15, 0.00' RT DESIGN CENTERLINE ALIGNMENT  
N: 481884.2804  
E: 1112146.0563
  - STA 90+40 TO STA 92+33, RT TEMPORARY BARRIER - 185 L.F. SEE STANDARD PLAN K-80.32
  - 20 L.F. TEMPORARY STOP LINE - SHORT DURATION SEE WSDOT STANDARD PLAN M-24.60
  - STA 92+83 TEMPORARY DETOUR = STA 203+23.21, 2.12' RT DESIGN CENTERLINE ALIGNMENT  
N: 482025.9519  
E: 1112363.4567
  - SIGNS MOUNTED ON TYPE 3 BARRICADE
  - QUANTITIES FOR DETOUR:  
60 C.Y. ROADWAY EXCAVATION INCL. HAUL  
100 TON CRUSHED SURFACING BASE COURSE
- GENERAL NOTES:**
- ALL SIGNS ARE BLACK ON ORANGE UNLESS SPECIFIED OTHERWISE.
  - EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
  - EXISTING SIGNS THAT CONFLICT WITH THIS PLAN SHALL BE COVERED DURING CONSTRUCTION. TEMPORARY SIGN SPACING SHALL BE ADJUSTED TO ACCOMMODATE PERMANENT ADVANCED WARNING SIGNS. SIGN SEQUENCING AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
  - CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THIS PLAN.
  - SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

**CURVE TABLE: TEMPORARY DETOUR**

CURVE #	R	L	D	T
C1	100.00	22.71	057° 17' 45"	11.41
C2	142.86	176.78	040° 06' 23"	101.71
C3	100.00	36.86	057° 17' 45"	18.64

**LINE TABLE: TEMPORARY DETOUR**

LINE #	LENGTH	DIRECTION
L1	30.16	N23° 26' 16"E
L2	16.48	N73° 13' 06"E

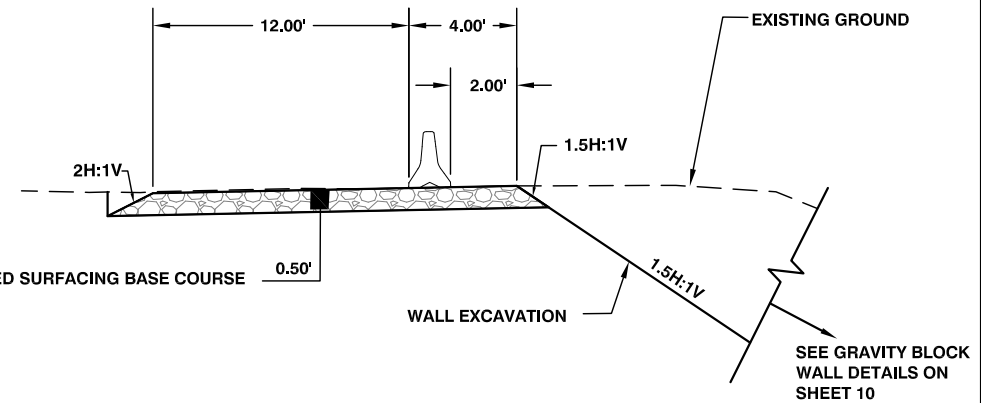
**CHANNELIZATION DEVICE SPACING (FEET)**

MPH	TAPER	TANGENT
25/30	20	40

**SIGN SPACING**

RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS  
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



**TEMPORARY SINGLE LANE DETOUR**  
NOT TO SCALE

**TEMPORARY DETOUR SECTION**  
NOT TO SCALE

- LEGEND**
- TEMPORARY DETOUR ALIGNMENT
  - TEMPORARY DETOUR OUTSIDE EDGE
  - CUT LINE
  - TEMPORARY CONCRETE BARRIER
  - TRAFFIC DRUM
  - TYPE 3 BARRICADE
  - CLASS A SIGN (POST MOUNTED)
- FLAGGING STATION**

**Lewis County**  
Department of Public Works

2025 N. E. KRESKY AVE.  
CHEHALIS WA 98532  
PHONE # (360) 740-1123  
FAX # (360) 740-2719

DESIGNED BY :	NO.	DATE	REVISION	BY	APP.
WRA					
WRA					

**PIGEON SPRINGS MP 2.30  
SLIDE REPAIR**

COUNTY ROAD PROJECT NO:  
90-21F640220230

TEMPORARY DETOUR AND TRAFFIC CONTROL  
PLAN

SHEET  
**16**  
OF  
**16**

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