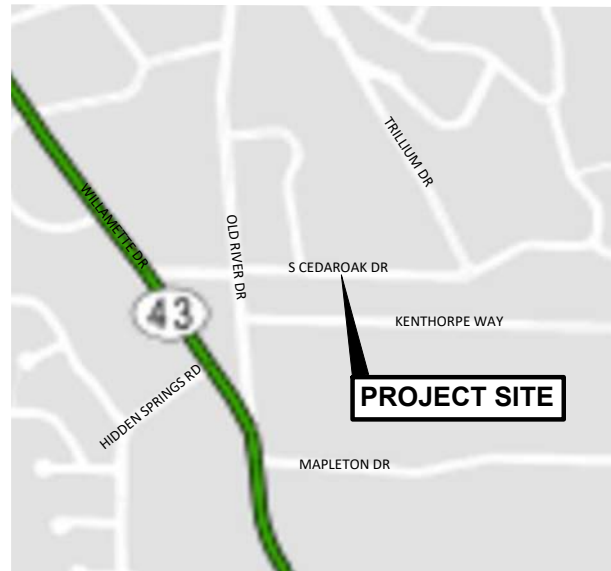
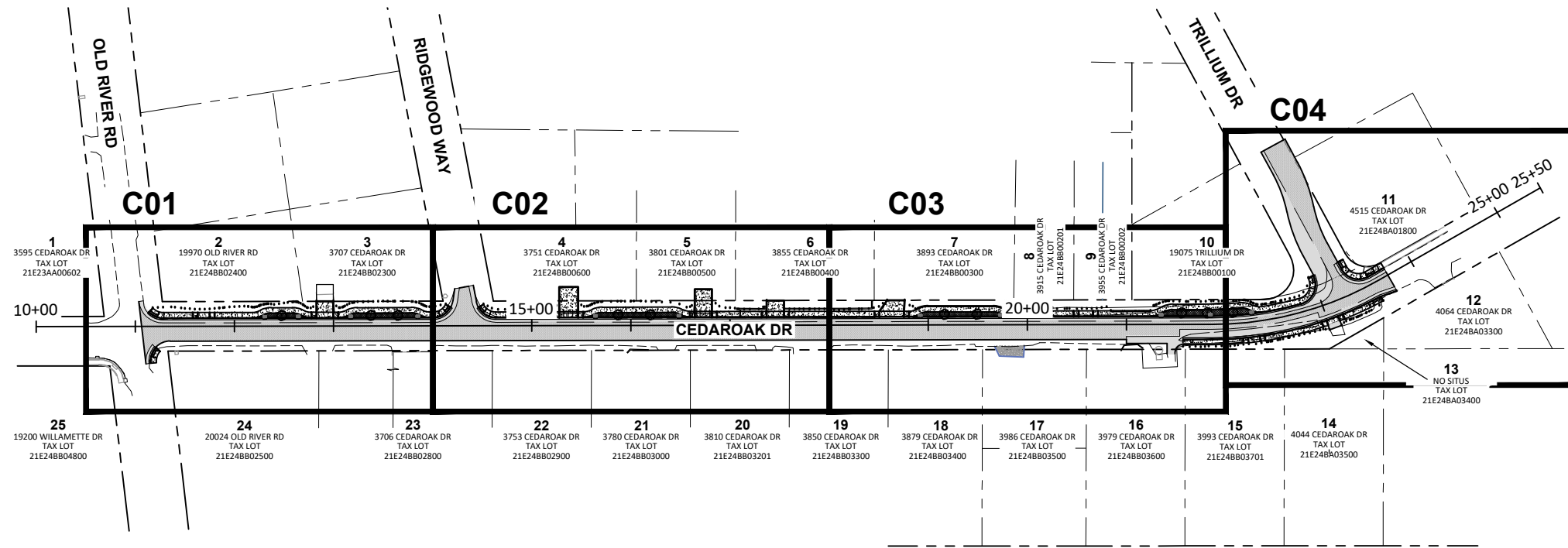


# 2024 SAFE ROUTES PROGRAM DESIGN

## CEDAROAK DRIVE WEST LINN, OREGON



**VICINITY MAP**  
NTS



**SITE MAP**  
SCALE: 1" = 150'

### SHEET INDEX

Sht. No.	Sheet Title
A01	COVER SHEET
B01	TYPICAL SECTIONS
B02	GEOMETRY AND PAVING PLANS
C01	PLAN AND PROFILE STA 10+00 TO 14+00
C02	PLAN AND PROFILE STA 14+00 TO 18+00
C03	PLAN AND PROFILE STA 18+00 TO 22+00
C04	PLAN AND PROFILE STA 22+00 TO 25+00
DA	DRIVEWAY DETAIL GRADING
DB	CURB DETAIL GRADING
DC	STANDARD DETAILS
EC	EROSION CONTROL PLANS
LA	LANDSCAPE PLAN
SS	SIGNING AND STRIPING PLANS
WA	WALL PLANS
XS	CROSS SECTIONS

### OWNER/DEVELOPER

CITY OF WEST LINN  
DEPARTMENT OF PUBLIC WORKS  
22500 SALAMO RD  
WEST LINN, OR 97068  
CONTACTS:  
CLARK IDE, PE  
PHONE:(503) 722-3437  
JAMESON LUMPKIN  
PHONE:(503) 722-4739

### ENGINEER

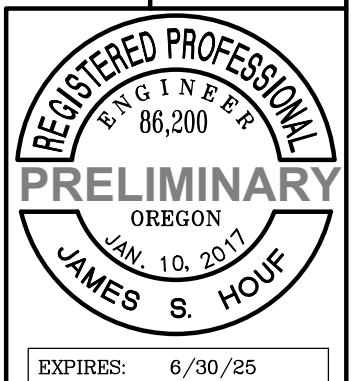
HARPER HOUF PETERSON RIGHELLIS INC.  
205 SE SPOKANE STREET, SUITE 200  
PORTLAND, OREGON 97202  
PHONE: (503) 221-1131  
CONTACTS: JIMMY HOUF, PE

### SITE INFORMATION

WILLAMETTE MERIDAN  
CLACKAMAS COUNTY, OREGON  
TOWNSHIP 2S, RANGE 1E, SECTION 24BB

COVER SHEET  
CEDAROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson  
Righellis Inc.  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>A01</b>
CHECKED: JSH	JOB NO. CWL-10
DATE: 2-12-2024	

**90% PLANS**

DRAWING NAME: CWL10-A01 COVER SHEET.DWG

DRAWING NAME: CWL10-B01 TYPICAL SECTIONS.DWG

EX ROW

**CONSTRUCTION NOTES:**

- ① CONSTRUCT CURB AND GUTTER (E=6"; GUTTER PAN=18") PER CITY DWG WL-RD700 ON SHEET DC03.
- ② SAWCUT EXISTING ASPHALT.
- ③ CONSTRUCT ROADWAY PAVEMENT SECTION. 2" OF LEVEL 2, 1/2 INCH ACP (TOP LIFT) 2" OF LEVEL 2, 1/2 INCH ACP (BASE LIFT) 2" OF 3/4"-0 AGGREGATE BASE 10" OF 1 1/2"-0 AGGREGATE BASE
- ④ CONSTRUCT CONCRETE SIDEWALK. 4" OF PCC 2" OF 3/4"-0 AGGREGATE BASE
- ⑤ CONSTRUCT 2" GRIND AND INLAY. 2" OF LEVEL 2, 1/2 INCH ACP. SEE PAVING AND GEOMETRY SHEET SERIES "B02-B03" FOR LIMITS.
- ⑥ CONSTRUCT STORMWATER PLANTER PER DETAIL ON SHEETS DC15 & DC16.
- ⑦ CONSTRUCT SEGMENTAL BLOCK WALL. SEE "WA" SHEET SERIES FOR DETAILS.
- ⑧ CONSTRUCT THICKENED EDGE SIDEWALK WITH 4' BLACK VINYL CHAIN LINK FENCE. SEE "WA" SHEET SERIES FOR DETAILS.
- ⑨ CONSTRUCT THICKENED EDGE SIDEWALK. SEE "WA" SHEET SERIES FOR DETAILS.

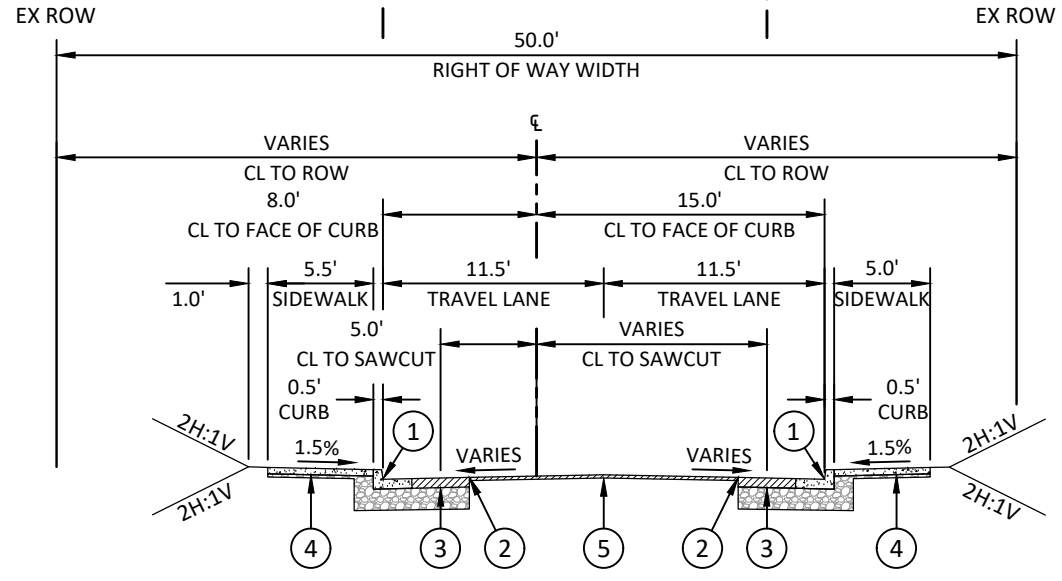
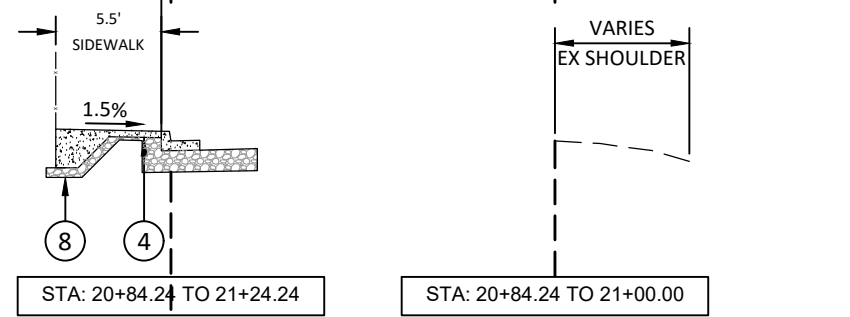
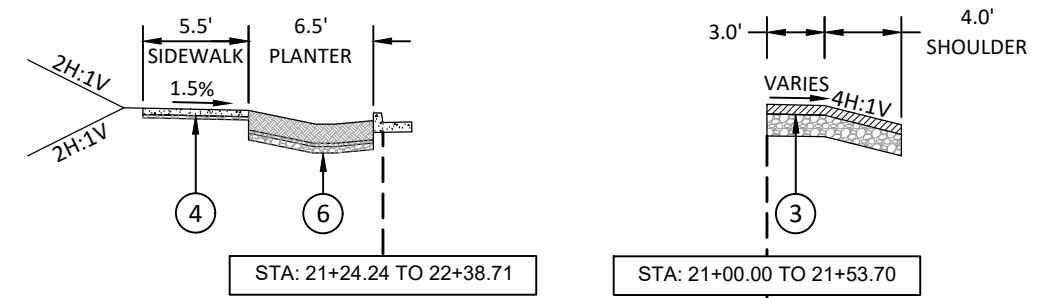
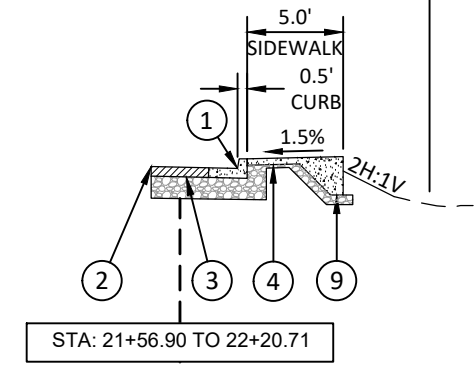
TYPICAL SECTIONS  
**CEDAROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

Harper Houf Peterson Righellis Inc.  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
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Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

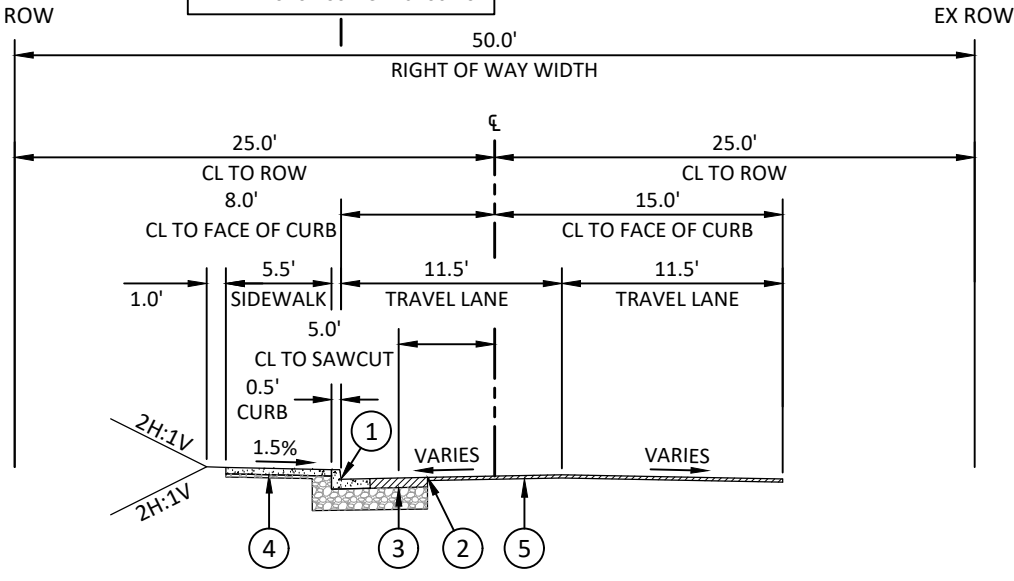
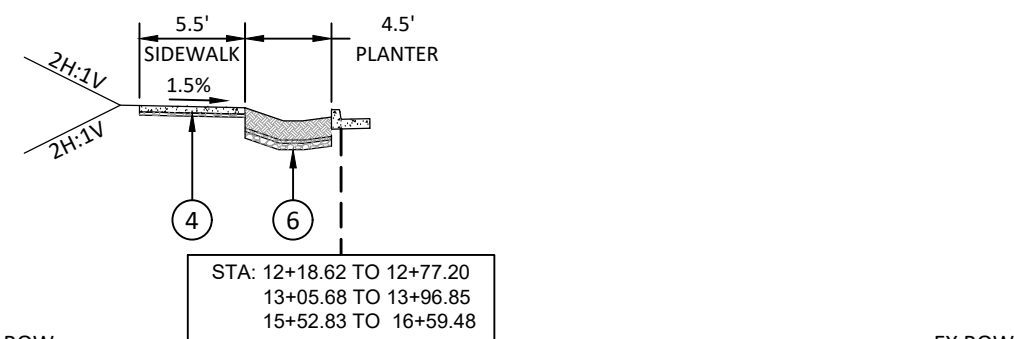
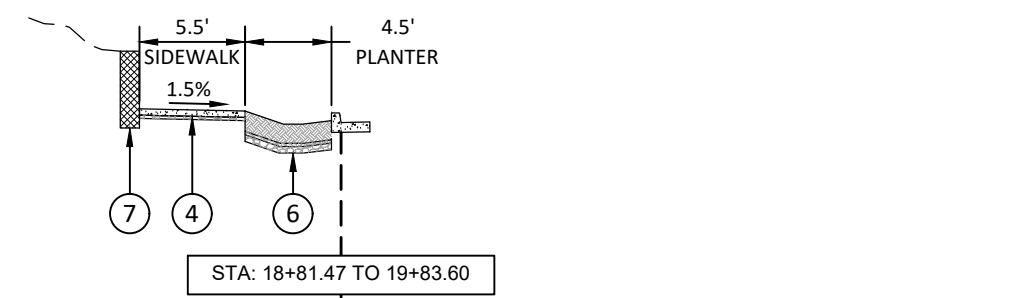


EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>B01</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10



**CEDAROAK DR**  
STA: 20+84.24 TO 22+80.20

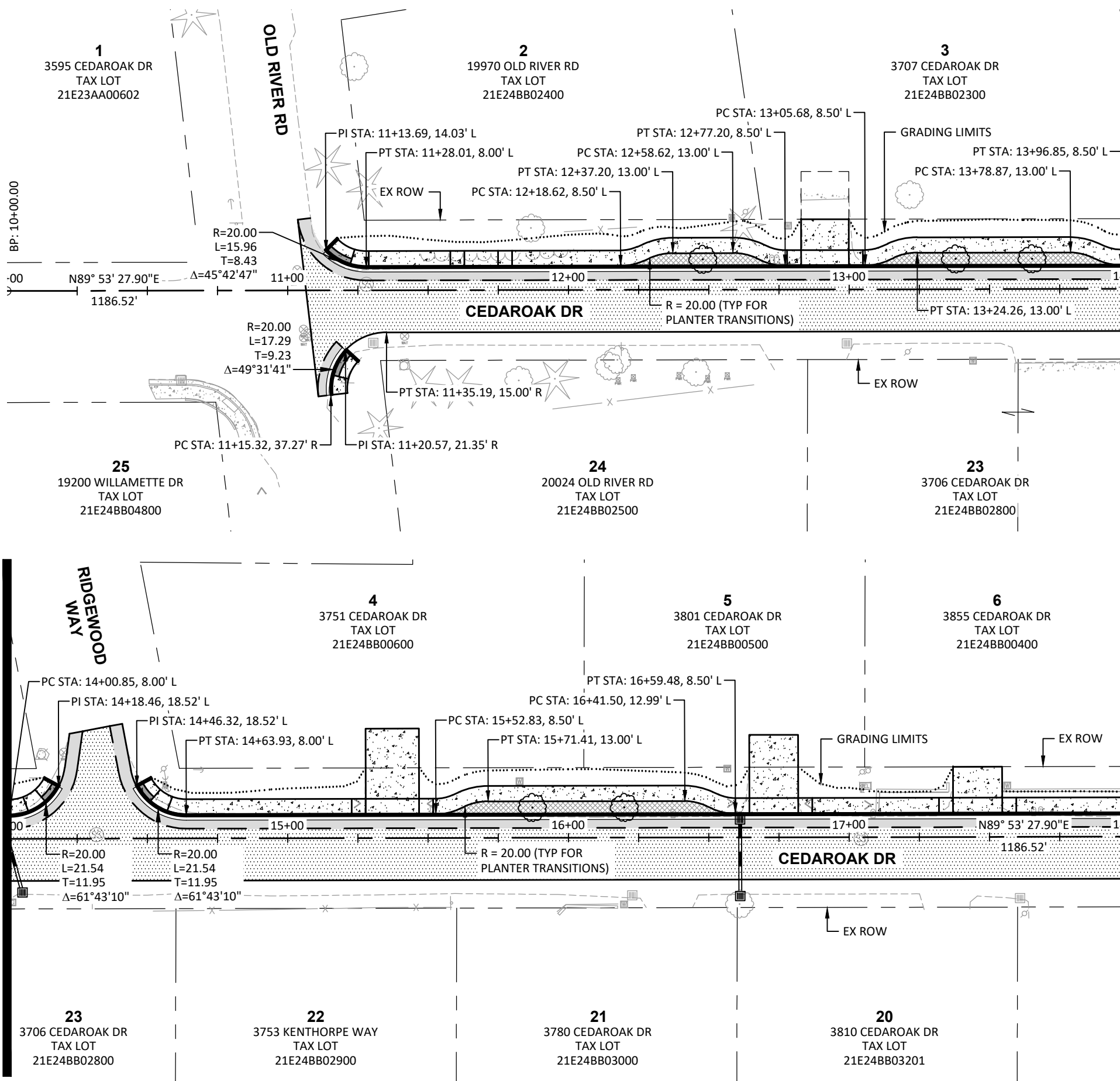


**CEDAROAK DR**  
STA: 11+28.88 TO 20+84.24



DRAWING NAME: CWL10-B02 GEOMETRY & PAVING PLAN.DWG

MATCHLINE STA. 14+00 SEE ABOVE

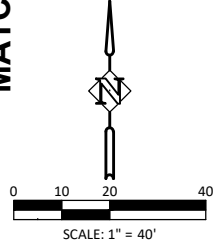


MATCHLINE STA. 14+00 SEE BELOW

MATCHLINE STA. 18+00 SEE SHEET B03

**LEGEND**

- FULL DEPTH STRUCTURAL SECTION
- GRIND AND INLAY SECTION
- CONCRETE SIDEWALK
- TRUNCATED DOMES
- DRIVEWAY/DRIVEWAY APPROACH
- STORMWATER PLANTER



GEOMETRY & PAVING PLAN  
**CEDAR OAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

**Harper Houf Peterson**  
**Righellis Inc.**  
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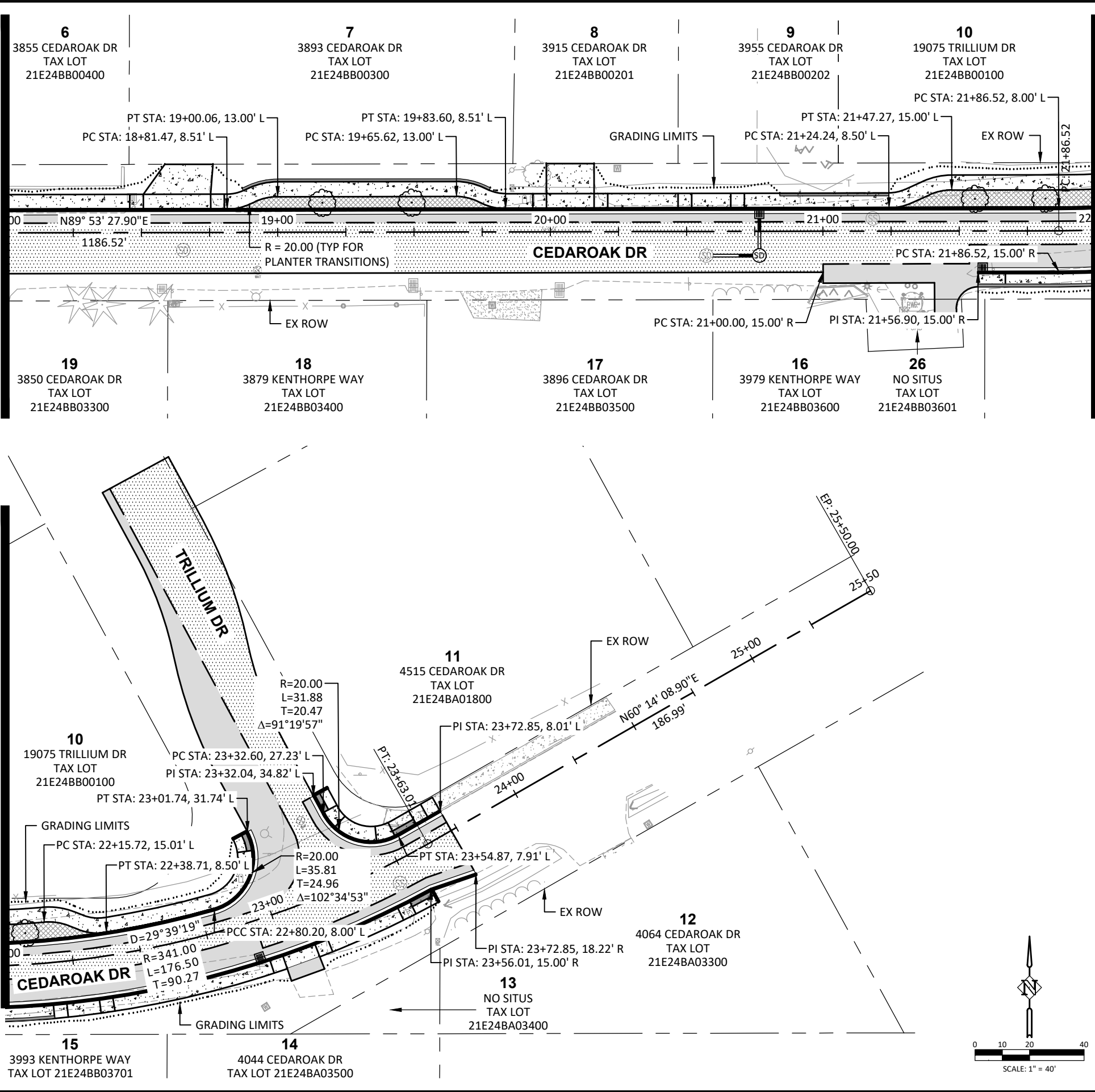
**REGISTERED PROFESSIONAL ENGINEER**  
 86,200  
**PRELIMINARY**  
 OREGON  
 JAN. 10, 2017  
 JAMES S. HOUF

EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>B02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

MATCHLINE STA. 18+00 SEE SHEET B02

MATCHLINE STA. 22+00 SEE ABOVE



MATCHLINE STA. 22+00 SEE BELOW

LEGEND	
	FULL DEPTH STRUCTURAL SECTION
	GRIND AND INLAY SECTION
	CONCRETE SIDEWALK
	TRUNCATED DOMES
	DRIVEWAY/DRIVEWAY APPROACH
	STORMWATER PLANTER

GEOMETRY & PAVING PLAN  
**CEDAR OAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

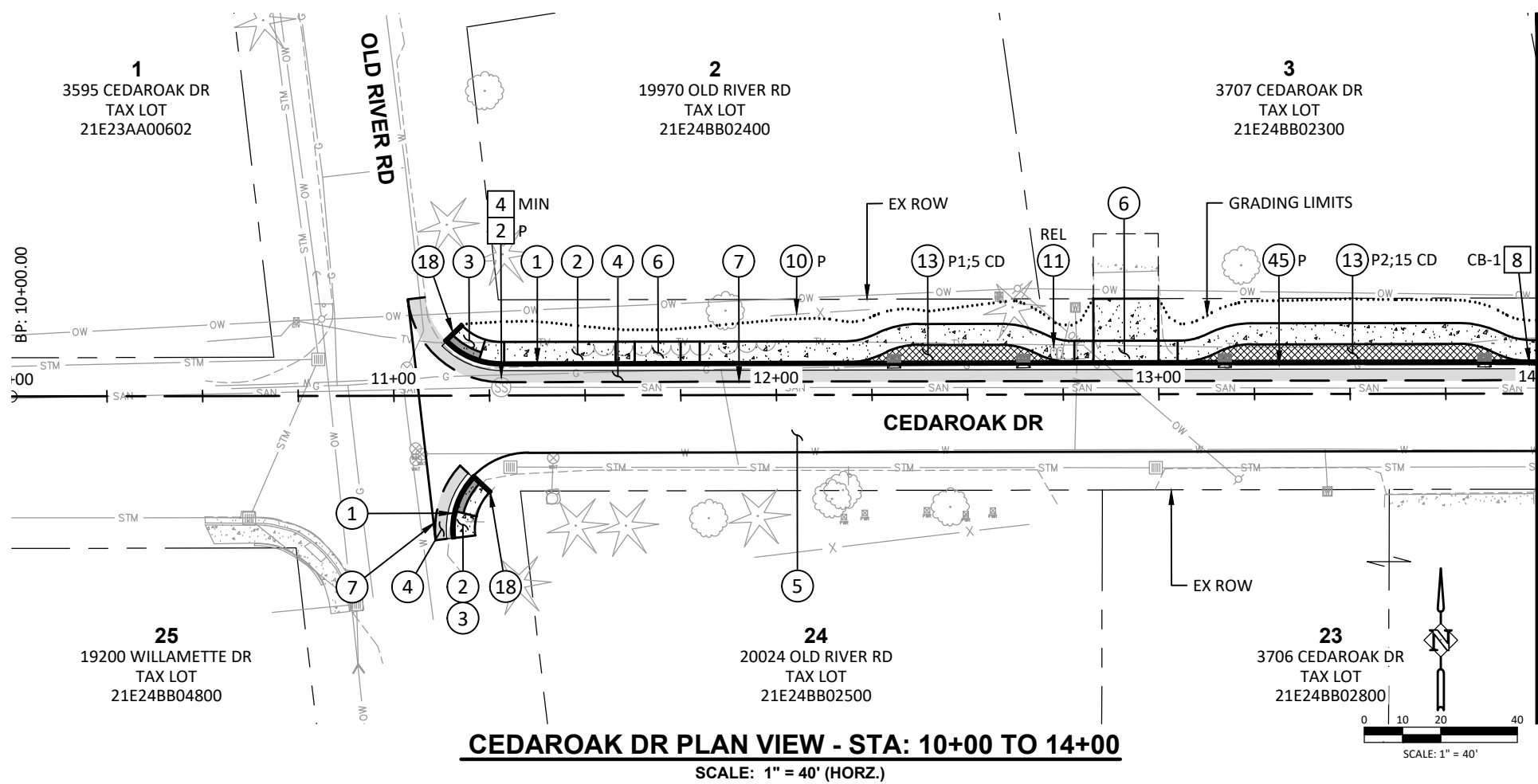
**Harper Houf Peterson**  
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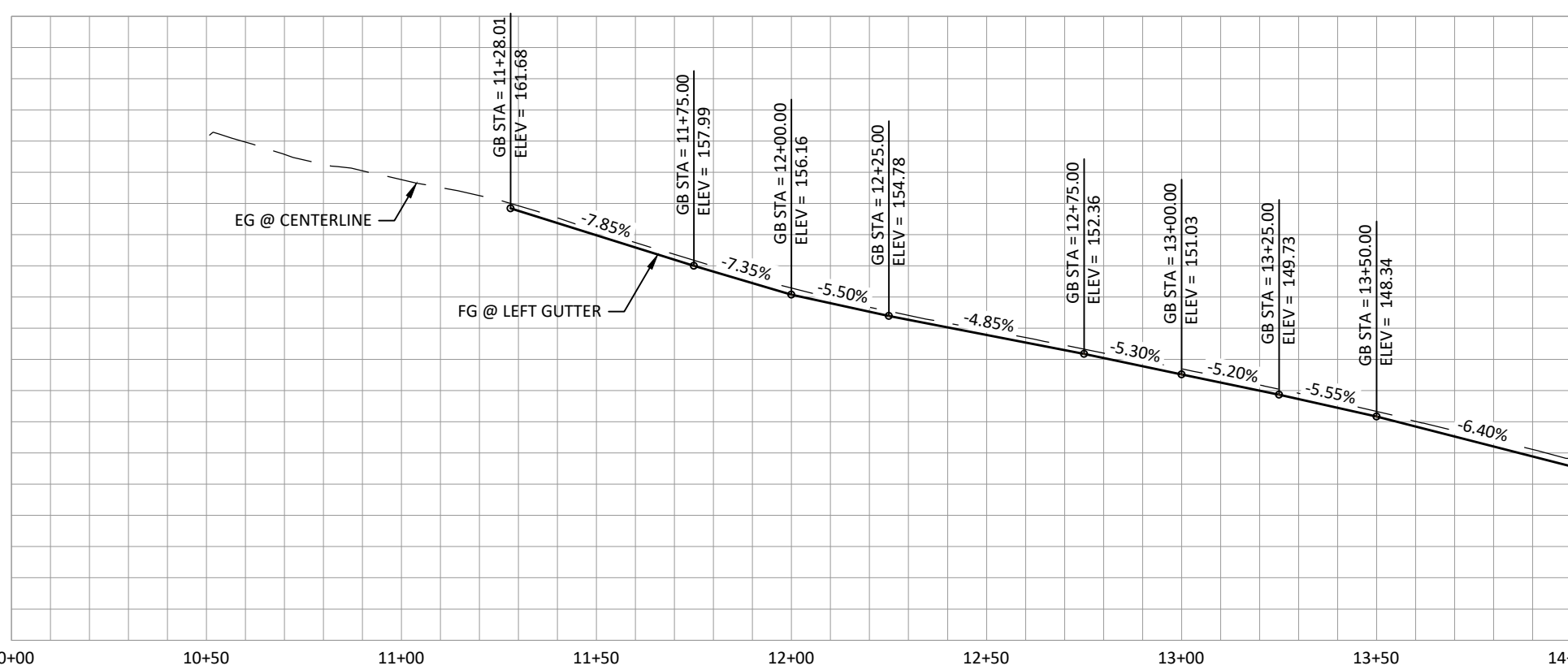
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>B03</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-B02 GEOMETRY & PAVING PLAN.DWG



**CEDAROAK DR PLAN VIEW - STA: 10+00 TO 14+00**  
SCALE: 1" = 40' (HORZ.)



**CEDAROAK DR PLAN VIEW - STA: 10+00 TO 14+00**  
SCALE: 1" = 40' (HORZ.)  
1" = 10' (VERT.)

**CONSTRUCTION NOTES:**

- 1 CONSTRUCT CURB AND GUTTER (E=6"; GUTTER PAN=18") PER CITY DWG WL-RD700 ON SHEET DC03.
- 2 CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET B01. FOR DETAILS, SEE ODOT STANDARD DWG RD735 ON SHEET DC01.
- 3 CONSTRUCT SIDEWALK RAMP PER ODOT STANDARD DWGS RD904 AND RD960 ON SHEET DC02 AND SHEET DC05. SEE CURB RETURN GRADE ELEVATIONS ON "DB" SHEETS.
- 4 CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET B01.
- 5 CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET B01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON "D" SHEETS.
- 6 CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD735 ON SHEET DC01. MATCH EXISTING WIDTH AND MATERIAL BEHIND APPROACH UNLESS NOTED OTHERWISE. SAWCUT AND REMOVE EXISTING SURFACE AS REQUIRED. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE OR 6" P.C.C. OVER 6" AGGREGATE BASE. SEE DRIVEWAY GRADE ELEVATIONS ON SHEET SERIES "DA".
- 7 SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- 10 REMOVE (R), ADJUST (A), OR PROTECT (P) EXISTING FENCE & GATES.
- 11 RELOCATE (REL), REMOVE (R), ADJUST (A) OR PROTECT (P) EXISTING MAILBOX(ES). FOR ANY RELOCATION OR ADJUSTMENT, SEE ODOT STANDARD DRAWING RD100 AND RD101 ON SHEET DC17 & DC18. COORDINATE LOCATION WITH ENGINEER.
- 13 CONSTRUCT STORMWATER PLANTER PER DETAIL ON SHEETS DC15 & DC16. STORMWATER PLANTER TO INCLUDE BEEHIVE INLET, PERFORATED PIPE, AND CLEANOUT, PER PLAN. SEE PLAN FOR QUANTITY OF EVENLY SPACED CHECK DAMS (CD) TO INSTALL.
- 18 CONSTRUCT STANDARD CURB (E=6"; H=16") PER CITY DWG WL-RD700 ON SHEET DC03.
- 45 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING GAS LINE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.

**STORM SEWER CONSTRUCTION NOTES:**

- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DC10. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 8 CONSTRUCT CG-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD366 ON SHEET DC13. SEE PLAN FOR INVERTS AND DATA.

**INLET DRAINAGE DATA:**

CB-1 (CG-2)  
STA 13+98.60, 8.0' L  
GUT = 145.23  
12" IE OUT (S) = 143.60  
29.4 LF DI, S=0.0050  
SUMP = 142.10

MATCHLINE STA. 14+00 SEE SHEET C02

ROADWAY PLAN & PROFILE  
**CEDAROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

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**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
JAMES S. HOUF

EXPIRES: 6/30/25

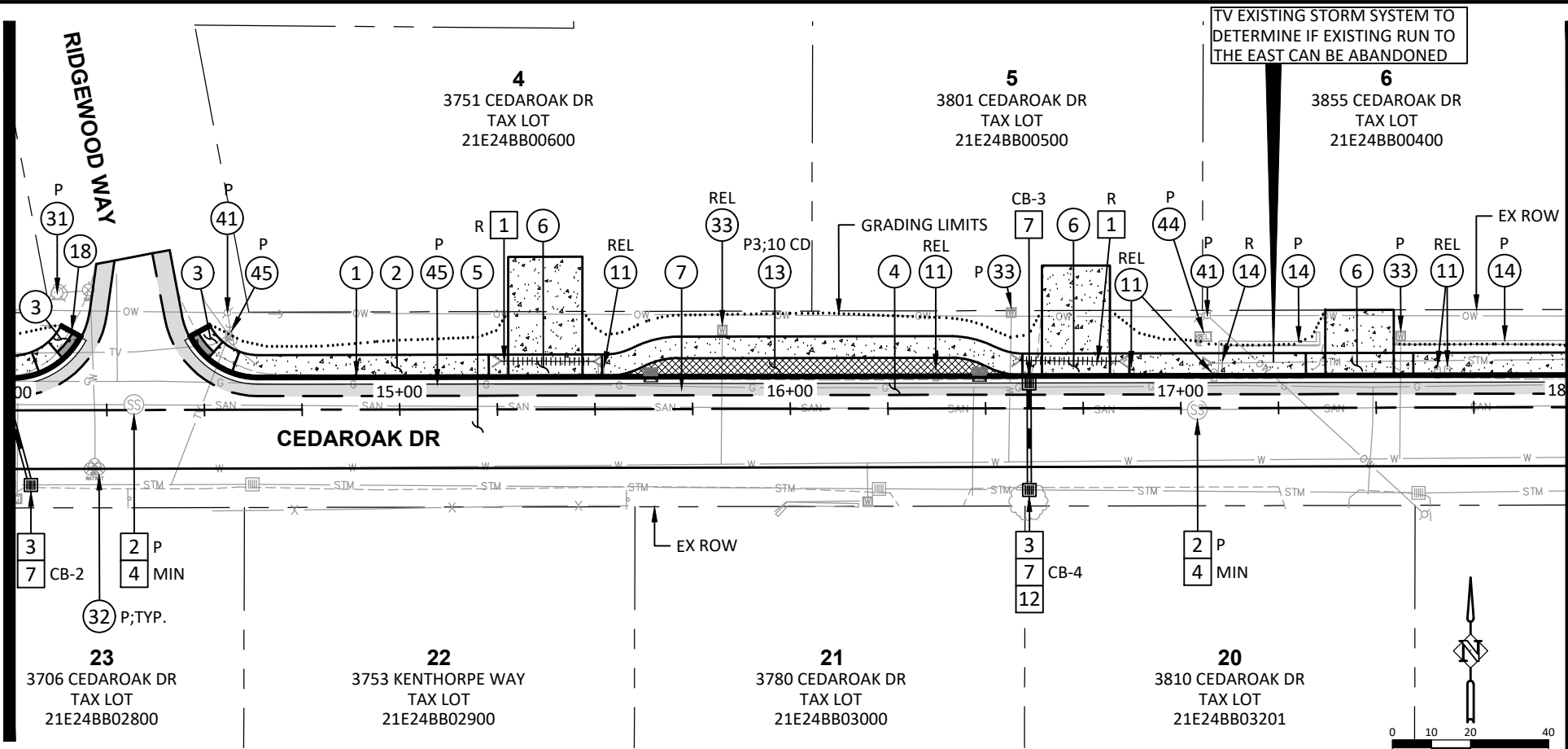
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>C01</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10

DRAWING NAME: CWL10-C01 ROADWAY PLAN AND PROFILES.DWG

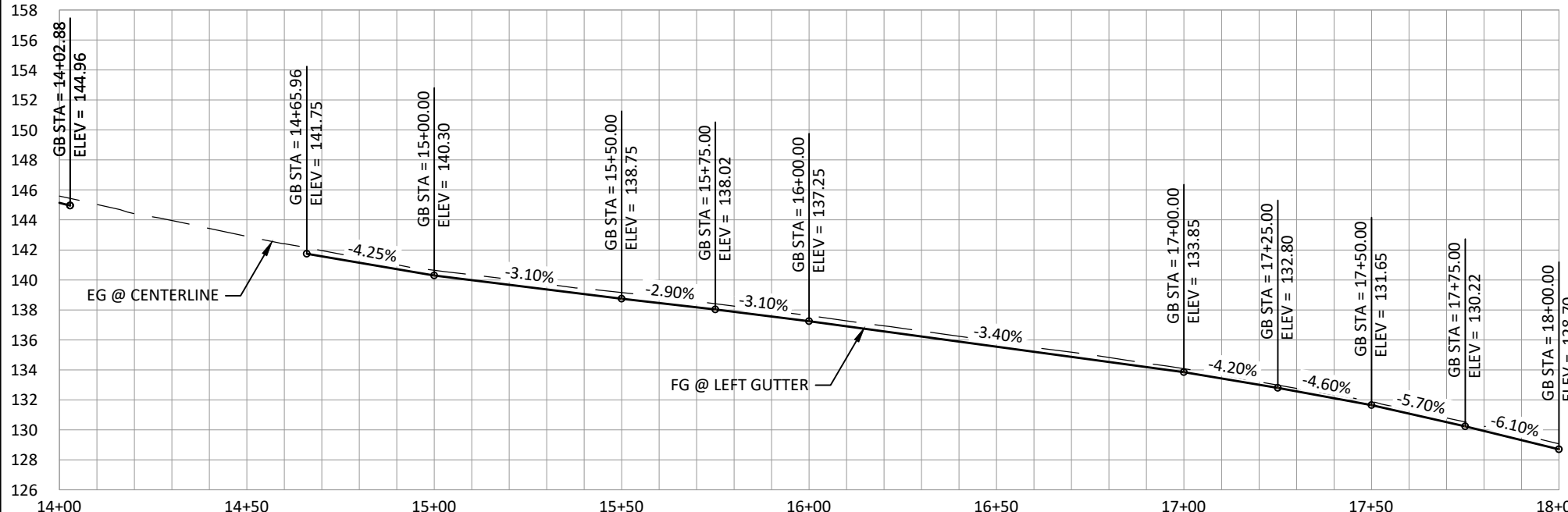


MATCHLINE STA. 14+00 SEE SHEET C01

MATCHLINE STA. 18+00 SEE SHEET C03



**CEDAROOK DR PLAN VIEW - STA: 14+00 TO 18+00**  
SCALE: 1" = 40' (HORZ.)



**INLET DRAINAGE DATA:**

Station	Direction	Structure	Notes
14+05.53	Right	CB-2 (G-2)	STA 14+05.53, 19.1' R, RIM = 145.63, 12" IE IN (N) = 143.45, EX 12" IE IN (W) = 143.25, EX 12" IE OUT (E) = 143.25, SUMP = 141.75
16+61.16	Left	CB-3 (G-2)	STA 16+61.16, 8.0' L, GUT = 135.17, 12" IE OUT (S) = 133.66, 27.2 LF DI, S=0.0042, SUMP = 132.39
16+61.16	Right	CB-4 (G-2)	STA 16+61.16, 20.9' R, RIM = 135.17, 12" IE IN (N) = 133.55, EX 12" IE IN (W) = 133.55, EX 12" IE OUT (E) = 133.55, SUMP = 132.05

**CEDAROOK DR PROFILE VIEW - STA: 14+00 TO 18+00**  
SCALE: 1" = 40' (HORZ.), 1" = 10' (VERT.)

**CONSTRUCTION NOTES:**

- 1 CONSTRUCT CURB AND GUTTER (E=6"; GUTTER PAN=18") PER CITY DWG WL-RD700 ON SHEET DC03.
- 2 CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET B01. FOR DETAILS, SEE ODOT STANDARD DWG RD735 ON SHEET DC01.
- 3 CONSTRUCT SIDEWALK RAMP PER ODOT STANDARD DWGS RD904 AND RD960 ON SHEET DC02 AND SHEET DC05. SEE CURB RETURN GRADE ELEVATIONS ON "DB" SHEETS.
- 4 CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET B01.
- 5 CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET B01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON "D" SHEETS.
- 6 CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD735 ON SHEET DC01. MATCH EXISTING WIDTH AND MATERIAL BEHIND APPROACH UNLESS NOTED OTHERWISE. SAWCUT AND REMOVE EXISTING SURFACE AS REQUIRED. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE OR 6" P.C.C. OVER 6" AGGREGATE BASE. SEE DRIVEWAY GRADE ELEVATIONS ON SHEET SERIES "DA".
- 7 SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- 11 RELOCATE (REL), REMOVE (R), ADJUST (A) OR PROTECT (P) EXISTING MAILBOX(ES). FOR ANY RELOCATION OR ADJUSTMENT, SEE ODOT STANDARD DRAWING RD100 AND RD101 ON SHEET DC17 & DC18. COORDINATE LOCATION WITH ENGINEER.
- 13 CONSTRUCT STORMWATER PLANTER PER DETAIL ON SHEETS DC15 & DC16. STORMWATER PLANTER TO INCLUDE BEEHIVE INLET, PERFORATED PIPE, AND CLEANOUT, PER PLAN. SEE PLAN FOR QUANTITY OF EVENLY SPACED CHECK DAMS (CD) TO INSTALL.
- 14 REMOVE (R), ADJUST (A), OR PROTECT (P) EXISTING WALL.
- 18 CONSTRUCT STANDARD CURB (E=6"; H=16") PER CITY DWG WL-RD700 ON SHEET DC03.
- 31 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING FIRE HYDRANT. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 32 RELOCATE (REL), ADJUST (A) OR PROTECT (P) EXISTING WATER VALVE. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 33 RELOCATE (REL), ADJUST (A) OR PROTECT (P) EXISTING WATER METER, BOX, AND SERVICE. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 41 REMOVE (R), RELOCATE (REL), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- 44 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING UTILITY PEDESTAL. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- 45 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING GAS LINE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.

**STORM SEWER CONSTRUCTION NOTES:**

- 1 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON IN-PLACE (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. UPON ABANDON IN-PLACE, FILL PIPE WITH CONTROLLED DENSITY FILL (CDF).
- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 3 CONNECT TO EXISTING PIPE OR STRUCTURE PER DETAIL ON SHEET DC06.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DC10. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 7 CONSTRUCT G-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD364 ON SHEET DC11. SEE PLAN FOR INVERTS AND DATA.
- 12 FIELD VERIFY ELEVATION PRIOR TO INSTALLATION. NOTIFY ENGINEER OF ANY DISCREPENCIES.

ROADWAY PLAN & PROFILE  
**CEDAROOK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

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REGISTERED PROFESSIONAL ENGINEER 86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
JAMES S. HOUF

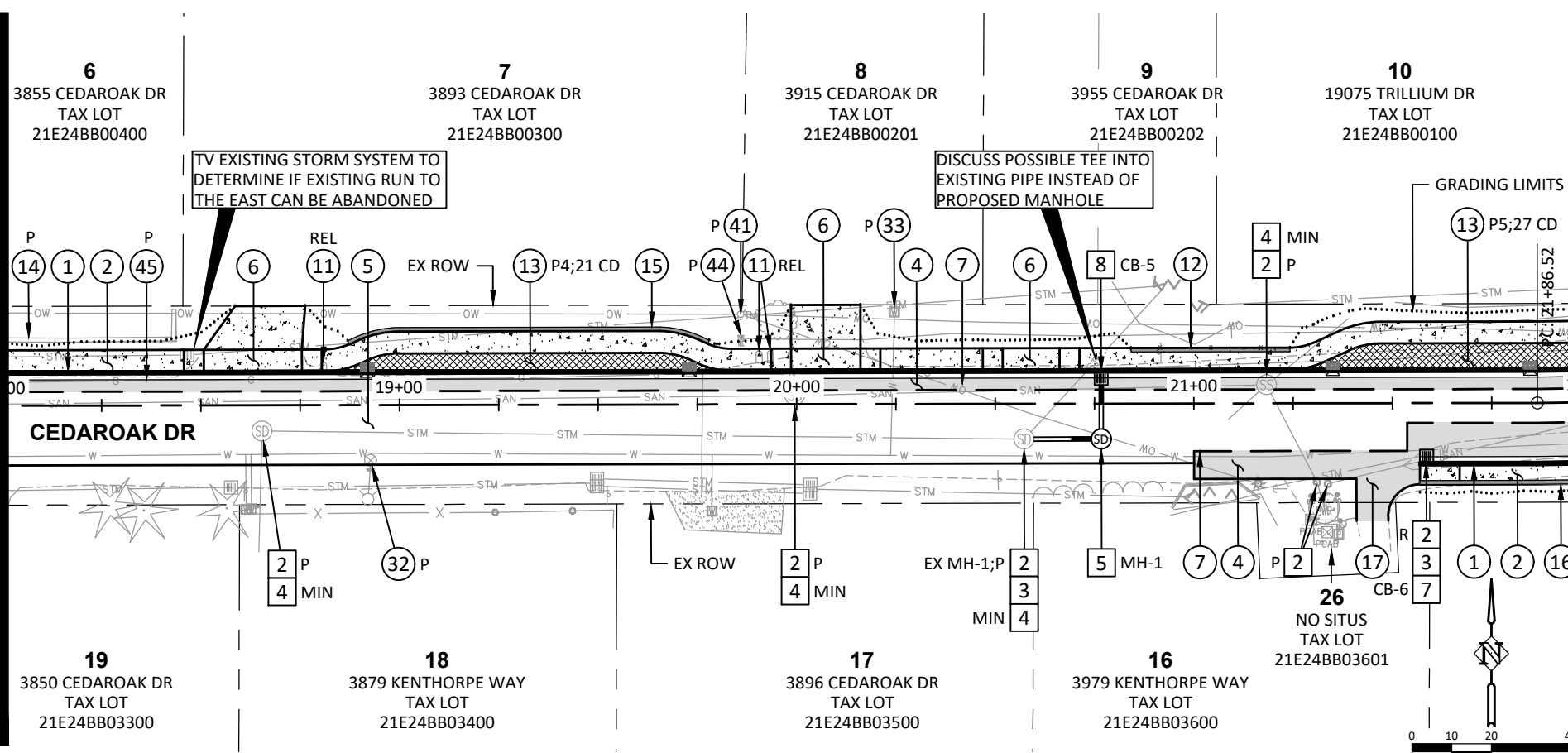
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>C02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-C01 ROADWAY PLAN AND PROFILES.DWG

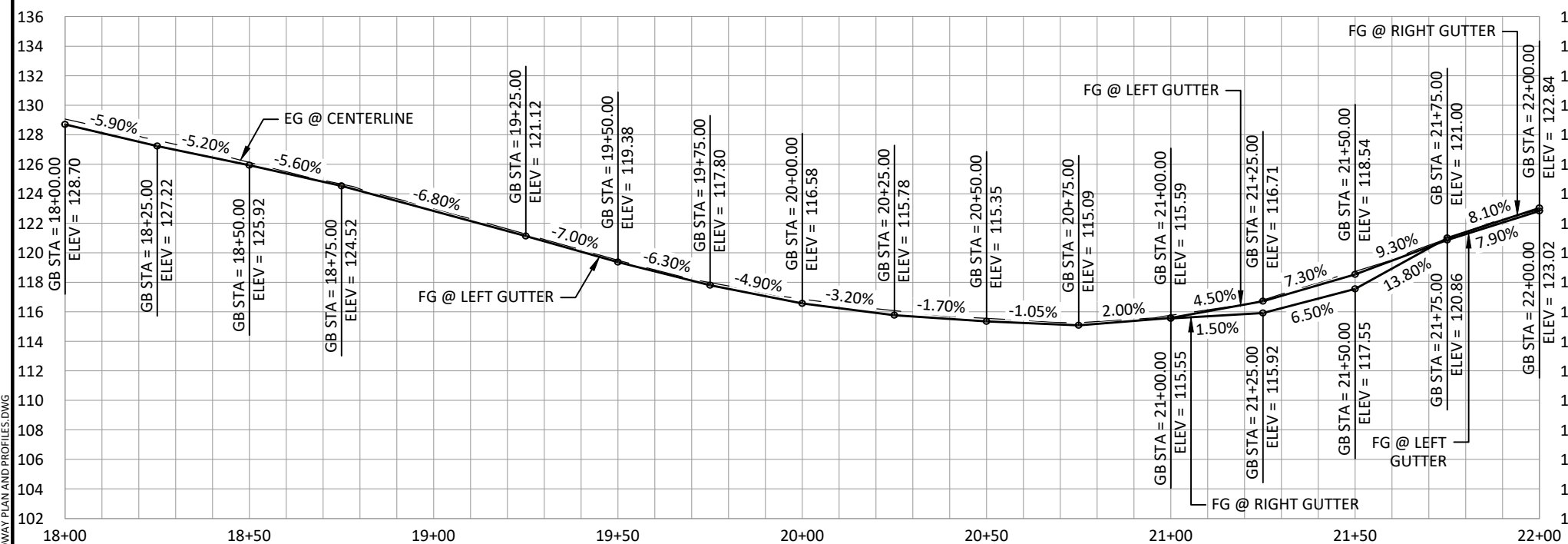


MATCHLINE STA. 18+00 SEE SHEET C02

MATCHLINE STA. 22+00 SEE SHEET C04



**CEDARROAK DR PLAN VIEW - STA: 18+00 TO 22+00**  
SCALE: 1" = 40' (HORZ.)



**CEDARROAK DR PROFILE VIEW - STA: 18+00 TO 22+00**  
SCALE: 1" = 40' (HORZ.)  
1" = 10' (VERT.)

**INLET DRAINAGE DATA:**

CB-5 (CG-2) STA 20+76.67, 8.0' L GUT = 115.13 12" IE OUT (S) = 111.13 15.2 LF DI, S=0.0200 SUMP = 109.63	MH-1 (STANDARD MH) STA 20+76.67, 8.9' R RIM = 115.16 12" IE IN (N) = 110.83 12" IE OUT (W) = 110.63 19.4 LF PVC, S=0.0170	EX MH-1 (EX MH) STA 20+57.25, 8.9' R RIM = 115.30 12" IE IN (E) = 110.30 EX 36" IE IN (W) = 106.80 EX 36" IE OUT (NE) = 106.60	CB-6 (G-2) STA 21+58.43, 15.0' R GUT = 118.71 EX 12" IE OUT (SW) = 116.00 SUMP = 116.00
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**CONSTRUCTION NOTES:**

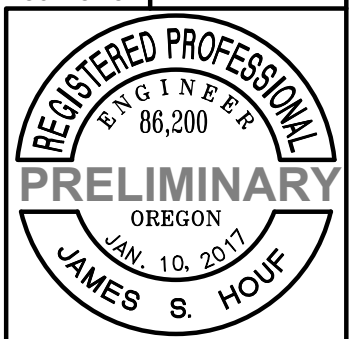
- 1 CONSTRUCT CURB AND GUTTER (E=6"; GUTTER PAN=18") PER CITY DWG WL-RD700 ON SHEET DC03.
- 2 CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET B01. FOR DETAILS, SEE ODOT STANDARD DWG RD735 ON SHEET DC01.
- 4 CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET B01.
- 5 CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET B01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON "D" SHEETS.
- 6 CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD735 ON SHEET DC01. MATCH EXISTING WIDTH AND MATERIAL BEHIND APPROACH UNLESS NOTED OTHERWISE. SAWCUT AND REMOVE EXISTING SURFACE AS REQUIRED. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE OR 6" P.C.C. OVER 6" AGGREGATE BASE. SEE DRIVEWAY GRADE ELEVATIONS ON SHEET SERIES "DA".
- 7 SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- 11 RELOCATE (REL), REMOVE (R), ADJUST (A) OR PROTECT (P) EXISTING MAILBOX(ES). FOR ANY RELOCATION OR ADJUSTMENT, SEE ODOT STANDARD DRAWING RD100 AND RD101 ON SHEET DC17 & DC18. COORDINATE LOCATION WITH ENGINEER.
- 12 CONSTRUCT THICKENED EDGE SIDEWALK WITH 4' BLACK VINYL CHAIN LINK FENCE. SEE "WA" SHEET SERIES FOR DETAILS.
- 13 CONSTRUCT STORMWATER PLANTER PER DETAIL ON SHEETS DC15 & DC16. STORMWATER PLANTER TO INCLUDE BEEHIVE INLET, PERFORATED PIPE, AND CLEANOUT, PER PLAN. SEE PLAN FOR QUANTITY OF EVENLY SPACED CHECK DAMS (CD) TO INSTALL.
- 14 REMOVE (R), ADJUST (A), OR PROTECT (P) EXISTING WALL.
- 15 CONSTRUCT SEGMENTAL BLOCK WALL. SEE "WA" SHEET SERIES FOR DETAILS.
- 16 CONSTRUCT THICKENED EDGE SIDEWALK. SEE "WA" SHEET SERIES FOR DETAILS.
- 17 CONSTRUCT IMPERVIOUS ASPHALT CONNECTION WITH 4" AC PAVEMENT OVER 8" AGGREGATE BASE.
- 32 RELOCATE (REL), ADJUST (A) OR PROTECT (P) EXISTING WATER VALVE. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 33 RELOCATE (REL), ADJUST (A) OR PROTECT (P) EXISTING WATER METER, BOX, AND SERVICE. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 41 REMOVE (R), RELOCATE (REL), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- 44 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING UTILITY PEDESTAL. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- 45 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING GAS LINE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.

**STORM SEWER CONSTRUCTION NOTES:**

- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 3 CONNECT TO EXISTING PIPE OR STRUCTURE PER DETAIL ON SHEET DC06.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DC10. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 5 CONSTRUCT STORM SEWER MANHOLE PER ODOT STANDARD DWG RD335 ON SHEET DC08. SEE PROFILES AND DRAINAGE DATA FOR INVERTS AND LOCATION.
- 7 CONSTRUCT G-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD364 ON SHEET DC11. SEE PLAN FOR INVERTS AND DATA.
- 8 CONSTRUCT CG-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD366 ON SHEET DC13. SEE PLAN FOR INVERTS AND DATA.

ROADWAY PLAN & PROFILE  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

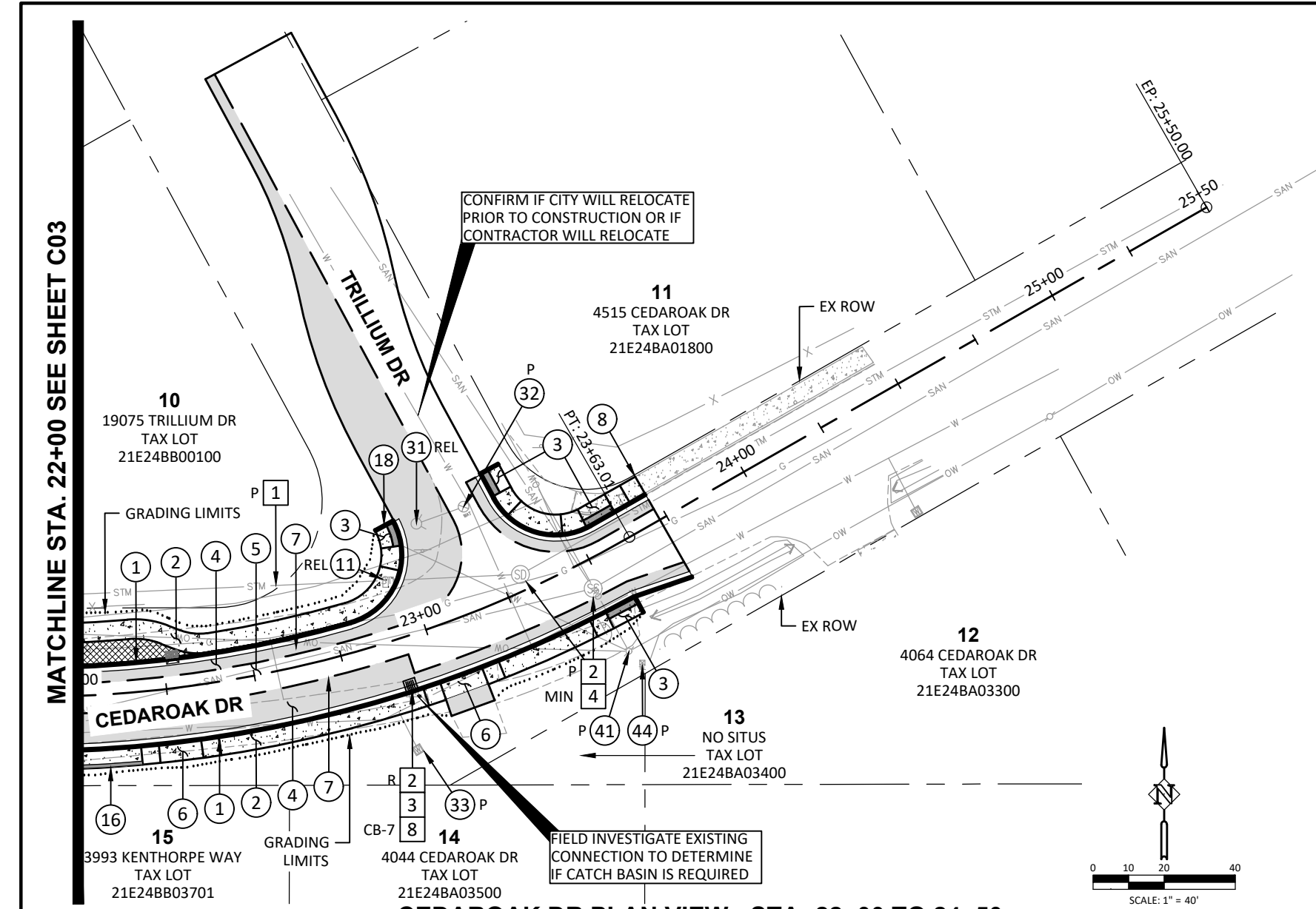
Harper Houf Peterson  
Righellis Inc.  
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LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhp.com fax: 503.221.1171



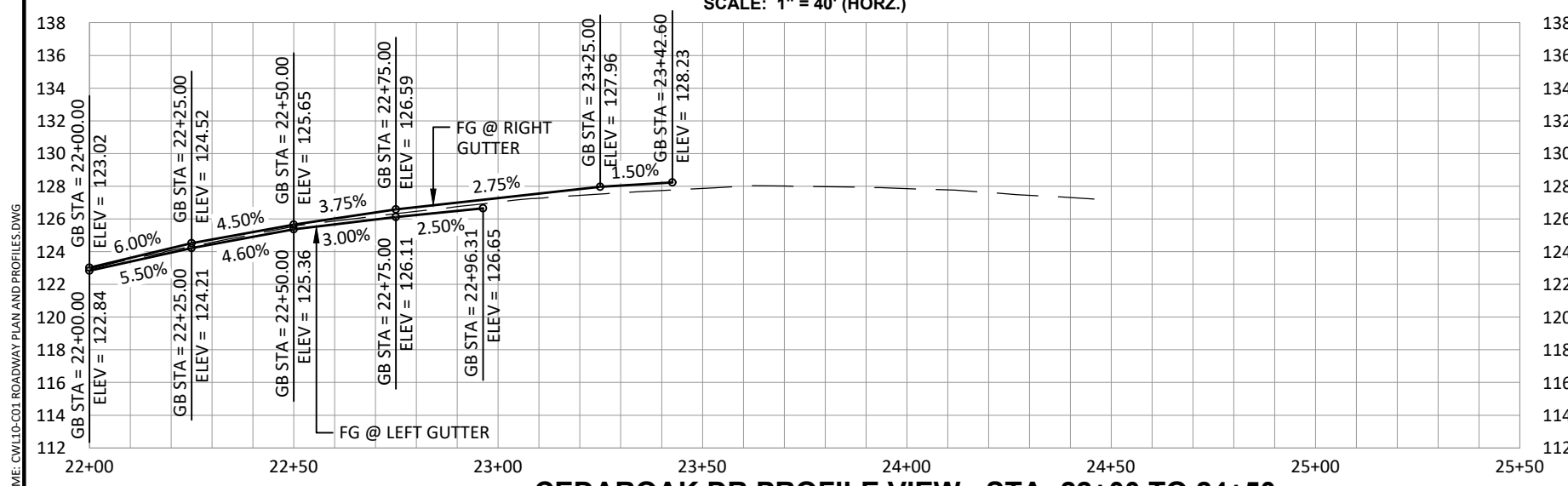
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DRAWN: HHPR TEAM	<b>C03</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

EXPIRES: 6/30/25

DRAWING NAME: CWL10-C01 ROADWAY PLAN AND PROFILES.DWG



**CEDAROK DR PLAN VIEW - STA: 22+00 TO 24+50**  
SCALE: 1" = 40' (HORZ.)



**CEDAROK DR PROFILE VIEW - STA: 22+00 TO 24+50**  
SCALE: 1" = 40' (HORZ.)  
1" = 10' (VERT.)

**CONSTRUCTION NOTES:**

- 1 CONSTRUCT CURB AND GUTTER (E=6"; GUTTER PAN=18") PER CITY DWG WL-RD700 ON SHEET DC03.
- 2 CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET B01. FOR DETAILS, SEE ODOT STANDARD DWG RD735 ON SHEET DC01.
- 3 CONSTRUCT SIDEWALK RAMP PER ODOT STANDARD DWGS RD904 AND RD960 ON SHEET DC02 AND SHEET DC05. SEE CURB RETURN GRADE ELEVATIONS ON "DB" SHEETS.
- 4 CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET B01.
- 5 CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET B01. FOR LIMITS, SEE PAVING AND GEOMETRY PLANS ON "D" SHEETS.
- 6 CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD735 ON SHEET DC01. MATCH EXISTING WIDTH AND MATERIAL BEHIND APPROACH UNLESS NOTED OTHERWISE. SAWCUT AND REMOVE EXISTING SURFACE AS REQUIRED. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE OR 6" P.C.C. OVER 6" AGGREGATE BASE. SEE DRIVEWAY GRADE ELEVATIONS ON SHEET SERIES "DA".
- 7 SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- 8 MATCH NEW CURB TO EXISTING CURB AND/OR MATCH NEW SIDEWALK TO EXISTING SIDEWALK, AS REQUIRED AND DIRECTED. FIELD COORDINATE SAWCUT LIMITS, AS REQUIRED AND DIRECTED. PROTECT EXISTING CURB AND/OR CONCRETE SIDEWALK.
- 11 RELOCATE (REL), REMOVE (R), ADJUST (A) OR PROTECT (P) EXISTING MAILBOX(ES). FOR ANY RELOCATION OR ADJUSTMENT, SEE ODOT STANDARD DRAWING RD100 AND RD101 ON SHEET DC17 & DC18. COORDINATE LOCATION WITH ENGINEER.
- 16 CONSTRUCT THICKENED EDGE SIDEWALK. SEE "WA" SHEET SERIES FOR DETAILS.
- 18 CONSTRUCT STANDARD CURB (E=6"; H=16") PER CITY DWG WL-RD700 ON SHEET DC03.
- 31 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING FIRE HYDRANT. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 32 RELOCATE (REL), ADJUST (A) OR PROTECT (P) EXISTING WATER VALVE. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 33 RELOCATE (REL), ADJUST (A) OR PROTECT (P) EXISTING WATER METER, BOX, AND SERVICE. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
- 41 REMOVE (R), RELOCATE (REL), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- 44 RELOCATE (REL), ADJUST (A), OR PROTECT (P) EXISTING UTILITY PEDESTAL. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.

**STORM SEWER CONSTRUCTION NOTES:**

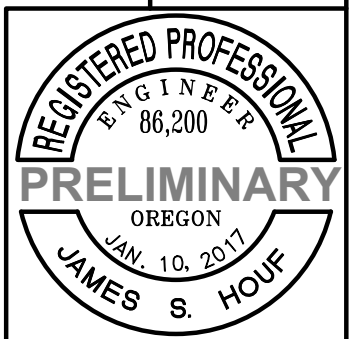
- 1 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON IN-PLACE (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. UPON ABANDON IN-PLACE, FILL PIPE WITH CONTROLLED DENSITY FILL (CDF).
- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 3 CONNECT TO EXISTING PIPE OR STRUCTURE PER DETAIL ON SHEET DC06.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DC10. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 8 CONSTRUCT CG-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD366 ON SHEET DC13. SEE PLAN FOR INVERTS AND DATA.

**INLET DRAINAGE DATA:**

CB-7 (CG-2)  
STA 22+91.11, 15.0' R  
GUT = 127.03  
EX 12" IE IN (E) = CONFIRM IN FIELD  
EX 12" IE OUT (S) = CONFIRM IN FIELD  
SUMP = CONFIRM IN FIELD

ROADWAY PLAN & PROFILE  
**CEDAROK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

Harper Houf Peterson  
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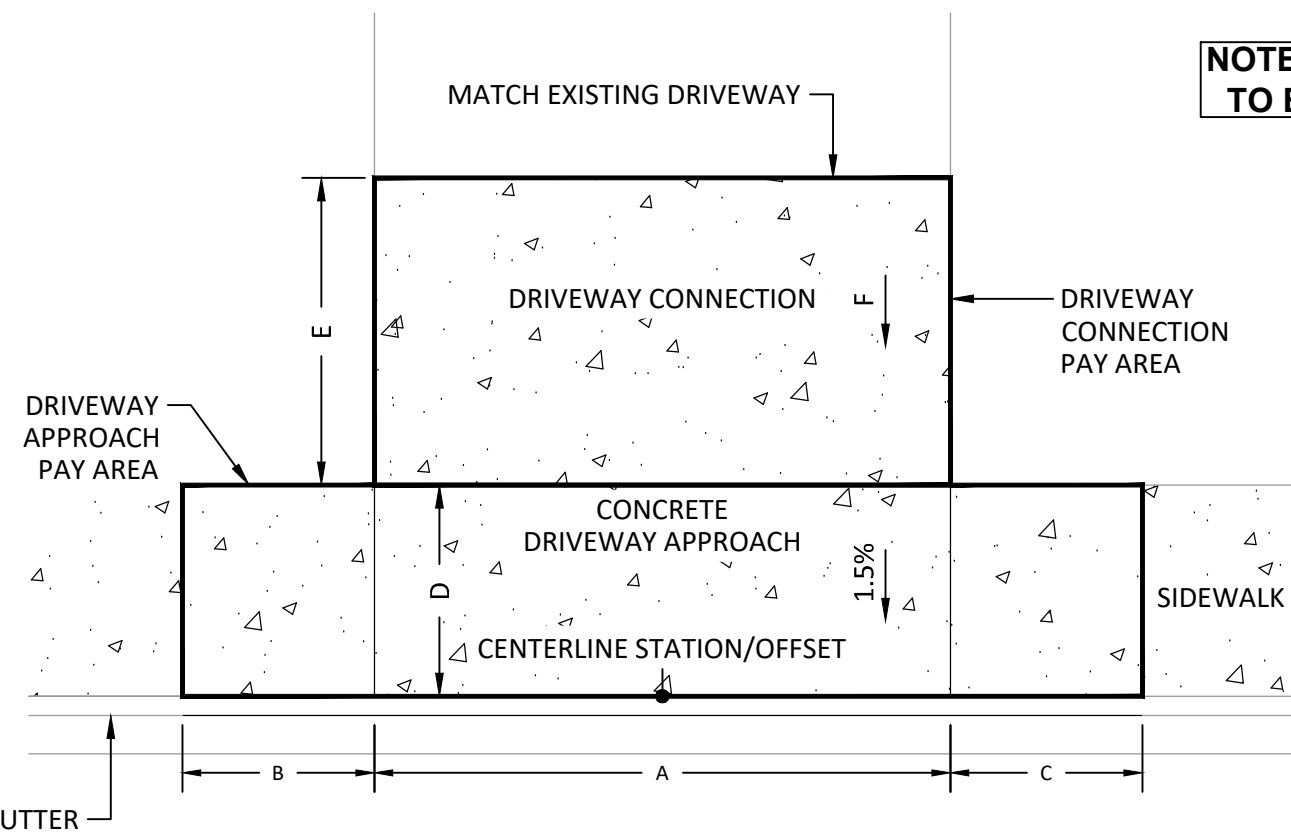
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>C04</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10

DRAWING NAME: CWL10-C01 ROADWAY PLAN AND PROFILES.DWG

### DRIVEWAY CONSTRUCTION TABLE

LOCATION			CONCRETE DRIVEWAY APPROACH				DRIVEWAY CONNECTION				
STATION "L"	ADDRESS	PROPERTY NUMBER	"A" APPROACH WIDTH	APPROACH AREA (SF)	"B" WING WIDTH	"C" WING WIDTH	"D" PATHWAY LENGTH	FINISH SURFACE	"E" ESTIMATED LENGTH	ESTIMATED AREA (SF)	"F" APPROX. SLOPE
11+68.98, 8.5' LT	19970 OLD RIVER RD	2	12.0	121	5.0	5.0	5.5	N/A	N/A	N/A	N/A
12+91.41, 8.5' LT	3707 CEDAROAK DR	3	17.0	149	5.0	5.0	5.5	CONCRETE	11.0	187	19.2%
15+37.33, 8.5' LT	3751 CEDAROAK DR	4	19.0	159	5.0	5.0	5.5	CONCRETE	25.0	475	13.8%
16+73.18, 8.5' LT	3801 CEDAROAK DR	5	17.4	150	5.0	5.0	5.5	CONCRETE	22.5	392	7.4%
17+45.77, 8.5' LT	3855 CEDAROAK DR	6	17.5	151	5.0	5.0	5.5	CONCRETE	11.0	193	10.5%
18+63.12, 8.5' LT	3893 CEDAROAK DR	7	24.7	191	5.0	5.0	5.5	CONCRETE	11.0	233	18.2%
20+07.35, 8.5' LT	3915 CEDAROAK DR	8	17.5	151	5.0	5.0	5.5	CONCRETE	11.0	193	6.4%
20+59.04, 8.5' LT	3955 CEDAROAK DR	9	14.3	133.8	5.0	5.0	5.5	N/A	N/A	N/A	N/A
23+04.93, 15.5' LT	444 CEDAROAK DR	14	12.5	113	5.0	5.0	5.0	AC PAVEMENT	4.78	61	7.5%
22+26.93, 15.5' LT	3993 CEDAROAK DR	15	12.0	111	5.0	5.0	5.0	N/A	N/A	N/A	N/A



**NOTE: VERTICAL CURVE INFORMATION TO BE PROVIDED WITH FINAL PLANS**

### TYPICAL DRIVEWAY

DRIVEWAY DETAIL GRADING  
**CEDAROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

**Harper Houf Peterson**  
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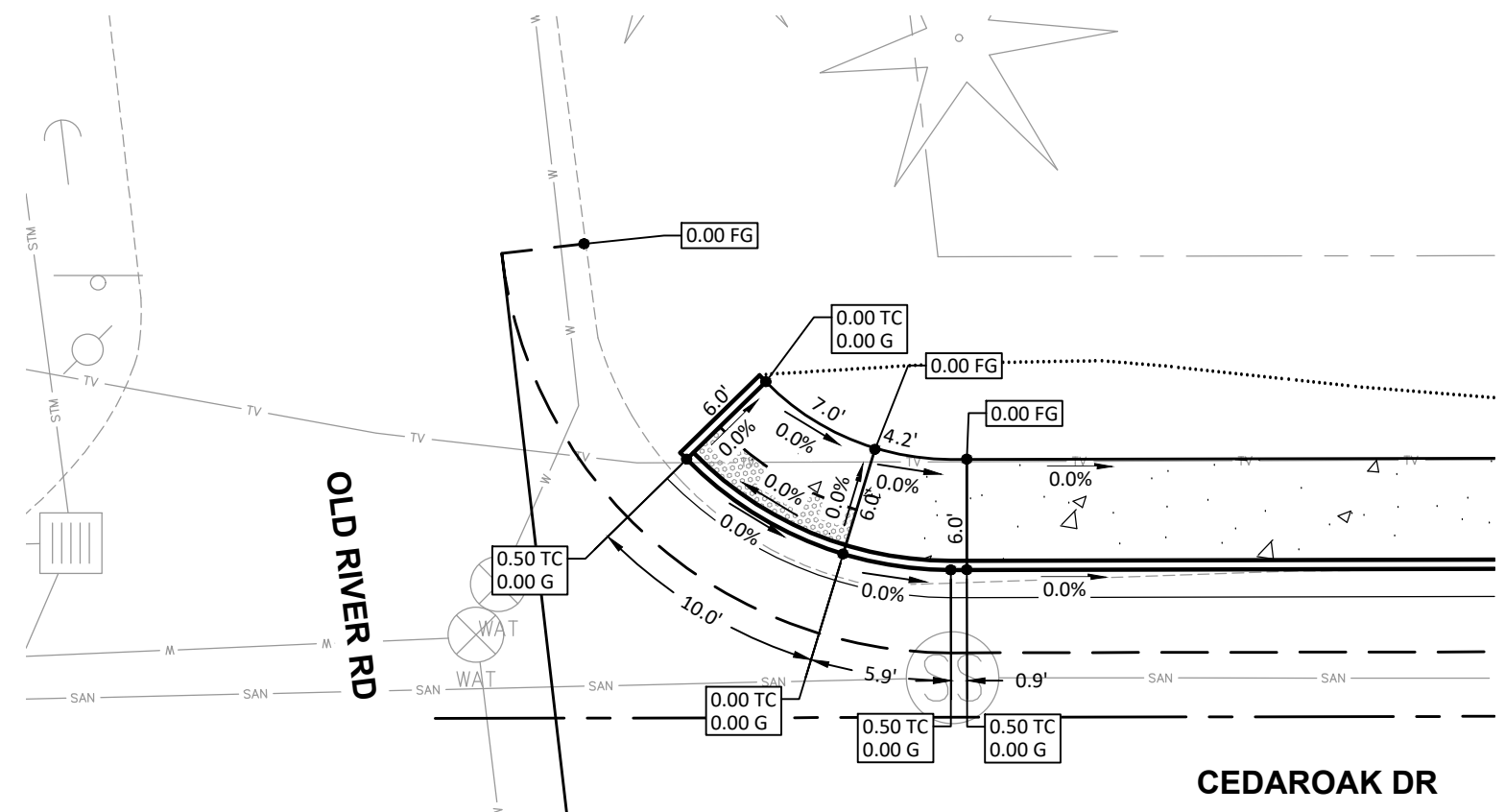


**REGISTERED PROFESSIONAL ENGINEER**  
 86,200  
**PRELIMINARY**  
 OREGON  
 JAN. 10, 2017  
**JAMES S. HOUF**  
 EXPIRES: 6/30/25

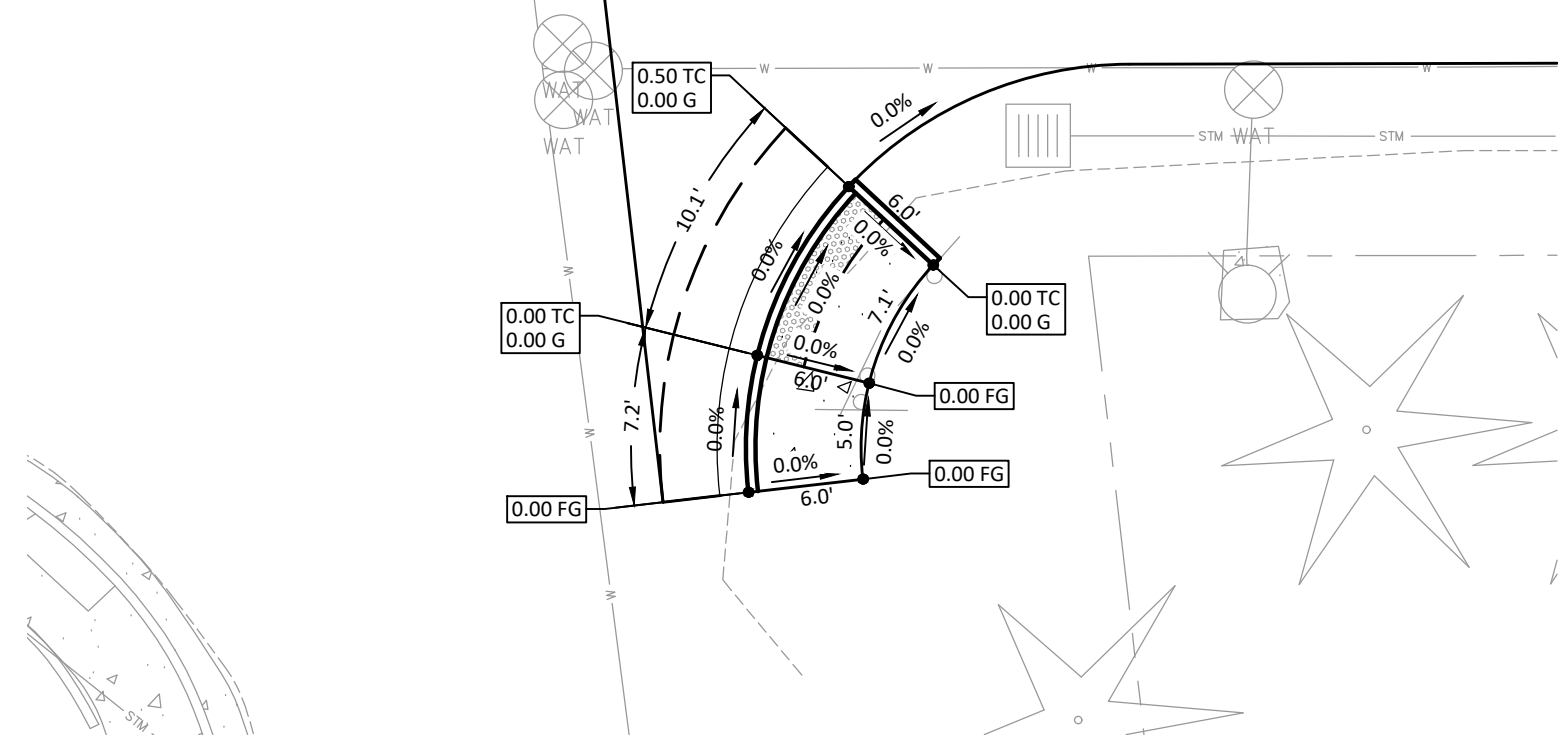
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DA01</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10

DRAWING NAME: CWL10-DA01 DRIVEWAY DETAIL GRADING.DWG

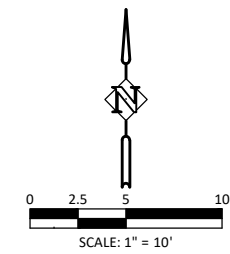




**DETAILED SPOT GRADING TO BE COMPLETED WITH 100% SUBMITTAL .**



**OLD RIVER RD AND CEDAROK DR NE AND SE RAMP - PLAN VIEW**



CURB RETURNS  
**CEDAROK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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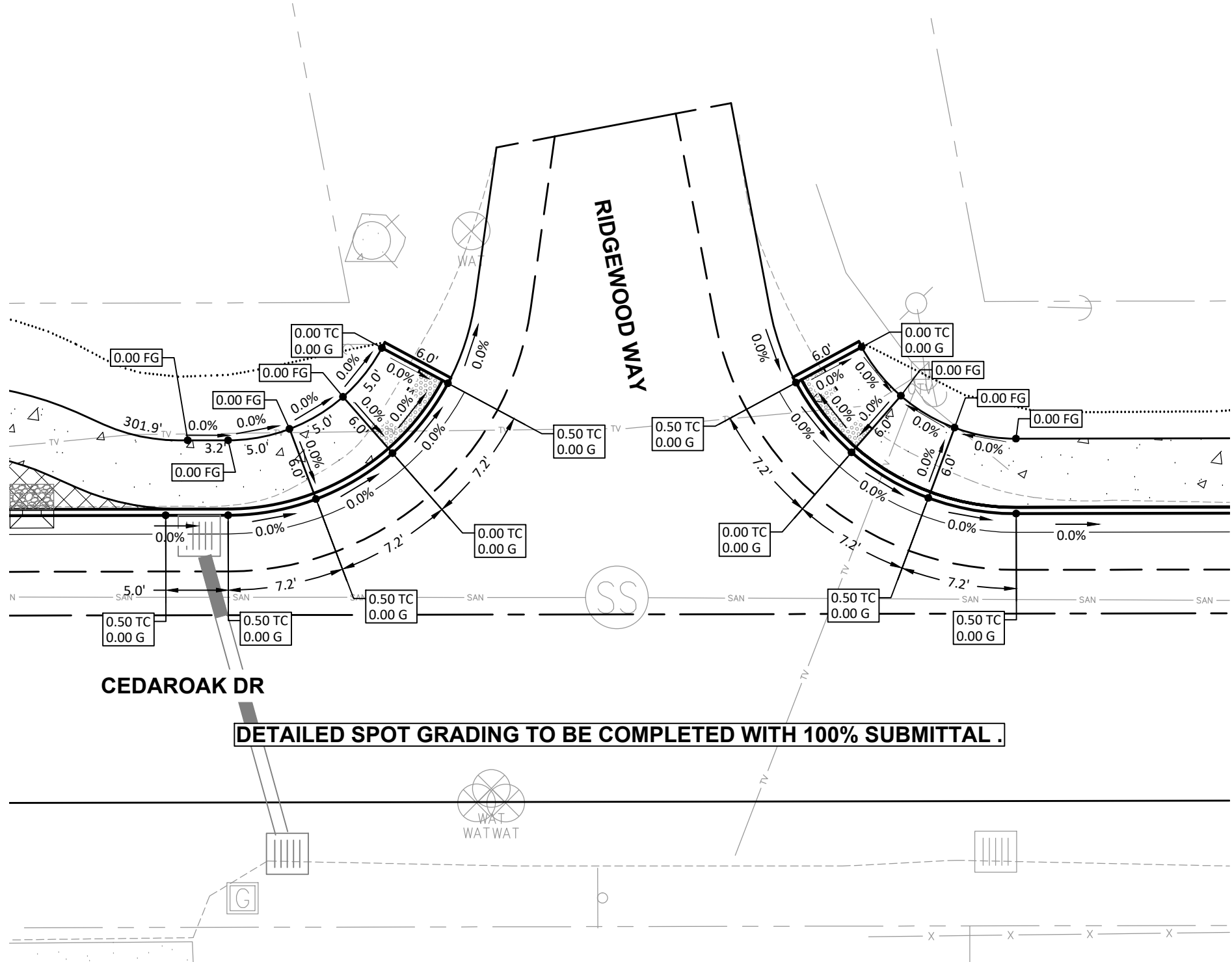
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DB01</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-DB01 CURB RETURNS.DWG



DRAWING NAME: CWL10-DB02 CURB RETURNS.DWG



**CEDARROAK DR AND RIDGEWOOD WAY NW AND NE RAMP - PLAN VIEW**

**DETAILED SPOT GRADING TO BE COMPLETED WITH 100% SUBMITTAL .**

CURB RETURNS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

**Harper Houf Peterson**  
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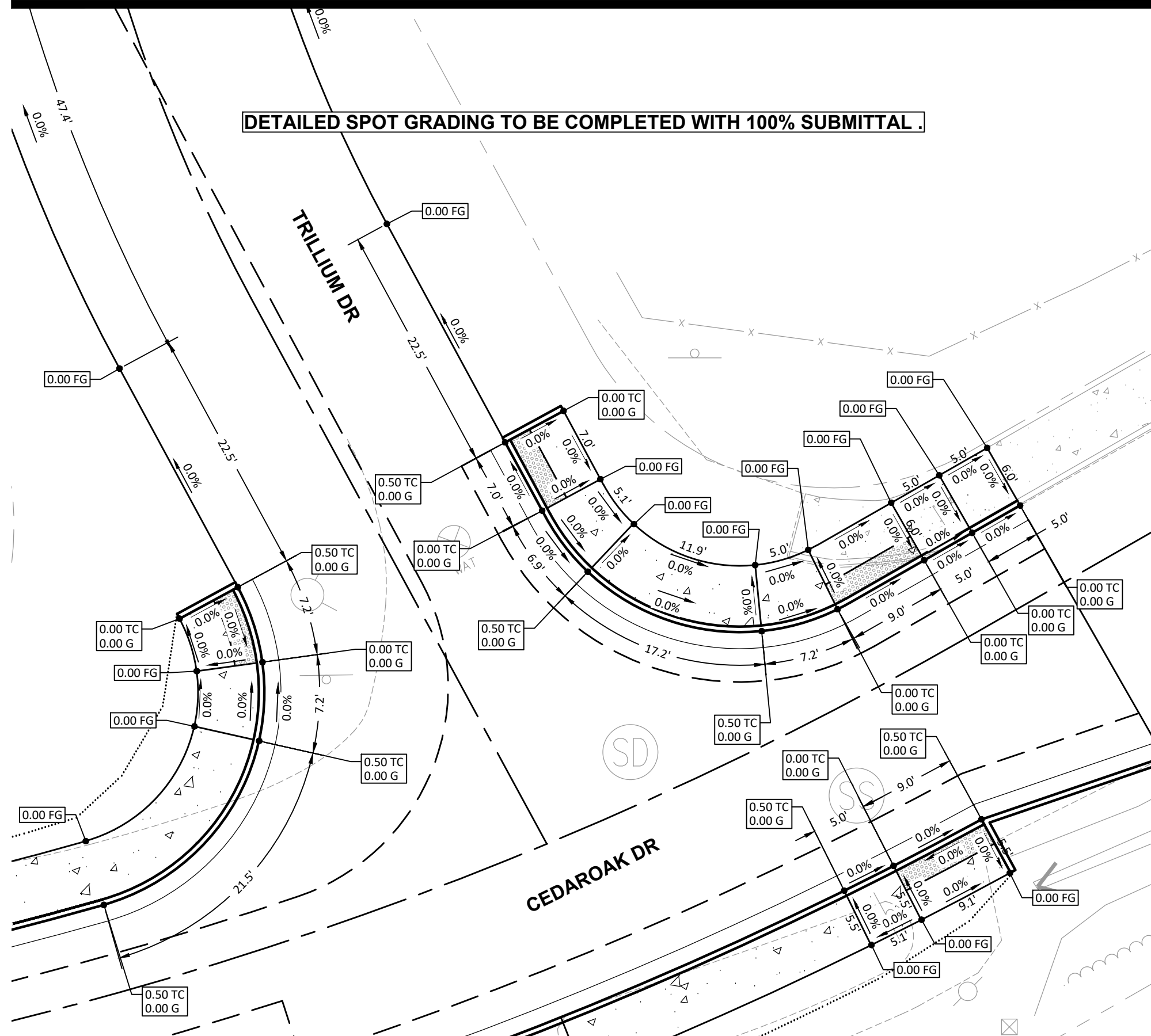


EXPIRES: 6/30/25

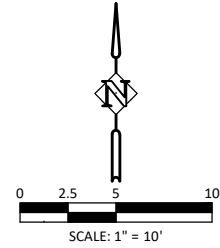
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DRAWN: HHPR TEAM	<b>DB02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

SEE SHEET DB04

DETAILED SPOT GRADING TO BE COMPLETED WITH 100% SUBMITTAL .



CEDAROK DR AND TRILLIUM DR NW AND NE RAMP - PLAN VIEW



CURB RETURNS  
**CEDAROK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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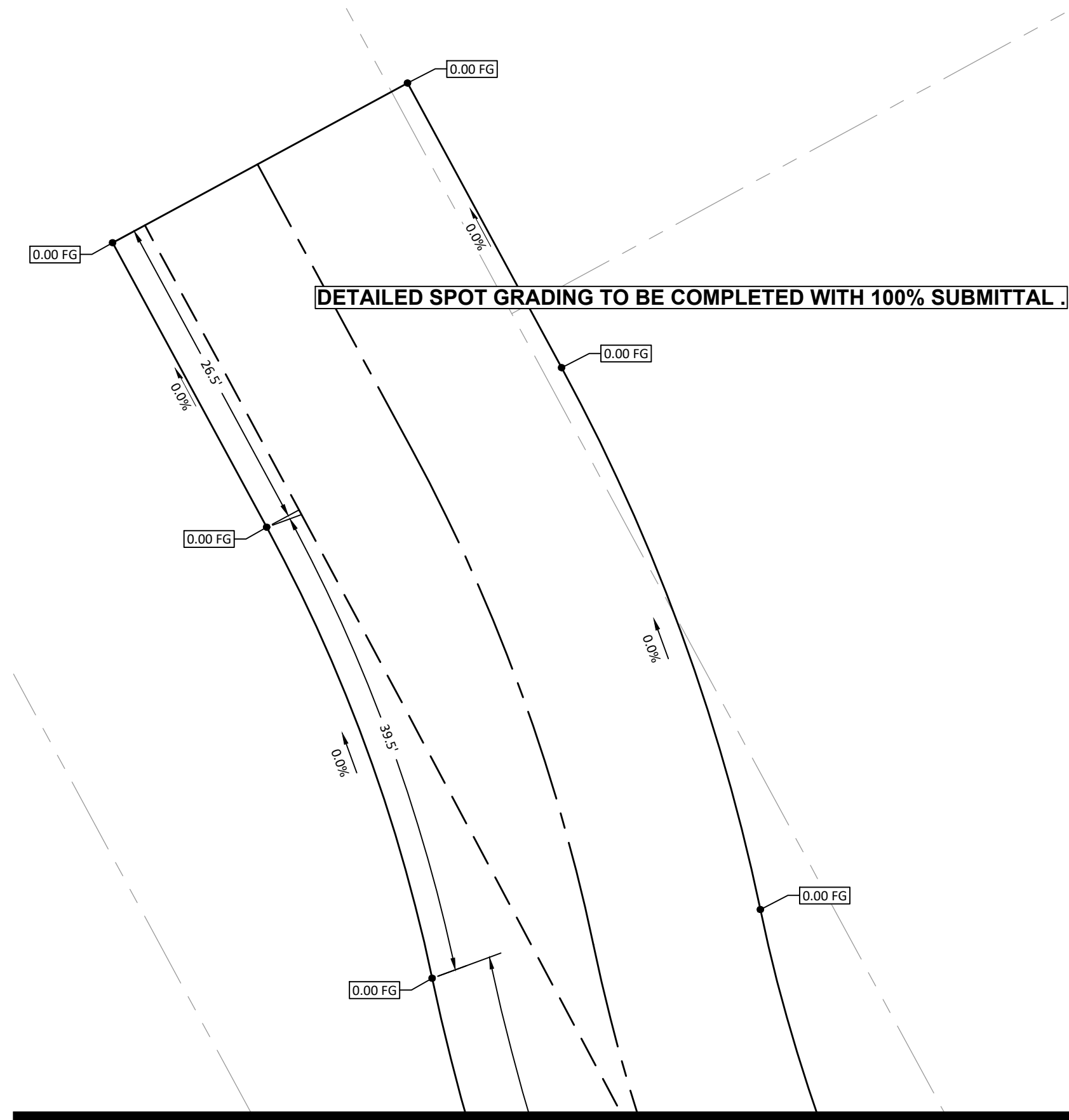


EXPIRES: 6/30/25

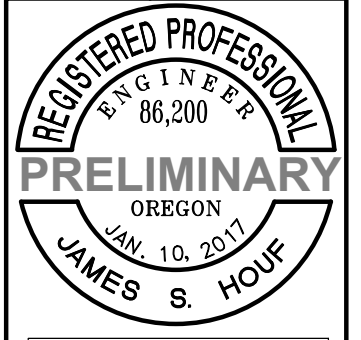
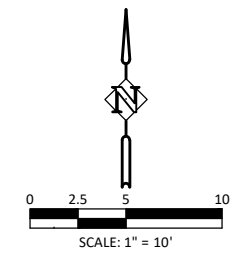
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CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-DB03 CURB RETURNS.DWG

DRAWING NAME: CWL10-DB01 CURB RETURNS.DWG



**SEE SHEET DB03**  
**TRILLIUM DR TRANSITION - PLAN VIEW**



EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DB04</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

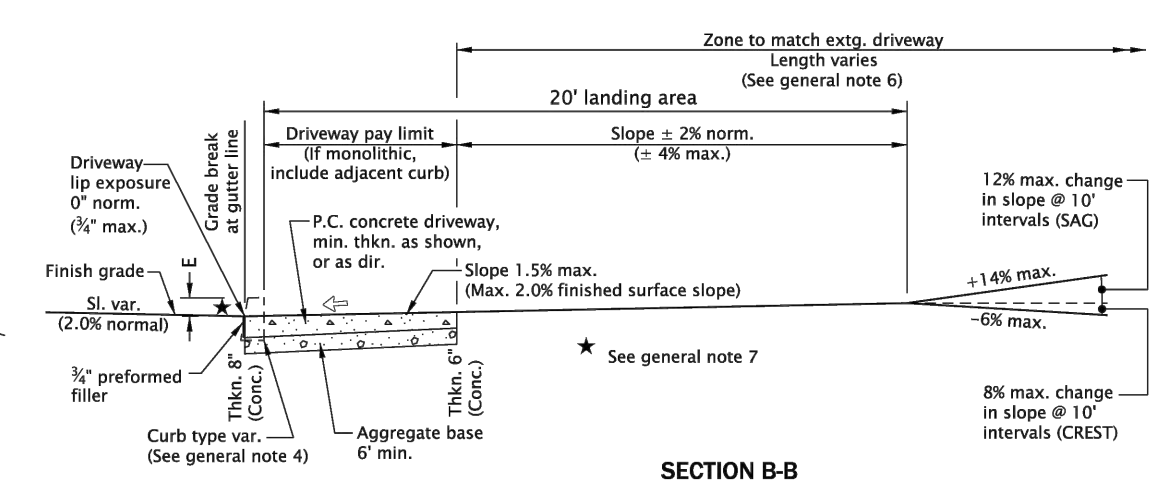
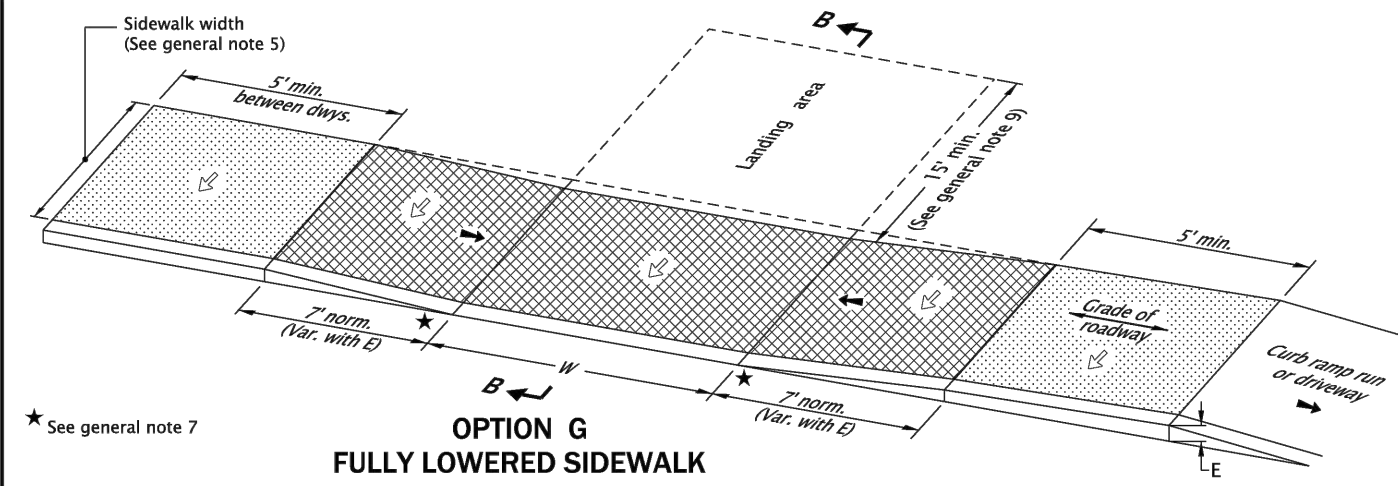
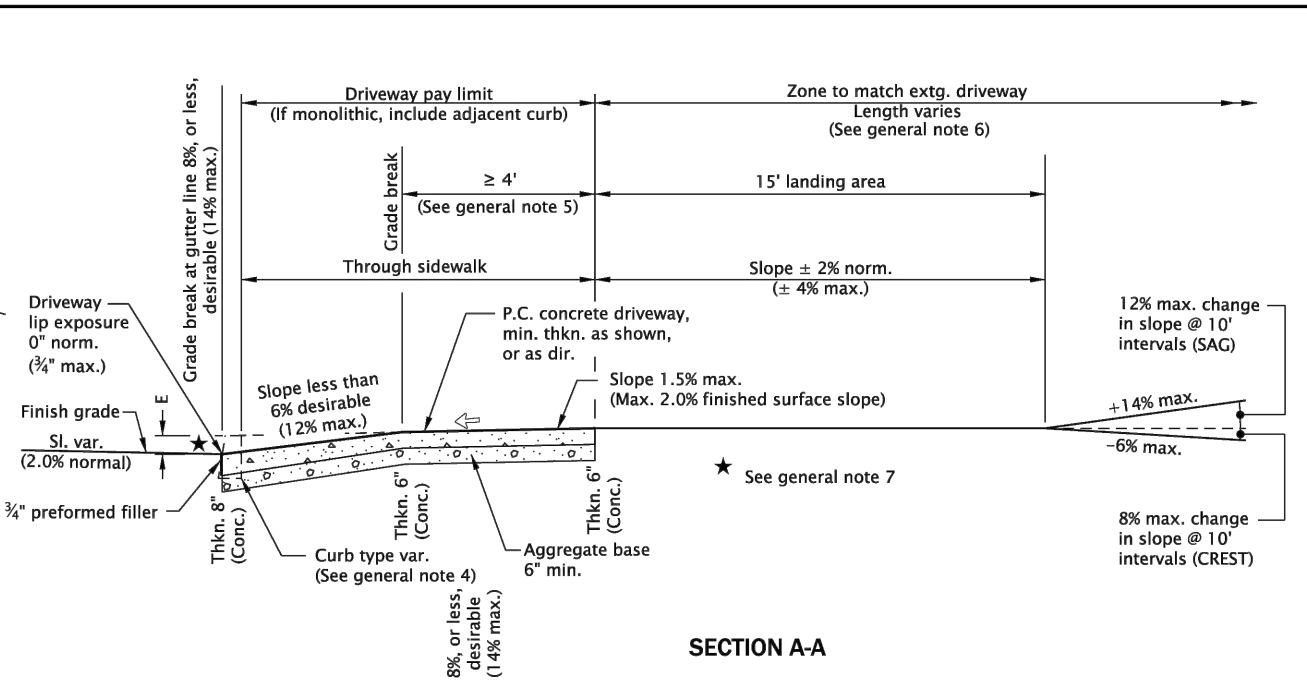
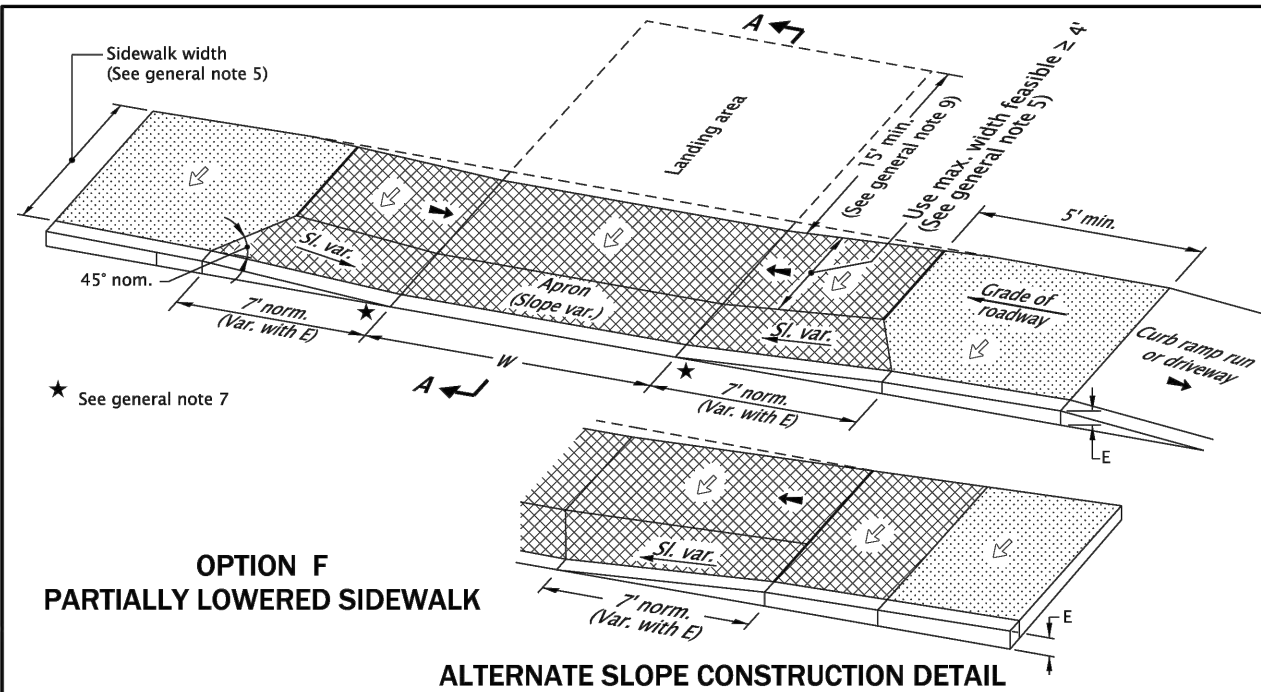
CURB RETURNS  
**CEDARROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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 Phone: 503.221.1131 www.hhpr.com Fax: 503.221.1171





RD735.dgn 14-JAN-2022



- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
- Details are based on applicable ODOT Standards.
  - Only use details allowed by jurisdiction.
  - The following dimensions are as shown on plans, or as directed: driveway width, driveway slope, sidewalk width, curb exposure, driveway lip exposure, landing area length and width. See project plans for details not shown.
  - Curb, gutter, and sidewalk types varies, see plans. See Std. Dwg. RD700 & RD701 for curb details. See Std. Dwg. RD720 for sidewalk details. See Std. Dwg. RD722 for joint details.
  - A greater than or equal 4' unobstructed clear passage with cross slope 1.5% max. (Max. 2.0% finished surface slope) is required behind driveway apron.
  - Where existing driveway is in good condition, and meets slope requirements, construct only as much landing area as required for satisfactory connection with new work.
  - Check the gutter flow depth at driveway locations to assure that the design flood does not overtop the back of sidewalk at driveway. If overtopping occurs place an inlet at upstream side of driveway or perform other approved design mitigation.
  - Construct a full depth expansion joints with 1#2" (In) preformed joint filler at ends of each driveway. Tooled joints are required at all driveway slope break lines.
  - 15' min. of the driveway behind the sidewalk should be surfaced to prevent tracking of gravel onto the sidewalk.
  - Monolithic curb & sidewalk shall retain thickened edge through lowered profile, to accommodate driveway use. See Std. Dwg. RD720 for details.

**LEGEND:**

	Sidewalk
	Driveway pay limit (If monolithic, include adjacent curb) (See project plans for details not shown)
	Cross slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
	Running slope 7.5% max. (Max. 8.3% finished surface slope)
<b>W</b>	Width of driveway
<b>E</b>	Curb exposure

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**CURB LINE SIDEWALK DRIVEWAYS OR ALLEYS (OPTIONS F & G) ODOT HIGHWAYS**

2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. N/A SDR DATE: 20-JUL-2020 RD735

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
CEDARROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

**Harper Houf Peterson Righellis Inc.**  
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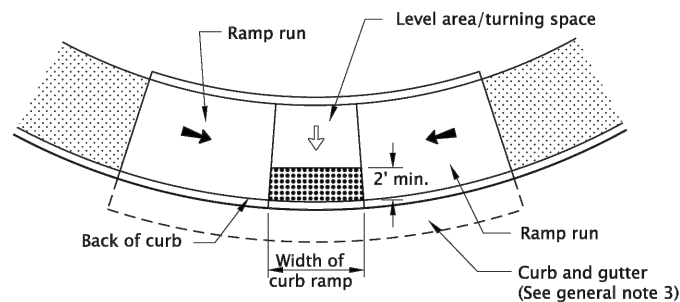


**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
JAMES S. HOUF  
EXPIRES: 6/30/25

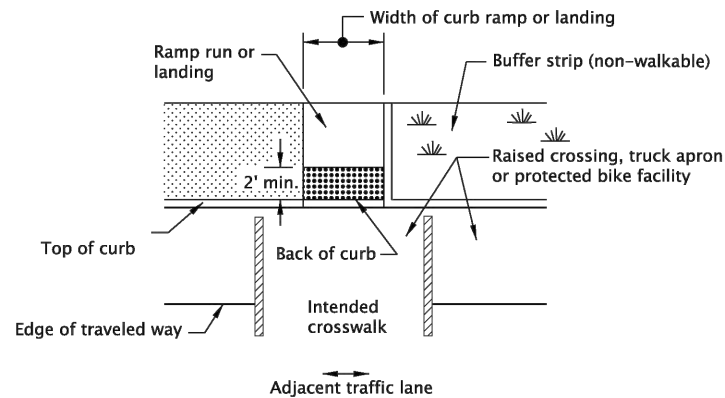
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC01</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

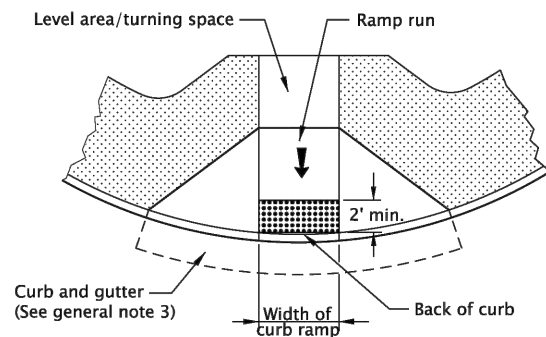




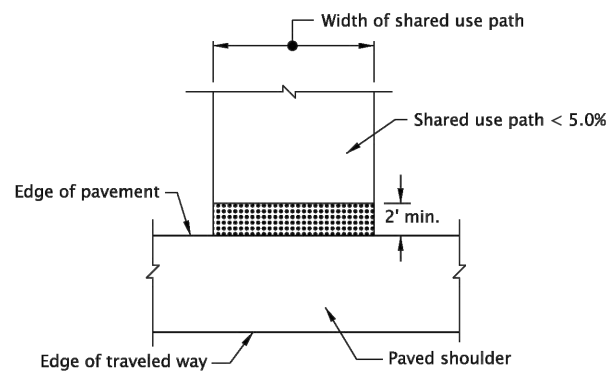
**PARALLEL CURB RAMP**



**RAISED CROSSING, TRUCK APRON OR PROTECTED BIKE FACILITY**



**PERPENDICULAR CURB RAMP  
GRADE BREAK IN FRONT OF CURB**



**SHARED-USE PATH CONNECTION**

**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. Detectable warning surface details & locations are based on applicable ODOT Standards.
2. See project plans for details not shown.  
See Std. Dwgs. RD700 & RD701 for curbs.  
See Std. Dwg. RD902 for detectable warning surface installation details.
3. On or along state highways, curb and gutter is required at curb ramps.
4. Detectable warning surface placement for perpendicular ramps vary as shown.

**LEGEND:**

- Marked or intended crossing location
- Sidewalk
- Detectable warning surface
- Cross slope 1.5% max.  
(Max. 2.0% finished surface slope)  
(Normal sidewalk cross slope)
- Running slope 7.5% max.  
(Max. 8.3% finished surface slope)

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**DETECTABLE WARNING SURFACE PLACEMENT FOR CURB RAMPS**

2024

DATE	REVISION	DESCRIPTION
07-2020	NEW DRAWING CREATED	

CALC. BOOK NO. N/A SDR DATE 20-JUL-2020 **RD904**

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

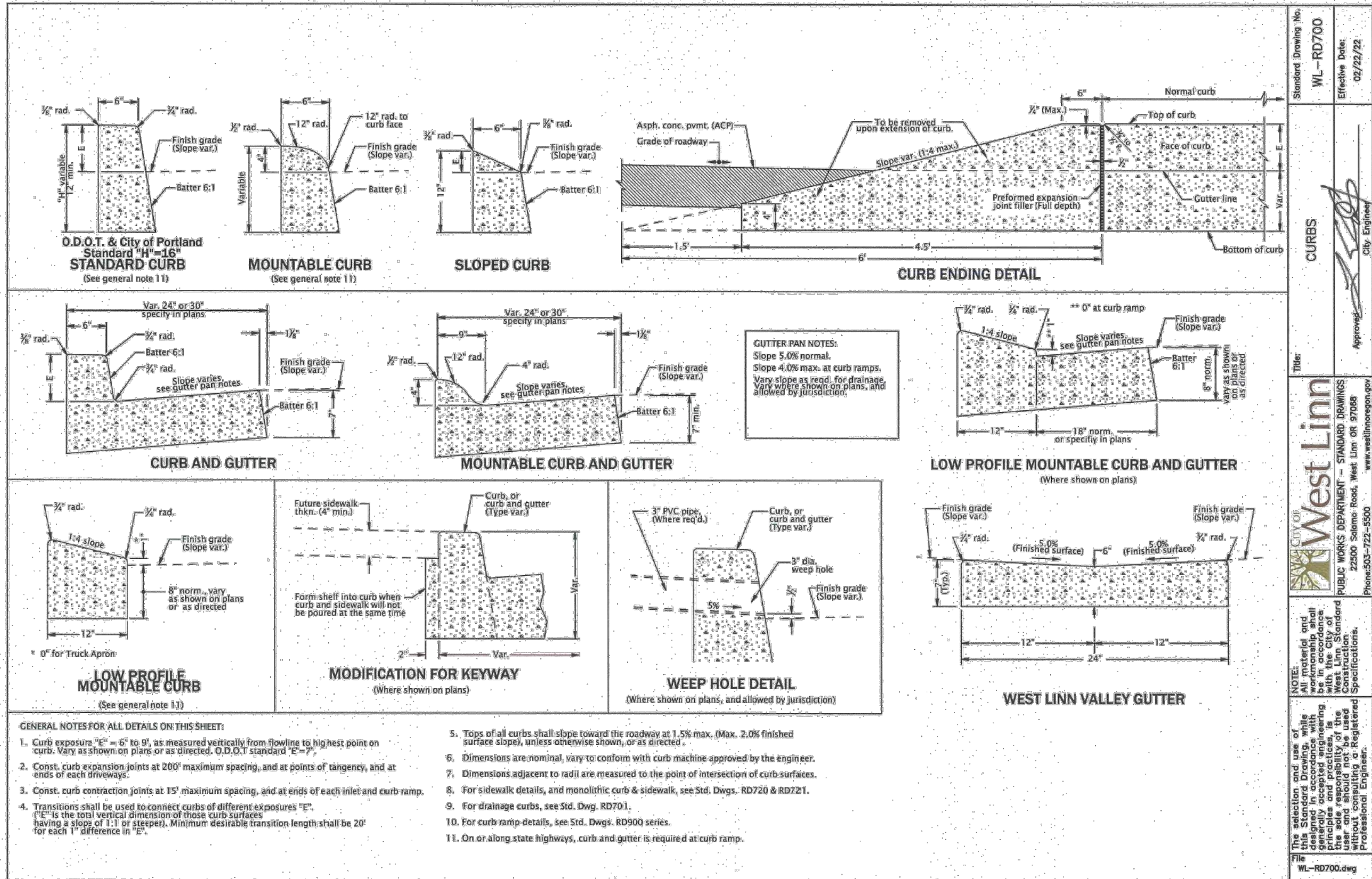
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CITY OF  
**West Linn**

**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
**JAMES S. HOUF**  
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM SHEET NO.  
DRAWN: HHPR TEAM **DC02**  
CHECKED: JSH  
DATE: 2-12-2024 JOB NO. CWL-10

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG



- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
- Curb exposure "E" = 6" to 9", as measured vertically from flowline to highest point on curb. Vary as shown on plans or as directed. O.D.O.T. standard "E" = 7".
  - Const. curb expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveways.
  - Const. curb contraction joints at 15' maximum spacing, and at ends of each inlet and curb ramp.
  - Transitions shall be used to connect curbs of different exposures "E". ("E" is the total vertical dimension of those curb surfaces having a slope of 1:1 or steeper). Minimum desirable transition length shall be 20' for each 1" difference in "E".
  - Tops of all curbs shall slope toward the roadway at 1.5% max. (Max. 2.0% finished surface slope), unless otherwise shown, or as directed.
  - Dimensions are nominal, vary to conform with curb machine approved by the engineer.
  - Dimensions adjacent to radii are measured to the point of intersection of curb surfaces.
  - For sidewalk details, and monolithic curb & sidewalk, see Std. Dwgs. RD720 & RD721.
  - For drainage curbs, see Std. Dwg. RD701.
  - For curb ramp details, see Std. Dwgs. RD900 series.
  - On or along state highways, curb and gutter is required at curb ramp.

Standard Drawing No. **WL-RD700**  
Effective Date: **02/22/22**

Title: **CURBS**

City Engineer: *[Signature]*

Approved: *[Signature]*

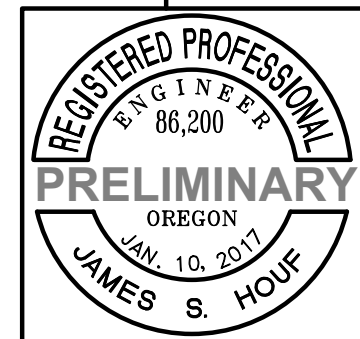
West Linn  
PUBLIC WORKS DEPARTMENT - STANDARD DRAWINGS  
22500 Salem Road, West Linn, OR 97068  
Phone: 503-722-5500

NOTE:  
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user. The City of West Linn is not liable for any errors or omissions without consulting a Registered Professional Engineer.

File: **WL-RD700.dwg**

STANDARD DETAILS  
**CEDAR OAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

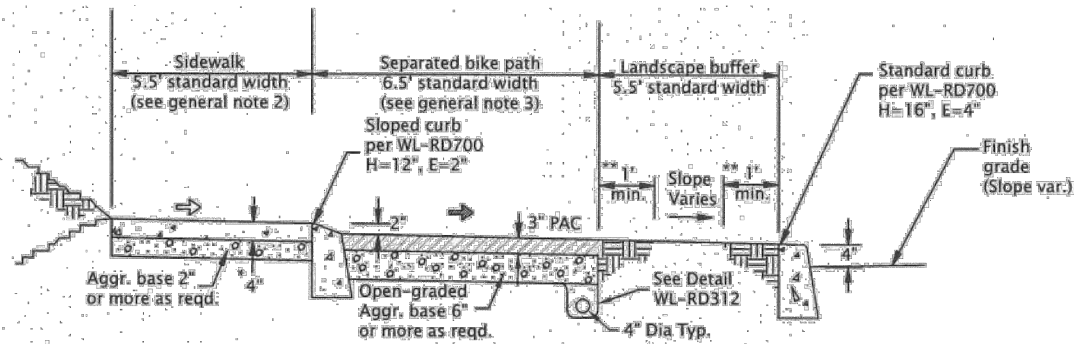
Harper Houf Peterson  
Righellis Inc.  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503-221-1131 www.hhp.com



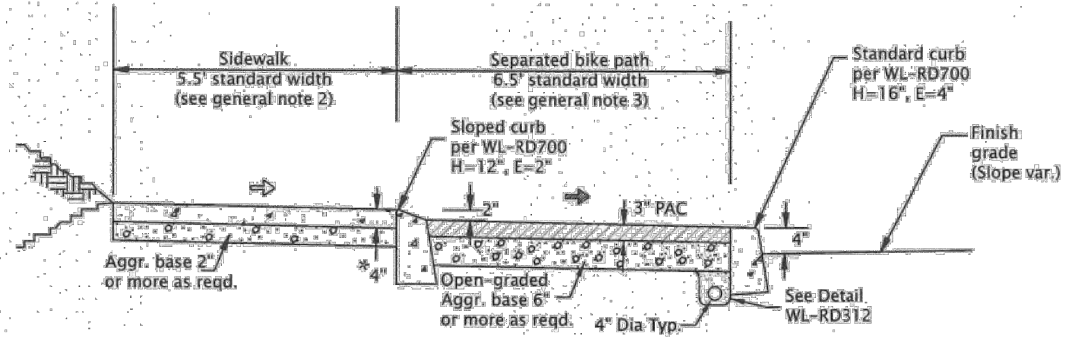
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC03</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10



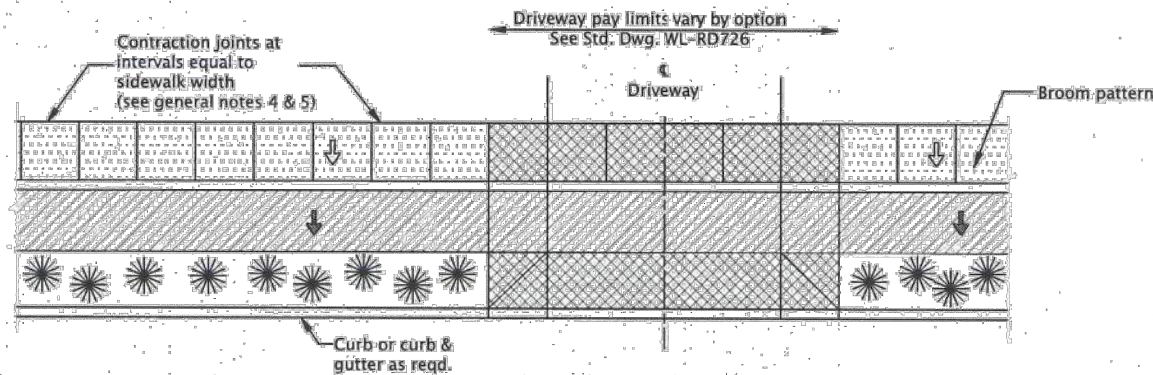
DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG



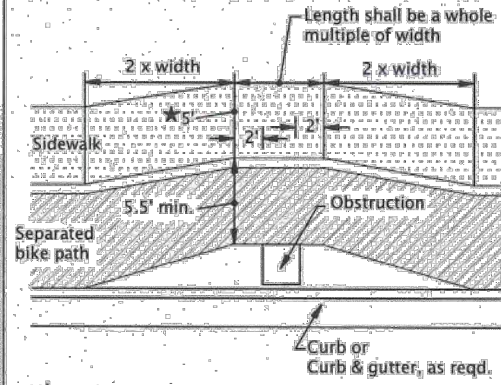
**STANDARD SETBACK SEPARATED BIKE PATH AND SIDEWALK**



**ALTERNATE CURB LINE SEPARATED BIKE PATH AND SIDEWALK**

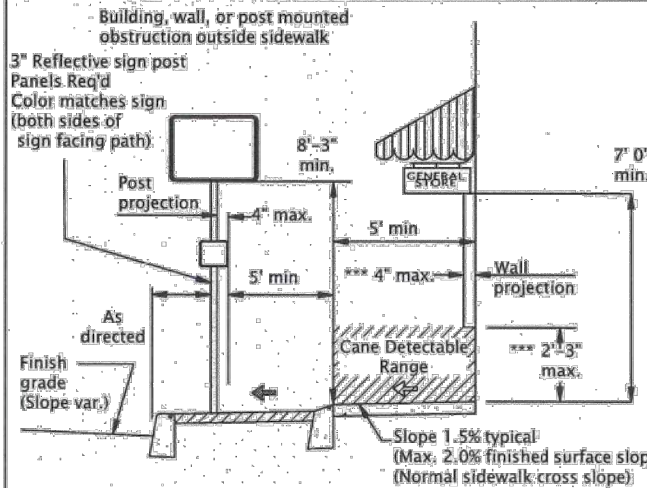


**PLAN VIEW - STANDARD SETBACK SEPARATED BIKE PATH AND SIDEWALK**



★ When site constraints prohibit a 5' passage, the Engineer may direct this to be reduced, but no less than 4" (as shown on plans).

**REQUIRED ALTERNATE CURB LINE SEPARATED BIKE PATH AND SIDEWALK WIDENING AROUND OBSTRUCTIONS**



**CLEAR CIRCULATION PATH FOR ALTERNATE CURB LINE SEPARATED BIKE PATH AND SIDEWALK**

(Only when path widening around an obstruction is not feasible)

- ▨ Sidewalk (PCC)
- ▨ Separated bike path (3/4" PAC)
- ▨ Driveway (PCC) (See general note 8) (See project plans for details not shown)
- ↔ Slope sidewalk 1.5% typical (Max. 2.0% finished surface slope)
- ↔ Slope separated bike lane 1.5% typical (Max. 8.0% finished cross slope)

- \* As specified in plans, min. 4". If sidewalk is intended as portion of a driveway or mountable curb is used min. thickness 6".
- \*\* Provide compacted backfill adjacent to curb and separated bike path
- \*\*\* Objects with base below 2'-3" may protrude any distance as long as the 5' circulation path is maintained. When an object with a base higher than 2'-3" protrudes further than 4" provide a detection below protrusion to delineate edge.

Standard Drawing No. **WL-RD721**  
 Effective Date: **02/22/22**  
 Title: **STANDARD SEPARATED BIKE PATH AND SIDEWALK**  
 Approved: City Engineer  
 West Linn  
 PUBLIC WORKS DEPARTMENT - STANDARD DRAWINGS  
 22500 Solamo Road, West Linn, OR 97068  
 Phone: 503-722-5500  
 www.westlinnoregon.gov  
 NOTE: The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.  
 File: **WL-RD721.dwg**

- GENERAL NOTES FOR ALL DETAILS:**
- Include additional paved or unpaved 2' clearance to vertical faces higher than 5' such as retaining walls, sound walls, fences and buildings.
  - Curb type and sidewalk width as shown on plans or as directed. On sidewalks 8' and wider, provide a longitudinal joint at the midpoint.
  - Storm drain weep hole pipes are not permitted in sidewalks with separated bike paths.
  - Const. expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveway.
  - Const. contraction joints at 15' maximum spacing, and at ends of each driveway and curb ramp.
  - For curb details, see Std. Dwg. WL-RD700 and ODOT Std. Dwg. RD701.
  - Sidewalk details are based on ODOT applicable standards.
  - For driveway details not shown, see Std. Dwg. WL-RD726 and WL-RD736.
  - See project plans for details not shown.
  - The standard layout for separated bike path and sidewalk shall be used unless site conditions require the reverse slope separated bike path and sidewalk layout. See Std. Dwg. WL-RD722.

STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

Harper Houf Peterson  
 Righellis Inc.  
 ENGINEERS & PLANNERS  
 LANDSCAPE ARCHITECTS & SURVEYORS  
 205 SE Spokane Street, Suite 200, Portland, OR 97202  
 Phone: 503.221.1131 www.hhp.com fax: 503.221.1171

CITY OF  
**West Linn**

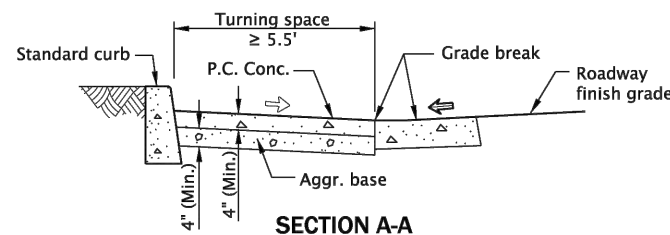
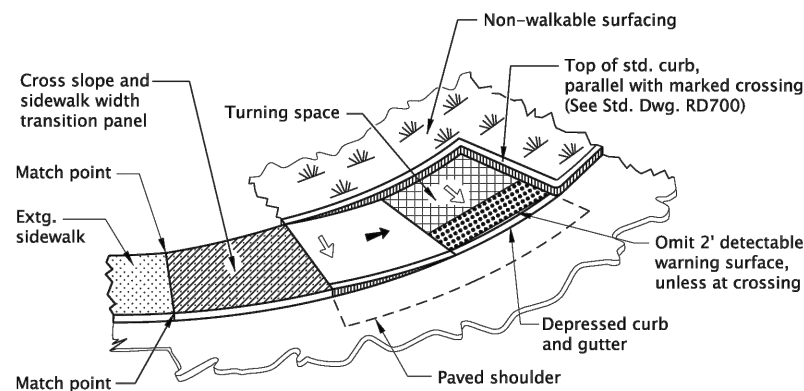
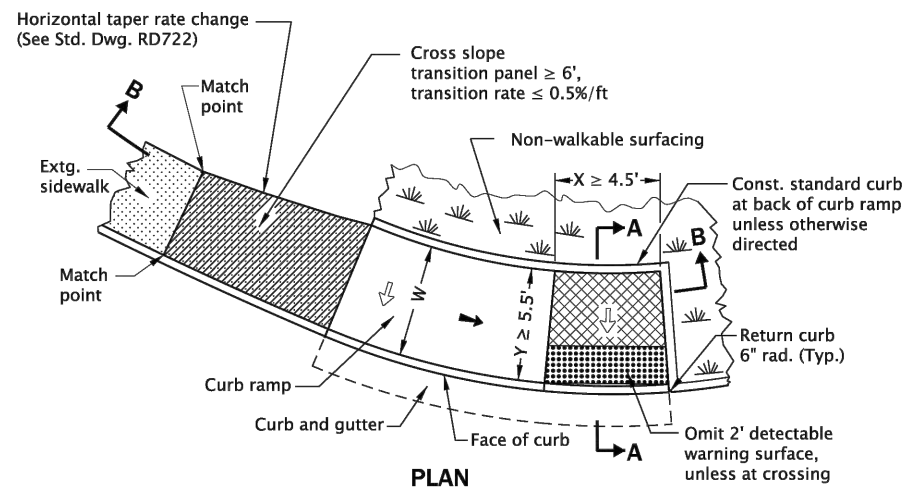
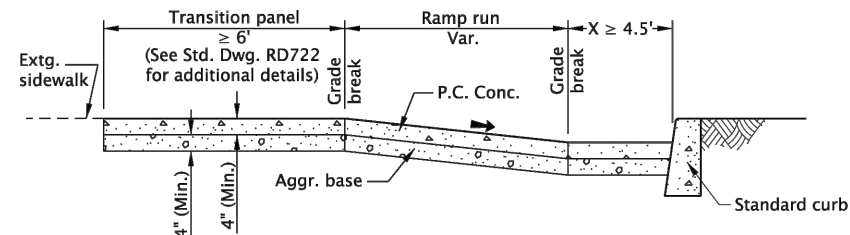
**REGISTERED PROFESSIONAL ENGINEER**  
 86,200  
**PRELIMINARY**  
 OREGON  
 JAN. 10, 2017  
**JAMES S. HOUF**

EXPIRES: 6/30/25

DESIGNED: HHPR TEAM  
 DRAWN: HHPR TEAM  
 CHECKED: JSH  
 DATE: 2-12-2024  
 SHEET NO. **DC04**  
 JOB NO. CWL-10



RD960.dgn 19-JUL-2021



**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. Curb ramp details are based on applicable ODOT applicable Standards.
2. See project plans for details not shown. See Std. Dwg. RD700 & RD701 for curbs. See Std. Dwg. RD720 & RD721 for sidewalks. See Std. Dwg. RD722 for transition panel details. See Std. Dwg. RD902 through RD908 for detectable warning surface installation details. See Std. Dwg. RD920 for parallel curb ramp details.
3. Site conditions normally require a project special design. See project plans for details not shown.
4. Tooled dummy joints are required at all curb ramp grade break lines, (see Std. Dwg. RD722).
5. Curb ramp slopes shown are relative to the true level horizon (zero bubble).
6. Place detectable warning surface at the back of curb for a minimum depth of 2' in the direction of pedestrian travel full width of curb ramp opening that is adjacent to traffic.
7. Place an inlet at upstream side of curb ramp or perform other approved design mitigation. Check the gutter flow depth at curb ramp locations to assure that the design flood does not overtop the back of sidewalk.
8. When a shared use path terminates, the curb ramp shall be the full width of the path, the turning space Y-dimension should be minimum 8' wide to enable bicycles to ride from ramp to shoulder.
9. Grade breaks at the top and bottom of curb ramp runs shall be perpendicular to the direction of the ramp run. Grade breaks shall not be permitted on the surface of ramp runs and turning spaces. Surface slopes that meet at grade breaks shall be flush.
10. On or along state highways, curb and gutter is required at curb ramps.
11. Unique curb ramp option can be used for curved or tangent roadway sections. Superelevated roadways require a site specific detail.

**LEGEND:**

- Sidewalk
- Transition panel
- Detectable warning surface
- Level area (Turning space/landing)  
Unobstructed 4.5' x 4.5'  
With obstruction 4.5' x 5.5' (Longer dimension in direction of pedestrian street crossing).  
For the purposes of this application, a max. 2.0% finished surface slope (for drainage) measured perpendicular in two directions is considered level.
- Cross slope 1.5% max.  
(Max. 2.0% finished surface slope)  
(Normal sidewalk cross slope)
- Running slope 7.5% max.  
(Max. 8.3% finished surface slope)
- Counter slope 4.0% max. ascending or descending,  
(Max. 5.0% finished surface slope)  
Slope as required for drainage
- W New construction sidewalk width. See contract plans for dimension

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**UNIQUE CURB RAMP**

2024

DATE	REVISION DESCRIPTION
07-2020	NEW DRAWING CREATED
07-2021	REVISED DETAILS AND NOTES

CALC. BOOK NO.	N/A	SDR DATE	19-JUL-2021	RD960
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**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
JAMES S. HOUF

EXPIRES: 6/30/25

DESIGNED: HHRP TEAM	SHEET NO.
DRAWN: HHRP TEAM	<b>DC05</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

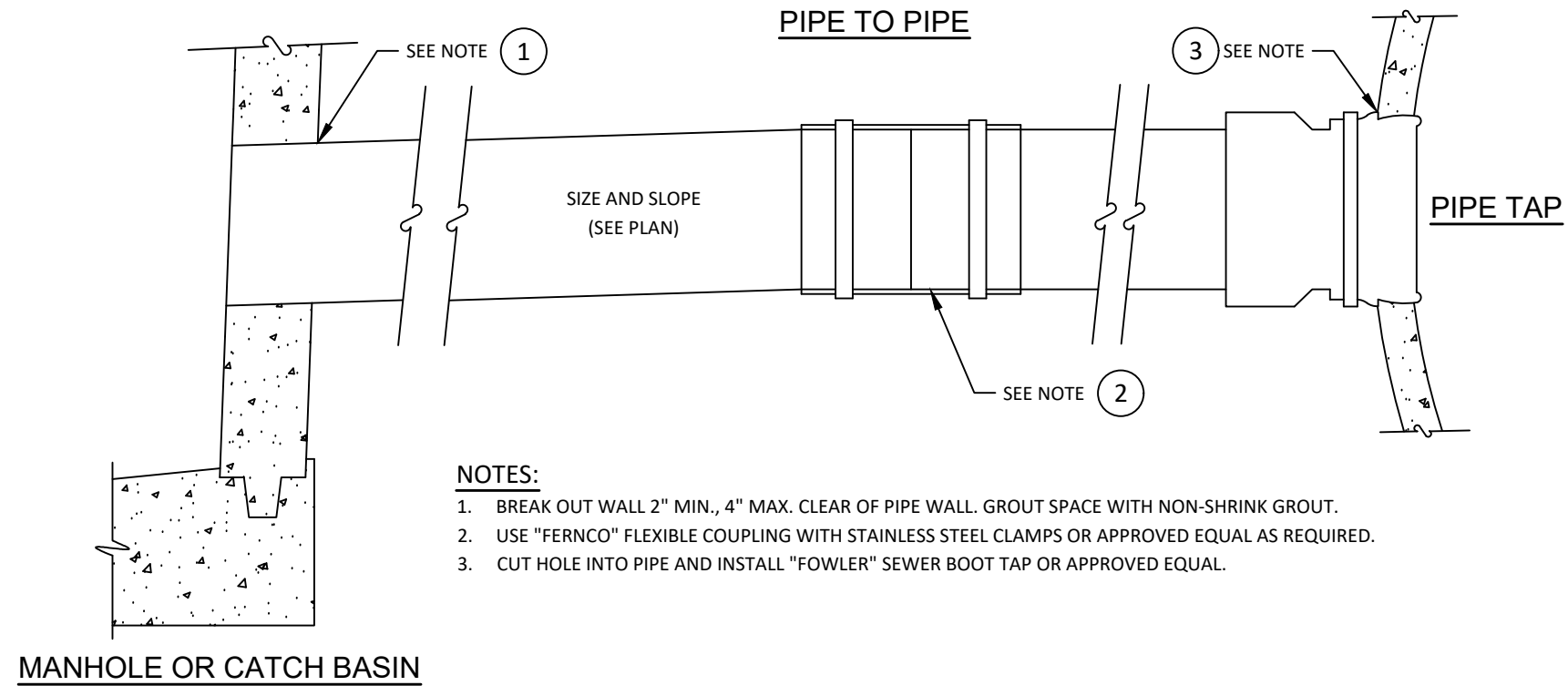
STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

Harper Houf Peterson  
Righellis Inc.  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhrp.com



DRAWING NAME: CWL10-DC05 STANDARD DETAILS.DWG





**NOTES:**

1. BREAK OUT WALL 2" MIN., 4" MAX. CLEAR OF PIPE WALL. GROUT SPACE WITH NON-SHRINK GROUT.
2. USE "FERNCO" FLEXIBLE COUPLING WITH STAINLESS STEEL CLAMPS OR APPROVED EQUAL AS REQUIRED.
3. CUT HOLE INTO PIPE AND INSTALL "FOWLER" SEWER BOOT TAP OR APPROVED EQUAL.

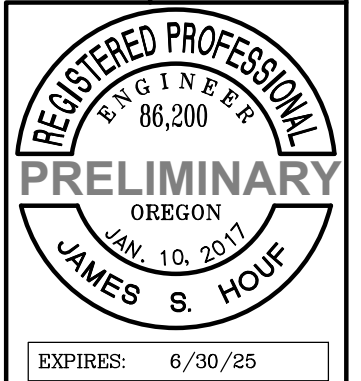
**PIPE CONNECTION**

NTS

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

STANDARD DETAILS  
**CEDAROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

**Harper Houf Peterson**  
**Righellis Inc.**  
 ENGINEERS \* PLANNERS  
 LANDSCAPE ARCHITECTS \* SURVEYORS  
 205 SE Spokane Street, Suite 200, Portland, OR 97202  
 Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

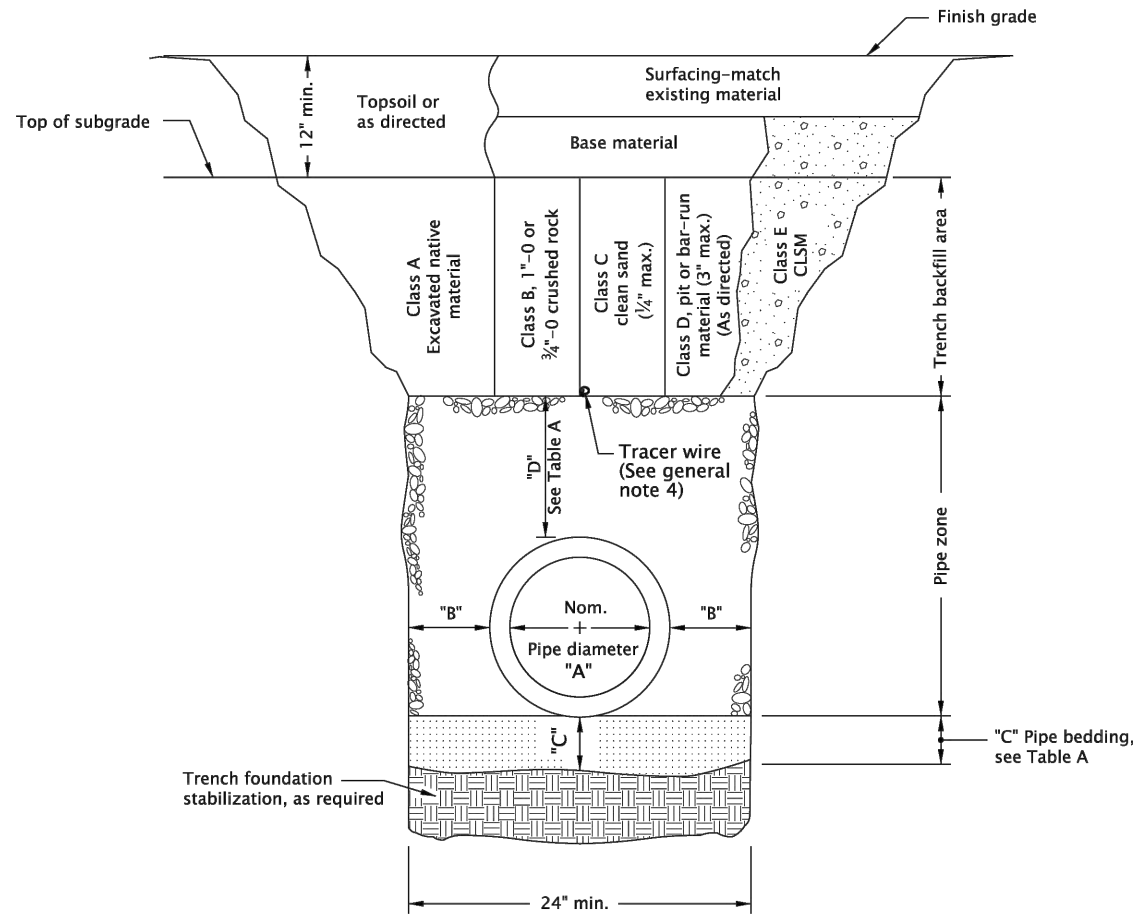


DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC06</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

TABLE A

"A" (in)	"B" (in)	"C" (in)	"D" (in)
4	10	4	8
6	10	4	8
8	10	6	10
10	10	6	10
12	12	6	10
15	12	6	10
18	16	6	12
21	16	6	12
24	18	6	12
30	18	6	12
36	24	6	14
42	24	6	14
48	24	6	14
54	24	6	14
60	24	6	14
66	24	6	14
72	24	6	14

For pipes over 72" diameter, see general note 3.



MULTIPLE INSTALLATIONS	
DIAMETER	MIN. SPACE BETWEEN PIPES
Up to 48"	24"
48" to 72"	One half (1/2) dia. of pipe

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Surfacing of paved areas shall comply with street cut Std. Dwg. RD302.
2. For pipe installation in embankment areas where the trench method will not be used and the pipe is  $\geq 36$ " diameter, increase dimension "B" to nominal pipe diameter.
3. Pipes over 72" diameter are structures, and are not applicable to this drawing.
4. See Std. Dwg. RD336 for tracer wire details (When required).

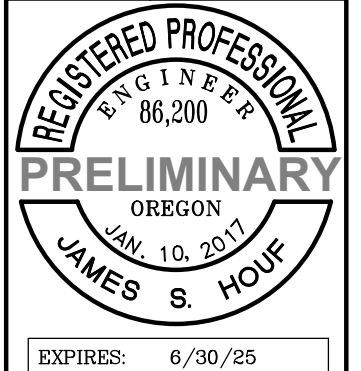
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.	
<b>OREGON STANDARD DRAWINGS</b>	
<b>TRENCH BACKFILL, BEDDING, PIPE ZONE AND MULTIPLE INSTALLATIONS</b>	
2024	
DATE	REVISION DESCRIPTION
CALC. BOOK NO. - - - - - N/A - - - - -	SDR DATE - 14-JUL-2014 - - - - - RD300

Effective Date: December 1, 2023 - May 31, 2024

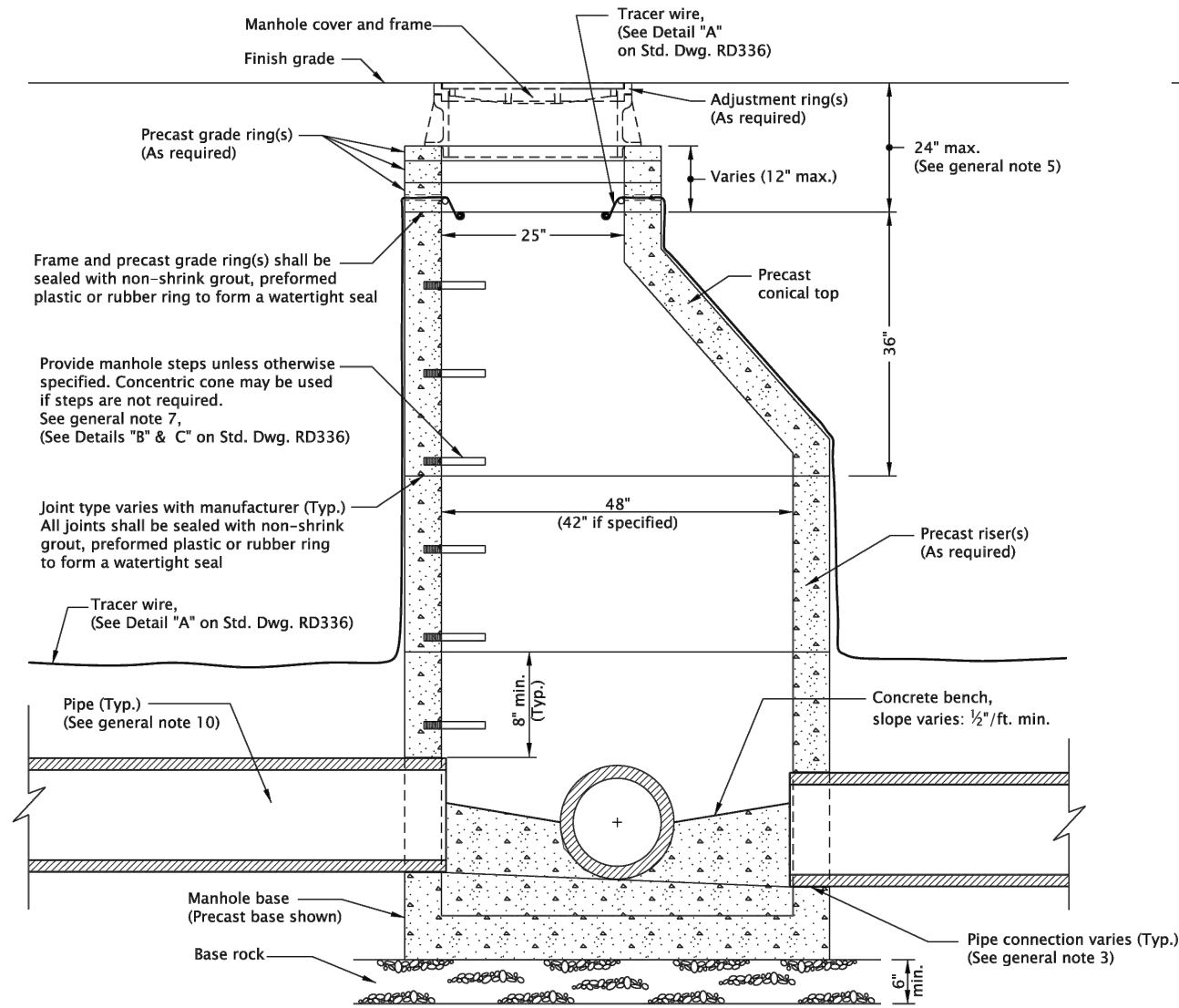
STANDARD DETAILS  
CEDARROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson  
Righellis Inc.  
ENGINEERS \* PLANNERS  
LANDSCAPE ARCHITECTS \* SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

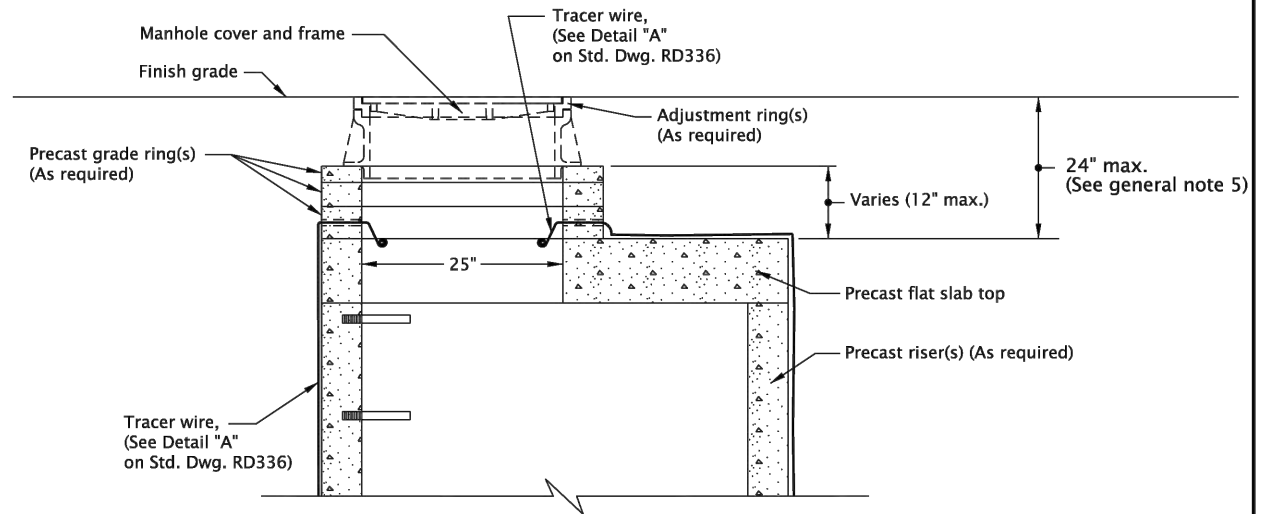


DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC07</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10

RD335.dgn 20-JUL-2020



MANHOLE WITH PRECAST CONICAL TOP



MANHOLE WITH PRECAST FLAT SLAB TOP

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. All precast products shall conform to requirements of ASTM C478.
2. Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
3. See Std. Dwg. RD345 for pipe to manhole connections.
4. See Std. Dwg. RD344 for manhole base section.
5. Adjust 24" maximum.
6. All connecting pipes shall have a tracer wire, or approved alternate.
7. See Std. Dwg. RD336 for manhole steps.
8. See Std. Dwg. RD336 for details not shown.
9. See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
10. Max. pipe diameter varies with pipe material.
11. See Std. Dwg. RD342 for shallow manholes.
12. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.

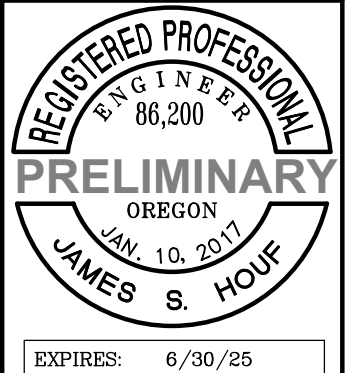
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.	
<b>OREGON STANDARD DRAWINGS</b>	
<b>STANDARD STORM SEWER MANHOLE</b>	
2024	
DATE	REVISION DESCRIPTION
CALC. BOOK NO. N/A	SDR DATE 21-JUN-2019 RD335

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
CEDARROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson Righellis Inc.  
ENGINEERS PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

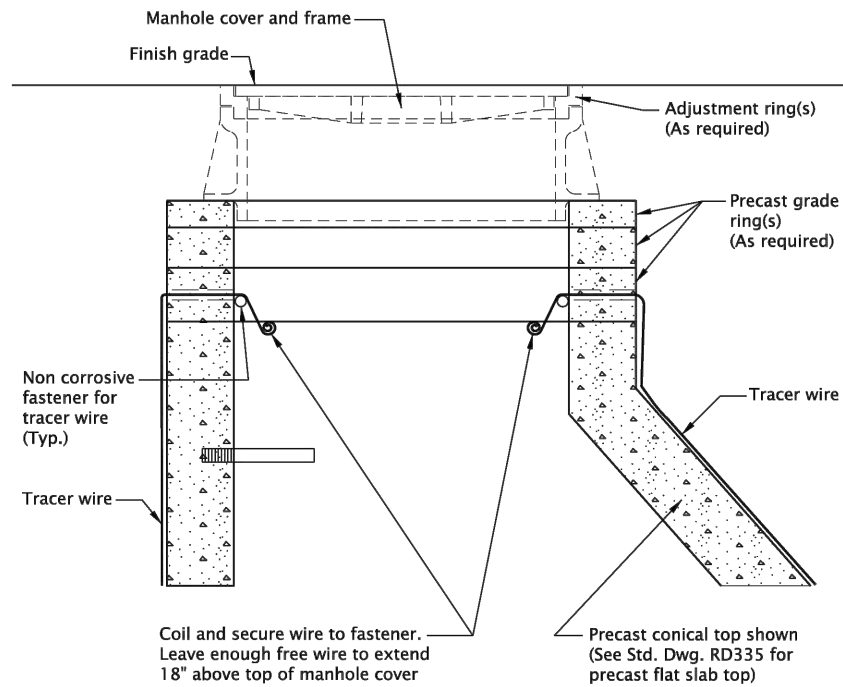


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DRAWN: HHPR TEAM	<b>DC08</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

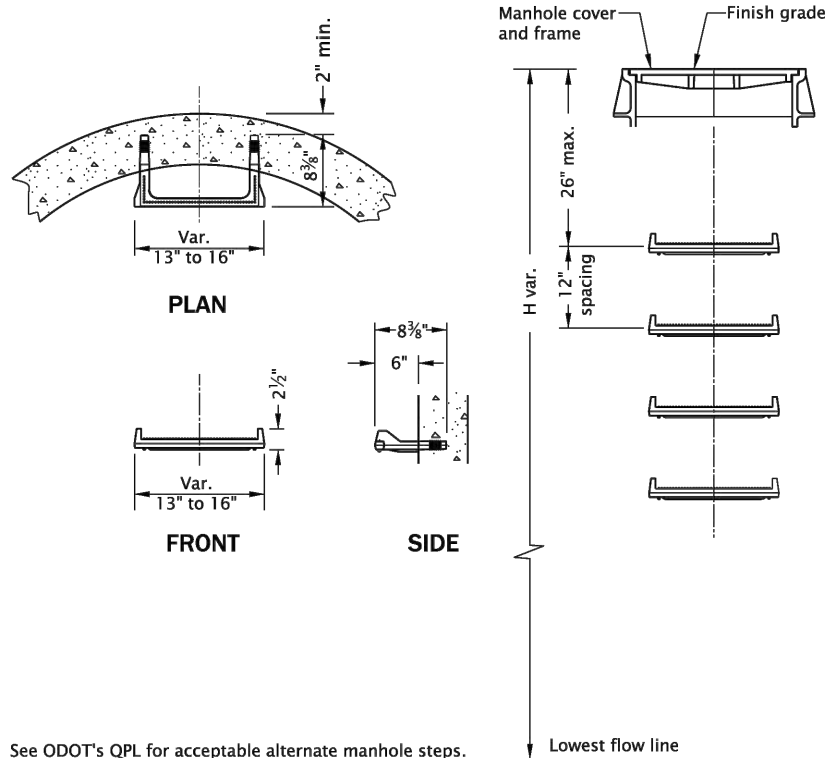
DRAWING NAME: CWL10-DC08 STANDARD DETAILS.DWG



RD336.dgn 20-JUL-2020

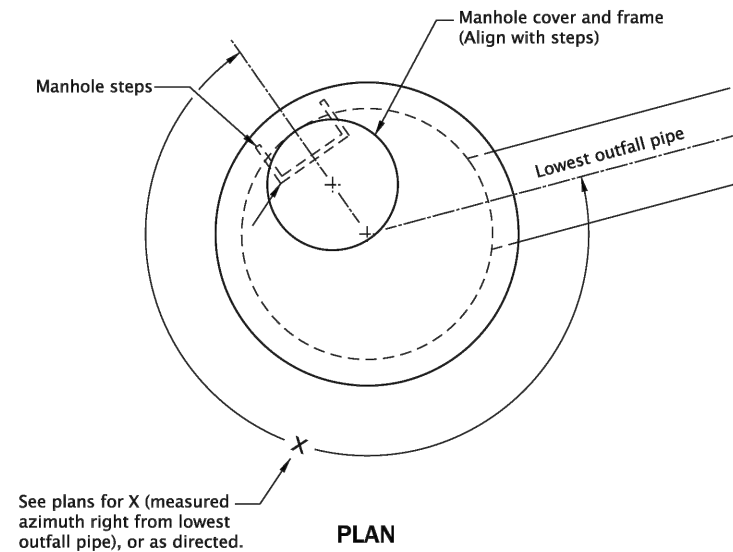


**DETAIL "A"  
TRACER WIRE**  
(See general note 6)



See ODOT's QPL for acceptable alternate manhole steps.  
NOTE: No conflict with pipe align with available shelf.

**DETAIL "B"  
MANHOLE STEPS**  
(See general note 7)



**DETAIL "C"  
PRECAST CONICAL TOP  
OR  
PRECAST FLAT SLAB TOP  
AND MANHOLE STEPS ORIENTATION**  
(See general note 7)

**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. All precast products shall conform to requirements of ASTM C478.
2. Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
3. See Std. Dwg. RD345 for pipe to manhole connections.
4. See Std. Dwg. RD344 for manhole base section.
5. Adjust 24" maximum.
6. All connecting pipes shall have a tracer wire, or approved alternate. Place tracer wire directly over pipe centerline and on top of the pipe zone material.
7. Steps shall conform to requirements of ASTM C478. When H=42" or less omit steps. See Detail "C" for alignment of steps, and manhole cover and frame.
8. See Std. Dwg. RD335 for details not shown.
9. See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
10. Max. pipe diameter varies with pipe material.
11. See Std. Dwg. RD342 for shallow manholes.
12. See project plans for details not shown.

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**STANDARD  
MANHOLE DETAILS**

2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. N/A SDR DATE 16-JAN-2019 **RD336**

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

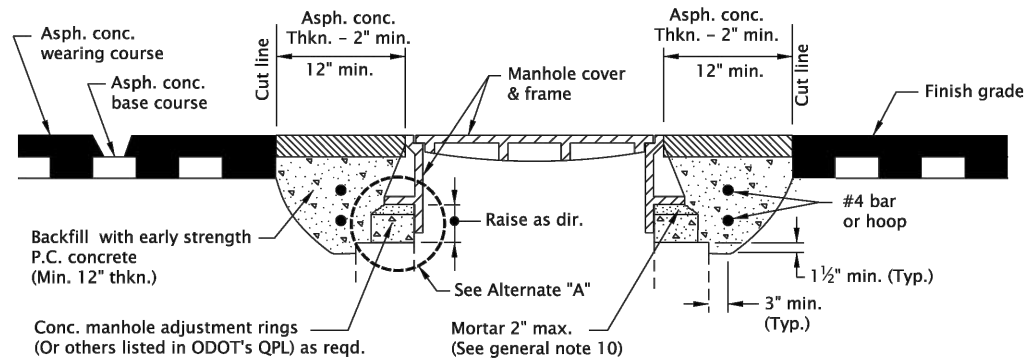
**Harper Houf Peterson Righellis Inc.**  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



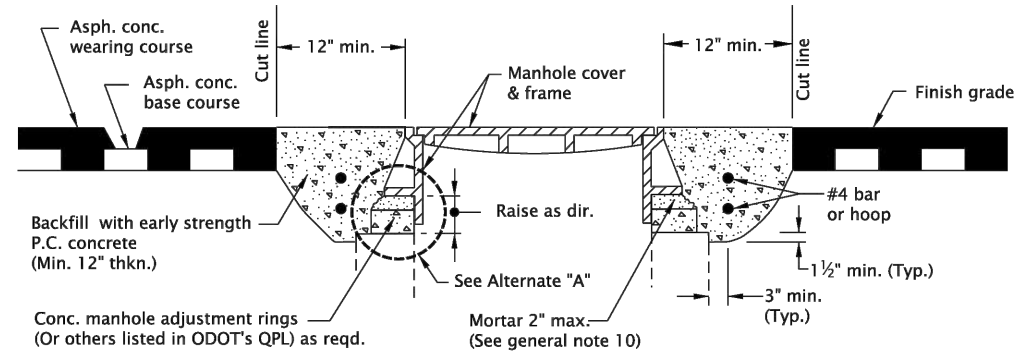
DESIGNED: HHPR TEAM SHEET NO.  
DRAWN: HHPR TEAM **DC09**  
CHECKED: JSH  
DATE: 2-12-2024 JOB NO. CWL-10

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

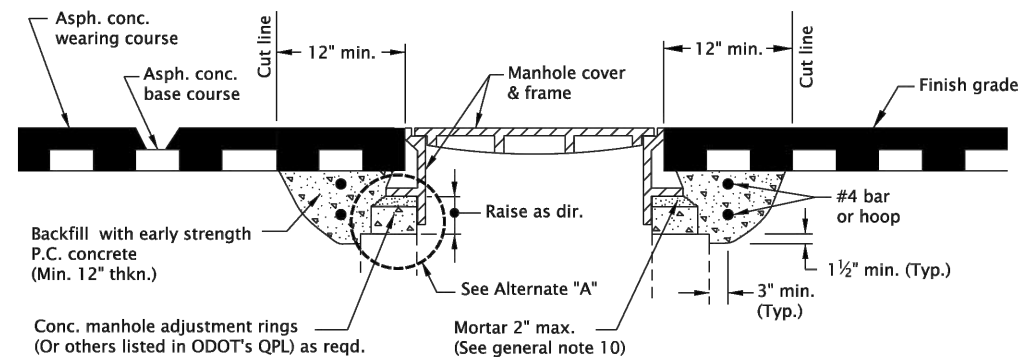
RD360.dgn 20-JUL-2020



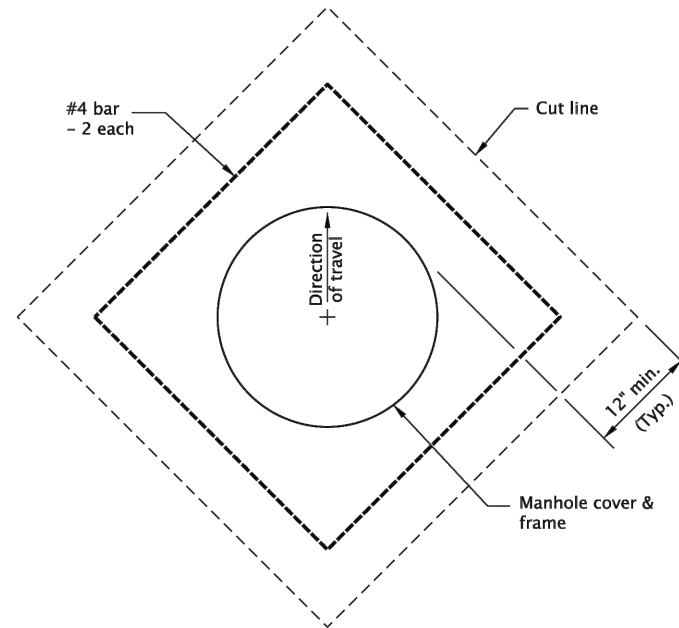
**METHOD "A"**



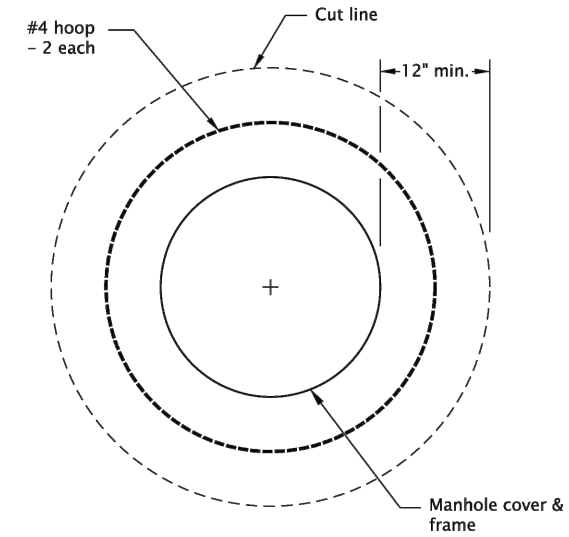
**METHOD "B"**



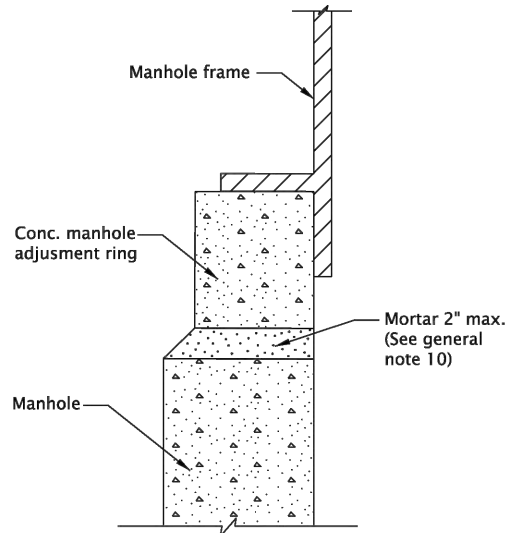
**METHOD "C"**



**PLAN SQUARE CUT**



**PLAN CIRCULAR CUT**



**ALTERNATE "A"**

**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. Cover manhole with building paper and const. asph. conc. base course and wearing courses.
2. Saw cut square or circular excavation around manhole 12" min. from manhole frame.
3. Raise manhole cover and frame to finish grade by installing conc. manhole adjustment rings and leveling mortar, as shown.
4. Backfill with early strength Portland Cement Concrete. All concrete shall be commercial grade concrete.
5. Protect from traffic loading until conc. has cured to 3000 psi.
6. Apply tack coat to edges of existing pavement before installing patch.
7. Finish joint with asphalt seal and sand.
8. See Std. Dwg. RD336 for manhole steps details.
9. See appropriate manhole standard drawings for details not shown.
10. Use epoxy for synthetic grade rings.
11. See Std. Dwg. RD336 for tracer wire details.
12. See Std. Dwg. RD356 for manhole covers and frames.

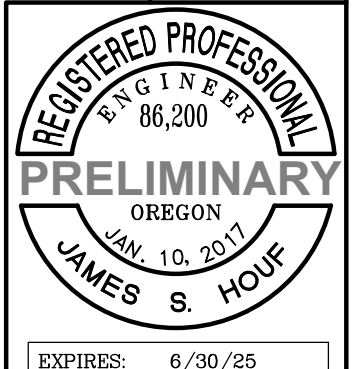
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.	
<b>OREGON STANDARD DRAWINGS</b>	
<b>MANHOLE FRAME ADJUSTMENT</b>	
2024	
DATE	REVISION DESCRIPTION
CALC. BOOK NO.	N/A
SDR DATE	21-JUL-2015
	<b>RD360</b>

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
CEDARROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson  
Righellis Inc.  
ENGINEERS PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



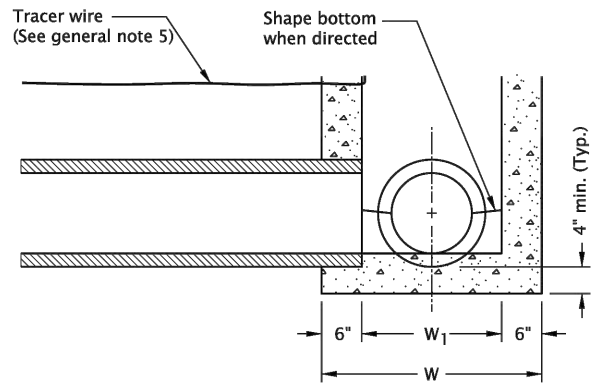
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC10</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

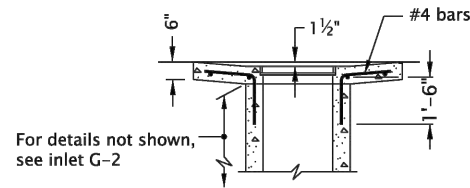
DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

20-JUL-2020

RD364.dgn

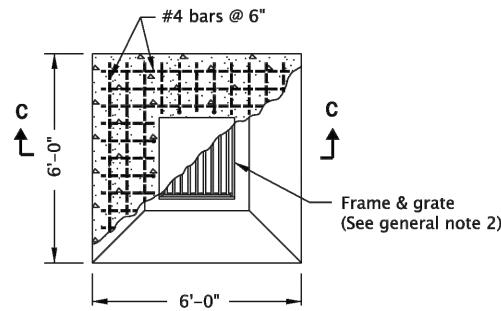


**DETAIL A  
WITHOUT SUMP**

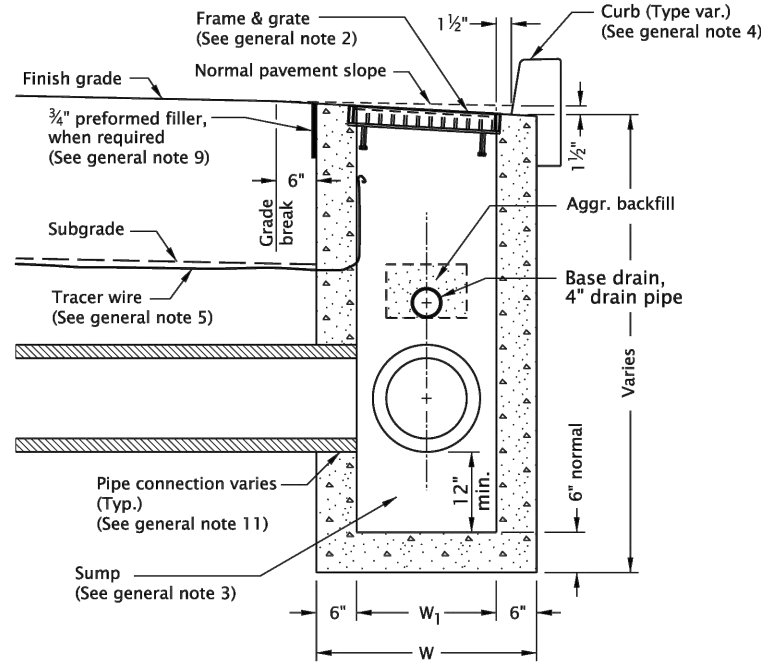


**SECTION C-C**

NOTE:  
All reinforcement to be placed 2" clear of nearest face of concrete unless shown or noted otherwise



**PLAN  
TYPE G-2MA**

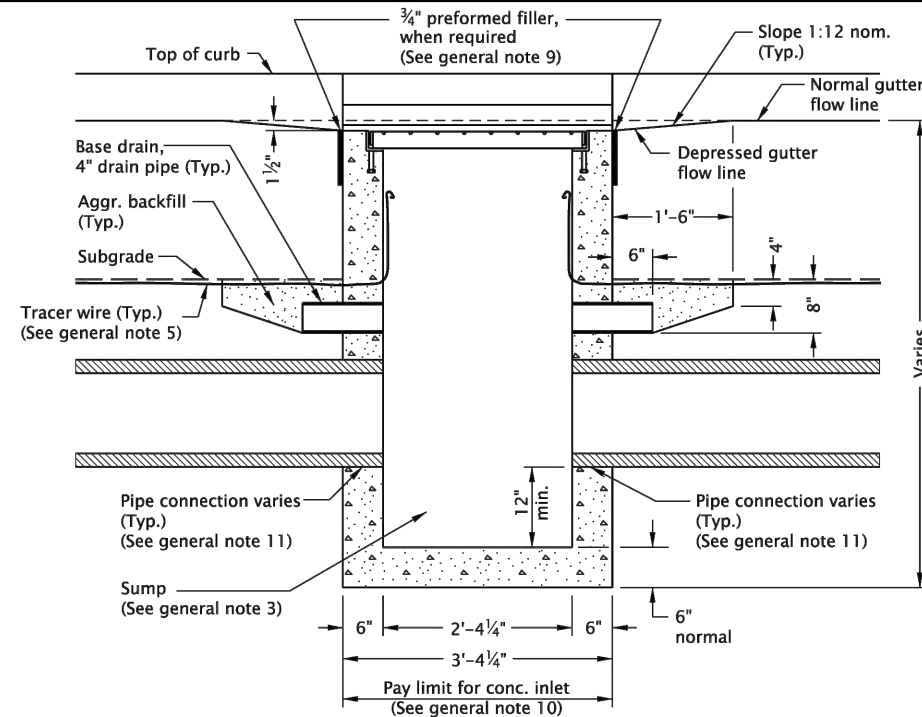


**SECTION B - B**

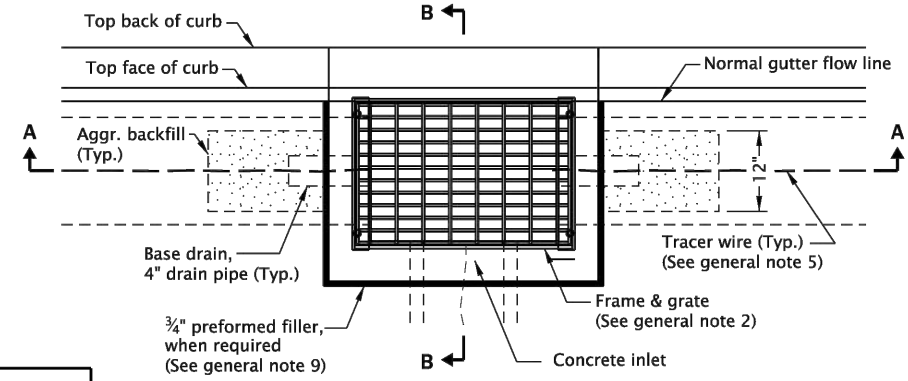
TABLE A		
INLET TYPE	W	W <sub>1</sub>
G-1	2'-8 <sup>7</sup> / <sub>8</sub> "	1'-8 <sup>7</sup> / <sub>8</sub> "
G-2, G-2M, G-2MA	3'-3 <sup>3</sup> / <sub>8</sub> "	2'-3 <sup>3</sup> / <sub>8</sub> "

**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

- Where precast inlets are used as an alternate to cast-in-place inlets, a 4" compacted leveling bed of sand or 1/4"-0 crushed aggregate shall be provided. All precast inlets shall conform to requirements of ASTM C913.
- Graphics show G-1 inlet with Type 2 grate. See Table A for inlet dimensions.  
Type 1 grate allowed only in locations not subject to bicycle or pedestrian use.  
For frame and grate details, see Std. Dwg. RD365.
- Provide sump only where shown on plans, and allowed by jurisdiction. See Detail A for inlet without sump.
- For curb details, see Std. Dwgs. RD700 & RD701.
- See Std. Dwg. RD336 for tracer wire details, or approved alternate.
- Max. pipe diameter varies with pipe material.
- Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
- All concrete shall be commercial grade concrete.
- 3/4" preformed filler (in concrete pavement or gutter only) to extend through thickness of concrete.
- See Std. Dwg. RD363 for gutter transition section, when curb and gutter are required.
- See Std. Dwg. RD339 for pipe to structure connections.



**SECTION A - A**



**PLAN  
TYPE G-1, G-2, G-2M**

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**CONCRETE INLETS  
TYPE G-1, G-2, G-2M, & G-2MA**

2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. N/A SDR DATE 24-JUL-2015 **RD364**

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

**Harper Houf Peterson**  
**Righellis Inc.**

ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

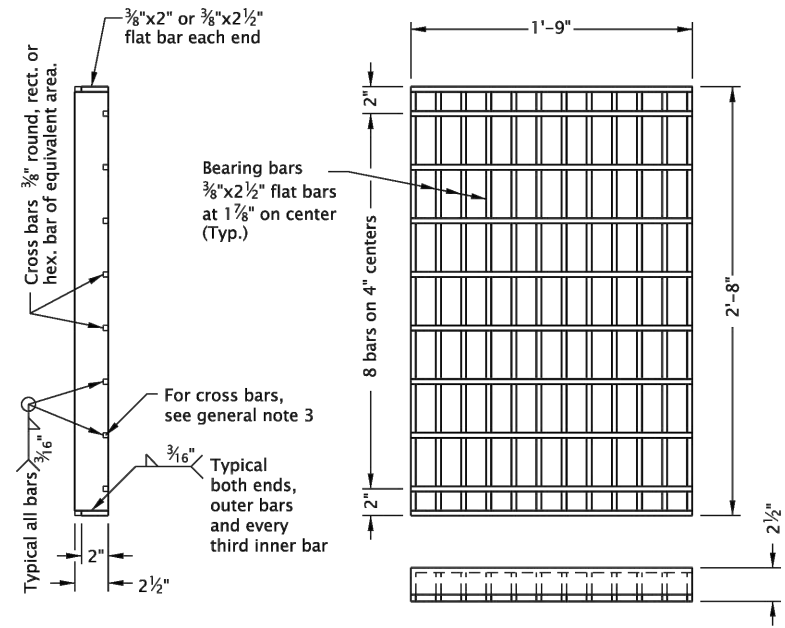
CITY OF  
**West Linn**

**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
**JAMES S. HOUF**

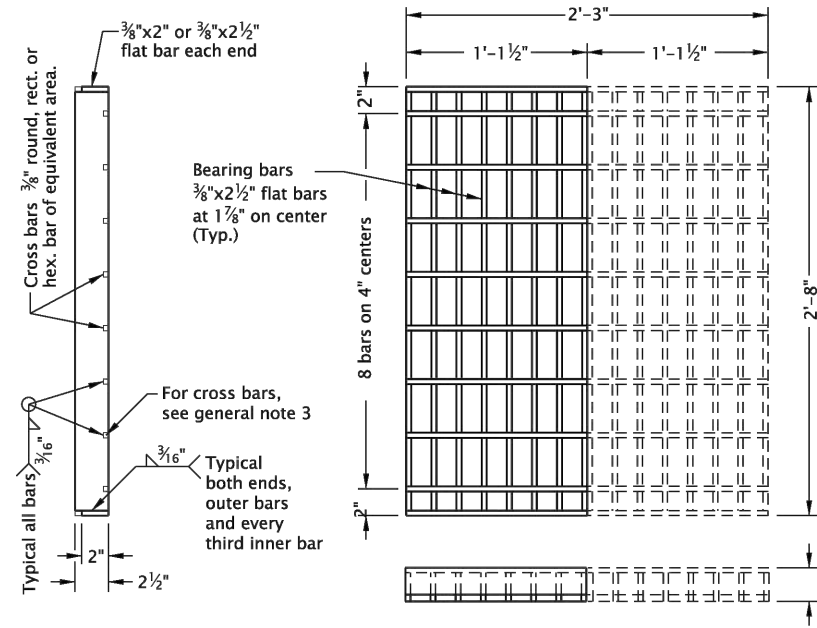
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC11</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

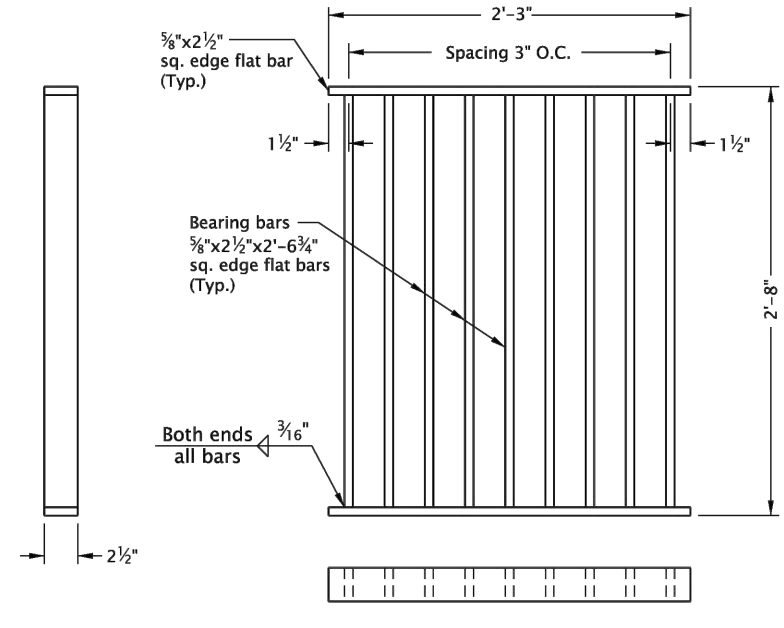




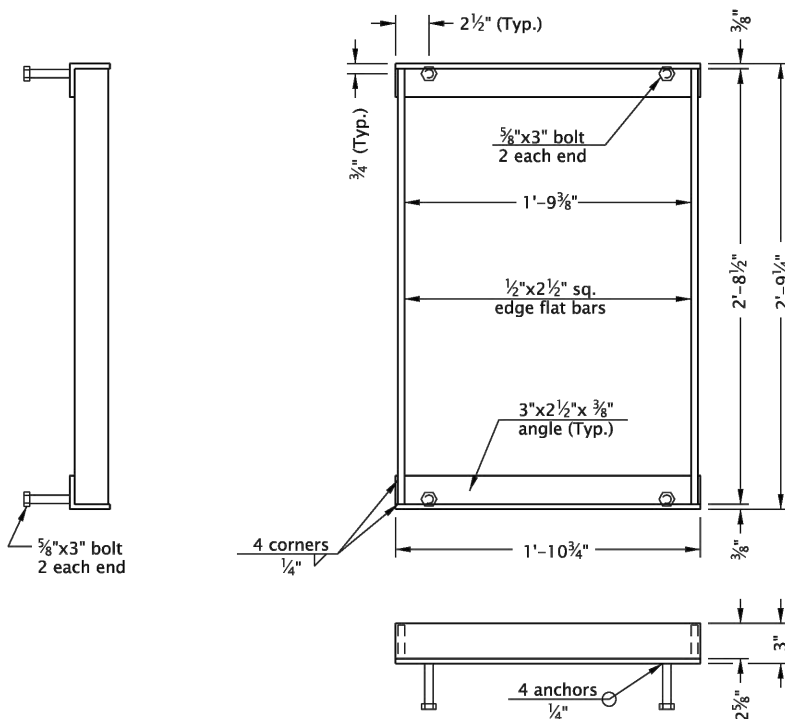
**G-1, CG-1 GRATE  
(TYPE 2)**  
(Bicycle-safe)



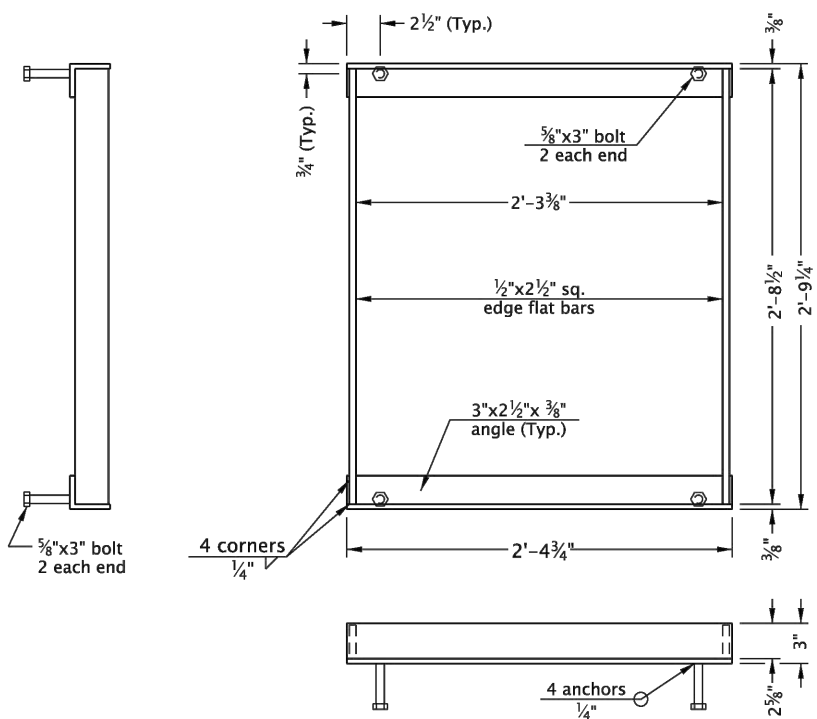
**G-2, G-2M, G-2MA, CG-2 GRATE  
(TYPE 2)**  
(Bicycle-safe)  
(2 grates required per inlet, as shown)



**G-2, G-2M, G-2MA, CG-2 GRATE  
(TYPE 1)**  
(See general note 2)



**G-1, CG-1 FRAME**



**G-2, G-2M, G-2MA, CG-2 FRAME**

- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:
1. For inlet details, see appropriate inlet standard drawing(s).
  2. Type 1 grate allowed only in locations not subject to bicycle or pedestrian use.
  3. 3/8" cross bars shall be flush with the top of grate surface and may be fillet welded, resistance welded or electroforged to bearing bars.
  4. Hot dip galvanize after fabrication.
  5. Cast iron grate and frame are acceptable alternates. See ODOT's QPL.

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**FRAMES & GRATES FOR CONCRETE INLETS**

2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. --- N/A --- SDR DATE: 14-JUL-2014 **RD365**

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

**Harper Houf Peterson Righellis Inc.**  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

CITY OF **West Linn**

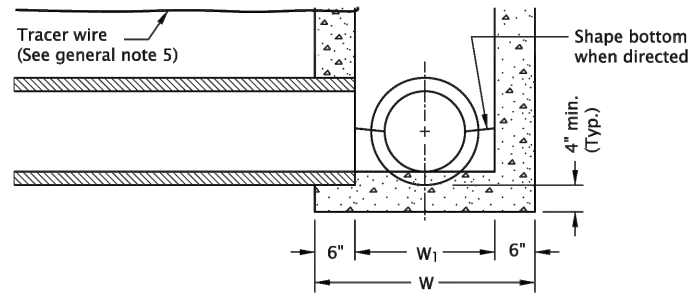
**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
JAMES S. HOUF  
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC12</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

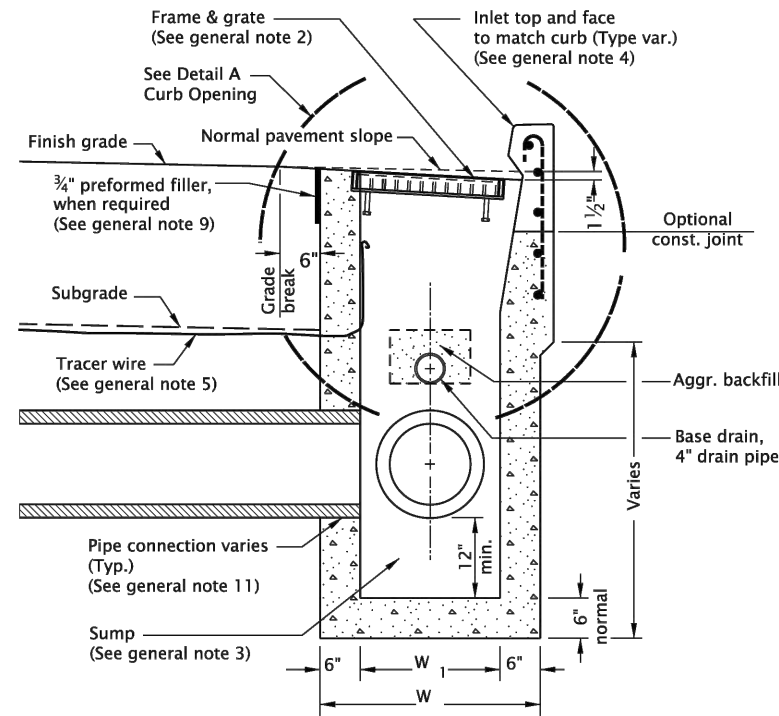
DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

RD366.dgn 20-JUL-2020

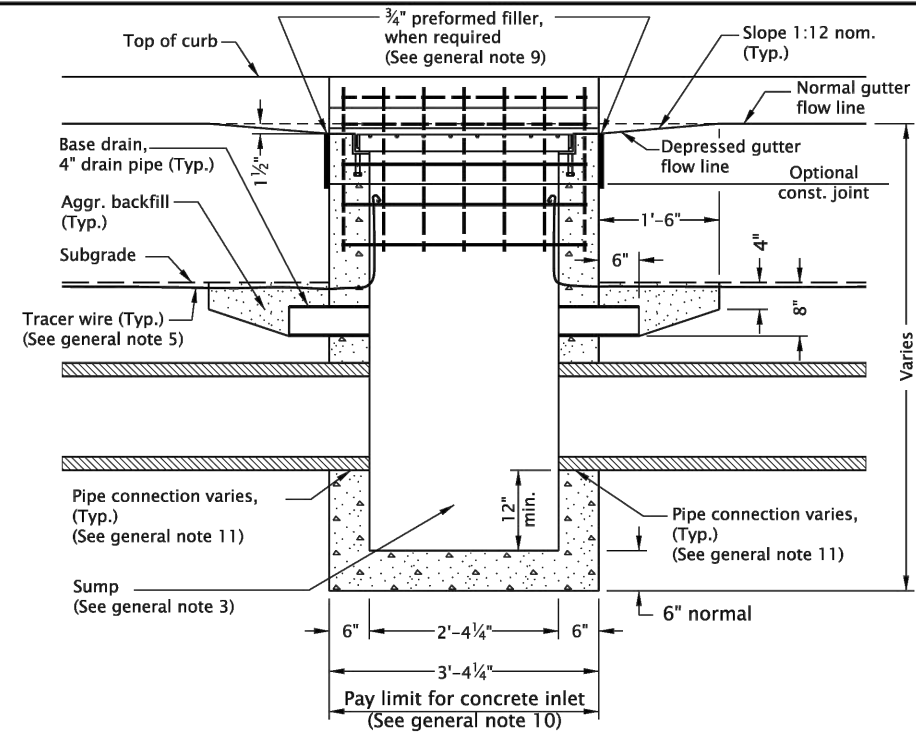
- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
- Where precast inlets are used as an alternate to cast-in-place inlets, a 4" compacted leveling bed of sand or 1/4"-0 crushed aggregate shall be provided. All precast inlets shall conform to requirements of ASTM C913.
  - Graphics show CG-1 inlet with Type 2 grate. See Table A for inlet dimensions. Type 1 grate allowed only in locations not subject to bicycle or pedestrian use. For frame and grate details, see Std. Dwg. RD365.
  - Provide sump only where shown on plans, and allowed by jurisdiction. See Detail B for inlet without sump.
  - For curb details, see Std. Dwgs. RD700 & RD701.
  - See Std. Dwg. RD336 for tracer wire details, or approved alternate.
  - Max. pipe diameter varies with pipe material.
  - Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
  - All concrete shall be commercial grade concrete.
  - 3/4" preformed filler (in concrete pavement or gutter only) to extend through thickness of concrete.
  - See Std. Dwg. RD363 for gutter transition section, when curb and gutter are required. (Pay limit for inlet is expanded when curb and gutter are monolithic)
  - See Std. Dwg. RD339 for pipe to structure connections.



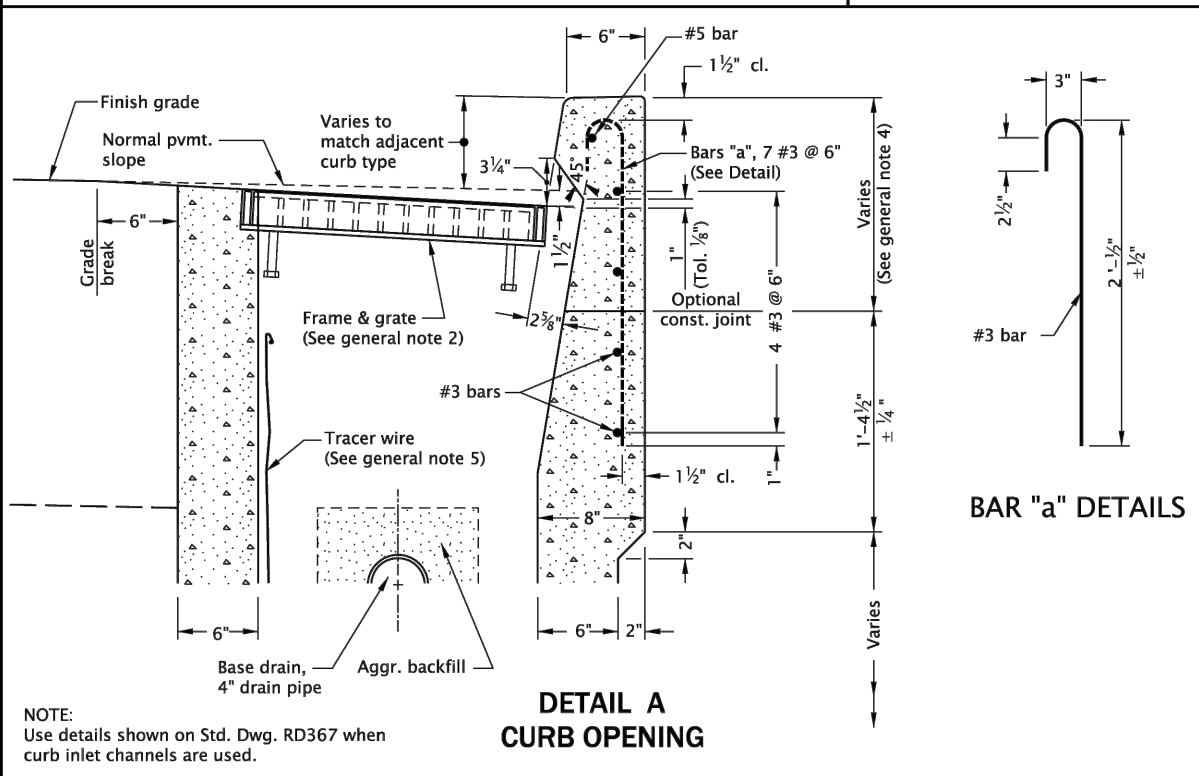
**DETAIL B WITH-OUT SUMP**



**SECTION B - B**

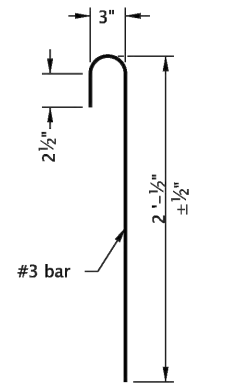


**SECTION A - A**



**DETAIL A CURB OPENING**

NOTE:  
Use details shown on Std. Dwg. RD367 when curb inlet channels are used.

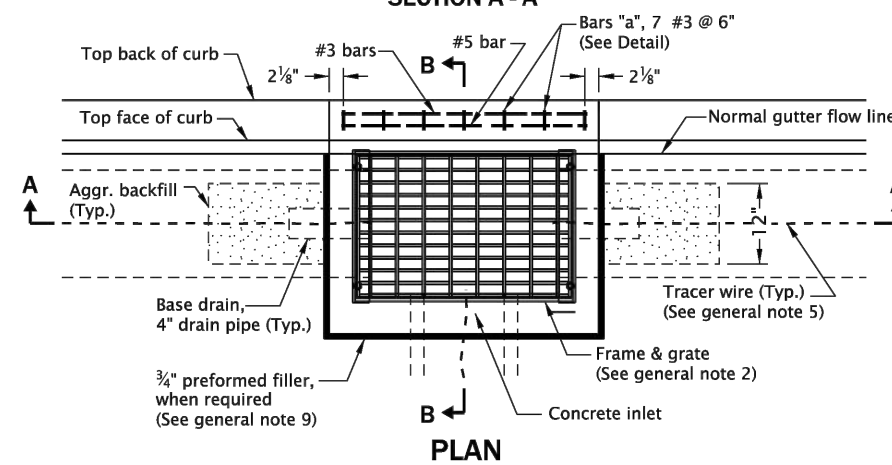


**BAR "a" DETAILS**

TABLE A		
INLET TYPE	W	W <sub>1</sub>
CG-1	2'-8 7/8"	1'-8 7/8"
CG-2	3'-3 3/8"	2'-3 3/8"

**NOTES:**

- #3 "a" bars to be placed during curb construction.
- All bars to be placed 1 1/2" clear of nearest face of concrete unless shown or noted otherwise.
- All bars shall be full length.



**PLAN**

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

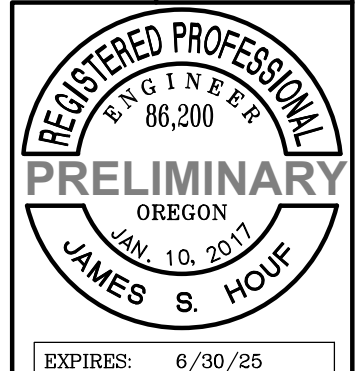
**CONCRETE INLETS  
TYPE CG-1, CG-2**

2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. N/A SDR DATE: 20-JUL-2020 **RD366**

Effective Date: December 1, 2023 – May 31, 2024

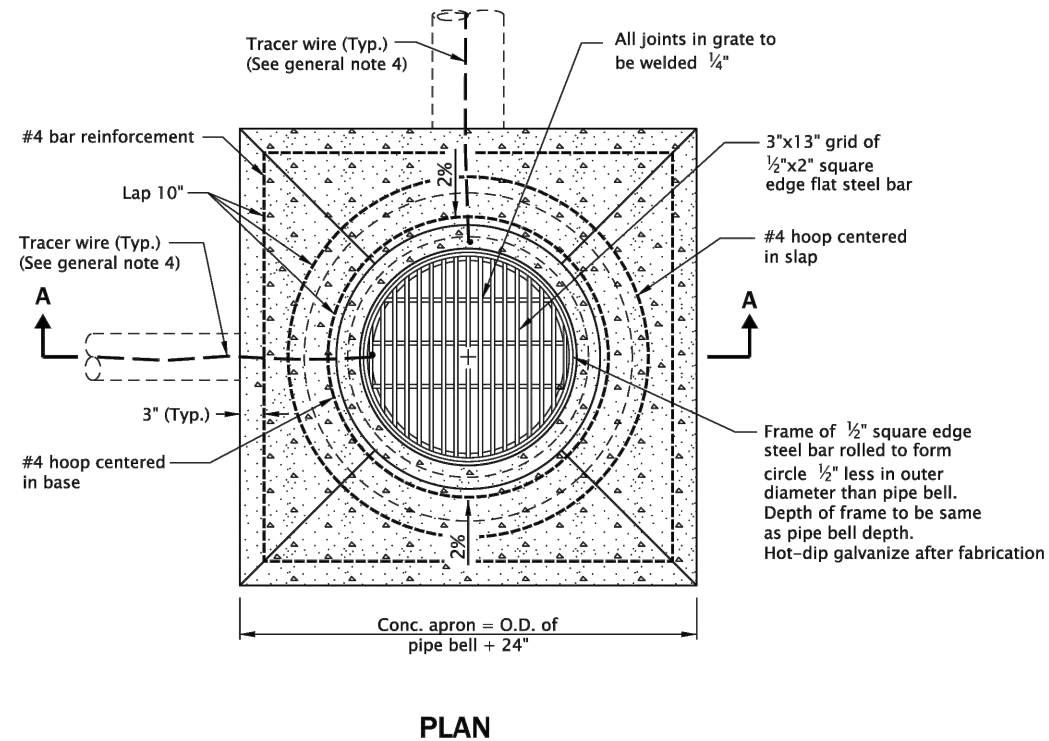
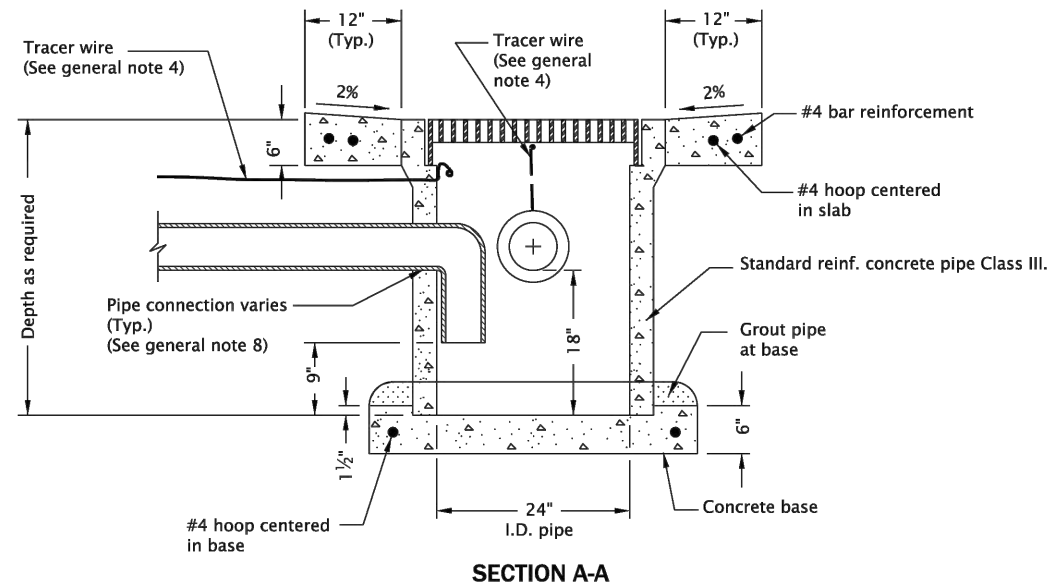


DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC13</b>
CHECKED: JSH	JOB NO. CWL-10
DATE: 2-12-2024	EXPIRES: 6/30/25

STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

**Harper Houf Peterson Righellis Inc.**  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171





**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. Grates shall be bicycle-safe.
2. Precast concrete inlets may be used when specified or approved. All precast inlets shall conform to requirements of ASTM C913.
3. Anchor vertical leg of inlet pipe if not a glued joint.
4. See Std. Dwg. RD336 for tracer wire details.
5. All reinforcement shall be 2" clear of nearest face of conc., unless otherwise shown.
6. Max. connecting pipe diameter varies with pipe material.
7. All concrete shall be commercial grade concrete.
8. See Std. Dwg. RD339 for pipe to structure connections.
9. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.

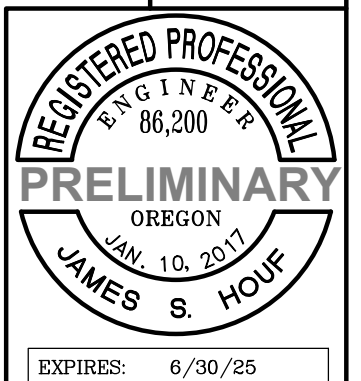
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.		
<b>OREGON STANDARD DRAWINGS</b>		
<b>AREA DRAINAGE BASIN OR FIELD INLET</b>		
2024		
DATE	REVISION	DESCRIPTION
CALC. BOOK NO.	N/A	SDR DATE 14-JUL-2014
		<b>RD374</b>

Effective Date: December 1, 2023 – May 31, 2024

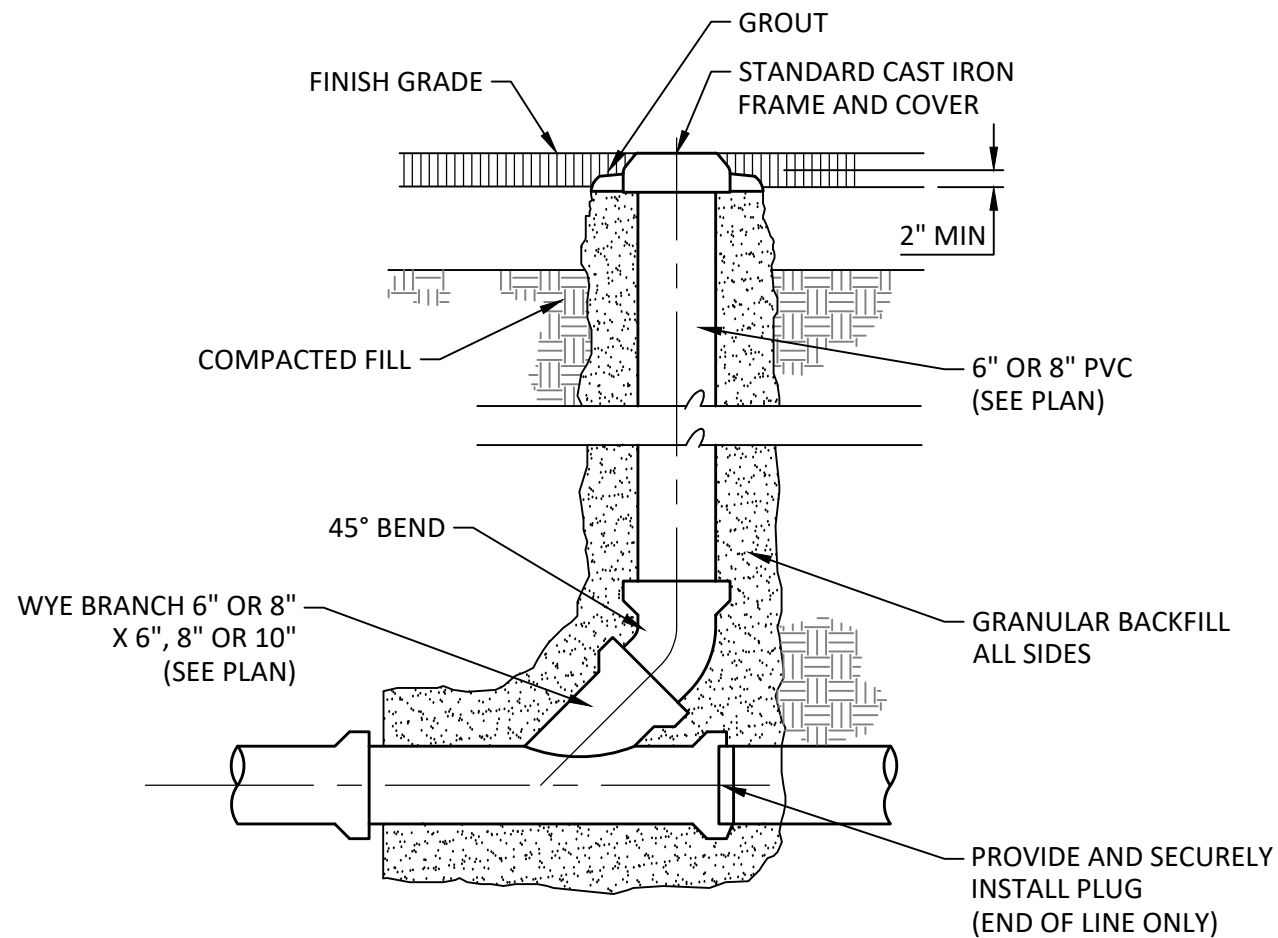
STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

Harper Houf Peterson  
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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC14</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10



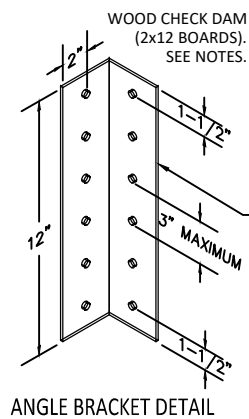
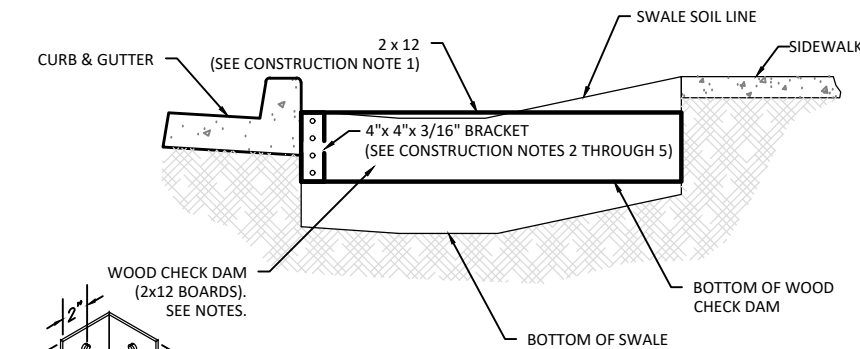
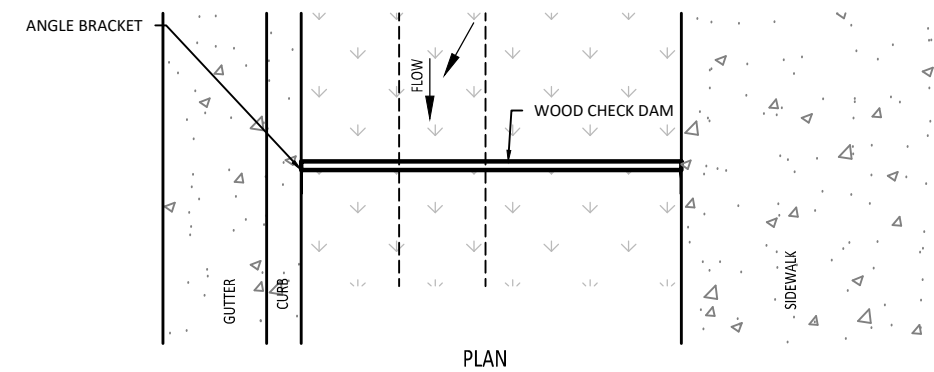


**NOTE:**

NOTE: CAST IRON FRAME AND COVER SHALL BE VALLEY IRON & STEEL CO. NO.'S 202 (6") OR 203 (8") OR APPROVED EQUAL.

**STANDARD CLEANOUT**

NTS

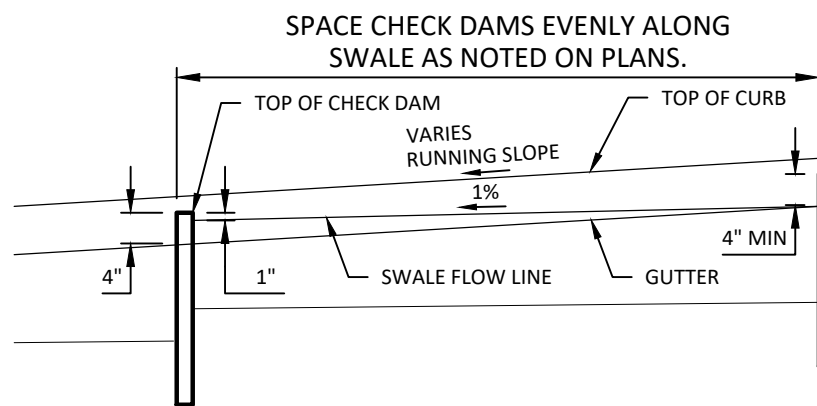


**CONSTRUCTION NOTES**

1. Lumber to be a naturally rot-resistant wood (e.g. cedar). Manufactured products can be used with approval. No chemically treated wood will be allowed.
2. All fasteners to be stainless steel or aluminum.
3. 4"x 4"x 12" angle bracket, minimum 3/16" thick, stainless steel, or aluminum.
4. Top of bracket to be no higher than top of check dam.
5. Minimum 5/16" dia. bolts, 3 bolts into concrete, 2 bolts into each board

**WOOD CHECK DAM DETAIL**

NTS



**CHECK DAM PROFILE**

NTS

STANDARD DETAILS  
CEDARROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON



EXPIRES: 6/30/25

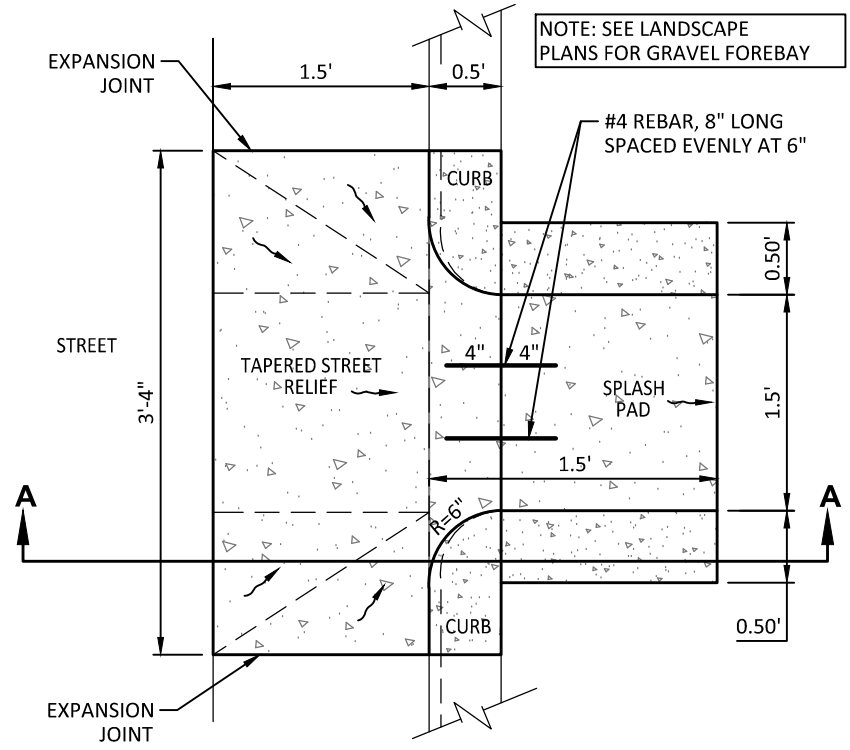
DESIGNED: HHPR TEAM  
DRAWN: HHPR TEAM  
CHECKED: JSH

SHEET NO.

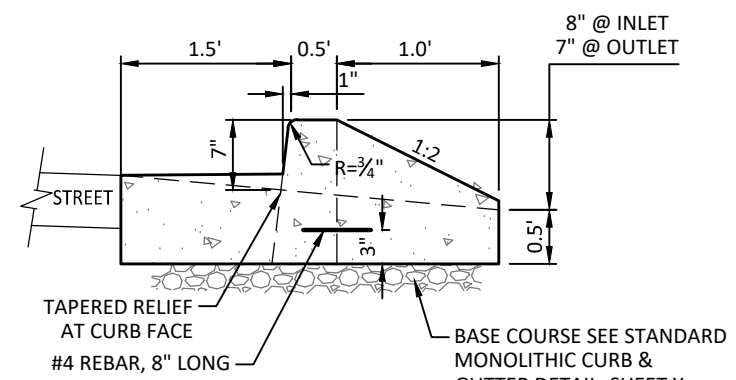
**DC15**

DATE: 2-12-2024

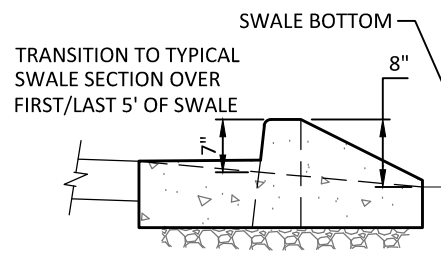
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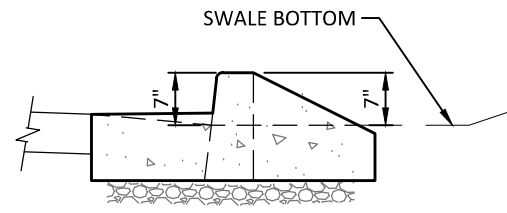
**PLAN**



**SECTION A-A**



**INLET SECTION**

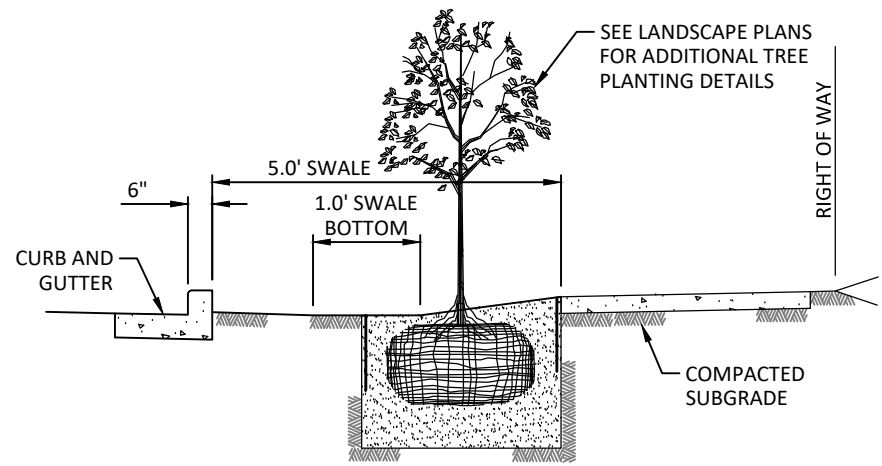


**OUTLET SECTION**

NOTE: OUTLET ON PLANTER SWALES MAY REQUIRE ADJUSTMENT TO ACCOMMODATE THE CATCH BASIN.

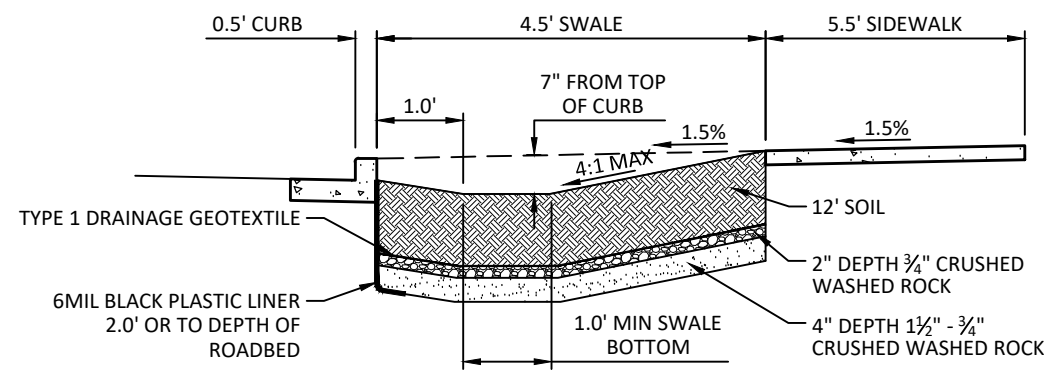
**SWALE INLET/OUTLET**

NTS



**TREE PLANTING SECTION**

NTS



**TYPICAL SWALE SECTION**

NTS

NOTE: SEE LANDSCAPE PLANS FOR GRAVEL FOREBAY

SEE LANDSCAPE PLANS FOR ADDITIONAL TREE PLANTING DETAILS

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

STANDARD DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

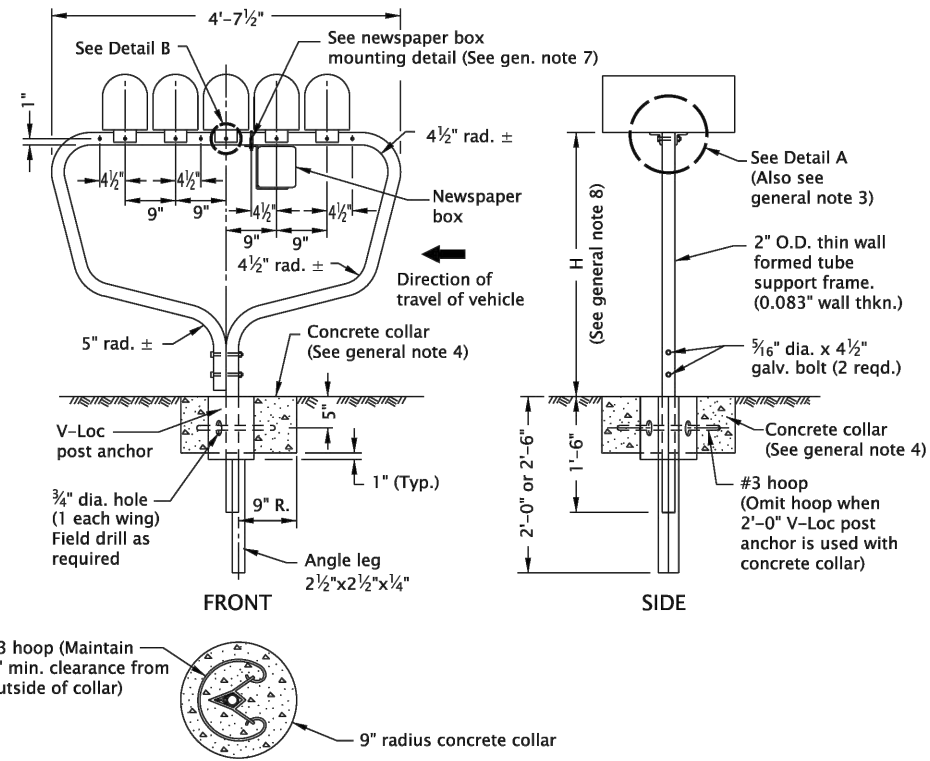
**Harper Houf Peterson Righellis Inc.**  
 ENGINEERS & PLANNERS  
 LANDSCAPE ARCHITECTS & SURVEYORS  
 205 SE Spokane Street, Suite 200, Portland, OR 97202  
 Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



**REGISTERED PROFESSIONAL ENGINEER**  
 86,200  
**PRELIMINARY**  
 OREGON  
 JAN. 10, 2017  
 JAMES S. HOUF

EXPIRES: 6/30/25

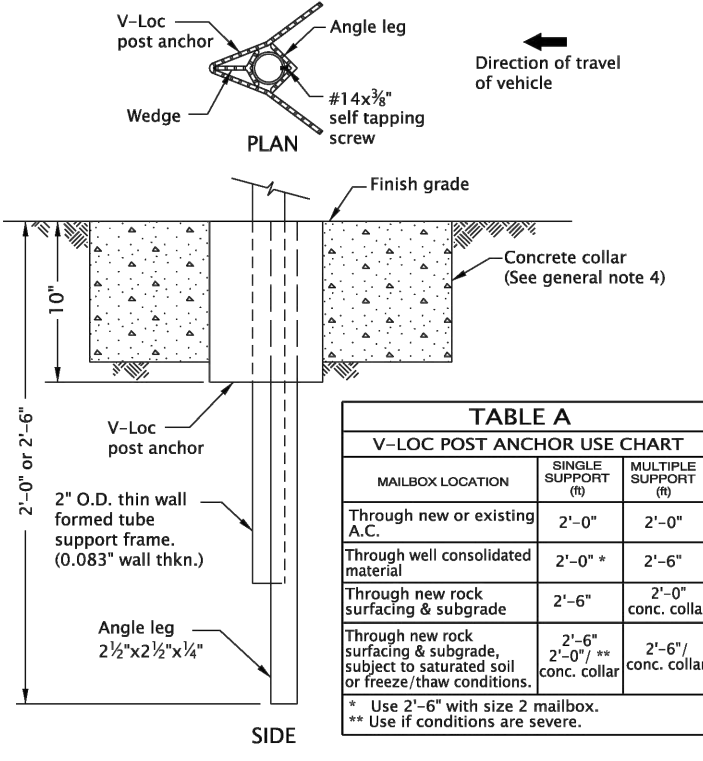
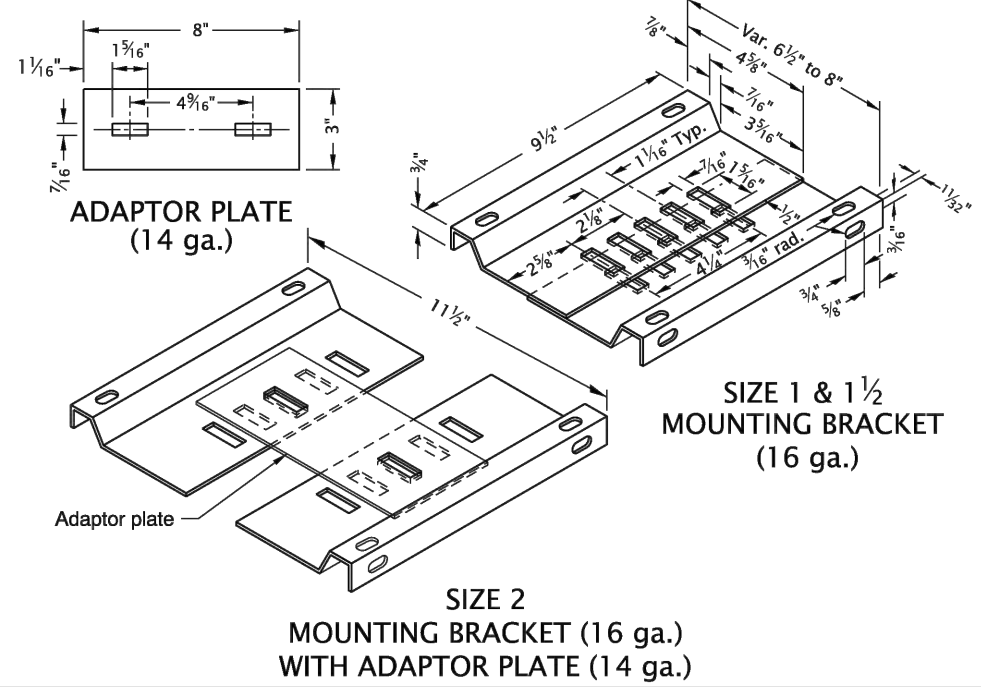
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>DC16</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10



**CONCRETE COLLAR**  
(See general note 4)

**MULTIPLE SUPPORT**

(Supports 5 standard (Sizes 1 & 1 1/2) mailboxes or 4 large (Size 2) mailboxes)

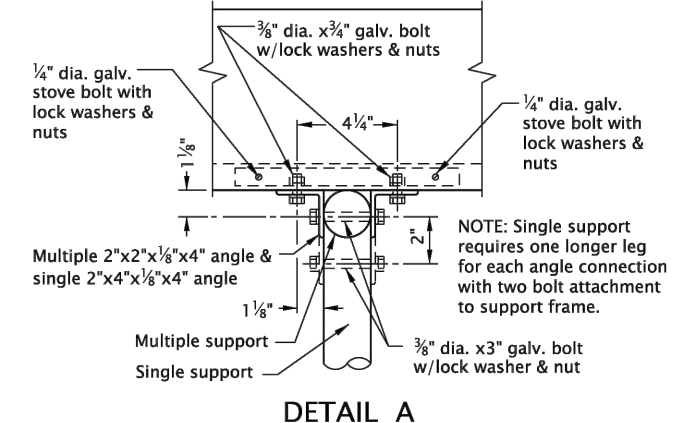


**TABLE A**  
V-LOC POST ANCHOR USE CHART

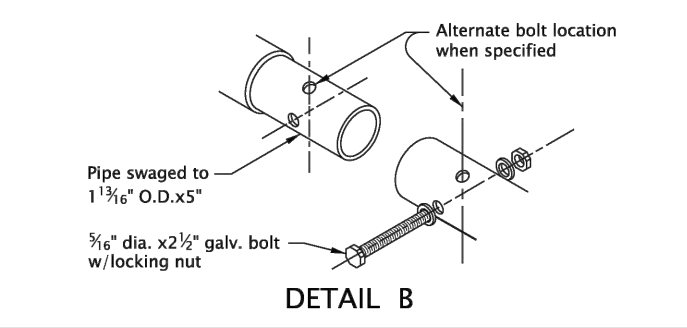
MAILBOX LOCATION	SINGLE SUPPORT (ft)	MULTIPLE SUPPORT (ft)
Through new or existing A.C.	2'-0"	2'-0"
Through well consolidated material	2'-0" *	2'-6"
Through new rock surfacing & subgrade	2'-6"	2'-0" conc. collar
Through new rock surfacing & subgrade, subject to saturated soil or freeze/thaw conditions.	2'-6" / 2'-0" **	2'-6" / conc. collar

\* Use 2'-6" with size 2 mailbox.  
\*\* Use if conditions are severe.

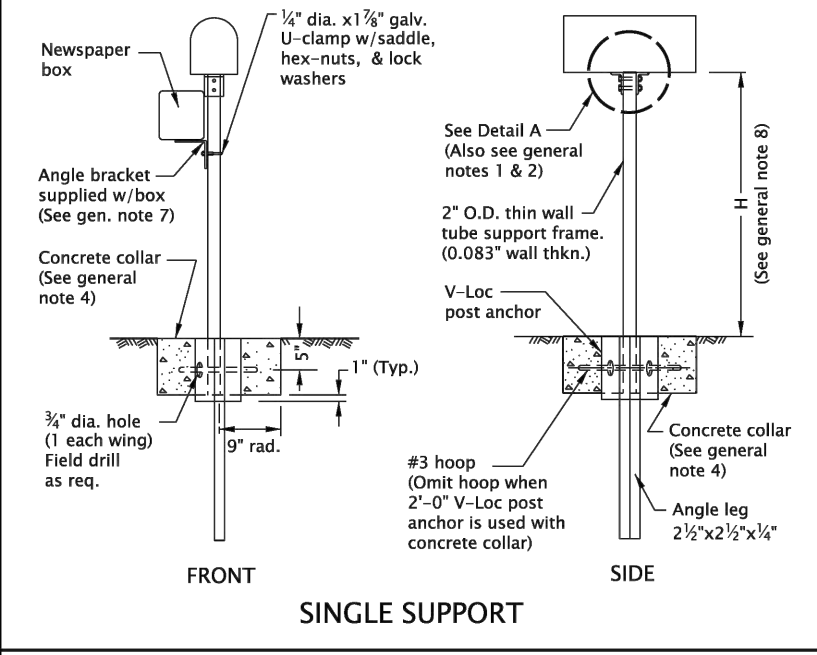
**POST MOUNTING SOCKET**



**DETAIL A**



**DETAIL B**



**SINGLE SUPPORT**

- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
- Angle connections to be parallel to traffic flow for Size 2 mailbox mounted on single post.
  - All holes in the tube support frame are to be predrilled by the manufacturer.
  - Size 2 mailbox mounted on a multiple support requires 2 each 3/8 inch dia. x 5/8 inch galv. bolts with lock washers and nuts to attach the adaptor plate to the mounting bracket. The unit will then require 4 angle connections to attach to the formed tube support frame. See Detail A.
  - Provide concrete collar when any of the following conditions exist:
    - when required in Table A
    - when required by project plans
    - as directed by the Engineer
 Concrete collar, when required, to be poured in place after V-Loc post anchor has been installed, level and plumb. Do not excavate below bottom of V-Loc post anchor. Care shall be taken that no concrete is placed within anchor.
  - Other proprietary products available as listed in ODOT's QPL.
  - For mailbox installation locations, see Std. Dwg. RD101 and project plans.
  - For Newspaper Box Mounting Detail, see Std. Dwg. RD101.
  - Mounting height (H) shall be 42" nominal, measured from vehicle driving surface.
  - See project plans for detail not shown.

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**MAILBOX SUPPORT**

2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. N/A SDR DATE: 25-JUL-2017 **RD100**

Effective Date: December 1, 2023 – May 31, 2024

STANDARD DETAILS  
**CEDAR OAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

Harper Houf Peterson  
Righellis Inc.  
ENGINEERS & PLANNERS  
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CITY OF  
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OREGON  
JAN. 10, 2017  
JAMES S. HOUF  
EXPIRES: 6/30/25

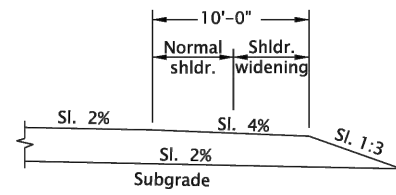
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DRAWN: HHPR TEAM	<b>DC17</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

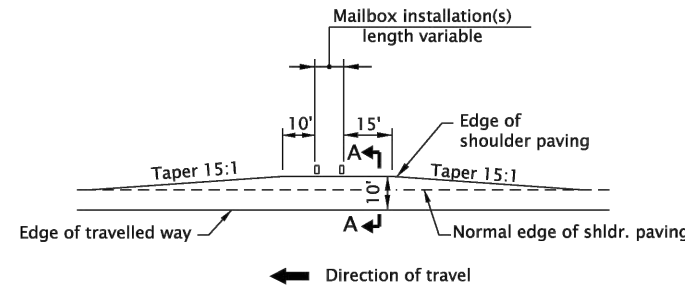


20-JUL-2020

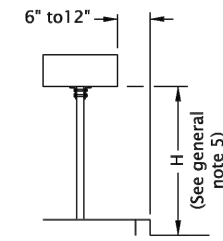
RD101.dgn



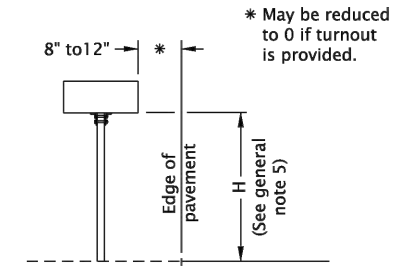
SECTION A-A



MAILBOX SERVICE TURNOUT

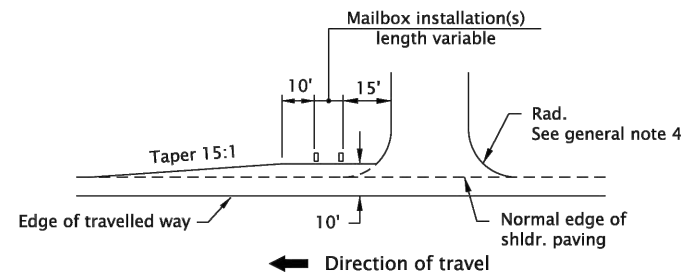


CURBED SECTION

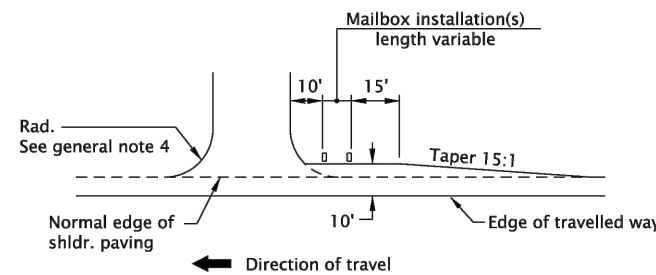


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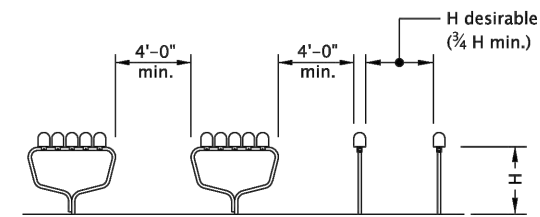
PLACEMENT



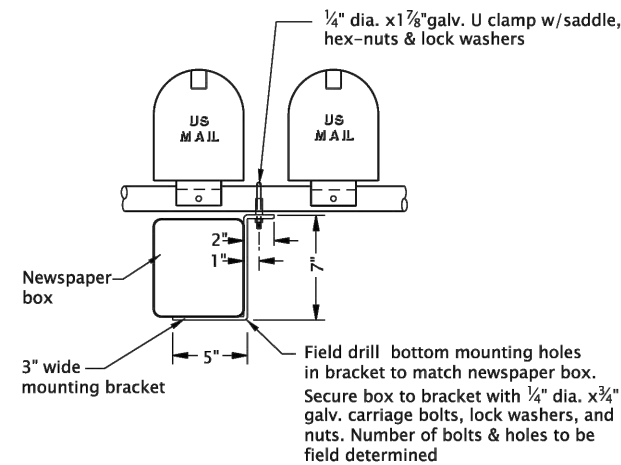
MAILBOX SERVICE TURNOUT AFTER APPROACH



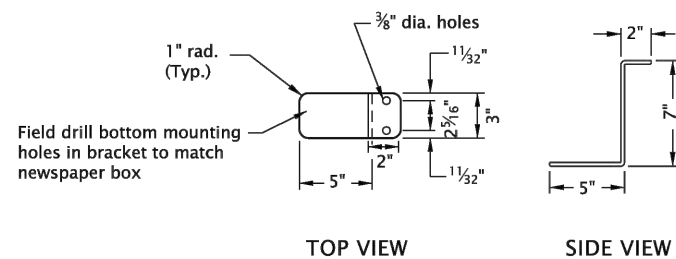
MAILBOX SERVICE TURNOUT BEFORE APPROACH



SUPPORT SPACING



NEWSPAPER BOX MOUNTING DETAIL



NEWSPAPER BOX MOUNTING BRACKET DETAIL (14 ga.)

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. All holes in the tube support frame are to be predrilled by the manufacturer.
2. Other proprietary products available as listed in ODOT's QPL.
3. For mailbox support details, see Std. Dwg. RD100.
4. For approach details, see Std. Dwg. RD715.
5. Mounting height (H) shall be 42" nominal, measured from vehicle driving surface.
6. See project plans for details not shown.

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

MAILBOX INSTALLATION

2024

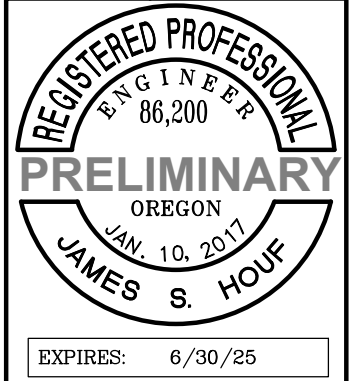
DATE	REVISION	DESCRIPTION

CALC. BOOK NO. N/A SDR DATE 25-JUL-2017 RD101

Effective Date: December 1, 2023 - May 31, 2024

STANDARD DETAILS  
CEDARROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson  
Righellis Inc.  
ENGINEERS PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhp.com fax: 503.221.1171



DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC18
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-DC01 STANDARD DETAILS.DWG

DRAWING NAME: CWL10-DC01- STANDARD DETAILS.DWG

20-JUL-2020

RD815.dgn

### TYPE CL-6

For runs of fence of 20' or less, omit truss rod and install lower brace rail in alternate position at End and Corner Posts.

\* See general note 8

### TYPE CL-6R

\* See general note 8

\*\* Bracing symmetrical about post for intermediate end post

### TYPES CL-4 & CL-5

\* See general note 8

### TYPES CL-4R & CL-5R

\* See general note 8

\*\* Symmetrical about post for intermediate end post

### GATES

\* See general note 8

### TABLE 1

TYPE	MEMBER											
	BRACE AND TOP RAILS		LINE POSTS		END, CORNER & INTERMEDIATE END POST		GATE OPENING (ft)		GATE POSTS			
	TUBULAR		TUBULAR	H-SECTION	TUBULAR		SINGLE GATE	DOUBLE GATE	TUBULAR			
	Fence Industry (in)	Nom. Dia. (in)	Fence Industry (in)	Nom. Dia. (in)	Size (in)	Wt. lb/ft	Fence Industry (in)	Nom. Dia. (in)	SINGLE GATE	DOUBLE GATE	Fence Industry (in)	Nom. Dia. (in)
CL-4 & CL-4R CL-5 & CL-5R	1 3/8	1 1/4	1 7/8	1 1/2	1 7/8 x 1 3/8	2.72	2 3/8	2	Up thru 6	Up thru 12	2 7/8	2 1/2
CL-6 & CL-6R	1 3/8	1 1/4	2 3/8	2	2 1/4 x 2	4.10	2 7/8	2 1/2	7 thru 13	13 thru 26	4	3 1/2
									14 thru 18	27 thru 36	6 3/8	6

NOTE: For CL-6, CL-6R, CL-8, CL-8R, CL-10 & CL-10R, the hardware is minimum and does not include slat wind loading.

### GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Do not use top rail where fence can be struck by an errant vehicle.
- Fittings shown are illustrative of use and not specific as to design.
- Gate posts on each side of a gate opening to be the same size. At a double gate installation with unequal width gates, size of both posts to be as indicated for a single gate installation of the wider gate width.
- For cross sectional dimensions of members, see Table 1.
- Posts and rails with sections not shown that meet the requirements of AASHTO M181 are acceptable alternates. See ODOT's QPL for acceptable alternates.
- All concrete shall be commercial grade concrete.
- All chain link fabric top and bottom selvage shall be knuckled finish.
- Chain link fabric for the fence to be installed with pickets shall be 9 gauge wire woven in 3 1/2" by 5 1/2" diamond mesh.
- See project plans for details not shown.
- Add fence grounding as required.

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**CHAIN LINK FENCE**

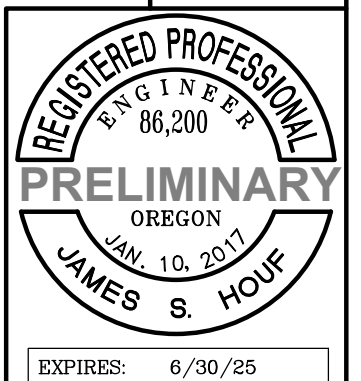
2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. N/A SDR DATE 13-JAN-2020 **RD815**

STANDARD DETAILS  
CEDARROAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson  
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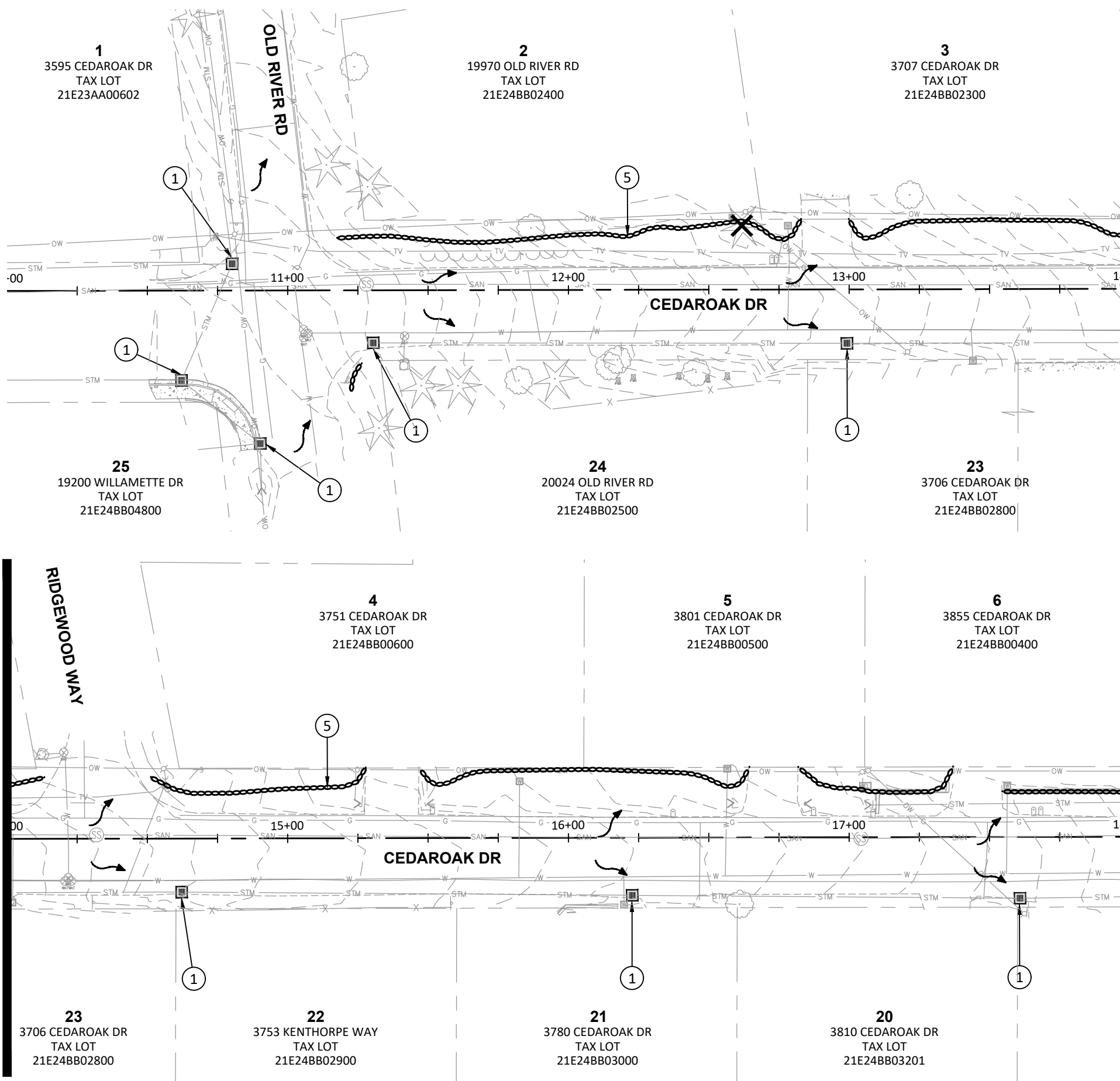
DESIGNED: HHPR TEAM SHEET NO.  
DRAWN: HHPR TEAM **DC19**  
CHECKED: JSH  
DATE: 2-12-2024 JOB NO. CWL-10

Effective Date: December 1, 2023 - May 31, 2024



DRAWING NAME: CWL10-EC01-ESC EX COND PLAN.DWG

MATCHLINE STA. 14+00 SEE ABOVE



MATCHLINE STA. 14+00 SEE BELOW

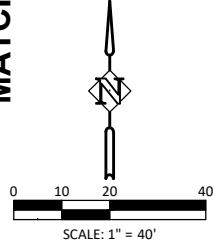
MATCHLINE STA. 18+00 SEE SHEET EC05

**CONSTRUCTION NOTES:**

- ① INSTALL INLET PROTECTION, TYPE 3 PER DETAIL ON SHEET EC05.
- ⑤ INSTALL SEDIMENT BARRIER TYPE 8 PER ODOT STANDARD DWG RD1032 ON SHEET EC07.

**ESC LEGEND**

- INLET PROTECTION - TYPE 3
- INLET PROTECTION - TYPE 4
- SEDIMENT FENCE
- FLOW DIRECTION
- EXISTING INLET TO BE REMOVED/ABANDONED
- EXISTING CONTOURS
- TREE REMOVAL



ESCP - EXISTING CONDITIONS  
**CEDAR OAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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EXPIRES: 6/30/25

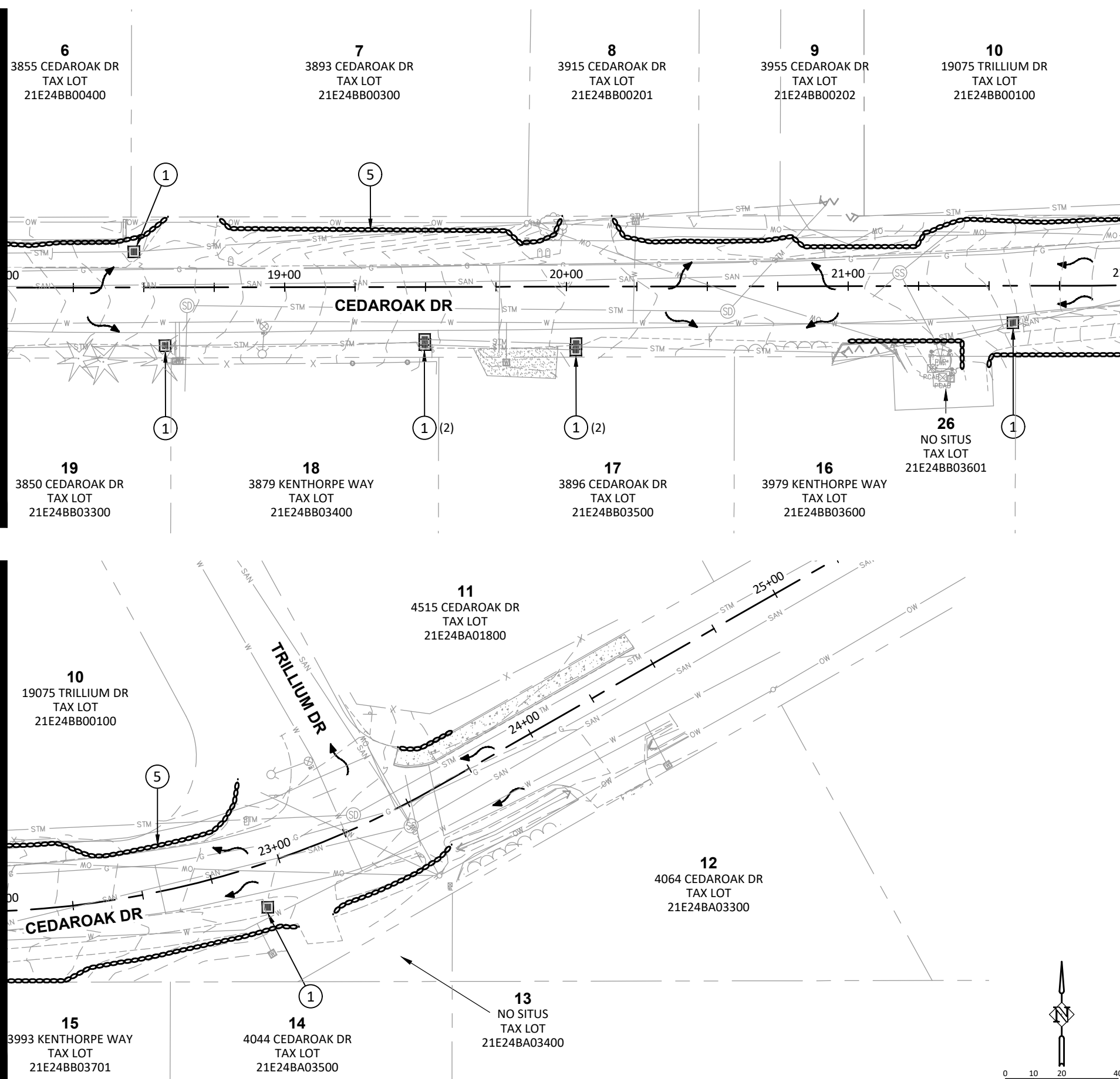
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DRAWN: HHPR TEAM	<b>EC01</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10



DRAWING NAME: CWL10-EC04-ESC EX COND PLAN.DWG

MATCHLINE STA. 18+00 SEE SHEET EC04

MATCHLINE STA. 22+00 SEE ABOVE



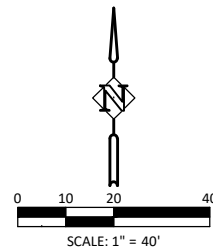
MATCHLINE STA. 22+00 SEE BELOW

**CONSTRUCTION NOTES:**

- ① INSTALL INLET PROTECTION, TYPE 3 PER DETAIL ON SHEET EC05.
- ⑤ INSTALL SEDIMENT BARRIER TYPE 8 PER ODOT STANDARD DWG RD1032 ON SHEET EC07.

**ESC LEGEND**

- INLET PROTECTION - TYPE 3
- INLET PROTECTION - TYPE 4
- SEDIMENT FENCE
- FLOW DIRECTION
- EXISTING INLET TO BE REMOVED/ABANDONED
- EXISTING CONTOURS
- TREE REMOVAL



ESCP - EXISTING CONDITIONS  
**CEDAR OAK DRIVE SAFE ROUTES**  
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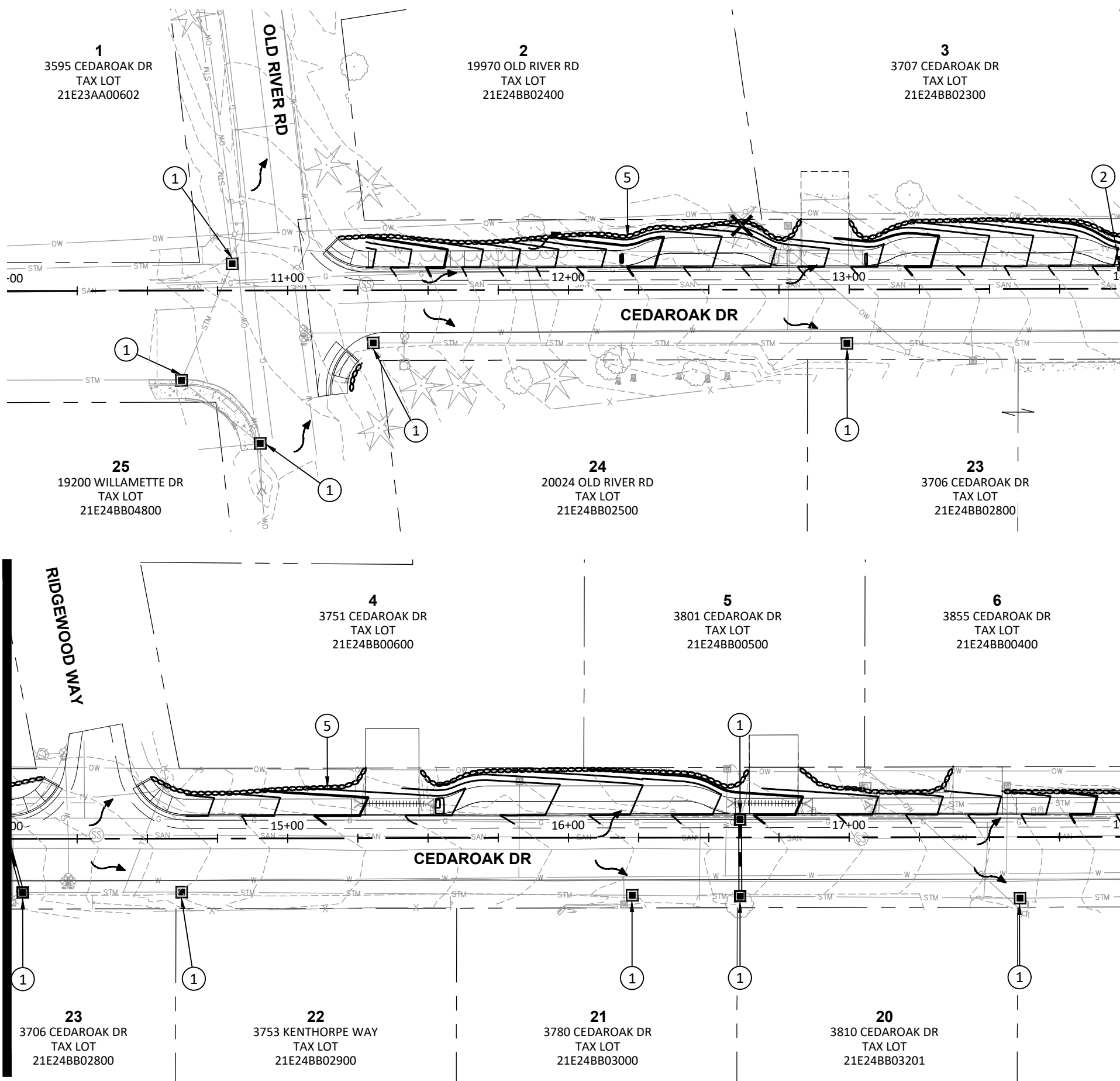


EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>EC02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-EC03 ESC PR COND PLAN.DWG

MATCHLINE STA. 14+00 SEE ABOVE



MATCHLINE STA. 14+00 SEE BELOW

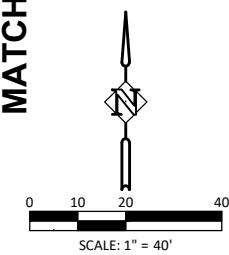
MATCHLINE STA. 18+00 SEE SHEET EC07

**CONSTRUCTION NOTES:**

- ① INSTALL INLET PROTECTION, TYPE 3 PER DETAIL ON SHEET EC05.
- ② INSTALL INLET PROTECTION, TYPE 4 PER DETAIL ON SHEET EC06.
- ⑤ INSTALL SEDIMENT BARRIER TYPE 8 PER ODOT STANDARD DWG RD1032 ON SHEET EC07.

**ESC LEGEND**

- INLET PROTECTION - TYPE 3
- INLET PROTECTION - TYPE 4
- CONCRETE WASHOUT (AS REQUIRED)
- SEDIMENT FENCE
- FLOW DIRECTION
- EXISTING INLET TO BE REMOVED/ABANDONED
- 215- EXISTING CONTOURS
- 215- PROPOSED MAJOR CONTOURS
- TREE REMOVAL



ESCP - PROPOSED CONDITIONS  
**CEDAR OAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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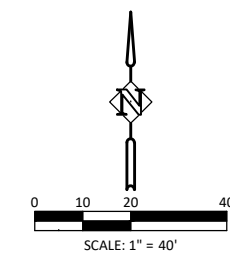
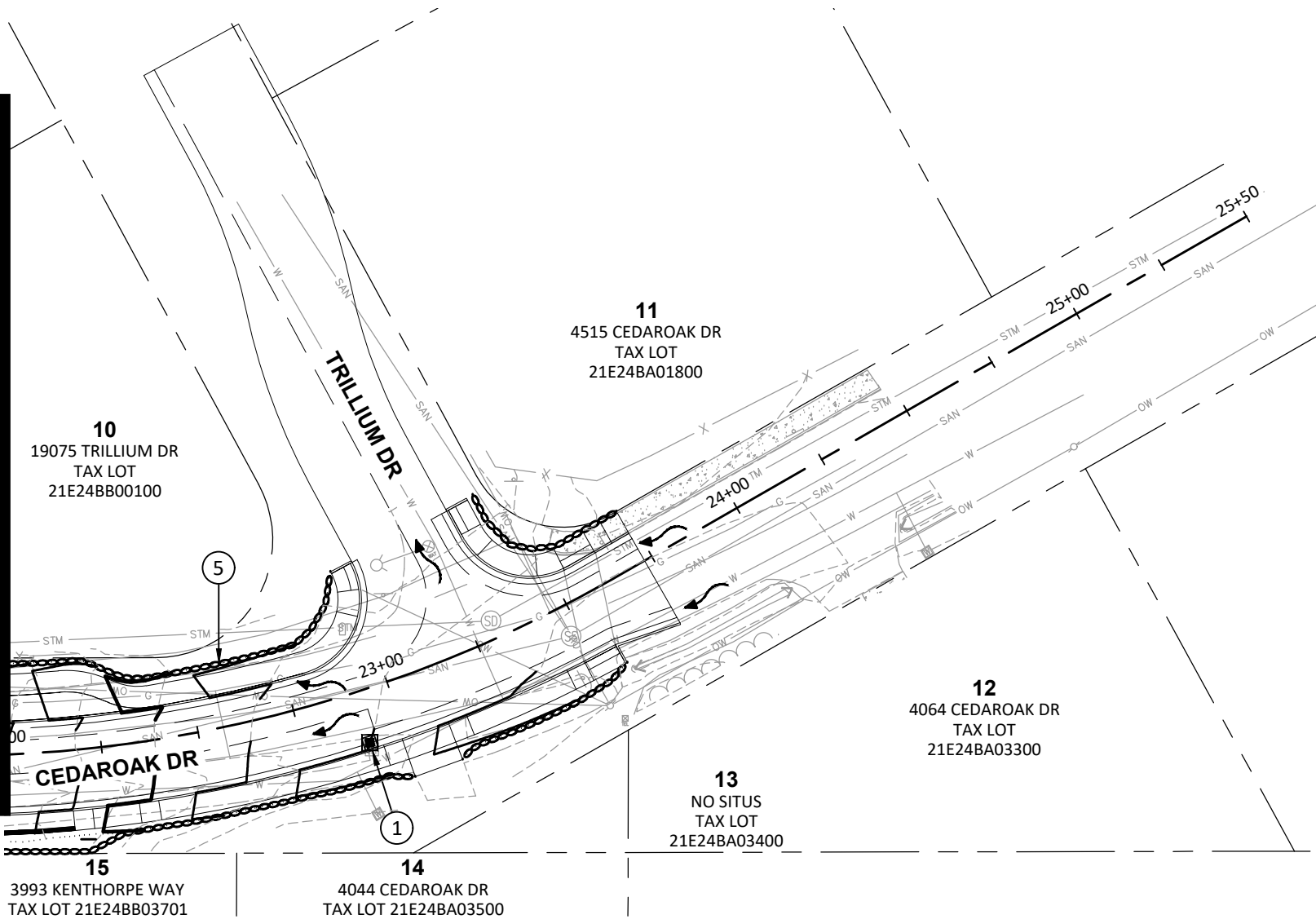
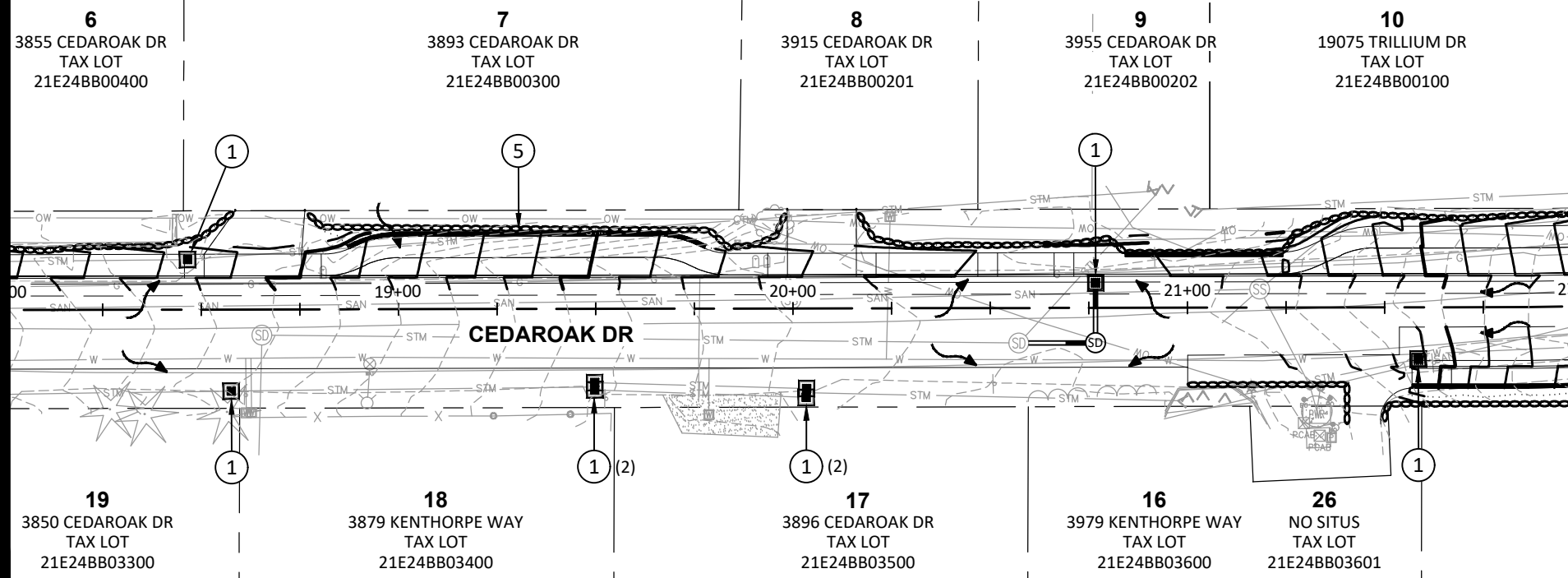


DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>EC03</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-EC04 ESC PR COND PLAN.DWG

MATCHLINE STA. 18+00 SEE SHEET B02




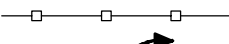


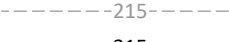
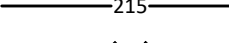

MATCHLINE STA. 22+00 SEE ABOVE



### CONSTRUCTION NOTES:

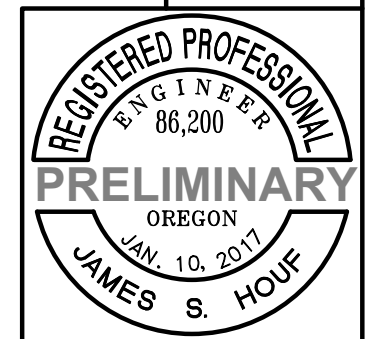
- ① INSTALL INLET PROTECTION, TYPE 3 PER DETAIL ON SHEET EC08.
- ⑤ INSTALL SEDIMENT BARRIER TYPE 8 PER ODOT STANDARD DWG RD1032 ON SHEET EC010.

### ESC LEGEND

-  INLET PROTECTION - TYPE 3
-  INLET PROTECTION - TYPE 4
-  CONCRETE WASHOUT (AS REQUIRED)
-  SEDIMENT FENCE
-  FLOW DIRECTION
-  EXISTING INLET TO BE REMOVED/ABANDONED
-  -215- EXISTING CONTOURS
-  -215- PROPOSED MAJOR CONTOURS
-  TREE REMOVAL

ESCP - PROPOSED CONDITIONS  
**CEDAROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

**Harper Houf Peterson**  
**Righellis Inc.**  
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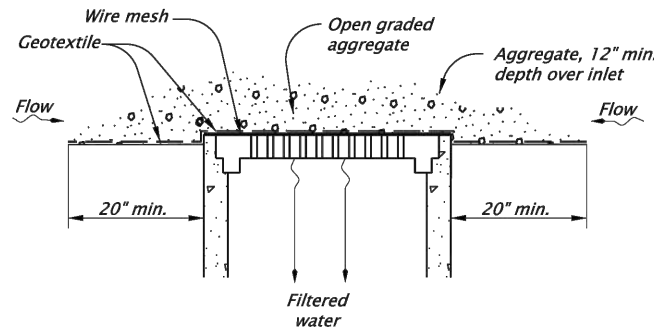


EXPIRES: 6/30/25

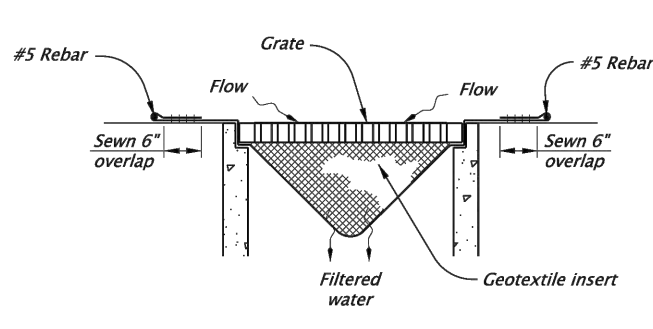
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>EC04</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10



RD1010.dgn 20-JAN-2021

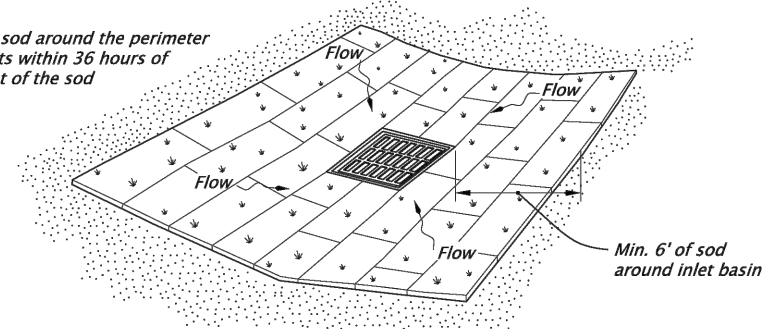


**GEOTEXTILE/WIRE MESH/AGGREGATE - TYPE 2**  
NOT TO SCALE

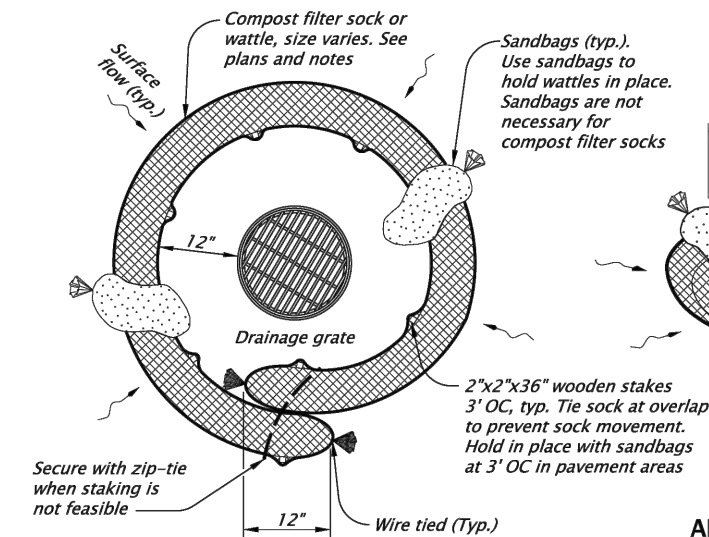


**PREFABRICATED FILTER INSERT - TYPE 3**  
NOT TO SCALE

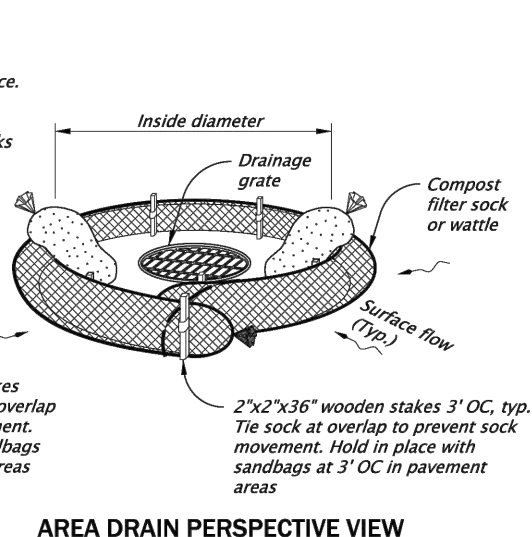
**NOTE:**  
Install sod around the perimeter of inlets within 36 hours of harvest of the sod



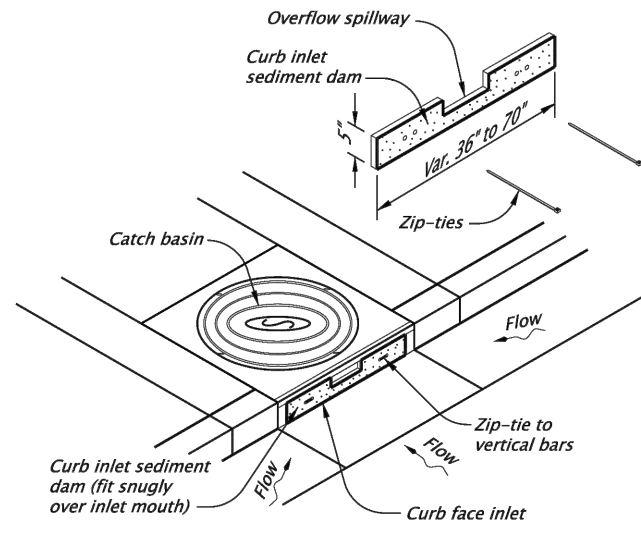
**SOD PROTECTION - TYPE 6**  
NOT TO SCALE



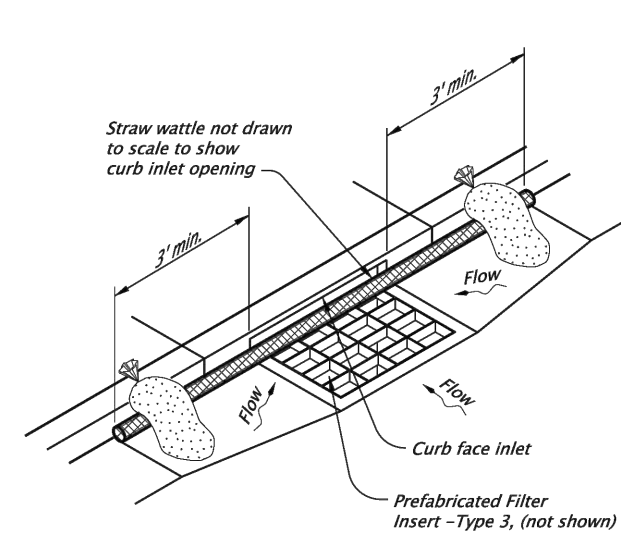
**AREA DRAIN PLAN**



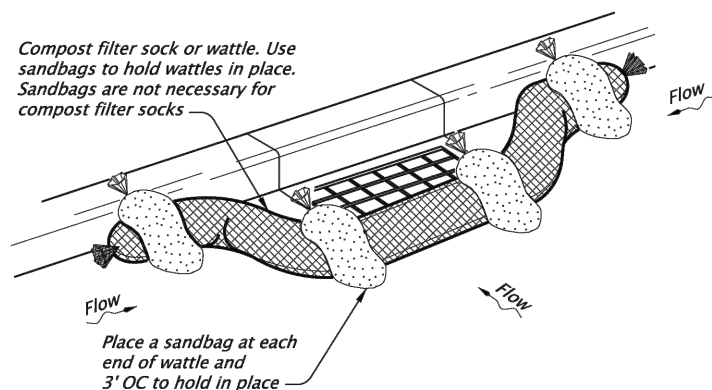
**AREA DRAIN PERSPECTIVE VIEW**



**CURB INLET SEDIMENT DAM - TYPE 10**  
NOT TO SCALE



**WATTLE BARRIER WITH FILTER INSERT - TYPE 11**  
NOT TO SCALE



**COMPOST FILTER SOCK OR WATTLE - TYPE 7**  
NOT TO SCALE

**NOTES:**  
Type 2 - Geotextile/wire mesh/aggregate  
Place the wire mesh over the grate.  
Place sediment fence geotextile over the wire mesh and perimeter area around structure.  
Install aggregate over the geotextile fabric.

Type 3 - Prefabricated filter inserts  
Install prefabricated filter inserts according to the plans, special provisions, and manufacturer recommendations.  
Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMP's to prevent the potential of sediments entering project storm systems.  
Field fabricated inserts are not allowed.

Type 7 - Compost filter sock  
Drive 2"x2" wood stakes a minimum of 6" into ground and flush with the top of the sock.  
Overlap ends of sock per manufacturers recommendations (12" min., 36" max.).  
Use 8" to 12" dia sock on curbside in traffic areas.

(Type 7 cont.)  
Use 12" to 18" dia sock in non-traffic areas or areas where the larger socks can be used safely.  
Use synthetic mesh socks for temporary installations.

Type 10 - Curb inlet sediment dam  
Fit curb inlet sediment dam snugly into inlet mouth. Curb inlet sediment dam is required for use with inlet filter insert where at-grade inlet grate and curb inlet are combined at a catch basin.

Type 11 - Wattle barrier with filter insert  
Install wattle over opening and 36" to each side of opening tight against curb. Adjust wattle to force storm water to flow through filter insert or wattle prior to leaving the site.  
Adjust, replace or modify the inlet protection as needed to prevent sediment laden water from entering the catch basin.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**INLET PROTECTION  
TYPE 2, 3, 6, 7, 10 AND 11**

2024

DATE	REVISION	DESCRIPTION
01-2021	REMOVED CALC BOOK NUMBERS	
01-2021	MOVED NOTES UP FROM OVERLAPPING THE SHEET BORDER	
CALC. BOOK NO.	N/A	SDR DATE 20-JAN-2021

**RD1010**



EXPIRES: 6/30/25

DESIGNED: HHPR TEAM  
DRAWN: HHPR TEAM  
CHECKED: JSH

SHEET NO.  
**EC05**  
JOB NO.

DATE: 2-12-2024

CWL-10

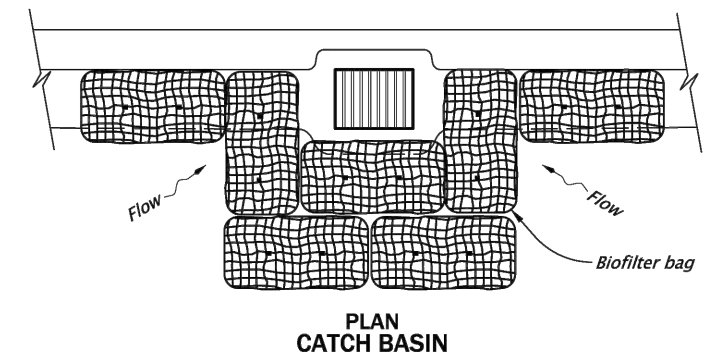
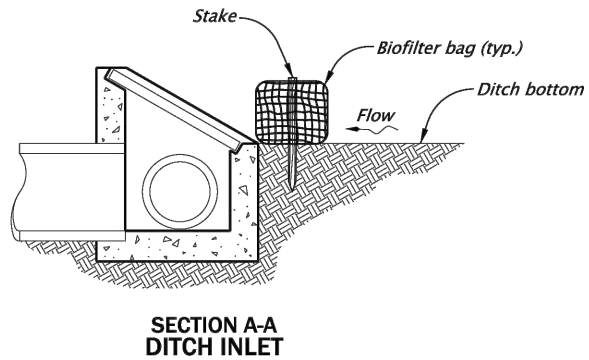
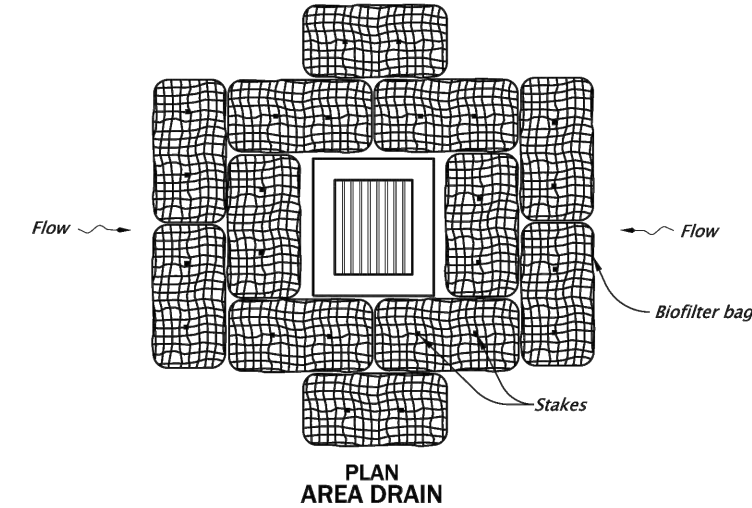
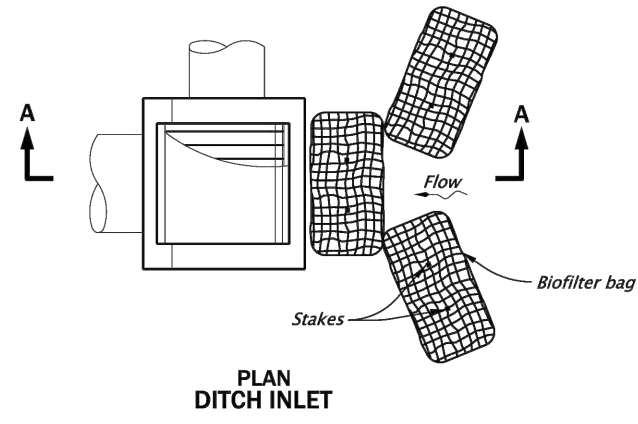
Effective Date: December 1, 2023 - May 31, 2024

ESCP - EROSION CONTROL DETAILS  
**CEDAR OAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

**Harper Houf Peterson Righellis Inc.**  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



DRAWING NAME: CWL10-EC08 ESC DETAILS.DWG



**BIOFILTER BAGS - TYPE 4**  
NOT TO SCALE

- NOTES:**
1. Stake biofilter bags with 2"x2"x36" wood stakes, and use a minimum 2 stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags.
  2. Omit stakes when bags are placed on pavement surface.
  3. Overlap all bag joints 6".

4. Biofilter bags used on active roadways are easily displaced and made ineffective if struck by vehicles. If struck by a cyclist, falls with injury could result. On active roadways alternative inlet protection should be considered.

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All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

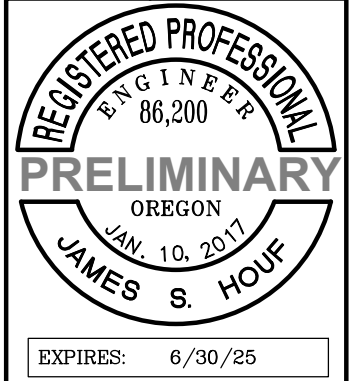
**INLET PROTECTION TYPE 4**

2024

DATE	REVISION DESCRIPTION
01-2021	REMOVED CALC BOOK NUMBERS

CALC. BOOK NO. N/A SDR DATE 20-JAN-2021 **RD1015**

Effective Date: December 1, 2023 – May 31, 2024



DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>EC06</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

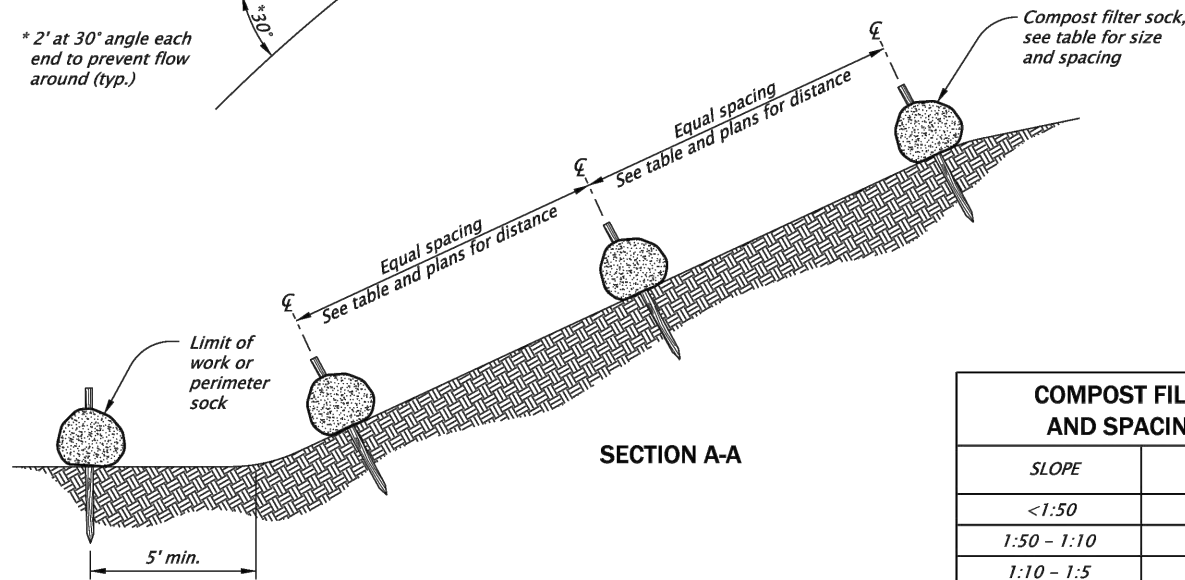
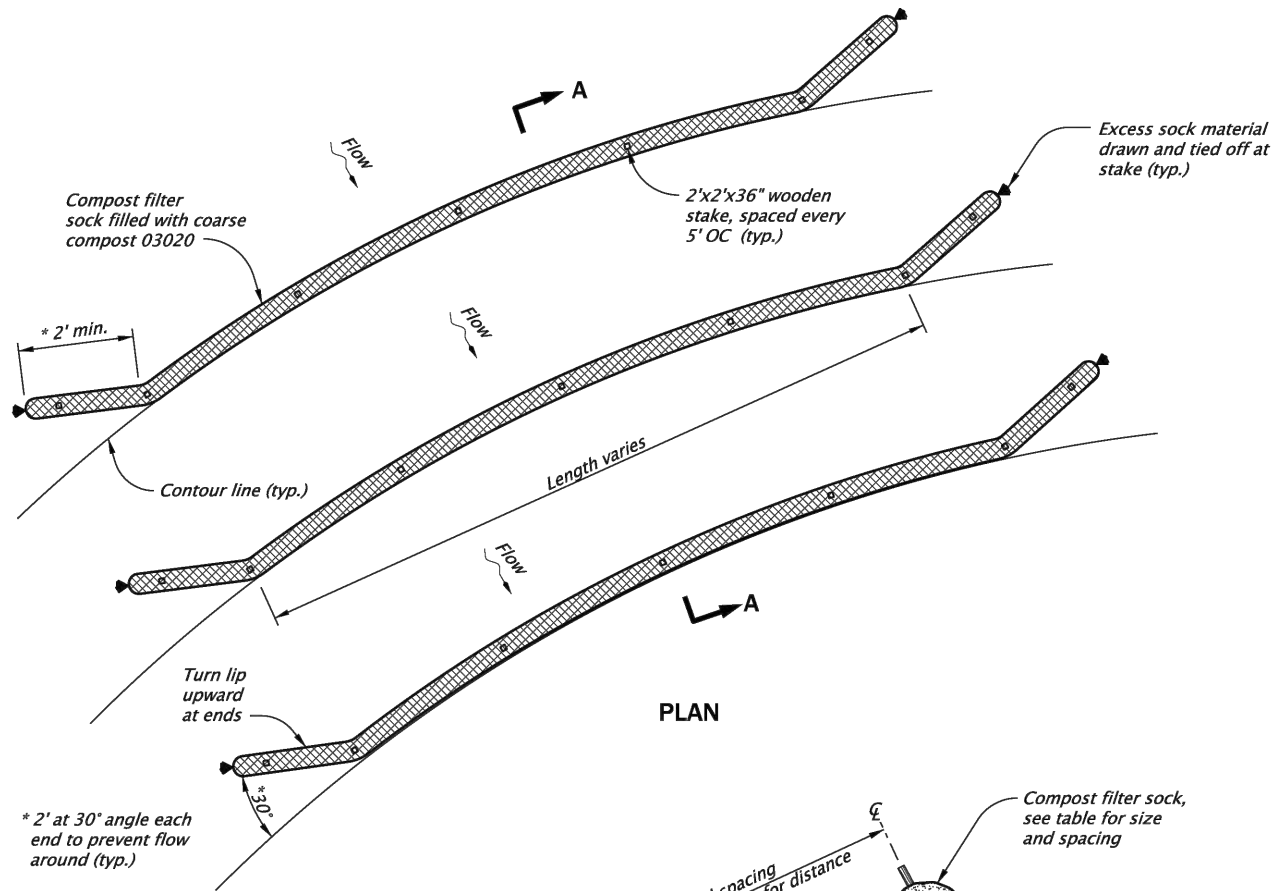


**Harper Houf Peterson Righellis Inc.**  
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ESCP - EROSION CONTROL DETAILS  
**CEDAROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON



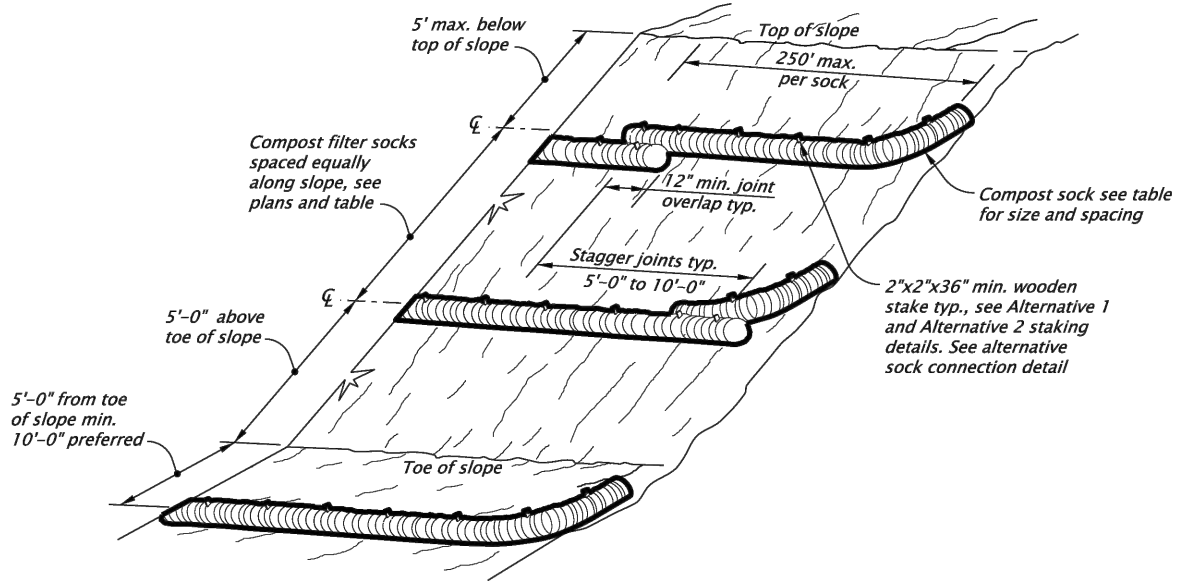
RD1032.dgn 20-JAN-2021



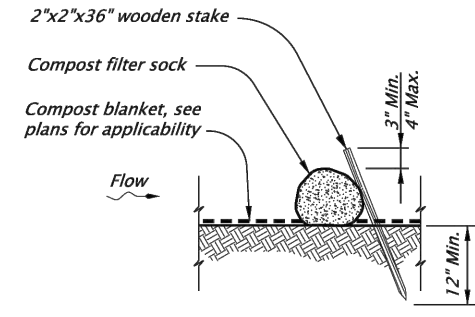
NOTE:  
Fully biodegradable compost sock mesh is recommended for permanent installations. Where compost socks must be moved or removed, synthetic sock mesh should be used.

COMPOST FILTER SOCK DIAMETER AND SPACING BASED ON SLOPE		
SLOPE	SPACING (ft)	DIAMETER (in)
<1:50	250	8
1:50 - 1:10	125	12
1:10 - 1:5	100	12
1:5 - 1:2	50	18
>1:2	25	18

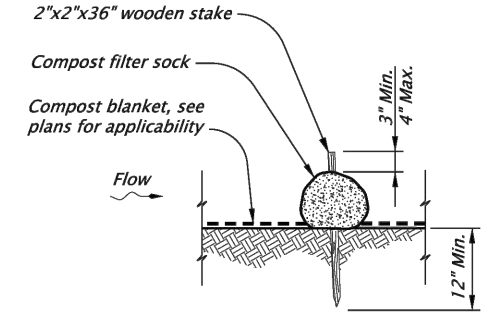
COMPOST FILTER SOCK  
NOT TO SCALE



SLOPE APPLICATION - PERSPECTIVE VIEW



ALTERNATIVE 1 (Staking)



ALTERNATIVE 2 (Staking)

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**SEDIMENT BARRIER TYPE 8**

2024

DATE	REVISION	DESCRIPTION
01-2021	REMOVED	CALC BOOK NUMBERS

CALC. BOOK NO. --- N/A --- SDR DATE: 20-JAN-2021 RD1032

Effective Date: December 1, 2023 – May 31, 2024

ESCP - EROSION CONTROL DETAILS  
CEDAR OAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson Righellis Inc.  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



REGISTERED PROFESSIONAL ENGINEER  
86,200  
PRELIMINARY  
OREGON  
JAN. 10, 2017  
JAMES S. HOUF

EXPIRES: 6/30/25

DESIGNED: HHPR TEAM  
DRAWN: HHPR TEAM  
CHECKED: JSH  
DATE: 2-12-2024

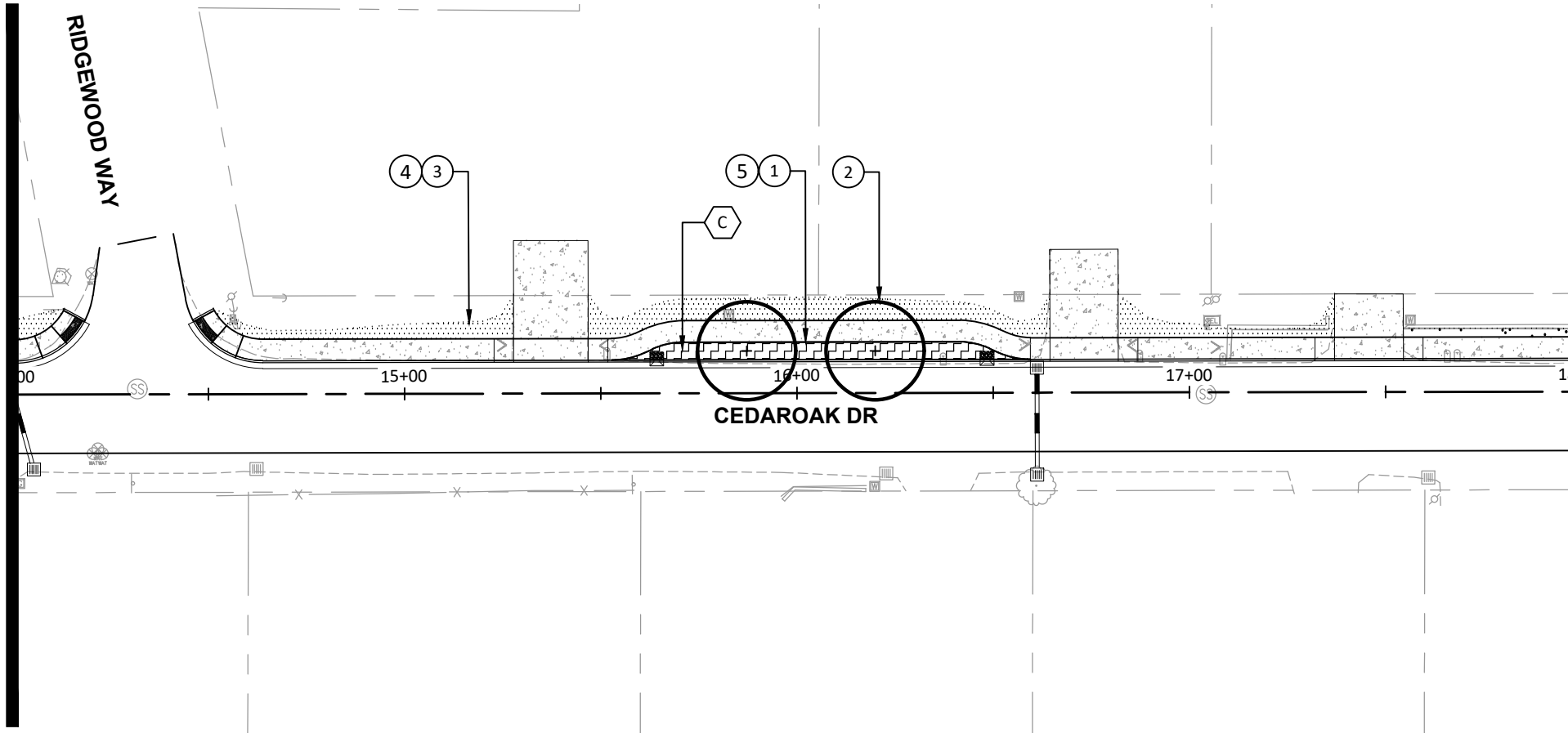
SHEET NO.  
**EC07**  
JOB NO.  
CWL-10

DRAWING NAME: CWL10-EC08 ESC DETAILS.DWG

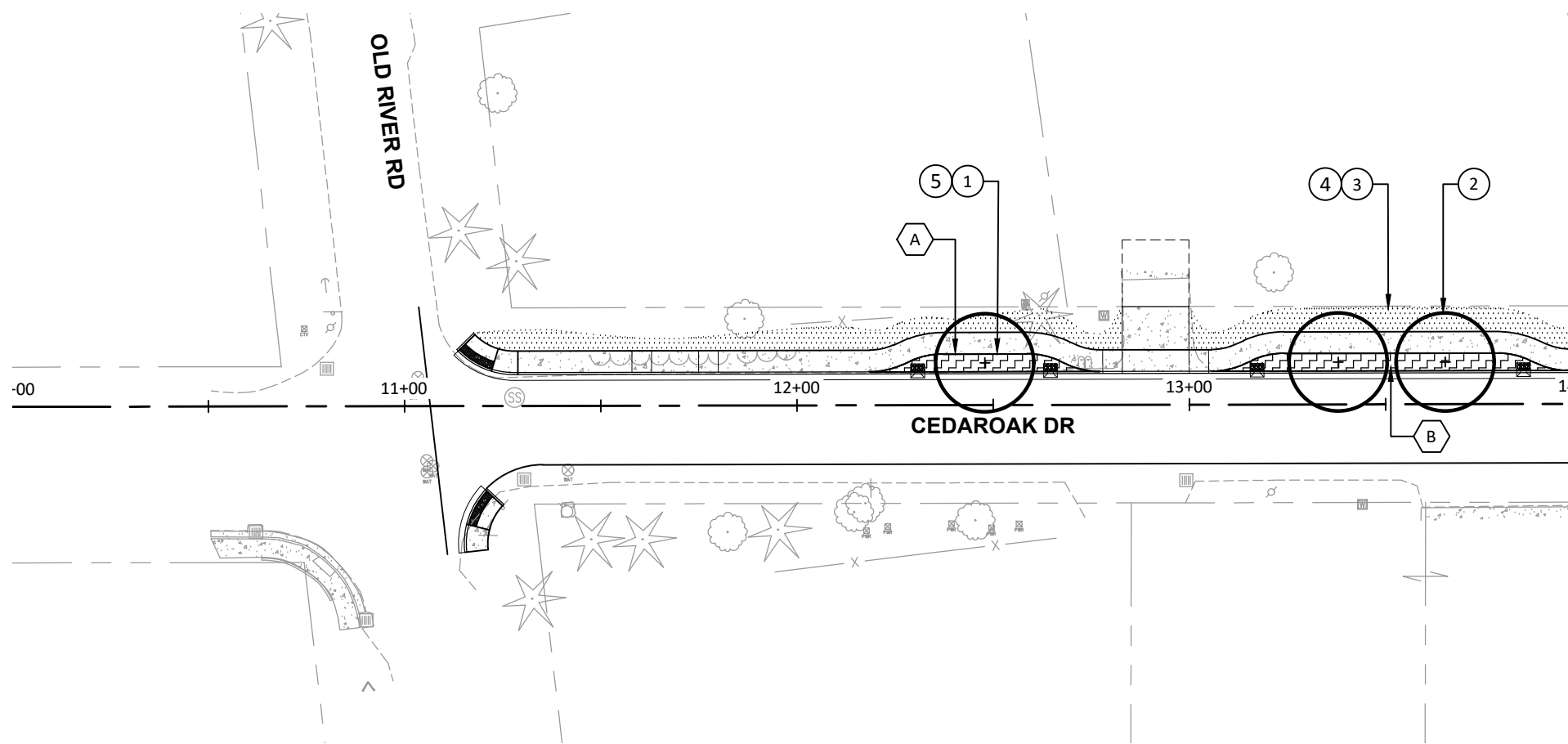


DRAWING NAME: CWL10-LA01 LANDSCAPE.DWG

MATCHLINE STA. 14+00 SEE ABOVE



MATCHLINE STA. 18+00 SEE SHEET LA02

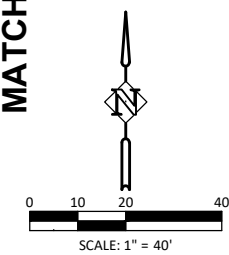


MATCHLINE STA. 14+00 SEE BELOW

**CONSTRUCTION NOTES:**

- ① PLACE 12" STORMWATER FACILITY TOP SOIL IN PLANTINERS, TYP. 32 CY
- ② INSTALL NYSSA SYLVATICA 'WILDFIRE' AS SHOWN - 2" CAL. 5 EA
- ③ PLACE 4" TOP SOIL IN SEEDED AREAS, TYP. 33 CY
- ④ INSTALL SEEDING IN DISTURBED AREAS AS SHOWN 0.06 AC
- ⑤ INSTALL WETLAND PLANTS AT 80 PLANT / 100 SF (SEE TABLE) - 1 GAL 689 EA

WATER QUALITY PLANTERS		
BASIN NO.	BASIN ZONE A SIZE (SF)	HERBACEOUS PLANTS (80/100SF)
A	166	133
B	312	250
C	382	306
D	362	290
E	563	450
<b>TOTAL</b>	<b>1785</b>	<b>1429</b>



LANDSCAPE PLAN  
CEDAR OAK DRIVE SAFE ROUTES  
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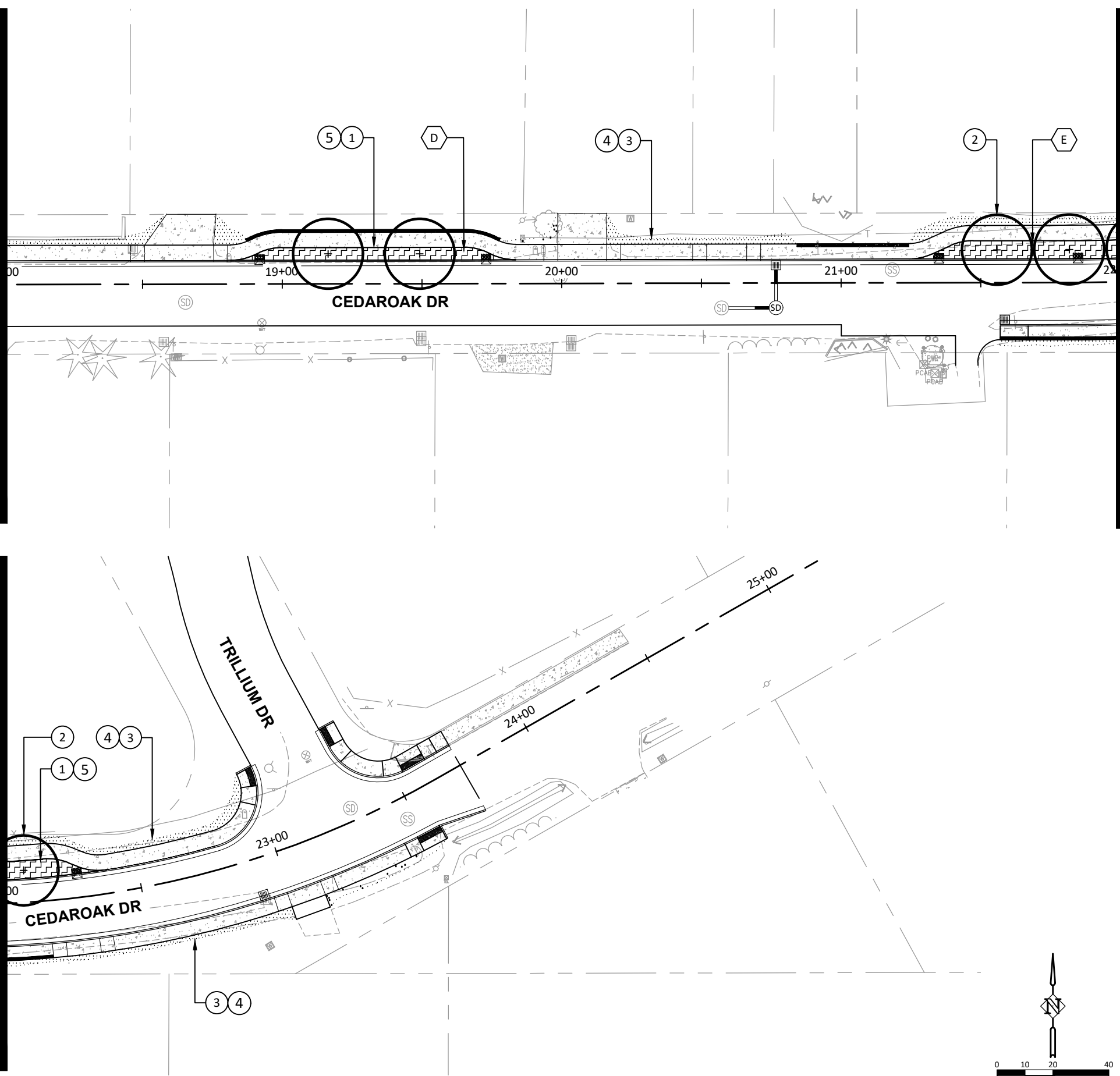
REGISTERED  
747  
PRELIMINARY  
JEFFERY P. CREEL  
OREGON  
05/13/11  
LANDSCAPE ARCHITECT  
EXPIRES: 05/31/24

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>LA01</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-LA01 LANDSCAPE.DWG

MATCHLINE STA. 18+00 SEE SHEET LA01

MATCHLINE STA. 22+00 SEE ABOVE



MATCHLINE STA. 22+00 SEE BELOW

**CONSTRUCTION NOTES:**

- ① PLACE 12" STORMWATER FACILITY TOP SOIL IN PLANTINERS, TYP. 35 CY
- ② INSTALL NYSSA SYLVATICA 'WILDFIRE' AS SHOWN - 2" CAL. 5 EA
- ③ PLACE 4" TOP SOIL IN SEEDED AREAS, TYP. 17 CY
- ④ INSTALL SEEDING IN DISTURBED AREAS AS SHOWN 0.03 AC
- ⑤ INSTALL WETLAND PLANTS AT 80 PLANT / 100 SF (SEE TABLE) - 1 GAL 740 EA

LANDSCAPE PLAN  
**CEDAROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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REGISTERED  
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 JEFFERY P. CREEL  
 OREGON  
 05/13/11  
 LANDSCAPE ARCHITECT  
 EXPIRES: 05/31/24

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>LA02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

# PLANTING NOTES

## STORMWATER FACILITY TOPSOIL

- FURNISH TOPSOIL CONTAINING NO SUBSTANCE DETRIMENTAL TO THE GROWTH OF PLANTS AND THAT IS FREE OF PLANTS DESIGNATED BY THE OREGON DEPARTMENT OF AGRICULTURE AS TYPE "A" OR TYPE "B" WEEDS. UNSUITABLE TOPSOIL, OR TOPSOIL PLACED BY THE CONTRACTOR WITHOUT APPROVAL IN AREAS TO BE PLANTED, MAY BE REQUIRED TO BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- FURNISH IMPORTED TOPSOIL FOR VEGETATED STORM WATER FACILITIES CONFORMING TO THE FOLLOWING:
  - GENERAL COMPOSITION - THE MATERIAL SHALL BE ANY BLEND OF LOAMY SOIL, SAND, AND COMPOST THAT IS 30-40% COMPOST (BY VOLUME) AND MEETS THE OTHER CRITERIA IN THIS SPECIFICATION.
  - ANALYSIS REQUIREMENTS FOR THE BLENDED MATERIAL:
    - PARTICLE GRADATION - A SIEVE ANALYSIS OF THE BLENDED MATERIAL, INCLUDING COMPOST, SHALL BE CONDUCTED IN CONFORMANCE WITH ASTM C117/C136, AASHTO T11/T27 OR ASTM D422/D1140. THE ANALYSIS SHALL INCLUDE THE FOLLOWING SIEVE SIZES: 1 INCH, 3/8 INCH, #4, #10, #20, #40, #60, #100, #200. THE GRADATION OF THE BLEND SHALL MEET THE FOLLOWING GRADATION CRITERIA.

SIEVE SIZE	PERCENT PASSING
1 INCH	100
# 4	75 -100
# 10	40-100
# 40	15-50
# 100	5-25
# 200	5-15

THE BLEND SHALL HAVE A COEFFICIENT OF UNIFORMITY (D60/D10) EQUAL TO OR GREATER THAN 6 TO ENSURE IT IS WELL GRADED (HAS A BROAD RANGE OF PARTICLE SIZES). THE COEFFICIENT IS THE RATIO OF TWO PARTICLE DIAMETERS ON A GRAIN-SIZE DISTRIBUTION CURVE; IT IS THE PARTICLE DIAMETER AT 60% PASSING DIVIDED BY THE PARTICLE DIAMETER AT 10% PASSING.

- ACIDITY - THE PH (POWER OF HYDROGEN) OF THE BLENDED MATERIAL SHALL BE TESTED AND BE BETWEEN 6 TO 8.
- GENERAL REQUIREMENTS FOR THE BLENDED MATERIAL:
    - THE MATERIAL SHALL BE LOOSE AND FRIABLE.
    - IT SHALL BE WELL MIXED AND HOMOGENOUS.
    - IT SHALL BE FREE OF WOOD PIECES, PLASTIC, AND OTHER FOREIGN MATTER.
    - IT SHALL HAVE NO VISIBLE FREE WATER.
- COMPOST - THE COMPOST SHALL BE DERIVED FROM PLANT MATERIAL AND PROVIDED BY A MEMBER OF THE US COMPOSTING COUNCIL SEAL OF TESTING ASSURANCE (STA) PROGRAM. SEE WWW.COMPOSTINGCOUNCIL.ORG FOR A LIST OF LOCAL PROVIDERS.
 

THE COMPOST SHALL BE THE RESULT OF THE BIOLOGICAL DEGRADATION AND TRANSFORMATION OF PLANT-DERIVED MATERIALS UNDER CONDITIONS DESIGNED TO PROMOTE AEROBIC DECOMPOSITION. THE MATERIAL SHALL BE WELL COMPOSTED, FREE OF VIABLE WEED SEEDS, AND STABLE WITH REGARD TO OXYGEN CONSUMPTION AND CARBON DIOXIDE GENERATION. THE COMPOST SHALL HAVE NO VISIBLE FREE WATER AND PRODUCE NO DUST WHEN HANDLED. IT SHALL MEET THE FOLLOWING CRITERIA, AS REPORTED BY THE US COMPOSTING COUNCIL STA COMPOST TECHNICAL DATA SHEET PROVIDED BY THE VENDOR.

    - 100% OF THE MATERIAL MUST PASS THROUGH A 1/2-INCH SCREEN.
    - THE PH OF THE MATERIAL SHALL BE BETWEEN 6 AND 8.
    - MANUFACTURED INERT MATERIAL (PLASTIC, CONCRETE, CERAMICS, METAL, ETC.) SHALL BE LESS THAN 1.0% BY WEIGHT.
    - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 30 AND 70% (DRY WEIGHT BASIS).
    - SOLUBLE SALT CONTENT SHALL BE LESS THAN 6.0 MMHOS/CM.
    - MATURITY INDICATOR SHALL BE GREATER THAN 80% FOR GERMINATION AND VIGOR.
    - STABILITY SHALL BE 'STABLE' TO 'VERY STABLE'.
    - CARBON/NITROGEN (C/N) RATIO SHALL BE LESS THAN 25:1
    - TRACE METALS TEST RESULT = "PASS."
  - SUBMITTALS - AT LEAST 14 WORKING DAYS IN ADVANCE OF CONSTRUCTION, SUBMIT THE FOLLOWING:
    - DOCUMENTATION FOR THE TWO ANALYSES DESCRIBED IN SECTION 01040.14(D)(1)(B) OF THIS SPECIFICATION (PARTICLE GRADATION WITH CALCULATED COEFFICIENT OF UNIFORMITY; AND PH) SHALL BE PERFORMED BY AN ACCREDITED LABORATORY WITH CERTIFICATION MAINTAINED CURRENT. THE DATE OF THE ANALYSES SHALL BE NO MORE THAN 90 CALENDAR DAYS PRIOR TO THE DATE OF THE SUBMITTAL. THE REPORT SHALL INCLUDE THE FOLLOWING INFORMATION:
      - NAME AND ADDRESS OF THE LABORATORY.
      - PHONE CONTACT AND E-MAIL ADDRESS FOR THE LABORATORY.
      - TEST DATA, INCLUDING THE DATE AND NAME OF THE TEST PROCEDURE.
    - A COMPOST TECHNICAL DATA SHEET FROM THE COMPOST VENDOR. THE ANALYSIS AND REPORT MUST CONFORM TO THE SAMPLING AND REPORTING REQUIREMENTS OF THE US COMPOSTING COUNCIL SEAL OF TESTING ASSURANCE (STA) PROGRAM. THE ANALYSIS SHALL BE PERFORMED AND REPORTED BY AN APPROVED INDEPENDENT STA PROGRAM LABORATORY AND BE NO MORE THAN 90 CALENDAR DAYS PRIOR TO THE DATE OF THE SUBMITTAL.
    - TWO PINT SIZED SAMPLES OF THE BLENDED MATERIAL.
    - A DESCRIPTION OF THE LOCATION, EQUIPMENT, AND METHOD PROPOSED TO MIX THE MATERIAL.

## 5. STORMWATER FACILITY TOPSOIL INSTALLATION:

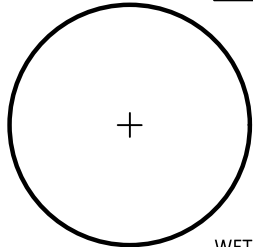
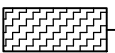
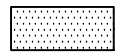
- PROTECTION OF THE TOPSOIL - THE MATERIAL SHALL BE PROTECTED FROM ALL SOURCES OF CONTAMINATION, INCLUDING WEED SEEDS, WHILE AT THE SUPPLIER, IN CONVEYANCE, AND AT THE PROJECT SITE.
- PLACEMENT OF THE TOPSOIL - THE MATERIAL SHALL BE PLACED IN LOOSE LIFTS, NOT TO EXCEED 8 INCHES EACH AND EACH LIFT SHALL BE COMPACTED WITH A WATER-FILLED LANDSCAPE ROLLER. THE MATERIAL SHALL NOT OTHERWISE BE MECHANICALLY COMPACTED.
- TIMING OF PLANT INSTALLATION - WEATHER PERMITTING AND AS APPROVED, PLANTS SHALL BE INSTALLED AS SOON AS POSSIBLE AFTER PLACING AND GRADING THE TOPSOIL IN ORDER TO MINIMIZE EROSION AND FURTHER COMPACTION.
- EROSION CONTROL - TEMPORARY EROSION CONTROL MEASURES ARE REQUIRED UNTIL PERMANENT STABILIZATION MEASURES ARE FUNCTIONAL.
- PROTECTION OF THE INSTALLED TOPSOIL - IN ALL CASES, THE INSTALLED MATERIAL MUST BE PROTECTED FROM FOOT OR EQUIPMENT TRAFFIC AND SURFACE WATER RUNOFF. TEMPORARY FENCING OR WALKWAYS SHOULD BE INSTALLED AS NEEDED TO KEEP WORKERS, PEDESTRIANS, AND EQUIPMENT OUT OF THE AREA. UNDER NO CIRCUMSTANCES SHOULD MATERIALS AND EQUIPMENT BE STORED ON TOP OF THE INSTALLATION AREA.
- WET AND WINTER CONDITIONS - PLACEMENT OF THE TOPSOIL WILL NOT BE ALLOWED WHEN THE GROUND IS FROZEN OR SATURATED OR WHEN THE WEATHER IS TOO WET AS DETERMINED BY THE OWNERS REPRESENTATIVE.

### GENERAL PLANTING NOTES

- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT CITY OF WEST LINN STANDARDS AND OREGON BUILDING AND SPECIALITY CODES.
- INSTALL EROSION CONTROL SYSTEMS IN ACCORDANCE WITH CITY OF WEST LINN STANDARDS PRIOR TO SITE WORK AND LANDSCAPE INSTALLATION.
- CONTRACTOR SHALL MARK AND PROTECT ALL UTILITIES, SITE FEATURES, AND VEGETATION TO REMAIN IN PLACE.
- CONTRACTOR SHALL REMOVE ALL WEEDS AND INVASIVE SPECIES PRIOR TO PLANTING OR SEEDING.
- ALL AREAS DISTURBED BY STAGING AND CONSTRUCTION ACTIVITIES SHALL BE SEEDED AT NO ADDITIONAL COST TO THE OWNER.
- ALL SEEDED AREAS SHALL BE STRIPPED OF VEGETATION, SCARIFIED AND RECEIVE 4" OF TOPSOIL PRIOR TO APPLICATION OF SEED.
- LANDSCAPE INSTALLATION SHALL INCLUDE PROVISION FOR TEMPORARY IRRIGATION OF PLANT MATERIALS DURING THE ESTABLISHMENT PERIOD
- PLANT MATERIAL INSTALLED SHALL CONFORM IN SIZE AND GRADE TO THE "AMERICAN STANDARD FOR NURSERY STOCK" CURRENT EDITION.

- LANDSCAPE CONTRACTOR SHALL WATER PLANTINGS FOR DURATION OF 1 YEAR WARRANTY PERIOD AFTER INSTALLATION AND GUARANTEE ALL PLANTINGS TO BE IN SATISFACTORY HEALTH. LANDSCAPE CONTRACTOR SHALL REPLACE ALL DAMAGED, DEAD, OR DYING PLANTS COVERED BY WARRANTY WITHIN 30 DAYS OF INITIAL IDENTIFICATION OF CONDITION.

## PLANT SCHEDULE

TREES																						
	10 Nysa sylvatica 'Wildfire' - Wildfire Tupelo 2" CAL. B&B, WELL BRANCHED, LIMBED TO 6'																					
WETLAND PLANTS																						
	562 Juncus patens - Spreading Rush 562 Carex obnupta - Slough Sedge 1 GAL. CONT., FULL PLANTS, 80 PLANTS / 100 SF																					
SEED MIXES																						
	.09 AC SEED MIX 1 (ROUGH SEED)																					
	<table border="1"> <thead> <tr> <th></th> <th>% PLS</th> <th>LBS OF PLA/ 1000 SF</th> </tr> </thead> <tbody> <tr> <td>Festuca rubra ssp fallax</td> <td>20</td> <td>8.00</td> </tr> <tr> <td>Festuca rubra</td> <td>20</td> <td>8.00</td> </tr> <tr> <td>Lolium perenne</td> <td>30</td> <td>12.00</td> </tr> <tr> <td>Agrostis calillaris var highland</td> <td>20</td> <td>8.00</td> </tr> <tr> <td>Trifolium repens</td> <td>10</td> <td>4.00</td> </tr> <tr> <td><b>TOTAL</b></td> <td></td> <td><b>40.00</b></td> </tr> </tbody> </table>		% PLS	LBS OF PLA/ 1000 SF	Festuca rubra ssp fallax	20	8.00	Festuca rubra	20	8.00	Lolium perenne	30	12.00	Agrostis calillaris var highland	20	8.00	Trifolium repens	10	4.00	<b>TOTAL</b>		<b>40.00</b>
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<b>TOTAL</b>		<b>40.00</b>																				

LANDSCAPE LEGEND & NOTES  
CEDAR OAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

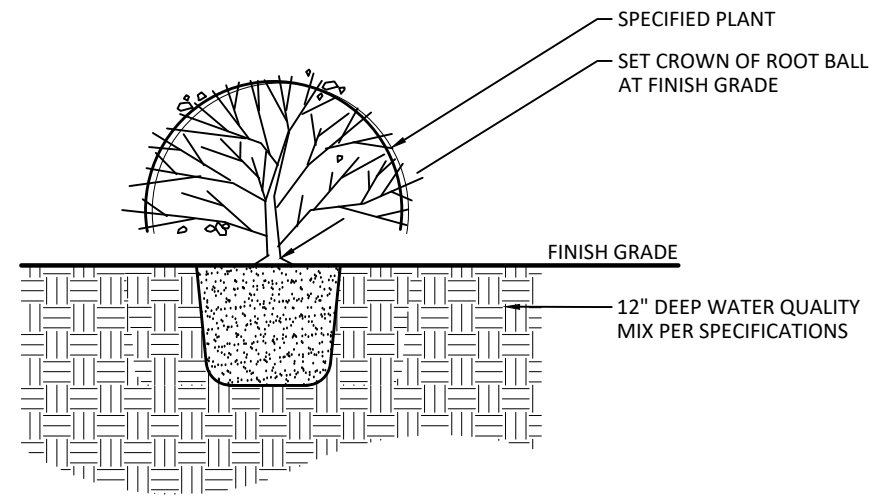
Harper Houf Peterson  
Righellis Inc.  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
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CITY OF  
**West Linn**

REGISTERED  
747  
PRELIMINARY  
JEFFERY P. CREEL  
OREGON  
05/13/11  
LANDSCAPE ARCHITECT  
EXPIRES: 05/31/24

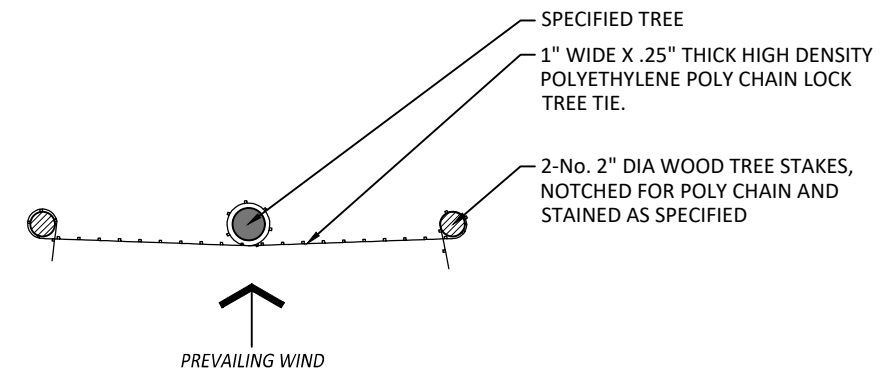
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DRAWN: HHPR TEAM	<b>LA03</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10



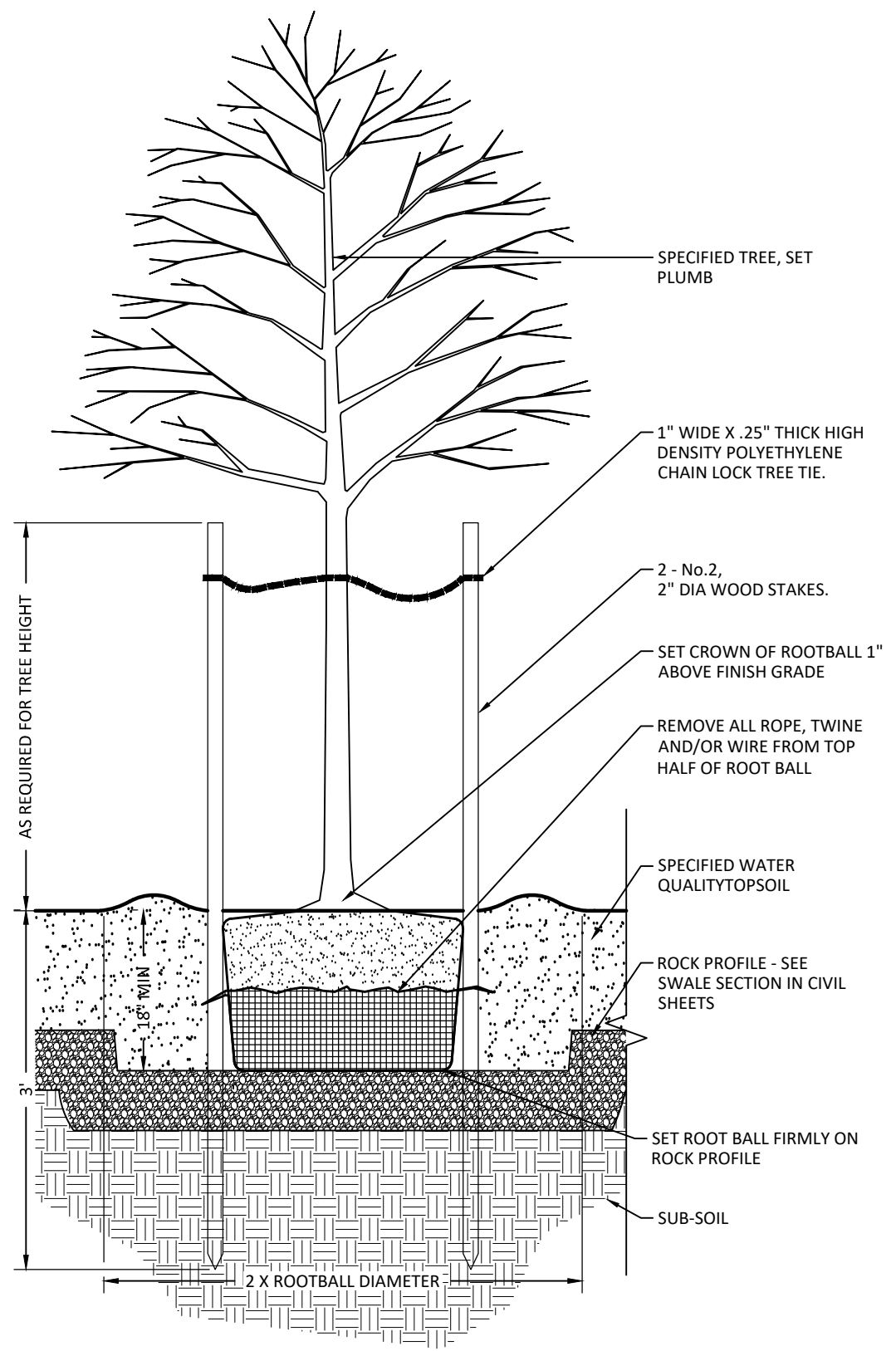


**1** SHRUB PLANTING IN SWALE (ZONE A)  
Section NOT TO SCALE

**NOTE:**  
WRAP POLY CHAIN AROUND NOTCHED STAKE AND LOCK TO SECURE. WRAP CENTER OF POLY CHAIN AROUND TREE TRUNK TO MOVE 3" IN ALL DIRECTIONS.



**2** TREE STAKING  
Plan NOT TO SCALE



**3** DECIDUOUS TREE PLANTING IN SW PLANTER  
Section NOT TO SCALE

LANDSCAPE DETAILS  
**CEDARROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

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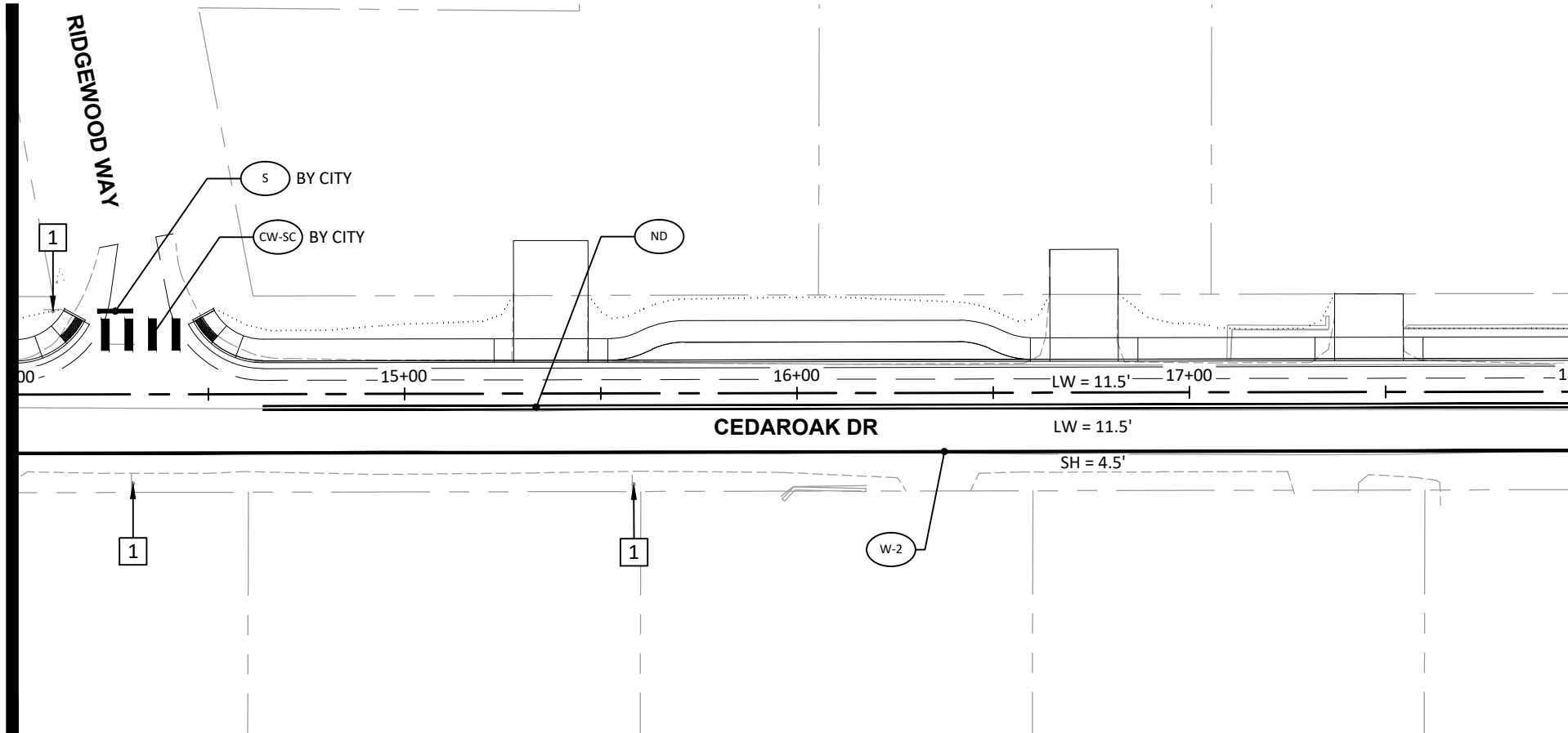
REGISTERED  
747  
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JEFFERY P. CREEL  
OREGON  
05/13/11  
LANDSCAPE ARCHITECT  
EXPIRES: 05/31/24

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>LA04</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

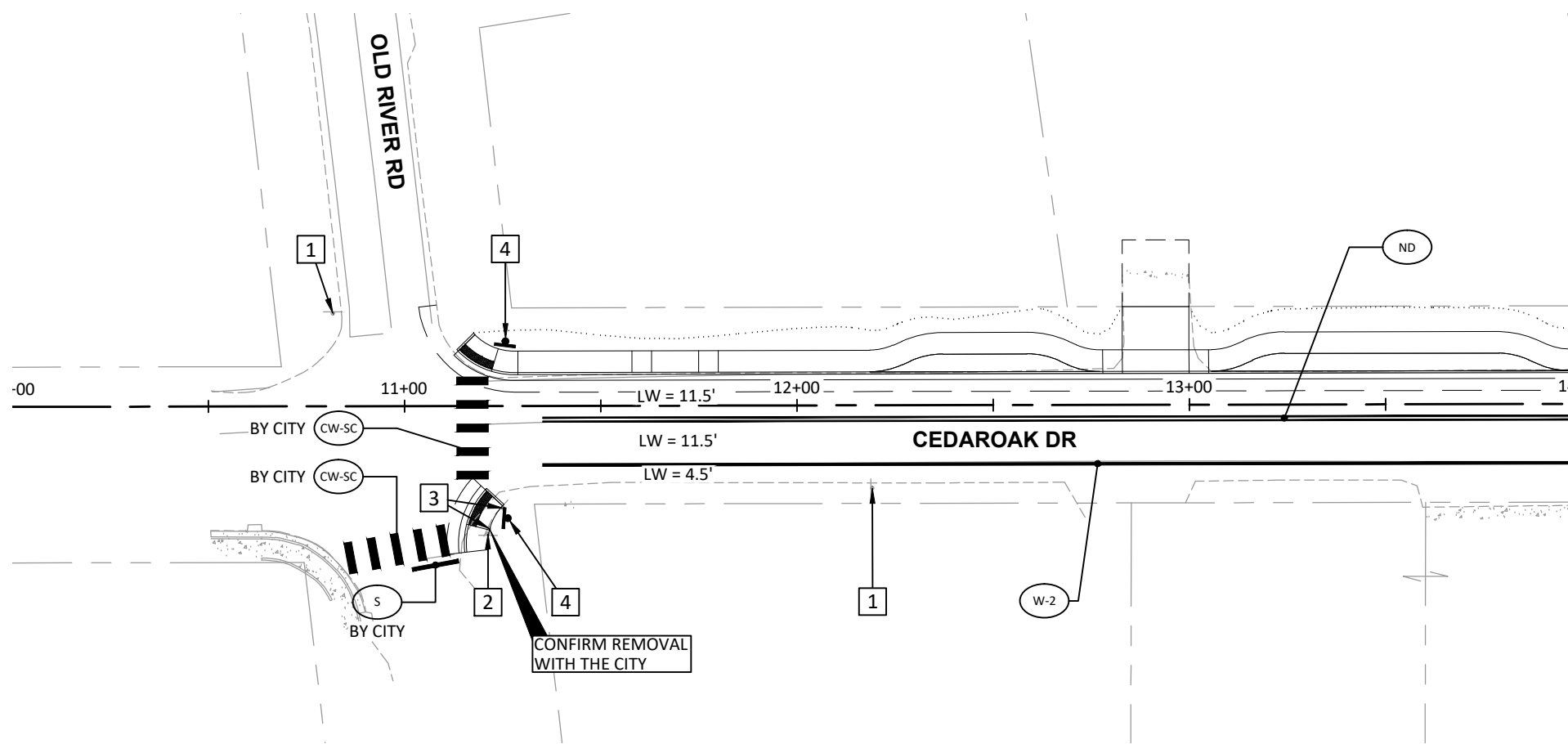
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DRAWING NAME: CWL10-SS01\_SIGN & STRIPE.DWG

MATCHLINE STA. 14+00 SEE ABOVE



MATCHLINE STA. 18+00 SEE SHEET SS02



MATCHLINE STA. 14+00 SEE BELOW

**SIGNING NOTES:**

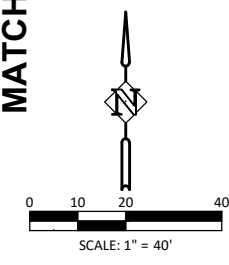
- 1 PROTECT EXISTING SIGN.
- 2 REMOVE EXISTING SIGN AND REINSTALL PER T250 ON SHEET SS03.
- 3 REMOVE EXISTING SIGN.
- 4 INSTALL W11-2 AND W16-7P SIGNS PER DETAIL T150 AND T250 ON SHEET SS03.

**STRIPING NOTES:**

- SEE ODOT STANDARD DRAWINGS FOR STRIPING REFERENCE DETAILS.

**GENERAL NOTES:**

- 1. MATCH POINTS TO EXISTING PAVEMENT MARKINGS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
- 2. REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THESE PLANS. REMOVAL OF EXISTING PAVEMENT MARKINGS IS TO BE DETERMINED IN THE FIELD. STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
- 3. UNLESS OTHERWISE SPECIFIED, ALL TRANSVERSE PAVEMENT MARKINGS INCLUDING LEGENDS AND BARS SHALL BE TYPE B-HS, PREFORMED FUSED THERMOPLASTIC FILM HIGH SKID. TO BE INSTALLED BY CITY OF WEST LINN.
- 4. UNLESS OTHERWISE SPECIFIED, ALL LONGITUDINAL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, EXTRUDED, SURFACE, NON-PROFILED.
- 5. ALL PAVEMENT LEGENDS TO BE INSTALLED BY CITY. COORDINATE WITH CITY ON INSTALLATION.



SIGNING & STRIPING PLAN  
**CEDAR OAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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**REGISTERED PROFESSIONAL ENGINEER**  
 86,200  
**PRELIMINARY**  
 OREGON  
 JAN. 10, 2017  
 JAMES S. HOUF

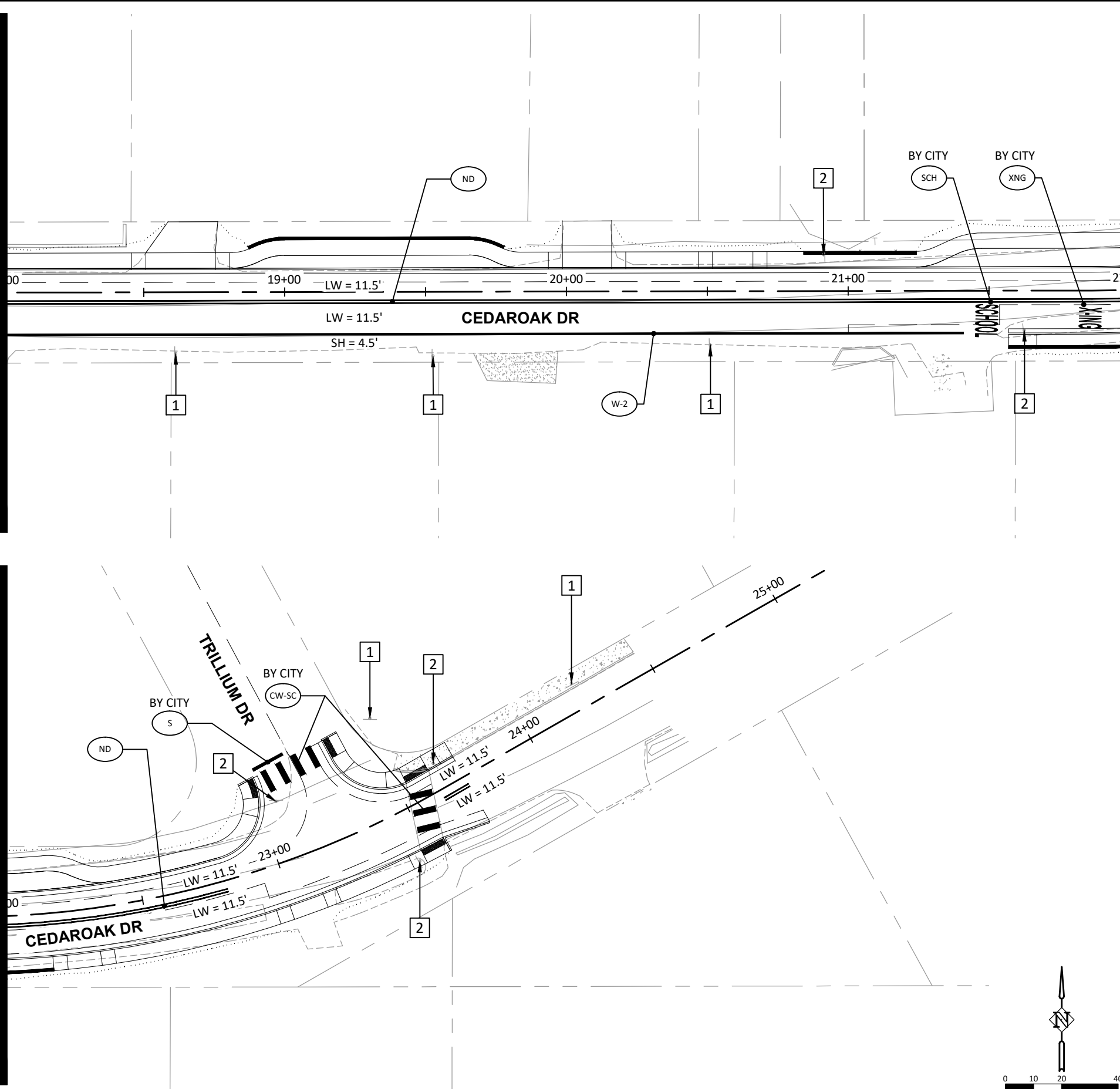
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>SS01</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-SS01 SIGN & STRIPE.DWG

MATCHLINE STA. 18+00 SEE SHEET SS01

MATCHLINE STA. 22+00 SEE ABOVE



MATCHLINE STA. 22+00 SEE BELOW

**SIGNING NOTES:**

- 1 PROTECT EXISTING SIGN.
- 2 REMOVE EXISTING SIGN AND REINSTALL PER T250 ON SHEET SS03.

**STRIPING NOTES:**

○ SEE ODOT STANDARD DRAWINGS FOR STRIPING REFERENCE DETAILS.

**GENERAL NOTES:**

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SIGNING & STRIPING PLAN  
**CEDAROAK DRIVE SAFE ROUTES**  
 WEST LINN, OREGON

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 Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



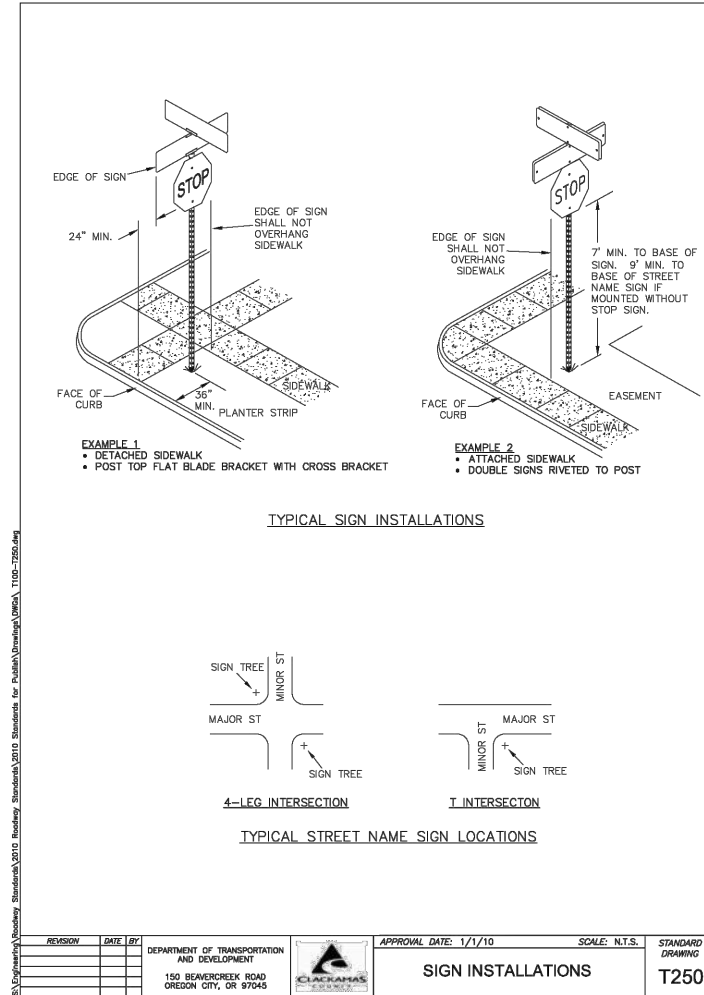
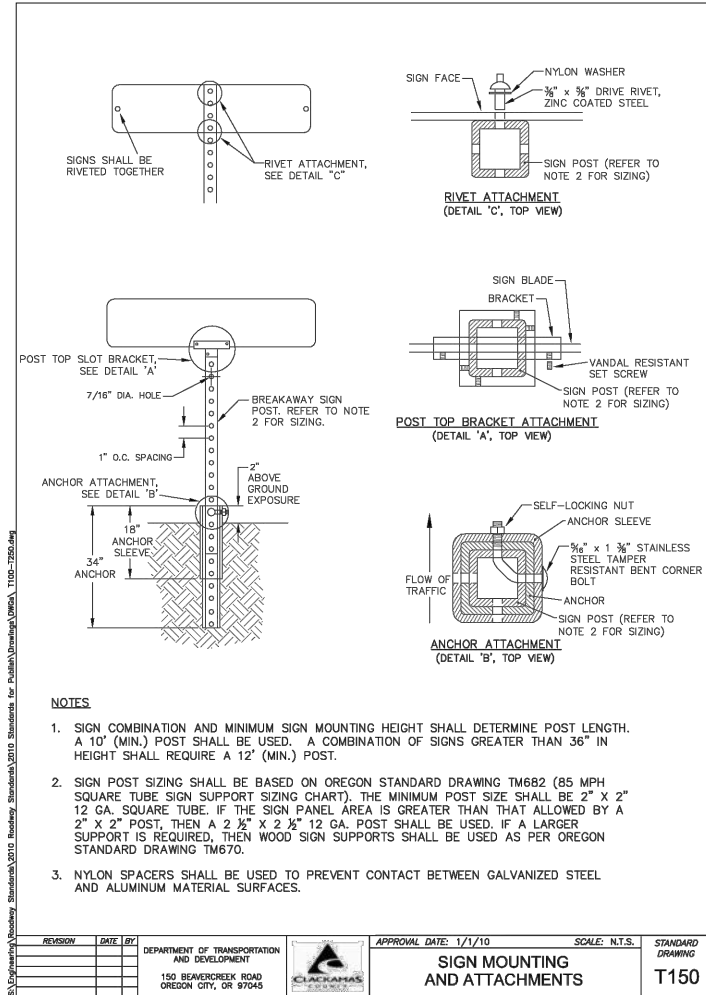
**REGISTERED PROFESSIONAL ENGINEER**  
 86,200  
**PRELIMINARY**  
 OREGON  
 JAN. 10, 2017  
 JAMES S. HOUF

EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>SS02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

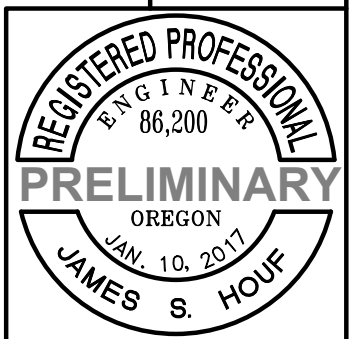


DRAWING NAME: CWL10-SS01 SIGN & STRIPE DWG

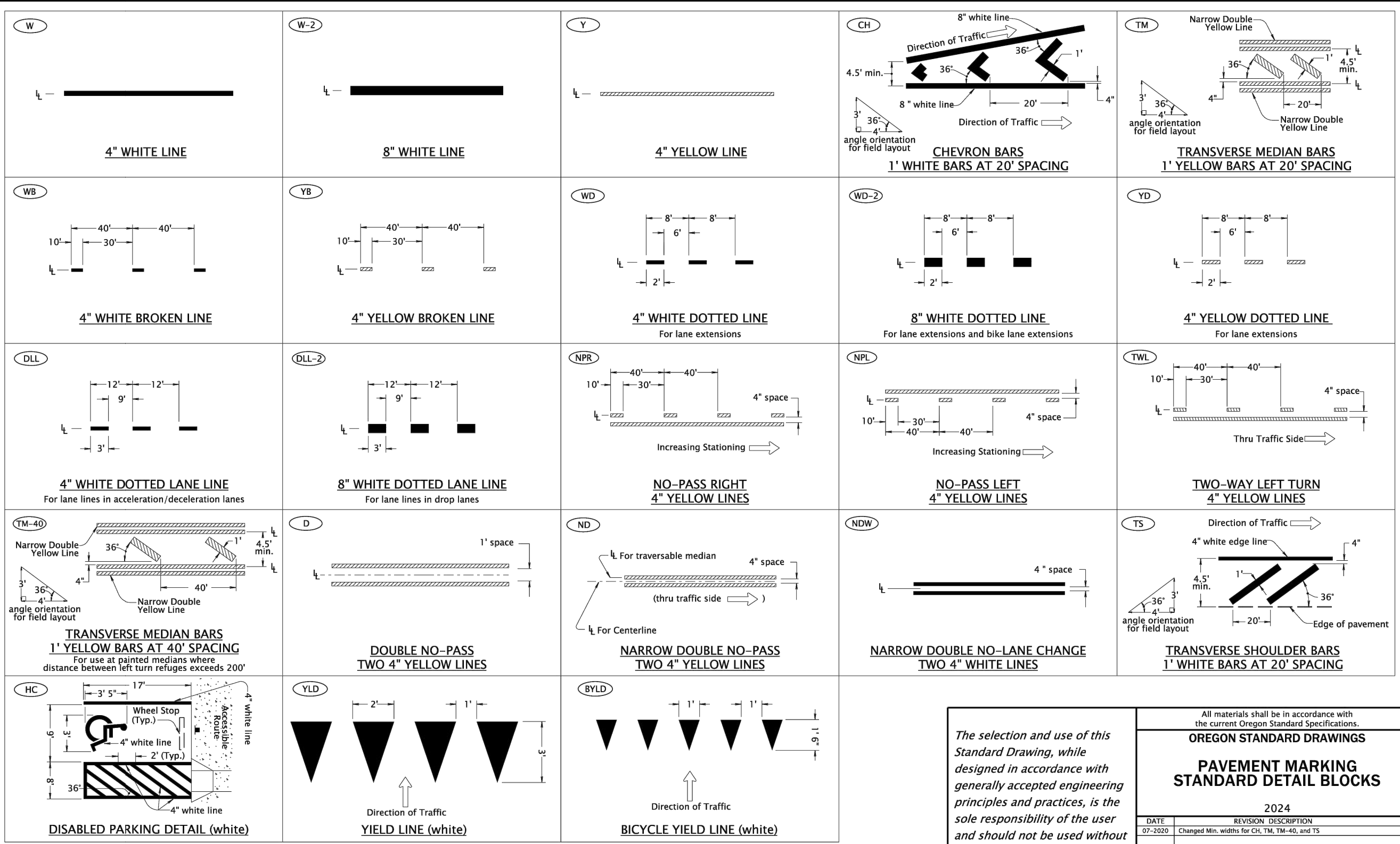


SIGNING & STRIPING DETAILS  
 CEDAROAK DRIVE SAFE ROUTES  
 WEST LINN, OREGON

Harper Houf Peterson  
 Righellis Inc.  
 ENGINEERS • PLANNERS  
 LANDSCAPE ARCHITECTS • SURVEYORS  
 205 SE Spokane Street, Suite 200, Portland, OR 97202  
 Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>SS03</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10



← Direction Of Traffic, Increasing Stationing Or Thru Traffic Side

**LEGEND**

⊥ — Lane line dimensions are shown on the striping plans

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**PAVEMENT MARKING STANDARD DETAIL BLOCKS**

2024

DATE	REVISION	DESCRIPTION
07-2020	Changed Min. widths for CH, TM, TM-40, and TS	

CALC. BOOK NO. N/A SDR DATE 07-01-2020 **TM500**

Effective Date: December 1, 2023 - May 31, 2024

SIGNING & STRIPING DETAILS  
**CEDAR OAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

**Harper Houf Peterson Righellis Inc.**

**HHPR**

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LANDSCAPE ARCHITECTS & SURVEYORS  
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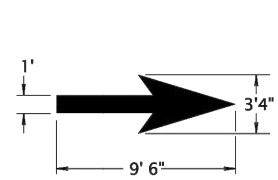
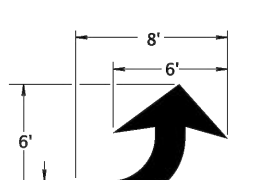
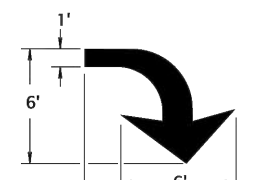
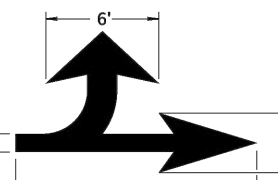
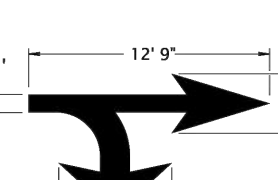
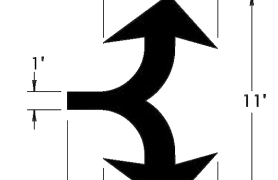
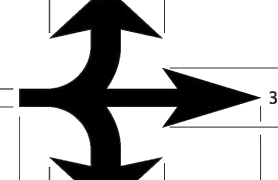
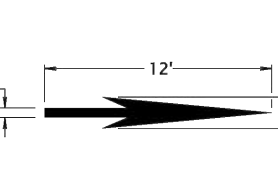
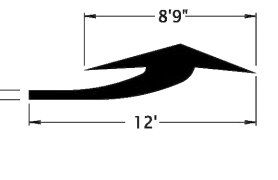
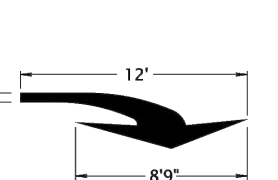
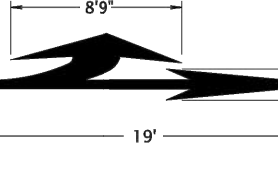
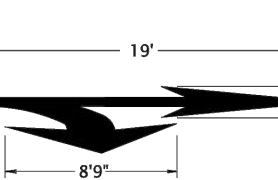
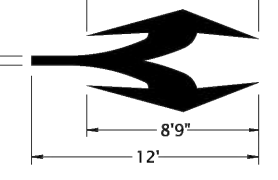
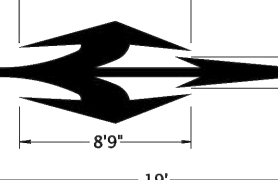
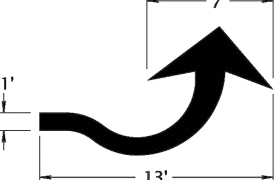
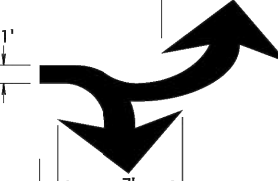
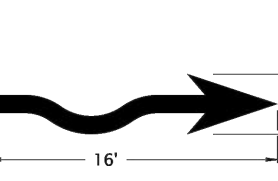
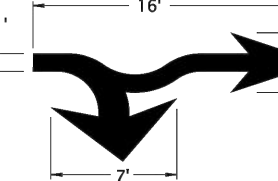
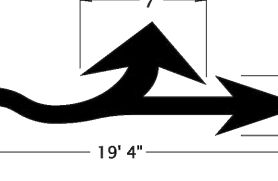
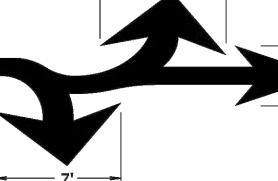
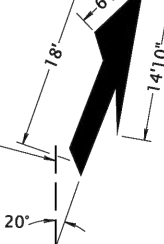
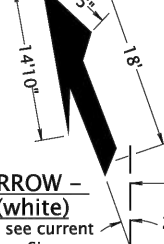
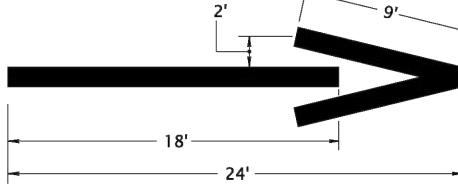
CITY OF  
**West Linn**

**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
**JAMES S. HOUF**

EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>SS04</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10

DRAWING NAME: CWL10-SS05 SIGN & STRIPE.DWG TMS01.dgn 01-03-2022

 <p><b>SA</b> <b>STRAIGHT ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>LA</b> <b>LEFT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>RA</b> <b>RIGHT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>LSA</b> <b>LEFT TURN STRAIGHT ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>RSA</b> <b>RIGHT TURN STRAIGHT ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>												
 <p><b>RALA</b> <b>RIGHT TURN LEFT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>RSLA</b> <b>RIGHT TURN STRAIGHT LEFT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>E-SA</b> <b>ELONGATED STRAIGHT ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>E-LA</b> <b>ELONGATED LEFT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>E-RSA</b> <b>ELONGATED RIGHT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>												
 <p><b>E-LSA</b> <b>ELONGATED LEFT TURN STRAIGHT ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>E-RSA</b> <b>ELONGATED RIGHT TURN STRAIGHT ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>E-RALA</b> <b>ELONGATED RIGHT TURN LEFT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>E-RSLA</b> <b>ELONGATED RIGHT TURN STRAIGHT LEFT TURN ARROW (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>F-LA</b> <b>FISH-HOOK LEFT TURN ARROW (white)</b> For arrow proportion details, see the current ODOT Traffic Line Manual</p>												
 <p><b>F-RALA</b> <b>FISH-HOOK RIGHT TURN LEFT TURN ARROW (white)</b> For arrow proportion details, see the current ODOT Traffic Line Manual</p>	 <p><b>F-SA</b> <b>FISH-HOOK STRAIGHT ARROW (white)</b> For arrow proportion details, see the current ODOT Traffic Line Manual</p>	 <p><b>F-RSA</b> <b>FISH-HOOK RIGHT TURN STRAIGHT ARROW (white)</b> For arrow proportion details, see the current ODOT Traffic Line Manual</p>	 <p><b>F-LSA</b> <b>FISH-HOOK LEFT TURN STRAIGHT ARROW (white)</b> For arrow proportion details, see the current ODOT Traffic Line Manual</p>	 <p><b>F-RSLA</b> <b>FISH-HOOK RIGHT TURN STRAIGHT LEFT TURN ARROW (white)</b> For arrow proportion details, see the current ODOT Traffic Line Manual</p>												
 <p><b>LRA-L</b> <b>LANE REDUCTION ARROW - LEFT LANE ENDS (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>LRA-R</b> <b>LANE REDUCTION ARROW - RIGHT LANE ENDS (white)</b> For arrow proportion details, see current version of Standard Highway Signs</p>	 <p><b>WWA</b> <b>WRONG-WAY ARROW (white)</b></p>	<p><i>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.</i></p> <p>All materials shall be in accordance with the current Oregon Standard Specifications.</p> <p><b>OREGON STANDARD DRAWINGS</b></p> <p><b>PAVEMENT MARKING STANDARD DETAIL BLOCKS</b></p> <p>2024</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>REVISION</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>07-2020</td> <td></td> <td>Some Detail Blocks moved to new Std. Drawing TMS04</td> </tr> <tr> <td>01-2022</td> <td></td> <td>Fish-hook Arrows added, LRA split into LRA-L and LRA-R</td> </tr> <tr> <td>01-2022</td> <td></td> <td>Corrected bubble callout of LRA-L and typo in LRA-R</td> </tr> </tbody> </table> <p>CALC. BOOK NO. N/A SDR DATE: 01-03-2022 <b>TM501</b></p>		DATE	REVISION	DESCRIPTION	07-2020		Some Detail Blocks moved to new Std. Drawing TMS04	01-2022		Fish-hook Arrows added, LRA split into LRA-L and LRA-R	01-2022		Corrected bubble callout of LRA-L and typo in LRA-R
DATE	REVISION	DESCRIPTION														
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01-2022		Fish-hook Arrows added, LRA split into LRA-L and LRA-R														
01-2022		Corrected bubble callout of LRA-L and typo in LRA-R														

**General Note:**  
 1. Center pavement markings within the lane width.  
 2. Arrow and letter dimensions nominal, excluding WWA.

Effective Date: December 1, 2023 - May 31, 2024

SIGNING & STRIPING DETAILS  
CEDAR OAK DRIVE SAFE ROUTES  
WEST LINN, OREGON

Harper Houf Peterson  
Righellis Inc.  
ENGINEERS PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhp.com fax: 503.221.1171

CITY OF  
**West Linn**



**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
**JAMES S. HOUF**  
EXPIRES: 6/30/25

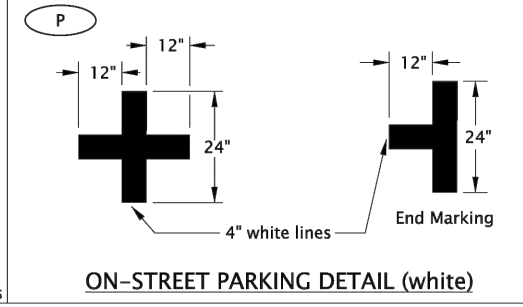
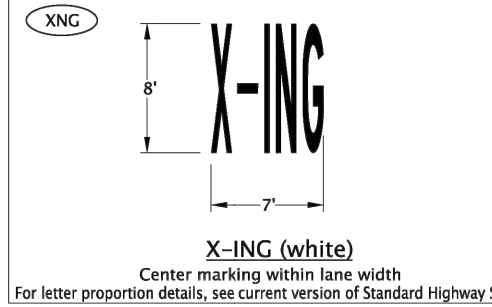
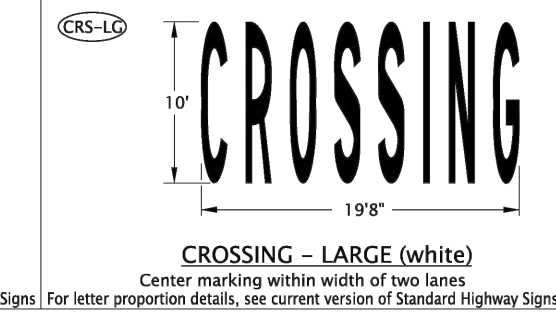
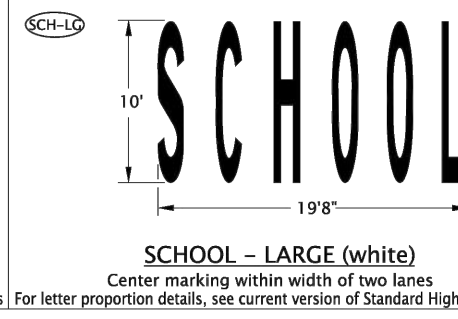
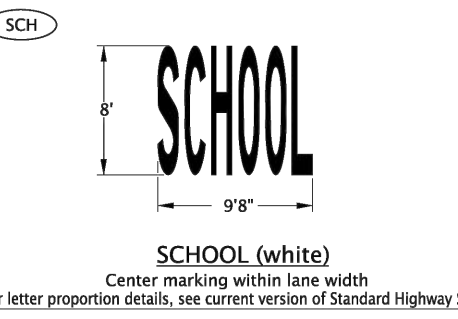
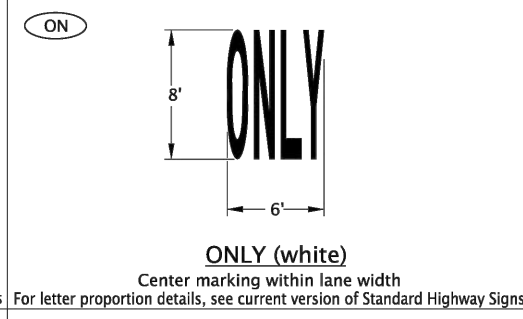
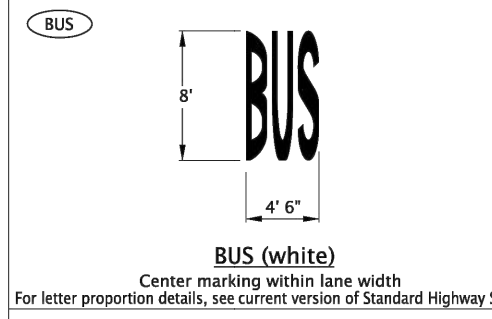
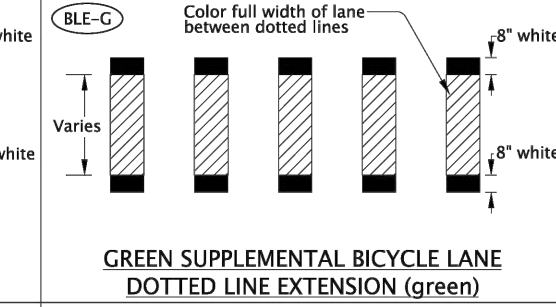
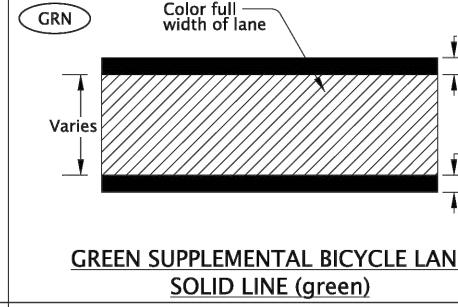
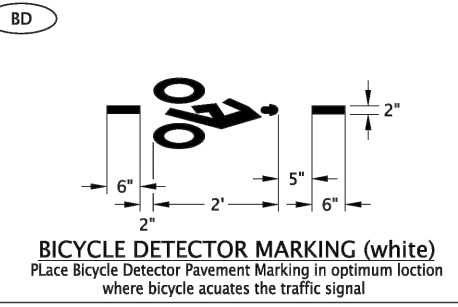
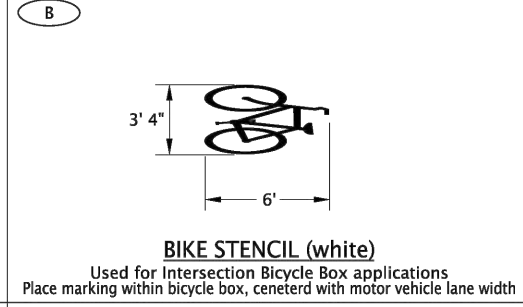
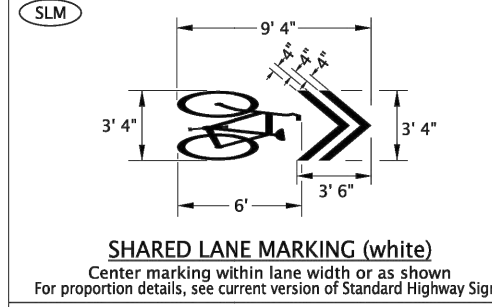
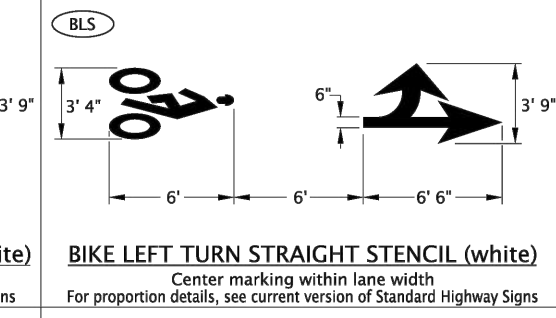
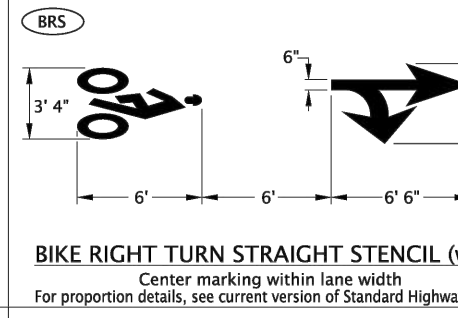
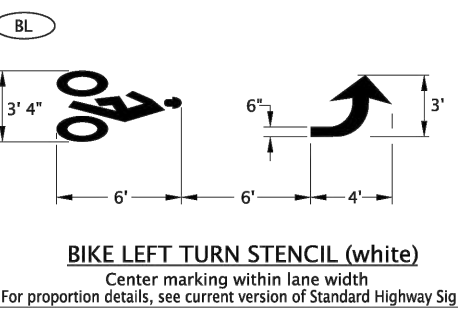
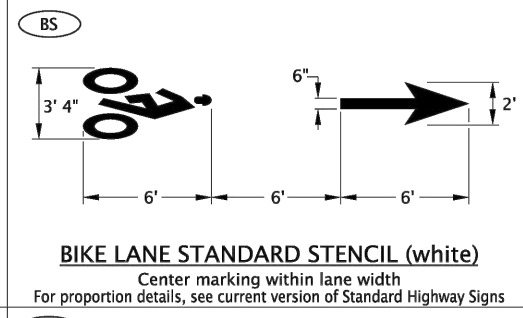
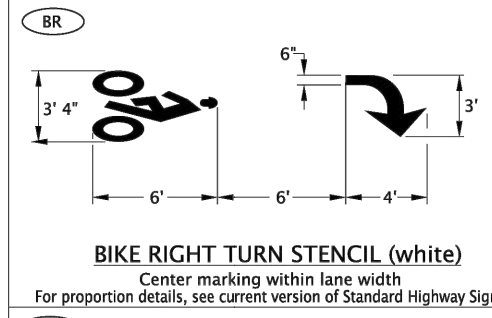
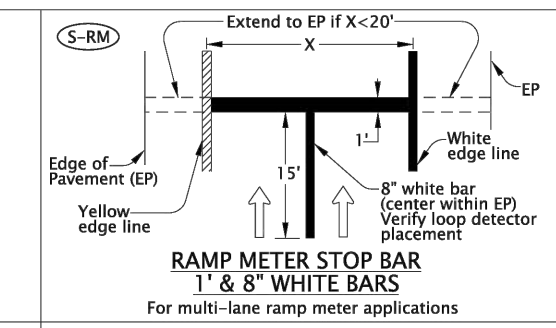
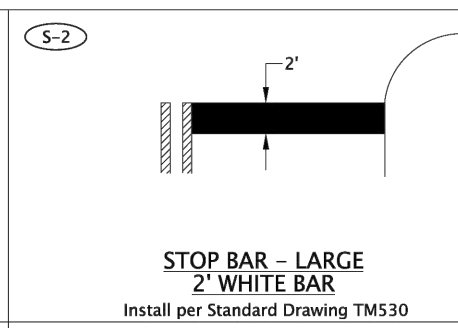
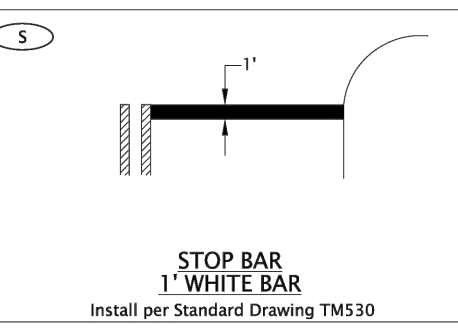
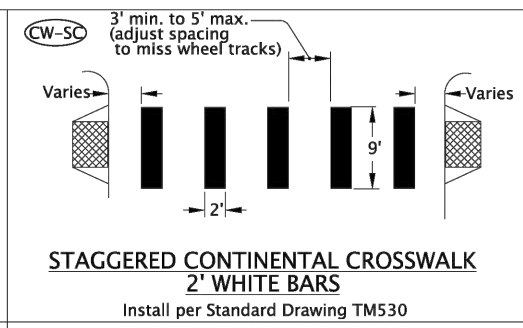
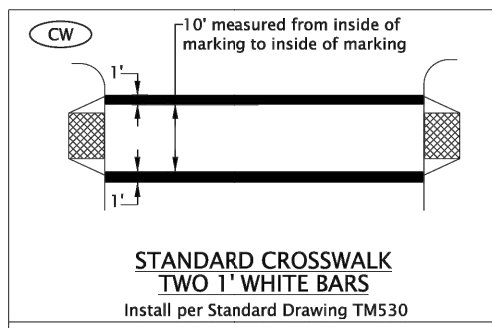
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>SS05</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10



07-08-2022

TM503.dgn

DRAWING NAME: CWL10-SS01 SIGN & STRIPE.DWG



**General Note:**

1. Arrow, letter, and bike symbol dimensions nominal.

**LEGEND**

← Direction of Travel

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

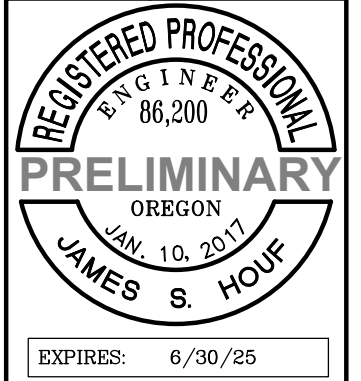
**PAVEMENT MARKING**  
**STANDARD DETAIL BLOCKS**

2024

DATE	REVISION	DESCRIPTION
07-2022	Added note for measurement of Standard Crosswalk	

CALC. BOOK NO. N/A SDR DATE 07-08-2022 **TM503**

Effective Date: December 1, 2023 - May 31, 2024

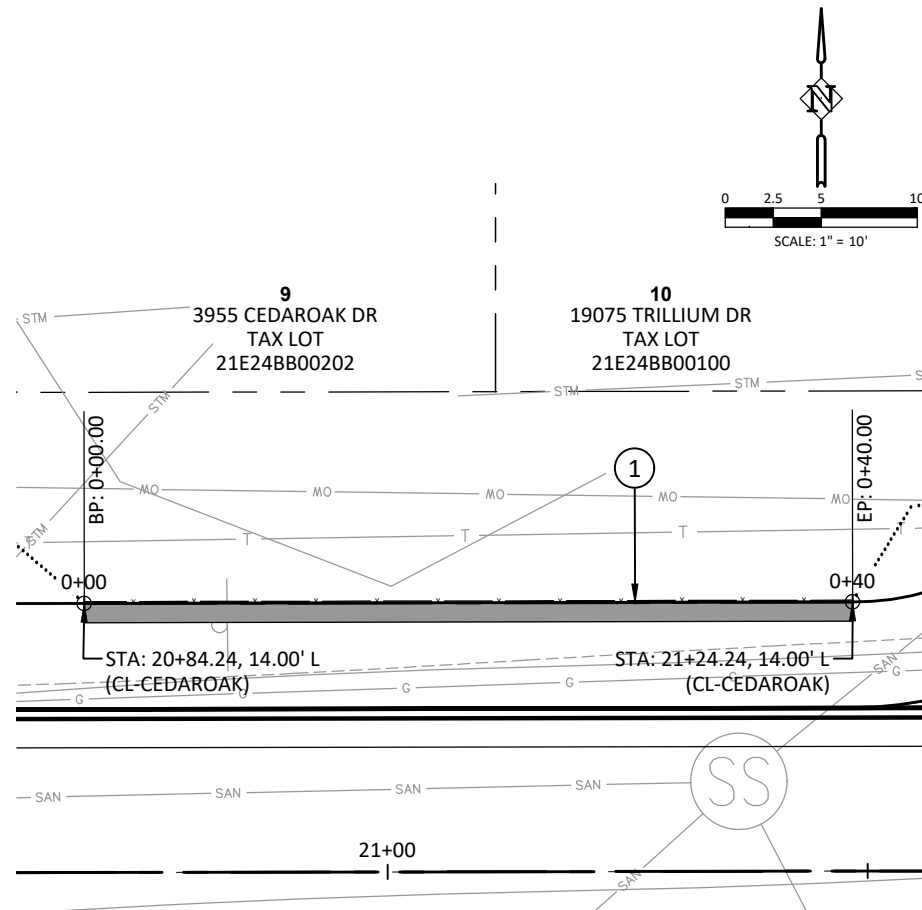


DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>SS06</b>
CHECKED: JSH	
DATE: 2-12-2024	JOB NO. CWL-10

**SIGNING & STRIPING DETAILS**  
**CEDAR OAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

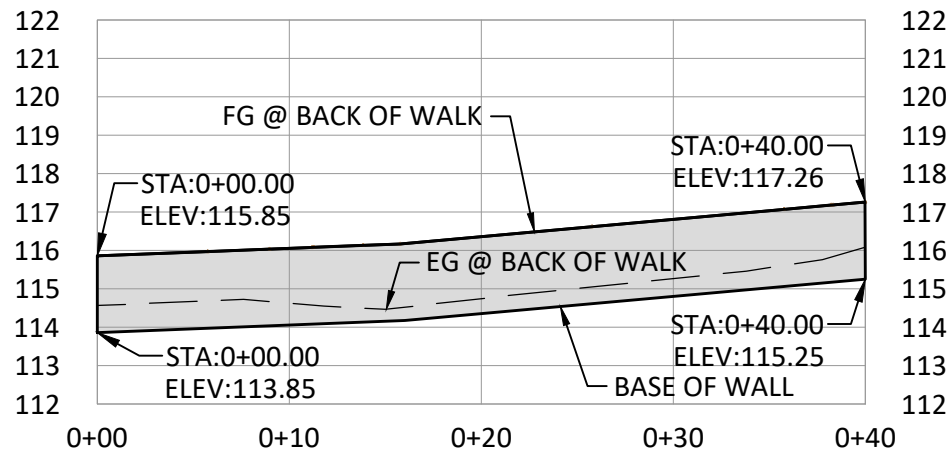
**Harper Houf Peterson Righellis Inc.**  
ENGINEERS, PLANNERS, LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171





**WALL 2 @ PROPERTY 9/10 - PLAN VIEW**

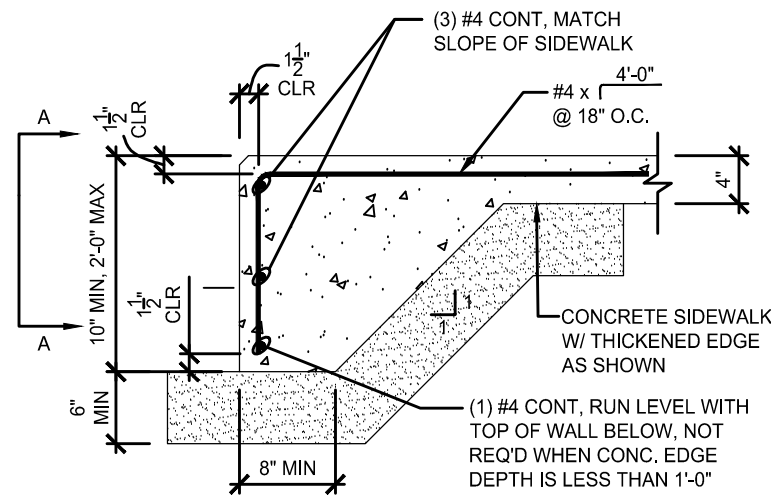
SCALE: 1" = 10' (HORZ.)



**WALL 2 @ PROPERTY 9/10 - PROFILE VIEW**

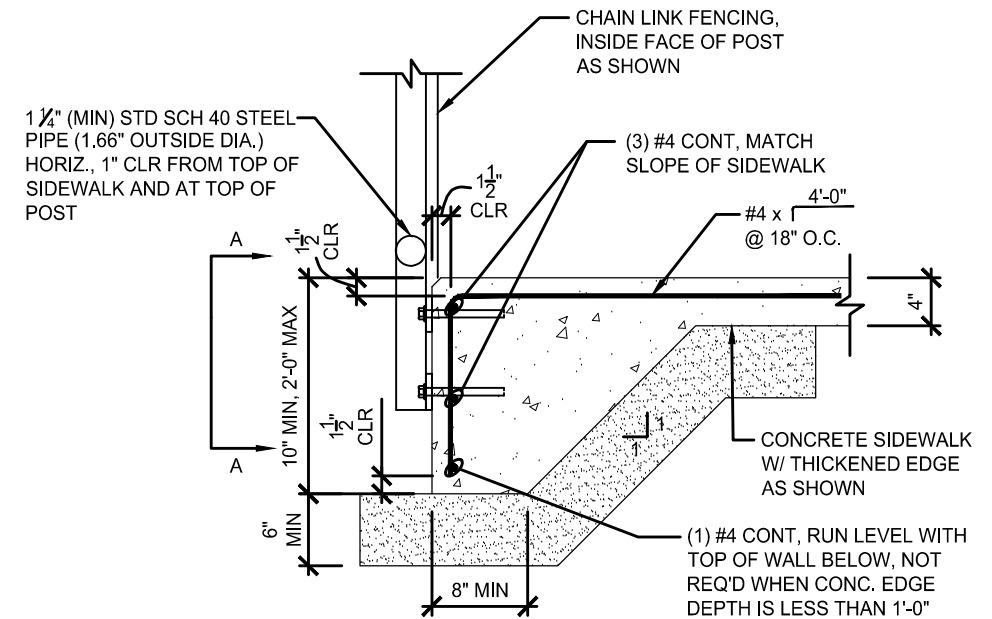
SCALE: 1" = 10' (HORZ.)  
1" = 5' (VERT.)

**NOTE: WALL DETAILS TO BE FINALIZED WITH FINAL PLANS**



**THICKENED EDGE SIDEWALK DETAIL**

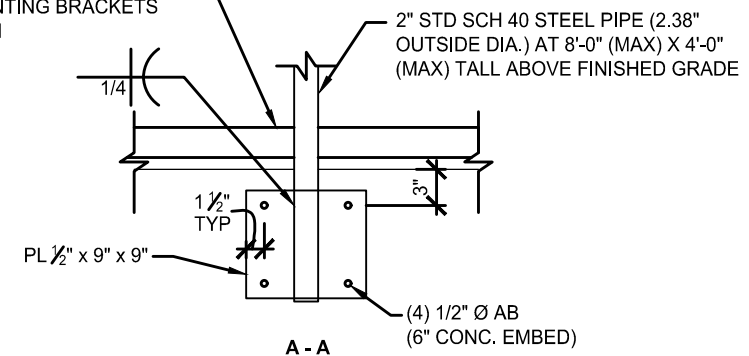
NTS



**THICKENED EDGE SIDEWALK WITH FENCE DETAIL**

NTS

1 1/2" (MIN) STD SCH 40 STEEL PIPE (1.66" OUTSIDE DIA.)  
HORIZ., 1" CLR FROM TOP OF SIDEWALK AND AT TOP OF POST, MOUNTING BRACKETS NOT SHOWN



A-A

- NOTES:
- ANCHOR BOLTS (AB) SHALL CONSIST OF SIMPSON STRONG-BOLT, STAINLESS STEEL, PERIODIC SPECIAL INSPECTION REQUIRED.
  - ALL MEMBERS & HARDWARE SHALL BE HOT-DIP GALVANIZED.
  - ANCHOR BOLTS SHALL BE OFFSET FROM COPING REBAR, DO NOT DRILL THROUGH AT AB INSTALLATION.

**WALL FACE MOUNTED FENCE DETAIL**

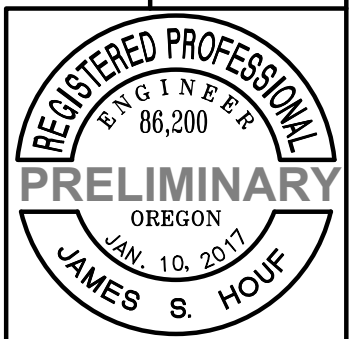
NTS

**CONSTRUCTION NOTES:**

- CONSTRUCT THICKENED EDGE SIDEWALK WITH FACE MOUNTED 4' BLACK VINYL COATED CHAIN-LINK FENCE CL-4R PER DETAIL BELOW AND ODOT STANDARD DRAWING RD815 ON SHEET DC19.

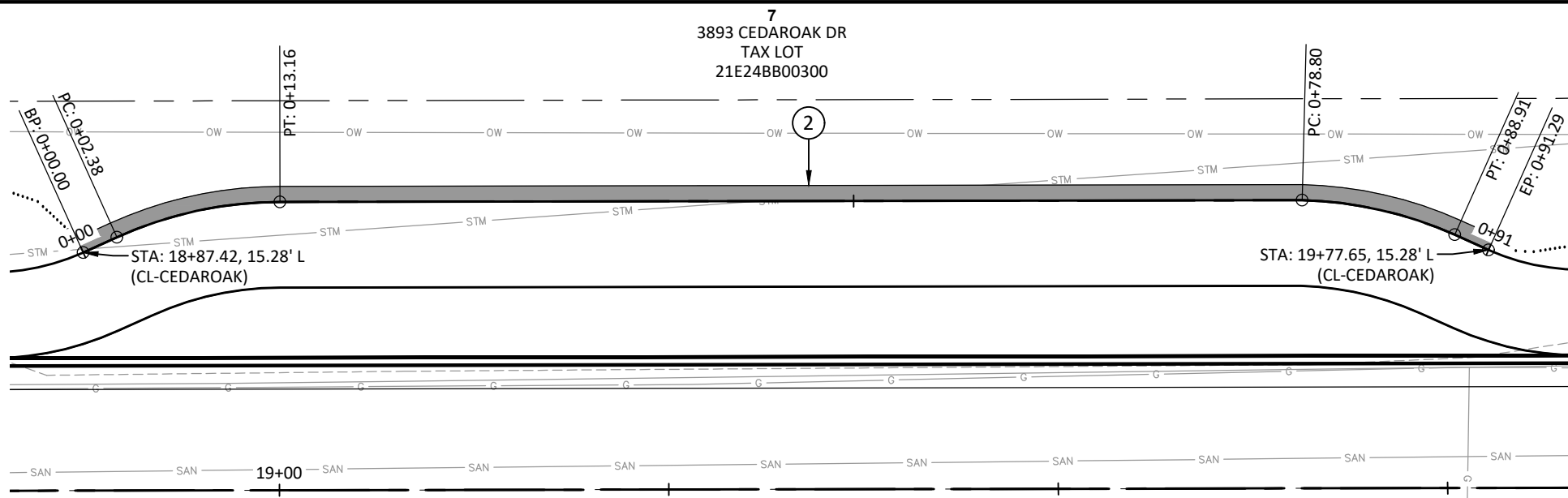
WALL PLAN & PROFILE  
**CEDAR OAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

Harper Houf Peterson Righellis Inc.  
ENGINEERS & PLANNERS  
LANDSCAPE ARCHITECTS & SURVEYORS  
205 SE Spokane Street, Suite 200, Portland, OR 97202  
Phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

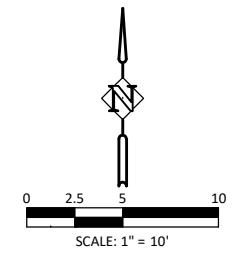


DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>WA02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-WA02 WALLS.DWG

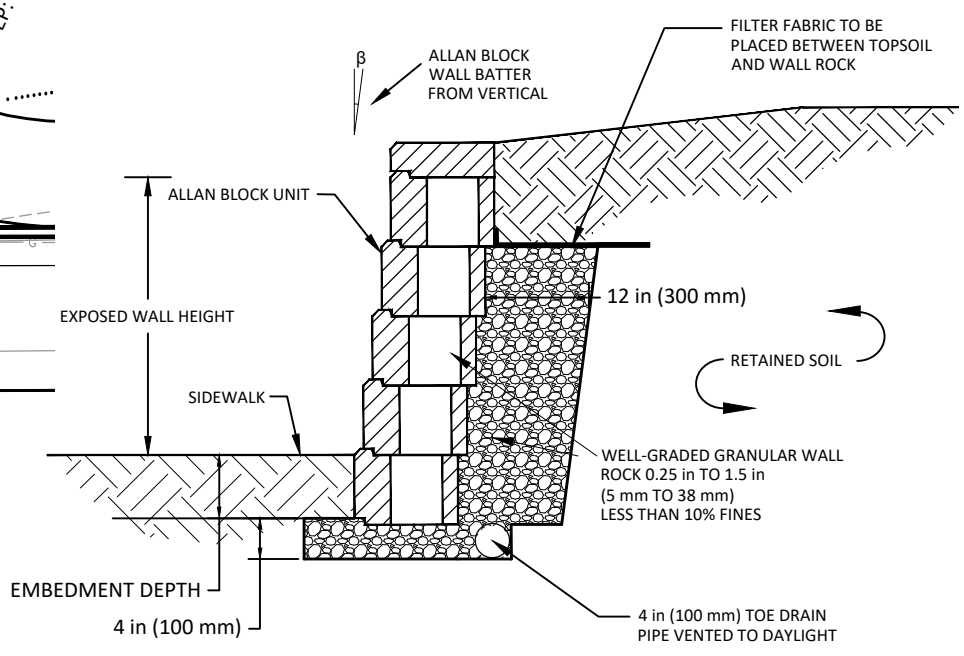


**WALL 1 @ PROPERTY 7 - PLAN VIEW**  
SCALE: 1" = 10' (HORZ.)



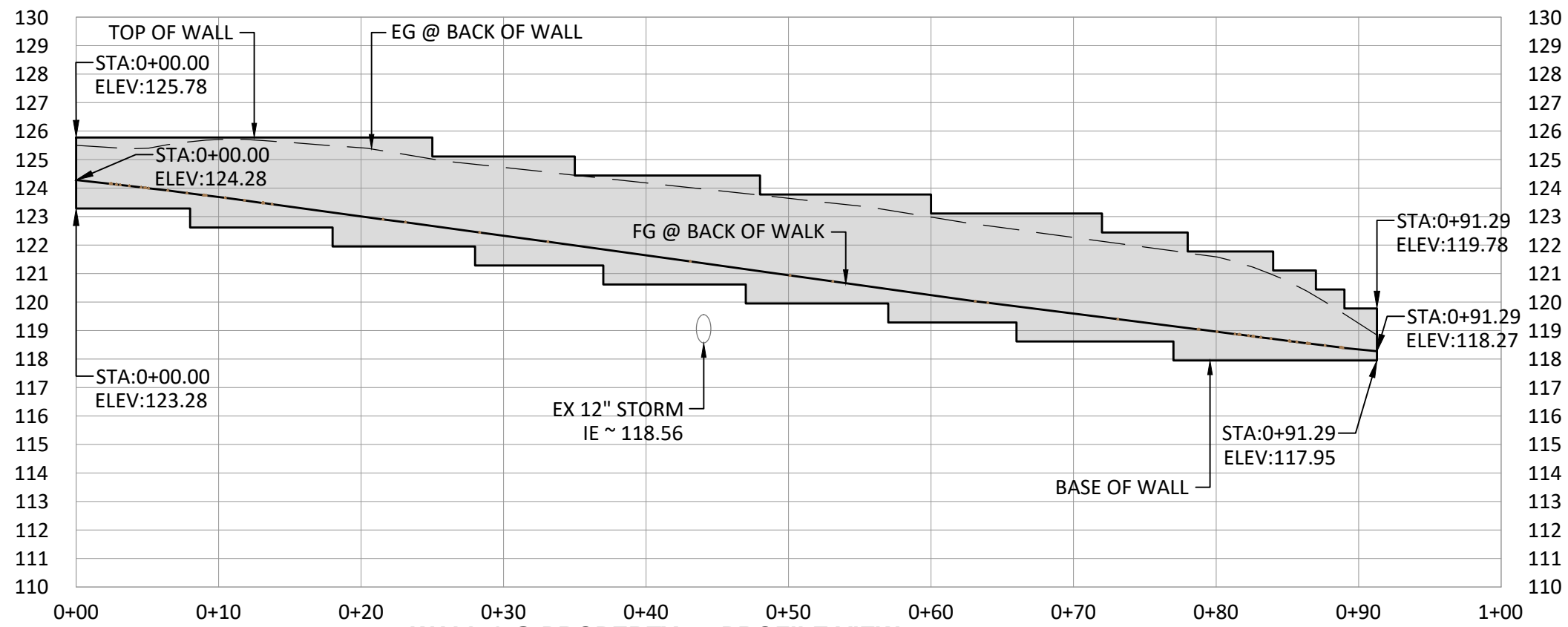
**CONSTRUCTION NOTES:**

② CONSTRUCT SEGMENTAL BLOCK WALL. SEE WALL DETAIL BELOW.



**SEGMENTAL BLOCK WALL**  
NTS

**NOTE: WALL DETAILS TO BE FINALIZED WITH FINAL PLANS**



**WALL 1 @ PROPERTY 7 - PROFILE VIEW**  
SCALE: 1" = 10' (HORZ.)  
1" = 5' (VERT.)

WALL PLAN & PROFILE  
**CEDAR OAK DRIVE SAFE ROUTES**  
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**REGISTERED PROFESSIONAL ENGINEER**  
86,200  
**PRELIMINARY**  
OREGON  
JAN. 10, 2017  
JAMES S. HOUF

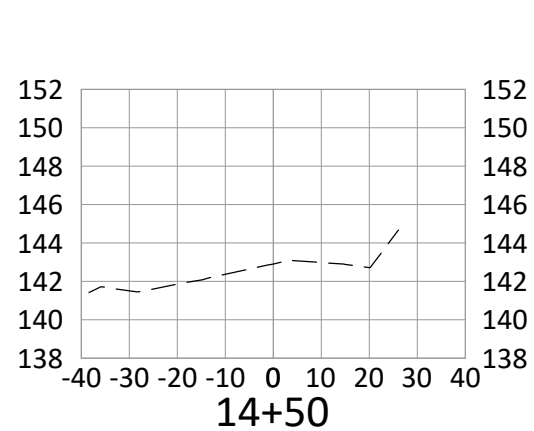
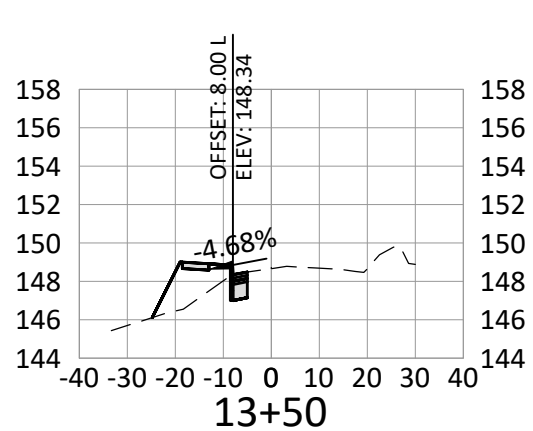
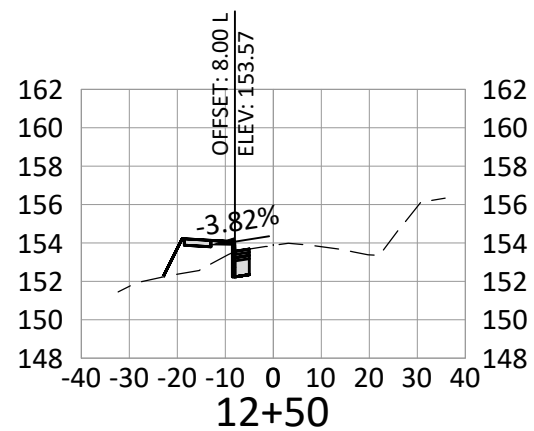
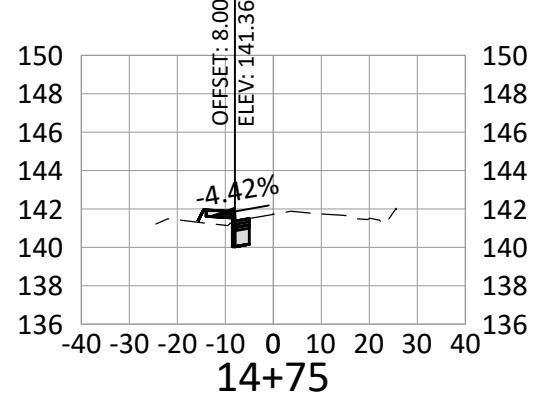
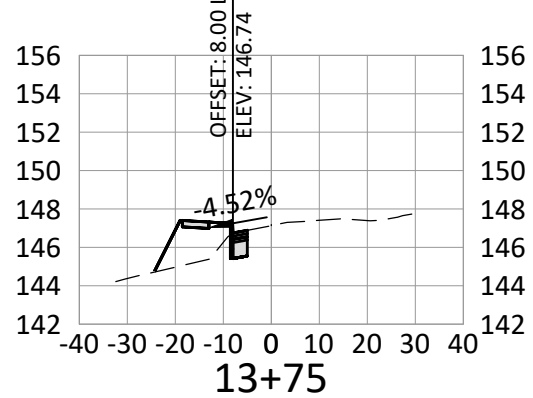
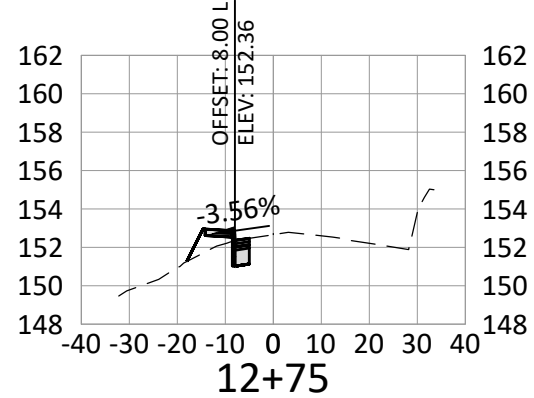
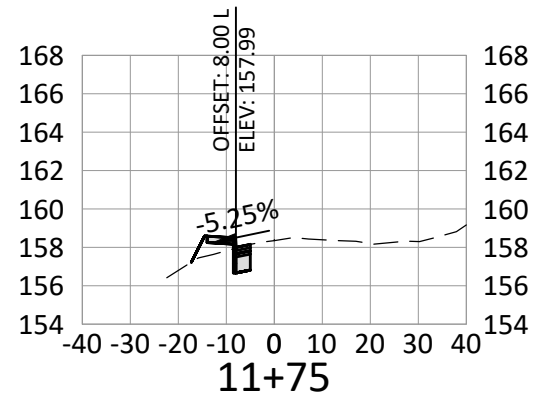
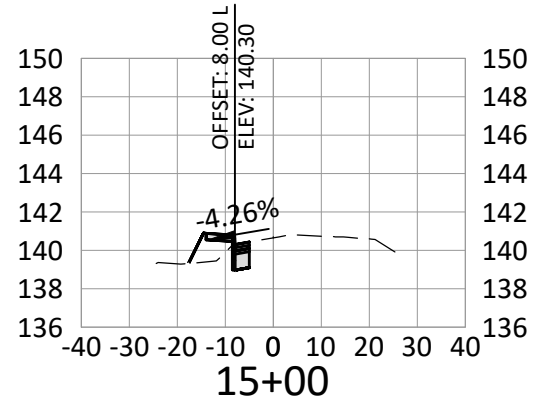
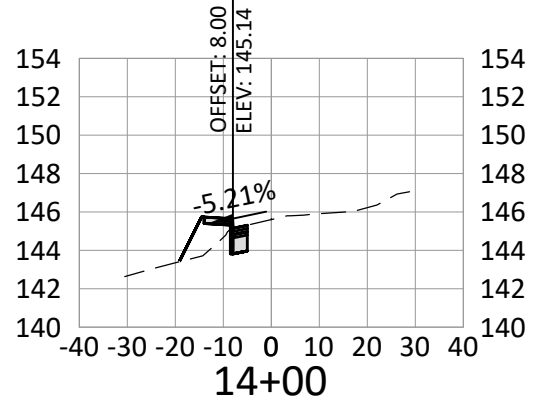
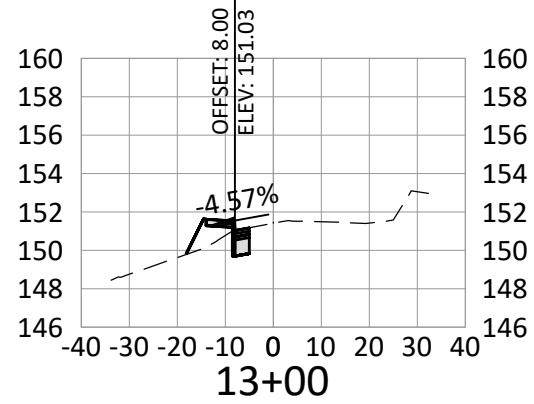
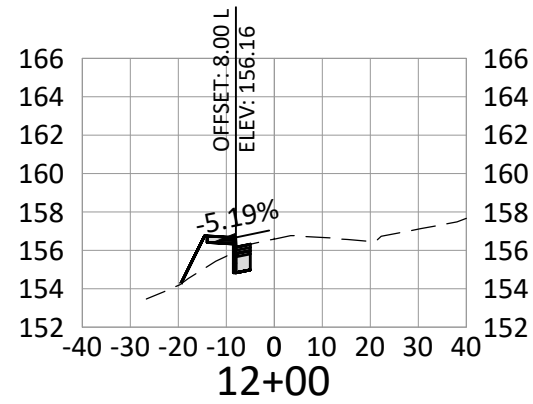
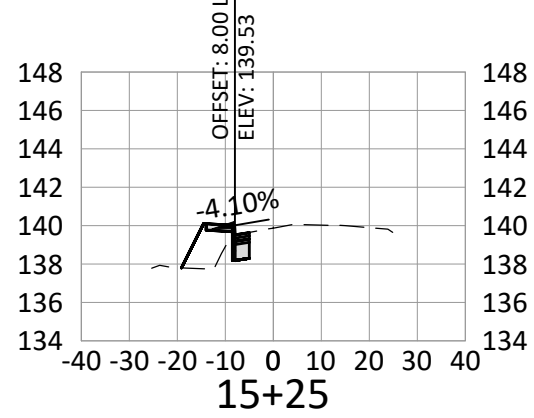
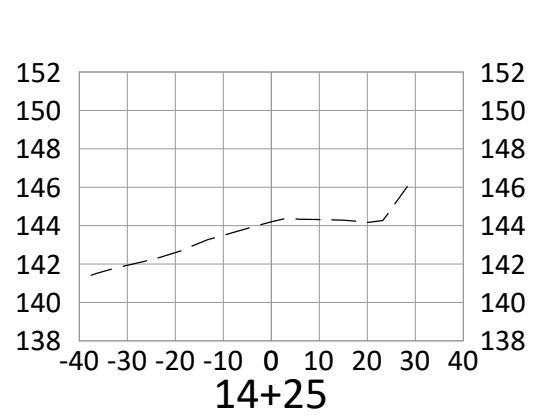
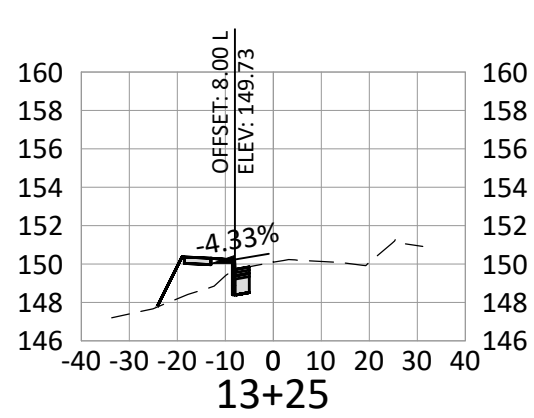
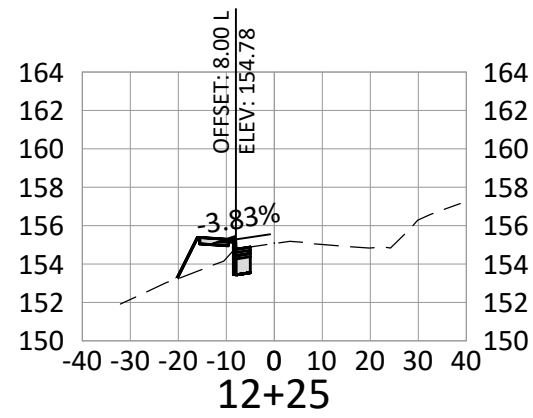
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>WA01</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10-WA01 WALLS.DWG



DRAWING NAME: CWL10.XS01 CROSS SECT.DWG

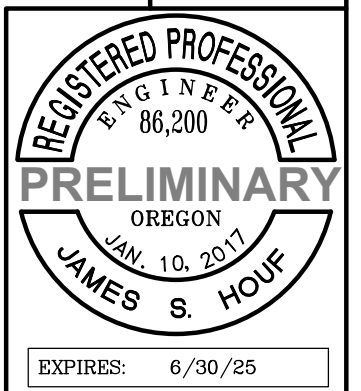


**CEDAROAK DR - CROSS SECTIONS**

SCALE: 1" = 40' (HOR.)  
1" = 10' (VERT)

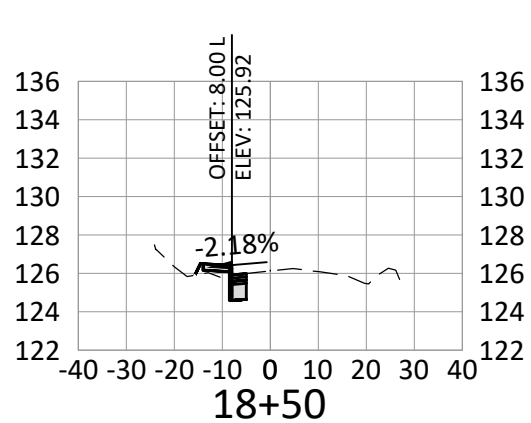
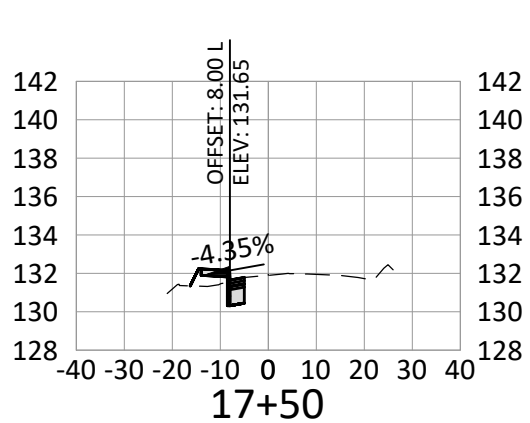
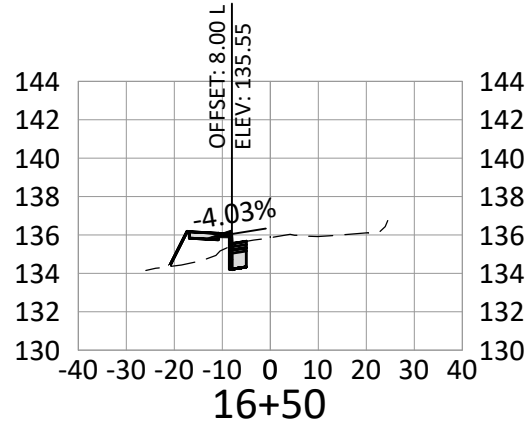
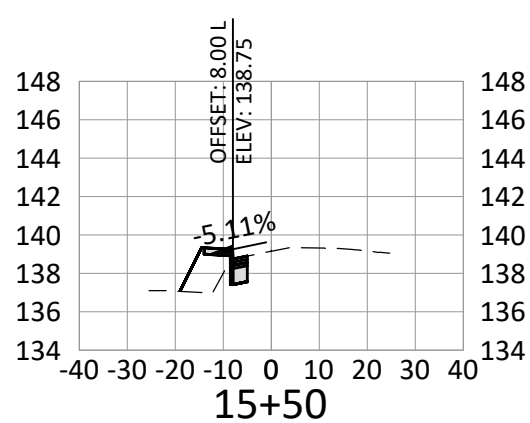
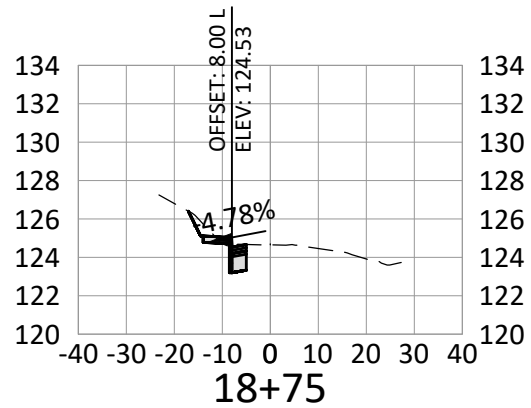
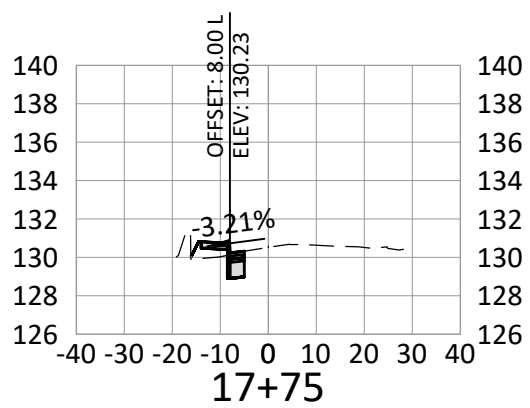
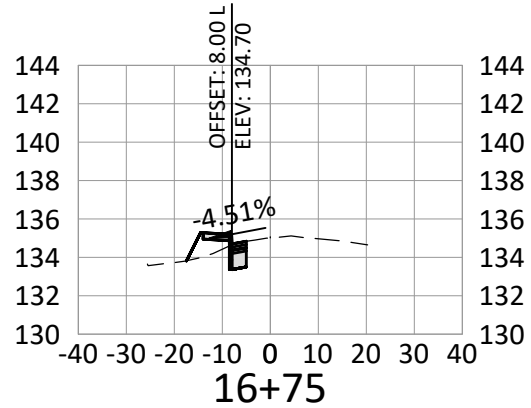
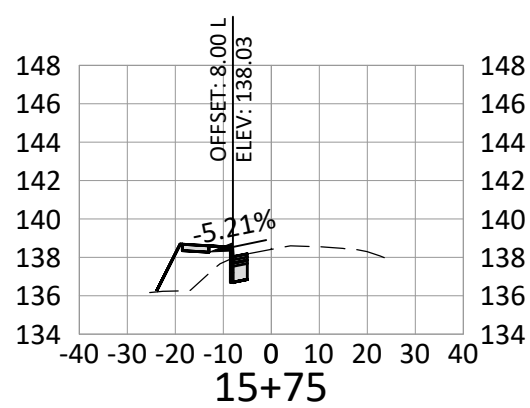
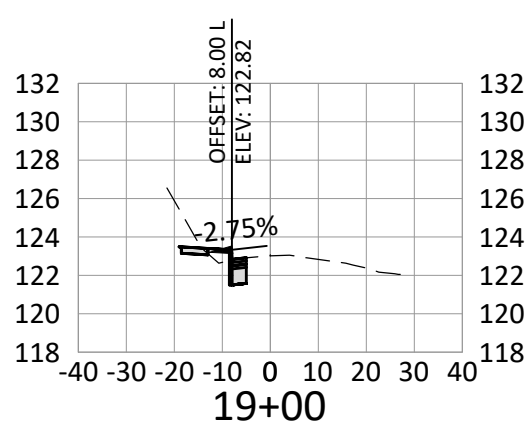
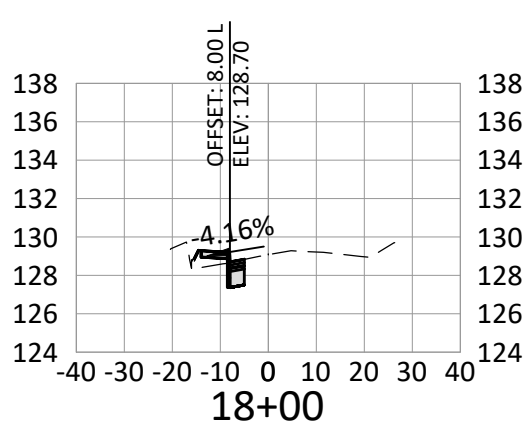
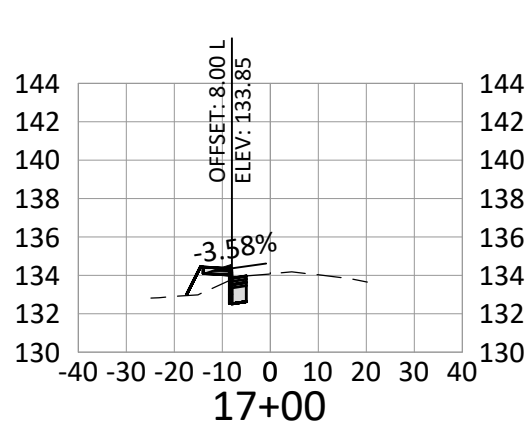
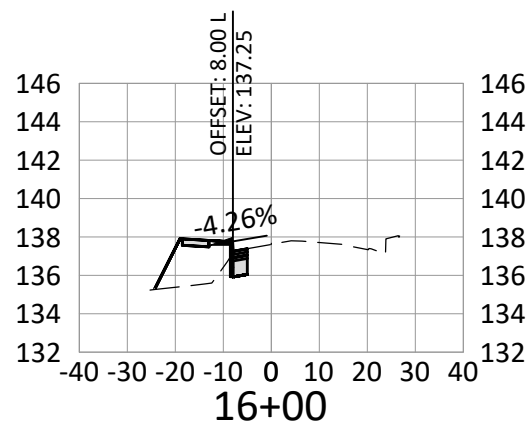
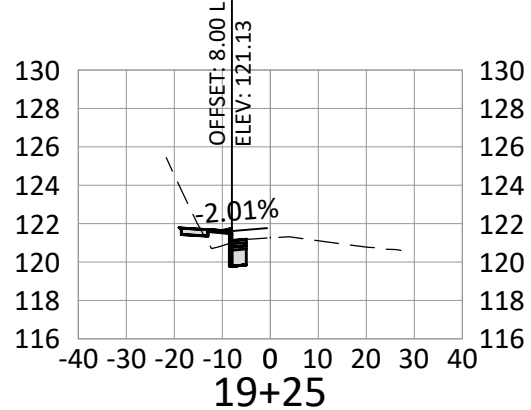
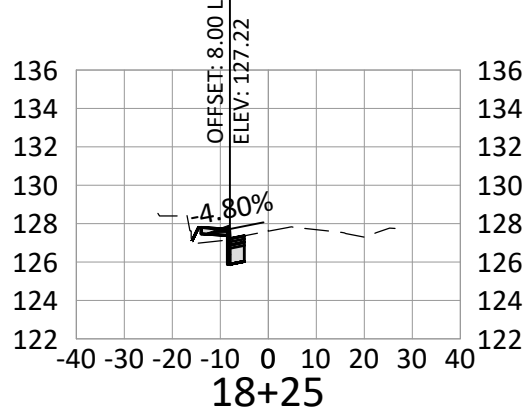
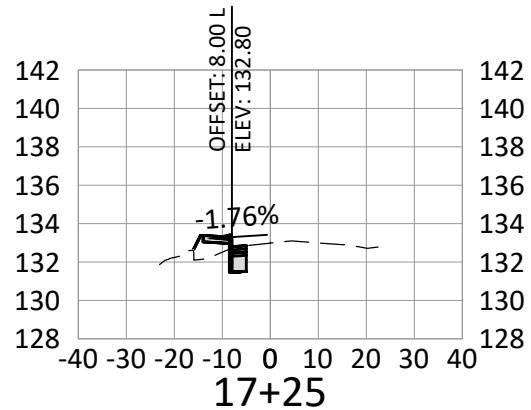
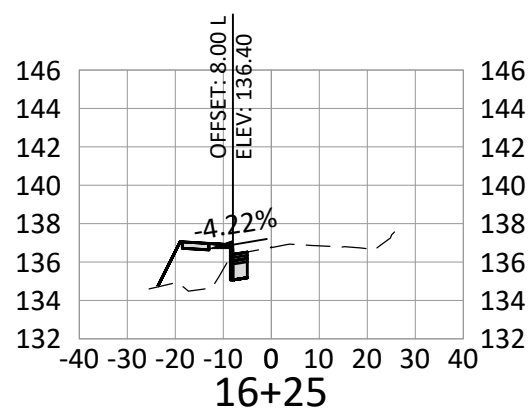
CROSS SECTIONS  
**CEDAROAK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

**Harper Houf Peterson**  
**Righellis Inc.**  
ENGINEERS \* PLANNERS  
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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>XS01</b>
CHECKED: JSH	JOB NO. CWL-10
DATE: 2-12-2024	

DRAWING NAME: CWL10.XS01 CROSS SECT.DWG



**CEDAROK DR - CROSS SECTIONS**

SCALE: 1" = 40' (HORZ.)  
1" = 10' (VERT.)

CROSS SECTIONS  
**CEDAROK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

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REGISTERED PROFESSIONAL ENGINEER  
86,200

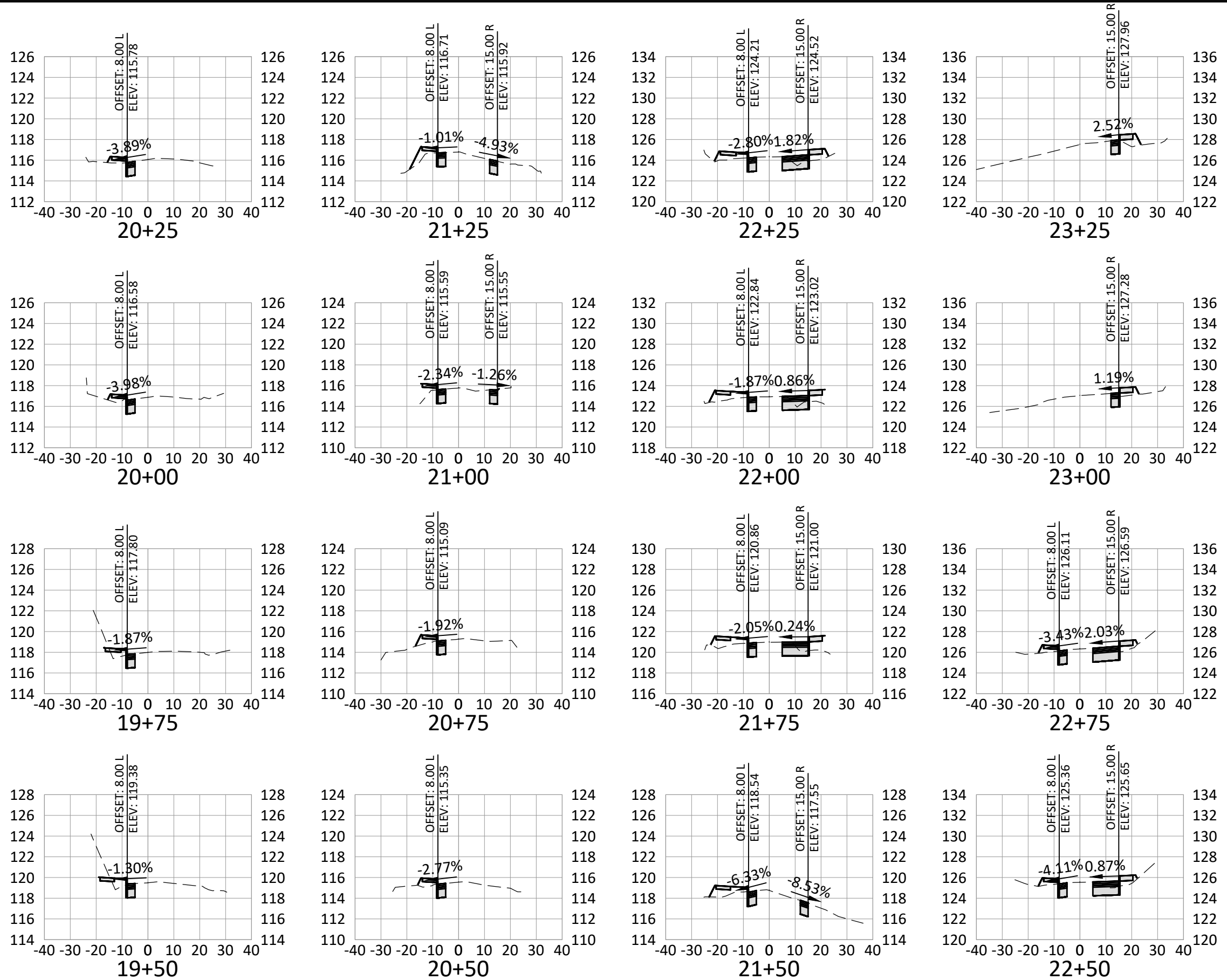
**PRELIMINARY**

OREGON  
JAN. 10, 2017  
JAMES S. HOUF

EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>XS02</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10

DRAWING NAME: CWL10.XS03 CROSS SECT.DWG



### CEDAROK DR - CROSS SECTIONS

SCALE: 1" = 40' (HORZ.)  
1" = 10' (VERT)

CROSS SECTIONS  
**CEDAROK DRIVE SAFE ROUTES**  
WEST LINN, OREGON

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86,200  
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OREGON  
JAN. 10, 2017  
JAMES S. HOUF  
EXPIRES: 6/30/25

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	<b>XS03</b>
CHECKED: JSH	JOB NO.
DATE: 2-12-2024	CWL-10