

WILLAMETTE FALLS DRIVE STREETScape

10TH STREET TO 16TH STREET
WEST LINN, OREGON

OWNER/DEVELOPER

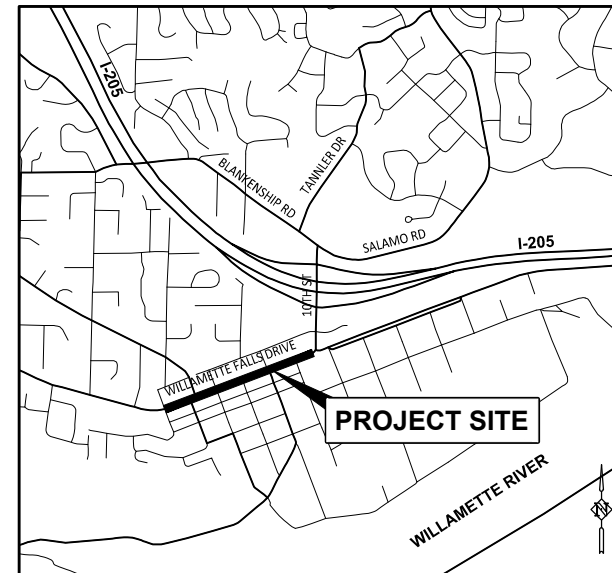
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DEPARTMENT OF PUBLIC WORKS
22500 SALAMO RD
WEST LINN, OR 97068
PHONE: (503) 722-3424
CONTACTS: LANCE CALVERT, PE

ENGINEER

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

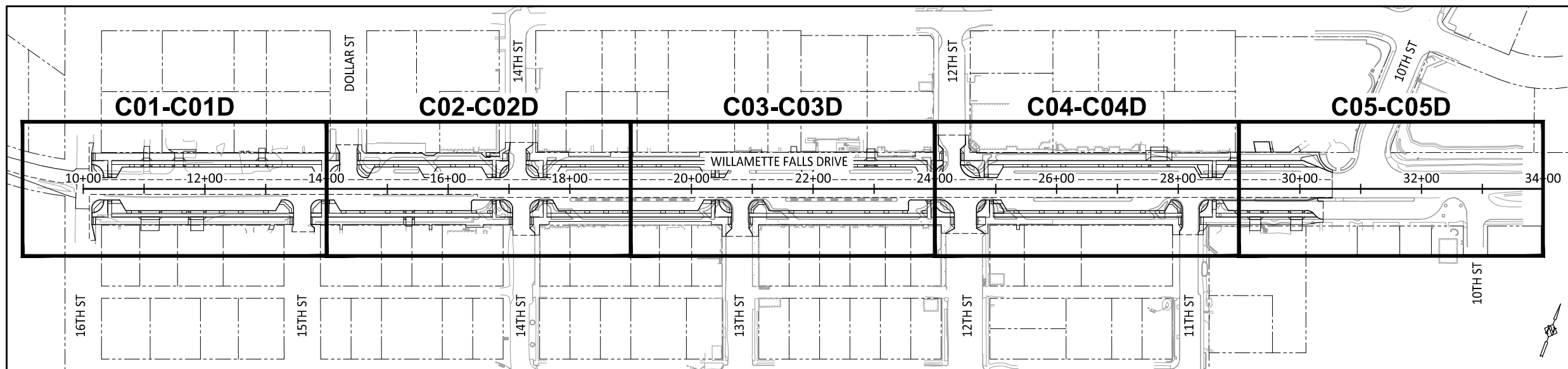
SITE INFORMATION

WILLAMETTE MERIDAN
CLACKAMAS COUNTY, OREGON
S2 TT3S R1E AND S35 T2S R1E



VICINITY MAP

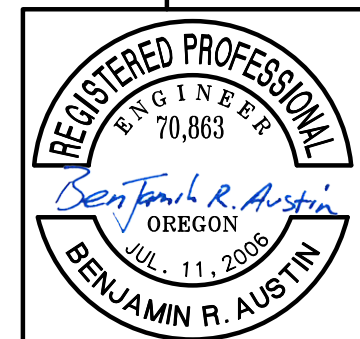
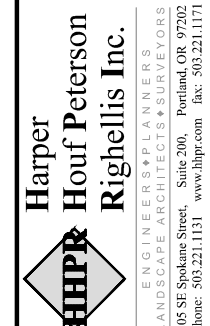
NTS



SITE MAP

1" = 200'

COVER SHEET
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON



DESIGNED:	HHPR TEAM	SHEET NO.	A01
DRAWN:	HHPR TEAM		
CHECKED:	BRA/JSH		
DATE:	11-1-19	JOB NO.	

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DRAWING NAME: CWL02-A02-SHEET INDEX.DWG

SHEET INDEX

Sht. No.	Sheet Title
A01	TITLE SHEET
A02	INDEX OF SHEETS
BA01	TYPICAL SECTIONS
BB	GEOMETRY AND PAVING PLANS
C01	WILLAMETTE FALLS DRIVE STA. 9+00 TO 14+00 PROFILE
C01A	WILLAMETTE FALLS DRIVE STA. 9+00 TO 14+00 PLAN
C01B	WILLAMETTE FALLS DRIVE STA. 9+00 TO 14+00 STORM PROFILE
C01C	WILLAMETTE FALLS DRIVE STA. 9+00 TO 14+00 STORM PLAN
C01D	WILLAMETTE FALLS DRIVE STA. 9+00 TO 14+00 WATER PLAN
C02	WILLAMETTE FALLS DRIVE STA. 14+00 TO 19+00 PROFILE
C02A	WILLAMETTE FALLS DRIVE STA. 14+00 TO 19+00 PLAN
C02B	WILLAMETTE FALLS DRIVE STA. 14+00 TO 19+00 STORM PROFILE
C02C	WILLAMETTE FALLS DRIVE STA. 14+00 TO 19+00 STORM PLAN
C02D	WILLAMETTE FALLS DRIVE STA. 14+00 TO 19+00 WATER PLAN
C03	WILLAMETTE FALLS DRIVE STA. 19+00 TO 24+00 PROFILE
C03A	WILLAMETTE FALLS DRIVE STA. 19+00 TO 24+00 PLAN
C03B	WILLAMETTE FALLS DRIVE STA. 19+00 TO 24+00 STORM PROFILE
C03C	WILLAMETTE FALLS DRIVE STA. 19+00 TO 24+00 STORM PLAN
C03D	WILLAMETTE FALLS DRIVE STA. 19+00 TO 24+00 WATER PLAN
C04	WILLAMETTE FALLS DRIVE STA. 24+00 TO 29+00 PROFILE
C04A	WILLAMETTE FALLS DRIVE STA. 24+00 TO 29+00 PLAN
C04B	WILLAMETTE FALLS DRIVE STA. 24+00 TO 29+00 STORM PROFILE
C04C	WILLAMETTE FALLS DRIVE STA. 24+00 TO 29+00 STORM PLAN
C04D	WILLAMETTE FALLS DRIVE STA. 24+00 TO 29+00 WATER PLAN
C05	WILLAMETTE FALLS DRIVE STA. 29+00 TO 34+00 PROFILE
C05A	WILLAMETTE FALLS DRIVE STA. 29+00 TO 34+00 PLAN
C05B	WILLAMETTE FALLS DRIVE STA. 29+00 TO 34+00 STORM PROFILE
C05C	WILLAMETTE FALLS DRIVE STA. 29+00 TO 34+00 STORM PLAN
C05D	WILLAMETTE FALLS DRIVE STA. 29+00 TO 34+00 WATER PLAN
DA	DETAILS - STANDARD DETAILS
DB	DETAILS -DRIVEWAY DETAILS
DC	DETAILS - CURB RETURN DETAILS
EC	EROSION CONTROL PLANS
IL	ILLUMINATION PLANS
IR	IRRIGATION PLANS
SS	SIGNING AND STRIPING PLANS
TC	TRAFFIC CONTROL PLANS
UR	UTILITY RELOCATION PLANS
XS	CROSS SECTIONS

SHEET INDEX
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON


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EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	A02
DRAWN: HHPR TEAM	
CHECKED: BRA/JSH	
DATE: 11-1-19	JOB NO. CWL-02

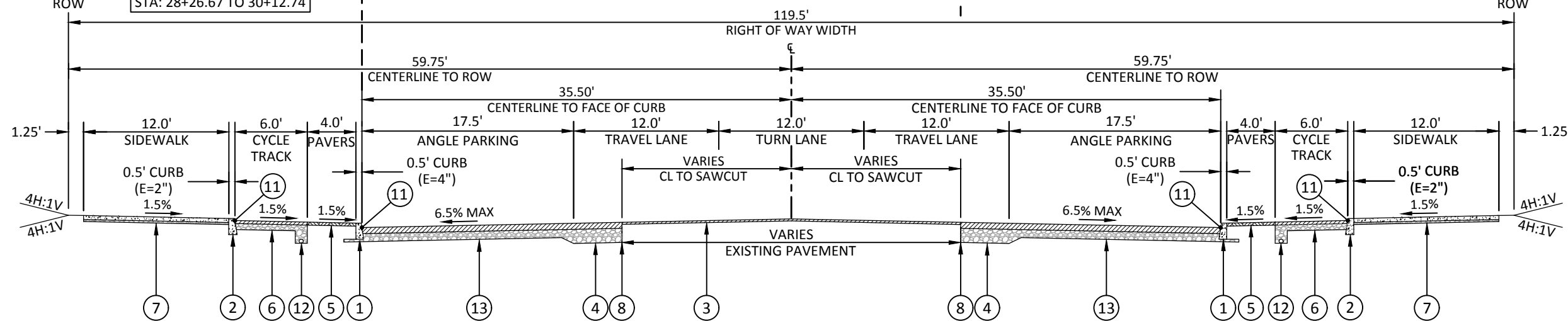
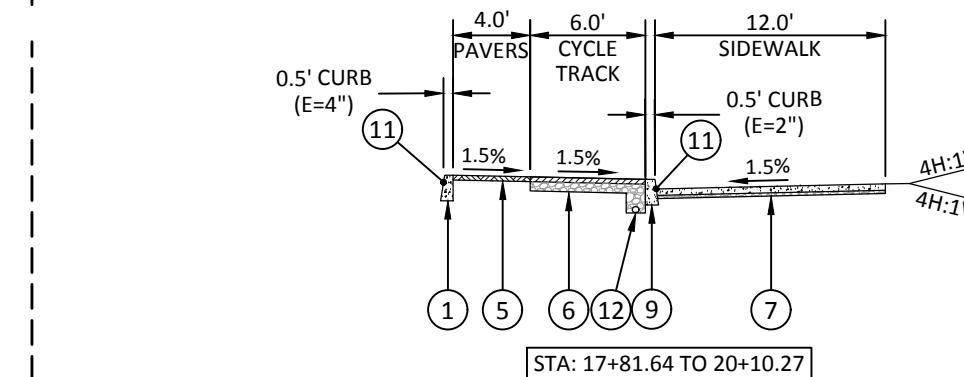
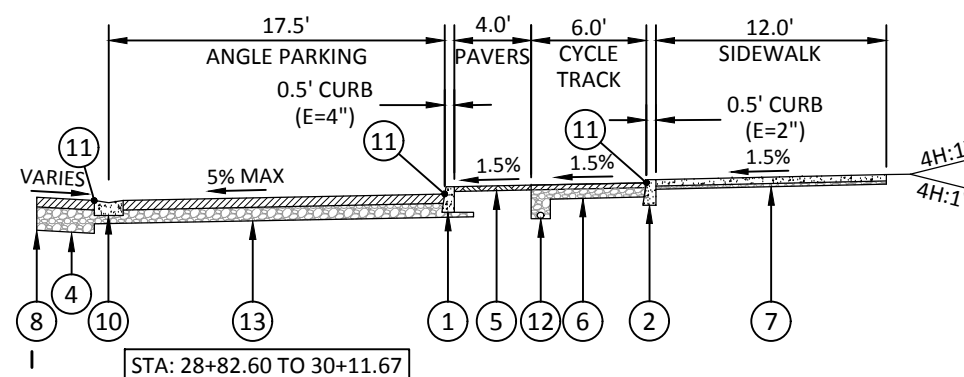
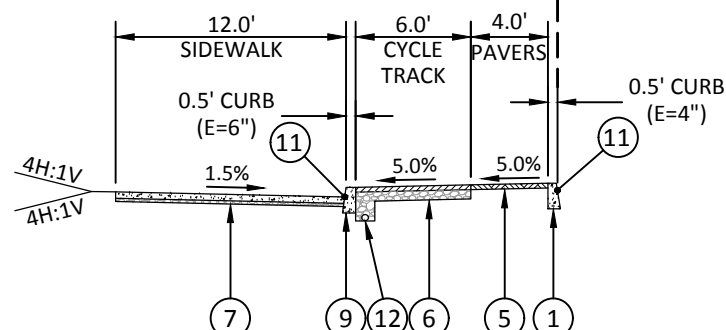
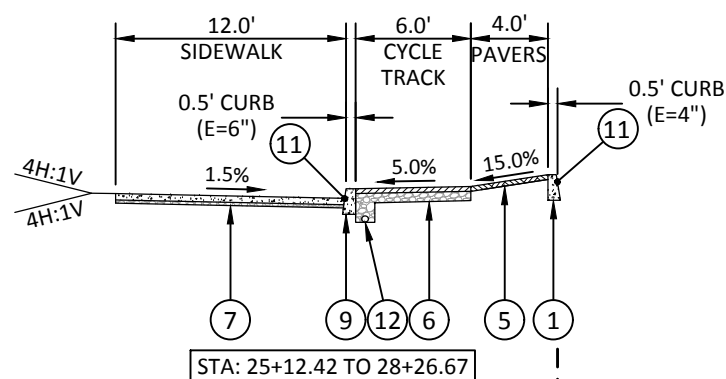
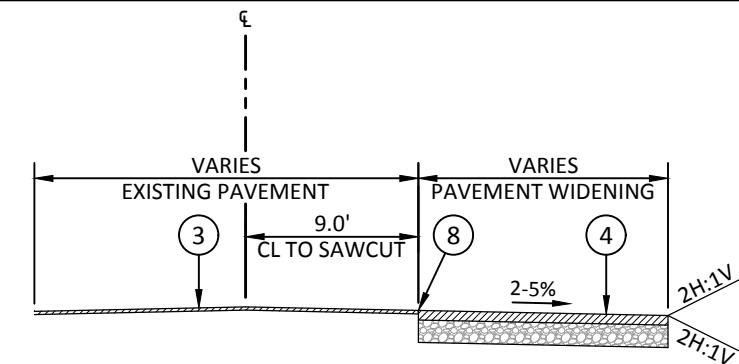
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CONSTRUCTION NOTES

- ① CONSTRUCT 4" STANDARD CURB PER ODOT STANDARD DWG RD700 (H=16", E=4").
- ② CONSTRUCT 2" MOUNTABLE CURB PER ODOT STANDARD DWG RD700 (H=12", E=2").
- ③ CONSTRUCT 2" GRIND AND INLAY. INLAY TO INCLUDE FORTA-FI FIBER. SEE PAVING AND GEOMETRY PLANS SHEET SERIES "BB" FOR LIMITS.
- ④ CONSTRUCT ROADWAY PAVEMENT SECTION. 2" OF LEVEL 3, 1/2 INCH ACP WITH FORTA-FI FIBER 4" OF LEVEL 3, 3/4 INCH ACP 2" OF 3/4"-0 AGGREGATE BASE 12" OF 1 1/2"-0 AGGREGATE BASE
- ⑤ CONSTRUCT PERVIOUS PAVERS. 2 3/8" ECO-CITY LOCK PERMEABLE PAVER, 4" X 8" HERRINGBONE PATTERN 1" ASTM NO. 8 BEDDING SAND 6" OF OPEN-GRADED AGGREGATE BASE
- ⑥ CONSTRUCT POROUS AC BIKE PATH. 3" OF 1/2 INCH PAC MIXTURE 6" OF OPEN-GRADED AGGREGATE BASE
- ⑦ CONSTRUCT CONCRETE SIDEWALK. 4" OF PCC 2" OF 3/4"-0 AGGREGATE BASE
- ⑧ SAWCUT EXISTING ASPHALT. SEE PAVING AND GEOMETRY PLANS SHEET SERIES "BB" FOR DETAILS.
- ⑨ CONSTRUCT 6" MOUNTABLE CURB PER ODOT STANDARD DWG RD700 (H=16", E=6").
- ⑩ CONSTRUCT GUTTER VALLEY CURB PER DETAIL ON SHEET DA12.
- ⑪ FINISHED GRADE ELEVATION AT GUTTER. SEE PROFILE SHEETS C01-C05.
- ⑫ CONSTRUCT PERFORATED PIPE GRANULAR TRENCH PER DETAIL ON SHEET DA18.
- ⑬ CONSTRUCT PARKING PAVEMENT SECTION. 2" OF LEVEL 3, 1/2 INCH ACP WITH FORTA-FI FIBER 4" OF LEVEL 3, 3/4 INCH ACP 2" OF 3/4"-0 AGGREGATE BASE 6" OF 1 1/2"-0 AGGREGATE BASE

WILLAMETTE FALLS DRIVE WEST TRANSITION

STA: 98+41.30 TO 99+89.22



WILLAMETTE FALLS DRIVE

STA: 10+64.27 TO 30+12.74

TYPICAL SECTIONS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

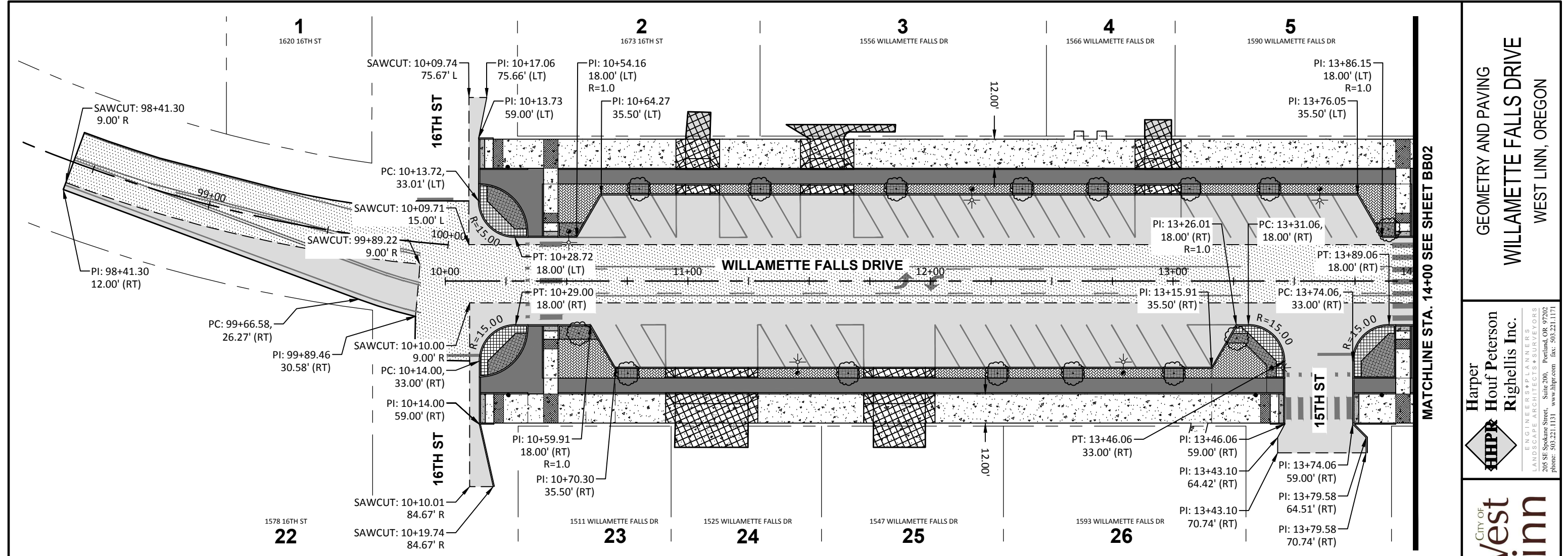
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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	BA01
CHECKED: BRA/JS	JOB NO.
DATE: 11-1-19	CWL-02

DRAWING NAME: CWL02-BA-TYPICAL SECTIONS.DWG

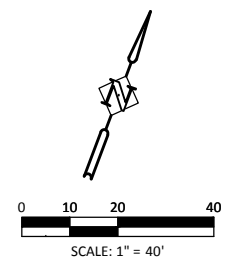
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DRAWING NAME: CWL02-BB-GEOMETRY AND PAVING.DWG

LEGEND	
	FULL DEPTH STRUCTURAL SECTION
	2" GRIND AND INLAY
	AC CYCLE TRACK
	CONCRETE SIDEWALK
	EXPOSED AGGREGATE CONCRETE (6" THICK)
	PAVERS
	LANDSCAPING - TOPSOIL
	DRIVEWAY/ DRIVEWAY APPROACH
	PEDESTRIAN LANDING ZONES
	TRUNCATED DOMES

NOTE: TREES (⊙) SHOWN FOR LAYOUT PURPOSES ONLY. CITY TO INSTALL TREES AFTER COMPLETION OF PROJECT.



GEOMETRY AND PAVING
WILLAMETTE FALLS DRIVE
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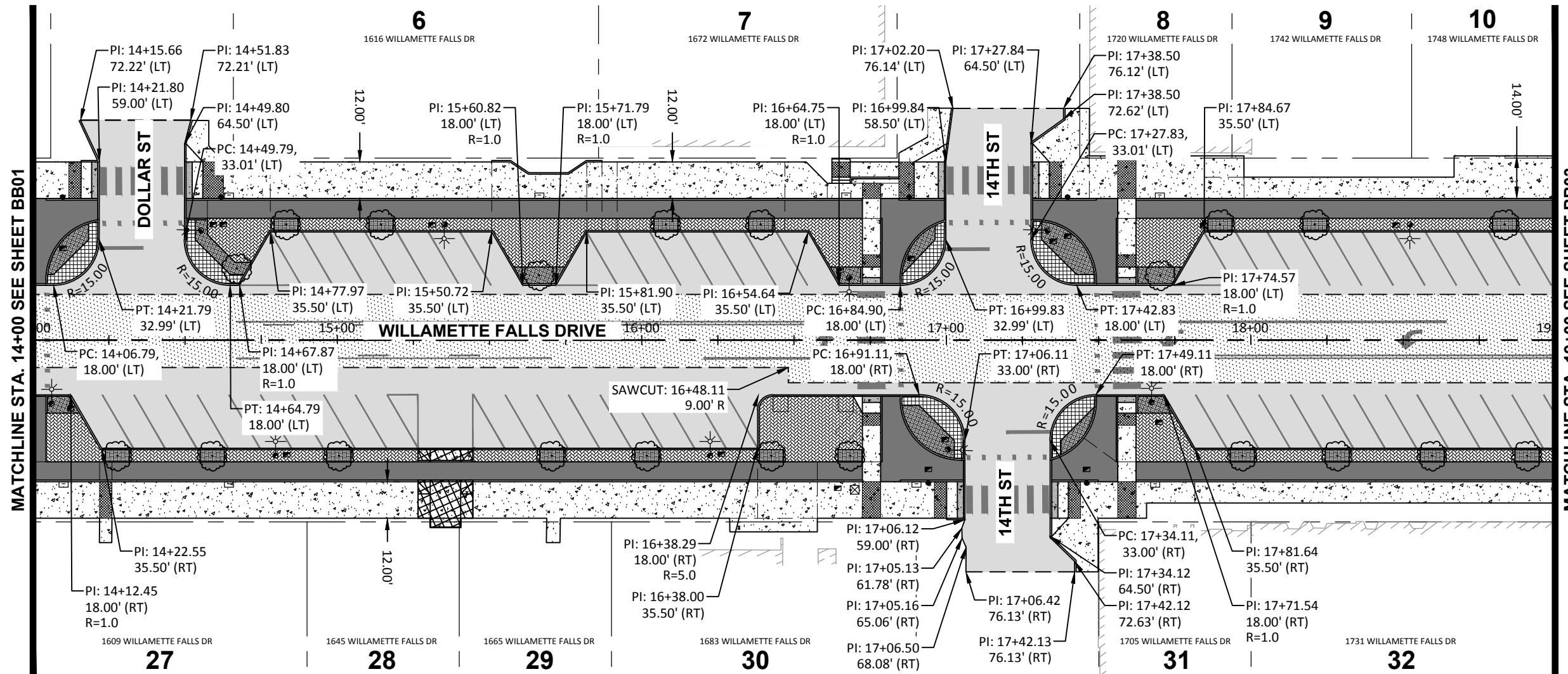
EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	BB01
CHECKED: BRA/JS	
DATE: 11-1-19	JOB NO. CWL-02

MATCHLINE STA. 14+00 SEE SHEET BB02

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DRAWING NAME: CWL02-BB-GEOMETRY AND PAVING.DWG

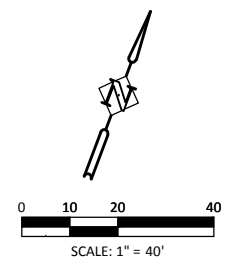


MATCHLINE STA. 14+00 SEE SHEET BB01

MATCHLINE STA. 19+00 SEE SHEET BB03

LEGEND	
	FULL DEPTH STRUCTURAL SECTION

NOTE: TREES (⊙) SHOWN FOR LAYOUT PURPOSES ONLY. CITY TO INSTALL TREES AFTER COMPLETION OF PROJECT.



GEOMETRY AND PAVING
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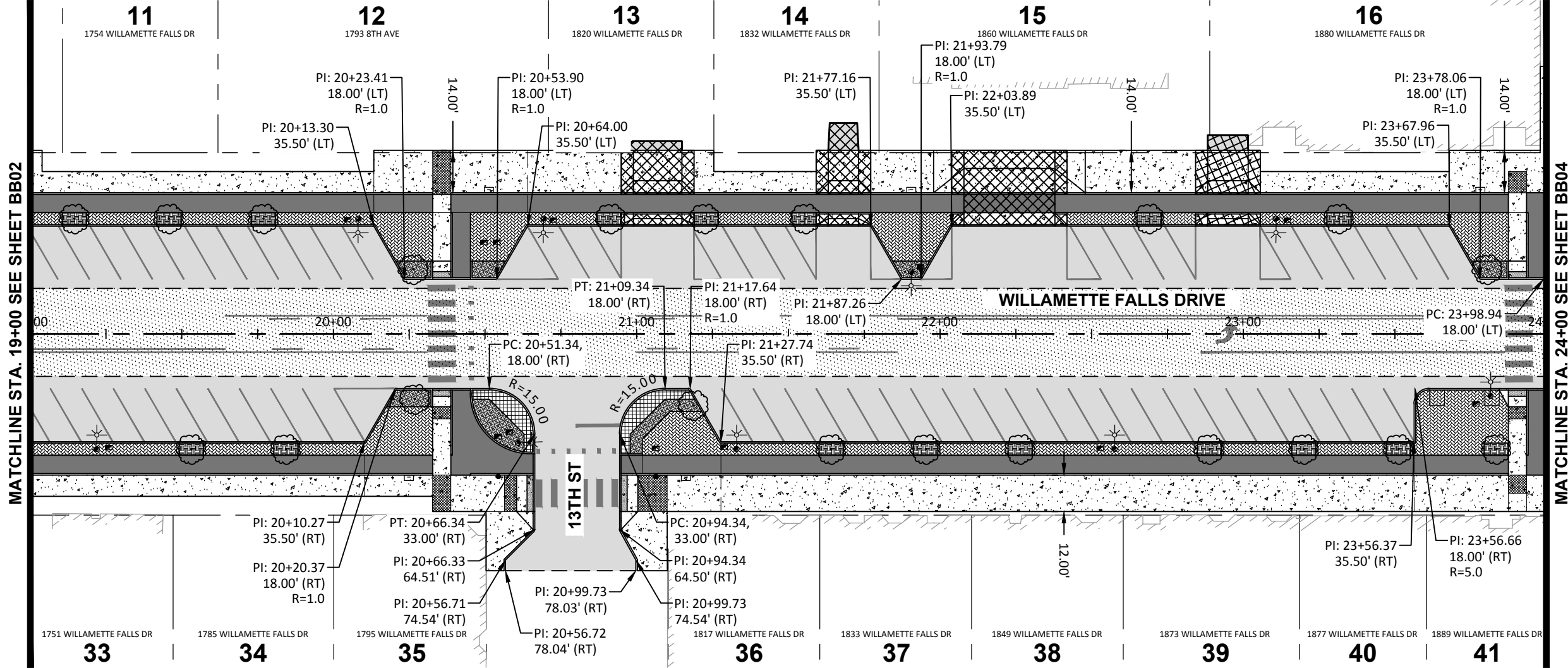


REGISTERED PROFESSIONAL ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	BB02
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

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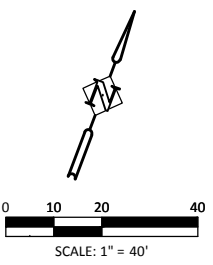


MATCHLINE STA. 19+00 SEE SHEET BB02

MATCHLINE STA. 24+00 SEE SHEET BB04

LEGEND	
	FULL DEPTH STRUCTURAL SECTION
	2" GRIND AND INLAY
	AC CYCLE TRACK
	CONCRETE SIDEWALK
	EXPOSED AGGREGATE CONCRETE (6" THICK)
	PAVERS
	LANDSCAPING - TOPSOIL
	DRIVEWAY/ DRIVEWAY APPROACH
	PEDESTRIAN LANDING ZONES
	TRUNCATED DOMES

NOTE: TREES (⊙) SHOWN FOR LAYOUT PURPOSES ONLY. CITY TO INSTALL TREES AFTER COMPLETION OF PROJECT.



GEOMETRY AND PAVING
WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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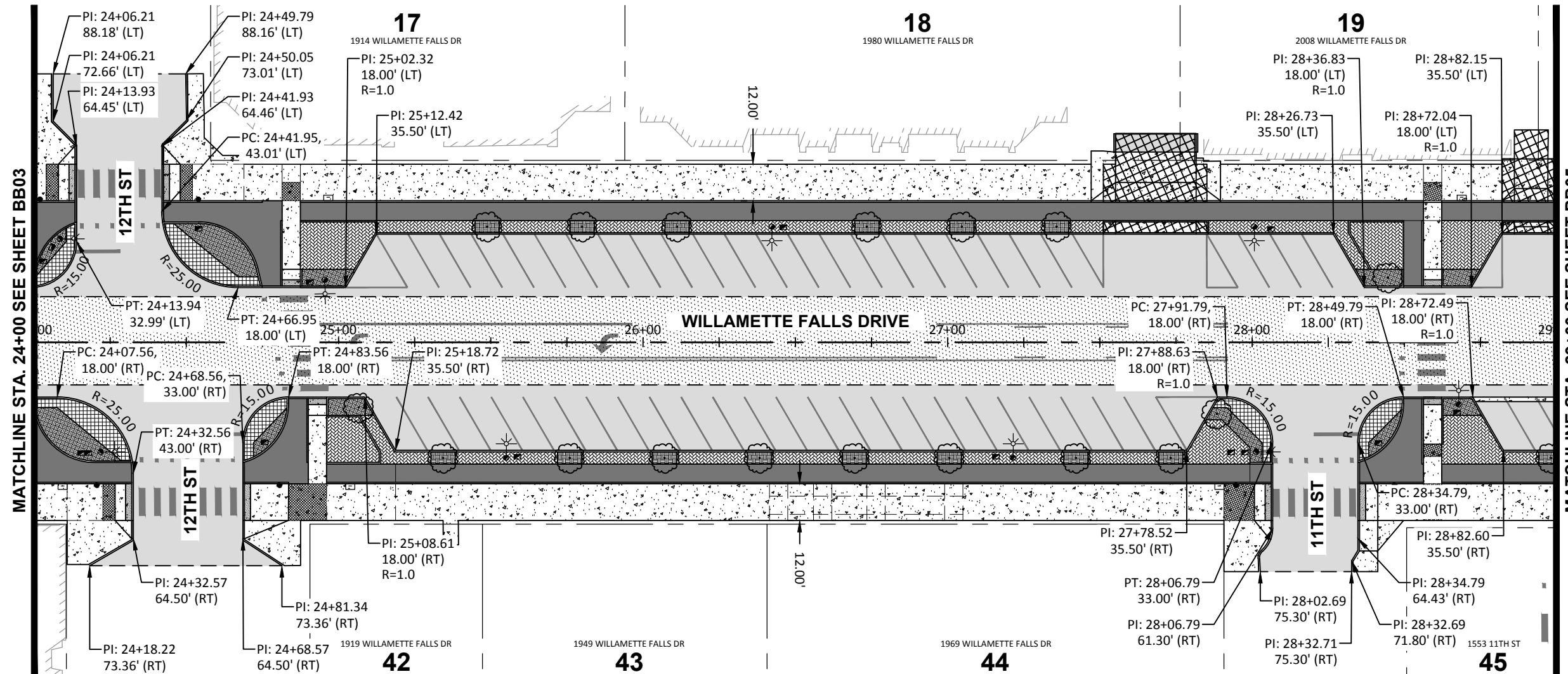
EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO. BB03
DRAWN: HHPR TEAM	
CHECKED: BRA/JSH	
DATE: 11-1-19	JOB NO. CWL-02

DRAWING NAME: CWL02-BB-GEOMETRY AND PAVING.DWG

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DRAWING NAME: CWL02-BB-GEOMETRY AND PAVING.DWG

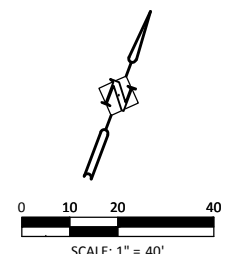


MATCHLINE STA. 24+00 SEE SHEET BB03

MATCHLINE STA. 29+00 SEE SHEET BB05

LEGEND			
	FULL DEPTH STRUCTURAL SECTION		PAVERS
	2" GRIND AND INLAY		LANDSCAPING - TOPSOIL
	AC CYCLE TRACK		DRIVEWAY/ DRIVEWAY APPROACH
	CONCRETE SIDEWALK		PEDESTRIAN LANDING ZONES
	EXPOSED AGGREGATE CONCRETE (6" THICK)		TRUNCATED DOMES

NOTE: TREES (⊙) SHOWN FOR LAYOUT PURPOSES ONLY.
 CITY TO INSTALL TREES AFTER COMPLETION OF PROJECT.



GEOMETRY AND PAVING
WILLAMETTE FALLS DRIVE
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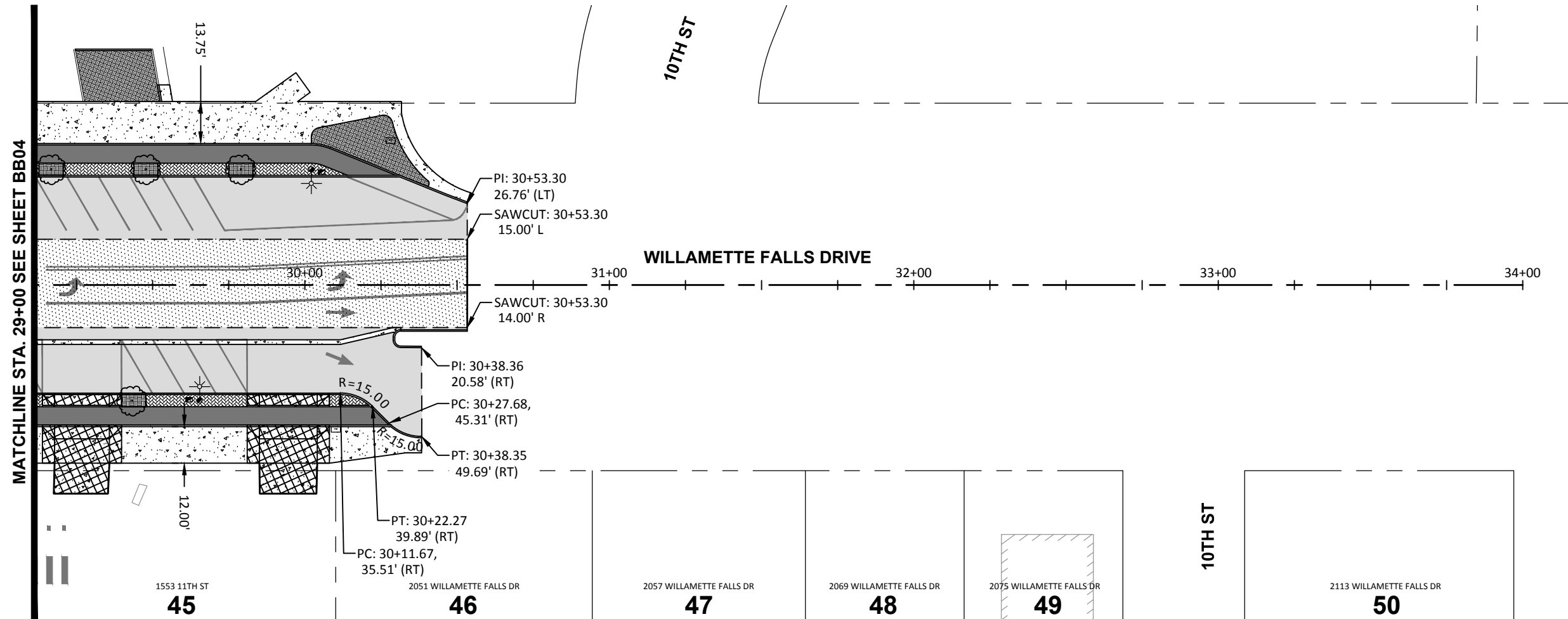
REGISTERED PROFESSIONAL ENGINEER
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 JUL. 11, 2006
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DESIGNED: HHPR TEAM	SHEET NO. BB04
DRAWN: HHPR TEAM	
CHECKED: BRA/JS	
DATE: 11-1-19	JOB NO. CWL-02

EXPIRES: 12/31/19

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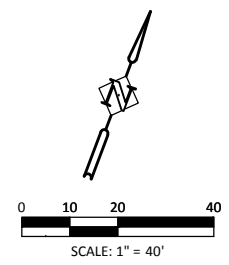
DRAWING NAME: CWL02-BB-GEOMETRY AND PAVING.DWG



MATCHLINE STA. 29+00 SEE SHEET BB04

LEGEND			
	FULL DEPTH STRUCTURAL SECTION		PAVERS
	2" GRIND AND INLAY		LANDSCAPING - TOPSOIL
	AC CYCLE TRACK		DRIVEWAY/ DRIVEWAY APPROACH
	CONCRETE SIDEWALK		PEDESTRIAN LANDING ZONES
	EXPOSED AGGREGATE CONCRETE (6" THICK)		TRUNCATED DOMES

NOTE: TREES (⊙) SHOWN FOR LAYOUT PURPOSES ONLY.
CITY TO INSTALL TREES AFTER COMPLETION OF PROJECT.



GEOMETRY AND PAVING
WILLAMETTE FALLS DRIVE
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JUL. 11, 2006
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EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	BB05
CHECKED: BRA/JS	JOB NO.
DATE: 11-1-19	CWL-02

WILLAMETTE FALLS PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

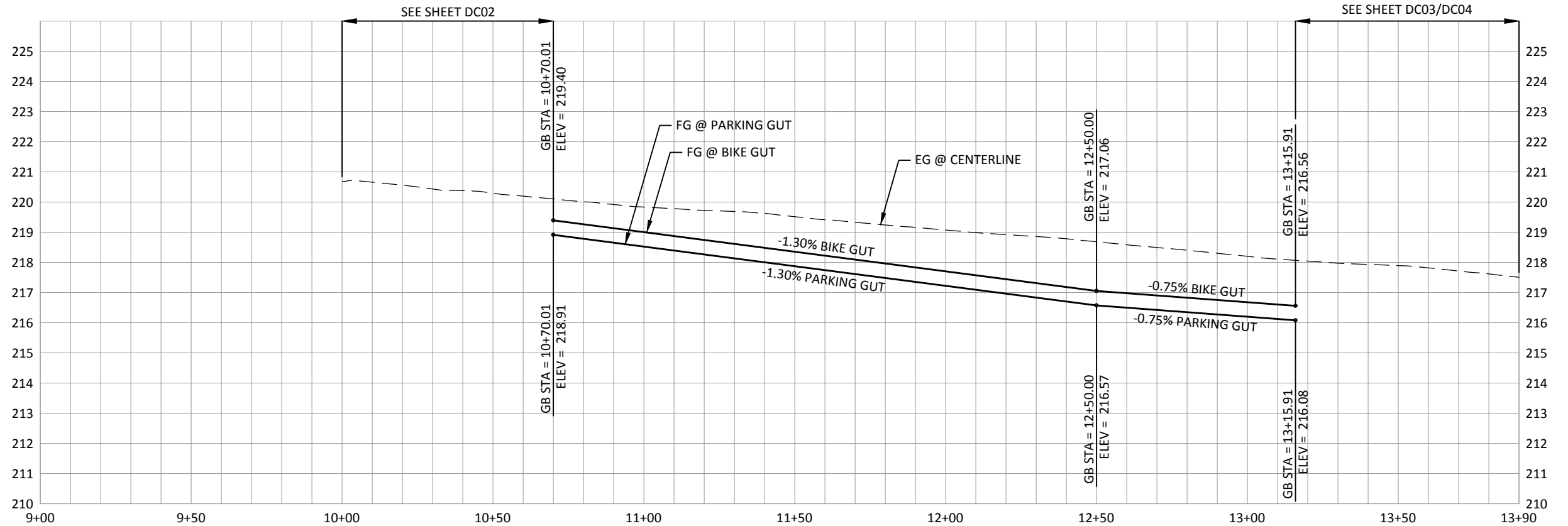
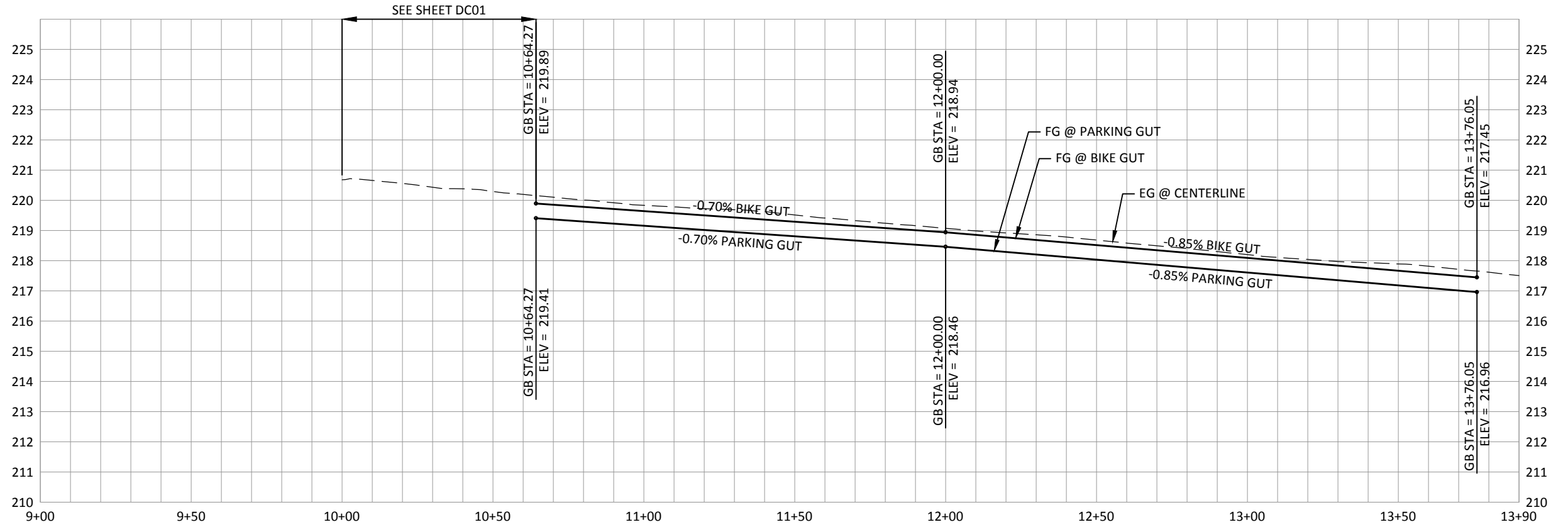
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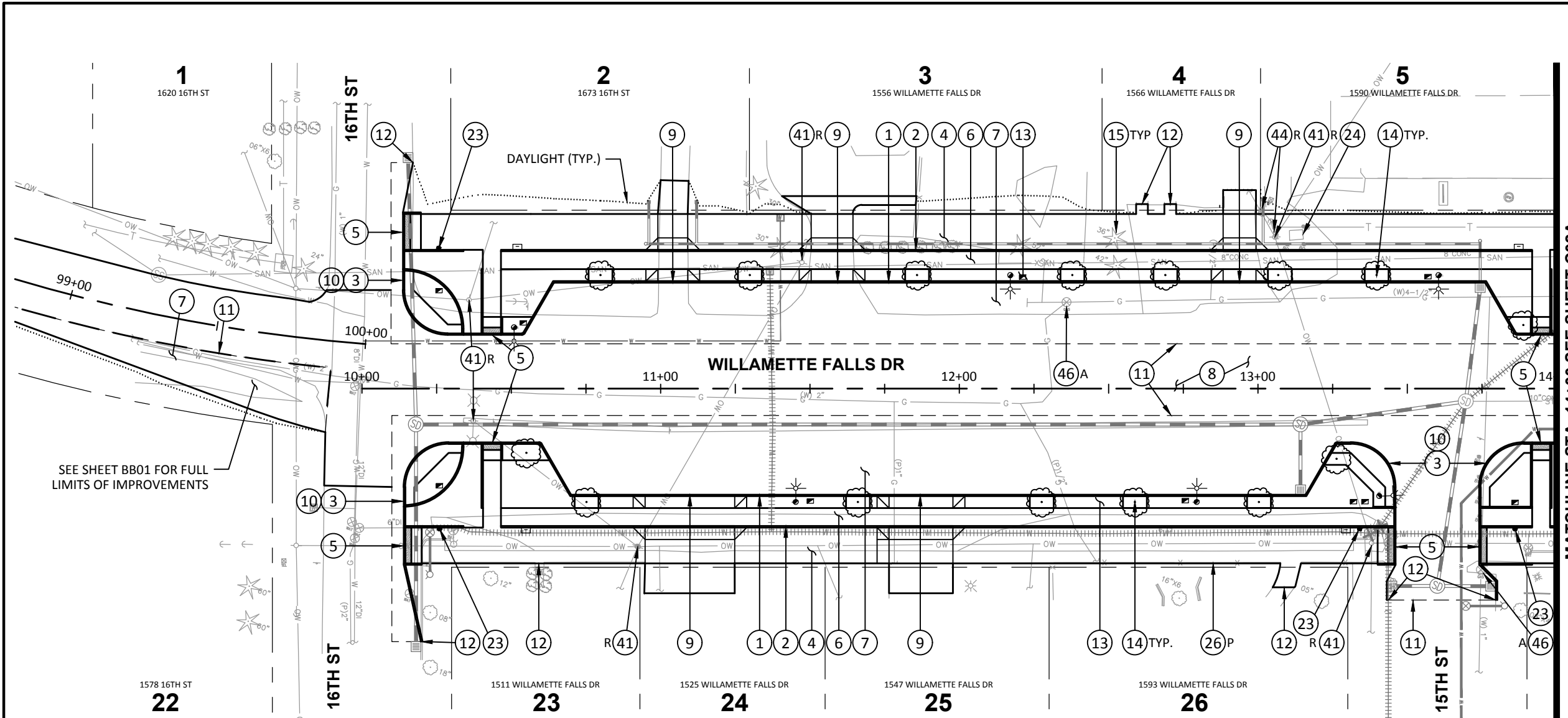


CITY OF
West Linn



SHEET NO. C01	DESIGNED: HHPR TEAM
JOB NO. CWL-02	DRAWN: HHPR TEAM
	CHECKED: BRA/JSH
	DATE: 11-1-19





CONSTRUCTION NOTES

- 1) CONSTRUCT 4" STANDARD CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 2) CONSTRUCT 2" MOUNTABLE CURB (E=2" H=12") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 3) CONSTRUCT 4" MOUNTABLE CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 4) CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET BA01. FOR DETAILS, SEE ODOT STANDARD DWG RD721 ON SHEET DA14 AND SCORING PATTERN ON SHEET DA03.
- 5) CONSTRUCT SIDEWALK RAMP PER ODOT STANDARD DWGS RD755 AND RD759 ON SHEET DA16 AND SHEET DA17. SEE CURB RETURN GRADE ELEVATIONS ON SHEET SERIES "DC".
- 6) CONSTRUCT POROUS AC BIKE PATH PER TYPICAL SECTION ON SHEET BA01.
- 7) CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET BA01.
- 8) CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET BA01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON SHEET SERIES "BB".
- 9) CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD725 ON SHEET DA15. 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 "DB".
- 10) CONSTRUCT CURB RETURN PER GRADES ON SHEET SERIES "DC". SEE SHEET SERIES "DC" FOR CURB TYPE AROUND INTERSECTIONS. SEE SHEET SERIES "BB" FOR MATERIAL TYPE AROUND INTERSECTIONS.
- 11) SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- 12) 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.
- 13) CONSTRUCT PERVIOUS PAVER SECTION PER TYPICAL SECTION ON SHEET BA01 AND DA18. FOR LIMITS, SEE GEOMETREY AND PAVING PLANS ON SHEET SERIES "BB".
- 14) CONSTRUCT TREE WELL WITH PERIMETER ROOT BARRIERS PER DETAIL ON SHEET DA03. EXCAVATE TREE WELL DOWN TO NATIVE SOIL AND BACKFILL WITH TOPSOIL. MINIMUM DEPTH OF TOPSOIL SHALL BE 2 FT. TREES TO BE INSTALLED BY CITY STAFF AFTER COMPLETION OF PROJECT.
- 15) REMOVE EXISTING TREE STUMPS AND REMOVE EXISTING SHRUBS WITHIN LIMITS OF GRADING (CATCH POINTS), UNLESS NOTED TO PROTECT (P). TREE STUMP REMOVALS ARE SHOWN IN SHEET SERIES "EC". TRIMMING IS TYPICAL FOR ANY EXISTING TREE OR SHRUB THAT REMAINS ALONG BACK OF SIDEWALK. COORDINATE WITH ENGINEER PRIOR TO REMOVAL OR TRIMMING.
- 23) INSTALL BOLLARD. FOR DETAILS, SEE ILLUMINATION PLANS ON SHEET SERIES "IL".
- 24) REMOVE CONCRETE PAD AND BOLLARDS.
- 26) REMOVE (R), ADJUST (A), OR PROTECT (P) EXISTING FENCE.
- 41) REMOVE OR RELOCATE (R), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- 44) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING UTILITY PEDESTAL. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- 46) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS VALVE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.

MATCHLINE STA. 14+00 SEE SHEET C02A

DRAWING NAME: C:\102-C01A_C05A-WILLAMETTE FALLS PLAN.DWG

WILLAMETTE FALLS PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

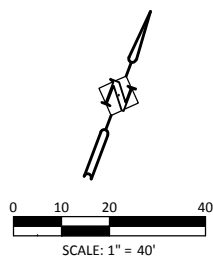
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EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	C01A
CHECKED: BRA/JSH	
DATE: 11-1-19	JOB NO. CWL-02



WILLAMETTE FALLS STORM PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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 205 SE Spokane Street, Suite 200, Portland, OR 97202
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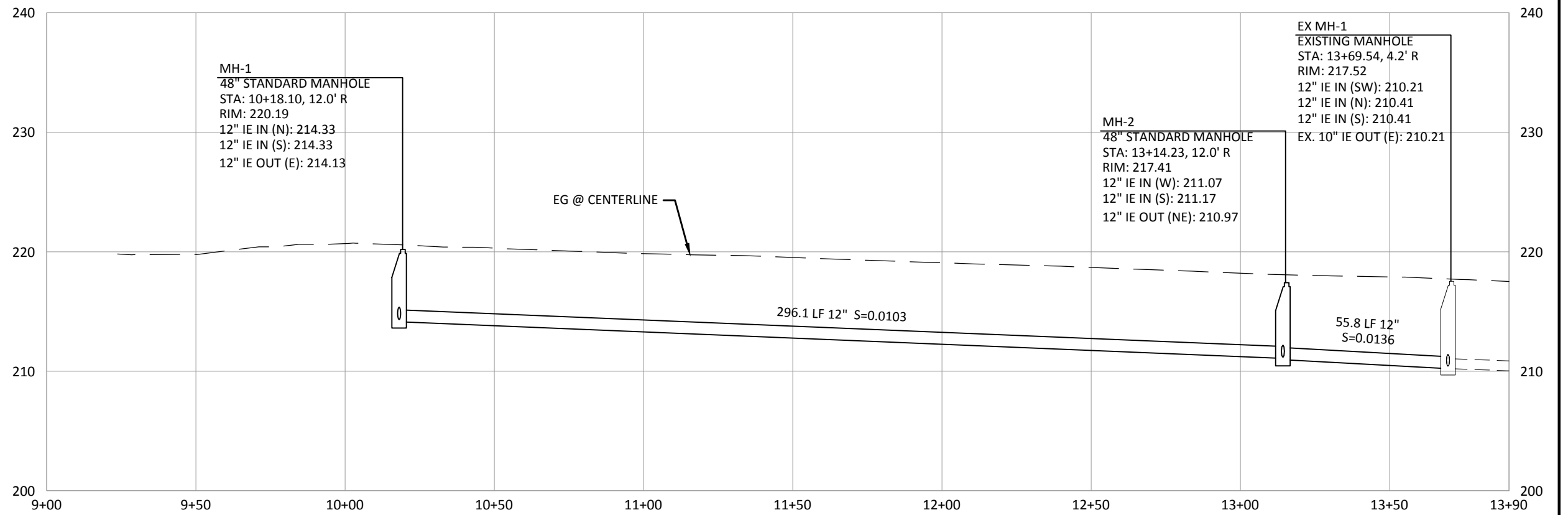


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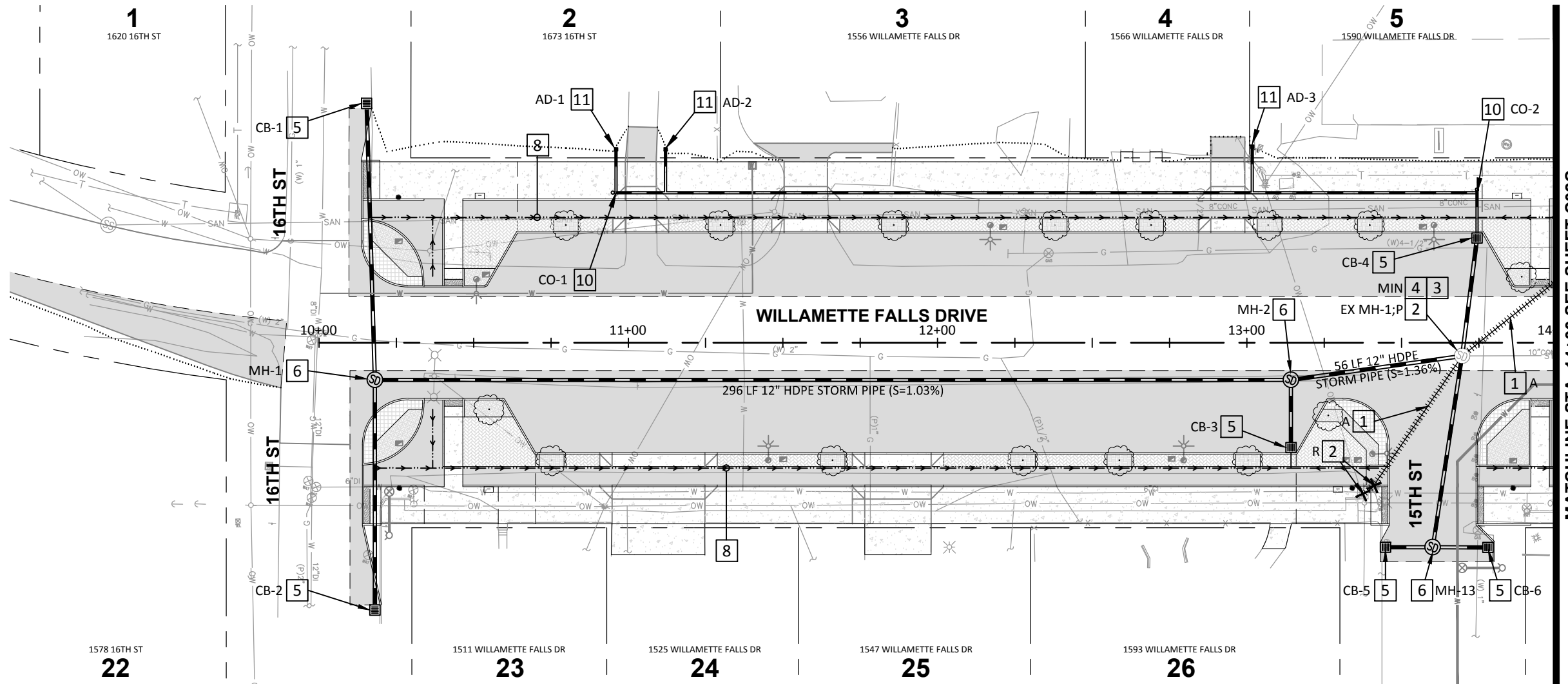
EXPIRES: 12/31/19

SHEET NO.	DESIGNED:
C01B	HHPR TEAM
	DRAWN:
	HHPR TEAM
CHECKED:	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19



WILLAMETTE FALLS DRIVE - CENTERLINE

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



STORM SEWER CONSTRUCTION NOTES

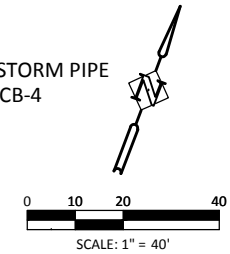
- 1 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON IN-PLACE (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. UPON ABANDON IN-PLACE, FILL PIPE WITH CONTROLLED DENSITY FILL (CDF).
- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 3 CONNECT TO EXISTING PIPE OR STRUCTURE PER DETAIL ON SHEET DA03.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DA07. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 5 CONSTRUCT G-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD364 ON SHEET DA08. SEE PLAN FOR INVERTS AND DATA.
- 6 CONSTRUCT STORM SEWER MANHOLE PER ODOT STANDARD DWG RD335 ON SHEET DA05. SEE PROFILES AND DRAINAGE DATA FOR INVERTS AND LOCATION.*
- 8 CONSTRUCT PERFORATED PIPE GRANULAR TRENCH PER DETAIL ON SHEET DA18. (MIN S = 0.5%)
- 10 CONSTRUCT STORM SEWER CLEANOUT PER DETAIL ON SHEET DA20. SEE PLAN FOR INVERTS AND DATA.
- 11 CONSTRUCT AREA DRAIN PER DETAIL ON SHEET DA20. SEE PLAN FOR INVERTS AND DATA.

DRAINAGE DATA

<p>CB-1 STA 10+17.03, 77.3' L RIM: 219.38 12" IE OUT (S): 215.38 CONSTRUCT 89.4 LF 12" HDPE STORM PIPE (S=1.17%) TO MANHOLE, MH-1</p> <p>CB-2 STA 10+19.73, 86.3' R RIM: 219.85 12" IE OUT (N): 215.85 CONSTRUCT 74.3 LF 12" HDPE STORM PIPE (S=2.04%) TO MANHOLE, MH-1</p> <p>CB-3 STA 13+14.23, 35.5' R CONNECT TO 4" PERFORATED PIPE; CONSTRUCT 6.6 LF 4" HDPE STORM PIPE (S=9.94%); INSTALL 4" x 4" TEE RIM: 216.08 4" IE IN (S): 214.08 12" IE OUT (N): 212.08 CONSTRUCT 21.9 LF 12" HDPE STORM PIPE (S=4.16%) TO MANHOLE, MH-2</p>	<p>CB-4 STA 13+74.37, 35.5' L RIM: 216.96 8" IE IN (N): 213.29 12" IE OUT (S): 212.95 CONSTRUCT 38.4 LF 12" HDPE STORM PIPE (S=6.64%) TO MANHOLE, EX MH-1</p> <p>MH-13 STA 13+60.06, 66.1' R RIM: 216.73 12" IE IN (E): 211.86 12" IE IN (W): 211.86 12" IE OUT (N): 211.66 CONSTRUCT 62.5 LF 12" HDPE STORM PIPE (S=2.00%) TO MANHOLE, EX MH-1</p> <p>CB-5 STA 13+43.10, 66.1' R RIM: 216.50 12" IE OUT (E): 212.50 CONSTRUCT 15.3 LF 12" HDPE STORM PIPE (S=4.19%) TO MANHOLE, MH-13</p>	<p>CB-6 STA 13+79.58, 66.2' R RIM: 216.50 12" IE OUT (W): 212.50 CONSTRUCT 17.8 LF 12" HDPE STORM PIPE (S=3.59%) TO MANHOLE, MH-13</p> <p>AD-1 STA 10+96.05, 62.5' L RIM: 218.98 8" IE OUT (S): 217.81 CONSTRUCT 14.0 LF 8" HDPE STORM PIPE (S=3.14%) TO CLEANOUT, CO-1</p> <p>CO-1 STA 10+96.05, 48.5' L RIM: 219.87 8" IE: 217.37 CONSTRUCT 278.3 LF 8" HDPE STORM PIPE (S=0.80%) TO CLEANOUT, CO-2</p>	<p>AD-2 STA 11+12.05, 62.5' L RIM: 219.02 8" IE OUT (S): 217.85 CONSTRUCT 14.0 LF 8" HDPE STORM PIPE (S=4.34%); CONNECT TO 8" HDPE STORM PIPE WITH 8" x 8" TEE; 8" IE: 217.24</p> <p>AD-3 STA 13+01.70, 63.4' L RIM: 217.30 8" IE OUT (S): 216.13 CONSTRUCT 14.9 LF 8" HDPE STORM PIPE (S=2.72%); CONNECT TO 8" HDPE STORM PIPE WITH 8" x 8" TEE; 8" IE: 215.72</p> <p>CO-2 STA 13+74.37, 48.5' L RIM: 217.66 8" IE: 215.14 CONSTRUCT 14.6 LF 8" HDPE STORM PIPE (S=12.66%) TO CATCH BASIN, CB-4</p>
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*NOTE
SEE SHEET C01B FOR DRAINAGE DATA FOR MH-1, MH-2, & EX MH-1

TRENCH RESURFACING FOR STORM BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION. SEE FULL DEPTH SECTION PER TYPICAL SECTION.



WILLAMETTE FALLS STORM PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

Harper Houf Peterson Righellis Inc.
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LANDSCAPE ARCHITECTS & SURVEYORS
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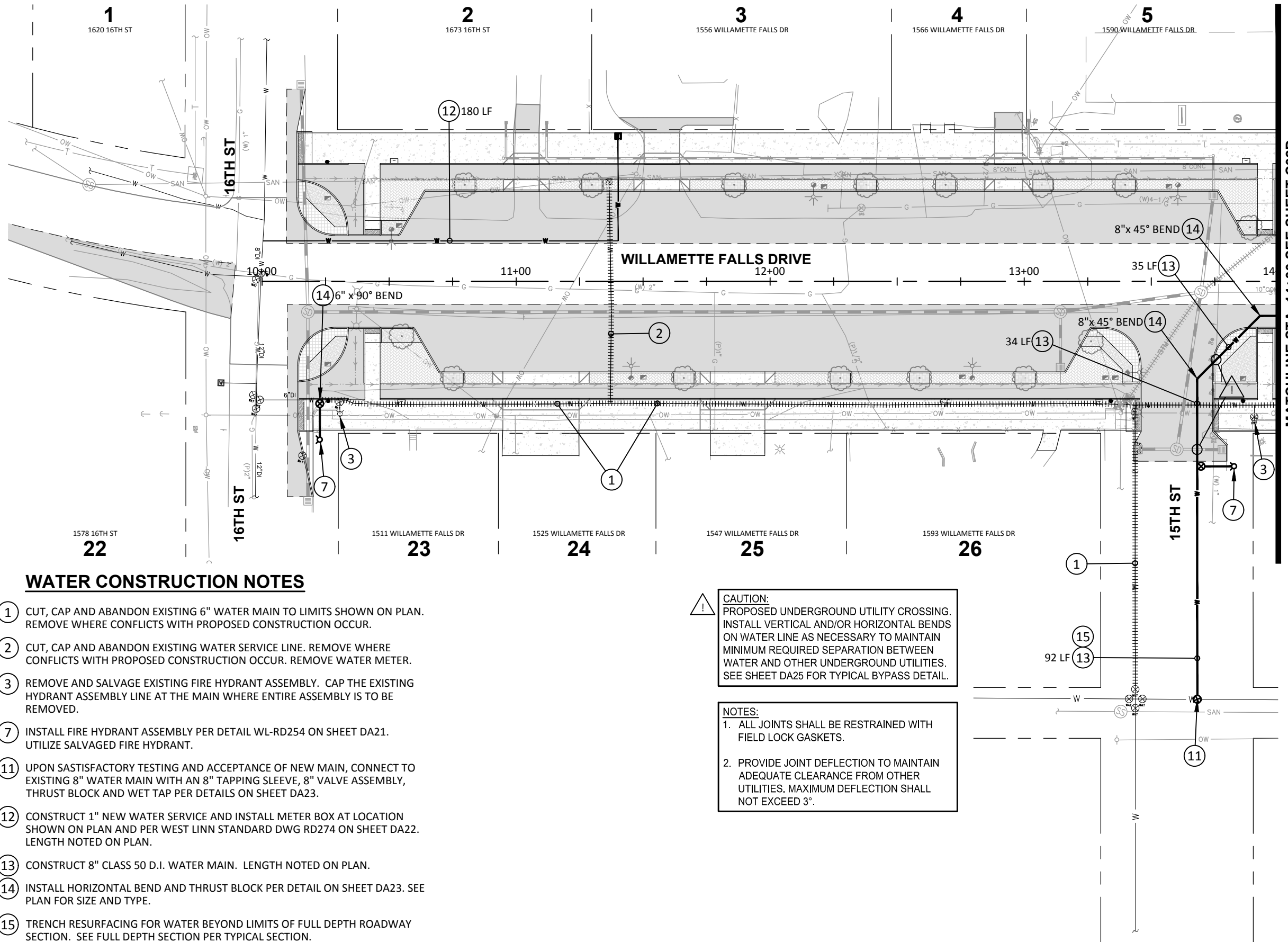
REGISTERED PROFESSIONAL ENGINEER
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	C01C
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

DRAWING NAME: C:\102-C01C_C05C-WILLAMETTE FALLS STORM PLAN.DWG

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DRAWING NAME: CWL02-C01D_C05D-WILLAMETTE FALLS WATER PLAN.DWG



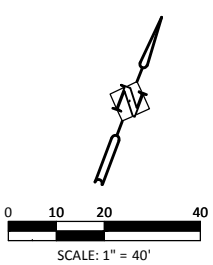
WATER CONSTRUCTION NOTES

- ① CUT, CAP AND ABANDON EXISTING 6" WATER MAIN TO LIMITS SHOWN ON PLAN. REMOVE WHERE CONFLICTS WITH PROPOSED CONSTRUCTION OCCUR.
- ② CUT, CAP AND ABANDON EXISTING WATER SERVICE LINE. REMOVE WHERE CONFLICTS WITH PROPOSED CONSTRUCTION OCCUR. REMOVE WATER METER.
- ③ REMOVE AND SALVAGE EXISTING FIRE HYDRANT ASSEMBLY. CAP THE EXISTING HYDRANT ASSEMBLY LINE AT THE MAIN WHERE ENTIRE ASSEMBLY IS TO BE REMOVED.
- ⑦ INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL WL-RD254 ON SHEET DA21. UTILIZE SALVAGED FIRE HYDRANT.
- ⑪ UPON SATISFACTORY TESTING AND ACCEPTANCE OF NEW MAIN, CONNECT TO EXISTING 8" WATER MAIN WITH AN 8" TAPPING SLEEVE, 8" VALVE ASSEMBLY, THRUST BLOCK AND WET TAP PER DETAILS ON SHEET DA23.
- ⑫ CONSTRUCT 1" NEW WATER SERVICE AND INSTALL METER BOX AT LOCATION SHOWN ON PLAN AND PER WEST LINN STANDARD DWG RD274 ON SHEET DA22. LENGTH NOTED ON PLAN.
- ⑬ CONSTRUCT 8" CLASS 50 D.I. WATER MAIN. LENGTH NOTED ON PLAN.
- ⑭ INSTALL HORIZONTAL BEND AND THRUST BLOCK PER DETAIL ON SHEET DA23. SEE PLAN FOR SIZE AND TYPE.
- ⑮ TRENCH RESURFACING FOR WATER BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION. SEE FULL DEPTH SECTION PER TYPICAL SECTION.

CAUTION:
 PROPOSED UNDERGROUND UTILITY CROSSING. INSTALL VERTICAL AND/OR HORIZONTAL BENDS ON WATER LINE AS NECESSARY TO MAINTAIN MINIMUM REQUIRED SEPARATION BETWEEN WATER AND OTHER UNDERGROUND UTILITIES. SEE SHEET DA25 FOR TYPICAL BYPASS DETAIL.

NOTES:
 1. ALL JOINTS SHALL BE RESTRAINED WITH FIELD LOCK GASKETS.
 2. PROVIDE JOINT DEFLECTION TO MAINTAIN ADEQUATE CLEARANCE FROM OTHER UTILITIES. MAXIMUM DEFLECTION SHALL NOT EXCEED 3".

MATCHLINE STA. 14+00 SEE SHEET C02D



WILLAMETTE FALLS WATER PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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REGISTERED PROFESSIONAL ENGINEER
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Benjamin R. Austin
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 BENJAMIN R. AUSTIN

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DRAWN: HHPR TEAM	C01D
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WILLAMETTE FALLS PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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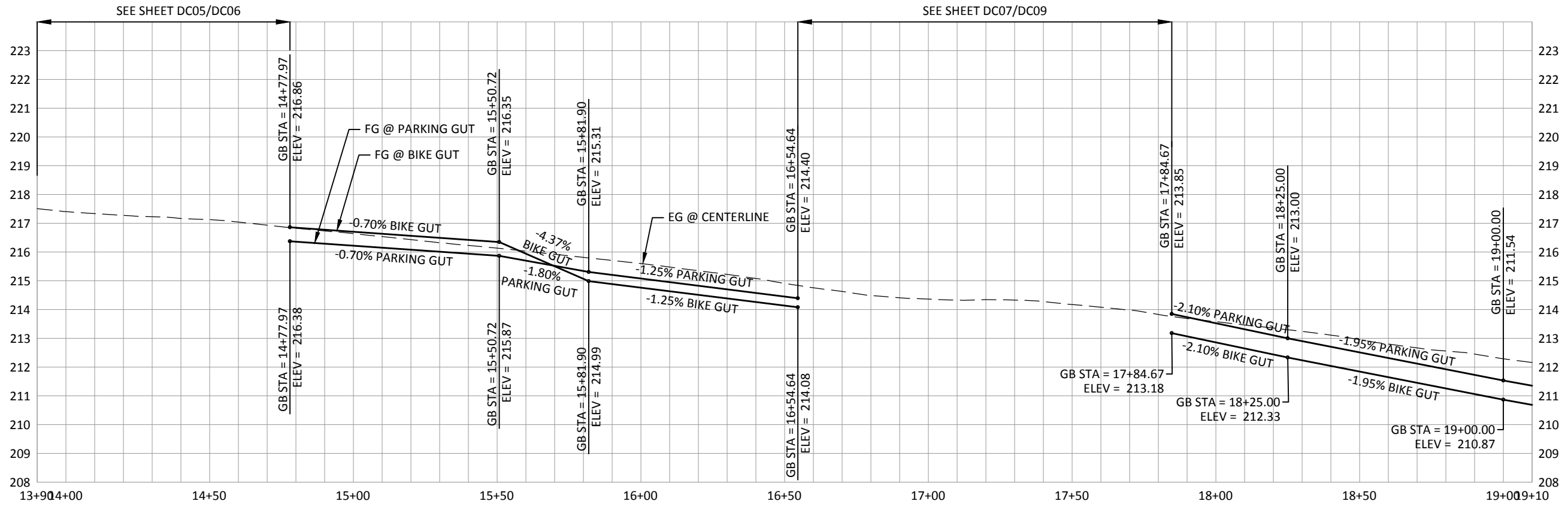


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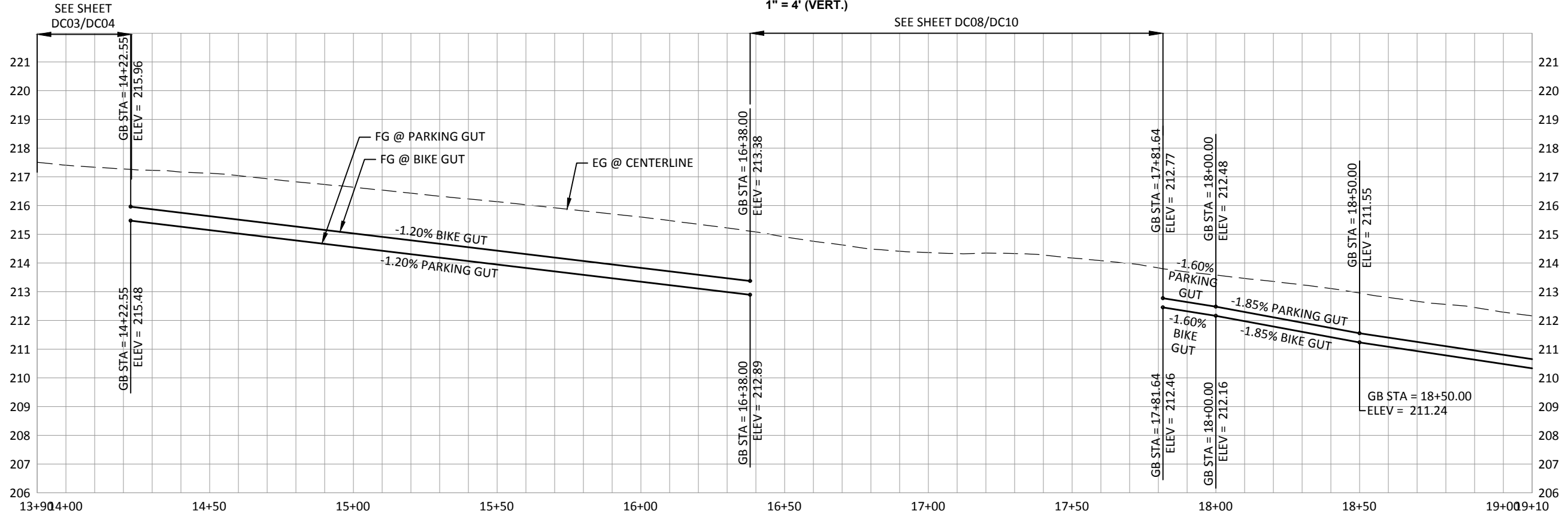
EXPIRES: 12/31/19

SHEET NO.	DESIGNED:
C02	HHPR TEAM
	DRAWN:
	HHPR TEAM
	CHECKED:
	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19



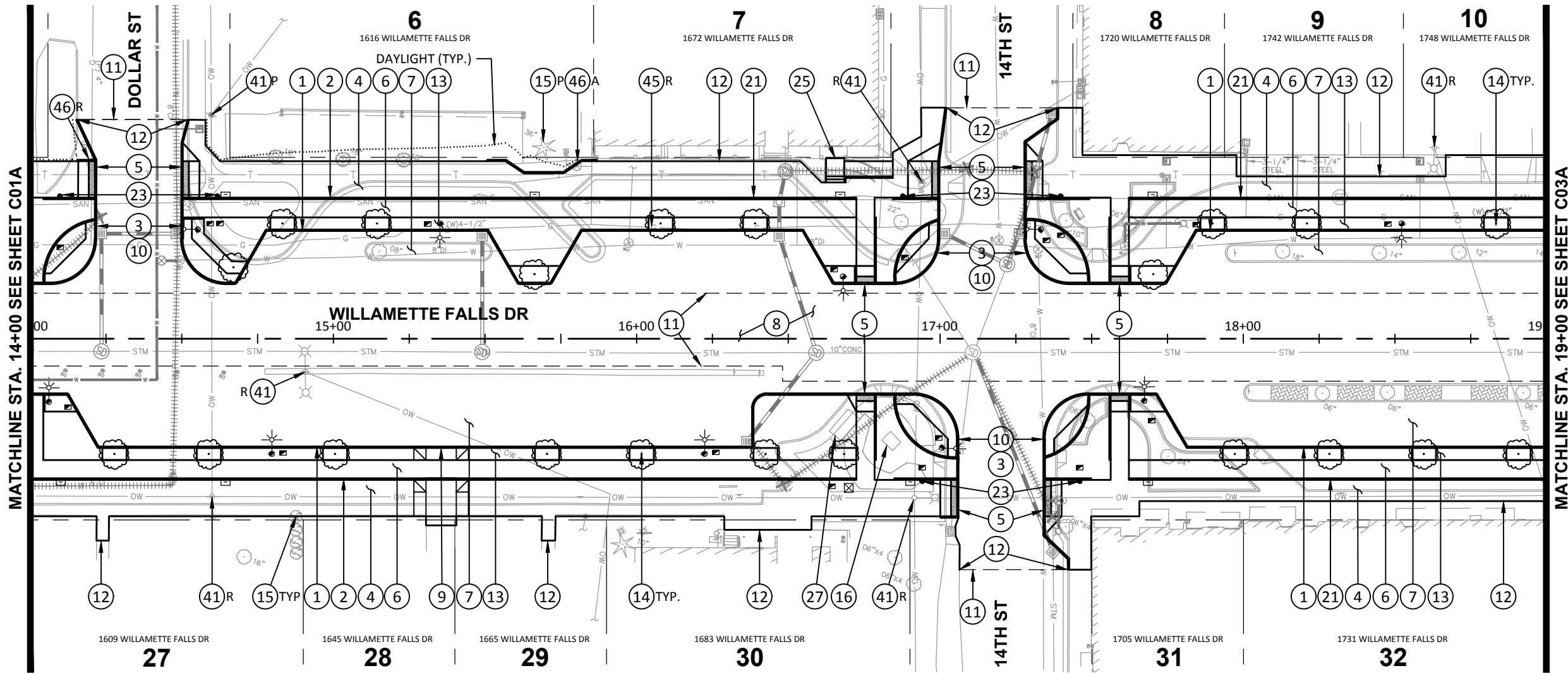
WILLAMETTE FALLS DRIVE - LEFT GUTTER

SCALE: 1" = 40' (HORZ.)
 1" = 4' (VERT.)



WILLAMETTE FALLS DRIVE - RIGHT GUTTER

SCALE: 1" = 40' (HORZ.)
 1" = 4' (VERT.)



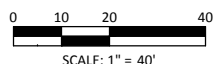
CONSTRUCTION NOTES

- 1) CONSTRUCT 4" STANDARD CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 2) CONSTRUCT 2" MOUNTABLE CURB (E=2" H=12") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 3) CONSTRUCT 4" MOUNTABLE CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 4) CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET BA01. FOR DETAILS, SEE ODOT STANDARD DWG RD721 ON SHEET DA14 AND SCORING PATTERN ON SHEET DA03.
- 5) CONSTRUCT SIDEWALK RAMP PER ODOT STANDARD DWGS RD755 AND RD759 ON SHEET DA16 AND SHEET DA17. SEE CURB RETURN GRADE ELEVATIONS ON SHEET SERIES "DC".
- 6) CONSTRUCT POROUS AC BIKE PATH PER TYPICAL SECTION ON SHEET BA01.
- 7) CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET BA01.
- 8) CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET BA01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON SHEET SERIES "BB".
- 9) CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD725 ON SHEET DA15. 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 "DB".
- 10) CONSTRUCT CURB RETURN PER GRADES ON SHEET SERIES "DC". SEE SHEET SERIES "DC" FOR CURB TYPE AROUND INTERSECTIONS. SEE SHEET SERIES "BB" FOR MATERIAL TYPE AROUND INTERSECTIONS.
- 11) SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- 12) 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.
- 13) CONSTRUCT PERVIOUS PAVER SECTION PER TYPICAL SECTION ON SHEET BA01 AND DA18. FOR LIMITS, SEE GEOMETREY AND PAVING PLANS ON SHEET SERIES "BB".
- 14) CONSTRUCT TREE WELL WITH PERIMETER ROOT BARRIERS PER DETAIL ON SHEET DA03. EXCAVATE TREE WELL DOWN TO NATIVE SOIL AND BACKFILL WITH TOPSOIL. MINIMUM DEPTH OF TOPSOIL SHALL BE 2 FT. TREES TO BE INSTALLED BY CITY STAFF AFTER COMPLETION OF PROJECT.
- 15) REMOVE EXISTING TREE STUMPS AND REMOVE EXISTING SHRUBS WITHIN LIMITS OF GRADING (CATCH POINTS), UNLESS NOTED TO PROTECT (P). TREE STUMP REMOVALS ARE SHOWN IN SHEET SERIES "EC". TRIMMING IS TYPICAL FOR ANY EXISTING TREE OR SHRUB THAT REMAINS ALONG BACK OF SIDEWALK. COORDINATE WITH ENGINEER PRIOR TO REMOVAL OR TRIMMING.
- 16) PROTECT AND RELOCATE EXISTING METEOR REPLICA TO DOLLAR STREET. COORDINATE RELOCATION WITH CITY STAFF.
- 21) CONSTRUCT 6" MOUNTABLE CURB (E=6" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 23) INSTALL BOLLARD. FOR DETAILS, SEE ILLUMINATION PLANS ON SHEET SERIES "IL".
- 25) REMOVE AND RECONSTRUCT EXISTING RAMP AND STAIRS. INSTALL METAL 2-RAIL-HANDRAIL ALONG STAIRS AND RAMP WITH 1 1/2" RAIL DIAMETER. POWDER COAT TO MATCH EXISTING HANDRAIL COLOR. SEE GRADE ELEVATIONS IN SHEET SERIES "DC".
- 27) REMOVE AND SALVAGE EXISTING BUS SHELTER. REINSTALL BUS SHELTER. COORDINATE NEW LOCATION WITH ENGINEER AND CITY STAFF.
- 41) REMOVE OR RELOCATE (R), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- 45) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS LINE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- 46) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS VALVE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.



EXPIRES: 12/31/19

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CHECKED: BRA/JSH	
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WILLAMETTE FALLS PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

Harper Houf Peterson
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ENGINEERS & PLANNERS
LANDSCAPE ARCHITECTS & SURVEYORS
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DRAWING NAME: CWL02-C01A_C02A-WILLAMETTE FALLS PLAN.DWG

WILLAMETTE FALLS STORM PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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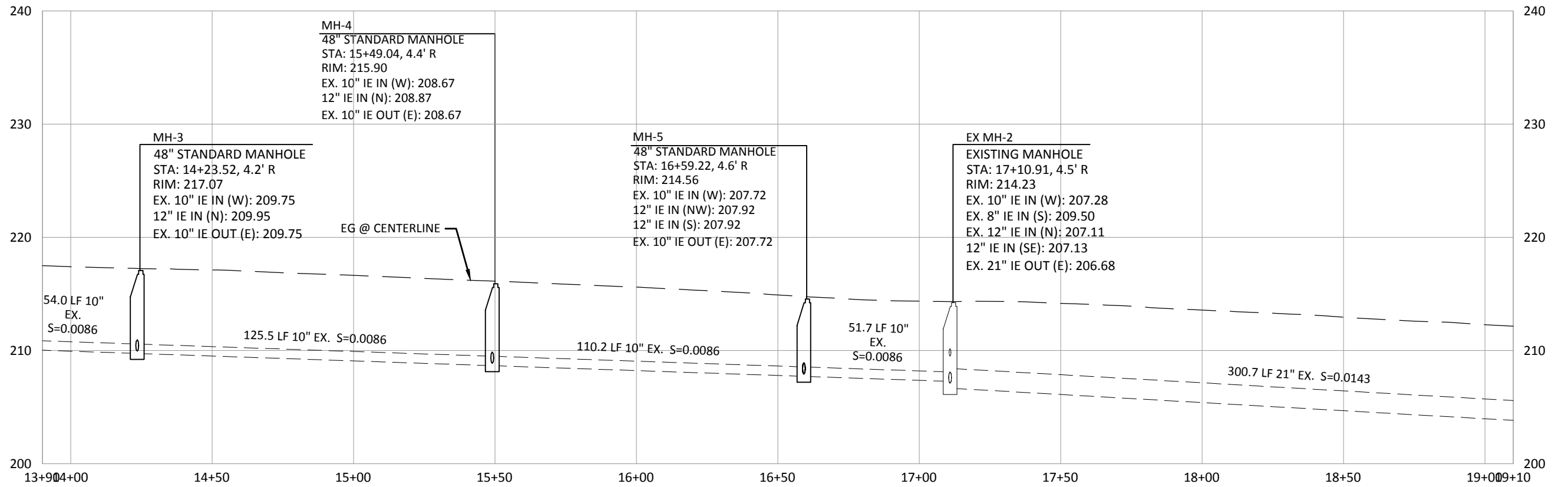


CITY OF
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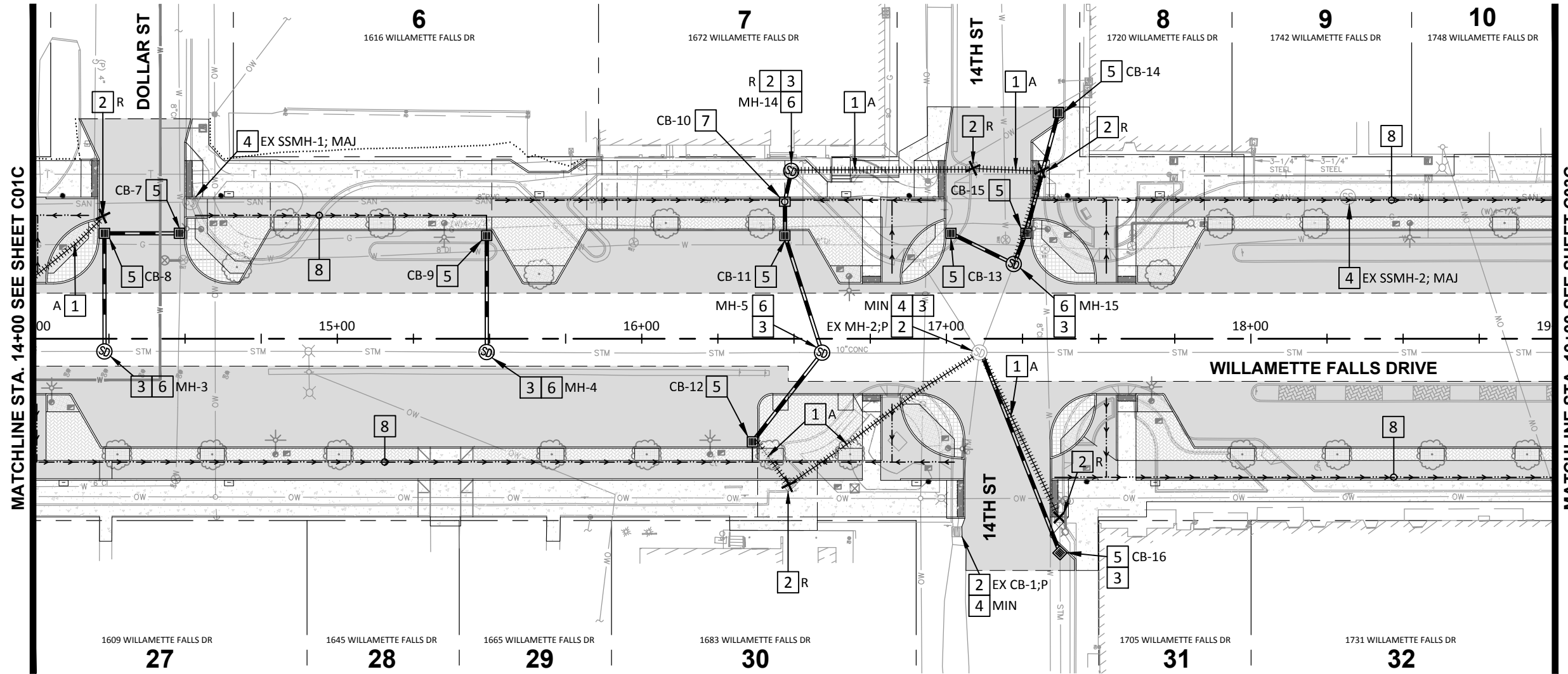
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C02B	HHPR TEAM
	DRAWN:
	HHPR TEAM
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CWL-02	11-1-19



WILLAMETTE FALLS DRIVE - CENTERLINE

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

DRAWING NAME: CWL02-C01C_C05C-WILLAMETTE FALLS STORM PLAN.DWG



MATCHLINE STA. 14+00 SEE SHEET C01C

MATCHLINE STA. 19+00 SEE SHEET C03C

STORM SEWER CONSTRUCTION NOTES

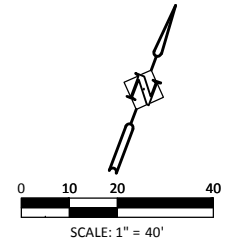
- 1 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON IN-PLACE (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. UPON ABANDON IN-PLACE, FILL PIPE WITH CONTROLLED DENSITY FILL (CDF).
- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 3 CONNECT TO EXISTING PIPE OR STRUCTURE PER DETAIL ON SHEET DA03.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DA07. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 5 CONSTRUCT G-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD364 ON SHEET DA08. SEE PLAN FOR INVERTS AND DATA.
- 6 CONSTRUCT STORM SEWER MANHOLE PER ODOT STANDARD DWG RD335 ON SHEET DA05. SEE PROFILES AND DRAINAGE DATA FOR INVERTS AND LOCATION.*
- 7 CONSTRUCT CG-3 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWGS RD371 AND RD372 ON SHEET DA10 AND DA11. SEE PLAN FOR INVERTS AND DATA.
- 8 CONSTRUCT PERFORATED PIPE GRANULAR TRENCH PER DETAIL ON SHEET DA18. (MIN S = 0.5%)

DRAINAGE DATA

<p>CB-7 STA 14+49.80, 34.6' L RIM: 216.89 12" IE OUT (W): 212.89 CONSTRUCT 24.6 LF 12" HDPE STORM PIPE (S=1.00%) TO CATCH BASIN, CB-8</p> <p>CB-8 STA 14+21.80, 34.6' L RIM: 217.00 12" IE IN (E): 212.64 12" IE OUT (S): 212.44 CONSTRUCT 38.8 LF 12" HDPE STORM PIPE (S=6.42%) TO MANHOLE, MH-3</p> <p>CB-9 STA 15+49.04, 35.5' L CONNECT TO 4" PERFORATED PIPE; CONSTRUCT 7 LF 4" HDPE STORM PIPE (S=9.79%); INSTALL 4" x 4" TEE RIM: 215.87 4" IE IN (N): 213.87 12" IE OUT (S): 211.87 CONSTRUCT 38.3 LF 12" HDPE STORM PIPE (S=7.84%) TO MANHOLE, MH-4</p>	<p>CB-10 STA 16+46.97, 46.5' L RIM: 214.68 GUTTER: 214.18 4" IE IN (W): 212.85 4" IE IN (E): 212.85 12" IE IN (N): 210.21 12" IE OUT (S): 210.11 CONSTRUCT 11.1 LF 12" HDPE STORM PIPE (S=1.00%) TO CATCH BASIN, CB-11</p> <p>CB-11 STA 16+46.97, 35.5' L RIM: 214.48 12" IE IN (NW): 210.00 12" IE OUT (SE): 209.90 CONSTRUCT 40.4 LF 12" HDPE STORM PIPE (S=4.90%) TO MANHOLE, MH-5</p>	<p>MH-14 STA 16+49.07, 55.1' L RIM: 214.31 EX. 12" IE IN (N): 212.31 12" IE OUT (S): 210.31 CONSTRUCT 10.3 LF 12" HDPE STORM PIPE (S=1.00%) TO CATCH BASIN, CB-10</p> <p>CB-12 STA 17+36.33, 35.5' R CONNECT TO 4" PERFORATED PIPE; CONSTRUCT 6.6 LF 4" HDPE STORM PIPE (S=10.09%); INSTALL 4" x 4" TEE RIM: 212.89 4" IE IN (S): 210.89 12" IE OUT (N): 208.89 CONSTRUCT 31.8 LF 12" HDPE STORM PIPE (S=2.61%) TO MANHOLE, MH-5</p> <p>CB-13 STA 16+99.83, 34.6' L RIM: 213.55 12" IE OUT (E): 209.67 CONSTRUCT 23.0 LF 12" HDPE STORM PIPE (S=1.00%) TO MANHOLE, MH-15</p> <p>MH-15 STA 17+22.18, 24.5' L RIM: 213.99 12" IE IN (W): 209.44 12" IE IN (N): 209.34 EX. 12" IE OUT (S): 209.24 (CONTRACTOR TO VERIFY EX. INVERT)</p>	<p>CB-14 STA 17+38.50, 74.3' L RIM: 213.80 12" IE OUT (S): 209.96 CONSTRUCT 41.0 LF 12" HDPE STORM PIPE (S=1.00%) TO CATCH BASIN, CB-15</p> <p>CB-15 STA 17+27.83, 34.7' L RIM: 213.55 12" IE IN (N): 209.55 12" IE OUT (S): 209.45 CONSTRUCT 10.9 LF 12" HDPE STORM PIPE (S=1.00%) TO MANHOLE, MH-15</p> <p>EX CB-1 STA 17+05.15, 63.4' R EX. RIM: 212.76 PROP. RIM: 212.90 EX. 8" IE OUT (N): 210.61</p> <p>CB-16 STA 17+38.49, 69.1' R RIM: 212.67 EX. 12" IE IN (S): 207.53 12" IE OUT (NW): 207.43 CONSTRUCT 68.6 LF 12" HDPE STORM PIPE (S=0.44%) TO EXISTING MANHOLE, EX MH-2; CONNECT TO EXISTING SOUTHEAST 12" INVERT (CONTRACTOR TO VERIFY INVERT)</p>
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***NOTE**
SEE SHEET C02B FOR DRAINAGE DATA FOR MH-3, MH-4, MH-5, & EX MH-2

TRENCH RESURFACING FOR STORM BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION. SEE FULL DEPTH SECTION PER TYPICAL SECTION.



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REGISTERED PROFESSIONAL ENGINEER
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BENJAMIN R. AUSTIN

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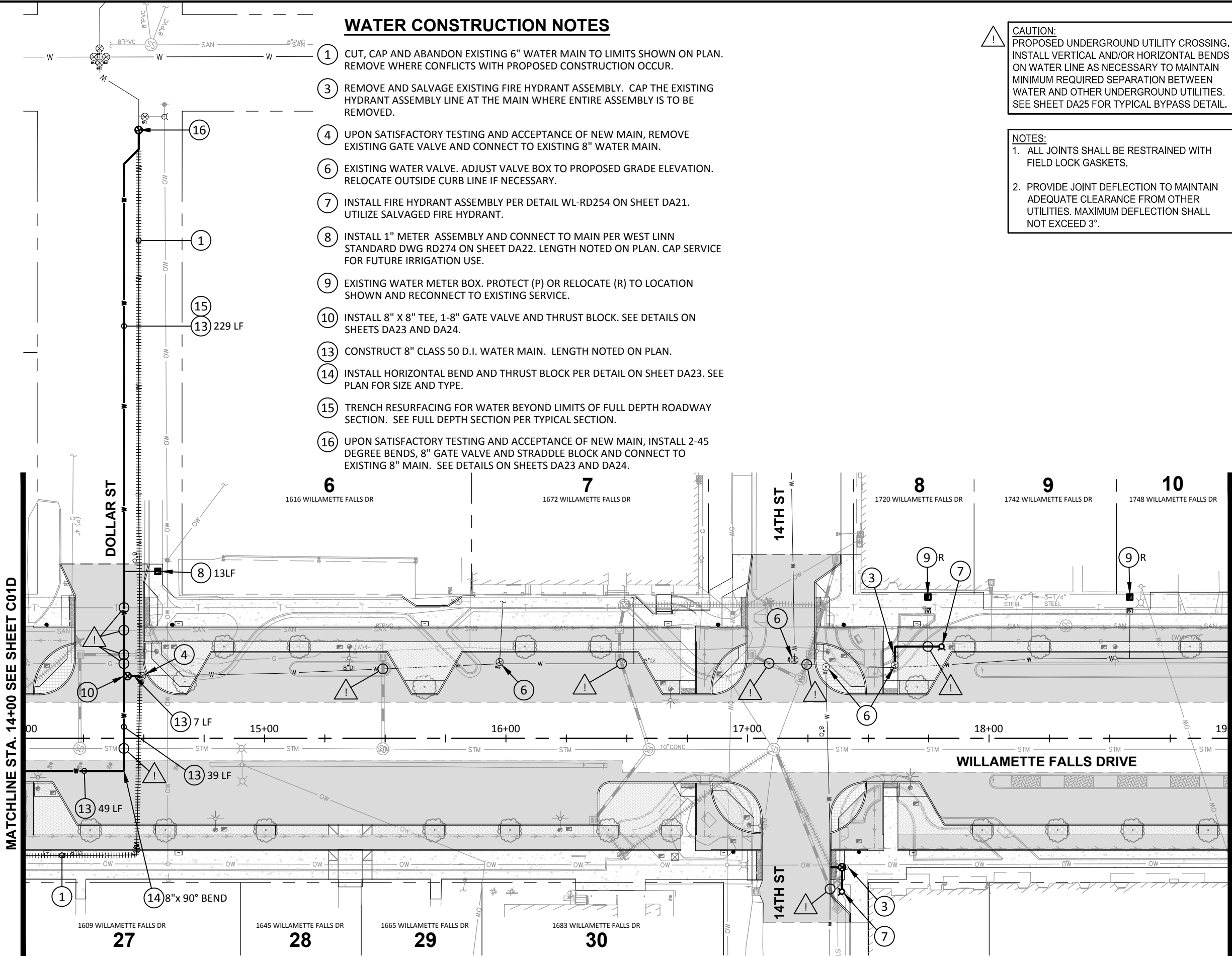
DRAWING NAME: CWL02-C01D_C05D-WILLAMETTE FALLS WATER PLAN.DWG

WATER CONSTRUCTION NOTES

- 1 CUT, CAP AND ABANDON EXISTING 6" WATER MAIN TO LIMITS SHOWN ON PLAN. REMOVE WHERE CONFLICTS WITH PROPOSED CONSTRUCTION OCCUR.
- 3 REMOVE AND SALVAGE EXISTING FIRE HYDRANT ASSEMBLY. CAP THE EXISTING HYDRANT ASSEMBLY LINE AT THE MAIN WHERE ENTIRE ASSEMBLY IS TO BE REMOVED.
- 4 UPON SATISFACTORY TESTING AND ACCEPTANCE OF NEW MAIN, REMOVE EXISTING GATE VALVE AND CONNECT TO EXISTING 8" WATER MAIN.
- 6 EXISTING WATER VALVE. ADJUST VALVE BOX TO PROPOSED GRADE ELEVATION. RELOCATE OUTSIDE CURB LINE IF NECESSARY.
- 7 INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL WL-RD254 ON SHEET DA21. UTILIZE SALVAGED FIRE HYDRANT.
- 8 INSTALL 1" METER ASSEMBLY AND CONNECT TO MAIN PER WEST LINN STANDARD DWG RD274 ON SHEET DA22. LENGTH NOTED ON PLAN. CAP SERVICE FOR FUTURE IRRIGATION USE.
- 9 EXISTING WATER METER BOX. PROTECT (P) OR RELOCATE (R) TO LOCATION SHOWN AND RECONNECT TO EXISTING SERVICE.
- 10 INSTALL 8" X 8" TEE, 1-8" GATE VALVE AND THRUST BLOCK. SEE DETAILS ON SHEETS DA23 AND DA24.
- 13 CONSTRUCT 8" CLASS 50 D.I. WATER MAIN. LENGTH NOTED ON PLAN.
- 14 INSTALL HORIZONTAL BEND AND THRUST BLOCK PER DETAIL ON SHEET DA23. SEE PLAN FOR SIZE AND TYPE.
- 15 TRENCH RESURFACING FOR WATER BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION. SEE FULL DEPTH SECTION PER TYPICAL SECTION.
- 16 UPON SATISFACTORY TESTING AND ACCEPTANCE OF NEW MAIN, INSTALL 2-45 DEGREE BENDS, 8" GATE VALVE AND STRADDLE BLOCK AND CONNECT TO EXISTING 8" MAIN. SEE DETAILS ON SHEETS DA23 AND DA24.

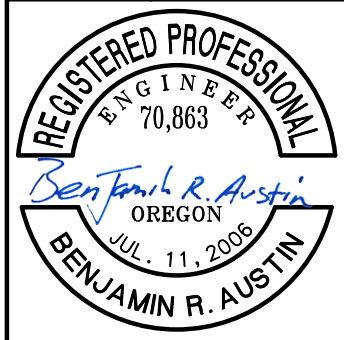
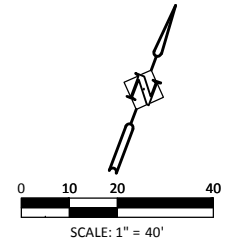
CAUTION:
PROPOSED UNDERGROUND UTILITY CROSSING. INSTALL VERTICAL AND/OR HORIZONTAL BENDS ON WATER LINE AS NECESSARY TO MAINTAIN MINIMUM REQUIRED SEPARATION BETWEEN WATER AND OTHER UNDERGROUND UTILITIES. SEE SHEET DA25 FOR TYPICAL BYPASS DETAIL.

NOTES:
1. ALL JOINTS SHALL BE RESTRAINED WITH FIELD LOCK GASKETS.
2. PROVIDE JOINT DEFLECTION TO MAINTAIN ADEQUATE CLEARANCE FROM OTHER UTILITIES. MAXIMUM DEFLECTION SHALL NOT EXCEED 3".



WILLAMETTE FALLS WATER PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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LANDSCAPE ARCHITECTS & SURVEYORS
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CHECKED: BRA/JS	
DATE: 11-1-19	JOB NO. CWL-02

WILLAMETTE FALLS PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

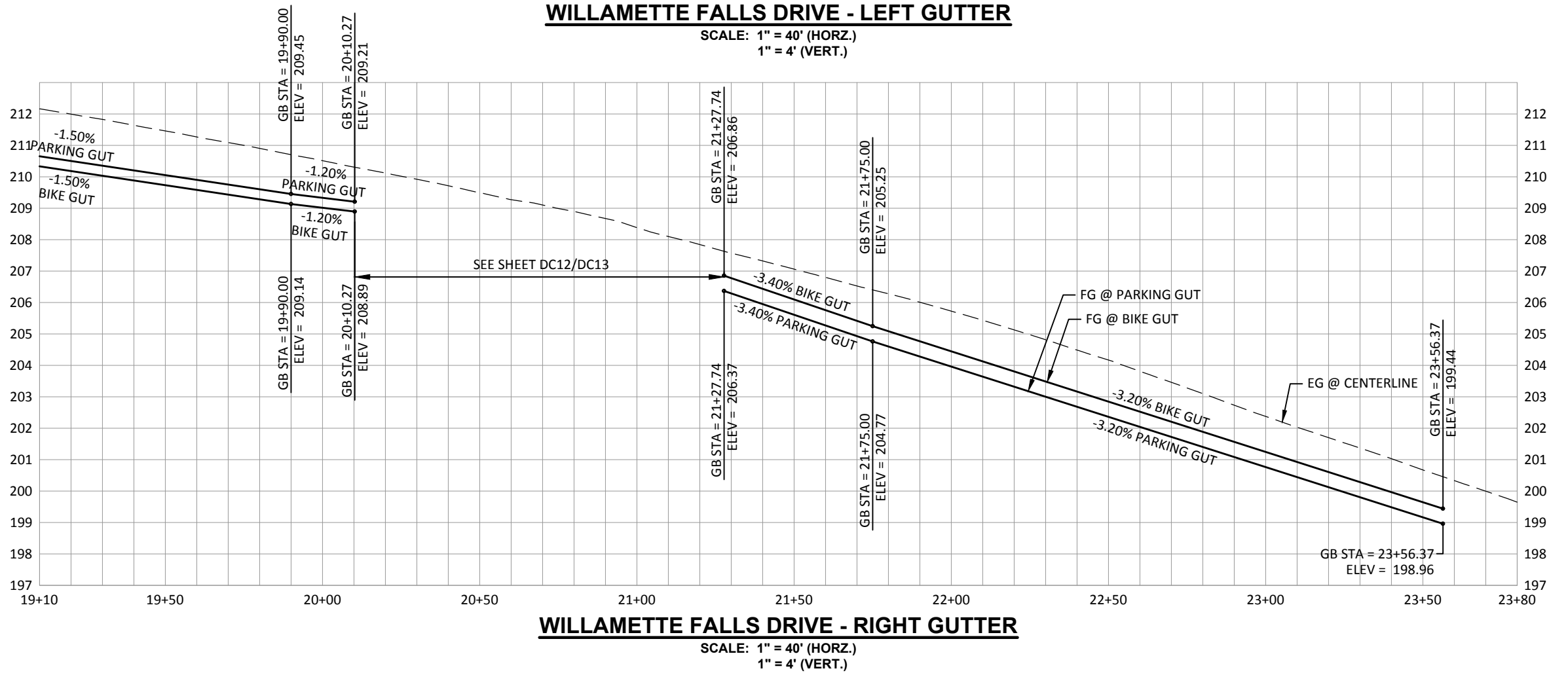
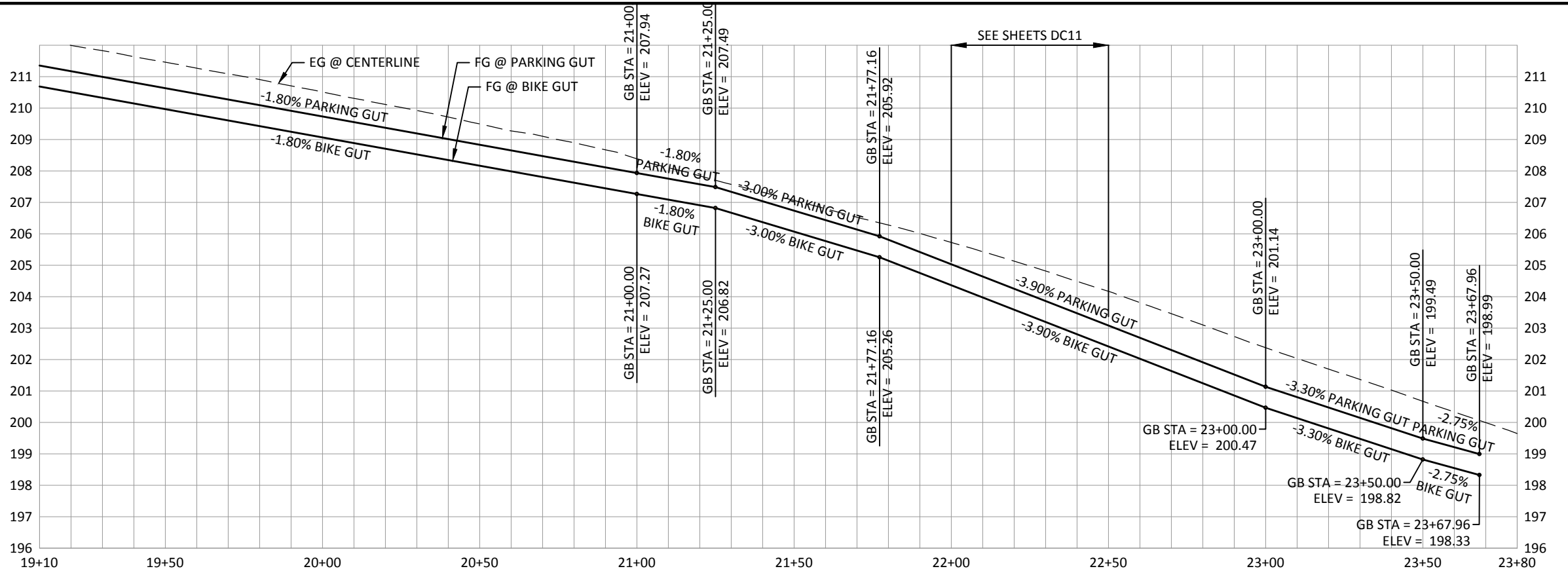
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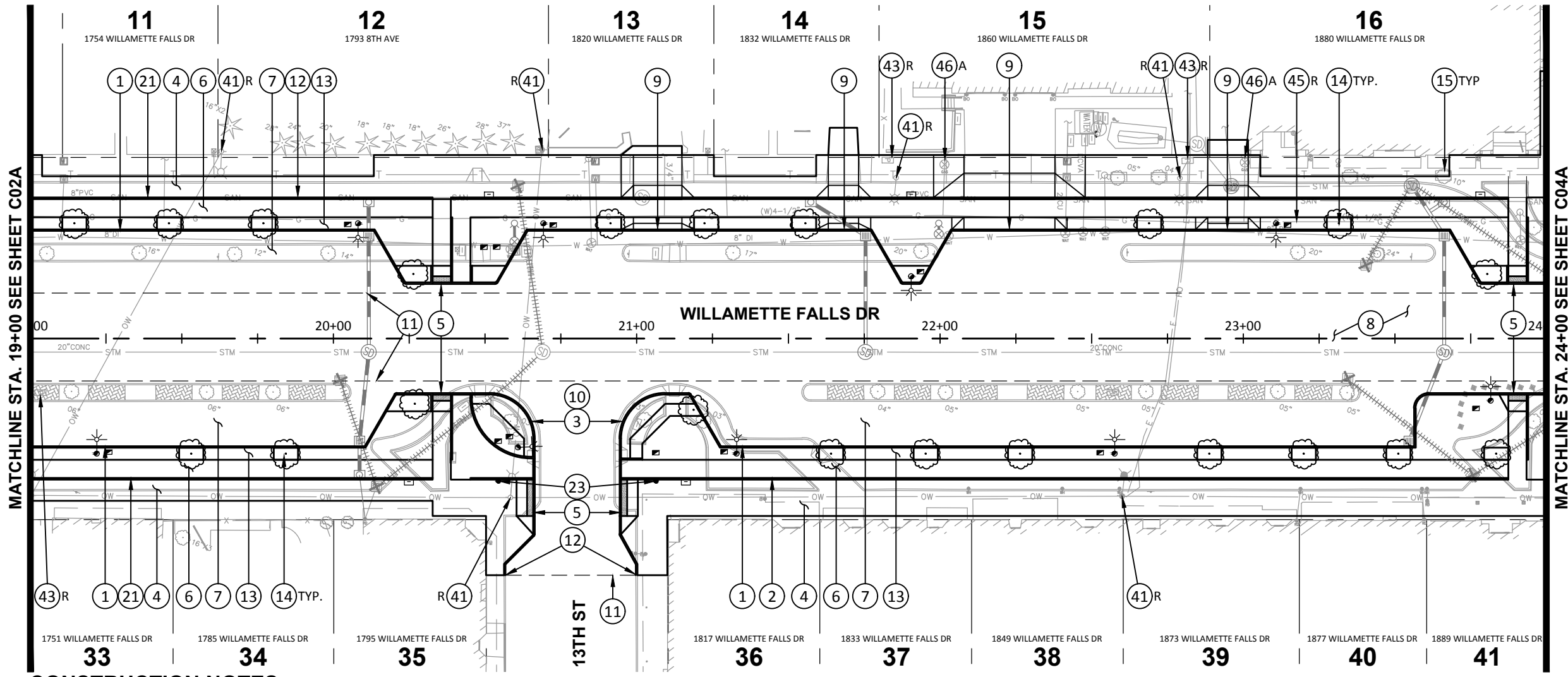


CITY OF
 West
 Linn



SHEET NO.	DESIGNED:
C03	HHPR TEAM
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	HHPR TEAM
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JOB NO.	DATE:
CWL-02	11-1-19





CONSTRUCTION NOTES

- 1) CONSTRUCT 4" STANDARD CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 2) CONSTRUCT 2" MOUNTABLE CURB (E=2" H=12") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 3) CONSTRUCT 4" MOUNTABLE CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 4) CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET BA01. FOR DETAILS, SEE ODOT STANDARD DWG RD721 ON SHEET DA14 AND SCORING PATTERN ON SHEET DA03.
- 5) CONSTRUCT SIDEWALK RAMP PER ODOT STANDARD DWGS RD755 AND RD759 ON SHEET DA16 AND SHEET DA17. SEE CURB RETURN GRADE ELEVATIONS ON SHEET SERIES "DC".
- 6) CONSTRUCT POROUS AC BIKE PATH PER TYPICAL SECTION ON SHEET BA01.
- 7) CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET BA01.
- 8) CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET BA01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON SHEET SERIES "BB".
- 9) CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD725 ON SHEET DA15. 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 "DB".
- 10) CONSTRUCT CURB RETURN PER GRADES ON SHEET SERIES "DC". SEE SHEET SERIES "DC" FOR CURB TYPE AROUND INTERSECTIONS. SEE SHEET SERIES "BB" FOR MATERIAL TYPE AROUND INTERSECTIONS.
- 11) SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- 12) 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.
- 13) CONSTRUCT PERVIOUS PAVER SECTION PER TYPICAL SECTION ON SHEET BA01 AND DA18. FOR LIMITS, SEE GEOMETREY AND PAVING PLANS ON SHEET SERIES "BB".
- 14) CONSTRUCT TREE WELL WITH PERIMETER ROOT BARRIERS PER DETAIL ON SHEET DA03. EXCAVATE TREE WELL DOWN TO NATIVE SOIL AND BACKFILL WITH TOPSOIL. MINIMUM DEPTH OF TOPSOIL SHALL BE 2 FT. TREES TO BE INSTALLED BY CITY STAFF AFTER COMPLETION OF PROJECT.
- 15) REMOVE EXISTING TREE STUMPS AND REMOVE EXISTING SHRUBS WITHIN LIMITS OF GRADING (CATCH POINTS), UNLESS NOTED TO PROTECT (P). TREE STUMP REMOVALS ARE SHOWN IN SHEET SERIES "EC". TRIMMING IS TYPICAL FOR ANY EXISTING TREE OR SHRUB THAT REMAINS ALONG BACK OF SIDEWALK. COORDINATE WITH ENGINEER PRIOR TO REMOVAL OR TRIMMING.
- 21) CONSTRUCT 6" MOUNTABLE CURB (E=6" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- 23) INSTALL BOLLARD. FOR DETAILS, SEE ILLUMINATION PLANS ON SHEET SERIES "IL".
- 41) REMOVE OR RELOCATE (R), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- 43) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING UTILITY BOX. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- 45) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS LINE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- 46) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS VALVE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.

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WILLAMETTE FALLS PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

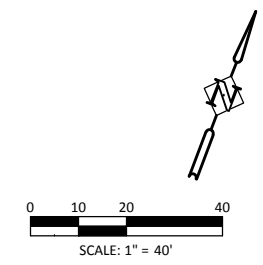
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REGISTERED PROFESSIONAL
ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

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WILLAMETTE FALLS STORM PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

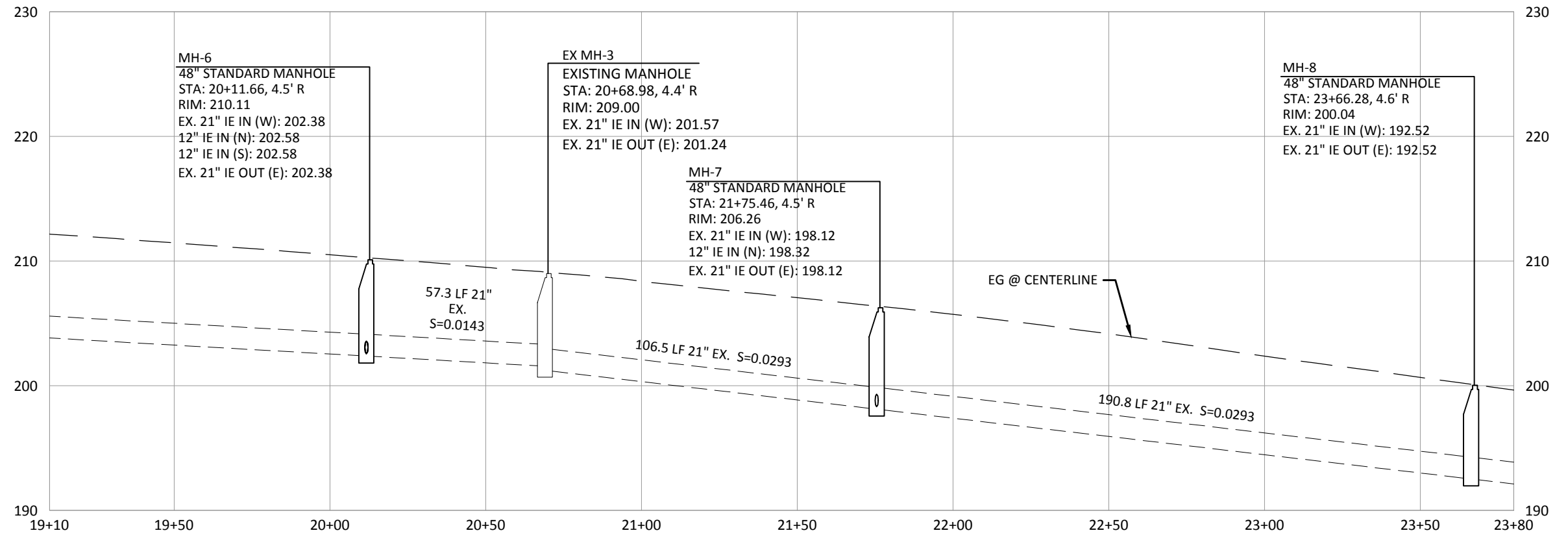
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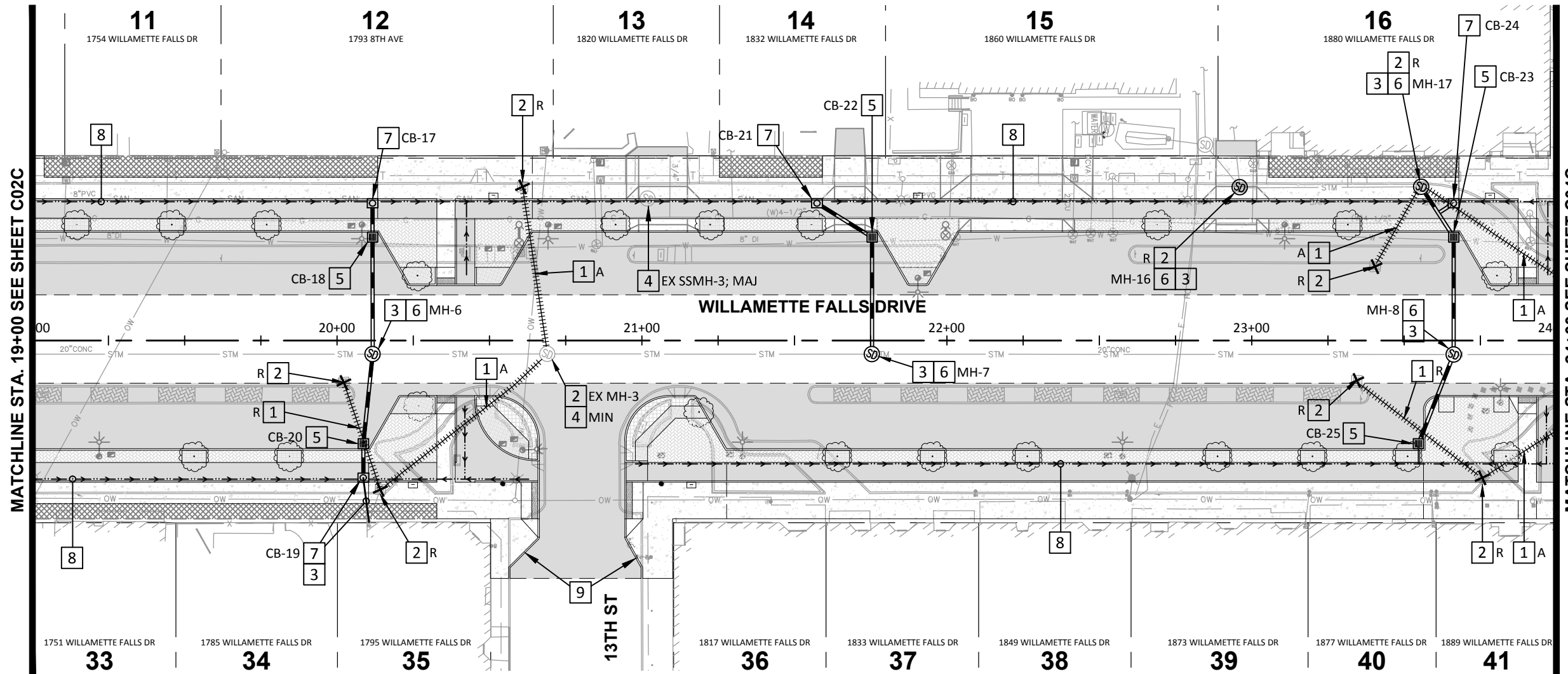
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	HHPR TEAM
CHECKED:	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19



WILLAMETTE FALLS DRIVE - CENTERLINE
 SCALE: 1" = 40' (HORZ.)
 1" = 10' (VERT.)



MATCHLINE STA. 19+00 SEE SHEET C02C

MATCHLINE STA. 24+00 SEE SHEET C04C

STORM SEWER CONSTRUCTION NOTES

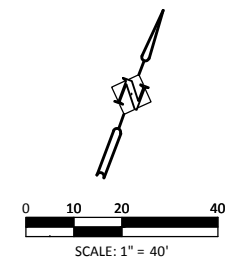
- 1 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON IN-PLACE (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. UPON ABANDON IN-PLACE, FILL PIPE WITH CONTROLLED DENSITY FILL (CDF).
- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 3 CONNECT TO EXISTING PIPE OR STRUCTURE PER DETAIL ON SHEET DA03.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DA07. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 5 CONSTRUCT G-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD364 ON SHEET DA08. SEE PLAN FOR INVERTS AND DATA.
- 6 CONSTRUCT STORM SEWER MANHOLE PER ODOT STANDARD DWG RD335 ON SHEET DA05. SEE PROFILES AND DRAINAGE DATA FOR INVERTS AND LOCATION.*
- 7 CONSTRUCT CG-3 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWGS RD371 AND RD372 ON SHEET DA10 AND DA11. SEE PLAN FOR INVERTS AND DATA.
- 8 CONSTRUCT PERFORATED PIPE GRANULAR TRENCH PER DETAIL ON SHEET DA18. (MIN S = 0.5%)
- 9 RECONSTRUCT WEEPHOLE IN PROPOSED CURB PER ODOT STANDARD DWG RD700 ON SHEET DA13.

DRAINAGE DATA

<p>CB-17 STA 20+11.63, 46.5' L RIM: 209.36 GUTTER: 208.86 4" IE IN (W): 207.61 12" IE OUT (S): 205.86 CONSTRUCT 11.1 LF 12" HDPE STORM PIPE (S=3.23%) TO CATCH BASIN, CB-18</p> <p>CB-18 STA 20+11.63, 35.5' L RIM: 209.50 12" IE IN (N): 205.50 12" IE OUT (S): 205.40 CONSTRUCT 38.3 LF 12" HDPE STORM PIPE (S=7.35%) TO MANHOLE, MH-6</p> <p>CB-19 STA 20+08.59, 46.0' R RIM: 209.41 GUTTER: 208.91 4" IE IN (W): 207.66 4" IE IN (E): 207.66 6" IE IN (SE): 207.76 12" IE OUT (N): 205.91 CONNECT EXISTING ROOF DRAIN (CONTRACTOR TO VERIFY SIZE); CONSTRUCT 11.2 LF 12" HDPE STORM PIPE (S=8.92%) TO CATCH BASIN, CB-20</p>	<p>CB-20 STA 20+08.59, 35.5' R RIM: 209.21 12" IE IN (S): 205.21 12" IE OUT (N): 205.11 CONSTRUCT 29.5 LF 12" HDPE STORM PIPE (S=8.57%) TO MANHOLE, MH-6</p> <p>CB-21 STA 21+57.41, 46.5' L RIM: 206.35 GUTTER: 205.80 4" IE IN (W): 204.60 12" IE OUT (E): 202.80 CONSTRUCT 38.4 LF 12" HDPE STORM PIPE (S=3.44%) TO CATCH BASIN, CB-22</p> <p>CB-22 STA 21+75.48, 35.5' L RIM: 205.92 12" IE IN (W): 202.12 12" IE OUT (S): 201.92 CONSTRUCT 38.4 LF 12" HDPE STORM PIPE (S=9.39%) TO MANHOLE, MH-7</p>	<p>MH-16 STA 22+96.12, 50.3' L RIM: 200.68 EX. 10" IE IN (NW): 194.65 EX. 8" IE IN (NW): 194.63 EX. 10" IE OUT (E): 194.53 (CONTRACTOR TO VERIFY EX. INVERTS)</p> <p>MH-17 STA 23+55.64, 50.4' L RIM: 198.72 EX. 10" IE IN (W): 194.18 12" IE OUT (SE): 193.98 (CONTRACTOR TO VERIFY EX. INVERTS) CONSTRUCT 19.7 LF 12" HDPE STORM PIPE (S=1.00%) TO CATCH BASIN, CB-23</p> <p>CB-23 STA 23+66.28, 35.5' L RIM: 198.99 12" IE IN (NW): 193.78 12" IE OUT (S): 193.68 CONSTRUCT 38.5 LF 12" HDPE STORM PIPE (S=1.07%) TO MANHOLE, MH-8</p>	<p>CB-24 STA 23+66.28, 46.5' L RIM: 198.87 GUTTER: 198.37 4" IE IN (W): 197.12 4" IE IN (E): 197.12 12" IE OUT (SW): 195.37 CONSTRUCT 6.0 LF 12" HDPE STORM PIPE (S=24.71%) TO 12" LATERAL; INSTALL 12" x 12" TEE AT CONNECTION (12" IE: 193.88)</p> <p>CB-25 STA 23+54.69, 35.5' R CONNECT TO 4" PERFORATED PIPE; CONSTRUCT 6.6 LF 4" HDPE STORM PIPE (S=10.54%); INSTALL 4" x 4" TEE RIM: 198.96 4" IE IN (S): 196.96 12" IE OUT (N): 194.96 CONSTRUCT 29.3 LF 12" HDPE STORM PIPE (S=5.37%) TO MANHOLE, MH-8</p>
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TRENCH RESURFACING FOR STORM BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION. SEE FULL DEPTH SECTION PER TYPICAL SECTION.

*NOTE
 SEE SHEET C03B FOR DRAINAGE DATA FOR MH-6, EX MH-3, MH-7, & MH-8



DRAWING NAME: C:\02-C01C_C05C-WILLAMETTE FALLS STORM PLAN.DWG

WILLAMETTE FALLS STORM PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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CITY OF
West Linn

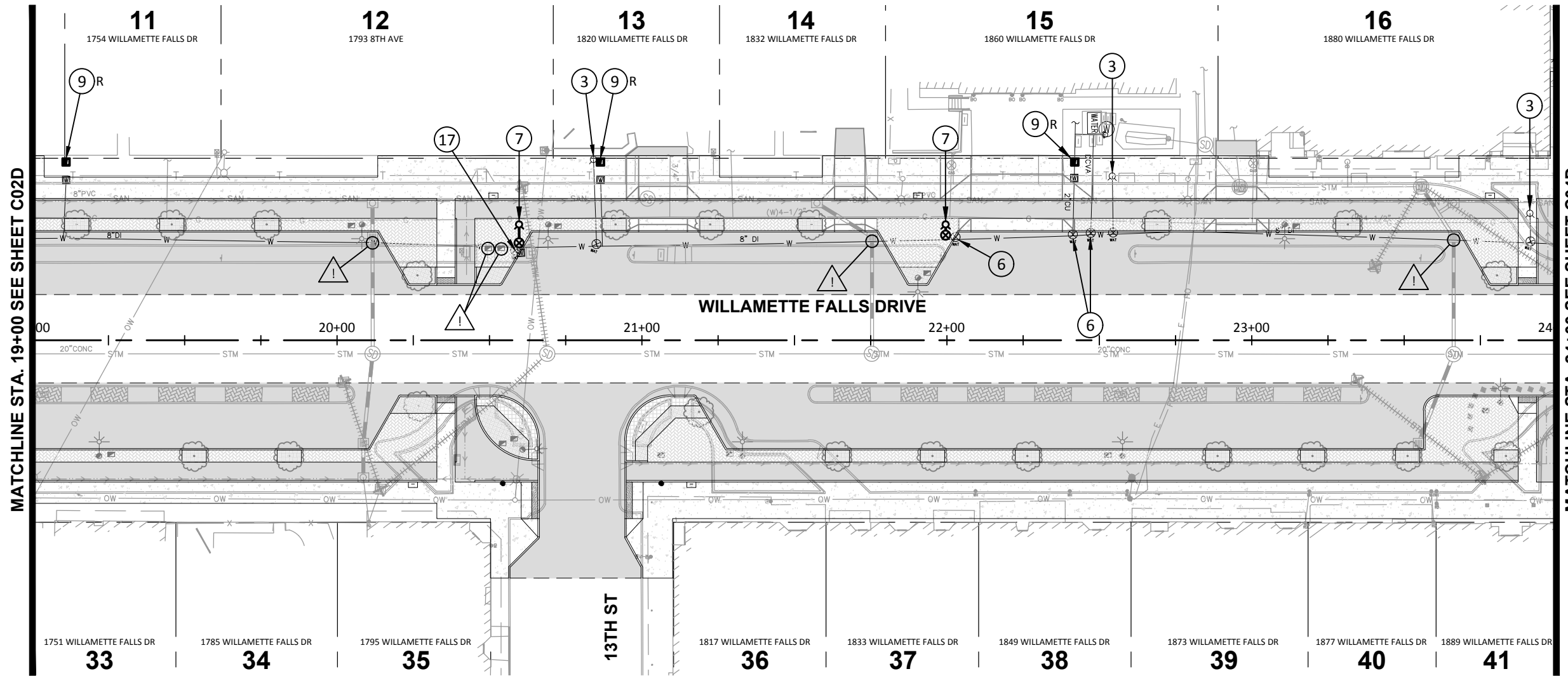
REGISTERED PROFESSIONAL ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

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DATE: 11-1-19	CWL-02

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MATCHLINE STA. 19+00 SEE SHEET C02D

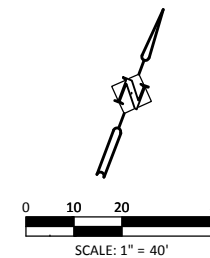
MATCHLINE STA. 24+00 SEE SHEET C04D

WATER CONSTRUCTION NOTES

- ③ REMOVE AND SALVAGE EXISTING FIRE HYDRANT ASSEMBLY. CAP THE EXISTING HYDRANT ASSEMBLY LINE AT THE MAIN WHERE ENTIRE ASSEMBLY IS TO BE REMOVED.
- ⑥ EXISTING WATER VALVE. ADJUST VALVE BOX TO PROPOSED GRADE ELEVATION. RELOCATE OUTSIDE CURB LINE IF NECESSARY.
- ⑦ INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL WL-RD254 ON SHEET DA21. UTILIZE SALVAGED FIRE HYDRANT.
- ⑨ EXISTING WATER METER BOX. PROTECT (P) OR RELOCATE (R) TO LOCATION SHOWN AND RECONNECT TO EXISTING SERVICE.
- ⑰ CUT, CAP AND RETURN EXISTING WATER METER TO CITY OF WEST LINN.

CAUTION:
 PROPOSED UNDERGROUND UTILITY CROSSING. INSTALL VERTICAL AND/OR HORIZONTAL BENDS ON WATER LINE AS NECESSARY TO MAINTAIN MINIMUM REQUIRED SEPARATION BETWEEN WATER AND OTHER UNDERGROUND UTILITIES. SEE SHEET DA25 FOR TYPICAL BYPASS DETAIL.

NOTES:
 1. ALL JOINTS SHALL BE RESTRAINED WITH FIELD LOCK GASKETS.
 2. PROVIDE JOINT DEFLECTION TO MAINTAIN ADEQUATE CLEARANCE FROM OTHER UTILITIES. MAXIMUM DEFLECTION SHALL NOT EXCEED 3°.



WILLAMETTE FALLS WATER PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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 70,863
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WILLAMETTE FALLS PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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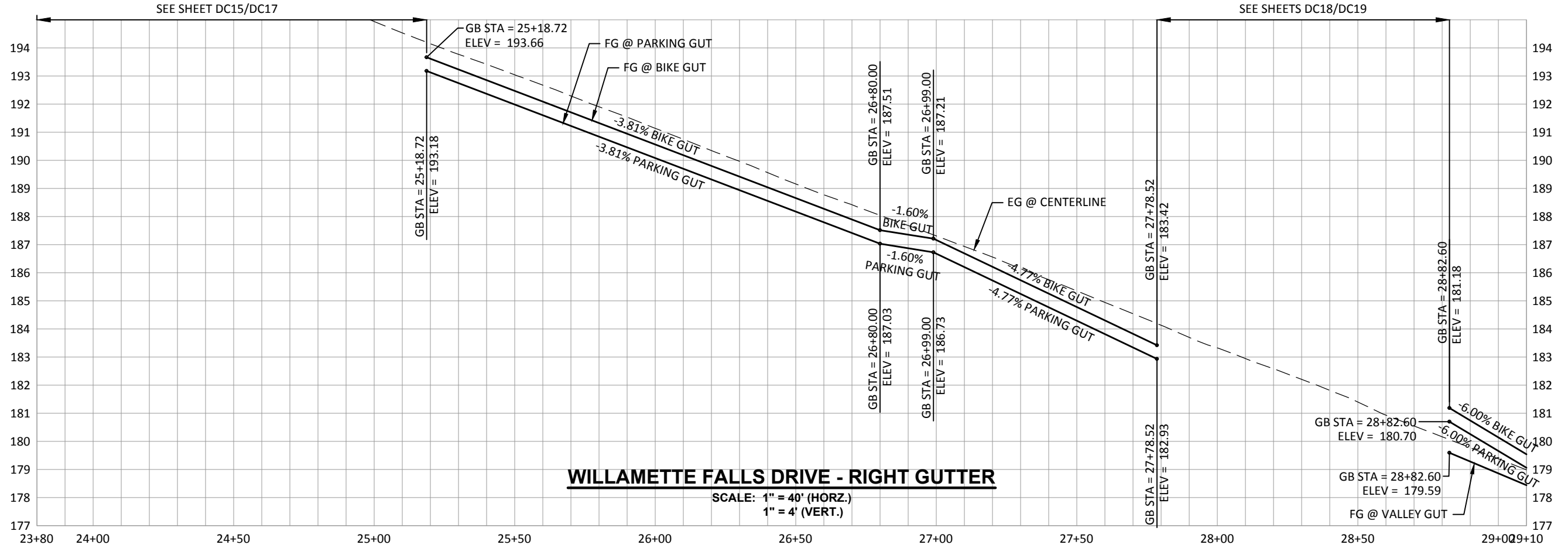
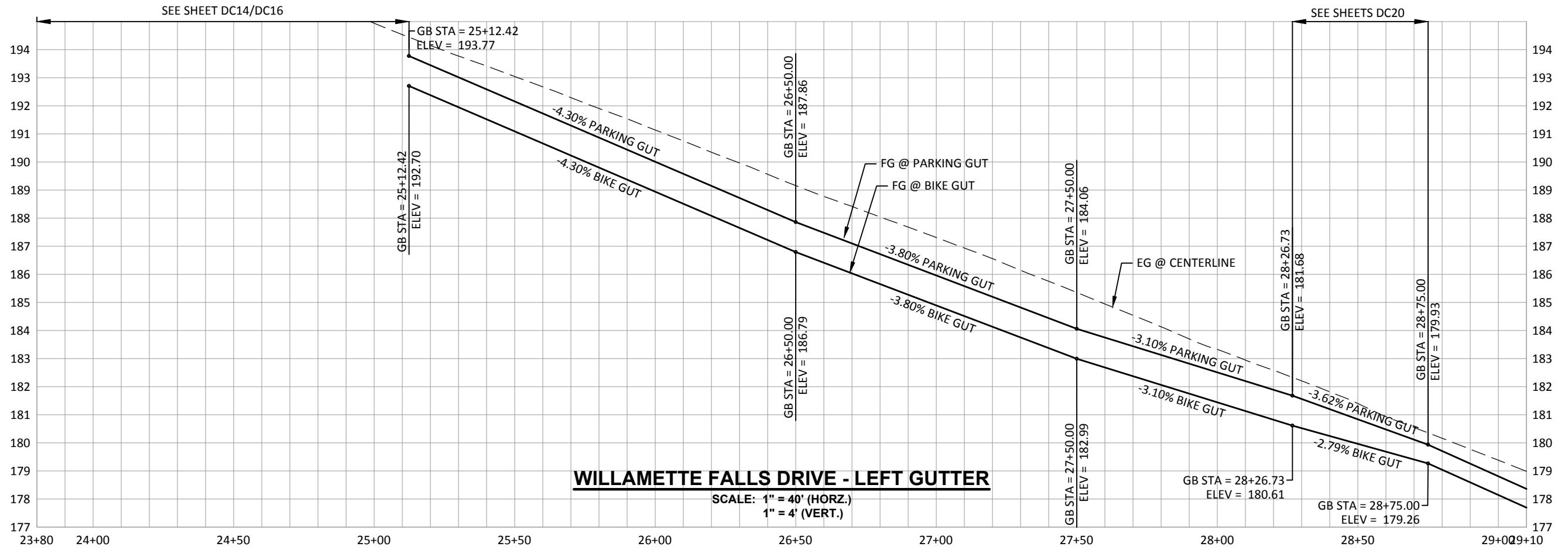


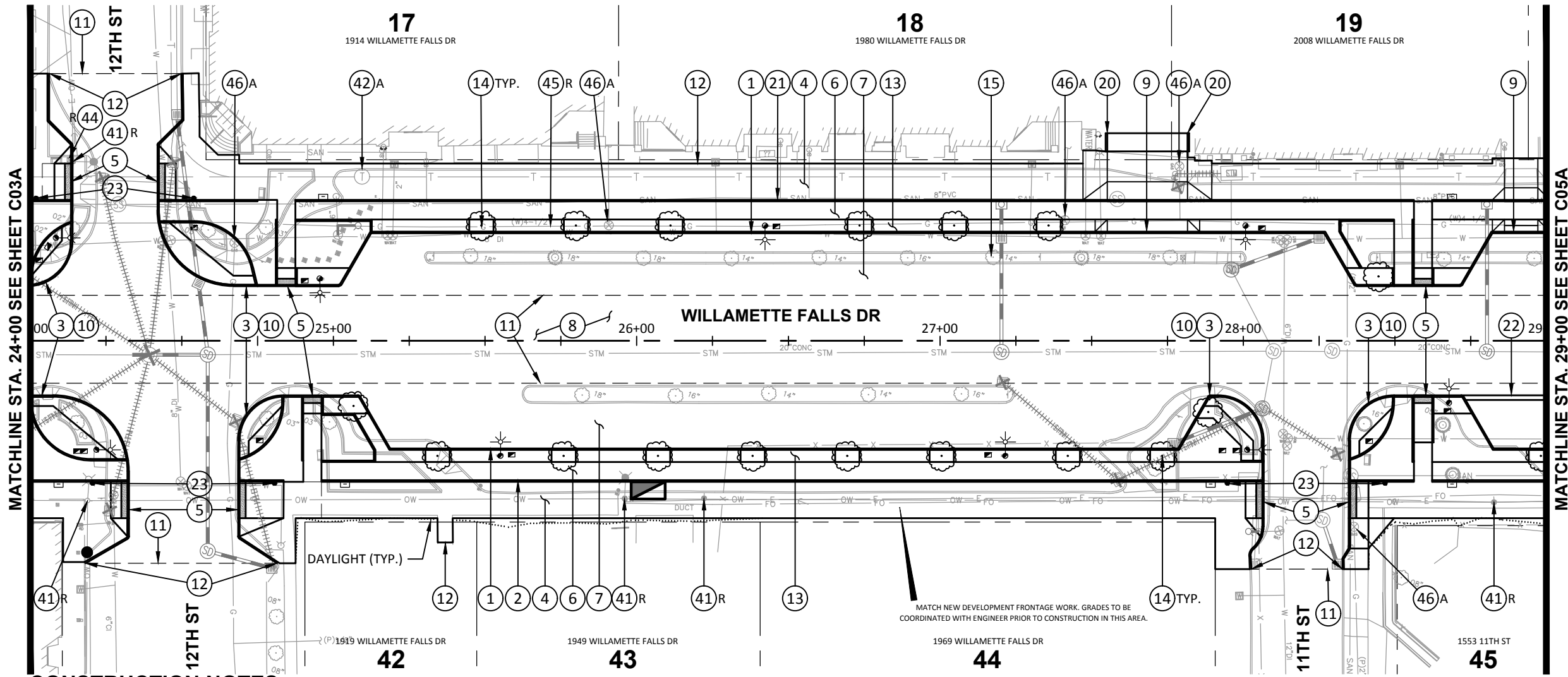
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C04	HHPR TEAM
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	HHPR TEAM
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JOB NO.	DATE:
CWL-02	11-1-19





MATCHLINE STA. 24+00 SEE SHEET C03A

MATCHLINE STA. 29+00 SEE SHEET C05A

CONSTRUCTION NOTES

- ① CONSTRUCT 4" STANDARD CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ② CONSTRUCT 2" MOUNTABLE CURB (E=2" H=12") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ③ CONSTRUCT 4" MOUNTABLE CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ④ CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET BA01. FOR DETAILS, SEE ODOT STANDARD DWG RD721 ON SHEET DA14 AND SCORING PATTERN ON SHEET DA03.
- ⑤ CONSTRUCT SIDEWALK RAMP PER ODOT STANDARD DWGS RD755 AND RD759 ON SHEET DA16 AND SHEET DA17. SEE CURB RETURN GRADE ELEVATIONS ON SHEET SERIES "DC".
- ⑥ CONSTRUCT POROUS AC BIKE PATH PER TYPICAL SECTION ON SHEET BA01.
- ⑦ CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET BA01.
- ⑧ CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET BA01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON SHEET SERIES "BB".
- ⑨ CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD725 ON SHEET DA15. 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 "DB".
- ⑩ CONSTRUCT CURB RETURN PER GRADES ON SHEET SERIES "DC". SEE SHEET SERIES "DC" FOR CURB TYPE AROUND INTERSECTIONS. SEE SHEET SERIES "BB" FOR MATERIAL TYPE AROUND INTERSECTIONS.
- ⑪ SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- ⑫ 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.
- ⑬ CONSTRUCT PERVIOUS PAVER SECTION PER TYPICAL SECTION ON SHEET BA01 AND DA18. FOR LIMITS, SEE GEOMETREY AND PAVING PLANS ON SHEET SERIES "BB".
- ⑭ CONSTRUCT TREE WELL WITH PERIMETER ROOT BARRIERS PER DETAIL ON SHEET DA03. EXCAVATE TREE WELL DOWN TO NATIVE SOIL AND BACKFILL WITH TOPSOIL. MINIMUM DEPTH OF TOPSOIL SHALL BE 2 FT. TREES TO BE INSTALLED BY CITY STAFF AFTER COMPLETION OF PROJECT.
- ⑮ REMOVE EXISTING TREE STUMPS AND REMOVE EXISTING SHRUBS WITHIN LIMITS OF GRADING (CATCH POINTS), UNLESS NOTED TO PROTECT (P). TREE STUMP REMOVALS ARE SHOWN IN SHEET SERIES "EC". TRIMMING IS TYPICAL FOR ANY EXISTING TREE OR SHRUB THAT REMAINS ALONG BACK OF SIDEWALK. COORDINATE WITH ENGINEER PRIOR TO REMOVAL OR TRIMMING.
- ⑯ CONSTRUCT 6" STANDARD CURB (E=6" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ⑰ CONSTRUCT 6" MOUNTABLE CURB (E=6" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ⑱ CONSTRUCT CONCRETE VALLEY GUTTER PER DETAIL ON SHEET DA12.
- ⑲ INSTALL BOLLARD. FOR DETAILS, SEE ILLUMINATION PLANS ON SHEET SERIES "IL".
- ⑳ REMOVE OR RELOCATE (R), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- ㉑ RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING UTILITY MANHOLE/VAULT. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- ㉒ RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING UTILITY PEDESTAL. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- ㉓ RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS LINE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.
- ㉔ RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS VALVE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.

MATCH NEW DEVELOPMENT FRONTAGE WORK. GRADES TO BE COORDINATED WITH ENGINEER PRIOR TO CONSTRUCTION IN THIS AREA.

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WILLAMETTE FALLS PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

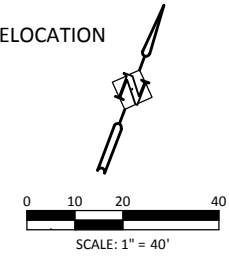
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REGISTERED PROFESSIONAL ENGINEER
70,863
Benjamin R. Austin
OREGON
BENJAMIN R. AUSTIN
JUL. 11, 2006

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO. C04A
DRAWN: HHPR TEAM	CHECKED: BRA/JSH
DATE: 11-1-19	JOB NO. CWL-02



WILLAMETTE FALLS STORM PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

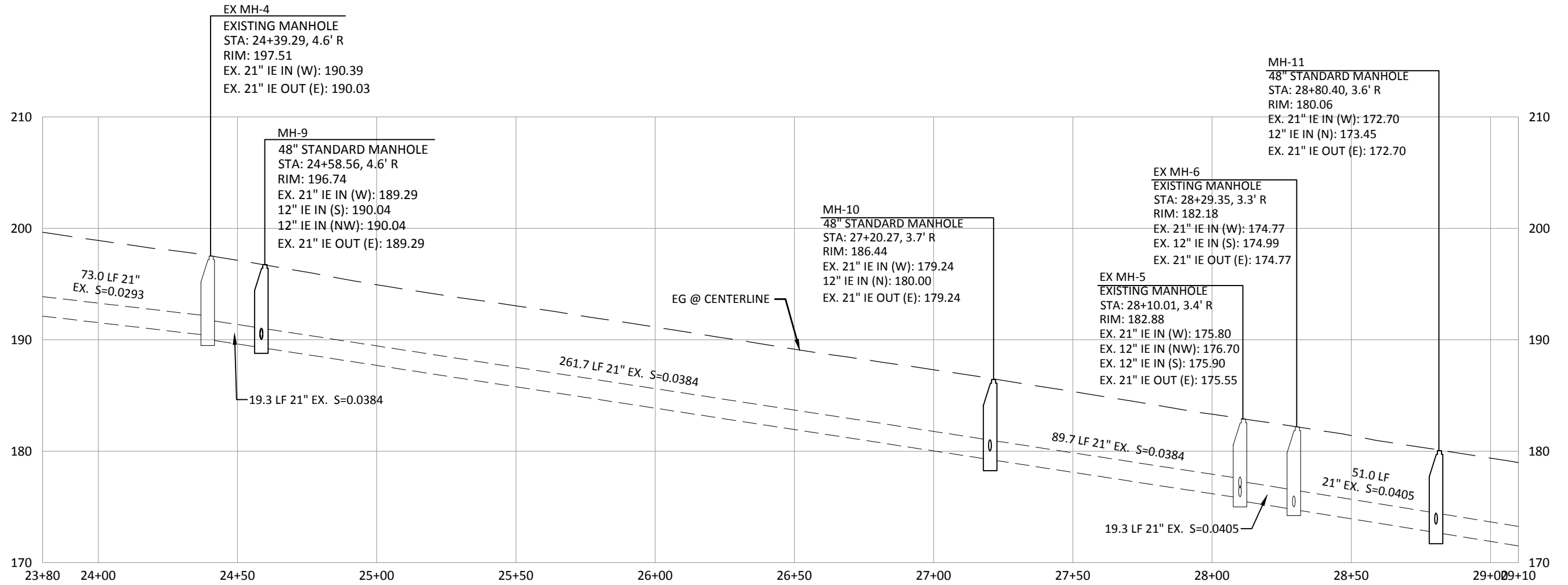
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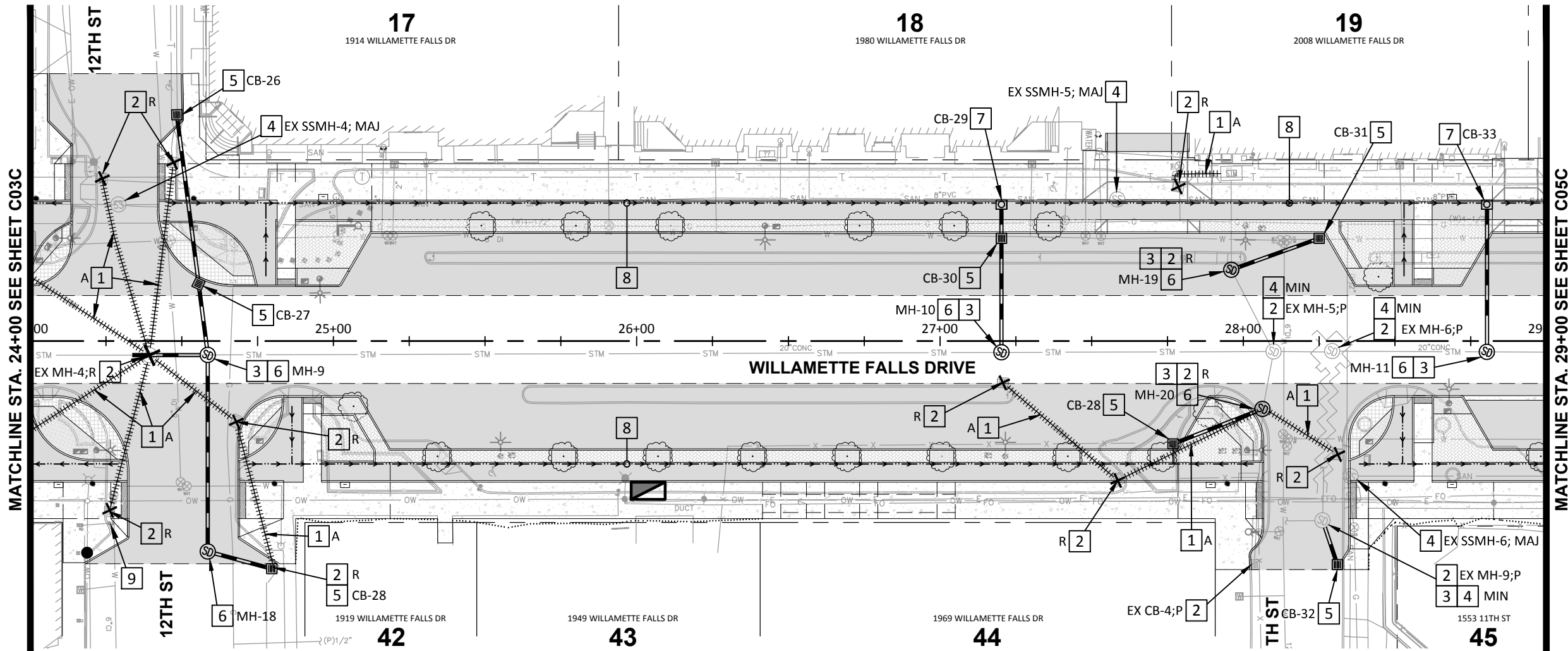


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C04B	HHPR TEAM
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CWL-02	11-1-19



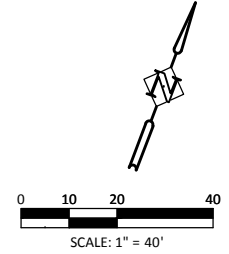
WILLAMETTE FALLS DRIVE - CENTERLINE

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



MATCHLINE STA. 24+00 SEE SHEET C03C

MATCHLINE STA. 29+00 SEE SHEET C05C



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 DA03.
- 4 ADJUST STRUCTURE RIM, COVER, OR FRAME TO FINISH GRADE PER PER ODOT STANDARD DWGS RD360 ON SHEET DA07. MAJ = MAJOR ADJUSTMENT, MIN = MINOR ADJUSTMENT.
- 5 CONSTRUCT G-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD364 ON SHEET DA08. SEE PLAN FOR INVERTS AND DATA.
- 6 CONSTRUCT STORM SEWER MANHOLE PER ODOT STANDARD DWG RD335 ON SHEET DA05. SEE PROFILES AND DRAINAGE DATA FOR INVERTS AND LOCATION.*
- 7 CONSTRUCT CG-3 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWGS RD371 AND RD372 ON SHEET DA10 AND DA11. SEE PLAN FOR INVERTS AND DATA.
- 8 CONSTRUCT PERFORATED PIPE GRANULAR TRENCH PER DETAIL ON SHEET DA18. (MIN S = 0.5%)
- 9 RECONSTRUCT WEEPHOLE IN PROPOSED CURB PER ODOT STANDARD DWG RD700 ON SHEET DA13.

DRAINAGE DATA

CB-26
 STA 24+50.00, 74.6' L
 RIM: 195.05
 12" IE OUT (SE): 191.05
 CONSTRUCT 56.2 LF 12" HDPE STORM PIPE (S=1.15%) TO CATCH BASIN, CB-27

CB-27
 STA 24+56.24, 20.4' L
 RIM: 196.41
 12" IE IN (NW): 190.41
 12" IE OUT (SE): 190.31
 CONSTRUCT 23.7 LF 12" HDPE STORM PIPE (S=1.15%) TO MANHOLE, MH-9

CB-28
 REMOVE EXISTING CATCH BASIN; CONSTRUCT NEW CATCH BASIN IN PLACE;
 STA 24+79.66, 75.0' R (CENTER OF STRUCTURE)
 RIM: 195.18
 12" IE OUT (W): 191.42
 CONSTRUCT 21.8 LF 12" HDPE STORM PIPE (S=1.00%) TO MANHOLE, MH-18

MH-18
 STA 24+58.57, 69.4' R
 RIM: 197.00
 12" IE IN (E): 191.20
 12" IE OUT (N): 191.00
 CONSTRUCT 64.8 LF 12" HDPE STORM PIPE (S=1.48%) TO MANHOLE, MH-9

CB-29
 STA 27+76.85, 35.5' R
 RIM: 182.93
 4" IE IN (S): 180.93
 12" IE OUT (NE): 178.93
 CONSTRUCT 31.7 LF 12" HDPE STORM PIPE (S=3.63%) TO MANHOLE, MH-20

MH-20
 STA 28+06.39, 22.3' R
 RIM: 183.04
 EX. 12" IE IN (S): 178.18
 12" IE IN (SW): 177.78
 EX. 12" IE OUT (N): 177.68
 (CONTRACTOR TO VERIFY EX. INVERTS)

CB-30
 STA 27+20.27, 46.5' L
 RIM: 184.62
 GUTTER: 184.12
 4" IE IN (W): 182.87
 12" IE OUT (SE): 182.12
 CONSTRUCT 11.1 LF 12" HDPE STORM PIPE (S=8.35%) TO CATCH BASIN, CB-31

CB-31
 STA 27+20.27, 35.5' L
 RIM: 185.19
 12" IE IN (NW): 181.19
 12" IE OUT (E): 181.09
 CONSTRUCT 37.6 LF HDPE STORM PIPE (S=2.90%) TO MANHOLE, MH-10

CB-32
 STA 28+25.05, 35.5' L
 RIM: 181.68
 12" IE OUT (SW): 178.46
 CONSTRUCT 30.7 LF 12" HDPE STORM PIPE (S=1.00%) TO MANHOLE, MH-19

MH-18
 STA 27+96.11, 23.5' L
 RIM: 182.88
 12" IE IN (NE): 178.15
 EX. 12" IE IN (N): 178.40
 EX. 12" IE OUT (SE): 177.95
 (CONTRACTOR TO VERIFY EX. INVERTS)

CB-33
 STA 28+32.70, 73.7' R
 RIM: 183.92
 12" IE OUT (NW): 177.92
 CONSTRUCT 15.3 LF 12" HDPE STORM PIPE (S=8.29%) TO MANHOLE, EX MH-9

EX MH-9
 STA 28+26.19, 53.1' R
 RIM: 183.86
 12" IE IN (SE): 176.65
 EX. 12" IE IN (W): 175.65
 EX. 12" IE OUT (N): 175.55
 CONSTRUCT NEW 12" INVERT ON SE SIDE OF EXISTING STRUCTURE

CB-34
 STA 20+80.40, 46.5' L
 RIM: 179.47
 GUTTER: 178.94
 4" IE IN (W): 177.72
 12" IE OUT (S): 175.94
 CONSTRUCT 48.6 LF 12" HDPE STORM PIPE (S=5.13%) TO MANHOLE, MH-11

*NOTE
 SEE SHEET C04B FOR DRAINAGE DATA FOR EX MH-4, MH-9, MH-11, EX MH-5, EX MH-6, & MH-11

TRENCH RESURFACING FOR STORM BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION. SEE FULL DEPTH SECTION PER TYPICAL SECTION.

DRAWING NAME: CWL02-C01C_C05C-WILLAMETTE FALLS STORM PLAN.DWG

WILLAMETTE FALLS STORM PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

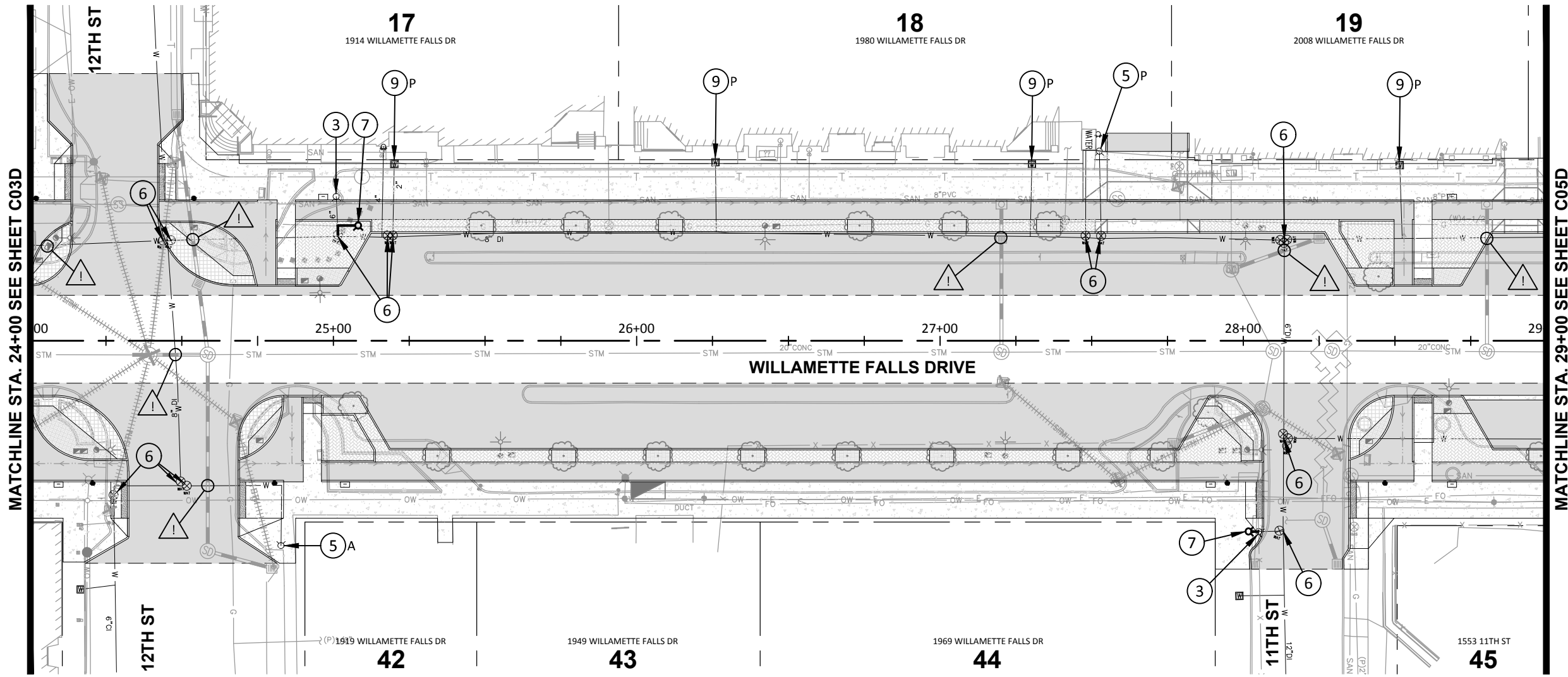
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DATE: 11-1-19	CWL-02

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MATCHLINE STA. 24+00 SEE SHEET C03D

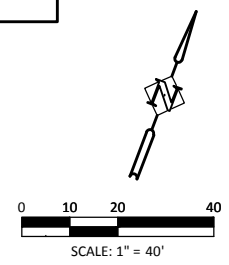
MATCHLINE STA. 29+00 SEE SHEET C05D

WATER CONSTRUCTION NOTES

- 3 REMOVE AND SALVAGE EXISTING FIRE HYDRANT ASSEMBLY. CAP THE EXISTING HYDRANT ASSEMBLY LINE AT THE MAIN WHERE ENTIRE ASSEMBLY IS TO BE REMOVED.
- 5 EXISTING FIRE HYDRANT. PROTECT (P) OR ADJUST (A) BASE TO PROPOSED GRADE ELEVATION.
- 6 EXISTING WATER VALVE. ADJUST VALVE BOX TO PROPOSED GRADE ELEVATION. RELOCATE OUTSIDE CURB LINE IF NECESSARY.
- 7 INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL WL-RD254 ON SHEET DA21. UTILIZE SALVAGED FIRE HYDRANT.
- 9 EXISTING WATER METER BOX. PROTECT (P) OR RELOCATE (R) TO LOCATION SHOWN AND RECONNECT TO EXISTING SERVICE.

CAUTION:
 PROPOSED UNDERGROUND UTILITY CROSSING. INSTALL VERTICAL AND/OR HORIZONTAL BENDS ON WATER LINE AS NECESSARY TO MAINTAIN MINIMUM REQUIRED SEPARATION BETWEEN WATER AND OTHER UNDERGROUND UTILITIES. SEE SHEET DA25 FOR TYPICAL BYPASS DETAIL.

NOTES:
 1. ALL JOINTS SHALL BE RESTRAINED WITH FIELD LOCK GASKETS.
 2. PROVIDE JOINT DEFLECTION TO MAINTAIN ADEQUATE CLEARANCE FROM OTHER UTILITIES. MAXIMUM DEFLECTION SHALL NOT EXCEED 3°.



WILLAMETTE FALLS WATER PLAN
 WILLAMETTE FALLS DRIVE
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DRAWING NAME: CWL02-C01D-C05D-WILLAMETTE FALLS WATER PLAN.DWG

WILLAMETTE FALLS PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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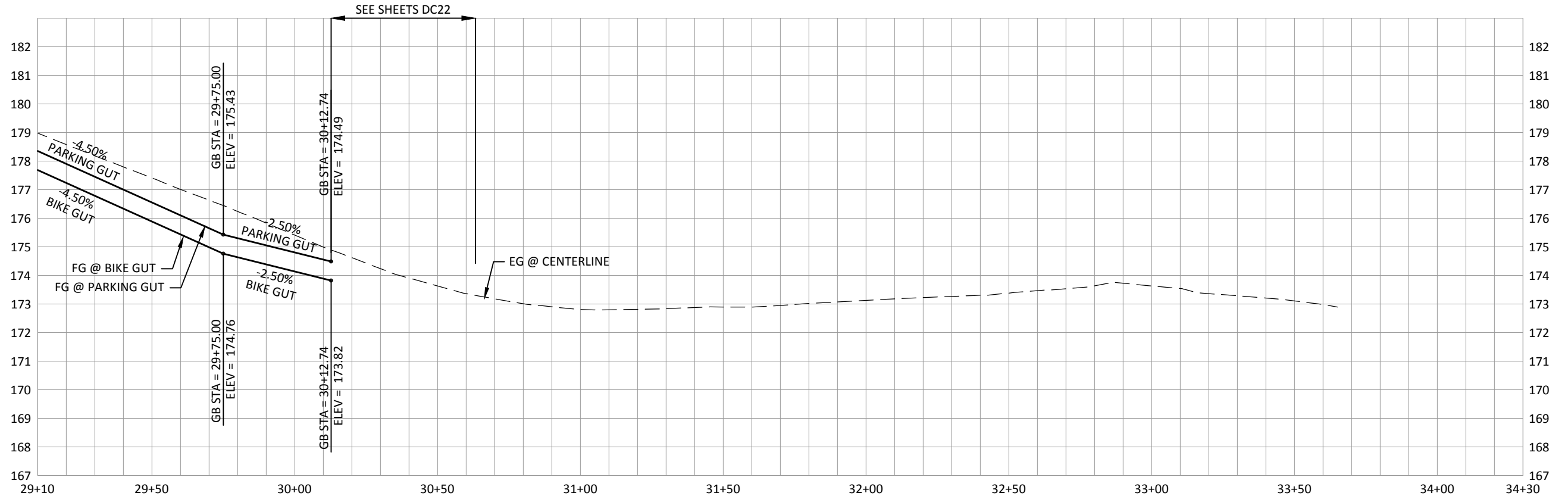


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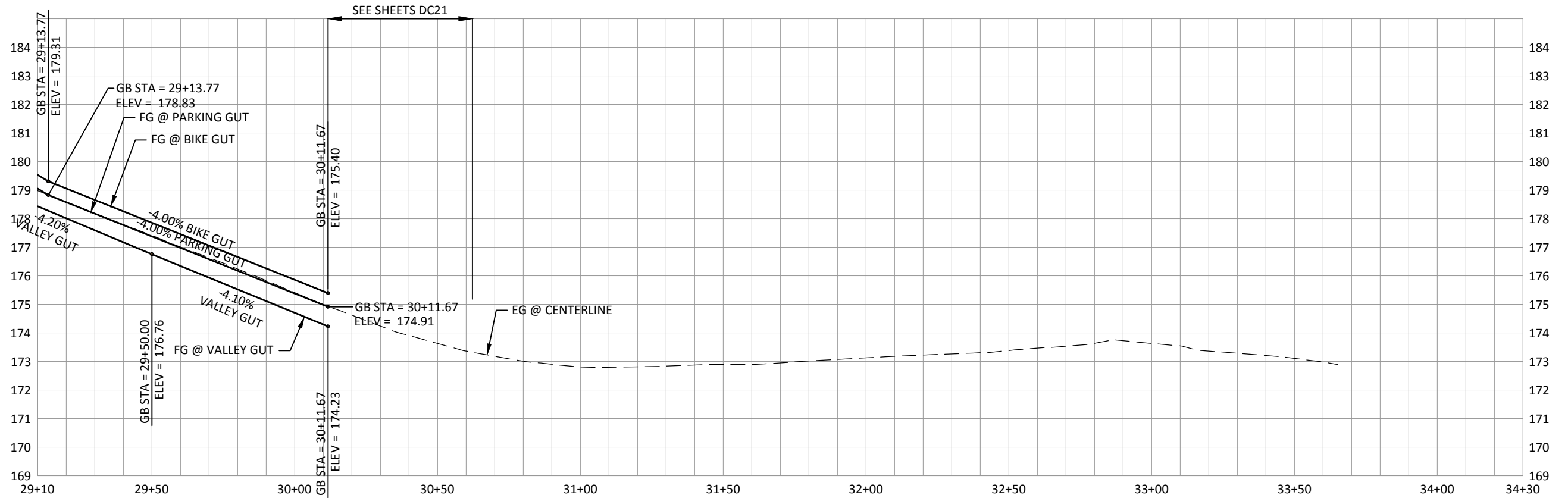
EXPIRES: 12/31/19

SHEET NO. C05	DESIGNED: HHPR TEAM
	DRAWN: HHPR TEAM
JOB NO. CWL-02	CHECKED: BRA/JSH
	DATE: 11-1-19



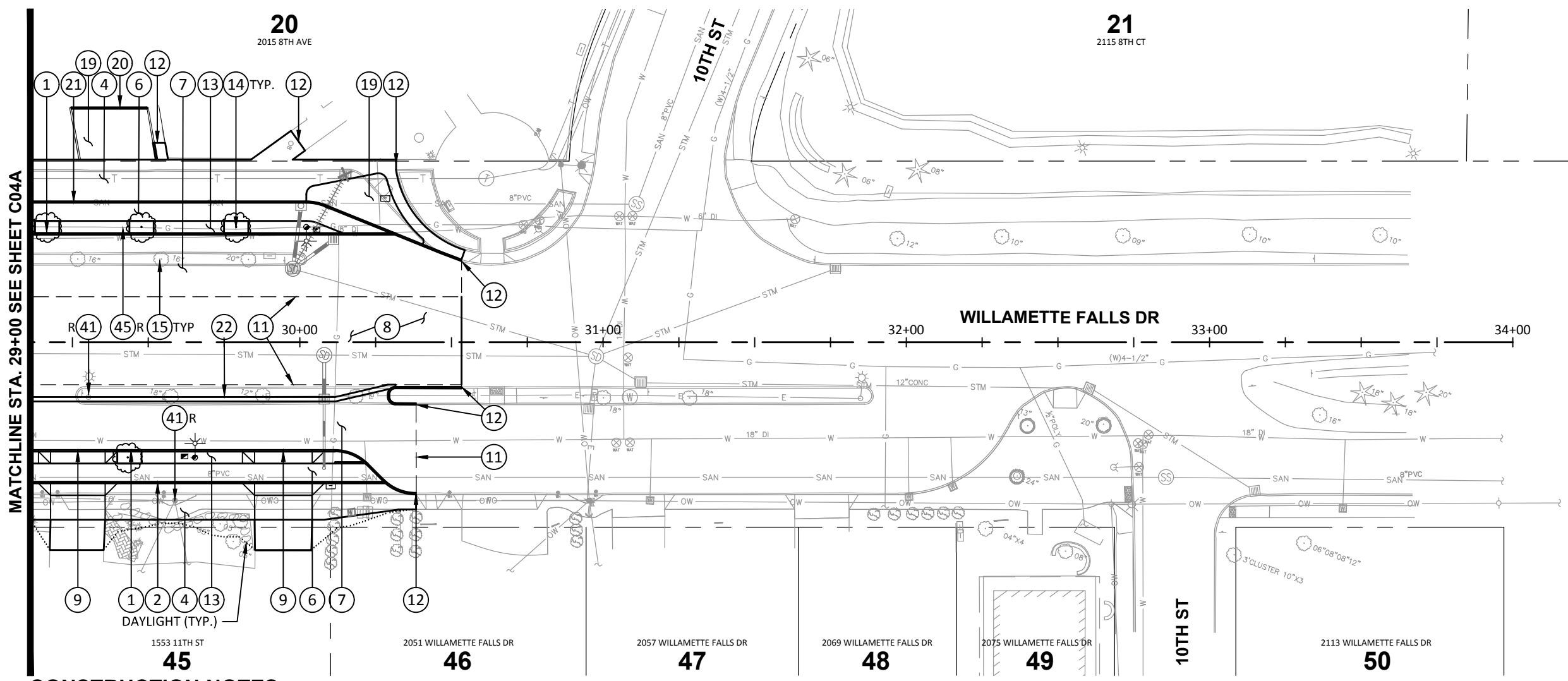
WILLAMETTE FALLS DRIVE - LEFT GUTTER

SCALE: 1" = 40' (HORZ.)
 1" = 4' (VERT.)



WILLAMETTE FALLS DRIVE - RIGHT GUTTER

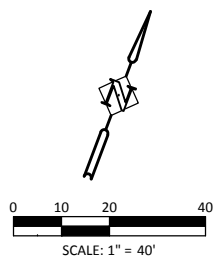
SCALE: 1" = 40' (HORZ.)
 1" = 4' (VERT.)



MATCHLINE STA. 29+00 SEE SHEET C04A

CONSTRUCTION NOTES

- ① CONSTRUCT 4" STANDARD CURB (E=4" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ② CONSTRUCT 2" MOUNTABLE CURB (E=2" H=12") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ④ CONSTRUCT CONCRETE SIDEWALK PER TYPICAL SECTION ON SHEET BA01. FOR DETAILS, SEE ODOT STANDARD DWG RD721 ON SHEET DA14 AND SCORING PATTERN ON SHEET DA03.
- ⑥ CONSTRUCT POROUS AC BIKE PATH PER TYPICAL SECTION ON SHEET BA01.
- ⑦ CONSTRUCT FULL DEPTH PAVEMENT SECTION PER TYPICAL SECTION ON SHEET BA01.
- ⑧ CONSTRUCT 2 INCH GRIND AND INLAY PER TYPICAL SECTION ON SHEET BA01. FOR LIMITS, SEE PAVING AND GEOMETREY PLANS ON SHEET SERIES "BB".
- ⑨ CONSTRUCT CONCRETE DRIVEWAY APPROACH PER ODOT STANDARD DWG RD725 ON SHEET DA15. 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 "DB".
- ⑪ SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
- ⑫ 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.
- ⑬ CONSTRUCT PERVIOUS PAVER SECTION PER TYPICAL SECTION ON SHEET BA01 AND DA18. FOR LIMITS, SEE GEOMETREY AND PAVING PLANS ON SHEET SERIES "BB".
- ⑭ CONSTRUCT TREE WELL WITH PERIMETER ROOT BARRIERS PER DETAIL ON SHEET DA03. EXCAVATE TREE WELL DOWN TO NATIVE SOIL AND BACKFILL WITH TOPSOIL. MINIMUM DEPTH OF TOPSOIL SHALL BE 2 FT. TREES TO BE INSTALLED BY CITY STAFF AFTER COMPLETION OF PROJECT.
- ⑮ REMOVE EXISTING TREE STUMPS AND REMOVE EXISTING SHRUBS WITHIN LIMITS OF GRADING (CATCH POINTS), UNLESS NOTED TO PROTECT (P). TREE STUMP REMOVALS ARE SHOWN IN SHEET SERIES "EC". TRIMMING IS TYPICAL FOR ANY EXISTING TREE OR SHRUB THAT REMAINS ALONG BACK OF SIDEWALK. COORDINATE WITH ENGINEER PRIOR TO REMOVAL OR TRIMMING.
- ⑲ CONSTRUCT LANDSCAPE AREA. EXCAVATE DOWN TO NATIVE SOIL AND BACKFILL WITH TOPSOIL.
- ⑳ CONSTRUCT 6" STANDARD CURB (E=6" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ㉑ CONSTRUCT 6" MOUNTABLE CURB (E=6" H=16") PER ODOT STANDARD DWG RD700 ON SHEET DA13.
- ㉒ CONSTRUCT CONCRETE VALLEY GUTTER PER DETAIL ON SHEET DA12.
- ④① REMOVE OR RELOCATE (R), OR PROTECT (P) EXISTING UTILITY POLE. REMOVAL OR RELOCATION BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES.
- ④⑤ RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING GAS LINE. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE.



WILLAMETTE FALLS PLAN
 WILLAMETTE FALLS DRIVE
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DRAWING NAME: CWL02-C01A_C05A-WILLAMETTE FALLS PLAN.DWG

WILLAMETTE FALLS STORM PROFILE
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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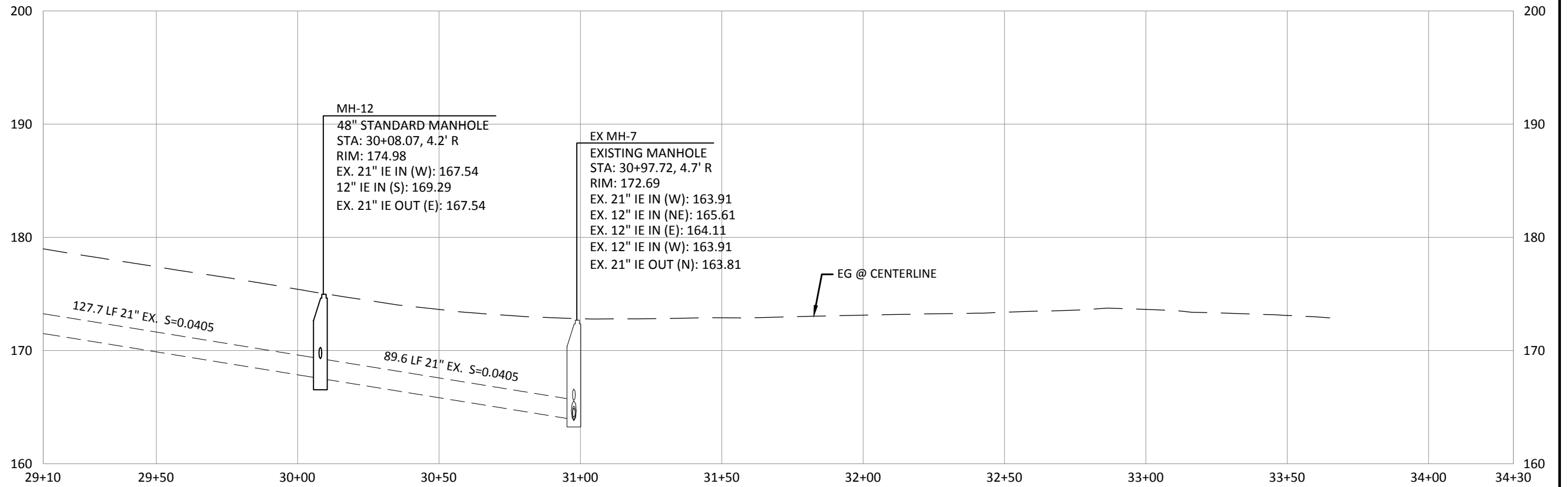


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EXPIRES: 12/31/19

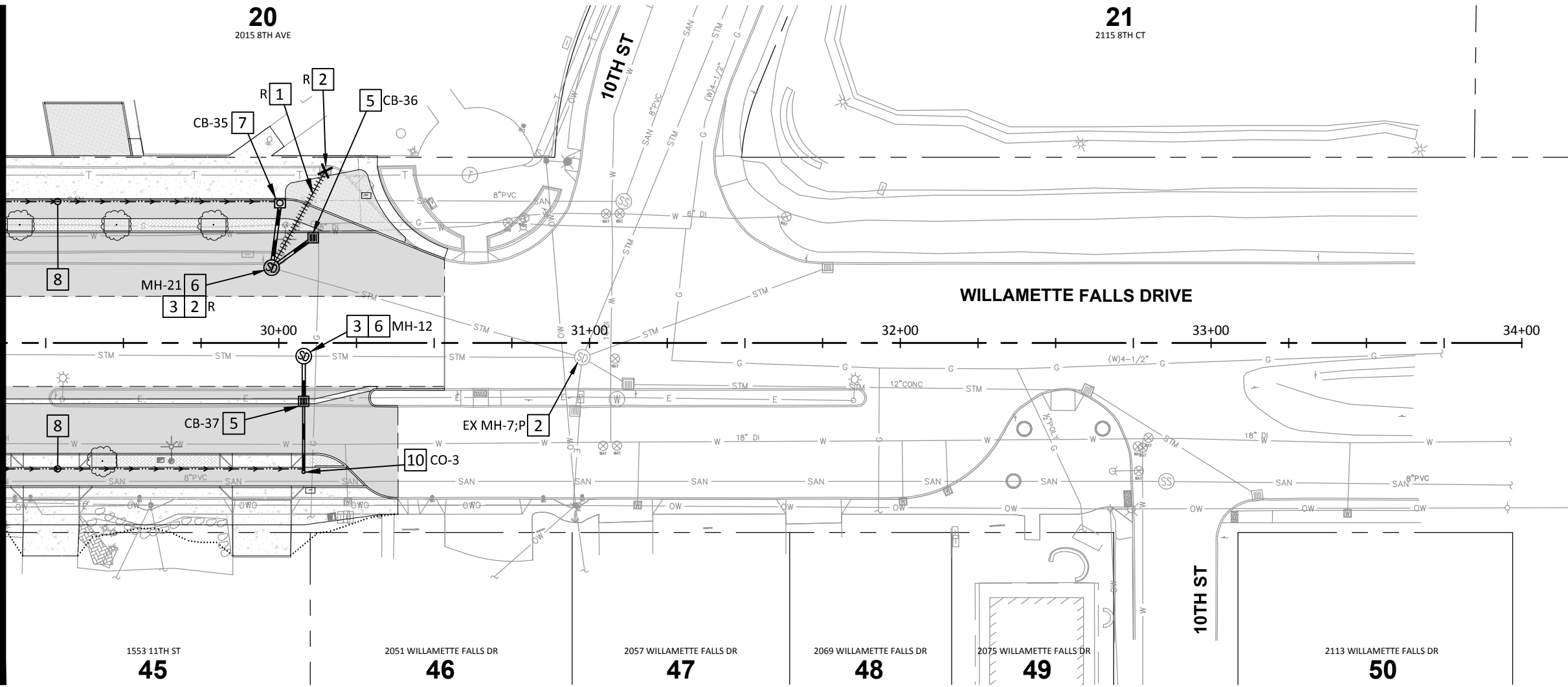
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JOB NO. CWL-02	DRAWN: HHPR TEAM
	CHECKED: BRA/JSH
	DATE: 11-1-19



WILLAMETTE FALLS DRIVE - CENTERLINE

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

MATCHLINE STA. 29+00 SEE SHEET C04C



STORM SEWER CONSTRUCTION NOTES

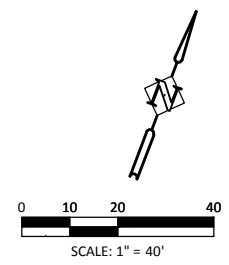
- 1 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON IN-PLACE (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. UPON ABANDON IN-PLACE, FILL PIPE WITH CONTROLLED DENSITY FILL (CDF).
- 2 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM STRUCTURE. UPON REMOVAL, FILL ANY VOID WITH GRANULAR BACKFILL.
- 3 CONNECT TO EXISTING PIPE OR STRUCTURE PER DETAIL ON SHEET DA03.
- 5 CONSTRUCT G-2 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWG RD364 ON SHEET DA08. SEE PLAN FOR INVERTS AND DATA.
- 6 CONSTRUCT STORM SEWER MANHOLE PER ODOT STANDARD DWG RD335 ON SHEET DA05. SEE PROFILES AND DRAINAGE DATA FOR INVERTS AND LOCATION.*
- 7 CONSTRUCT CG-3 INLET CATCH BASIN AND LATERALS PER ODOT STANDARD DWGS RD371 AND RD372 ON SHEET DA10 AND DA11. SEE PLAN FOR INVERTS AND DATA.
- 8 CONSTRUCT PERFORATED PIPE GRANULAR TRENCH PER DETAIL ON SHEET DA18. (MIN S = 0.5%)
- 10 CONSTRUCT STORM SEWER CLEANOUT PER DETAIL ON SHEET DA20. SEE PLAN FOR INVERTS AND DATA.

DRAINAGE DATA

<p>CB-35 STA 30+00.41, 46.5' L RIM: 174.62 GUTTER: 174.13 4" IE IN (W): 172.88 12" IE OUT (S): 171.63 CONSTRUCT 20.9 LF 12" HDPE STORM PIPE (S=3.06%) TO MANHOLE, MH-21</p>	<p>CB-36 STA 30+11.06, 35.5' L RIM: 174.26 12" IE OUT (SW): 171.26 CONSTRUCT 16.4 LF 12" HDPE STORM PIPE (S=1.64%) TO MANHOLE, MH-21</p>	<p>CB-37 STA 30+07.99, 18.8' R RIM: 174.36 8" IE IN (S): 170.19 12" IE OUT (N): 169.86 CONSTRUCT 14.5 LF 12" HDPE STORM PIPE (S=3.92%) TO MANHOLE, MH-12</p>
<p>MH-21 STA 29+97.74, 24.2' L RIM: 175.25 12" IE IN (N): 170.99 12" IE IN (NE): 170.99 EX. 12" IE OUT (E): 170.79 (CONTRACTOR TO VERIFY EX. INVERTS)</p>	<p>CO-3 STA 30+07.99, 40.5' R RIM: 175.46 4" IE (W): 173.81 8" IE (N): 173.55 CONSTRUCT 21.7 LF 8" HDPE STORM PIPE (S=15.45%) TO CATCH BASIN, CB-37</p>	

***NOTE**
 SEE SHEET C05B FOR DRAINAGE DATA FOR MH-12 & EX MH-7

TRENCH RESURFACING FOR STORM BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION. SEE FULL DEPTH SECTION PER TYPICAL SECTION.



WILLAMETTE FALLS STORM PLAN
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DRAWING NAME: CWL02-C01C_C05C-WILLAMETTE FALLS STORM PLAN.DWG

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DRAWING NAME: CW102-C01D_C05D-WILLAMETTE FALLS WATER PLAN.DWG

MATCHLINE STA. 29+00 SEE SHEET C04D

20
2015 8TH AVE

21
2115 8TH CT

WILLAMETTE FALLS DRIVE

30+00 31+00 32+00 33+00 34+00

1553 11TH ST
45

2051 WILLAMETTE FALLS DR
46

2057 WILLAMETTE FALLS DR
47

2069 WILLAMETTE FALLS DR
48

2075 WILLAMETTE FALLS DR
49

10TH ST

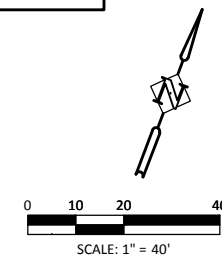
2113 WILLAMETTE FALLS DR
50

WATER CONSTRUCTION NOTES

9 EXISTING WATER METER BOX. PROTECT (P) OR RELOCATE (R) TO LOCATION SHOWN AND RECONNECT TO EXISTING SERVICE.

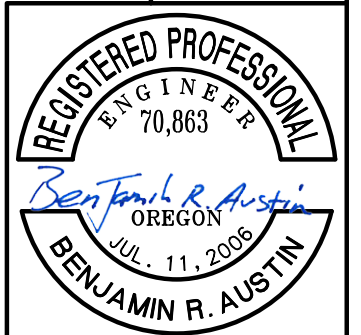
CAUTION:
PROPOSED UNDERGROUND UTILITY CROSSING. INSTALL VERTICAL AND/OR HORIZONTAL BENDS ON WATER LINE AS NECESSARY TO MAINTAIN MINIMUM REQUIRED SEPARATION BETWEEN WATER AND OTHER UNDERGROUND UTILITIES. SEE SHEET DA25 FOR TYPICAL BYPASS DETAIL.

NOTES:
1. ALL JOINTS SHALL BE RESTRAINED WITH FIELD LOCK GASKETS.
2. PROVIDE JOINT DEFLECTION TO MAINTAIN ADEQUATE CLEARANCE FROM OTHER UTILITIES. MAXIMUM DEFLECTION SHALL NOT EXCEED 3°.



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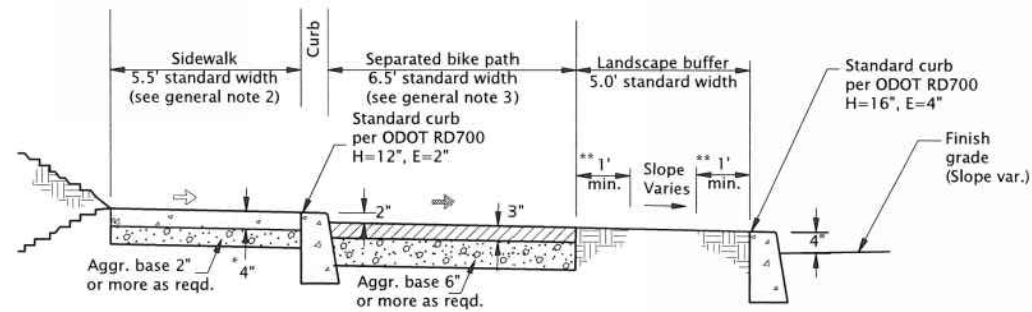


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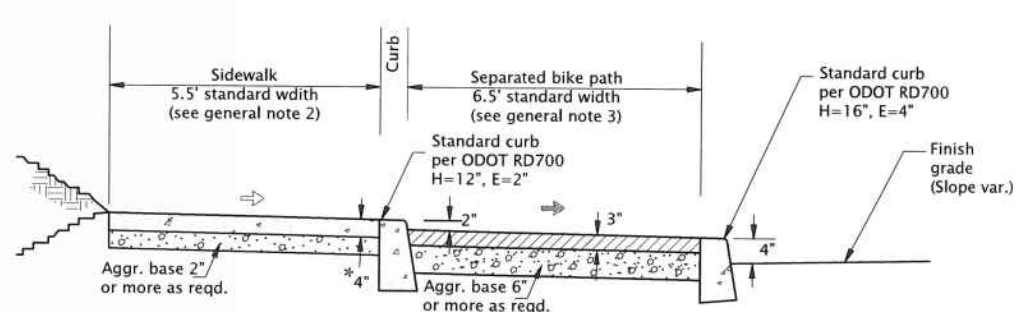
DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JS
DATE: 11-1-19

SHEET NO.
C05D
JOB NO.
CWL-02

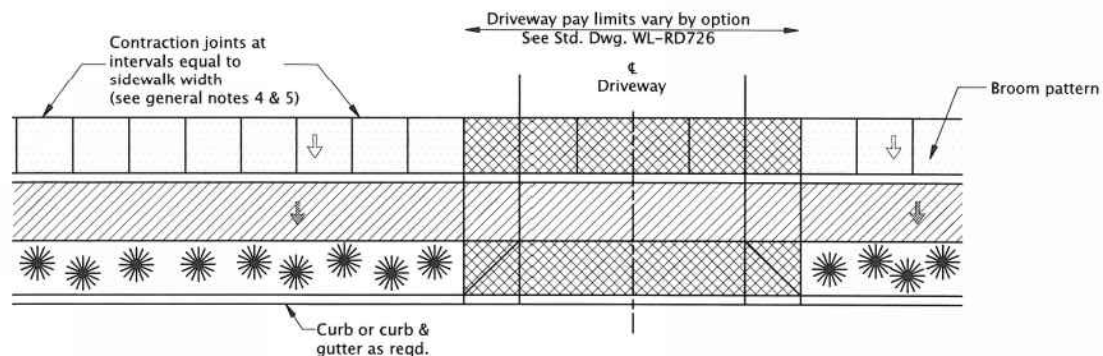
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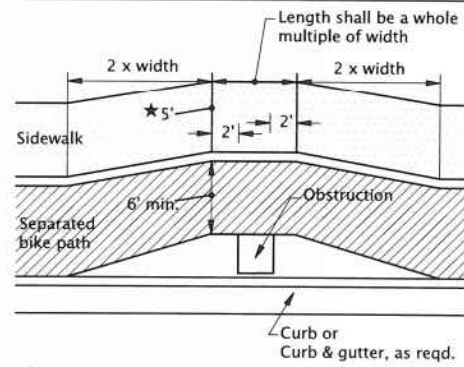
STANDARD SETBACK SEPARATED BIKE PATH AND SIDEWALK



ALTERNATE CURB LINE SEPARATED BIKE PATH AND SIDEWALK

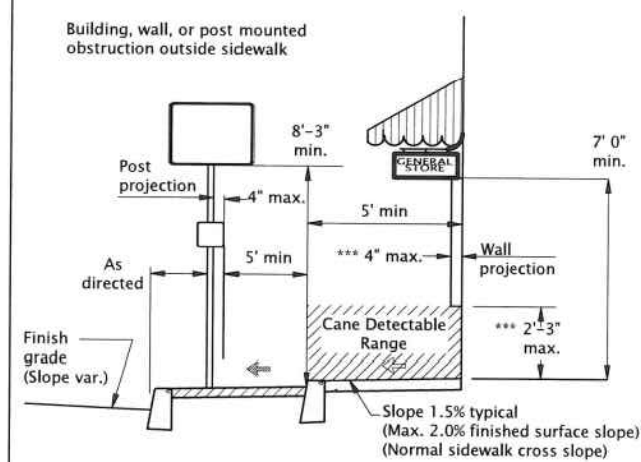


PLAN VIEW - STANDARD SETBACK SEPARATED BIKE PATH AND SIDEWALK



★ 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

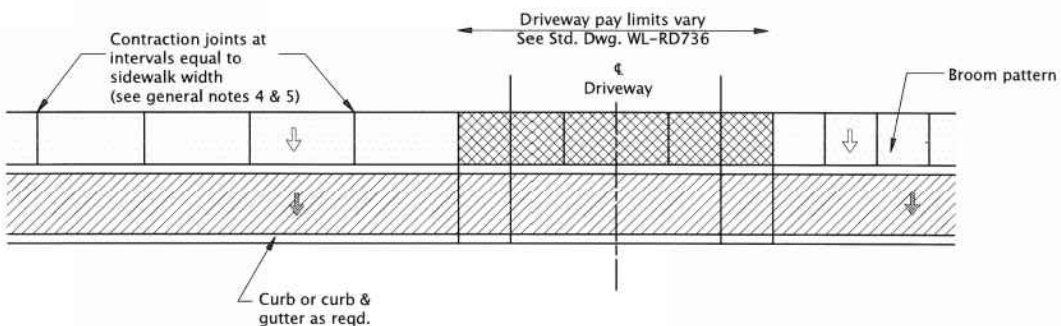
(Only when path widening around an obstruction is not feasible)

- Sidewalk (PCC)
- ▨ Separated bike path (AC)
- ▩ 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 2.0% typical (Max. 5.0% 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.



PLAN VIEW - ALTERNATE CURB LINE SEPARATED BIKE PATH AND SIDEWALK

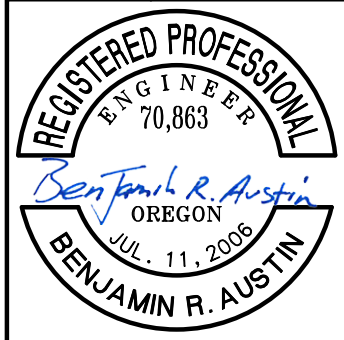
GENERAL NOTES FOR ALL DETAILS:

1. Include additional paved or unpaved 2' clearance to vertical faces higher than 5' such as retaining walls, sound walls, fences and buildings.
2. Curb type and sidewalk width as shown on plans or as directed. On sidewalks 8' and wider, provide a longitudinal joint at the midpoint.
3. Storm drain weep hole pipes are not permitted in sidewalks with separated bike paths.
4. Const. expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveway.
5. Const. contraction joints at 15' maximum spacing, and at ends of each driveway and curb ramp.
6. For curb details, see ODOT Std. Dwg. RD700 & RD701.
7. Sidewalk details are based on ODOT applicable standards.
8. For driveway details not shown, see Std. Dwg. WL-RD726 and WL-RD736.
9. See project plans for details not shown.
10. 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 Drawing No.	WL-RD721
Effective Date:	02/22/19
Title:	STANDARD SEPARATED BIKE PATH AND SIDEWALK
Approved:	City Engineer
City of West Linn	
PUBLIC WORKS DEPARTMENT - STANDARD DRAWINGS	
22500 Salamo Road, West Linn OR 97068	
Phone: 503-722-5500	www.westlinnoregon.gov
NOTE: All material and workmanship shall be in accordance with the City of West Linn Standard Construction Specifications.	
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

DETAILS
WILLAMETTE FALLS DRIVE
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.	DA01
DRAWN:	HHPR TEAM		
CHECKED:	BRA/JSH		
DATE:	11-1-19	JOB NO.	

NOTE: DETAIL WL-RD721 IS PROVIDED FOR GENERAL LAYOUT ONLY. SEE PROJECT SPECIFIC TYPICAL SECTIONS, GRADING AND DETAILS.

DRAWING NAME: CWL02-DA-DETAILS.DWG

WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

DETAILS

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

Harper
Houf Peterson
Righellis Inc.

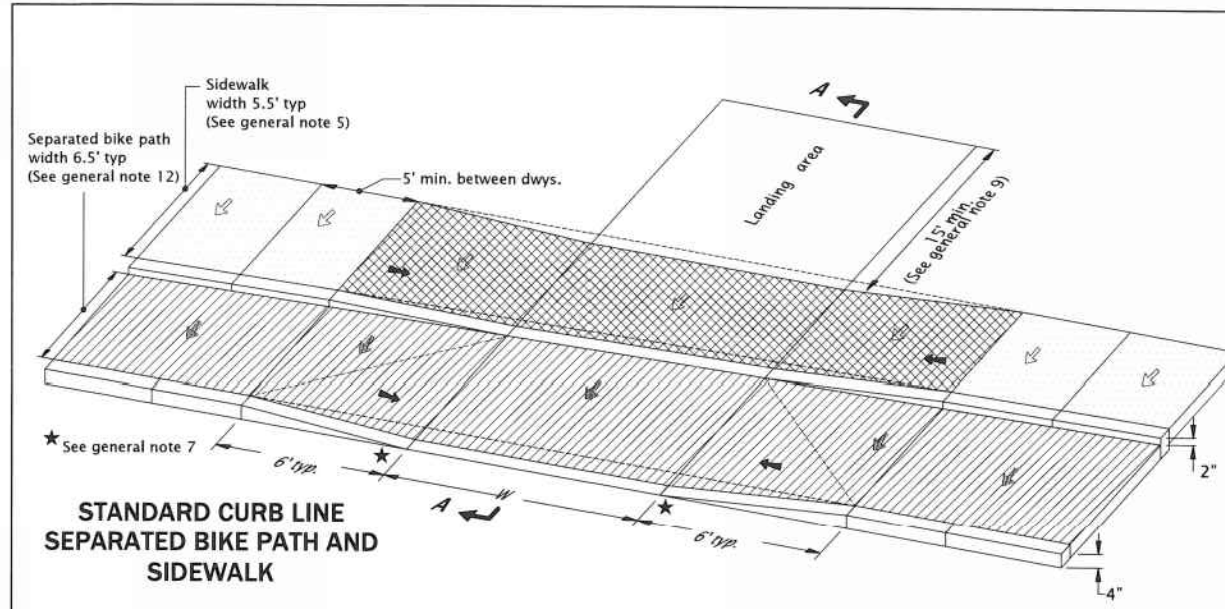


CITY OF
West Linn

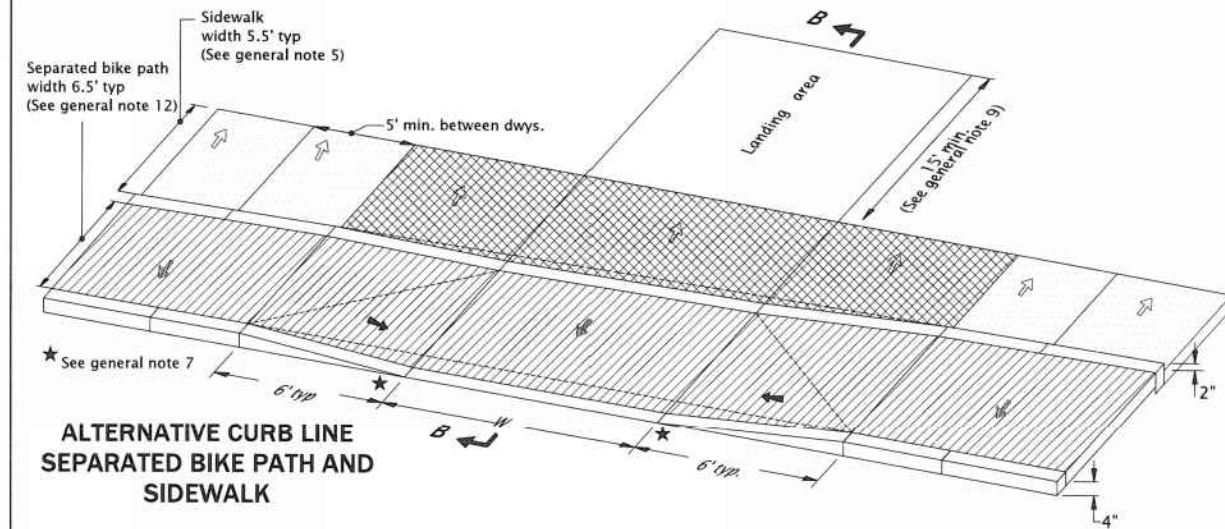


EXPIRES: 12/31/19

SHEET NO. DA02
DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JSH
JOB NO. CWL-02
DATE: 11-1-19



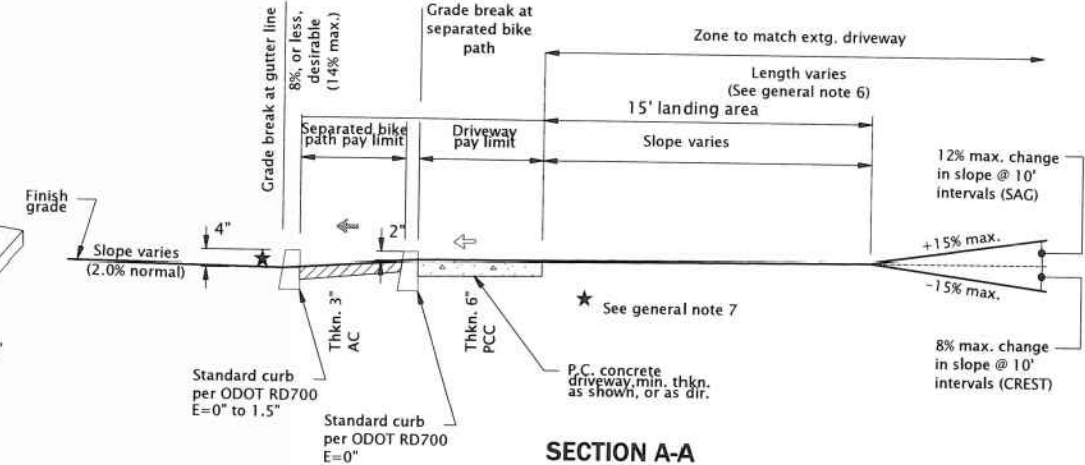
STANDARD CURB LINE
SEPARATED BIKE PATH AND
SIDEWALK



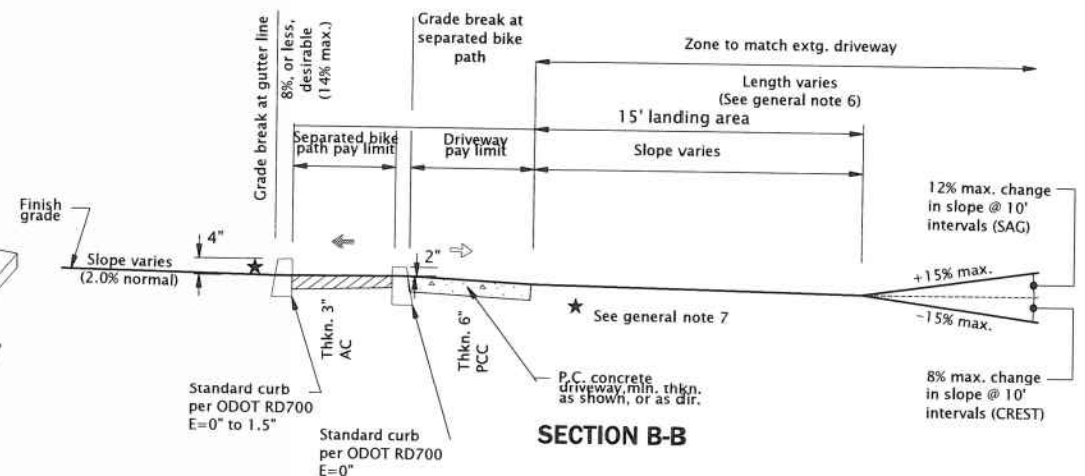
ALTERNATIVE CURB LINE
SEPARATED BIKE PATH AND
SIDEWALK

GENERAL NOTES FOR ALL DETAILS:

- Details are based on ODOT applicable standards.
- This detail is the only approved driveway design for a curb line separated bike path and sidewalk.
- 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. WL-RD721 AND WL-RD722 for separated bike path and sidewalk details.
- 4' unobstructed clear passage with 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 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 the driveway. If overtopping occurs place an inlet at upstream side of driveway or perform other approved design mitigation.
- 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.
- On or along state highways, curb and gutter is required at curb ramps.
- Separated bike path shall continue as asphaltic concrete through driveway or alley.



SECTION A-A



SECTION B-B

- Sidewalk (PCC)
- Separated bike path (AC)
- Driveway (PCC) pay limit (If monolithic, include adjacent curb) (See project plans for details not shown)
 - Slope sidewalk 1.5% max.
 - Slope separated bike lane 2.0% max. (Max. 5.0% finished surface slope)
 - Slope 2.0% min., 7.5% max. (Max. 8.3% finished surface slope)
- Width of driveway (max=30')
See project plans for dimensions

Standard Drawing No. WL-RD736
Effective Date: 02/22/19

DRIVEWAYS OR ALLEYS AT CURB LINE SEPARATED BIKE PATH AND SIDEWALK

Approved: [Signature] City Engineer

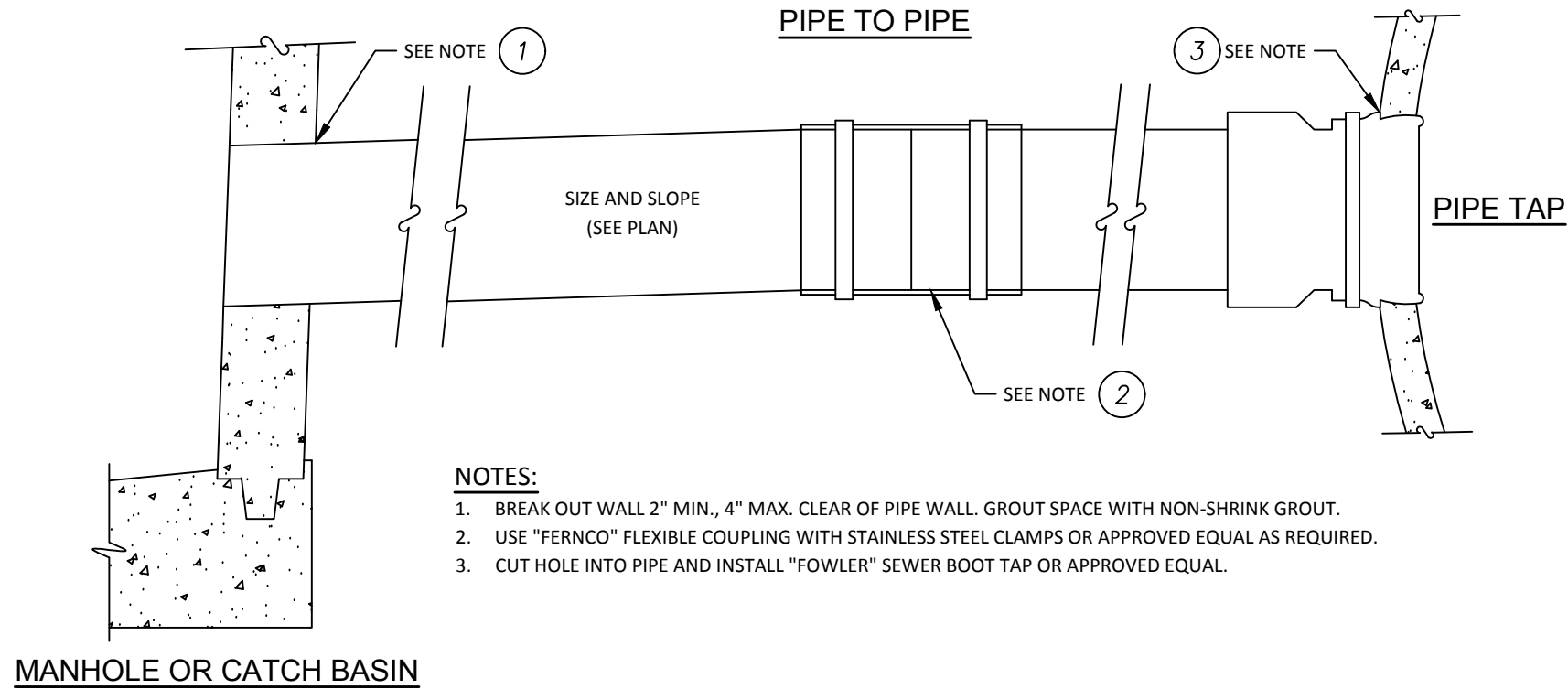
West Linn
CITY OF
PUBLIC WORKS DEPARTMENT - STANDARD DRAWINGS
22500 Salamo Road, West Linn OR 97068
Phone: 503-722-5500 www.westlinnoregon.gov

NOTE: All material and workmanship shall be in accordance with the City of West Linn Standard Construction Specifications.

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-RD736.dwg

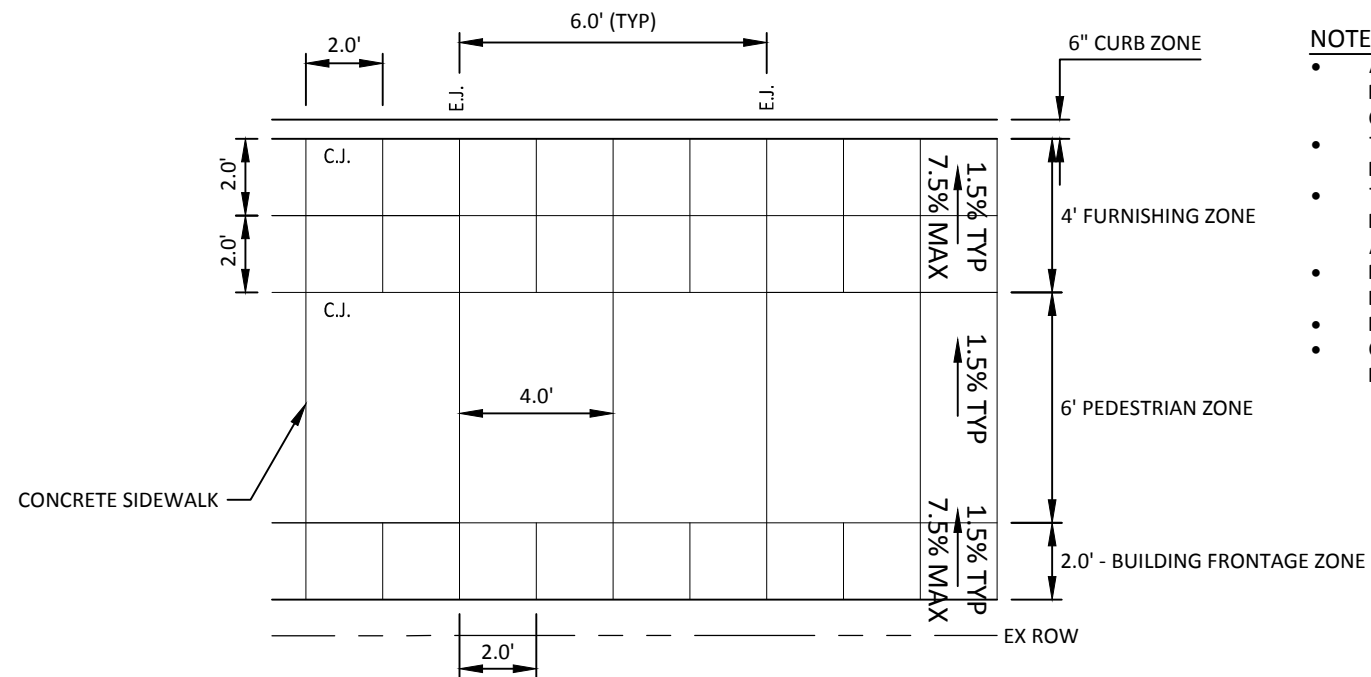
NOTE: DETAIL WL-RD736 IS PROVIDED FOR GENERAL LAYOUT ONLY. SEE PROJECT SPECIFIC TYPICAL SECTIONS, GRADING AND DETAILS.



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



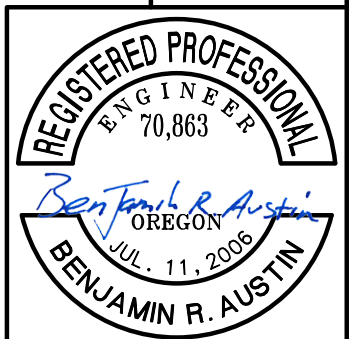
SIDEWALK LAYOUT/SCORING
NTS

NOTES:

- ALL SIDEWALK SHALL HAVE A MEDIUM BROOM FINISH SURFACE OF CONCRETE TO GRADE AND CROSS SECTION WITH A BULL FLOAT.
- TROWEL SMOOTH, FINISH WITH A MEDIUM BRISTLE BROOM AND SCORE AS REQUIRED.
- TOUCH-UP FINISH OF ADJACENT SCORE JOINTS AS REQUIRED FOR CONSISTENT FINISH BETWEEN JOINTS AS NECESSARY.
- MEDIUM BROOMING SHALL BE TRANSVERSE TO THE LINE OF TRAFFIC.
- NO SHINERS.
- COORDINATE WITH ENGINEER FOR SCORING PATTERN ADJACENT TO SIDEWALK TO BE PROTECTED.

DETAILS
WILLAMETTE FALLS DRIVE
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



EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DA03
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

DETAILS

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



West Linn
CITY OF



EXPIRES: 12/31/19

SHEET NO. **DA04**
 DESIGNED: HHPR TEAM
 DRAWN: HHPR TEAM
 CHECKED: BRA/JSH
 JOB NO. CWL-02
 DATE: 11-1-19

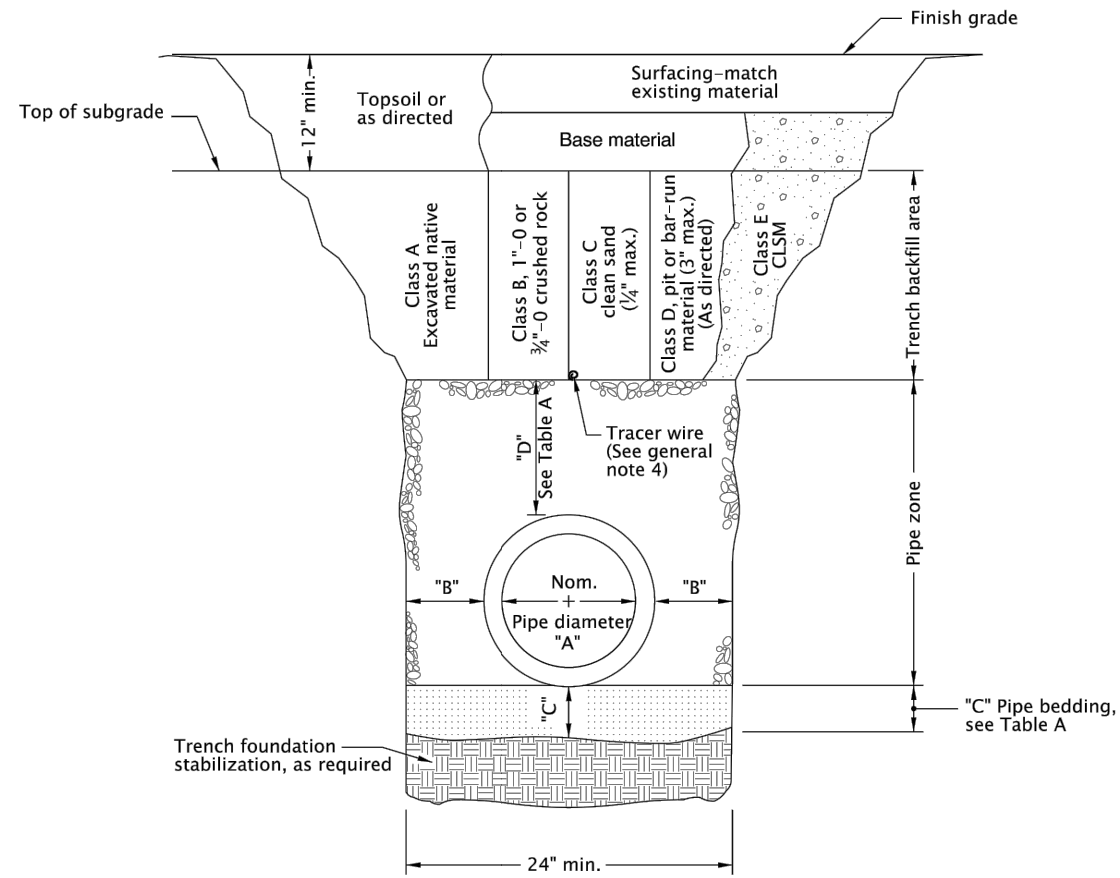
rd300.dgn 25-JUL-2017

RD300

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

CALC. BOOK NO. N/A BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

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.

**OREGON STANDARD DRAWINGS
TRENCH BACKFILL, BEDDING,
PIPE ZONE AND MULTIPLE
INSTALLATIONS**

DATE	REVISION	DESCRIPTION

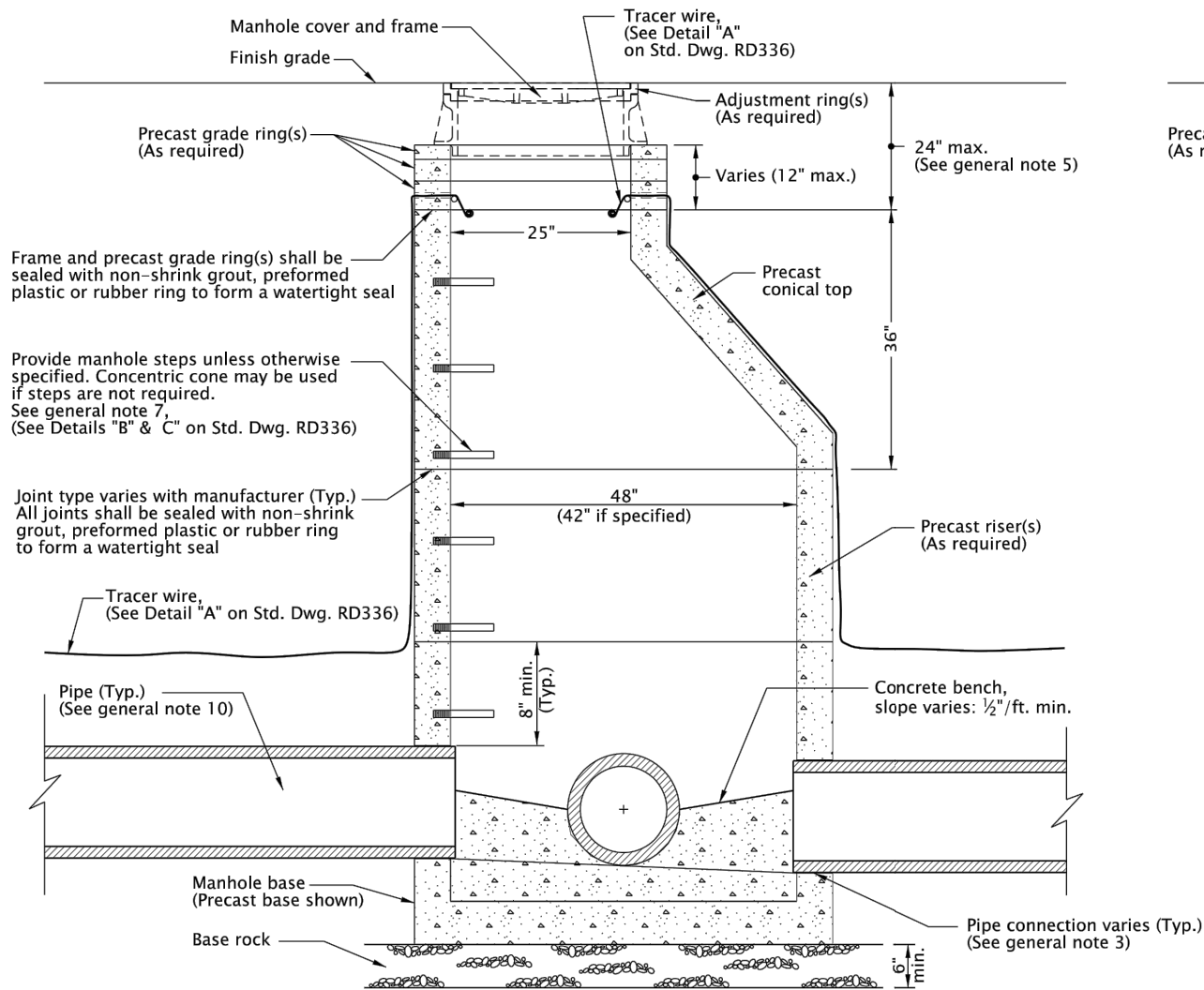
Effective Date: December 1, 2019 – May 31, 2020

RD300

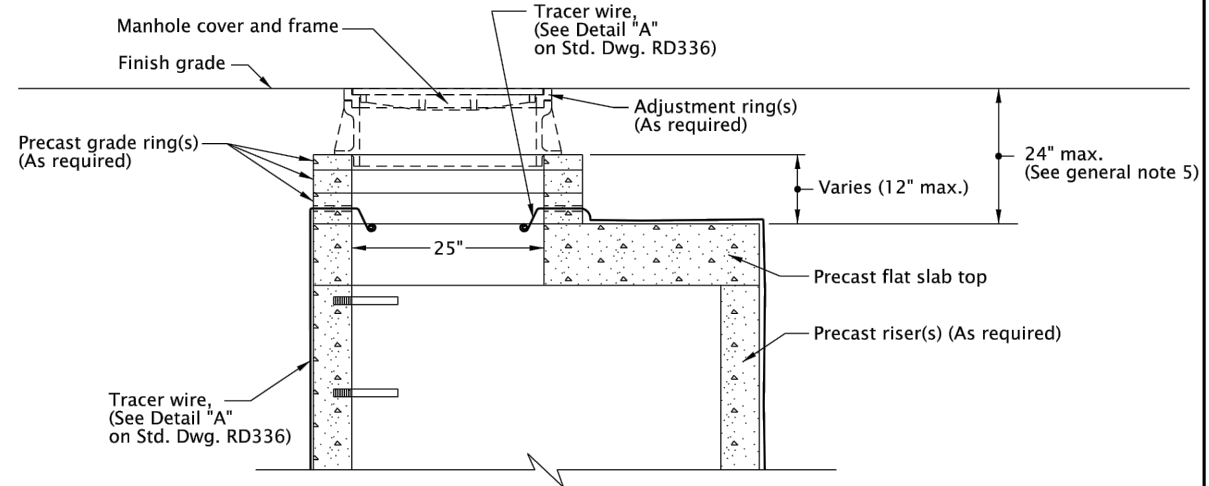
DRAWING NAME: CWL02-DA-DETAILS.DWG

rd335.dgn 21-JUN-2019

RD335



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.

CALC. BOOK NO.	N/A	BASELINE REPORT DATE	21-JUN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
OREGON STANDARD DRAWINGS			
STANDARD STORM SEWER MANHOLE			
2018			
DATE	REVISION	DESCRIPTION	
01-2019	REVISED NOTE		
06-2019	ADDED DETAIL TITLES		

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.

Effective Date: December 1, 2019 - May 31, 2020

RD335

DETAILS
WILLAMETTE FALLS DRIVE
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



EXPIRES: 12/31/19

DESIGNED:	HHPR TEAM	SHEET NO.	DA05
DRAWN:	HHPR TEAM		
CHECKED:	BRA/JSH		
DATE:	11-1-19	JOB NO.	

DRAWING NAME: C:\W\02-DA-DETAILS.DWG

WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

DETAILS

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



Harper
Houf Peterson
Righellis Inc.

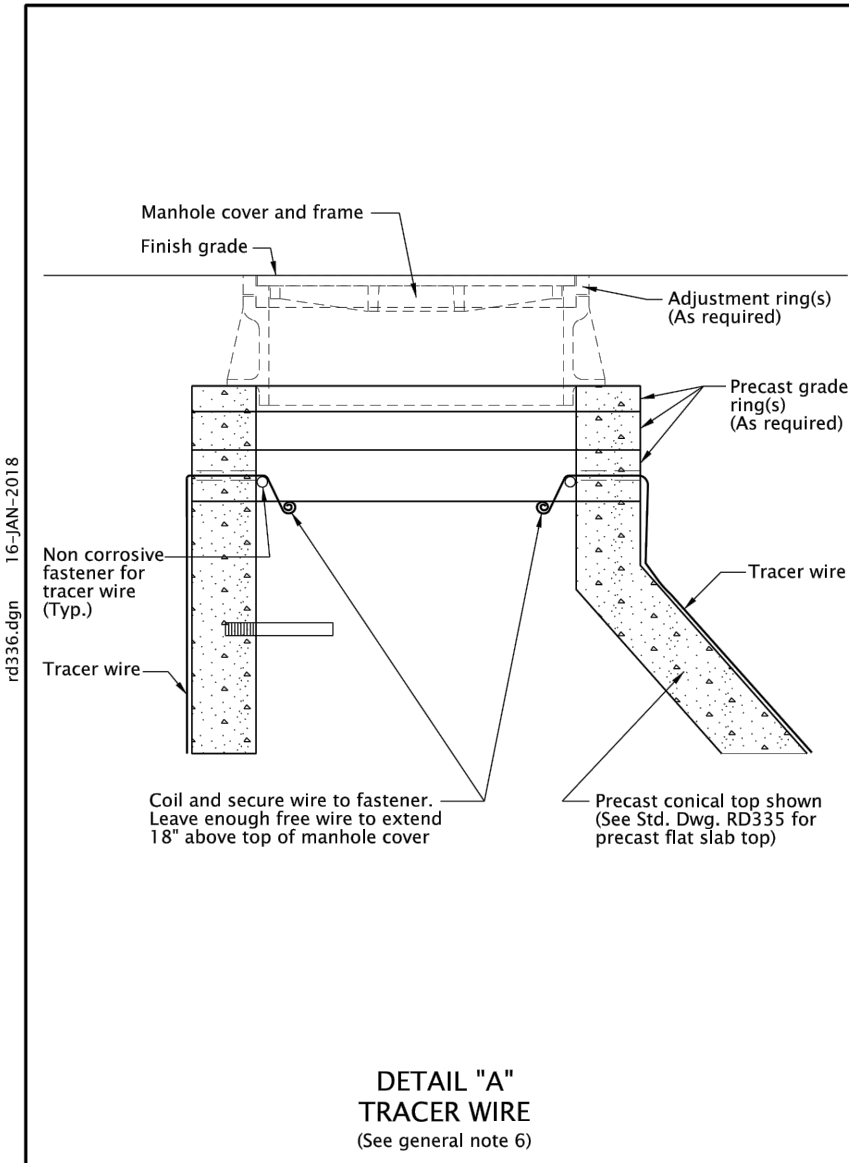


CITY OF
West Linn

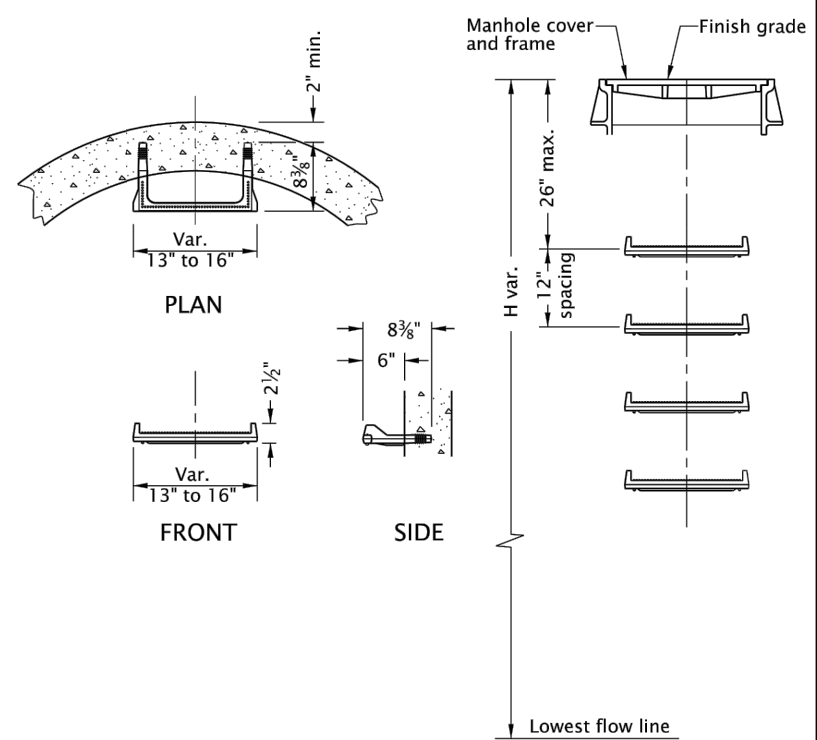


EXPIRES: 12/31/19

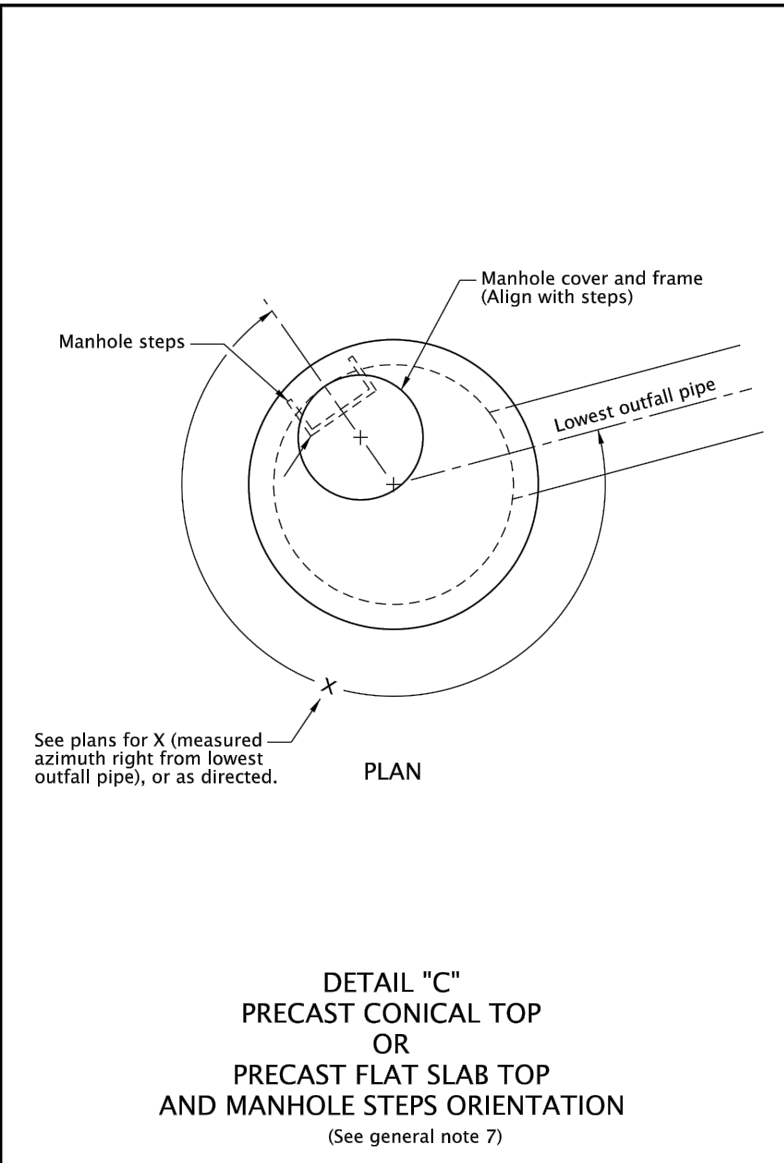
SHEET NO. DA06
DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JSH
JOB NO. CWL-02
DATE: 11-1-19



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



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:

- All precast products shall conform to requirements of ASTM C478.
- Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
- See Std. Dwg. RD345 for pipe to manhole connections.
- See Std. Dwg. RD344 for manhole base section.
- Adjust 24" maximum.
- 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.
- 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.
- See Std. Dwg. RD335 for details not shown.
- See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
- Max. pipe diameter varies with pipe material.
- See Std. Dwg. RD342 for shallow manholes.
- See project plans for details not shown.

RD336

CALC. BOOK NO. N/A	BASELINE REPORT DATE 16-JAN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
STANDARD MANHOLE DETAILS	
2018	
DATE 01-2019	REVISION DESCRIPTION

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.

Effective Date: December 1, 2019 – May 31, 2020

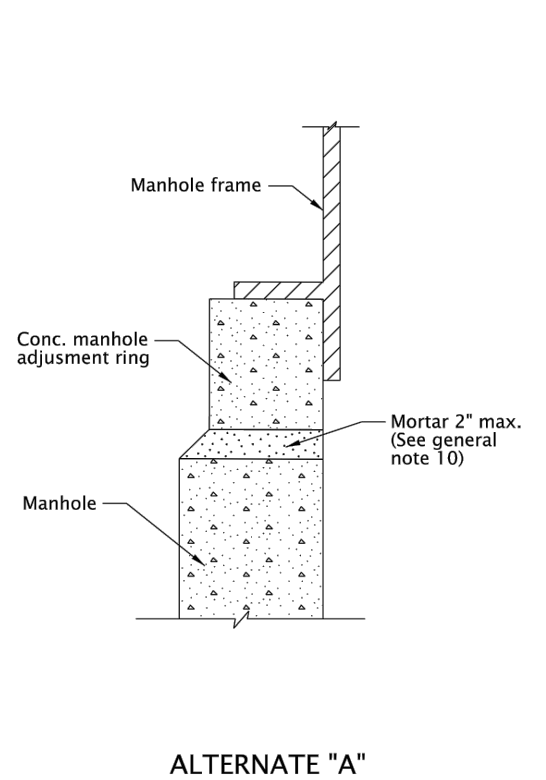
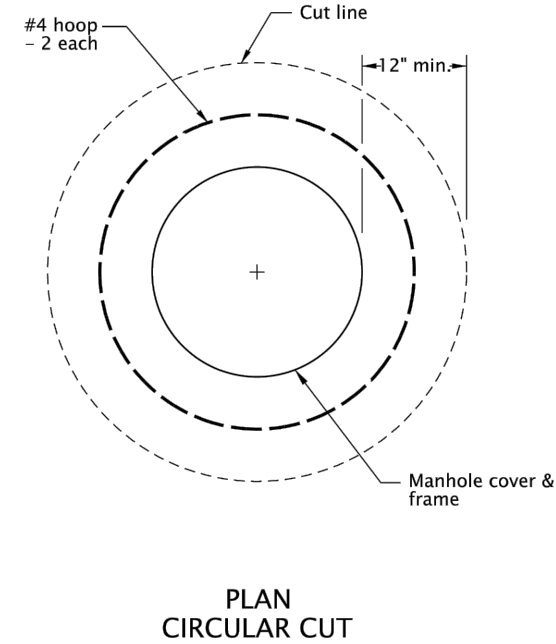
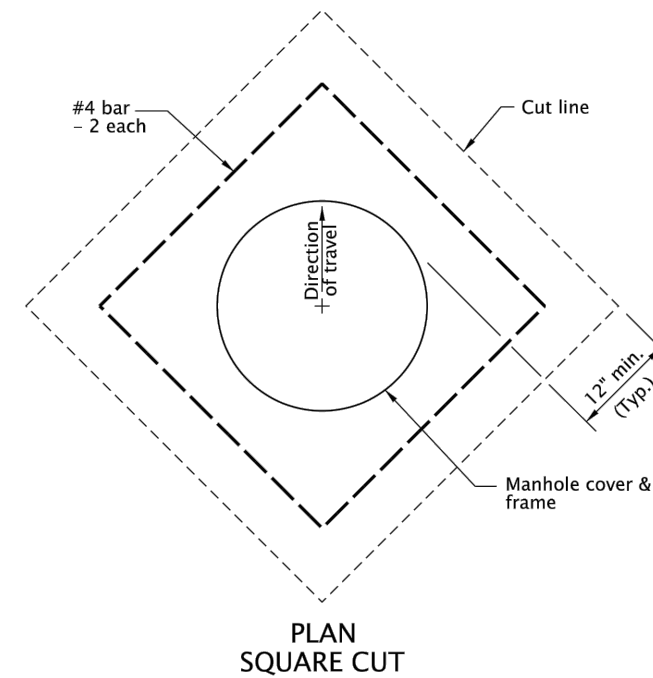
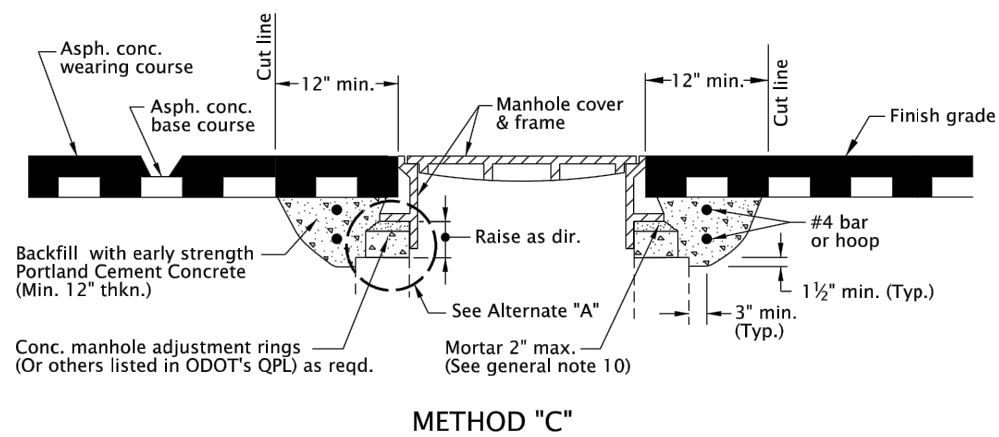
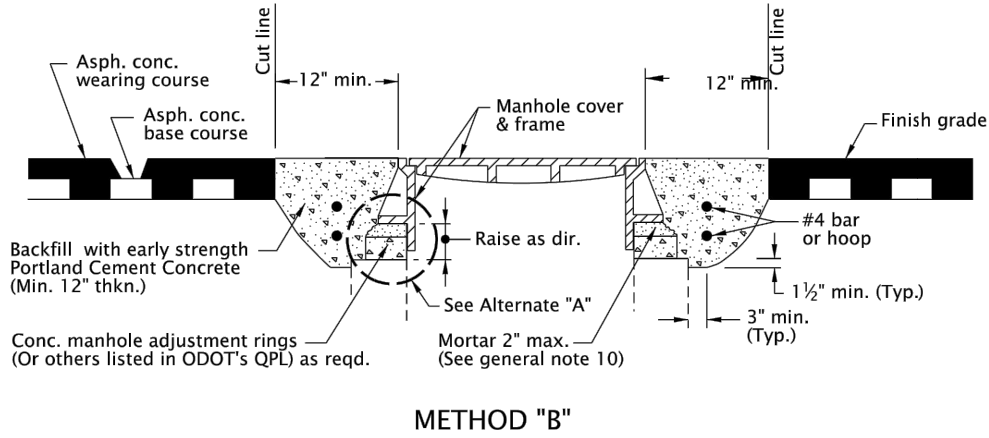
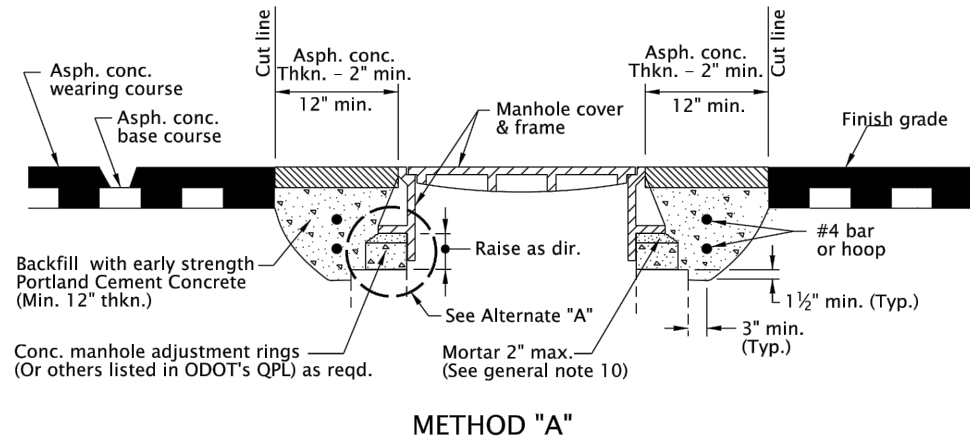
RD336

DRAWING NAME: CWL02-DA-DETAILS.DWG

rd360.dgn 25-JUL-2017

rd360.dgn

RD360



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

CALC. BOOK NO. <u>N/A</u>	BASELINE REPORT DATE <u>21-JUL-2015</u>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
MANHOLE FRAME ADJUSTMENT	
2018	
DATE	REVISION DESCRIPTION

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.

Effective Date: December 1, 2019 - May 31, 2020 RD360

DETAILS
WILLAMETTE FALLS DRIVE
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
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DA07
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

EXPIRES: 12/31/19

DRAWING NAME: CWL02-DA-DETAILS.DWG

WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

DETAILS

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



CITY OF
West Linn

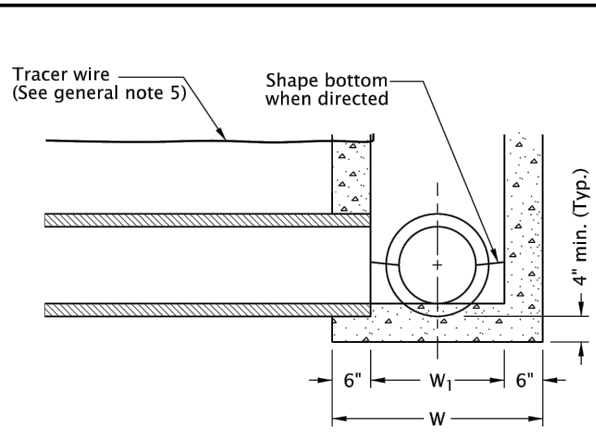


EXPIRES: 12/31/19

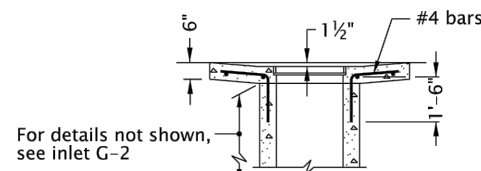
SHEET NO. DA08
DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JSH
JOB NO. CWL-02
DATE: 11-1-19

rd364.dgn 25-JUL-2017

RD364

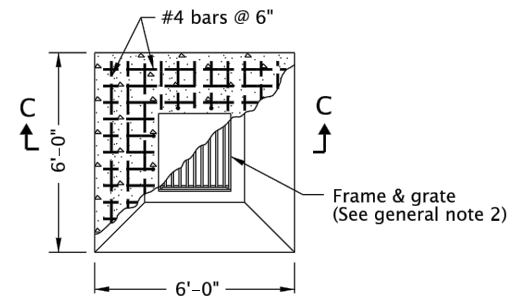


DETAIL A
WITHOUT SUMP

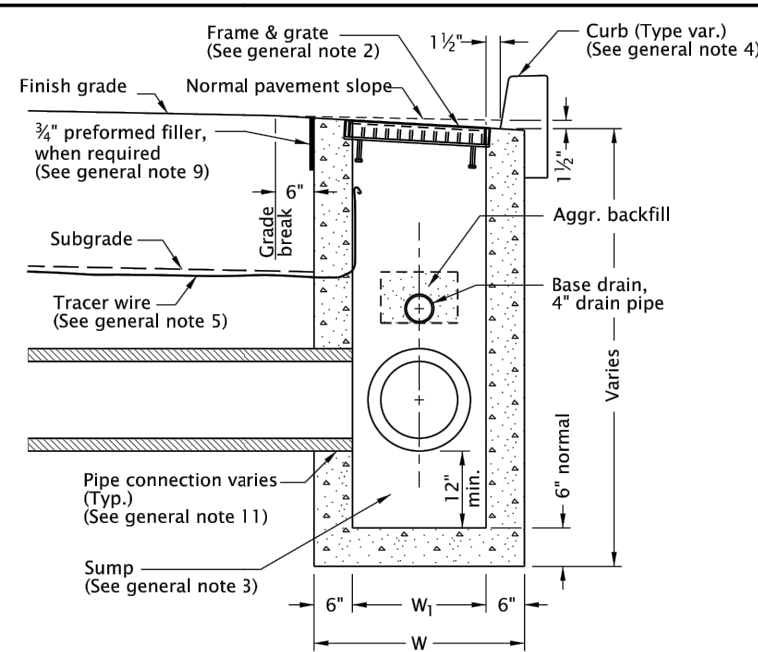


SECTION C-C

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



PLAN
TYPE G-2MA

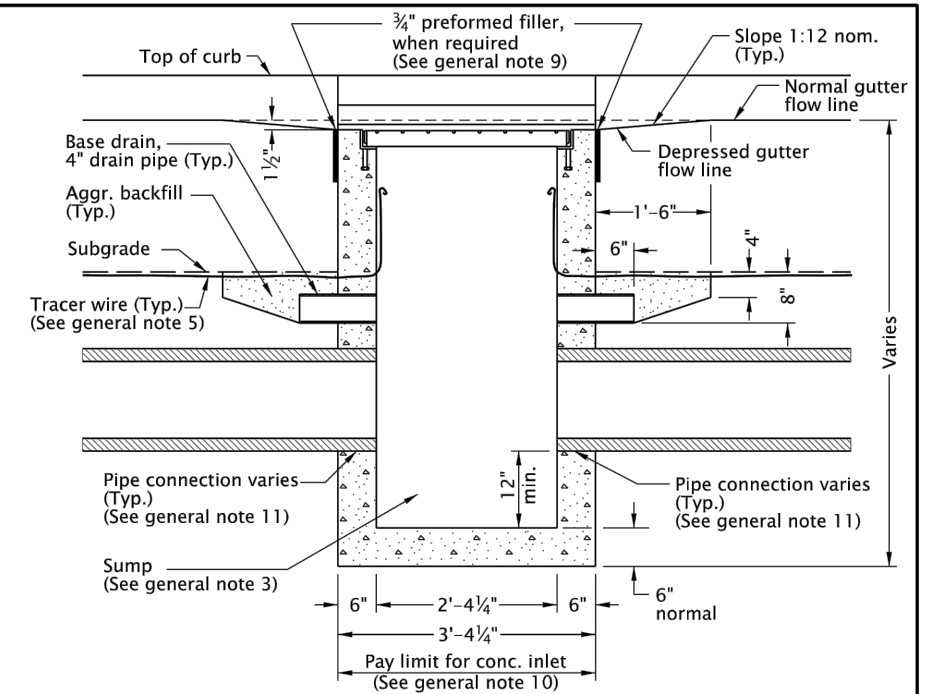


SECTION B - B

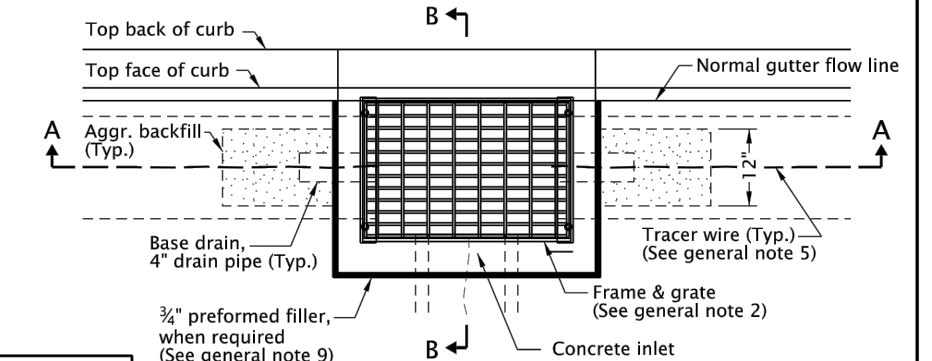
TABLE A		
INLET TYPE	W	W ₁
G-1	2'-8 7/8"	1'-8 7/8"
G-2, G-2M, G-2MA	3'-3 3/8"	2'-3 3/8"

GENERAL NOTES FOR ALL DETAILS:

- 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

CALC. BOOK NO. N/A	BASILENE REPORT DATE
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
CONCRETE INLETS	
TYPE G-1, G-2, G-2M, & G-2MA	
2018	
DATE	REVISION DESCRIPTION

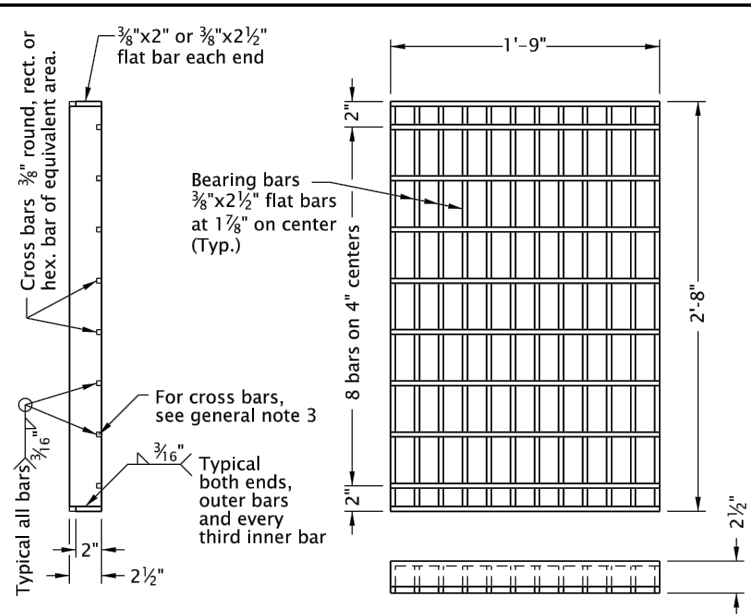
Effective Date: December 1, 2019 - May 31, 2020

RD364

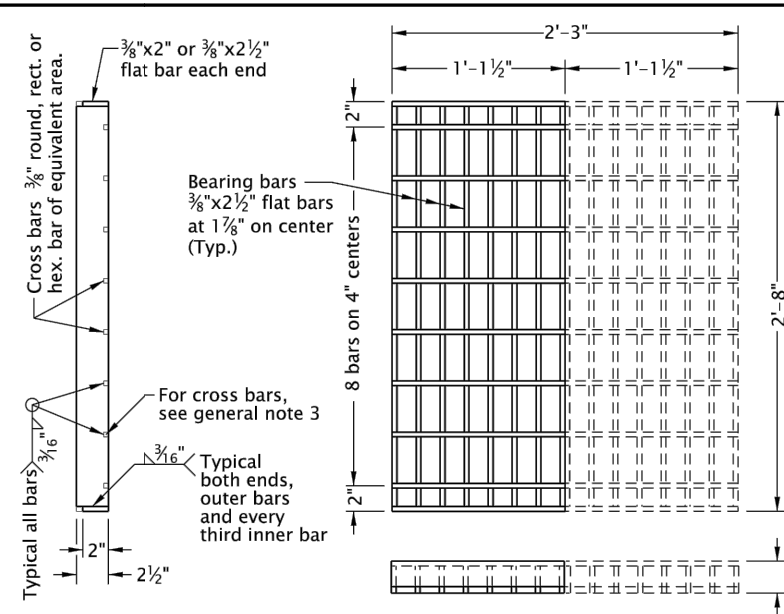
DRAWING NAME: CWL02-DA-DETAILS.DWG

rd365.dgn 25-JUL-2017

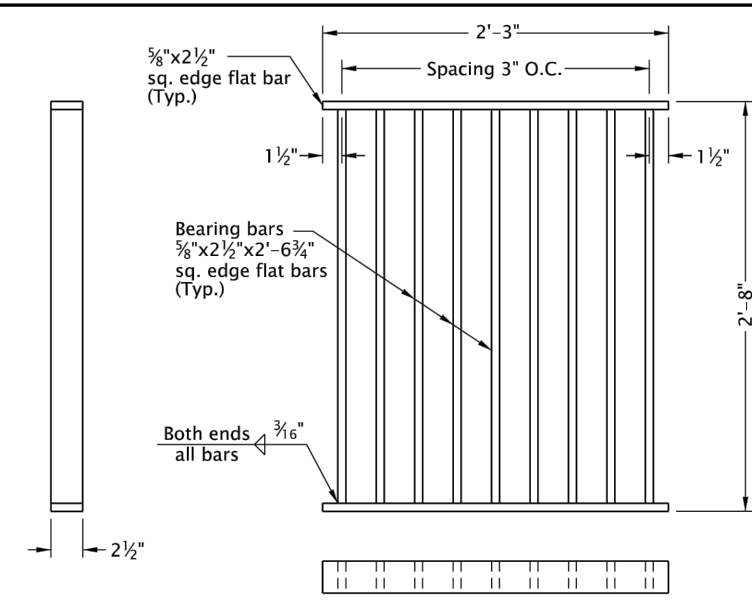
RD365



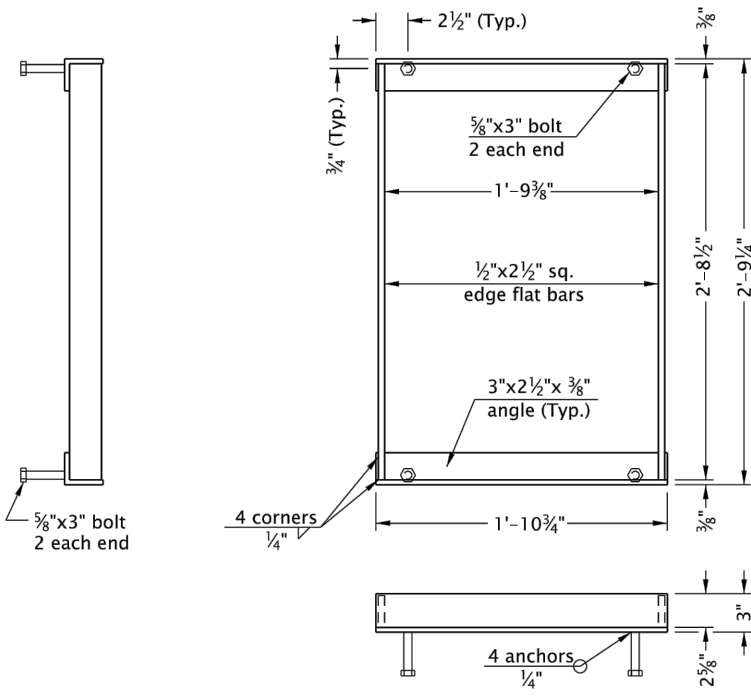
**G-1, CG-1 GRATE
(TYPE 2)**
(Bicycle-safe)



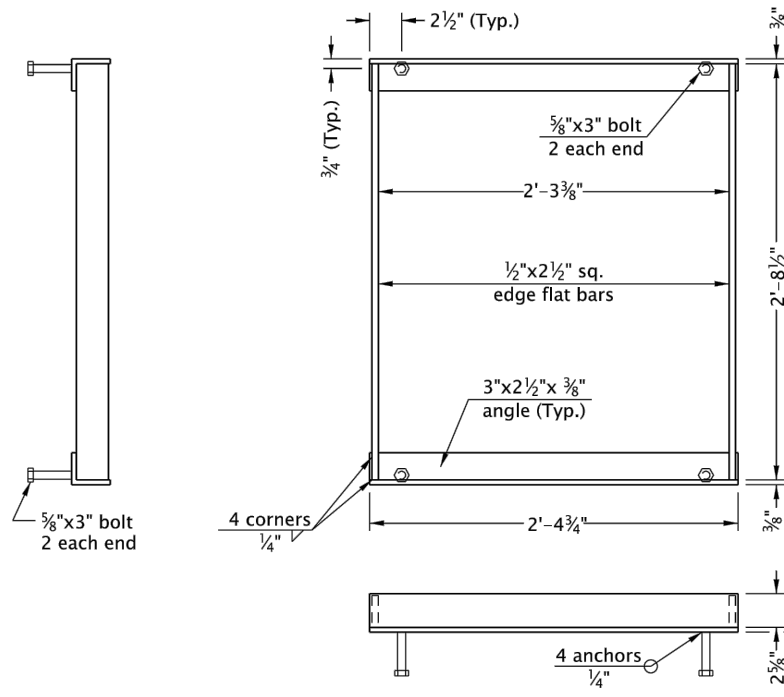
**G-2, G-2M, G-2MA, CG-2 GRATE
(TYPE 2)**
(Bicycle-safe)
(2 grates required per inlet, as shown)



**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:**
- For inlet details, see appropriate inlet standard drawing(s).
 - Type 1 grate allowed only in locations not subject to bicycle or pedestrian use.
 - 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.
 - Hot dip galvanize after fabrication.
 - Cast iron grate and frame are acceptable alternates. See ODOT's QPL.

CALC. BOOK NO. N/A	BASELINE REPORT DATE 14-JUL-2014
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
FRAMES & GRATES FOR CONCRETE INLETS	
2018	
DATE	REVISION DESCRIPTION

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.

Effective Date: December 1, 2019 - May 31, 2020

RD365

DETAILS
WILLAMETTE FALLS DRIVE
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
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

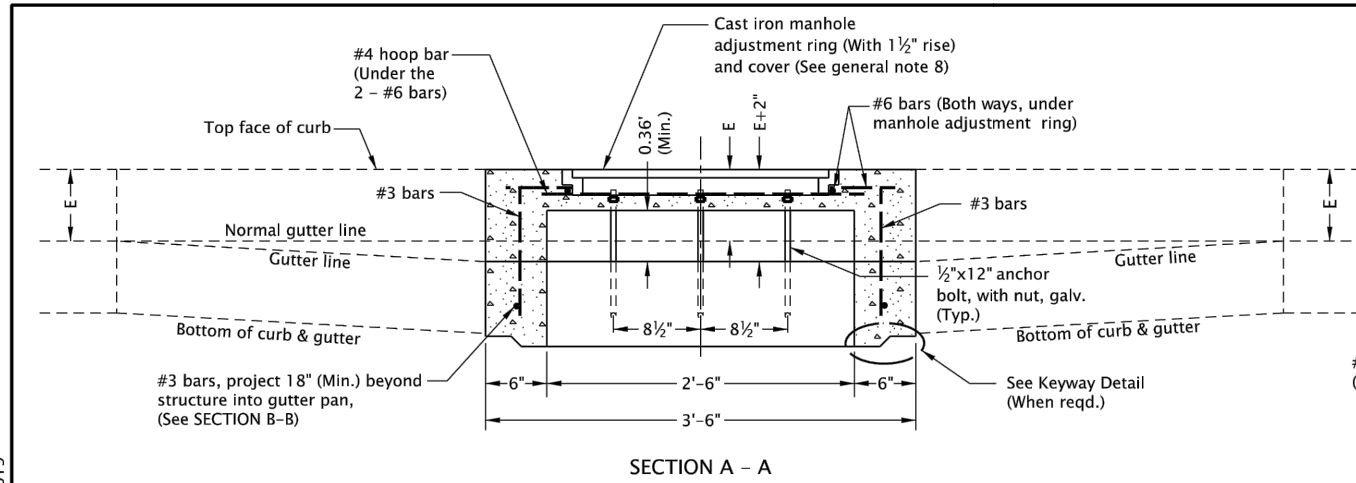
EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DA09
CHECKED: BRA/JS	JOB NO.
DATE: 11-1-19	CWL-02

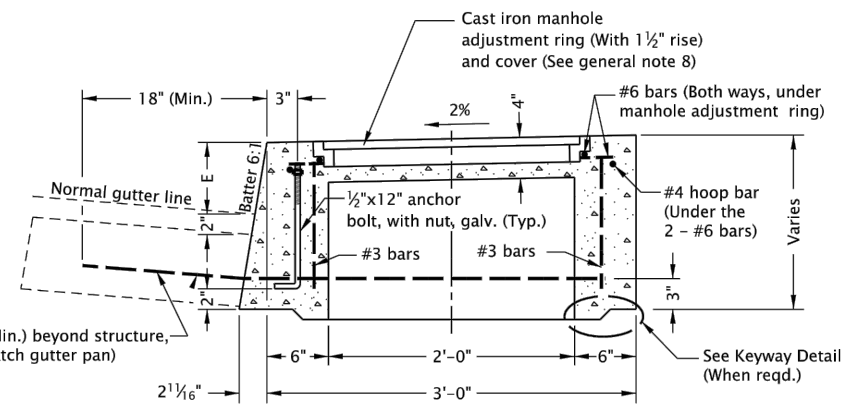
DRAWING NAME: CWL02-DA-DETAILS.DWG

rd372.dgn 16-JAN-2019

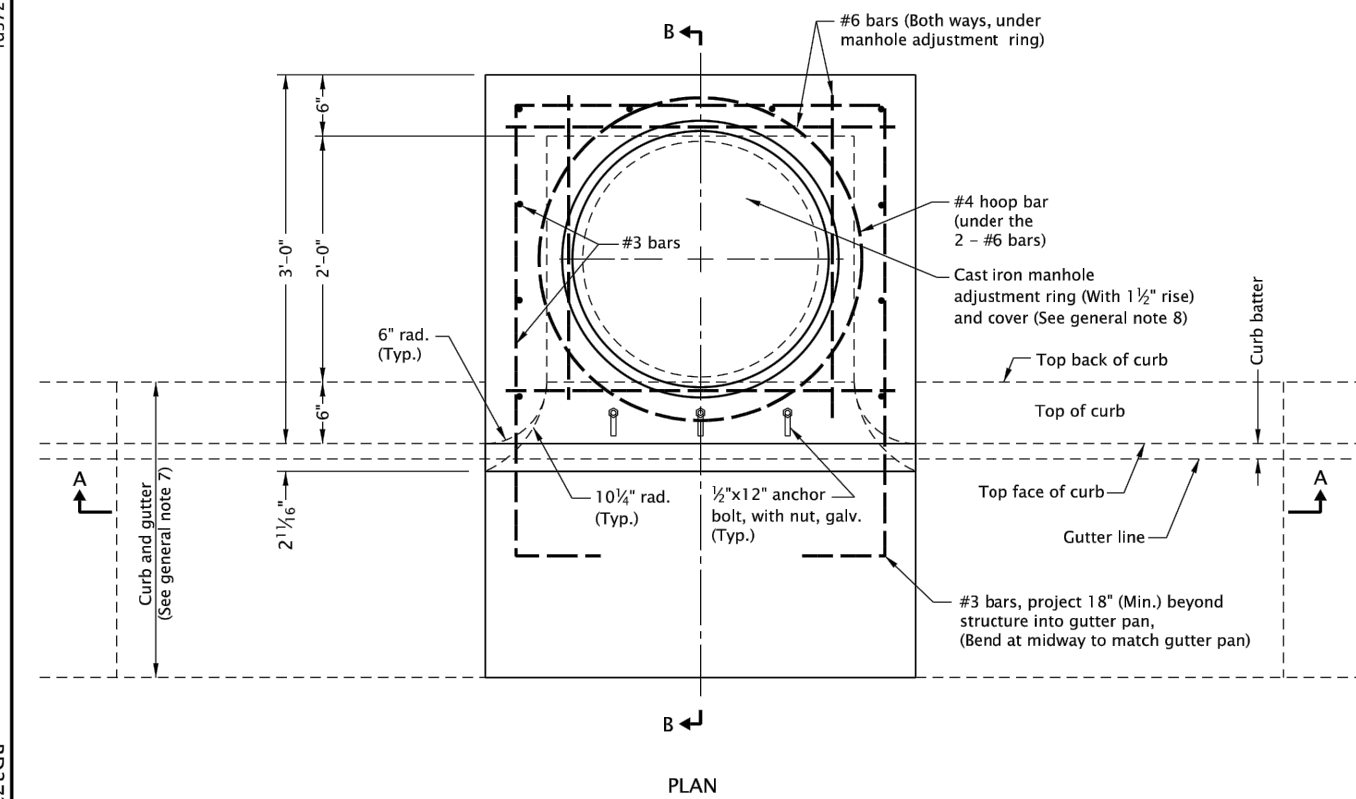
RD372



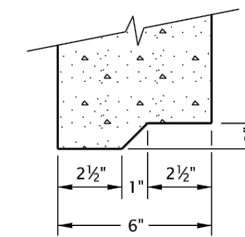
SECTION A - A



SECTION B - B



PLAN



KEYWAY DETAIL

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. All concrete shall be commercial grade concrete.
2. Inlet top may be cast-in-place or precast. All precast inlets shall conform to requirements of ASTM C913.
3. All reinforcement shall be 2" clear of nearest face of conc., unless otherwise shown.
4. Vary anchor bolt length and reinforcing bar placement as required by curb exposure E (see note 7 below).
5. See Std. Dwg. RD371 for inlet base details.
6. See Std. Dwg. RD371 for inlet pay limit.
7. See Std. Dwgs. RD700 & RD701 for curb and gutter details.
8. See Std. Dwg. RD356 for cast iron manhole adjustment ring and cover.

CALC. BOOK NO.	N/A	BASELINE REPORT DATE	16-JAN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
OREGON STANDARD DRAWINGS			
CONCRETE INLET TOP, OPTION 1			
TYPE CG-3			
2018			
DATE	REVISION	DESCRIPTION	
01-2019	REVISED	DETAILS & NOTES	

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.

Effective Date: December 1, 2019 - May 31, 2020

RD372

DETAILS
WILLAMETTE FALLS DRIVE
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
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

DESIGNED:	HHPR TEAM	SHEET NO.	DA11
DRAWN:	HHPR TEAM		
CHECKED:	BRA/JSH		
DATE:	11-1-19	JOB NO.	

DRAWING NAME: C:\LD2-DA-DETAILS.DWG

WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

DETAILS

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

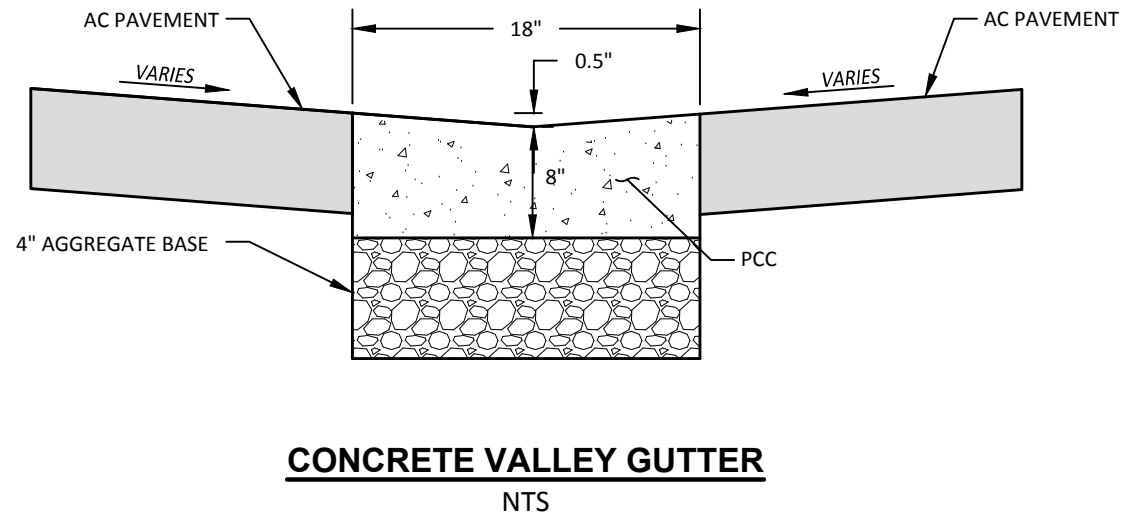
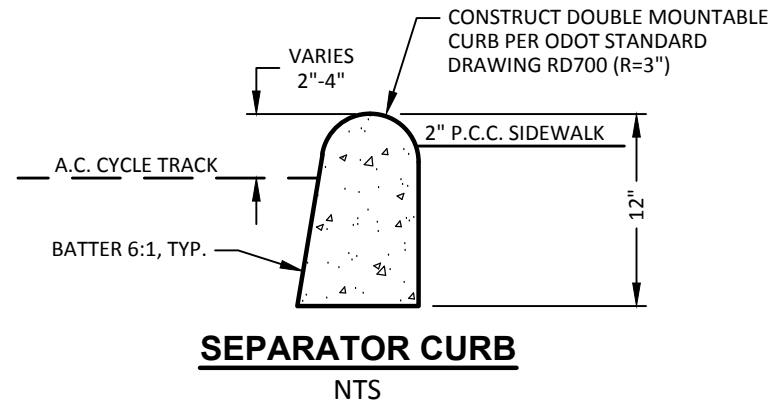
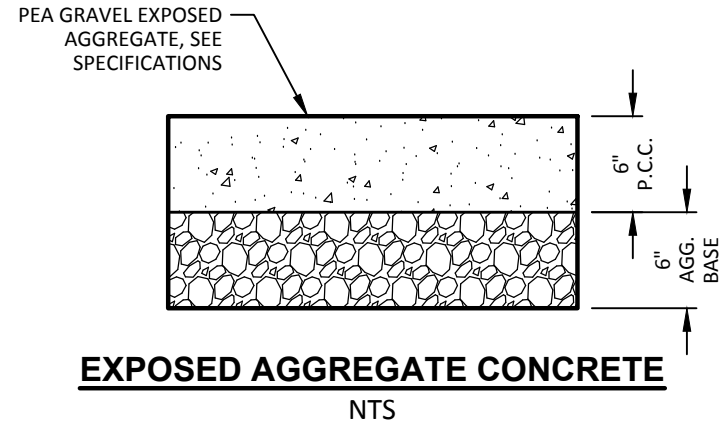


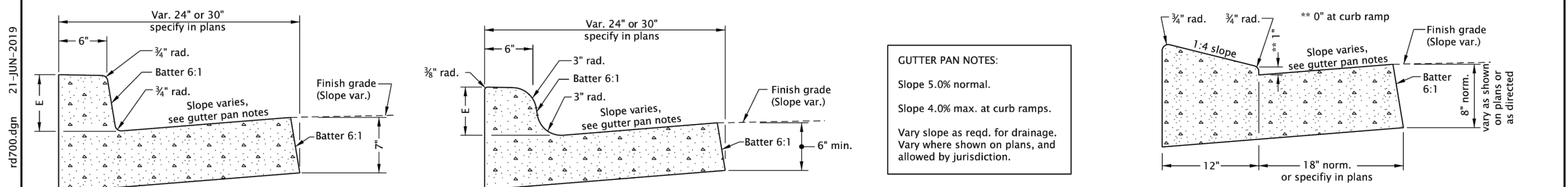
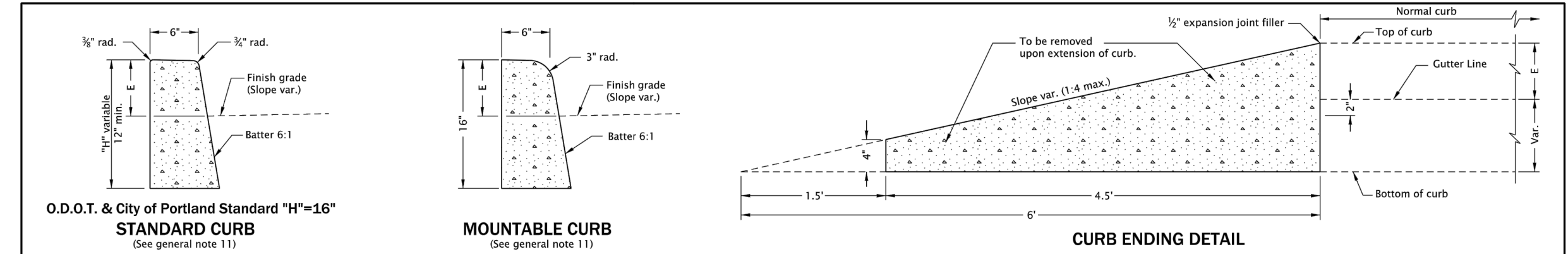
West Linn
CITY OF



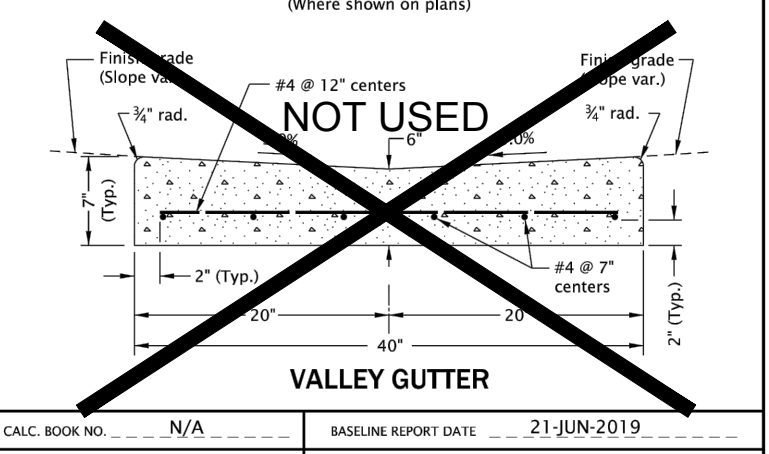
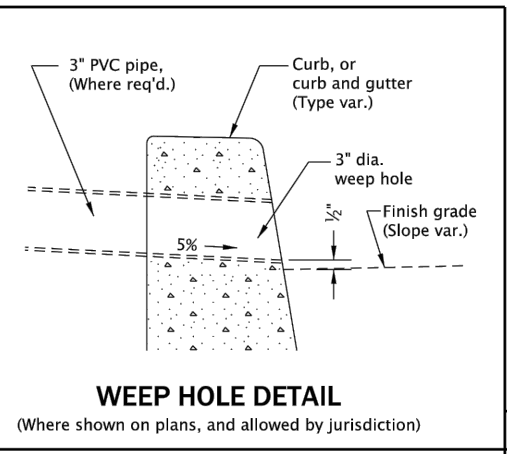
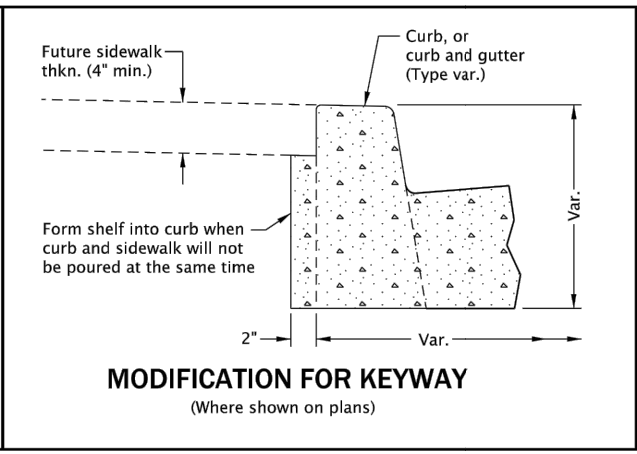
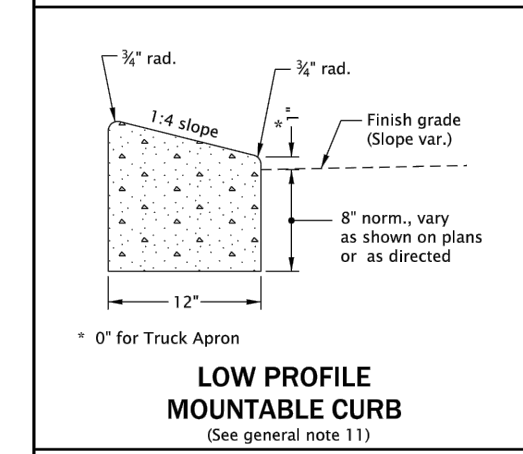
EXPIRES: 12/31/19

SHEET NO.	DESIGNED: HHPR TEAM
DA12	DRAWN: HHPR TEAM
	CHECKED: BRA/JSH
JOB NO. CWL-02	DATE: 11-1-19





GUTTER PAN NOTES:
 Slope 5.0% normal.
 Slope 4.0% max. at curb ramps.
 Vary slope as reqd. for drainage.
 Vary where shown on plans, and allowed by jurisdiction.



- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:
1. 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".
 2. Const. curb expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveways.
 3. Const. curb contraction joints at 15' maximum spacing, and at ends of each inlet and curb ramp.
 4. 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".

5. 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.
6. Dimensions are nominal, vary to conform with curb machine approved by the engineer.
7. Dimensions adjacent to radii are measured to the point of intersection of curb surfaces.
8. For sidewalk details, and monolithic curb & sidewalk, see Std. Dwgs. RD720 & RD721.
9. For drainage curbs, see Std. Dwg. RD701.
10. For curb ramp details, see Std. Dwg. RD755.
11. On or along state highways, curb and gutter is required at curb ramp.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

CURBS

2018

DATE	REVISION DESCRIPTION
01-2018	REVISED & ADDED NOTES
05-2018	REVISED NOTE
07-2018	ADDED DETAIL & REVISED NOTES
06-2019	REVISED NOTES

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.

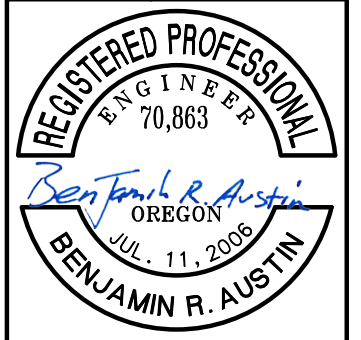
rd700.dgn 21-JUN-2019

RD700

DRAWING NAME: CWL02-DA-DETAILS.DWG

Effective Date: December 1, 2019 – May 31, 2020

RD700



DESIGNED:	HHPR TEAM	SHEET NO.	DA13
DRAWN:	HHPR TEAM		
CHECKED:	BRA/JSH		
DATE:	11-1-19	JOB NO.	
EXPIRES:		12/31/19	

WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

DETAILS

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



West Linn
CITY OF

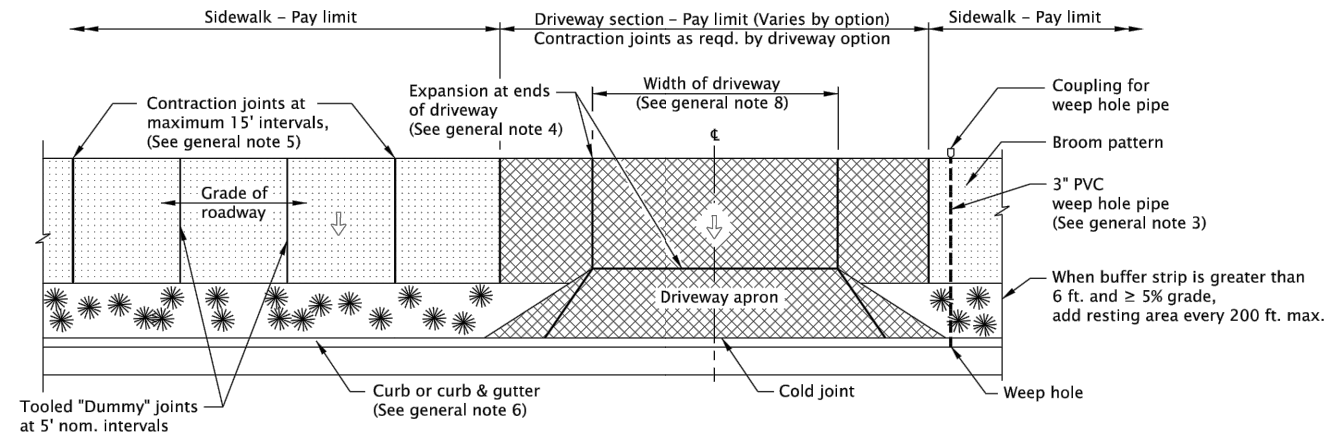


EXPIRES: 12/31/19

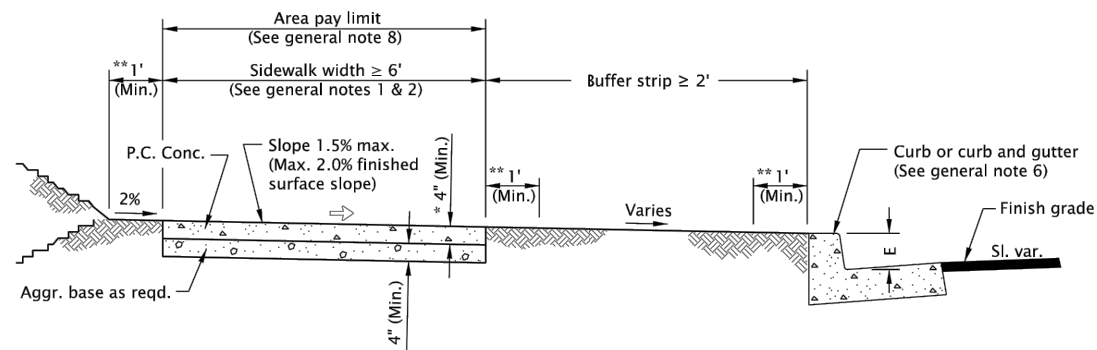
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DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JSH
JOB NO. CWL-02
DATE: 11-1-19

rd721.dgn 21-JUN-2019

RD721



TYPICAL PLAN VIEW - SEPARATED SIDEWALK



TYPICAL SETBACK SIDEWALK CROSS SECTION

E = curb exposure, see general note 6

- * Min. 4" or as specified in plans. A thickness 6" if sidewalk is intended as portion of a driveway or mountable curb is used.
- ** Provide compacted backfill adjacent to curb and sidewalk

LEGEND

	Sidewalk pay limit.
	Driveway pay limit, varies by option, (See general note 8).
	Slope 1.5% max. (Max. 2.0% finished surface slope)

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Include additional paved or unpaved 2' shy distance to vertical faces higher than 5' such as retaining walls, sound walls, fences and buildings.
2. Curb type and sidewalk width as shown on plans or as directed. On sidewalks 8' and wider, provide a longitudinal joint at the midpoint.
3. Install 3" pvc weep hole pipes in sidewalks where shown on plans, and allowed by jurisdiction. Place contraction joint over top of pipe. See Std. Dwg. RD700 for weep hole details.
4. Provide expansion joints around poles, posts, boxes, at ends of each driveway, and other fixtures which protrude through or against the structures. For sidewalk, monolithic curb & sidewalk, const. expansion joints at 45' maximum spacing. See Std. Dwg. RD722 for expansion joint details.
5. Const. contraction joints at 15' maximum spacing, and at ends of each curb ramp. See Std. Dwg. RD722 for contraction joint details.
6. Curb and gutter shown; see project plans for the curb design specified. For curb details, see Std. Dwgs. RD700 & RD701. ODOT standard E=7".
7. Sidewalk details are based on ODOT applicable standards.
8. Driveway encroaches into sidewalk shown; see project plans for the driveway design specified. For driveway details not shown, see Std. Dwgs. RD725, RD730, RD735, RD740, RD745 & RD750.
9. See project plans for details not shown.

CALC. BOOK NO. N/A	BASELINE REPORT DATE 21-JUN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
SEPARATED SIDEWALKS	
2018	
DATE	REVISION DESCRIPTION
01-2019	DRAWING CREATED
06-2019	ADDED NOTES

Effective Date: December 1, 2019 – May 31, 2020

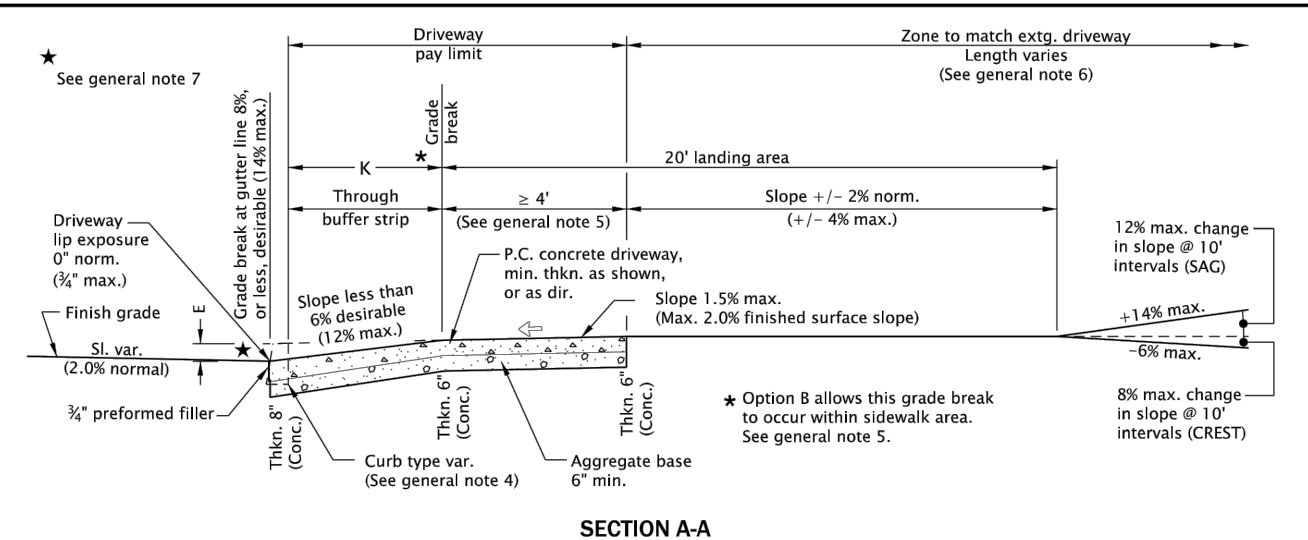
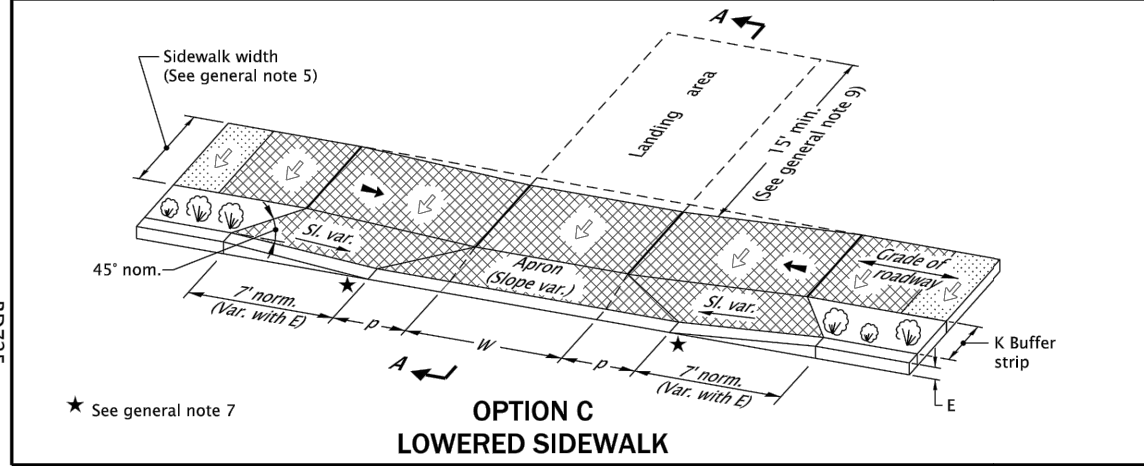
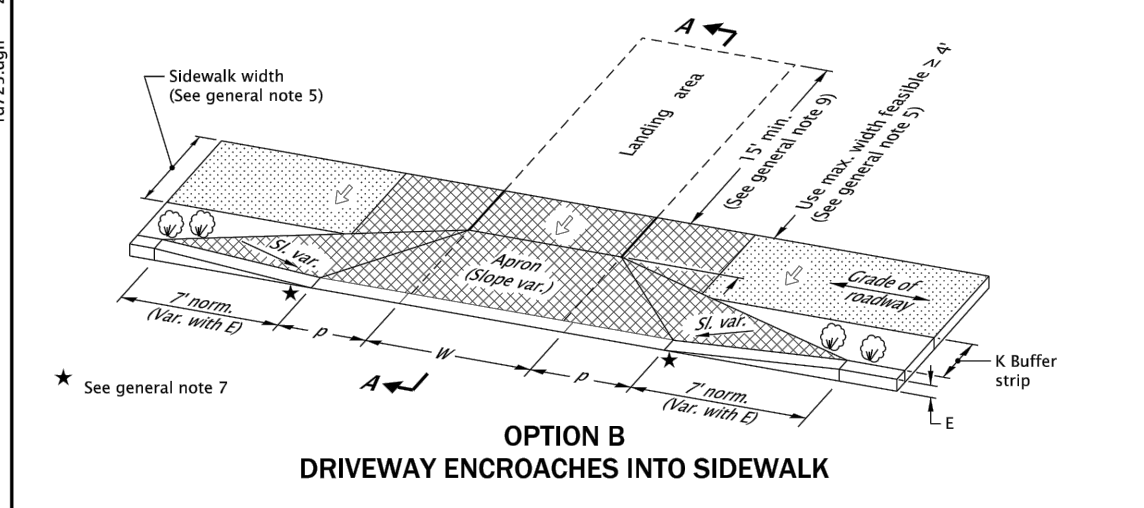
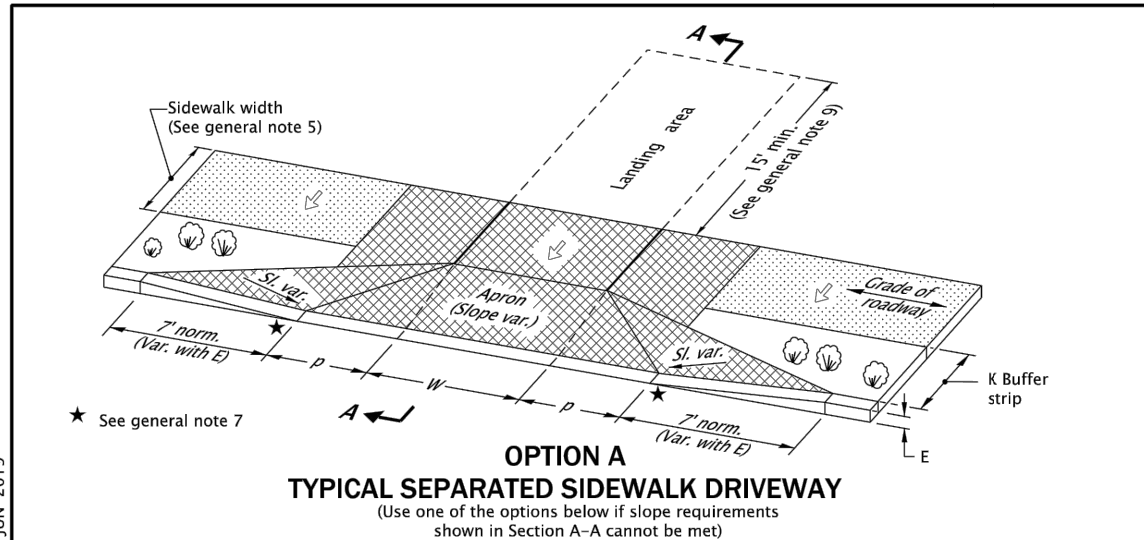
RD721

DRAWING NAME: CWL02-DA-DETAILS.DWG

rd725.dgn 21-JUN-2019

RD725

DRAWING NAME: CWL02-DA-DETAILS.DWG



GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Details are based on ODOT applicable standards.
- Only use details allowed by jurisdiction.
- The following dimensions are as shown on plans, or as directed: driveway width, driveway slope, sidewalk width, buffer strip 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. RD721 for sidewalk details. See Std. Dwg. RD722 for joint details.
- A greater than or equal to 4' unobstructed clear passage with cross slope 1.5% max. (Max. 2.0% finished surface slope) is required behind driveway apron. Sidewalk profile grade of the pedestrian accessible route shall not exceed the adjacent roadway profile grade.
- Where existing driveway is in good condition, and meets slope requirements, construct only as much 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" (1n) 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.

LEGEND:

	Sidewalk
	Driveway pay limit (See project plans for details not shown)
	Slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
	Slope 7.5% max. (Max. 8.3% finished surface slope)
W	Width of driveway
K	Buffer strip width (5' normal, 3' min.)
E	Curb exposure
p	7.0' in commercial land use types 3.5' in residential land use types

CALC. BOOK NO. N/A	BASELINE REPORT DATE 21-JUN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
SEPARATED SIDEWALK DRIVEWAYS OR ALLEYS (OPTIONS A, B & C)	
ODOT HIGHWAYS	
2018	
DATE	REVISION DESCRIPTION
01-2018	REVISED & ADDED NOTES
07-2018	REVISED NOTE
01-2019	REVISED DETAILS & NOTES
06-2019	REVISED DETAILS & NOTES

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.

Effective Date: December 1, 2019 - May 31, 2020

RD725

DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

Harper Houf Peterson
HHPR 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
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DA15
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

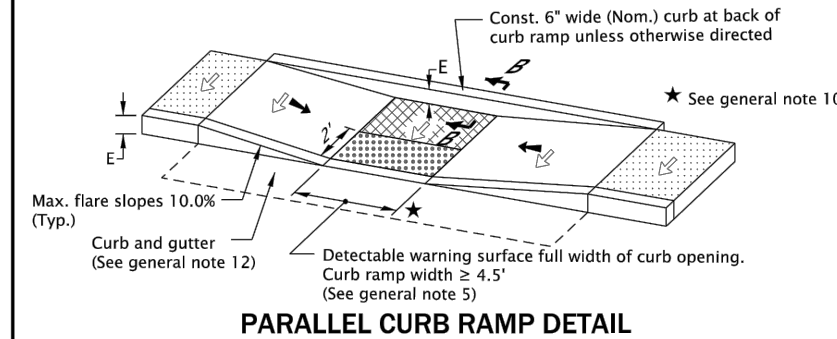
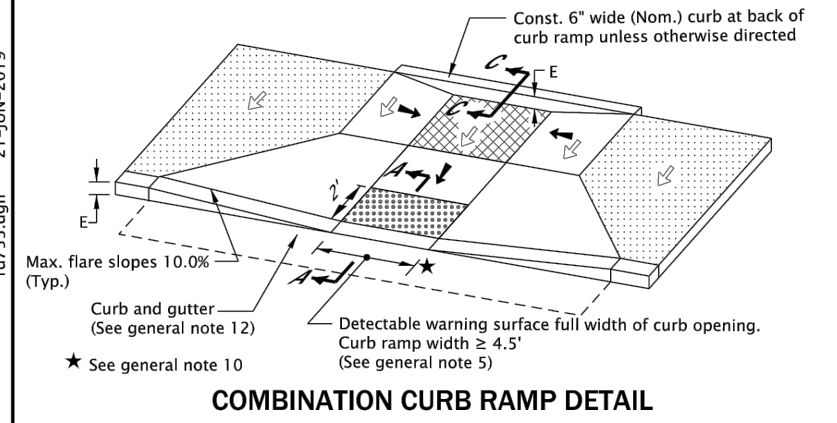
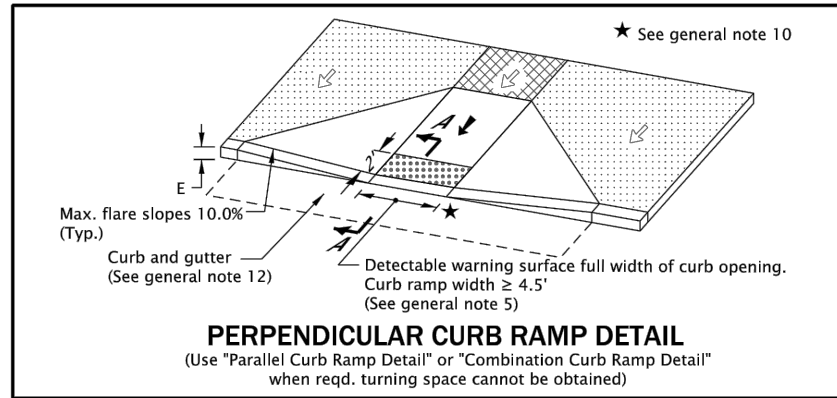


EXPIRES: 12/31/19

SHEET NO.	DESIGNED:
DA16	HHPR TEAM
	DRAWN:
	HHPR TEAM
CHECKED:	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19

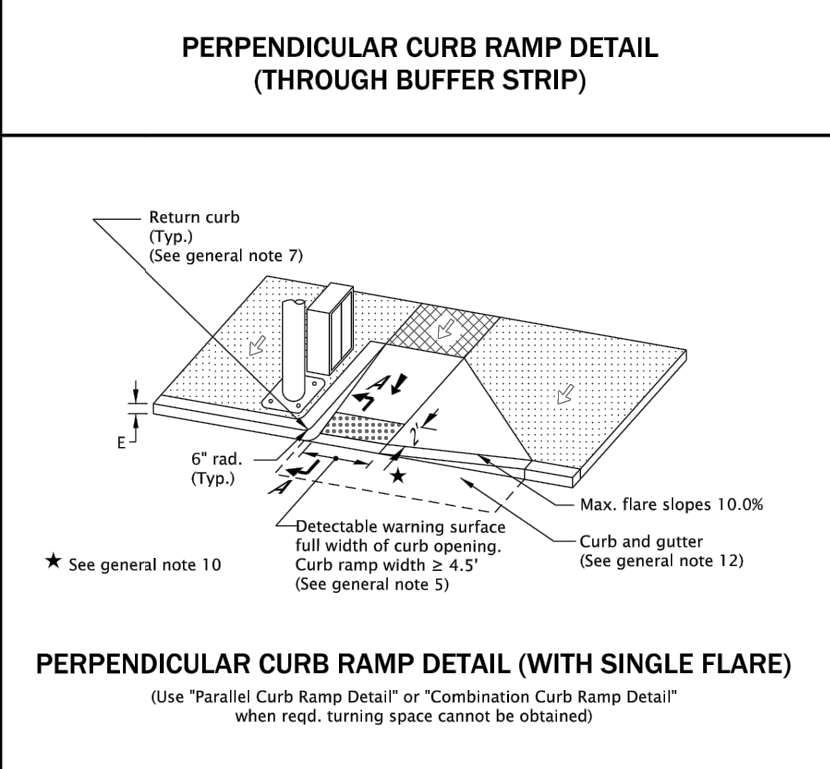
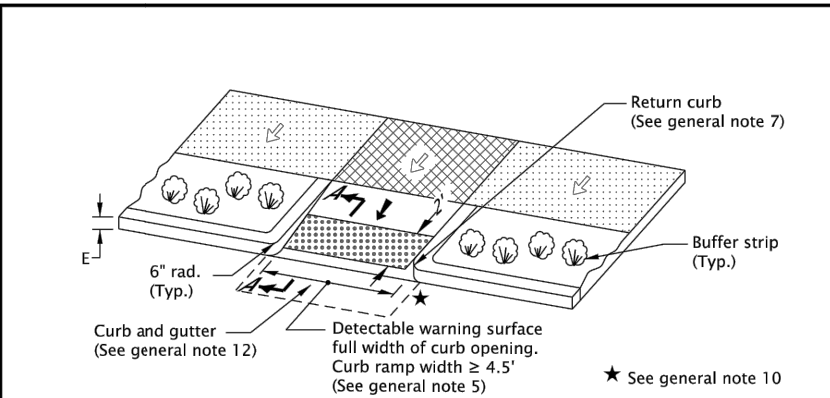
rd755.dgn 21-JUN-2019

RD755

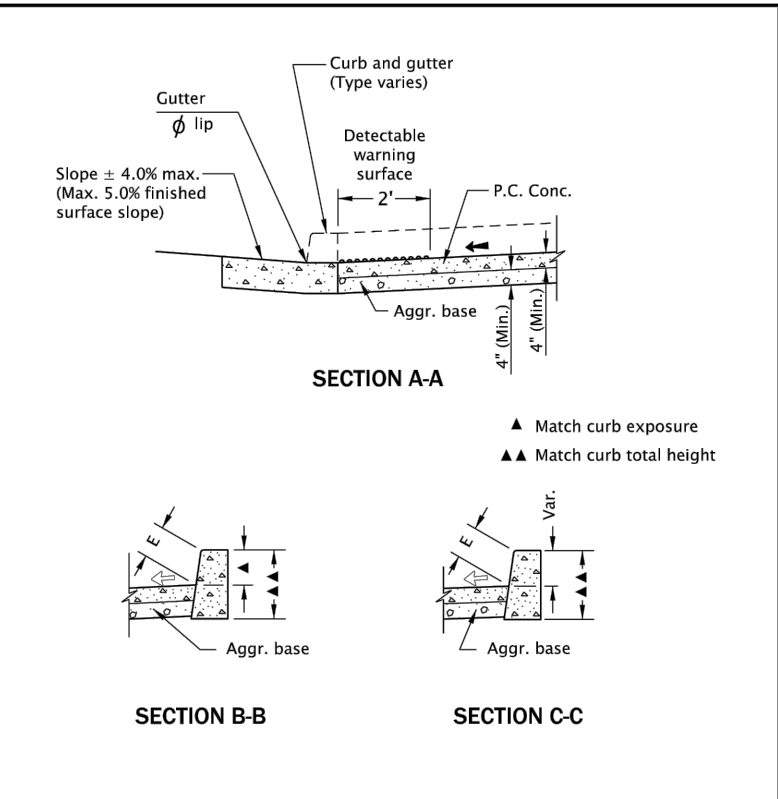


GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Curb ramp details are based on ODOT applicable standards.
- See Std. Dwgs. RD700 & RD701 for curbs. See Std. Dwgs. RD720 & RD721 for sidewalks. See Std. Dwgs. TM503 & TM530 for crosswalk markings, widths, etc.
- Tooled joints are required at all curb ramp grade break lines.
- Curb ramp slopes shown are relative to the true level horizon (Zero bubble).
- Place detectable warning surface at the back of curb for a minimum depth of 2' at curb ramp that is adjacent to traffic. For details not shown, see Std. Dwgs. RD758 & RD759.
- 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.
- Return curb may be provided in lieu of flared slope only if protected from traverse travel by landscaping. Return curb shall not reduce width of approaching sidewalk.



- Curb ramps for paths intersecting a roadway should be full width of path, excluding flares. When a curb ramp is used to provide bicycle access from a roadway to a sidewalk, the curb ramp should be 8' wide.
- For curb ramp placement options, see Std. Dwgs. RD756 & RD757.
- Check the gutter flow depth at curb ramp locations to assure that the design flood does not overtop the back of sidewalk at curb ramp. Place an inlet at upstream side of curb ramp or perform other approved design mitigation.
- Site conditions normally require a project specific design. See project plans for details not shown.
- On or along state highways, curb and gutter is required at curb ramps.



LEGEND:

- Sidewalk
- Turning space
When not constrained 4.5' x 4.5' (4' x 4' min. finished surface).
When constrained 4.5' x 5.5' (4' x 5' min. finished surface with longer dimension in direction of pedestrian street crossing).
For the purposes of this application, a max. 2.0% finished surface slope (for drainage) is considered level.
- Detectable warning surface
- Slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
- Slope 7.5% max. (Max. 8.3% finished surface slope)

CALC. BOOK NO.	N/A	BASELINE REPORT DATE	21-JUN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
OREGON STANDARD DRAWINGS			
CURB RAMP DETAILS			
2018			
DATE	REVISION	DESCRIPTION	
01-2018	REVISED	DETAILS, REVISED & ADDED NOTES	
07-2018	REVISED	DETAILS, REVISED & ADDED NOTES	
01-2019	REVISED	DETAIL & ADDED DIAGRAM	
06-2019	REVISED	DETAILS & NOTES	

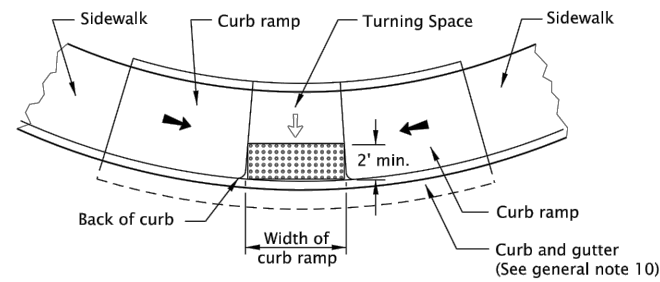
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

Effective Date: December 1, 2019 – May 31, 2020

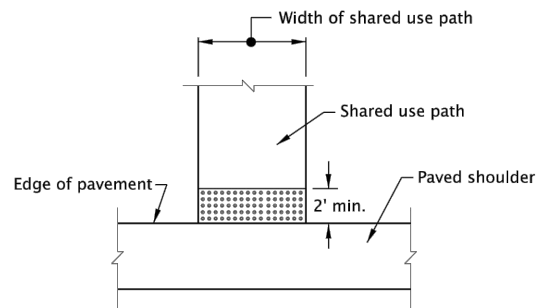
RD755

rd759.dgn 21-JUN-2019

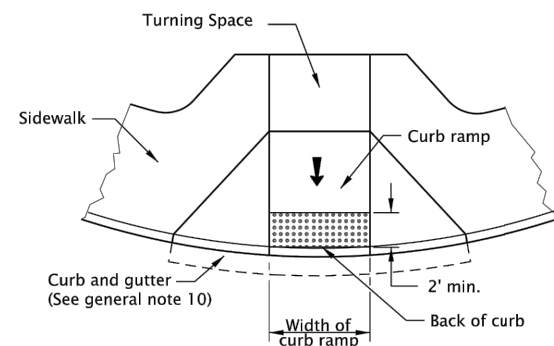
RD759



PARALLEL CURB RAMP

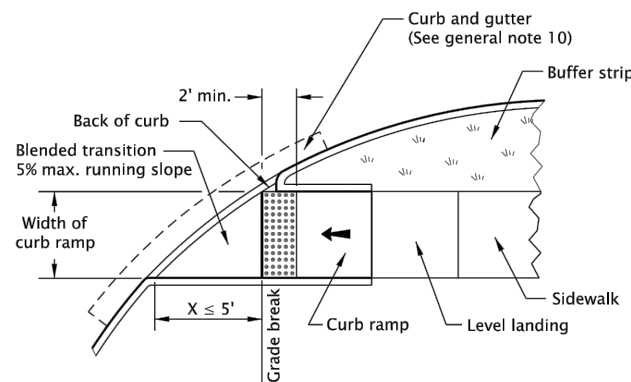


SHARED-USE PATH CONNECTION



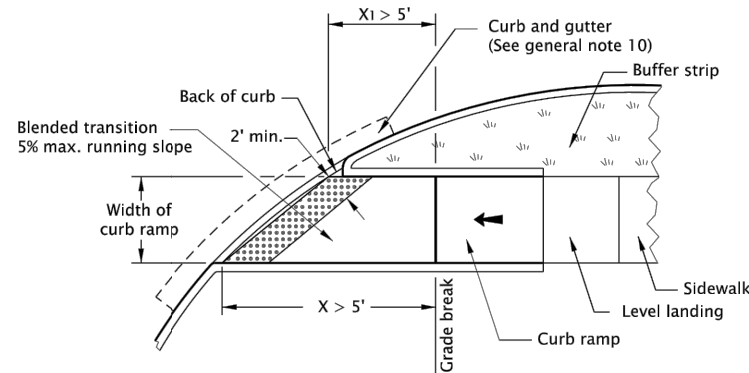
**PERPENDICULAR CURB RAMP
GRADE BREAK IN FRONT OF CURB**

(Detectable warning surface shall be placed in the lower 2' at the back of curb ramp that is adjacent to traffic)



**CURB RAMP CROSSING
GRADE BREAK ≤ 5 FT. FROM BACK OF CURB**

(Detectable warning surface shall be placed on the bottom of the curb ramp directly above the grade break)



**CURB RAMP CROSSING
GRADE BREAK (X or X1) > 5 FT. FROM BACK OF CURB**

(Detectable warning surface shall be placed in the lower 2' at the back of curb ramp that is adjacent to traffic)

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Detectable warning surface details & locations are based on ODOT applicable Standards.
- See project plans for details not shown. See Std. Dwg. RD700 & RD701 for curbs. See Std. Dwg. RD720 for sidewalks. See Std. Dwg. TM503 & TM530 for crosswalk markings, widths, etc. See Std. Dwg. RD705 & RD710 for islands.
- The Detectable Warning Surface shall extend the full width of the curb ramp, or other roadway entrance as applicable. A gap of up to 2 inches on each side of the Detectable warning surface is permitted (Measured at the leading corners of the detectable warning surface panel).
- Detectable warning surface shall be placed at the back of curb for a minimum depth of 2 ft. at curb ramps that adjacent to traffic. Detectable warning surface may be radial or rectangular, but must comply with the truncated dome size and spacing standards. Detectable warning surface may be cut to meet necessary shape as shown in plans. Color to be safety yellow if no color specified in construction note. For detectable warning surface on or along state highway, alternative colors must be approved.
- Detectable warning surface shall be used in the following locations:
 - Curb ramps (See Std. Dwg. RD755, RD756, & RD757).
 - Crossing islands (Accessible Route Islands), (See Std. Dwg. RD710).
 - Rail crossings (See Std. Dwg. RD758).
- Where public transportation stations (rail, bus, etc.) use platform boarding, detectable warning surface shall be placed along the full edge length of the station, when not protected by platform screens or guards (See Std. Dwg. RD758).
- Detectable warning surface shall not be used on the following locations:
 - End of sidewalk transitions that are not at a crosswalk, (See Std. Dwg. RD754).
 - Driveways, unless constructed with curb return, (See Std. Dwg. RD725, RD730, RD735, RD740, RD745, & RD750).
 - Parking lots.
- 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.
- Where no curb is present, the detectable warning surface shall be placed at the edge of the roadway.
- On or along state highways, curb and gutter is required at curb ramps.
- Detectable warning surface placement for perpendicular ramps vary as shown.

- Detectable warning surface
- Slope 1.5% max. (Max. 2.0% finished surface slope)
- Slope 7.5% max. (Max. 8.3% finished surface slope)

CALC. BOOK NO. N/A	BASELINE REPORT DATE 21-JUN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS DETECTABLE WARNING SURFACE DETAILS & PLACEMENT LOCATIONS	
2018	
DATE	REVISION DESCRIPTION
07-2018	REPLACED DRAWING TITLE, REVISED DETAILS & NOTES
09-2018	REVISED DETAIL & NOTES
01-2019	REVISED DETAIL & NOTES
06-2019	REVISED DETAIL & NOTES

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Effective Date: December 1, 2019 – May 31, 2020

RD759

DETAILS
WILLAMETTE FALLS DRIVE
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
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DA17
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

DRAWING NAME: C:\LD2-DA-DETAILS.DWG

WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

DETAILS

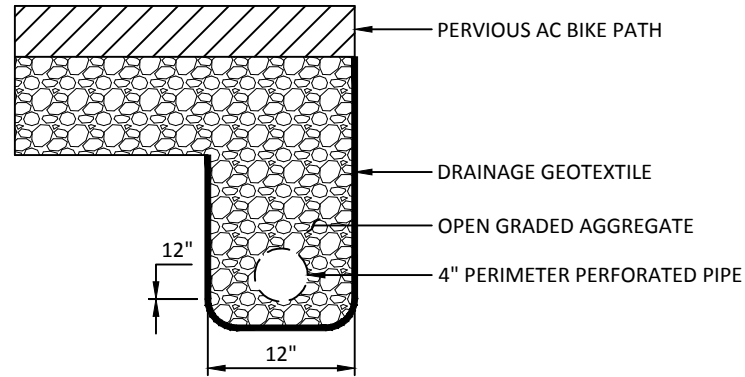
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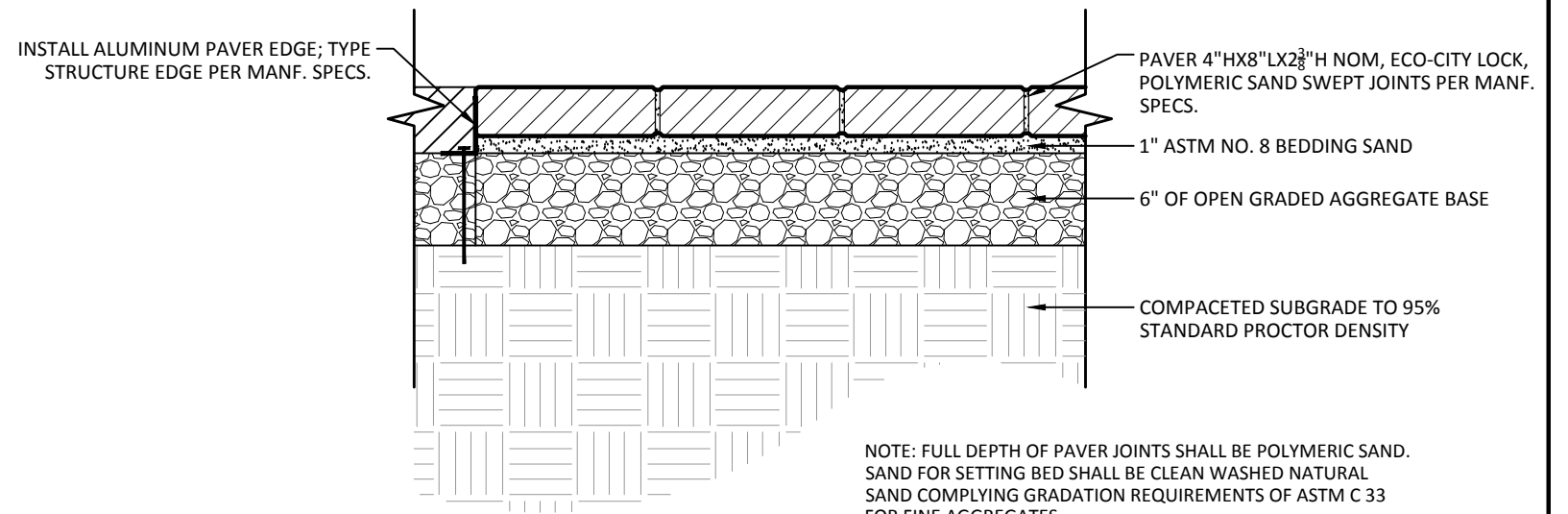


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DRAWN: HHPR TEAM
CHECKED: BRA/JSH
JOB NO. CWL-02
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PERFORATED PIPE GRANULAR TRENCH

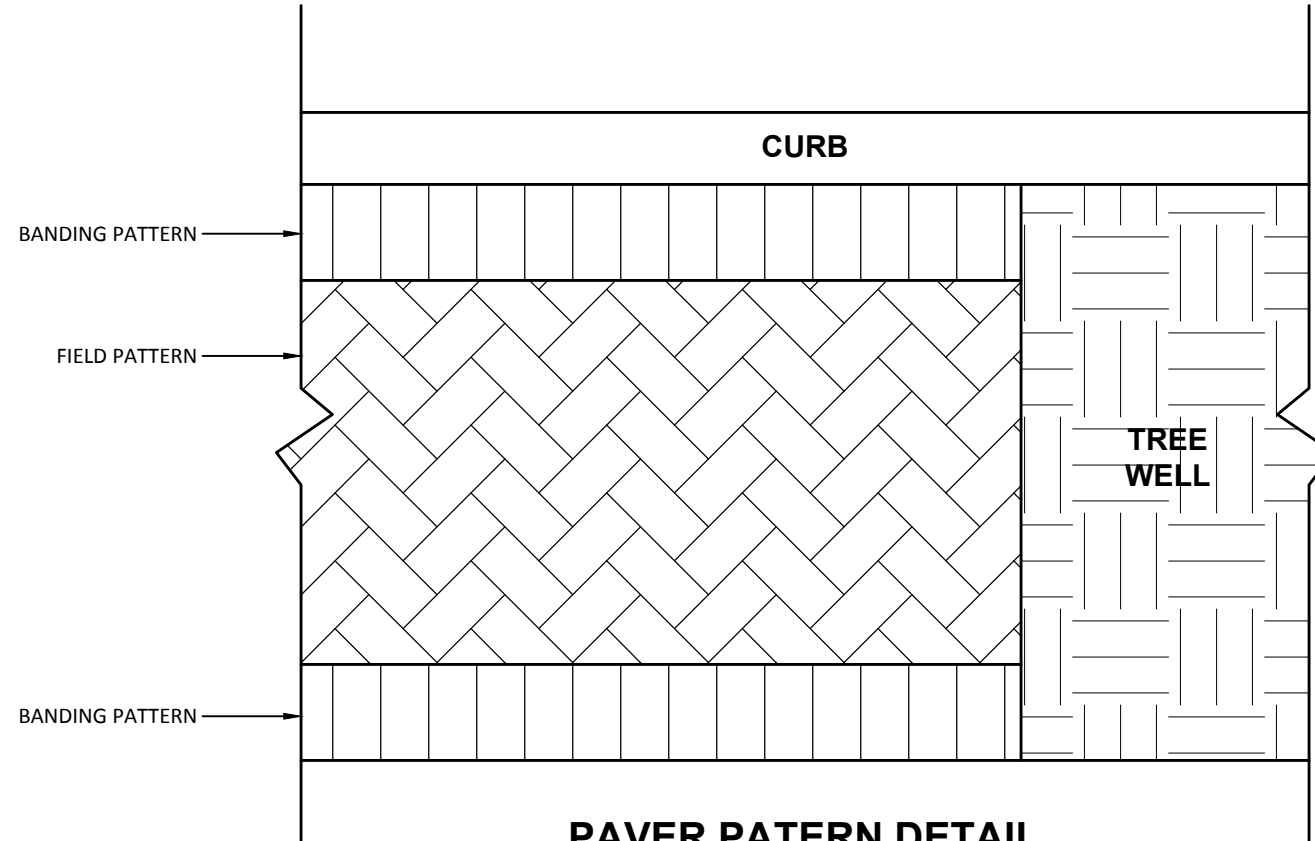
NTS



SAND SET PAVER DETAIL

NTS

NOTE: FULL DEPTH OF PAVER JOINTS SHALL BE POLYMERIC SAND. SAND FOR SETTING BED SHALL BE CLEAN WASHED NATURAL SAND COMPLYING GRADATION REQUIREMENTS OF ASTM C 33 FOR FINE AGGREGATES.



PAVER PATTERN DETAIL

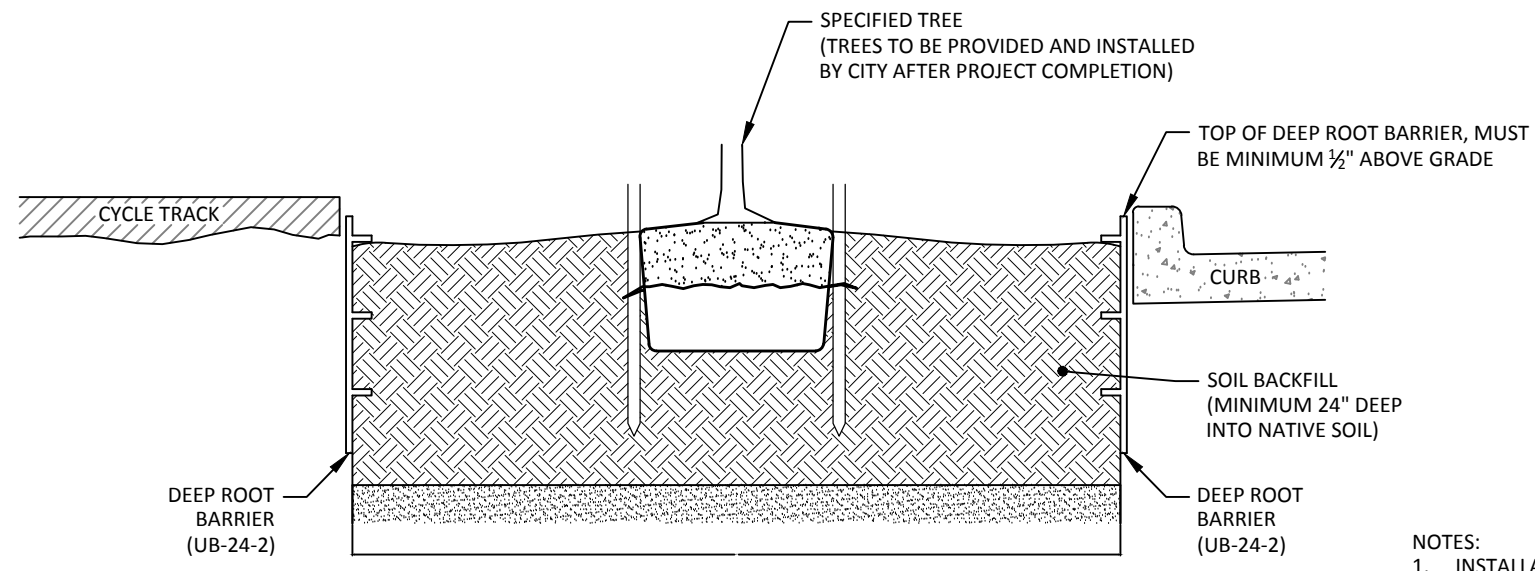
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MANUFACTURER:
WILLAMETTE GRAYSTONE OR APPROVED EQUAL

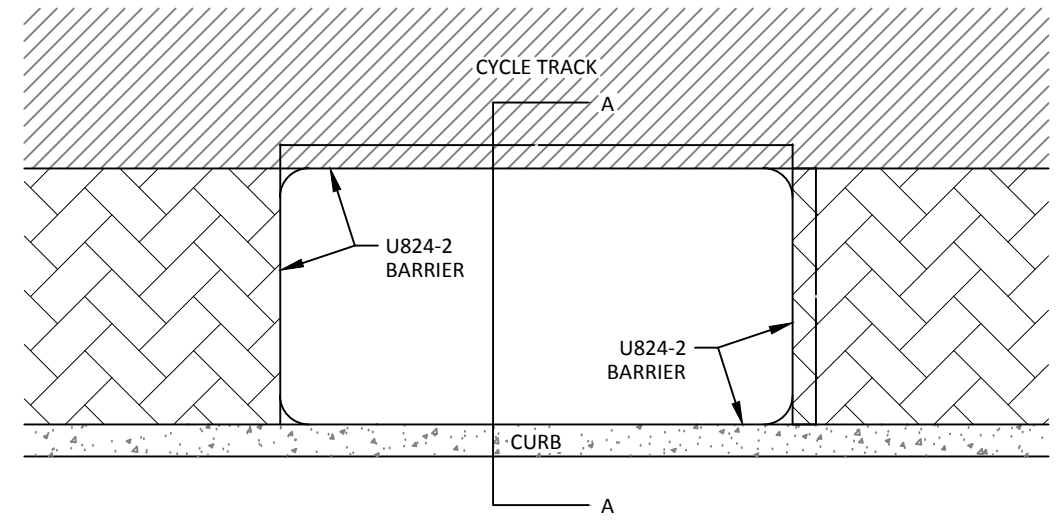
PRODUCT SPECIFICATIONS:
NOMINAL DIMENSIONS: 4"W X 8"L X 2 3/8"H, ECO-CITY LOCK
FIELD PATTERN: 45° HERRINGBONE, COLOR: WALNUT
BANDNG PATTERN: SOLDIER COURSE, COLOR: WALNUT

APPROVED EQUAL ALTERNATIVE:
WESTERN INTERLOCK OR APPROVED EQUAL

PRODUCT SPECIFICATIONS:
NOMINAL DIMENSIONS: 2 7/8"W X 7 7/8"L X 2 3/8"H, HOLLAND PERMEARE
FIELD PATTERN: 45° HERRINGBONE, COLOR: COLUMBIA BLEND
BANDNG PATTERN: SOLDIER COURSE, COLOR: COLUMBIA BLEND



- NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 2. THE RAISED ROOT GUIDING RIBS MUST BE FACING TOWARDS THE TREE ROOTS.
 3. THE TOP OF THE BARRIER PANELS MUST BE SLIGHTLY ABOVE GRADE (NEVER BELOW GRADE).
 4. POSITION BARRIER PANELS VERTICALLY WITH TOP AGAINST THE STRUCTURE TO BE PROTECTED.



DETAILS

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OREGON JUL. 11, 2006

BENJAMIN R. AUSTIN

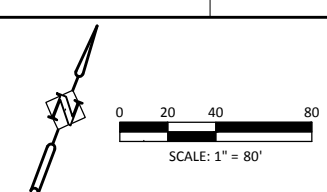
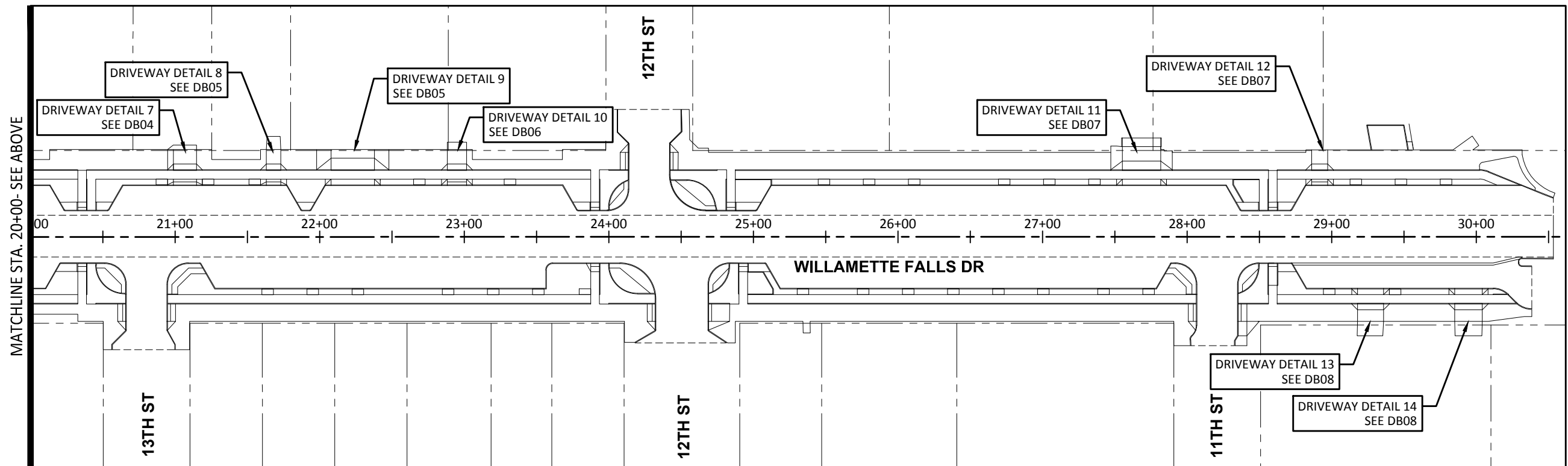
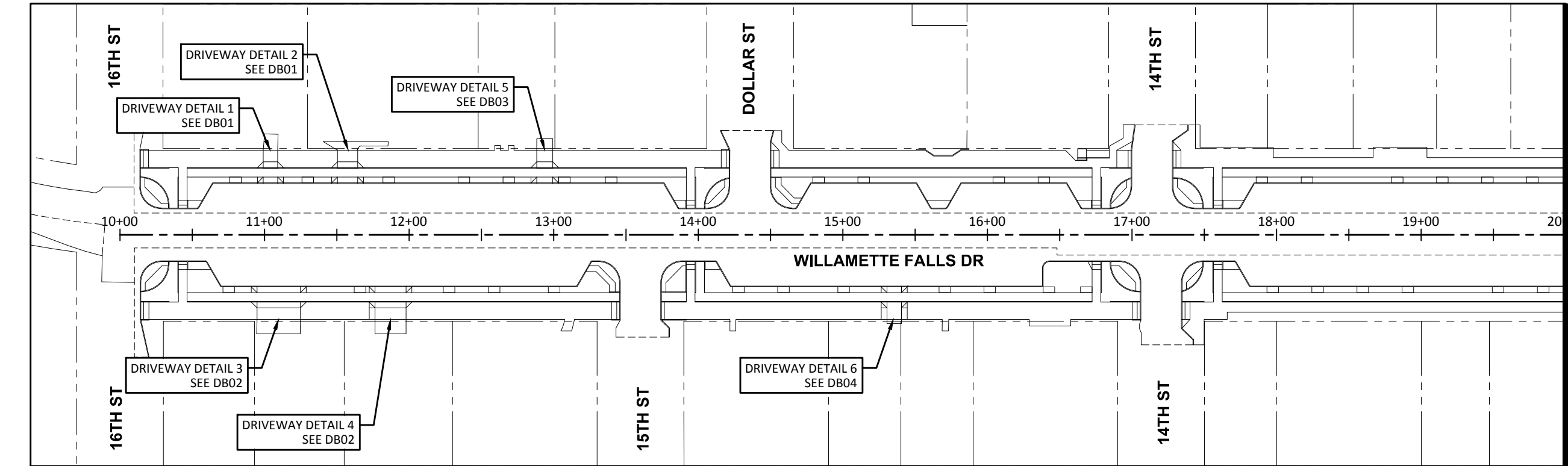
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DATE: 11-1-19	CWL-02

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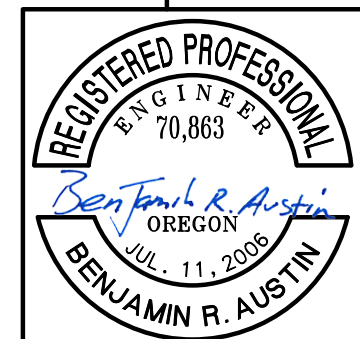
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DRIVEWAY DETAILS COVER SHEET
 WILLAMETTE FALLS DRIVE
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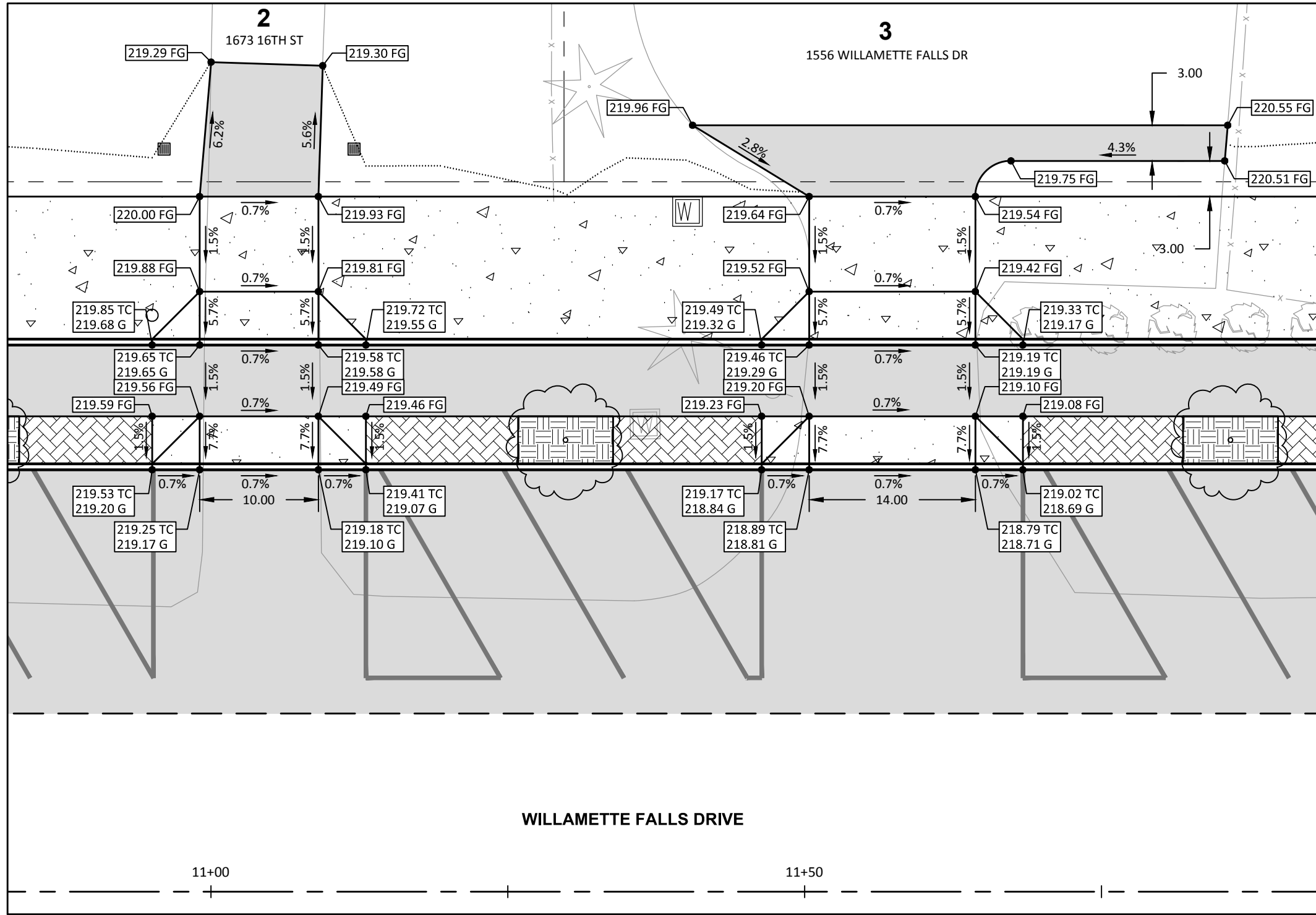
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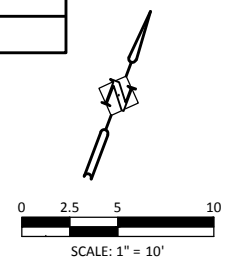
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DRIVEWAY 1
SCALE: 1" = 10'

DRIVEWAY 2
SCALE: 1" = 10'



DRIVEWAY DETAILS
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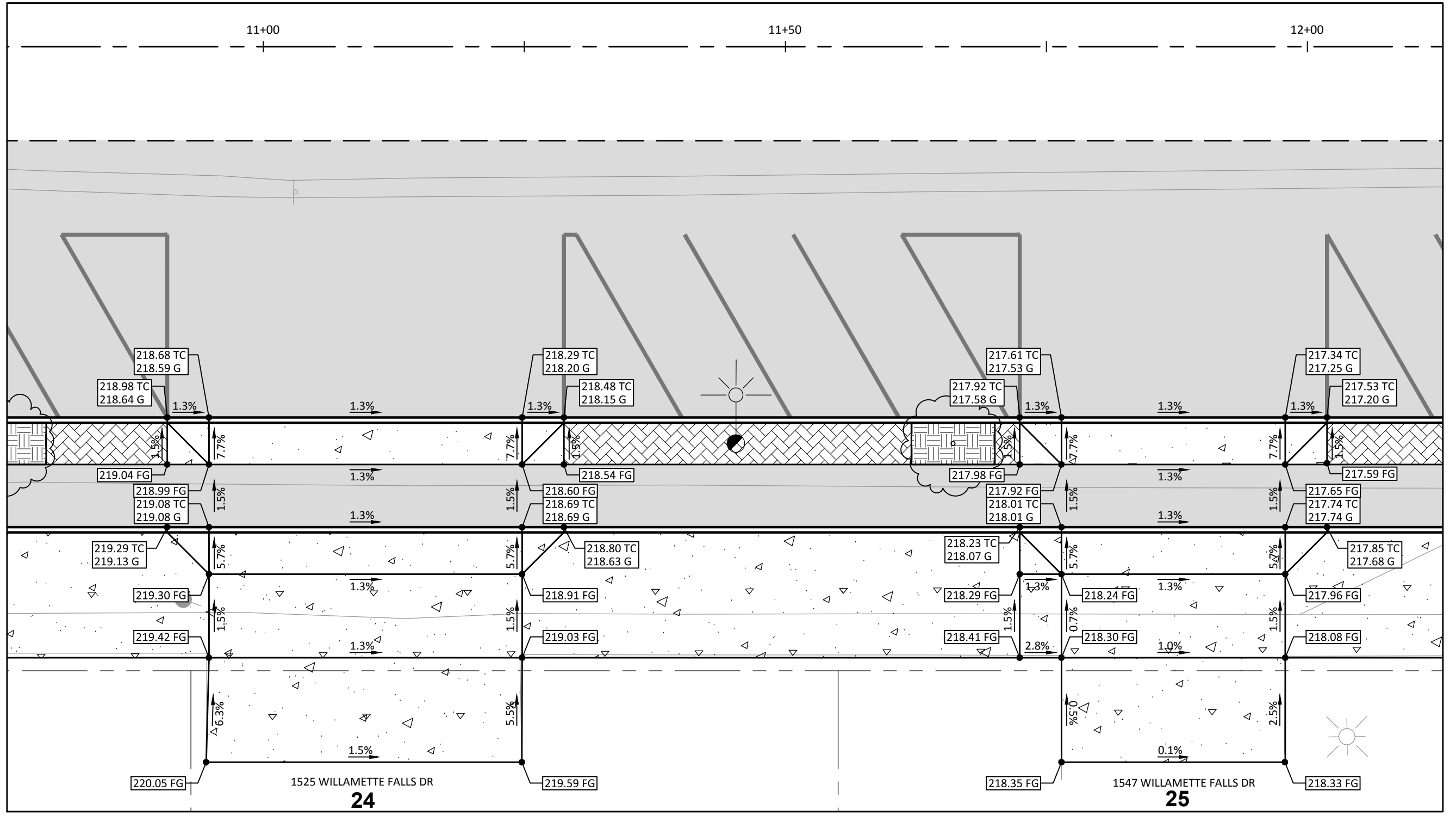


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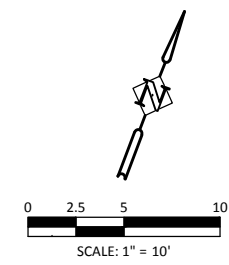
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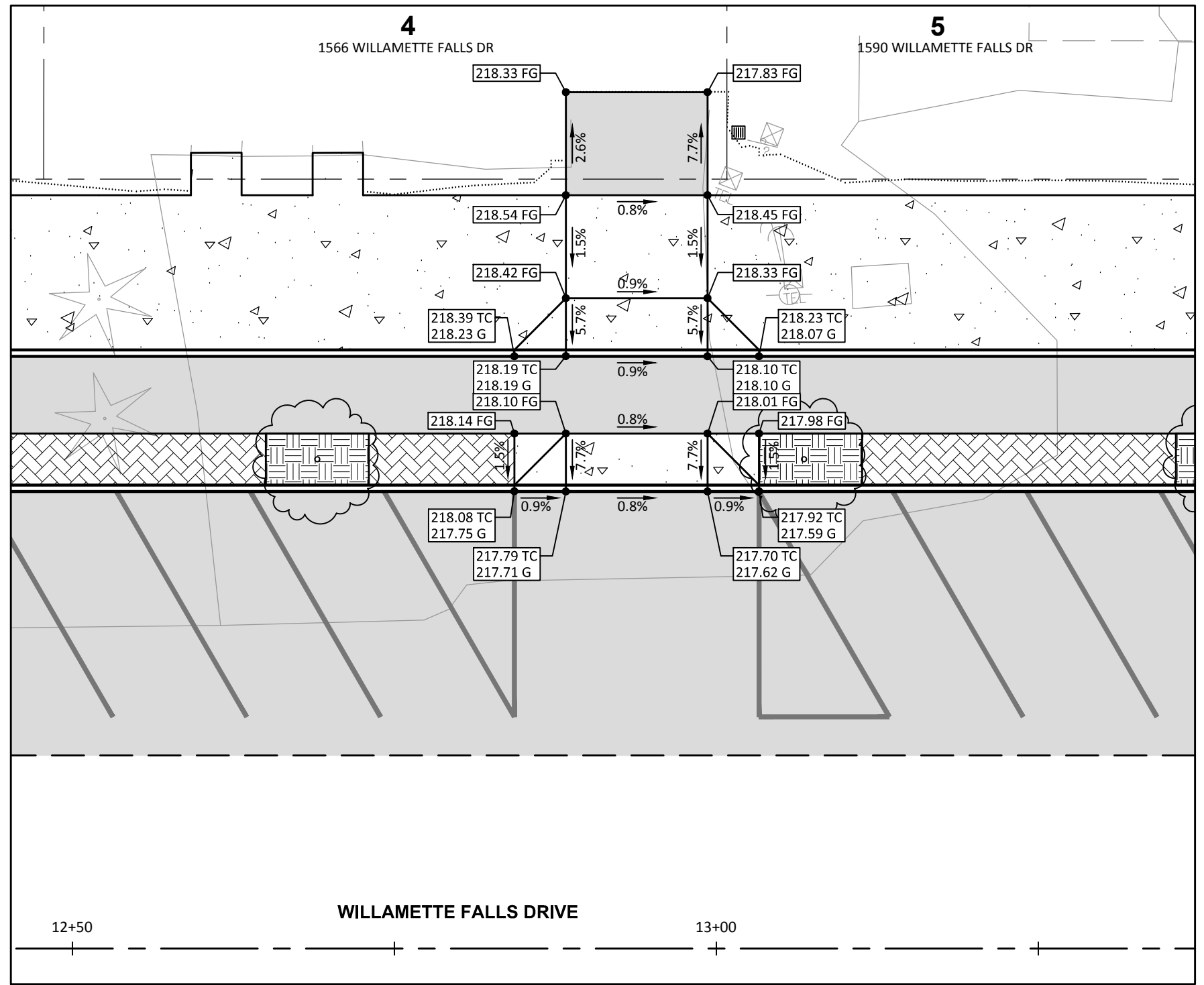


DRIVEWAY 3
 SCALE: 1" = 10'

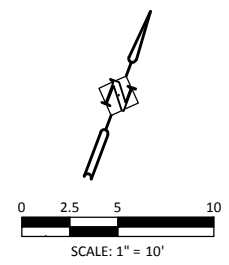
DRIVEWAY 4
 SCALE: 1" = 10'



DRAWING NAME: CWL02-DB-DRIVEWAY DETAILS.DWG



DRIVEWAY 5
SCALE: 1" = 10'



DRIVEWAY DETAILS
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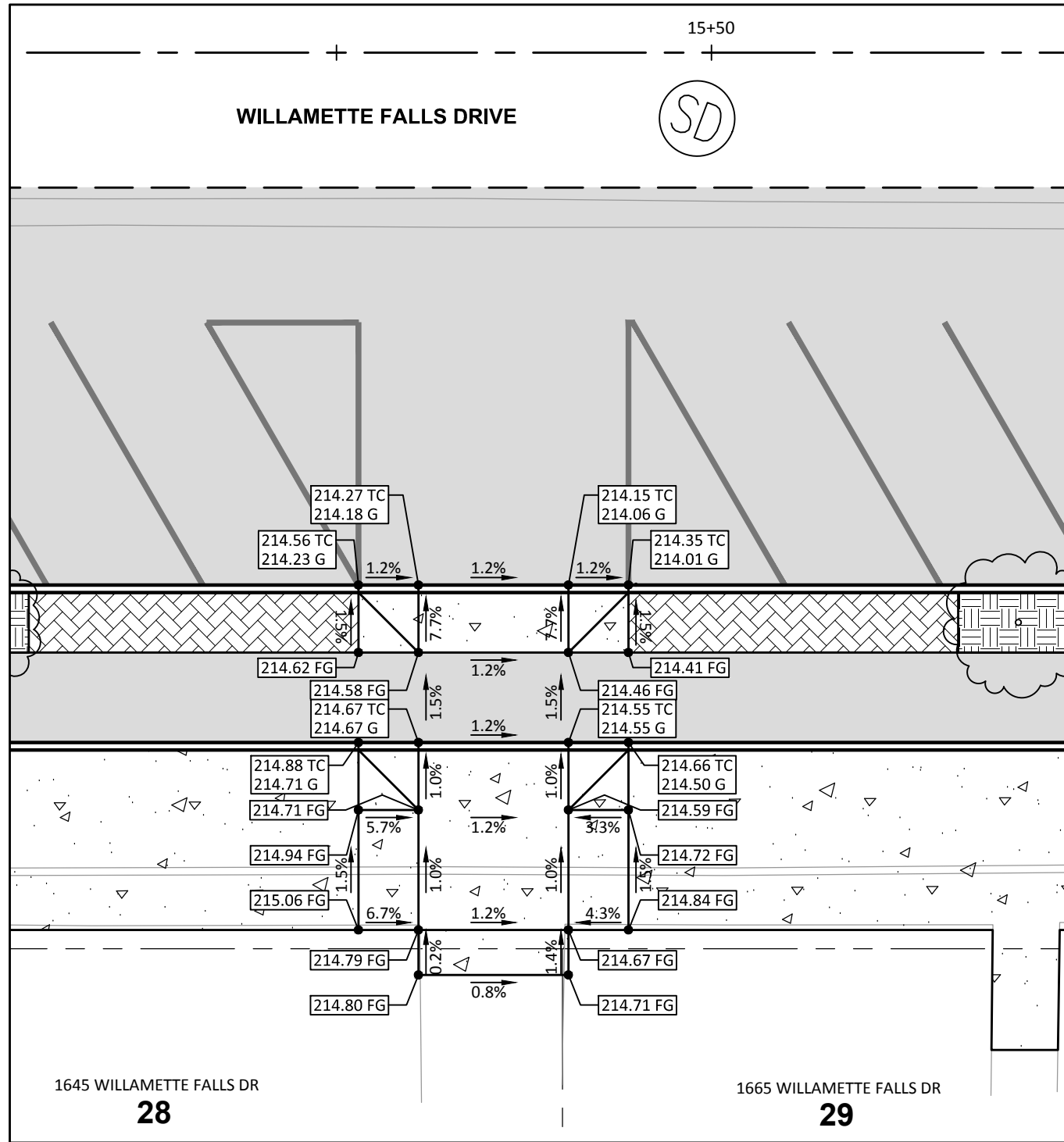


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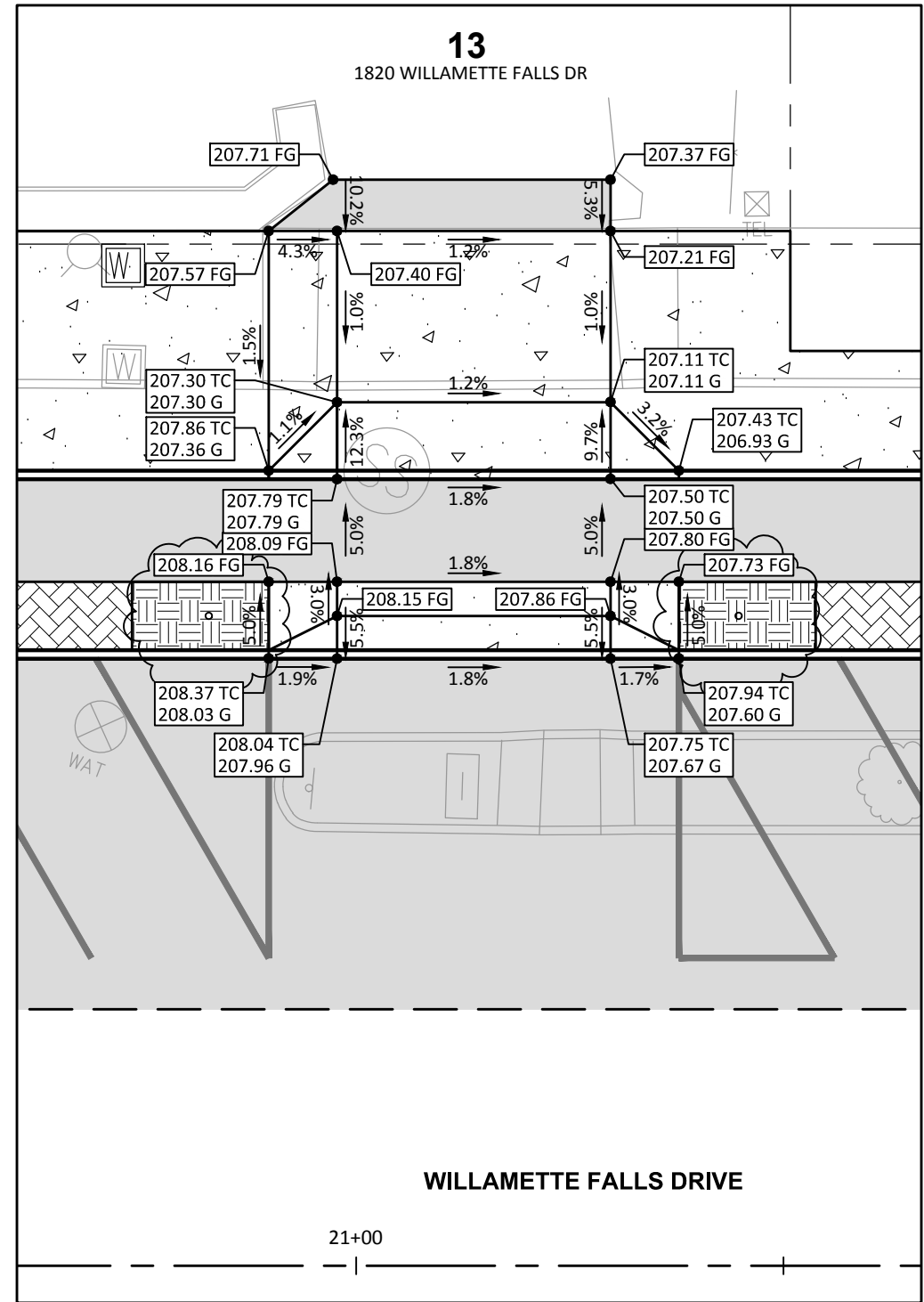
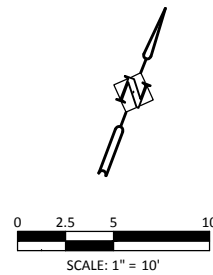


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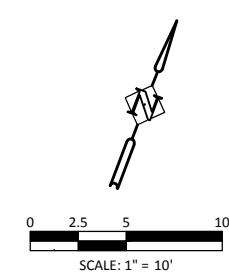
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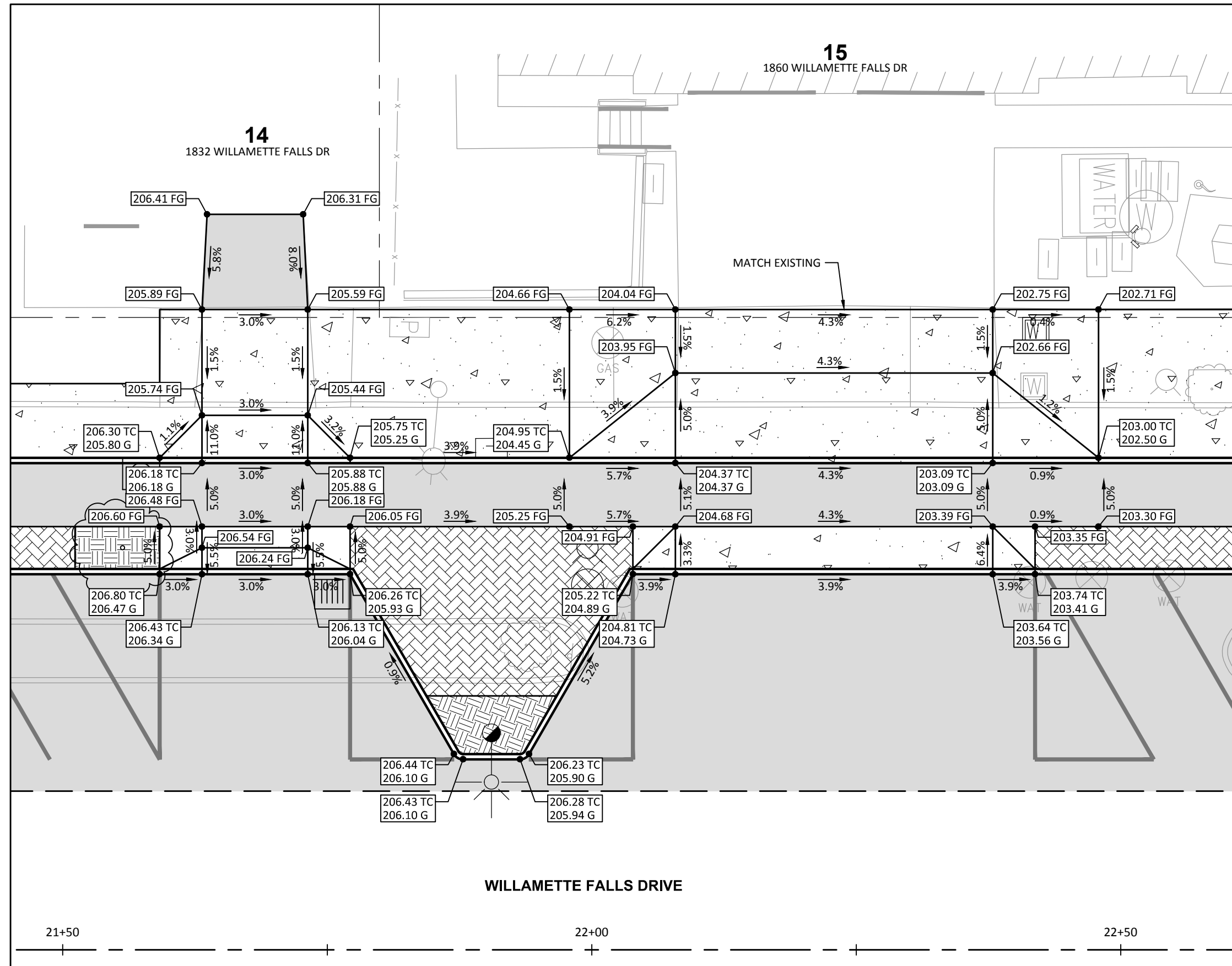
DRIVEWAY 6
 SCALE: 1" = 10'



DRIVEWAY 7
 SCALE: 1" = 10'

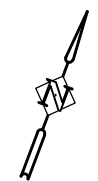
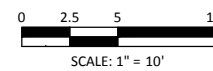


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DRIVEWAY 8
SCALE: 1" = 10'

DRIVEWAY 9
SCALE: 1" = 10'



DRIVEWAY DETAILS
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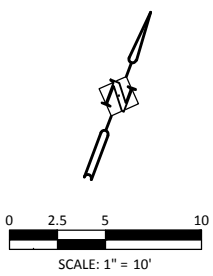
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BENJAMIN R. AUSTIN

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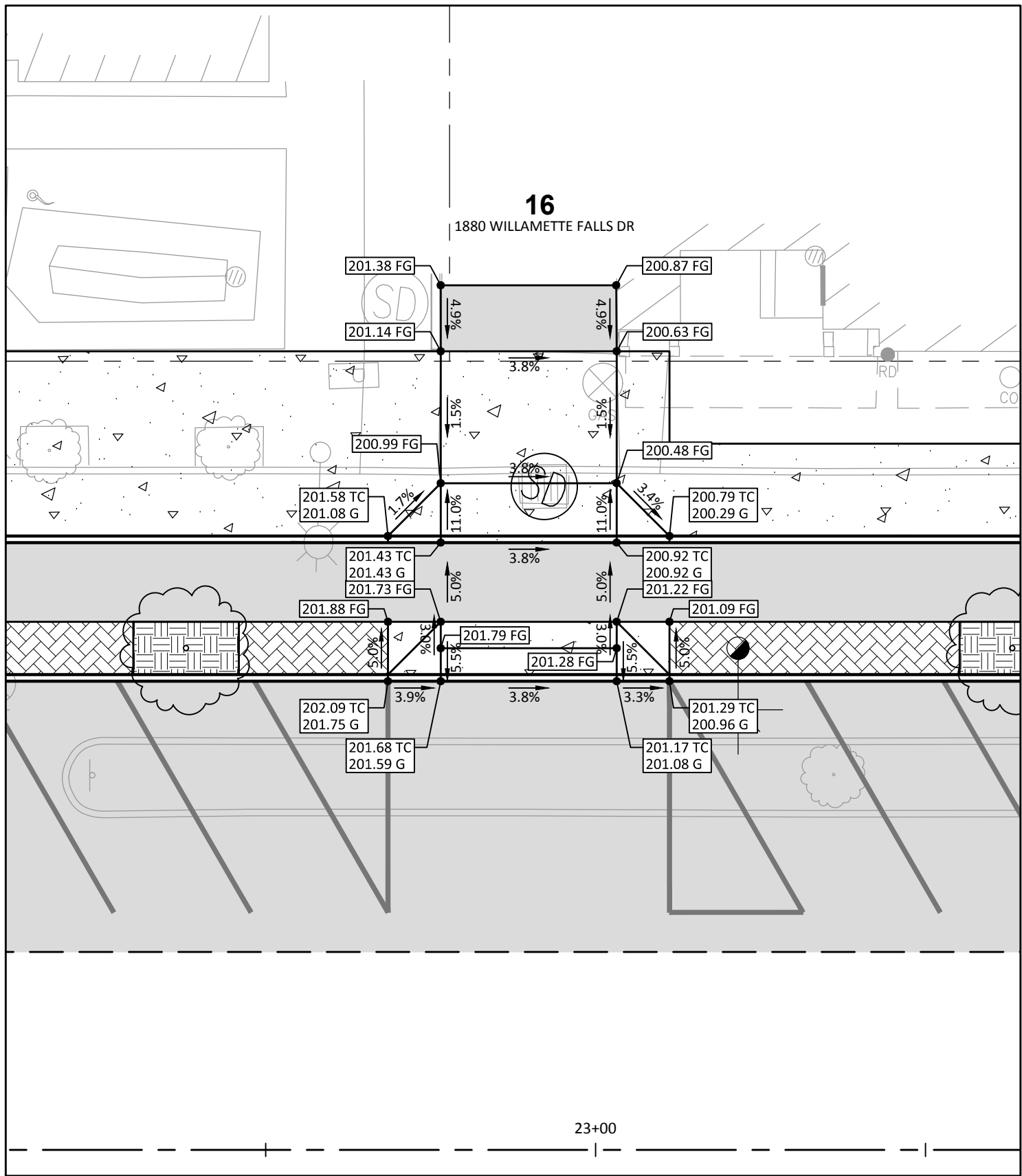
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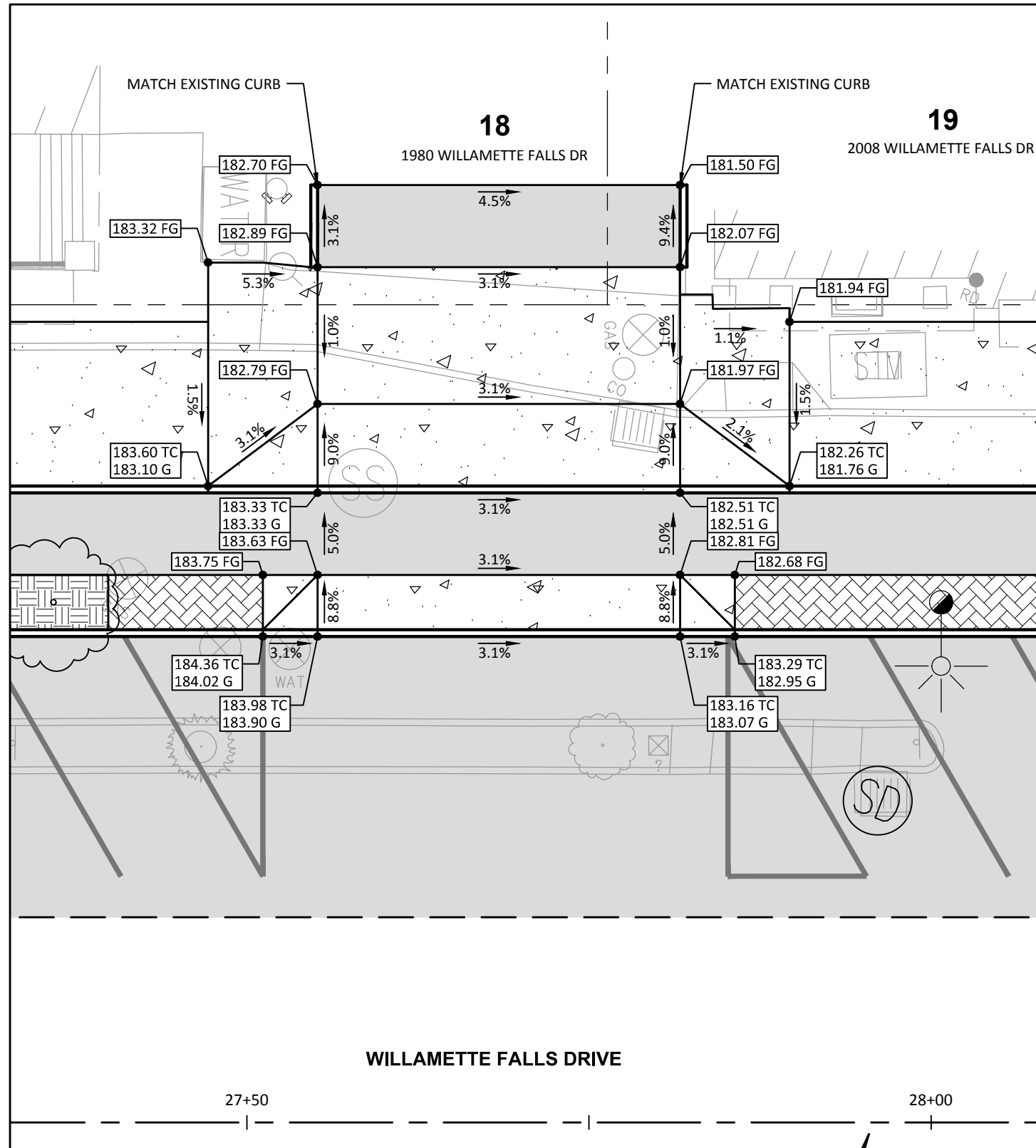
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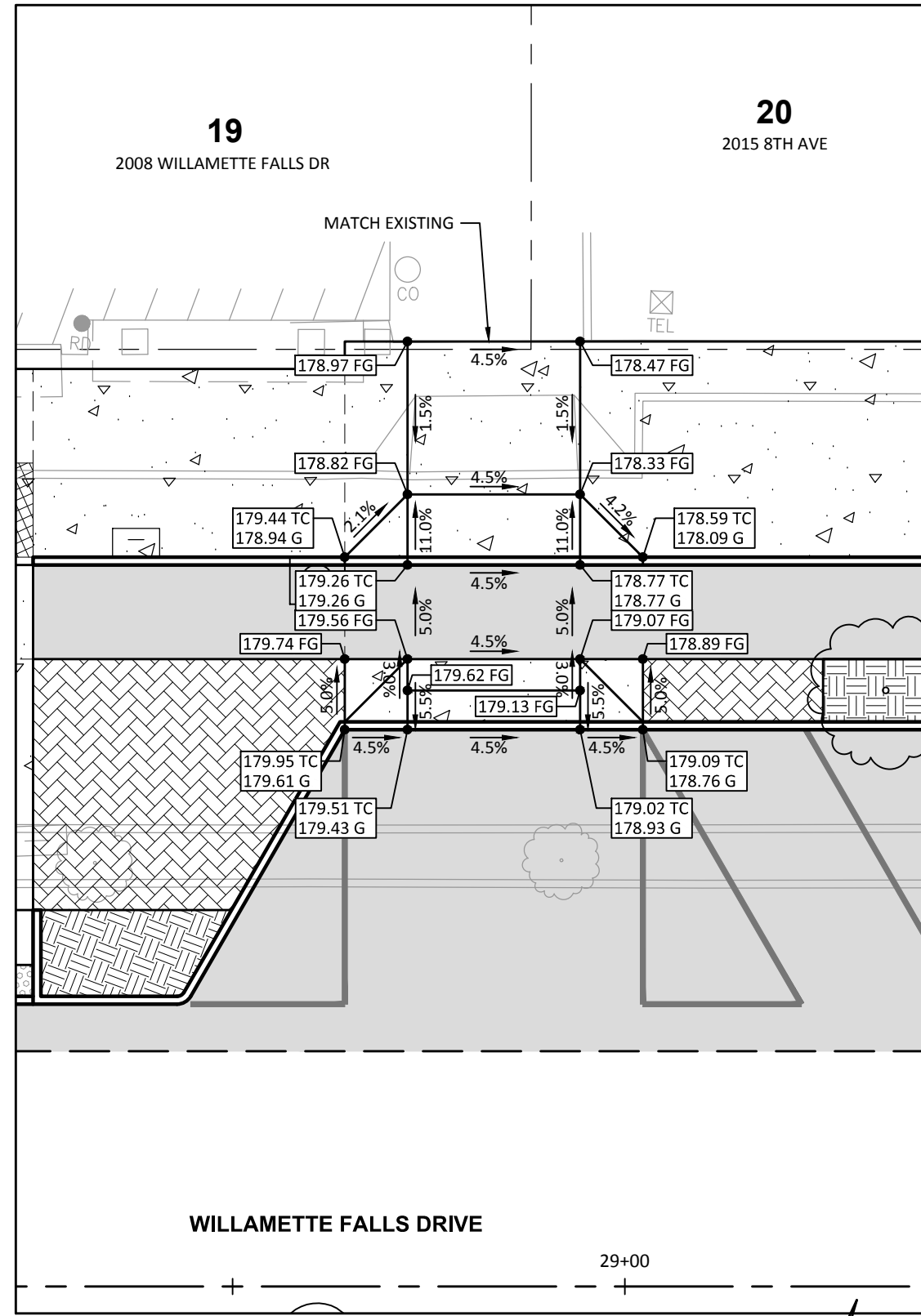
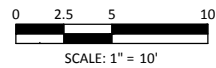


DRIVEWAY 10
 SCALE: 1" = 10'

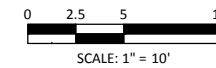
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DRIVEWAY 11
SCALE: 1" = 10'



DRIVEWAY 12
SCALE: 1" = 10'



DRIVEWAY DETAILS
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SHEET NO.
DB07
JOB NO.
CWL-02

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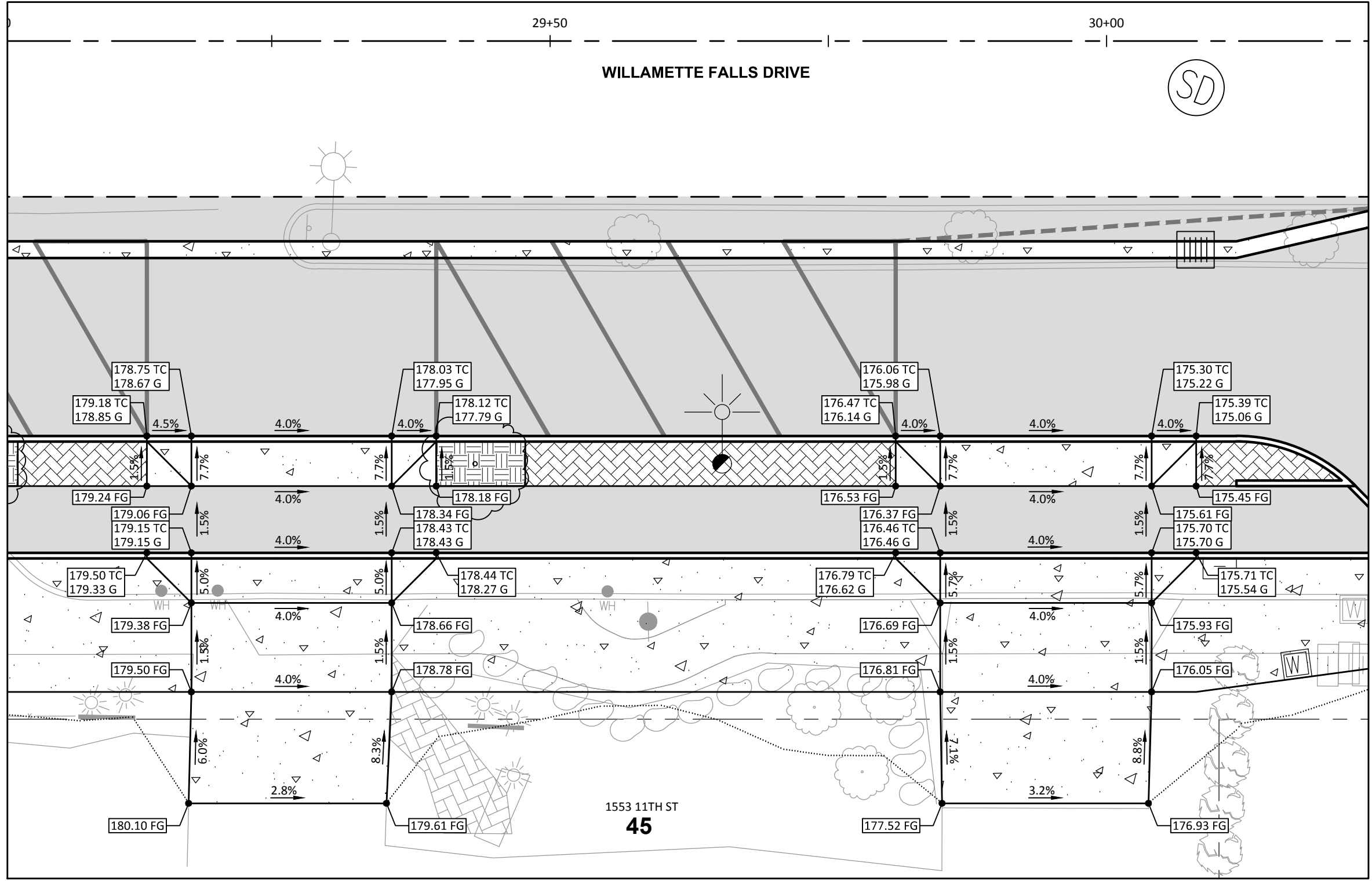
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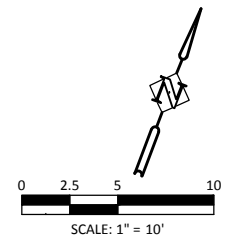
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JOB NO.	DATE:
CWL-02	11-1-19

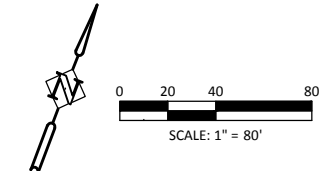
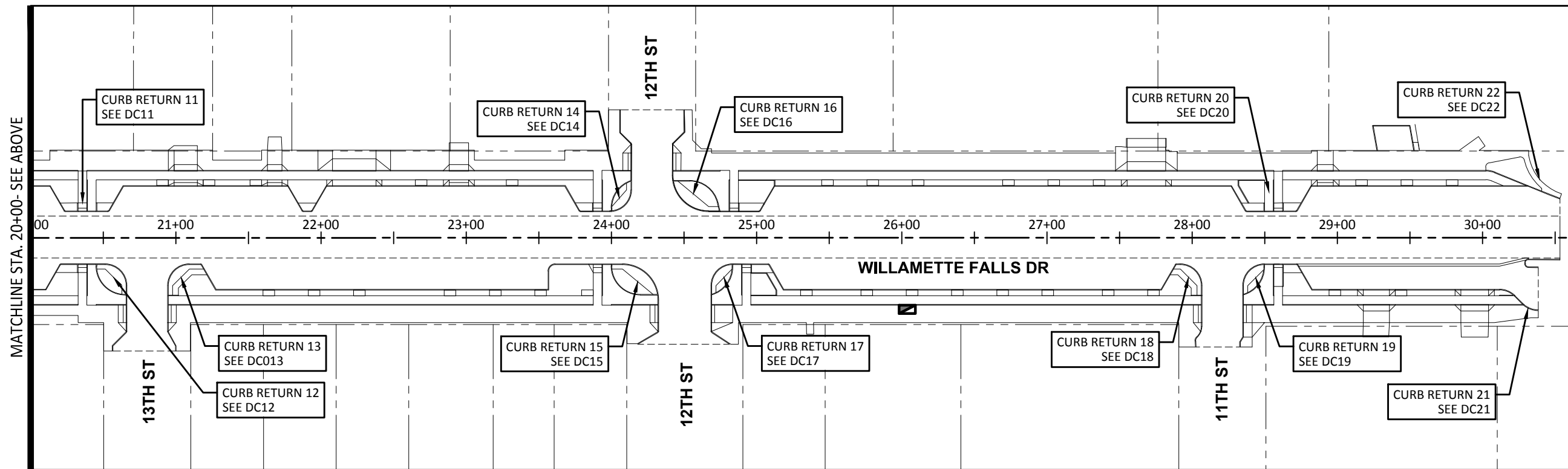
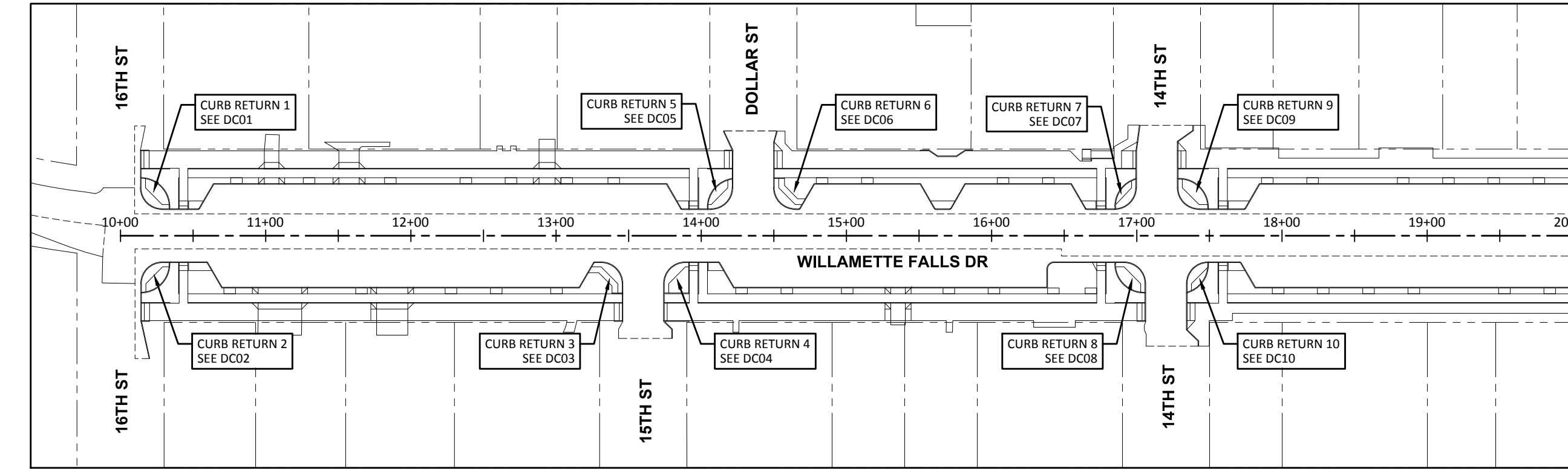


DRIVEWAY 13
 SCALE: 1" = 10'

DRIVEWAY 14
 SCALE: 1" = 10'



DRAWING NAME: CWL02-DC-CURB RETURN COVER SHEET.DWG



CURB RETURN COVER SHEET
 WILLAMETTE FALLS DRIVE
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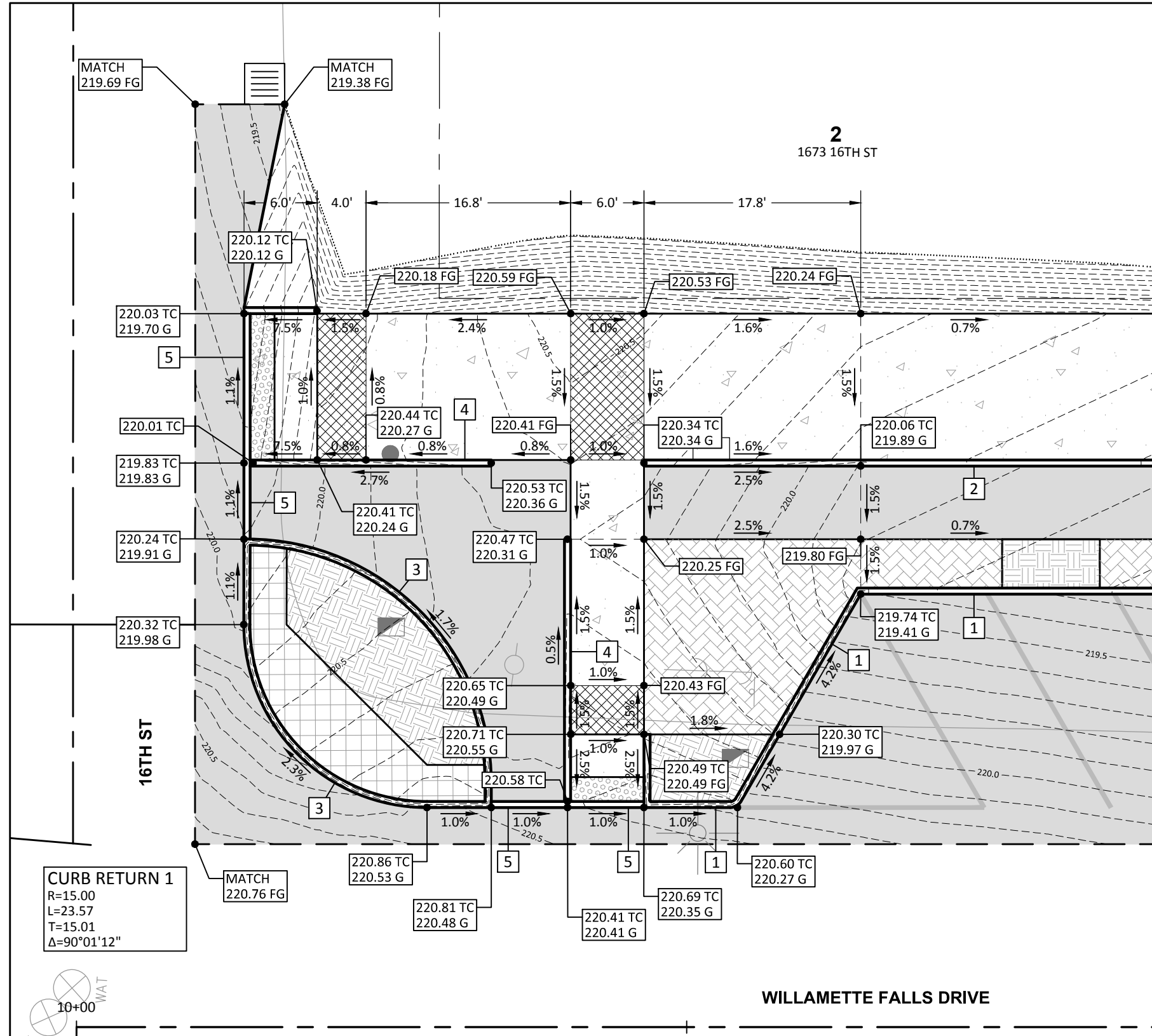
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DRAWING NAME: CWL02-DC-CURB RETURN-13TH-16TH.DWG



CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

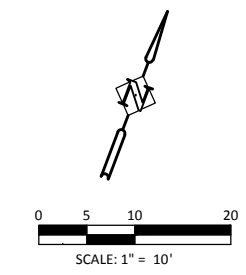
CURB RETURN DETAILS
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EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC01
CHECKED: BRA/JS	JOB NO.
DATE: 11-1-19	CWL-02



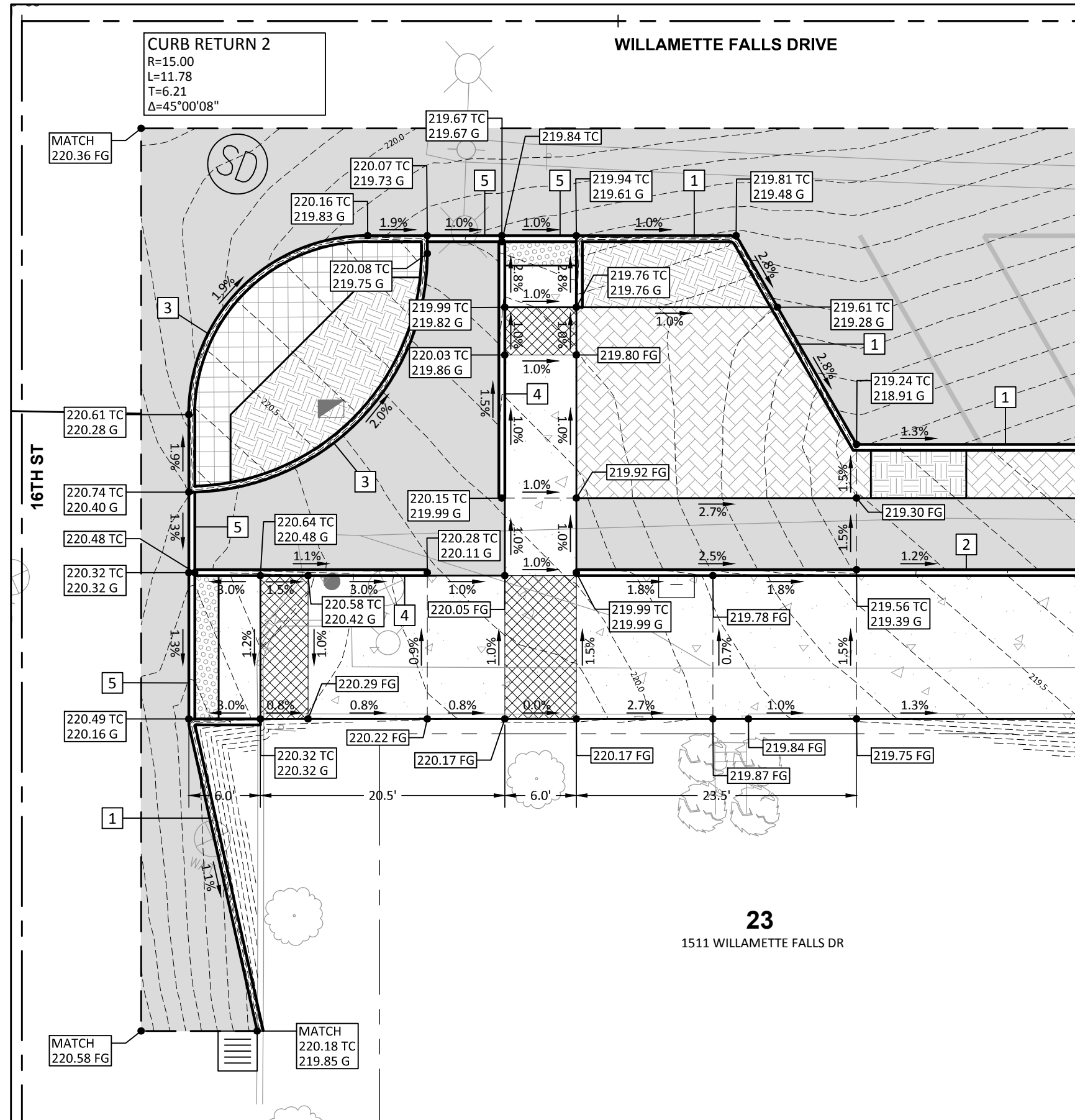
CURB RETURN 1
 SCALE: 1" = 10'

CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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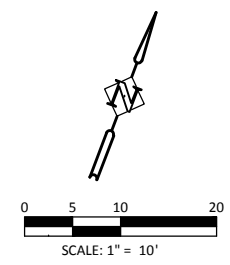
EXPIRES: 12/31/19	DESIGNED: HHPR TEAM
SHEET NO. DC02	DRAWN: HHPR TEAM
JOB NO. CWL-02	CHECKED: BRA/JSH
DATE: 11-1-19	



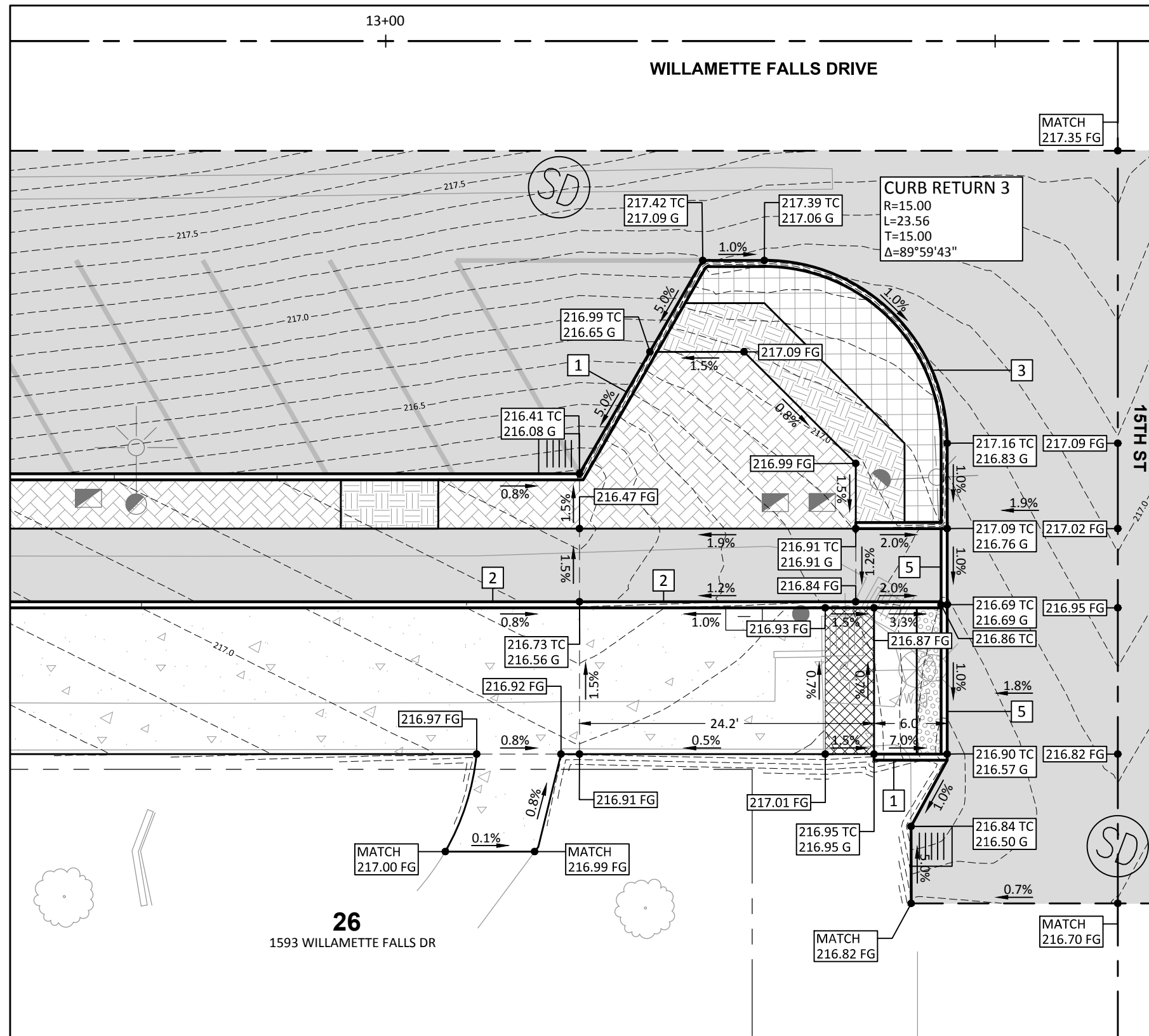
CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN 2
 SCALE: 1" = 10'



DRAWING NAME: CWL02-DC-CURB RETURN-13TH-15TH.DWG



CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

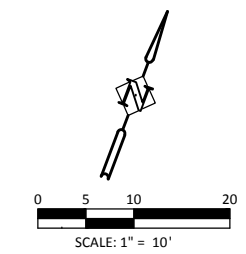
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REGISTERED PROFESSIONAL ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC03
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02



CURB RETURN 3
 SCALE: 1" = 10'

26
 1593 WILLAMETTE FALLS DR

CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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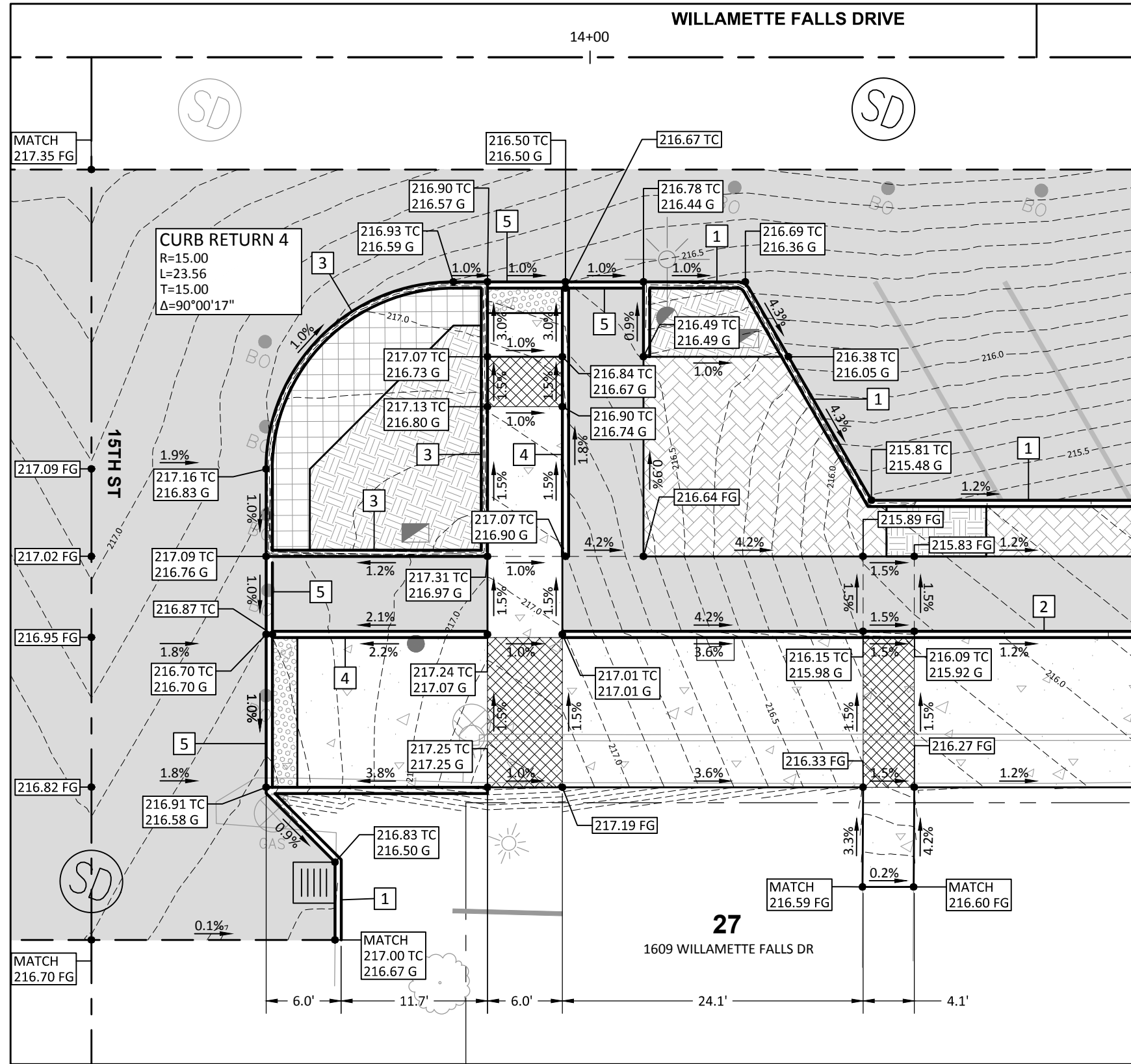


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EXPIRES: 12/31/19

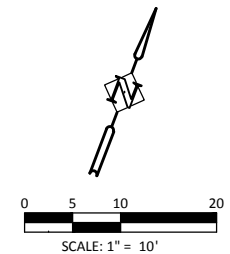
SHEET NO.	DESIGNED: HHPR TEAM
DC04	DRAWN: HHPR TEAM
	CHECKED: BRA/JSH
JOB NO. CWL-02	DATE: 11-1-19



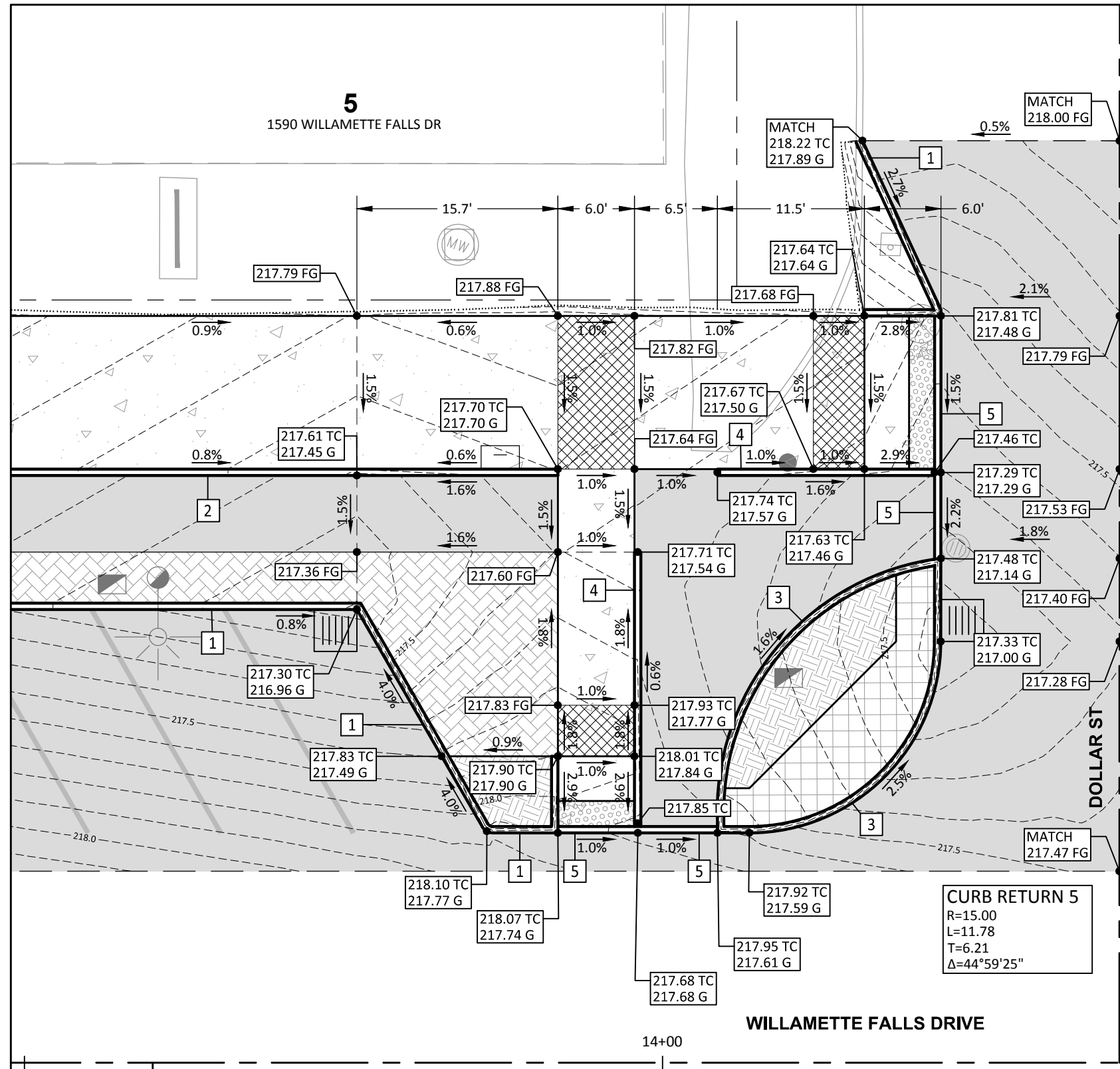
CURB RETURN 4
 SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE



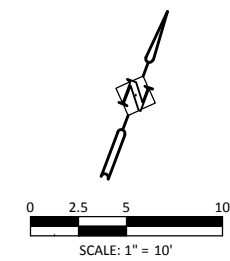
DRAWING NAME: CWL02-DC-CURB RETURN-13TH-16TH.DWG



CURB RETURN 5
SCALE: 1" = 10'

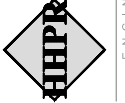
CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE



CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
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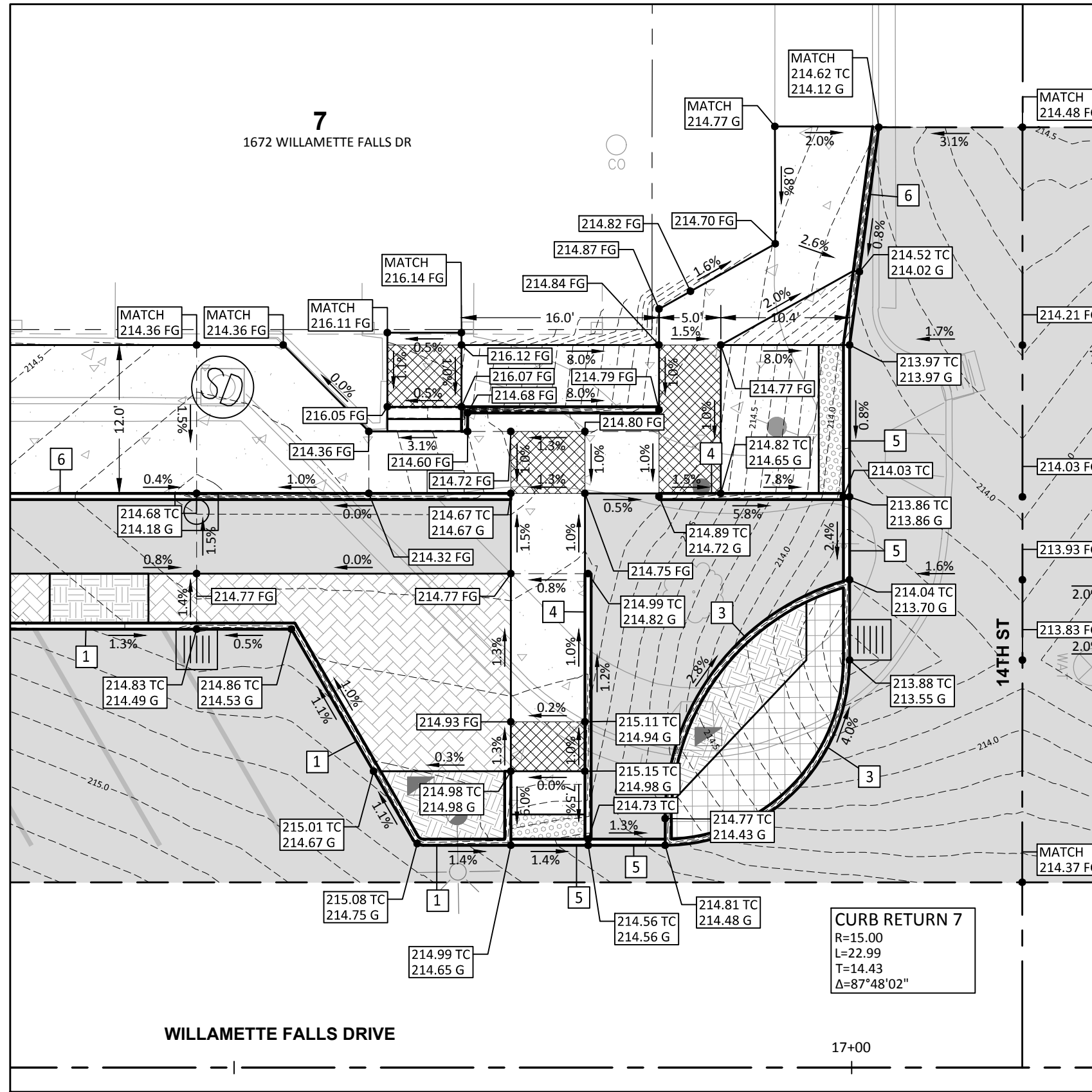


EXPIRES: 12/31/19

DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JS
DATE: 11-1-19

SHEET NO.
DC05
JOB NO.
CWL-02

DRAWING NAME: CWL02-DC-CURB RETURN-13TH-16TH.DWG



CURB RETURN 7
SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

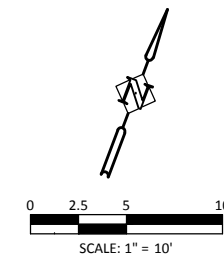
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EXPIRES: 12/31/19

DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JS
DATE: 11-1-19

SHEET NO.
DC07
JOB NO.
CWL-02

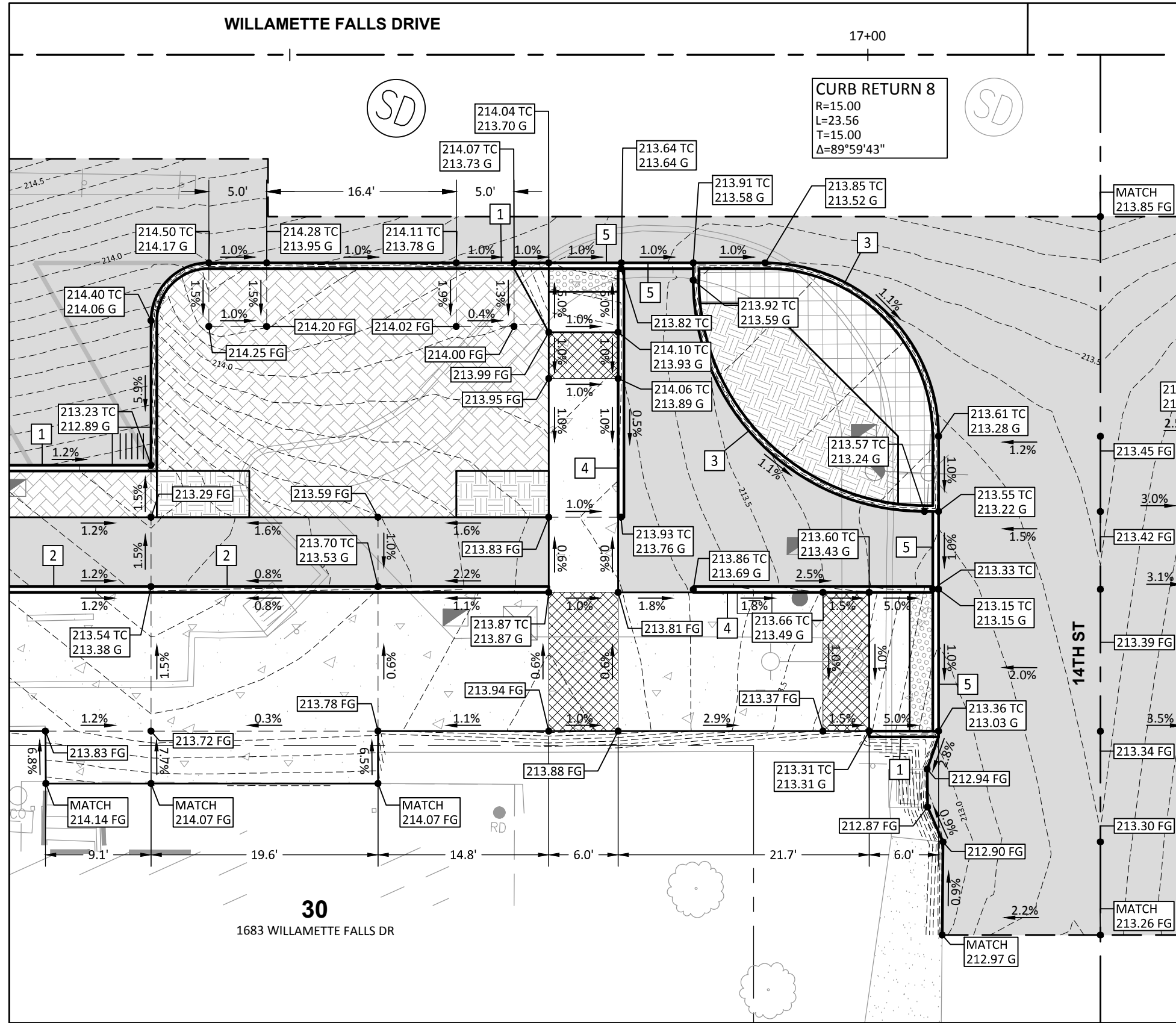


CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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SHEET NO.	DESIGNED:
DC08	HHPR TEAM
	DRAWN:
	HHPR TEAM
	CHECKED:
	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19

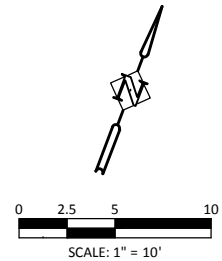


CURB TYPE LEGEND

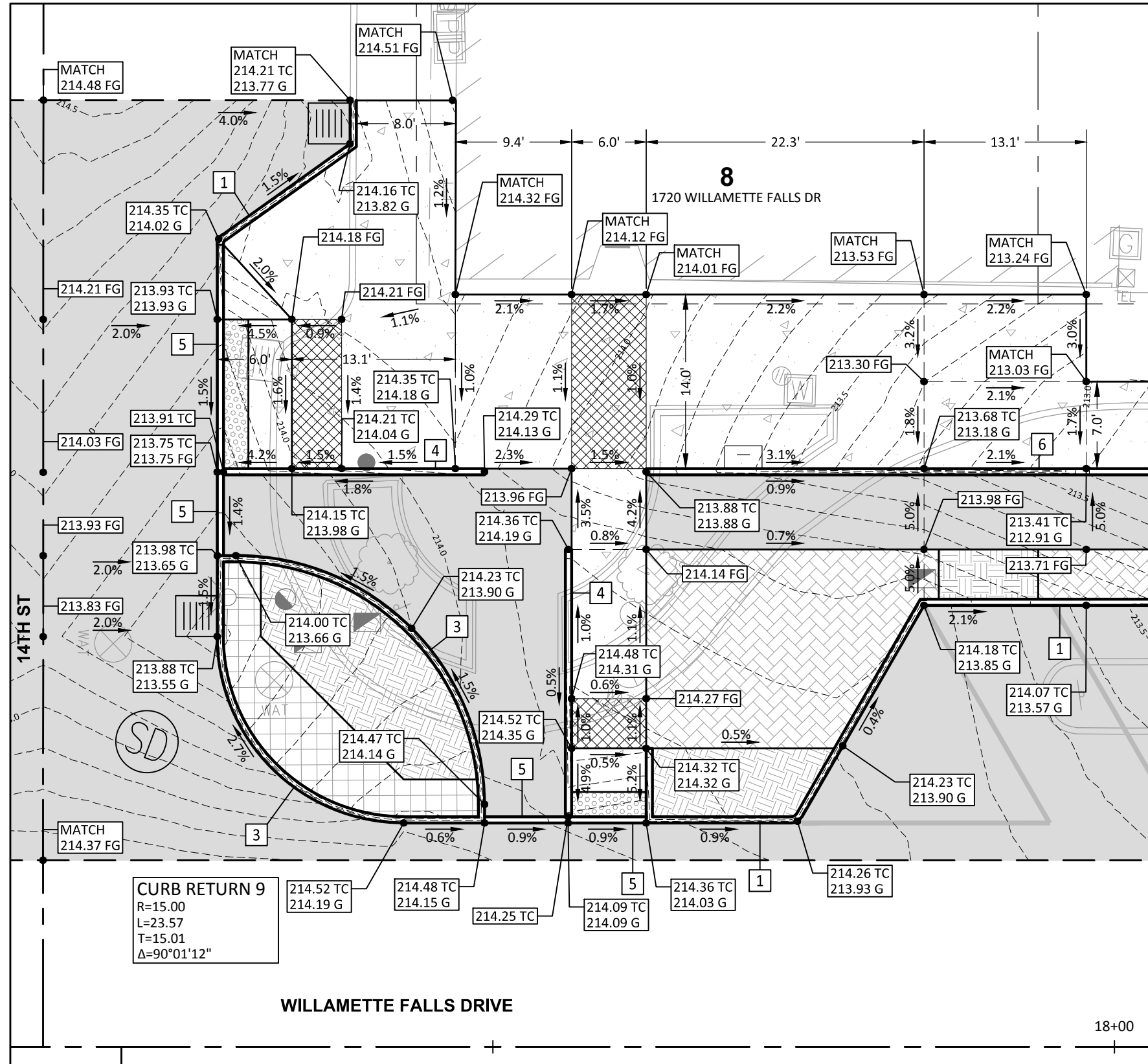
- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN 8

SCALE: 1" = 10'



DRAWING NAME: CWL02-DC-CURB RETURN-13TH-16TH.DWG

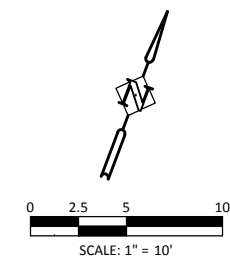


CURB RETURN 9
 R=15.00
 L=23.57
 T=15.01
 Δ=90°01'12"

CURB RETURN 9
 SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE



CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
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REGISTERED PROFESSIONAL ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC09
CHECKED: BRA/JS	JOB NO.
DATE: 11-1-19	CWL-02

CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
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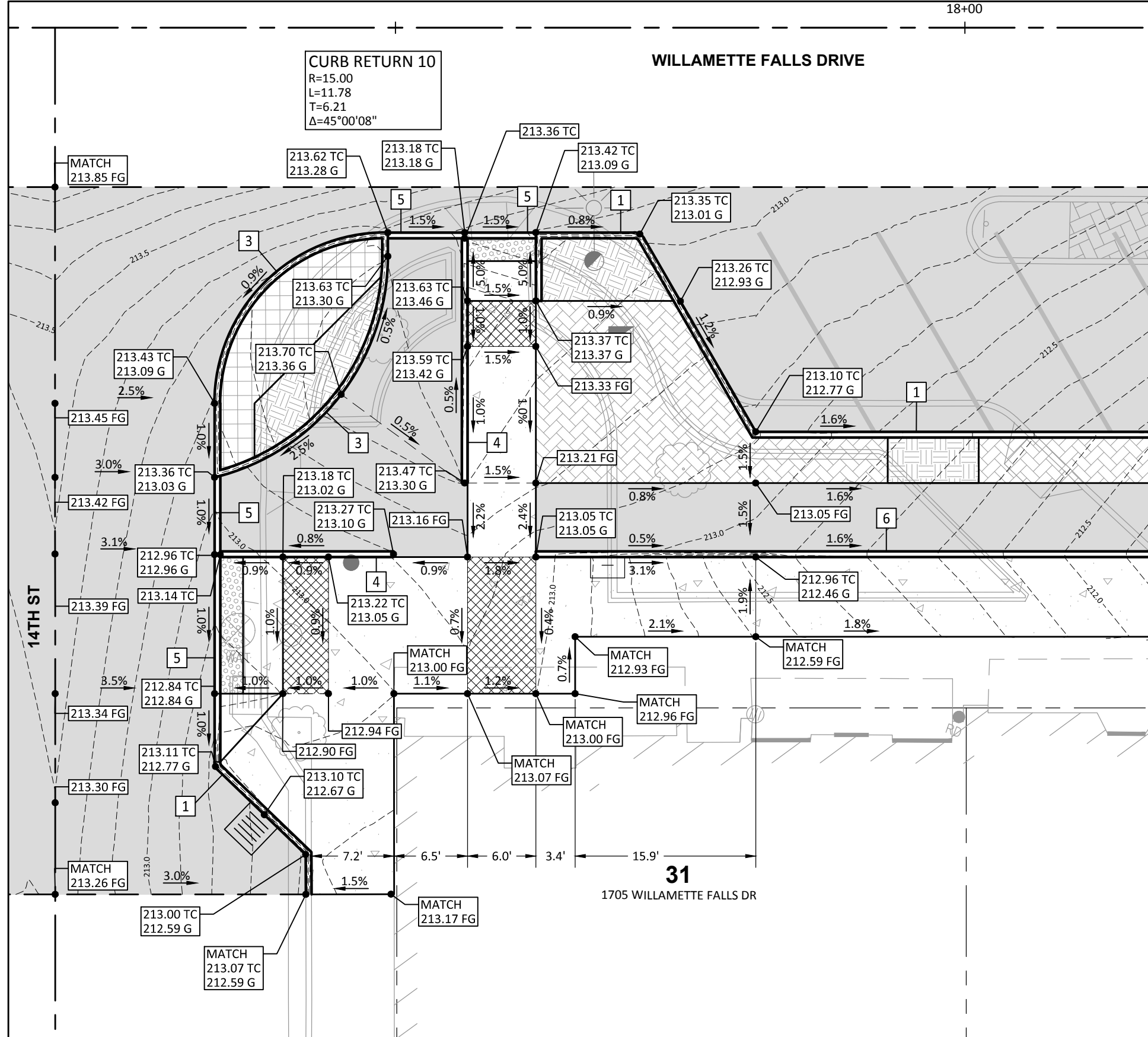


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SHEET NO.	DESIGNED: HHPR TEAM
DC10	DRAWN: HHPR TEAM
	CHECKED: BRA/JSH
JOB NO. CWL-02	DATE: 11-1-19

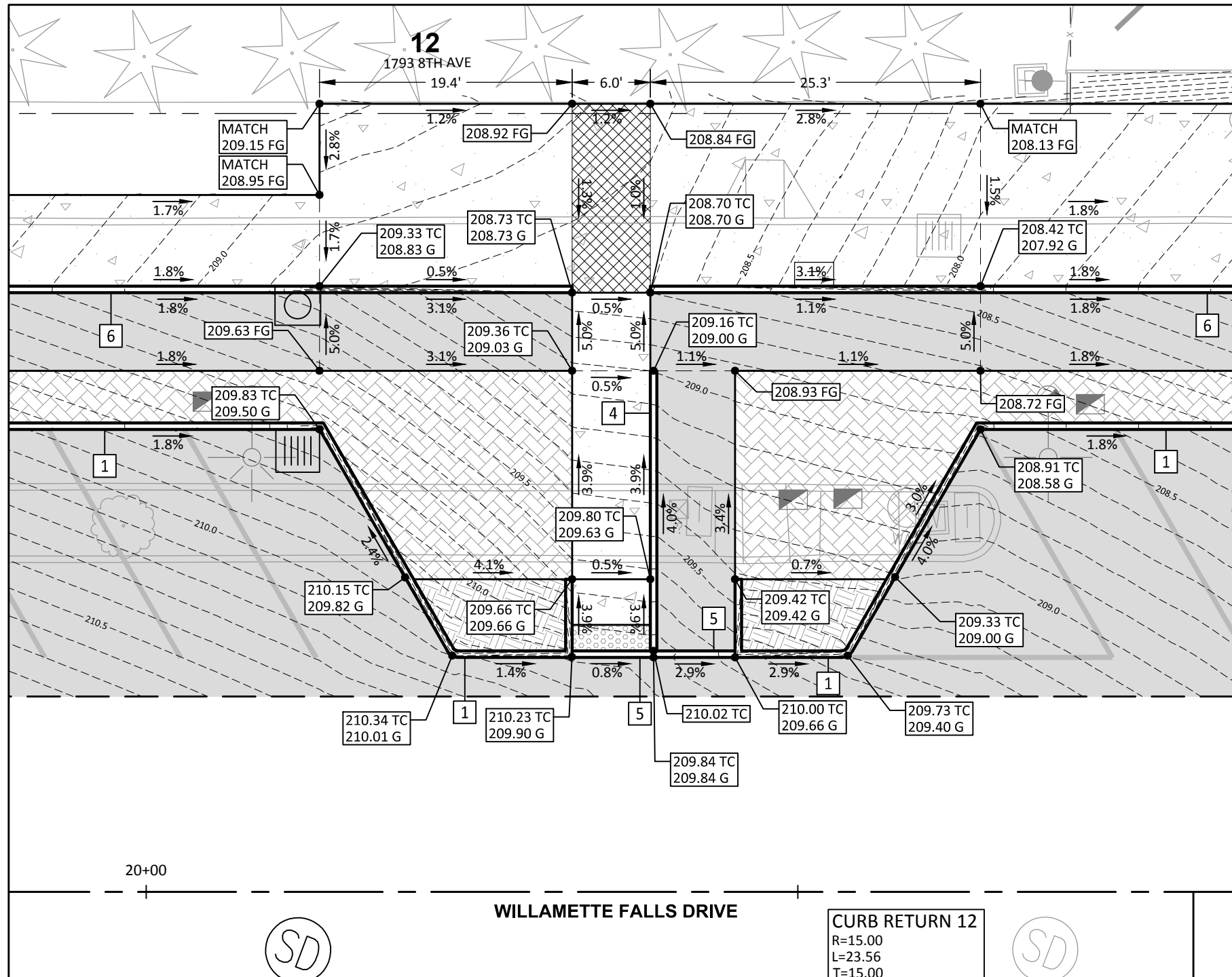


CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN 10
 SCALE: 1" = 10'

DRAWING NAME: CWL02-DC-CURB RETURN-13TH-16TH.DWG

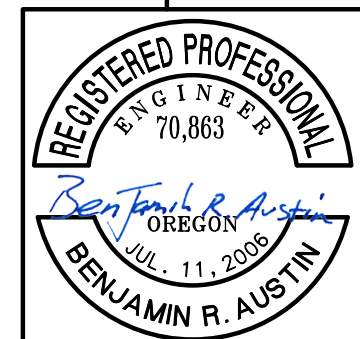


CURB TYPE LEGEND

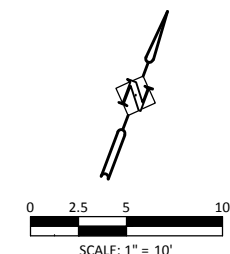
- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC11
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02



CURB RETURN 11
 SCALE: 1" = 10'

CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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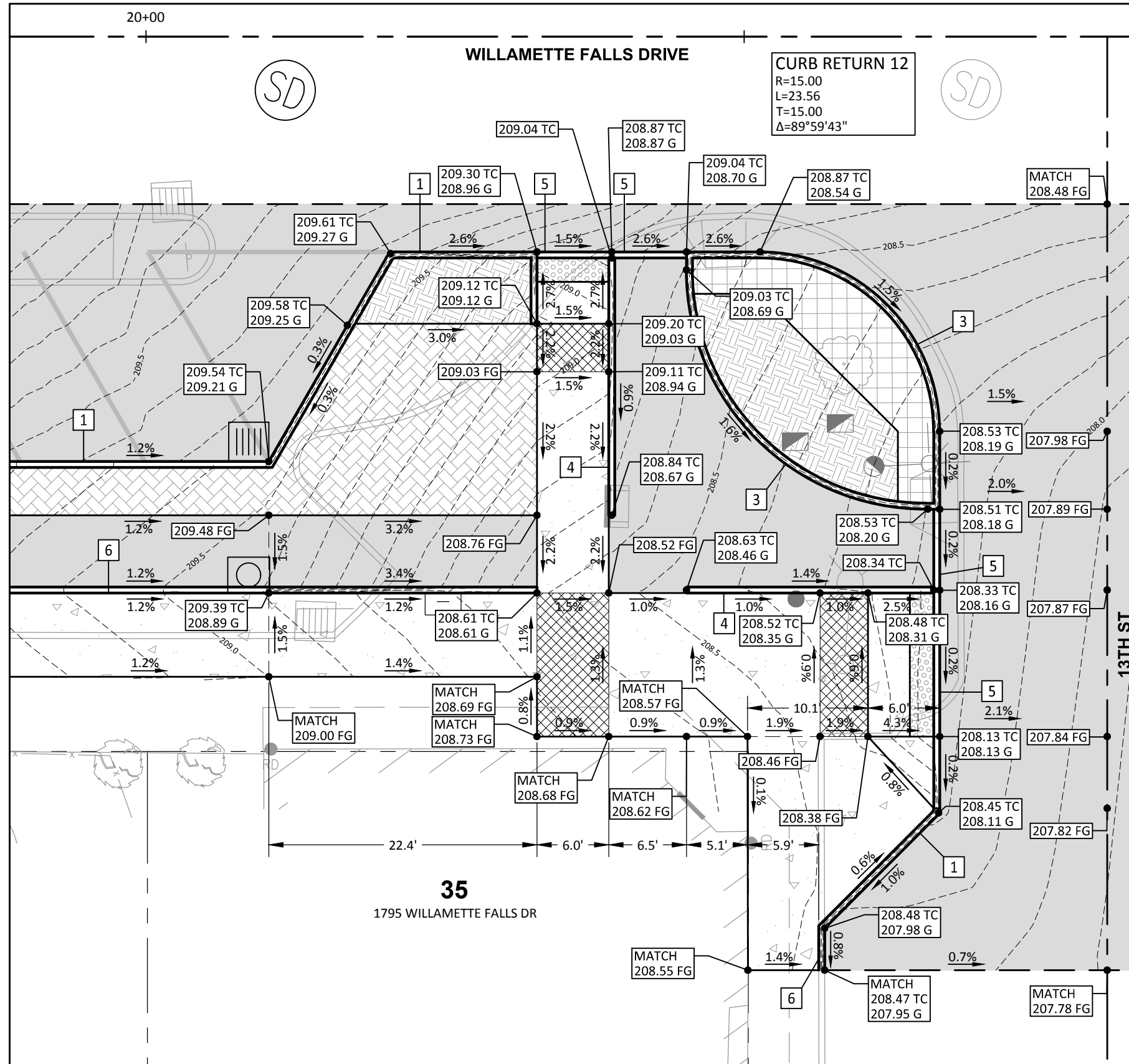


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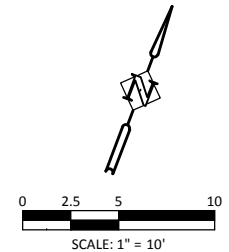
SHEET NO. **DC12**
 DESIGNED: HHPR TEAM
 DRAWN: HHPR TEAM
 CHECKED: BRA/JSH
 JOB NO. CWL-02
 DATE: 11-1-19



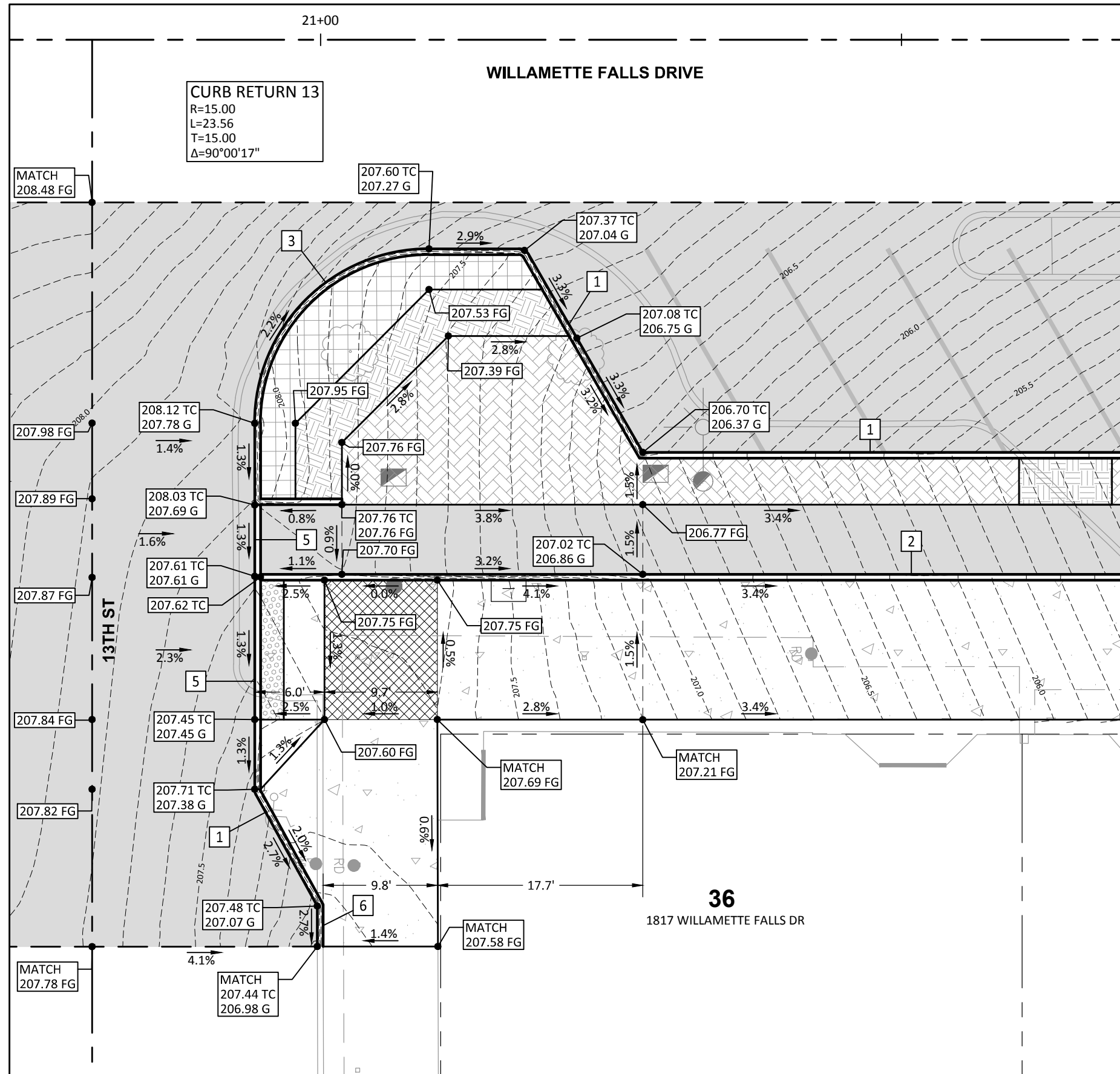
CURB RETURN 12
 SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE



DRAWING NAME: CWL02-DC-CURB RETURN-13TH-16TH.DWG



CURB RETURN 13
SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

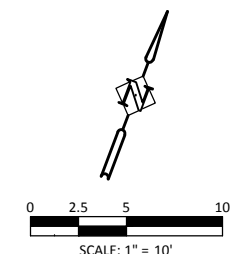
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 ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
 BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC13
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02



CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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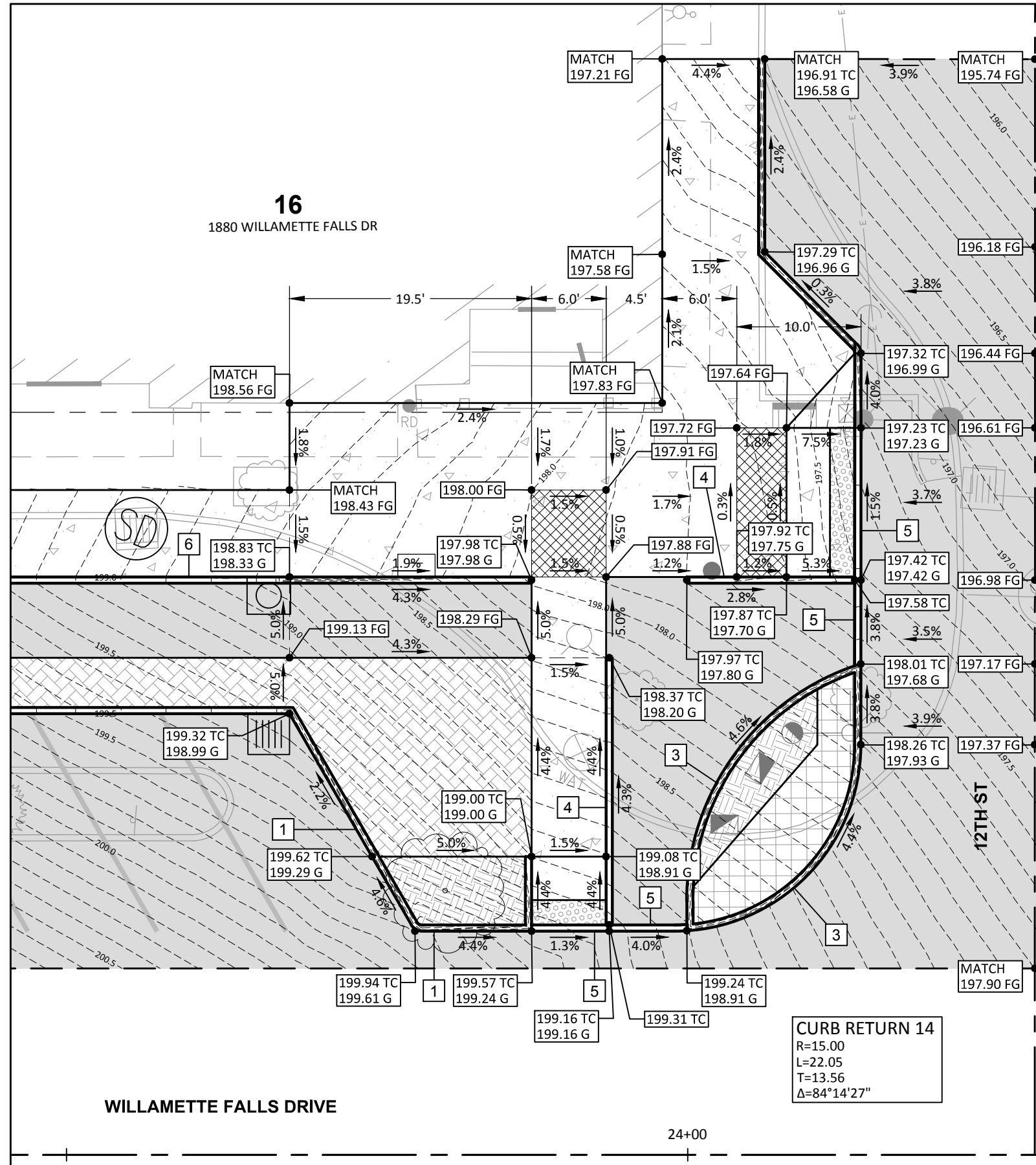


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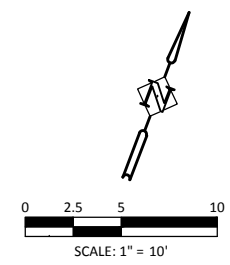
SHEET NO. **DC14**
 DESIGNED: HHPR TEAM
 DRAWN: HHPR TEAM
 CHECKED: BRA/JSH
 JOB NO. CWL-02
 DATE: 11-1-19



CURB TYPE LEGEND

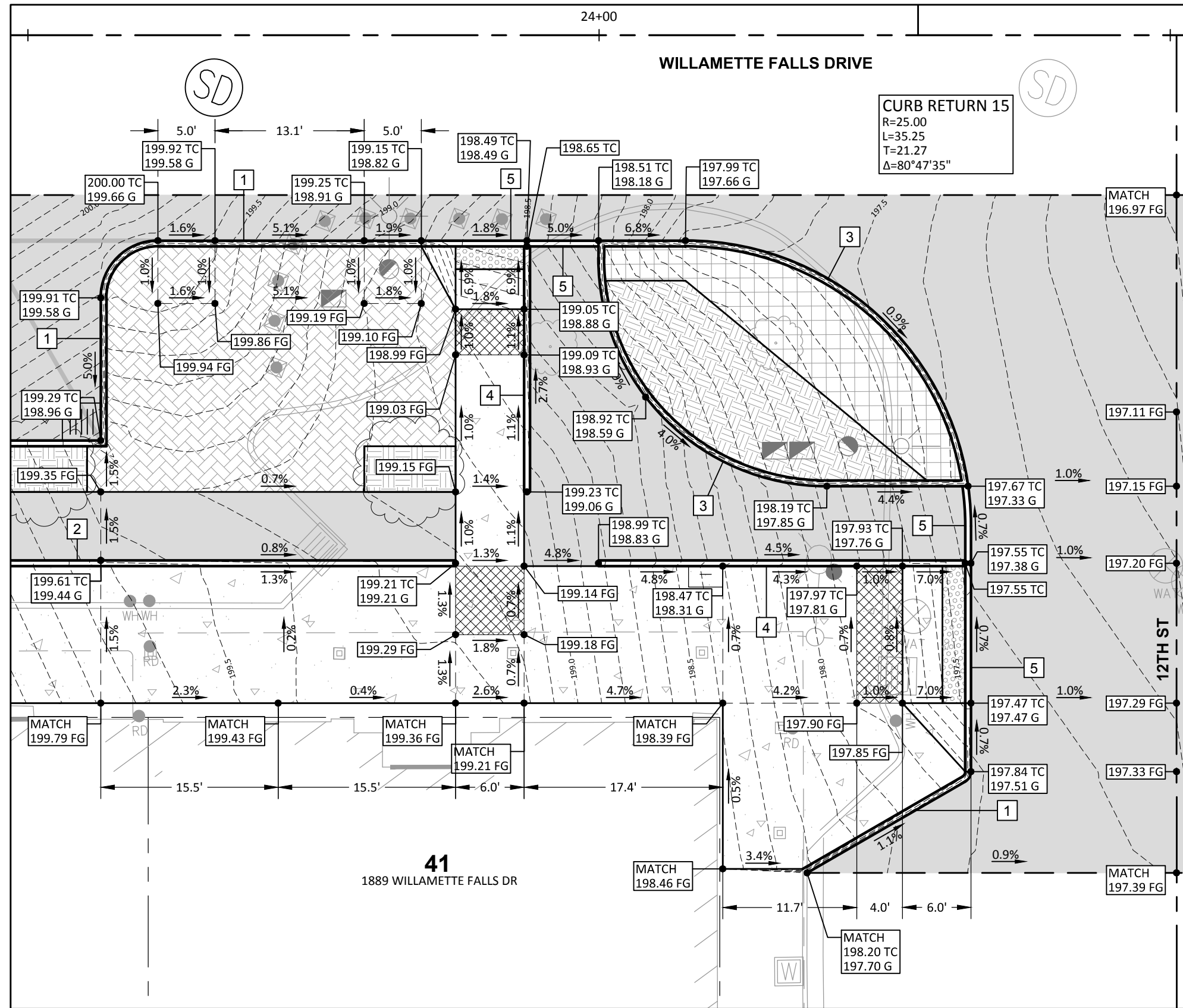
- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN 14
 R=15.00
 L=22.05
 T=13.56
 Δ=84°14'27"



CURB RETURN 14
 SCALE: 1" = 10'

DRAWING NAME: CWL02-DC-CURB RETURN-10TH-12TH.DWG



CURB RETURN 15

SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

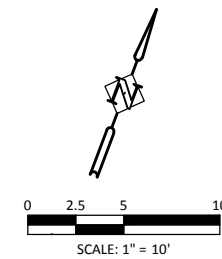
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DESIGNED: HHPR TEAM
 DRAWN: HHPR TEAM
 CHECKED: BRA/JS
 DATE: 11-1-19

SHEET NO.
DC15
 JOB NO.
 CWL-02



CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
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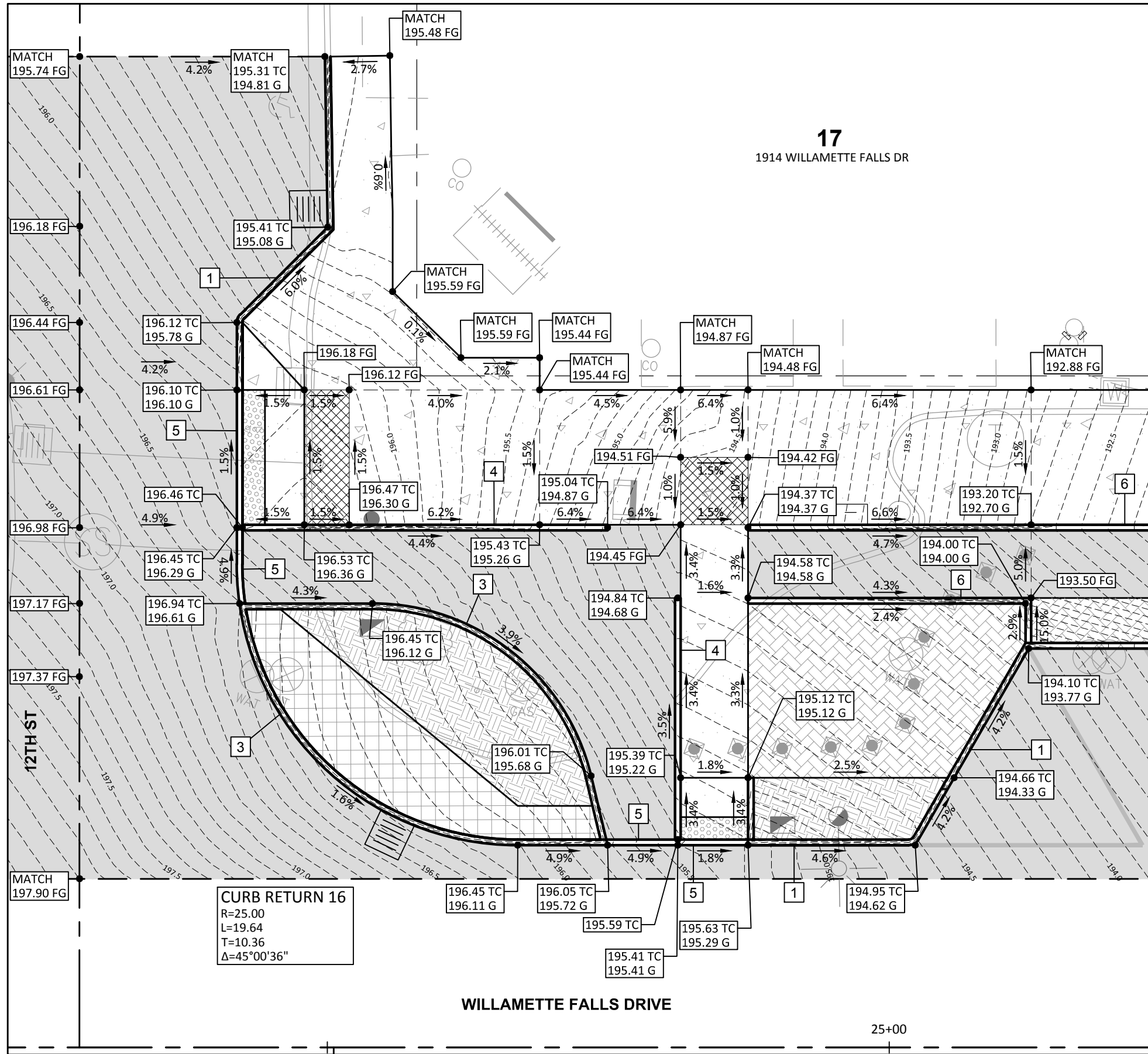


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 CITY OF



EXPIRES: 12/31/19

SHEET NO.	DESIGNED:
DC16	HHPR TEAM
	DRAWN:
	HHPR TEAM
	CHECKED:
	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19



CURB TYPE LEGEND

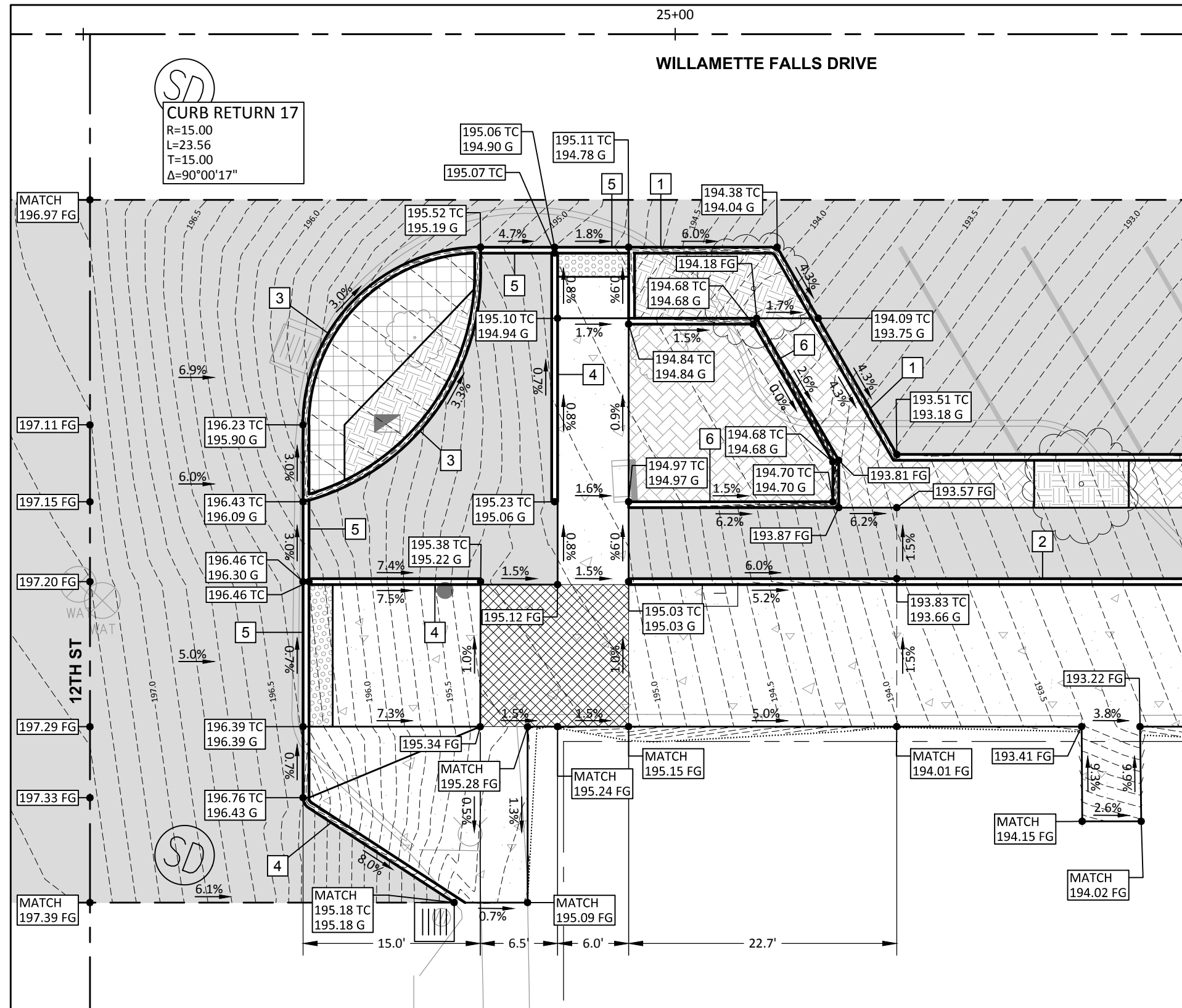
- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

WILLAMETTE FALLS DRIVE

CURB RETURN 16

SCALE: 1" = 10'

DRAWING NAME: CWL02-DC-CURB RETURN-10TH-12TH.DWG



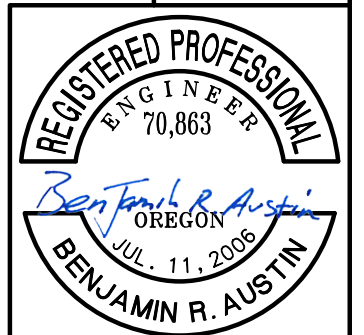
CURB RETURN 17
SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

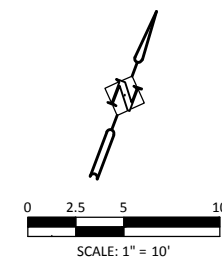
Harper Houf Peterson
HHPR Righellis Inc.
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EXPIRES: 12/31/19

DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/JS
DATE: 11-1-19

SHEET NO.
DC17
JOB NO.
CWL-02

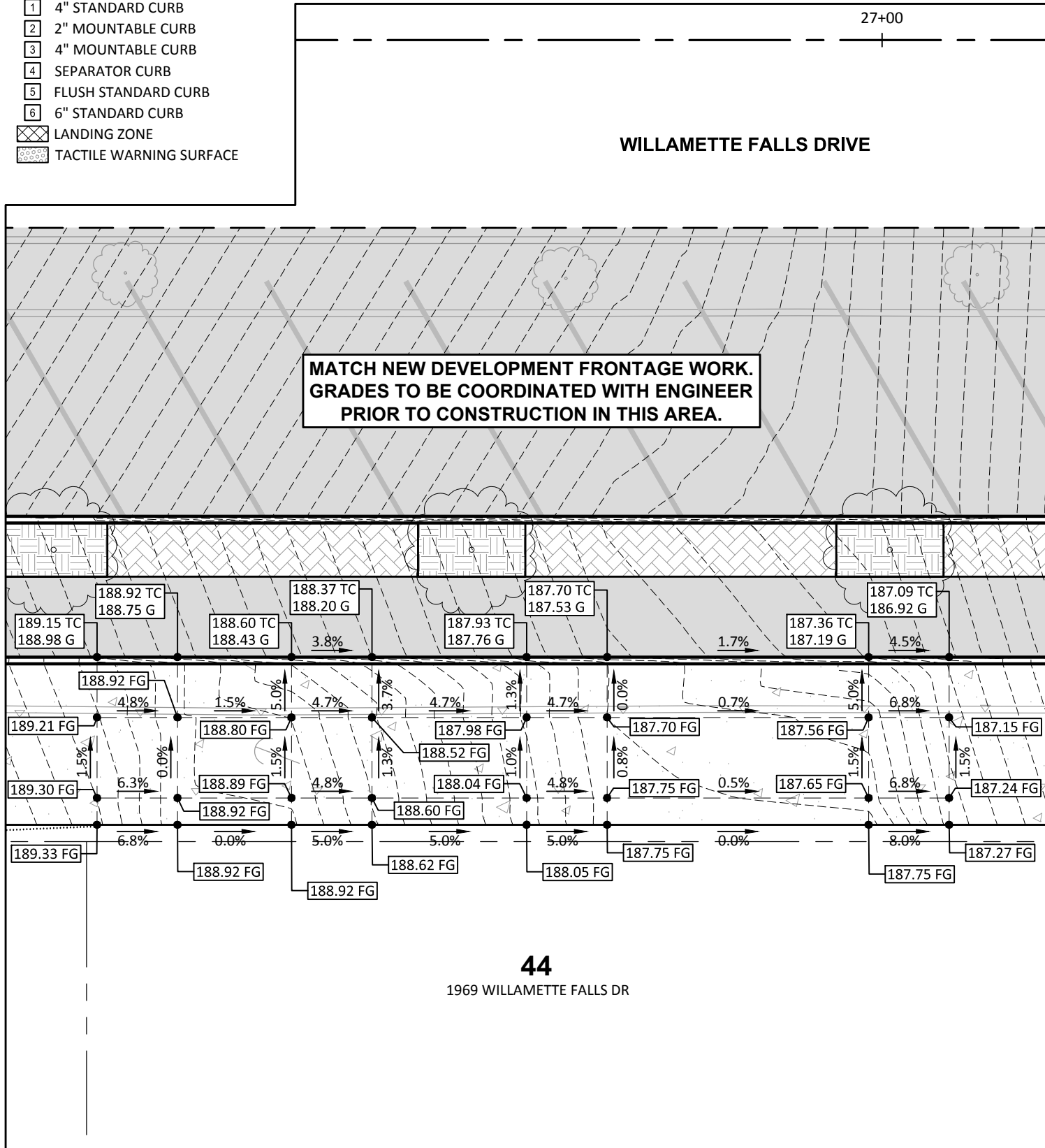


CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

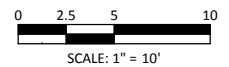
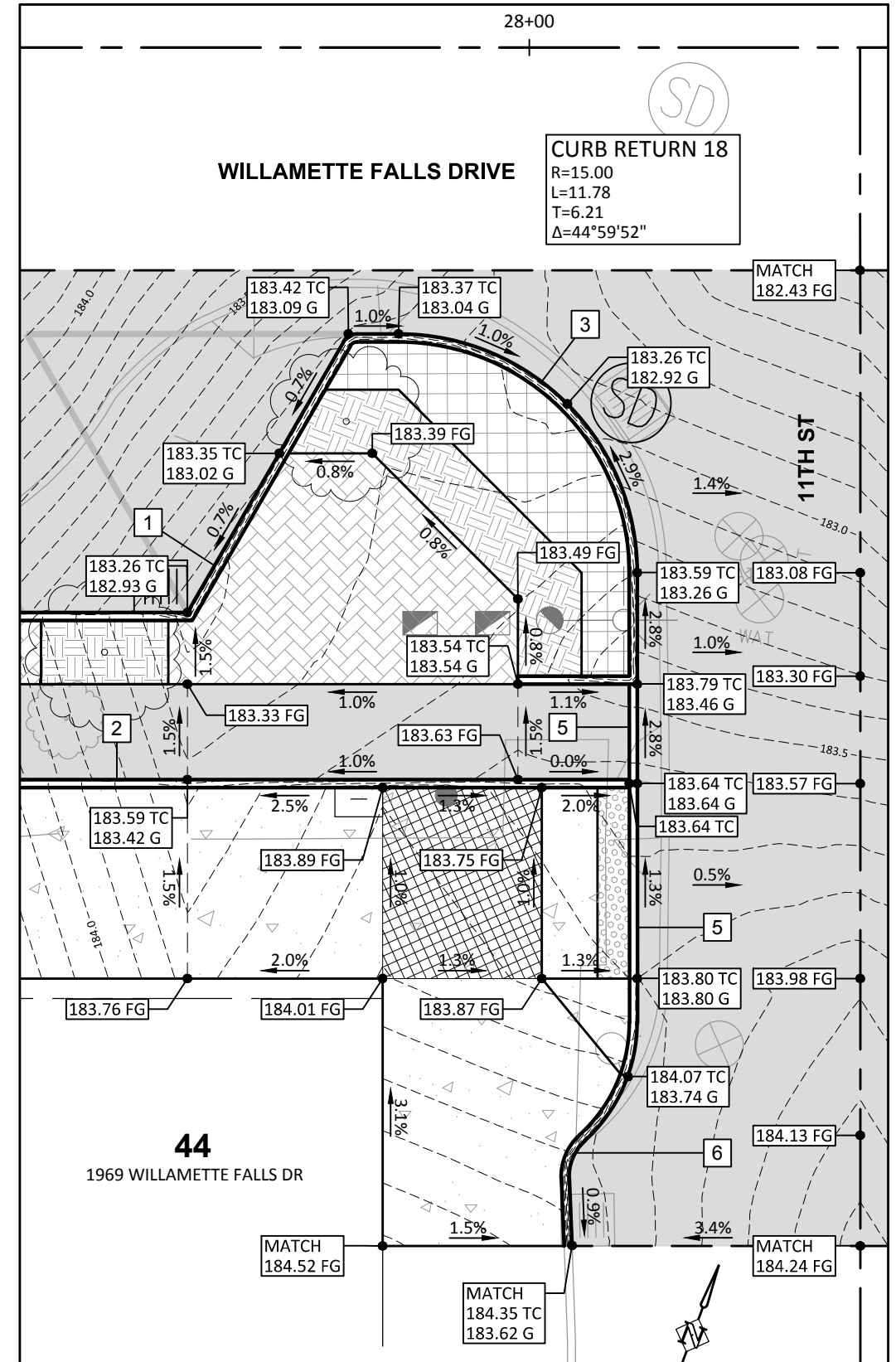
CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

MATCH NEW DEVELOPMENT FRONTAGE WORK.
 GRADES TO BE COORDINATED WITH ENGINEER
 PRIOR TO CONSTRUCTION IN THIS AREA.



CURB RETURN 18
 SCALE: 1" = 10'



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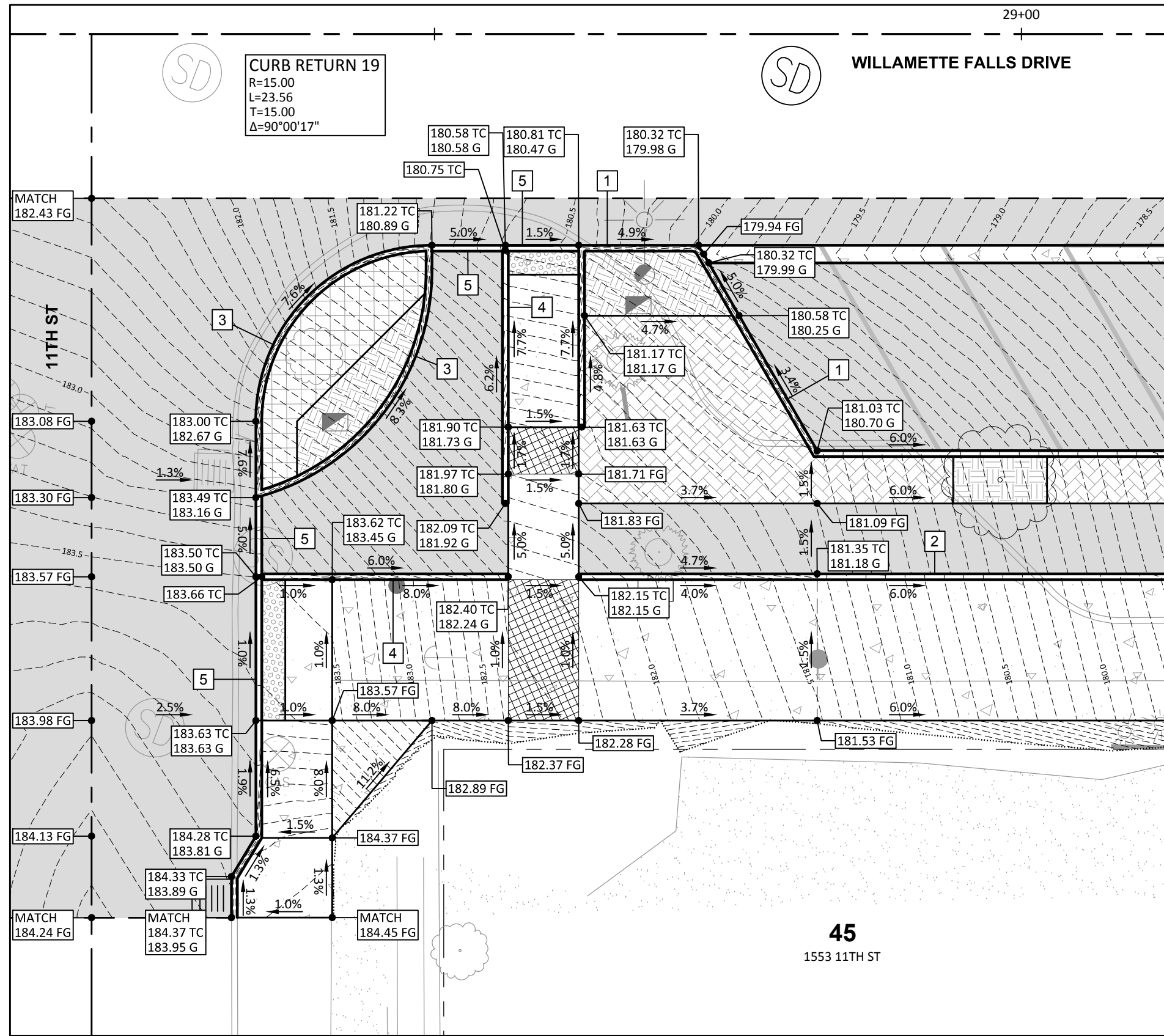
CITY OF
West Linn

REGISTERED PROFESSIONAL
 ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
 BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

SHEET NO.	DESIGNED:
DC18	HHPR TEAM
	DRAWN:
	HHPR TEAM
	CHECKED:
	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19

DRAWING NAME: CWL02-DC-CURB RETURN-10TH-12TH.DWG



CURB RETURN 19
 R=15.00
 L=23.56
 T=15.00
 Δ=90°00'17"



WILLAMETTE FALLS DRIVE

29+00

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

Harper Houf Peterson Righellis Inc.
 ENGINEERS & PLANNERS
 LANDSCAPE ARCHITECTS & SURVEYORS
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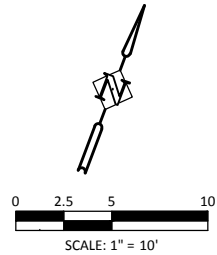


REGISTERED PROFESSIONAL ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC19
CHECKED: BRA/JS	JOB NO.
DATE: 11-1-19	CWL-02

CURB RETURN 19
 SCALE: 1" = 10'



45
 1553 11TH ST

CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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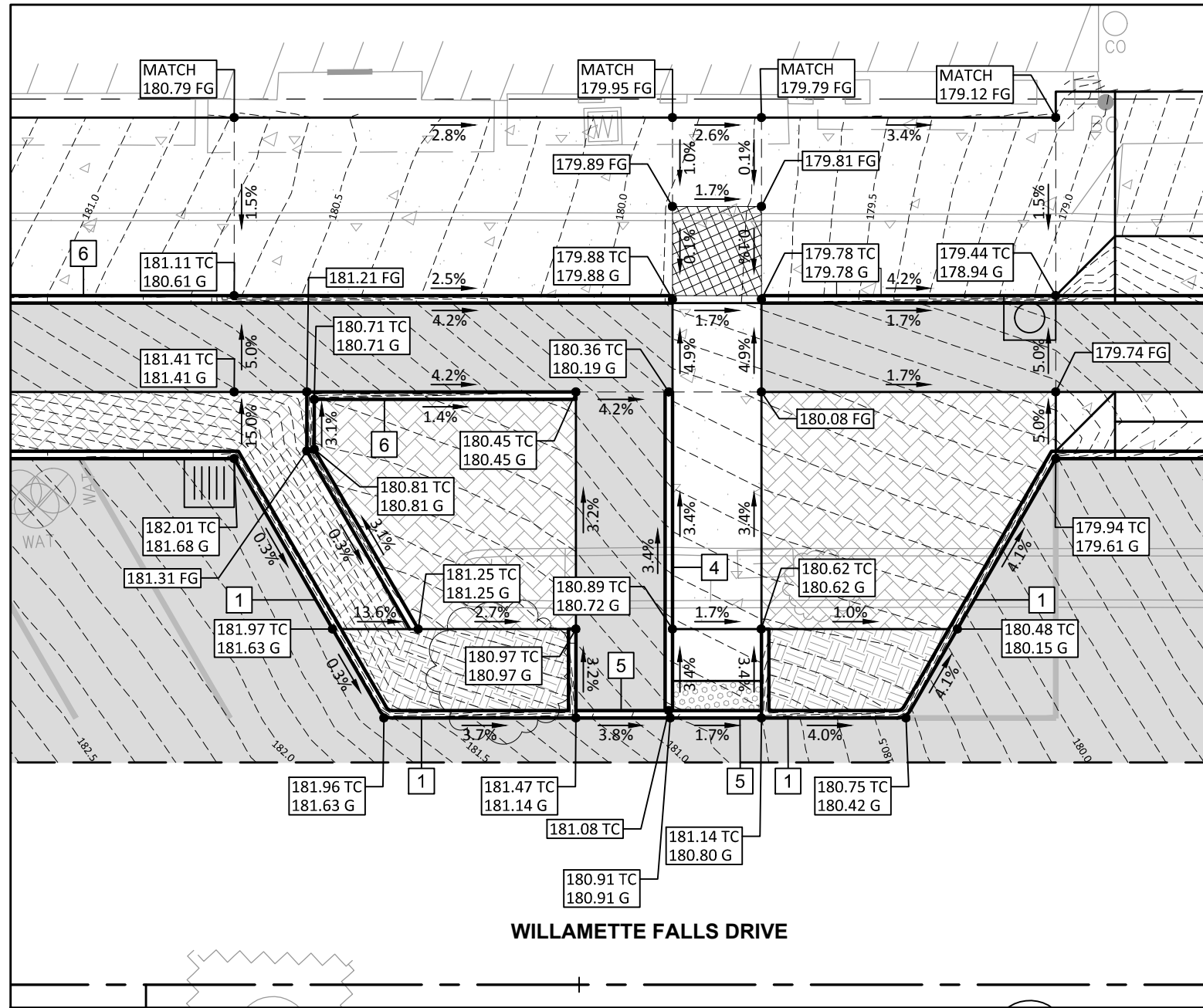


CITY OF
West Linn



EXPIRES: 12/31/19

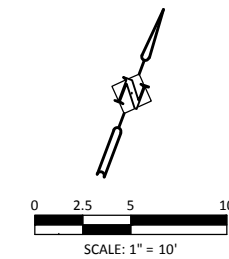
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	CHECKED: BRA/JSH
JOB NO. CWL-02	DATE: 11-1-19



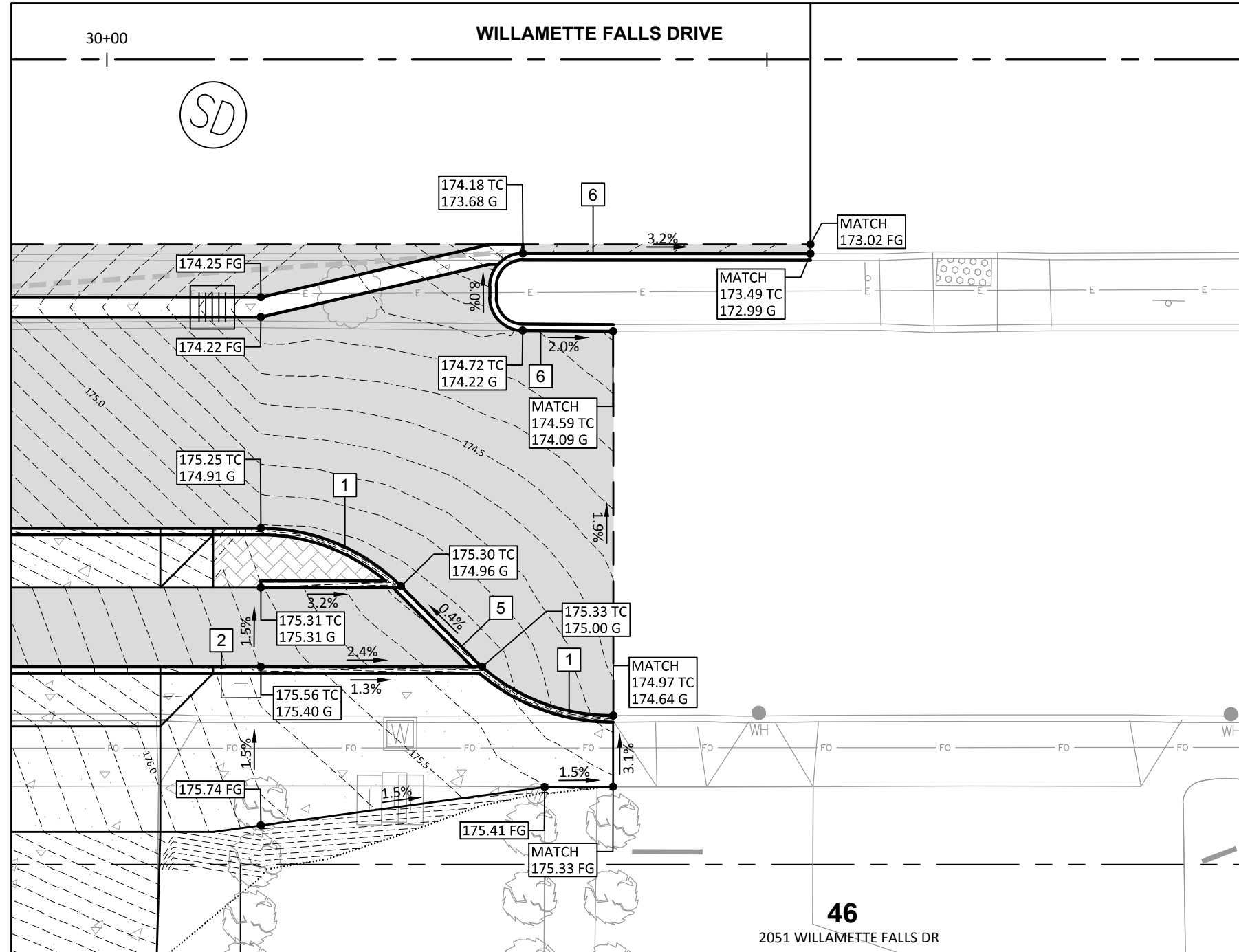
CURB RETURN 20
 SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE



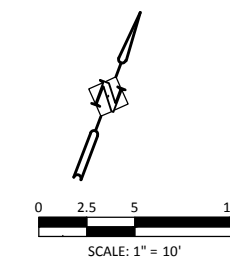
DRAWING NAME: CWL02-DC-CURB RETURN-10TH-12TH.DWG



CURB RETURN 21
SCALE: 1" = 10'

CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE



CURB RETURN DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	DC21
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

CURB RETURN DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

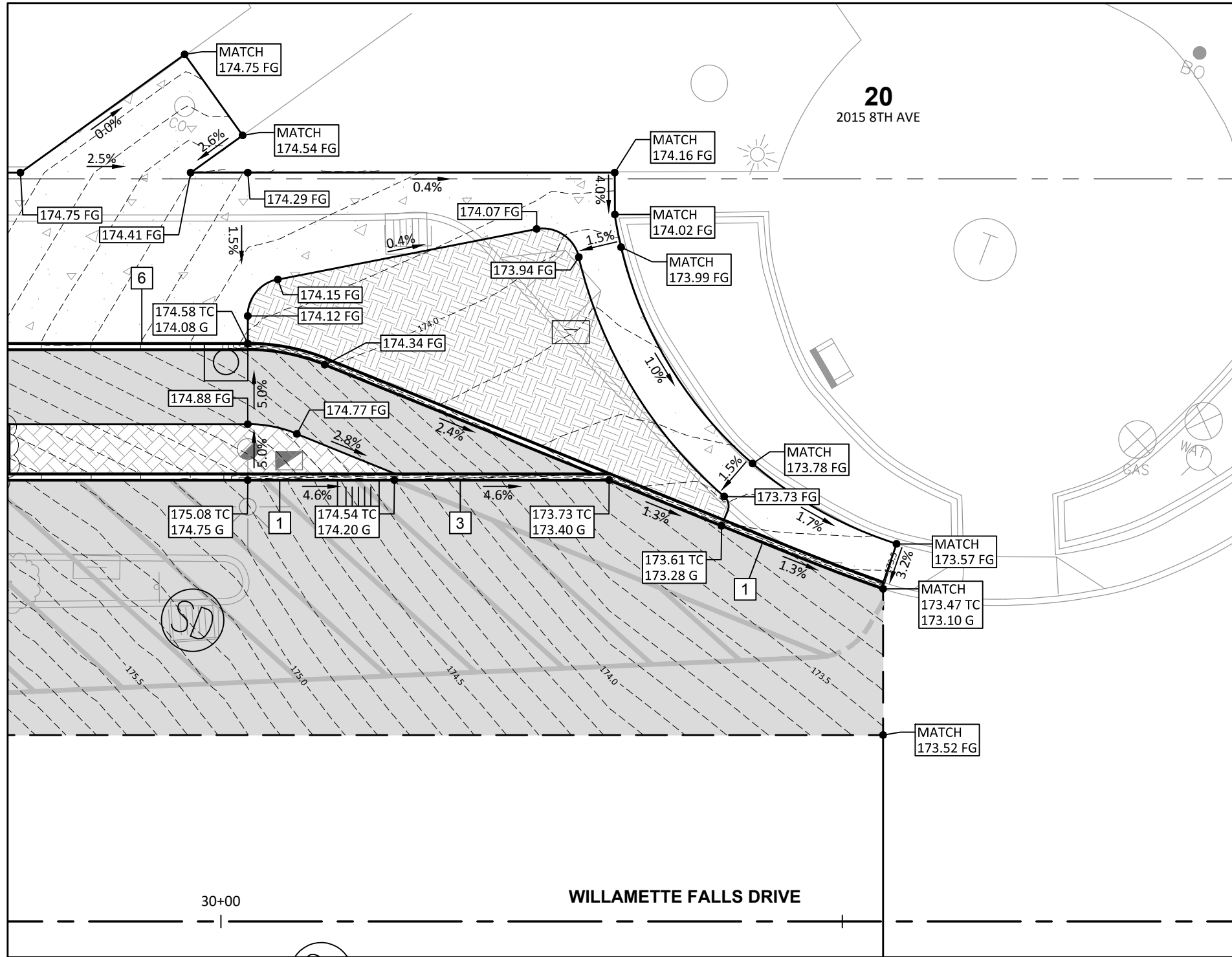
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CITY OF
West Linn



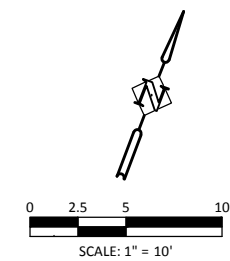
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DC22	DRAWN: HHPR TEAM
JOB NO.	CHECKED: BRA/JSH
CWL-02	DATE: 11-1-19



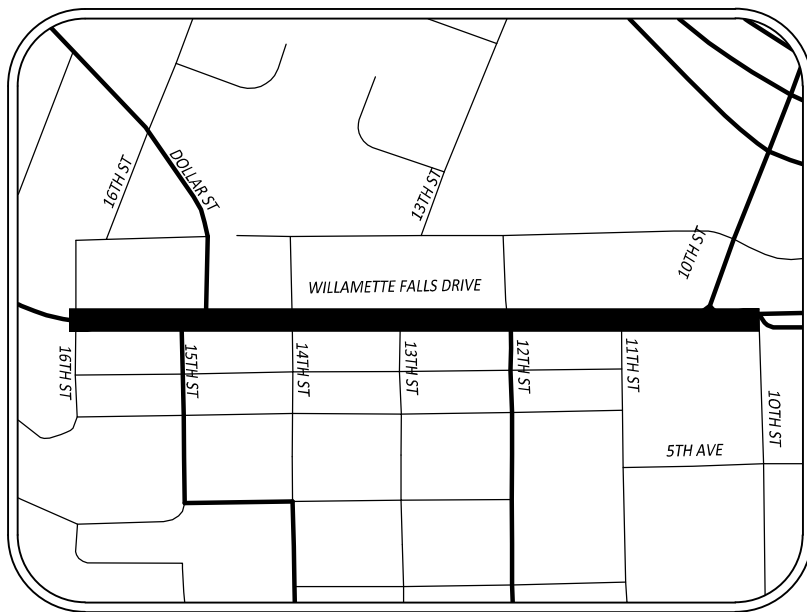
CURB TYPE LEGEND

- 1 4" STANDARD CURB
- 2 2" MOUNTABLE CURB
- 3 4" MOUNTABLE CURB
- 4 SEPARATOR CURB
- 5 FLUSH STANDARD CURB
- 6 6" STANDARD CURB
- LANDING ZONE
- TACTILE WARNING SURFACE

CURB RETURN 22
 SCALE: 1" = 10'

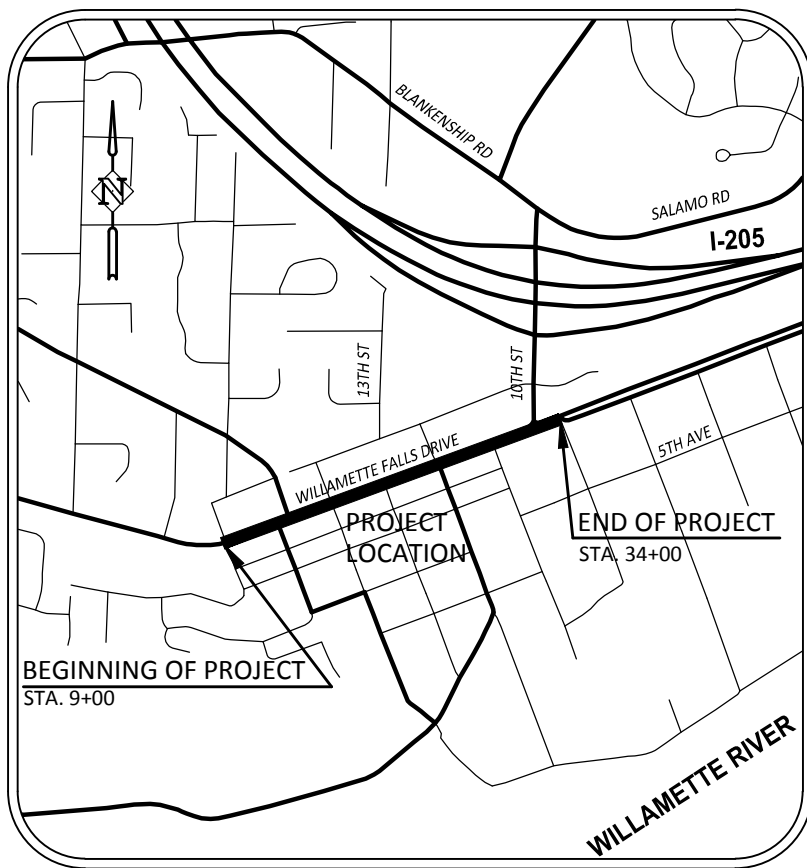


ESC PLAN FOR SITES 1 TO 5 ACRES



SITE MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

DEVELOPER / AGENCY

DEVELOPER/COMPANY: CITY OF WEST LINN
 DEPARTMENT OF PUBLIC WORKS
 CONTACT: LANCE CALVERT, PE
 22500 SALAMO RD
 WEST LINN, OR 97068
 PHONE: (503) 722-3424

PLANNING / ENGINEERING / SURVEYING FIRM

HARPER HOUF PETERSON RIGHELLIS INC.
 CONTACT: BEN AUSTIN, PE
 205 SE SPOKANE AVE, SUITE 200
 PORTLAND, OR 97202
 PHONE: (503) 221-1131
 FAX: (503) 221-1171

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS

- WILLAMETTE FALLS DRIVE FROM 16TH STREET TO 10TH STREET IS AN EXISTING TWO LANE ROADWAY WITH MULTIPLE PARKING CONFIGURATIONS THROUGH THE DOWNTOWN WEST LINN AREA, ADJACENT TO BOTH RESIDENTIAL AND COMMERCIAL PROPERTIES.

DEVELOPED CONDITIONS

- A TWO LANE ROADWAY WITH A CENTER LEFT TURN LANE ALONG WILLAMETTE FALLS DRIVE FROM 16TH STREET TO 10TH STREET, INCLUDING ROAD IMPROVEMENTS, ANGLE PARKING, SIDEWALKS, A PROTECTED BIKE PATH, AND LIGHTING

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

- CLEARING (JANUARY 2020)
- MASS GRADING (FEBRUARY 2020)
- UTILITY INSTALLATION (FEBRUARY 2020 - JUNE 2020)
- STREET CONSTRUCTION (FEBRUARY 2020 - JUNE 2020)
- FINAL STABILIZATION (JUNE 2020 - SEPTEMBER 2020)

TOTAL SITE AREA = 244,433 SF = 5.61 ACRES
 TOTAL DISTURBED AREA = 188,364 SF = 4.32 ACRES

SITE SOIL CLASSIFICATION:

THE SITE IS MAPPED BY USDA WITH THE FOLLOWING SOIL UNITS:

- 88A-WILLAMETTE SILT LOAM, WET, 0 TO 3 PERCENT SLOPES, RUNOFF IS HIGH, HAZARD OF EROSION IS SLIGHT

ALL FILL MATERIAL SHALL BE GENERATED ON-SITE FROM GRADING EXCAVATION AND UTILITY TRENCH SPOILS.

RECEIVING WATER BODIES:

NEAREST WATER BODY: WILLAMETTE RIVER

INSPECTION FREQUENCY:

SITE CONDITION	MINIMUM FREQUENCY
1. ACTIVE PERIOD	WEEKLY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOW MELT, IS OCCURRING. AT LEAST ONCE MONTH, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.
3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS.	ONCE EVERY MONTH.
4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.
5. PERIODS DURING WHICH DISCHARGE IS UNLIKELY DUE TO FROZEN CONDITIONS.	MONTHLY. RESUME MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

- HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS.
- ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-CN PERMIT REQUIREMENTS.
- INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-CN PERMIT REQUIREMENTS.
- RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION.

PROJECT LOCATION:

WILLAMETTE FALLS DRIVE,
 16TH STREET TO 10TH STREET
 WEST LINN, OREGON 97068
 LATITUDE = 45.344099 - 45°20'38.8"N
 LONGITUDE = -122.655818 - 122°39'20.9"W

PROPERTY DESCRIPTION:

NORTHERN HALF OF SECTION 2, TOWNSHIP 3
 SOUTH, RANGE 1 EAST AND SOUTHERN HALF OF
 SECTION 35, TOWNSHIP 2 SOUTH, RANGE 1 EAST
 WILLAMETTE MERIDIAN,
 CLACKAMAS COUNTY, OREGON

PERMITTEE'S SITE INSPECTOR:

NAME: KURTIS PIPKIN
 COMPANY/AGENCY: HHPR
 PHONE: OFFICE 503-365-1131; CELL 503-887-3708
 FAX: 503-221-1171
 E-MAIL: kurtisp@hhpr.com
 DESCRIPTION OF EXPERIENCE: ROADWAY CONSTRUCTION AND EROSION CONTROL INSPECTION CESCL #81881. ESCP WITH 1 YEAR EXPERIENCE ON LINEAR ROADWAY PROJECTS

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200-CN PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200-CN PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200-CN PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

ESC COVER SHEET
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON



ENGINEERS & PLANNERS
 LANDSCAPE ARCHITECTS & SURVEYORS
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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	EC01
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

DRAWING NAME: CWL02-EC01_EC03-ESC COVER AND NOTES.DWG

ESC STANDARD NOTES
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

ENGINEERS PLANNERS
 LANDSCAPE ARCHITECTS SURVEYORS
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West Linn
 CITY OF



EXPIRES: 12/31/19

SHEET NO.	DESIGNED: HHPR TEAM
EC02	DRAWN: HHPR TEAM
	CHECKED: BRA/JSH
JOB NO. CWL-02	DATE: 11-1-19

SHEET INDEX

EROSION AND SEDIMENT CONTROL PLANS

EC01	ESC COVER SHEET
EC02	ESC STANDARD NOTES
EC03	ESC STANDARD NOTES
EC04	ESC EXISTING CONDITIONS
EC05	ESC EXISTING CONDITIONS
EC06	ESC EXISTING CONDITIONS
EC07	ESC PROPOSED CONDITIONS
EC08	ESC PROPOSED CONDITIONS
EC09	ESC PROPOSED CONDITIONS
EC10	ESC STANDARD DETAILS
EC11	ESC STANDARD DETAILS

BMP MATRIX FOR CONSTRUCTION PHASES

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

	CLEARING	MASS GRADING	UTILITY INSTALLATION	STREET CONSTRUCTION	FINAL STABILIZATION	WET WEATHER (OCT. 1 - MAY 31ST)
EROSION PREVENTION						
PRESERVE NATURAL VEGETATION	** X	X	X	X	X	X
GROUND COVER					X	X
HYDRAULIC APPLICATIONS						
PLASTIC SHEETING						
MATTING						
DUST CONTROL	X	X	X	X	X	X
TEMPORARY/ PERMANENT SEEDING						
BUFFER ZONE						
OTHER:						
SEDIMENT CONTROL						
SEDIMENT FENCE (PERIMETER)	** X	X	X	X	X	X
SEDIMENT FENCE (INTERIOR)						
STRAW WATTLES						
FILTER BERM						
INLET PROTECTION	** X	X	X	X	X	X
DEWATERING						
SEDIMENT TRAP						
NATURAL BUFFER ENCROACHMENT						
OTHER:						
RUN OFF CONTROL						
CONSTRUCTION ENTRANCE						
PIPE SLOPE DRAIN						
OUTLET PROTECTION						
SURFACE ROUGHENING						
CHECK DAMS						
OTHER:						
POLLUTION PREVENTION						
PROPER SIGNAGE	X	X	X	X	X	X
HAZ WASTE MGMT	X	X	X	X	X	X
SPILL KIT ON-SITE	X	X	X	X	X	X
CONCRETE WASHOUT AREA	X	X	X	X	X	X
OTHER:						

* SIGNIFIES ADDITIONAL BMP'S REQUIRED FOR WORK WITHIN 50' OF WATER OF THE STATE.
 ** SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL

BRA

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:

- HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.I.(3))
- ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SCHEDULE A.12.B AND SCHEDULE B.1)
- INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SCHEDULE B.1.C AND B.2)
- RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, THE ABOVE RECORDS MUST BE RETAINED BY THE PERMIT REGISTRANT BUT DO NOT NEED TO BE AT THE CONSTRUCTION SITE. (SCHEDULE B.2.C)
- ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A 8.A)
- THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SCHEDULE A.12.C.I)
- SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT WITHIN 10 DAYS. (SCHEDULE A.12.C.IV. AND V)
- PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A.7.A.III)
- IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SCHEDULE A.8.C.I.(1) AND (2))
- PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.A.V)
- MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SCHEDULE A.7.B.I. AND (2)(A)(B))
- INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SCHEDULE A.8.C.I.(5))
- CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SCHEDULE A.7.C)
- CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SCHEDULE A.7.D.I)
- ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
- APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS.(SCHEDULE A.8.C.II.(3))
- ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.I.(7))
- PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SCHEDULE A 7.D.II AND A.8.C.I.(4))
- WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II.(5))
- CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SCHEDULE A.6)
- USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2))
- IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SCHEDULE A. 7.E.III.)
- USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SCHEDULE A 7.A.IV)
- THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.III)

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES (CONT.):

25. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D)
26. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A 7.B)
27. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPs MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SCHEDULE A 7.E.II.(2))
28. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND BARE GROUND ACTIVITIES DURING WET WEATHER. (SCHEDULE A.7.A.I)
29. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
30. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.I)
31. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.III& IV)
32. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN-UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.I)
33. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
34. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
35. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.II)
36. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. (SCHEDULE A.8.C.III(1) AND D.3.C.II AND III)
- 37.

GRADING, STREET AND UTILITY EROSION AND SEDIMENT CONSTRUCTION NOTES:

1. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
 - A. VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
 - B. DWARF GRASS MIX (MIN. 100 LB./AC.)
 1. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
 2. CREEPING RED FESCUE (20% BY WEIGHT)
 - B. STANDARD HEIGHT GRASS MIX (MIN. 100LB./AC.)
 1. ANNUAL RYEGRASS (40% BY WEIGHT)
 2. TURF-TYPE FESCUE (60% BY WEIGHT)
2. SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
3. LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
4. TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
5. STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.
6. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
7. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
8. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
9. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
10. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
11. AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTling PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.
12. SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
13. AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.
14. USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
15. COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. "STOCK PILE AREA 1" SHALL BE MOVED TO "STOCK PILE AREA 2" FOLLOWING THE EXCAVATION CUT ACTIVITIES.
3. THE "STAGING, EQUIPMENT MAINTENANCE, FUELING, PORTA-POTTY, AND SOLID WASTE AREA 1" SHALL BE MOVED TO "STAGING, EQUIPMENT MAINTENANCE, FUELING, PORTA-POTTY, AND SOLID WASTE AREA 2" FOLLOWING EXCAVATION "CUT" ACTIVITIES.
4. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.
5. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.
6. THE STORM WATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.
7. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

LOCAL AGENCY-SPECIFIC EROSION CONTROL NOTES:

1. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1; THE TYPE AND PERCENTAGES OF SEED IN THE MIX MUST BE IDENTIFIED ON THE PLANS.
2. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP I.E. (FILTER BAG).
3. ALL EXPOSED SOILS MUST BE COVERED DURING THE WET WEATHER PERIOD, OCTOBER 01 - MAY 31.

ESC STANDARD NOTES
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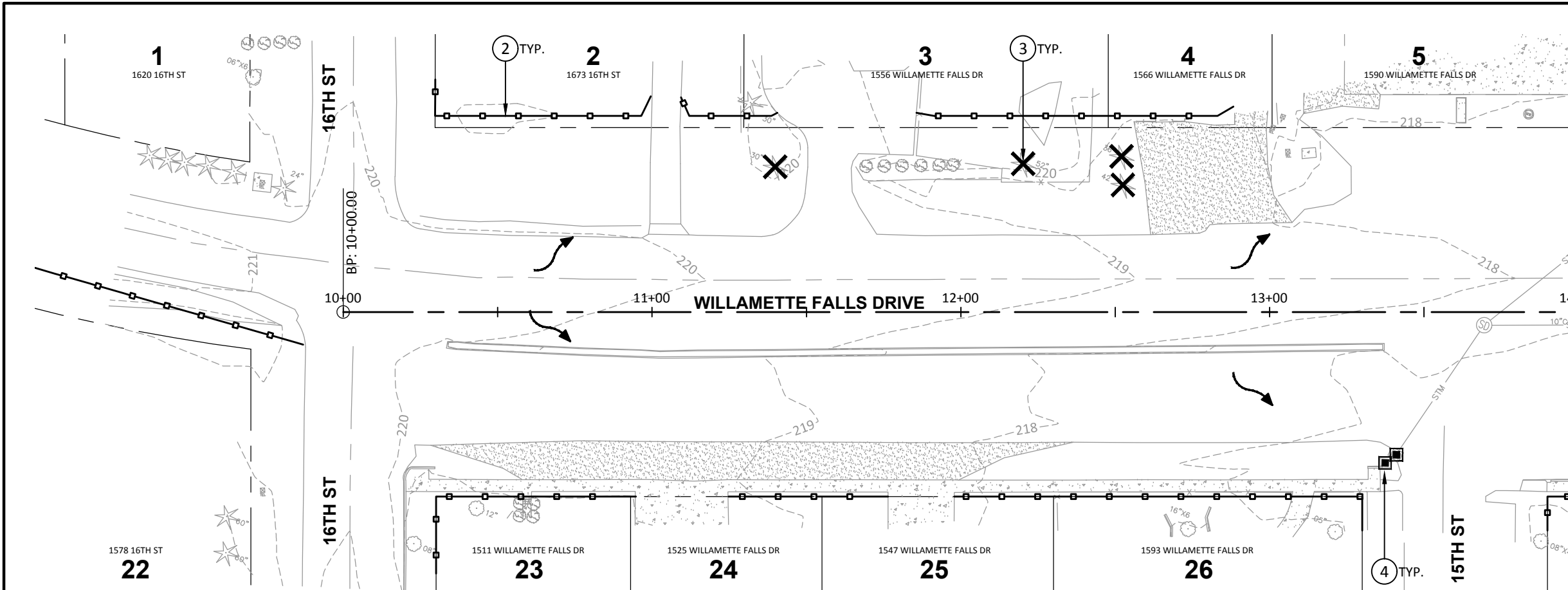


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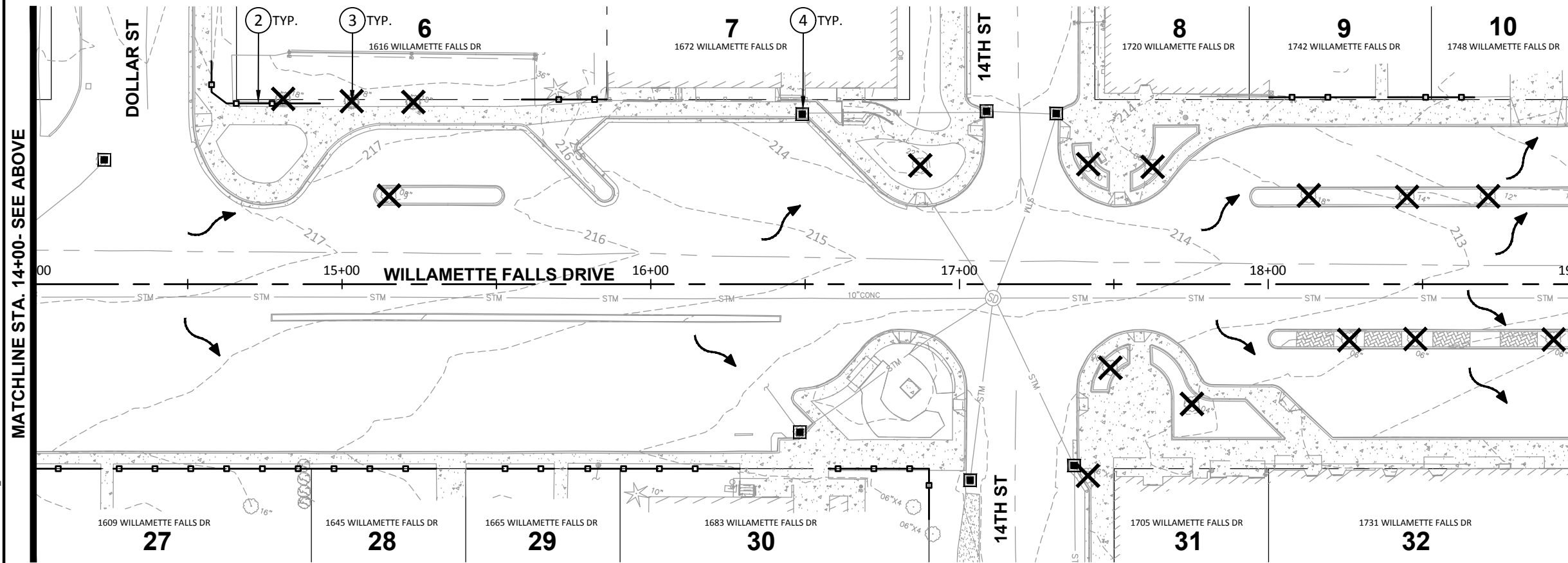
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DRAWN: HHPR TEAM	EC03
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DATE: 11-1-19	JOB NO. CWL-02

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DRAWING NAME: CWL02-EC04_EC05-ESC EXISTING CONDITIONS.DWG



PLAN VIEW



PLAN VIEW

CONSTRUCTION NOTES

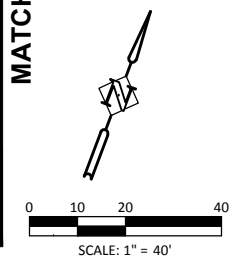
- ② INSTALL SEDIMENT FENCE PER DETAIL ON SHEET EC10.
- ③ GRIND AND REMOVE TREE STUMP. TREES TO BE CUT DOWN BY CITY PRIOR TO REMOVAL OF TREE STUMP BY CONTRACTOR.
- ④ INSTALL INLET PROTECTION, TYPE 5 PER DETAIL ON SHEET EC10.

MATCHLINE STA. 14+00- SEE BELOW

SYMBOLS

	INLET PROTECTION - TYPE 4
	INLET PROTECTION - TYPE 5
	CONCRETE WASHOUT (AS REQUIRED)
	SEDIMENT FENCE
	FLOW DIRECTION
	EXISTING INLET TO BE REMOVED
	EXISTING CONTOURS
	PROPOSED CONTOURS
	REMOVE TREE

MATCHLINE STA. 19+00 SEE SHEET EC05



ESC EXISTING CONDITIONS
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REGISTERED PROFESSIONAL ENGINEER
 70,863
Benjamin R. Austin
 OREGON
 JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	EC04
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

ESC EXISTING CONDITIONS
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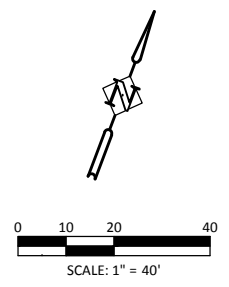
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SHEET NO. **EC05**

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 DATE: 11-1-19

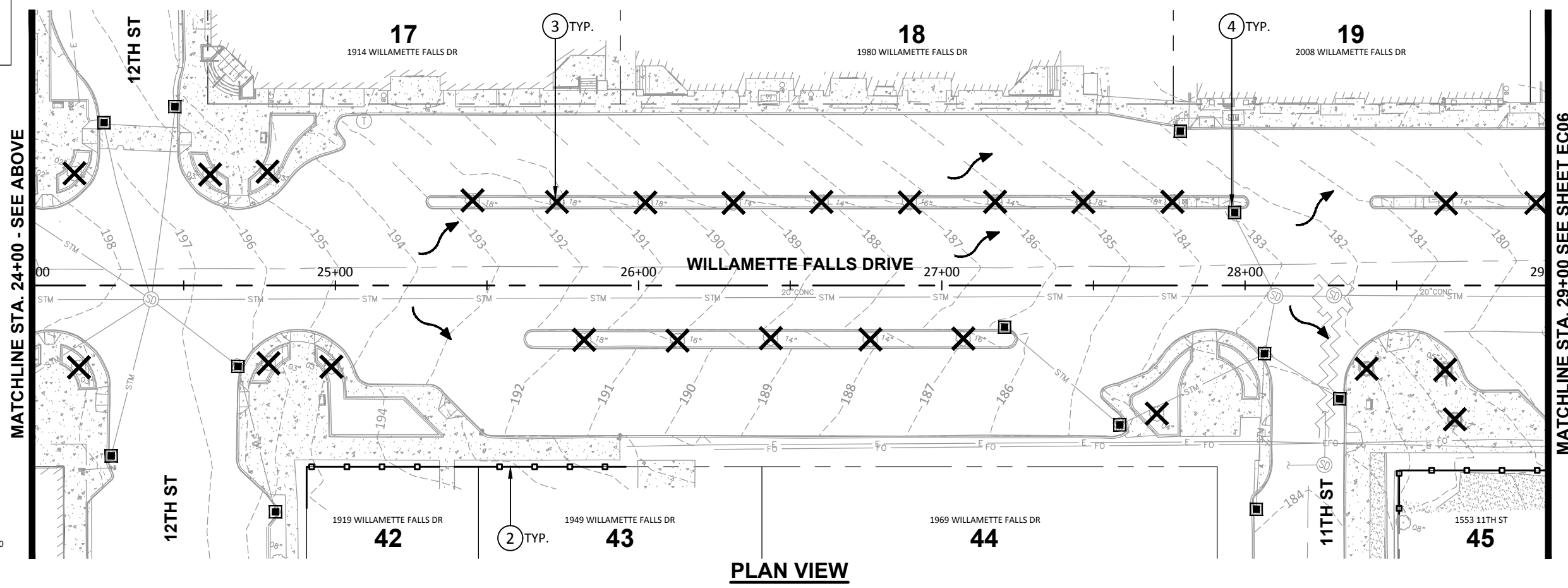
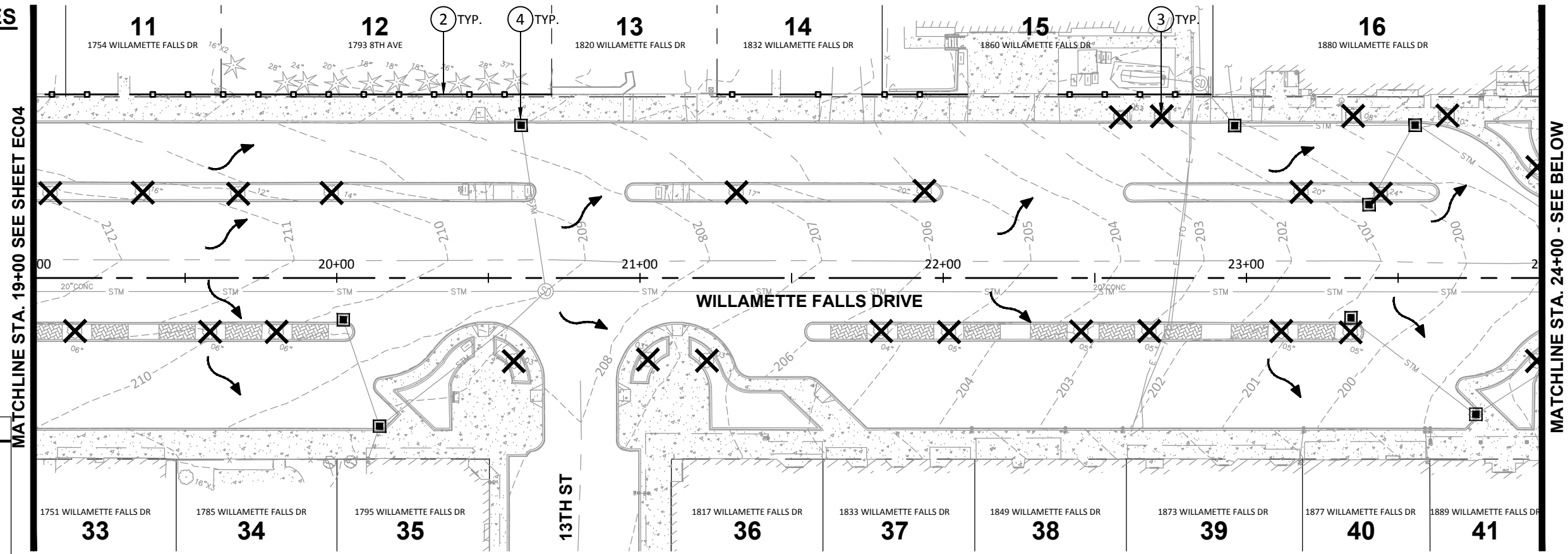


CONSTRUCTION NOTES

- ② INSTALL SEDIMENT FENCE PER DETAIL ON SHEET EC10.
- ③ GRIND AND REMOVE TREE STUMP. TREES TO BE CUT DOWN BY CITY PRIOR TO REMOVAL OF TREE STUMP BY CONTRACTOR.
- ④ INSTALL INLET PROTECTION, TYPE 5 PER DETAIL ON SHEET EC10.

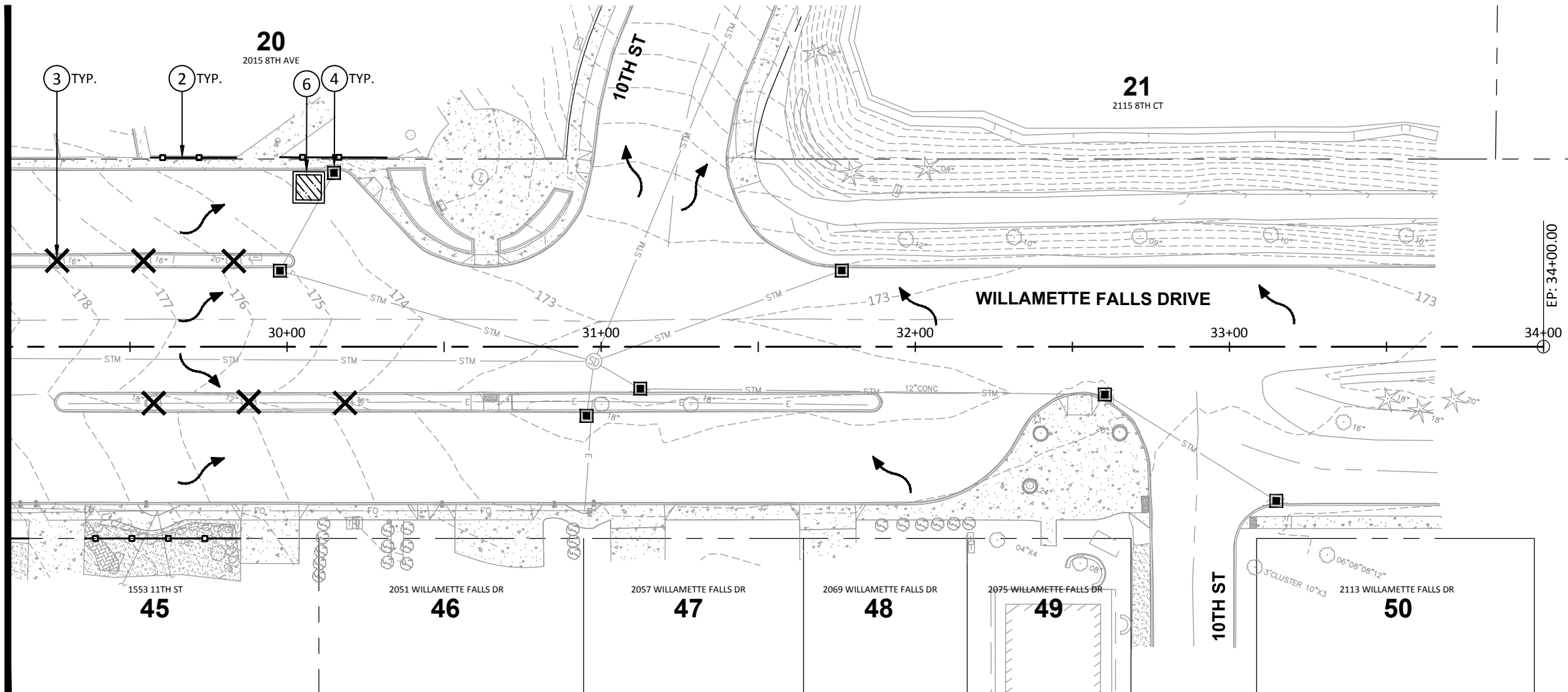
SYMBOLS

- INLET PROTECTION - TYPE 4
- INLET PROTECTION - TYPE 5
- CONCRETE WASHOUT (AS REQUIRED)
- SEDIMENT FENCE
- FLOW DIRECTION
- EXISTING INLET TO BE REMOVE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- REMOVE TREE



DRAWING NAME: CWL02-EC04-EC05-ESC EXISTING CONDITIONS.DWG

MATCHLINE STA. 29+00 SEE SHEET EC05

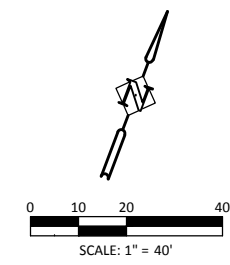


PLAN VIEW

CONSTRUCTION NOTES

- 2 INSTALL SEDIMENT FENCE PER DETAIL ON SHEET EC10.
- 3 GRIND AND REMOVE TREE STUMP. TREES TO BE CUT DOWN BY CITY PRIOR TO REMOVAL OF TREE STUMP BY CONTRACTOR.
- 4 INSTALL INLET PROTECTION, TYPE 5 PER DETAIL ON SHEET EC10.
- 6 CONSTRUCT CONCRETE WASHOUT PER DETAIL SHEET EC11. ADJUST LOCATION AS NECESSARY.

SYMBOLS	
	INLET PROTECTION - TYPE 4
	INLET PROTECTION - TYPE 5
	CONCRETE WASHOUT (AS REQUIRED)
	SEDIMENT FENCE
	FLOW DIRECTION
	EXISTING INLET TO BE REMOVE
	EXISTING CONTOURS
	PROPOSED CONTOURS
	REMOVE TREE



ESC EXISTING CONDITIONS
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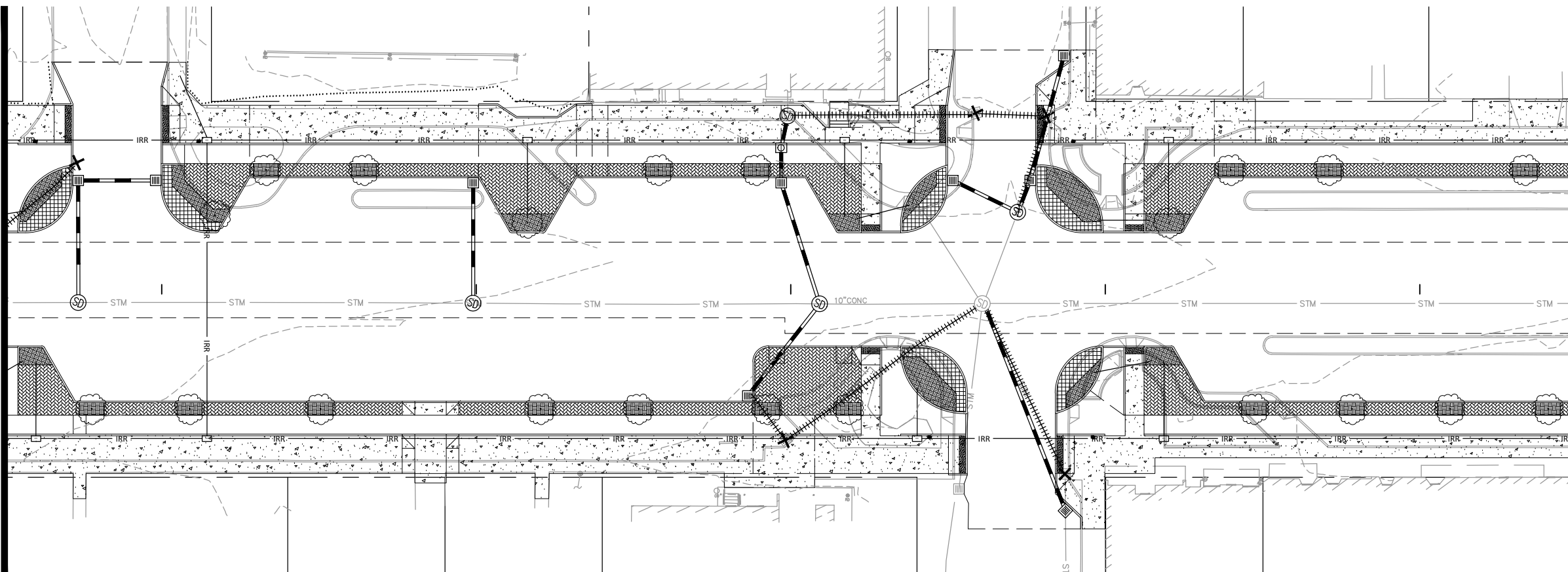
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DATE: 11-1-19	CWL-02

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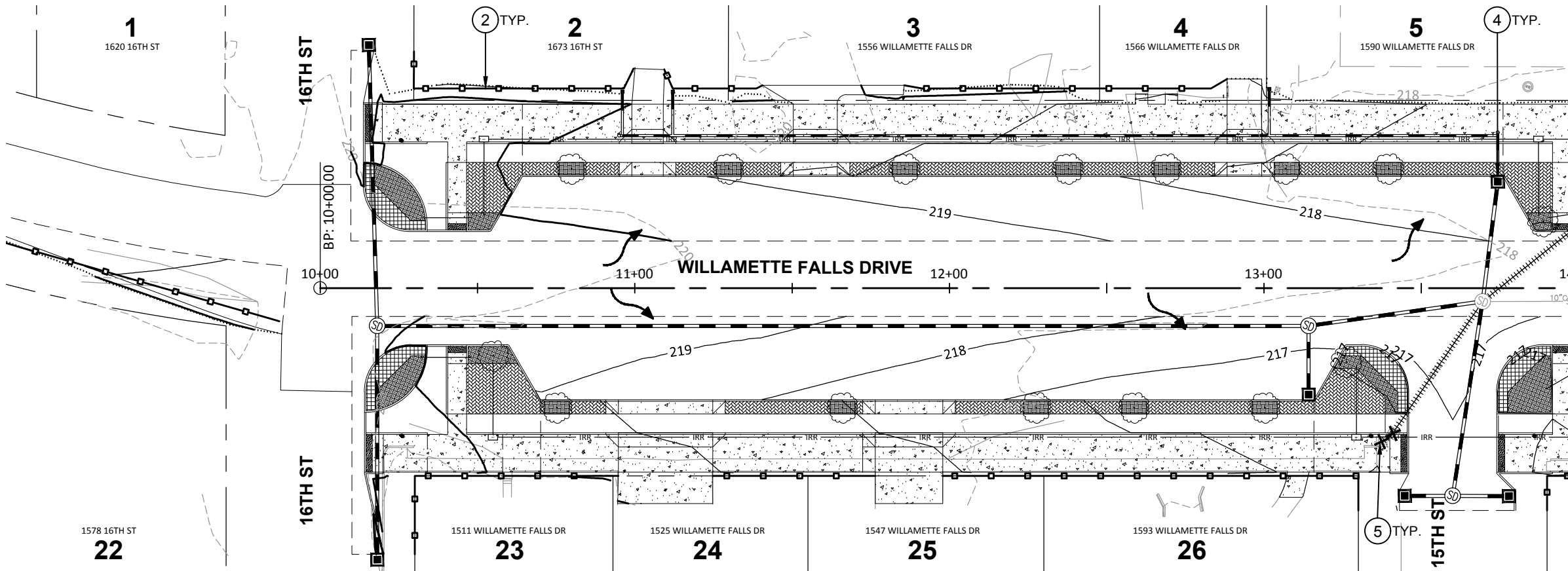
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MATCHLINE STA. 14+00- SEE ABOVE



PLAN VIEW



PLAN VIEW

CONSTRUCTION NOTES

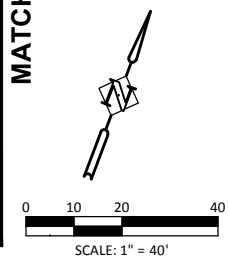
- ① INSTALL INLET PROTECTION, TYPE 4 PER DETAIL ON SHEET EC10.
- ② INSTALL SEDIMENT FENCE PER DETAIL ON SHEET EC10.
- ④ INSTALL INLET PROTECTION, TYPE 5 PER DETAIL ON SHEET EC10.
- ⑤ REMOVE/ABANDON EXISTING STORM STRUCTURE

MATCHLINE STA. 14+00- SEE BELOW

SYMBOLS

- INLET PROTECTION - TYPE 4
- INLET PROTECTION - TYPE 5
- CONCRETE WASHOUT (AS REQUIRED)
- SEDIMENT FENCE
- FLOW DIRECTION
- EXISTING INLET TO BE REMOVED/ ABANDONED
- EXISTING STORM LINE TO BE REMOVED/ ABANDONED
- EXISTING CONTOURS
- PROPOSED CONTOURS

MATCHLINE STA. 19+00 SEE SHEET EC08



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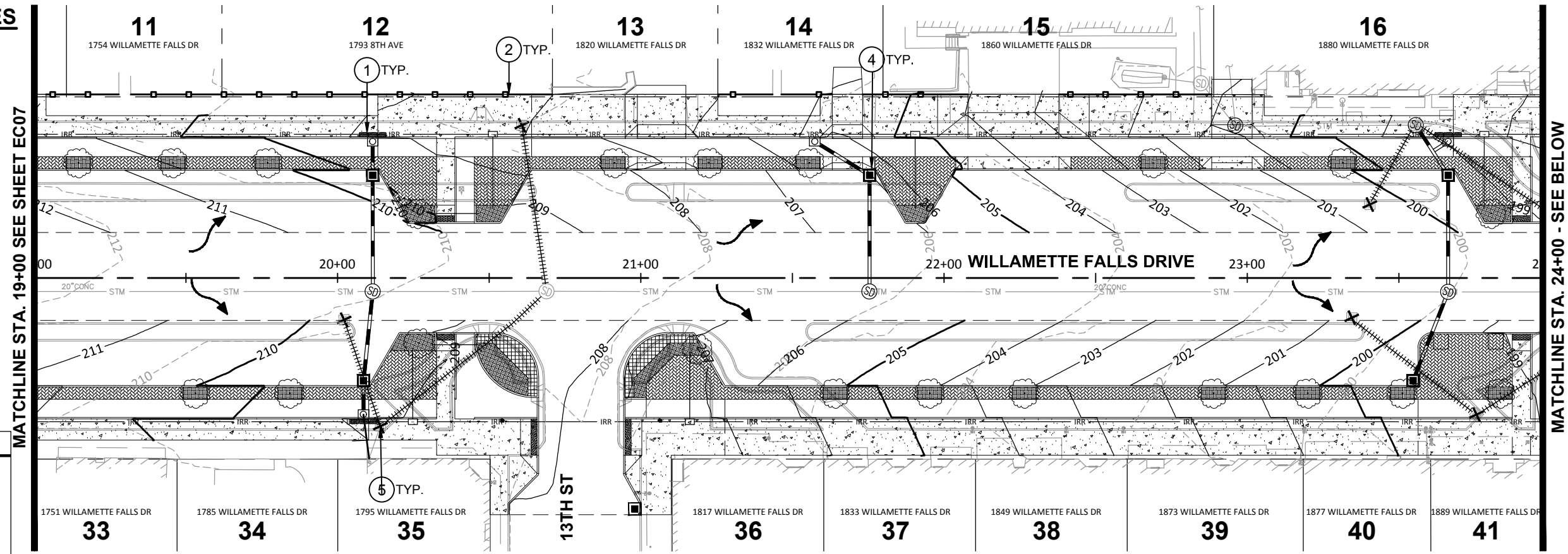
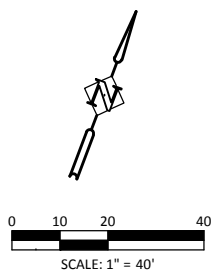
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 DATE: 11-1-19

CONSTRUCTION NOTES

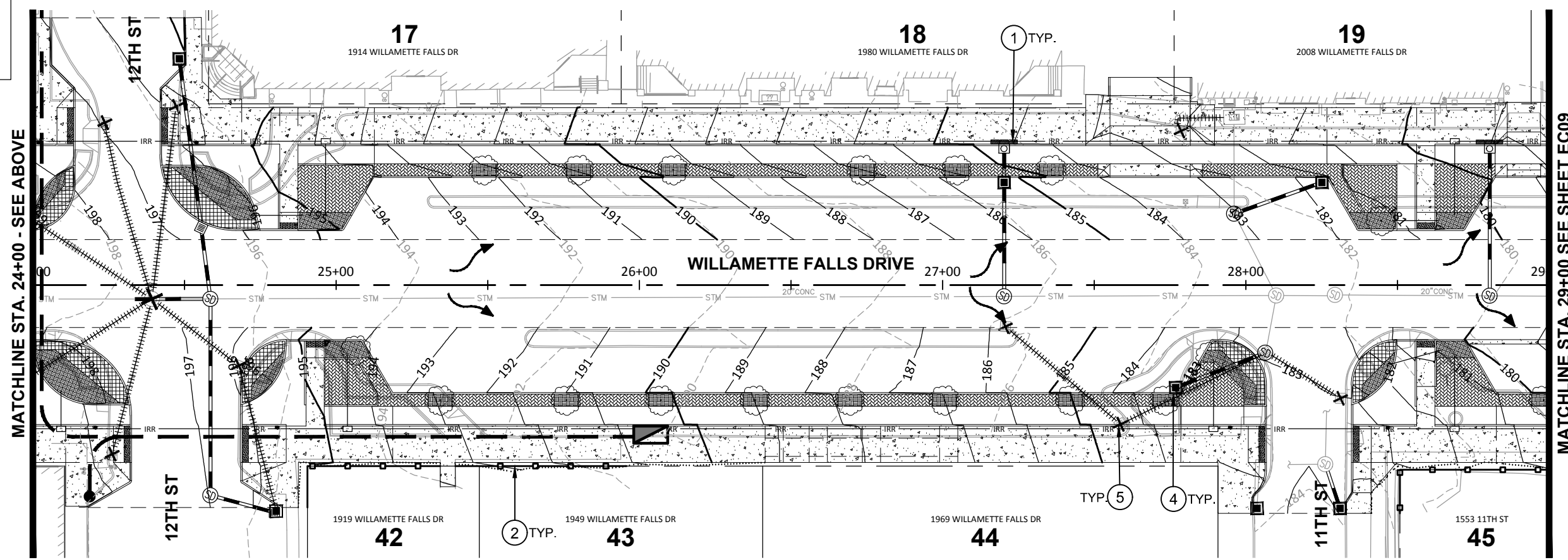
- 1 INSTALL INLET PROTECTION, TYPE 4 PER DETAIL ON SHEET EC10.
- 2 INSTALL SEDIMENT FENCE PER DETAIL ON SHEET EC10.
- 4 INSTALL INLET PROTECTION, TYPE 5 PER DETAIL ON SHEET EC10.
- 5 REMOVE/ABANDON EXISTING STORM STRUCTURE

SYMBOLS

	INLET PROTECTION - TYPE 4
	INLET PROTECTION - TYPE 5
	CONCRETE WASHOUT (AS REQUIRED)
	SEDIMENT FENCE
	FLOW DIRECTION
	EXISTING INLET TO BE REMOVED/ABANDONED
	EXISTING STORM LINE TO BE REMOVED/ABANDONED
	EXISTING CONTOURS
	PROPOSED CONTOURS



PLAN VIEW



PLAN VIEW

MATCHLINE STA. 19+00 SEE SHEET EC07

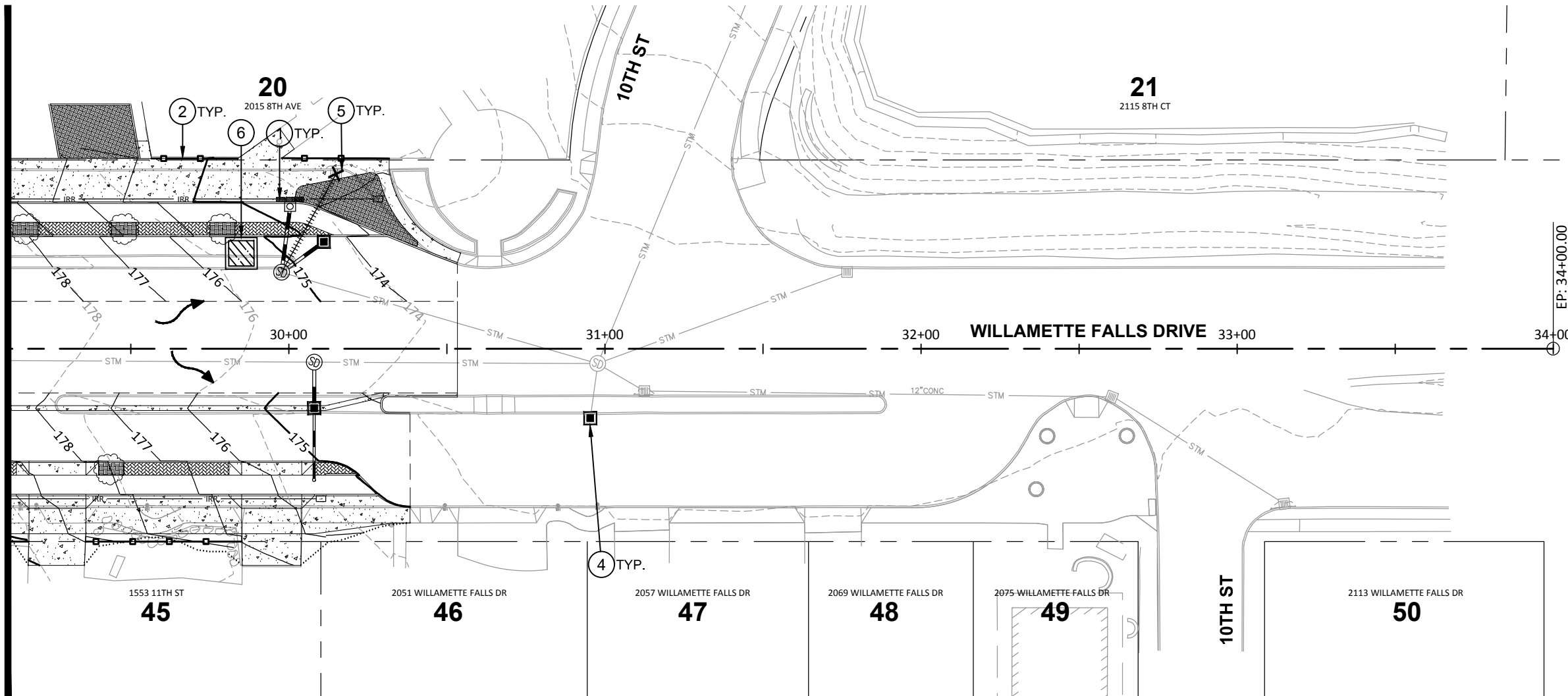
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MATCHLINE STA. 24+00 - SEE BELOW

MATCHLINE STA. 29+00 SEE SHEET EC09

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MATCHLINE STA. 29+00 SEE SHEET EC08

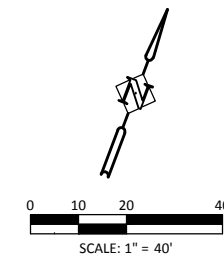


PLAN VIEW

CONSTRUCTION NOTES

- ① INSTALL INLET PROTECTION, TYPE 4 PER DETAIL ON SHEET EC10.
- ② INSTALL SEDIMENT FENCE PER DETAIL ON SHEET EC10.
- ④ INSTALL INLET PROTECTION, TYPE 5 PER DETAIL ON SHEET EC10.
- ⑤ REMOVE/ABANDON EXISTING STORM STRUCTURE
- ⑥ CONSTRUCT CONCRETE WASHOUT PER DETAIL SHEET EC11. ADJUST LOCATION AS NECESSARY.

SYMBOLS	
	INLET PROTECTION - TYPE 4
	INLET PROTECTION - TYPE 5
	CONCRETE WASHOUT (AS REQUIRED)
	SEDIMENT FENCE
	FLOW DIRECTION
	EXISTING INLET TO BE REMOVED/ ABANDONED
	EXISTING STORM LINE TO BE REMOVED/ ABANDONED
	EXISTING CONTOURS
	PROPOSED CONTOURS



ESC PROPOSED CONDITIONS
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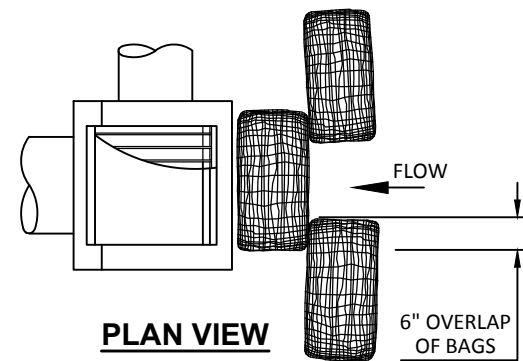
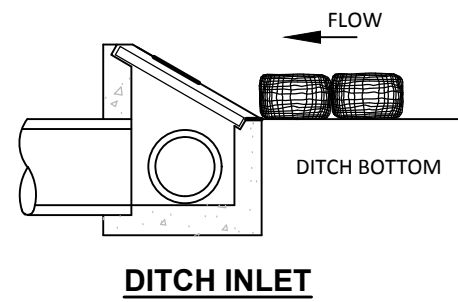
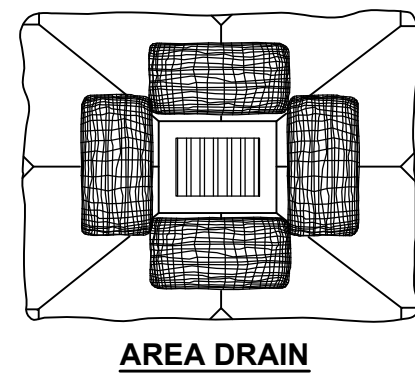
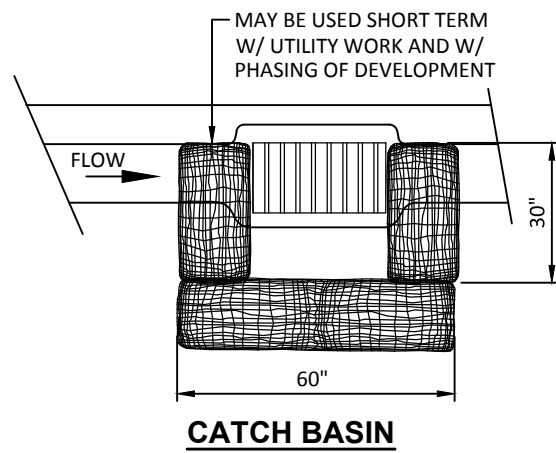


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 DATE: 11-1-19

SHEET NO.
EC09
 JOB NO.
 CWL-02

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NOTES:

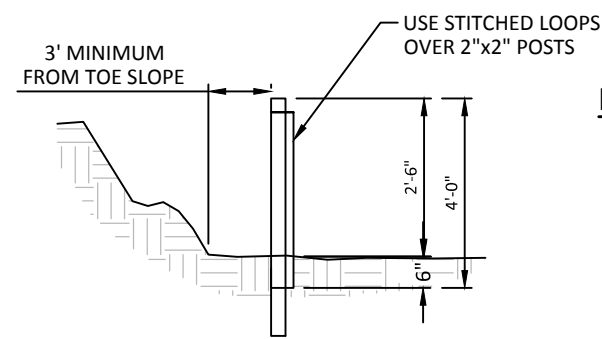
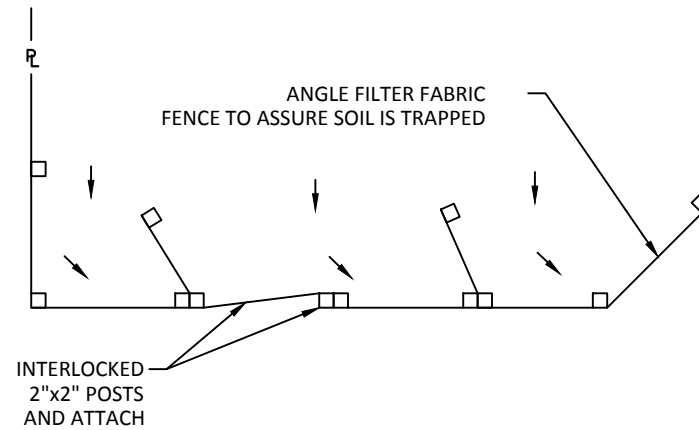
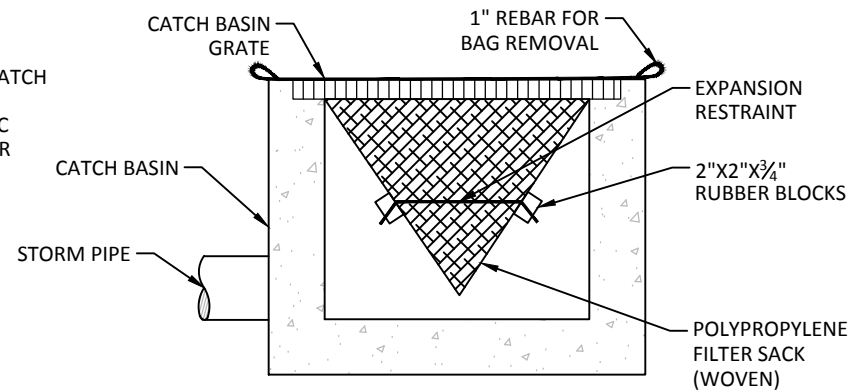
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

INLET PROTECTION TYPE 4

NTS

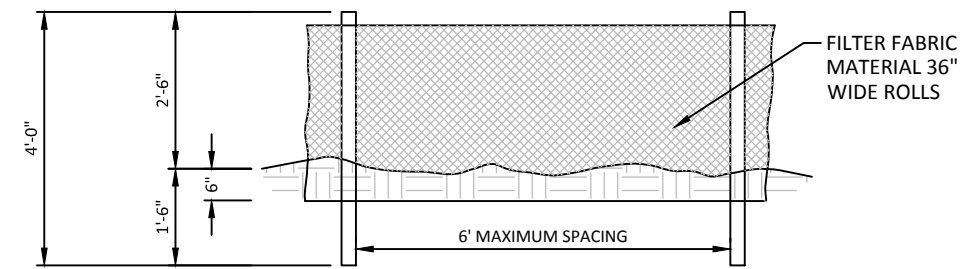
NOTE:

1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.



NOTES:

1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2"x2" FIR, PINE OR STEEL FENCE POSTS.
3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
5. PANELS MUST BE PLACED ACCORDING TO SPACING ON DETAIL.



SEDIMENT FENCE

NTS

ESC DETAILS
WILLAMETTE FALLS DRIVE
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
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	EC10
CHECKED: BRA/JSH	
DATE: 11-1-19	JOB NO. CWL-02

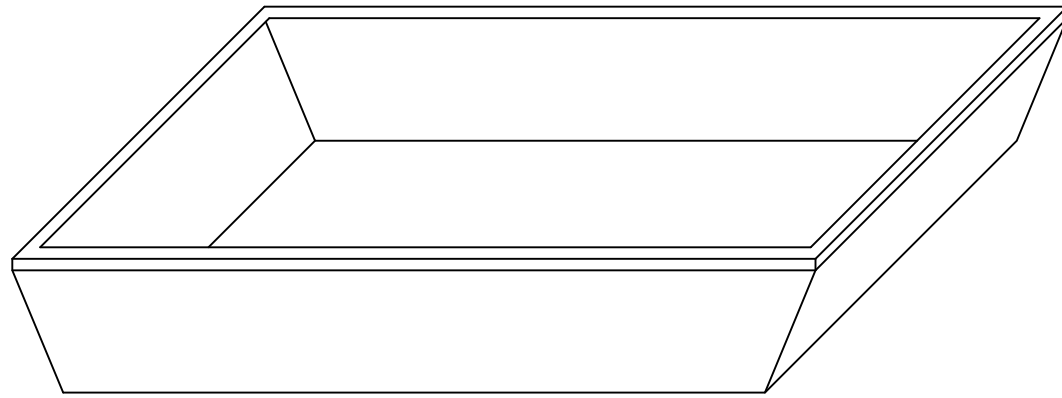
ESC DETAILS
 WILLAMETTE FALLS DRIVE
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EC11	DRAWN: HHPR TEAM
	CHECKED: BRA/JSH
JOB NO. CWL-02	DATE: 11-1-19

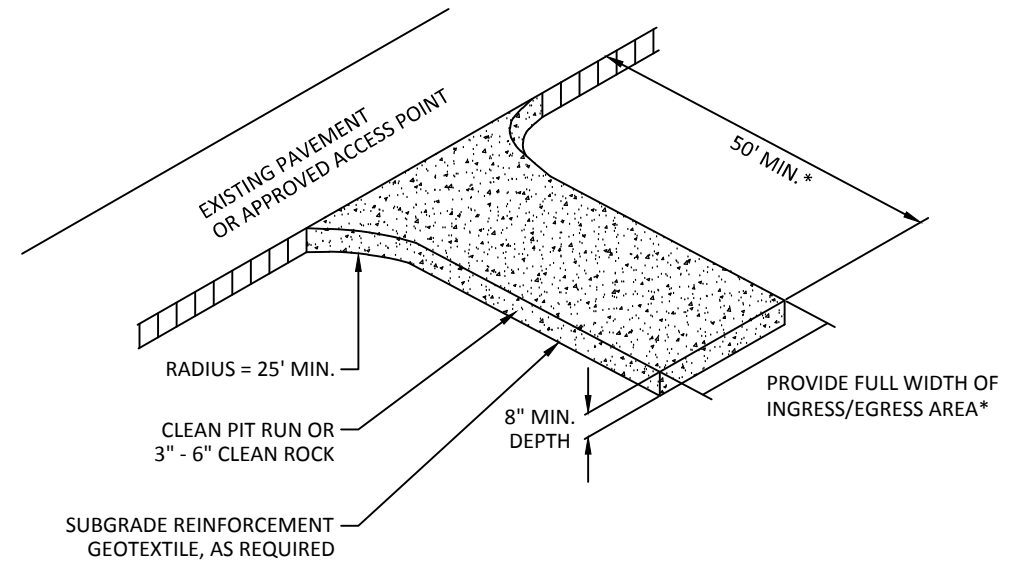


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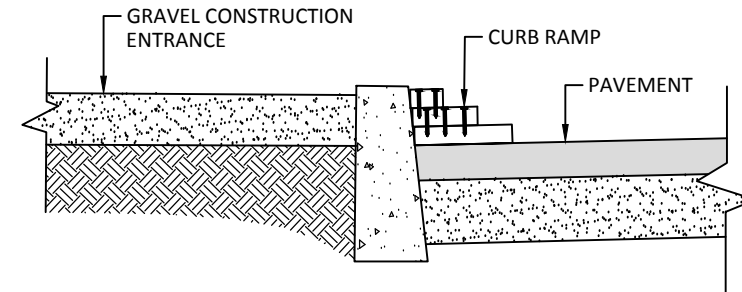
- COLLECT AND RETAIN ALL THE CONCRETE WASHOUT WATER AND SOLIDS IN A LEAK PROOF BASIN.
- INSPECT FREQUENTLY. DO NOT OVERFILL BASIN.
- RECYCLE MATERIALS.
 - WASHWATER RECYCLING: WASHWATER SHOULD BE PASSED THROUGH A FILTER AND TREATMENT SYSTEM TO REMOVE SOLIDS REDUCE PH. WASHWATER MAY BE REUSED FOR CONCRETE WASHOUT WATER. DISPOSAL OF WASHWATER SHALL BE AT AN APPROVED DISPOSAL FACILITY. DO NOT DRAIN TO STORM OR SANITARY SYSTEM.
 - SOLIDS RECYCLING: COURSE AGGREGATE MATERIALS THAT ARE SEPARATED FROM WASHWATER MAY BE RETURN TO READY MIX PLANT. COORDINATE WITH READY MIX PLANT PRIOR TO CONSTRUCTION.
 - HARDENED CONCRETE RECYCLING: ALLOW CONCRETE WASHOUT TO HARDEN IN BASIN. THE HARDEN CONCRETE MAY BE DELIVERED TO RECYCLING PLANTS.

CONCRETE TRUCK WASHOUT BASIN

NTS



*20' MIN. FOR SINGLE FAMILY AND DUPLEX RESIDENTIAL



NOTES:

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
- DIMENSIONS
 - SINGLE FAMILY
20' LONG BY 20' WIDE 8" DEEP OF 3/4" MINUS CLEAN ROCK.
 - COMMERCIAL
50' LONG BY 20' WIDE 3-6" CLEAN ROCK,
GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

NTS

LEGEND

POLES

- (N) NEW METAL LIGHT POLE NO. (N) FOR ROADWAY ILLUMINATION (SEE PGE LIGHT POLE TABLE).
- (LP/PGE) PGE TO FURNISH AND INSTALL NEW PGE APPROVED STREET LIGHT POLE WITH EXTENSION AND ARM BRACKET (SEE PGE LIGHT POLE TABLE)
- (FND) INSTALL FOUNDATION FOR STREET LIGHT POLE, FOUNDATION TO BE PROVIDED BY PGE.
- (BN) INSTALL STERNBERG LIGHTING 230LED MANOR SERIES BOLLARD WITH LED LIGHT AND GFCI OUTLET (N=NUMBER), PART NUMBER: 230LED-IL30TS-MDL07-CL2-FHD-GFILPIUC/BK.
- (PS) POWER SOURCE.

CABINETS

- (BMCL) INSTALL BASE MOUNTED SERVICE CABINET, 120/240 VOLT METERED.

JUNCTION BOXES

- (JB 1) INSTALL 17"x10"x12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX.
- (JB 2) INSTALL 22"x12"x12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX.
- (JB 3) INSTALL 30"x17"x12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX.
- (JB/PGE2) FURNISH AND INSTALL PGE APPROVED 17"x30"x18" JUNCTION BOX.
- (GFI 1) INSTALL GFI RECEPTACLE AND JUNCTION BOX NO. (N). SEE "JUNCTION BOX AND GFI RECEPTACLE DETAIL ON SHEET IL6"

CONDUITS

- (S) INSTALL (S) INCH NON-METALLIC CONDUIT.
- (W) INSTALL CONDUIT AS REQUIRED BY POWER COMPANY.
- (HDD) INSTALL CONDUIT BY HORIZONTAL DIRECTIONAL DRILLING, OPEN TRENCH NOT ALLOWED.

WIRES

- (PL) FURNISH AND INSTALL POLY PULL TAPE (500 LB, NON-CONDUCTING)
- (N|G) INSTALL (N=NUMBER) NO. (G=AWG WIRE SIZE) XHHW WIRES
- L#N GFI CIRCUIT NO. (N)
- G(S) INSTALL ONE NO. (S) COPPER GROUND WIRE

POLE NO.	STATION	OFFSET* (FT)	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)	PGE LIGHT POLE TABLE			Notes
					LUMINAIRE			
					PART NUMBER	WATTAGE	TYPE	
1	10+51	2.4	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
2	11+45	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
3	12+17	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
4	12+79	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
5	13+60	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
6	13+41	5.0	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
7	14+55	5.5	21	4	C7897GA-A3N73032A3NNNNA	35W	III	INSTALL PHOTOCONTROL ON ARM
8	14+06	2.8	21	4	C7897GA-A3N73032A3NNNNA	35W	III	INSTALL PHOTOCONTROL ON ARM
9	15+35	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
10	14+80	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
11	16+68	2.5	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
12	16+22	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
13	17+33	5.5	21	4	C7897GA-A3N73032A3NNNNA	35W	III	INSTALL PHOTOCONTROL ON ARM
14	17+01	5.5	21	4	C7897GA-A3N73032A3NNNNA	35W	III	INSTALL PHOTOCONTROL ON ARM
15	17+67	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
16	18+52	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
17	19+22	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
18	20+08	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
19	20+61	5.5	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
20	20+69	2.5	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
21	21+33	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
22	21+90	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
23	22+58	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
24	23+11	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
25	23+82	2.5	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
26	24+08	5.5	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
27	24+22	9.1	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
28	24+95	2.6	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
29	25+55	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
30	26+42	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
31	27+22	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
33	28+01	5.0	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
34	28+01	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
35	28+68	2.5	21	4	C7897GB-A3N73048A3NNNNA	52W	III	INSTALL PHOTOCONTROL ON ARM
36	30+02	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM
37	29+65	2.5	21	4	C7897GC-A3N73064A3NNNNA	68W	III	INSTALL PHOTOCONTROL ON ARM

* FC = Measured from center of pole to face of curb

GENERAL NOTES

- UTILITY LOCATIONS ARE APPROXIMATE AND NOT ALL UTILITIES ARE SHOWN. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES THROUGHOUT CONSTRUCTION. MAINTAIN AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED. COORDINATE ALL WORK WITH UTILITY COMPANIES TO ELIMINATE CONFLICTS.
- FOUNDATIONS, JUNCTION BOXES, AND CONDUIT SHOULD BE INSTALLED AT LOCATIONS SHOWN ON PLANS. IF CONFLICTS ARISE, FOUNDATIONS, JUNCTION BOX, AND CONDUIT LOCATIONS MAY BE MODIFIED IN THE FIELD PER ENGINEER APPROVAL. THE PREFERRED LOCATION OF CONDUIT IS UNDER SIDEWALK. ALL LIGHTING EQUIPMENT MUST BE PLACED WITHIN THE RIGHT OF WAY.
- ALL PROPOSED STREET LIGHTING JUNCTION BOXES, CONDUITS, PULL ROPES, ANCHOR BOLTS, AND CONCRETE FOUNDATIONS SHALL BE INSTALLED BY CONTRACTOR PER PGE REQUIREMENTS. REFER TO PGE ELECTRICAL SERVICE REQUIREMENTS, JANUARY 2018.
- ALL STREET LIGHT POLES, LUMINAIRE ARMS, LUMINAIRES, LAMPS AND WIRING SHALL BE FURNISHED AND INSTALLED BY PGE AND FOUNDATIONS SHALL BE FURNISHED BY PGE AND INSTALLED BY THE CONTRACTOR.
- FIELD VERIFY ALL MEASUREMENTS PRIOR TO CONSTRUCTION. FINAL LIGHT POLE LOCATIONS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER PRIOR TO FOUNDATION INSTALLATION.
- ALL CONDUIT ELBOWS SHALL BE LONG RADIUS 36" FIBERGLASS.
- CONTACT BRENT BALDWIN PGE (503-736-5470) TO COORDINATE SERVICE CONNECTIONS. REFER TO WORK ORDER NUMBER M2802365.
- MAINTAIN A MINIMUM 12 INCH CLEARANCE BETWEEN ALL EXISTING UTILITIES AND NEW FOUNDATIONS, JUNCTION BOXES, AND ELECTRICAL CONDUIT.

LIGHTING NOTES

- LIGHT POLE (FURNISHED AND INSTALLED BY PGE) SHALL BE:

MANUFACTURER: HADCO CATALOG NUMBER: CP2871C

- 4' EXTENSION WITH ARM BRACKET (FURNISHED AND INSTALLED BY PGE) SHALL BE:

MANUFACTURER: HADCO CATALOG NUMBER: CA7897-HFP710-P5A

- LUMINAIRE (FURNISHED AND INSTALLED BY PGE) SHALL BE:

MANUFACTURER: WESTBROOKE CATALOG NUMBER: SEE PGE LIGHT POLE TABLE

- ANCHOR BASE CONCRETE FOOTING (FURNISHED BY PGE) SHALL BE:

MANUFACTURER: OLD CASTLE CATALOG NUMBER: 20R-LB-4-PGE

- PGE TYPE 2: JUNCTION BOX (17"x30"x18") SHALL BE RATED TIER 22 FOR THE BOX AND TIER 15 FOR THE LID ACCORDING TO ANSI/SCTE 77-2010.

MANUFACTURER: NEWBASIS QUAZITE (HUBBELL) OLD CASTLE/CARSON INDUSTRIES HIGHLINE ARMORCAST CATALOG NUMBER: FCA173018T-90026 A42173018A017 17301620 CHA173018HE1 A6001640TAX18-PGE

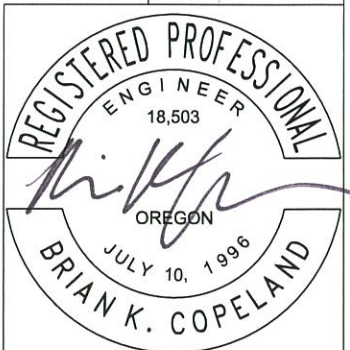
- PHOTOCONTROL (FURNISHED AND INSTALLED BY PGE) SHALL BE:

MANUFACTURER: RIPLEY DTL INTERMACTIC CATALOG NUMBER: RD8645 DLL12715J50 EK45365B

ACCOMPANIED BY: SHEETS IL2-IL8 AND ODOT STANDARD DRAWINGS TM471, TM472, AND TM482.

ILLUMINATION LEGEND
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

720 SW Washington St, Suite 500
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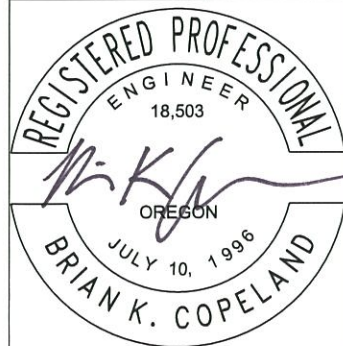
EXPIRES: DEC. 31, 2019

DESIGNED: ELV	SHEET NO.
DRAWN: MAL	IL1
CHECKED: BKC	
DATE: 11-1-19	JOB NO. CWL-02

ILLUMINATION PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

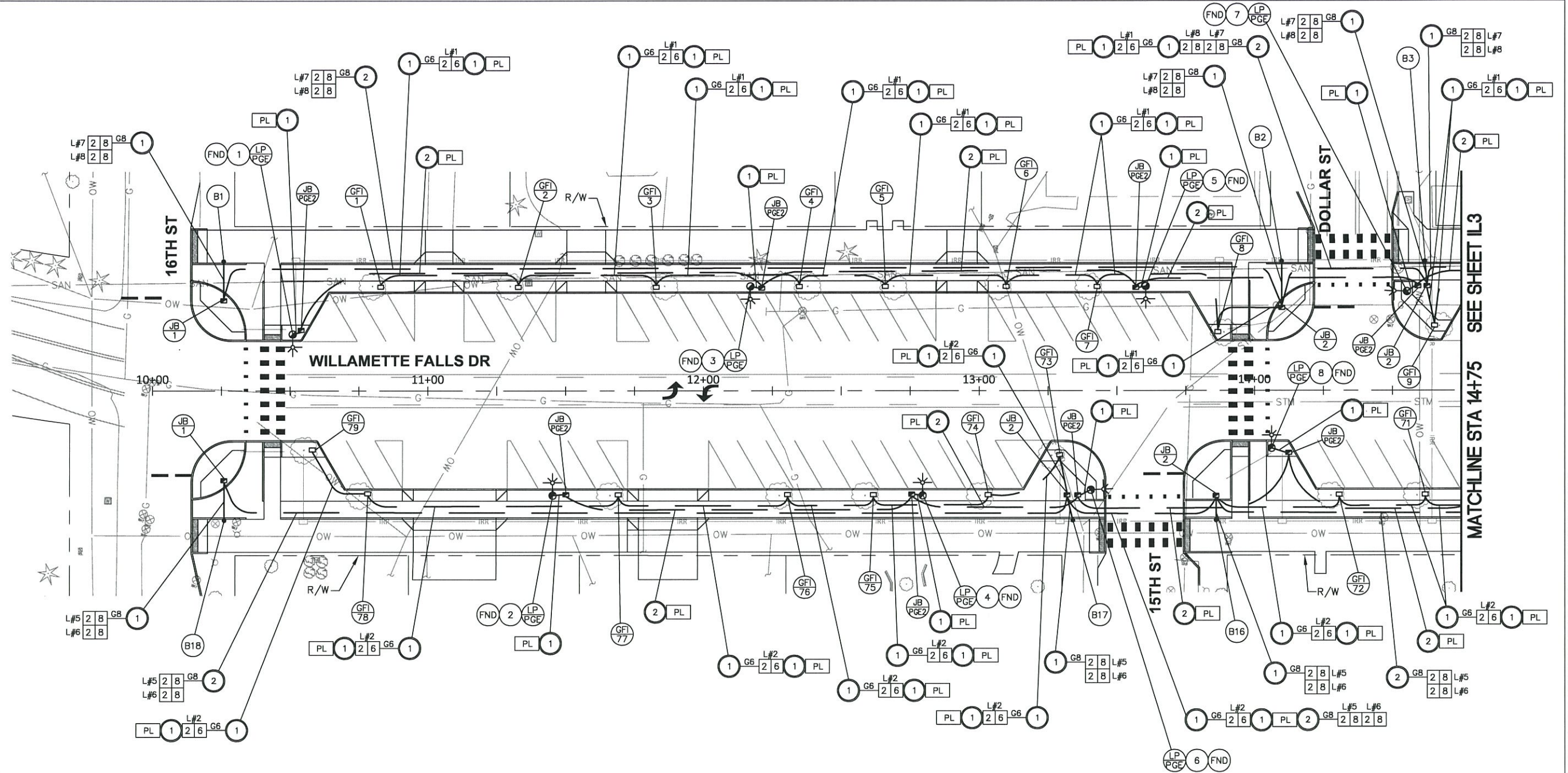


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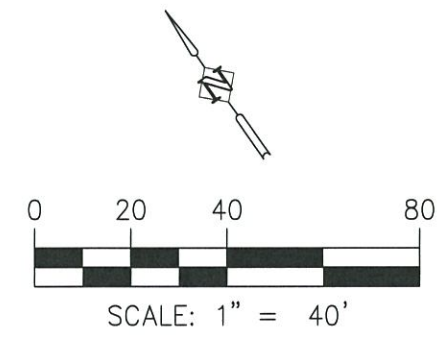
EXPIRES: DEC. 31, 2019

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CWL-02		

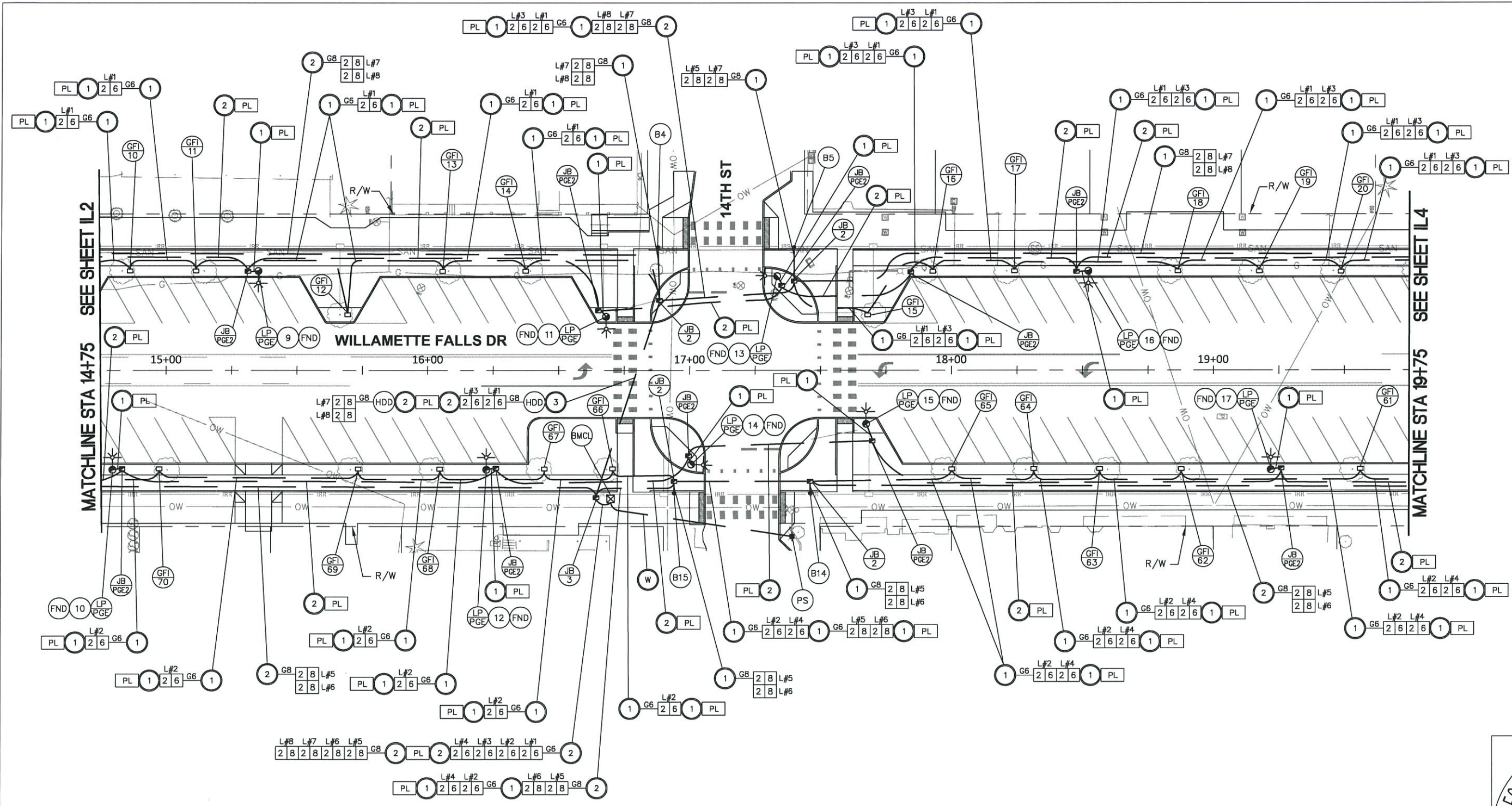


"NOT ALL UTILITIES SHOWN"
 CONTACT UTILITY COMPANIES FOR FIELD LOCATIONS

NOTE:
 SEE SHEET IL1 FOR ILLUMINATION PLAN LEGEND.



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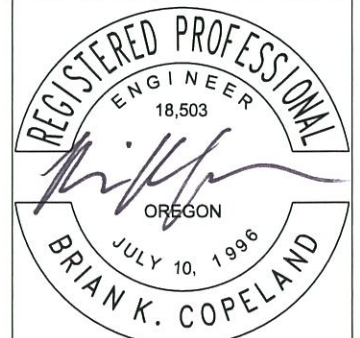


MATCHLINE STA 14+75 SEE SHEET IL2

SEE SHEET IL4 MATCHLINE STA 19+75

ILLUMINATION PLAN
WILLAMETTE FALLS DRIVE
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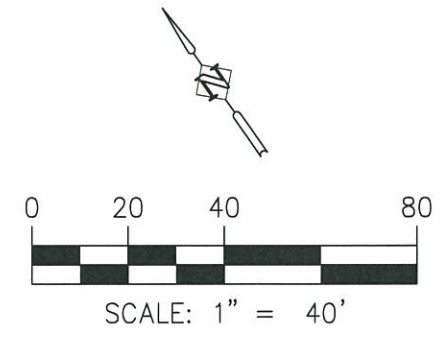


EXPIRES: DEC. 31, 2019

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DATE:	11-1-19	JOB NO.		CWL-02

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CONTACT UTILITY COMPANIES FOR FIELD LOCATIONS

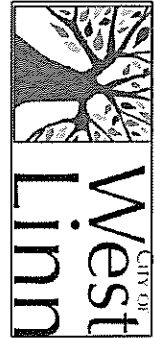
NOTE:
SEE SHEET IL1 FOR ILLUMINATION PLAN LEGEND.



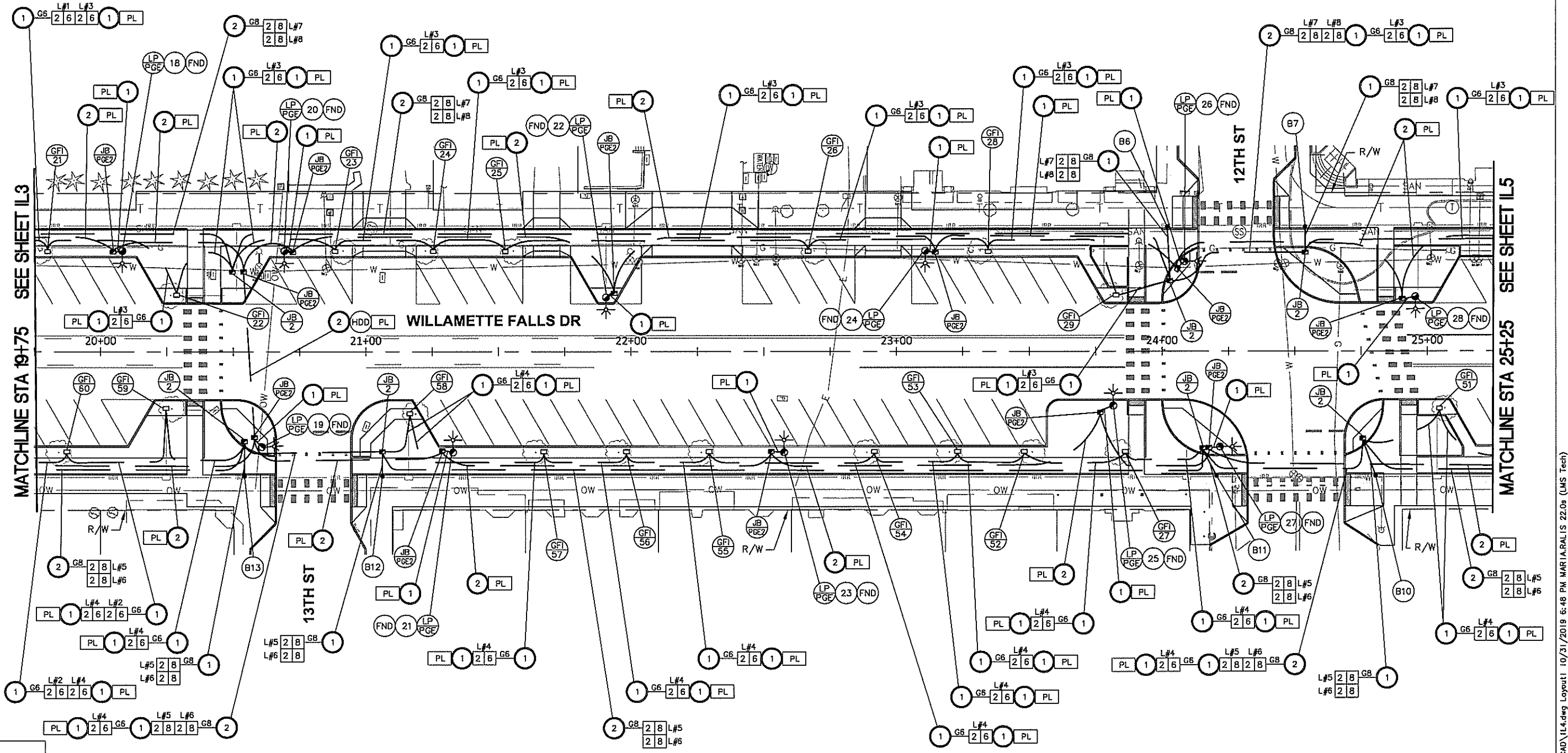
ILLUMINATION PLAN
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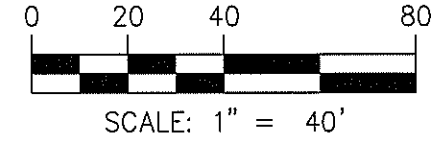


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IL4	DRAWN:	MAL
JOB NO.	CHECKED:	BKC
CWL-02	DATE:	11-1-2019



"NOT ALL UTILITIES SHOWN"
CONTACT UTILITY COMPANIES FOR FIELD LOCATIONS

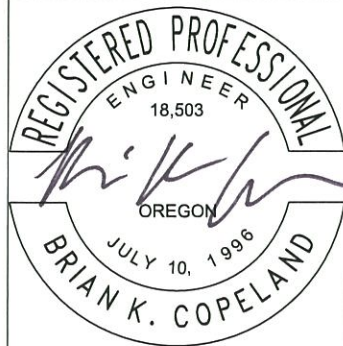
NOTE:
SEE SHEET IL1 FOR ILLUMINATION PLAN LEGEND.



ILLUMINATION DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

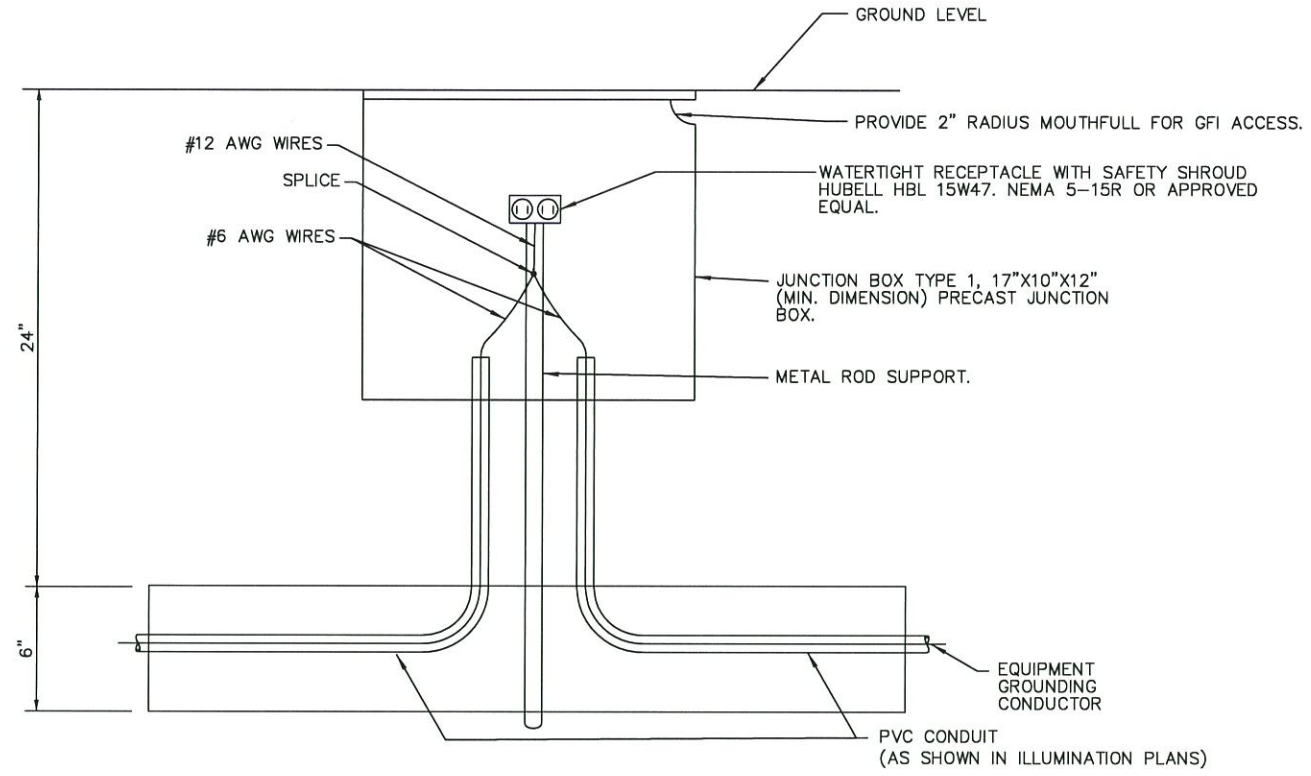


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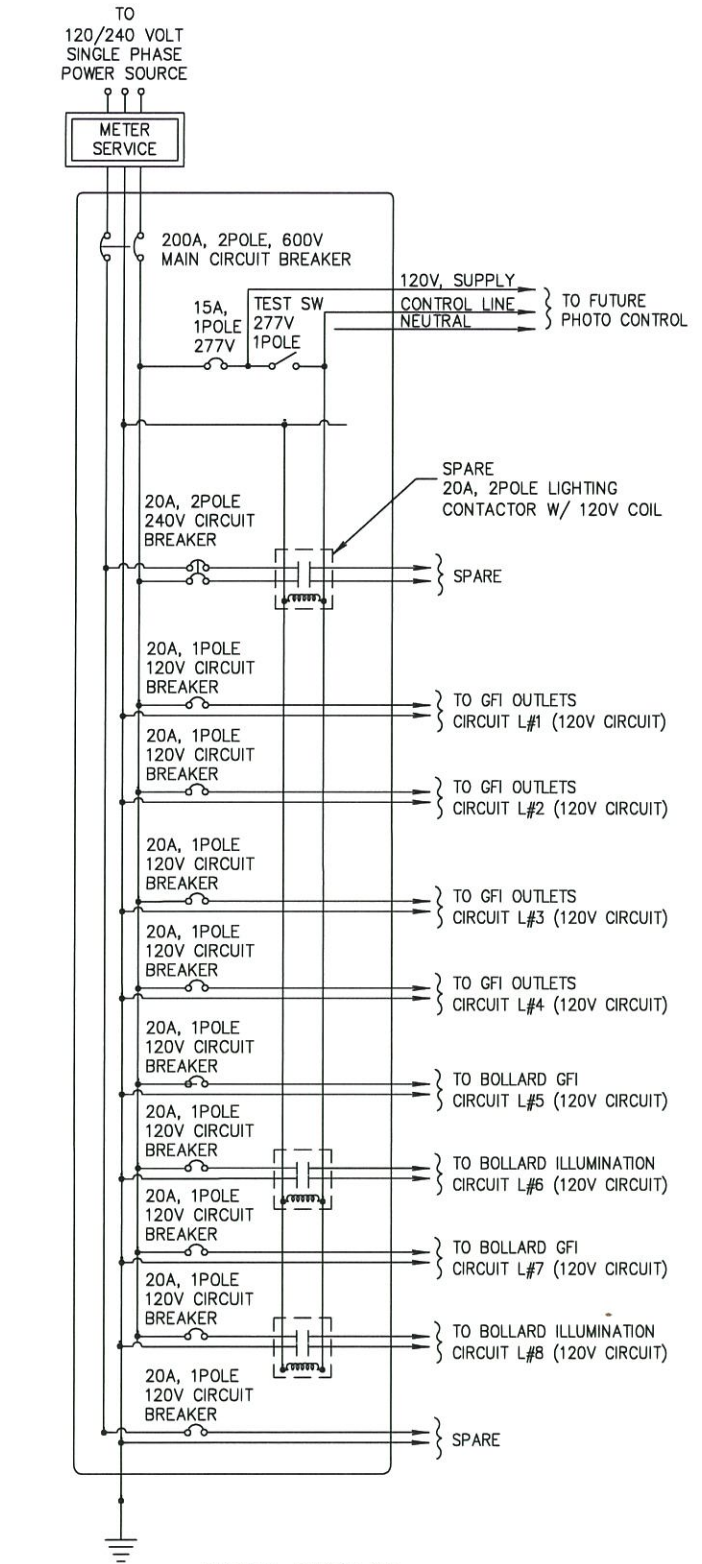
EXPIRES: DEC. 31, 2019

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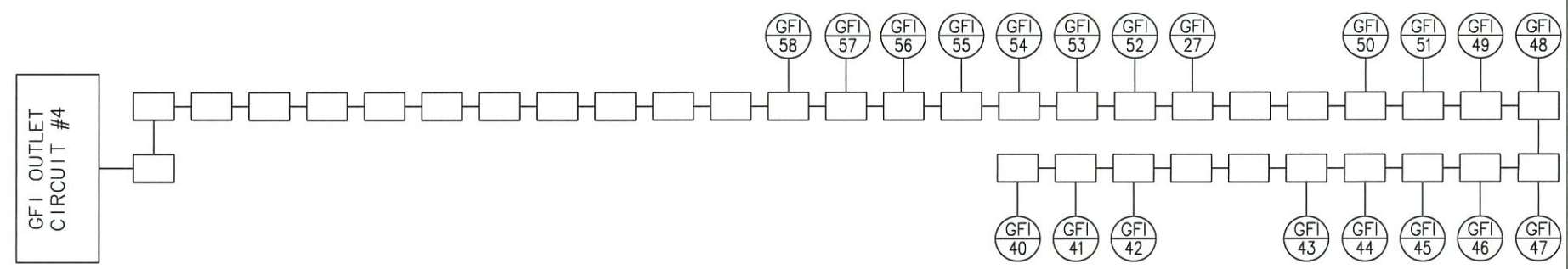
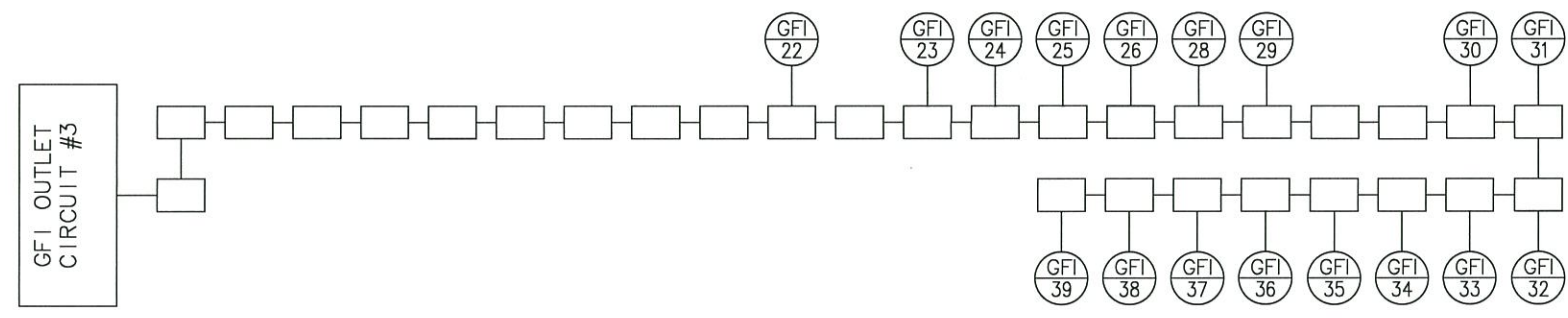
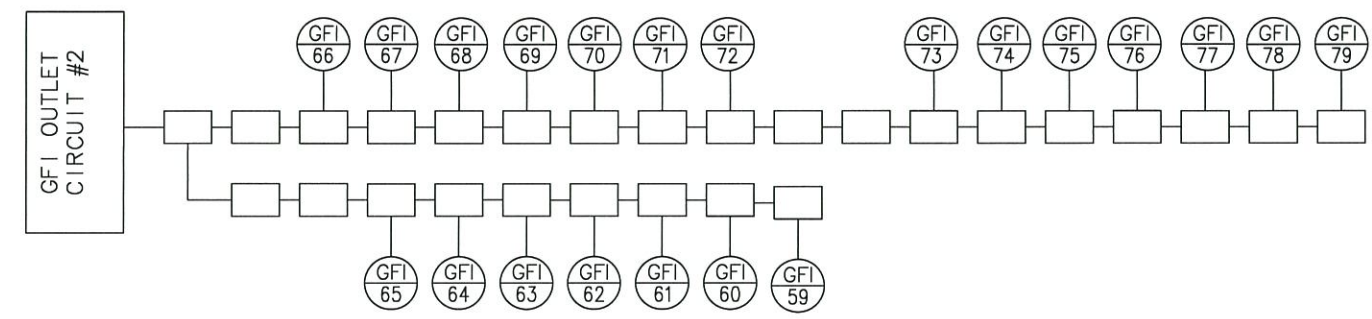
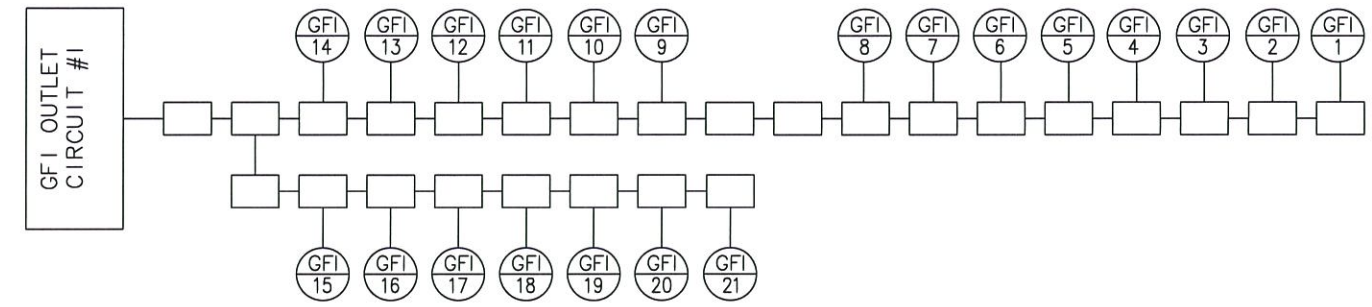


JUNCTION BOX AND GFI RECEPTACLE DETAIL
 (NTS)

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BMCL
WIRING DIAGRAM
BASE MOUNTED CONTROL CABINET
(SOUTHWEST CORNER OF WILLAMETTE
FALLS DRIVE AND 14TH STREET STA.
16+70 49.2' RT)



LEGEND

□ GFI RECEPTACLE

○ GFI N
GFI RECEPTACLES NO. (N)

ILLUMINATION DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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EXPIRES: DEC. 31, 2019

DESIGNED:	ELV	SHEET NO.	IL7
DRAWN:	MAL		
CHECKED:	BKC		
DATE:	11-1-19	JOB NO. CWL-02	

ILLUMINATION DETAILS
 WILLAMETTE FALLS DRIVE
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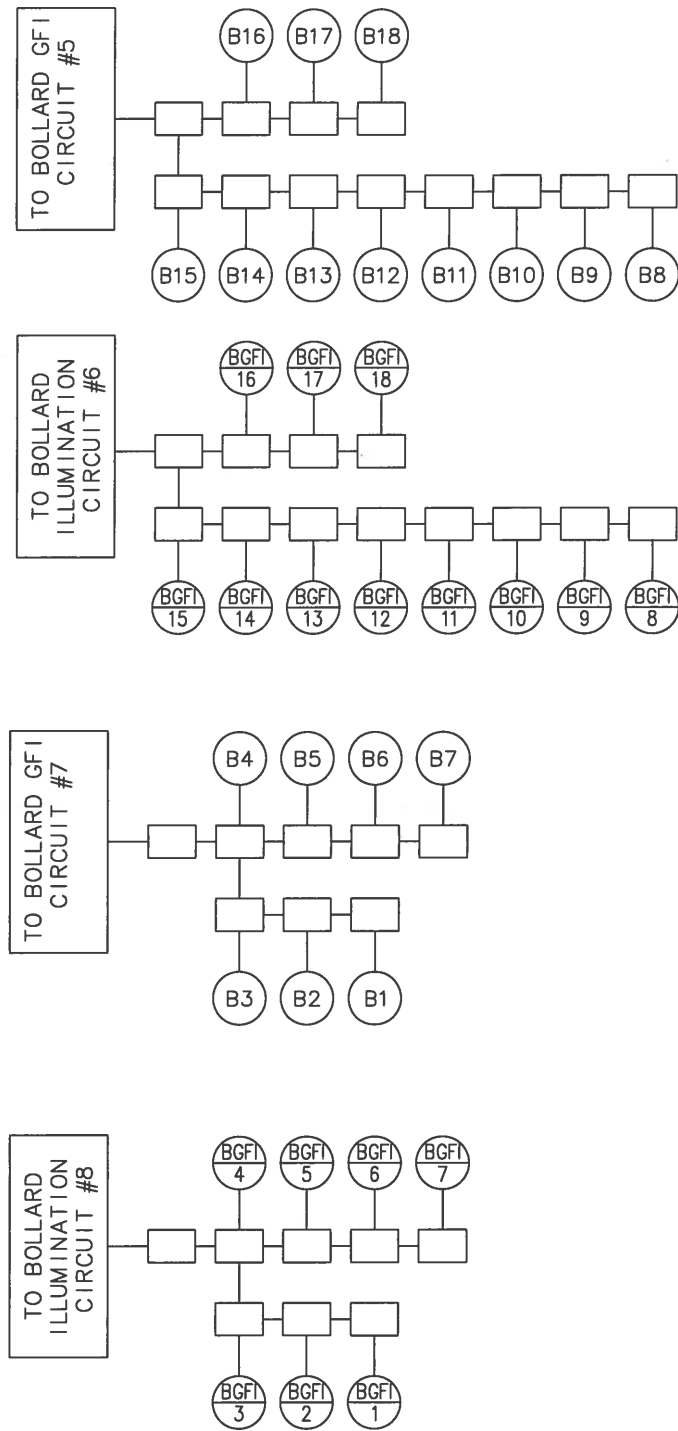


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JOB NO. CWL-02	CHECKED: BKC
	DATE: 11-1-2019



LEGEND

-  GFI RECEPTACLE
-  BOLLARD/GFI RECEPTACLES NO. (N)
-  BOLLARD NO. (N)

NOTE:
 SEE SHEET IL7 FOR SERVICE CABINET DETAILS.

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Top Of Finished Surface

Minimum Cover (See Table)

Conduit

Minimum Cover Table (Use Permit Depth If Greater Than These)		
Type Of Conduit	Roadway & Shoulders	Other Areas
Metallic	24"	18"
Non-Metallic	30"	18"

MINIMUM COVER FROM FINISHED SURFACE

Cables/Wires (Or Pull Line in Conduit For Future Use Only)

Install Push-On PVC End Bell Conduit Bushings Before Installing Wire

Install Foam Conduit Plug After Wiring (Or Pull Line) Is Installed

PVC Riser (In Junction Boxes) Or Fiberglass Riser (In Foundations)

Foam Conduit Plug

Notes:

- 1.) Ream Conduit Ends To Remove Rough Edges And Burrs
- 2.) Temporarily Plug Or Cap Conduit Ends Until Wiring Is Installed To Keep Debris Out

CONDUIT ENDS AND BUSHINGS

Standard Factory Fiberglass Bend (No Crimping Or Flattening)

Conduit Diameter	R (min.)
1.5"	10"
2.0"	12"
2.5"	15"
3.0"	18"

CONDUIT ELBOWS

Make Cuts Square And True So Conduit Ends Fit Together For Thier Full Circumference. Use Solvent Weld To Connect Conduit As Per Manufacturer's Recommendation.

Coupling

Non-Metallic Conduit

Notes:

- 1.) Slip Joints, Running Threads Or Reducing Couplings Not Allowed. Use The Same Size Conduit For The Entire Length, Outlet To Outlet.

CONDUIT COUPLINGS

Selected Granular Or Selected General (Native) Material Compact Material In Layers Not Greater Than 6 Inches According To 00405.46(C)(2)

6" (Nominal)

2" Cover

2" Bedding

Conduit

Top Of Trench, Bottom Of Subgrade, Surrounding Ground, Or Upper Limit Of Excavation

Install Underground Marking Tape Directly Over The Conduit For The Entire Length Of The Conduit Run

Sand Blanket (May Be Omitted When Using Rigid Metallic Conduit)

UNSURFACED AREAS
(new roadway prior to paving, shoulders, under sidewalk, landscaped areas, etc.)

6" Min. Or Match Existing Surface Thickness, Whichever Is Greater

Top Of Existing Surface

When Excavating, Cut Sharp And Well Defined Pavement Edges With An Approved Pavement Cutting Saw 2 Inches Minimum Depth Along The Boundaries Of The Area To Be Removed

Match Existing Surface Material: PCC Or ACP Compact Material According To 00744, 00745, 00755, And 00756, As Applicable. Finish To A Smooth Riding Surface.

CLSM

Conduit

EXISTING PAVED AREAS

Trenching & Backfill Notes:

1. Excavate According To 00960.40. In Areas To Be Paved Or Landscaped, Place All Conduit Before Paving Or Landscaping.
2. Hold Trench Width To A Practical Minimum
3. Do Not Backfill Trenches Until Inspected By The Engineer
4. Furnish Backfill Materials According To 00960.10

CONDUIT OPEN TRENCH EXCAVATION & BACKFILL

2" Min. - 3" Max.

Fiberglass riser (Install plumb)

Concrete Foundation

Fiberglass Elbow

Coupling

Conduit (size as shown on plans)

Extend fiberglass conduit 10" -12" beyond foundation

CONDUIT INSTALLATIONS IN FOUNDATIONS
(Applicable for Pole, Pedestal, Post, Service Cabinet and Controller Cabinet Foundations)

Junction Box

PVC riser (install plumb)

2" to 3" Typ. from end wall

2" Min. - 3" Max.

Conduit (size as shown on plans). Enter through the bottom of the box near the end wall from the direction of the conduit run

(Direction of Conduit Run)

Fiberglass conduit elbow

Coupling

CONDUIT INSTALLATION IN JUNCTION BOXES

General Notes:

1. Install Non-Metallic Conduit Unless Otherwise Shown. Conduit Runs Shall Be Continuous Between Any Pole, Junction Box, Or Cabinet.
2. Install Conduit By Open Trench Method, Horizontal Directional Drilling, Or As Shown
3. Conduit Runs Shown On Plans Are For Bidding Purposes Only. Locations May Be Changed To Avoid Obstructions.
4. Larger Conduit Than Specified May Be Used At The Option And Cost Of The Contractor

CALC. BOOK NO. N/A	BASELINE REPORT DATE 2-Jul-2018
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
TRENCHING & CONDUIT INSTALLATION	
2018	
DATE 07/18	REVISION DESCRIPTION New Drawing

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.

ILLUMINATION DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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DESIGNED: ELV	SHEET NO. IL9
DRAWN: MAL	
CHECKED: BKC	
DATE: 11-1-19	JOB NO. CWL-02

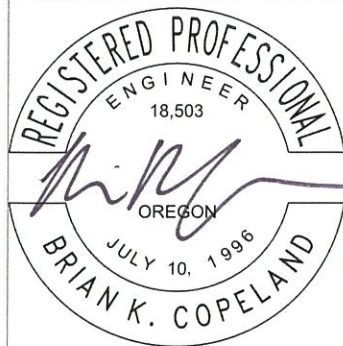
Effective Date: December 1, 2019 - May 31, 2020

TM471

TM471

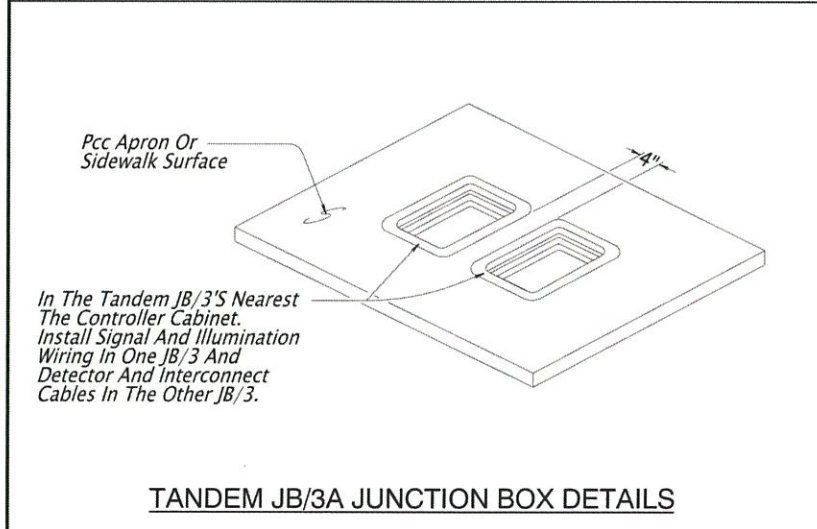
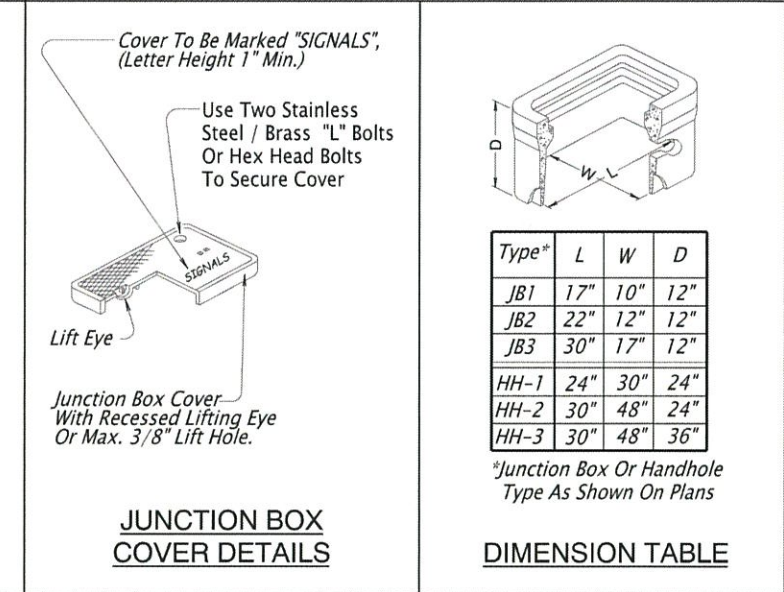
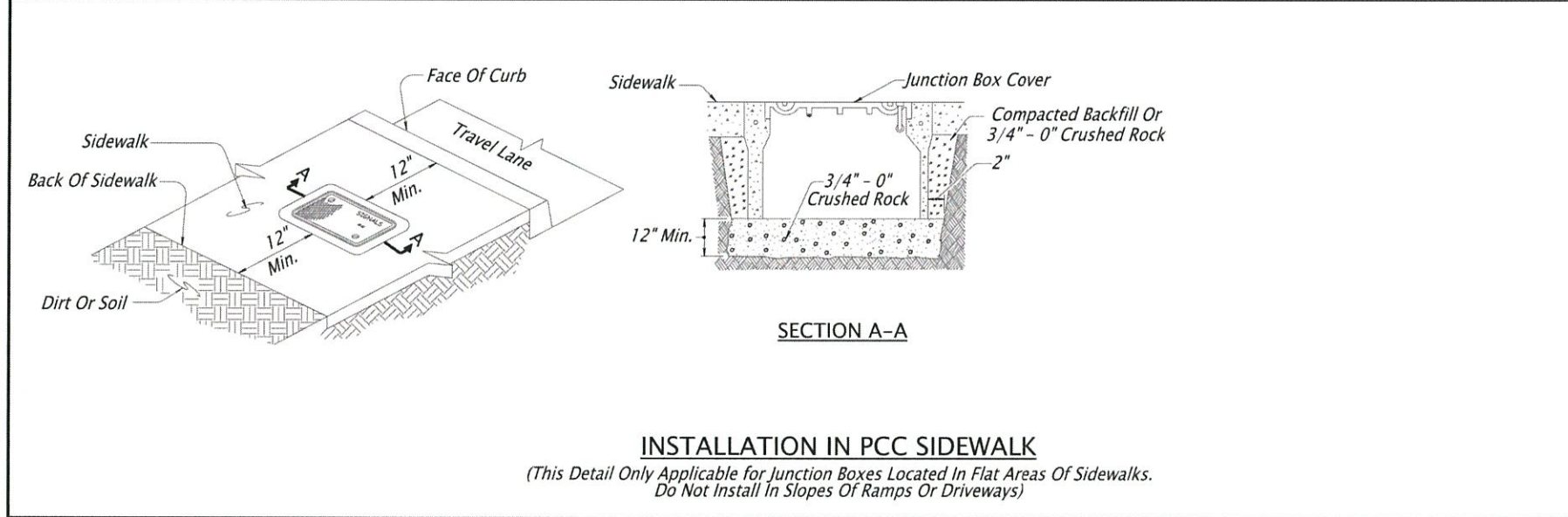
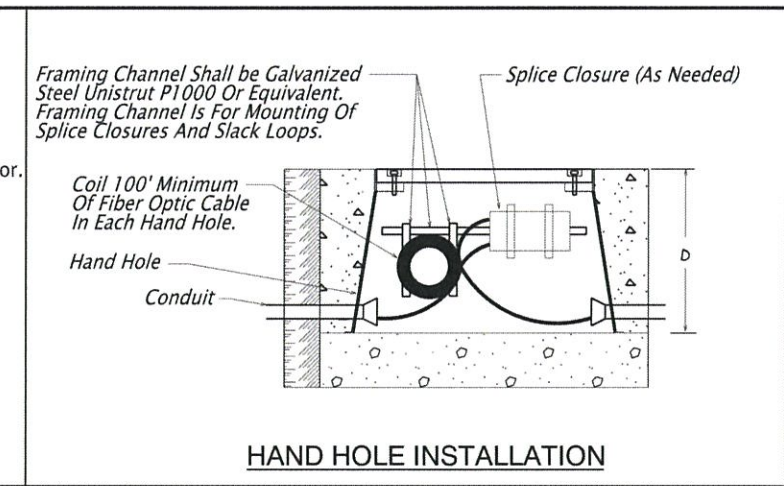
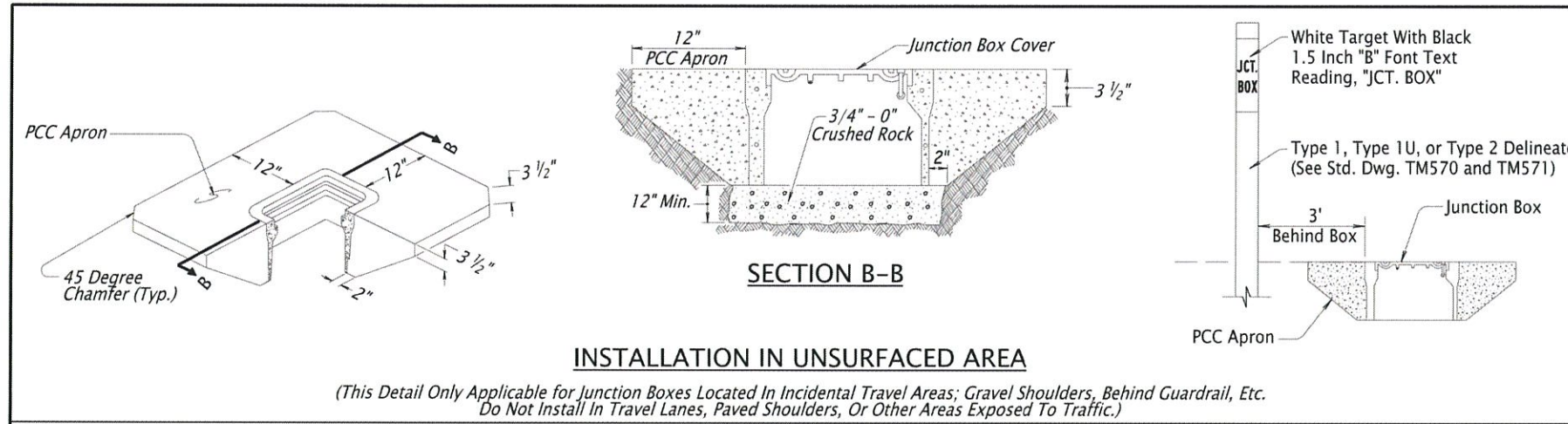


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EXPIRES: DEC. 31, 2019

SHEET NO.	DESIGNED:	ELV
IL10	DRAWN:	MAL
JOB NO.	CHECKED:	BKC
CWL-02	DATE:	11-1-2019



- GENERAL NOTES:**
1. Install Top of Junction Box Flush With The Sidewalk, Surrounding Grade, Or Top Of Curb
 2. Install Junction Boxes At The Approximate Locations Shown, Or If Not Shown, No More Than 300 Feet Apart
 3. More Junction Boxes Than Specified May Be Installed To Facilitate The Work At The Option And Cost Of The Contractor

CALC. BOOK NO. N/A	BASELINE REPORT DATE 2-Jul-2018
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
TRAFFIC SIGNAL JUNCTION BOXES/ HAND HOLES	
2018	
DATE	REVISION DESCRIPTION
07/18	Added A New Detail & Notes, Revised & Simplified Details

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.

Effective Date: December 1, 2019 - May 31, 2020

TM472

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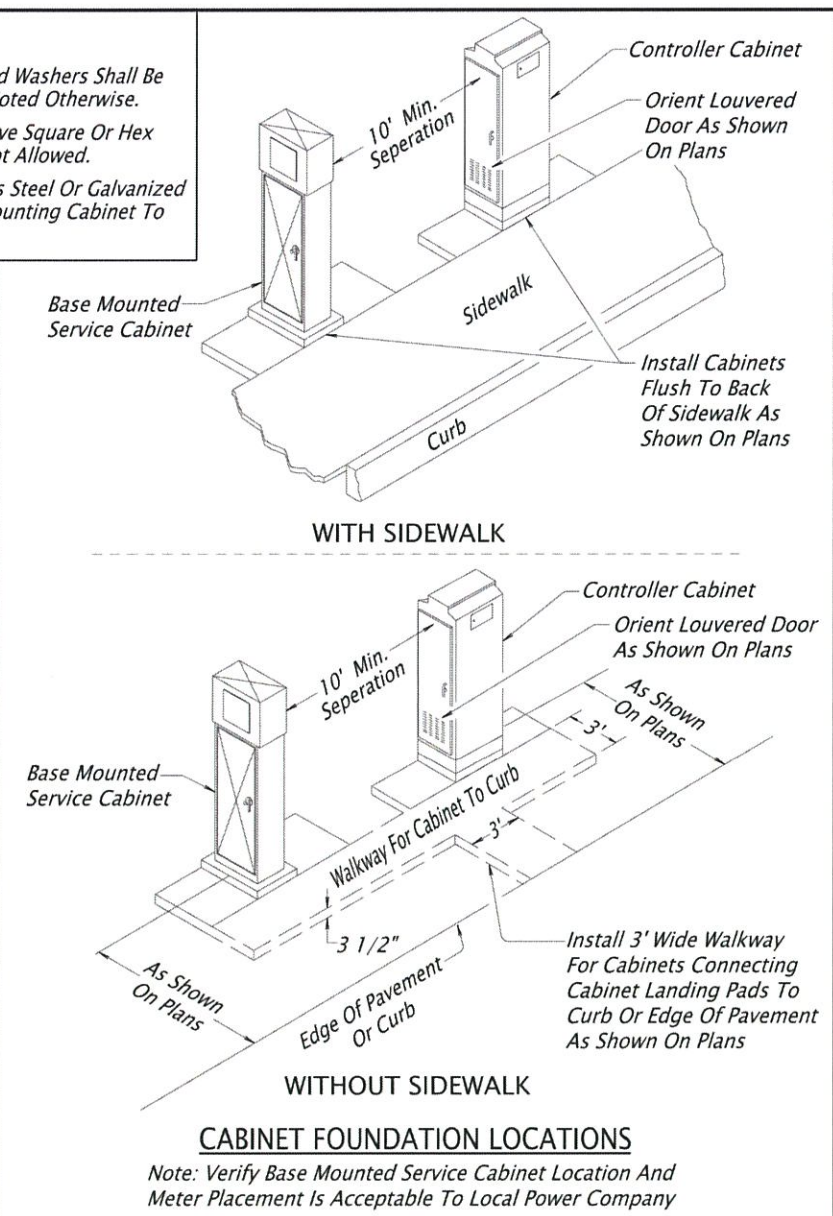
ILLUMINATION DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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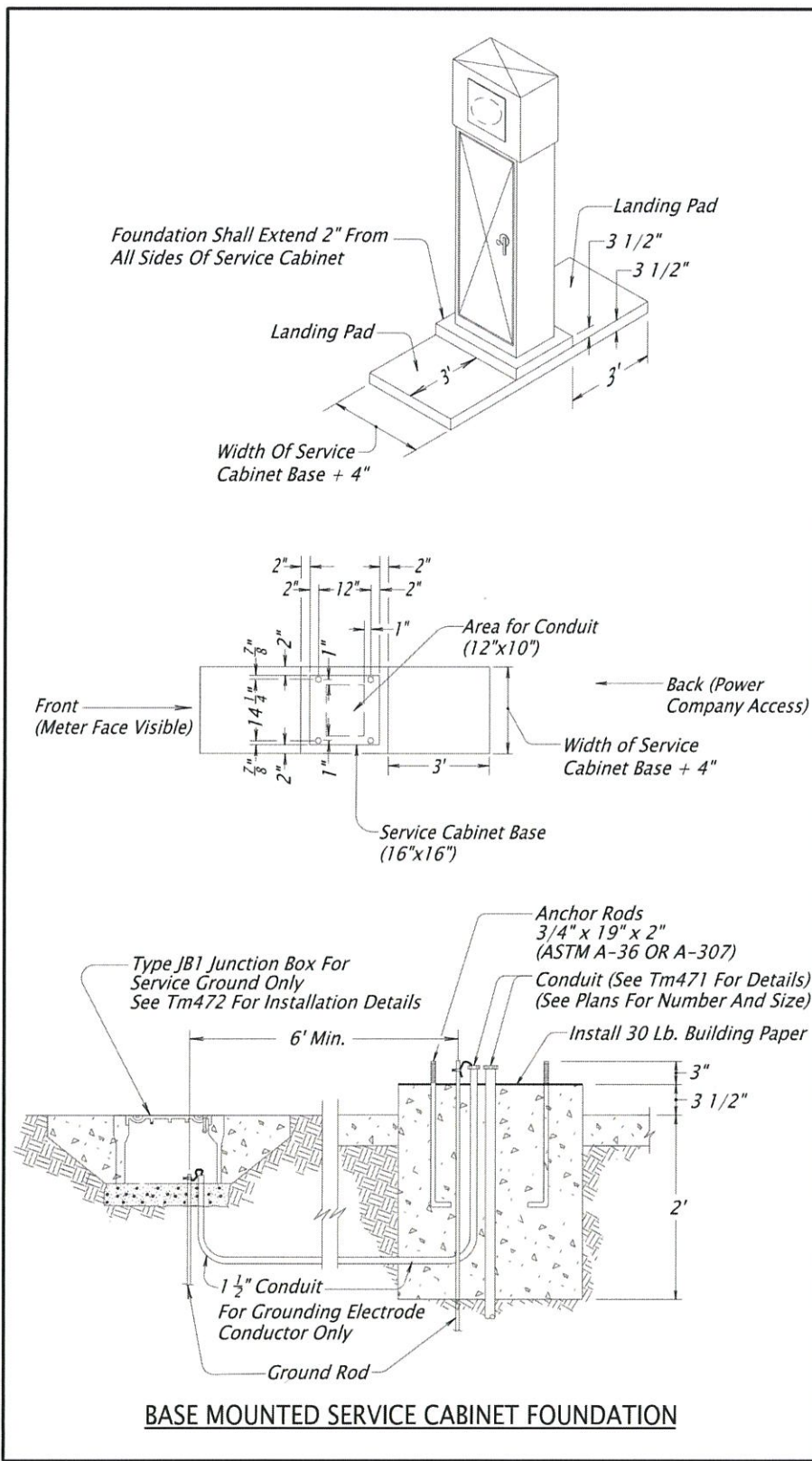
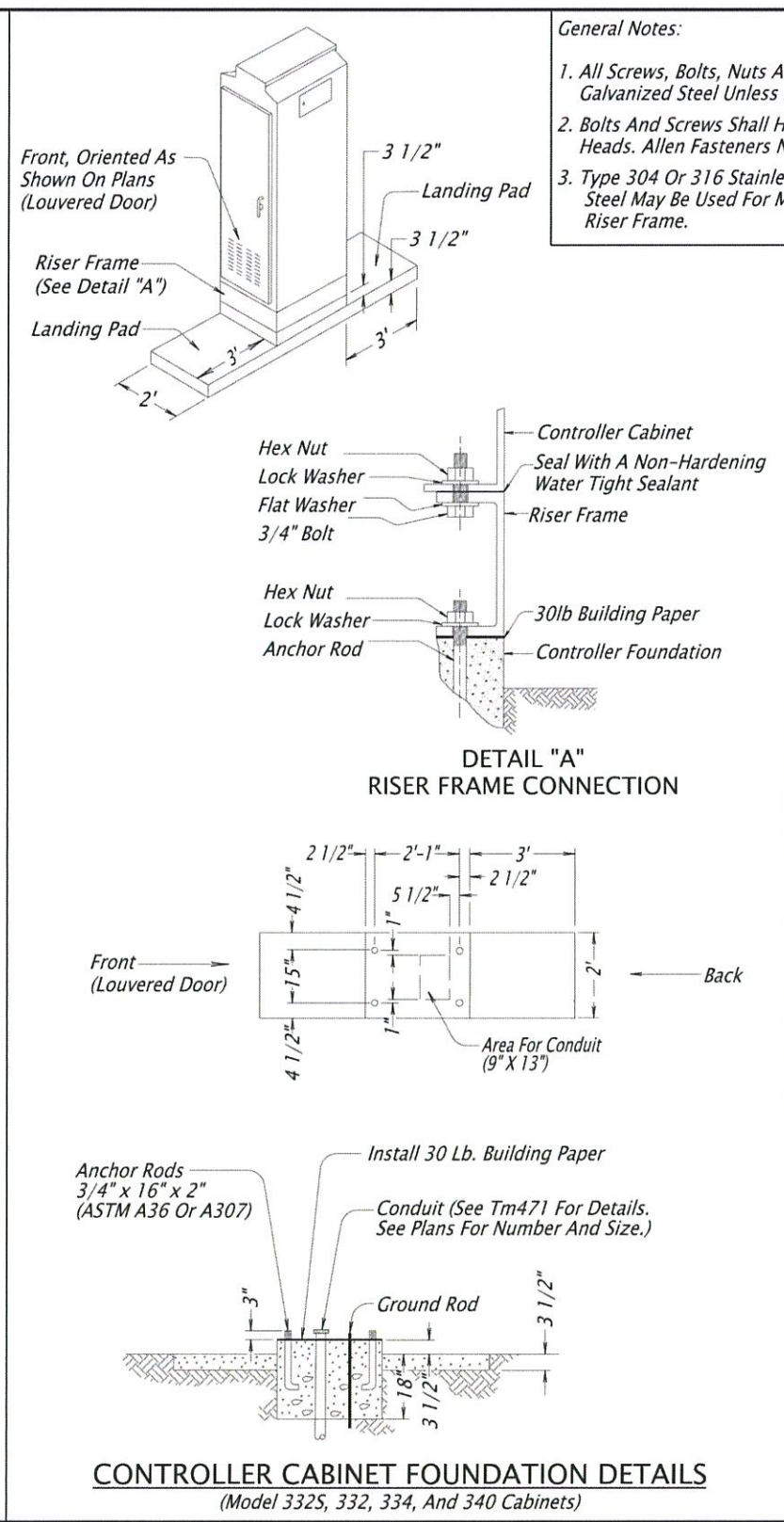


EXPIRES: DEC. 31, 2019

DESIGNED:	ELV	SHEET NO.	IL11
DRAWN:	MAL		
CHECKED:	BKC		
DATE:	11-1-19	JOB NO.	



General Notes:
1. All Screws, Bolts, Nuts And Washers Shall Be Galvanized Steel Unless Noted Otherwise.
2. Bolts And Screws Shall Have Square Or Hex Heads. Allen Fasteners Not Allowed.
3. Type 304 Or 316 Stainless Steel Or Galvanized Steel May Be Used For Mounting Cabinet To Riser Frame.



Effective Date: December 1, 2019 - May 31, 2020

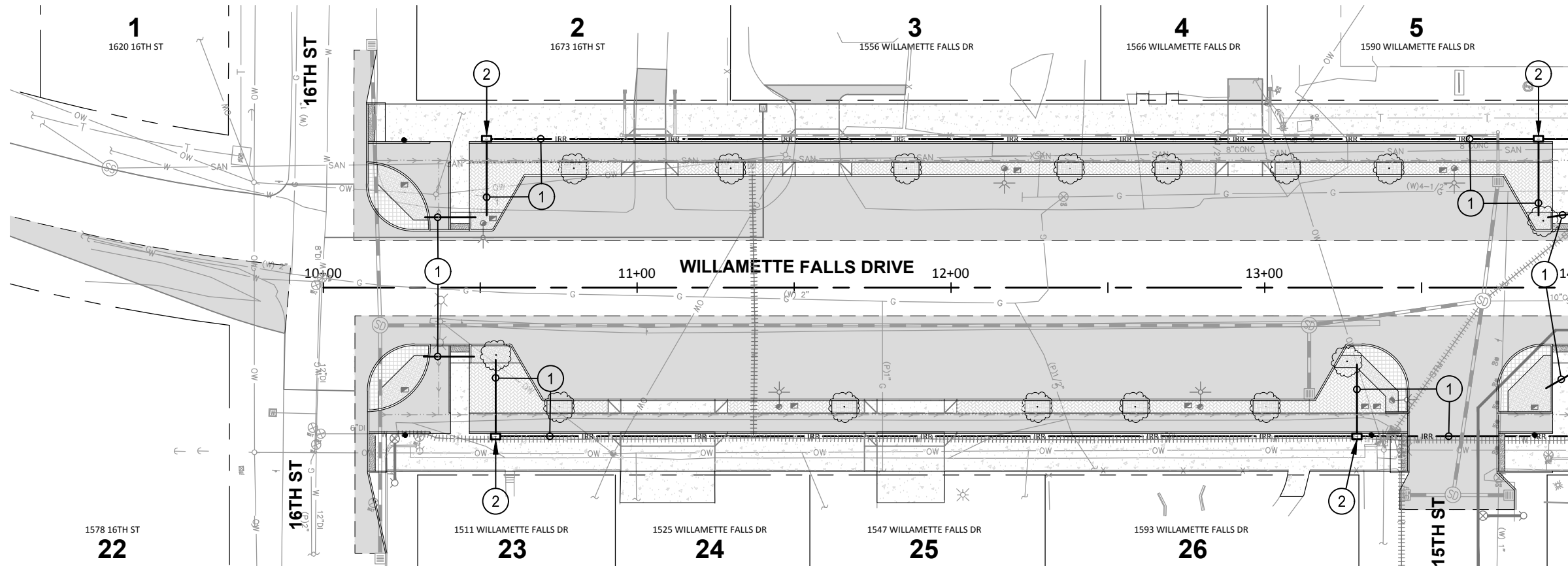
TM482

CALC. BOOK NO. N/A	BASELINE REPORT DATE 2-Jul-2018
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
CONTROLLER CABINET & SERVICE CABINET FOUNDATION DETAILS	
2018	
DATE	REVISION DESCRIPTION
07/18	Added Service Cabinet Foundation Details, Modified Drawing Title

TM482

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DRAWING NAME: CWL02-IRR-IRRIGATION PLAN.DWG



PLAN VIEW

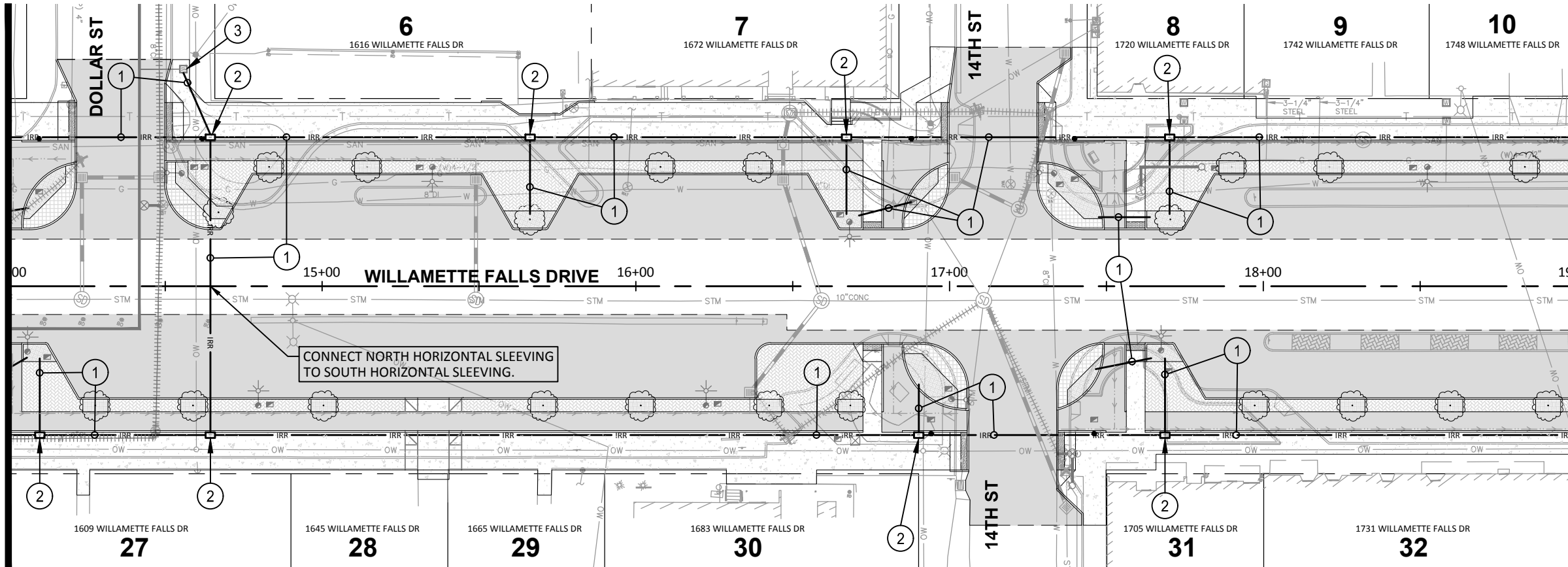
CONSTRUCTION NOTES

- ① INSTALL 6" PVC IRRIGATION SLEEVING PER DETAIL ON SHEET IR04. SLEEVING TO DEVIATE HORIZONTALLY AND VERTICALLY TO AVOID CONFLICTS WITH OTHER UNDERGROUND UTILITIES AND STRUCTURES WHERE NECESSARY.
- ② CONSTRUCT 17" x 30" CONCRETE IRRIGATION JUNCTION BOX.
- ③ INSTALL SALVAGED IRRIGATION METER AND VALVE THAT WAS REMOVED FROM NORTH SIDE OF 13TH STREET INTERSECTION. SEE SHEET C03D FOR MORE INFORMATION.

MATCHLINE STA. 14+00- SEE BELOW

LEGEND

- CONCRETE IRRIGATION BOX (17"x30")
- 6" IRRIGATION SLEEVING



PLAN VIEW

MATCHLINE STA. 19+00 SEE SHEET IR02

IRRIGATION PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

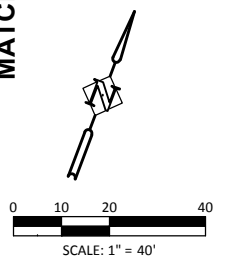
Harper Houf Peterson Righellis Inc.
ENGINEERS & PLANNERS
LANDSCAPE ARCHITECTS & SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



REGISTERED PROFESSIONAL ENGINEER
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	IR01
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02



IRRIGATION PLAN
WILLAMETTE FALLS DRIVE
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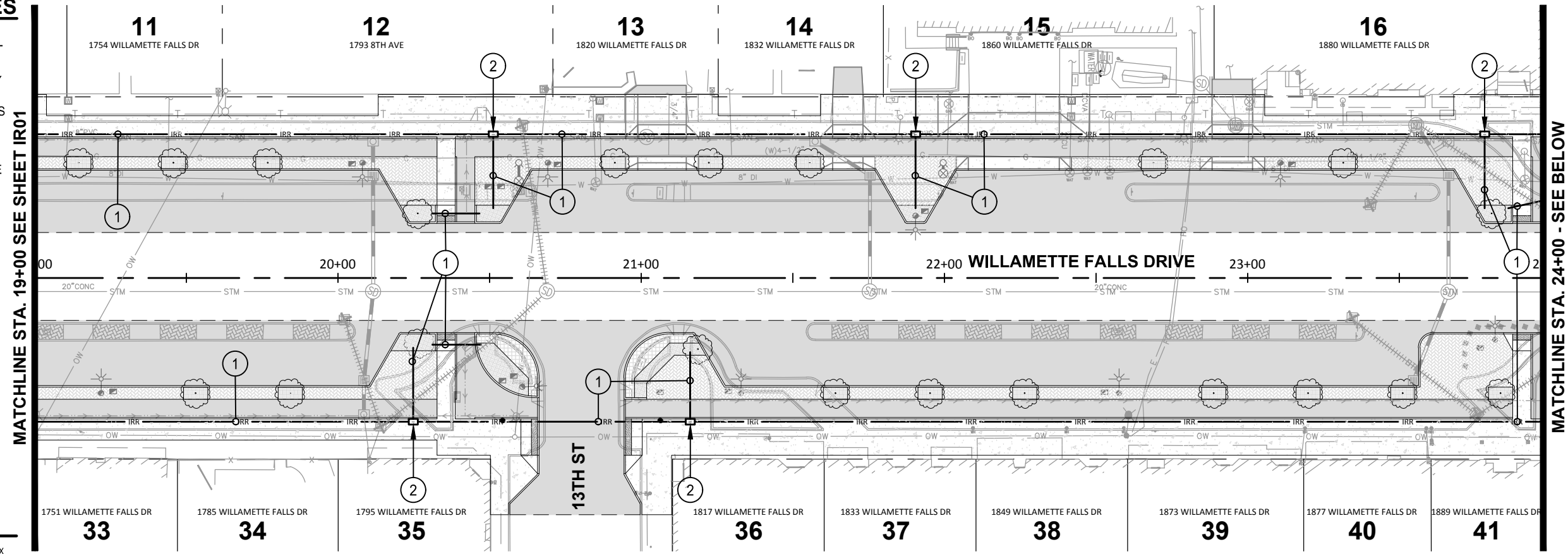
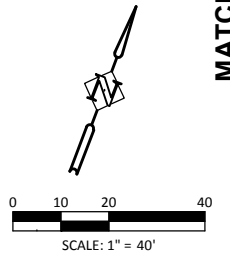
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 DRAWN: HHPR TEAM
 CHECKED: BRA/JSH
 JOB NO. CWL-02
 DATE: 11-1-19

CONSTRUCTION NOTES

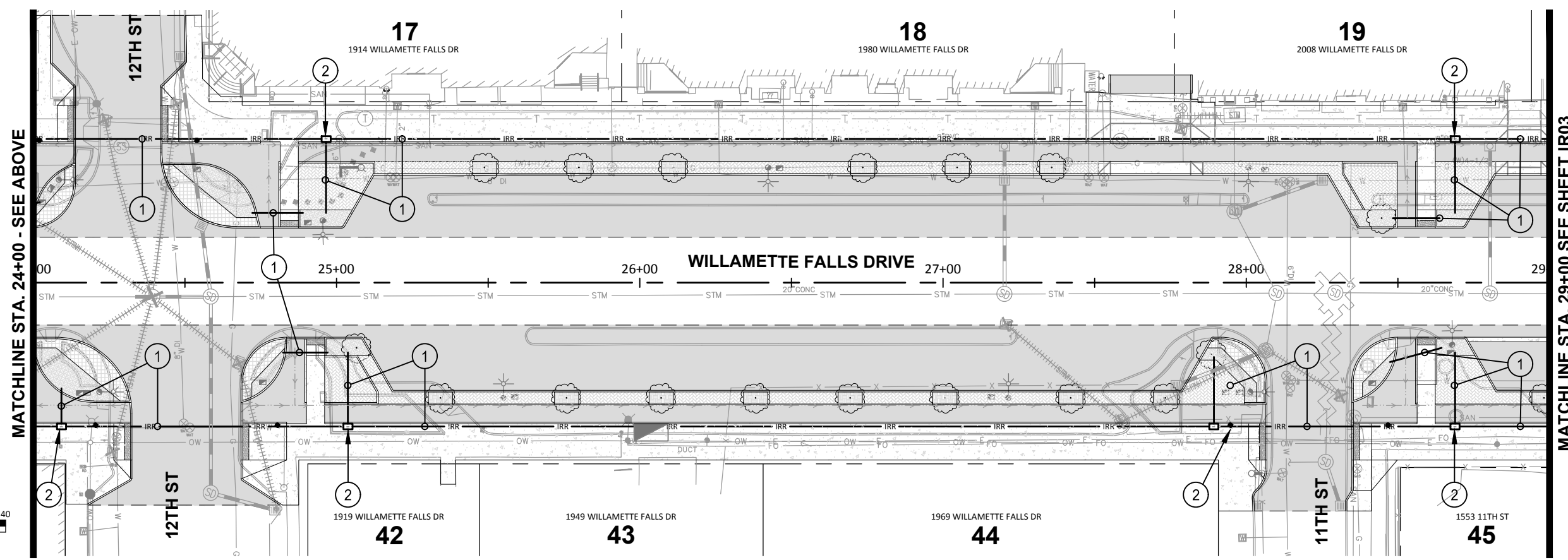
- 1 INSTALL 6" PVC IRRIGATION SLEEVING PER DETAIL ON SHEET IR04. SLEEVING TO DEVIATE HORIZONTALLY AND VERTICALLY TO AVOID CONFLICTS WITH OTHER UNDERGROUND UTILITIES AND STRUCTURES WHERE NECESSARY.
- 2 CONSTRUCT 17" x 30" CONCRETE IRRIGATION JUNCTION BOX.

LEGEND

- CONCRETE IRRIGATION BOX (17"x30")
- 6" IRRIGATION SLEEVING



PLAN VIEW



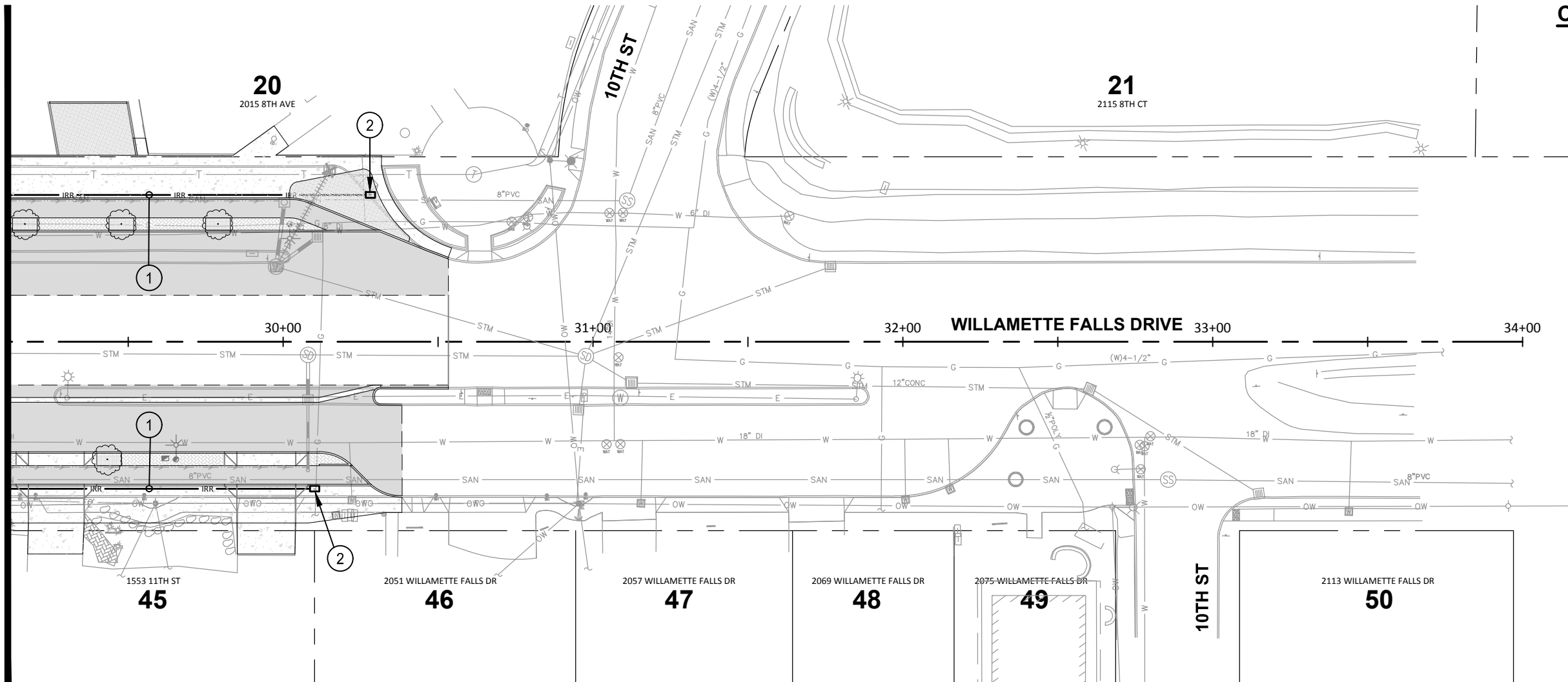
PLAN VIEW

MATCHLINE STA. 24+00 - SEE BELOW

MATCHLINE STA. 29+00 SEE SHEET IR03

DRAWING NAME: CWL02-IR-IRRIGATION PLAN.DWG

MATCHLINE STA. 29+00 SEE SHEET IR02





PLAN VIEW

CONSTRUCTION NOTES

- ① INSTALL 6" PVC IRRIGATION SLEEVING PER DETAIL ON SHEET IR04. SLEEVING TO DEVIATE HORIZONTALLY AND VERTICALLY TO AVOID CONFLICTS WITH OTHER UNDERGROUND UTILITIES AND STRUCTURES WHERE NECESSARY.
- ② CONSTRUCT 17" x 30" CONCRETE IRRIGATION JUNCTION BOX.

LEGEND

-  CONCRETE IRRIGATION BOX (17"x30")
-  6" IRRIGATION SLEEVING

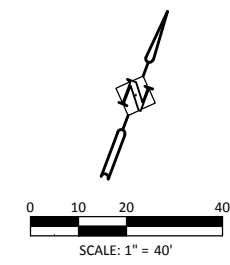
IRRIGATION PLAN
WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	IR03
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02



DRAWING NAME: CWL02-IR-IRRIGATION PLAN.DWG

IRRIGATION DETAILS
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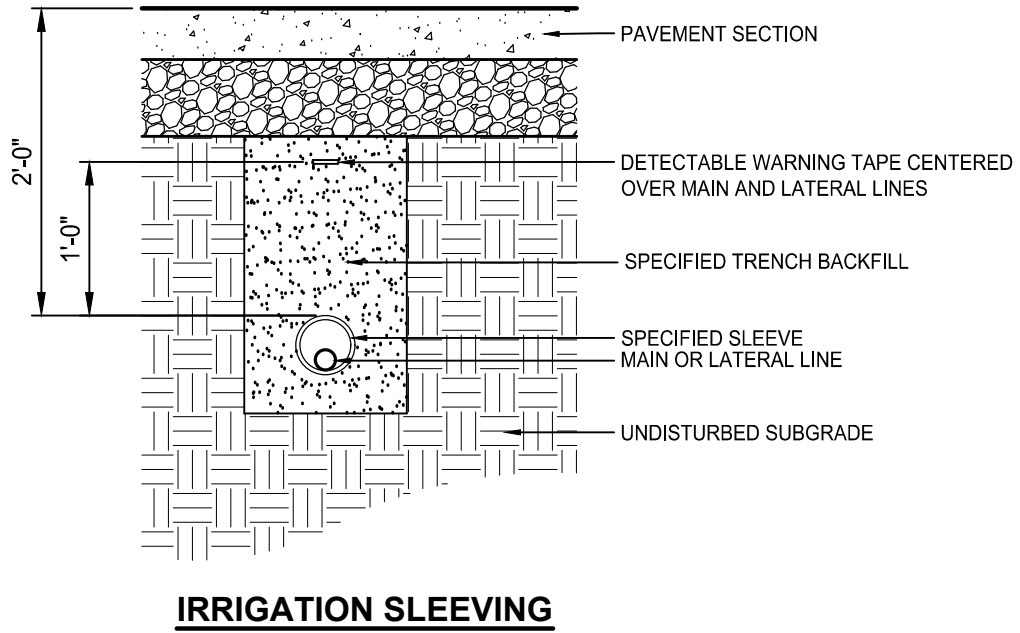


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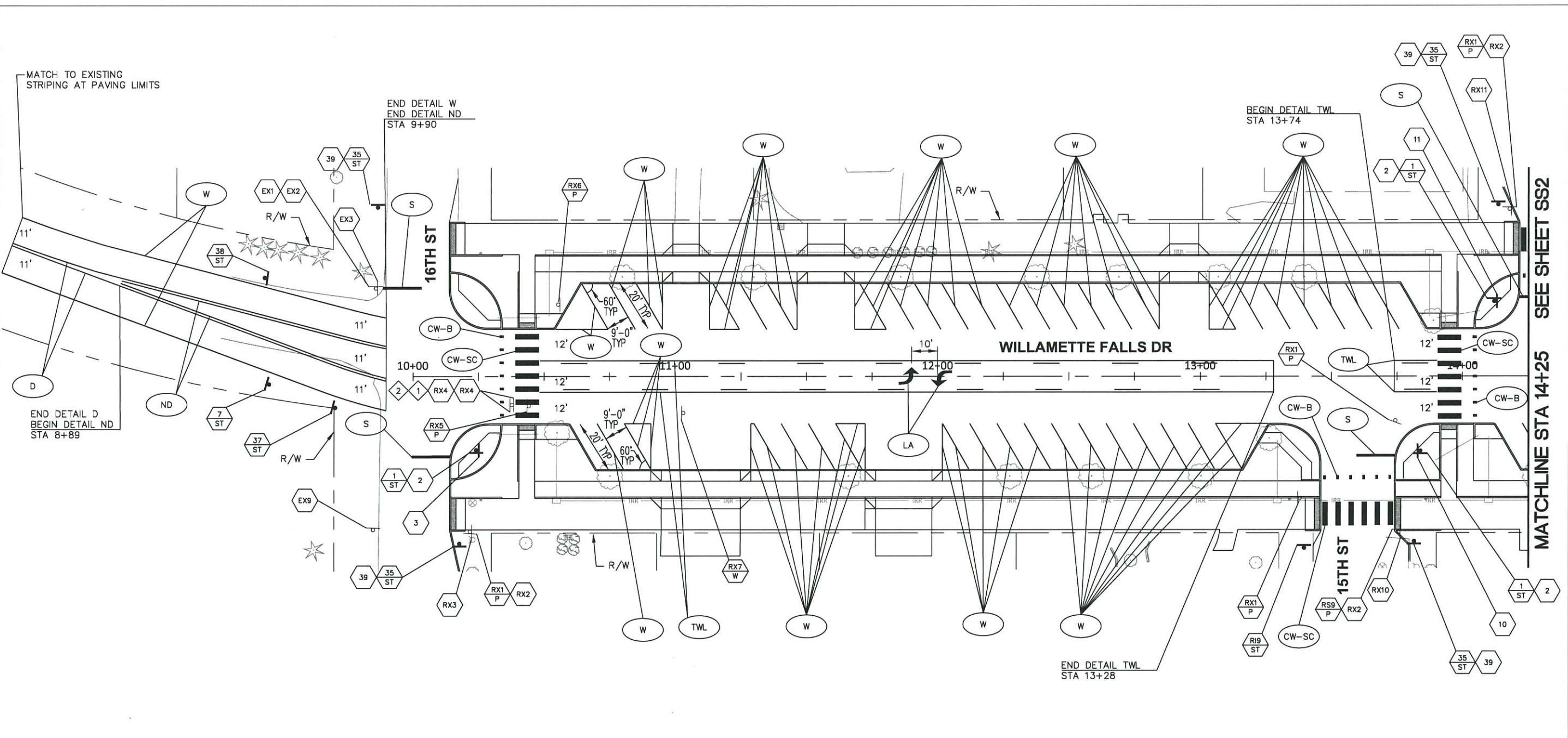


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JOB NO. CWL-02	DATE: 11-1-19

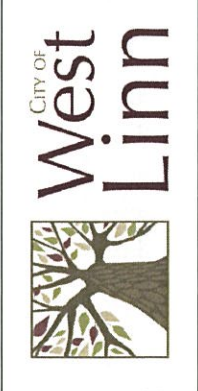


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SIGNING/STRIPING PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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LEGEND

- W INSTALL 4" WHITE LINE.
 - TWL INSTALL TWO-WAY LEFT TURN MARKINGS.
 - CW-SC INSTALL STAGGERED CONTINENTAL CROSSWALK BARS.
 - LA INSTALL LEFT TURN ARROW.
 - CW-B INSTALL STAGGERED WHITE BICYCLE CROSSWALK BARS.
 - D INSTALL DOUBLE NO-PASS TWO 4" YELLOW LINES.
 - ND INSTALL NARROW DOUBLE NO PASS.
 - EXN MAINTAIN AND PROTECT EXISTING SIGN (N) AND SUPPORT.
 - RXN M REMOVE EXISTING SIGN (N) AND (M) SIGN SUPPORT.
 - RXN REMOVE EXISTING SIGN (N).
 - RSN M REMOVE AND SAVE EXISTING SIGN (N) AND REMOVE (M) SIGN SUPPORT.
 - RIN M REINSTALL EXISTING SIGN (N) ON NEW (M) SIGN SUPPORT.
 - N M INSTALL NEW SIGN (N) ON NEW (M) SIGN SUPPORT.
 - N INSTALL NEW SIGN (N).
- N = SIGN NUMBER
M = MATERIAL:
ST = PERFORATED STEEL SQUARE TUBE
W = WOOD
P = ROUND PIPE SUPPORT

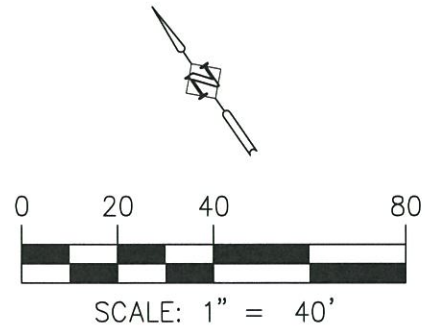
CONSTRUCTION NOTES

- 1. COORDINATE WITH TRIMET FOR RELOCATION OF TRIMET OWNED SIGN.
- 2. WOOD POST TO BE REMOVED BY OTHERS.

GENERAL NOTE

- 1. REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THESE PLANS. REMOVAL OF EXISTING STRIPING IS TO BE DETERMINED IN THE FIELD. STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

TO BE ACCOMPANIED BY ODOT STANDARD DRAWINGS TM200, TM676, TM681, TM687, AND TM521,



EXPIRES: DEC. 31, 2019	
DESIGNED: BJM	SHEET NO.
DRAWN: MAL	SS1
CHECKED: BKC	JOB NO.
DATE: 11-1-2019	CWL-02

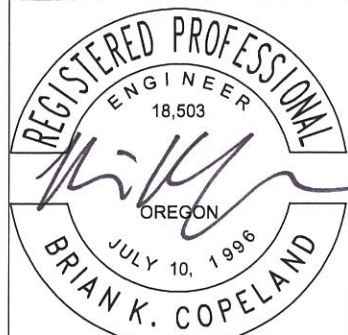
SIGNING/STRIPING PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON



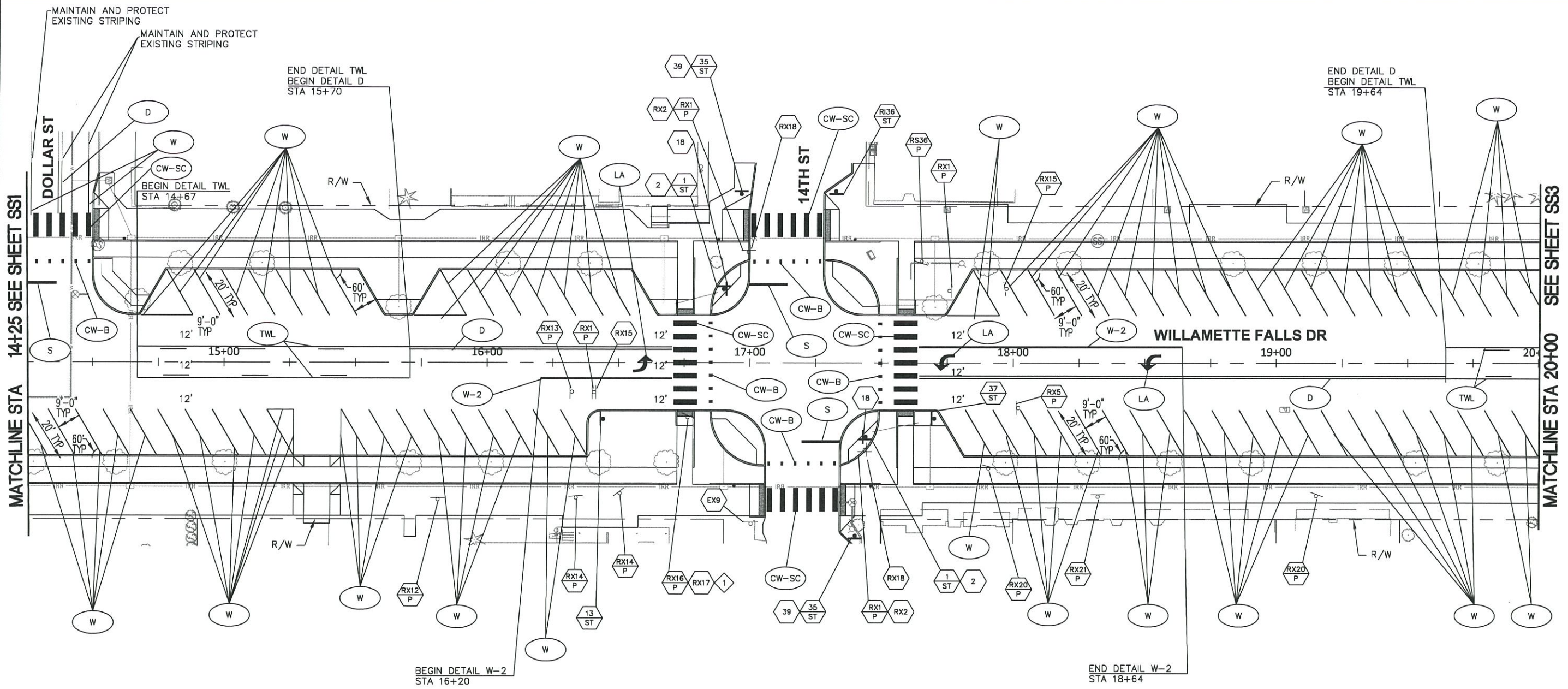
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SS2	DRAWN:	MAL
	CHECKED:	BKC
JOB NO.	DATE:	11-1-2019
CWL-02		



LEGEND

- (W) INSTALL 4" WHITE LINE.
- (W-2) INSTALL 8" WHITE LINE.
- (TWL) INSTALL TWO-WAY LEFT TURN MARKINGS.
- (CW-SC) INSTALL STAGGERED CONTINENTAL CROSSWALK BARS.
- (LA) INSTALL LEFT TURN ARROW.
- (CW-B) INSTALL STAGGERED WHITE BICYCLE CROSSWALK BARS.
- (D) INSTALL DOUBLE NO-PASS TWO 4" YELLOW LINES.
- (EXN) MAINTAIN AND PROTECT EXISTING SIGN (N) AND SUPPORT.
- (RXN M) REMOVE EXISTING SIGN (N) AND (M) SIGN SUPPORT.
- (RXN) REMOVE EXISTING SIGN (N).
- (RSN M) REMOVE AND SAVE EXISTING SIGN (N) AND REMOVE (M) SIGN SUPPORT.
- (RIN M) REINSTALL EXISTING SIGN (N) ON NEW (M) SIGN SUPPORT.
- (N M) INSTALL NEW SIGN (N) ON NEW (M) SIGN SUPPORT.
- (N) INSTALL NEW SIGN (N).

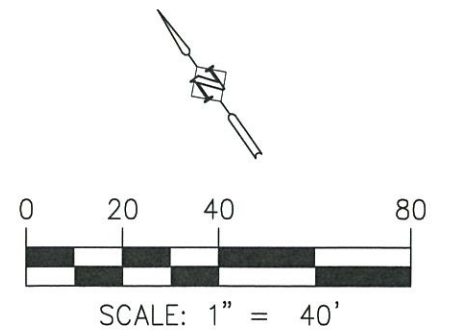
N = SIGN NUMBER
M = MATERIAL:
ST = PERFORATED STEEL SQUARE TUBE
P = ROUND PIPE SUPPORT

CONSTRUCTION NOTES

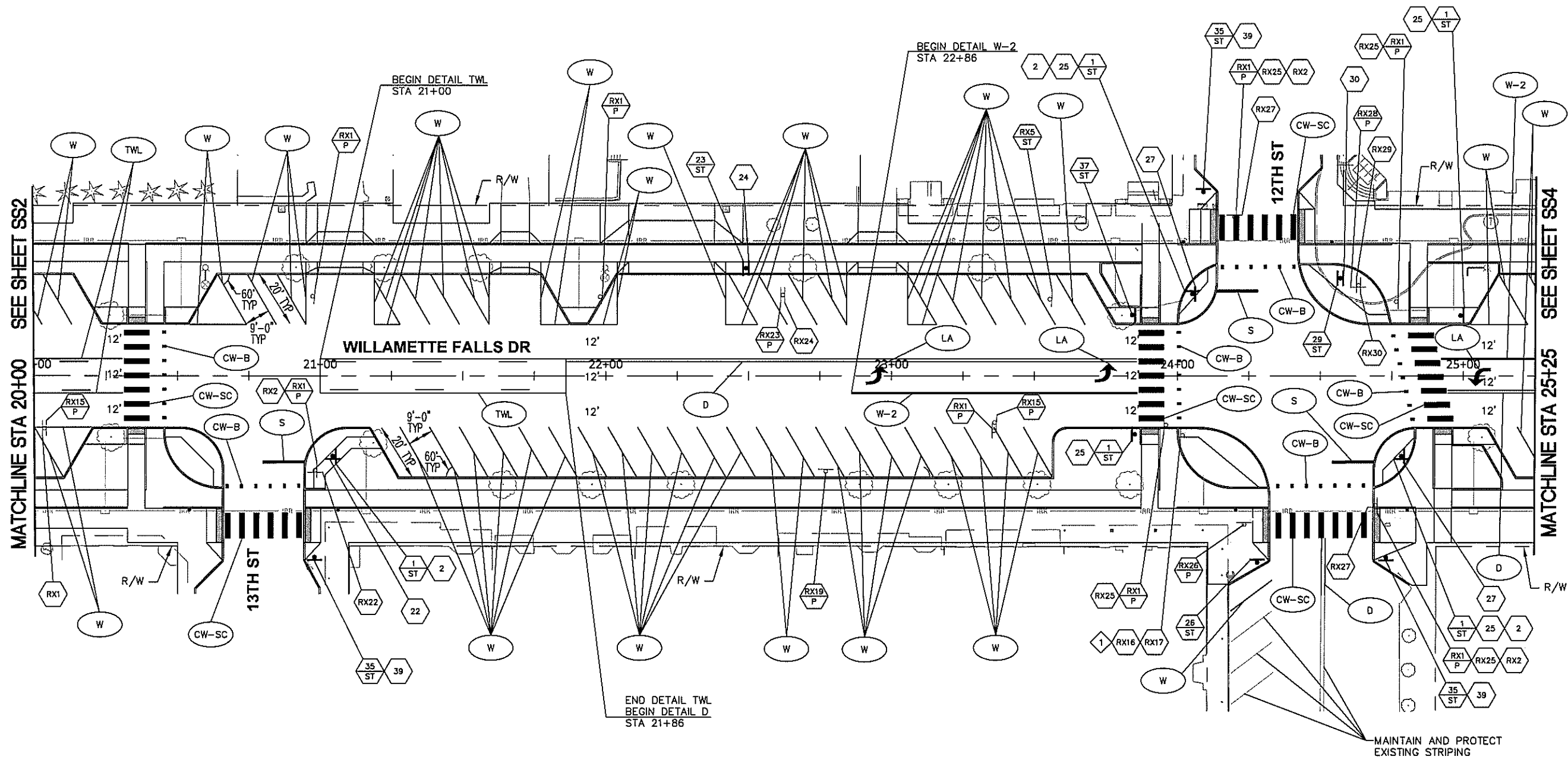
- 1 COORDINATE WITH TRIMET FOR RELOCATION OF TRIMET OWNED SIGN.

GENERAL NOTE

1. REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THESE PLANS. REMOVAL OF EXISTING STRIPING IS TO BE DETERMINED IN THE FIELD. STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

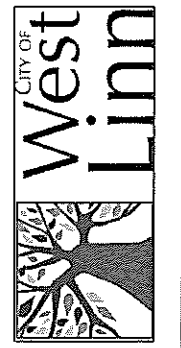


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SIGNING/STRIPING PLAN
 WILLAMETTE FALLS DRIVE
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LEGEND

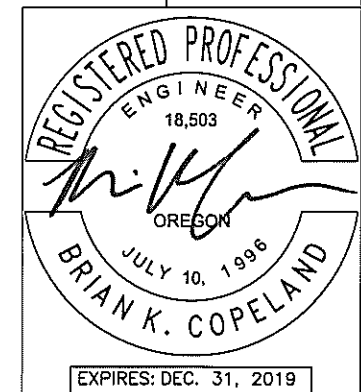
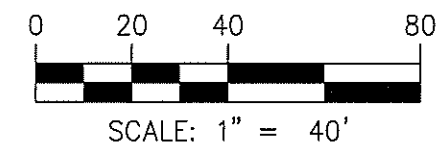
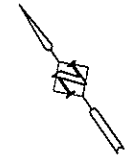
- (W) INSTALL 4" WHITE LINE.
 - (W-2) INSTALL 8" WHITE LINE.
 - (TWL) INSTALL TWO-WAY LEFT TURN MARKINGS.
 - (CW-SC) INSTALL STAGGERED CONTINENTAL CROSSWALK BARS.
 - (LA) INSTALL LEFT TURN ARROW.
 - (CW-B) INSTALL STAGGERED WHITE BICYCLE CROSSWALK BARS.
 - (D) INSTALL DOUBLE NO-PASS TWO 4" YELLOW LINES.
 - (EXN) MAINTAIN AND PROTECT EXISTING SIGN (N) AND SUPPORT.
 - (RXN M) REMOVE EXISTING SIGN (N) AND (M) SIGN SUPPORT.
 - (RXN) REMOVE EXISTING SIGN (N).
 - (N M) INSTALL NEW SIGN (N) ON NEW (M) SIGN SUPPORT.
 - (N) INSTALL NEW SIGN (N).
- N = SIGN NUMBER
 M = MATERIAL:
 ST = PERFORATED STEEL SQUARE TUBE
 P = ROUND PIPE SUPPORT

CONSTRUCTION NOTES

- ① COORDINATE WITH TRIMET FOR RELOCATION OF TRIMET OWNED SIGN.

GENERAL NOTE

1. REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THESE PLANS. REMOVAL OF EXISTING STRIPING IS TO BE DETERMINED IN THE FIELD. STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.



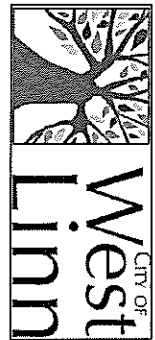
DESIGNED:	BJM	SHEET NO.	SS3
DRAWN:	MAL		
CHECKED:	BKC		
DATE:	11-1-2019	JOB NO.	

EXPIRES: DEC. 31, 2019

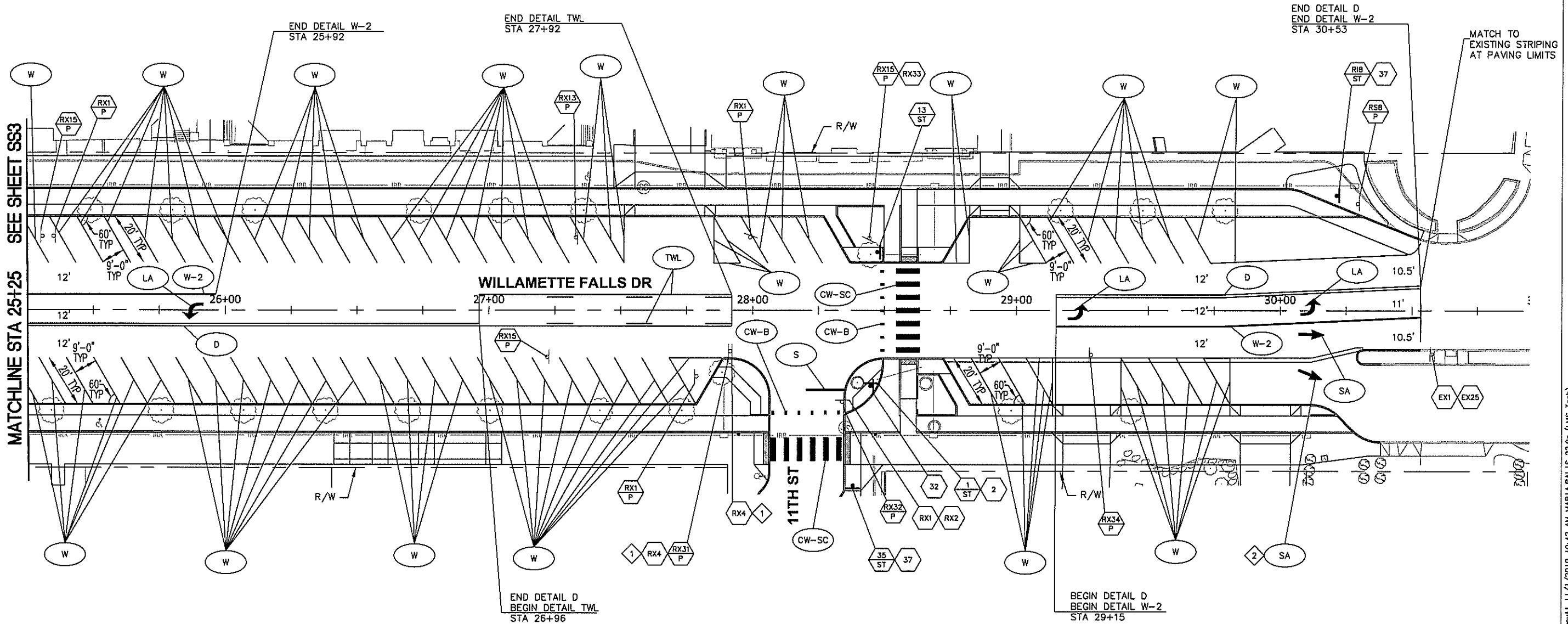
SIGNING/STRIPING PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON



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SHEET NO.	DESIGNED:	BJM
SS4	DRAWN:	MAL
	CHECKED:	BKC
JOB NO.	DATE:	11-1-2019
CWL-02		



LEGEND

- INSTALL 4" WHITE LINE.
- INSTALL 8" WHITE LINE.
- INSTALL TWO-WAY LEFT TURN MARKINGS.
- INSTALL STAGGERED CONTINENTAL CROSSWALK BARS.
- INSTALL LEFT TURN ARROW.
- INSTALL STRAIGHT ARROW (WHITE).
- INSTALL STAGGERED WHITE BICYCLE CROSSWALK BARS.
- INSTALL DOUBLE NO-PASS TWO 4" YELLOW LINES.

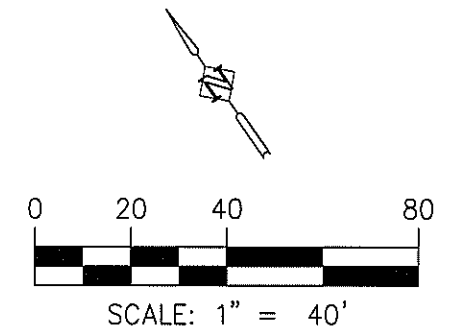
- MAINTAIN AND PROTECT EXISTING SIGN (N) AND SUPPORT.
 - REMOVE EXISTING SIGN (N) AND (M) SIGN SUPPORT.
 - REMOVE AND SAVE EXISTING SIGN (N) AND REMOVE (M) SIGN SUPPORT.
 - REINSTALL EXISTING SIGN (N) ON NEW (M) SIGN SUPPORT.
 - REMOVE EXISTING SIGN (N).
 - INSTALL NEW SIGN (N) ON NEW (M) SIGN SUPPORT.
 - INSTALL NEW SIGN (N).
- N = SIGN NUMBER
M = MATERIAL:
ST = PERFORATED STEEL SQUARE TUBE
P = ROUND PIPE SUPPORT

CONSTRUCTION NOTES

- COORDINATE WITH TRIMET FOR RELOCATION OF TRIMET OWNED SIGN.
- ORIENT STRAIGHT ARROW TO FORM A 20° ANGLE WITH CURB.

GENERAL NOTE

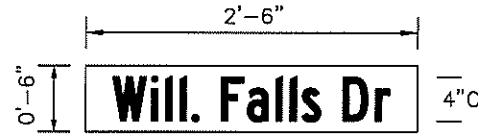
1. REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THESE PLANS. REMOVAL OF EXISTING STRIPING IS TO BE DETERMINED IN THE FIELD. STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.



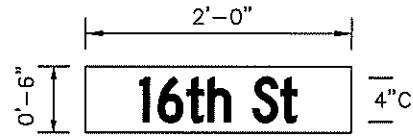
x:\Projects\2019\19022-000 (West Linn Willamette & 10th Streetscape)\CAD\SS5.dwg Layout1 10/31/2019 6:58 PM BENJAMIN.MOIZIO 22.0s (LMS Tech)



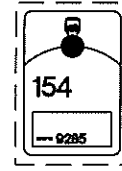
R1-1
SIGN NO. 1



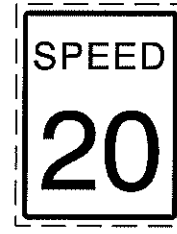
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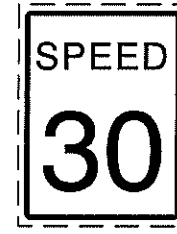
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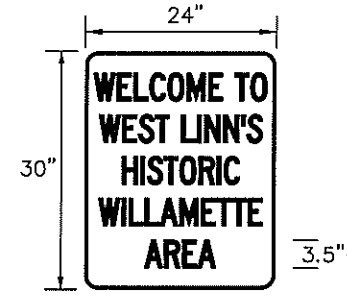
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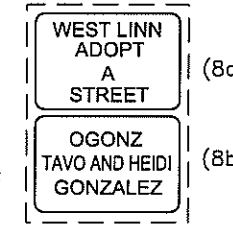
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SIGN NO. 6



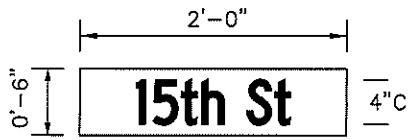
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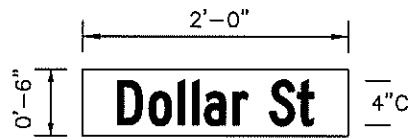
SIGN NO. 8



SIGN NO. 9



SIGN NO. 10



SIGN NO. 11



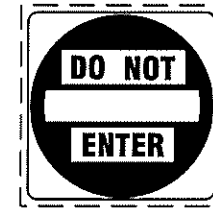
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W11-8
SIGN NO. 13



SIGN NO. 14



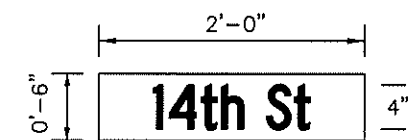
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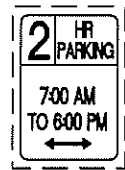
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SIGN NO. 17



SIGN NO. 18



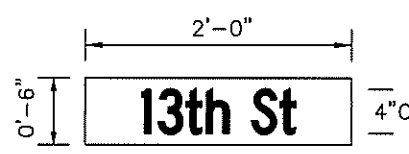
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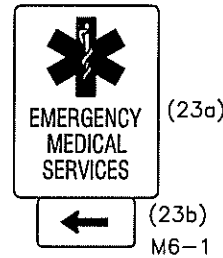
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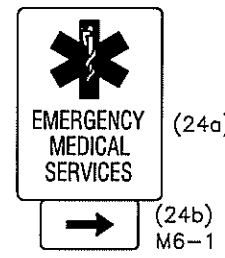
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SIGN NO. 22



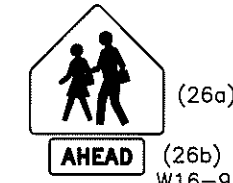
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(23b)
M6-1
D19-13 MOD.
SIGN NO. 23



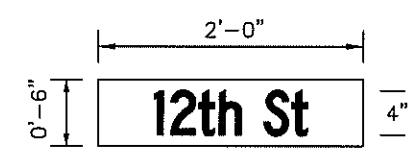
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(24b)
M6-1
D19-13 MOD.
SIGN NO. 24



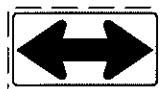
R1-3P
SIGN NO. 25



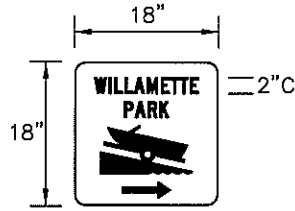
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(26b)
W16-9P
S1-1
SIGN NO. 26



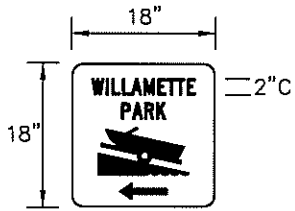
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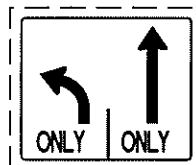
W1-7
SIGN NO. 28



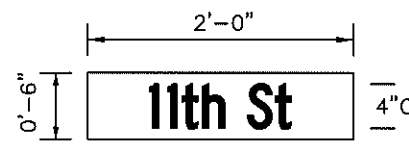
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SIGN NO. 30



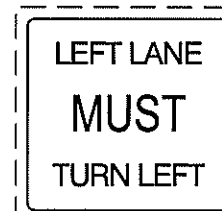
SIGN NO. 31



SIGN NO. 32



SIGN NO. 33



R3-7L
SIGN NO. 34



W11-15
SIGN NO. 35



SIGN NO. 36



R2-1
SIGN NO. 37



R2-1
SIGN NO. 38

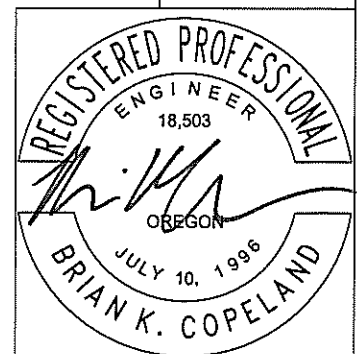


W16-7P
SIGN NO. 39

SIGNS SHOWN WITH BROKEN BORDERS
ARE EXISTING SIGNS.

SIGNING DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

720 SW Washington St, Suite 500
Portland, Oregon 97205
www.dksassociates.com



DESIGNED:	BJM	SHEET NO.	SS5
DRAWN:	MAL		
CHECKED:	BKC		
DATE:	11-1-2019	JOB NO.	

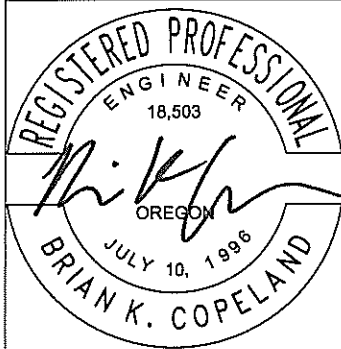
STRIPING DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON



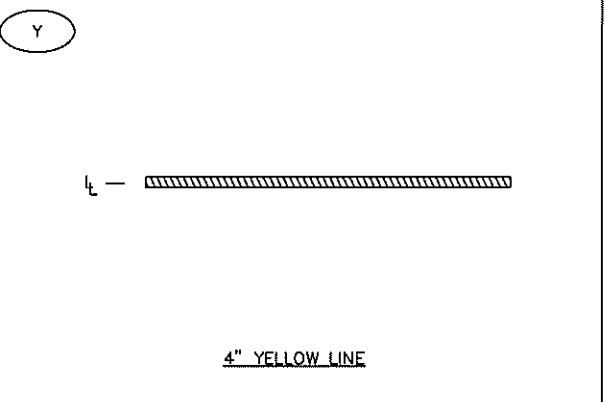
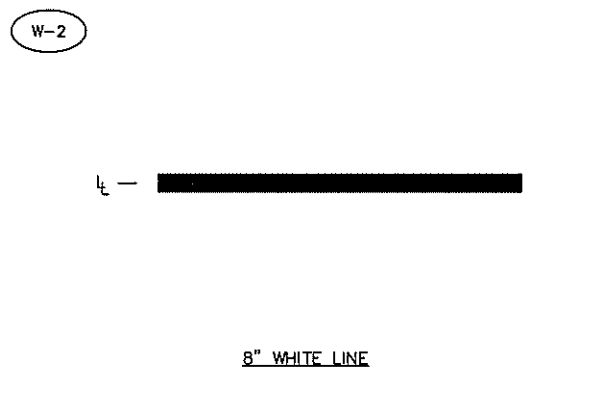
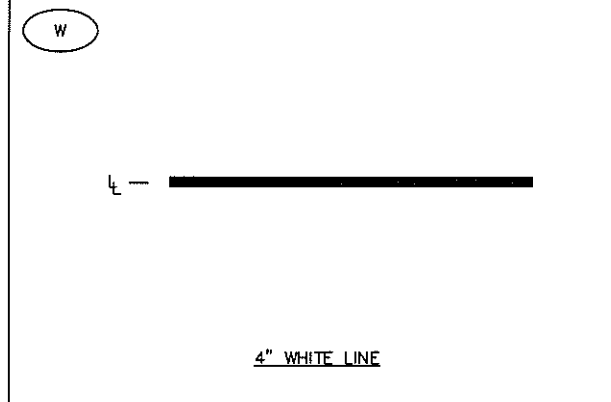
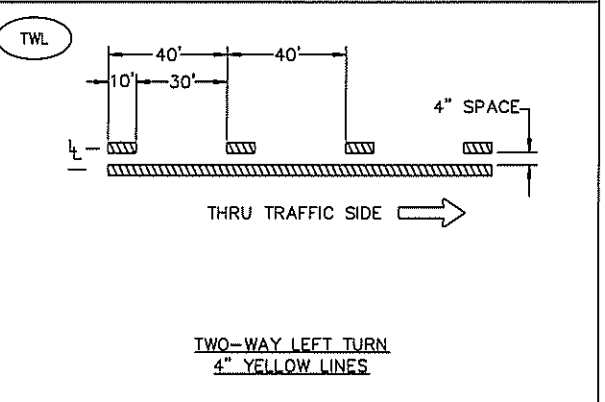
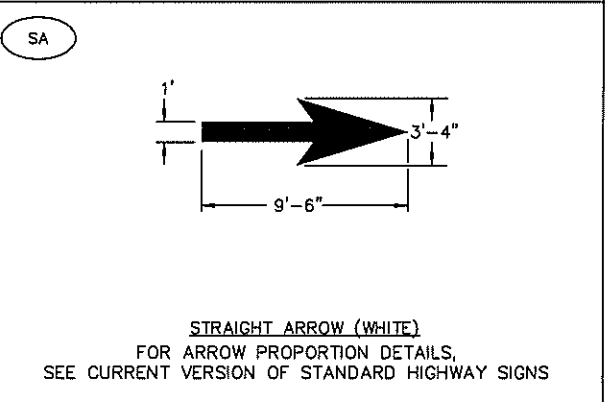
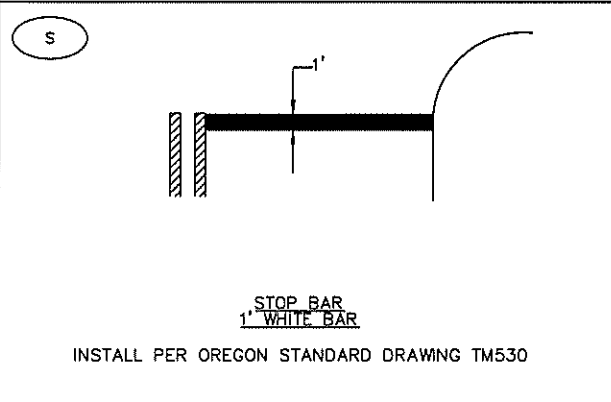
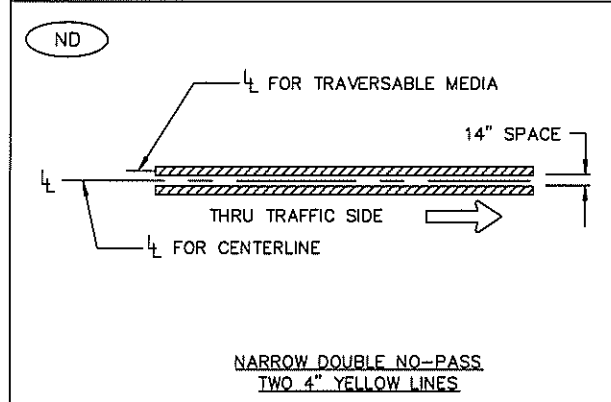
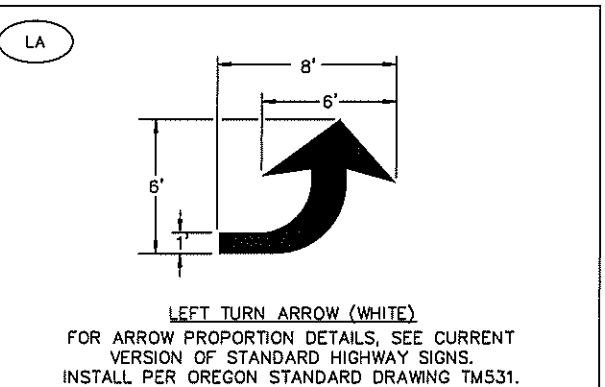
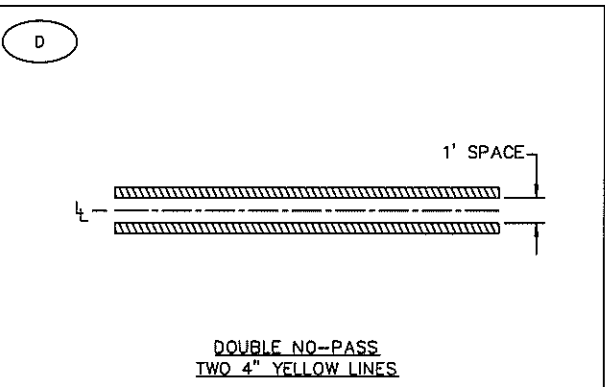
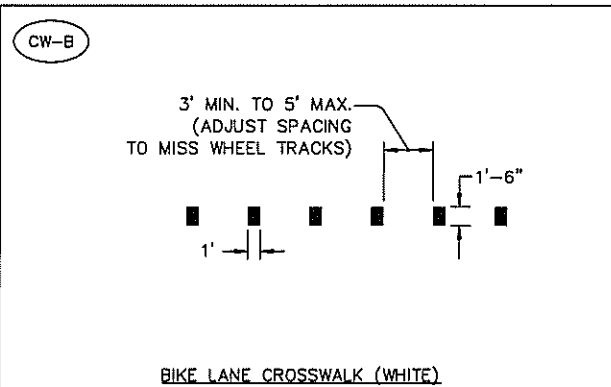
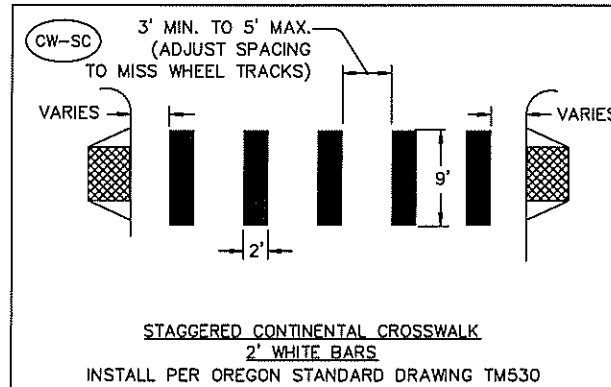
220 SW Washington St. Suite 900
Portland, Oregon 97205
www.dksassoc.com



West Linn
CITY OF



SHEET NO.	DESIGNED:
SS6	BJM
	DRAWN:
	MAL
CHECKED:	BKC
JOB NO.	DATE:
CWL-02	11-1-2019



GENERAL NOTE

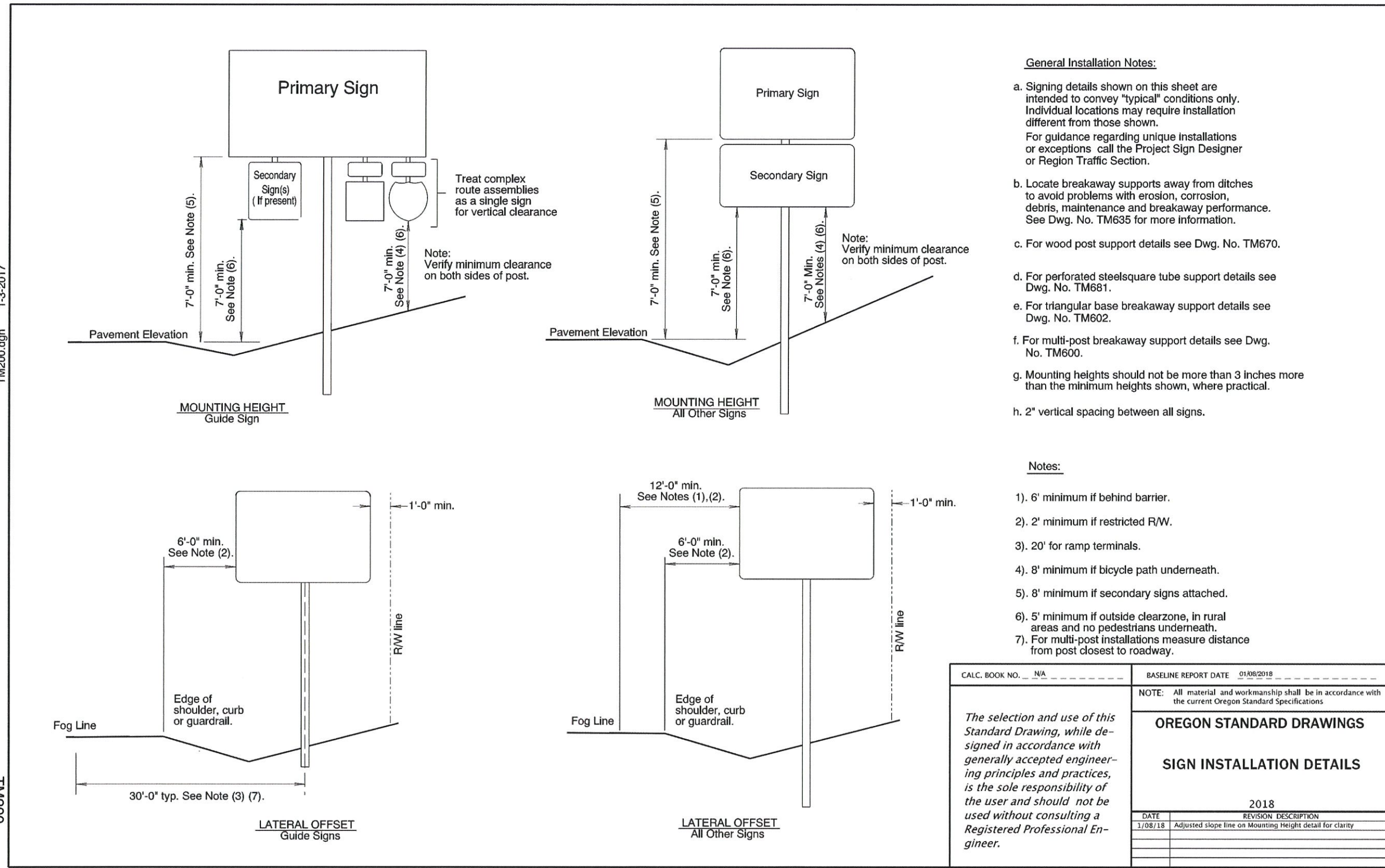
1. MATCH POINTS TO EXISTING PAVEMENT MARKINGS AND STATION CALL-OUTS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
2. REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH THESE PLANS. REMOVAL OF EXISTING PAVEMENT MARKINGS IS TO BE DETERMINED IN THE FIELD. STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
3. ALL LONGITUDINAL PAVEMENT MARKINGS SHALL BE INSTALLED METHOD AB-NON-PROFILED EXTRUDED OR SPRAYED MARKING FOR THERMOPLASTIC.
4. ALL TRANSVERSE PAVEMENT MARKINGS INCLUDE LEGENDS AND BARS SHALL BE TYPE BH-S, PREFORMED FUSED THERMOPLASTIC FILM HIGH SKID.

x:\Projects\2019\19022-000 (West Linn Willamette & 10th Streetscape)\CAD\SS9.dwg Layout! 11/1/2019 10:24 AM MAL 22.0s (LMS Tech)

TM200.dgn 1-3-2017

TM200

plotfile_TM200s_500s.dgn :: Default 7/10/2019 3:21:08 PM hwyr20m



General Installation Notes:

- a. Signing details shown on this sheet are intended to convey "typical" conditions only. Individual locations may require installation different from those shown. For guidance regarding unique installations or exceptions call the Project Sign Designer or Region Traffic Section.
- b. Locate breakaway supports away from ditches to avoid problems with erosion, corrosion, debris, maintenance and breakaway performance. See Dwg. No. TM635 for more information.
- c. For wood post support details see Dwg. No. TM670.
- d. For perforated steelsquare tube support details see Dwg. No. TM681.
- e. For triangular base breakaway support details see Dwg. No. TM602.
- f. For multi-post breakaway support details see Dwg. No. TM600.
- g. Mounting heights should not be more than 3 inches more than the minimum heights shown, where practical.
- h. 2" vertical spacing between all signs.

Notes:

- 1). 6' minimum if behind barrier.
- 2). 2' minimum if restricted R/W.
- 3). 20' for ramp terminals.
- 4). 8' minimum if bicycle path underneath.
- 5). 8' minimum if secondary signs attached.
- 6). 5' minimum if outside clearzone, in rural areas and no pedestrians underneath.
- 7). For multi-post installations measure distance from post closest to roadway.

CALC. BOOK NO. N/A	BASELINE REPORT DATE 01/08/2018
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
SIGN INSTALLATION DETAILS	
2018	
DATE	REVISION DESCRIPTION
1/08/18	Adjusted slope line on Mounting Height detail for clarity

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.

Effective Date: December 1, 2019 - May 31, 2020

TM200

SIGNING DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

720 SW Washington St, Suite 500
Portland, Oregon 97205
www.dksassociates.com

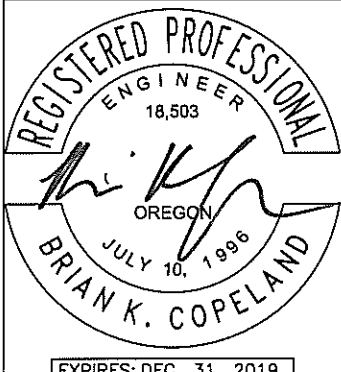
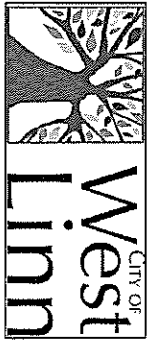


DESIGNED: BJM	SHEET NO.
DRAWN: MAL	SS9
CHECKED: BKC	
DATE: 11-1-2019	JOB NO. CWL-02

SIGNING DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON



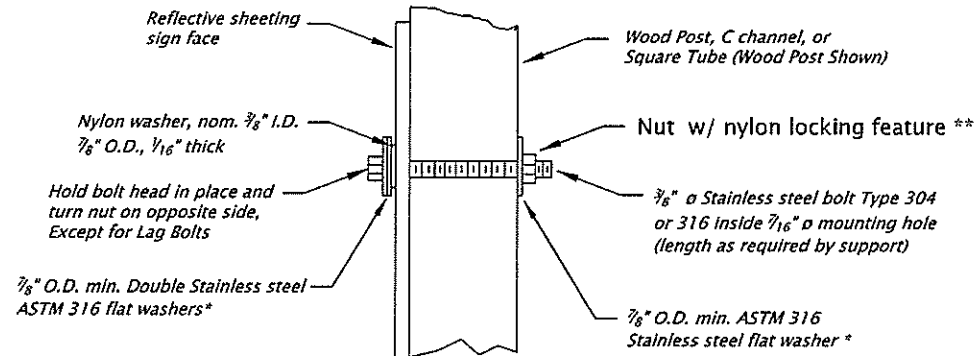
720 SW Washington St. Suite 500
 Portland, Oregon 97205
 www.dksassoc.com



SHEET NO. **SS10**
 DESIGNED: ELV
 DRAWN: MAL
 CHECKED: BKC
 JOB NO. CWL-02
 DATE: 11-1-2019

10-JUL-2017
 tm676.dgn

TM676



Note:
 1) When signs are placed on opposing sides of post, 3/8" x 3" lag bolts can be used instead of through bolt.
 2) Use nylon and stainless steel washers when signs are placed on both sides of post.
 3) Burr threads at junction with nut when locknuts are not used.
 4) Post bolts to extend beyond the tightened nuts within the limits of 1/4" to 1".

* Stainless steel bonded sealing washer with neoprene layer is an acceptable substitute

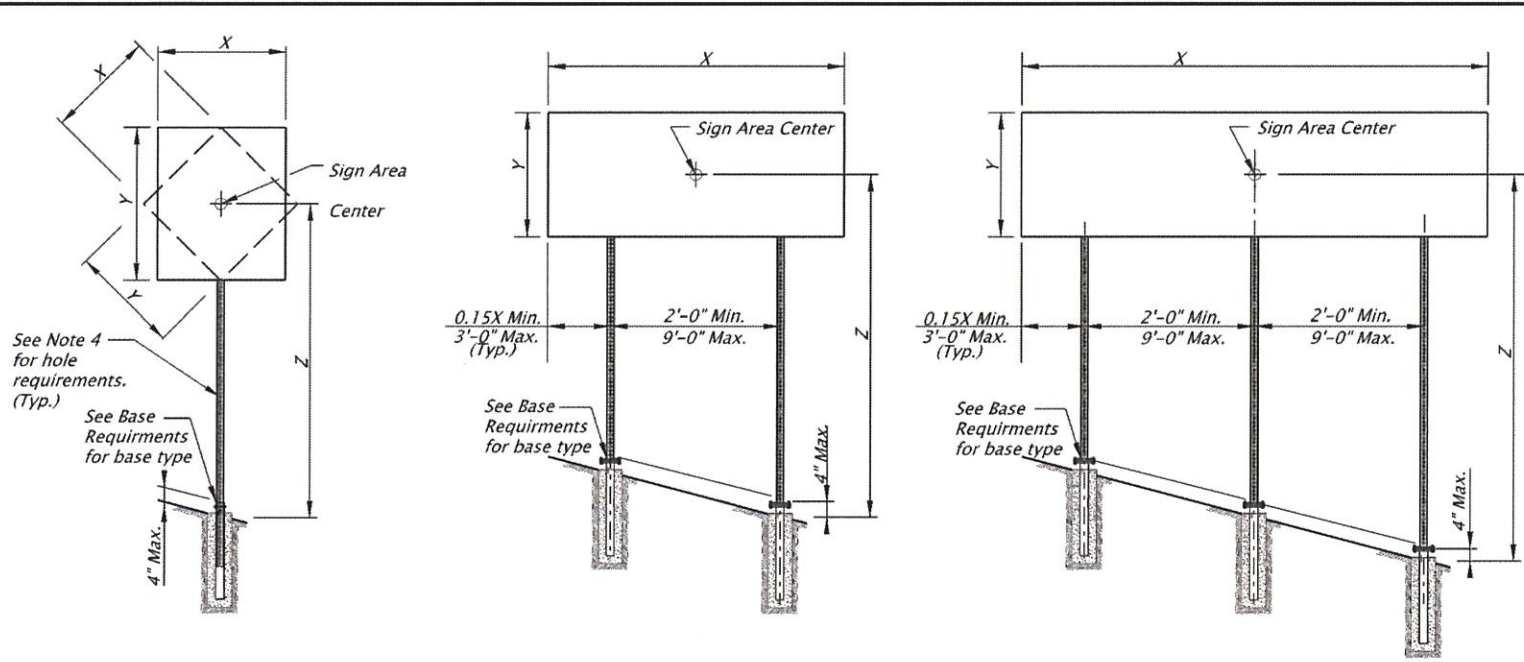
** Acceptable substitute for nylon locking nuts:
 ANCO PIN-LOC
 TRI-LOC® Top Lock Locknut

SIGN ATTACHMENT DETAIL

CALC. BOOK NO. _____	BASELINE REPORT DATE <u>06-JUL-2015</u>										
<p>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.</p>	NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications										
	OREGON STANDARD DRAWINGS										
	SIGN ATTACHMENTS										
	2018										
	<table border="1"> <thead> <tr> <th>DATE</th> <th>REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	DATE	REVISION DESCRIPTION								
DATE	REVISION DESCRIPTION										

Effective Date: December 1, 2019 - May 31, 2020

TM676



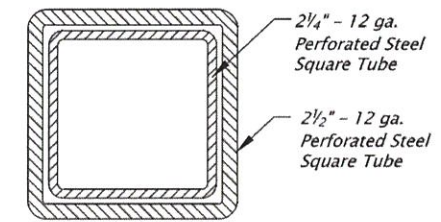
SINGLE POST ELEVATION
No scale

TWO POST ELEVATION
No scale

THREE POST ELEVATION
No scale

GENERAL NOTES:

1. Perforated Steel Square Supports are designed in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 4th Edition, 2001, 2002, 2003, and 2006 interim revisions.
2. The design basic wind speed (3 second gust) shall be according to the wind map shown on TM671.
3. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
4. Use 7/16" diameter holes at 1" spacing on each of the 4 sides.
5. Steel post shall have a minimum yield stress of 50 ksi.
6. Steel shall be galvanized according to ASTM A653 with coating designation G90.
7. General design parameters are $K_z = 0.87$, $C_d(\text{sign}) = 1.20$, and $G = 1.14$.
8. Permanent signing uses an $I_r = 0.71$ for a recurrence interval of 10 years.
9. Temporary signing uses an $I_r = 0.45$ for a recurrence interval of 1.5 years.
10. The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
11. For horizontal and vertical clearances of permanent signs refer to TM200 and of temporary signs refer to TM822.
12. Posts protected by barrier or guardrail do not require slip bases.



2 1/4" & 2 1/2" - 12 GA. DETAIL
No scale

Square Tube Size	(X * Y * Z) in ft ³ - Maximum								
	3 Second Gust Wind Speed (TM671)								
	85 MPH			95 MPH			105 or 110 MPH		
	Number of Posts			Number of Posts			Number of Posts		
2"-12 ga.	79	158	237	63	126	189	57	114	171
2 1/2"-12 ga.	136	272	408	109	218	327	98	196	294
2 1/2"-10 ga.	165	330	495	132	264	396	119	238	357
2 1/4" & 2 1/2"-12 ga.	231	462	693	185	370	555	167	334	501

PERMANENT PERFORATED STEEL SQUARE TUBE TABLE

Square Tube Size	(X * Y * Z) in ft ³ - Maximum								
	3 Second Gust Wind Speed (TM671)								
	85 MPH			95 MPH			105 or 110 MPH		
	Number of Posts			Number of Posts			Number of Posts		
2"-12 ga.	125	250	375	100	200	300	90	180	270
2 1/2"-12 ga.	215	430	645	172	344	516	155	310	465
2 1/2"-10 ga.	261	522	783	209	418	627	189	378	567
2 1/4" & 2 1/2"-12 ga.	364	728	1092	292	584	876	263	526	789

TEMPORARY PERFORATED STEEL SQUARE TUBE TABLE

* - See 2 1/4" & 2 1/2" - 12 ga. detail.

Square Tube Size	Number of Posts		
	2"-12 ga.	Anchor	Anchor
2 1/2"-12 ga.	Anchor	Slip	Slip
2 1/2"-10 ga.	Slip	Slip	Slip
2 1/4" & 2 1/2"-12 ga.	Slip	Slip	Slip

1. Anchor - See Drawing TM687 for PSST anchor foundation details.
2. Slip - See Drawing TM688 for PSST slip base foundation details.
3. N/A - Do not use this option.

BASE REQUIREMENTS

Accompanied by dwgs. TM200, TM671, TM687, TM688, TM689, TM822

CALC. BOOK NO. 5752	BASELINE REPORT DATE 10-JUL-2017
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
PERFORATED STEEL SQUARE TUBE (PSST) SIGN SUPPORT INSTALLATION	
2018	
DATE 07/17	REVISION DESCRIPTION Changed G140 to G90.

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.

Effective Date: December 1, 2019 - May 31, 2020

TM681

SIGNING DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

720 SW Washington St, Suite 500
Portland, Oregon 97205
www.dksassociates.com



EXPIRES: DEC. 31, 2019

DESIGNED: ELV	SHEET NO.
DRAWN: MAL	SS11
CHECKED: BKC	
DATE: 11-1-19	JOB NO. CWL-02



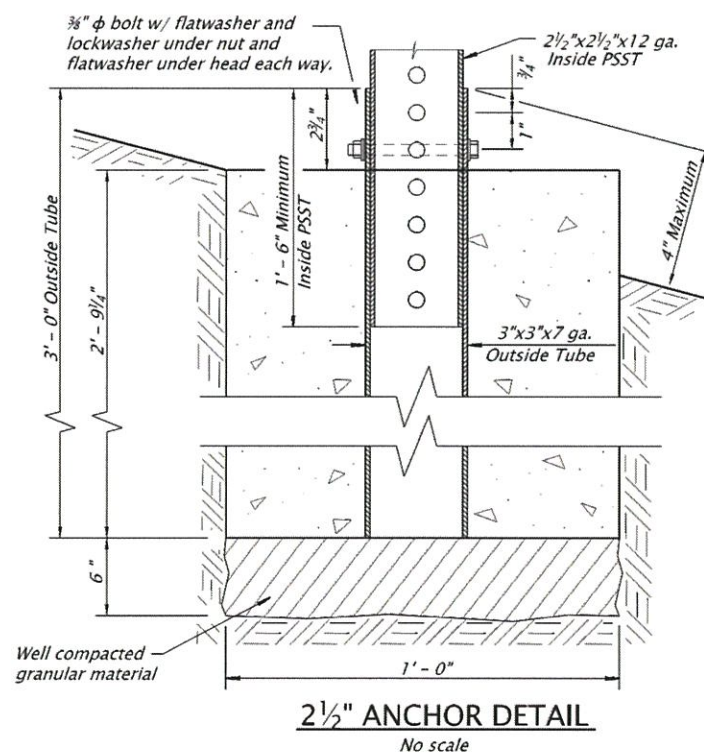
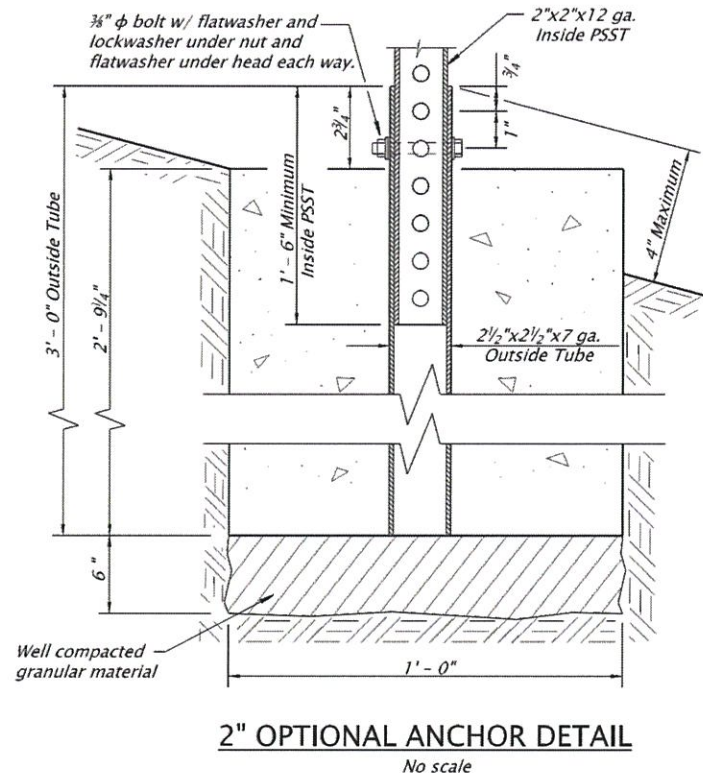
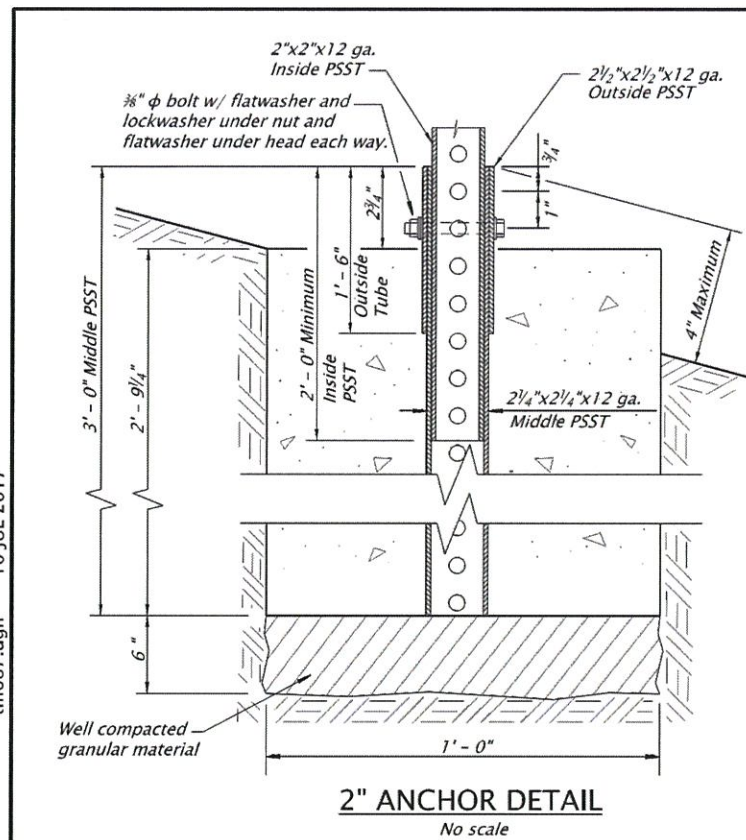
720 SW Washington St., Suite 500
 Portland, Oregon 97205
 www.dksassociates.com



SHEET NO.	DESIGNED:	ELV
SS12	DRAWN:	MAL
JOB NO.	CHECKED:	BKC
CWL-02	DATE:	11-1-2019

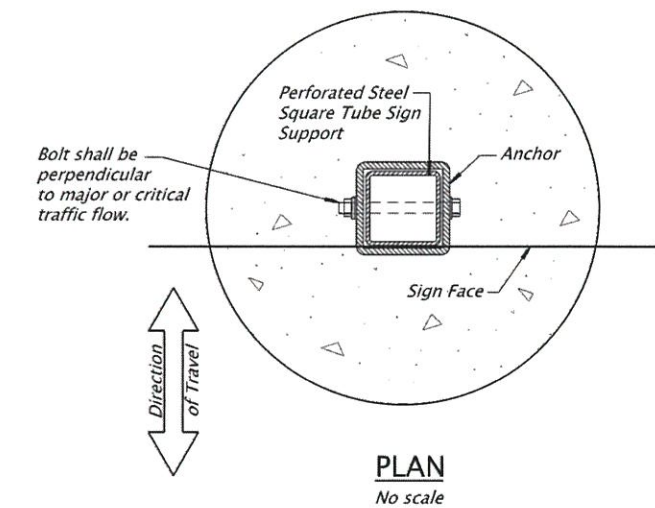
tm687.dgn 10-JUL-2017

TM687



General Notes:

1. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
2. Anchor steel shall be hot dipped galvanized or approved equal.
3. Footing concrete shall be Commercial Grade Concrete (fc = 3000 psi) per Specification 00440. The CGC mixture may be accepted at the site of placement according to 00440.14.
4. The estimated concrete volume is .09 cubic yards.



Accompanied by dwgs. TM681, TM688

CALC. BOOK NO. 5752	BASELINE REPORT DATE 06-JAN-2012
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
PERFORATED STEEL SQUARE TUBE (PSST) ANCHOR FOUNDATION	
2018	
DATE	REVISION DESCRIPTION

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.

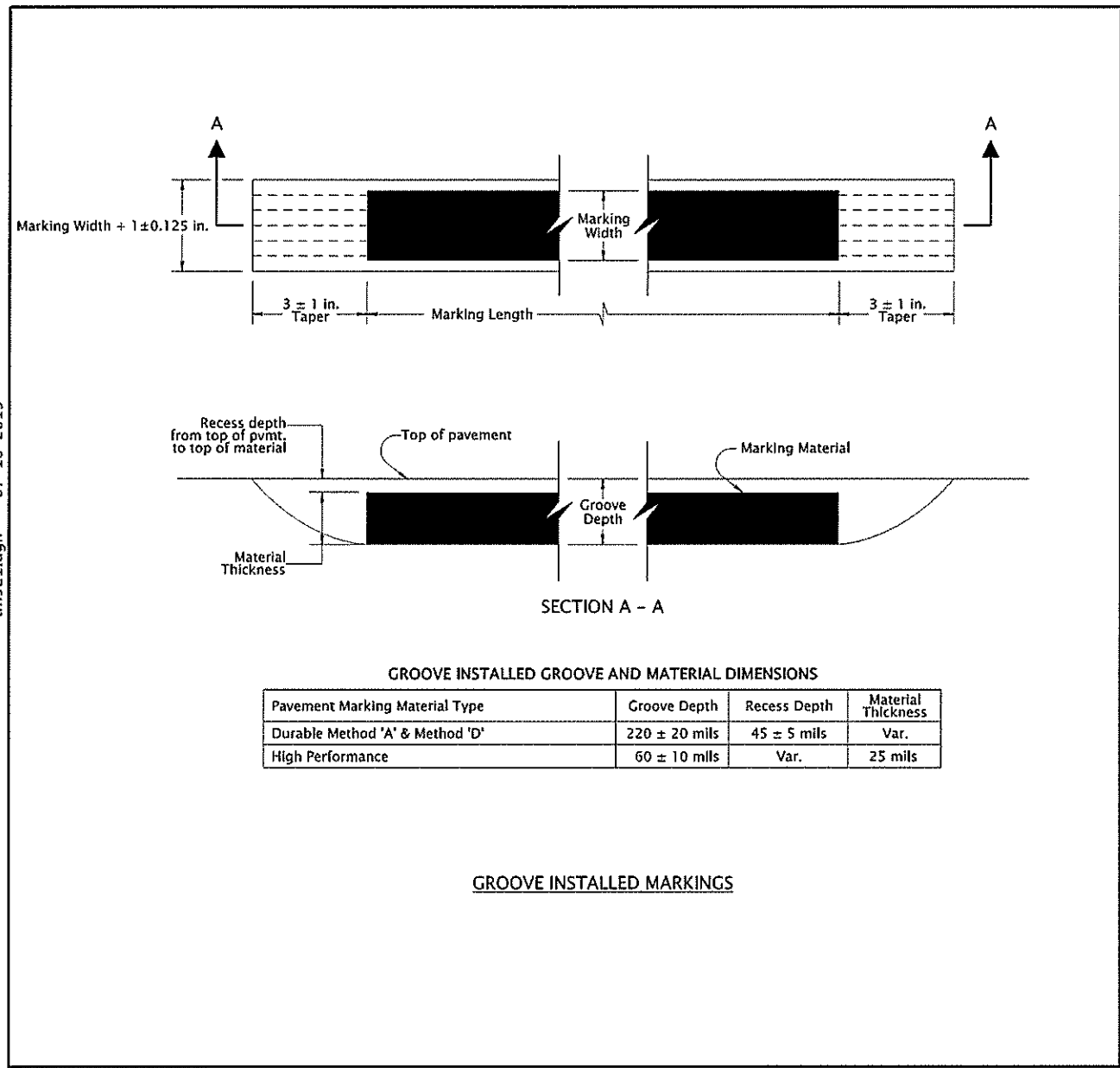
Effective Date: December 1, 2019 - May 31, 2020

TM687

X:\Projects\2019\19022-000 (West Linn Willamette & 10th Streetscape)\CAD\SS13.dwg Layout1 11/1/2019 10:31 AM MAL 22.0s (LMS Tech)

tm521.dgn 07-10-2019

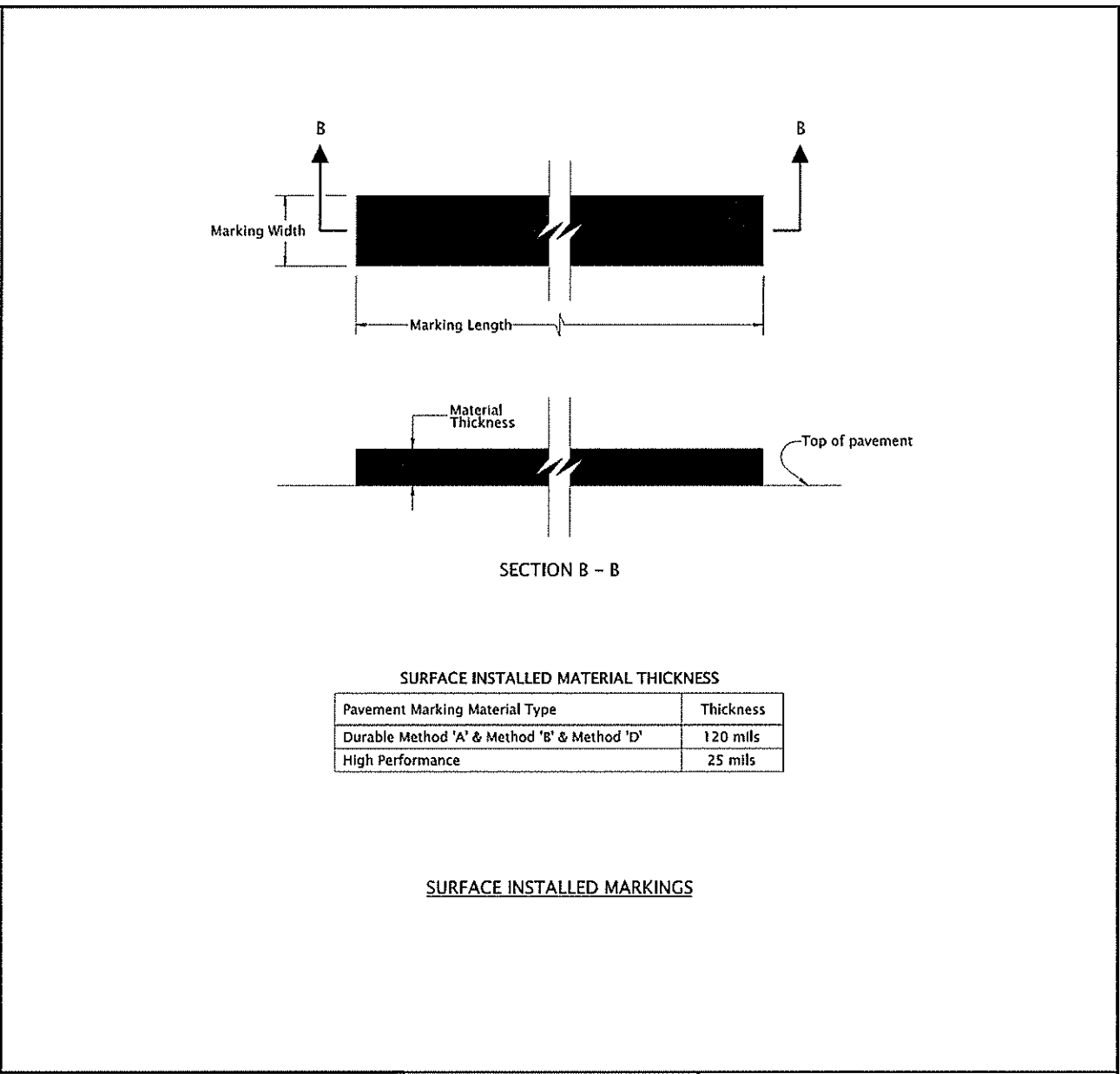
TM521



GROOVE INSTALLED GROOVE AND MATERIAL DIMENSIONS

Pavement Marking Material Type	Groove Depth	Recess Depth	Material Thickness
Durable Method 'A' & Method 'D'	220 ± 20 mils	45 ± 5 mils	Var.
High Performance	60 ± 10 mils	Var.	25 mils

GROOVE INSTALLED MARKINGS



SURFACE INSTALLED MATERIAL THICKNESS

Pavement Marking Material Type	Thickness
Durable Method 'A' & Method 'B' & Method 'D'	120 mils
High Performance	25 mils

SURFACE INSTALLED MARKINGS

General Notes:
 1) See Standard Drawing TM500 and/or project plans for marking length and width dimensions.
 2) See Standard Specification 00850.46 for marking installation tolerances.

CALC. BOOK NO. _ _ _ N/A _ _ _ _ _

BASELINE REPORT DATE _ _ 07/05/2013 _ _ _ _ _

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS
 DURABLE & HIGH PERFORMANCE
 PAVEMENT MARKINGS
 SURFACE & GROOVE INSTALLED
 NON-PROFILED**

2018

DATE	REVISION DESCRIPTION

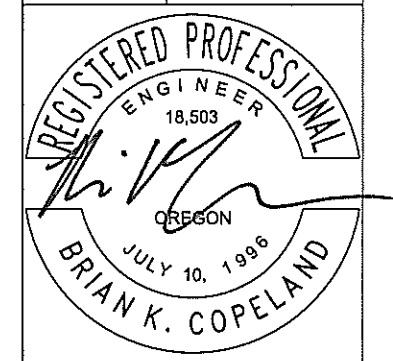
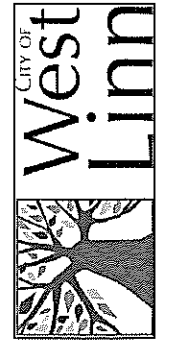
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

Effective Date: December 01, 2019 - May 31, 2020

TM521

SIGNING DETAILS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

720 SW Washington St, Suite 500
 Portland, Oregon 97205
 www.dksassociates.com



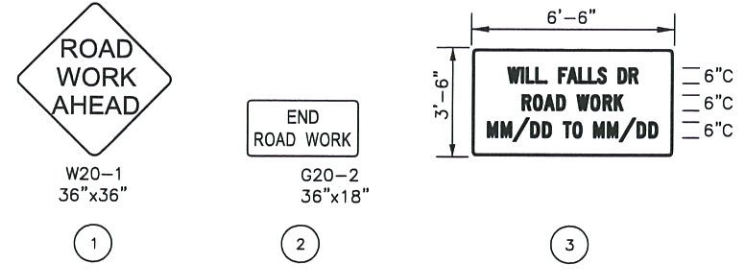
EXPIRES: DEC. 31, 2019

DESIGNED: ELV	SHEET NO.
DRAWN: MAL	SS13
CHECKED: BKC	
DATE: 11-1-19	JOB NO. CWL-02

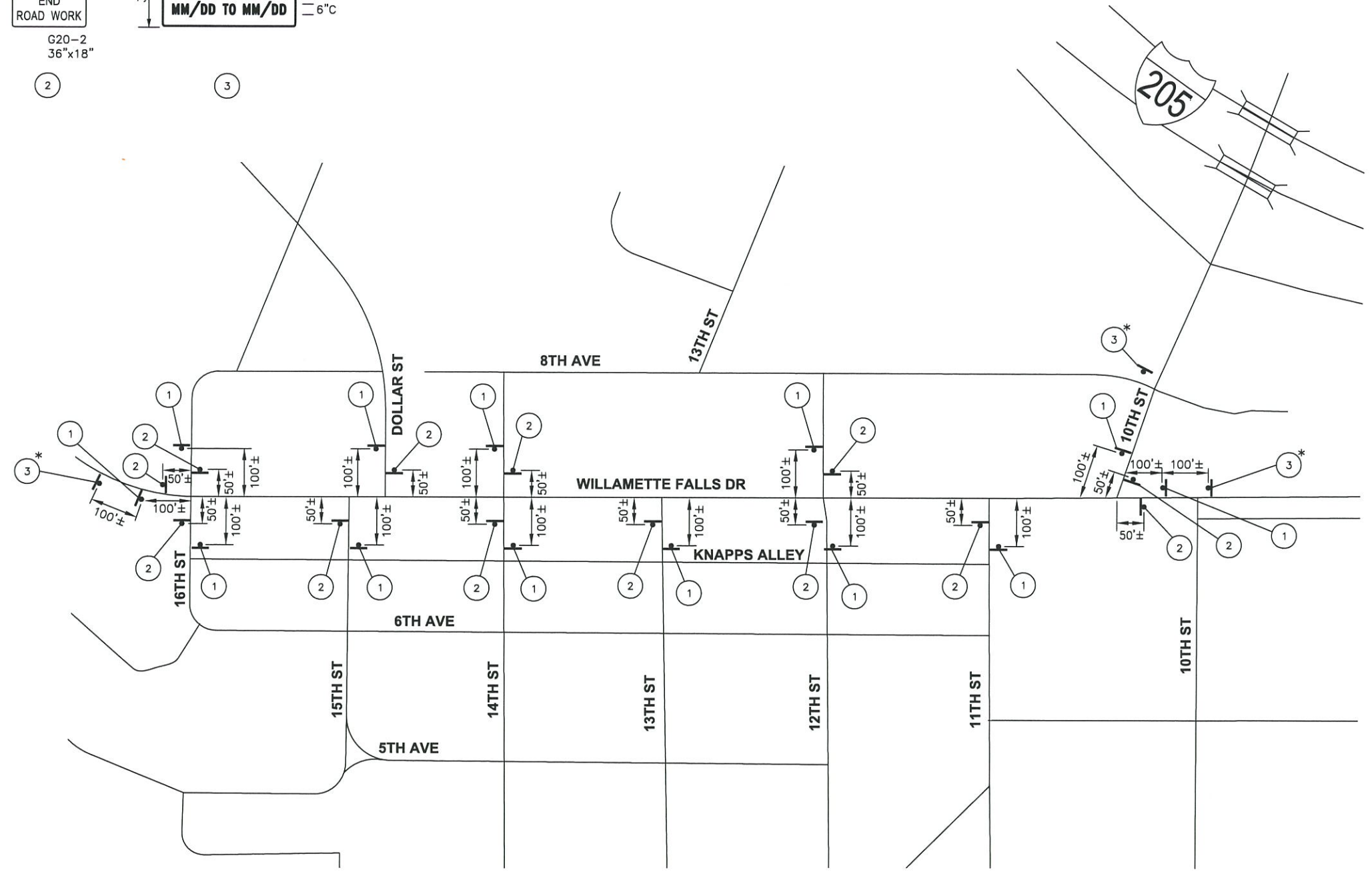
TRAFFIC CONTROL PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON



SHEET NO.	DESIGNED: BJM
TC1	DRAWN: MAL
	CHECKED: BKC
JOB NO. CWL-02	DATE: 11-1-2019



ADVANCE SIGNING
 STAGES I AND II

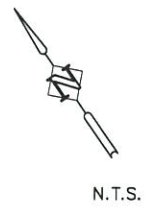


* INSTALL SIGN TWO WEEKS PRIOR TO CONSTRUCTION

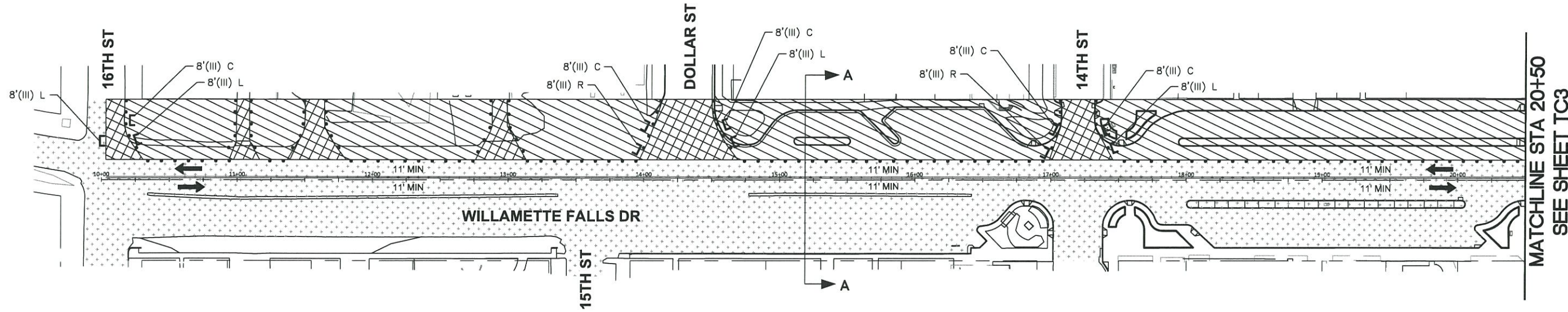
- LEGEND**
- (X) SIGNING DETAIL (SEE DETAILS THIS SHEET)
 - ↓ TEMPORARY SIGN ON TEMPORARY SUPPORT

- GENERAL NOTES**
- ADJUSTMENTS TO TEMPORARY TRAFFIC DEVICES MAY BE REQUIRED TO ACCOMMODATE EXISTING FIELD CONDITIONS. LOCATIONS OF ALL TEMPORARY TRAFFIC DEVICES SHALL BE APPROVED IN THE FIELD BY THE ENGINEER.

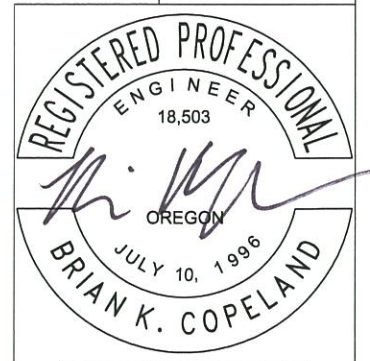
TO BE ACCOMPANIED BY ODOT STANDARD DRAWINGS
 TM800, TM810, TM820, TM821, TM822, AND TM844.



STAGE I



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EXPIRES: DEC. 31, 2019

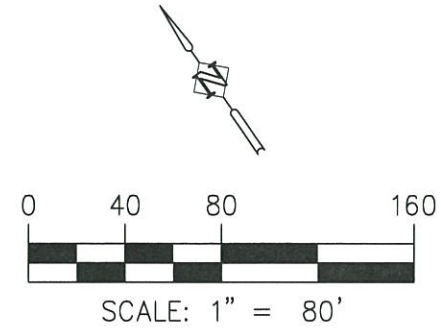
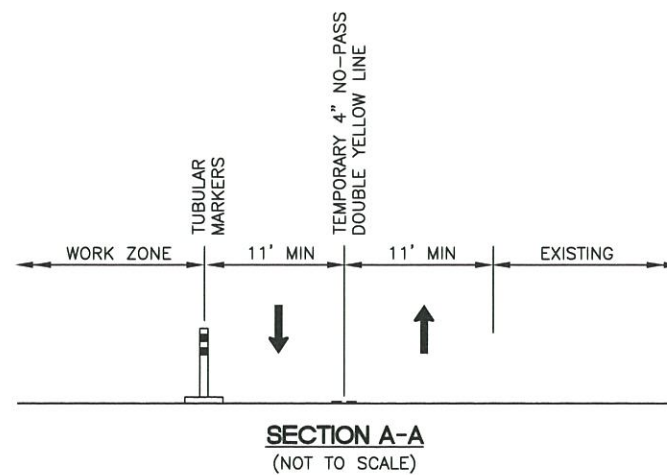
DESIGNED: BJM	SHEET NO.
DRAWN: MAL	TC2
CHECKED: BKC	
DATE: 11-1-2019	JOB NO. CWL-02

LEGEND

- STAGE 1 UNDER CONSTRUCTION
- STAGE 1 TRAFFIC UNDER CONSTRUCTION
- UNDER TRAFFIC
- TEMPORARY TUBULAR MARKERS ON 10' MAX SPACING
- DIRECTION OF TRAFFIC
- 8' TYPE III BARRICADE (R, L, OR C)

GENERAL NOTES

1. SEE SHEET TC1 FOR ADVANCE SIGNING.
2. MAINTAIN ACCESS TO DRIVEWAYS AND AT ALL TIMES.
3. MAINTAIN TWO LANES OF TRAFFIC ON WILLAMETTE FALLS DRIVE AT ALL TIMES.
4. ONLY ONE SIDE STREET TO BE CLOSED AT ANY TIME. SEE SHEETS TC6 AND TC7 FOR DETAILS.



X:\Projects\2019\19022-000 (West Linn Willamette & 10th Streetscape)\CAD\TC2.dwg Layout1 11/1/2019 11:01 AM BENJAMIN.MOIZIO 22.0s (LMS Tech)

TRAFFIC CONTROL PLAN
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

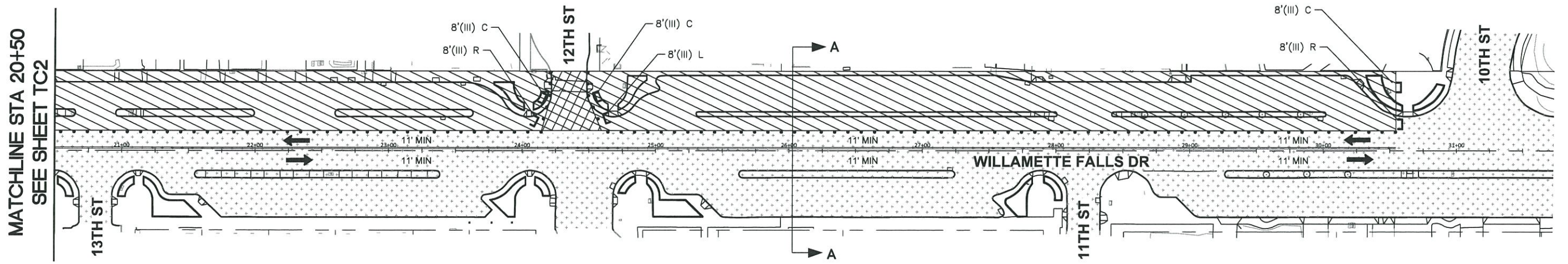


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SHEET NO. **TC3**
 DESIGNED: BJM
 DRAWN: MAL
 CHECKED: BKC
 JOB NO. CWL-02
 DATE: 11-1-2019

STAGE I

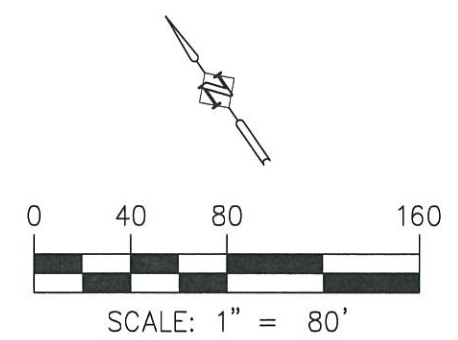
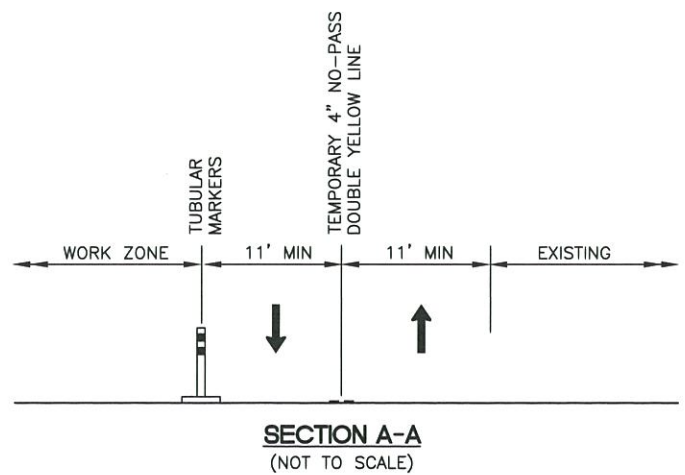


LEGEND

- STAGE 1 UNDER CONSTRUCTION
- STAGE 1 TRAFFIC UNDER CONSTRUCTION
- UNDER TRAFFIC
- TEMPORARY TUBULAR MARKERS ON 10' MAX SPACING
- DIRECTION OF TRAFFIC
- 8' TYPE III BARRICADE (R, L, OR C)

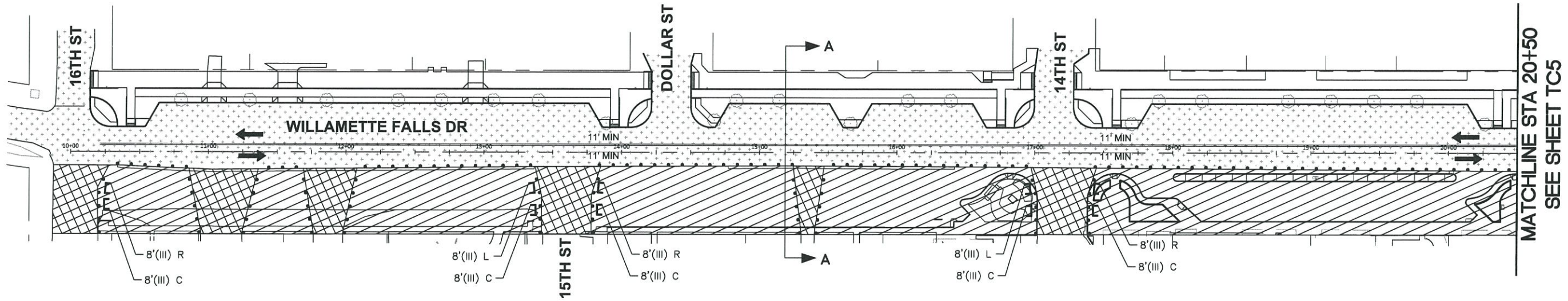
GENERAL NOTES

1. SEE SHEET TC1 FOR ADVANCE SIGNING.
2. MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. MAINTAIN TWO LANES OF TRAFFIC ON WILLAMETTE FALLS DRIVE AT ALL TIMES.
4. ONLY ONE SIDE STREET TO BE CLOSED AT ANY TIME. SEE SHEETS TC6 AND TC7 FOR DETAILS.



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STAGE II



TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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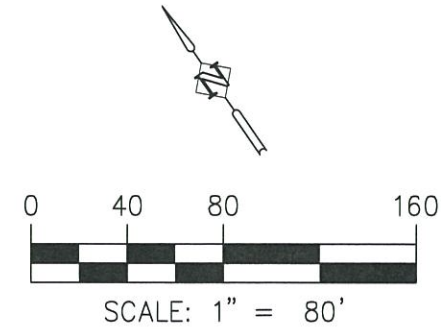
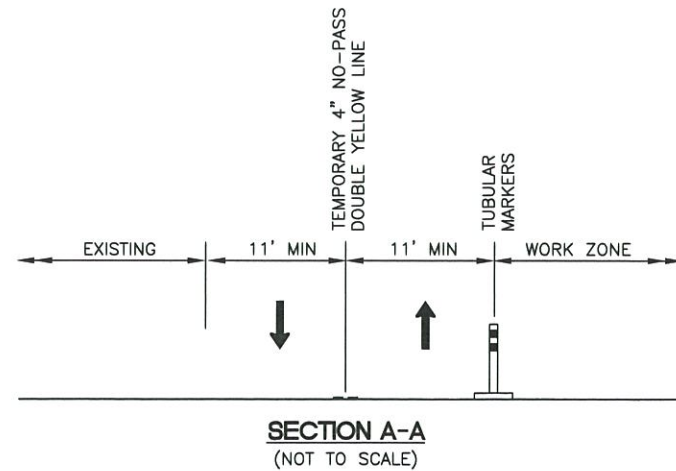


LEGEND

- STAGE 1 UNDER CONSTRUCTION
- STAGE 1 TRAFFIC UNDER CONSTRUCTION
- UNDER TRAFFIC
- TEMPORARY TUBULAR MARKERS ON 10' MAX SPACING
- DIRECTION OF TRAFFIC
- 8' TYPE III BARRICADE (R, L, OR C)

GENERAL NOTES

1. SEE SHEET TC1 FOR ADVANCE SIGNING.
2. MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. MAINTAIN TWO LANES OF TRAFFIC ON WILLAMETTE FALLS DRIVE AT ALL TIMES.
4. ONLY ONE SIDE STREET TO BE CLOSED AT ANY TIME. SEE SHEETS TC6 AND TC7 FOR DETAILS.

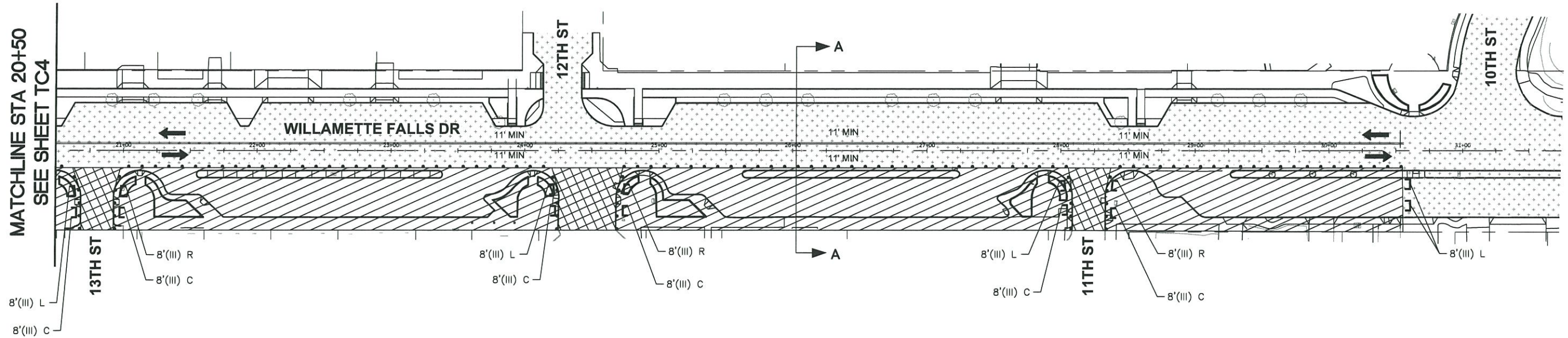


DESIGNED: BJM	SHEET NO. TC4
DRAWN: MAL	
CHECKED: BKC	
DATE: 11-1-2019	JOB NO. CWL-02

EXPIRES: DEC. 31, 2019

TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

STAGE II





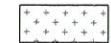


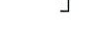
MATCHLINE STA 20+50
SEE SHEET TC4



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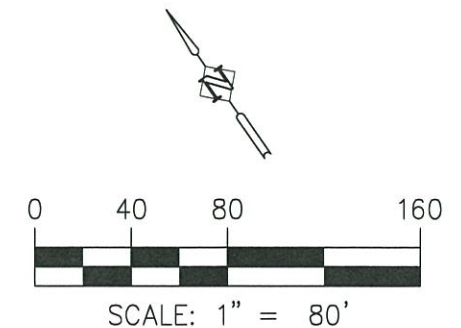
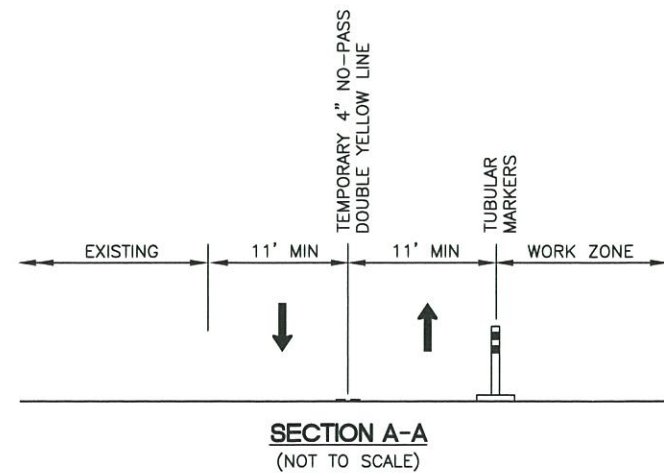


LEGEND

-  STAGE 1 UNDER CONSTRUCTION
-  STAGE 1 TRAFFIC UNDER CONSTRUCTION
-  UNDER TRAFFIC
-  TEMPORARY TUBULAR MARKERS ON 10' MAX SPACING
-  DIRECTION OF TRAFFIC
-  8' TYPE III BARRICADE (R, L, OR C)

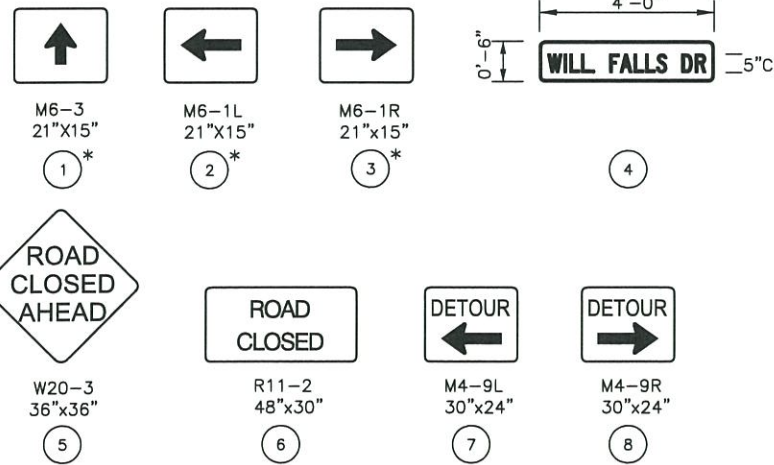
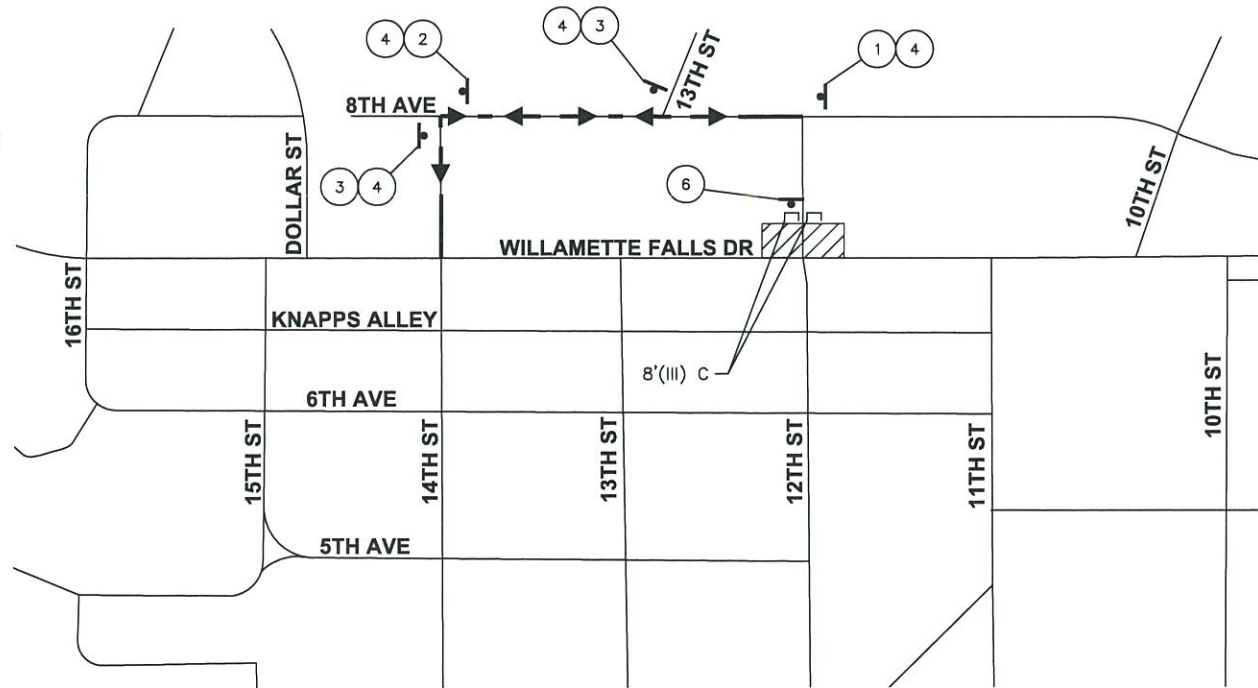
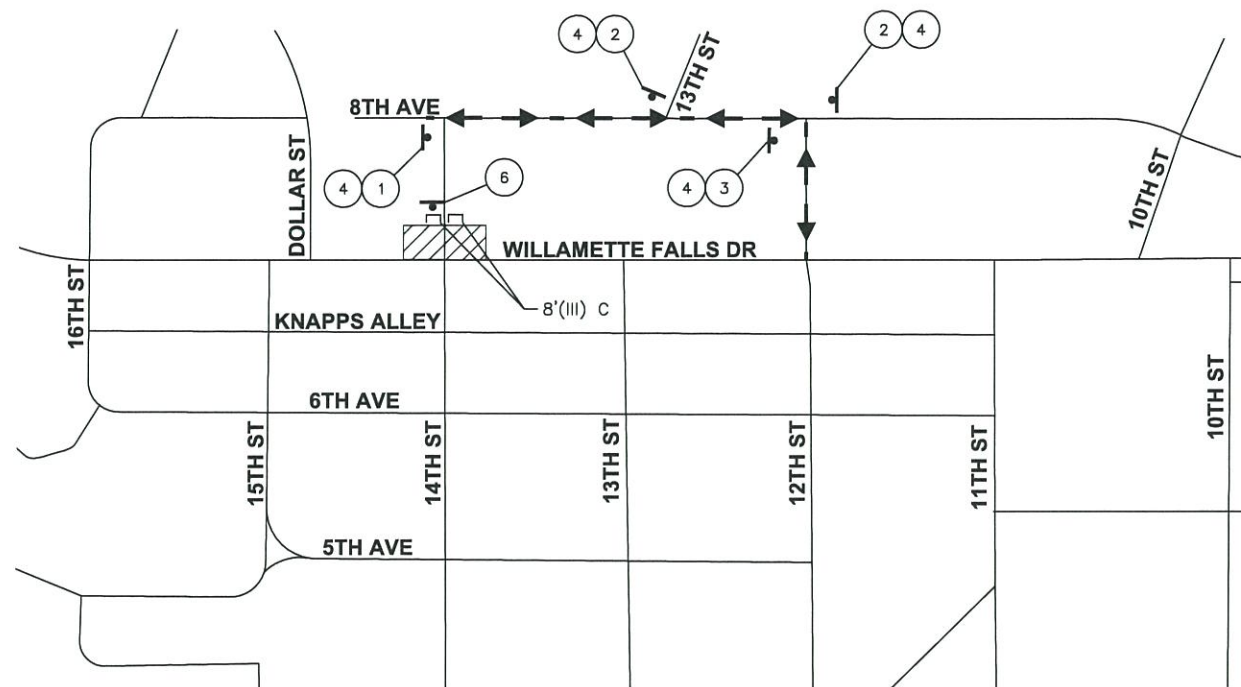
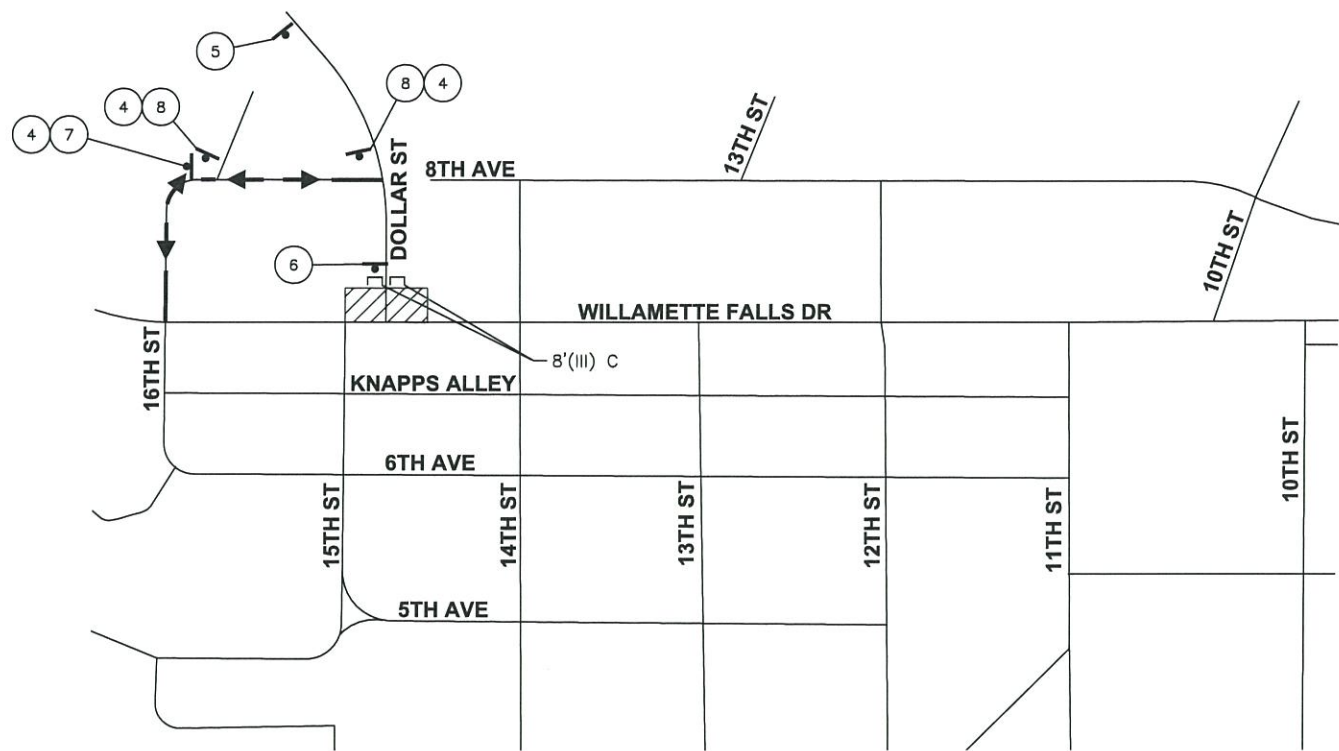
GENERAL NOTES

1. SEE SHEET TC1 FOR ADVANCE SIGNING.
2. MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.
3. MAINTAIN TWO LANES OF TRAFFIC ON WILLAMETTE FALLS DRIVE AT ALL TIMES.
4. ONLY ONE SIDE STREET TO BE CLOSED AT ANY TIME. SEE SHEETS TC6 AND TC7 FOR DETAILS.



SHEET NO.	DESIGNED:	BJM
TC5	DRAWN:	MAL
	CHECKED:	BKC
JOB NO.	DATE:	11-1-2019
CWL-02		

TYPICAL DETOUR MAP
SIDE STREET CLOSURE
STAGE I
12TH ST, 14TH ST, DOLLAR ST



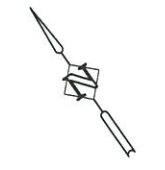
*SIGN TO BE BLACK LEGEND WITH ORANGE BACKGROUND

GENERAL NOTE

1. MAINTAIN TWO LANES OF TRAFFIC ON WILLAMETTE FALLS DRIVE AT ALL TIMES.

LEGEND

- WORK ZONE
- DETOUR ROUTE
- 8' TYPE III BARRICADE (R, L, OR C)



TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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DESIGNED: BJM	SHEET NO. TC6
DRAWN: MAL	
CHECKED: BKC	
DATE: 11-1-2019	JOB NO. CWL-02

X:\Projects\2019\19022-000 (West Linn Willamette & 10th Streetscape)\CAD\TC6.dwg Layout 1 11/1/2019 11:07 AM MAL 22.0s (LMS Tech)

TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

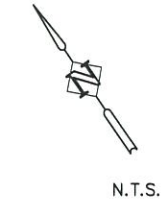
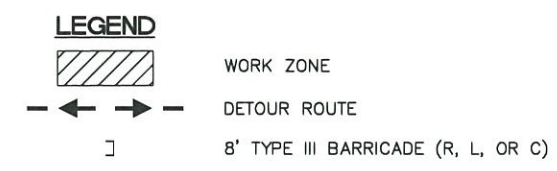
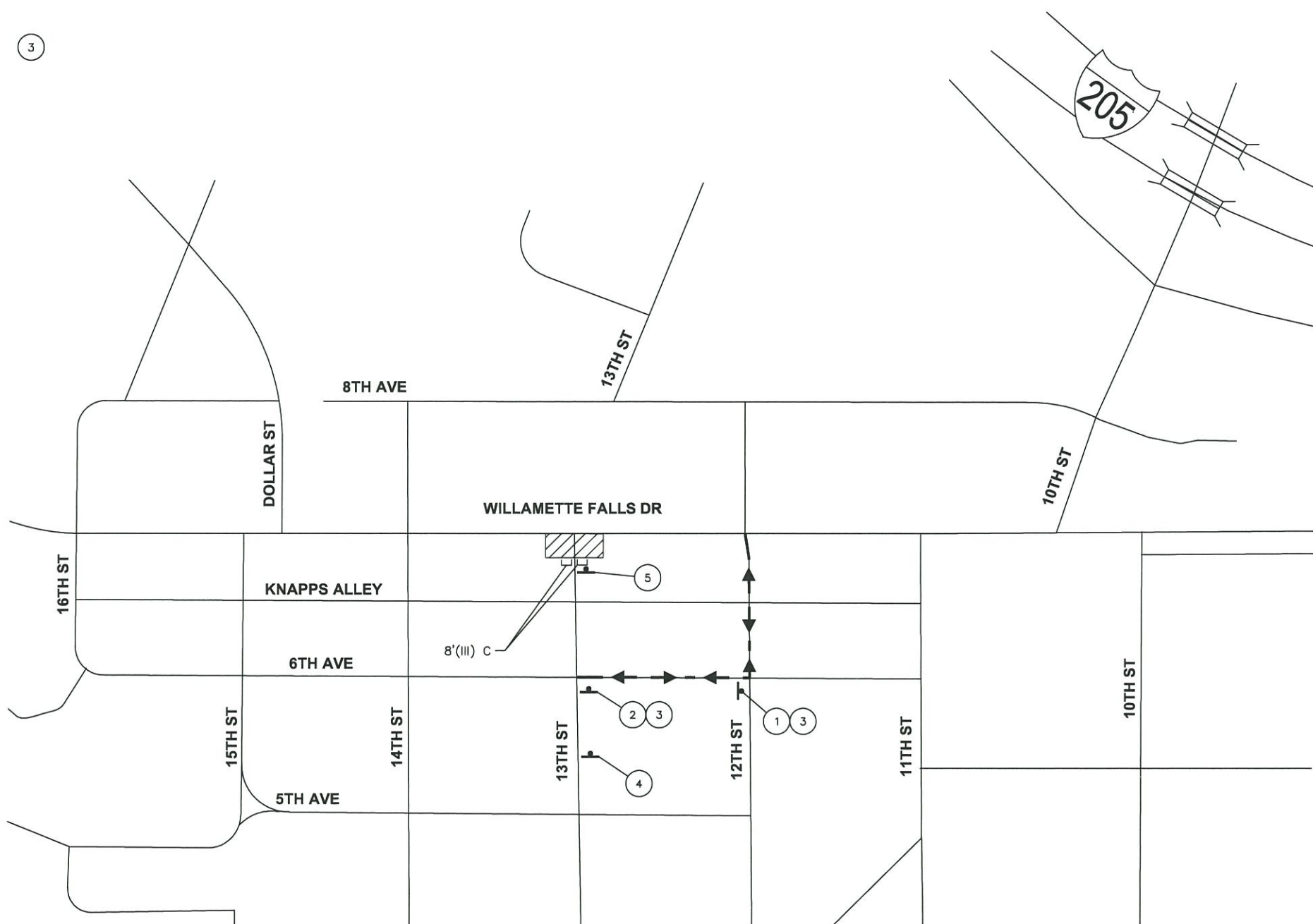
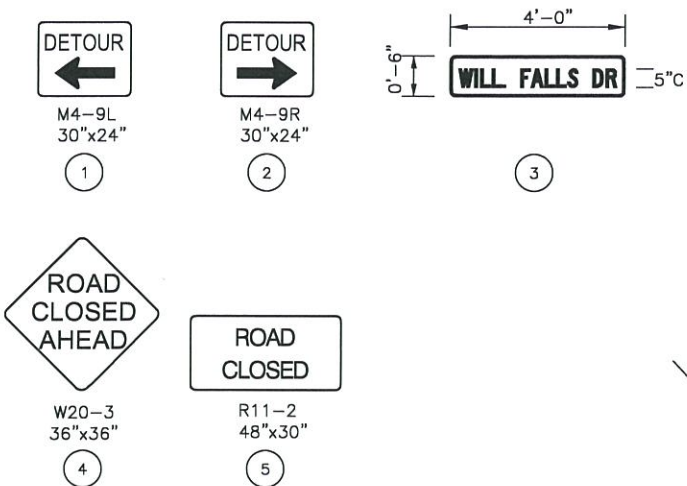


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SHEET NO.	DESIGNED:	BJM
TC7	DRAWN:	MAL
	CHECKED:	BKC
JOB NO.	DATE:	11-1-2019
CWL-02		

TYPICAL DETOUR MAP
SIDE STREET CLOSURE
STAGE II
 11TH ST, 12TH ST, 13TH ST, 14TH ST, 15TH ST, 16TH ST



TAPER TYPES & FORMULAS	
TAPER	FORMULA
Merging (Lane Closure)	"L"
Shifting	"L"/2 or 1/2"L"
Shoulder Closure	"L"/3 or 1/3"L"
Flagging (See Drg. TM850)	50' - 100'
Downstream (Termination)	Varies (See Drawings)

★ Use Pre-Construction Posted Speed to select the Speed from the Tables below:

★ SPEED (mph)	MINIMUM FLARE RATE
≤ 30	8:1
35	9:1
40	10:1
45	12:1
50	14:1
55	16:1
60	18:1
65	19:1
70	20:1

MINIMUM LENGTHS TABLE					
★ SPEED (mph)	"L" VALUE FOR TAPERS (ft)				BUFFER "B" (ft)
	W ≤ 10	W = 12	W = 14	W = 16	
25	105	125	145	165	75
30	150	180	210	240	100
35	205	245	285	325	125
40	265	320	375	430	150
45	450	540	630	720	180
50	500	600	700	800	210
55	550	660	770	880	250
60	600	720	840	960	285
65	650	780	910	1000	325
70	700	840	980	1000	365
FREEWAYS					
55	1000	1000	1000	1000	250
60	1000	1000	1000	1000	285
65	1000	1000	1000	1000	325
70	1000	1000	1000	1000	365

NOTES:

- For Lane closures where W < 10', use "L" value for W = 10'.
- For Shoulder closures where W < 10', use "L" value for W = 10' or calculate "L" using formula, for Speeds ≥ 45: L = WS, Speeds < 45: L = S*W/60, S = Speed, W=Width

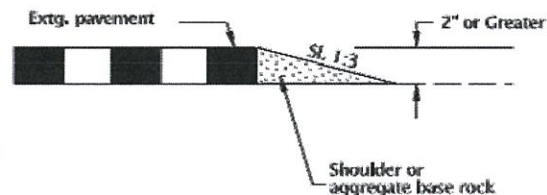
TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE				
★ SPEED (mph)	Sign Spacing (ft)			Max. Channelizing Device Spacing (ft)
	A	B	C	
20 - 30	100	100	100	20
35 - 40	350	350	350	20
45 - 55	500	500	500	40
60 - 70	700	700	700	40
Freeway	1000	1500	2640	40

NOTES:

- Place traffic control devices on 10 ft. spacing for intersection and access radii.
- When necessary, sign spacing may be adjusted to fit site conditions. Limit spacing adjustments to 30% of the "A" dimension for all speeds.

NOTES:

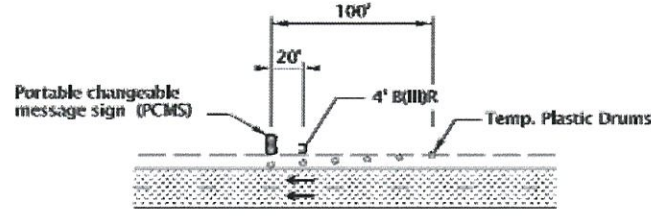
- When paved shoulders adjacent to excavations are less than four feet wide protect longitudinal abrupt edge as shown.
- Use aggregate wedge when abrupt edge is 2 inches or greater.



EXCAVATION ABRUPT EDGE

NOTES:

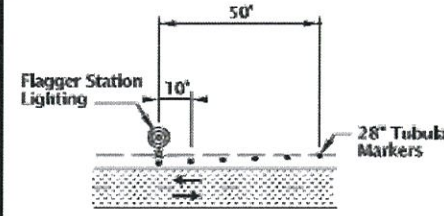
- Install PCMS beyond the outside shoulder, when possible.
- Use the appropriate type of barricade panels for PCMS location. Right shoulder, use Type B(III)R. Left shoulder, use Type B(III)L.
- Use six drums in shoulder taper on 20' spacing. The drums and barricade may be omitted when PCMS is placed behind a roadside barrier.
- Detail as shown is used for trailered and non-crashworthy components of:
 - Portable Traffic Signals
 - Smart Work Zone Systems



PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLATION

NOTES:

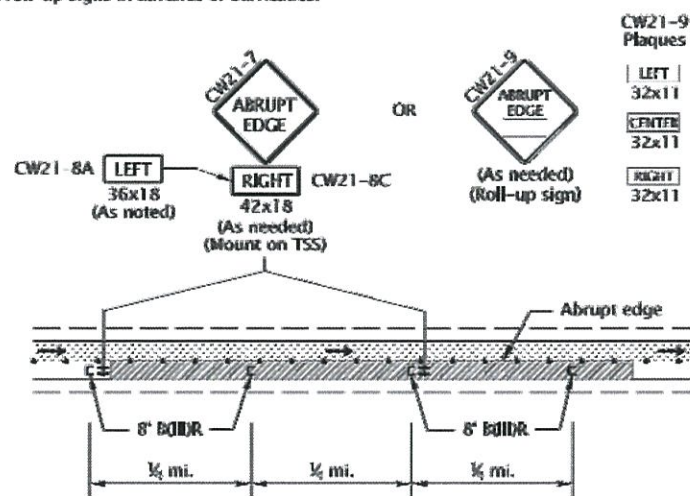
- Install Flagger Station Lighting beyond the outside shoulder, where practical.
- Use six tubular markers in shoulder taper on 10' spacing.
- Place cart / generator / power supply off of the shoulder, as far as practical.



FLAGGER STATION LIGHTING DELINEATION

NOTES:

- Abrupt edges may be created by paving, operations, excavations or other roadway work. Use abrupt edge signing for longitudinal abrupt edges of 1 inch or greater.
- If the excavation is located on left side of traffic, replace the 8' B(III)R barricades with 8' B(III)L barricades and replace the "RIGHT" (CW21-8C) riders with "LEFT" (CW21-8A) riders.
- Continue signing and other traffic control devices throughout excavation area at spacings shown.
- If roll-up signs are used, attach the correct (CW21-9) plaques to the sign face using hook and loop fasteners. Place roll-up signs in advance of barricades.



TYPICAL ABRUPT EDGE DELINEATION

GENERAL NOTES FOR ALL TCP DRAWINGS:

- Signs and other Traffic Control Devices (TCD) shown are the minimum required.
- Place a barricade approx. 20' ahead of all sequential arrow boards.
- Arrows shown in roadway are directional arrows to indicate traffic movements.
- All signs are 48" x 48" unless otherwise shown. Use fluorescent orange sheeting for the background of all temporary warning signs.
- All diamond shaped warning signs mounted on barrier sign supports shall be 36" by 36". All other signs mounted on barrier sign supports shall not exceed 12 sq. ft. in total sign area.
- Low speed highways have a pre-construction posted speed of 40 mph or less. High speed highways have a pre-construction posted speed of > 40 mph.
- Do not locate sign supports in locations designated for bicycle or pedestrian traffic.
- Combine drawing details to complete temporary traffic control for each work activity.
- To be accompanied by Drg. Nos. TM820 & TM821.

- Temp. Plastic Drums See TCD Spacing Table for max. spacing.
- 28" Tubular Markers See TCD Spacing Table for max. spacing.
- UNDER TRAFFIC
- UNDER CONSTRUCTION

CALC. BOOK NO. TM09-01 BASELINE REPORT DATE 01-JAN-2019

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

TABLES, ABRUPT EDGE AND PCMS DETAILS

2018

DATE	REVISION DESCRIPTION

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.

Effective Date: December 1, 2019 - May 31, 2020

TM800

TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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Portland, Oregon 97205
www.dksassociates.com



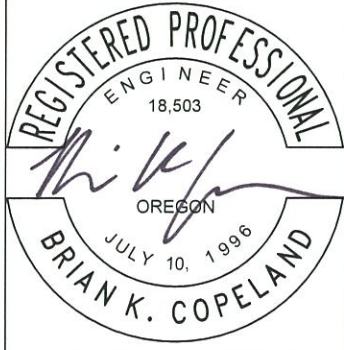
EXPIRES: DEC. 31, 2019

DESIGNED:	BJM	SHEET NO.	
DRAWN:	MAL	TC8	JOB NO.
CHECKED:	BKC		
DATE:	11-1-2019	CWL-02	

TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON



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SHEET NO.	DESIGNED:	BJM
TC9	DRAWN:	MAL
	CHECKED:	BKC
JOB NO.	DATE:	11-1-2019
CWL-02		

tm810.dgn 01-JAN-2019

TM810

LAYOUT "A"
(Supplemented double solid lines)

TYPICAL APPLICATIONS:

- To prohibit lane changes or passing (include appropriate regulatory signs).
- Freeway or multilane shifts and crossovers.
- For projects in place through winter months.
- Two-lane, two-way centerlines.

LAYOUT "B"
(Supplemented solid line)

TYPICAL APPLICATIONS:

- Alignment shifts or crossovers.
- To discourage lane changes in multilane sections.
- For projects in place through winter months.

LAYOUT "C"
(Supplemented broken lines)

TYPICAL APPLICATIONS:

- Freeway and multilane broken lines.
- High ADT 2 lane roads (greater than 10,000).
- For projects in place through winter months.

LAYOUT "D"
(Simulated broken lines)

TYPICAL APPLICATIONS:

- During staging on finished/existing surfaces.
- HMAC intermediate surfaces.
- Emulsified asphalt surface treatments (chip seals) where permanent pavement markings cannot be placed within two weeks.

LAYOUT "E"
(Simulated solid lines)

TYPICAL APPLICATIONS:

- Alignment shifts or crossovers.
- To discourage lane changes in multilane sections.
- Edge lines for short durations, less than 14 days.

LAYOUT "F"
(Supplemented wide double solid lines)

TYPICAL APPLICATIONS:

- To prohibit lane changes or passing (include appropriate regulatory signs).
- 2 lane, 2 way centerlines.
- 2 lane, 1 way alignments on freeways or multi-lane highways.

LAYOUT "G"
(Supplemented solid 8" line)

TYPICAL APPLICATIONS:

- Gore areas
- Alignment splits (bifurcations)

GENERAL NOTES FOR ALL DETAILS:

- When using Supplemented or Simulated lines:
 - Yellow Bi-Directional Pavement Markers are required for Two-Way Traffic.
 - White Mono-Directional Pavement Markers are required for one-way traffic or edge lines.
- Supplemented lines are painted lines enhanced with Reflective Pavement Markers.
- Simulated lines are Reflective Pavement Markers placed in a pattern to substitute for a painted line.
- Pavement marking colors shall conform to the MUTCD.

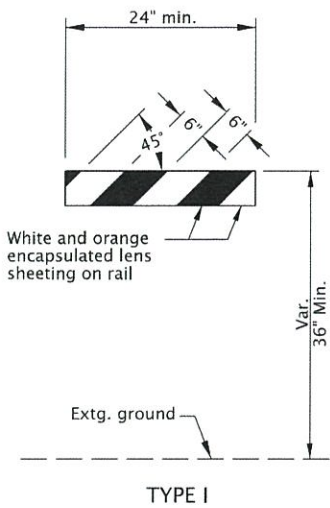
CALC. BOOK NO.	N/A
BASELINE REPORT DATE	01-JAN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
TEMPORARY PAVEMENT MARKINGS	
2018	
DATE	REVISION DESCRIPTION

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.

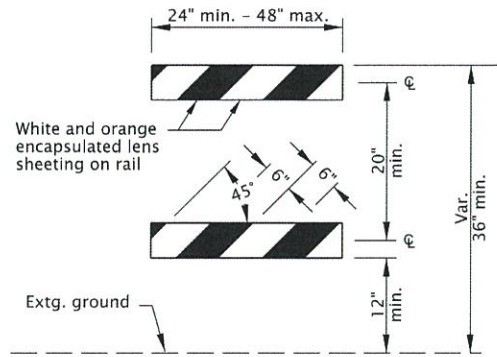
Effective Date: December 1, 2019 - May 31, 2020

TM810

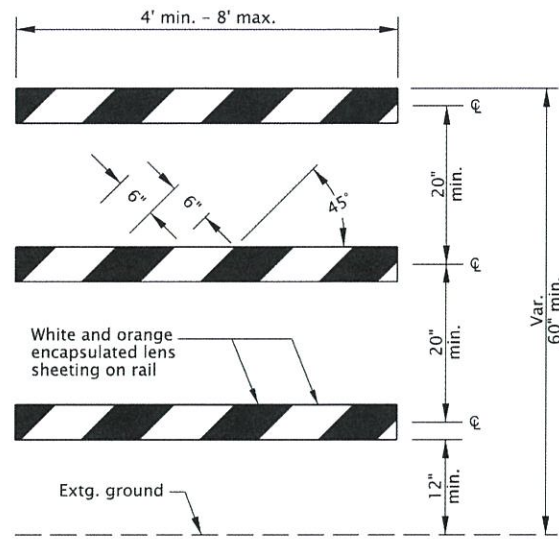
tm820.dgn 01-JAN-2019



TYPE I



TYPE II



TYPE III

BARRICADE RAIL LAYOUT

GENERAL NOTES FOR ALL DETAILS:

- Sandbags (approximately 25 lb sack filled with sand) may be placed on lower frame to provide additional ballast.
- Ballast shall not extend above bottom rail or be suspended from barricade.
- For rails less than 36" long, 4" wide stripes shall be used.
- Rails must be 8" min. to 12" max. in height.
- Use barricades from ODOT Qualified Products List (QPL).
- Use 4' Type III barricades where horizontal space is limited.
- Do not block bike lanes or shoulders unless the facility is properly closed and signed.
- Do not place barricades in sidewalks unless sidewalk is closed and a temporary pedestrian accessible route (TPAR) is signed according to the TCP. See Dwg. No. TM 844.

NOTES:

- Markings for barricade rails shall slope downward at an angle of 45° in the direction traffic is to pass.
- Where a barricade extends entirely across a roadway, it is desirable that the stripes slope downward in the direction toward which traffic must turn in detouring.
- Where both right and left turns are provided for, slope the chevron striping downward in both directions from the center of the barricade.
- For full roadway closures, the C or LR barricade may be used. Extend barricades completely across roadway unless access is required for local road users.

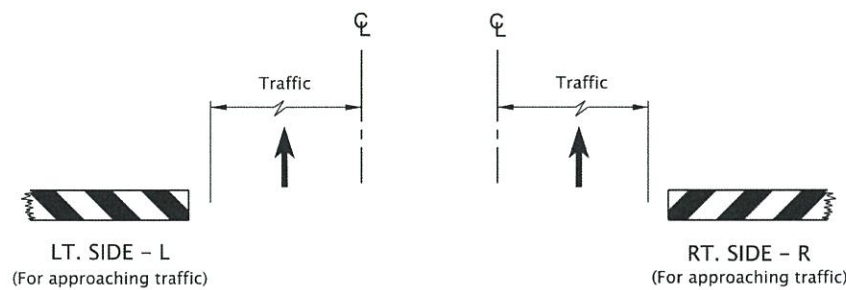
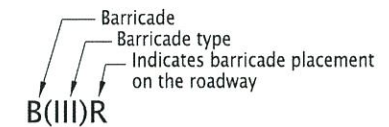


DIAGRAM FOR BARRICADE PLACEMENT AND SLOPE MARKING



BARRICADE NOTATION

CALC. BOOK NO. N/A	BASELINE REPORT DATE 01-JAN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
TEMPORARY BARRICADES	
2018	
DATE	REVISION DESCRIPTION
01-2019	REVISED NOTES

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Effective Date: December 1, 2019 - May 31, 2020

TM820

TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

720 SW Washington St, Suite 500
Portland, Oregon 97205
www.dksassociates.com



EXPIRES: DEC. 31, 2019

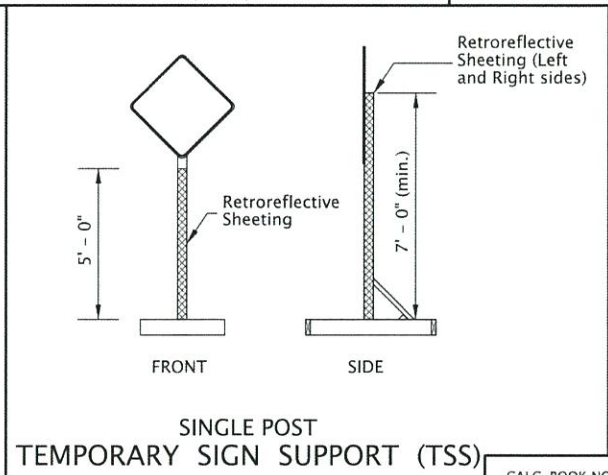
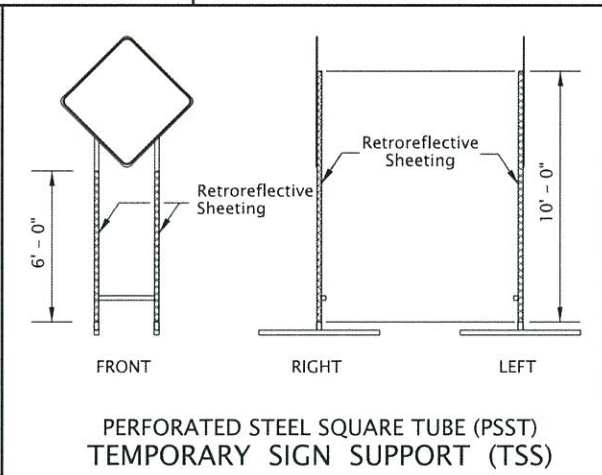
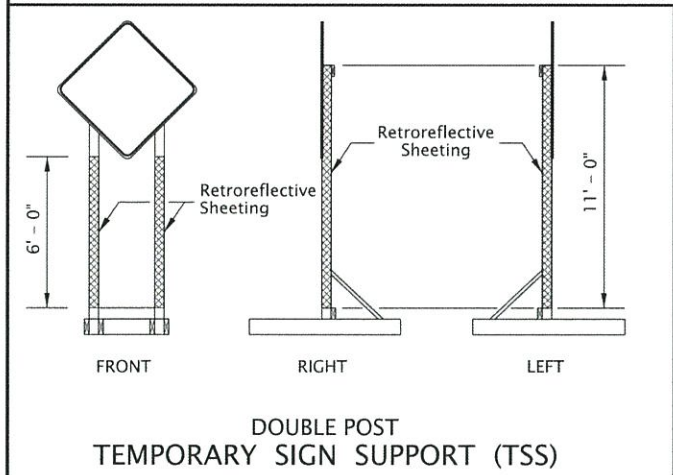
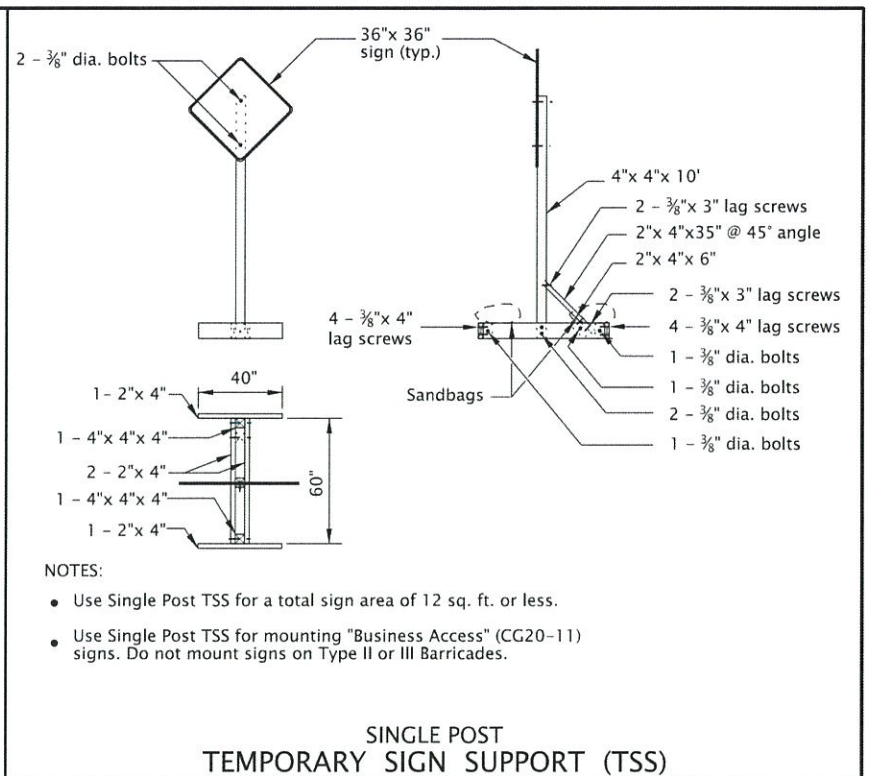
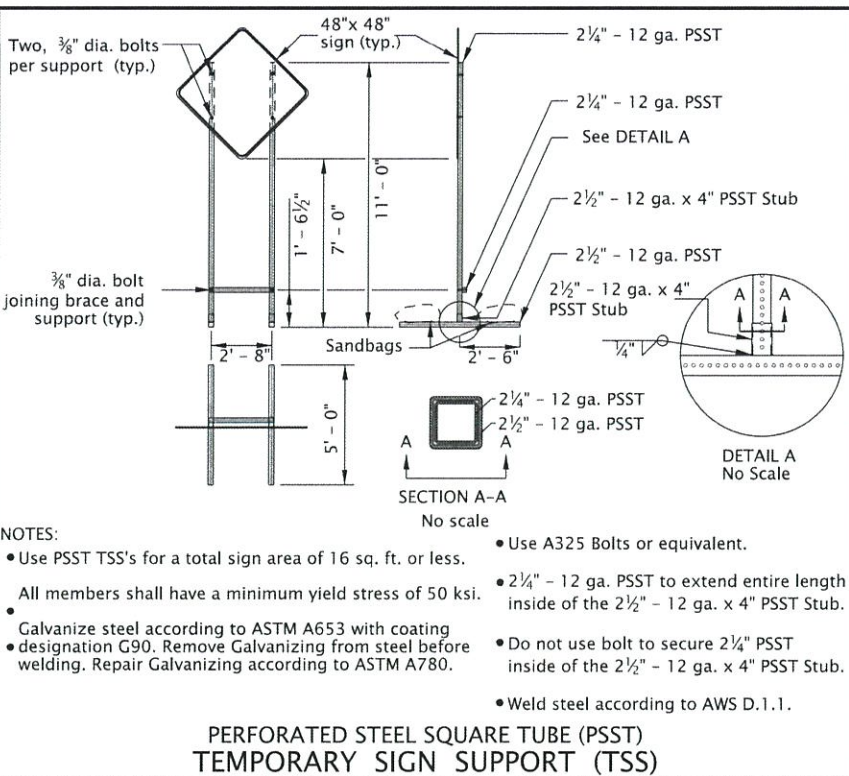
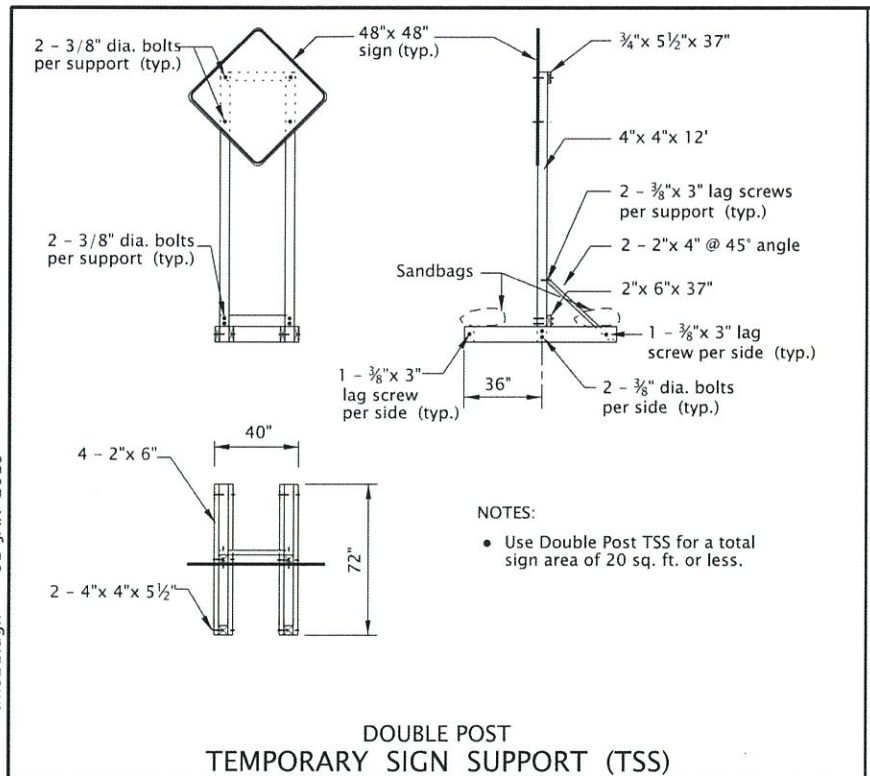
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DRAWN: MAL	TC10
CHECKED: BKC	
DATE: 11-1-2019	JOB NO. CWL-02



EXPIRES: DEC. 31, 2019

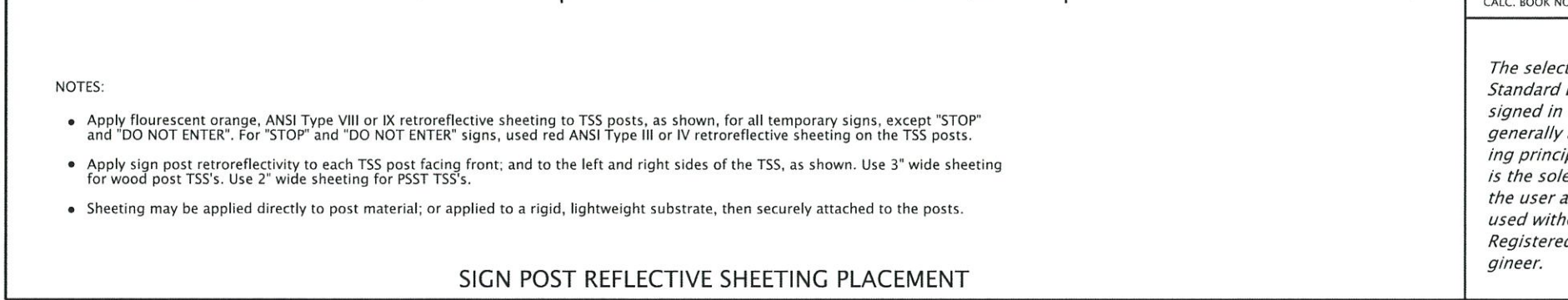
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TC11	DRAWN:	MAL
	CHECKED:	BKC
JOB NO.	DATE:	11-1-2019
CWL-02		

tm821.dgn 01-JAN-2019



TEMPORARY SIGN SUPPORT GENERAL NOTES:

- DO NOT TIP OVER TSS AT ANY TIME.
- Do not locate TSS's in locations that block pedestrian/bicycle traffic.
- For wooden TSS's, use either Douglas Fir or Hem Fir, which is surfaced four sides (S4S) and free of heart center (FOHC).
- See "Temporary Sign Placement" detail on TM822 for sign installation heights.
- Do not place or stack ballast more than 24" above the ground.
- When sign is inconsistent with current work zone conditions, cover sign; or turn sign 90 degrees away from approaching traffic. Remove TSS from roadway when signing is not needed for more than 3 days.
- Place a minimum of 50 lbs of sandbags on each of the four TSS supports legs. (25 lb. max per bag) (min. 100 lbs per side of each TSS).



CALC. BOOK NO.	N/A	BASELINE REPORT DATE	01-JAN-2019
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OREGON STANDARD DRAWINGS			
TEMPORARY SIGN SUPPORTS			
2018			
DATE	REVISION	DESCRIPTION	
01-2019	REVISED	NOTES	

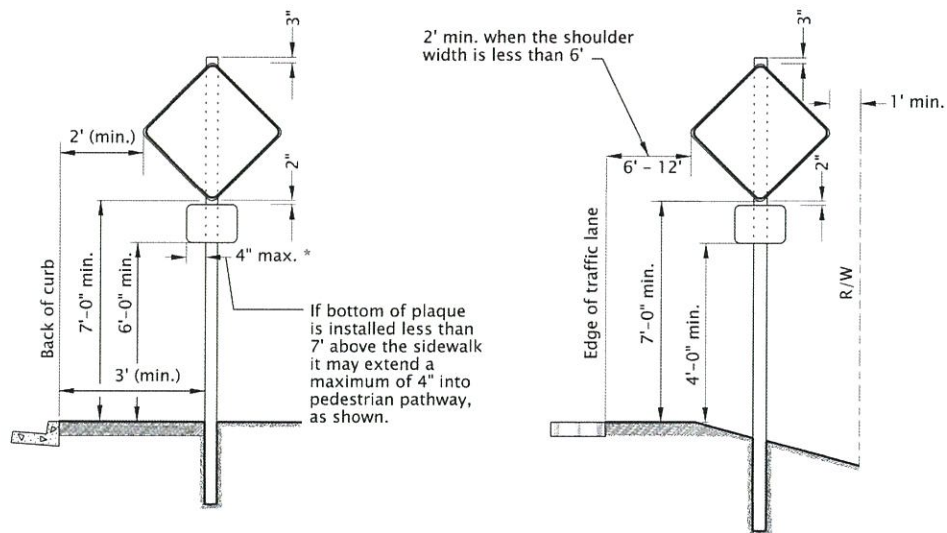
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Effective Date: December 1, 2019 - May 31, 2020

TM821

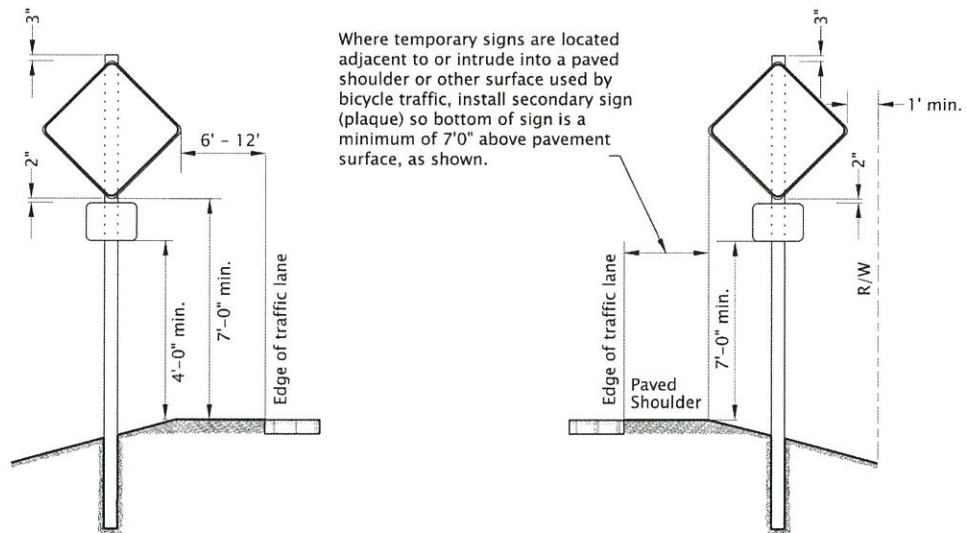
NOTES:

- Do not block bicycle lanes, sidewalks, or TPAR's with sign supports. Maintain minimum widths for these facilities according to TCP Design Manual, MUTCD, ADA, or as directed.
- To be accompanied by Drg. Nos. TM670, TM671, TM687, TM688 & TM689.



URBAN AREAS WITH CURB/SIDEWALK

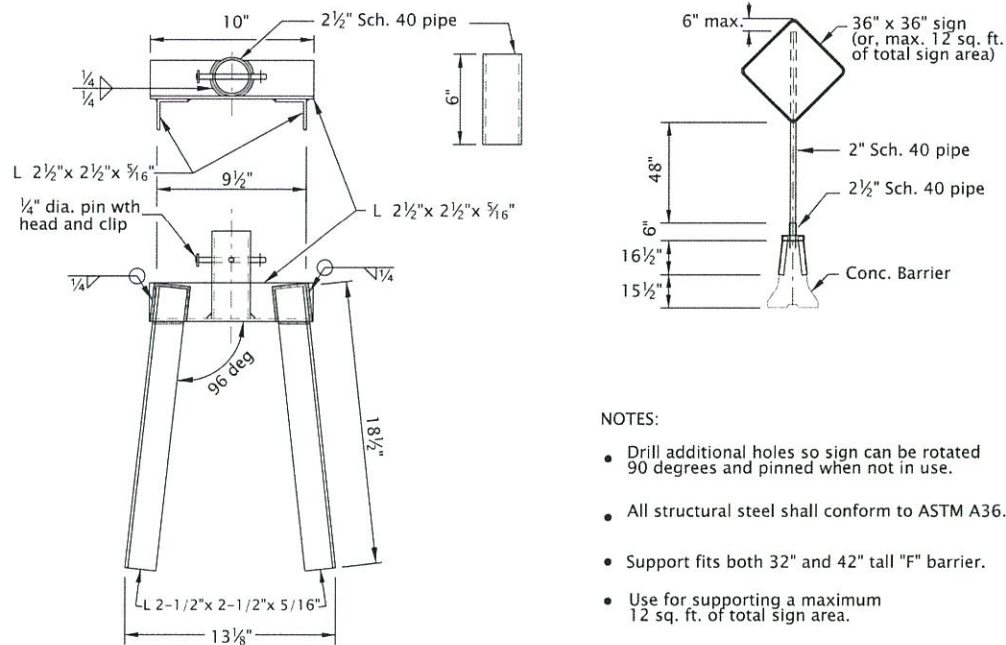
RURAL AREAS



DIVIDED HIGHWAY/FREEWAY MEDIANS
NO CURB/SIDEWALK

RURAL OR URBAN AREAS - CURB OR NO CURB
BICYCLES ON SHOULDER

TEMPORARY SIGN PLACEMENT



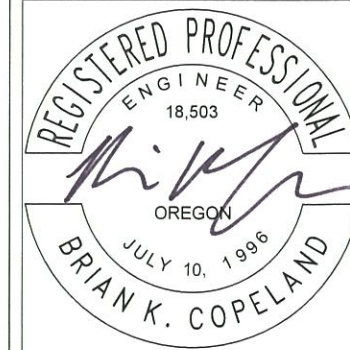
NOTES:

- Drill additional holes so sign can be rotated 90 degrees and pinned when not in use.
- All structural steel shall conform to ASTM A36.
- Support fits both 32" and 42" tall "F" barrier.
- Use for supporting a maximum 12 sq. ft. of total sign area.
- Place support at connection between two concrete barrier sections.
- Weld steel according to American Welding Society (AWS) D.1.1.
- Do not use clipped signs.

CONCRETE BARRIER SIGN SUPPORT

CALC. BOOK NO.	N/A	BASELINE REPORT DATE	01-JAN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
OREGON STANDARD DRAWINGS			
TEMPORARY SIGN SUPPORTS			
2018			
DATE	REVISION	DESCRIPTION	
01-2018	REVISED DRAWING		
01-2019	REVISED NOTES		

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DESIGNED:	BJM	SHEET NO.	
DRAWN:	MAL		
CHECKED:	BKC		
DATE:	11-1-2019	JOB NO.	CWL-02

TC12

Effective Date: December 1, 2019 - May 31, 2020

TM822

**TRAFFIC CONTROL PLAN
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON**

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tm822.dgn 01-JAN-2019

TM822



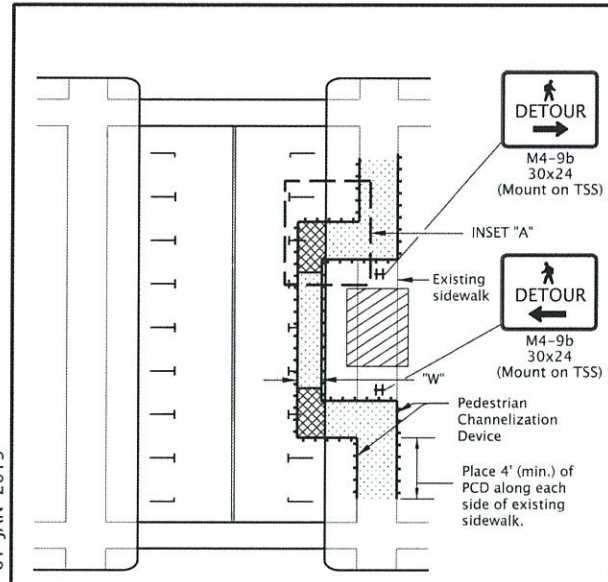
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EXPIRES: DEC. 31, 2019

SHEET NO.	DESIGNED:	BJM
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	CHECKED:	BKC
JOB NO.	DATE:	11-1-2019
CWL-02		

6102-JNF-10
tm844.dgn



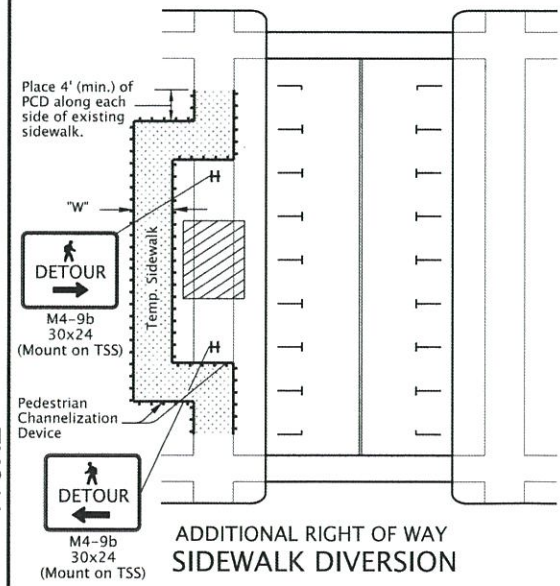
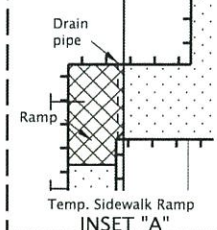
**WITHIN ROADWAY
SIDEWALK DIVERSION**

NOTES:

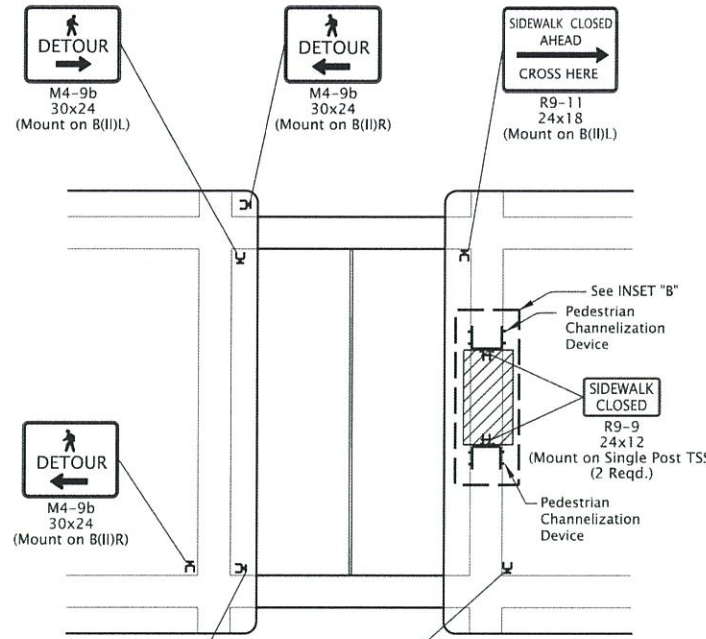
- Place or construct temp. sidewalk ramp, as needed.
- For roadways with a pre-construction posted speed of 40 mph or less.
- See inset "A" for Temp. Sidewalk Ramp details.
- "W" = 60", or, where 60" width cannot be maintained through the entire route, provide 48" min. width with 60" x 60" passing spaces every 200 ft.
- Use temporary ADA compliant surfaces to cross planter strips or other non-traversable surfaces.

NOTES:

- Ramp size will vary. Ramp must meet ADA requirements incl. max design grade of 7.5% and max design cross slope of 1.5%.



**ADDITIONAL RIGHT OF WAY
SIDEWALK DIVERSION**

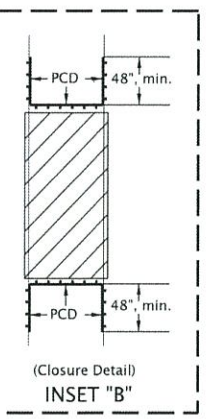


SIDEWALK CLOSURE, MIDBLOCK

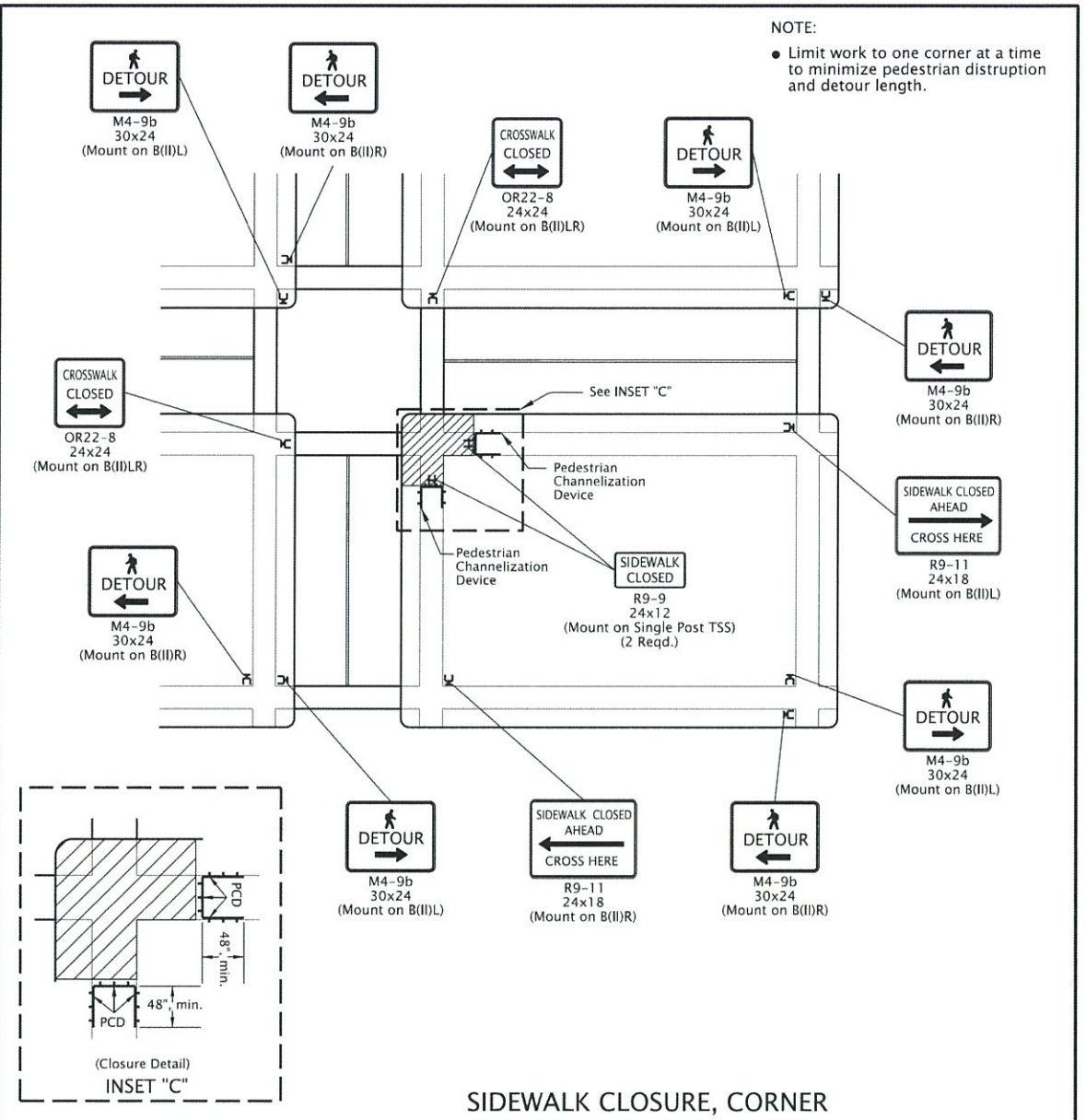
GENERAL NOTES FOR ALL DETAILS:

- When closing or relocating crosswalks or other pedestrian facilities provide ADA compliant facilities. Include accessibility features consistent with existing pedestrian facilities by providing adequate slope transitions and surfacing.
- Provide non-slip, 60 inch minimum wide surface through entire pedestrian route. If not possible, provide 48" min. width with 60" x 60" passing spaces every 200 feet along the route.
- Only TCD for pedestrians are shown. Other devices may be necessary to control vehicular traffic.
- Stage work, as necessary, to provide a temporary pedestrian access route at all times. For roadways with no available detours, maintain one open sidewalk at all times.
- Minimize pedestrian out-of-direction travel.
- To be accompanied by Drg. Nos. TM820 & TM821.

- UNDER PEDESTRIAN TRAFFIC
- UNDER CONSTRUCTION
- PEDESTRIAN CHANNELIZATION DEVICE



INSET "B"



SIDEWALK CLOSURE, CORNER

NOTE:

- Limit work to one corner at a time to minimize pedestrian disruption and detour length.

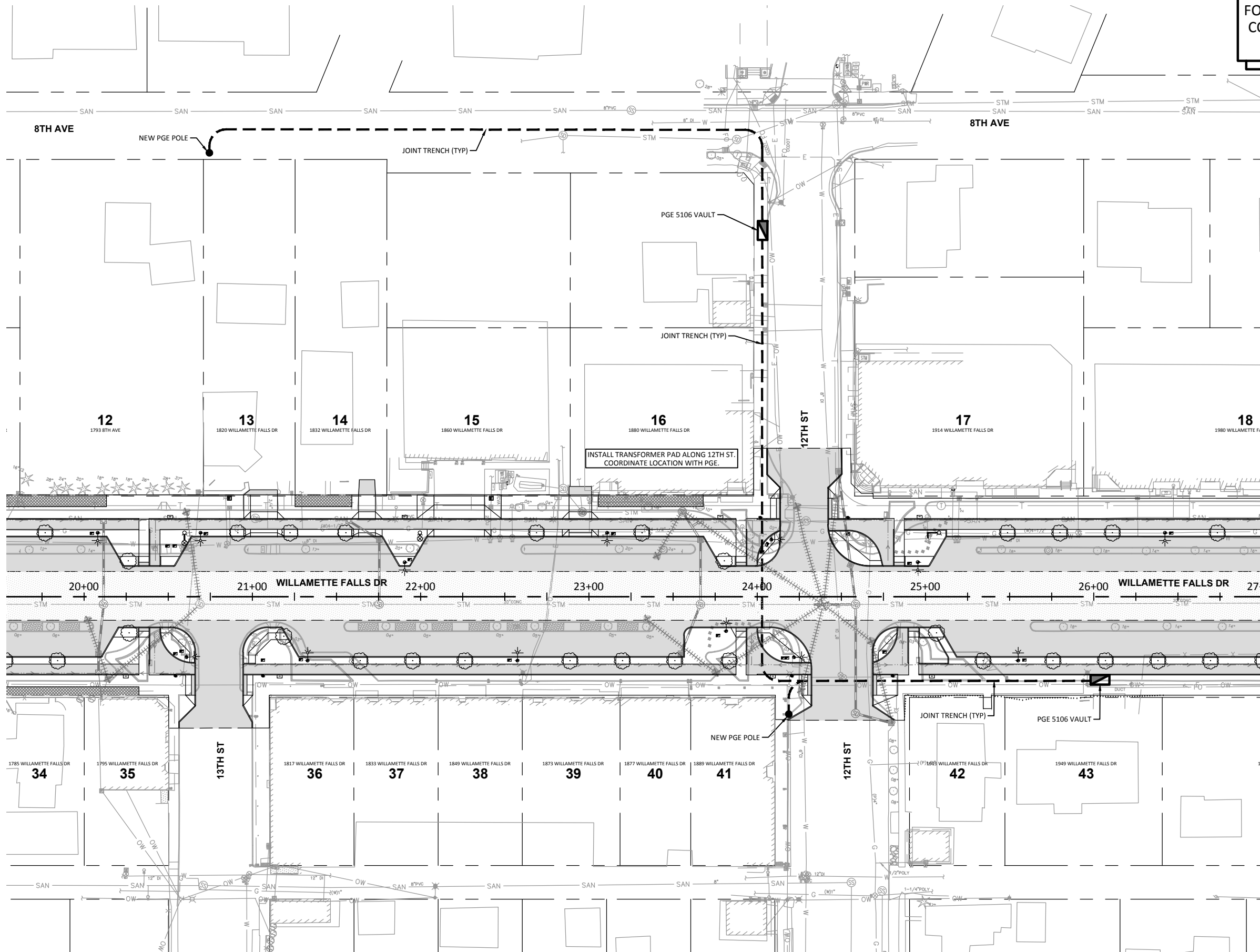
CALC. BOOK NO.	N/A	BASELINE REPORT DATE	01-JAN-2019
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
OREGON STANDARD DRAWINGS			
TEMPORARY PEDESTRIAN ACCESS ROUTING			
2018			
DATE	REVISION	DESCRIPTION	
01-2019	REVISED	NOTES	

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Effective Date: December 1, 2019 - May 31, 2020




TM844

DRAWING NAME: CWL02-UR-UTILITY RELOCATION PLAN.DWG



FOR SIZE AND NUMBER OF UTILITY CONDUITS IN JOINT TRENCH - SEE FRANCHISE UTILITY PLANS

SYMBOLS

-  PROPOSED UTILITY LINE
-  UTILITY VAULT - 5106
-  PROPOSED UTILITY POLE

SURFACE RESTORATION FOR JOINT TRENCH BEYOND LIMITS OF FULL DEPTH ROADWAY SECTION IS INCIDENTAL TO WORK BEING PERFORMED.

PLAN VIEW

UTILITY RELOCATION
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

Harper Houf Peterson
Righellis Inc.

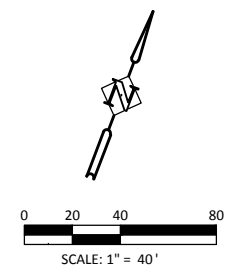
ENGINEERS & PLANNERS
LANDSCAPE ARCHITECTS & SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171



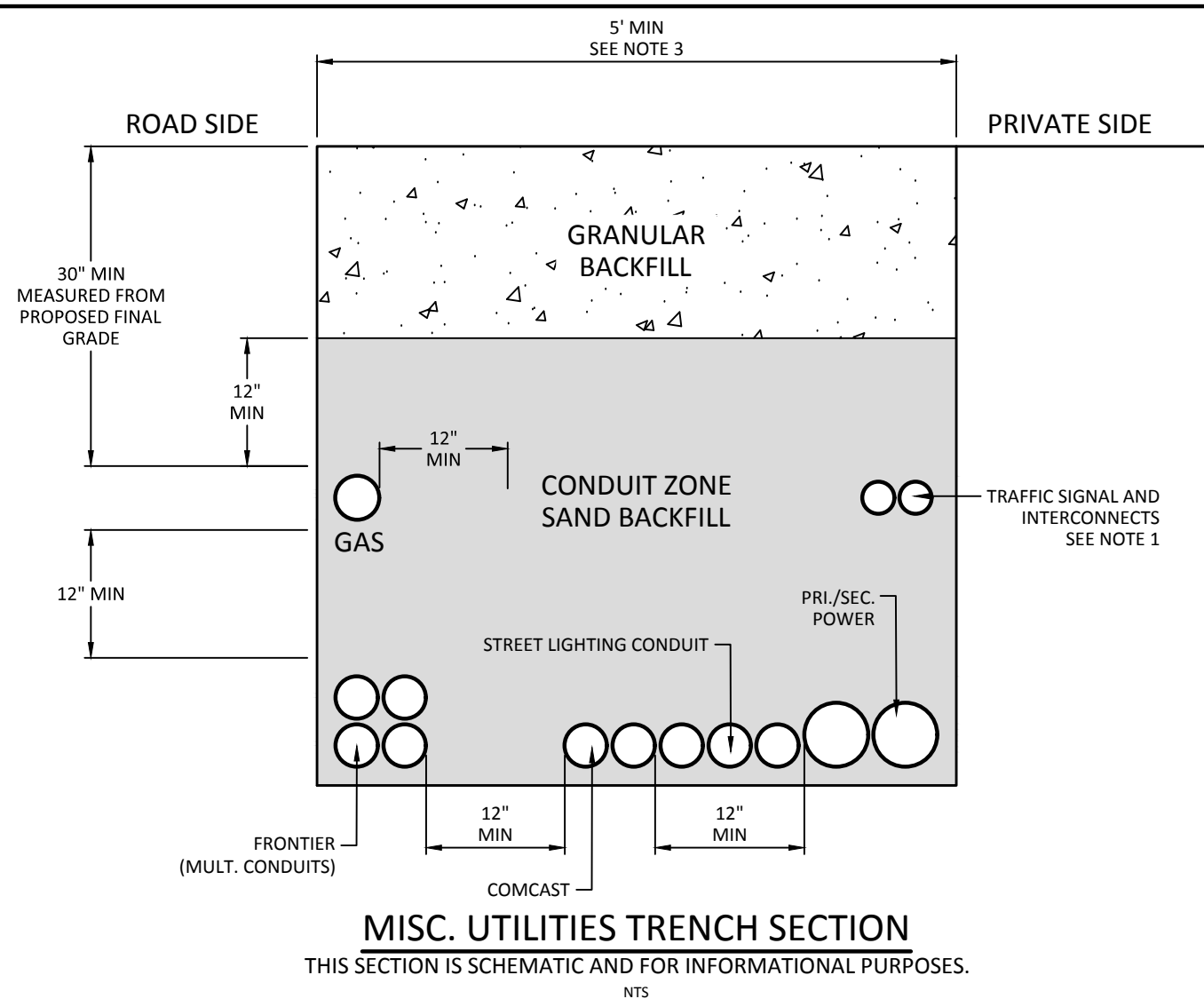
REGISTERED PROFESSIONAL ENGINEER
70,863
Benjamin R. Austin
OREGON
JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	UR01
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

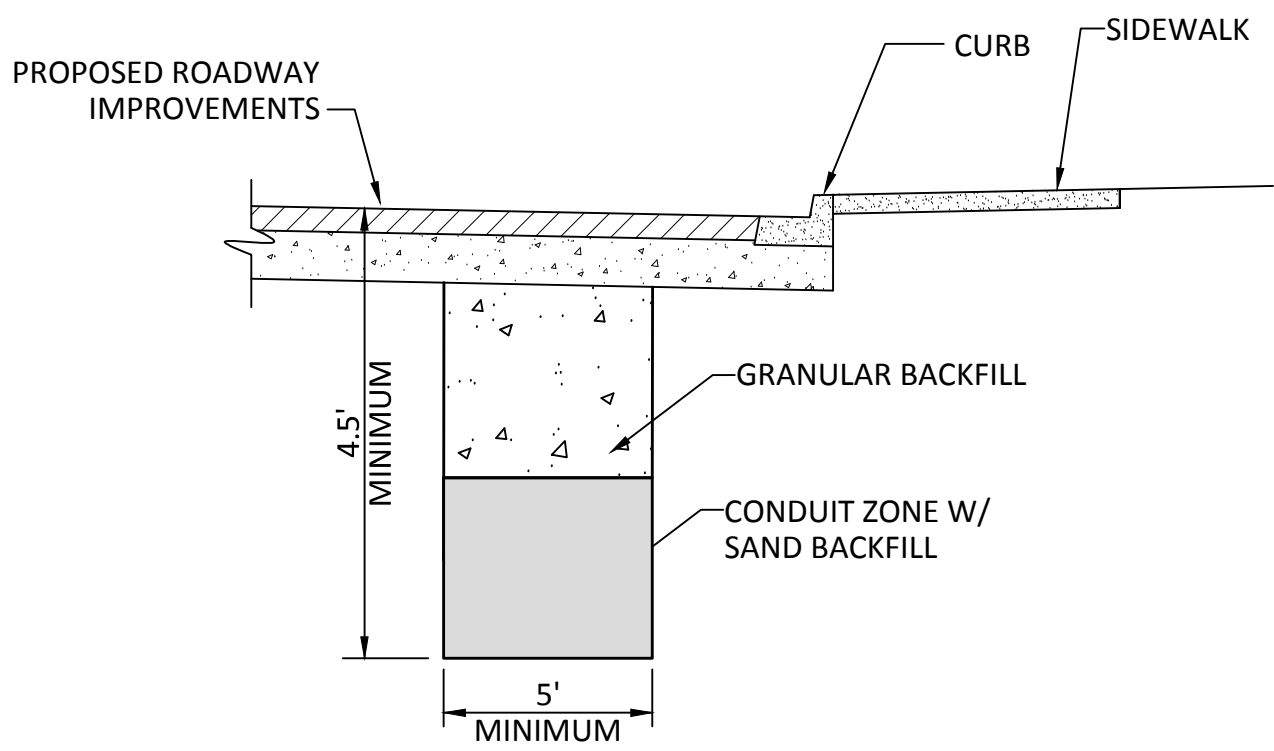


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- NOTES:**
1. TRAFFIC SIGNAL AND INTERCONNECT CONDUITS SHOULD HAVE A MINIMUM COVER OF 3' AT ROADWAY CROSSINGS AND 2' UNDER SIDEWALKS.
 2. ALL CONDUITS NEED TO MAINTAIN THE REQUIRED SEPARATION FROM GAS LINES.
 3. PHONE AND CABLE WILL HAVE MULTIPLE CONDUITS WHICH MAY AFFECT TRENCH WIDTH
 4. MAINTAIN 12" HORIZONTAL AND VERTICAL CLEARANCE BETWEEN GAS AND OTHER CONDUIT.

BACKFILL NOTE:
NATIVE BACKFILL ABOVE CONDUIT ZONE MAY BE USED ONLY IN AREAS WHERE ENTIRE TRENCH IS OUTSIDE OF SIDEWALK AND ROADWAY AREA. USE OF NATIVE BACKFILL MUST BE APPROVED BY ENGINEER.



- GENERAL NOTES:**
- THE LOCATIONS OF THE JOINT TRENCHES, UTILITY VAULTS, AND PEDESTALS SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE FOR INFORMATIONAL PURPOSES ONLY. LOCATIONS MAY VARY IN FIELD TO AVOID EXISTING UTILITIES, TREES, AND OTHER PHYSICAL FEATURES. NOT ALL TRENCHING NEEDED FOR CONDUIT, UTILITY VAULT, AND PEDESTAL INSTALLATIONS ARE REPRESENTED ON THESE SCHEMATIC DRAWINGS.
- THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATIONS OF THE JOINT TRENCHES, AND THE EXACT NUMBER AND SIZES OF CONDUIT TO BE INSTALLED, WITH THE UTILITY REPRESENTATIVE AND THE UTILITY DESIGN DRAWINGS PREPARED BY THE APPROPRIATE UTILITY. THE JOINT TRENCH SHALL ACCOMMODATE ALL FRANCHISE UTILITIES (IE: POWER, TELEPHONE, GAS, CABLE TV). AS SHOWN ON THE APPROVED PLAN FROM EACH UTILITY.
- JOINT TRENCHES SHALL BE MADE TO ACCOMMODATE MINIMUM RADIUS NEEDED FOR CONDUIT INSTALLATION. THE MINIMUM RADIUS ARE NOT REPRESENTED ON THESE SCHEMATIC DRAWINGS. THE CONTRACTOR SHALL VERIFY MINIMUM RADIUS REQUIREMENTS ARE MET PRIOR TO PLACING VAULTS.
- NOT ALL UTILITY VAULTS AND PEDESTALS ARE REPRESENTED ON THESE SCHEMATIC DRAWINGS. THE CONTRACTOR SHALL COORDINATE THE EXACT NUMBER AND LOCATIONS WITH THE UTILITY REPRESENTATIVE AND THE UTILITY DESIGN DRAWINGS PREPARED BY THE APPROPRIATE UTILITY.
- PLANS DO NOT REFLECT STREET LIGHT/INTERCONNECT ONLY TRENCH LOCATIONS.
- FOR PGE OVERHEAD SERVICES: CONTRACTOR TO INSTALL SWEEP AND CONDUIT UP THE POLE. COORDINATE WITH PGE.
- FOR PGE UNDERGROUND SERVICES: CONTRACTOR TO INSTALL NEW CONDUIT PARALLEL TO EXISTING SERVICE. COORDINATE LOCATION WITH PGE. PGE WILL INTERCEPT EXISTING CONDUIT AND INSTALL TRANSITION.

UTILITY RELOCATION DETAILS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

Harper Houf Peterson Righellis Inc.
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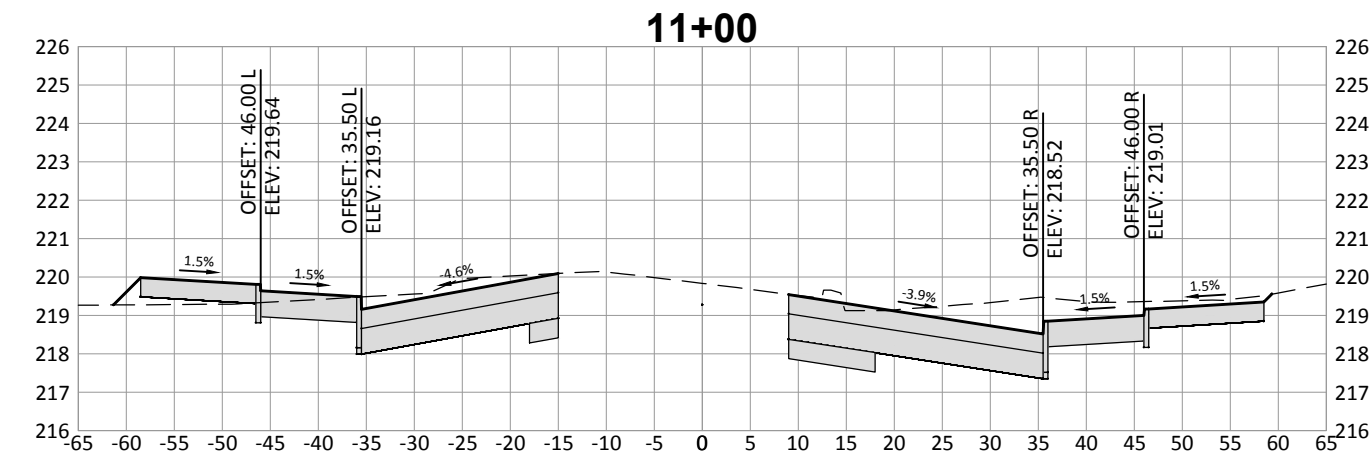
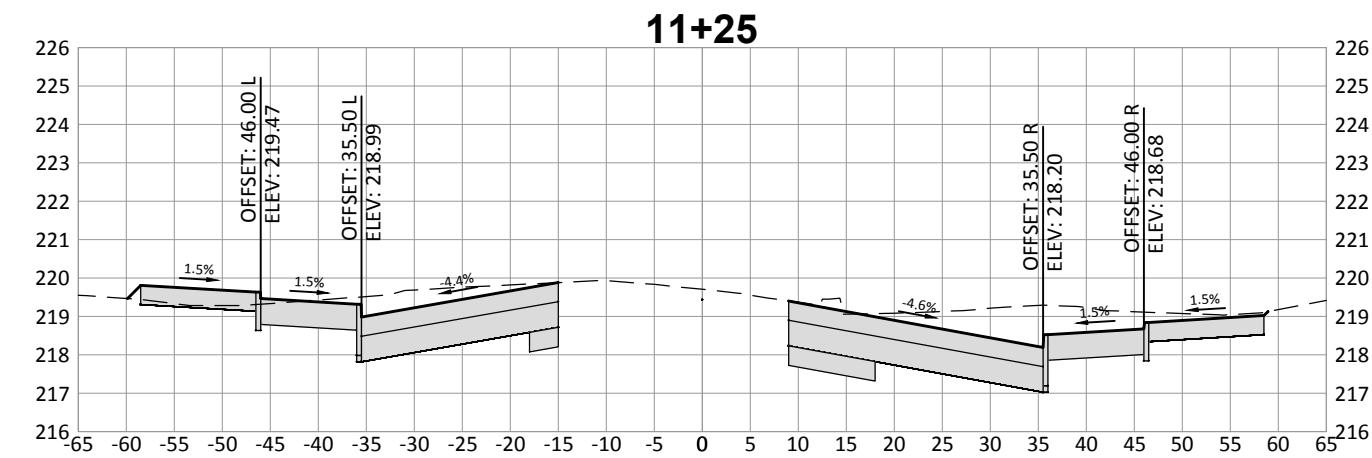
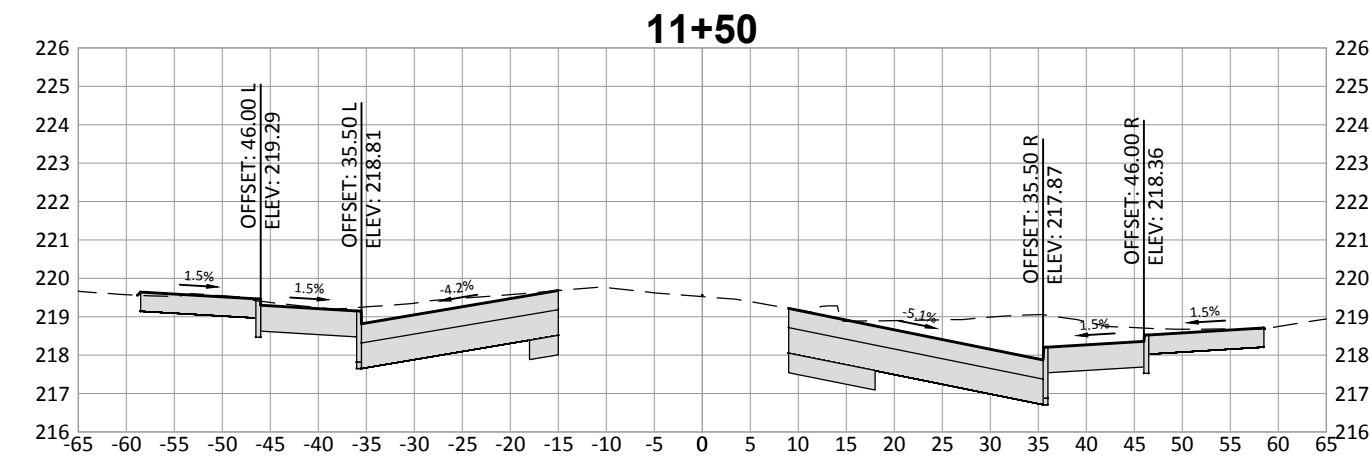
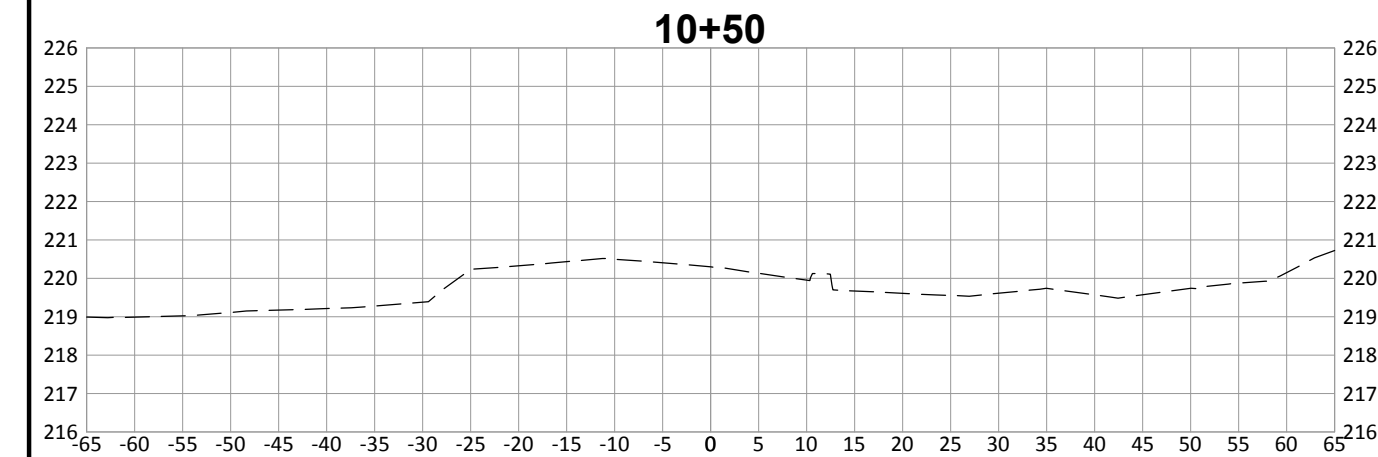
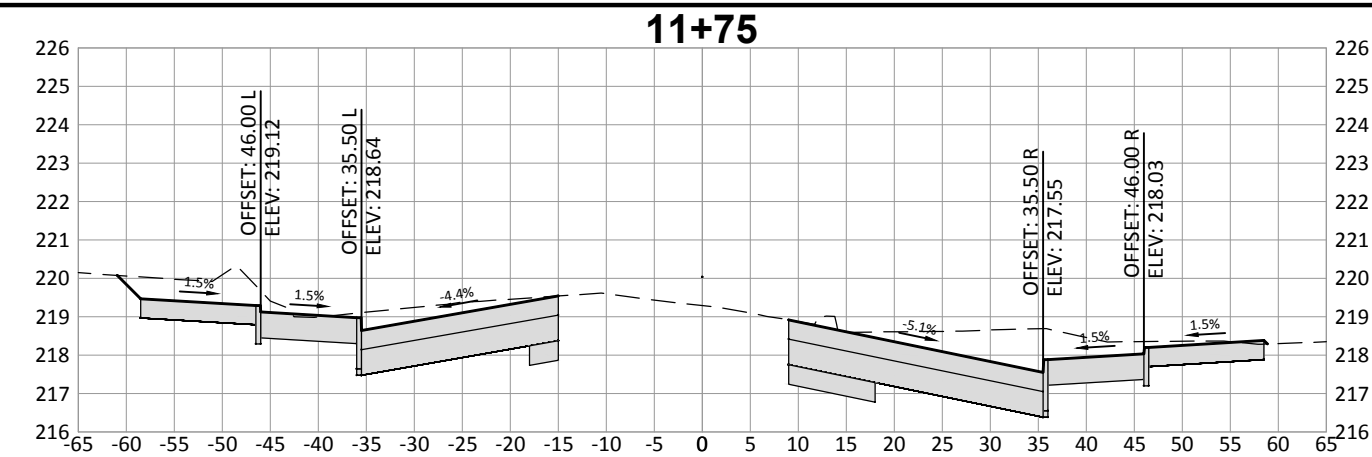
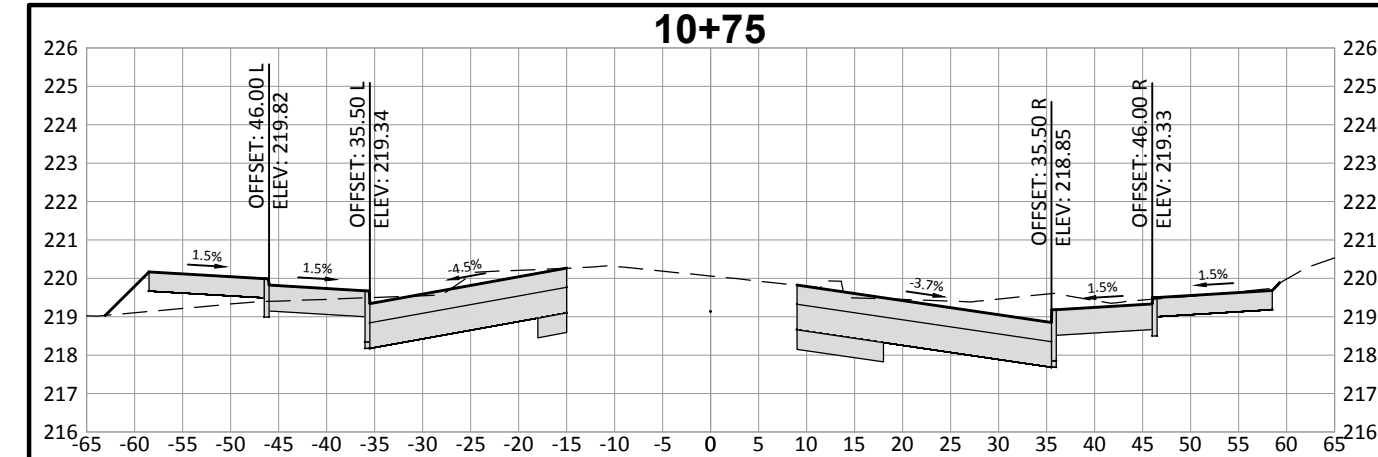
EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	UR02
CHECKED: BRA/JSH	
DATE: 11-1-19	JOB NO. CWL-02

DRAWING NAME: CWL02-UR-UTILITY RELOCATION PLAN.DWG

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DRAWING NAME: CWL02-XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG



WILLAMETTE FALLS DRIVE CROSS SECTIONS

HORIZ SCALE: 1" = 40'
VERT. SCALE: 1" = 10'

WILLAMETTE FALLS CROSS SECTIONS
WILLAMETTE FALLS DRIVE
WEST LINN, OREGON

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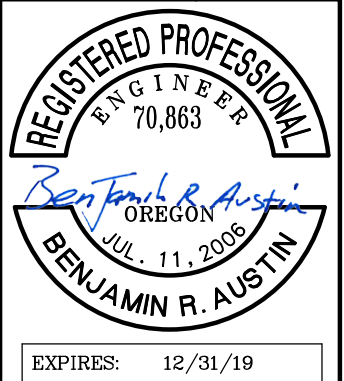


REGISTERED PROFESSIONAL ENGINEER
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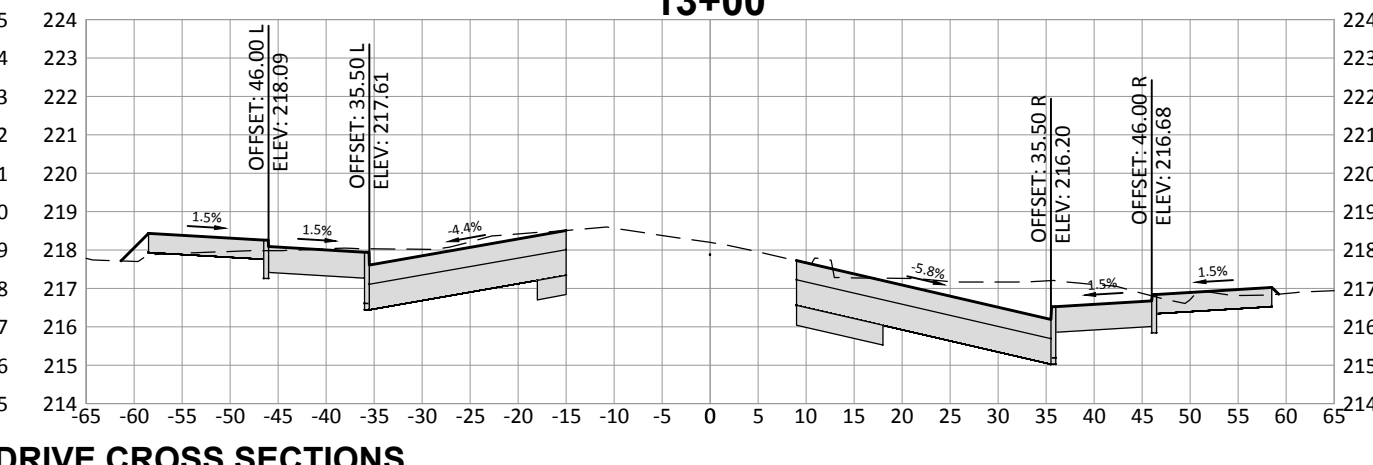
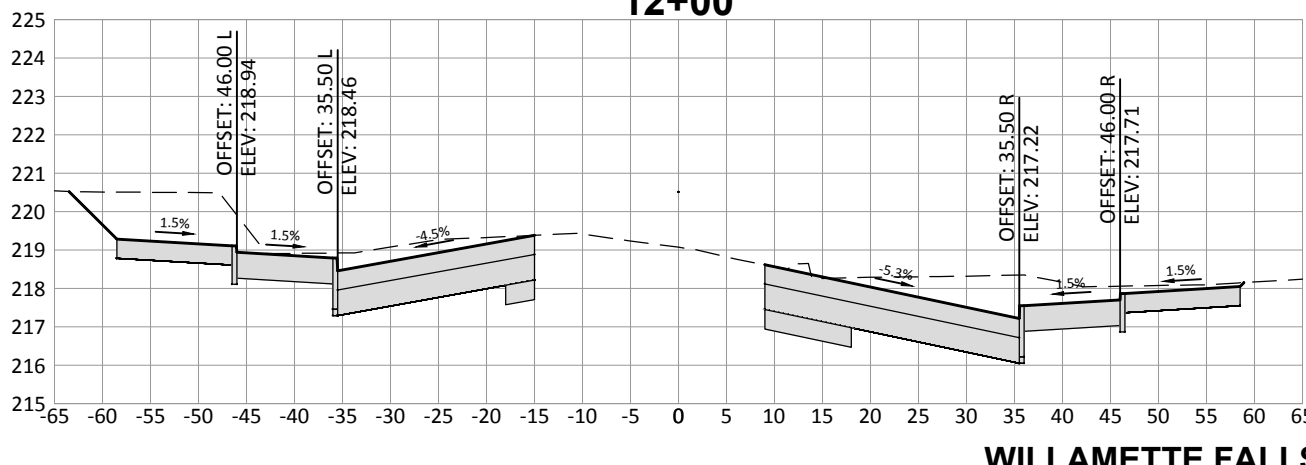
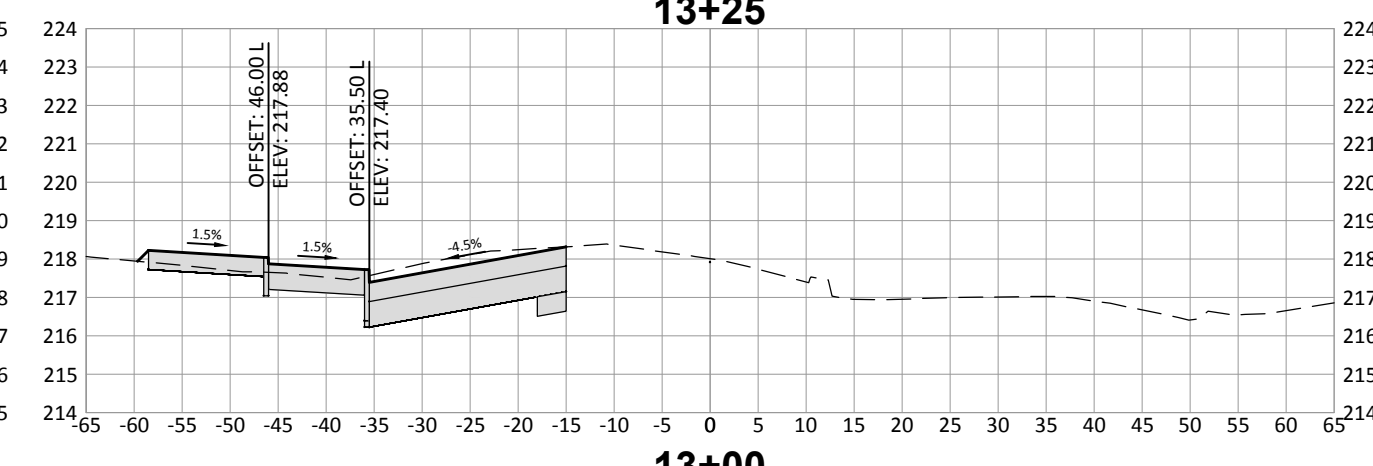
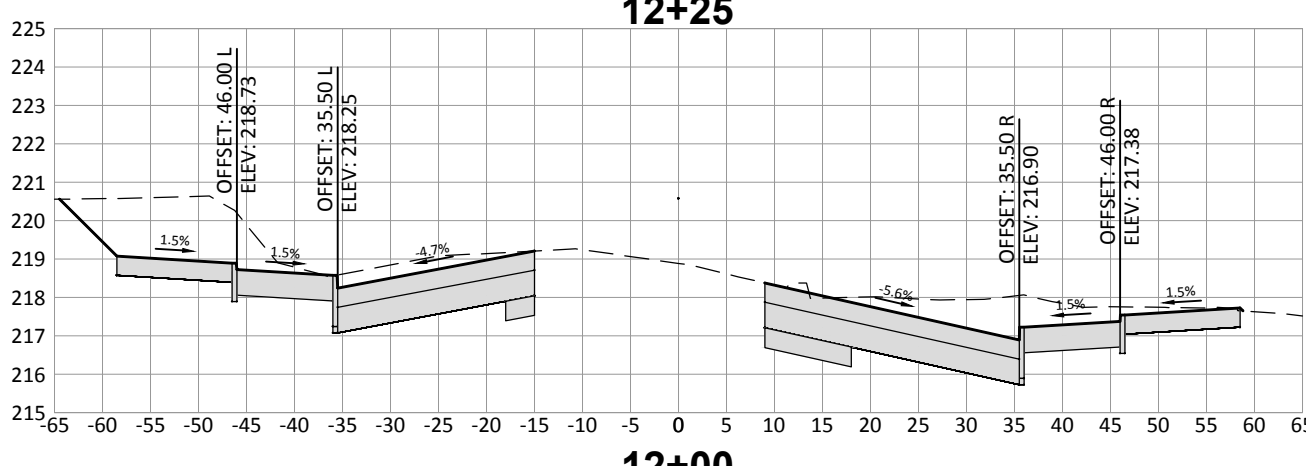
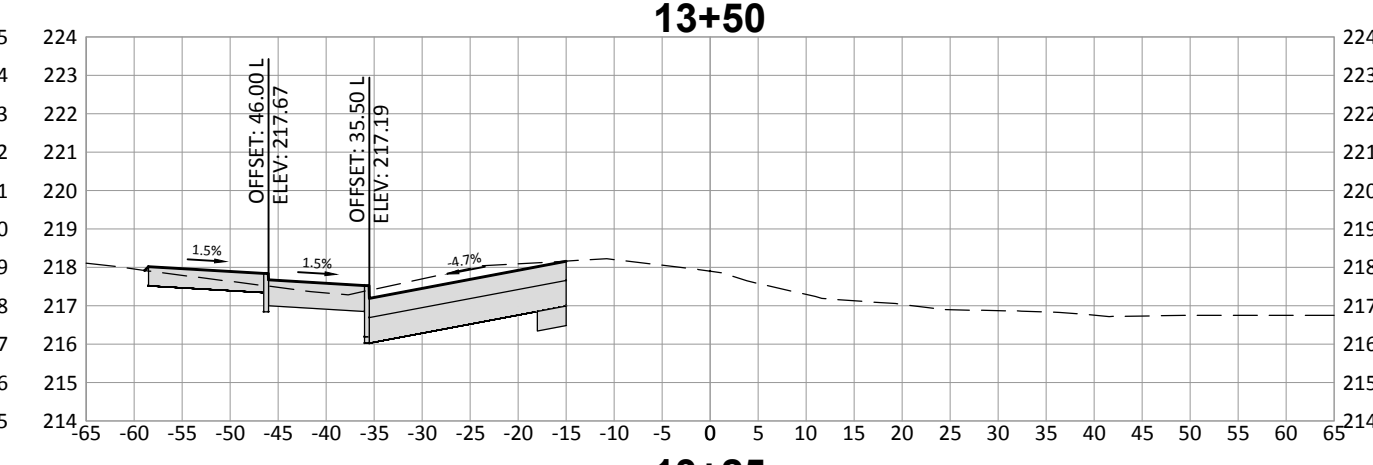
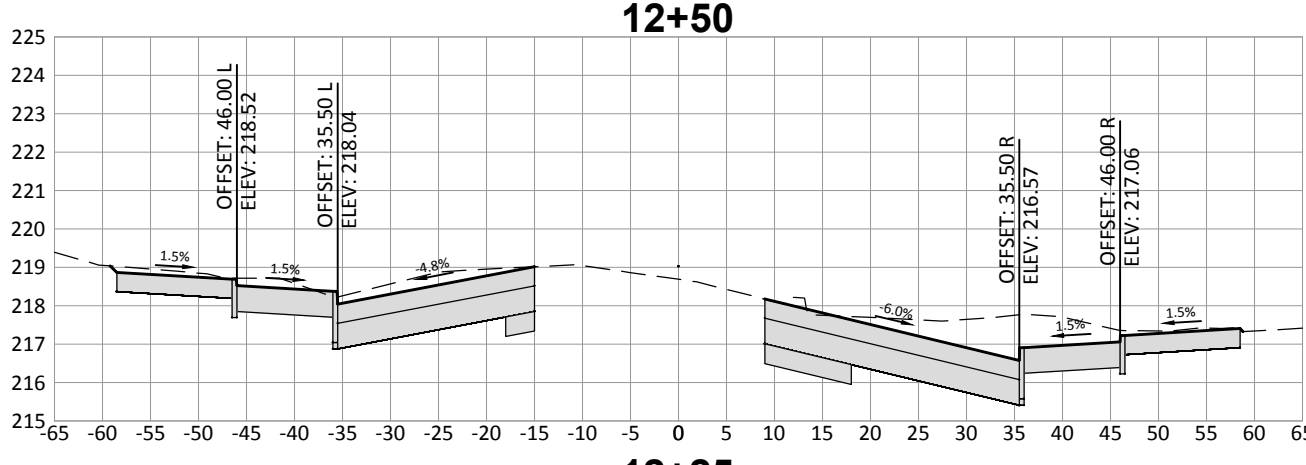
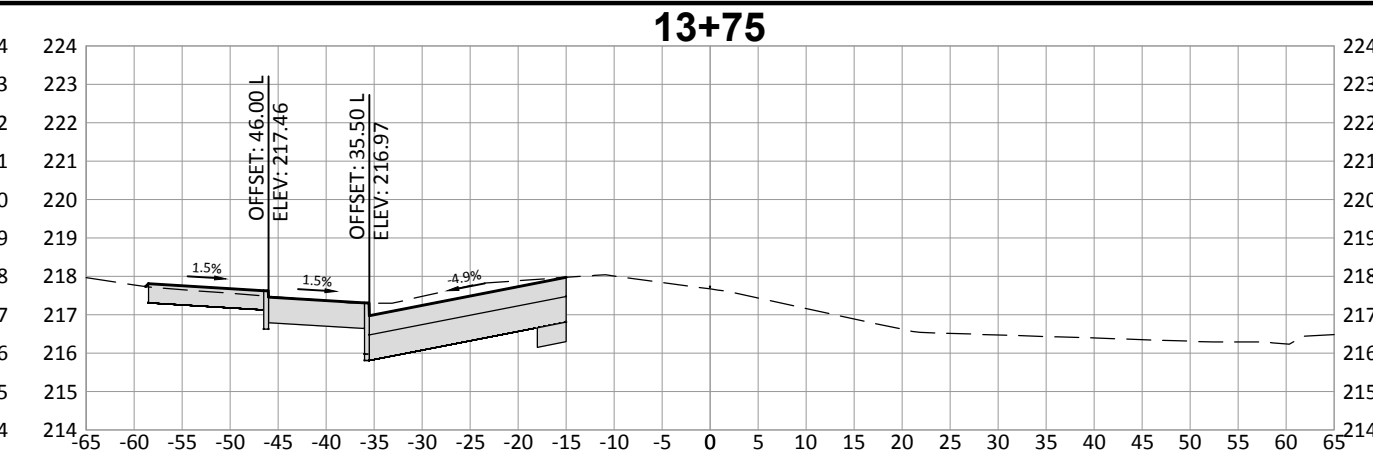
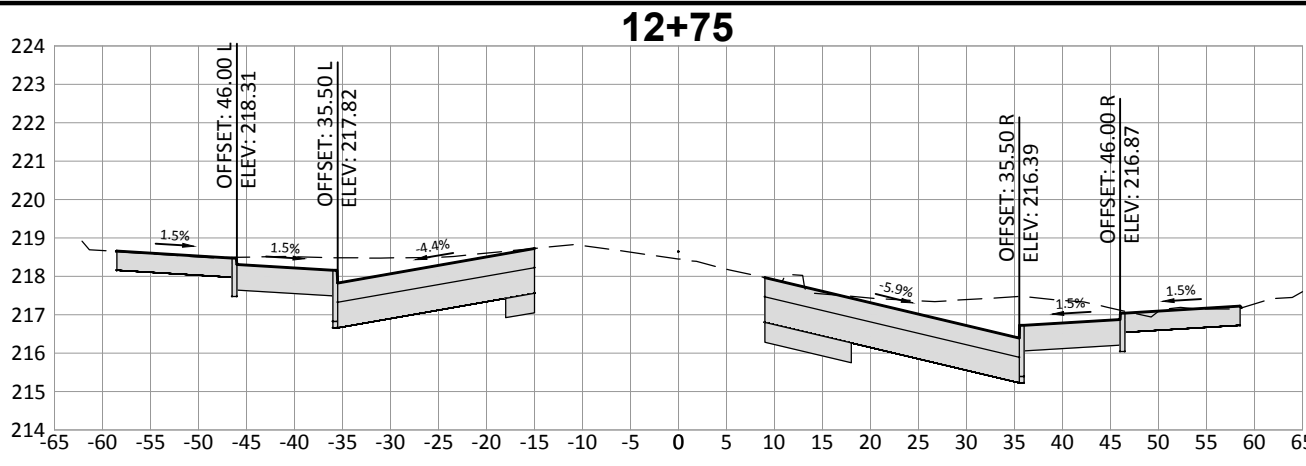
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CHECKED: BRA/JS	
DATE: 11-1-19	JOB NO. CWL-02

WILLAMETTE FALLS CROSS SECTIONS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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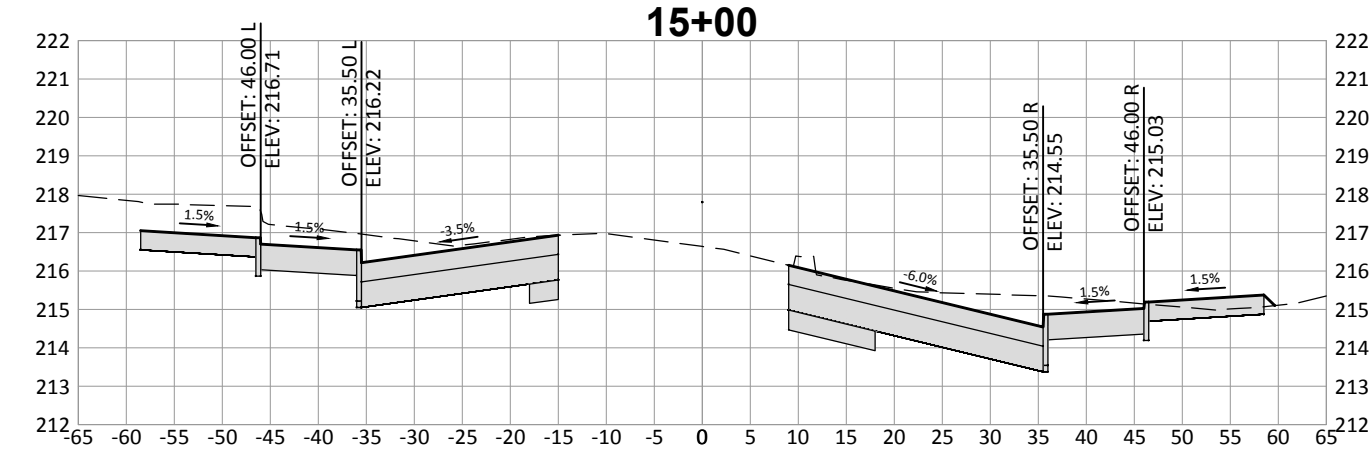
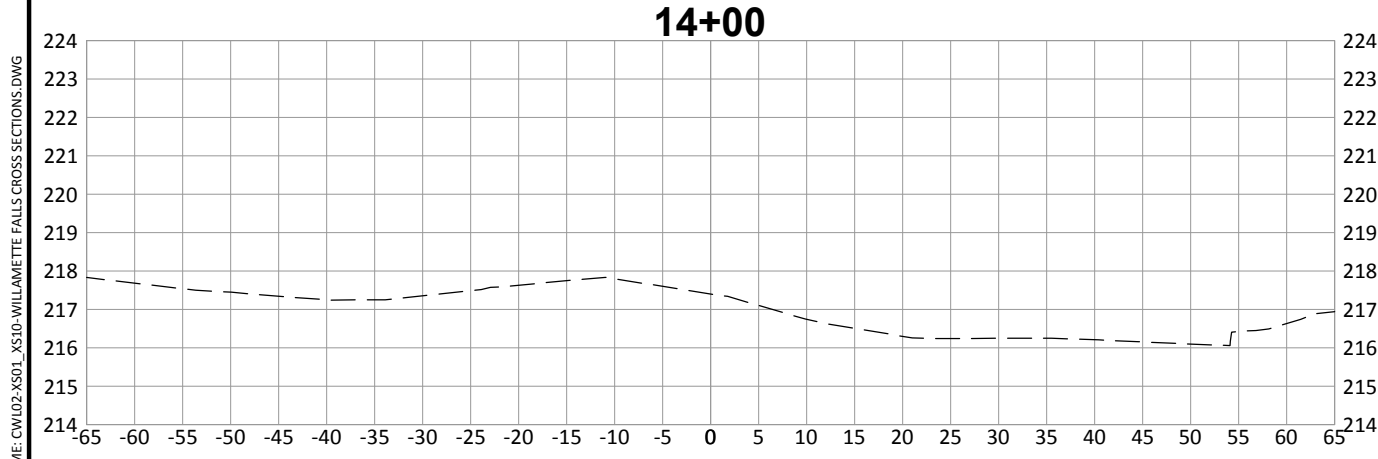
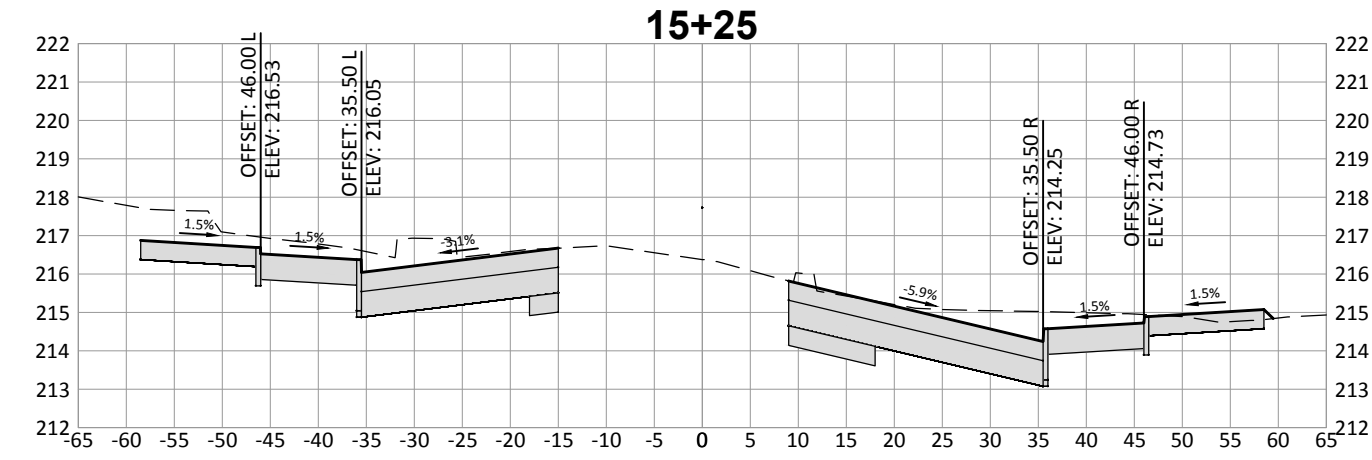
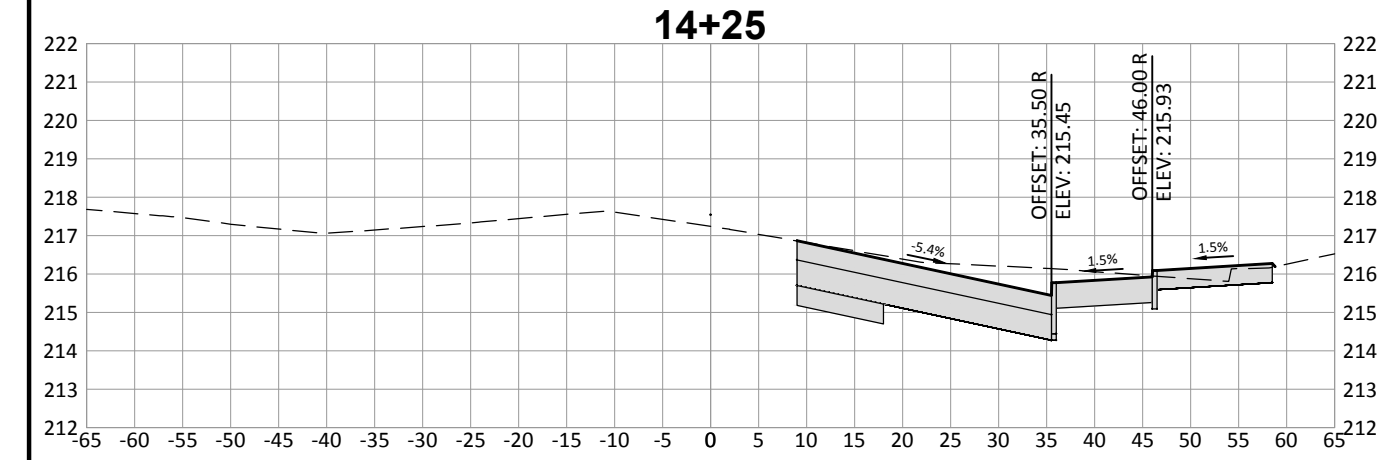
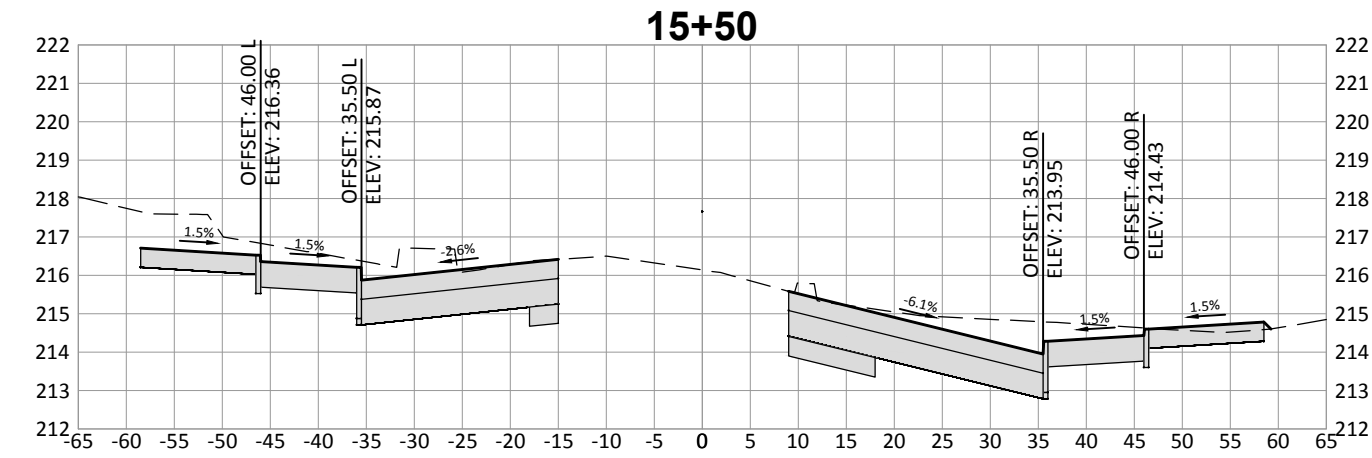
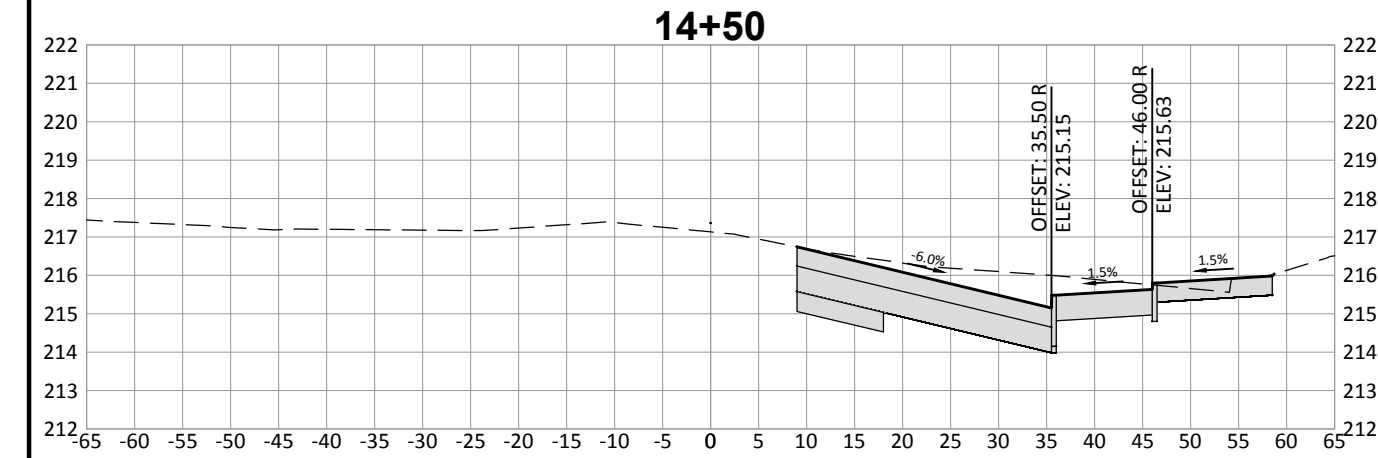
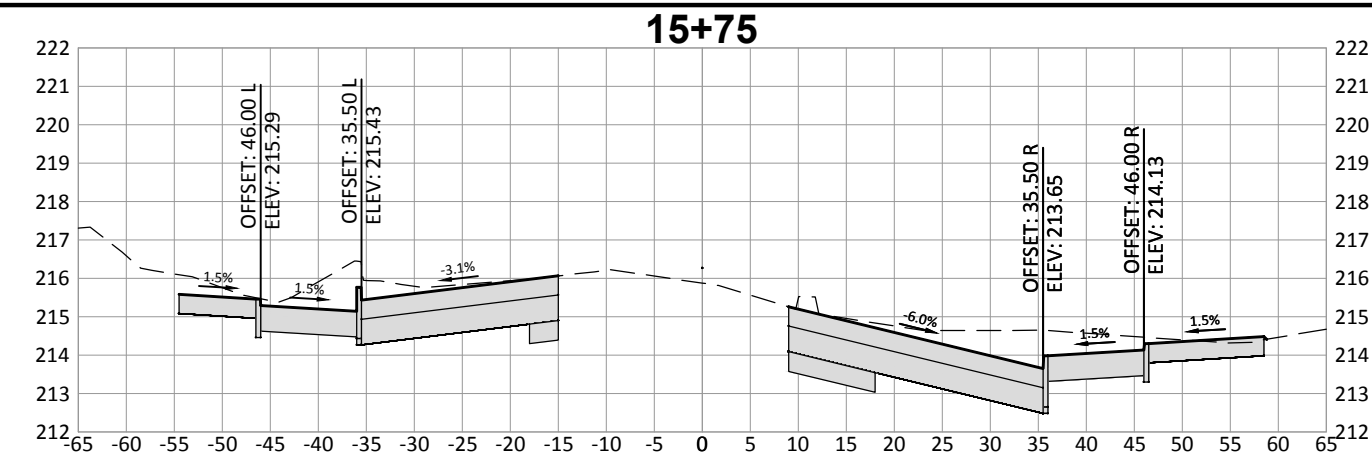
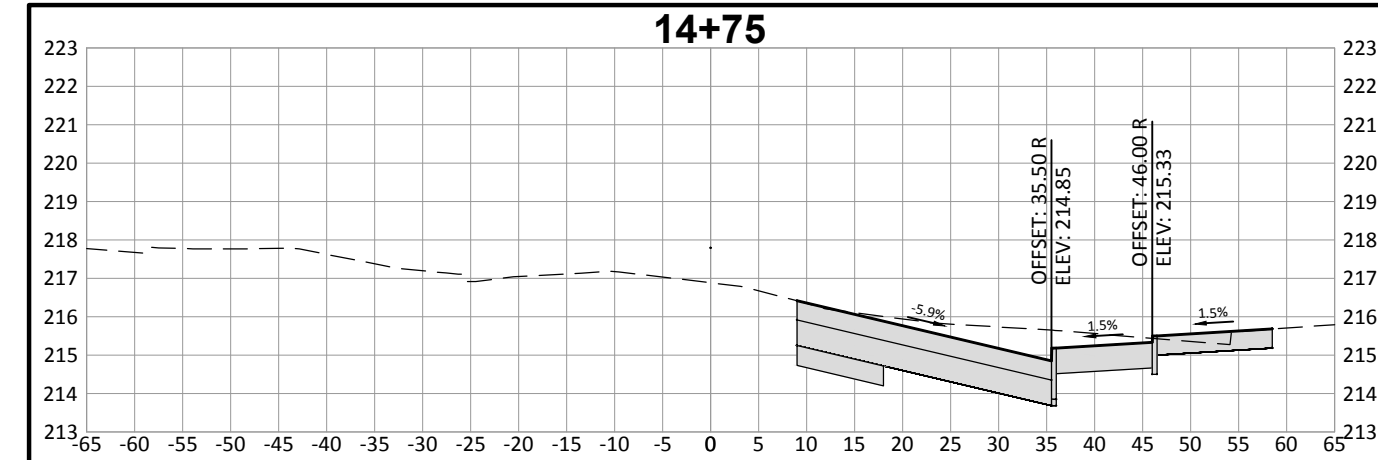
SHEET NO. **XS02**
 DESIGNED: HHPR TEAM
 DRAWN: HHPR TEAM
 CHECKED: BRA/JSH
 JOB NO. CWL-02
 DATE: 11-1-19



WILLAMETTE FALLS DRIVE CROSS SECTIONS
 HORIZ SCALE: 1" = 40'
 VERT. SCALE: 1" = 10'

DRAWING NAME: CWL02-XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG

DRAWING NAME: CWL02-XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG



WILLAMETTE FALLS DRIVE CROSS SECTIONS

HORIZ SCALE: 1" = 40'
VERT. SCALE: 1" = 10'

WILLAMETTE FALLS CROSS SECTIONS
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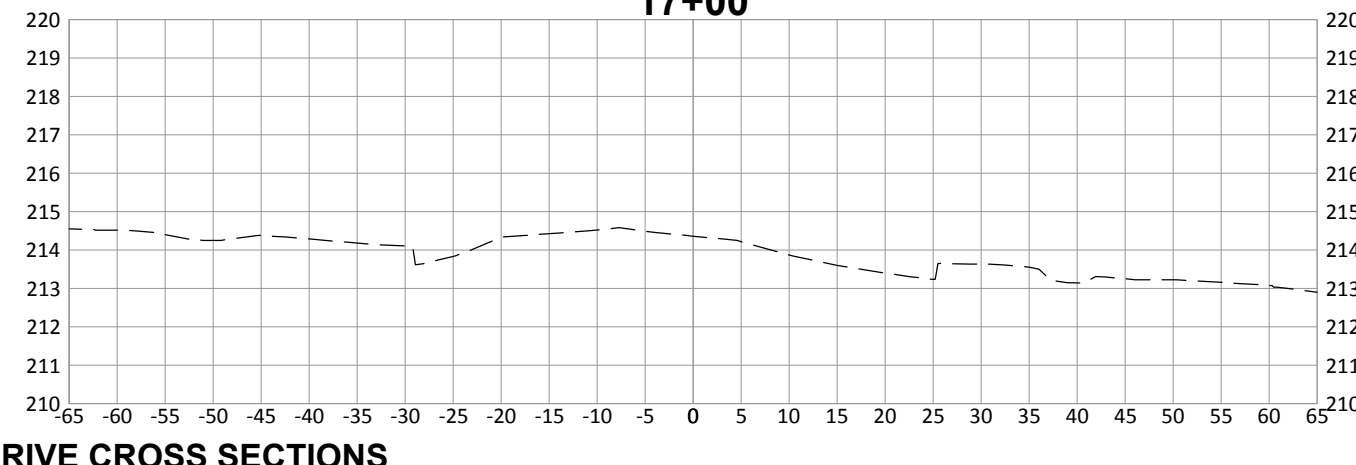
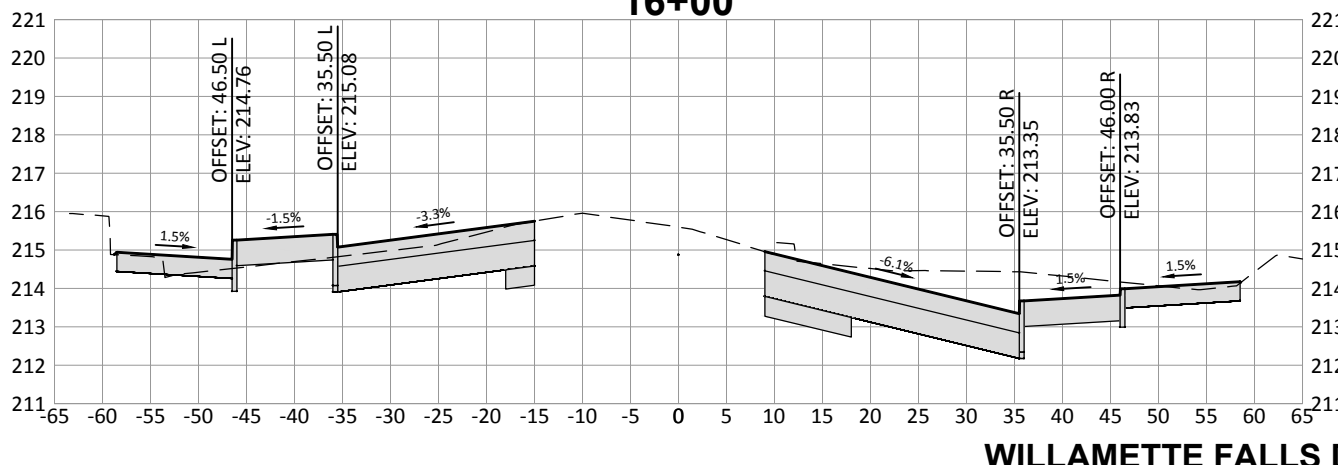
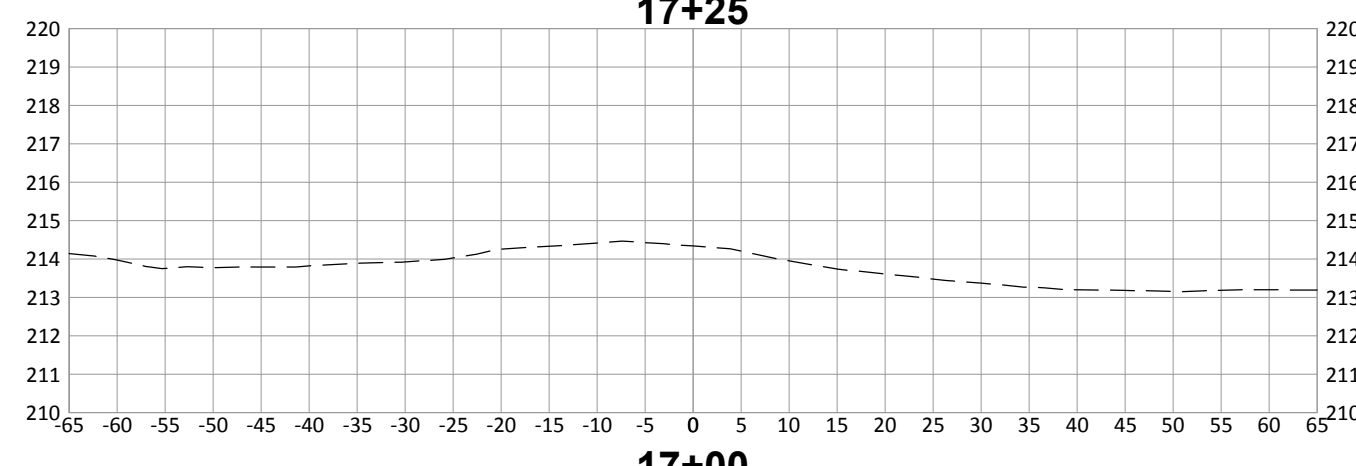
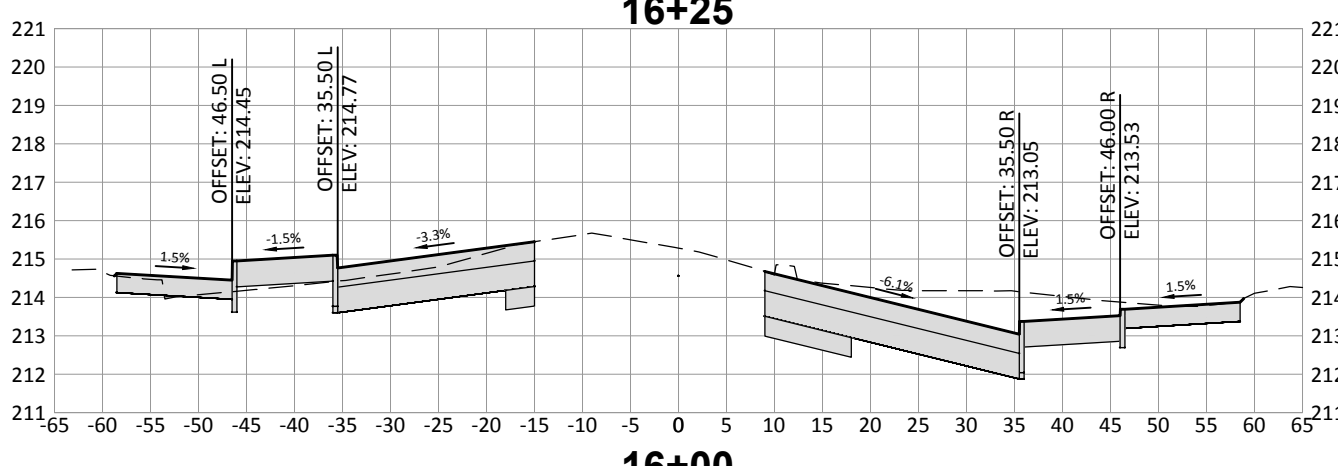
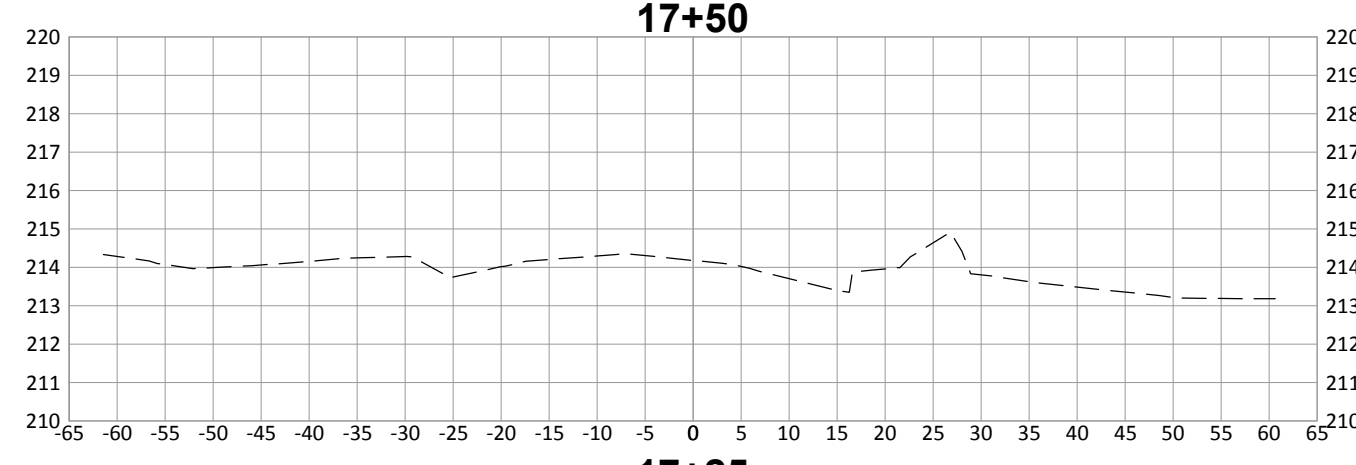
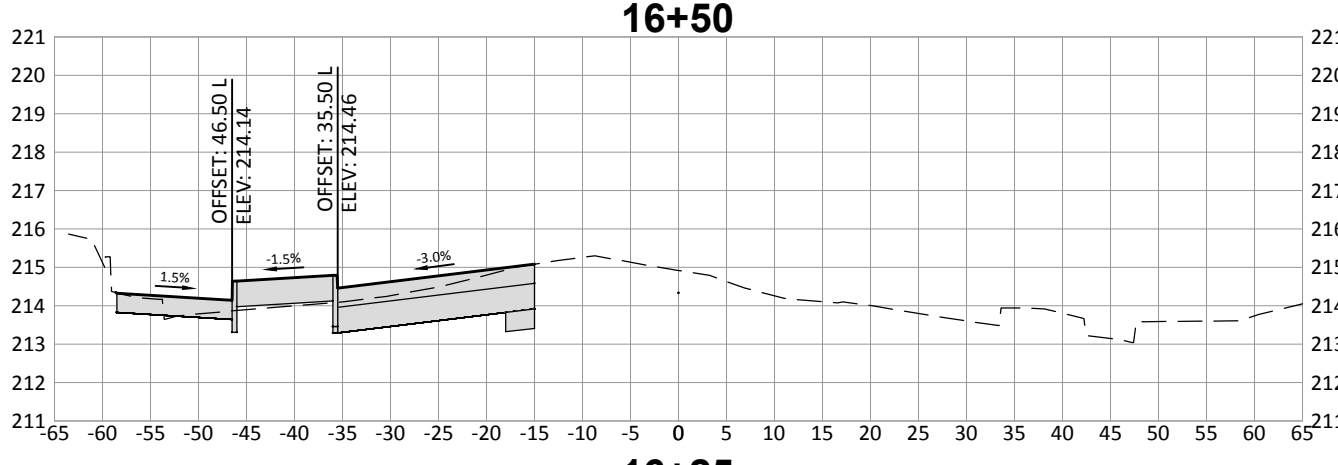
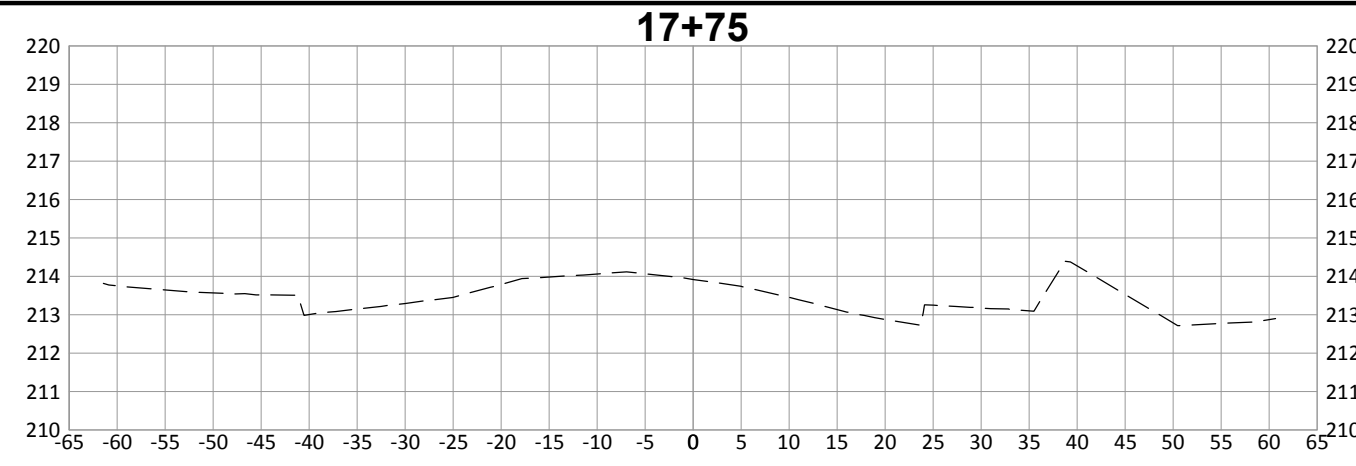
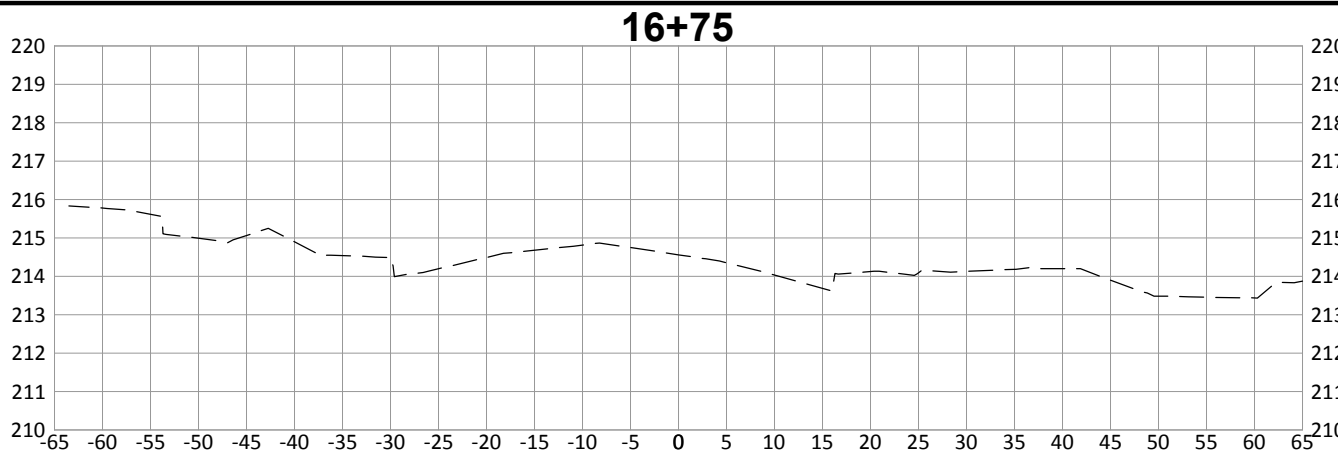
DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	XS03
CHECKED: BRA/JSH	JOB NO.
DATE: 11-1-19	CWL-02

WILLAMETTE FALLS CROSS SECTIONS
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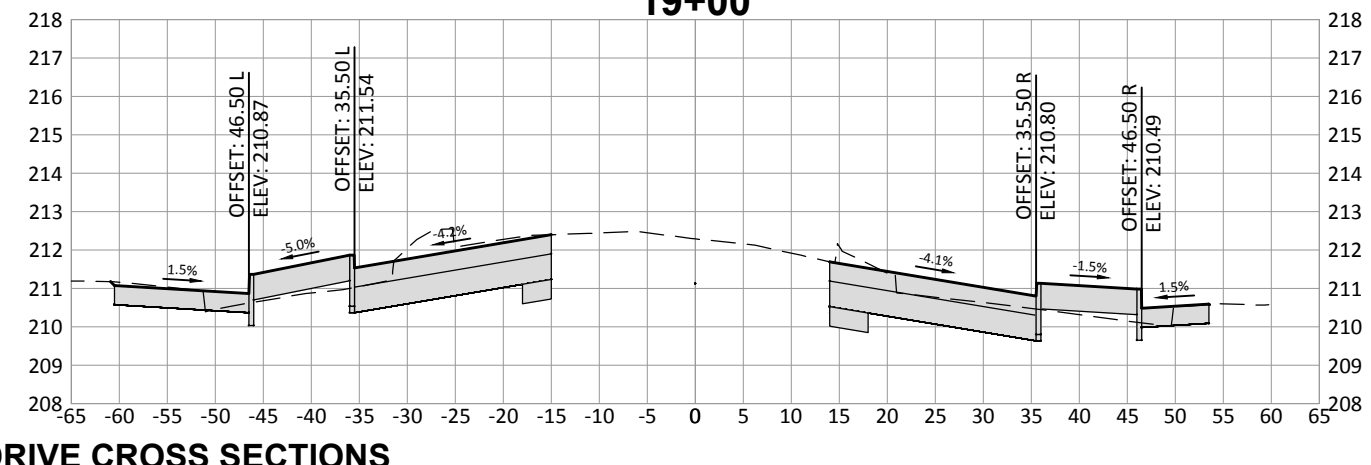
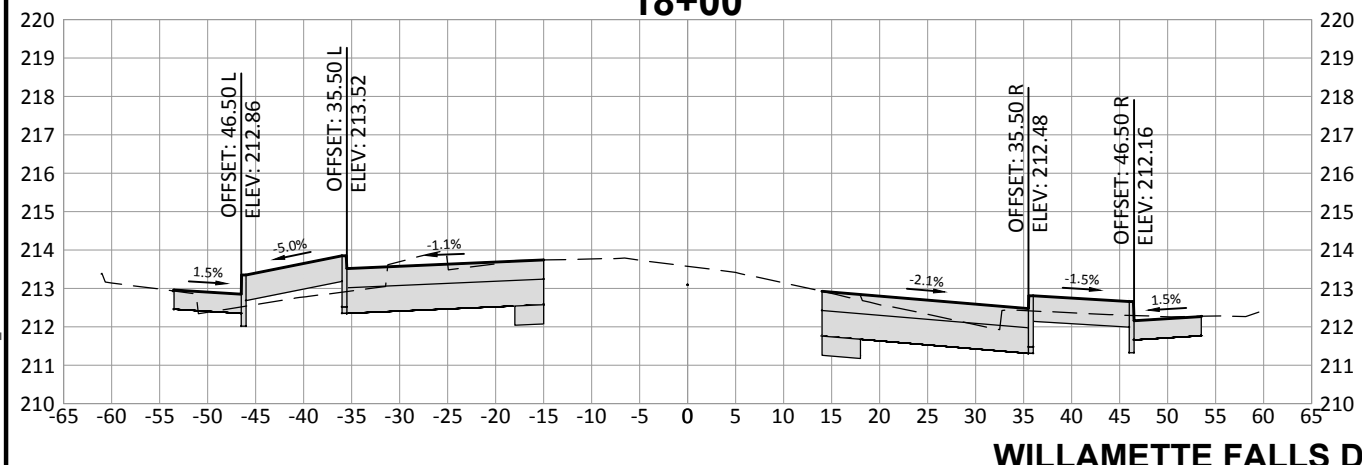
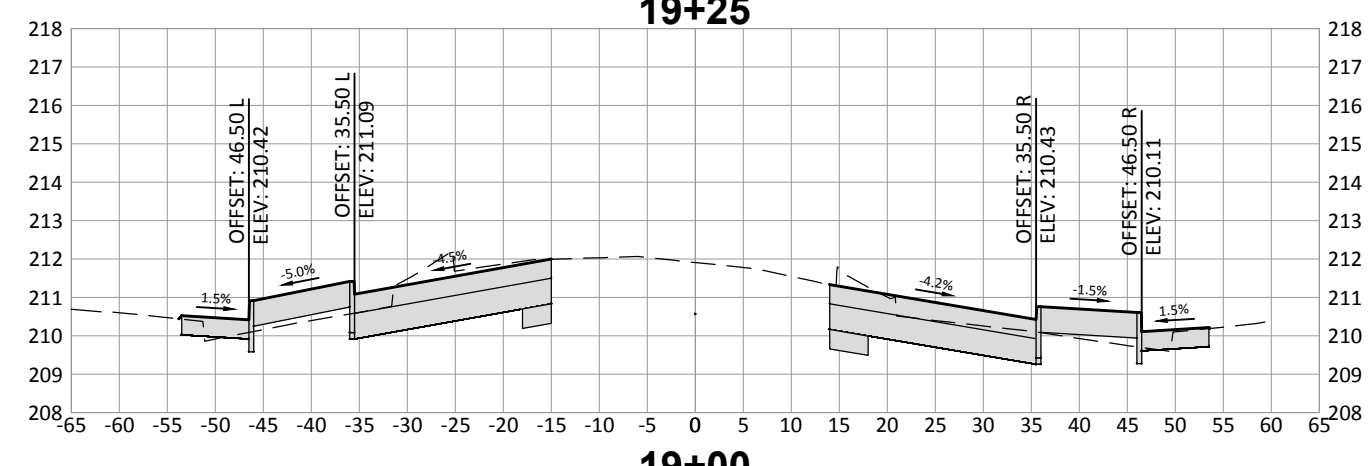
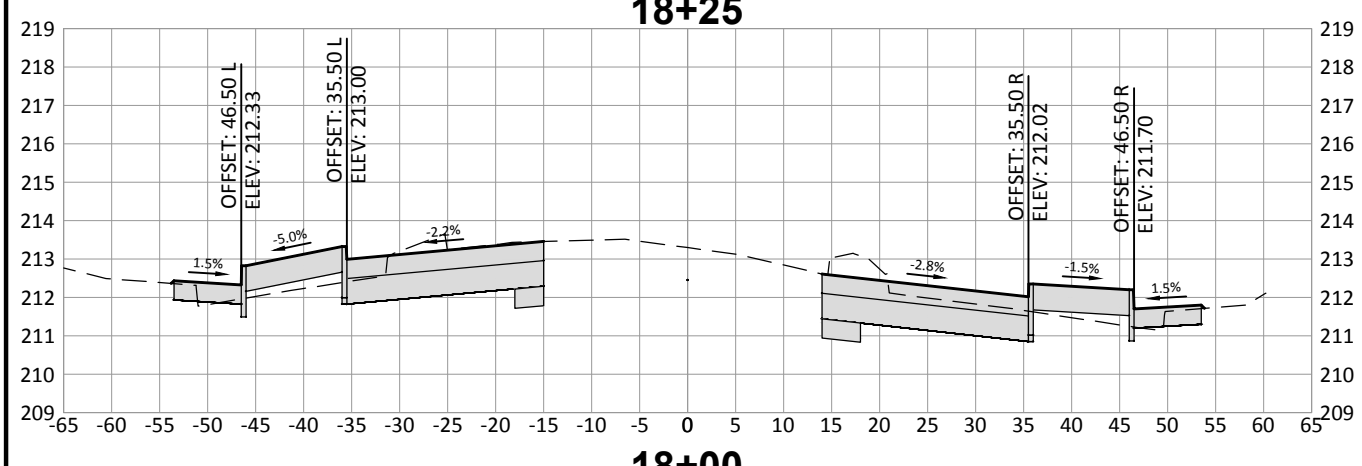
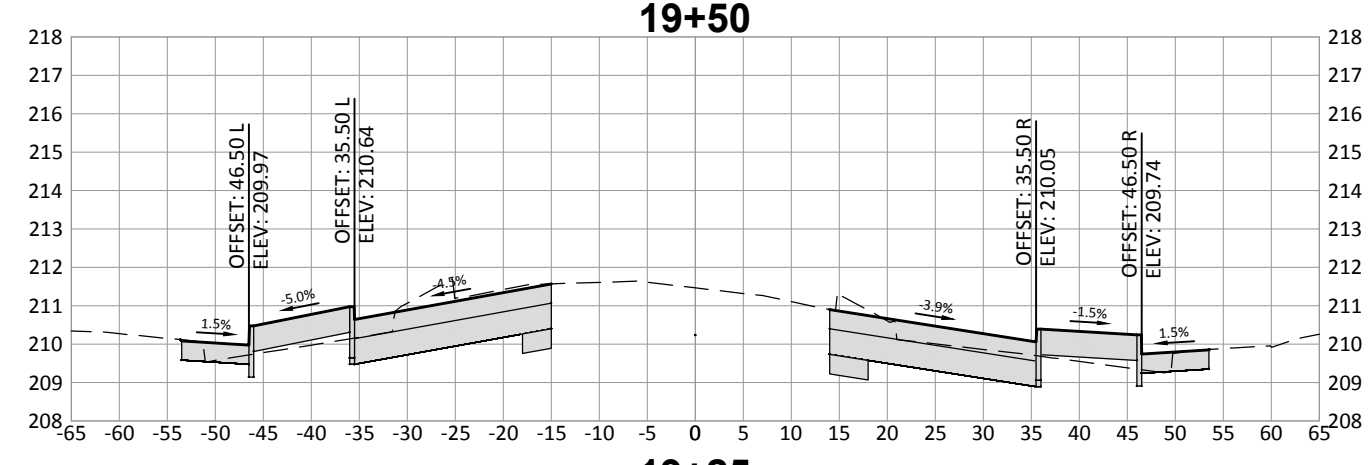
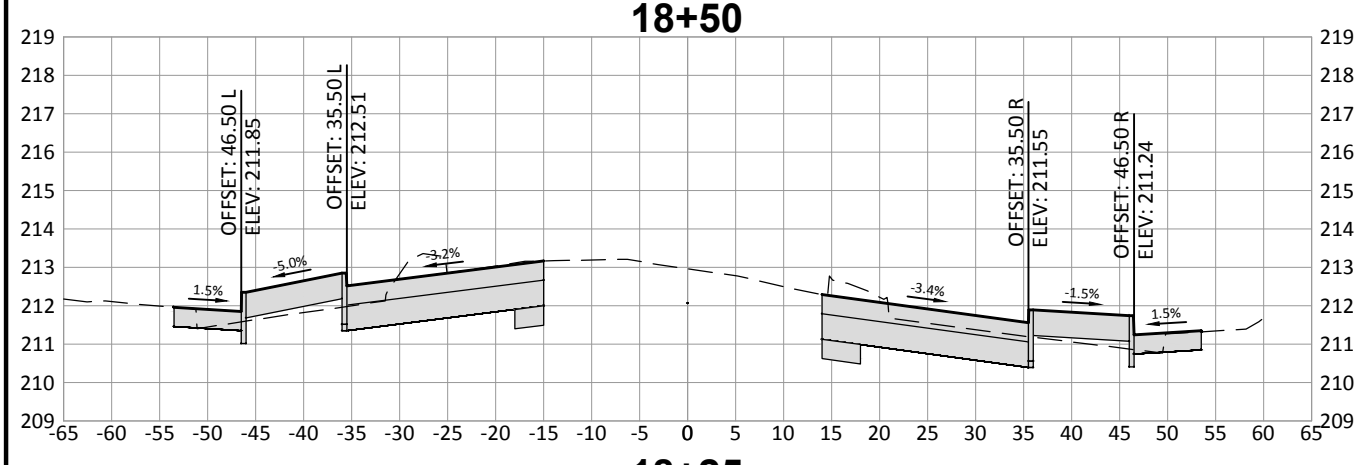
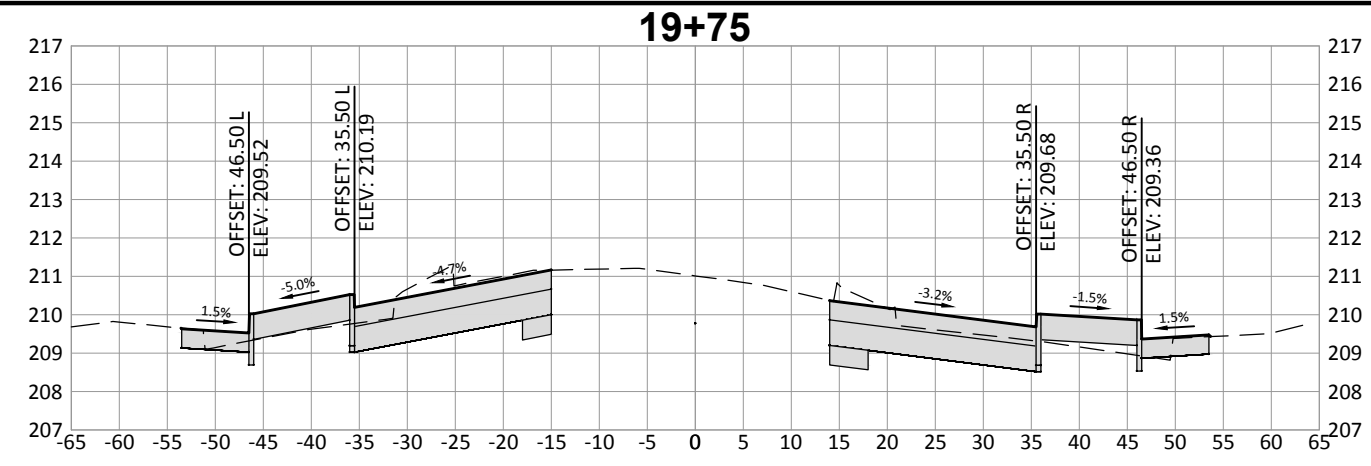
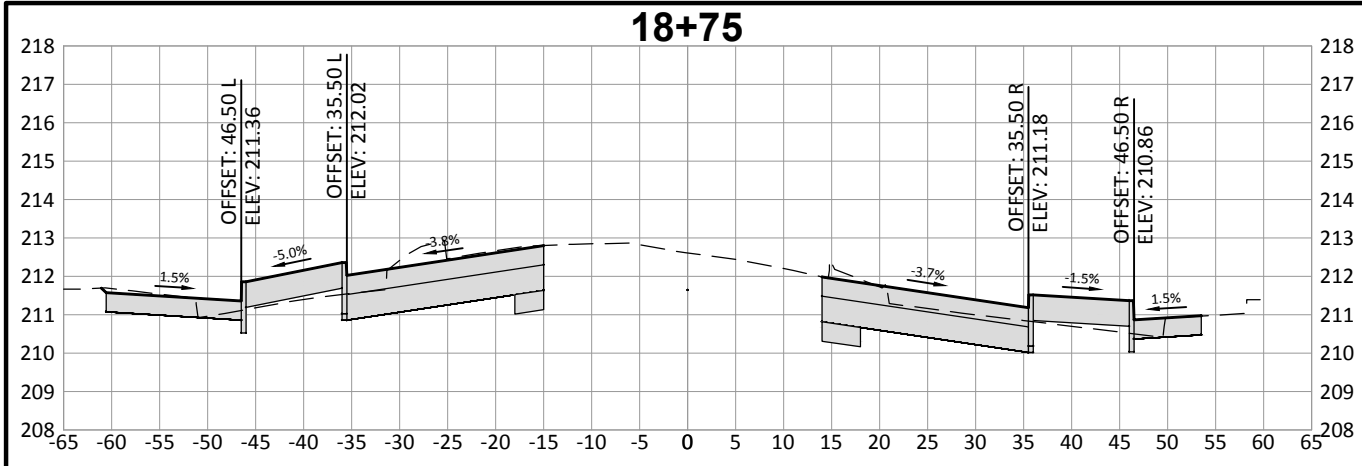
SHEET NO.	DESIGNED:
XS04	HHPR TEAM
	DRAWN:
	HHPR TEAM
JOB NO.	CHECKED:
CWL-02	BRA/JSH
DATE:	11-1-19



WILLAMETTE FALLS DRIVE CROSS SECTIONS
 HORIZ SCALE: 1" = 40'
 VERT. SCALE: 1" = 10'

DRAWING NAME: CWL02-XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG

DRAWING NAME: CWL02.XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG



WILLAMETTE FALLS DRIVE CROSS SECTIONS

HORIZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 10'

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JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM
DRAWN: HHPR TEAM
CHECKED: BRA/USH
DATE: 11-1-19

SHEET NO.
XS05
JOB NO.
CWL-02

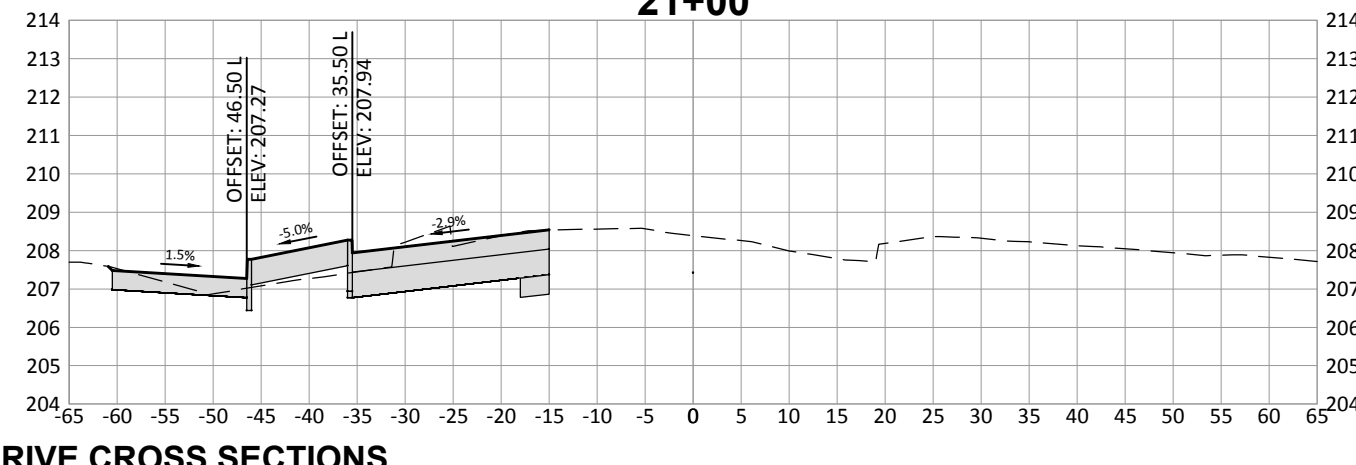
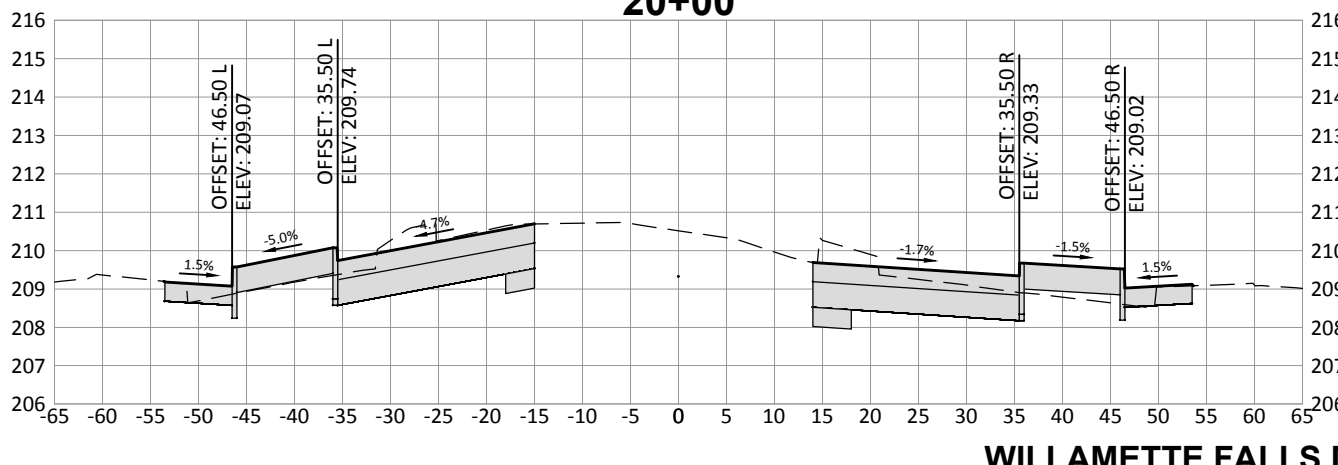
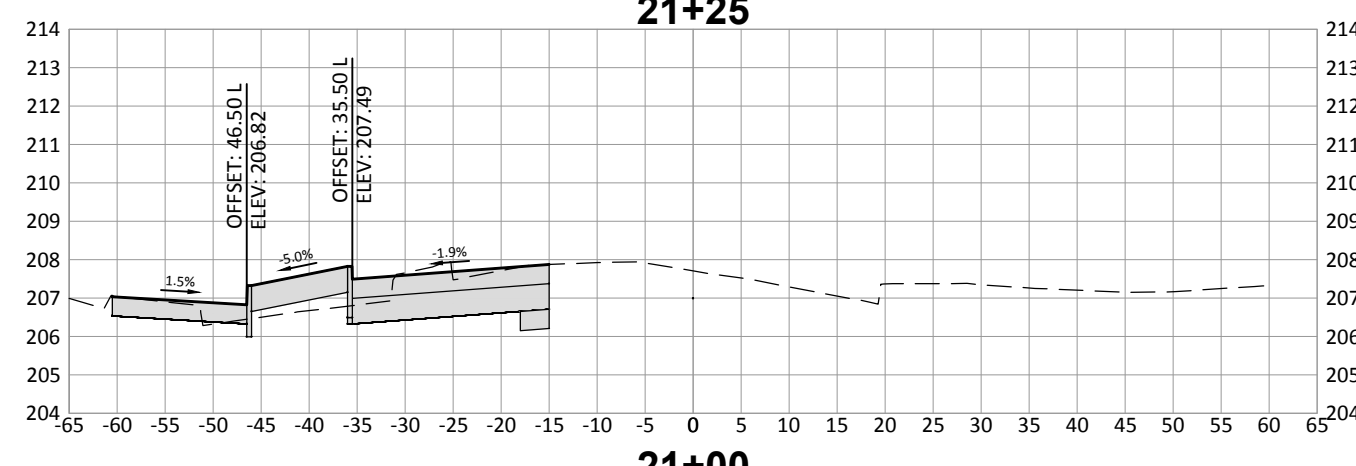
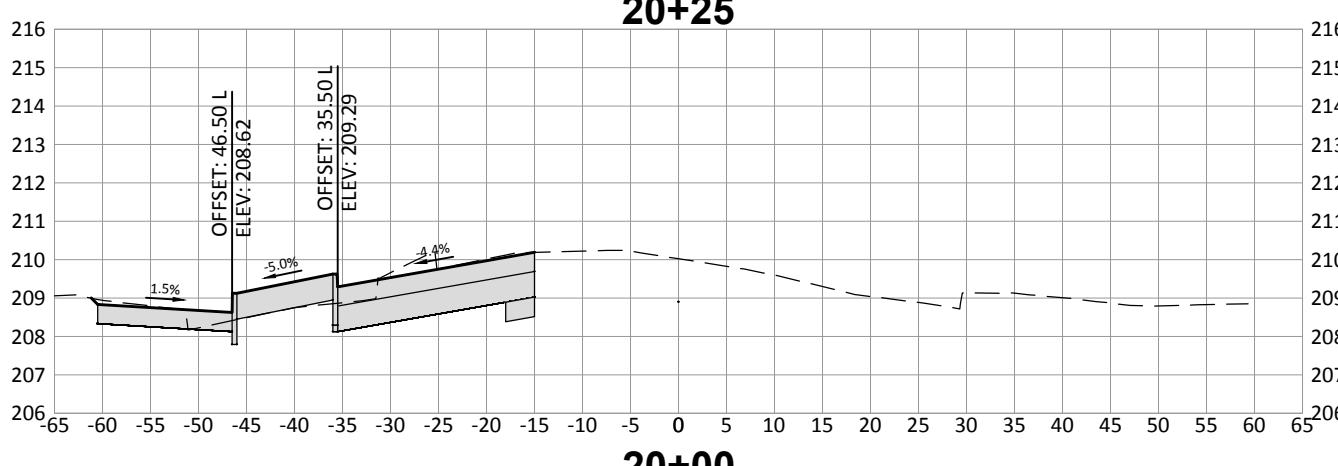
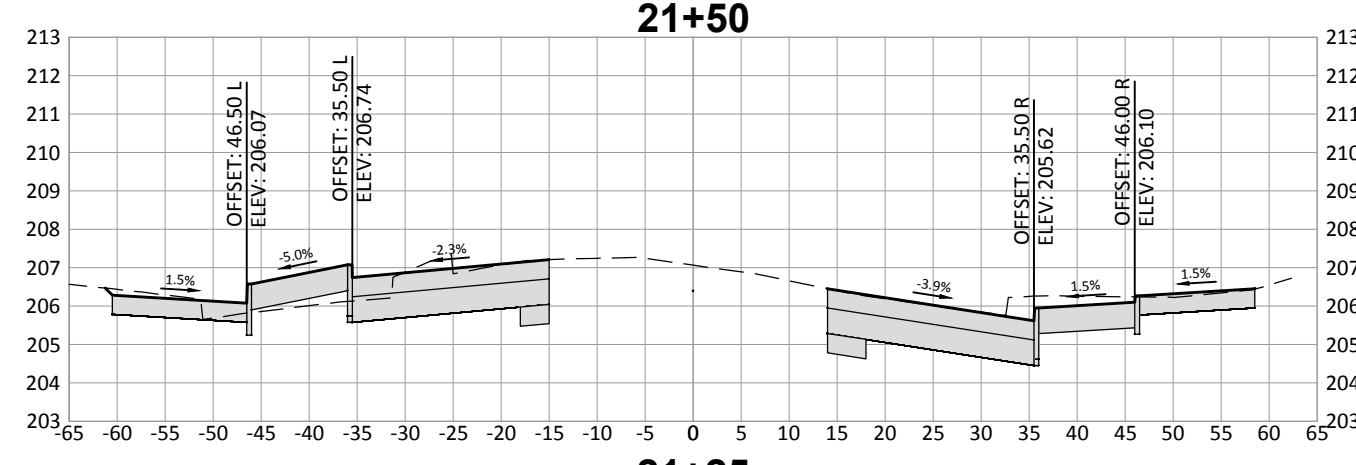
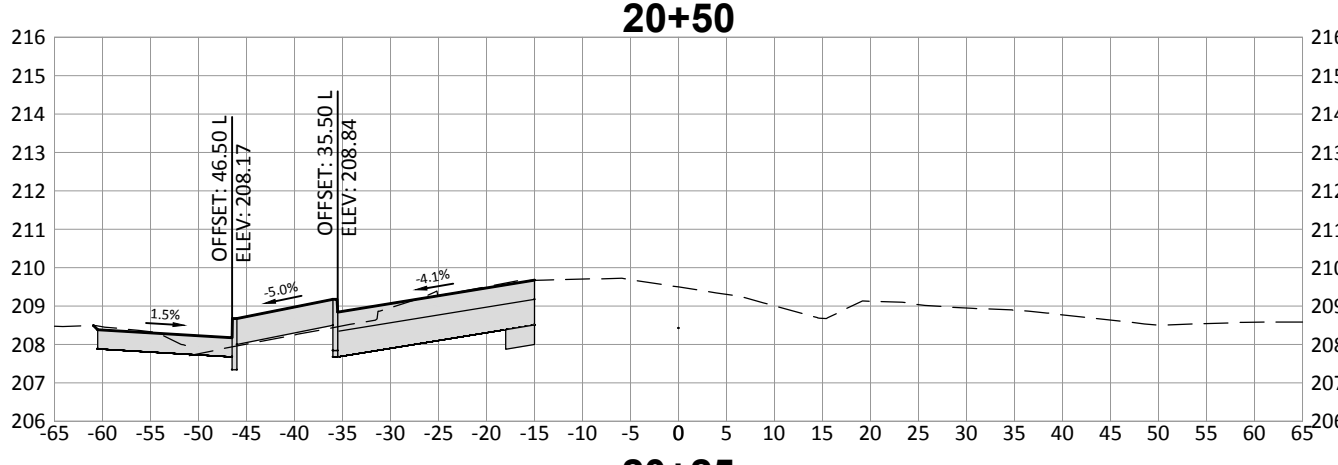
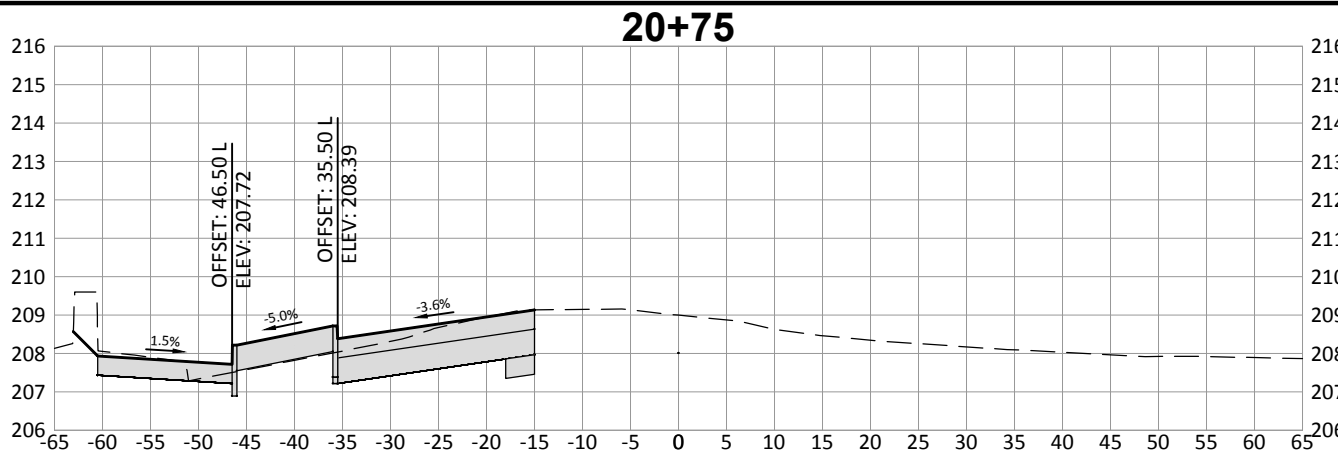
WILLAMETTE FALLS CROSS SECTIONS
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SHEET NO. **XS06**
 DESIGNED: HHPR TEAM
 DRAWN: HHPR TEAM
 CHECKED: BRA/JSH
 JOB NO. CWL-02
 DATE: 11-1-19

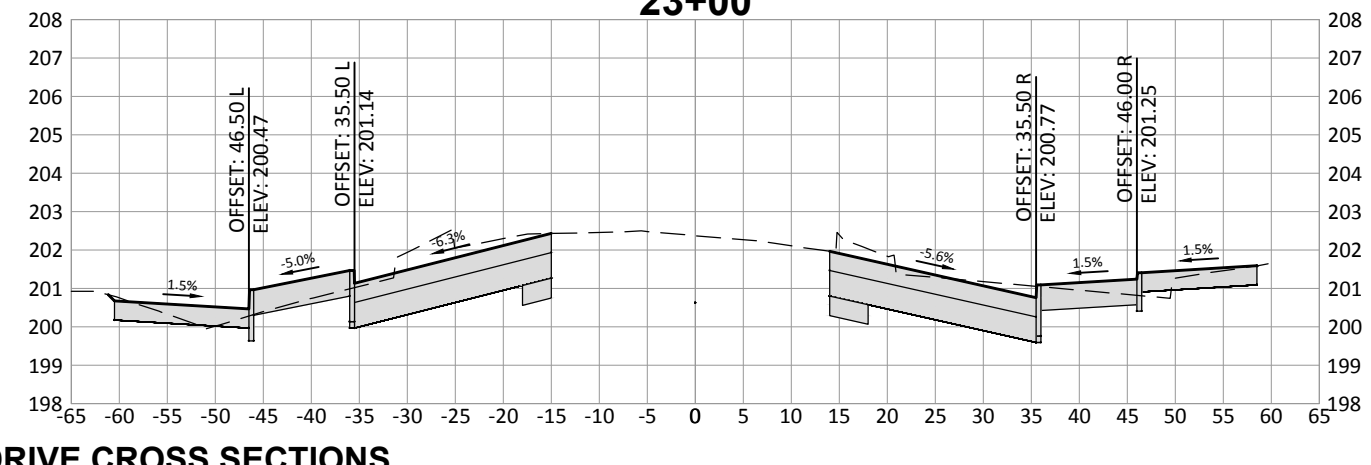
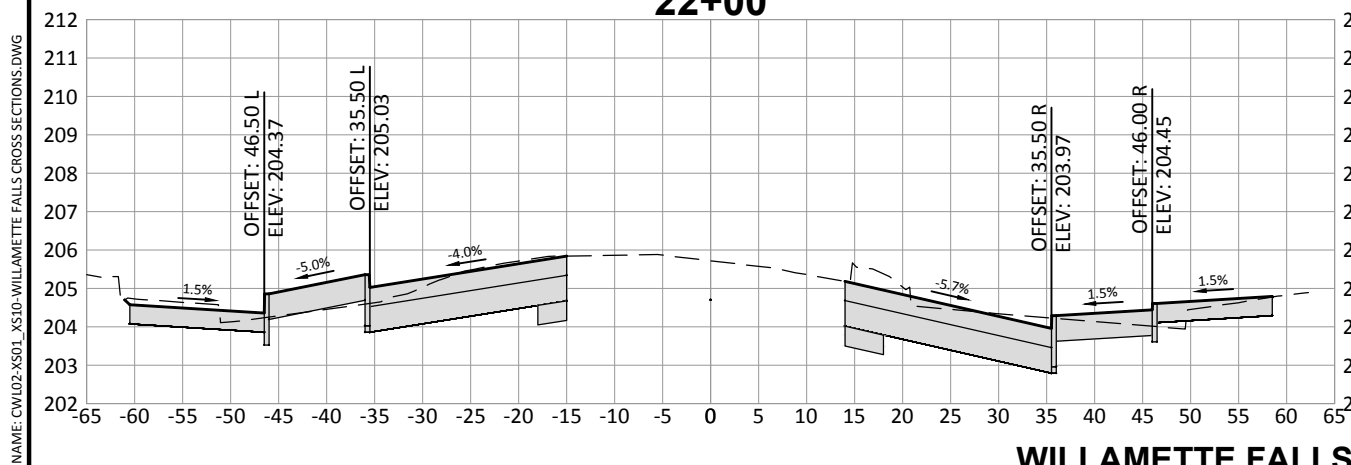
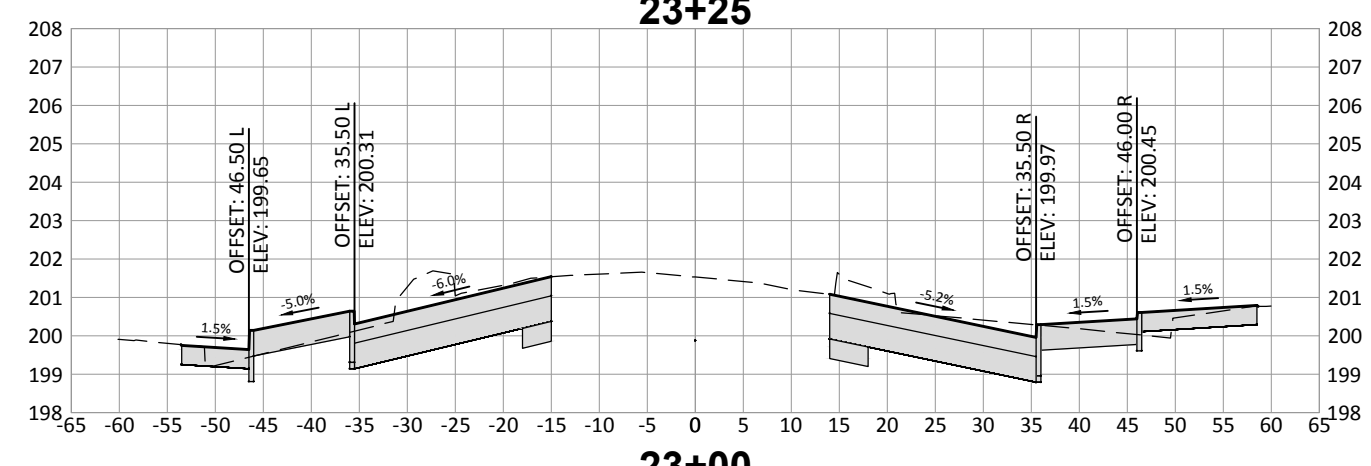
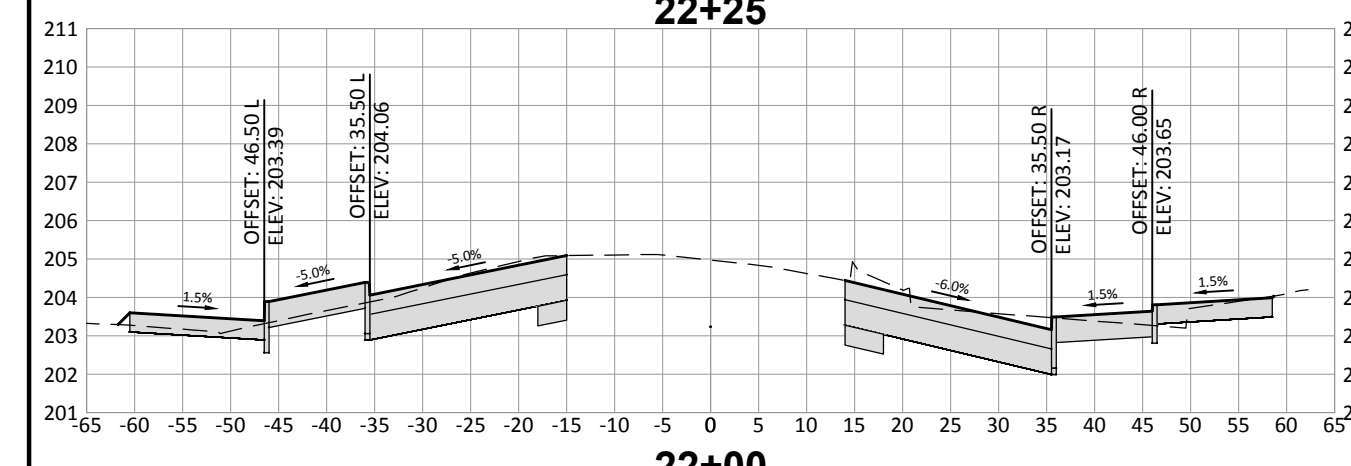
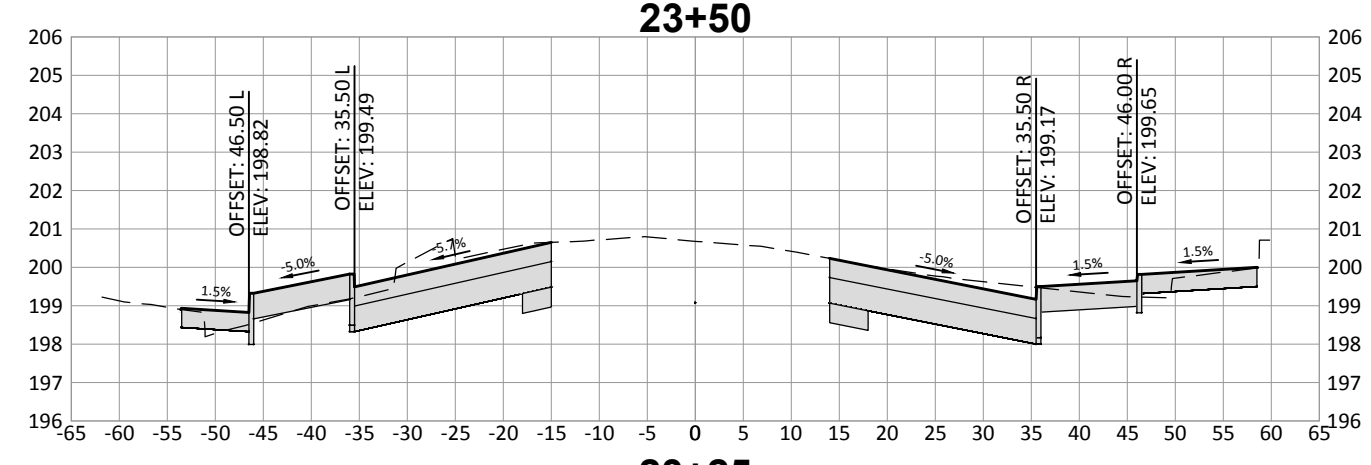
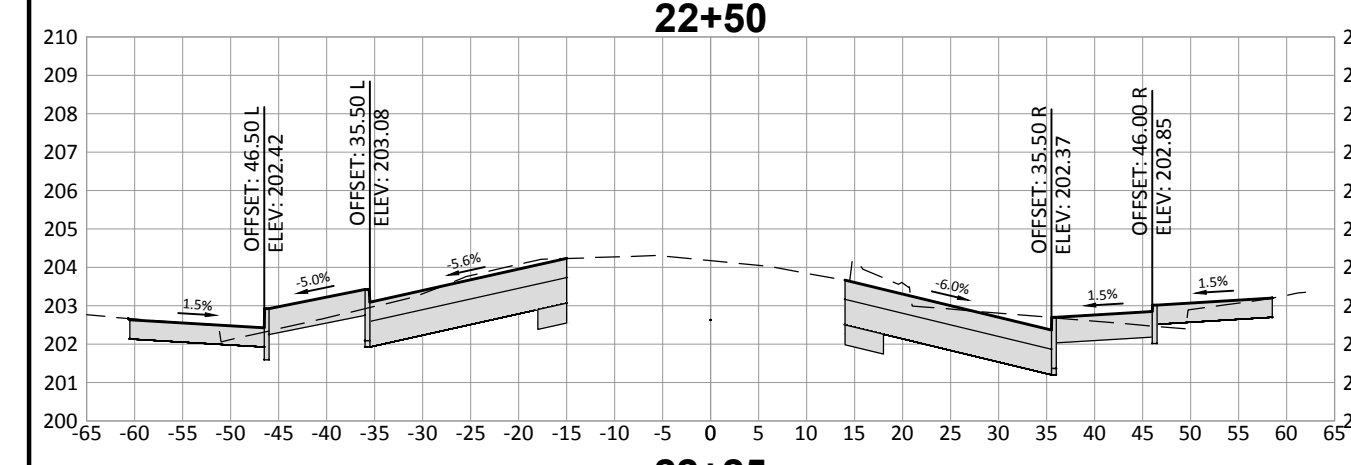
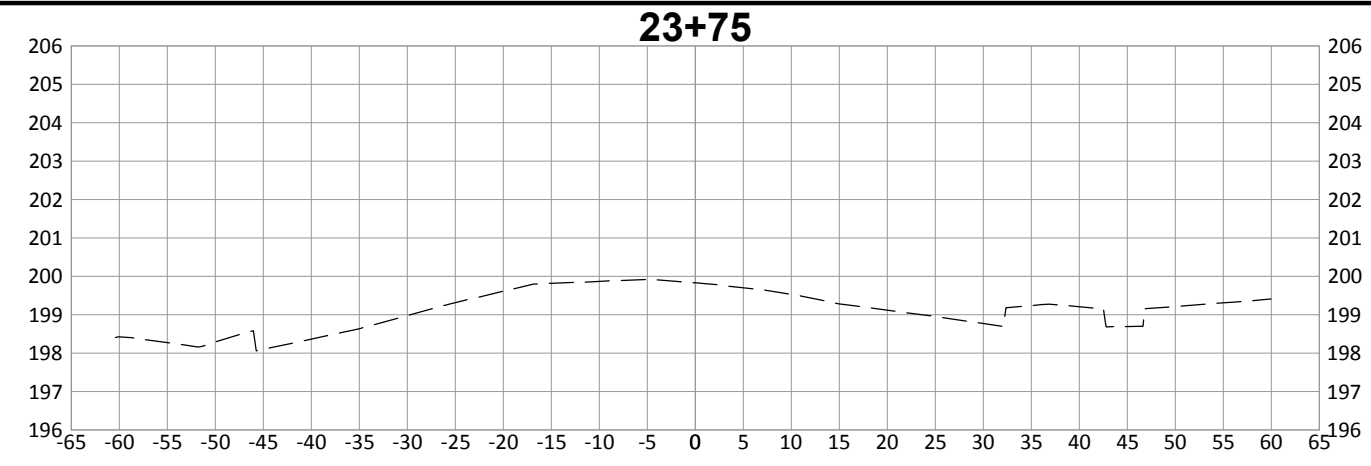
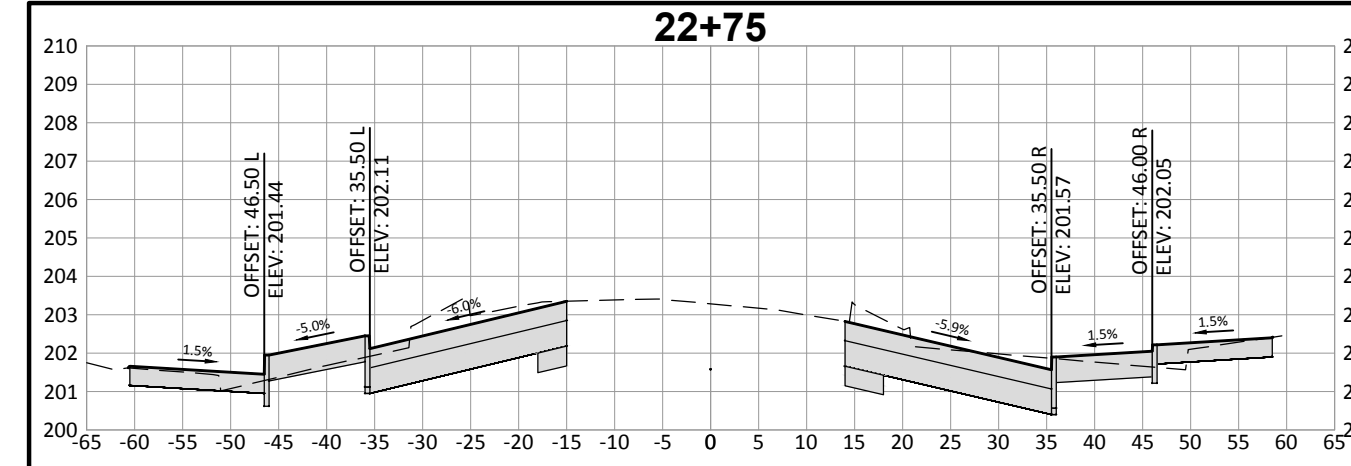


WILLAMETTE FALLS DRIVE CROSS SECTIONS

HORIZ SCALE: 1" = 40'
 VERT. SCALE: 1" = 10'

DRAWING NAME: CWL02-XS01-WILLAMETTE FALLS CROSS SECTIONS.DWG

DRAWING NAME: CWL02.XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG



WILLAMETTE FALLS DRIVE CROSS SECTIONS

HORIZ SCALE: 1" = 40'
VERT. SCALE: 1" = 10'

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JUL. 11, 2006
BENJAMIN R. AUSTIN

EXPIRES: 12/31/19

DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	XS07
CHECKED: BRA/USH	JOB NO.
DATE: 11-1-19	CWL-02

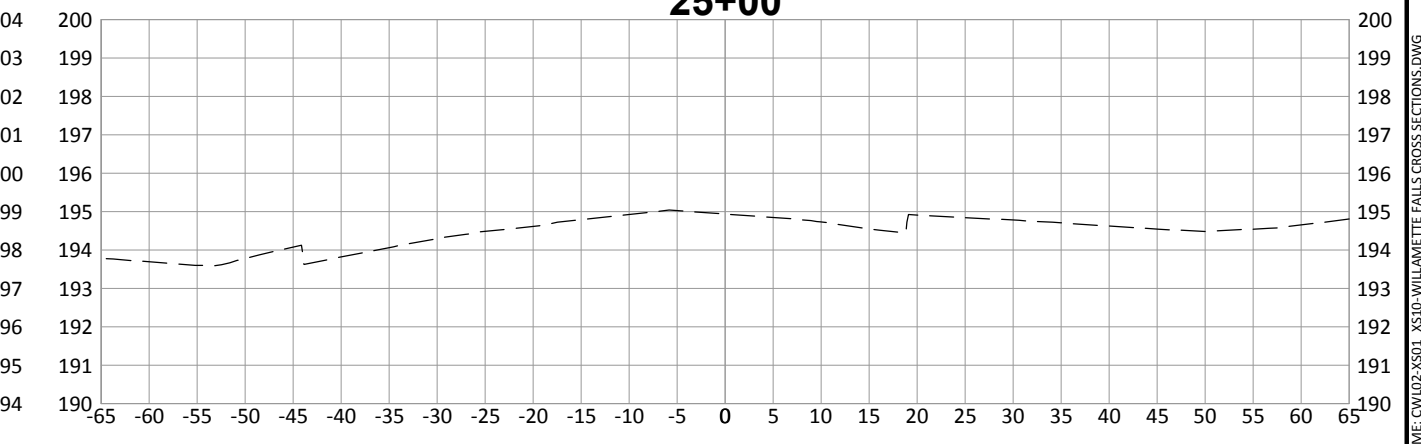
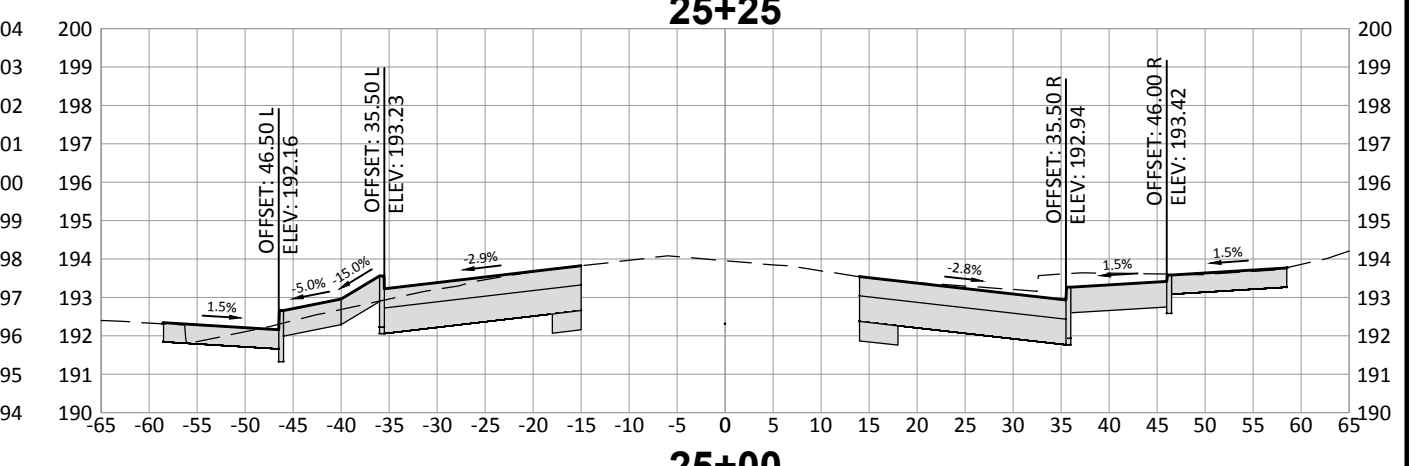
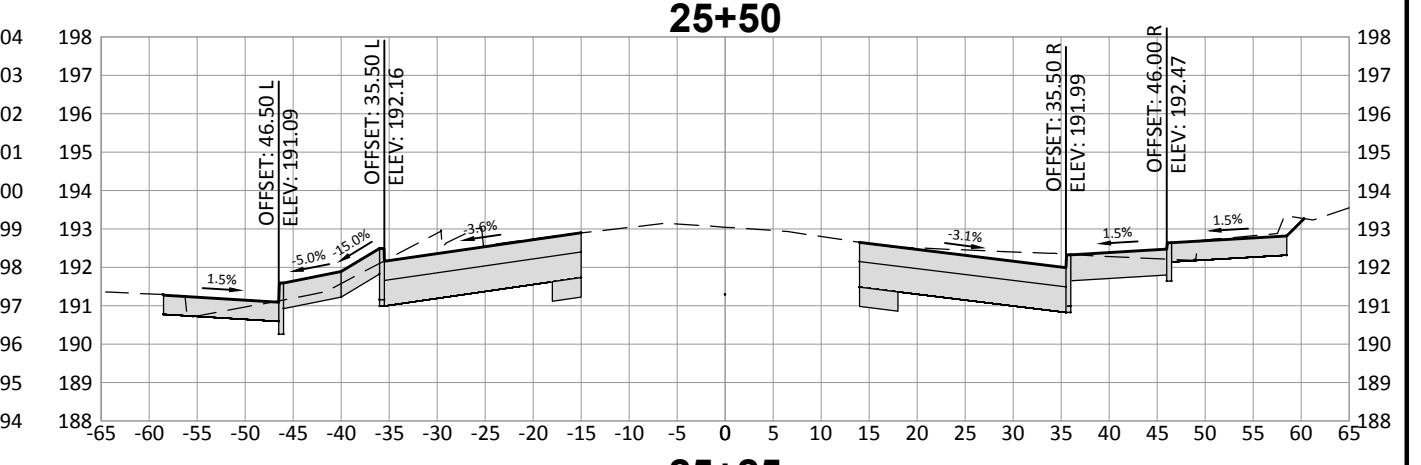
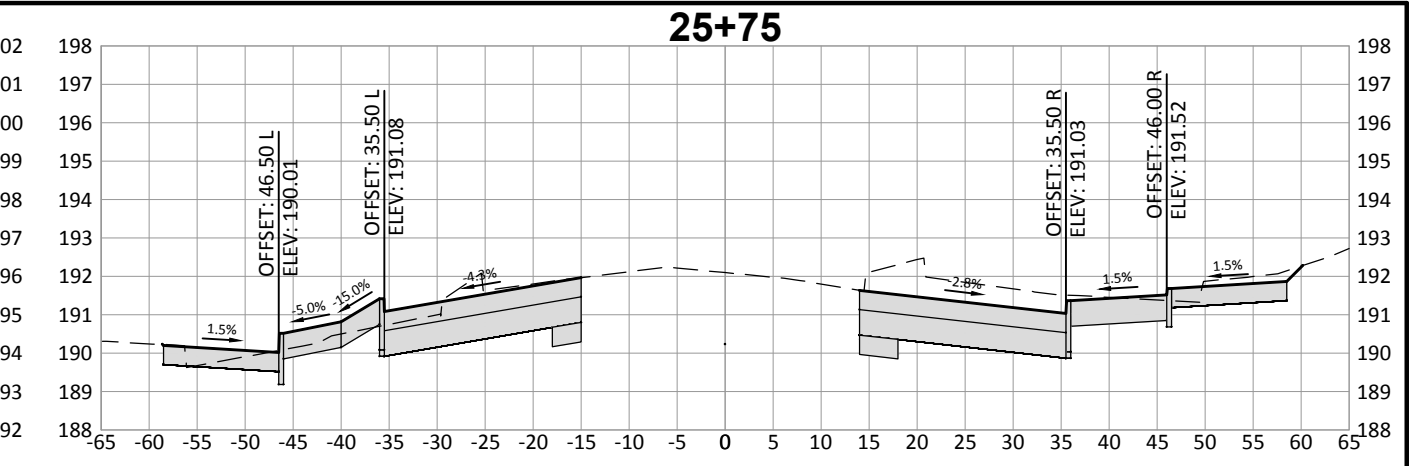
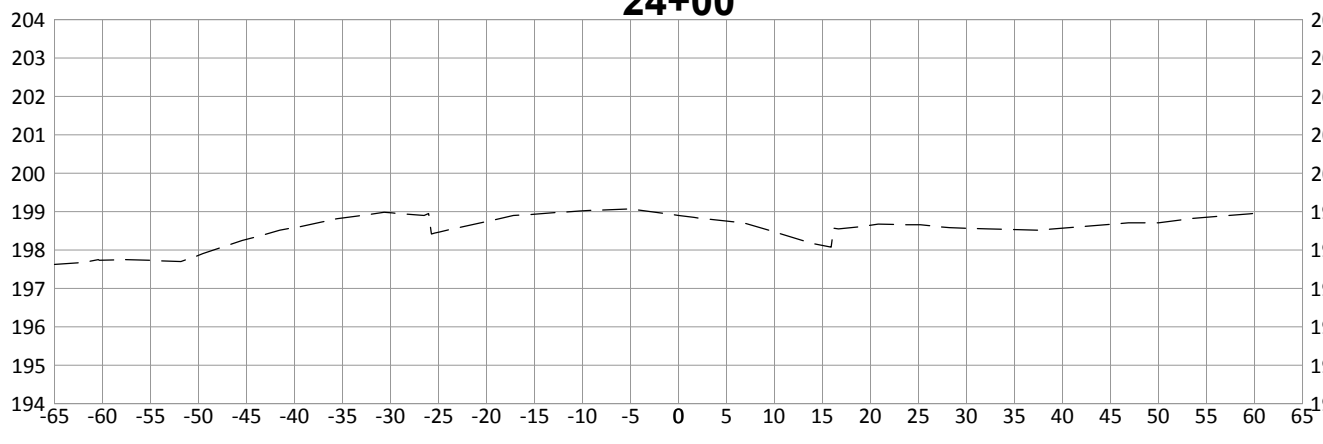
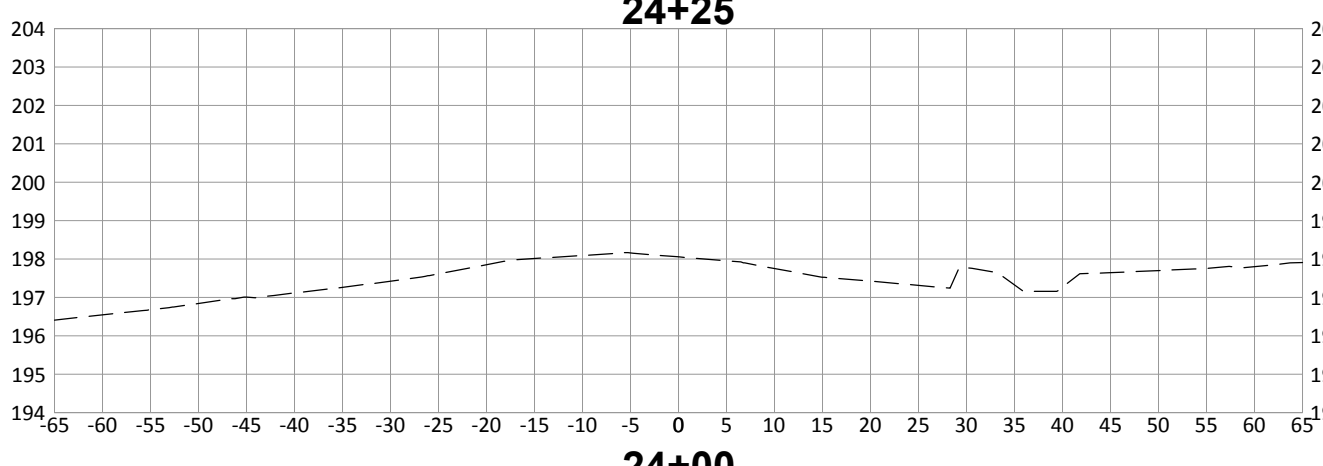
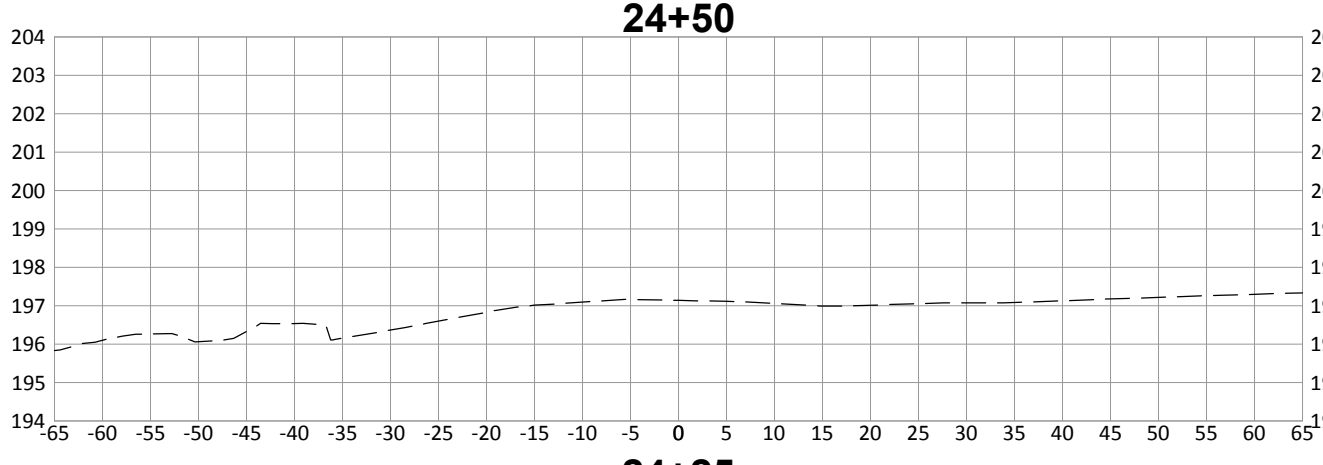
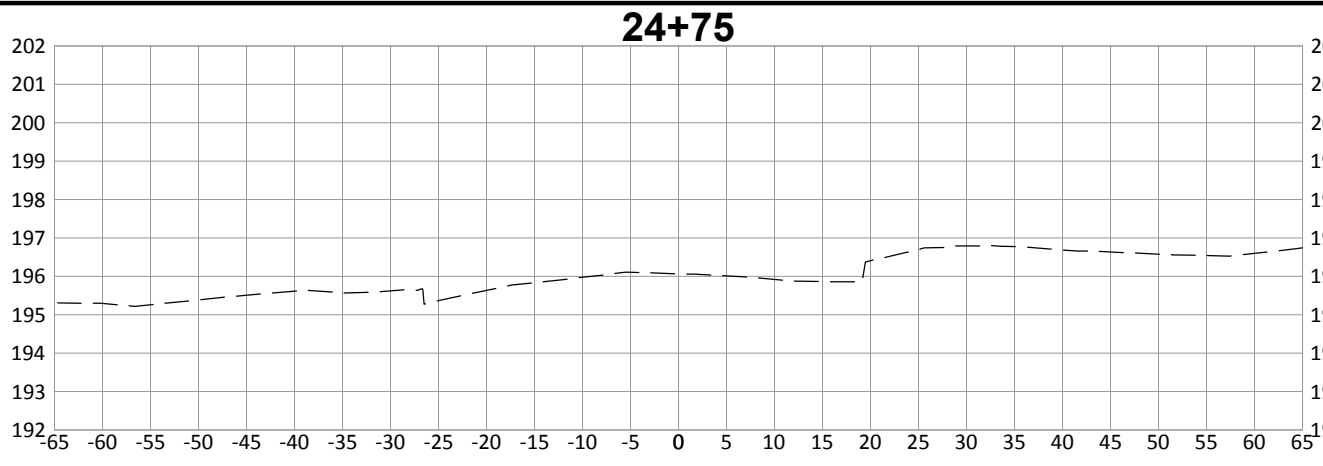
WILLAMETTE FALLS CROSS SECTIONS
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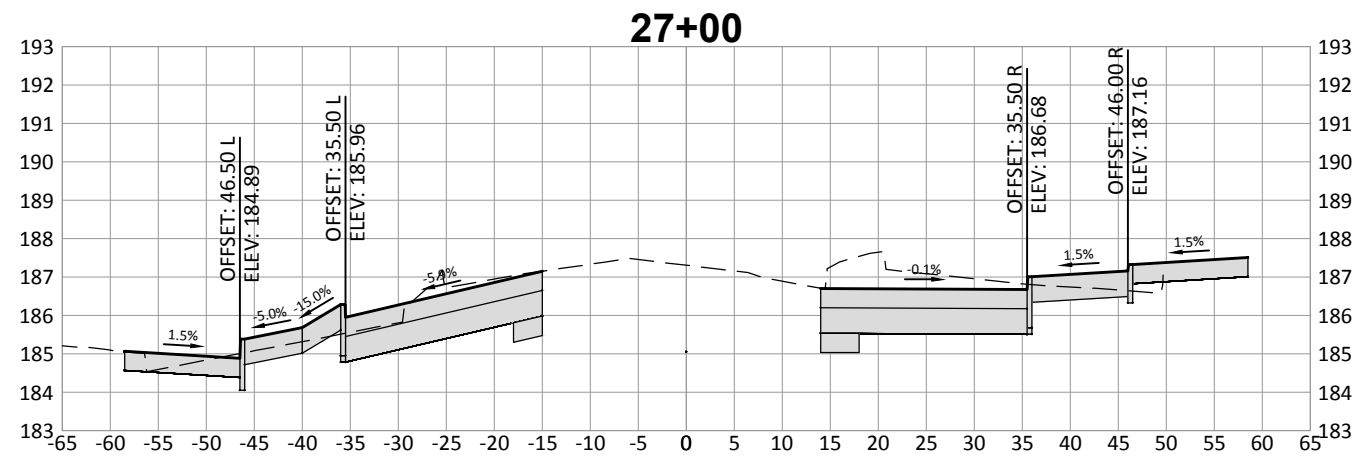
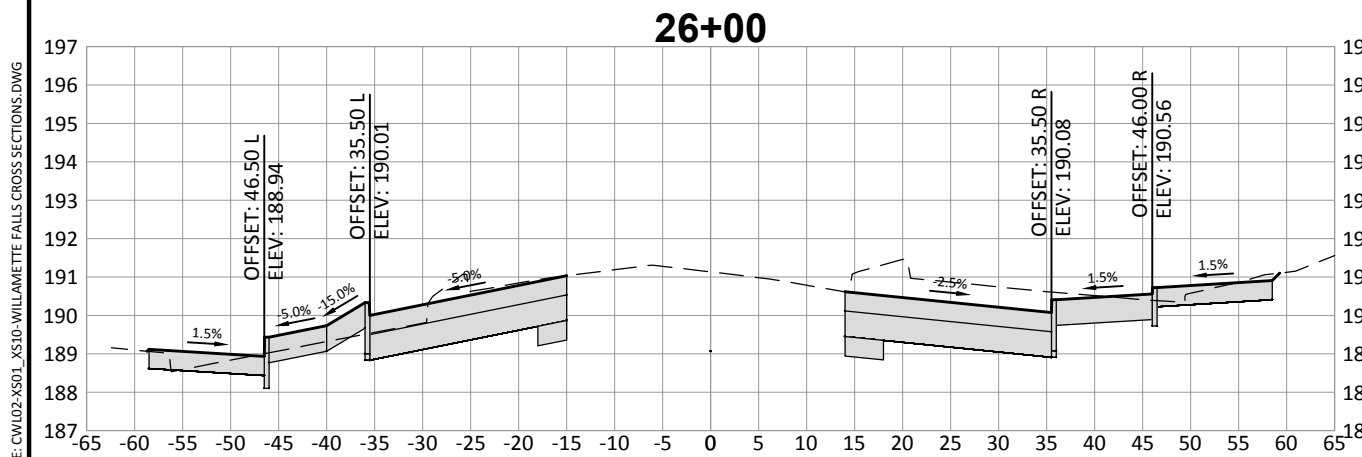
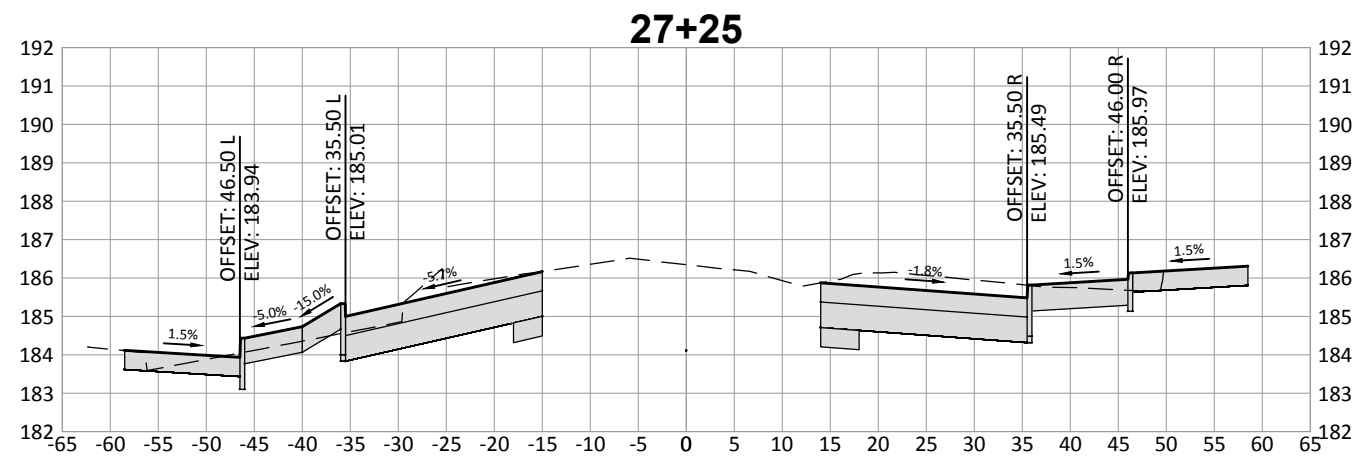
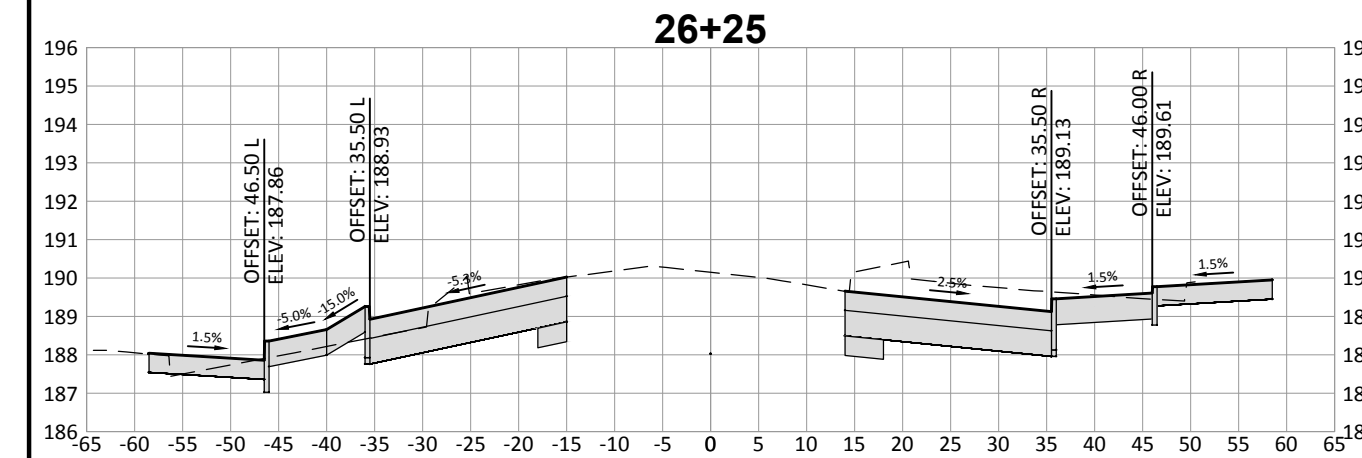
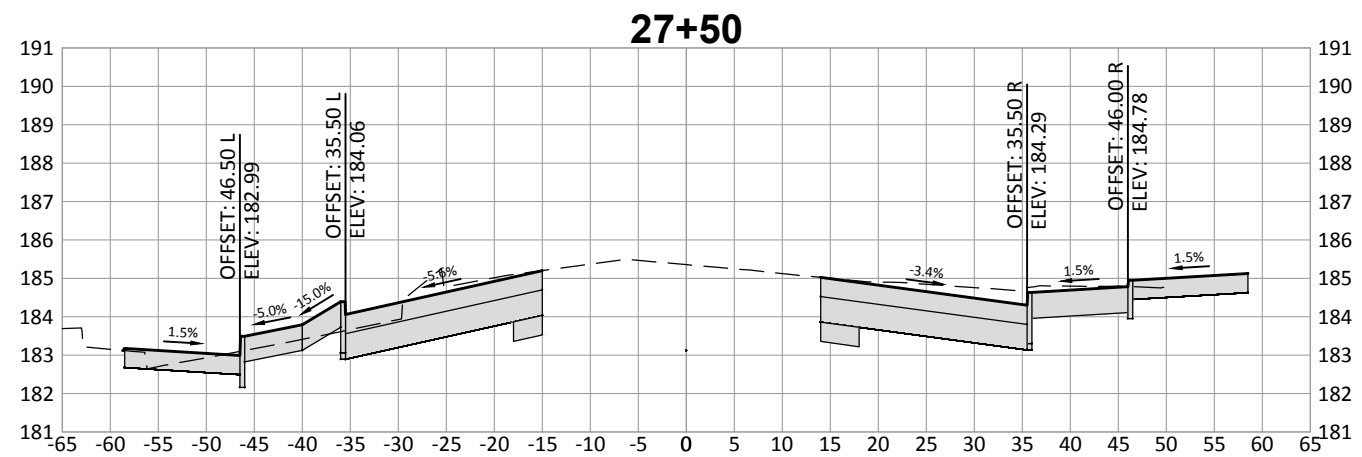
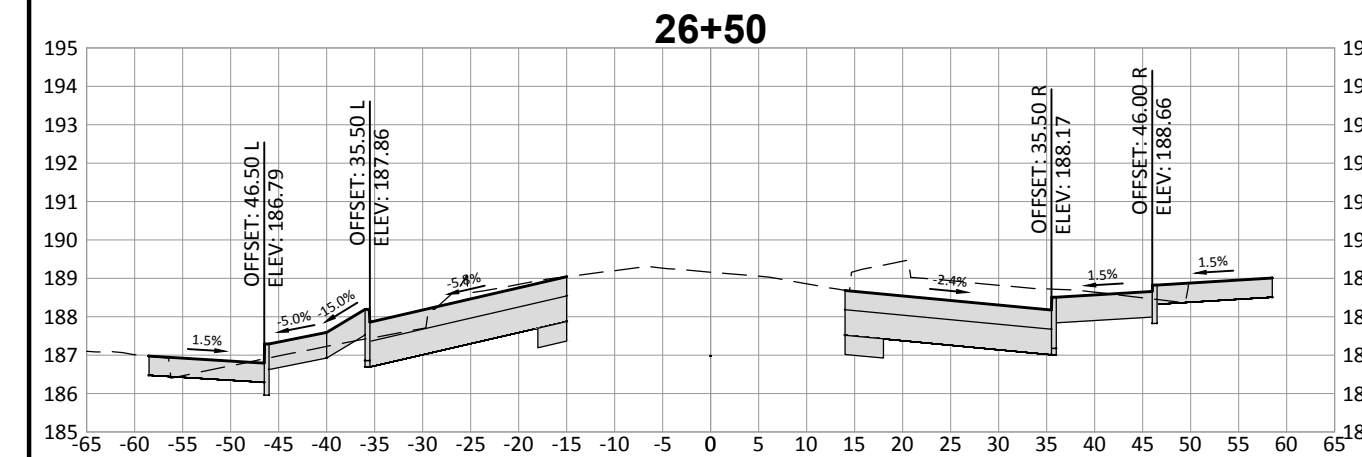
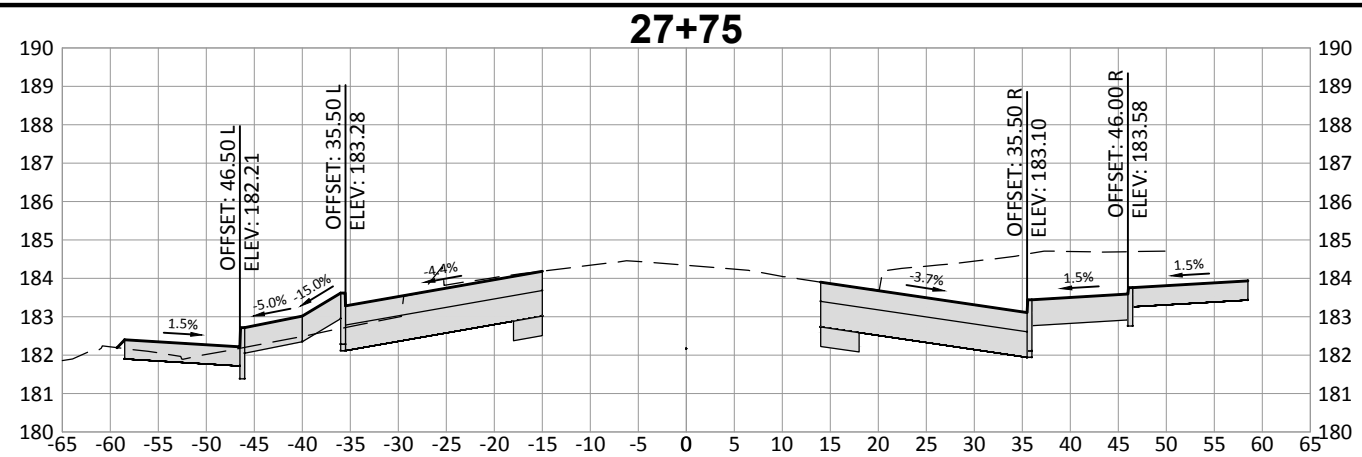
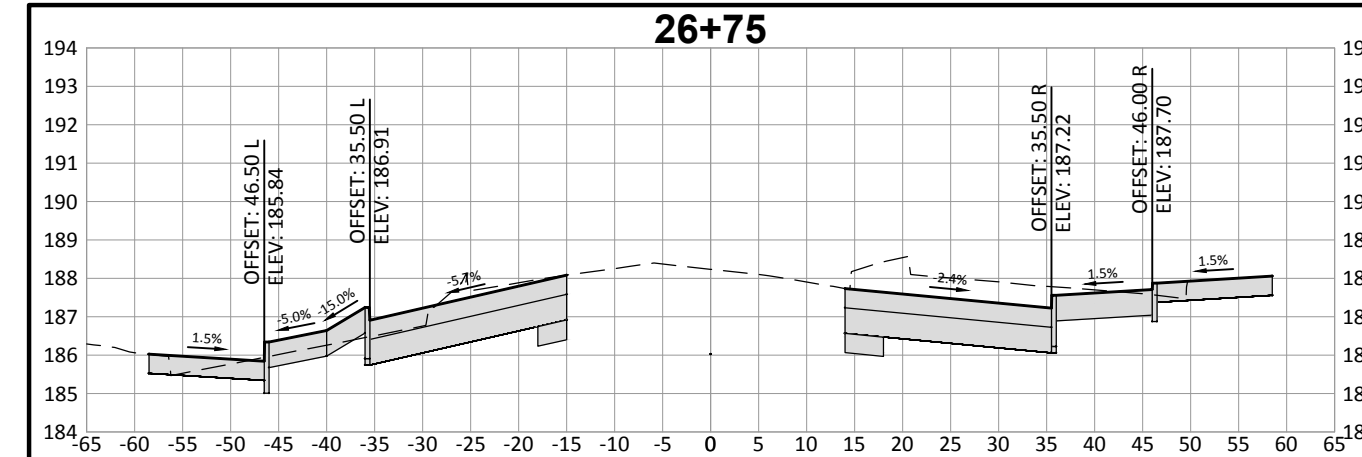
SHEET NO.	DESIGNED:
XS08	HHPR TEAM
	DRAWN:
	HHPR TEAM
CHECKED:	BRA/JSH
JOB NO.	DATE:
CWL-02	11-1-19



WILLAMETTE FALLS DRIVE CROSS SECTIONS
 HORIZ SCALE: 1" = 40'
 VERT. SCALE: 1" = 10'

DRAWING NAME: CWL02-XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG

DRAWING NAME: CWL02.XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG



WILLAMETTE FALLS DRIVE CROSS SECTIONS

HORIZ SCALE: 1" = 40'
VERT. SCALE: 1" = 10'

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JUL. 11, 2006
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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	XS09
CHECKED: BRA/USH	JOB NO.
DATE: 11-1-19	CWL-02

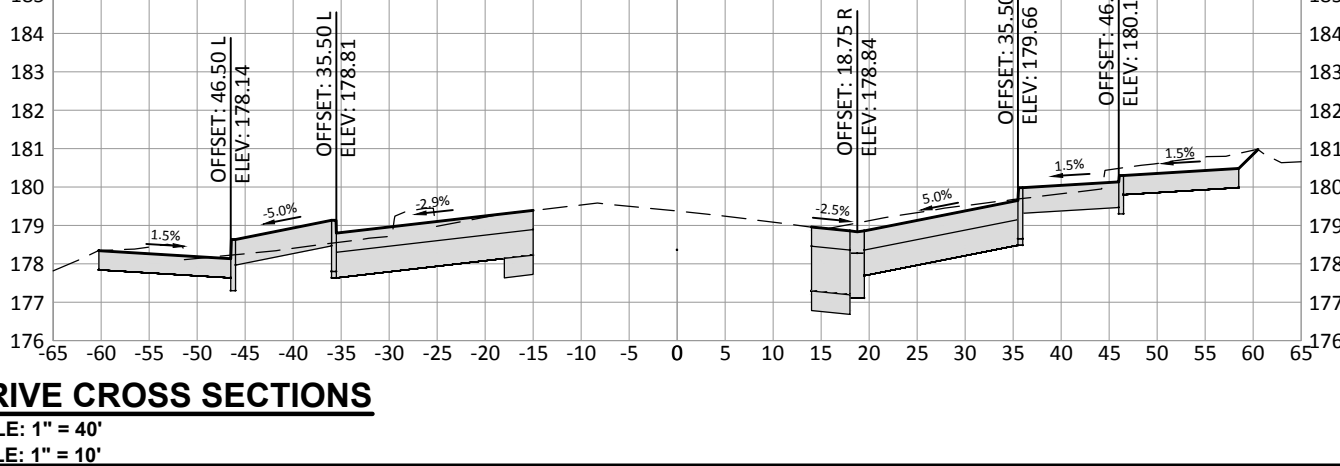
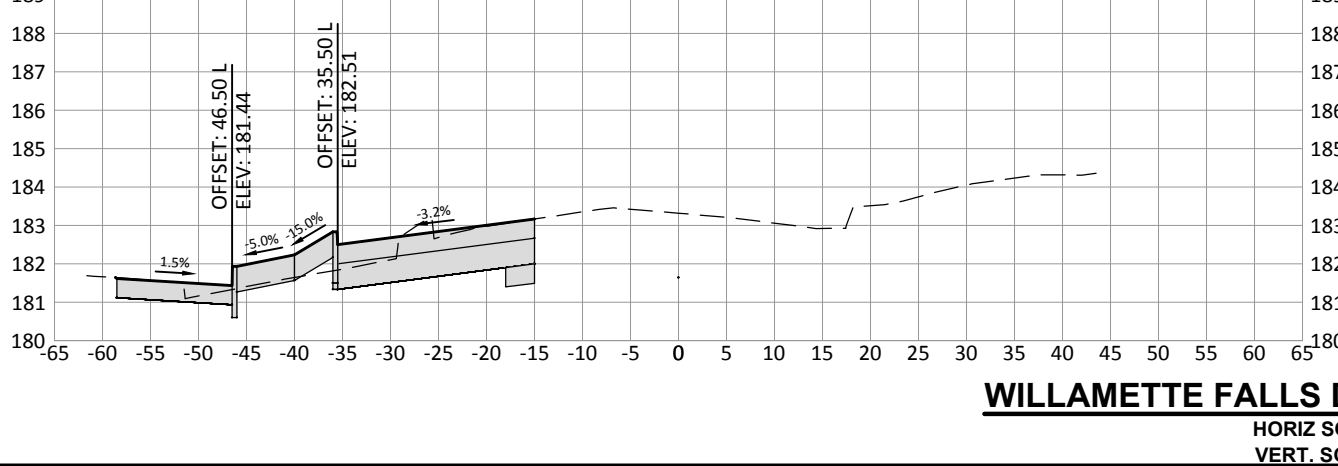
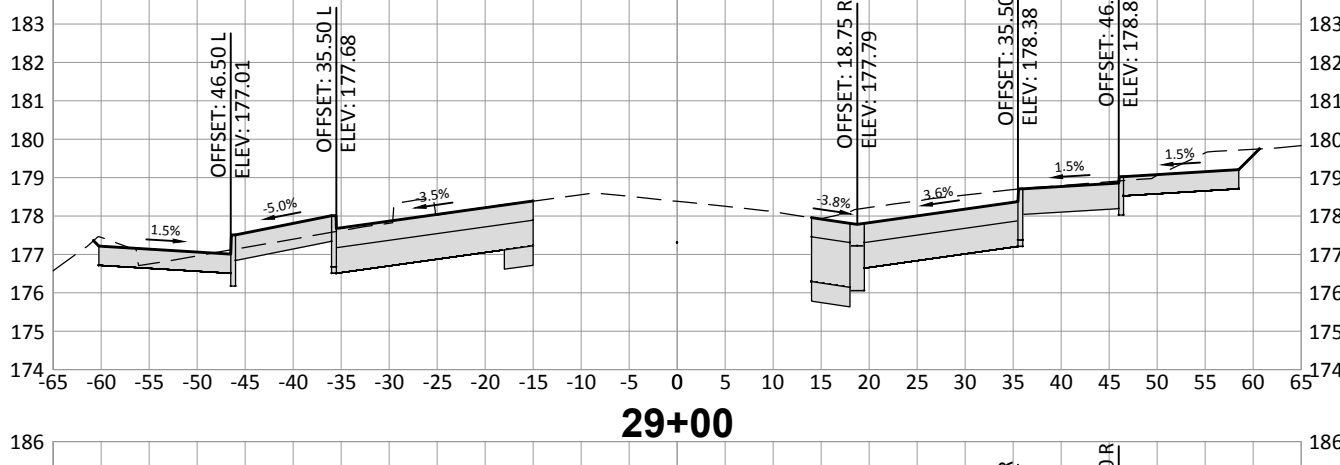
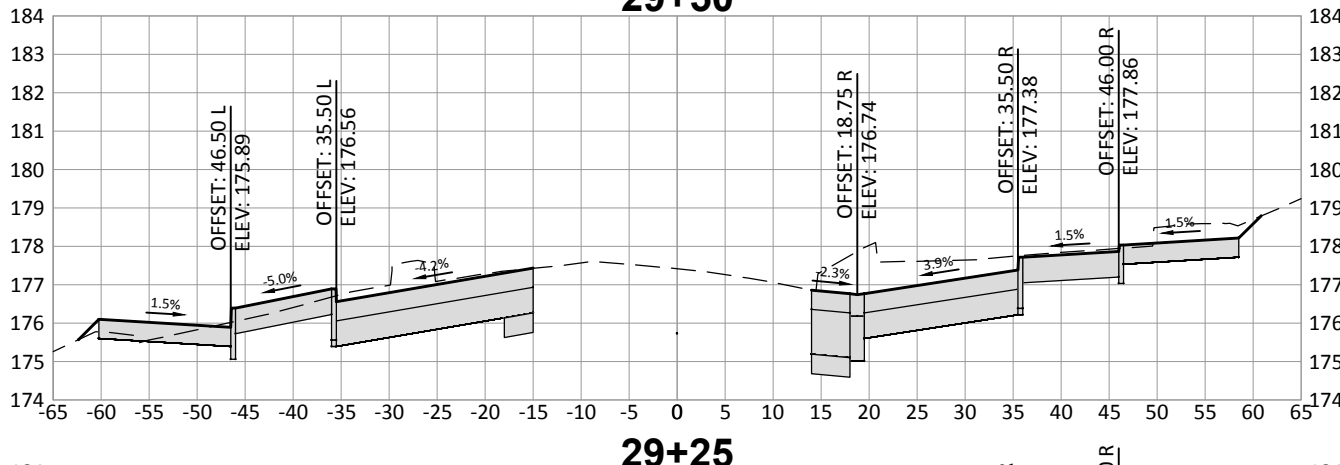
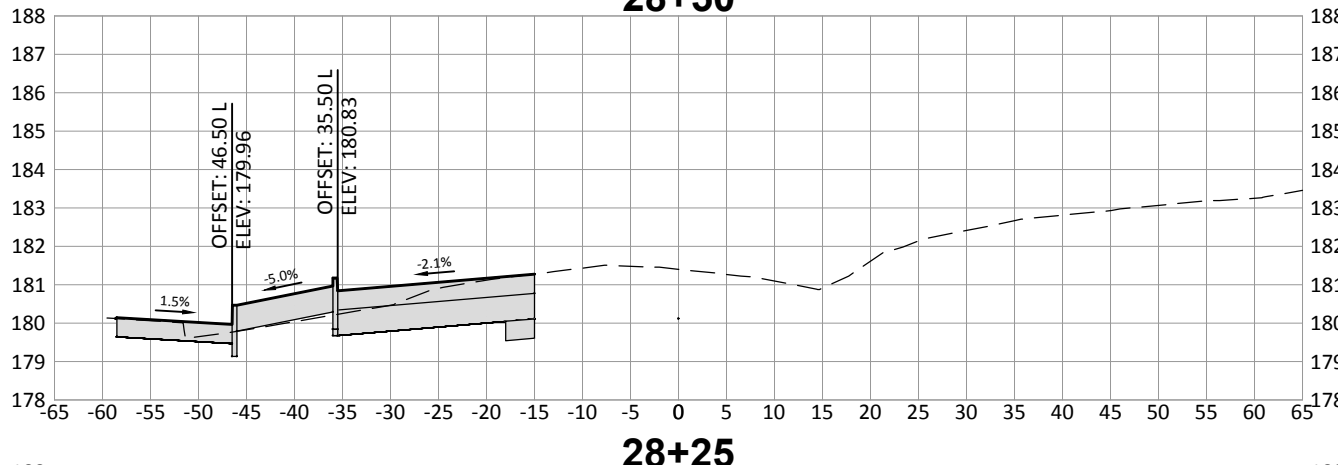
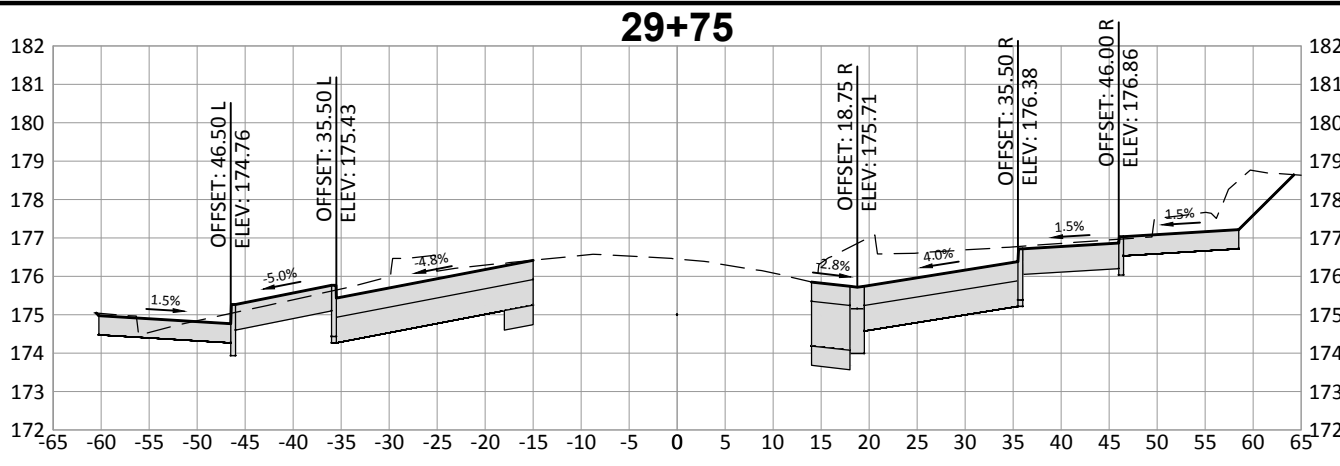
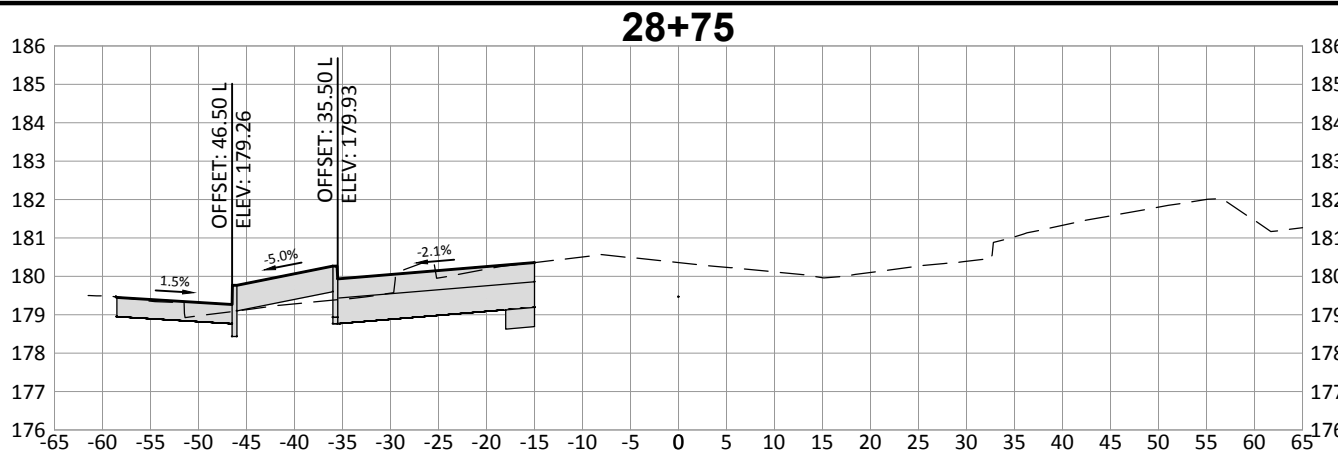
WILLAMETTE FALLS CROSS SECTIONS
 WILLAMETTE FALLS DRIVE
 WEST LINN, OREGON

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 EXPIRES: 12/31/19

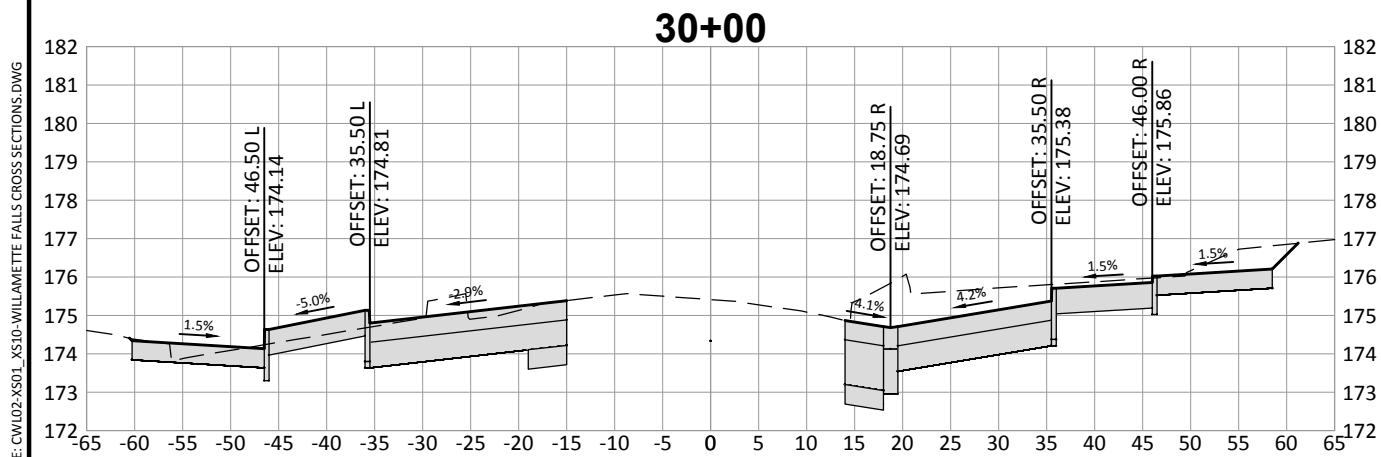
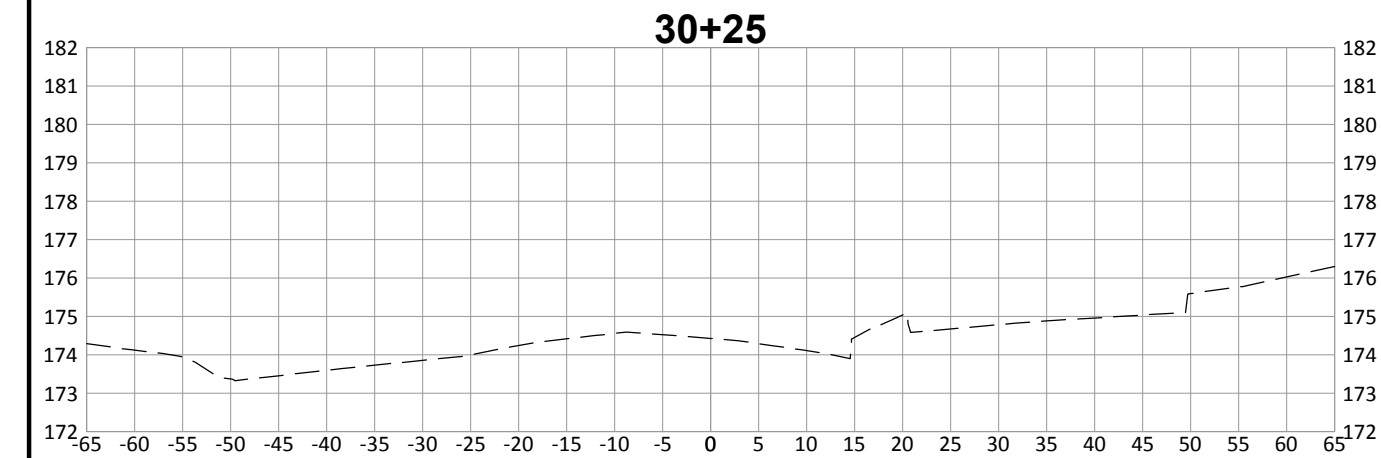
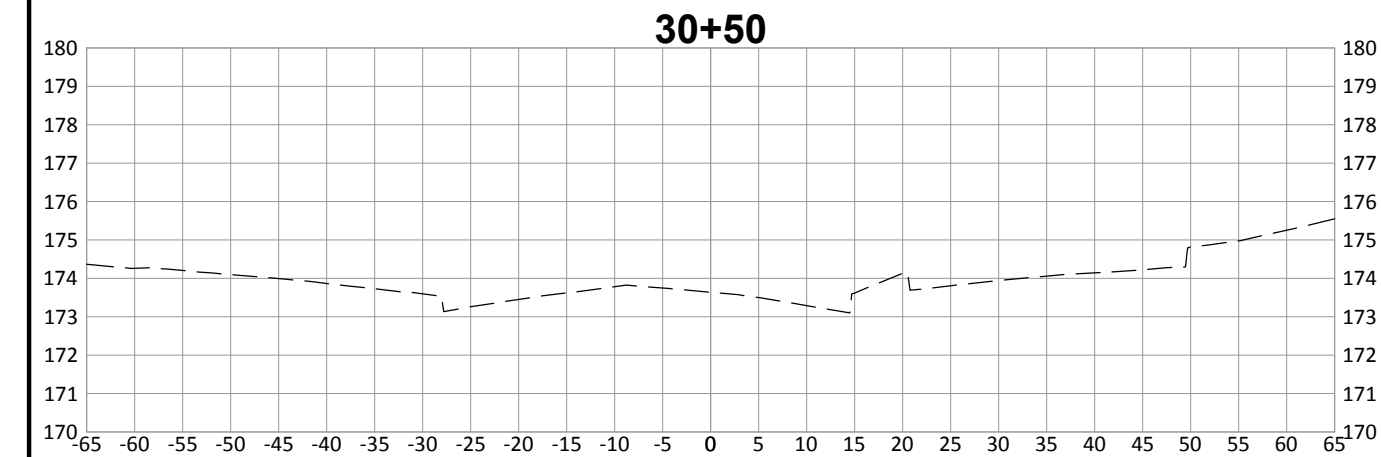
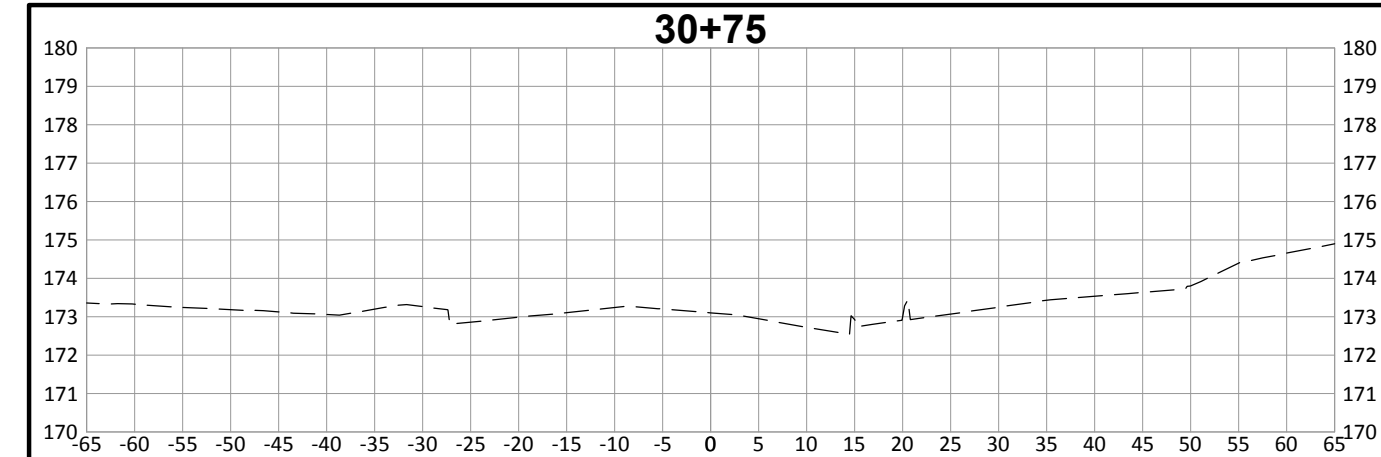
SHEET NO. **XS10**
 DESIGNED: HHPR TEAM
 DRAWN: HHPR TEAM
 CHECKED: BRA/JSH
 JOB NO. CWL-02
 DATE: 11-1-19



WILLAMETTE FALLS DRIVE CROSS SECTIONS
 HORIZ SCALE: 1" = 40'
 VERT. SCALE: 1" = 10'

DRAWING NAME: CWL02-XS01-WILLAMETTE FALLS CROSS SECTIONS.DWG

DRAWING NAME: CWL02-XS01_XS10-WILLAMETTE FALLS CROSS SECTIONS.DWG



WILLAMETTE FALLS DRIVE CROSS SECTIONS

HORIZ SCALE: 1" = 40'
VERT. SCALE: 1" = 10'

WILLAMETTE FALLS CROSS SECTIONS
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DESIGNED: HHPR TEAM	SHEET NO.
DRAWN: HHPR TEAM	XS11
CHECKED: BRA/USH	
DATE: 11-1-19	JOB NO. CWL-02