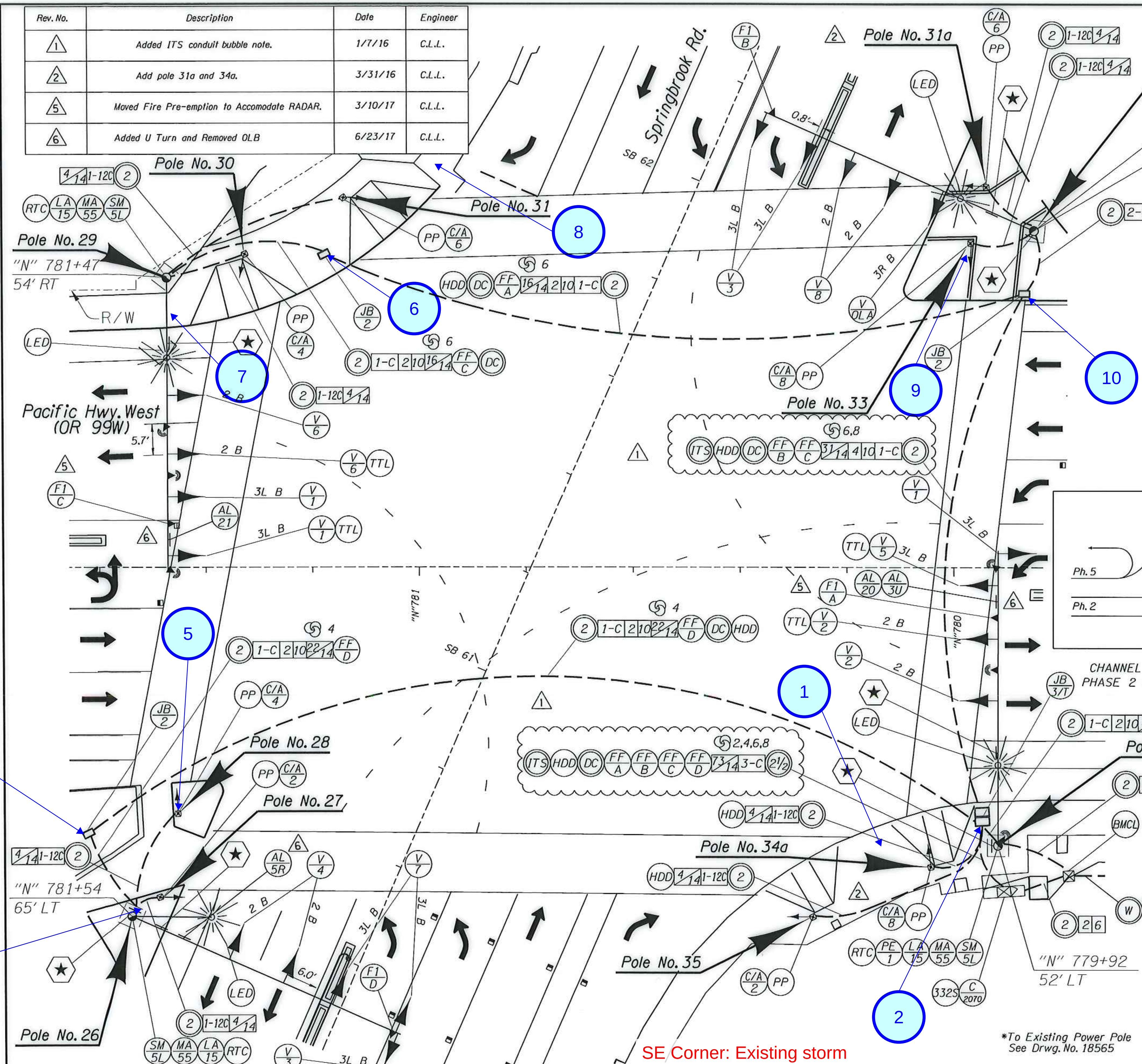
Existing radar on all approaches.

Pushbuttons go to mast arm pole terminal cabinets.

Existing APS pushbuttons and ped heads on ped poles.

Rev. No.	Description	Date	Engineer
1	Added ITS conduit bubble note.	1/7/16	C.L.L.
2	Add pole 31a and 34a.	3/31/16	C.L.L.
5	Moved Fire Pre-emption to Accomodate RADAR.	3/10/17	C.L.L.
6	Added U Turn and Removed OLB	6/23/17	C.L.L.



SCALE 0 10 20 30 40 FEET

NOTE: Right-of-Way Is Located Beyond Plan Sheet View

NORMAL PHASE ROTATION

OLA=1+8-8 PED

CHANNEL A PHASE 2 & 5

CHANNEL B PHASE 4 & 7

CHANNEL C PHASE 1 & 6

CHANNEL D PHASE 3 & 8

FIRE PREEMPTION OPERATION

"UTILITIES NOT SHOWN" See Utility Plan Sheet

NOTE: See T.R.S. Dwg. 18550 & 18551 for Legend

NOTE: Field Verify Measurements Before Construction

Traffic Section Approval

REGISTERED PROFESSIONAL ENGINEER 87,105 OREGON NOV. 13, 2012 CHRISTINA L. LAFLEUR

RENEWS: 12-31-2018

OREGON DEPARTMENT OF TRANSPORTATION

REGION 2 TECH CENTER

OR18: NEWBERG-DUNDEE BYPASS (PHASE 1G) (SPRINGBROOK RD) SEC.
HILLSBORO-SILVERTON, PACIFIC HWY WEST & SALMON RIVER HWYS.
YAMHILL COUNTY

Reviewed By -S. Cramer
Designed By -C. LaFleur
Drafted By -C. LaFleur

FC: 091
MP: 22.03

TSSU NO. 03057

T.R.S. DWG. NO. 18564

SIGNAL PLAN

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DETAILS
PACIFIC HWY.WEST AT SPRINGBROOK RD.
OR99W M.P. 22.03
NEWBERG
SPRINGBROOK RD.AT HAYES ST.
NEWBERG
SPRINGBROOK RD.AT
2ND ST./FERNWOOD ST.
NEWBERG

POLE ENTRANCE CHART

		See TM650 thru TM653	EQUIPMENT ON POLE					△5	EQUIPMENT ON MAST ARM (Length in Feet and Equipment Type)											FOUNDATION INFORMATION (See Std. Drg. TM653)		LUMINAIRES				FIXTURE	
POLE NO.	DWG. NO.	TYPE	PED. SIGNAL DEG.	TERM. CABINET DEG.	SIGN DEG.	TRAFFIC SIGNAL DEG.	PHOTO ELECTRIC CELL	RADAR UNIT	ARM LENGTH	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10	FOUNDATION NUMBER	REQUIRED FOUNDATION DEPTH	ARM LENGTH	ARM DEG.	MOUNTING HEIGHT	TYPE	TYPE	WATTAGE
26	18564	SM-5L		180	270 GS				55	0.5 V3L	1.0 V3L	1.5 F	14.0 V3L	24.0 V2	35.0 V2	44.5 SA △6	49.0 SNS	——	——	6	15' - 6"	15.0	337	35.0	LED	M-C-III	168
27	18564	PP	160							——	——	——	——	——	——	——	——	——	——								
28	18564	PP	60									△6	△6														
29	18564	SM-5L		180					55	0.5 RAD	3.0 V3L	6.0 SB	9.0 F	13.5 V3L	17.5 RAD	21.5 V2	27.0 RAD	32.5 V2	42.75 SNS	6	15' - 6"	15.0	0	40.0	LED	M-C-III	168
30	18564	PP	80							——	——	——	——	——	——	——	——	——	——								
31	18564	PP	160							——	——	——	——	——	——	——	——	——	——								
△2 31a	18564	PP	340							——	——	——	——	——	——	——	——	——	——								
32	18564	SM-5L		180	270 GS				55	0.5 V3L	1.5 F	10.5 V3L	18.5 V2	27.5 V2	36.5 V3R	46.5 SNS	——	——	——	6	15' - 6"	15.0	0	40.0	LED	M-C-III	168
33	18564	PP	70							——	——	——	——	——	——	——	——	——	——								
34	18564	SM-5L		180	270 GS		90	30	55	0.5 V3L	3.0 RAD	6.5 V3L	9.5 SA	12.5 F	16.5 V2	22.0 RAD	28.0 V2	37.75 SNS	——	6	15' - 6"	15.0	0	40.0	LED	M-C-III	168
34a	18564	PP	90										△6	△6													
35	18564	PP	340																								
36	18568	EXMP						20		0.5 V6L	EX F	5.5 RAD	EX V2	EX V2	30.0 SNS	——	——	——	——								
37	18568	PP	90 & 180							——	——	——	——	——	——	——	——	——	——								
38	18568	EXMP						15		EX SA	EX V2	EX F	EX V2	30.0 SNS	——	——	——	——	——								
39	18568	PP	0 & 90							——	——	——	——	——	——	——	——	——	——								
40	18568	EXMP	78 & 184					35		0.5 V6L	EX F	EX V2	13.5 RAD	EX V2	28.0 SNS	——	——	——	——								
△4 40a	18568	SM-3L						25	35	0.5 F	5.5 SA	10.0 V2	22.0 V2	——	——	——	——	——	——	4	14' - 0"	15.0	0	35.0	LED	M-C-III	168
40b	18568	PP	0 & 284							——	——	——	——	——	——	——	——	——	——								
41	18571	SM-4	80 & 190	180				25	40	0.5 F	6.0 V2	16.0 V2	29.0 SNS	——	——	——	——	——	——	4	14' - 0"						
42	18571	SM-3L	85 & 185	180				25	35	0.5 F	1.5 V6L	8.5 V2	10.5 RAD	18.0 V2	28.25 SNS	——	——	——	——	4	14' - 0"	15.0	0	35.0	LED	M-C-III	168
43	18571	SM-3	85 & 185	180			180	20	30	0.5 F	1.5 V2	11.5 V2	23.25 SNS	——	——	——	——	——	——	3	13' - 6"						
44	18571	SM-4L	80 & 190	180				20	45	0.5 F	4.0 V6L	12.0 V2	17.0 RAD	22.0 V2	34.0 SNS	——	——	——	——	5	15' - 0"	15.0	0	40.0	LED	M-C-III	168

NOTE

Refer To Geotechnical Report, OR18: Newberg-Dundee Bypass (Phase 1G), Key 16901, Yamhill County,
Salmon River Highway, MP 59.93-60.90,
Hillsboro-Silverton Highway, MP 21.17-22.19,
Pacific Highway West, MP 21.19-22.16 For Subsurface Information

BRACKET MOUNT

V2 = Traffic Signal Type 2, Adjustable Bracket Mount (See Std. Dwg. TM462)
V3L = Traffic Signal Type 3L, Adjustable Bracket Mount (See Std. Dwg. TM462)
V6L = Traffic Signal Type 6L, Adjustable Bracket Mount (See Std. Dwg. TM462)
SA = Sign, 30" x 36" Aluminum w/Adjustable Bracket Mount (See Std Dwg TM465)
SB = Sign, 36" x 36" Aluminum w/Adjustable Bracket Mount (See Std Dwg TM465)

MISC. ITEMS

F = Fire Preemtion (See Std. Dwg. TM465)
RAD = RADAR Unit
SNS = Street name sign (See signing plans for details on sign and attachment type)
GS = Guide sign (See signing plans for details on sign and attachment type)

Rev. No.	Description	Date	Engineer
△2	Added poles 31a and 34a.	3/31/16	C.L.L.
△4	Added poles 40a and 40b.	1/19/17	C.L.L.
△5	Changed Detection to RADAR	3/10/17	C.L.L.
△6	Added Signs and adjusted Fire Pre-emption	6/23/17	C.L.L.

Traffic Section Approval

REGISTERED PROFESSIONAL ENGINEER
87,105
OREGON
NOV. 13, 2012
CHRISTINA L. LAFLEUR

RENEWS: 12-31-2018

OREGON DEPARTMENT OF TRANSPORTATION

REGION 2 TECH CENTER

OR18: NEWBERG-DUNDEE BYPASS (PHASE 1G) (SPRINGBROOK RD) SEC.
HILLSBORO-SILVERTON, PACIFIC HWY WEST & SALMON RIVER HWYS.
YAMHILL COUNTY

Reviewed By -S. Cramer
Designed By -C. LaFleur
Drafted By -C. LaFleur

FC: 000
MP: 000

TSSU NO. 00000

SIGNAL PLAN DETAILS

T.R.S. DWG. NO. 18577

LEGEND CONTINUED

JUNCTION BOXES

JB 1	Install 17"x10"x12" (min. dimension) precast concrete junction box
JB 1A	Install 17"x10"x12" (min. dimension) precast concrete junction box with concrete apron
JB 2	Install 22"x12"x12" (min. dimension) precast concrete junction box
JB 2A	Install 22"x12"x12" (min. dimension) precast concrete junction box with concrete apron
JB 3/T	Install tandem 30"x17"x12" (min. dimension) precast concrete junction boxes (See TM472 for details)
JB SP	Junction box (See Signal Plan)
JB 3/TA	Install tandem 30"x17"x12" (min. dimension) precast concrete junction boxes with concrete aprons (See TM472 for details)
EX JB	Retain and protect existing junction box
RX JB	Remove existing junction box
JB DP	Junction box (See Detector Plan)

LUMINAIRES

LED	Install 168 watt light emitting diode luminaire, (See special provisions). Bond luminaire to pole grounding terminal with No. 10 AWG THWN wire
HPS	Install 250 watt high pressure sodium luminaire, type M-S-III, 120/240 dual voltage mag-regulator ballast. Bond luminaire to pole grounding terminal
PE 1	Install photocontrol electronic relay on pole, as per Std. Drg. No. TM465

CONDUITS

S	Install (S=size) inch electrical conduit
CS	Install 2" conduit stub (For future use, cap ends)
DC	Detector conduit (See Detector Plan)
EC	Electrical conduit (See Signal Plan)
HDD	Install conduit by horizontal directional drilling, open trench not allowed
W	Install conduit and wire as required by power company
EX EC	Retain and protect existing electrical conduit
EX DC	Retain and protect existing detector conduit
AX C	Abandon existing conduit
EX C S	Retain and protect existing (S=size) inch conduit
EX IC	Retain and protect existing interconnect conduit
ITS	ITS conduit (See ITS Plan) △1

Rev. No.	Description	Date	Engineer
△1	Added ITS conduit bubble note and corrected sheet number.	1/7/16	C.L.L.
△2	Removed Wilsonville Rd from Sheet Heading and Added Light Pole Table	3/31/16	C.L.L.
△5	Added RADAR notes.	3/10/17	C.L.L.
△6	Added Signs to Legend.	6/23/17	C.L.L.

LEGEND CONTINUED

SIGNS

	AL 5R	Install aluminum (30"x36", type "W7") right arrow "ONLY" sign (R3-5R)
	EX AL	Retain and protect existing aluminum sign and mount
	RX AL	Remove existing aluminum sign and mount
	CW	Install crosswalk closure barricades with signs (both sides of barricade)
	AL 3U	Install aluminum (30"x36", type "W7")"U TURN PERMITTED" sign (OR3-12)
△6	AL 5R	Install aluminum (30"x36", type "W7") right arrow "ONLY" sign (R3-5R)
	AL 11	Install aluminum (30"x36", type "W7") "LEFT TURN YIELD ON GREEN BALL" sign (R10-12)
	AL 20	Install aluminum (30"x30", type "W7") NO TRUCKS "SYMBOL" sign (R5-2)
△6	AL 21	Install aluminum (36"x36", type "W7") NO U TURN "SYMBOL" sign (R3-4)
	RR AL	Remove and relocate existing aluminum sign and mount
	RI AL	Reinstall existing aluminum sign and mount
	★	See signing plans for details on sign and attachment

DETECTION

	CAM T	Install detector camera (T=Camera)
	PhT X	Define phase (Ph = phase) detection zone on camera (T = camera) with voyage detector number (X = number)
	RX FPh	Remove existing phase (Ph=phase) loop feeder cable(s)
	AX DPh	Abandon existing phase (Ph = phase) vehicle detector loop
	EX CAM	Retain and protect existing detector camera
△5	R-F T	Install far-range radar detector unit (T=Radar)
△5	R-N T	Install near-range radar detector unit (T=Radar)
△5	PhT X	Install Phase (Ph=Phase) detection zone on radar (T=Radar) with voyage detector number (X=Number)

HEADS & BRACKETS

AB = Adjustable sign bracket assembly w/rain cap(s)

B = Adjustable signal bracket assembly w/rain cap(s) (Install 1" galvanized chase nipple).

2 = 12" R, 12" Y, 12" G

3L = 12" RLTA, 12" YLTA, 12" GLTA

3R = 12" RRTA, 12" YRTA, 12" GRTA

6L = 12" RLTA, 12" YLTA, 12" FYLTA, 12" GLTA

VL = Thermal Detection Camera Bracket, Cable Mount, 1-Piece With 23" Tube (Pelco Part No. AS-0175 or Approved Equal) Mount Camera on Luminaire Arm

VM = Thermal Detection Camera Bracket, Cable Mount, 1-Piece With 74" Tube (Pelco Part No. AS-0175 or Approved Equal) Mount Camera on Mast Arm

CAMERA TYPES

22 = Thermal Imaging detector camera

LEGEND
HILLSBORO-SILVERTON HWY. AT SPRINGBROOK RD./INDUSTRIAL PKWY. OR219 M.P. 21.88
△2 HILLSBORO-SILVERTON HWY. AT SALMON RIVER HWY. OR219 M.P. 22.13
PACIFIC HWY. WEST AT SPRINGBROOK RD. OR99W M.P. 22.03
SPRINGBROOK RD. AT HAYES ST.
SPRINGBROOK RD. AT 2ND ST./FERNWOOD ST.
NEWBERG

△2

METAL LIGHT POLE TABLE*											
POLE NO.	STATION	**ATTACHMENT HEIGHT OF ARM	UPSWEEP ARM		"BL"	LUMINAIRE			MOUNTING HEIGHT (ft.)	BASE PLATE CONFIG.	NOTES
			LENGTH	RISE (1)		LAMP (Watts)	LINE VOLT	TYPE			
18	A3b 26+40 (23.8' LT.)	34'-0"	15'-0"	5'-10"	39'-10"	168W LED	240 V	M-C-3	40	F	H(90)

LEGEND

* = Metal Pole and its foundation shall be according to ODOT Standard Specification & Standard Dwg. No. TM629 and TM630.

** = Field verify attachment height of arm before ordering. Values are approximated from grading cross sections

F = Fixed base illumination pole. See Dwg. No. TM629 & TM630.

LED = Luminaire utilizing 'Light Emitting Diode' technology

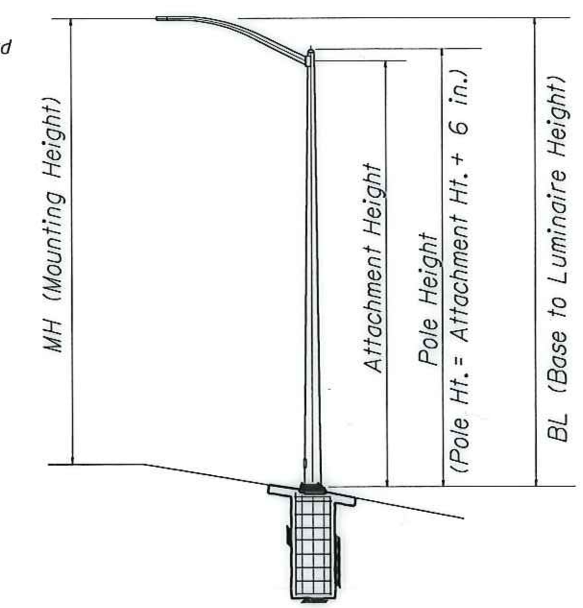
(1) = Attachment height of arm may vary due to difference in manufacturers arm rise

M-C-3 = Medium-Cutoff-Type 3 light distribution

BL = Base plate to Luminaire height.

H(n) = Handhole orientation measured from luminaire arm clockwise direction (n=angle in degrees)

NOTE:
See T.R.S. Dwg. 18552 Thru 18591 for Signal and Detector Plans



POLE HEIGHT VERIFICATION

Note: Slope may vary per pole location

Traffic Section Approval

REGISTERED PROFESSIONAL ENGINEER
87,105
OREGON
NOV. 13, 2012
CHRISTINA L. LAFLEUR

RENEWS: 12-31-2018

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HILLSBORO-SILVERTON, PACIFIC HWY WEST & SALMON RIVER HWYS.
YAMHILL COUNTY

Reviewed By -S. Cramer
Designed By -C. LaFleur
Drafted By -C. LaFleur

FC: 000
MP: 000

TSSU NO. 00000

LEGEND

T.R.S. DWG. NO. 18551

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INTERCONNECT PLAN

HILLSBORO-SILVERTON HWY. AT
SPRINGBROOK RD./INDUSTRIAL PKWY.
OR219 M.P. 21.60
NEWBERG

HILLSBORO-SILVERTON HWY. AT
SALMON RIVER HWY.
OR219 M.P. 22.13
NEWBERG

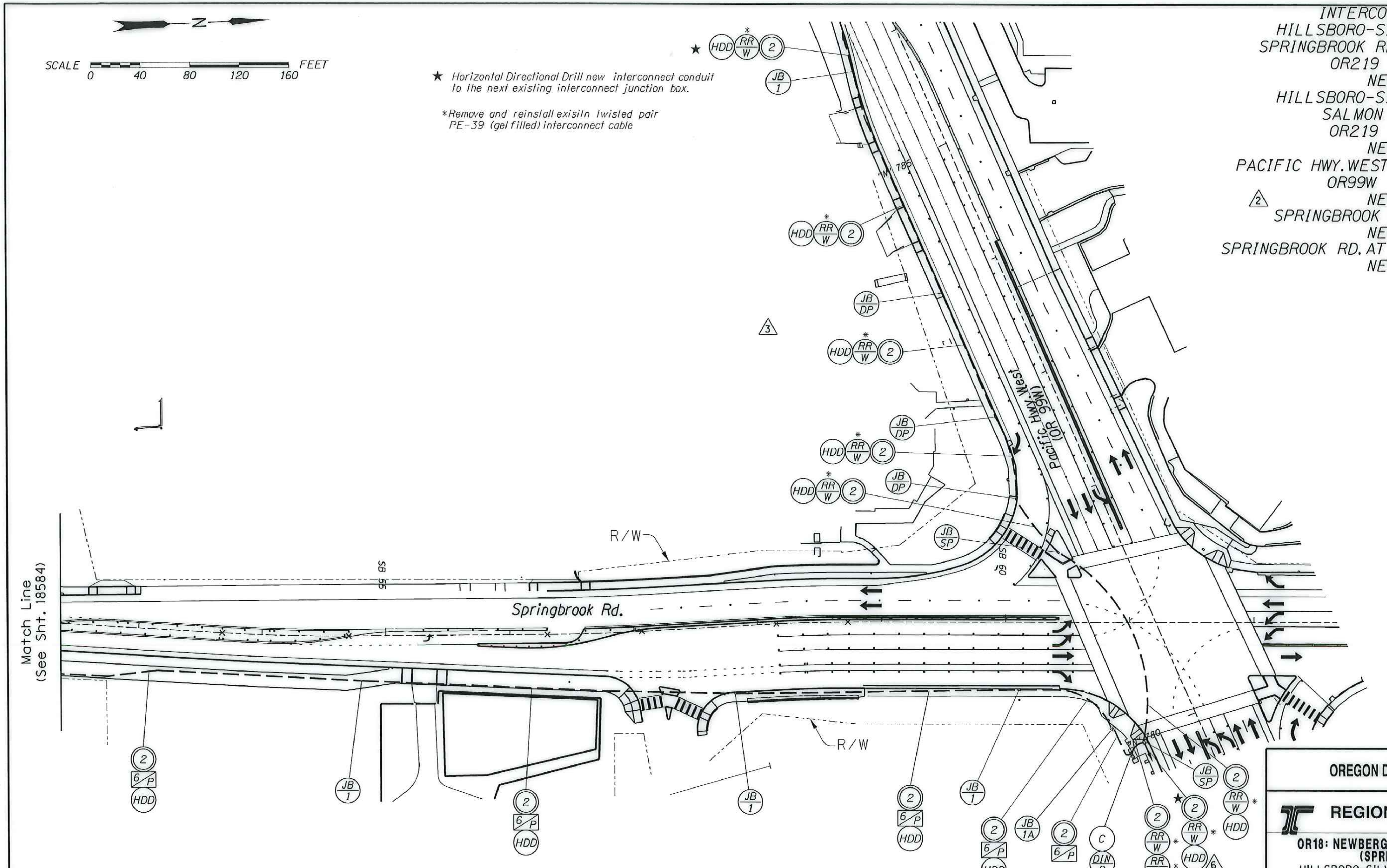
PACIFIC HWY. WEST AT SPRINGBROOK RD.
OR99W M.P. 22.03
NEWBERG

SPRINGBROOK RD. AT HAYES ST.
NEWBERG

SPRINGBROOK RD. AT 2ND ST./FERNWOOD ST.
NEWBERG

★ Horizontal Directional Drill new interconnect conduit to the next existing interconnect junction box.

*Remove and reinstall exisitn twisted pair PE-39 (gel filled) interconnect cable



Rev. No.	Description	Date	Engineer
2	Removed Wilsonville Rd from Sheet Heading	3/31/16	C.L.L.
3	Added interconnect conduit along OR99W.	10/17/16	C.L.L.
6	Added interconnect conduit along OR99W.	6/23/17	C.L.L.

"UTILITIES NOT SHOWN"
See Utility Plan Sheet

NOTE:
See T.R.S. Dwg. 18550 & 18551 for Legend

NOTE:
Field Verify Measurements Before Construction

Traffic Section Approval

REGISTERED PROFESSIONAL ENGINEER
87,105
OREGON
NOV. 13, 2012
CHRISTINA L. LAFLEUR
RENEWS: 12-31-2018

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Reviewed By -S. Cramer
Designed By -C. LaFleur
Drafted By -C. LaFleur

FC: 000
MP: 000

TSSU NO. 00000

INTERCONNECT PLAN

T.R.S. DWG. NO. 18585