



INVITATION TO BID #2018-39
Hwy 224 at Springwater Road Signal Installation
ADDENDUM NUMBER 1
May 7, 2018

On April 19, 2018, Clackamas County ("County") published Invitation to Bid #2018-39 ("BID"). The County has found that it is in its interest to amend the BID through the issuance of this Addendum #1. Except as expressly amended below, all other terms and conditions of the original BID shall remain unchanged.

1. In the Special Provision, page iii (3), in the Table of Contents, SECTION 00294 - CONTAMINATED MEDIA...(pg.46) was omitted.

Please Note; SECTION 00294 - CONTAMINATED MEDIA is part of the Special Provisions.

2. In Section 00130 of the Standard Specifications, modify as follows;
00130.90 Notice to Proceed- Delete the first paragraph and replace with the following;

Notice to proceed only allows the contractor limited access to the site. Due to another adjacent project, the worksite will not be fully available to the contractor until September 1st. This other project is reconstruction of the approaches to the Springwater Rd. (Carver) Bridge. If Contractor chooses to work prior to September 1st, contractor will need to coordinate work zone traffic control with the Bridge Approach contractor who will have work zone access control till September 1st.

3. In Section 00150 of the Standard Specifications, modify as follows;
00150.55 Cooperation with Other Contractors- Delete the last paragraph and replace with the following;

Due to another adjacent project, the worksite will not be fully available to the contractor until September 1st. This other project is reconstruction of the approaches to the Springwater Rd. (Carver) Bridge. If Contractor chooses to work prior to September 1st, contractor will need to coordinate work zone traffic control with the Bridge Approach contractor who will have work zone access control till September 1st.

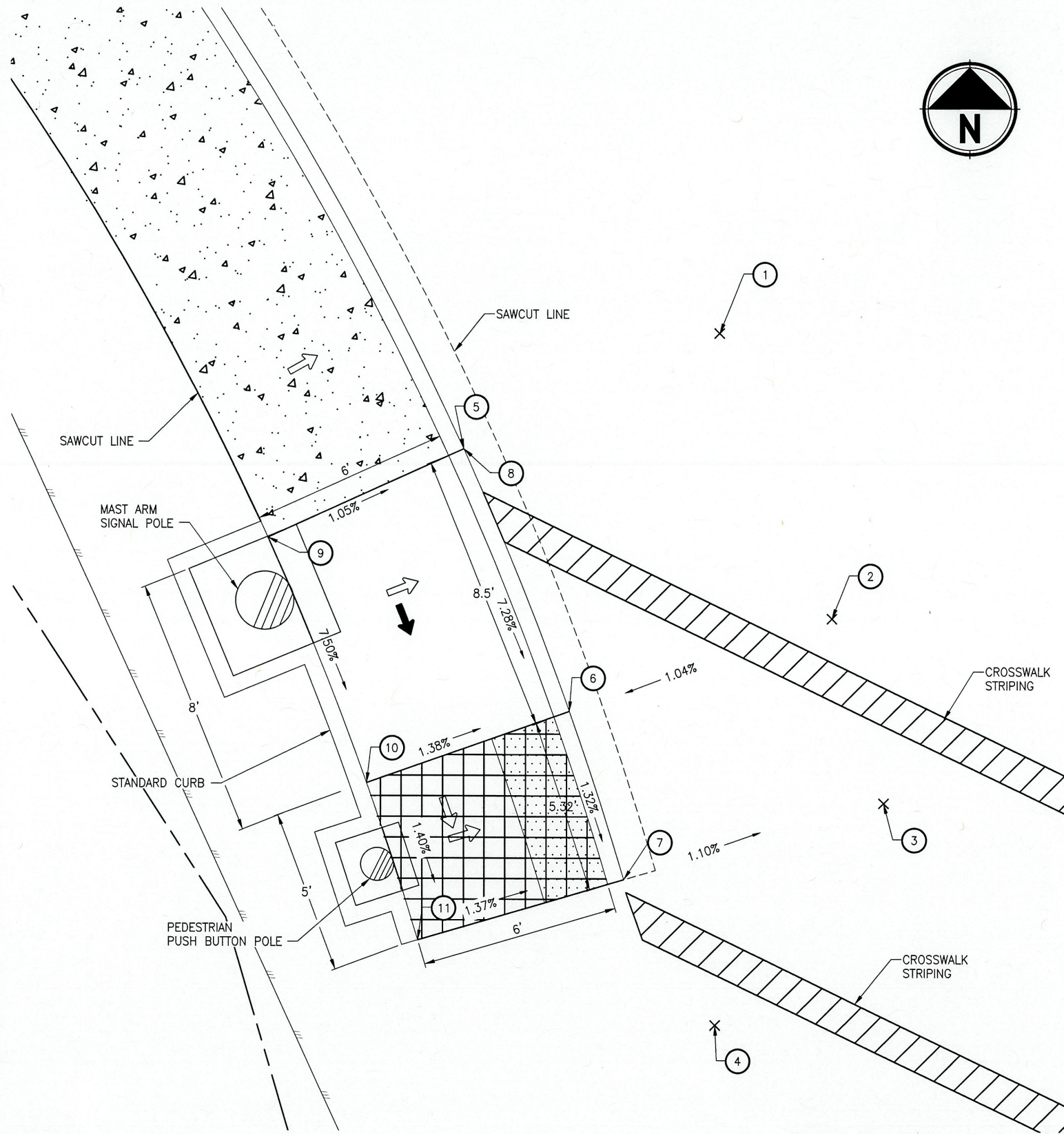
The following changes are made to the Project Plans:

Plan sheets No. 2B-4, 2B-5, 2B-6, 2B-7, 2B-8, ST, TS01, TS02, TS03, TS04 and TS05 are replaced with the attached revised plan sheets No. 2B-4, 2B-5, 2B-6, 2B-7, 2B-8, ST, TS01, TS02, TS03, TS04 and TS05 all dated 04/25/20183

These changes will be included in the Contract for this Project. It is understood that your Bid will be submitted accordingly.

Attachments: New Plan Sheets No. 2B-4, 2B-5, 2B-6, 2B-7, 2B-8, ST, TS01, TS02, TS03, TS04 and TS05 all dated 04/25/20183

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LRM: 17100100
M.P.: 9.30
CORNER POSITION: 1
RAMP NUMBER: 2

LEGEND:

- SIDEWALK
- TURNING SPACE
- MARKED CROSSING LOCATION
- TRUNCATED DOME DETECTABLE WARNING SURFACE
- SLOPE 1.5% MAX
- SLOPE 7.5% MAX.

CONSTRUCTION NOTES:

1. SLOPES HOLD OVER ELEVATIONS
2. SEE STD. DWG. RD754 FOR DETAILS NOT SHOWN
3. SEE SHEET 2B-2 FOR CURB DETAIL

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
1	12+15.45	18.45' RT.	141.75'	FG SPOT ELEVATION
2	12+22.76	23.28' RT.	141.39'	FG SPOT ELEVATION
3	12+26.88	26.89' RT.	141.14'	FG SPOT ELEVATION
4	12+26.62	35.34' RT.	140.71'	FG SPOT ELEVATION
5	12+11.86	26.01' RT.	141.34'	CURB FL
6	12+18.52	30.3' RT.	141.30'	CURB FL/TOP OF CURB (TOC)
7	12+22.39	33.39' RT.	141.23'	CURB FL/TOP OF CURB (TOC)
8	12+11.86	26.01' RT.	141.92'	TOP OF CURB (TOC)
9	12+09.26	31.83' RT.	141.99'	BACK OF WALK
10	12+15.39	35.76' RT.	141.39'	BACK OF WALK
11	12+18.98	38.59' RT.	141.32'	BACK OF WALK

RAMP DETAILS

OR 224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 02/28/18 PROJECT NO: 274-1751-017

CLACKAMAS COUNTY

DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045



M. BARBARA CARTMILL ACTING DIRECTOR

DESIGNED BY: JP
DRAFTED BY: MS
CHECKED BY: STAFF

REVISIONS

NO DATE: 04/25/18
ADDENDUM #1 - SHEET REVISED

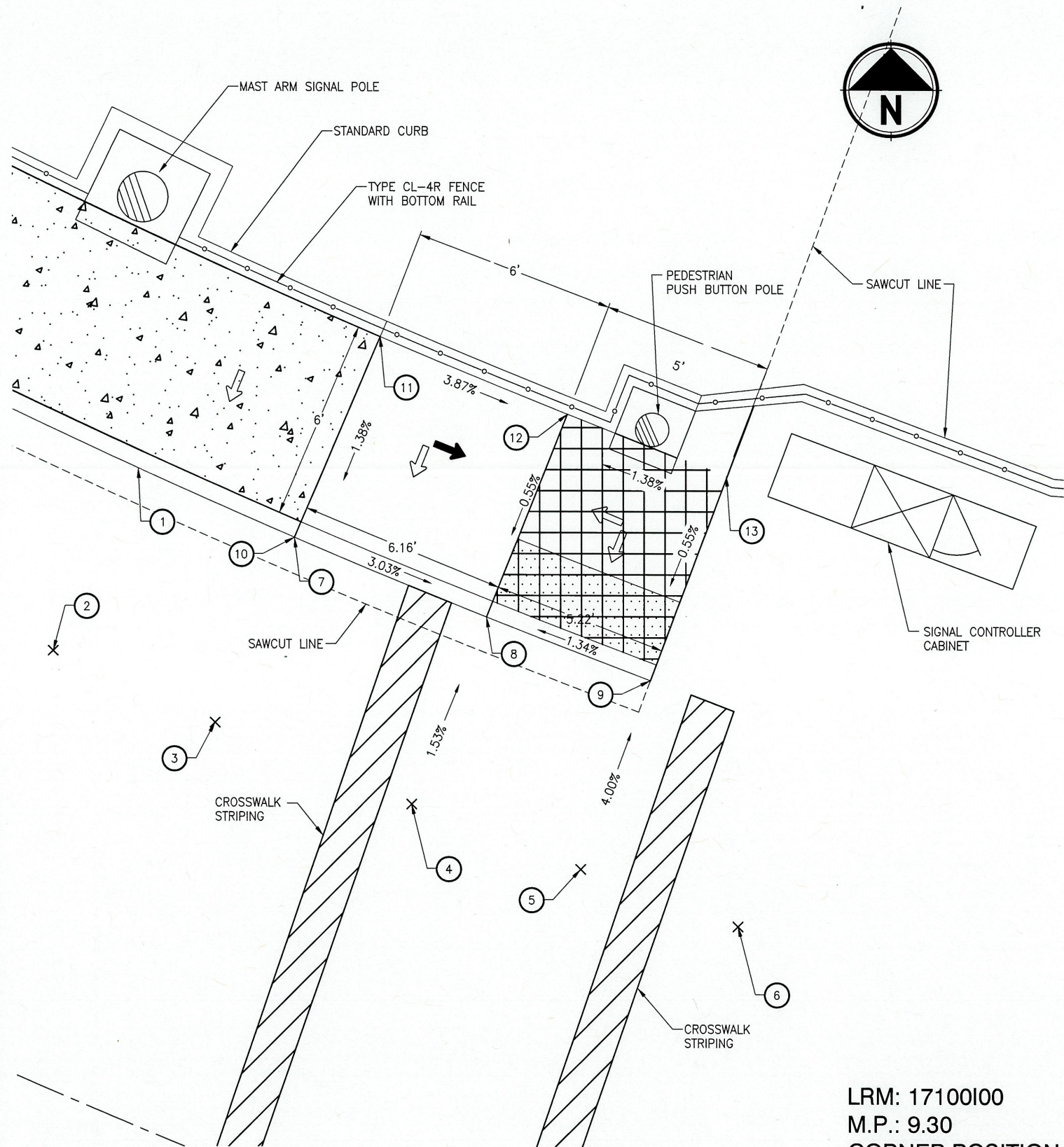
Sheet No.

2B-4

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES



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LRM: 17100I00
M.P.: 9.30
CORNER POSITION: 3
RAMP NUMBER: 1

LEGEND:

- SIDEWALK
- TURNING SPACE
- MARKED CROSSING LOCATION
- TRUNCATED DOME DETECTABLE WARNING SURFACE
- SLOPE 1.5% MAX
- SLOPE 7.5% MAX.

CONSTRUCTION NOTES:

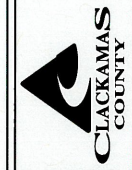
- SLOPES HOLD OVER ELEVATIONS
- SEE STD. DWG. RD754 FOR DETAILS NOT SHOWN
- SEE SHEET 2B-2 FOR CURB DETAIL

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
1	12+73.94	18' LT.	142.94'	CURB FL
2	12+73.94	12' LT.	143.17'	FG SPOT ELEVATION
3	12+79.48	12' LT.	143.38'	FG SPOT ELEVATION
4	12+86.14	12' LT.	143.63'	FG SPOT ELEVATION
5	12+91.78	12' LT.	143.85'	FG SPOT ELEVATION
6	12+97.03	12' LT.	144.06'	SAWCUT
7	12+79.48	18' LT.	143.14'	CURB FL
8	12+86.14	18' LT.	143.54'	CURB FL/TOP OF CURB (TOC)
9	12+91.78	18' LT.	143.61'	CURB FL/TOP OF CURB (TOC)
10	12+79.48	18' LT.	143.72'	TOP OF CURB (TOC)
11	12+79.48	24.5' LT.	143.81'	BACK OF WALK
12	12+86.14	24.5' LT.	143.58'	BACK OF WALK
13	12+91.78	24.5' LT.	143.65'	BACK OF WALK

RAMP DETAILS

OR 224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

CLACKAMAS COUNTY
DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045



M. BARBARA CARTMILL ACTING DIRECTOR

DESIGNED BY: JP
DRAFTED BY: MS
CHECKED BY: STAFF

REVISIONS

NO	DATE	ADDENDUM #1 - SHEET REVISED
1	04/25/18	

Sheet No. 2B-5



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LEGEND:

- SIDEWALK
- TURNING SPACE
- MARKED CROSSING LOCATION
- TRUNCATED DOME DETECTABLE WARNING SURFACE
- SLOPE 1.5% MAX
- SLOPE 7.5% MAX.

CONSTRUCTION NOTES:

- SLOPES HOLD OVER ELEVATIONS
- SEE STD. DWG. RD756 FOR DETAILS NOT SHOWN
- SEE SHEET 2B-2 FOR CURB DETAIL

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
1	12+61.58	30.32' RT.	140.15	FG SPOT ELEVATION
2	12+61.58	20.42' RT.	141.46'	FG SPOT ELEVATION
3	12+61.58	1.50' RT.	142.75'	FG SPOT ELEVATION
4	12+74.17	33.08' RT.	140.83'	TOP OF CURB (TOC)
5	12+74.17	33.08' RT.	141.41'	CURB FL
6	12+75.79	28.11' RT.	142.08'	CURB FL/TOP OF CURB (TOC)
7	12+79.90	22.46' RT.	142.44'	CURB FL/TOP OF CURB (TOC)
8	12+82.87	20.25' RT.	142.82'	CURB FL
9	12+84.12	19.59' RT.	142.97'	CURB FL
10	12+82.87	20.25' RT.	143.07'	TOP OF CURB (TOC)
11	12+84.12	19.59' RT.	143.22'	TOP OF CURB (TOC)
12	12+80.64	27.83' RT.	142.43'	BACK OF WALK
13	12+88.76	27.10' RT.	143.05'	BACK OF WALK
14	12+92.36	26.87' RT.	143.11'	BACK OF WALK
15	12+92.14	21.88' RT.	143.18'	GRADE BREAK
16	12+88.47	22.11' RT.	143.12'	GRADE BREAK

LRM: 17100I00
M.P.: 9.30
CORNER POSITION: 2
RAMP NUMBER: 1



RAMP DETAILS

OR 224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 02/28/18 PROJECT NO.: 274-1751-017

CLACKAMAS COUNTY
DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
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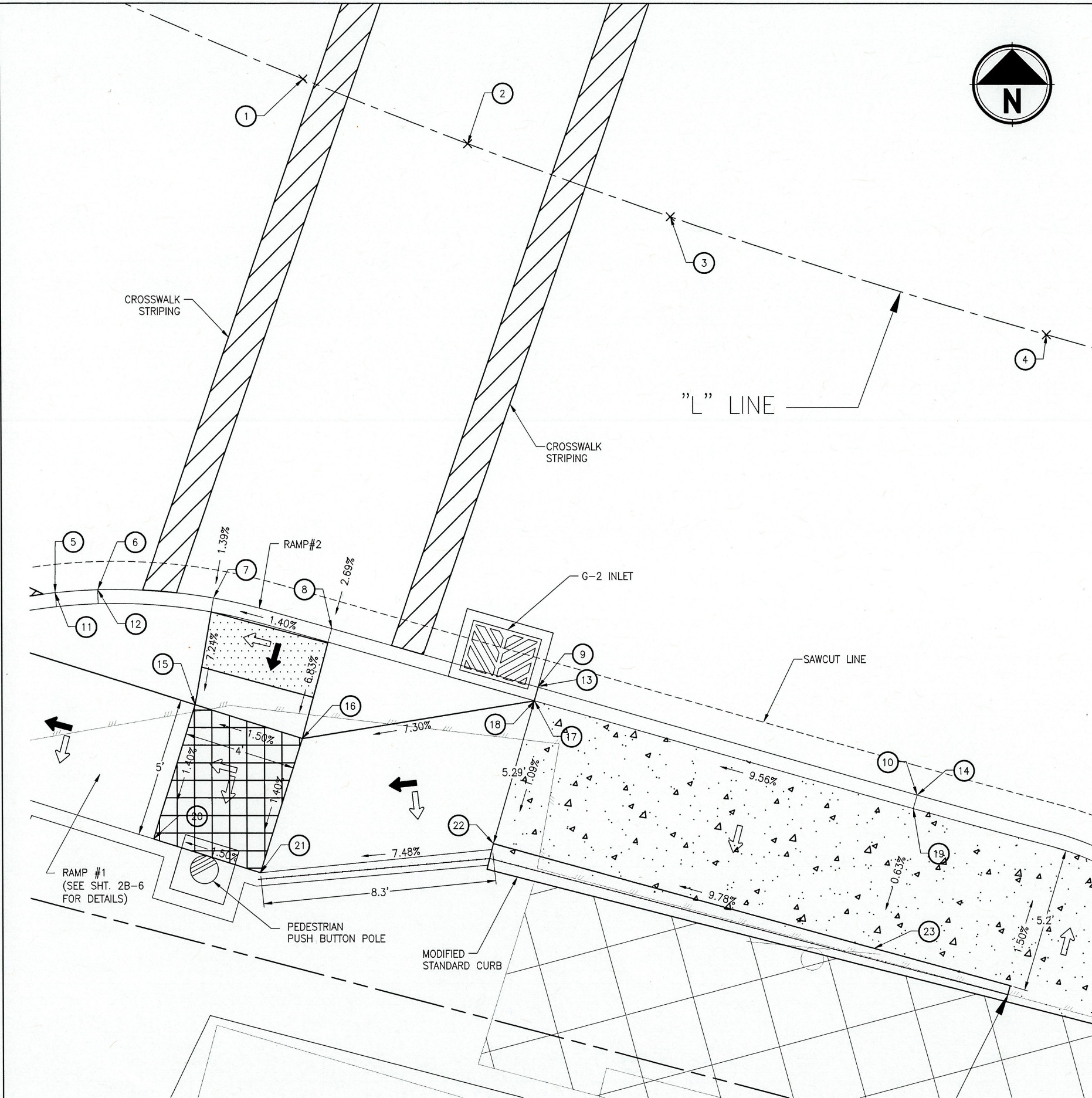
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REVISIONS

NO.	DATE:	ADDENDUM #1 - SHEET REVISED
1	04/25/18	

Sheet No. 2B-6

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LEGEND:

- SIDEWALK
TURNING SPACE
MARKED CROSSING LOCATION
TRUNCATED DOME DETECTABLE WARNING SURFACE
SLOPE 1.5% MAX
SLOPE 7.5% MAX.

CONSTRUCTION NOTES:

- SLOPES HOLD OVER ELEVATIONS
- SEE STD. DWG. RD754 FOR DETAILS NOT SHOWN
- SEE SHEET 2B-2 FOR CURB DETAIL

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
1	12+84.08	0'	143.65'	FG SPOT ELEVATION
2	12+90.36	0'	143.91'	FG SPOT ELEVATION
3	12+98.00	0'	144.22'	FG SPOT ELEVATION
4	13+12.00	0'	144.81'	FG SPOT ELEVATION
5	12+82.87	20.25' RT.	142.82'	CURB FL
6	12+84.12	19.59' RT.	142.97'	CURB FL
7	12+87.77	18.33' RT.	143.37'	CURB FL/TOP OF CURB (TOC)
8	12+91.79	17.85' RT.	143.43'	CURB FL/TOP OF CURB (TOC)
9	12+98.90	17.35' RT.	143.71'	CURB FL
10	13+12.00	17.00' RT.	144.54'	CURB FL
11	12+82.87	20.25' RT.	143.07'	TOP OF CURB (TOC)
12	12+84.12	19.59' RT.	143.22'	TOP OF CURB (TOC)
13	12+98.90	17.35' RT.	144.29'	TOP OF CURB (TOC)
14	13+12.00	17.00' RT.	145.12'	TOP OF CURB (TOC)
15	12+88.47	22.11' RT.	143.12'	GRADE BREAK
16	12+92.14	21.88' RT.	143.18'	GRADE BREAK
17	12+98.90	17.85' RT.	144.30'	BACK OF CURB
18	12+98.90	17.85' RT.	143.79'	WALK
19	13+12.00	17.5' RT.	145.13'	BACK OF CURB/WALK
20	12+88.75	27.1' RT.	143.05'	BACK OF WALK
21	12+92.36	26.87' RT.	143.11'	BACK OF WALK
22	12+99.14	23.13' RT.	143.73'	BACK OF WALK
23	13+12.00	22.72' RT.	145.09'	BACK OF WALK

LRM: 17100I00
M.P.: 9.30
CORNER POSITION: 2
RAMP NUMBER: 2

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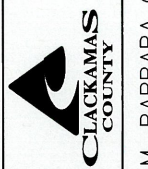
REVISIONS

NO.	DATE:	DESCRIPTION
1	04/25/18	ADDENDUM #1 - SHEET REVISED

Sheet No. 2B-7

CLACKAMAS COUNTY

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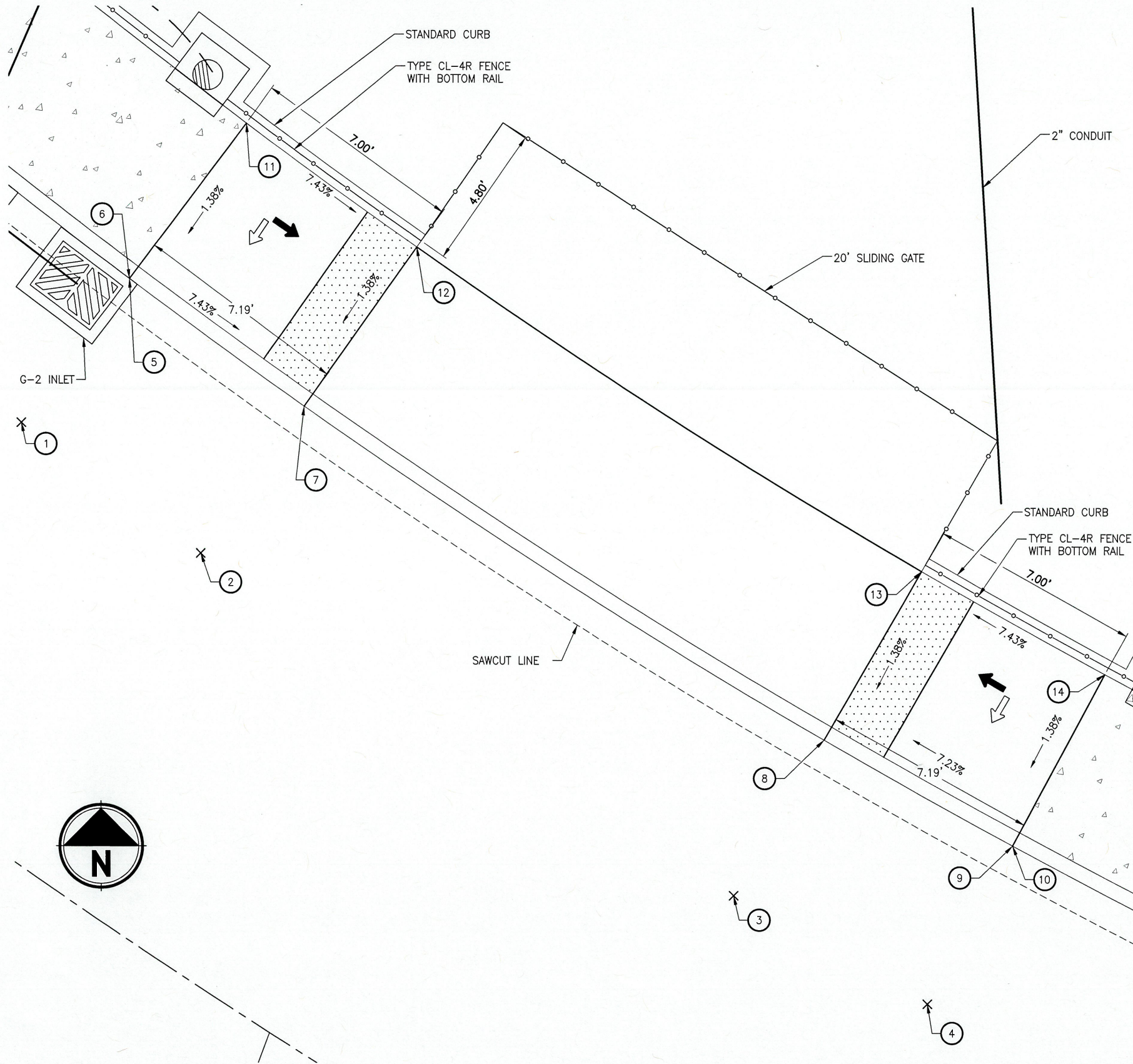
M. BARBARA CARTMILL
ACTING DIRECTOR

RAMP DETAILS

OR 224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 02/28/18 PROJECT NO.: 274-1751-017

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LEGEND:

- SIDEWALK
TRUNCATED DOME DETECTABLE WARNING SURFACE
SLOPE 1.5% MAX
SLOPE 7.5% MAX.

CONSTRUCTION NOTES:

- SLOPES HOLD OVER ELEVATIONS
- SEE STD. DWG. RD754 FOR DETAILS NOT SHOWN
- SEE SHEET 2B-2 FOR CURB DETAIL

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
1	12+19.56	12' LT.	142.07'	FG SPOT ELEVATION
2	12+27.32	12' LT.	142.06'	FG SPOT ELEVATION
3	12+49.49	12' LT.	142.4'	FG SPOT ELEVATION
4	12+57.25	12' LT.	142.54'	FG SPOT ELEVATION
5	12+19.56	18' LT.	142.03	CURB FL
6	12+19.56	18' LT.	142.53	TOP OF CURB (TOC)
7	12+27.32	18' LT.	142.10	CURB FL/TOP OF CURB (TOC)
8	12+49.49	18' LT.	142.36	CURB FL/TOP OF CURB (TOC)
9	12+57.25	18' LT.	142.38	CURB FL
10	12+57.25	18' LT.	142.88	TOP OF CURB (TOC)
11	12+19.56	24.5' LT.	142.62	BACK OF WALK
12	12+27.32	24.5' LT.	142.10	BACK OF WALK
13	12+49.49	24.5' LT.	142.45	BACK OF WALK
14	12+57.25	24.5' LT.	142.97	BACK OF WALK

LRM: 17100100
M.P.: 9.30

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DRIVEWAY DETAILS

OR 224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 02/28/18 PROJECT NO.: 274-1751-017

CLACKAMAS COUNTY

DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045



M. BARBARA CARTMILL ACTING DIRECTOR

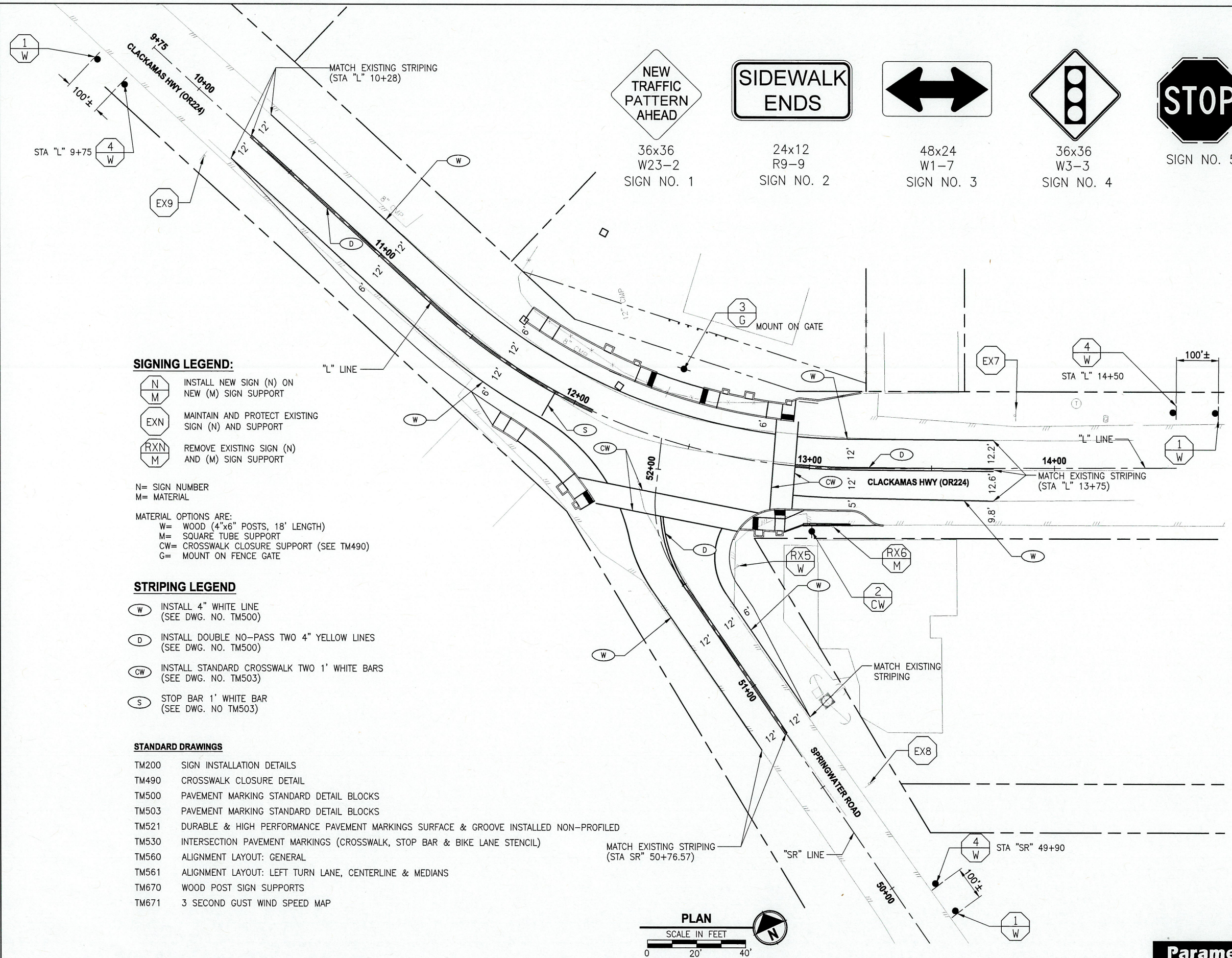
DESIGNED BY: JP
DRAFTED BY: MS
CHECKED BY: STAFF

REVISIONS

NO.	DATE	DESCRIPTION
1	04/25/18	ADDENDUM #1 - SHEET REVISED

Sheet No.

2B-8



SIGNING LEGEND:

- INSTALL NEW SIGN (N) ON NEW (M) SIGN SUPPORT
- MAINTAIN AND PROTECT EXISTING SIGN (N) AND SUPPORT
- REMOVE EXISTING SIGN (N) AND (M) SIGN SUPPORT

N= SIGN NUMBER
M= MATERIAL

MATERIAL OPTIONS ARE:
W= WOOD (4"x6" POSTS, 18' LENGTH)
M= SQUARE TUBE SUPPORT
CW= CROSSWALK CLOSURE SUPPORT (SEE TM490)
G= MOUNT ON FENCE GATE

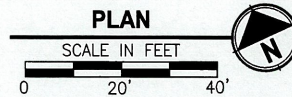
STRIPING LEGEND

- INSTALL 4" WHITE LINE (SEE DWG. NO. TM500)
- INSTALL DOUBLE NO-PASS TWO 4" YELLOW LINES (SEE DWG. NO. TM500)
- INSTALL STANDARD CROSSWALK TWO 1' WHITE BARS (SEE DWG. NO. TM503)
- STOP BAR 1' WHITE BAR (SEE DWG. NO TM503)

STANDARD DRAWINGS

- TM200 SIGN INSTALLATION DETAILS
- TM490 CROSSWALK CLOSURE DETAIL
- TM500 PAVEMENT MARKING STANDARD DETAIL BLOCKS
- TM503 PAVEMENT MARKING STANDARD DETAIL BLOCKS
- TM521 DURABLE & HIGH PERFORMANCE PAVEMENT MARKINGS SURFACE & GROOVE INSTALLED NON-PROFIED
- TM530 INTERSECTION PAVEMENT MARKINGS (CROSSWALK, STOP BAR & BIKE LANE STENCIL)
- TM560 ALIGNMENT LAYOUT: GENERAL
- TM561 ALIGNMENT LAYOUT: LEFT TURN LANE, CENTERLINE & MEDIANS
- TM670 WOOD POST SIGN SUPPORTS
- TM671 3 SECOND GUST WIND SPEED MAP

MATCH EXISTING STRIPING
(STA SR" 50+76.57)



NEW TRAFFIC PATTERN AHEAD
36x36
W23-2
SIGN NO. 1

SIDEWALK ENDS
24x12
R9-9
SIGN NO. 2

48x24
W1-7
SIGN NO. 3

36x36
W3-3
SIGN NO. 4

STOP
SIGN NO. 5

NO PARKING ANY TIME
SIGN NO. 6

20 MPH
SIGN NO. 7

OREGON CITY
PORTLAND
ESTACADA
224
SIGN NO. 8

ESTACADA
SPRINGWATER RD.
CARVER PARK
MCIVER PARK
224
SIGN NO. 9

NOTE:
SIGNS SHOWN WITH BROKEN BORDERS ARE EXISTING SIGNS



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SIGNING & STRIPING PLAN
OR 224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 02/28/18 PROJECT NO.: 274-1751-017

CLACKAMAS COUNTY
DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045
M. BARBARA CARTMILL ACTING DIRECTOR

DESIGNED BY: JP
DRAFTED BY: MK
CHECKED BY: STAFF

REVISIONS

NO	DATE	DESCRIPTION
1	04/25/18	ADDENDUM #1 - SHEET REVISED

Sheet No. **ST**

LEGEND

CONTROLLERS

- 332S

INSTALL A MODEL 332S CABINET AND CONTROL EQUIPMENT WITH RISER FRAME, ORIENT LOUVERED DOOR AS SHOWN.
- C
ATC

INSTALL INTELIGHT MODEL ATC CONTROLLER PART NUMBER 2070-LDX IN MODEL 332S CABINET.
- C

INSTALL CONTROLLER CABINET (SEE SIGNAL PLAN).
- CID

INSTALL RADAR CABINET INTERFACE DEVICE.

POLES

- SM
T

INSTALL (T=TYPE) STANDARD TRAFFIC SIGNAL MAST ARM POLE (SEE "POLE ENTRANCE CHART" ON SHEET TS-04).
- MA
L

INSTALL (L=LENGTH) FOOT TRAFFIC SIGNAL MAST ARM.
- LA
L

INSTALL (L) FT. LUMINAIRE ARM.
- PP

INSTALL PEDESTRIAN SIGNAL PEDESTAL WITH FRANGIBLE BASE.

LUMINAIRES

- LED

INSTALL LED LUMINAIRE ON LUMINAIRE ARM.
- PE
1

INSTALL PHOTO ELECTRONIC CONTROL RELAY INSIDE SERVICE CABINET. SEE STD. DWG. NO. TM465.

SIGNALS

- V
Ph

INSTALL PHASE (Ph) VEHICLE SIGNAL WITH RED, AMBER AND GREEN LEDS.
- C/A
Ph

INSTALL PHASE (Ph) PEDESTRIAN SIGNAL WITH LED COUNTDOWN TIMER INCLUDE PHASE (Ph) AUDIBLE PEDESTRIAN SIGNAL. (SEE "POLE ENTRANCE CHART", DETAIL SHEET TS-04, STANDARD DWG. TM467, AND SPECIAL PROVISIONS).
- C
Ph

INSTALL PHASE (Ph) PEDESTRIAN SIGNAL WITH LED COUNTDOWN TIMER. (SEE "POLE ENTRANCE CHART", DETAIL SHEET TS-04, STANDARD DWG. TM467, AND SPECIAL PROVISIONS).
- A
Ph

INSTALL PHASE (Ph) AUDIBLE PEDESTRIAN SIGNAL. (SEE "POLE ENTRANCE CHART", DETAIL SHEET TS-04, STANDARD DWG. TM467, AND SPECIAL PROVISIONS).

FIRE PREEMPTION

- FN
Ch

INSTALL CHANNEL (Ch=CHANNEL), (N=NUMBER) BARREL FIRE PREEMPTION DETECTOR UNIT.
- FF
Ch

INSTALL CHANNEL (Ch=CHANNEL) FIRE PREEMPTION DETECTOR FEEDER CABLE.

CABINETS

- RTC

INSTALL RECESSED TERMINAL CABINET. (SEE SHEET TS07 AND TS08).
- BMCL

INSTALL BASE MOUNTED SERVICE CABINET, 120/240 VOLT METERED, FOR SIGNAL AND SIGNAL POLE MOUNTED ILLUMINATION SYSTEMS.

HEADS AND BRACKETS

2 = 12"R, 12"Y, 12"G
B = ADJUSTABLE SIGNAL BRACKET ASSEMBLY WITH RAIN CAP(S)
(INSTALL 1" GALVANIZED CHASE NIPPLE)

SIGNS

- CW

INSTALL CROSSWALK CLOSURE BARRICADES WITH SIGNS (BOTH SIDES OF BARRICADE).
- SNS
N

INSTALL STREET NAME SIGN (N) ON MAST ARM. SEE TS04 FOR SIGN DETAILS.

WIRES AND CABLES

- X-N
G

INSTALL (X=NUMBER OF CABLES) CONTROL CABLE(S) WITH (N=NUMBER) (G=AWG WIRE SIZE) AWG CONDUCTORS.
- RCC
T

INSTALL RADAR CONTROL CABLE (T=RADAR).
- LF
X-Ph

INSTALL (X=NUMBER OF CABLES) PHASE (Ph=PHASE) LOOP FEEDER CABLES.
- N
G

INSTALL (N=NUMBER) NO. (G=AWG WIRE SIZE) XHHW WIRES.

JUNCTION BOXES

- JB
1A

INSTALL 17"x10"x12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX.
- JB
2

INSTALL 22"x12"x12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX.
- JB
3T

INSTALL TANDEM 30"x17"x12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOXES (SEE TM472 FOR DETAILS).
- JB
SP

JUNCTION BOX (SEE SIGNAL PLAN).

DETECTION

- LD
Ph

INSTALL PHASE (Ph=PHASE) 6' ROUND VEHICLE DETECTOR LOOP.
- N
LW

INSTALL (N=NUMBER) PAIR OF LOOP WIRES.
- SP
S

INSTALL 6" MAXIMUM SAND POCKET BLOCK-OUT WITH (S=SIZE) INCH CONDUIT TO JUNCTION BOX.
- R-N
T

INSTALL NEAR-RANGE RADAR DETECTOR UNIT (T=RADAR).
- PhT
X

INSTALL PHASE (Ph=PHASE) DETECTION ZONE ON RADAR (T-RADAR) WITH MAXTIME DETECTOR NUMBER (X=NUMBER).

CONDUITS

- S

INSTALL (S=SIZE) INCH CONDUIT.
- W

INSTALL CONDUIT AND WIRE AS REQUIRED BY POWER COMPANY.
- EC

ELECTRICAL CONDUIT (SEE SIGNAL PLAN).
- DC

DETECTOR CONDUIT (SEE DETECTOR PLAN).
- HDD

INSTALL CONDUIT BY HORIZONTAL DIRECTION DRILLING.

ACCOMPANIED BY DWGS: TM450, TM457, TM460, TM462, TM465, TM467, TM470, TM472, TM475, TM480, TM482, TM485, TM490, TM650, TM651, TM652, TM653, TM679, AND T.R.S. DWG. NO. 19783-19789

FC: 171 M.P. 9.30
TSSU# 2C071
T.R.S. DWG. NO. 19782

Traffic Section Approval

DKS

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



SIGNAL PLAN LEGEND
OR224 AT M.P. 9.30
(CLACKAMAS)

REVISIONS

NO.	DATE:	REVISIONS
1	4/25/2018	Revised Sheet

Sheet No.

TS01

CLACKAMAS COUNTY

DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045



M. BARBARA CARTMILL

ACTING DIRECTOR

SIGNAL PLAN LEGEND

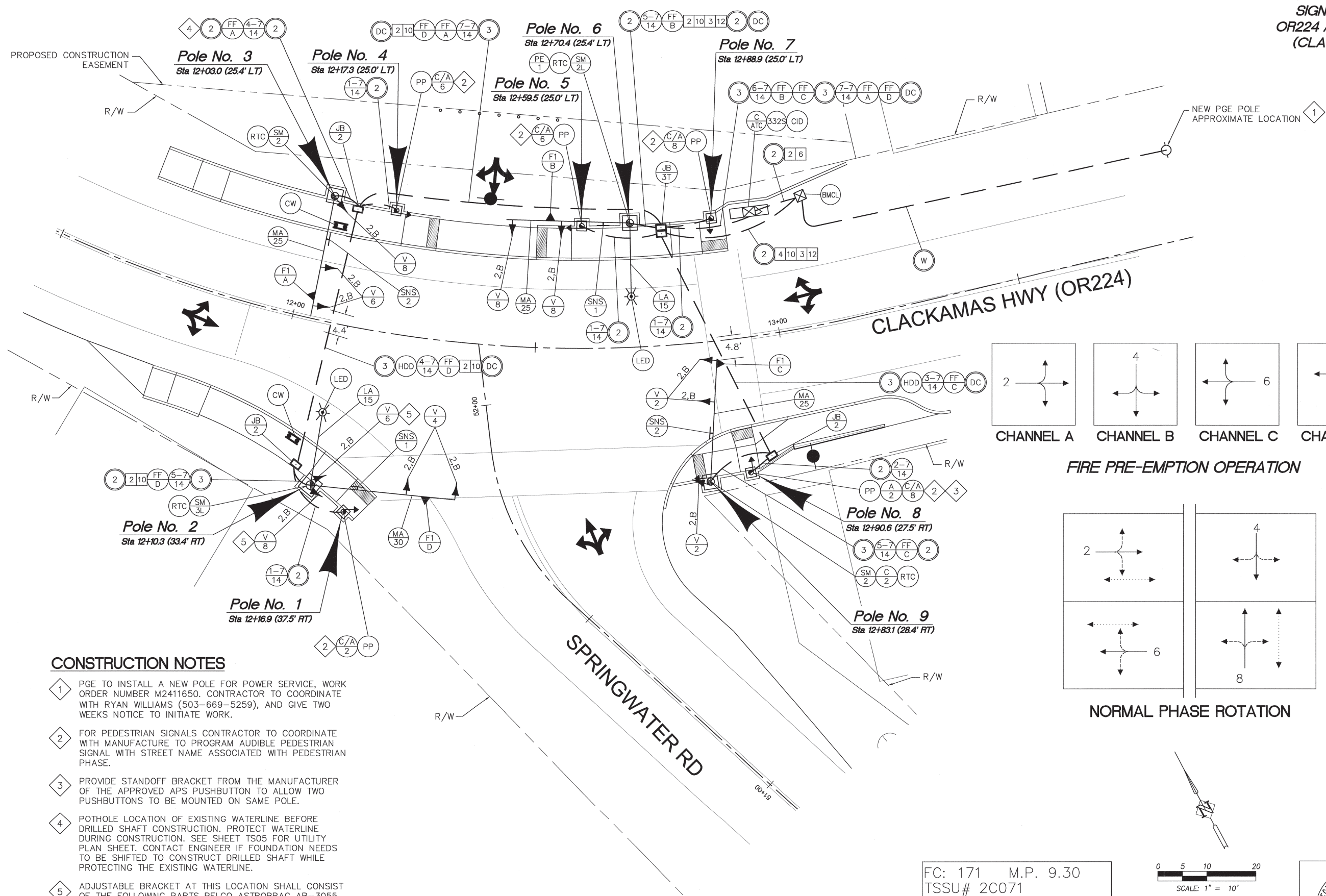
OR224 AT SPRINGWATER

ROAD SIGNAL INSTALLATION

CLACKAMAS HIGHWAY

DATE: 4/25/2018 PROJECT NO.: 274-1751-017

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SIGNAL PLAN
OR224 AT M.P. 9.30
(CLACKAMAS)

SIGNAL PLAN
OR224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 4/25/2018 PROJECT NO.: 274-1751-017

CLACKAMAS COUNTY
DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045



ACTING DIRECTOR

M. BARBARA CARTMILL

DESIGNED BY: JLB
DRAFTED BY: MPZ
CHECKED BY: BKC

REVISIONS

NO. DATE:

1 4/25/2018 Revised Sheet

Sheet No.

TS02

CONSTRUCTION NOTES

- 1 PGE TO INSTALL A NEW POLE FOR POWER SERVICE, WORK ORDER NUMBER M2411650. CONTRACTOR TO COORDINATE WITH RYAN WILLIAMS (503-669-5259), AND GIVE TWO WEEKS NOTICE TO INITIATE WORK.
- 2 FOR PEDESTRIAN SIGNALS CONTRACTOR TO COORDINATE WITH MANUFACTURE TO PROGRAM AUDIBLE PEDESTRIAN SIGNAL WITH STREET NAME ASSOCIATED WITH PEDESTRIAN PHASE.
- 3 PROVIDE STANDOFF BRACKET FROM THE MANUFACTURER OF THE APPROVED APS PUSHBUTTON TO ALLOW TWO PUSHBUTTONS TO BE MOUNTED ON SAME POLE.
- 4 POT HOLE LOCATION OF EXISTING WATERLINE BEFORE DRILLED SHAFT CONSTRUCTION. PROTECT WATERLINE DURING CONSTRUCTION. SEE SHEET TS05 FOR UTILITY PLAN SHEET. CONTACT ENGINEER IF FOUNDATION NEEDS TO BE SHIFTED TO CONSTRUCT DRILLED SHAFT WHILE PROTECTING THE EXISTING WATERLINE.
- 5 ADJUSTABLE BRACKET AT THIS LOCATION SHALL CONSIST OF THE FOLLOWING PARTS PELCO ASTROBRAC AB-3055 CLAMP KIT, AB-2003 TUBE KIT, AND AB-4012 ARM KIT. ORDER "STAINLESS" CABLE AND "PROCESS NO COLOR" COATING.

NOTE:
See Plan Sheet No. TS01 (T.R.S.
DWG. NO. 19782) for Legend

"UTILITIES NOT SHOWN"
See Utility Plan Sheet

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T.R.S. DWG. NO. 19783

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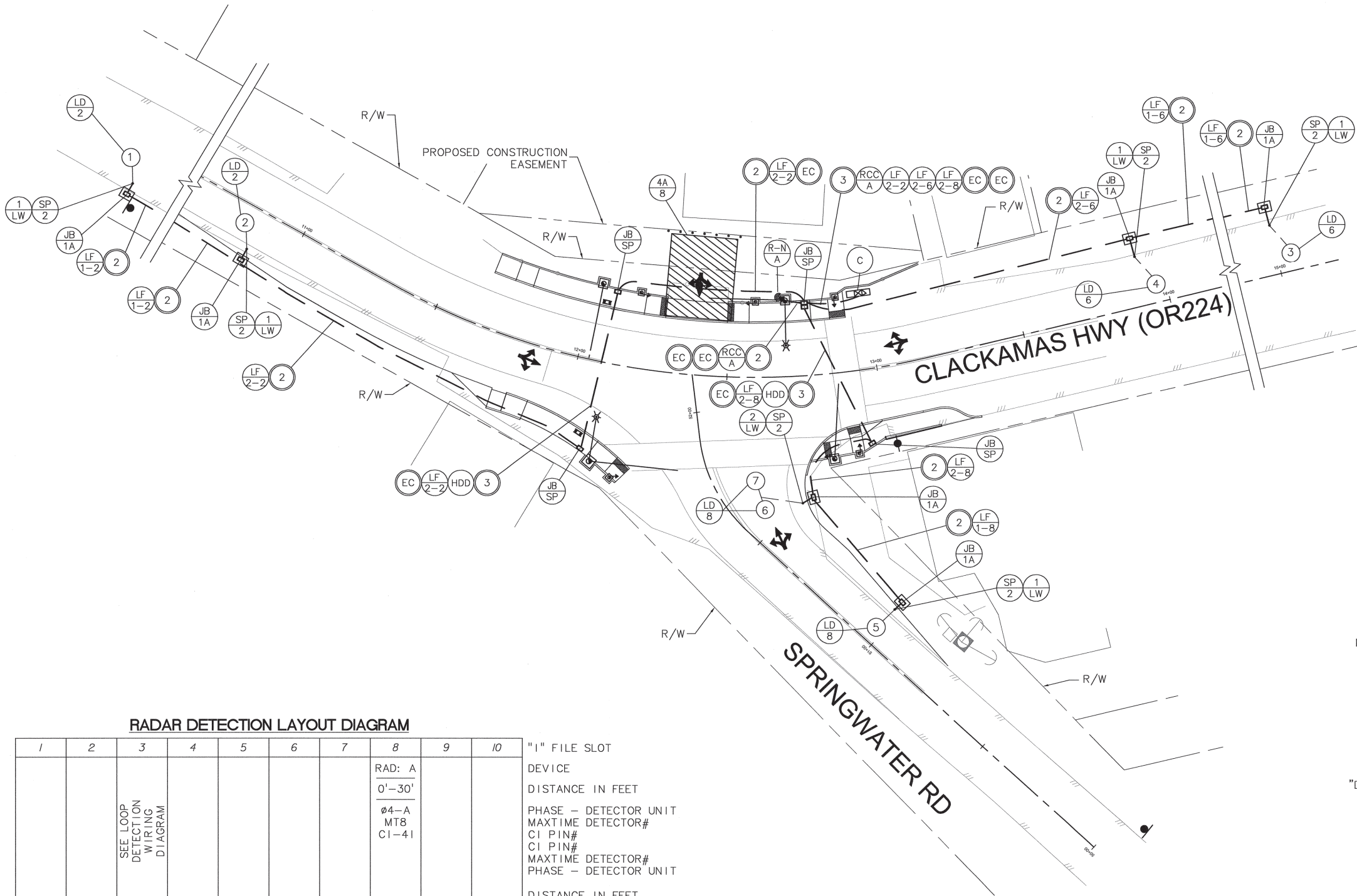
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DETECTOR PLAN
OR224 AT M.P. 9.30
(CLACKAMAS)



RADAR DETECTION LAYOUT DIAGRAM

1	2	3	4	5	6	7	8	9	10
		SEE LOOP DETECTION WIRING DIAGRAM					RAD: A 0'-30' Ø4-A MT8 CI-41		
		SEE LOOP DETECTION WIRING DIAGRAM					SEE LOOP DETECTION WIRING DIAGRAM		

DEVICE: RAD: T = RADAR DETECTOR CARDS (T = RADAR UNIT)

"I" FILE SLOT
DEVICE
DISTANCE IN FEET
PHASE - DETECTOR UNIT
MAXTIME DETECTOR#
CI PIN#
CI PIN#
MAXTIME DETECTOR#
PHASE - DETECTOR UNIT
DISTANCE IN FEET
"J" FILE SLOT
DEVICE
DISTANCE IN FEET
PHASE - DETECTOR UNIT
MAXTIME DETECTOR#
CI PIN#
CI PIN#
MAXTIME DETECTOR#
PHASE - DETECTOR UNIT
DISTANCE IN FEET

NOTE:
See Plan Sheet No. TS01 (T.R.S.
DWG. NO. 19782) for Legend

"UTILITIES NOT SHOWN"
See Utility Plan Sheet

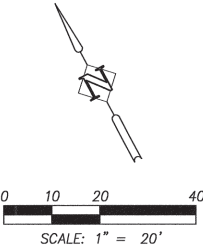
FC: 171 M.P. 9.30
TSSU# 2C071
T.R.S. DWG. NO. 19784
Traffic Section Approval

LOOP DETECTOR WIRING DIAGRAM

Loop Number	Distance (Feet)	Phase	Slot	MT
1	220	2	I3U	2
2	110	2	I3L	3
3	220	6	J3U	16
4	110	6	J3L	17
5	75	8	J8U	22
6	15	8	J8L	23
7	5			

CONTROLLER CABINET

"DISTANCE" IS FROM STOP LINE TO CENTER OF LOOP
IN FEET. CENTER ALL LOOPS IN TRAVEL LANES.



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Sheet No.
TS03

CLACKAMAS COUNTY

DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045



M. BARBARA CARTMILL ACTING DIRECTOR

DETECTOR PLAN

OR224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 4/25/2018 PROJECT NO.: 274-1751-017

POLE ENTRANCE CHART

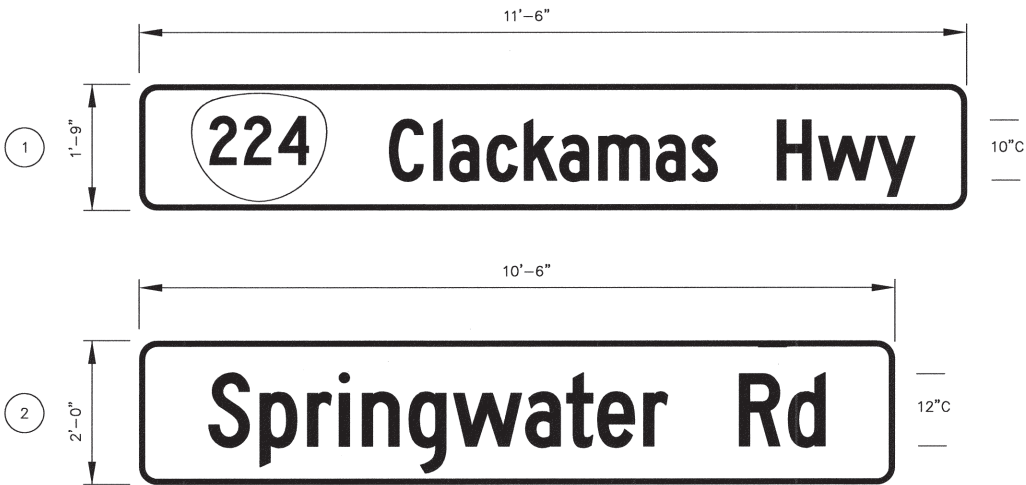
SEE ODOT STANDARD DRAWINGS TM650 THRU TM653			EQUIPMENT ON POLE							EQUIPMENT ON MAST ARM (Length in feet and equipment type)												FOUNDATION INFORMATION (See ODOT Standard Dwg. No. TM653)		LUMINAIRE					
POLE NO.	DWG. NO.	TYPE	MAST ARM DEG.	PED. SIGNAL DEG.	VEH. SIGNAL DEG.	BICYCLE PUSHBUTTON DEG.	PED. PUSHBUTTON DEG.	TERM. CABINET DEG.	RADAR DEG.	PHOTO CELL DEG.	ARM LENGTH	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	FOUNDATION NUMBER	REQUIRED FOUNDATION DEPTH	ARM LENGTH	ARM DEGREE	MOUNTING HEIGHT	TYPE	FIXTURES	
1	02	PP		25			25																						
2	02	SM3L			25/340			180			30	0.5 V2	6.0 F	10.0 V2	20.0 SNS							4	18'	15'	270	30'	LED	3	x
3	02	SM2			315			180			25	2.0 V2	4.0 F	10.0 V2	16.5 SNS							3	12'						
4	02	PP		215			215																						
5	02	PP		215			215																						
6	02	SM2L						180	30	95	25	1.0 V2	7.5 F	11.0 V2	18.0 SNS							3	19'	15'	270	30'	LED	3	x
7	02	PP		290			290																						
8	02	PP		290			295/25																						
9	02	SM2		0	285			90			25	0.5 V2	1.0 F	8.5 V2	16.0 SNS							3	12'						

BRACKET MOUNT
V2 = TRAFFIC SIGNAL TYPE 2, ADJUSTABLE BRACKET MOUNT (SEE STD. DWG. TM462)
SNS = STREET NAME SIGN

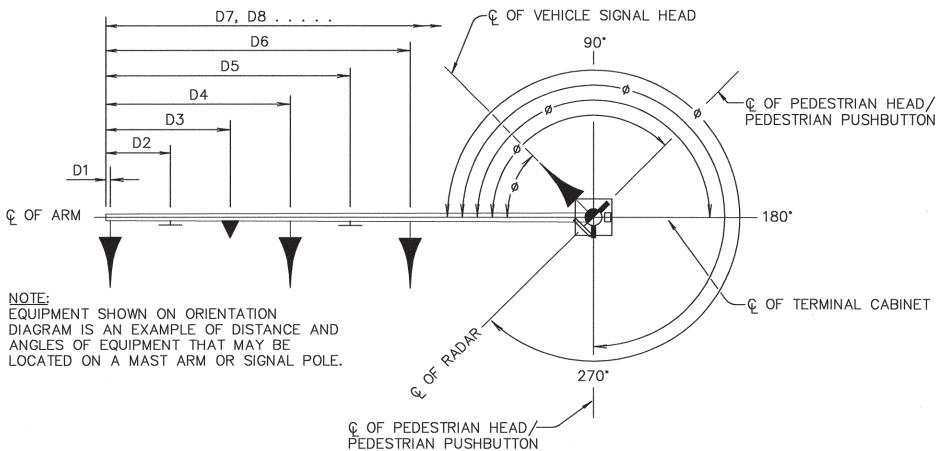
MISC. ITEMS
F = FIRE PREEMPTION (SEE STD. DWG. TM465)
RADN = NEAR-RANGE DETECTOR UNIT

* SEE SPECIFICATIONS FOR APPROVED LUMINAIRES AND WATTAGES.

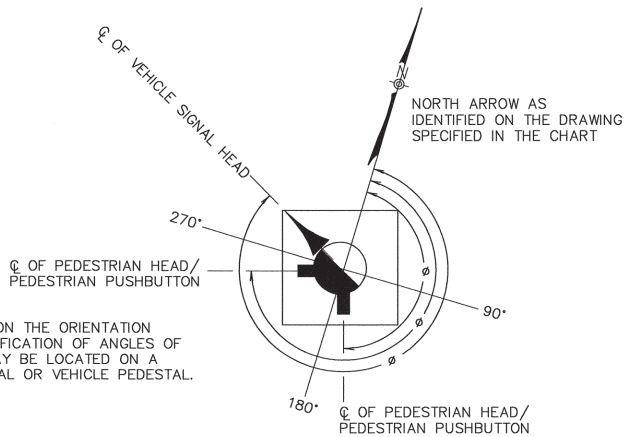
GEO DESIGN PROJECT: CLACKCO-79-01
JAN. 16, 2017



SIGN DETAILS



MAST ARM POLE ORIENTATION DIAGRAM



PEDESTRIAN PEDESTAL/VEHICLE PEDESTAL ORIENTATION DIAGRAM

FC: 171 M.P. 9.30
TSSU# 2C071
T.R.S. DWG. NO. 19785

Traffic Section Approval

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SIGNAL PLAN DETAILS
OR224 AT M.P. 9.30
(CLACKAMAS)

SIGNAL PLAN DETAILS
OR224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 4/25/2018 PROJECT NO.: 274-1751-017

CLACKAMAS COUNTY
DEPT. OF TRANSPORTATION
AND DEVELOPMENT
150 BEAVERCREEK ROAD
OREGON CITY, OR 97045



M. BARBARA CARTMILL ACTING DIRECTOR

DESIGNED BY: JLB
DRAFTED BY: MPZ
CHECKED BY: BKC

REVISIONS

NO DATE: 1 4/25/2018 Revised Sheet

Sheet No.

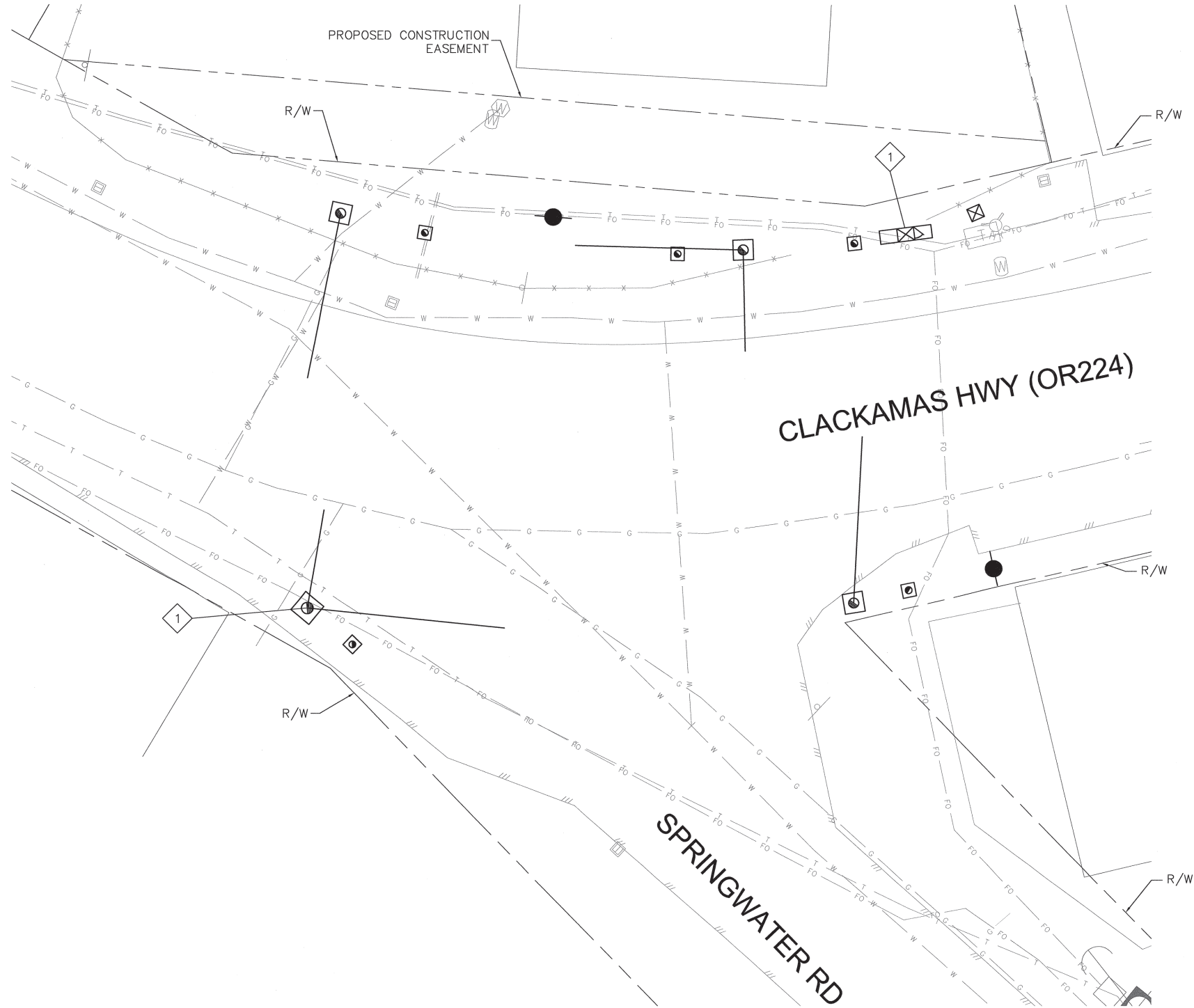
TS04

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CONSTRUCTION NOTES

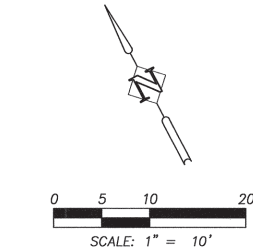
- 1 EXISTING UNDERGROUND UTILITY CONFLICTS WILL BE RELOCATED BY OTHERS.

EXISTING UTILITY PLAN OR224 AT M.P. 9.30 (CLACKAMAS)

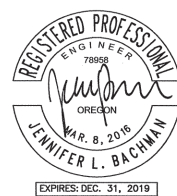


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T.R.S. DWG. NO. 19786

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TS05

CLACKAMAS COUNTY

DEPT. OF TRANSPORTATION
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M. BARBARA CARTMILL
ACTING DIRECTOR

EXISTING UTILITY PLAN
OR224 AT SPRINGWATER
ROAD SIGNAL INSTALLATION
CLACKAMAS HIGHWAY

DATE: 4/25/2018 PROJECT NO.: 274-1751-017