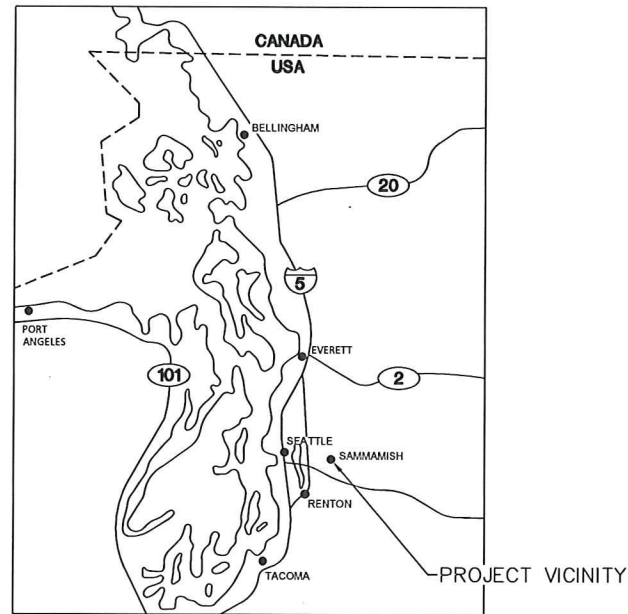


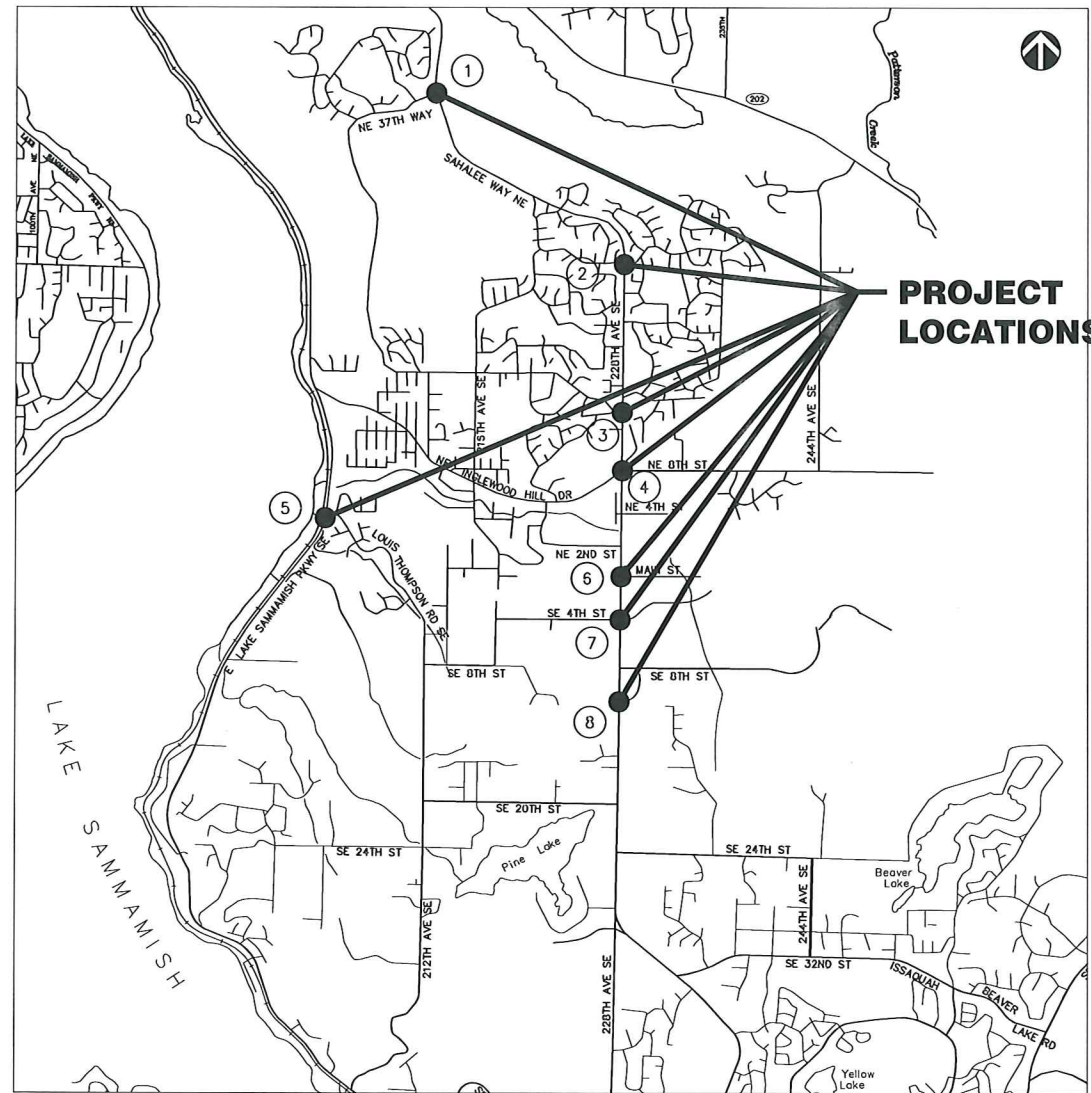


# 2018 FLASHING YELLOW ARROW SIGNALS PROJECT

LOCATION MAP  
NOT TO SCALE



VICINITY MAP  
NOT TO SCALE



SHEET INDEX

TITLE	SHEET NO.
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CITY OFFICIALS

MAYOR: CHRISTIE MALCHOW  
 DEPUTY MAYOR: KAREN MORAN  
 COUNCIL MEMBERS: TOM HORNISH, JASON RITCHIE, CHRIS ROSS, PAMELA STUART, RAMIRO VALDERRAMA  
 CITY MANAGER: LYMAN HOWARD  
 DIRECTOR OF PUBLIC WORKS: STEVE LENISZEWSKI, P.E.  
 PROJECT/TRAFFIC ENGINEER: STEVEN CHEN, P.E.  
 CITY ENGINEER: ANDREW ZAGARS, P.E.

PHONE NUMBERS

FIRE / MEDIC 1 / POLICE	911
SAMMAMISH PUBLIC WORKS	(425) 295-0500
WATER (SAMMAMISH PLATEAU WATER & SEWER DISTRICT)	(425) 392-6256
SEWER (SAMMAMISH PLATEAU WATER & SEWER DISTRICT)	(425) 392-6256
POWER (PUGET SOUND ENERGY)	(425) 417-9188
GAS (PUGET SOUND ENERGY)	(425) 417-9188
COMMUNICATIONS (COMCAST)	(425) 263-5348
COMMUNICATIONS (CENTURY LINK)	(206) 261-1402
U.S. POST OFFICE, ISSAQUAH POSTMASTER	(425) 837-8795
UNDERGROUND UTILITY LOCATES	811

APPROVED BY: \_\_\_\_\_  
 PROJECT ENGINEER: *[Signature]* DATE: 6/21/18  
 CITY ENGINEER: *[Signature]* DATE: 6/21/18  
 DIRECTOR OF PUBLIC WORKS: *[Signature]* DATE: 6/21/18

By: AOW Date: 4:02 PM File: P:\COSA000000023\0400CAD\SHEETS\FLASHING YELLOW SIGNALS\TTCV001\COSA0023\_FY.dwg Layout: CV01

<b>CALL 48 HOURS BEFORE YOU DIG</b> 1-800-424-5555	<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	BY	APPR	REVISION																					JOB#: COSA0023 DSGN: AOW DRN: OXA CHKD: KAHA DATE: 6/21/18 SCALE: AS NOTED	 <b>DAVID EVANS AND ASSOCIATES INC.</b> 14432 SE Eastgate Way, Suite 400 Bellevue Washington 98007 Phone: 425.519.6500			<b>CITY OF SAMMAMISH</b> <b>2018 FLASHING YELLOW ARROW SIGNALS PROJECT</b> KING COUNTY WASHINGTON	CV01           <b>COVER</b>           <b>1 OF 8</b>
	NO.	DATE	BY	APPR	REVISION																											
COVER																																


**GENERAL SITE PLAN NOTES**

1. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PERMIT CONDITIONS, THE SAMMAMISH MUNICIPAL CODE (SMC), THE SAMMAMISH PUBLIC WORKS STANDARDS (PWS) AND THE CONDITIONS OF APPROVAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT (CITY ENGINEER) AND THE CONTRACTOR TO CORRECT ANY ERROR, OMISSION, OR DEVIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS.
2. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THE CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW CHECKLIST. ANY DEVIATION FROM ADOPTED STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY IN WRITING PRIOR TO CONSTRUCTION.
3. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL OF UTILITIES NOT OWNED BY THE CITY (E.G. DOMESTIC WATER CONVEYANCE, SEWER CONVEYANCE, GAS, ELECTRICAL, ETC.).
4. PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CITY OF SAMMAMISH, THE APPLICANT(S), AND THE APPLICANT'S CONSTRUCTION REPRESENTATIVE.
5. A COPY OF THESE APPROVED PLANS SHALL BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. CONSTRUCTION HOURS ARE 7:00 AM TO 8:00 PM MONDAY THROUGH FRIDAY AND 9:00 AM TO 6:00 PM ON SATURDAYS. WORK IS NOT ALLOWED ON SUNDAYS AND SOME HOLIDAYS IN ACCORDANCE WITH SMC 16.05.030. WORK IN THE PUBLIC RIGHT-OF-WAY IS FURTHER RESTRICTED BY THE SPECIAL PROVISIONS PART OF THE CONTRACT PROVISIONS.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY POSSESSION OF ALL NECESSARY CONSTRUCTION EASEMENTS BEFORE INITIATING ANY OFF-SITE WORK.
8. VERTICAL DATUM SHALL BE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) UNLESS OTHERWISE APPROVED BY THE CITY OF SAMMAMISH. HORIZONTAL DATUM SHALL BE IN THE WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, USING NORTH AMERICAN DATUM OF 1983 (NAD 83 (1991)) UNLESS OTHERWISE APPROVED BY THE CITY.
9. NOT USED
10. OPEN CUTTING OF ROADWAYS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY AND NOTED ON THESE APPROVED PLANS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY. WORK IN RIGHT-OF-WAY IS NOT AUTHORIZED UNTIL A TRAFFIC CONTROL PLAN IS APPROVED BY THE CITY.
12. ANY CHANGES TO THE APPROVED PLANS MUST BE SUBMITTED TO THE CITY IN WRITING. NO CONSTRUCTION ON THESE CHANGES SHALL BEGIN UNTIL APPROVED BY THE CITY.
13. PER RCW SECTION 19.122, CALL 811 BETWEEN TEN (10) AND TWO (2) BUSINESS DAYS BEFORE BEGINNING EXCAVATION WHERE ANY UNDERGROUND UTILITIES MAY BE LOCATED. FAILURE TO DO SO COULD RESULT IN THE CONTRACTOR BEARING SUBSTANTIAL REPAIR COSTS.
14. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UTILITY LOCATIONS WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY PUBLIC WORKS CONSTRUCTION INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE CITY OF SAMMAMISH PUBLIC WORKS DEPARTMENT PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT UTILITY LOCATES ARE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
15. ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE PUBLIC WORKS CONSTRUCTION INSPECTOR BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECT'S PERFORMANCE BOND.
16. NOT USED
17. NOT USED
18. THESE PLANS ARE APPROVED FOR STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. STRUCTURES SUCH AS BRIDGES, VAULTS, AND RETAINING WALLS REQUIRE ADDITIONAL PERMITS FROM THE CITY PRIOR TO CONSTRUCTION.
19. NO MATERIALS OR EQUIPMENT SHALL BE PLACED OR STORED ON PUBLIC RIGHT-OF-WAY AT ANY TIME WITHOUT THE ENGINEER'S APPROVAL.
20. NOT USED
21. CONSTRUCTION NOISE SHALL BE LIMITED TO THE CONSTRUCTION HOURS AS STATED IN SMC 16.05.030.

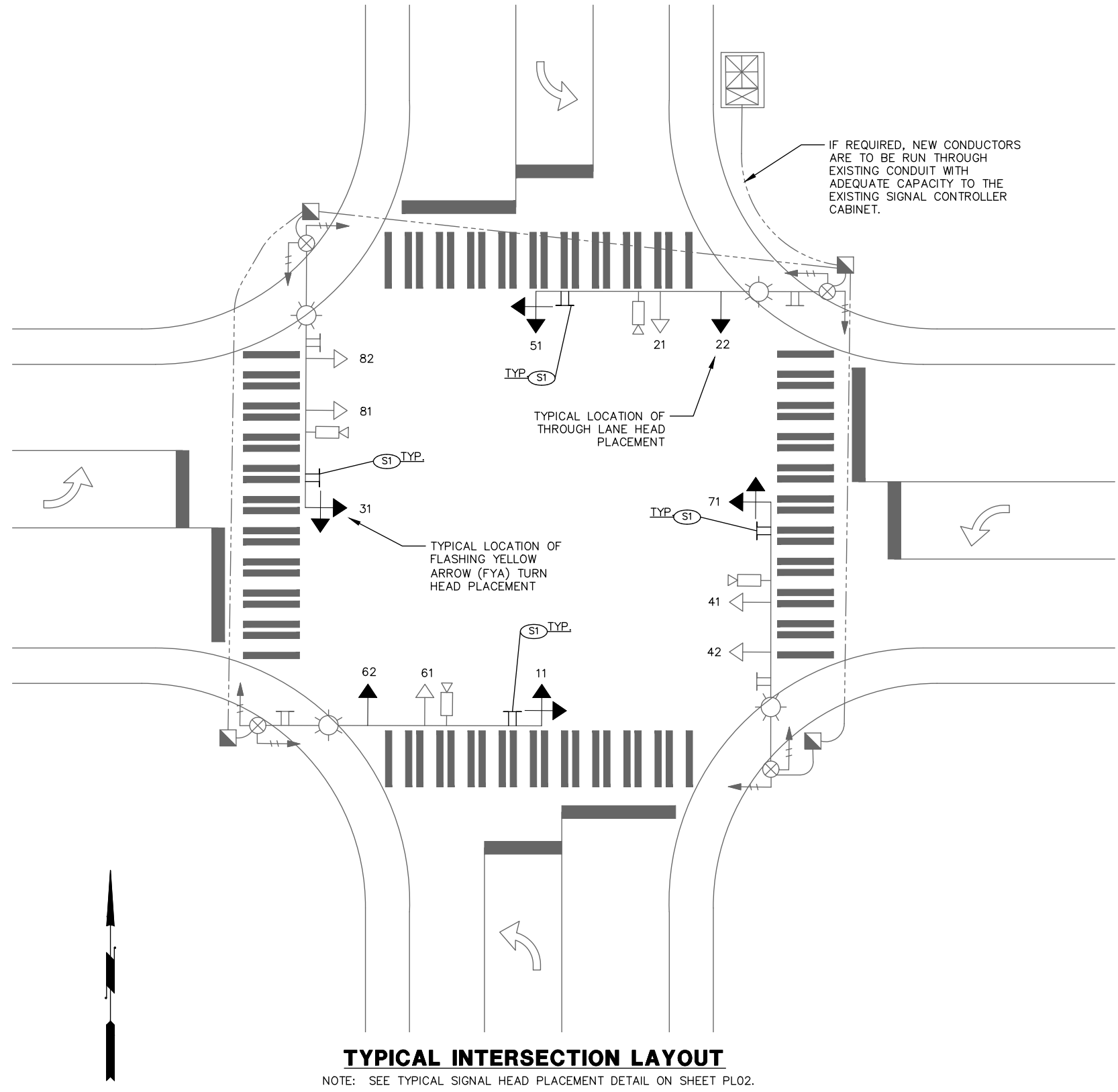
**ROADWAY PLAN NOTES**

1. NOT USED
2. NOT USED
3. ANY ROADWAY SIGNAGE OR STRIPING THAT IS DAMAGED, REMOVED, OR TEMPORARILY RELOCATED BY THE CONTRACTOR SHALL BE RESTORED TO MEET THE CURRENT CITY OF SAMMAMISH PUBLIC WORKS STANDARDS.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY TRAFFIC CONTROL TO ENSURE TRAFFIC SAFETY DURING CONSTRUCTION ACTIVITIES. THEREFORE, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY PUBLIC WORKS CONSTRUCTION INSPECTOR AT LEAST 48 HOURS PRIOR TO STARTING ANY WORK IN THE RIGHT-OF-WAY. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) OR AS APPROVED BY THE TRAFFIC ENGINEER.
5. NOT USED
6. NOT USED
7. NOT USED
8. NOT USED
9. NOT USED
10. NOT USED
11. NOT USED
12. NOT USED
13. ANY EXISTING PUBLIC IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED PRIOR TO RELEASE OF MAINTENANCE AND DEFECT.
14. NOT USED
15. NOT USED
16. NOT USED
17. NOT USED
18. NOT USED
19. NOT USED

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<b>CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555</b>	<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	BY	APPR	REVISION																										JOB#: <b>COSA0023</b> DSGN: <b>AOW</b> DRN: <b>OXA</b> CHKD: <b>KAHA</b> DATE: <b>6/21/18</b> SCALE: <b>AS NOTED</b>	 <p>14432 SE Eastgate Way, Suite 400 Bellevue Washington 98007 Phone: 425.519.6500</p>			<b>CITY OF SAMMAMISH</b> <b>2018 FLASHING YELLOW ARROW SIGNALS PROJECT</b> KING COUNTY WASHINGTON	<b>SN01</b>
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<b>STANDARD NOTES</b>						<b>2 OF 8</b>																															

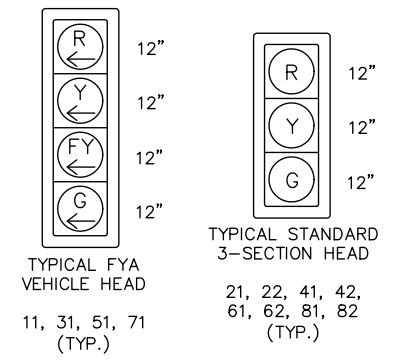
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**TYPICAL INTERSECTION LAYOUT**  
NOTE: SEE TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON SHEET PL02.



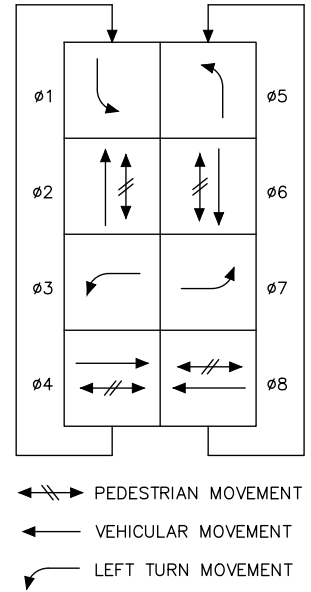
**SIGNAL DISPLAYS**



**GENERAL NOTES**

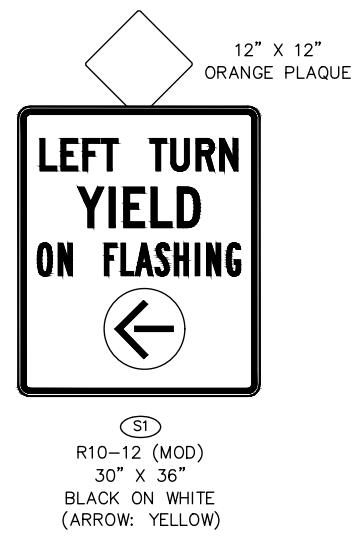
- FOR INTERSECTION SPECIFIC IMPROVEMENTS AND CONSTRUCTION NOTES, SEE SHEET PL02.
- ALL MAST ARM MOUNTED SIGNS SHALL BE INSTALLED PER STD. PLAN G-30.10-04.
- THE LOCATION OF ALL BASE MAPPING FEATURES SHOWN ON THESE PLAN ARE TYPICAL GRAPHICAL PRESENTATION ONLY. CONTRACTOR SHALL COORDINATE WITH CITY OF SAMMAMISH TRAFFIC ENGINEER AND KING COUNTY SIGNAL TECHNICIANS ON FINAL LOCATION OF ALL MAST ARM HEADS AND SIGNS, AND ALL NEWLY INSTALLED SIGNAL CABINET EQUIPMENT.
- ALL WORK SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY OF SAMMAMISH PUBLIC WORKS STANDARDS, KING COUNTY SIGNAL OPERATIONS METHODOLOGIES, THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, AND ALL APPLICABLE CITY AND WSDOT STD. PLANS.
- THE CONTRACTOR SHALL CONTACT THE CITY OF SAMMAMISH TRAFFIC ENGINEER AND KING COUNTY SIGNAL TECHNICIANS 48 HOURS BEFORE COMMENCING WORK AT ANY INTERSECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING SIGNAL EQUIPMENT AND OTHER UTILITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY AND THE CITY IMMEDIATELY UPON DAMAGE.
- EXISTING EQUIPMENT IS TO REMAIN OPERATIONAL DURING INSTALLATION OF NEW EQUIPMENT, UNLESS OTHERWISE APPROVED BY THE CITY OF SAMMAMISH TRAFFIC ENGINEER. CHANGE OVER TO NEW EQUIPMENT AND FOUNDATIONS SHALL TAKE PLACE OUTSIDE OF PEAK TRAFFIC HOURS, AND UNDER THE DIRECT SUPERVISION OF THE ENGINEER. UNIFORMED OFF-DUTY POLICE OFFICER SHALL DIRECT TRAFFIC DURING THE CHANGE OVER.
- ALL EXISTING SIGNAL HEADS AND OTHER REMOVED SIGNAL EQUIPMENT SHALL BE RETURNED TO THE KING COUNTY SIGNAL SHOP IN RENTON, WASHINGTON. SEE CONTRACT SPECIAL PROVISIONS SECTION 8-20.3 FOR DELIVERY AND CONTACT INFORMATION.
- NEW TRAFFIC SIGNAL CONTROLLERS SHALL BE TESTED BY KING COUNTY SIGNAL TECHNICIANS PRIOR TO INSTALLATION.

**TYPICAL SIGNAL PHASE DIAGRAM**



**SIGNAL DISPLAY NOTES**

- ALL VEHICLE SIGNAL HEADS SHALL HAVE BACKPLATES AND TUNNEL VISORS. ALL BACKPLATES SHALL BE BLACK, LOUVERED AND HAVE A 2" YELLOW REFLECTIVE BAND OF TAPE.
- ALL VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL HAVE LIGHT EMITTING DIODES (LED).
- ALL VEHICLE SIGNAL HEADS ON MAST ARMS SHALL USE TYPE M MOUNTING PER WSDOT STD. PLAN J-75.20-01.
- ALL MAST ARM MOUNTED SIGNS SHALL BE INSTALLED PER WSDOT STD. PLAN G-30.10-04.



**LEGEND**

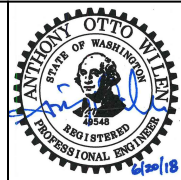
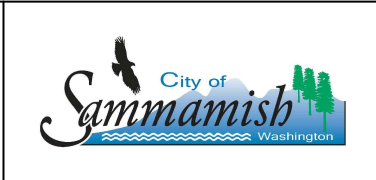
- EXISTING CONDUIT
- NEW MAST ARM MOUNTED SIGN
- NEW VEHICLE HEAD (THROUGH/LEFT)
- EXISTING VEHICLE HEAD
- EXISTING VIDEO DETECTION CAMERA
- EXISTING SIGNAL POLE WITH LUMINAIRE
- EXISTING CONTROLLER CABINET
- EXISTING JUNCTION BOX (TYPE VARIES)
- EXISTING SERVICE CABINET
- CONSTRUCTION NOTE
- SIGN NOTE

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1-800-424-5555

NO.	DATE	BY	APPR	REVISION

JOB#: COSA0023  
DSGN: AOW  
DRN: OXA  
CHKD: KAHA  
DATE: 6/21/18  
SCALE: AS NOTED

**DAVID EVANS AND ASSOCIATES INC.**  
14432 SE Eastgate Way, Suite 400  
Bellevue Washington 98007  
Phone: 425.519.6500



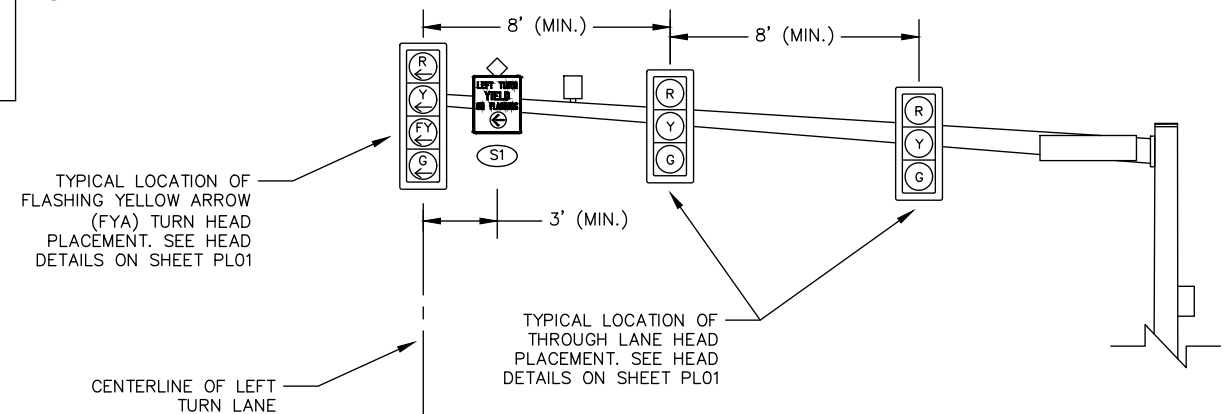
**CITY OF SAMMAMISH**  
**2018 FLASHING YELLOW ARROW SIGNALS PROJECT**  
KING COUNTY WASHINGTON  
**ROADWAY PLAN**

# FLASHING YELLOW ARROW (FYA) SIGNAL INSTALLATION SCHEDULE

INTERSECTION NO.	INTERSECTION LOCATION	ROADWAY DIRECTION CONVERTED TO FLASHING YELLOW ARROW	FYA SIGNAL COMPONENTS AND ASSOCIATED CONSTRUCTION NOTES						COMMENTS
			SIGNAL CONTROLLER	SIGNAL CABINET	CONFLICT MONITOR	SIGNAL WIRING	SIGNAL HEADS	MAST ARM SIGNS	
1	SAHALEE WAY NE & NE 37TH WAY	NORTHBOUND	①	EX	②	EX	⑤ ⑥ ⑦	⑪ ⑫	ONE OFF-DUTY POLICE OFFICER IS REQUIRED DURING THE CHANGE OVER.
2	228TH AVENUE NE & NE 25TH WAY	NORTHBOUND	①	EX	②	EX	⑥ ⑦	⑪ ⑫	ONE OFF-DUTY POLICE OFFICER IS REQUIRED DURING THE CHANGE OVER.
		SOUTHBOUND				EX	⑥ ⑦	⑪ ⑫	
3	228TH AVENUE NE & NE 12TH PLACE	NORTHBOUND	①	EX	②	EX	⑥ ⑦	⑪ ⑫	ONE OFF-DUTY POLICE OFFICER IS REQUIRED DURING THE CHANGE OVER.
4	228TH AVENUE NE & NE INGLEWOOD HILL ROAD/NE 8TH STREET	NORTHBOUND	EX	EX	EX ③ (E/W) (N/S)	EX	⑧	⑪	CONVERT FROM PROTECTED TO FYA FOR NON-PEAK HOURS ONLY. REMOVE EXISTING "NO U-TURN" SIGN ON MAST ARM. TWO OFF-DUTY POLICE OFFICERS ARE REQUIRED DURING THE CHANGE OVER.
		SOUTHBOUND				EX	⑧	⑪	
5	E LAKE SAMMAMISH PARKWAY NE & LOUIS THOMPSON ROAD NE	SOUTHBOUND	①	EX	②	EX	⑧	⑪	CONVERT FROM PROTECTED TO FYA. ONE OFF-DUTY POLICE OFFICER IS REQUIRED DURING THE CHANGE OVER.
6	228TH AVENUE NE & E MAIN STREET	NORTHBOUND	①	EX	②	EX	⑦ ⑩	⑪ ⑫	ONE OFF-DUTY POLICE OFFICER IS REQUIRED DURING THE CHANGE OVER.
		SOUTHBOUND				EX	⑦ ⑩	⑪ ⑫	
7	228TH AVENUE SE & SE 4TH STREET/ CRUSADER WAY	EASTBOUND	EX	EX	EX ③ (N/S) (E/W)	④	⑤ ⑨ ⑬	⑪ ⑫	TWO OFF-DUTY POLICE OFFICERS ARE REQUIRED DURING THE CHANGE OVER.
		WESTBOUND				④	⑤ ⑨ ⑬	⑪ ⑫	
8	228TH AVENUE SE & SE 10TH STREET/ SPARTAN WAY	NORTHBOUND	①	EX	②	EX	⑦ ⑩	⑪ ⑫	ONE OFF-DUTY POLICE OFFICER IS REQUIRED DURING THE CHANGE OVER.
		SOUTHBOUND				EX	⑦ ⑩	⑪ ⑫	

## CONSTRUCTION NOTES

- ① REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL CONTROLLER. CONTROLLER SHALL BE RETURNED TO THE KING COUNTY TRAFFIC SIGNAL OPERATIONS GROUP. INSTALL NEW ECONOLITE COBALT TRAFFIC SIGNAL CONTROLLER. RE-TERMINATE ALL SIGNAL CONTROLLER SERIAL PORTS. SIGNAL TIMING SHALL BE OBTAINED FROM THE KING COUNTY TRAFFIC SIGNAL OPERATIONS FOR EACH INDIVIDUAL INTERSECTION. NEW TRAFFIC SIGNAL CONTROLLER SHALL BE TESTED BY KING COUNTY SIGNAL TECHNICIANS PRIOR TO INSTALLATION. COORDINATE TESTING AND INSTALLATION WITH KING COUNTY TRAFFIC SIGNAL TECHNICIANS.
- ② REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL CONFLICT MONITOR. CONFLICT MONITOR SHALL BE RETURNED TO THE KING COUNTY TRAFFIC SIGNAL OPERATIONS GROUP. INSTALL NEW EDI MMU2-16LE(ip) SMARTMONITOR CONFLICT MONITOR. RE-TERMINATE ALL SIGNAL CONFLICT MONITOR PORTS. COORDINATE INSTALLATION WITH KING COUNTY TRAFFIC SIGNAL TECHNICIANS.
- ③ INSTALL NEW MMU2-16LE SMARTMONITOR PROGRAM CARD IN EXISTING SIGNAL MMU2 CONFLICT MONITOR FOR FLASHING YELLOW ARROW (FYA) OPERATIONS.
- ④ INSTALL NEW FIVE CONDUCTOR (5C) BETWEEN NEW LEFT-TURN SIGNAL HEAD AND EXISTING TERMINAL CABINET ON SIGNAL POLE. INSTALL NEW FIVE CONDUCTOR (5C) BETWEEN EXISTING TERMINAL CABINET AND EXISTING SIGNAL CONTROLLER THROUGH EXISTING SIGNAL CONDUIT. TERMINATE CONDUCTORS IN SIGNAL CONTROLLER CABINET.
- ⑤ FIELD DRILL AND WELD GALVANIZED TENON ON EXISTING SIGNAL POLE MAST ARM. ALL TENON COMPONENTS SHALL BE HOT-DIP GALVANIZED PRIOR TO INSTALLATION. AFTER FIELD WELDING, REPAIR DAMAGED HOT-DIP GALVANIZING ACCORDING TO ASTM A780 AND ASTM A123. MINIMUM DRY FILM THICKNESS IS 3 MILS. MINIMUM ZINC CONTENT FOR METHOD A2 IS 92 PERCENT ON THE DRY FILM. IF POLE IS DECORATIVE, CONTRACTOR TO PAINT TENON AND ASSOCIATED AREA TO MATCH EXISTING SIGNAL MAST ARM WITH PAINT IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 9-08. TENON'S SHALL BE DEBURRED AND EDGES TREATED PRIOR TO INSTALLATION OF CONDUCTORS. ALL LOCATION OF TENONS SHOULD BE INSTALLED PER TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON SHEET PLO2, AND AS APPROVED BY THE CITY OF SAMMAMISH TRAFFIC ENGINEER AND KING COUNTY SIGNAL TECHNICIANS. INSTALLATION OF TENON SHALL CONFORM TO THE LATEST EDITION OF THE AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS AND AWS D1.1 STRUCTURAL STEEL WELDING CODE.
- ⑥ REMOVE AND RELOCATE 4-SECTION SIGNAL HEAD OVER LEFT-TURN LANE PER TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON THIS SHEET. REMOVE AND REPLACE ALL EXISTING SIGNAL DISPLAYS WITH LIGHT EMITTING DIODE (LED) ARROW HEADS FOR FLASHING YELLOW ARROW (FYA) CONFIGURATION. INSTALL NEW FIVE CONDUCTOR (5C) BETWEEN RELOCATED SIGNAL HEAD AND EXISTING TERMINAL CABINET.
- ⑦ INSTALL NEW 3-SECTION SIGNAL HEAD OVER THROUGH LANE WITH LIGHT EMITTING DIODE (LED) DISPLAYS. RELOCATE EXISTING 3-SECTION HEAD TO HAVE 8-FOOT MINIMUM SEPARATION PER TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON SHEET PLO2, OR AS APPROVED BY ENGINEER.
- ⑧ REMOVE AND SALVAGE EXISTING 3-SECTION PROTECTED LEFT-TURN SIGNAL HEAD. SIGNAL HEAD SHALL BE RETURNED TO THE KING COUNTY TRAFFIC SIGNAL OPERATIONS GROUP. INSTALL NEW 4-SECTION SIGNAL HEAD ON EXISTING TENON. NEW 4-SECTION HEAD SHALL HAVE LIGHT EMITTING DIODE (LED) ARROW HEADS FOR FLASHING YELLOW ARROW (FYA) CONFIGURATION.
- ⑨ INSTALL NEW 4-SECTION SIGNAL HEAD OVER LEFT-TURN LANE PER TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON THIS SHEET. NEW 4-SECTION HEAD SHALL HAVE LIGHT EMITTING DIODE (LED) ARROW HEADS FOR FLASHING YELLOW ARROW (FYA) CONFIGURATION. INSTALL NEW FIVE CONDUCTOR (5C) BETWEEN RELOCATED SIGNAL HEAD AND EXISTING TERMINAL CABINET.
- ⑩ REMOVE AND REPLACE ALL EXISTING SIGNAL DISPLAYS WITH LIGHT EMITTING DIODE (LED) ARROW HEADS FOR FLASHING YELLOW ARROW (FYA) CONFIGURATION. INSTALL NEW FIVE CONDUCTOR (5C) BETWEEN RELOCATED SIGNAL HEAD AND EXISTING TERMINAL CABINET.
- ⑪ INSTALL NEW "LEFT TURN YIELD ON FLASHING" SIGN PER SIGN DETAIL S1. MOUNT RIGHT OF NEW FLASHING YELLOW ARROW SIGNAL HEAD PER WSDOT STD. PLAN G-30.10-04. INSTALL ONE PERMANENT FLUORESCENT ORANGE "ENHANCED CONSPICUITY" 12"x12" PLAQUE, ABOVE THE S1 SIGN, EACH AT 45 DEGREES TO THE VERTICAL.
- ⑫ REMOVE AND SALVAGE EXISTING "LEFT TURN YIELD ON GREEN" SIGN. SIGN SHALL BE RETURNED TO THE KING COUNTY TRAFFIC SIGNAL OPERATIONS GROUP.
- ⑬ RELOCATE EXISTING 3-SECTION HEAD TO HAVE 8-FOOT MINIMUM SEPARATION PER TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON SHEET PLO2, OR AS APPROVED BY ENGINEER.
- EX NO NEW EQUIPMENT REQUIRED IN THIS CATEGORY. EXISTING EQUIPMENT CAPABLE OF FLASHING YELLOW ARROW OPERATIONS.



**TYPICAL SIGNAL HEAD PLACEMENT DETAIL**

By: AOW Date: 4:03 PM File: P:\C:\COSAA0000023\0400CAD\SHEETS\FLASHING YELLOW SIGNALS\TTPLO01COSAA00023\_FY.dwg Layout: PLO2

<b>CALL 48 HOURS BEFORE YOU DIG</b> <b>1-800-424-5555</b>	<b>NO.</b>	<b>DATE</b>	<b>BY</b>	<b>APPR</b>	<b>REVISION</b>	JOB#: <b>COSA0023</b> DSGN: <b>AOW</b> DRN: <b>OXA</b> CHKD: <b>KAHA</b> DATE: <b>6/21/18</b> SCALE: <b>AS NOTED</b>	 14432 SE Eastgate Way, Suite 400 Bellevue Washington 98007 Phone: 425.519.6500			<b>CITY OF SAMMAMISH</b> <b>2018 FLASHING YELLOW ARROW SIGNALS PROJECT</b> KING COUNTY WASHINGTON	<b>PL02</b>
	<b>ROADWAY PLAN</b>										<b>4 OF 8</b>

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240

USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.

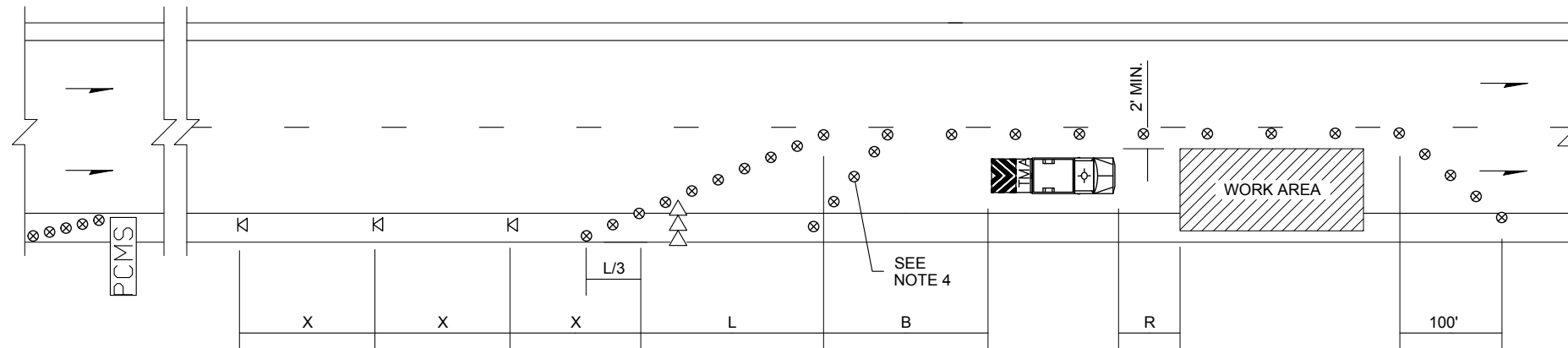
SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.  
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

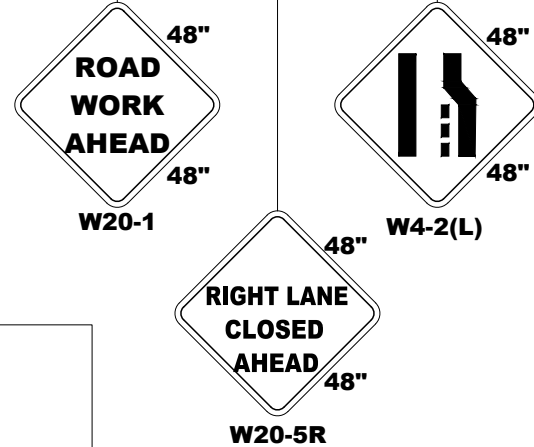
BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R					
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'



PCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.



LEGEND	
⊗	TEMPORARY SIGN LOCATION
⊗	TRAFFIC SAFETY DRUM
⇨⇨	SEQUENTIAL ARROW SIGN
	TRANSPORTABLE ATTENUATOR
	PORTABLE CHANGEABLE MESSAGE SIGN

## SINGLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS

NOT TO SCALE

### NOTES:

- SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
- EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER.
- DEVICES SHALL NOT ENCROACH INTO THE ADJACENT LANE.
- USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (FT) (RECOMMENDED).
- DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
- ALL SIGNS ARE BLACK ON ORANGE.

By: AOW Date: 4:03 PM File: P:\C:\COSAA0000023\0400CAD\SHEETS\FLASHING YELLOW SIGNALS\TT0001COSAA0023\_FY.dwg Layout: TC01

NO.	DATE	BY	APPR	REVISION	

JOB#: COSA0023  
DSGN: AOW  
DRN: OXA  
CHKD: KAHA  
DATE: 6/21/18  
SCALE: AS NOTED

**DAVID EVANS AND ASSOCIATES INC.**  
14432 SE Eastgate Way, Suite 400  
Bellevue Washington 98007  
Phone: 425.519.6500

City of **Sammamish** Washington

ANTHONY OTTO WELLEN  
STATE OF WASHINGTON  
REGISTERED  
PROFESSIONAL ENGINEER  
6/20/18

**CITY OF SAMMAMISH**  
**2018 FLASHING YELLOW ARROW SIGNALS PROJECT**  
KING COUNTY WASHINGTON

**TRAFFIC CONTROL PLAN**

TC01

5 OF 8

SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

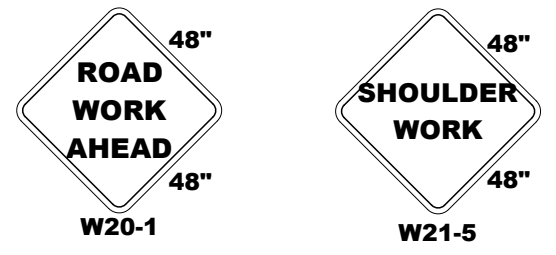
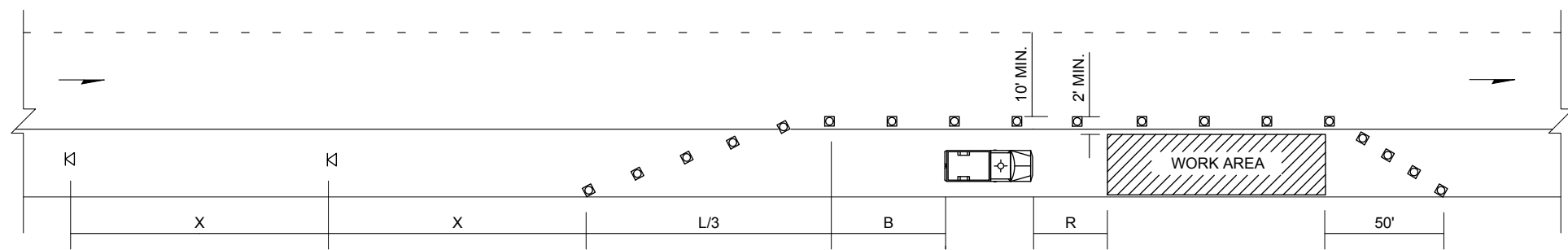
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.  
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	-	-	-	-	-	-
10'	40	60	90	90	-	-	-	-	-	-

USE A 3 DEVICES TAPER FOR SHOULDERS LESS THEN 8'

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35/40	30	60
25/30	20	40

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.					
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH					
100'	123'	172'	74'	100'	150'					
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										



**SHOULDER CLOSURE - LOW SPEED**  
(40 MPH OR LESS)

NOT TO SCALE

- NOTES:
1. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
  2. ALL SIGNS ARE BLACK ON ORANGE.

By: AOW Date: 4:03 PM File: P:\COSA0000023\0400CAD\SHEETS\FLASHING YELLOW SIGNALS\TTC001COSA0023\_FY.dwg Layout: TC02

LEGEND				
K	TEMPORARY SIGN LOCATION			
□	CHANNELIZING DEVICES			
	PROTECTIVE VEHICLE			

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6/20/18

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KING COUNTY WASHINGTON

**TRAFFIC CONTROL PLAN**

TC02

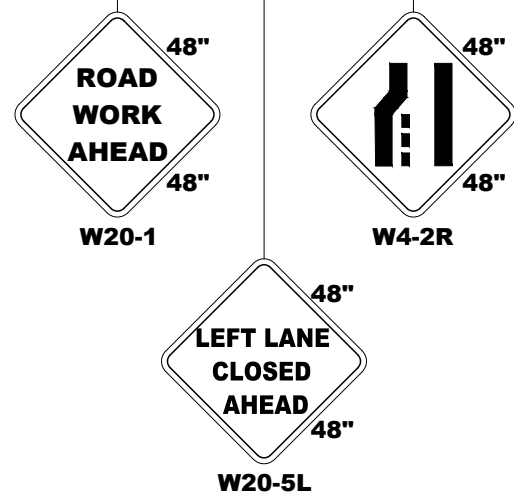
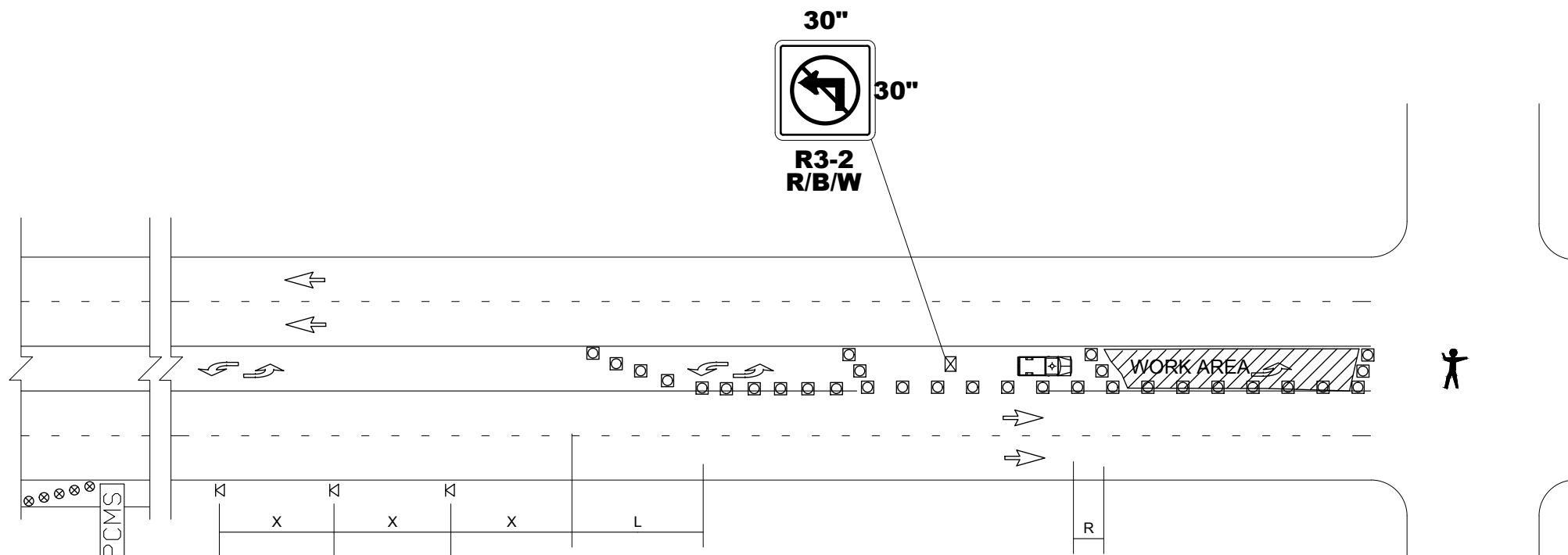
SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS	25 / 30 MPH	200' ± (2)
RESIDENTIAL & BUSINESS DISTRICTS		
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.  
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240

USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40



PCMS	
1	2
LEFT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

LEGEND	
K	TEMPORARY SIGN LOCATION
□	CHANNELIZING DEVICES
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
⊗	TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
⋈	OFFICER CONTROLLED

### LEFT TURN POCKET CLOSURE

NOT TO SCALE

- SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.
- TYPICAL APPLICATION SHOWN. ADJUST FOR SITE CONDITIONS.
- ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

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CHKD: KAHA  
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**CITY OF SAMMAMISH**  
**2018 FLASHING YELLOW ARROW SIGNALS PROJECT**  
KING COUNTY WASHINGTON

TRAFFIC CONTROL PLAN

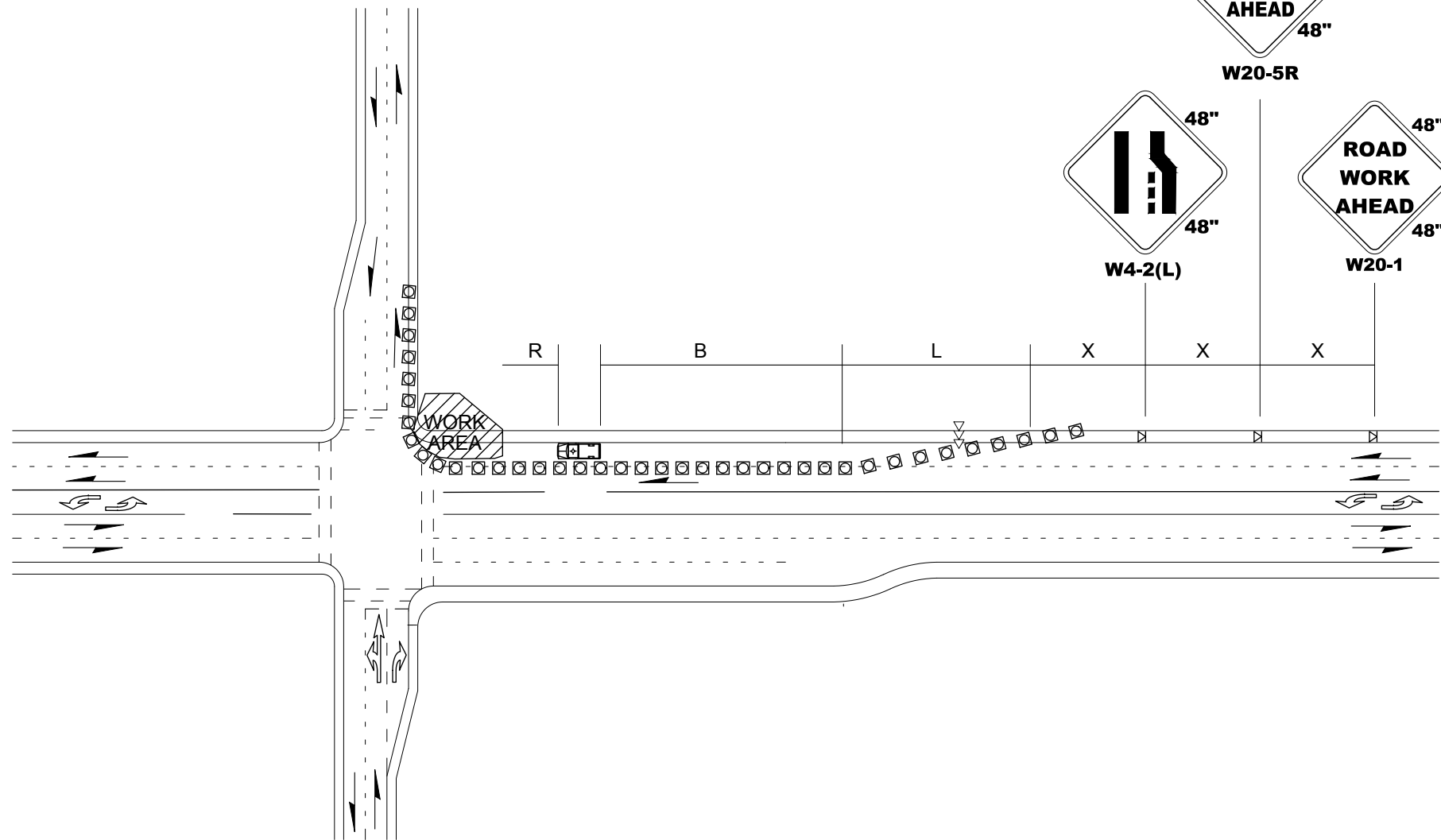
CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

LANE WIDTH (feet)	MINIMUM TAPER LENGTH = L (feet)										
	Posted Speed (mph)										
	25	30	35	40	45	50	55	60	65	70	
10	105	150	205	270	450	500	550	-	-	-	
11	115	165	225	295	495	550	605	660	-	-	
12	125	180	245	320	540	600	660	720	-	-	

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
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TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.						HOST VEHICLE WEIGHT > 22,000 lbs.				
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH					
100'	123'	172'	74'	100'	150'					
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS	25 / 30 MPH	200' ± (2)
RESIDENTIAL & BUSINESS DISTRICTS		
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(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



LEGEND	
	TEMPORARY SIGN LOCATION
	CHANNELIZING DEVICES
	SEQUENTIAL ARROW SIGN
	PROTECTIVE VEHICLE - RECOMMENDED

### INTERSECTION LANE CLOSURE ~ FIVE LANE ROADWAY

NOT TO SCALE

#### NOTES

- RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
- IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS.
- MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
- ALL SIGNS ARE BLACK ON ORANGE.

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**KING COUNTY WASHINGTON**

**TRAFFIC CONTROL PLAN**

TC04  
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