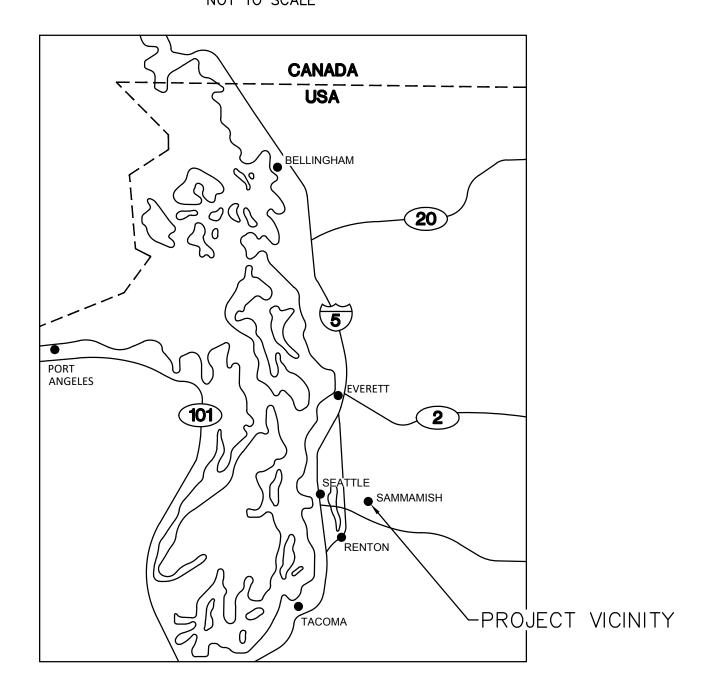
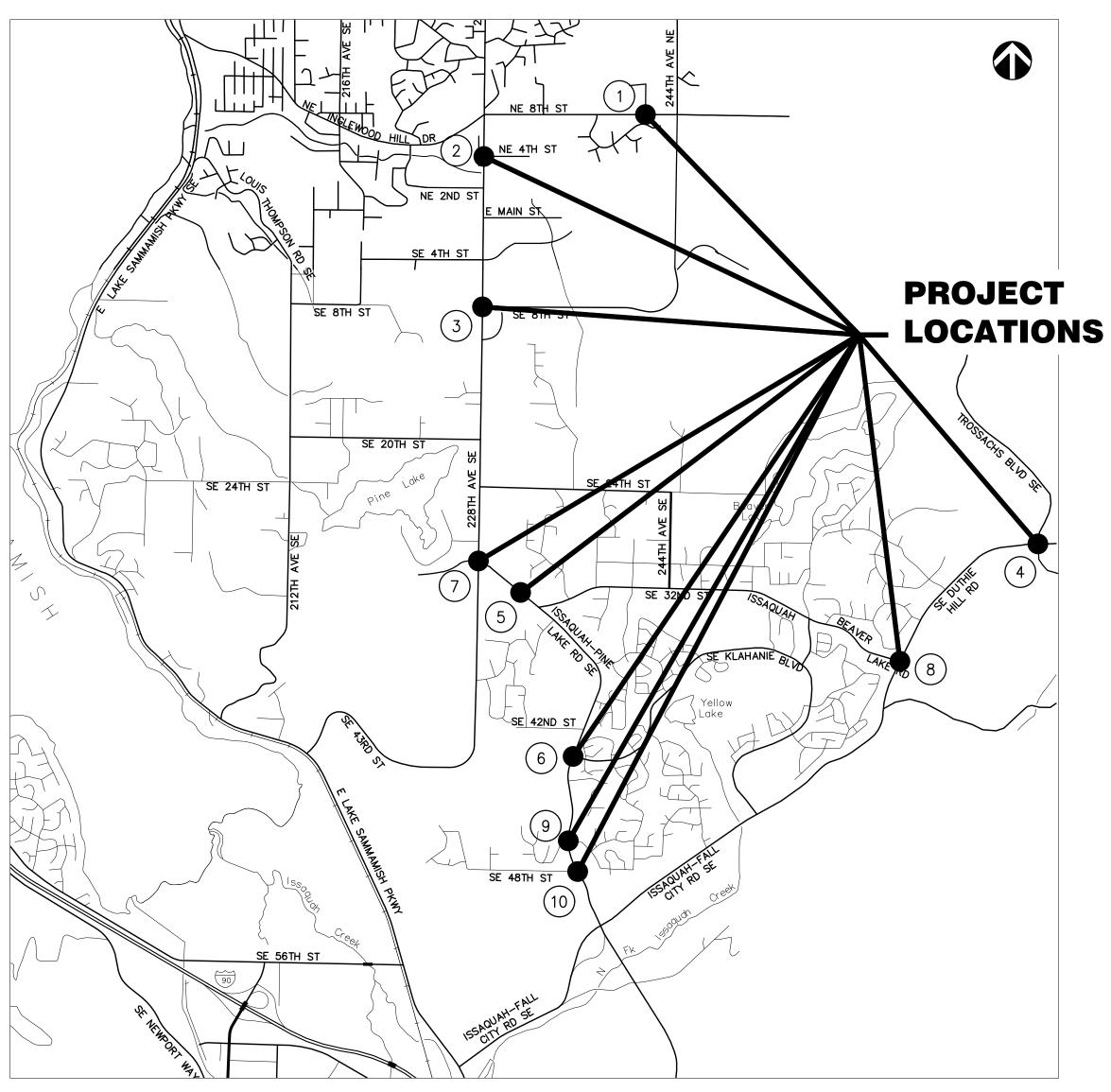


# 2019 FLASHING YELLOW ARROW SIGNALS PROJECT

#### LOCATION MAP NOT TO SCALE







### SHEET INDEX

| <u>TITLE</u>          | SHEET NO. |
|-----------------------|-----------|
| COVER                 | 1         |
| STANDARD NOTES        | 2         |
| ROADWAY PLANS         | 3-4       |
| TRAFFIC CONTROL PLANS | 5-9       |

### <u>CITY OFFICIALS</u>

MAYOR: CHRISTIE MALCHOW

DEPUTY MAYOR: KAREN MORAN

ACTING DIRECTOR OF PUBLIC WORKS: CHERYL PASTON, P.E.

PROJECT/TRAFFIC ENGINEER: ISABEL DIAZ, 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 |
| U.S. POST OFFICE, REDMOND POSTMASTER             | (425) 869-3690 |
| UNDERGROUND UTILITY LOCATES                      | 811            |

| APPROVED BY:              |       |
|---------------------------|-------|
| PROJECT ENGINEER:         | DATE: |
| CITY ENGINEER:            | DATE: |
| DIRECTOR OF PUBLIC WORKS: | DATE: |

|                | <u> </u> |      |    |      |          | İ      |           |
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|                | NO.      | DATE | BY | APPR | REVISION | JOB#:  | COSA0025  |
| CALL 48 HOURS  |          |      |    |      |          | DSGN:  | AOW       |
| BEFORE YOU DIG |          |      |    |      |          | DRN:   | OXA       |
| 1-800-424-5555 |          |      |    |      |          | CHKD:  | КАНА      |
|                |          |      |    |      |          | DATE:  | 8/13/2019 |
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| CITY OF SAMMAMISH 2019 FLASHING YELLOW ARROW SIGNALS PROJECT KING COUNTY WASHINGTON | CV01   |  |  |  |  |
|---|--------|--|--|--|--|
| COVER   | 1 OF 9 |  |  |  |  |

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 72 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

|                | 1 1 |      | T  | T T  |          |           |           |
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|                | NO. | DATE | BY | APPR | REVISION | ] ,on //. |           |
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| CALL 48 HOURS  |     |      |    |      |          | DSGN:     | AOW       |
|                |     |      |    |      |          | DRN:      | OXA       |
| BEFORE YOU DIG |     |      |    |      |          | CHKD:     |           |
| 1 000 404 5555 |     |      |    |      |          |           | KAHA      |
| 1-800-424-5555 |     |      |    |      |          | DATE:     | 8/13/2019 |
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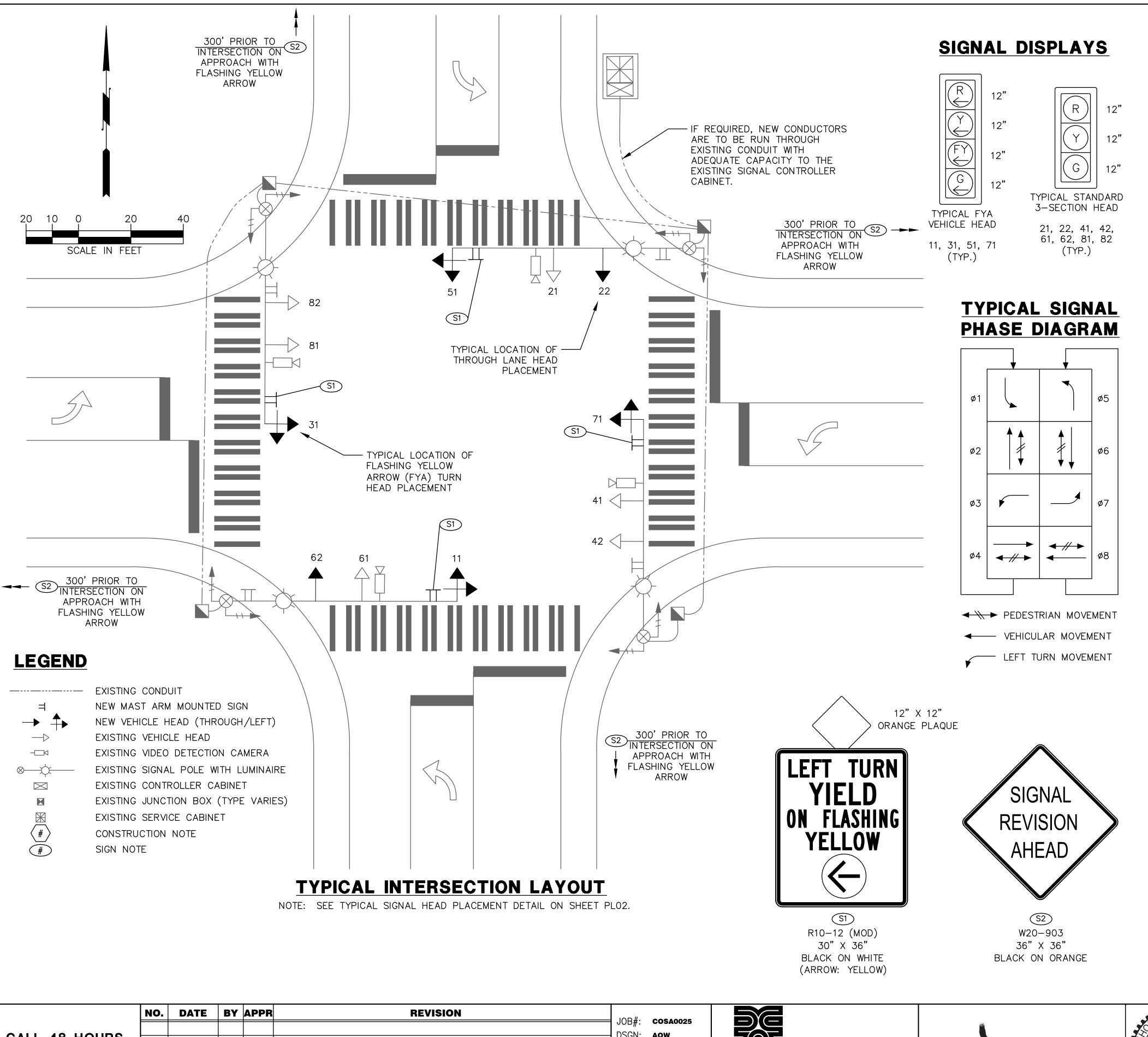


Phone: 425.519.6500





|   | CITY OF SAMMAMISH                          |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|
|   | 2019 FLASHING YELLOW ARROW SIGNALS PROJECT |  |  |  |  |  |  |  |  |  |
| 1 | KING COUNTY WASHINGTON                     |  |  |  |  |  |  |  |  |  |
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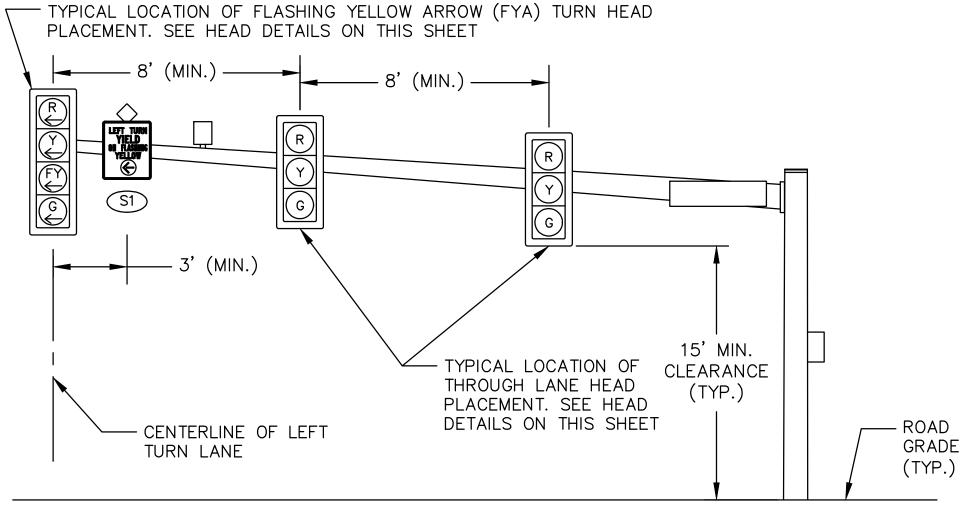


#### **GENERAL NOTES**

- 1. FOR INTERSECTION SPECIFIC IMPROVEMENTS AND CONSTRUCTION NOTES, SEE SHEET PLO2.
- 2. ALL MAST ARM MOUNTED SIGNS SHALL BE INSTALLED PER STD. PLAN G-30.10-04 OR ON SPAN WIRE SIGN MOUNTING HANGER.
- 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 CITY OF SAMMAMISH SIGNAL TECHNICIANS ON FINAL LOCATION OF ALL MAST ARM HEADS AND SIGNS, AND ALL NEWLY INSTALLED SIGNAL CABINET EQUIPMENT
- 4. 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 CITY OF SAMMAMISH SIGNAL TECHNICIANS, 72 HOURS BEFORE COMMENCING WORK AT ANY INTERSECTION.
- 6. 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.
- 7. 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. THE CONTRACTOR SHALL COORDINATE RETURN OF SIGNAL EQUIPMENT WITH CITY OF SAMMAMISH SIGNAL TECHNICIANS.
- 9. NEW TRAFFIC SIGNAL CONTROLLERS SHALL BE TESTED BY CITY OF SAMMAMISH SIGNAL TECHNICIANS PRIOR TO INSTALLATION.
- 10. S2 SIGNS SHALL BE INSTALLED PRIOR TO FLASHING YELLOW ARROW SIGNAL TURN ON.

#### SIGNAL DISPLAY NOTES

- 1. 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.
- 2. ALL VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL HAVE LIGHT EMITTING DIODES (LED).
- 3. ALL VEHICLE SIGNAL HEADS ON MAST ARMS SHALL USE TYPE M MOUNTING PER WSDOT STD. PLAN J-75.20-01. ALL VEHICLE SIGNAL HEADS ON SPAN WIRES SHALL USE TYPE P MOUNTING PER WSDOT STD. PLAN J-75.20-01.
- 4. ALL MAST ARM MOUNTED SIGNS SHALL BE INSTALLED PER WSDOT STD. PLAN G-30.10-04.



### TYPICAL SIGNAL HEAD PLACEMENT DETAIL

NOTE: SEPARATION INFORMATION ALSO APPLICABLE TO SPAN WIRE SIGNAL SYSTEMS

DSGN: AOW CALL 48 HOURS DRN: **OXA** BEFORE YOU DIG CHKD: KAHA 1-800-424-5555 DATE: **8/13/2019** SCALE: AS NOTED



Bellevue Washington 98007

Phone: 425.519.6500





| CITY OF SAMMAMISH<br>2019 FLASHING YELLOW ARROW SIGN |
|--|
| KING COUNTY  |
| ROADWAY PLAN   |

MAMISH PL01 ROW SIGNALS PROJECT **WASHINGTON** 

### FLASHING YELLOW ARROW (FYA) SIGNAL INSTALLATION SCHEDULE

| NTERSECTION | INTERSECTION  | ROADWAY DIRECTION<br>CONVERTED TO | FYA                  | SIGNAL | COMPONEN | TS AND A         | ASSOCIATED | CONSTRUC         | TION NOTES                 |                  | COMMENTS  |
|-------------|---|-----------------------------------|----------------------|--------|----------|------------------|------------|------------------|----------------------------|------------------|---|
| NO.         | LOCATION<br>(SIGNAL TYPE)   | FLASHING YELLOW<br>ARROW          | SIGNAL<br>CONTROLLER |        | CONFLICT | SIGNAL<br>WIRING |            | TRAFFIC<br>SIGNS | FLASH<br>TRANSFER<br>RELAY | LOAD<br>SWITCHES | - COMMENTS  |
|             |   | E A CEDOLINID                     |                      |        |          |                  | 7 (10)     | 11 12            |                            |                  | UTILIZE EXISTING 5C ON NEW 3-SECTION HEADS (EASTBOUND/WESTBOUND)  |
| 1           | NE 8TH STREET &<br>242ND AVENUE NE  | EASTBOUND                         | (EX)                 | (EX)   | 2        | 4                |            | 11)(12)          | 14)                        | 5                | INSTALL HEADS AND SIGNS ON EXISTING SPAN WIRE SYSTEM  |
|             | (SPAN WIRE)   | WESTBOUND                         |                      |        |          | 4                | 7 10       | 11 12            | QTY: 4                     |                  | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |
|             |   |                                   |                      |        |          |                  |            |                  |                            |                  | INSTALL S1 SIGN TO THE LEFT OF EXISTING LEFT TURN/U-TURN SIGN   |
| 2           | 228TH AVENUE NE &<br>NE 4TH STREET<br>(MAST ARM)                                | NORTHBOUND                        | 1                    | EX     | 2        | 4                | 8          | 11)              | EX                         | 5                | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |
|             |   | SOUTHBOUND                        |                      |        |          | 4                | (8)        | (11)             |                            |                  | CONVERT SOUTHBOUND FROM PROTECTED TO FLASHING YELLOW ARROW FOR NON-PEAK HOURS ONLY. COORDINATE FLASHING YELLOW ARROW HOURS WITH CITY TRAFFIC ENGINEER |
| 3           | 228TH AVENUE SE   | EASTBOUND                         |                      | (EX)   |          | 4                | 9          | (12)             | EX                         | 5                | EASTBOUND/WESTBOUND-NO FLASHING YELLOW ARROW, SPLIT PHASE CONVERSION ONLY   |
| 5           | & SE 8TH STREET (MAST ARM)  | EASTBOOMD                         |                      |        | (2)      | 4                | 9          |                  |                            |                  | INSTALL S1 SIGN TO THE RIGHT OF FLASHING YELLOW ARROW (SOUTHBOUND ONLY).  |
|             |   | WESTBOUND                         |                      |        |          | 4                | 9          | (12)             |                            |                  | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |
|             | SE DUTHIE HILL ROAD   | NORTHBOUND                        |                      |        |          | 4                | (15)       | 11 (12)          |                            |                  | UTILIZE EXISTING 5C ON RELOCATED 3-SECTION HEADS (NORTHBOUND/SOUTHBOUND)  |
| 4           | & TROSSACHS BOULEVARD SE & 275TH AVE SE (MAST ARM)                              | SOUTHBOUND                        |                      | (EX)   | 2        | 4                | (15)       | 11 12            | EX                         | 5                | UTILIZE EXISTING 5C ON NEW 3-SECTION HEADS (EASTBOUND/WESTBOUND)  |
|             |   | EASTBOUND                         |                      |        |          | 4)               | 6 7        | (11)(12)         |                            |                  | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |
|             | (, ,)   | WESTBOUND                         |                      |        |          | 4)               | 67         | (11)(12)         |                            |                  | UTILIZE EXISTING 5C ON NEW 3 SECTION HEADS (NORTHBOUND/SOUTHBOUND)  |
| 5           | ISSAQUAH-PINE LAKE ROAD SE & 230TH LANE SE & PINE LAKE MIDDLE SCHOOL (MAST ARM) | NORTHBOUND (IPL)                  |                      | EX     | 2        | 4                | 6 7        | 11 12            | QTY: 2                     | 5                | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING  |
|             |   | SOUTHBOUND (IPL)                  |                      |        |          | 4                | 6 7        | 11 (12)          |                            |                  | SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS  |
|             |   |                                   |                      |        |          |                  |            |                  |                            |                  | UTILIZE EXISTING 5C ON NEW 3-SECTION HEADS (NORTHBOUND/SOUTHBOUND)  |
| 6           | ISSAQUAH-PINE LAKE<br>ROAD SE & SE  | NORTHBOUND (IPL)                  | EX                   | (EV)   | EV (3)   | 4                |            |                  | 14)                        | 5                | INSTALL HEADS AND SIGNS ON EXISTING SPAN WIRE SYSTEM  |
| Ŭ           | KLAHANIE BOULEVARD (SPAN WIRE)  | SOUTHBOUND (IPL)                  |                      | (EX)   | (EX) (3) | 4                | 6 7        | (11)             | QTY: 1                     |                  | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |
|             |   |                                   |                      |        |          |                  |            |                  |                            |                  | INSTALL S1 SIGN TO THE RIGHT OF FLASHING YELLOW ARROW   |
| 7           | 228TH AVENUE SE & ISSAQUAH-PINE LAKE ROAD SE (MAST ARM)                         | NORTHBOUND                        | EX                   | EX     | 2        | 4                | 8          | 11)              | EX                         | 5                | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |
|             |   |                                   |                      |        |          |                  |            |                  |                            |                  | UTILIZE EXISTING 5C ON NEW 3-SECTION HEAD (EASTBOUND)   |
| 8           | SE ISSAQUAH-BEAVER<br>LAKE ROAD & SE<br>DUTHIE HILL ROAD<br>(MAST ARM)          | EASTBOUND<br>(SE DUTHIE HILL RD)  | 1                    | EX     | 2        | 4                | 6 7        | 11 (12)          | (14)<br>QTY: 1             | 5                | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |
|             | ISSAQUAH-PINE   | NORTHBOUND                        |                      |        |          | 4                | 7 (13)     | 11 (12)          |                            |                  | UTILIZE EXISTING 5C ON NEW 3—SECTION HEADS (NORTHBOUND/SOUTHBOUND)  INSTALL HEADS AND SIGNS ON EXISTING SPAN WIRE SYSTEM                              |
| 9           | LAKE ROAD SE & SE 47TH WAY & 238TH WAY SE                                       |                                   | SOUTHBOUND           | EX     | EX 3     |                  |            |                  | EX                         | 5                | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING  |
|             | (SPAN WIRE)   | SOUTHBOUND                        |                      |        |          | 4                | 7 (13)     | 11 12            |                            |                  | SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS  |
|             | 100 4 0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4   |                                   |                      |        |          |                  |            |                  |                            |                  | UTILIZE EXISTING 5C ON NEW 3-SECTION HEAD (NORTHBOUND)  |
| 10          | ISSAQUAH-PINE<br>LAKE ROAD SE &<br>SE 48TH STREET<br>(MAST ARM)                 | NORTHBOUND                        | 1                    | EX     | EX 3     | 4                | 6 7        | 11 12            | EX                         | 5                | CONTRACTOR TO HAVE TWO (2) OFF-DUTY UNIFORMED POLICE OFFICERS PRESENT DURING SIGNAL CHANGEOVER PER 1-10.3(1)B IN THE SPECIAL PROVISIONS               |

|                | NO.      | DATE | BY | APPR | REVISION | 100 // |           |
|----------------|----------|------|----|------|----------|--------|-----------|
|                |          |      |    |      |          | JOB#:  | COSA0025  |
| CALL 48 HOURS  |          |      |    |      |          | DSGN:  | AOW       |
| OALL 40 HOOKS  |          |      |    |      |          | DRN:   | OXA       |
| BEFORE YOU DIG |          |      |    |      |          |        | UAA       |
| DEFORE 100 DIG |          |      |    |      |          | CHKD:  | KAHA      |
| 1-800-424-5555 |          |      |    |      |          | DATE:  | 8/13/2019 |
|                |          |      |    |      |          |        |           |
|                | $\vdash$ |      |    |      |          | SCALE: | AS NOTED  |
|                |          |      |    |      |          |        |           |



Bellevue Washington 98007

Phone: 425.519.6500





#### CITY OF SAMMAMISH 2019 FLASHING YELLOW ARROW SIGNALS PROJECT **KING COUNTY WASHINGTON**

PL02

4 OF 9

#### **CONSTRUCTION NOTES**

- REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL CONTROLLER. CONTROLLER SHALL BE RETURNED TO THE CITY OF SAMMAMISH 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 CITY OF SAMMAMISH TRAFFIC SIGNAL OPERATIONS FOR EACH INDIVIDUAL INTERSECTION. NEW TRAFFIC SIGNAL CONTROLLER SHALL BE TESTED BY CITY OF SAMMAMISH SIGNAL TECHNICIANS PRIOR TO INSTALLATION. COORDINATE TESTING AND INSTALLATION WITH CITY OF SAMMAMISH TRAFFIC SIGNAL TECHNICIANS.
- REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL CONFLICT MONITOR. CONFLICT MONITOR SHALL BE RETURNED TO THE CITY OF SAMMAMISH TRAFFIC SIGNAL OPERATIONS GROUP. INSTALL NEW EDI MMU2-16LE(ip) SMARTMONITOR CONFLICT MONITOR. RE-TERMINATE ALL SIGNAL CONFLICT MONITOR PORTS. COORDINATE INSTALLATION WITH CITY OF SAMMAMISH TRAFFIC SIGNAL TECHNICIANS.
- INSTALL NEW MMU2-16LE SMARTMONITOR PROGRAM CARD IN EXISTING SIGNAL MMU2 CONFLICT MONITOR FOR FLASHING YELLOW ARROW (FYA) OPERATIONS.
- INSTALL NEW SEVEN CONDUCTOR (7C) BETWEEN NEW LEFT-TURN SIGNAL HEAD AND EXISTING TERMINAL CABINET ON SIGNAL POLE. INSTALL NEW SEVEN CONDUCTOR (7C) BETWEEN EXISTING TERMINAL CABINET AND EXISTING SIGNAL CONTROLLER THROUGH EXISTING SIGNAL CONDUIT. ALL SEVEN CONDUCTORS (7C) ON SPAN WIRE SYSTEMS SHALL UTILIZE SPAN WIRE AND RISER ON CONTROLLER CORNER RATHER THAN TERMINAL CABINETS. TERMINATE CONDUCTORS IN SIGNAL CONTROLLER CABINET.
- PROVIDE AND INSTALL TWO (2) LOAD SWITCHES.
- REMOVE AND RELOCATE 4-SECTION SIGNAL HEAD OVER LEFT-TURN LANE PER (6) TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON SHEET PLO1. REMOVE AND REPLACE ALL EXISTING SIGNAL DISPLAYS WITH LIGHT EMITTING DIODE (LED) ARROW HEADS FOR FLASHING YELLOW ARROW (FYA) CONFIGURATION.
- 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 PLO1, OR AS APPROVED BY ENGINEER.
- REMOVE AND SALVAGE EXISTING 3-SECTION SIGNAL HEAD OVER LEFT-TURN LANE. SIGNAL HEAD SHALL BE RETURNED TO THE CITY OF SAMMAMISH 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. THE CONTRACTOR SHALL COORDINATE RETURN OF SIGNAL EQUIPMENT WITH CITY OF SAMMAMISH SIGNAL TECHNICIANS.
- REMOVE AND SALVAGE EXISTING 3-SECTION PROTECTED LEFT-TURN SIGNAL HEAD. SIGNAL HEAD SHALL BE RETURNED TO THE CITY OF SAMMAMISH 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.
- REMOVE AND REPLACE ALL EXISTING SIGNAL DISPLAYS WITH LIGHT EMITTING DIODE (LED) ARROW HEADS FOR FLASHING YELLOW ARROW (FYA) CONFIGURATION.
- INSTALL NEW "LEFT TURN YIELD ON FLASHING YELLOW" SIGN PER SIGN DETAIL S1. MOUNT RIGHT OF NEW FLASHING YELLOW ARROW SIGNAL HEAD ON MAST ARM PER WSDOT STD. PLAN G-30.10-04 OR ON SPAN WIRE SIGN MOUNTING HANGER. INSTALL ONE PERMANENT FLUORESCENT ORANGE "ENHANCED CONSPICUITY" 12"X12" PLAQUE, ABOVE THE S1 SIGN, EACH AT 45 DEGREES TO THE VERTICAL.
- REMOVE AND SALVAGE EXISTING "LEFT TURN YIELD ON GREEN" OR "LEFT TURN MUST YIELD" SIGN. SIGN SHALL BE RETURNED TO THE CITY OF SAMMAMISH TRAFFIC SIGNAL OPERATIONS GROUP.
- REMOVE AND SALVAGE EXISTING 5-SECTION (DOGHOUSE) SIGNAL HEAD. SIGNAL HEAD SHALL BE RETURNED TO THE CITY OF SAMMAMISH TRAFFIC SIGNAL OPERATIONS. INSTALL NEW 3-SECTION BIMODAL SIGNAL HEAD ON EXISTING SIGNAL SPAN WIRE. NEW 3-SECTION BIMODAL HEAD SHALL HAVE LIGHT EMITTING DIODE (LED) ARROW HEADS FOR FLASHING YELLOW ARROW (FYA) CONFIGURATION.
- PROVIDE AND INSTALL FLASH TRANSFER RELAYS FOR CABINET.
- REMOVE AND RELOCATE EXISTING 3-SECTION SIGNAL HEADS PER TYPICAL SIGNAL HEAD PLACEMENT DETAIL ON SHEET PLO1, OR AS APPROVED BY ENGINEER. 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.
- NO NEW EQUIPMENT REQUIRED IN THIS CATEGORY. EXISTING EQUIPMENT CAPABLE OF FLASHING YELLOW ARROW OPERATIONS.

**ROADWAY PLAN** 

|        | MINIMUM LANE CLOSURE TAPER LENGTH = L (feet) |     |     |                    |     |     |     |     |     |     |  |  |  |  |
|--------|--|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| LANE   | LANE<br>WIDTH                                |     |     | Posted Speed (mph) |     |     |     |     |     |     |  |  |  |  |
| (feet) | 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) |
|--|-------------------------------------|--------|
|--|-------------------------------------|--------|

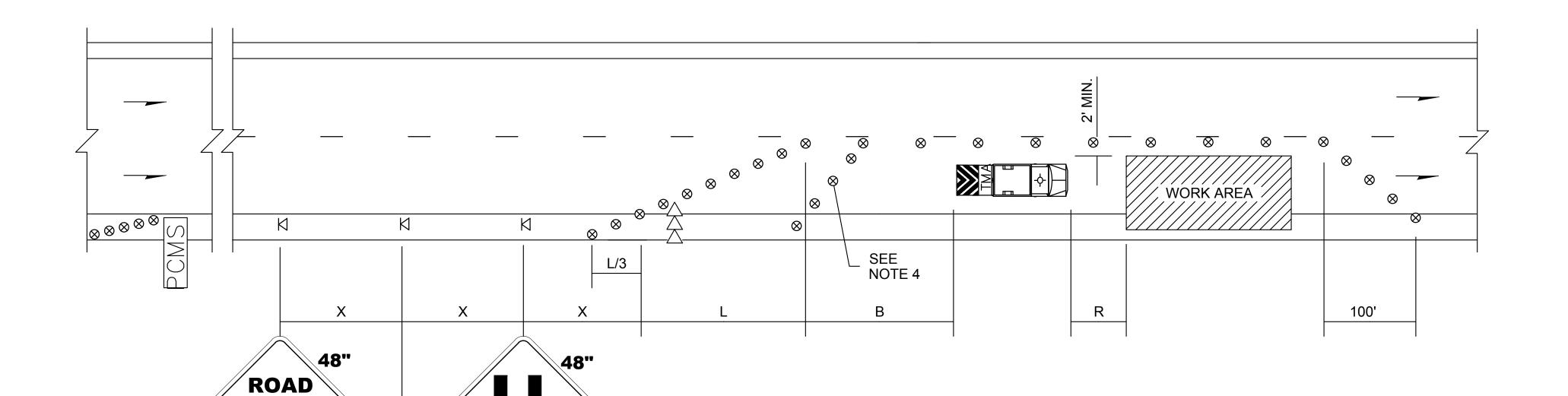
|  |    |                    |    |    |     |     |     | `   | ,   |     |  |  |
|--|----|--------------------|----|----|-----|-----|-----|-----|-----|-----|--|--|
| SHOULDER<br>WIDTH  |    | Posted Speed (mph) |    |    |     |     |     |     |     |     |  |  |
| (feet)   | 25 | 30                 | 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 SPAC                            | ING = 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 SDACING MAY DE AD ILISTED TO |                |            |

(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 (MP                                   | PH)  | 25             | 30  | 35  | 40  | 45                | 50  | 55               | 60     | 65   | 70  |
| LENGTH (feet) 155                           |  |                | 200 | 250 | 305 | 360               | 425 | 495              | 570    | 645  | 730 |
| TRANSPO                                     | TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R |                |     |     |     |                   |     |                  |        |      |     |
| HOST VEHICLE WEIGHT<br>9,900 TO 22,000 lbs. |  |                |     |     |     |                   |     | EHICLE<br>22,000 |        | HT.  |     |
| < 45 MPH                                    | 45-55  | 5 MPH > 55 MPH |     |     | <   | < 45 MPH 45-55 MI |     | PH               | > 55 N | 1PH  |     |
| 100'  | 12   | 23'            |     |     |     | 74'               |     | 100'             |        | 150' |     |



| PCMS                     |                  |  |  |  |  |  |  |
|--------------------------|------------------|--|--|--|--|--|--|
| 1                        | 2                |  |  |  |  |  |  |
| RIGHT<br>LANE<br>CLOSURE | 1000 FT<br>AHEAD |  |  |  |  |  |  |
| 2.0 SEC                  | 2.0 SEC          |  |  |  |  |  |  |

FIELD LOCATE 1000 FEET ± 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:

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

|                | NO. | DATE | BY | APPR | REVISION |        |                 |
|----------------|-----|------|----|------|----------|--------|-----------------|
|                |     |      |    |      |          | JOB#:  | COSA0025        |
| CALL 48 HOURS  |     |      |    |      |          | DSGN:  | AOW             |
|                |     |      |    |      |          | DRN:   | OXA             |
| BEFORE YOU DIG |     |      |    |      |          | CHKD:  | КАНА            |
| 1-800-424-5555 |     |      |    |      |          |        |                 |
| 1-600-424-5555 |     |      |    |      |          | DATE:  | 8/13/2019       |
|                |     |      |    |      |          | SCALE: | <b>AS NOTED</b> |

**WORK** 

AHEAD

**W20-1** 

W4-2(L)

RIGHT LANE

**CLOSED** 

AHEAD/

**W20-5R** 



Phone: 425.519.6500





| CITY OF SAMMAMISH         |                   |  |  |  |  |  |
|---------------------------|-------------------|--|--|--|--|--|
| 2019 FLASHING YELLOW ARRO | W SIGNALS PROJECT |  |  |  |  |  |
| KING COUNTY               | WASHINGTON        |  |  |  |  |  |
|                           |                   |  |  |  |  |  |

TC01

TRAFFIC CONTROL PLAN

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

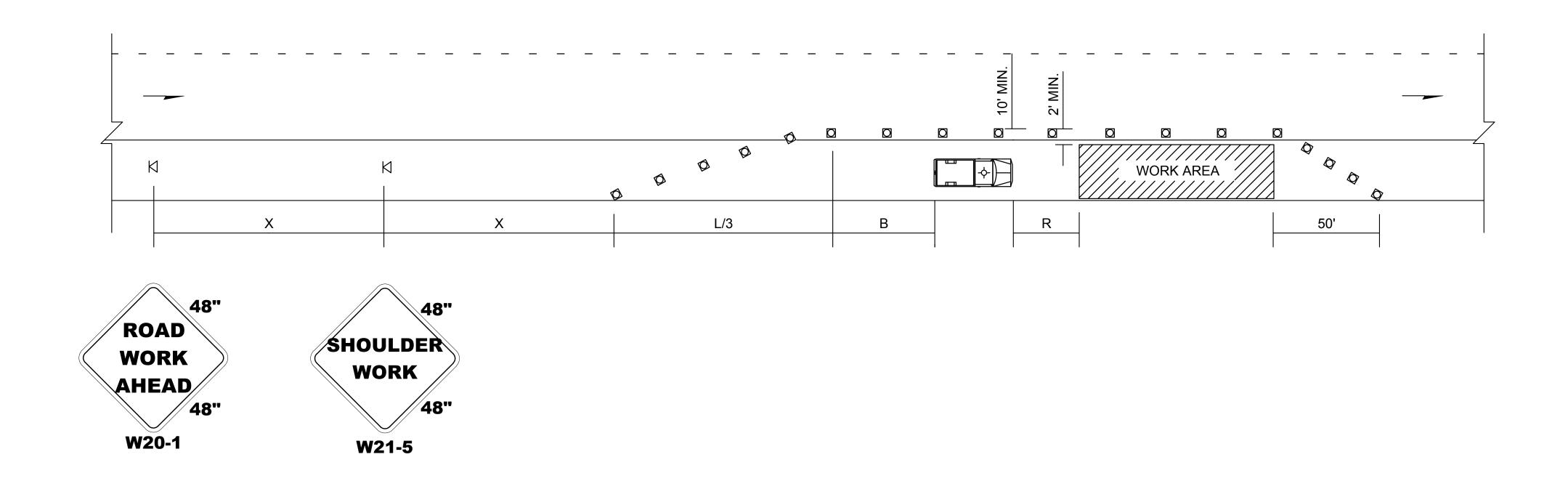
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE

| ( )                       |           |           | _           |  |
|---------------------------|-----------|-----------|-------------|--|
| INTERSECTIONS AND DRI     | VEWAYS.   |           |             |  |
| (2) THIS SPACING MAY BE F | REDUCED I | N URBAN A | REAS TO FIT |  |
| ROADWAY CONDITIONS.       |           |           |             |  |

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

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



LEGEND TEMPORARY SIGN LOCATION CHANNELIZING DEVICES PROTECTIVE VEHICLE

## 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.

|                |     |      |    |      |          | •      |           |
|----------------|-----|------|----|------|----------|--------|-----------|
|                | NO. | DATE | BY | APPR | REVISION |        |           |
|                |     |      |    |      |          | JOB#:  | COSA0025  |
| CALL 48 HOURS  |     |      |    |      |          | DSGN:  | AOW       |
|                |     |      |    |      |          | DRN:   | OXA       |
| BEFORE YOU DIG |     |      |    |      |          |        |           |
|                |     |      |    |      |          | CHKD:  | KAHA      |
| 1-800-424-5555 |     |      |    |      |          | DATE:  | 8/13/2019 |
|                |     |      |    |      |          | SCALE. | AS NOTED  |
|                |     |      |    |      |          | JUALL. | AS NOTED  |







| CITY OF SAMMAMISH<br>2019 FLASHING YELLOW ARROW SIGNALS PROJECT |                 |            |  |  |  |  |  |  |  |
|---|-----------------|------------|--|--|--|--|--|--|--|
| KING COUNT  | Υ               | WASHINGTON |  |  |  |  |  |  |  |
|   | TRAFFIC CONTROL | PLAN       |  |  |  |  |  |  |  |

6 OF 9

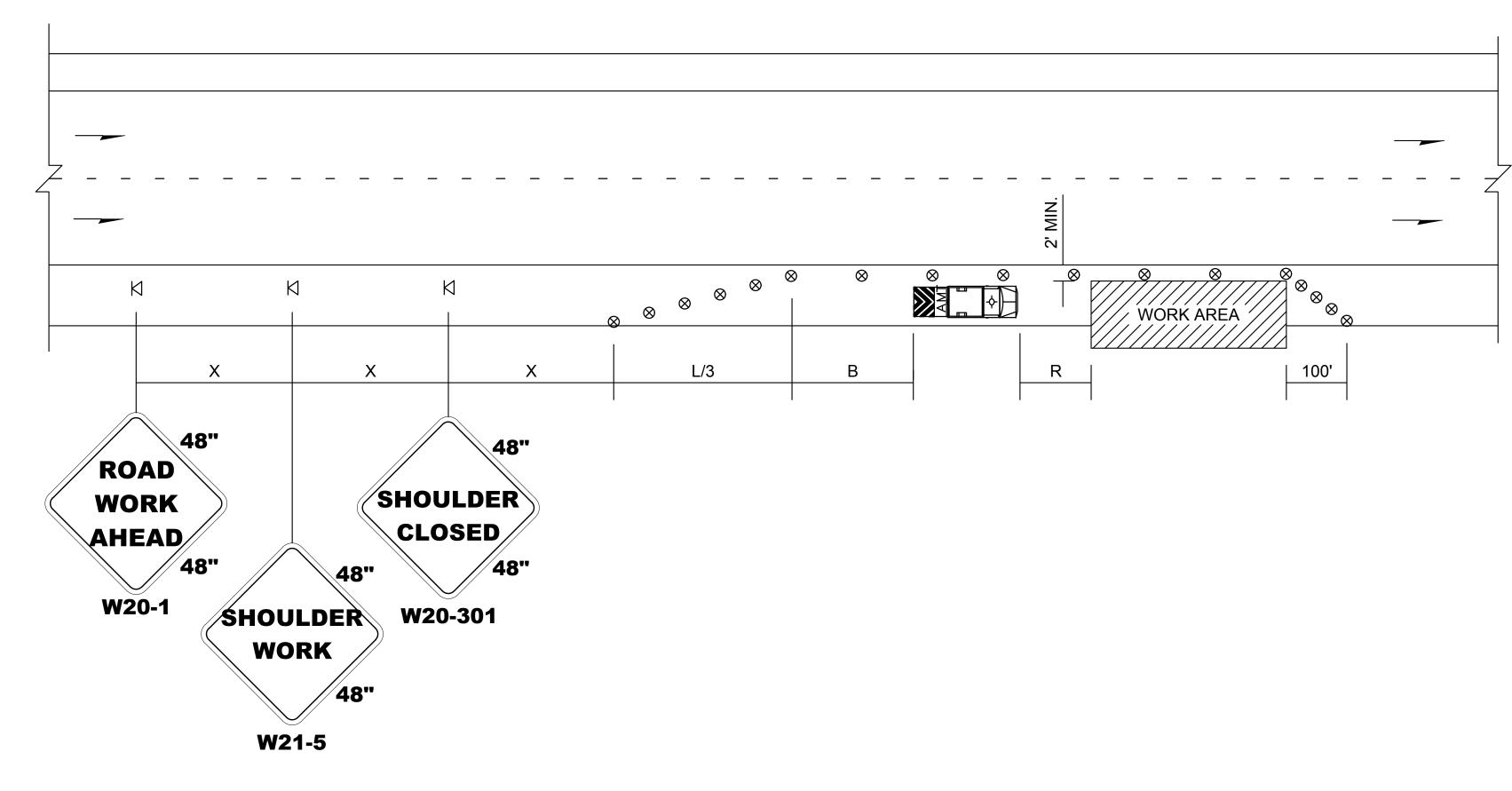
TC02

| MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)               |                    |    |    |    |     |     |     |     |     |     |  |
|--|--------------------|----|----|----|-----|-----|-----|-----|-----|-----|--|
| SHOULDER   | Posted Speed (mph) |    |    |    |     |     |     |     |     |     |  |
| WIDTH<br>(feet)  | 25                 | 30 | 35 | 40 | 45  | 50  | 55  | 60  | 65  | 70  |  |
| 8'   | -                  | -  | -  | -  | 120 | 130 | 150 | 160 | 170 | 190 |  |
| 10'  | -                  | -  | -  | -  | 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' |  |
| (1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.            |  |  |  |  |  |  |  |                              |  |

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

| BUFFER DATA                                      |        |     |     |        |     |                                   |     |           |     |          |    |  |
|--|--------|-----|-----|--------|-----|-----------------------------------|-----|-----------|-----|----------|----|--|
| LONGITUDINAL BUFFER SPACE = B                    |        |     |     |        |     |                                   |     |           |     |          |    |  |
| SPEED (MPH) 25 30 35 4                           |        |     |     |        |     | 45                                | 50  | 55        | 60  | 65       | 70 |  |
| LENGTH   | (feet) | 200 | 250 | 305    | 360 | 425                               | 495 | 570       | 645 | 730      |    |  |
| TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R |        |     |     |        |     |                                   |     |           |     |          |    |  |
|  | VEHICI |     |     |        |     | HOST VEHICLE WEIGHT > 22,000 lbs. |     |           |     |          |    |  |
| < 45 MPH   | 45-55  | MPH | > ! | 55 MPH | <   | < 45 MPH                          |     | 45-55 MPH |     | > 55 MPH |    |  |
| 100'   | 12     | 23' |     | 172'   |     | 74'                               |     | 100'      |     | 150'     |    |  |
|  | I      |     |     |        | I   |                                   | I   |           | I   |          |    |  |



LEGEND

TRANSPORTABLE ATTENUATOR

SHOULDER CLOSURE - HIGH SPEED (GREATER THAN 40 MPH)

NOT TO SCALE

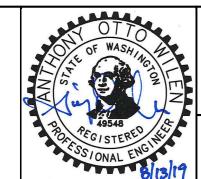
#### NOTES

- NO ENCROACHMENT IN TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
- 2. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT) O.C.
- 3. ALL SIGNS ARE BLACK ON ORANGE.

|                | NO. | DATE | BY | APPR | REVISION | JOB#:  | COSA0025  |
|----------------|-----|------|----|------|----------|--------|-----------|
| CALL 48 HOURS  |     |      |    |      |          | DSGN:  | AOW       |
|                |     |      |    |      |          | DRN:   | OXA       |
| BEFORE YOU DIG |     |      |    |      |          | CHKD:  | КАНА      |
| 1-800-424-5555 |     |      |    |      |          | DATE:  | 8/13/2019 |
|                |     |      |    |      |          | SCALE: | AS NOTED  |
| 4              |     |      |    |      |          |        |           |







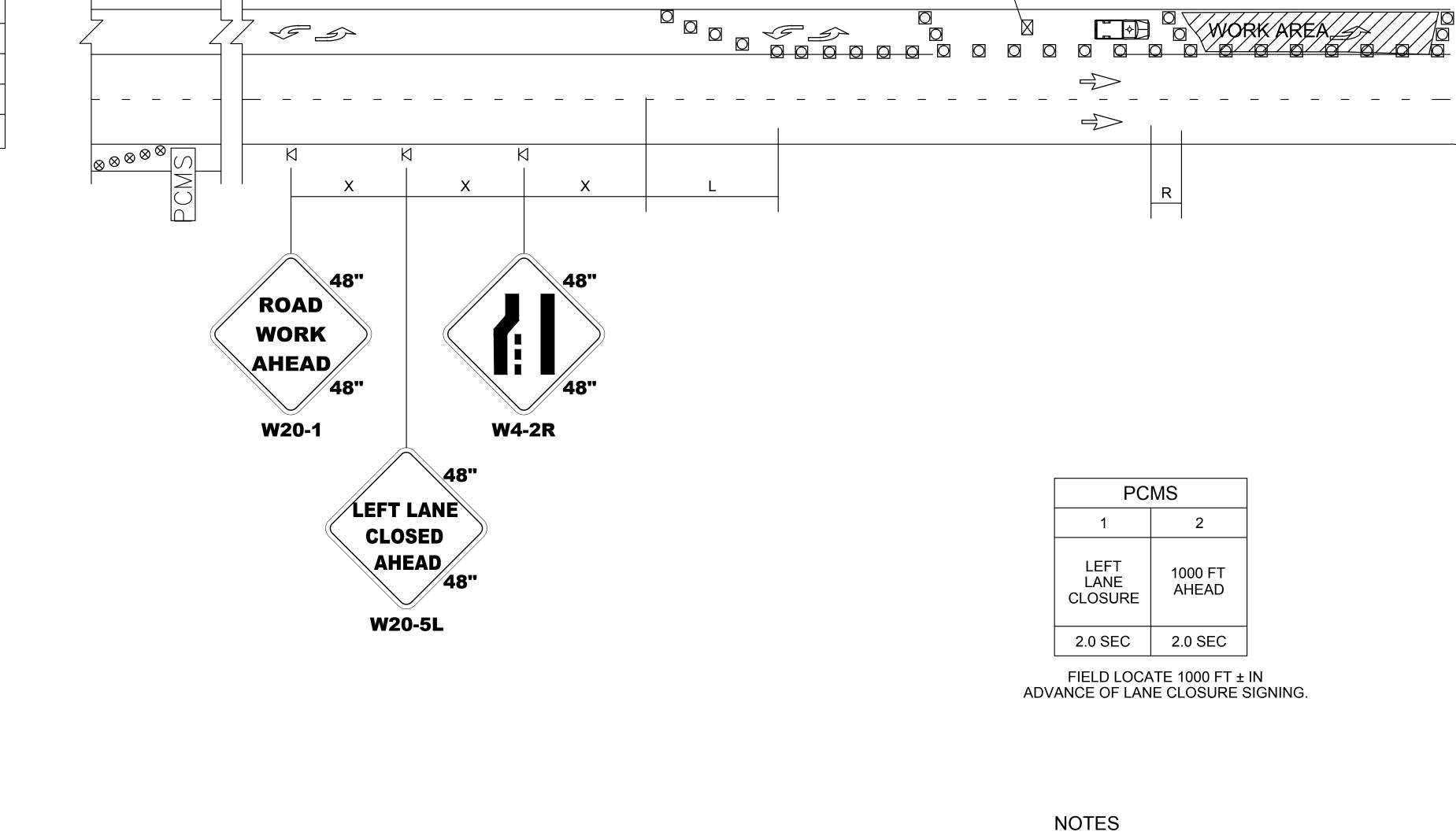
|   | CITY OF SAMMAMISH<br>2019 FLASHING YELLOW ARROW SIGNALS PROJECT | TC0  |
|---|---|------|
|   | KING COUNTY WASHINGTON  |      |
| 5 | TRAFFIC CONTROL PLAN  | 7 05 |

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

| ROADWAT CONDITIONS. |
|---------------------|
|                     |
|                     |
|                     |

| MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)               |                    |    |    |    |     |     |     |     |     |     |  |
|--|--------------------|----|----|----|-----|-----|-----|-----|-----|-----|--|
| SHOULDER<br>WIDTH  | Posted Speed (mph) |    |    |    |     |     |     |     |     |     |  |
| (feet)   | 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      |  |  |  |  |  |  |



30"

R3-2 R/B/W

LEGEND

TEMPORARY SIGN LOCATION

CHANNELIZING DEVICES

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

OFFICER CONTROLLED

## LEFT TURN POCKET CLOSURE

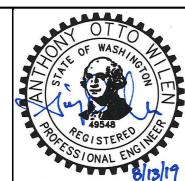
NOT TO SCALE

| COSA0025  |   |
|-----------|---|
| AOW       | ® |
| OXA       |   |
| КАНА      |   |
| 8/13/2019 |   |
| AS NOTED  |   |



Phone: 425.519.6500





| NEW | CITY OF SAMMAMISH 2019 FLASHING YELLOW ARROW SIGNALS PRO KING COUNTY WASHI | JECT<br>INGTON | TC04 |
|-----|--|----------------|------|
| A   |  |                |      |

8 OF 9

1. SEE SPECIAL PROVISIONS FOR CLOSURE HOUR RESTRICTIONS.

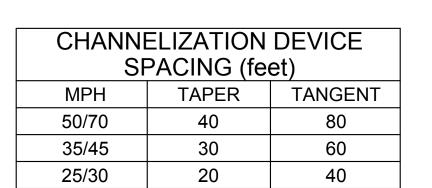
2. TYPICAL APPLICATION SHOWN. ADJUST FOR SITE CONDITIONS.

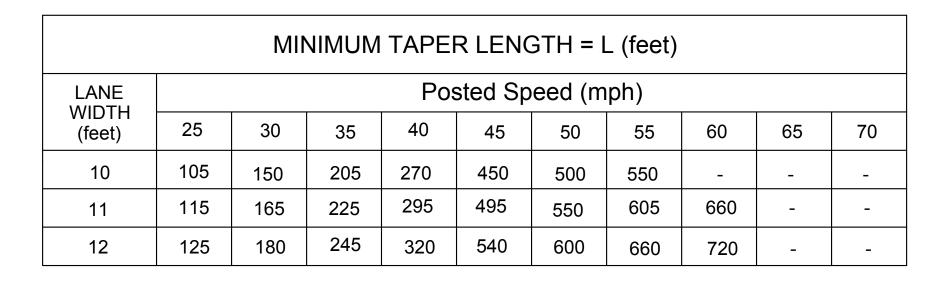
TRAFFIC CONTROL PLAN

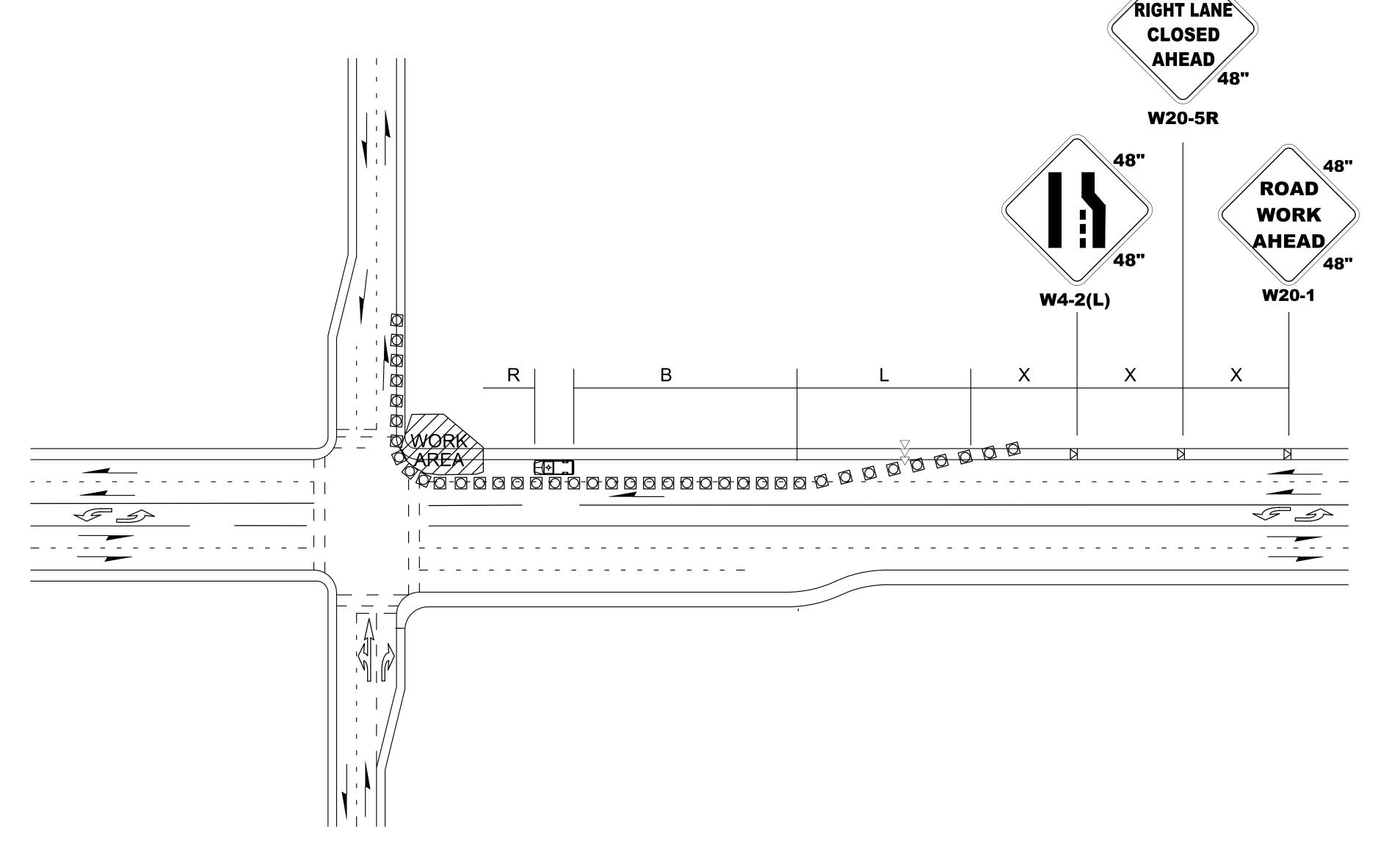
3. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

CALL 48 HOURS **BEFORE YOU DIG** 1-800-424-5555

NO. DATE BY APPR **REVISION** JOB#: SCALE:







**BUFFER DATA** LONGITUDINAL BUFFER SPACE = B SPEED (MPH) 55 60 25 50 30 35 40 45 65 200 250 305 360 570 645 730 425 LENGTH (feet) TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs. HOST VEHICLE WEIGHT > 22,000 lbs. > 55 MPH < 45 MPH 45-55 MPH > 55 MPH < 45 MPH 45-55 MPH 172' 150' 100' 74' 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) |  |  |  |  |
| RESIDENTAL & BUSINESS DISTRICTS |                |            |  |  |  |  |
| 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.

#### LEGEND

- ☐ TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN

PROTECTIVE VEHICLE - RECOMMENDED

### INTERSECTION LANE CLOSURE ~ FIVE LANE ROADWAY

NOT TO SCALE

#### NOTES

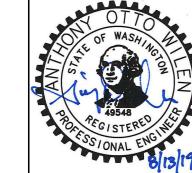
- 1. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
- IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS.
- 3. MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
- 4. ALL SIGNS ARE BLACK ON ORANGE.

|                | NO. | DATE | BY | APPR | REVISION |        |           |
|----------------|-----|------|----|------|----------|--------|-----------|
|                |     |      |    |      |          | JOB#:  | COSA0025  |
| CALL 48 HOURS  |     |      |    |      |          | DSGN:  | AOW       |
|                |     |      |    |      |          | DRN:   | OXA       |
| BEFORE YOU DIG |     |      |    |      |          | CHKD:  | КАНА      |
| 1-800-424-5555 |     |      |    |      |          |        |           |
| 1 000 424 0000 |     |      |    |      |          | DATE:  | 8/13/2019 |
|                |     |      |    |      |          | SCALE: | AS NOTED  |



Phone: 425.519.6500





| To       |      |
|----------|------|
| SHINGT   | 2019 |
|          | KING |
| ENGINE T |      |

| CITY OF SAMMAMISH<br>2019 FLASHING YELLOW ARROW SIGNALS PROJECT | TC05   |
|---|--------|
| KING COUNTY WASHINGTON  |        |
| TRAFFIC CONTROL PLAN  | 0 0- 0 |