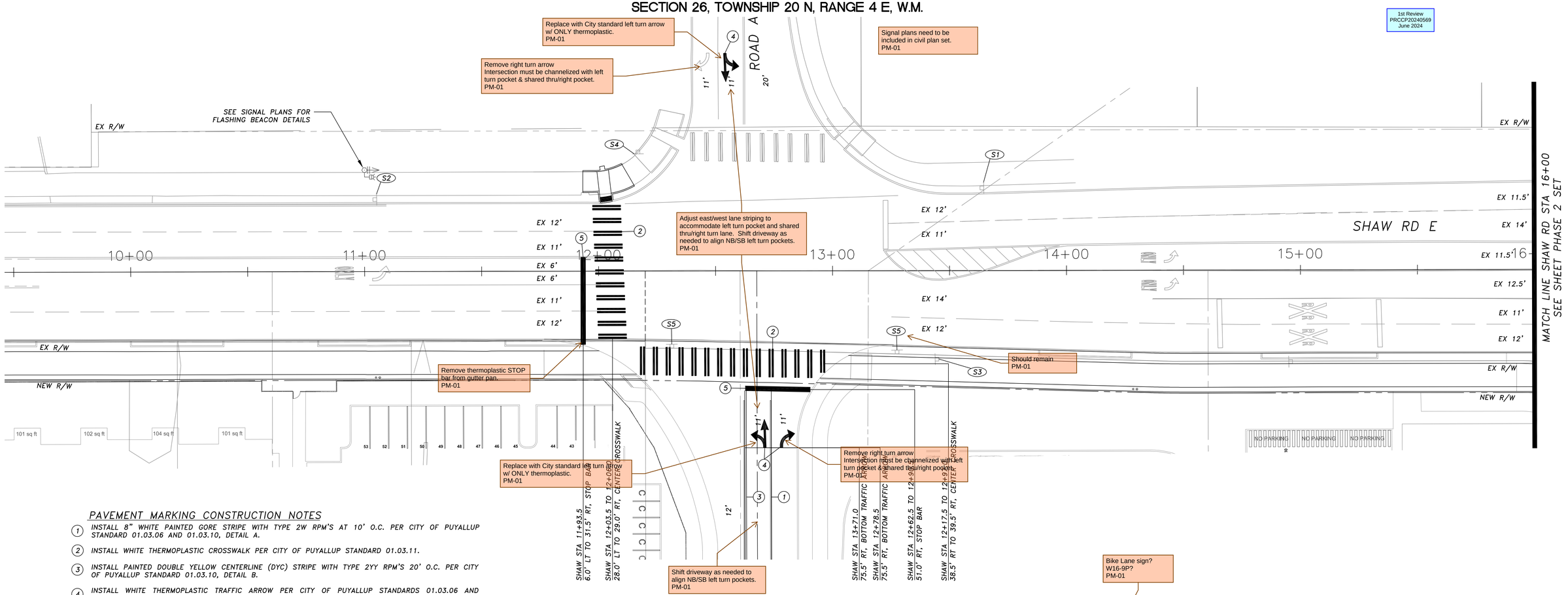
SECTION 26, TOWNSHIP 20 N, RANGE 4 E, W.M.

1st Review
PRCCP20240569
June 2024



PAVEMENT MARKING CONSTRUCTION NOTES

1. INSTALL 8" WHITE PAINTED GORE STRIPE WITH TYPE 2W RPM'S AT 10' O.C. PER CITY OF PUYALLUP STANDARD 01.03.06 AND 01.03.10, DETAIL A.
2. INSTALL WHITE THERMOPLASTIC CROSSWALK PER CITY OF PUYALLUP STANDARD 01.03.11.
3. INSTALL PAINTED DOUBLE YELLOW CENTERLINE (DYC) STRIPE WITH TYPE 2YY RPM'S 20' O.C. PER CITY OF PUYALLUP STANDARD 01.03.10, DETAIL B.
4. INSTALL WHITE THERMOPLASTIC TRAFFIC ARROW PER CITY OF PUYALLUP STANDARDS 01.03.06 AND 01.03.14 AND WSDOT STANDARD PLAN M-24.40. CENTER IN LANE AT THE STATION SHOWN.
5. INSTALL 24" WIDE WHITE THERMOPLASTIC STOP BAR PER CITY OF PUYALLUP STANDARD 01.03.06 AND 01.03.11.

PAVEMENT MARKING GENERAL NOTES

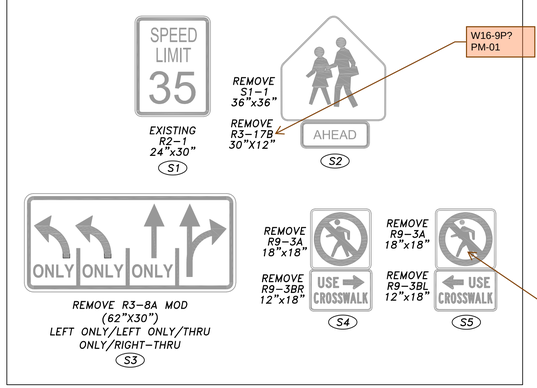
1. ALL PAVEMENT MARKINGS SHALL BE LAID OUT WITH SPRAY PAINT AND APPROVED BY CITY OF PUYALLUP (COP) TRAFFIC OPERATIONS PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE COP TRAFFIC OPERATIONS APPROVAL THROUGH THE COP INSPECTOR.
2. ALL CROSSWALK MARKINGS SHALL BE CENTERED WITHIN THE ADJACENT ADA RAMPS UNLESS OTHERWISE DIRECTED BY THE COP INSPECTOR.
3. COORDINATE WITH CITY STRIPING TECHNICIAN AT ~~253.405.4389~~ PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL COORDINATE WITH CITY SIGN SPECIALIST, ~~TED SCHUMAN, (253.405.4389)~~ PRIOR TO SIGN INSTALLATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL SIGNS AND CHANNELIZATION PER CITY OF PUYALLUP STANDARDS. CONTRACTOR SHALL LAYOUT OUT ALL SIGNS AND CHANNELIZATION, AND THEN CONTACT PUYALLUP, AT 253.405.4389, 48-HOURS IN ADVANCE OF INSTALLATION TO VERIFY LAYOUT.
6. INSTALL ALL SIGNS IN CONCRETE/ASPHALT PER CITY OF PUYALLUP STANDARD 01.04.01.
7. CONTRACTOR SHALL PRUNE ALL VEGETATION IN CONFLICT WITH SIGNS TO ENSURE UNOBSTRUCTED VISIBILITY TO DRIVERS AND PEDESTRIANS.
8. UNLESS OTHERWISE NOTED, INSTALL ALL SIGNS, PER CITY OF PUYALLUP STANDARD DETAIL 01.04.01, AT 7' ABOVE FINISHED GRADE, AS MEASURED TO THE BOTTOM OF SIGN. ON THE SAME POST, THE LOWEST SIGN SHALL BE 7' ABOVE FINISHED GRADE, AS MEASURED TO THE BOTTOM OF THE SIGN.

PAVEMENT MARKING REMOVAL NOTE

1. REMOVE EXISTING CONFLICTING STRIPING AS NECESSARY TO ACCOMMODATE NEW STRIPING. CONTRACTOR TO COORDINATE STRIPING REMOVAL WITH ASPHALT RESTORATION WORK.

Jason Rogge
253-841-5471
PM-01

SIGN LEGEND



W16-9P?
PM-01

Bike Lane sign?
W16-9P?
PM-01

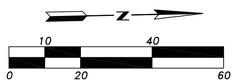
SIGNING CONSTRUCTION NOTES

- S1 EXISTING R2-1 "SPEED LIMIT" SIGN AND EXISTING POST TO REMAIN. PROTECT DURING CONSTRUCTION.
- S2 REMOVE EXISTING S1-1 AND R3-17B SIGNS AND POST AND RETURN TO CITY. RESTORE AREA TO MATCH SURROUNDING.
- S3 REMOVE EXISTING R3-8A MOD SIGN AND POST AND RETURN TO CITY. RESTORE AREA TO MATCH SURROUNDING.
- S4 REMOVE EXISTING R9-3A SIGN AND R9-3BR SIGN AND RETURN TO CITY.
- S5 ~~REMOVE EXISTING R9-3A SIGN AND R9-3BL SIGN AND RETURN TO CITY.~~

Why remove this sign?
PM-01

remain and point to southern leg of this intersection.
PM-01

Should Remain
PM-01



LEGEND

- PAVEMENT MARKING NOTE
- SIGNING NOTE
- SIGN (NEW)
- SIGN (EXISTING)

APPROVED

BY: _____
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE _____

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SEE SHEET PM-02 TO PM-03 FOR:
- STANDARD PLAN DETAILS

No.	Date	By	Revision Description

Designed By:	Issue Date:
LAB	09/29/2023 PERMIT
Drawn By:	
LAB	
Checked By:	**Project No.:**
GRL	2022-295

CHRISTOPHER T. BIRKS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
09-29-2023

TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Trevor Takara, P.E.
Phone: 206-914-3843

ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

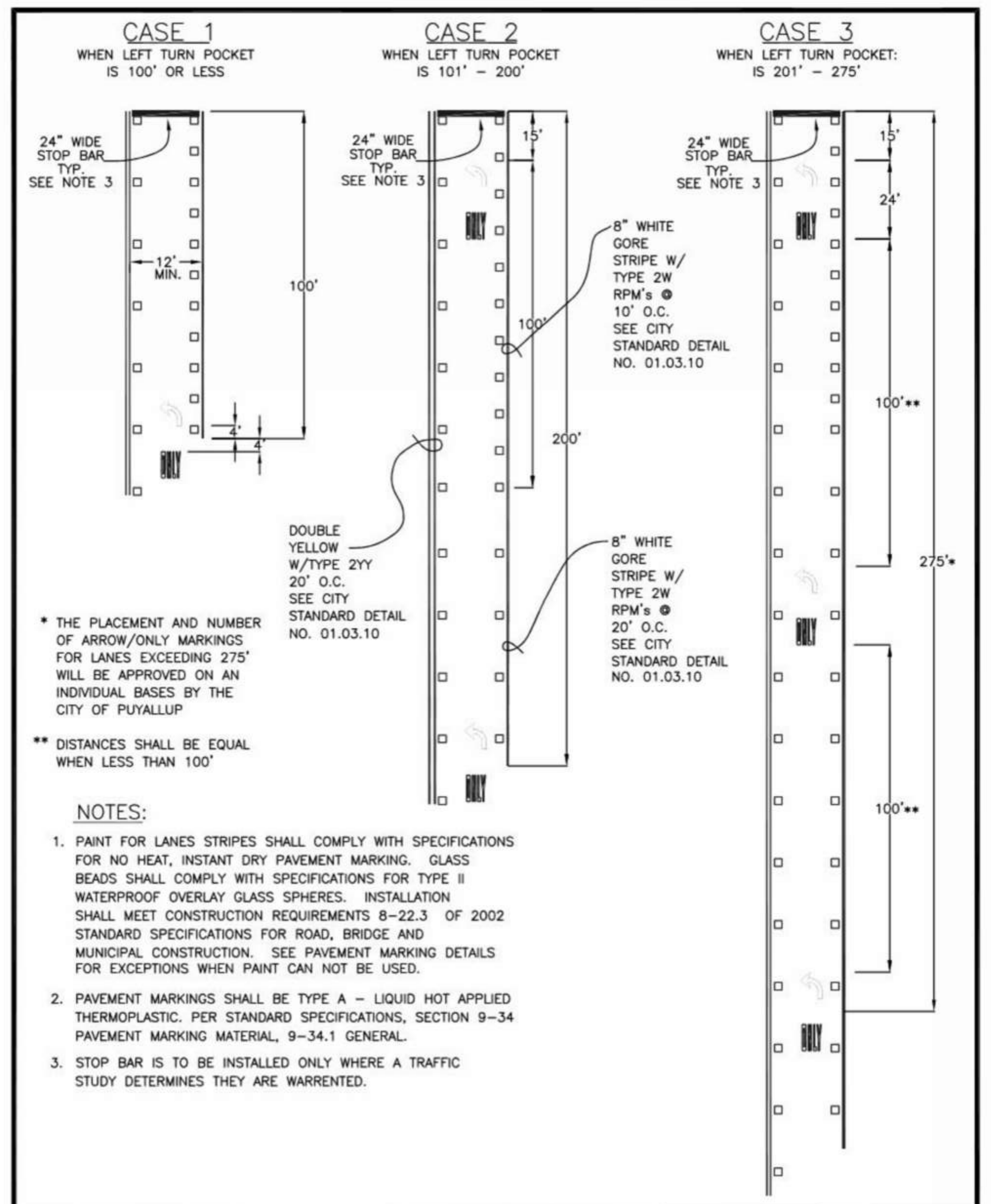
PAVEMENT MARKING & SIGNING PLANS – PHASE 1

PM-01

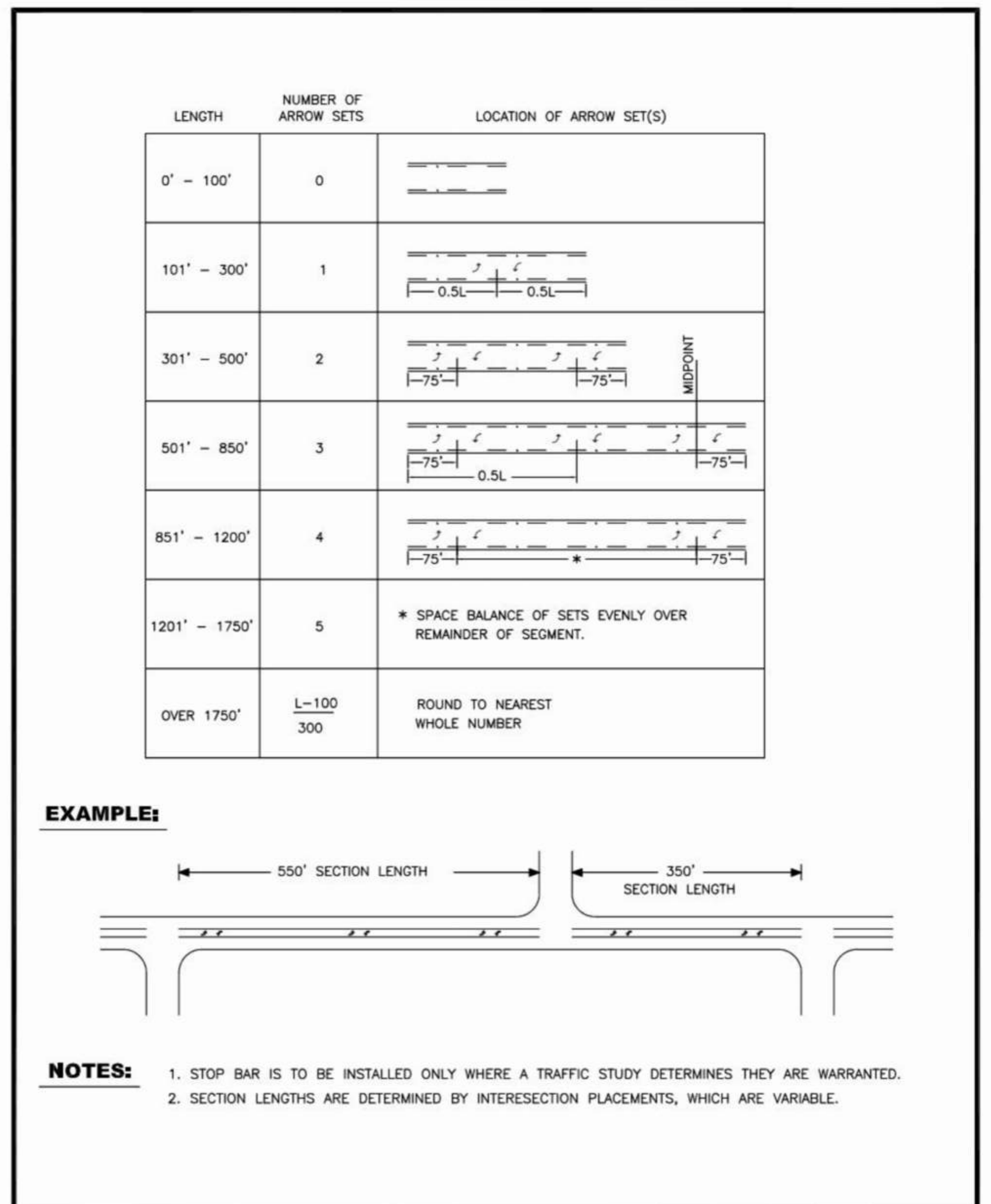
SHEET:

____ OF ____

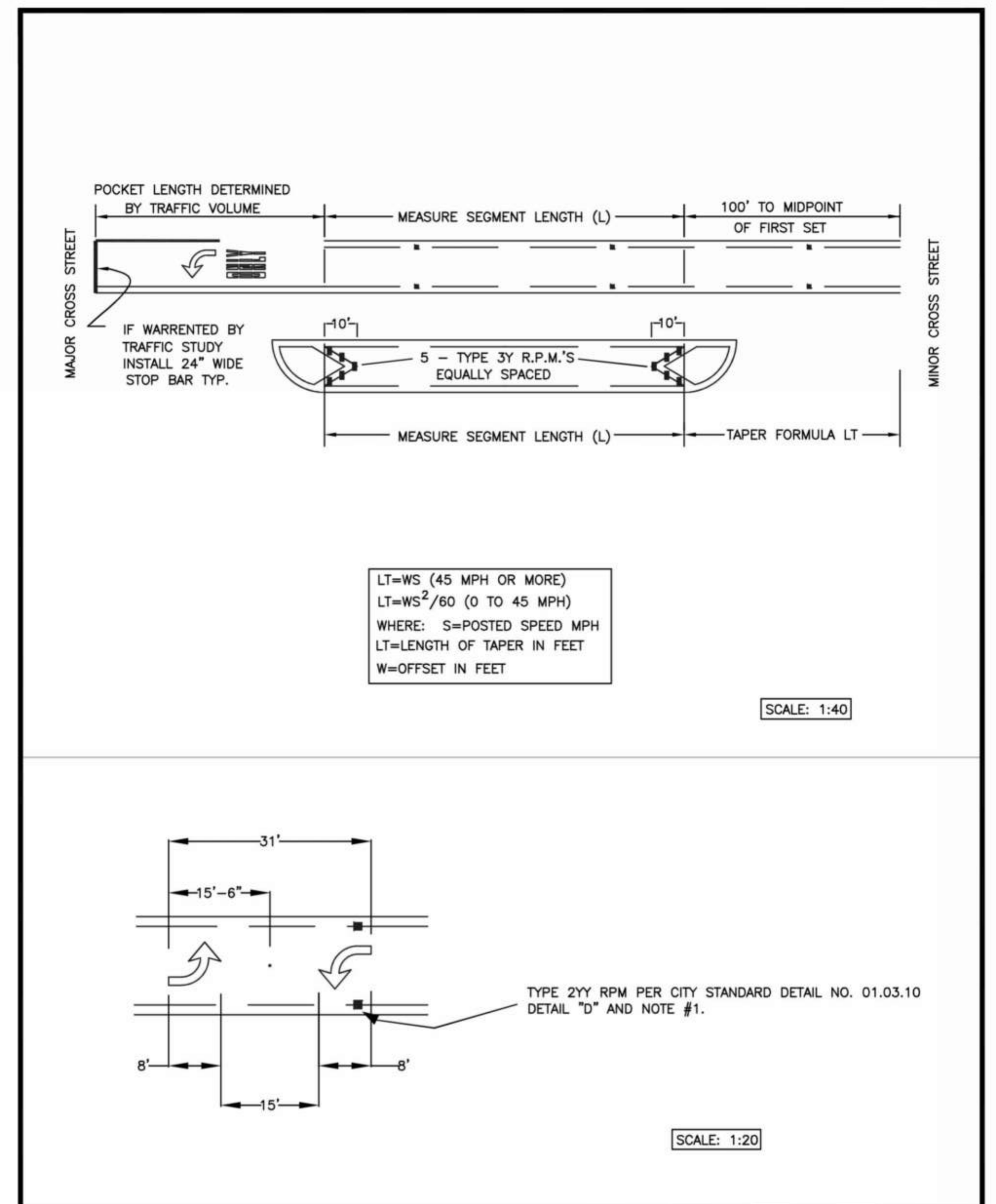
SECTION 26, TOWNSHIP 20 N, RANGE 4 E, W.M.



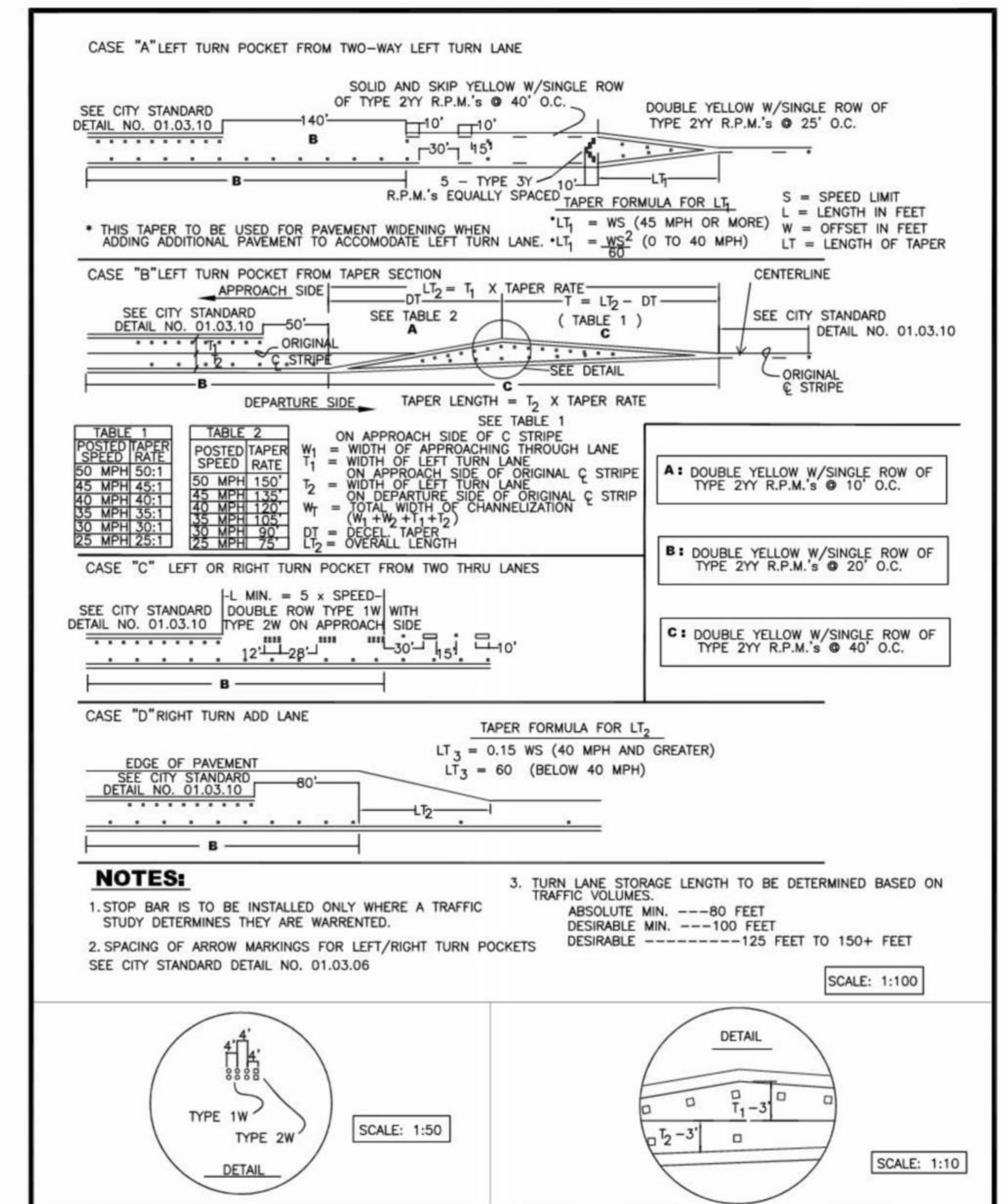
CITY OF PUYALLUP — LEFT/RIGHT TURN POCKET ARROW AND ONLY LAYOUT — 01.03.06



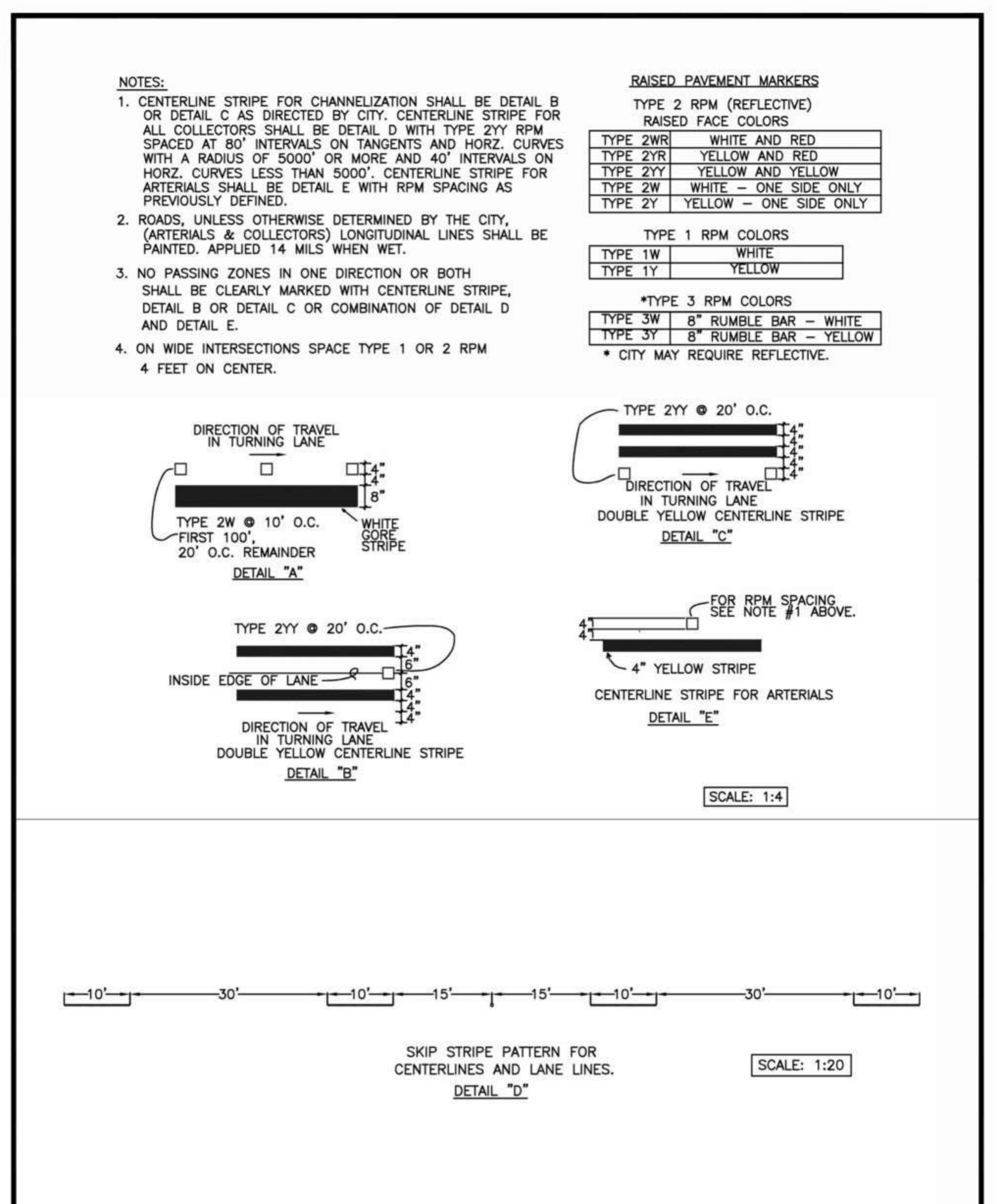
CITY OF PUYALLUP — TWO-WAY LEFT TURN CHANNELIZATION — 01.03.07



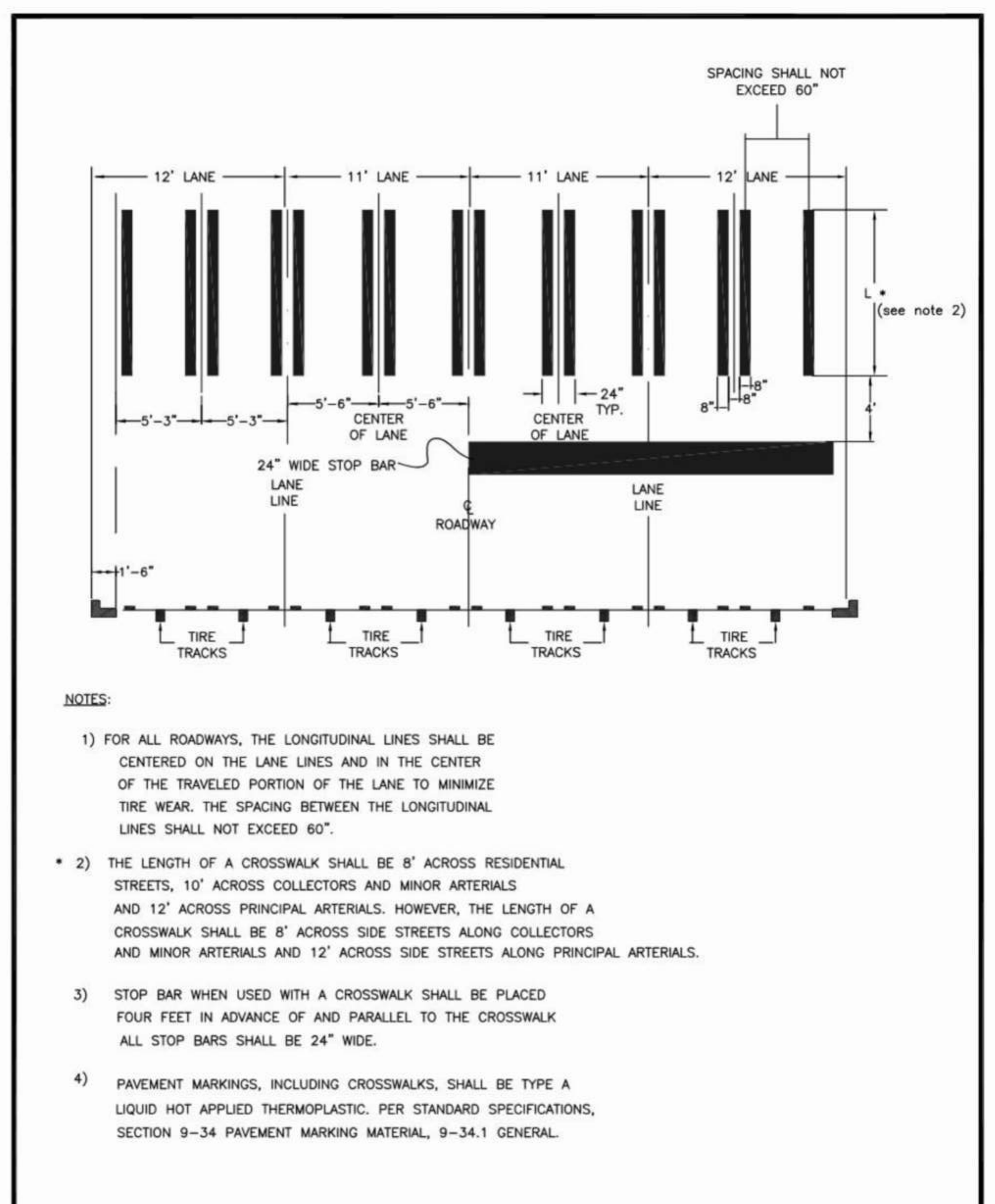
CITY OF PUYALLUP — TWO-WAY LEFT TURN CHANNELIZATION (CONT.) — 01.03.08



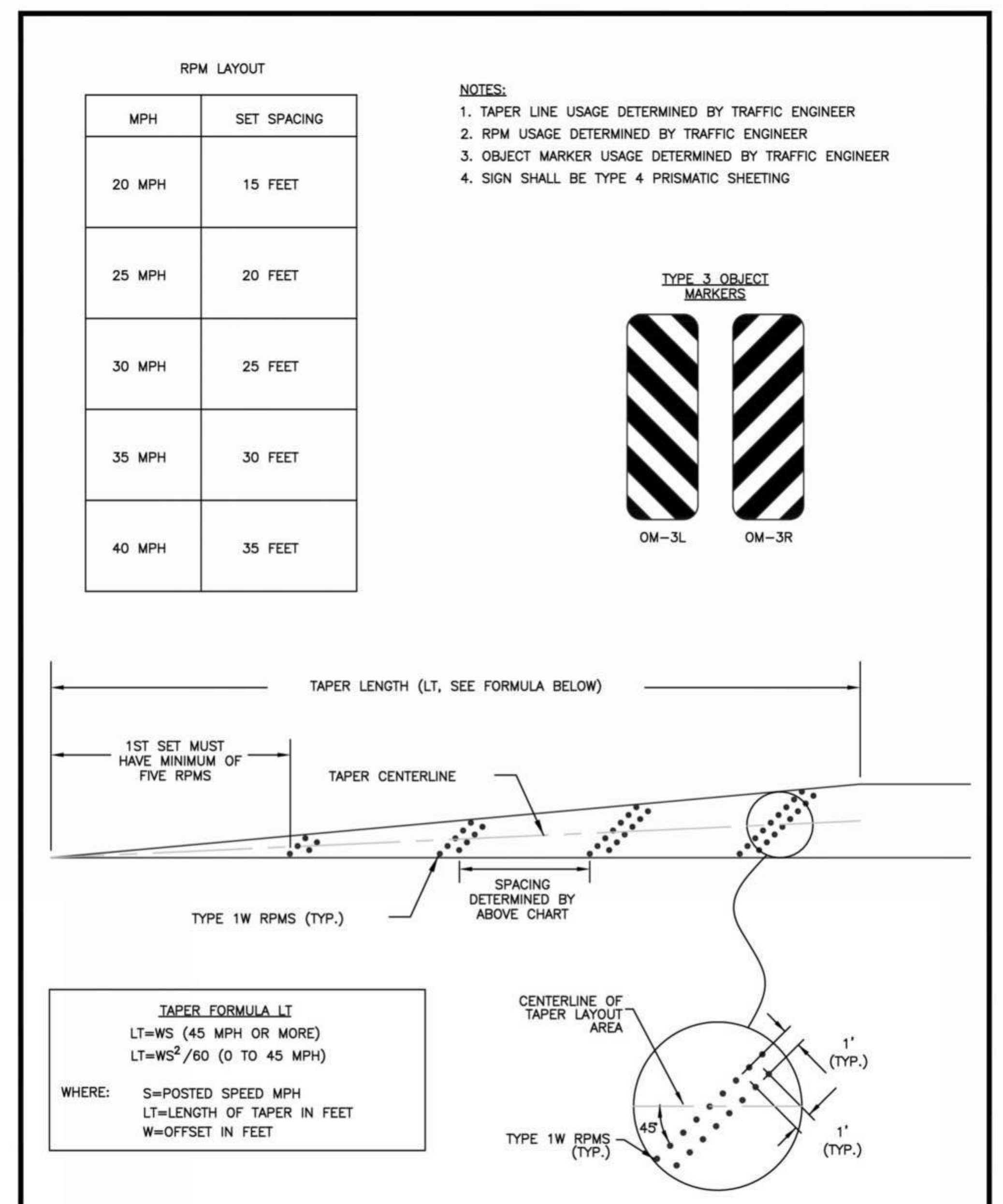
CITY OF PUYALLUP — LEFT TURN POCKETS — 01.03.09



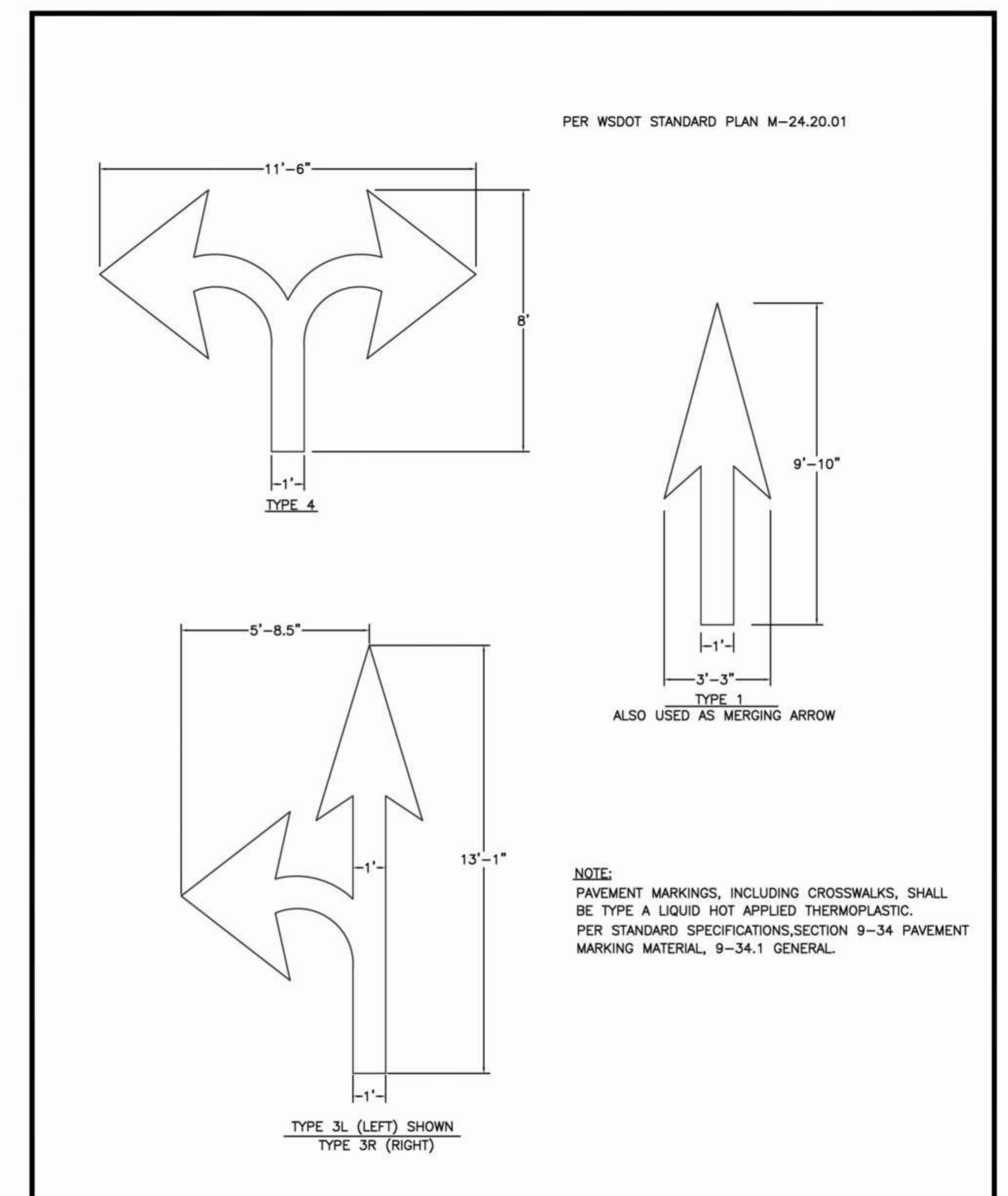
CITY OF PUYALLUP — PAVEMENT MARKING DETAILS — 01.03.10



CITY OF PUYALLUP — CROSSWALK DETAIL — 01.03.11



CITY OF PUYALLUP — TAPER MARKING LAYOUTS — 01.03.13



CITY OF PUYALLUP — PAVEMENT ARROWS — 01.03.14

APPROVED

BY: CITY OF PUYALLUP ENGINEERING SERVICES

DATE

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Drawn By:	PERMIT
LAB	
Checked By:	Project No.:
GRL	2022-295

09-29-2023

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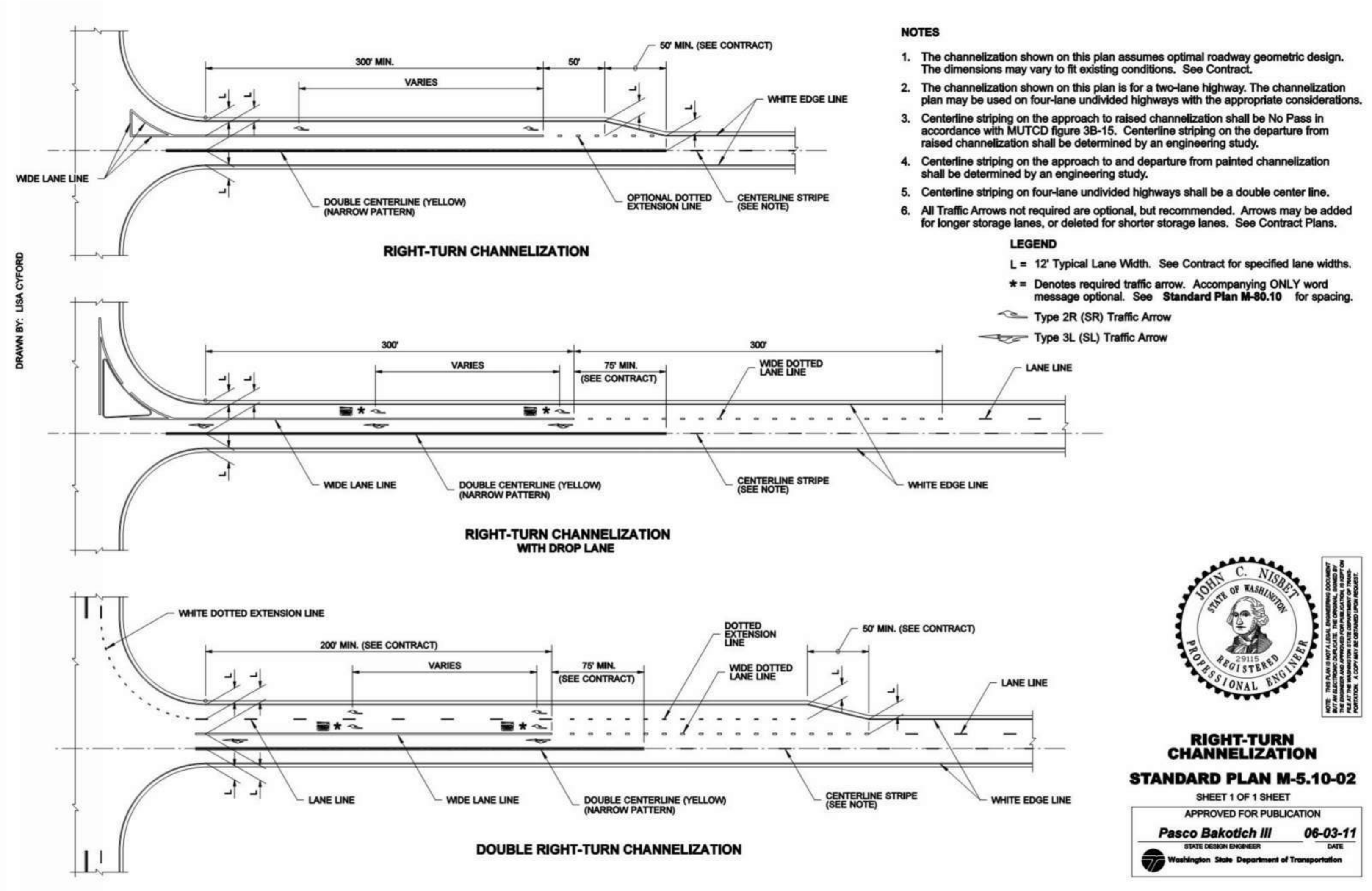
Phone: 206-914-3843

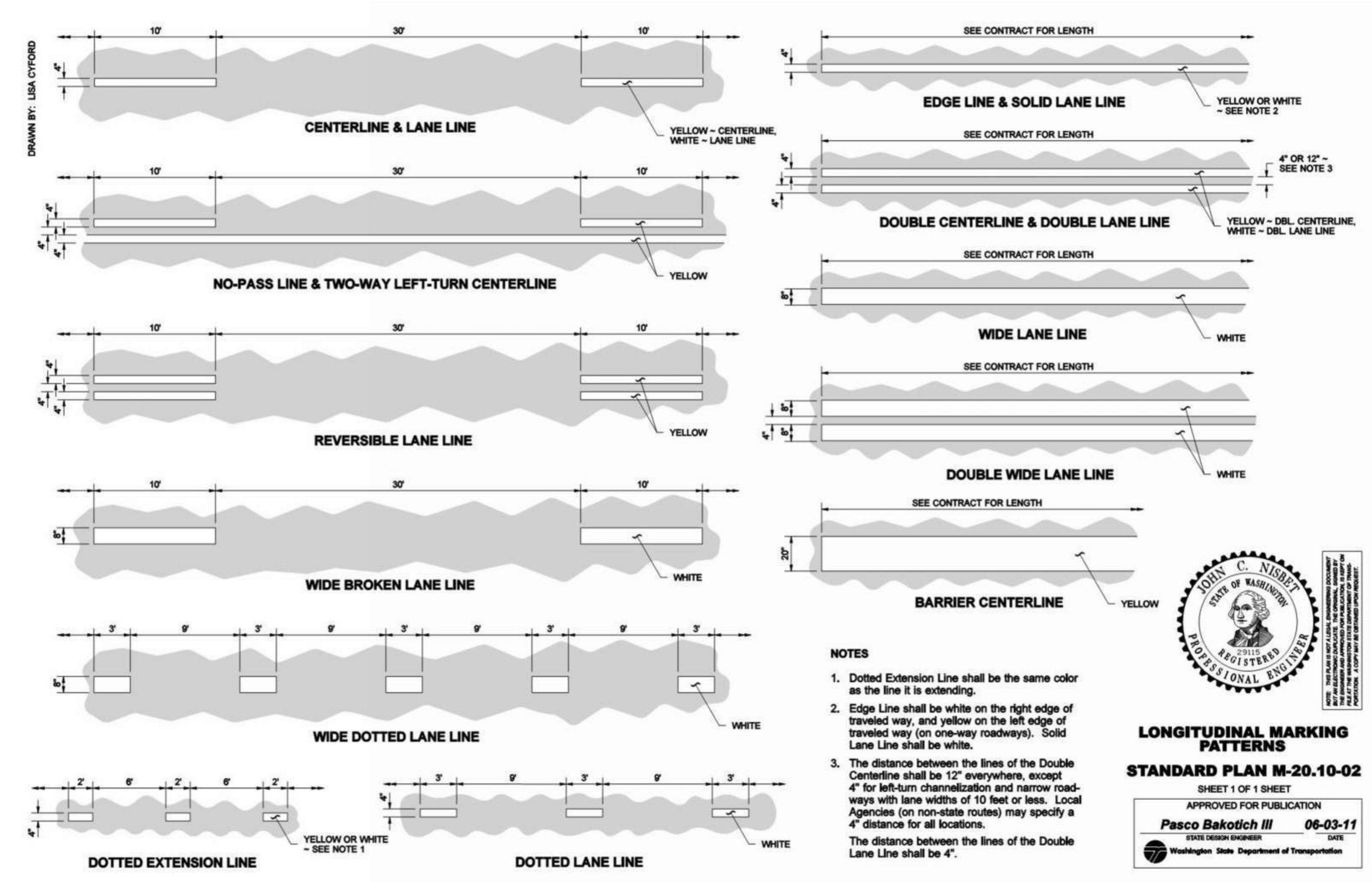
ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

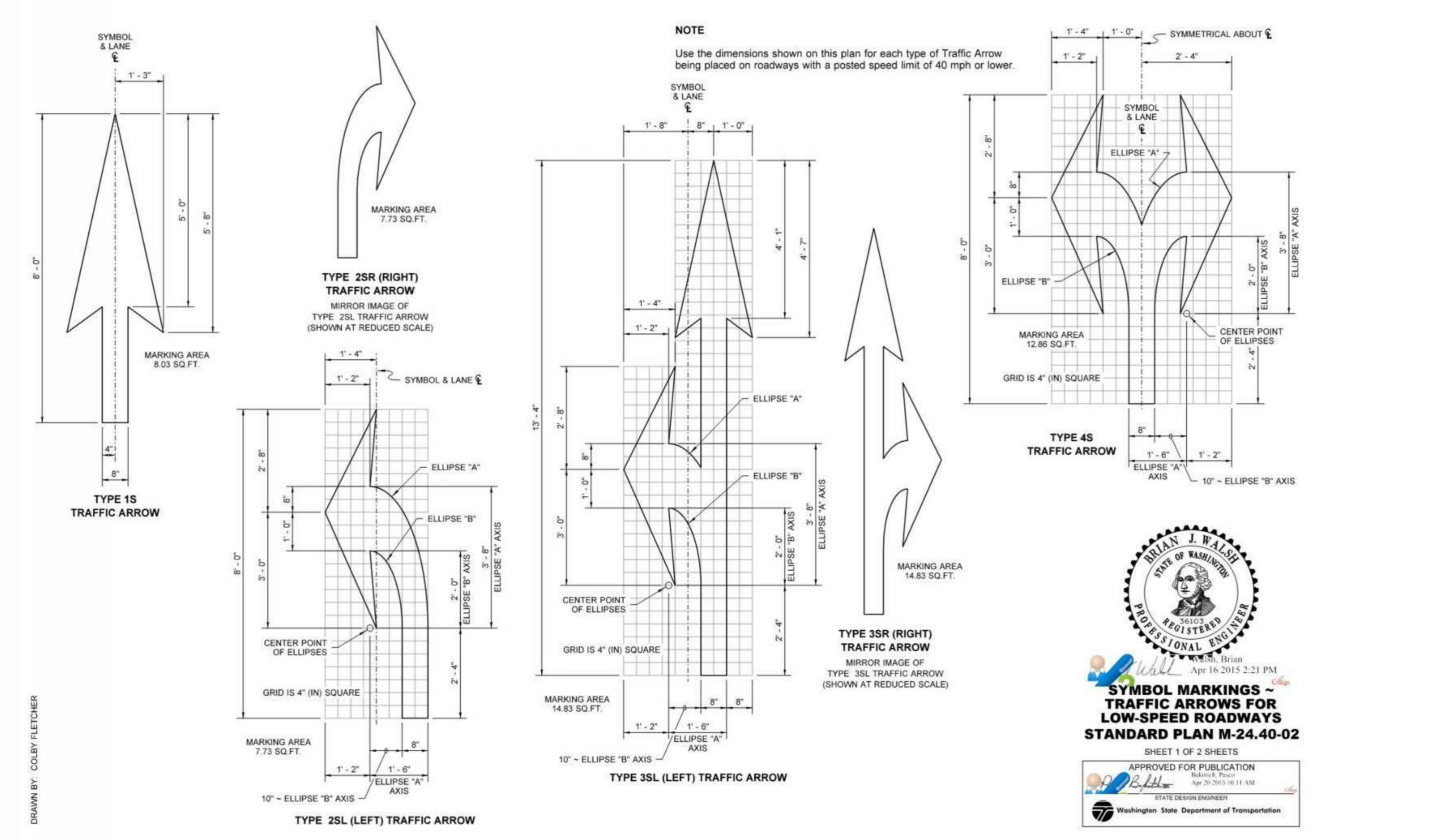
PAVEMENT MARKING & SIGNING PLANS
STANDARD DETAILS – PHASE 1

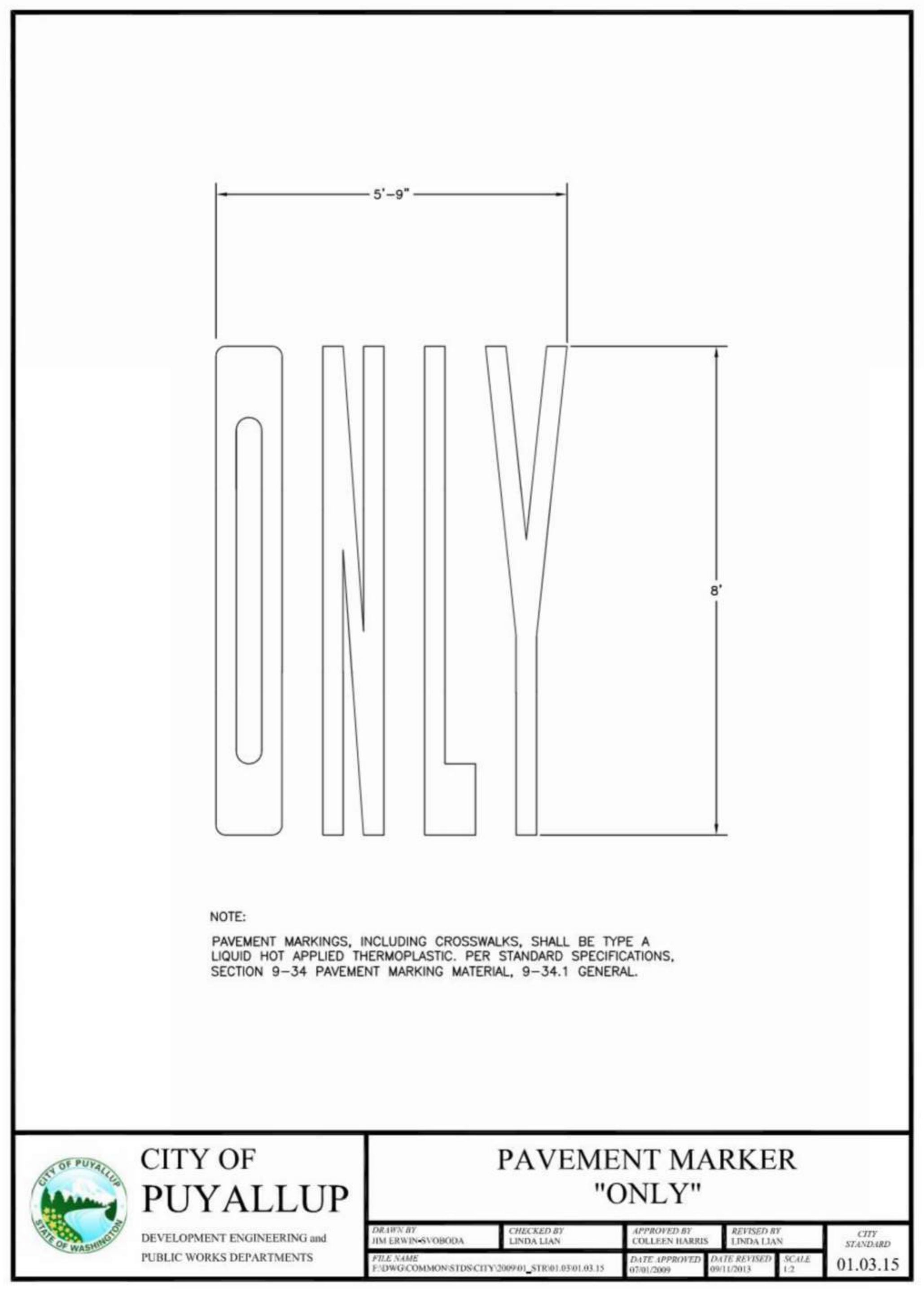
PM-02
SHEET: ___ OF ___

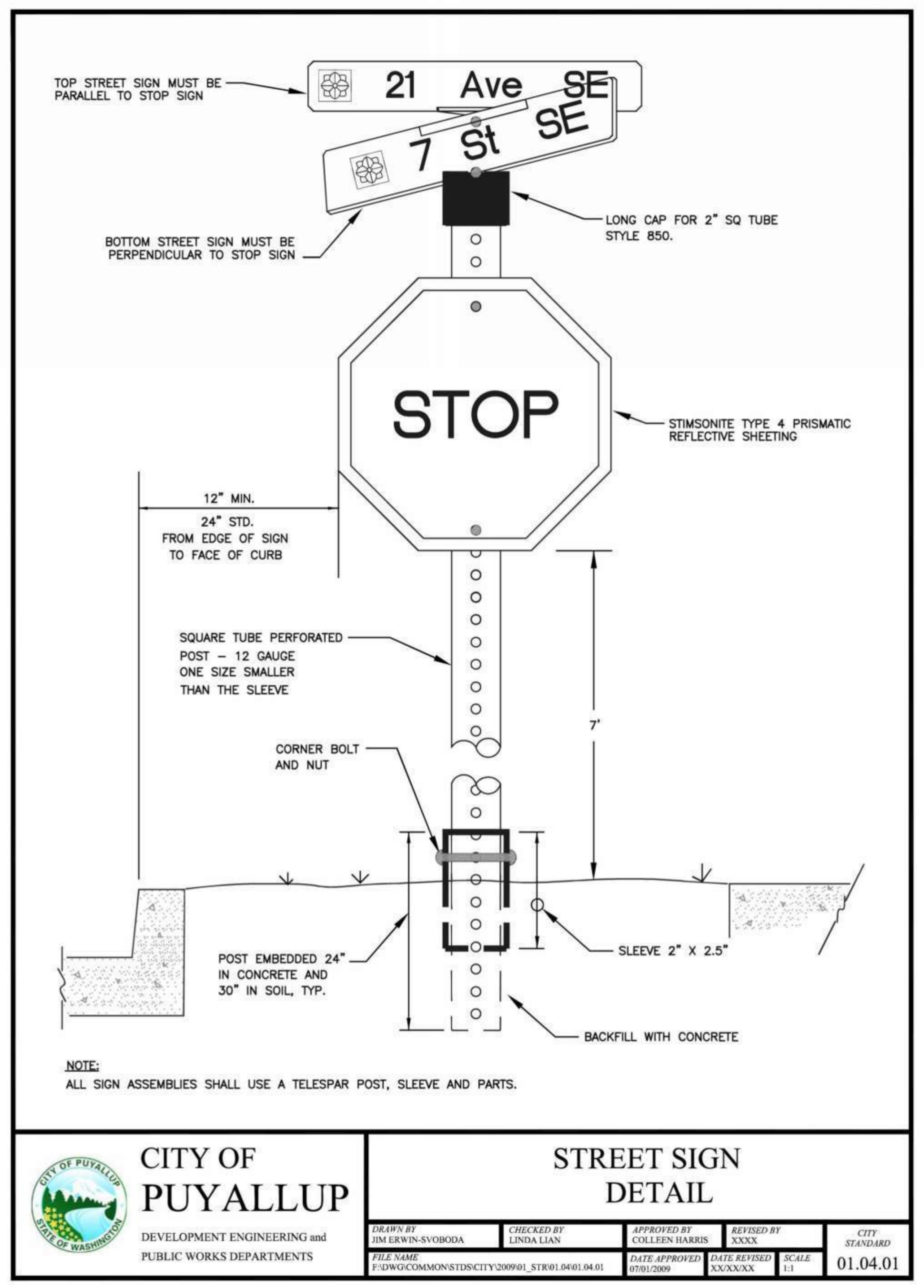
SECTION 26, TOWNSHIP 20 N, RANGE 4 E, W.M.

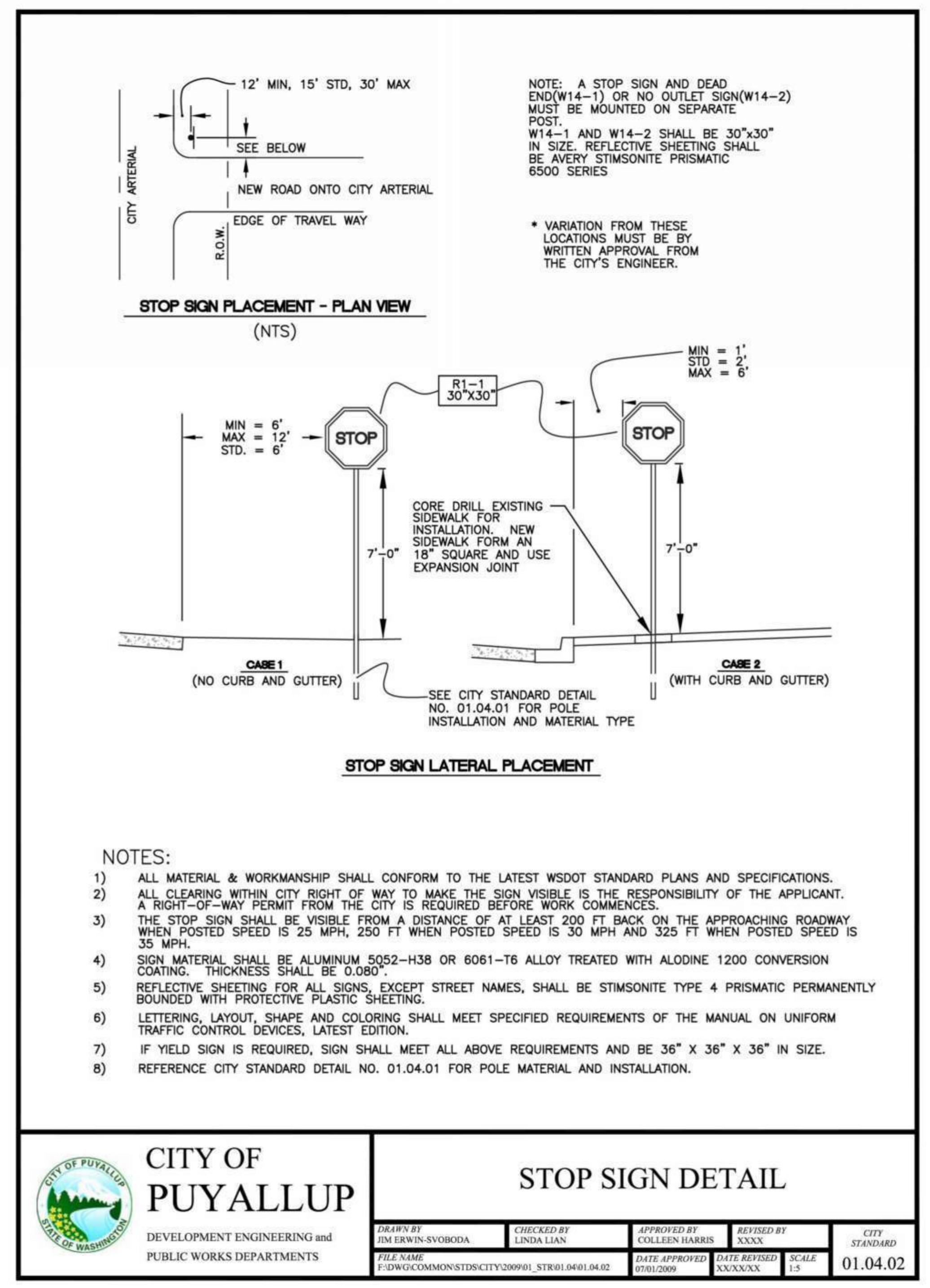

RIGHT-TURN CHANNELIZATION
RIGHT-TURN CHANNELIZATION WITH DROP LANE
DOUBLE RIGHT-TURN CHANNELIZATION
RIGHT-TURN CHANNELIZATION
STANDARD PLAN M-5.10-02
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakotich III 06-03-11
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation

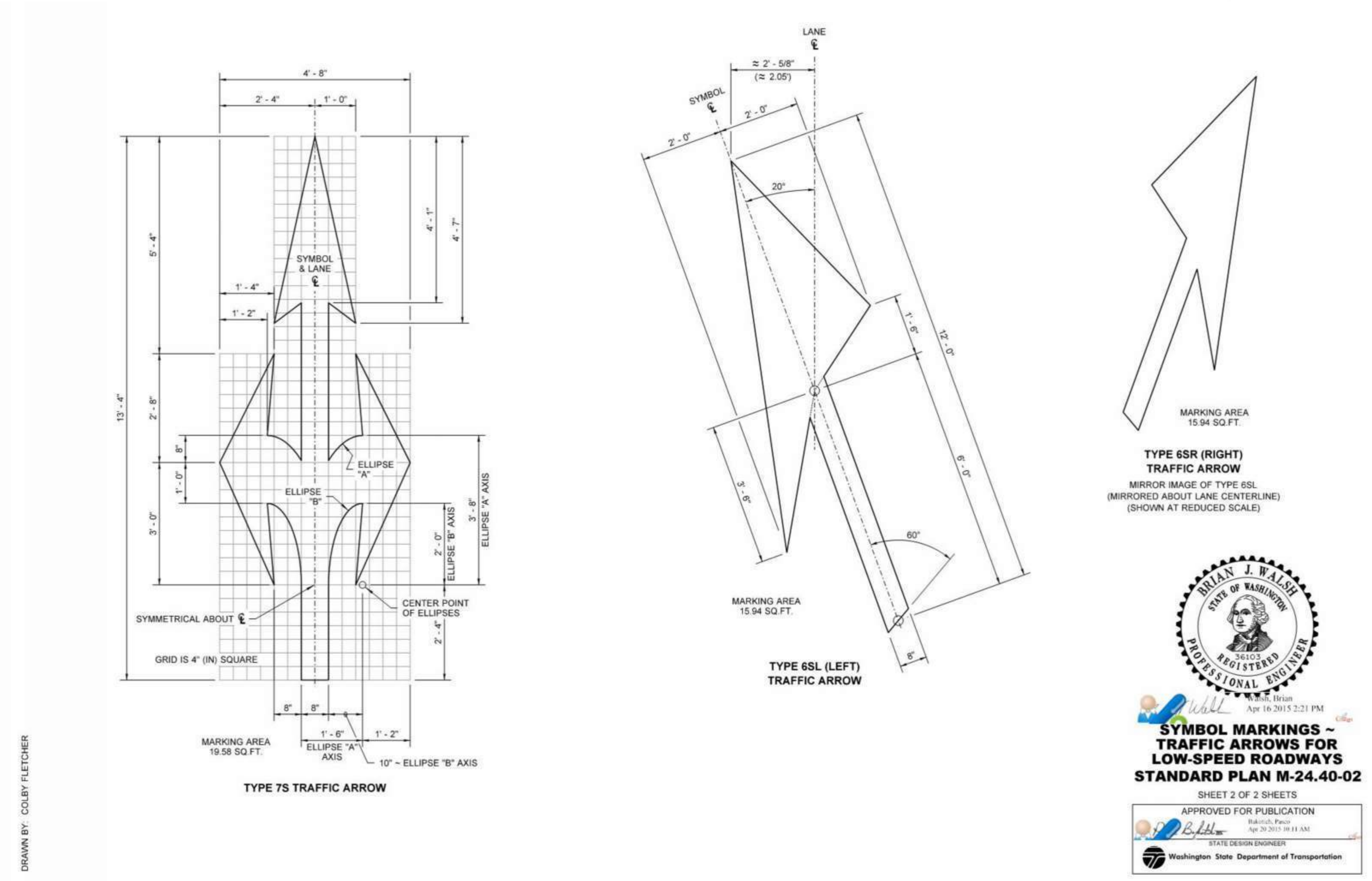

CENTERLINE & LANE LINE
NO-PASS LINE & TWO-WAY LEFT-TURN CENTERLINE
REVERSIBLE LANE LINE
WIDE BROKEN LANE LINE
WIDE DOTTED LANE LINE
DOTTED EXTENSION LINE
YELLOW OR WHITE ~ SEE NOTE 1
DOTTED LANE LINE
WHITE
EDGE LINE & SOLID LANE LINE
DOUBLE CENTERLINE & DOUBLE LANE LINE
WIDE LANE LINE
DOUBLE WIDE LANE LINE
BARRIER CENTERLINE
LONGITUDINAL MARKING PATTERNS
STANDARD PLAN M-20.10-02
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakotich III 06-03-11
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation
4" for left-turn channelization and narrow roadways with lane widths of 10 feet or less. Local Agencies (on non-state routes) may specify a 4" distance for all locations.
The distance between the lines of the Double Lane Line shall be 4".


TYPE 1S TRAFFIC ARROW
TYPE 2SR (RIGHT) TRAFFIC ARROW
TYPE 2SL (LEFT) TRAFFIC ARROW
TYPE 3SL (LEFT) TRAFFIC ARROW
TYPE 3SR (RIGHT) TRAFFIC ARROW
TYPE 4S TRAFFIC ARROW
SYMBOL MARKINGS ~ TRAFFIC ARROWS FOR LOW-SPEED ROADWAYS
STANDARD PLAN M-24.40-02
SHEET 1 OF 2 SHEETS


5'-9"
ONLY
8'
NOTE:
PAVEMENT MARKINGS, INCLUDING CROSSWALKS, SHALL BE TYPE A LIQUID HOT APPLIED THERMOPLASTIC. PER STANDARD SPECIFICATIONS, SECTION 9-34 PAVEMENT MARKING MATERIAL, 9-34.1 GENERAL.
CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS
PAVEMENT MARKER "ONLY"
DRAWN BY JIM ERWIN-SVOBODA
CHECKED BY LINDA LIAN
APPROVED BY COLLEEN HARRIS
REVISED BY LINDA LIAN
CITY STANDARD
01.03.15


TOP STREET SIGN MUST BE PARALLEL TO STOP SIGN
21 Ave SE
7 St SE
LONG CAP FOR 2" SQ TUBE STYLE 850.
BOTTOM STREET SIGN MUST BE PERPENDICULAR TO STOP SIGN
STOP
STIMSONITE TYPE 4 PRISMATIC REFLECTIVE SHEETING
12" MIN.
24" STD.
FROM EDGE OF SIGN TO FACE OF CURB
SQUARE TUBE PERFORATED POST - 12 GAUGE ONE SIZE SMALLER THAN THE SLEEVE
7'
CORNER BOLT AND NUT
POST EMBEDDED 24" IN CONCRETE AND 30" IN SOIL, TYP.
SLEEVE 2" X 2.5"
BACKFILL WITH CONCRETE
NOTE:
ALL SIGN ASSEMBLIES SHALL USE A TELESPAR POST, SLEEVE AND PARTS.
CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS
STREET SIGN DETAIL
DRAWN BY JIM ERWIN-SVOBODA
CHECKED BY LINDA LIAN
APPROVED BY COLLEEN HARRIS
REVISED BY XXXX
CITY STANDARD
01.04.01


12' MIN, 15' STD, 30' MAX
SEE BELOW
NEW ROAD ONTO CITY ARTERIAL
EDGE OF TRAVEL WAY
CITY ARTERIAL
R.O.W.
STOP SIGN PLACEMENT - PLAN VIEW
(NTS)
NOTE: A STOP SIGN AND DEAD END(W14-1) OR NO OUTLET SIGN(W14-2) MUST BE MOUNTED ON SEPARATE POST.
W14-1 AND W14-2 SHALL BE 30"x30" IN SIZE. REFLECTIVE SHEETING SHALL BE AVERY STIMSONITE PRISMATIC 6500 SERIES
* VARIATION FROM THESE LOCATIONS MUST BE BY WRITTEN APPROVAL FROM THE CITY'S ENGINEER.
MIN = 6'
MAX = 12'
STD. = 6'
R1-1 30"X30"
MIN = 1'
STD = 2'
MAX = 6'
STOP
CORE DRILL EXISTING SIDEWALK FOR INSTALLATION. NEW SIDEWALK FORM AN 18" SQUARE AND USE EXPANSION JOINT
7'-0"
CASE 1 (NO CURB AND GUTTER)
CASE 2 (WITH CURB AND GUTTER)
SEE CITY STANDARD DETAIL NO. 01.04.01 FOR POLE INSTALLATION AND MATERIAL TYPE
STOP SIGN LATERAL PLACEMENT
NOTES:
1) ALL MATERIAL & WORKMANSHIP SHALL CONFORM TO THE LATEST WSDOT STANDARD PLANS AND SPECIFICATIONS.
2) ALL CLEARING WITHIN CITY RIGHT OF WAY TO MAKE THE SIGN VISIBLE IS THE RESPONSIBILITY OF THE APPLICANT. A RIGHT-OF-WAY PERMIT FROM THE CITY IS REQUIRED BEFORE WORK COMMENCES.
3) THE STOP SIGN SHALL BE VISIBLE FROM A DISTANCE OF AT LEAST 200 FT BACK ON THE APPROACHING ROADWAY WHEN POSTED SPEED IS 25 MPH, 250 FT WHEN POSTED SPEED IS 30 MPH AND 325 FT WHEN POSTED SPEED IS 35 MPH.
4) SIGN MATERIAL SHALL BE ALUMINUM 5052-H38 OR 6061-T6 ALLOY TREATED WITH ALODINE 1200 CONVERSION COATING. THICKNESS SHALL BE 0.080".
5) REFLECTIVE SHEETING FOR ALL SIGNS, EXCEPT STREET NAMES, SHALL BE STIMSONITE TYPE 4 PRISMATIC PERMANENTLY BOUNDED WITH PROTECTIVE PLASTIC SHEETING.
6) LETTERING, LAYOUT, SHAPE AND COLORING SHALL MEET SPECIFIED REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
7) IF YIELD SIGN IS REQUIRED, SIGN SHALL MEET ALL ABOVE REQUIREMENTS AND BE 36" X 36" X 36" IN SIZE.
8) REFERENCE CITY STANDARD DETAIL NO. 01.04.01 FOR POLE MATERIAL AND INSTALLATION.
CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS
STOP SIGN DETAIL
DRAWN BY JIM ERWIN-SVOBODA
CHECKED BY LINDA LIAN
APPROVED BY COLLEEN HARRIS
REVISED BY XXXX
CITY STANDARD
01.04.02



APPROVED

BY: ______________________
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE ______________________

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ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

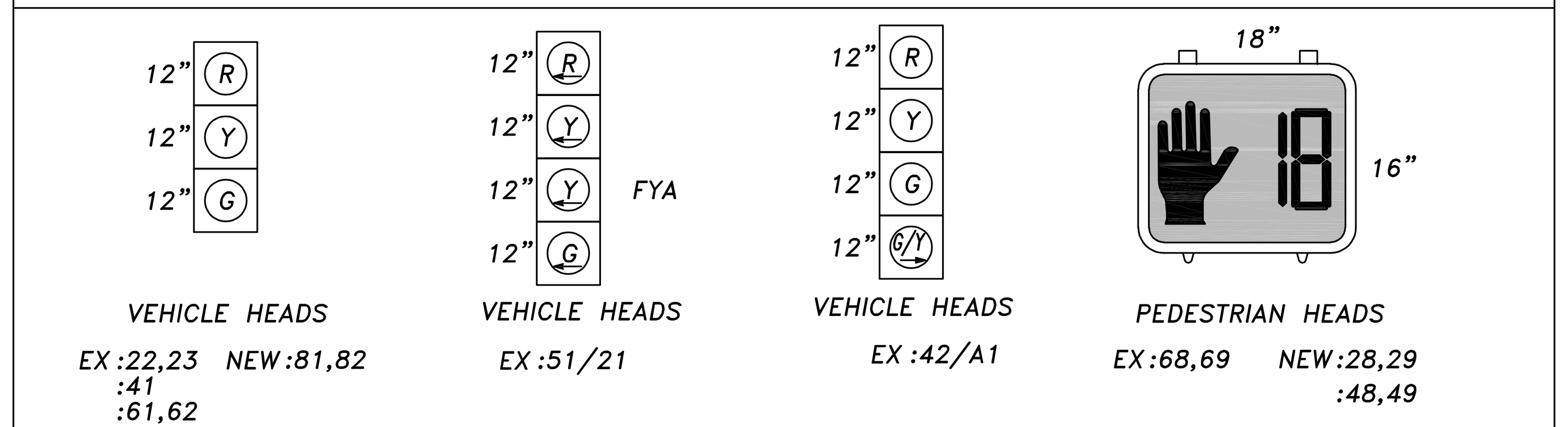
PAVEMENT MARKING & SIGNING PLANS
STANDARD DETAILS - PHASE 1

PM-03

SHEET: ____ OF ____

SECTION 26, TOWNSHIP 20 N, RANGE 4 E, W.M.

SIGNAL DISPLAYS



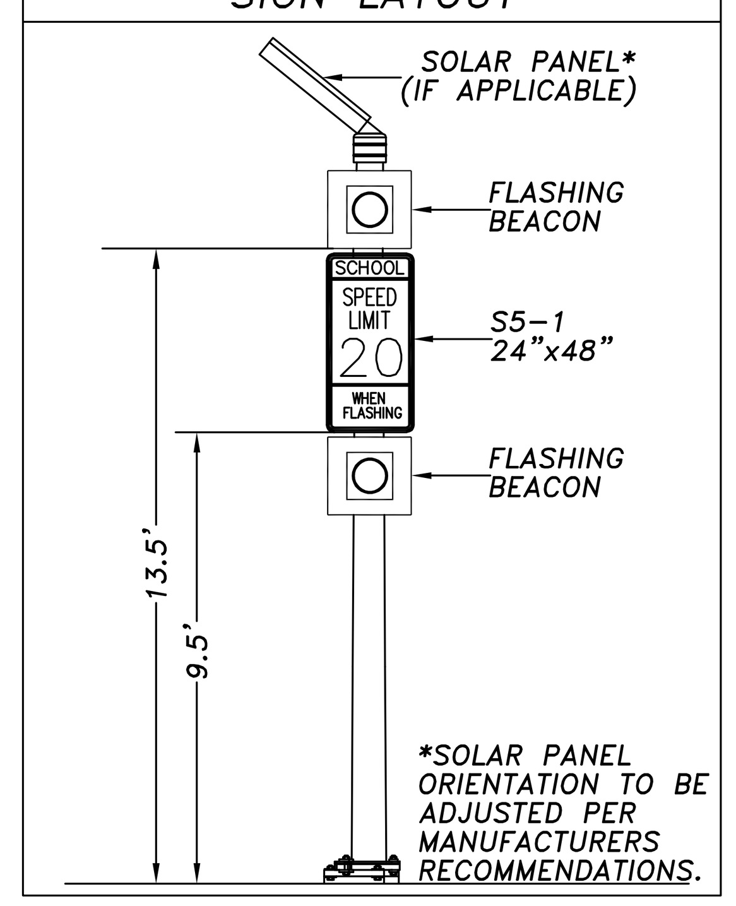
1. ALL STANDARD VEHICLE SIGNAL HEADS SHALL BE CONVENTIONAL ALUMINUM TYPE WITH 12-INCH LENS FOR ALL INDICATIONS AND SQUARE DOORS WITH TUNNEL VISORS. EACH SIGNAL HEAD SHALL HAVE A 0.25-INCH HOLE DRILLED INTO THE BOTTOM. BALLS AND ARROWS SHALL BE ILLUMINATED WITH DIALIGHT ITE SPECIFICATION LED LIGHTS FOR ALL INDICATIONS.
2. ALL PEDESTRIAN HEADS SHALL BE COUNTDOWN AND ITE SPECIFICATION LED LIGHT UNITS BY DIALIGHT WITH BLACK Z CRATE VISORS. HAND SYMBOL SHALL BE PORTLAND ORANGE AND MAN SYMBOL SHALL BE LUNAR WHITE.
3. PEDESTRIAN HEADS, VEHICLE HEADS AND BACK-PLATES SHALL BE ALUMINUM AND FLAT BLACK IN COLOR. PROVIDE A 2-INCH WIDE STRIP OF YELLOW RETRO-REFLECTIVE TAPE, TYPE IV PRISMATIC SHEETING, CONFORMING TO THE REQUIREMENTS OF WSDOT SPECIFICATIONS SECTION 9-28.12 AROUND THE PERIMETER OF EACH BACK-PLATE.

As condition with the preliminary site plan approval, the required signal/intersection modifications must be fully configured and operational no less than 2 weeks prior to receiving occupancy for any building on-site. Adaptive signal contractor (Rhythm Engineering) will be required to configure the adaptive system on-site. Adaptive contractor will provide setup/configuration/optimization (not completed by the City). Place this condition on the plans.
TS-01

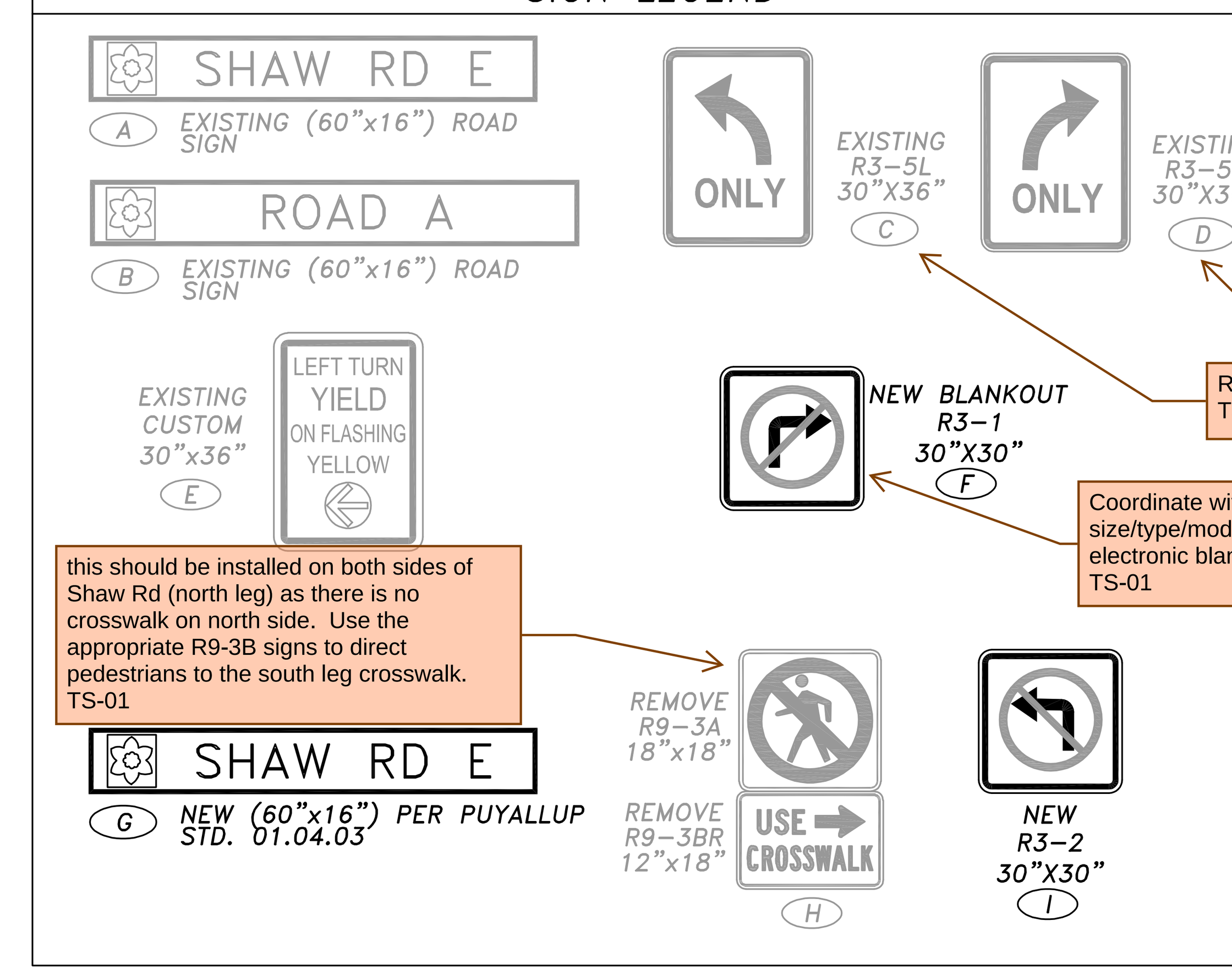
JUNCTION BOX SCHEDULE

BOX	TYPE	ROADWAY REFERENCE	STATION	OFFSET	FUNCTION	NOTES
A	2	SHAW RD E	12+92.0	60.0' RT	SIGNAL	ENCAPSULATE IN CONCRETE

SIGN LAYOUT



SIGN LEGEND



Remove
TS-01

Coordinate with the City on the size/type/model number of electronic blank out sign.
TS-01

this should be installed on both sides of Shaw Rd (north leg) as there is no crosswalk on north side. Use the appropriate R9-3B signs to direct pedestrians to the south leg crosswalk.
TS-01

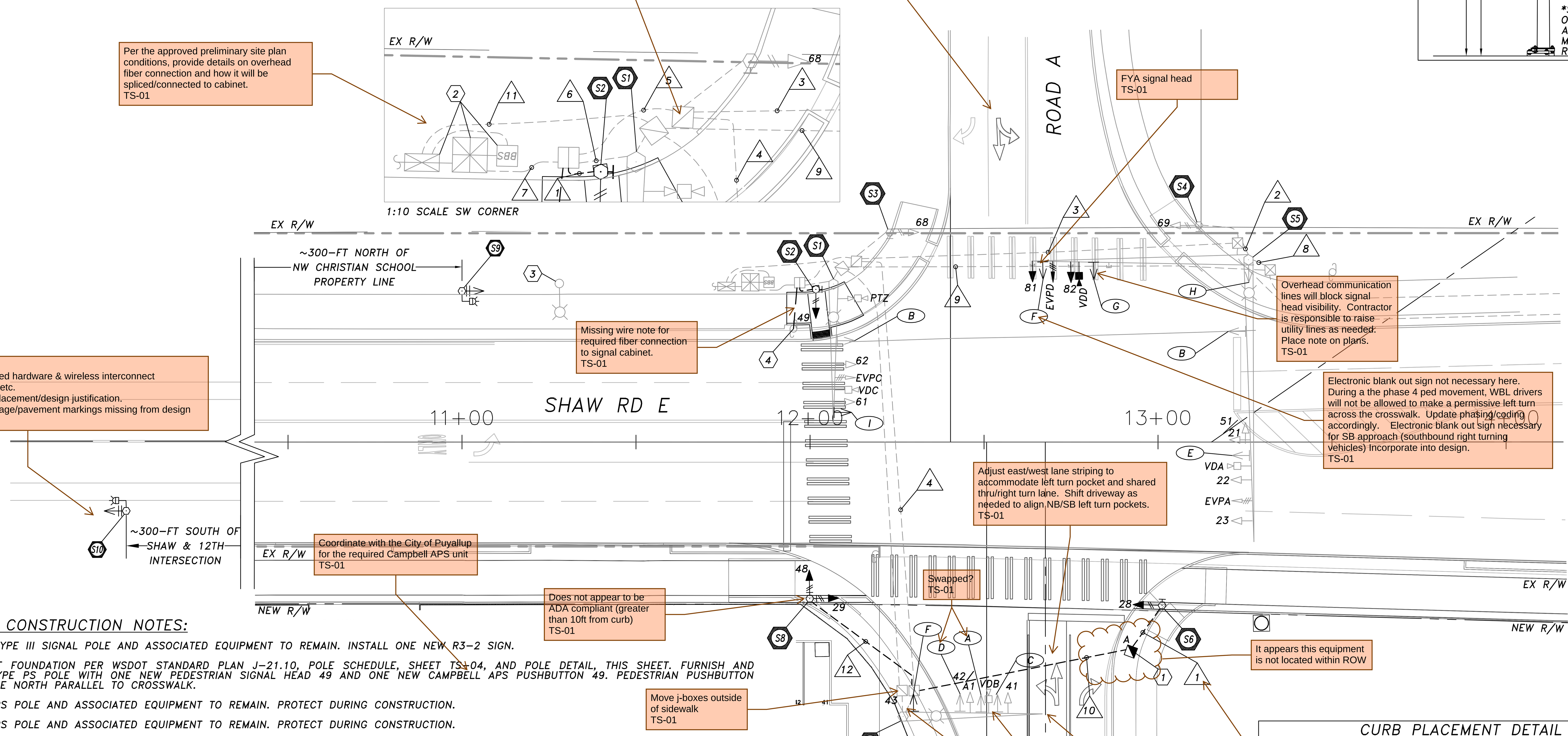
Adjust east/west lane striping to accommodate left turn pocket and shared thru/right turn lane. To accommodate this phasing, the EBR overlap must be removed
TS-01

As condition with the preliminary site plan approval, Flashing yellow arrows with PT/PM phasing required required for EB/WB left turns. Modify phasing as needed
TS-01

J-box over capacity
TS-01

Per the approved preliminary site plan conditions, provide details on overhead fiber connection and how it will be spliced/connected to cabinet.
TS-01

FYA signal head
TS-01



Update phasing digram to reflect PT/PM FYA operation for EB/WB.
TS-01

To accommodate required channelization (left turn pocket and shared thru/right turn lane), EBR overlap must be removed
TS-01

Missing wire note for required fiber connection to signal cabinet.
TS-01

Overhead communication lines will block signal head visibility. Contractor is responsible to raise utility lines as needed. Place note on plans.
TS-01

Electronic blank out sign not necessary here. During a the phase 4 ped movement, WBL drivers will not be allowed to make a permissive left turn across the crosswalk. Update phasing/coding accordingly. Electronic blank out sign necessary for SB approach (southbound right turning vehicles) Incorporate into design.
TS-01

WBL permissive not allowed during phase 4 ped movement. Show this configuration.
TS-01

RSSZ flasher
-Coordinate with the City for required hardware & wireless interconnect
-Show conduit/j-box/power source/etc.
-Reference applicable WAC with placement/design justification.
-MUTCD compliant advanced signage/pavement markings missing from design
TS-01

Adjust east/west lane striping to accommodate left turn pocket and shared thru/right turn lane. Shift driveway as needed to align NB/SB left turn pockets.
TS-01

Coordinate with the City of Puyallup for the required Campbell APS unit
TS-01

Does not appear to be ADA compliant (greater than 10ft from curb)
TS-01

Swapped?
TS-01

It appears this equipment is not located within ROW
TS-01

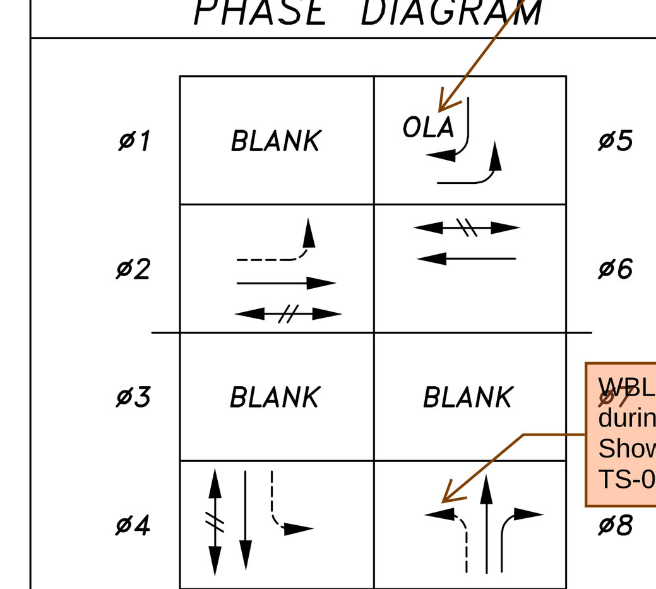
Move j-boxes outside of sidewalk
TS-01

Missing wire note
TS-01

FYA signal head
TS-01

Missing EVPE for this leg.
TS-01

PHASE DIAGRAM



PROTECTED VEHICLE MOVEMENT
PERMISSIVE VEHICLE MOVEMENT
PEDESTRIAN MOVEMENT

PRE-EMPT (VEHICLE)
EVP A = ø2 & ø5
EVP B = ø4
EVP C = ø1 & ø6
EVP D = ø8

SIGNAL LEGEND

EXIST.	NEW	DESCRIPTION
		JUNCTION BOX TYPE 1,2,8
		VEHICLE SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD
		MAST ARM, LUMINAIRE POLE
		TYPE PS POLE
		PEDESTRIAN PUSHBUTTON
		MAST ARM MOUNTED SIGN
		EMERGENCY PRE-EMPTION DETECTOR WITH CONFIRMATION LIGHT
		VIDEO DETECTION CAMERA
		TENON
		CONDUIT/CONDUCTOR
		ELECTRICAL SERVICE CABINET
		CONTROLLER CABINET
		BACKUP BATTERY SYSTEM
		ROADWAY LIGHT STANDARD
		LUMINAIRE POLE MOUNTED SIGN
		PTZ CAMERA
		WIRE NOTE
		CONSTRUCTION NOTE
		SIGNAL POLE NUMBER/CONSTRUCTION NOTE
		SIGN NOTE

SIGNAL CONSTRUCTION NOTES:

S1 EXISTING TYPE III SIGNAL POLE AND ASSOCIATED EQUIPMENT TO REMAIN. INSTALL ONE NEW R3-2 SIGN.

S2 CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-21.10, POLE SCHEDULE, SHEET TS-04, AND POLE DETAIL, THIS SHEET. FURNISH AND INSTALL TYPE PS POLE WITH ONE NEW PEDESTRIAN SIGNAL HEAD 49 AND ONE NEW CAMPBELL APS PUSHBUTTON 49. PEDESTRIAN PUSHBUTTON SHALL FACE NORTH PARALLEL TO CROSSWALK.

S3 EXISTING PS POLE AND ASSOCIATED EQUIPMENT TO REMAIN. PROTECT DURING CONSTRUCTION.

S4 EXISTING PS POLE AND ASSOCIATED EQUIPMENT TO REMAIN. PROTECT DURING CONSTRUCTION.

S5 EXISTING TYPE SD SIGNAL POLE AND ASSOCIATED EQUIPMENT TO REMAIN. REMOVE EXISTING SIGNS R9-3A & R9-3BR AND RETURN TO CITY. FURNISH AND INSTALL TWO NEW VEHICLE SIGNAL HEADS 81 AND 82, ONE NEW OPTICOM EMERGENCY VEHICLE PREEMPTION DETECTOR WITH CONFIRMATION LIGHT, ONE NEW INSYNC VIDEO DETECTION CAMERA, AND ONE NEW ILLUMINATED STREET NAME SIGN ON WESTBOUND MAST ARM.

S6 CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-21.10, POLE SCHEDULE, SHEET TS-04, AND POLE DETAIL, THIS SHEET. FURNISH AND INSTALL TYPE PS POLE WITH ONE NEW PEDESTRIAN SIGNAL HEAD 28 AND ONE NEW CAPBELL APS PUSHBUTTON 28. PEDESTRIAN PUSHBUTTON SHALL FACE WEST PARALLEL TO CROSSWALK.

S7 EXISTING TYPE III SIGNAL POLE AND ASSOCIATED EQUIPMENT TO REMAIN. INSTALL NEW BLANK OUT SIGN PER POLE SCHEDULE, SHEET PM-04, AND ALL ASSOCIATED WIRING BACK TO CONTROLLER CABINET USING EXISTING CONDUIT.

S8 CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-21.10, POLE SCHEDULE, SHEET TS-04, AND POLE DETAIL, THIS SHEET. FURNISH AND INSTALL TYPE PS POLE WITH TWO NEW PEDESTRIAN SIGNAL HEAD 48 & 29 AND TWO NEW CAMPBELL APS PUSHBUTTON 48 & 29. PEDESTRIAN PUSHBUTTON 48 SHALL FACE NORTH PARALLEL TO CROSSWALK. PEDESTRIAN PUSHBUTTON 29 SHALL FACE WEST PARALLEL TO CROSSWALK.

S9 CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-21.10. LOCATION SHALL BE FIELD VERIFIED BY CITY OF PUYALLUP ENGINEER. FURNISH AND INSTALL TYPE FB POLE PER WSDOT STANDARD PLAN J-21.16 WITH TWO FLASHING BEACONS, AND ONE MUTCD SCHOOL SPEED LIMIT WHEN FLASHING SIGN (S5-1) ON POLE PER DETAIL, THIS SHEET, AND CITY OF PUYALLUP STANDARD PLANS 01.07.03, 01.07.04, AND 01.07.05.

S10 CONSTRUCT FOUNDATION PER WSDOT STANDARD PLAN J-21.10. LOCATION SHALL BE FIELD VERIFIED BY CITY OF PUYALLUP ENGINEER. FURNISH AND INSTALL TYPE FB POLE PER WSDOT STANDARD PLAN J-21.16 WITH TWO FLASHING BEACONS, AND ONE MUTCD SCHOOL SPEED LIMIT WHEN FLASHING SIGN (S5-1) ON POLE PER DETAIL, THIS SHEET, AND CITY OF PUYALLUP STANDARD PLANS 01.07.03, 01.07.04, AND 01.07.05.

1 FURNISH AND INSTALL NEW TYPE 2 JUNCTION BOX PER CITY OF PUYALLUP STANDARD 01.06.01.

2 EXISTING COMBINATION CONTROLLER/SERVICE/BBS CABINET TO REMAIN. PROTECT DURING CONSTRUCTION.

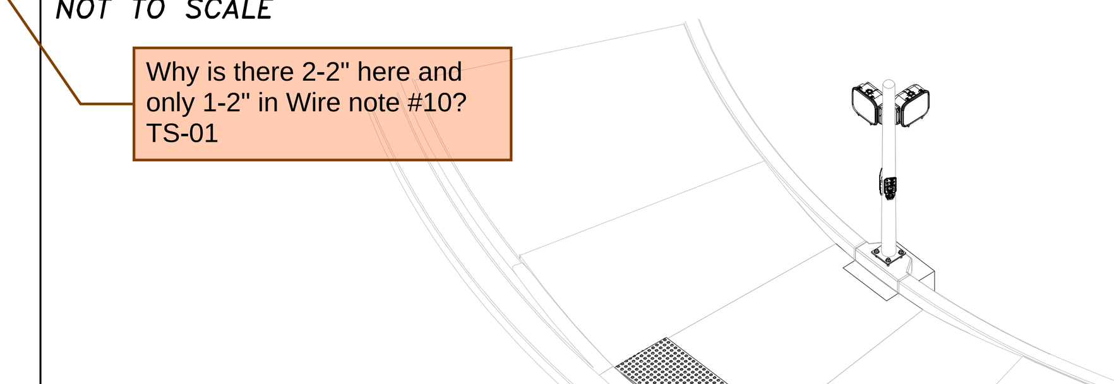
3 EXISTING STREET LIGHT AND EQUIPMENT TO REMAIN. PROTECT DURING CONSTRUCTION.

4 CONTRACTOR SHALL COORDINATE WITH CITY TO INTERCEPT EXISTING FIBER AND ROUTE DOWN EXISTING UTILITY POLE. CONTRACTOR SHALL INSTALL NEW CONDUIT/RISER TO EXISTING JUNCTION BOX AND SPLICE EXISTING FIBER INTO EXISTING CONTROLLER CABINET. IF SUFFICIENT SLACK IS NOT AVAILABLE, CONTRACTOR SHALL PULL NEW FIBER FROM NEAREST SPLICE POINT.

R9-3 combo should be installed on both sides of Shaw Rd (north leg)
TS-01

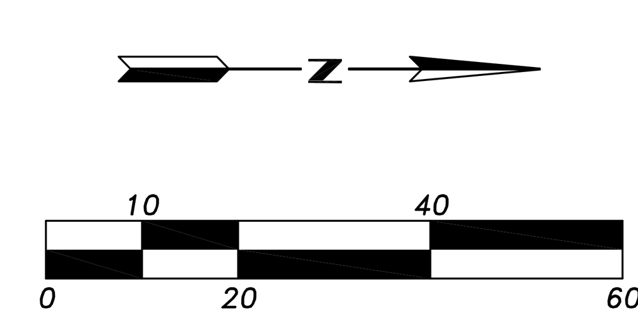
CURB PLACEMENT DETAIL

NOT TO SCALE



NOTE: SEE WSDOT STANDARD PLAN J-20.11-02 FOR CURB BASE DETAIL.

Why is there 2-2" here and only 1-2" in Wire note #10?
TS-01



APPROVED

BY: CITY OF PUYALLUP ENGINEERING SERVICES

DATE

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

No.	Date	By	Revision Description

RSSZ flasher
-Coordinate with the City for required hardware & wireless interconnect
-Show conduit/j-box/power source/etc.
-How did the design team determine placement? 300ft from school property would place beacon within signalized intersection.
-Reference applicable WAC with placement/design justification.
-MUTCD compliant advanced signage/pavement markings missing from design
TS-01

Designed By:	Issue Date:
LAB	09/29/2023
Drawn By:	PERMIT
LAB	
Checked By:	Project No.:
GRL	2022-295

09-29-2023

TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Trevor Takara, P.E.
Phone: 206-914-3843

ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

TRAFFIC SIGNAL PLANS – PHASE 1

TS-01
SHEET:
___ OF ___

WIRING SCHEDULE (AFFECTED RUNS ONLY)

△ NO.	RACEWAY CONDUIT SIZE	E.V. DETECT. 3C(SH)		PRE-EMPT LIGHT 2C(SH)		VEH. HEAD 5C		PPB 2C(SH)		PED. HEAD/PPB 5C		ILLUM ST NAME SIGN 2C(SH)		VIDEO DETECT. ***		EQUIP. GRND. *		ILLUM #6		INTER 144 SMFO		PTZ CAMERA		BLANK OUT 3C		PULL WIRE		CONDUIT FILL	ALLOWABLE FILL	
		EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW	EX.	NEW		EX.	NEW
1	2" SCH40 PVC										1						1											0.28	---	0.86
	2" SCH40 PVC								1								1											0.18	---	0.86
2	EX 2" SCH40 PVC**			1	1	2										1												0.60	1.32	---
	EX 2" SCH40 PVC**	1	1				2							1	1	1												1.25	1.32	---
3	EX 2" SCH80 PVC**			1	1	2	2			1						1												1.02	1.15	---
	EX 2" SCH80 PVC**	1						1						2		1												0.99	1.15	---
	EX 4" SCH80 PVC**		1												1	1				1								1.30	4.39	---
	EX 2" SCH80 PVC SPARE																										1	---	1.15	---
4	EX 2" SCH80 PVC**					2			3		3					1									1				1.18	1.15	---
	EX 3" SCH40 PVC**			1	1	4	2			2	3					1									1			1.93	2.91	---
5	EX 2" SCH40 PVC**	1						2						2		1												1.08	1.32	---
	EX 4" SCH40 PVC**		1						3						1	1				1								1.57	4.93	---
	EX 2" SCH40 PVC SPARE																										1	---	1.32	---
6	EX 2" SCH40 PVC**			1		2					1					1												0.65	1.32	---
	EX 2" SCH40 PVC**	1												1		1						1						0.71	1.32	---
7	EX 3" SCH40 PVC**			2		6				2						1									1			1.51	2.91	---
	EX 3" SCH40 PVC**	2	1					2	4					3	1	1						1						2.13	2.91	---
	EX 4" SCH40 PVC**				1		2				4					1				1								1.89	4.93	---
8	EX 2" SCH40 PVC**											1	1			1		2										0.42	1.32	---
9	EX 2" SCH80 PVC**											1	1			1		2										0.42	1.15	---
	EX 2" SCH80 PVC SPARE																										1	---	1.15	---
10	2" SCH80 PVC								1		1					1												0.37	---	0.75
11	EX 2" SCH40 PVC**											3	1			1		2										0.60	1.32	---
12	2" SCH40 PVC										2						1											0.42	---	0.86
	2" SCH40 PVC								2								1											0.27	---	0.86

No spares?

Type PS pole receiving Type PS pole?

* EQUIPMENT GROUND SIZE SHALL BE EQUAL TO OR LARGER THAN THE LARGEST WIRE SIZE IN THE CONDUIT.
** OTHER CONDUIT AND CONDUCTORS MAY BE PRESENT.
*** VIDEO DETECTION CABLE SHALL BE 14/3 CABLE AND SHIELDED CAT5.

EX SERVICE BREAKER SCHEDULE
E SHAW RD AND ROAD A

CIRCUIT	BREAKER	CONTACTOR
MAIN	1P-100 AMP	---
LT SIGN	1P-20 AMP	---
SIGNAL	1P-50 AMP	30 AMP
ILLUM 1 A	2P-20 AMP	30 AMP
ILLUM B (SPARE)	2P-30 AMP	30 AMP

GENERAL NOTES

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE APPROVED ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEER SERVICES AT (253-841-5568) TO SCHEDULE THE MEETING. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN SET OF APPROVED PLANS AT THE MEETING.
2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.
3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").
4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE CITY PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.
6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
7. ANY STRUCTURE AND/OR OBSTRUCTION THAT REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.
8. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE TRUE ELEVATIONS AND LOCATIONS OF HIDDEN UTILITIES. ALL VISIBLE ITEMS SHALL BE THE ENGINEER'S RESPONSIBILITY.
9. THE CONTRACTOR SHALL INSTALL, REPLACE, OR RELOCATE ALL SIGNS, AS SHOWN ON THE PLANS OR AS AFFECTED BY CONSTRUCTION, PER CITY STANDARDS.
10. POWER, STREET LIGHT, CABLE AND TELEPHONE LINES SHALL BE IN A TRENCH LOCATED WITHIN A 10-FOOT UTILITY EASEMENT ADJACENT TO PUBLIC RIGHT-OF-WAY. RIGHT-OF-WAY CROSSINGS SHALL HAVE A MINIMUM HORIZONTAL SEPARATION FROM OTHER UTILITIES (SEWER, WATER, AND STORM) OF 5 FEET.
11. ALL CONSTRUCTION SURVEYING FOR EXTENSIONS OF PUBLIC FACILITIES SHALL BE DONE UNDER THE DIRECTION OF A WASHINGTON STATE LICENSED LAND SURVEYOR OR A WASHINGTON LICENSED PROFESSIONAL CIVIL ENGINEER.
12. DURING CONSTRUCTION, ALL PUBLIC STREETS ADJACENT TO THIS PROJECT SHALL BE KEPT CLEAN OF ALL MATERIAL DEPOSITS RESULTING FROM ON-SITE CONSTRUCTION, AND EXISTING STRUCTURES SHALL BE PROTECTED AS DIRECTED BY THE CITY.
13. CERTIFIED RECORD DRAWINGS ARE REQUIRED PRIOR TO PROJECT ACCEPTANCE.
14. A NPDES STORMWATER GENERAL PERMIT MAY BE REQUIRED BY THE DEPARTMENT OF ECOLOGY FOR THIS PROJECT. FOR INFORMATION CONTACT THE DEPARTMENT OF ECOLOGY, SOUTHWEST REGION OFFICE AT (360-407-6300).
15. ANY DISTURBANCE OR DAMAGE TO CRITICAL AREAS AND ASSOCIATED BUFFERS, OR SIGNIFICANT TREES DESIGNATED FOR PRESERVATION AND PROTECTION SHALL BE MITIGATED IN ACCORDANCE WITH A MITIGATION PLAN REVIEWED AND APPROVED BY THE CITY'S PLANNING DIVISION. PREPARATION AND IMPLEMENTATION OF THE MITIGATION PLAN SHALL BE AT THE DEVELOPER'S EXPENSE.
16. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF PUYALLUP PUBLIC WORKS STANDARDS AND WSDOT STANDARDS AND SPECIFICATIONS.
17. THE LOCATIONS OF FEATURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION START.
18. UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY ILLUMINATION WORK.
19. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.
20. CONDUIT LOCATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES. ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD.
21. CONTRACTOR SHALL COORDINATE WITH THE CITY SIGNAL/ILLUMINATION TECHNICIAN AT 253.405.4390 PRIOR TO CONSTRUCTION.
22. THE LOCATION OF ALL CONDUITS, JUNCTION BOXES, POLES, AND CABINETS SHOWN ON THIS PLAN MAY BE ADJUSTED IN THE FIELD TO AVOID CONFLICTS AND MEET ADA REQUIREMENTS. ALL FINAL LOCATIONS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER PRIOR TO CONSTRUCTION.
23. JUNCTION BOX LOCATIONS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. JUNCTION BOXES SHALL BE FIELD LOCATED BY THE CONTRACTOR WITH DIRECTION FROM THE CITY.
24. CONTRACTOR SHALL ADJUST JUNCTION BOX LIDS TO BE FLUSH WITH TOP OF SIDEWALK.
25. JUNCTION BOXES, CABLE VAULTS, AND PULL BOXES WHICH ARE PLACED WITHIN THE SIDEWALK SHALL HAVE SLIP RESISTANT LIDS WHICH MEET THE REQUIREMENTS OF AMERICANS WITH DISABILITIES ACT (ADA) AND PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG). APPROVED PRODUCTS ARE SLIPNOT GRIP PLATE GRADE 3 SURFACE AND IKG INDUSTRIES MEBAC#1.
26. ILLUMINATION CONDUIT SHALL BE PLACED IN THE SAME TRENCH AS OTHER UTILITIES WHERE POSSIBLE. THE JUNCTION BOX AND CONDUIT LOCATIONS SHOWN ARE APPROXIMATE.
27. THE CONTRACTOR SHALL SUBMIT A REQUEST TO THE CITY OF PUYALLUP FOR MATERIALS APPROVAL AT THE EARLIEST POSSIBLE DATE.
28. LIGHT STANDARD FOUNDATIONS SHALL NOT BE EXCAVATED AND POURED BEFORE POLE LOCATIONS ARE APPROVED BY THE ENGINEER.
29. THE CONTRACTOR SHALL CONFIRM THAT 10 FEET MINIMUM CIRCUMFERENTIAL CLEARANCE IS PROVIDED BETWEEN LUMINAIRE POLES AND OVERHEAD POWER LINES PRIOR TO FOUNDATION INSTALLATION. IF A CONFLICT IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO FOUNDATION INSTALLATION.

ILLUMINATION & SIGNAL GENERAL NOTES

1. ALL VEHICLE SIGNAL HEADS SHALL USE TYPE M MOUNTS (CONNECTED BETWEEN THE RED AND YELLOW SIGNAL FACES). ALL PEDESTRIAN SIGNAL HEADS SHALL USE TYPE E CLAMSHELL MOUNTS.
2. ALL PEDESTRIAN PUSH BUTTONS SHALL BE ACCESSIBLE PEDESTRIAN SIGNALS (APS) AND SHALL BE INSTALLED PER MUTCD STANDARDS. ALL CURB RAMPS SHALL MEET PROWAG STANDARDS.
3. THE LOCATION OF ALL CONDUITS, JUNCTION BOXES, POLES AND CABINETS SHOWN ON THIS PLAN MAY BE SLIGHTLY ADJUSTED IN THE FIELD TO AVOID CONFLICTS. ALL FINAL LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
4. ALL NEW FOUNDATION LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO EXCAVATION. CONTRACTOR SHALL CHECK FOR MINIMUM OVERHEAD CLEARANCE OF 16'6" FOR ALL SIGNAL HEADS ABOVE THE STREET PRIOR TO POURING THE FOUNDATION.
5. ALL TRAFFIC SIGNAL AND PEDESTRIAN HEADS, AND PUSH BUTTONS SHALL BE SECURELY AND COMPLETELY COVERED WHILE SIGNAL IS NOT IN OPERATION. SIGNAL HEADS WILL BE BAGGED WITH A SMALL HOLE IN LINE WITH EACH SIGNAL LENS.
6. ALL CONDUCTORS FOR ALL ELECTRICAL EQUIPMENT SHALL BE LABELED IN EACH JUNCTION BOX.
7. ALL CONDUITS SHALL BE RIGID HOT-DIPPED GALVANIZED STEEL OR SCHEDULE 80 PVC WHEN EXPOSED ABOVE THE GROUND. SEE SPECIAL PROVISIONS.
8. ALL SIGNS SHALL BE VIP DIAMOND GRADE SHEETING FOR BOTH MAST ARM AND SHOULDER MOUNTS. STREET NAME SIGNS SHALL BE LED LIGHTED UNITS WITH THE CITY'S DAFFODIL LOGO. STREET NAME SIGNS WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL LIGHTED STREET NAME SIGN LAYOUTS SHALL BE APPROVED BY THE CITY SIGN TECHNICIAN PRIOR TO MANUFACTURING.
9. ALL JUNCTION BOXES SHALL BE PLACED BEHIND SIDEWALK, UNLESS OTHERWISE NOTED.
10. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF PUYALLUP STANDARDS AND SPECIFICATIONS.
11. THE LOCATIONS OF FEATURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR AS NECESSARY.
12. THE CONTRACTOR SHALL SUBMIT A REQUEST TO THE INSPECTOR FOR MATERIALS APPROVAL AT THE EARLIEST POSSIBLE DATE.
13. ALL WORK SHALL BE CONSISTENT WITH UTILITY AGENCY REQUIREMENTS. THE CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY AGENCIES 48 HOURS BEFORE COMMENCING WORK, AND SHALL COORDINATE WITH AFFECTED UTILITY AGENCIES THROUGHOUT THE PROJECT.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY AND THE CITY OF PUYALLUP IMMEDIATELY UPON DAMAGE.
15. EXISTING FEATURES TO REMAIN UNLESS OTHERWISE NOTED.
16. ALL JUNCTION BOXES CARRYING SIGNAL EQUIPMENT AND/OR INTERCONNECT SHALL HAVE THE LETTERS "TS" INSCRIBED ON THE LID. ALL JUNCTION BOXES CARRYING ONLY INTERCONNECT EQUIPMENT SHALL HAVE THE LETTERS "INTC" INSCRIBED ON THE LID.
17. ALL WORK SHALL MEET THE REQUIREMENTS OF THE PROJECT SPECIAL PROVISIONS AND THE CITY OF PUYALLUP STANDARD DRAWINGS.
18. THE TOP ELEVATION OF ALL POLE FOUNDATIONS SHALL BE APPROVED BY THE INSPECTOR PRIOR TO PLACING CONCRETE.
19. ANY NEW JUNCTION BOX WHICH WILL BE LOCATED WITHIN OR PARTIALLY WITHIN SIDEWALK SHALL HAVE LIDS AND FRAMES WITH A NON-SLIP COATING ON THE TOP SURFACE EQUAL TO MEBAC1 OR SLIPNOT#3.
20. A COPY OF THE LOAD CALCULATIONS SHALL BE PROVIDED TO THE CITY'S SIGNAL TECHNICIAN PRIOR TO INSTALLATION.
21. CONTRACTOR SHALL CONTACT THE CITY'S SIGNAL TECHNICIAN WHEN THE LIGHTS ARE READY TO BE ENERGIZED.
22. THE APPLICANT SHALL PURCHASE INSYNC ADAPTIVE CAMERAS DIRECTLY FROM RHYTHM ENGINEER (CHRIS FEES AT 913-227-0603 EXT. 145 OR SAWYER BRESLOW 913-227-0603 EXT. 136) AND PROVIDE TO THE CONTRACTOR FOR INSTALLATION. CITY STAFF CAN ASSIST WITH PREPARING AN AGREEMENT BETWEEN THE APPLICANT AND RHYTHM ENGINEERING. THE CONTRACTOR SHALL INSTALL COMPLETE INSYNC ADAPTIVE SYSTEMS AT THE SHAW/SITE ACCESS INTERSECTIONS AND COORDINATE DIRECTLY WITH RHYTHM ENGINEERING FOR PROGRAMMING.
23. THE REQUIRED SIGNAL MODIFICATIONS MUST BE FULLY CONFIGURED AND OPERATIONAL NO LESS THAN 2 WEEKS PRIOR TO RECEIVING OCCUPANCY FOR ANY BUILDING ON-SITE. ADAPTIVE SIGNAL CONTRACTOR (RHYTHM ENGINEERING) WILL BE REQUIRED TO CONFIGURE THE ADAPTIVE SYSTEM ON-SITE.

APPROVED

BY: _____
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE _____

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

No.	Date	By	Revision Description

Designed By:	Issue Date:
LAB	09/29/2023
Drawn By:	PERMIT
LAB	
Checked By:	Project No.:
GRL	2022-295

CHRISTOPHER T. BIDEZ — STATE OF WASHINGTON — 25855 — REGISTERED PROFESSIONAL ENGINEER
09-29-2023

TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Trevor Tokara, P.E.
Phone: 206-914-3843

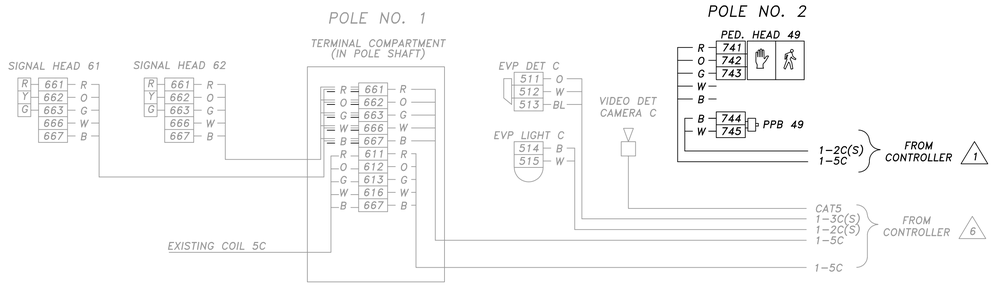
ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

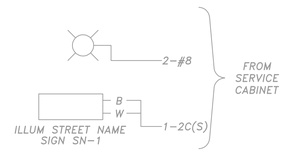
TRAFFIC SIGNAL WIRE SCHEDULE - PHASE 1

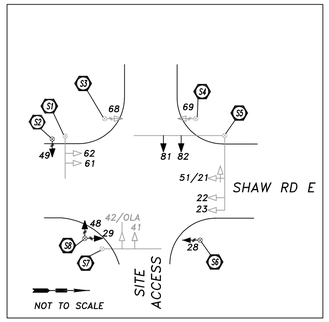
TS-02
SHEET: ____ OF ____

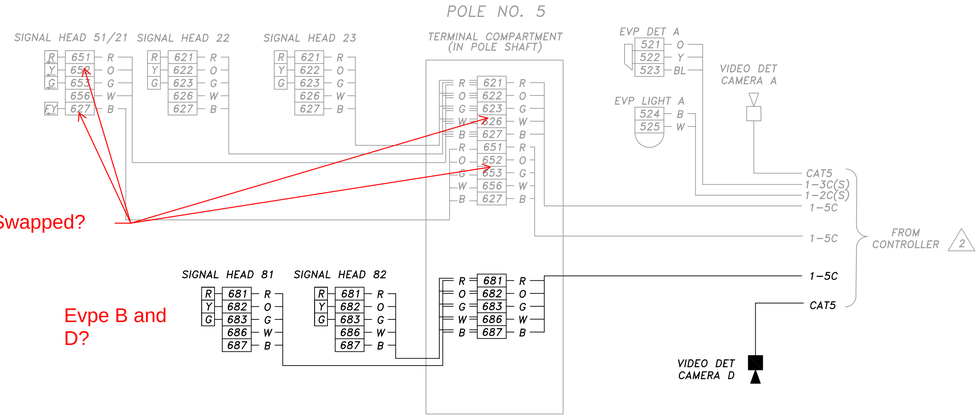
SECTION 26, TOWNSHIP 20 N, RANGE 4 E, W.M.

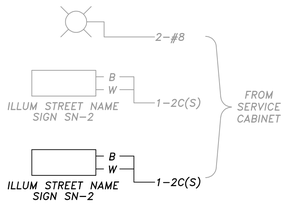
FIELD WIRE TERMINATIONS

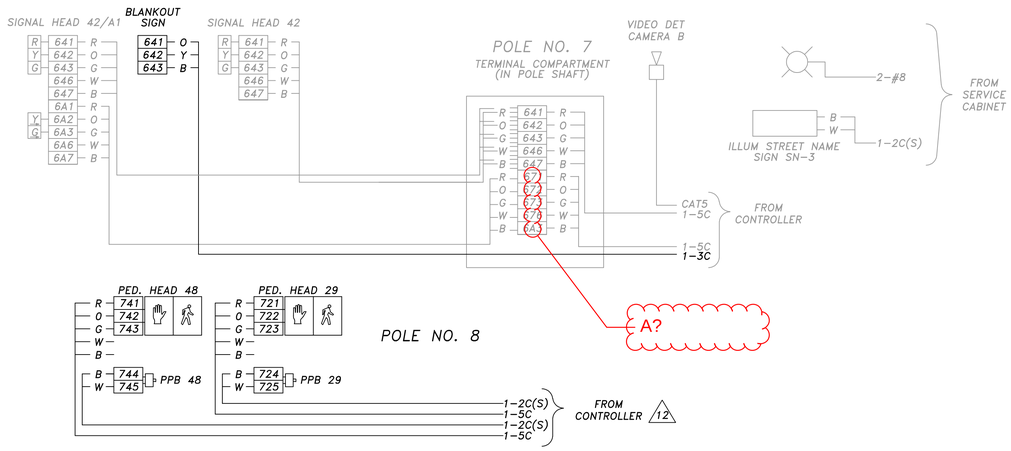


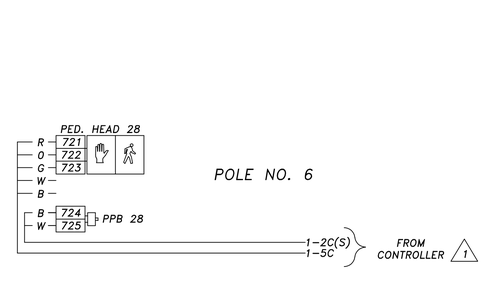






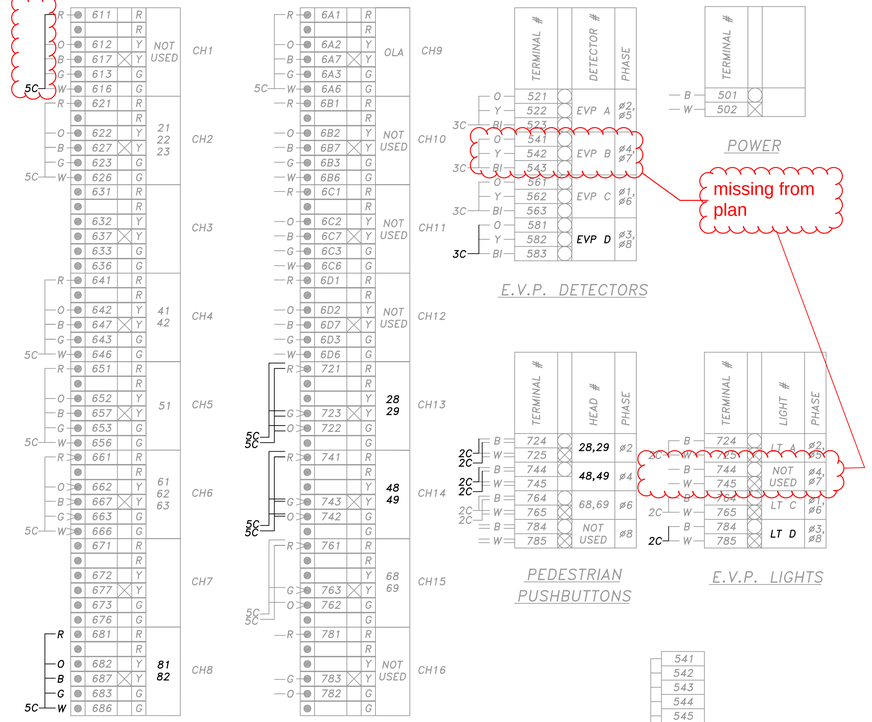






existing

CONTROLLER TERMINALS



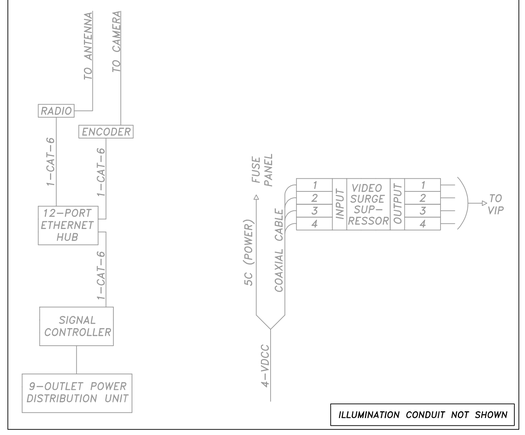
PREEMPT WIRING CODE

ORANGE	24 VOLT
YELLOW	CALL
BLUE	SPARE
DRAIN	GROUND

TERMINAL CODING

- ☒ CONNECT TO NEUTRAL BUSS
- ◯ CONTROL SIDE TERMINAL CONNECTION
- ☒ CONNECT TO DETECTOR COMMON BUSS
- ☐ SPARE

CAMERA WIRING/TERMINATIONS



ABBREVIATIONS:
EVP: EMERGENCY VEHICLE PRE-EMPTION
VDCC: VIDEO DETECTION CAMERA CABLE

APPROVED

BY: _____
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE _____

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.
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No.	Date	By	Revision Description

Designed By:	Issue Date:
LAB	09/29/2023
Drawn By:	PERMIT
LAB	
Checked By:	**Project No.:**
GRL	2022-295

CHRISTOPHER T. BUSSE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
09-29-2023

TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Trevor Takara, P.E.
Phone: 206-914-3843

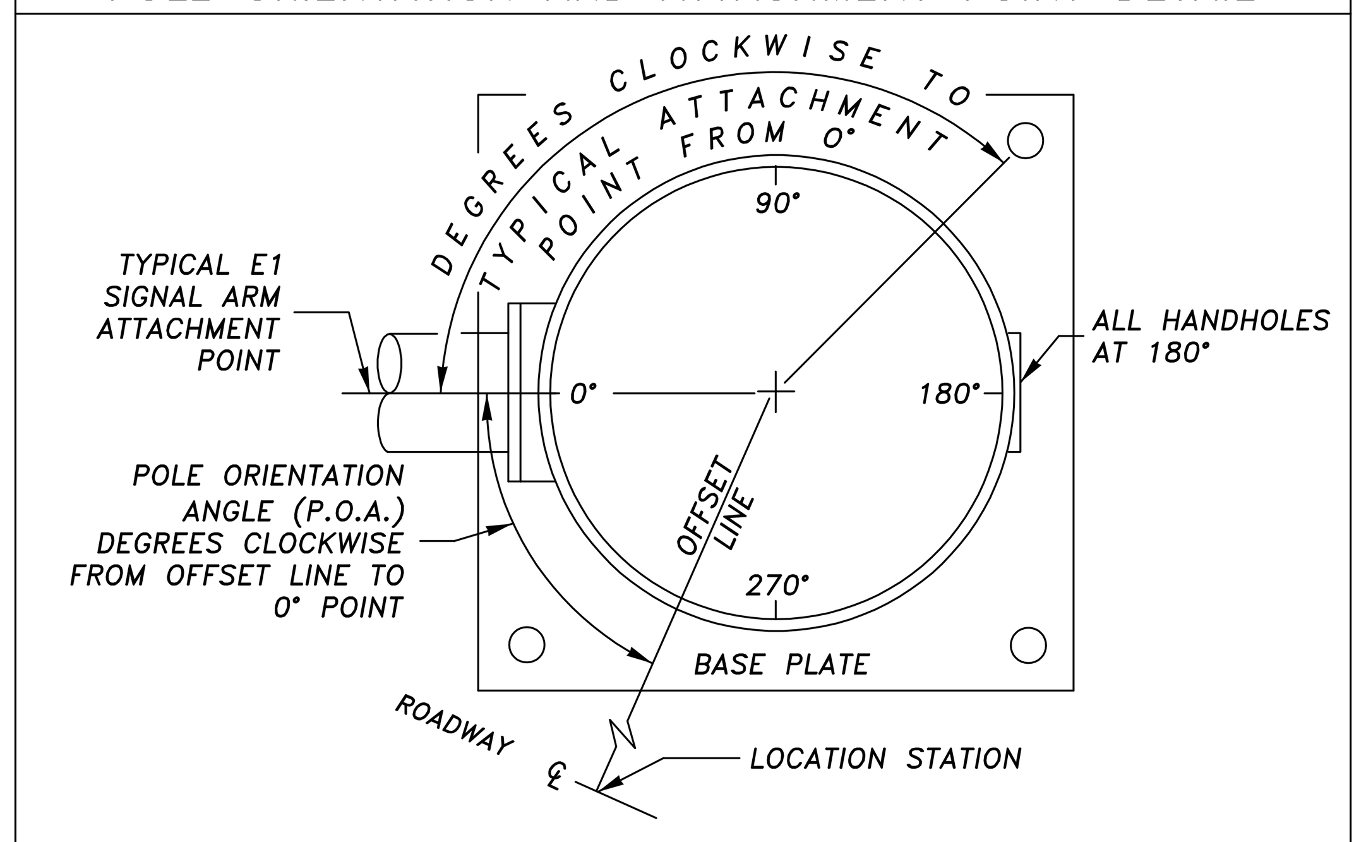
ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

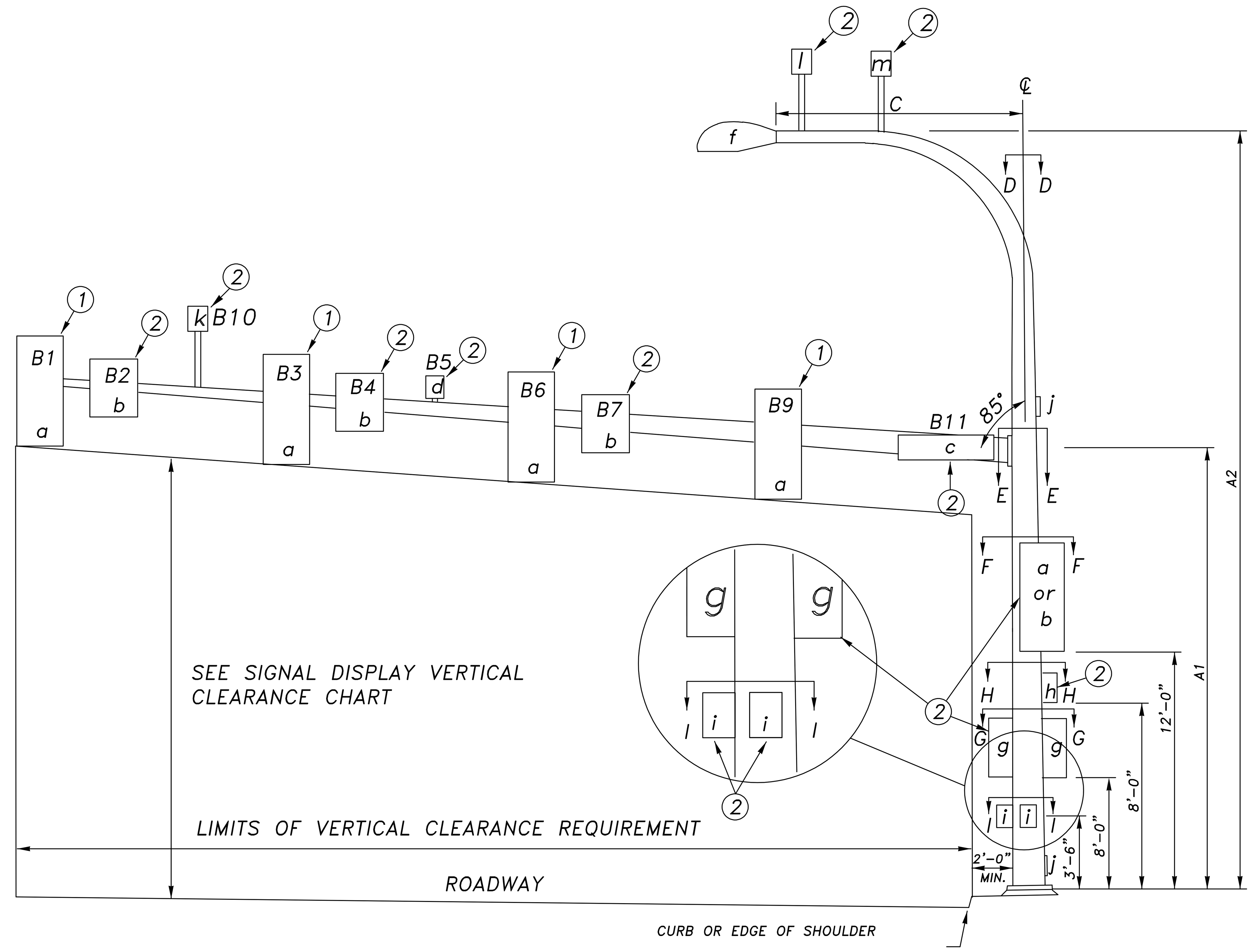
TRAFFIC SIGNAL
WIRING DIAGRAM – PHASE 1

TS-03
SHEET: ____ OF ____

SECTION 26, TOWNSHIP 20 N, RANGE 4 E, W.M.

POLE ORIENTATION AND ATTACHMENT POINT DETAIL





TYPE II MAST ARM SIGNAL STANDARD

TYPE III COMBINATION LIGHTING AND MAST ARM SIGNAL STANDARD

LEGEND

a. VEHICLE SIGNAL HEAD
b. SIGN
c. ILLUMINATED STREET NAME SIGN
d. PRE-EMPT DETECTOR
e. DELETED (10/22/90)
f. LUMINAIRE
g. PEDESTRIAN SIGNAL HEAD
h. RECESSED TERMINAL COMPARTMENT
i. PEDESTRIAN PUSHBUTTON ASSEMBLY
j. HANDHOLE
k. VIDEO DETECTION CAMERA
l. PTZ CAMERA
m. BROADBAND PANEL ANTENNA

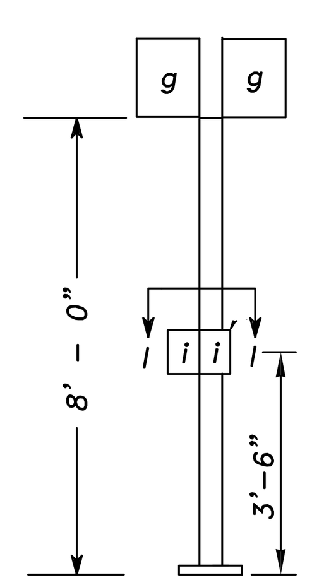
ALTERNATE NOTE 1 FOR TYPE N MOUNT ONLY:
DRILL 1" HOLE IN MAST ARM AND INSTALL PLASTIC SPLIT BUSHING FOR CABLE ENTRANCE.

NOTES

(1) MOUNTING COUPLING INSTALLED AT OFFSET DISTANCE INDICATED IN CHART.

(2) FIELD INSTALLED.

SIGNAL STANDARD DETAILS



TYPE PS PED. HEAD STANDARD

SIGNAL DISPLAY VERTICAL CLEARANCE (FEET)

DISTANCE FROM STOP LINE	40' MIN.	40' MAX.	45' MIN.	45' MAX.	50' MIN.	50' MAX.	53' OR MORE MIN.	53' OR MORE MAX.
3 SECTION 12" 5 SECTION (DOGHOUSE) 12"	16.5'	17.5'	16.5'	19.2'	16.5'	20.9'	16.5'	22.0'
4 SECTION 12"	16.5'	17.0'	16.5'	18.0'	16.5'	19.7'	16.5'	20.8'
5 SECTION (VERTICAL) 12"	16.5'	17.0'	16.5'	17.5'	16.5'	18.5'	16.5'	19.6'
	MEASURED FROM BOTTOM OF SIGNAL HEAD HOUSING (BACKPLATE) TO ROADWAY							

Update based PT/PM FYA phasing, FYA signage, etc. TS-04

Verify new signage is included for new wind area loading TS-04

SIGNAL STANDARD DETAIL CHART

STD. NO.	REFERENCE ROADWAY	FIELD LOCATION STATION	OFFSET	LT.	RT.	P.O.A.	TYPE	MOUNTING HEIGHT (FT) A1	A2	MAST ARM	SIGNAL MAST ARM DATA: OFFSET DISTANCE (FT) (Z) (POLE ℄ TO ATTACHMENT POINT) B1	B2	B3	B4	B5	B6	B7	B9	B10	B11	WINDLOAD AREAS (FT)² (X)(Y)(4) B1	B2	B3	B4	B6	B7	B9	B10	B11	(X)(Y)(Z)(3) TOTAL(FT)³	LUMINAIRE ARM(FT) C	POLE ATTACHMENT POINT ANGLES (DEG) D	E1	F1	F2	G1	G2	H	I1	I2	FOUNDATION(1) DEPTHS(FT) 3' RD.	3' SQ.	4' RD.	REMARKS
1	SHAW RD E	EX	EX	X		0°	EX III	18.0'	30.0'	43.0'	–	39.0'	34.0'	–	27.0'	23.0'	–	–	–	16.5'	–	6.3	9.2	–	9.2	–	–	–	6.7	1381	12'	–	–	–	–	–	–	135	–	–	11	9	9	
2	SHAW RD E	12+01.5	44.0'	X		–	PS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–	(3)	–	–	270	–	–	–	–	FDN PER WSDOT J-21.10
3	SHAW RD E	EX	EX	X		–	EX PS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	(3)	–	–	0	–	–	–	–	
4	SHAW RD E	EX	EX	X		–	EX PS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	(3)	–	–	0	–	–	–	–	
5	SHAW RD E	EX	EX	X		0°	EX SD	17.0'	30.0'	75.0'	75.0'	–	63.5'	56.0'	69.5'	51.5'	–	–	–	20.5'	9.2	–	9.2	7.5	11.6	–	–	–	6.7	2429	12'	–	0	0	–	–	–	270	–	–	–	–	12	
								17.0'	–	62.0'	62.0'(2)	59.0'	51.0'(2)	–	–	43.0'(2)	–	–	–	33.0'	11.6	7.5	9.2	–	9.2	–	–	–	6.7	2220	–	–	90	–	–	–	–		–	–				
6	SHAW RD E	13+01.0	47.0'		X	–	PS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	(3)	–	–	0	–	–	–	–	FDN PER WSDOT J-21.10
7	SHAW RD E	EX	EX		X	90°	EX III	18.0'	30.0'	38.0'	30.0'	26.5'	16.5'	–	11.5	–	3.0	–	–	23.0'	11.6	7.5	9.2	–	9.2	6.3	–	–	6.7	1477	12'	–	–	0	–	–	–	135	–	–	11	9	9	
8	SHAW RD E	12+12.0	45.0'		X	–	PS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	(3)	–	–	0	90	–	–	–	FDN PER WSDOT J-21.10

Update based PT/PM FYA phasing, FYA signage, overlap removal, electronic blank-out sign, etc. TS-04

SIGNAL STANDARD DETAIL CHART NOTES

(1) FOUNDATION DEPTHS ARE BASED ON AN ALLOWABLE LATERAL BEARING CAPACITY OF 1,000 PSF. RECOMMENDED PER COORDINATION WITH EARTH SOLUTIONS NW, LLC ON 1/3/2019.

(2) INSTALL NEW VEHICLE HEAD ON EXISTING TENON.

(3) N/A: PEDESTRIAN SIGNAL HEAD SHALL USE TYPE "D" TOP MOUNT.

(4) CALCULATED WINDLOAD PLUS 500 FT^3 FOR FUTURE UNKNOWN CONDITIONS.

(5) NOT APPLICABLE. PEDESTRIAN SIGNAL HEAD SHALL BE MOUNTED WITH A TYPE D TOP MOUNT.

APPROVED

BY: ____________
CITY OF PUYALLUP ENGINEERING SERVICES

DATE ____________

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Drawn By:	PERMIT
LAB	
Checked By:	Project No.:
GRL	2022-295

CHRISTOPHER T. BICKET STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
09-29-2023

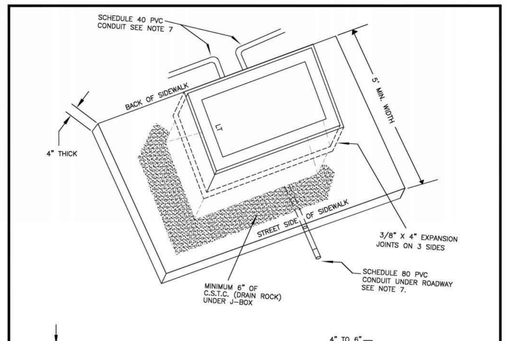
TENW
Transportation Engineering NorthWest
Transportation Planning | Design | Traffic Impact & Operations
11400 SE 8th Street, Suite 200, Bellevue, WA 98004 | Office (425) 889-6747
Project Contact: Trevor Takara, P.E.
Phone: 206-914-3843

ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

TRAFFIC SIGNAL POLE SCHEDULE – PHASE 1

TS-04

SHEET: ____ OF ____

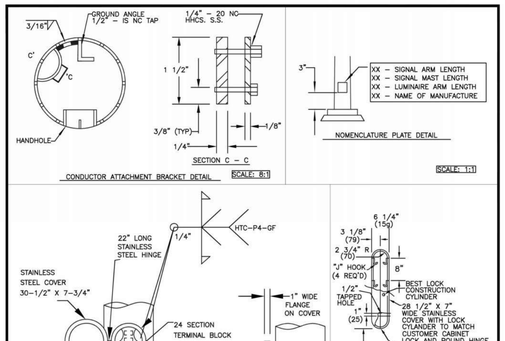


NOTES:
1. SEE W.S.D.O.T. STANDARD PLAN J-40.10-03 FOR J-BOX TYPE AND SIZE.
2. ALL LIDS SHALL BE GALVANIZED STEEL AND MARKED WITH AN "LT" OR "TS" PER W.S.D.O.T. STANDARD PLAN J-40.10-03. NON-SLIP SURFACE TREATMENT SHALL BE MEBAC1 OR SlipNOT #3.
3. TYPE III SHALL BE DUAL HINGED
4. IF NO SIDEWALK EXISTS, A CONCRETE COLLAR SHALL BE CONSTRUCTED 6" THICK, 6" WIDE, COMPLETELY SURROUNDING THE J-BOX WITH ONE #4 REBAR ON CENTER EACH SIDE AND TIED AT CORNERS. CLASS 5 (1 1/2) CONCRETE SHALL BE USED. BY PERMISSION, COLLAR MAY ENCOMPASS JUNCTION BOX AND STREET LIGHT. PREFERRED LOCATION OF JUNCTION BOX SHOULD NOT BE IN THE SIDEWALK, BUT RATHER AT THE BACK OF SIDEWALK WITH 3-SIDED COLLAR.
5. CONDUIT RUNS SHALL NOT EXCEED 195 FEET BETWEEN JUNCTION BOXES.
6. JUNCTION BOX SHALL BE LOCATED WITHIN 10 FEET OF EACH LUMINAIRE POLE AND AT ROAD CROSSING.
7. CONDUIT MATERIAL SHALL BE AS SPECIFIED IN WSDOT STANDARD SPECIFICATION 8-20.3(5) OR AS MODIFIED ON SPECIAL PROVISIONS.
8. STREET LIGHT JUNCTION BOXES SHALL BE WELDED SHUT, 2'-2" LONG WELDS MIN., IMMEDIATELY AFTER L & I AND CITY INSPECTIONS TO HELP PREVENT WIRE THEFT. OTHER THEFT PREVENTION METHODS MAY BE USED IF APPROVED BY THE CITY.

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

JUNCTION BOX

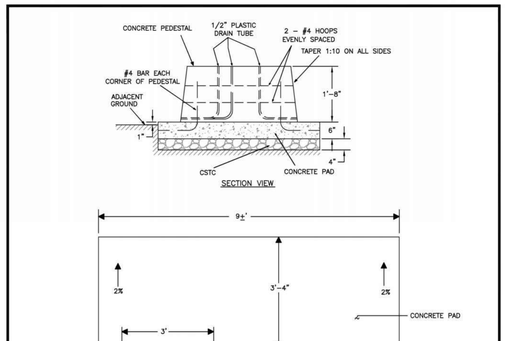
DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
DM DEWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	XXXX	
FILE NAME: T:\DWG\COMMON\STDDETCITY\2009\01_STR\01.06\01.06.01	DATE APPROVED: 03/01/2009	DATE REVISED: 11/18/2014	SCALE: 3/4	01.06.01



CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

TERMINAL COMPARTMENT AND MISC. POLE DETAILS

DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
DM DEWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	XXXX	
FILE NAME: T:\DWG\COMMON\STDDETCITY\2009\01_STR\01.06\01.06.02	DATE APPROVED: 03/01/2009	DATE REVISED: XX/XX/XX	SCALE: VARIES	01.06.02

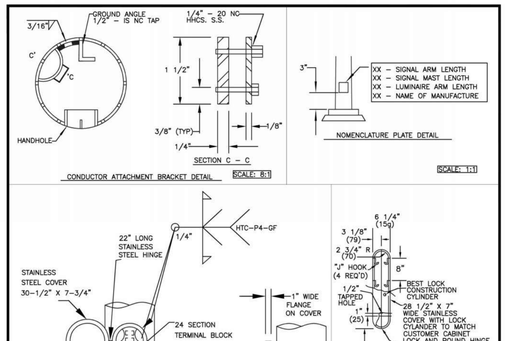


NOTES:
1. CONTRACTOR IS TO VERIFY THAT DETAIL SPECIFICATIONS AND EQUIPMENT LOCATIONS MEET WITH SERVING UTILITY REQUIREMENTS AND CITY OF PUYALLUP ENGINEERING REQUIREMENTS.
2. EXPANSION ANCHOR BOLTS (KWIK-BOLT OR EQUAL) MAY BE USED TO MOUNT CABINET IN LIEU OF EMBEDDED BOLTS.
3. CONDUIT SIZE AND QUANTITY AS REQUIRED BY SIGNAL DESIGN PLANS.
4. 332 SIGNAL CONTROLLER CABINET REQUIRED.
5. SKYLINE SERVICE CABINET SERIES 47700–P2 OR APPROVED EQUIVALENT.
6. VERIFY CABINET DIMENSIONS WITH MFG.
7. SEAL CABINETS TO PEDESTAL WITH SILICON SEALANT. PLACE SEALANT ON PEDESTAL AND SET CABINETS ONTO SEALANT. REMOVE EXCESS SEALANT.
8. INSTALL 1/2" DRAIN HOSE FROM EACH CABINET THROUGH THE PEDESTAL TRIM HOSE FLUSH WITH THE TOP OF THE PEDESTAL.

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

TRAFFIC SIGNAL, METER CABINET, AND BATTERY BACKUP SYSTEM CABINET FOUNDATION

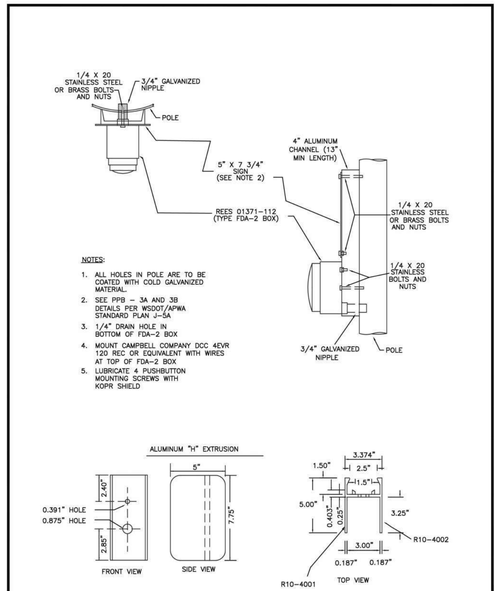
DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
DM DEWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	XXXX	
FILE NAME: T:\DWG\COMMON\STDDETCITY\2009\01_STR\01.06\01.06.06	DATE APPROVED: 03/01/2009	DATE REVISED: XX/XX/XX	SCALE: 1:1	01.06.06



CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

TERMINAL COMPARTMENT AND MISC. POLE DETAILS

DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
DM DEWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	XXXX	
FILE NAME: T:\DWG\COMMON\STDDETCITY\2009\01_STR\01.06\01.06.02	DATE APPROVED: 03/01/2009	DATE REVISED: XX/XX/XX	SCALE: VARIES	01.06.02

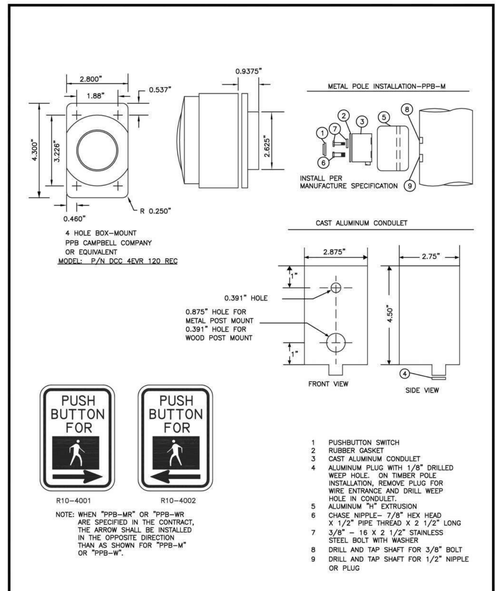


NOTES:
1. ALL HOLES IN POLE ARE TO BE COATED WITH COLD GALVANIZED MATERIAL.
2. SEE PPB – 3A AND 3B DETAILS PER WSDOT/APWA STANDARD PLAN J-5A
3. 1/4" DRAIN HOLE IN BOTTOM OF FDA-2 BOX
4. MOUNT CAMPBELL COMPANY DCC 4EVR 120 REC OR EQUIVALENT WITH WIRES AT TOP OF FDA-2 BOX
5. LUBRICATE 4 PUSHBUTTON MOUNTING SCREWS WITH KOPR SHIELD

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

PEDESTRIAN PUSHBUTTON ASSEMBLY 1

DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
DM DEWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	XXXX	
FILE NAME: T:\DWG\COMMON\STDDETCITY\2009\01_STR\01.06\01.06.03	DATE APPROVED: 03/01/2009	DATE REVISED: XX/XX/XX	SCALE: 3/4	01.06.03



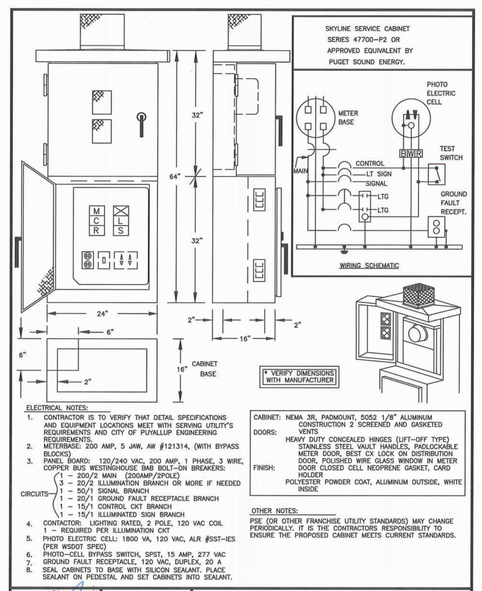
NOTE: WHEN "PPB–MR" OR "PPB–WR ARE SPECIFIED IN THE CONTRACT, THE ARROW SHALL BE INSTALLED IN THE OPPOSITE DIRECTION THAN AS SHOWN FOR "PPB–M" OR "PPB–W".

1 PUSHBUTTON SWITCH
2 RUBBER GASKET
3 CAST ALUMINUM CONDULET
4 ALUMINUM PLUG WITH 1/8" DRILLED WEEP HOLE. ON TIMBER POLE INSTALLATION, REMOVE PLUG FOR WIRE ENTRANCE AND DRILL WEEP HOLE IN CONDULET.
5 ALUMINUM "H" EXTRUSION
6 CHASE NIPPLE– 7/8" HEX HEAD X 1/2" PIPE THREAD X 2 1/2" LONG
7 3/8" – 16 X 2 1/2" STAINLESS STEEL BOLT WITH WASHER
8 DRILL AND TAP SHAFT FOR 3/8" BOLT
9 DRILL AND TAP SHAFT FOR 1/2" NIPPLE OR PLUG

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

PEDESTRIAN PUSHBUTTON ASSEMBLY 2

DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
DM DEWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	XXXX	
FILE NAME: T:\DWG\COMMON\STDDETCITY\2009\01_STR\01.06\01.06.04	DATE APPROVED: 03/01/2009	DATE REVISED: XX/XX/XX	SCALE: 3/4	01.06.04



ELECTRICAL NOTES:
1. CONTRACTOR IS TO VERIFY THAT DETAIL SPECIFICATIONS AND EQUIPMENT LOCATIONS MEET WITH SERVING UTILITY'S REQUIREMENTS AND CITY OF PUYALLUP ENGINEERING REQUIREMENTS.
2. METERBASE: 200 AMP, S JAW, AM #121314, (WITH BYPASS BLOCKS)
3. PANEL BOARD: 120/240 VAC, 200 AMP, 1 PHASE, 3 WIRE, COPPER BUS WESTINGHOUSE BAB BOLT–ON BREAKERS:
   - CIRCUITS: 1 – 200/2 MAIN (200AMP/2POLE)
   - 2 – 20/2 ILLUMINATION BRANCH OR MORE IF NEEDED
   - 1 – 50/1 SIGNAL BRANCH
   - 1 – 20/1 GROUND FAULT RECEPTACLE BRANCH
   - 1 – 15/1 CONTROL CKT BRANCH
   - 1 – 15/1 ILLUMINATED SIGN BRANCH
4. CONTACTOR: LIGHTING RATED, 2 POLE, 120 VAC COIL
   1 – REQUIRED PER ILLUMINATION CKT
5. PHOTO ELECTRIC CELL: 1800 VA, 120 VAC, ALR #SST–IES (PER WSDOT SPEC)
6. PHOTO–CELL BYPASS SWITCH, SPST, 15 AMP, 277 VAC
7. GROUND FAULT RECEPTACLE, 120 VAC, DUPLEX, 20 A
8. SEAL CABINETS TO BASE WITH SILICON SEALANT. PLACE SEALANT ON PEDESTAL AND SET CABINETS INTO SEALANT.

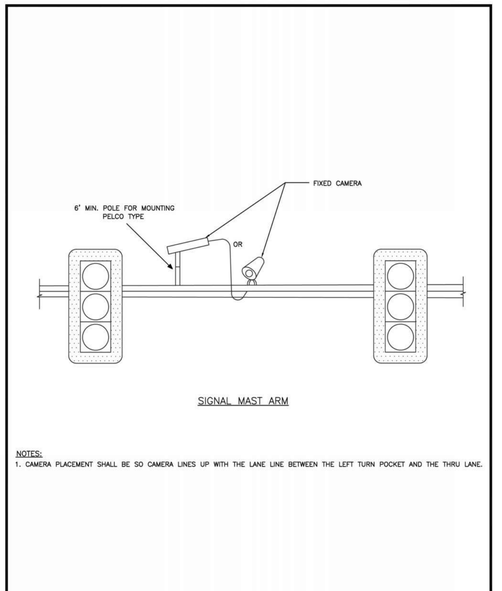
CABINET: NEMA 3R, PADMOUNT, 5052 1/8" ALUMINUM CONSTRUCTION 2 SCREENED AND GASKETED
DOORS: VENTS
HEAVY DUTY CONCEALED HINGES (LIFT–OFF TYPE)
FINISH: STAINLESS STEEL VAULT HANDLES, PADLOCKABLE METER DOOR, BEST CX LOCK ON DISTRIBUTION DOOR, POLISHED WIRE GLASS WINDOW IN METER DOOR CLOSED CELL NEOPRENE GASKET, CARD HOLDER
POLYESTER POWDER COAT, ALUMINUM OUTSIDE, WHITE INSIDE

OTHER NOTES:
PSE (OR OTHER FRANCHISE UTILITY STANDARDS) MAY CHANGE PERIODICALLY. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THE PROPOSED CABINET MEETS CURRENT STANDARDS.

CITY OF PUYALLUP
OFFICE of THE CITY ENGINEER

METER CABINET (STREET LIGHTING CONTROL & TRAFFIC CONTROL)

DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	DATE REVISED	CITY STANDARD
DM DEWIN-SVOBODA	TED HILL	MARK PALMER	GIBLES	XX/XX/XX	
FILE NAME: P:\DWG\COMMON\HOUSTDDETCITYSTD\2016\01_STR\01.06\01.06.05	DATE APPROVED: 01/31/2017	SCALE: 1:1		XX/XX/XX	01.06.05



SIGNAL MAST ARM

NOTES:
1. CAMERA PLACEMENT SHALL BE SO CAMERA LINES UP WITH THE LANE LINE BETWEEN THE LEFT TURN POCKET AND THE THRU LANE.

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

VIDEO CAMERA DETECTION

DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
DM DEWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	Linda Lian	
FILE NAME: P:\DWG\COMMON\STDDETCITY\2009\01_STR\01.06\01.06.07	DATE APPROVED: 03/01/2009	DATE REVISED: 09/25/2013	SCALE: 3/4	01.06.07

APPROVED

BY: _____
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE _____

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CHRISTOPHER T. BISHOP — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
09-29-2023

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ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

TRAFFIC SIGNAL STANDARD DETAILS – PHASE 1

TS-05

SHEET: ____ **OF** ____

GENERAL:

THE INTENT OF THE FOLLOWING SPECIFICATION IS TO PROVIDE A COMPLETE, READY TO INSTALL, 2-WAY PAGING CONTROL, SOLAR POWERED SCHOOL ZONE FLASHING BEACON SYSTEM.

DESCRIPTION:

THE PURPOSE OF THIS SPECIFICATION IS TO DESCRIBE THE MINIMUM ACCEPTABLE DESIGN FOR A 2-WAY PAGING SOLAR POWERED, DUAL BEACON SCHOOL ZONE FLASHING BEACON SYSTEM. THE SYSTEM WILL BE DESIGNED TO OPERATE FOR A PERIOD OF 4 HOURS PER DAY, 5 DAYS PER WEEK. THE SYSTEM SHALL BE DESIGNED TO OPERATE WITH A PROBABILITY OF NO LOSS OF LOAD DURING ALL MONTHS OF THE YEAR.

1. CABINET

THE CABINET SHALL BE MANUFACTURED OF 0.125" SHEET ALUMINUM. NOMINAL CABINET DIMENSIONS SHALL BE 26.25" H x 15.5" W x 14.75" D. THE CABINET SHALL BE A TWO (2)COMPARTMENT TYPE, THE BOTTOM COMPARTMENT SHALL HAVE A NEOPRENE GASKET SEAL SO AS TO PREVENT BATTERY GASES FROM SEEPING INTO THE TOP COMPARTMENT. THE CABINET SHALL HAVE WIRE SCREENED INSECT PROOF LOUVERS ON EACH SIDE OF BOTH COMPARTMENTS FOR VENTILATION. THE LOUVERS SHALL BE DESIGNED TO NOT ALLOW ANY RAIN TO ENTER THE CABINET. ON THE BOTTOM OF THE CABINET THERE SHALL BE TWO SCREENED INSECT PROOF DRAIN HOLES.

THE DOOR SHALL BE A SINGLE UNIT WITH A CONTINUOUS PIANO HINGE RIVETED TO THE DOOR AND THE CABINET. THE DOOR SHALL INCORPORATE A NEOPRENE GASKET WHICH, WHEN CLOSED, FORMS A SNUG WEATHER TIGHT SEAL. THE DOOR LOCK SHALL BE A STANDARD POLICE LOCK, REINFORCED WITH A STEEL PLATE.

EACH CABINET SHALL BE EQUIPPED WITH THE NECESSARY RIGID TOP AND BOTTOM MOUNT FOR A 4" ID POLE WITH 4.5" OD POLE CLAMPS. ALL NECESSARY HARDWARE FOR PROPER MOUNTING SHALL BE INCLUDED.

2. CONTROL PANEL

THE CONTROL PANEL CONTAINING THE ELECTRONICS (SOLAR CHARGE CONTROLLER AND FLASHER) AND 2-WAY PAGING TIME CLOCK SHALL BE MOUNTED IN THE TOP COMPARTMENT OF THE CABINET USING BOLTS WITH WING NUTS FOR QUICK AND EASY REMOVAL. THE SOLAR PANEL BEACON AND BATTERY SHALL BE CONNECTED THROUGH A MAIN WIRING HARNESS VIA A CIRCULAR PIN CONNECTOR (CPC).

THE SOLAR PANELS, LOAD, AND BATTERY SHALL BE FUSED FOR SHORT CIRCUIT PROTECTION AND EASE OF SYSTEM MAINTENANCE.

SOLAR CHARGE CONTROLLER

THE SOLAR CHARGE CONTROLLER SHALL CONTROL BATTERY CHARGING THROUGH PULSE WIDTH, MODULATED, TEMPERATURE COMPENSATING, CONSTANT CHARGING ALGORITHM. THE SOLAR CHARGE CONTROLLER WILL HAVE BOTH A LOW VOLTAGE DISCONNECT (LVD) OF 11.4 VDC AND A HIGH VOLTAGE DISCONNECT (HVD) OF 15.5 VDC. A LIQUID CRYSTAL DISPLAY (LCD) OF BATTERY VOLTAGE, SOLAR ARRAY CURRENT, AND LOAD CURRENT WILL BE AVAILABLE WITH THE SOLAR CHARGE CONTROLLER. IN ADDITION, COLORED LED'S WILL DISPLAY BATTERY STATE. A GREEN LED WILL INDICATE FULL CHARGE, AMBER LED WILL INDICATE HALF CHARGE, AND A FLASHING RED LED WILL INDICATE LOW CHARGE. A SOLID GLOWING RED LED WILL INDICATE THE LOAD HAS BEEN DISCONNECTED. A SEPARATE GREEN LED WILL INDICATE THE BATTERY IS BEING CHARGED.

THE SOLAR CHARGE CONTROLLER WILL HAVE A LOAD DISCONNECT PUSHBUTTON. WHEN THE LOAD IS DISCONNECTED THE BUTTON WILL GLOW RED.

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

SOLAR POWERED SCHOOL ZONE FLASHING BEACON SYSTEM NOTES

DRAWN BY	CHECKED BY	APPROVED BY	REVISED BY	CITY STANDARD
JIM ERWIN-SVOBODA	LINDA LIAN	COLLEEN HARRIS	XXXX	01.07.03
FILE NAME: F:\DWG\COMMON\STDS\CITYSTDS\STR\01.07\01.07.03		DATE APPROVED: 07/01/2009	DATE REVISED: XX/XX/XX; SCALE: 1:1	

THE SOLAR CHARGE CONTROLLER WILL BE CAPABLE OF OPERATING IN A TEMPERATURE RANGE OF −40 DEGREES C AND +85 DEGREES C.

FLASHER

THE FLASHER SHALL BE SOLID STATE, 2 CIRCUIT DEVICE WHICH CONTROLS THE FLASHING SEQUENCE OF THE BEACON. THE FLASHER WILL HAVE A SELECTABLE FLASH RATE OF 35–70 FLASHES PER MINUTE AND WILL FLASH A DUTY CYCLE OF 50% ON AND 50% OFF.

THE FLASHER WILL BE CAPABLE OF OPERATING IN A TEMPERATURE RANGE OF −40 DEGREES C AND +85 DEGREES C.

3. 2-WAY PAGING TIME CLOCK

THE 2-WAY PAGING TIME CLOCK WILL CONTAIN BOTH THE CAPABILITY OF RECEIVING PAGES FROM A CENTRAL LOCATION AND RESPONDING VIA EMAIL TO A DESIGNATED ADDRESS. THE 2-WAY PAGING TIME CLOCK WILL BE ABLE TO RECEIVE AND STORE AN ANNUAL PROGRAM OF UP TO 960 CHARACTERS INCLUDING STEPS AND EXCEPTIONS, AN ALTERNATE PROGRAM, AND AN IMMEDIATE PROGRAM. THE 2-WAY PAGING TIME CLOCK WILL SELECT THE APPROPRIATE PROGRAM AND/OR EXCEPTION FOR TODAY AND WILL RUN THAT PROGRAM. THE 2-WAY PAGING TIME CLOCK WILL ALSO HAVE THE CAPABILITY OF BEING PROGRAMMED VIA A KEY PAD ON THE TIME CLOCK.

THE 2-WAY PAGING TIME CLOCK WILL CONTAIN WATCH DOG CIRCUITS TO ENSURE THAT THE CLOCK RESETS ITSELF SHOULD IT FAULT FOR A PERIOD GREATER THAN SPECIFIED. THE CLOCK WILL CONTAIN 2 OUTPUT CIRCUITS, EACH CIRCUIT RATED AT 16 AMPS. THE CLOCK WILL BE CAPABLE OF BEING POWERED BY EITHER DC OR AC POWER. THE CLOCK WILL CONTAIN NON-VOLATILE MEMORY SO THAT A POWER FAILURE WILL NOT ERASE THE PROGRAM. THE CLOCK WILL HAVE CAPACITIVE BACKUP POWER RATED AT 168 HOURS IN THE EVENT OF POWER FAILURE. THE CLOCK WILL BE CAPABLE OF LEAP YEAR COMPENSATION AND WILL AUTOMATICALLY COMPENSATE FOR DAYLIGHT SAVINGS TIME.

SYSTEM SOFTWARE WILL BE PROVIDED FOR OPERATION OF THE SYSTEM. FUNCTIONS AND FEATURES OF THE SOFTWARE ARE DESCRIBED IN SECTION 3.1.

THE 2-WAY PAGING TIME CLOCK WILL BE CAPABLE OF OPERATING IN A TEMPERATURE RANGE OF −40 DEGREES C AND +85 DEGREES C

3.1 2-WAY PAGING SYSTEM SOFTWARE

THE 2-WAY PAGING SYSTEM SOFTWARE WILL RUN ON A STANDARD PC USING A WINDOWS 2000, XP, OR VISTA OPERATING SYSTEM.

THE SOFTWARE WILL HAVE THE CAPABILITY TO ASSIGN 99 GROUPS WITH 99 UNITS PER GROUP. THE SOFTWARE WILL ALLOW THE USER TO CREATE AN ANNUAL PROGRAM WITH EXCEPTIONS FOR EACH GROUP AND WILL ALLOW THE USER TO COPY PROGRAMS FROM ONE GROUP TO ANOTHER GROUP. THE SOFTWARE WILL ALLOW THE USER TO CREATE AN ALTERNATE PROGRAM WHICH OVERRIDES THE ANNUAL PROGRAM FOR A SPECIFIED PERIOD. THE SOFTWARE WILL ALLOW THE USER TO CREATE AN IMMEDIATE EXECUTABLE PROGRAM WHICH OPERATES ONLY ON THE DATE OF THE PROGRAM. THE SOFTWARE WILL ALSO ALLOW THE USER TO CONTROL THE CLOCK MANUALLY.

THE SOFTWARE WILL ALLOW THE USER TO PRINT A HARDCOPY LISTING OF ALL SCHOOL PROGRAMS. IT WILL ALLOW THE USER TO PRINT A LISTING OR ALL REMOTE SITES. IT WILL MAINTAIN A HISTORY OF THE LAST 500 PAGE MESSAGES SENT TO REMOTE UNITS.

THE SOFTWARE WILL ALLOW THE USER TO ADDRESS AND SEND A PAGE MESSAGE TO ALL UNITS WITH ONE COMMAND, ANY GROUP OF UNITS WITH ONE COMMAND, OR A SINGLE UNIT WITH ONE COMMAND.

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DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

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THE SOFTWARE WILL ALLOW THE USER TO CHANGE THE EMAIL ADDRESS TO WHICH THE UNIT RESPONDS, TO SEND AN ANNUAL PROGRAM WITH EXCEPTIONS, TO SEND AN ALTERNATE PROGRAM, TO SEND AN IMMEDIATE PROGRAM, TO TURN ON OR TURN OFF THE RELAYS MANUALLY, TO SEND A TIME UPDATE, OR TO QUERY THE UNITS REGARDING STATUS (DATE, TIME, UNIT IDENTIFICATION, PROGRAM RUNNING, AND RELAY STATE).

4. SOLAR PANEL

THE SOLAR PANEL WILL BE HIGH EFFICIENCY, SINGLE CRYSTAL SILICON SOLAR CELLS THAT ARE LAMINATED TO GLASS WITH LAYERS OF ETHYLENE VINYL ACETATE (EVA). THE PANEL WILL BE SELF-CLEANING, IMPACT RESISTANT, HIGHLY TRANSMISSIVE, TEMPERED GLASS SUPERSTATE. THE PANEL MODULE FRAME WILL BE MADE OF EXTRUDED, POLYMER COATED ALUMINUM ALLOY OR SIMILAR APPROVED CONSTRUCTION. THE PANEL MODULE JUNCTION BOX WILL BE A UV RESISTANT, WEATHERPROOF WIRE TERMINATION SYSTEM WHICH HANDLES #14 AWG WIRING. THE MINIMUM ACCEPTABLE WATTAGE OF THE SOLAR PANEL WILL BE 85 WATTS.

5. BATTERIES

THE BATTERIES WILL BE A TYPE 27 ABSORBED GLASS MAT (AGM) LEAD ACID TYPE 12 VOLT DC BATTERY. THE BATTERIES WILL CONTAIN VALVE REGULATION WITH A SELF DISCHARGE RATE OF 1% PER MONTH OR LESS (AT 68 DEGREES F). THE BATTERIES WILL UTILIZE T881 TERMINALS. THE POSITIVE TERMINAL WILL BE COVERED WITH A RUBBER BOOT TO PROTECT THE BATTERIES FROM ACCIDENTAL SHORTING.

6. SIGNAL BEACON

THE SIGNAL BEACONS WILL CONSIST OF THE HEAD, AMBER LENS, VISOR, SIGNAL CLOSURE CAP, AND MOUNTING HARDWARE FOR A 4.5" OD ALUMINUM POLE. THE LENS WILL BE A 12VDC 12" AMBER LED BEACON USING ALLnGaP TECHNOLOGY. THE HEAD WILL BE A ONE PIECE POLYCARBONATE SHELL WITH THE POLYCARBONATE DOOR USING STAINLESS STEEL HINGE PINS. THUMBSCREWS WILL HOLD THE DOOR AGAINST THE BODY. THE VISOR SHALL BE A ONE PIECE POLYCARBONATE TUNNEL UNIT WHICH SHALL BE DURALOCKED AT FOUR POINTS TO THE HEAD DOOR.

THE SIGNAL BEACON WILL BE ASSEMBLED AND WIRED AS A UNIT.

7. POLE AND BASE

THE POLE WILL BE A SCHEDULE 80 SPUN ALUMINUM 4" ID (4.5" OD) x 16' H. THE BASE WILL BE A BREAKAWAY BASE SIMILAR TO PELCO PART NUMBER PB-5340. A SET OF 4 ANCHOR BOLTS WILL BE PROVIDED. THE ANCHOR BOLTS WILL BE 3/4" x 10" AND WILL BE SIMILAR TO PELCO PART NUMBER PB-5306. A POLE COLLAR ASSEMBLY AND A POLE CAP WILL ALSO BE PROVIDED.

8. WARRANTY

A MINIMUM OF ONE YEAR WARRANTY FROM THE DATE OF SYSTEM INSTALLATION WILL BE REQUIRED FOR ALL SYSTEM COMPONENTS. THE BATTERY WILL BE PRO-RATED WARRANTED FOR 5 YEARS. THE SOLAR PANEL WILL BE WARRANTED FOR 20 YEARS. ALL SHIPPING COSTS FOR WARRANTY REPAIRS WILL BE PAID BY THE VENDOR.

CITY OF PUYALLUP
DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

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APPROVED

BY: ______________________
CITY OF PUYALLUP
ENGINEERING SERVICES

DATE ____________________

NOTE: THIS APPROVAL IS VOID AFTER 1 YEAR FROM APPROVAL DATE.

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE ENGINEERING SERVICES MANAGER.

No.	Date	By	Revision Description

Designed By:	Issue Date:
LAB	09/29/2023 PERMIT
Drawn By:	
LAB	
Checked By:	Project No.:
GRL	2022-295

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REGISTERED PROFESSIONAL ENGINEER
09-29-2023

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ASH DEVELOPMENT, LLC
EAST TOWN CROSSING
PUYALLUP, WA

FLASHING BEACON STANDARD DETAILS – PHASE 1

TS-06

SHEET: ____ OF ____