Shelton City Council
Meeting Agenda
September 5, 2023 at 6:00 p.m.
Civic Center & Virtual Platform

A. Call to Order
- Pledge of Allegiance
- Roll Call
- Late Changes to the Agenda

B. Council Reports

C. Consent Agenda (Action)
1. Vouchers numbered 108795 through 108837 in the total amount of $285,616.48
2. Vouchers numbered 108847 through 108909 in the total amount of $238,812.62
3. Vouchers numbered 108910 through 108940 in the total amount of $105,366.69
4. Letter of Support – Comprehensive Planning Grant Application

D. Business Agenda (Study/No Action/Public Comment Taken)
1. Public Hearing Ordinance No. 2003-0523 Adoption of 2021 International Fire Code – Presented by Community & Economic Development Director Jae Hill
2. Public Hearing Ordinance No. 2004-0523 Adoption of 2021 International Building Code – Presented by Community & Economic Development Director Jae Hill
3. Ordinance No. 2010-0723 Amending SMC Related to Sewer Rates – Presented by Public Works Director Jay Harris
4. Ordinance No. 2011-0723 Amending SMC Related to Water Rates – Presented by Public Works Director Jay Harris
5. Resolution No. 1287-0823 Amending Petty Cash Monies - Presented by Finance Director Mike Githens
6. ILA with Mason County for Joint Comprehensive Planning – Presented by Community & Economic Development Director Jae Hill

E. Action Agenda (Action/Public Comment Taken)
1. Resolution No. 1286-0823 Civic Center Exterior Rehabilitation Project – Presented by Parks & Recreation Supervisor Jordanne Krumpols
2. Resolution No. 1279-0723 Consultant Services for Comprehensive Plan Update - Presented by Community & Economic Development Director Jae Hill
3. Resolution No. 1281-0723 Signatory Authorization to Invest in Local Government Investment Pool - Presented by Finance Director Mike Githens
4. Resolution No. 1282-0723 Wastewater System Comprehensive Plan Update – Presented by Public Works Director Jay Harris
5. Resolution No. 1283-0723 Water System Comprehensive Plan Update - Presented by Public Works Director Jay Harris
6. Resolution No. 1284-0723 Design & Construction Standards Manual Update - Ch. 1 & 2 - Presented by Public Works Director Jay Harris

F. Administration Reports

1. City Manager Report

G. General Public Comment (3-minute time limit)

*The City Council invites members of the public to provide comment on any topic at this time. To make comments in person, please sign in on the public comment sheet and keep an instruction card. If you would like to comment on a Business or Action item, please list the agenda item number on the list. To comment virtually using Zoom, please use the "Raise Hand" feature to alert the City Clerk. If you have joined Zoom on your telephone, dial *9 to use the "Raise Hand" feature. City Councilmembers and City Staff will not enter into a dialogue during public comment. If the Council feels an issue requires follow up, Staff will be directed to respond at an appropriate time.*

H. New Items for Discussion

I. Announcement of Next Meeting – September 19, 2023 at 6:00 p.m.

J. Adjourn

Special Note for Virtual Public Participation

The meeting can be viewed at: https://www.youtube.com/user/cityofshelton

The public can provide comments virtually by:
Email: donna.nault@sheltonwa.gov (before 5:00pm the day of the meeting)
Telephone: (360) 432-5103 (before 5:00pm the day of the meeting)
Join the Zoom meeting by clicking on the link posted on the City Council's webpage

Your comments will be relayed directly to the Council.

2023 Looking Ahead

(Items and dates are subject to change)

Tues. 9/12 6:00 p.m.	Study Session	Study Agenda • Evergreen Treatment Services – Mobile Medical Unit • Street Fund Discussion • 2024 Budget Discussion	Packet Items Due: 9/8 @ noon
Tues. 9/19 5:45 p.m.	SMPD Meeting	Consent Agenda • Vouchers/Meeting Minutes Business Agenda • Action Agenda • Administration Report •	Packet Items Due: 9/8 @ 5:00 p.m.
Tues. 9/19 6:00 p.m.	Regular Meeting	Consent Agenda • Vouchers/Payroll Warrants/Meeting Minutes Presentation • July Financial Status Report Business Agenda • Public Hearing Ordinance No. 2012-0823 Amending Traffic Impact Fee Definitions • Resolution No. 1288-0823 Electronic Funds Transfer Policy Action Agenda • Ordinance No. 2003-0523 Adoption of 2021 International Fire Code • Ordinance No. 2004-0523 Adoption of 2021 International Building Code • Ordinance No. 2010-0723 Amending SMC Related to Sewer Rates • Ordinance No. 2011-0723 Amending SMC Related to Water Rates • Resolution No. 1287-0823 Amending Petty Cash Monies • ILA with Mason County for Joint Comprehensive Planning Administration Report •	Packet Items Due: 9/8 @ 5:00 p.m.
Tues. 9/26 6:00 p.m.	Study Session	Study Agenda Comp. Plan Scoping	Packet Items Due: 9/22 @ noon
Tues. 10/3 6:00 p.m.	Regular Meeting	Consent Agenda • Vouchers/Payroll Warrants/Meeting Minutes	Packet Items Due: 9/22 @ 5:00 p.m.

DRAFT

		Presentation • Business Agenda • Resolution No. 1291-0832 Authorizing Sale of Surplus Real Estate • Northcliff Purchase and Sales Agreement Action Agenda • Ordinance No. 2012-0823 Amending Traffic Impact Fee Definitions • Resolution No. 1288-0823 Electronic Funds Transfer Policy • LTAC Tourism Grant Recommendations Administration Report •	
Tues. 10/10 6:00 p.m.	Study Session	Study Agenda	Packet Items Due: 10/6 @ noon
Tues. 10/17 6:00 p.m.	Regular Meeting	Consent Agenda • Vouchers/Payroll Warrants/Meeting Minutes Presentation • Business Agenda • Action Agenda • Administration Report •	Packet Items Due: 10/6 @ 5:00 p.m.
Tues. 10/17 After regular meeting	Special Meeting	Executive Session • Real Estate Sale, Purchase, or Lease	N/A
Tues. 10/24 6:00 p.m.	Study Session	Study Agenda	Packet Items Due: 10/20 @ noon
Tues. 11/7 6:00 p.m.	Regular Meeting	Consent Agenda • Vouchers/Payroll Warrants/Meeting Minutes Presentation • Business Agenda • Action Agenda • Administration Report •	Packet Items Due: 10/27 @ 5:00 p.m.
Tues. 11/14 6:00 p.m.	Study Session	Study Agenda	Packet Items Due: 11/9 @ noon

Other – TBD

- Public Hearing Ordinance No. 1990-0522 Amending SMC 17.12
- Project and Funding Authorization for Wallace/Shelton Springs Intersection Improvements
- Property Maintenance Code

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VOUCHER APPROVAL

I, the undersigned, do hereby certify under penalty of perjury that the materials have been furnished, the services rendered, or the labor performed as described herein vouchers number 108795 through number 108837 in the total amount of $285,616.48 that the claims are just, due and unpaid obligations against the City of Shelton, and that I am authorized to authenticate and certify said claims.

Signed this 9th of August, 2023.

Michael A. Gothard
Finance Director

We, the undersigned members of the City Council of Shelton, Washington, do hereby certify that the vouchers contained herein are approved for payment.

Signed this _____ of _____, 2023.

_____
Mayor Eric Onisko

_____
Deputy Mayor Joe Schmit

_____
Councilmember James Boad

_____
Councilmember Miguel Gutierrez

_____
Councilmember Kathy McDowell

_____
Councilmember Deidre Peterson

_____
Councilmember Sharon Schirman

Shelton, WA

Check Register

Packet: APPKT02834 - AUGUST 9, 2023 AP PAYMENTS

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: APBNK-Main-APBNK-Main						
002520	ARAMARK	08/09/2023	Regular	0.00	137.53	108795
003655	BATTERIES PLUS	08/09/2023	Regular	0.00	92.91	108796
004385	BLACK STAR	08/09/2023	Regular	0.00	3,253.12	108797
005900	CAPITAL BUSINESS MACHINES	08/09/2023	Regular	0.00	755.67	108798
005910	CAPITAL INDUSTRIAL INC.	08/09/2023	Regular	0.00	27.57	108799
108679	CENTRAL MASON FIRE AND EMS	08/09/2023	Regular	0.00	188,926.76	108800
VEN01564	COPIERS NORTHWEST	08/09/2023	Regular	0.00	231.28	108801
009251	DATAPROSE LLC	08/09/2023	Regular	0.00	2,754.75	108802
009351	DELAGE LANDEN FINANCIAL SVCS	08/09/2023	Regular	0.00	201.98	108803
VEN02319	DENALI WATER SOLUTIONS LLC	08/09/2023	Regular	0.00	7,130.04	108804
009595	DEPT. OF LICENSING	08/09/2023	Regular	0.00	57.00	108805
018001	EMPLOYMENT SECURITY DEPT	08/09/2023	Regular	0.00	20.79	108806
023078	FASTENAL COMPANY	08/09/2023	Regular	0.00	243.88	108807
VEN01406	FERGUSON WATERWORKS	08/09/2023	Regular	0.00	2,445.59	108808
VEN01832	KIM KILMER - FINANCE PETTY CASH	08/09/2023	Regular	0.00	80.45	108809
113004	MASON COUNTY - UTILITIES/WASTE	08/09/2023	Regular	0.00	754.61	108810
114420	MASON TRANSIT AUTHORITY	08/09/2023	Regular	0.00	220.00	108811
132235	MOUNTAIN MIST WATER	08/09/2023	Regular	0.00	68.85	108812
VEN01558	NORTHWEST CUSTOM TEES	08/09/2023	Regular	0.00	300.36	108813
VEN02312	ODP BUSINESS SOLUTIONS LLC	08/09/2023	Regular	0.00	56.56	108814
149070	OLYMPIC REGION CLEAN AIR AGENC	08/09/2023	Regular	0.00	304.00	108815
VEN02070	PAPE MACHINERY	08/09/2023	Regular	0.00	177.61	108816
VEN02465	PNW RAISED EVENTS	08/09/2023	Regular	0.00	3,500.00	108817
163450	PURCHASE POWER	08/09/2023	Regular	0.00	987.85	108818
VEN02369	QUIXOTE COMMUNITIES	08/09/2023	Regular	0.00	19,614.34	108819
164899	QWEST DBA CENTURYLINK	08/09/2023	Regular	0.00	954.72	108820
903584	RIGHT SYSTEMS	08/09/2023	Regular	0.00	12,002.82	108821
178231	SEAN CARNEY	08/09/2023	Regular	0.00	241.60	108822
187505	SHELTON SCHOOL DISTRICT	08/09/2023	Regular	0.00	60.00	108823
187000	SHELTON-MASON COUNTY JOURNA	08/09/2023	Regular	0.00	93.00	108824
178252	TASCHNER LAW, PLLC	08/09/2023	Regular	0.00	9,083.00	108825
VEN01972	THOMAS A FURRER	08/09/2023	Regular	0.00	1,552.50	108826
201300	TOZIER BROS INC.	08/09/2023	Regular	0.00	233.08	108827
201875	TYLER TECHNOLOGIES	08/09/2023	Regular	0.00	2,240.00	108828
202195	U.S. BANK N.A.-CUSTODY	08/09/2023	Regular	0.00	46.00	108829
VEN01846	USSSA WASHINGTON STATE	08/09/2023	Regular	0.00	546.00	108830
202340	UTILITIES UNDERGROUND LOCATIO	08/09/2023	Regular	0.00	58.05	108831
202392	VERIZON WIRELESS	08/09/2023	Regular	0.00	1,314.60	108832
203780	WATER MGMNT LABORATORIES INC	08/09/2023	Regular	0.00	1,035.00	108833
203900	WESMAR COMPANY, INC	08/09/2023	Regular	0.00	1,018.37	108834
053987	WESTBAY NAPA AUTO PARTS	08/09/2023	Regular	0.00	22.69	108835
025951	WILLIAMS ARCHITECTURE	08/09/2023	Regular	0.00	9,621.50	108836

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
155563	YOUNGLOVE & COKER-PLLC	08/09/2023	Regular	0.00	13,150.05	108837

Bank Code APBNK-Main Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	67	43	0.00	285,616.48
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
Virtual Payments	0	0	0.00	0.00
	67	**43**	**0.00**	**285,616.48**

	Virtual Payments	0	0	0.00	0.00

Fund Summary

Fund	Name	Period	Amount
999	Pooled Cash	8/2023	285,616.48
			285,616.48

Shelton, WA

Check Register

Packet: APPKT02834 - AUGUST 9, 2023 AP PAYMENTS

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: APBNK-Main-APBNK-Main						
002520	ARAMARK	08/09/2023	Regular	0.00	137.53	108795

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
5120287196	Invoice	07/26/2023	ACCT#792105973 COVERALLS,MATS,TOW	0.00	65.71
402-400-000-53580-4900		Miscellaneous		ACCT#792105973 COVERA	65.71
5120291455	Invoice	08/02/2023	ACCT#792105972 COVERALLS,MATS.TOW	0.00	71.82
401-000-000-53480-4900		Miscellaneous		ACCT#792105972 COVERA	71.82

003655	BATTERIES PLUS	08/09/2023	Regular	0.00	92.91	108796

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
P63232271	Invoice	06/14/2023	CUST#3604266442 BATTERY	0.00	92.91
402-400-000-53580-3100		Office and Operating		CUST#3604266442 BATTER	92.91

004385	BLACK STAR	08/09/2023	Regular	0.00	3,253.12	108797

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
27113	Invoice	07/28/2023	VINYL WRAP UTILITY BOX	0.00	3,253.12
001-143-000-57320-4900		Miscellaneous		VINYL WRAP UTILITY BOX	3,253.12

005900	CAPITAL BUSINESS MACHINES	08/09/2023	Regular	0.00	755.67	108798

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
INV164574	Invoice	08/07/2023	CONTRACT#CN3230-01	0.00	246.61
001-111-000-51423-4500		Operating Rentals		CONTRACT#CN3230-01	147.97
001-130-000-51810-4500		Operating Rentals		CONTRACT#CN3230-01	98.64
INV164575	Invoice	08/07/2023	CONTRACT#CN3370-01	0.00	331.60
001-110-000-51160-4500		Operating Rentals		CONTRACT#CN3370-01	81.91
001-111-000-51421-4500		Operating Rentals		CONTRACT#CN3370-01	3.12
001-111-000-51423-4500		Operating Rentals		CONTRACT#CN3370-01	11.61
001-115-000-51896-4500		Operating Rentals		CONTRACT#CN3370-01	110.92
001-120-000-51310-4500		Operating Rentals		CONTRACT#CN3370-01	3.75
001-121-000-51430-4500		Operating Rentals		CONTRACT#CN3370-01	0.93
001-130-000-51810-4500		Operating Rentals		CONTRACT#CN3370-01	0.30
001-132-000-51888-4500		Operating Rentals		CONTRACT#CN3370-01	13.26
001-140-000-55860-4500		Operating Rentals		CONTRACT#CN3370-01	85.39
001-141-000-57680-4500		Operating Rentals		CONTRACT#CN3370-01	9.20
001-142-000-51830-4500		Operating Rental		CONTRACT#CN3370-01	10.81
001-143-000-57320-4500		Operating Rentals		CONTRACT#CN3370-01	0.40
INV164576	Invoice	08/07/2023	CONTRACT#CN1866-01 WWTP	0.00	71.68
402-400-000-53580-4500		Operating Rentals		CONTRACT#CN1866-01 W	71.68
INV164577	Invoice	08/07/2023	CONTRACT#CN3227-01 SHOP	0.00	38.08
401-000-000-53480-4500		Operating Rentals		CONTRACT#CN3227-01 SH	38.08
INV164578	Invoice	08/07/2023	CONTRACT#CN3364-01	0.00	67.70
401-000-000-53480-4500		Operating Rentals		CONTRACT#CN3364-01	67.70

005910	CAPITAL INDUSTRIAL INC.	08/09/2023	Regular	0.00	27.57	108799

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
0000058499	Invoice	08/01/2023	COUPLING INSERT	0.00	27.57
402-400-000-53580-3100		Office and Operating		COUPLING INSERT	27.57

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
108679	CENTRAL MASON FIRE AND EMS	08/09/2023	Regular	0.00	188,926.76	108800

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
AUGUST/2023	Invoice	08/01/2023	AUGUST 2023 SERVICES	0.00	188,926.76
001-119-000-52220-4103	Prof FF Services-Fire Dist		AUGUST 2023 SERVICES		138,111.93
001-119-000-52221-4103	Prof EMS Services-Fire Di		AUGUST 2023 SERVICES		46,037.31
001-119-000-52260-4100	Professional Serv - CMFE		AUGUST 2023 SERVICES		4,777.52

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN01564	COPIERS NORTHWEST	08/09/2023	Regular	0.00	231.28	108801

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
INV2682766	Invoice	07/28/2023	ACCT#203430 INK	0.00	231.28
401-000-000-53480-3100	Office and Operating		ACCT#203430 INK		231.28

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
009251	DATAPROSE LLC	08/09/2023	Regular	0.00	2,754.75	108802

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
DP2302895	Invoice	07/31/2023	ACCT#1397 JULY STATEMENTS	0.00	2,754.75
001-111-000-51421-4100	Professional Services/Adv		ACCT#1397 JULY STATEME		476.51
001-111-000-51421-4200	Communication		ACCT#1397 JULY STATEME		2,218.22
401-000-000-53480-4100	Professional Services/Adv		ACCT#1397 JULY STATEME		60.02

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
009351	DELAGE LANDEN FINANCIAL SVCS	08/09/2023	Regular	0.00	201.98	108803

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
80589277	Invoice	08/06/2023	CONTRACT#500-50411706	0.00	201.98
001-118-000-59121-7001	Long Term Lease - Police		CONTRACT#500-50411706		201.98

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02319	DENALI WATER SOLUTIONS LLC	08/09/2023	Regular	0.00	7,130.04	108804

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
INV556174	Invoice	08/04/2023	CUST#599121378 TRANSPORTATION	0.00	4,201.44
402-400-000-53580-4100	Professional Services/Adv		CUST#599121378 TRANSP		4,201.44
INV556176	Invoice	08/04/2023	CUST#599121378 TRANSPORTATION	0.00	2,928.60
402-400-000-53580-4100	Professional Services/Adv		CUST#599121378 TRANSP		2,928.60

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
009595	DEPT. OF LICENSING	08/09/2023	Regular	0.00	57.00	108805

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
SHP230028	Invoice	08/03/2023	SHP230028	0.00	21.00
657-000-000-58600-0007	Concealed Pistol Permits		SHP230028		21.00
SHP230029	Invoice	08/07/2023	SHP230029	0.00	18.00
657-000-000-58600-0007	Concealed Pistol Permits		SHP230029		18.00
SHP230030	Invoice	08/07/2023	SHP230030	0.00	18.00
657-000-000-58600-0007	Concealed Pistol Permits		SHP230030		18.00

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
018001	EMPLOYMENT SECURITY DEPT	08/09/2023	Regular	0.00	20.79	108806

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
QTR1/2023FMLA	Invoice	08/08/2023	QTR1/2023FMLACORRECTION	0.00	20.79
657-000-000-58930-0000	PFMLA Taxes		QTR1/2023FMLACORRECTI		20.79

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
023078	FASTENAL COMPANY	08/09/2023	Regular	0.00	243.88	108807

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
WATUM216117	Invoice	08/03/2023	CUST#WATUM1962 MISC SUPPLIES	0.00	243.88
402-400-000-53580-3100	Office and Operating		CUST#WATUM1962 MISC		243.88

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN01406	FERGUSON WATERWORKS	08/09/2023	Regular	0.00	2,445.59	108808

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
0010380	Invoice	07/28/2023	CUST#2544 IPERL & 520M	0.00	2,445.59	
401-000-000-53480-3100	Office and Operating		CUST#2544 IPERL & 520M		2,445.59	
VEN01832	KIM KILMER - FINANCE PETTY CASH	08/09/2023	Regular	0.00	80.45	108809
PETTYCASHREIM	Invoice	08/08/2023	PETTY CASH REIMB	0.00	80.45	
001-111-000-51423-4900	Miscellaneous		PETTY CASH REIMB		0.70	
001-141-000-57680-4900	Miscellaneous		PETTY CASH REIMB		54.75	
001-142-000-51830-4900	Miscellaneous		PETTY CASH REIMB		8.00	
001-142-000-51830-4900	Miscellaneous		PETTY CASH REIMB		8.00	
001-142-000-51830-4900	Miscellaneous		PETTY CASH REIMB		9.00	
113004	MASON COUNTY - UTILITIES/WASTE	08/09/2023	Regular	0.00	754.61	108810
006457	Invoice	08/01/2023	CUST#SW-C022 LANDFILL CHARGES	0.00	51.05	
404-000-000-53180-3100	Office and Operating		CUST#SW-C022 LANDFILL		51.05	
006458	Invoice	08/01/2023	CUST#SW-C030 LANDFILL CHARGES	0.00	576.55	
402-400-000-53580-3100	Office and Operating		CUST#SW-C030 LANDFILL		576.55	
006459	Invoice	08/01/2023	CUST#SW-C035 LANDFILL CHARGES	0.00	127.01	
101-000-000-54230-3100	Office and Operating		CUST#SW-C035 LANDFILL		127.01	
114420	MASON TRANSIT AUTHORITY	08/09/2023	Regular	0.00	220.00	108811
11041	Invoice	07/31/2023	JULY 2023 GYM USE	0.00	220.00	
001-141-000-57120-4500	Operating Rentals		JULY 2023 GYM USE		220.00	
132235	MOUNTAIN MIST WATER	08/09/2023	Regular	0.00	68.85	108812
005528769	Invoice	08/04/2023	ACCT#088436 SHOP	0.00	28.17	
401-000-000-53480-3100	Office and Operating		ACCT#088436 SHOP		19.47	
401-000-000-53480-4500	Operating Rentals		ACCT#088436 SHOP		8.70	
005528775	Invoice	08/04/2023	ACCT#088436 ADMIN	0.00	40.68	
001-130-000-51810-3100	Office and Operating		ACCT#088436 ADMIN		31.98	
001-130-000-51810-4500	Operating Rentals		ACCT#088436 ADMIN		8.70	
VEN01558	NORTHWEST CUSTOM TEES	08/09/2023	Regular	0.00	300.36	108813
1615	Invoice	08/07/2023	PRINTED TEES	0.00	300.36	
001-141-000-57120-3100	Office and Operating		PRINTED TEES		300.36	
VEN02312	ODP BUSINESS SOLUTIONS LLC	08/09/2023	Regular	0.00	56.56	108814
316933907001	Invoice	07/19/2023	ACCT#28972108 SYMMETRY BLACK	0.00	39.16	
402-400-000-53580-3100	Office and Operating		ACCT#28972108 SYMMET		39.16	
316974011001	Invoice	07/19/2023	ACCT#28972108 PLASTIC CUPS	0.00	17.40	
402-400-000-53580-3100	Office and Operating		ACCT#28972108 PLASTIC C		17.40	
149070	OLYMPIC REGION CLEAN AIR AGENC	08/09/2023	Regular	0.00	304.00	108815

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
25437	Invoice	08/01/2023	REGISTRATION CLASSIFICATION 5	0.00	304.00	
402-400-000-53580-4100		Professional Services/Adv		REGISTRATION CLASSIFICA	304.00	
VEN02070	PAPE MACHINERY	08/09/2023	Regular	0.00	177.61	108816
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
656269	Invoice	06/26/2023	CUST#6128936 Z TURN REPAIR/MAINT	0.00	177.61	
401-000-000-53480-4800		Repairs and Maintenance		CUST#6128936 Z TURN RE	177.61	
VEN02465	PNW RAISED EVENTS	08/09/2023	Regular	0.00	3,500.00	108817
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
LTACGRANT2023	Invoice	08/01/2023	CINCO ROCKS LTAC GRANT	0.00	3,500.00	
108-000-000-57390-4111		Prof Serv-PNW Raised Ev		CINCO ROCKS LTAC GRANT	3,500.00	
163450	PURCHASE POWER	08/09/2023	Regular	0.00	987.85	108818
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
80009000113670	Invoice	07/25/2023	8000900011367046JUL23	0.00	987.85	
001-111-000-51421-4200		Communication		8000900011367046JUL23	383.00	
001-111-000-51423-4200		Communication		8000900011367046JUL23	200.00	
001-142-000-51890-4215		Communication-Civic Cen		8000900011367046JUL23	404.85	
VEN02369	QUIXOTE COMMUNITIES	08/09/2023	Regular	0.00	19,614.34	108819
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
VETERANSVILLAG	Invoice	08/08/2023	VETERANSVILLAGEAPRIL2023	0.00	5,613.54	
107-100-000-56520-4100		Professional Services - Ve		VETERANSVILLAGEAPRIL20	5,613.54	
VETERANSVILLAG	Invoice	08/08/2023	VETERANSVILLAGEJUNE2023	0.00	14,000.80	
107-100-000-56520-4100		Professional Services - Ve		VETERANSVILLAGEJUNE20	14,000.80	
164899	QWEST DBA CENTURYLINK	08/09/2023	Regular	0.00	954.72	108820
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
360Z260219722B	Invoice	07/26/2023	360Z260219722BJUL23	0.00	954.72	
401-000-000-53480-4201		Communication - Shop		360Z260219722BJUL23	141.75	
402-300-000-53580-4200		Communication		360Z260219722BJUL23	56.84	
402-400-000-53580-4200		Communication		360Z260219722BJUL23	192.23	
402-400-000-53580-4200		Communication		360Z260219722BJUL23	336.30	
402-640-000-53580-4200		Communication		360Z260219722BJUL23	227.60	
903584	RIGHT SYSTEMS	08/09/2023	Regular	0.00	12,002.82	108821
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
SI-182423	Invoice	08/02/2023	CUST#COS006 MANAGED SERVICES	0.00	12,002.82	
001-132-000-51888-4100		Data Processing-Prof Svcs		CUST#COS006 MANAGED	12,002.82	
178231	SEAN CARNEY	08/09/2023	Regular	0.00	241.60	108822
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
KIMUDOJULY202	Invoice	08/03/2023	KIMUDOJULY2023	0.00	241.60	
001-141-000-57120-4100		Professional Services/Adv		KIMUDOJULY2023	241.60	
187505	SHELTON SCHOOL DISTRICT	08/09/2023	Regular	0.00	60.00	108823

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
2023-068	Invoice	08/01/2023	VOLLEYBALL CAMP JUNE 2023	0.00	60.00	
001-141-000-57120-4500	Operating Rentals		VOLLEYBALL CAMP JUNE 2	60.00		
187000	SHELTON-MASON COUNTY JOURNA	08/09/2023	Regular	0.00	93.00	108824
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
120452	Invoice	07/27/2023	VACATIONING 5TH ST	0.00	46.50	
001-110-000-51160-4100	Professional Services/Adv		VACATIONING 5TH ST	46.50		
120453	Invoice	07/27/2023	SMC POLICE DEPT	0.00	46.50	
001-110-000-51160-4100	Professional Services/Adv		SMC POLICE DEPT	46.50		
178252	TASCHNER LAW, PLLC	08/09/2023	Regular	0.00	9,083.00	108825
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
AUGUST/2023	Invoice	08/01/2023	AUGUST 2023 SERVICES	0.00	9,083.00	
001-122-000-51593-4100	Public Defense/Adult Mis		AUGUST 2023 SERVICES	9,083.00		
VEN01972	THOMAS A FURRER	08/09/2023	Regular	0.00	1,552.50	108826
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
AUGUST/2023	Invoice	08/01/2023	AUGUST 2023 SERVICES	0.00	1,552.50	
001-112-000-51251-4109	Other Professional Servic		AUGUST 2023 SERVICES	1,552.50		
201300	TOZIER BROS INC.	08/09/2023	Regular	0.00	233.08	108827
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
464407	Invoice	06/29/2023	CUST#20090 MG LIQUAFEED REFILL	0.00	58.72	
401-000-000-53480-3100	Office and Operating		CUST#20090 MG LIQUAFE	58.72		
464635	Invoice	07/12/2023	CUST#20090 KEY CUT	0.00	3.74	
503-000-000-54865-3100	Office and Operating		CUST#20090 KEY CUT	3.74		
464819	Invoice	07/20/2023	CUST#20090 WASP SPRAY	0.00	20.93	
404-000-000-53180-3100	Office and Operating		CUST#20090 WASP SPRAY	20.93		
465136	Invoice	08/03/2023	CUST#20090 NOZZLE SWEEPER, MARKIN	0.00	30.43	
401-000-000-53480-3100	Office and Operating		CUST#20090 NOZZLE SWE	30.43		
465186	Invoice	08/07/2023	CUST#20090 TUBING VINYL, ADAPTER	0.00	27.46	
402-400-000-53580-3100	Office and Operating		CUST#20090 TUBING VINY	27.46		
465195	Invoice	08/07/2023	CUST#20090 DW ANGLE GRINDER	0.00	85.95	
402-400-000-53580-3100	Office and Operating		CUST#20090 DW ANGLE G	85.95		
465223	Invoice	08/08/2023	CUST#20090 CAP 1.5"	0.00	5.85	
402-400-000-53580-3100	Office and Operating		CUST#20090 CAP 1.5"	5.85		
201875	TYLER TECHNOLOGIES	08/09/2023	Regular	0.00	2,240.00	108828
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
025-431965	Invoice	08/01/2023	CUST#48155 UTILITY BILLING AUG 2023	0.00	160.00	
001-111-000-51421-4100	Professional Services/Adv		CUST#48155 UTILITY BILLI	160.00		
045-431530	Invoice	07/26/2023	CUST#48155 ASSET MAINTENANCE	0.00	2,080.00	
401-000-000-53480-4100	Professional Services/Adv		CUST#48155 ASSET MAINT	832.00		
402-300-000-53580-4100	Professional Services/Adv		CUST#48155 ASSET MAINT	832.00		
404-000-000-53180-4105	Professional Services/Adv		CUST#48155 ASSET MAINT	208.00		
503-000-000-54865-4101	Professional Services/Adv		CUST#48155 ASSET MAINT	208.00		
202195	U.S. BANK N.A.-CUSTODY	08/09/2023	Regular	0.00	46.00	108829

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
VEN01846	USSSA WASHINGTON STATE	08/09/2023	Regular	0.00	546.00	108830
2023-7	Invoice	08/02/2023	JULY 2023 TRAVEL	0.00	546.00	
001-141-000-57120-4100	Professional Services/Adv		JULY 2023 TRAVEL		546.00	
202340	UTILITIES UNDERGROUND LOCATIO	08/09/2023	Regular	0.00	58.05	108831
3070228	Invoice	07/31/2023	ACCT#100100 EXCAVATION NOTICES JULY	0.00	58.05	
401-000-000-53480-4100	Professional Services/Adv		ACCT#100100 EXCAVATIO		19.35	
402-400-000-53580-4100	Professional Services/Adv		ACCT#100100 EXCAVATIO		19.35	
404-000-000-53180-4105	Professional Services/Adv		ACCT#100100 EXCAVATIO		19.35	
202392	VERIZON WIRELESS	08/09/2023	Regular	0.00	1,314.60	108832
9940330150	Invoice	07/23/2023	ACCT#342078219-00001	0.00	451.70	
001-115-000-51895-4200	Communication		ACCT#342078219-00001		230.20	
001-140-000-55850-4200	Communication		ACCT#342078219-00001		52.96	
401-000-000-53480-4200	Communication		ACCT#342078219-00001		88.52	
402-400-000-53580-4200	Communication		ACCT#342078219-00001		80.02	
9940425331	Invoice	07/23/2023	ACCT#942084392-00001	0.00	862.90	
001-110-000-51160-4200	Communication		ACCT#942084392-00001		370.01	
001-111-000-51423-4200	Communication		ACCT#942084392-00001		52.96	
001-112-000-51251-4200	Communication	23-ITC	ACCT#942084392-00001		52.96	
001-112-000-51251-4200	Communication		ACCT#942084392-00001		52.96	
001-120-000-51310-4200	Communication		ACCT#942084392-00001		145.93	
001-121-000-51430-4200	Communication		ACCT#942084392-00001		52.96	
001-130-000-51810-4200	Communication		ACCT#942084392-00001		52.96	
001-140-000-55850-4200	Communication		ACCT#942084392-00001		52.96	
001-142-000-51830-4200	Communication		ACCT#942084392-00001		29.20	
203780	WATER MGMNT LABORATORIES INC	08/09/2023	Regular	0.00	1,035.00	108833
213559	Invoice	07/28/2023	ACCT#AS201R TESTS	0.00	745.00	
402-400-000-53580-4100	Professional Services/Adv		ACCT#AS201R TESTS		745.00	
213625	Invoice	07/31/2023	ACCT#AS201R TESTS	0.00	290.00	
402-400-000-53580-4100	Professional Services/Adv		ACCT#AS201R TESTS		290.00	
203900	WESMAR COMPANY, INC	08/09/2023	Regular	0.00	1,018.37	108834
312979	Invoice	07/31/2023	CUST#31175 SODIUM HYPOCHLORITE	0.00	1,018.37	
401-000-000-53480-3104	Office and Operating-Chl		CUST#31175 SODIUM HYP		1,018.37	
053987	WESTBAY NAPA AUTO PARTS	08/09/2023	Regular	0.00	22.69	108835
046963	Invoice	08/04/2023	ACCT#4296 TOTALCLEAN BODY	0.00	9.18	
402-400-000-53580-3100	Office and Operating		ACCT#4296 TOTALCLEAN B		9.18	
047137	Invoice	08/06/2023	ACCT#4296 TRUCK 55	0.00	13.51	
402-400-000-53580-3100	Office and Operating		ACCT#4296 TRUCK 55		13.51	
JULY/2023CUSTO	Invoice	07/31/2023	JULY/2023CUSTODYCHARGES	0.00	46.00	
001-111-000-51423-4102	Prof Services-Banking Fee		JULY/2023CUSTODYCHARG		46.00	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
025951	WILLIAMS ARCHITECTURE	08/09/2023	Regular	0.00	9,621.50	108836

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
2023003-01	Invoice	07/30/2023	CIVIC CENTER EXTERIOR REPAIRS	0.00	9,621.50

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-142-000-51890-4815	Repairs and Maintenance		CIVIC CENTER EXTERIOR R	9,621.50

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
155563	YOUNGLOVE & COKER-PLLC	08/09/2023	Regular	0.00	13,150.05	108837

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
20501-001JUL23	Invoice	07/25/2023	20501-001JUL23 PROSECUTING SVCS	0.00	13,150.05

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-122-000-51545-4101	Prof Serv - Prosecutor		20501-001JUL23 PROSECU	13,150.05

Bank Code APBNK-Main Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	67	43	0.00	285,616.48
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
Virtual Payments	0	0	0.00	0.00
	67	**43**	**0.00**	**285,616.48**

	Virtual Payments	0	0	0.00	0.00

Fund Summary

Fund	Name	Period	Amount
999	Pooled Cash	8/2023	285,616.48
			285,616.48

VOUCHER APPROVAL

I, the undersigned, do hereby certify under penalty of perjury that the materials have been furnished, the services rendered, or the labor performed as described herein vouchers number 108847 through number 108909 in the total amount of $238,812.62 that the claims are just, due and unpaid obligations against the City of Shelton, and that I am authorized to authenticate and certify said claims.

Signed this 18th of August, 2023.

Michael H. Hathaway
Finance Director

We, the undersigned members of the City Council of Shelton, Washington, do hereby certify that the vouchers contained herein are approved for payment.

Signed this _____ of _____, 2023.

_____
Mayor Eric Onisko

_____
Deputy Mayor Joe Schmit

_____
Councilmember James Boad

_____
Councilmember Miguel Gutierrez

_____
Councilmember Kathy McDowell

_____
Councilmember Deidre Peterson

_____
Councilmember Sharon Schirman

Shelton, WA

Check Register

Packet: APPKT02840 - AUGUST 18, 2023 AP PAYMENTS

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: APBNK-Main-APBNK-Main						
000401	A T & T	08/18/2023	Regular	0.00	55.55	108847
000050	AAA SEPTIC LLC	08/18/2023	Regular	0.00	100.00	108848
002982	APP	08/18/2023	Regular	0.00	5,709.71	108849
002520	ARAMARK	08/18/2023	Regular	0.00	136.65	108850
2901	ASPECT CONSULTING, LLC	08/18/2023	Regular	0.00	32,879.00	108851
003140	ATCO INTERNATIONAL	08/18/2023	Regular	0.00	698.30	108852
VEN02340	BLT SHELTON PONY, LLC	08/18/2023	Regular	0.00	1,665.31	108853
098000	BUILDERS FIRSTSOURCE	08/18/2023	Regular	0.00	59.80	108854
005900	CAPITAL BUSINESS MACHINES	08/18/2023	Regular	0.00	261.62	108855
VEN02063	CARL TANNE	08/18/2023	Regular	0.00	720.00	108856
006400	CASCADE NATURAL GAS	08/18/2023	Regular	0.00	360.84	108857
108679	CENTRAL MASON FIRE AND EMS	08/18/2023	Regular	0.00	8,497.00	108858
007450	CH2O INCORPORATED	08/18/2023	Regular	0.00	723.70	108859
VEN01214	CINTAS CORPORATION	08/18/2023	Regular	0.00	216.77	108860
VEN01281	CITY OF SHELTON - UTILITY BILLS/PE	08/18/2023	Regular	0.00	171.60	108861
008300	CODE PUBLISHING COMPANY	08/18/2023	Regular	0.00	266.56	108862
VEN01564	COPIERS NORTHWEST	08/18/2023	Regular	0.00	1,235.87	108863
VEN01228	DAN PATTON	08/18/2023	Regular	0.00	1,000.00	108864
009573	DEPT OF ECOLOGY	08/18/2023	Regular	0.00	24,620.26	108865
023078	FASTENAL COMPANY	08/18/2023	Regular	0.00	886.38	108866
VEN02460	FIRST CITIZENS BANK & TRUST CO	08/18/2023	Regular	0.00	917.19	108867
028029	FRED HOLMES TREE SERVICE, LLC	08/18/2023	Regular	0.00	813.75	108868
031500	GALLS, LLC	08/18/2023	Regular	0.00	1,651.50	108869
040960	GRAINGER	08/18/2023	Regular	0.00	292.38	108870
045000	H.D. FOWLER COMPANY	08/18/2023	Regular	0.00	384.26	108871
070000	JIM'S AUTO REPAIR & TOWING	08/18/2023	Regular	0.00	103.36	108872
VEN02337	JONES & JONES ARCHITECTS AND LA	08/18/2023	Regular	0.00	1,910.63	108873
077170	JUDICIAL CONF REGISTRAR	08/18/2023	Regular	0.00	225.00	108874
085995	LANGUAGE LINE SERVICES	08/18/2023	Regular	0.00	19.07	108875
087799	LEMAY MOBILE SHREDDING	08/18/2023	Regular	0.00	31.68	108876
109760	MASON COUNTY PUBLIC WORKS	08/18/2023	Regular	0.00	45,925.34	108877
132235	MOUNTAIN MIST WATER	08/18/2023	Regular	0.00	47.63	108878
VEN02077	NATURAL SELECTION FARMS, INC.	08/18/2023	Regular	0.00	3,826.50	108879
142300	NISQUALLY INDIAN TRIBE	08/18/2023	Regular	0.00	13,390.00	108880
VEN02312	ODP BUSINESS SOLUTIONS LLC	08/18/2023	Regular	0.00	444.31	108881
VEN02441	OX BODIES, INC.	08/18/2023	Regular	0.00	455.46	108882
151000	P. U. D. # 3	08/18/2023	Regular	0.00	36,463.62	108883
VEN02451	PACIFIC MEDTECHS, INC	08/18/2023	Regular	0.00	2,104.42	108884
200897	PETEK & ASSOCIATES	08/18/2023	Regular	0.00	385.00	108885
114040	PETTYJOHN ENTERPRISES, LLC	08/18/2023	Regular	0.00	835.00	108886
150400	PNCWA	08/18/2023	Regular	0.00	800.00	108887
159300	POLYDYNE, INC.	08/18/2023	Regular	0.00	8,474.58	108888
VEN02198	RAM ELECTRIC	08/18/2023	Regular	0.00	7,708.48	108889
903584	RIGHT SYSTEMS	08/18/2023	Regular	0.00	3,607.35	108890
183400	SCJ ALLIANCE- SHEA, CARR & JEWEL	08/18/2023	Regular	0.00	595.75	108891
195599	STATE AUDITORS OFFICE	08/18/2023	Regular	0.00	3,778.95	108892
196300	STERICYCLE, INC.	08/18/2023	Regular	0.00	10.36	108893
196341	STEVEN R. BUZZARD	08/18/2023	Regular	0.00	75.00	108894
VEN02449	THE NICHOLS GROUP RELATIONS, LI	08/18/2023	Regular	0.00	3,000.00	108895
189670	THE SHOPPER	08/18/2023	Regular	0.00	1,181.21	108896
200985	THURSTON CO PUBLIC HEALTH	08/18/2023	Regular	0.00	672.00	108897
VEN01650	THURSTON MASON BEHAVIORAL HI	08/18/2023	Regular	0.00	785.95	108898
201300	TOZIER BROS INC.	08/18/2023	Regular	0.00	422.91	108899
VEN01220	TRIPLE C FABRICATORS LLC	08/18/2023	Regular	0.00	868.00	108900

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
201875	TYLER TECHNOLOGIES	08/18/2023	Regular	0.00	520.00	108901
VEN02408	VEOLIA WATER TECHNOLOGIES TRE	08/18/2023	Regular	0.00	8,193.80	108902
203030	WASHINGTON STATE PATROL	08/18/2023	Regular	0.00	129.25	108903
203780	WATER MGMNT LABORATORIES INC	08/18/2023	Regular	0.00	360.00	108904
203900	WESMAR COMPANY, INC	08/18/2023	Regular	0.00	2,036.74	108905
053987	WESTBAY NAPA AUTO PARTS	08/18/2023	Regular	0.00	289.99	108906
204069	WESTERN STEEL & SUPPLY, INC.	08/18/2023	Regular	0.00	22.96	108907
025951	WILLIAMS ARCHITECTURE	08/18/2023	Regular	0.00	4,762.50	108908
VEN02139	ZEPPELIN SHIPPING & TECHNOLOGY	08/18/2023	Regular	0.00	25.82	108909

Bank Code APBNK-Main Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	134	63	0.00	238,812.62
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
Virtual Payments	0	0	0.00	0.00
	134	**63**	**0.00**	**238,812.62**

	Virtual Payments	0	0	0.00	0.00

Fund Summary

Fund	Name	Period	Amount
999	Pooled Cash	8/2023	238,812.62
			238,812.62



Shelton, WA

Check Register

Packet: APPKT02840 - AUGUST 18, 2023 AP PAYMENTS

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: APBNK-Main-APBNK-Main						
000401	A T & T	08/18/2023	Regular	0.00	55.55	108847

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
0302659923001A	Invoice	08/03/2023	0302659923001AUG23	0.00	55.55
402-400-000-53580-4200		Communication		0302659923001AUG23	55.55

000050	AAA SEPTIC LLC	08/18/2023	Regular	0.00	100.00 108848

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
I17260	Invoice	07/01/2023	CUST#C2936 SHELTON SPRINGS COURSE	0.00	100.00
001-141-000-57680-4500		Operating Rentals		CUST#C2936 SHELTON SPR	100.00

002982	APP	08/18/2023	Regular	0.00	5,709.71 108849

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
23-886643	Invoice	08/02/2023	ACCT#AP7500158 FUEL	0.00	3,705.13
503-250-000-58900-0001		Inventory-Gas		ACCT#AP7500158 FUEL	3,705.13
23-891853	Invoice	08/09/2023	ACCT#AP7500158 FUEL	0.00	2,004.58
503-250-000-58900-0001		Inventory-Gas		ACCT#AP7500158 FUEL	2,004.58

002520	ARAMARK	08/18/2023	Regular	0.00	136.65 108850

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
5120291457	Invoice	08/02/2023	ACCT#792105973 COVERALLS,MATS,TOW	0.00	65.71
402-400-000-53580-4900		Miscellaneous		ACCT#792105973 COVERA	65.71
5120295736	Invoice	08/09/2023	ACCT#792105972 COVERALLS, MATS,TOW	0.00	70.94
401-000-000-53480-4901		Miscellaneous - Shop		ACCT#792105972 COVERA	70.94

2901	ASPECT CONSULTING, LLC	08/18/2023	Regular	0.00	32,879.00 108851

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
51004	Invoice	04/14/2023	N SHELTON SEWER DIVERSION	0.00	22,095.05
402-630-000-53580-4100		Professional Services	23-NSHELTONSWR	N SHELTON SEWER DIVERS	22,095.05
52576	Invoice	08/04/2023	C ST LANDFILL	0.00	10,783.95
403-000-000-53780-4103		Prof Services - "C" Street	"C" St. Landfill	C ST LANDFILL	10,783.95

003140	ATCO INTERNATIONAL	08/18/2023	Regular	0.00	698.30 108852

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
I0617569	Invoice	08/10/2023	CUST#607848 SHOP SUPPLIES	0.00	698.30
503-000-000-54865-3100		Office and Operating		CUST#607848 SHOP SUPPL	698.30

VEN02340	BLT SHELTON PONY, LLC	08/18/2023	Regular	0.00	1,665.31 108853

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number		Account Name	Project Account Key	Item Description	Dist Amount
519528	Invoice	08/02/2023	UNIT #18 GLOVE BOX, PIN	0.00	325.94
001-118-000-52122-4805		Repairs and Maintenance		UNIT #18 GLOVE BOX, PIN	325.94
519599	Invoice	08/08/2023	22 EXPLORER FILTER	0.00	25.32
001-118-000-52122-3110		Office & Operating-Auto		22 EXPLORER FILTER	25.32
644183	Invoice	05/02/2023	VIN#0376 MAINTENANCE	0.00	78.07
001-118-000-52122-4805		Repairs and Maintenance		VIN#0376 MAINTENANCE	78.07
645293	Invoice	07/21/2023	VIN#0210 MAINTENANCE	0.00	753.10

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
001-118-000-52122-4805	Repairs and Maintenance		VIN#0210 MAINTENANCE		753.10	
646180	Invoice	08/04/2023	VIN#4817 MAINTENANCE	0.00	404.81	
001-118-000-52122-4805	Repairs and Maintenance		VIN#4817 MAINTENANCE		404.81	
646432	Invoice	08/16/2023	VIN#0376 MAINTENANCE	0.00	78.07	
001-118-000-52122-4805	Repairs and Maintenance		VIN#0376 MAINTENANCE		78.07	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
098000	BUILDERS FIRSTSOURCE	08/18/2023	Regular	0.00	59.80	108854

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
87804786	Invoice	08/16/2023	ACCT#671668 REBAR	0.00	24.92
401-000-000-53480-3100	Office and Operating		ACCT#671668 REBAR		24.92
87806591	Invoice	08/16/2023	ACCT#671668 REBAR	0.00	34.88
401-000-000-53480-3100	Office and Operating		ACCT#671668 REBAR		34.88

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
005900	CAPITAL BUSINESS MACHINES	08/18/2023	Regular	0.00	261.62	108855

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
INV164596	Invoice	08/07/2023	CONTRACT#CN1692-01 MUNI COURT	0.00	13.56
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN1692-01 M		13.56
INV164597	Invoice	08/07/2023	CONTRACT#CN3142-01 MUNI COURT	0.00	27.20
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN3142-01 M		27.20
INV164598	Invoice	08/07/2023	CONTRACT#CN3143-01 MUNI COURT	0.00	38.08
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN3143-01 M		38.08
INV164599	Invoice	08/07/2023	CONTRACT#CN3144-01 MUNI COURT	0.00	38.08
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN3144-01 M		38.08
INV165498	Invoice	08/07/2023	CONTRACT#CN2621-01	0.00	113.92
001-118-000-52122-4500	Operating Rentals		CONTRACT#CN2621-01		113.92
INV165499	Invoice	08/07/2023	CONTRACT#CN2736-01	0.00	30.78
001-118-000-52122-4500	Operating Rentals		CONTRACT#CN2736-01		30.78

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02063	CARL TANNE	08/18/2023	Regular	0.00	720.00	108856

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
0726-2023-SHELT	Invoice	07/26/2023	0726-2023-SHELTONMUNI	0.00	420.00
001-112-000-51251-4106	Interpreter Expenses	23-ITC	0726-2023-SHELTONMUNI		420.00
0802-2023-SHELT	Invoice	08/02/2023	0802-2023-SHELTONMUNI	0.00	300.00
001-112-000-51251-4106	Interpreter Expenses		0802-2023-SHELTONMUNI		300.00

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
006400	CASCADE NATURAL GAS	08/18/2023	Regular	0.00	360.84	108857

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
01912100003AU	Invoice	08/07/2023	01912100003AUG23	0.00	60.43
001-140-000-55430-4700	Utility Services-Animal Sh		01912100003AUG23		60.43
07912100000AU	Invoice	08/07/2023	07912100000AUG23	0.00	60.43
001-142-000-57250-4700	Utility Services-Library		07912100000AUG23		60.43
31538372017AU	Invoice	08/07/2023	31538372017AUG23	0.00	101.76
402-400-000-53580-4700	Utility Services-Sewer Ma		31538372017AUG23		101.76
53617506497AU	Invoice	08/07/2023	53617506497AUG23	0.00	15.12
401-000-000-53480-4701	Utility Services - Shop		53617506497AUG23		15.12
70912100008AU	Invoice	08/07/2023	70912100008AUG23	0.00	15.12
401-000-000-53480-4701	Utility Services - Shop		70912100008AUG23		15.12
80912100007AU	Invoice	08/07/2023	80912100007AUG23	0.00	13.78
401-000-000-53480-4701	Utility Services - Shop		80912100007AUG23		13.78
88112100008AU	Invoice	08/07/2023	88112100008AUG23	0.00	80.42
001-142-000-51890-4715	Utility Services-Civic Ctr		88112100008AUG23		80.42

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
90912100006AU	Invoice	08/07/2023	90912100006AUG23	0.00	13.78	
401-000-000-53480-4701	Utility Services - Shop		90912100006AUG23		13.78	
108679	CENTRAL MASON FIRE AND EMS	08/18/2023	Regular	0.00	8,497.00	108858
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
1065	Invoice	06/27/2023	CUST#85 JUNE 2023 FIRE MARSHAL FEES	0.00	4,707.00	
001-119-000-52230-4103	Prof Svcs Fire Prevention-		CUST#85 JUNE 2023 FIRE		4,707.00	
1075	Invoice	07/27/2023	CUST#85 JULY 2023 FIRE MARSHAL FEES	0.00	3,790.00	
001-119-000-52230-4103	Prof Svcs Fire Prevention-		CUST#85 JULY 2023 FIRE M		3,790.00	
007450	CH2O INCORPORATED	08/18/2023	Regular	0.00	723.70	108859
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
336868	Invoice	08/08/2023	CUST#CITYOFSHELTO005 PUMP	0.00	723.70	
401-000-000-53480-3100	Office and Operating		CUST#CITYOFSHELTO005 P		723.70	
VEN01214	CINTAS CORPORATION	08/18/2023	Regular	0.00	216.77	108860
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
5170473417	Invoice	08/09/2023	CUST#10690213 FIRST AID KIT	0.00	216.77	
001-118-000-52122-3100	Office and Operating		CUST#10690213 FIRST AID		216.77	
VEN01281	CITY OF SHELTON - UTILITY BILLS/PE	08/18/2023	Regular	0.00	171.60	108861
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
INV-00000710	Invoice	08/09/2023	PERMIT FEE	0.00	171.60	
401-000-000-53480-3100	Office and Operating		PERMIT FEE		171.60	
008300	CODE PUBLISHING COMPANY	08/18/2023	Regular	0.00	266.56	108862
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
GC0011522	Invoice	08/09/2023	CUST#SH4639 MUNI CODE WEB UPDATE	0.00	266.56	
001-110-000-51160-4100	Professional Services/Adv		CUST#SH4639 MUNI CODE		266.56	
VEN01564	COPIERS NORTHWEST	08/18/2023	Regular	0.00	1,235.87	108863
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
INV2687770	Invoice	08/05/2023	ACCT#203430 INK	0.00	1,235.87	
101-000-000-54230-3100	Office and Operating		ACCT#203430 INK		308.97	
401-000-000-53480-3100	Office and Operating		ACCT#203430 INK		308.97	
402-400-000-53580-3100	Office and Operating		ACCT#203430 INK		308.96	
404-000-000-53180-3100	Office and Operating		ACCT#203430 INK		308.97	
VEN01228	DAN PATTON	08/18/2023	Regular	0.00	1,000.00	108864
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
TUITIONREIMB20	Invoice	08/17/2023	TUITIONREIMB2023	0.00	1,000.00	
001-118-000-52122-4920	Misc-Education Reimburs		TUITIONREIMB2023		1,000.00	
009573	DEPT OF ECOLOGY	08/18/2023	Regular	0.00	24,620.26	108865
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
LN-000003470	Invoice	08/01/2023	L0200016/#38 LOAN PRINCIPLE	0.00	24,620.26	
402-700-000-59135-7809	Princ-DOE-WWTP Digeste		L0200016/#38 LOAN PRIN		24,620.26	
023078	FASTENAL COMPANY	08/18/2023	Regular	0.00	886.38	108866

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
WATUM216206	Invoice	08/09/2023	CUST#WATUM1991 WIPES	0.00	57.44	
001-118-000-52122-3100		Office and Operating		CUST#WATUM1991 WIPES	57.44	
WATUM216209	Invoice	08/09/2023	CUST#WATUM1961 MISC SUPPLIES	0.00	261.03	
401-000-000-53480-3100		Office and Operating		CUST#WATUM1961 MISC	261.03	
WATUM216312	Invoice	08/09/2023	CUST#WATUM1991 GLOVES,BATTERY, TO	0.00	93.29	
001-118-000-52122-3100		Office and Operating		CUST#WATUM1991 GLOVE	93.29	
WATUM216316	Invoice	08/09/2023	CUST#WATUM1961 MISC SUPPLIES	0.00	205.94	
401-000-000-53480-3100		Office and Operating		CUST#WATUM1961 MISC	205.94	
WATUM216318	Invoice	08/09/2023	CUST#WATUM1962 MISC SUPPLIES	0.00	268.68	
402-400-000-53580-3100		Office and Operating		CUST#WATUM1962 MISC	268.68	
VEN02460	FIRST CITIZENS BANK & TRUST CO	08/18/2023	Regular	0.00	917.19	108867
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
42852266	Invoice	07/25/2023	CUST#2300086269 COPIER	0.00	401.48	
001-118-000-52122-4500		Operating Rentals		CUST#2300086269 COPIER	401.48	
42949768	Invoice	08/12/2023	CUST#2000176406 COPIER	0.00	515.71	
001-112-000-51251-4500		Operating Rentals		CUST#2000176406 COPIER	515.71	
028029	FRED HOLMES TREE SERVICE, LLC	08/18/2023	Regular	0.00	813.75	108868
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
1350	Invoice	08/09/2023	FIR TREE FALL DOWN	0.00	651.00	
001-141-000-57680-4100		Professional Services/Adv		FIR TREE FALL DOWN	651.00	
1352	Invoice	08/09/2023	FIR DOWN	0.00	162.75	
001-141-000-57680-4100		Professional Services/Adv		FIR DOWN	162.75	
031500	GALLS, LLC	08/18/2023	Regular	0.00	1,651.50	108869
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
025305588	Invoice	08/08/2023	ACCT#3524003 BODY ARMOR	0.00	1,651.50	
001-118-000-52122-3102		Uniforms-Vests/Grants		ACCT#3524003 BODY ARM	1,651.50	
040960	GRAINGER	08/18/2023	Regular	0.00	292.38	108870
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
9790493705	Invoice	08/01/2023	ACCT#839177342 MISC SUPPLIES	0.00	292.38	
402-400-000-53580-3100		Office and Operating		ACCT#839177342 MISC SU	292.38	
045000	H.D. FOWLER COMPANY	08/18/2023	Regular	0.00	384.26	108871
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
I6483003	Invoice	08/14/2023	ACCT#194680 BRASS VALVE	0.00	384.26	
402-400-000-53580-3100		Office and Operating		ACCT#194680 BRASS VALV	384.26	
070000	JIM'S AUTO REPAIR & TOWING	08/18/2023	Regular	0.00	103.36	108872
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
38643	Invoice	08/03/2023	UNIT#51 CONTRACT TOW	0.00	103.36	
001-118-000-52122-4100		Patrol-Professional Servic		UNIT#51 CONTRACT TOW	103.36	
VEN02337	JONES & JONES ARCHITECTS AND L/	08/18/2023	Regular	0.00	1,910.63	108873
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
6	Invoice	08/10/2023	DOWNTOWN ST TREE REPLACEMENT/STS	0.00	1,910.63	
101-000-000-54230-4100		Professional Services/Adv		DOWNTOWN ST TREE REP	1,910.63	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
077170	JUDICIAL CONF REGISTRAR	08/18/2023	Regular	0.00	225.00	108874

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
GREERCONFREGI	Invoice	08/15/2023	GREERCONFREGISTRATION	0.00	225.00

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-112-000-51251-4907	Miscellaneous-Training		GREERCONFREGISTRATION	225.00

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
085995	LANGUAGE LINE SERVICES	08/18/2023	Regular	0.00	19.07	108875

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
11070569	Invoice	07/31/2023	ACCT#9020514029 INTERPRETATION	0.00	19.07

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-112-000-51251-4106	Interpreter Expenses		ACCT#9020514029 INTERP	19.07

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
087799	LEMAY MOBILE SHREDDING	08/18/2023	Regular	0.00	31.68	108876

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
4803781S185	Invoice	08/01/2023	ACCT#2185-952778-454	0.00	31.68

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-118-000-52122-4100	Patrol-Professional Servic		ACCT#2185-952778-454	31.68

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
109760	MASON COUNTY PUBLIC WORKS	08/18/2023	Regular	0.00	45,925.34	108877

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
012113	Invoice	06/26/2023	PROJECTS APRIL-MAY 2023 FRONT ST	0.00	45,925.34

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
302-000-000-59530-6300	CAPITAL IMPROVEMENT-	23- FRONT ST PAVING	PROJECTS APRIL-MAY 2023	45,925.34

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
132235	MOUNTAIN MIST WATER	08/18/2023	Regular	0.00	47.63	108878

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
005528774	Invoice	08/04/2023	ACCT#088436 POLICE	0.00	30.07

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-118-000-52122-3100	Office and Operating		ACCT#088436 POLICE	25.72
001-118-000-52122-4500	Operating Rentals		ACCT#088436 POLICE	4.35

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
005528776	Invoice	08/04/2023	ACCT#088436 MUNI COURT	0.00	17.56

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-112-000-51251-3100	Office and Operating		ACCT#088436 MUNI COUR	13.21
001-112-000-51251-4500	Operating Rentals		ACCT#088436 MUNI COUR	4.35

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02077	NATURAL SELECTION FARMS, INC.	08/18/2023	Regular	0.00	3,826.50	108879

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
7226	Invoice	07/31/2023	JULY BIOSOLIDS	0.00	3,826.50

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
402-400-000-53580-4100	Professional Services/Adv		JULY BIOSOLIDS	3,826.50

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
142300	NISQUALLY INDIAN TRIBE	08/18/2023	Regular	0.00	13,390.00	108880

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
36218	Invoice	07/31/2023	INCARCERATIONBOOKING FEES JULY 2023	0.00	13,390.00

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-123-000-52360-4103	Professional Services/Adv		INCARCERATIONBOOKING	13,390.00

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02312	ODP BUSINESS SOLUTIONS LLC	08/18/2023	Regular	0.00	444.31	108881

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
316973977001	Invoice	07/26/2023	ACCT#28972108 MISC OFFICE SUPPLIES	0.00	88.18

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
402-400-000-53580-3100	Office and Operating		ACCT#28972108 MISC OFF	88.18

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
324402348001	Invoice	07/26/2023	ACCT#28972108 CHAIR, POST ITS	0.00	299.25

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
404-000-000-53180-3100	Office and Operating		ACCT#28972108 CHAIR, P	299.25

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
326147656001	Invoice	08/07/2023	ACCT#28972108 FOLDERS	0.00	56.88

Account Number	Account Name	Project Account Key	Item Description	Dist Amount
001-111-000-51423-3100	Office and Operating		ACCT#28972108 FOLDERS	56.88

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02441	OX BODIES, INC.	08/18/2023	Regular	0.00	455.46	108882

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
526109	Invoice	04/25/2023	SPINNER MOTOR 19991D	0.00	455.46	
503-000-000-54865-3104		Oper Supp-Parts-EM&R V		SPINNER MOTOR 19991D	455.46	
151000	P. U. D. # 3	08/18/2023	Regular	0.00	36,463.62	108883
101001AUG23	Invoice	08/07/2023	101001AUG23	0.00	88.22	
101-000-000-54264-4700		Utility Services		101001AUG23	88.22	
18515001AUG23	Invoice	08/07/2023	18515001AUG23	0.00	79.82	
402-300-000-53580-4700		Utility Services-Sewer Ma		18515001AUG23	79.82	
250321001AUG2	Invoice	08/07/2023	250321001AUG23	0.00	67.70	
101-000-000-54270-4700		Utility Services-Roadside		250321001AUG23	67.70	
25911002AUG23	Invoice	08/07/2023	25911002AUG23	0.00	95.61	
101-000-000-54264-4700		Utility Services		25911002AUG23	95.61	
25911003AUG23	Invoice	08/07/2023	25911003AUG23	0.00	63.61	
001-141-000-57680-4700		Utility Services-Park		25911003AUG23	63.61	
25911005AUG23	Invoice	08/09/2023	25911005AUG23	0.00	59.04	
402-640-000-53580-4700		Utility Services-Sewer Sat		25911005AUG23	59.04	
259409001AUG2	Invoice	08/07/2023	259409001AUG23	0.00	13,612.13	
402-400-000-53580-4700		Utility Services-Sewer Ma		259409001AUG23	13,612.13	
26551001AUG23	Invoice	08/07/2023	26551001AUG23	0.00	1,457.68	
402-400-000-53580-4700		Utility Services-Sewer Ma		26551001AUG23	1,457.68	
26717001AUG23	Invoice	08/07/2023	26717001AUG23	0.00	146.60	
401-000-000-53480-4701		Utility Services - Shop		26717001AUG23	146.60	
26729001AUG23	Invoice	08/07/2023	26729001AUG23	0.00	355.65	
401-000-000-53480-4700		Utility Services-Water		26729001AUG23	355.65	
26857001AUG23	Invoice	08/07/2023	26857001AUG23	0.00	28.68	
101-000-000-54265-4700		Utility Services		26857001AUG23	28.68	
27639001AUG23	Invoice	08/07/2023	27639001AUG23	0.00	486.50	
001-142-000-57530-4700		Utility Services-Museum		27639001AUG23	486.50	
277201001AUG2	Invoice	08/08/2023	277201001AUG23	0.00	115.24	
401-000-000-53480-4700		Utility Services-Water		277201001AUG23	115.24	
277201002AUG2	Invoice	08/09/2023	277201002AUG23	0.00	67.12	
401-000-000-53480-4700		Utility Services-Water		277201002AUG23	67.12	
27837001AUG23	Invoice	08/07/2023	27837001AUG23	0.00	1,849.81	
101-000-000-54263-4700		Utility Services		27837001AUG23	1,849.81	
27839002AUG23	Invoice	08/07/2023	27839002AUG23	0.00	10,065.16	
101-000-000-54263-4700		Utility Services		27839002AUG23	10,065.16	
28249001AUG23	Invoice	08/08/2023	28249001AUG23	0.00	3,289.05	
001-142-000-51890-4715		Utility Services-Civic Ctr		28249001AUG23	3,289.05	
30003001AUG23	Invoice	08/07/2023	30003001AUG23	0.00	118.08	
001-141-000-57680-4700		Utility Services-Park		30003001AUG23	118.08	
30003002AUG23	Invoice	08/07/2023	30003002AUG23	0.00	612.30	
402-400-000-53580-4700		Utility Services-Sewer Ma		30003002AUG23	612.30	
32453001AUG23	Invoice	08/07/2023	32453001AUG23	0.00	98.65	
001-141-000-57680-4700		Utility Services-Park		32453001AUG23	98.65	
35199001AUG23	Invoice	08/07/2023	35199001AUG23	0.00	233.06	
001-140-000-55430-4700		Utility Services-Animal Sh		35199001AUG23	233.06	
35201001AUG23	Invoice	08/07/2023	35201001AUG23	0.00	1,992.07	
401-000-000-53480-4700		Utility Services-Water		35201001AUG23	1,992.07	
35337001AUG23	Invoice	08/07/2023	35337001AUG23	0.00	85.49	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
101-000-000-54264-4700	Utility Services		35337001AUG23		85.49	
35665001AUG23 Invoice	08/07/2023	35665001AUG23		0.00	921.57	
001-142-000-57250-4700	Utility Services-Library		35665001AUG23		921.57	
45451001AUG23 Invoice	08/07/2023	45451001AUG23		0.00	180.78	
401-000-000-53480-4700	Utility Services-Water		45451001AUG23		180.78	
46051001AUG23 Invoice	08/07/2023	46051001AUG23		0.00	138.43	
401-000-000-53480-4700	Utility Services-Water		46051001AUG23		138.43	
47009001AUG23 Invoice	08/07/2023	47009001AUG23		0.00	72.95	
402-300-000-53580-4700	Utility Services-Sewer Ma		47009001AUG23		72.95	
8511001AUG23 Invoice	08/08/2023	8511001AUG23		0.00	82.62	
401-000-000-53480-4700	Utility Services-Water		8511001AUG23		82.62	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02451	PACIFIC MEDTECHS, INC	08/18/2023	Regular	0.00	2,104.42	108884

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
42946	Invoice	08/13/2023	OVERFLOW ALARM REPAIR	0.00	2,104.42
402-400-000-53580-4800	Repairs and Maintenance		OVERFLOW ALARM REPAIR		2,104.42

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
200897	PETEK & ASSOCIATES	08/18/2023	Regular	0.00	385.00	108885

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
1962	Invoice	08/05/2023	PRE EMPLOY PSYCH EVAL. JULY 2023	0.00	385.00
001-118-000-52122-4100	Patrol-Professional Servic		PRE EMPLOY PSYCH EVAL.		385.00

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
114040	PETTYJOHN ENTERPRISES, LLC	08/18/2023	Regular	0.00	835.00	108886

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
3281	Invoice	08/01/2023	BRUSH AND STUMPS	0.00	835.00
101-000-000-54230-3100	Office and Operating		BRUSH AND STUMPS		20.00
401-000-000-53480-3100	Office and Operating		BRUSH AND STUMPS		815.00

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
150400	PNCWA	08/18/2023	Regular	0.00	800.00	108887

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
6040	Invoice	07/25/2023	ERIC AUSETH CONF. REGISTRATION	0.00	800.00
402-400-000-53580-4907	Miscellaneous-Training		ERIC AUSETH CONF. REGIS		800.00

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
159300	POLYDYNE, INC.	08/18/2023	Regular	0.00	8,474.58	108888

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
1760071	Invoice	08/01/2023	CUST#100860 CLARIFLOC	0.00	8,474.58
402-400-000-53580-3100	Office and Operating		CUST#100860 CLARIFLOC		8,474.58

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02198	RAM ELECTRIC	08/18/2023	Regular	0.00	7,708.48	108889

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
5591	Invoice	07/31/2023	CAPITAL HILL LIFT STATION	0.00	6,729.28
402-300-000-53580-4800	Repairs and Maintenance		CAPITAL HILL LIFT STATION		6,729.28
5595	Invoice	07/31/2023	FIX PUMP CHAMBER 1 - EMERGENCY CAL	0.00	979.20
402-400-000-53580-4800	Repairs and Maintenance		FIX PUMP CHAMBER 1 - E		979.20

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
903584	RIGHT SYSTEMS	08/18/2023	Regular	0.00	3,607.35	108890

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
SI-182597	Invoice	08/11/2023	CUST#COS006 MSFT MONTHLY LICENSE	0.00	3,607.35
001-132-000-51888-4100	Data Processing-Prof Svcs		CUST#COS006 MSFT MON		3,607.35

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
183400	SCJ ALLIANCE- SHEA, CARR & JEWEL	08/18/2023	Regular	0.00	595.75	108891

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
73126	Invoice	08/03/2023	COFFEE CREEK TIA REVIEW	0.00	595.75	
001-115-000-51896-4100		Professional Services/Adv		COFFEE CREEK TIA REVIEW	595.75	
195599	STATE AUDITORS OFFICE	08/18/2023	Regular	0.00	3,778.95	108892
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
L156130	Invoice	08/10/2023	ATTESTATION ENGAGEMENTS	0.00	3,778.95	
001-111-000-51423-4145		Professional Services - Sta		ATTESTATION ENGAGEME	3,778.95	
196300	STERICYCLE, INC.	08/18/2023	Regular	0.00	10.36	108893
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
3006570995	Invoice	07/31/2023	CUST#6060343 MONTHLY SERVICE	0.00	10.36	
001-118-000-52122-4100		Patrol-Professional Servic		CUST#6060343 MONTHLY	10.36	
196341	STEVEN R. BUZZARD	08/18/2023	Regular	0.00	75.00	108894
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
JUDGEPROTEMA	Invoice	08/09/2023	JUDGEPROTEMAUG23	0.00	75.00	
001-112-000-51251-4101		Judge Pro-Tem		JUDGEPROTEMAUG23	75.00	
VEN02449	THE NICHOLS GROUP RELATIONS, LI	08/18/2023	Regular	0.00	3,000.00	108895
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
2052	Invoice	08/10/2023	GOVERNMENTAL AFFAIRS CONSULT AUG	0.00	3,000.00	
001-120-000-51310-4100		Professional Services/Adv		GOVERNMENTAL AFFAIRS	3,000.00	
189670	THE SHOPPER	08/18/2023	Regular	0.00	1,181.21	108896
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
57823	Invoice	07/25/2023	SIGN LETTERS	0.00	138.88	
001-143-000-57550-3100		Office and Operating		SIGN LETTERS	138.88	
58063	Invoice	08/09/2023	MAIL TO DATAPROSE	0.00	1,042.33	
001-141-000-57120-3100		Office and Operating		MAIL TO DATAPROSE	1,042.33	
200985	THURSTON CO PUBLIC HEALTH	08/18/2023	Regular	0.00	672.00	108897
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
LABFEESJUL23	Invoice	08/04/2023	LABFEESJUL23	0.00	672.00	
401-000-000-53480-4100		Professional Services/Adv		LABFEESJUL23	672.00	
VEN01650	THURSTON MASON BEHAVIORAL HI	08/18/2023	Regular	0.00	785.95	108898
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
LPE2023-Q2	Invoice	08/11/2023	QTR 2 2023 LIQUOR PROFITS & EXCISE	0.00	785.95	
001-140-000-56600-4400		GENERAL FUND-Taxes		QTR 2 2023 LIQUOR PROFI	785.95	
201300	TOZIER BROS INC.	08/18/2023	Regular	0.00	422.91	108899
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
465238	Invoice	08/09/2023	CUST#20090 ROPE	0.00	54.14	
402-400-000-53580-3100		Office and Operating		CUST#20090 ROPE	54.14	
465281	Invoice	08/10/2023	CUST#20090 TANK SPRAYER	0.00	38.23	
402-400-000-53580-3100		Office and Operating		CUST#20090 TANK SPRAYE	38.23	
465330	Invoice	08/14/2023	CUST#20090 PAINTING SUPPLIES	0.00	34.09	
503-000-000-54865-3100		Office and Operating		CUST#20090 PAINTING SU	34.09	
465343	Invoice	08/15/2023	CUST#20090 FOGGER, FLY PAPER	0.00	14.47	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
402-400-000-53580-3100	Office and Operating		CUST#20090 FOGGER, FLY		14.47	
465349	Invoice	08/15/2023	CUST#20090 WASP SPRAY	0.00	60.58	
401-000-000-53480-3100	Office and Operating		CUST#20090 WASP SPRAY		60.58	
465370	Invoice	08/16/2023	CUST#20090 MEASURING WHEEL, CLAMP	0.00	88.86	
402-640-000-53580-3100	Office and Operating		CUST#20090 MEASURING		88.86	
465371	Invoice	08/16/2023	CUST#20090 PROPANE	0.00	66.90	
503-000-000-54865-3100	Office and Operating		CUST#20090 PROPANE		66.90	
465372	Invoice	08/16/2023	CUST#20090 MISC	0.00	65.64	
001-141-000-57680-3100	Office and Operating		CUST#20090 MISC		65.64	
VEN01220	TRIPLE C FABRICATORS LLC	08/18/2023	Regular	0.00	868.00	108900
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
2711	Invoice	08/15/2023	REPAIR STAINLESS RING FOR WWTP	0.00	868.00	
402-640-000-53580-4800	Repairs and Maintenance		REPAIR STAINLESS RING FO		868.00	
201875	TYLER TECHNOLOGIES	08/18/2023	Regular	0.00	520.00	108901
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
045-432472	Invoice	07/31/2023	CUST#48155 ASSET MAINTENANCE	0.00	520.00	
401-000-000-53480-4100	Professional Services/Adv		CUST#48155 ASSET MAINT		208.00	
402-300-000-53580-4100	Professional Services/Adv		CUST#48155 ASSET MAINT		208.00	
404-000-000-53180-4105	Professional Services/Adv		CUST#48155 ASSET MAINT		52.00	
503-000-000-54865-4101	Professional Services/Adv		CUST#48155 ASSET MAINT		52.00	
VEN02408	VEOLIA WATER TECHNOLOGIES TRE	08/18/2023	Regular	0.00	8,193.80	108902
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
902259115	Invoice	08/08/2023	ACCT#510148	0.00	8,193.80	
402-400-000-53580-4800	Repairs and Maintenance		ACCT#510148		8,193.80	
203030	WASHINGTON STATE PATROL	08/18/2023	Regular	0.00	129.25	108903
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
I24000529	Invoice	08/01/2023	JULY 2023 BACKGROUND CHECKS	0.00	129.25	
001-118-000-52122-3100	Office and Operating		JULY 2023 BACKGROUND C		129.25	
203780	WATER MGMNT LABORATORIES INC	08/18/2023	Regular	0.00	360.00	108904
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
213747	Invoice	08/08/2023	ACCT#AS201R TESTS	0.00	360.00	
402-400-000-53580-4100	Professional Services/Adv		ACCT#AS201R TESTS		360.00	
203900	WESMAR COMPANY, INC	08/18/2023	Regular	0.00	2,036.74	108905
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
312076	Invoice	07/06/2023	CUST#31175 SODIUM HYPOCHLORITE	0.00	1,018.37	
401-000-000-53480-3104	Office and Operating-Chl		CUST#31175 SODIUM HYP		1,018.37	
313218	Invoice	08/08/2023	CUST#31175 SODIUM HYPOCHLORITE	0.00	1,018.37	
401-000-000-53480-3104	Office and Operating-Chl		CUST#31175 SODIUM HYP		1,018.37	
053987	WESTBAY NAPA AUTO PARTS	08/18/2023	Regular	0.00	289.99	108906
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description		Dist Amount	
047375	Invoice	08/07/2023	ACCT#4296 WEATHERTECH 73800D	0.00	256.75	
503-000-000-54865-3104	Oper Supp-Parts-EM&R V		ACCT#4296 WEATHERTEC		256.75	
047804	Invoice	08/10/2023	ACCT#4296 OIL, FUEL FILTERS 19989D	0.00	28.74	
503-000-000-54865-3102	Oper Supplies-Parts		ACCT#4296 OIL, FUEL FILT		28.74	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
048398	Invoice	08/15/2023	ACCT#4296 PUSH BT MOM ON 16	0.00	4.50	
401-000-000-53480-3100	Office and Operating		ACCT#4296 PUSH BT MO	4.50		

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
204069	WESTERN STEEL & SUPPLY, INC.	08/18/2023	Regular	0.00	22.96	108907

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description	Dist Amount	
207642	Invoice	08/09/2023	MILD STEEL ROUND 5/8	0.00	22.96
503-000-000-54865-3100	Office and Operating		MILD STEEL ROUND 5/8	22.96	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
025951	WILLIAMS ARCHITECTURE	08/18/2023	Regular	0.00	4,762.50	108908

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description	Dist Amount	
2023023-01	Invoice	08/09/2023	K ST MAINTENANCE YARD	0.00	4,762.50
401-000-000-53480-4100	Professional Services/Adv	21-MAINTFACEXP	K ST MAINTENANCE YARD	4,762.50	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
VEN02139	ZEPPELIN SHIPPING & TECHNOLOGY	08/18/2023	Regular	0.00	25.82	108909

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description	Dist Amount	
PACKAGEID#1068	Invoice	08/15/2023	TROEMNER LLC	0.00	25.82
402-400-000-53580-3100	Office and Operating		TROEMNER LLC	25.82	

Bank Code APBNK-Main Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	134	63	0.00	238,812.62
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
Virtual Payments	0	0	0.00	0.00
	134	**63**	**0.00**	**238,812.62**

	Virtual Payments	0	0	0.00	0.00

Fund Summary

Fund	Name	Period	Amount
999	Pooled Cash	8/2023	238,812.62
			238,812.62

VOUCHER APPROVAL

I, the undersigned, do hereby certify under penalty of perjury that the materials have been furnished, the services rendered, or the labor performed as described herein vouchers number 108910 through number 108940 in the total amount of $105,366.69 that the claims are just, due and unpaid obligations against the City of Shelton, and that I am authorized to authenticate and certify said claims.

Signed this 25th of August, 2023.

Michael G. Gothens
Finance Director

We, the undersigned members of the City Council of Shelton, Washington, do hereby certify that the vouchers contained herein are approved for payment.

Signed this _____ of _____, 2023.

_____
Mayor Eric Onisko

_____
Deputy Mayor Joe Schmit

_____
Councilmember James Boad

_____
Councilmember Miguel Gutierrez

_____
Councilmember Kathy McDowell

_____
Councilmember Deidre Peterson

_____
Councilmember Sharon Schirman

Shelton, WA

Check Register

Packet: APPKT02843 - AUGUST 25, 2023 AP PAYMENTS

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: APBNK-Main-APBNK-Main						
003655	BATTERIES PLUS	08/25/2023	Regular	0.00	500.79	108910
VEN02338	BHC CONSULTANTS LLC	08/25/2023	Regular	0.00	39,249.50	108911
VEN02340	BLT SHELTON PONY, LLC	08/25/2023	Regular	0.00	375.56	108912
098000	BUILDERS FIRSTSOURCE	08/25/2023	Regular	0.00	19.99	108913
005900	CAPITAL BUSINESS MACHINES	08/25/2023	Regular	0.00	116.50	108914
VEN01281	CITY OF SHELTON - UTILITY BILLS/PE	08/25/2023	Regular	0.00	27,783.19	108915
009351	DELAGE LANDEN FINANCIAL SVCS	08/25/2023	Regular	0.00	866.08	108916
009595	DEPT. OF LICENSING	08/25/2023	Regular	0.00	250.00	108917
VEN01592	EDGAR JERONIMO PABLO	08/25/2023	Regular	0.00	280.00	108918
015000	EDWARD HAEFLIGER	08/25/2023	Regular	0.00	137.86	108919
064940	J & I POWER EQUIPMENT INC	08/25/2023	Regular	0.00	188.67	108920
079581	KCDA PURCHASING COOPERATIVE	08/25/2023	Regular	0.00	224.33	108921
087799	LEMAY MOBILE SHREDDING	08/25/2023	Regular	0.00	1.00	108922
112000	MASON COUNTY SHERIFF DEPT	08/25/2023	Regular	0.00	61.95	108923
113000	MASON COUNTY TREASURER	08/25/2023	Regular	0.00	84.44	108924
VEN02466	METTLER-TOLEDO INTERNATIONAL	08/25/2023	Regular	0.00	964.95	108925
132235	MOUNTAIN MIST WATER	08/25/2023	Regular	0.00	51.44	108926
142952	NORTH CENTRAL LABORATORIES	08/25/2023	Regular	0.00	785.75	108927
VEN02141	NORTHWEST CASCADE, INC.	08/25/2023	Regular	0.00	141.00	108928
151000	P. U. D. # 3	08/25/2023	Regular	0.00	261.90	108929
155541	PARAMETRIX, INC.	08/25/2023	Regular	0.00	1,943.18	108930
158001	PITNEY BOWES	08/25/2023	Regular	0.00	577.90	108931
150400	PNCWA	08/25/2023	Regular	0.00	835.00	108932
VEN02369	QUIXOTE COMMUNITIES	08/25/2023	Regular	0.00	24,239.13	108933
168450	RH2 ENGINEERING INC	08/25/2023	Regular	0.00	3,158.90	108934
187000	SHELTON-MASON COUNTY JOURNA	08/25/2023	Regular	0.00	46.50	108935
201300	TOZIER BROS INC.	08/25/2023	Regular	0.00	136.55	108936
VEN02437	WALTER E NELSON CO OF WESTERN	08/25/2023	Regular	0.00	1,869.97	108937
203035	WASHINGTON ST. TREASURER	08/25/2023	Regular	0.00	139.30	108938
053987	WESTBAY NAPA AUTO PARTS	08/25/2023	Regular	0.00	61.82	108939
VEN02139	ZEPPELIN SHIPPING & TECHNOLOGY	08/25/2023	Regular	0.00	13.54	108940

Bank Code APBNK-Main Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	54	31	0.00	105,366.69
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
Virtual Payments	0	0	0.00	0.00
	54	**31**	**0.00**	**105,366.69**

	Virtual Payments	0	0	0.00	0.00

Fund Summary

Fund	Name	Period	Amount
999	Pooled Cash	8/2023	105,366.69
			105,366.69

Shelton, WA

Check Register

Packet: APPKT02843 - AUGUST 25, 2023 AP PAYMENTS

By Check Number

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: APBNK-Main-APBNK-Main						
003655	BATTERIES PLUS	08/25/2023	Regular	0.00	500.79	108910

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**
P64805031	Invoice	08/10/2023	CUST#3604325193 BATTERIES	0.00	500.79
001-142-000-51830-3100	Office and Operating		CUST#3604325193 BATTE		500.79

VEN02338	BHC CONSULTANTS LLC	08/25/2023	Regular	0.00	39,249.50	108911

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**
0018623	Invoice	08/17/2023	ANGLESIDE STORAGE & PRESSURE ZONE I	0.00	29,133.25
401-000-000-53480-4100	Professional Services/Adv		ANGLESIDE STORAGE & PR		29,133.25
0018624	Invoice	08/17/2023	WATER RESERVOIR STORAGE	0.00	4,095.00
401-000-000-53480-4100	Professional Services/Adv		WATER RESERVOIR STORA		4,095.00
0018625	Invoice	08/17/2023	PEACOCK RIDGE WATER AVAIL ANALYSIS	0.00	6,021.25
401-000-000-53480-4100	Professional Services/Adv		PEACOCK RIDGE WATER AV		6,021.25

VEN02340	BLT SHELTON PONY, LLC	08/25/2023	Regular	0.00	375.56	108912

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**
519514	Invoice	08/01/2023	19917D TRAILER MODULE	0.00	320.08
503-000-000-54865-3102	Oper Supplies-Parts		19917D TRAILER MODULE		320.08
646428	Invoice	08/17/2023	VIN#3818 UNIT 207 MAINTENANCE	0.00	55.48
001-118-000-52122-4805	Repairs and Maintenance		VIN#3818 UNIT 207 MAIN		55.48

098000	BUILDERS FIRSTSOURCE	08/25/2023	Regular	0.00	19.99	108913

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**
87555311	Invoice	07/03/2023	ACCT#671668 STAPLES	0.00	15.22
001-141-000-57680-3100	Office and Operating		ACCT#671668 STAPLES		15.22
87762936	Invoice	08/08/2023	ACCT#671668 SCREWS	0.00	4.77
001-142-000-51830-3100	Office and Operating		ACCT#671668 SCREWS		4.77

005900	CAPITAL BUSINESS MACHINES	08/25/2023	Regular	0.00	116.50	108914

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**
INV157011	Invoice	06/08/2023	CONTRACT#CN1692-01	0.00	13.14
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN1692-01		13.14
INV157012	Invoice	06/08/2023	CONTRACT#CN3142-01	0.00	27.20
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN3142-01		27.20
INV157013	Invoice	06/08/2023	CONTRACT#CN3143-01	0.00	38.08
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN3143-01		38.08
INV157014	Invoice	06/08/2023	CONTRACT#CN3144-01	0.00	38.08
001-112-000-51251-4500	Operating Rentals		CONTRACT#CN3144-01		38.08

VEN01281	CITY OF SHELTON - UTILITY BILLS/PE	08/25/2023	Regular	0.00	27,783.19	108915

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
AUGUST/2023	Invoice	08/16/2023	AUGUST 2023 CITY UTILITY BILLS	0.00	27,783.19	
001-140-000-55430-4700		Utility Services-Animal Sh		AUGUST 2023 CITY UTILITY	200.06	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	699.75	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	88.62	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	12.94	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	420.68	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	3,552.11	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	87.91	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	2,389.61	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	15.66	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	107.18	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	2,712.59	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	17.47	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	328.01	
001-141-000-57680-4700		Utility Services-Park		AUGUST 2023 CITY UTILITY	74.54	
001-142-000-51890-4715		Utility Services-Civic Ctr		AUGUST 2023 CITY UTILITY	149.01	
001-142-000-51890-4715		Utility Services-Civic Ctr		AUGUST 2023 CITY UTILITY	147.32	
001-142-000-51890-4715		Utility Services-Civic Ctr		AUGUST 2023 CITY UTILITY	728.68	
001-142-000-51890-4715		Utility Services-Civic Ctr		AUGUST 2023 CITY UTILITY	1,091.06	
001-142-000-57250-4700		Utility Services-Library		AUGUST 2023 CITY UTILITY	1,073.90	
001-142-000-57530-4700		Utility Services-Museum		AUGUST 2023 CITY UTILITY	165.75	
101-000-000-54265-4700		Utility Services		AUGUST 2023 CITY UTILITY	154.81	
101-000-000-54270-4700		Utility Services-Roadside		AUGUST 2023 CITY UTILITY	158.65	
401-000-000-53480-4700		Utility Services-Water		AUGUST 2023 CITY UTILITY	49.85	
401-000-000-53480-4700		Utility Services-Water		AUGUST 2023 CITY UTILITY	18.58	
401-000-000-53480-4700		Utility Services-Water		AUGUST 2023 CITY UTILITY	38.55	
401-000-000-53480-4700		Utility Services-Water		AUGUST 2023 CITY UTILITY	23.55	
401-000-000-53480-4700		Utility Services-Water		AUGUST 2023 CITY UTILITY	22.87	
401-000-000-53480-4700		Utility Services-Water		AUGUST 2023 CITY UTILITY	15.80	
401-000-000-53480-4701		Utility Services - Shop		AUGUST 2023 CITY UTILITY	116.30	
401-000-000-53480-4701		Utility Services - Shop		AUGUST 2023 CITY UTILITY	201.55	
401-000-000-53480-4701		Utility Services - Shop		AUGUST 2023 CITY UTILITY	620.38	
401-000-000-53480-4701		Utility Services - Shop		AUGUST 2023 CITY UTILITY	90.73	
401-000-000-53480-4701		Utility Services - Shop		AUGUST 2023 CITY UTILITY	110.11	
402-300-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	15.66	
402-400-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	5,315.09	
402-400-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	590.76	
402-400-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	70.31	
402-400-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	19.33	
402-400-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	25.95	
402-400-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	25.95	
402-500-000-53580-4700		Utility Services-Sewer Ma		AUGUST 2023 CITY UTILITY	44.15	
402-640-000-53580-4700		Utility Services-Sewer Sat		AUGUST 2023 CITY UTILITY	15.66	
402-640-000-53580-4700		Utility Services-Sewer Sat		AUGUST 2023 CITY UTILITY	538.25	
402-640-000-53580-4700		Utility Services-Sewer Sat		AUGUST 2023 CITY UTILITY	18.11	
402-640-000-53580-4700		Utility Services-Sewer Sat		AUGUST 2023 CITY UTILITY	5,366.34	
404-000-000-53180-4700		Utility Services		AUGUST 2023 CITY UTILITY	53.05	
009351	DELAGE LANDEN FINANCIAL SVCS	08/25/2023	Regular	0.00	866.08	108916
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
80747999	Invoice	08/20/2023	CONTRACT#500-50265514	0.00	162.12	
402-700-000-59135-7001		Long Term Lease - Sewer		CONTRACT#500-50265514	162.12	
80748023	Invoice	08/20/2023	CONTRACT#500-50499914	0.00	162.12	
401-250-000-59134-7001		Long Term Lease - Water		CONTRACT#500-50499914	162.12	
80760693	Invoice	08/20/2023	CONTRACT#500-50492834	0.00	270.92	
001-111-000-59114-7001		Long Term Lease - Financ		CONTRACT#500-50492834	162.55	
001-130-000-59117-7001		Long Term Lease - Human		CONTRACT#500-50492834	108.37	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
80760699	Invoice	08/20/2023	CONTRACT#500-50499916	0.00	270.92	
001-115-000-59148-7001	Long Term Lease - PW Ad		CONTRACT#500-50499916		127.33	
001-120-000-59113-7001	Long Term Lease - Executi		CONTRACT#500-50499916		13.55	
001-140-000-59158-7001	Long Term Lease - Comm		CONTRACT#500-50499916		130.04	
009595	DEPT. OF LICENSING	08/25/2023	Regular	0.00	250.00	108917
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
WALMARTDEALE	Invoice	04/01/2022	WALMARTDEALERLICENSE2022	0.00	125.00	
657-000-000-58600-0007	Concealed Pistol Permits		WALMARTDEALERLICENSE		125.00	
WALMARTDEALE	Invoice	02/01/2023	WALMARTDEALERSLICENSE2023	0.00	125.00	
657-000-000-58600-0007	Concealed Pistol Permits		WALMARTDEALERSLICENS		125.00	
VEN01592	EDGAR JERONIMO PABLO	08/25/2023	Regular	0.00	280.00	108918
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
540	Invoice	08/22/2023	MAM INTERPRETATION	0.00	140.00	
001-122-000-51593-4101	LEGAL - OPD Grant Public		MAM INTERPRETATION		140.00	
INTERPRETATION	Invoice	08/21/2023	INTERPRETATION07102023	0.00	140.00	
001-112-000-51251-4106	Interpreter Expenses		INTERPRETATION0710202		140.00	
015000	EDWARD HAEFLIGER	08/25/2023	Regular	0.00	137.86	108919
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
PRESCRIPTIONSJ	Invoice	08/24/2023	PRESCRIPTIONSJUL23	0.00	137.86	
611-000-000-51725-2034	Non Insured Med Csts-Rtr		PRESCRIPTIONSJUL23		137.86	
064940	J & I POWER EQUIPMENT INC	08/25/2023	Regular	0.00	188.67	108920
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
734679	Invoice	07/31/2023	CUST#1177 OIL	0.00	188.67	
001-141-000-57680-3100	Office and Operating		CUST#1177 OIL		188.67	
079581	KCDA PURCHASING COOPERATIVE	08/25/2023	Regular	0.00	224.33	108921
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
300726925	Invoice	08/02/2023	CUST#101367 CAN LINERS	0.00	224.33	
001-141-000-57680-3100	Office and Operating		CUST#101367 CAN LINERS		224.33	
087799	LEMAY MOBILE SHREDDING	08/25/2023	Regular	0.00	1.00	108922
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
4806044S185	Invoice	08/01/2023	ACCT#2185-952778-1442	0.00	1.00	
001-130-000-51810-4100	Professional Services/Adv		ACCT#2185-952778-1442		1.00	
112000	MASON COUNTY SHERIFF DEPT	08/25/2023	Regular	0.00	61.95	108923
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
PRESCRIPTIONSJ	Invoice	08/11/2023	PRESCRIPTIONSJULY/2023	0.00	61.95	
001-123-000-52360-4103	Professional Services/Adv		PRESCRIPTIONSJULY/2023		61.95	
113000	MASON COUNTY TREASURER	08/25/2023	Regular	0.00	84.44	108924
Payable #	**Payable Type**	**Payable Date**	**Payable Description**	**Discount Amount**	**Payable Amount**	
Account Number	**Account Name**	**Project Account Key**	**Item Description**		**Dist Amount**	
MARCH/2022	Invoice	08/22/2023	MARCH 2022 CVC FINES	0.00	84.44	
657-000-000-58600-0005	CVC Fines & Forfeits		MARCH 2022 CVC FINES		84.44	
VEN02466	METTLER-TOLEDO INTERNATIONAL	08/25/2023	Regular	0.00	964.95	108925

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
655212197	Invoice	07/28/2023	CUST#302222910 2023-2024 CONTRACT	0.00	964.95	
402-400-000-53580-4100		Professional Services/Adv		CUST#302222910 2023-20	964.95	
132235	MOUNTAIN MIST WATER	08/25/2023	Regular	0.00	51.44	108926
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
005551299	Invoice	08/18/2023	ACCT#088436 POLICE DEPT	0.00	38.23	
001-118-000-52122-3100		Office and Operating		ACCT#088436 POLICE DEP	38.23	
005551301	Invoice	08/18/2023	ACCT#088436 MUNI COURT	0.00	13.21	
001-112-000-51251-3100		Office and Operating		ACCT#088436 MUNI COUR	13.21	
142952	NORTH CENTRAL LABORATORIES	08/25/2023	Regular	0.00	785.75	108927
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
490919	Invoice	08/04/2023	ACCT#42215 MISC	0.00	785.75	
402-400-000-53580-3100		Office and Operating		ACCT#42215 MISC	785.75	
VEN02141	NORTHWEST CASCADE, INC.	08/25/2023	Regular	0.00	141.00	108928
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
0553621881	Invoice	07/26/2023	CUST#228916 799 W HARVARD AVE	0.00	141.00	
001-141-000-57680-4500		Operating Rentals		CUST#228916 799 W HAR	141.00	
151000	P. U. D. # 3	08/25/2023	Regular	0.00	261.90	108929
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
113939001AUG2	Invoice	08/16/2023	113939001AUG23	0.00	63.48	
401-000-000-53480-4700		Utility Services-Water		113939001AUG23	63.48	
82241001AUG23	Invoice	08/16/2023	82241001AUG23	0.00	72.33	
001-141-000-57680-4700		Utility Services-Park		82241001AUG23	72.33	
85079001AUG23	Invoice	08/16/2023	85079001AUG23	0.00	65.14	
402-300-000-53580-4700		Utility Services-Sewer Ma		85079001AUG23	65.14	
85183001AUG23	Invoice	08/16/2023	85183001AUG23	0.00	60.95	
404-000-000-53180-4700		Utility Services		85183001AUG23	60.95	
155541	PARAMETRIX, INC.	08/25/2023	Regular	0.00	1,943.18	108930
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
47605	Invoice	08/14/2023	SEWER SCADA SERVICES	0.00	1,943.18	
402-400-000-53580-4100		Professional Services/Adv		SEWER SCADA SERVICES	1,943.18	
158001	PITNEY BOWES	08/25/2023	Regular	0.00	577.90	108931
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
1023687063	Invoice	08/14/2023	ACCT#0016679919 INK	0.00	577.90	
001-142-000-51890-3115		Office and Operating-Civi		ACCT#0016679919 INK	577.90	
150400	PNCWA	08/25/2023	Regular	0.00	835.00	108932
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number		Account Name	Project Account Key	Item Description	Dist Amount	
6419	Invoice	08/15/2023	DONALD WALKER REGISTRATION	0.00	835.00	
402-400-000-53580-4307		Travel-Training		DONALD WALKER REGISTR	835.00	
VEN02369	QUIXOTE COMMUNITIES	08/25/2023	Regular	0.00	24,239.13	108933

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
VETERNSVILLAGE	RH2 ENGINEERING INC	08/25/2023	Regular	0.00	3,158.90	108934
VETERNSVILLAGE	Invoice	08/22/2023	VETERNSVILLAGEMAR23	0.00	24,239.13	
107-100-000-56520-4100	Professional Services - Ve		VETERNSVILLAGEMAR23	24,239.13		
168450	RH2 ENGINEERING INC	08/25/2023	Regular	0.00	3,158.90	108934
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
92107	Invoice	08/16/2023	DEVELOPMENT REVIEW ASSISTANCE	0.00	3,158.90	
001-115-000-51896-4100	Professional Services/Adv		DEVELOPMENT REVIEW AS	3,158.90		
187000	SHELTON-MASON COUNTY JOURNA	08/25/2023	Regular	0.00	46.50	108935
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
120770	Invoice	08/17/2023	CITY OFFICERS & DEPARTMENTS	0.00	46.50	
001-110-000-51160-4100	Professional Services/Adv		CITY OFFICERS & DEPART	46.50		
201300	TOZIER BROS INC.	08/25/2023	Regular	0.00	136.55	108936
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
465431	Invoice	08/20/2023	CUST#20090 BEE TRAPS	0.00	30.12	
001-141-000-57680-3100	Office and Operating		CUST#20090 BEE TRAPS	30.12		
465454	Invoice	08/21/2023	CUST#20090 BEE TRAPS/SPRAY	0.00	99.37	
001-141-000-57680-3100	Office and Operating		CUST#20090 BEE TRAPS/S	99.37		
465470	Invoice	08/22/2023	CUST#20090 D TORQ MGV DECK	0.00	7.06	
001-141-000-57680-3100	Office and Operating		CUST#20090 D TORQ MGV	7.06		
VEN02437	WALTER E NELSON CO OF WESTERN	08/25/2023	Regular	0.00	1,869.97	108937
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
673131	Invoice	08/15/2023	CUST#12400 MISC SUPPLIES	0.00	535.90	
001-142-000-51890-3115	Office and Operating-Civi		CUST#12400 MISC SUPPLI	364.91		
001-142-000-57250-3100	Office and Operating		CUST#12400 MISC SUPPLI	170.99		
676917	Invoice	08/18/2023	CUST#12400 MISC SUPPLIES	0.00	782.05	
001-142-000-51830-3100	Office and Operating		CUST#12400 MISC SUPPLI	221.72		
001-142-000-51890-3115	Office and Operating-Civi		CUST#12400 MISC SUPPLI	303.84		
001-142-000-57250-3100	Office and Operating		CUST#12400 MISC SUPPLI	204.94		
401-000-000-53480-3100	Office and Operating		CUST#12400 MISC SUPPLI	51.55		
676924	Invoice	08/18/2023	CUST#12400 CLEANING SUPPLIES	0.00	679.19	
001-141-000-57680-3100	Office and Operating		CUST#12400 CLEANING SU	679.19		
924553CR	Credit Memo	06/08/2023	CUST#12400 GROUT CLEANER RETURN	0.00	-127.17	
001-141-000-57680-3100	Office and Operating		CUST#12400 GROUT CLEA	-127.17		
203035	WASHINGTON ST. TREASURER	08/25/2023	Regular	0.00	139.30	108938
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
2023FORFEITEDP	Invoice	08/22/2023	2023FORFEITEDPROP	0.00	120.80	
657-000-000-58600-0012	WaSt Confiscated-Forfeit		2023FORFEITEDPROP	120.80		
QTR4/2022STATE	Invoice	08/22/2023	QTR4/2022STATEFINES ADDITIONAL	0.00	18.50	
657-000-000-58600-0001	State Bldg Code Fee		QTR4/2022STATEFINES AD	18.50		
053987	WESTBAY NAPA AUTO PARTS	08/25/2023	Regular	0.00	61.82	108939
Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount	
Account Number	Account Name	Project Account Key	Item Description	Dist Amount		
046617	Invoice	08/02/2023	ACCT#4296 WINDSHIELD WIPERS	0.00	7.96	
001-118-000-52122-3110	Office & Operating-Auto		ACCT#4296 WINDSHIELD	7.96		
048644	Invoice	08/17/2023	ACCT#4296 FAB LOOM SPLIT POLY	0.00	53.86	

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
503-000-000-54865-3100	Office and Operating		ACCT#4296 FAB LOOM SPL		53.86	
VEN02139	ZEPPELIN SHIPPING & TECHNOLOGY	08/25/2023	Regular	0.00	13.54	108940

Payable #	Payable Type	Payable Date	Payable Description	Discount Amount	Payable Amount
Account Number	Account Name	Project Account Key	Item Description		Dist Amount
PACKAGEID#1071	Invoice	08/21/2023	WSP EVIDENCE	0.00	13.54
001-118-000-52122-4200	Communication		WSP EVIDENCE		13.54

Bank Code APBNK-Main Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	54	31	0.00	105,366.69
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
Virtual Payments	0	0	0.00	0.00
	54	**31**	**0.00**	**105,366.69**

	Virtual Payments	0	0	0.00	0.00

Fund Summary

Fund	Name	Period	Amount
999	Pooled Cash	8/2023	105,366.69
			105,366.69

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item C4)

Touch Date: 08/04/2023
Brief Date: 08/15/2023
Action Date: 09/05/2023

Department: Community & Economic Development

Presented By: Jae Hill, Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		REVIEWED:
☒	Dept. Head	jbh
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Letter of Support for Comprehensive Plan Periodic Update Grant Application

ATTACHMENTS:
-Letter of Support

Action Requested:

- ☐ Ordinance
- ☐ Resolution
- ☒ Motion
- ☐ Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
City staff will be applying for a grant for $125,000 over the next two years to complete the upcoming 2025 Comprehensive Plan Update. One of the required grant application materials is a letter of support from the local jurisdiction for applying for the grant funds, to be signed by the highest signatory authority—in Shelton's case, the mayor.

ANALYSIS/OPTIONS/ALTERNATIVES:
The City of Shelton is required to update its Comprehensive Plan every ten years per the Washington State Growth Management Act, with the next plan required to be adopted by June 2025. The City has selected its preferred consultant and committed funds to develop the plan with the expectation of applying for grant funding from the Washington State Department of Commerce. The grant is noncompetitively awarded based on population size of the communities and is available to all communities in the state.

Staff still has to finalize the scope of work and set the schedule for the project with the consultant, SCJ Alliance. Grant applications are due by the end of September, so staff has requested this letter be signed such that the application can be submitted before the deadline.

BUDGET/FISCAL INFORMATION:
Council allocated $75,000 in the 2023 budget for beginning work on the Comp Plan Update. The Washington State Department of Commerce will provide a $125,000 grant to complete the work. This brings total funds available to $200,000 to be spent before the end of 2025 on the project. $30,000 has been earmarked for joint planning efforts with Mason County, leaving $170,000 for Shelton's work. The consultant contract will expend just short of that maximum, at $169,489.

PUBLIC INFORMATION REQUIREMENTS:
No notice or public hearing are required for motions and consent agenda items.

STAFF RECOMMENDATION/MOTION:
This item is listed on the Consent Agenda.

City of Shelton, Washington
525 West Cota Street Shelton, WA 98584
Phone: (360) 426-4491
Web: www.sheltonwa.gov

September 5, 2023

Dave Andersen, AICP, Managing Director
Dave.Andersen@Commerce.wa.gov

Dear Mr. Andersen,

It is my pleasure to present this letter of support for an application by the City of Shelton for grant funding from the Washington State Department of Commerce to assist in the development of our city's 2025 Comprehensive Plan Update. This grant application was supported by a majority vote of the City Council.

In addition to the $125,000 the City is requesting from the Department of Commerce; Shelton has also allocated $75,000 of its own money to supporting this important two-year planning effort. A consultant has already been selected to assist City staff with the project and work is underway on finalizing the contract and scope of work. The City is also contributing resources to Mason County's concurrent comprehensive plan update via an interlocal agreement.

Thank you for your consideration of this grant application and your support for the City of Shelton's long-range visioning and planning efforts.

Warmest regards,

_____

Eric Onisko, Mayor of the City of Shelton

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item D1)

Touch Date: 08/04/2023
Brief Date: 09/05/2023
Action Date: 09/19/2023

Department: Community & Economic Development

Presented By: Jae Hill, Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	jbh
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Adoption of 2021 International Fire Code & Amending Title 18 of Shelton Municipal Code

ATTACHMENTS:
-Ordinance No. 2003-0523

Action Requested:

☒	Ordinance
☐	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The City of Shelton is required to update its Fire Code to be in conformance with the Washington State Code Council's adoption cycle. The current 2018 versions of the International Fire Code will be replaced by the 2021 versions.

The state has mandated adoption no later than 120 days after June 30, 2023, which is October 28, 2023.

ANALYSIS/OPTIONS/ALTERNATIVES:
The new codes have already been adopted by the State of Washington in Title 51 of the Washington Administrative Code, and we are required by state law to update our codes accordingly.

BUDGET/FISCAL INFORMATION:
There is no additional cost to the City to adopt or administer other than the necessary training for fire, planning, and building staff to understand the new regulations.

PUBLIC INFORMATION REQUIREMENTS:
Public hearing notice was published in the Shelton-Mason County Journal.

STAFF RECOMMENDATION/MOTION:
"I move that we forward Ordinance No. 2003-0523 to the action agenda of the September 19th Council meeting for further consideration."

ORDINANCE NO. 2003-0523

AN ORDINANCE OF THE CITY OF SHELTON, WASHINGTON, ADOPTING THE 2021 INTERNATIONAL FIRE CODE AND AMENDING CHAPTER 18.05 OF THE SHELTON MUNICIPAL CODE

WHEREAS, the City of Shelton regulates planning and building activities within City limits for the purposes of the health and safety of its residents; and

WHEREAS, the City of Shelton, in partnership with Central Mason Fire & EMS, currently administers the 2018 International Fire Code, as amended, as a function of planning and building activities throughout the City; and

WHEREAS, the Washington State Code Council has adopted the revised 2021 International Fire Code as amended in Title 51 of the Washington Administrative Code (WAC), and

WHEREAS, the State has mandated for all local jurisdictions an adoption of the new International Fire Code "120 days from June 30, 2023", which is October 28, 2023;

NOW, THEREFORE, the City Council of the City of Shelton hereby ordains as follows:

Section 1. Chapter 18.05 of the Shelton Municipal Code, Amendments to the International Fire Code, is amended as follows:

Chapter 18.05

AMENDMENTS TO THE INTERNATIONAL FIRE CODE

18.05.010 Amendments to the International Fire Code

The ~~2018~~ 2021 Washington State Fire Code (Chapter 51-54A WAC), with amendments, is hereby adopted, with appendices, amendments and additions, and incorporated into the city of Shelton's construction administrative code.

Chapter 1

Administration

Subsection 101.1 is amended as follows:

> 101.1 Title. These regulations shall be known as the Fire Code for the City of Shelton, hereinafter referred to as "this code."

Subsection 101.2.1 is amended as follows:

101.2.1 Appendices. The following appendices of the 2018 IFC are hereby adopted in this code:

Appendix B: Fire-Flow Requirements for Buildings.

Appendix C: Fire Hydrant Locations and Distribution.

Appendix D: Fire Apparatus Access Roads.

Appendix E: Hazard Categories.

Appendix F: Hazard Ranking.

Appendix G: Cryogenic Fluids Weight and Volume Equivalents.

Appendix H: Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) Instructions.

Appendix I: Fire Protection Systems Noncompliant Conditions.

~~Appendix K: Construction Requirements for Existing Ambulatory Care Facilities.~~

~~Appendix L: Requirements for Firefighter Air Replenishment Systems.~~

~~Appendix N: Indoor Trade Shows and Exhibitions.~~

Section 102

Applicability

Subsection 102.3.1, Changes in Character of Occupancy, is hereby added as a new subsection to Section 102 Applicability, as follows:

102.3.1 Changes in Character of Occupancy. Changes made in the character of an occupancy or the use of any building that would place the building in a different division of the same occupancy or in a different occupancy shall be approved by the Building Official and the Fire Marshal.

Section 103

Department of Fire Prevention

Subsection 103.2, Appointment, is hereby amended as follows:

103.2 Appointment. The City of Shelton hereby contracts with Mason County Fire Protection District 5, doing business as Central Mason Fire & EMS,~~is hereby authorized to contract with the Central Mason Fire and Emergency Medical Services~~, hereinafter referred to as (CMFE), for enforcement and administration of this chapter. The City of Shelton may also authorize CMFE or its designee to retain all permitting and/or inspection fees related to the administration of this ordinance.

Section 104

General Authority and Responsibilities

Subsection 104.2.1, Construction Plan Review, is hereby added as a new subsection to Section 104, General Authority and Responsibilities, as follows:

104.2.1 Construction Plan Review. Plans shall be submitted to and approved by the Fire Marshal and/or CMFE for all new commercial building, residential construction, or land development prior to the issuance of any approvals or permits or commencement of development or construction.

Subsections 104.10, Fire Investigations, and 104.10.1, Assistance From Other Agencies, are hereby amended by revising the text, as follows:

104.11 ~~104.10~~ Fire Investigations. The Fire Marshal and CMFE are authorized to investigate the origin, cause and circumstances of fires occurring within the City of Shelton that involve loss of life, injury to person(s), destruction or damage to property. If it appears to the fire investigator that such fire is of suspicious or incendiary nature, the investigator shall immediately take charge of all physical evidence relating to the cause of the fire and shall

notify the Shelton Police Department. The Fire Marshal and CMFE are also authorized to investigate the origin, cause, and circumstances of any explosion or unauthorized releases of hazardous materials.

~~104.10.1~~ 104.11.1 Assistance from other agencies. The Shelton Police Department and other enforcement agencies shall have authority to render necessary assistance in the investigation of fires when requested to do so by the Fire Marshal or CMFE.

104.13 Standards. The Fire Marshal and CMFE may adopt Standards as needed to detail specific requirements of this code.

Section 111 ~~109~~

Board of Appeals

Subsection ~~109.1~~, 111.1., Board of Appeals, established is hereby amended by revising the text, as follows:

~~109.1~~ 111.1 Board of Appeals. The hearing examiner shall hear appeals based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of the code do not fully apply, or an equally good or better form of construction is proposed. The hearing examiner shall not have the authority to waive requirements of the adopted code. The appeal must be accompanied by an appeal fee, as established by the city, be filed with the City of Shelton community and economic development department within ten days of the decisions, and the written appeal shall contain the information in SMC Section 17.08.028.

111.2 Limitations on Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or any equivalent or better form of construction is proposed. The Hearing Examiner shall not have authority to waive the requirements of this code or interpret the administration of this code.

Section 112 ~~110~~

Violations

Subsection ~~110.4~~ 112.4, Violation penalties, is hereby amended by revising the text, as follows:

> ~~110.4~~ 112.4 Violation Penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code shall be processed in accordance with the provisions of SMC Chapter 17.08.

Section ~~112~~ 113

Stop Work Order

Subsection ~~112.4~~ 113.4, Failure to comply, is hereby amended by revising the text, as follows:

> ~~112.4~~ 113.4 Failure to Comply. Any person who willfully violates, disobeys, omits, neglects or refuses to comply with or resists the enforcement of this title or its provisions shall be deemed guilty of a misdemeanor and shall be subject to criminal penalties as prescribed in Section 17.08.010.

Section 201

General

Subsection 201.5, CMFE Fire Marshal and the Fire Chief of CMFE, is hereby added as a new subsection to Section 201, General, as follows:

> 201.5 CMFE Fire Marshal and the Fire Chief of CMFE. Unless specifically mentioned to the contrary, all references to the chief, chief of the department, chief engineer, fire code official or fire marshal shall mean the CMFE Fire Marshal or the Fire Chief of CMFE or designee. Unless specifically mentioned to the contrary, all references to the fire department, department of fire prevention or fire prevention bureau shall mean the CMFE Fire Prevention ~~Bureau~~ Division or CMFE.

Section 307

Open Burning, Recreational Fires and Portable Outdoor Fireplaces

Subsection 307.1.1, Prohibited Open Burning, is hereby amended by the revising the text, as follows:

307.1.1 Prohibited Open Burning. Open burning shall be prohibited in the City of Shelton by Chapter 173-425 WAC, as regulated by the Olympic Region Clean Air Agency (ORCAA).

Section 308

Open Flames

Open-flame cooking devices. Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction.

Exceptions:

1. One- and two-family dwellings.

2. Where buildings, balconies and decks are protected by an automatic sprinkler system.

3. LP-gas cooking devices having LP-gas container with a water capacity not greater than 2 1/2 pounds [nominal 1 pound (0.454 kg) LP-gas capacity].

Section 319

Mobile Food Preparation Vehicles

Subsection 319.11, Operational Requirements, is hereby added by including the text, as follows:

319.11 Operational Requirements. Any vendor engaging in mobile food vending shall comply with the following requirements:

319.11.1. Blocking Emergency Access. Units shall not be parked, situated, or operated in a manner that restricts or blocks emergency vehicle access roadways, access to fire hydrants or fire protection equipment.

319.11.2. Distance from Structures. Mobile food vending units shall have a minimum clearance of 10 feet from other vending units, buildings, structures, and combustible structures.

319.11.3. Distance from Hydrants and FDCs. Mobile food vending units shall have a minimum clearance of 15 feet from fire hydrants, Fire Department Connections and Post indicator Valves.

319.11.4. Fuel Source. When a fuel source other than LPG is used, it shall be installed and maintained in accordance with the Fire Code and any other applicable code. Use of fuels other than LPG shall be subject to the approval of the Fire Marshal and CMFE.

319.11.5. Solid Fuels. Solid fuel shall not be stored within 3 feet of any heat producing device, cooking appliance, vent, flammable liquids, or ignition sources. Ash, cinders, and other fire debris shall be removed from the firebox or cooking appliance at regular intervals and shall be placed in a closed metal container at least 3 feet from cooking appliances and combustibles.

~~Section 320~~

~~Fire Department Standards~~

~~Section 320, Fire Department Standards, is hereby added by including the text, as follows:~~

~~320.1 Fire Department Standards. The Fire Marshal and CMFE may adopt fire department standards as needed to detail specific requirements of this code.~~

Section 401

General

Subsection 401.9, Site and building as-builts plans for pre-planning, is hereby added by including the text, as follows:

Site and building as-builts plans for pre-planning. Where required by the fire code, official as-built site and building plans shall be submitted for use of pre-planning for the Fire Departments and Law Enforcement. The plans shall specifically call out the following when applicable:

1. Building Plans

a. Elevator Location

b. Fire Alarm Panel and Annunciator

c. Sprinkler Riser

d. Knox Box

e. Electrical breaker panels

f. Fire Walls

g. Rooms numbers

h. Standpipe Connection Locations

i. Fire Department Connection

j. Roof Access

k. Building Dimensions

2. Site Plan

a. Fire Access Roads

b. Fire Hydrants

c. Post Indicator Valve

d. Fire Department Connection

Section 403

Emergency Preparedness Requirements

Subsection 403.5.5, Prior Awareness of Drills, is hereby added to Section 403.5, Group E Occupancies, as follows:

403.5.5 Prior Awareness of Drills. Administrators are the only ones to have prior knowledge of a fire drill.

Exception: The first fire drill of the year.

Section 503

Fire Apparatus Access Roads

Section 503 is hereby adopted as follows:

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3.

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this

section and shall extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:

1. The fire code official is authorized to increase the dimension of 150 feet where any of the following conditions occur:

1.1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

1.2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

1.3. There are not more than two Group R-3 or Group U occupancies.

2. Where approved by the fire code official, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

503.1.2 Additional Access. The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

503.1.3 High-piled storage. Fire department vehicle access to buildings used for high-piled combustible storage shall comply with the applicable provisions of Chapter 32.

~~503.1.4 The fire marshal and CMFE are empowered to designate fire lanes where needed for fire apparatus access roads, and 15 feet within fire hydrants, or Fire Department connections.~~

~~503.1.4.1 Fire lanes enforcement. The Shelton Police Department and other enforcement agencies shall have authority to enforce the no parking provisions in marked fire lanes, the fine for which will be $25.00 plus court costs and statutory assessments, if any for each violation. If a fire lane is completely blocked to the passage of fire apparatus by an unlawfully parked vehicle, the Shelton Police Department is authorized to impound the blocking vehicle at the owner's expense pursuant to WAC 132N-156-550 of Washington State adopted code.~~

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through ~~503.4.~~1 503.2.8.

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches.

503.2.2 Authority. The fire code official shall have the authority to require a permit modification to the required access widths where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction.

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be determined by the fire code official.

503.2.5 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.

503.2.6 Bridges and elevated surfaces. Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO- HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges where required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces that are not designed for such use, approved barriers approved signs, or both shall be installed and maintained where required by the fire code official.

503.2.7 Grade. The grade of the fire apparatus access road shall not be more than 10 percent grade.

Exception: Grades steeper than 10 percent as approved by the fire code official.

503.2.8 Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be within the limits established by the fire code official based on the fire department's apparatus.

503.3 Marking. Fire apparatus access roads shall be marked whenever necessary to maintain the unobstructed minimum required width of roadways, as determined by the fire code official. Subject to the Fire Code Official's prior written approval, marked fire apparatus access roads, or "fire lanes" as defined in section 502.1 of the code, may be established or relocated at the time of plan review, pre-construction site inspection, and/or post construction site inspection as well as any time during the lift of the occupancy. One those fire apparatus access roads established by the Fire Code Official can utilize red marking paint and the term "Fire Lane". Once a fire lane is established it shall be maintained in a clean and legible condition at all times or repair/replaced to maintain visibility. Fire lanes shall be marked as directed by the Fire Code Official with one or more of the following types of marking: ~~Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.~~

Type 1. The following shall apply to Type 1 marking:
Curbs shall be identified by red traffic paint with a 6-inch-wide stripe on the top and front, extending the length of the designated fire lane.
Rolled curbs shall be identified by red traffic paint with a 6-inch-wide stripe on the curb, extending the length of the designated fire lane.
Lanes without curbs shall be identified by red traffic paint with a 6-inch-wide stripe on the pavement, extending the length of the designated fire lane.
The words "Fire Lane – No Parking" shall be in 1 inch stroke white letters 6 inches in height and placed on the curb.
Type 2. The following shall apply to Type 2 Marking:
In addition to the requirements for Type 1 marking, Type 2 marking shall also include the addition of metal signs in accordance with Section D103.6 of the 2021 International Fire Code.
Type 3. The following shall apply to Type 3 marking:

Where required by the fire code official, specific areas shall be designated, and those areas are to be marked with diagonal striping across the width of the fire lane. Diagonal marking shall be used in conjunction with painted curbs and/or edge striping and shall run at an angle of 30 to 60 degrees from one side to the other. These diagonal lines shall be in red traffic paint, parallel with each other, at least 6 inches in width, and 24 inches apart. Lettering shall occur as with Type 1 marking.

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Sections 503.2.1 and 503.2.2 shall be maintained at all times.

~~503.4.1 Traffic calming devices. Traffic calming devices shall be prohibited unless approved by the fire code official.~~

503.8 Alternative materials and methos. The Fire code official may modify, on a case-by-case basis, any of the marking provisions in this subsection 503.3 where practical difficulties exist. Modification requests shall be submitted in writing to the Fire Code Official setting forth a suggested alternative.

~~Subsections 503.5.2, Gates – Entrance to roads, trails or other access ways, is hereby added as a new subsection to Section 503, Fire Apparatus Access Roads, as follows:~~

~~503.5.2 Gates entrances to roads, trails, or other access ways. Entrances to roads, trails or other access ways which have been closed with gates and barriers in accordance with Section 503.5 shall not be obstructed by parked vehicles.~~

Section 505

~~Premises~~ Address Identification

Section 505.1, ~~Premises~~ Address Identification, is amended by revising the text, as follows:

505.1 New and existing buildings shall be provided with approved address identification. The address identification shall be legible and paced in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letter. Number shall not be spelled out. Each character shall be not less than 4 inches (102mm) high with a

minimum stroke width of 1/2 inch (12.77mm) on residential structures and 12 inches (305mm) high with a minimum stroke width of 1/2 inch (12,7mm) on commercial structures. Where required by the fire code official, address identification shall be provided in additional locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or means shall be used to identify the structure. Address identification shall be maintained.

Exception: Fire code official determines that the current address identification is readily visible from the roadway.

Section 506

Key Boxes

Subsection 506.1, Where required, is hereby amended by revising the text, as follows:

506.1 Where required. All buildings and structures ~~occupancies~~ with an automatic fire alarm system or a gas detection system must provide an approved key box. Two complete sets of access keys for all rooms and spaces in the building, fire alarm control panel, elevator and sprinkler system control valves shall be separately identified and placed in the security key box. The fire code official is authorized to require more than one key box to be located on the Knox box depending on lay out, and fire access roads.

Subsection 506.1.1, Gates—Security Key Boxes, is hereby amended by revising the text, as follows:

506.1.1 Gates Security Key Boxes. Gate access devices and padlocks required by Sections 503.5-503.7 and this section shall be of a type and a common key as approved by the Fire Marshal and CMFE, such boxes shall be located immediately adjacent to the gate in a location that is readily visible and accessible from either side of the gate.

506.1.1.1 Manual Gate. Manual gates shall be provided with a Knox Padlock or other means of emergency access as approved by the fire code official.

506.1.1.2 Electronic or Motorized Gates. Electronic or Motorized gates shall be provided with a Knox Gate Key Switch installed per manufactures specifications by a licensed professional.

Section 507

Fire Protection Water Supplies

Subsection 507.3, Fire Flow, is hereby amended by revising the text, as follows:

507.3 Fire Flow. Fire flow requirements for buildings or portions of building and facilities shall be determined by Appendix B of this code.

Exceptions:

1.Fire flow is not required for structures under 500 square feet with a B, U, R-1 occupancy where structures are at least 30 feet from any other structure and are used only for recreation.

2.In rural and suburban areas in which adequate and reliable water supply systems do not exit, the fire code official is authorized to utilize NFPA 1142 or the International Wildland-Urban Interface Code. ~~Fire flow and the number of hydrants shall be determined as prescribed in Appendix B and Appendix C, IFC 2018 Edition.~~

~~Subsection 507.3.1, Storz Adaptors, is hereby added as a new subsection to Section 507, Fire Protection Water Supplies, as follows:~~

~~507.3.1 Storz Adaptors. Fire hydrants shall be provided with appropriate 4-inch "storz" type adaptors for the pumper connection.~~

507.5 Where Required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by Appendix C of this code.

Exceptions:

1.For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).

2.For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

~~Subsection 507.5.1.2, Fire Hydrants not included, is hereby added as a subsection of 507.5, as follows:~~

~~507.5.1.2 Fire Hydrants not included. Fire hydrants more than 15 feet from an approved access road or fire lane that serves the building in question, shall not be counted in any calculation of fire hydrant spacing. On-site fire hydrants and water supplies on adjacent properties shall not be considered available, unless accessible by fire apparatus on an approved access road. Fire hydrants located on the opposite side of a roadway more than 2 lanes wide shall not be considered in the fire hydrant placement calculations unless specifically approved by the Fire Marshal or CMFE.~~

Section 903

Automatic Sprinkler Systems

~~Section 903.2.8, Group R, is hereby amended, as follows:~~

~~903.2.8 An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R Fire Area.~~

~~Exception: Group R-3 if all the following apply:~~

~~1. The structure must be within 600 feet from a fire hydrant.~~

~~2. The required fire flow by appendix B is met.~~

~~3. The structure is less than 5000 square feet (this aligns with the newly adopted energy code for a large dwelling units).~~

~~4. The fire marshal has approved the fire department access to the proposed structure.~~

~~5. Each dwelling units must be provided with at least one 2A10BC fire extinguisher located within the kitchen area (mounted per manufacturer's installation instructions) in a conspicuous location enabling ready access.~~

~~Section 903.2.9, Group S-1, is hereby amended as follows:~~

~~903.2.9 Group S~~

~~An automatic sprinkler system shall be provided throughout all buildings containing a Group S occupancy where one of the following conditions exists:~~

~~1. A Group S fire area exceeds 5,000 square feet.~~

~~2. A Group S fire area is located more than one floor above grade plane.~~

~~3. The combined Group S fire areas on all floors, including any mezzanines, exceeds 12,000 square feet.~~

~~4. A Group S-1 fire area used for the repair of commercial motor vehicles where the fire area exceeds 5,000 square feet.~~

~~Subsection 903.2.11.3, Buildings greater than two stories in height, is hereby amended by revising the text, as follows:~~

~~903.2.11.3 Buildings 3 Stories or greater. All buildings 3 stories or greater shall have an automatic fire sprinkler system installed within.~~

Subsection 903.3.1.1.3, Underground Main Valves, is hereby added, as follows:

903.3.1.1.3 Underground Main Valves. Underground main valves supplying water for automatic sprinkler systems must be of a Post Indicator type located outside of the collapse zone of the structure whenever practical, as determined by the fire code official.

~~Section 912~~

~~Fire Department Connections~~

~~Subsections 912.2.3, Hydrant Requirements, is hereby added as a subsection to 912.2, Location, as follows:~~

~~912.2.3 Hydrant Requirements. A fire hydrant shall be located within 100 feet, when practical as determined by the fire code official, of all Fire Department Connection unless specifically exempted by the fire code official.~~

Section 5601

General

Subsection 5601.2.3.1, Manufacture Prohibited, is hereby added as a subsection to section 5601, general, as follows:

5601.2.3.1 Manufacture Prohibited. The Manufacture of explosives or explosive material shall be prohibited within the City of Shelton.

Section 5704

Storage

Subsection 5704.2.9.6.1, Locations where above-ground tanks are prohibited, is hereby amended by revising the text and by adding two exemptions as enumerated by the numbers 1 and 2, as follows:

5704.2.9.6.1 Locations where above-ground tanks are prohibited. The Storage of Class I and Class II liquids in aboveground tanks outside of buildings is prohibited within the City of Shelton.

Exceptions:

1. Aboveground storage of motor fuels for dispensing into the fuel tanks of motor vehicles and boats at a marina shall be in accordance with Section 2310.

2. Storage as authorized by Section 5706.2., Storage and dispensing of flammable and combustible liquids on farms and construction sites.

Section 5806

Limitations

Subsection 5806.2, Limitations, is hereby amended by revising the text, as follows:

5806.2 Limitations. Storage of flammable cryogenic fluids in stationary containers outside of buildings in the City of Shelton is prohibited within the city Limits, except as approved by the Fire Marshal.

Section 6104

Location of Containers

Subsection 6104.2, Maximum capacity within established limits, is hereby amended by revising the text, as follows:

6104.2 Maximum capacity within established limits. Within the limits established by law restricting the storage of liquefied petroleum gas within the City of Shelton, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7,570 L).

Appendix D – Fire Apparatus Access Roads

Grade

Subsection D103.2, Grade, is hereby amended by adding the text, as follows:

D103.2 Grade. Fire Apparatus Access Roads shall not exceed 10 percent grade.

Exceptions.

1. Fire Apparatus access roads to access 4 or less one- or two-family dwelling units shall not exceed 15 percent if any of the following are correct.

a. All buildings accessed from the fire access road are protected by an automatic sprinkler system in accordance with Section 903 of this code.

2. As Approved by Fire Code Official.

Section 2. Effective date. This ordinance shall take effect five (5) days after its passage, approval, and publication as required by law.

INTRODUCED the 5th day of September 2023.

ADOPTED by the City Council of the City of Shelton, Mason County, Washington at a regular open public meeting held the 19th day of September 2023.

_____

Eric Onisko, Mayor

AUTHENTICATED:

_____

Donna Nault, City Clerk

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item D2)

Touch Date: 08/04/2023
Brief Date: 09/05/2023
Action Date: 09/19/2023

Department: Community & Economic Development

Presented By: Jae Hill, Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		REVIEWED:
☒	Dept. Head	jbh
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Adoption of 2021 International Building Code & Amending Title 18 of Shelton Municipal Code

ATTACHMENTS:
-Ordinance No. 2004-0523

Action Requested:

☒	Ordinance
☐	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The City of Shelton is required to update its Building Code to be in conformance with the Washington State Code Council's adoption cycle. The current 2018 versions of the International Building Code will be replaced by the 2021 versions. The Building Code update also includes adoptions of ancillary codes, such as Plumbing, Residential, and Energy Codes.

The state has mandated adoption no later than 120 days after June 30, 2023, which is October 28, 2023.

ANALYSIS/OPTIONS/ALTERNATIVES:
The new codes have already been adopted by the State of Washington in Title 51 of the Washington Administrative Code, and we are required by state law to update our codes accordingly.

BUDGET/FISCAL INFORMATION:
There is no additional cost to the City to adopt or administer other than the necessary training for fire, planning, and building staff to understand the new regulations.

PUBLIC INFORMATION REQUIREMENTS:
Public hearing notice was published in the Shelton-Mason County Journal.

STAFF RECOMMENDATION/MOTION:
"I move that we forward Ordinance No. 2004-0523 to the action agenda of the September 19th Council meeting or further consideration."

ORDINANCE NO. 2004-0523

AN ORDINANCE OF THE CITY OF SHELTON, WASHINGTON, ADOPTING THE 2021 INTERNATIONAL BUILDING CODE AND AMENDING TITLE 18 OF THE SHELTON MUNICIPAL CODE

WHEREAS, the City of Shelton regulates planning and building activities within City limits for the purposes of the health and safety of its residents; and

WHEREAS, the City of Shelton currently administers the 2018 International Building Code, and associated codes, as amended, as a function of planning and building activities throughout the City; and

WHEREAS, the Washington State Code Council has adopted the revised 2021 International Building Code, and associated codes, as amended, in Title 51 of the Washington Administrative Code (WAC), and

WHEREAS, the State has mandated for all local jurisdictions an adoption of the new International Building Code and associated codes, as amended, "120 days from June 30, 2023", which is October 28, 2023;

NOW, THEREFORE, the City Council of the City of Shelton hereby ordains as follows:

Section 1. Chapter 18.02 of the Shelton Municipal Code, Construction Administrative Code, is amended as follows:

Chapter 18.02
CONSTRUCTION ADMINISTRATIVE CODE

Sections:

18.02.010 Construction Administrative Code.
18.02.020 Documents to be filed and available for public inspection.
18.02.030 Severability.
18.02.040 Repealer.
18.02.050 Effective date.

18.02.010 Construction Administrative Code.

All building and building-related codes, as currently adopted or as may be adopted in future enactments by the state of Washington pursuant to RCW 19.27.031, together with all amendments that may be adopted by the State Building Code Council of the state of Washington, are hereby adopted as the Construction Administrative Code for the city of Shelton, subject to the specific additions, deletions, and modifications set forth in this chapter and as authorized by the State Building Code Council. The provisions of this code shall apply to the administration of the technical and nontechnical codes listed below:

A. International Building Code (IBC), ~~2018~~ 2021 Edition, as published by the International Code Council, together with ~~IBC Appendices E and J and~~ ICC/ANSI A117.1-20~~09~~ 2017; Chapter 51-50 WAC.

B. International Residential Code (IRC), ~~2018~~ 2021 Edition, as published by the International Code Council, excepting IRC Chapters 11 and 25 through 43 but including IRC Appendice~~s F, Q and U~~ AQ; Chapter 51-51 WAC.

C. International Existing Building Code (IEBC), ~~2018~~ 2021 Edition, as published by the International Code Council.

D. International Fuel Gas Code (IFGC), ~~2018~~ 2021 Edition, as published by the International Code Council, ~~excepting that the standards for liquefied petroleum gas installations shall be contained in the 2018 Edition of NFPA 58 (Storage and Handling of Liquefied Petroleum Gases) and the 2018 Edition of ANSI Z233.1/NFPA 54 (International Fuel Gas Code)~~; Chapter 51-52 WAC.

E. International Mechanical Code (IMC), ~~2018~~ 2021 Edition, as published by the International Code Council, ~~including adoption of 2018 International Fuel Gas Code, 2018 NFPA 58 and 2017 and NFPA 54;~~ Chapter 51-52 WAC.

F. Uniform Plumbing Code (UPC), ~~2018~~ 2021 Edition, as published by the International Association of Plumbing and Mechanical Officials, including Appendices A, B and I; Chapter 51-56 WAC.

G. International Fire Code (IFC), ~~2018~~ 2021 Edition, as published by the International Code Council, together with IFC Appendices A, B, C, D, E, F, G, H, I, K, L, and N; Chapter 51-54A WAC.

H. ~~International Energy Conservation Codes~~ Washington State Energy Code, Commercial and Residential, ~~2018~~ 2021 Edition, as published by the International Code Council with Washington amendments (Chapters 51-11C and 51-11R WAC).

I. ADA Standards for Accessible Design, Accessible and Usable Buildings and Facilities, ICC A117.1-20~~09~~ 2017 as published by ANSI and the International Code Council.

~~J. National Green Building Standard (ICC 700), 2012 Edition, as published by the International Code Council, on a voluntary basis. (Ord. 1988-0522 § 1, 2022)~~

J. Wildland-Urban Interface Code (IWUIC), 2021 Edition, as published by the International Code Council.

~~K. International Property Maintenance Code (IPMC), 2021 Edition, as published by the International Code Council.~~

18.02.020 Documents to be filed and available for public inspection.

The codes, appendices, and standards set forth in this chapter shall be filed with the city clerk and a copy made available for use and examination by the public, pursuant to RCW 35A.12.140. (Ord. 1988-0522 § 1, 2022)

18.02.030 Severability.

If any provision of this code or its application to any person or circumstances is found invalid, the remainder of the code or its application of the provision to other persons or circumstances is not affected. (Ord. 1988-0522 § 1, 2022)

18.02.040 Repealer.

All ordinances or resolutions, or parts of ordinances or resolutions, in conflict with this chapter are repealed. (Ord. 1988-0522 § 1, 2022)

18.02.050 Effective date.

This chapter shall go into effect five calendar days after adoption by the city of Shelton city council and publication pursuant to law. (Ord. 1988-0522 § 1, 2022)

Section 2. Chapter 18.03 of the Shelton Municipal Code, Amendments to the International Building Code, is amended as follows:

Chapter 18.03
AMENDMENTS TO THE INTERNATIONAL BUILDING CODE

18.03.010 Amendments to the International Building Code.

Chapter 1, Administration of the International Building Code, is hereby adopted and incorporated into the city of Shelton construction administrative code and the same shall apply to all the afore mentioned codes and documents and shall include the following amendments:

CHAPTER 1

ADMINISTRATION

SECTION 101

GENERAL

101.1 Title. These regulations shall be known as the Building Code of the City of Shelton, hereinafter referred to as "this code."

101.2 Scope. The provisions of this code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress, and their accessory structures not more than three stories above grade plane in height, shall comply with this code or the International Residential Code.

101.3 Intent. The purpose of this code is to establish the minimum requirements to provide reasonable level of safety, public health and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire, explosion and other hazards, and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

101.4 Referenced codes. The codes listed in this section and elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

101.4.1 Gas. The provisions of the ~~2018~~ currently adopted International Fuel Gas Code (NFPA 54) and 2008 Liquid Petroleum Gas Code (NFPA 58) shall apply to the installation of all materials and equipment utilizing liquid propane gas; the provisions of the ~~2018~~ currently adopted International Fuel Gas Code shall apply to the installation of all materials and equipment utilizing natural gas except those regulated by the International Residential Code (IRC).

101.4.2 Mechanical. The provisions of the ~~2018~~ currently adopted International Mechanical Code shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems. ~~, except:~~

~~1) The International Fuel Gas Code shall apply to all installations utilizing natural gas except those regulated by the IRC and those utilizing LPG.~~

~~2) The IRC shall apply to all structures regulated by the IRC except LPG installations.~~

~~3) NFPA 54 & 58 shall apply to all LPG installations.~~

101.4.3 Plumbing. The provisions of the ~~2018~~ currently adopted Uniform Plumbing Code shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system.

101.4.4 Fire prevention. The provisions of the ~~2018~~ currently adopted International Fire Code shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction,

extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

101.4.5 Energy. The provisions of the ~~2018~~ currently adopted Washington State Energy Code ~~International Energy Conservation~~ (WAC 51-11C, WAC 51-11R) shall apply to all matters governing the design and construction of buildings for energy efficiency.

101.4.6 Existing Buildings. The provisions of the ~~2018~~ currently adopted International Existing Building Code shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

101.4.7 Ventilation and indoor air quality. Applicable provisions of the ~~2018~~ currently adopted International Residential Code, ~~2018~~ currently adopted International Mechanical Code and ~~2018~~ currently adopted International Building Code shall apply to all matters governing the design and construction of buildings for ventilation and indoor air quality.

101.4.8 Electrical. The provisions of the currently adopted National Electrical Code (NFPA 70), as amended and adopted by the State of Washington shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

~~SECTION 105~~

~~PERMITS~~

~~105.3 Application for permit.~~

~~A. Application shall be made for a permit to perform any building, construction or placement of any structure or manufactured home within the city not exempted by city, state or federal law, code or regulation.~~

~~B. Such application shall be on forms provided by the city.~~

~~C. The applicant shall provide all information required by this title, as well as all other reasonable information determined by the city to be necessary for consideration and action upon any application.~~

~~D. If the city finds an application to be in compliance with this title and all other mandated laws, codes and regulations within the city's scope of authority to enforce, then a permit may be issued, provided all appropriate fees and charges have been paid.~~

SECTION 109

FEES

109.1 Payment of fees. Permit fees are collected prior to or at the time of the issuance of the permit; a permit shall not be valid until the fees prescribed by resolution of the city council of the City of Shelton have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid. For those building services to be billed on an hourly basis, billings will be based on the hourly rates established by resolution of the city council of the City of Shelton. The city may use the services of an outside professional consultant for plan review services; all invoices associated with the services of an outside professional consultant, including any administrative services charge as prescribed by resolution of the City Council of the City of Shelton, shall be paid prior to or at the time of permit issuance. All other fees, including but not limited to general facility charges, impact fees and system development charges must also be paid prior to or at the time of permit issuance, unless deferred under state law.

109.2 Master fee schedule. For buildings, structures, gas, mechanical, plumbing, signs, manufactured home installations, grading activities, energy code reviews and demolition or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the master fee schedule as established by resolution of the city council of the City of Shelton.

109.2.1 Washington State Building Code Council (WSBCC) surcharge. The WSBCC assesses a permit surcharge to each jurisdiction in the State of Washington (E2SHB 1622), which at the time of passage of this ordinance, is a flat rate fee of $6.50 for each RESIDENTIAL permit for approved plans or any other permit that is issued in accordance with the adopted building codes. For COMMERCIAL projects, the WSBCC fee is $25.00 for approved plans or any other permit that is issued in accordance with the adopted building codes. The WSBCC surcharge may be adjusted

at any time and any required changes to this fee will be reflected in the master fee schedule as established by resolution of the city council of the City of Shelton. The City of Shelton forwards all fees collected in this regard to the WSBCC on a quarterly basis.

109.2.2 Plan review fee. A plan review fee shall be charged for permit plan review. The plan review fee shall be a separate fee from the permit fee specified in this section and is in addition to the permit fee. When submittal documents or plans are required under this code, the plan review fee shall be paid at the time of submittal of these documents or plans for review. The building official may have the option to charge deposit in lieu of the full plan review fee, if the full fee amount is not known at the time of document or plan submittal. The plan review deposit shall be applied toward the remaining plan review fee; the actual plan review fee shall be determined upon completion of the plan review and the remaining balance owing shall be paid at the time of permit issuance. When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items, an additional plan review fee shall be charged. Plan review fees shall be set by resolution of the city council of the City of Shelton.

109.2.3 Energy code review fee. An energy code review fee may also be established by the city in order to meet the requirements of WAC 51-11C. If the city utilizes the services of outside professional consultant for this review, all invoices associated with the services of this outside professional consultant, including an administrative service charge shall be paid to the City as invoiced.

109.3 Building permit valuations. The applicant for a permit shall provide an estimated permit value at time of application. Permit valuations shall include total value for work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment, and permanent systems. If, in the opinion of the building official, the valuation is underestimated on the application the Building Official may utilize the August Building Valuation Data ~~on a two-year lag~~ in the ICC Building Safety Journal. Final building permit valuations shall be set by the Building Official.

109.4 Work commencing before permit issuance. In addition to the required permit fees, the building official shall require that any person who commences any work on

a building, structure, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a special investigation fee, which shall include the doubling of the required permit fees as established by resolution of the city council of the City of Shelton.

109.4.1 Contractor(s) commencing work prior to permit issuance or without first obtaining a City of Shelton business license endorsement issued by the Department of Licensing (without prior approval of the Building Official) shall be fined per the following schedule;

First Offense- $100 Fine

Second Offense- $250 Fine and misdemeanor enforced by the City of Shelton Court.

Third offense- $1000 Fine and City of Shelton endorsement denied for 180 days.

109.5 Refunds. No permit fee refund will be allowed once any work has begun on a project. In order to request a refund of a permit fee, the request shall be addressed to the Building Official in writing and shall be received at the City of Shelton finance department within 180 days of the date of issuance of the permit; any refund request received after 180 days of the date of permit issuance shall automatically be denied. At the discretion of the Building Official, refund requests may be approved or denied based on the status of a project. All approved refunds shall be limited to 75% of the total permit fees paid. Refund requests shall only be considered for building, plumbing and mechanical permit fees. Refunds shall not include any plan review fees.

Section 113

Appeals

Replacing Section 113, Board of Appeals, with the following:

The hearing examiner shall hear appeals based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of the code do not fully apply, or an equally good or better form of construction is proposed. The hearing examiner shall not have the authority to waive

requirements of the adopted code. The appeal must be accompanied by an appeal fee, as established by the city, be filed with the City of Shelton community and economic development department within ten days of the decisions, and the written appeal shall contain the information in SMC Section 17.08.028.

Section 3. Chapter 18.04 of the Shelton Municipal Code, Amendments to the International Residential Code, is amended as follows:

Chapter 18.04
AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE

18.04.010 Amendments to the International Residential Code.

The following amendments to the ~~2018~~ currently adopted International Residential Code are hereby adopted and incorporated into the city of Shelton's construction administrative code:

CHAPTER 1

ADMINISTRATION

SECTION R105

PERMITS

R101.1 City of Shelton inserted as "name of jurisdiction".

Subsection R105.2, Work Exempt from Permit, is hereby amended as follows:

R105.2 Work exempt from permit. In addition to the exemptions enumerated in Chapter 1 of the currently adopted International Residential Code, a permit shall not be required for the following:

Buildings:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet with sidewall heights not greater than ten foot in height and roof framing shall not exceed pitch of the existing primary structure (unless approved by the City Planning Department).

CHAPTER 3

BUILDING PLANNING

Table R301.2(1), Climatic and Geographic Design Criteria, is hereby amended by including the pertinent information as it relates to the city of Shelton, as follows:

TABLE R301.2(1)

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load:	25 psf
Roof Snow Load:	~~25 psf~~ 35 psf
Wind Exposure Category:	B
Wind Speed - 3 Second Gust:	110 mph
Seismic Design Category:	~~D1~~ D2
Subject to Damage From:	
Weathering	Moderate
Frost Line Depth:	12 inches
Termite:	Slight to Moderate
Winter Design Temperature:	See WSEC
Ice Barrier Underlayment Required:	No

Flood Hazards:	SMC Chapter 18.07 adopted June 21, 2022
Air Freezing Index:	N/A
Mean Annual Temperature:	50 Degrees F
Soil Bearing Capacity	#1500 (assumed) residential *Per geotechnical analysis for Commercial.

Section 4. Effective date. This ordinance shall take effect five (5) days after its passage, approval, and publication as required by law.

INTRODUCED the 5th day of September 2023.

ADOPTED by the City Council of the City of Shelton, Mason County, Washington at a regular open public meeting held the 19th day of September 2023.

_____

Eric Onisko, Mayor

AUTHENTICATED:

_____

Donna Nault, City Clerk

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item D3)

Touch Date: 08/08/2023
Brief Date: 09/05/2023
Action Date: 09/19/2023

Department: Public Works

Presented By: Jay Harris, Public Works Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		REVIEWED:
☒	Dept. Head	J.O.H.
☐	Finance Director	
☒	Attorney	K.H.
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Amending Chapter 14.28 (Sewer Rates) of the SMC

ATTACHMENTS:
- Ordinance No. 2010-0723
- Proposed 2024-2026 Water, Sewer & GFC Rates
- FCS PowerPoint Presentation

Action Requested:

☒	Ordinance
☐	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
FCS Group was authorized by City Council Resolution No. 1257-1222 in February of this year to conduct a needed sewer rate and general facility charge (GFC) study, as the rate schedule ends in 2023, and Staff is nearing the completion of an updated Sewer Comprehensive Plan that sets goals, expectations, and desires for the utility on a 20-year planning horizon. Comprehensive Sewer Plans are required to be updated every 10 years by the State of Washington. As time passes, wear and tear on sewer infrastructure continues to proceed and upgrades/repairs priorities are subject to change, as items are repaired/replaced, and system capacity is added for new connections. Based on this fact, the sewer rate analysis includes projections for future improvements that will be needed as water infrastructure reaches its useful life expectancy and needs to be upgraded and/or replaced.

The intent of the current Ordinance is to make needed changes to section 14.28 of Shelton Municipal Code (SMC) to remove sewer rates out of City Code and placing them into the City's annually adopted Master Fee Schedule. This Ordinance makes the revisions to the SMC and the new sewer rates and GFC's shown on the attached proposed 2024-2026 rate schedule will become effective January 1, 2024, with adoption of the Master Fee Schedule prior to the end of the year.

ANALYSIS/OPTIONS/ALTERNATIVES:
The City Council could elect to modify the proposed sewer rates and GFC's, with the understanding that future operation and maintenance budgets and capital projects identified within both the current 6-Year Capital Improvement Plan and the updated Sewer System Comprehensive may need to be adjusted accordingly.

BUDGET/FISCAL INFORMATION:
Please see the work prepared by the FCS Group previously for the August 8th Council Study Session and the attached PowerPoint presentation that provides significant budget/fiscal information.

PUBLIC INFORMATION REQUIREMENTS:
Information can be obtained from the Public Works Department.

STAFF RECOMMENDATION/MOTION:
"I move that we forward Ordinance No. 2010-0723 to the September 19, 2023 City Council Meeting Action Agenda for further consideration."

ORDINANCE NO. 2010-0723

AN ORDINANCE OF THE CITY OF SHELTON, WASHINGTON, AMENDING CHAPTER 14.28 OF THE SHELTON MUNICPAL CODE RELATING TO SEWER RATES.

WHEREAS, The City Council desires to update Title 14, Chapter 14.28, entitled Sewer Service – Rates and Charges, of the Shelton Municipal Code; and

WHEREAS, following the review of the conclusion of a formal rate study conducted by FCS Group in 2023 and the current status of the sewer utility, the City Council finds it necessary to update sewer utility rates and charges to provide revenue essential to support the sewer utility's operations, debt service and capital projects anticipated in future years; and

WHEREAS, the City Council wishes to adopt the practice of including utility rates in the Master Fee Schedule, which is updated as needed per Council Resolution, rather than including the rates in the municipal code; and

WHEREAS, the proposed 2024-2026 water and sewer and GFC rate schedule is attached and is proposed to be adopted by Resolution by the City Council later this year; and

WHEREAS, the City Council held a meeting open to the public on this issue on September 5, 2023 and have reviewed public comment on the proposed rate adjustments and considered the recommendations of both staff and the public.

NOW, THEREFORE, be it ordained by the City Council of the City of Shelton, Washington:

Section 1. Repealing and Replacing. Sections 14.28.010 through 14.28.060 of the City of Shelton Municipal Code are hereby replaced in their entirety with the following:

14.28.010 Monthly sewer rates.

A. Monthly sewer rates are identified within the most recently adopted Master Fee Schedule, effective with the January billings of the affected year.

14.28.020Schedule 1: Single-family residential and duplex.

A. Basic Charge for Each Meter Served - Single-family residential and duplex sewer rates are identified within the most recently adopted Master Fee Schedule.

B. Consumption Charge – In addition to the basic charge, each single-family residence or duplex, shall pay a monthly basic charge identified within the most recently adopted Master Fee Schedule.

C. Averaging for Summer Consumption Charge. During the billing months of June, July, August, September and October, the consumption charge for each such month shall be based on the average water consumption of the preceding billing months of November, December, January, February and March recorded for that account.

D. Administrative procedures shall be established to determine an equitable average to use for charging summer consumption, using historical data from the city utility billing system where available, or using a pre-determined default number for customers, for new accounts established after September 30th of the preceding year.

E. Customers installing an irrigation meter for outside watering only will be exempt from the summer sewer average charge and will be billed for sewer charges based on actual usage for their household meter account.

F. Administrative procedures shall be established for customers to request a reduced level of service when an address is vacant. This request exempts the customer from the summer sewer average charge, and all sewer charges will be paid based on consumption. A reasonable fee will be charged to the account to cover the administrative costs of processing this request.

G. Eligible low-income senior citizens and disabled customers living in single-family residences shall receive a discount of seventeen percent of the monthly basic charge for sewer services. The city shall establish the eligibility requirements that must be met in order to receive any discount.

14.28.030 Schedule 2: Single-family residential and duplex without water service.

A. Single-family residential and duplexes without water service sewer rates are identified within the most recently adopted Master Fee Schedule.

14.28.040 Schedule 3: Triplex, multifamily, mobile home and trailer parks.

A. Basic Charge – Charges for Triplex, multifamily, mobile homes and trailer parks having more than two Single family units or spaces sewer rates are identified within the most recent Council adopted Master Fee Schedule.

B. Consumption Charge – In addition to the basic charge, each single-family residence or duplex, shall pay a monthly consumption charge identified within the most recently adopted Master Fee Schedule.

C. Averaging for Summer Consumption Charge. During the billing months of June, July, August, September and October, the consumption charge for each such month shall be based on the average water consumption of the preceding billing months of November, December, January, February and March recorded for that account.

D. Administrative procedures shall be established to determine an equitable average to use for charging summer consumption, using historical data from the city utility billing system, or using a predetermined default number for customers for new accounts established after September 30th of the preceding year.

E. Customers installing an irrigation meter for outside watering only will be billed for sewer charges based on actual usage for their household meter(s).

F. Administrative provisions shall be established for customers to request a reduced level of service when an address is vacant. This request exempts the customer from the summer sewer average charge, and all sewer charges will be paid based on consumption. A reasonable fee will be charged to the account to cover the administrative costs of processing this request.

14.28.050 Schedule 4: Commercial.

A. Basic Charge – Each commercial account that is served shall pay a monthly basic charge identified within the most recently adopted Master Fee Schedule.

B. Consumption Charge – In addition to the basic charge, each commercial account shall pay a consumption charge for each cubic foot consumed in a month greater than a consumption of eighty-four cubic feet unit. Charges are identified within the most recently approved master fee schedule.

14.28.060 Schedule 5: Hotel/Motel.

A. Basic Charge – Each unit of accommodation of a hotel or motel that is served shall pay a monthly basic charge per unit, as identified within the most recently adopted Master Fee Schedule. Hotel/Motel sewer Charges are identified within the most recently adopted Master Fee Schedule.

B. Consumption Charge – In addition to the basic charge, each hotel/motel account shall pay a consumption charge for each cubic foot consumed in a month greater than a consumption of eighty-four cubic feet. Charges are identified within the most recently approved master fee schedule.

Section 2. Severability. If any section subsection, paragraph, sentence, clause or phrase of this ordinance is declared unconstitutional or invalid for any reason, such invalidity shall not affect the validity or effectiveness of the remaining portions of this ordinance.

Section 3. Savings Clause. Chapter 14.28 of the Shelton Municipal Code shall remain in full force and effect until such date as this ordinance becomes effective. The 2023 Sewer Rates within SMC 14.28.10 through 14.28.60 remain in effect until December 31, 2023.

Section 4. Effective Date. This Ordinance shall take effect five days after its passage and publication.

INTRODUCED the 5th day of September 2023.

ADOPTED by the City Council of the City of Shelton, Mason County, Washington at a regular open public meeting held the 19th day of September 2023.

_____
Eric Onisko, Mayor

AUTHENTICATED:

_____
Donna Nault, City Clerk

Water Utility - Monthly Water Rates

Recommended Rate Increases	2024	2025	2026
Across-the-Board Increases:	14.00%	14.00%	14.00%

Schedule 1: Meter Charge

Schedule 1 - 2023:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$16.46	$14.52	$14.03	$43.51	$10.53
1-inch	$21.39	$18.13	$17.32	$66.56	$12.60
1-1/4-inch	$26.58	$21.68	$20.49	$94.21	$14.40
1-1/2-inch	$31.78	$25.26	$23.63	$121.82	$16.22
2-inch	$47.56	$37.14	$34.54	$191.69	$23.25
2-1/2-inch	N/A	N/A	N/A	N/A	$42.25
3-inch	$117.15	$96.26	$91.08	$405.68	$64.48
4-inch	$162.92	$130.29	$122.16	$613.73	$84.30
6-inch	$282.94	$217.69	$201.47	$1,184.25	$133.49
8-inch	$424.85	$320.48	$294.53	$1,867.04	$190.93
10-inch	$639.07	$489.05	$451.72	$2,712.45	$297.61
12-inch	$978.00	$757.82	$703.07	$4,020.30	$469.57

Schedule 1 - 2024:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$18.76	$16.55	$15.99	$49.60	$12.00
1-inch	$24.38	$20.67	$19.74	$75.88	$14.36
1-1/4-inch	$30.30	$24.72	$23.36	$107.40	$16.42
1-1/2-inch	$36.23	$28.80	$26.94	$138.87	$18.49
2-inch	$54.22	$42.34	$39.38	$218.53	$26.51
2-1/2-inch	N/A	N/A	N/A	N/A	$48.17
3-inch	$133.55	$109.74	$103.83	$462.48	$73.51
4-inch	$185.73	$148.53	$139.26	$699.65	$96.10
6-inch	$322.55	$248.17	$229.68	$1,350.05	$152.18
8-inch	$484.33	$365.35	$335.76	$2,128.43	$217.66
10-inch	$728.54	$557.52	$514.96	$3,092.19	$339.28
12-inch	$1,114.92	$863.91	$801.50	$4,583.14	$535.31

Schedule 1 - 2025:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$21.39	$18.87	$18.23	$56.55	$13.68
1-inch	$27.80	$23.56	$22.51	$86.50	$16.37
1-1/4-inch	$34.54	$28.18	$26.63	$122.44	$18.71
1-1/2-inch	$41.30	$32.83	$30.71	$158.32	$21.08
2-inch	$61.81	$48.27	$44.89	$249.12	$30.22
2-1/2-inch	N/A	N/A	N/A	N/A	$54.91
3-inch	$152.25	$125.10	$118.37	$527.22	$83.80
4-inch	$211.73	$169.32	$158.76	$797.60	$109.56
6-inch	$367.71	$282.91	$261.83	$1,539.05	$173.48
8-inch	$552.14	$416.50	$382.77	$2,426.41	$248.13
10-inch	$830.54	$635.57	$587.06	$3,525.10	$386.77
12-inch	$1,271.01	$984.86	$913.71	$5,224.78	$610.25

Water Utility - Monthly Water Rates

Schedule 1 - 2026:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$24.39	$21.51	$20.79	$64.46	$15.60
1-inch	$31.69	$26.86	$25.66	$98.61	$18.67
1-1/4-inch	$39.38	$32.12	$30.36	$139.58	$21.33
1-1/2-inch	$47.08	$37.42	$35.01	$180.48	$24.03
2-inch	$70.46	$55.02	$51.17	$284.00	$34.45
2-1/2-inch	N/A	N/A	N/A	N/A	$62.60
3-inch	$173.56	$142.61	$134.94	$601.03	$95.53
4-inch	$241.37	$193.03	$180.99	$909.27	$124.89
6-inch	$419.19	$322.52	$298.49	$1,754.52	$197.77
8-inch	$629.43	$474.81	$436.36	$2,766.10	$282.87
10-inch	$946.81	$724.55	$669.24	$4,018.61	$440.92
12-inch	$1,448.95	$1,122.74	$1,041.63	$5,956.25	$695.69

Monthly Water Rates	2023	2024	2025	2026
Schedule 2: Single-Family Residential				
Consumption Charge for First 600 c.f.	$0.0345	$0.0393	$0.0448	$0.0511
Consumption Charge for 601-1,500 c.f.	$0.0413	$0.0471	$0.0537	$0.0612
Consumption Charge for 1,500+ c.f.	$0.0513	$0.0585	$0.0667	$0.0760
Schedule 3: Multifamily (including duplexes, triplexes, mobile home parks and trailer parks)				
Multifamily Consumption Charge per c.f.	$0.0401	$0.0457	$0.0521	$0.0594
Schedule 4: Commercial (including government, industrial, hotel/motel)				
Commercial Consumption Charge per c.f.	$0.0395	$0.0450	$0.0513	$0.0585
Schedule 5: Irrigation				
Irrigation Consumption Charge per c.f.	$0.0513	$0.0585	$0.0667	$0.0760
Schedule 6: Wholesale Rate				
Wholesale Consumption Rate Charge per c.f.	$0.0356	$0.0406	$0.0463	$0.0527
Schedule 7: Standby Fire Protection Service	See City code.			
Schedule 8: Regional Plan Partners	Based on agreements.			

c.f. = cubic foot

Water Connections - General Facilities Charge (GFC)

Existing GFC (2023)

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$1,260
1"	2.50	$3,150
1.5"	5.00	$6,300
2"	8.00	$10,080
3"	16.00	$18,900
4"	25.00	$31,500
6"	50.00	$63,000
8"	80.00	$100,800

Maximum Defensible Charge Calculated

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$3,756
1"	2.50	$9,390
1.5"	5.00	$18,780
2"	8.00	$30,048
3"	16.00	$60,096
4"	25.00	$93,900
6"	50.00	$187,800
8"	80.00	$300,480

GFC Assumed for Rate Forecast

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$3,000
1"	2.50	$7,500
1.5"	5.00	$15,000
2"	8.00	$24,000
3"	16.00	$48,000
4"	25.00	$75,000
6"	50.00	$150,000
8"	80.00	$240,000

Sewer Utility - Monthly Sewer Rates

Recommended Rate Increases	2024	2025	2026
Across-the-Board Increases:	4.50%	4.50%	4.50%

Monthly Sewer Rates	2023	2024	2025	2026
Schedule 1: Single-family residential and duplex				
A. Basic Charge (per meter)	$54.14	$56.58	$59.12	$61.78
B. Consumption Charge (per cubic foot)	$0.1084	$0.1133	$0.1184	$0.1237
Schedule 2: Single-family residential and duplex without water service				
Flat Monthly Rate (per customer)	$138.99	$145.24	$151.78	$158.61
Schedule 3: Triplex, multifamily, mobile home and trailer parks				
A. Basic Charge (per dwelling unit)	$54.14	$56.58	$59.12	$61.78
B. Consumption Charge (per cubic foot over 460 c.f. per unit)	$0.1170	$0.1223	$0.1278	$0.1335
Schedule 4: Commercial				
A. Monthly Base Charge based on consumption (per account):				
0 - 1,000 cubic feet	$65.60	$68.55	$71.64	$74.86
1,001 cubic feet - 2,000 cubic feet	$98.12	$102.54	$107.15	$111.97
2,000+ cubic feet	$136.12	$142.25	$148.65	$155.34
B. Consumption Charge (per cubic foot)	$0.1172	$0.1225	$0.1280	$0.1337
Schedule 5: Hotel/Motel				
A. Basic Charge (per unit)	$9.92	$10.37	$10.83	$11.32
B. Consumption Charge (per cubic foot over 84 c.f. per unit)	$0.1172	$0.1225	$0.1280	$0.1337
Schedule 6: Industrial	Case by case basis.			
Schedule 7: Regional Plan Partners	Based on agreements.			

c.f. = cubic foot

Sewer Connections - General Facilities Charge (GFC)

Existing GFC (2023)

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$3,258
1"	2.50	$8,145
1.5"	5.00	$16,290
2"	8.00	$26,064
3"	16.00	$48,870
4"	25.00	$81,495
6"	50.00	$162,900
8"	80.00	$260,640

Maximum Defensible Charge Calculated

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$16,155
1"	2.50	$40,388
1.5"	5.00	$80,775
2"	8.00	$129,240
3"	16.00	$258,480
4"	25.00	$403,875
6"	50.00	$807,750
8"	80.00	$1,292,400

GFC Assumed for Rate Forecast

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$8,000
1"	2.50	$20,000
1.5"	5.00	$40,000
2"	8.00	$64,000
3"	16.00	$128,000
4"	25.00	$200,000
6"	50.00	$400,000
8"	80.00	$640,000

City of Shelton



Council Meeting
Water & Sewer Rate Study
FCS GROUP
September 5, 2023

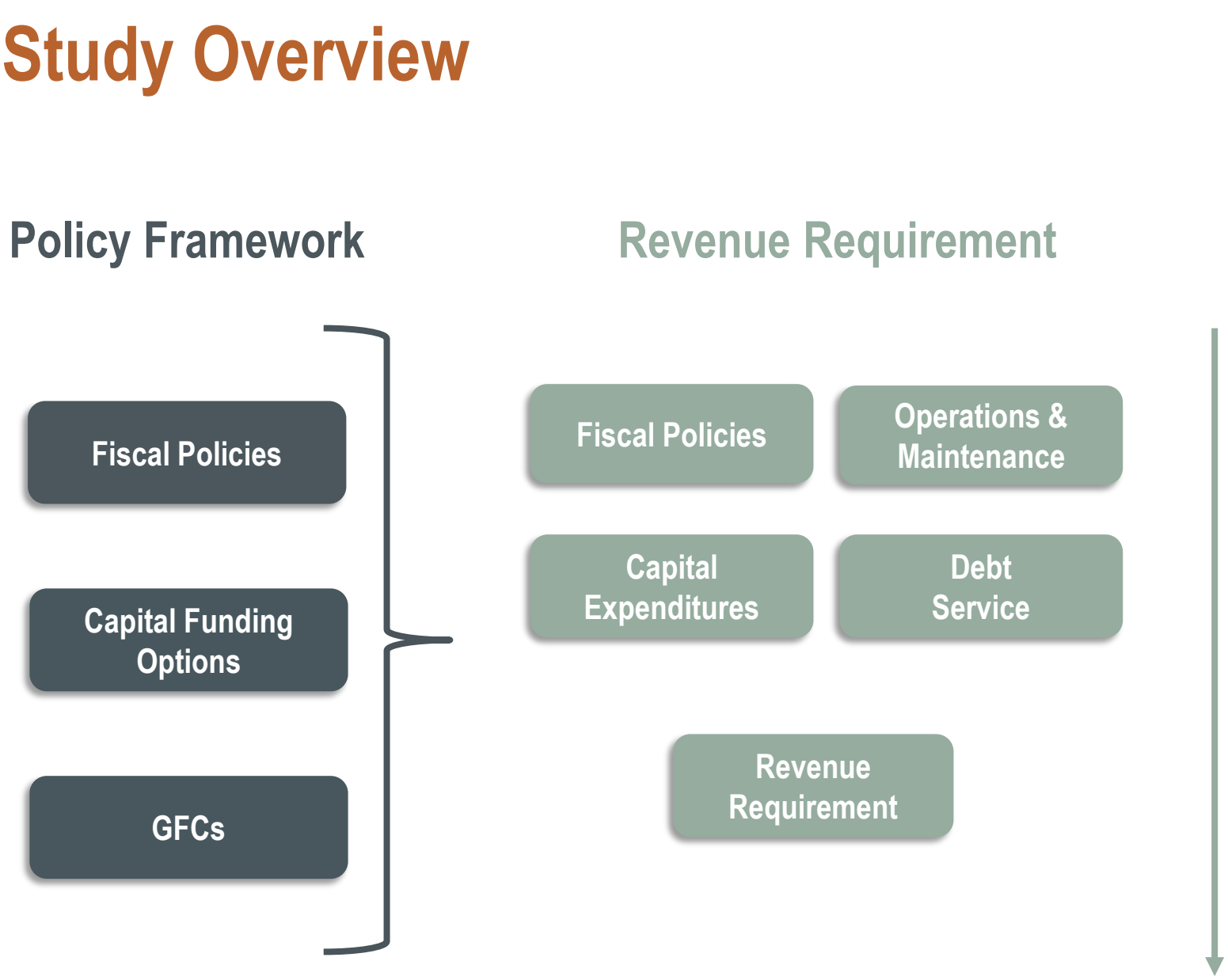
FCS GROUP
Solutions-Oriented Consulting

Agenda

- **Rate Study Overview**
- **Revenue Requirement Summaries**
  "What revenue adjustments are needed to cover the water and sewer utilities' costs?"
  - » Water
  - » Sewer
- **Comparable Rates and Charges**
  - » Comparative rate survey
  - » Comparative GFC survey
- **Summary of Next Steps**

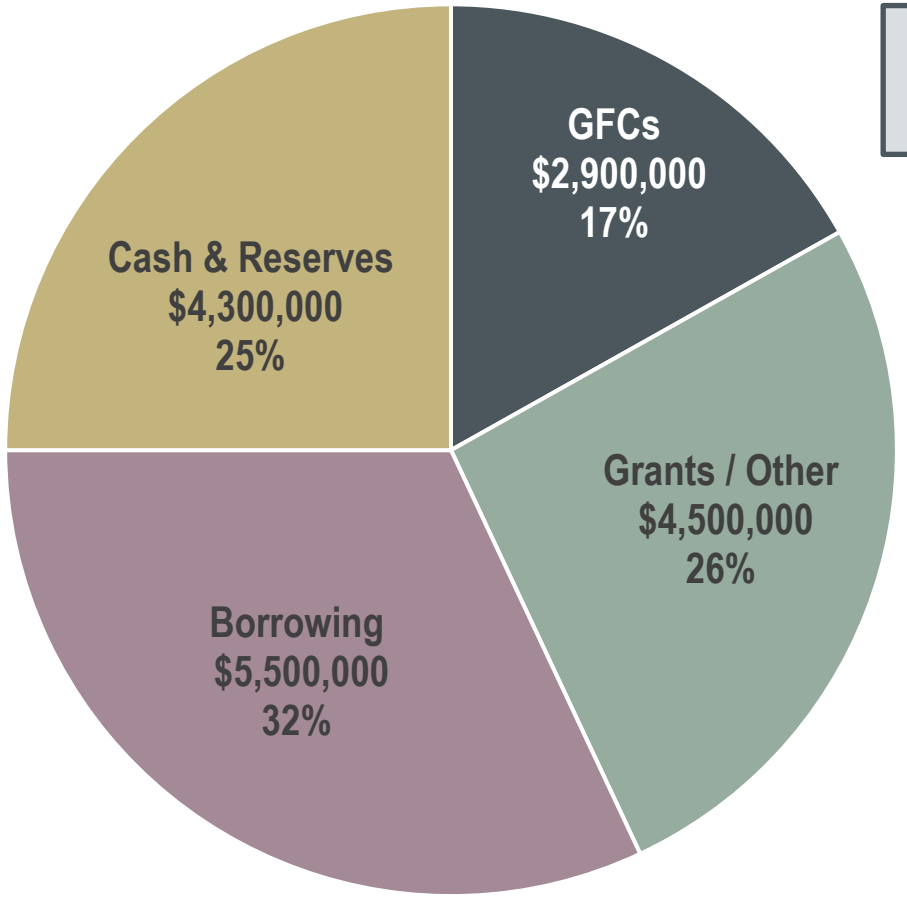


Rate Study Overview



Water Revenue Requirement

Water Utility – Capital Funding Strategy ($3,000 GFC)

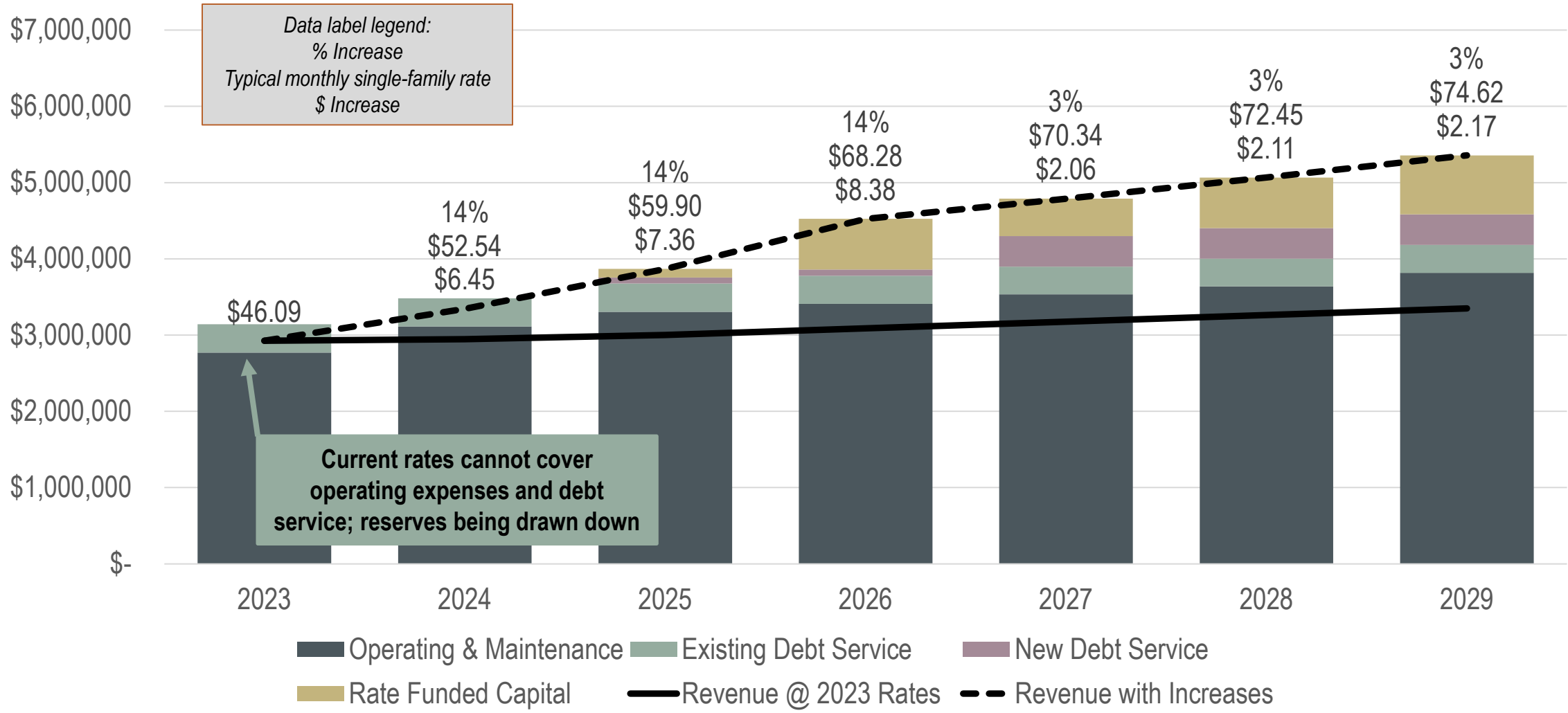


Maximum defensible GFC is $3,756

City staff have done a great job at applying for and getting project grants

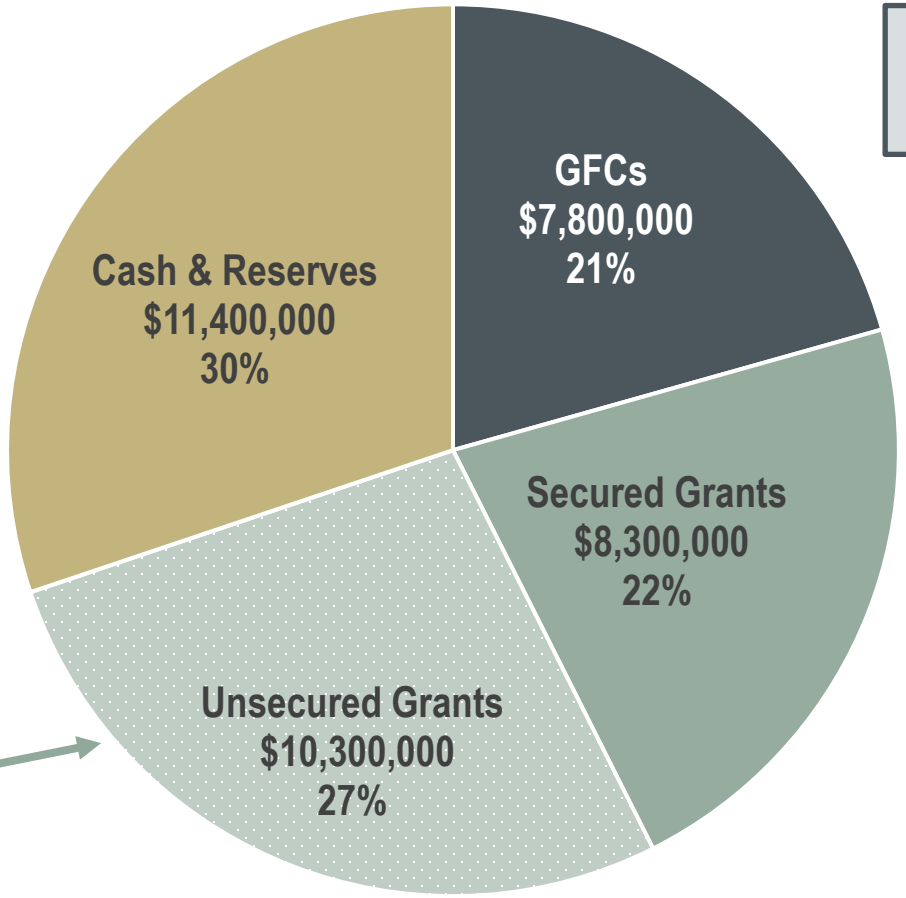
Note: Grants / Other includes approximately $800,000 from a 2023 property sale

Water Utility – Revenue Requirement ($3,000 GFC)



Sewer Revenue Requirement

Sewer Utility – Capital Funding Strategy ($8,000 GFC)

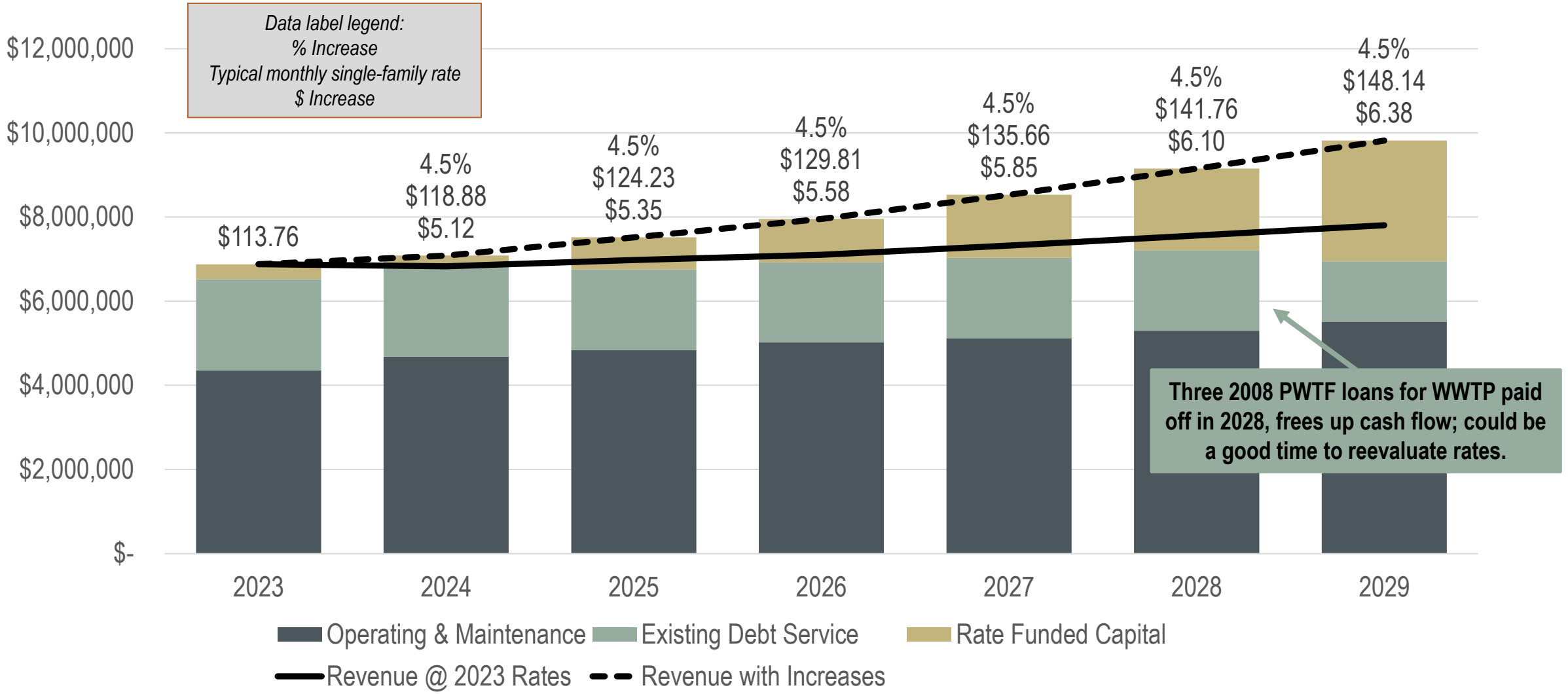


Maximum defensible GFC is $16,155

Like in Water, City staff have done a great job at applying for and getting project grants

Unsecured grants associated with projects that have flexible schedules, can be pushed out if funding does not come through

Sewer Utility – Revenue Requirement ($8,000 GFC)

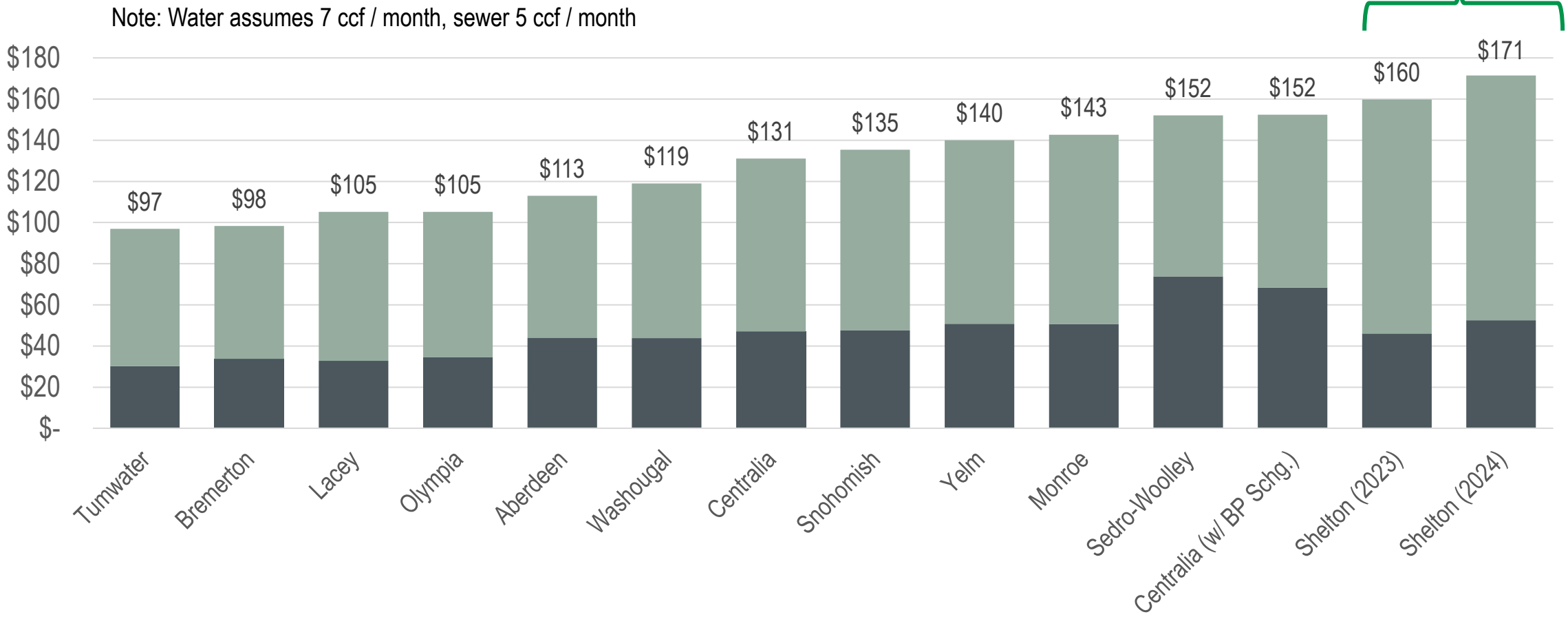


Comparative Rates and Charges



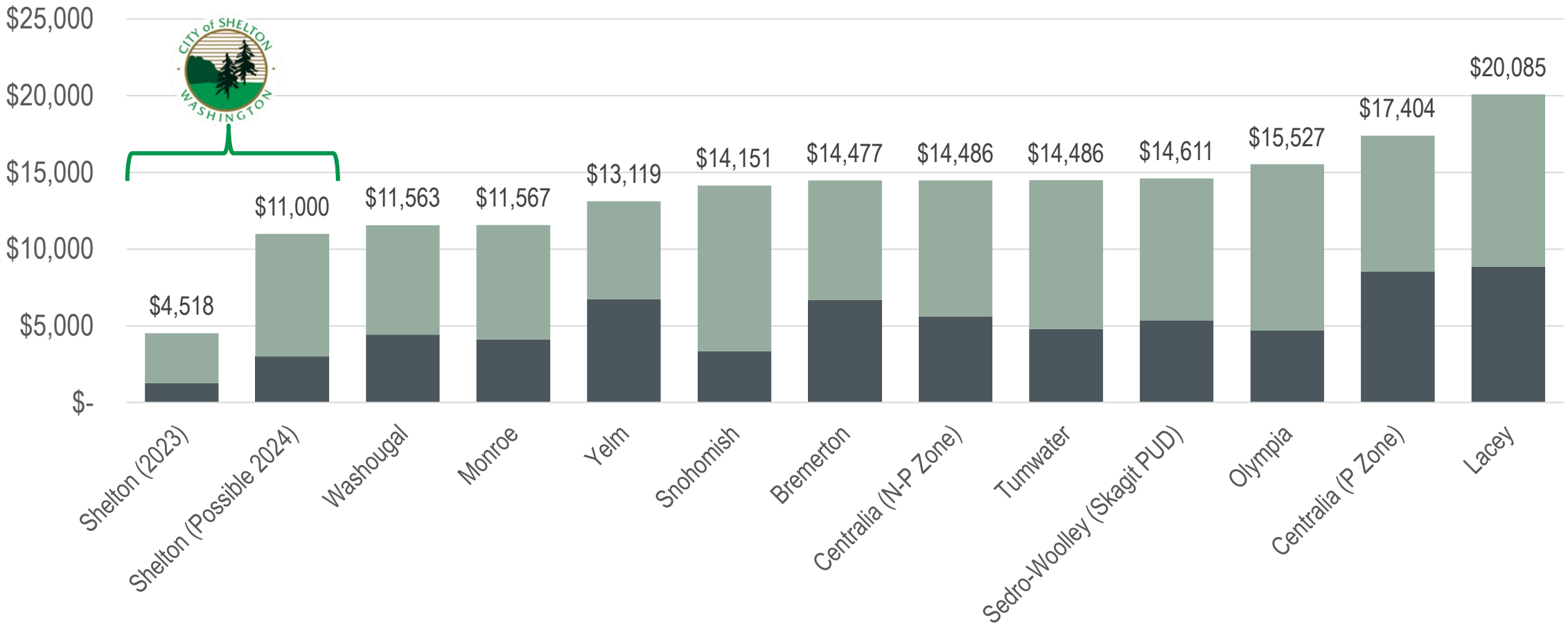
Monthly Single-Family Rate Survey

- **Mix of nearby and / or "comparable" utilities; City on the high-end of monthly rates**



Single-family GFC Survey (3/4” meter)

- **Mix of nearby and / or “comparable” utilities; City on low-end of GFCs**



Next Steps

Summary

- **Revenue requirement**
  - » Adopt a multi-year rate adjustment strategy
  - » Water utility: 14% per year 2024-2026
  - » Sewer utility: 4.5% per year 2024-2026
  - » Revisit in a few years to reevaluate growth, project, & grant assumptions

- **GFCs**
  - » Adopt a $3,000 water utility GFC for 2024 (at least)
  - » Adopt a combined $8,000 sewer utility GFC for 2024 (at least)
    - – Eliminate reclaimed-water-only GFC
  - » Consider phasing towards maximum defensible GFC in each utility over multiple years



Questions?

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FCS GROUP
Solutions-Oriented Consulting

Backup Slides

Water Utility – Capital Program (2023 $)

- **$15.3 million total; $2.2 million / year average ($17.2 million total; $2.5 million / year average escalated)**
- **Storage deficiencies severely limiting growth; capital program helps address deficiencies**

#	Description	2023	2024	2025	2026	2027	2028	2029	Total
ST-04	High School Tank Recoating Design & Construction W/ Overflow Replacement			$60,000	$450,000				**$510,000**
PS-01	Upper Angleside Pressure Zone Improvements	$200,000	$600,000	$2,600,000	*$1.8 million Legislative grant for PS-01 project*				**$3,400,000**
S-02	Well 1 to HS Tank Pipe Pressurization Project		$2,200,000		*$2 million Commerce grant for S-02 project*				**$2,200,000**
	Well 1 generator, chlorine, & security improvements		$70,000	$400,000					**$470,000**
S-03, S-04	Well 3 & 4 Chlorine system improvements, evaluate generator replacement			$80,000	$550,000				**$630,000**
	New 0.5 MG Tank Angleside Pressure Zone				$500,000	$5,000,000			**$5,500,000**
	Railroad Avenue Waterline Replacement, 8th to Front						$250,000	$1,700,000	**$1,950,000**
G-05	K Street Maintenance Facility Purchase (Laydown, Shop, Storage, Admin.)		$220,000	$200,000					**$420,000**
	Water, Storm, & Wastewater Rate and GFC Study					$40,000			**$40,000**
	Automated Meter Infrastructure	$75,000							**$75,000**
	Emergency Generator Receptacle	$30,000							**$30,000**
	New Zero Turn Mower & Trailer	$25,000							**$25,000**
	Total	**$330,000**	**$3,090,000**	**$3,340,000**	**$1,500,000**	**$5,040,000**	**$250,000**	**$1,700,000**	**$15,250,000**

Denotes received and/or awarded grants.

Water Utility – General Facilities Charge

- **General facilities charge revenue can be an important part of the capital funding strategy**

- **Current GFC**
  - » $1,260 per single-family connection (assumes a ¾" water meter)
  - » Charges scale up based on meter size

- **Rate forecast assumes a GFC of $3,000 for a ¾" water meter in 2024**

- **Maximum defensible charge is $3,756**

- **Growth forecast for rate study**
  - » 200 units / year is $250,000 per year under current GFC or $600,000 per year under $3,000 GFC

Per City Staff	2023	2024	2025	2026	2027	2028	2029
ERUs / Year	0	125	200	200	200	200	200

Sewer Utility – Capital Program (2023 $)

- **$32.3 million total; $4.7 million / year average ($37.8 million total; $5.4 million / year average escalated)**

#	Description	2023	2024	2025	2026	2027	2028	2029	Total
LS3/LS1	Front Street Pipe Removal, Design & Construction.	90,000	$120,000	$500,000					**$710,000**
P7	Basin 4 I&I Reduction Design and Construction		$80,000	$450,000	$3,200,000				**$3,730,000**
	Springs Road Sewer Extension to Port of Shelton		$252,000	$3,200,000		*$3 million Community Project Funding Grant*			**$3,452,000**
LS6	North diversion lift station and force main to WRP Design and Construction.				$200,000	$1,300,000	$11,000,000		**$12,500,000**
WW-2	CAAMP (State Conditionally Approved Area Management Plan) PH-1 valve & return flow system				$250,000				**$250,000**
WRP 1A	MBR Plant Headworks Capacity Upgrades	$400,000	$500,000	$2,800,000		*$3.2 million State Grant*			**$3,700,000**
WRP 1B	MBR Filter Replacements, #1 and #2							$5,005,000	**$5,005,000**
WRP	Design and Construct 0.5 MG reclaimed water tank	$300,000	$2,012,000			*$2 million Commerce Grant*			**$2,312,000**
WRP	WRP Property Purchase		$300,000						**$300,000**
G-05	K Street Maintenance Facility Purchase (Laydown, Shop, Storage, Admin.)		$220,000	$200,000					**$420,000**
	Water, Storm, and Wastewater Rate and GFC Study					$40,000			**$40,000**
	Automated Meter Infrastructure	$75,000							**$75,000**
	New Camera Van	$177,000							**$177,000**
	Total	**$1,042,000**	**$3,484,000**	**$7,150,000**	**$3,650,000**	**$1,340,000**	**$11,000,000**	**$5,005,000**	**$32,671,000**

Denotes received and/or awarded grants.

Somewhat grant contingent; assumes 40% grant

Sewer Utility – General Facilities Charge

- **Sewer utility has two GFCs (regular sewer and reclaimed water)**
  - » Recommended combining into one GFC
  - » Comprehensive Plan alludes to “dynamic system”, flexing flows to reclaimed water plant to free up capacity

- **Current GFC**
  - » Regular sewer: $3,258 per single-family connection; $1,629 in Grandview Heights (assumes a ¾” water meter)
  - » Reclaimed water: $335 per ¾” water meter connection
  - » Charges scale up based on meter size

- **Rate forecast assumes a GFC of $8,000 for a ¾” water meter**

- **Maximum defensible charge is $16,155**

- **Growth forecast for rate study**
  - » 200 units / year is $650,000 per year under current GFC or $1.6 million per year under $8,000 GFC

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item D4)

Touch Date: 08/08/2023
Brief Date: 09/05/2023
Action Date: 09/19/2023

Department: Public Works

Presented By: Jay Harris, Public Works Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	J.O.H.
☐	Finance Director	
☒	Attorney	K.H.
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Amending Chapter 15.28 (Water Rates) of the SMC

ATTACHMENTS:
- Ordinance No. 2011-0723
- Proposed 2024-2026 Water & Sewer & GFC Rates
- FCS PowerPoint Presentation

Action Requested:

☒	Ordinance
☐	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
FCS Group was authorized by City Council Resolution No. 1257-1222 in February of this year to conduct a needed water rate and general facility charge (GFC) study, as the rate schedule ends in 2023, and Staff is nearing the completion of an updated Water Comprehensive Plan that sets goals, expectations, and desires for the utility on a 20-year planning horizon. Comprehensive Water Plans are required to be updated every 10 years by the State of Washington/Department of Health. As time passes, wear and tear on water system infrastructure continues to proceed, and upgrades/repairs priorities are subject to change, as items are repaired/replaced, and system capacity is added for new connections. Based on this fact, the water rate analysis includes projections for future improvements that will be needed as water infrastructure reaches its useful life expectancy and needs to be replaced.

The intent of the current Ordinance is to make needed changes to section 15.28 of Shelton Municipal Code (SMC) to remove water rates out of City Code and placing them into the City's annually adopted Master Fee Schedule. This Ordinance makes the revisions to the SMC and the new water rates and GFC's shown on the attached proposed 2024-2026 rate schedule will become effective January 1, 2024, with adoption of the Master Fee Schedule prior to the end of the year.

ANALYSIS/OPTIONS/ALTERNATIVES:
The City Council could elect to modify the proposed water rates and GFC's with the understanding that future operation and maintenance budgets and capital projects identified within both the current 6-Year Capital Improvement Plan and the updated Water System Comprehensive may need to be adjusted accordingly.

BUDGET/FISCAL INFORMATION:
Please see the work conducted by the FCS Group previously for the August 8th Council Study Session and the attached PowerPoint presentation that provides significant budget/fiscal information.

PUBLIC INFORMATION REQUIREMENTS:
Information can be obtained from the Public Works Department.

STAFF RECOMMENDATION/MOTION:
"I move that we forward Ordinance No. 2011-0723 to the September 19, 2023 City Council Meeting Action Agenda for further consideration."

ORDINANCE NO. 2011-0723

AN ORDINANCE OF THE CITY OF SHELTON, WASHINGTON, AMENDING CHAPTER 15.28 OF THE SHELTON MUNICPAL CODE RELATING TO WATER RATES

WHEREAS, The City Council desires to update Title 15, Chapter 15.28, entitled Water Service – Rates and Charges, of the Shelton Municipal Code; and

WHEREAS, following the review of the conclusion of a formal rate study conducted by FCS Group in 2023 and the current status of the water utility, the City Council finds it necessary to update water utility rates and charges to provide revenue essential to support the water utility's operations, debt service and capital projects anticipated in future years; and

WHEREAS, the City Council wishes to adopt the practice of including utility rates in the Master Fee Schedule, which is updated as needed per Council Resolution, rather than including the rates in the municipal code; and

WHEREAS, the proposed 2024-2026 water and sewer and GFC rate schedule is attached and is proposed to be adopted by Resolution by the City Council later this year; and

WHEREAS, the City Council held a meeting, open to the public on this issue on September 5, 2023 and have reviewed public comment on the proposed rate adjustments and considered the recommendations of both staff and the public.

NOW, THEREFORE, be it ordained by the City Council of the City of Shelton, Washington:

Section 1. Repealing and Replacing. Sections 15.28.020 through 15.28.065 of the City of Shelton Municipal Code are hereby replaced in their entirety with the following.

15.28.010 Monthly water rates.
Water rates shall be charged in accordance with the rates in the most recent Council-adopted Master Fee Schedule, effective with the January billings of the affected year.

15.28.020 Schedule 1: Meter charge.
A. Meter Each account served shall pay a monthly meter charge identified and shown within the most recently adopted Master Fee Schedule. Private Fire will be rated based on the size of the backflow prevention device in lieu of a meter size and fire line charges will be collected only prospectively beginning with the January 2018 billings.

15.28.030 Schedule 2: Single-family residential.
A. In addition to the meter charge identified in the Master Fee Schedule
, each single family residential unit shall pay a consumption charge for each cubic foot of water identified and shown within the most recently adopted Master Fee Schedule.

B. Senior Citizen and Disability Discounts. Eligible low-income senior citizens and disabled persons living in single-family residences shall receive a discount, as outlined within the most recently adopted version of the City of Shelton's Master Fee Schedule.

15.28.040 Schedule 3: Multifamily (including duplexes, triplexes, mobile home and trailer parks).
A. In addition to the meter charge identified in the Master Fee Schedule, each multifamily account shall pay a consumption charge for each cubic foot of water identified and shown within the most recently adopted Master Fee Schedule.

15.28.050 Schedule 4: Commercial (including government, industrial, hotel/motel).

A. In addition to the meter charge identified in Schedule 1 above, each commercial account shall pay a consumption charge for each cubic foot of water identified and shown within the most recently adopted Master Fee Schedule.

B. The following provisions shall apply to industrial services, as defined in Section 15.04.160, located in the city or in any outlying area where industrial accounts are served by the city:

1. All costs incurred in connection and installation of meters and service connections will be borne by the industrial services user;
2. Any water supplied to an industrial services user is subject to immediate deactivation when it is determined by the director that an emergency warrants this action;
3. The rate to be charged industrial services shall be computed on a monthly basis consistent with the commercial rates, as shown within the most recently adopted City of Shelton Master Fee Schedule.

15.28.060 Schedule 5: Irrigation.

A. In addition to the meter charge identified in the Master Fee Schedule, each irrigation account shall pay a consumption charge for each cubic foot of water identified and shown within the most recently adopted Master Fee Schedule.

15.28.065 Schedule 6: Wholesale rate.

A. In addition to the meter charge identified in the Master Fee Schedule, the Johns Prairie area owned by the Port of Shelton shall pay a consumption charge for each cubic foot of water identified and shown within the most recently adopted Master Fee Schedule.

Section 2. Severability. If any section subsection, paragraph, sentence, clause or phrase of this ordinance is declared unconstitutional or invalid for any reason, such invalidity shall not affect the validity or effectiveness of the remaining portions of this ordinance.

Section 3. Savings Clause. Chapter 15.28 of the Shelton Municipal Code shall remain in full force and effect until such date as this ordinance becomes effective. The 2023 Water Rates within SMC 15.28.10 through 15.28.65 remain in effect until December 31, 2023.

Section 4. Effective Date. This Ordinance shall take effect five days after its passage and publication.

INTRODUCED the 5th day of September 2023.

ADOPTED by the City Council of the City of Shelton, Mason County, Washington at a regular open public meeting held the 19th day of September 2023.

_____
Eric Onisko, Mayor

AUTHENTICATED:

_____
Donna Nault, City Clerk

Water Utility - Monthly Water Rates

Recommended Rate Increases	2024	2025	2026
Across-the-Board Increases:	14.00%	14.00%	14.00%

Schedule 1: Meter Charge

Schedule 1 - 2023:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$16.46	$14.52	$14.03	$43.51	$10.53
1-inch	$21.39	$18.13	$17.32	$66.56	$12.60
1-1/4-inch	$26.58	$21.68	$20.49	$94.21	$14.40
1-1/2-inch	$31.78	$25.26	$23.63	$121.82	$16.22
2-inch	$47.56	$37.14	$34.54	$191.69	$23.25
2-1/2-inch	N/A	N/A	N/A	N/A	$42.25
3-inch	$117.15	$96.26	$91.08	$405.68	$64.48
4-inch	$162.92	$130.29	$122.16	$613.73	$84.30
6-inch	$282.94	$217.69	$201.47	$1,184.25	$133.49
8-inch	$424.85	$320.48	$294.53	$1,867.04	$190.93
10-inch	$639.07	$489.05	$451.72	$2,712.45	$297.61
12-inch	$978.00	$757.82	$703.07	$4,020.30	$469.57

Schedule 1 - 2024:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$18.76	$16.55	$15.99	$49.60	$12.00
1-inch	$24.38	$20.67	$19.74	$75.88	$14.36
1-1/4-inch	$30.30	$24.72	$23.36	$107.40	$16.42
1-1/2-inch	$36.23	$28.80	$26.94	$138.87	$18.49
2-inch	$54.22	$42.34	$39.38	$218.53	$26.51
2-1/2-inch	N/A	N/A	N/A	N/A	$48.17
3-inch	$133.55	$109.74	$103.83	$462.48	$73.51
4-inch	$185.73	$148.53	$139.26	$699.65	$96.10
6-inch	$322.55	$248.17	$229.68	$1,350.05	$152.18
8-inch	$484.33	$365.35	$335.76	$2,128.43	$217.66
10-inch	$728.54	$557.52	$514.96	$3,092.19	$339.28
12-inch	$1,114.92	$863.91	$801.50	$4,583.14	$535.31

Schedule 1 - 2025:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$21.39	$18.87	$18.23	$56.55	$13.68
1-inch	$27.80	$23.56	$22.51	$86.50	$16.37
1-1/4-inch	$34.54	$28.18	$26.63	$122.44	$18.71
1-1/2-inch	$41.30	$32.83	$30.71	$158.32	$21.08
2-inch	$61.81	$48.27	$44.89	$249.12	$30.22
2-1/2-inch	N/A	N/A	N/A	N/A	$54.91
3-inch	$152.25	$125.10	$118.37	$527.22	$83.80
4-inch	$211.73	$169.32	$158.76	$797.60	$109.56
6-inch	$367.71	$282.91	$261.83	$1,539.05	$173.48
8-inch	$552.14	$416.50	$382.77	$2,426.41	$248.13
10-inch	$830.54	$635.57	$587.06	$3,525.10	$386.77
12-inch	$1,271.01	$984.86	$913.71	$5,224.78	$610.25

Water Utility - Monthly Water Rates

Schedule 1 - 2026:

Meter Size	Single-family	Multifamily	Commercial	Irrigation	Private fire line
3/4-inch	$24.39	$21.51	$20.79	$64.46	$15.60
1-inch	$31.69	$26.86	$25.66	$98.61	$18.67
1-1/4-inch	$39.38	$32.12	$30.36	$139.58	$21.33
1-1/2-inch	$47.08	$37.42	$35.01	$180.48	$24.03
2-inch	$70.46	$55.02	$51.17	$284.00	$34.45
2-1/2-inch	N/A	N/A	N/A	N/A	$62.60
3-inch	$173.56	$142.61	$134.94	$601.03	$95.53
4-inch	$241.37	$193.03	$180.99	$909.27	$124.89
6-inch	$419.19	$322.52	$298.49	$1,754.52	$197.77
8-inch	$629.43	$474.81	$436.36	$2,766.10	$282.87
10-inch	$946.81	$724.55	$669.24	$4,018.61	$440.92
12-inch	$1,448.95	$1,122.74	$1,041.63	$5,956.25	$695.69

Monthly Water Rates	2023	2024	2025	2026
Schedule 2: Single-Family Residential				
Consumption Charge for First 600 c.f.	$0.0345	$0.0393	$0.0448	$0.0511
Consumption Charge for 601-1,500 c.f.	$0.0413	$0.0471	$0.0537	$0.0612
Consumption Charge for 1,500+ c.f.	$0.0513	$0.0585	$0.0667	$0.0760
Schedule 3: Multifamily (including duplexes, triplexes, mobile home parks and trailer parks)				
Multifamily Consumption Charge per c.f.	$0.0401	$0.0457	$0.0521	$0.0594
Schedule 4: Commercial (including government, industrial, hotel/motel)				
Commercial Consumption Charge per c.f.	$0.0395	$0.0450	$0.0513	$0.0585
Schedule 5: Irrigation				
Irrigation Consumption Charge per c.f.	$0.0513	$0.0585	$0.0667	$0.0760
Schedule 6: Wholesale Rate				
Wholesale Consumption Rate Charge per c.f.	$0.0356	$0.0406	$0.0463	$0.0527
Schedule 7: Standby Fire Protection Service	See City code.			
Schedule 8: Regional Plan Partners	Based on agreements.			

c.f. = cubic foot

Water Connections - General Facilities Charge (GFC)

Existing GFC (2023)

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$1,260
1"	2.50	$3,150
1.5"	5.00	$6,300
2"	8.00	$10,080
3"	16.00	$18,900
4"	25.00	$31,500
6"	50.00	$63,000
8"	80.00	$100,800

Maximum Defensible Charge Calculated

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$3,756
1"	2.50	$9,390
1.5"	5.00	$18,780
2"	8.00	$30,048
3"	16.00	$60,096
4"	25.00	$93,900
6"	50.00	$187,800
8"	80.00	$300,480

GFC Assumed for Rate Forecast

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$3,000
1"	2.50	$7,500
1.5"	5.00	$15,000
2"	8.00	$24,000
3"	16.00	$48,000
4"	25.00	$75,000
6"	50.00	$150,000
8"	80.00	$240,000

Sewer Utility - Monthly Sewer Rates

Recommended Rate Increases	2024	2025	2026
Across-the-Board Increases:	4.50%	4.50%	4.50%

Monthly Sewer Rates	2023	2024	2025	2026
Schedule 1: Single-family residential and duplex				
A. Basic Charge (per meter)	$54.14	$56.58	$59.12	$61.78
B. Consumption Charge (per cubic foot)	$0.1084	$0.1133	$0.1184	$0.1237
Schedule 2: Single-family residential and duplex without water service				
Flat Monthly Rate (per customer)	$138.99	$145.24	$151.78	$158.61
Schedule 3: Triplex, multifamily, mobile home and trailer parks				
A. Basic Charge (per dwelling unit)	$54.14	$56.58	$59.12	$61.78
B. Consumption Charge (per cubic foot over 460 c.f. per unit)	$0.1170	$0.1223	$0.1278	$0.1335
Schedule 4: Commercial				
A. Monthly Base Charge based on consumption (per account):				
0 - 1,000 cubic feet	$65.60	$68.55	$71.64	$74.86
1,001 cubic feet - 2,000 cubic feet	$98.12	$102.54	$107.15	$111.97
2,000+ cubic feet	$136.12	$142.25	$148.65	$155.34
B. Consumption Charge (per cubic foot)	$0.1172	$0.1225	$0.1280	$0.1337
Schedule 5: Hotel/Motel				
A. Basic Charge (per unit)	$9.92	$10.37	$10.83	$11.32
B. Consumption Charge (per cubic foot over 84 c.f. per unit)	$0.1172	$0.1225	$0.1280	$0.1337
Schedule 6: Industrial	Case by case basis.			
Schedule 7: Regional Plan Partners	Based on agreements.			

c.f. = cubic foot

Sewer Connections - General Facilities Charge (GFC)

Existing GFC (2023)

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$3,258
1"	2.50	$8,145
1.5"	5.00	$16,290
2"	8.00	$26,064
3"	16.00	$48,870
4"	25.00	$81,495
6"	50.00	$162,900
8"	80.00	$260,640

Maximum Defensible Charge Calculated

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$16,155
1"	2.50	$40,388
1.5"	5.00	$80,775
2"	8.00	$129,240
3"	16.00	$258,480
4"	25.00	$403,875
6"	50.00	$807,750
8"	80.00	$1,292,400

GFC Assumed for Rate Forecast

Water Meter Size	Weighting Factor	Fee
3/4"	1.00	$8,000
1"	2.50	$20,000
1.5"	5.00	$40,000
2"	8.00	$64,000
3"	16.00	$128,000
4"	25.00	$200,000
6"	50.00	$400,000
8"	80.00	$640,000

City of Shelton



Council Meeting
Water & Sewer Rate Study
FCS GROUP
September 5, 2023

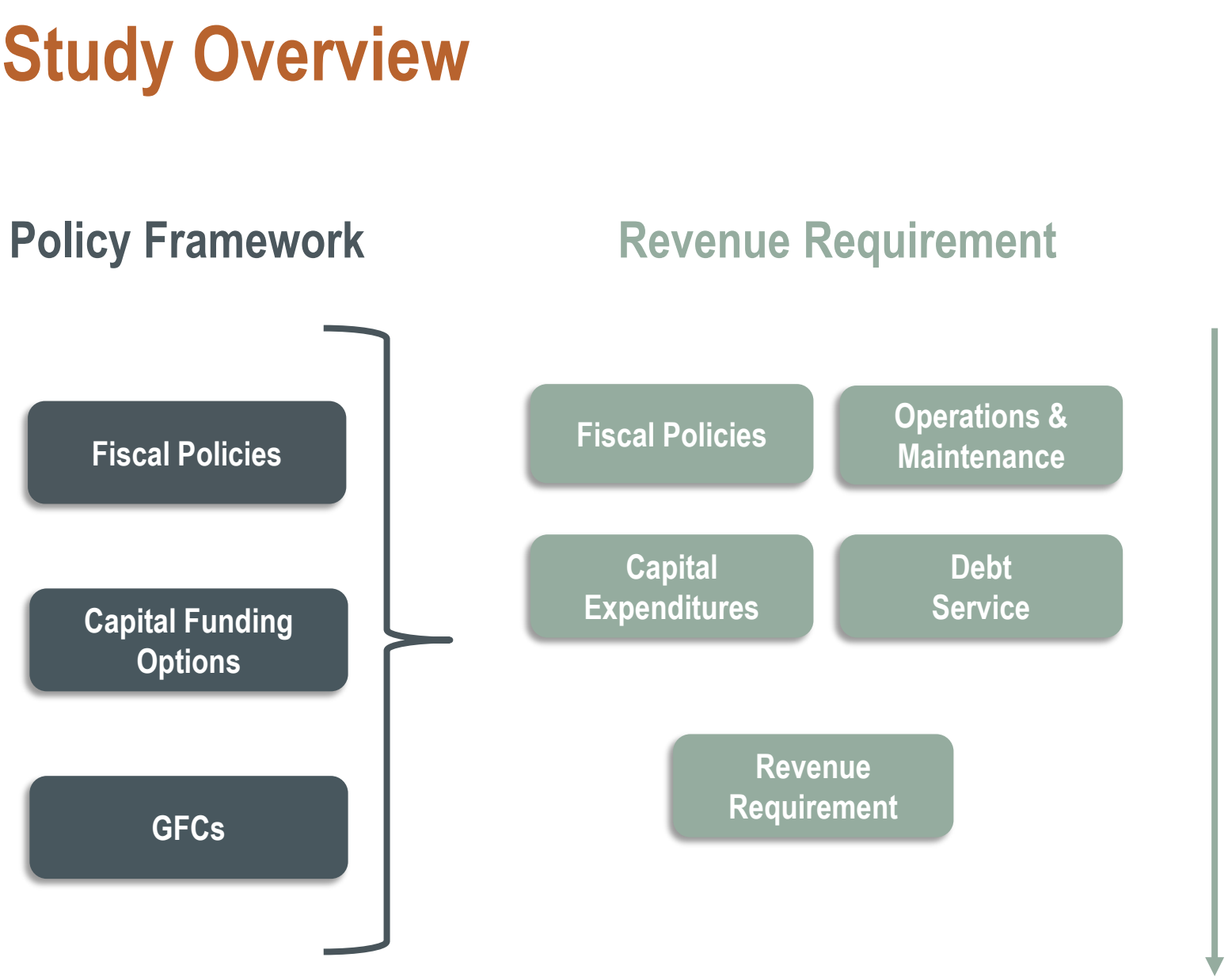
FCS GROUP
Solutions-Oriented Consulting

Agenda

- **Rate Study Overview**
- **Revenue Requirement Summaries**
  "What revenue adjustments are needed to cover the water and sewer utilities' costs?"
  - » Water
  - » Sewer
- **Comparable Rates and Charges**
  - » Comparative rate survey
  - » Comparative GFC survey
- **Summary of Next Steps**

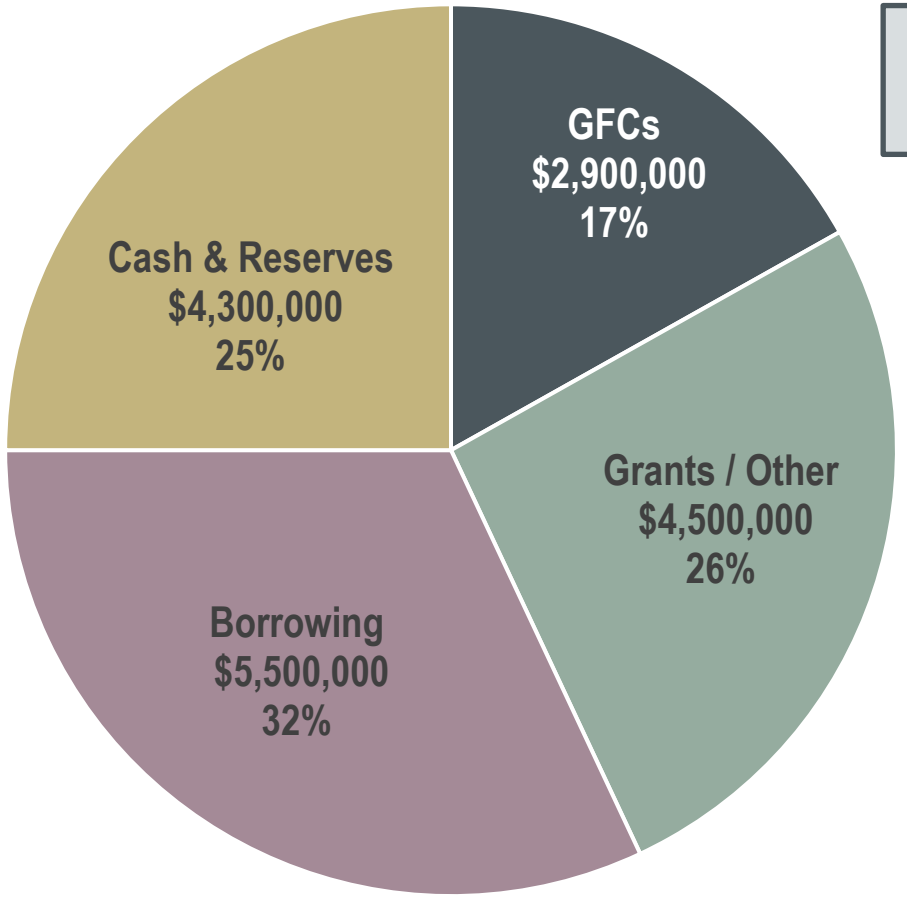


Rate Study Overview



Water Revenue Requirement

Water Utility – Capital Funding Strategy ($3,000 GFC)

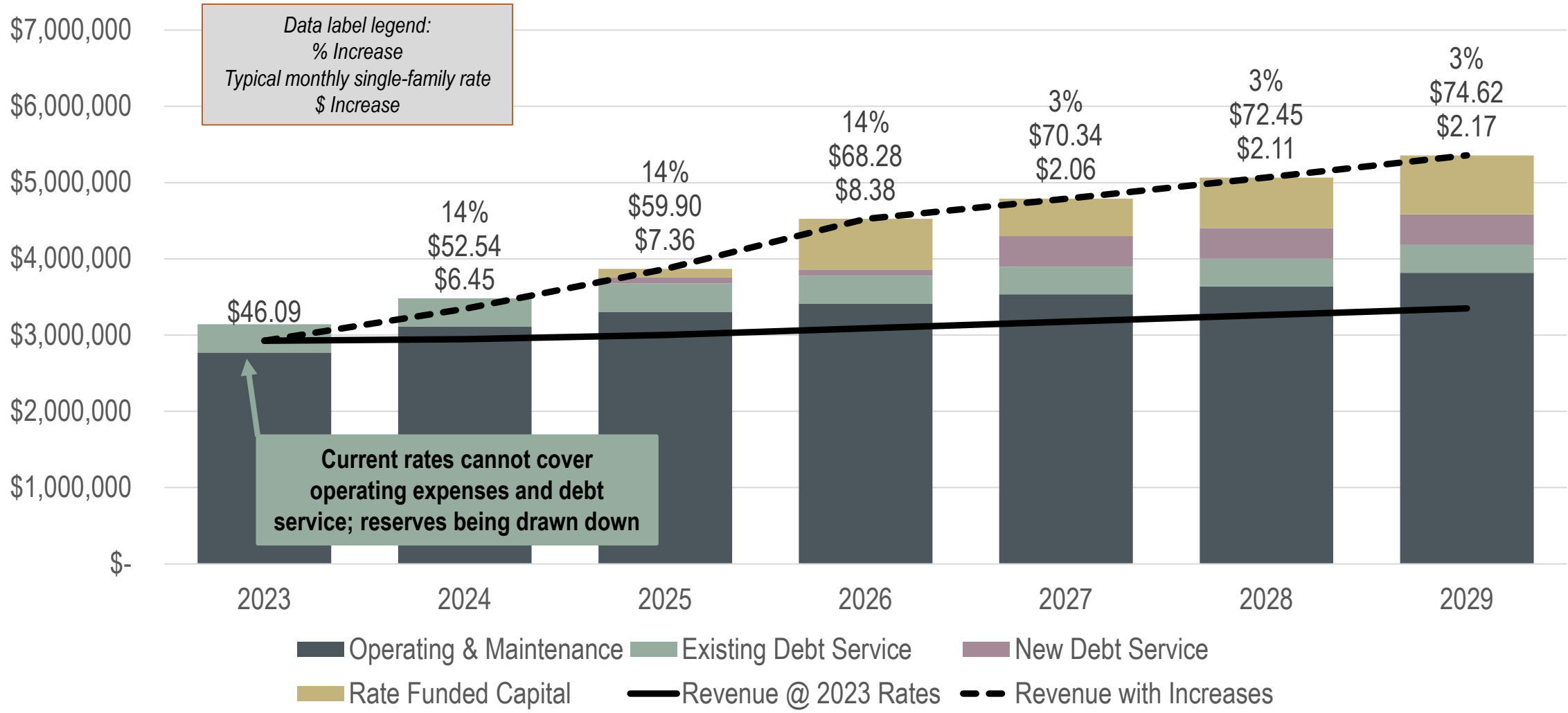


Maximum defensible GFC is $3,756

City staff have done a great job at applying for and getting project grants

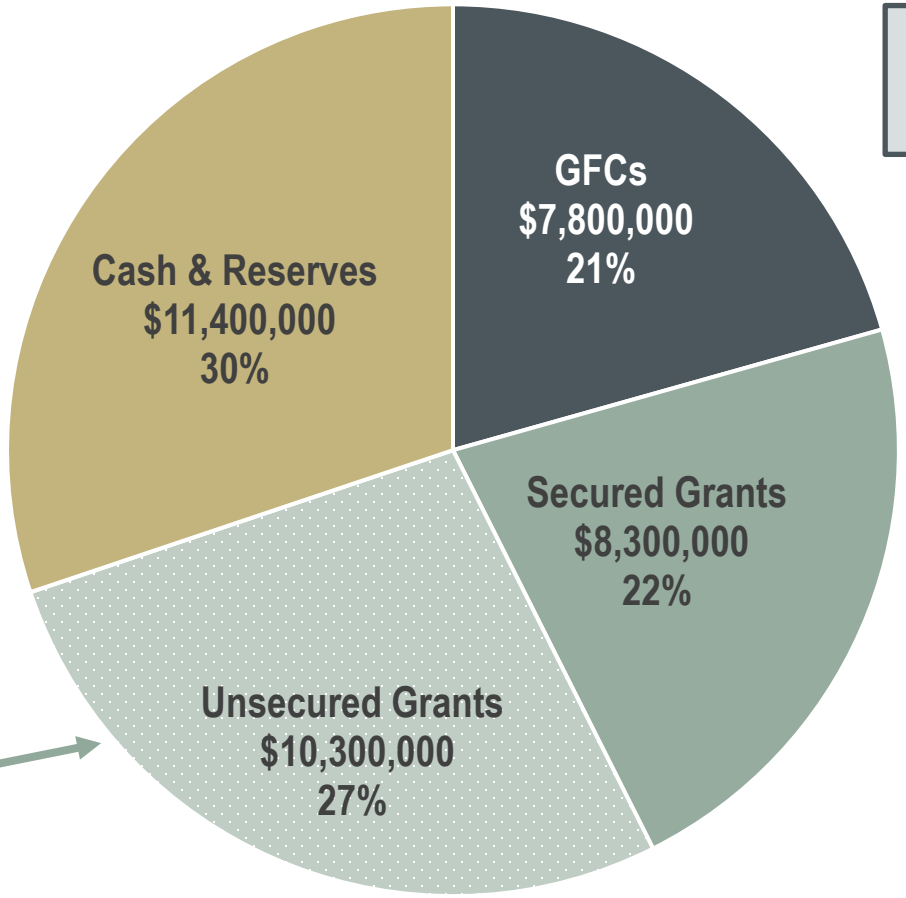
Note: Grants / Other includes approximately $800,000 from a 2023 property sale

Water Utility – Revenue Requirement ($3,000 GFC)



Sewer Revenue Requirement

Sewer Utility – Capital Funding Strategy ($8,000 GFC)

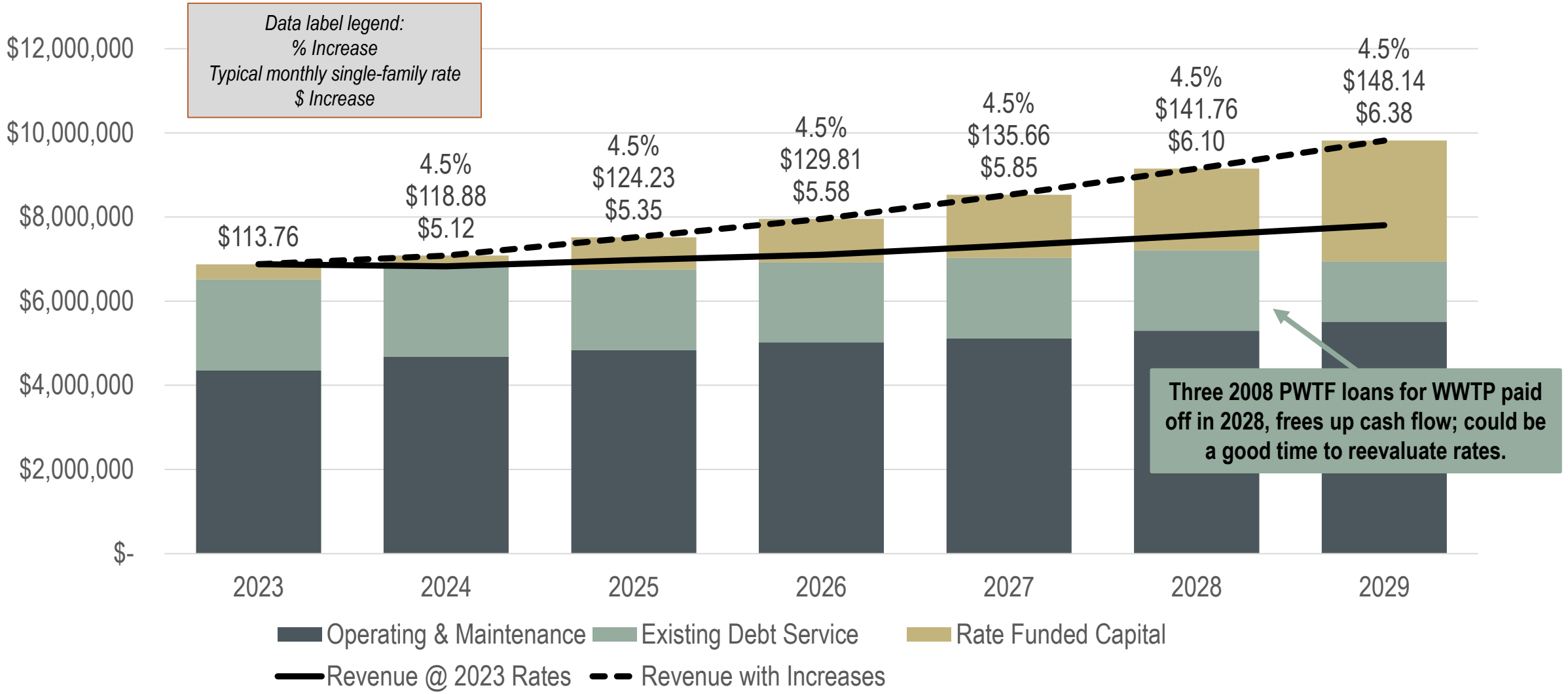


Maximum defensible GFC is $16,155

Like in Water, City staff have done a great job at applying for and getting project grants

Unsecured grants associated with projects that have flexible schedules, can be pushed out if funding does not come through

Sewer Utility – Revenue Requirement ($8,000 GFC)

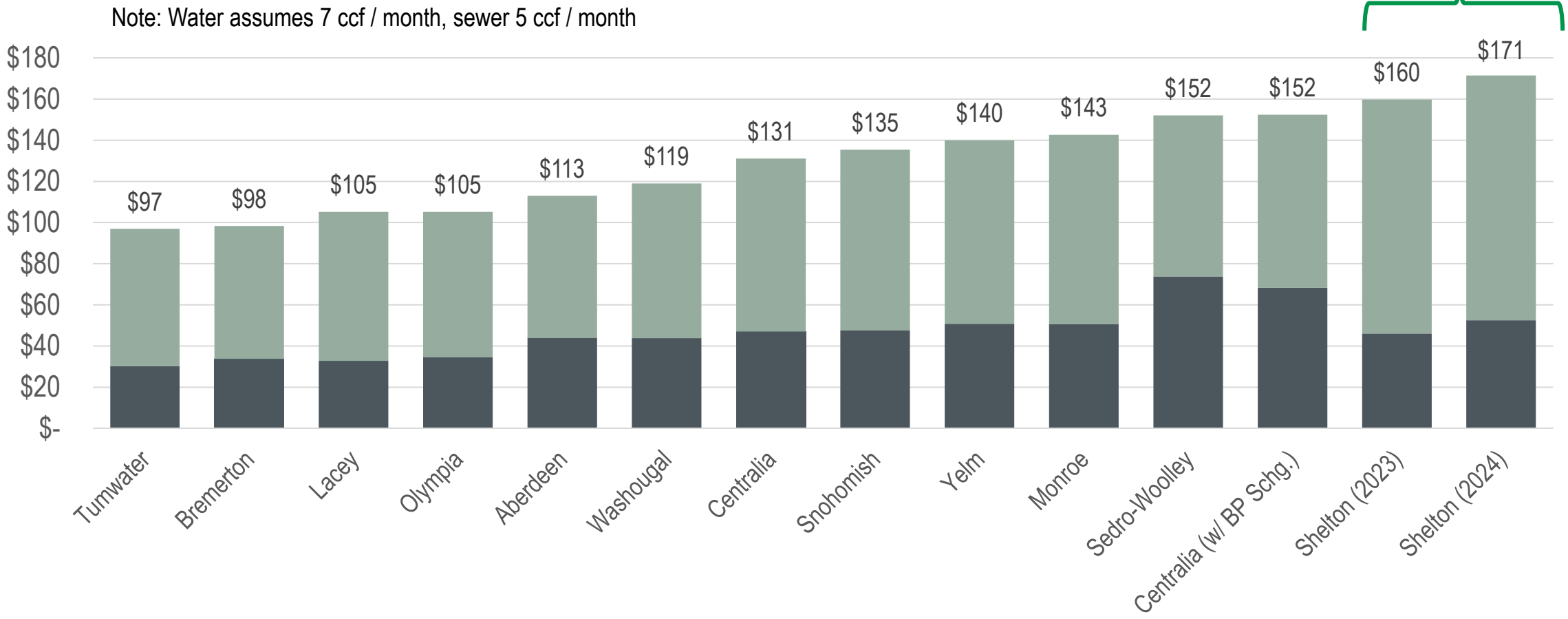


Comparative Rates and Charges



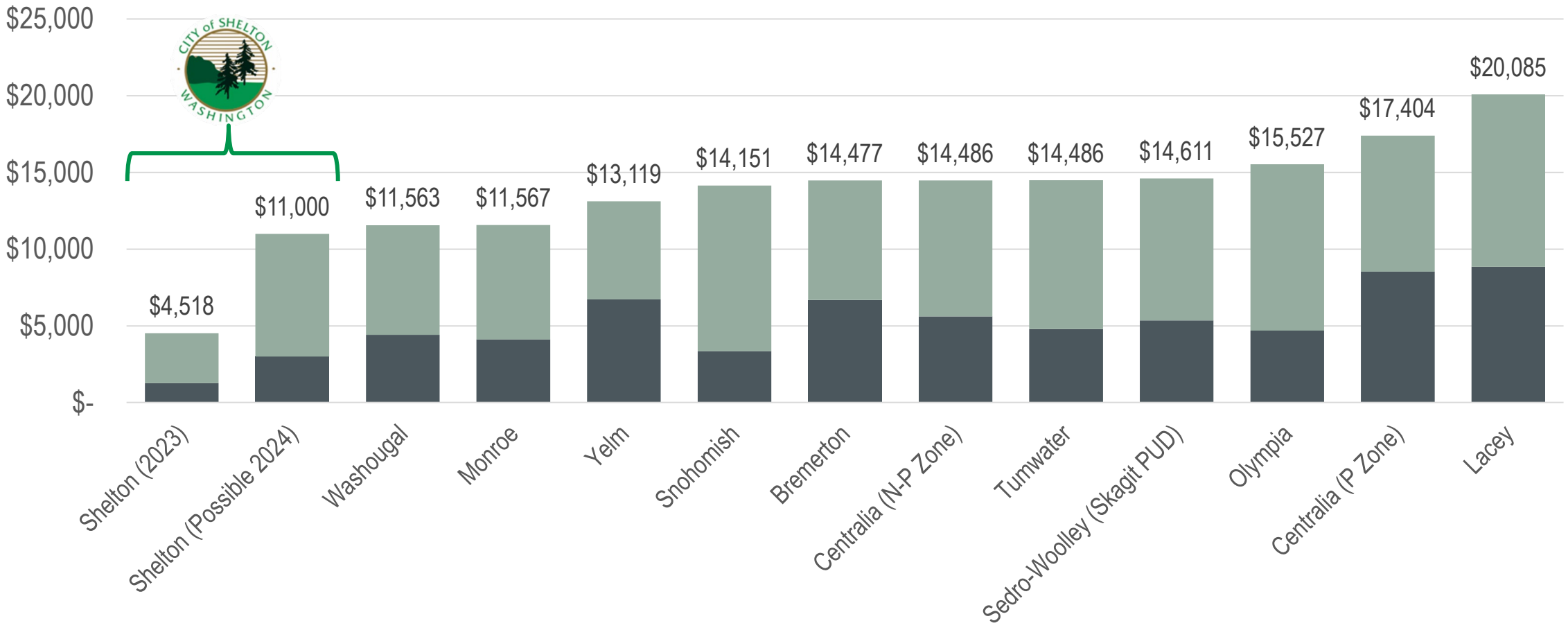
Monthly Single-Family Rate Survey

- **Mix of nearby and / or "comparable" utilities; City on the high-end of monthly rates**



Single-family GFC Survey (3/4” meter)

- **Mix of nearby and / or “comparable” utilities; City on low-end of GFCs**



Next Steps

Summary

- **Revenue requirement**
  - » Adopt a multi-year rate adjustment strategy
  - » Water utility: 14% per year 2024-2026
  - » Sewer utility: 4.5% per year 2024-2026
  - » Revisit in a few years to reevaluate growth, project, & grant assumptions

- **GFCs**
  - » Adopt a $3,000 water utility GFC for 2024 (at least)
  - » Adopt a combined $8,000 sewer utility GFC for 2024 (at least)
    - – Eliminate reclaimed-water-only GFC
  - » Consider phasing towards maximum defensible GFC in each utility over multiple years



Questions?

Tage Aaker
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www.fcsgroup.com

FCS GROUP
Solutions-Oriented Consulting

Backup Slides

Water Utility – Capital Program (2023 $)

- **$15.3 million total; $2.2 million / year average ($17.2 million total; $2.5 million / year average escalated)**
- **Storage deficiencies severely limiting growth; capital program helps address deficiencies**

#	Description	2023	2024	2025	2026	2027	2028	2029	Total
ST-04	High School Tank Recoating Design & Construction W/ Overflow Replacement			$60,000	$450,000				**$510,000**
PS-01	Upper Angleside Pressure Zone Improvements	$200,000	$600,000	$2,600,000	*$1.8 million Legislative grant for PS-01 project*				**$3,400,000**
S-02	Well 1 to HS Tank Pipe Pressurization Project		$2,200,000		*$2 million Commerce grant for S-02 project*				**$2,200,000**
	Well 1 generator, chlorine, & security improvements		$70,000	$400,000					**$470,000**
S-03, S-04	Well 3 & 4 Chlorine system improvements, evaluate generator replacement			$80,000	$550,000				**$630,000**
	New 0.5 MG Tank Angleside Pressure Zone				$500,000	$5,000,000			**$5,500,000**
	Railroad Avenue Waterline Replacement, 8th to Front						$250,000	$1,700,000	**$1,950,000**
G-05	K Street Maintenance Facility Purchase (Laydown, Shop, Storage, Admin.)		$220,000	$200,000					**$420,000**
	Water, Storm, & Wastewater Rate and GFC Study					$40,000			**$40,000**
	Automated Meter Infrastructure	$75,000							**$75,000**
	Emergency Generator Receptacle	$30,000							**$30,000**
	New Zero Turn Mower & Trailer	$25,000							**$25,000**
	Total	**$330,000**	**$3,090,000**	**$3,340,000**	**$1,500,000**	**$5,040,000**	**$250,000**	**$1,700,000**	**$15,250,000**

Denotes received and/or awarded grants.

Water Utility – General Facilities Charge

- **General facilities charge revenue can be an important part of the capital funding strategy**

- **Current GFC**
  - » $1,260 per single-family connection (assumes a ¾" water meter)
  - » Charges scale up based on meter size

- **Rate forecast assumes a GFC of $3,000 for a ¾" water meter in 2024**

- **Maximum defensible charge is $3,756**

- **Growth forecast for rate study**
  - » 200 units / year is $250,000 per year under current GFC or $600,000 per year under $3,000 GFC

Per City Staff	2023	2024	2025	2026	2027	2028	2029
ERUs / Year	0	125	200	200	200	200	200

Sewer Utility – Capital Program (2023 $)

- **$32.3 million total; $4.7 million / year average ($37.8 million total; $5.4 million / year average escalated)**

#	Description	2023	2024	2025	2026	2027	2028	2029	Total
LS3/LS1	Front Street Pipe Removal, Design & Construction.	90,000	$120,000	$500,000					**$710,000**
P7	Basin 4 I&I Reduction Design and Construction		$80,000	$450,000	$3,200,000				**$3,730,000**
	Springs Road Sewer Extension to Port of Shelton		$252,000	$3,200,000		*$3 million Community Project Funding Grant*			**$3,452,000**
LS6	North diversion lift station and force main to WRP Design and Construction.				$200,000	$1,300,000	$11,000,000		**$12,500,000**
WW-2	CAAMP (State Conditionally Approved Area Management Plan) PH-1 valve & return flow system				$250,000				**$250,000**
WRP 1A	MBR Plant Headworks Capacity Upgrades	$400,000	$500,000	$2,800,000		*$3.2 million State Grant*			**$3,700,000**
WRP 1B	MBR Filter Replacements, #1 and #2							$5,005,000	**$5,005,000**
WRP	Design and Construct 0.5 MG reclaimed water tank	$300,000	$2,012,000			*$2 million Commerce Grant*			**$2,312,000**
WRP	WRP Property Purchase		$300,000						**$300,000**
G-05	K Street Maintenance Facility Purchase (Laydown, Shop, Storage, Admin.)		$220,000	$200,000					**$420,000**
	Water, Storm, and Wastewater Rate and GFC Study					$40,000			**$40,000**
	Automated Meter Infrastructure	$75,000							**$75,000**
	New Camera Van	$177,000							**$177,000**
	Total	**$1,042,000**	**$3,484,000**	**$7,150,000**	**$3,650,000**	**$1,340,000**	**$11,000,000**	**$5,005,000**	**$32,671,000**

Denotes received and/or awarded grants.

Somewhat grant contingent; assumes 40% grant

Sewer Utility – General Facilities Charge

- **Sewer utility has two GFCs (regular sewer and reclaimed water)**
  - » Recommended combining into one GFC
  - » Comprehensive Plan alludes to “dynamic system”, flexing flows to reclaimed water plant to free up capacity

- **Current GFC**
  - » Regular sewer: $3,258 per single-family connection; $1,629 in Grandview Heights (assumes a ¾” water meter)
  - » Reclaimed water: $335 per ¾” water meter connection
  - » Charges scale up based on meter size

- **Rate forecast assumes a GFC of $8,000 for a ¾” water meter**

- **Maximum defensible charge is $16,155**

- **Growth forecast for rate study**
  - » 200 units / year is $650,000 per year under current GFC or $1.6 million per year under $8,000 GFC

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item D5)

Touch Date: 08/11/2023
Brief Date: 09/05/2023
Action Date: 09/19/2023

Department: Finance

Presented By: Mike Githens, Finance Director

APPROVED FOR COUNCIL PACKET:

Action Requested:

ROUTE TO:		**REVIEWED:**
☐	Dept. Head	
☒	Finance Director	8/11/23
☐	Attorney	
☒	City Clerk	8/25/23
☒	City Manager	8/14/23

PROGRAM/PROJECT TITLE:
Amended Petty Cash Resolution
ATTACHMENTS:
Resolution No. 1287-0823

☐	Ordinance
☒	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The current Petty Cash Resolution No. 1182-1120, setting petty cash limits at $1,400, is requested to be increased by $300. Resolution No. 1287-0823 will update the petty cash limit to $1,700, which is a $300 increase to allow an additional separate cash box to be allocated for front desk coverage.

ANALYSIS/OPTIONS/ALTERNATIVES:
Sharing cash boxes for front desk coverage is not advisable as a best practice for balancing daily receipts and accountability. Due to a reduction in personnel at the front desk, we need to train an additional staff member for occasional break and absence coverage and this allows for each person who works at the front customer service desk to use their own cash box. Balanced cash boxes are locked in a secure location.

BUDGET/FISCAL INFORMATION:
The $300 cost to set up this amount can be absorbed by the finance department 2023 budget.

PUBLIC INFORMATION REQUIREMENTS:
Information can be obtained from the City Clerk.

STAFF RECOMMENDATION/MOTION:
A recommended motion is: “I move to forward Resolution No. 1287-0823, to the September 19, 2023 action agenda for further consideration.”

RESOLUTION NO. 1287-0823

A RESOLUTION OF THE CITY OF SHELTON, WASHINGTON AMENDING THE PETTY CASH MONIES FOR VARIOUS CITY DEPARTMENTS

WHEREAS, Resolution No. 1182-1120 established petty cash monies for various City departments at their current level; and

WHEREAS, the Finance Department requests a $300 increase to the total petty cash amount assigned to the department to allow for individual cashier starting cash boxes;

NOW, THEREFORE BE IT RESOLVED, by the City Council of the City of Shelton, Washington, as follows:

Section 1.

That Resolution No. 1182-1120 is hereby repealed and declared null and void.

Section 2.

The following rules for petty cash monies shall be in effect with passage of this Resolution:

1. The Director of Financial Services, or their designee, shall be responsible for establishing the appropriate rules and regulations for the disbursement and accounting of any petty cash monies; and

2. Each department within the City shall be responsible for abiding by the rules and regulations established by the Director of Financial Services, or designee, as they pertain to petty cash monies.

Section 3.

The total of all petty cash monies for the City is declared to be one thousand seven hundred dollars, ($1,700) allocated as follows:

Department	Amount	Type of Account
Financial Services	$ 1,400.00	Change and Minor Reimbursement
Municipal Court	$ 300.00	Change and Minor Reimbursement

Section 4.

This Resolution shall become effective immediately upon its approval.

INTRODUCED AND PASSED by the City Council of the City of Shelton on the 19th day of September 2023.

_____
Eric Onisko, Mayor

AUTHENTICATED:

_____
Donna Nault, City Clerk

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item D6)

Touch Date: 08/04/2023
Brief Date: 09/05/2023
Action Date: 09/19/2023

Department: Community & Economic Development

Presented By: Jae Hill, Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	jbh
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
ILA with Mason Co. for Joint Comprehensive Planning

ATTACHMENTS:
-Interlocal Agreement

Action Requested:

☐	Ordinance
☐	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The City of Shelton is requesting an interlocal agreement (ILA) for joint comprehensive planning with Mason County. This ILA will reduce the costs of completing the comprehensive plan updates for both the City and the County, as well as reduce duplicate efforts.

The ILA was drafted by City staff, then reviewed and approved by Mason County, and is now awaiting approval by the Shelton City Council.

ANALYSIS/OPTIONS/ALTERNATIVES:
The City of Shelton and Mason County have both selected the same consultant, SCJ Alliance, to prepare their respective comprehensive plans. By collaborating jointly on several items, as listed in the ILA, both governments can reduce their respective costs. The ILA also outlines areas of responsibility to prevent duplication of work, such as the City's responsibility to lead planning efforts in the Shelton UGA.

BUDGET/FISCAL INFORMATION:
Council allocated $75,000 in the 2023 budget for beginning work on the Comp Plan Update. The Washington State Department of Commerce will provide a $125,000 grant to complete the City's portion of the work. This brings total funds available to $200,000 to be spent before the end of 2025 on the project. A maximum of $30,000 has been earmarked for joint planning efforts with Mason County, leaving $170,000 for Shelton's work.

PUBLIC INFORMATION REQUIREMENTS:
N/A

STAFF RECOMMENDATION/MOTION:
"I move to forward this Interlocal Agreement with Mason County to the Sept. 19, 2023 action agenda for further consideration."

INTERLOCAL AGREEMENT BETWEEN THE CITY OF SHELTON AND MASON COUNTY, RELATED TO JOINT COMPREHENSIVE PLANNING FOR THE 2025 COMPREHENSIVE PLAN UPDATE

THIS INTERLOCAL AGREEMENT is made and entered into this 15th **day of** August**, 2023** between the City of Shelton, a State of Washington Municipal Corporation ("City"), and Mason County, a political subdivision of the State of Washington ("County"), hereafter "the Parties."

WHEREAS, the City and County will be updating their respective Comprehensive Plans ("Comp Plans") in accordance with the Washington State Department of Commerce 2025 Periodic Update Cycle and the requirements of the Revised Code of Washington (RCW) 36.70A ("Growth Management Act" or "GMA"); and

WHEREAS, the County and City have policies which promote mutual coordination for planning and economic development regionally, and there are a number of areas which the Parties agree there would be economy of scale benefits in cooperating in preparing their Comp Plans, thereby reducing costs and avoiding duplication of efforts; and

WHEREAS, the County is prepared to provide technical assistance to support the City's planning efforts in the Shelton UGA.

NOW THEREFORE, in consideration of the mutual terms, provisions and obligations contained herein, it is agreed by and between the City and County as follows:

TERM. This agreement will continue through the end of 2025, through the adoption of both Parties' Comp Plans, or through the end of billing by the County's selected consultant for said work, whichever of these items is latest in time.

PLAN ADOPTION PROCESSES.

The Parties agree to conduct their respective plan adoption processes with an anticipated final completion date of June 30, 2025. The Parties agree to work together in good faith. The Parties agree to provide their own staff, consultants, and legal counsel for their respective processes. Any appeals of either Comprehensive Plan shall be the responsibility of the respective agencies.

CALCULATION OF REIMBURSEMENTS. Where reimbursement is required under this Agreement, the City shall reimburse the County for 7.9% of its expenses in accordance with the Parties' respective populations.

AREAS OF COOPERATION WITH ASSOCIATED COST SHARING METHODS.

1. Data Collection and Population Projections; No Reimbursement

The Parties shall collaborate on collecting data—including characteristics, trends, indicators, actuals, costs, and specific metrics—which needs to be collected for Shelton's individual update, but also for Mason County as a whole. This data includes: population and demographic data, transportation data (including vehicle miles traveled, levels of service, state highway data, airport data), housing information, employment data, GIS data, and economic indicators. To support the use of consistent data and projections, the County will provide standardized data for the City to use. Any additional data specific to the City's planning efforts and not collected by Mason County will be the sole responsibility of the City.

2. Countywide Planning Policies; No Reimbursement

The County shall be responsible for drafting and adopting Countywide Planning Policies (CPPs) in accordance with GMA requirements.

3. Shelton Urban Growth Area Planning; No Reimbursement

The City of Shelton will likely seek to alter the boundaries of its established Urban Growth Area (UGA), by removing some areas that are unlikely to annex, and adding areas that are likely. Since the Shelton UGA is the future boundary of the City and is the water and sewer service area for the City's utilities, the City shall bear the cost and responsibility of planning efforts in the area. The City shall provide a recommended future land use map, revised Comprehensive Plan policies, a revised zoning map for the Shelton UGA and amended development regulations as appropriate for consideration and adoption by the County Commissioners.

4. Housing Element; Population-Based Reimbursement

Starting with the data collected for the County's 2022 Regional Housing Needs Assessment, the County's selected Consultant will develop a countywide housing element. The City shall reimburse the County 7.9% of these costs. After the initial housing needs and policy frameworks are established jointly, then the City will undertake its own application of the required housing provision using its specific land use policies with its own consultant.

5. Climate Change Element; Population-Based Reimbursement

The County's Multijurisdictional Multihazard Mitigation Plan, of which the City was a participant; shall provide the bulk of the newly-mandated Climate Element and required Resiliency subelement for the Comp Plans. Since Mason County is the lead agency for emergency management for the entire county, including the City of Shelton, the County shall lead in developing an initial draft of the Climate Element, which the City will refine separately for the City's specific purposes and adoption thereafter. The City shall reimburse the County for 7.9% of its costs in creating the initial draft of the Climate Element.

MEANS AND AMOUNT OF REIMBURSEMENT. The County's selected consultant will bill the County for services rendered based on task order. The County will issue a quarterly invoice to the City based on this agreement; the City agrees to pay such invoice within 45 days of receipt. Should there be a dispute about the quality of the work in question or billing details, any undisputed portion of the invoice shall be paid while the Parties attempt to resolve the issues in question. The amount authorized for reimbursement under this Agreement shall not exceed $29,999 over the duration of the Agreement.

OWNERSHIP AND USE OF WORK PRODUCT. Any and all documents, drawings, reports, and other work product produced by the County and its selected Consultant under this Agreement shall also become the property of the City upon payment of the County's invoices. The City shall have the complete right to use and re-use such work product in any manner deemed appropriate by the City.

CITY'S RIGHT OF INSPECTION. Even though the Consultant is an independent contractor with the authority to control and direct the performance and details of the work authorized under this

Agreement, the work must meet the approval of the City and shall be subject to the City's general right of inspection to secure the satisfactory completion thereof.

RESOLUTION OF DISPUTES AND GOVERNING LAW.

A. Should any dispute, misunderstanding, or conflict arise as to the terms and conditions contained in this Agreement, the matter shall be referred to the City's Community & Economic Development Director and the County's Community Development Director. The Directors shall determine the term or provision's true intent or meaning. The Directors shall also decide all questions which may arise between the parties relative to the actual services provided or to the sufficiency of the performance hereunder.

B. If any dispute arises between the City and the County under any of the provisions of this Agreement which cannot be resolved by the Directors' determination in a reasonable time, the Parties agree to submit to binding arbitration. The Parties shall bear their own costs and fees for the arbitration, including attorney fees.

WRITTEN NOTICE. All notices required to be given by either party to the other under this Agreement shall be in writing and shall be given in person or by mail to the addresses set forth below. Notice by mail shall be deemed given as of the date the same is deposited in the United States mail, postage prepaid, addressed as provided in this paragraph.

MASON COUNTY	CITY OF SHELTON
Kell Rowen, Department of Community Development, Director	Jae Hill, Community & Economic Development Director
615 W Alder St	525 W Cota St Shelton, WA 98584
(360) 427-9670 ext. 286	(360) 432-5176
KRowen@masoncountywa.gov	jae.hill@sheltonwa.gov

ENTIRE AGREEMENT. This Agreement represents the entire integrated agreement between the City and the County, superseding all prior negotiations, representations or agreements, written or oral. This Agreement may be modified, amended, or added to, only by approval of the Parties' legislative bodies. If extending the duration of the Agreement only, the City and County Managers may mutually agree to such duration extension.

IN WITNESS WHEREOF, the parties have executed this Agreement this 15th **day of** August **2023**.

	MASON COUNTY	CITY OF SHELTON
Signed	Sharon Trask	
Attested	McKenzie Smith	
Approved to form	Tim Whitaker	

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item E1)

Touch Date: 07/21/2023
Brief Date: 08/15/2023
Action Date: 09/05/2023

Department: Parks, Recreation and Facilities

Presented By: Jordanne Krumpols

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	Krumpols
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Civic Center Exterior Rehabilitation Project

ATTACHMENTS:
Invitation to Bid
Bid Tabulation
Resolution No. 1286-0823

Action Requested:

☐	Ordinance
☒	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The Civic Center exterior project's goal is to prepare and repaint exterior surfaces, which includes siding, soffits, fascia and trim and edges. Also, to replace existing damaged siding and new trim band in selected locations. We are also looking at getting existing Fypon Cornice cleaned, repaired, and painted, along with stripping, sanding, cleaning, and staining all sides of existing heavy timber cupola, entrance trusses and wood soffit at the entrance. Using the Municipal Research and Services Center (MRSC) Small Workers Roster, an Invitation to Bid (ITB) was distributed on July 20, 2023, with a response deadline of August 8, 2023. This project also meets the City Council's Strategic Goals under Community Safety, referencing that we are managing full lifecycle of community assets.

The bid opening was held on August 8, 2023, and we received six bids in response to the ITB, with Rhizor's Painting, LLC having the lowest responsible bid of $55,357.

ANALYSIS/OPTIONS/ALTERNATIVES:
N/A

BUDGET/FISCAL INFORMATION:
The adopted budget of $90,000 allows for getting exterior upgrades to the Civic Center completed. Awarding this contract will be bringing us in under our budget amount. If Council accepts the staff recommendation of awarding the contract, we will be able to complete the project.

PUBLIC INFORMATION REQUIREMENTS:
N/A

STAFF RECOMMENDATION/MOTION:
Staff recommends "I move to adopt Resolution No. 1286-0823 as presented."

CITY OF SHELTON
CIVIC CENTER EXTERIOR REHABILITATION

JULY 2023

FACILITIES DEPARTMENT
525 WEST COTA
SHELTON, WASHINGTON 98584
(360) 426-9731

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CITY OF SHELTON
WASHINGTON

CITY OFFICIALS & PERSONNEL

MAYOR	ERIC ONISKO
DEPUTY MAYOR	JOE SCHMIT
COUNCILMEMBER	JAMES BOAD
COUNCILMEMBER	KATHY MCDOWELL
COUNCILMEMBER	SHARON SCHIRMAN
COUNCILMEMBER	DEIDRE PETERSON
COUNCILMEMBER	MIGUEL GUTIERREZ
CITY MANAGER	MARK ZIEGLER
CITY CLERK	DONNA NAULT
DIRECTOR OF FINANCE	MIKE GITHENS
DIRECTOR OF COMMUNITY DEVELOPMENT	JAE HILL
DIRECTOR OF PUBLIC WORKS	JAY HARRIS
SUPERINTENDENT OF STREETS/WATER/EM&R	MIKE ALBAUGH
SUPERINTENDENT OF SEWER/STORM	BRENT ARMSTRONG
SENIOR INSPECTOR	AMIE ANDERSON
FACILITIES/PARKS FIELD SUPERVISOR	LUKE MANNING
BUILDING OFFICIAL	SEAN CARLSTROM
CITY ATTORNEY	HAGGARD & GANSON, LLP

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Washington State Department of Labor and Industries Prevailing Wage Rates, incorporated by reference. See:
https://secure.lni.wa.gov/wagelookup/

EXHIBIT C
WSDOT Standard Specifications, incorporated by reference. See:
http://www.wsdot.wa.gov/publications/manuals/fulltext/M41-10/SS.pdf

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Contract Drawings

PART I

PROCUREMENT AND CONTRACTING REQUIREMENTS

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CITY OF SHELTON
REQUEST FOR BIDS

PROJECT NAME:	Civic Center Exterior Rehabilitation Project
ESTIMATED COST:	$100,000 - $155,000 Base Bid (Inc. WSST)
BIDS DUE:	August 8, 2023 at 1:00 pm
PRE-BID MEETING:	July 26, 2023 at 10:00 am

The City of Shelton is releasing a Small Works Project. As a Contractor on the City of Shelton MRSC Small Works Roster for "Painting - Exterior", you are invited to submit a bid on this project.

Scope of Work: This Contract provides for the rehabilitation of the exterior of the Shelton Civic Center. The Base Bid for this project will include preparation and repainting of exterior surfaces including siding, soffits, fascia and trim, edges, selective replacement of damaged siding, new trim band at the base of existing siding in certain locations, and other related items of work. There are additional additives/alternates for treatment of select exterior surfaces that may or may not be awarded, as budget allows.

The Contractor will have 35 (thirty-five) working days, to complete the work in compliance with all applicable laws and regulations. Prevailing Wages shall be paid.

Solicitation Documents: The complete bid packet can be downloaded from the City of Shelton Website on the Public Works Bid Opportunities page at:
https://www.sheltonwa.gov/business/rfp_and_bid_opportunities.php

Any release of addenda, question and answers, or updates related to this ITB will be posted to the City Website. It is the responsibility of the bidder to frequently monitor this site for any updates regarding this solicitation.

Delivery of Proposal: Proposals can be mailed, hand delivered, or delivered by courier to the City of Shelton, 525 W Cota Street, Shelton, WA 98584.
All proposals must be securely sealed and clearly marked on the outside of the envelope, "***Civic Center Exterior Rehabilitation Bid***".

Bid Due Date: Tuesday August 8, 2023 at 1:00 p.m.
Bidders must be registered on the City of Shelton MRSC Small Works Roster at the time of bid deadline to be eligible to submit a bid for this project. Bids received after the date and time specified above will be rejected and considered non-responsive. There will not be a public opening of the bids.

Prebid Conference: A Prebid Conference is scheduled for 10:00 a.m. Wednesday, July 26, 2023. The conference will begin at the main floor inside the Civic Center, 525 W Cota Street, Shelton, Washington. Prospective bidders are encouraged to participate.

Inquiries: Questions and requests for clarification of the bidding documents may be submitted in writing by 10:00 a.m., Pacific Time, Tuesday August 1, 2023, to the Contracting & Procurement Manager by email to brooke.kilts@sheltonwa.gov. In your email subject line, reference the procurement title; all questions must be in the body of the email rather than in an attachment. No further questions will be accepted after th

is date and time. The City will not be responsible for unsuccessful submittal of questions. No oral responses to questions by City personnel about the project will be binding on the City.

Written answers to all questions submitted will be emailed to the Contractors on the City of Shelton's MRSC Small Works Roster for "Painting - Exterior", and posted on the City's website, by 5:00 p.m. August 2, 2023. The City reserves the discretion to group similar questions to provide a single answer or not to respond when the requested information is confidential. The answers are not typically considered an addendum.

The City of Shelton, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award

Discrimination is prohibited. Each Bidder, contractor, or subcontractor (hereinafter the Contractor) shall not discriminate against any employee, applicant for employment, or any person seeking the services of the Contractor, on the basis of race, color, religion, creed, sex, age, national origin, marital status, or presence of any sensory, mental, or physical handicap, or any other legally protected status.

The City of Shelton reserves the right to waive informalities in the bidding, accept a proposal of the lowest responsible bidder, award only the base bid or the base bid and any combination of additives and/or alternates, reject any or all bids, revise or cancel the work, or require the work to be done in another way if the best interest of the City is served.

BIDDER'S CHECKLIST

The bidder's attention is especially called to the following forms which must be executed in full as required and submitted collectively as the bid proposal package:

___(1) Proposal: Prices must be shown in the space provided.

___(2) Proposal Signature Sheet: To be filled in and signed by the bidder.

___(3) Non-Collusion Declaration: Submit an original signed and notarized document.

___(4) Bond Accompanying Bid: This form is to be executed by the bidder and the surety company unless bid is accompanied by a certified check. The amount of this bond shall be not less than five percent (5%) of the total amount bid. Checks shall be payable to the City of Shelton. Bonds shall be furnished by a company authorized to do business in the State of Washington,

___(5) Bidder's Proposed Subcontractors: Identify categories of work and firms whose subcontract will exceed ten percent of the submitted bid price. This form must be filled out and submitted with the bid proposal.

___(6) Bidder's Work History: This form must be filled out and submitted with the bid proposal.

___(7) Certification of Wage Compliance. This form must be filled out and submitted with the bid proposal.

The following forms are to be executed by the successful bidder and submitted within five (5) working days after Notice of Award:

(1) Contract: To be executed by the successful bidder.

(2) Certificate as to Corporate Principal.

(3) Payment and Performance Bonds: Owner provided form to be executed by the successful bidder and the bidder's surety company and submitted with Contractor executed Contracts.

(4) Declaration of Option for Management of Statutory Retained Percentage: This item to be executed by the successful bidder.

(5) Certificate of Insurance for the types and limits defined in the Contract and all applicable endorsements naming the City of Shelton as additional insured.

The following shall be filed prior to Notice to Proceed:

(a) Statement of Intent to Pay Prevailing Wages – to be filed immediately by the Prime Contractor after Contract is awarded and before work begins, and subsequently by all those providing labor on the project.
(b) City of Shelton Business License Endorsement – to be obtained by the Prime Contractor and all subcontractors performing work on the project.

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PROPOSAL

CITY OF SHELTON

CIVIC CENTER EXTERIOR REHABILITATION

NOTE: All entries must be typed or entered in ink. Bidders shall use the Total Base Bid Amount in determining the bid deposit amount.

BASE BID

Prepare and repaint exterior surfaces, including siding, soffits, fascia and trim, edges, and any other surfaces not factory finished, or unless otherwise noted. Replace existing damaged siding in select locations, and place new trim band at the base of existing siding on the south and west elevations.

Subtotal Base Bid: $_____

Sales Tax (8.8%): $_____

Total Base Bid: $_____

ADDITIVE ALT. BID #1

Prepare, clean, repair, and paint existing Fypon Cornice.

Subtotal (pre-tax) Add. Alt. #1 $_____

ADDITIVE ALT. BID #2

Prepare (including strip, sand, clean, and all other associated prep. work) and stain all sides of existing heavy timber cupola, entrance trusses, and wood soffit at entrance.

Subtotal (pre-tax) Add. Alt. #2 $_____

The undersigned hereby certifies that he/she has personally examined and become familiar with the details and terms for the project, is aware of the local conditions affecting the performance of a contract covering the items bid, has knowledge of the cost of the work at the place where the work is to be done, understands the methods by which payment will be made, and hereby proposes and agrees to supply and install the materials and perform the work in accordance with plans and specifications and will Contract at the Schedule of rates and prices indicated above, which will remain in effect for 45 days from the bid date.

Bidder/Company Name: _____ Date: _____

_____ _____

Print Name of Authorized Official Signature of Authorized Official

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PROPOSAL SIGNATURE SHEET

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as _____.

To City of Shelton (hereinafter called "OWNER").

In compliance with your Invitation to Bid, BIDDER hereby proposes to perform all WORK for the construction of the **Civic Center Exterior Rehabilitation** in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated in the Proposal.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to its own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

The undersigned also agrees as follows:

1. Within five (5) working days after Notice of Award, to execute the contract and to furnish to the City of Shelton, Washington, two satisfactory contract bonds (payment and performance), guaranteeing the faithful performance of the work and payment of bills.
2. Enclosed with this proposal is a cashier's or certified check, or a bid bond, in the sum of not less than five percent (5%) of the bid. It is agreed this 5% of the bid shall be collected and retained by the City of Shelton as liquidated damages in the event this proposal is accepted by the City of Shelton within forty-five (45) calendar days after the bid opening and the undersigned fails to execute the contract in conformance with the contract documents. Said check or bond shall be returned to the undersigned after execution of the contract and required bond.
3. That his/her proposal cannot be withdrawn within forty-five (45) days after the scheduled time for receipt of bids.
4. That it is understood the City of Shelton may accept any combination of the base bid and/or additive alternates or reject any or all bids.
5. Receipt of Addenda numbered _____ through _____ is hereby acknowledged.

_____	_____
Bidder/Proposer's Registered Name	Signature of Person Authorized to Enter into Contract for Bidder/Proposer — Date
_____	_____
State Contractor's License Number	Name of Authorized Official (Printed)
_____	_____
WA State Unified Business Identification No.	WA State Employment Security Dept. No.
_____	_____
Mailing Address	WA State Excise Tax Registration No.
(_____)_____	_____
Telephone	Email Address

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NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. That the undersigned persons(s), firm, association, or corporation has(have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.

2. That by signing the signature page of this proposal, I am deemed to have signed and have agreed to the provisions of this declaration.

Signature of Bidder

Signed this _____ day of _____, 20___.

_____	_____
Name of Bidder (Printed)	Contractor's License Number
_____	_____
Signature of Authorized Official	Title
_____	_____
Name of Authorized Official (Printed)	Phone No.

NOTE:

1. If the bidder is a joint venture, so state giving firm name under which business is transacted.

2. If the bidder is a corporation, this proposal must be executed by its duly authorized officials and the CERTIFICATE AS TO CORPORATE PRINCIPAL must be completed.

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(select one)

BID BOND DEPOSIT

Herewith find deposit in the form of a cashier's check or postal money order in the amount of $_____, which amount is not less than five percent (5%) of the total bid.

Signature _____

- -

BID BOND

KNOW ALL BY THESE PRESENTS:

That we,_____, as Principal, and_____, as Surety, are held and firmly bound unto the City of Shelton, as Obligee, in the penal sum of _____ dollars for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for the project designated **Civic Center Exterior Rehabilitation** according to the terms of the proposal or bid made by the Principal therefore, and the Principal shall duly make and enter into a contract with the Obligee in accordance with terms of said proposal or bid and award, and shall give bond for the faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure so to do, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; Otherwise, it shall be and remain in full force and effect and Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED this____day of_____, 20___.

PRINCIPAL

By: _____
Signature

_____
Printed

_____
Title

SURETY

ATTEST: (if corporation)

_____

Surety

By: _____

Signature

_____

Printed

_____

Title

Please attach certification of authorization for signatures for Surety company.

BIDDER'S PROPOSED SUBCONTRACTORS

The following list identifies categories of work and firms whose subcontract will exceed 10 percent of the submitted bid price. This must be submitted with the bid.

	Contractor Firm Name	Contractor Number	Category	Amount
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

_____
(Contractor)

By: _____ Date: _____
(Authorized Official)

_____
(Title)

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BIDDER'S WORK HISTORY
CIVIC CENTER EXTERIOR REHABILITATION

CONTRACTOR'S COMPANY NAME: _____

DATE: _____ ADDRESS: _____ PHONE NO: _____

1. Bidder has been in business continuously from: _____
(year)

2. Bidder has had experience in work comparable with that required under the proposed contract:

   As a prime contractor for _____ years.

   As a subcontractor for _____ years.

3. Following is a partial list of work the bidder has completed in the last five (5) years which is similar in character and in magnitude to that required in the proposed contract:

Year	Owner	Location	Contract Amount

4. Furnish references for information concerning the work listed above:

Name	Address	Phone No.

5. List five major pieces of equipment which are anticipated to be used on this project:

   1. _____
   2. _____
   3. _____
   4. _____
   5. _____

6. List the supervisory personnel to be employed by the bidder and available for work on this project (Project Manager, Principal Foreman, Superintendents and Engineers):

Name	Title	Years of experience

7. List all projects undertaken in the last five (5) years which have resulted in partial or final settlement of the contract by arbitration or litigation in the Courts:

Name of Client	Contract Amount	Total Claims Arbitrated or Litigated	Amount of Settlement of Claims

8. Name and title of person filling out form:

_____ _____

Name (Printed) *Title*

_____ _____

Bidder's Phone Number *Bidder's Email Address*

CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date (August 8, 2023), the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

_____
Bidder's Business Name

_____
Signature of Authorized Official*

_____
Printed Name

_____
Title

_____ _____ _____
Date City State

Check One:

Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

_____

If a co-partnership, give firm name under which business is transacted:

_____

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

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CITY OF SHELTON
CONSTRUCTION CONTRACT

for

CIVIC CENTER EXTERIOR REHABILITATION

THIS AGREEMENT, made in two (2) copies each deemed an original, and entered into by and between the City of Shelton, Washington, a Washington municipal corporation ("Owner" / "City" / "Public Entity"), under and by virtue of Title 35 RCW as amended, and _____ ("Contractor"), a _____ (*insert entity type and state*).

WITNESSETH:

In consideration of the terms and conditions contained in this Agreement and any Attachments referred to in this Agreement and incorporated by reference, the Owner and Contractor agree as follows:

1. Owner Responsibilities. The City of Shelton, Washington, hereby agrees to retain the Contractor to perform the work to its completion in accordance with the attached plans and specifications subject to the terms and conditions of this Agreement.

2. Contractor Compliance With All Applicable Laws. The Contractor agrees to abide by all applicable laws, whether or not explicitly referenced in this Agreement, and agrees that it is Contractor's responsibility to identify and comply with such laws. This includes but is not limited to Washington's laws against discrimination (Chapter 49.60 RCW and as subsequently amended); Washington's provisions in buildings for aged and handicapped persons (Chapter 90.92 RCW and as subsequently amended); Washington's Industrial Safety and Health Act (Chapter 49.17 RCW and as subsequently amended) and associated WAC provisions regarding safety standards; Washington's Unemployment Compensation provisions (Chapter 50.24 RCW and as subsequently amended); Hours of Labor; Workplace Surveys and Material Safety Data Sheets, and all other applicable laws and statutes. Any reference to laws or statutes in this Agreement or Exhibits/Attachments thereto is not intended to be a complete or exclusive list and should not be relied upon as such.

The Contractor shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract. Title VI also includes protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury's Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this contract.

3. Proof of Registration, License, Bond. The Contractor agrees and represents that Contractor is appropriately registered, licensed, and bonded, and has provided or will provide written evidence of the same upon City request. Contractor agrees and represents that any subcontractors/assignees (if authorized by the City to perform pursuant to the terms of this Agreement) are appropriately registered, licensed, and bonded and have provided or will provide written evidence of the same to the City.

The Contractor shall submit all documentation required under this section for receipt by the City within ten (10) days of execution of this Agreement.

4. Price – Payment – Warranty of Title. The Owner agrees to pay the bid amount of **$_____**, **including sales tax**, for the work specified in the bid, subject to 1-04.6 of the Standard Specifications and any change orders hereafter approved in writing by both the Owner and the Contractor. Payment shall be made within thirty (30) days' of receipt of an approved application for payment for work completed in accordance with this Agreement, subject to statutory retainage requirements. The Contractor warrants and guarantees that title to all work, improvements, materials and equipment covered by an application for payment will pass to the Owner no later than the time of payment, free and clear of liens and any other encumbrances.

5. Retainage. The Contractor agrees that pursuant to RCW 60.28.011, the City will withhold up to 5% of the value of the contract (excluding sales tax), as retainage until the project is completed and receives the written "FINAL ACCEPTANCE." The Contractor shall specify to the City whether such retainage shall be held in a public fund, private interest-bearing account, or private escrow account, and absent such direction, the City shall hold such retainage in either of these in the City's discretion.

The Contractor may request that the City accept a retainage bond covering any or all of the amount in lieu of all or a portion of the retainage to be held in accounts, and the City shall evaluate and grant such request absent compelling basis to the contrary. The Contractor agrees that subcontractors may request the Contractor to submit a retainage bond to the City for the portion of the subcontractor's retainage, and the Contractor agrees to comply with the requirements under RCW 60.28.011(6) in this event.

After the expiration of the forty-five day period for giving notice of lien provided in RCW 60.28.011(2), and after receipt of the certificates of the department of revenue, the employment security department, and the department of labor and industries, the City shall release retainage in accordance with RCW 60.28.021.

6. Performance and Payment Bonding. The Contractor represents that the Contractor has submitted, or submits concurrently with this Agreement, a performance bond and a payment bond for one hundred percent of the total contract price, and represents that the surety issuing the bond has an A.M. Best financial strength rating that satisfies current City requirements.

7. Contractor Responsibilities. The Contractor shall do all work and furnish all tools, materials, and equipment for the **CIVIC CENTER EXTERIOR REHABILITATION**, in accordance with and as described in the proposal and the plans and specifications detailed in the Contract Documents and shall conform to the 2023 WSDOT Standard Specifications for Road, Bridge and Municipal Construction, and amendments thereto effective as of October 3, 2022, ("Standard Specifications"), which are incorporated herein by this reference.

The Contractor shall provide and bear the expense of all equipment, permits (if applicable), work and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work agreed upon.

The Contractor shall be solely responsible, and Owner shall have no responsibility, for all aspects of safety related to this Agreement and work performed. Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to persons or property.

8. Warranty/Guarantee. The Contractor warrants that materials and equipment furnished under the Agreement will be of good quality and new, that the Work will be performed in a workmanlike manner, free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of this Agreement including all Contract Documents (subject to any modifications agreed upon in writing by City and Contractor). The City may conclude that Work not conforming to these requirements, including substitutions not properly approved and authorized, is defective. This warranty includes but is not limited to the implied warranties of merchantability and fitness for a particular purpose. All improvements are warrantied by Contractor to be free from defects in workmanship and material for a period of one (1) year under normal use, from the date of "final acceptance."

To the extent that warranty work is done after completion of the work provided under this Agreement, Contractor agrees that such work is also subject to the original prevailing wage for this Agreement creating the warranty obligation. In this event, the original Intent to Pay Prevailing Wages is still valid; however, Contractor is obligated to update the Affidavit of Wages required pursuant to this Agreement and applicable law.

9. Wage Payment - Prevailing Wage Requirements. The City of Shelton complies with the Prevailing Wage Law of the State of Washington (chapter 39.12 RCW) and requires all contractors to comply. Contractor shall be responsible for paying all wages in accordance with Section 1-07.9(1) of the Standard Specifications. The Contractor must comply with the minimum rates for state wages. Current prevailing wage rates are as set forth in **Contract Document Exhibit B**, which specifies classes of laborers, workers and/or mechanics anticipated on this project. Contractor agrees to update this information throughout the course of this project to ensure that this identification is accurate, and that all classes of laborers, workers, and mechanics are paid wages compliant with all applicable prevailing wage laws.

10. Procedural and Filing Requirements – Statement of Intent to Pay Prevailing Wage; Affidavit of Wages Paid. The Contractor agrees to satisfy all related procedural and filing requirements, including but not limited to filing of Statement of Intent to Pay Prevailing Wages (see RCW 39.12.040) with the Department of Labor and Industries; agrees to promptly provide to the City proof of such filing and related approval by the Department of Labor and Industries; and agrees that the City may withhold all payments under this Agreement until such filing is completed. The Contractor shall ensure that this requirement is similarly satisfied by all subcontractors. The Contractor agrees to file with the City an Affidavit of Wages Paid, promptly upon completion of all work under this Agreement, and following approval of the Affidavit by the Department of Labor and Industries. The Contractor agrees that the City may withhold the retainage until the Contractor and all subcontractors have filed approved Affidavits of Wages Paid. The Contractor shall ensure that this requirement is similarly satisfied by all subcontractors.

11. City Business License. In accordance with Shelton Municipal Code, anyone executing a contract with the City of Shelton, and their subcontractors, is subject to the licensing requirements and business and occupation tax levied under the Shelton Municipal Code. The City of Shelton Business License is required irrespective of whether goods or services are delivered inside or outside of the city limits, or whether the person's physical office is inside or outside of the city limits.

12. Completion of Work. Work shall be completed within **thirty-five (35) working days** from the project start date specified in the Notice to Proceed. "Working Days" are as defined in the Standard Specifications.

13. Indemnification / Hold Harmless. The Contractor shall defend, indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in connection with the performance of this Agreement, except for injuries and damages caused by the sole negligence of the City.

However, should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Contractor and the City, its officers, officials, employees, and volunteers, the Contractor's liability hereunder shall be only to the extent of the Contractor's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Contractor's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

14. Insurance

A. Insurance Term

The Contractor shall procure and maintain insurance, as required in this Section, without interruption from commencement of the Contractor's work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated herein.

The Contractor shall maintain Commercial General Liability completed operations coverage for a period of three years following substantial completion of the work for the benefit of the City by naming the City an additional insured using ISO Additional Insured-Completed Operations endorsement CG 20 37 10 01 or an endorsement providing at least as broad coverage.

B. No Limitation

The Contractor's maintenance of insurance, its scope of coverage and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

C. Minimum Scope of Insurance

The Contractor's required insurance shall be of the types and coverage as stated below:

1. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be at least as broad as Insurance Services Office (ISO) form CA 00 01.

2. Commercial General Liability insurance shall be at least as broad as ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent contractors, products-completed operations, stop gap liability, personal injury and advertising injury, and liability assumed under an insured contract. The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit using ISO form CG 25 03 05 09 or an endorsement providing at least as broad coverage. There shall be no exclusion for liability arising from explosion, collapse or underground property damage. The City shall be named as an additional insured under the Contractor's Commercial General Liability insurance policy with respect to the work performed for the City using ISO Additional Insured endorsement CG 20 10 10 01 and Additional Insured-Completed Operations

endorsement CG 20 37 10 01 or substitute endorsements providing at least as broad coverage.

3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

D. Minimum Amounts of Insurance

The Contractor shall maintain the following insurance limits:

1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of $1,000,000 per accident.

2. Commercial General Liability insurance shall be written with limits no less than $2,000,000 each occurrence, $2,000,000 general aggregate and $2,000,000 products-completed operations aggregate limit.

E. City Full Availability of Contractor Limits

If the Contractor maintains higher insurance limits than the minimums shown above, the City shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract or whether any certificate of insurance furnished to the City evidences limits of liability lower than those maintained by the Contractor.

F. Other Insurance Provision

The Contractor's Automobile Liability and Commercial General Liability insurance policies are to contain, or be endorsed to contain that they shall be primary insurance as respect the City. Any insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Contractor's insurance and shall not contribute with it.

G. Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best rating of not less than A: VII.

H. Verification of Coverage

The Contractor shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsements, evidencing the insurance requirements of the Contractor before commencement of the work. Upon request by the City, the Contractor shall furnish certified copies of all required insurance policies, including endorsements, required in this Contract and evidence of all subcontractors' coverage.

I. Subcontractors' Insurance

The Contractor shall cause each and every Subcontractor to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors. The Contractor shall ensure that the City is an additional insured on each and every Subcontractor's Commercial General liability insurance policy using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

J. Notice of Cancellation
The Contractor shall provide the City and all Additional Insureds for this work with written notice of any policy cancellation within two business days of their receipt of such notice.

K. Failure to Maintain Insurance
Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Contractor from the City.

15. Ownership of Records – Record Maintenance, Preservation, Availability and Public Records. The City is a public entity subject to Washington State statutes regarding Public Records and Open Public Meetings. Subject to the Washington State Public Records Act (chapter 42.56 RCW), the City will generally produce all records generated and received in relation to the subject matter of this contract in response to public records requests received.

The Contractor agrees to maintain, preserve, and promptly make available upon City request, in the format requested by the City, all records related to this Agreement, for a period of seven (7) years from the date of final payment issued by the City. The Contractor agrees to ensure that all records requirements are similarly satisfied by all Subcontractors of any tier, with this requirement explicitly set forth in a written agreement between the Contractor and Subcontractor.

Upon expiration or termination of this Agreement for any reason, the City is entitled to receive, upon City request, all plans, specifications, reports and other materials related to this Agreement and within the Contractor's possession or control, in electronic format or hard copies, as specified by the City, all of which shall be the property of the City to use at its discretion for the purpose of completion, alteration, modification, maintenance, or any other use related to this Agreement.

16. Maintenance and Prompt Production of As-Built Drawings and Records. The Contractor agrees that the City has the ability to withhold any payments due under this Agreement in the event the Contractor fails to keep as-built documentation current and to provide current as-built documentation to the City throughout the course of the project. All as-built drawings and records are to be produced to the City for verification and retention purposes.

17. Designated Points of Contact - Notices. Any Notice required or permitted to be given under this Agreement shall be deemed sufficient if either A) given in writing and deposited into any post office as first-class, postage prepaid and as certified mail, return receipt requested, to the address designated by the Parties, and shall be deemed received on the third (3rd) business day following the date of mailing (with date of mailing not included in the date calculation); or B) hand-delivery to the individual designated as the office point of contact as specified herein; or C) transmitted by e-mail to and from the e-mail addresses respectively designated by the parties. At the pre-construction meeting, the parties shall provide each other with a written designation specifying: i) the name and contact information for the City's and Contractor's field point of contact; ii) the name and contact information for the City's and Contractor's office point of contact; iii) the respective mailing and physical addresses for service; iv) the respective e-mail addresses for service. Any change to this information must be in a written notice provided to the other party.

Notices to the City of Shelton shall be sent to the designated representative at the following address:

Luke Manning, Facilities/Parks Field Supervisor
City of Shelton
525 W Cota Street
Shelton, WA 98584
Phone number: (360) 810-0495
Email: luke.manning@sheltonwa.gov

Notices to the Contractor shall be sent to the designated representative at the following address:

Name, Title
Business Name
Street Address
City, State, Zip Code
Phone number: (xxx) xxx-xxxx
Email: _____

18. Attorneys Fees and Costs. In the event of litigation arising under this Agreement, the parties shall be responsible for their own fees and costs.

19. Applicable Law, Jurisdiction and Venue. This Agreement shall be governed, construed, and interpreted according to the laws of the State of Washington. The venue for any legal action in which the State of Washington is not named as a party shall be in Mason County, Washington, with jurisdiction vested in the Mason County District and Mason County Superior Courts, in the City's discretion. Venue for any legal action in which the State of Washington is named as a party shall be pursuant to Standard Specifications section 1-09.11(3).

20. Disputes and Claims. Disputes and claims related in any way to this Agreement shall be governed by the procedures set forth in section 1-09 of the 2018 Standard Specifications.

21. Severability. Should any term, provision, condition or other portion of this Agreement or its application be held to be inoperative, invalid or unenforceable, and the remainder of this Agreement still fulfill its purposes, the balance of this Agreement or its application or other circumstances shall not be affected thereby, and shall continue in full force and effect.

22. Exhibits/Attachments - Entirety. This Agreement and attachments/exhibits attached hereto and incorporated herein by this reference represent the entire agreement between the Parties. Any prior written or oral statement or proposal or representation, not incorporated herein, shall be excluded, and shall not alter any term or provision of this Agreement. This Agreement may be modified or amended only in writing by any authorized representatives of the Parties.

Exhibits/Attachments include: Except to the extent explicitly contradicted by express terms of this Agreement, the following are incorporated by reference into this Agreement (all collectively "Contract Documents"): i) City of Shelton Design and Construction Standards (as effective January 2019); ii) Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (2023) and amendments thereto ("Standard Specifications"); Documents and Instruments detailed in the Table of Contents dated July 2023 attached hereto. In the event of a conflict or discrepancy among the Contract Documents, the following order of priority shall govern interpretation: First: this Agreement; Second: City of Shelton Design and Construction Standards; Third: Standard Specifications.

If the Contractor finds a conflict, error, or discrepancy in the Contract Documents, the Contractor shall timely report it to the Owner in writing, and shall receive a written interpretation or clarification from Owner to determine how to proceed.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year of the last signature affixed hereto.

CONTRACTOR

Signed this _____ day of _____, 20____

_____ _____
Signature Title

_____ _____
Printed Contractor Name

Federal Tax ID No._____ Contractor License #_____

CITY OF SHELTON

COUNTERSIGNED this _____ day of _____, 20___.

IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed the day and year first herein above written.

_____
Mark Ziegler, City Manager

Attested:

_____
City Clerk

(execute this document if Contractor is a Corporation)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ of the corporation named as Contractor in the Agreement attached hereto; that _____, who signed said Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

By _____

Title _____

State of _____

Subscribed and sworn to before me this _____ day of _____, 20____.

_____
Notary Public in and for the State of Washington.
My Commission expires_____.

State of Washington)
) ss
County of _____)

_____ being duly sworn deposes and says that they are _____

of _____.
(Name of Organization)

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PERFORMANCE BOND

BOND TO CITY OF SHELTON KNOW ALL BY THESE PRESENTS:

That we, the undersigned,_____
_____
_____as Principal, and_____, a corporation organized and existing under the laws of the State of Washington, as a surety corporation, and qualified under the laws of the State of Washington to become surety upon bonds of contractors with municipal corporations, as surety, are jointly and severally held and firmly bound to the City of Shelton in the penal sum as identified in the Standard Specifications, the payment of which sum on demand we bind ourselves and our successors, heirs, administrators or personal representatives, as the case may be.

This obligation is entered pursuant to the statutes of the State of Washington and the Ordinances of the City of Shelton.

Dated at _____, Washington, this _____ day of _____, 20__.

Nevertheless, the conditions of the above obligation are such that:

WHEREAS, the Councilmembers of the City of Shelton passed in regular Council meeting on_____, 20__ to award this contract, the Councilmembers of said City of Shelton has let or is about to let to the said,_____, the above bounden Principal, a certain contract, the said contract being the Civic Center Exterior Rehabilitation Project, (which contract is referred to herein and is made a part hereof as though attached hereto), and WHEREAS, the said Principal has accepted, or is about to accept, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth;

NOW, THEREFORE, if the said Principal shall faithfully perform all of the provisions of said contract in the manner and within the time therein set forth, or within such extensions of time as may be granted under said contract and shall hold said City of Shelton harmless from any loss or damage occasioned to any person or property by reason of any carelessness or negligence of the said Principal, or any sub-contractor in the performance of said work, and shall indemnify and hold the City of Shelton harmless from any damage or expense by reason of failure of performance as specified in said contract, then this obligation shall be released, otherwise it shall be in full force.

The Surety hereby agrees that modifications and changes may be made in the terms and provisions of the aforesaid Contract without notice to Surety, and any such modifications or changes increasing the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this Performance Bond in a like amount, such increase, however, not to exceed one hundred percent (100%) of the original amount of this bond without the consent of the Surety.

PRINCIPAL

By: _____

Signature

_____

Printed

_____

Title

SURETY

ATTEST: (if corporation)

_____

Surety

By: _____

Signature

_____

Printed

_____

Title

Please attach certification of authorization for signatures for Surety company.

CITY OF SHELTON

Template contracts reviewed as to form by City Attorney, 2021

PAYMENT BOND

BOND TO CITY OF SHELTON KNOW ALL BY THESE PRESENTS:

That we, the undersigned,_____

_____

as Principal, and_____, a corporation organized and existing under the laws of the State of Washington, as a surety corporation, and qualified under the laws of the State of Washington to become surety upon bonds of contractors with municipal corporations, as surety, are jointly and severally held and firmly bound to the City of Shelton in the penal sum as identified in the Standard Specifications, the payment of which sum on demand we bind ourselves and our successors, heirs, administrators or personal representatives, as the case may be.

This obligation is entered pursuant to the statutes of the State of Washington and the Ordinances of the City of Shelton.

Dated at _____, Washington, this _____ day of _____, 20__.

Nevertheless, the conditions of the above obligation are such that:

WHEREAS, the Councilmembers of the City of Shelton passed in regular Council meeting on_____, 20__ to award this contract, the Councilmembers of said City of Shelton has let or is about to let to the said,_____, the above bounden Principal, a certain contract, the said contract being the Civic Center Exterior Rehabilitation Project, (which contract is referred to herein and is made a part hereof as though attached hereto), and WHEREAS, the said Principal has accepted, or is about to accept, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth;

NOW, THEREFORE, if the said Principal shall make payment to all persons having a direct relationship with the Principal or a subcontractor of the Principal for furnishing labor, material or both in the prosecution of the work provided for in the contract identified above, and any authorized modifications of the contract that subsequently are made the above obligation is void.

The Surety hereby agrees that modifications and changes may be made in the terms and provisions of the aforesaid Contract without notice to Surety, and any such modifications or changes increasing the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this Performance Bond in a like amount, such increase, however, not to exceed one hundred percent (100%) of the original amount of this bond without the consent of the Surety.

PRINCIPAL

By: _____

Signature

_____

Printed

_____

Title

SURETY

ATTEST: (if corporation)

_____

Surety

By: _____

Signature

_____

Printed

_____

Title

Please attach certification of authorization for signatures for Surety company.

CITY OF SHELTON

Template contracts reviewed as to form by City Attorney, 2021

DECLARATION OF OPTION FOR MANAGEMENT OF STATUTORY RETAINED PERCENTAGE

Note: This form must be submitted at the time the Contractor executes the contract. Contractor shall designate the option desired by initialing the appropriate space.

Monies reserved under provisions of RCW 60.28, at the option of the Contractor, shall be (select one):

_____(1) Retained in a fund by the public body.

_____(2) Deposited by the public body in an interest earning account in a bank, mutual savings bank, or savings and loan association, subject to joint control by owner and the contractor. Interest on moneys reserved by a public body under the provision of a public improvement shall be paid to the contractor.

_____(3) Placed in escrow with a bank or trust company by the public body. When the moneys reserved are placed in escrow, the public body shall issue a check representing the sum of the moneys reserved payable to the bank or trust company and the contractor jointly. This check shall be converted into bonds and securities chosen by the contractor and approved by the public body and the bonds and securities shall be held in escrow. Interest on the bonds and securities shall be paid to the contractor as the interest accrues.

_____(4) Bond in lieu of retainage. Retainage Bond Number _____ is attached.

The Contractor in choosing option (2) or (3) agrees to assume full responsibility to pay all costs, which may accrue from escrow services, brokerage charges, or both, and further agrees to assume all risks in connection with the investment of the retained percentages in securities.

Contractor Signature_____

Date_____

Printed _____

Title _____

Project Name _____

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CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of the City of Shelton, do hereby certify as follows

I have examined the attached contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements are adequate and have has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

By: _____

Date: _____

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GENERAL REQUIREMENTS

STANDARD SPECIFICATIONS: COORDINATION OF CONTRACT DOCUMENTS

This project shall be constructed in accordance with the WSDOT 2023 Standard Specifications for Road, Bridge, and Municipal Construction, hereinafter referred to as the Standard Specifications, and all applicable APWA (American Public Works Association) Standards.

The above mentioned Standard Specifications, except as they may be modified or superseded by the Bidding Requirements or Special Provisions shall govern bidding, award, execution and all work and materials.

The various parts of the contract documents are all essential to the Contract and are intended to be complementary and prescribe and provide for a complete project. Any work or material that has been omitted from the description of the work but is clearly implied shall be furnished by the Contractor as though it has been specifically stated.

DEFINITIONS

Whenever used in the contract documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

APWA – American Public Works Association

AWWA – American Waterworks Association

CITY – Refers to the City of Shelton. The City's authorized representative is the City Engineer or his or her designee.

CONTRACTOR – The person, firm or corporation with whom the Owner has executed the agreement

DOE – Washington State Department of Ecology

DOH – Washington State Department of Health

ENGINEER – The City of Shelton City Engineer or his or her designee.

EPA – Environmental Protection Agency

INSPECTOR – The authorized representative of the Engineer who is assigned to the project site or any part thereof.

OWNER – The City of Shelton, Washington, for whom the work is to be performed, acting through its legally constituted officials, officers, or employees.

STATE – Wherever the Standard Specifications use the term "State" to define "Owner", the term "State" shall be construed to mean the City of Shelton.

SUBCONTRACTOR – The person, firm, or corporation having a direct contract with the Contractor or with any other subcontractor for the performance of a part of the work at the site.

WSDOT – Washington State Department of Transportation

INTERPRETATION OF CONTRACT DOCUMENTS (PRIOR TO BID)

All questions about the meaning or intent of the contract documents shall be submitted to the specified person of the Contracting Agency in writing. Replies will be uploaded to Builder's Exchange of Washington (www.bxwa.com) and registered plan holders will be notified by e-mail. Questions received less than seven days prior to the date for opening bids will not be answered. Only questions answered by formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Bids shall obtain an acknowledgment of receipt of all addenda.

FORM OF BID

Bid shall be made on the proposal form provided. All blank spaces in the form shall be fully completed. Numbers shall be stated in figures. The completed forms shall be without interlineation, alteration, erasure, or recapitulation of work to be done.

Each bid must be accompanied by the fully executed "Proposal Signature Sheet" provided and by a proposal guaranty or bid bond of 5% of the total bid as prescribed in Section 1-02.7 of the Standard Specifications, and made payable to the Owner.

Each bidder is hereby notified that by signing the proposal form, they are declaring non-collusion in the bid process.

REUSE OF DOCUMENTS

Neither Contractor nor any subcontractor, manufacturer, fabricator, supplier, or distributor shall have or acquire any title to or ownership rights in any of the Plans, Specifications, or other documents (or copies thereof) prepared by or bearing the seal of the Engineer; and they shall not reuse any of them on extensions of the project or any other project without written verification or adaptation by the Engineer.

CONTRACT BONDS

The successful bidder shall furnish at the time of execution of the contract, two contract bonds (payment and performance) as prescribed in Section 1-03.4 and 1-03.5 of the Standard Specifications. Also, the Contractor shall obtain and maintain all insurance for the amounts, times, and coverage prescribed in Section 1-07.18 of the Standard Specifications, except as may be modified in these Special Provisions.

PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

The Contractor shall obtain insurance and comply with all requirements outlined in Section 1-07.18(1)-(3) of the Standard Specifications.

WASTE SITE

The Owner has not provided a waste site for the Contractor. All construction waste is the responsibility of the Contractor to dispose properly. The Contractor shall certify to the Owner that the construction debris is disposed of in compliance with all Federal, State and Local laws. The Owner will provide a location for all salvageable materials as directed by the Owner.

LIMITATIONS ON ENGINEER'S RESPONSIBILITIES

Whenever in the Contract Documents the terms "as ordered", "as directed", "required", "as allowed", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used, to describe requirements, direction, review or judgment of the Engineer as to the work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that the Engineer shall have authority to undertake responsibility contrary to the provisions of the following paragraphs.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, and the Engineer will not be responsible for the Contractor's failure to perform the work in accordance with the contract documents.

The Engineer will not be responsible for the acts or omissions of the Contractor or of any Subcontractors, or of the agents or employees of any Contractor or Subcontractor, or of any other persons at the site or otherwise performing any of the work.

WORK BY OTHERS

All work on this contract shall be performed by the Contractor.

SOURCE OF MATERIALS

No source has been provided for any of the materials required for construction of this project.
The Contractor shall make his or her own arrangements to obtain all required materials at his or her own expense, and all cost of acquiring, producing, and placing the materials in the finished work will be considered incidental to the unit bid involved.

MATERIAL STANDARDS

Any material specified by reference to the number, symbol, or title of a specific standard such as a commercial standard, federal specification, a trade association standard, or other similar standard, shall comply with the requirements in the latest revision thereof and of any amendment or supplement thereto, in effect on the date of advertisement for bids, except as limited to type, class, or grade in the Standard Specifications or Special Provisions.

WAGE RATES

Statutes of Washington RCW 39.12 and RCW 49.28 as amended or supplemented, shall be a part of this contract. The Contractor shall comply with Section 1-07.9 of the Standard Specifications. (See Part 4 for copy).

PREVENTION OF ENVIRONMENTAL POLLUTION AND THE PRESERVATION OF PUBLIC NATURAL RESOURCES

The Contractor shall comply with those provisions of federal, state, and local statutes, ordinances and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources that affect or are affected by the project.
The Contractor shall take the necessary precautions to prevent contamination of the creek from accidental spills of motor fuel, oil grease, sediment, silt, and all other materials. The Contractor shall maintain a clean site and control litter during all phases of construction and testing.

LICENSES, REGULATORY SUBMITTALS, AND PERMITS

The Contractor shall obtain all licenses and permits required by federal, state, and local law. The Contractor is specifically notified that a City of Shelton Business and Occupation License is required of the Contractor and all Subcontractors.
Contractor shall obtain necessary local and state permits for work on public rights-of-way.

PROGRESS SCHEDULE

The Contractor shall prepare and submit a progress schedule in conformance with Section 1-08.3. In conformance with Section 1-08.3 of the Standard Specifications, the Contractor, after being awarded the contract, shall immediately prepare and submit to the Contracting Agency for review and approval a progress schedule which will ensure the completion of the project within the time specified. Adequate equipment and forces shall be made available by the Contractor to carry out the schedule to completion of the contract within the time specified.

TIME FOR COMPLETION

In addition to Section 1-08.5, this project, as awarded by Owner, shall be completed in its entirety within the number of working days stipulated in the Contract. The number of working days provided in the contract is deemed to be sufficient time to complete the project. The Contractor shall furnish necessary manpower and equipment to insure completion of the contract within the specified number of working days.

Holidays shall be those legal holidays as defined under Section 1-08.5 in the Standard Specifications.

LIQUIDATED DAMAGES

Failure to complete the work on time shall result in the Contractor paying to the Owner liquidated damages in accordance with Section 1-08.9 of the Standard Specifications.

MOBILIZATION

Mobilization shall conform to Section 1-09.7 Payment for Mobilization of the Standard Specifications.

PROGRESS PAYMENTS, FINAL PAYMENTS, AND RETAINED PERCENTAGES

Section 1-09.9 of the Standard Specifications is hereby amended to add the following: The Contractor and Contracting Agency shall determine a cut-off date each month to calculate that previous month's pay estimate (i.e., the 25th of each month).

SALES TAX

The Contractor is hereby notified that the work on this project is on municipal land. According to the provisions of Section 1-07.2(2) of the Standard Specifications, the Contractor shall be responsible to pay all applicable sales tax.

GENERAL CONTRACTOR'S RESPONSIBILITY

It shall be the Contractor's responsibility to notify in advance Fire and Police departments when their operations will hinder in any manner normal access by emergency vehicles. The Contractor shall leave their afterhours emergency telephone number(s) with the Police Department so that contact may be made at all times in case of emergencies involving the project. The following emergency services may be contacted at the following numbers: Dispatch – 426-4441 (notifies all emergency vehicles in City, including Police, Fire, and ambulance), Fire Department direct – 426-3348.

PART II

GENERAL REQUIREMENTS

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PART 1 - GENERAL

1.01 SCOPE

A. The work included in this Contract is defined on the drawings listed in Section 00 73 00, and within these specifications under the following Division Numbers:

1. PART I – PROCUREMENT AND CONTRACTING
2. PART II - GENERAL REQUIREMENTS

B. The work under this contract is to provide and furnish and/or install all labor, materials and equipment, as may be required to complete the work, installed, tested, and ready for use, and as described in these documents.

Base Bid: Bid includes preparation and repainting of the exterior of Shelton Civic Center, including siding, soffits,
fascias and trim, and edges, and any other surfaces not factory finished, or unless otherwise noted.

Bid includes selective replacement of damaged siding as required

Bid includes new trim band at the base of existing siding on the south and west elevations.

Additive Alt. Bid #1: Fypon Cornice rehabilitation. Add the cost of preparation, cleaning, repair and painting of the existing Fypon cornice.

Additive Alt. Bid #2: Staining of exterior wood heavy timber elements. Add to the cost of preparation, stripping, sanding, cleaning and all other associated preparation, and staining of all sides of existing heavy timber cupola, entrance trusses, and wood soffit at entrance.

1.02 LOCATION

A. This project is located at Shelton Civic Center in Shelton, Washington. The address for the site is 525 W. Cota St., Shelton, Washington.

1.03 ACCESS TO SITE

A. The Contractor shall have access to the construction site via West Grove ST.

1.04 WORK HOURS

A. Contractors work hours: Work shall be limited to Monday through Friday, except city observed holidays, during hours of 7:00 AM to 5:00 PM.
   1. Any exemption or changes must be requested in writing at least two working days in advanced and approved by the city. Work on other days and at other hours shall be only with written approval of the city's representative.
   2. If it becomes necessary to perform Work on weekends and holidays, in order to meet milestones and or final completion dates. Work shall be performed at no change in Contract Amount unless authorized be written Change Order or Field Instruction.

1.05 ENGINEERING AND INSPECTION

A. Engineers, inspectors and other representatives of the City of Shelton will perform necessary engineering and inspection work throughout the duration of the Contract.

B. Engineers and inspectors of the City of Shelton may enter the project site and perform its necessary engineering and inspection work.

1.06 COORDINATION

A. The Contractor shall coordinate its activity with Shelton Civic Center operations, so interference with the Center activities will be minimized.

B. The Contractor shall coordinate with Shelton Civic Center to remain open for business. The Contractor shall not impede City of Shelton business, create nuisance, or endanger city employees and or the public.

C. Access to Civic Center facilities must not be restricted without prior approval.

D. If disruptions to utility services are required for any reason, coordinate with Owner a minimum of 48 hours in advance.

E. Especially noisy activities are to be coordinated with Owner a minimum of 48 hours in advance.

F. Relationship of contract documents: drawings, specifications and other contract documents in the project manual are intended to be complimentary. What is required be one shall be as if required by all. What is shown o required, or may be reasonably inferred to be required, or which is usually and customarily provided for similar work, shall be included in the Work

G. Discrepancies in contract documents: in the event of error, omission, ambiguity or conflict drawings and specifications, contractor shall bring the matter to attention of the architect in a timely manner during bidding period, for determination and direction by the architect in accordance with the provisions of the Contract General Conditions.

1.07 MATERIALS TESTING

Not used

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

B. Documentation of changes in Contract Sum and Contract Time.

C. Change procedures.

D. Procedures for preparation and submittal of application for final payment.

1.02 MEASUREMENT FOR PAYMENT

A. Measurement for payment will be at the prices as stipulated in the bid form for the items listed below. Payment shall be considered full compensation for furnishing all labor, materials, and equipment to complete the work as specified.

1. BASE BID
   a. Description: See description in Sec. 01 11 00 - Summary of Work.
   b. Measurement: Base Bid is a lump sum bid item. Work associated with this item shall not be measured separately for payment.
   c. Payment: Base Bid shall be paid at the lump sum bid price. Partial monthly payments may be made based on the percent of completion agreed by City representatives.
2. ADDITIVE ALTERNATE BIDS
   a. Description: See description in Sec. 01 11 00- Summary of Work.
   b. Measurement: Alternate bids are lump sum bid items. Work associated with these items shall not be measured separately for payment.
   c. Payment: Alternate Bids shall be paid at the lump sum bid price. Partial monthly payments may be made based on the percent of completion agreed by City representatives.
3. UNIT COSTS
   a. Description: These bid items are to be used only in the event that additional materials require replacement, in the judgment of City representatives. See description in Sec. 01 11 00 - Summary of Work.

b. Measurement: Quantities of added materials shall be pre-approved by city representatives based on measurements provided by contractor.
c. Payment: Amounts shall be calculated based on Unit Cost amounts in bid proposal. Amounts will be added to the Contract by Change Order and paid at regular monthly draws.

1.03 SCHEDULE OF VALUES

A. Electronic media printout; submit sample to Architect for approval.

B. Forms filled out by hand will not be accepted.

C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

D. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 PAYMENT APPLICATION MEETINGS

A. Prepare for and attend project meetings to negotiate the percentage completion on or before the 20th of each month. The purpose of the meeting is to review a draft payment application and establish the percentage completion at that date. Present at the meeting will be the Owner's representative, Architect, funding representative, Contractor's project manager, and Contractor's superintendent.

1.05 APPLICATIONS FOR PROGRESS PAYMENTS

A. Initial Payment Application
1. Prior to the first application for payment, the following documents must be submitted to the Architect and approved or the payment application will not be processed. Certain of these documents must be submitted prior to the commencement of construction.
a. List of subcontractors.
b. List of suppliers and fabricators.
c. Schedule of values.
d. Construction schedule.
e. Submittal schedule.
f. List of Contractor's staff assignments

g. Copies of licenses and permits from regulatory agencies.
h. Certificates of insurance and insurance policies.
i. Performance and payment bonds (if required).
j. Intents to Pay Prevailing Wages for Contractor and all subcontractors.

B. Payment Period: Submit at intervals stipulated in the Agreement.

C. AIA form G702; electronic media printout including equivalent information will be considered in lieu of this form upon approval of City.

D. Forms filled out by hand will not be accepted.

E. For each item, provide a column for listing each of the following:

1. Item Number.
2. Description of work.
3. Scheduled Values.
4. Previous Applications.
5. Work in Place under this Application.
6. Authorized Change Orders.
7. Total Completed and Stored to Date of Application.
8. Percentage of Completion.
9. Balance to Finish.
10. Retainage.

F. Execute certification by signature of authorized officer.

G. Submit four copies of each Application for Payment.

1.06 MODIFICATION PROCEDURES

A. Procedures for executing changes in the work shall be as ooutlined in the General Conditions, AIA Document A201, Supplemental Condition and as described herein. Procedures will be discussed further at the Preconstruction conference.

B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor with copy to Owner, using AIA form G107.
1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
2. Promptly execute the change.

C. Changes may be initiated by the Owner and/or Architect. When unforeseen conditions require modifications to the Contract, the Contractor is to propose changes by submitting a written request to the Architect. The proposal will include:
   1. Description of changes, products, and location of modification in the project.
   2. Supplementary or revised Drawings.
   3. Reason for requesting changes.

D. Determination of Payment
   1. Payments for changes will be determined as follows:
      a. Labor- The Contractor will be reimbursed for labor (on an hourly basis as determined by the established prevailing wage rate) for the work described in the change proposal (but not for supervision by superintendents, project managers or general foremen unless a change in contract time is involved).
      b. Materials- The Contractor will be reimbursed for actual invoice costs for Contractor-supplied materials. This cost includes actual freight charges and sales tax provided that these costs have not been paid in some other manner under the contract.
      c. Equipment- The Contractor will be reimbursed for major tools or equipment costs. The approval of the Architect shall be required for such reimbursement (costs for small tools and equipment will not be reimbursed).
      d. Subcontractors- The subcontractors will be allowed up to a 10 percent markup of the total cost of above items 1, 2, & 3 for insurance, B&O tax, and bonding for their work.
      e. Prime Contractors- The prime Contractor will be allowed up to a 10 percent markup of the total cost of the above items 1, 2, 3, & 4 to cover all administrative costs (including the cost of modification proposal preparation).
      f. Insurance, B&O Tax, and Bonding- The Contractor will be allowed an additional 5 percent markup of the total cost of items 1, 2, 3, 4, & 5 for insurance, B&O tax and bonding.
   2. The payments above shall be full payment for all work done by Modification Proposals. The payment shall cover all expenses of every nature, kind, and description, including all overhead expenses, profit, occupational tax, and any other Federal or State revenue acts (other than sales tax), premiums on public liability and property damage insurance policies.

3. No change to the Contractor's indirect expense is permitted for selection of higher or lower priced materials or systems, of the same scope and nature as part of the original Contract.

E. Construction Change Directive
   1. Reference Document: AIA Document G714 Construction Change Directive.
   2. When the owner and Contractor are not in agreement on the terms of a Change Proposal, the Architect may issue a Construction Change Directive, instructing the Contractor to proceed with a change, for subsequent inclusion in a Change Proposal. The Construction Change Directive will contain a complete description of the change and designate the method to be followed to determine the change in the Contract Sum or Time.

F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract

G. Substantiation of Costs: Provide full information required for evaluation.
   1. Provide the following data:
      a. Quantities of products, labor, and equipment.
      b. Taxes, insurance, and bonds.
      c. Overhead and profit.
      d. Justification for any change in Contract Time.
      e. Credit for deletions from Contract, similarly documented.

1.07 CHANGE ORDERS
   A. Reference Document: AIA Document, G701 Change Order
      1. Change Orders list and describe previously approved proposal requests, allowance adjustments, construction change directives, with additions and deletions, and attachments of revised contract documents and/or other documentation.
      2. Change Orders will be prepared monthly prior to progress payment submittals or at such intervals as the Architect deems most practical.
      3. Upon signature and execution by the Owner, the Change Order becomes part of the Contract Documents and alters the Contract Time and/or Cost as described in the Change Order.

1.08 APPLICATION FOR FINAL PAYMENT
   A. Application for Final Payment will not be considered until the following have been accomplished:
      1. Time records and wage rates paid have been submitted, including state certification of payment of prevailing wages.

2. All closeout procedures specified in Division 0 are completed.
3. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments.

B. The Contractor may only request payment for the work against an approved Change Order.

PART 2 - PRODUCTS- NOT USED

PART 3 - EXECUTION- NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

A. Individual submittals required in accordance with the pertinent sections of these specifications.

PART 2 - PRODUCTS

2.01 COMPLIANCE

A. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Architect based on these specifications.

2.02 SHOP DRAWINGS

A. The City of Shelton will not accept shop drawings that prohibit the City from making copies for its own use.

B. Quality: Shop drawings shall be prepared accurately to scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the work.

C. All drawings submitted to the Architect for approval shall be drawn on sheets in 11” x 17” format or sheets that are multiples of 8-1/2 inches by 11 inches. Upon the Architect’s specific request, the Contractor shall furnish copies of any drawing on sheets having the dimensions 24 inches wide by 36 inches long in overall dimensions.

D. Type of Prints Required:
   1. Whenever possible, the Contractor shall transit all submittals in portable document format (PDF).
   2. If PDF format is not feasible, the Contractor shall submit copies of all shop drawings or supplemental working drawings in accordance with the General Conditions.
   3. Distribution: The City will review any drawings provided by the Contractor, mark with appropriate notations, prepare the required number of prints for its use, and return marked copies to the Contractor. The Contractor may then order as many additional copies as required for Contractor’s work.

2.03 MANUFACTURERS' LITERATURE

A. Catalog cuts or brochures shall show the type, size, ratings, style, color, manufacturer, and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. Catalog data shall be submitted in an orderly bound form. General catalogs or partial lists will not be accepted.

B. Whereever possible, submittals shall be submitted electronically as anportable document format (PDF). The manufacturer's original electronic issue is preferred.

C. If electronic format is not possible, submittals shall be submitted with a transmittal form of the Contractors choice.

2.04 SAMPLES

A. The sample submitted shall be the exact or precise article proposed to be furnished.

B. Samples, color chips, finish styles, etc., shall be submitted in sufficient number as to provide the Architect with alternate choices.

2.05 SUBSTITUTIONS

A. The Contract is based on the materials, equipment, and methods described in the Contract Documents.

B. The Architect will consider proposals for substitutions of materials, equipment, and methods only when such proposals are accompanied by full and complete technical data and all other information required by the Architect to evaluate the proposed substitution. (Substitution requests are to be submitted with the form provided at the end of this section.)

C. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved in writing for this work by the Architect.

D. Requests for substitutions may be made before bidding and after award. Such requests shall be accompanied by all technical data and costs, and delivery information. When, in the sole opinion of the Architect, the product is equal, or better, in all respects to the product specified, it will be approved subject to contract requirements and the Contractor's assumption of all responsibility therefore. (Substitution requests are to be

submitted with the form provided at the end of this section.) Substitutions approved prior to bidding will be communicated by Addenda to all bidders.

E. After written approval, this submission shall become a part of the Contract, and may not be deviated from except upon written approval of the City.

F. Catalog data for equipment approved by the Architect does not in any case supersede the Contract Documents. The approval by the Architect shall not relieve the Contractor from responsibility for deviations from drawings or specifications, unless Contractor has in writing called the Architect's attention to such deviations at the time of the submission, nor shall it relieve him from responsibility for errors of any sort in the items submitted. The Contractor shall check the work described by the catalog data with the Contract Documents for deviations and errors.

G. It shall be the responsibility of the Contractor to insure that items to be furnished fit the space available. Contractor shall make necessary field measurements to ascertain space requirements, including those for connections and shall order such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the Drawings and Specifications.

H. Where equipment requiring different arrangement of connections from those shown as approved is used, it shall be the responsibility of the Contractor to install the equipment to operate properly, and in harmony with the intent on the Drawings and Specifications, and to make all changes in the work required by the different arrangement of connections together with any cost of redesign necessitated thereby, all at Contractor's expense.

2.06 SUBMITTALS FOR PROJECT CLOSEOUT

A. When the following are specified in individual sections, submit them at project closeout:
1. Project record documents.
2. Operation and maintenance data.
3. Warranties.
4. Bonds.
5. Other types as indicated.

B. Submit for Owner’s benefit during and after project completion.

PART 3 - EXECUTION

3.01 TRANSMITTALS

A. General: The Contractor shall submit all shop drawings, catalog cuts, brochures and mailable samples accompanied with a transmittal form. Preferred method is PDF format.

B. Preparation: A separate submittal form shall be prepared for each product or procedure and shall be further identified by referencing the Specification section and paragraph number and each submittal shall be numbered consecutively.

3.02 COORDINATION

A. Shop and detail drawings shall be submitted in related packages. All equipment or material details which are interdependent or are related in any way must be submitted indicating the complete installation. Submittals shall not be altered once approved for Construction. Revisions shall be clearly marked and dated. Major revisions must be submitted for approval.

B. The Contractor shall thoroughly review all shop and detail drawings, prior to submittal, to assure coordination with other parts of the work. The Contractor's failure to do this will be the cause for rejection. Submittals shall bear this approval stamp and initials.

C. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.

END OF SECTION

PART 1 – GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

A. The provisions and intent of the Contract, including the General Conditions, Supplementary Conditions, Appendices, and other sections of the Contract Documents, apply to this work as if specified in this section.

1.02 DESCRIPTION OF WORK

A. The work includes the requirements to maintain environmental controls by the Contractor until the acceptance of the Contract.

1.03 SITE MAINTENANCE

A. The Contractor shall keep the work site, staging areas, and Contractor's facilities clean and free from rubbish and debris. Materials and equipment shall be removed from the site when they are no longer necessary. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to present a clean and neat appearance in conformance with the present condition of the site.

B. Cleanup:

1. Waste material of any kind shall not be permitted to remain on the site of the work or on adjacent streets. Immediately upon such materials becoming unfit for use in the work, they shall be collected, carried off the site, and properly disposed of by the Contractor.
2. The contractor shall ensure that screws and other hazards to tires are picked up immediately. The contractor shall periodically sweep with a magnet to pick up all the screws. The contractor shall be responsible for any tire damage due to debris from this project.
3. In the event that waste material, refuse, debris, and/or rubbish are not removed from the work by the Contractor, the City reserves the right to have the waste material, refuse, debris and/or rubbish removed, and the expense of the removal and disposal charged to the Contractor.

1.04 AIR POLLUTION CONTROL

A. The Contractor shall use Ultra Low Sulfur Diesel fuel on all off-road construction equipment.

B. The Contractor shall not discharge smoke, dust, odor, and/or other contaminants into the atmosphere that violate the regulations of any legally constituted authority. Internal combustion engines shall not be

allowed to idle for prolonged periods of time, and shall be turned off when not in use. The Contractor shall maintain construction vehicles and equipment in good repair. Exhaust emissions that are determined to be excessive by the Engineer shall be repaired or replaced.

1.05 NOISE CONTROL

A. Construction involving noisy operations, including starting and warming up of equipment, shall be in compliance with local noise ordinances. Noisy operations shall be scheduled to minimize their duration. The Contractor shall comply with the City of Shelton for the hours of operations, unless otherwise approved by the City of Shelton.

B. The Contractor shall comply with all local, state and federal controls and noise level rules, regulations, and ordinances that apply to any work performed by the Contractor pursuant to the Contract.

C. Each internal combustion engine, used for any purpose on the job or related to the job, shall be enclosed and be equipped with a muffler and spark arrester of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler and enclosure.

D. Noise levels for trucks shall not exceed 90 dBA at 50 feet as measured under the noisiest operating conditions. For all other equipment, noise levels shall not exceed 85 dBA. Equipment that cannot meet these levels shall be quieted by use of improved exhaust mufflers, portable acoustical screens, or other means. Equipment not modified to meet these requirements shall be removed from the project.

1.06 TREE AND PLANT PROTECTION

A. Existing Vegetation Protection:
   1. The Contractor shall carefully protect the vegetation inside and outside of the boundaries of the project site from damage by construction activities.
   2. If any vegetation is damaged or destroyed by construction, the Contractor shall replace it with species and grade as required by the Engineer.

1.07 SURFACE WATER AND GROUNDWATER

A. Only clean, clear water is allowed to enter the city catch basins or on-site drainage system. The Contractor shall employ appropriate BMPs (Best Management Plans) to ensure that no debris, turbid water, or other pollutant enters storm water drain systems.

1.08 OIL SPILL PREVENTION AND CONTROL

A. The Contractor shall be responsible for prevention, containment, and cleanup of spilling of oil, fuel, and other petroleum products used in the Contractor's operations. All such prevention, containment, and cleanup costs shall be borne by the Contractor.

B. The Contractor is advised that discharge of oil from equipment or facilities into state waters or onto adjacent land is not permitted under state water quality regulations.

C. The Contractor shall, at a minimum, take the following measures regarding oil spill prevention, containment, and cleanup:

1. Fuel hoses, lubrication equipment, hydraulically-operated equipment, oil drums, and other equipment and facilities shall be inspected regularly for drips, leaks, or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
2. The Contractor shall have a spill kit available on site.

PART 2 – PRODUCTS- NOT USED

PART 3 – EXECUTION- NOT USED

PART 4 - MEASUREMENT AND PAYMENT

All costs associated with this section shall be considered incidental to the overall project and shall not be measured separately for payment.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Other definitions are included in individual specification sections.

1.02 DEFINITIONS

A. As directed: Directed by authorized City Representative.

B. As required: As required to suitably complete the work.

C. Coordinate: To combine in an approved manner the work of all trades for a complete, acceptable, and operating installation.

D. Furnish: To supply, deliver, unload, and inspect for damage.

E. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, make ready for use, and enter permanently into the project.

F. Install in accordance with manufacturer's recommendations or directions: Throughout the documents, although it may not be specifically stated, Contractor is to install all work in accordance with manufacturers; directions. Conflict between manufacturer's recommendations and these documents: Should any provision of these documents be in conflict with manufacturer's directions or manufacture's recommendations, immediately notify Architect. Do not proceed until written authorization is received.

G. Manufacturers' (Manufacturer's) directions and recommendations: Where Contractor is required to follow manufacturer's directions, recommendations, instructions, and the like, but more than one manufacturer is involved in the work or its component parts, Contractor must follow all manufacturer's directions and recommendations. In the event of conflict between manufacturer's directions and recommendations, Contractor shall submit discrepancy or conflict to Architect for resolution and instruction.

H. Notice to Proceed: A notice from Owner to Contractor that defines the date on which the Contract Time begins to run.

I. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result. Products may be new, never before used, or re-used materials or equipment.

J. Project Manual: The book-sized volume that includes the procurement requirements, the contracting requirements, and the specifications.

K. Provide: To furnish and install.

L. Supply: Same as Furnish.

M. Substantial Completion: Work is sufficiently completed to be used for its intended purpose, in the judgment of the City Representative.

1.03 DATES

A. Bid Opening Date: The date on which Bids for the Work are opened and read publicly.

B. Award Date: The date on which the Owner formally accepts the Bid of the lowest and best Bidder and award the Contract.

C. Notice to Proceed Date: The date stated in the Notice to Proceed on which the contract time begins.

D. Substantial Completion Date: Date Substantial Completion is certified by City Representative in writing.

E. Final Completion Date: The date, certified in writing by the Architect, when the Work including every item or element, is satisfactorily complete in accordance with the Contract Documents. This includes the completion of all associated paper work required for contract close out.

1.04 ABBREVIATIONS

A. See drawings and individual sections of the specifications.

PART 2 - PRODUCTS- NOT USED

PART 3 - EXECUTION- NOT USED

PART 1 - GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

The provisions and intent of the Contract, including the General Conditions, and other sections of the General Requirements, apply to this work as if specified in this section.

1.02 DESCRIPTION OF WORK

The Work includes the requirements to provide temporary facilities required until the acceptance of the Contract.

PART 2 - PRODUCTS

2.01 UTILITIES

A. It shall be the Contractor's responsibility to provide adequate facilities for Contractor's operation, including:
   1. Water: Drinking water for employees shall be provided in sanitary containers and maintained fresh each day.
   2. Construction Electricity: Electricity for Contractor's use for project purposes will be provided from the existing facility power system. Contractor is to coordinate with City of Shelton and Civic center staff for available connections and acceptable arrangements.
   3. Toilet Room Facilities: The Contractor shall install and maintain necessary temporary sanitary toilet facilities during the term of this contract. Toilet facilities for employees shall be maintained in a sanitary condition. Toilets shall be of a chemical type; remove at completion of work and disinfect the premises.

2.02 USE AND OCCUPANCY

A. The Contractor will be allowed space for the storage of materials and the pursuance of the Work under this Contract. City of Shelton will designate on-site area(s) to be utilized.

B. SECURITY
   1. The laydown area shall be closed to the public at all times.
   2. The Contractor shall abide by special request of local police and fire departments.
   3. Contactor to is responsible for securing, all project materials, equipment, and supplies both on-site and in the laydown area; the city of Shelton will not be held liable for any loss, or damages.

C. FENCES & ENCLOSURES
   1. General: Furnish and install a temporary fence around the entire laydown area.
   2. Construction: The temporary fence shall consist of woven wire mesh not less than six feet in height, complete with metal or wood posts and all required bracing, and with truck and optional pedestrian gates.

2.03 PEDESTRIAN SAFETY

A. Contractor shall close-off and post signs to indicate areas that are closed to pedestrian traffic whenever work is conducted over entrances, traveled walkways, or any area where people might cross below workers or into a zone where there is a potential hazard of fallen objects.
   1. The Contractor shall furnish all signage which may necessary to close off or re-direct traffic of pedestrians during project duration.

2.04 CONSTRUCTION SAFETY EQUIPMENT

A. The contractor is responsible for supplying safety equipment, fall protection, and personal protective equipment as necessary to accomplish the work

2.05 WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition. Civic Center facility waste containers shall not be used for construction purposes.

B. Provide containers with lids. Remove trash from site periodically.

C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

PART 3 - EXECUTION

3.01 GENERAL

A. Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the work. Remove at the completion of the work.

PART 4 - MEASUREMENT AND PAYMENT

All costs associated with this section shall be considered incidental to the overall project and shall not be measured separately for payment.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

A. The provisions and intent of the Contract, including the General Conditions and other sections of the General Requirements apply to this work as if specified in this section. Work related to this section is described throughout the specifications.

B. Prior to requesting final inspection, the Contractor shall assure itself that the project is complete in all aspects.

PART 2 - PRODUCTS

2.01 MATERIALS

A. All materials used are to be new and in original packaging, unless otherwise approved by Architect.

2.02 WARRANTY

A. The Contractor warrants all labor, materials and equipment delivered under the contract to be free from defects in design, material, or workmanship, and against damage caused prior to final inspection. Unless otherwise specified, this warranty extends for a period of one (1) year from the date of Substantial Completion.

B. The Contractor shall promptly repair or replace all defective or damaged items delivered under the contract. The Contractor may elect to have any replaced item returned to Contractor’s plant at Contractor’s expense.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specifications sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer’s instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting and patching.

B. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-conforming work.

C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit work air tight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.

3.05 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective covers at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Prohibit traffic from landscaped areas.

H. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.07 FINAL CLEANING

A. Use cleaning materials that are nonhazardous.

B. Clean exterior glass surfaces exposed to view.

C. Remove all labels that are not permanent.

D. Clean debris from roofs, gutters, downspouts, and drainage systems.

E. Clean project area and laydown area of site; sweep paved areas, rake clean landscaped surfaces in these areas.

F. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.08 CLOSEOUT PROCEDURES

A. Provide submittals noted in Section 3.09.

B. Notify Architect when work is considered ready for Substantial Completion.

C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's review.

D. Correct items of work listed in Substantial Completion documents.

E. Notify Architect when work is considered finally complete.

F. Complete items of work determined by Architect's final inspection.

3.09 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings
   2. Specifications
   3. Addenda
   4. Change Orders and other modifications to the Contract.
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Product substitutions or alternates utilized.
   2. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings:
   1. Legibly mark each item to record actual construction including:

a. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
b. Measured locations of internal utilities and appurtenances concealed in construction, referenced visible and accessible features of the Work.
c. Field changes of dimension and detail.
d. Details not on original Contract drawings.

2. Digital Copies of Record Drawings. Provide PDFs of all record drawings. PDFs shall be prepared as follows:
   a. For PDFs scanned from hard copies, provide PDFs in color.

3.10 OPERATION AND MAINTENANCE DATA

A. For each product, applied material, and finish, provide instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

B. Provide information in an organized notebook or folder, and assist Owner with any questions or clarifications needed.

3.11 WARRANTIES

A. Submit executed copies of warranties per section 2.02 in an organized notebook or folder, including complete warranty and contact information.

END OF SECTION

PART III

TECHNICAL SPECIFICATIONS

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PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. All building demolition and/or preparation work as specified herein or otherwise noted on the drawings, and as required for installation of new work, except those items shown and noted on drawings as existing and to remain.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

B. Specifications throughout all Divisions of the contract provisions are directly applicable to this Section, and this Section is directly applicable to them.

1.3 RELATED WORK DESCRIBED ELSEWHERE

A. Section 06 01 00 - Maintenance of Exterior Wood, Plastics Metal Flashings and trims, and Fiber Cement
B. Section 06 20 13 - Exterior Wood Trim
C. Section 06 62 00 – Plastic Foam Fabrications
D. Section 06 06 73 – Preservative Treated Lumber and Plywood
E. Section 07 62 00 - Sheet Metal Flashing and Trim
F. Section 07 92 13 - Joint Sealant

1.4 SUBMITTALS

A. Submit notification of intended location of disposal site for demolished items removed from the site to the project manager.

1.5 PROJECT CONDITIONS

A. Owner will occupy portions or all of the building immediately adjacent to areas of selective demolition. Conduct selective demolition Work in manner that will minimize need for disruption of Owner's normal operations.

B. Owner assumes no responsibility for actual condition of items or structures to be demolished nor their supporting structure.

C. Promptly repair damages caused to adjacent materials by demolition work.

D. Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Maintain fire protection services during selective demolition operations.

PART 2 – PRODUCTS

2.1 MATERIAL OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the contractor's option.

PART 3 – EXECUTION

3.1 PREPARATION

A. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to receive selective demolition and adjacent facilities to remain.

1. Cease operations and notify Project Manager immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.

3.2 DEMOLITION

A. Perform selective demolition Work in a systematic manner. Use such methods as required to complete Work indicated on Drawings in accordance with governing regulations.

B. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit a report to the project manager in written, accurate detail. Pending receipt of directive from the Project Manager, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

3.3 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose of off site.

1. If hazardous materials are encountered during demolition operations, notify Project Manager immediately. Comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

2. Burning of removed materials is not permitted on the project site.

3.4 CLEANUP AND REPAIR

A. Upon completion of demolition work, remove tools, equipment, and demolished materials from the project site. Remove protections and leave interior areas broom clean.

1. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start of operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Maintenance, repair, rehabilitation and replacement of exterior wood, plastics, metal flashings, trim and fiber cement sidings

1.2 RELATED WORK DESCRIBED ELSEWHERE

A. Section 02 41 10.13 - Selective Demolition

B. Section 06 20 13 - Exterior Wood Trim

C. Section 06 30 00 – Preservative Treated Lumber and Plywood

D. Section 07 62 06 – Metal Flashings and Trims

E. Section 07 92 13 – Joint Sealant

F. Section 09 91 13 – Exterior Painting and Finishes

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.5 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. All cleaning, repair, rehabilitation, and replacement- equipment, accessories, cleaners, fasteners, and sealants, shall be in strict accordance with the manufacture's instructions. Refer to the corresponding sections for general information, product information and execution.

PART 3 EXECUTION

3.1 CLEANING

A. Clean all materials within the scope of work as shown in the documents in strict accordance with manufacturer's instructions.

3.2 REPAIR

A. Repair all materials within the scope of work as shown in the documents in strict accordance with manufactures instructions

3.3 REHABILITATION

A. Rehabilitate materials within the scope of work as shown in the documents in strict accordance with manufactures instructions

3.4 REPLACEMENT

A. Replace, and install all new materials within the scope of work as shown in the documents in strict accordance with manufactures instructions

B. Install all new materials within the scope of work as shown in the documents. For general information, product information and execution refer the appropriate sections within the specifications.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preservative treatment of lumber and plywood.

1.2 RELATED WORK DESCRIBED ELSEWHERE

A. Section 02 41 10.13 - Selective Demolition

B. Section 06 01 00 - Maintenance of Exterior Wood, Plastics Metal Flashings and trims, and Fiber Cement

C. Section 07 62 06 – Metal Flashings and Trims.

D. Section 07 92 13 – Joint Sealants

E. Section 09 91 13 - Exterior Painting and Finishes.

1.3 REFERENCES

A. Environmental Protection Agency (EPA)

B. Federal Standard USA:
   1. TT-W-550 - WOOD PRESERVATIVE: CHROMATED COPPER ARSENATE MIXT
   2. TT-W-571 - Wood Preservation: Treating Practices

C. International Building Code (IBC):
   1. Section 2304.12 - Wood: Protection Against Decay and Termites.

D. International Code Council Evaluation Service (ICC-ES).

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data:
   1. Manufacturer's data sheets on each product to be used.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Typical installation methods.

C. Verification Samples: Two representative units of each type, size, pattern, and color.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing

products specified in this section with a minimum five years documented experience.

B. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.

C. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

1.6 PRE-INSTALLATION CONFERENCE

A. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store and handle in strict compliance with manufacturer's written instructions and recommendations.

B. Protect from damage due to weather, excessive temperature, and construction operations.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 WARRANTY

A. Manufacturer's standard limited warranty unless indicated otherwise.

PART 2 PRODUCTS

2.1 PRESERVATIVE AND PRESSURE TREATED WOOD LUMBER AND TIMBER

A. To match existing plywood Cornice

2.2 PRESERVATIVE PRESSURE TREATMENT OF WOOD: BORATE

A. Preservative Treatment: Borate pressure treated wood. For interior wood framing. Resists attack by subterranean termites and numerous household insects and pests, including fungal decay and carpenter ants. At the higher retention level, resists attack by Formosan termites.
   1. Composition and Materials: Disodium octaborate tetrahydrate (DOT)

2. Composition of Materials: Sodium octaborate. Listed in AWPA preservative standards and is referred to as SBX. Meets requirements of AWPA standard U1 and is suitable for Use Categories UC1 and UC2.
3. Colors: Product is clear and nonblooming.
4. Limitations: For aboveground, weather-protected applications only. They are not to be used in areas subject to precipitation, wetting, dampness, or condensation.

B. Technical Data
1. Applicable Standards:
   a. American Wood Protection Association (AWPA):
      1) AWPA C9 Plywood, Pressure Treatment.
      2) AWPA C31 Lumber Used Out of Contact With the Ground and Continuously Protected From Liquid Water.
      3) AWPA P5 Waterborne Preservatives.
   b. Code compliance: Borate-treated wood is referenced in the following model codes.
      1) International Building Code: Section 2308.1.8, preservative treated wood.
      2) International Residential Code: Section R319.1, protection against decay.
      3) International Residential Code: Section R320, protection against termites.
2. Approved Lumber Species:
   a. Southern Yellow Pine.
   b. Douglas-Fir.
   c. Hem-Fir.
   d. Spruce-Pine-Fir.
3. Approved plywood species:
   a. Southern Yellow Pine.
   b. Douglas-Fir.
4. Environmental Considerations:
   a. Registered with Environmental Protection Agency (EPA).
   b. Meets requirements of American Wood Protection Association (AWPA) Standard P5.

C. Physical and Chemical Properties:
1. Wood products are to carry the following information:
   a. Manufacturer's name.
   b. Treatment plant name.
   c. Quality mark of an independent inspection agency.
   d. Symbol "SBX" (Sodium borate), preservative retention level and date of treatment.
   e. AWPA treatment standard, wood species and the words "Above

Ground and Continuously Protected From Liquid Water."

2. Test Reports and Additional Product Information: Available from Manufacturer upon request.

D. Performance:
   1. Specifier should select one of two following borate active ingredient minimum retention levels based upon building code and local conditions.
   2. Protection against North American subterranean termites, decay, and insects:
      a. PCF: 0.25 DOT retention.
      b. PCF: 0.17 pcf (2.7 kg/m3) B2O3, DOT minimum retention.
   3. Protection against Formosan termites:
      a. PCF: 0.42 pcf DOT retention.
      b. PCF: 0.28 pcf (4.5 kg/m3) B2O3, DOT minimum retention.

E. Refer to the following for locations requiring preservative-treated wood for decay or termite resistance.
   1. International Building Code (IBC) Section 2304.12
   2. International Residential Code (IRC) Sections R317 and R318

2.3 PRESERVATIVE PRESSURE TREATMENT OF WOOD: COPPER

A. Preservative Treatment: Waterborne, copper azole preservative system CA-C.
   1. Standards Compliance:
      a. In accordance with requirements of ICC Evaluation Report ESR-1721.
      b. AWPA Analytical Standards A2-98, A3-00, A9-00, A-16-93, A17-97, A18-99.
      c. AWPA Standard C4-99.
      d. AWPA Commodity Standards C1-00, C2-00, C4-99, C5-00, C9-00, C15-00, C17-00, C22-00.
      e. AWPA Preservative Standard P5-01.
   2. Minimum Preservative Retention: In accordance with requirements for the following applications:
      a. Above Ground.
      b. Ground or Fresh Water Contact.
      c. Structural Posts and Poles; Sawn or Round.
      d. Round Timber Piling.
   3. Moisture Content: Dry after treatment as follows:
      a. Plywood: 18 percent, maximum.
   4. Wood products are to carry the following information:
      a. Quality mark of an independent inspection agency.
      b. Standard to which the material was treated.
      c. Treating facility.

d. Preservative and retention.
e. End use for which the product is suitable.

5. Test Reports and Additional Product Information: Available from Manufacturer upon request.
6. Refer to the following for locations requiring preservative-treated wood for decay or termite resistance.
   a. International Building Code (IBC) Section 2304.12.
   b. International Residential Code (IRC) Sections R317 and R318.

B. Preservative Treatment: Chromated Copper Arsenate Preservative system CCA. For above ground and ground contact use. Pressure treated to various retention levels. Pressure-impregnated preservative treated lumber and plywood designed for long-term performance in various commercial or industrial and limited residential applications where protection from fungal decay and termites is required.
   1. Standards Compliance:
      a. AWPA P5: Meet or exceed.
      b. AWPA P23, U1 and T1.
      c. Federal Standard TT-W-550: Meet or exceed.
      d. Federal Standard TT-W-571: Meet or exceed.
      e. AWPA Commodity Standards as applicable.
   2. Plywood: To be manufactured under US Product Standard PS 1 or PS 2.
      a. Panels shall have a minimum bond durability of Exposure 1.
   3. Grade Marked Lumber: Treated with CCA in accordance with PS 20.
   4. Wood products are to carry the following information:
      a. Quality mark of an independent inspection agency.
      b. Standard to which the material was treated.
      c. Treating facility.
      d. Preservative and retention.
      e. End use for which the product is suitable.
   5. Test Reports and Additional Product Information: Available from Manufacturer upon request.
   6. Refer to the following for locations requiring preservative-treated wood for decay or termite resistance.
      a. International Building Code (IBC) Section 2304.12.
      b. International Residential Code (IRC) Sections R317 and R318.
   7. Applications: AWPA Use Categories (UC) describing exposure conditions CCA treated wood may be subject to.
      a. UC3B: Exterior Above Ground, Uncoated or Poor Water Runoff.
      b. UC4A: Ground Contact, General Use.
      c. UC4B: Ground Contact, Heavy Duty.
      d. UC4C: Ground Contact, Extreme Duty.
      e. UC5A: Marine Use, Northern Waters (Salt or Brackish).
      f. UC5B: Marine Use, Central Waters (Salt or Brackish).

g. UC5C: Marine Use, Southern Waters (Salt or Brackish).

C. Preservative Treatment: Micronized copper azole based preservative system MCA. For wood products protected from termites and fungal decay.
1. Standards Compliance:
a. AWPA Standards A2-06, A3-05, A9-01, A-11-93, A17-03, A18-05, A21-00, A36-04, A37-05.
2. End Cut Preservative: Acceptable to manufacturer of micronized copper azole preservative.
3. Adhesive: Acceptable to manufacturer of micronized copper azole preservative.
4. Wood products are to carry the following information:
a. Quality mark of an independent inspection agency.
b. Standard to which the material was treated.
c. Treating facility.
d. Preservative and retention.
e. End use for which the product is suitable.

2.4 ACCESSORIES

A. Fasteners: ASTM A-153 Hot dipped Galvanized per APA guidelines

B. Code compliant water-resistive barrier where applicable.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly constructed and prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

B. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.

3.5 CLEANING AND PROTECTION

A. Clean products in accordance with the manufacturer's recommendations.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Exterior Wood Trims

1.02 RELATED WORK DESCRIBED ELSEWHERE

A. Section 02 41 10.13 – Selective Demolition

B. Section 07 92 13 – Joint Sealant

C. Section 07 62 06 – Metal Flashings and Trims

D. Section 09 91 13 – Exterior Painting and Finishes

1.03 SUBMITTALS

A. Submit under provisions of Section 01 33 00 – Submittals.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and finishes.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

E. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of all components.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer with not less than five years documented experience

B. Installer Qualifications: Installer with not less than three years documented experience.

C. Pre-Installation Meetings: Conduct pre-installation meetings to verify project requirements, substrate conditions, construction documents, details and manufacturer's warranty requirements.

D. Mock-Up: Provide a mock-up for evaluation of wood siding, surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
   1. Do not store siding under a tarp or in a garage or enclosed area. Keep wood shims between layers of boards to allow proper air flow.
   2. Allow siding to sit where it will be installed for 7 days prior to installation in order to get acclimated to your local temperature and humidity levels.
   3. Siding should be elevated at least 12 inches off the ground during acclimation.
   4. Place siding on top of blocks of wood to ensure the bottom boards are well ventilated.
   5. Do not cover siding material with plastic or a tarp during this acclimation period. Cover the top of the pile with a sheet of plywood to shed the water is recommended.
   6. Keep material dry until installation.

1.06 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 WOOD TRIM AND FASCIA

A. Provide trim boards as manufactured under Western Red Cedar Lumber Association (WRCLA) Guidelines

B. Species: Western Red Cedar

C. Sizes: As documented, to match existing

D. Grade: C and better per WRCLA Grading criteria

E. Texture: S1S2E, with rough surface on exposed face.

F. Moisture content: Kiln-dried, Maximum 15 %

2.02 BACKING, BLOCKING & MISCELLANEOUS FRAMING

A. Furnish exterior grade, rot, 100% water and insect proof shims

2.03 ACCESSORIES

A. Fasteners: ASTM A-153 Hot dipped Galvanized per WRCLA guidelines

B. Code compliant water-resistive barrier where applicable.

C. Self-adhering high density polyethylene sheet, with rubberized asphalt adhesive. Must comply with AAMA 711 and all other applicable codes.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Repair substrate flaws or defects before applying siding

C. Prepare surfaces using the methods recommended by the manufacturer and WRCLA for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Install in accordance with manufacturer's and WRCLA instructions.

B. Provide scarf joints at all “end to end” joints typical

3.04 CLEANING

A. Upon completion of siding application, clean entire area, removing all scrap, packaging, and unused materials related to this work.

3.05 PROTECTION

A. Protect installed products until completion of project.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

1. Plastic foam fabrications (FYPON) and accessories

1.2 RELATED WORK DESCRIBED ELSEWHERE

A. Section 02 41 10.13 - Selective Demolition

B. Section 06 01 00 – Maintenance of Exterior Wood Trim, Exterior preserved Plywood, Metal Flashings and trims, and Fiber Cement Siding

C. Section 07 62 06 – Metal Flashings and Trims

D. Section 07 92 13 – Joint Sealant

E. Section 09 91 13 – Exterior Painting and Finishes

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the scope of the standard details and specifications provided by the manufacturer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Minimum of 2 years' experience with installation of similar products.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.

C. Store and dispose of solvent-based materials, and materials used with

solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.7 WARRANTY

A. Product Warranty: Limited, non-pro-rated product warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Fypon LLC 1750 Indian Wood Circle Maumee, OH 43537 1.800.446.3040 www.fypon.com

B. Substitutions: Not permitted.

C. Requests for approval of equal substitutions will be considered in accordance with the provisions of Section 01 60 00 - Product Requirements.

2.2 MOLDED MILLWORK

A. Provide molded millwork fabricated from high density polymer with factory applied prime paint finish

B. Provide Fypon “Standard” line of millwork material

2.3 ACCESSORIES

A. Fasteners: provide type(s) as recommended by manufacturer for securing millwork to substrates as details or as otherwise required.

B. Adhesive: Provide types as recommended by millwork manufacturer as required for adhering millwork to substrates and as required for joinery.

C. Joint cover tape: As recommended by manufacturer for conditions of work in this section.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until the substrates have been properly prepared.

B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Install a water-resistive barrier is required in accordance with local building code requirements.

D. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.

3.3 INSTALLATION – FYPON MOLDED MILLWORK

A. Install materials in strict accordance with manufacturer's installation instructions.

B. Install all accessories and related products per manufacturers instructions

C. At all fastener locations putty holes per manufactures instructions and sand smooth in preparation of paint finish system installed under section 09 91 13

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fiber cement lap siding, panels, shingle, trim, fascia, and accessories; Engineered for Climate Siding.

1.2 RELATED WORK DESCRIBED ELSEWHERE

A. Section 02 41 10.13 - Selective Demolition

B. Section 06 01 00 - Maintenance of Exterior Wood, Plastics Metal Flashings and trims, and Fiber Cement

C. Section 07 62 06 – Metal Flashings and Trims

D. Section 07 92 13 – Joint Sealant

E. Section 09 91 13 – Exterior Painting and Finishes

1.3 REFERENCES

A. ASTM C1186 - Standard Specification for Flat Fiber-Cement Sheets.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the scope of the standard details and specifications provided by the manufacturer.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 4 by 6 inches (100 by 150 mm), representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Minimum of 2 years' experience with installation of

similar products.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

A. Product Warranty: Limited, non-pro-rated product warranty.
   1. Hardie Plank HZ5 lap siding for 30 years.
   2. Hardie Panel HZ5 vertical siding for 30 years.
   3. Hardie Soffit HZ5 panels for 30 years.
   4. Hardie Shingle HZ5 siding for 30 years.

B. Product Warranty: Limited, product warranty.
   1. Hardie Trim HZ and HZ5 boards for 15 years.

C. Finish Warranty: Limited product warranty against manufacturing finish defects.
   1. When used for its intended purpose, properly installed and maintained according to James Hardie's published installation instructions, James Hardie's ColorPlus finish with ColorPlus Technology, for a period of 15 years from the date of purchase: will not peel; will not crack; and will not chip. Finish warranty includes the coverage for labor and material.

D. Workmanship Warranty: Application limited warranty for 2 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 303 E. Wacker Dr.; Chicago, IL 60601 ; Toll Free Tel: 877-236-

7526; Email:request info (info@jameshardie.com);
Web:https://www.jameshardiepros.com|https://www.jameshardie.com

B. Substitutions: Not permitted.

C. Requests for approval of equal substitutions will be considered in accordance with the provisions of Section 01 60 00 - Product Requirements.

2.2 SIDING

A. Hardie Plank HZ5 lap siding, Hardie Panel HZ5 vertical siding, Hardie Soffit HZ5 panels and Hardie Shingle HZ5 siding requirement for Materials:
1. Fiber-cement Siding - complies with ASTM C 1186 Type A Grade II.
2. Fiber-cement Siding - complies with ASTM E 136 as a noncombustible material.
3. Fiber-cement Siding - complies with ASTM E 84. Flame Spread Index: 0. Smoke Developed Index: 5.
4. CAL-FIRE, Fire Engineering Division Building Materials Listing - Wildland Urban Interface (WUI) Listed Product.
5. National Evaluation Report No. NER 405 (BOCA, ICBO, SBCCI, IBC, IRC).
6. International Code Council Evaluation Services Report No. ESR-1844.
7. International Code Council Evaluation Services Report No. ESR-2290.
8. International Code Council Evaluation Services Report No. ESR-2273.
9. US Department of Housing and Urban Development Materials Release 1263.

B. Lap Siding: Hardie Plank Lap siding as manufactured by James Hardie Building Products, Inc.
1. Type: To match existing boards

2.3 FINISHES

A. Factory Primer: Provide factory applied universal primer.
1. Primer: Factory primed by James Hardie.
2. Topcoat: Refer to Section 09 90 00 - Painting and Coating and Exterior Finish Schedule.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until the substrates have been properly prepared.

B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Install a water-resistive barrier is required in accordance with local building code requirements.

D. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.

E. Install Engineered for Climate Hardie Weather barrier in accordance with local building code requirements.

F. Use Hardie Weather Barrier Seam Tape and joint and laps.

G. Install Hardie Weather Barrier Pro- flashing, and Hardie Weather Barrier Flex Flashing.

3.3 INSTALLATION - HARDIE PLANK LAP SIDING

A. Install materials in strict accordance with manufacturer's installation instructions.

B. Starting: Install a minimum 1/4 inch (6 mm) thick lath starter strip at the bottom course of the wall. Apply planks horizontally with minimum 1-1/4 inches (32 mm) wide laps at the top. The bottom edge of the first plank overlaps the starter strip.

C. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's installation instructions.

D. Align vertical joints of the planks over framing members.

E. Maintain clearance between siding and adjacent finished grade.

F. Locate splices at least one stud cavity away from window and door openings.

G. Wind Resistance: Where a specified level of wind resistance is required Hardie Plank lap siding is installed to framing members and secured with fasteners described in Table No. 2 in International Code Council Evaluation Report No. ESR-2290.

H. Locate splices at least 12 inches (305 mm) away from window and door openings.

3.4 FINISHING

A. Finish unprimed siding with a minimum one coat high quality, alkali resistant

primer and one coat of either, 100 percent acrylic or latex or oil based, exterior grade topcoats or two coats high quality alkali resistant 100 percent acrylic or latex, exterior grade topcoat within 90 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.

B. Finish factory primed siding with a minimum of one coat of high quality 100 percent acrylic or latex or oil based exterior grade paint within 180 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

A. Fabricated sheet metal items, including flashings and counter flashings,

1.02 RELATED DOCUMENTS

A. All contract provisions are directly applicable to this Section, and this Section is directly applicable to them.

1.03 RELATED WORK DESCRIBED ELSEWHERE

A. Section 02 41 10.13 - Selective Demolition

B. Section 06 01 00 - Maintenance of Exterior Wood, Plastics Metal Flashings and trims, and Fiber Cement

C. Section 06 20 13 – Exterior Wood Trim

D. Section 07 92 13 – Joint Sealants

E. Section 09 91 13 - Exterior Painting and Coating

1.04 REFERENCE TO STANDARDS

A. AAMA 2603 – Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels; 2002.

B. ASTM A653/A653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2011.

C. SMACNA (ASMM) – Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractor's National Association; 2012.

1.05 SUBMITTALS

A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, terminations, and installation details.

1.06 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.

1.07 DELIVERY, STORAGE AND HANDLING

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

B. Prevent contact with materials that could cause discoloration and staining.

PART 2 – PRODUCTS

2.01 SHEET MATERIALS

A. Flashing type “A”

1 Pre-finished Galvanized Steel Flashing and Trim: 26 gauge steel, ASTM A653/A653M, with G90/Z275 zinc coating; minimum 0.02 inch thick base metal, shop pre-coated with Kynar 500 or Hylar 5000 to match Fiber cement board color

2 Location and profiles: see documents

B. Flashing type “B”

1 Pre-finished Galvanized Steel Flashing and Trim: 22 gauge steel, ASTM A653/A653M, with G90/Z275 zinc coating; minimum 0.03 inch thick base metal, shop pre-coated with Kynar 500 or Hylar 5000 to match Fiber cement board color

2 Location and profiles: see documents

C. Flashing type- Miscellaneous flashings

1 Painted in the field; Galvanized steel: ASTM A 653/A 653M, with G90/Z275 zinc coating; minimum 0.02 inch thick base metal.

2 Location and profiles: as required

2.02 ACCESSORIES

A. Fasteners: Same material and finish as flashing metal, with soft neoprene washers.

B. Primer: Zinc chromate type.

C. Protective Backing Paint: Zinc molybdate alkyd.

D. Sealant: Polyurethane based meeting ASTM C 920

E. Plastic Cement: ASTM D4586, Type I.

F. Reglet: Surface mounted type, galvanized steel; face and ends covered with plastic tape.

2.03 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

B. Fabricate cleats of same material as sheet, minimum continuous 2” wide, interlocking with sheet.

C. Form pieces in longest possible lengths.

D. Hem exposed edges on underside 1/2”; miter and seam corners.

E. Form material with standing seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

F. Fabricate corners from one piece with minimum 18” long legs; seam for rigidity, seal with sealant.

G. Fabricate vertical faces with bottom edge formed outward 1/4” and hemmed to form drip.

3.02 PREPARATION

A. Install starter and edge strips, and cleats before starting installation.

B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

3.03 INSTALLATION

A. Secure flashing in place using concealed fasteners. Use exposed fasteners only where permitted.

B. Apply plastic cement compound between metal flashings and felt flashings.

C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes and lines accurate to profiles.

D. Seal metal joints watertight.

End of Section

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Exterior weatherproofing sealants.

1.2 REFERENCES

A. AAMA 803.3 - Specification for Narrow Joint Seam Sealers.

B. AAMA 808.3 - Specification for Exterior Perimeter Sealing Compound.

C. ASTM C 717 - Terminology of Building Seals and Sealants.

D. ASTM C 719 - Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants under Cyclic Movement (Hockman Cycle).

E. ASTM C 794 - Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants.

F. ASTM C 834 – Standard Specification for Latex Sealants

G. ASTM C 920 - Specification for Elastomeric Joint Sealants.

H. ASTM C 1248 - Test Method for Staining of Porous Substrate by Joint Sealants.

I. ASTM D 2240 - Test Method for Rubber Property - Durometer Hardness.

J. GANA - Sealant Manual and Related GANA Publications.

K. SWRI Sealant Manual and Related SWRI Publications.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods including joint design, surface preparation, and application instructions.
   4. Submit manufacturer's test reports indicating test results of adhesion and/or compatibility testing of samples of substrates which either come in contact with or are in close proximity to sealants.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications:
   1. Manufacturer's Certification: Submit manufacturer's certification that materials are suitable for intended application.

B. Installer Qualifications: Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying:
   1. Product name.
   2. Manufacturer.
   3. Sealant color.
   4. Sealant batch or lot number.
   5. Sealant use-before date.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
   1. Store materials in a clean, dry area indoors in accordance with manufacturer's instructions.
   2. Store sealants within temperature range in accordance with manufacturer's instructions.
   3. Keep containers sealed until ready for use.
   4. Do not use materials after manufacturer's use-before date.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
   1. Do not apply sealants to surfaces that are wet, damp, or contain frost.
   2. Do not apply sealants when air or surface temperature is below 40 degrees F (7 degrees C).
   3. Use caution when applying sealants when air or surface temperature is above 120 degrees F (49 degrees C).

1.7 WARRANTY

A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Period: Ten years from date of Substantial Completion.

C. Special warranties specified exclude deterioration or failure of elastomeric joint sealants from the following:
   1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
   2. Disintegration of joint substrates from natural causes exceeding design specifications.
   3. Mechanical damage caused by individuals, tools, or other outside agents.
   4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 PRODUCTS

2.1 WEATHERPROOFING SEALANTS AND ADHESIVES

A. POLYURETHANE JOINT SEALANTS
   1. One component, high performance, moisture cure, non-sag, gun-grade elastomeric polyurethane sealant.
   2. Standards Compliance: Meets or exceeds the following.
      a. ASTM C920, Type S, Grade NS, Class 35, Use: NT, A, M, O, and T.
      b. TT-S-00230C, Type II, Class A, Non-Sag, One Component.
      c. CAN/CGSB-19.13-M87.
   3. Volatile Organic Compound (VOC) Content: 40 g/L maximum.
   4. Volatile Organic Emissions (VOE): Not greater than Greenguard Children and Schools Certification emissions levels.
   5. Properties, Uncured:
      a. Tack free Time per ASTM C679 and TT-S-00230C: Passes.
      b. Curing Time at 75 Degrees F (23.9 degrees C) and 50 Percent RH: Skins less than 24 hours. Full Cure: Approximately one week.
      c. Flow, Sag or Slump per TT-S-00230C/ASTM C639: Passes.
      d. Staining per TT-S-00230C/ASTM C510: Passes.
   6. Properties, After Full Cure. At 75 degrees F (23.9 degrees C) and 50 percent RH. The physical properties will remain relatively unchanged over a temperature range of minus 40 to 180 degrees F (minus 40 to 82.2 degrees C).
      a. Hardness (Shore A) per ASTM D2240/ASTM C661: 27, plus or

minus 2.
b. Tensile Strength ASTM D412: 350 to 450 psi.
c. Percent Elongation ASTM D412: 800 to 900 percent.
d. Modulus at 100 percent ASTM D412: 75 to 85 psi.
e. Tear Strength ASTM D412: 65 to 75 psi.
f. Smoke Development ASTM E84: 5.
g. Color: As selected by Architect from manufacturer's standard line of not less than 20 colors.
h. UV Resistance per ASTM C793: Good.

7. Substrates: Cementitious board, masonry, stucco, concrete, wood, vinyl, aluminum, steel, ceramics, clay and concrete roof tiles, and natural stone.
8. Shelf Life: 12 months from date of manufacturer when stored at room temperature.
9. Excellent weatherability when exposed to ultraviolet radiation, atmospheric hydrocarbons and extremes in temperature.
10. Joints accommodate 70 percent total joint movement while not affecting the seal or adhesion bond.
11. Joints properly designed and sealed will extend and compress a total of 70 percent of installation width with no more than 35 percent movement in a single direction.
12. Cured sealant can be painted with emulsion or synthetic enamel paints.
13. Unaffected by contact with water after cure on non-porous substrates.
14. Porous Substrates: Priming is recommended if sealant will be subjected to prolonged periods of immersion.

B. ACRYLIC LATEX JOINT SEALANTS
1. For low/medium movement areas, wood trim, interior/exterior, and paintable.
2. In Accordance With:
a. ASTM C834, Type OP and C, Grade NF.
b. ASTM C920, Class 12.5.
3. Volatile Organic Compound (VOC) Content: 35 g/L maximum.
4. Volatile Organic Emissions (VOE): Not greater than Greenguard Children and Schools Certification emissions levels.
5. Color: White, paintable.

2.2 ACCESSORIES

A. Backer Rod for Weather Sealing Applications:
1. Material: Non-gassing polyethylene or flexible polyurethane foam rod.
2. EIFS and Porous Surface Applications: Non-gassing polyethylene, non-gassing polyolefin or flexible polyurethane foam rod.
3. Width: 25 to 50 percent greater than width of joint to extend continuous pressure against joint walls.
4. Material shall expand and contract with bead movement without

pushing sealant out of joint during compression cycle.

5. Do not use solid rubber backup materials, unless tested for compatibility with sealants and approved by Architect.

B. Bond Breaker Tape: Polyethylene tape, approved by manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine joints to receive sealants. Notify Architect if conditions are not acceptable.

B. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.2 SURFACE PREPARATION

A. Prepare joints in accordance with manufacturer's instructions.

B. Ensure joint thickness is as indicated on the drawings.

C. Remove dirt, dust, oil, grease, rust, loose materials, contaminants, and existing sealants from surfaces that contact sealants.

D. Clean surfaces within 1 to 2 hours before applying sealants.

3.3 WEATHER SEALING APPLICATION

A. Apply sealants in accordance with manufacturer's instructions at locations indicated on the drawings.

B. Ensure surfaces to receive sealants are clean, sound, dry, and free of frost.

C. Use appropriate primer, backer rod, and bond breaker tape.

D. Priming:
1. Apply primer, if required, in accordance with manufacturer's instructions.
2. Perform trial applications to check adhesion of sealants to specific materials to be used.
3. Do not apply primer to glass surfaces.
4. Allow primer to dry before applying sealant.

E. Masking:
1. Apply masking tape to surfaces as required to ensure a neat application of sealants and to protect adjoining surfaces.
2. Do not allow masking tape to touch clean surfaces to which sealants are to adhere.
3. Remove masking tape immediately after tooling and before sealants

begin to cure.

F. Install backer rod in joint to allow for appropriate depth of sealants and to prevent 3-sided adhesion.

G. Install backer rod in joint to allow for appropriate depth of sealants and to prevent 3-sided adhesion.

H. Install bond breaker tape when joint depth is too shallow to allow backer rod.

I. If a bead is too thin, it will not have adequate adhesion to the joint due to low stress at the bond line. If a bead is too thick, the movement of the joint will be inhibited due to high stress at the bond line. Also, if a bead is too thick, excessive surface stretch may tear the sealant. Consult GE Silicones web site for additional information.

J. Apply sealant depth of 1/8 inch minimum to 3/8 inch maximum over crown of backer rod.

K. Apply sealants in a continuous operation, horizontally in 1 direction and vertically from bottom to top of joint opening. Apply positive pressure adequate to properly fill and seal joint width.

L. Tool or strike sealants with appropriate tool applying light pressure to spread sealants against back-up material and joint surfaces to ensure void-free application. Do not use soap or detergent solutions for tooling.

M. Tool sealants at sill in glazing so precipitation and cleaning solutions will not pool.

3.4 EXTERIOR JOINT-SEALANT SCHEDULE

A. Exterior Polyurethane foam wall panel (FYPON)
   1. Joint Sealant: Single component polyurethane sealant

B. Exterior Fiber Cement siding (HARDI SIDING)
   1. Joint Sealant: Acrylic Latex sealant

C. Exterior Fiber Cement Siding to Exterior wood
   1. Joint Sealant: Acrylic Latex sealant

D. Exterior Joints between different materials listed above
   1. Joint Sealant: Single component polyurethane sealant

3.5 CLEANING

A. Remove excess sealants from glass, metal, and plastic surfaces while still uncured.

B. Remove excess sealants from porous surfaces after initial cure or set-up.

3.6 PROTECTION

A. Protect sealants in joints from damage until fully cured.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Exterior paint and coating systems including surface preparation.

1.2 REFERENCES

A. Material Safety Data Sheets / Environmental Data Sheets: Per manufacturer's MSDS/EDS for specific VOCs (calculated per 40 CFR 59.406). VOCs may vary by base and sheen.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: For each paint system indicated, including.
   1. Product characteristics.
   2. Surface preparation instructions and recommendations.
   3. Primer requirements and finish specification.
   4. Storage and handling requirements and recommendations.
   5. Application methods.
   6. Cautions for storage, handling and installation.

C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's products, colors and sheens available.

D. Verification Samples: For each finish product specified, submit samples that represent actual product, color, and sheen.

E. Coating Maintenance Manual: Upon conclusion of project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams, "Custodian Project Color and Product Information" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used. "

F. Only submit complying products based on project requirements (i.e. LEED). One must also comply with the regulations regarding VOCs (CARB, OTC, SCAQMD, LADCO). To ensure compliance with district regulations and other rules, businesses that perform coating activities should contact the local district in each area where the coating will be used.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this

Project, whose work has resulted in applications with a record of successful in-service performance.

B. Paint exposed surfaces. If a color of finish, or a surface is not specifically mentioned, Architect will select from standard products, colors and sheens available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish surfaces for verification of products, colors and sheens.
   2. Finish area designated by Architect.
   3. Provide samples that designate primer and finish coats.
   4. Compatibility and Adhesion: Check after one week of drying and curing by testing in accordance with ASTM D3359; Adhesion by tape test. If coating system is incompatible, additional surface preparation up to and including complete removal may be required.
   5. Do not proceed with remaining work until the Architect approves the mock-up.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information.
   1. Product name, and type (description).
   2. Application and use instructions.
   3. Surface preparation.
   4. VOC content.
   5. Environmental handling.
   6. Batch date.
   7. Color number.

B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.

D. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not

install products under environmental conditions outside manufacturer's recommended limits.

1.7 EXTRA MATERIALS

A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.

B. Furnish Owner with an additional one gallon of each material and color

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Sherwin-Williams, which is located at: 101 Prospect Ave.; Cleveland, OH 44115; Email: request info chris.j.hazelton@sherwin.com.

2.2 APPLICATIONS/SCOPE

A. Exterior Paint and Coating Systems:
   1. Metal: Aluminum, galvanized steel.
   2. Wood: Non-vehicular floors, and platforms.
   3. Wood: Siding, trim, shutters, sash, and miscellaneous hardboard.
   4. Fiber Cement Siding
   5. Fypon Foam Cornice

2.3 PAINT MATERIALS - GENERAL

A. Paints and Coatings:
   1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
   2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufactures product instructions for optimal color conformance.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

D. Color: Refer to Finish Schedule for paint colors, and as selected.

2.4 EXTERIOR PAINT AND COATING SYSTEMS

A. Metal: Aluminum, Galvanized.
   1. Latex Systems:
      a. Semi-Gloss Finish:
         1) 1st Coat: S-W Pro Industrial DTM Acrylic Semi-Gloss, B66-1150 Series.
         2) 2nd Coat: S-W Pro Industrial DTM Acrylic Semi-Gloss, B66-1150 Series (2.0-4.0 mils dry per coat).

B. Wood: Semi-Transparent System Exterior Wood Truss – Add alternate #2
   1. Stain Systems:
      a. Semi-Transparent Stain:
         1) 1st Coat: S-W Woodscapes Exterior Polyurethane Waterborne Semi-Transparent Stain, A15 Series.
         2) 2nd Coat: S-W Woodscapes Exterior Polyurethane Waterborne Semi-Transparent Stain, A15 Series (100 - 350 sq ft/gal)

C. Wood: Exterior Wood Truss - Add alternate #3
   1. Latex System:
         1) 1st Coat: S-W Exterior Oil Based Primer
         2) 2nd Coat S-W Superpaint Exterior Latex Satin
         3) 3rd Coat S-W Superpaint Exterior Latex Satin

D. Wood: Siding, Trim, Shutters, Sashes, and Hardboard-Bare/Primed.
   1. Latex Systems:
      a. Satin Finish:
         1) Spot Prime: S-W Preprite Problock Latex Primer, B51w620 (4.0 mils wet, 1.4 mils dry).
         2) 2nd Coat: S-W Superpaint Exterior Latex Satin, A89 Series.
         3) 3rd Coat: S-W Superpaint Exterior Latex Satin, A89 Series (4.0 mils wet, 1.5 mils dry per coat).

E. Fiber Cement Siding
   1. Latex System:
      a. Satin Finish:
         1) Spot Prime: S-W Preprite Problock Latex Primer, B51w620 (4.0 mils wet, 1.4 mils dry).
         2) 2nd Coat: S-W Superpaint Exterior Latex Satin, A89 Series.
         3) 3rd Coat: S-W Superpaint Exterior Latex Satin, A89 Series (4.0 mils wet, 1.5 mils dry per coat).

F. Fypon Foam Cornice – Add Alternate #1
   1. Latex System
      a. Satin Finish
         1) Spot Prime: S-W Preprite Problock Latex Primer, B51w620 (4.0 mils wet, 1.4 mils dry).

2) 2nd Coat: S-W Superpaint Exterior Latex Satin, A89 Series.
3) 3rd Coat: S-W Superpaint Exterior Latex Satin, A89 Series (4.0 mils wet, 1.5 mils dry per coat).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared; notify Architect of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

B. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.

C. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
   1. Prior to attempting to remove mildew, it is recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions are advised.
   2. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply solution and scrub the mildewed area. Allow solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow surface to dry before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
   3. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
   4. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50 degrees F (10

degrees F) or higher to use low temperature products.

B. Aluminum: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.

C. Cement Composition Siding/Panels: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments.

D. Copper and Stainless Steel: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP 2, Hand Tool Cleaning.

E. Exterior Composition Board (Hardboard): Some composition boards may exude a waxy material that must be removed with a solvent prior to coating. Whether factory primed or unprimed, exterior composition board siding (hardboard) must be cleaned thoroughly and primed with an alkyd primer.

F. Galvanized Metal: Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.

G. Vinyl Siding, Architectural Plastics, EIFS and Fiberglass: Clean vinyl siding thoroughly by scrubbing with a warm, soapy water solution. Rinse thoroughly. Do not paint vinyl siding with any color darker than the original color unless the paint system features Sherwin-Williams VinylSafe technology. Painting with darker colors that are not Sherwin-Williams VinylSafe may cause siding to warp. Follow all painting guidelines of the vinyl manufacturer when painting. Only paint properly installed vinyl siding. Deviating from the manufacturer's painting guidelines may cause the warranty to be voided.

H. Wood: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

I. Wood- Exterior Heavy Timber: Additive Alternates #2; At wood surfaces to receive Semitransparent stain. All wood to be clean and dry. All existing stain to be removed by approved stripper and sanding to smooth “Bare wood” condition.

J. Wood- Exterior Heavy Timber: Additive Alternates #3 At wood surfaces to

receive Solid opaque paint. All wood to be clean and dry. Existing stain to be removed by stripper and sanding to smooth all surfaces must pass water absorption test prior to application of Paint system. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

3.3 INSTALLATION

A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.

B. Do not apply to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or morning fog or dew.

C. Apply coatings using methods recommended by manufacturer.

D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.

E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness.

F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

G. Inspection: The coated surface must be inspected and approved by the Architect just prior to the application of each coat.

3.4 PROTECTION

A. Protect finished coatings from damage until completion of project.

B. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SECTION

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EXHIBIT A

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Installation Instructions
General Finishing

General & Safety Information

- Wear proper personal protective equipment (PPE) and follow manufacturer guidelines for product use, including ventilation recommendations.
- For best results, finish and allow to dry prior to installation. All Fypon® polyurethane products must be finished within 90 days of installation to maintain warranty coverage.
- In exterior applications on PVC, do not use a coating with a light reflectance value (LRV) below 55%. DO NOT paint QuickRail® products, as it will void their warranty.

Tools / Materials

- Water and mild detergent
- Lint-free rags
- Sandpaper (220-grit recommended for PUR, 1000-grit or finer recommended for PVC)
- Brushes and / or rollers
- Exterior-grade polyurethane- or PVC-compatible filler (depending on substrate material)
- High-quality acrylic latex paint or water-based stain (use exterior paint or apply topcoat to stain for heavy traffic or exterior applications)

Finishing Instructions

1) Prepare surface.

If there are light scratches, lightly buff them. For deep scratches, fill with a compatible filler, allow to dry and lightly sand to match the surrounding area, but be careful not to remove the primer. If finishing a wood-grained product, etch in grain to match if desired but DO NOT sand.

Clean surfaces to be finished, using a clean rag dampened with water and a mild detergent, if necessary. Allow to dry completely. Compressed air can also be used to blow dust out of deep grooves. Prime to match surrounding color. Sherwin-Williams® formulas to match Fypon primers can be found on the right (Figure 1).

Figure 1

Primer Color	White	Oatmeal
Sherwin-Williams Product Type	Resilience Exterior Latex	Resilience Exterior Latex
Sherwin-Williams Product Number	K42W51	K43W00053
Sheen	Flat	Satin
Base	Extra White	Deep Base
Quart Formula	No colorant needed.	W1 - White 4/32, 1/64
		B1 - Black 7/32, 1/64, 1/128 R2 - Maroon 4/32
		Y3 - Deep Gold 15/32, 1/64, 1/128
Gallon Formula	No colorant needed.	W1 - White 18/32
		B1 - Black 31/32, 1/128
		R2 - Maroon 15/32, 1/64
		Y3 - Deep Gold 63/32

Installation Instructions
General Finishing

2) Apply finish.

Follow finish manufacturer guidelines. If desired, finish should be applied to a sample piece or less visible area to confirm desired appearance. Paint can be sprayed, brushed, rolled or applied to create the desired appearance or texture. Typically, multiple thin coats are recommended. Stain should be brushed into the grain, cracks and crevices, then in the direction of the grain and blended for a uniform appearance. If a darker shade of the stain is desired, a second coat can be applied after the first coat is dry. Periodically remove excess stain from the brush onto a clean dry rag or shop towel, and tug on the brush to remove any loose bristles.

If finishing a large piece, work in smaller sections, finishing edges first and main visible surfaces last (Figure 2).

3) Test for dryness.

Check for dryness per manufacturer guidelines. Do not proceed to next step until dry.

4) Apply topcoat (if applicable).

Follow finish manufacturer guidelines. Fypon requires topcoat for stained high-traffic, exterior and high UV-exposure applications. Apply in a thin, uniform layer, per manufacturer guidelines. If applying by brush, use the tips of the bristles and use light brush strokes, to prevent bubbling or removing stain.

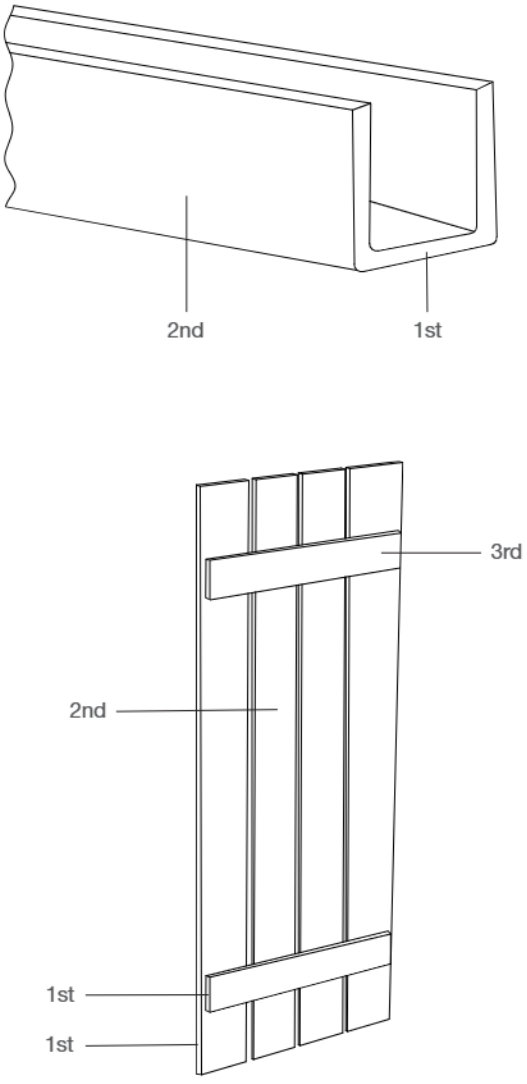
5) Install product.

Allow finish to dry completely prior to installation and refer to product installation instructions.

6) Maintain finish.

Reapply topcoat or refinish as necessary, if existing finish is beginning to fade or feels rough to the touch. Frequency will depend on the finish product, exposure and conditions.

Figure 2



1750 Indian Wood Circle I Maumee, Ohio 43537 I 1.800.446.3040 I fypon.com

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Installation Instructions
Scratch & Dent Repair

General & Safety Information

- Wear proper personal protective equipment (PPE).
- Use all products and tools per manufacturer guidelines, including ventilation requirements.

Tools / Materials

- Sandpaper (220-grit or finer recommended) and / or sanding block
- Orbital sander (for larger repairs)
- Lint-free rags or tack cloth
- Spatula or putty knife
- Automotive body filler and hardener
- High-quality water-based exterior primer

For repairs that do not require filler:

1) Remove any loose material.

2) Sand area to be repaired.

Lightly sand (by hand) the area to be repaired and the surrounding area, using 220-grit or finer sandpaper (Figure 2A). Refrain from excessive sanding that will change the texture, grain, or moulding profile.

3) Wipe down area.

Wipe entire surface with lint-free rags or tack cloth (Figure 3A).

4) Apply primer.

Apply a high-quality water-based primer to the area to be repaired (Figure 4A). Allow to dry completely.

5) Finish

Refer to Fypon® General Finishing Instructions.

Figure 2A

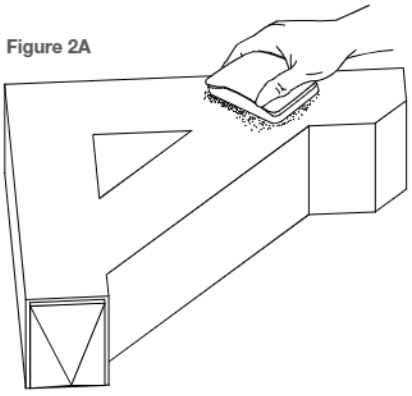


Figure 3A

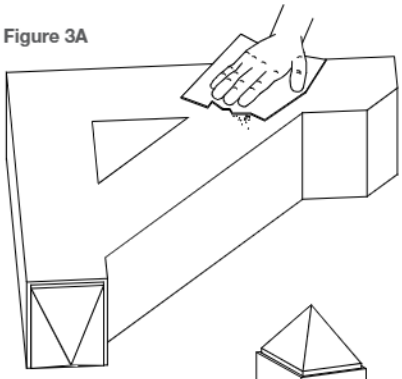
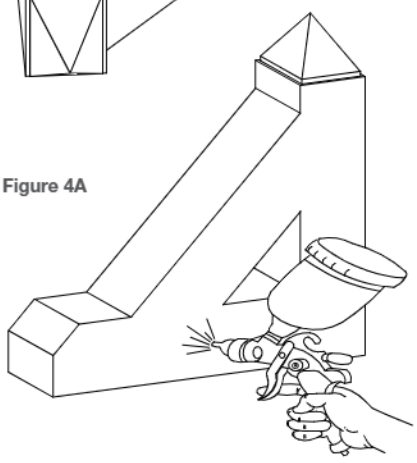


Figure 4A



Installation Instructions
Scratch & Dent Repair

For repairs that require filler:

1) Remove any loose material.

2) Sand area to be repaired.

Lightly sand (by hand) the area to be repaired and the surrounding area, using 220-grit or finer sandpaper (Figure 2B). Refrain from excessive sanding that will change the texture, grain, or moulding profile.

3) Wipe down area.

Wipe entire surface with lint-free rags or tack cloth (Figure 3B).

4) Apply filler (if the damage can be felt).

Mix and apply a hardening automotive body filler to the area to be repaired (Figure 4B). Follow the filler manufacturer guidelines. Apply it so the filler sits slightly higher in the center and blend to the surrounding area. Allow to harden.

5) Sand filler.

Use 220-grit or finer sandpaper to sand the filler until it matches the surrounding area. Use parallel movements while sanding.

For larger areas, an orbital sander may be more efficient (Figure 5B).

6) Apply primer.

Apply a high-quality water-based primer to the area to be repaired (Figure 6B). Allow to dry completely.

7) Finish.

Refer to Fypon® General Finishing Instructions.

Figure 2B

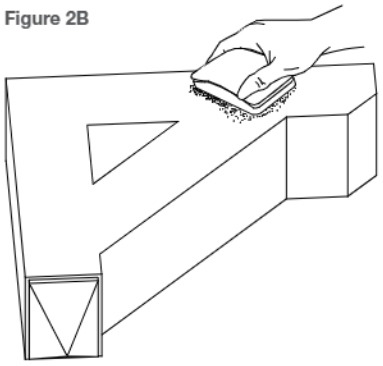


Figure 3B

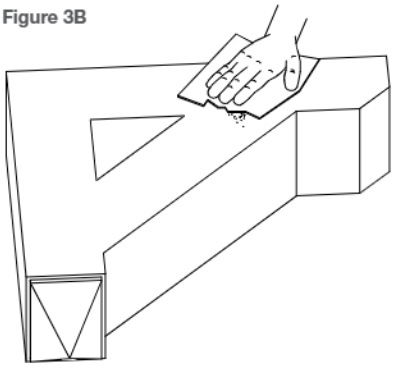


Figure 4B

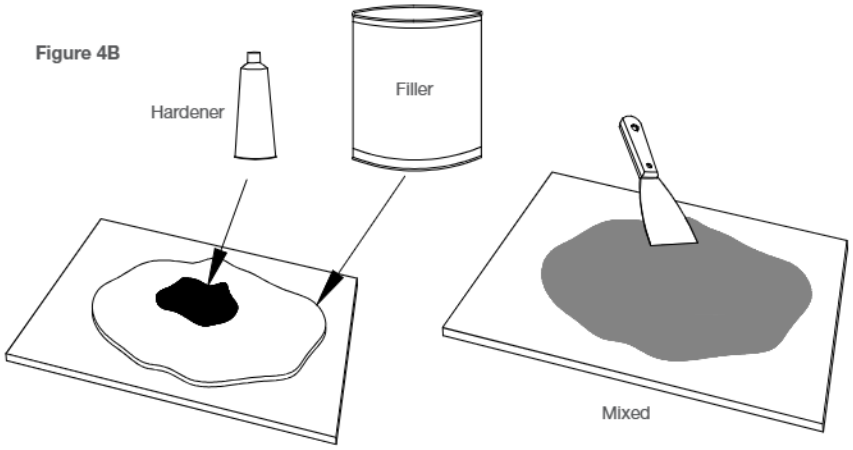


Figure 5B

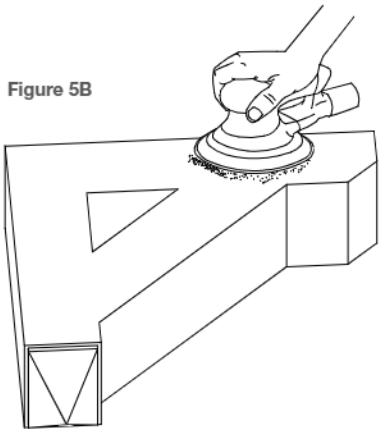
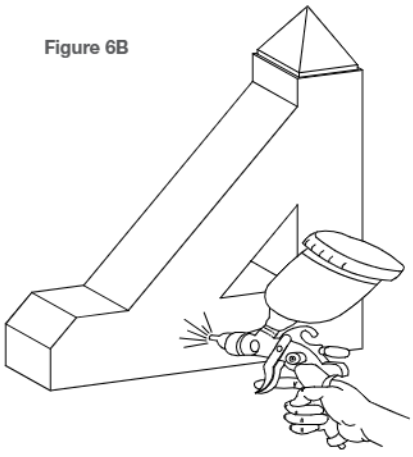


Figure 6B



1750 Indian Wood Circle I Maumee, Ohio 43537 I 1.800.446.3040 I fypon.com

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COLORPLUS® TECHNOLOGY SUPPLEMENTAL CLEANING METHOD

NOVEMBER 2018

TECHNICAL BULLETIN #28

This supplement is being provided as additional guidance for removing tough stains such as clay, gypsum and cement based mortar dust that remains on ColorPlus products after Technical Bulletin #20 (Cleaning James Hardie® siding) has been utilized.
Note: Not to be used on James Hardie primed products

Prior to proceeding with the method outlined below, the following requirements shall be met:

- For best results, this action should be taken as soon as possible (within 10 days) of installation on James Hardie ColorPlus Technology products.
- Tech Bulletin #20 Cleaning James Hardie® siding has been followed, yet tough stains still remain.

Spot clean as needed – do not apply the cleaner unnecessarily to siding that does not require additional cleaning.
Working area should be adjusted to accommodate drying times which can vary based on factors such as sun exposure, air temperature, siding color and other factors.

Tools	1. Soft cloth. 2. Soft brush (horsehair or siding brush with polyfiber bristles). *Caution: Do not use hard brush (for example: scrub brush or an abrasive scrub sponge) which could damage the finish or siding.* 3. Spray bottle or bucket for applying cleaner. 4. Garden hose for rinsing.
Cleaners	A. NorthStar® House Wash Concentrate by Northern® Tool + Equipment. Diluted to 1 part cleaner to 12 parts water (approx. 1 quart cleaner to 3 gallons water). **OR** B. Mighty Boss™ by Zoom Cleaning Products. Diluted to 1 part cleaner to 12 parts water (approx. 1 quart cleaner to 3 gallons water). Do not exceed the concentrations listed above. *Caution: During cleaning, always follow the cleaning product manufacturer's recommendations for personal protection, which may include using appropriate gloves and eye protection. Protect any nearby plants or landscaping from overspray.*
Direction	1. Spray or brush the cleaner onto the affected area. 2. Gently clean the siding with the soft brush or wet soft cloth in the direction of the grain/texture. Use care not to push too hard against product surface. 3. Continually rinse the area until all of the cleaner has been washed off of the siding. Do not allow the cleaners to dry on the siding. 4. Let the cleaned area dry.

Horse Hair Brush



Siding Brush



IMPORTANT!

Low pressure water spray, a soft bristle (nonmetal) brush is most suitable for cleaning fiber cement products. If using a pressure washer, care must be taken to ensure that the water stream does not damage the surface of the siding. Using wide fan tips that are kept a minimum of 6 feet from the wall and at pressures under 1500 psi will minimize the chance of damaging the siding.
Sand blasting can damage the fiber cement surface and is not recommended.
Acid washing can damage the fiber cement surface and is not recommended.
Note: Damage to siding arising from improper cleaning or maintenance may not be covered by the James Hardie warranty.

IMPORTANT: Failure to follow James Hardie written installation instructions and comply with applicable building codes may violate local laws, affect building envelope performance and may affect warranty coverage. Failure to comply with all health and safety regulations when cutting and installing this product may result in personal injury.

DESIGN ADVICE: Any information or assistance provided by James Hardie in relation to specific projects must be approved by the relevant specialists engaged for the project eg. builder, architect or engineer. James Hardie will not be responsible in connection with any such information or assistance.

Product warranties, safety information and additional installation information are available at jameshardiepros.com

JamesHardie®

1.866.442.7343 | www.jameshardiepros.com

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EXHIBIT B

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State of Washington
Department of Labor & Industries
Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 08/08/2023

County	Trade	Job Classification	Wage	Holiday	Overtime	Note	*Risk Class
Mason	Carpenters	Acoustical Worker	$71.53	15J	4C		View
Mason	Carpenters	Bridge, Dock And Wharf Carpenters	$71.53	15J	4C		View
Mason	Carpenters	Floor Layer & Floor Finisher	$71.53	15J	4C		View
Mason	Carpenters	Journey Level	$71.53	15J	4C		View
Mason	Carpenters	Scaffold Erector	$71.53	15J	4C		View
Mason	Fabricated Precast Concrete Products	Journey Level	$15.74		1		View
Mason	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	$15.74		1		View
Mason	Laborers	Air, Gas Or Electric Vibrating Screed	$56.80	15J	4V	8Y	View
Mason	Laborers	Airtrac Drill Operator	$58.56	15J	4V	8Y	View
Mason	Laborers	Ballast Regular Machine	$56.80	15J	4V	8Y	View
Mason	Laborers	Batch Weighman	$48.14	15J	4V	8Y	View
Mason	Laborers	Brick Pavers	$56.80	15J	4V	8Y	View
Mason	Laborers	Brush Cutter	$56.80	15J	4V	8Y	View
Mason	Laborers	Brush Hog Feeder	$56.80	15J	4V	8Y	View
Mason	Laborers	Burner	$56.80	15J	4V	8Y	View
Mason	Laborers	Caisson Worker	$58.56	15J	4V	8Y	View
Mason	Laborers	Carpenter Tender	$56.80	15J	4V	8Y	View
Mason	Laborers	Cement Dumper-paving	$57.84	15J	4V	8Y	View
Mason	Laborers	Cement Finisher Tender	$56.80	15J	4V	8Y	View
Mason	Laborers	Change House Or Dry Shack	$56.80	15J	4V	8Y	View
Mason	Laborers	Chipping Gun (30 Lbs. And Over)	$57.84	15J	4V	8Y	View
Mason	Laborers	Chipping Gun (Under 30 Lbs.)	$56.80	15J	4V	8Y	View
Mason	Laborers	Choker Setter	$56.80	15J	4V	8Y	View
Mason	Laborers	Chuck Tender	$56.80	15J	4V	8Y	View
Mason	Laborers	Clary Power Spreader	$57.84	15J	4V	8Y	View
Mason	Laborers	Clean-up Laborer	$56.80	15J	4V	8Y	View
Mason	Laborers	Concrete Dumper/Chute Operator	$57.84	15J	4V	8Y	View
Mason	Laborers	Concrete Form Stripper	$56.80	15J	4V	8Y	View
Mason	Laborers	Concrete Placement Crew	$57.84	15J	4V	8Y	View
Mason	Laborers	Concrete Saw Operator/Core Driller	$57.84	15J	4V	8Y	View
Mason	Laborers	Crusher Feeder	$48.14	15J	4V	8Y	View
Mason	Laborers	Curing Laborer	$56.80	15J	4V	8Y	View
Mason	Laborers	Demolition: Wrecking & Moving (Incl. Charred Material)	$56.80	15J	4V	8Y	View
Mason	Laborers	Ditch Digger	$56.80	15J	4V	8Y	View
Mason	Laborers	Diver	$58.56	15J	4V	8Y	View
Mason	Laborers	Drill Operator (Hydraulic, Diamond)	$57.84	15J	4V	8Y	View
Mason	Laborers	Dry Stack Walls	$56.80	15J	4V	8Y	View
Mason	Laborers	Dump Person	$56.80	15J	4V	8Y	View
Mason	Laborers	Epoxy Technician	$56.80	15J	4V	8Y	View
Mason	Laborers	Erosion Control Worker	$56.80	15J	4V	8Y	View
Mason	Laborers	Faller & Bucker Chain Saw	$57.84	15J	4V	8Y	View
Mason	Laborers	Fine Graders	$56.80	15J	4V	8Y	View
Mason	Laborers	Firewatch	$48.14	15J	4V	8Y	View
Mason	Laborers	Form Setter	$57.84	15J	4V	8Y	View
Mason	Laborers	Gabian Basket Builders	$56.80	15J	4V	8Y	View
Mason	Laborers	General Laborer	$56.80	15J	4V	8Y	View
Mason	Laborers	Grade Checker & Transit Person	$59.85	15J	4V	8Y	View
Mason	Laborers	Grinders	$56.80	15J	4V	8Y	View
Mason	Laborers	Grout Machine Tender	$56.80	15J	4V	8Y	View

Mason	Laborers	Groutmen (Pressure) Including Post Tension Beams	$57.84	15J	4V	8Y	View
Mason	Laborers	Guardrail Erector	$56.80	15J	4V	8Y	View
Mason	Laborers	Hazardous Waste Worker (Level A)	$58.56	15J	4V	8Y	View
Mason	Laborers	Hazardous Waste Worker (Level B)	$57.84	15J	4V	8Y	View
Mason	Laborers	Hazardous Waste Worker (Level C)	$56.80	15J	4V	8Y	View
Mason	Laborers	High Scaler	$58.56	15J	4V	8Y	View
Mason	Laborers	Jackhammer	$57.84	15J	4V	8Y	View
Mason	Laborers	Laserbeam Operator	$57.84	15J	4V	8Y	View
Mason	Laborers	Maintenance Person	$56.80	15J	4V	8Y	View
Mason	Laborers	Manhole Builder-Mudman	$57.84	15J	4V	8Y	View
Mason	Laborers	Material Yard Person	$56.80	15J	4V	8Y	View
Mason	Laborers	Mold Abatement Worker	$56.80	15J	4V	8Y	View
Mason	Laborers	Motorman-Dinky Locomotive	$59.95	15J	4V	8Y	View
Mason	Laborers	nozzleman (concrete pump, green cutter when using combination of high pressure air & water on concrete & rock, sandblast, gunite, shotcrete, water blaster, vacuum blaster)	$59.85	15J	4V	8Y	View
Mason	Laborers	Pavement Breaker	$57.84	15J	4V	8Y	View
Mason	Laborers	Pilot Car	$48.14	15J	4V	8Y	View
Mason	Laborers	Pipe Layer (Lead)	$59.85	15J	4V	8Y	View
Mason	Laborers	Pipe Layer/Tailor	$57.84	15J	4V	8Y	View
Mason	Laborers	Pipe Pot Tender	$57.84	15J	4V	8Y	View
Mason	Laborers	Pipe Reliner	$57.84	15J	4V	8Y	View
Mason	Laborers	Pipe Wrapper	$57.84	15J	4V	8Y	View
Mason	Laborers	Pot Tender	$56.80	15J	4V	8Y	View
Mason	Laborers	Powderman	$58.56	15J	4V	8Y	View
Mason	Laborers	Powderman's Helper	$56.80	15J	4V	8Y	View
Mason	Laborers	Power Jacks	$57.84	15J	4V	8Y	View
Mason	Laborers	Railroad Spike Puller - Power	$57.84	15J	4V	8Y	View
Mason	Laborers	Raker - Asphalt	$59.85	15J	4V	8Y	View
Mason	Laborers	Re-timberman	$58.56	15J	4V	8Y	View
Mason	Laborers	Remote Equipment Operator	$57.84	15J	4V	8Y	View
Mason	Laborers	Rigger/Signal Person	$57.84	15J	4V	8Y	View
Mason	Laborers	Rip Rap Person	$56.80	15J	4V	8Y	View
Mason	Laborers	Rivet Buster	$57.84	15J	4V	8Y	View
Mason	Laborers	Rodder	$57.84	15J	4V	8Y	View
Mason	Laborers	Scaffold Erector	$56.80	15J	4V	8Y	View
Mason	Laborers	Scale Person	$56.80	15J	4V	8Y	View
Mason	Laborers	Sloper (Over 20")	$57.84	15J	4V	8Y	View
Mason	Laborers	Sloper Sprayer	$56.80	15J	4V	8Y	View
Mason	Laborers	Spreader (Concrete)	$57.84	15J	4V	8Y	View
Mason	Laborers	Stake Hopper	$56.80	15J	4V	8Y	View
Mason	Laborers	Stock Piler	$56.80	15J	4V	8Y	View
Mason	Laborers	Swinging Stage/Boatswain Chair	$48.14	15J	4V	8Y	View
Mason	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	$57.84	15J	4V	8Y	View
Mason	Laborers	Tamper (Multiple & Self-propelled)	$57.84	15J	4V	8Y	View
Mason	Laborers	Timber Person - Sewer (Lagger, Shorer & Cribber)	$57.84	15J	4V	8Y	View
Mason	Laborers	Toolroom Person (at Jobsite)	$56.80	15J	4V	8Y	View
Mason	Laborers	Topper	$56.80	15J	4V	8Y	View
Mason	Laborers	Track Laborer	$56.80	15J	4V	8Y	View
Mason	Laborers	Track Liner (Power)	$57.84	15J	4V	8Y	View
Mason	Laborers	Traffic Control Laborer	$51.48	15J	4V	9C	View
Mason	Laborers	Traffic Control Supervisor	$54.55	15J	4V	9C	View
Mason	Laborers	Truck Spotter	$56.80	15J	4V	8Y	View
Mason	Laborers	Tugger Operator	$57.84	15J	4V	8Y	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	$158.87	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	$163.90	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	$167.58	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	$173.28	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	$175.40	15J	4V	9B	View

Mason	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	$180.50	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	$182.40	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	$184.40	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	$186.40	15J	4V	9B	View
Mason	Laborers	Tunnel Work-Guage and Lock Tender	$59.95	15J	4V	8Y	View
Mason	Laborers	Tunnel Work-Miner	$59.95	15J	4V	8Y	View
Mason	Laborers	Vibrator	$57.84	15J	4V	8Y	View
Mason	Laborers	Vinyl Seamer	$56.80	15J	4V	8Y	View
Mason	Laborers	Watchman	$43.76	15J	4V	8Y	View
Mason	Laborers	Welder	$57.84	15J	4V	8Y	View
Mason	Laborers	Well Point Laborer	$57.84	15J	4V	8Y	View
Mason	Laborers	Window Washer/Cleaner	$43.76	15J	4V	8Y	View
Mason	Painters	Journey Level	$49.46	6Z	11J		View
Mason	Plasterers	Journey Level	$67.49	7Q	1R		View
Mason	Plasterers	Nozzleman	$71.49	7Q	1R		View
Mason	Power Equipment Operators	Asphalt Plant Operators	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Assistant Engineer	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Barrier Machine (zipper)	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Batch Plant Operator: concrete	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Boat Operator	$76.79	7A	11H	8X	View
Mason	Power Equipment Operators	Bobcat	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Brokk - Remote Demolition Equipment	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Brooms	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Bump Cutter	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Cableways	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Chipper	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Compressor	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Concrete Finish Machine - Laser Screed	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Conveyors	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Cranes Friction: 200 tons and over	$79.13	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes, A-frame: 10 tons and under	$72.22	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	$77.56	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes: 20 tons through 44 tons with attachments	$76.11	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	$78.36	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	$79.13	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	$76.79	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes: Friction cranes through 199 tons	$78.36	7A	11H	8X	View
Mason	Power Equipment Operators	Cranes: through 19 tons with attachments, a-frame over 10 tons	$75.53	7A	11H	8X	View
Mason	Power Equipment Operators	Crusher	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Deck Engineer/Deck Winches (power)	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Derricks, On Building Work	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Dozers D-9 & Under	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Drilling Machine	$77.54	15J	11G	8X	View
Mason	Power Equipment Operators	Elevator and man-lift: permanent and shaft type	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Forklift: 3000 lbs and over with attachments	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Forklifts: under 3000 lbs. with attachments	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Gradechecker/Stakeman	$72.20	15J	11G	8X	View

Mason	Power Equipment Operators	Guardrail Punch	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Horizontal/Directional Drill Locator	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Horizontal/Directional Drill Operator	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	$75.53	7A	11H	8X	View
Mason	Power Equipment Operators	Hydralifts/boom trucks: 10 tons and under	$72.22	7A	11H	8X	View
Mason	Power Equipment Operators	Leverman	$78.33	15J	11G	8X	View
Mason	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Loaders, Overhead Under 6 Yards	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Loaders, Plant Feed	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Loaders: Elevating Type Belt	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Locomotives, All	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Material Transfer Device	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Mechanics: All (Leadmen - $0.50 per hour over mechanic)	$77.54	15J	11G	8X	View
Mason	Power Equipment Operators	Motor Patrol Graders	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Overhead, bridge type Crane: 20 tons through 44 tons	$76.11	7A	11H	8X	View
Mason	Power Equipment Operators	Overhead, bridge type: 100 tons and over	$77.56	7A	11H	8X	View
Mason	Power Equipment Operators	Overhead, bridge type: 45 tons through 99 tons	$76.79	7A	11H	8X	View
Mason	Power Equipment Operators	Pavement Breaker	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Pile Driver (other Than Crane Mount)	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Posthole Digger, Mechanical	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Power Plant	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Pumps - Water	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Quick Tower: no cab, under 100 feet in height base to boom	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Rigger and Bellman	$72.22	7A	11H	8X	View
Mason	Power Equipment Operators	Rigger/Signal Person, Bellman(Certified)	$75.53	7A	11H	8X	View
Mason	Power Equipment Operators	Rollagon	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Roller, Other Than Plant Mix	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Roto-mill, Roto-grinder	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Saws - Concrete	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Scrapers - Concrete & Carry All	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Service Engineers: Equipment	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Shotcrete/Gunite Equipment	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$77.54	15J	11G	8X	View
Mason	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$78.33	15J	11G	8X	View
Mason	Power Equipment Operators	Slipform Pavers	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Spreader, Topsider & Screedman	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Subgrader Trimmer	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Tower Bucket Elevators	$75.51	15J	11G	8X	View

Mason	Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	$78.36	7A	11H	8X	View
Mason	Power Equipment Operators	Tower crane: up to 175' in height base to boom	$77.56	7A	11H	8X	View
Mason	Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	$79.13	7A	11H	8X	View
Mason	Power Equipment Operators	Transporters, All Track Or Truck Type	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Trenching Machines	$75.51	15J	11G	8X	View
Mason	Power Equipment Operators	Truck Crane Oiler/Driver: 100 tons and over	$76.11	7A	11H	8X	View
Mason	Power Equipment Operators	Truck crane oiler/driver: under 100 tons	$75.53	7A	11H	8X	View
Mason	Power Equipment Operators	Truck Mount Portable Conveyor	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Vac Truck (Vactor Guzzler, Hydro Excavator)	$76.09	15J	11G	8X	View
Mason	Power Equipment Operators	Welder	$76.77	15J	11G	8X	View
Mason	Power Equipment Operators	Wheel Tractors, Farmall Type	$72.20	15J	11G	8X	View
Mason	Power Equipment Operators	Yo Yo Pay Dozer	$76.09	15J	11G	8X	View
Mason	Truck Drivers	Asphalt Mix Over 16 Yards	$71.70	15J	11M	8L	View
Mason	Truck Drivers	Asphalt Mix To 16 Yards	$70.86	15J	11M	8L	View
Mason	Truck Drivers	Dump Truck	$70.86	15J	11M	8L	View
Mason	Truck Drivers	Dump Truck & Trailer	$71.70	15J	11M	8L	View
Mason	Truck Drivers	Other Trucks	$71.70	15J	11M	8L	View

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Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.

J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.

K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

1. O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.

P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.

R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.

U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.

W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.

Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.

Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

Overtime Codes Continued

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

   F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.

   M. This code appears to be missing. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.

   O. All hours worked on Sundays and holidays shall be paid at one and one-half times the hourly rate of wage.

   R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.

   U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.

3. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.

   H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.

   J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

   K. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

   After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the eight (8) hours rest period.

Overtime Codes Continued

4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage

C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

D. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:
On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. The First eight (8) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) per day on Saturdays shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. J. The first eight (8) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) hours on a Saturday shall be paid at double the hourly rate of wage. All hours worked over twelve (12) in a day, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

K. All hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked over twelve (12) in a day Monday through Saturday, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.

L. The first twelve (12) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on a Saturday in excess of twelve (12) hours shall be paid at double the hourly rate of pay. All hours worked over twelve (12) in a day Monday through Friday, and all hours worked on Sundays shall be paid at double the hourly rate of wage. All hours worked on a holiday shall be paid at one and one-half times the hourly rate of wage, except that all hours worked on Labor Day shall be paid at double the hourly rate of pay.

U. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. (Except on makeup days if work is lost due to inclement weather, then the first eight (8) hours on Saturday may be paid the regular rate.) All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

S. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, work performed in excess of (10) hours shall be paid at one and one half (1-1/2) times the hourly rate of pay. On Monday through Friday, work performed outside the normal work hours of 6:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations).

All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Multiple Shift Operations: When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. Special Shifts: The Special Shift Premium is the basic hourly rate of pay plus $2.00 an hour. When due to conditions beyond the control of the employer or when an owner (not acting as the contractor), a government agency or the contract specifications require more than four (4) hours of a special shift can only be performed outside the normal 6am to 6pm shift then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid the special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday).

Overtime Codes Continued

4. V. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established or outside the normal shift (5 am to 6pm), and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

In the event the job is down due to weather conditions, then Saturday may, be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

X. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. Work performed outside the normal shift of 6 am to 6pm shall be paid at one and one-half the straight time rate, (except for special shifts or three shift operations). All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. Shifts may be established when considered necessary by the Employer.

The Employer may establish shifts consisting of eight (8) or ten (10) hours of work (subject to WAC 296-127-022), that shall constitute a normal forty (40) hour work week. The Employer can change from a 5-eight to a 4-ten hour schedule or back to the other. All hours of work on these shifts shall be paid for at the straight time hourly rate. Work performed in excess of eight hours (or ten hours per day (subject to WAC 296-127-022) shall be paid at one and one-half the straight time rate.

When due to conditions beyond the control of the Employer, or when contract specifications require that work can only be performed outside the regular day shift, then by mutual agreement a special shift may be worked at the straight time rate, eight (8) hours work for eight (8) hours pay. The starting time shall be arranged to fit such conditions of work.

When an employee returns to work without at a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

11. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

B After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

C The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, and all hours on Sunday shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage. All non-overtime and non-holiday hours worked between 4:00 pm and 5:00 am, Monday through Friday, shall be paid at a premium rate of 15% over the hourly rate of wage.

Overtime Codes Continued

11. D. All hours worked on Saturdays and holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

E. The first two (2) hours after eight (8) regular hours Monday through Friday, the first ten (10) hours on Saturday, and the first ten (10) hours worked on Holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, and Sundays shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one-half times the hourly rate of wage for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

G. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.

All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of nine (9) hours or more. When an employee returns to work without at least nine (9) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the nine (9) hours rest period.

H. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.

All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of ten (10) hours or more. When an employee returns to work without at least ten (10) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the ten (10) hours rest period.

Overtime Codes Continued

11. J. All hours worked on holidays shall be paid at double the hourly rate of wage.

K. On Monday through Friday hours worked outside 4:00 am and 5:00 pm, and the first two (2) hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked over 10 hours per day Monday through Friday, and all hours worked on Saturdays, Sundays, and Holidays worked shall be paid at double the hourly rate of wage.

L. An employee working outside 5:00 am and 5:00 pm shall receive an additional two dollar ($2.00) per hour for all hours worked that shift. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

M. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 am to 6:00 pm, then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shift shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten shifts.

On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay. All work performed after 6:00 pm Saturday to 5:00 am Monday, all work performed over twelve (12) hours, and all work performed on holidays shall be paid at double the straight time rate of pay.

Shift Pay Premium: In an addition to any overtime already required, all hours worked between the hours of 6:00 pm and 5:00 am shall receive an additional two dollars ($2.00) per hour.

N. All work performed over twelve hours in a shift and all work performed on Sundays and Holidays shall be paid at double the straight time rate.

Any time worked over eight (8) hours on Saturday shall be paid double the straight time rate, except employees assigned to work six 10-hour shifts per week shall be paid double the straight time rate for any time worked on Saturday over 10 hours.

Holiday Codes

5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).

   B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).

   C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

   D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).

   H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).

   I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

   K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).

   L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).

   N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).

   P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.

   Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

   R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).

   S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).

   Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

6. G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).

   H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).

Holiday Codes Continued

6. T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).

   Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

   B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

   C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

   D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

   E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

   F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

   G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

   H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

   I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

V. Holidays: New Year's Day, President's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year's Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

W. Holidays: New Year's Day, Day After New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year's Day, and a Floating Holiday.

X. Holidays: New Year's Day, Day before or after New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day before or after Christmas day. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.

Y. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, Christmas Eve, and Christmas Day (9). Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday. Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Holiday Codes Continued

15. G. New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, the last scheduled workday before Christmas, and Christmas Day (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Note Codes

8. D. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $0.75, Level B: $0.50, And Level C: $0.25.

M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: $1.00, Levels C & D: $0.50.

N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

Note Codes Continued

8. U. Workers on hazmat projects receive additional hourly premiums as follows – Class A Suit: $2.00, Class B Suit: $1.50, And Class C Suit: $1.00. Workers performing underground work receive an additional $0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional $0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do “pioneer” work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional $0.50 per hour.

V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.

Depth premiums apply to depths of fifty feet or more. Over 50' to 100' - $2.00 per foot for each foot over 50 feet. Over 101' to 150' - $3.00 per foot for each foot over 101 feet. Over 151' to 220' - $4.00 per foot for each foot over 220 feet. Over 221' - $5.00 per foot for each foot over 221 feet.

Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25’ to 300’ - $1.00 per foot from entrance. 300’ to 600’ - $1.50 per foot beginning at 300’. Over 600’ - $2.00 per foot beginning at 600’.

W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

X. Workers on hazmat projects receive additional hourly premiums as follows - Class A Suit: $2.00, Class B Suit: $1.50, Class C Suit: $1.00, and Class D Suit: $0.50. Special Shift Premium: Basic hourly rate plus $2.00 per hour.

When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications requires that work can only be performed outside the normal 5 am to 6pm shift, then the special shift premium will be applied to the basic hourly rate. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in OT or Double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Y. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

Swinging Stage/Boatswains Chair: Employees working on a swinging state or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

Z. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as a contractor), a government agency or the contract specifications require that more than (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they will be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Note Codes Continued

9. A. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

Special Shift Premium: Basic hourly rate plus $2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications require that more than four (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Certified Crane Operator Premium: Crane operators requiring certifications shall be paid $0.50 per hour above their classification rate.

Boom Pay Premium: All cranes including tower shall be paid as follows based on boom length:

(A) – 130’ to 199’ – $0.50 per hour over their classification rate.
(B) – 200’ to 299’ – $0.80 per hour over their classification rate.
(C) – 300’ and over – $1.00 per hour over their classification rate.

B. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

C. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents ($0.75) per hour above the classification rate.

Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

D. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, bridges, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

E. Heavy Construction includes construction, repair, alteration or additions to the production, fabrication or manufacturing portions of industrial or manufacturing plants, hydroelectric or nuclear power plants and atomic reactor construction. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

F. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

Note Codes Continued

9.	H.	One (1) person crew shall consist of a Party Chief. (Total Station or similar one (1) person survey system). Two (2) person survey party shall consist of a least a Party Chief and a Chain Person. Three (3) person survey party shall consist of at least a Party Chief, an Instrument Person, and a Chain Person.

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EXHIBIT C

WSDOT Standard Specification, incorporated by reference. See:
https://www.wsdot.wa.gov/publications/manuals/fulltext/m41-10/ss.pdf

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EXHIBIT D

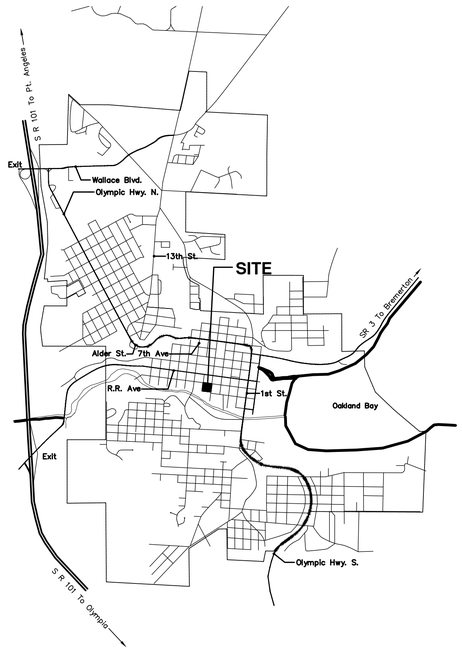
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REHABILITATION OF THE EXTERIOR OF

SHELTON CIVIC CENTER

Shelton, Washington

Vicinity Map



PARCEL NO.:
32019-51-16001

LEGAL DESCRIPTION:
D SHELTONS 1ST ADD TO SHELTONV BLK: P LOTS:
1-8, TR 143 EX OF DLC #37 CITY OF SHELTON CIVIC CTR

SITE ADDRESS:
525 W COTA ST
SHELTON, WASHINGTON 98584

CODE COMPLIANCE

Applicable Codes:	International Building Code (IBC) (2018) nternational Existing Building Code (IEBC) (2018) State and local codes and ordinances City of Shelton Zoning Ordinances
IEBC Alteration Level:	Alteration Level 1
Occupancy Type:	No Change - A-2, B, I-3, S-1
Construction Type:	Type V-B (IBC Table 601) No Change
Allowable Areas:	No Change - Group A-2/Construction Type V-B: 24,000 Square Feet (IBC Table 506.2)
Actual Areas:	No Change - 38,261 S.F.
Allowable Building Height:	No Change - 2 stories, 60'-0" (IBC Table 503) Actual Building No Change - 2 Stories, 28'-5" Height:
Occupant Loads:	No Change
Construction Separations:	No Change - 1 hr. B to A-2 & A-2 to S-1 2 hr. area separation wall B to I-3 2 hr. walls < 10' from prop. line at A-2 occupancy (partial south wall) 1 hr. walls < 20' from prop. line (south & partial west walls) Protected openings < 10' from prop. line (south wall)

General Notes:
A building permit is required to alter or repair a building structure; to be provided by owner. (IBC 105.1)

Use only approved connectors for treated material.

Provide metal flashing as required for a water tight job.
Conform to details in SMACNA Sheet Metal Manual.

All electrical work shall conform to the National Electric Code, State of Washington Electrical Code and local codes.

Plumbing and Mechanical Work (Heating), if applicable, shall conform to national, state and local codes.

Caulk, weatherstrip or gasket around all utility penetrations to limit air infiltration per Washington State Energy Code.

Existing ceiling, wall or floor cavities of the exterior envelope exposed during construction without insulation are to be filled with full depth insulation.

PROJECT DESCRIPTION

The work consists of the rehabilitation of the exterior of Shelton Civic Center.

BASE BID:
Bid includes preparation and repainting of the exterior of Shelton Civic Center, including siding, soffits, fascias and trim, and edges, and any other surfaces not factory finished, or unless otherwise noted.
Bid includes selective replacement of damaged siding as required
Bid includes new trim band at the base of existing siding on the south and west elevations.

ADDITIVE BID #1:
Add the cost of preparation and painting of the Fypon cornice.

ADDITIVE BID #2:
Add the cost of preparation and staining of wood surfaces.

PROJECT INFORMATION

Owner:	City of Shelton 525 W. Cota St. Shelton, WA 98584 Contact: Mark Ziegler Owner's Representative Community Development Director Phone: (360) 342-5194 E-mail: mark.ziegler@sheltonwa.gov
Site Address:	525 W. Cota St. Shelton, WA 98584
Architect:	Williams Architecture AIA Architects P.O. Box 102 Shelton, Washington 98584 Contact: Iain Morris Phone: (360)426-0511 e-mail: Iain@fosterwilliams.com
Building Official:	City of Shelton Building Department 525 W. Cota St. Shelton, WA 98584 Contact: Sean Carlstrom Phone: (360) 432-5175

INDEX TO DRAWINGS

A100 VICINITY MAP, CODE COMPLIANCE, PROJECT DESCRIPTION, PROJECT INFORMATION, INDEX TO DRAWINGS
A301 BUILDING ELEVATIONS
A302 BUILDING ELEVATIONS AND DETAILS

WILLIAMS ARCHITECTURE
601 W. RAILROAD AVE
P.O. BOX 102
SHELTON, WA 98584
PH: (360) 426-0511

PROJECT NUMBER
2023003
PROJECT TITLE

EXTERIOR REHABILITATION
MASON COUNTY CIVIC CENTER
SHELTON, WASHINGTON

REVISIONS

SHEET CONTENTS
PROJECT INFORMATION

DATE
07-07-23
DRAWN BY
IM
CHECKED BY
L.A.W.
SHEET NUMBER

A-100

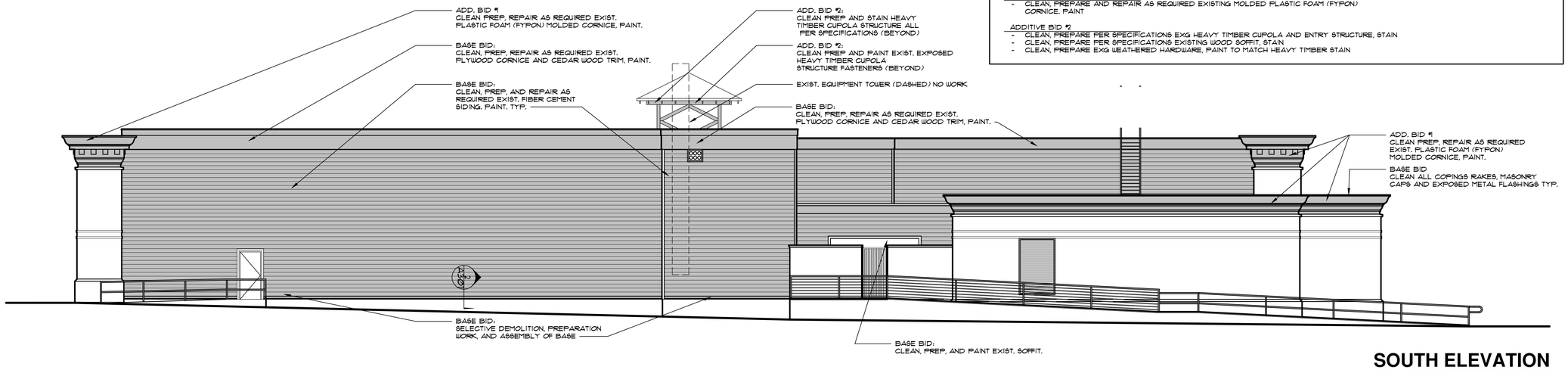
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REPRODUCTION OR RE-USE OF THESE DRAWINGS WITHOUT WRITTEN PERMISSION OF THE ARCHITECT IS PROHIBITED.

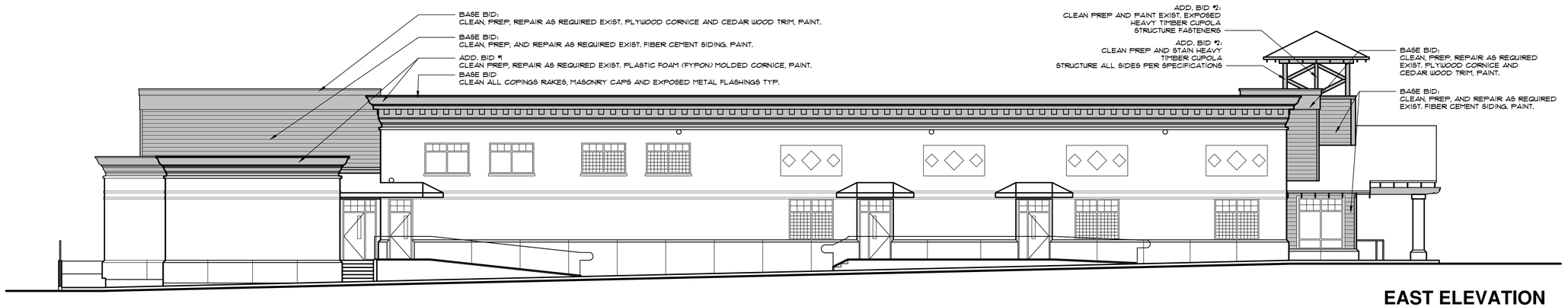
BASE BID
- CLEAN, PREPARE & PAINT EXTERIOR CLADDINGS INCLUDING FIBER CEMENT SIDING, MDO, AND CEDAR TRIM.
- REPAIR, AND OR REPLACE DAMAGED FIBER CEMENT SIDING AS REQUIRED FOR UNIFORM APPEARANCE
- REPAIR, AND OR REPLACE DAMAGED MDO PLYWOOD CORNICE AS REQUIRED
- REPAIR AND OR REPLACE DAMAGED CEDAR TRIM AS REQUIRED
- SELECTIVE DEMOLITION A301/1, PREPARATION WORK, AND ASSEMBLY OF BASE CONDITION AT SOUTH AND WEST ELEVATIONS, SEE ELEVATIONS FOR SCOPE SEE DETAIL A301/2 FOR ASSEMBLY
- CLEAN ALL COPINGS, RAKES, MASONRY CAPS, AND EXPOSED METAL FLASHINGS

ADDITIVE BID #1
- CLEAN, PREPARE AND REPAIR AS REQUIRED EXISTING MOLDED PLASTIC FOAM (FYPON) CORNICE, PAINT

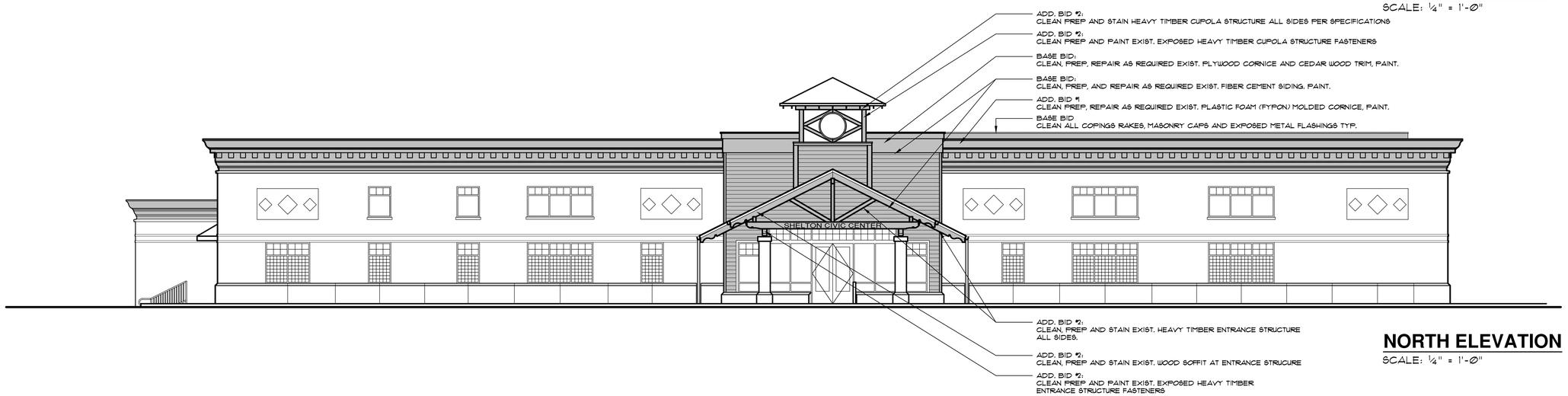
ADDITIVE BID #2
- CLEAN, PREPARE PER SPECIFICATIONS EXG HEAVY TIMBER CUPOLA AND ENTRY STRUCTURE, STAIN
- CLEAN, PREPARE PER SPECIFICATIONS EXISTING WOOD SOFFIT, STAIN
- CLEAN, PREPARE EXG WEATHERED HARDWARE, PAINT TO MATCH HEAVY TIMBER STAIN



SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



EAST ELEVATION
SCALE: 1/4" = 1'-0"



NORTH ELEVATION
SCALE: 1/4" = 1'-0"

WILLIAMS ARCHITECTURE
601 W. RAILROAD AVE
P.O. BOX 102
SHELTON, WA 98584
PH: (360) 426-0511

PROJECT NUMBER
2023003
PROJECT TITLE

EXTERIOR REHABILITATION
MASON COUNTY CIVIC CENTER
SHELTON, WASHINGTON

REVISIONS

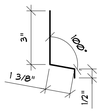
SHEET CONTENTS
BUILDING ELEVATIONS

DATE
07-07-23
DRAWN BY
IM
CHECKED BY
L.A.W.
SHEET NUMBER

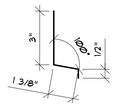
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OF 3

REPRODUCTION OR RE-USE OF THESE DRAWINGS WITHOUT WRITTEN PERMISSION OF THE ARCHITECT IS PROHIBITED.



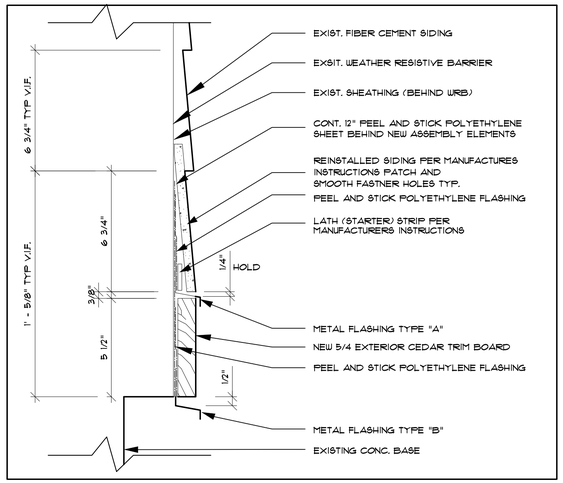
METAL FLASHING TYPE "A" 26 GAUGE



METAL FLASHING TYPE "B" 22 GAUGE

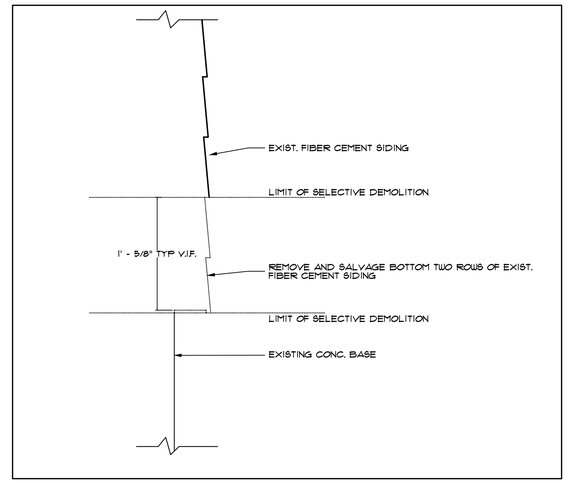
3 A301 METAL TRIMS PROFILE

SCALE: 3" = 1'-0"



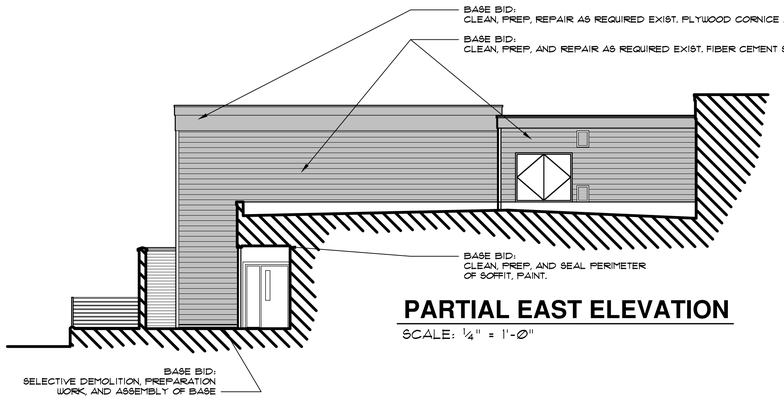
2 A301 SECTION DETAIL: BASE

SCALE: 3" = 1'-0"



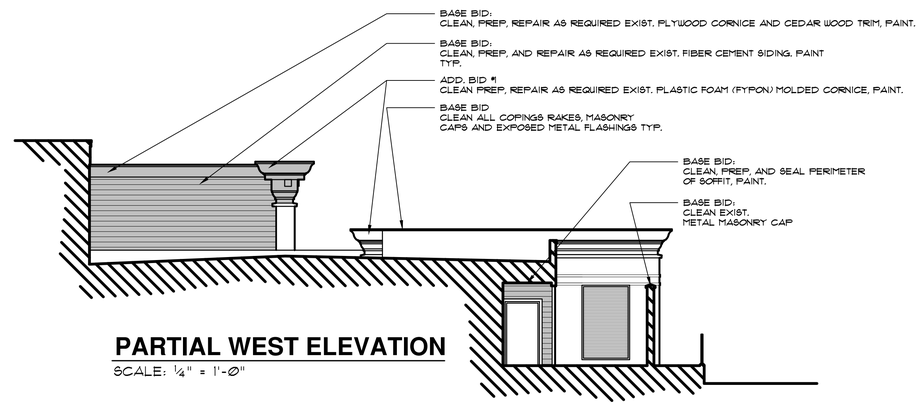
1 A301 SECTION DETAIL: BASE SELECTIVE DEMOLITION

SCALE: 1½" = 1'-0"



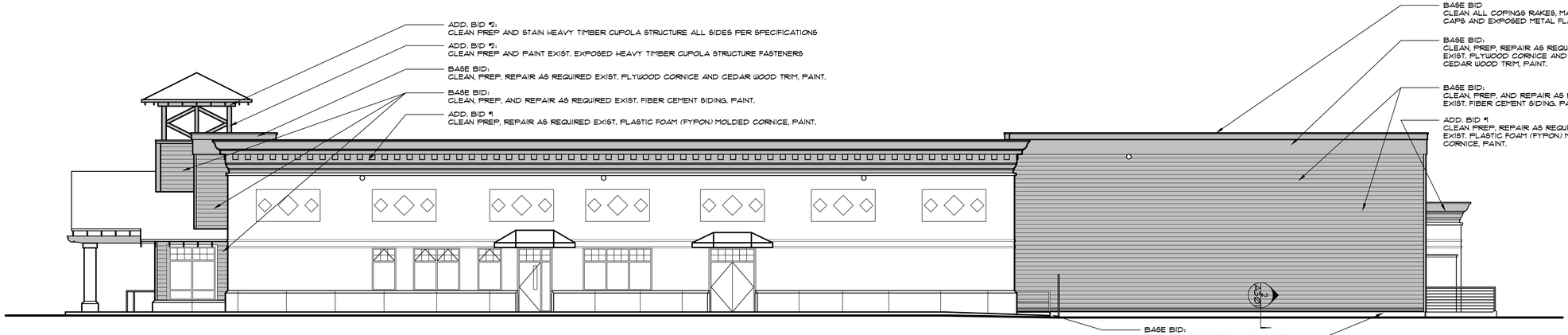
PARTIAL EAST ELEVATION

SCALE: ¼" = 1'-0"



PARTIAL WEST ELEVATION

SCALE: ¼" = 1'-0"



WEST ELEVATION

SCALE: ¼" = 1'-0"

WILLIAMS ARCHITECTURE
601 W. RAILROAD AVE
P.O. BOX 102
SHELTON, WA 98584
PH: (360) 426-0511

PROJECT NUMBER
2023003
PROJECT TITLE

EXTERIOR REHABILITATION
MASON COUNTY CIVIC CENTER
SHELTON, WASHINGTON

REVISIONS

SHEET CONTENTS
BUILDING ELEVATIONS DETAIL

DATE
07-07-23
DRAWN BY
IM
CHECKED BY
L.A.W.
SHEET NUMBER

A-301

OF 3

REPRODUCTION OR RE-USE OF THESE DRAWINGS WITHOUT WRITTEN PERMISSION OF THE ARCHITECT IS PROHIBITED.

CIVIC CENTER EXTERIOR REHABILITATION PROJECT
BID TABULATION FORM

Bids Due: 8/8/23, 1:00 PM

BIDDER	Architect's Estimate	Rhizor's Painting, LLC	Long Painting Company	Olympic Roofing, LLC	Sabelhaus West, Inc.	Quality Coating Enterprises	KR Homes, LLC
BIDDER ADDRESS		2810 205TH AVE SW LAKEBAY, WA 98349	21414 68TH AVE S KENT, WA 98032	1505 S 356TH ST STE 112 FEDERAL WAY, WA 98003	10880 OLD FRONTIER RD NW SILVERDALE, WA 98383	PO BOX 4759 SOUTH COLBY, WA 98384	PO BOX 856 WINLOCK, WA 98596
WASHINGTON STATE UBI NO.		604013749	578090687	604182311	602176261	603091432	604572381
WASHINGTON STATE CONTRACTOR'S REG. NUMBER		RHIZOPL841M6	LONGP**230MA	OLYMPRL834PQ	SABELWI975R2	QUALICE834JG	KRHOMHL805K1
BID BOND OR OTHER GOOD FAITH TOKEN		5% BID BOND	5% BID BOND	5% BID BOND	5% BID BOND	5% BID BOND	5% BID BOND
Description	Total Price	Total Price	Total Price	Total Price	Total Price	Total Price	Total Price
Sub-Total Base Bid	$103,490.00	$33,650.50	$41,421.00	$45,000.00	$75,725.06	$55,724.00	$115,722.00
WSST 8.8%	$9,107.12	$2,961.24	$3,645.05	$3,960.00	$6,663.81	$4,903.71	$10,183.54
Total Base Bid	**$112,597.12**	**$36,611.74**	**$45,066.05**	**$48,960.00**	**$82,388.87**	**$60,627.71**	**$125,905.54**
Sub-Total Additive Alternate #1	$65,120.00	$6,379.00	$27,048.00	$32,000.00	$15,404.78	$43,000.00	$42,278.00
WSST 8.8%	$5,730.56	$561.35	$2,380.22	$2,816.00	$1,355.62	$3,784.00	$3,720.46
Total Add. Alt. #1	$70,850.56	$6,940.35	$29,428.22	$34,816.00	$16,760.40	$46,784.00	$45,998.46
Sub-Total Additive Alternate #2	$29,260.00	$10,850.50	$17,284.00	$14,000.00	$21,847.25	$32,999.00	$15,222.00
WSST 8.8%	$2,574.88	$954.84	$1,520.99	$1,232.00	$1,922.56	$2,903.91	$1,339.54
Total Add. Alt. #2	$31,834.88	$11,805.34	$18,804.99	$15,232.00	$23,769.81	$35,902.91	$16,561.54
Sub-Total Base Bid with Add. Alt. #1 and #2	$197,870.00	$50,880.00	$85,753.00	$91,000.00	$112,977.09	$131,723.00	$173,222.00
Washington State Sales Tax 8.8%	$17,412.56	$4,477.44	$7,546.26	$8,008.00	$9,941.98	$11,591.62	$15,243.54
Total Base Bid with Add. Alt. #1 and #2	$215,282.56	**$55,357.44**	**$93,299.26**	**$99,008.00**	**$122,919.07**	**$143,314.62**	**$188,465.54**

DENOTES MATHEMATICAL ERROR OCCURRED ON ORIGINAL BID. CORRECTED AMOUNT SHOWN.

RESOLUTION NO. 1286-0823

A RESOLUTION OF THE COUNCIL OF THE CITY OF SHELTON, WASHINGTON, AUTHORIZING THE CITY MANAGER TO APPROVE A PUBLIC WORKS CONTRACT WITH RHIZOR'S PAINTING, LLC FOR THE COMPLETION OF THE CIVIC CENTER EXTERIOR REHABILITATION PROJECT

WHEREAS, an Invitation to Bid was advertised through the City of Shelton's Small Works Roster on July 20, 2023; and

WHEREAS, the Invitation to Bid identified exterior rehabilitation of the Shelton Civic Center; and

WHEREAS, the City received six bids in response to the Invitation to Bid, which were opened on August 8, 2023; and

WHEREAS, Rhizor's Painting, LLC had the lowest responsible bid of $55,357.44.

THEREFORE, BE IT RESOLVED by the City Council of the City of Shelton that the City Manager is authorized to sign the Public Works Contract with Rhizor's Painting, LLC for the completion of the 2023 Shelton Civic Center exterior rehabilitation project.

Passed by the City Council at its regular meeting held on the September 5, 2023.

_____
Mayor Onisko

ATTEST:

_____
City Clerk Nault

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item E2)

Touch Date: 08/04/2023
Brief Date: 08/15/2023
Action Date: 09/05/2023

Department: Community & Economic Development

Presented By: Jae Hill, Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	jbh
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Consultant Services for Updates to the Comp Plan

ATTACHMENTS:
-Resolution No. 1279-0723
-Contract for Services

Action Requested:

☐	Ordinance
☒	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The City of Shelton is required to update its Comprehensive Plan every ten years per the Washington State Growth Management Act, with the next plan required to be adopted by June 2025. Most cities don't have the staff capacity to handle these intensive comp plan updates internally, and they contract for services with planning firms that have expertise in these areas.

ANALYSIS/OPTIONS/ALTERNATIVES:
Staff issued an RFP on July 10, circulated to firms on the MRSC roster offering comprehensive planning services. Bidding closed July 31. The City received two responses from qualified bidders, both of whom have done extensive work for the city in the past—SCJ Alliance and BHC. A review panel was convened consisting of Director Hill, City Manager Mark Ziegler, Senior Planner Jason Dose, and although both proposals were of excellent quality, SCJ was the unanimous choice of all three reviewers due to lower cost and more extensive staff experience.

Work on the Comprehensive Plan will begin in September and run through adoption in June 2025.

BUDGET/FISCAL INFORMATION:
Council allocated $75,000 in the 2023 budget for beginning work on the Comp Plan Update. The Washington State Department of Commerce will provide a $125,000 grant to complete the work. This brings total funds available to $200,000 to be spent before the end of 2025 on the project. $30,000 has been earmarked for joint planning efforts with Mason County, leaving $170,000 for Shelton's work. The consultant contract will expend just short of that maximum, at $169,489.

PUBLIC INFORMATION REQUIREMENTS:
N/A

STAFF RECOMMENDATION/MOTION:
"I move to approve Resolution No. 1279-0723 for Consultant Services for updates to the Comprehensive Plan."

RESOLUTION NO. 1279-0723

A RESOLUTION OF THE COUNCIL OF THE CITY OF SHELTON, WASHINGTON, AUTHORIZING THE CITY MANAGER TO SIGN A CONTRACT FOR SERVICES WITH SCJ ALLIANCE TO UPDATE THE CITY'S COMPREHENSIVE PLAN

WHEREAS, the City is required by the State of Washington's Growth Management Act to conduct periodic updates of the City's Comprehensive Plan; and

WHEREAS, most Washington cities hire consultants to assist with the updates of such plans given the temporary but extensive staffing requirements during the update process; and

WHEREAS, SCJ Alliance is a firm with a strong record of performing similar land-use planning work for multiple jurisdictions; and

WHEREAS, a panel of City staff has unanimously selected SCJ Alliance as the preferred consultant after a competitive bidding process;

NOW, THEREFORE BE IT RESOLVED, by the City Council of the City of Shelton that the City Manager is hereby authorized to sign the contract with Shea, Carr & Jewell, Inc. (dba SCJ Alliance) in the amount of $169,649 to update the City's Comprehensive Plan.

INTRODUCED on the 15th day of August 2023 and **PASSED** by the City Council at its regular meeting held on the 5th day of September 2023.

_____
Mayor Onisko

ATTEST:

_____
City Clerk Nault

CONTRACT FOR SERVICES

City of Shelton and SCJ Alliance
Comprehensive Plan Update

This Agreement is entered into by and between the City of Shelton, Washington, ("the City") and Shea, Carr & Jewell, Inc. (dba SCJ Alliance), ("the Consultant"), whose principal office is located at 8730 Tallon Lane NE, Suite 200, Lacey, WA 98516.

WHEREAS, the City is required by the State of Washington's Growth Management Act to conduct periodic updates of the City's Comprehensive Plan; and

WHEREAS, the Consultant has a strong record of performing similar land-use planning work for multiple jurisdictions; and

WHEREAS, the Consultant was selected by a panel of City staff after a competitive bidding process; and

WHEREAS, the City desires to have the Consultant perform such services pursuant to the following terms and conditions;

NOW, THEREFORE, IN CONSIDERATION OF the mutual benefits and conditions set forth below, the parties hereto agree as follows:

1. **Scope of Services to be Performed by Consultant**. The Consultant shall perform an update to the City of Shelton's Comprehensive Plan, as described in **Exhibit "A"** attached hereto and incorporated herein by this reference as if fully set forth in this contract.

2. **Compliance with Applicable Industry Standards, Laws and Requirements.** In performing such services, the Consultant shall at all times comply with all federal, state, and local laws applicable to the performance of such services. It is the Consultant's responsibility to identify and comply with such laws, including but not limited to Washington's laws against discrimination; Washington's Industrial Safety and Health Act and associated regulations; Washington's Unemployment Compensation provisions, and any other applicable laws, statutes, regulations or requirements otherwise applicable to the services provided under this Agreement.

3. **Registration, Licensing and Bonding.** Consultant shall at all times maintain appropriate registration, licensing and bonding applicable to professional services to be performed pursuant to this Agreement, and has provided or will provide written evidence of the same to the City upon execution of this Agreement, and shall require and produce the same with respect to any subcontractors/assignees (if the same are authorized by the City to perform pursuant to the terms of this Agreement).

4. **Time Devoted.** The Consultant shall devote such time as reasonably necessary for the satisfactory performance of the services under this Agreement. Should Client require additional services not included under this Agreement, the Consultant shall make reasonable effort to provide such additional services within the time schedule without decreasing the effectiveness of the performance of services required under this

Agreement, and shall be compensated for such additional services as agreed between the Parties.

5. **Provisions of Facilities, Equipment, Personnel.** The Consultant shall furnish the facilities, equipment, and personnel necessary to perform the services required under this Agreement unless otherwise provided herein.

6. **Compensation and Invoicing**. The Consultant shall provide the services at a cost not to exceed **$169,489.00** in accordance with Exhibit A, Scope of Work. If additional task authorizations are issued, a new scope and budget will be requested.

   The City shall pay the Consultant for services rendered within thirty (30) days of receipt of an approvable invoice as well as the form titled, Exhibit "B", attached hereto and incorporated herein by this reference. The Consultant shall provide an activity report with each invoice highlighting services provided during the billing period, upcoming activities, and emerging management issues.

   The Consultant shall complete and return Exhibit "C", Tax Identification Number, to the City prior to or along with the first billing voucher submittal. The Consultant is required to have a City Business license and no payment will be made until one is obtained.

7. **Provisions for Changes in Scope of Consultant Services**. The Consultant agrees to perform those services described in Exhibit "A" attached hereto. Unless modified in writing and agreed to by both parties, the duties of the Consultant shall not be construed to exceed those services. The City and the Consultant agree that if additional duties are to be performed by the Consultant in the prosecution of this work, the Consultant shall submit an additional or supplemental work program and upon the City's approval, shall be compensated on the same terms of this contract as previously stated, or in a manner mutually agreed upon by both parties.

8. **Duration of Agreement**. This Agreement shall be in full force and effect for a period commencing on the date of the last signature affixed hereto and ending **June 30, 2025**, unless sooner terminated under the provisions hereinafter specified.

9. **Ownership and Use of Documents**. All documents, drawings, specifications, and other materials produced by the Consultant in connection with the services rendered under this Agreement shall be the property of the City whether the project for which they are made is executed or not. The City shall hold the Consultant harmless for the City's use of the documents, drawings, specifications, and other materials outside of the project intended.

10. **Independent Consultant**. The Consultant and the City agree that the Consultant is an Independent Contractor with respect to the services provided pursuant to this Agreement. Nothing in this Agreement shall be considered to create the relationship of employer and employee between the parties. Neither the Consultant nor any employee of the Consultant shall be entitled to any benefits accorded City employees by virtue of the services provided under this Agreement. The City shall not be responsible for paying, withholding, or otherwise deducting any customary state or federal payroll deductions, including but not limited to FICA, FUTA, state industrial insurance, state workers compensation, or otherwise assuming the duties of an employer with respect

to the Consultant or any employee of the Consultant.
In accordance with Shelton Municipal Code, for the privilege of accepting or executing a contract with the City of Shelton, irrespective of whether goods or services are delivered within or outside the city, or whether the person's office is within or outside the city, the consultant is subject to the licensing requirements and business and occupation tax levied in SMC Chapters 5.04.030 and 3.52.060.

11. **Indemnification / Hold Harmless**

Consultant shall defend, indemnify, and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the negligent acts, errors or omissions of the Consultant in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City.

In the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Consultant and the City, its officers, officials, employees, and volunteers, the Consultant's liability, including the duty and cost to defend, hereunder shall be only to the extent of the Consultant's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Consultant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

A. Insurance Term

The Consultant shall procure and maintain for the duration of the Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Consultant, its agents, representatives, or employees.

B. No Limitation

The Consultant's maintenance of insurance as required by the Agreement shall not be construed to limit the liability of the Consultant to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

C. Minimum Scope of Insurance

The Consultant shall obtain insurance of the types and coverage described below:

1. Automobile Liability insurance covering all owned, non-owned, hired, and leased vehicles. Coverage shall be as least as broad as Insurance Services Office (ISO) form CA 00 01.

2. Commercial General Liability insurance shall be at least as broad as ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, stop-gap independent contractors and personal injury and advertising injury. The Public Entity shall be named as an additional insured under the Consultant's Commercial General Liability insurance policy with respect to the work performed for the Public Entity using an additional insured endorsement at least as broad as ISO CG 20 26.

3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

4. Professional Liability insurance appropriate to the Consultant's profession.

D. Minimum Amounts of Insurance

The Consultant shall maintain the following insurance limits:

1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of $1,000,000 per accident.

2. Commercial General Liability insurance shall be written with limits no less than $2,000,000 each occurrence, $2,000,000 general aggregate.

3. Professional Liability insurance shall be written with limits no less than $2,000,000 per claim and $2,000,000 policy aggregate limit.

E. Other Insurance Provision

The Consultant's Automobile Liability and Commercial General Liability insurance policies are to contain, or be endorsed to contain that they shall be primary insurance as respect the City. Any insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Consultant's insurance and shall not contribute with it.

F. Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

G. Verification of Coverage

The Consultant shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Consultant before commencement of the work.

H. Notice of Cancellation

The Consultant shall provide the City with written notice of any policy cancellation within two business days of their receipt of such notice.

I. Failure to Maintain Insurance

Failure on the part of the Consultant to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days' notice to the Consultant to correct the breach, immediately terminate the contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Consultant from the City.

J. City Full Availability of Consultant Limits

If the Consultant maintains higher insurance limits than the minimums shown above, the City shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Consultant, irrespective of whether such limits maintained by the Consultant are greater than those required by this contract or whether any certificate of insurance furnished to the City evidences limits of liability lower than those maintained by the Consultant.

12. **Record Keeping and Reporting**.

A. The Consultant shall maintain accounts and records, including personnel, property, financial, and programmatic records, which sufficiently and properly reflect all direct and indirect costs of any nature expended and services performed pursuant to this Agreement. The Consultant shall also maintain such other records as may be deemed necessary by the City to ensure proper accounting of all funds contributed by the City to the performance of this Agreement.

B. These records shall be maintained for a period of seven (7) years after termination hereof unless permission to destroy them is granted by the Office of the Archivist in accordance with RCW Chapter 40.14 and by the City.

13. **Audits and Inspections**. The records and documents with respect to all matters covered by this Agreement shall be subject at all times to inspection, review, or audit as allowed by law during the performance of this Agreement. The City shall have the right to conduct an audit of the Consultant's financial statement and condition and to a copy of the results of any such audit or other examination performed by or on behalf of the Consultant.

14. **Termination**. This Agreement may at any time be terminated for any reason by the City upon giving to the Consultant thirty (30) days written notice of the City's intention to terminate the same. If the Consultant's insurance coverage is canceled for any reason, the City shall have the right to terminate this Agreement immediately. Consultant will be paid for satisfactory work performed through the date of termination.

15. **Discrimination Prohibited**. The Consultant shall not discriminate against any employee, applicant for employment, or any person seeking the services of the Consultant under this Agreement on the basis of race, color, religion, creed, sex, age, national origin, marital status, or presence of any sensory, mental, or physical handicap, or any other protected class.

16. **Assignment and Subcontract**. The Consultant shall not assign or subcontract any portion of the services contemplated by this Agreement without the prior written consent of the City.

17. **Entire Agreement**. This Agreement and Exhibits A, B, & C contain the entire agreement between the parties hereto, and no other agreements, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or bind either party. Either party may request changes to the Agreement. Proposed changes, which are mutually agreed upon and signed by each parties authorized signatory, shall be incorporated by written amendments to this Agreement.

18. **Notices**. The designated project representative for the City of Shelton is:

Jae Hill
Community & Economic Development Director
City of Shelton
525 West Cota Street
Shelton, Washington 98584
Phone number: (360) 432-5176
Email: jae.hill@sheltonwa.gov

Notices to the City shall be sent to the address noted above.

The designated project representative for the Consultant is Aaron Qualls; notices to the Consultant shall be sent to the following address:

Aaron Qualls
Project Manager
SCJ Alliance
108 N Washington, Suite 238
Phone number: (509) 835-3770
Email: aaron.qualls@scjalliance.com

19. **Applicable Law; Venue; Attorneys' Fees**. This Agreement shall be governed by and construed in accordance with the laws of the State of Washington. In the event any suit, arbitration, or other proceeding is instituted to enforce any term of this Agreement, the parties specifically understand and agree that venue shall be exclusively in Mason County, Washington. The prevailing party in any such action shall be entitled to its attorneys' fees and costs of suit.

20. **Representation of Consultant**. The Consultant represents to the City that it has no conflict of interest in performing any of the services set forth in Exhibit "A". In the event that the Consultant is asked to perform services for a project with which it may have a conflict, it will disclose such conflict to the City. At the discretion of the City, the City may direct the Consultant to refrain from entering into a contract with representatives of the conflicting project.

CONTRACT SIGNATURES

DATED this 5th day of September 2023

CITY OF SHELTON	SCJ ALLIANCE
By: _____	By: _____
Mark Ziegler, City Manager	Bill Grimes, Principal-in-Charge

EXHIBIT A

Scope of Work
City of Shelton 2025 Comprehensive Plan Update and EIS

This comprehensive plan update must integrate an EIS update and several previously completed planning efforts, including the Shoreline Master Plan, Hazard Mitigation Plan, PROS Plan, and the Water Comprehensive Plan Update. It will also require a development regulations audit in consideration of newly passed legislation by Washington State. This is an important opportunity to knit together what the City has been working on recently to produce a unified, consistent, and effective policy framework and collaboration with the County on housing will be a key part of this work, as well.

We understand City staff will be a key partner in this effort, and we look forward to working with various departments, associated boards, and commissions to ensure this plan is both compelling and useful. Our approach will be inclusive, transparent, memorable, technically solid, and intuitive.

Most importantly, this process provides an opportunity to hear from your community on what matters and craft a future vision for economic prosperity, housing attainability, historic downtown vitalization, and what we hear matters from stakeholders. The Shelton community must be meaningfully involved throughout this effort. Public engagement is the core of our practice, and we look forward to providing innovative, fun, and meaningful engagement opportunities during all phases of this update.

SCJ has also recently contracted with Mason County to update its comprehensive plan—providing a unique opportunity for us to coordinate outreach efforts, ensure consistency and coordination among both jurisdictions, and offer cost efficiencies.

Phase 1: Project Management, Documentation, and Communications
The consultant team will begin the project by meeting with SCJ and Shelton staff to review the project scope, schedule, budget, and deliverables to ensure expectations are clear. That meeting will cover project communication protocols, including providing team members with the information needed to deal effectively with issues, including whom to inform of a specific issue and whom to contact for assistance.
The consultant team will participate in monthly check-in calls with the City's project manager and will provide monthly progress reports documenting the status of both scope progress and budget expenditure.
Deliverables:

- Kickoff meeting with staff
- Participation in monthly check-in calls, monthly invoices, and progress reports

Phase 2: Understanding
This work establishes a baseline of understanding for Shelton and an assessment of the existing comprehensive plan's policy for compliance with current (and recent) GMA requirements. Although a revised GMA checklist does not yet exist where new legislation is considered, we

have already produced our own giving us a head start for the City of Shelton. This phase will also produce a detailed project engagement schedule, identifying specific engagement opportunities and establishing a first-generation project calendar in close consultation with City staff.

2.1 Demographics Report
SCJ will work directly with City staff in updating the plan's demographic information. This task will also include compiling data for base map layers.

2.2 Policy Framework
This task includes reviewing and analyzing existing plans and other relevant planning documents. SCJ will compile this information into a single and cohesive reference document, evaluating the existing comprehensive plan's policy framework and "mashing up" policy guidance from other recent policy documents and the Regional Transportation Planning Organization (RTPO). This will establish a comprehensive and current policy framework, allowing for a quick and intuitive understanding and evaluation of the community's current policy environment. This will also be a living document, keeping track of policy initiatives as they emerge and providing comparisons to what is already on the books.

2.3 Comprehensive Plan Engagement Schedule
In this task, SCJ will create a project schedule integrating the comprehensive plan and EIS update, working with staff to understand the process needs for each and designing points of intersection where appropriate. This task ensures our collective efforts are compatible, consistent, and complimentary. The detailed project schedule will identify milestones for internal coordination with City Departments, community outreach, and anticipated touchpoints with the Steering Committee and City Council. This task will identify community engagement events and techniques for each step in the process. We will work with you to design a program (see Phase 5) to build upon Shelton's existing community engagement tools and ensure transparency and effectiveness. We also look forward to how we may maximize engagement efforts and minimize costs through tandem efforts with Mason County's Comprehensive Plan update.

Deliverables:

- Demographics memo
- Plan and policy inventory
- Process schedule, with engagement strategy
- Policy Framework

Phase 3: Comprehensive Plan Update
This phase of work prepares the comprehensive plan periodic update, revising its structure, narrative, and policy to comply with new statutory and regional requirements and advance the community's pursuit of its vision. The plan will also incorporate work produced for the transportation element, ensuring policy compatibility with strategically targeted and consistent implementation actions.

3.1 Projections and Land Use Needs Analysis

We will review your existing land use environment and compare it to population forecasts and policy guidance from OFM, the Department of Commerce, and Mason County. We will work with you to understand how land use may need to adjust to hit growth targets and achieve the type, mix, and scale of development envisioned.

3.2 GMA Checklist, Evaluation, and Update of the Existing Policy Framework
SCJ will apply GMA checklist elements (using our own or any revised checklist provided by Commerce) to evaluate the required updates to the comprehensive plan and Shelton's existing development regulations. We will also assess how the city's goals match the results of early community conversations that identify issues and opportunities—using the policy framework to target policy revision requirements and opportunities specifically. SCJ is also underway with Mason County's Comprehensive Plan update. This provides a unique opportunity to provide seamless coordination between both jurisdictions with respect to the housing element, climate element, and urban growth area revisions.

3.3 Vision: Applied
We will review, vet, and refine Shelton's vision to reflect community concerns and aspirations. We may use a scenario-based approach to visioning or focus on amending the one now adopted, working with you to discern the most helpful method. Our approach will conform to your guidance for equity in engagement, ensuring the emerging vision benefits from as broad a set of perspectives as possible. We will make this vision spatial in nature, emphasizing the community's diversity in character, hope, and need.

3.4 Scenarios
We will work with staff to develop land use scenarios, addressing potential land use changes and policy consequences of each. These scenarios will be the basis for detailed community conversation and inform the accompanying SEPA/EIS work, creating a direct bridge between the comprehensive plan and its integrated environmental impact statement.

3.5 Plan Drafting
We will rewrite the comprehensive plan to respond to the updated vision, technical analysis, regional considerations, and community suggestions. We will review those areas in town which may intensify and become more complex, including the potential new multi-family zone. We will ensure transportation, transit, utilities, and policy adequately support them. The plan will conform to GMA content requirements but may also be structured differently than the current plan. We will work with you to determine the best possible format, potentially orienting the plan for an "online first" publication and building it on HTML protocols.

3.6 Implementation
We will create an implementation table, linking each attainable with applicable plan policies to underscore the relationships between proposed actions and the planning basis for each.

3.7 Zoning Amendments
This task dedicates approximately 40 hours of our time to audit your development regulations and, as possible, draft specific code amendments to tackle the highest compliance or strategic implementation priorities. The City may wish to consider the adoption of any new multi-family

zone in tandem with the comprehensive plan to ensure predictability for the community. We will work with you in this task to prioritize code amendments, conceptualize their direction, draft text edits, and consider the magnitude of other changes necessary to achieve plan objectives.

Deliverables:

- Land use analysis and targeted change areas
- GMA checklist and policy framework
- Draft spatial vision
- Planning scenarios
- Draft comprehensive plan
- Draft implementation table
- Priority zoning amendments

Phase 4: State Environmental Policy Act (SEPA) Consultation

This process is consistent with the Washington Administrative Code's guidance for developing, vetting, and certifying an integrated comp plan/EIS, ensuring the process can accommodate and effectively integrate an EIS into the comprehensive plan if required.

4.1 Background and Scoping

The scope and level of environmental review will match the degree of detail and transformation the comprehensive plan anticipates. We will work with the City to define the scope of environmental analysis, including an integrated environmental impact statement (EIS) as part of our initial scope. We will prepare a Determination of Significance and begin the EIS scoping process, coordinating with the City to determine if the EIS will be prepared as an addendum to existing EIS material if it will be a supplemental EIS, or if it will be a full EIS for integration into the plan.

4.2 Preparing the EIS

We have allocated a limited number of hours now for this task. Understanding the actual EIS scope will be determined as part of the process and in response to the complexity of the planning alternatives chosen to be evaluated. We believe the EIS can also be integrated into the comprehensive plan, consolidating the SEPA and plan review into a single process and resulting in some preparation efficiencies. We will revisit this work item with staff after the Determination of Significance is issued and the City understands the environmental work ahead.

4.3 Completing the FEIS

As with Task 4.2, we have assigned hours to this task but will need to confirm their adequacy once the draft plan/EIS is issued, and comments are received. The Final Environmental Impact Statement (FEIS) effort will include preparing responses to those comments and making edits as appropriate to the EIS material integrated into the comprehensive plan.

Deliverables:

- Determination of Non-Significance and SEPA checklist
- Determination of Significance and scoping notice

Phase 5: Community Engagement Strategy and Adoption

The best plans are supported by the communities that will live by them and be responsible for their implementation. This phase of work describes the types of engagement activities we expect to design, inform, or run, ensuring the Shelton community has an effective voice in this plan's development, priorities, and commitments.

5.1 Orientation Interviews
We believe a set of orientation interviews soon after starting work is key to focusing our effort on the topics and issues most relevant in the community's eyes. These interviews invite community members into the process. We propose devoting up to three days for these conversations by meeting with people one-on-one virtually, by phone, or, if possible, in person.

5.2 Steering Committee Updates
We believe a Steering Committee will prove helpful in generating community involvement, and we have included updates as part of our proposed scope. We will work with you to identify the Committee's role and scope of activities and prepare them for involvement.

5.3 Public Outreach Events (up to 8)
We will design and participate in multiple outreach events. We have included up to eight (8) public events here, preparing materials in advance as appropriate to support them. When possible, we will coordinate public engagement with other City events, presenting materials pertaining to the comprehensive plan update and related planning efforts. We expect to refine the public engagement and outreach events once we have agreed upon an overall strategy, creating a progressive, inclusive, transparent, and compelling engagement series to inform the community and support plan initiatives. Events may include a storefront studio or other multi-day charrette-style activity, community workshops, or open-mic open houses, depending on the outreach approach we agree upon during the project planning phase. At your preference, we may also look for opportunities to time some of our engagement efforts with parallel efforts for the county with the goal of maximizing the community's opportunity to help shape the future vision of Shelton.

5.4 Project Website and Social Media
We will coordinate with the City on its website and social media platforms, developing content as appropriate to announce events and describe project progress. We will also develop at least one online community questionnaire to explore community preferences and sort through planning alternatives.

5.5 Steering Committee and City Council
We anticipate preparing for and attending up to eight public work sessions or hearings with the Steering Committee and City Council, tracking recommended changes to the comprehensive plan as requested, and then producing a final document upon plan adoption.
Deliverables:

- Up to 20 orientation interviews and summary report
- Up to eight public events
- Project website and social media
- Up to six Steering Committee and City Council meetings

EXHIBIT B

City of Shelton
Billing Voucher

To: City of Shelton
525 West Cota
Shelton, Washington 98584
Phone: (360) 426-9731
FAX: (360) 426-7746

Submittal No.:_____

Consultant: _____ Telephone: ( ) _____

Mailing Address: _____

Project Title: _____

Contract Expiration: _____ Reporting Period: _____

Amount requested this invoice: $_____

Is this the final invoice for this Contract? ☐ Yes ☐ No

Invoice Number: _____ Date of Invoice: _____ (Attach Invoice)

_____
Authorized Signature

BUDGET SUMMARY

Total contract amount	$_____
Previous payments	$_____
Current request	$_____
Total requested this contract to date	$_____
Balance remaining	$_____

Note: If applicable, submit a separate voucher for each project, which is funded by your City of Shelton contract.

For Department Use Only

_____ Date: _____
Director of Public Works

EXHIBIT C

CITY OF SHELTON
525 West Cota Street
Shelton, WA 98584
Phone: (360) 426-9731
FAX: (360) 426-7746

TAX IDENTIFICATION NUMBER

In order for you to receive reimbursement from the City of Shelton, we must have either a Tax Identification Number or a Social Security Number. The Internal Revenue Code requires a Form 1099 for payments to every person or organization other than a corporation for services performed in the course of trade or business.

Please complete the following information request form and return it to the City of Shelton before or along the submittal of the first billing voucher.

Please check the appropriate category:

___Corporation ___Partnership ___Government Agency
___Individual/Proprietor ___Other (please explain)

Tax Identification #: _____

UBI #: _____

Print Name:_____

Print Title:_____

Business Name:_____

Business Address: _____

Business Phone:_____

Business e-mail: _____

_____ _____
Authorized Signature (required) Date

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item E3)

Touch Date: 07/26/2023
Brief Date: 08/15/2023
Action Date: 09/05/2023

Department: Finance

Presented By: Mike Githens, Finance Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	8/3/23
☒	Finance Director	
☐	Attorney	8/7/23
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Authorization of Investment of City of Shelton Monies in the Local Government Investment Pool (LGIP)

ATTACHMENTS:
Resolution No. 1281-0723

Action Requested:

- ☐ Ordinance
- ☒ Resolution
- ☒ Motion
- ☐ Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:

The Local Government Investment Pool (LGIP) is a public funds investment account available to local governmental entities for purposes of investment by the Office of the State Treasurer. Due to staffing changes, it is necessary to update and adopt an updated resolution to reflect the change and appointment of City Manager Mark Ziegler, Finance Director Mike Githens and Deputy Finance Director Teri Schnitzer as authorized signatories on the City of Shelton's LGIP account.

ANALYSIS/OPTIONS/ALTERNATIVES:

BUDGET/FISCAL INFORMATION:

No impact.

PUBLIC INFORMATION REQUIREMENTS:

N/A

STAFF RECOMMENDATION/MOTION:

"I move to adopt Resolution No. 1281-0723 as presented."

RESOLUTION NO. 1281-0723

RESOLUTION AUTHORIZING INVESTMENT OF CITY OF SHELTON MONIES IN THE LOCAL GOVERNMENT INVESTMENT POOL

WHEREAS, pursuant to Chapter 294, Laws of 1986, the Legislature created a trust fund to be known as the public funds investment account (commonly referred to as the Local Government Investment Pool (LGIP)) for the contribution and withdrawal of money by an authorized governmental entity for purposes of investment by the Office of the State Treasurer; and

WHEREAS, these provisions are codified under Chapter 43.250 RCW ("Investment of Local Government Funds"); and

WHEREAS, by previous resolution (#1118-0218), the City of Shelton ("City") authorized the contribution and withdrawal of governmental monies in the LGIP in the manner prescribed by law, rule, and prospectus; and

WHEREAS, following staffing changes, it is necessary to execute and submit to the Office of the State Treasurer an updated resolution and Local Government Investment Pool Transaction Authorization Form, to reflect the removal of previous staff and the appointment of successor "authorized individuals;" and

WHEREAS, by this present resolution, the City authorizes City Manager Mark Ziegler, City Finance Director Mike Githens and City Deputy Finance Director Teri Schnitzer as the "authorized individuals", with each authorized to act alone and with only the signature of one authorized individual required to effectuate an action, to authorize all amendments, changes or alterations to the Local Government Investment Pool Transaction Authorization Form or any other documentation, including the designation of other individuals to make contributions and withdrawals on behalf of the governmental entity, pursuant to the terms of the resolution first authorizing City participation in the Local Government Investment Pool; and

WHEREAS, the Office of the State Treasurer will rely solely on the City's governing body to provide notice regarding the status of any individual(s) authorized and vested to act as the "authorized individual(s)"; and

WHEREAS the City will file this present resolution and updated Local Government Investment Pool Transaction Authorization Form, with the Office of the State Treasurer; and

WHEREAS, the City's governing body attests by the signature of the mayor that it is duly authorized and empowered to direct the contribution or withdrawal of governmental entity monies, and to delegate certain authority to make adjustments to the incorporated transactional forms, to the individuals designated herein;

NOW THEREFORE, BE IT RESOLVED that the City's governing body hereby approves the Local Government Investment Pool Transaction Authorization Form (Form) as completed by Mark Ziegler, City Manager, Mike Githens, City Finance Director and Teri Schnitzer, City Deputy Finance Director, and incorporates said Form into this resolution by reference and does hereby attest to its accuracy.

BE IT FURTHER RESOLVED that the City's governing body hereby revokes and rescinds any and all authority, delegation and authorization vested in any previously named "authorized individuals," and hereby designates Mark Ziegler City Manager, Mike Githens, City Finance Director, and Teri Schnitzer, City Deputy Finance Director, respectively, as the "authorized individuals" to authorize all amendments, changes, or alterations to the Form or any other documentation including the designation of other individuals to make contributions and withdrawals on behalf of the governmental entity, with each authorized to act alone and with only the signature of one authorized individual required to effectuate an action.

BE IT FURTHER RESOLVED that this delegation ends upon the written notice, by any method set forth in the prospectus, of the governing body that the authorized individual has been terminated or that his or her delegation has been revoked. The Office of the State Treasurer will rely solely on the governing body to provide notice of such revocation and is entitled to rely on the authorized individual's instructions until such time as said notice has been provided.

BE IT FURTHER RESOLVED that the Form referred to in this resolution or hereafter amended by delegated authority, or any other documentation signed or otherwise approved by the authorized individuals shall remain in effect after revocation of the authorized individual's delegated authority, except to the extent that the authorized individual whose delegation has been terminated shall not be permitted to make further withdrawals or contributions to the LGIP on behalf of the governmental entity. No amendments, changes, or alterations shall be made to the Form or any other documentation until the entity passes a new resolution naming a new authorized individual; and

BE IT FURTHER RESOLVED that the governing body acknowledges that it has received, read, and understood the prospectus as provided by the Office of the State Treasurer. In addition, the governing body agrees that a copy of the prospectus will be provided to the persons delegated or otherwise authorized to make contributions or withdrawals into or out of the LGIP and that said individuals will be required to read

the prospectus prior to making any withdrawals or contributions or any further withdrawals or contributions if authorizations are already in place.

PASSED AND ADOPTED by the City Council of the City of Shelton, State of Washington on this _____ day of _____ 2023.

ATTEST:

_____ _____

City Clerk Donna Nault Mayor Eric Onisko

CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item E4)

Touch Date: 07/26/2023
Brief Date: 08/15/2023
Action Date: 09/05/2023

Department: Public Works

Presented By: Jay Harris, Public Works Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	J.O.H.
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
Wastewater Comprehensive Plan

ATTACHMENTS:
- Resolution No. 1282-0723
- Exhibit "A" November 2022 Comprehensive Wastewater-Facility Plan
- PowerPoint Presentation

Action Requested:

☐	Ordinance
☒	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The attached Exhibit A, November 2022 Sewer Comprehensive/Wastewater Facility Plan (Plan), for the City of Shelton addresses the City's planning needs for wastewater collection, transmission, treatment, reuse, and disposal for the 20-year planning period. The Plan was prepared in accordance with the provisions of the Revised Code of Washington (RCW) Section 90.48, Water Pollution Control, Washington Administrative Code (WAC) Section 173-240-050, General Sewer Plan, WAC 173-240-060, and federal requirements for a Wastewater Facility Plan. Development of the Plan has been coordinated with the 2017 City of Shelton Comprehensive Plan.

Key regulatory issues identified affecting the Wastewater Treatment Plant (WWTP) and Water Reclamation Plant (WRP) include:

- Treatment reliability and redundancy requirements.
- New Reclaimed Water Rule (WAC 173-219) impacting the WRP and use of reclaimed water.
- Standards for the protection of shellfish beds from pathogens impacting the WWTP.
- Potential new effluent nutrient restrictions affecting the WWTP.

LONG-TERM OBJECTIVES:
The City's objective with this Plan and future system improvements is to enhance the region's water resources, particularly Goldsborough Creek, Hammersley Inlet and Oakland Bay, and to facilitate water reuse within the community at a reasonable cost thereby protecting the environment and supporting economic growth. This includes the following:

1. Improving instream flows in Goldsborough Creek to support habitat.
2. Minimizing the discharge of pathogens to Hammersley Inlet and Oakland Bay to ensure safe recreation and reducing restrictions on shellfish harvesting.
3. Minimizing the discharge of nutrients to Hammersley Inlet and Oakland Bay to reduce the risk of dissolved oxygen depletion.
4. Encouraging the expansion of water reuse in the City to help preserve water resources.
5. Replacing aging infrastructure and ensuring the reliability and resilience of existing infrastructure.

6. Expanding the collection system to accommodate growth.
7. Ensuring rates and connection fees are affordable and equitable for both residential and commercial customers.

Modeling work of future conditions relevant to the City's sewer system is included within the update with recommendations for future improvements based on projected growth within the City over the 20-year planning horizon studied.

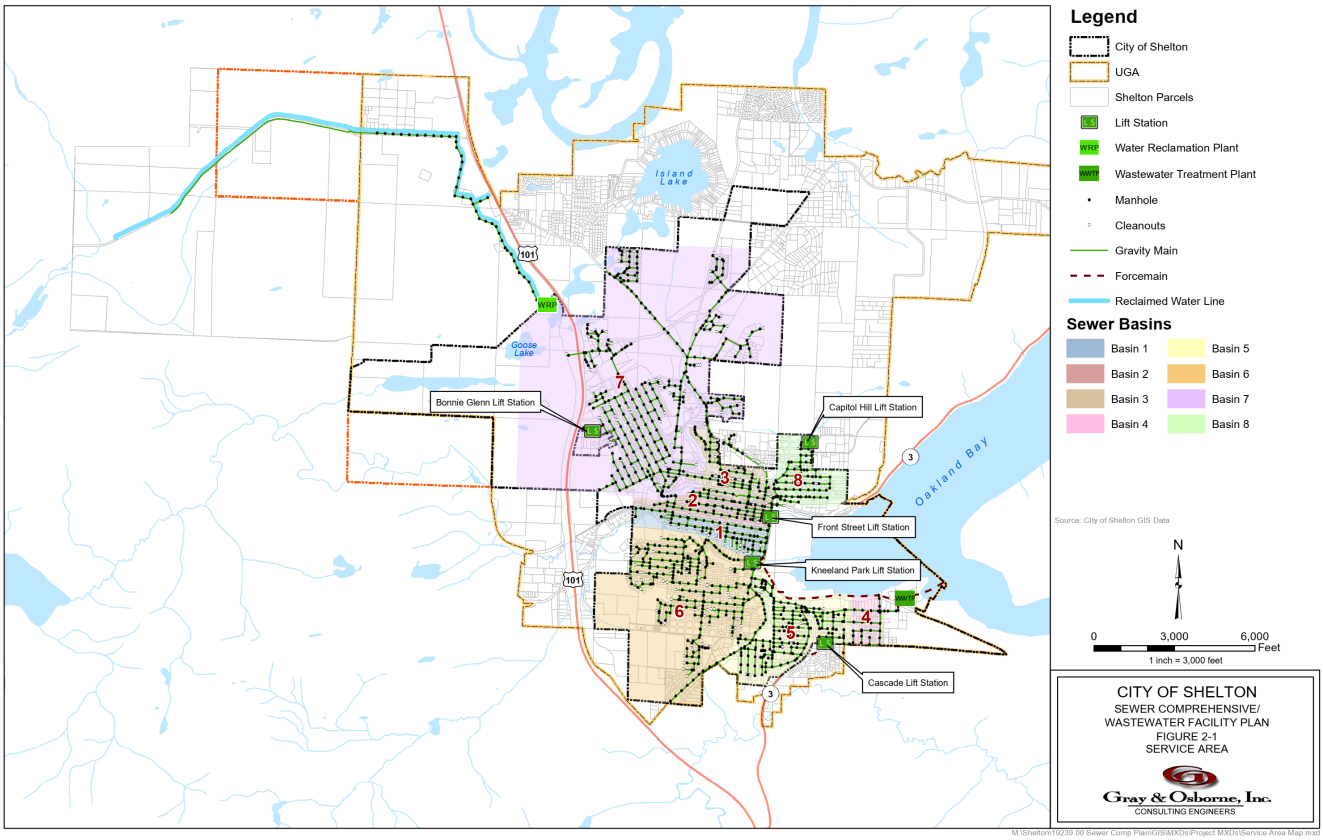
ANALYSIS/OPTIONS/ALTERNATIVES:
N/A

BUDGET/FISCAL INFORMATION:
N/A

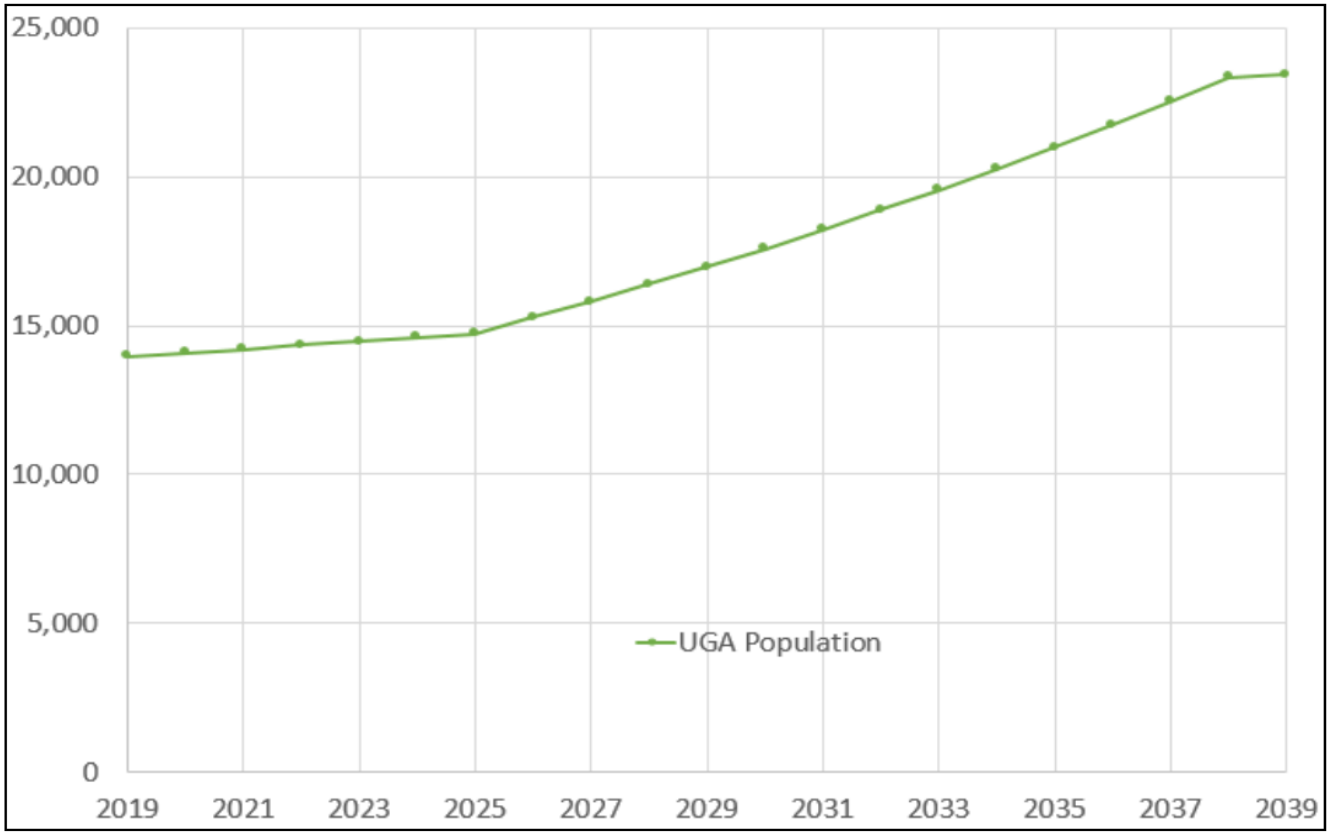
PUBLIC INFORMATION REQUIREMENTS:
Information can be obtained from the Public Works Department.

STAFF RECOMMENDATION/MOTION:
"I move to adopt Resolution No. 1282-0723 as presented".

City of Shelton Sewer Service Area



Projected Number of Sewer Connections



Summary of Model Results

	No. of Surcharged Pipe Segments	No. Surcharged MHs	Peak Hour Flow at Front Street LS (gpm)	Peak Hour Flow at Kneeland LS (gpm)	Peak Hour Flow from Basin 4[(1)] (gpm)	Total Modeled Peak Hour Flow to WWTP (gpm)	Total Modeled Peak Hour Flow to WWTP (mgd)	Total Modeled Peak Hour Flow to WRP (mgd)
2-Year Storm								
2020	2	3	2,229	1,334	212	3,775	5.4	0.39
2026	8	12	2,164	712	212	3,088	4.5	1.00
2030	18	34	2,652	726	212	3,590	5.2	1.57
Buildout	26	44	2,753	732	90	3,575	5.2	4.23
20-Year Storm								
2020	12	16	3,860	2,439	329	6,628	9.5	0.55
2026	15	22	4,166	1,239	392	5,797	8.4	0.99
2030	25	48	5,085	1,262	392	6,739	9.7	1.56
Buildout	40	66	6,255	1,274	160	7,689	11.1	4.23

(1) Discharges directly to WWTP

Modeled Pipe Deficiencies and Recommended Improvements

Basin	Location	Modeling Location	Capacity Issue	Year Deficiency Occurs	Surcharge Range (ft)[(1)]	Recommendation[(2)]
6D/6E	South 1st Street (just north of Mill Street)	MH 19 to MH A15A_, MH18 to MH 17	Surcharges; Undersized 12-inch pipe (min. slope)	2020 - Buildout	0.04 - 1.7	Replace 381 LF of 12-inch pipe w/18-inch pipe
6A	Park Street	MH A147 to MH A137	Surcharges due to I/I; 12-inch pipes	Only in 2020 (20-yr storm)	0.5 - 1.4	Rehabilitating the majority of the upstream Basin 6 pipes for I/I reduction is projected to eliminate the surcharge in 2026.
	South 10th Street	MH A209 to MH A181	Surcharges due to I/I; 12-inch pipes	Only in 2020 (20-yr storm)	1.0	Rehabilitating the majority of the upstream Basin 6 pipes for I/I reduction is projected to eliminate the surcharge in 2026.
7B/7C/7E	East D Street and Alley West of Laurel Street	MH M24 to MH M35	Surcharges; Undersized 8-inch pipe (min. slope)	2026 - Buildout	0.5 – 6.4	Investigate further; Possibly replace 4,545 LF of 8-inch pipe w/18-inch pipe or could potentially split flows amongst nearby parallel pipes.
7B/7A	Alley West of Laurel Street and West Birch Street	MH M35 to MH M5	Surcharges; Undersized 8-inch and 12-inch pipes (min. slope)	2030 - Buildout	1.3 – 9.8	Replace 1,085 LF of 8-inch pipe w/18-inch pipe
3B/3A/2B	North 3rd Street and East Cedar Street	MH D88 to MH 7D73	Surcharges; Undersized 15-inch pipe	Buildout (20-yr storm)	0.1	Since surcharging is less than 1 foot during buildout, recommend leaving this pipes as is.
7K	Alpine Way (west of North 13th Street)	MH M196 to MH M193	Surcharges; Undersized 8-inch pipe	2030 - Buildout	1.9 - 12	Monitor for future; model assumes Johns Prairie's flows to come through here but alternate routes may be available; If flows are directed here, replace 1,010 LF 8-inch w/12-inch pipe at min. slope of 0.007

TABLE 6-5 – (continued)

Modeled Pipe Deficiencies and Recommended Improvements

Basin	Location	Modeling Location	Capacity Issue	Year Deficiency Occurs	Surcharge Range (ft)[1]	Recommendation[2]
7G	North 13th Street	MH M193 to MH M146	Surcharges; Undersized 14- and 15-inch pipe	Buildout (20 yr storm)	0.03 – 4.0	Monitor for future; model assumes Johns Prairie's flows to come through here but alternate routes may be available; If flows are directed here, replace 3,770 LF of 14-inch to 15-inch w/18-inch pipe

(1) Surcharge results represent range of surcharge between all scenarios (Existing through Buildout and 2-year /20-year storms).
(2) Verification of inverts for these areas should be done prior to design or construction to confirm capacity issues.

RESOLUTION NO. 1282-0723

A RESOLUTION OF THE CITY OF SHELTON, WASHINGTON ADOPTING THE NOVEMBER 2022 SEWER COMPREHENSIVE/WASTEWATER FACILITY PLAN UPDATE

WHEREAS, the City's consultant, Gray and Osborne has prepared the November 2022 Sewer Comprehensive/Wastewater Facility Plan Update for the City of Shelton (hereafter called "Sewer System Plan"), which includes, existing land use and population projections, review of existing facilities and relevant regulatory requirements, wastewater flow and loading projections, collection and wastewater treatment plant evaluation, wastewater treatment and water reclamation analysis and recommendations, capital improvement plan and financial analysis; and

WHEREAS, the Sewer System Plan meets the statutory requirements and was prepared in accordance with the provisions of the Revised Code of Washington (RCW) Section 90.48, Water Pollution Control, Washington Administrative Code (WAC) Section 173-240-050*,* General Sewer Plan*,* WAC 173-240-060, Engineering Report*,* and federal requirements for a Wastewater Facility Plan; and

WHEREAS, the City Council finds the Sewer System Plan has been subject to public participation and public hearing; and

WHEREAS, the City Council finds that it is in the best interest of the City of Shelton, its citizens, and businesses to adopt said Sewer System Plan and to repeal all previous Sewer Comprehensive Plans for the City of Shelton; **NOW, THEREFORE,**

THE CITY COUNCIL OF THE CITY OF SHELTON DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The attached Exhibit A November 2022 Sewer Comprehensive Plan update for the City of Shelton together with a review of existing land use and population projections, review of existing facilities and relevant regulatory requirements, wastewater flow and loading projections, collection and Wastewater Treatment Plant evaluation, wastewater treatment and water reclamation analysis and recommendations, Capital Improvement Plan, and financial analysis is hereby adopted.

Section 2. All previous sewer comprehensive plans of the City of Shelton are hereby repealed.

INTRODUCED AND PASSED by the City Council of the City of Shelton on this 5th day of September 2023.

_____
Mayor Eric Onisko

ATTEST:

_____
City Clerk Donna Nault

City of Shelton

2023 SEWER COMPREHENSIVE PLAN UPDATE

New in the 2023 Sewer Comprehensive Plan Update

- **Updates to Land Use, Population Projections, and Service Area Characteristics.**
- **Regulatory Review of Shelton's Current and Needed Facilities.**
- **Review of Current Shelton Wastewater Infrastructure.**
- **Wastewater Flow and Loading Projections.**
- **Collection System Evaluation.**
- **Wastewater Treatment Evaluation.**
- **Water Reclamation Plant and Water Reuse Analysis.**
- **Wastewater Treatment and Water Reclamation Alternative and Recommendations.**
- **Capital Improvement Plan and Financial Analysis.**

Collection System 6-Year Capital Improvement Plan Projects

Project	Estimated Start Year	Description	Location	Total Project Costs (2021 $)
P8	2023	Mill Basin Smoke test and identify potential storm connection; redirect storm piping away from sewer.	Mill Basin	$133,000
P9	2023	Assess condition of existing 18-inch steel force main to WWTP.	5A/5B/4A/9A	$50,000
P7	2024	Rehabilitate/replace all pipes and manholes within Basin 4A to reduce I/I.	4A	$3,680,000
LS6	2024	Install new North Diversion Lift Station and force main w/diversion to West Birch and North 12th street to provide flexibility to convey flows to either WRP or WWTP.	A Street, Olympic Highway	$9,989,000
LS2	2027	Relocate Check Valves (4) closer to header.	Front Street LS	$64,000
Total				**$13,916,000**

Wastewater Treatment Plant 6-Year Capital Improvement Plan Projects

Project	Estimated Start Date	Description	Total Project Costs (2021 $)
WW-1	2023	Study future biosolids treatment and management options at WWTP and WRP (through buildout).	$80,000
WW-2	2022	CAAMP Compliance Part 1 – Automated Gate at Slack Tide Tank and Return Flow System.	$290,000
WW-3	2023	CAAMP Compliance Part 2 – Back-Up Disinfection System.	$747,000
WW-5	2023	CAAMP Compliance Part 4 – Polymer Feed System	$194,000
WW-6	2024	Additional Aerobic Digester.	$6,715,000
WW-8	2024	Centrifuge Upgrades	$620,000
WW-9	2026	New Sludge Storage Building	$1,719,000
WW-10	2026	Biosolids Transfer Improvements	$893,000
Total			**$11,258,000**

WRP and Water Reuse System 6-Year Capital Improvement Plan

Project	Capacity	Upgrades	Start Year	Estimated Costs
Reclaimed Water Tank	0.75 MG	0.75 MG Storage Water Tank	2023	$2,000,000
Phase 1A	0.4 mgd MMF, 1.0 mgd PHF, 1,800 ppd BOD, 1,800 ppd TSS.	HW's Upgrade	2025	$3,757,000
Phase 1B	0.9 mgd MMF, 1.0 mgd PHF, 2,600 ppd BOD, 2,300 ppd TSS.	MBR 1 and 2 Replacement	2027	$5,005,000
Substandard Effluent Holding Pond	1.0 mg	Construct holding pond to store substandard effluent and return to WRP for retreat after the peak	2026	$1,167,000
Infiltration Site Improvements	4.23 mgd	Conversion of sprayfield to dry wells/infiltration galleries	2026	$2,275,000
Phase 2	1.57 mgd MMF, 1.57 mgd PHF, 3,900 ppd BOD, 3,400 ppd TSS.	Convert EQ Basin to Anoxic Tank, MBT replacement, New aeration tank, New MBR tank, reclaimed water pump upgrade and New standby generator	2026	$8,416,000
Total				**$22,620,000**

Questions/Comments?



CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item E5)

Touch Date: 07/26/2023 Brief Date: 08/15/2023 Action Date: 09/05/2023	Department: Public Works Presented By: Jay Harris, Public Works Director

APPROVED FOR COUNCIL PACKET:

ROUTE TO:		REVIEWED:
☒	Dept. Head	J.O.H.
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

PROGRAM/PROJECT TITLE:
2023 Water System Comprehensive Plan Update

ATTACHMENTS:
- Resolution No. 1283-0723
- Exhibit "A" July 2023 Water System Comprehensive Plan Update
- PowerPoint Presentation

Action Requested:

☐	Ordinance
☒	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
The City of Shelton, in collaboration with Carollo Engineers, has updated the City's Water Comprehensive Plan (2010) in order to fulfill the water utilities statutory requirements (WAC 246-290-100) and remain in compliance with the Washington State Department Health (DOH). Attached are two maps that show the current corporate limits of the City of Shelton and its current water system. The City's water system is officially designated in the Washington State DOH records as the City of Shelton with a public water system number of 78170N. It is a municipal Class A water system.

This 2023 update to the City's Water Comprehensive Plan:
- Defines the City's retail service area.
- Describes the existing water system.
- Establishes minimum performance criteria for the system.
- Projects future demands within the service area.
- Identifies system deficiencies.
- Incorporates a 20-year capital improvement plan, staff presented the near-term 6-year plan to Council on 7-25-203
- Offers a financing and implementation plan.
- Includes the water use efficiency goals presented to Council on 8/15/2023.

This updated Comprehensive Water Plan is a 20-year plan starting in the year 2022, and covers the required elements as outlined within Washington State statutes.

ANALYSIS/OPTIONS/ALTERNATIVES:
N/A

BUDGET/FISCAL INFORMATION:
N/A

PUBLIC INFORMATION REQUIREMENTS:
Information can be obtained from the Public Works Department.

STAFF RECOMMENDATION/MOTION:
"I move to adopt Resolution No. 1283-0723 as presented".

City of Shelton Water System (Current)

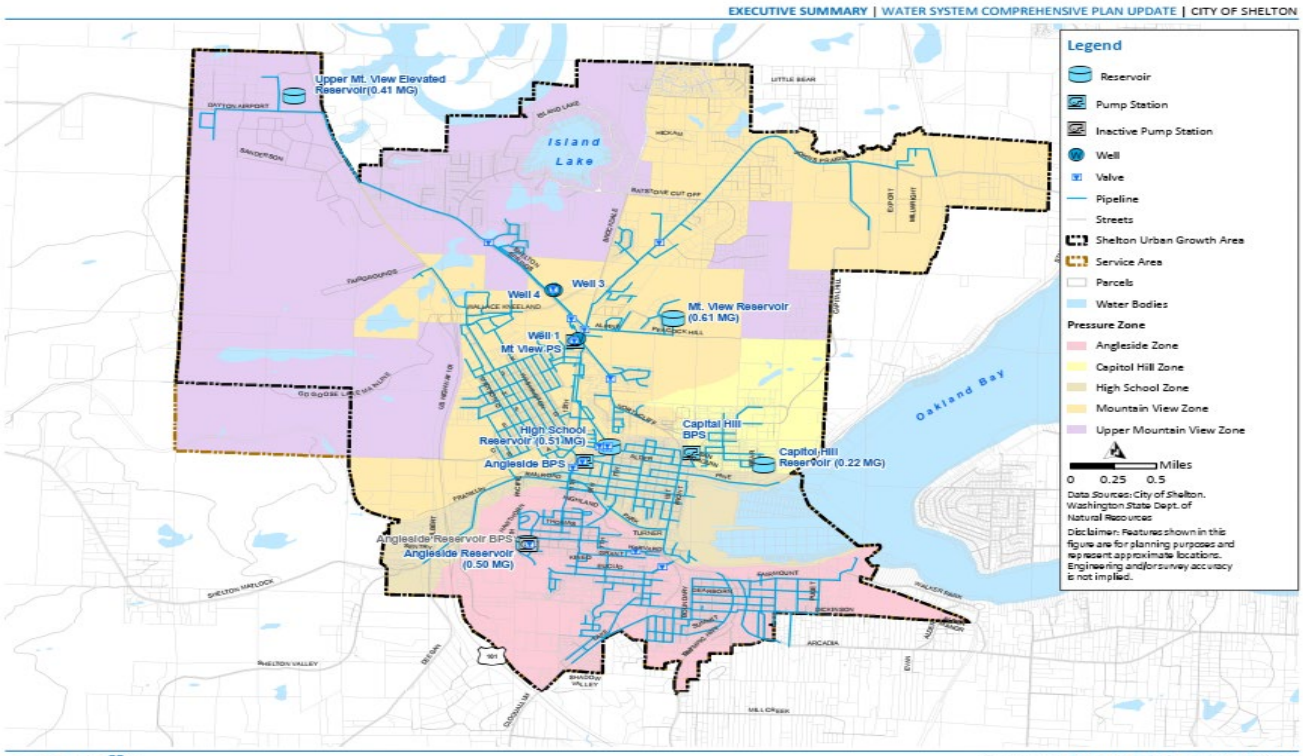


Figure ES.5 Shelton Existing Water System

City of Shelton Water Service Area (Future)

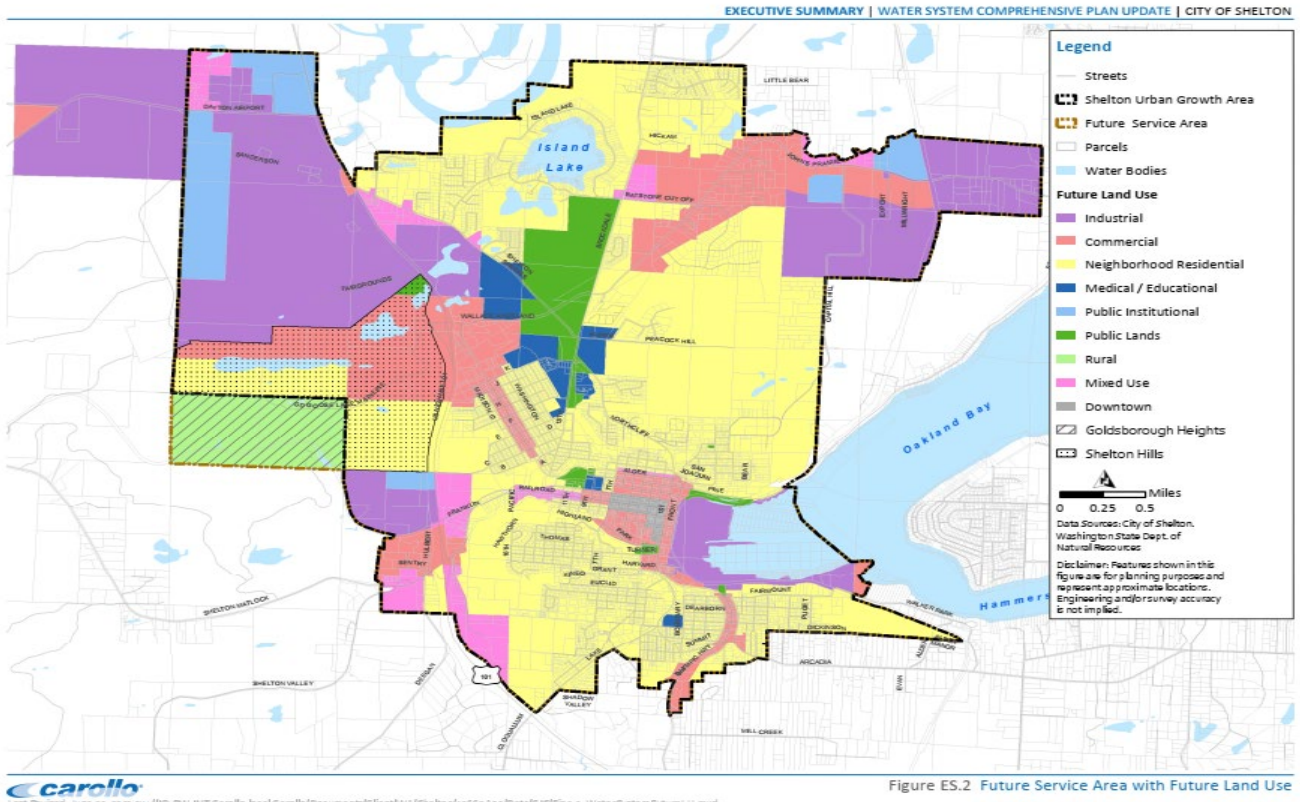


Figure ES.2 Future Service Area with Future Land Use

RESOLUTION NO. 1283-0723

A RESOLUTION OF THE CITY OF SHELTON, WASHINGTON ADOPTING THE 2023 WATER SYSTEM COMPREHENSIVE PLAN UPDATE

WHEREAS, Carollo Engineers has prepared the July 2023 Water Comprehensive Plan update attached as Exhibit A for the City of Shelton (hereafter called "Water System Plan"), which includes a description of the water system, planning data, water demand forecasting, systems analysis, conservation program, source water protection, existing and proposed operation and maintenance programs, design and construction standards, Capital Improvement Plans (or CIP), and a financial plan; and

WHEREAS, the Water System Plan meets the statutory requirements of WAC 246-290-100 and the Department of Health requirements; and

WHEREAS, the City Council finds the Water System Plan has been subject to public participation and public hearing; and

WHEREAS, the City Council finds that it is in the best interest of the City of Shelton, its citizens, and businesses to adopt said Water System Plan and to repeal all previous Water Comprehensive Plans for the City of Shelton; **NOW, THEREFORE,**

THE CITY COUNCIL OF THE CITY OF SHELTON DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The July 2023 Water Comprehensive Plan update for the City of Shelton together with a review of the regulatory requirements, a description of the water system, planning data and water demand forecasting, systems analysis, conservation program, source water protection, existing and proposed operation and maintenance programs, design and construction standards, Capital Improvement Plans (or CIP) and financial plan is hereby adopted.

Section 2. All previous City of Shelton Water Comprehensive Plans are hereby repealed.

INTRODUCED AND PASSED by the City Council of the City of Shelton on this 5th day of September, 2023.

_____
Mayor Eric Onisko

ATTEST:

_____
City Clerk Donna Nault

2023 WATER SYSTEM COMPREHENSIVE PLAN UPDATE

CITY COUNCIL PRESENTATION

AUGUST 15, 2023

WATER SYSTEM ANALYSIS SUMMARY

*

Table 5.17 Water System Components Analysis Summary

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ERUs	6,657	6,890	7,122	7,498	7,807	8,115	8,424	8,732	9,041	9,349	9,658
Source Capacity											
Installed Pumping Capacity	33,720	33,720	33,720	33,720	33,720	33,720	33,720	33,720	33,720	33,720	33,720
Qi	67,900	67,900	67,900	67,900	67,900	67,900	67,900	67,900	67,900	67,900	67,900
Qa	22,793	22,793	22,793	22,793	22,793	22,793	22,793	22,793	22,793	22,793	22,793
Storage Capacity											
Equalizing(1)	12,034	12,034	12,034	12,034	12,034	12,034	12,034	12,034	12,034	12,034	12,034
Standby/ Fire Suppression(2)	6,649	6,619	6,595	6,562	6,537	6,506	6,476	6,445	6,420	6,389	6,359
DSL	740	766	791	833	867	902	936	970	1,005	1,039	1,073

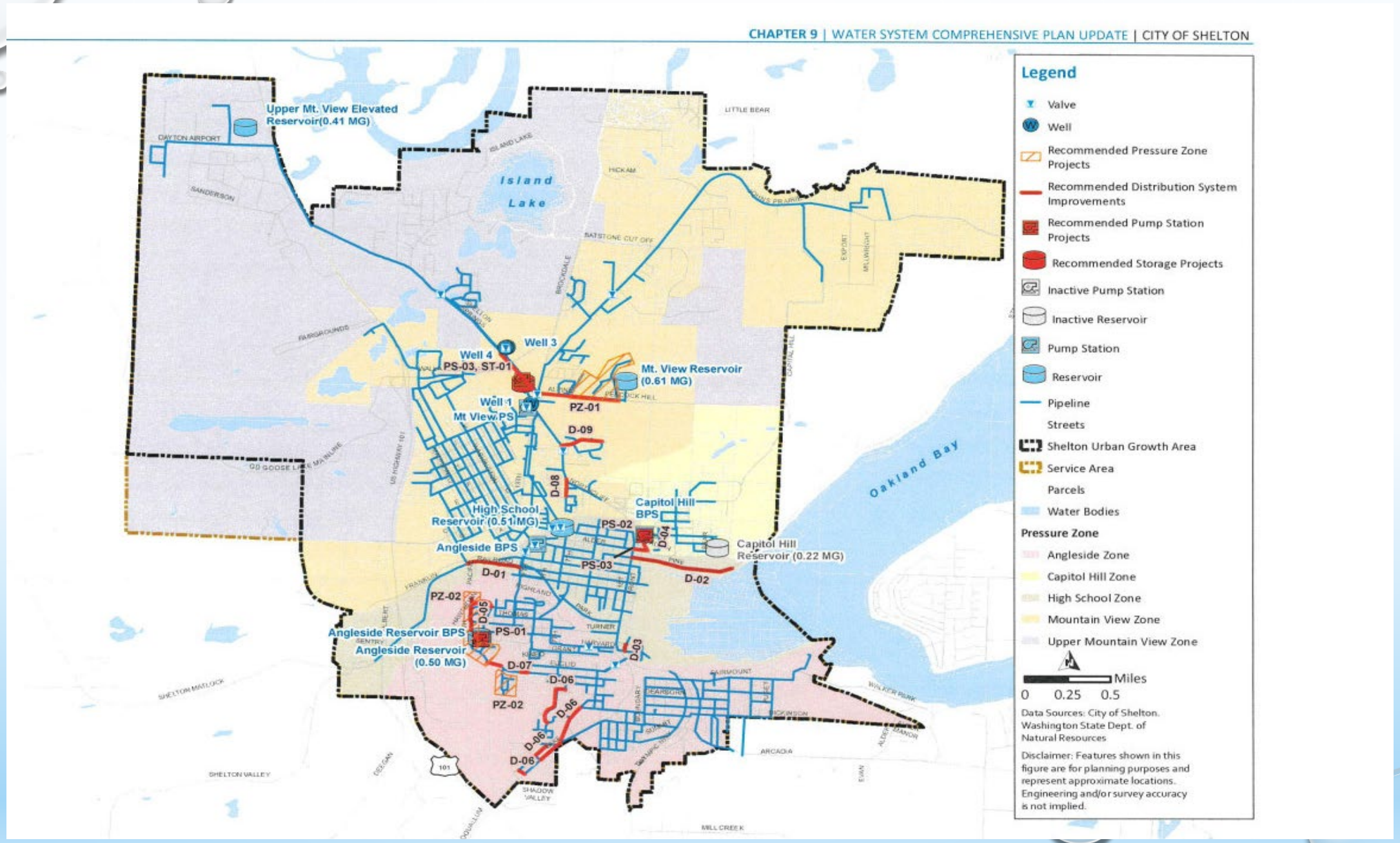
Notes:
(1) Available storage system-wide at 30 psi minus operational storage.
(2) Available storage system-wide at 20 psi minus operational storage and required equalizing storage.
(3) Values in table assume no recommended improvements have been implemented.

WAC 246-290-010 defines an ERU as the amount of water consumed by a typical full-time single-family residence. Water use per ERU is calculated by dividing the total volume of water utilized in the residential customer class by the total number of active residential accounts. The volume of water used by other customer classes is divided by the residential water use to determine the number of ERUs per account for other customer classes. For developing demand projections, the City selected to define its ERU value as the 75th percentile of the historical data, which is 158 gpd/ERU. The 75th percentile is considered appropriate for sizing infrastructure improvements.

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM SUMMARY

Capital Improvements Program Summary																				
Project		CIP Project Subtotal[1]	Total CIP Cost Estimate	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Short-term (2022-2031)	Long-term (2032-2040)	Project Type		
																Growth	Repair & Replacement	Level of Service
General																		
G-01	Hydrant Improvements	$ 250,000	$ 424,000	$ 106,000	$ 106,000	$ 106,000	$ 106,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 424,000	$ -	0%	100%	0%
G-02	Repair & Replacement	$ 2,000,000	$ 3,400,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 170,000	$ 1,700,000	$ 1,700,000	0%	100%	0%
G-03	Water System Plan	$ 400,000	$ 560,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 560,000	0%	100%	0%
G-04	Water Meter AMI Upgrade[2]	$ 850,000	$ 850,000	$ -	$ 850,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 850,000	$ -	0%	100%	0%
G-05	Maintenance Facility Expansion[2]	$ 530,000	$ 530,000	$ -	$ 530,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 530,000	$ -	0%	0%	100%
G-06	Rate Study[2]	$ 20,000	$ 20,000	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	0%	0%	100%
	General Subtotal		**$ 5,784,000**	**$ 296,000**	**$ 1,656,000**	**$ 276,000**	**$ 276,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 170,000**	**$ 3,524,000**	**$ 2,260,000**			
Supply																		
S-01	New Well in Angleside	$ 2,130,000	$ 3,551,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,551,000	50%	0%	50%
S-02	Well 1 Rehabilitation and Pipeline Pressurization[2]	$ 1,562,000	$ 1,562,000	$ 781,000	$ 781,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,562,000	$ -	0%	0%	100%
S-03	Onsite Chlorine Generation[2]	$ 200,000	$ 200,000	$ -	$ -	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ -	0%	0%	100%
S-04	New Generator for Wells 3 & 4[2]	$ 125,000	$ 125,000	$ 125,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 125,000	$ -	0%	100%	0%
	Supply Subtotal		**$ 5,438,000**	**$ 906,000**	**$ 781,000**	**$ 200,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,887,000**	**$ 3,551,000**			
Pressure Zone																		
PZ-01	Mountain View PZ Rezone	$ 950,000	$ 1,615,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,615,000	50%	0%	50%
PZ-02	Angleside PZ Pressure Improvements	$ 798,000	$ 1,357,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,357,000	$ -	$ -	$ 1,357,000	$ -	50%	0%	50%
PZ-03	Angleside PZ Rezone Study	$ 70,000	$ 70,000	$ -	$ 70,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 70,000	$ -	50%	0%	50%
	Pressure Zone Subtotal		**$ 2,972,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,357,000**	**$ -**	**$ -**	**$ 1,357,000**	**$ 1,615,000**			
Storage																		
ST-01	New Mt. View Ground Storage Tank	$ 3,080,000	$ 5,202,000	$ -	$ -	$ -	$ 1,734,000	$ 1,734,000	$ 1,734,000	$ -	$ -	$ -	$ -	$ 5,202,000	$ -	50%	0%	50%
ST-02	New Angleside Reservoir	$ 1,820,000	$ 3,094,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,094,000	75%	0%	25%
ST-03	Shelton Hills Elevated Tank[3]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		100%	0%	0%
ST-04	High School Tank Re-Coating[2]	$ 500,000	$ 500,000	$ -	$ -	$ 344,000	$ -	$ 156,000	$ -	$ -	$ -	$ -	$ -	$ 500,000		0%	100%	0%
	Storage Subtotal		**$ 8,796,000**	**$ -**	**$ -**	**$ 344,000**	**$ 1,734,000**	**$ 1,890,000**	**$ 1,734,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 5,702,000**	**$ 3,094,000**			
Pump Station																		
PS-01	Angleside Reservoir PS Control Improvements	$ 450,000	$ 765,000	$ -	$ -	$ 100,000	$ 665,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 765,000	$ -	50%	0%	50%
PS-02	Capitol Hill Pressure Improvements	$ 2,030,000	$ 3,452,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,726,000	$ 1,726,000	$ 3,452,000	$ -	0%	0%	100%
PS-03	Upper Mt. View Booster Pump Station	$ 535,000	$ 910,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 910,000	0%	0%	100%
	Pump Station Subtotal		**$ 5,127,000**	**$ -**	**$ -**	**$ 100,000**	**$ 665,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,726,000**	**$ 1,726,000**	**$ 4,217,000**	**$ 910,000**			
Distribution Pipeline																		
D-01	W Railroad Ave Pipe Upsize[2]	$ 980,000	$ 980,000	$ 980,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 980,000	$ -	0%	0%	100%
D-02	E Pine St Pipe Upsize[3]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	0%	100%
D-03	Alleghany St Pipe Upsize[3]	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0%	0%	100%
D-04	Capitol Hill Hydrant Lateral Relocation	$ 54,000	$ 92,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 92,000	0%	0%	100%
D-05	S 16th St Pipe Project	$ 279,000	$ 474,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 474,000	0%	0%	100%
D-06	Southwest Angleside PZ Pipe Improvements	$ 944,000	$ 1,605,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,605,000	0%	0%	100%
D-07	Eaglewood Way Pipe Loop	$ 160,600	$ 273,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 273,000	0%	0%	100%
D-08	N 8th Street Pipe	$ 108,000	$ 184,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 184,000	0%	0%	100%
D-09	Terrace Boulevard Pipe Upsize	$ 286,000	$ 486,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 486,000	0%	0%	100%
	Distribution Pipeline Subtotal		**$ 4,094,000**	**$ 980,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 980,000**	**$ 3,114,000**			
CIP Total			**$ 32,211,000**	**$ 2,182,000**	**$ 2,472,000**	**$ 920,000**	**$ 2,675,000**	**$ 2,060,000**	**$ 1,904,000**	**$ 170,000**	**$ 1,527,000**	**$ 1,896,000**	**$ 1,896,000**	**$ 17,702,000**	**$ 14,544,000**	**$ 8,600,500**	**$ 5,859,000**	**$ 17,821,500**
Annual Cost			$ 1,611,000	$ 2,182,000	$ 2,472,000	$ 920,000	$ 2,675,000	$ 2,060,000	$ 1,904,000	$ 170,000	$ 1,527,000	$ 1,896,000	$ 1,896,000	$ 1,770,000	$ 1,454,000	$ 430,000	$ 293,000	$ 891,000

PROJECT LOCATIONS



RECOMMENDED SUPPLY PROJECTS

PROJECT S-01: NEW WELL IN ANGLESIDE PZ

Existing sources are sufficient to provide projected 2041 MDD but cannot meet city's goal of providing 2041 MDD with the largest supply out-of-service. It is recommended that the city work with a hydrogeologist to develop a water rights strategy to develop a new well with a capacity of 1,000 gpm. This new well would entail transfer of a portion of the water right from Shelton Springs. With a capacity of 1,000 gpm, the future new well would be sufficient to meet the city's goal of providing 2041 MDD with largest supply out-of-service. If possible, it is recommended that this project be co-located with an at-hydraulic-grade reservoir (ST-02) in the Angleside PZ. This project is recommended to be completed in the long-term planning horizon.

RECOMMENDED STORAGE PROJECTS

ST-01: NEW MOUNTAIN VIEW GROUND STORAGE RESERVOIR

A new reservoir with a usable storage capacity of 0.75 MG is recommended to provide additional storage in the Mountain View PZ to address the standby/fire suppression storage deficiency in the short-term planning horizon. A booster pump station is recommended to provide useable storage at the correct HGL for the Mountain View PZ. Improvements are required to meet DOH storage criteria and recommended to be completed in short-term planning horizon. A siting study is recommended to identify an appropriate site for the reservoir. If a site is identified at an elevation to enable the reservoir to be used as a gravity tank, a BPS is not recommended. It is recommended that the new Mountain View reservoir PS include space to install pumps to serve the upper Mountain View PZ with water from the new reservoir (see PS-03 for detailed information).

ST-02: NEW ANGLESIDE RESERVOIR

A new reservoir with a usable storage capacity of 0.50 MG is recommended to address the standby/fire suppression storage deficiency in the long-term planning horizon in the Angleside PZ. The Angleside reservoir can either be ground or standpipe-style reservoir. Both options will require a booster pump station. To aid in operations, it is recommended than an at-hydraulic-grade reservoir (standpipe or elevated) and the new well be co-located, if possible. See project S-01. Distribution system improvements may be required depending on the location of the reservoir. This project is recommended to be completed in the long-term planning horizon.

ST-03: NEW UPPER MOUNTAIN VIEW STORAGE RESERVOIR

A 0.41 MG Upper Mountain View pressure zone elevated tank is needed to provide adequate water service to the Shelton Hills development. This project is required to provide sufficient service pressures during fire flows in the proposed development (phase 2 and beyond). This project is developer-funded and will likely occur in the long-term planning horizon, depending in the development schedule.

RECOMMENDED PRESSURE ZONE IMPROVEMENTS

PZ-01: MOUNTAIN VIEW PZ REZONE

There are customers within the Mountain View PZ that, due to high elevations, have low pressures during peak hour demands in the short-term planning horizon. This project is to rezone a section within the Mountain View PZ to the Upper Mountain View PZ to provide peak hour demand pressures greater than 30 psi to all customers. The transmission of the Upper Mountain View PZ supply will require 3,000 LF of 12-inch diameter pipe from the well no. 3/well no. 4 site, south on north Shelton Springs Road to north 13th Street, and east on west Alpine Way to Alpine Drive. This project will also help address the standby/fire suppression storage deficiency in the Mountain View PZ by decreasing the amount of dead storage in the Mountain View reservoir and allowing more of the reservoir to be used to meet standby/fire suppression storage. This project is recommended to be completed in the long-term planning horizon.

PZ-02: ANGLESIDE PZ BOOSTED ZONE

There are customers within the Angleside PZ that, due to high elevations, have low pressures during peak hour demands in the short-term planning horizon. This project is to add small jockey pumps to two areas of the pressure zone with high elevations to provide domestic flows at pressure greater than 30 psi during peak hour demands. This project will require improvements in the interim to address fire flow deficiencies at high elevations in the Angleside PZ in projects PS-01, G-01, and D-05. This project is recommended to be completed in the short-term planning horizon. If PZ-03, as described below, is completed and the rezone includes the two areas of the pressure zone with high elevations (Vista View and south 16th Street/Eaglewood Way), this project is no longer required.

PZ-03: ANGLESIDE PZ REZONE STUDY

There are customers within the Angleside PZ that, due to high elevations, have low pressures during peak hour demands and fire flow deficiencies in the short-term planning horizon. The customers at high elevations also contribute to the volume of dead storage in the existing Angleside reservoir. This project is a study to rezone sections of the Angleside PZ to a separate, upper Angleside PZ utilizing the Angleside reservoir PS that was constructed in 2018 but is not currently used by the city. The Angleside PZ rezone will help the city meet DOH storage criteria and system pressure requirements and is recommended to be completed in the short-term planning horizon. If this project is completed, project PZ-02, D-05, D-06, and D-07 may no longer be required.

RECOMMENDED PUMP STATION IMPROVEMENTS

PS-01: ANGLESIDE RESERVOIR PS CONTROL STUDY AND IMPROVEMENTS

Higher pressures during fire flow are needed to resolve deficiencies in high elevation areas of the Angleside PZ in the short-term planning horizon. Currently the Angleside reservoir PS is manually controlled. This project is to construct control improvements to allow automated use of the city's Angleside reservoir PS. The reservoir PS may not automatically start for low flow hydrants if available flow is below control trigger. These hydrants will need to be addressed separately with the fire department. This project will require new control valves, vfd's, and site piping at the Angleside BPS and reservoir PS sites. There are two recommended, automated control modes: high reservoir outflow (fire flow) and low reservoir level (emergency supply). This project will also address the standby/fire suppression storage deficit in the Angleside PZ by decreasing the amount of dead storage in the Angleside reservoir and allowing more of the reservoir to be used to meet standby/fire suppression storage. This project is recommended to be completed in the short-term planning horizon. Improvements at the Angleside reservoir PS need to coordinate with the Angleside PZ rezone (PZ-03) so that any changes at the Angleside reservoir PS will work with the Angleside PZ rezone.

PS-02: CAPITOL HILL PRESSURE IMPROVEMENTS

The existing Capitol Hill BPS and reservoir are not able to provide 30 psi to all customers during the PHD in the short-term planning horizon. To increase the peak hour demand pressures and pump station redundancy, it is recommended the capitol hill PZ be converted to a closed pressure zone. This project recommends decommissioning the Capitol Hill reservoir and constructing a new Capitol Hill BPS to supply customers at a higher hydraulic grade. This will require increasing the BPS capacity to meet the peak hour demand and fire flows of approximately 1,750 gpm of flow (firm capacity). Approximately 1,000 feet of distribution mains may need to be upsized to support the greater pumping rates. This project is recommended to be completed in the short-term planning horizon.

PS-03: PUMPS TO SERVE UPPER MOUNTAIN VIEW AT NEW MOUNTAIN VIEW RESERVOIR BOOSTER PUMP STATION

New pumps are recommended at the future Mountain View reservoir BPS to provide supply/pumping redundancy to the Upper Mountain View PZ if well no. 3 is offline. The additional pumps will be dedicated to serving the Upper Mountain View PZ. The Upper Mountain View reservoir will remain online to provide storage for the pressure zone. Previous analysis of the Dayton-Airport Road Commercial Industrial Center (DARCI) UGA expansion area project indicated that additional infrastructure would be needed to support the new development. This analysis was performed as part of the system analysis for urban growth area expansion that included a technical memorandum a draft of which was completed in September 2016. This BPS cannot provide fire flow to future DARCI industrial users but could provide domestic water demands. This project is recommended to be completed in the long-term planning horizon.

Table 5.18 Recommended Improvements for Fire Flow Deficiencies

ID	Project Name	PZ	Pipe Length (feet)	Existing Diameter (inches)	Proposed Diameter (inches)	Location	Purpose
D-01	West Railroad Avenue Pipe Upsize	High School	1,700	8	12	West Railroad Avenue	Upsize pipe to address fire flow deficiencies. Deficiency is due to 1,500 gpm fire flow demands on long, 8-in dead end pipe.
D-02[(1)]	East Pine Street Pipe Upsize	High School	3,200	6	12	East Pine Street	Upsize pipe to address fire flow deficiency. Deficiency is due to 1,500 gpm fire flow demand on long, small diameter (6-in) dead end pipe.
D-03[(1)]	Alleghany Street Pipe Upsize	High School	230	6	8	Alleghany Street	Upsize pipe to address fire flow deficiency. Deficiency is due to 1,500 gpm fire flow demand on small diameter (6-inches) dead end pipe.
D-04	Capitol Hill Hydrant Lateral Relocation	Capitol Hill	300	n/a	6	Capitol Hill BPS	Move hydrant lateral to address fire flow deficiency at pressure zone boundary. Deficiency is due to 1,000 gpm fire flow demand at hydrant with high elevation in High School PZ.
D-05	South 16th Street Pipe Project	Angleside	1,550	n/a,4,6	8	South 16th Street and Holly Drive	Upsize/loop pipe to address fire flow deficiencies. Deficiency is due to 1,000 gpm fire flow demand at hydrants with high elevations in Angleside PZ.
D-06	Southwest Angleside PZ Pipe	Angleside	1,700 2,900	n/a, 6 6	8 12	SW Angleside PZ	Upsize/loop pipe to address fire flow deficiencies. Deficiencies are due to 1,000 gpm fire flow demand at hydrants in the Angleside PZ.
D-07	Eaglewood Way Pipe Loop	Angleside	730	n/a, 6	12	Eaglewood Way	Upsize/loop pipe to address fire flow deficiencies. Deficiencies are due to 1,000 gpm fire flow demand at hydrants with high elevations in the Angleside PZ.
D-08	N 8th Street Pipe Upsize	Mountain View	600	6	8	N 8th Street	Upsize pipe to address fire flow deficiencies. Deficiency is due to 1,000 gpm fire flow demand at hydrants on dead end pipe.
D-09	Terrace Boulevard Pipe Upsize	Mountain View	1,300	8	12	Terrace Boulevard	Upsize pipe to address fire flow deficiencies. Deficiency is due to 1,000 gpm fire flow demand at hydrants on dead end pipe.

Notes:
(1) Project will be developer funded.

RECOMMENDED FIRE FLOW DEFICIENCIES

G-01: Hydrant Improvements

Field investigation identified some hydrants that may need repair and/or are severely limited by low system pressure. The recommended project is to work with the fire department to identify ways to provide fire flows in these areas, keeping in mind that reservoir levels will be lower in a fire flow condition than normal conditions. Repair, move, and remove fire hydrants as agreed with Fire Department. This project is recommended to be completed in the short-term planning horizon.

QUESTIONS/COMMENTS





CITY OF SHELTON
COUNCIL BRIEFING REQUEST
(Agenda Item E6)

Touch Date: 05/09/2023
Brief Date: 08/15/2023
Action Date: 09/05/2023

Department: Public Works

Presented By: Jay Harris, Public Works Director

APPROVED FOR COUNCIL PACKET:

PROGRAM/PROJECT TITLE:
Design and Construction Standards Manual Update - Chapters 1 & 2

ROUTE TO:		**REVIEWED:**
☒	Dept. Head	J.O.H.
☐	Finance Director	
☐	Attorney	
☒	City Clerk	
☐	City Manager	

ATTACHMENTS:
- **Resolution No. 1284-0723**
- **Exhibit "A" 2023 Design & Construction Standards Manual (All Chapters)**
- **Exhibit "B" 2019 Design & Construction Standards Manual (Chapters 1 and 2)**
- **Change Log (Text Changes Chapters 1 and 2)**
- **Change Log (Chapter 2 Details)**
- **PowerPoint Presentation**

Action Requested:

☐	Ordinance
☒	Resolution
☒	Motion
☐	Other

DESCRIPTION OF THE PROGRAM/PROJECT AND BACKGROUND INFORMATION:
It is imperative that the City of Shelton maintains up-to-date and current design and construction standards when development proposals are brought forward to ensure the safety and well-being of the citizens and visitors to the city. Staff have identified needed changes to Chapter 1 (General Standards and Specifications and Chapter 2 (Transportation), which were reviewed last year with the Development Code Update Committee, and more recently at several study sessions with the City Council. At the July 25, 2023 study session, the City Council agreed that this item be placed on the business agenda for consideration at the August 15th meeting.

ANALYSIS/OPTIONS/ALTERNATIVES:
N/A

BUDGET/FISCAL INFORMATION:
N/A

PUBLIC INFORMATION REQUIREMENTS:
Information can be obtained from the Public Works Department.

STAFF RECOMMENDATION/MOTION:
"I move to adopt Resolution No. 1284-0723 as presented".

RESOLUTION No. 1284-0723

A RESOLUTION OF THE CITY OF SHELTON, WASHINGTON ADOPTING CHANGES TO CHAPTERS 1 AND 2 WITHIN THE CITY'S DESIGN AND CONSTRUCTION STANDARDS

WHEREAS, the City has initiated and brought forward modifications to the City's currently adopted Design and Construction Standards (Chapter 1 and 2) and staff have presented and discussed these modifications in front of the City Council and the general public on multiple occasions; and

WHEREAS, the City Council finds the changes to Chapter 1 and 2 of the City's Design and Construction Standards has been subject to public participation and public hearing; and

WHEREAS, the City Council finds that it is in the best interest of the City of Shelton, its citizens, and businesses to adopt said modifications to Shelton's Design and Construction Standards, specifically, Chapters 1 and 2, attached herein.

NOW, THEREFORE,

THE CITY COUNCIL OF THE CITY OF SHELTON DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. Modifications to Chapters 1 and 2 of the City of Shelton's Design and Construction Standards Manual as outlined within Exhibit A, attached herein by reference, is hereby adopted.

Section 2. All prior versions of the City of Shelton's Design and Construction Standard Manuals are hereby repealed.

INTRODUCED AND PASSED by the City Council of the City of Shelton on this 5th day of September 2023.

_____
Mayor Eric Onisko

ATTEST:

_____
City Clerk Donna Nault

CITY OF SHELTON

DESIGN AND CONSTRUCTION STANDARDS 2023

City of Shelton
525 W. Cota Street
Shelton, WA 98584
(360) 426-4491

Effective Date: September 6, 2023

CITY OF SHELTON

DESIGN AND CONSTRUCTION STANDARDS

2023

Mayor
Eric Onisko

Deputy Mayor
Joe Schmit

Council Members
Deidre Peterson
Kathy McDowell
Sharon Schirman
James Boad
Miguel Gutierrez

Administration

Mark Ziegler	City Manager
Jae Hill	Community & Economic Development Director
Jay Harris	Director of Public Works

FORWARD

Build a Stronger Community – TOGETHER!

Welcome to a community dedicated to a quality environment. Shelton's Administration, City Council and staff will work with you to create first class additions to our City. We look forward to meeting with you to work out the details of your project. This document will show you our process and our standards. We hope that all your questions can be answered here. If not, please call and we will be glad to help.

This document is intended to assist, advise, guide and direct all who propose to modify facilities or develop within the City. The processing of all documents shall be in accordance with these *Design and Construction Standards* and the regulations and standards of other agencies as referred to herein.

These Standards shall apply in the City, in applicable utility service areas, and in portions of Mason County that are within the City of Shelton's Urban Growth Management Area boundary.

We attempt to achieve maximum uniformity of planning, engineering, and construction practices within the City and outside the City as outlined above. These are minimum standards and are intended to assist, but not to substitute for competent work by engineering and design professionals. Special conditions or environmental constraints may require a more stringent design than would normally be required under these *Development Standards*. It is not the intent of the City to unreasonably limit any innovative effort that could result in a superior project design. A proposed design that is different from these *Development Standards* will be evaluated on the basis that the proposed design will produce a comparable or superior result, and is, in every way, adequate for the user, the City, and the public.

This document may contain minor errors, discrepancies or omissions. The editor would appreciate it if users of this document notify the City of any required corrections.

CITY OF SHELTON
DESIGN AND CONSTRUCTION STANDARDS

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C H A P T E R 1

1.000 GENERAL STANDARDS AND SPECIFICATIONS

1.010 Purpose

These City of Shelton Design and Construction Standards are intended to assist, advise, guide, and direct all who propose to conduct new development or redevelopment within the City of Shelton, or propose actions that would impact public roads, public rights-of-way, or existing utility infrastructure. Processing of documents, design details, draft and final engineering documents, surveys, testing and construction shall be in accordance with these Standards, and the regulations and standards of other agencies referred to herein.

1.020 Shortened Designation

These City of Shelton Design and Construction Standards shall be cited routinely in this text as the *Standards*.

1.030 Applicability

These *Standards* are applicable to all new construction, reconstruction and upgrading of facilities in the right-of-way and on-site for transportation and transportation-related facilities, storm drainage facilities, and sewer and water improvements.

The following specifications shall be applicable when pertinent, when specifically cited in the Standards or when required by a higher funding authority. In case of disputes regarding which *Standards* apply, the Director of Public Works will have the final decision.

A. The current edition of the Washington State Department of Transportation/American Public Works Association (WSDOT/APWA) Standard Specifications for Road, Bridge and Municipal Construction and the APWA Amendment to Division.

B. Conditions and standards as set forth in the current edition of the City of Shelton Comprehensive Water System Plan.

C. Conditions and standards as set forth in the current edition of the City of Shelton Comprehensive Sewer Plan Update and the City of Shelton I/I Facility Plan Update.

D. Conditions and standards as set forth in the current edition of the City of Shelton Comprehensive Plan.

E. Adopted rules, regulations, and ordinances of the *Shelton Municipal Code.*

F. Criteria set forth in the Local Agency Guidelines as amended and approved by Washington State Department of Transportation.

G. The current version of the AASHTO "Green Book", A Policy of Geometric Design of Highways and Streets.

H. U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD) as amended and approved by WSDOT.

I. Washington State Department of Transportation (WSDOT) Construction Manual as amended and approved by WSDOT.

J. Washington State Department of Ecology (ECY) Stormwater Management Manual for Western Washington and the Shelton Municipal Code Title 13.

K. Rules and regulations of the State Board of Health regarding public water supplies as published by the State Department of Health.

L. Conditions and standards as set forth in the State of Washington Department of Ecology Criteria for Sewage Works Design, most current edition.

M. Conditions and standards as set forth by the State of Washington Department of Labor and Industries.

N. Criteria as set forth in the latest American Association of State Highway and Transportation Officials (AASHTO) policy on geometric design of highways and streets.

O. Design criteria of federal agencies including Department of Housing and Urban Development and the Federal Housing Administration.

P. Conditions and standards as set forth in the American Water Works Association (AWWA) design manuals.

Q. Criteria as set forth in Highway Capacity Manual (Special Report 209).

R. Current version of the American Water Works Association (AWWA) Cross Connection Control Manual.

S. Current edition of the State of Washington Department of Health Water System Design Manual.

T. Federal Americans with Disabilities Act (ADA).

U. Other specifications not listed above as may apply when required by the city.

1.040 Definitions and Terms

“As-Builts” – A revised set of engineering drawing plans that are modified at the completion of construction that show the true locations and elevations of the improvements and shall be certified by the project engineer and land surveyor.

"Average Daily Traffic” (ADT) -- The average number of vehicles passing a specified point during a 24-hour period. Annual average daily traffic (AADT) denotes daily traffic that is averaged over one calendar year.

"Bicycle Facilities" -- That portion of the public right-of-way used exclusively for bicyclists or shared with other transportation modes.

"BOD" -- (Biochemical Oxygen Demand) shall be the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in 5 days at 20 degrees Celsius expressed in parts per million (mg/l) by weight.

"Building Drain" -- Shall be that portion of the waste drainage line(s) inside the walls of the building that connect to the building sewer. (SMC 14.04.030)

"Building Official" -- Is the City of Shelton Building Official or his/her designated appointee.

"Building Sewer" -- Shall be that portion of the sewer line from the building foundation and extending two feet outside the foundation wall of the structure. (SMC 14.04.040). Maintenance of building sewer shall be the responsibility of the property owners.

"CED" -- Refers to the City of Shelton Community and Economic Development.

"Civil Engineer" -- A professional engineer registered in the State of Washington.

"Controlled Density Fill” (CDF) -- A lean sand and concrete mixture–with a maximum of 188 lbs. of cement per cubic yard (depending on application) and resulting in a material with a compressive strength of 50 to 200 pounds per square inch (depending on cement ratio) as outlined in Section 2-09.3(1)E of the Washington State Department of Transportation Standard Specifications.

"City" -- Refers to the City of Shelton. (SMC 14.04.050)

"City Engineer" -- The individual appointed by the City of Shelton as its City Engineer or his or her duly authorized representative.

“Critical Pedestrian Route” -- A interconnected network of hard surface public pedestrian and multi-modal traffic routes that are physically separate from the roadway driving surface. Critical pedestrian routes allow residents to recreate, stay healthy, and provides connections to neighbors, places of employment, commercial areas, parks, trails, and other points of interest. Refer to the Critical Pedestrian Route Map in Appendix B in Chapter 2.

“Developed Parcel” -- A parcel that has an existing permitted building or structure with public or private water and sewer services for the site.

"Developer" -- Any person, firm, partnership, association, joint venture, corporation, or any other entity responsible for a given project.

"Development" -- Any man-made change to improved or unimproved real property including but not limited to construction of buildings or other structures, additions, reconstruction, placement of manufactured home/mobile home, mining, dredging, logging, clearing, filling, grading, paving, excavation, drilling operations, storage of equipment or materials, any activity that results in the removal of vegetation or alteration of natural site characteristics or the division of property pursuant to the subdivision regulations.

"Director of Public Works" -- The individual appointed by the City of Shelton as its Public Works Director or his or her duly authorized representative.

“Driveway” -- An access from a public right-of-way or private street easement/tract to one or two parcels maximum, with a length of no more than 50 feet as measured from the edge of the right-of-way or private street easement/tract to the point where shared access ends for two parcels.

"Dwelling Unit" -- one or more rooms, including kitchen, designed as a unit for occupancy by one family for the purpose of cooking, living, and sleeping.

"Easement" -- The right to use a defined area of property on a subdivision plat or short plat, or by separate instrument, for specific purpose(s) set forth in the easement document.

"Engineer" -- Any Washington State licensed professional engineer who represents the developer.

"ERU" -- The unit used to calculate sewer consumption. One Equivalent Residential Unit (ERU) for other than residential equals two hundred twenty-five gallons of wastewater per day. (Shelton Municipal Code Chapter 14.04, Section 14.04.130 Definitions and Chapter 14.28, Sewer Service-Rates, and charges).

“Frontage” – The length of roadway of the abutting parcel as measured along all the property lines of all abutting street rights-of-way.

“Cues’ GraniteNet” -- Data collection software used in CCTV pipeline inspections.

"Half Street" -- A portion of a roadway section modified to conform to when limited right-of-way is presently available, or when constructing a portion of the road section when less capacity is necessary for adequate levels of service.

“Infiltration/Inflow” (I&I) -- The process of groundwater, or water from sources other than domestic wastewater (such as surface runoff) entering sanitary sewers via service laterals, sump pumps, roof drains, broken pipe joints, manhole leaks, and other stormwater cross connections. I&I causes dilution in sanitary sewers that decreases the efficiency of system piping, pumping, and treatment, and can cause sewage volumes to exceed design capacity.

"Inspector" -- The authorized representative of the City Engineer or Public Works Director who is assigned to the project site or any part thereof during construction.

"Interceptor" -- A sewer that receives flow from a number of main trunk sewers, force mains, etc.

“Interim Street” – A temporary partial street improvement constructed to ultimate alignment and grade allowing for a minimum of two-way traffic and constructed to the current adopted International Fire Code and City standards.

“Infill Development” -- A infill development is defined as an undeveloped parcel(s) with frontage(s) that have a distance of undeveloped frontage including the project frontage between developed parcels and/or side streets of 150 feet or less in length, as measured between existing property lines.

"Lateral" -- That section of the sewer line extending from the City’s main to the right-of-way or easement line. Maintenance of the lateral is the responsibility of the property owner. (SMC 14.12.150)

"Level of Service” (LOS) -- An indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. LOS means an established minimum capacity of capital facilities that must be provided per unit of demand or other appropriate measures of need.

“Multi-Dwelling Unit (MDU)” -- A classification of housing where multiple separate housing units for residential inhabitants are contained within one building or several buildings within one complex. This classification includes duplexes, apartment buildings, condominiums, mobile home parks, trailer courts, and other like structures.

"NPDES" -- The National Pollutant Discharge Elimination System permit program administered by the Washington State Department of Ecology.

"Plans" -- The plans, profiles, cross sections, elevations, details, and supplementary specifications signed by a licensed professional Engineer and approved by the City, which show the location, character, dimensions, and details of the work to be performed.

"Pretreatment" -- The reduction of the number of pollutants, the elimination of pollutants, or the alteration of the nature of pollutants in wastewater prior to discharge to the City's system.

"Pretreatment Program" -- An approved plan that provides for pretreatment, monitoring, sampling, and conditioning of wastewater prior to discharge to the City system.

"Private Pump Station" -- A private pump station is a facility connected to a private sewer main, lateral, or side sewer which conveys sewage or effluent by pumping to a City gravity lateral extended to the property line from the public mainline. The design and construction of the private pump station must receive approval of the City prior to use. The private property owner will own, operate, and maintain this pump station.

"Private Sewer" -- Pertains to a sewer not owned or maintained by the City. Private gravity or pressure lines serving single lots or parcels. Private sewers shall not extend thru a parcel to serve adjacent parcel(s), which will require a public sewer mainline extension.

"Private Street" -- Privately owned and maintained vehicular access, not including driveway(s) in the public right-of-way, serving at least two (2) but no more than four (4) lots. Private streets are situated in a dedicated roadway tract that originates from a public right-of-way, said tract owned equally by the benefitting property owners, with a public and private access and utility easement over the entirety of the tract.

"Project" -- General term encompassing all phases of the work to be performed and is synonymous to the term "improvement" or "work."

"Property" -- A lot, parcel, or tract of land together with the building and structures located thereon.

"Public Sewer" -- That portion of the system located within public rights-of-way or easements, and which are operated and maintained by the City including interceptors, trunks, mains, and force mains along with all publicly controlled and maintained manholes, pump stations and other appurtenances.

"Public Street" -- Publicly owned and maintained street.

"Redevelopment" and/or “Remodel” -- The conversion, structural alteration, relocation, significant alteration or improvement, or enlargement of any

structure and/or the addition or improvement of site features for the purpose of changing the type of or increasing the intensity of use of a site.

“Redevelopment site” and/or “Remodel site” – For development for all sites outside of Neighborhood Residential Zoning District, where the value of the proposed improvement to the building or structure exceeds 50 percent of the value of the existing structure, as determined by a licensed Architect in the State of Washington. Redevelopment sites in the Neighborhood Residential Zoning District extend existing adjacent street improvements on all street/alley frontages and construct an 8-foot-wide paved parking strip adjacent to site frontage(s).

"Right-of-Way" -- A general term denoting public land, property or interest therein acquired for, or devoted to, a public street, public access, or public use.

"Road" -- An open general public way for the passage of persons and vehicles; used interchangeably with street.

"Sanitary Sewage" -- Wastewater derived from domestic, commercial, and industrial pretreated waste to which storm, surface and ground water are not intentionally admitted.

"Sewer Main or Trunk" -- A sewer that receives flow from individual services and from one or more mains.

“SCADA” -- (Supervisory Control and Data Acquisition) is a category of software application program for process control and gathering of data in real time from remote locations in order to control equipment and conditions.

"Side Sewer" -- That portion of the system located on private property connecting the building sewer to the lateral. Maintenance of side sewers is the responsibility of the property owner.

"SMC" -- Shelton Municipal Code.

"State" -- Wherever the *Standard Specifications* uses the term "State" to define "owner." The term "State" shall be construed to mean the City of Shelton.

"Street" -- A public thoroughfare used for the passage of persons and vehicles from one place to another, including the sidewalks lining one or both sides. Used interchangeably with roads.

"Street Frontage of Lot" -- The distance between the two points where the lot lines intersect the boundary of public street right-of-way.

"Subgrade" -- The top surface of the roadbed on which sub-base, base, surfacing, pavement, or layers of similar materials are placed.

“Undeveloped Parcel” -- A parcel that has no existing or former building or structure and does not have existing or former public or private water or sewer services used on the site.

“Unimproved Street” -- A public right-of-way that does not have any street improvements or the existing street improvements are less than 20 feet in width, and/or the street structural section will not support emergency response vehicles per the current adopted International Fire Code, as determined by the Fire Marshall and City Engineer.

“Unpaved Street” - An existing street segment within the City that is actively maintained by City crews, and which has a gravel driving surface.

"Utility" -- A company providing public service including, but not limited to, gas, electric power, street, street lighting, telephone and other communication lines, water, sewer, solid waste, storm drainage, or cable television whether or not such utility is privately owned or owned by a governmental entity.

"Urban Density" -- Development of land at a minimum of four dwelling units per acre. Development for commercial or industrial uses that require urban services such as municipal water or sewer is considered to be urban in nature.

1.050 Changes to Standards

Minor updates and revisions to the City of Shelton Design and Construction Standards shall be completed by the Public Works Department on an as-needed basis as items arise. The City Manager has the authority to approve changes for any policy or standard modification that does not increase the item cost by more than 30 percent. Changes in cost exceeding 30 percent will be considered by City Council and the updated Standards Manual adopted by Resolution.

The current version of the Standards shall indicate the year and month which the updated standards shall be in effect, together with a log tracking the changes approved by the City Manager and/or City Council. If requested, the Public Works Director shall provide a written report to the City Council summarizing the reasons for any recent revision(s) approved by the City Manager.

Design Modification Requests

All requests for design modifications to the Standards Manual shall be made to the City Public Works Engineering Department. Unless otherwise specified, to request exceptions to the design standards contained in this Standards Manual. Submit a completed Design Modification Request Form (PDF) for each exception requested.

Generally, a design modification request review and approval can be completed within one month of receipt. It is recommended that modification requests be

submitted as soon as possible to build in a buffer for those reviewing and approving the exceptions, and for questions to be resolved. Be advised that incomplete or poorly written requests will be returned for revision and resubmission. Comments will be provided as appropriate.

To avoid delays it is recommended that the design engineer meet with city staff in advance to discuss the exceptions and come to an initial agreement on the proposed exception(s), proposed and potential mitigations, and to determine if a reasonable change can eliminate or reduce the impact of the deficiency. Staff involved will normally be the City Traffic Engineer (Consultant), the Community Development Director, the City Engineer, and others as needed. This will help the exception request move more smoothly through the process. These meetings also allow agreement as to which exceptions can be bundled into one request, versus separate requests.

While the city will process design modifications as expediently as possible, be advised that late submittals are subject to the workload of other requests and projects that are already in the queue. Late submittals, especially coupled with assumptions and a lack of communication, increases the risk of delay in the issuance of the permit required to proceed with construction.

The exception request will be approved, approved with conditions, or denied.

1.060 Severability

If any part of these *City of Shelton Design and Construction Standards* shall be found invalid, all other parts shall remain in effect.

1.070 Design Standards

Detailed plans for new development or redevelopment within the City of Shelton, or proposed actions that would cause modifications to existing public roads, public rights-of-way, or existing utility infrastructure, must be prepared by the Engineer, and submitted to the City for plan review and approval prior to the commencement of any construction. The Engineer shall be a Professional Engineer, registered as such in the State of Washington.

All plans must be signed and stamped by the Engineer prior to submittal for plan review. Final plans shall be approved by the City prior to the start of construction. Any alteration(s) to the approved Final Plans shall be submitted by the Engineer and approved by the Public Works Director prior to construction of the proposed change. Building permits for construction of structures will not be released by the City until all public improvements have been completed and accepted by the City.

Plan Preparation Standards:

A. The Civil Engineer is to refer to and complete the City civil plan review checklist prior to submitting construction plans and supporting studies. The plans prepared by the Engineer shall show all relevant surface features and all subsurface utilities and shall show both plan and profile views on the same sheet. Separate plan sheets shall highlight the location of individual utilities (water, sewer, storm drainage, etc.) while also showing the other utilities. The plans shall show public easements where utilities are on private property, and all utility facilities within those easements must be shown. The plans shall show invert elevations of water, sewer and storm drainage mains at the outlet and all inlets of each manhole, slope of the main(s), and surface elevations of all surface structures. In the profile view, the finish ground elevation over the pipe(s) shall be shown. Notes shall be provided on the plans that refer to specific City standards for such things as catch basins, manholes, lampholes, crosswalks, water meter boxes, side sewers, etc. Horizontal and vertical clearances shall be shown between proposed and existing utilities. All cross-connection control devices shall be detailed on the plans. If the Engineer is aware of any known or potential conflicts, these shall be highlighted. Officially designated historical facilities and districts shall be noted.

B. Plans and profile drawings, showing all existing and proposed facilities are required for all proposed transportation-related improvements, street illumination, traffic signalization, storm drainage, sewer, and water improvements. Specifications shall be required and submitted with the plans if General Notes do not adequately cover the project requirements. If the project is to be done in phases, each phase shall be clearly defined, and the entire project shall be designed by an Engineer and approved by the City before any portions of the proposed improvement can be constructed. Sizing and layout shall consider the entire project.

C. All plans and supporting documents are submitted via the City online permitting system, per requirements and checklists shown on the system. All drawings shall be on 22" x 34" sheet size or as otherwise approved by the City. The maximum allowable scale shall be 1 inch = 50 feet, with enlarged key/detailed areas on the plans. On small projects, multiple items can be shown on the page(s) to adequately utilize the full plan sheet.

D. Final plans issued for construction will be high quality electronic PDF files stamped by the project engineer and stamped approved by the City of Shelton.

E. Within 30 days following the completion of construction, the original signed plan set shall be modified to be “As Built” showing the true condition or configuration of the improvements and certified by the Engineer and project surveyor as to location/elevations of improvements. All changes to the design plans and profiles shall be identified with a

"a/b" appended to the modified information. "As-Built" plans shall be submitted to the City on 24-inch x 34-inch mylar sheets, accompanied by a PDF of the plan set, and drawing plans digital file in AutoCAD release 2011 or above, with plot files, fonts, shape files, and x-ref, as well as properly executed easement deeds as applicable. "As-Built" plans shall become the property of the City.

F. On occasion, the scope of the project (i.e., relocation of a hydrant or installing a new driveway to an existing single-family home) may not require engineered plans and can instead be handled via a Right-of-Way Access Permit. This option will be decided by the City.

1.080 Plan Review

All plans are to be submitted to the City together with any necessary easements or dedications. A preliminary check of the plans and other documents will be made by the City to ensure that the plans meet minimum requirements. If the plans appear to meet minimum requirements as to completeness, the City will contact the applicant for the payment of calculated fees. Review fees are based on a percentage of the first plan review public improvement cost estimate for the project. The estimate shall be a line-item cost estimate separated into each category of work, such as grading, ESC, walls, streets, sidewalks, landscaping, water, sewer, storm drainage, and public utilities. Once the review fees are paid, the application will then be routed to the appropriate City staff for substantive/content review and the plan review process begins.

Submittals of plans may include construction drawings, specifications, design calculations, drainage calculations, maintenance, and operations manuals, and accompanying deeds, easements and/or other documents pertaining to the project. Additional information may be required from the applicant to ensure that the City's infrastructure needs are met and that the project is consistent with the City of Shelton Comprehensive Plans and future City needs.

Initial turnaround time for the first review of plans is normally four to six weeks but may be longer for larger projects. The review time is typically shorter for any subsequent submittals. Resubmittal of plans and supporting information back to the City will include a letter from the project engineer that includes a written response page by page to each of the City comments on the plans and/or supporting document(s).

Some proposed projects may require other governing agency approval(s), which might require additional time. Copies of permits for outside agencies such as WSDOT or Mason County will be required to be submitted to the City prior to the release of the City approved plans.

If revisions to the plans require three or more submittals, additional fees may be levied by the City, as determined by the City Engineer. Additional staff time will be billed on an hourly basis per the adopted master fee schedule.

Approved plans will be released after all plan review and inspection fees have been paid. Inspection fees are based on the final engineers line-item construction cost estimate that is also used for bonding/assurance purposes identified in Section 1.130.

All prints used for construction, including changes to the plans, shall bear the City approval stamp and be onsite at all times prior to commencing any work.

1.090 Construction Control

Work performed for or impacting the construction of streets and utilities, or private development that falls under these *Standards*, whether by or for a private developer, by City forces, or by a City contractor, shall be done to the satisfaction of the City and in accordance with approved plans. It is emphasized that no work shall be started until such plans are approved. Any revisions to such plans shall be submitted by the Engineer and approved by the City before being implemented. Failure to receive the City's approval can result in removal or modification of construction not in conformance with approved plans, at the developer's expense.

All improvements shall be staked by a licensed professional land surveyor and appropriate right-of-way/easement locations shall be determined.

The Engineer shall include the General Construction Notes in Section 1.220 on any plans dealing with construction of alternations, extensions, or connections to public facilities, unless otherwise directed by the City.

1.100 Inspection

All work performed within the public rights-of-way, easements, private development that falls under these *Standards*, or as otherwise described in these *Standards*, whether by or for a private developer, by City forces, or by a City contractor, shall be done to the satisfaction of the City and in accordance with the approved plans and these *Standards*. Any revision(s) to the Final Plans must be submitted by the Engineer and approved by the City before constructing the modified improvement.

It is the responsibility of the developer, the developer's contractor, or their agents to notify the City in advance of the commencement of any construction work. The contractor shall contact the City to schedule a preconstruction meeting and/or field review prior to the commencement of work (two business days' notice is required). Inspections are to be scheduled through the Public Works Department.

It is the responsibility of the developer, the contractor, or their agents to have an approved set of plans and any necessary permits on the job site whenever work is being performed. The City shall have authority to enforce construction

authorized by the approved plans and these *Standards* as well as other referenced or pertinent specifications. The City will assign personnel as necessary to inspect the work being performed.

All specific inspections, test measurements or actions required of all work and materials are set forth herein. All tests shall be performed at the developer's or contractor's expense and witnessed by the City Inspector. Failure to comply with the provisions of these *Standards* may result in stop work orders, removal of work accomplished, at the developer's expense, or other penalties as established by Ordinance.

Failure to contact the City for required inspection may result in claims against bonds or other penalties as established by Ordinance.

A project is considered final when the City issues a letter of Final Acceptance.

1.110 Fees

Fees and applicable charges shall be as established by the City Council by the passage of a resolution adopting a master fee schedule, except where specifically set forth in the Shelton Municipal Code (SMC).

Special reports or studies submitted by the applicant such as structural, transportation, geotechnical, drainage, water, or sewer, prepared for the project may need to be reviewed by outside consultants hired by the City. The City will notify the applicant of the additional outside review fees and obtain written permission to invoice the fee to the applicant, prior to the commencement of the outside review. All plan review fees are due prior to the release of approved plans.

Depending on the type of development, there may be various miscellaneous connection, inspection, traffic impact fees, and/or water, sewer, or storm drainage general facilities charges charged, as identified in the City master fee schedule.

The City will not release the approved plans and/or issue a letter of Final Acceptance until **all** fees and charges have been paid to the City.

1.120 Permits

Some of the work covered under these *Standards* may require multiple permit reviews and approvals from the responsible authority. Any questions about permits, approvals and agreements should be directed to the City as soon as possible.

The following general categories describe some of the permits, approvals and agreements that may be needed along with the issuing permit/code authority identified in parentheses.

A. Environmental Review

For most projects, an environmental checklist must be completed by the project representative and submitted along with plans, specifications, and other information when approval or permits are being requested for a project. The City will conduct the environmental review and make the SEPA threshold determination.

B. Construction Permits

1. Business License: All entities doing business in the City must obtain a City of Shelton Business License (Community Development).

2. Right-of-Way Permit:

   a. Because of the need to preserve public safety for vehicular and pedestrian traffic, a Right-of-Way Permit (Public Works) is required for any work within the public right-of-way. Such work may include utilities, lane closures, parking strips, driveways, curbs, sidewalks, haul routes and/or permission to temporarily close a street or a portion thereof for construction activities.

   b. A traffic control plan shall be submitted for approval. In the case of contracted work by the City, the signing of the contract shall constitute the Right-of-Way Permit. The contractor shall notify all appropriate agencies of approved closures and/or detours (Fire, Dispatch, Mason Transit Authority, School Districts, media (Journal, iFiberone Radio).

   c. A separate Right-of-Way Permit shall be obtained for each separate project before any person, firm, or corporation shall commence or permit any person, firm, or corporation to commence any work within a public right-of-way. Work includes; grading, paving, leveling, altering, constructing, repairing, removing, excavating or placement of any pavement, sidewalk, crosswalk, curb, gutter, driveway, gutter, drain, sewer facility, water facility, conduit, tank, vault, utility pole, mailbox, street banner or any other structure, utility or improvement located over, under or upon any existing or future public right-of-way or easement in the City of Shelton, or place any other material or item tending to obstruct, damage, disturb, occupy, or interfere with the free use thereof or any improvement situated therein, or cause a dangerous condition.

3. A Civil Site Plan Review application and permit is needed for any extension or improvement to the City public storm drainage, sanitary sewer, waterworks, or street system.

4. Building Permit: The project may require a Building Permit (Community Development). A Building Permit is required for most construction work including alteration, repairs, and demolition. Construction of structures greater than 4,000 square feet requires the submittal of an environmental checklist.

5. Excavation and Grading Permit: The development site will need to submit a Clearing and Grading Permit to the Public Works Department if the amount of earthen material being moved exceeds 50 cubic yards. Non-structural fill placement areas shall be clearly noted on the site plans and shall not exceed three feet in depth.

   A soils report by a registered Geotechnical Engineer is required for all compacted structural fill areas. Onsite compaction and soils testing is required during construction and a final project summary report for each lot or parcel shall be submitted at the end of the project by the Geotechnical Engineer.

   A wall design report by a registered Geotechnical or Structural Engineer is required for all walls exceeding 4 feet in height. Onsite observation and testing is required during construction and a final project summary report for each lot or parcel submitted at the end of the project by the Geotechnical or Structural Engineer.

6. State Highway (WSDOT): Some City streets are also state highways. The contractor shall obtain approval for work upon or temporary closure of state highways from WSDOT as required.

7. County Right-of-Way Permit: Application to and approval of a Right-of-Way Permit from Mason County may be required for work on City of Shelton facilities in unincorporated Mason County.

8. Other: There are several other permits or approvals that may be required, and which may be referred to in these *Standards* including, but not limited, to site plan review approval, plat and short plat approvals, Certificate of Occupancy issuance, zoning, and other land use approvals, planned unit development approval, and shoreline substantial development approval.

1.130 Financial Guarantees for Public Projects

Financial guarantees in the form of bonds or other allowable securities may be required by the City on all projects affecting public facilities to guarantee the performance of or maintenance of required improvements, including improvements constructed within unincorporated areas of Mason County. The type and amount of security shall be per code, or if not specified, be at the discretion of the City. Types of securities include, but are not limited to, a bond with a surety licensed to do bonding business in the State of Washington, a

cash deposit, an assigned savings account, a set-aside letter, or a letter of credit.

A. Performance Guarantee: No construction permit (See Section 1.120.b above) shall be issued until a performance bond or other allowable security as outlined above, has been posted with the City in an amount equal to one hundred fifty percent (150%) of the cost of the public improvements.

B. A building permit shall not be issued until all public improvements are completed and final acceptance granted.

C. Maintenance Guarantee: Prior to the final acceptance of public improvements, a maintenance guarantee for materials and workmanship shall be posted with the City for a period of 24 months after final acceptance of construction and in the amount equal to 20 percent of the estimated cost of the public improvements. Release of the maintenance guarantee may occur 18 months from the date of final acceptance of construction if all maintenance has been performed as required and accepted by the city.

1.140 Utility Alignments

Locations of new or relocated utilities shall conform to City Standards as nearly as practical, be compatible with the existing installations and shall comply with all provisions as set forth in SMC Chapter 12.20 Excavations and Encroachments. Existing utilities shall be shown on the plans using the best information available. This verification will require exploration/excavation (potholing) if utilities are in conflict with the proposed design. The contractor/developer shall be responsible for utility locates in conjunction with the project.

Utilities converted from overhead to underground on existing roadways will be considered as if they are new utilities.

1.150 Easements

Utilities shall be placed in the public right-of-way unless terrain or other topographic obstacles dictate otherwise, or as otherwise approved by the City. Where the City approves public utilities and/or their conveyance systems across private lands, an easement must be granted to the City. It is the developer's responsibility to provide the required documentation to the City to process, record, and file all easements. If the property is platted, the easement may be conveyed when the short plat or final plat is filed. All easements not shown on a plat must be prepared by a licensed land surveyor.

Easement widths shall be fifteen feet minimum for a single utility and twenty feet minimum for dual utilities unless a wider width is determined to be necessary by the City, such as for pipelines exceeding ten feet in depth.

Construction easements shall be thirty feet minimum in total width, including the permanent easement. When trench depths dictate or where pipe diameter or vault widths exceed four feet, a wider easement may be required by the City.

Easements are required to be submitted in draft on City standard forms, unsigned for review and approval. Signed copies are required prior to plan approval. Any change in design that places a public facility, i.e., water main, sewer main, sidewalk, etc., outside of an easement may necessitate the suspension of construction until modified plans and easements can be resubmitted and approved. Easements will be recorded at Mason County by the City upon satisfactory completion of work. The applicant is responsible to pay the applicable County recording fees to the City prior to recording the easement(s).

1.160 Latecomers Agreement

Any person who constructs water or sewer main extension (including pump stations) that will benefit properties abutting the extension may enter a contract with the City that is commonly termed a "Latecomers Agreement", per Section 17.14 of the Shelton Municipal Code. As determined by the City at its sole discretion, the Latecomers Agreement may allow the developer to be reimbursed for that portion of the construction cost which benefits adjoining properties. To be considered by the City, the format for a Latecomers Agreement **must** be submitted for review and approval prior to plan approval. Latecomers Agreements submitted after plan approval **will not** be accepted.

The developer is responsible for initiating, executing, and submitting the Latecomers Agreement to the City. The Latecomers Agreement shall include a list of those properties which will benefit from the extension, a map outlining and designating these properties, legal descriptions as required by the City, and backup data supporting the costs submitted. The City shall be responsible for filing and recording a covenant on all affected parcels and property and notifying current and future owners of the Latecomers Agreement reimbursement encumbrance.

The developer will be responsible for all fees, charges, and expense involved for the City to perform this procedure. The City will collect the latecomer's fee from persons wanting to connect to the extension and subsequently see that the developer receives the payment. Expiration of this agreement shall be fifteen years from the date of execution.

1.170 Traffic Control

As specified in Section 1.120 above, the contractor must obtain a Right-of-Way Permit before commencing any work in the public right-of-way. The contractor shall also be responsible for interim traffic control during construction on or along traveled roadways. Traffic control shall follow the guidelines of the WSDOT/APWA Standard Specifications. All barricades, signs, and flagging shall conform to the requirements of the MUTCD.

City utilities constructed within Mason County right-of-way shall follow all traffic control requirements as set forth by Mason County Department of Public Works and the MUTCD.

Roadway work zone construction signs must be legible, clean, reflective, and visible and shall be removed from the work zone at the end of each workday, if the sign is not applicable after construction hours.

When road closures and detours cannot be avoided, the contractor shall notify the City. The City may require a detour plan to be prepared, submitted, and approved prior to closing any portion of a City right-of-way.

1.180 Call Before You Dig

All developers/contractors are responsible for timely notification of all utilities in advance of any construction in right-of-way or utility easements. The utilities one-call Underground Location Center phone number is 1-800-424-5555 or 811.

The City is not responsible for locating private lines or other utilities in the right-of-way. The contractor shall be responsible for field verifying by pot-holing or other means as needed all potential public or private utility conflicts.

1.190 Utility Extension

Anyone who wishes to extend any City utility should contact the City to see if there are any extension/connection fees or any special extension requirements.

For service to adjacent property and/or future development, as determined by the City, utility mains shall be extended across the frontage of, or to and through the property being developed to adjacent parcel(s). Extensions shall be to the middle of intersections and through to the end of any pavement. Utility extensions shall be sized per the appropriate utilities' Comprehensive Plan or sized by the project engineer to provide for further extensions, as directed by the City.

1.200 Annexation Requirement

Every applicant for water and sewer service outside the City limits in the Urban Growth Area, except for municipal corporations or quasi-municipal corporations, must sign an agreement with the City not to protest annexation. The owner shall provide the City with an irrevocable power of attorney to allow a City representative to sign a petition for annexation on behalf of the property owner or the property owner shall agree to sign a petition for annexation of his/her property when requested to do so by the City. The agreement shall be recorded against the property in the Mason County Auditor's Office and shall constitute a covenant running with the land. All provisions of the agreement shall be binding on the owner and all other persons subsequently acquiring any right, title, or interest in or to said property.

Owners of property located outside the City Urban Growth Area boundary may make application for sewer and water service to their property. The City Council shall review the application and may, in its sole discretion, allow the extension or expansion of sewer and water service if the City Council finds:

1. That the requested service is necessary to protect basic public health and safety and the environment.
2. That the requested service is financially supportable at rural densities and does not permit urban development.
3. That the City's NPDES permit will not be affected by the extension or expansion.
4. That the extension or expansion is consistent with the goals of the City's Sewer Comprehensive Plan, its Water Comprehensive Plan, and all other applicable law.

1.210 Standards in Shelton Urban Growth Area

City utilities may be extended to properties within the Shelton Urban Growth Area per Shelton Municipal Code Chapter 17.10, only after the property is legally committed to eventual annexation per Section 1.200. Utility extensions may be permitted after the following policies are satisfied. These policies have been adopted by both the City of Shelton and Mason County.

A. City utilities may be extended to properties within the Urban Growth Area (UGA) either upon annexation or through the creation of a Utility Extension Agreement with the owners of properties not annexed. (County Policy U-151 B1)

B. No utility extension will be permitted to any non-annexed property within the UGA unless a Utility Extension Agreement is signed between the owner of the subject property and the City of Shelton. The agreement shall provide for the following (County Policy U-151 B2):

    1. Utility Extension Agreements will be an instrument recorded against the title of the property and the responsibilities therein shall transfer

to successors in ownership of all or part of the property (County Policy U-151 B2a).

2. Extension and hook-up must not result in lowering of service delivery below adopted City LOS standards as determined by the City. Hook-ups outside of the City shall not be permitted until such standards are adopted, as determined by the City (County Policy U-151 B2b).

3. Water hook-up will not be allowed until a contribution to a source development fund is made by the property owner/developer, as determined by the City (County Policy U-151 B2d).

4. Extensions will not be permitted unless agreement is made to pay a system development charge as identified by the City in a rate study (County Policy U-151 B2e).

5. All costs for a utility system extension, the steps necessary to maintain level of service (LOS), sewer system I&I fund contributions, water source development fund contributions and system development charges shall be borne by the property owner served (County Policy U-151 B2f).

6. All served property must have a commitment to annex when contiguous and requested by the City placed on the property title. (County Policy U-151 B2g)

7. All utility users shall be subject to rates and surcharges as established by the City of Shelton (County Policy U-151 B2h).

8. In the event that a Utility Extension Agreement is approved by the City in an area that is served by an existing State Department of Health approved water system; that system may continue to be operated by the present owners or their satellite management agency. Fire flow, service line size, and main size will remain until State Department of Health requires an upgrade in order to obtain a green operating permit (County Policy U-151 B2i).

C. In addition to all conditions listed above, the following must be provided in a Utility Extension Agreements to extend City services to new development not vested by virtue of a complete development application prior to the adoption of these standards (County Policy U-151 B3).

1. City owned utilities will only be extended to land uses consistent with the City's Comprehensive Plan Future Land Use Map as determined by the City (County Policy U-151 B3a).

2. City owned utilities will only be extended to development meeting City development standards (County Policy U-151 B3b).

3. When extended to residential development, City owned utilities will only be extended to development that meets the definition of urban densities as per the Joint Planning Agreement and is consistent with the policies for subdivision of land therein (County Policy U-151-B3c).

4. Storm water systems, in the UGA, shall be designed and constructed in compliance with the requirements of the Washington State Department of Ecology Stormwater Manual for the Puget Sound Basin and all adopted storm water master plans or storm water ordinances and basin plans. Those properties designated by these plans as draining to City of Shelton owned and maintained facilities shall be included in the City Storm Water Utility Program (County Policy U-151 B3d).

1.220 General Notes (For all Projects)

1. All workmanship and materials shall be in accordance with the most current City of Shelton *Standards* and the most current edition of the State of Washington Standard Specifications for Road, Bridge and Municipal Construction (WSDOT/APWA).

2. All safety standards and requirements shall be complied with as set forth by OSHA, WISHA, and the Washington State Department of Labor and Industries.

3. All work in the City requires a City of Shelton Business License.

4. Prior to working within the City right-of-way or on City property, the contractor must obtain a City of Shelton Right-of-Way Permit. All contractors shall be licensed and bonded in the State of Washington. Proponent shall comply with all other permits and other requirements of the governing authority or agency. It is the contractor's responsibility to verify the location of the right-of-way.

5. A pre-construction meeting with the City of Shelton is required. The meeting shall be scheduled a minimum of two days before the start of construction. Contact the City Engineering Department at (360) 426-9731 to schedule.

6. It is the contractor's responsibility to notify the City of his/her schedule. Inspection by City personnel shall be during City work hours. City inspection hours are 7:00 a.m. to 5:00 p.m., Monday through Thursday, except holidays. The proponent must give the City a minimum of 24-hour notice for inspections. No trenching on public right-of-way after 4:00 p.m., unless otherwise approved by the City. Other work such as backfilling, cleanup, etc., or as approved by the City, is acceptable if 24-hour prior notice is provided to the City.

7. Temporary erosion/water pollution measures shall be required in accordance with section 1-07.15 of the WSDOT/APWA Standard Specifications the Washington State Department of Ecology Storm Water Management Manual for the Puget Sound Basin, and the Shelton Municipal Code.

8. At no time will silts and debris be allowed to drain into an existing or newly installed storm water facility or onto adjacent roads or properties. The contractor shall not release storm water to the sanitary sewer system. All erosion control and water pollution prevention measures shall be regularly inspected and maintained by the contractor.

9. It is the Contractor's responsibility to notify all emergency services (Fire, Police, etc.) if streets or other accesses are obstructed. Within the City of Shelton, Dispatch at (360) 426-4441 will notify Police and Ambulance. The Contractor shall be responsible for notifying the Shelton Fire Department.

10. The following are telephone numbers the contractor may need. These are provided for convenience only and are subject to change without notice.

City Shop	(360) 432-5189
City Engineering	(360) 426-9731
City Treatment Plant	(360) 426-6521
City Hall	(360) 426-4491
Fire Department	(360) 426-5533
Mason Transit Authority	(360) 427-5033
Shelton School District	(360) 427-8610

11. The Contractor shall notify and work with all affected property owners. The Contractor shall provide the City with emergency telephone numbers at the preconstruction meeting and shall provide a foreman on site during all working hours.

12. The Contractor shall be responsible for all traffic control in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and Department of Labor and Industries. Prior to disruption of any traffic, traffic control plans shall be prepared and submitted to the City for approval. No work shall commence until all approved traffic control is in place.

13. The Contractor shall be fully responsible for the location and protection of all existing utilities. The contractor shall verify all utility locations prior to construction by calling the Underground Locate line at 1-800-424-5555 or 811 a minimum of two business days prior to any excavations.

14. Water, sewer, or storm service lines broken on private property shall be repaired immediately by the contractor in accordance with the Uniform Plumbing Code (UPC) or other appropriate standards and may require a permit. Contact the City Building Official.

15. City service lines broken in the City right-of-way shall be reported to the City and repaired immediately by the Contractor. If not repaired within 24 hours, the City will repair, and the contractor will be billed for the repair work on a time and materials basis for marked utility lines. Reports should be directed to (360) 432-5189 during regular business hours or (360) 426-4441 during non-business hours.

16. All utilities shall be staked for grades and alignment by a licensed Engineering or Surveying firm capable of performing such work.

17. Signed and approved blueprints shall be on-site at all times while work is being performed.

18. The Contractor shall restore work area to same or better condition unless otherwise approved or specified.

19. All disturbed areas, other than pavement and rocked surfaces, shall be seeded and mulched or similarly stabilized to the satisfaction of the City and in accordance with the *Standards*. For sites where grass has been planted, the performance and/or maintenance guarantees will not be released until the grass has been thoroughly established, unless otherwise approved by the City.

20. If existing native material is determined by the City to be suitable for backfill, the Contractor may use the native material.

21. All asphalt restoration shall be as specified in the Standard Detail T-18 or to the depth of the existing pavement, whichever is greater. Existing asphalt edges shall be saw-cut to a smooth, straight edge prior to final patching, unless otherwise approved by the City.

22. All concrete restoration shall be saw-cut to a smooth, straight edge prior to final patching, unless otherwise approved by the City. 3000 psi concrete shall be used and shall be poured to the same depth and alignment as the existing pavement. The City will require doweling per Standard Detail T-18.

23. All permanent patching shall be accomplished within seven calendar days unless otherwise approved by the City. Any temporary patch that requires more than seven calendar days shall be hot mix asphalt concrete.

24. Temporary patching shall be 2-inch depth, Class B asphalt concrete pavement, 2-inch medium curing (MC-250) liquid asphalt (cold mix), 2-inch asphalt treated base (ATB) or steel plates. The Contractor shall maintain the patch. If not properly maintained, the City will perform any necessary repair and bill the Contractor.

C H A P T E R 2

2.000 TRANSPORTATION

2.010 Transportation System Alterations, Extensions and Connections

To allow the City to provide timely assistance and advice, anyone who wishes to alter, extend, or connect to the City's transportation system should contact the City as soon as possible. Any alteration of, extension of, or connection to the City's transportation system must conform to the Comprehensive Plan, SEPA determinations, Final Plat approval, Site Plan approval, Subdivision approval, Final Planned Unit Development approval, Binding Site Plan approval, the WSDOT *Standard Specifications for Road, Bridge and Municipal Construction,* the WSDOT *Design Manual*, the WSDOT Construction Manual, American Association of State Highway and Transportation Officials (AASHTO) *Highway & Street Design "Green Book"*, Manual on Uniform Traffic Control Devices (MUTCD), Title 12 of the *Shelton Municipal Code,* and these Standards.

The design of streets and roads shall depend upon type and usage. The width and grade of pavement shall provide for safety and uniformity as required by the standards.

2.020 Functional Classification

City streets are divided into principal arterials, minor arterials, major collectors, minor collectors, and local access streets in response to regional transportation needs and the functional use each serves. See Figure 11 in the most current Comprehensive Plan for a listing of arterials. Function is the controlling element for classification and shall govern right-of-way, road width, and road geometrics. Streets will be classified or reclassified by the City as deemed necessary. See Table 6 Minimum Design Standards.

2.030 Roadway Classification Definitions

A. Principal Arterial: Serves regional major activity areas. Carries all inter-urban and significant intra-urban auto and transit trips. Carries the highest traffic and longest trips. Offers most mobility, least land access. Fully or partially controlled access.

B. Minor Arterial: Interconnects and augments principal arterials. Distributes travel to areas smaller than those associated with major arterials. Places more emphasis on land access than principal arterials.

C. Major Collector: Provides both land access and traffic circulation within residential areas. Provides intra-community continuity but doesn't penetrate identifiable neighborhoods. Carries local bus routes.

D. Minor Collector: Collects traffic from local system and channels it to arterials. Provides both land access and traffic circulation within residential neighborhoods, commercial areas, and industrial areas.

E. Local: Provides direct access to abutting land and access to higher classified streets. Offers least mobility. Usually contains no bus routes. Through traffic deliberately discouraged.

2.040 Streets and Alleys Design Standards

The design of streets and roads shall depend upon type and usage. Street design shall provide for the maximum weight loading conditions as determined by the City. The width and grade of the pavement shall provide for safety and uniformity as required by the Standards.

The layout of streets shall provide for preserving and extending the connectivity of the pedestrian, bicycle, and grid street system. The layout shall also ensure that new development that is bordered or surrounded by areas of undeveloped land provides for future street extensions, connections, rights-of-way etc., so that undeveloped areas do not become isolated from the transportation network. Existing streets and alleys and their proper projection will be considered by showing a conceptual street and lot development pattern sketch with vertical (contours & profiles in sloped areas) and horizonal alignments a minimum of 500 feet surrounding the developing parcel(s). Streets that primarily serve to provide access to abutting property shall be designed to discourage regular use by cut-through traffic while maintaining the connectivity of the transportation system. See the table of Minimum Street Design Standards.

A. Alignment: The alignment of alleys, arterials and collectors shall conform as nearly as possible to the Comprehensive Plan.

B. Grade: Street grades should conform closely to the natural contour of the land. In some cases, a different grade may be required by the City depending upon the street classification. The minimum allowable profile grade shall be 1.0 percent. Flatter grades may be approved on a case-by-case basis as approved by the City Engineer through the design modification request process. The maximum allowable profile grade shall be as specified in Table 1 below.

C. Width: Street pavement and right-of-way width depend upon the street classification. Table 6, the Minimum Street Design Standards, and the associated street standard detail drawings identify the minimum widths allowed. Street widths shall be measured from face-of-curb to face-of-curb on streets with cement concrete curb and gutter or the edge-of-pavement where no curb and gutter exists.

D. Existing and proposed alleys are secondary access points to primary ingress and egress from public street frontages. Alleys allow access to utilities, garbage service, loading areas, and off-street parking lots. Alleys have very low volume of vehicular and pedestrian traffic. Existing alleys may need to

dedicate public right-of-way for near-term or future widening of the Alley surface to meet these standards.

E. Geometrics: The latest version of the "AASHTO Green Book" contains a discussion of the factors and assumptions associated with the calculation of stopping, passing, and intersection sight distance. Stopping sight distance is a vital consideration for both urban and rural situations. Passing sight distance will likely be pertinent only in rural arterial situations. Intersection sight distance must be considered with or taking into account the terrain in which the facility is located and in urban situations to what extent parking is permitted. Stopping Sight Distance (SSD) shall be available throughout all horizontal and vertical curves.

F. For purposes of design and location, all guardrails along roadways shall conform to the criteria as outlined in the WSDOT *Design Manual* as may be amended or revised.

G. Traffic Impact Analysis: Refer to Chapter 2, Appendix A.

2.050 Vertical Alignment

A. Curve length and stopping sight distance shall be designed to ensure proper drainage,clear sight distance, and safety for vehicles and pedestrians.

B. The maximum profile grades in Table 1 may be exceeded for 300 feet or less, uponshowing through the design medication request process that no practical alternative exists. Exceptions exceeding 10 percent shall require approval through the design modification request process by the City Engineer and Fire Marshal.

C. Grade transitions shall be constructed as smooth vertical curves except, upon approval of the City Engineer, in intersections where the difference in grade is one (1) percent or less.

Table 1: Maximum Profile Grade

Local Secondary	Local Primary	Arterial – Collector	Arterial – Minor	Arterial – Principal
15%[1]	10%	10%	10%	9%

[1] *See Section 2.050.B*

2.060 Vertical Curve Criteria

A. The minimum vertical curve length for roadways is 75 feet.

B. The point of vertical curvature (PVC) shall not encroach into a cross street any further than the center of pavement of the cross street.

C. Cross Slope: The standard cross slope is a 2.5 percent crown to provide for adequate drainage to the gutter section. On roadway widening projects, the maximum cross slope to the gutter shall not exceed 4.0 percent and the minimum cross slope shall be greater than 1.0 percent.

D. Stopping Sight Distance (SSD) is based on an eye height of three and one-half (3.5) feet and the height of an object at one-half (0.5) foot.

E. The Director may approve sag vertical curves on Local Primary and Local Secondary Streets with SSD less than that in Table 3 below if no practical design exists and if acceptable road lighting is provided throughout the curve.

F. At street intersections, the crown of the major (higher classification) street shall continue through the intersection.

G. The roadway section of the minor street will flatten to match the longitudinal grade of the major street at the projected curb line.

H. Street grades, intersections, and super elevation transitions shall be designed to not allow concentrations of storm water to flow across the travel lanes.

Table 2: Design Controls for Crest Vertical Curves Based on Stopping Sight Distance

U.S. Customary			
Design Speed (mph)	Stopping Sight Distance (ft)	Rate of Vertical Curvature, Ka	
		Calculated	Design
15	80	3.0	3
20	115	6.1	7
25	155	11.1	12
30	200	18.5	19
35	250	29.0	29
40	305	43.1	44
45	360	60.1	61
50	425	83.7	84
55	495	113.5	114
60	570	150.6	151
65	645	192.8	193
70	730	246.9	247
75	820	311.6	312
80	910	383.7	384

Rate of vertical curvature, *K*, is the length of curve per percent algebraic difference in intersecting grades (*A*), $K = L/A$.

Table 3: Design Controls for Sag Vertical Curves Based on Headlight Sight Distance

U.S. Customary			
Design Speed (mph)	Stopping Sight Distance (ft)	Rate of Vertical Curvature, K^a	
		Calculated	Design
15	80	9.4	10
20	115	16.5	17
25	155	25.5	26
30	200	36.4	37
35	250	49.0	49
40	305	63.4	64
45	360	78.1	79
50	425	95.7	96
55	495	114.9	115
60	570	135.7	136
65	645	156.5	157
70	730	180.3	181
75	820	205.6	206

Rate of vertical curvature, *K*, is the length of curve per percent algebraic difference in intersecting grades (*A*), *K* =*L*/*A*.

2.070 Horizontal Curve Criteria

A. Superelevated roadway sections are not allowed in the design of horizontal curves of Local and Minor Collector Streets but may be needed to meet terrain and right-of-way conditions for higher speed Major Collector and Arterial Streets.

B. Cross Slope: The typical cross slope is a two (2) percent crown slope to provide for adequatedrainage to the pavement edge, and to minimize ice formation on roadway surfaces during inclement weather events.

C. Calculate superelevation according to AASHTO "Low Speed Urban Streets" design methodology.

D. See Table 4 for horizontal curve standards.

E. Offset roadway crowns are not allowed, unless approved by the City Engineer in a design modification request.

Table 4: Horizontal Curve Design

Maximum Design Speed(mph)		25[1]	30[1]	35	40
Minimum Center line Radius[2] (ft)		200	340	510	770
6% Superelevation Horizontal Curvature Radius (ft)		145	235	340	485
8% Superelevation, Horizontal Curvature forRadius (ft)		135	215	315	445

1 Use these criteria without superelevation.
2 Radii based on crown section with two (2.0) percent slope on each side of crown.
3 Where superelevation is used, calculate runoff lengths according the WSDOT Design Manual.
4 Where a curved road approaches an intersection, these tangent sections shall be provided on the approach to the intersectionto provide for adequate sight distance for traffic control devices at the intersection. The distance shall be measured from the flow line of the through street. Where superelevation is used, calculate runoff lengths according the WSDOT Design Manual intersection. The distance shall be measured from the flow line of the through street. Where superelevation is used, calculate runoff lengths according the WSDOT Design Manual.

2.080 Curb Radii

A. Curb radii design shall balance vehicle turning movements with pedestrian safety. Typically, it is appropriate to use the smallest turn radii possible that still accommodates the Design Vehicle.
B. For design, round curb radii to the nearest five (5) foot increment.
C. Typical curb radii based on street classification are shown in Table 12. However, these values may be impacted by site conditions, including width of receiving lanes, on-street parking, and angle of intersecting roadways.
D. Curb return profiles are required on all plan submittals that include slope into PC, slope out of PT, station & elevation of PC, ¼, ½, and ¾, PT points. Include the station & elevation of any high or low points. Indicate the calculated slope between each point, which shall not be less than 0.5% to allow for proper drainage.

Table 5: Typical Curb Radii Design Values

Street Classification (for highest street classification at intersection)	Radius
Arterial to Arterial	35 feet
Arterial to Local Street	25 feet
Local Street to Local Street	25 feet
Where vehicular turn is prohibited	10 feet
Radii for curb setbacks and bulb-outs	15 feet

2.100 Minimum Street Design Standards

Table 6: Street Design Standards

DESIGN STANDARDS	PRINCIPAL ARTERIAL	MINOR ARTERIAL	MAJOR COLLECTOR	MINOR COLLECTOR	LOCAL RESIDENTIAL (2)	LOCAL INDUSTRIAL OR COMMERCIAL	ALLEY
DESIGN LIMITATIONS	Access per Section 2.130 No on-street parking allowed.	Access per Section 2.130 No on-street parking allowed.	Access per Section 2.130 No on-street parking allowed.	Access per Section 2.130 On-street parking allowed. Maximum ADT of 2000 trips per day.	Access per Section 2.130 On-street parking allowed. Maximum ADT of 1200 trips per day.	Access per Section 2.130 On-street parking allowed. Maximum ADT of 1200 trips per day.	No parking allowed. Loading and unloading allowed. Maximum ADT of 500 trips per day.
MINIMUM STRUCTURAL DESIGN	See Section 2.100						
DRAWING STANDARD (1)	T-23A, T-23B	T-23A, T-23B	T-23A, T-23B	T-24	T-25	T-26	T-27
PARKING LANE (3)	None allowed	None allowed	Conditionally allowed with design modification request.	Allowed	Allowed	Allowed	N/A
SIDEWALKS	Both sides, minimum 6’ width, 10’ with zero lot setback	Both sides, minimum 6’ width, 10’ with zero lot setback	Both sides, minimum 6’ width, 10’ with zero lot setback	Both sides, minimum 6' width	Both sides, minimum 6' in residential zone.	Both sides, minimum 6' in commercial zone, 10’ with zero lot setback	N/A

(1) Additional right of way may be required to accommodate street tree corridor, parking lanes and bus turnout.
(2) An exception to these standards for infill development within the Neighborhood Residential (NR) Zoning District provided in 2.165.
(3) Where parking lane is allowed, parking lane minimum width shall be 8 feet.

2.105 Surfacing Requirements

A. Refer to Standard details T-22 for surfacing requirements for each classification of roadway.

B. All depths indicated are a minimum compacted depths and assume an unsaturated, non-yielding subgrade for dry weather construction. Wet weather construction projects and/or differing site conditions will require alternate sections to be designed by a Registered Geotechnical Engineer and approved by the City Engineer, prior to commencing construction.

C. Alternate structures will be accepted if soil tests based on a 25-year road life using standard AASHTO (WSDOT) engineering analysis is provided to justify the alternative section. Soil tests and a completed analysis for each road classification shall accompany plans submitted if structures other than those shown below are used.

D. Soil tests shall be performed by a Washington State registered Professional Engineer or licensed Engineering Geologist specializing in soils analysis. One soil sample per each 500 LF of centerline with 3 minimum per project representative of the roadway subgrade shall be taken to determine a statistical representation of the existing soil conditions.

E. The pavement structure design and accompanying soils report shall be based on actual soils tests and projected traffic. The report shall be stamped and signed by a State of Washington registered Engineer or licensed Engineering Geologist.

2.110 Sidewalks, Curb and Gutter, & ADA Curb Ramps

Standards specified below shall be met in the design and construction of sidewalks, curbs, and gutters.

A. Sidewalks

1. Sidewalks shall be required on both sides of all streets, unless otherwise noted Section 2.160, Frontage Improvement Standards. Sidewalks are to be separated from the curb as indicated in the street typical sections, except where physical or topographic conditions make it impracticable to separate the sidewalk from the curb, the City may approve a Design Exception to allow the sidewalk to be adjacent to the curb, through the Design Modification Request application process.

2. Where clustered mailboxes, transit shelters, benches, or any other objects are within a sidewalk, the walk shall be widened to provide clearance equal to ADA minimum requirements.

3. Sidewalks should be kept free of utility structures and other encroachments by locating such structures behind the sidewalk, in the landscape strip, or in the Public Utility Easement (PUE). If a utility structure must be in the sidewalk, it shall be installed flush with the sidewalk and have a non-skid walking surface rated for pedestrian traffic.

4. The connection of sidewalks of different widths shall be accomplished by a transition section of sidewalk with length of 5 times the width of the transition. The deflection angles from the centerlines of the two connected sidewalks shall not exceed 45 degrees without the City Engineer's written approval.

5. Sidewalks shall be constructed in accordance with WSDOT Standard Plan F-30.10.

6. When the sidewalk, curb and gutter are contiguous, the width of the sidewalk shall be measured from back of curb and gutter to back of sidewalk (per Standard Detail T-02).

7. Plans for construction of sidewalks, curbs and gutters are to be submitted as part of the street plan when applicable.

8. Marked crosswalks shall be provided at crossings that are protected by a traffic signal. Marked crosswalks may be provided at other locations only when approved by the City Engineer.

9. Utility Locations, all above-grade utilities shall be located outside of the edge of the sidewalk whenever possible. When it is necessary to place utilities within the limits of the sidewalk, such utilities shall follow all ADA and clear zone requirements and placed so as not to hinder pedestrian traffic.

10. Around utility poles, block-outs shall be constructed around the pole of ¾ inch expansion joint material and 18" greater in diameter than the pole.

11. A minimum distance of 2 feet is required from the face of curb to any obstruction on or within the sidewalk unless otherwise noted.

12. All sidewalks shall be constructed over a minimum 2 inches of crushed surfacing top course or well-graded sand meeting the requirements of Section 9-03.9(3) of the *WSDOT Standard Specifications* and compacted to 95% of maximum density.

B. ADA Pedestrian Curb Ramps

1. Curb ramps must be provided at all intersections and any required mid-block crossings and must be constructed in accordance with the WSDOT Standard Plans F40.12, F-40.14, F-40.15, F-40.16, and F-45.10.

2. The intent is to follow ADA standards of state and federal law.

3. Form and subgrade inspections by the City are required before each handicap ramp is poured. See Standard Details T-07 through T-11.

4. To minimize water, sedimentation, and debris from flowing into ramp depression(s), a drainage inlet shall be located a maximum of 100 feet uphill of any ADA ramp.

C. Curb and Gutter

1. Cement concrete curb and gutter shall be used for all street edges, unless otherwise approved by the City. All curbs and gutters shall be constructed in accordance with the City Standard Details and WSDOT Standard Plan F-10.12 and the Section 8-14 of the WSDOT *Standard Specifications*.

2. The use of calcium chloride as an admixture is prohibited.

2.120 Driveways

A. Driveways shall be constructed consistent with the specifications outlined in this section and WSDOT Standard Plan F-80.10.

B. Only one driveway shall be allowed per parcel unless otherwise approved by the City Engineer. A TIA shall be used to justify the need for more than one driveway.

C. All driveway approaches crossing sidewalks shall be constructed of Portland Concrete Cement and shall be subject to the same testing and inspection requirements as curb, gutter and sidewalk construction. Commercial driveways may be constructed of alternative materials if approved by the City Engineer.

D. Joint-use driveways serving two adjacent parcels may be built on their common boundary upon formal written agreement by both property owners and approval of the City. The agreement shall be a recorded easement for both parcels specifying maintenance and joint usage in perpetuity.

E. All abandoned driveways shall be removed and the curbing and sidewalk or shoulder and ditch section shall be properly restored by the property owner.

F. Residential driveway access spacing onto the various roadway classifications shall not exceed the distances shown on detail #T-22. Access spacing for commercial driveways is per Section 2.130 below.

G. Within the limitations set forth above, access to arterial streets shall be limited to one driveway for each tract of property separately owned. Properties contiguous to each other and owned by the same person are

considered one tract where practical. Shared access with adjacent properties will be encouraged.

H. Driveways giving direct access onto arterial streets may be denied if alternate access is available. No commercial driveway shall be approved where backing onto the sidewalk or street right-of-way will occur. A residential driveway may be allowed to back out onto a sidewalk or street right of way on a non-arterial roadway, provided the developer can show that adequate sight distance exists, and all safety issues are addressed.

I. The maximum driveway width shall conform to the below table. A wider driveway width may be approved by the City where a substantial percentage of oversized vehicle traffic exists, where divisional islands are proposed, or where multiple exit or entrance lanes are needed.

Table 7: Driveway Width

Residential Driveways		
Lot Frontage Width	Minimum Driveway Width	Maximum Driveway Width
Up to 50 feet	10 feet	24 feet
From 51 feet to 60 feet	10 feet	24 feet + 1 foot per foot of Lot Frontage in excess of 50 feet
Greater than 60 feet	10 feet	35 feet
Commercial Driveways		
Two-way access		30 feet
One-way access		20 feet
Industrial Driveways		
Two-way access		35 feet
On-way access		30 feet

J. Driveways shall be designed and constructed to not restrict surface water flow, and to provide positive drainage at the point of connection to the street. Private stormwater systems shall be constructed outside the limits of the right-of-way to limit discharge to the public stormwater systems and site surface runoff from driveways or over sidewalks to the public streets shall be minimized.

K. Parking lot circulation and signing needs shall be met on site. The public right-of-way shall not be utilized as part of a one-way parking lot flow or queuing for drive-through commercial uses.

L. Maintenance of sidewalks and driveways is the responsibility of the property owner per Section 12.08.030 of the Shelton Municipal Code.

2.130 Intersections

A. Traffic control will be as specified in the *Manual on Uniform Traffic Control Devices (MUTCD)* or as modified by the City as a result of appropriate traffic engineering studies.

B. Street intersections shall be laid out so as to intersect as nearly as possible to ninety (90) degrees and in no case shall it be less than seventy-five (75) degrees. A straight horizontal alignment (no curves, no angle points) shall be used through the intersection and for a minimum of 25 feet each side of intersecting right-of-way lines.

C. For safe design, the following types of intersection features are not allowed:

1. Intersections with more than four intersecting streets;

2. "Y" type intersections where streets meet at acute angles;

3. Intersections adjacent to bridges and other sight obstructions.

D. The minimum and maximum spacing distances between any public or private roadway or commercial driveway approach onto any other public roadway, measured from centerline to centerline of the roadway or driveway, will apply for either the same side or opposite sides of the primary street:

1. Local Street/Alley/Commercial Driveway or Intersecting Local Street: 200 feet minimum, 800 feet maximum.

2. Local Street/Alley/Commercial Driveway Intersecting Minor Collector: 300 feet minimum.

3. Local Street/Alley/Commercial Driveway Intersecting Major Collector or Arterials: 600 feet minimum.

4. Arterials Intersecting Arterials: 1,320 feet minimum.

5. Exception to Access Criteria

a. Alternate points of access may be allowed if an access management plan which maintains the classified function and integrity of the applicable facility is reviewed and approved by the City Engineer thru the design modification request process, after considering the applicant's compliance with this Section.

b. The application for an Access Management Plan shall explain the need for the modification and demonstrate that the modification maintains the classified function and integrity of the facility. References to standards or publications used to prepare the Access Management Application shall be included.

c. An access management plan shall address the safety and operational problems which would be encountered should a modification to the access spacing standards be granted. An access management plan shall be prepared and certified by a traffic or civil engineer registered in the State of Washington.

d. The access management plan shall at minimum contain the following:

i. The minimum study area shall include the length of the site's frontage plus the distance of the applicable access spacing standard, as set forth above, measured from the property lines or access point(s), whichever is greater. For example, a property with 500 feet of frontage on a minor arterial (required 600-foot access spacing standard) shall have a minimum study area which is 1,700 feet in length.

ii. The access management plan shall address the potential safety and operational problems associated with the proposed access point. The access management plan shall review both existing and future access for all properties within the study area as defined above.

iii. The access management plan shall include a comparison of all alternatives examined. At a minimum, the access management plan shall evaluate the proposed modification to the access spacing standard and the impacts of a plan utilizing the City standard for access spacing. Specifically, the access management plan shall identify any impacts on the operations and/or safety of the various alternatives.

iv. The access management plan shall include a list of improvements and recommendations necessary to implement the proposed access modification, specifically addressing all safety and operational concerns identified.

v. Notice for a proposed access management plan shall include all property owners within the study area.

6. Interim Access

a. No development shall be denied a Right-of-Way permit for the sole reason that the parcel for which it is sought cannot physically accommodate the access spacing requirements of this standard. In such an event, the use may be issued an interim access permit which shall expire when access as required under this Section becomes available.

b. An interim access permit may be granted based upon the following:

i. The site is situated such that adequate access cannot otherwise be provided in accord with the access spacing requirements of this Section.

ii. The interim access shall meet minimum City traffic safety and operational requirements, including sight distance.

iii. Alternate access shall not be deemed adequate and connections to alternate access shall not be required if the resulting route of access would require a trip more than one block or 500 feet out of direction (whichever is less).

iv. New interim access locations on Arterials and Collectors shall be posted with a sign. The sign shall note that the access is interim and will be removed once ultimate access is available. The sign and its location shall be approved by the City Engineer.

v. The property owner signs a waiver of the right to remonstrate against the formation of a Local Improvement District or similar financing mechanism for the primary purpose of constructing a public road or right-of-way providing access to the arterial or collector road; such access shall meet the minimum applicable City standard.

vi. The property owner records an agreement to participate in any project that would consolidate access points where such project would not result in new or more severe traffic operation or safety problems.

vii. The property owner records an agreement to abandon use of the existing private access way when an adequate alternative access becomes available, and that the interim access improvements will be removed at their cost.

E. A new Local Road that creates a four-leg intersection shall be permitted along an arterial roadway when located directly opposite either a local or arterial roadway; it shall also be permitted along a local (non-arterial) roadway when located opposite an arterial roadway.

F. A new Minor Road that creates a four-leg intersection shall be permitted only along an arterial roadway when located directly opposite a local (nonarterial) roadway.

G. A new Arterial that creates a four-leg intersection opposite a local (non-arterial) roadway requires the approval of the City Engineer.

H. On sloping approaches at an intersection, landings shall be provided with a grade not to exceed one foot difference in elevation for 30-feet approaching any arterial or 20-feet approaching a collector or local access street, measured from nearest right-of-way line (extended) of the intersecting street. The City Engineer may direct the use of a greater distance when required for public safety.

2.140 Sight Obstruction

It is the policy of the City of Shelton to have the applicant's Project Engineer evaluate safe intersection sight distance using the principles and methods recommended by WSDOT and AASHTO. This policy shall apply to the design of new streets and driveways, and to the placement of any object in the public right-of-way, including landscaping features. Poles, small tree trunks, and similar obstructions will be allowed within the sight distance area only if it can be shown that such obstructions do not prevent the continuous view of the vehicle approaching on the intersecting street.

The following minimum standards shall apply:

Sight clearance requirements consider the proportional relationship between speed and stopping distance. The sight distance area is a clear-view triangle formed on all intersections by extending two lines of specified length (A) and (B) from the center of the intersecting streets along the centerlines of both streets and connecting those endpoints to form the hypotenuse of the triangle. The area within the sight distance triangle shall be subject to restrictions to maintain a clear view of the intersection approaches.

A preliminary sight distance report shall be submitted for all public intersections and private driveways (except for driveways serving one single family home) with a land use application submittal. A final sight distance report is to be submitted with the first review of construction plans. All submittals shall be completed by a licensed engineer or land surveyor in the State of Washington.

A. Sight Distance Triangle for Stop or Yield-Controlled Intersections:

	Sight Distance (Feet)	
Speed Limit	Major Street (A)	Minor Street (B)
20 mph	200	*
25 mph	250	*
30 mph	300	*
35 mph	350	*
40 mph	400	*

B. Sight Distance Triangle for Uncontrolled Intersections:

	Sight Distance (Feet)	
Speed Limit	Major Street (A)	Minor Street (B)
20 mph	90	90
25 mph	110	110
30 mph	130	130
35 mph	155	155
40 mph	180	180

The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 3-feet and 10-feet above the existing surface of the street. Sight distance is measured from a point on the minor road 15 feet from the edge (extended) of the major road edge of traveled way, and from a height of 3.50 feet on the minor road to a height of 3.50 feet on the major road.

The traffic speed used in the calculation shall be the highest of the following: (1) the design speed of the intersecting street; (2) the posted speed of the intersecting street; or (3) the measured 85th percentile speed of the intersecting street. Where the intersecting street is controlled by a stop sign or yield sign, a design speed of zero may be assumed. Where traffic signal control exists at an intersection or where a traffic signal is likely to be installed in the future, adequate sight distance shall be provided for potential right turns on red.

In some locations, maintenance of the required sight distance may require a sight line easement to place restrictions on private property improvements and landscaping outside the public right-of-way. If so, the Project Engineer shall demonstrate that adequate documents are recorded that allow enforcement, entry, and maintenance by the City, to assure that the required sight distance can be maintained in the future.

In addition to the sight distance standards described above, all intersections shall conform with the Vision Clearance Standards described in Shelton Municipal Code Section 20.60.120.B, as follows:

Vision Clearance. In order to protect vision clearances, the plant selection and placement shall be designated such that there is at every street intersection a clear view between heights of three and six feet in a

triangle formed by the corner and points on the curb thirty feet from the intersection or entranceway.

All intersection/driveway vision clearance triangles and sight distance lines that extend outside of the public right-of-way shall be shown/labeled on the site plans for the project.

2.150 Private Streets

Private streets may be approved by the City Engineer under the following conditions:

A. Permanently established by a separate tract providing legal access to serve more than one but no more than 4 lots or businesses on separate parcels, or unlimited dwellings units or businesses situated on one parcel and sufficient to accommodate required improvements, to include provisions for future use by adjacent property owners when applicable.

B. Accessible at all times and with sufficient width and load bearing capacity for emergency and public service vehicle use and a width conforming to International Fire Code as approved by the Fire Marshal and paved to street standards per section 2.100.

C. Will not result in land-locking parcels nor obstruct public street circulation nor be inconsistent with the surrounding grid system.

D. Covenants have been approved, recorded, and verified with the City that provide for the ownership and maintenance of the private streets and associated parking areas by the owner(s) or homeowners association or other legal entity, and access and public and private utility easements to adjacent property owners, if applicable.

E. Owners may be required to sign an indemnification for any damages.

F. Owner shall provide off-street parking in accordance with City Development Code requirements. On street parking may be allowed with approval by the City Engineer and Fire Marshall.

G. Private Streets will not be approved by the City in an area or location that is identified by the City as a known or potential extension of existing public rights-of-way.

H. Acceptance as Public Streets. Acceptance of private streets as public streets will be considered only if the street(s) meet all applicable public street widths, structural section, storm drainage, water, wastewater, and utility standards.

I. Installation of a "Private Drive, Not Maintained by City" sign shall be 18"x18" sign with blue reflective background with white 2" lettering and white border.

J. Open for public ingress and egress and for emergency access at all times.

2.160 Street and Alley Improvement Standards

A. Except for infill development sites discussed in Section 2.165, all new development projects, redevelopment sites, short plats, and subdivision plats within the City and UGA (as approved by Mason County) shall complete interior street and site frontage improvements in conformance with these standards and improvements identified in Section 2.100.

B. Street and/or alley frontage improvements, in conformance with these standards is required along all street and alley frontage adjacent to development identified in #A above. Corner lots are responsible to improve all street frontages and intersections to a minimum of the centerline of adjacent roadways. Local street frontage improvements shall include an allowance for two-way traffic, parking along the project frontage, curbs, landscape strips, street trees, sidewalks, public utility easements, right-of-way dedication, street and sidewalk barricades, and offsite pavement tapers for lane transitions back to the existing roadway surfaces. Frontage improvements for collector and arterial roadways shall also include turn lanes, striping, medians, bike lanes, and additional right of way dedication.

C. All interim streets and interim offsite streets used to access development sites, except for infill development sites as discussed in Section 2.165, shall meet the standards described in the current adopted International Fire Code. The local street improvement shall include 20 feet of paving per detail T-22, 1-foot-wide gravel shoulders, storm drainage improvements, street lighting, and no parking signs. Additional improvements will be required for local streets for developments over 9 lots, collector and arterial roadways, such as turn lanes, striping, widened shoulders, curbs, and sidewalks, which will be determined on a case-by-case basis by the City Engineer. The City Engineer will take in consideration the traffic impact study results, pedestrian & automobile volumes, nearby uses, and vehicular and pedestrian safety. All streets shall meet the design standards of this Chapter and the current adopted International Fire Code.

D. All street improvement plans shall be prepared and signed by a licensed Civil Engineer registered in the State of Washington.

E. When constructing right-of-way improvement not associated with new development projects, such as the reconstruction of roadway driving surfaces, new or upgraded sidewalks/paths, or installation of new stormwater system improvements, it is not necessary that the road system be improved to include all elements that constitute full frontage improvements as required by these Standards. In this instance, constructed improvements shall meet the minimum standard for the element being constructed, the current adopted International Fire Code access standards, and ADA standards for accessibility.

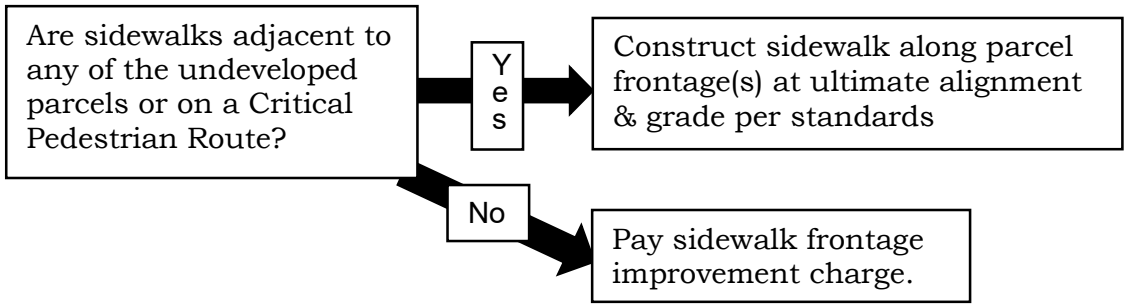
F. All public and private utility excavation projects in the City or UGA exceeding 300 feet in length and/or significant potholing or pavement damage to streets, with a pavement condition index of 70 or better, shall restore the existing roadway surface back to original pavement condition index or better, as determined by the City Engineer. Longitudinal utility trenching is not allowed within the automobile wheel paths, when possible. Local street chip seals and collector and arterial street overlays are required for the full width of the roadway and extend a minimum of 10 feet past the excavation location. A frontage improvement charge shall be collected for excavations less than 300 feet in length and may be collected for larger projects on a case-by-case basis, as determined by the City Engineer. Refer to SMC Section 12.32, Street Excavation Prohibitions, for the standards for trenching in streets during the 5-year no pavement cut period. Restoration of Portland cement concrete roadways shall consider replacement of full panels and limiting the number of surface joints, as determined by the City Engineer.

G. Frontage improvement charges may be collected by the City in lieu of formal street improvements per SMC Chapter 12.36, per the current City Master Fee Schedule, as approved by the City Engineer. Frontage improvement charges collected by the city will be used for sidewalk improvements on Critical Pedestrian Routes (see Appendix D), paving of unpaved streets and alleys, or other improvement projects, as determined by the City Engineer.

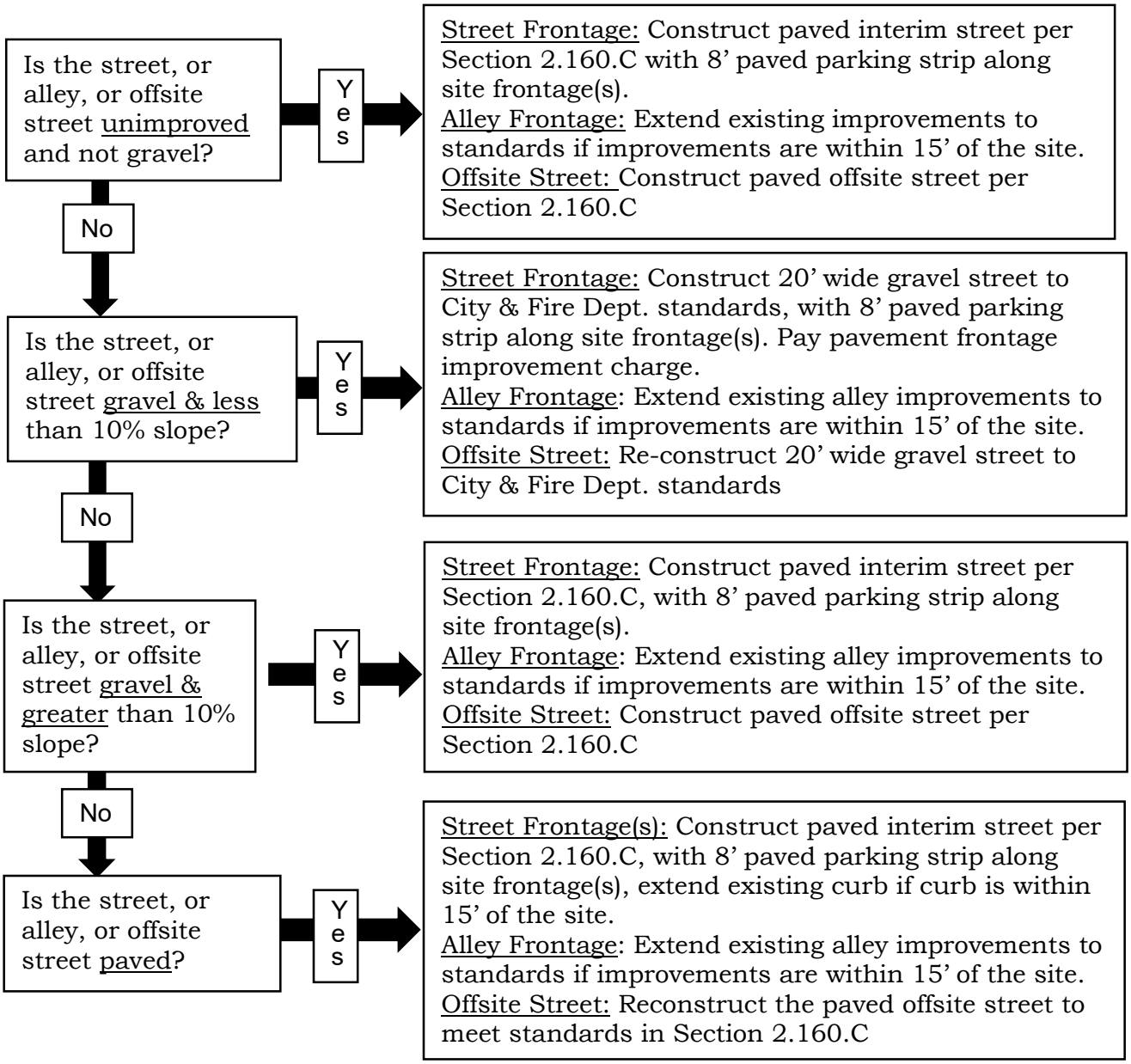
2.165 Infill Development Standards

A. The intent of these standards is to encourage the development of undeveloped parcels in the Neighborhood Residential Zoning District. Refer to the definitions in Chapter 1.

B. Sidewalk improvement standards determination diagram.



C. Street frontage, alley frontage, and offsite street extension improvement standards determination diagram.



D. Frontage improvement charges may be collected in lieu of street improvements per Section 2.160.G.

2.170 Transitions

A. Street width transitions from a narrower width to a wider width shall be designed with a 3 to 1 taper. Delineators, as approved by the City, shall be installed to define the configuration.

B. For street width transitions from a wider width to a narrower width, the length of transition taper shall be determined as follows:

L = S x W (for S = 45 MPH or more)
L = $\frac{W \times (S)^{**2}}{60}$ (for S = less than 45)
Where L = minimum length of taper (feet)
S = design speed (MPH)
W = EP to EP offset width

C. Delineators, as approved by the City Engineer, may be installed to define the configuration. Maximum spacing of delineators shall be the numerical value of the design speed, in feet (i.e., 35- foot spacing for 35 MPH).

D. In situations where a tapered transition cannot be provided, a barricade shall be installed at the end of the wider section of the street and a taper shall be appointed and delineated as approved by the City Traffic Engineer. The barricade shall conform to the Standard Drawing. If the wider section does not provide an additional travel lane, only a barricade is required without the transition.

2.180 Cul-de-sac

In general, the City discourages the use of cul-de-sacs per Section 2.040 of these Standards. Streets designed to have one end permanently closed shall be no longer than 400-feet.

The radius of the cul-de-sac bulb shall meet the current adopted International Fire Code Standards, 48-foot bulb radius, minimum of a 26-foot-wide access road, and 28-foot radius curb returns.

2.190 Temporary Dead Ends

Where a street is temporarily dead ended, turn-around provisions must be provided where the road extends more than 150 feet. The turnaround may be a hammerhead with a minimum distance on both sides at the

centerline of the intersection of 60 feet to facilitate emergency vehicle turn-around in conformance with the current adopted International Fire Code. A public easement or right of way shall be provided for the turnaround and signed for no-parking, per the current adopted International Fire Code.

2.200 Parking Lots

A. All proposed parking lot construction requires a Site Plan Review, whether independent or in conjunction with a project that shall be determined through the Site Plan Review process.

B. Stormwater quality and retention shall be provided and shall follow the criteria as set forth in Chapter 3 of these *Standards*, as required by the Site Plan Review process.

C. Parking lot surfacing materials shall satisfy the requirement for a permanent all-weather surface. Asphalt concrete pavement, cement concrete pavement and permeable pavers satisfy this requirement and are approved materials. All other proposed parking lot surface materials require specific approval by the City through a design modification request process.

2.210 Medians

Medians shall be designed so as not to limit the turning radius or the sight distance at intersections. The style and design of the raised median shall be site specific and may be required to include drought tolerant landscaping with plant establishment irrigation, hardscaping, or a combination of these items. The raised median shall be designed to be safe for the design speed. Raised median designs shall be subject to the Public Works Director's staff approval.

The raised median shall be set back at least two (2) feet from the adjacent travel lane stripe.

Road lighting shall be sufficient to illuminate the raised median.

Any objects placed or remaining within the raised median shall not physically or visually interfere with vehicle or pedestrian traffic in the traveled way.

2.220 Bikeways

Normally bikeways are shared with other transportation modes, although they may be provided exclusively for bicycle use. Bikeway or Urban Trail construction is required in conjunction with any new development or redevelopment when the need for such a bikeway is indicated in an

adopted City of Shelton Bikeway Plan or by the City Planning or Parks Departments. The design of bicycle paths shall depend upon their type and usage. Bikeway surfacing shall be hard surfaced with concrete or asphalt paving as outlined in Section 2.100.

2.230 Street Illumination

A. All new development and redevelopment adjacent to existing and future right-of-way shall provide street lights in accordance with Section 1040 of the WSDOT Design Manual, Illuminating Engineer Society (IES) and American National Standards Institute (ANSI) approved design recommendations for roadway lighting, National Electrical Safety Code (NESC) requirements as specified by WAC 296-45-045; National Electric Code (NEC) requirements for roadway lighting, the Mason County Public Utility District #3 (PUD #3) Standards Book, and these Standards.

B. Option 'A' street lighting systems are owned and maintained by the City.

C. Option 'B' street lighting systems are owned and maintained by PUD #3.

D. All street lighting plans shall be submitted by the applicant and approved by the City and PUD #3. All public streetlight designs shall be prepared by a professional engineer licensed by the State of Washington and capable of performing such work.

E. Illumination systems shall be Dark-Sky compliant, unless unique situations exist, as may be approved through a design modification request process.

F. Refer to Appendix C for the City streetlight design standards.

2.240 Traffic Signals and Roundabouts

A. Traffic Signal Design Standards

Signal systems shall be designed in accordance with the specifications as set forth in the WSDOT *Design Manual* and the WSDOT/APWA *Standard Specifications* unless otherwise authorized by the City. All public traffic signal systems shall be prepared by an engineering firm capable of performing such work. The Engineer shall be licensed by the State of Washington. Traffic signals shall be installed per the requirements set forth herein. This work shall consist of furnishing and installing a complete and functional traffic control system with controllers, electrical service, LED signals,

detection loops, LED and Audible pedestrian features, emergency preemption devices, and appurtenances that meet traffic warrants.

B. Roundabout Design Standards

Roundabouts shall be designed in accordance with the specifications as set forth in the WSDOT *Design Manual* and the WSDOT/APWA *Standard Specifications* unless otherwise authorized by the City. All roundabouts shall be prepared by an engineering firm capable of performing such work. The Engineer shall be licensed by the State of Washington. The installation work shall consist of furnishing and installing a complete and functional roundabout with curbing, striping, signage, center median, street lighting, landscaping, sidewalks, and ADA ramps and other pedestrian features to meet identified traffic warrants.

2.250 Flashing Beacons

The City may require the installation of Warning Beacons or Rapid Rectangular Flashing Beacons (RRFB) for advanced warning, or to increase pedestrian safety at crosswalk locations. Installation of warning beacons and rapid flashing beacons shall meet the warrants listed in Chapter 4 of MUTCD, as indicated by pedestrian or traffic studies, or as directed by City Engineer

Refer to the following WSDOT Guidance on RRFB installation:

A. https://wsdot.wa.gov/publications/fulltext/Standards/psl/IS-22/Uncontrolled_Ped_Crossing_Guidance.pdf
B. https://wsdot.wa.gov/publications/fulltext/Standards/psl/IS-22/WSDOT-InterimGuidanceRFB_R1A.pdf
C. https://www.wsdot.wa.gov/publications/fulltext/Standards/psl/IS-22/IS-23.pdf
D. https://wsdot.wa.gov/publications/fulltext/Standards/psl/IS-22/IS-22.pdf

2.260 Signing and Pavement Markings

The developer is responsible for providing and installing all necessary traffic control signs (including poles and hardware), such as speed limit, street name, stop, stop ahead, no parking, crosswalk, and private drive signage. Traffic control signing and pavement markings shall comply with the provisions as established by the *Manual on Uniform Traffic Control Devices* (MUTCD).

Signposts and foundations shall utilize the latest revision of WSDOT Standard plan G-24.50 - ST-4. Other sign requirements may be required

in commercial areas such as logos or other unique features as determined by the City Engineer.

2.270 Survey Monuments

A. All existing survey control monuments and property corners within 10-feet of any proposed onsite or offsite construction activity shall be shown on the project construction plans. Any survey control monument and/or property corner that will be disturbed or destroyed during construction shall be referenced prior to construction and replaced after construction by a Professional Land Surveyor licensed by the State of Washington. All applicable RCW's and WAC's will be complied with, including but not limited to, WAC 332-120, WAC 332-130, and RCW 58.09. The monuments shall be replaced with the proper type as outlined below at the expense of the responsible builder or developer.

B. A pre-cast monument with cast iron monument case and cover installed per City of Shelton standards is required for all street centerline monument locations, including intersections, and PC's, PT's, PCC's, and PRC's of horizontal curves. See Detail T-15.

2.275 Existing and Proposed Roadside Features

A. Existing roadside features such as existing street signposts, mailbox structures, street trees, and curbing can be modified, upgraded, or reused, as approved on a case by case basis by the City Engineer. The upgraded feature shall meet the current adopted Standards

B. The design and placement of all new, upgraded, reused, and/or any existing roadside features adjacent to the onsite or offsite roadway improvements to be modified, reconstructed, or installed by the development, shall adhere to Section 310, Roadside Safety, of the WSDOT Design Manual.

2.280 Retaining Walls

A. Retaining walls proposed for development of private property shall be placed only on private property and shall not be placed in the public right-of-way. Design and construction shall conform to the Uniform Building Code, and the contractor shall obtain a building permit if required from the City.

B. If the City approves a retaining wall or walls to support the public right of way, such retaining wall(s) may occur in the right of way and shall be designed by an engineer licensed by the State of Washington and capable of performing such work. Retaining walls in the public right of way shall be constructed of concrete, either cast-in-place or

engineered large concrete "Ecology" block precast walls with a decorative surface finish and wall cap blocks. Walls shall be designed to accommodate ultimate traffic, foundation, and soil surcharge loads. Plans for such retaining walls shall be submitted to the City for review and approval as to location, structural design, loading, benching, drainage, plantings, drop off protection, maintenance access, and other relevant criteria as determined by the City.

C. Structural walls over 4-feet tall, or walls subject to surcharge loadings, shall be "Ecology" block or cast-in-place concrete walls. Walls under 4-feet in height that are not subject to surcharge loadings may use other materials such as rockery or masonry walls; refer to standard Detail T-07.

2.290 Bus Stops and Benches

A. Public Transit

Different population densities dictate the number and placement of transit bus stops:

1. The spacing, locations and design or specific bus stops shall be coordinated with the Mason County Transportation Authority. See Detail T-17.

2. Signage shall be placed in accordance with the MUTCD.

B. Benches

Bench material and placement locations shall be approved by the City. Bench material, style and color to match existing benches within the City downtown corridor.

2.300 Street Trees

A. Street trees shall be required for all new development within the City adjacent to existing or proposed streets and along all designated tree corridors as defined in SMC 20.60.120. Designated tree corridors include:

- Railroad Avenue between Front Street and 7th Street,
- Cota Street between 1st Street and 6th street,
- 5th Street between Cota Street and Alder Street,
- Alder Street between 1st Street and 7th Street,
- Olympic Highway North between 13th Street and Wallace Kneeland Boulevard,

- Olympic Highway South between Fairmount Street and the City Limits.

Trees planted adjacent to streets on private property shall also comply with these specifications.

B. Unless otherwise approved by the City, street trees shall be installed in the numbers equal to one per thirty feet of roadway frontage constructed. Street trees shall not be planted at the edge of any sight distance area(s) at intersections and driveways. Trees shall also be placed to avoid locations of utility improvements including but not limited to:

- Fire Hydrant and associated clear zone
- Watermain and water meter improvements
- Mailboxes
- Sewer manholes or cleanouts
- Streetlights
- Street signs

C. The plans for the installation of street trees, or any other proposed landscaping in the public right-of-way shall be submitted for review and approval by the City Engineering Division. Tree root barriers are required along streets, sidewalks, bikeways or pedestrian paths, as shown on Standard Details # M-03 & #M-04.

D. Street trees shall be selected from the City adopted street list in Appendix B and be a species that will minimize the likelihood of future root upheaval or other damage to the sidewalk. In the selection of trees, consideration should be given to overall aesthetic impacts at maturity. The design of tree spacing should consider the tree canopy at maturity, which should be intended to connect and form a continuous tree canopy over the street, while not encroaching into pedestrian headroom or obstruct tall curbside vehicles such as a garbage truck, delivery trucks, or buses. The type selected should be of a variety to reach a minimum of 20 and a maximum of 50 feet in height at maturity, unless such height at maturity would generate conflicts with overhead electrical power lines. A 5-foot minimum clear zone shall be maintained between buildings and tree wells to allow adequate clearance for pedestrian traffic. Design of street tree locations, tree wells and grates shall comply with all relevant Americans with Disabilities Act (ADA) requirements.

E. Trees shall be a minimum of 1-1/2 inches in trunk diameter at the time of installation. Street Trees in the Downtown District shall be a minimum of 2-1/2 inches in diameter at the time of installation. All new street trees shall be guyed and staked to industry standards.

F. In the downtown district the street trees shall be installed in a 3' x 3' tree well or a cast iron grate with frame shall be installed at the top of the tree well or fit to match the surface of the adjacent sidewalk, as specified in the WSDOT/APWA *Standard Specifications for Road, Bridge and Municipal Construction.* The aesthetic design of the tree grate(s) shall be approved by the City.

G. Prior to receiving final approval of street construction and/or receiving a final certificate of occupancy, street trees shall be installed per design plans and these Standards. Prior to installing tree(s) it is advised that the tree locations are staked and approved by the City Public Works Department to minimize conflicts with other utilities, and driveways, etc.

H. Watering bags shall be furnished by the contractor with written instructions to property owners informing their responsibility to maintain the new street tree(s). Copies of the written instructions delivered to the property owners will be required from the contractor, builder, and/or developer, by the City upon request. The abutting property owners shall maintain and replace any damaged, diseased, dead trees, and vegetation, per SMC Sections 12.08.040 and 12.08.050.

2.310 Street Construction General Notes

In addition to the General Notes in Chapter One, the Engineer shall include the following notes on any plans dealing with the construction or alterations, extensions or connections to the transportation systems.

1. All materials and workmanship shall be in accordance with the requirements of the most current edition of the State of Washington Department of Transportation Standard Specifications for Road and Bridge Construction and City of Shelton Design Standards

2. All work in the City requires a City of Shelton Business License.

3. Prior to working within the City right-of-way or on City property, the contractor must obtain a City of Shelton Right-of-Way permit. All contractors shall be licensed and bonded in the State of Washington. Proponent shall comply with all other permits and other requirements of the governing authority or agency. It is the contractor's responsibility to verify the location of right-of-way.

4. All curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment shall be staked by a licensed engineering or surveying firm capable of performing such work.

5. Where new asphalt joins existing asphalt, the existing asphalt shall be cut to a neat vertical edge and tacked with asphalt emulsion type CSS-1 per Section 9-02.1(6) of the WSDOT/APWA *Standard Specifications* . Tack coat shall be applied per Section 5-04.3(5)A. The new asphalt shall be feathered back over existing to provide for a seal at the saw cut location and the joint sealed In accordance with Section 5-04.3(5)C of the WSDOT/APWA *Standard Specifications.*

6. Compaction of subgrade, sub-base, base, surfacing, pavement, or layers of similar material shall be in accordance with WSDOT *Standard Specifications* Section 2-06 and Section 4.04.3(5). Fill shall be provided in 6-inch maximum lifts unless otherwise approved by the City, and shall be compacted to 95 percent of its maximum relative density.

7. Form and subgrade inspection by the City is required before placing asphalt or concrete. 48-hour notice is required for form inspection.

8. Testing and sampling frequencies will be as described in the City of Shelton *Design and Construction Standards.*

9. Contractor is required to protect or replace existing survey monuments if disturbed.

10. The Contractor/Developer provides and installs street name and regulatory signs at their expense.

11. During construction, existing mailboxes shall be accessible for the delivery of mail, or, if necessary, moved to a temporary location. Temporary relocation shall be coordinated with the U.S. Postal Service by the contractor. The mailboxes shall be reinstalled at the original location at the completion of construction or, if construction has made it impossible, to a location approved by the U.S. Postal Service and the City. New mailboxes shall be located as approved in writing by the US Postal Service and the City of Shelton, as coordinated by the Applicant or Engineer.

12. The Contractor shall provide a traffic control plan covering all phases of construction to the City of Shelton for approval prior to the start of construction.

13. Notification to affected property owners and residents required at least 1-week in advance of first planned construction working day through the means of door hangers and reader boards.

14. Inspection by the City is required during all phases of construction. It is the contractor's responsibility to notify the City of his/her schedule. Inspection by City personnel shall be required during City

work hours. City work hours are generally 7:00 AM to 5:00 PM Monday through Thursdays, except holidays. A minimum 48-hour (72-hour preferred) notice is required for inspection of any work. No trenching on public right of way after 4:00 PM unless approved by the City. Other work such as backfilling, cleanup, etc., or as approved by the City is acceptable if 24 hours' prior notice is provided to the City.

Trench and Pavement Cut, Backfill and Restoration

A. Refer to Excavation SMC 12.32, Street Excavation Prohibitions, for restoration standards for proposed street excavations within 5-years of a roadway being resurfaced.

B. All work done in roadways is subject to the requirements of the City Right of Way permits, which shall include performance, maintenance bonding and certificate of insurance, as described in Chapter 1 of these Standards.

C. Temporary restoration of trenches shall be accomplished by using 2" HMA Asphalt Concrete Pavement when available, 2" medium-curing (MC-250) Liquid Asphalt (cold mix), or steel plates.

D. All temporary patches shall be maintained in good condition by the contractor until such time as the permanent pavement patch is in place. The permanent patch shall be accomplished within 7 calendar days unless otherwise approved by the City. Any temporary patch that requires more than 7 calendar days shall be hot mix asphalt concrete pavement.

E. If the contractor does not maintain a temporary pavement patch for whatever reason, sitework shall cease. The City will repair patch and bill the contractor for actual costs of time and materials plus a 20% markup to cover overhead expenses.

F. Trenches shall be excavated to the line and depth designated by the City. Except for unusual circumstances where approved by the City, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space. Federal, state and local regulations for safety must be adhered to. Surface water shall be diverted so as not to enter the trench. Where water is encountered in the trench, it shall be removed during pipe laying operations, and shall be so maintained until the ends of the pipe are sealed and provisions are made to prevent floating of the pipe. Except in the case of unusual circumstances, trench water or other deleterious materials shall not be allowed to enter the pipe at any time. The contractor shall maintain sufficient pumping equipment on the job to ensure that these provisions are carried out.

    1. All initial trench and pavement cuts shall be made by a spade bladed jackhammer with saw cuts. All final cuts shall be made

by saw cuts placed at a minimum of 1-foot outside the trench width.

2. Bank Run Gravel for Trench Backfill meeting WSDOT Standard Specification 9-03.19 shall be used for the backfilling of trenches in the pavement area of streets, unless otherwise approved by the City. When public safety concerns exist, the City may require more stringent backfilling standards. The trench shall be compacted to 95% per WSDOT Standard Specification 2-03.3(14)C method C. Daily compaction reports from an independent, certified testing agency licensed in the state of Washington.

    a. All trenching in a gravel shoulder section outside of the pavement or in a Gravel Surfaced Roadway shall be backfilled with Bank Run Gravel for Trench Backfill meeting WSDOT Standard Specification 9-03.19. The trench shall be compacted to 95% per WSDOT Standard Specification 2-03.3(14)C method C. Daily compaction reports from an independent, certified testing agency licensed in the state of Washington.

        If the existing native material is determined by the City to be suitable for backfill in trenches in either a paved or gravel roadway, the contractor may use the native material with City approval prior to placement up to the bottom of the surfacing requirements. The trench shall be compacted to 95% per WSDOT Standard Specification 2-03.3(14)C method C. Daily compaction reports from an independent, certified testing agency licensed in the state of Washington.

    b. Trenching located outside of the roadway prism shall be compacted per WSDOT Standard Specification 2-03.3(14)C method B, which requires the top 2’ of embankment to be 95% and all embankment below that to be compacted to 90% maximum density.

G. All asphalt restoration shall be as specified in these Standards, or to the depth of the existing pavement, whichever is greater. Existing asphalt edges shall be sawcut to a smooth straight edge prior to final patching, unless otherwise approved by the City. Joints shall be sealed in accordance with WSDOT Standard Specification 5-03.3(3)D.

H. All concrete restoration shall be sawcut to a smooth, straight edge prior to final patching, unless otherwise

approved by the City. 3000 psi concrete shall be used, and shall be poured to the same depth and alignment as the existing pavement. Dowling may be required by the City.

I. All street surfaces, walks or driveways within the street trenching areas affected by the pavement cut shall be feathered and shimmed to an extent that provides a smooth riding connection and expeditious drainage flow for the newly paved surface. Shimming and feathering shall be accomplished by raking out the oversized aggregates from the mix as appropriate. Surface smoothness shall be in accordance with Section 5-04.3(13) of the WSDOT *Standard Specifications*. All joints shall be sealed using paving asphalt CSS-1.

J. When trenching within the road right of way(s), the right-of-way shall be restored to its original or better condition. All disturbed areas shall be seeded and mulched or similarly stabilized according to Best Management Practices outlined in the Department of Ecology *Stormwater Management Manual for Western Washington*. For sites where grass has been planted, the contractor's performance or maintenance bond will not be released until the grass has been thoroughly established, unless otherwise approved by the City.

K. Controlled Density Fill may be required to achieve proper compaction and when approved by the City Engineer shall meet the requirements of WSDOT Standard Specification 6-02.3(2)D.

2.330 Traffic Signal and Illumination Construction

A. Traffic Signal Testing

All signals shall be subject to any necessary electrical inspections by the State Department of Labor and Industries, Mason County PUD #3, and the City, as well as requirements as set forth in the WSDOT Design Manual and the WSDOT/APWA *Standard Specifications*. A signal system shall not be approved or accepted by the City until the signal has performed correctly to the City's satisfaction for a 30 day "check-out" period as outlined below. All parts and workmanship shall be warranted for two years from the date of acceptance.

Controller and cabinet testing by WSDOT District 3 laboratory shall be required by the City. All specifications and material samples shall be submitted to the City for review and approval prior to installation.

B. Dry Run Traffic Signal

The Contractor shall dry run the signal with the City present to confirm proper operation prior to beginning the final check-out procedures.

C. Traffic Signal Check-Out Procedures

The contractor shall call for an intersection check-out after completing the controller cabinet installation, along with all other signal equipment complete with wiring connections. New signals shall operate without any type of failure for a period of 30 days. The contractor shall have a person available to respond to system failures within 24 hours during the 30-day "check-out" period. Failure of any control equipment or hardware within the "check-out" period shall restart the 30-day "check-out"

D. The following General Notes shall be included on any plans dealing with streetlight design and construction, in addition to all applicable requirements of Mason County Public Utility District #3 and the City.

1. All workmanship, materials and testing shall be in accordance with the standards of Mason County PUD #3 and these *Standards.*

2. All safety standards and requirements shall be complied with as set forth by the State of Washington, Department of Labor & Industries.

3. A preconstruction meeting shall be held with the City of Shelton and Mason County PUD #3 prior to the start of construction.

4. All approvals and permits required by the City of Shelton and Mason County PUD #3 shall be obtained by the contractor prior to the start of construction.

The property owner is responsible for the payment of electrical charges prior to City acceptance of construction.

2.340 Construction Staking

All surveying and staking shall be performed by a Professional Land Surveyor, licensed within the State of Washington. A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to

construction. The minimum staking of streets shall be as follows or as otherwise directed by the City:

A. Survey stakes shall be in accordance with WSDOT Standard Plan A-10.10.

B. Stake centerline every 50-feet in tangent sections and 25-feet in horizontal and vertical curved sections plus grade breaks, PCs PTs, high point and low points, with cut and/or fill to subgrade.

C. Stake top of ballast with red tops and top of crushed surfacing with blue tops, at centerline and at edge of pavement at the above-described intervals, and at grade breaks.

D. Stake top back of curb at the above-described intervals with cut or fill to finished grade and include all critical features such as ADA improvements or driveways.

E. Staking shall be performed by a professional land surveyor, licensed within the State of Washington to WSDOT standards.

F. A pre-construction meeting shall be held with the City prior to commencing staking.

G. All construction staking shall be inspected by the City prior to construction.

Any deviations from these minimum staking requirements shall be approved by the City.

2.350 Testing

Testing shall be required at the developer's or contractor's expense and shall be ordered by the developer or contractor. Testing shall be done on all materials and construction as specified in the WSDOT/APWA *Standard Specifications for Road, Bridge and Municipal Construction* and the WSDOT *Construction Manual* with the frequency as specified herein, unless otherwise approved by the City.

Appendix A: Traffic Impact Analysis

A Traffic Impact Analysis (TIA) is a specialized study of the impacts a certain type and size of development will have on the surrounding transportation system. The traffic impact analysis is an integral part of the environmental review process and is specifically concerned with the generation, distribution, and assignment of traffic to and from the proposed development.

The purpose of a TIA is to determine what impact development traffic will have on the existing and proposed street network and what impact the existing and projected traffic on the street system will have on the "new development". (Refer to definition of "development" in Chapter One).

This section has been prepared to establish the requirements for a Traffic Impact Analysis. The City Engineer will approve the scope of work, review the Traffic Impact Analysis and make recommendations to the SPRC and/or the ERC.

All reports shall be submitted in a professional format that can be interpreted by all departments. Exhibits shall include a border with a title block identifying the project and a description with legible text clearly identifying all items. Exhibits shall be constructed with approved graphical software.

To adequately assess traffic impacts on the transportation system, the City Engineer or designee may require a Traffic Generation Worksheet be prepared to determine if a Traffic Impact Analysis (TIA) or traffic mitigation is required.

A full or partial TIA may be required if any of the following conditions are met:

1. The development will generate more than 20 PM peak hour trips.

2. The development will generate more than 100 peak hour trips at a time other than PM peak.

3. The Public Works Department is unable to determine the traffic generation characteristics of the development.

4. The developer feels further traffic analysis may clarify questions about the identified traffic mitigation assessment for the project.

5. The development access to the roadway network may create an impact as determined by the Public Works Department.

6. The development impacts an area identified by the Public Works Department that does not meet the concurrency requirements of the Growth Management Act.

7. The development may potentially affect the implementation of the street system outlined in the Transportation Element of the Comprehensive Plan or any other documented transportation project.

8. If modifications are required to the original TIA that is more than two years old, or where the increase in traffic volume as measured by ADT, peak hour, or peak hour of critical movement is more than 10 percent.

9. The development may have an impact to the roadway or transportation system as determined by the Public Works Department.

10. The City has required that an Environmental Assessment or Environmental Impact Statement be prepared.

If the City Engineer requires a TIA, the general guidelines for content and structure shall follow the following format.

B. Qualifications for preparing TIA Documents

The Traffic Scoping and/or the TIA shall be prepared and stamped by an engineer licensed to practice in the State of Washington with special training and experience in traffic engineering and who preferably is a member of the Institute of Transportation Engineers (ITE). The developer shall provide the Public Works Department the credentials of the individual(s) selected to perform the report(s).

B. Scoping Report

If a Traffic Impact Analysis is required, the engineer shall submit 5 copies of a Scoping Report to the City. The Scoping Report will be used by the City to develop the scope of work for the TIA. The Scoping Report shall include all items in the following checklist:

- ☐ Traffic Scoping Information Worksheet (see following pages)
- ☐ Project Size in Square Feet and Acres
- ☐ General Location
- ☐ Proposed Use
- ☐ Phasing Plan
- ☐ Number of Lots or Units
- ☐ Trip Generation
- ☐ Daily Trips
- ☐ PM Peak Hour
- ☐ Year of Occupancy (Horizon year of project)
- ☐ Land Use Code

- ☐ Ambient Growth within the existing City limits
- ☐ Other potential offsite growth within the UGA
- ☐ Approved Development Projects in the Vicinity
- ☐ Intersections Impacted by 20 or more PM Peak Hour Trips
- ☐ A reduced copy of the "Site Plan" showing the type of development, street system, right-of-way limits, proposed access points, and other features of significance in the development. The "Site Plan" shall also include pertinent "off-site" information such as dimensioning to all existing intersections and driveways with the existing channelization, land use descriptions, street right-of-way limits with respect to the existing roadway and other features of significance. Exhibit "B" illustrates an example site plan for reference purposes.
- ☐ A graphical distribution map showing site generated PM peak hour traffic. Generally, traffic shall be distributed to one PM peak trip within the Transportation Plan Area. This map shall clearly identify all traffic movements and the percentage of site traffic. Include a copy of an approved link-node map or identify the Traffic Analysis Zone (TAZ) of the generic distribution used. Exhibits "E" and "F" illustrate examples of distribution maps. Exhibit "G" illustrates an example of the link-node map.
- ☐ Name, address and phone number of project developer and traffic consultant.
- ☐ If streets or intersections affected are in the neighboring jurisdiction of Mason County, or the Washington State Department of Transportation, identify issues that may impact those jurisdictions.

Traffic Scoping Information Worksheet
(Include Site Plan)
Project Information

Project Title: _____
Project Description: _____
Parcel Number(s): _____
Trip Generation: _____

Quantity	Units	Land Use Code and Description	Daily Generation Rate	AM Generation Rate	PM Generation Rate	Proposed Pass-by Rate

Total PM Peak Hour Trips: _____

New PM Peak Hour Trips: _____

Total AM Peak Hour Trips: _____

Total Daily Trips: _____

Year of Occupancy (Horizon Year of Project): _____

Phasing Plan: _____

_____

Identify all intersections that are affected by more than 20 new PM Peak Hour Trips: Use additional sheets if necessary.

1. _____	6. _____
2. _____	7. _____
3. _____	8. _____
4. _____	9. _____
5. _____	10. _____

Include: Name, address, phone number and fax number of project developer and traffic consultant. Include site plan showing all existing roadways and driveways.

C.Traffic Impact Analysis

The level of detail and scope of work of a TIA may vary with the size, complexity, and location of the development. A TIA shall be a thorough review of the immediate and long-range effects of the development on the transportation system

1. Prospectus

   a. Provide a "Vicinity Map" of the project area showing the transportation system to be impacted by the development.

   b. Provide a reduced copy of the Site Plan showing the type of development, street system, right-of-way limits, proposed access points, and other features of significance in the development. The Site Plan shall also include pertinent off-site information such as dimensioning to all existing intersections and driveways with the existing channelization, land use descriptions, and street right-of-way limits with respect to the existing roadway and other features of significance.

   c. Discuss specific development characteristics such as type of development proposed (single-family, multi-family, retail, industrial), internal street network, proposed access locations, parking requirements, zoning, and other pertinent factors attributable to the development.

   d. Discuss project completion, phasing plan and occupancy schedule for the development. Identify horizon years for traffic analysis purposes.

   2. Existing Conditions

      a. Discuss street characteristics including functional classification, number of traveled lanes, lane width, shoulder treatment, posted speed limit, bicycle path corridors, transit routes, transit accessibility and traffic control at study intersections. An Exhibit may be used to illustrate existing transportation facilities.

      b. Identify approved nearby land development (planned or under construction) and associated traffic.

      c. Identify safety and access issues including discussions on crash potential, sight distance restrictions, traffic control and pedestrian conflicts.

d. Obtain all available traffic data from the City of Shelton and surrounding jurisdictions if applicable. If data is unavailable, the individual or firm preparing the TIA shall collect the necessary data to support the discussions and analysis in the TIA.

e. Conduct manual peak hour turning movement counts at study intersections if traffic volume data is more than 2 years old unless otherwise directed by the Public Works Department. A copy of the summarized data shall be attached to the TIA when submitted.

f. An Exhibit shall be prepared showing existing average daily traffic (ADT) and peak hour traffic volumes on the adjacent streets and intersections in the study area. This Exhibit shall represent the "base-line" traffic volumes for analysis purposes. Complete turning movement volumes shall be illustrated.

3. Development Traffic

This element of the TIA shall be conducted to identify the limits of the study area. The study area shall include all site access drives, pertinent intersections and streets impacted by development traffic. The limits of the study area shall be representative of the specific conditions outlined in the Scoping process. The threshold requirement of development traffic is ten vehicles in the peak hour on the adjacent streets and intersections. Each intersection and street impacted as described shall be included in the Plan Area for mitigation or analysis purposes.

4. Trip Generation

The methodology and procedures used in preparing the trip generation of the development are as follows:

Site-generated traffic from the development shall be estimated using the latest edition of the ITE *Trip Generation Manual*. **Average trip rates shall be used for all land-use categories where applicable.** Trip rate equations will only be allowed for those land-uses without average rates. Table formats for trip generation shall not be interpolated. Generally, the consultant shall use individual rates for mixed-use developments.

Variations from the trip rates will be considered in the scoping process. The consultant shall submit a letter explaining the reason for the variation and all supporting documentation. Trip generation

studies shall follow standard ITE guidelines and shall be statistically valid for approval by the City Engineer.

Site traffic shall be estimated for daily, AM peak hour and PM peak hour periods as directed by the City. A "pass-by" traffic volume discount for applicable commercial development shall be calculated based on the *Trip Generation Handbook*, most current edition, published by the Institute of Transportation Engineers (ITE). If a comparable use is not identified in the ITE *Trip Generation Handbook*, an independent study of a minimum three comparable uses shall be used. The comparable sites must be approved by the City. Land uses not identified in the ITE *Trip Generation Handbook* will typically have a "pass-by" rate between 0% and 25% maximum and shall be consistent with similar land uses approved by the City. If a minimum three comparable uses cannot be identified, the developer may use rates previously approved by the City for similar uses if available. "Pass-by" discounts will not be permitted for residential or office developments.

For multi-use and/or phased projects, a trip generation table shall be prepared showing proposed land-use, trip rates, and vehicle trips for daily and peak hour periods and appropriate traffic volume discounts if applicable.

5. Trip Distribution

Projects that generate more than 250 PM peak hour trips may be required to generate a project specific distribution.

The City Engineer shall approve the trip distribution for a development during the formal scoping process.

A graphical distribution map shall be submitted showing site generated PM peak hour traffic. Generally, traffic shall be distributed to one PM peak trip within the Transportation Plan Area if a generic distribution is not used (20 trips if a generic distribution is used). This map shall clearly identify all traffic movements and the percentage of site traffic. Include a copy of the link-node map or identify the Traffic Analysis Zone (TAZ) if the generic distribution is used.

6. Future Traffic Conditions

Future traffic volumes shall be estimated by including an annual growth rate to the existing (base-line) traffic volumes and shall include all traffic generated by anticipated nearby land development (projects with an approved traffic scope) when

forecasting future traffic volumes. The future traffic volumes shall be representative of the year the project development is scheduled to be completed (horizon year). The City Engineer will determine an appropriate growth rate.

The site-generated traffic shall be assigned to the street network in the study area based on the approved trip distribution. The site traffic shall be combined with the forecasted traffic volumes to show the total traffic conditions estimated at development completion. An exhibit will be required showing daily and peak period turning movement volumes for each traffic study intersection.

7. Traffic Operations

The Level of Service (LOS) and capacity analysis shall be conducted for each pertinent intersection in the study area as determined by the Public Works Department. The methodology and procedures for conducting the capacity analysis shall follow the guidelines specified in the current version of the *Highway Capacity Manual - Special Report 209*. The individual or firm preparing the TIA shall calculate the intersection LOS for each of the following conditions:

a. Existing PM peak hour traffic volumes (Exhibit required).

b. Future PM peak hour traffic volumes not including site traffic (Exhibit required).

c. Future PM peak hour traffic volumes including site traffic (Exhibit required).

d. Level of Service results for each traffic volume scenario (Table required).

The Level of Service table shall include LOS results for the key peak periods if applicable. The table shall show LOS conditions with corresponding vehicle delays for signalized intersections and un-signalized intersections. The LOS conditions and average vehicle delay shall be provided for each approach and the intersection as a whole.

If the development will be completed in phases, the TIA shall conduct a LOS analysis for each separate development phase. The incremental increases in site traffic from each phase shall be included in the LOS analysis for each succeeding year of development completion. An Exhibit will be required for each horizon year of phased development.

The capacity analysis shall be conducted using computer software compatible with the Public Works Department's software package. The individual or firm preparing the TIA shall use Synchro Studio or an approved equivalent for capacity analysis of signalized intersections. SIDRA Solutions shall be used for analysis of modern roundabouts and unsignalized intersections. All software utilized shall be capable of modeling in accordance with the most current version of the Highway Capacity Manual at the time of the completed traffic analysis. Other computer software packages used for capacity analysis applications will not be accepted unless approved beforehand by the City.

If the development impacts a traffic signal coordination system, the Public Works Department may require the TIA to include operational analysis of the system. Timing plans and proposed modifications to the coordination system may be required. The latest version of Synchro Studio shall be used.

The capacity analyses for each intersection shall be analyzed using the existing timing and phasing for both existing and future volumes. If the intersection runs free during the analysis period, phasing shall remain the same and existing minimums shall not be violated. All traffic signal system operational data will be made available by the Public Works Department and adjacent jurisdictions if applicable.

Generally, default values identified in the *Highway Capacity Manual-Special Report 209* shall be used in the analysis. The following values shall be used:

- Peak Hour Factor (PHF) shall be calculated for each intersection. At no time shall the PHF be higher than 0.90, regardless of the calculated value.
  PHV = V/(4 x V_{15}); V=peak-hour volume, V_{15}= volume during the peak 15 minutes of flow.

- Right Turn On Red (RTOR) shall not be used unless the approach has an exclusive right turn lane. If the approach has a right turn lane the maximum value shall be 100 vehicles per hour, unless otherwise approved by the City Engineer.

Include turning movement volumes in the report. The latest City counts shall be used if available. If not, an independent count must be submitted in graphical format similar to the City’s format.

A disk of the analysis model and a hard copy explanation of the scenarios by filename or line number are required. The computer

worksheets that identify the input and output data shall be included in a technical appendix along with an electronic version (i.e., compact disk, flash drive or email) of the program data of each capacity analysis.

For unsignalized intersections, the *Highway Capacity Manual* methodology shall be used in the analysis. If the intersection or a particular movement fails, a signal warrant analysis shall be completed for the intersection.

8. Access Management

Requests for site access shall be addressed in the Traffic Impact Analysis. Recommendations shall include site access and transportation improvements needed to maintain traffic flow to, from, within and past the site at an acceptable and safe level of service.

Areas to address include:

- Separate conflict areas. Reduce the number of access points or increase their spacing so conflict areas or maneuver areas do not overlap.
- Limit the type of conflict areas by preventing certain maneuvers.
- Remove turning vehicles or queues from through lanes.
- Safety of a proposed access (sight distance both horizontally and vertically), including pedestrian features.
- Reduce the speed differential in through lanes between through vehicles and turning vehicles.
- Consider the impact of access points on adjacent or nearby properties on both sides of the roadway.

Improvements include such things as: relocation, restriction, or elimination of access point(s); roadway widening; turning lanes; traffic signals; modern roundabouts; and pedestrian facilities.

9. Traffic Calming

Internal traffic calming shall be incorporated into all developments to control cut-through traffic and reduce speed within the development. The Traffic Impact Analysis shall identify and propose specific traffic calming measures and locations to be incorporated in the development. Traffic calming shall be aesthetically pleasing. Public transportation shall also be evaluated. The traffic-calming plan shall include an overall drawing of the development and identify specific locations and features to be included in the development. The proponent's Traffic Engineer

shall work with the Public Works Department to develop a traffic-calming plan for the development.

10. Alternate Modes of Transportation

Identify deficiencies in other modes of travel and strategies to encourage these alternate modes. New developments are encouraged to implement Transportation Demand Management practices. An Exhibit should be prepared to identify existing transit routes and stops, bicycle lanes and sidewalks within the vicinity of the development. The Traffic Impact Analysis shall identify deficiencies in the system to be mitigated.

11. Mitigation

The Traffic Impact Analysis shall include a proposed mitigation plan. The mitigation may be either the construction or financial commitment of the necessary transportation system improvements via a signed deferment agreement, or contributions to the City for the development's proportionate share of the improvements.

The Level of Service standards shall be used as the threshold for determining appropriate mitigating measures in the study area. The adopted level of service standards for the intersection of Wallace Kneeland Boulevard and Olympic Highway North is LOS E. All other areas have an adopted LOS of D.

The following guidelines shall be used to determine appropriate mitigating measures of traffic impacts generated by the development.

a. To maintain the adopted Level of Service standard, the development shall provide a financial guarantee or construct improvements to maintain the level of service at or above the adopted standard. This improvement must be consistent with the Transportation Element of the *City of Shelton Comprehensive Plan* goals and policies.

b. Transportation facilities affecting neighboring jurisdictions shall mitigate the impacts based on a per trip methodology approved by the jurisdiction.

c. On transportation facilities where the existing Level of Service condition is less than the adopted LOS standard and where no improvements are planned to improve capacity and traffic operations, the development shall mitigate the intersection to an acceptable Level of Service condition or wait until the

improvements are implemented by the City or other developments.

If the analysis identifies a LOS deficiency for an un-signalized intersection that is not scheduled for an improvement, alternate roadway connections or non-controlled intersection improvements approved by the City Engineer shall be appropriate mitigating measures. A controlled intersection (traffic signal, modern roundabout) to alleviate a LOS deficiency is not required. If sufficient alternate routes exist as determined by the City Engineer mitigation will not be required.

If there are no alternatives to installation of a controlled intersection, and two or more traffic signal warrants, as outlined in the MUTCD (*Manual on Uniform Traffic Control Devices*) are satisfied within the horizon year of the development, a traffic signal or modern roundabout will be required as a mitigating measure for the development.

Appendix B: Street Tree List

4’ Planter Width:

Check on availability of selected tree(s) and call 360-432-5102 for site inspection prior to planting.

Common Name	Scientific Name	Cultivar	Height (Ft)	Width (Ft)	Shape	Features	Drought Tolerant	Overhead Utilities
Trident Maple	*Acer bueraeranum*		25	20	round	red in fall	Yes	Yes
Rocky Mountain Glow Maple	*Acer arandidentatum*	Schmidt	25	15	oval	orange/red in fall	Yes	Yes
Paperbark Maple	*Acer qriseum*		25	20	upright/round	peeling brown bark, red in fall	Yes	Yes
American Hornbeam	*Carpinus caraliniana*		25	20	oval	smooth gray trunk, yellow to orange in fall	Moderate	Yes
Eddies White Wonder Dogwood	*Cornus*	Eddie's White Wndr	25	20	upright/pyramidal	white flowers, red in fall, transplants readily	Moderate	Yes
Heart Throb Dogwood	*Cornus kousa*	Schmred	20	20	rounded	long lasting pink flowers, deep red fall color	Moderate	Yes
Flowering Ash	*Franxinus ornus*		35	20	pyramidal/round	creamy white fragrant flowers, yellow in fall	Yes	No
Persian Parrotia	*Parrotia persica*		30	20	rounded	red-purple leaves turn to green to orange in fall. Tiny red flowers in winter	Yes	No
Cascade Snow Cherry	*Prunus*	Berry	25	20	upright/spreading	disease resistant, white flowers, orange leaves in fall	Yes	Yes
Japanese Snowbell	*Styrax japonicus*		25	25	rounded	bell shaped hanging flowers, yellow-red leaves in fall	Yes	Yes
Emerald Sunshine Elm	*Ulmus propinqua*	JES-Rieberich	35	25	vase	fast growing, urban tolerant, yellow leaves in fall	Yes	No
City Sprite Zelkova	*Zelkova serrata*	JES-KW1	25	20	compact oval/vase	bright green leaves, low maintenance	Yes	Yes

6’ Planter Width:

Check on availability of selected tree(s) and call 360-432-5102 for site inspection prior to planting.

Common Name	Scientific Name	Cultivar	Height (Ft)	Width (Ft)	Shape	Features	Drought Tolerant	Overhead Utilities	Soil Type
European Hornbeam	*Carpinus betulus*	Fastigiata	35	25	upright/oval	catkins turn brown in November; yellow in fall	Yes	No	all
Japanese Hornbeam	*Carpinus japonicus*		30	25	rounded vase	white/yellow flowers; red in fall	Yes	Yes	all
Katsura Tree	*Cercidiphyllum japonicum*		40	40	pyramidal/rounded	heart shaped leaves; red-orange in fall	No	No	all
Princeton Sentry Ginkgo	*Ginkgo biloba*	Princeton Sentry	40	15	columnar	seedless male; yellow in fall	Yes	No	all
Mountain Silverbells	*Halesia monticola*		40	25	conical/rounded	white bell shaped flowers; yellow fall color	Moderate	No	all
Red Range Tupelo	*Nyssa sylvatica*	Haymanred	35	20	broadly pyramidal	glossy foliage resistant to leaf spot; bright red in fall	Yes	No	all
Kwanzan Flowering Cherry	*Prunus serrulata*	Kwanzan	30	20	vase/rounded	pink. double flowers; hardiest *P. serrulata;* orange in fall	Moderate	No	all
Forest Green Oak	*Quercus Frainetto*	Schmidt	50	30	oval	strong central leader	Yes	No	all
Sterling Silver Linden	*Tilia tomentosa*	Sterling	45	35	pyramidal	dark green/silver underside; fewer aphids	Yes	No	all
Wireless Zelkova	*Zelkova serrata*	Schmidtlow	25	35	spreading vase	ideal for use under power lines	Yes	Yes	all

8’ Planter Width:

Check on availability of selected tree(s) and call 360-432-5102 for site inspection prior to planting.

Common Name	Scientific Name	Cultivar	Height (Ft)	Width (Ft)	Shape	Features	Drought Tolerant	Overhead Utilities
State Street Maple	*Acer miyabei*	Morton	50	35	rounded	red in fall	Yes	No
Hardy Rubber Tree	*Eucommia ulmoides*		55	45	conical /globose	yellowish in fall	Yes	No
Rivers Purple Beech	*Fagus sylvatica*	Riversii	50	40	broadly oval	deep purple foliage; striking grey bark	very sensitive to drought	no
Oregon Ash	*Fraxinus latifolia*		50	30	upright oval	native tree; drought and flood tolerant	Yes	No
Tulip Tree	*Liriodendron tufipifera*		60	30	oval	yellow flowers; yellow in fall	can tolerate drought in humid regions	No
Dawn Redwood	*Metasequoia glyptostoboides*		60	25	conical	fast growing; deciduous conifer; urban tolerant	Yes	No
Scarlet Oak	*Ouercus coccinea*		50	40	upright/oval	red in fall	Yes	No
Red Oak	*Quercus rubra*		50	45	rounded	fast growing/large; red in fall	Moderate	No
Bald Cypress	*Taxodium distichum*		55	30	pyramidal/oval	deciduous conifer; wet/dry sites; urban tolerant	Yes	No

DOWNTOWN DISTRICT STREET TREES:

Check on availability of selected tree(s) and call 360-432-5102 for site inspection prior to planting. To maintain tree planting corridor continuity, downtown street tree varieties and locations to be approved by the City Engineer and Community Development Director.

Common Name	Scientific Name	Cultivar	Height (Ft)	Width (Ft)	Shape	Features	Drought Tolerant	Overhead Utilities
Upright Hornbeam	*Carpinus Betulus*	Frans Fontaine	40	20	columnar	Grows well in full sun or deep shade. Very drought tolerant. Has golden-yellow leaves in the fall. 25' tall in 10 years with a 8-foot width	Yes	No
Princeton Sentry Ginkgo	*Ginkgo Biloba*	PNI 2720	45	25	upright/narrow	Leaves turn a uniform golden yellow in autumn, seedless male	Yes	No
Firestarter Tupelo	*Nyssa Sulvatica*	JFS-Red	35	18	Oval	Dark green, medium-sized, oblong leaves turn intense bright red in the fall. Seedless.	Moderate	No
Sugar Cone Maple	*Acer Saccharum*	Sugar Cone	25	13	Pyramidal	Stout, upsweeping branches bear large, dark green leaves that turn orange red to golden orange in autumn.	Moderate	Yes
Cleveland Select Pear (Chanticleer Pear)	*Pyrus Calleryana*	Cleveland Select	40	20	Pyramidal	Showy clusters of gleaming white blooms in early spring. Dark green summer foliage turns a brilliant purplish red-orange in fall.	Moderate	No

Appendix C: Street Lighting Standards

Under Option 'A' street lighting, the developer will design and install the street lighting to standards, and the City of Shelton will own and maintain the system. Refer to Section 2.230 of the Engineering Design and Construction Standards.
The developer shall maintain the street lighting system during the maintenance period identified in Chapter 1 of the Engineering Design and Construction Standards. A 72-hour burn-in period, approved as-builts, and maintenance period assurance is required prior to acceptance onto the maintenance period.
All Option 'A' City of Shelton lighting shall comply with the following requirements:

1. **Lighting Levels**

Minimum Average Maintained in Foot Candles			
Roadway Classification	**Commercial**	**Mixed-use and Institutional**	**Residential**
Arterials	2.0	1.4	1.0 *
Collectors	1.2	0.9 *	0.6 *
Neighborhood Routes	1.2	0.9	0.6
Local Streets	0.9 *	0.6 *	0.5 *
Private Streets	0.6	0.5	0.5
Roadside Walk and Bikeways	0.9	0.6	0.5
Other Pedestrian and Bicycle ways		Average Foot Candles	
Walk, Bicycle Parking Spaces, and Bikeways Distant From Roadways		0.5	
Pedestrian Tunnels		4.0	
Pedestrian Overpasses		0.5	
Pedestrian Stairways		0.6	

Notes:

1. Average maintained illuminance measured on the horizonal.
2. The City and the appropriate natural resource agencies shall determine whether lighting shall be provided for shared-use paths in designated natural resource and wildlife areas.
3. *Increase light level by 50 percent at intersections.
4. The minimum average uniformity of lighting shall be 6 to 1 for local streets and 3 to 1 for all other areas.
5. The minimum average foot candles shall be more than 10% above the requirement.
6. All streetlights shall be option 'B' as defined below unless otherwise approved in writing by the City Engineer, as coordinated with PUD #3

2. Conduit

A. All new installations and replacements of existing wire shall be in schedule 40 PVC conduit, schedule 80 conduit crossing or under roadways, that shall conform to the applicable requirements of Article 347 of the National Electrical Code (NEC). All conduits shall be installed per the “wet location” requirements of the NEC.

B. Rigid conduit shall extend from the power source to a junction box, which is to be located not more than three (3) feet from each pole served.

C. All conduits shall be marked using a "Warning Tape" which shall be located per industry standards.

D. Cables between the junction box and the lighting pole shall be installed inside a car flex or flexible schedule 40 PVC when using direct bury poles; otherwise, rigid conduit shall be used.

E. Splices are not allowed within the conduits.

F. All conduits shall have a burial depth of 36 inches to 42 inches below finished grade.

G. For conduit runs between the streetlight pole and the junction box, conduit size shall be a minimum of one (1) inch and for runs between junction boxes a minimum of two (2) inches.

H. All conduit ends shall have terminal adapters with bushings or bell brushings installed. All conduit ends shall be sealed with “Molded Plug” preformed closed cell foam conduit and pipe seals.

I. All conduit ends, with bushings installed, shall be between four (4) inches and six (6) inches below the bottom of the junction box lid. All conduit ends in junction boxes or foundations shall have a one-inch clearance from other conduits, rods, pole walls, and junction box walls. Conduits shall enter through the bottom of the junction box with factory 90-degree elbows.

J. All turns in conduits other than at junction boxes shall be conduit long sweeps. Conduit shall terminate near the box wall to leave the major portion of the box clear. Conduit outlets shall be located on the side of the box that corresponds to the direction of the conduit run and shall be no closer than four (4) inches from the bottom of the box lid and at least two (2) inches above the gravel fill. Conduit ends shall be oriented towards the top of the box such that the conductors may be pulled out of the conduit from the top of the box without touching the side of the box.

3. Cable and Wire

A. Circuits and Cable runs shall be designed to provide separate and independent circuits for streetlights. Wire size shall be determined by the loading and distance of each circuit for a 240V lighting system. Wire shall be sized to limit voltage drops to a maximum of two (2) percent between the utility service connection and the control panel and a maximum of three (3) percent for new installations and maximum of five (5) percent for additions to existing circuits from the control panel to the most distant fixture served.

B. Solid aluminum or copper wiring shall not be used. All wire shall be stranded copper, single conductor, with a 600-volt insulation. The minimum wire size shall be #10 AWG stranded copper wire, type XHHW for the lighting circuit. The photocell circuit wires shall be #12 AWG stranded copper, type XHHW. The maximum wire size shall be #1 AWG stranded copper. Equipment ground wire shall be stranded copper, single conductor, either bare or with a 600-volt green insulation.

C. Cable installation shall conform to the National Electric Code and the design standards of the City of Shelton. All wire and cable splices and connections shall be made within approved junction boxes and shall be accomplished with approved fasteners. Any splices and connections that are prone to flooding (near a water source, within a floodplain, within an area of known flooding, or an area of high ground water) shall be installed per the “wet location” requirements of the NEC.

a. Wire insulation color shall conform to the following:
b. 120-volt photo electric circuit wires shall be #12 AWG stranded copper wire, type XHHW. A yellow wire from the controller to the photocell, purple wire for the return to the cabinet.
c. 240-volt line distribution wires shall be a minimum of #10 AWG stranded copper wire, type XHHW. One wire shall be black in color; the other wire shall be red in color. When two or more separate circuits are run in the same conduit, the second pair of conductors shall be blue and brown. Additional colors for addition circuits may be required with the approval of the City of Shelton Operations Department's lead electrician.
d. Grounded conductors shall be white.
e. Grounding conductors shall be green insulated or bare stranded wire.

D. Color coding of each conductor shall remain consistent throughout the entire system. Factory supplied striping of conductors will be accepted when the required color insulation is not available. Color tape will not be accepted as an alternate for insulation color coding.

E. Electrical wire splices located in junction boxes, poles, or other similar locations shall be made moisture and waterproof by using either a heat shrink tubing with pre-applied sealant or electrical insulating rubber tape overwrapped with electrical vinyl tape. Each splice shall be taped separately.

4. Poles:

A. Arterial and Collector Streets: Anchor base poles shall be used on arterial and collector streets. The standard pole for arterial and collector streets shall be of the anchor base type with a mounting height up to 35 feet, "Whatley" aluminum poles or approved equal with a 14-inch bolt circle and a bolt size of 1 inch x 36 inch x 4 inch.

B. Residential Streets: The standard pole for residential streets shall be of the direct burial or embedded type with a mounting height of 25

feet, “Whatley” pole or approved equal. Poles shall be bronze in color and constructed of smooth filament wound fiberglass. If the poles are to be located behind the sidewalk, an aluminum mast arm bronze in color and of sufficient length to locate the fixture over the roadway will be required. The standard length of the arm shall be six (6) feet. If the pole is located next to the curb the standard length of mast arm shall be eight (8) inches. All arm lengths shall be consistent within the project.

All direct bury poles and pre-formed pole bases shall be back filled with ½ yard of compacted ¾ inch - 0 inch crushed rock.

C. All Other Applications: All other applications shall be evaluated on a case-by-case basis.

D. Pole Access: All lighting poles shall be constructed with a nominal 2-1/2 inch by 5-inch hand hole. When on the plan view, the hand hole shall be at 90 degrees from the mast arm or curb side of the pole. The hand hole shall be secured with cast aluminum, galvanized steel or fiber glass cover painted to match the pole and held in place with a stainless-steel tamper resistant set screw.

5. Lighting Fixtures:

A. Lighting fixtures shall be Light-Emitting Diode (LED) with number of LEDs and lumens that are necessary to achieve the requirements. All lighting fixtures shall contain current drivers no higher than 525mA. Lighting fixtures shall be of the same color as the poles and mast arms. Fixtures shall be of the "power door" type with the electronic components mounted on a single removable panel that will facilitate dry room repairs or replacement.

B. All fixtures shall have a multi-tap current divers and be pre-connected to 240 volt taps. All circuits and fixtures shall be wired 240 volts and shall be grounded.

C. Every fixture shall have wattage labels visible from the street indicating the wattage for the drive current selected.

6. Control Cabinets

A. Details of the street lighting controller cabinet shall be submitted to the city for approval prior to fabrication. Contact the Operations Street Lighting Section for the current controller cabinet specifications. The location and type of streetlight circuit controller shall be shown on all street lighting plans. Whenever possible, the controller cabinets shall be installed away from intersections. The cabinet shall have a service panel that has a "Service Equipment" rated UL label attached to the panel. Each controller shall be painted light green and shall be placed on a concrete pad.

B. A 100 amp, single phase, 3 wire, 240 volt, dedicated unmetered service is to be provided by the developer. Each street lighting circuit shall be wired 240 volts. The streetlight control cabinet shall be a “Copper B-Line catalog no. CUP 4111SPL-GRN” In special circumstances, when a metered service is required, the street control cabinet shall be a “Copper B-Line catalog no. CMP4111SPL-GRN. The street control cabinet shall be mounted on a concrete pad with 30 pounds craft paper between the cabinet and the concrete pad. The concrete pad shall measure 24 inches x 24 inches x 18 inches deep. The concrete pad shall be MB1515 or approved equal. The concrete pad shall be set at the sidewalk grade and located not more than two (2) feet behind the sidewalk with front door facing the sidewalk. A concrete 12” apron shall be installed when control cabinet is in areas without sidewalk. The control cabinet shall be sealed around the bottom with silicone seal or caulk.

C. All streetlights shall operate at 240 volts and shall be grounded.

D. All streetlight circuits shall be controlled by a single photocell installed on the streetlight fixture closest to the control cabinet. Photocell shall be a three-prong NEMA type twist lock with receptacle adjustable to point north meeting the specifications of Ripley’s Model no. 6390TF-FO or approved equal. The photocell shall be used in conjunction with a lighting contactor in the control cabinet. All poles without a photocell shall contain a black cover shorting cap Ripley’s Model 6005 or approved equal.

E. All circuits shall have a manual on/off switch that will over-ride the photo-electric cell. This switch shall be located within the interior of the control cabinet and shall be labeled, “On/Off”.

F. All control cabinets shall contain GFCI 15Amp-125 Volt grounded receptacles mounted inside cabinet from a dedicated 20 Amp circuit.

G. A 10-amp resettable pushbutton circuit protector, Heinemann Model KD1-5 (Re-cirk-it), HEB, HEY or approved equal shall be installed between the circuit and each light fixture on that circuit. The circuit protector shall be accessible through the hand hole.

H. In systems with lights on both sides of the street, the circuitry shall be designed such that the lights on one side of the street can be “de-energized” without affecting the operation of the lights on the other side of the street.

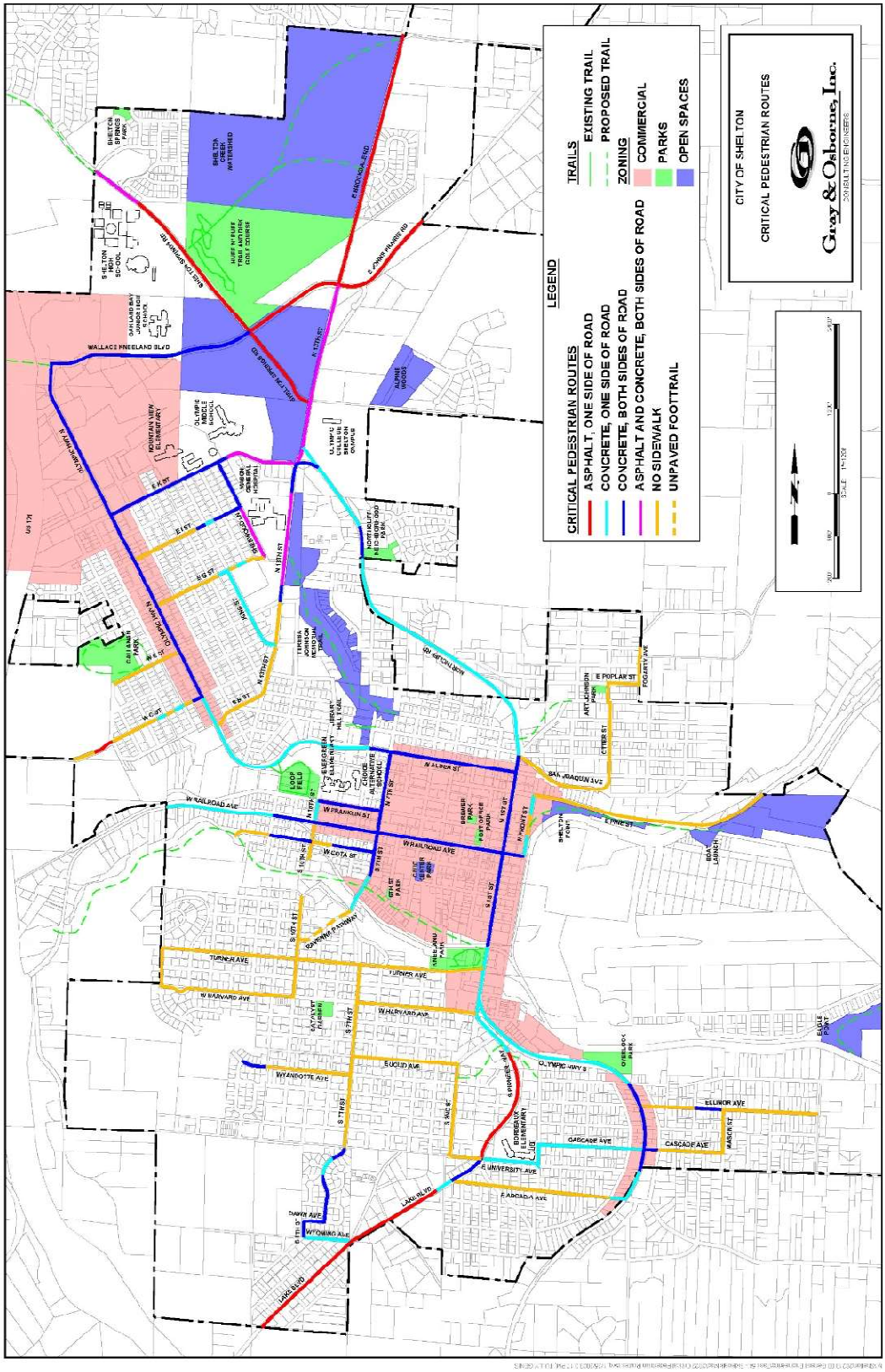
7. Junction Boxes

A. All junction boxes shall be traffic rated concrete, composite concrete or fiberglass and shall be stamped "Street Lighting." All junction boxes outside of sidewalk shall include a 12” Portland cement concrete apron.

B. There shall be one (1) junction box for each streetlight pole. The junction box shall be located not more than three (3) feet from the pole that it serves. All junction boxes shall be set at finish grade or curb height, whichever applies.

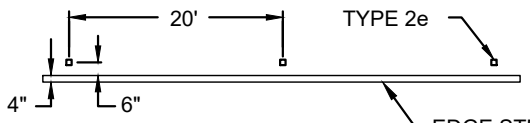
All junction boxes shall have a 12” base of compacted ¾ inch - 0 inch crushed rock. If mud or dirt has infiltrated into the junction box, remove all contaminated fill and install new base. When conduit crosses a street, a junction box shall be set on each side of the street at the crossing. A junction box shall be set at each horizontal turn in the conduit of 45 degrees or more. Use a larger size junction box where needed.

Appendix D: Critical Pedestrian Route Map

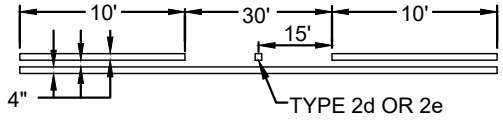


LIST OF DRAWINGS
CHAPTER 2 TRANSPORTATION

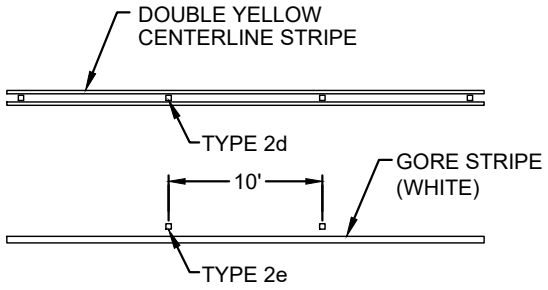
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Street Sign and Lettering	T-10B
Signpost In Paved/Concrete Area	T-10C
Sight Obstruction Details	T-12
Monument Case & Cover with Riser	T-13A
Monument Case Installation	T-13B
Curb Markings	T-16
Bus Stop Pullout -Arterial Streets	T-17
Asphalt Pavement Utility Trench Restoration	T-18A
Concrete Pavement Utility Trench Restoration	T-18B
Gravel Surface Utility Trench Restoration	T-19
Pavement Sections and Access Spacing	T-22
Major Arterial or Major Collector Road with Multiuse Path	T-23A
Major Arterial or Major Collector Road with Bike Lanes	T-23B
Minor Collector Road	T-24
Local Residential Road	T-25
Local Industrial or Commercial Roadway	T-26
Alley	T-27



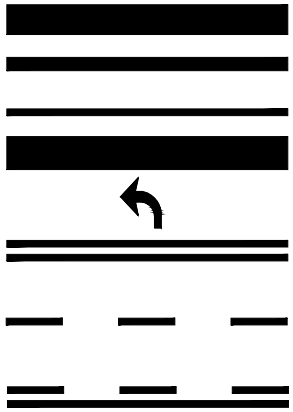
EDGE STRIPE



TWO-WAY LEFT TURN



LEFT TURN LANE



STOP BAR (18" WHITE)

GORE STRIPE (8" WHITE OR YELLOW)

EDGE STRIPE (4" WHITE OR YELLOW)

CROSSWALK (24" WHITE)

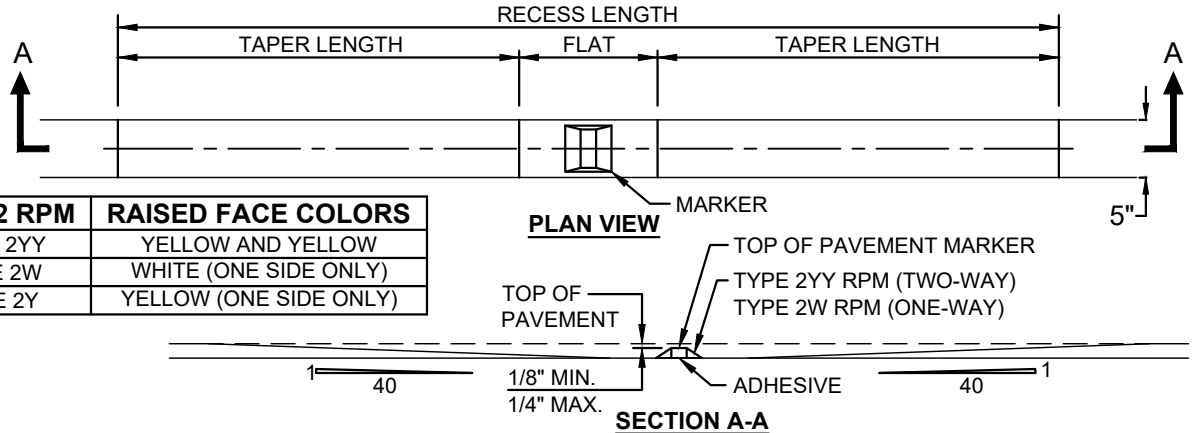
ARROWS (WHITE)

DOUBLE YELLOW CENTER STRIPE
(4" YELLOW)

SKIP LANE STRIPE
(4" WHITE OR YELLOW)

TWO-WAY LEFT TURN LANE

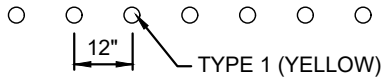
PAVEMENT MARKER KEY



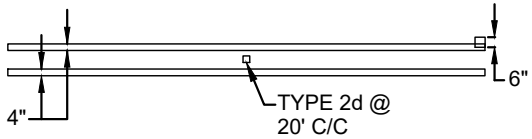
TYPE 2 RPM	RAISED FACE COLORS
TYPE 2YY	YELLOW AND YELLOW
TYPE 2W	WHITE (ONE SIDE ONLY)
TYPE 2Y	YELLOW (ONE SIDE ONLY)

RECESSED PAVEMENT MARKER DETAILS

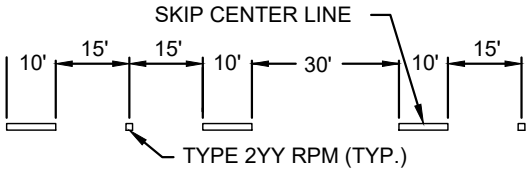
FOR USE WHERE SPECIFIED IN CONTRACT



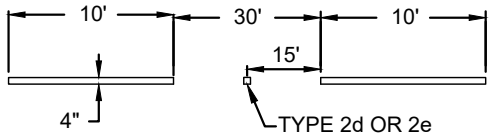
CENTERLINE GUIDE MARKERS



DOUBLE CENTERLINE STRIPE



TWO LANE TWO-WAY TRAFFIC

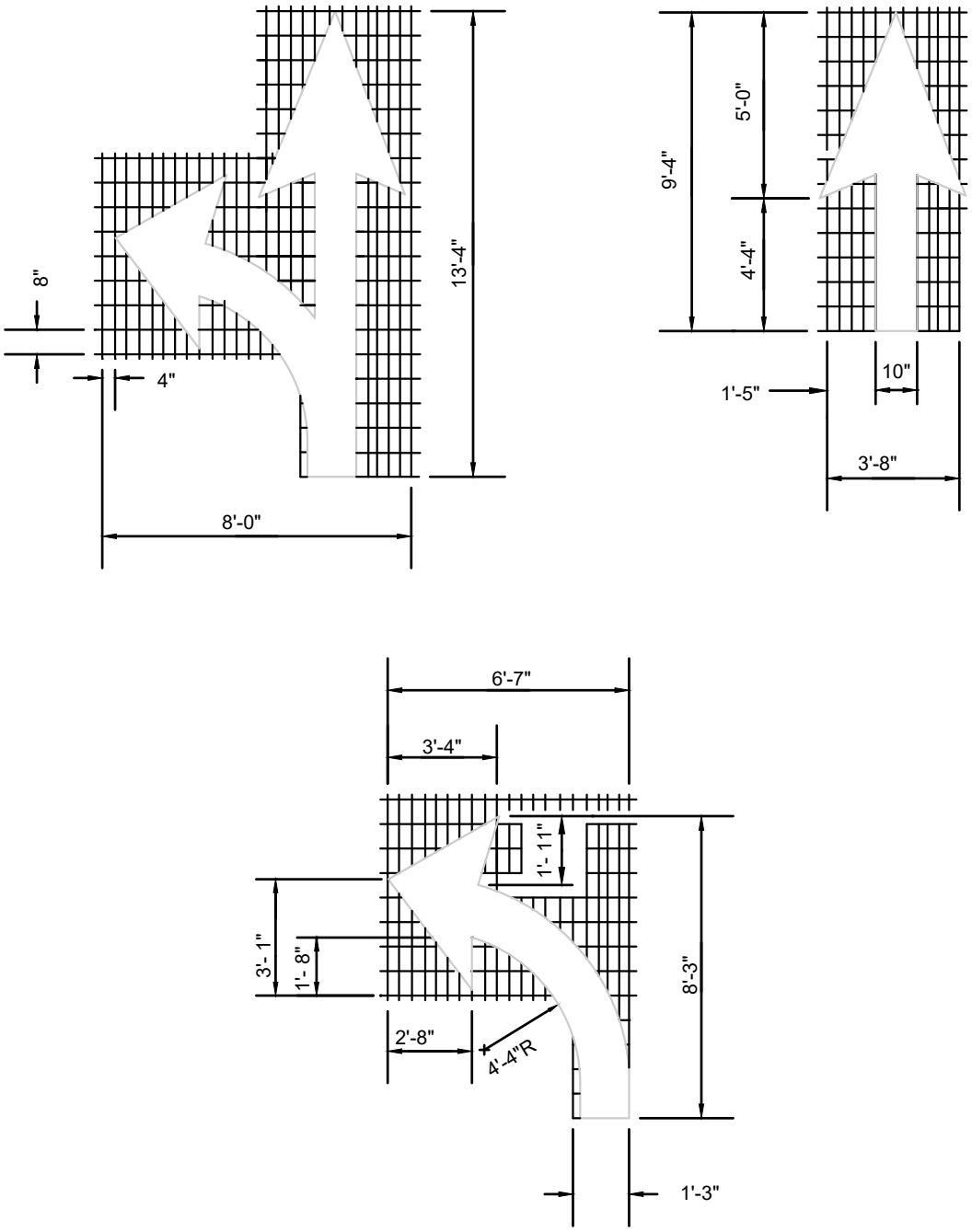


SKIP LANE STRIPE

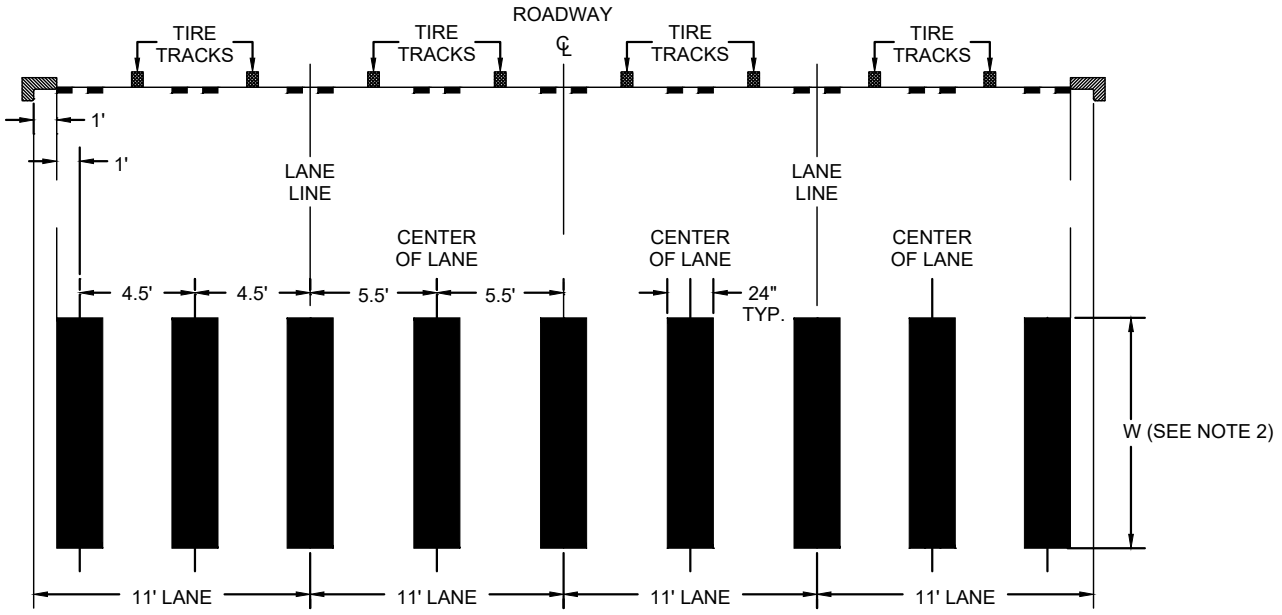
NOTES:

1. RECESSED PAVEMENT MARKER, WHEN SPECIFIED, SHALL BE INSTALLED AT THE LOCATIONS SHOWN FOR TYPE 2W RPMs ON MULTILANE ONE-WAY ROADWAYS AND TYPE 2YY RPMs ON TWO-LANE TWO-WAY ROADWAYS.
2. FOR LANE LINES, TYPE 2W RPMs SHALL BE SPACED AT 80' INTERVALS ON TANGENTS AND HORIZONTAL CURVES WITH A RADIUS OF 5,000' OR MORE, AND 40' INTERVALS ON HORIZONTAL CURVES HAVING RADII OF LESS THAN 5,000'.
3. FOR CENTER LINES, TYPE 2YY RPM'S SHALL BE SPACED AT 80' INTERVALS ON TANGENTS AND HORIZONTAL CURVES WITH A RADIUS OF 5000' OR MORE, AND 40' INTERVALS ON HORIZONTAL CURVES HAVING RADII LESS THAN 5000' TYPE 2YY RPM'S ARE TO BE CENTERED BETWEEN SKIP LINES.
4. ALL PAVEMENT MARKERS ARE TO BE RECESSED IN ACCORDANCE WITH THE WSDOT CURRENT STANDARD PLANS SECTION M (ROADWAY DELINEATION) OR AS DIRECTED BY THE CITY ENGINEER.
5. STRIPING MATERIAL SHALL BE PER WSDOT STANDARD SPECIFICATIONS 8-22.2.

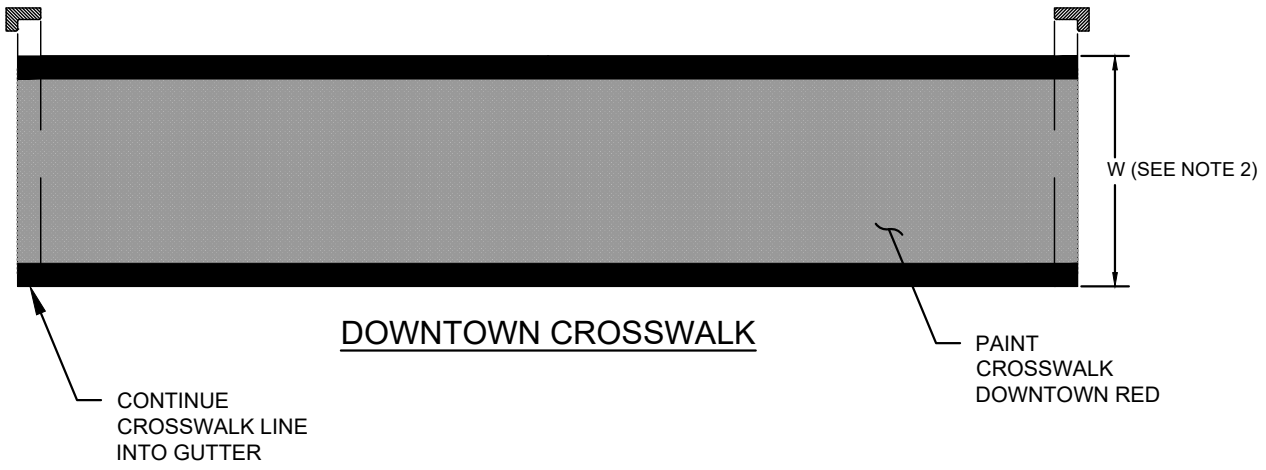
City Of Shelton Public Works	PAVEMENT MARKING AND STRIPING DETAILS	SCALE: NONE DATE: JAN 2023	T-01A



City Of Shelton Public Works	PAVEMENT TURN ARROW MARKINGS	SCALE: NONE DATE: JAN 2023	T-01B



TYPICAL CROSSWALK



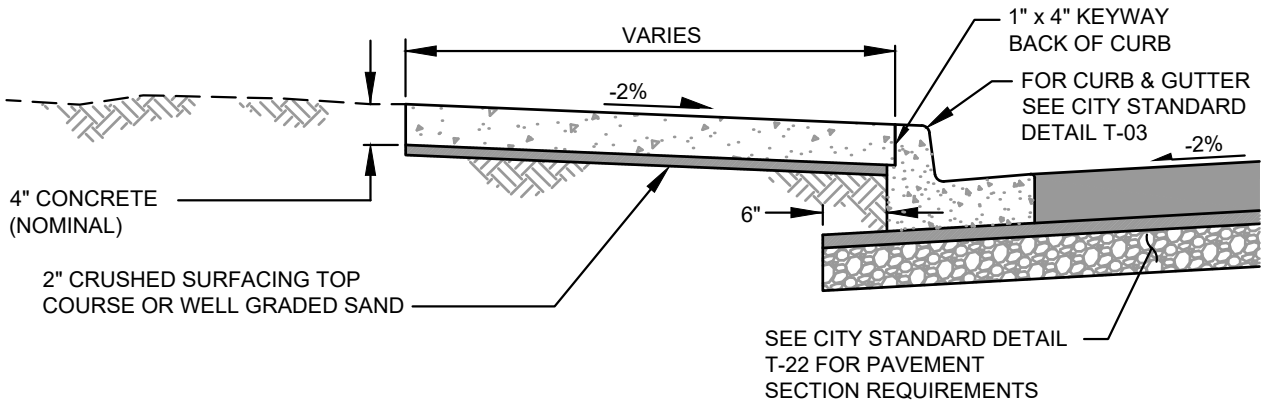
DOWNTOWN CROSSWALK

1. FOR ROADWAYS WITH MORE OR FEWER LANES, THE SAME CONFIGURATION APPLIES TO KEEP THE BARS CENTERED ON THE LANE LINES, AND IN THE CENTER OF THE TRAVELED PORTION OF THE LANE TO MINIMIZE TIRE WEAR.

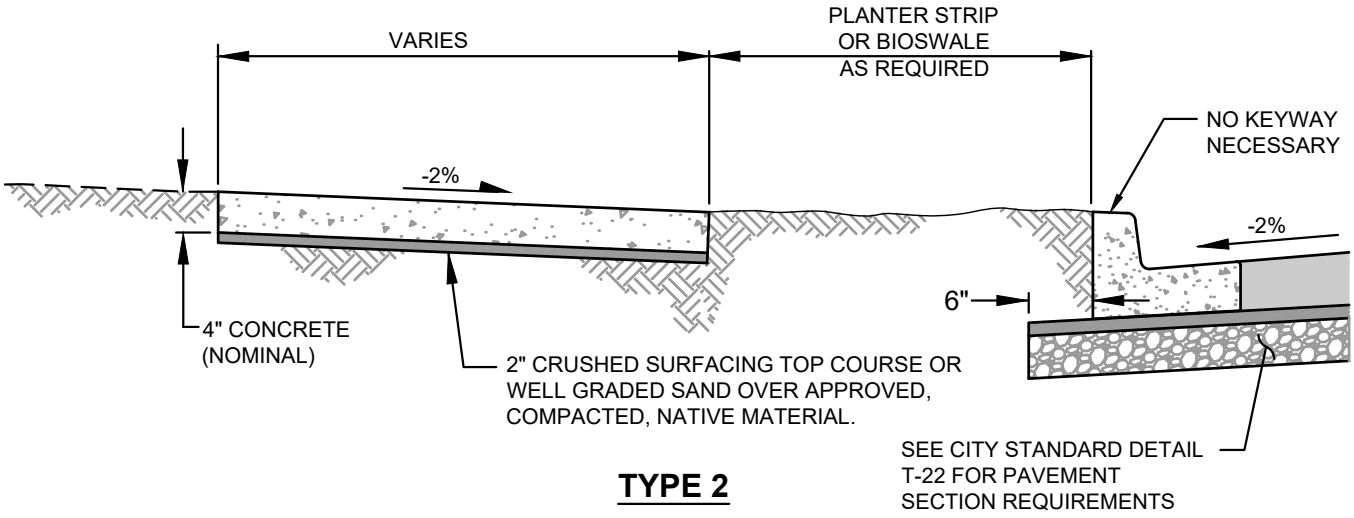
2. THE WIDTH OF A CROSSWALK SHALL BE 8' WHEN CROSSING A RESIDENTIAL STREET, 10' ACROSS A STREET INTERSECTING AN ARTERIAL, AND 12' WHEN THE CROSSWALK IS CROSSING AN ARTERIAL.

3. PAVEMENT MARKINGS SHALL BE INSTALLED WITH HOT APPLIED THERMOPLASTIC ON NEW ASPHALT, OVERLAYS AND ASPHALT IN GOOD CONDITION, AS DETERMINED BY THE CITY. WHERE AUTHORIZED, PREFORMED THERMOPLASITC MATERIAL SHALL BE PREMARK WITH VIZIGRIP MADE BY FLINT TRADING INC. AND BE APPLIED USING PREMARK SEALER, AS APPLICABLE, PER MANUFACTURER'S RECOMMENDATIONS, OR CITY APPROVED EQUAL. ALL MATERIAL SHALL BE 125 MIL THICKNESS AND APPLIED USING APPROPRIATE INSTALLATION PROCEDURES ACCORDING TO THE MANUFACTURER.

City Of Shelton Public Works	PAVEMENT CROSSWALK MARKINGS	SCALE: NONE DATE: JAN 2023	T-01C



TYPE 1 (SEE NOTE 5)

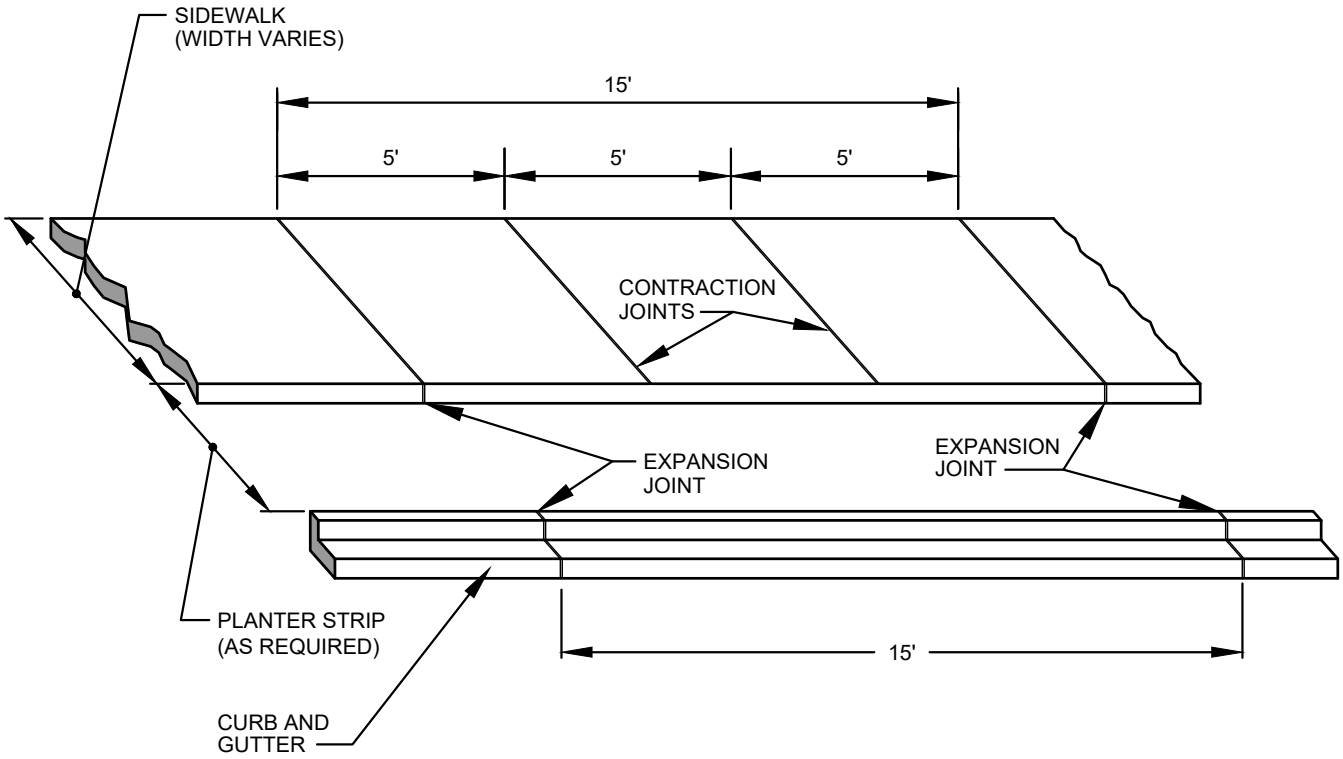


TYPE 2

NOTES:

1. FOR EXPANSION AND DUMMY JOINT REQUIREMENTS, SEE CITY STANDARD DETAIL T-02B.
2. CONCRETE DRIVEWAYS REQUIRE A MINIMUM DEPTH OF 6" WITH REBAR. SEE CITY STANDARD DETAIL T-04.
3. BROOM FINISH TO BE PERPENDICULAR TO ROADWAY IN SIDEWALK SECTIONS.
4. CONCRETE SHALL BE COMMERCIAL CONCRETE 3,000 PSI HIGH EARLY STRENGTH.
5. TYPE 2 SIDEWALKS ARE REQUIRED FOR ALL PROJECTS. TYPE 1 SIDEWALK DESIGNS SHALL ONLY BE USED IF APPROVED BY THE CITY VIA DESIGN MODIFICATION REQUEST.

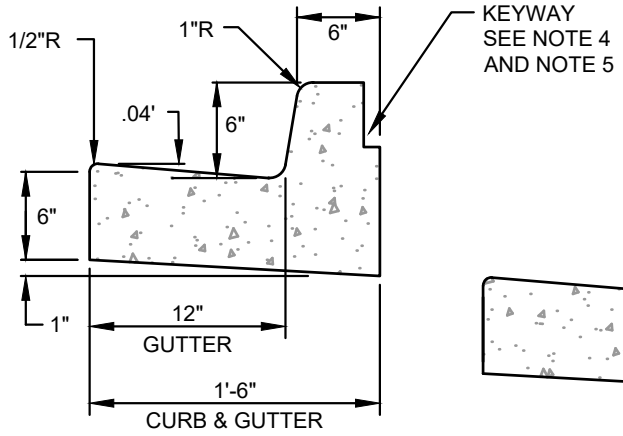
City Of Shelton Public Works	SIDEWALK DETAILS	SCALE: NONE DATE: JAN 2023	T-02A



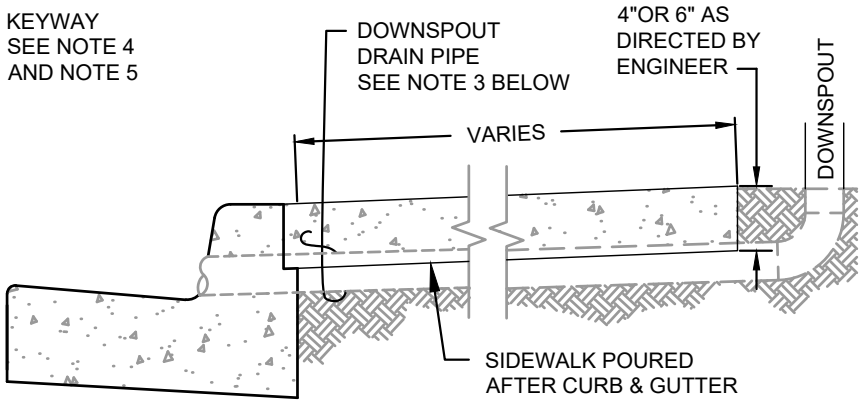
NOTES:

1. INSPECTION OF FORMS AND SUBGRADE BY CITY INSPECTOR IS REQUIRED BEFORE POURING CONCRETE.
2. EXPANSION JOINT MATERIAL TO BE 1/2"-THICK PRE-MOLDED JOINT FILLER FOR THE FULL THICKNESS OF THE CONCRETE.
3. SCORED MARKS (CONTRACTION JOINTS) SHALL BE ±1/8" WIDE BY ±1/4" DEEP. FOR ALL SIDEWALKS OVER 8' IN WIDTH, MAKE A LONGITUDINAL (PARALLEL WITH THE CURB) SCORE MARK ALONG THE CENTER OF THE SIDEWALK.
4. EXPANSION JOINTS SHALL BE INSTALLED IN CURB AND GUTTER AND IN SIDEWALK AT PC AND PT AT ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS CONTIGUOUS TO CURB AND GUTTER UNLESS OTHERWISE DIRECTED BY ENGINEER. CONTRACTION JOINTS IN SIDEWALK ONLY.

City Of Shelton Public Works	SIDEWALK EXPANSION AND CONTRACTION JOINT SPACING	SCALE: NONE DATE: JAN 2023	T-02B

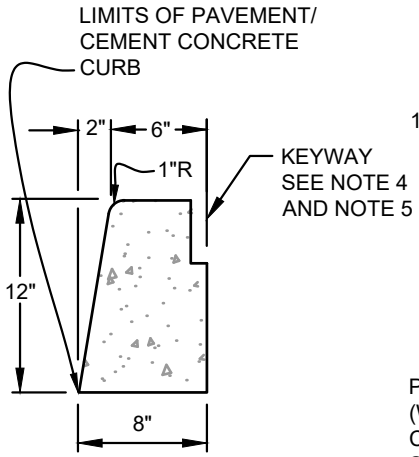


TYPICAL SECTION

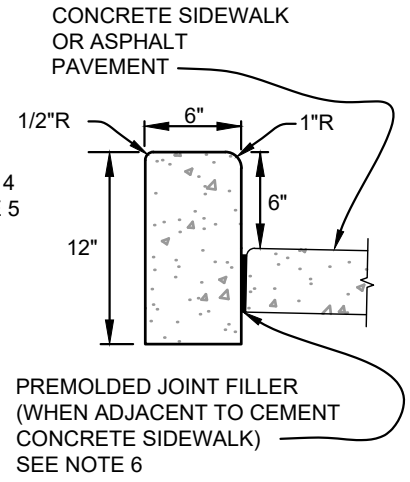


SECTION, DOWNTOWN AREA ONLY
AS APPROVED BY CITY ENGINEERING DEPARTMENT

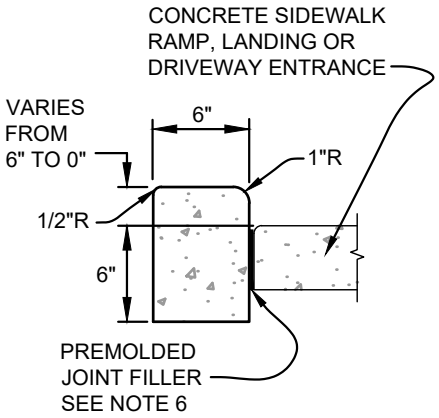
TYPE 1 CONCRETE CURB AND GUTTER



TYPE 2 TRAFFIC CURB



TYPE 3 PEDESTRIAN CURB



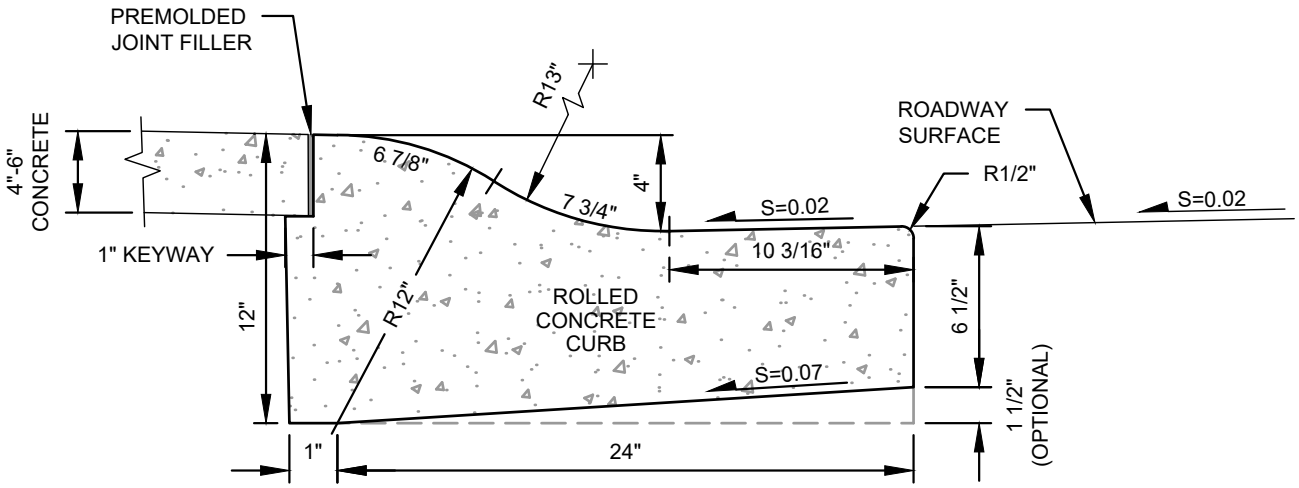
TYPE 3 PEDESTRIAN CURB
AT SIDEWALK RAMPS/LANDINGS AND
AT DRIVEWAY ENTRANCES

TYPE 2 AND TYPE 3 CONCRETE CURB

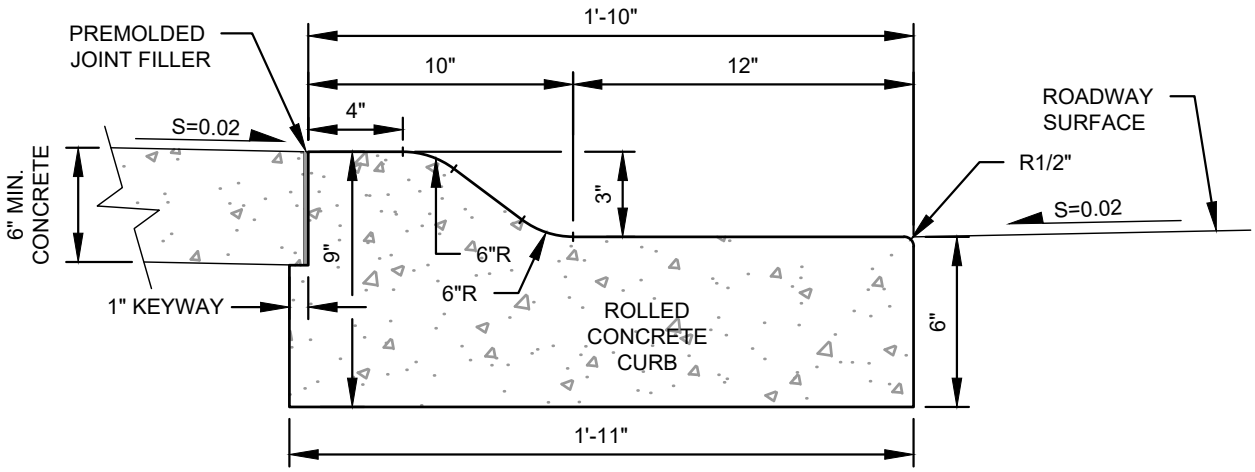
NOTES:

1. 1/2" EXPANSION JOINTS SHALL BE INSTALLED AT 15' ON-CENTER OR AS DIRECTED BY THE ENGINEER, AND THEY SHALL EXTEND TO THE BOTTOM OF THE CONCRETE. EXPANSION JOINTS SHALL CONTAIN PREMOLDED JOINT FILLER CONFORMING TO CURRENT WSDOT STANDARD SPECIFICATIONS SECTION 9-04.1(2).
2. ALL CURB, GUTTER, AND SIDEWALK SHALL BE COMMERCIAL CONCRETE PER CURRENT WSDOT STANDARD SPECIFICATIONS SECTION 6-02.3(2)B.
3. DOWNSPOUT DRAINS SHALL BE PLACED PER WSDOT STANDARD PLANS OR AS DIRECTED BY THE ENGINEER.
4. INSTALL KEYWAY, 1"x4" (4" OR THICKNESS OF SIDEWALK/DRIVEWAY) WHEN SIDEWALK ABUTS A TYPE 1 OR TYPE 2 CURB.
5. FILL KEYWAY WITH EXPANSION JOINT MATERIAL WHERE CURB ABUTS DRIVEWAY AND/OR SIDEWALK.

City Of Shelton Public Works	VERTICAL CURB AND GUTTER	SCALE: NONE DATE: JAN 2023	T-03A



ROLLED EDGE CONCRETE CURB AND GUTTER WITH KEYWAY



ROLLED EDGE CONCRETE CURB AND GUTTER WITH KEYWAY FOR ROUNDABOUT

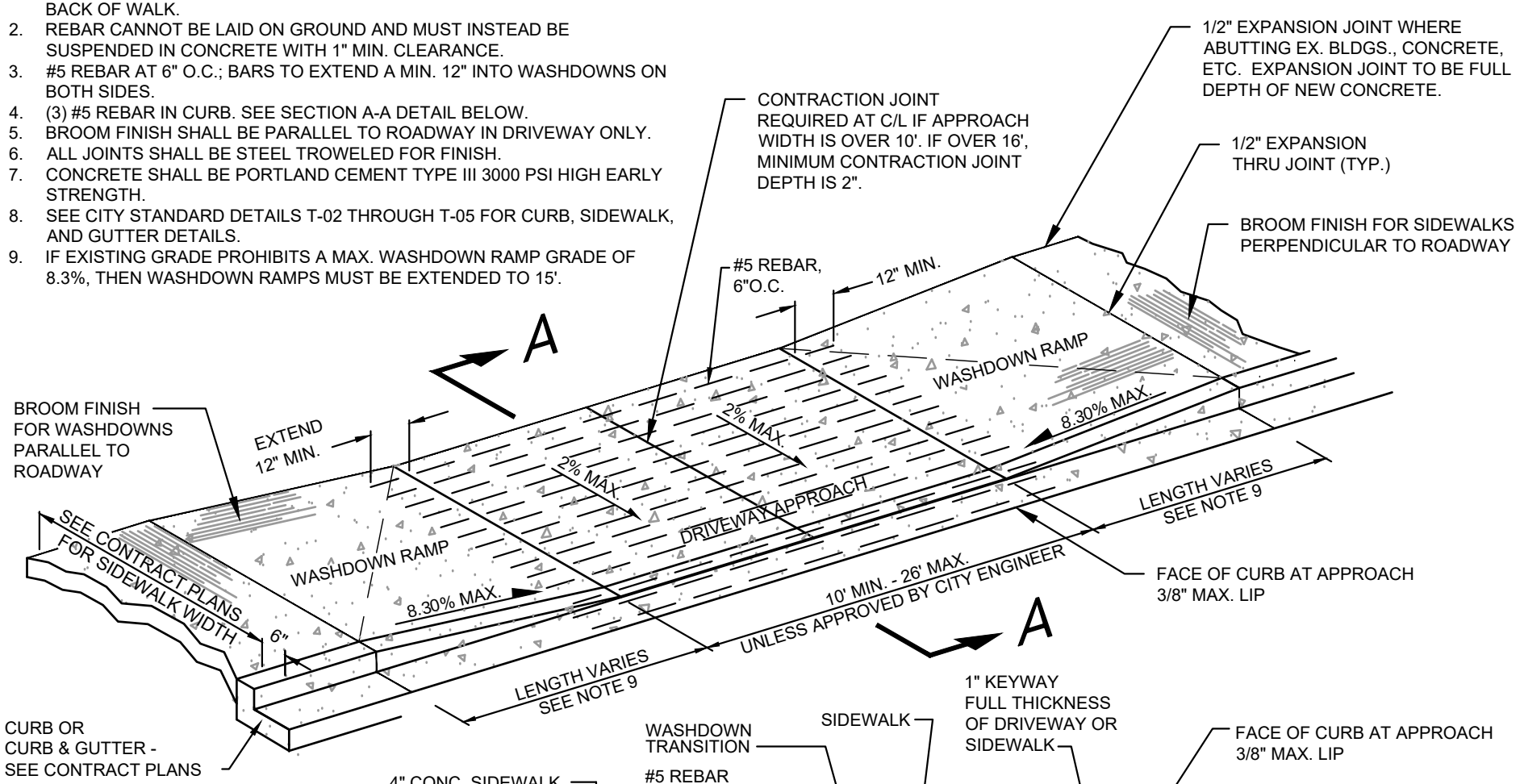
NOTES:

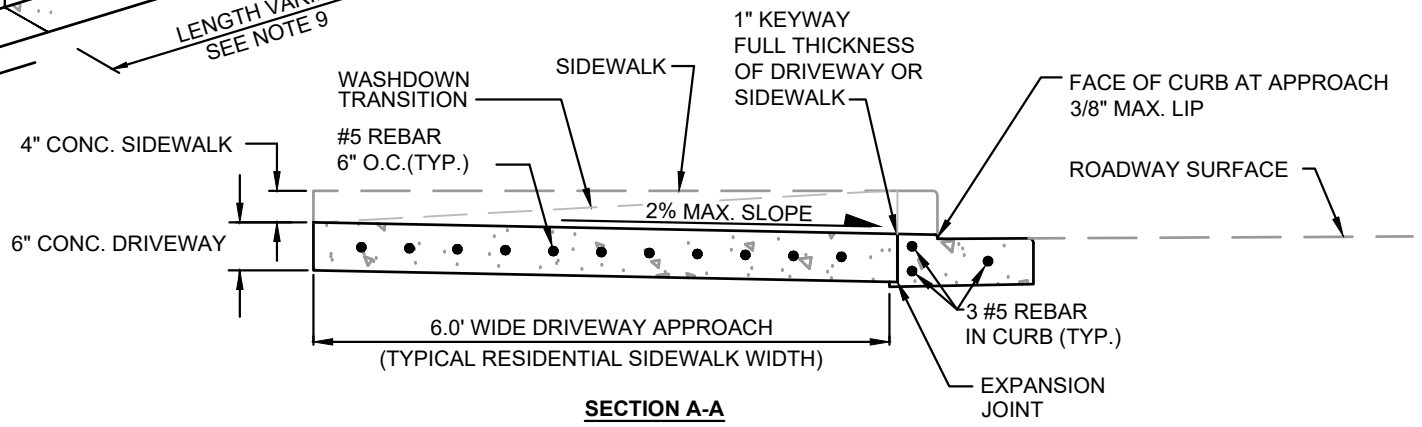
1. KEYWAYS ARE NOT NECESSARY IN LOCATIONS WHERE CURB DOES NOT ABUT SIDEWALK.

City Of Shelton Public Works	ROLLED CURB	SCALE: NONE DATE: JAN 2023	T-03B

NOTES:

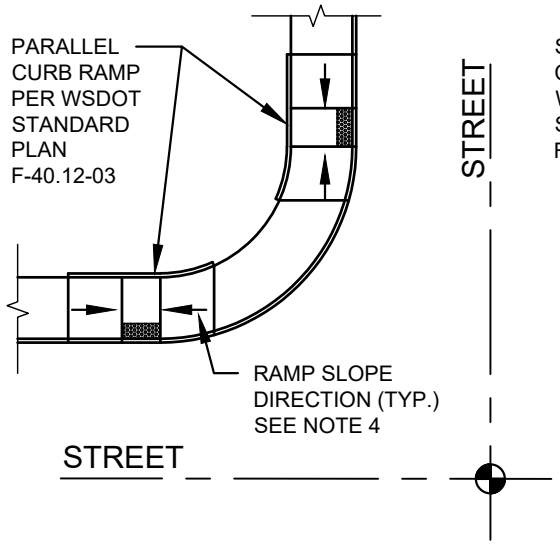
1. DRIVEWAY AND SIDEWALK WIDTH MEASURED FROM BACK OF CURB TO BACK OF WALK.
2. REBAR CANNOT BE LAID ON GROUND AND MUST INSTEAD BE SUSPENDED IN CONCRETE WITH 1" MIN. CLEARANCE.
3. #5 REBAR AT 6" O.C.; BARS TO EXTEND A MIN. 12" INTO WASHDOWNS ON BOTH SIDES.
4. (3) #5 REBAR IN CURB. SEE SECTION A-A DETAIL BELOW.
5. BROOM FINISH SHALL BE PARALLEL TO ROADWAY IN DRIVEWAY ONLY.
6. ALL JOINTS SHALL BE STEEL TROWELED FOR FINISH.
7. CONCRETE SHALL BE PORTLAND CEMENT TYPE III 3000 PSI HIGH EARLY STRENGTH.
8. SEE CITY STANDARD DETAILS T-02 THROUGH T-05 FOR CURB, SIDEWALK, AND GUTTER DETAILS.
9. IF EXISTING GRADE PROHIBITS A MAX. WASHDOWN RAMP GRADE OF 8.3%, THEN WASHDOWN RAMPS MUST BE EXTENDED TO 15'.



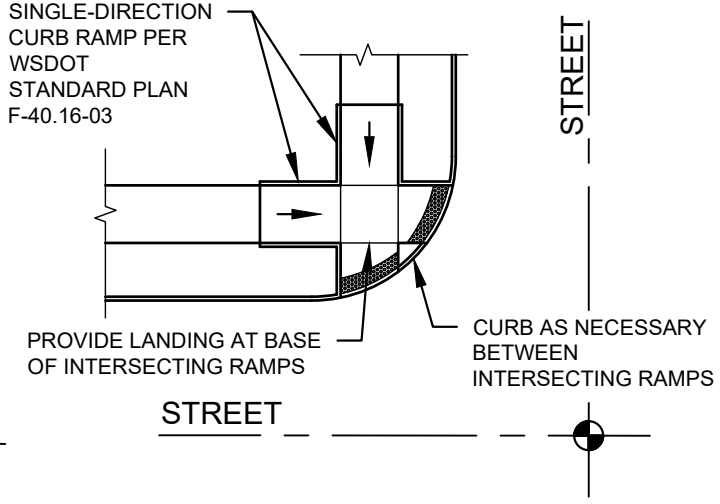


SECTION A-A

City Of Shelton Public Works	CEMENT CONCRETE DRIVEWAY	SCALE: NONE DATE: JAN 2023	T-04



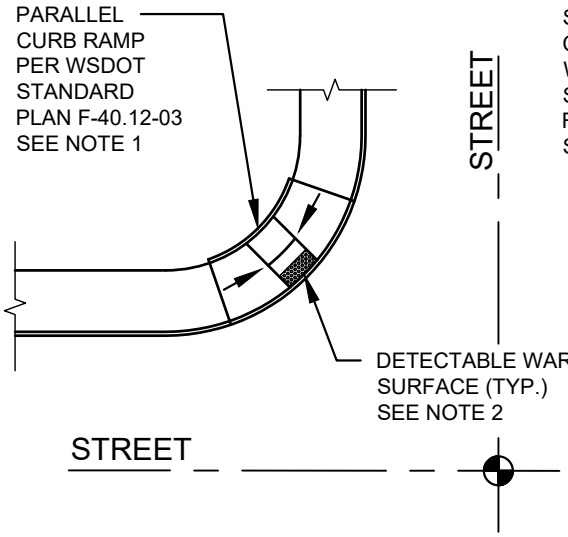
DOUBLE PARALLEL CURB RAMPS



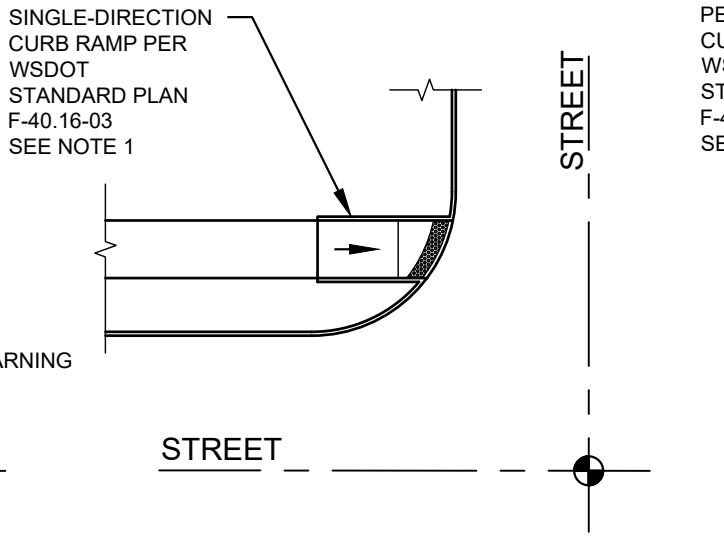
DOUBLE SINGLE-DIRECTION CURB RAMPS

NOTES:

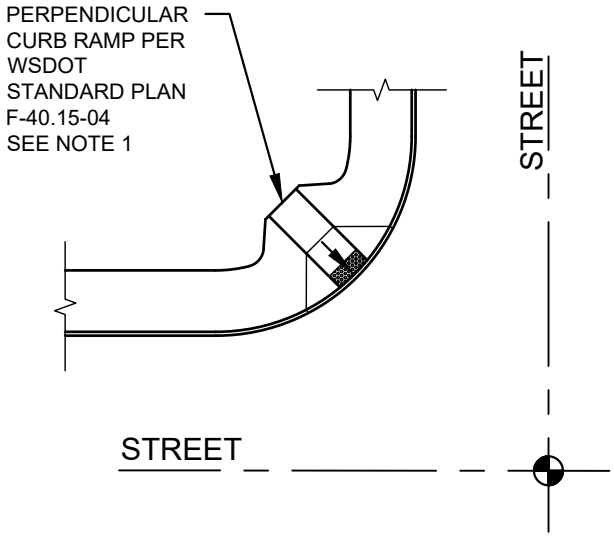
1. SINGLE RAMPS AT INTERSECTIONS ARE ALLOWED ONLY WHEN PROVIDING SEPARATE RAMPS IN EACH DIRECTION IS NOT FEASIBLE OR NOT REQUIRED.
2. PROVIDE TRUNCATED DOME DETECTABLE WARNING SURFACES AS INDICATED IN THE APPROPRIATE WSDOT STANDARD PLANS FOR EACH RAMP PER WSDOT STANDARD PLAN F-45.10-03. DETECTABLE WARNING SURFACES SHALL BE DARK GRAY (FEDERAL STANDARD COLOR NO. 36118) IN COLOR UNLESS OTHERWISE DIRECTED BY THE CITY.
3. ISOLATE CURB RAMPS FROM SIDEWALKS USING 3/8" EXPANSION JOINTS PER WSDOT STANDARD PLAN F-30.10.
4. MAXIMUM ALLOWABLE WASHDOWN RAMP SLOPE IS 8.3%. IF EXISTING CONDITIONS PROHIBIT ACHIEVING AN 8.3% SLOPE, RAMP MUST BE EXTENDED TO A LENGTH OF 15'.
5. ALL SIDEWALK RAMP DESIGNS MUST BE APPROVED BY THE CITY.



PARALLEL CURB RAMP

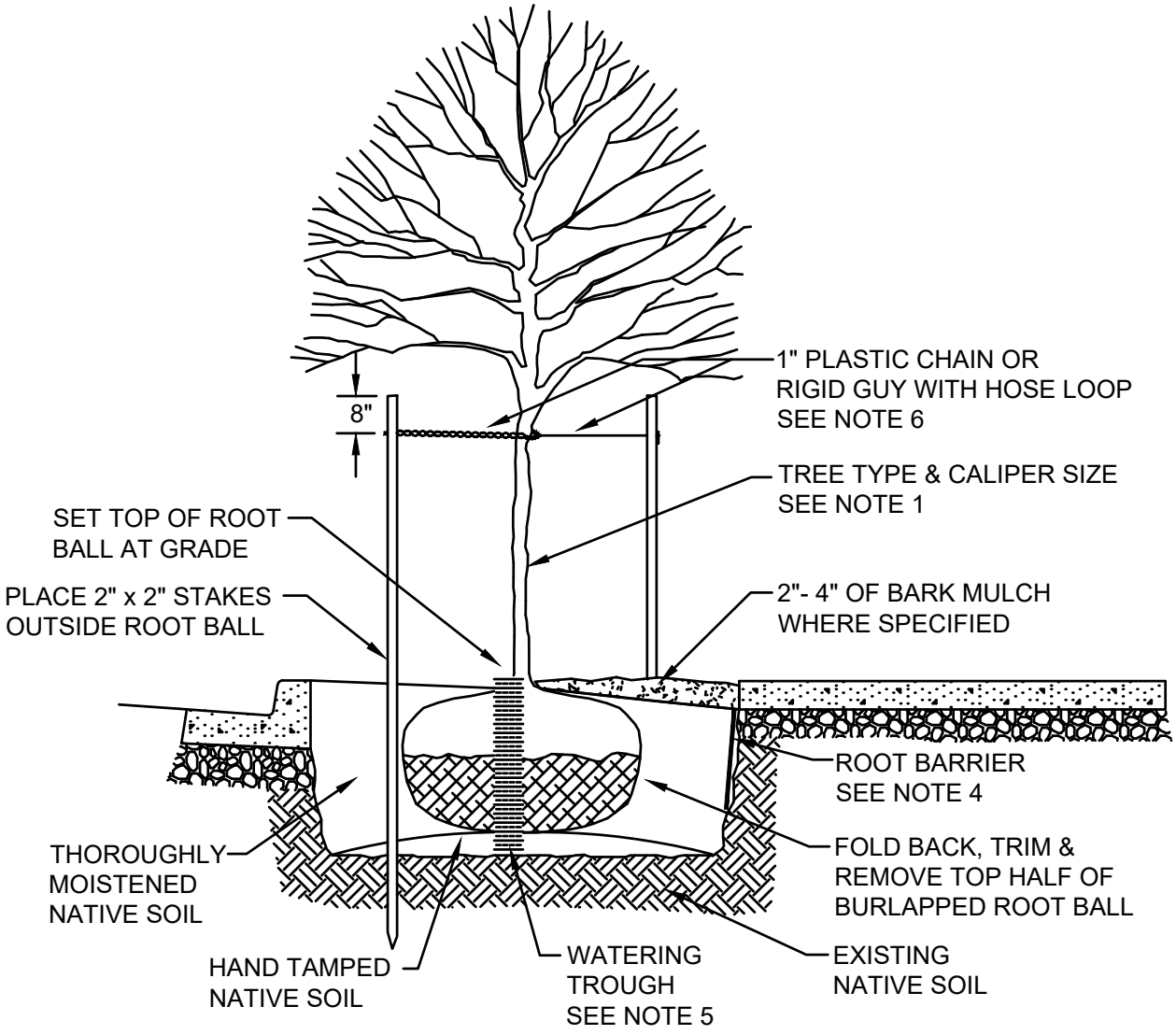


SINGLE-DIRECTION CURB RAMP



PERPENDICULAR CURB RAMP

City Of Shelton Public Works	INTERSECTION SIDEWALK RAMPS	SCALE: NONE DATE: JAN 2023	T-05



CROSS-SECTION

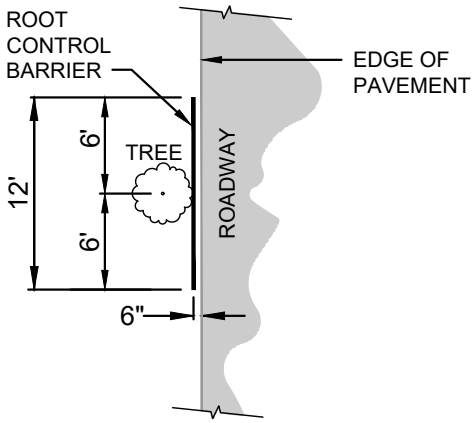
NOTES:

1. TREE SPECIES AND CALIPER SIZE ARE TO BE APPROVED BY THE CITY ARBORIST.
2. ADJUST PLANTING LOCATIONS SO THAT TREE CROWN OR ROOT BALL DOES NOT CONFLICT WITH ABOVE OR BELOW - GROUND UTILITIES.
3. DO NOT UNDERMINE CURB OR SIDEWALK WHEN EXCAVATING.
4. AN 18 INCHES DEEP ROOT BARRIER SHALL BE ADDED WHERE REQUIRED BY THE CITY ARBORIST.
5. OPPOSITE TREE STAKES, PROVIDE TWO 3-INCH DIAMETER ADS PERFORATED PIPE WATERING TROUGHS FILLED WITH PEA GRAVEL.
6. PROVIDE A LOOP IN CHAIN LOCK OR GUY HOSE LARGE ENOUGH TO ALLOW FOR TRUNK GROWTH.
7. TREE STAKES ARE TO BE REMOVED FOLLOWING THE REQUIRED ESTABLISHMENT PERIOD.

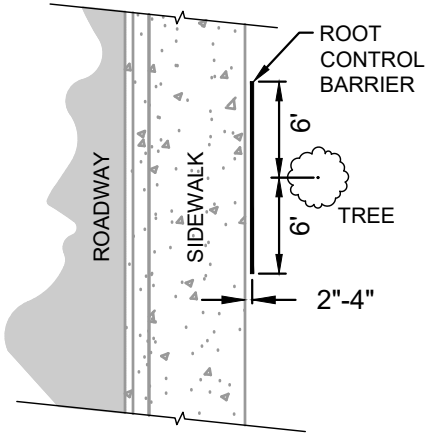
City Of Shelton Public Works	STANDARD SIDEWALK TREEWELL	SCALE: NONE DATE: AUG 2023	T-06

NOTES:

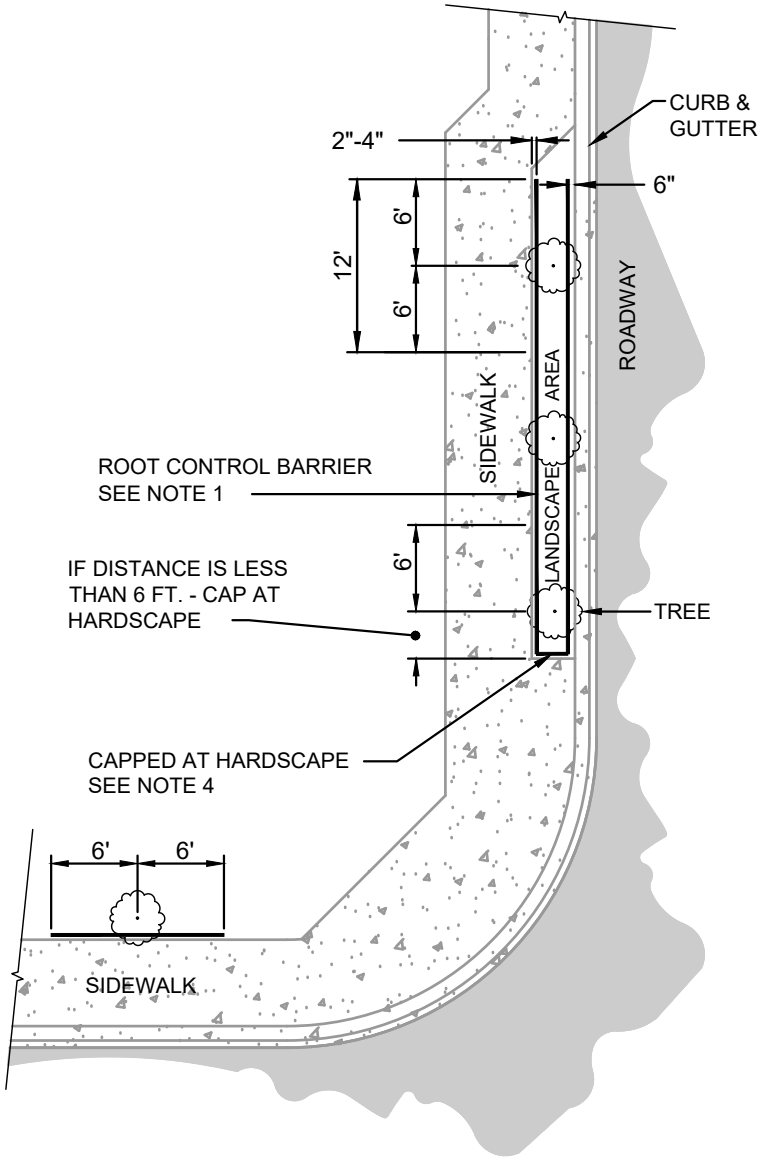
1. IF THE DISTANCE BETWEEN TREE TRUNKS ARE 12 FT. OR LESS, INSTALL CONTINUOUS BARRIER ALONG HARDSCAPE UNTIL 6 FT. BEYOND LAST TREE TRUNK.
2. OFFSET ROOT CONTROL BARRIER 6 INCH MIN. FROM ROADWAY AND CURB & GUTTER AND 2" TO 4" FROM SIDEWALKS.
3. IF NO HARDSCAPE IS ENCOUNTERED, DISTANCE FROM TRUNK OF TREE TO ROOT CONTROL BARRIER CANNOT BE LESS THAN 6 FT. IN ANY DIRECTION.
4. HARDSCAPE DEFINED HERE AS ANY PUBLIC OWNED SURFACE TREATMENT SUCH AS SIDEWALK, CURB & GUTTER, AND ROADWAY.
5. SEE CITY STANDARD DETAIL T-06B FOR SECTION VIEWS AND ADDITIONAL NOTES AND DETAILS.
6. ROOT CONTROL BARRIER SHALL BE DEEPROOT TREE BARRIER UB36-2, CENTURY PRODUCTS TREE BARRIER PANEL CPU 36-2, OR AN APPROVED EQUAL.



TREE BY ROADWAY

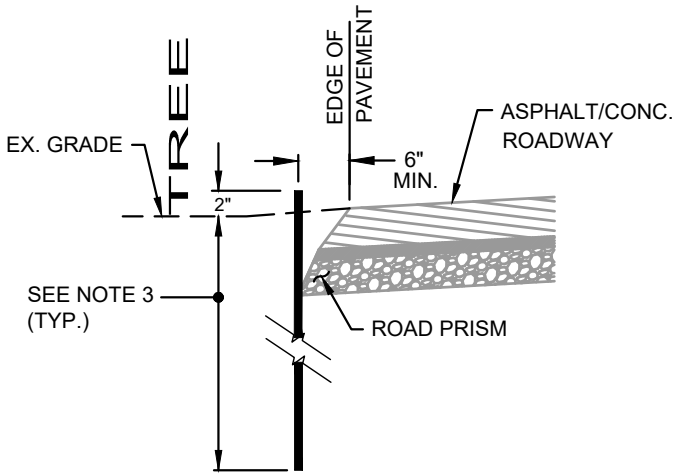


TREE BY SIDEWALK

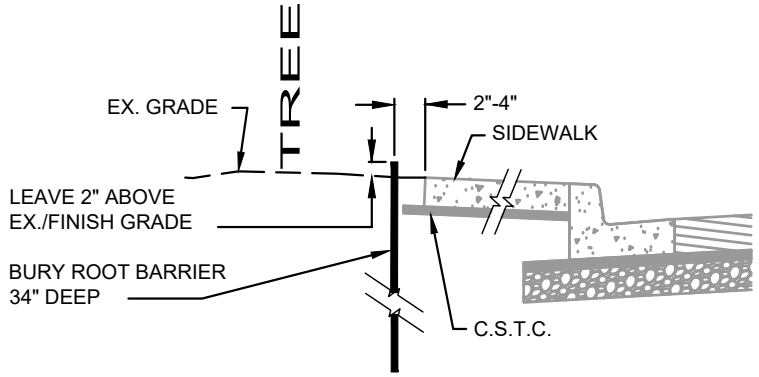


TREES BY SIDEWALK AND IN LANDSCAPING STRIPS

City Of Shelton Public Works	ROOT CONTROL BARRIER PLAN VIEW	SCALE: NONE DATE: AUG 2023	T-06A



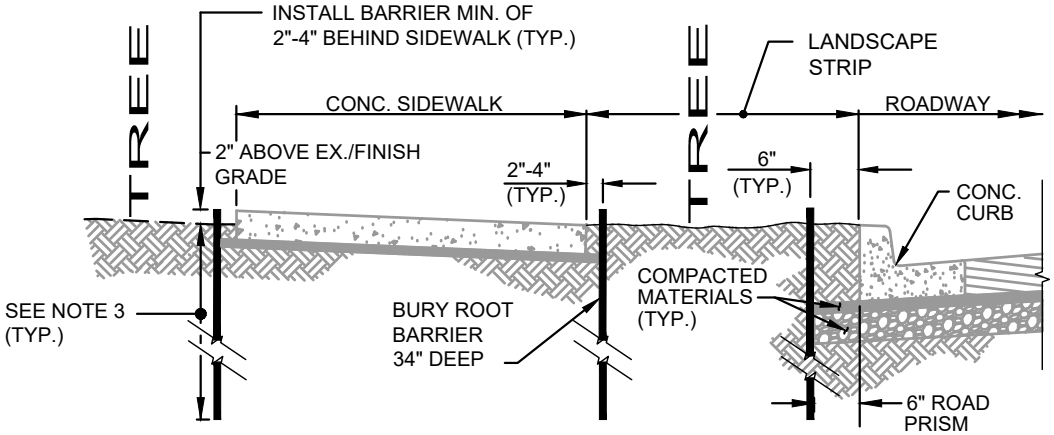
TREE BY ROADSIDE



TREE BY SIDEWALK

NOTES:

1. AFTER ROOT BARRIER IS INSTALLED, BACKFILL w/ APPROVED MATERIAL AND COMPACT TO 95% MAX. DENSITY.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS & AS APPROVED BY CITY ENGINEER.
3. INSTALL 36" LONG ROOT CONTROL BARRIER 34" DEEP. LEAVE 2" EXPOSED ABOVE FINISHED ELEVATION.
4. SEE CITY STANDARD DETAIL T-06A FOR PLAN VIEWS AND ADDITIONAL NOTES AND DETAILS.
6. ROOT CONTROL BARRIER SHALL BE DEEPROOT TREE BARRIER UB36-2, CENTURY PRODUCTS TREE BARRIER PANEL CPU 36-2, OR AN APPROVED EQUAL.

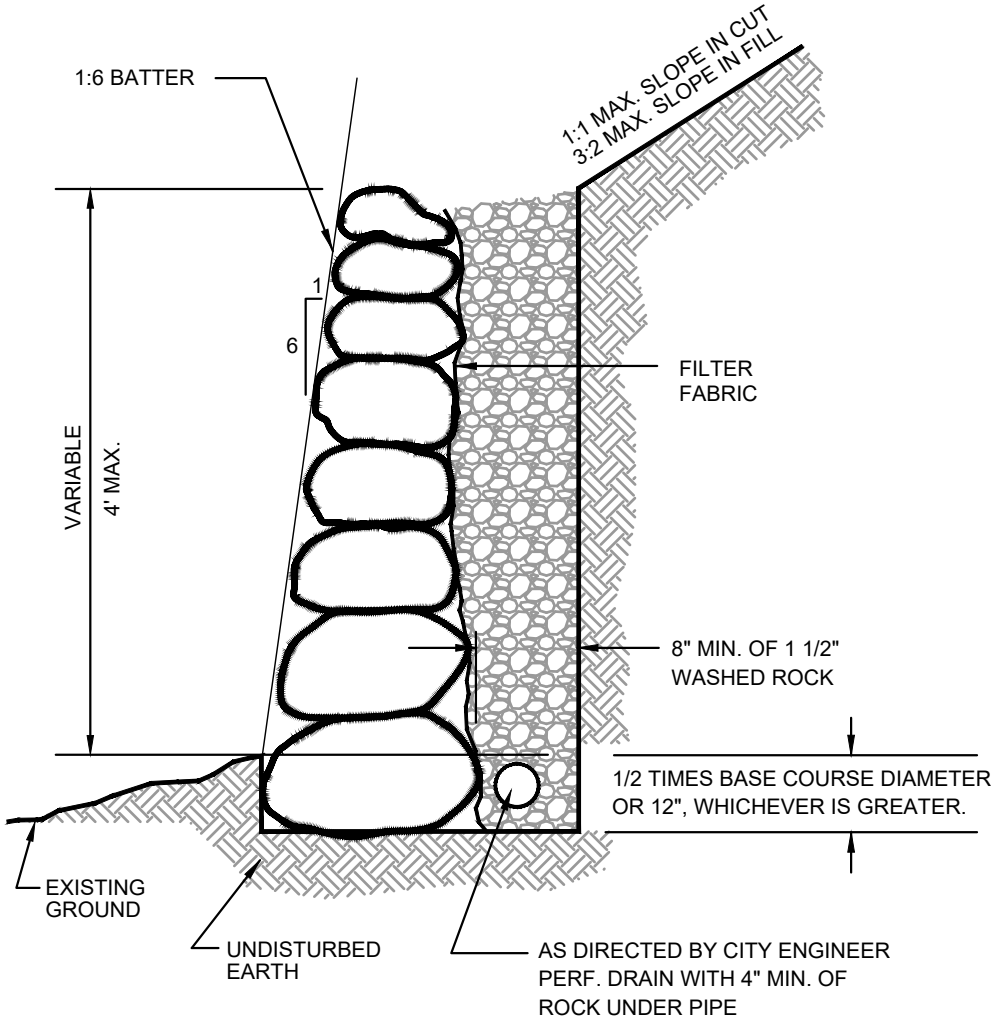


TREES BY SIDEWALK AND IN LANDSCAPING STRIPS

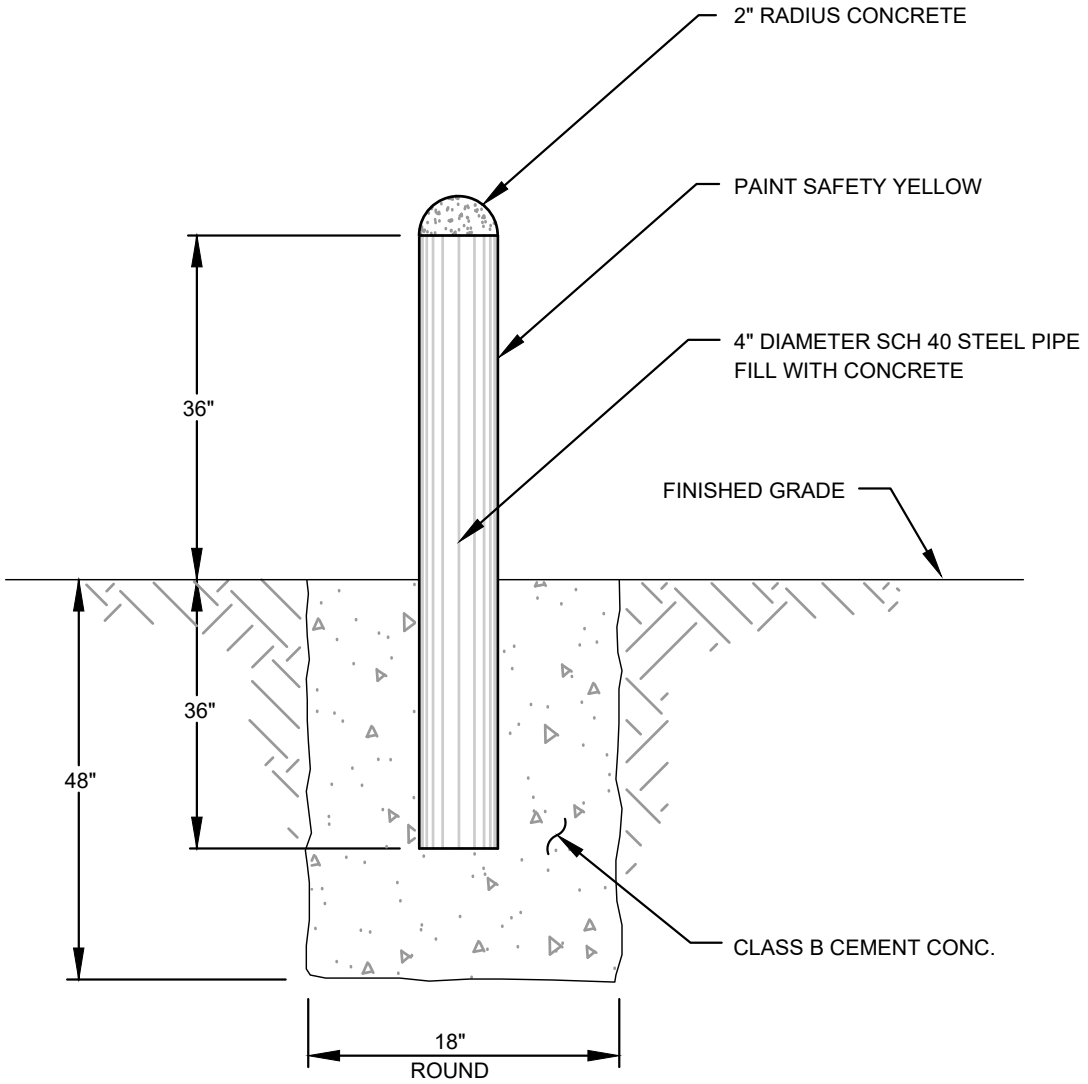
City Of Shelton Public Works	ROOT CONTROL BARRIER SECTION VIEWS	SCALE: NONE DATE: AUG 2023	T-06B

NOTES:

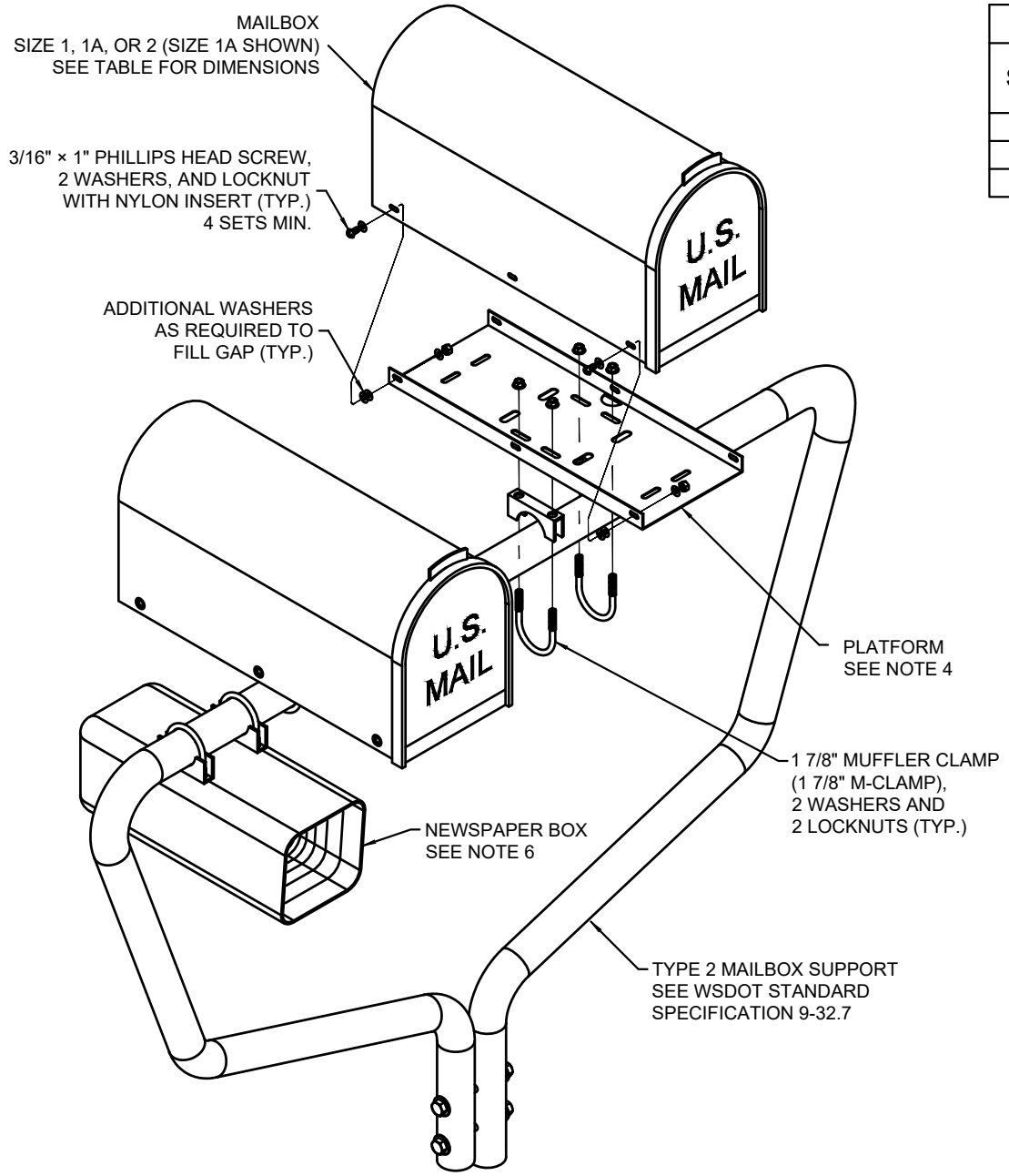
1. ROCKERIES OF 4' OR LOWER SHALL BE CONSTRUCTED OF 3-MAN TO 2-MAN FROM BOTTOM TO TOP. ROCK SIZE CATEGORIES SHALL BE AS FOLLOWS:
   - TWO-MAN ROCKS (300 TO 600 POUNDS), 13 INCHES IN LEAST DIMENSION;
   - THREE-MAN ROCKS (800 TO 1200 POUNDS), 16 INCHES IN LEAST DIMENSION.
2. THE ROCKERY SHALL BE INSTALLED WITH A SMOOTH FACE.
3. THE LONG DIMENSION OF THE ROCKS SHALL BE ORIENTED TOWARDS THE BANK TO PROVIDE MAXIMUM STABILITY.
4. THE ROCK SHALL BE PLACED SO AS TO LOCK INTO TWO ROCKS IN THE LOWER TIER.
5. CALL FOR INSPECTION PRIOR TO BASE COURSE BEING PLACED (FOR VERIFICATION OF ROCKERY HEIGHT, FOUNDATION MATERIAL AND ROCK SIZE).
6. DESIGN VARYING FROM THOSE INDICATED SHALL CARRY THE SEAL OF A CIVIL ENGINEER EXPERIENCED IN SOIL MECHANICS.
7. NO SURCHARGE



City Of Shelton Public Works	ROCK WALL, 4' HIGH OR LESS	SCALE: NONE DATE: AUG 2023	T-07



City Of Shelton Public Works	**BOLLARD**	**SCALE: NONE**	**T-08**
		DATE: AUG 2023	

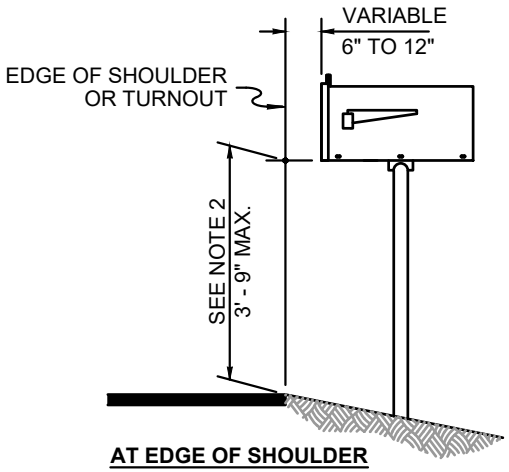


MAILBOX & PLATFORM DIMENSIONS						
SIZE	MAILBOX DIMENSIONS			PLATFORM DIMENSIONS		
	L	W	H	L	W	H
1	19"	6 1/2"	8 1/2"	17"	6"	1"
1A	21"	8"	10 1/2"	19"	7 1/2"	1"
2	24"	11 1/2"	13 1/2"	21"	11"	1"

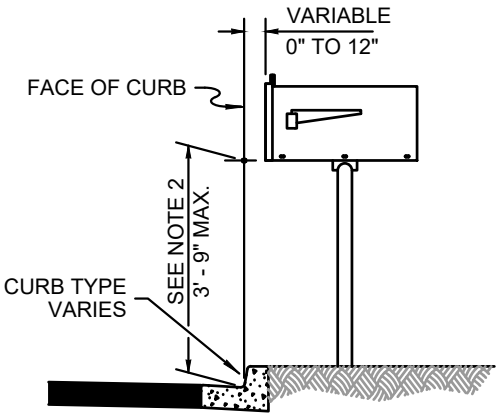
NOTES:

1. SEE CITY STANDARD DETAIL T-09A FOR ADDITIONAL DETAILS AND REQUIREMENTS.
2. THE ANCHORING SYSTEM SHALL MEET NCHRP 350 CRASH TEST CRITERIA. USE A SOCKET AND WEDGE SYSTEM OR THE ANCHORING SYSTEM SUPPLIED BY OR RECOMMENDED BY THE TYPE 2 SUPPORT MANUFACTURER.
3. A MAXIMUM OF FIVE MAILBOXES MAY BE INSTALLED ON A TYPE 2 SUPPORT.
4. SEE PLATFORM DETAIL ON CITY STANDARD DETAIL T-09A. PLATFORM DETAIL FEATURES SLOTS THAT ACCOMMODATE SEVERAL TYPES OF MAILBOX SUPPORTS; ONLY THOSE SLOTS NECESSARY FOR ASSEMBLING THE TYPE OF MAILBOX BEING INSTALLED ARE REQUIRED. AN ADJUSTABLE PLATFORM MAY BE USED IN LIEU OF THIS PLATFORM DESIGN. ADJUSTABLE PLATFORMS MUST FIT THE 1 7/8" M-CLAMP.
5. CENTER THE MAILBOX ON THE PLATFORM TO ENSURE SPACE FOR THE MAILBOX DOOR TO OPEN AND TO ALLOW SPACE FOR INSTALLING THE FASTENERS. SPACING OF MAILBOX MOUNTING HOLES VARIES AMONG MANUFACTURERS. ATTACHMENT OF THE MAILBOX TO THE PLATFORM MAY REQUIRE DRILLING ADDITIONAL HOLES THROUGH THE MAILBOX TO FIT THE PLATFORM.
6. ATTACH A NEWSPAPER BOX TO A TYPE 2 SUPPORT WITH TWO 1 7/8" MUFFLER CLAMPS SPACED 4" APART. FIELD DRILL 7/16" HOLES IN THE NEWSPAPER BOX TO FIT. NEWSPAPER BOXES MUST NOT EXTEND BEYOND THE FRONT OF THE MAILBOX WHEN THE MAILBOX DOOR IS CLOSED.
7. THIS DRAWING DEPICTS A MINIMUM STRUCTURAL AND DIMENSIONAL STANDARD FOR A CLUSTER MAILBOX INSTALLATION. FOR SPECIFIC POSTAL REQUIREMENTS, CONTACT THE POSTMASTER.
8. MAILBOXES MUST BE POSTMASTER APPROVED WITH A UNIFORM BOX STYLE AND METHOD OF ADDRESS IDENTIFICATION.
9. LOCATIONS OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE PUBLIC WORKS DIRECTOR FOR PROTECTION OF VIEWS AND ACCESS.

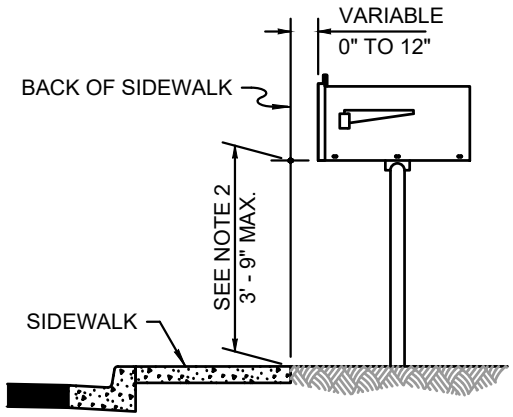
City Of Shelton Public Works	MAILBOX CLUSTER INSIDE/OUTSIDE OF PAVED AREA	SCALE: NONE DATE: AUG 2023	T-09



AT EDGE OF SHOULDER

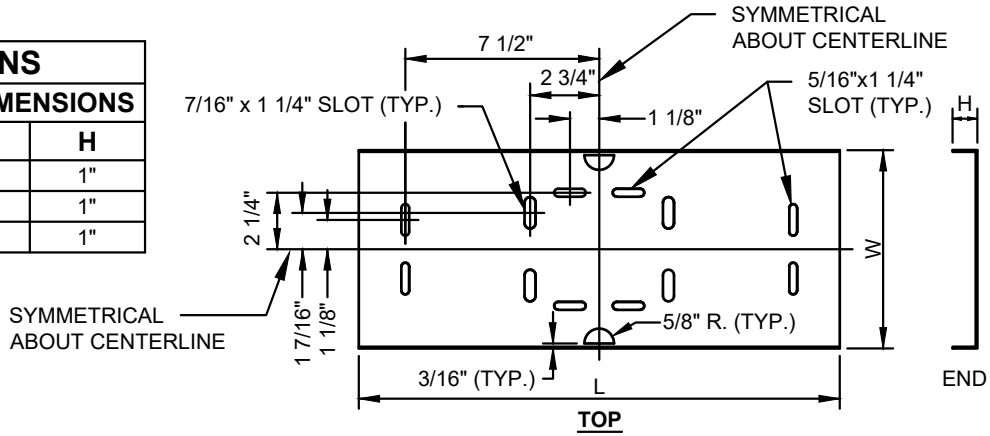


BEHIND CURB



BEHIND SIDEWALK

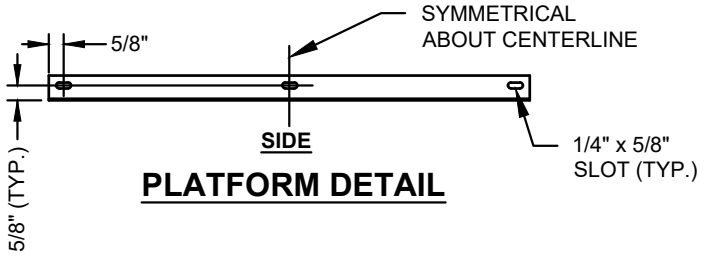
MAILBOX & PLATFORM DIMENSIONS						
SIZE	MAILBOX DIMENSIONS			PLATFORM DIMENSIONS		
	L	W	H	L	W	H
1	19"	6 1/2"	8 1/2"	17"	6"	1"
1A	21"	8"	10 1/2"	19"	7 1/2"	1"
2	24"	11 1/2"	13 1/2"	21"	11"	1"



TOP

NOTES:

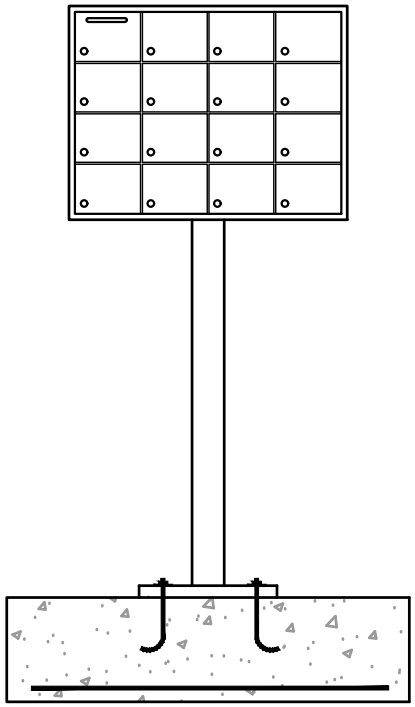
1. SEE CITY STANDARD DETAIL T-09 FOR ADDITIONAL DETAILS AND REQUIREMENTS.
2. MINIMUM HEIGHT SHALL BE 3'-5" UNLESS OTHERWISE INDICATED IN THE PLANS.



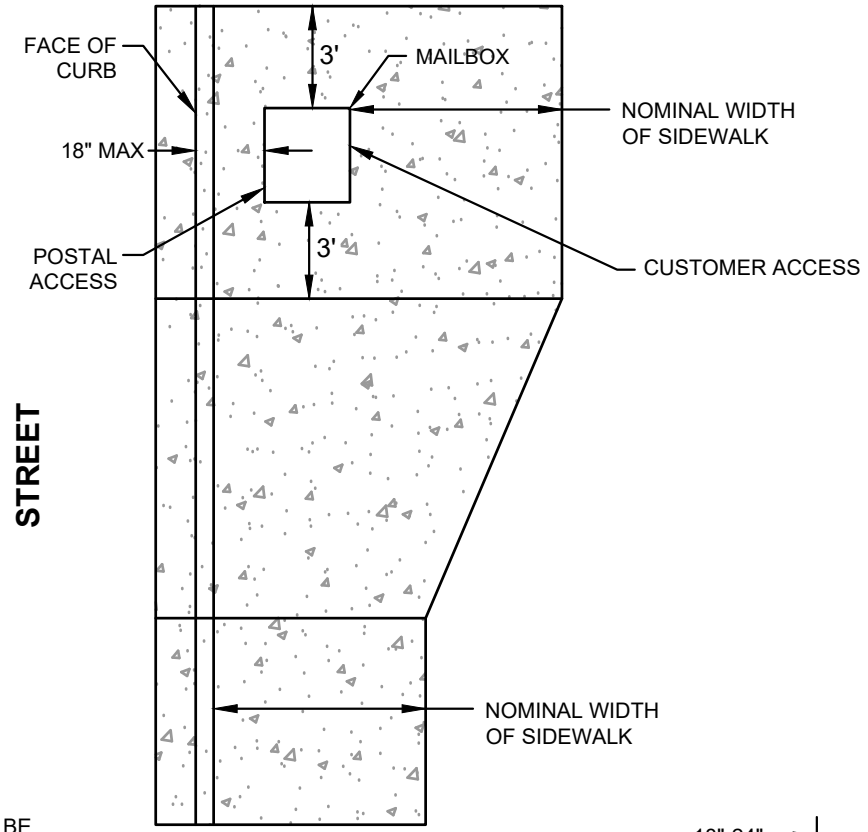
SIDE

PLATFORM DETAIL

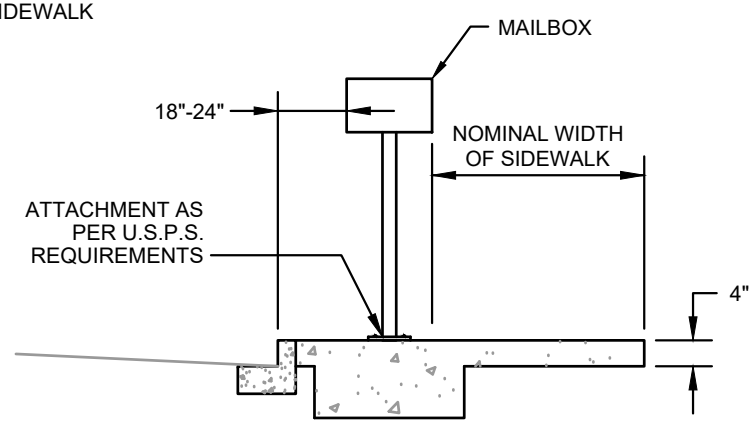
City Of Shelton Public Works	MAILBOX CLUSTER INSIDE/OUTSIDE OF PAVED AREA DETAILS	SCALE: NONE DATE: AUG 2023	T-09A



FRONT VIEW



PLAN VIEW

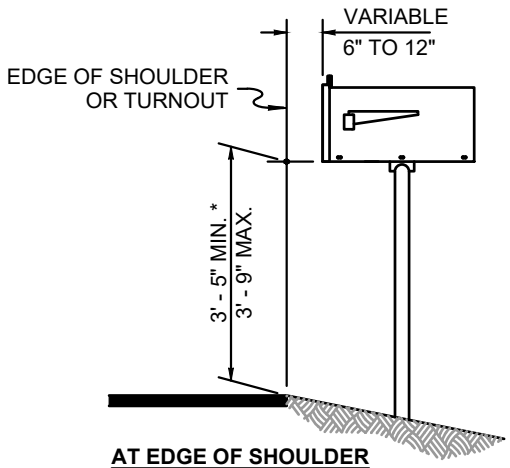


SIDE VIEW

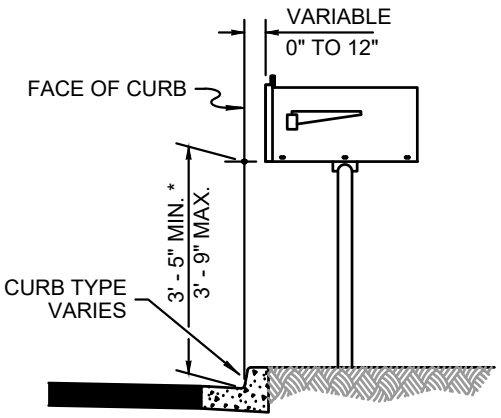
NOTES:

1. LOCATION OF PEDESTAL PARCEL LOCKER WILL BE APPROVED BY PUBLIC WORKS DIRECTOR AND THE POSTAL SERVICE.
2. THIS DRAWING DEPICTS A MINIMUM STRUCTURAL AND DIMENSIONAL STANDARD FOR NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT AND PADS. FOR SPECIFIC POSTAL REQUIREMENTS, CONTACT THE POSTMASTER.
3. MAILBOXES MUST BE POSTMASTER APPROVED WITH A UNIFORM BOX STYLE AND METHOD OF ADDRESS IDENTIFICATION.
4. LOCATIONS OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE PUBLIC WORKS DIRECTOR FOR PROTECTION OF VIEWS AND ACCESS.

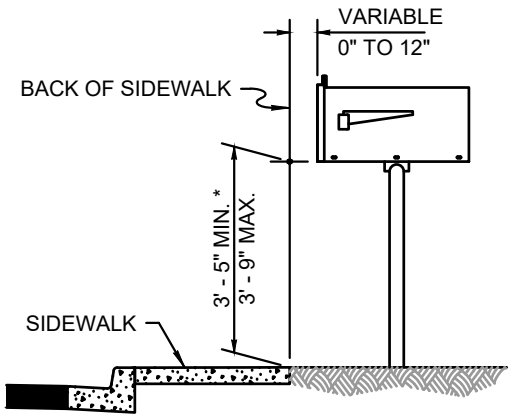
City Of Shelton Public Works	MAILBOX SETBACKS	SCALE: NONE DATE: AUG 2023	T-09B



AT EDGE OF SHOULDER



BEHIND CURB

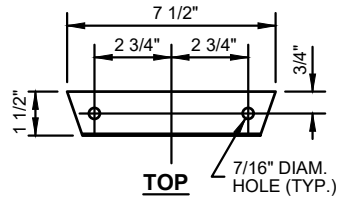


BEHIND SIDEWALK

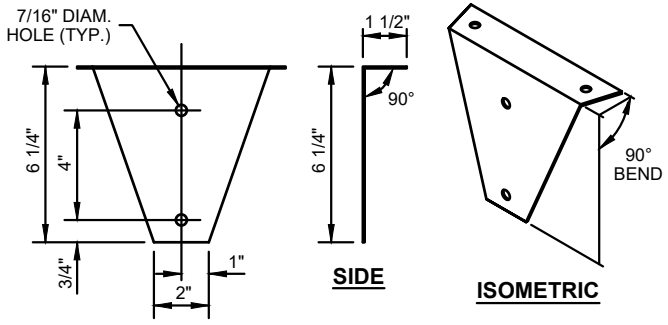
* UNLESS OTHERWISE SHOWN IN THE PLANS

MAILBOX & PLATFORM DIMENSIONS

SIZE	MAILBOX DIMENSIONS			PLATFORM DIMENSIONS		
	L	W	H	L	W	H
1	19"	6 1/2"	8 1/2"	17"	6"	1"
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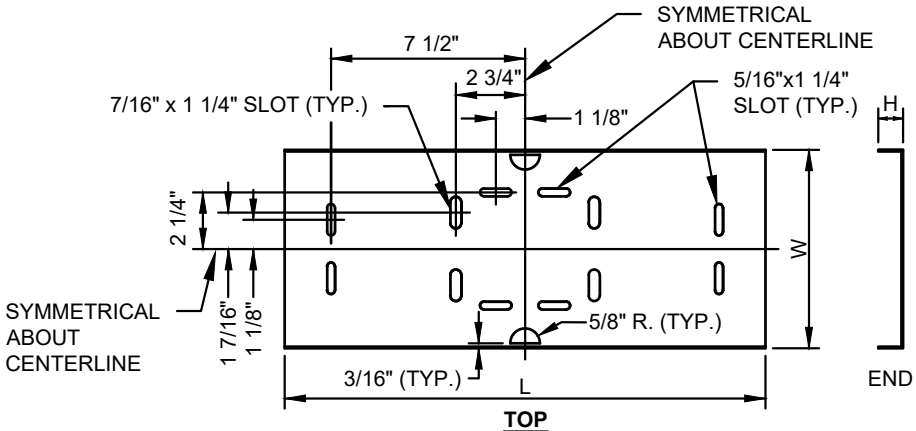


TOP

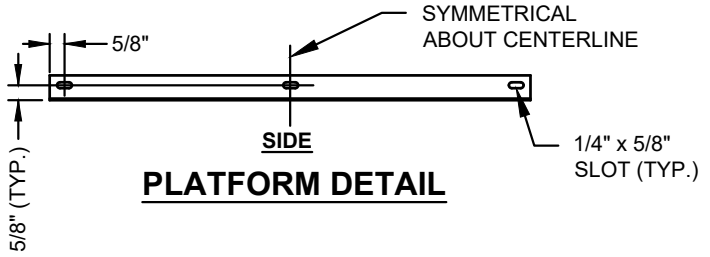


FRONT **SIDE** **ISOMETRIC**

BRACKET DETAIL



TOP



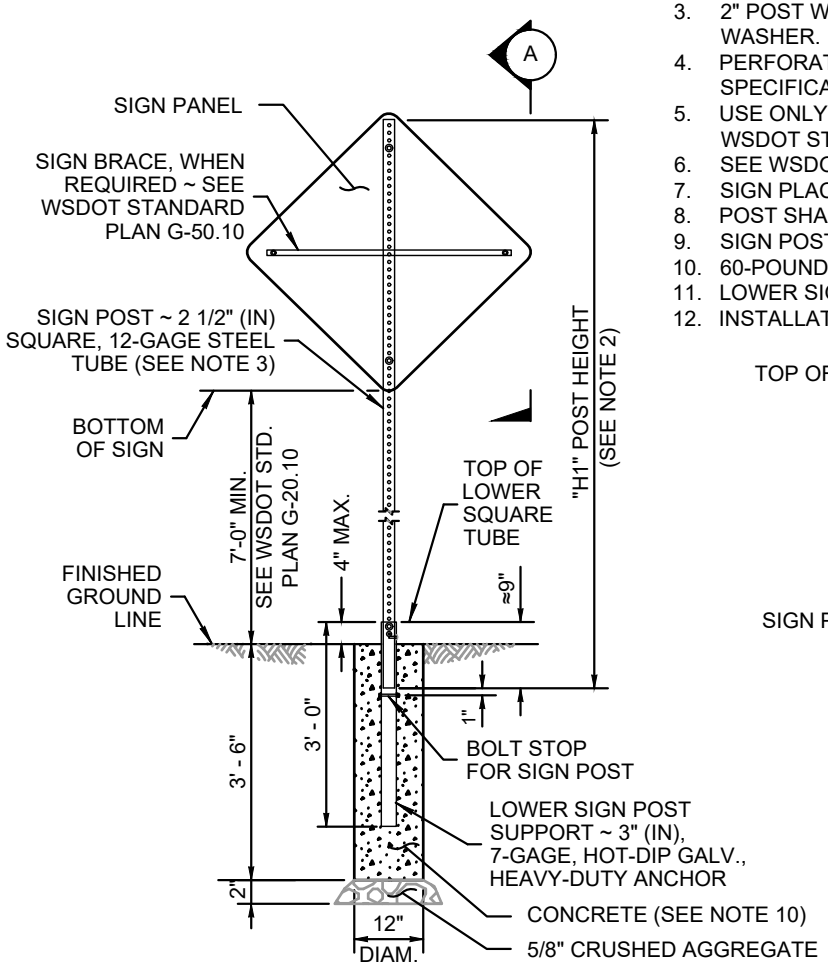
SIDE

PLATFORM DETAIL

City Of Shelton Public Works	SINGLE MAILBOX INSIDE PAVED AREA DETAILS	SCALE: NONE DATE: AUG 2023	T-09C

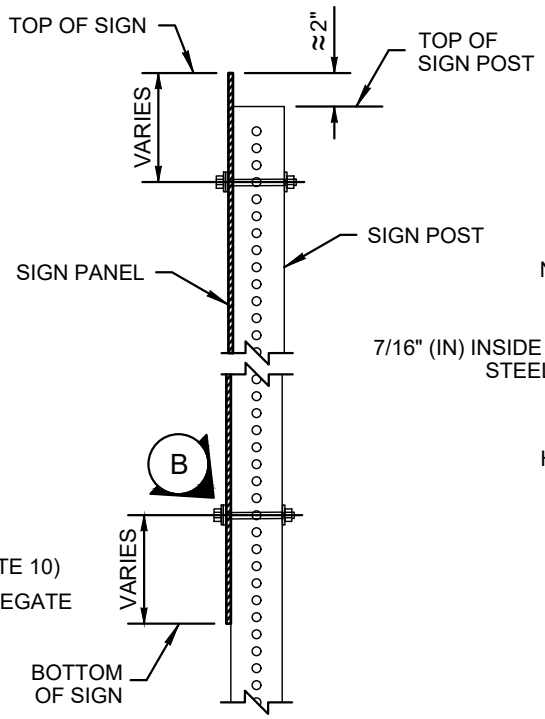
NOTES:

1. DIMENSIONS FOR THE PARTS USED TO ASSEMBLE THE BASE CONNECTIONS ARE INTENTIONALLY NOT SHOWN. BASE CONNECTIONS ARE PATENTED, MANUFACTURED PRODUCTS THAT ARE IN COMPLIANCE WITH NCHRP 350 CRASH TEST CRITERIA. THE BASE CONNECTION DETAILS ARE SHOWN ON THIS PLAN ONLY TO ILLUSTRATE HOW THE PARTS ARE ASSEMBLED.
2. FOR "H1", REFER TO THE SIGN SPECIFICATION SHEET IN THE CONTRACT.
3. 2" POST WITH A 2 1/4" 7-GAUGE BREAKAWAY ANCHOR; 2 1/2" x 5/16" STAINLESS STEEL BOLT, NUT, AND WASHER.
4. PERFORATED SQUARE STEEL POST SHALL MEET THE REQUIREMENTS OF WSDOT STANDARD SPECIFICATIONS SECTION 9-06.
5. USE ONLY BASE CONNECTION MANUFACTURER-SUPPLIED HARDWARE THAT MEETS THE REQUIREMENTS OF WSDOT STANDARD SPECIFICATIONS SECTIONS 9-06 AND 9-28.
6. SEE WSDOT STANDARD PLAN G-24.50 (CURRENT REVISION) FOR ADDITIONAL INSTALLATION REQUIREMENTS.
7. SIGN PLACEMENT IN DIRT SHALL BE A MINIMUM OF 24" FROM CURB FACE - VARIES BY SIGN SIZE.
8. POST SHALL BE SPRAYED WITH PERMATEX ALUMINUM OR EQUAL ON THE BOTTOM 2'-6".
9. SIGN POST SHALL BE INSERTED A MINIMUM OF 12" INTO THE 30" BASE.
10. 60-POUND SACK OF 3500 PSI CONCRETE.
11. LOWER SIGN POST SHALL BE SOLID AND NON-PERFORATED.
12. INSTALLATION AND LOCATION OF SIGNS SHALL ADHERE TO CITY AND STATE STANDARD SPECIFICATIONS.

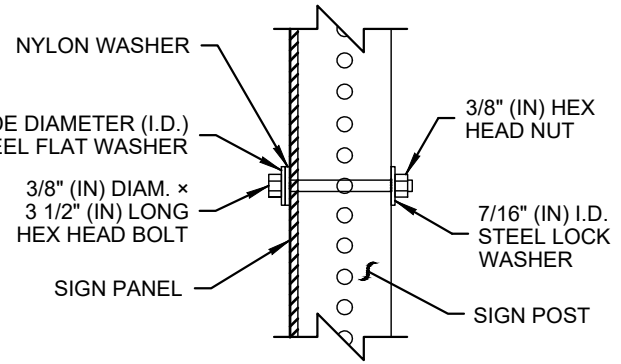


ELEVATION

TYPE ST-4 SIGN SUPPORT

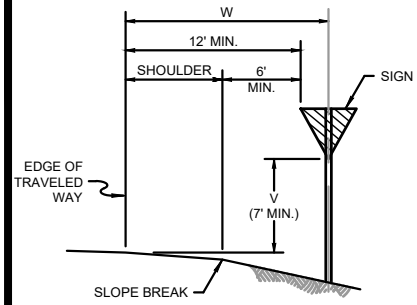


VIEW (A)

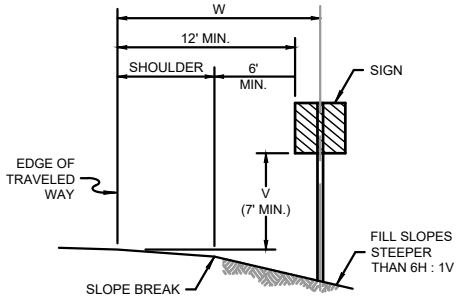


DETAIL (B)

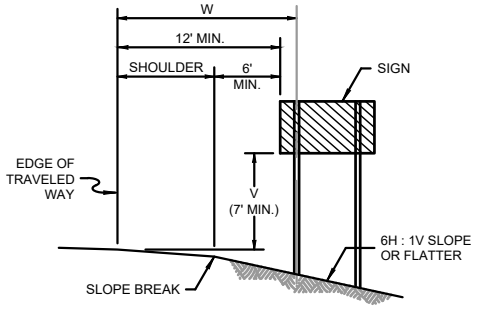
City Of Shelton Public Works	SIGN POST INSTALLATION	SCALE: NONE DATE: AUG 2023	T-10



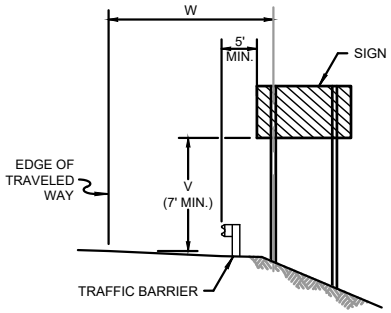
SIGN INSTALLATION IN FILL SECTION



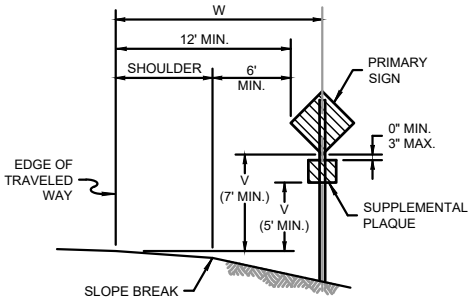
SIGN INSTALLATION ON STEEP FILL SLOPES



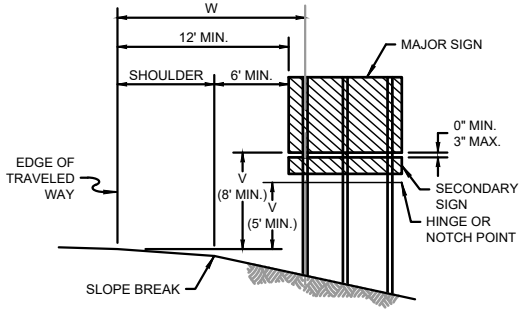
MULTIPLE SIGN POST INSTALLATION IN FILL SECTION



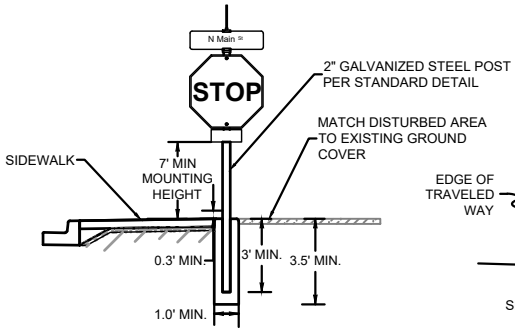
SIGN INSTALLATION BEHIND TRAFFIC BARRIER



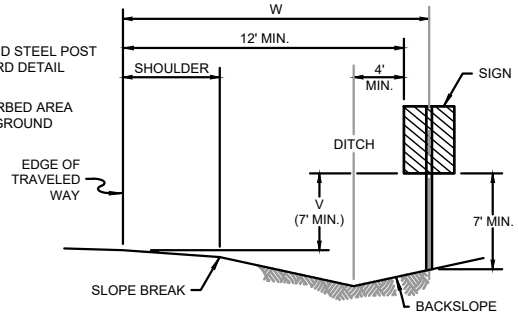
SIGN WITH SUPPLEMENTAL PLAQUE INSTALLATION IN FILL SECTION



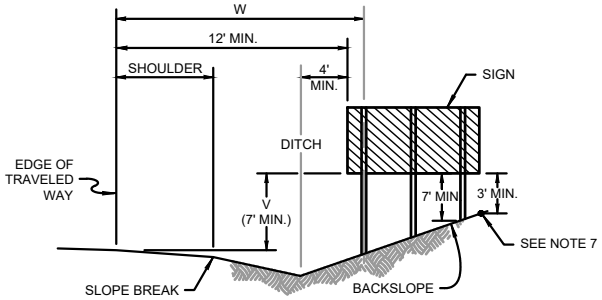
GUIDE OR DIRECTIONAL SIGN WITH SECONDARY SIGN INSTALLATION ON EXPRESSWAYS AND FREEWAYS



SIGN INSTALLATION IN CURB SECTION



SIGN INSTALLATION IN DITCH SECTION



MULTIPLE SIGN POST INSTALLATION IN DITCH SECTION

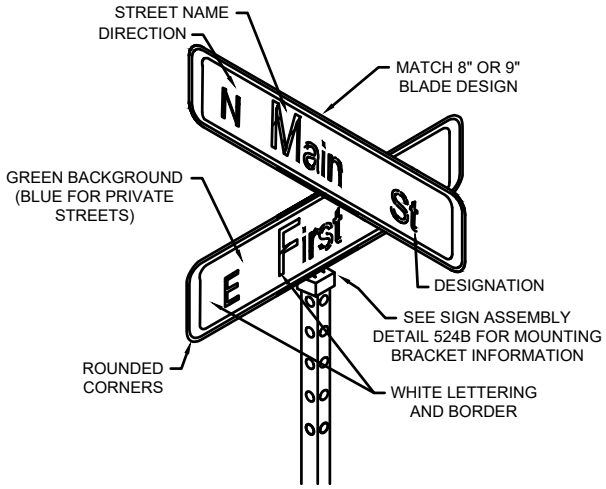
NOTES:

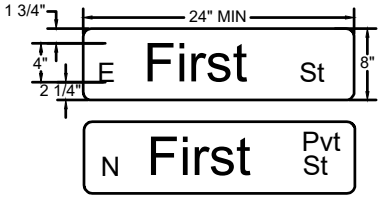
1. REFER TO THE SIGN SPECIFICATION SHEET OF THE CONTRACT FOR DISTANCES 'V' AND 'W'.
2. THE MINIMUM VERTICAL DISTANCE FROM THE BOTTOM OF THE SIGN TO THE GROUND SHALL NOT BE LESS THAN 7 FEET FOR SIGNS LOCATED WITHIN THE DESIGN CLEAR ZONE.
3. ALL NUTS AND BOLTS SHALL BE STAINLESS STEEL.
4. THE STREET NAMES AND LETTERING SHALL BE APPROVED BY THE CITY.
5. SEE WSDOT STANDARD PLAN G-20.10 (CURRENT REVISION) FOR ADDITIONAL REQUIREMENTS.
6. INSTALLATION AND LOCATION OF SIGNS SHALL ADHERE TO CITY AND STATE STANDARD SPECIFICATIONS.
7. MINIMUM HEIGHT 3 FEET TO HIGH POINT OF GROUND UNDERNEATH BOTTOM EDGE OF SIGN PANEL IN DITCH SECTIONS.

City Of Shelton Public Works	GROUND MOUNTED SIGN PLACEMENT	SCALE: NONE DATE: AUG 2023	T-10A

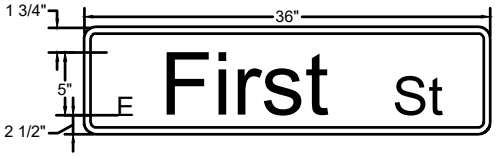
BLADE AND LETTERING SIZE REQUIREMENTS (SEE NOTE 8)

POSTED SPEED (MPH)	BLADE SIZE	UPPERCASE LETTER HEIGHT	LOWERCASE LETTER HEIGHT	DIRECTION (N,S,E,W)	DESIGNATION (ST,DR,ETC.)	LETTER SPACING
25 OR LESS	6" HIGH	4"	3"	2 1/2"	1/2" SMALLER THAN LOWER CASE LETTER	1/2"
30 OR LESS	9" HIGH	6"	3 3/4"	3 1/4"		3/4"





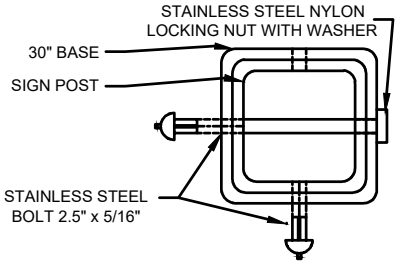
25 MPH OR LESS



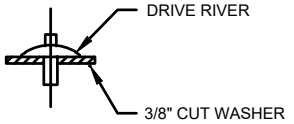
30 MPH AND HIGHER

NOTES:

1. SIGN POST SHALL BE INSERTED A MINIMUM OF 12" INTO THE 30" BASE.
2. SLEEVE SHALL BE 30" 7 GAUGE X 2-1/4" - POST SHALL BE 14 GA X 2".
3. CAP AND CROSSPIECE TO BE THE SAME STYLE, 12" BLADE MINIMUM.
4. SEE DETAILS M-08A & M-08B FOR GROUND & CONCRETE SIGN APPLICATIONS.
5. SEE CHAPTER 2 IN THE ENGINEERING DESIGN MANUAL FOR THE MATERIAL SPECIFICATIONS.
6. INSTALLATION AND LOCATION OF SIGNS SHALL ADHERE TO CITY AND STATE STANDARD SPECIFICATIONS.
7. BLADE LENGTH SHALL BE ADJUSTED TO ACCOMMODATE LENGTH OF STREET NAME.
8. BLADE AND LETTERING SHALL MEET REQUIREMENTS FOR CONVENTIONAL ROADS IN RURAL DISTRICTS SET FORTH BY THE MUTCD FOR LETTER STYLE AND SIZE OF LETTERING.
9. ALL NAMES SHALL BE APPROVED BY THE CITY.
10. ALL SIGNS SHALL BE HIGH INTENSITY PRISMATIC GRADE SHEETING.
11. LOCATE POSTS SO TRAFFIC CONTROL SIGNS CAN BE PLACED ON THE SAME POST WITH PROPER CLEARANCE.
12. SLEEVE SHALL BE 30" - 12GA x 2 1/4" SQ.; TUBE POST SHALL BE12GA x 2" SQ. TUBE.
13. MAINTAIN 7' OF CLEARANCE FROM THE BOTTOM OF THE LOWEST STREET SIGN TO FINISHED GRADE.
14. STREET NAME SIGNS SHALL BE OF TYPE FLAT DOUBLE FACED, .125 ALUMINUM WITH HIGH INTENSITY REFLECTIVE PRISMATIC GRADE SHEETING
15. STREET NAME SIGNS SHALL USE WHITE LETTERING ON GREEN BACKGROUND WITH WHITE BORDER AS SHOWN. A BLUE BACKGROUND SHALL BE USED FOR PRIVATE STREETS IN PLACE OF GREEN.

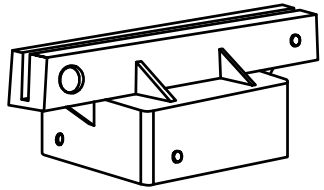


SECTION A-A

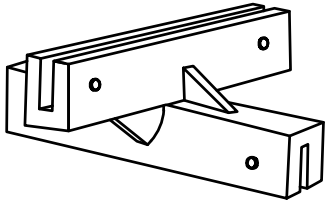


DRIVER RIVET DETAIL

FOR MOUNTING SIGN



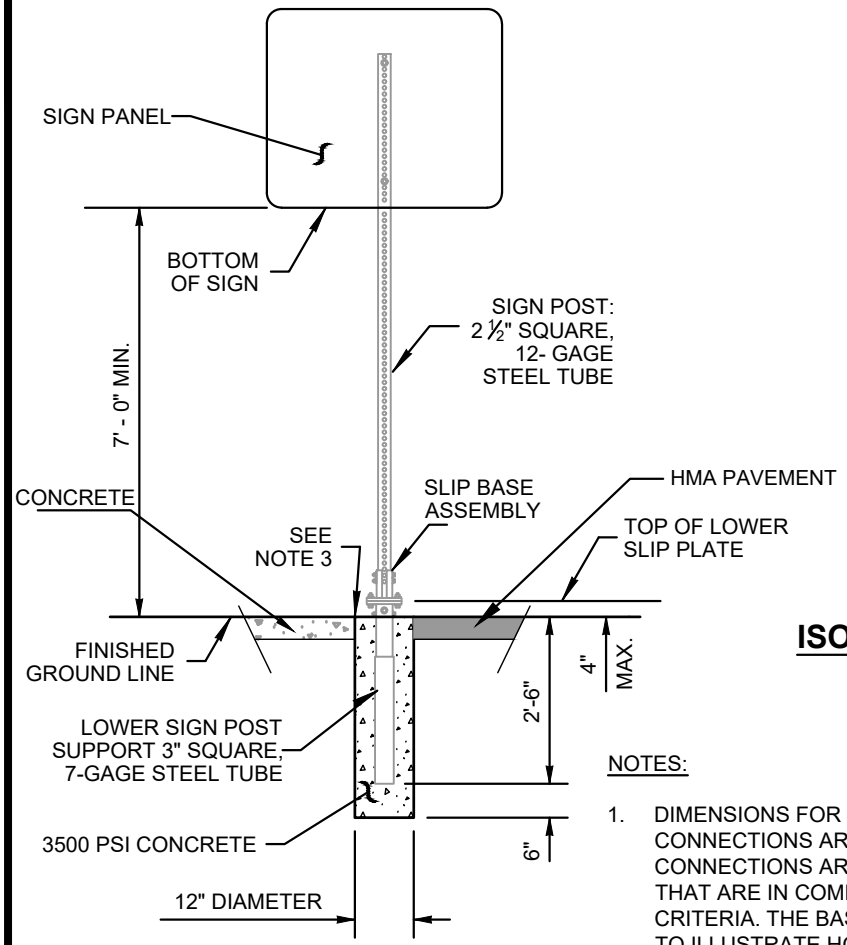
HOLDER (OR EQUIVALENT) VULCAN INC. VS-4 CAP 12" BLADE



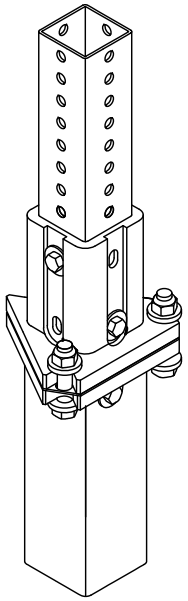
VULCAN INC. VS-4 CROSS 12" BLADE HOLDER (OR EQUIVALENT)

STREET NAME BLADE HOLDERS

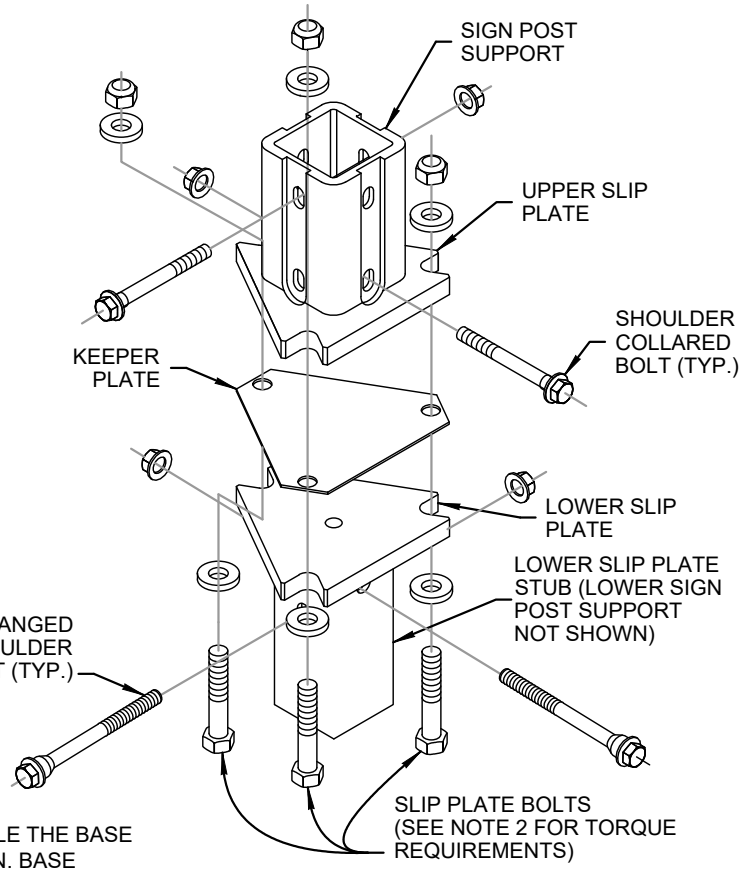
City Of Shelton Public Works	STREET SIGN AND LETTERING	SCALE: NONE DATE: AUG 2023	T-10B



ELEVATION



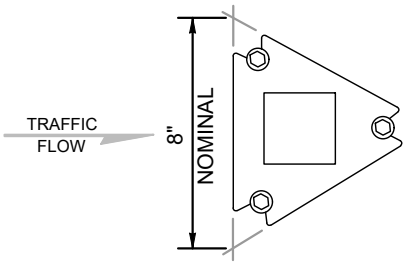
ISOMETRIC VIEW



EXPLODED VIEW TYPE SB-3 SLIP BASE ASSEMBLY

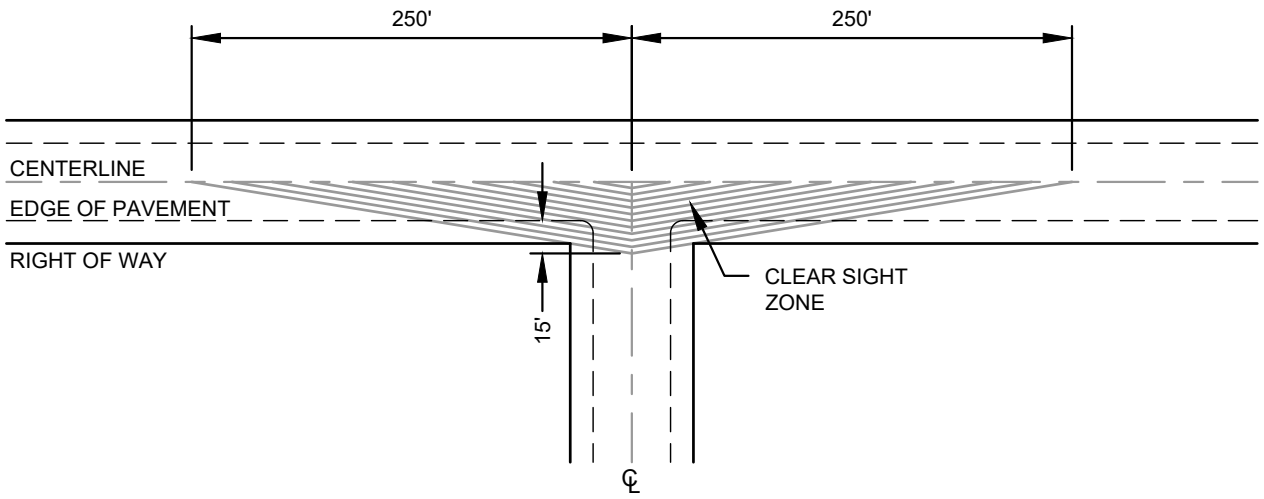
NOTES:

1. DIMENSIONS FOR THE PARTS USED TO ASSEMBLE THE BASE CONNECTIONS ARE INTENTIONALLY NOT SHOWN. BASE CONNECTIONS ARE PATENTED, MANUFACTURED PRODUCTS THAT ARE IN COMPLIANCE WITH NCHRP 350 CRASH TEST CRITERIA. THE BASE CONNECTION DETAILS ARE ONLY SHOWN TO ILLUSTRATE HOW PARTS ARE ASSEMBLED.
2. DO NOT TIGHTEN ANY SINGLE SLIP PLATE BOLT TO THE RECOMMENDED TORQUE BEFORE PRETIGHTENING THE OTHER BOLTS. PROGRESSIVELY TIGHTEN THE THREE SLIP PLATE BOLTS IN 10 FT-LB INCREMENTS, ALTERNATELY, TO A FINAL TORQUE OF 40 FT-LB ON EACH
3. TOP OF CONCRETE FOUNDATION SHALL BE SMOOTH, DENSE AND UNIFORM TO FINISHED GROUND LINE.
4. SEE WSDOT STANDARD PLAN G-24.50-05 FOR ADDITIONAL INSTALLATION REQUIREMENTS.



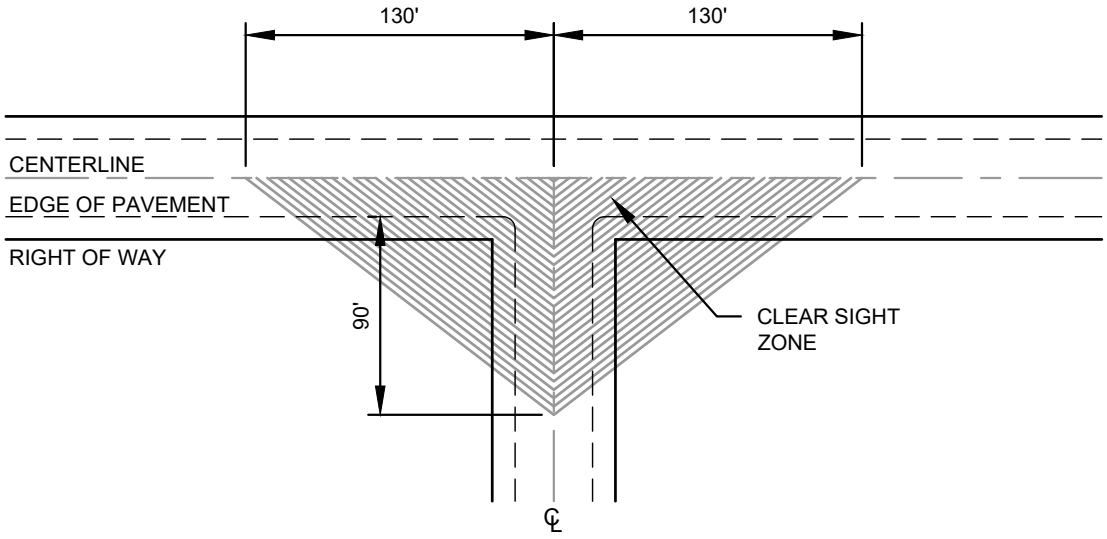
SLIP PLATE DETAIL FOR TYPE SB-3

City Of Shelton Public Works	SIGN POST IN PAVED/CONCRETE AREA	SCALE: NONE DATE: AUG 2023	T-10C



STOP OR YIELD-CONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT = 25 MPH



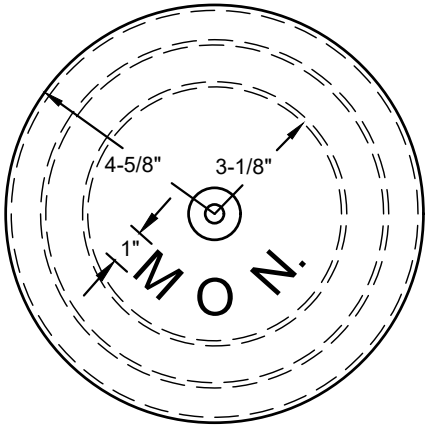
UNCONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT = 30 MPH
MINOR STREET SPEED LIMIT = 20 MPH

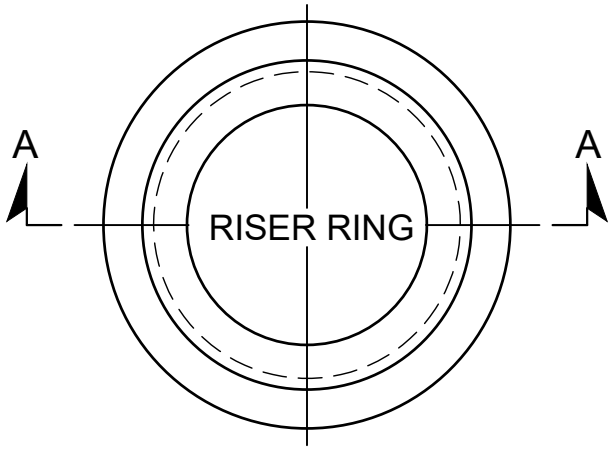
NOTES:

1. CLEAR SIGHT ZONE TRIANGLE SHALL BE KEPT CLEAR OF OBSTRUCTIONS BETWEEN 3 FEET AND 10 FEET ABOVE THE SURFACE OF THE ROADWAY. SEE SECTION 2.170 OF THE CITY STANDARDS.

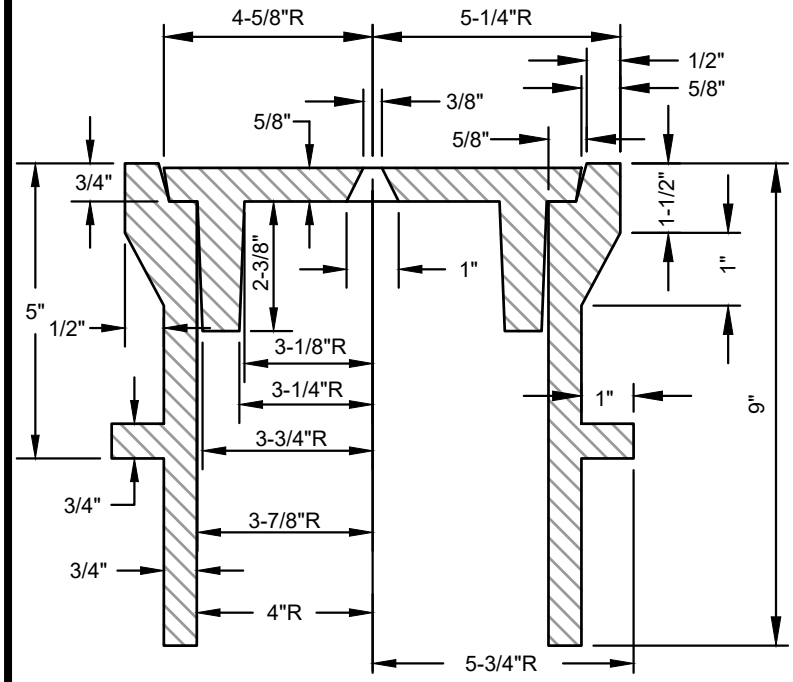
City Of Shelton Public Works	SIGHT OBSTRUCTION DETAILS	SCALE: NONE DATE: JAN 2023	T-12



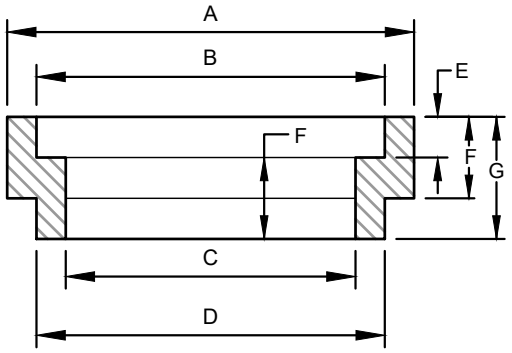
COVER PLAN VIEW



RISER PLAN VIEW



COVER SECTION VIEW



RISER SECTION A-A

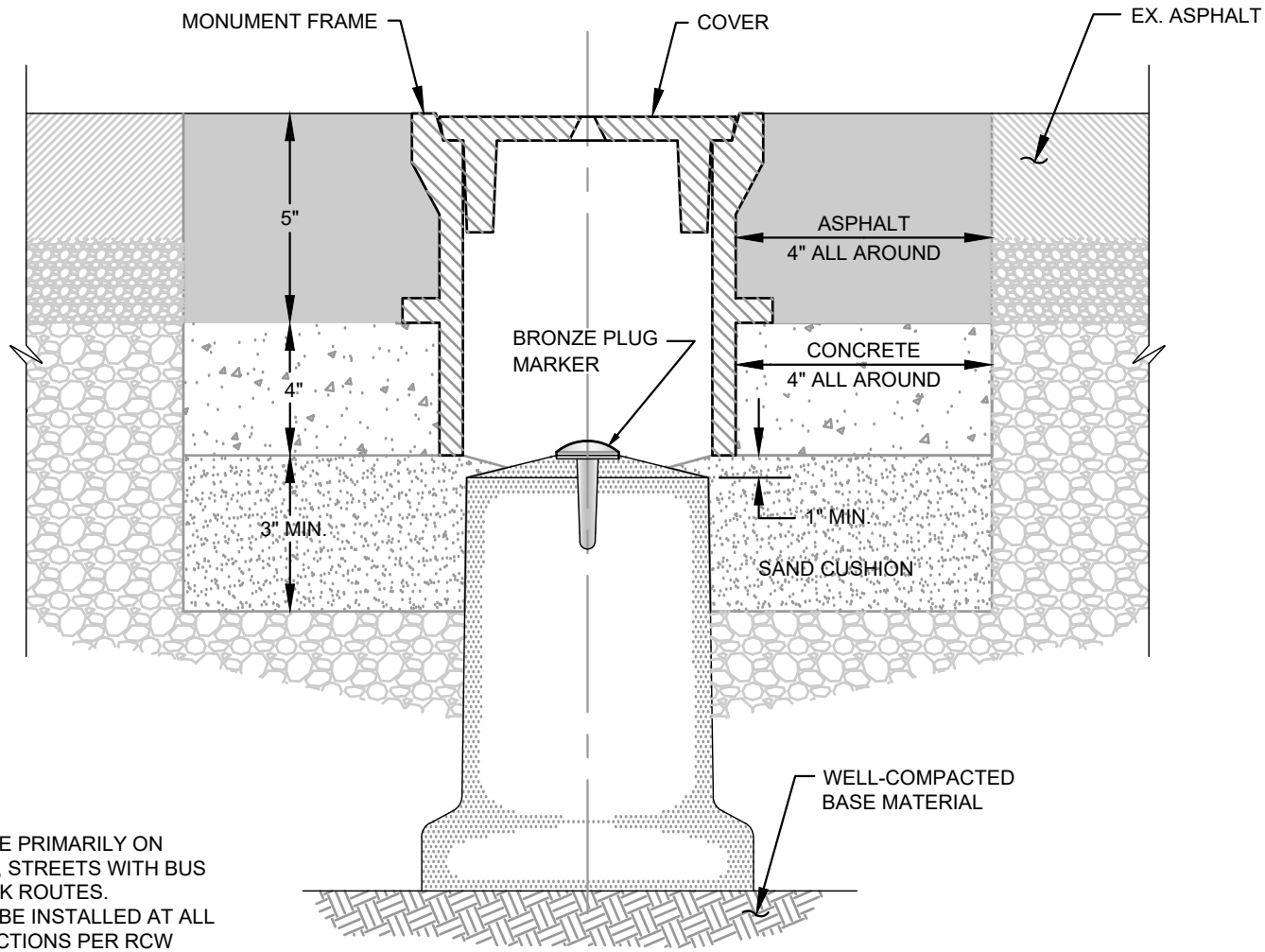
RISER SIZES			
DIM.	**1 1/2"**	**2"**	**3"**
A	10-1/2"	10-1/2"	10-1/2"
B	9-1/2"	9-1/2"	9-1/2"
C	8"	8"	8"
D	9"	9"	9"
E	3/4"	3/4"	3/4"
F	1-1/2"	2"	3"
G	2-1/4"	2-3/4"	3-3/4"

NOTES:

1. MONUMENTS MUST BE INSTALLED AT ALL ROADWAY INTERSECTIONS PER RCW 58.28.270.
2. DIMENSIONS MAY VARY ACCORDING TO MANUFACTURER.
3. BASE TO BE PLACED ON WELL-COMPACTED FOUNDATION.
4. MONUMENT CASE TO BE INSTALLED BY CONTRACTOR.
5. SEE CITY STANDARD DETAIL T-13B FOR MONUMENT CASE INSTALLATION.

APPROXIMATE WEIGHTS	
CASE	60 LBS
COVER	19 LBS
TOTAL	**79 LBS**

City Of Shelton Public Works	MONUMENT CASE AND COVER WITH RISER	SCALE: NONE DATE: JAN 2023	T-13A

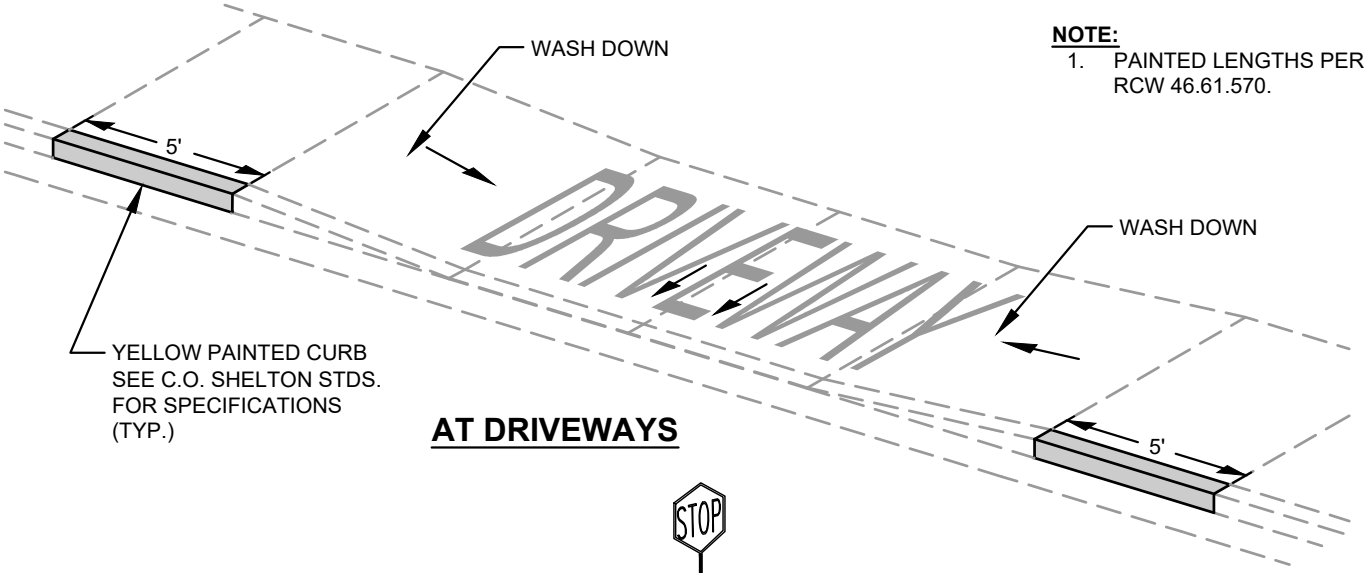


NOTES:

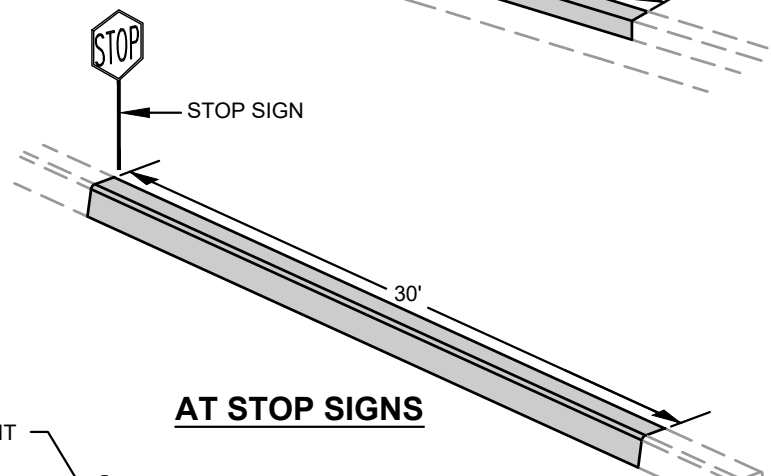
1. MONUMENT FOR USE PRIMARILY ON ARTERIAL STREETS, STREETS WITH BUS TRAFFIC, AND TRUCK ROUTES.
2. MONUMENTS MUST BE INSTALLED AT ALL ROADWAY INTERSECTIONS PER RCW 58.28.270. MONUMENTS MUST ADDITIONALLY BE INSTALLED AT THE PCs AND PTs OF HORIZONTAL ROADWAY CURVES (AS WELL AS PIs SHOULD THEY LIE IN THE TRAVELED ROADWAY).
3. MONUMENTS MUST BE INSTALLED AT THE CORNERS OF ALL DEDICATED LAND CLAIMS, SECTIONS, QUARTERS, AND SIXTEENTHS WITHIN A SUBDIVISION.

City Of Shelton Public Works	MONUMENT CASE INSTALLATION	SCALE: NONE DATE: JAN 2023	T-13B

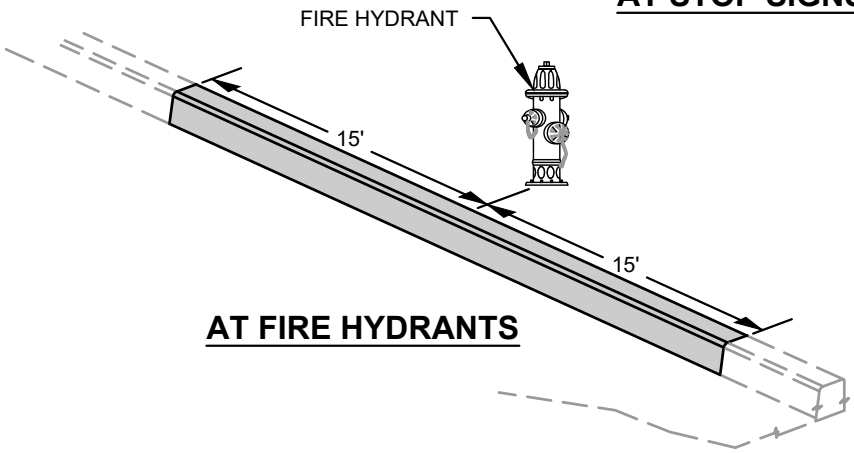
NOTE:
1. PAINTED LENGTHS PER RCW 46.61.570.



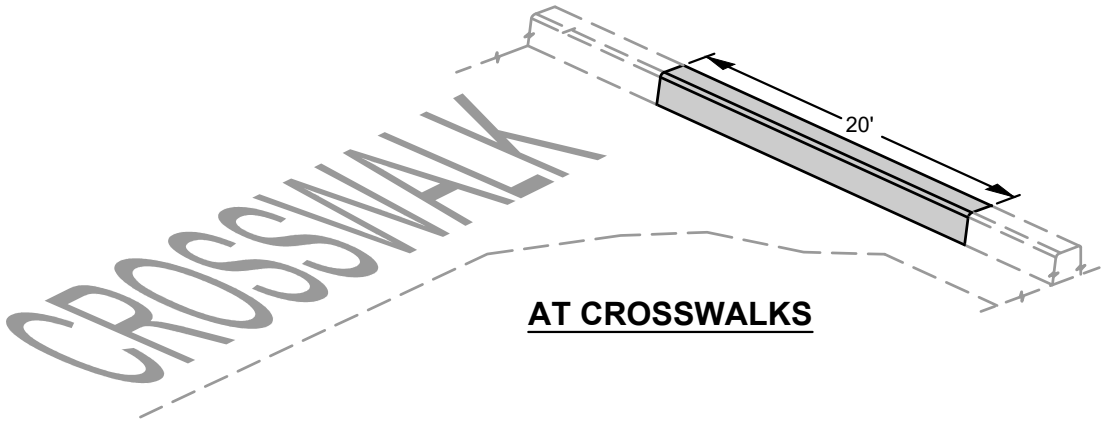
AT DRIVEWAYS



AT STOP SIGNS

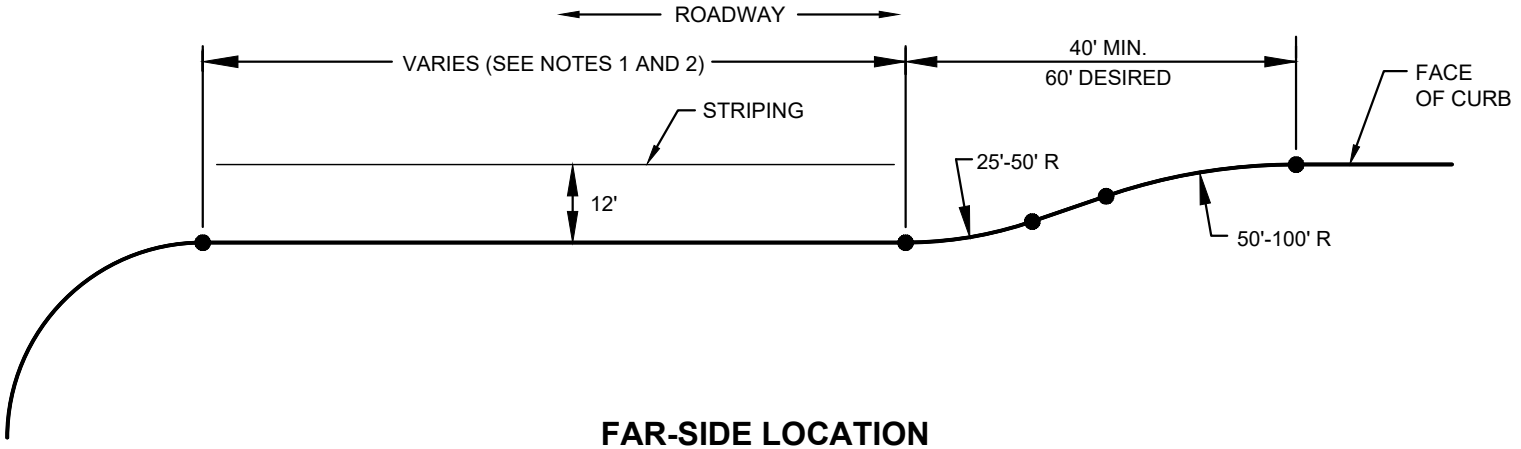


AT FIRE HYDRANTS



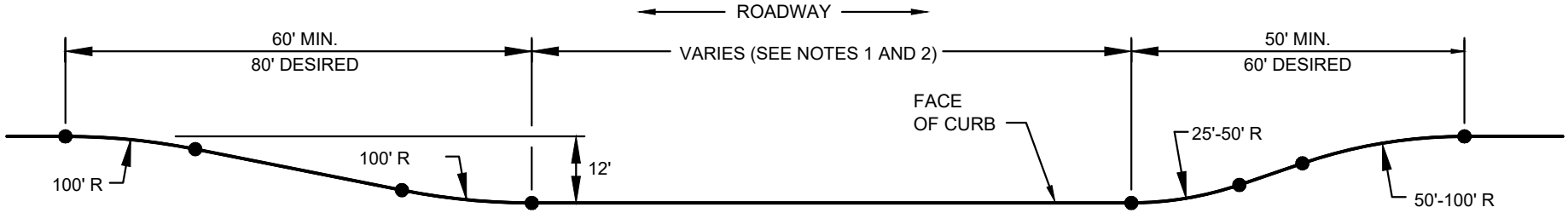
AT CROSSWALKS

City Of Shelton Public Works	CURB MARKINGS	SCALE: NONE DATE: JAN 2023	T-16



FAR-SIDE LOCATION

PLAN VIEW



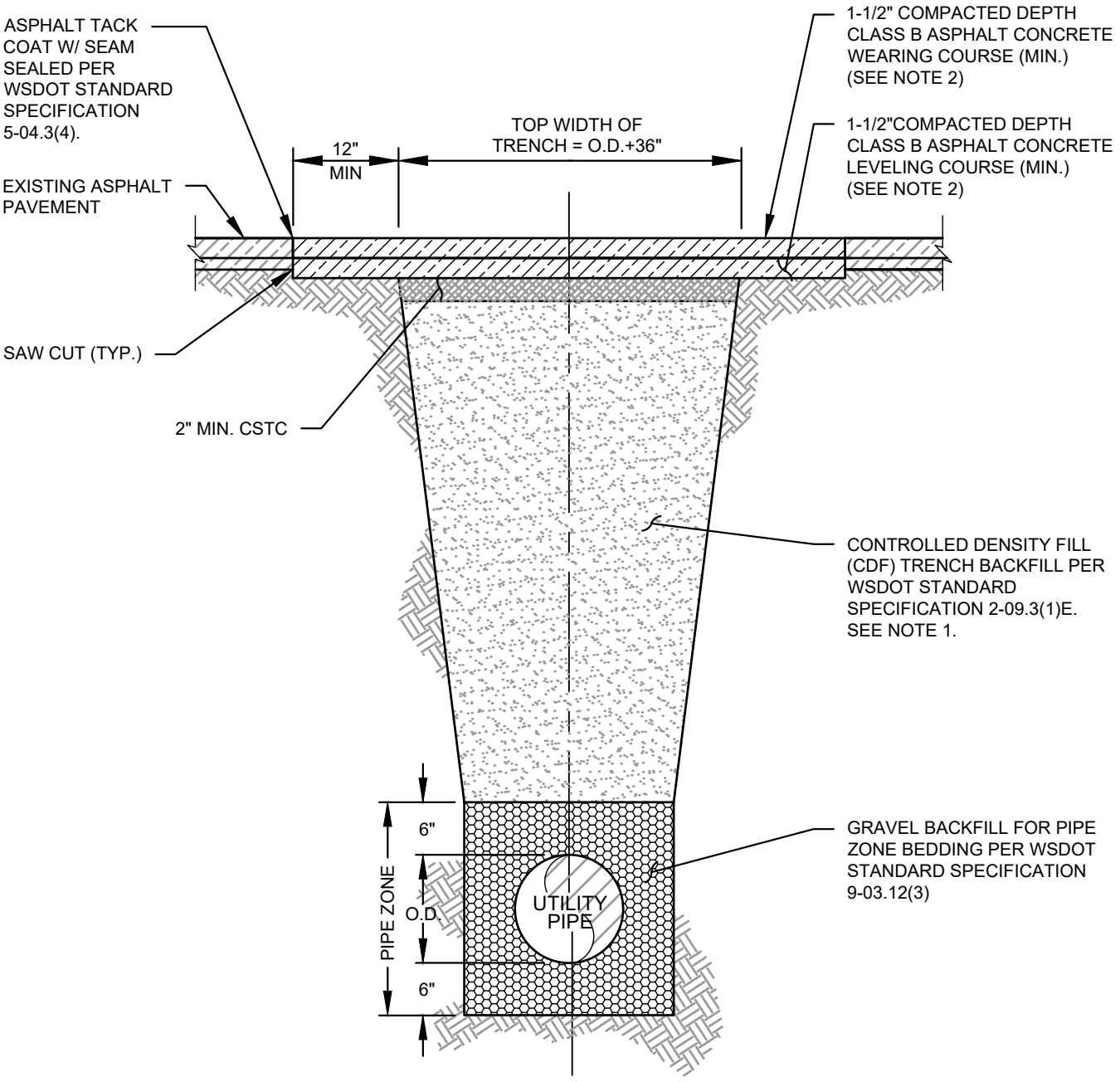
MID-BLOCK LOCATION

PLAN VIEW

NOTES:

1. USE 50' FOR LENGTH OF PULLOUT FOR A STANDARD 40'-LONG BUS. ADD 40' FOR EACH ADDITIONAL BUS.
2. USE 70' FOR LENGTH OF PULLOUT FOR AN ARTICULATED BUS. ADD 60' FOR EACH ADDITIONAL BUS.
3. ALL BUS STOP PULLOUT DESIGNS MUST BE APPROVED BY THE CITY OF SHELTON AND BY THE MASON TRANSIT AUTHORITY.

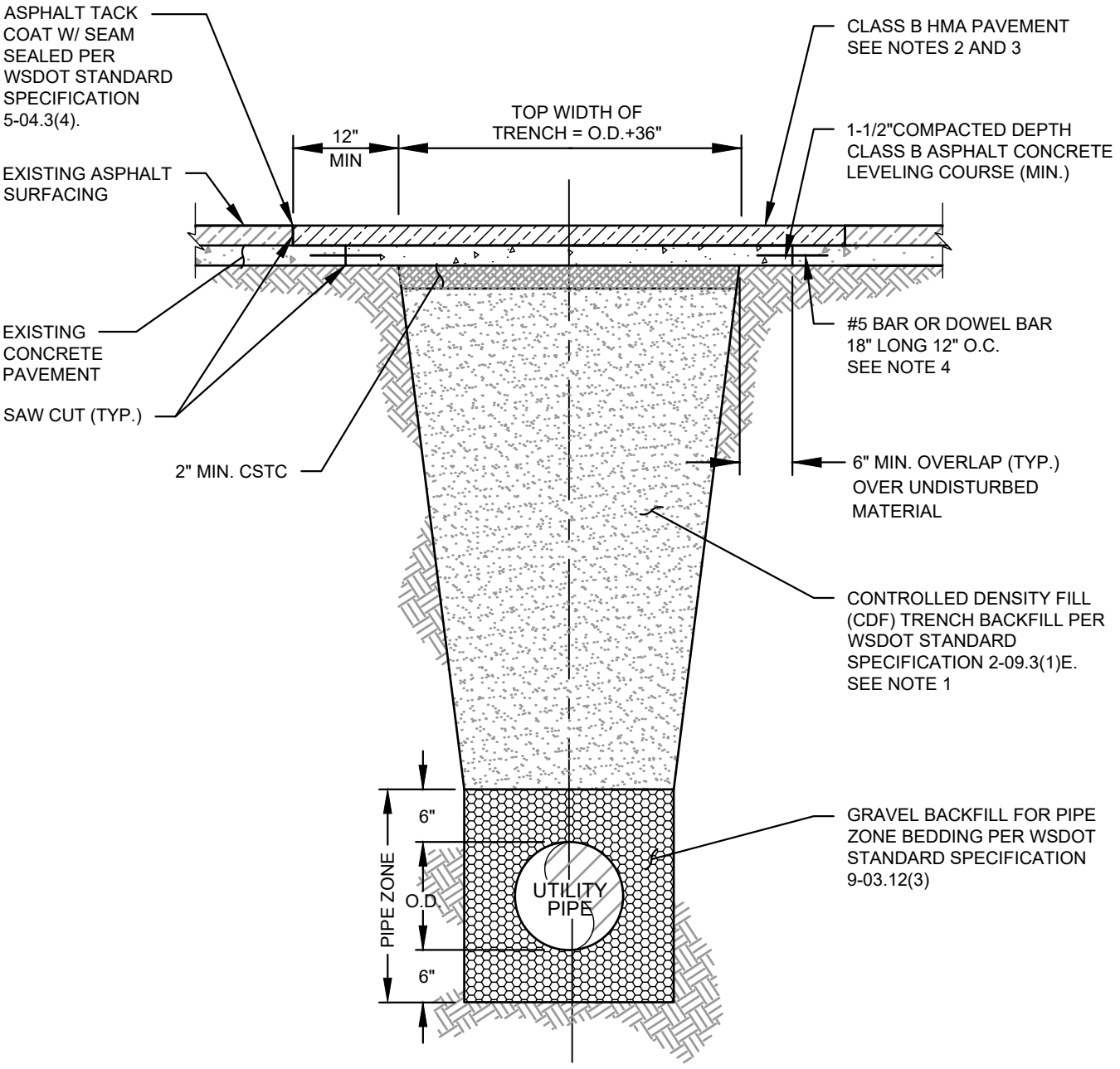
City Of Shelton Public Works	BUS STOP PULLOUT FOR ARTERIAL STREETS	SCALE: NONE DATE: JAN 2023	T-17



NOTES:

1. APPROVED TRENCH BACKFILL OR BALLAST MAY BE USED IN LIEU OF CDF IF APPROVED BY CITY PUBLIC WORKS DIRECTOR PRIOR TO PLACEMENT OF MATERIAL. MATERIAL MUST COMPLY WITH WSDOT STANDARD SPECIFICATIONS 9-03.19 OR 9-03.9(1) AS APPLICABLE.
2. PATCH ASPHALT TO A TOTAL COMPACTED DEPTH OF 3" OR TO THE DEPTH OF THE EXISTING ASPHALT - WHICHEVER IS GREATER. INSTALL ASPHALT IN 1 1/2" LIFTS.

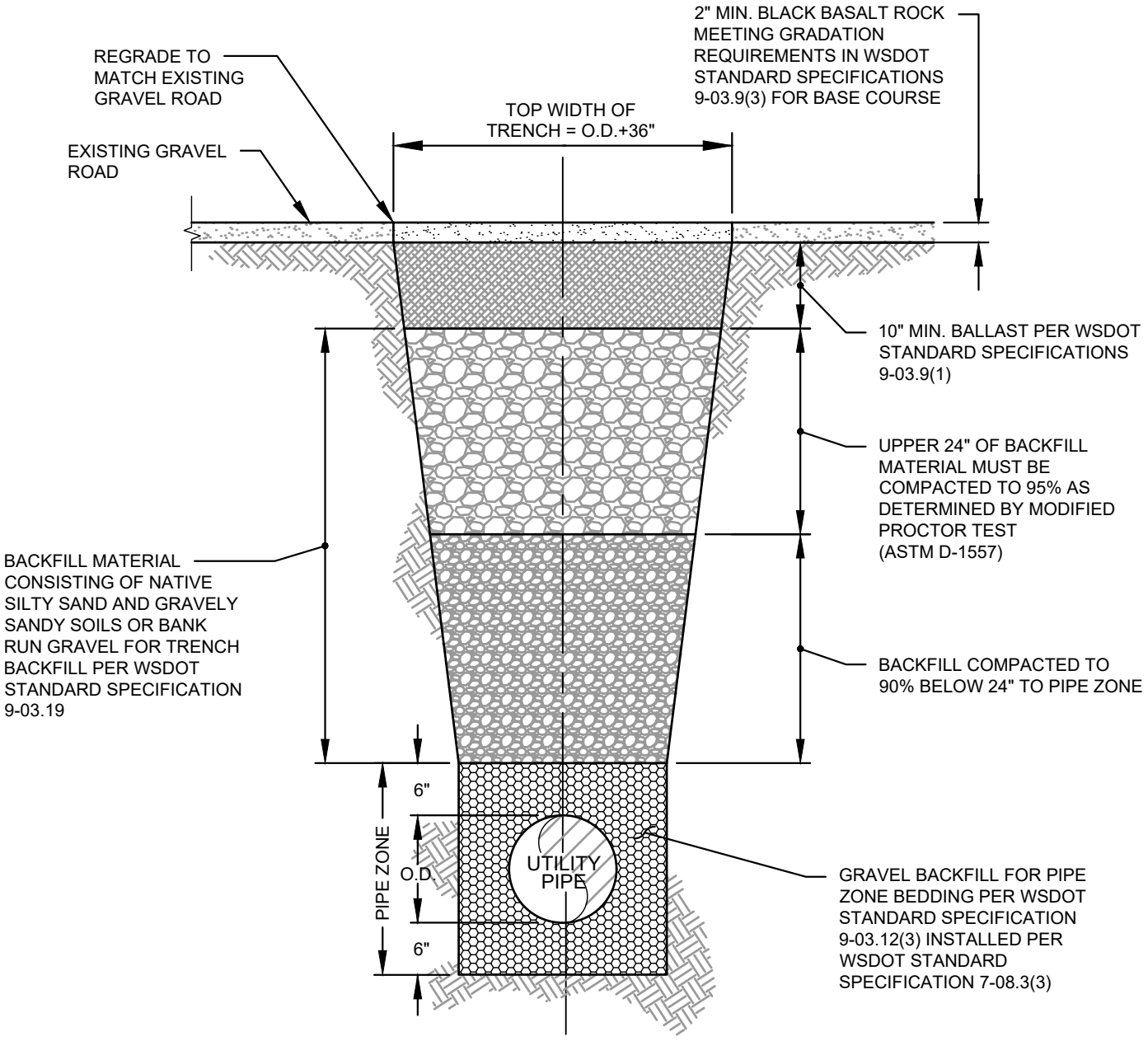
City Of Shelton Public Works	ASPHALT PAVEMENT SECTION UTILITY TRENCH RESTORATION	SCALE: NONE DATE: JAN 2023	T-18A



NOTES:

1. APPROVED TRENCH BACKFILL OR BALLAST MAY BE USED IN LIEU OF CDF IF APPROVED BY CITY PUBLIC WORKS DIRECTOR PRIOR TO PLACEMENT OF MATERIAL. MATERIAL MUST COMPLY WITH WSDOT STANDARD SPECIFICATIONS 9-03.19 OR 9-03.9(1) AS APPLICABLE.
2. RESTORE EXISTING ASPHALT SURFACING TO A TOTAL COMPACTED DEPTH OF 3" OR TO THE DEPTH OF THE EXISTING ASPHALT - WHICHEVER IS GREATER. INSTALL ASPHALT IN 1 1/2" LIFTS.
3. IF NO ASPHALT OVERLAY EXISTS, THEN RESTORE AS SHOWN FOR CONCRETE PAVEMENT ONLY.
4. #5 BAR OR DOWEL BAR SHALL BE INSTALLED PER WSDOT STANDARD PLAN A-40.10-04 IN CONFORMANCE WITH WSDOT STANDARD SPECIFICATION 5-05.3(10).

City Of Shelton Public Works	CONCRETE PAVEMENT UTILITY TRENCH RESTORATION	SCALE: NONE DATE: JAN 2023	T-18B



City Of Shelton Public Works	GRAVEL SURFACE UTILITY TRENCH RESTORATION	SCALE: NONE DATE: JAN 2023	T-19

	PRINCIPAL ARTERIAL		MINOR ARTERIAL		MAJOR COLLECTOR		MINOR COLLECTOR		LOCAL RESIDENTIAL		LOCAL INDUSTRIAL OR COMMERCIAL		ALLEY	
	DEPTH	NO. OF LIFTS	DEPTH	NO. OF LIFTS	DEPTH	NO. OF LIFTS	DEPTH	NO. OF LIFTS	DEPTH	NO. OF LIFTS	DEPTH	NO. OF LIFTS	DEPTH	NO. OF LIFTS
HMA CLASS 1/2" PG 64-22	6"	3	6"	3	4.5"	2	4.5"	2	3"	1	4.5"	2	3"	1
CSTC	2"	1	2"	1	2"	1	2"	1	2"	1	2"	1	2"	1
BALLAST	18"	3	14"	3	14"	3	10"	2	10"	2	10"	2	10"	2
TOTAL DEPTH	26"		22"		20.5"		16.5"		15"		16.5"		15"	

* **ACCESS SPACING**	600'	300'	100'	50'	FULL	FULL	FULL

NOTES:

1. PAVEMENT SECTIONS WILL VARY IF ROADWAY IS A DESIGNATED TRUCK ROUTE.
2. PAVEMENT SECTIONS SHALL BE PLACED ON COMPACTED SUBGRADE.

* SINGLE FAMILY RESIDENTIAL DRIVEWAY ACCESS SPACING

	WSDOT SPEC	COMPACTION	HATCH
HMA CLASS 1/2" PG 64-22	5-04.3(9)		
CRUSHED SURFACING TOP COURSE	9-03.9(3)		
PARTIALLY CRUSHED BALLAST	9-03.9(1)		

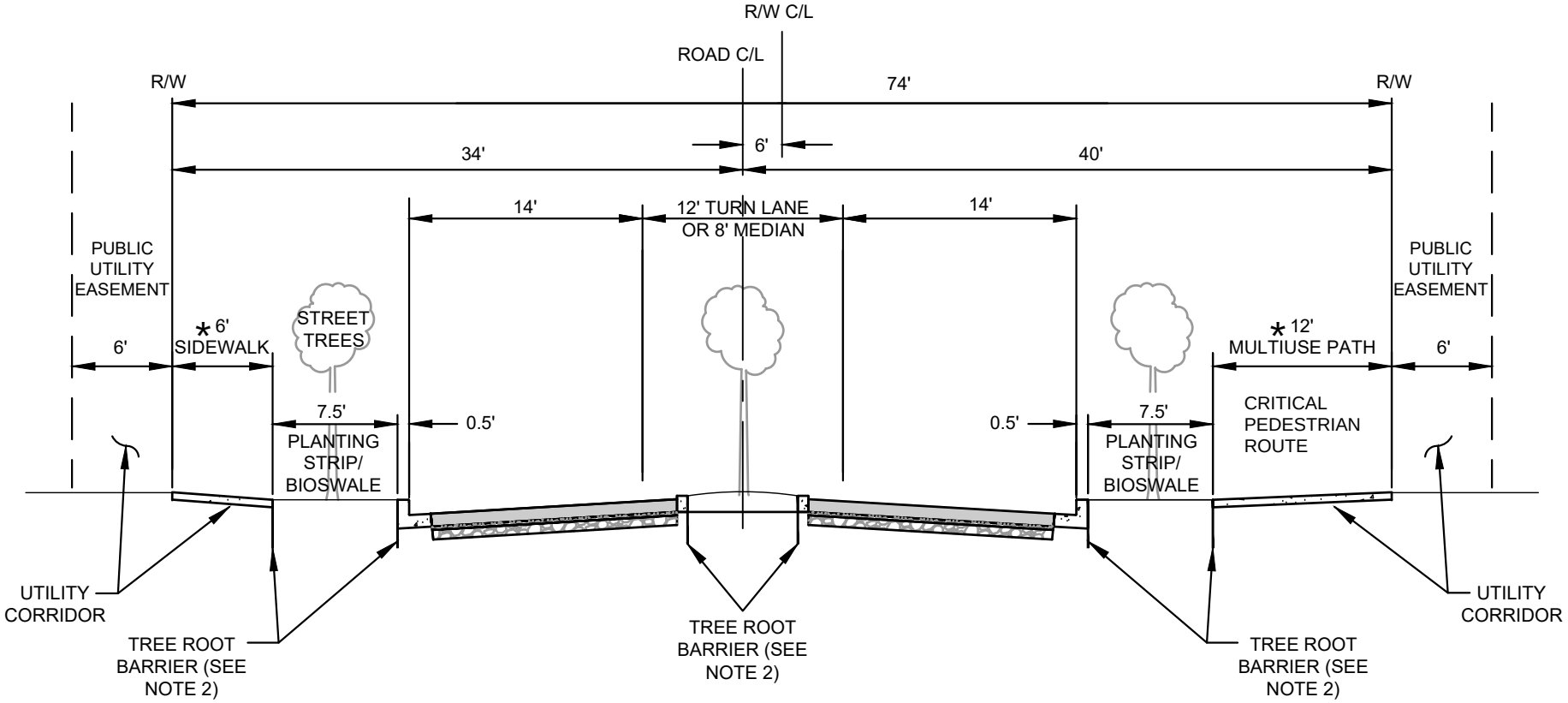
City Of Shelton Public Works

PAVEMENT SECTIONS AND ACCESS SPACING

SCALE: NONE

DATE: JAN 2023

T-22

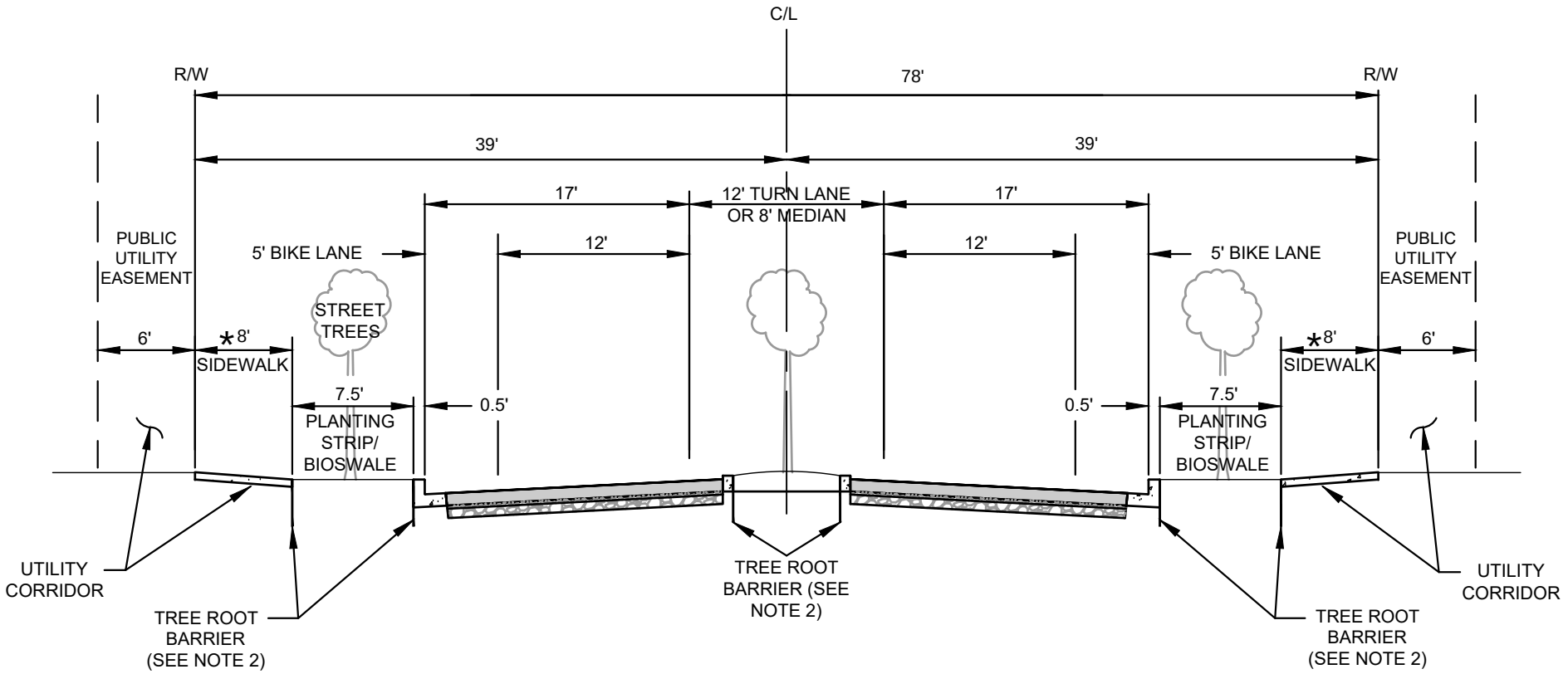


NOTES:

1. STREET TREES, SIDEWALK, AND PLANTING STRIP/BIOSWALE ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
2. TREE ROOT BARRIER IS REQUIRED ADJACENT TO ANY PAVEMENT OR SIDEWALK. SEE CITY STANDARD DETAILS M-03 AND M-04 FOR ROOT CONTROL BARRIER.
3. SEE CITY STANDARD DETAIL T-22 FOR PAVEMENT SECTIONS AND ROADWAY AND DRIVEWAY ACCESS SPACING.
4. STREET TREES SHALL BE PLACED AS SPECIFIED ON CITY STANDARD DETAIL T-XX WITH ROOT BARRIERS (SEE NOTE 2).

* 10' SIDEWALK MINIMUM REQUIRED IN ZONES OF ZERO FOOT BUILDING SETBACKS

City Of Shelton Public Works	MAJOR ARTERIAL OR COLLECTOR ROAD WITH MULTIUSE PATH	SCALE: NONE DATE: JAN 2023	T-23A

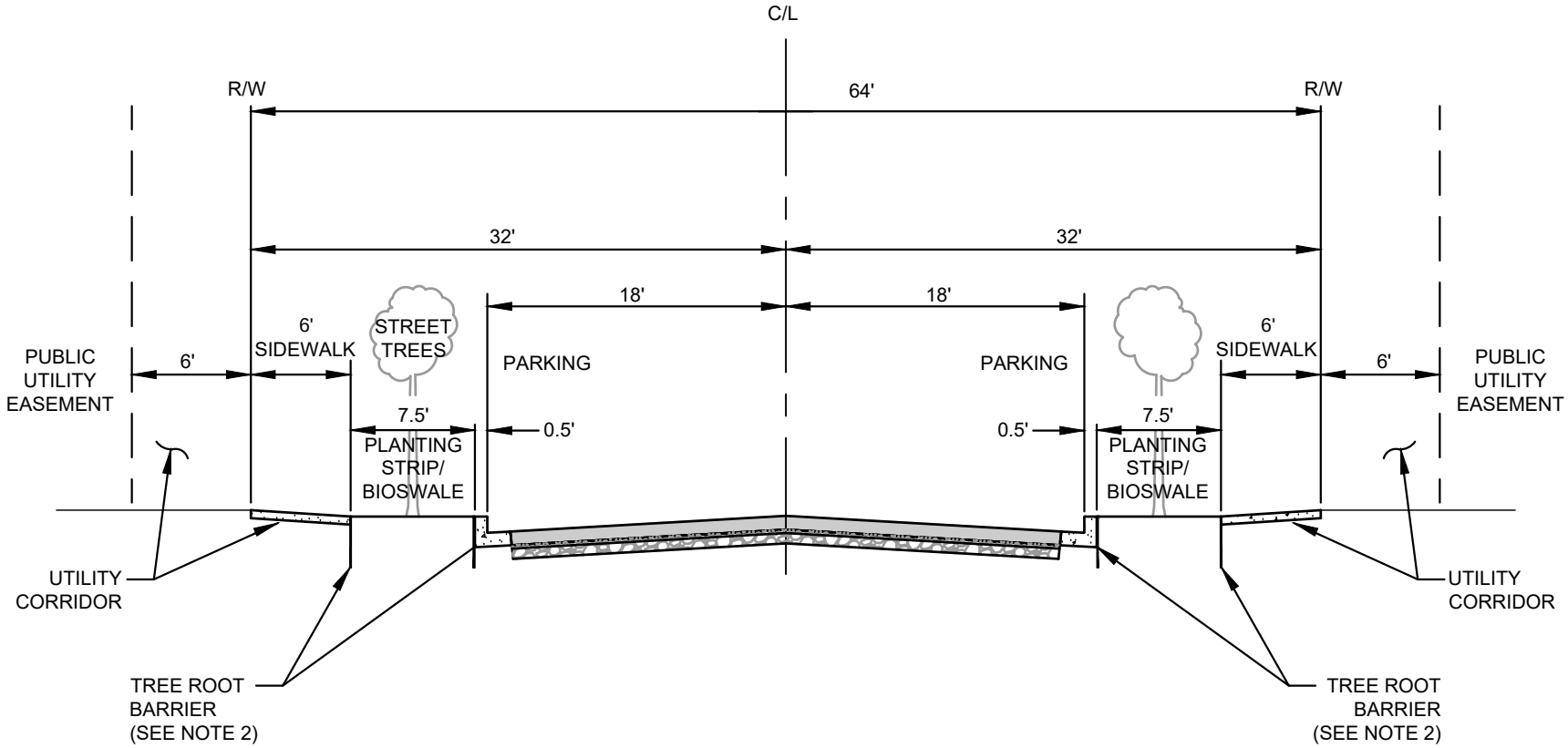


NOTES:

1. STREET TREES, SIDEWALK, AND PLANTING STRIP/BIOSWALE ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
2. TREE ROOT BARRIER IS REQUIRED ADJACENT TO ANY PAVEMENT OR SIDEWALK. SEE CITY STANDARD DETAILS M-03 AND M-04 FOR ROOT CONTROL BARRIER.
3. SEE CITY STANDARD DETAIL T-22 FOR PAVEMENT SECTIONS AND ROADWAY AND DRIVEWAY ACCESS SPACING.
4. STREET TREES SHALL BE PLACED AS SPECIFIED ON CITY STANDARD DETAIL T-XX WITH ROOT BARRIERS (SEE NOTE 2).

* 10' SIDEWALK MINIMUM REQUIRED IN ZONES OF ZERO FOOT BUILDING SETBACKS

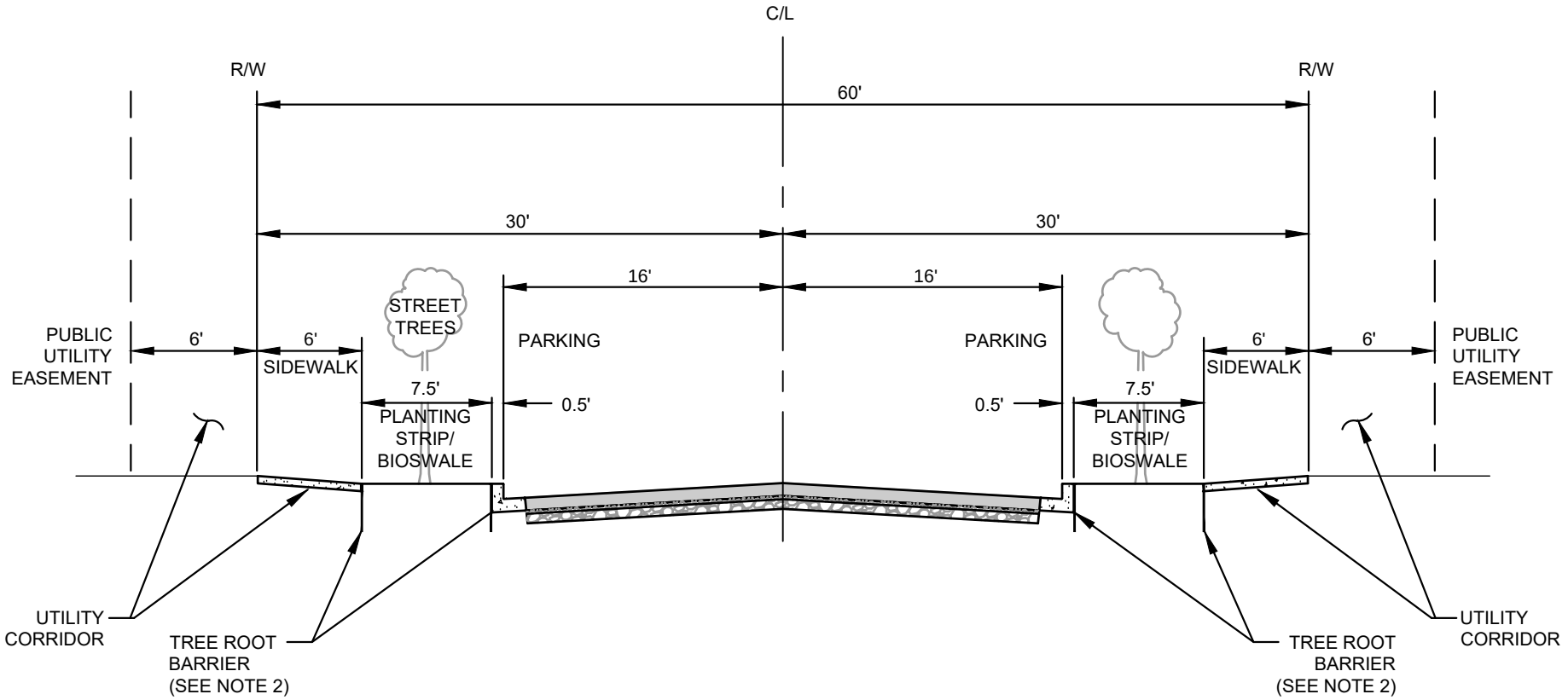
City Of Shelton Public Works	MAJOR ARTERIAL OR COLLECTOR ROAD WITH BIKE LANES	SCALE: NONE DATE: JAN 2023	T-23B



NOTES:

1. STREET TREES, SIDEWALK, AND PLANTING STRIP/BIOSWALE ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
2. TREE ROOT BARRIER IS REQUIRED ADJACENT TO ANY PAVEMENT OR SIDEWALK. SEE CITY STANDARD DETAILS M-03 AND M-04 FOR ROOT CONTROL BARRIER.
3. SEE CITY STANDARD DETAIL T-22 FOR PAVEMENT SECTIONS AND ROADWAY AND DRIVEWAY ACCESS SPACING.
4. STREET TREES SHALL BE PLACED AS SPECIFIED ON CITY STANDARD DETAIL T-XX WITH ROOT BARRIERS (SEE NOTE 2).

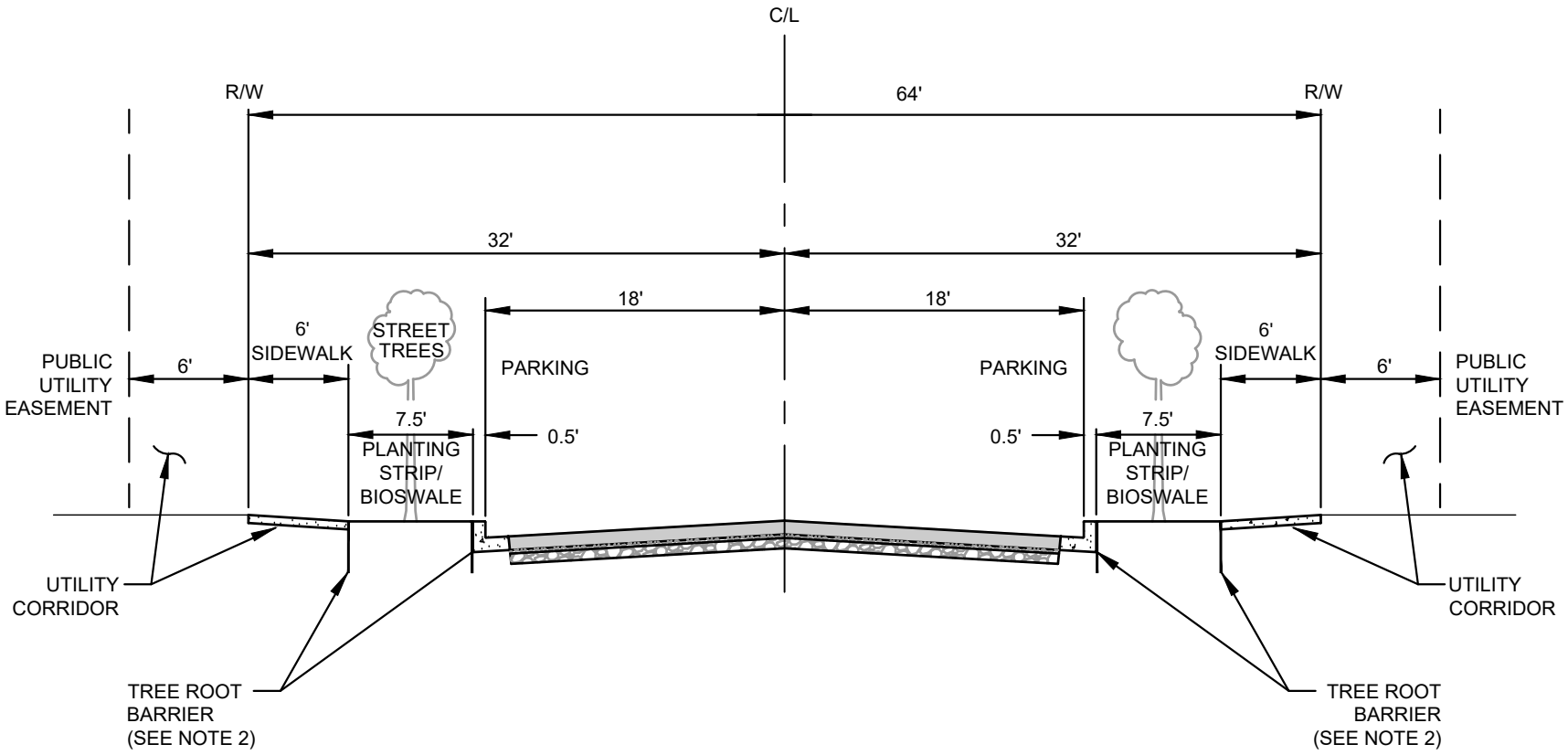
City Of Shelton Public Works	MINOR COLLECTOR ROAD	SCALE: NONE DATE: JAN 2023	T-24



NOTES:

1. STREET TREES, SIDEWALK, AND PLANTING STRIP/BIOSWALE ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
2. TREE ROOT BARRIER IS REQUIRED ADJACENT TO ANY PAVEMENT OR SIDEWALK. SEE CITY STANDARD DETAILS M-03 AND M-04 FOR ROOT CONTROL BARRIER.
3. SEE CITY STANDARD DETAIL T-22 FOR PAVEMENT SECTIONS AND ROADWAY AND DRIVEWAY ACCESS SPACING.
4. STREET TREES SHALL BE PLACED AS SPECIFIED ON CITY STANDARD DETAIL T-XX WITH ROOT BARRIERS (SEE NOTE 2).

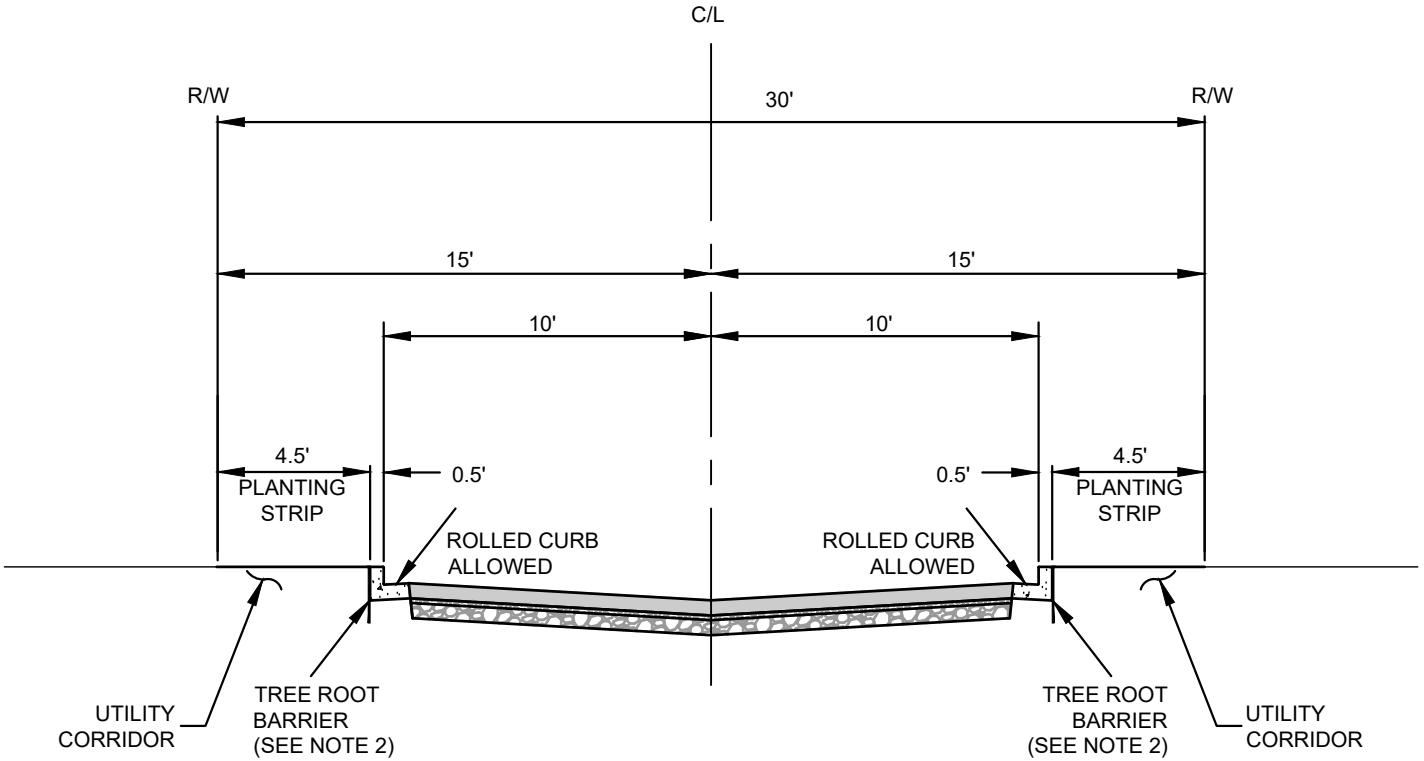
City Of Shelton Public Works	LOCAL RESIDENTIAL ROAD	SCALE: NONE DATE: JAN 2023	T-25



NOTES:

1. STREET TREES, SIDEWALK, AND PLANTING STRIP/BIOSWALE ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
2. TREE ROOT BARRIER IS REQUIRED ADJACENT TO ANY PAVEMENT OR SIDEWALK. SEE CITY STANDARD DETAILS M-03 AND M-04 FOR ROOT CONTROL BARRIER.
3. SEE CITY STANDARD DETAIL T-22 FOR PAVEMENT SECTIONS AND ROADWAY AND DRIVEWAY ACCESS SPACING.
4. STREET TREES SHALL BE PLACED AS SPECIFIED ON CITY STANDARD DETAIL T-XX WITH ROOT BARRIERS (SEE NOTE 2).

City Of Shelton Public Works	LOCAL INDUSTRIAL OR COMMERCIAL ROAD	SCALE: NONE DATE: JAN 2023	T-26



NOTES:

1. PLANTING STRIPS ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
2. IF STREET TREES ARE TO BE INSTALLED, TREE ROOT BARRIER IS REQUIRED ADJACENT TO ANY PAVEMENT OR SIDEWALK. SEE CITY STANDARD DETAILS M-03 AND M-04 FOR ROOT CONTROL BARRIER.
3. SEE CITY STANDARD DETAIL T-22 FOR PAVEMENT SECTIONS AND ROADWAY AND DRIVEWAY ACCESS SPACING.

City Of Shelton Public Works	ALLEY	SCALE: NONE DATE: JAN 2023	T-27

C H A P T E R 3

3.000 STORM DRAINAGE

3.010 Public Storm Drainage System Alterations, Extensions and Connections

To allow the City to provide timely assistance and advice, anyone who wishes to alter, extend or connect to the City's storm water drainage system must conform to the requirements specified in Section 13.02.130 of the Shelton Municipal Code, and the current edition of the City Comprehensive Plan. All proposed alterations, extensions or connections to the public storm drainage system must be reviewed and approved by the City of Shelton. The standards established by this Chapter are intended to represent the minimum standards for storm drainage and erosion control facilities.

3.020 Design Standards

The design of storm drainage and/or retention/detention systems shall depend on their type and local site conditions. The design elements of storm drainage systems shall conform to City standards as set forth herein, and follow current design practice. The currently adopted version of the Washington State Department of Ecology *Storm Water Management Manual for Western Washington*, and Chapter 13 of the Shelton Municipal Code are referenced as a part of these *Standards.*

A. Swales

Swales will only be allowed where approved by the City. If approved, swales shall be protected by curbing and maintained by the abutting property owner(s). Also, in residential developments a homeowners association with covenants shall be formed to ensure enforcement of the maintenance requirements.

Swales designed for transporting, storing and/or infiltrating stormwater from public roadways shall not be located on a lot designated for single-family occupancy. Easements proposed for such swales will not be allowed. This is necessary due to the complexity of operating and maintaining the integrity of such facilities within fenced and landscaped private property.

B. Catch Basins

Catch basins shall be located on the upstream side of every intersection. Where there are no intersections, maximum catch basin spacing shall be 300-feet on arterials and collectors and 500-feet on local streets. All storm drainage pipes shall be constructed in a straight line between catch basins and other drainage structures.

C. Retention/Detention Ponds

The maximum depth of a retention or detention pond shall be 4.5-feet from the pond bottom to the top of the pond slope (not the water elevation). Deeper ponds may be allowed by the City if minimum 6-foot wide benches are provided at no more than 4.5 vertical foot intervals.

D. Fencing

Fencing for public safety shall be provided. Surface ponds and infiltration basins with a maximum depth of 3.0 feet or less do not require fencing, provided the maximum associated interior side slope of the pond or basin does not exceed 4H:1V (including baffle side slopes).

All ponds and basins with a maximum depth of water greater than 3 feet will require a 6-foot high perimeter fence unless the following condition is met:

1. The facility is designed and constructed with a 10-foot wide safety bench for every three feet of depth, and the interior side slopes are no greater than 4H;1V (including baffle side slopes); or

2. When fencing is required around a facility to be dedicated to and/or maintained by the City, the fence shall be chain link. The chain link fence fabric shall be galvanized steel core wire and coated with bonded polyvinyl. The polyvinyl coating shall not be subject to fading, cracking, peeling, or shrinkage and shall be brown, black, or some shade of natural green (such as pine, forest, or olive). The fence manufacturer shall provide a 10-year (minimum) warranty on the polyvinyl coating. All fence/gate posts and top/brace rails shall be powder-coated the same color as the chain link fence fabric. The chain link fence shall meet all other applicable specifications for Type 3 chain link fence as set forth in the WSDOT/APWA *Standard Specifications for Road, Bridge, and*

Municipal Construction except that the line posts for Type 3 fence shall be set in concrete.

E. Driveway Culverts

Where roadside ditches are approved, all driveway culvert pipes shall be corrugated metal pipe (CMP), high-density polyethylene (HDPE), concrete or ductile iron with a minimum diameter of 12-inches, and of sufficient length to provide a minimum 3:1 slope from the edge of the driveway to the bottom of the ditch. Culverts shall have beveled end sections to match the side slope.

F. Release to Public System

All on-site storm drainage shall be infiltrated to the highest degree allowed by site conditions. If drainage outlets (stub-outs) are approved by the City to be provided for each individual lot, the stub-outs shall conform to the following:

1. The receiving drainage system shall have sufficient capacity for the onsite release. The developer shall provide an engineered drainage analysis to verify the capacity.

2. Each drainage outlet shall be suitably located at the lowest elevation on the lot, so as to service all future roof downspouts and footing drains, driveways, yard drains, and any other surface or subsurface drains necessary to render the lots suitable for their intended use. Each outlet shall have free-flowing, positive drainage to an approved storm conveyance system or to an approved outfall location.

3. Drainage outlets on each lot shall be located with a 5-foot long steel reinforcing bar painted fluorescent green and driven into the ground. The stub-out shall visibly extend above the surface of the ground and be secured to the reinforcing bar.

4. Drainage easements are required for drainage systems designed to convey flows through individual lots.

5. The Engineer is responsible for coordinating the locations of all stub-out drainage conveyance lines with respect to utilities (e.g., water, sewer, electrical power, gas, telephone, and television).

6. All individual stub-outs to the main or catch basin shall be privately owned and maintained by the lot owner.

3.030 Storm Water System Rainfall Design Criteria

Where single-event modeling is applicable, the following values are to be used as design criteria for stormwater facilities:

100 Year – 24 Hour Design Event	8.50 inches
50 Year – 24 Hour Design Event	7.80 inches
25 Year – 24 Hour Design Event	7.05 inches
10 Year – 24 Hour Design Event	5.50 inches
5 year – 24 Hour Design Event	4.75 inches
2 Year – 24 Hour Design Event	4.00 inches
6 Month – 24 Hour Design Event	2.56 inches
100 Year – 7 Day design Event	16.60 inches

The applicable design storm event shall be used in all calculations submitted to the City for review.

All stormwater facilities shall be designed to meet all requirements of the currently adopted Department of Ecology *Stormwater Management Manual for Western Washington* as referenced in Shelton Municipal Code Title 13, and all Best Management Practices.

All stormwater detention, infiltration and conveyance systems shall be sized to accommodate the modeling requirements of the currently adopted stormwater management manual.

Additionally, whenever an overflow system is proposed, a complete downstream analysis will be required to ensure that downstream properties or stormwater conveyance systems are not compromised.

A. Infiltration Rate Guidelines

Obtaining a design infiltration rate utilizing a soils evaluation and infiltration test is highly desirable for all projects utilizing storm water infiltration systems within the City. The largest infiltration rate allowed for design without a soils investigation and infiltration test is 6-inches per hour (or ten minutes per inch). This rate may be allowed only in locations where the City has sufficient knowledge of existing soils in the vicinity of the project, and where infiltration systems in that location have been performing as designed with this design infiltration rate.

An adequate soils investigation for designing infiltration systems includes a soils exploration and an infiltration test at the depth of the bottom of the proposed infiltration system. The exploration shall be a minimum of three feet below the elevation of the bottom of the proposed infiltration system to determine if high groundwater or impermeable soil layers will impede vertical movement of the stormwater unless otherwise approved by the City. The largest infiltration rate allowed for design with a soils investigation and infiltration test is ten-inches per hour (or six-minutes per inch).

In all cases, an adequate factor of safety shall be utilized when determining a design infiltration rate to compensate for soil clogging and cementation, high groundwater levels, and vertical separation between the bottom of the infiltration system and impermeable soil layers. Additionally, all infiltration rates utilized in the design shall be reviewed and approved by the City. It is recommended that the infiltration rate proposed for the design of infiltration systems be approved by the City prior to the start of design to avoid unnecessary revisions that could prove costly for the applicant and cause delays in the progress of the project.

Storm drain pipe within a public right-of-way or easement shall be sized to carry the maximum anticipated runoff for a 100-Year 24-Hour Storm Event from the contributing area. The minimum size for mains and laterals shall be eight inches in diameter, or as otherwise approved by the City. Nothing shall preclude the City from requiring the installation of a larger-sized storm drain if the City determines a larger size is needed to serve adequate areas or for future service. When the property discharges to the public storm drainage system, installation of appropriately sized storm drains across the face of the property may be required by the City where applicable.

Storm drain pipe shall meet the requirements of Section 7-04.2 of the WSDOT *Standard Specifications*.

All storm drainage systems are required to be air testable in conformance with Section 7-04.3(1) of the WSDOT *Standard Specifications.* Special structures, oil/water separators and outlet controls shall be installed and tested per the approved plans and manufacturer's recommendations.

The minimum cover for storm drain pipe shall be two feet, or as otherwise approved by the City. Where the minimum depth includes the roadway section, structural calculations or manufacturer's specifications for the appropriate H-loading shall be submitted along with the plans. All drain pipe specified where the cover is two feet or less shall be HDPE, concrete or ductile iron of a class determined by the structural calculations or manufacturer's specifications.

Where connections require field verifications, connection points will be exposed by the contractor and fittings verified two business days prior to beginning work.

3.040 Staking

All surveying and staking shall be performed by a Professional Land Surveyor, licensed within the State of Washington. A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of stormwater lines shall be as follows, unless otherwise directed by the City.

A. Stake centerline alignment every 50 feet with cut or fill to invert of pipe.

B. Stake location of all catch basins, manholes and other structures for grade and alignment with cut or fill to rim and invert of all pipes. Two offsets to the centerline of the structures shall be provided.

C. Grade stake, or slope stake as appropriate, at intervals sufficient to control the location, size and depth of retention/detention facilities.

D. Stake finished grade of all stormwater features, including, but not limited to catch basin/manhole rim elevations, overflow structures, weirs and invert elevations of all pipes in catch basins, manholes, and those pipes that daylight.

3.050 Trench Excavation

See Chapter Two, Section 2.200 for requirements regarding trench excavation.

3.060 Backfilling

See Chapter Two, Section 2.200 for requirements regarding backfilling.

3.070 Street Patching and Restoration

See Chapter Two, Sections 2.190 and 2.200 for requirements regarding street patching and trench restoration.

3.080 Maintenance

The City shall maintain all stormwater drainage elements such as catch basins, oil water separators, and conveyance systems located within the public rights-of-way.

All private stormwater systems are required to have an Operations and Maintenance Manual per Department of Ecology's requirements. The manual must be submitted to the City for review prior to construction authorization. The development's owners' association shall be responsible for maintaining the on-site stormwater facilities including, but not limited to, on-site retention/detention ponds, catch basins, oil-water separators and conveyance system(s).

Each property shall also submit a Stormwater Maintenance Agreement for City approval that addresses the long-term maintenance of its system. Property owners are responsible for conducting inspections and maintenance of their system each year.

3.090 Storm Drainage Construction General Notes

In addition to the General Construction Notes in Chapter One, the Engineer shall include the following notes on any plans dealing with the construction, alterations, extensions or connections to the storm drainage system

A. All storm mains, structures, conveyance systems and retention/detention areas shall be staked for grade and alignment prior to the start of construction.

B. All storm drainage systems are required to be air tested in conformance with Section 7-04.3(1) of the *WSDOT Standard Specifications*. Special structures, oil/water separators and outlet controls shall be installed and tested per the approved plans and manufacturer's recommendations.

LIST OF DRAWINGS
CHAPTER 3 STORM DRAINAGE

Title	Drawing
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Catch Basin Type 1L	SD-02
Catch Basin Type 1	SD-03
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Sheet 2 of 2 ~ Combination Inlet Notes)	SD-04
Catch Basin Type 2, 48" & 54"	SD-05
Catch Basin Type 2, 72" & 96"	SD-06
Flow Restrictor Catch Basin	SD-07
Floatable Material Separator	SD-08
Typical Restrictor Installation	SD-09
East Jordan Hinged CB Type 2 Cover & Frame for Paved Areas	SD-10
Manhole Ring and Cover for Unpaved Areas	SD-10A
Overflow Structure Detail	SD-11
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CB Type 2 w/Bird Cage Trash Rack	SD-13
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STORM DRAINAGE DETAILS

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SD-02 CATCH BASIN TYPE 1L

SD-03 CATCH BASIN TYPE 1

SD-04 Sht. 1 of 2 ~ COMBINATION INLET (CB TYPE 1 SHOWN)

Sht. 2 of 2 ~ COMBINATION INLET NOTES

SD-05 CATCH BASIN TYPE 2 (48" & 54")

SD-06 CATCH BASIN TYPE 2 (72" & 96")

SD-07 FLOW RESTRICTOR CATCH BASIN

SD-08 FLOATABLE MATERIAL SEPARATOR

SD-09 TYPICAL RESTRICTOR INSTALLATION

SD-10 EAST JORDAN HINGED CB TYPE 2 COVER & FRAME FOR PAVED AREAS

SD-10A MANHOLE RING AND COVER for UNPAVED AREAS

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SD-16 RECESSED GUTTER DETAIL

SD-17 LIFT GATE ASSEMBLY & SECONDARY ORIFICE DETAILS

SD-18 BIOFILTER SWALE

SD-19 MANHOLE SURFACE RESTORATION WITHIN THE RIGHT-OF-WAY

SD-20 INFILTRATION GALLERY

SD-21 ALT. #1 ~ ROOF DRAIN DRYWELL

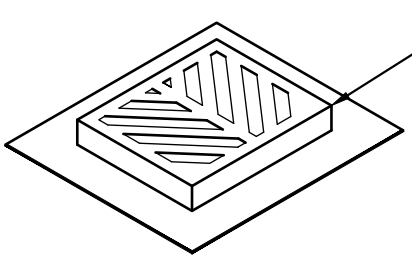
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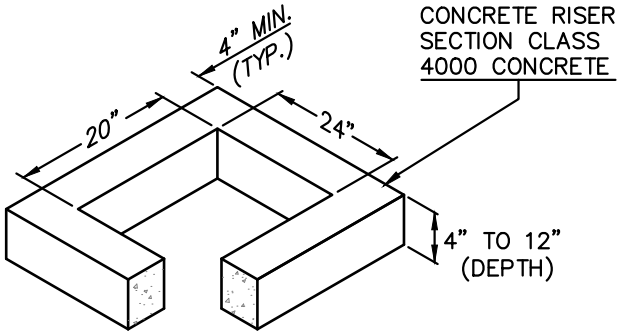
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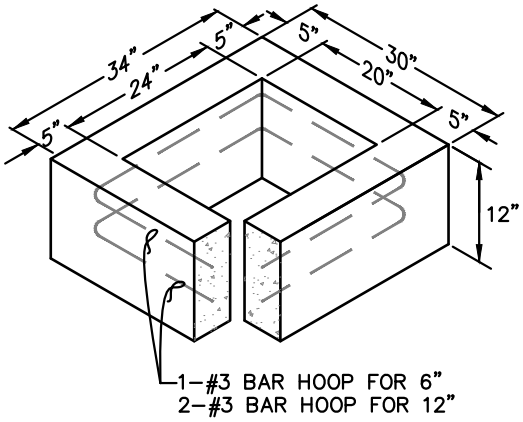
1. FOR PATCHING VOIDS AROUND PIPES, PICKING EYE HOLES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE NON-SHRINK PRECISION GROUT-PRODUCT NO. 1585-00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244-56 -81.
2. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
3. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE® CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.





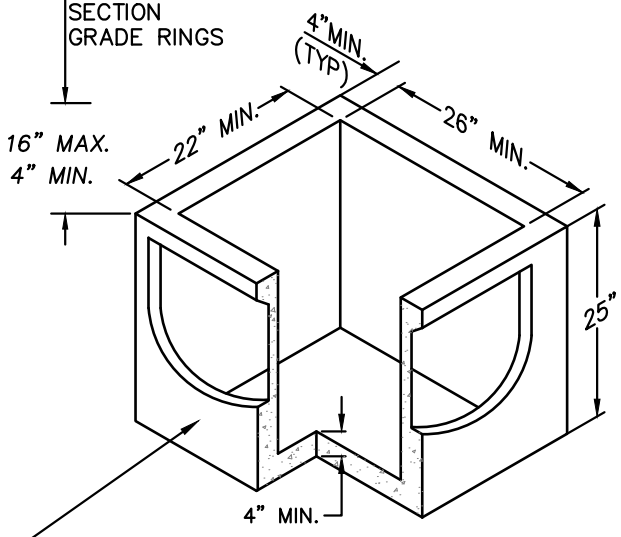
A MIN. OF 4" RISER DEPTH IS REQUIRED

ADJUSTMENT SECTION GRADE RING



12" ADJUSTMENT SECTION GRADE RINGS

REQUIRED:
ADJUSTMENT SECTION GRADE RINGS



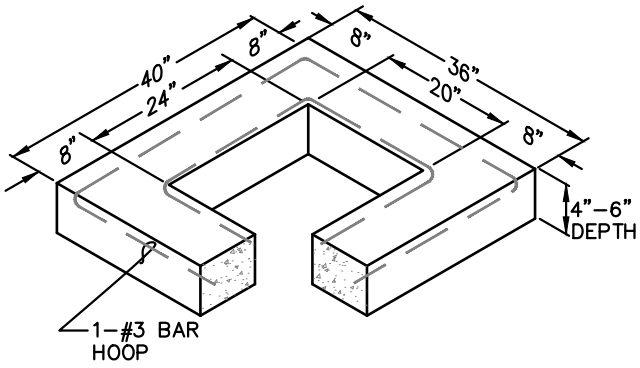
PRECAST CONCRETE BASE SECTION W/MAX. OF ONE 17" KNOCKOUT PER SIDE ENTRANCE ANGLE TO BE LIMITED BY KNOCKOUTS CLASS 4000 CONCRETE PIPE OUTER DIAMETER PLUS INLET WALL THICKNESS SHALL NOT EXCEED 17".

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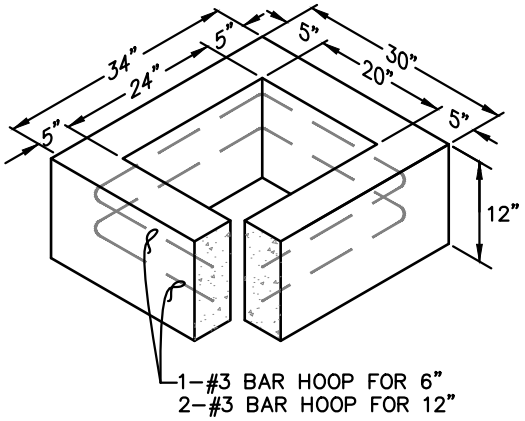
INLET STRUCTURE

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-01

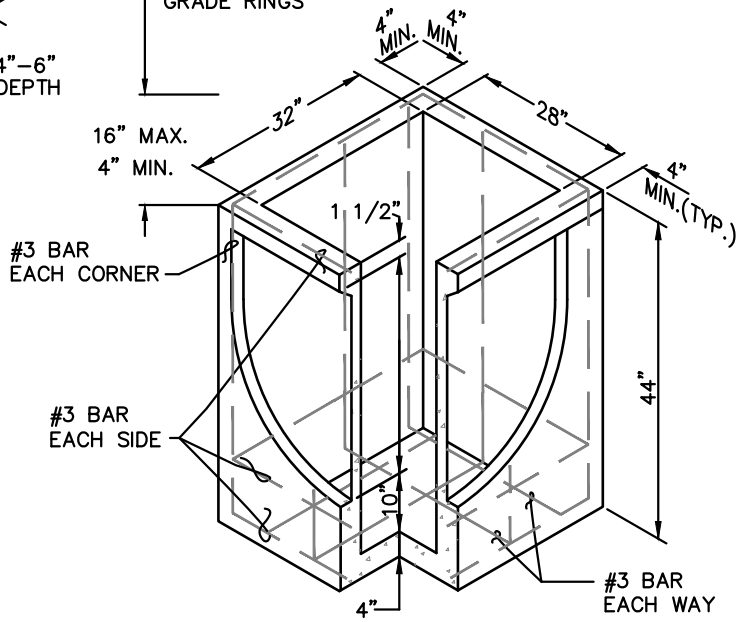


2"-6" ADJUSTMENT SECTION
GRADE RINGS



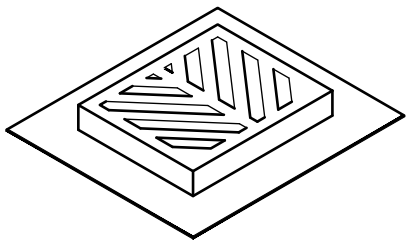
12" ADJUSTMENT SECTION
GRADE RINGS

REQUIRED:
ADJUSTMENT SECTION
GRADE RINGS



PRECAST BASE SECTION

(MEASUREMENT AT THE
TOP OF THE BASE)



FRAME AND GRATE

(SEE STANDARD PLANS FOR DETAILS)

NOTES:

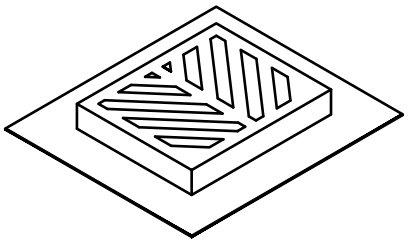
1. CATCH BASINS TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATE TO REBAR, WELDED WIRE FABRIC HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A 497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN THE KNOCKOUTS.
3. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE POURED ROUNDED.
4. PRECAST BASES SHALL BE FURNISHED W/CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
5. KNOCKOUTS MAY BE IN ALL 4 SIDES WITH MAXIMUM DIAMETER OF 28". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE. PIPE TO BE INSTALLED IN FACTORY SUPPLIED KNOCKOUTS.
6. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS.
7. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2"/FT..
8. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR–F–62ID. MATING SURFACES SHALL BE FINISHED TO ASSURE NON– ROCKING FIT.
9. FRAME & GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
10. A MIN. OF 4" DEPTH OF RISER REQUIRED. ANY DEVIATION MUST BE APPROVED BY CITY ENGINEER.
11. FOR PATCHING VOIDS AROUND PIPES & HOLES FOR PICKING EYES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON–SHRINK PRECISION GROUT–PRODUCT NO. 1585–00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244–56 –81.
12. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
13. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE® CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

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CATCH BASIN TYPE 1L

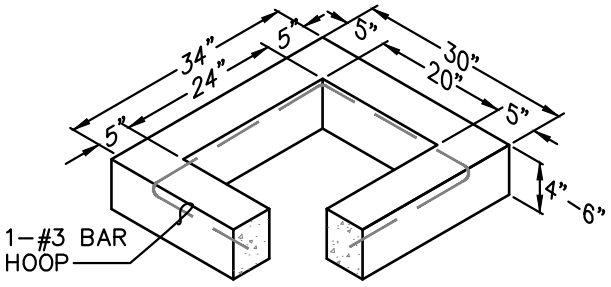
APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-02

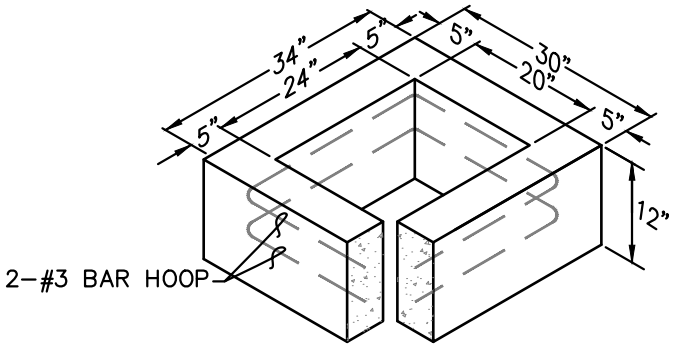


FRAME AND GRATE

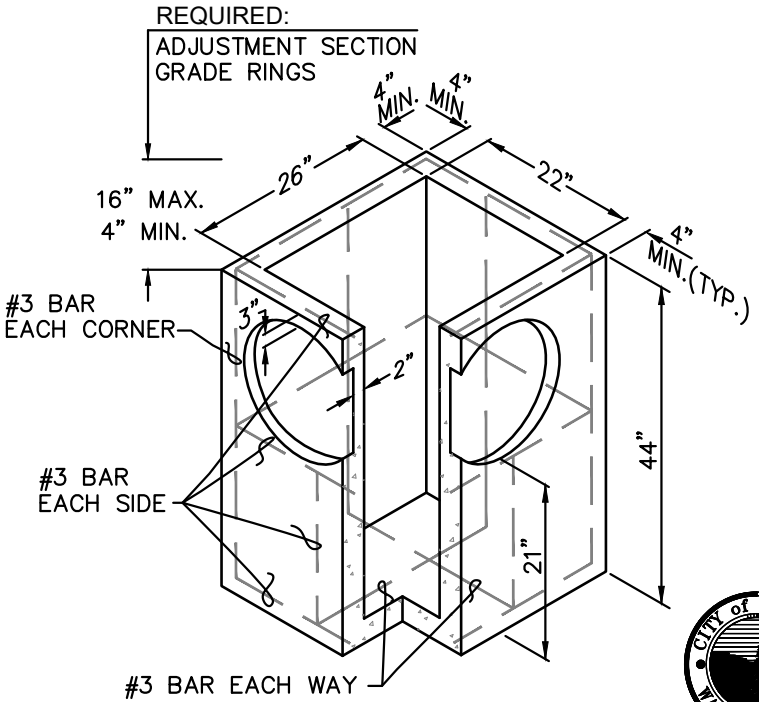
(SEE STANDARD PLAN FOR DETAILS)



4"-6" ADJUSTMENT SECTION GRADE RING



12" ADJUSTMENT SECTION GRADE RING



PRECAST BASE SECTION

(MEASUREMENT AT THE TOP OF THE BASE)

NOTES:

1. IF WIRE MESH IS USED AS AN ALTERNATE TO REBAR, IT SHALL NOT BE PLACED IN KNOCKOUTS.
2. THE BOTTOM OF THE PRECAST BASE SECTION SHALL BE MINIMUM 4" THICK AND MAY BE ROUNDED.
3. KNOCKOUTS MAY BE ON ALL FOUR SIDES, EITHER ROUND OR "D" SHAPE. PIPE TO BE INSTALLED IN FACTORY SUPPLIED KNOCKOUTS. HOLE SIZE SHALL BE EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS, 20" MAX.
4. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'–0".
5. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 4%.
6. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
7. A MIN. OF 4" DEPTH OF RISER REQUIRED. ANY DEVIATION MUST BE APPROVED BY CITY ENGINEER.
8. FOR PATCHING VOIDS AROUND PIPES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON–SHRINK PRECISION GROUT–PRODUCT NO. 1585–00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244–56 –81.
9. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
10. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

CITY of SHELTON WASHINGTON

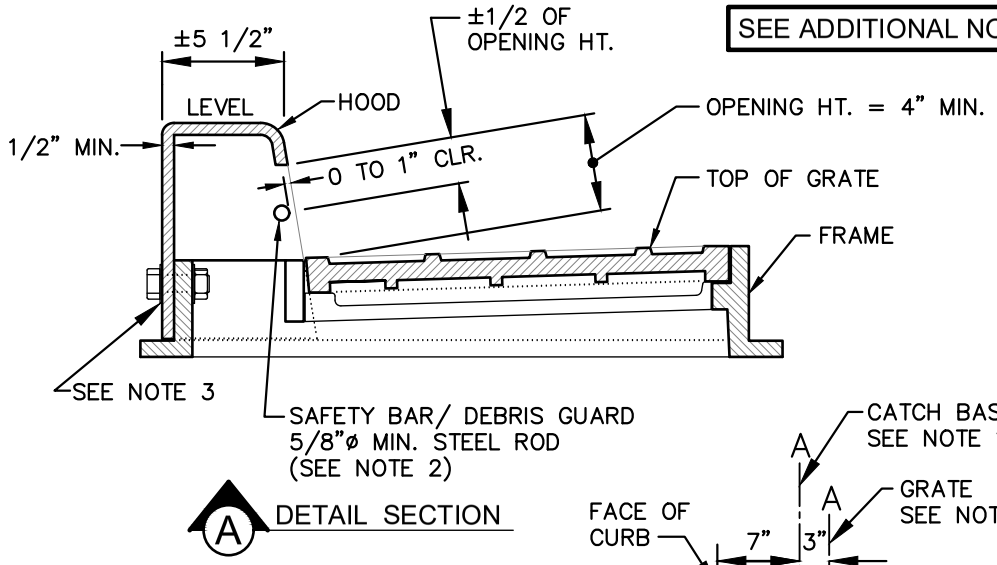
"Building A Stronger Community TOGETHER"

CATCH BASIN TYPE 1

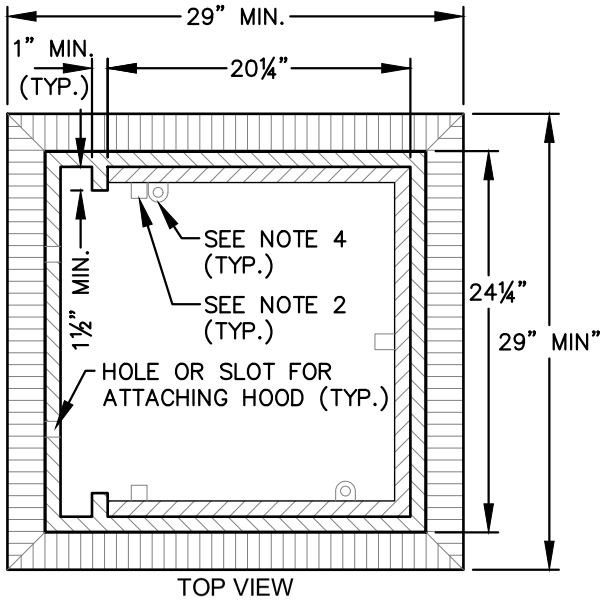
APPROVED: CRAIG GREGORY
CITY ENGINEER

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-03

SEE ADDITIONAL NOTES FOR COMBINATION INLET ON SHT. 2 OF 2 OF DETAIL SD-04

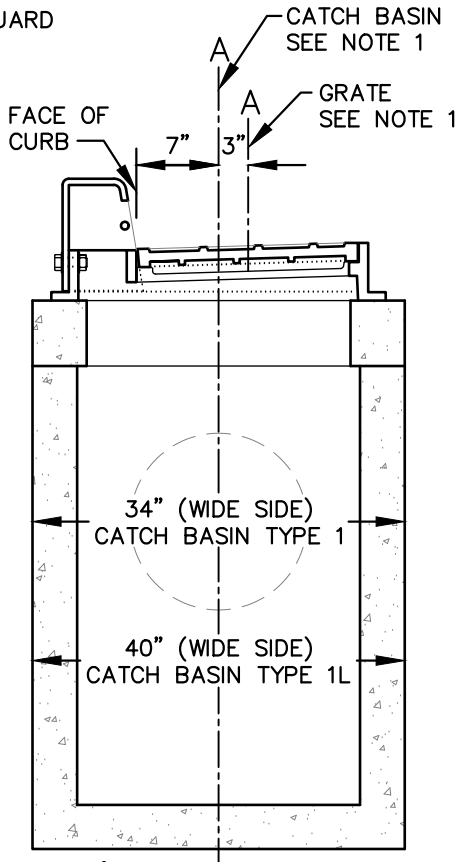


A DETAIL SECTION

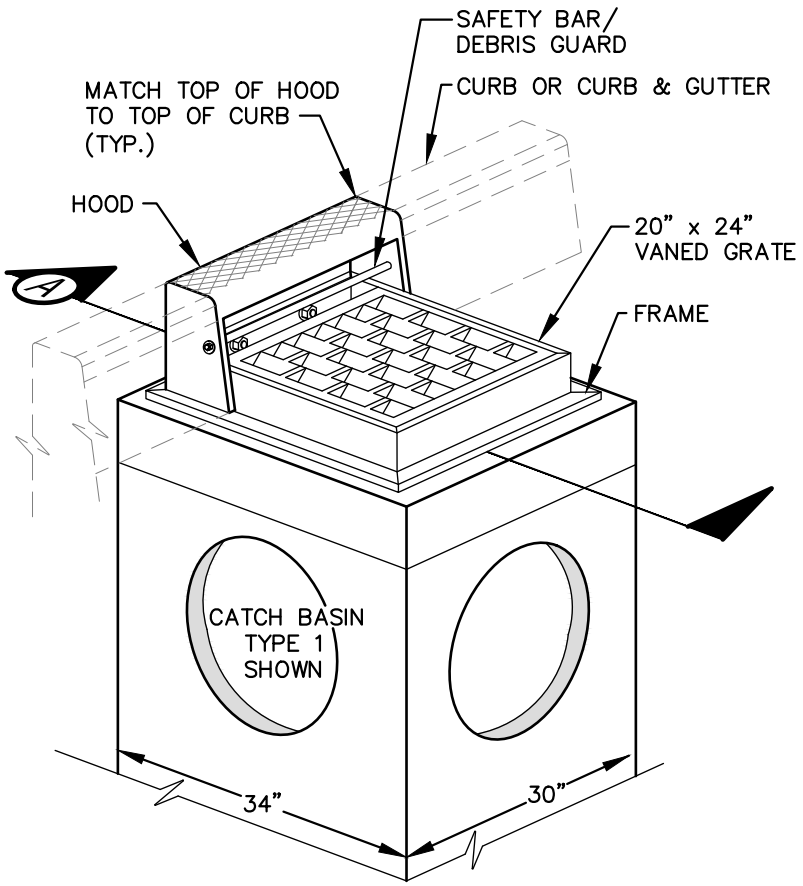


TOP VIEW

FRAME DETAIL



A SECTION



ISOMETRIC VIEW

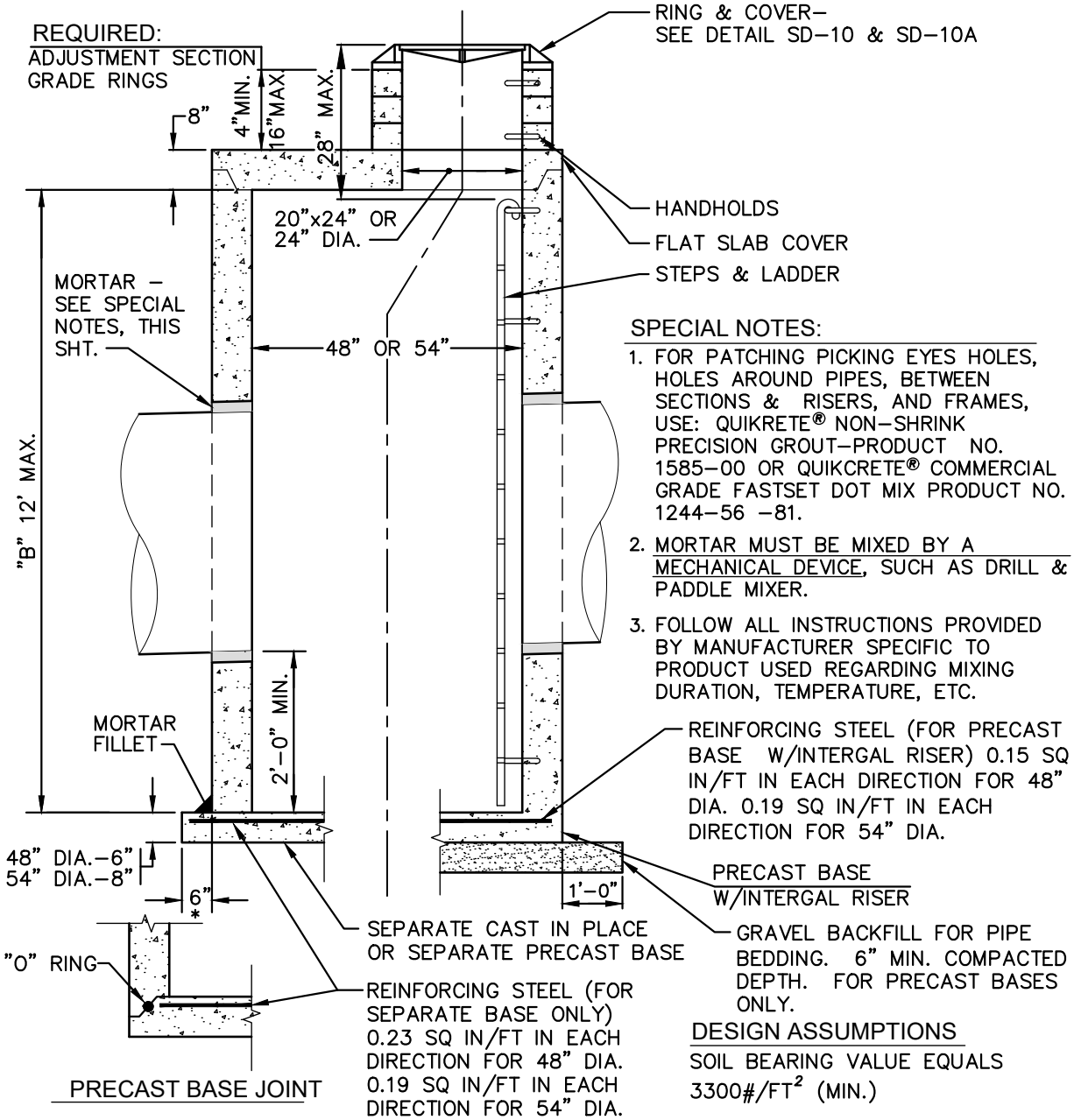
COMBINATION INLET
FRAME, HOOD & VANED GRATE

"Building A Stronger Community TOGETHER"

COMBINATION INLET (CB TYPE 1 SHOWN)

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-04



SPECIAL NOTES:

1. FOR PATCHING PICKING EYES HOLES, HOLES AROUND PIPES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON–SHRINK PRECISION GROUT–PRODUCT NO. 1585–00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244–56 –81.
2. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
3. FOLLOW ALL INSTRUCTIONS PROVIDED BY MANUFACTURER SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

DESIGN ASSUMPTIONS

SOIL BEARING VALUE EQUALS 3300#/FT^2 (MIN.)

NOTES:

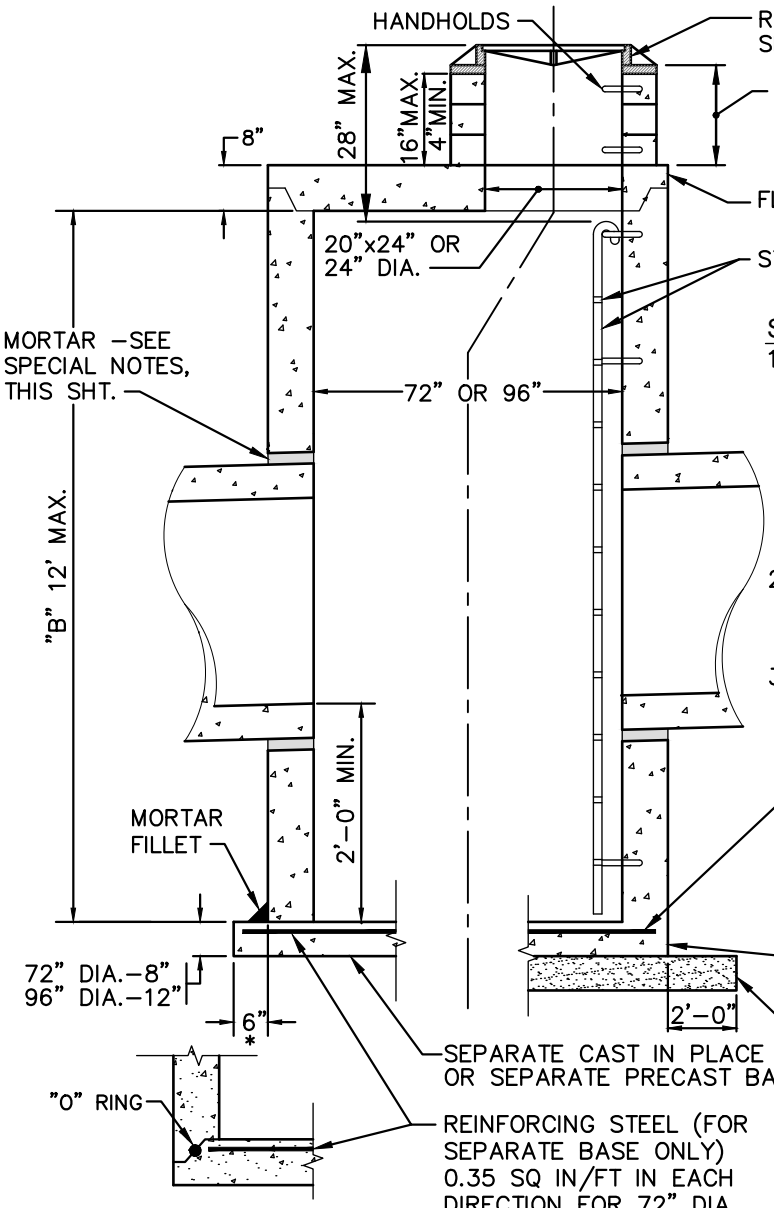
1. CATCH BASINS TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. HANDHOLDS IN RISER OR ADJUSTMENT SECTION SHALL HAVE 3" MIN. CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MIN. CLEAR–ANCE. NO STEPS ARE REQUIRED WHEN "B" IS 4' OR LESS.
3. ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS A. ALL PRECAST CONCRETE SHALL OBTAIN 4,000 PSI @ 28 DAYS.
4. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS. MAX. HOLE SIZE IS 36" FOR 48" CATCH BASIN, 42" FOR 54" CATCH BASIN. MIN. DISTANCE BETWEEN HOLES IS 8".
5. FOR RING & COVER SEE DETAIL SD–10 & SD–10A.
6. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
7. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE POURED ROUNDED.
8. FOR DETAILS SHOWING LADDER, STEPS HANDRAIL & TOP SLAB SEE STANDARD PLAN "MISCELLANEOUS CATCH BASIN DETAILS".
9. FRAME & GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.

"Building A Stronger Community TOGETHER"

CATCH BASIN: TYPE 2
48" & 54"

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-05



PRECAST BASE JOINT

SPECIAL NOTES:

1. FOR PATCHING HOLES AROUND PIPES, PICKING EYE HOLES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON-SHRINK PRECISION GROUT-PRODUCT NO. 1585-00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244-56 -81.
2. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
3. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE® CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

REINFORCING STEEL (FOR PRECAST BASE W/INTERGAL RISER) 0.24 SQ IN/FT IN EACH DIRECTION FOR 72" DIA. 0.29 SQ IN/FT IN EACH DIRECTION FOR 96" DIA.

PRECAST BASE W/INTERGAL RISER

GRAVEL BACKFILL FOR PIPE BEDDING. 6" MIN. COMPACTED DEPTH. FOR PRECAST BASES ONLY.

DESIGN ASSUMPTIONS

SOIL BEARING VALUE EQUALS

3300#/FT^2 (MIN)

NOTES:

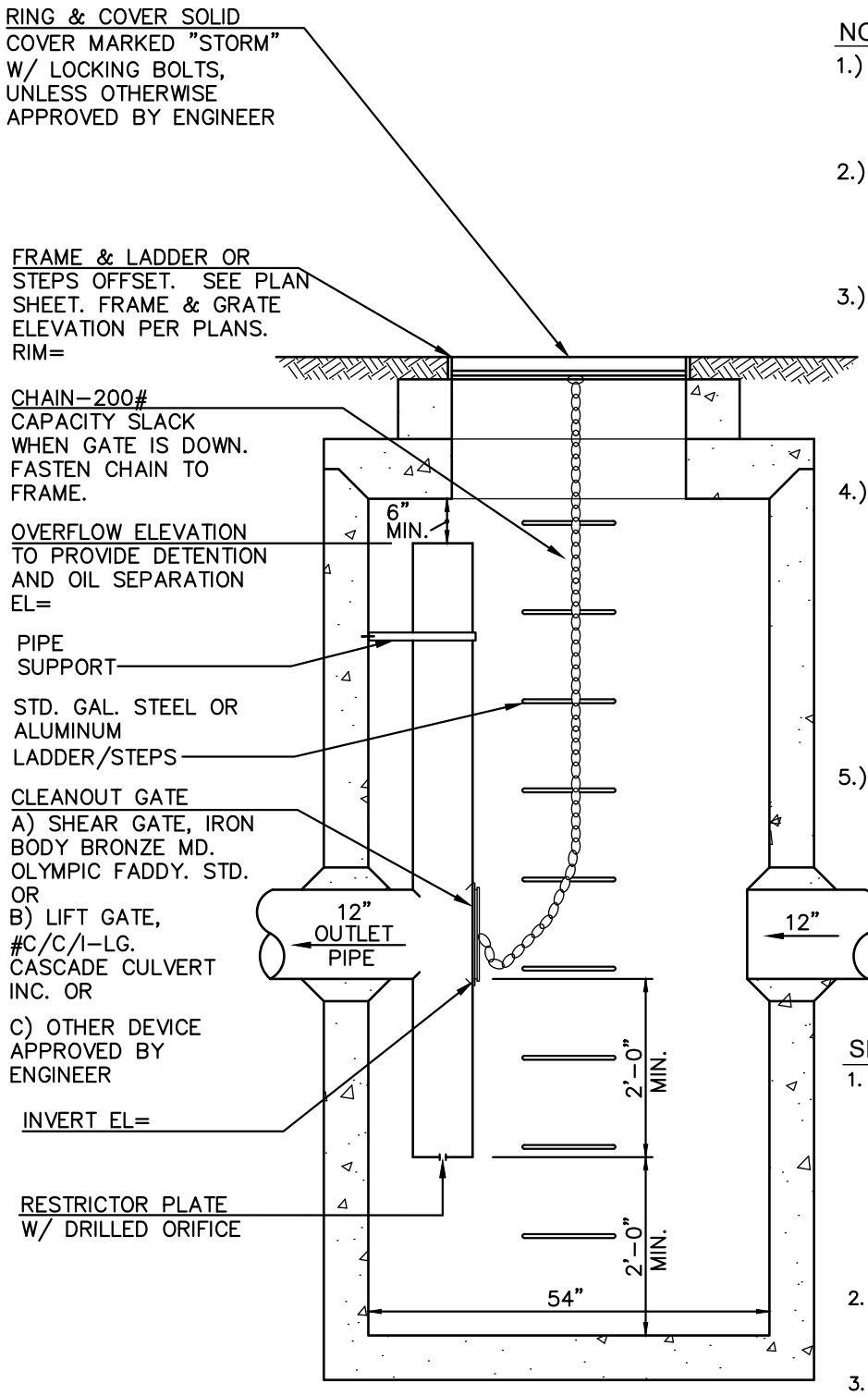
1. CATCH BASINS TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. HANDHOLDS IN RISER OR ADJUSTMENT SECTION SHALL HAVE 3" MIN. CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MIN. CLEARANCE. NO STEPS ARE REQUIRED WHEN "B" IS 4' OR LESS.
3. PRECAST BASES SHALL BE FURNISHED W/CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
4. ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS A. ALL PRECAST CONCRETE SHALL OBTAIN 4,000 PSI @ 28 DAYS.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS. MAX. HOLE SIZE IS 36" FOR 48" CATCH BASIN, 42" FOR 54" CATCH BASIN. MIN. DISTANCE BETWEEN HOLES IS 8".
6. FOR RING & COVER SEE DETAIL SD-18 & SD-19. FRAME & GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-62ID. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT.
7. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
8. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE POURED ROUNDED.
9. FOR DETAILS SHOWING FRAME AND GRATE, RING AND COVER SEE STANDARD PLAN "METAL FRAME & GRATE FOR CATCH BASIN & INLET.
10. FOR DETAILS SHOWING LADDER, STEPS HANDRAIL & TOP SLAB SEE STANDARD PLAN "MISCELLANEOUS CATCH BASIN DETAILS".
11. FRAME & GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.

"Building A Stronger Community TOGETHER"

CATCH BASIN: TYPE 2
72" & 96"

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-06



NOTES:

1.) PIPE SIZES & SLOPES, SEE PLANS.

2.) OUTLET CAPACITY NOT LESS THAN COMBINED INLETS

3.) METAL PARTS:
- A) CORROSION RESISTANT OR GALVANIZED OR ALUMINIZED TYPE 2,
- B) IF GALVANIZED STEEL PIPE, HAVE ASPHALT TREATMENT 1.

4.) FRAME & LADDER OR STEPS OFFSET SO:
- A) CLEANOUT GATE IS VISIBLE FROM TOP.
- B) CLIMBDOWN SPACE IS CLEAR OF RISER & CLEANOUT GATE.
- C) FRAME IS CLEAR OF CURB.

5.) STRUCTURE SHALL BE A TYPE 2 CATCH BASIN MINIMUM.

SPECIAL NOTES:

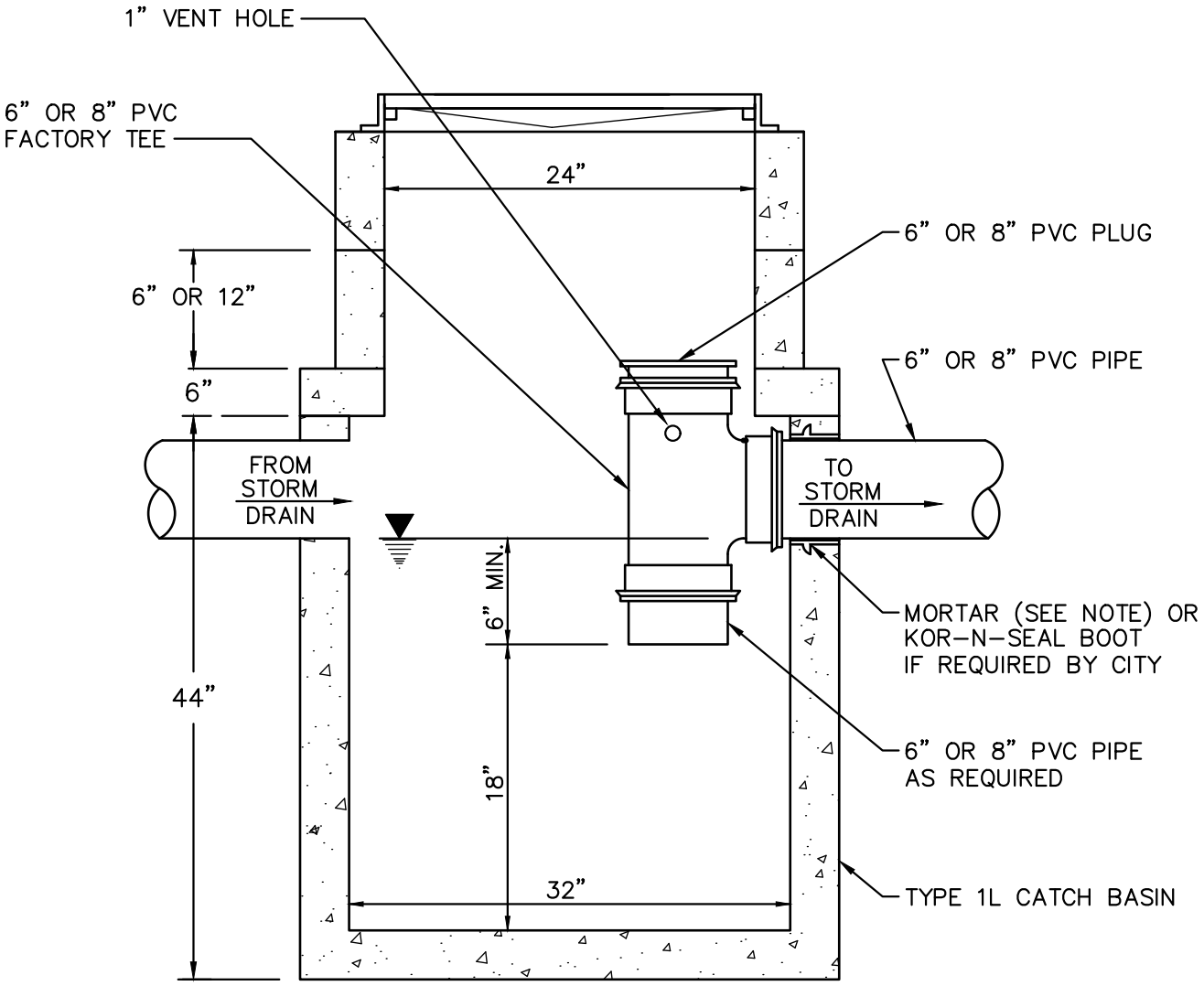
1. FOR PATCHING PICKING EYES HOLES, HOLES AROUND PIPES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON–SHRINK PRECISION GROUT–PRODUCT NO. 1585–00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244–56 –81.
2. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
3. FOLLOW ALL INSTRUCTIONS PROVIDED BY MANUFACTURER SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

"Building A Stronger Community TOGETHER"

FLOW RESTRICTOR CATCH BASIN

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-07



NOTES:

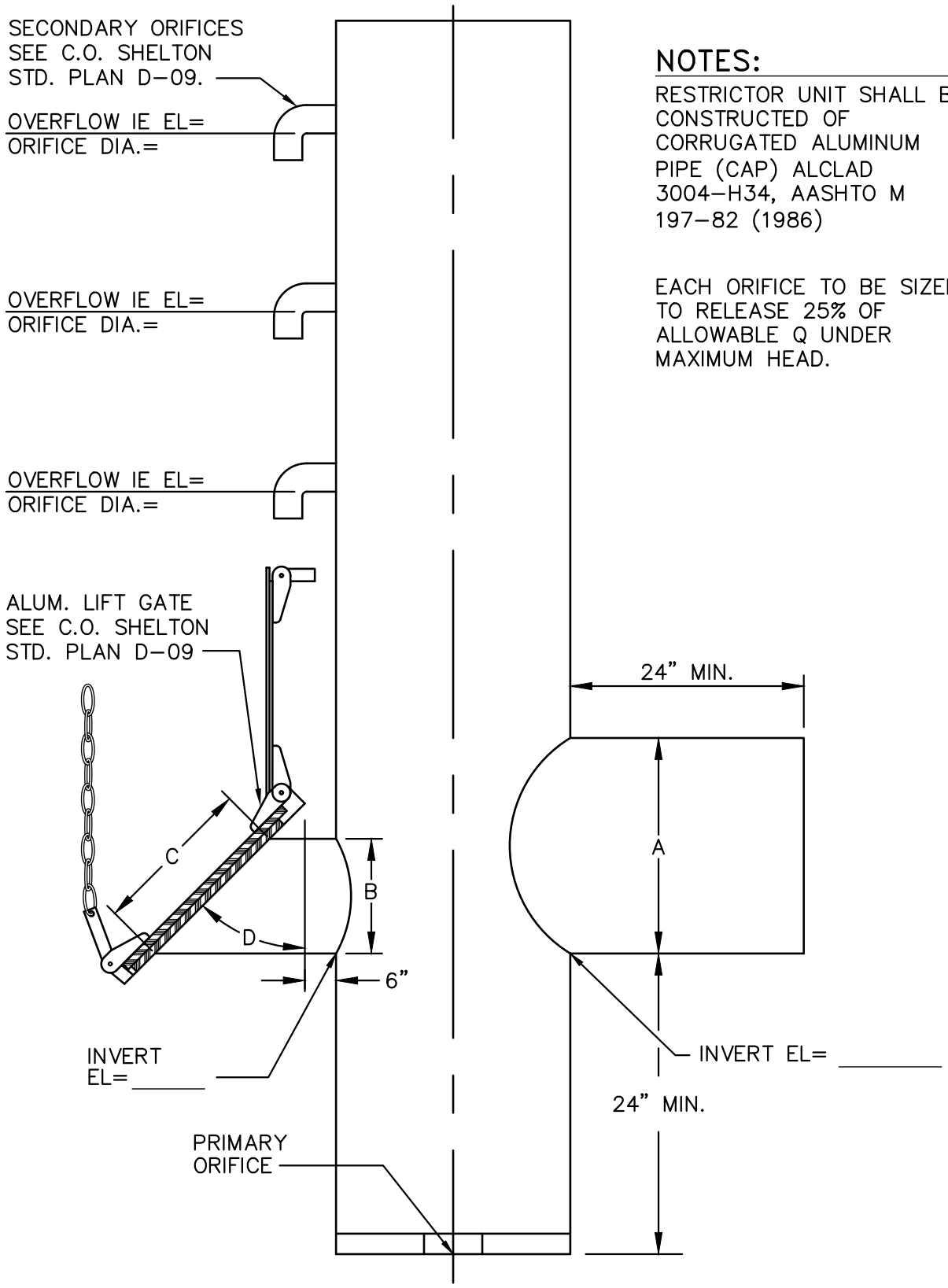
1. FOR PATCHING VOIDS AROUND PIPES, PICKING EYE HOLES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON-SHRINK PRECISION GROUT-PRODUCT NO. 1585-00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244-56 -81.
2. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
3. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE® CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

"Building A Stronger Community TOGETHER"

FLOATABLE MATERIAL SEPARATOR

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-08



NOTES:

RESTRICTOR UNIT SHALL BE CONSTRUCTED OF CORRUGATED ALUMINUM PIPE (CAP) ALCLAD 3004-H34, AASHTO M 197-82 (1986)

EACH ORIFICE TO BE SIZED TO RELEASE 25% OF ALLOWABLE Q UNDER MAXIMUM HEAD.

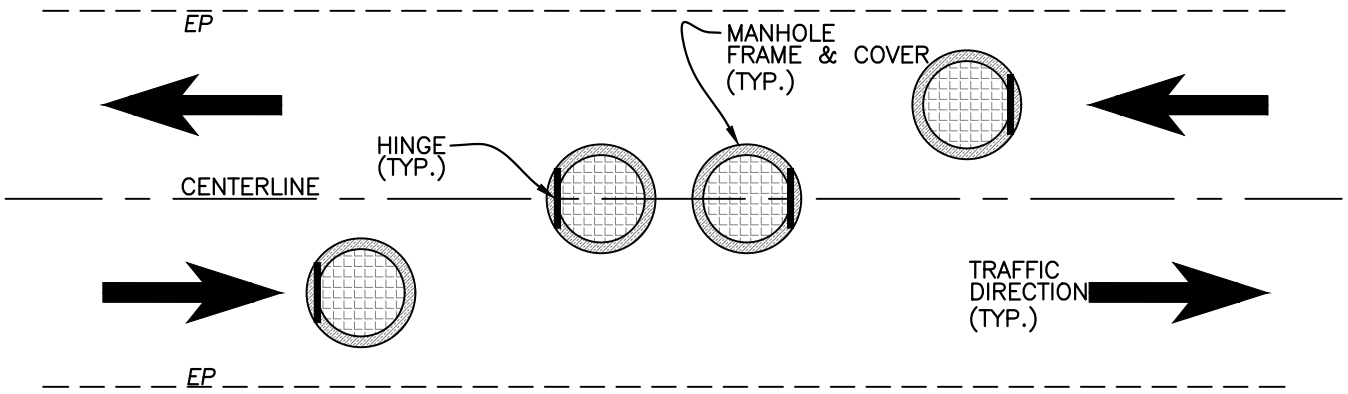
ITEM	DESCRIPTION	SIZE	
A	OUTLET	18" & SMALLER	24" & LARGER
B	CLEANING	6" ID	10" ID
C	GATE SIZE	8" OPENING	12" OPENING
D	ANGLE	42	34

"Building A Stronger Community TOGETHER"

TYPICAL RESTRICTOR INSTALLATION

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-09



NOTES:

1.) CATCH BASIN TYPE 2 COVER AND FRAME SHALL BE CALLED EAST JORDAN. COVER AND FRAME SHALL BE MANUFACTURED FROM DUCTILE IRON. HINGE MUST BE PERPENDICULAR TO FLOW OF TRAFFIC. SEE PLAN VIEW.

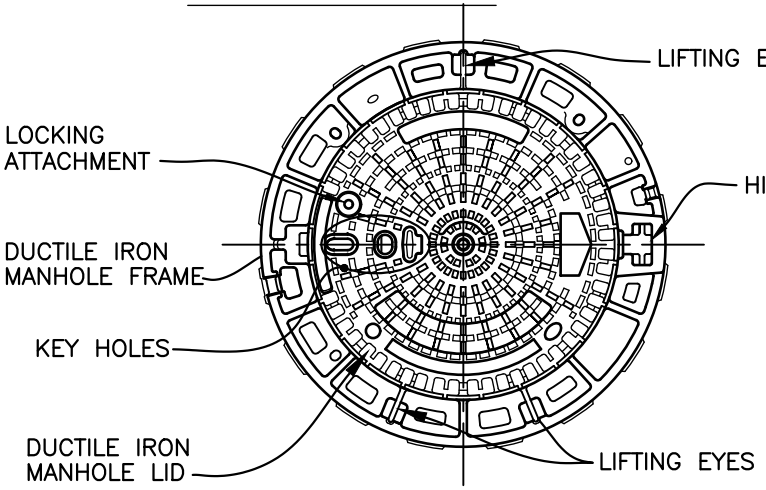
2.) COVERS SHALL HAVE LOCKING ATTACHMENT. COVERS SHALL BE HINGED AND INCORPORATE A 90 DEGREE BLOCKING SYSTEM TO PREVENT ACCIDENTAL CLOSURE. COVERS SHALL BE ONE MAN OPERABLE USING STANDARD TOOLS AND SHALL BE CAPABLE OF WITHSTANDING A TEST LOAD OF 80,000 LBS.

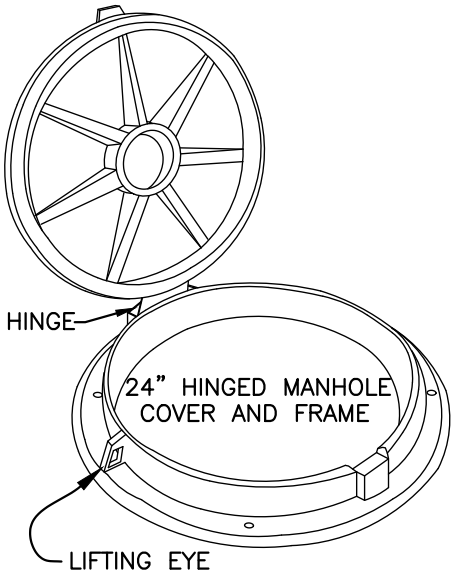
3.) FRAMES SHALL BE CIRCULAR, INCORPORATE A SEATING RING AND A FITTED PLUG IN THE HINGE HOUSING, AND BE AVAILABLE IN A 24 INCH CLEAR OPENING. THE FRAME DEPTH SHALL NOT EXCEED 4 INCHES, AND THE FLANGE SHALL INCORPORATE BEDDING SLOTS, BOLT HOLES, AND LIFTING EYES.

4.) ALL COMPONENTS SHALL BE BLACK COATED.

5.) FOR CATCH BASIN TYPE 2 INSTALLATION OUTSIDE OF PAVED AREAS SEE C.O. SHELTON STD. DETAIL SD–10A.

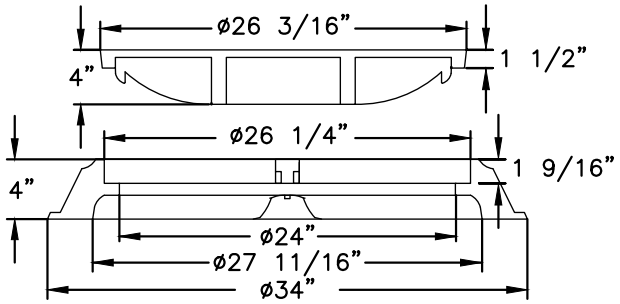
PLAN VIEW





ISOMETRIC VIEW

TOP VIEW



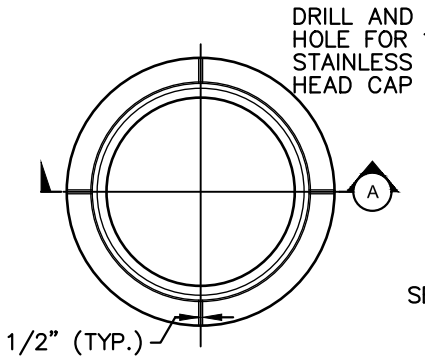
ELEVATION VIEW

"Building A Stronger Community TOGETHER"

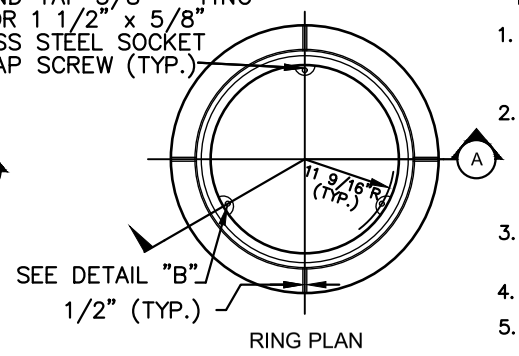
EAST JORDAN CB TYPE 2 COVER & FRAME FOR PAVED AREAS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

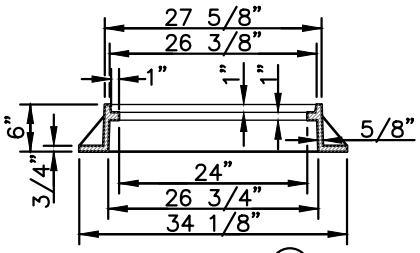
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-10



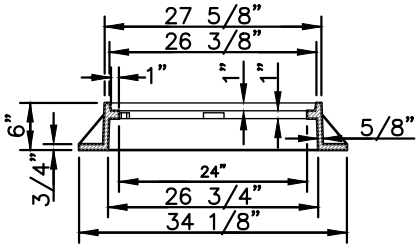
RING PLAN



RING PLAN



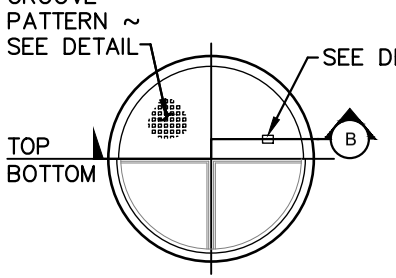
RING SECTION (A)



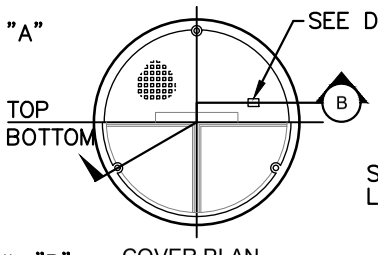
RING SECTION (A)

NOTES

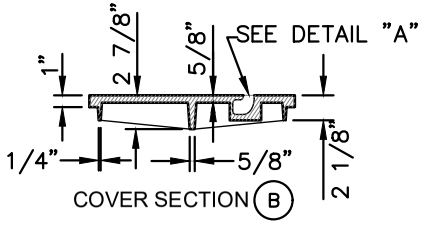
1. THE GASKET AND GROOVE MAY BE IN THE SEAT (FRAME) OR IN THE UNDERSIDE OF THE COVER. THE GASKET MAY BE "T" SHAPED IN SECTION. THE GROOVE MAY BE CAST OR MACHINED.
2. BOLT–DOWN CAPABILITY IS REQUIRED ON ALL FRAMES, GRATES, AND COVERS, UNLESS SPECIFIED OTHERWISE IN THE CONTRACT. PROVIDE 3 HOLES IN THE FRAME THAT ARE VERTICALLY ALIGNED WITH THE GRATE OR COVER SLOTS. THE FRAME SHALL ACCEPT THE 5/8" – 1 NC ×2" ALLEN HEAD CAP SCREW BY BEING TAPPED, OR OTHER APPROVED MECHANISM. LOCATION OF BOLT DOWN HOLES VARIES BY MANUFACTURER.
3. FOR BOLT–DOWN CB TYPE 2 RING AND COVERS THAT ARE NOT DESIGNATED "WATERTIGHT," THE NEOPRENE GASKET, GROOVE, AND WASHER ARE NOT REQUIRED.
4. WASHER SHALL BE NEOPRENE (DETAIL "B").
5. IN LIEU OF BLIND PICK NOTCH FOR MANHOLE COVERS, A SINGLE 1" PICK HOLE IS ACCEPTABLE. HOLE LOCATION AND NUMBER OF HOLES MAY VARY BY MANUFACTURER.
6. ALTERNATIVE REINFORCING DESIGNS ARE ACCEPTABLE IN LIEU OF THE RIB DESIGN.
7. WATERTIGHT CB TYPE 2 COVER SHALL BE OLYMPIC FOUNDRY INC., OR APPRV'D EQUAL.
8. ALL CB TYPE 2 RING & COVERS TO MEET CURRENT WSDOT STD. SPECIFICATIONS.
9. FOR CATCH BASIN TYPE 2 INSTALLATION INSIDE OF PAVED AREAS/CONCRETE SEE C.O. SHELTON STD. DETAIL SD–10.



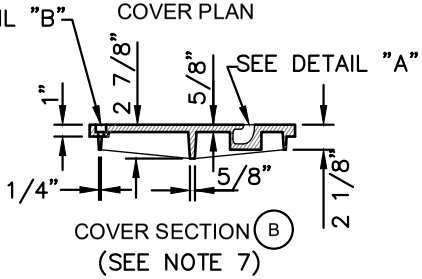
COVER PLAN



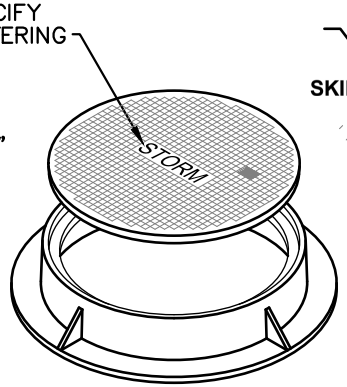
COVER PLAN



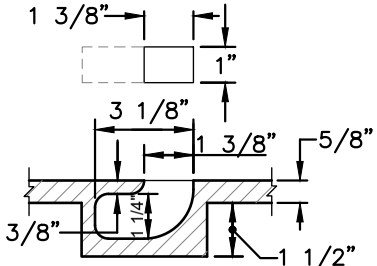
STANDARD
TYPE 1



(SEE NOTE 7)
BOLT-DOWN / WATERTIGHT
TYPE 2



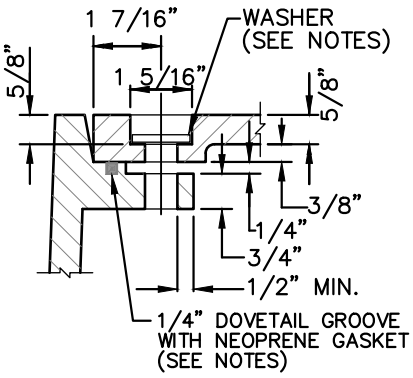
ISOMETRIC VIEW



BLIND PICK NOTCH
DETAIL "A"



SKID GROOVE PATTERN DETAIL



BOLT-DOWN / WATERTIGHT
DETAIL "B"

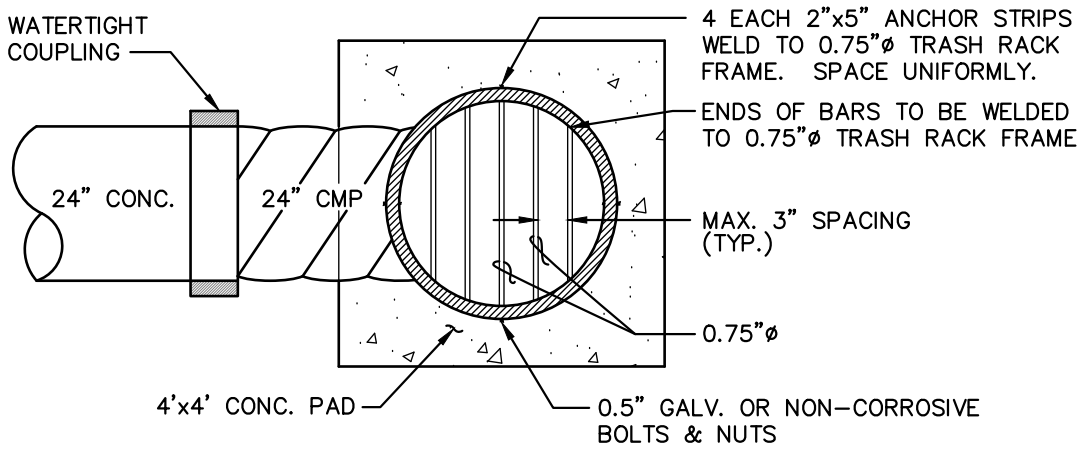
SEE DETAIL SD-19 FOR
ADDITIONAL REQUIREMENTS

CATCH BASIN TYPE 2 RING AND COVER FOR UNPAVED AREAS

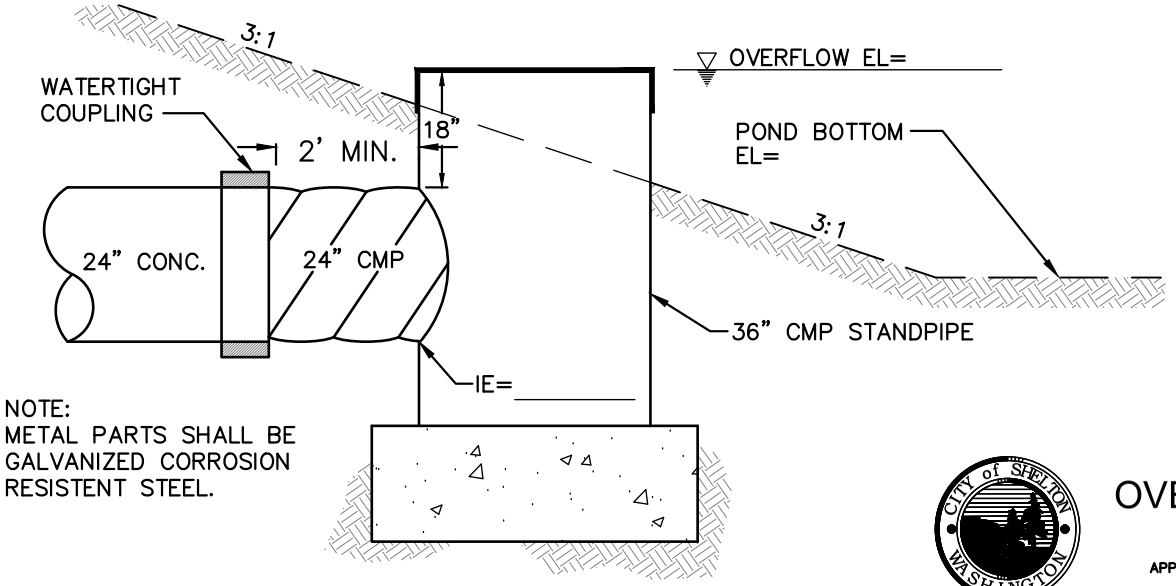
CITY of SHELTON WASHINGTON
"Building A Stronger Community TOGETHER"

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-10A



PLAN VIEW



NOTE:
METAL PARTS SHALL BE GALVANIZED CORROSION RESISTENT STEEL.

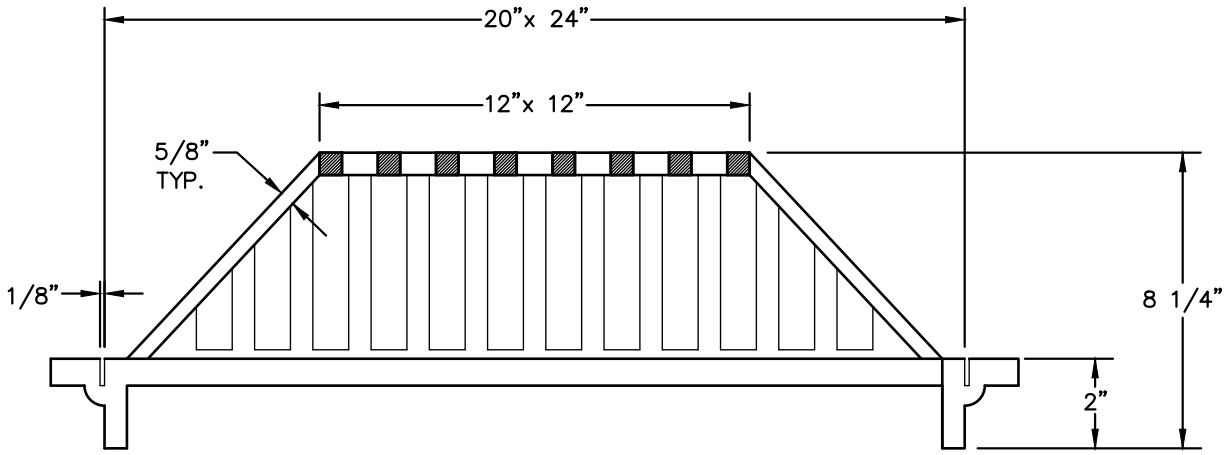
SECTION VIEW

"Building A Stronger Community TOGETHER"

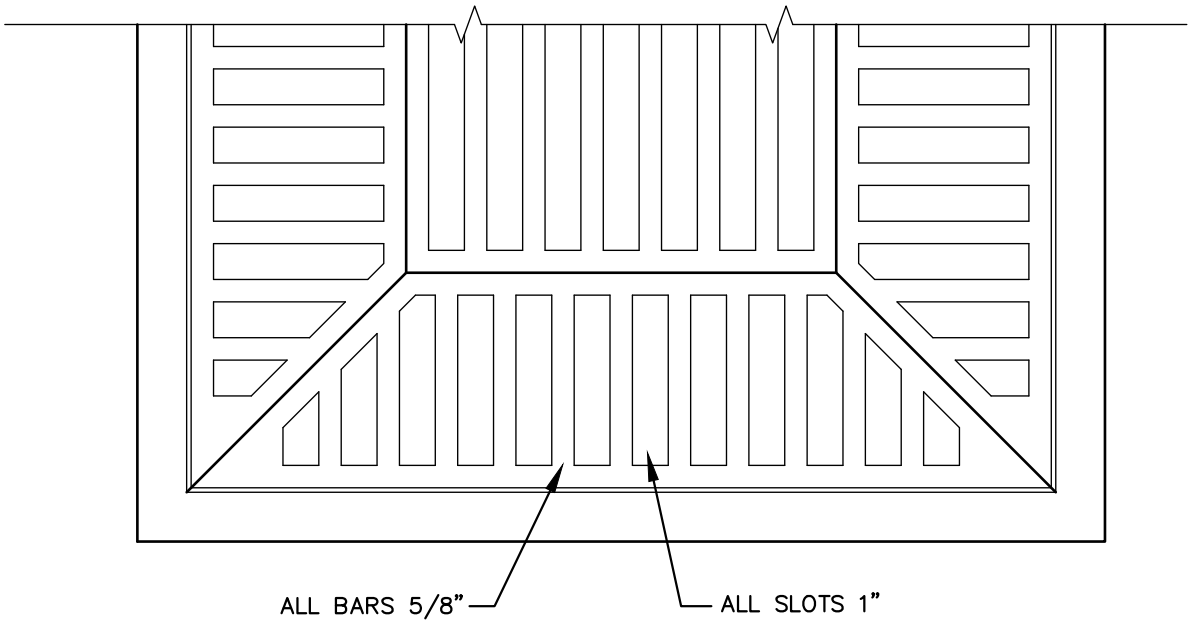
OVERFLOW STRUCTURE DETAIL

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-11



NOTES:
1. ALL MATERIAL FOR GRATE SHALL BE DUCTILE IRON, ASTM A536 GR.80–55–06
2. GRATE SHALL BE OLYMPIC FOUNDRY MODEL No. SM60BH OR EQUAL.
3. GRATE SHALL LOCK TO FRAME.



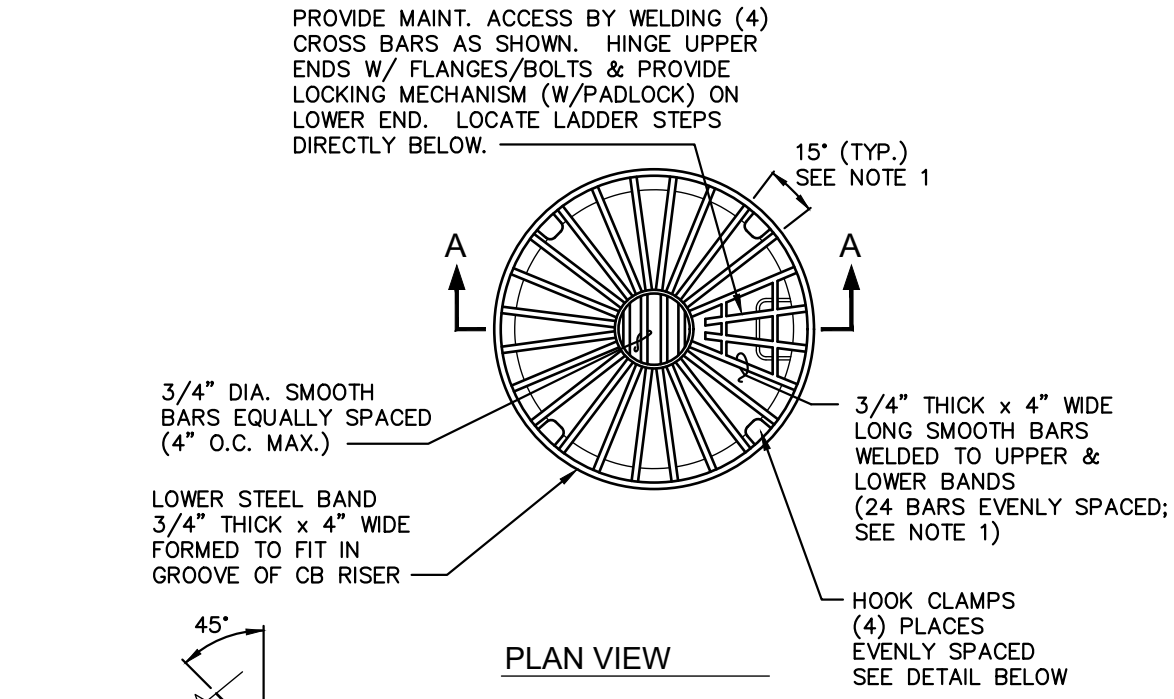
* FOR TYPE 1 CATCH BASIN

"Building A Stronger Community TOGETHER"

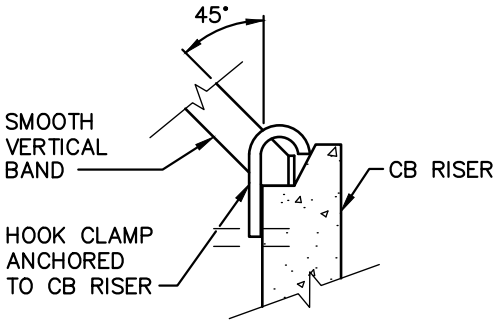
SQUARE BEEHIVE DRAIN GRATE*

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

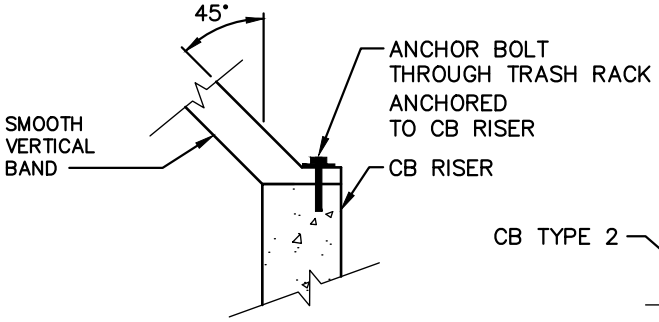
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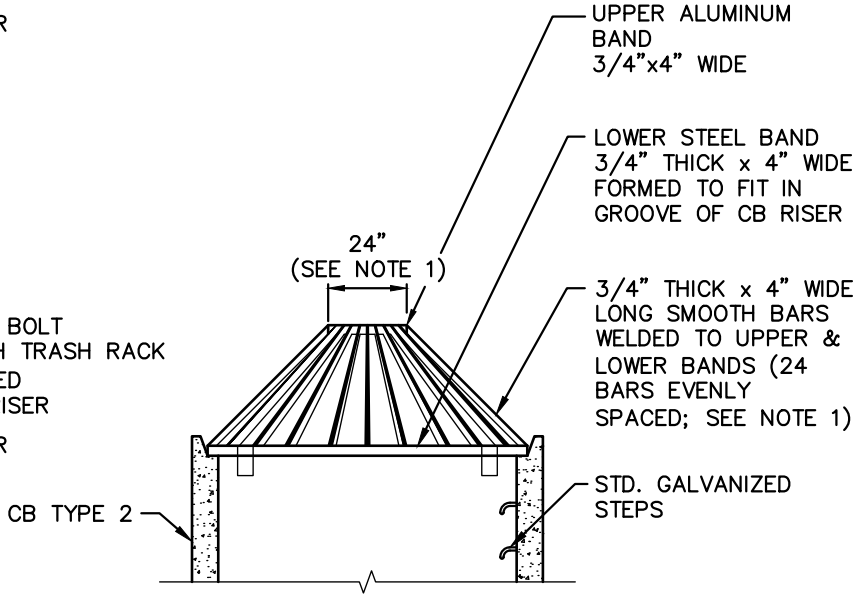
PLAN VIEW



HOOK CLAMP DETAIL



ALTERNATE RACK CONNECTION DETAIL



SECTION A-A

NOTES:

1.) DIMENSIONS ARE FOR INSTALLATION ON 54" DIA. CB'S, ADJUST DIMENSIONS TO MAINTAIN 45° ANGLE ON "VERTICAL" BARS AND 4" O.C. MAX. SPACING OF BARS AROUND LOWER ALUMINUM BAND, WHEN VERTICAL BAR SPACING EXCEEDS 4" O.C. ADD CONCENTRIC HORIZONTAL RINGS, SPACED 4" O.C. TO THE STRUCTURE.

2.) METAL PARTS: METAL BARS: 6061 T.6. ALUMINUM ALLOY.

3.) THIS DEBRIS BARRIER IS ALSO RECOMMENDED FOR USE ON THE INLET TO ROADWAY CROSS-CULVERTS WITH HIGH POTENTIAL FOR DEBRIS COLLECTION (EXCEPT ON TYPE 2 STREAMS).

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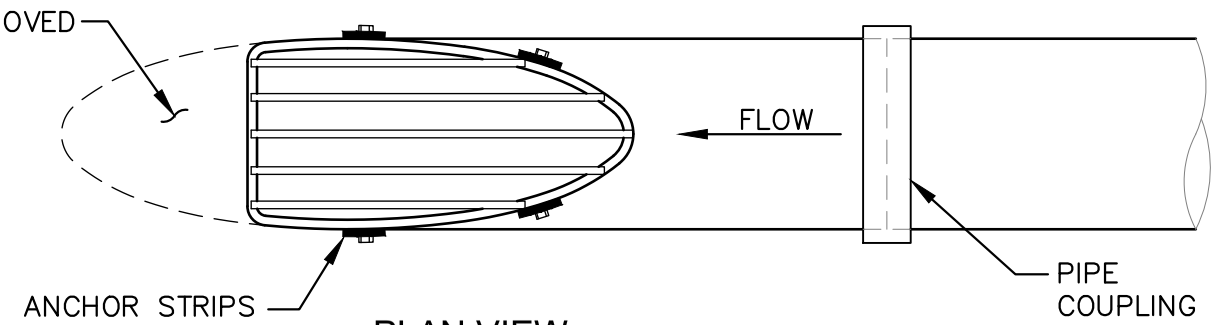
CATCH BASIN, TYPE 2 w/ BIRD CAGE TRASH RACK

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

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1/2019	GS	NTS	SD-13

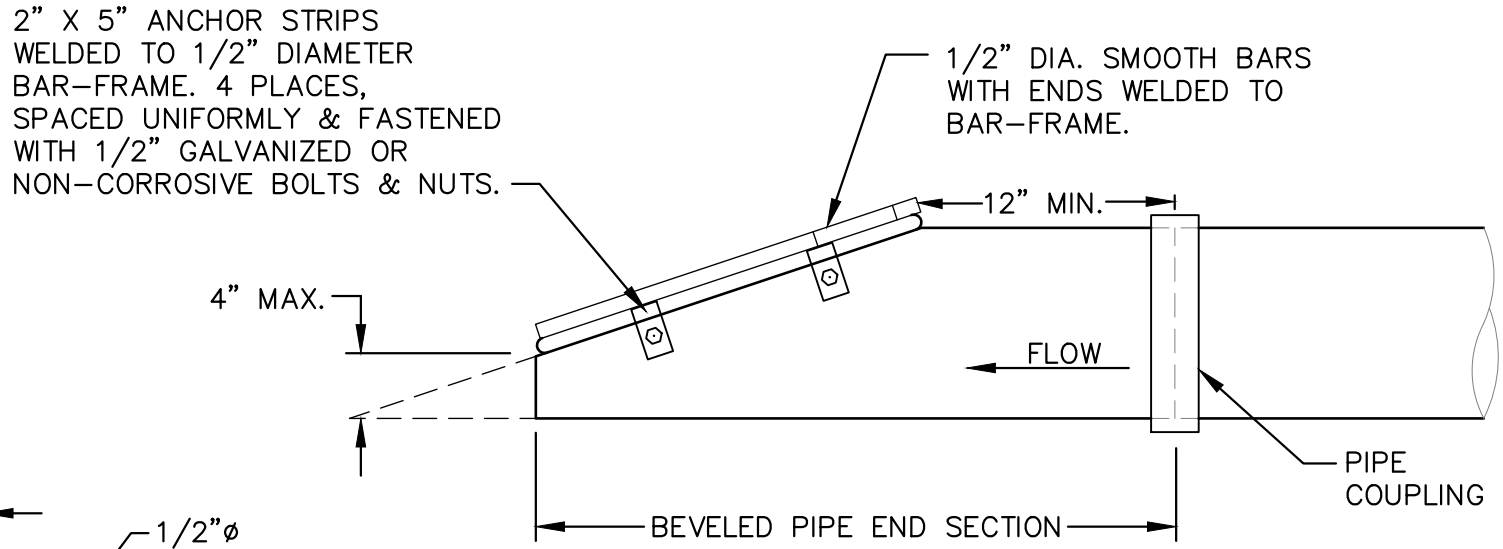
NOTE:

ALL STEEL PARTS MUST BE GALVANIZED.



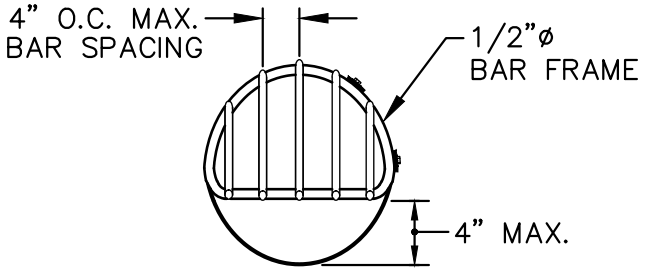
PLAN VIEW

NTS



SECTION VIEW

NTS



END VIEW

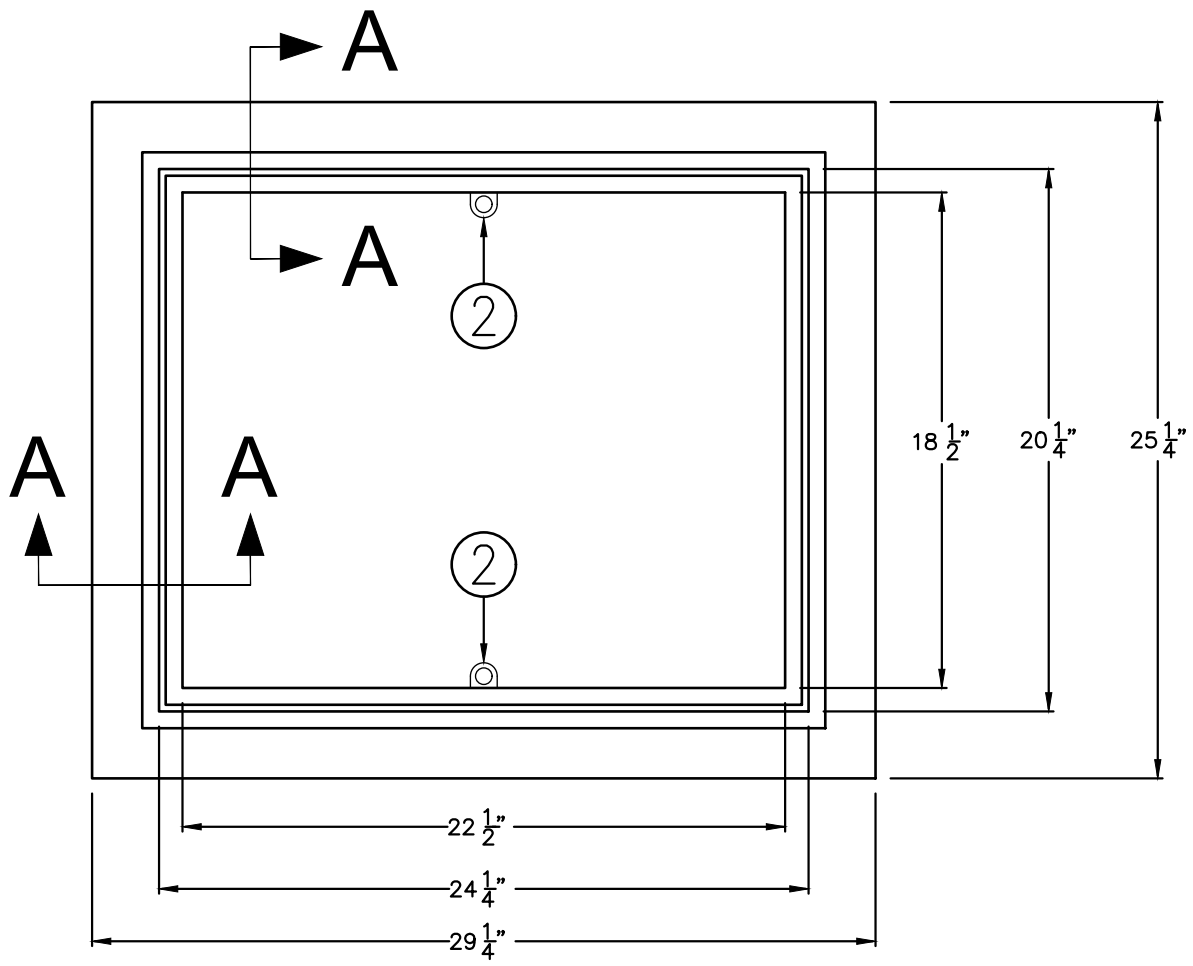
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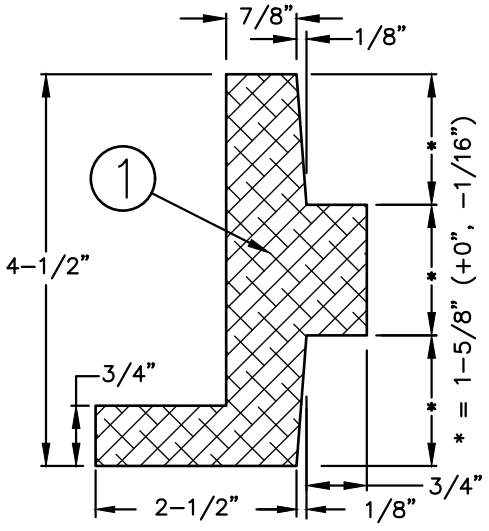
DEBRIS BARRIER DETAIL

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-14



TOP VIEW



SECTION A-A

NOTES:

1. MATERIAL USED SHALL BE CAST IRON PER ASTM-A48, CLASS 30. FRAME SHALL HAVE A BITUMINOUS COATING APPLIED.
2. WHEN A LOCKING GRATED OR COVER IS REQUIRED. THE FRAME SHALL BE FABRICATED SO AS TO ACCEPT TWO (2) 5/8" STAINLESS STEEL SOCKET HEAD CAP SCREWS OF GRATE OR COVER.

SPECIAL NOTE:

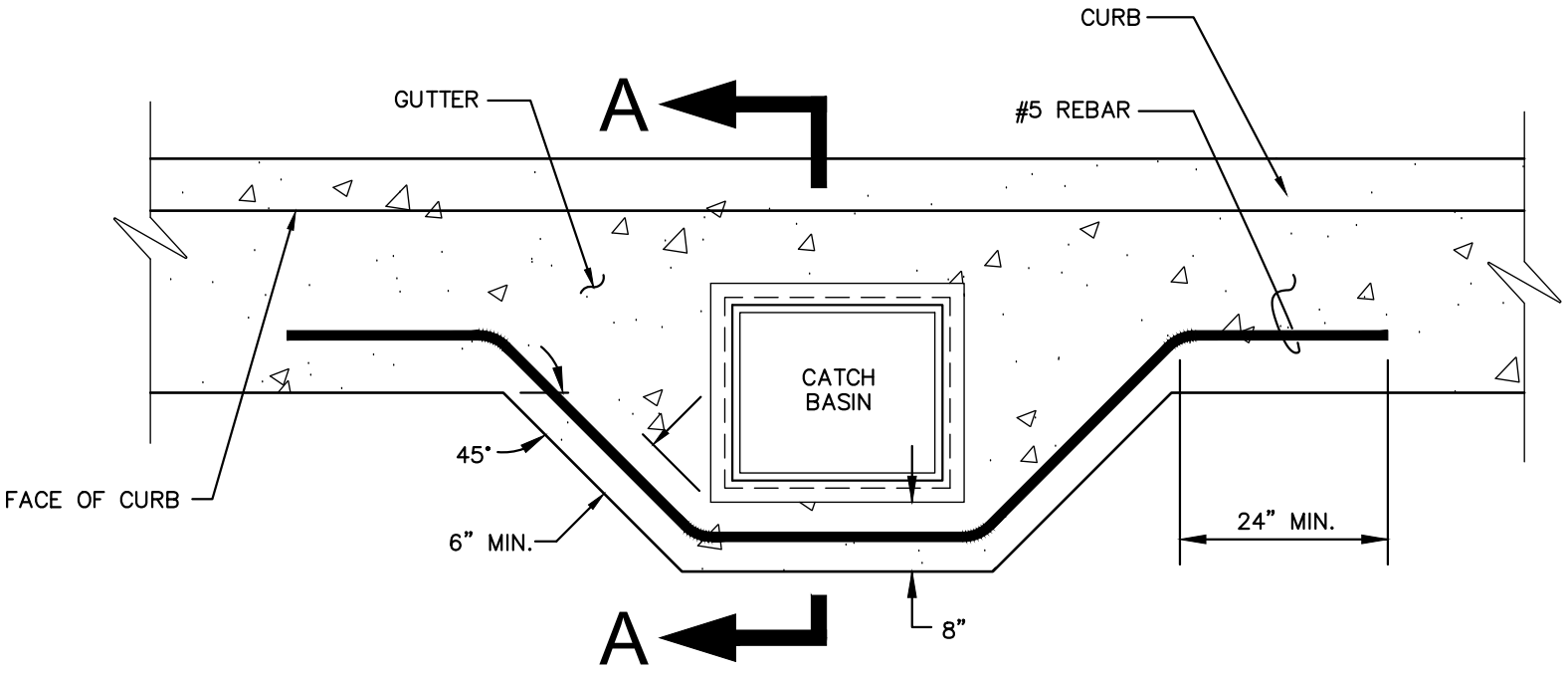
CATCH BASINS AND GRATES TO CONFORM TO WSDOT STANDARD PLANS. VERIFY TYPE W/ CITY ENGINEER.

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FRAME FOR GRATE OR SOLID COVER

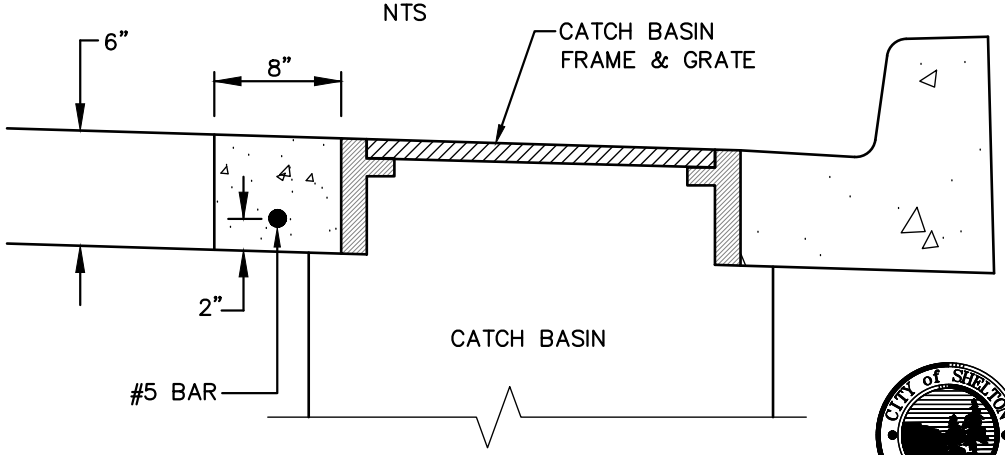
APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

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1/2019	GS	NTS	SD-15



PLAN VIEW

NTS



SECTION A-A

NTS

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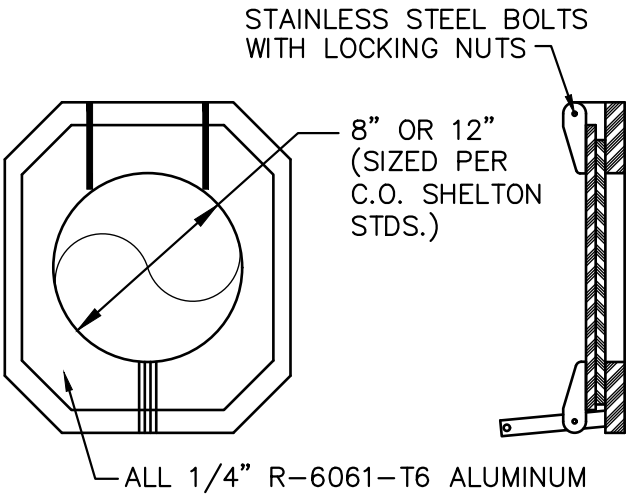
RECESSED GUTTER DETAIL

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PUBLIC WORKS DIRECTOR

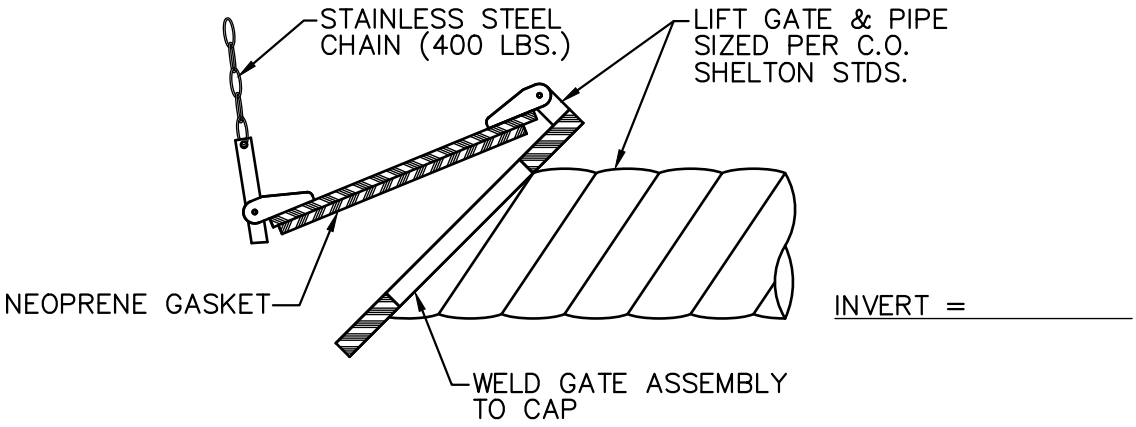
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NOTES:

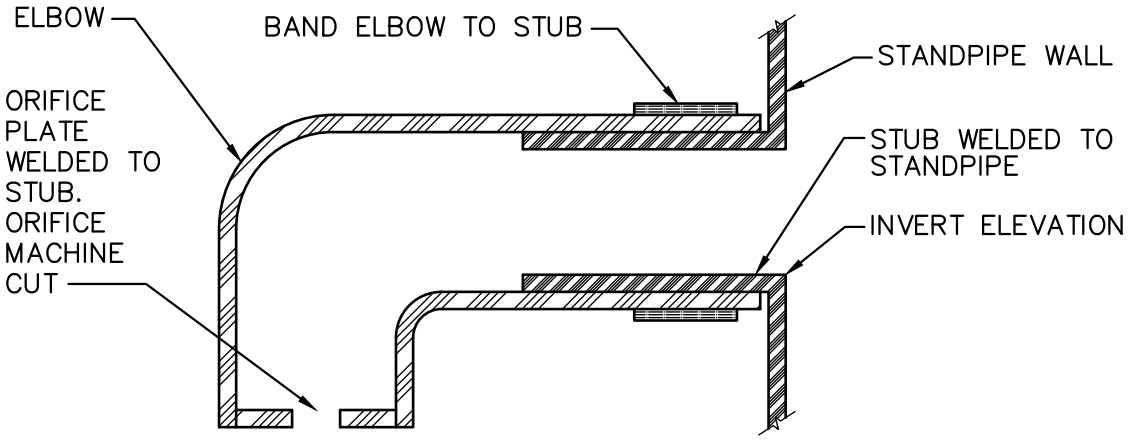
LIFT GATE SHALL BE CONSTRUCTED OF: 1/4" R–6061–T6 ALUMINUM WITH CLOSED CELL NEOPRENE PER ASTM 1056– 67 CHEMICAL RESISTANT (OIL & GREASE). OZONE RESISTANT, 67° TO +250° F SERVICE TEMPERTURE.



LIFT GATE DETAIL



LIFT GATE ASSEMBLY



ALL PARTS TO BE R–6061–T6 ALUMINUM

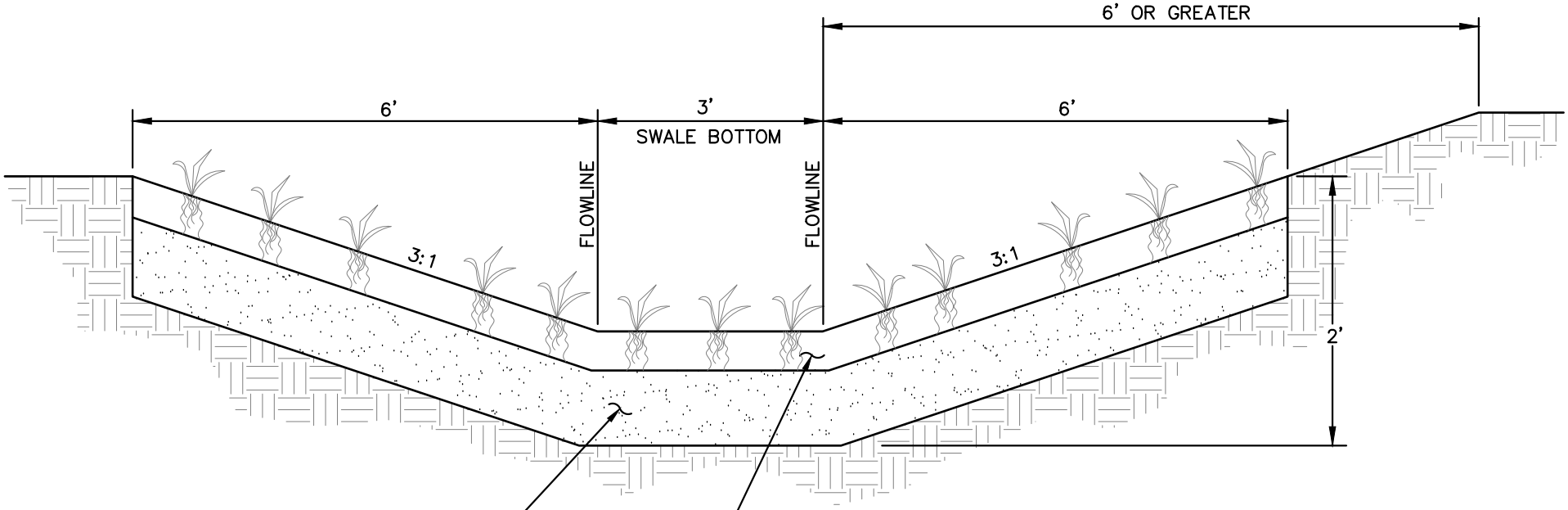
SECONDARY ORIFICE DETAIL

"Building A Stronger Community TOGETHER"

LIFT GATE ASSEMBLY & SECONDARY ORIFICE DETAILS

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-17

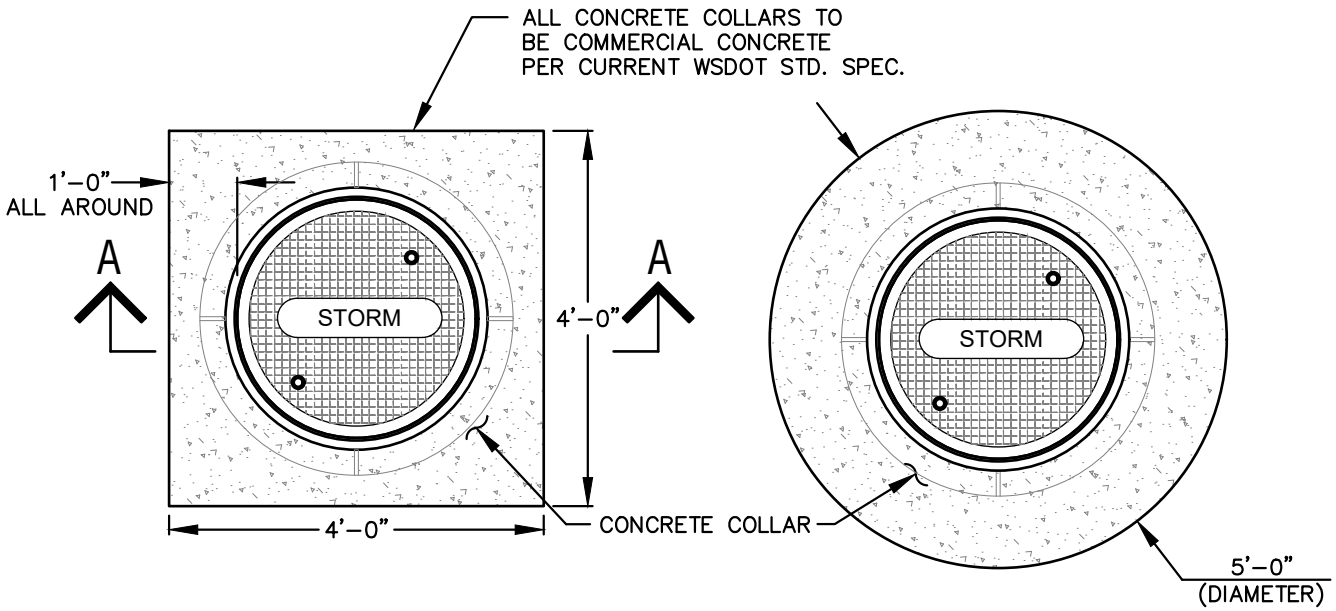


"Building A Stronger Community TOGETHER"

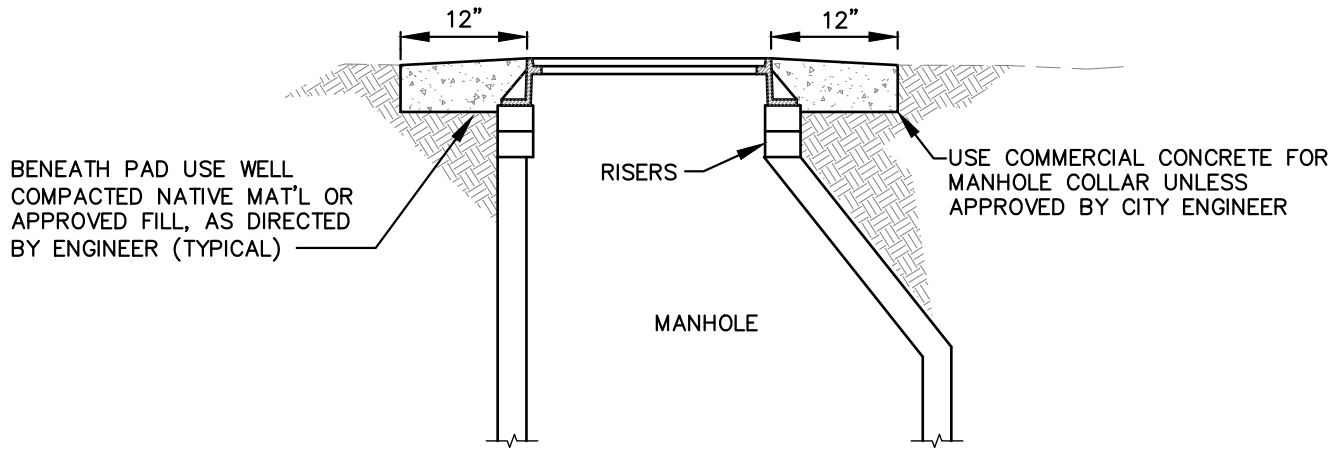
BIOFILTER SWALE DETAIL

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-18



CATCH BASIN TYPE 2 RING &
COVER W/ CONCRETE COLLAR
NTS



SECTION A-A
NTS

INSTALLATION NOTES

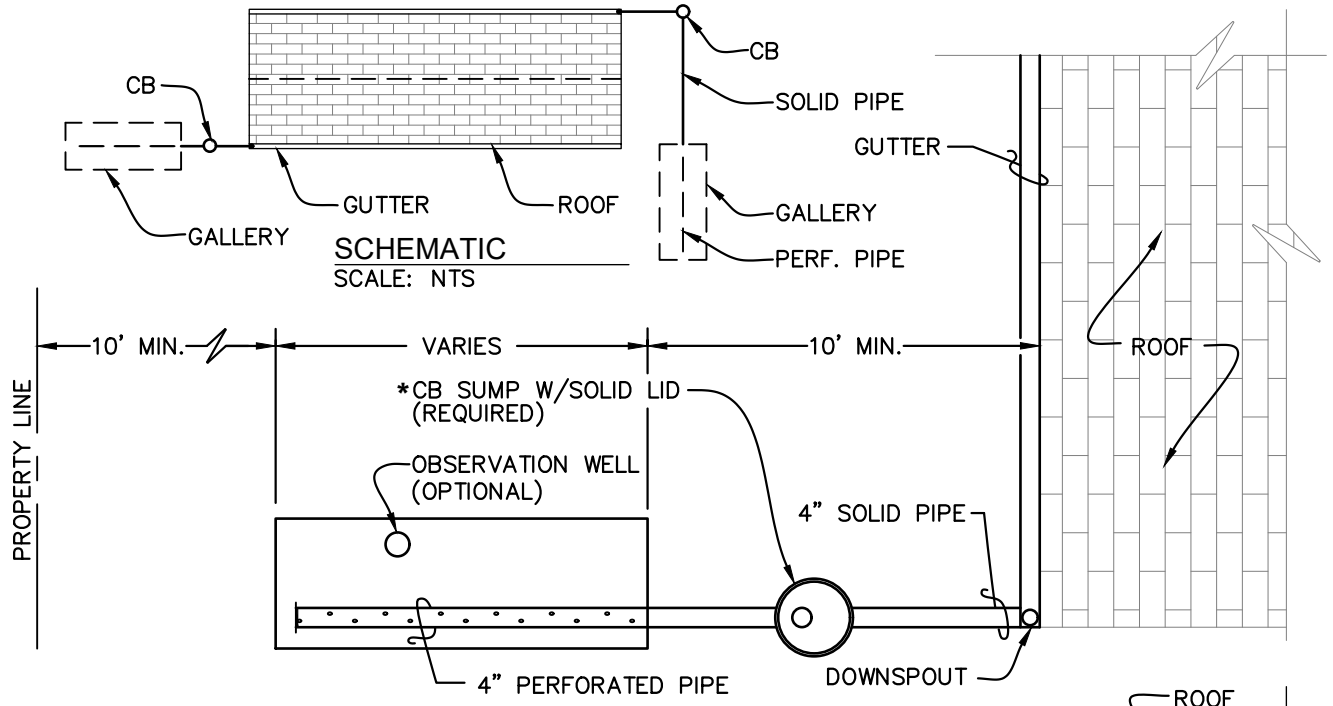
1. SECURE RING & COVER TO MANHOLE RISER USING APPRV'D GROUT AS LISTED BELOW.
2. MUST INSTALL MIN. OF 4" OF ADJUSTMENT RINGS (RISERS).
3. ONLY NON–HINGED MANHOLE COVERS IN NON–PAVED AREAS SEE DETAIL SD–10A. SEE DETAIL SD–10 FOR PAVED AREAS.
4. PATCH ALL VOIDS AROUND PIPES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON–SHRINK PRECISION GROUT–PRODUCT NO. 1585–00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244–56 –81 OR AN APPROVED EQUAL.
5. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
6. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

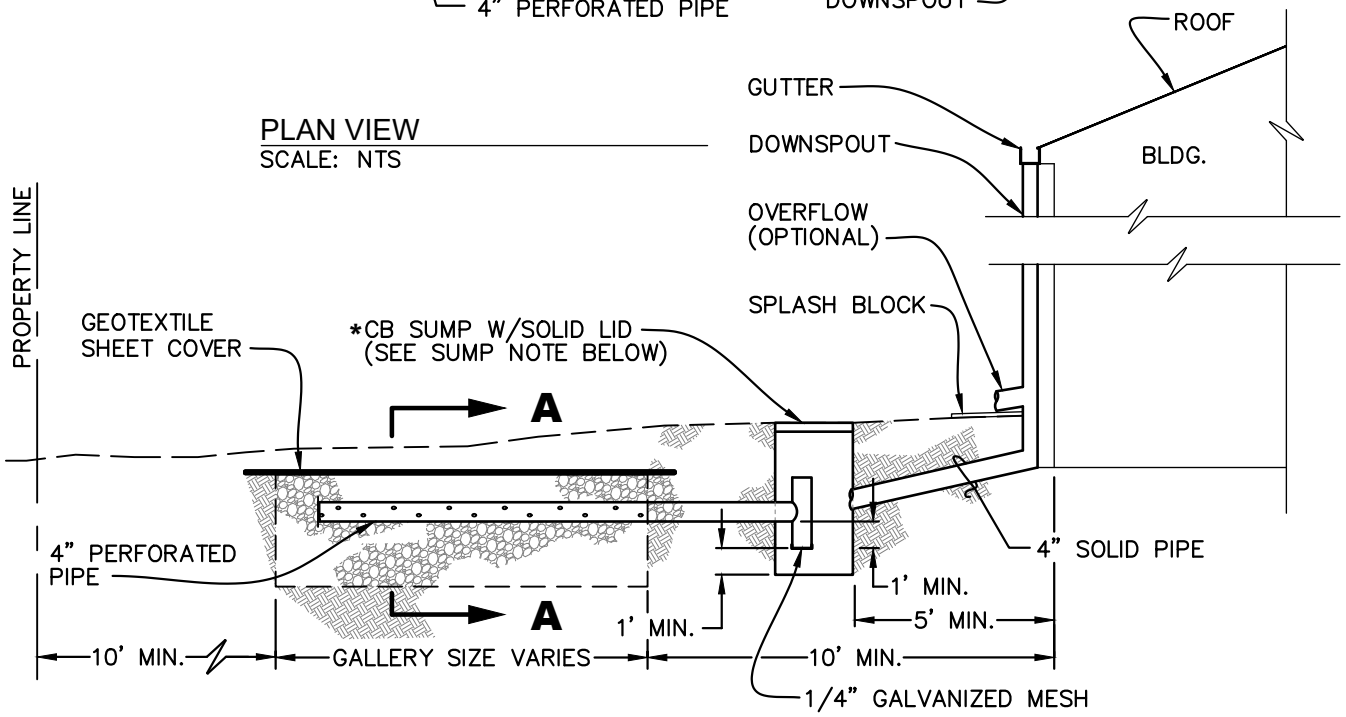
"Building A Stronger Community TOGETHER"

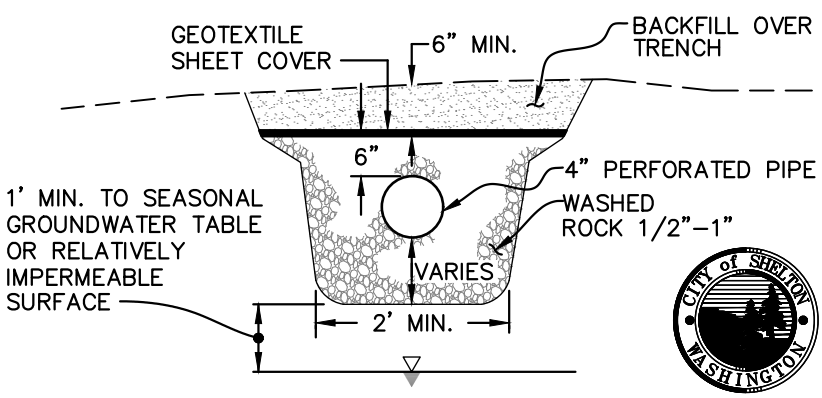
CATCH BASIN TYPE 2 SURFACE RESTORATION WITHIN RIGHT OF WAY

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-19







*SUMP NOTE

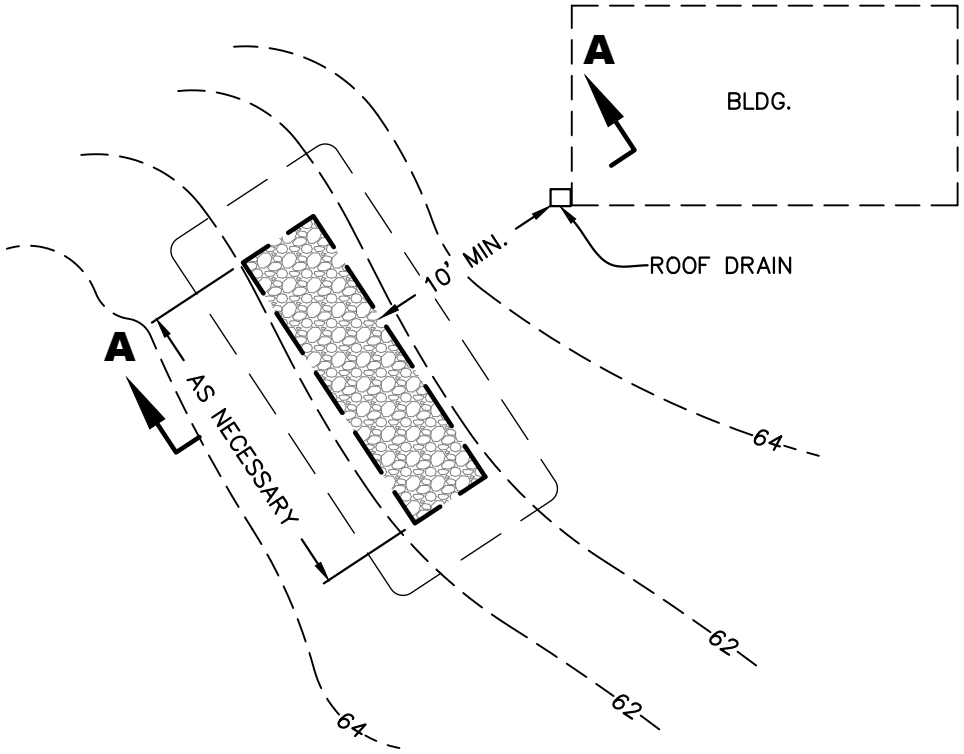
A SUMP IS A REQUIRED ITEM.
HP SUMP 1830
18"x30" SUMP WELL CORRUGATED POLY HANCOR CA-SWO-18 OR EQUIVALENT

"Building A Stronger Community TOGETHER"

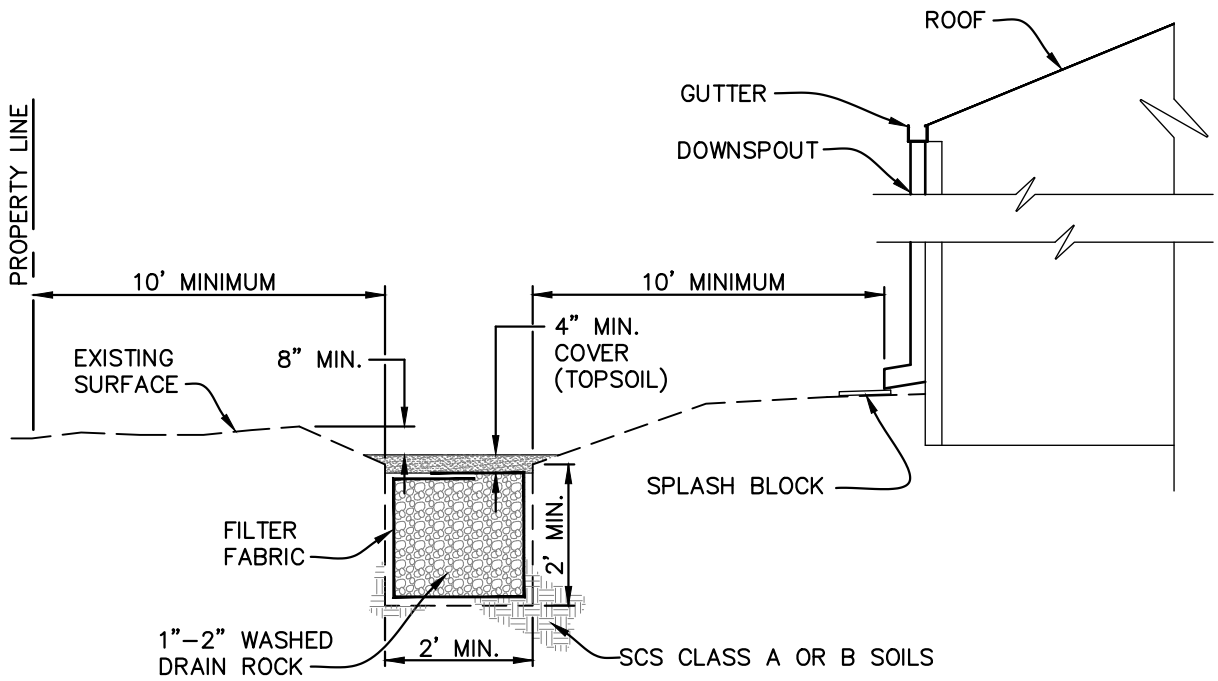
INFILTRATION GALLERY

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-20



PLAN VIEW



SECTION A-A

NOTE:

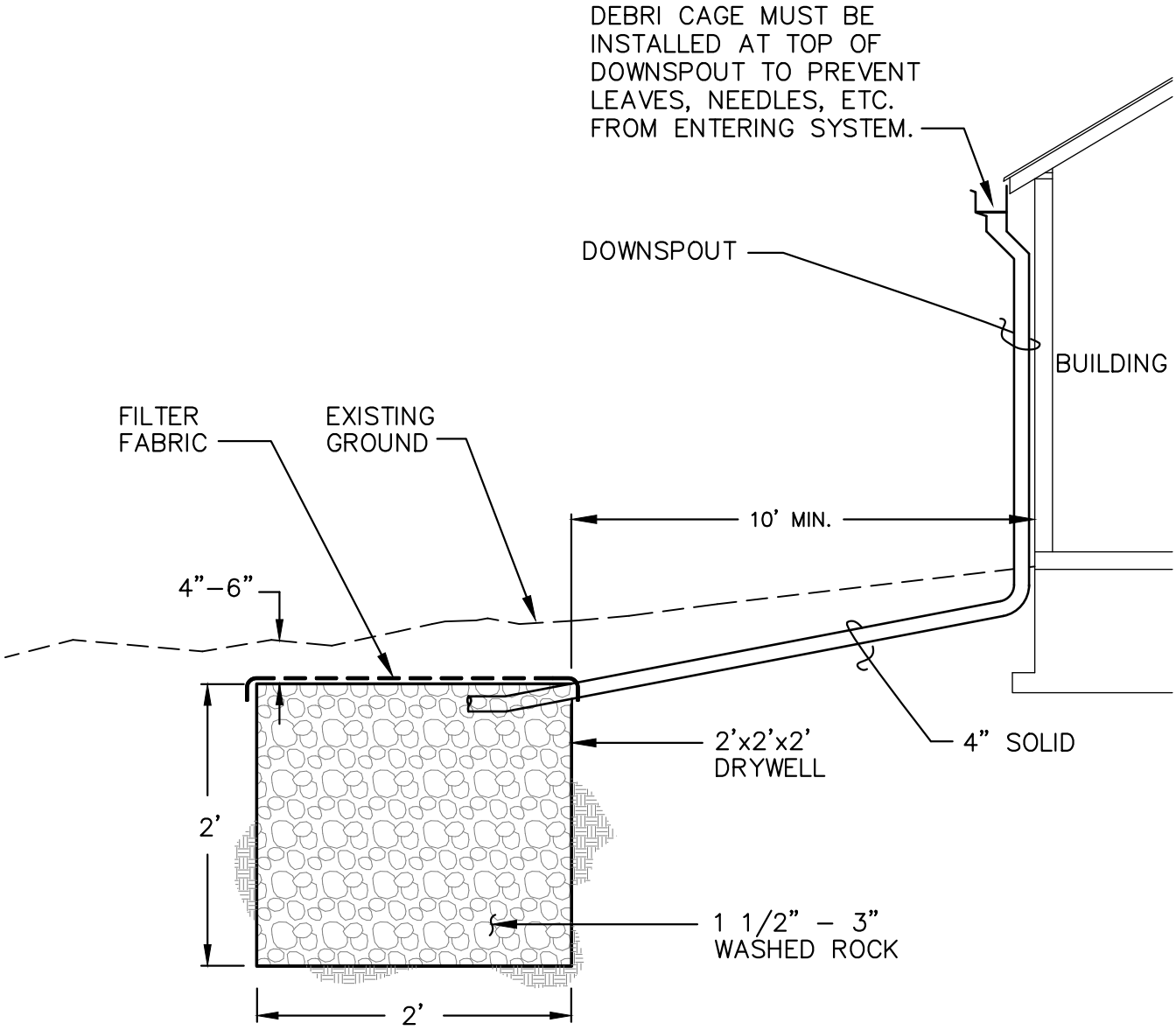
FOR USAGE ONLY WHEN AUTHORIZED BY THE CITY ENGINEER AND IF SIZE OF ROOF AREA IS LESS THAN 1,000 SF.

"Building A Stronger Community TOGETHER"

ALTERNATE #1 ROOF DRAIN DRYWELL

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-21



NOTE:

FOR USAGE ONLY WHEN AUTHORIZED BY THE CITY ENGINEER AND IF SIZE OF ROOF AREA IS LESS THAN 1,000 SF.

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ALTERNATE #2 ROOF DRAIN DRYWELL

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-22

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"Building A Stronger Community TOGETHER"

DETAIL TITLE

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-23

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"Building A Stronger Community TOGETHER"

DETAIL TITLE

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SD-24

C H A P T E R 4

4.000 WATER

4.010 Water System Alterations, Extensions and Connections

To allow the City to provide timely assistance and advice, anyone who wishes to alter, extend or connect to the City's water system should contact the City as soon as possible. Any alteration, connection and/or extension of the public water supply and distribution system must be approved by the City of Shelton. Proposed alterations, connections and/or extensions must conform to Department of Health (DOH), and *Comprehensive Water System Plan* requirements and City Ordinances.

In the case of development within the corporate City limits on existing lots, or on new lots or sites created by subdivisions desiring a connection to City water or requiring fire flows, the owners of each lot of parcel shall, in conjunction with an application for a building permit, apply for connection to be made at their own expense between the City's water system and each premises, building or structure requiring a building permit. Where the property abuts a public right-of-way or easement, extension of the water main shall be required. Such extension(s) shall be to and across the full width of the property served with water unless otherwise approved by the City. For corner lots, the extension shall be to the middle of the adjacent roadway intersection.

In planning and designing for any alteration, connection and/or extension, it is the Engineer's responsibility to see that adequate water for both domestic use and fire protection is attainable. The proposed plans must show how water will be supplied and whether adequate water pressure will be available in case of fire. An analysis of the water supply and distribution system may be required if it appears that the system might be less than adequate.

Any alteration, extension or connection to the City water system, or any plumbing in a residential or nonresidential facility providing water for human consumption that is connected to the City system shall be lead-free. With respect to solders and flux, lead-free shall mean no more than 0.2% lead, and no more than 0.89% lead with respect to pipes and pipe fittings. (After 01/01/2014, lead-free shall mean zero parts lead for all solders, flux, pipes, and pipe fittings).

The design of any water system alteration/extension/connection shall conform to these City *Standards* and any applicable City ordinances as set forth herein. The layout of extensions shall provide for the future continuation and/or 'looping" of the existing system, as determined by the City. When determined to be applicable by the City due to topography, existing and/or proposed land uses, Comprehensive Plan and other factors, installation of an appropriately-sized water main across the full width of the property may be required.

All residential dwelling units, commercial and industrial complexes shall have at least one water meter installed per separate building. All duplexes shall have two water meters installed. All multi-dwelling units with three or more residential dwelling units shall require a master meter. Master meters may be allowed for properties under one ownership at the Public Works Director approval. All appropriate cross connection control devices must be installed.

Prior to the installation of any water meters, all public water system improvements must be completed and approved by the City, including granting of right-of-way or easements and the payment of all applicable fees. Issuance of building permits for new construction of single family subdivisions shall not occur until final City approval is given.

For commercial projects, building permits may be issued upon completion and acceptance of the required fire protection facilities. A financial guarantee in accordance with Chapter One of these *Standards* will be required for the remaining water system improvements. The Certificate of Occupancy will not be issued until final City approval of all improvements.

4.020 Water Main Design Standards

Water mains shall be sized to provide adequate domestic flow, plus fire flow at the required residual pressure, as required by the current edition of the *Washington State Water System Design Manual* and the *Uniform Fire Code.* Fire flow requirements will be determined by the City; however, the quantity of water required will in no case be less than 1000 GPM at 20 psi residual for all other occupancies except UBC Class U. Check with the City for Class U requirements.

The minimum water main size shall be 8 inches diameter. If fire protection requirements are met, the City may approve alternate

pipe sizes (i.e., cul-de-sac). Larger size mains are required in specific areas as outlined in the *Comprehensive Water System Plan* or as necessary to meet fire flow requirements and future service areas. Water supply and fire flow quantities will dictate water main looping requirements. In any case, water mains longer than 1,200 lineal feet shall be looped.

All pipe for water mains and appurtenances shall be ductile iron Class 52 (Class 235 C-900 may be used if approved by the City) and comply with the requirements for water distribution material (Section 9-30 of the WSDOT Standard Specifications), EXCEPT: Steel pipe shall not be approved. In addition: In areas of high groundwater (as typically found in Sewer Basins 1, 2, and 3) or reactive soils, Ductile Iron Pipe conforming to AWWA C 151, Class 52 pipe and/or polyethylene encasement shall be installed.

The minimum cover for all water mains from top of pipe to finish grade shall be 36 inches unless otherwise approved by the City. If the pipe is offset to the edge of the road, the actual roadway cross grade shall be projected out and used to measure cover to top of pipe. This will require more fill over the pipe in a fill section but allows the pipe adequate cover in the event of future roadway cuts or widening. If the pipe is located under a ditch or on the "downhill" slope of the roadway cross section, the minimum cover over the pipe shall be 36 inches or as otherwise approved by the City. All materials shall also be installed in conformance with the manufacturer's written recommendations.

The maximum cover for all water mains shall be 42 inches at top of pipe unless otherwise approved by the City. See Standard Detail W-06.

4.030 Hydrant Design Standards

The pipe from the main line to the fire hydrant shall be ductile iron cement mortar lined Class 52, no less than 6 inches in diameter.

Fire hydrants shall have two 2-1/2 inch outlets and one 4-1/2 inch pumper port outlet fitted with a 4 inch Stortz adapter. All outport threads shall be Shelton Standard No. 475 thread. The valve opening shall be 5-1/4 inch diameter. The hydrant shall have a positive and automatic barrel drain and shall be of the "safety" or breakaway style.

Hydrants shall be manufactured by either Mueller or M&H. All new hydrants shall be bagged until all new water system construction is approved by the City.

The following guidelines shall apply for hydrant number and location, unless otherwise approved by the City:

A. A minimum of one hydrant shall be installed at all intersections.

B. Hydrant spacing shall conform to the requirements of the International Fire Code, but in no instance stall exceed 600 feet.

C. Hydrants located in cul-de-sac or dead end areas either by design, topographic or manmade feature that prohibit straight line distance measurement, shall be located to serve no more than 60,000 square feet of land area or have a maximum travel distance of 300 feet. Where a cul-de-sac or dead end exceeds 300 feet, a hydrant shall be required.

D. When any portion of a proposed non-residential building is in excess of 150 feet from a water supply on a public street, on-site hydrants may be required by the City. Such hydrants shall be located per the *Standards* and easements for such hydrants shall be granted to the City.

E. A scaled down plan view of the proposed water system shall be included on the plans. The scale shall be appropriate to show the entire proposed system. This plan view shall show the location of all the proposed hydrants plus the location of the appropriate existing hydrants adjoining the project. If the project only includes the addition of one or two new hydrants, the location of at least two existing hydrants in the project vicinity need to be shown on the plan view.

F. Fire hydrants shall be set as shown in Standard Detail W-08.

   For requirements regarding use, size and location of a fire department connection (FDC) and/or post indicator valve, contact the City Fire Department. Location of the FDC shall be shown on the plans.

   A Water Usage Permit is required for the use of hydrants; contact the City about permit procedures and fees.

Where needed, the City may require hydrants to be protected by two or more posts, six inches in diameter by five feet in height, and made of either reinforced concrete or steel. Posts shall be placed so that they do not interfere with the operation of the hydrant or cause obstruction of the ports. See Standard Detail W-09.

4.040 Valve Design Standards

All valves and fittings shall be ductile iron with ANSI flanges or mechanical joint ends. Valves shall be installed in the distribution system at sufficient intervals to facilitate system repair and maintenance, but in no case shall there be less than one valve every 1,000 feet. Generally, there shall be two valves on each tee and three valves on each cross. Specific requirements for valve spacing will be made during plan review.

A. Gate Valves: The design, materials and workmanship of all gate valves shall conform to AWWA C515-80, latest revision. Gate valves shall be resilient wedge, non-rising stem (NRS) with two internal O-ring stem seals. Gate valves shall be Mueller, M & H, Kennedy, Clow R/W, Waterous Series 500 or an approved equal. Gate Valves shall be used on all water mains, or as otherwise approved by the City.

B. Butterfly valves may be used on all lines 12 inches and larger except when a tapping valve is required, when approved by the Public Works Director. Butterfly valves shall conform to AWWA C504, Class 150B, with cast iron short body and O-ring stem seals. Butterfly valves shall be Mueller, Linseal III, Kennedy, Pratt Ground Hog, Allis Chalmers, or an approved equal.

C. All valves shall be installed with a valve box with a lug type cover from Olympic Foundry Inc., or an approved equal per detail W-07 and W-07A.

D. An operating nut extension shall be installed when the ground surface is more than 36 inches above the valve-operating nut. The operating nut extension shall extend into the top section of the standard valve box and shall clear the bottom of the valve box lid by a minimum of 10 inches. When an operating nut extension is required, it shall be furnished and installed by the contractor. See Note: Valve Stem Extension Legend on Standard Detail W-07.

4.050 Water Service Connections

For new mains extending across the frontage of lots not a part of the project, service connections shall be provided as necessary for service to lots. At the time of water main construction, all water service connections required by the approved plans shall be installed by the contractor. All service taps shall be shown on the plans. See Standard Details W-01 through W-05. After the water service lines have been constructed, inspected, tested and approved by the City, the property owner may apply for a water meter. The Contractor will install water meters 1 ½" and larger after a utility application has been made and all related fees have been paid. The City will lock off meter until approved for service. All water services between the City main and the meter are the property of the City.

When water is desired to a parcel fronting an existing main but not served by an existing meter, a utility application must be made to the City. Upon approval of the application and payment of all applicable fees, the Contractor will install the service lateral, meter box and setter, as necessary.

Service lines shall be as specified herein. Service lines shall be installed at a 45-degree angle off the top of the water main. No glued joints will be accepted.

All service lines up to and including two (2) inches in diameter shall be pressure class 200, polyethylene plastic pipe manufactured from all virgin material, category 5, grade P34, Class C high density polyethylene CTS OD ASTM D-2737 SDR 9 PE3408; cell classification 335434C to 355434C from Philips Driscopipe, Superlon Plastics, Type K Copper or approved equal. Stainless steel inserts shall be used with all polyethylene plastic pipe. Service lines larger than 2 inches in diameter shall be as specified in section 4.020. All services shall have a minimum of 20 inches of cover.

Service Saddles shall be ductile iron with stainless steel straps. All saddles shall have rubber gasket and iron pipe threaded outlets.

Corporation stops shall be iron pipe or Mueller CC threads conforming to AWWA C 800 or an approved equal.

When connection to the City of Shelton water system is requested by a customer connected to an existing domestic well, the well must be abandoned per Department of Ecology requirements or a cross connection control assembly must be installed and tested per Section 4.160. This is necessary to assure that an unapproved auxiliary water supply (the customer's well) will not contaminate

the City's water supply. The customer's domestic well may be kept serviceable for irrigation purposes after all cross connection control have been met. No water meter will be installed until a cross connection inspection has been completed to the satisfaction of the City.

Development on new lot created by subdivision and each approved site plan shall have a water service connection to a City main installed.

In single-family subdivision (including mobile home and manufactured home subdivisions), a service shall be provided to each lot or site. If a separate domestic and an irrigation meter are desired at a particular lot or tract, additional services shall be installed.

4.060 Water Main/Sanitary Sewer Crossings

When water mains and sanitary sewer mains cross, the water main shall be above the sanitary sewer main. The contractor shall maintain a minimum of 18 inches of vertical separation between sanitary sewers and water mains. The minimum cover of 42 inches for water mains may be reduced to 24 inches, in accordance with the pipe manufacturer's written recommendations, and upon approval by the City, to provide for as much vertical separation as possible.

The longest standard length of water pipe shall be installed so that the joints will fall equidistant from any sewer crossing.

In some cases, where minimum separation cannot be maintained, it may be necessary to encase the water pipe and/or the sewer service in pipe or concrete per the State Department of Ecology's *Criteria for Sewage Works Design*. No concrete shall be installed unless specifically allowed by the City.

4.070 Manholes

See Chapter 5 for design, construction and testing requirements regarding manholes.

4.080 Sterilization and Flushing

Sterilization of water mains shall be the responsibility of the contractor and shall be done in accordance with Section 7 of the WSDOT *Standard Specifications for Road, Bridge and Municipal Construction* and in a manner satisfactory to the City, with a

minimum 50mg/L chlorination in accordance with the requirements of the Washington State Department of Health.

At no time shall chlorinated water from the new main be flushed into a body of water. This is to include lakes, rivers, streams, drainage ways, ditches and any and all other waters where fish or other natural aquatic life can be expected.

When a chlorine concentration has been established throughout the line, the valves shall be closed and the line left undisturbed for a minimum of 24 hours. The line shall then be thoroughly flushed and water samples taken by the City at least 24 hours after flushing and disinfecting for testing by an approved laboratory. Should the initial treatment result in an unsatisfactory bacteriological test, the original chlorination procedure shall be repeated by the contractor until satisfactory results are obtained.

4.090 Hydrostatic Tests

Prior to the acceptance of the work, the installation shall be subject to hydrostatic pressure test(s) of 200 psi or twice the line pressure, whichever is greater, for 15 minutes in accordance with Section 7 of the WSDOT *Standard Specifications for Road, Bridge and Municipal Construction*. Any leaks or imperfections developing under said pressure shall be remedied by the contractor. No main shall be hydrostatically tested until the lines are flushed of chlorine. The main shall be tested between valves. Whenever possible, no hydrostatic pressure shall be placed against the opposite side of the valve being tested.

The contractor shall provide all necessary equipment and shall perform all work required to complete the tests. Tests shall be made on the main prior to any service tap. Service taps will be made after the hydrostatic testing of the main and shall be made when the main is at its working pressure. The contractor shall perform the test to assure that the equipment to be used for the test is adequate and in good operating condition and the air in the line has been released before requesting the City to witness the test.

4.100 Air and Vacuum Release Valves

Air and vacuum release valves (ARV) shall be APCO combination air release valve or approved equal. Installation shall be as shown on Standard Detail W-15. The installation shall be set at the high point of the line when required. Where possible, pipes are to be graded to prevent the need for an air release valve.

4.110 Blowoff Assembly

If a fire hydrant is not located at the end of a dead end main, a blowoff assembly shall be required. The pressure rating for blowoff assemblies shall be 200 psi. Blowoff assemblies shall be located near the end of cul-de-sacs when appropriate. Installation shall be as shown on Standard Detail W-11.

4.120 Staking

All surveying and staking shall be performed by a Professional Land Surveyor licensed by the State of Washington. All construction staking shall be inspected by the City prior to beginning construction.

The minimum staking of waterlines shall be as directed by the City or as follows:

A. Stake centerline alignment every 50 feet with cut or fill to invert of pipe maintaining cover over pipe per Section 4.020. Cuts are normally not required when the road grade has been built to subgrade elevation.

B. Stake alignment of all fire hydrants, tees, water meters, setters and other appurtenances and mark cut or fill to hydrant flange finished grade.

Any deviations from these minimum staking requirements shall be approved by the City.

4.130 Trench Excavation and Pipe Laying

Clearing and grubbing where required shall be performed within the easement or public right-of-way as permitted by the City in conformance to WSDOT *Standard Specifications*. Debris resulting from the clearing and grubbing shall be disposed of by the contractor in accordance with the terms of all applicable permits. Track mounted equipment shall not be allowed on paved City streets and public rights-of-way outside of the approved project boundaries and gravel streets without prior approval by the City.

The contractor shall perform all excavation in whatever substance is encountered. Boulders, hardpan, clay rocks, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below water main grade. Where materials are removed from below water main grade, the trench

shall be backfilled to grade with material satisfactory to the City and thoroughly compacted.

Trenches shall be excavated to the line and depth designated by the City to provide a minimum of 36 inches cover over the pipe. The trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space and in compliance with all State and Federal guidelines.

Surface water shall be diverted so as not to enter the trench. Trench water or other deleterious materials shall not be allowed to enter the pipe at any time. The contractor shall maintain sufficient pumping equipment on the job to ensure that these provisions are carried out. Provisions shall be made to prevent floating of the pipe.

The contractor shall handle all types of pipe in a manner that will prevent damage to the pipe, pipe lining or coating. Pipe and fittings shall be loaded and unloaded using hoists and slings in a manner to avoid shock or damage, and under no circumstances shall pipe be dropped, skidded, or rolled against another pipe.

If the Inspector determines that the contractor's methods are damaging to the pipe, the contractor shall correct the handling methods. All damaged pipe will be rejected, marked as such, placed apart from undamaged pipe, and shall be removed from the site within 24 hours. Pipe shall be stacked in such a manner as to prevent damage to the pipe, to prevent dirt and debris from entering the pipe, and to prevent any movement of the pipe. For public safety, each size of pipe shall be stacked separately.

Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations, and any pipe or fitting that has been installed with dirt or foreign material in it shall be removed, cleaned and re-laid. At times, when pipe laying is not in progress, the open ends of the pipe shall be closed by a watertight plug or by other means approved by the Engineer to ensure cleanliness inside the pipe.

The bottom of the trench shall be finished to grade with hand tools in such a manner that the pipe will be bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to accommodate the joint.

Long radius curves, either horizontal or vertical, may be laid with standard pipe by deflecting the joints. The amount of

deflection at each pipe joint when pipe is laid on a curve shall not exceed the manufacturer's printed recommended deflections. When rubber gasketed pipe is laid on a curve, the pipe shall be jointed in a straight alignment and then deflected to the curved alignment. Trenches shall be made wider on curves for this purpose.

When the contractor is trenching and shoring adjacent to an existing water main or any other underground utilities or public safety concerns exist, the City may require more stringent trenching standards. Trenching, shoring and pipe laying shall be in conformance with Washington Industrial Safety and Health Administration (WISHA), Washington Department of Labor and Industries (L&I), the Office of Safety and Health Administration (OSHA) Safety Standards and any other agency with jurisdiction.

4.140 Casing

Steel casing pipe shall be schedule 20 steel, ductile iron, or approved equal. Spacers shall be Cascade style CCS with 8 inch runners as available from Cascade Waterworks. Casing pipe and spacers shall be sized for the pipe being installed. Install a minimum of three spaces per section of pipe.

4.150 Irrigation

All irrigation systems located within the public right-of-way shall be designed by a State of Washington registered professional engineer or licensed landscape architect, and approved by the City.

The contractor shall be responsible for all installation, repair, testing and operation of the irrigation water system until all work is complete and the system has been certified by the engineer or landscape architect who prepared the approved plans. The engineer or landscape architect shall be responsible for inspection of the irrigation system during construction and testing of the system operations following the completion of construction. Thereafter, it is the responsibility of the property owner to have the cross connection control assembly tested annually by a certified backflow assembly tester, and to submit the test results to the City.

The engineer or landscape architect shall provide the City with a letter bearing his/her professional registration and certifying the irrigation system as complete and constructed and all cross

connection control requirements per Section 4.160 have been complied with in full accordance with the plans approved by the City.

4.160 Cross Connection Control

Testing for cross connection control shall be the responsibility of the contractor. A certified backflow assembly tester shall perform all cross connection control tests, and the test results shall be submitted to the City.

The installation of cross connection control assemblies is required to protect the existing water system and users from possible contamination, new commercial buildings are required to install RPBA and shall comply with the requirements of the City of Shelton Cross Connection Policy, the most current edition of the AWWA *Cross Connection Control Manual, the USC Manual of Cross Connection Control,* and the *PNWS Cross Connection Control Manual*. Thereafter, it is the responsibility of the property owner to have the cross connection control assembly tested annually by a certified backflow assembly tester, and to submit the test results to the City. See Standard Details W-17 through W-26.

4.170 Thrust Blocking

The locations of thrust blocking shall be shown on the plans. Thrust blocks shall be designed for the test pressures set forth in the *Standards.*

Thrust block concrete shall be commercial concrete at least 3000 psi compressive strength, poured against undisturbed earth. A plastic barrier shall be placed between all thrust blocks and fittings. Designed and approved joint restraining systems must include a combination of thrust blocking and RomaGrip pipe restraints manufactured by ROMAC or approved equal. Restraining joint brand, type, and size shall be specified on the plans. See Standard Details W-12, W-13, and W-14 for examples.

4.180 Backfilling

Backfilling and surface restoration shall closely follow the installation of pipe so that not more than 100 feet of trench is left open at any time during construction without approval of the City. When public safety concerns exist, the City may require more stringent backfilling standards.

Selected backfill material shall be placed and compacted around and under the water mains with hand tools to a height of 6 inches above the top of the water main.

The remaining backfill shall be compacted to 95 percent of the maximum density in the roadway prism and to 90 percent outside the roadway prism and shall be satisfactorily demonstrated to the City by density tests per the WSDOT *Standard Specifications for Road, Bridge and Municipal Construction*. If native material is not suitable for backfill, the City will order the placing of pipe bedding around the water main conforming to the *Standard Specifications.*

Where governmental agencies other than the City have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having jurisdiction.

4.190 Street Patching and Restoration

See Chapter 2.190 and 2.200 for requirements trench backfilling, temporary patching, and pavement restoration.

4.200 Watershed and Wellhead Protection Area

A protection area is designated for the City's watershed and each of the City's wells as an irregular boundary determined by topography, waterflow patterns both above and below ground, soil types, flow rates and other criteria. Please contact the City to determine if the proposed project is situated within a watershed or wellhead protection area.

In order to protect the public water supply, the following criteria shall apply to any project or portion of a project that is partially or completely located within a watershed or wellhead protection area.

A. A storm and erosion control plan requiring treatment of stormwater is required. Depending on the individual characteristics of the project, more stringent treatment requirements than those required in the currently adopted Washington State Department of Ecology *Storm Water Management Manual for Western Washington* referenced in Title 13 of the Shelton Municipal Code may be imposed by the City. All storm water shall be directed away from a well.

B. If the project is a subdivision, it must be noted on the face of the plat that the project is located within a watershed or wellhead protection area.

C. All garbage bins and dumpsters shall be covered in a manner that prevents rainwater from entering the containers, and subsequently, the groundwater.

D. In projects where hazardous spill could occur, a spill and containment plan shall be implemented. Depending on the nature of the project, more stringent spill and containment requirements than those in the Washington State Department of Ecology *Storm Water Management Manual for Western Washington* and Title 13 of the Shelton Municipal Code may be imposed by the City.

E. No outside storage or sales of hazardous materials will be allowed within a watershed or wellhead protection area. This includes but is not limited to: industrial chemicals, solvents, petroleum products, pesticides, herbicides, animal wastes, fertilizers and other lawn and garden chemicals.

4.210 Water Main Construction Standards (General Notes) -

In addition to the General Notes in Chapter One, the Engineer shall include the following notes on any plans dealing with water system design.

A. All water mains shall be staked for grades and alignment by an engineering or surveying firm capable of performing such work, in accordance with the Washington Administrative Code (WAC).

B. New and existing valves are to be operated only by City employees.

C. Hydrants shall be bagged until the system is approved after construction. Fire hydrants meeting required fire flows shall be installed, tested, and accepted prior to the issuance of a building permit. A Water Usage permit is required for the use of hydrants; contact the City about permit procedures and fees. A Water Usage permit is valid only at the location specified on the permit. When using the hydrant to fill a vehicle, the vehicle must be equipped with an approved cross connection control device.

D. All lines shall be chlorinated and tested in conformance with Department of Health (DOH) requirements and City *Standards.* An approved dechlorination device shall be used when flushing chlorinated water that will discharge to any body of water. All new water mains and laterals shall include tracer wire.

E. The Contractor shall give the City a minimum of 72 hour notice of any planned shutdown to make a connection to an existing water main. Where connections require field verification, connection points will be exposed by the contractor and fittings will be verified 48 hours prior to distributing shutdown notices.

   This includes all cut-ins and live taps. In certain situations, the City may dictate scheduling of water main shutdowns so as not to impose unnecessary shutdowns during specific periods to existing customers. No tap shall be made to an existing main on a Friday without specific approval from the City.

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1-1/2 to 2" WATER SERVICE INSTALLATION	W-03
3" - 4" WATER SERVICE METER SETTER w/BYPASS	W-04
NEW CONNECTIOON TO EXISTING WATERMAIN	W-04A
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AIR GAP FOR MAKEUP TANK	W-16
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NOTES REDUCED PRESS. BACKFLOW ASSEMBLY (RPBA) 2" AND SMALLER	W-18
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NOTES - DOUBLE CHECK VALVE ASSEMBLY (DCVA) FOR 2" AND SMALLER	W-20
DOUBLE CHECK VALVE ASSEMBLY (DCVA) & (DCDA) 2-1/2" AND LARGER	W-21
NOTES - DOUBLE CHECK VALVE ASSY. (DCVA) & (DCDA) 2-1/2" & LARGER	W-21
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W-04 - 3" - 4" WATER SERVICE METER SETTER w/ BYPASS

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W-22 - SPILL RESISTANT PRESSURE VACUUM BREAKER ASSEMBLY

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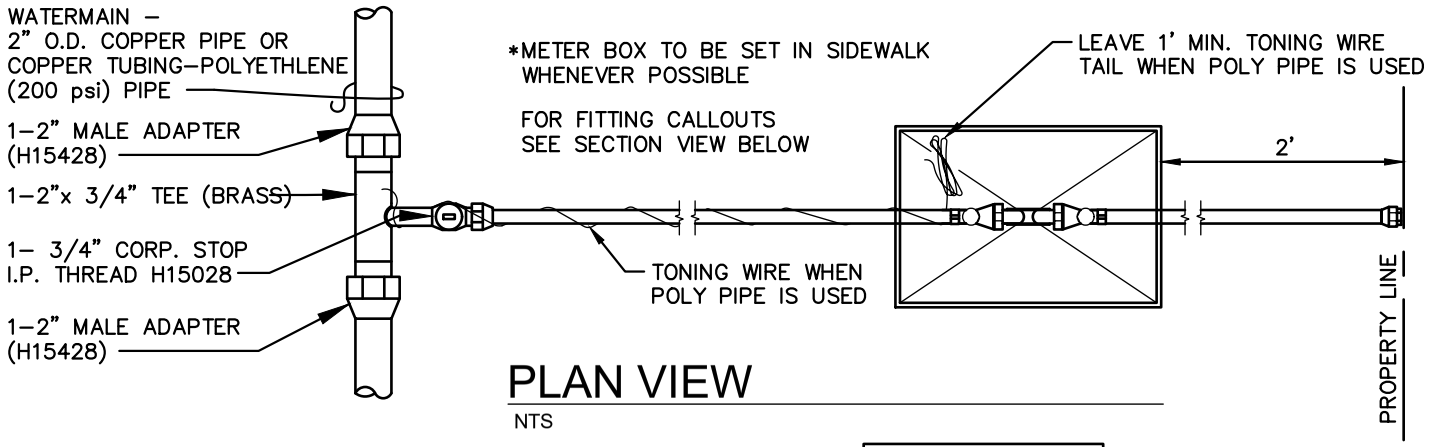
W-24 - THIS PAGE INTENTIONALLY LEFT BLANK

W-25 - BACKFLOW BY-PASS PARALLELED ASSEMBLY

W-26 - POST INDICATOR VALVE and FIRE DEPARTMENT CONNECTION

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PLAN VIEW

NTS

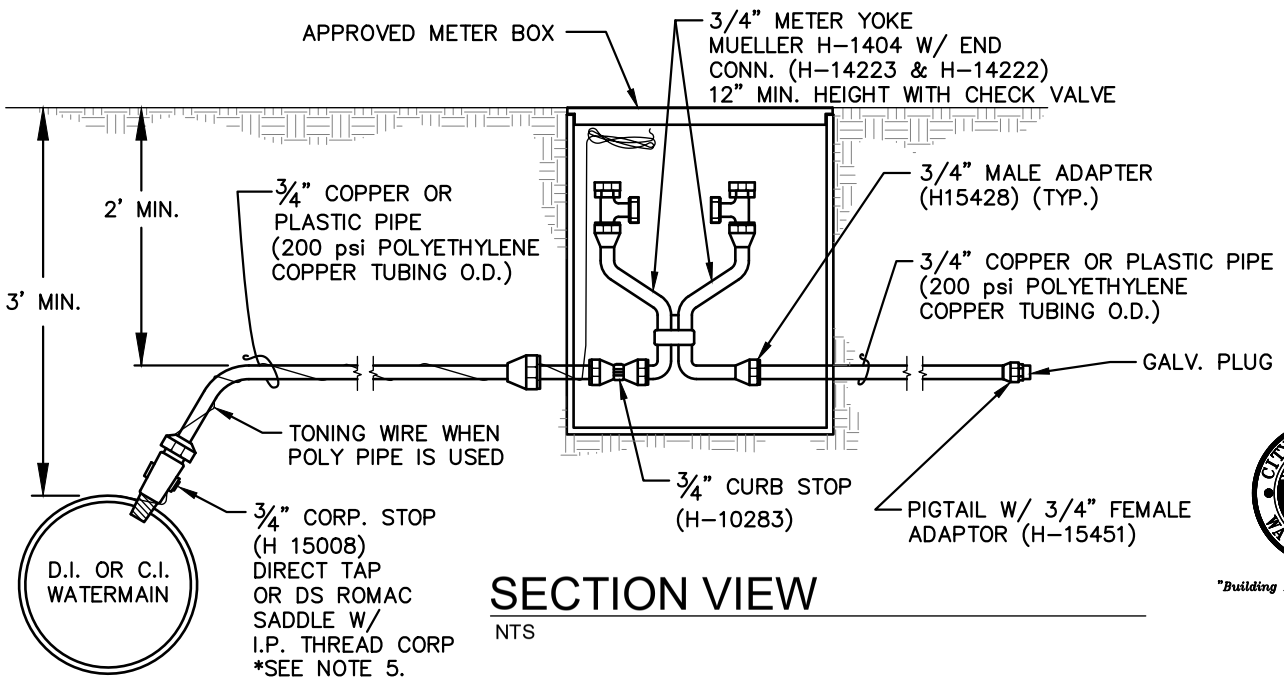
APPROVED METER BOXES:
MID STATES PLASTICS, INC. BCF SERIES BOX W/ CAST IRON READER STYLE LID PART # MSBCF1324–18

ALL TAPS:
12" O.C. MINIMUM

SPECIAL NOTES:

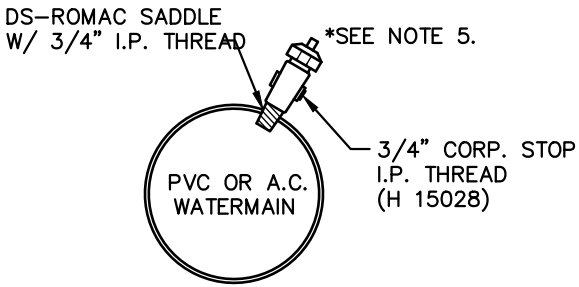
1. MINIMUM 15 FT. SEPARATION TO ADJACENT SERVICES.
2. TRACER WIRE MUST BE USED WITH POLY PIPE.

NOTES:
1. ALL PARTS NUMBERS ARE MUELLER.
2. FORD OR A.Y. McDONALD QUICKJOINTS MAY BE USED.
3. (200 psi POLYETHLENE COPPER TUBING O.D.)
4. STAINLESS STEEL LINERS #505142 REQ'D AT COUPLINGS.
5. *ALL SADDLES MUST HAVE SS STRAPS.



SECTION VIEW

NTS

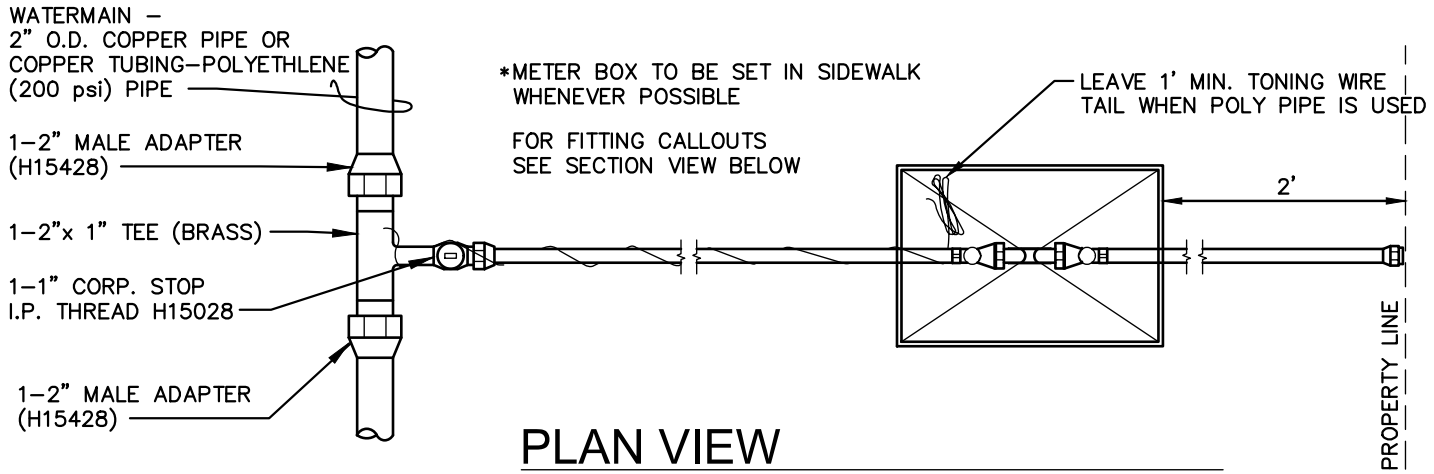


"Building A Stronger Community TOGETHER"

3/4" SINGLE SERVICE INSTALLATION

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-01



PLAN VIEW

NTS

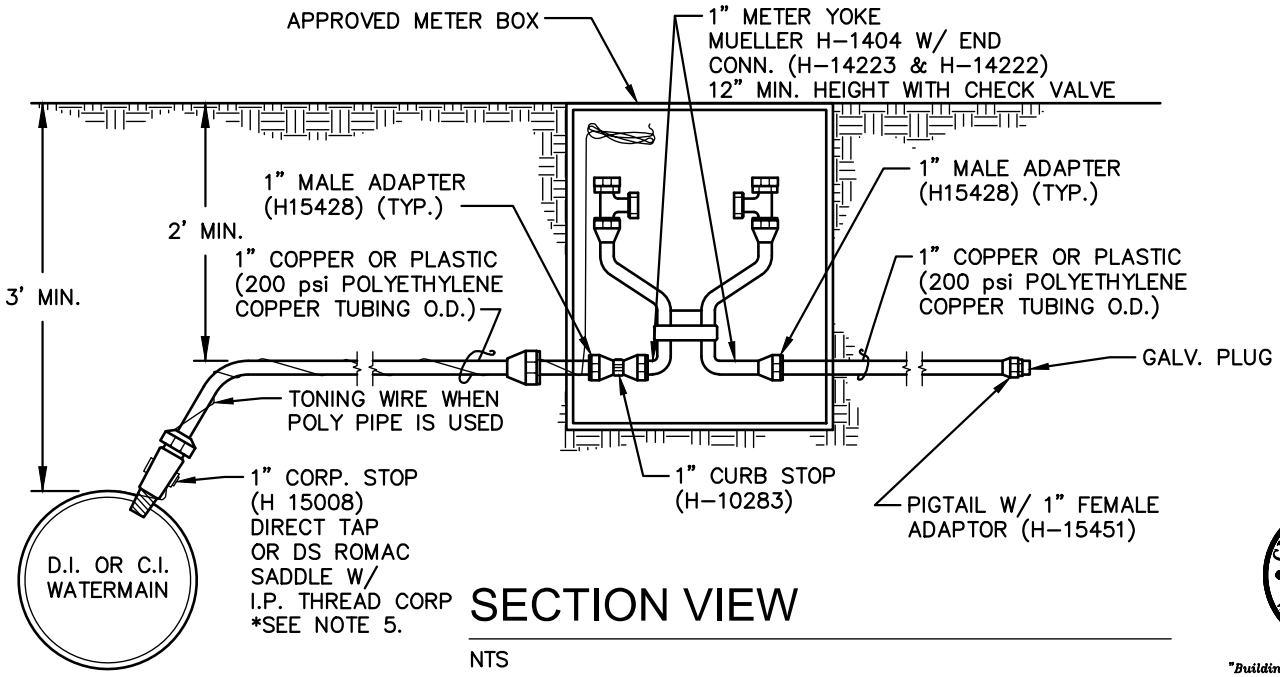
APPROVED METER BOXES:
MID STATES PLASTICS, INC. BCF SERIES BOX W/ CAST IRON READER STYLE LID PART # MSBCF1324–18

ALL TAPS: 12" O.C. MINIMUM

SPECIAL NOTES:

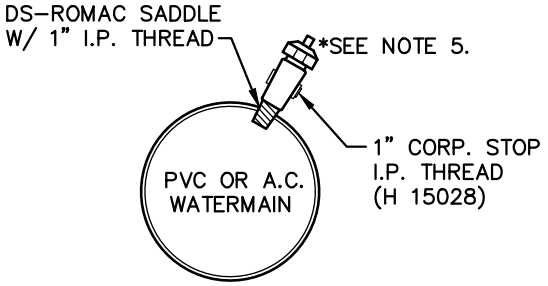
1. MINIMUM 15 FT. SEPARATION TO ADJACENT SERVICES.
2. TONING WIRE MUST BE USED WITH POLY PIPE.

NOTES:
1. ALL PARTS NUMBERS ARE MUELLER. 2. FORD OR A.Y. McDONALD QUICKJOINTS MAY BE USED. 3. (200 psi POLYETHLENE COPPER TUBING O.D.) 4. STAINLESS STEEL LINERS #505142 REQ'D AT COUPLINGS. 5. *ALL SADDLES MUST HAVE SS STRAPS.



SECTION VIEW

NTS

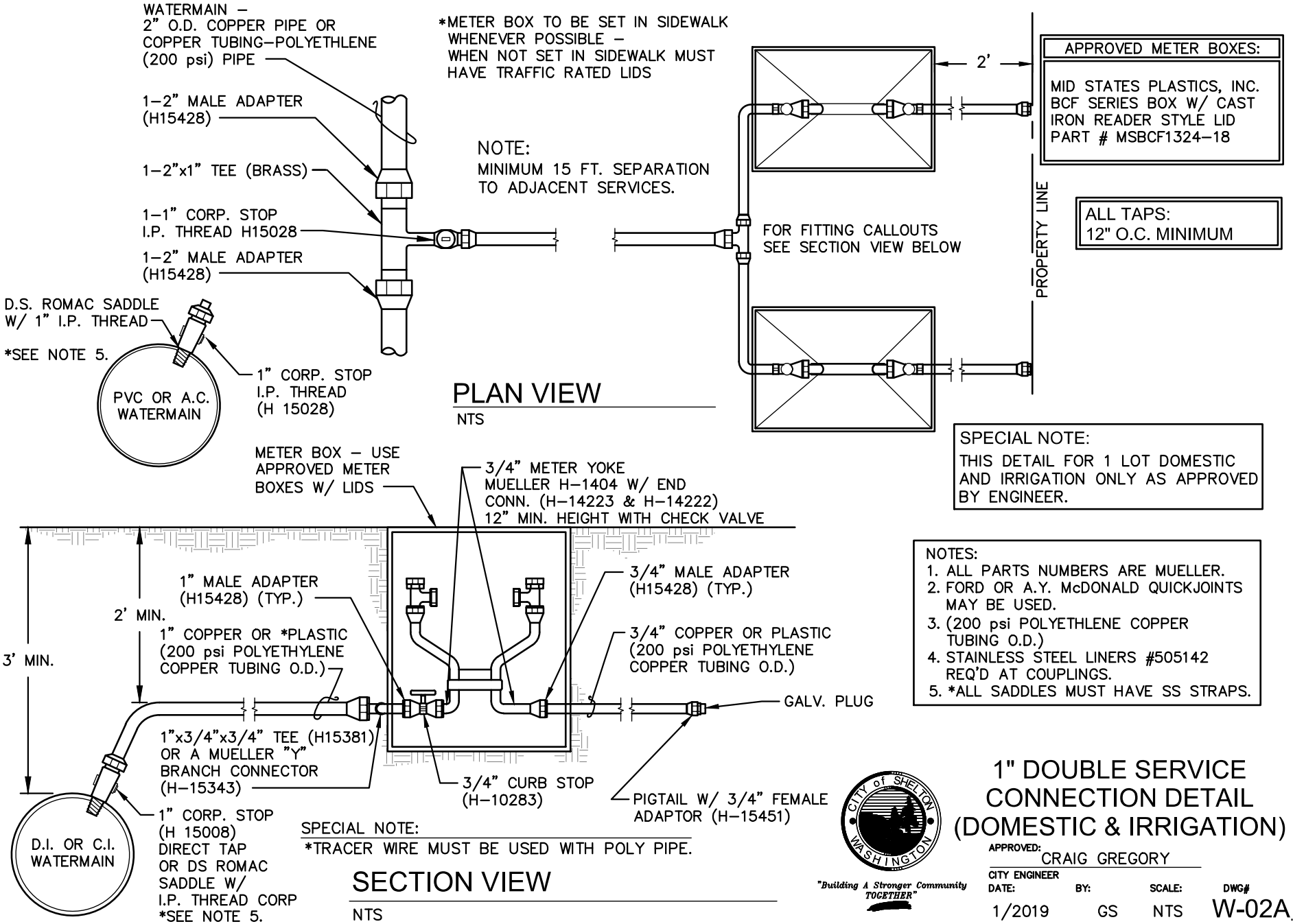


"Building A Stronger Community TOGETHER"

1" SINGLE SERVICE INSTALLATION

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

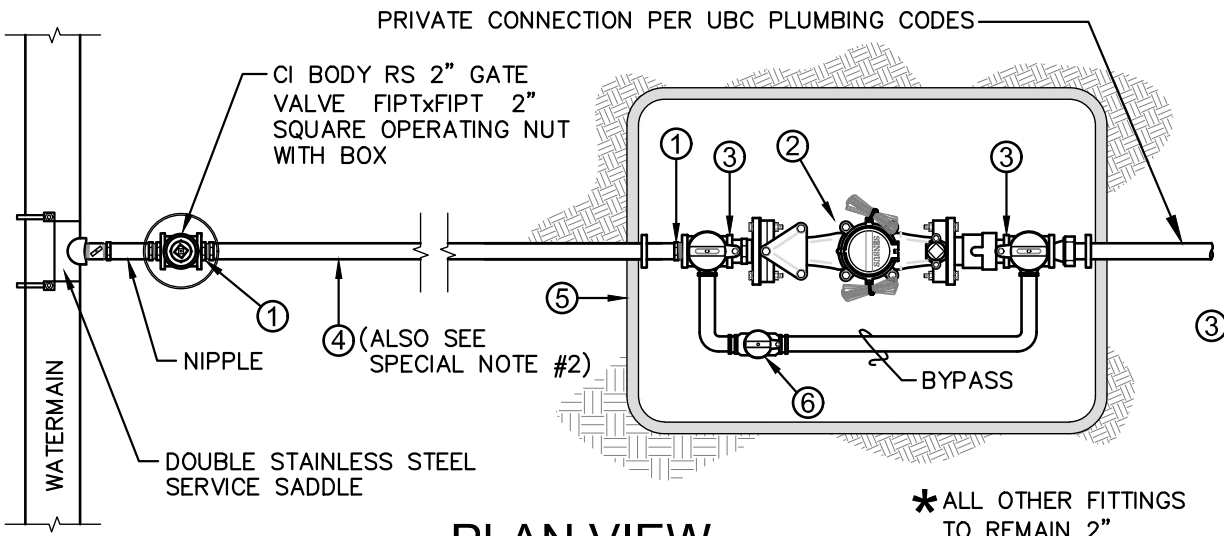
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1/2019	GS	NTS	W-02



1" DOUBLE SERVICE CONNECTION DETAIL (DOMESTIC & IRRIGATION)

APPROVED: CRAIG GREGORY
CITY ENGINEER

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-02A



PLAN VIEW

NTS

ALL TAPS: 12" O.C. MINIMUM

KEYNOTES

① 2"–MIPT x 110 COMPRESSION 2" ADAPTER MUELLER #15428

② ✱ 1–1/2" OR 2" WATER METER SENSUS OMNI C2 CUBIC FT. READ.

③ ✱✱ MUELLER 2" COPPER METER YOKE W/ ELEVATED BYPASS #B–2423–2–99000 MINIMUM SIZE OF 12" TALL MAXIMUM OF 27" FIPTxFIPT

④ 2"ø TYPE K COPPER PIPE OR APPROVED PLASTIC (200 PSI POLYETHYLENE COPPER TUBING O.D.)

⑤ METER BOX TO BE: MID STATES BOX #BCF173012B LID #BCF1730RL

⑥ BYPASS SHUTOFF VALVE

✱ ALL OTHER FITTINGS TO REMAIN 2"

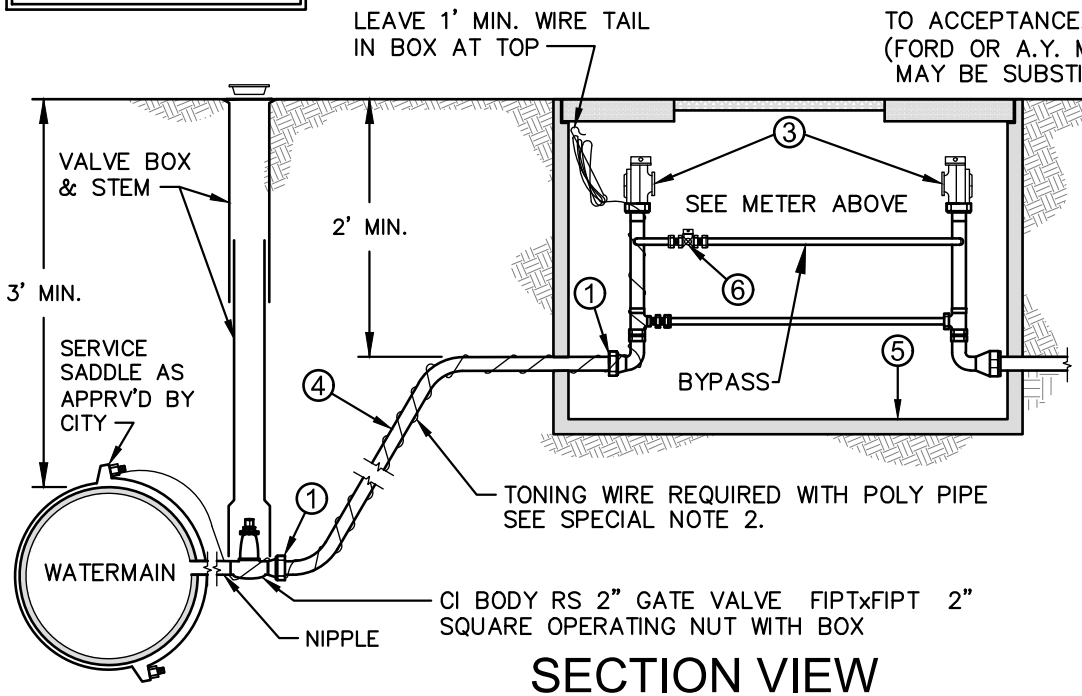
✱✱ OTHER CONFIGURATIONS MAY BE USED TO BEST FIT YOUR NEEDS. HOWEVER, THEY MUST BE APPROVED BY THE CITY PRIOR TO ACCEPTANCE. (FORD OR A.Y. McDONALD FITTINGS MAY BE SUBSTITUTED.)

NOTE:

PRECAST CONCRETE ENCLOSURE WITH STEEL ACCESS HATCH (AS MANUFACTURED BY UTILITY VAULT CO. OR AN APPROVED EQUAL.

APPROVED METER BOXES:

MID STATES PLASTICS, INC.
BCF SERIES BOX W/ CAST IRON READER STYLE LID
PART # MSBCF1324–18



SECTION VIEW

NTS

SPECIAL NOTES:

1. MINIMUM 15 FT. SEPARATION TO ADJACENT SERVICES.
2. 14 GAUGE BLUE COATED TONING WIRE MUST BE WRAPPED AROUND PIPE WHEN POLY PIPE IS USED. CONNECT TO SADDLE OR MECHANICALLY BOND TO EX. WIRE ON MAIN.

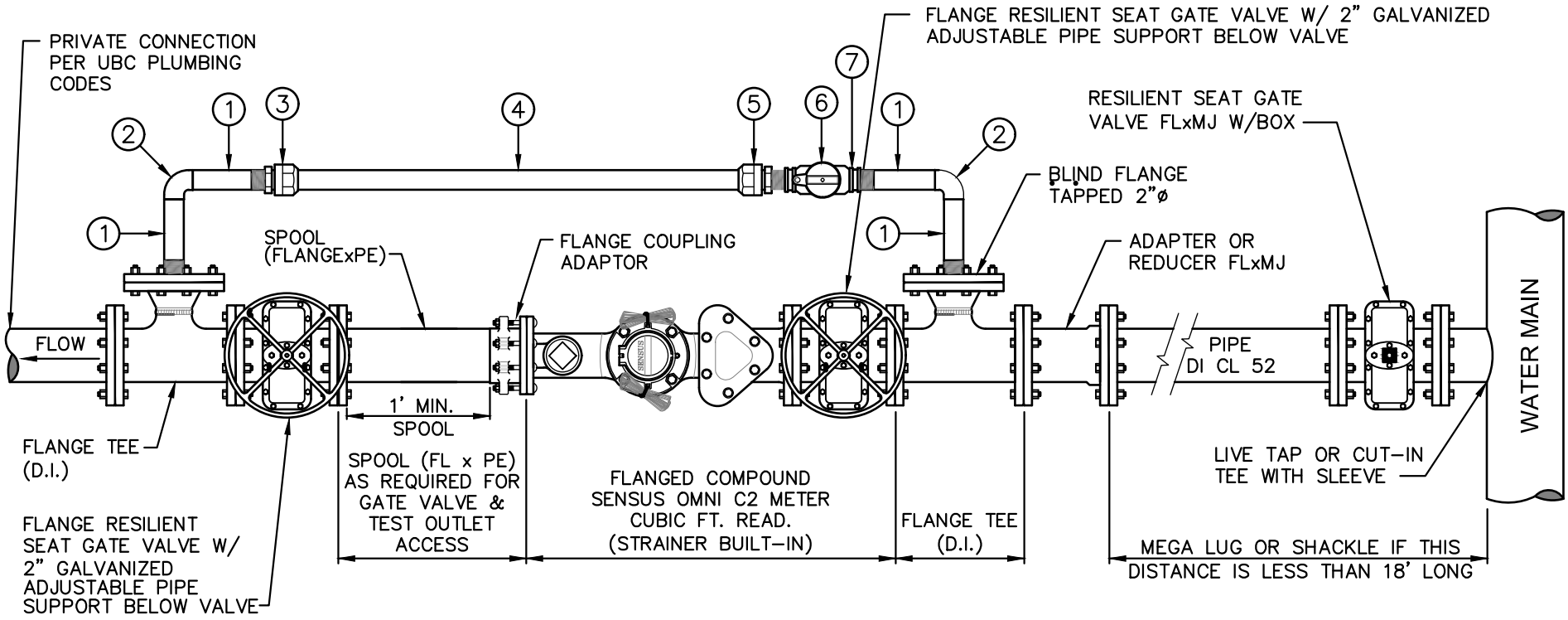
CITY of SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

1½" - 2" WATER SERVICE INSTALLATION

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-03



KEYNOTES

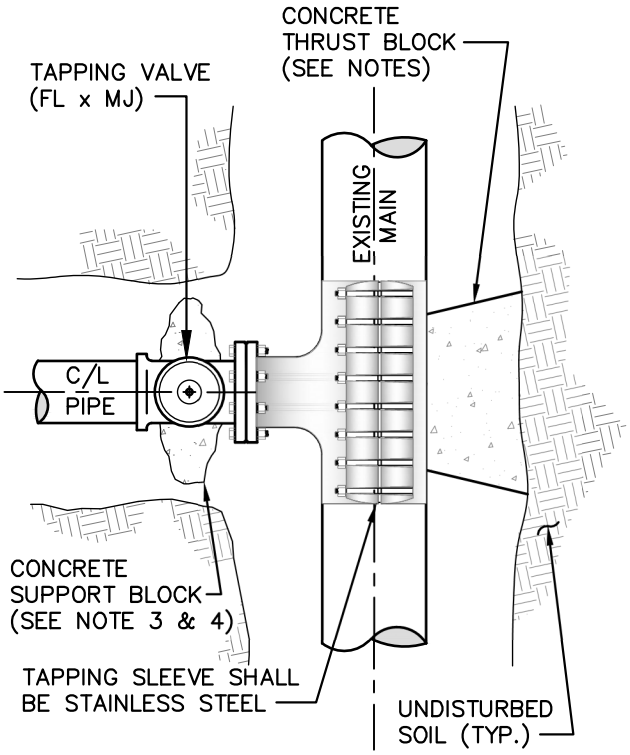
1. 2"ø x 6" BRASS NIPPLE
2. 2"ø 90° BRASS ELBOW
3. 2"ø FEMALE ADAPTER MIPT x 110 COMP. MUELLER #H-15451
4. 2"ø TYPE K COPPER PIPE
5. 2" MALE ADAPTER MIPT x 110 COMP. MUELLER #15428
6. 2" BALL CURB STOP FIPT x 110 COMP. MUELLER #B-15172
7. 2" BRASS UNION

"Building A Stronger Community TOGETHER"

3" - 4" WATER SERVICE METER SETTER w/ BYPASS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

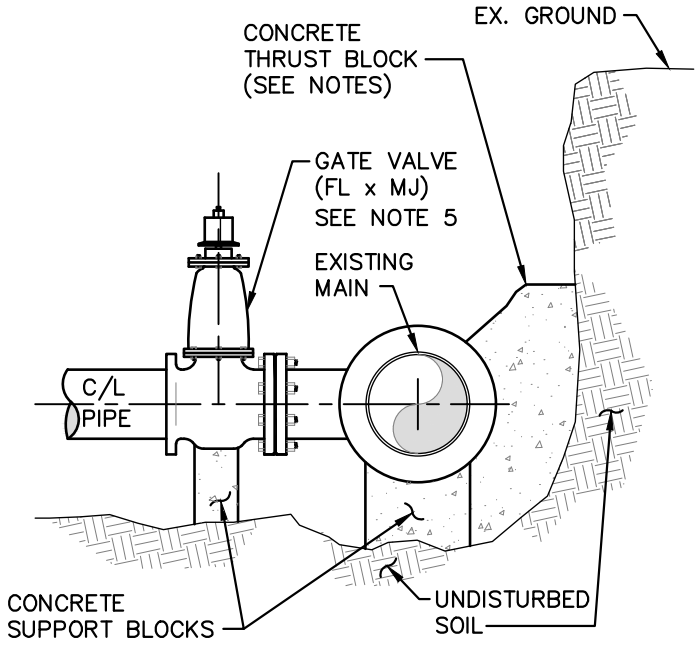
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-04



VALVE & SLEEVE SHALL
BE SUPPORTED & BACKFILLED
AS SHOWN IN ELEVATION VIEW.

PREFERRED METHOD
LIVE TAP

NTS

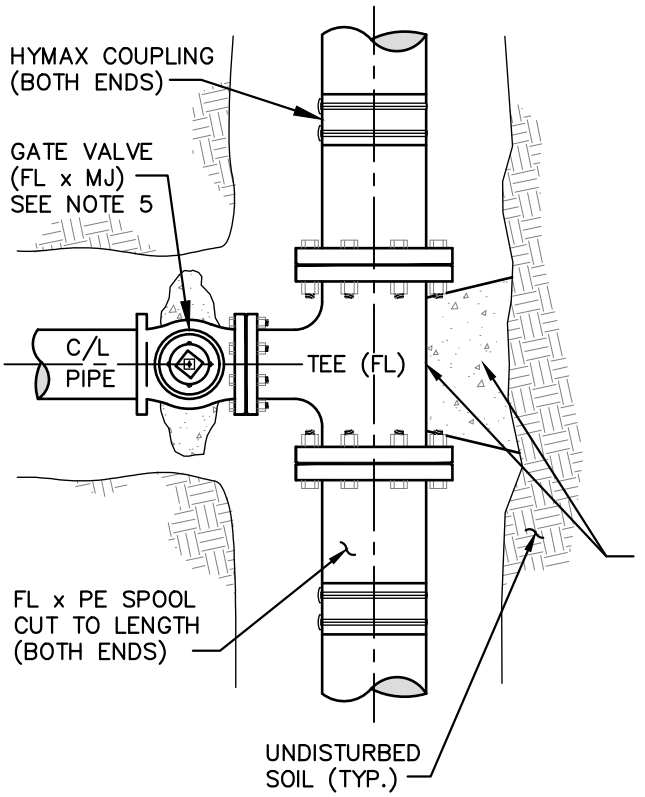


ELEVATION VIEW

NTS

INSTALLTION NOTES:

1. CUT–IN TEE ALLOWED ONLY AT TIMES WHEN SERVICE INTERRUPTION TO BE DETERMINED TO BE NON–PROBLEMATIC. CONSULT W/ PROJECT ENGINEER & WATER DEPT. PRIOR TO INSTALLATION.
2. MJ MEGA LUG RETAINERS, RESTRAINING RODS, OR ROMA GRIP RING RETAINERS TO BE USED IN COMBINATION WITH CONCRETE THRUST BLOCKING.
3. THRUST BLOCKING & SUPPORT BLOCKING SHALL BE COMMERCIAL CONCRETE AT LEAST 3,000 PSI COMPRESSIVE STRENGTH, POURED AGAINST UNDISTURBED SOIL. FOR ADDTIONAL THRUST BLOCKING REQUIREMENTS SEE C.O. SHELTON STD. DETAILS W–12, W–13 & W–14.
4. A PLASTIC BARRIER SHALL BE PLACED BETWEEN ALL FITTINGS & THRUST BLOCKS & CONC. SUPPORT BLOCKS.
5. FOR ADDITIONAL WATER VALVE INSTALLATION REQUIREMENTS SEE DETAIL W–07 & W–07A.



CUT-IN TEE (SEE NOTE 1)

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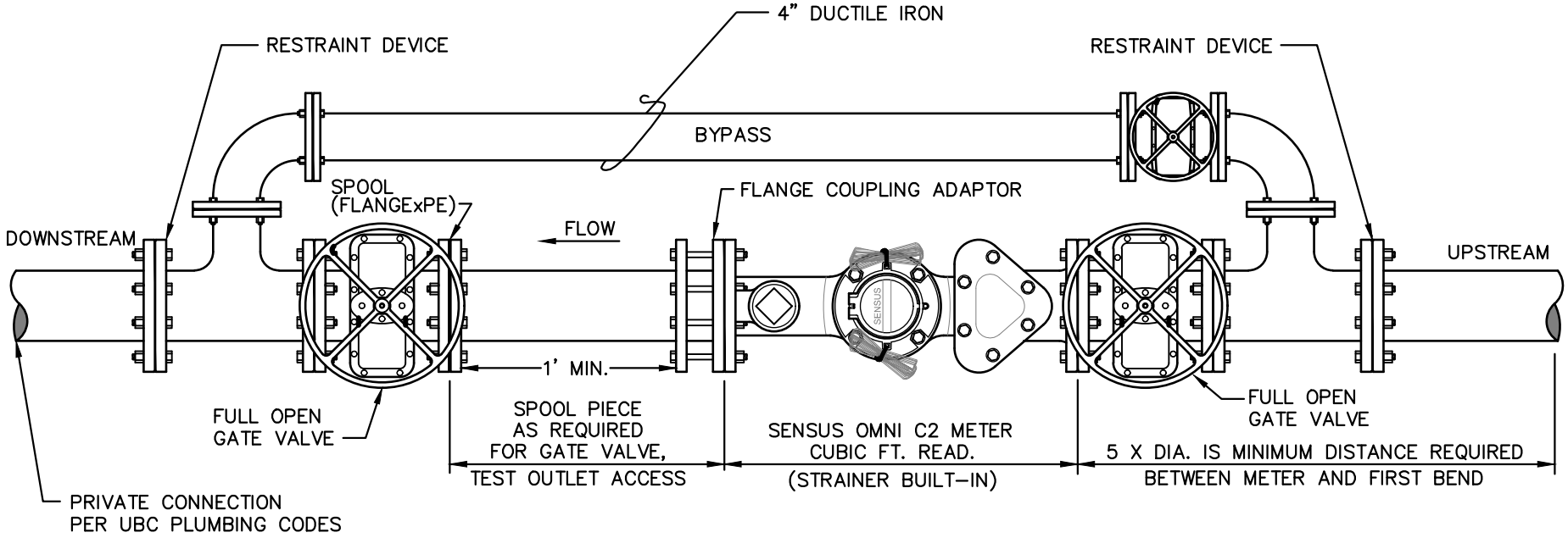
NEW CONNECTION TO EXISTING WATER MAIN

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1/2019	GS	NTS	W-04A

WATER METER NOTES:

1. CONTRACTOR TO INSTALL METER.
2. COORDINATE W/ CITY FOR OBTAINING METER.
3. UTILITY APPLICATION MUST BE COMPLETED & SUBMITTED BEFORE METER CAN BE INSTALLED.



CONSTRUCTION NOTES:

1. PRECAST CONCRETE ENCLOSURE WITH STEEL ACCESS HATCH (AS MANUFACTURED BY UTILITY VAULT CO. OR AN APPROVED EQUAL.)
2. PIPE STANDS ON 2' CENTERS.
3. MINIMUM OF 2 PIPE STANDS TO BE USED.
4. PIPE STANDS TO BE MADE OF GALV. STEEL. (2" MINIMUM DIAMETER)

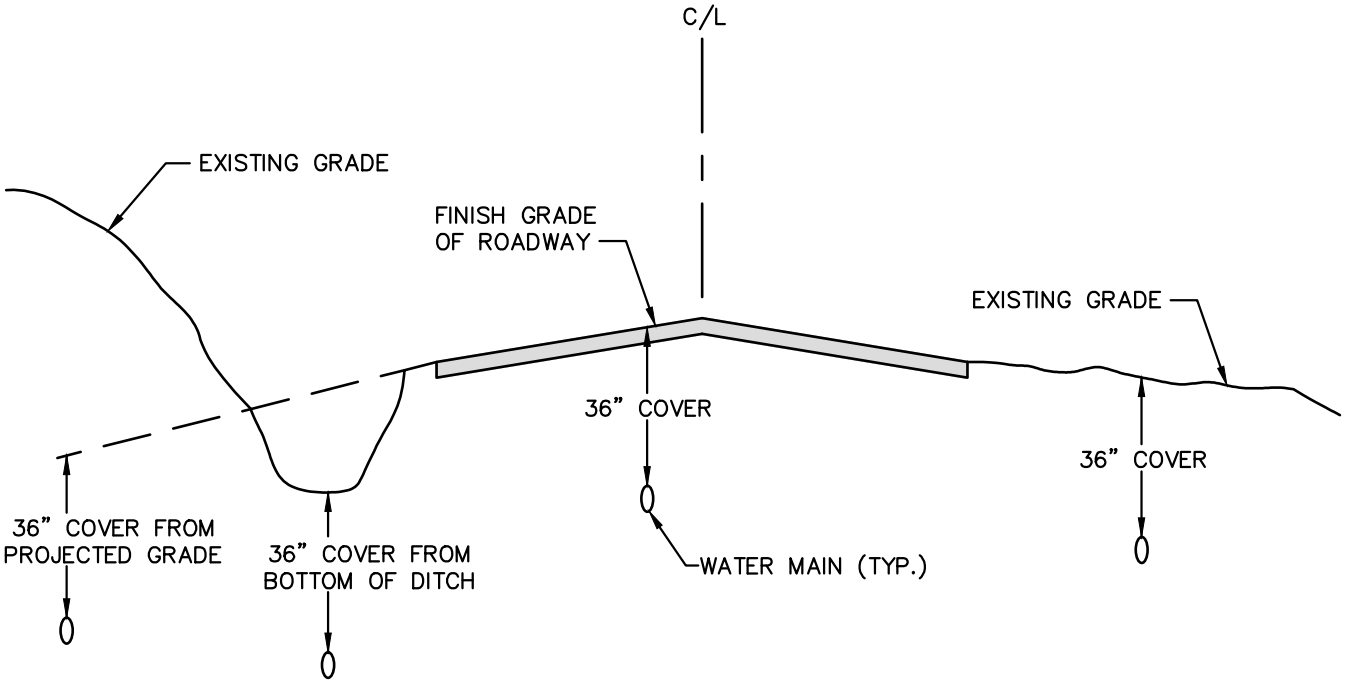
CITY of SHELTON WASHINGTON

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WATER METER ASSEMBLY
6" - 8" LARGER w/ 4" BYPASS

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NOTE:

THE MINIMUM COVER FOR ALL WATER MAINS FROM TOP OF PIPE TO FINISH GRADE SHALL BE 36 INCHES UNLESS OTHERWISE APPROVED. IF THE PIPE IS OFFSET TO THE EDGE OF THE ROAD, THE ACTUAL ROADWAY CROSS GRADE SHALL BE PROJECTED OUT AND USED TO MEASURE COVER TO TOP OF PIPE. THIS WILL REQUIRE MORE FILL OVER THE PIPE IN A FILL SECTION BUT ALLOWS THE PIPE ADEQUATE COVER IN THE EVENT OF FUTURE ROADWAY CUTS OR WIDENING. IF THE PIPE IS LOCATED UNDER A DITCH, OR ON THE "DOWNHILL" SLOPE OF THE ROADWAY CROSS SECTION, THE MINIMUM, COVER OVER THE PIPE SHALL BE 42 INCHES REGARDLESS OF PROJECTED GRADES.

THE MAXIMUM COVER FOR ALL WATER MAINS FROM THE TOP OF PIPE TO FINISH GRADE SHALL BE 42" UNLESS OTHERWISE APPROVED.

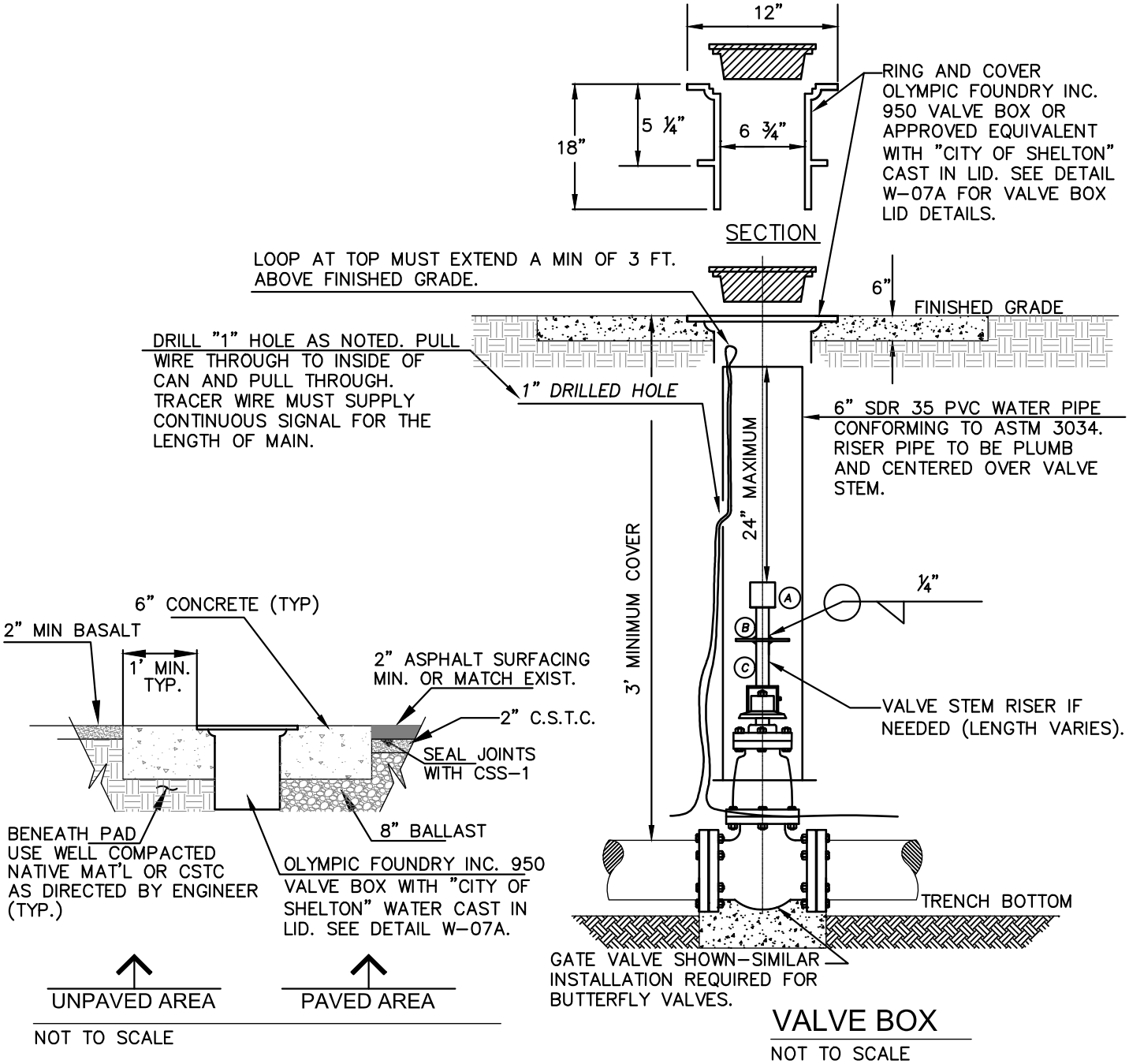
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MIN./ MAX. COVERAGE FOR WATER LINES

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NOT TO SCALE

VALVE BOX

NOT TO SCALE

VALVE STEM EXTENSION LEGEND:

A. VALVE OPERATING NUT OR 1 $\frac{7}{8}$" X 1 $\frac{7}{8}$" X 2" HIGH GRADE STEEL WELDED TO GUIDE PLATE.

B. $\frac{3}{16}$" THICK X 5 $\frac{1}{5}$" DIAMETER STEEL GUIDE PLATE WELDED TO RISER SHAFT.

C. 2" X 2" X $\frac{3}{16}$" SQUARE STRUCTURAL STEEL TUBING TO FIT OPERATING NUT. LENGTH AS REQUIRED.

NOTE: ALL WELDS TO SHAFT SHALL BE FILLET WELD ALL AROUND, AS SPECIFIED ABOVE.

NOTES:

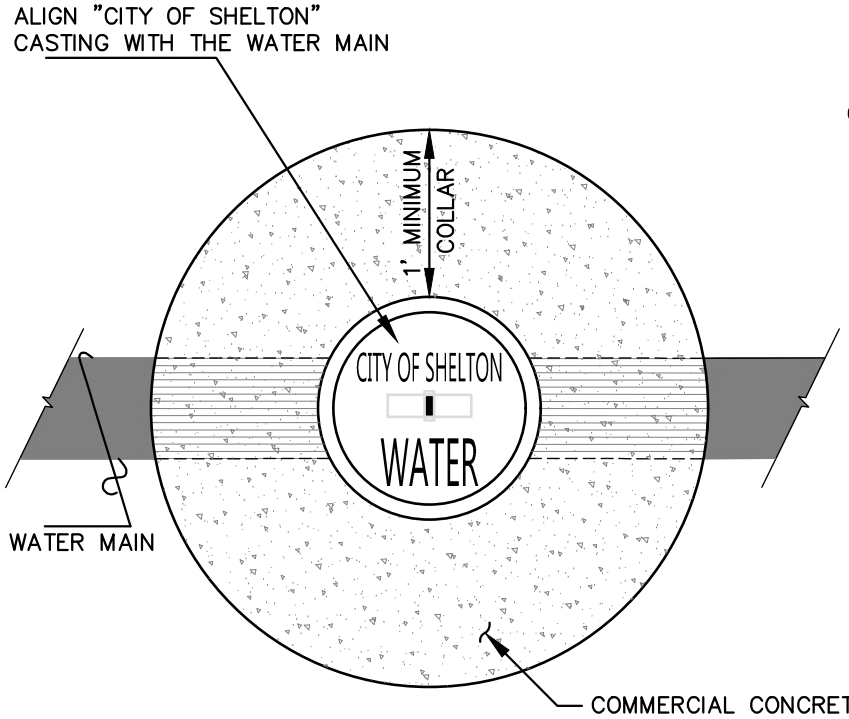
1. VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN TWO (2) FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG ONLY. ONE EXTENSION WILL BE ALLOWED PER VALVE.
2. ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL. SIZED AS NOTED, AND PAINTED WITH TWO (2) COATS OF METAL PAINT.
3. IF EXTENSION IS NEEDED, USE 6" SDR 35 PVC WATER PIPE CONFORMING TO ASTM 3034.

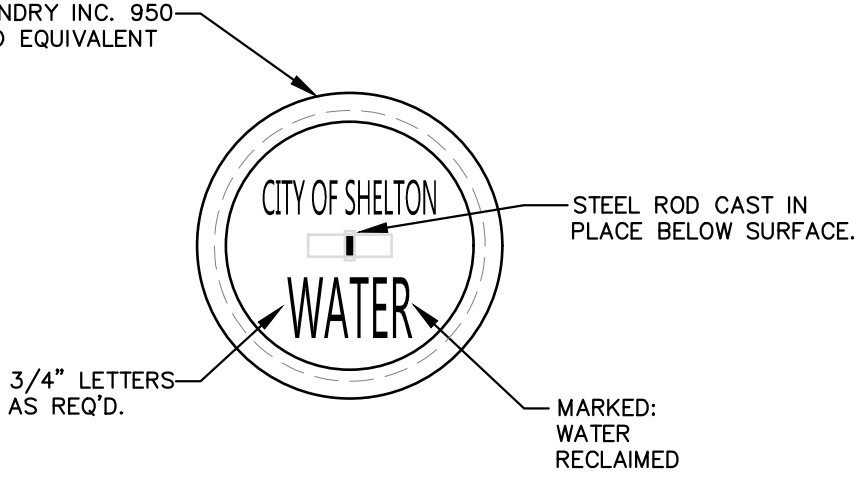
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VALVE BOX/RISER & ROAD RESTORATION

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VALVE BOX LID DETAIL

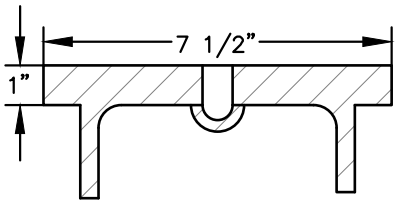
NOT TO SCALE

WATER VALVE BOX / RISER LID W/ CONCRETE COLLAR

NOT TO SCALE

NOTES:

1. SEE DETAIL W-07 VALVE BOX/RISER.
2. ALIGN "CITY OF SHELTON" CASTING WITH THE WATER MAIN.



VALVE BOX / RISER LID DETAIL

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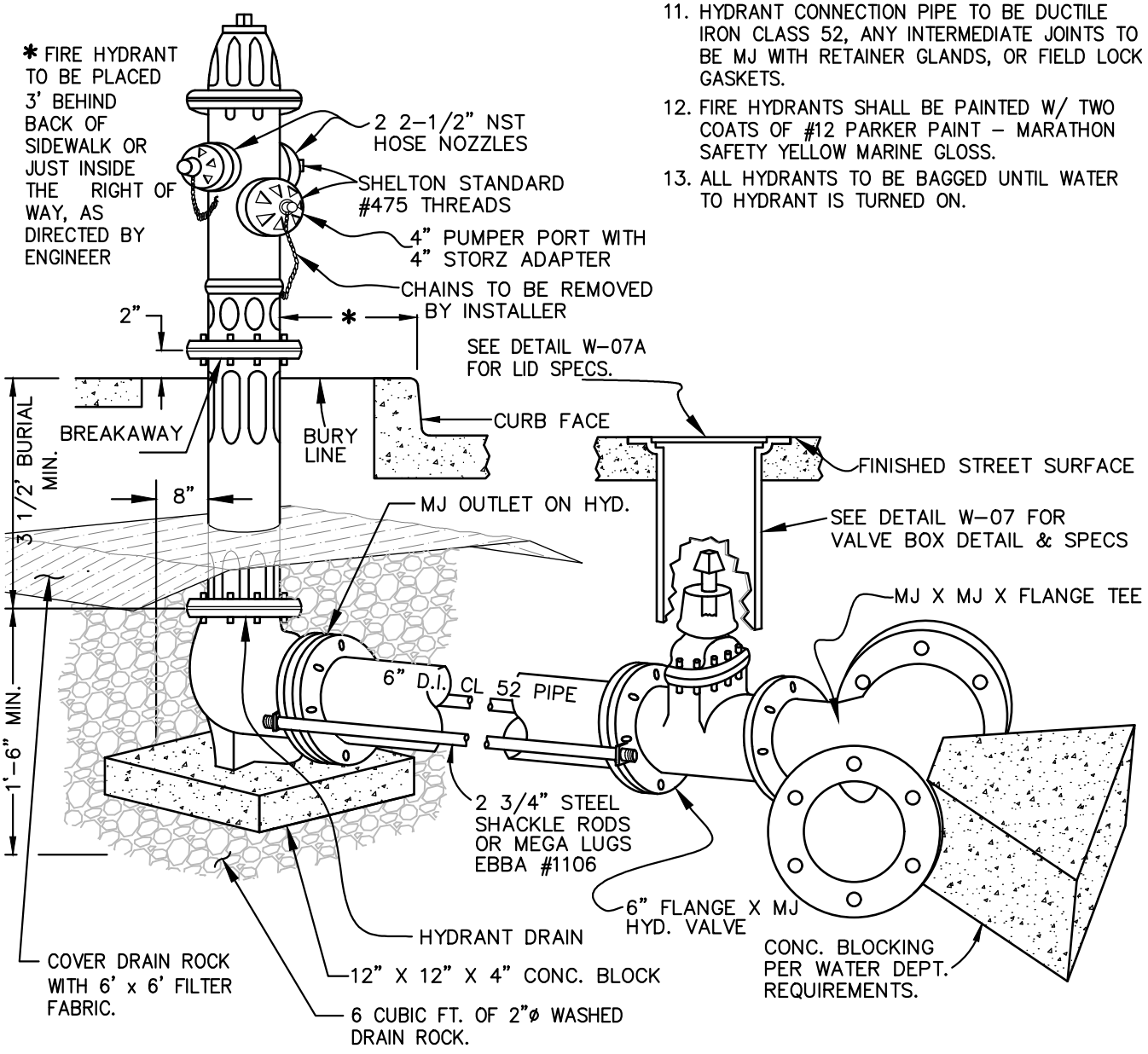
VALVE BOX / RISER LID DETAILS

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-07A

NOTES:

1. HYDRANTS AND ALL MATERIALS SHALL CONFORM TO AWWA STANDARDS AND SHALL BE OF STANDARD MANUFACTURE (MUELLER 250, M&H 129–S OR APPROVED EQUAL).
2. 5 1/4" VALVE MINIMUM.
3. 1 1/4" OPERATING NUT AND CAP NUT FOR 2 1/2" PORTS.
4. SHELTON STANDARD THREAD #475 ON 2 1/2" PORTS.
5. 4" STORZ FITTING W/SHELTON STD. THREAD #475 ON THE 4 1/2" PORTS.
6. IF HYDRANT RISES THROUGH CONCRETE, USE EXPANSION STRIP AROUND HYDRANT BARREL. PER DETAIL W–09.
7. PROVIDE FOR VEHICULAR TRAFFIC PROTECTION WHEN NECESSARY PER DETAIL W–09.
8. STEAMER PORT TO BE FACING STREET OR ROADWAY FOR FIRE ENGINE ACCESS.
9. BREAK–OFF FLANGE TO BE 2" ABOVE GROUND LEVEL.
10. INSTALL CONCRETE PAD AROUND HYDRANT IN UNPAVED, SOD AND ASPHALT AREAS PER DETAIL W–09.
11. HYDRANT CONNECTION PIPE TO BE DUCTILE IRON CLASS 52, ANY INTERMEDIATE JOINTS TO BE MJ WITH RETAINER GLANDS, OR FIELD LOCK GASKETS.
12. FIRE HYDRANTS SHALL BE PAINTED W/ TWO COATS OF #12 PARKER PAINT – MARATHON SAFETY YELLOW MARINE GLOSS.
13. ALL HYDRANTS TO BE BAGGED UNTIL WATER TO HYDRANT IS TURNED ON.



ADDITIONAL NOTES:

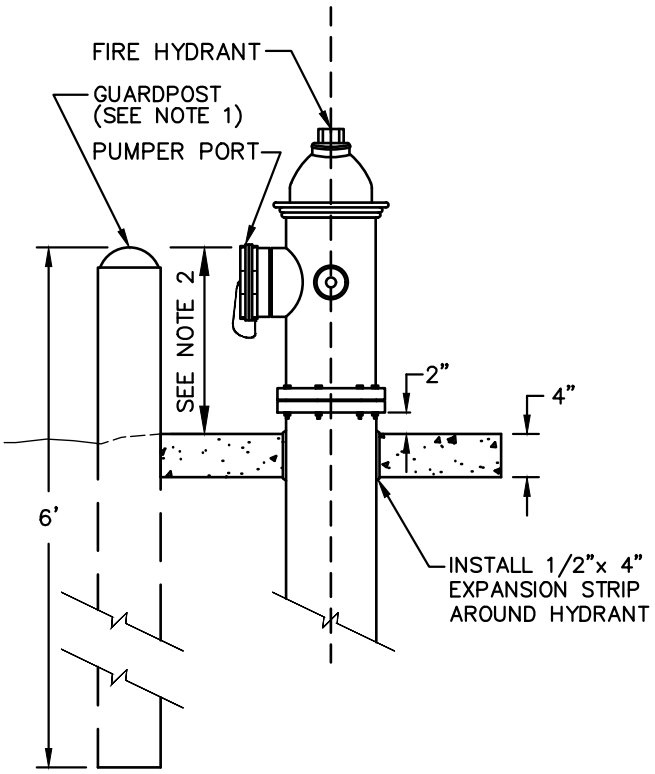
1. ALL FITTINGS SHALL BE APPROVED AND INSPECTED BY THE CITY PRIOR TO ACCEPTANCE.
2. SPECIAL FIELD CONDITIONS MAY REQUIRE THE WATER DEPARTMENT TO ALTER THE STANDARD SETTING REQUIREMENTS.
3. TYPE 2BB TWO WAY BLUE REFLECTIVE HYDRANT MARKER SHALL BE PLACED 4" OFF OF CENTERLINE LANE MARKER PER DETAIL T–01.

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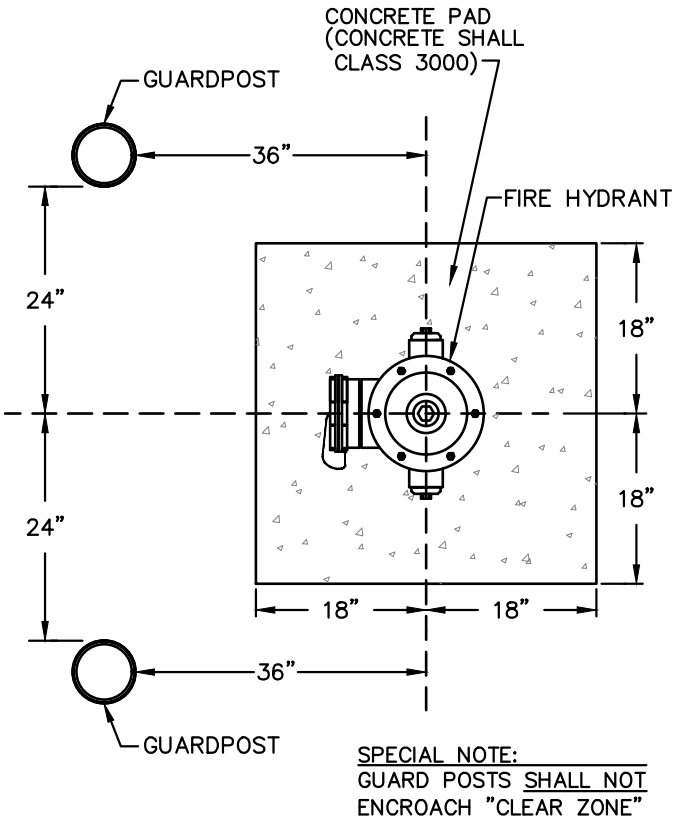
FIRE HYDRANT ASSEMBLY SYSTEM 1

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-08



ELEVATION VIEW



PLAN VIEW

FIRE HYDRANT GUARD POST & CONCRETE PAD

NOTES:

1. GUARD POSTS SHALL BE 6' LONG, 9" IN DIAMETER PRECAST CONCRETE OR 6' LONG, 6" DIAMETER SCHEDULE 40, CONCRETE FILLED CLASS 52 STEEL PIPE PAINTED WITH TWO COATS OF "RUST-O-LEUM" NO. 2766, HI GLOSS YELLOW PAINT.

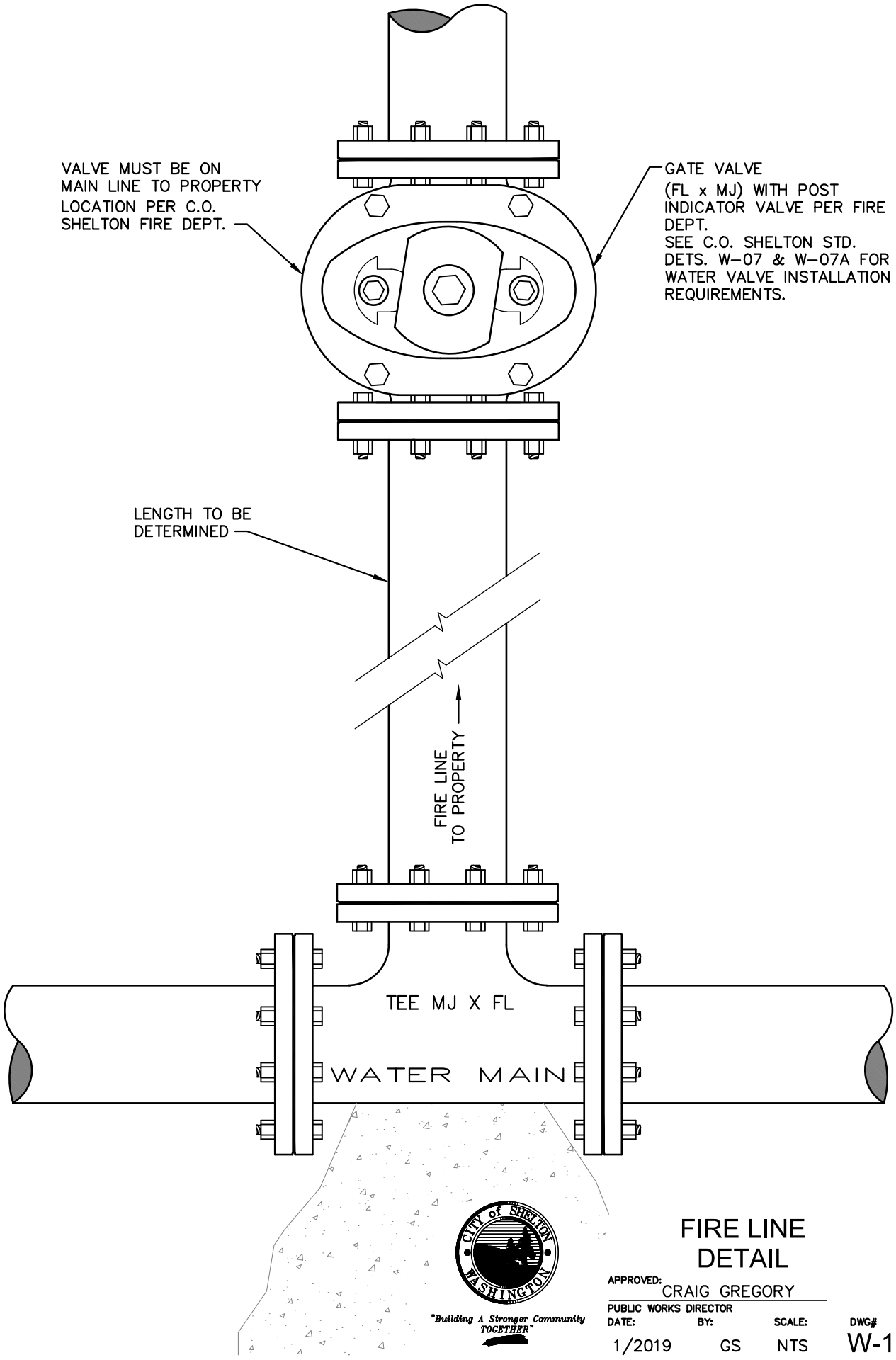
2. TOP OF GUARD POST SHALL BE LEVEL WITH TOP OF PUMPER PORT.

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FIRE HYDRANT
GUARD POST
& CONCRETE PAD

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DATE:	BY:	SCALE:	DWG#
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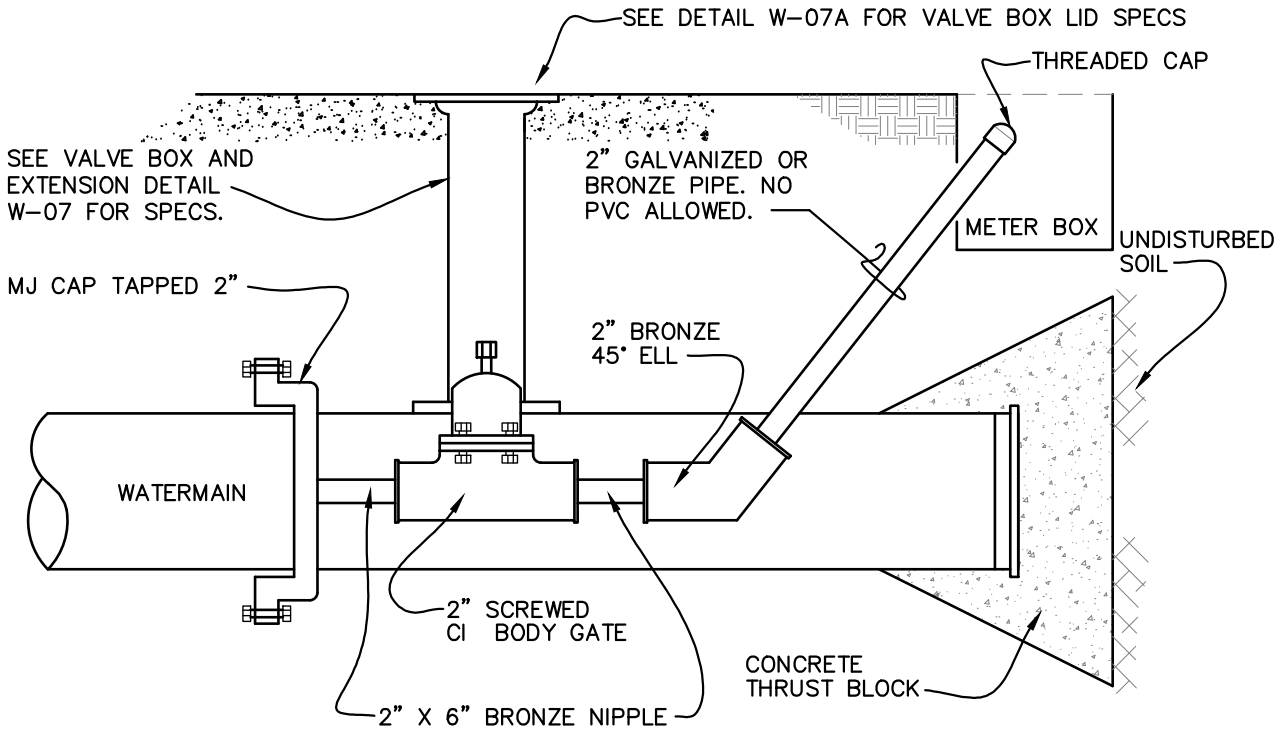


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FIRE LINE DETAIL

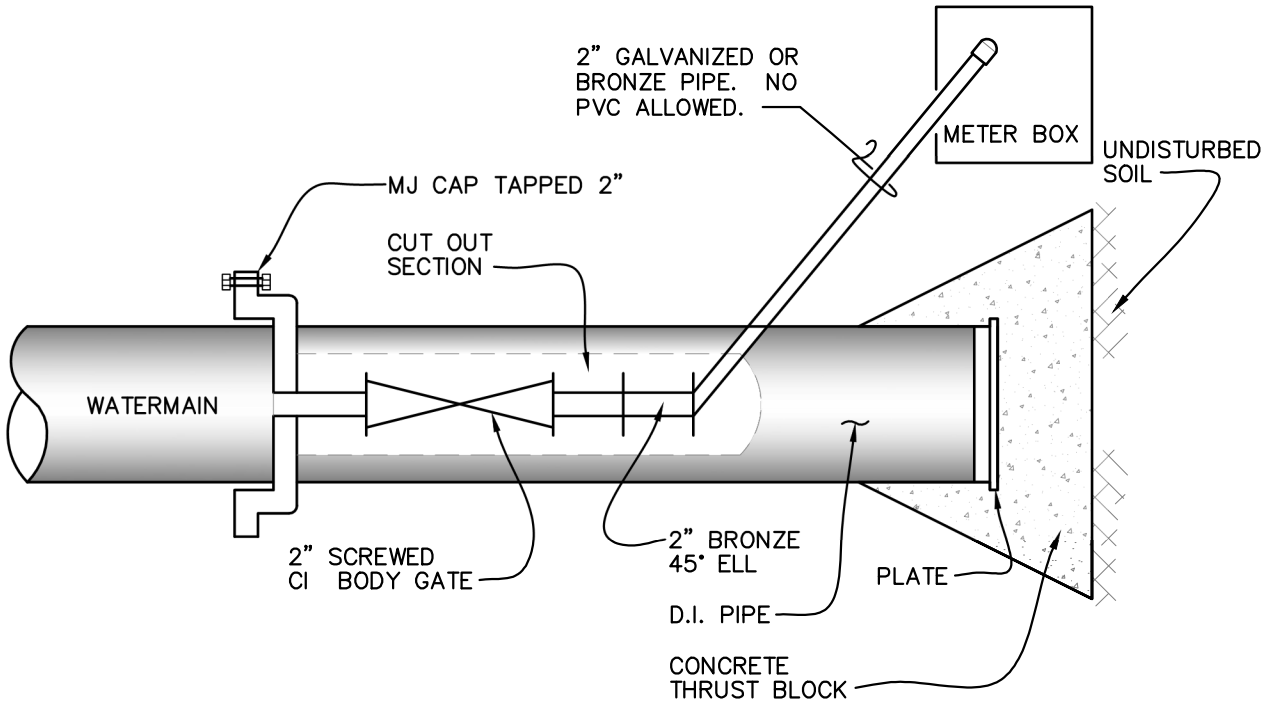
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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-10



SECTION VIEW

NOT TO SCALE



PLAN VIEW

NOT TO SCALE

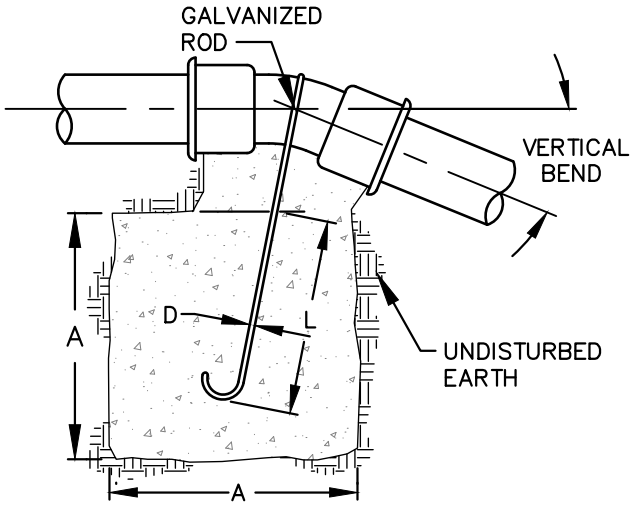
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BLOWOFF ASSEMBLY

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-11

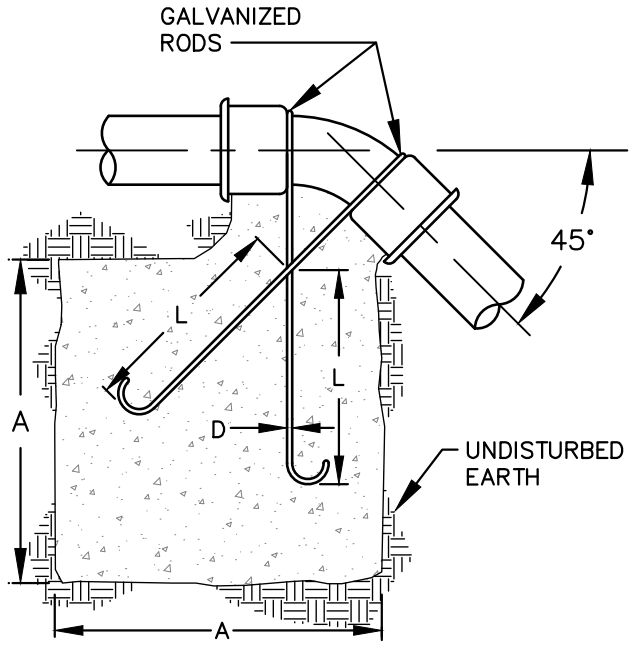
VERTICAL BLOCKING FOR 11 1/4° – 22 1/2° – 30° BENDS					
PIPE SIZE	VERT. BEND	GU FT.	A	D	L
4"	11 1/4°	8	2.0'	3/4"	1.5'
	22 1/2°	11	2.2'		2.0'
	30°	17	2.6'		
6"	11 1/4°	11	2.2'	3/4"	2.0'
	22 1/2°	25	2.8'		
	30°	41	3.5'		
8"	11 1/4°	16	2.5'	3/4"	2.0'
	22 1/2°	47	3.5'		
	30°	70	4.1'	3/4"	2.5'
12"	11 1/4°	32	3.2'	3/4"	2.0'
	22 1/2°	88	4.5'	7/8"	3.0'
	30°	132	5.1'		
16"	11 1/4°	70	4.1'	7/8"	3.0'
	22 1/2°	134	5.7'	1 1/3"	4.0'
	30°	275	6.5'	1 1/4"	
20"	11 1/4°	91	4.5'	7/8"	3.0'
	22 1/2°	225	6.1'	1 1/4"	4.0'
	30°	330	6.9'	1 3/8"	4.3'
24"	11 1/4°	128	5.0'	1"	3.5'
	22 1/2°	320	6.8'	1 3/8"	4.5'
	30°	480	7.0'	1 3/8"	5.5'



VERTICAL BLOCKING FOR 11 1/4° - 22 1/2° & 30° BENDS

NTS

VERTICAL BLOCKING FOR 45° BENDS					
PIPE SIZE	VERT. BEND	GU FT.	A	D	L
4"	45°	8	2.0'	3/4"	1.5'
6"	45°	11	2.2'		2.0'
8"	45°	17	2.6'		
12"	45°	11	2.2'	3/4"	2.0'
16"	45°	25	2.8'		
20"	45°	41	3.5'		
24"	45°	16	2.5'	3/4"	2.0'



VERTICAL BLOCKING FOR 45° BENDS

NTS

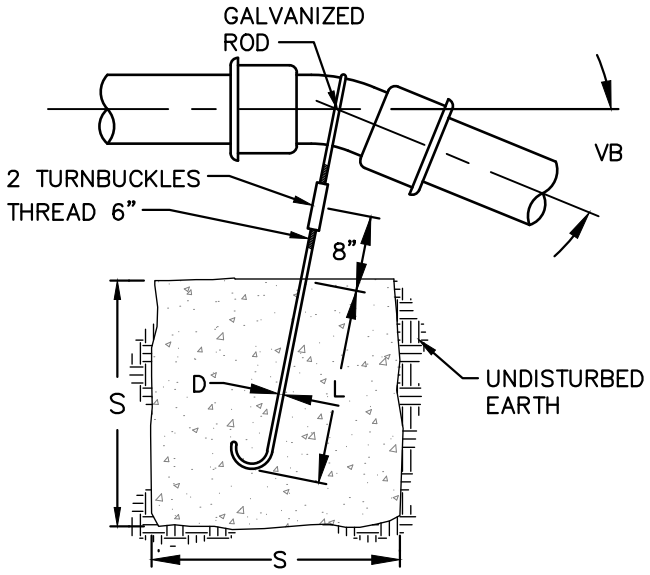
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VERTICAL THRUST BLOCKING

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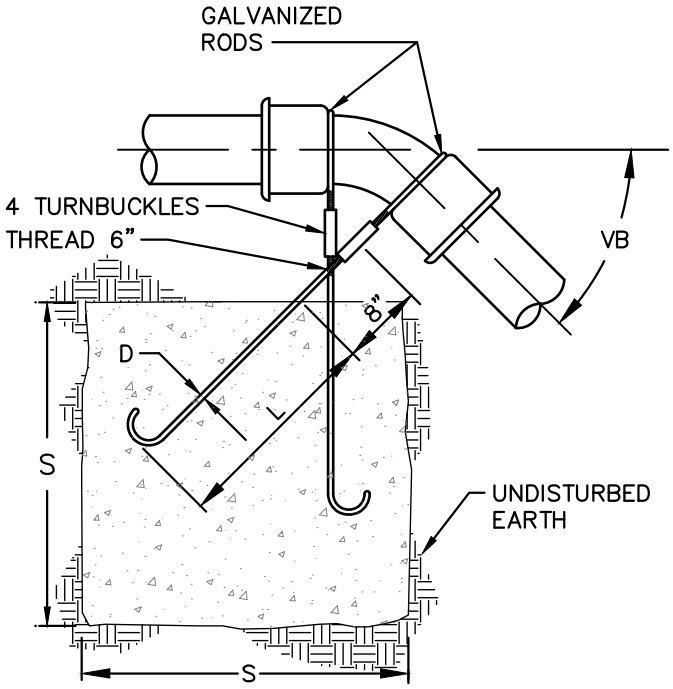
TYPE "A" BLOCKING FOR 11 1/4° – 22 1/2° – 30° BENDS						
		VB		S	D	L
PIPE SIZE NOM. DIAMETER INCHES	TEST PRESSURE PSI	VERTICAL BEND DEGREES	NO. OF CU CT OF CONC. BLOCKING	SIDE OF CUBE FEET	DIAMETER OF SHACKLE RODS (4) INCHES	DEPTH OF RODS IN CONCRETE FEET
4	300	11 1/4°	8	2.0	3/4	1.5
		22 1/2°	11	2.2		2.0
		30°	17	2.6		
6	300	11 1/4°	11	2.2	3/4	2.0
		22 1/2°	25	2.9		
		30°	41	3.5		
8	300	11 1/4°	16	2.5	3/4	2.0
		22 1/2°	47	3.6		
		30°	70	4.1		2.5
12	250	11 1/4°	32	3.2	3/4	2.0
		22 1/2°	88	4.5		3.0
		30°	132	5.1		
16	225	11 1/4°	70	4.1	7/8	3.0
		22 1/2°	148	5.3	1 1/8	4.0
		30°	275	6.5	1 1/4	
20	200	11 1/4°	91	4.5	7/8	3.0
		22 1/2°	225	6.1	1 1/4	4.0
		30°	330	6.9	1 3/8	4.3
24	200	11 1/4°	128	5.0	1	3.5
		22 1/2°	320	6.8	1 3/8	4.5
		30°	480	7.9	1 5/8	5.5



VERTICAL BLOCKING
FOR 11 1/4° - 22 1/2° & 30° BENDS

NTS

TYPE "B" BLOCKING FOR 45° BENDS						
		VB		S	D	L
PIPE SIZE NOM. DIAMETER INCHES	TEST PRESSURE PSI	VERTICAL BEND DEGREES	NO. OF CU CT OF CONC. BLOCKING	SIDE OF CUBE FEET	DIAMETER OF SHACKLE RODS (4) INCHES	DEPTH OF RODS IN CONCRETE FEET
4	300	45°	30	3.1	3/4	2.0
6	300	45°	68	4.1	3/4	2.0
8	300	45°	123	5.0	3/4	2.0
12	250	45°	232	6.1	3/4	2.5
16	225	45°	478	7.8	1 1/8	4.0
20	200	45°	560	8.2	1 1/4	4.0
24	200	45°	820	9.4	1 3/8	4.5



CLASS 3000 CONC.
(OR COMMERCIAL)

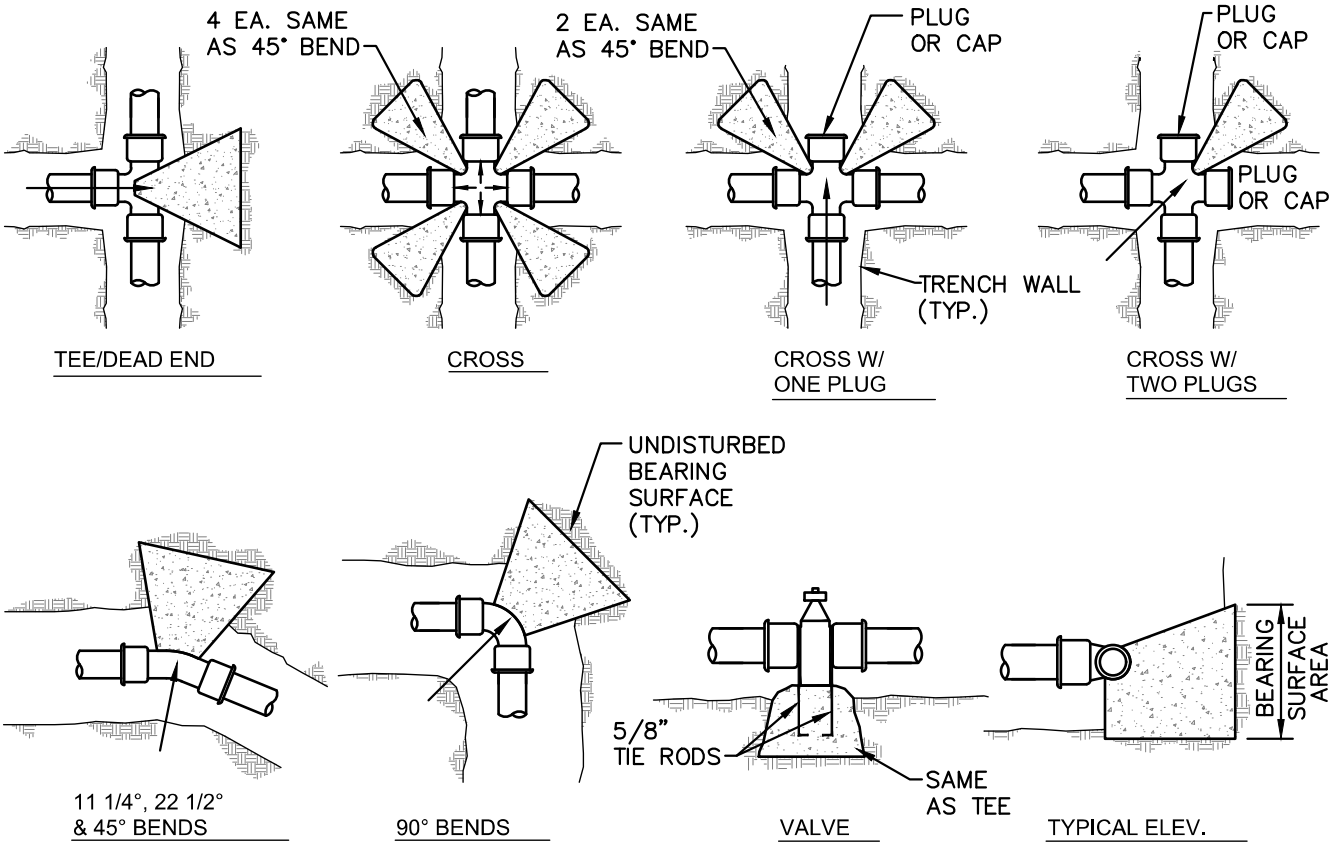
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ALTERNATE VERTICAL THRUST BLOCKING

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TYPES OF CONCRETE BLOCKING

NTS

TABLE A

THRUST (IN LBS.) PER PSI OF WATER PRESSURE AT VARIOUS FITTINGS

PIPE SIZE	BENDS				TEES DEAD ENDS
	11 1/4°	22 1/2°	45°	90°	
4	3	7	13	24	17
6	7	15	29	53	38
8	13	26	51	95	67
10	21	41	80	148	105
12	30	60	115	213	150
14	40	80	157	290	205
16	52	104	205	378	267
18	66	132	259	479	338
20	82	163	320	591	418
24	118	235	461	851	602

TABLE B

ALLOWABLE BEARING PRESSURE FOR SOILS TYPES

SOIL TYPE	BEARING PRESSURE LBS./SQ. FT.
PEAT OR MUCK	0
ALLUVIAL SOIL	1,000
SOFT CLAY	2,000
SAND	4,000
SAND & GRAVEL	6,000
SAND & GRAVEL W/CLAY	8,000
SHALE	12,000
ROCK	20,000

NOTES

TABLE "A" SHOULD BE USED WITH THE MAXIMUM PRESSURE ANTICIPATED FOR HYDROSTATIC TEST PRESSURE OR SURGE PRESSURE. (WORKING PRESSURE TIMES 1.33)

IN ABSENCE OF A SOILS REPORT, AN AVERAGE SOIL (SOFT CLAY) WITH AN ASSUMED VALUE OF 2,000 PSF BEARING STRENGTH (FROM TABLE "B") MAY BE USED.

CONCRETE FOR THRUST BLOCKING SHALL BE CLASS 3000 OR COMMERCIAL AT THE DISCRETION OF THE CONTRACTOR.

SHACKLE RODS SHALL BE ASTM A-36 WITH MINIMUM YIELD STRESS OF 36KSI (KIPS PER SQ. IN.) MINIMUM ROD DIAMETER SHALL BE 5/8".

NOTES IN FIGURES SUCH AS: "SAME AS 45° BEND" MEANS THE THRUST BLOCK VALUE SHALL BE THE SAME AS DETERMINED FOR A 45° BEND OF THE SAME SIZE.

EXAMPLE

REQUIRED BEARING SURFACE FOR A 90° BEND IN 8" LINER WITH MAXIMUM OPERATING PRESSURE OR TEST PRESSURE OF 200 PSI AND SOIL BEARING STRENGTH OF 2,000 PSF:

$\frac{\text{THRUST}}{\text{SOIL STRENGTH}}$ = BEARING AREA (SQ. FT.)

THRUST = 95(FROM TABLE) X 200 = 19,000 LBS

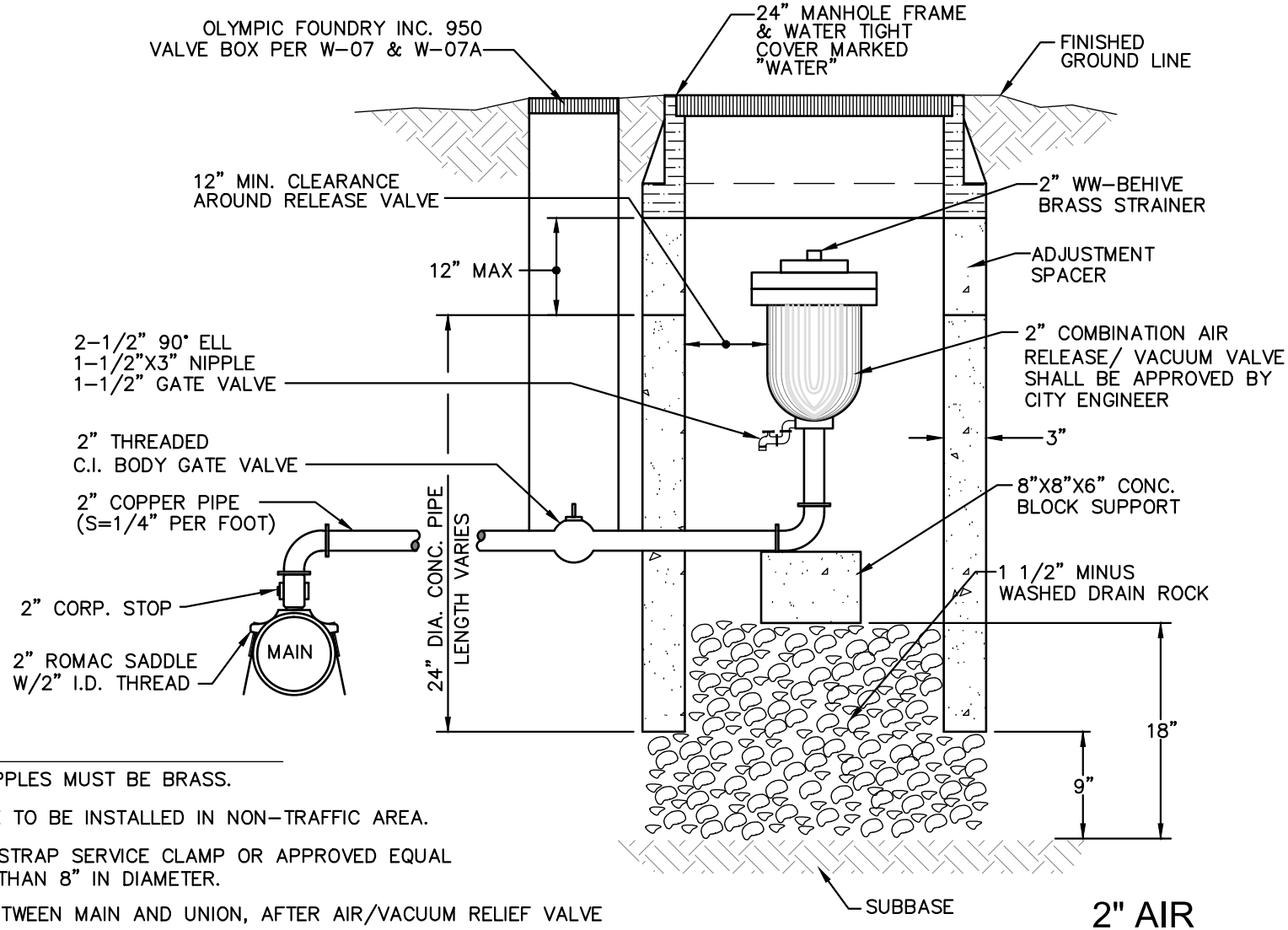
$\frac{19{,}000 \text{ LBS}}{2{,}000 \text{ PSF}}$ 9.5 SQ. FT. = AREA OF UNDISTURBED SOIL REQUIRED

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HORIZONTAL THRUST BLOCKING

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DATE:	BY:	SCALE:	DWG#
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NOTES:

1. ALL FITTINGS AND NIPPLES MUST BE BRASS.
2. AIR-VAC UNIT & BOX TO BE INSTALLED IN NON-TRAFFIC AREA.
3. USE ROMAC DOUBLE STRAP SERVICE CLAMP OR APPROVED EQUAL ON ALL MAINS LESS THAN 8" IN DIAMETER.
4. ALL PIPE FITTINGS BETWEEN MAIN AND UNION, AFTER AIR/VACUUM RELIEF VALVE SHALL BE BRASS.
5. INSTALLATIONS FOR OTHER SIZE AIR/VACUUM RELIEF VALVES SHALL BE INDIVIDUALLY DESIGNED AND WILL REQUIRE APPROVAL BY THE UTILITIES DIVISION.
6. AIR/VAC RELEASE VALVE ASSEMBLY SHALL BE INSTALLED AT HIGH POINT ON LINE. IF HIGH POINT FALLS IN LOCATION WHERE ASSEMBLY CANNOT BE INSTALLED, PROVIDE ADDITIONAL DEPTH TO CREATE NEW HIGH POINT.
7. CONCRETE VAULT PENETRATIONS SHALL BE CORED DRILLED AND GROUTED.

CITY of SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

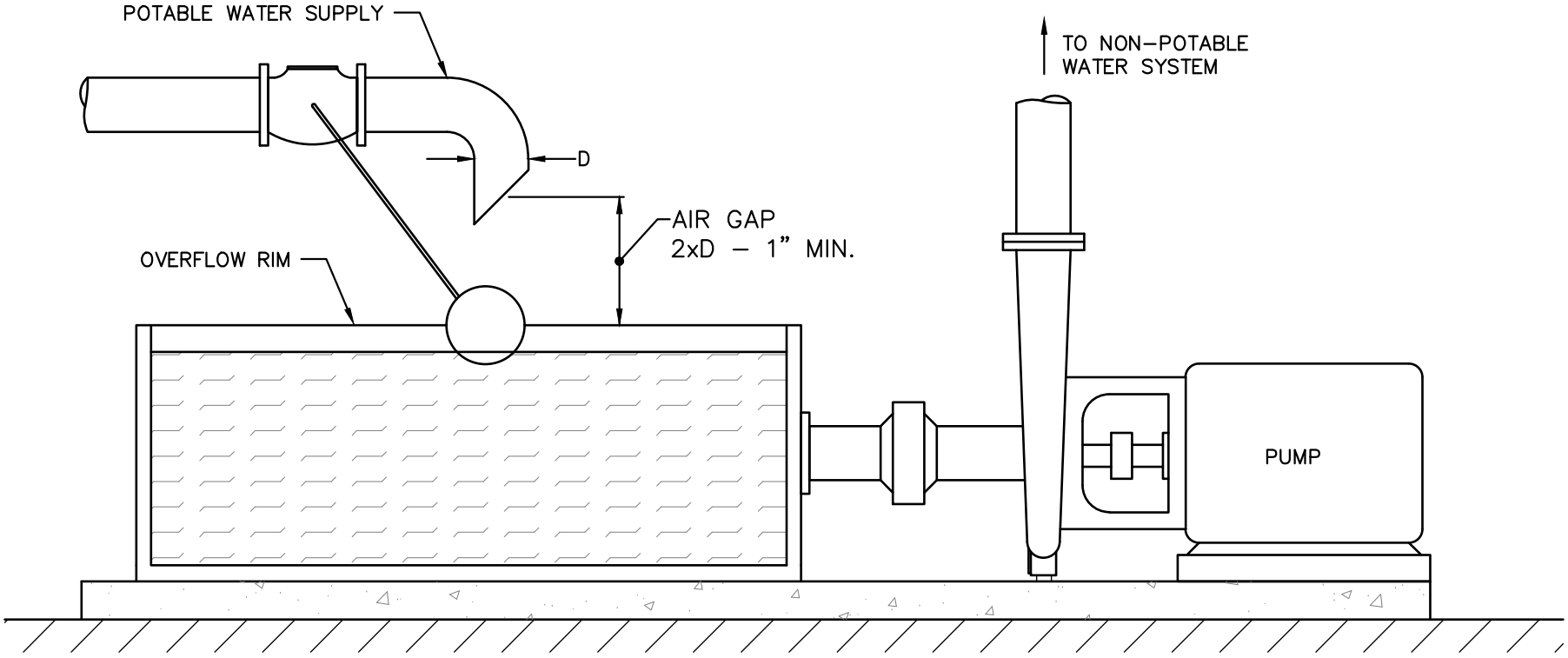
2" AIR VACUUM/RELEASE VALVE ASSEMBLY

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-15

APPROVED AIR GAP SEPARATION

AN APPROVED AIR GAP IS A PHYSICAL SEPARATION BETWEEN THE FREE FLOWING DISCHARGE END OF A POTABLE WATER SUPPLY PIPELINE AND THE OVERFLOW RIM OF AN OPEN OR NON–PRESSURE RECEIVING VESSEL. THESE VERTICAL, PHYSICAL SEPARATIONS MUST BE AT LEAST TWICE THE DIAMETER OF THE INLET PIPE BUT NEVER LESS THAN ONE INCH. IF SPLASHING IS A PROBLEM, TUBULAR SCREENS MAY BE ATTACHED OR THE SUPPLY LINE OUTLET MAY BE CUT AT A 45° ANGLE. IF SUPPLY LINE IS CUT AT A 45° ANGLE THE AIR GAP DISTANCE IS MEASURED FROM THE CENTER OF THE ANGLE, HOSES ARE NOT ALLOWED. BYPASSES ARE NOT ALLOWED. THE INSPECTION OF AIR GAPS SHALL BE INCLUDED IN THE YEARLY TESTING PROGRAM FOR BACK FLOW DEVICES.



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AIR GAP
FOR MAKEUP TANK

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-16

Pressure Vacuum Breaker Assembly

ASSEMBLIES MUST MEET REQUIREMENTS SHOWN BELOW TO ENSURE ACCESSIBILITY FOR TESTING, MAINTENANCE AND APPROVAL OF THE WATER PURVEYOR. VARIANCE OF ANY INSTALLATION MUST HAVE PRIOR WRITTEN APPROVAL OF THE LOCAL WATER PURVEYOR AND THE LOCAL OFFICIAL OF THE PLUMBING CODE AND IT'S INSPECTOR.

ASSEMBLY INSTALLATION REQUIREMENTS

THOROUGHLY FLUSH SERVICE LINE PRIOR TO INSTALLATION OF ASSEMBLY.
THE UNIT MUST BE:

- ACCESSIBLE FOR TESTING AND MAINTENANCE.
- PROTECTED FROM FREEZING, FLOODING, VANDALISM, AND MECHANICAL DAMAGE DUE TO WATER HAMMER AND EXCESSIVE PRESSURE.
- ALL ASSEMBLIES MUST BE INSTALLED VERTICALLY.

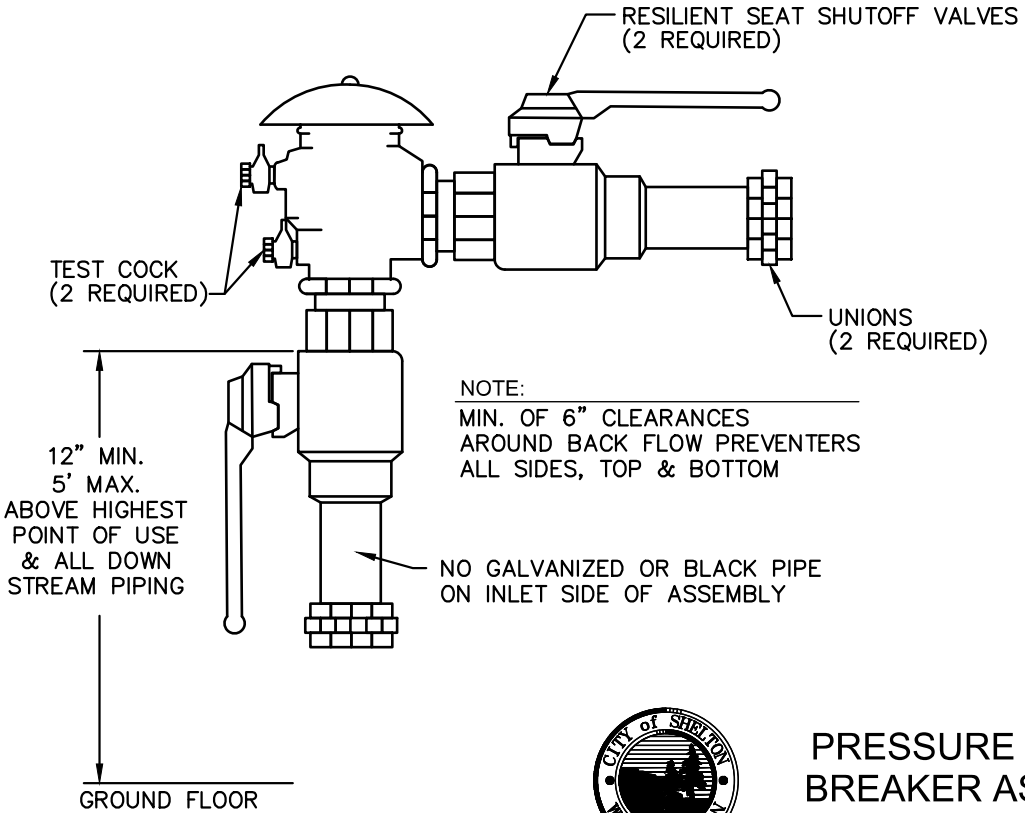
PRESSURE VACUUM BREAKER ASSEMBIES CANNOT BE INSTALLED BELOW GROUND AT ANYTIME

DESIGNED FOR BACK SIPHONAGE ONLY, NOT BACK PRESSURE.
WHEN INSTALLING AN ASSEMBLY INSIDE A BUILDING, ENSURE ASSEMBLY IS LOCATED WHERE OCCASIONAL SPITTING FROM THE RELIEF VALVE PORT, A FOULED CHECK, OR WATER FLUSHED OUT DURING THE ANNUAL TEST WILL NOT BE OBJECTIONABLE. PROPER DRAINAGE MUST BE PROVIDED.
NO GALVANIZED OR BLACK PIPE ON INLET SIDE.

PROCEDURE REQUIREMENTS

ALL ASSEMBLIES MUST BE ON THE WASHINGTON STATE APPROVED BACKFLOW ASSEMBLY LIST. THIS LIST IS AVAILABLE THROUGH THE DEPARTMENT OF HEALTH, (360) 236–3140.
A PLUMBING PERMIT IS REQUIRED; CONTACT THE WATER PURVEYOR FOR INSPECTION OF ALL NEWLY INSTALLED ASSEMBLIES

ALL ASSEMBLIES ARE REQUIRED TO BE TESTED AND SIGNED BY A WASHINGTON STATE CERTIFIED TESTER UPON INSTALLATION AND ANNUALLY THEREAFTER. ASSEMBLIES MUST BE TESTED AFTER REPAIRS, RELOCATION OR REINSTALLATION AND IMMEDIATELY SENT TO LOCAL WATER PURVEYOR

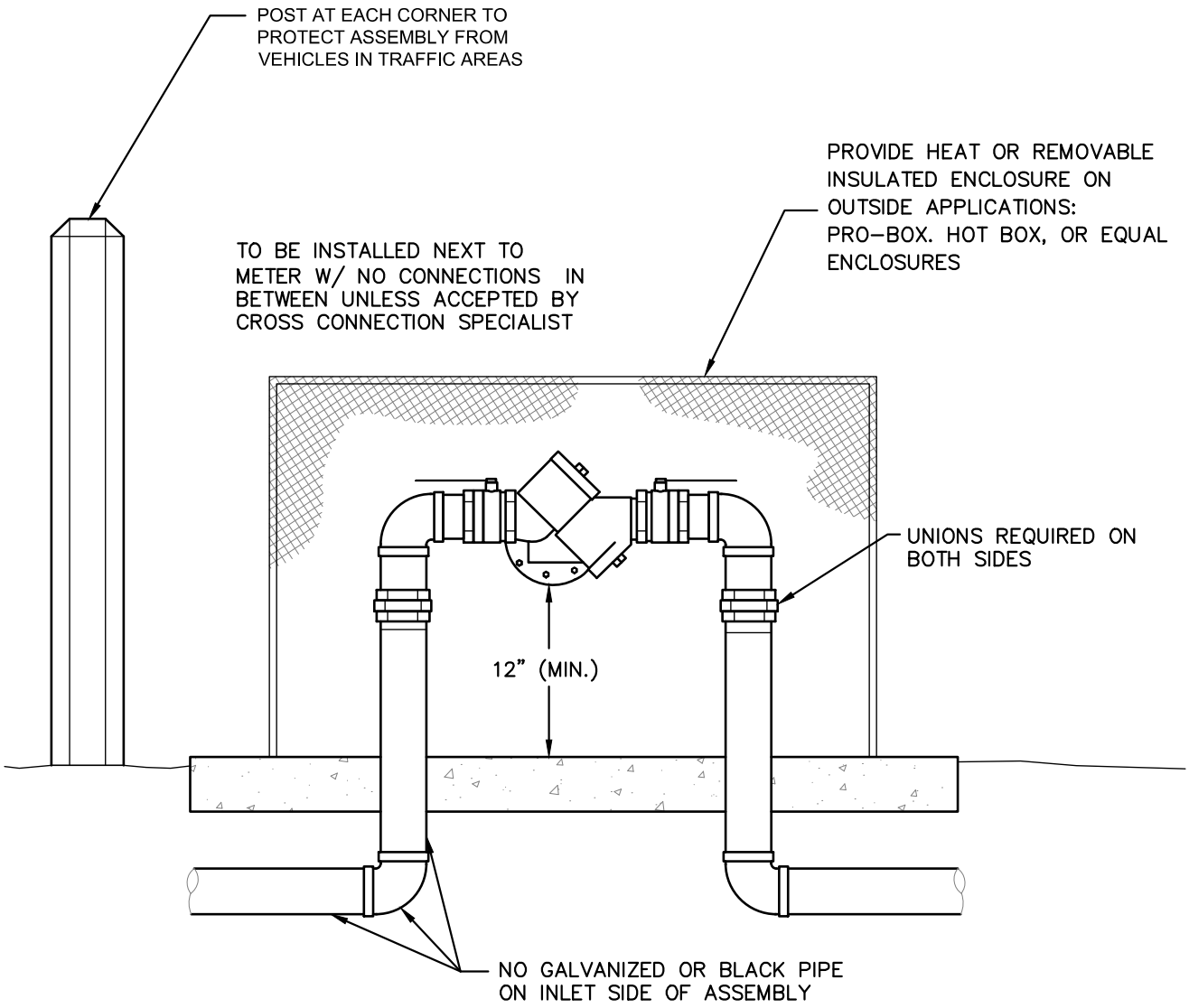


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PRESSURE VACUUM BREAKER ASSEMBLY

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-17



ATTENTION:
SEE SHT. W-19A FOR PROCEDURE & INSTALLATION REQUIREMENTS NOTES.

"Building A Stronger Community TOGETHER"

REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) 2" & SMALLER

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-18

Reduced Pressure Backflow Assembly (RPBA) Installation—2” and Smaller

PROCEDURE REQUIREMENTS

All assemblies must be on the Washington State Approved Backflow Assembly list. This list is available through USC Foundation approved Backflow Prevention Assemblies. For more information call the City of Shelton's C.C.S. (360) 432-5187. A plumbing permit is required; Contact the Water Purveyor for inspection of all newly installed assemblies. When testing a Reduced Pressure Detector Assembly, both assemblies must be tested and two test reports submitted to the Local Water Purveyor.

ALL ASSEMBLIES ARE REQUIRED TO BE TESTED AND SIGNED BY A WASHINGTON STATE CERTIFIED TESTER UPON INSTALLATION AND ANNUALLY THEREAFTER. ASSEMBLIES MUST BE TESTED AFTER REPAIRS, RELOCATION OR REINSTALLATION AND IMMEDIATELY SENT TO LOCAL WATER PURVEYOR.

ASSEMBLIES MUST MEET ABOVE REQUIREMENTS TO ENSURE ACCESSIBILITY FOR TESTING, MAINTENANCE AND APPROVAL OF THE WATER PURVEYOR. VARIANCE OF ANY INSTALLATION MUST HAVE PRIOR WRITTEN APPROVAL OF THE LOCAL WATER PURVEYOR AND THE LOCAL OFFICIAL OF THE PLUMBING CODE AND IT’S INSPECTOR.

ASSEMBLY INSTALLATION REQUIREMENTS

Thoroughly flush service line prior to installation of assembly.
The unit must be:

- Installed as a unit, including two shut off valves, two check valves and four test cocks for each RPBA All assemblies are required to be installed as a unit in the configuration they were approved by USC; Plugs must be installed in all test cocks on RPBA and RPDA'S.
- Accessible for testing and maintenance,
- Protected from freezing, flooding, vandalism, and mechanical damage due to water hammer and excessive pressure. If installed outside, assembly must be in Hot Box.

Assemblies must be installed no higher than 5 feet from floor to centerline of assembly and a minimum of 12 inches from floor to bottom of assembly. All assemblies must be installed horizontally, unless they have Washington State and USC approval to be installed vertically. If installed in a vertical configuration, it must be a minimum of 12 inches from floor, and no higher than 5 feet* to the centerline of the #2 shut-off valve. All assemblies must maintain a sufficient clearance from any wall, and 24 inches in front of assembly to ensure accessibility for maintenance and testing. Clearances may vary on small units - contact the local water purveyor for special installation requirements. Sizes 2 1/2 inches and larger in diameter may require additional space on one side of the assembly. Assemblies 2 1/2 inches and larger in diameter shall have support blocks to prevent flange damage.

*An Assembly installed more than 5 feet above floor or ground level must have a permanent platform under it for the plumber, tester or maintenance person to stand on. The platform must comply with all applicable safety standards and codes in effect.

REDUCED PRESSURE BACKFLOW ASSEMBLIES' CANNOT BE INSTALLED BELOW GROUND AT ANYTIME.

Do not install in an area subject to flooding.
When installing an assembly inside a building, ensure assembly is located where occasional spitting from the relief valve port, a fouled check, or water flushed out during the annual test will not be objectionable. Proper drainage must be provided.

No galvanized or black pipe on inlet side.

REQUIREMENTS FOR AIR GAPS:

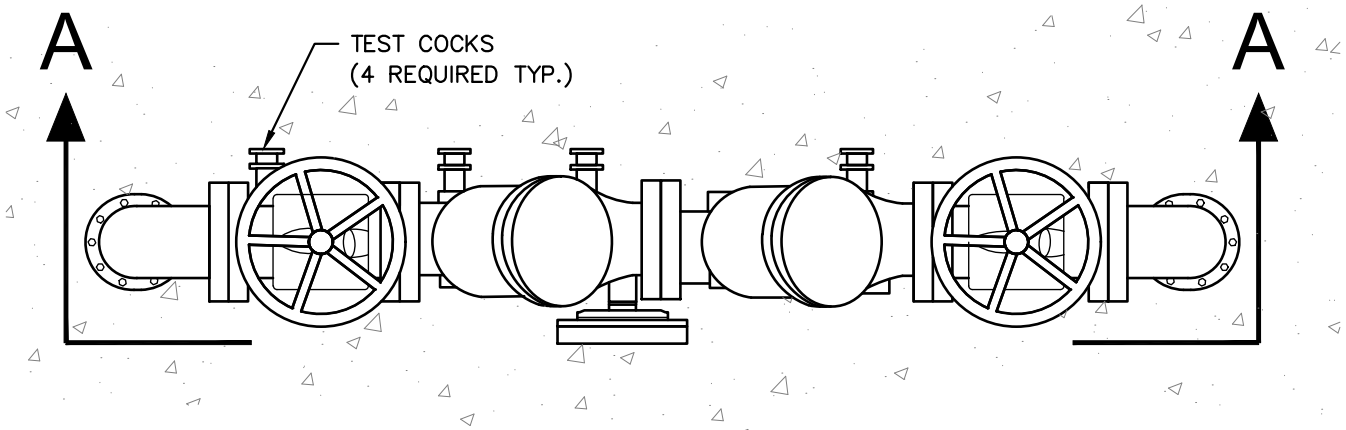
Air gap must be twice the diameter of the inlet pipe, minimum of 1 inch.
The air gap must provide a physical separation from the bottom of the inlet piping to the top of the overflow rim of the receiving vessel.
If inlet piping is cut diagonally to decrease Splashing, the air gap separation is measured from the bottom of the cut to the receiving vessel. If air gap is located near sidewalks, the separation increases to three times the diameter of the inlet piping, minimum of 1 1/2 inches.
Please note: Air gaps installed in lieu of a reduced pressure backflow assembly also require annual inspection.

"Building A Stronger Community TOGETHER"

NOTES FOR REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) 2" & SMALLER

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

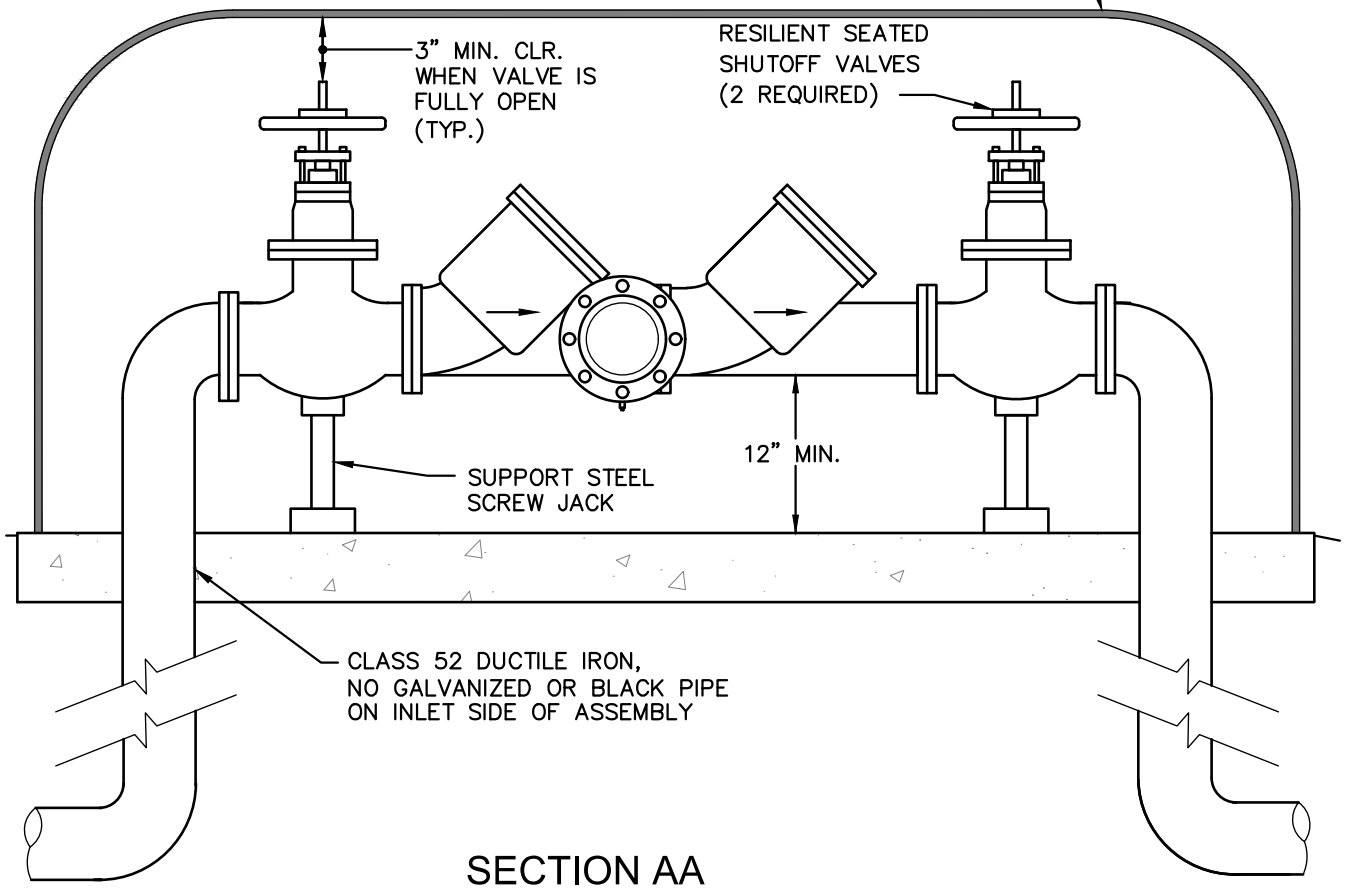
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1/2019	GS	NTS	W-18A



A CITY APPROVED VALVE IS REQUIRED BETWEEN THE SUPPLY MAIN & THE VAULT

PLAN VIEW
NTS

PROVIDE HEAT OR REMOVABLE INSULATED ENCLOSURE ON OUTSIDE APPLICATIONS: PRO-BOX. HOT BOX, OR EQUAL ENCLOSURES



SECTION AA
NTS

ATTENTION:
SEE SHT. W-19A FOR PROCEDURE & INSTALLATION REQUIREMENTS NOTES.

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REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) & (RPDA) 2½" & LARGER SERVICES

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-19

Reduced Pressure Backflow Assembly Installation (RPBA) & (RPDA) 2½" & Larger

PROCEDURE REQUIREMENTS

All assemblies must be on the Washington State Approved Backflow Assembly list. This list is available through the USC Foundation approved Backflow Prevention Assemblies. For more information call the City of Shelton's C.C.S. (360) 432-5187. A plumbing permit is required; Contact the Water Purveyor for inspection of all newly installed assemblies. When testing a Reduced Pressure Detector Assembly, both assemblies must be tested and two test reports submitted to the Local Water Purveyor.

ALL ASSEMBLIES ARE REQUIRED TO BE TESTED AND SIGNED BY A WASHINGTON STATE CERTIFIED TESTER UPON INSTALLATION AND ANNUALLY THEREAFTER. ASSEMBLIES MUST BE TESTED AFTER REPAIRS, RELOCATION OR REINSTALLATION AND IMMEDIATELY SENT TO LOCAL WATER PURVEYOR.

ASSEMBLIES MUST MEET ABOVE REQUIREMENTS TO ENSURE ACCESSIBILITY FOR TESTING, MAINTENANCE AND APPROVAL OF THE WATER PURVEYOR. VARIANCE OF ANY INSTALLATION MUST HAVE PRIOR WRITTEN APPROVAL OF THE LOCAL WATER PURVEYOR AND THE LOCAL OFFICIAL OF THE PLUMBING CODE AND IT'S INSPECTOR.

ASSEMBLY INSTALLATION REQUIREMENTS

Thoroughly flush service line prior to installation of assembly.
The unit must be:

- Installed as a unit, including two shut off valves, two check valves and four test cocks for each RPBA All assemblies are required to be installed as a unit in the configuration they were approved by USC; Plugs must be installed in all test cocks on RPBA and RPDA'S.
- Accessible for testing and maintenance,
- Protected from freezing, flooding, vandalism, and mechanical damage due to water hammer and excessive pressure.

Assemblies must be installed no higher than 5 feet from floor to centerline of assembly and a minimum of 12 inches from floor to bottom of assembly. All assemblies must be installed horizontally, unless they have Washington State and USC approval to be installed vertically. If installed in a vertical configuration, it must be a minimum of 12 inches from floor, and no higher than 5 feet* to the centerline of the #2 shut-off valve. All assemblies must maintain a sufficient clearance from any wall, and 24 inches in front of assembly to ensure accessibility for maintenance and testing. Clearances may vary on small units - contact the local water purveyor for special installation requirements. Sizes 2 1/2 inches and larger in diameter may require additional space on one side of the assembly. Assemblies 2 1/2 inches and larger in diameter shall have support blocks to prevent flange damage.

*An Assembly installed more than 5 feet above floor or ground level must have a permanent platform under it for the plumber, tester or maintenance person to stand on. The platform must comply with all applicable safety standards and codes in effect.

REDUCED PRESSURE BACKFLOW ASSEMBLIES' CANNOT BE INSTALLED BELOW GROUND AT ANYTIME.

Do not install in an area subject to flooding.
When installing an assembly inside a building, ensure assembly is located where occasional spitting from the relief valve port, a fouled check, or water flushed out during the annual test will not be objectionable. Proper drainage must be provided.

No galvanized or black pipe on inlet side.

REQUIREMENTS FOR AIR GAPS:

Air gap must be twice the diameter of the inlet pipe, minimum of 1 inch.
The air gap must provide a physical separation from the bottom of the inlet piping to the top of the overflow rim of the receiving vessel.

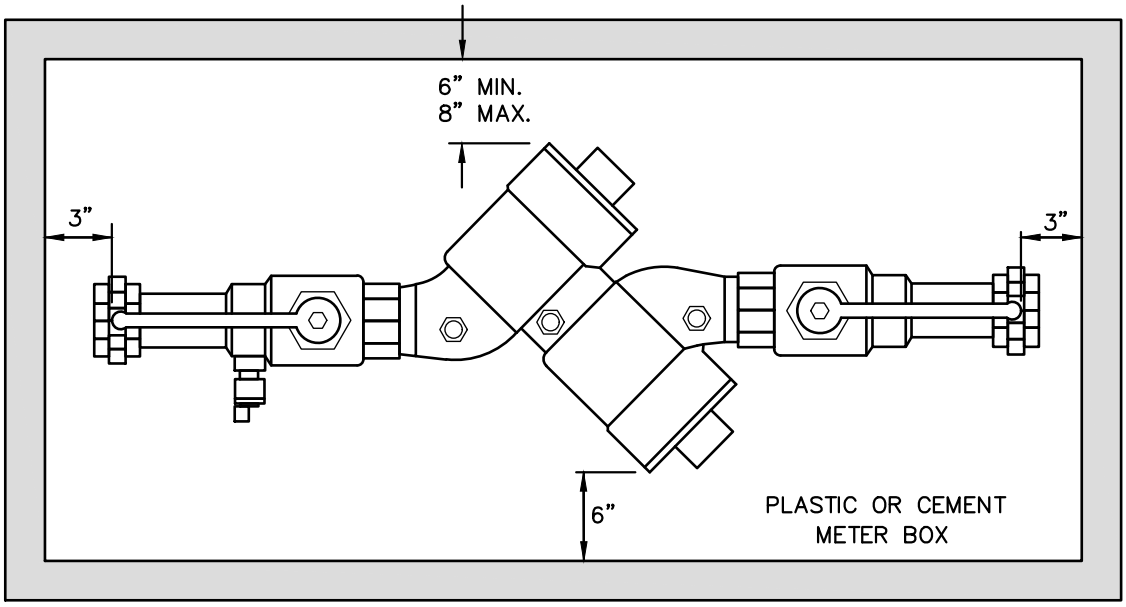
If inlet piping is cut diagonally to decrease Splashing, the air gap separation is measured from the bottom of the cut to the receiving vessel. If air gap is located near sidewalks, the separation increases to three times the diameter of the inlet piping, minimum of 1 1/2 inches. Please note: Air gaps installed in lieu of a reduced pressure backflow assembly also require annual inspection.

"Building A Stronger Community TOGETHER"

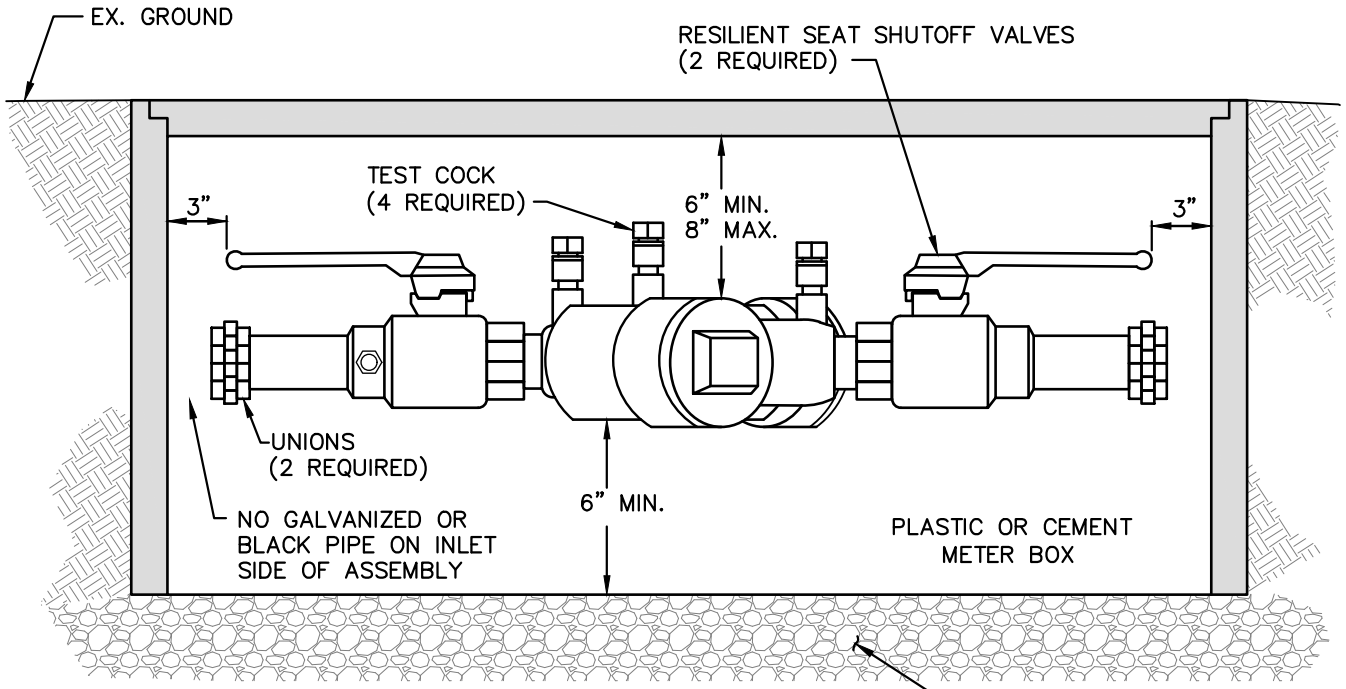
NOTES FOR REDUCED PRESSURE BACKFLOW ASSEMBLY(RPBA) & (RPDA) 2½" & LARGER SERVICES

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-19



PLAN VIEW
(BELOW GROUND INSTALLATION)



SIDE VIEW
(BELOW GROUND INSTALLATION)

ATTENTION:
SEE NOTES ON SHEET W-20A FOR INSTALLATION REQUIREMENTS.

"Building A Stronger Community TOGETHER"

DOUBLE CHECK VALVE ASSEMBLY (DCVA) FOR 2" & SMALLER SERVICES

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-20

Double Check Valve Assembly (DCVA) - 2” and Smaller

ASSEMBLY INSTALLATION REQUIREMENTS

Thoroughly flush service line prior to installation of assembly.

The unit must be:

- Installed as a unit, including two shut off valves, two check valves and four test cocks for each DCVA All assemblies are required to be installed as a unit in the configuration they were approved by USC; Plugs must be installed in all test cocks on DCVA and DCDA'S.
- Accessible for testing and maintenance,
- Protected from freezing, flooding, vandalism, and mechanical damage due to water hammer and excessive pressure.

Assemblies must be installed no higher than 5 feet from floor to centerline of assembly and a minimum of 6 inches from floor* to bottom of assembly. All assemblies must be installed horizontally, unless they have Washington State and USC approval to be installed vertically. If installed in a vertical configuration, it must be a minimum of 6 inches from floor, and no higher than 5 feet* to the centerline of the #2 shut-off valve. All assemblies must maintain a sufficient clearance from any wall, and 24 inches in front of assembly to ensure accessibility for maintenance and testing. Sizes 2 1/2 inches and larger in diameter may require additional space on one side of the assembly. Clearances may vary on small units - contact the local water purveyor for special installation requirements. Assemblies 2 1/2 inches and larger in diameter shall have support blocks to prevent flange damage.

*An Assembly installed more than 5 feet above floor or ground level must have a permanent platform under it for the plumber, tester or maintenance person to stand on. The platform must comply with all applicable safety standards and codes in effect. If vault is 4 foot or deeper a ladder is required.

Follow all safety procedures referencing confined space entry

If installed in a vault, a small assembly requires a 6 inch clearance below the assembly with pea gravel for drainage.

When installing an assembly inside a building, ensure assembly is located where occasional spitting from the relief valve port, a fouled check, or water flushed out during the annual test will not be objectionable. Proper drainage must be provided.

No galvanized or black pipe on inlet side.

ASSEMBLIES MUST MEET ABOVE REQUIREMENTS TO ENSURE ACCESSIBILITY FOR TESTING, MAINTENANCE AND APPROVAL OF THE WATER PURVEYOR. VARIANCE OF ANY INSTALLATION MUST HAVE PRIOR WRITTEN APPROVAL OF THE LOCAL WATER PURVEYOR AND THE LOCAL OFFICIAL OF THE PLUMBING CODE AND IT’S INSPECTOR.

PROCEDURE REQUIREMENTS

All assemblies must be on the Washington State Approved Backflow Assembly list. This list is available through the USC Foundation approved Backflow Prevention Assemblies. For more information call the City of Shelton's C.C.S. (360) 432-5187.

When testing a Double Check Detector Assembly, both the main unit and the assembly on the Bypass must be tested and two test reports submitted to the Water Purveyor.

A plumbing permit is required; Contact the Water Purveyor for inspection of all newly installed assemblies.

ALL ASSEMBLIES ARE REQUIRED TO BE TESTED AND SIGNED BY A WASHINGTON STATE CERTIFIED TESTER UPON INSTALLATION AND ANNUALLY THEREAFTER. ASSEMBLIES MUST BE TESTED AFTER REPAIRS, RELOCATION OR REINSTALLATION AND IMMEDIATELY SENT TO LOCAL WATER PURVEYOR.

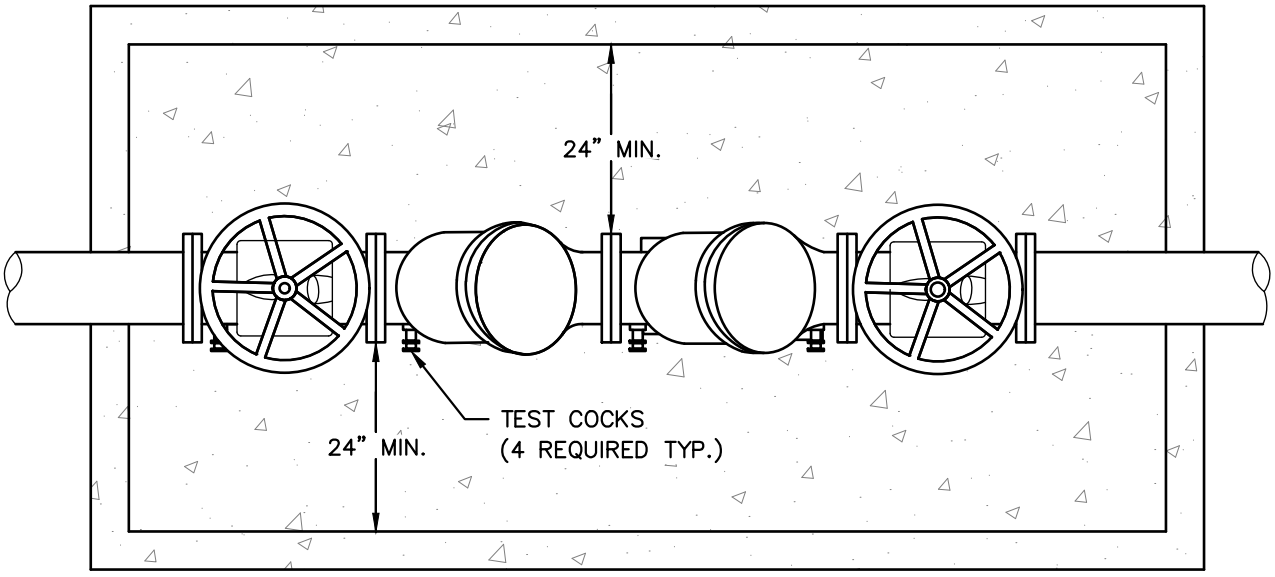
CITY OF SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

DOUBLE CHECK VALVE ASSEMBLY (DCVA) 2" & SMALLER SERVICES

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

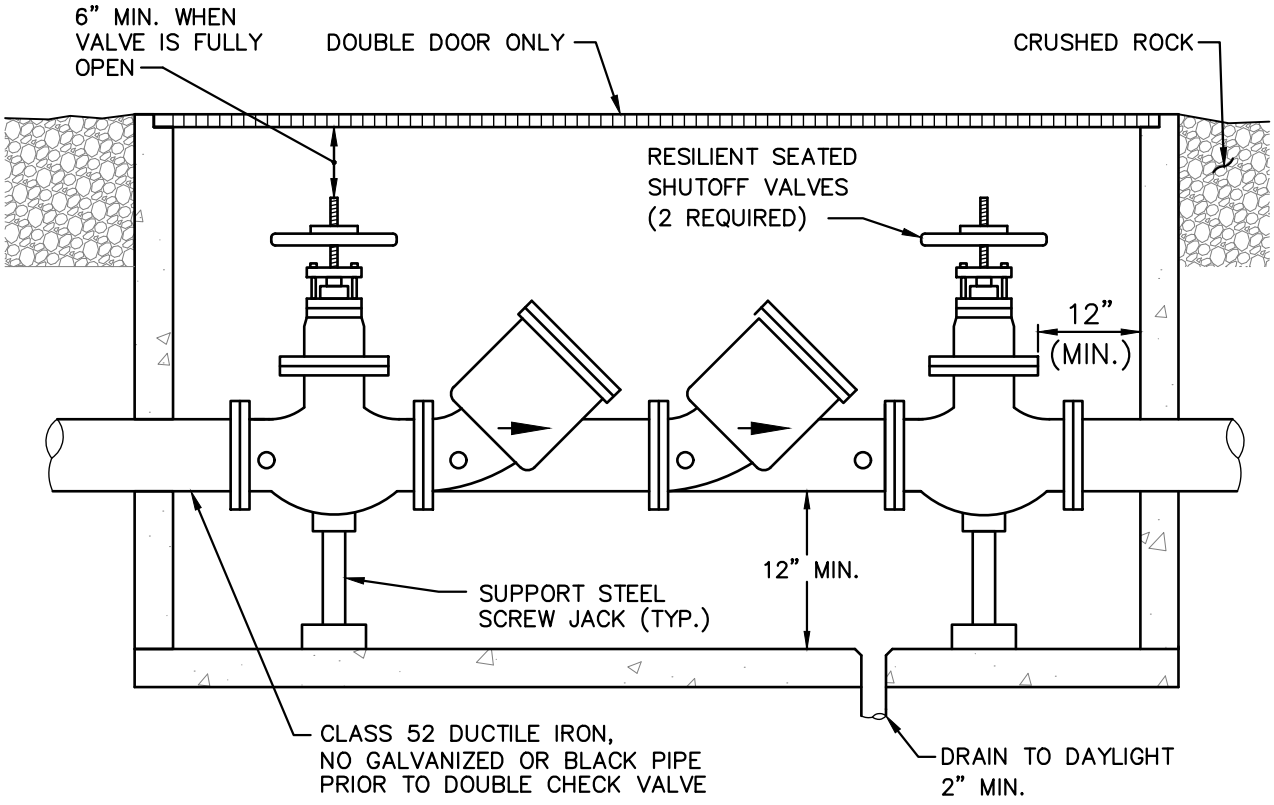
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1/2019	GS	NTS	W-20



A CITY APPROVED VALVE IS REQUIRED BETWEEN THE SUPPLY MAIN & THE VAULT

PLAN VIEW
NTS

PROVIDE HEAT OR REMOVABLE INSULATED ENCLOSURE ON OUTSIDE APPLICATIONS: PRO–BOX. HOT BOX, OR EQUAL ENCLOSURES



SECTION AA
NTS

ATTENTION:
SEE SHT. W-21A
FOR PROCEDURE & INSTALLATION
REQUIREMENT NOTES.

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DOUBLE CHECK VALVE ASSEMBLY (DCVA) & (DCDA) 2½" & LARGER SERVICES

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-21

Double Check Valve Assembly (DCVA) & (DCDA) - 2 1/2" and Larger

ASSEMBLY INSTALLATION REQUIREMENTS

Thoroughly flush service line prior to installation of assembly.

The unit must be:

- Installed as a unit, including two shut off valves, two check valves and four test cocks for each DCVA All assemblies are required to be installed as a unit in the configuration they were approved by USC; Plugs must be installed in all test cocks on DCVA and DCDA'S.
- Accessible for testing and maintenance,
- Protected from freezing, flooding, vandalism, and mechanical damage due to water hammer and excessive pressure.

Assemblies must be installed no higher than 5 feet from floor to centerline of assembly and a minimum of 12 inches from floor* to bottom of assembly. All assemblies must be installed horizontally, unless they have Washington State and USC approval to be installed vertically. If installed in a vertical configuration, it must be a minimum of 6 inches from floor, and no higher than 5 feet* to the centerline of the #2 shut-off valve. All assemblies must maintain a sufficient clearance from any wall, and 24 inches in front of assembly to ensure accessibility for maintenance and testing. Sizes 2 1/2 inches and larger in diameter may require additional space on one side of the assembly. Clearances may vary on small units - contact the local water purveyor for special installation requirements. Assemblies 2 1/2 inches and larger in diameter shall have support blocks to prevent flange damage.

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Follow all safety procedures referencing confined space entry
If installed in a vault, a small assembly requires a 12 inch clearance below the assembly with pea gravel for drainage. If vault is 4 foot or deeper a ladder is required.

When installing an assembly inside a building, ensure assembly is located where occasional spitting from the relief valve port, a fouled check, or water flushed out during the annual test will not be objectionable. Proper drainage must be provided.

A plumbing permit is required; No galvanized or black pipe on inlet side.

ASSEMBLIES MUST MEET ABOVE REQUIREMENTS TO ENSURE ACCESSIBILITY FOR TESTING, MAINTENANCE AND APPROVAL OF THE WATER PURVEYOR. VARIANCE OF ANY INSTALLATION MUST HAVE PRIOR WRITTEN APPROVAL OF THE LOCAL WATER PURVEYOR AND THE LOCAL OFFICIAL OF THE PLUMBING CODE AND IT'S INSPECTOR.

PROCEDURE REQUIREMENTS

All assemblies must be on the Washington State Approved Backflow Assembly list.

All assemblies must be on the Washington State Approved Backflow Assembly list. This list is available through the USC Foundation approved Backflow Prevention Assemblies. For more information call the City of Shelton's C.C.S. (360) 432-5187.

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A plumbing permit is required; Contact the Water Purveyor for inspection of all newly installed assemblies

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NOTES FOR
DOUBLE CHECK VALVE
ASSEMBLY (DCVA) & (DCDA)
2½" & LARGER SERVICES

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-21

Spill Resistant Pressure Vacuum Breaker Assembly

ASSEMBLIES MUST MEET REQUIREMENTS SHOWN BELOW TO ENSURE ACCESSIBILITY FOR TESTING, MAINTENANCE AND APPROVAL OF THE WATER PURVEYOR. VARIANCE OF ANY INSTALLATION MUST HAVE PRIOR WRITTEN APPROVAL OF THE LOCAL WATER PURVEYOR AND THE LOCAL OFFICIAL OF THE PLUMBING CODE AND IT'S INSPECTOR.

ASSEMBLY INSTALLATION REQUIREMENTS

THOROUGHLY FLUSH SERVICE LINE PRIOR TO INSTALLATION OF ASSEMBLY.
THE UNIT MUST BE:

- ACCESSIBLE FOR TESTING AND MAINTENANCE.
- PROTECTED FROM FREEZING, FLOODING, VANDALISM, AND MECHANICAL DAMAGE DUE TO WATER HAMMER AND EXCESSIVE PRESSURE.
- ALL ASSEMBLIES MUST BE INSTALLED VERTICALLY.

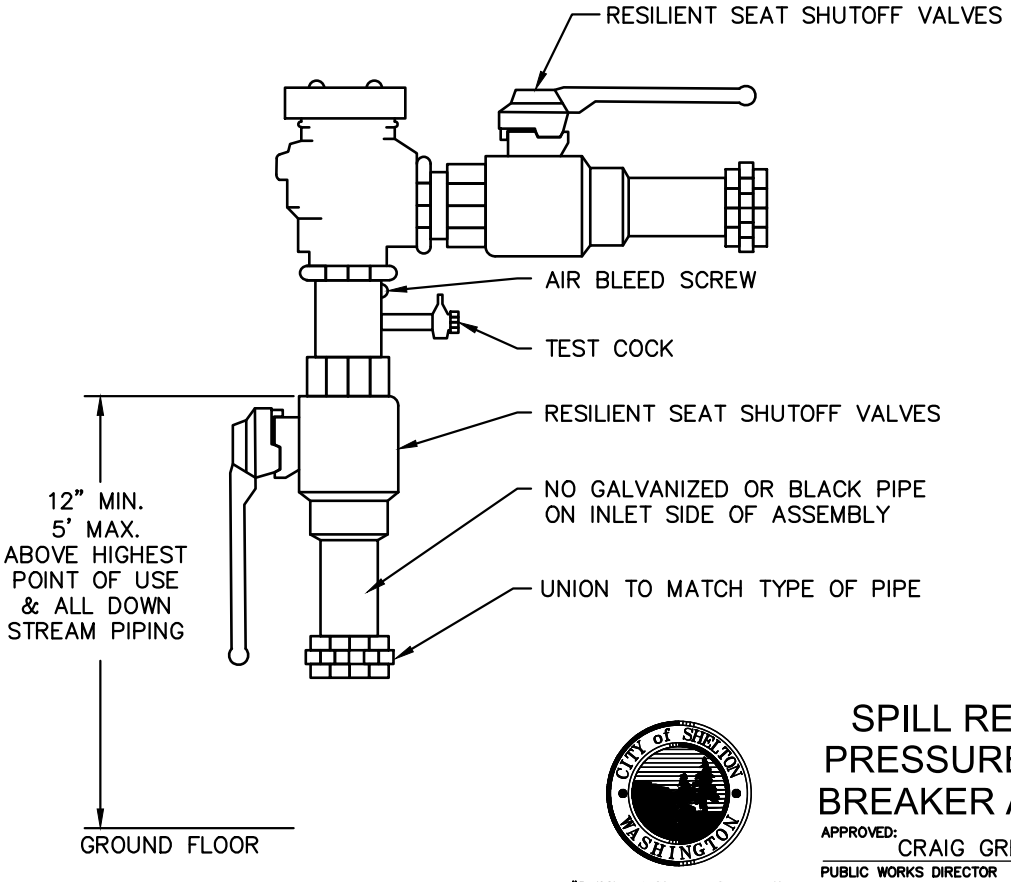
SPILL RESISTANT PRESSURE VACUUM BREAKER ASSEMBIES CANNOT BE INSTALLED BELOW GROUND AT ANYTIME

DESIGNED FOR BACK SIPHONAGE ONLY, NOT BACK PRESSURE.
WHEN INSTALLING AN ASSEMBLY INSIDE A BUILDING, ENSURE ASSEMBLY IS LOCATED WHERE OCCASIONAL SPITTING FROM THE RELIEF VALVE PORT, A FOULED CHECK, OR WATER FLUSHED OUT DURING THE ANNUAL TEST WILL NOT BE OBJECTIONABLE.
PROPER DRAINAGE MUST BE PROVIDED. NO GALVANIZED OR BLACK PIPE ON INLET SIDE.

PROCEDURE REQUIREMENTS

ALL ASSEMBLIES MUST BE ON THE WASHINGTON STATE APPROVED BACKFLOW ASSEMBLY LIST. THIS LIST IS AVAILABLE THROUGH THE DEPARTMENT OF HEALTH, (360) 236-3140.
A PLUMBING PERMIT IS REQUIRED; CONTACT THE WATER PURVEYOR FOR INSPECTION OF ALL NEWLY INSTALLED ASSEMBLIES

ALL ASSEMBLIES ARE REQUIRED TO BE TESTED AND SIGNED BY A WASHINGTON STATE CERTIFIED TESTER UPON INSTALLATION AND ANNUALLY THEREAFTER. ASSEMBLIES MUST BE TESTED AFTER REPAIRS, RELOCATION OR REINSTALLATION AND IMMEDIATELY SENT TO LOCAL WATER PURVEYOR



"Building A Stronger Community TOGETHER"

SPILL RESISTANT PRESSURE VACUUM BREAKER ASSEMBLY

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-22

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"Building A Stronger Community TOGETHER"

DETAIL TITLE

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
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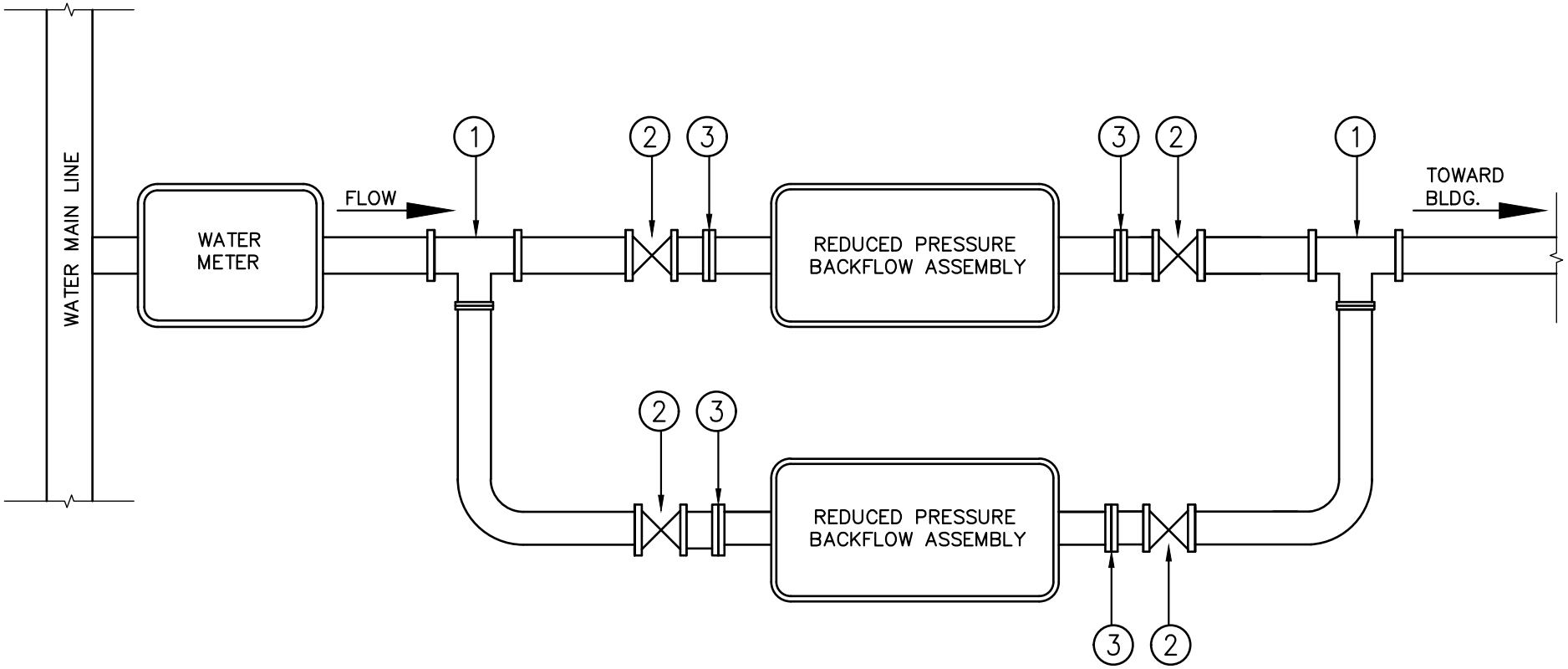
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"Building A Stronger Community TOGETHER"

DETAIL TITLE

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-24



SPECIAL NOTE:

BOTH LINES MUST PROVIDE
THE SAME DEGREE OF PROTECTION.

KEYNOTES:

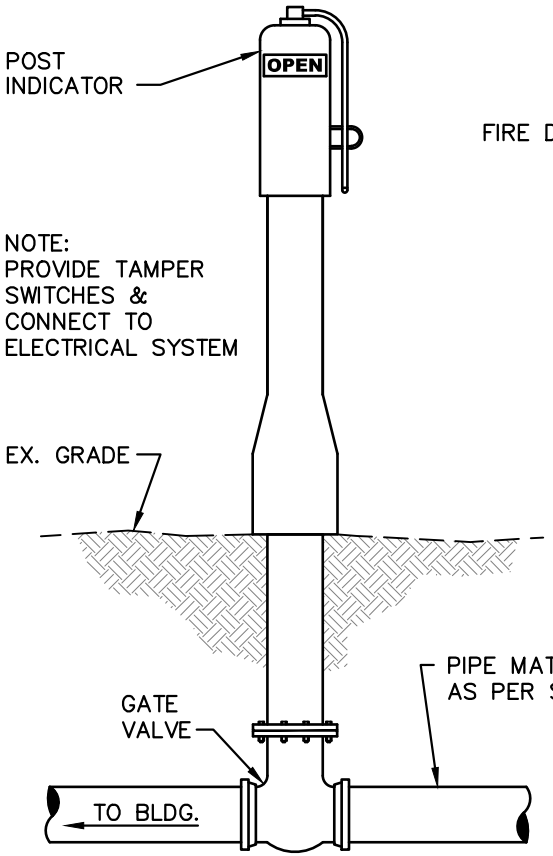
1. TEE
2. SHUT OFF VALVE
3. UNION

"Building A Stronger Community TOGETHER"

BACKFLOW BY-PASS PARALLELED ASSEMBLY

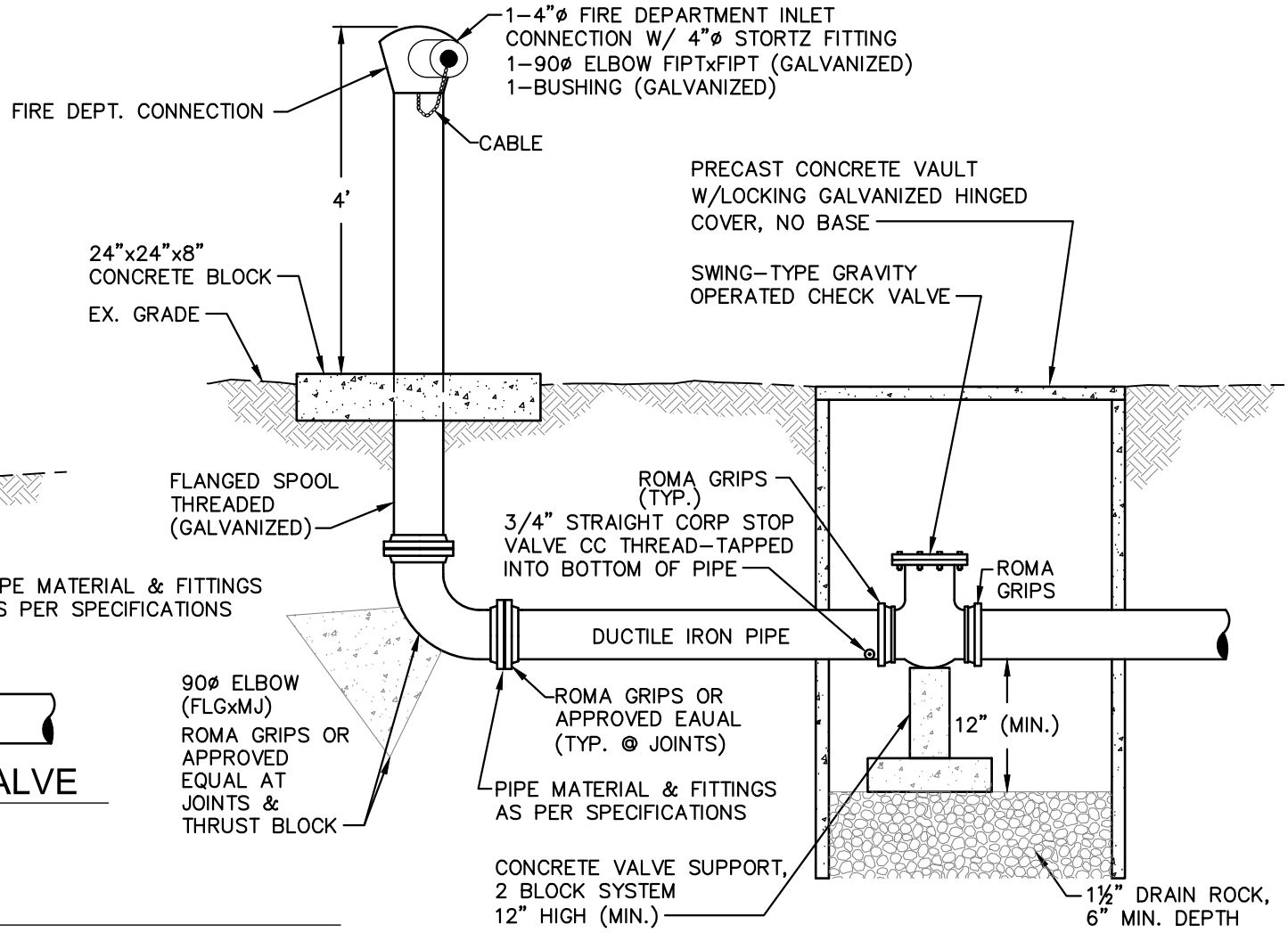
APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-25



POST INDICATOR VALVE

SCALE: NTS



FIRE DEPARTMENT CONNECTION

SCALE: NTS

NOTE:

1. ALL ABOVE GROUND PLUMBING TO BE PAINTED SAFETY RED.
2. ALL FIRE CONNECTIONS TO BE FLANGED, THREADED, VICTOLIC OR ROMA GRIPS.
3. ALL FIRE CONNECTIONS TO BE LOCATED ON THE DOWNSTREAM SIDE OF THE BACKFLOW ASSEMBLY.
4. FIRE DEPT. CONNECTION (FDC) MUST BE CONNECTED DOWNSTREAM OF THE DOUBLE CHECK VALVE ASSEMBLY (DCVA) WHETHER DCVA IS INSTALLED INSIDE OF BLDG. OR OUTSIDE IN A VAULT.

CITY of SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

POST INDICATOR VALVE & FIRE DEPT. CONNECTION

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-26

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"Building A Stronger Community TOGETHER"

DETAIL TITLE

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-27

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"Building A Stronger Community TOGETHER"

DETAIL TITLE

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	W-28

C H A P T E R 5

5.000 SANITARY SEWERS

5.010 Sewer System Alterations, Extensions and Connections

To allow the City to provide timely assistance and advice, anyone who wishes to alter, extend or connect to the sanitary sewer system should contact the City as soon as possible. Any alteration of, extension of, or connection to the City of Shelton's sanitary sewer system must conform to the Comprehensive Sewer Plan, State Department of Ecology (DOE), and the Department of Health (DOH) requirements, Section 7 of the WSDOT *Standard Specifications for Road, Bridge and Municipal Construction,* and these *Standards.*

In the case of development where the property abuts a right-of-way or public easement in which a public sewer is located, or where a service connection is or can be otherwise provided, connection of all structures generating sewage shall be required. Whenever a structure that generates sewage originates within 300 feet of the public sewer, the structure shall connect to the public sewer in compliance with these *Standards.* Sewer main extensions shall be required when the property does not front on a sewer main or when the existing sewer main is not adequate for the increased use that is being proposed. The minimum extension shall be to the far property line or for corner lots, to the middle of the adjacent intersection of the right of way (alley or street). Any sewage spills on City Right of Way shall be reported to the City immediately at (360) 432-5178 during business hours, or (360) 426-4441 during non-business hours.

City utilities may be extended to properties within the Shelton Urban Growth Area only after the property is legally committed to eventual annexation per Section 1.200.

Development on new lots or sites created by subdivisions or site plans shall have a sewer service installed as required by these *Standards.* In single family subdivisions and in mobile home/manufactured home parks, a service shall be provided to each lot, site or residential dwelling unit.

Development of multi-family residential buildings (3 or more units) and commercial complexes shall have a single side sewer

or lateral installed per separate building or ownership. Duplex units shall have a separate side sewer or lateral for each living unit that connects directly to the service main.

5.020 Sewer Design Standards

The design of any sewer extension/connection shall conform to the State Department of Ecology's *Criteria for Sewage Works Design* and any applicable standards as set forth herein. The layout of extensions shall provide for the future continuation of the existing system as determined by the City. All sewers shall be designed as a gravity sewer whenever physically feasible.

Sewer mains shall be sized for the ultimate development of the tributary area as determined by the City. The minimum size for sub-mains and mains shall be 8-inch inside diameter. The minimum size for a lateral shall be 4 inches. Nothing shall preclude the City from requiring the installation of a larger sized main if the City determines a larger size or a greater installation depth is needed to meet the requirements for future service.

Gravity sewers shall be designed with a straight alignment between manholes, or as otherwise approved by the City. New gravity sewer systems shall be designed on the basis of an average daily per capita flow of sewage of not less than 100 gallons per day. See the following DOE table on Design Basis for Sewage. This figure is assumed to cover normal infiltration, but an additional allowance may be required by the City where conditions are unfavorable. Generally, laterals and sub-main sewers should be designed to carry, when running full, not less than 400 gallons daily per capita contributions of sewage. When deviations from the foregoing per capita rates are used, a description of the procedure used for sewer design shall be submitted to the City for review.

DESIGN BASIS FOR NEW SEWAGE WORKS

Discharge Facility	Design Units	Flow* (gpd)	BOD (lb/day)	SS (lb/day)	Flow Duration (hr)
Dwellings	Per person	100	0.2	0.2	24
Schools w/showers and cafeteria	Per person	16	0.04	0.04	8
Schools w/o showers and cafeteria	Per person	10	0.025	0.025	8
Boarding schools	Per person	75	0.2	0.2	16
Motels at 65 gal/person (rooms	Per room	130	0.26	0.26	24

DESIGN BASIS FOR NEW SEWAGE WORKS

Discharge Facility	Design Units	Flow* (gpd)	BOD (lb/day)	SS (lb/day)	Flow Duration (hr)
only)					
Trailer courts at 3 persons/trailer	Per trailer	300	0.6	0.6	24
Restaurants	Per seat	50	0.2	0.2	16
Interstate or through highway restaurants	Per seat	180	0.7	0.7	16
Interstate rest areas	Per person	5	0.01	0.01	24
Service stations	Per vehicle serviced	10	0.01	0.01	16
Factories	Per person per 8-hr shift	15-35	0.03-0.07	0.03-0.07	Operating Period
Shopping centers	Per 1,000 sq. ft. of ultimate floor space	200-300	0.01	0.01	12
Hospitals	Per bed	300	0.6	0.6	24
Nursing homes	Per bed	200	0.3	0.3	24
Homes for the aged	Per bed	100	0.2	0.2	24
Doctor's office in medical center	Per 1,000 sq. ft	500	0.1	0.1	12
Laundromats, 9 to 12 machines	Per machine	500	0.3	0.3	16
Community colleges	Per student and faculty	15	0.03	0.03	12
Swimming pools	Per swimmer	10	0.001	0.001	12
Theaters, drive-in type	Per car	5	0.01	0.01	4
Theaters, auditorium type	Per seat	5	0.01	0.01	12
Picnic areas	Per person	5	0.01	0.01	12
Resort camps, day & night, w/limited plumbing	Per campsite	50	0.05	0.05	24
Luxury camps w/flush toilets	Per campsite	100	0.1	0.1	24

* Includes normal filtration

Taken from: “Criteria for Sewage Works Design"
By: State of Washington Department of Ecology
December 2008 (Table G2 – 2)

Gravity sewer mains shall be Class 52 ductile iron pipe or solid wall PVC and shall conform to the requirements of WSDOT Standard Specification Section 9-05.

Gravity sewer shall be as deep as possible while still being functional and will have a typical minimum depth of 7 feet to provide gravity service to adjoining parcels, adequate head room within manholes for maintenance personnel and vertical clearance between water and sewer lines. Actual depth will be

determined by slope, flow, velocity and elevation of the existing system. Additional depth may be required by the City.

All new mains connecting to the existing system shall connect either to a new manhole or existing manhole and 180° to the lay of the main provided the manhole placement, two mains cannot meet without manhole as per Chapter 5.070 is met. See Chapter 5.040 and Standard Details SS-05 and SS-06 for requirements for building or side sewer connections.

All new mains and laterals shall include Tracer Wire.

Septic Tank Effluent Pump (STEP) systems are not allowed by the City except as approved by the City. For a grinder pump system refer to Chapter 5.170.

5.030 Connection to Existing System

Before connection to the existing system, all new sewers shall be physically plugged until all tests have been completed and the City approves the removal of the plug.

Connection of new sewer pipe lines to existing manholes shall be accomplished by core drilling and inserting a "Kor-N-Seal" boot, or as otherwise approved by the City. The transition of connecting channels shall be constructed so as not to interrupt existing flow patterns.

Connection of a sewer pipe line to a sewer system where a manhole is not available shall be accomplished by installing an approved precast base or pouring a concrete base and setting manhole sections. The existing sewer pipe shall not be cut into until approval is received from the City. At connections where an existing stub-out is not available, or where a new building sewer is the same size as the existing main, a replacement manhole shall be installed, unless otherwise approved by the City. All sewer main installations shall be per Section 5.020.

When sewer service is needed to a parcel fronting an existing sewer main, a Utility Application must be made to the City. Following approval of the application and payment of all related fees, the contractor may tap the existing sewer main and install all building side sewers or laterals required by the approved plans shall be installed by the contractor. All connections to the sewer main shall be shown on the plans. The City shall inspect the contractor’s work and testing.

Taps shall not be allowed to protrude into the existing main. The City shall be notified 48 hours prior to any tap of a City sewer and a City Inspector shall be present to witness the tap. The mainline at the tap location shall be televised after tapping and prior to approval to ensure compliance upon City direction.

When it is necessary to break out or repair an existing sewer during construction, only new pipe having the same inside diameter will be used in reconnecting the sewer. Where joints must be made between pipes with a mismatched wall thickness, the contractor shall use a flexible gasketed coupling, adapter, or coupling-adapter to make a watertight joint. Couplings shall be those manufactured by Romac or Smith-Blair for reinforced pipe and Fernco for non-reinforced pipe, or City approved equal.

Taps on PVC sewer mains shall be made with a PVC gasketed sewer main saddle wye conforming to ASTM D 3034 SDR 35, or City approved equal. Taps on a ductile iron sewer main shall be made with a Romac style CB sewer saddle with Ductile+Plus saddle, stainless steel strap and rubber gasket meeting ASTM D-2000 3 BA715 or City approved equal. See Standard Detail SS-14. The manufactured bevel on the pipe to be inserted into the saddle shall be cut off to avoid pushing the pipe into the main.

5.040 Sewer Service and Laterals

Building side sewers and lateral sewers shall be a minimum 4-inch inside diameter. Installation and maintenance of building side sewers and laterals up to the connection with the service main is the responsibility of the property owner. Prior to connection of a building side sewer or a lateral to the public sewer, an approved Utility Application must be obtained. Materials and design criteria for a building side sewer are covered by the Uniform Plumbing Code (UPC) and these *Standards.*

Each separate building shall have its own separate side sewer (per SMC Chapter 14.12.020) and each property shall have its own lateral connection to the system, except that duplex units shall have a separate side sewer or lateral for each living unit that connects directly to the service main. Laterals for single-family residential properties shall not be connected to the system at a manhole, unless otherwise approved by the City. Multifamily and commercial complexes may connect directly to

a manhole if the lateral sewer is six inches in diameter or larger and the manhole is channeled to accommodate the lateral. Manhole sizing where laterals are connected shall be the same as designated in Section 5.070 of these Standards.

Lateral sewers shall be PVC ASTM D 3034 SDR 35 with flexible gasket joints. Ductile iron pipe may be required in areas with insufficient cover. Lateral connections shall be made by a tap to an existing sewer main by a licensed and bonded contractor upon approval of the right of way permit, or by a Y branch from a new main connected above the spring-line of the pipe. PVC sewer T-Y fittings shall be GPK Products part number 113-004 to 113-0278 depending on application size, or 114-0044 to 114-0278 depending on application size, manufactured in accordance with ASTM D-3033 79 SDR 35, SDR 41, or ASTM D-3034 78 SDR 42 or SDR 35, or City-approved equal.

A cleanout is required on the lateral at the right-of-way line or easement line, unless otherwise approved by the City. Cleanout ring and cover shall be Inland Foundry, East Jordan, or City approved equal. See Standard Detail SS-10. A backflow prevention device (backwater valve) is required on the side sewer in an accessible location near the building unless otherwise approved by the City. See Standard Detail SS-07.

If the property abuts an existing sewer main, an application for sewer service shall be made by the owner of the property on which the work is to be performed or by a properly licensed and bonded contractor representing the owner. All fees required by the City shall accompany the completed application. The charge for connection to the City's sewer system is established by the City Council and may be amended by the Council from time to time as necessary. All charges incurred in establishing a connection to the City's sewer system shall be at the sole expense of the applicant.

No person other than authorized personnel of the City, or a properly permitted, licensed and bonded contractor who is approved by the City, shall make any connection to or opening into, use, alter, or disturb any part of the City sewer system or appurtenance thereto without the expressed consent of the City.

Taps shall not be allowed to protrude into the existing main. The City shall be notified 48 hours prior to any tap of a City sewer and a City inspector shall be present to witness the tap.

The mainline at the tap location shall be televised after tapping and prior to approval to ensure compliance.

Sewer main extensions shall be required when the property does not front on a sewer main or when the existing sewer main is not adequate for the increased use that is being proposed. The minimum extension shall be to a point at least 5 feet inside the prolongation of the property line.

5.050 Pressure Sewer (Force Main) Design Standards

A. Force Mains

Force mains may be considered for situations where topography makes a gravity sewer impractical.

Force mains shall be ductile iron AWWA C151 Class 52 or an approved equal. A restraint-joint pipe may be required where excess trench widths occur. All ductile iron pipe and fittings shall be Protecto 401 epoxy coated or PE lined pipe or City approved equal, and designed for use with corrosive materials.

Force mains over 2" shall have a minimum 68 inches of cover to top of pipe. This minimum assumes 42 inches cover to an 8-inch diameter water pipe and 18 inches separation from the bottom of water pipe to top of sewer line. See Section 4.060 for sanitary sewer/water main crossing requirements

The minimum velocity allowed is 2 feet per second (fps) at average dry weather flow. Two fps is required to maintain solids in suspension although 3 fps is desired to scour settled solids. Maximum velocity allowed shall be 8 fps.

B. Valves

Sewer force main valves shall be ductile iron and epoxy-coated, or PE lined and designed for use with corrosive materials. 4" to 12" valves shall be Waterous Series 500 plug valves or an approved equal.

Three valves shall be installed at each cross and two valves shall be installed at every tee. At every lift station, a force main isolation valve is required within 10 feet of the station. Valves shall be installed at all locations where the size of the pipe changes. Valves shall also be installed in-line between nodes at sufficient intervals to facilitate system repair, but shall not exceed the following:

- Every 6,000' for 4" diameter pipe
- Every 3,000' for 6" diameter pipe
- Every 1,500' for 8" diameter pipe
- Every 1,000' for 10" diameter pipe
- Every 700' for 12" diameter pipe
- Every 500' for 14" diameter pipe

C. Air/Vacuum Valves

Air release valves and air/vacuum valves shall be located at the high points of the force main within a standard 48-inch manhole or a comparable sized approved vault. Air release valves shall be fitted with an activated carbon canister to absorb compounds with disagreeable odors prior to releasing the air to the surrounding area. Grades shall be designed to minimize the need for air/vacuum valves when practical. Vehicular access to the each air release/vacuum valve is required for maintenance.

D. Force Main Drain

Provisions to drain a pressure main to facilitate repairs or to temporarily remove the force main from service shall be provided. This shall be accomplished through the use of a valved tee connected to a drain line at the low point of the line. A manhole shall be set over the force main at the valved tee.

E. Thrust Blocking

Locations of thrust blocking shall be shown on the plans. Thrust blocks shall be designed for the test pressures set forth in Section 4.170 of these *Standards.* Thrust block concrete shall be Class B poured against undisturbed earth. A plastic barrier shall be placed between all thrust blocks and fittings. Designed and approved restraining joint systems may be allowed in lieu of thrust blocking. Restraining joint brand, type, and size shall be specified on the plans. See Standard Details W-12, W-13 and W-14 for examples.

F. Force Main Termination

Hydrogen sulfide odors (H_2S), and the buildup of sulfuric acid (H_2SO_4) occur in the operation of a force main. To mitigate these conditions, some type of control method(s) shall be used.

This may include chemical addition at the pump station and/or the re-aeration of the wastewater at or near the terminus. Re-aeration may include the following:

1. Construction of a vault housing and aspiration assembly.

2. The use of a hydraulic fall (vertical siphon) within the terminal manhole.

3. High velocity discharge with smooth transition so as to not cause splashing of force main into the downstream gravity sewer.

These methods all require an adequate source of fresh air at the vault or manhole. At a minimum, the manhole at the terminus and the first manhole downstream of the terminus shall be coated with Tnemec 120 vinyl ester, Quantum polymorphic resin or approved equal, under the direction of the product representative. If new gravity manholes are to be installed, two PVC lined manholes shall be installed downstream of the force main terminus. Aerators shall be contained within an appropriately sized manhole or suitably constructed building.

The pressure main discharge shall be made with a smooth transition of flow into the existing flow so as not to cause

5.060 Sanitary Sewer/Water Main Crossings

See Section 4.060 for requirements regarding sewer main and water main separation at crossings.

5.070 Manholes

Manholes shall be provided at a maximum of 300-foot intervals. Manholes shall be provided at all intersections, at changes in direction, at changes in grade, or where the pipe size changes. Mastic is required between risers and between risers and castings. A shim will be required under the frame to prevent settling. Minimum slope through the manhole shall be 1/10th of one foot from invert "in" to invert "out". The manhole cone shall be offset to be located out of the tire track of a traveled lane.

Precast manholes shall meet the requirements of ASTM C 478 with a precast base or a cast-in-place base made from 3000 psi structural concrete. Sanitary sewer manholes shall be 48-inch

diameter minimum. The minimum clear opening in the manhole frame shall be 24-inches. Where a drop manhole is used, a larger opening may be required. Joints shall be rubber gasketed conforming to ASTM C 443 and shall be grouted from the inside and outside with an approved grout and installed per the manufacturer's recommendations. Lift holes shall be filled entirely with grout. Acceptance of precast manholes, inlets and catch basins will be based on the presence of a "WSDOT Inspected" stamp or tag provided in the field, as specified in Section 9-4.41 of WSDOT Construction Manual and Section 9-12 of the State of Washington's *Standard Specifications*. See Details SS-01 and SS-02.

Manhole covers and frames shall be hinged lid *East Jordan* within paved areas or unless approved by Public Works Director. See Standard Detail SS-11. Manhole rings and covers shall be free of porosity, shrink cavities, cold shuts or cracks, or any surface defects which would impair serviceability.

Repairs of defects by welding or by the use of smooth-on or similar material will not be permitted. Manhole rings and covers shall be machine-finished or ground-on seating surfaces so as to assure a non-rocking, self-seating (easily removed and replaced without the use of a sledge hammer) fit in any position and be interchangeable in other standard manhole frames. All castings shall be coated with a bituminous coating prior to delivery to the job site.

Lock-type covers shall be required in all multi-family complexes, on school grounds, on manholes containing odor control devices and as determined by the City. Where lock-type castings are required, the casting device shall be such that the cover may be readily released from the ring and all movable parts shall be made of non-corrosive materials and otherwise arranged to avoid possible binding. See Detail SS-11.

Safety steps shall be fabricated of polypropylene conforming to an ASTM D-4101 specification, injection molded around a 1/2-inch ASTM A-615 grade 60 steel reinforcing bar with anti-slip tread, per Section 7 of WSDOT *Standard Specifications*. Steps shall project uniformly from the inside wall of the manhole. Steps shall be installed to form a continuous vertical ladder with rungs equally spaced on 12-inch centers.

Manhole sizing shall be determined by the following criteria:

A. 48-inch Manhole

1. 2 connecting pipes, 8-inch to 12-inch diameter.

2. 3 connecting pipes, 8-inch to 10-inch diameter, 90 to 120 degrees between all pipes.

3. 4 connecting pipes, 8-inch diameter, perpendicular.

B. 54-inch Manhole

1. 2 connecting pipes, 8-inch to 12-inch with less than 45 degrees deflection. Deflection=angle between any two pipe channels in the manhole.

2. 3 connecting pipes, 10-inch to 12-inch diameter, 90 to 120 degrees between all pipes.

3. 4 connecting pipes, 10-inch to 12-inch diameter, perpendicular.

C. 72-inch Manhole

1. 2 connecting pipes, 15-inch to 18-inch diameter with less than 45 degrees deflection.

2. 3 connecting pipes, 15-inch diameter, 90 to 120 degrees between all pipes

3. 4 connecting pipes, 15-inch diameter, perpendicular

The above configurations shall provide adequate shelves and room for maintenance and performing TV inspections. For other sewer pipe configurations, the size of the manhole shall be approved by the City.

5.080 Slope

All sewers shall be designed and constructed to give mean velocities, when flowing full, of not less than 2.0 feet per second based on Manning's formula using an "*n*" value of 0.013. Use of other practical "*n*" values may be permitted by the City if deemed justifiable on the basis of field data submitted. The following minimum slopes should be provided; however, slopes greater than these are desirable.

MINIMUM SLOPE

Sewer Size (inches)		Minimum %Slope (Feet per 100 Feet)
6		1.0 (0.0100 Ft/Ft)
8		0.40 (0.0040 Ft/Ft)
10		0.28 (0.0028 Ft/Ft)
12		0.22 (0.0022 Ft/Ft)
14		0.17 (0.0017 Ft/Ft)
15		0.15 (0.0015 Ft/Ft)
16		0.14 (0.0014 Ft/Ft)
18		0.12 (0.0012 Ft/Ft)
21		0.10 (0.0010 Ft/Ft)
24		0.08 (0.0008 Ft/Ft)
27		0.07 (0.0007 Ft/Ft)
30		0.07 (0.0006 Ft/Ft)
36		0.05 (0.0005 Ft/Ft)

Sewers shall be laid with uniform slope between manholes. Under special conditions, slopes slightly less than those required for the 2.0 feet per second velocity may be permitted by the City. Such decreased slopes will only be considered where the depth of flow will be 0.3 of the diameter or greater for design average flow. Whenever such decreased slopes are proposed, the engineer shall furnish computations of the depths of flow in such pipes at minimum, average, and daily or hourly rates of flow. Larger pipe size shall not be allowed to achieve lesser slopes unless otherwise approved by the City.

The maximum tolerance from true line and grade shall be as follows:

A. Maximum deviation from established line and grade shall not exceed .0026 feet (1/32-inch) per inch of pipe diameter, and not exceed .042 feet (1/2-inch) per pipe length.

B. No adverse grade in any pipe length will be permitted.

C. The difference in deviation from established line and grade between two successive joints shall not exceed 1/3 of the amounts specified above.

5.090 High Velocity Protection

Where velocities greater than 15 feet per second are expected, special provisions shall be applied such as thrust blocking,

abrasion-resistant manhole and pipe materials, and anti-abrasive coatings as required by the City.

Anti-abrasive coatings shall be Tnemec 120-5002 Vinester (vinyl ester) for prime coat, and Tnemec Series 120-5001 Vinester (vinyl ester) for the finish coat, applied in a neat and workmanlike manner in accordance with the manufacturer's recommendations, or City-approved equal.

5.100 Drops

Straight grades between inverts of manholes are preferred over drops. Care must be taken when designing steep grades so as not to create a situation of excessive velocity or excavation.

Drops may be allowed as approved by the City.

An inside drop connection shall be provided for a sewer entering a manhole at an elevation of 24-inches or more above the manhole invert. Where the difference in elevation between the incoming sewer and the manhole invert is less than 24 inches, the invert shall be filleted to prevent solids deposition. An outside drop will not be allowed unless specifically approved by the City Public Works Director. Drop structures shall be constructed per Standard Details SS-08 and SS-09.

5.110 Lampholes

Lampholes are not an acceptable substitute for manholes. However, lampholes may be used in lieu of manholes at the end of 6 or 8 inch diameter lines, when approved by the City. This does not include a 6 inch building or side sewer to serve one or two single-family dwellings. Location of the cleanout for a building sewer is governed by the Uniform Plumbing Code.

All lampholes in City right-of-way shall be extended to grade. A cast iron ring and cover shall be installed around all lampholes. See Standard Detail SS-13.

5.120 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed as a professional engineer or professional land surveyor by the State of Washington. All construction staking shall be

inspected by the City prior to construction. The minimum staking of sewer lines shall be as follows, or as otherwise directed by the City:

A. Stake the location of mainline pipe every 50-feet with cut to invert of pipe.

B. Stake the location of all manholes for alignment and grade with cut or fill to rim and invert of pipes with a minimum of two offsets.

C. Stake the location of all laterals and cleanouts at the property line.

Any deviations from these minimum staking requirements shall be approved by the City.

5.130 Trench Excavation and Pipe Laying

Clearing and grubbing shall be performed within the easement where required, or within the public right-of-way as permitted by the City. Debris resulting from the clearing and grubbing shall be disposed of by the contractor in accordance with the terms of all applicable permits and regulations. Track-mounted equipment shall not be allowed on City streets and public rights-of-way outside of the approved project boundaries unless authorized by Public Works Director.

The contractor shall perform all excavation of every description. Where native materials are unsuitable for pipe bedding (i.e. boulders, hardpan, clay, rocks, roots and other obstructions) the materials shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below sewer grade. Where materials are removed from below sewer main grade, the trench shall be backfilled to grade with material meeting pipe bedding specifications and thoroughly compacted.

Trenches shall be excavated to the line and depth approved by the City. Except for unusual circumstances where approved by the City, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space. When the support of existing utilities or public safety concerns exist, the City may require more stringent trenching standards. Trenching, shoring and pipe laying shall be in conformance with Washington Industrial Safety and Health Administration

(WISHA), Washington Department of Labor and Industries (L&I) and the Office of Safety and Health Administration (OSHA) Safety Standards. Surface water shall be diverted so as not to enter the trench. Where water is encountered in the trench, it shall be removed during pipe laying operations, and shall be so maintained until the ends of the pipe are sealed and provisions are made to prevent floating of the pipe. Trench water or other deleterious materials shall not be allowed to enter the pipe at any time. The contractor shall maintain sufficient pumping equipment on the job to ensure that these provisions are all carried out. Disposal of all trench water shall meet all local, state and federal guidelines.

The contractor shall handle all types of pipe in a manner that will prevent damage to the pipe. Pipe and fittings shall be loaded and unloaded using hoists and slings in a manner to avoid shock or damage, and under no circumstances shall pipe be dropped, skidded, or rolled against another pipe. If the Inspector determines that the contractor's methods are damaging to the pipe, the contractor shall correct the handling methods. Damaged pipe will be rejected, and the contractor shall immediately place all damaged pipe apart from undamaged pipe, and shall remove damaged pipe from the site within 24 hours. Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations, and any pipe or fitting that has been installed with dirt or foreign material in it shall be removed, cleaned and re-laid. A clean whisk broom shall be used for this purpose, and for brushing to remove foreign matter prior to joining of pipe ends. At times when pipe laying is not in progress, the open ends of the pipe shall be closed by a watertight plug or by other means approved by the Engineer, to ensure cleanliness inside the pipe.

Pipe shall be stacked in such a manner as to prevent damage to the pipe, to prevent dirt and debris from entering the pipe, and to prevent any movement of the pipe. The bottom tiers of the stack shall be kept off the ground on timbers, rails or other similar supports. Pipe on succeeding tiers shall be alternated by bell and plain end. Timbers 4-inches by 4-inches in size shall be placed between tiers, and chocks shall be placed at each end to prevent movement. For public safety, each size of pipe shall be stacked separately.

The trench bottom shall be finished to grade with hand tools in such a manner that the pipe will have bearing along the entire

length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to make up the joint.

Pea gravel backfill will be allowed only to the spring line of the sewer main pipe. For additional requirements regarding trench backfilling, temporary patching and pavement restoration, see Chapter 2 of these *Standards.*

5.140 Testing

A. Gravity Sewer Main

Immediately following pipe cleaning, the gravity sewer pipe installation shall be tested with low pressure air per WSDOT Standard 7.17.3.

The contractor shall make an air test for his own purposes prior to notifying the City to witness the test. The acceptance air test shall be made after the trench is backfilled and compacted and the roadway section is completed to subgrade.

All wyes, tees, and ends of building or side sewer stubs shall be plugged with flexible joint caps, or acceptable alternates and securely fastened to withstand the internal test pressures. Such plugs or caps shall be readily removable and their removal shall provide a socket suitable for making a flexible jointed lateral connection or extension.

Prior to approval and acceptance of gravity sewer construction, gravity sewer pipes shall be subject to a low pressure air test and meet a 4 psi for 15 minutes standard. A mandrel test or equivalent shall be required on all sewers except laterals. The contractor shall furnish all equipment and personnel for conducting the tests.

Testing of the gravity sewer main shall include a television inspection by the contractor. The camera must be equipped with a rotating head to allow televising of the building or side sewers as mainline inspection is occurring. Any tap to an existing sewer system also needs to be inspected by television.

Television inspection shall be done after the air test has been approved and before the roadway is paved. Immediately prior to a television inspection, enough water shall be run down the line so it comes out the lower manhole.

One copy of the videotape and any accompanying written report shall be submitted to the City. Camera work must be completed utilizing the latest version of Cues' GraniteNet Software, or as approved by the City. Acceptance of the gravity sewer line will be made after the tape has been reviewed by the City.

B. Manholes

A water or a negative air pressure (vacuum) test of all manholes on the gravity sewer line is also required.

1. The water test shall be made by the contractor by filling the manhole up with water and letting it sit for 24 hours to allow the water to saturate the concrete. After 24 hours the manhole shall be filled to the top of the cone. The water cannot drop more than 0.05 gallons in 15 minutes per foot of head above invert to pass.

2. The negative air pressure (vacuum) test may be used for testing concrete manholes. After backfilling, plug all inverts and lift holes with plugs suitably rated for the test pressures. Plugs shall be placed a minimum of 6 inches beyond the manhole wall. Once the vacuum tester head assembly is suitably attached to the tip of the manhole, the manhole shall be evacuated to 10 inches Hg (0.3 bar). Once a vacuum of 10 inches Hg (0.3 bar) is attained, the contractor and the City Inspector will monitor to ensure the vacuum does not drop in excess of 1-inch Hg over the time specified in the table below. If the manhole fails the test, the contractor will identify and seal the leak and retest until satisfactory. This procedure shall be repeated after backfilling for final acceptance.

VACUUM TEST TIMETABLE

	Manhole Diameter in Inches		
Depth	**48-Inch**	**60-Inch**	**72-Inch**
4 feet	10 seconds	13 seconds	16 seconds
8 feet	20 seconds	26 seconds	32 seconds
12 feet	30 seconds	39 seconds	48 seconds
16 feet	40 seconds	52 seconds	64 seconds
20 feet	50 seconds	65 seconds	80 seconds
24 feet	60 seconds	78 seconds	96 seconds

VACUUM TEST TIMETABLE

Depth	Manhole Diameter in Inches		
	48-Inch	**60-Inch**	**72-Inch**
*	0.5 seconds	6.5 seconds	8.0 seconds
***** Add "I" times for each additional 2-foot depth. (The values listed above have been extrapolated from ASTM designation C924-85.)			

C. Force Mains

Prior to acceptance of force main construction, force main and service lines shall be subjected to a hydrostatic pressure test of 200 pounds for 4 hours and any leaks or imperfections developing under said pressure shall be remedied by the contractor. No air will be allowed in the line. The force main shall be tested between valves. Insofar as possible, no hydrostatic pressure shall be placed against the opposite side of the valve being tested.

The contractor shall provide all necessary equipment and shall perform all work connected with the tests. Tests shall be made after all connections shown on the plans have been made. The contractor shall perform all tests to ensure that the equipment to be used for the test is adequate and in good operating condition and the air in the line has been released before requesting the City to witness the test.

A water test for all wet wells in accordance with the manhole water test for gravity sewers shall be required.

5.150 Sewer Lift Station Design Standards

The design of any public sewer lift station shall conform to the Department of Ecology's *Criteria of Sewage Works Design* and these *Standards* as applicable. Public lift stations shall conform to the Uniform Plumbing Code and these *Standards* as applicable. The City may require some lift station applications to be customized, depending on the size of service area, introduction flow to the station and the pumping requirements of the station.

Five copies of a Design Report with engineering plans shall be submitted with each lift station (custom designed or packaged), demonstrating its conformance with the *Standards.* The design report and plans shall provide:

A. Overall site drawing(s) of the lift station showing the location of all components including elevations;

B. List(s) of specific materials and components used including quantity, description, manufacturer and area representative;

C. Schematic and line diagrams of the service, motor control center and lift station. Terminology and abbreviations shall be per industry standards. A legend shall be provided on all schematics and line diagram, which shall show applicable telemetry points. A common termination point shall be provided in the lift station to interface between the lift station and the Remote Telemetry Unit (RTU). Telemetry points shall consist of:

- High Wet Well
- 1 Pump Run
- Power Fail
- Intrusion
- Low Wet Well
- 2 Pump Run
- Pump Fail for each pump
- Spare

D. An electrical system designed to meet NEC, State and City standards. A 460/277 three-phase system with 100 amp outlet and cover shall be provided, equipped with an Appleton reverse service receptacle, model ADR1044-RS for connection to an emergency generator in the event of a power failure, or a City-approved equal. The receptacle outlet cover shall be painted red.

E. All pumps shall have rail guides to facilitate removal and replacement.

F. Pump Data:

- Size and type
- Pump curves
- Head capacity
- Velocity
- Manufacturer/distributor

G. Motor Data:

- Size and type
- Horsepower
- Service factor
- Motor insulation
- Cycle length
- Full load amps
- Voltage
- Frame and type of mount
- Manufacturer/distributor

H. Controls

- Timers and relay mounting
- Motor starter size
- Phase monitor
- NEMA type enclosure
- Thermal magnetic circuit breakers
- Alternator
- GFI outlet
- Indicating lights
- Level controls approved by City
- Telemetry failure points
- Elapse time meters
- Component manufacturer/distributor

I. Telemetry

- Alarm system (compatible with City system)

J. Housing

- Size and type
- Ventilation
- Access
- Insulation
- Locking mechanism
- Hold open device
- Safety chain

K. Testing

- Factory test
- Operational test
- Pressure test
- Personnel at test

L. Piping and Valves

- Size and type
- Bypass
- Manufacturer/distributor

M. Spare Parts

- Spare motor
- One complete mechanical seal unit
- Two intrinsically safe relays
- One set of replacement O-rings for all components
- Spare gaskets for all components

N. Miscellaneous: Water hose big service (unmetered) connected to a double check valve assembly mounted to the side of the lift station.

O. A lift station emergency by-pass connection shall be installed.

5.160 Packaged Lift Stations

In addition to provisions of Section 5.150, the following are minimum requirements for packaged lift stations.

A. Three mercury float switches or transducers as approved by the City to control pump down levels in the wet well. Each float shall function as follows: two pumps run; one pumps run and pumps off.

B. One mercury float switch or transducer as approved by the City in the wet well to signal low wet well conditions.

C. One mercury float switch or transducer as approved by the City in the wet well to signal high wet well conditions.

D. Auxiliary Power: Provision for connection required of all lift stations. The developer may also be required to furnish or participate in the cost of an auxiliary generator, at the discretion of the City.

E. Well Sizing:

- Type

- Size
- Storage capacity
- Access
- Access to locking mechanism
- Welding
- Safety entry equipment

F. Maintenance:

- Warranty
- Staff training upon completion
- Tools and equipment required

G. Electrical Service

- Specifications (service size, voltage, motor size, enclosure type, etc.)
- Source of power
- Calculations
- Single line diagram
- Primary distribution equipment
- Service entrance
- Branch circuiting
- Mechanical equipment power requirements
- Control diagrams and schematics
- Schedules of fixtures, panel boards and switch gear
- Shop drawings

H. Corrosion Protection

- Type of materials
- Primer and finish coatings
- Total thickness in mils, dry
- Linings
- Maintenance

I. The control pump down mercury float switches in the wet well must be powered through intrinsically safe devices.

J. Mercury float switches or transducers as approved by the City in the wet well shall be separated from each other by means of a wooden board and spaces to prevent tangling.

K. Wet well ladder rungs shall not extend beyond the specified inlet pipe invert elevation into the wet well.

L. Inlet pipes into the wet well shall be baffled to reduce turbulence in the wet well.

M. Lift station motors and pumps shall be close coupled and mounted vertically.

N. A manual toggle switch to allow selection of lead and lag pump is required.

O. A five-digit hour meter to 1/10 hour increments is required for each pump so that run time can be accounted for.

P. The heater shall be controlled by an adjustable thermostat.

Q. Lift stations shall have a blower capable of a minimum 300 cfm.

R. Pump motors shall have sealed bearings requiring no lubrication.

A complete operation and maintenance manual from the lift station manufacturer shall be supplied. Two copies shall be submitted for the initial review. Upon completion of construction, 5 copies are to be submitted to the City. Specific components and model numbers shall be in the manual.

5.170 Private Grinder Pump Systems

All grinder pump systems shall be privately owned. A private grinder pump system may be installed to serve single-family residential, multi-family residential, and certain commercial and industrial applications where approved by the City. Private grinder pump systems will only be allowed where the City has accessible sewer service that is at an elevation generally higher than the subject property. The purpose for permitting private grinder pump systems and requiring a Grinder Sewer System Agreement is to provide a mechanism that alerts future property owners of the presence of a pressurized sewer system on the property. Although the on-site system is private, the Public Works Department requires specific wet well and pump standards in addition to inspection and testing of the system to reduce the likelihood of inflow and infiltration of groundwater into the City's sanitary sewer system and to insure that the pump head and pressure are

compatible with the existing sewer system. The system must meet *City Standards* for Cross Connection Control (see section 4.160).

If an entire plat is approved for private grinder pump systems, Grinder Sewer System Plat Covenants shall be included on the plat in lieu of the individual Grinder Sewer System Agreement.

A Private Grinder Sewer System is an on-site facility consisting of a wet well for collecting gravity effluent from the building, and a grinder pump situated in the wet well to process the effluent into a slurry and convey it into the City sewer system.

Operation and maintenance of the entire system, including, but not limited to, the wet well, pump, controls and piping, from the structure to the City sewer main is the responsibility of the property owner. The property owner shall maintain access to the wet well to facilitate maintenance of the system. The wet well lid should not be covered or buried although the owner may place a birdbath, potted plant or other yard decoration on the lid as long as it can be readily removed for repair or maintenance.

Private grinder pump systems located on commercially zoned properties that have kitchen or cooking facilities such as churches, community gathering places, restaurants, schools, etc., shall require installation of a grease trap per the Uniform Plumbing Code (UPC). The grease trap shall be installed on the gravity building sewer between the building and the wet well. Grease traps shall be maintained by the customer to the satisfaction of the City and DOH requirements.

Commercial private grinder pump systems and wet wells installed for the purpose of pumping industrial cleaning effluent, truck wash bays or car washes shall require the installation of an oil/water separator prior to the wet well.

Excessive use of a garbage disposal may clog the pump and piping assembly. The City encourages composting food materials instead of using a garbage disposal with grinder systems.

Only sanitary wastewater shall be discharged into the wet well. Roof drains and other storm water sources shall be strictly prohibited.

The property owner shall be responsible for curtailing water usage in the event of a high water alarm or a power outage. In the event of an extended power outage, the property owner may have to have the wet well pumped to avoid a sewage backup on the property or into the structure.

A. Design Standards

The design of any sewer shall meet all applicable standards and specifications as specified herein and as outlined in Section 5.020. Engineered plans are not required for private, on-site systems, however, a Grinder Sewer System Application complete with a sketch and submittals for the pumping system are required. In addition, either a Grinder Sewer System Agreement or Plat Covenants is required. If the property is located outside the City limits and within the City's Urban Growth Management Area boundary, a Special Power of Attorney for Annexation is required as a condition of service.

B. Building Sewer and Service Lateral

The gravity building sewer pipe between the building and the wet well shall be designed and installed in accordance with the Uniform Plumbing Code and Section 5.040. A cleanout shall be installed on the gravity building sewer, located between the structure and the tank, raised to grade and installed per the plumbing code. A backwater valve per Section 5.040 is required on the gravity line downstream of the cleanout and prior to the wet well.

The pressure service line from the pump to the City main shall be schedule 80 PVC water pipe, solvent weld joint located at 90 degrees to the mainline when possible. Solvent cements and primer for joining PVC pipe and fittings shall comply with ASTM D 2564 and shall be used as recommended by the pipe and fitting manufacturers. Solvent weld fittings for 1 and 2-inch pipe shall be socket type Schedule 80 and shall comply with ASTM D 1784 and ASTM D 2466. Pressure sewer services shall have a minimum 24-inches cover to top of pipe.

All pressure pipes shall be installed with continuous tracer tape installed 12 to 18-inches under the proposed finished grade. The marker tape shall be plastic, non-biodegradable, metal core or backing that can be detected by a standard metal detector. Tape shall be Terra Tape "D" or approved equal.

C. Pressure Lateral Valve and Valve Boxes

A ball valve shall be required at the end of the service stub at the property line. Ball valves at the property line shall be 1-1/4 or 2-inch Philmac FIPT *x* FIPT ball valves or approved equal. Valves shall be left in the "off" position and have a threaded plug installed in the end until the lot is inspected and approved for connection.

A check valve is required at the end of the service stub at the property line and shall be installed horizontally in a valve box along with the ball valve mentioned above. Check valves shall be a tee or wye pattern swing check rated for a minimum working pressure of 150 psi. Check valves shall be King Brothers, KSC or approved equal.

All valves shall be designed for use with corrosive fluids.

The valve box lid shall be marked "Sewer" so they can quickly be distinguished from valves in the water system. Valve boxes located in traffic areas shall be rated for traffic bearing loads.

D. Wet Well

The wet well tank shall be high density polyethylene (HDPE), fiberglass, or as approved by the City. Both shall be designed specifically to function as a sewer wet well for use in corrosive environments and shall be sized for the pump and the specific contributory flows.

All tanks shall be furnished with one EPDM grommet fitting to accept a 4-1/2-inch outside diameter schedule 40 sewer pipe.

The access-ways shall be an integral extension of the wet well and include a lockable cover assembly. Access-way design and construction shall facilitate field adjustment rings in increments of 3-inches without the use of any adhesives or sealants requiring cure time before installation can be completed.

All wet wells shall have all the necessary penetrations molded in and factory sealed. To ensure a leak-free installation, no field penetrations shall be acceptable.

All discharge piping shall be constructed of 304 series stainless steel and terminate outside the access-way bulkhead with a stainless steel, 1-1/4-inch female NPT fitting. The discharge

piping shall include a stainless steel ball valve rated for 200 psi.

The access way shall include a single NEMA 6P electrical quick disconnect for all power and control functions, factory installed with access way penetrations warranted by the manufacturer to be watertight.

The access-way shall also include a 2-inch PVC vent to prevent sewerage gases from accumulating in the tank.

HDPE wells shall have a melt index of 2.0 grams/10 minutes or lower to assure high environmental stress cracking resistance. Corrugated sections are to be made of a double wall construction with the internal wall being generally smooth to promote scouring. Any incidental sections of a single wall portion of the double wall construction area are to be a minimum .250-inch thick. The wet well shall have a nominal thickness of 1/2-inch. All seams created during tank construction are to be thermally welded and factory tested for leak tightness. Tank wall and bottom must withstand the pressure exerted by saturated soil loading at the maximum designed burial depth. All wet wells must function normally when exposed to 150 percent of the maximum external soil and hydrostatic pressure.

Fiberglass wet wells shall be custom molded fiberglass reinforced polyester resin. The tank wall and bottom must withstand the pressure exerted by saturated soil loading at maximum burial depth. All station components must function normally when exposed to 150 percent maximum external soil and hydrostatic pressure.

All wet wells shall have level transducers with float backup.

E. Anti-Flotation Device

Groundwater shall be rerouted or pumped to provide a firm, dry subgrade for the wet well and to guard against flotation or other damage resulting from general water or flooding.

A concrete anti-flotation collar, sized per the manufacturer's instructions, shall be required and shall be pre-cast to the grinder pump station or poured in place. Each grinder pump station with its pre-cast anti-flotation collar shall have a minimum of 3 lifting eyes for loading and unloading purposes.

If the concrete is poured in place, the unit shall be leveled, and filled with water to the bottom of the inlet to help prevent the unit from shifting while the concrete is being poured. The concrete must be manually vibrated to ensure there are no voids. If it is necessary to pour the concrete to a level higher than the inlet piping, an 8-inch sleeve is required over the inlet prior to the concrete being poured.

F. Backfill for Wet Well

Proper backfill is critical to the long-term reliability of the wet well. The preferred backfill shall be controlled density fill (CDF) meeting WSDOT/APWA *Standard Specification* 2-09.3(1)E. CDF is the desired method as it assures proper compaction, especially where tight clearances make it difficult to assure proper compaction with dry materials. CDF shall not be dropped more than 4-feet from the discharge to the bottom of the hole to avoid separation of the constituent materials.

A minimum 6-inches of naturally rounded aggregate, clean and free flowing, with particle size of not less than 1/8-inch or more than 3/4-inch shall be used as bedding material under the wet well.

Native backfill may be used if it meets Class I or Class II backfill material as defined in ASTM 2321. Class 1A and Class IB are recommended where frost heave is a concern. Class 1B shall be used where the native soil is sand or if a high, fluctuating water table is expected.

If native soil consists of clean, compactable soil, with less than 12 percent fines, free of rocks, roots and organic material, it may be an acceptable backfill. It is recommended that a geotechnical evaluation of the material be obtained before specifying backfill. Non-compactable clays and silts are not suitable backfill for this or any underground structure such as inlet or discharge lines.

Soil must be compacted in lifts not to exceed six inches to reach a minimum final density of 85 percent. The finish grade line shall be between 1 and 4 inches below the bottom of the lid and final grade shall slope away from the grinder pump station.

G. Grinder Pump and Assembly

The grinder pump shall be a custom designed, integral, vertical rotor, motor driven, solids handling pump of the progressing cavity type with a single mechanical seal. The rotor shall be through-hardened, highly polished, precipitation hardened stainless steel. Stainless steel plated rotors are not allowed. The stator shall be of an ethylene propylene synthetic elastomer. The material shall be suitable for use in wastewater environments. The pump shall be capable of delivering 15 GPM against a rated total dynamic head of 0 feet (0 psig) and 9 GPM against a rated total dynamic head of 138 feet (60 psig). The pump must also be capable of operating at negative total dynamic head without overloading the motor. Under no conditions shall in-line piping or valving be allowed to create a false apparent head.

The grinder shall be placed immediately below the pumping elements and shall be direct-driven by a single, one-piece motor shaft. The grinder impeller assembly shall be securely fastened to the pump motor shaft by means of a threaded connection attaching the grinder impeller to the motor shaft. Attachment by means of pins or keys will not be acceptable. The grinder will be of the rotating type with a stationary hardened and ground stainless steel shredding ring spaced in close annular alignment with the driven impeller assembly, which shall carry two hardened type 400 series stainless steel cutter bars. The grinder shall be positioned in such a way that solids are fed in an upward flow direction. The maximum flow rate through the cutting mechanism must not exceed 4-feet per second. The inlet shroud shall have a diameter of no less than 5-inches. The impeller mechanism must rotate at a nominal speed of no greater than 1800 rpm's. The grinder shall be capable of reducing all components in normal domestic sewage, including a reasonable amount of "foreign objects" to finely divided particles that will pass freely through the passages of the pump.

At a maximum, the motor shall be a 1 hp, 1725 rpm, 240 Volt 60 Hertz, 1 phase, capacitor start, ball bearing, air-cooled induction type with a low starting current not to exceed 30 amperes. Inherent protection against running overloads or locked rotor conditions for the pump motor shall be provided by the use of an automatic-reset, integral thermal overload protector incorporated into the motor.

The grinder pump core unit shall have two lifting hooks complete with nylon lift-out harness connected to its top housing to facilitate easy core removal when necessary. All

mechanical and electrical connections must provide easy disconnect capability for core unit removal and installation. A push-to-run feature will be provided for field troubleshooting. All motor control components shall be mounted on a readily replaceable bracket for ease of field service.

The pump, grinder, motor and control assembly shall be E/One complete system as manufactured by Environment One Corporation or City approved equal. City approved equals shall meet the requirements of a high head, low-pressure system as specified herein.

H. Control Panel

The electrical controls shall be furnished and prewired to operate the pump and motor assembly. A built-in alarm system shall be required on every system. All alarm systems shall be UL approved for use in wastewater systems. The alarm paned shall be located in a conspicuous location as per the National Electrical Code (NEC) and local codes.

The power and alarm circuits must be on separate, 15 amp; single pole circuit breakers. The alarm panel shall include both audio and visual alarm, push-to-run switches and high level (redundant) pump starting controls. The alarm sequence is to be as follows:

1. When liquid level in the sewage wet well rises above the alarm level, visual and audio alarms will be activated. The contacts on the alarm pressure switch will close. The redundant pump starting system will be energized.

2. The audio alarm may be silenced by means of the externally mounted, push-to-silence button.

3. Visual alarm remains illuminated until the sewage level in the wet well drops below the "off" setting of the alarm pressure switch.

4. The visual alarm shall be mounted to the control panel in such a manner as to maintain NEMA 4X rating. For duplex units, in addition to the above, two high-level indicator lights shall be mounted behind the access door.

I. Backflow Prevention Device

A backflow prevention device, in accordance with the provisions of WAC 246-290-490, is necessary to protect the domestic water system from contamination. The owner shall install a backflow prevention device into the water system on the property. The backflow prevention device shall be selected, installed and maintained to satisfy any governmental regulation and requirements and shall be in accordance with Department of Ecology standards.

The owner, at the owner's sole expense, shall have the backflow prevention device inspected annually by a contractor certified by the State of Washington for inspection of these devices. A report shall be provided to the City of Shelton immediately upon receipt by the owner. In the event that the City does not have a current annual inspection report on file, it shall have the right, but not the responsibility, to obtain one from a contractor of its choice. All costs or expenses, and a 20 percent administrative fee will be billed to the owner.

5.180 Interim Sewage Facilities – Urban Growth Area

In those areas located within the City of Shelton's Urban Growth Area where annexation or connection to a permanent public sewerage system is not feasible, an interim community on-site sewer system may be constructed to serve residential and light commercial locations, when approved by the City prior to design and construction. In certain cases, a value engineering study or approved equivalent may be required by the City prior to granting approval for an interim sewerage facility.

Maintenance and pumping of Interim Sewerage Facilities shall be the responsibility of the property owner(s).

5.190 Design Standards for Interim Community On-Site Sewer Systems

The design of any interim on-site sewer system shall conform to the criteria as set forth in the City of Shelton Comprehensive Plan and these *Standards.*

All collection lines, dry lines, pumping stations and all other sewer appurtenances and sizing shall be installed at the time of initial construction. The layout of the dry line main extension shall provide for the future continuation of the existing public sewer system as determined by the City. In

addition, the dry line main extension shall be installed within a plat or property prior to new roadway construction and extended to and through the side of the affected property fronting the main to the existing roadway and sewer main.

The interim community on-site sewer system shall be designed in such a way that each residence will discharge into their own on-site septic tank, which will then discharge by gravity into a community wet well. The community wet well will pump the effluent into a pressurized community drain field. Upon approval of the City of Shelton and Mason County, a community system may be designed utilizing an appropriately sized community solids tank and subsequent settling tanks before discharge into a community wet well. Tank design standards shall meet the applicable standards as set forth below for septic tanks.

Plan for the proposed on-site sewer system shall be prepared by a licensed professional engineer registered in the State of Washington and shall be submitted to the City for review and approval. The City will coordinate the review by the State and County Health Departments, whose approval is also required.

A. Pumping Chamber

The pumping chamber leading to the pressurized drain field shall be designed and constructed as set forth in Sections 5.150 and 5.160 for Lift Stations. The dry line installed for future connection to the public sewer system shall terminate in the pumping chamber. A valve shall be installed outside the wet well connected to the dry line for future use.

B. Grinder Pump

All private pumps on service lines shall be grinder pumps. Grinder pumps must meet all Uniform Plumbing Code requirements and shall connect to a gravity sewer lateral at the property or easement line.

C. Septic Tank

Each residence shall have its own septic tank. Only sanitary wastewater shall be discharged into the tank. Roof drains and other stormwater sources shall be strictly excluded. The tank shall be watertight, and shall be equipped with twin risers as specified, with the exception

that the 24-inch solids riser may be covered a maximum of 12 inches. It is the homeowner's responsibility to locate and uncover the solids riser when pumping of the septic tank is required. The 30-inch pump chamber riser may not be covered. It is the property owner's responsibility to pump the tanks.

The effluent shall be discharged by gravity to the community pumping chamber. In the event that topography prohibits a specific lot from achieving a gravity discharge, an approved STEP system shall be installed.

D. Pipe

1. Pressurized Drain Field

All pipe used in construction of the pressurized drain field shall be as specified in these *Standards* and shall be specified on the approved plans.

2. Gravity Lines

All pipe installed from the septic tanks to the pumping chamber, and all dry lines installed for future extension shall meet the criteria set forth in Section 5.020 of the *Standards* for gravity sewer lines.

3. Side Sewer or Lateral

The gravity side sewer or lateral between the building and the tank shall be designed and installed in accordance with the Uniform Plumbing Code. Maintenance of this line is the property owner's responsibility.

4. Connection

When the dry line is activated by the City, each property owner shall be required to connect to the public sewer system and decommission the septic tank on their property per the applicable *Standards*. This requirement shall be placed on the property title prior to the initial sale of the property.

5.200 Sanitary Sewer Main Construction (General Notes)

In addition to the General Construction Notes in Chapter One, the Engineer shall include the following notes on any plans dealing with the construction of alterations, extensions or connections to the sanitary sewer system.

A. The City shall be notified at least 48 hours in advance of a tap connection to an existing sewer main. The City's inspector shall be present at the time of the tap.

B. All sewer mains shall be field staked for grades and alignment by a registered land surveyor or licensed engineer.

C. Pre-cast manholes shall meet the requirements of ASTM C478. Manholes shall be Type 1-48" manhole unless otherwise specified on the plans. Joints shall be rubber gasket conforming to ASTM C443 and shall be grouted from the inside. Lift holes shall be grouted from the outside and inside of the manhole with an approved grout, installed per the manufacturer's recommendations.

D. Side sewer services shall be PVC, ASTM D 3034 SDR 35 with flexible gasket joints. Side sewer connections shall be made by a tap to an existing main or a wye branch from a new main connected above the spring-line of the pipe. All services shall include Tracer Wire.

E. All lines shall be high velocity cleaned, vacuumed and pressure tested in conformance with these *Standards.* Hydrant flushing of lines is not an acceptable cleaning method. Testing of the sanitary sewer main shall include TVing of the main by the contractor. Immediately prior to TVing enough water shall be run down the line so it comes out the lower manhole. The video tape shall show the distance from the manhole that the camera enters to all connections and to the next manhole. Camera work must be completed utilizing the latest version of Cues' GraniteNet Software, or as approved by the City. A copy of the video tape shall be submitted to the City. Acceptance of the line will be made after the tape has been reviewed and approved by the City.

F. The contractor shall be responsible for cleanup of any debris in new or existing manholes and mains associated with the project after the new lines are cleaned. A vacuum test of all manholes in accordance with these *Standards* is also required. Testing shall take place after all underground

utilities are installed and compaction of the roadway subgrade is completed.

G. All discharges from the sewerage collection system and spills of any type that may affect human health or the environment must be immediately reported by the contractor to the City.

H. Pea gravel shall be allowed for pipe bedding up to the spring line of pipe.

LIFT STATION INSPECTION CHECKLIST

Inspectors: _____ Date: _____
_____
_____

Name of Lift Station: _____
Location:_____
Address: _____
Assigned Lift Station Number: _____

AMP reading recorded at startup: #1 _____ #2 _____ #3 _____
Comments:_____
_____

Motor Data: HP _____ RPM _____ Phase _____ Cycle _____ Volt _____
Comments:_____
_____

Pump Design in gallons per minute: #1 _____ #2 _____ #3 _____
1, #2 and #3 _____ TDH _____
Comments:_____
_____

Pump performance during startup in gallons per minute: #1 _____#2 _____
#3 _____ #1, #2 and 3 _____ TDH _____
Comments:
_____
_____

Hour Meter Readings: #1 _____ #2 _____ #3 _____
Comments:_____
_____

Pump #1 Running Amps: L1 _____ L2 _____ L3 _____
Pump #2 Running Amps: L1 _____ L2 _____ L3 _____
Pump #3 Running Amps: L1 _____ L2 _____ L3 _____

Note: Check that motors are not exceeding their nameplate amperage multiplied by the motor service factor, (i.e., with FLA = 10 and SF = 1.15, the amperage recorded should not exceed 11.5 amps). The motor will operate satisfactorily under the following conditions of voltage and frequency variation, but not necessarily in accordance with the standards established for operation under rated conditions.

- The voltage variation may not exceed 10% above or below rating specified on the motor nameplate.
- The frequency variation may not exceed 5% above or below motor nameplate.

- The sum of the voltage and frequency variations may not exceed 10% above or below motor nameplate rating, provided the frequency variation does not exceed 5%.

Motor Nameplate Amps: #1 _____ #2 _____ #3 _____

Motor Nameplate SF Amps: #1 _____ #2 _____ #3 _____

Voltage Taken @ Terminal Block: L1 _____ L2 _____ L3 _____

	OPERATION OKAY Yes	No
Unusual Noise #1 Pump or Motor:	_____	_____
Comments: _____		
Unusual Noise #2 Pump or Motor:	_____	_____
Comments: _____		
Unusual Noise #3 Pump or Motor:	_____	_____
Comments: _____		
Sealed Bearings:	_____	_____
Comments: _____		
Pump Alternator Operation:	_____	_____
Comments: _____		
Control Panel components:		
Pump Run Lights:	_____	_____
Hour Meters:	_____	_____
H.O.A.:	_____	_____
Limit Switches:	_____	_____
Comments: _____		

	OPERATION OKAY Yes	No
Alarm Functions:		
Power Fail:	_____	_____
High Wet Well:	_____	_____
Low Wet Well:	_____	_____

	OPERATION OKAY Yes	No
Pump #1 Fail:	_____	_____
Pump #2 Fail:	_____	_____
Dry Well Flood:	_____	_____
Smoke and Fire:	_____	_____
Intrusion:	_____	_____
Pump #1 Run:	_____	_____
Pump #2 Run:	_____	_____

Comments: _____
_____

Actual Wet Well Pump down and fill levels:

High Water: _____
Fill Level: _____
Pump Down: _____
Low Level: _____

Wet Well blower Operation:	_____	_____
Wet Well Ladder:	_____	_____
Spare Parts Furnished:	_____	_____
O & M Manuals (5 copies):	_____	_____

Comments: _____

Telemetry Function at Maintenance Shop:

Power Fail:	_____	_____
High Wet Well:	_____	_____
Low Wet Well:	_____	_____
Pump #1 Fail:	_____	_____
Pump #2 Fail:	_____	_____
Dry Well Flood:	_____	_____
Smoke and Fire:	_____	_____
Intrusion:	_____	_____
Pump #1 Run:	_____	_____
Pump #2 Run:	_____	_____

Comments: _____
_____
_____

	OPERATION OKAY Yes	No
Locks:		
Wet Well:	_____	_____
Electrical:	_____	_____
Fenced Area:	_____	_____
Heater Operation:	_____	_____
Comments: _____		
Disconnect Operation:	_____	_____
Comments: _____		
Auxiliary Generator:		
Plug-in:	_____	_____
Plug-in face plate (red if 480\277/green if 208\120):	_____	_____
Transfer Switch:	_____	_____
Operation:	_____	_____
Comments: _____		
Isolation Valve Operation:		
Dry Well:	_____	_____
Outside:	_____	_____
Comments: _____		
Check Valve Operation:	_____	_____
Comments: _____		
Corrosion Resistant (epoxy coating):		
Dry Well:	_____	_____
Wet Well:	_____	_____
Force Main Outfall:	_____	_____
Down Stream Manhole:	_____	_____
Comments: _____		
Emergency Bypass:		
Components:	_____	_____
Operation:	_____	_____
Comments: _____		
All nuts and Bolts in Place:		
Dry Well:	_____	_____
Wet Well:	_____	_____
Comments: _____		
All Mechanical Components Installed:		
Dry Well:	_____	_____
Wet Well:	_____	_____
Comments: _____		

	OPERATION OKAY Yes	No
Wet Well Piping for Proper Size:	_____	_____
Heavy Ribbed Neoprene Mat Dry Well Floor:	_____	_____
Control Panel Enclosures with Appropriate UL Labels:	_____	_____
Comments: _____		
Wiring Schematics for Correlation:	_____	_____
Comments: _____		
_____		
_____		
Wire Gauge (usually 18):	_____	_____
Comments: _____		
_____		
Electrical Conduit for Defects:	_____	_____
Comments: _____		
_____		
_____		
Terminal Block:	_____	_____
Comments: _____		
_____		
_____		
Proper Sized Circuit Breakers & Fuses:	_____	_____
Comments: _____		
_____		
_____		
Electrical Control Devices Sized for Motor Horse Power:	_____	_____
Comments: _____		
_____		
_____		
Overload Devices, Trip Test & Manual Reset:	_____	_____
Comments: _____		
_____		
_____		
All Wires Connected:	_____	_____
Comments: _____		
_____		
_____		
Air Release Valve on Discharge:	_____	_____
Comments: _____		

	OPERATION OKAY Yes	No
Warranty: Comments: _____	_____	_____
Debris in Wet Well: Comments: _____ _____ _____	_____	_____
Infiltration Points: Comments: _____ _____ _____	_____	_____
Cleanliness: Comments: _____ _____ _____	_____	_____
Proper Pump Rotation (shaft moves in direction of arrows): Comments: _____	_____	_____
PSI Gauges Prime Chamber: Comments: _____	_____	_____

	OPERATION OKAY Yes	No
Operation of Latch: Comments: _____	_____	_____
Operation of Entrance Cover: Comments: _____	_____	_____
Operation of Cover Safety Latch: Comments: _____	_____	_____
Hose bib and DCVA: Comments: _____	_____	_____

LIST OF DRAWINGS
CHAPTER 5 SEWER

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Alternate Polypropylene Plastic Step	SS-04A
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Manhole & Lamphole Surface Restoration within Right-of-Way	SS-12
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Sewer Main Lamphole Detail	SS-13A
ROMAC Style “CB” Sewer Saddle	SS-14
Sewer Line Terminology	SS-15
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THIS PAGE INTENTIONALLY LEFT BLANK	SS-17

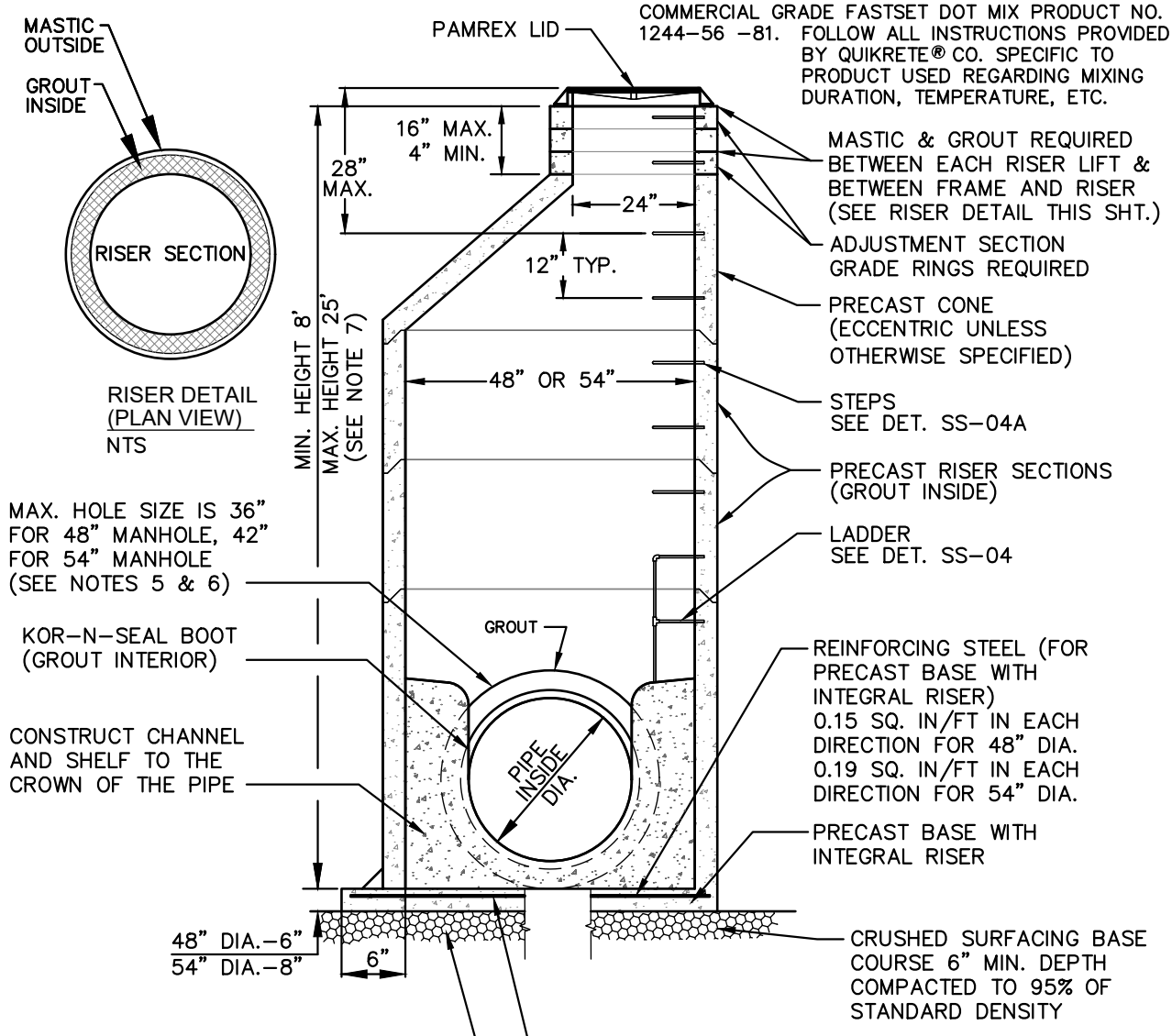
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SANITARY SEWER DETAILS

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SS-02	TYPE 2 MANHOLE (72" & 96")
SS-03	TYPE 3 MANHOLE
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SS-04A	ALTERNATE POLYPROPYLENE PLASTIC STEP
SS-05	4" SINGLE SANITARY SEWER LATERAL SERVICE
SS-06	6" SINGLE SANITARY SEWER LATERAL SERVICE
SS-07	TYPICAL CLEANOUT & BACKWATER VALVE
SS-08	OUTSIDE DROP MANHOLE CONNECTION
SS-09	INSIDE DROP MANHOLE CONNECTION
SS-10	MANHOLE RING AND COVER
SS-11	EAST JORDAN MANHOLE FRAME & COVER
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SS-14	ROMAC STYLE "CB" SEWER SADDLE (TYPICAL SEWER CONNECTION TO EXISTING SEWER MAIN)
SS-15	SEWER LINE TERMINOLOGY
SS-16	THIS PAGE INTENTIONALLY LEFT BLANK
SS-17	THIS PAGE INTENTIONALLY LEFT BLANK

NOTES:

1. MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M–199 (ASTM C 478) UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN STANDARD SPECIFICATIONS.
2. ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS 4000. NON–REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
3. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
4. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PS AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS MANHOLE WALL THICKNESS. MAXIMUM HOLE SIZE IS 36" FOR 48" MANHOLE, 42" FOR 54" MANHOLE. MINIMUM DISTANCE BETWEEN HOLES IS 8" (MEASURED ON THE INSIDE OF THE MANHOLE).
6. MANHOLE SIZE DEPENDS ON SIZES, LOCATION AND NUMBERS OF HOLES FOR PIPES. MANHOLE DESIGN AND SIZE SHALL BE APPROVED AND WARRANTED BY THE MANHOLE SUPPLIER.
7. FOR HEIGHTS OVER 25' MANHOLE BASE SLAB DESIGN SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.
8. GROUT ALL PICK HOLES INSIDE & OUTSIDE.
9. FOR PATCHING VOIDS AROUND PIPES, PICKING EYE HOLES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON–SHRINK PRECISION GROUT–PRODUCT NO. 1585–00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244–56 –81. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE® CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.



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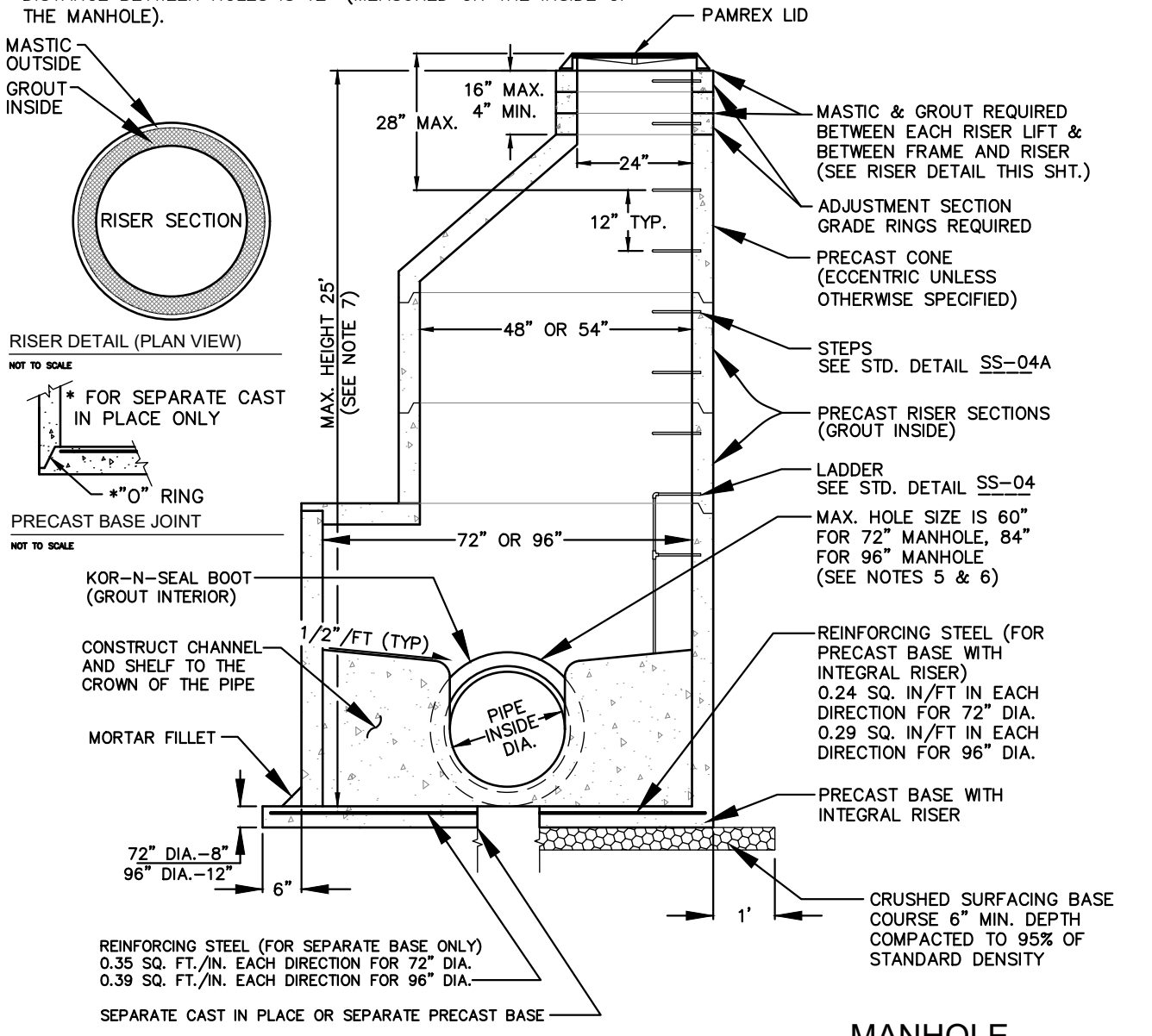
MAHOLE TYPE 1 48" & 54"

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SS-01

NOTES:

1. MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M–199 (ASTM C 478) UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN STANDARD SPECIFICATIONS.
2. ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS 4000. NON–REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
3. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
4. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PS AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS MANHOLE WALL THICKNESS. MAXIMUM HOLE SIZE IS 60" FOR 72" MANHOLE, 84" FOR 96" MANHOLE. MINIMUM DISTANCE BETWEEN HOLES IS 12" (MEASURED ON THE INSIDE OF THE MANHOLE).
6. MANHOLE SIZE DEPENDS ON SIZES, LOCATION AND NUMBERS OF HOLES FOR PIPES. MANHOLE DESIGN AND SIZE SHALL BE APPROVED AND WARRANTED BY THE MANHOLE SUPPLIER.
7. FOR HEIGHTS OVER 25' MANHOLE BASE SLAB DESIGN SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.
8. GROUT ALL PICK HOLES INSIDE AND OUTSIDE.
9. FOR PATCHING VOIDS AROUND PIPES, PICKING EYE HOLES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON–SHRINK PRECISION GROUT–PRODUCT NO. 1585–00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244–56 –81.
10. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
11. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE® CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

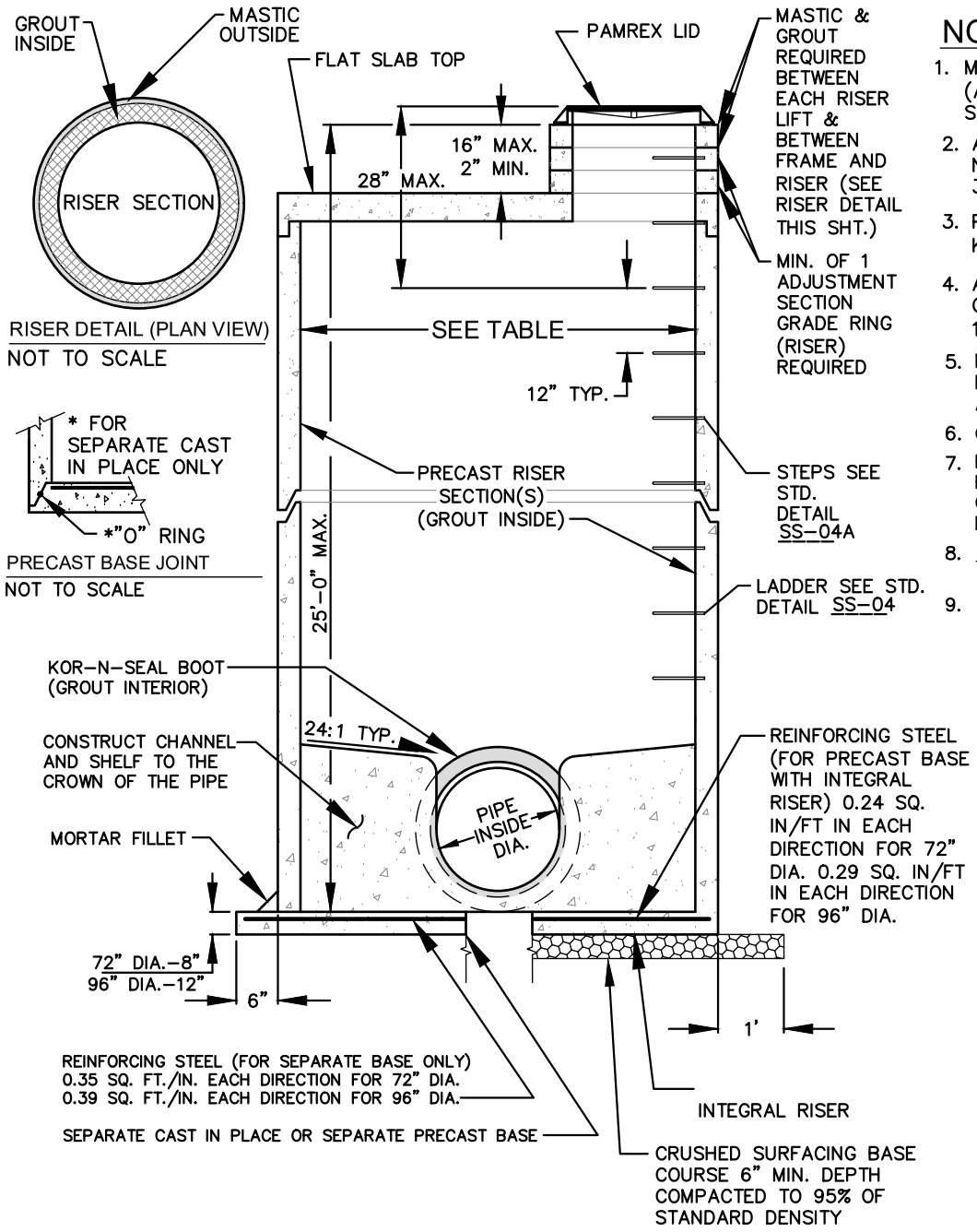


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MANHOLE TYPE 2 72" & 96"

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PUBLIC WORKS DIRECTOR

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1/2019	GS	NTS	SS-02



NOTES:

1. MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M-199 (ASTM C 478) UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN STANDARD SPECIFICATIONS.
2. ALL REINFORCED CAST IN PLACE CONCRETE SHALL BE CLASS 4000. NON-REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
3. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
4. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PS AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
5. MANHOLE SIZE DEPENDS ON SIZES, LOCATION AND NUMBERS OF HOLES FOR PIPES. MANHOLE DESIGN AND SIZE SHALL BE APPROVED AND WARRANTED BY THE MANHOLE SUPPLIER.
6. GROUT ALL PICK HOLES INSIDE AND OUTSIDE.
7. FOR PATCHING VOIDS AROUND PIPES, PICKING EYE HOLES, BETWEEN SECTIONS & RISERS, AND FRAMES, USE: QUIKRETE® NON-SHRINK PRECISION GROUT-PRODUCT NO. 1585-00 OR QUIKCRETE® COMMERCIAL GRADE FASTSET DOT MIX PRODUCT NO. 1244-56 -81.
8. MORTAR MUST BE MIXED BY A MECHANICAL DEVICE, SUCH AS DRILL & PADDLE MIXER.
9. FOLLOW ALL INSTRUCTIONS PROVIDED BY QUIKRETE ®CO. SPECIFIC TO PRODUCT USED REGARDING MIXING DURATION, TEMPERATURE, ETC.

MANHOLE DIMENSION TABLE

DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	42"	12"
144"	12"	12"	108"	12"

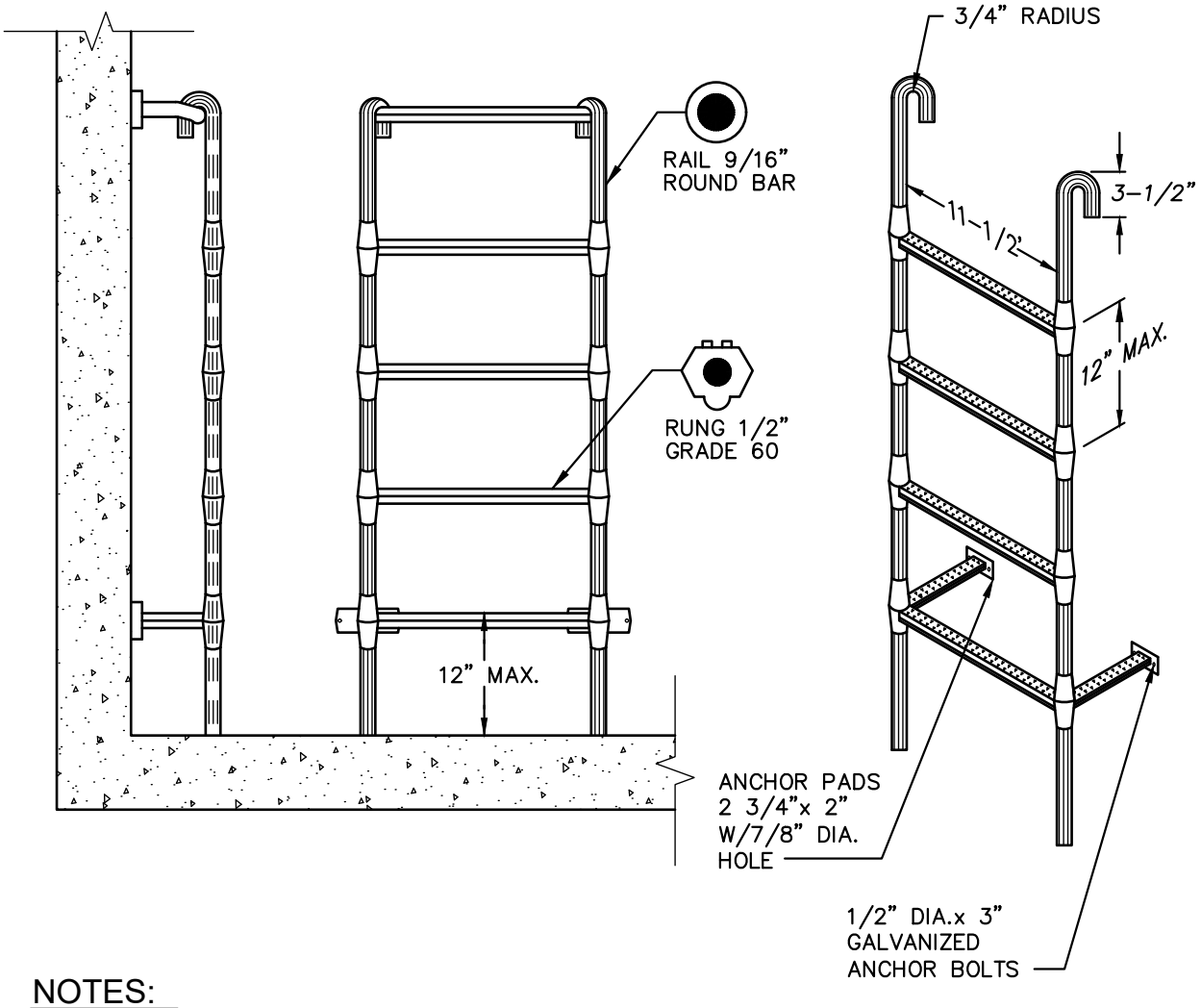
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MANHOLE TYPE 3

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NOTES:

1. STEPS SHALL BE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC CONFORMING TO:
   - (A) ASTM C 478 AND AASHTO M-199, MINIMUM HORIZONTAL LOAD SHALL BE 1500 LBS.
   - (B) ASTM A615 GRADE 60 (DEFORMED REINFORCING STEEL BAR).
   - (C) POLYPROPYLENE CONFORMS TO D-4101.
2. MANHOLE STEPS SHALL HAVE MOLDED SAFETY HAND GRIP. RED REFLECTORS ARE PREFERRED.
3. ALL FABRICATION DIMENSIONS INDICATED ARE MINIMUM.
4. THE ENTIRE POLYPROPYLENE PLASTIC MATERIAL SURROUNDING THE REINFORCING STEEL BAR SHALL BE CAST MONOLITHICALLY. MINIMUM COVER SHALL BE 3/16-INCH.
5. STEPS SHALL BE SPACED AT A MAXIMUM OF 12-INCHES.
6. STEPS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED MANUFACTURERS RECOMMENDED PROCEDURE.

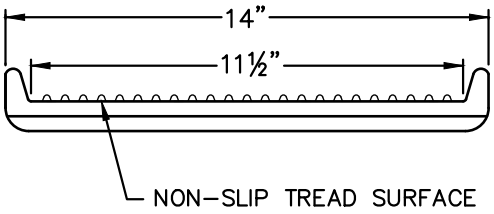
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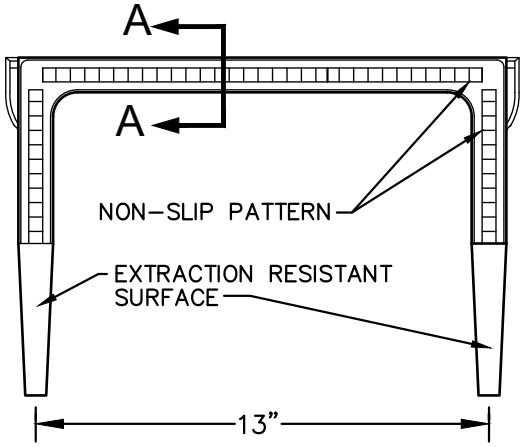
POLYPROLENE LADDER

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

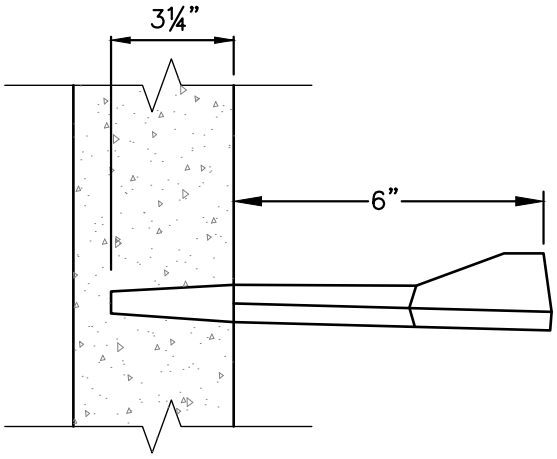
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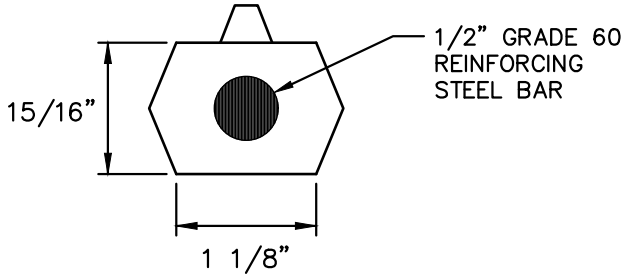
ELEVATION



PLAN



SIDE ELEVATION



SECTION A-A

NOTES:

1. STEPS SHALL BE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC CONFORMING TO:

   (A) ASTM D 478 AND AASHTO M–199, EXCEPT THAT THE MINIMUM HORIZONTAL PULLOUT LOAD SHALL BE 1500 LBS.

   (B) ASTM A 615 GRADE 60 (DEFORMED REINFORCING STEEL BAR).

2. ONLY STEPS APPROVED BY THE ENGINEER SHALL BE USED..
3. ALL FABRICATION DIMENSIONS INDICATED ARE MINIMUM.
4. THE MINIMUM TOTAL CROSS–SECTIONAL AREA OF THE EXPOSED PORTION OF THE STEEL, INCLUDING THE 1/2–INCH DEFORMED REINFORCING STEEL BAR, AND EXCLUDING THE NON–SLIP TREAD SURFACE, SHALL BE ONE SQUARE INCH.
5. THE ENTIRE POLYPROPYLENE PLASTIC MATERIAL SURROUNDING THE REINFORCING STEEL BAR SHALL BE CAST MONOLITHICALLY. MINIMUM COVER SHALL BE 3/16–INCH.
6. THE FOLLOWING DIMENSIONS SHALL APPLY UNLESS OTHERWISE NOTED ON THE DRAWINGS OR STANDARD PLANS FOR SPECIFIC STRUCTURES:
   D = 6" ±1/4", E = 1/4" ±1/4"
7. STEP SHALL BE SPACED AT A MAXIMUM OF 12–INCHES.
8. STEPS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED MANUFACTURER'S RECOMMENDED PROCEDURE.

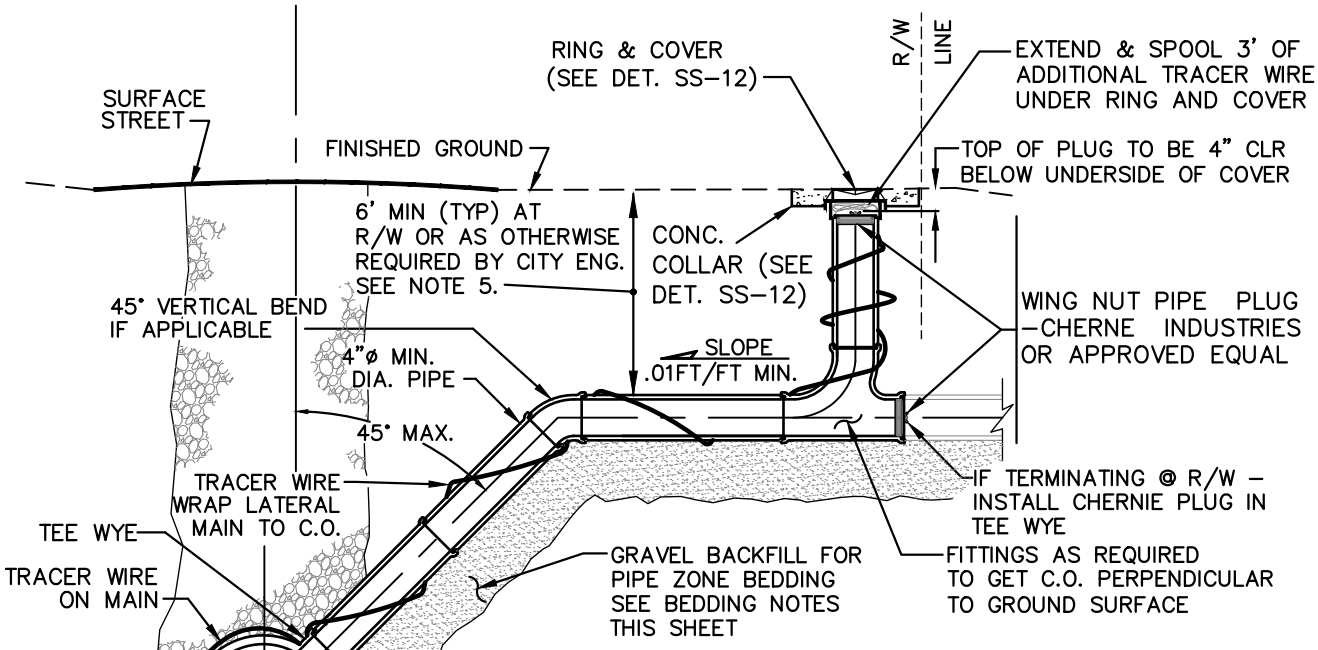
CITY of SHELTON WASHINGTON

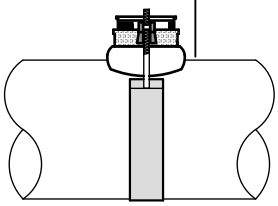
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ALTERNATE POLYPROPYLENE PLASTIC STEP

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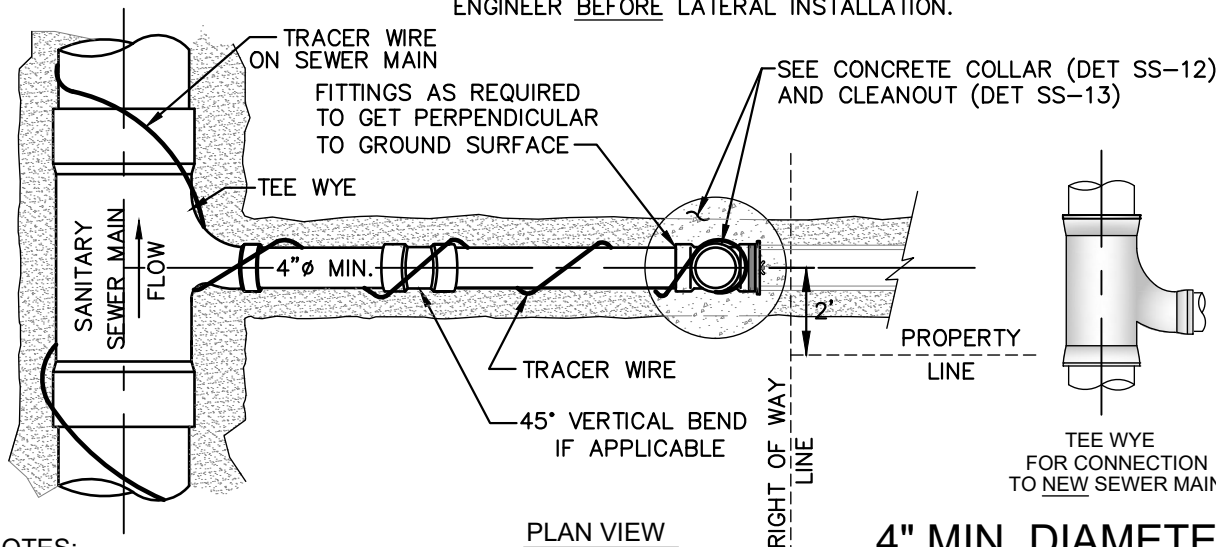




TYPE "CB" SEWER SADDLE FOR CONNECTION TO EXISTING SEWER MAIN
(SEE C.O. SHELTON STD. DETAIL SS-14)

BEDDING NOTES:

1. GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL CONFORM WITH WSDOT STD. SPEC. 9-03.12(3). PEA GRAVEL ALLOWED TO 50% OF THE O.D. (SPRING LINE)
2. SEE C.O. SHELTON STD. DETAILS T-18 AND T-19 FOR TRENCH RESTORATION ABOVE THE PIPE ZONE BEDDING
3. BEDDING AND GRADE SHALL BE ESTABLISHED PRIOR TO PIPE BEING PLACED IN TRENCH.
4. IF THE LATERALS STOPS AT THE EDGE OF RIGHT OF WAY, TERMINATE THE LINE WITH A WINGNUT PIPE PLUG/CHERNE INDUSTRIES OR APPROVED EQUAL IN TEE WYE.
5. IF SEWER MAIN ELEVATION DOES NOT ALLOW 6' MIN. DEPTH OF LATERAL AT R/W LINE, INSTALL LATERAL AS DEEP AS POSSIBLE WHILE MAINTAINING MIN. SLOPE. CONFIRM ELEVS. W/ PROJECT ENGINEER BEFORE LATERAL INSTALLATION.



PLAN VIEW
NTS

TEE WYE FOR CONNECTION TO NEW SEWER MAIN

NOTES:

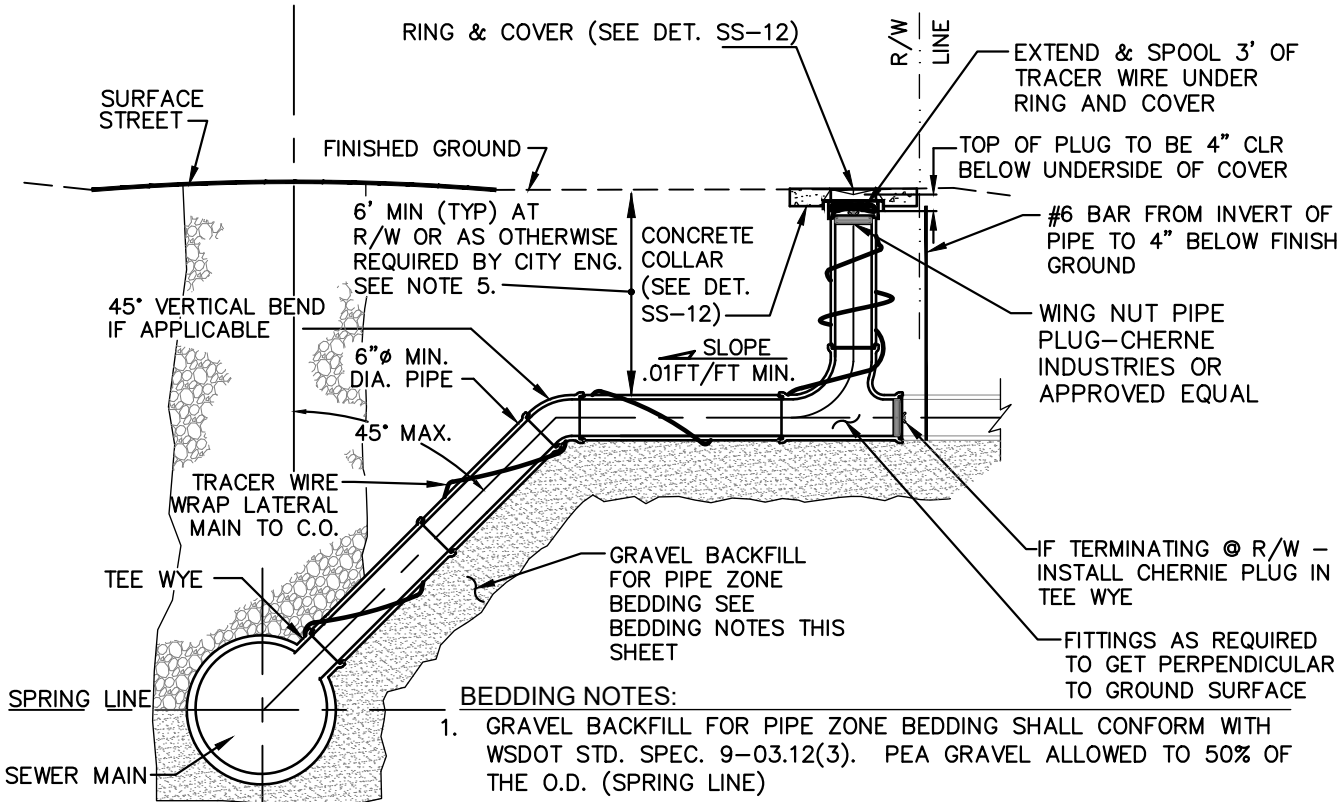
1. NO GLUED FITTINGS ALLOWED.
2. PIPE SHALL BE PVC SDR 3035 PIPE & GASKET.
3. SEE TYPICAL CLEANOUT & BACKWATER VALVE INSTALLATION DETAIL SS-07.

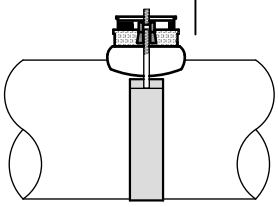
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4" MIN. DIAMETER SINGLE SANITARY SEWER LATERAL SERVICE

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DATE:	BY:	SCALE:	DWG#
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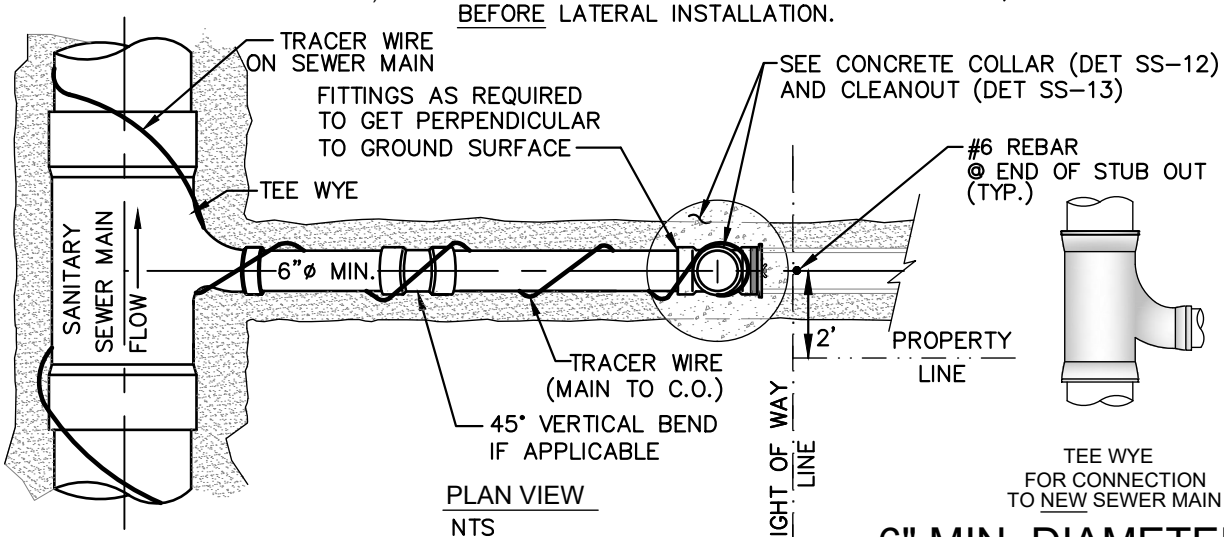


TYPE "CB" SEWER SADDLE FOR CONNECTION TO EXISTING SEWER MAIN

(SEE C.O. SHELTON STD. DETAIL SS-14)

BEDDING NOTES:

1. GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL CONFORM WITH WSDOT STD. SPEC. 9-03.12(3). PEA GRAVEL ALLOWED TO 50% OF THE O.D. (SPRING LINE)
2. SEE C.O. SHELTON STD. DETAILS T-18 & T-19 FOR TRENCH RESTORATION ABOVE THE PIPE ZONE BEDDING
3. BEDDING AND GRADE SHALL BE ESTABLISHED PRIOR TO PIPE BEING PLACED IN TRENCH.
4. IF THE LATERALS STOPS AT THE EDGE OF RIGHT OF WAY, TERMINATE THE LINE WITH A WING NUT PIPE PLUG/CHERNE INDUSTRIES OR APPROVED EQUAL IN TEE WYE.
5. IF SEWER MAIN ELEVATION DOES NOT ALLOW 6' MIN. DEPTH OF LATERAL AT R/W LINE, INSTALL LATERAL AS DEEP AS POSSIBLE WHILE MAINTAINING MIN. SLOPE. CONFIRM ELEVS. W/ PROJECT ENGINEER BEFORE LATERAL INSTALLATION.



PLAN VIEW

NTS

TEE WYE FOR CONNECTION TO NEW SEWER MAIN

NOTES:

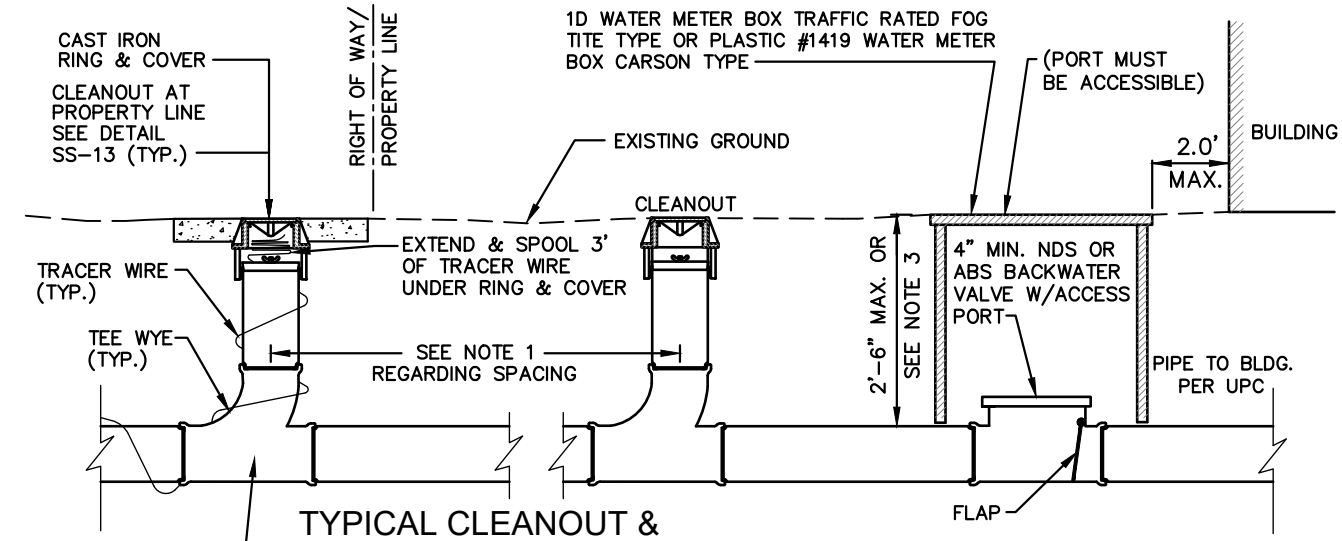
1. NO GLUED FITTINGS ALLOWED.
2. PIPE SHALL BE PVC SDR 3035 PIPE & GASKET.
3. SEE TYPICAL CLEANOUT & BACKWATER VALVE INSTALLATION DETAIL SS-07.

"Building A Stronger Community TOGETHER"

6" MIN. DIAMETER SINGLE SANITARY SEWER LATERAL SERVICE

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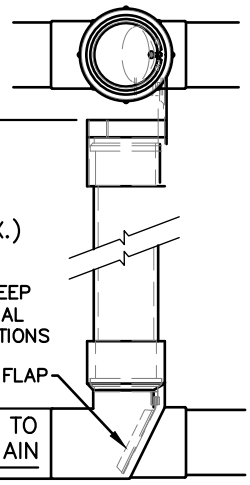


TYPICAL CLEANOUT & BACKWATER VALVE INSTALLATION

NOT TO SCALE

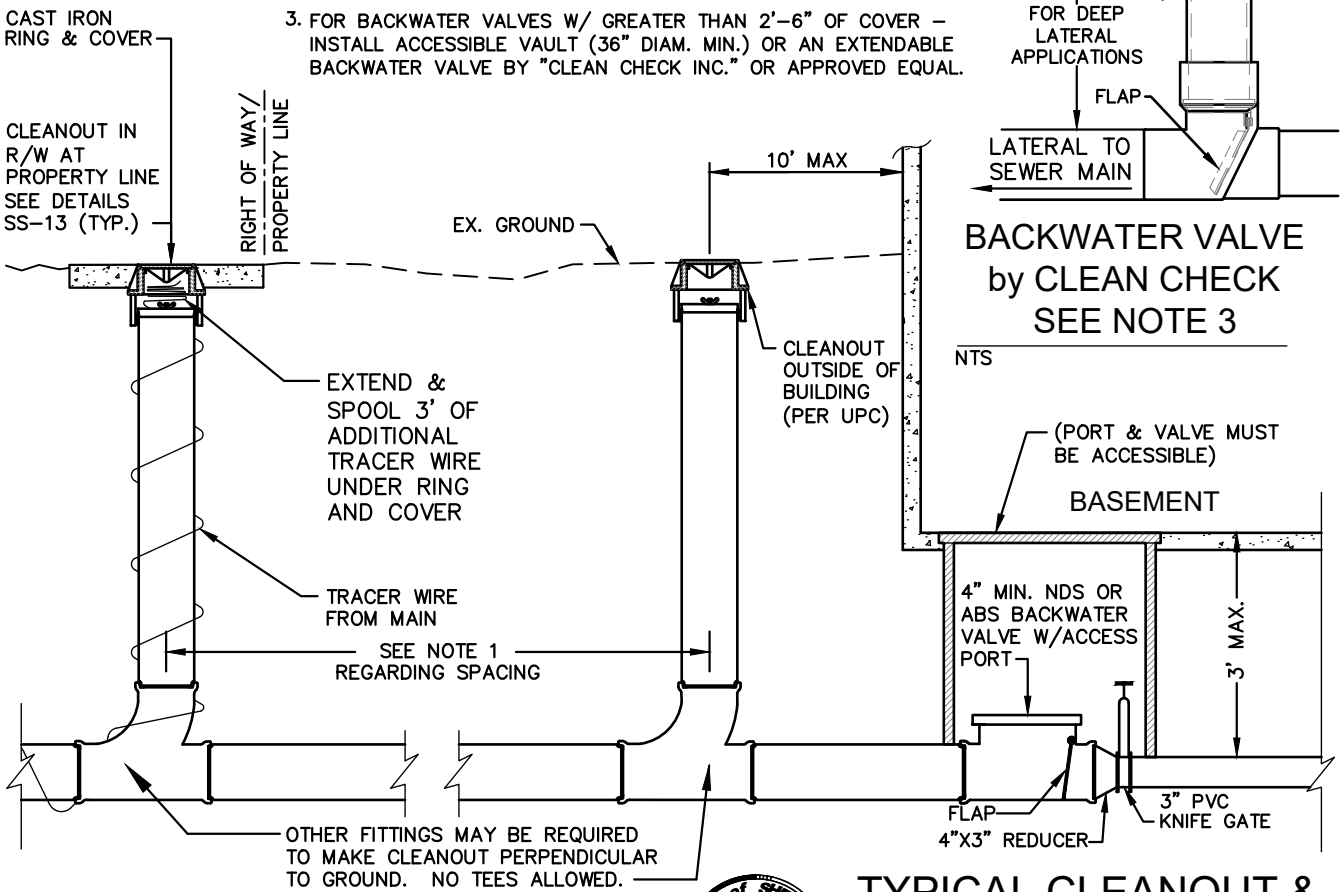
NOTES

1. HORIZONTAL BENDS SHALL BE 45° MAXIMUM. IF THE HORIZONTAL ALIGNMENT EXCEEDS 135° IN BENDS ON A SERVICE CONNECTION THEN A CLEANOUT IS REQUIRED AT NEXT BEND. A CLEANOUT SHALL BE PROVIDED FOR EACH TOTAL CHANGE OF 90° OF GRADE OR ALIGNMENT AND IN NO CASE SHALL THE SPACING OF CLEANOUTS EXCEED 100 FT.
2. BACKWATER VALVES REQUIRED ON ALL SERVICE CONNECTIONS, UNLESS OTHERWISE APPROVED BY THE CITY.
3. FOR BACKWATER VALVES W/ GREATER THAN 2'-6" OF COVER – INSTALL ACCESSIBLE VAULT (36" DIAM. MIN.) OR AN EXTENDABLE BACKWATER VALVE BY "CLEAN CHECK INC." OR APPROVED EQUAL.



BACKWATER VALVE by CLEAN CHECK SEE NOTE 3

NTS



TYPICAL BASEMENT INSTALLATION

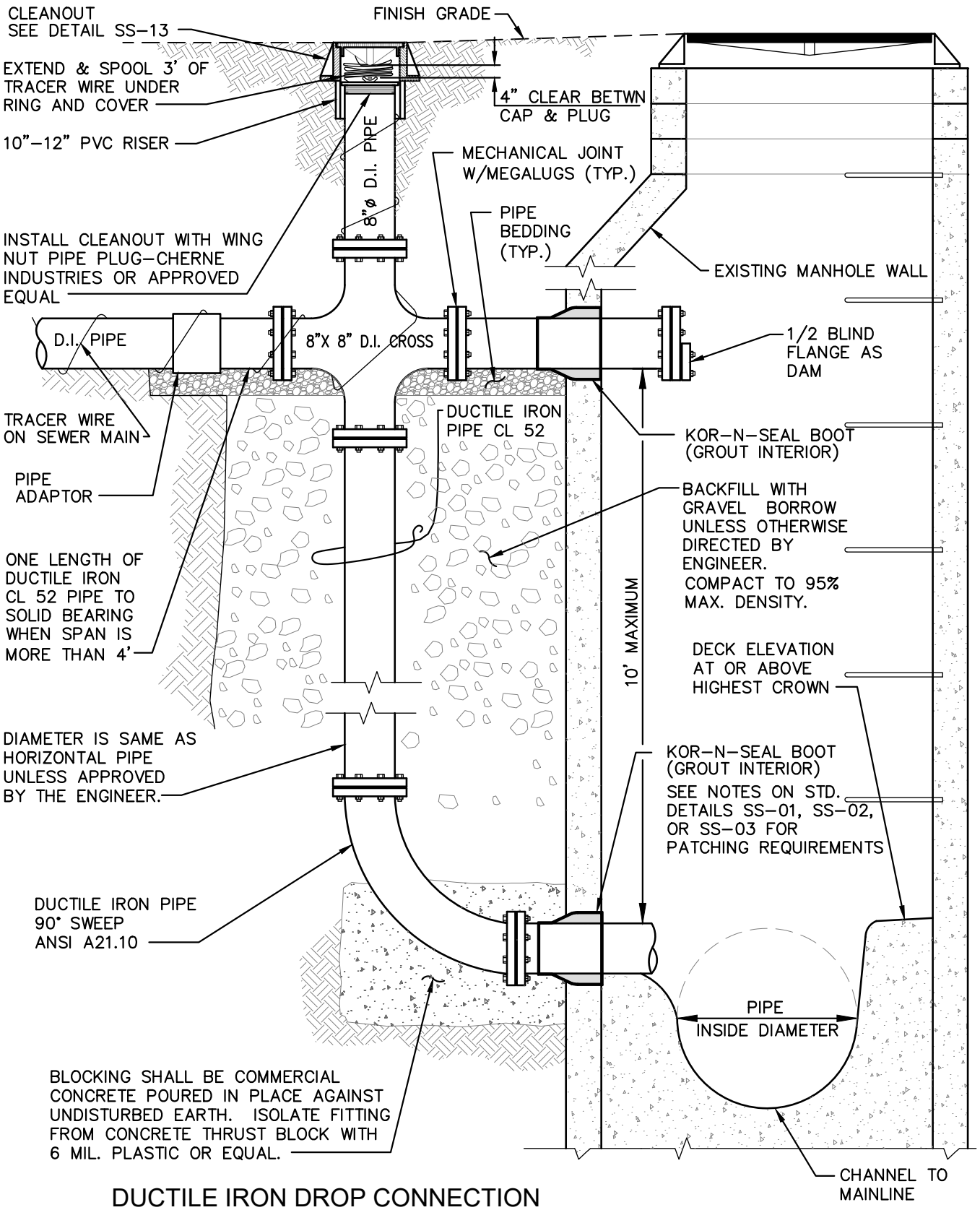
NOT TO SCALE

"Building A Stronger Community TOGETHER"

TYPICAL CLEANOUT & BACKWATER VALVE

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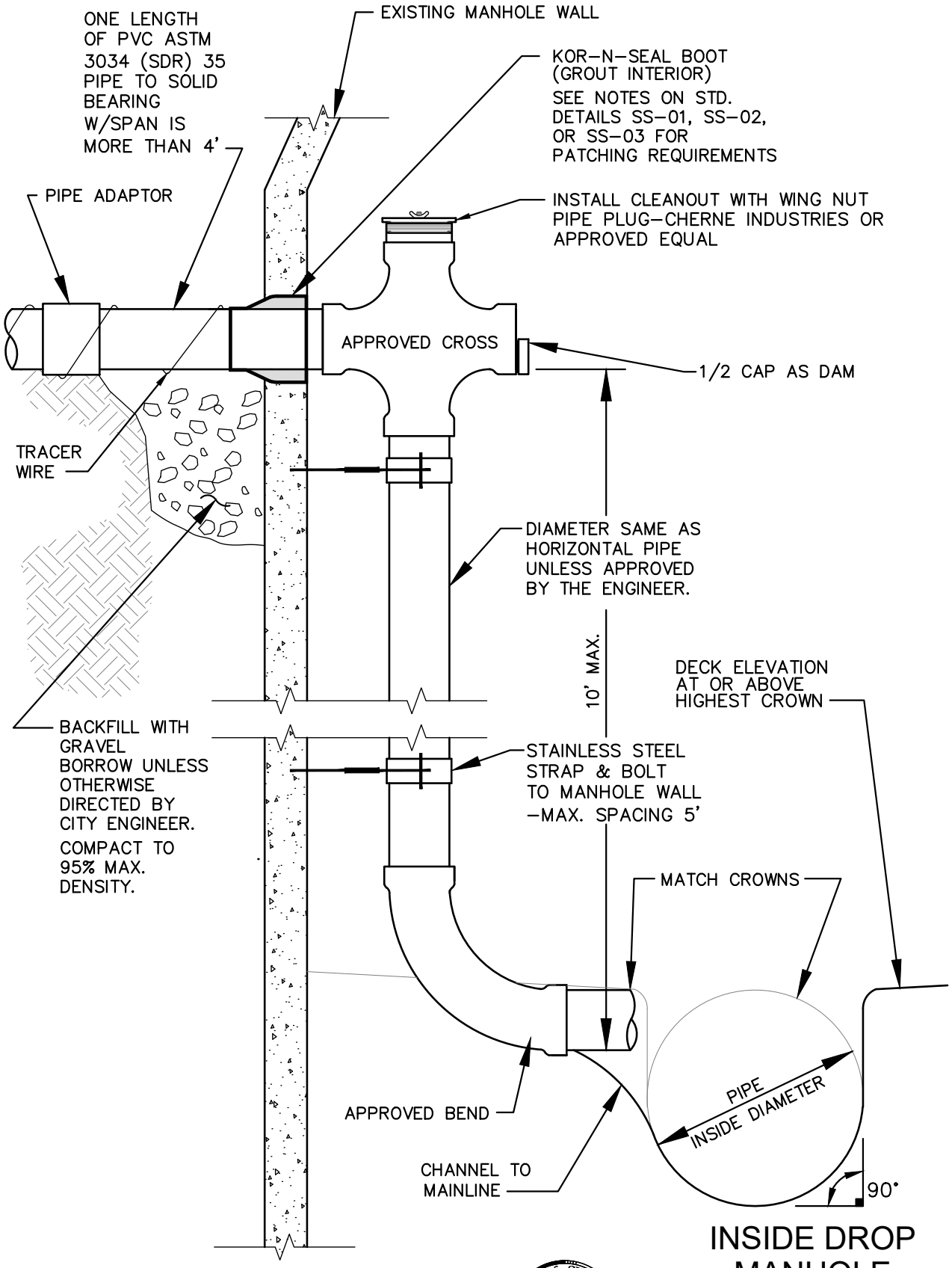
DUCTILE IRON DROP CONNECTION

"Building A Stronger Community TOGETHER"

OUTSIDE DROP MANHOLE CONNECTION

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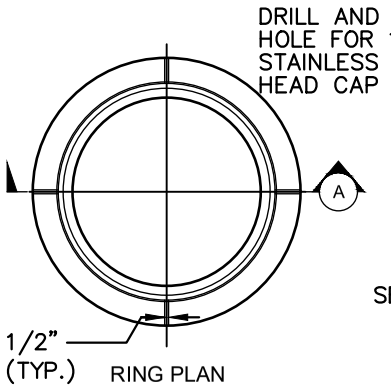
INSIDE DROP MANHOLE CONNECTION

NOTE
SEE MANHOLE SIZING CHART FOR MINIMUM MANHOLE DIAMETER REQUIREMENTS.

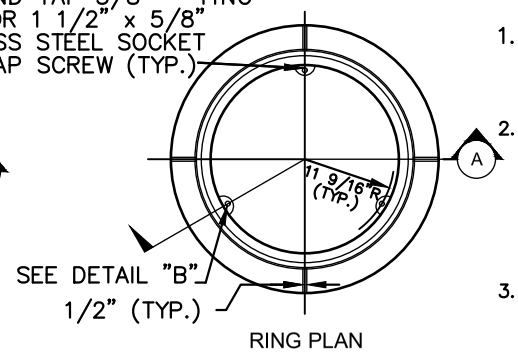
"Building A Stronger Community TOGETHER"

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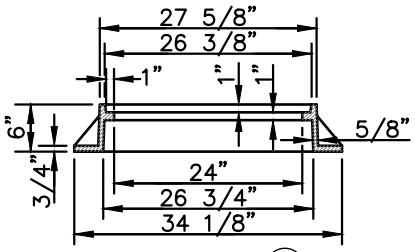
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1/2019	GS	NTS	SS-09



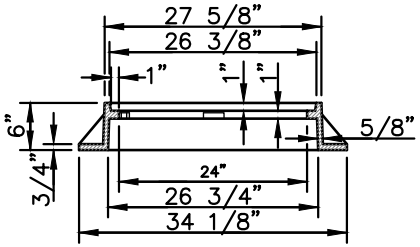
RING PLAN



RING PLAN



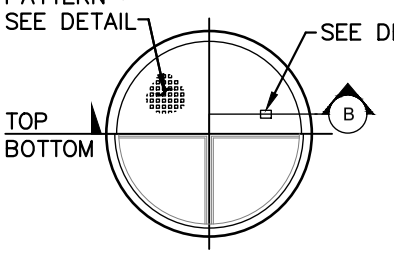
RING SECTION (A)



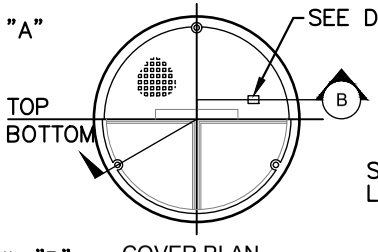
RING SECTION (A)

NOTES

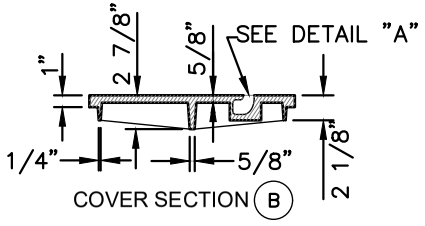
1. THE GASKET AND GROOVE MAY BE IN THE SEAT (FRAME) OR IN THE UNDERSIDE OF THE COVER. THE GASKET MAY BE "T" SHAPED IN SECTION. THE GROOVE MAY BE CAST OR MACHINED.
2. BOLT–DOWN CAPABILITY IS REQUIRED ON ALL FRAMES, GRATES, AND COVERS, UNLESS SPECIFIED OTHERWISE IN THE CONTRACT. PROVIDE 3 HOLES IN THE FRAME THAT ARE VERTICALLY ALIGNED WITH THE GRATE OR COVER SLOTS. THE FRAME SHALL ACCEPT THE 5/8" – 1 NC ×2" ALLEN HEAD CAP SCREW BY BEING TAPPED, OR OTHER APPROVED MECHANISM. LOCATION OF BOLT DOWN HOLES VARIES BY MANUFACTURER.
3. FOR BOLT–DOWN MANHOLE RING AND COVERS THAT ARE NOT DESIGNATED "WATERTIGHT," THE NEOPRENE GASKET, GROOVE, AND WASHER ARE NOT REQUIRED.
4. WASHER SHALL BE NEOPRENE (DETAIL "B").
5. IN LIEU OF BLIND PICK NOTCH FOR MANHOLE COVERS, A SINGLE 1" PICK HOLE IS ACCEPTABLE. HOLE LOCATION AND NUMBER OF HOLES MAY VARY BY MANUFACTURER.
6. ALTERNATIVE REINFORCING DESIGNS ARE ACCEPTABLE IN LIEU OF THE RIB DESIGN.
7. WATERTIGHT MANHOLE COVER SHALL BE OLYMPIC FOUNDRY INC., OR APPRV'D EQUAL.
8. ALL MANHOLE RING & COVERS TO MEET CURRENT WSDOT STD. SPECIFICATIONS.



COVER PLAN

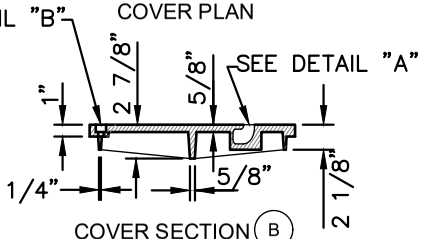


COVER PLAN



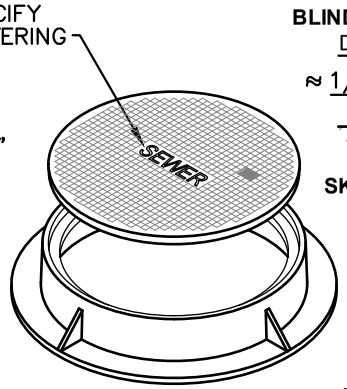
COVER SECTION (B)

STANDARD
TYPE 1

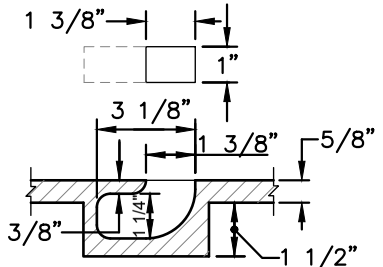


COVER SECTION (B)

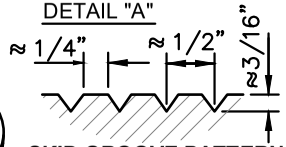
(SEE NOTE 7)
BOLT-DOWN / WATERTIGHT
TYPE 2



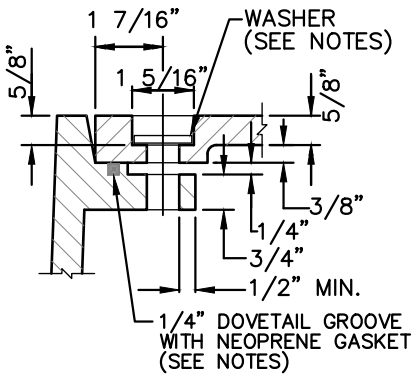
ISOMETRIC VIEW



BLIND PICK NOTCH
DETAIL "A"



SKID GROOVE PATTERN DETAIL



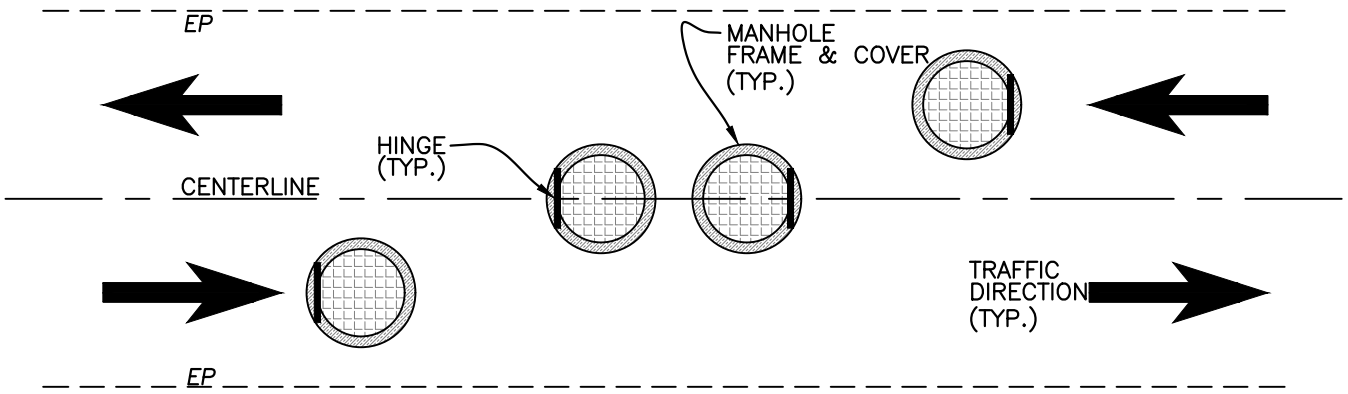
BOLT-DOWN / WATERTIGHT
DETAIL "B"

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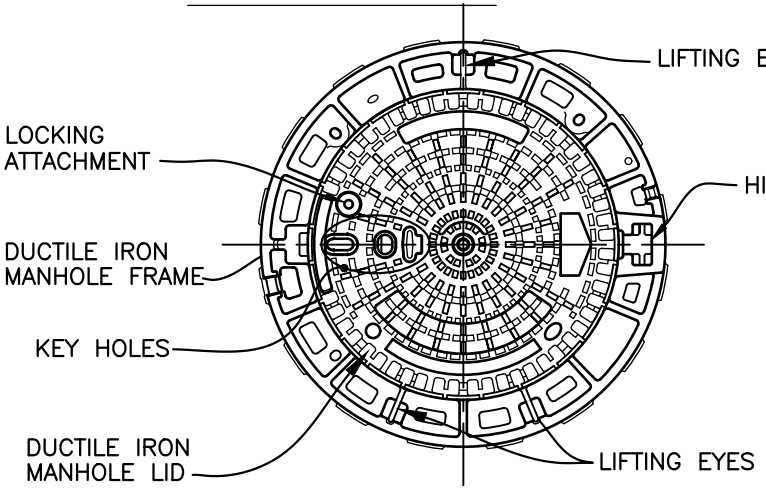
MANHOLE RING & COVER for UNPAVED AREAS

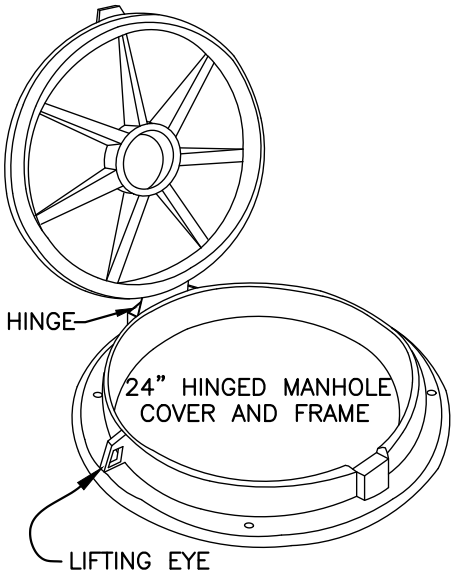
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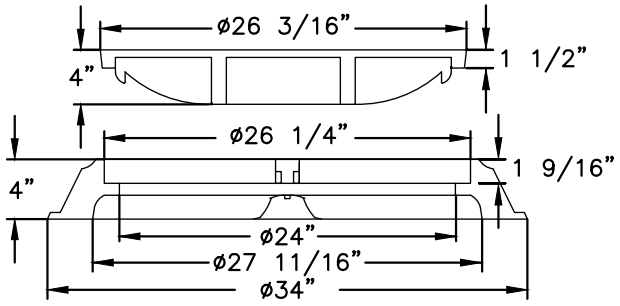
PLAN VIEW





ISOMETRIC VIEW

TOP VIEW



ELEVATION VIEW

NOTES:

1.) MANHOLE COVER AND FRAME SHALL BE CALLED EAST JORDAN. COVER AND FRAME SHALL BE MANUFACTURED FROM DUCTILE IRON. HINGE MUST BE PERPENDICULAR TO FLOW OF TRAFFIC. SEE PLAN VIEW.

2.) COVERS SHALL HAVE LOCKING ATTACHMENT. COVERS SHALL BE HINGED AND INCORPORATE A 90 DEGREE BLOCKING SYSTEM TO PREVENT ACCIDENTAL CLOSURE. COVERS SHALL BE ONE MAN OPERABLE USING STANDARD TOOLS AND SHALL BE CAPABLE OF WITHSTANDING A TEST LOAD OF 80,000 LBS.

3.) FRAMES SHALL BE CIRCULAR, INCORPORATE A SEATING RING AND A FITTED PLUG IN THE HINGE HOUSING, AND BE AVAILABLE IN A 24 INCH CLEAR OPENING. THE FRAME DEPTH SHALL NOT EXCEED 4 INCHES, AND THE FLANGE SHALL INCORPORATE BEDDING SLOTS, BOLT HOLES, AND LIFTING EYES.

4.) ALL COMPONENTS SHALL BE BLACK COATED.

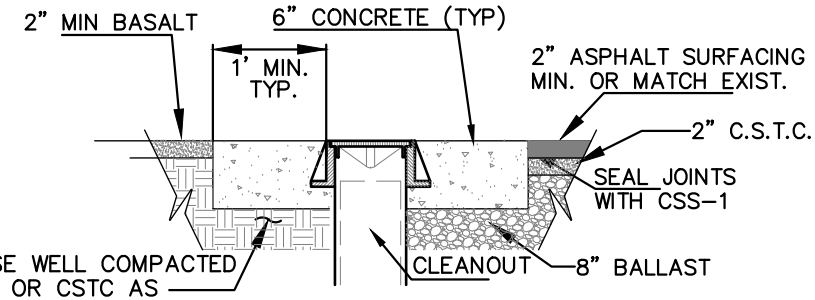
5.) FOR MANHOLE INSTALLATION OUTSIDE OF PAVED AREAS SEE C.O. SHELTON STD. DETAIL SS–12.

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EAST JORDAN MANHOLE FRAME & COVER

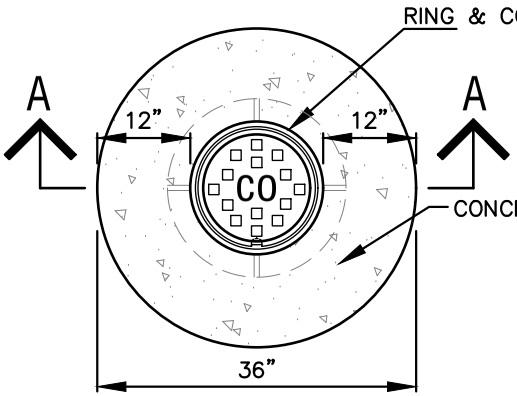
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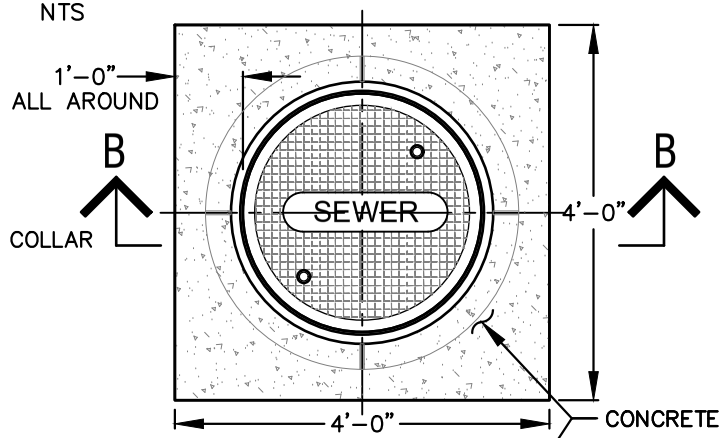
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SS-11

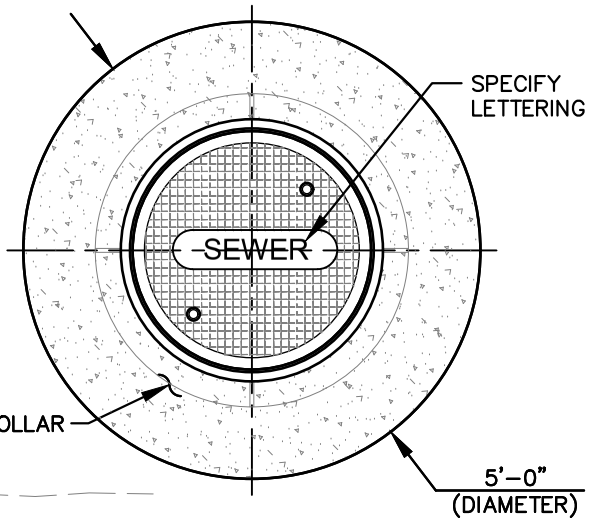


NTS

NOTE:
ALL CONCRETE COLLARS TO BE COMMERCIAL CONCRETE PER CURRENT WSDOT STD. SPEC.

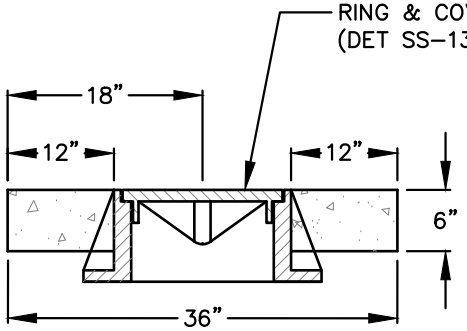






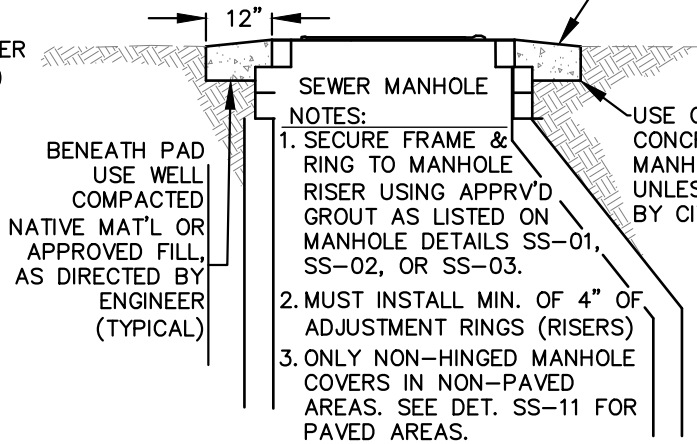
MANHOLE FRAME & COVER
W/ CONCRETE COLLAR
OUTSIDE PAVED AREA

NTS



CLEANOUT RING & COVER
W/ CONCRETE COLLAR

NTS



SECTION B-B (OUTSIDE PAVED AREA)

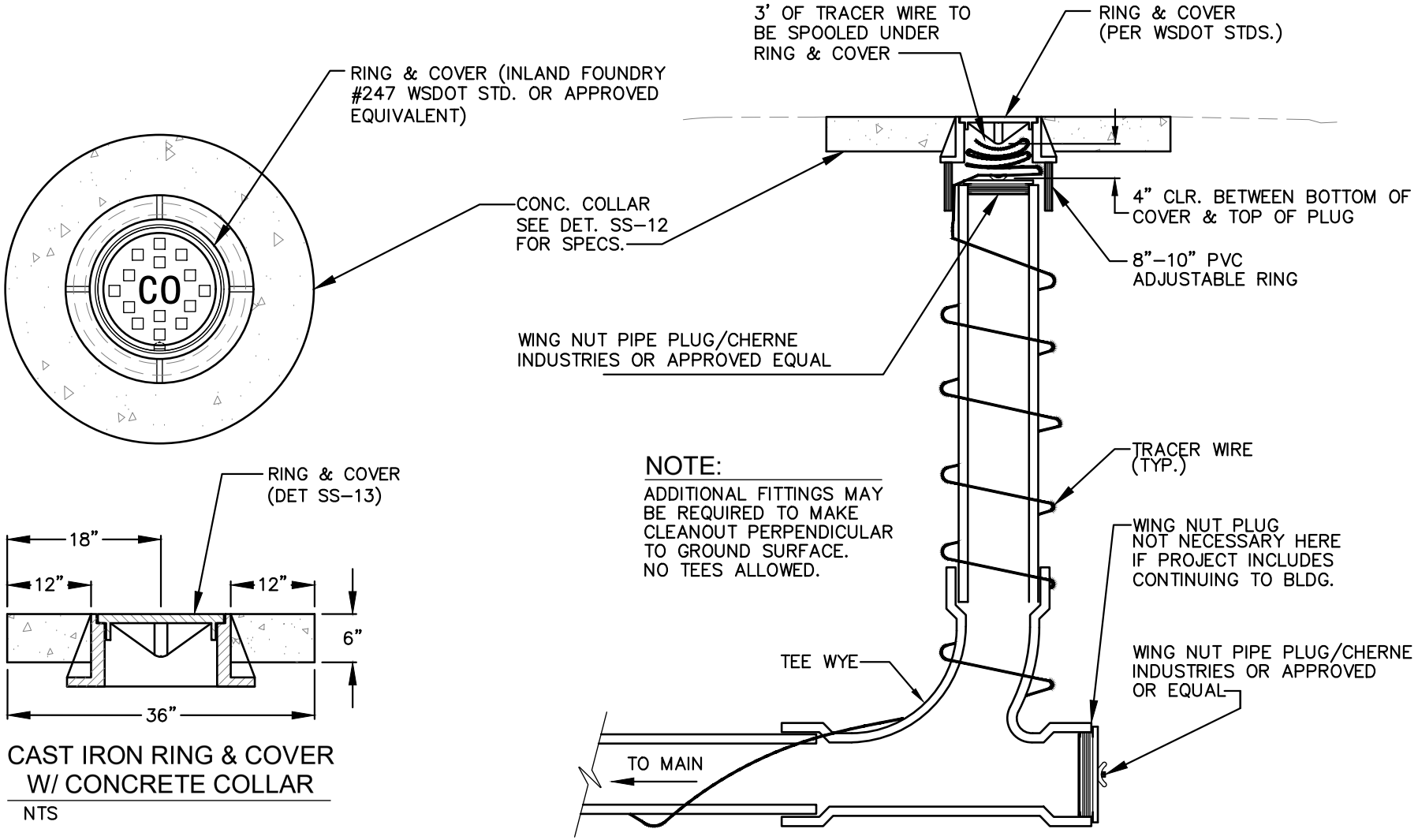
NTS

MANHOLE & CLEANOUT SURFACE RESTORATION WITHIN RIGHT-OF-WAY

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CAST IRON RING & COVER W/ CONCRETE COLLAR

NTS

NOTE:

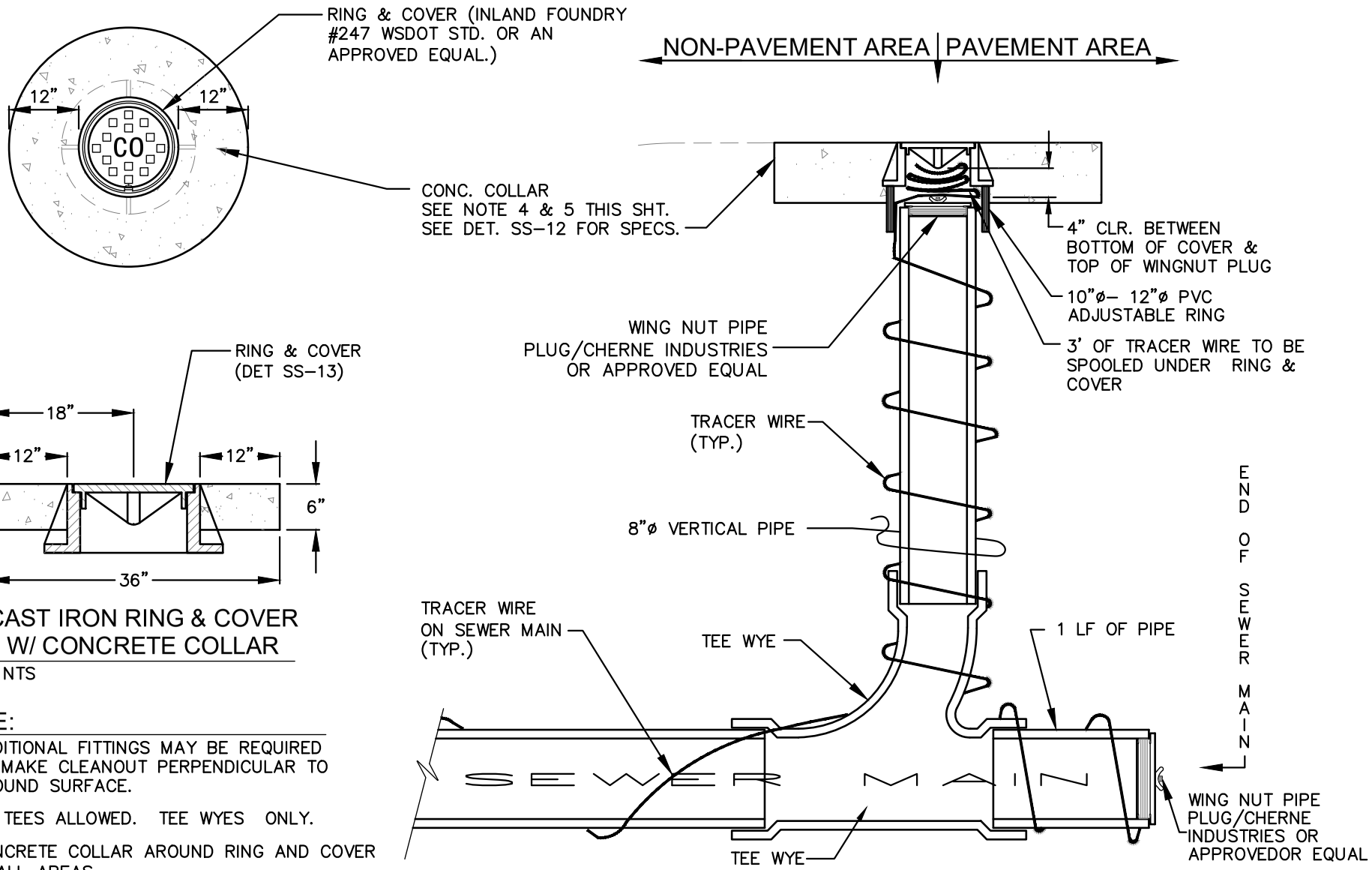
A CLEANOUT SHALL BE PROVIDED FOR EACH TOTAL CHANGE OF 90 DEGREES OF GRADE OR ALIGNMENT AND IN NO CASE SHALL THE SPACING OF CLEANOUTS EXCEED 100 FEET.

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CLEANOUT DETAIL

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CAST IRON RING & COVER W/ CONCRETE COLLAR

NTS

NOTE:

1. ADDITIONAL FITTINGS MAY BE REQUIRED TO MAKE CLEANOUT PERPENDICULAR TO GROUND SURFACE.
2. NO TEES ALLOWED. TEE WYES ONLY.
3. CONCRETE COLLAR AROUND RING AND COVER IN ALL AREAS.
4. ALL CONCRETE SHALL BE COMMERCIAL CONCRETE PER CURRENT WSDOT STD. SPECIFICATIONS.
5. ALL ASPHALT PAVEMENT & MATERIAL BELOW SURFACE TREATMENT TO BE PER C.O. SHELTON STANDARDS.

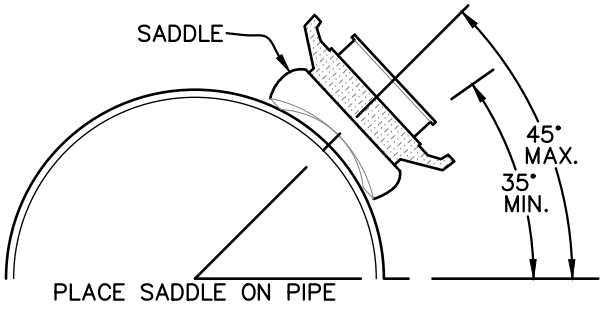
CITY of SHELTON WASHINGTON

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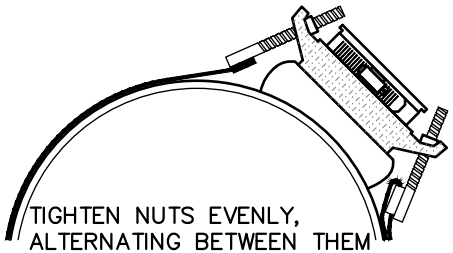
SEWER MAIN LAMPHOLE DETAIL

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1/2019	GS	NTS	SS-13A



PLACE SADDLE ON PIPE

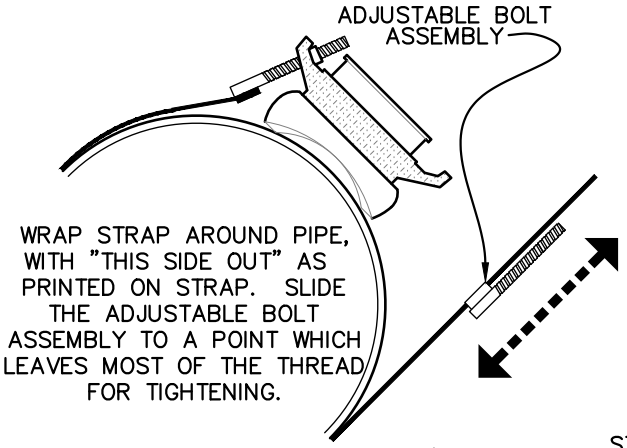


TIGHTEN NUTS EVENLY, ALTERNATING BETWEEN THEM UNTIL APPROPRIATE TORQUE IS REACHED (SEE BELOW)

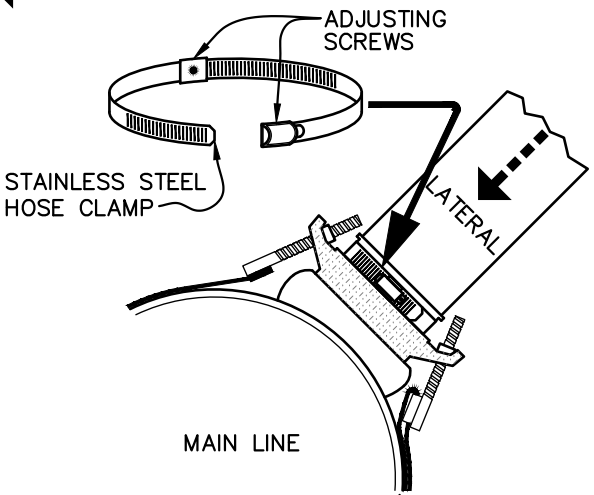
SIGNIFICANT FLATTENING OF PVC PIPE INDICATES OVER TIGHTENING. IN ALL CASES WAIT 10 MINUTES AND TORQUE AGAIN.

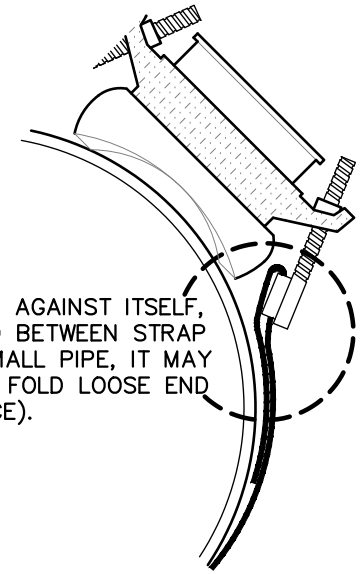
NOMINAL PIPE DIAMETER	TORQUE
6"–12"	15 – 20 FT.–LBS.
14"–48"	20 – 30 FT.–LBS.

25 FT–LBS. = 12" WRENCH W/25 LBS. FORCE



WRAP STRAP AROUND PIPE, WITH "THIS SIDE OUT" AS PRINTED ON STRAP. SLIDE THE ADJUSTABLE BOLT ASSEMBLY TO A POINT WHICH LEAVES MOST OF THE THREAD FOR TIGHTENING.





FOLD STRAP BACK AGAINST ITSELF, PLACING FREE END BETWEEN STRAP AND PIPE. (ON SMALL PIPE, IT MAY BE NECESSARY TO FOLD LOOSE END TWICE).

LUBRICATE AND INSERT LATERAL/OUTLET END.

THE CB SEWER SADDLES ARE PROVIDED WITH A BAND CLAMP (HOSE CLAMP) WHICH ALLOWS IT TO HAVE A RANGE. THE BAND CLAMP COMES WITH TWO ADJUSTING SCREWS WHICH PROVIDE MUCH GREATER CLAMPING FORCE THAN BAND CLAMPS WITH ONLY ONE ADJUSTING SCREW. THE BAND CLAMP NEEDS TO BE ASSEMBLED AROUND THE LATERAL/OUTLET AND BOTH ADJUSTING SCREWS TIGHTENED EVENLY.

NOTES:

1. CHECK DIAMETER OF MAIN AND BRANCH PIPE TO MAKE SURE YOU ARE USING THE CORRECT SIZE SADDLE GASKET; ALSO CHECK GASKET TO MAKE SURE IT IS THE SIZE YOU THINK IT IS.
2. REMOVE AS MUCH DIRT AND CORROSION FROM PIPE SURFACES AS POSSIBLE.
3. MAKE SURE NO FOREIGN MATERIALS LODGE BETWEEN SADDLE GASKET AND PIPE AS NUTS ARE TIGHTENED.
4. AVOID LOOSE FITTING WRENCHES OR WRENCHES TOO SHORT TO ACHIEVE PROPER TORQUE.
5. TAKE EXTRA CARE TO FOLLOW PROPER BOLT TIGHTENING PROCEDURES AND TORQUE RECOMMENDATIONS.
6. BACK FILL AND COMPACT CAREFULLY AROUND LATERAL/OUTLET.
7. THE HOLE CUT IN THE MAIN SHOULD BE NO LARGER THAN THE INSIDE DIAMETER OF THE SADDLE GASKET. THE 4" GASKET HAS AN I.D. OF 5.20, THE 6" GASKET HAS AN I.D. OF 6.40.
8. LUBRICATING BETWEEN THE SADDLE GASKET AND THE MAIN ON ROUGH OR LARGE O.D. PIPE CAN IMPROVE THE SEALING CAPACITY OF THE SADDLE.
9. DURING INSTALLATION THE TEMPERATURE OF THE SADDLE GASKET ITSELF CAN BE IMPORTANT. THE TEMPERATURE OF THE SADDLE GASKET SHOULD NOT FALL BELOW ~45° F.
10. IT IS NECESSARY TO BEVEL THE LATERAL/OUTLET PIPE END AND LUBRICATE PIPE END AND SADDLE GASKET HUB.
11. WHEN REINSTALLING PARTS WITH STAINLESS STEEL HARDWARE THERE MAY BE A LOSS IN PRESSURE HOLDING ABILITY DUE TO WORN OR DAMAGED THREADS DURING ORIGINAL INSTALLATION.

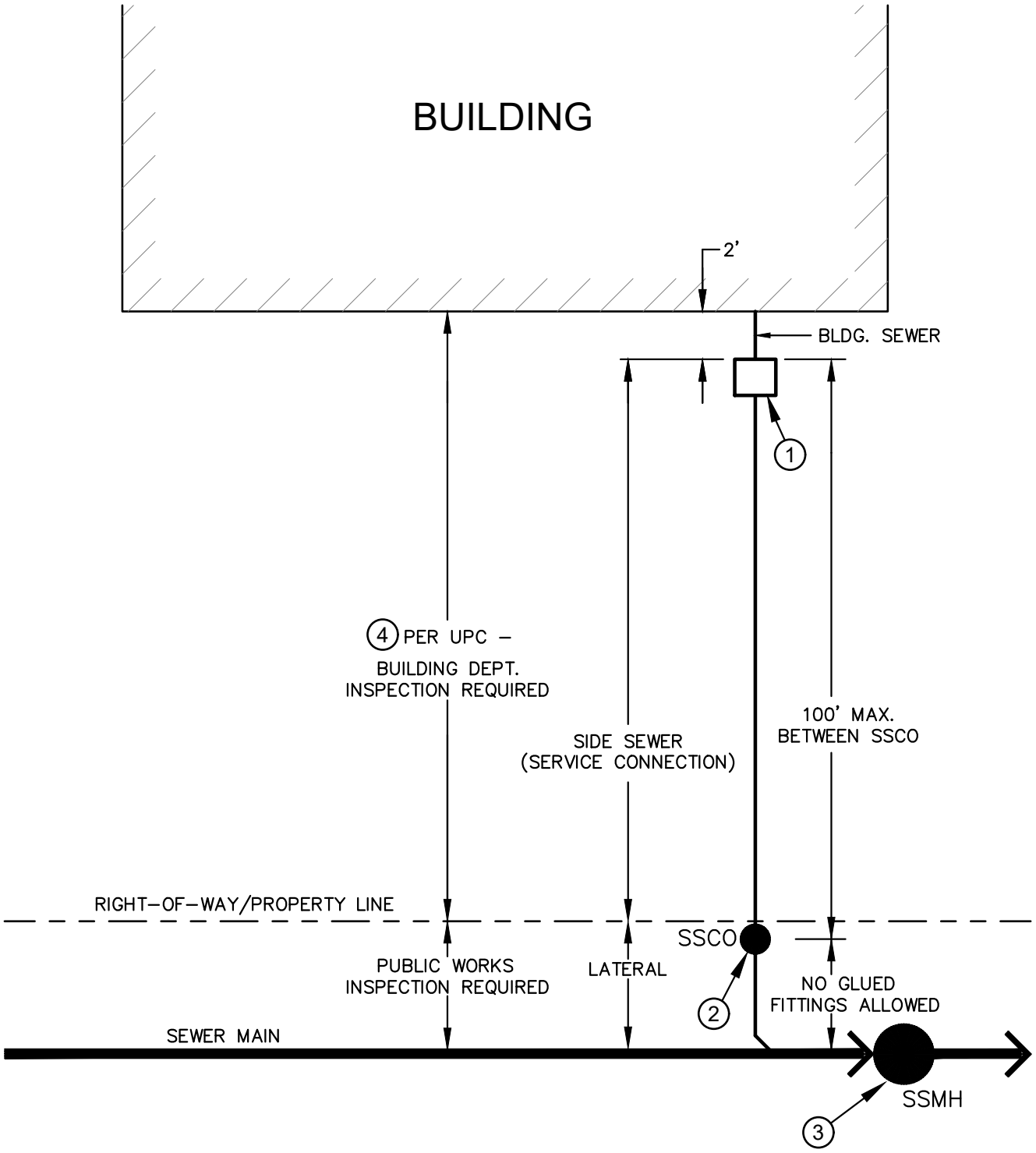
CITY of SHELTON WASHINGTON

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ROMAC STYLE "CB" SEWER SADDLE
TYPICAL SEWER CONNECTION TO EX. SEWER MAIN

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1/2019	GS	NTS	SS-14



LEGEND:

1. SANITARY SEWER BACKWATER VALVE DEVICE
2. SANITARY SEWER CLEANOUT
3. SANITARY SEWER MANHOLE
4. CONSTRUCTED PER "UNIFORM PLUMBING CODE" GUIDELINES

"Building A Stronger Community TOGETHER"

SEWER LINE TERMINOLOGY

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1/2019	GS	NTS	SS-15

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"Building A Stronger Community TOGETHER"

DETAIL TITLE

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SS-16

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"Building A Stronger Community TOGETHER"

DETAIL TITLE

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	SS-17

C H A P T E R 6

6.000 RECLAIMED WATER

6.010 Introduction

Any extension of the City of Shelton reclaimed water system must be approved by the Public Works Department. Construction of all extensions must conform to these Standards and the specifications and details contained in this Chapter.

Anyone who wishes to extend or connect to the City's reclaimed water system shall contact the Public Works Department to discuss the anticipated use, anticipated volume, desired flow rate and the availability of reclaimed water.

Reclaimed water, like potable water, is a limited resource. During periods of high demand, the reclaimed water system MAY NOT have the capacity to meet individual requests.

The developer's engineer is responsible for determining the scope of work for connection to existing reclaimed water mains.

It shall be the contractor's responsibility to field verify the location and depth of the existing main and the fittings required to make the connections to the existing mains. The City shall be present during any contractor taps. All fittings shall be approved by the Public Works Department prior to installation.

6.020 Connecting New Users

As part of the application process, the City will meet with the applicant to review a draft *Class A Reclaimed Water Service Agreement*, and discuss the responsibilities of being a reclaimed water user. Prior to connection to the reclaimed water system and issuance of a reclaimed water meter, a *Class A Reclaimed Water Service Agreement* must be executed, and all applicable fees must be paid. All use of Reclaimed Water shall meet the current Washington State Department of Health and Ecology's "Water Reclamation and Reuse Standards". A copy of the standards can be found on the Washington State Department of Health website at www.doh.wa.gov/CommunityandEnvironment/WastewaterManagement/WaterReclamation.

The user shall install a reclaimed water meter at all use sites. All reclaimed water use sites should be metered and the rate of flow and total annual volume monitored. Should the maximum allowed volume of reclaimed water be exceeded in any calendar year, the City may terminate the service for the remainder of the calendar year or until the critical demand period has passed. The decision to terminate reclaimed water service will be at the sole discretion of the City.

6.030 Irrigating with Reclaimed Water

Those users approved for use of reclaimed water for irrigation should irrigate at the Normal Agronomic Rate or less, and should not exceed this limit at any time. Normal Agronomic Rate is defined as that rate of irrigation required by the plants or vegetation. Variables, such as soil type, type of vegetation and precipitation play a role in Normal Agronomic Rate.

Adequate soil surface storage is required to limit translocation of water within the use area and perhaps causing runoff from the site during the infiltration process. Sprinkler systems should be designed with application rates that do not exceed the soil intake and plant evapotranspiration rate.

The applicant must provide documentation supporting the requested flow rates, a description of the area to be irrigated, and the proposed vegetation. The City utilizes the Crop Irrigation Requirement found in Appendix B of the U.S. Department of Agriculture Irrigation Guide as the basis for determining the irrigation requirement for turf (USDA, 1992). The annual irrigation requirement for the City, utilizing the chart for Olympia, is 16.47 inches per year.

6.040 Design Standards

The design of reclaimed water extensions, connection or facilities must conform to this Chapter, the applicable sections of the latest edition of DOE's Criteria for Sewerage Works Design, the Washington State Department of Transportation's Standard Specifications for Road and Bridge Construction and Washington State Department of Health Water Reclamation and Reuse Standards.

6.050 Service Interruption

The contractor must give the City a minimum of 48 hour notice of any planned connection to an existing pipeline, including cut-ins and live taps. Notice is required so any disruptions to existing

services can be scheduled. The City will notify customers involved or affected by the reclaimed water service interruption. The contractor shall make every effort to schedule reclaimed water main construction with a minimum interruption of reclaimed water service. During periods of high demand, the City may dictate scheduling of reclaimed water main construction to avoid shut downs during specific periods.

6.060 Main Line

A. The minimum reclaimed water main size is 4 inches. Where 8-inch or larger mains are placed, reclaimed water hydrants shall be installed. The location of the reclaimed water hydrants shall be coordinated with the City.

B. All pipe for reclaimed water mains shall have flexible gasketed joints, be colored purple (Pantone 512 or 522) and bear the marking "Reclaimed Water – Do Not Drink" printed along the length, and must be one of the following types:

    1. Polyvinyl Chloride (PVC) Pipe (under four inches): Pipe material shall be PVC 1120, PVC 1220, or PVC 2120, and have minimum wall thickness equal to or less than the standard dimension ratio (SDR) of 21, and meet the requirements of WSDOT Standard Specifications Section 9-30.1(5)B.

    2. PVC Pipe (4 through 12 inches): Shall meet the requirements of AWWA C900, Class 150 wall thickness equal to or less than the SDR of 18, and meet the requirements of WSDOT Standard Specifications Section 9-30.1(5)A.

    3. In general, ductile iron pipe shall not be used except where sound engineering practice would dictate its use to protect pipe integrity. In cases where ductile iron pipe must be used, the pipe shall be sleeved with a purple liner.

C. All fittings for PVC pipe shall be ductile iron compact fittings conforming to AWWA C 153 or Class 250 gray iron conforming to AWWA C 110 and C 111. All shall be cement mortar lined conforming to AWWA C 104.

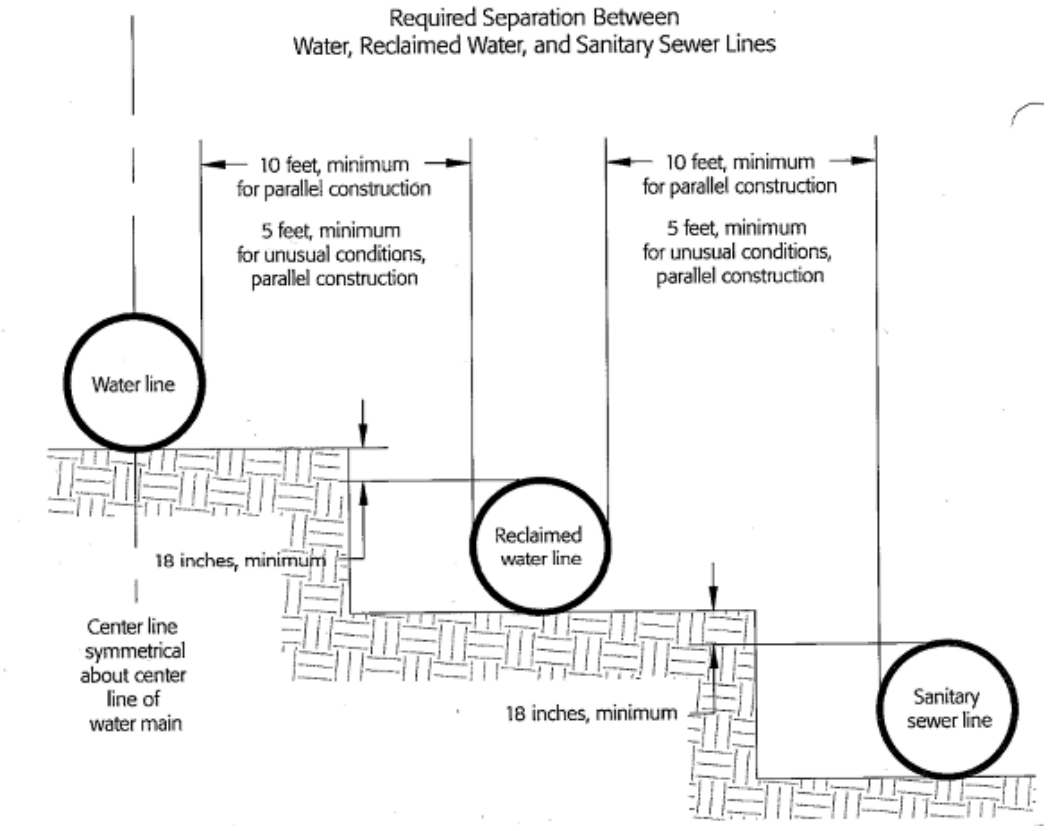
D. All pipe and service lines shall be installed with continuous tracer tape installed 12 to 18 inches under the final ground surface. The marker shall be plastic, non-biodegradable, marked "Reclaimed Water – Do Not Drink" three-inch wide minimum. Install 14 gauge heavy duty direct busy coated

copper wire (PAIGE "UF" single conductor or equal), wrapped around the pipe, brought up and tied off at valve body. All wire connections shall use wire nuts and epoxy DBY wire connection kit.

E. The minimum cover for all reclaimed water mains from top of pipe to finished grade shall be 36 inches, unless otherwise approved.

F. The contractor shall maintain a minimum of 18 inches of separation between sanitary sewers and reclaimed water mains and 18 inches of separation between reclaimed water mains and potable water mains. The minimum depth below ground surface for reclaimed water is 36 inches and the maximum depth is 42" provided no conflicts with other utilities. The minimum depth may be reduced, upon City approval, to provide for as much vertical separation as possible from water and sewer lines.

The following displays the minimum vertical and horizontal separation requirements for water, reclaimed water and sewer lines. For unusual conditions, when the minimum horizontal spacing requirements cannot be met, the City may consider reducing the minimum separation.



6.070 Reclaimed Water Meter Location

Reclaimed water meter locations shall be easily accessible to City personnel for meter reading. Meters and service valves shall remain outside the property line/fence line.

No trees or shrubs shall be planted within 3 feet of any reclaimed water meter. Improvements or landscaping of any sort shall not be constructed in any manner which will impede easy access for maintenance to reclaimed water meters.

6.080 Service Connection

Prior to connecting to the reclaimed water system, the property owner shall submit an application for service to the City. The City will evaluate the ability of the reclaimed water system to provide the requested volume, flow rate and pressure.

A. All service connections relating to new development shall be installed by the developer at the time of mainline construction. After the lines have been constructed, tested and approved, the owner may apply for a reclaimed water meter. The Contractor

will install reclaimed water meters 1 ½" and larger after the application has been made and all applicable fees have been paid. Reclaimed water meters will be set only after the system is inspected and has received final approval, and the parties have fully executed a Reclaimed Water User Agreement. The City will lock off meter until approved for service. All reclaimed water services between the City main and the meter are property of the City.

B. Service lines shall be one-inch high-density polyethylene pipe, minimum pressure class 200 psi DR7. No glued joints will be accepted. Service lines shall be installed 90 degrees off the main. Tracer wire wrapped around the pipe shall be installed on all service lines.

C. Service saddle shall be all ductile iron body with stainless steel straps and shall be *ROMAC* Industries or approved equal.

D. Corporation stop shall be all bronze and shall have iron pipe threads conforming to AWWA C 800. Stainless steel inserts shall be used with pack joints and polyethylene pipe.

E. A master meter may be allowed to serve multiple buildings or sites at the sole discretion of the City. If a master meter is allowed to serve more than one building or site, an approved RPBA device(s) must be installed at all buildings serviced by potable water.

F. A backflow assembly is required per Section 6.130.

6.090 Hydrants

A. The lead from the service main to the hydrant shall be purple (Pantone 512 or 522) PVC and meet the requirements of AWWA C900, Class 150 wall thickness must be equal to or greater than the SDR of 18, and meet the requirements of Standard Specifications Section 9-30.1(5)A. The pipe shall be no less than six inches in diameter. MJ joint shall be connected to the hydrant mechanical joint by a mechanical joint restraint, *Mega Lug* 2000PV or approved equal.

B. Hydrants shall have two, 2 ½-inch outlets and one 4 ½-inch pumper port outlet. All outlet ports shall be National Standard thread. The valve opening shall be no less than 5 ¼-inch diameter with a 5-inch "Storz" coupling and blind flange cap installed on the steamer port. The hydrant shall have a positive and automatic barrel drain and shall be of the "traffic safety" or break-away style; i.e., when accidentally broken off, reclaimed water will not flow.

C. All hydrants shall be center-stem compression design and valves shall open against pressure. Hydrants shall be manufactured by *Mueller*, *M&H*, or approved equal. All hydrants shall be tagged identifying the hydrant as a reclaimed water device. Hydrants shall be bagged until system is approved or until adequate reclaimed water flow can be provided. Hydrants shall be set as shown in Standard Drawing W-08 and W-09.

D. Where needed for protection as determined by the City, hydrants shall be protected by two or more bollards, each 8 inches in diameter by 5 feet in height made of either reinforced concrete or steel. Posts shall be painted to match hydrant color.

E. Reclaimed water hydrants shall be painted purple (Pantone 512 or 522).

6.100 Valves

Where possible, valves shall be located at tees or crosses.

All valves shall be ductile iron with ANSI flanges or mechanical joint ends. All existing valves shall be operated by City employees only.

Valves shall be installed in the distribution system at intervals no less than one valve every 500 feet. There shall be two valves on each tee and three valves on each cross.

A. Gate Valves, 2 inches or greater. The design, materials and workmanship of all gate valves shall conform to AWWA standards. Gate valves shall be Mueller, M & H, Kennedy, Clow R/W, Waterous Series 500 Gate valves shall be used on all 6 to 10 inch lines.

B. Butterfly Valves. Butterfly valves shall conform to AWWA. Butterfly valves shall conform to AWWA C504, Class 150B, with cast iron short body and O-ring stem seals. Butterfly valves shall be Mueller, Linseal III, Kennedy, Pratt Ground Hog, Allis Chalmers, or an approved equal. Butterfly valves may be used on all lines 12 inches and larger.

C. Valve Box. All valves shall have a standard Olympic Foundry, Reclaimed Water valve box or approved equal per Standard Detail W-07 and W-07A.

6.110 Air and Vacuum Release Valve

Combination air and vacuum release valves shall be 2" APCO combination air release valve, or approved equal. Installation shall be as shown on Standard Drawing RW-04.

The installation shall be set at the high point of the line. Where possible, pipes are to be graded to prevent the need for an air release valve. Air release valves may not be required when services are in the vicinity.

6.120 Blow-off Assembly

If a fire hydrant is not located at the terminus of a dead end main, a blow-off assembly shall be required. On reclaimed water mains that will be extended in the future, the valve, which operates the blow-off assembly, shall be the same size as the main and provided with a concrete thrust block. The pressure rating for blow-off assemblies shall be 200 psi. Installation shall be as shown in Standard Drawing RW-07.

6.130 Backflow Assembly

The purpose of this section is to provide guidance for protecting potable water systems from contamination. The installation of all backflow devices is required to protect the existing potable water system and users from potential contamination.

A cross connection is any actual or potential physical connection between a potable water line and any pipe, vessel, or machine containing a non-potable fluid or that has the possibility of containing a non-potable fluid, solid or gas, such that it is possible for the non-potable fluid, solid or gas to enter the water system by backflow. A cross connection could be any physical arrangement where a potable water supply is directly or indirectly connected with any non-potable or unapproved water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or any other device which contains, or may contain, contaminated water, liquid, gases, sewage, or other waste of unknown or unsafe quality which may import contamination to the potable water supply as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel or change-over devices, and other temporary, permanent or potential connections through which, or because of which, backflow could occur are considered to be cross connections.

Cross connections between the potable water and the reclaimed water system are not allowed under any circumstance. The City of Shelton is responsible for ensuring compliance with provisions of their approved Cross Connection Control (CCC) program.

Any site served with reclaimed water and potable water shall be provided with service-line protection. An approved reduced pressure backflow assembly (RPBA) device shall be installed on the potable water system at the potable water meter.

The Public Works Department shall receive the approved certification of test results for each RPBA device before allowing the hookup to the reclaimed water system. Certified Cross Connection Control personnel must test the RPBA device.

6.140 Irrigation

Irrigation sprinklers shall be situated to not overspray onto any public street, sidewalk or adjacent property. Irrigation shall be directed away from food facilities and public areas such as park barbeques. Sites shall be graded to prevent ponding or runoff of reclaimed water.

All irrigation pipes shall be purple (Pantone 512 or 522). Sprinkler heads shall be purple. All valve and control boxes shall be identified as reclaimed water and shall be purple.

If an existing sprinkler system is to be retrofitted for the application of reclaimed water, the existing pipes do not have to be replaced. All sprinkler heads, however, shall be replaced with purple heads identifying the use of reclaimed water. All control and valve boxes shall be replaced with boxes identifying the use of reclaimed water. Prior to the application of reclaimed water, the existing system shall be thoroughly tested by the user to ensure there are no cross connections with the potable water system. Testing shall be determined by the City.

6.150 Staking

All surveying and staking shall be performed by a licensed engineer or land surveyor. A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.
The minimum staking of reclaimed water lines shall be as directed by the Public Works Director, or as follows:

A. Stake centerline alignment every 50 feet with cut or fill to invert of pipe maintaining minimum cover over pipe.

B. Stake location of all fire hydrants, tee, reclaimed water meters and other fixtures and mark cut or fill to hydrant flange finished grade.

6.160 Trench Excavation and Pipe Laying

Clearing and grubbing where required shall be performed within the easement or public right-of-way as permitted by the City in conformance to WSDOT *Standard Specifications*. Debris resulting from the clearing and grubbing shall be disposed of by the contractor in accordance with the terms of all applicable permits. Track mounted equipment shall not be allowed on paved City streets and public rights-of-way outside of the approved project boundaries and gravel streets without prior approval by the City.

The contractor shall perform all excavation in whatever substance is encountered. Boulders, hardpan, clay rocks, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below water main grade. Where materials are removed from below water main grade, the trench shall be backfilled to grade with material satisfactory to the City and thoroughly compacted.

Trenches shall be excavated to the line and depth designated by the City to provide a minimum of 36 inches cover over the pipe. The trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space and in compliance with all State and Federal guidelines.

Surface water shall be diverted so as not to enter the trench. Trench water or other deleterious materials shall not be allowed to enter the pipe at any time. The contractor shall maintain sufficient pumping equipment on the job to ensure that these provisions are carried out. Provisions shall be made to prevent floating of the pipe.

The contractor shall handle all types of pipe in a manner that will prevent damage to the pipe, pipe lining or coating. Pipe and fittings shall be loaded and unloaded using hoists and slings in a manner to avoid shock or damage, and under no circumstances shall pipe be dropped, skidded, or rolled against another pipe.

If the Inspector determines that the contractor's methods are damaging to the pipe, the contractor shall correct the handling methods. All damaged pipe will be rejected, marked as such, placed apart from undamaged pipe, and shall be removed from the site within 24 hours. Pipe shall be stacked in such a manner as to prevent damage to the pipe, to prevent dirt and debris from entering the pipe, and to prevent any movement of the pipe. For public safety, each size of pipe shall be stacked separately.

Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations, and any pipe or fitting that has been installed with dirt or foreign material in it shall be removed, cleaned and re-laid. At times, when pipe laying is not in progress, the open ends of the pipe shall be closed by a watertight plug or by other means approved by the Engineer to ensure cleanliness inside the pipe.

The bottom of the trench shall be finished to grade with hand tools in such a manner that the pipe will be bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to accommodate the joint.

Long radius curves, either horizontal or vertical, may be laid with standard pipe by deflecting the joints. The amount of deflection at each pipe joint when pipe is laid on a curve shall not exceed the manufacturer’s printed recommended deflections. When rubber gasketed pipe is laid on a curve, the pipe shall be jointed in a straight alignment and then deflected to the curved alignment. Trenches shall be made wider on curves for this purpose.

. When the contractor is trenching and shoring adjacent to an existing water main or any other underground utilities or public safety concerns exist, the City may require more stringent trenching standards. Trenching, shoring and pipe laying shall be in conformance with Washington Industrial Safety and Health Administration (WISHA), Washington Department of Labor and Industries (L&I), the Office of Safety and Health Administration (OSHA) Safety Standards and any other agency with jurisdiction.

6.170 Thrust Blocking

Location of thrust blocking shall be shown on plans. Thrust block concrete shall be commercial Class 3000 psi poured against undisturbed earth. A plastic barrier shall be placed between all

thrust blocks and fittings. See Standard Drawings RW-08, RW-09, RW-10 for thrust block locations and calculations. If so desired, thrust blocking may be achieved through the use of Mega Lug Joint Restraints, or approved equals, to provide enough restrained length to make the pipe its own thrust block.

6.180 Backfilling

Backfilling and surface restoration shall closely follow installation of pipe so that no more than 100 feet is left exposed during construction hours without approval of the City. All trenches shall be backfilled during non-working hours unless otherwise approved by the City. Selected backfill material shall be placed and compacted around and under the reclaimed water main. The remaining backfill shall be compacted to 95 percent of the maximum density in traveled areas. Where governmental agencies other than the City have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having jurisdiction. See Standard Drawing T-19 for backfill and bedding materials.

6.190 Street Patching and Restoration

A. Temporary Street Patching

Temporary Street Patching shall be in accordance with Shelton Design and Construction Standards in Chapter 2.190.

B. Trench Pavement Restoration

Trench Pavement Restoration shall be in accordance with Shelton Design and Construction Standards Chapter 2.200.

6.200 Hydrostatic Tests

Prior to the acceptance of the work, the installation shall be subjected to a hydrostatic pressure test, and any leaks or imperfections developing under said pressure shall be remedied by the contractor. The main shall be tested between valves. No hydrostatic pressure shall be placed against the opposite side of the valve being tested. Test pressure shall be maintained while the entire installation is inspected.

The contractor shall notify the City 48 hours in advance of the planned testing.

The contractor shall provide all necessary equipment and shall perform all work connected with the tests. Tests will be done after all connections have been made and the roadway section is

constructed to subgrade. This is to include all connections as shown on the plan. The contractor shall perform the test to assure that testing equipment is in good operating condition and the air in the line has been released before requesting the City to witness the test.

LIST OF DRAWINGS
CHAPTER 6 RECLAIMED WATER

Title	Drawing
2" Air Vacuum/Release Valve Combination Assembly	RW-01
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W-02 - HORIZONTAL & VERTICAL SEPARATION OF RECLAIMED WATER & OTHER PIPING

W-03 - RECLAIMED WATER VALVE & VALVE BOX

W-04 - RECLAIMED WATER COMBINATION AIR RELEASE/ AIR VACUUM VALVE

W-05 - RECLAIMED WATER SETTER 1" DIAMETER

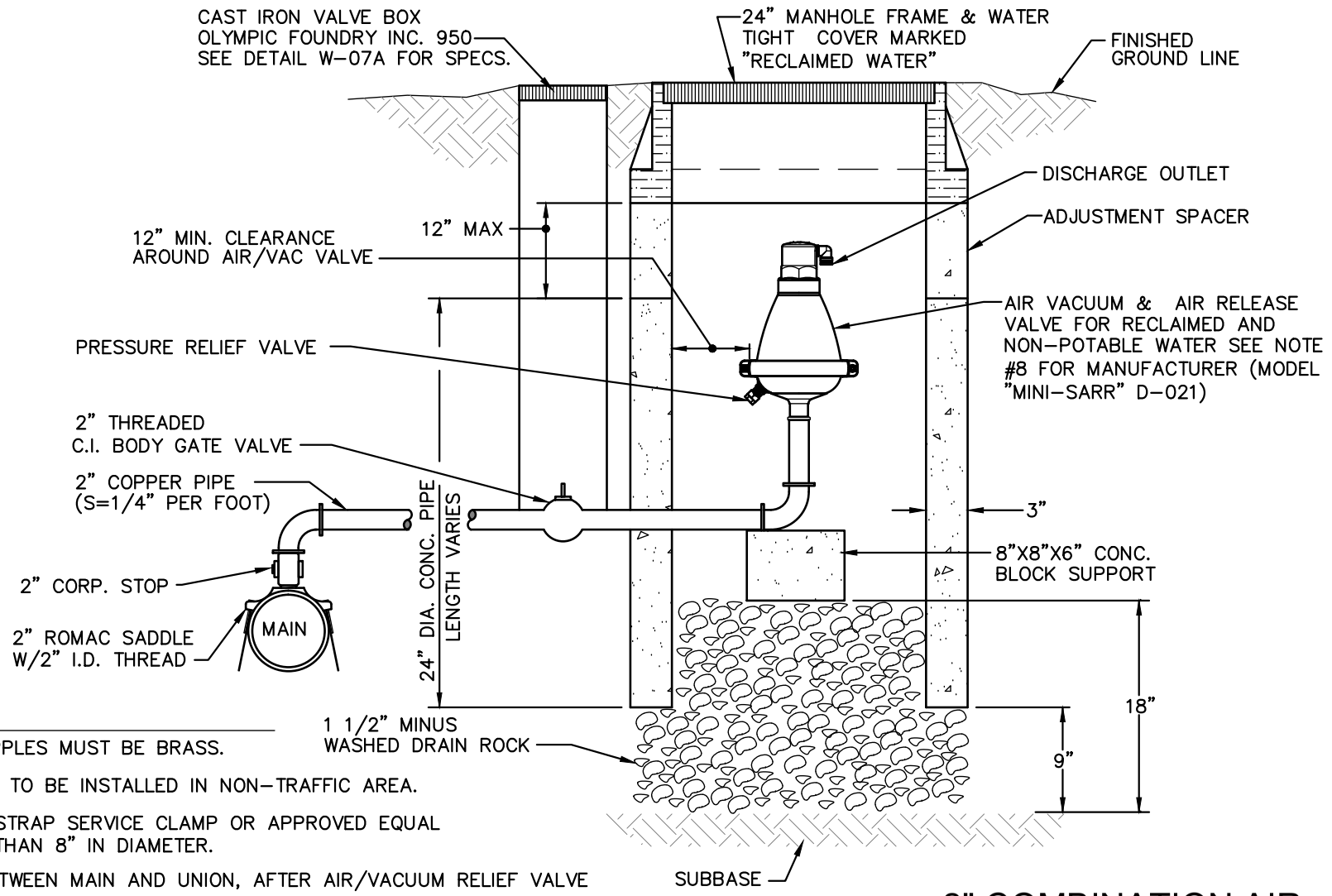
W-06 - RECLAIMED WATER SETTER 2" DIAMETER

W-07 - RECLAIMED WATER BLOWOFF ASSEMBLY INSTALLATION

W-08 - RECLAIMED WATER VERTICAL THRUST BLOCKING

W-09 - RECLAIMED WATER ALTERNATE VERTICAL CONCRETE BLOCKING

W-10 - RECLAIMED WATER HORIZONTAL THRUST BLOCKING



NOTES:

1. ALL FITTINGS AND NIPPLES MUST BE BRASS.
2. AIR-VAC UNIT & BOX TO BE INSTALLED IN NON-TRAFFIC AREA.
3. USE ROMAC DOUBLE STRAP SERVICE CLAMP OR APPROVED EQUAL ON ALL MAINS LESS THAN 8" IN DIAMETER.
4. ALL PIPE FITTINGS BETWEEN MAIN AND UNION, AFTER AIR/VACUUM RELIEF VALVE SHALL BE BRASS.
5. INSTALLATIONS FOR OTHER SIZE AIR/VACUUM RELIEF VALVES SHALL BE INDIVIDUALLY DESIGNED AND WILL REQUIRE APPROVAL BY THE UTILITIES DIVISION.
6. AIR/VAC RELEASE VALVE ASSEMBLY SHALL BE INSTALLED AT HIGH POINT ON LINE. IF HIGH POINT FALLS IN LOCATION WHERE ASSEMBLY CANNOT BE INSTALLED, PROVIDE ADDITIONAL DEPTH TO CREATE NEW HIGH POINT.
7. CONCRETE VAULT PENETRATIONS SHALL BE CORED DRILLED AND GROUTED.
8. PRODUCT MANUFACTURED BY A.R.I. FLOW CONTROL ACCESSORIES Ltd.

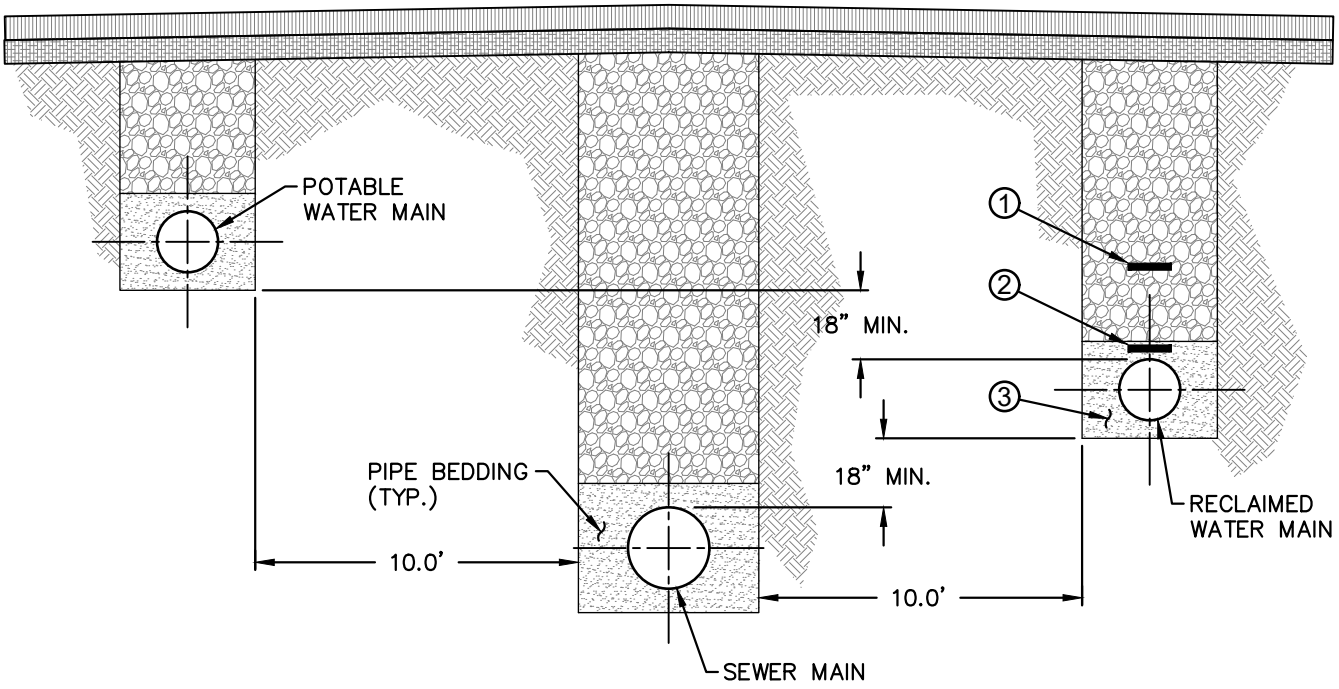
CITY of SHELTON WASHINGTON

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2" COMBINATION AIR VACCUM/AIR RELEASE VALVE ASSEMBLY

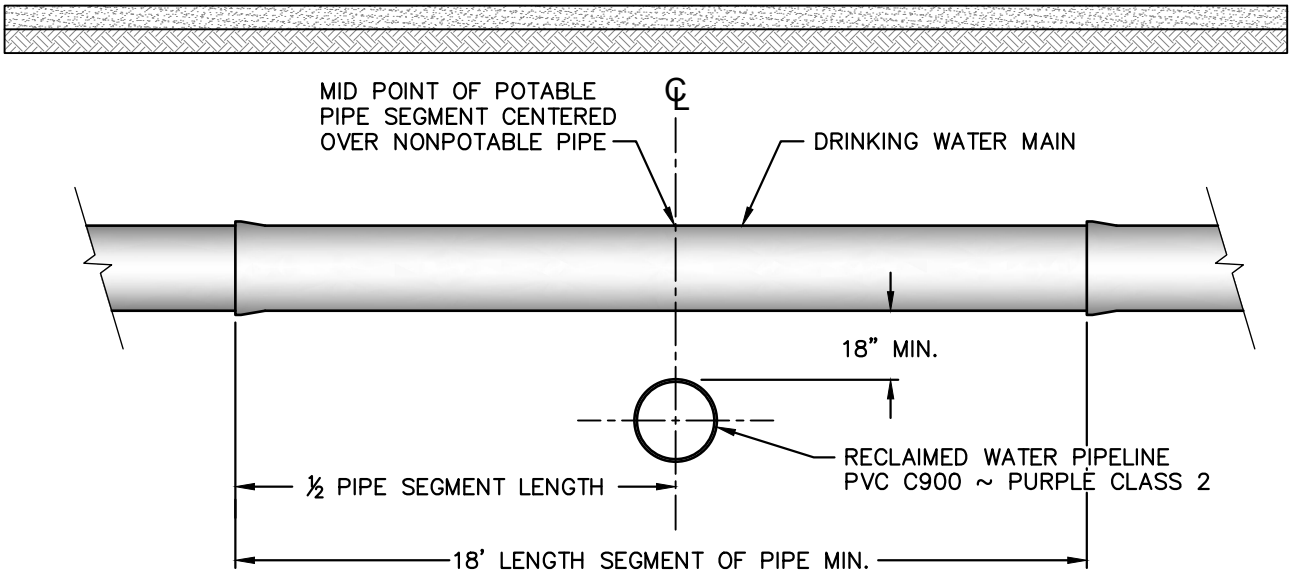
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TYPICAL URBAN UTILITY PIPE SEPARATIONS

NTS



TYPICAL UTILITY PIPE CROSSING

NTS

KEYNOTES:

① RECLAIMED WATER WARNING TAPE SHALL BE PLASTIC WITH NON BIODEGRADABLE METAL CORE OR BACKING THAT CAN BE TECTED WITH A STANDARD METAL DETECTOR. TAPE SHALL BE PURBLE WITH BLACK LETTERING STATING "CAUTION: RELAIMED WATER– DO NOT DRINK" AND SHALL BE PLACED 12" TO 18" BELOW FINISHED SURFACE.

② RECLAIMED WATER PIPE SHALL BE PURBLE COLOR AND CODED INTEGRALLY TAMPED IN BLACK "CAUTION: RECLAIMED WATER – DO NOT DRINK".

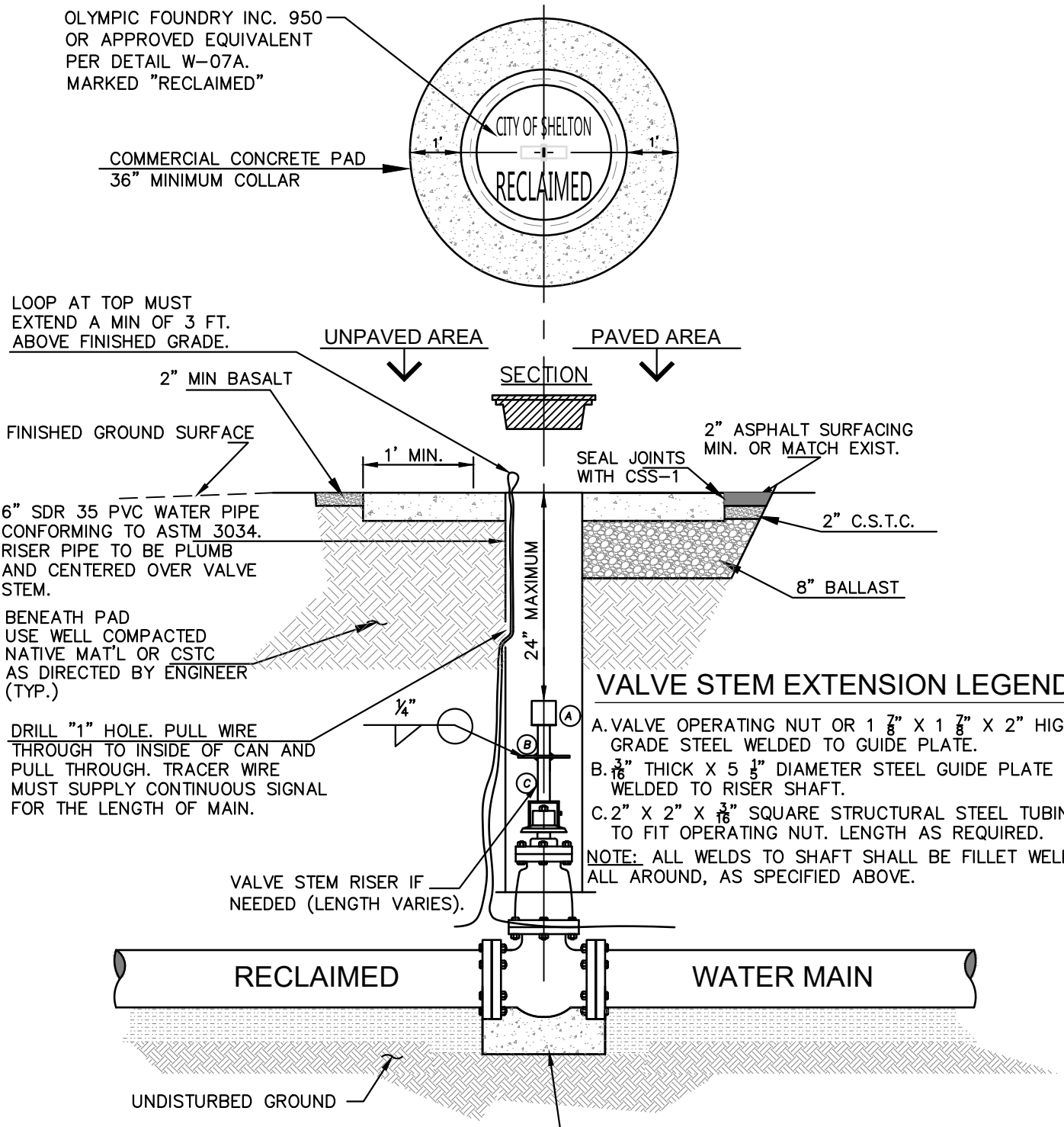
③ TRENCH DETAILS SHALL BE PER SHELTON STANDARDS.

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HORIZONTAL & VERTICAL SEPARATION OF RECLAIMED WATER & OTHER PIPING

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-02



VALVE STEM EXTENSION LEGEND:

A. VALVE OPERATING NUT OR 1 7/8" X 1 7/8" X 2" HIGH GRADE STEEL WELDED TO GUIDE PLATE.

B. 3/16" THICK X 5 1/5" DIAMETER STEEL GUIDE PLATE WELDED TO RISER SHAFT.

C. 2" X 2" X 3/16" SQUARE STRUCTURAL STEEL TUBING TO FIT OPERATING NUT. LENGTH AS REQUIRED.

NOTE: ALL WELDS TO SHAFT SHALL BE FILLET WELD ALL AROUND, AS SPECIFIED ABOVE.

NOTES:

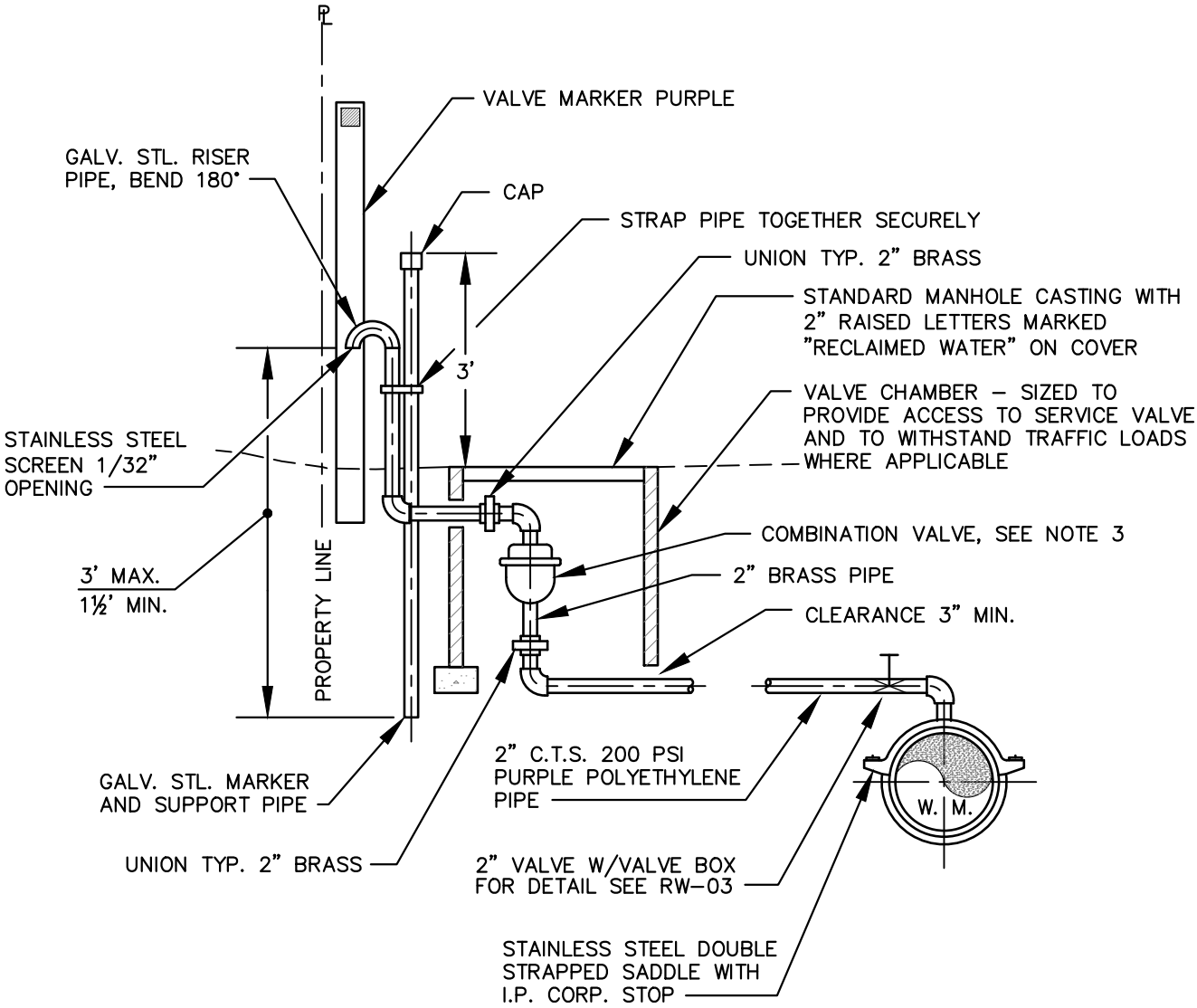
1. VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN TWO (2) FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG ONLY.
2. ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL. SIZED AS NOTED, AND PAINTED WITH TWO (2) COATS OF METAL PAINT.
3. IF EXTENSION IS NEEDED, USE 6" SDR 35 PVC WATER PIPE CONFORMING TO ASTM 3034.
4. A SQUARE CONCRETE PAD PROVIDING A 1' MINIMUM COLLAR AROUND THE VALVE MAY BE USED INSTEAD OF A CIRCULAR PAD. SEE DETAIL W-07A.
5. PIPE, MANHOLE, VALVE BOX & LID TO BE PAINTED REQUIRED PURPLE (PANTONE 512 OR PANTONE 522).

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RECLAIMED WATER VALVE & VALVE BOX

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NOTES:

1.. IF NOT SPECIFIED, SIZE OF PIPE SHALL BE SUBMITTED TO THE CITY FOR APPROVAL.

2. SUBMIT SHOP DRAWINGS OF VALVE CHAMBER FOR APPROVAL.

3. COMBINATION A.V./A.R. VALVE SHALL BE APCO 143C, 145C, 147C,149C OR EQUAL AS DICTATED BY SIZE OF WATER MAIN. SUBMIT CALCULATIONS TO THE CITY FOR APPROVAL.

4. ALL RIGID PIPE AND FITTINGS BELOW AIR RELIEF PIPE SHALL BE US MADE BRASS.

5. ACTUAL PIPE SIZES ARE DEPENDENT ON VALVE SIZE.

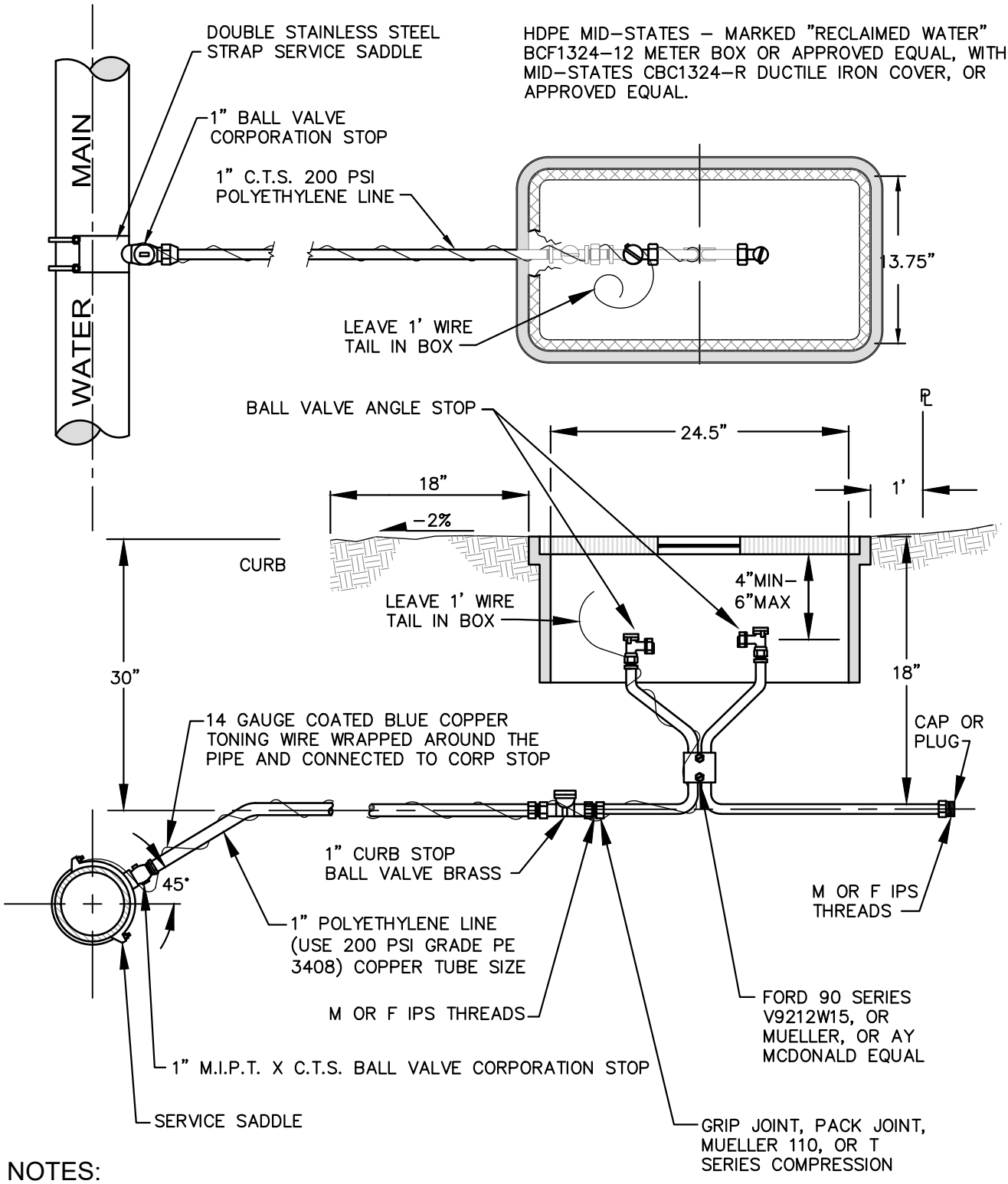
6. PAINT ALL PARTS PURPLE.

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RECLAIMED WATER COMBINATION AIR VACUUM/ AIR RELEASE VALVE

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-04



NOTES:

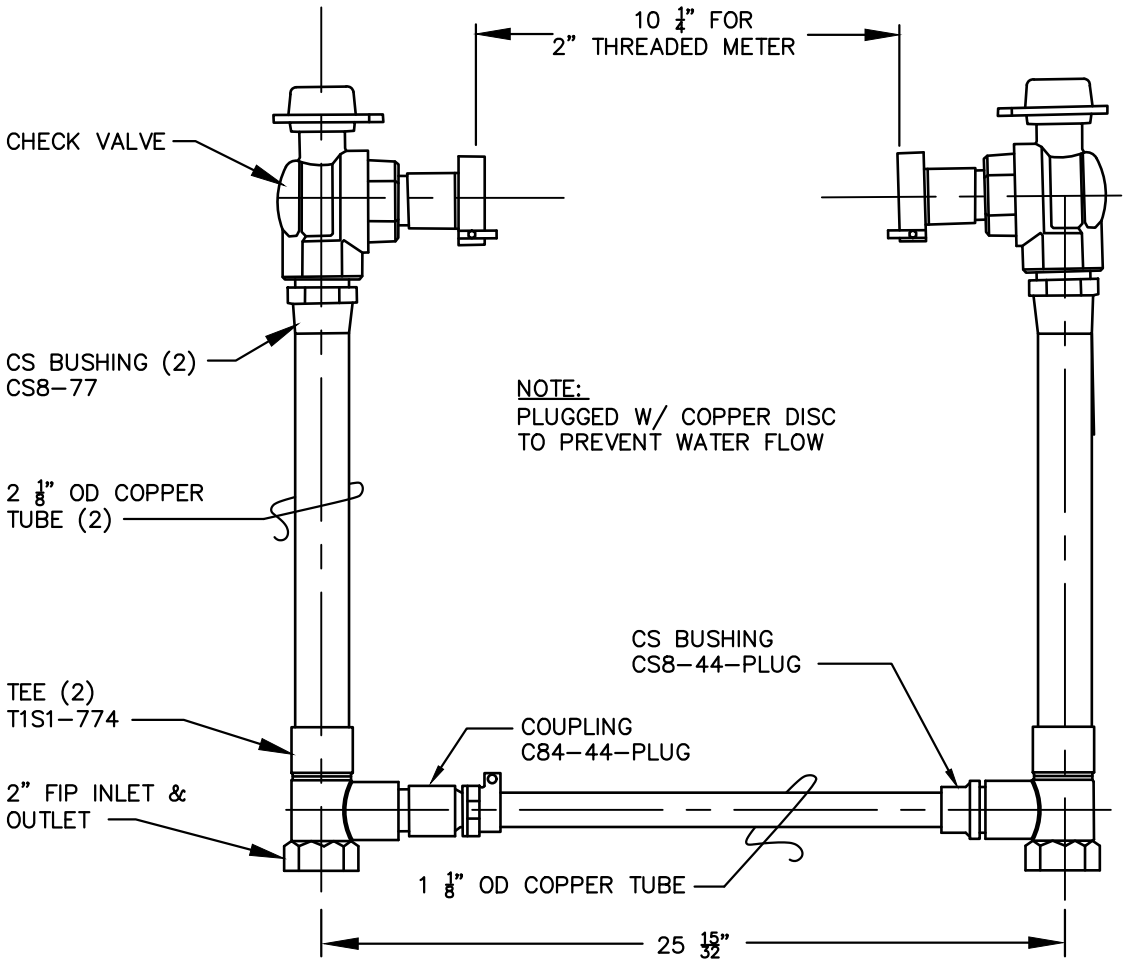
1. CORPORATION STOPS SHALL BE ALL U.S. BRASS AND SHALL BE FORD D, MUELLER, OR MCDONALD, WITH THREADS CONFORMING TO AWWA C800. STAINLESS STEEL INSERTS REQUIRED FOR ALL PACK JOINTS OR GRIP JOINTS.
2. SETTER SHALL BE CENTERED IN BOX.
3. ALL SERVICE SADDLES SHALL HAVE RUBBER GASKET, I.P. THREADS, AND STAINLESS STEEL DOUBLE STRAPS. TORQUE TO MANUFACTURES REQUIRED SPECIFICATIONS.

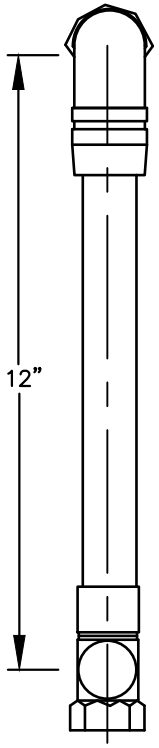
"Building A Stronger Community TOGETHER"

RECLAIMED WATER SETTER 1" DIAMETER

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-05





ALL BRASS OF
85-5-5-5 RED BRASS
UNS C83600 AWWA
C800-01 ASTM
B62-93

NOTES:

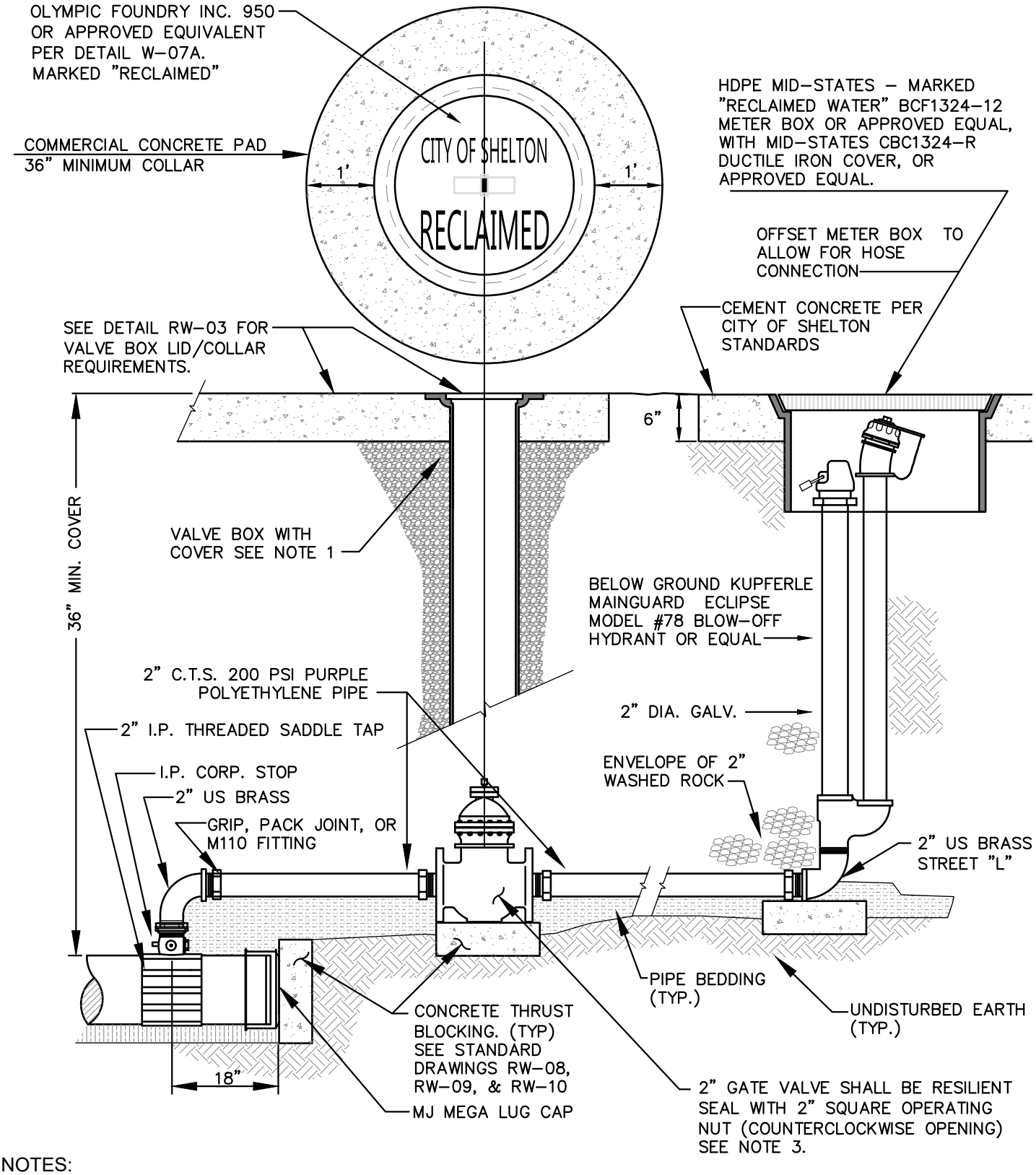
1. USE FORD VBRWH87-12-11-7710 OR APPROVED EQUAL FOR 1 1/2" AND 2" SETTERS.
2. PAINT ALL PARTS PURPLE

"Building A Stronger Community TOGETHER"

RECLAIMED WATER SETTER 2" DIAMETER

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-06



NOTES:

1. VALVE BOX AND COVER SHALL BE PER VALVE BOX STANDARD DRAWINGS RW-03.
2. LOCATE BLOWOFF HYDRANT OUTSIDE ROADWAY, LOCATE VALVE WITHIN ROADWAY.
3. ON RECLAIMED MAINS WHICH WILL BE EXTENDED IN THE FUTURE, THE VALVE WHICH OPERATES THE BLOWOFF ASSEMBLY SHALL BE THE SAME SIZE AND PROVIDED WITH A CONCRETE THRUST BLOCK.
4. PIPE, MANHOLE, VALVE BOX & LID TO BE PAINTED REQUIRED PURPLE (PANTONE 512 OR PANTONE 522).

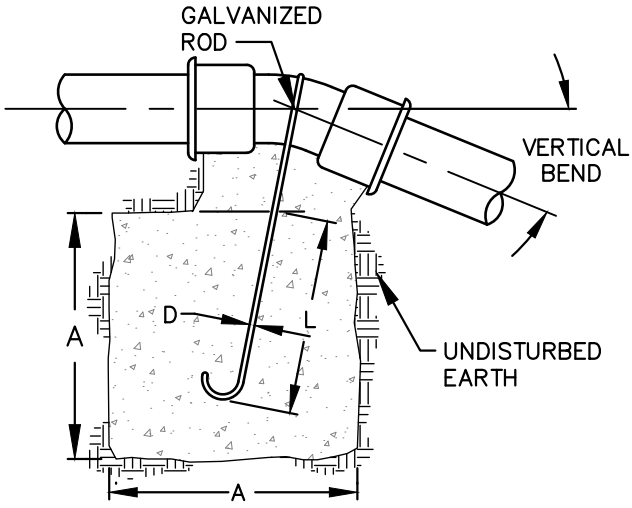
"Building A Stronger Community TOGETHER"

RECLAIMED WATER BLOW-OFF ASSEMBLY INSTALLATION

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-07

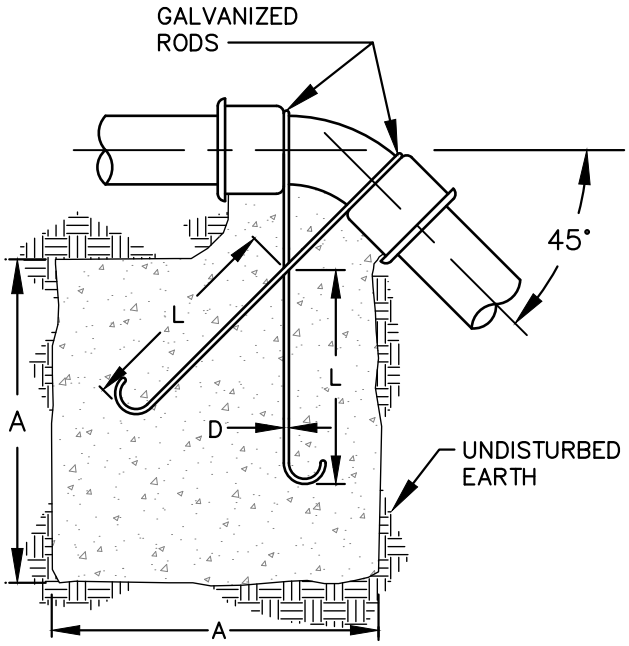
VERTICAL BLOCKING FOR 11 1/4° – 22 1/2° – 30° BENDS					
PIPE SIZE	VERT. BEND	GU FT.	A	D	L
4"	11 1/4°	8	2.0'	3/4"	1.5'
	22 1/2°	11	2.2'		2.0'
	30°	17	2.6'		
6"	11 1/4°	11	2.2'	3/4"	2.0'
	22 1/2°	25	2.8'		
	30°	41	3.5'		
8"	11 1/4°	16	2.5'	3/4"	2.0'
	22 1/2°	47	3.5'		
	30°	70	4.1'	3/4"	2.5'
12"	11 1/4°	32	3.2'	3/4"	2.0'
	22 1/2°	88	4.5'	7/8"	3.0'
	30°	132	5.1'		
16"	11 1/4°	70	4.1'	7/8"	3.0'
	22 1/2°	134	5.7'	1 1/3"	4.0'
	30°	275	6.5'	1 1/4"	
20"	11 1/4°	91	4.5'	7/8"	3.0'
	22 1/2°	225	6.1'	1 1/4"	4.0'
	30°	330	6.9'	1 3/8"	4.3'
24"	11 1/4°	128	5.0'	1"	3.5'
	22 1/2°	320	6.8'	1 3/8"	4.5'
	30°	480	7.0'	1 3/8"	5.5'



VERTICAL BLOCKING FOR 11 1/4° - 22 1/2° & 30° BENDS

NTS

VERTICAL BLOCKING FOR 45° BENDS					
PIPE SIZE	VERT. BEND	GU FT.	A	D	L
4"	45°	8	2.0'	3/4"	1.5'
6"	45°	11	2.2'		2.0'
8"	45°	17	2.6'		
12"	45°	11	2.2'	3/4"	2.0'
16"	45°	25	2.8'		
20"	45°	41	3.5'		
24"	45°	16	2.5'	3/4"	2.0'



VERTICAL BLOCKING FOR 45° BENDS

NTS

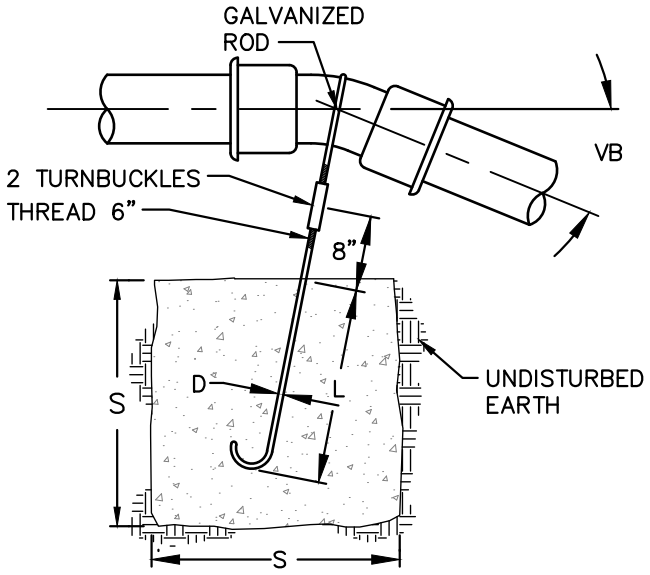
"Building A Stronger Community TOGETHER"

RECLAIMED WATER VERTICAL THRUST BLOCKING

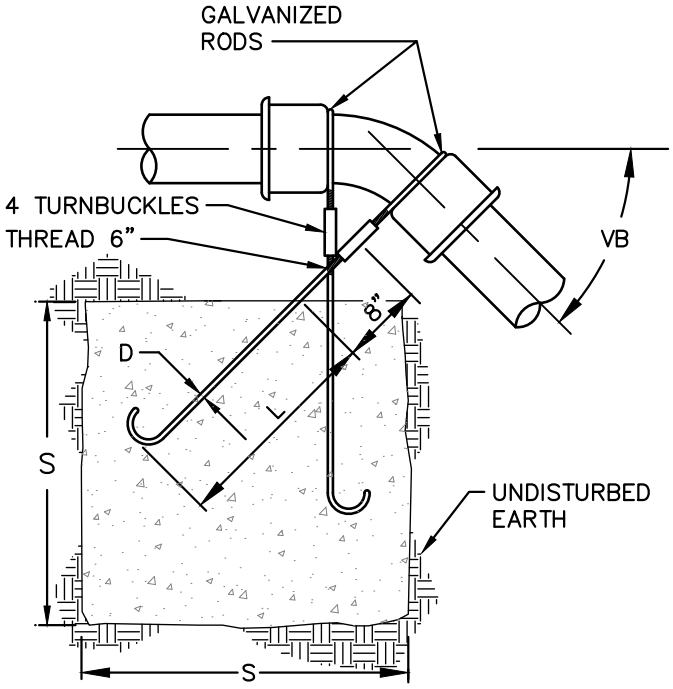
APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-08

TYPE "A" BLOCKING FOR 11 1/4° – 22 1/2° – 30° BENDS						
		VB		S	D	L
PIPE SIZE NOM. DIAMETER INCHES	TEST PRESSURE PSI	VERTICAL BEND DEGREES	NO. OF CU CT OF CONC. BLOCKING	SIDE OF CUBE FEET	DIAMETER OF SHACKLE RODS (4) INCHES	DEPTH OF RODS IN CONCRETE FEET
4	300	11 1/4°	8	2.0	3/4	1.5
		22 1/2°	11	2.2		2.0
		30°	17	2.6		
6	300	11 1/4°	11	2.2	3/4	2.0
		22 1/2°	25	2.9		
		30°	41	3.5		
8	300	11 1/4°	16	2.5	3/4	2.0
		22 1/2°	47	3.6		
		30°	70	4.1		2.5
12	250	11 1/4°	32	3.2	3/4	2.0
		22 1/2°	88	4.5		3.0
		30°	132	5.1		
16	225	11 1/4°	70	4.1	7/8	3.0
		22 1/2°	148	5.3	1 1/8	4.0
		30°	275	6.5	1 1/4	
20	200	11 1/4°	91	4.5	7/8	3.0
		22 1/2°	225	6.1	1 1/4	4.0
		30°	330	6.9	1 3/8	4.3
24	200	11 1/4°	128	5.0	1	3.5
		22 1/2°	320	6.8	1 3/8	4.5
		30°	480	7.9	1 5/8	5.5



VERTICAL BLOCKING
FOR 11 1/4° - 22 1/2° & 30° BENDS
NTS



CLASS 3000 CONC.
(OR COMMERCIAL)
NTS

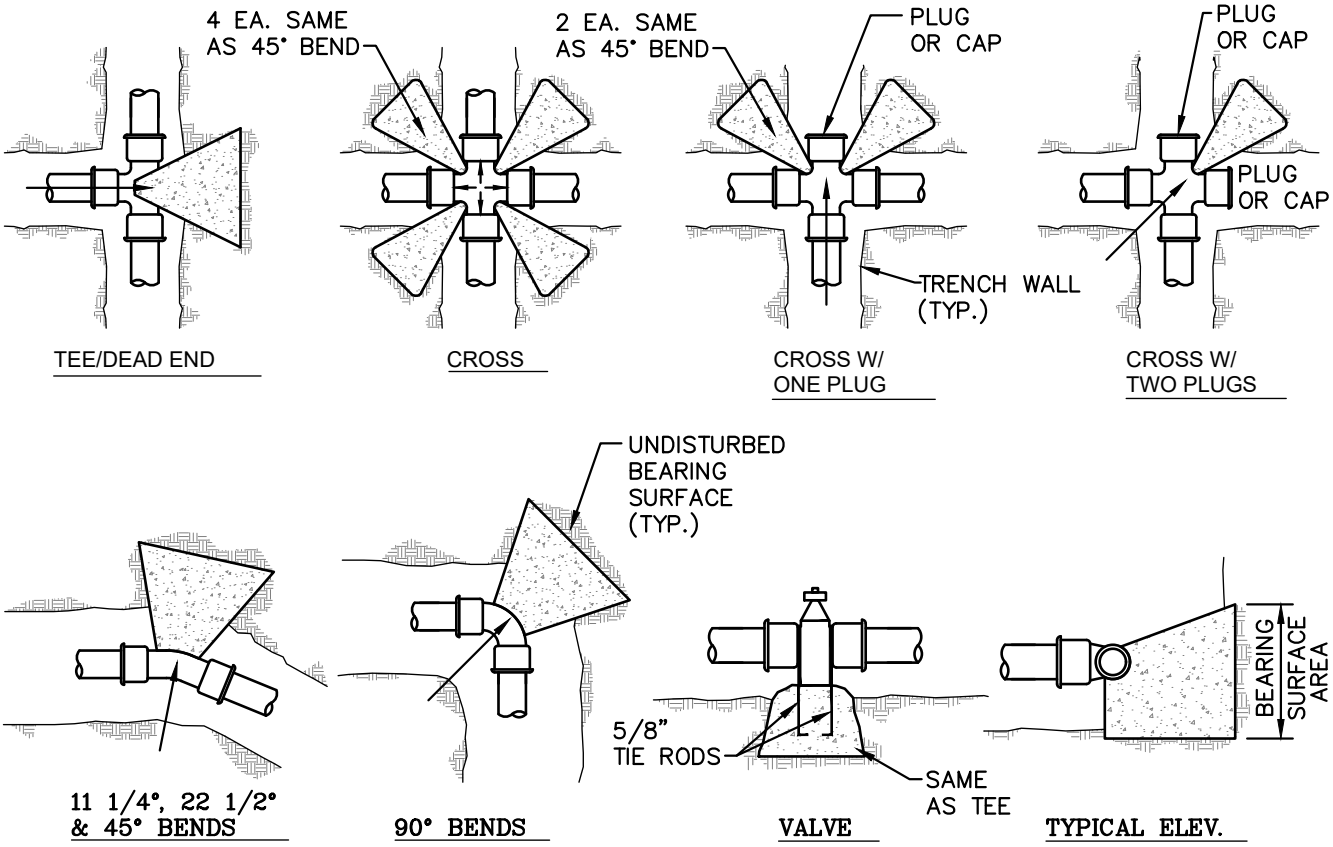
TYPE "B" BLOCKING FOR 45° BENDS						
		VB		S	D	L
PIPE SIZE NOM. DIAMETER INCHES	TEST PRESSURE PSI	VERTICAL BEND DEGREES	NO. OF CU CT OF CONC. BLOCKING	SIDE OF CUBE FEET	DIAMETER OF SHACKLE RODS (4) INCHES	DEPTH OF RODS IN CONCRETE FEET
4	300	45°	30	3.1	3/4	2.0
6	300	45°	68	4.1	3/4	2.0
8	300	45°	123	5.0	3/4	2.0
12	250	45°	232	6.1	3/4	2.5
16	225	45°	478	7.8	1 1/8	4.0
20	200	45°	560	8.2	1 1/4	4.0
24	200	45°	820	9.4	1 3/8	4.5

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RECLAIMED WATER ALTERNATE VERTICAL THRUST BLOCKING

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-09



TYPES OF CONCRETE BLOCKING

NTS

TABLE A

THRUST (IN LBS.) PER PSI OF WATER PRESSURE AT VARIOUS FITTINGS

PIPE SIZE	BENDS				TEES DEAD ENDS
	11 1/4°	22 1/2°	45°	90°	
4	3	7	13	24	17
6	7	15	29	53	38
8	13	26	51	95	67
10	21	41	80	148	105
12	30	60	115	213	150
14	40	80	157	290	205
16	52	104	205	378	267
18	66	132	259	479	338
20	82	163	320	591	418
24	118	235	461	851	602

TABLE B

ALLOWABLE BEARING PRESSURE FOR SOILS TYPES

SOIL TYPE	BEARING PRESSURE LBS./SQ. FT.
PEAT OR MUCK	0
ALLUVIAL SOIL	1,000
SOFT CLAY	2,000
SAND	4,000
SAND & GRAVEL	6,000
SAND & GRAVEL W/CLAY	8,000
SHALE	12,000
ROCK	20,000

NOTES

TABLE "A" SHOULD BE USED WITH THE MAXIMUM PRESSURE ANTICIPATED FOR HYDROSTATIC TEST PRESSURE OR SURGE PRESSURE. (WORKING PRESSURE TIMES 1.33)

IN ABSENCE OF A SOILS REPORT, AN AVERAGE SOIL (SOFT CLAY) WITH AN ASSUMED VALUE OF 2,000 PSF BEARING STRENGTH (FROM TABLE "B") MAY BE USED.

CONCRETE FOR THRUST BLOCKING SHALL BE CLASS 3000 OR COMMERCIAL AT THE DISCRETION OF THE CONTRACTOR.

SHACKLE RODS SHALL BE ASTM A-36 WITH MINIMUM YIELD STRESS OF 36KSI (KIPS PER SQ. IN.) MINIMUM ROD DIAMETER SHALL BE 5/8".

NOTES IN FIGURES SUCH AS: "SAME AS 45° BEND" MEANS THE THRUST BLOCK VALUE SHALL BE THE SAME AS DETERMINED FOR A 45° BEND OF THE SAME SIZE.

EXAMPLE

REQUIRED BEARING SURFACE FOR A 90° BEND IN 8" LINER WITH MAXIMUM OPERATING PRESSURE OR TEST PRESSURE OF 200 PSI AND SOIL BEARING STRENGTH OF 2,000 PSF:

$\frac{\text{THRUST}}{\text{SOIL STRENGTH}}$ = BEARING AREA (SQ. FT.)

THRUST = 95(FROM TABLE) X 200 = 19,000 LBS

$\frac{19{,}000 \text{ LBS}}{2{,}000 \text{ PSF}}$ 9.5 SQ. FT. = AREA OF UNDISTURBED SOIL REQUIRED

"Building A Stronger Community TOGETHER"

RECLAIMED WATER HORIZONTAL THRUST BLOCKING

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	RW-10



"Building A Stronger Community TOGETHER"

CITY OF SHELTON

DESIGN AND CONSTRUCTION STANDARDS 2019

City of Shelton
525 W. Cota Street
Shelton, WA 98584
(360) 426-4491

Effective Date: January 15, 2019



"Building A Stronger Community TOGETHER"

CITY OF SHELTON

DESIGN AND CONSTRUCTION STANDARDS

2019

Mayor
Bob Rogers

Deputy Mayor
Deidre Peterson

Council Members
Gary Cronce
Kathy McDowell
Kevin Dorcy
Eric Onisko
Joe Schmit

Administration

Jeff Niten	City Manager
Mark Zeigler	Community & Economic Development Director
Craig Gregory	Director of Public Works

2019 City of Shelton Design and Construction Standards
Update and Supplement

January 2019

This page indicates revisions to the 2018 version of the City of Shelton Design and Constructions Standards. Revisions are listed by chapter and section number. It is recommended that for future reference, this instruction page be kept in a convenient place in the Design Standard Book.

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	M-04
	M-05
	M-06
	M-07
TESC	DETAIL #
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	TC-12

FORWARD

Build a Stronger Community – TOGETHER!

Welcome to a community dedicated to a quality environment. Shelton's Administration, City Council and staff will work with you to create first class additions to our City. We look forward to meeting with you to work out the details of your project. This document will show you our process and our standards. We hope that all your questions can be answered here. If not, please call and we will be glad to help.

This document is intended to assist, advise, guide and direct all who propose to modify facilities or develop within the City. The processing of all documents shall be in accordance with these *Design and Construction Standards* and the regulations and standards of other agencies as referred to herein.

These Standards shall apply in the City, in applicable utility service areas, and in portions of Mason County that are within the City of Shelton's Urban Growth Management Area boundary.

We attempt to achieve maximum uniformity of planning, engineering, and construction practices within the City and outside the City as outlined above. These are minimum standards and are intended to assist, but not to substitute for competent work by engineering and design professionals. Special conditions or environmental constraints may require a more stringent design than would normally be required under these *Development Standards*. It is not the intent of the City to unreasonably limit any innovative effort that could result in a superior project design. A proposed design that is different from these *Development Standards* will be evaluated on the basis that the proposed design will produce a comparable or superior result, and is, in every way, adequate for the user, the City, and the public.

This document may contain minor errors, discrepancies or omissions. The editor would appreciate it if users of this document notify the City of any required corrections.

CITY OF SHELTON
DESIGN AND CONSTRUCTION STANDARDS

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C H A P T E R 1

1.000 GENERAL STANDARDS AND SPECIFICATIONS

1.010 Purpose

These City of Shelton Design and Construction Standards are intended to assist, advise, guide and direct all who propose to conduct new development or redevelopment within the City of Shelton, or propose actions that would impact public roads, public rights of way, or existing utility infrastructure. Processing of documents, design details, draft and final engineering documents, surveys, testing and construction shall be in accordance with these Standards, and the regulations and standards of other agencies referred to herein.

1.020 Shortened Designation

These City of Shelton Design and Construction Standards shall be cited routinely in this text as the *Standards*.

1.030 Applicability

These *Standards* are applicable to all new construction, reconstruction and upgrading of facilities in the right-of-way and on-site for transportation and transportation-related facilities, storm drainage facilities, and sewer and water improvements.

The following specifications shall be applicable when pertinent, when specifically cited in the Standards or when required by a higher funding authority. In case of disputes regarding which *Standards* apply, the Director of Public Works will have the final decision.

A. The current edition of the Washington State Department of Transportation/American Public Works Association (WSDOT/APWA) Standard Specifications for Road, Bridge and Municipal Construction and the APWA Amendment to Division.

B. Conditions and standards as set forth in the current edition of the City of Shelton Comprehensive Water System Plan.

C. Conditions and standards as set forth in the current edition of the City of Shelton Comprehensive Sewer Plan Update and the City of Shelton 1997 I/I Facility Plan Update.

D. Conditions and standards as set forth in the current edition of the City of Shelton Comprehensive Plan.

E. Adopted rules, regulations and ordinances of the *Shelton Municipal Code.*

F. Criteria set forth in the Local Agency Guidelines as amended and approved by Washington State Department of Transportation.

G. City and County Design Standards for the Construction of Urban and Rural Arterial and Collector Roads Promulgated by the City Engineers Association of Washington, May 24, 1989, or most current edition.

H. Conditions and standards as set forth in the Washington State Department of Transportation (WSDOT) Design Manual as amended and approved by WSDOT.

I. U.S. Department of Transportation's Manual on Uniform Traffic Control Devices (MUTCD) as amended and approved by WSDOT.

J. Washington State Department of Transportation (WSDOT) Construction Manual as amended and approved by WSDOT.

K. Washington State Department of Ecology (DOE) Stormwater Management Manual for the Puget Sound Basin and the Shelton Municipal Code, Title 13.

L. Rules and regulations of the State Board of Health regarding public water supplies as published by the State Department of Health.

M. Conditions and standards as set forth in the State of Washington Department of Ecology Criteria for Sewage Works Design, most current edition.

N. Conditions and standards as set forth by the State of Washington, Department of Labor and Industries.

O. Criteria as set forth in the latest American Association of State Highway and Transportation Officials (AASHTO) policy on geometric design of highways and streets.

P. Design criteria of federal agencies including Department of Housing and Urban Development and the Federal Housing Administration.

Q. Conditions and standards as set forth in the American Water Works Association (AWWA) design manuals.

R. Criteria as set forth in Highway Capacity Manual (Special Report 209)

S. American Water Works Association (AWWA) Cross Connection Control Manual dated December 1995, or most current edition.

T. State of Washington Department of Health Water System Design Manual (current edition).

U. Federal “Americans with Disabilities” Act (ADA).

V. Other specifications not listed above as may apply when required by the City.

1.040 Definitions and Terms

"Average Daily Traffic or (ADT)” -- The average number of vehicles passing a specified point during a 24-hour period. Annual average daily traffic (AADT) denotes daily traffic that is averaged over one calendar year.

"Bicycle Facilities" -- That portion of the public right-of-way used exclusively for bicyclists or shared with other transportation modes.

"BOD" -- (denoting Biochemical Oxygen Demand) shall be the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in 5 days at 20 degrees Celsius expressed in parts per million (mg/l) by weight.

"Building Drain" -- Shall be that portion of the waste drainage line(s) inside the walls of the building that connect to the building sewer. (SMC 14.04.030)

"Building Official" -- Is the City of Shelton Building Official or his/her designated appointee.

"Building Sewer" -- Shall be that portion of the sewer line from the building foundation and extending two feet outside the foundation wall of the structure. (SMC 14.04.040). Maintenance of building sewer shall be the responsibility of the property owners.

"CED" -- Refers to the City of Shelton Community and Economic Development.

"Civil Engineer" -- A professional engineer registered in the State of Washington.

"Controlled Density Fill (CDF)" -- A lean sand and concrete mixture–with a maximum of 188 lbs. of cement per cubic yard (depending on application) and resulting in a material with a compressive strength of 50 to 200 pounds per square inch (depending on cement ratio) as outlined in Section 2-09.3(1)E of the Washington State Department of Transportation Standard Specifications.

"City" -- Refers to the City of Shelton. (SMC 14.04.050)

"City Engineer" -- The individual appointed by the City of Shelton as its City Engineer or his or her duly authorized representative.

"Developer" -- Any person, firm, partnership, association, joint venture, or corporation or any other entity responsible for a given project.

"Development" -- Any man-made change to improved or unimproved real property including but not limited to construction of buildings or other structures, additions, reconstruction, placement of manufactured home/mobile home, mining, dredging, logging, clearing, filling, grading, paving, excavation, drilling operations, storage of equipment or materials, any activity that results in the removal of vegetation or alteration of natural site characteristics or the division of property pursuant to the subdivision regulations.

"Director of Public Works" -- The individual appointed by the City of Shelton as its Public Works Director or his or her duly authorized representative.

“Driveway” -- An access from a public right of way or private street easement/tract to one (1) or two (2) parcels maximum, with a length of no more than 50 feet as measured from the edge of the

right of way or private street easement/tract to the point where shared access ends for two (2) parcels.

"Dwelling Unit" -- one or more rooms including kitchen designed as a unit for occupancy by one family for the purpose of cooking, living and sleeping.

"Easement" -- The right to use a defined area of property on a plat or short plat for specific purpose(s) set forth in the easement document.

"Engineer" -- Any Washington State licensed professional engineer who represents the developer.

"ERU" -- The unit used to calculate sewer consumption. One Equivalent Residential Unit (ERU) for other than residential equals two hundred twenty-five gallons of wastewater per day. (Shelton Municipal Code Chapter 14.04, Section 14.04.130 Definitions and Chapter 14.28, Sewer Service-Rates and charges).

“Cues’ GraniteNet” -- Data collection software used in CCTV pipeline inspections.

"Half Street" -- A portion of an arterial roadway section modified to conform to when limited right-of-way is presently available, or when constructing a portion of the road section when less capacity is necessary for adequate levels of service.

"Inspector" -- The authorized representative of the City Engineer or Public Works Director who is assigned to the project site or any part thereof during construction.

"Interceptor" -- A sewer that receives flow from a number of main trunk sewers, force mains, etc.

"Lateral" -- That section of the sewer line extending from the City’s main to the right-of-way or easement line. Maintenance of the lateral is the responsibility of the property owner. (SMC 14.12.150)

"Level of Service (LOS)" -- An indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. LOS means an established minimum capacity of capital facilities that must be provided per unit of demand or other appropriate measures of need.

“Multi-Dwelling Unit (MDU)” -- A classification of housing where multiple separate housing units for residential inhabitants are contained within one building or several buildings within one complex. This classification includes duplexes, apartment buildings, condominiums, mobile home parks, trailer courts, and other like structures.

"NPDES" -- The 'National Pollutant Discharge Elimination System' permit program administered by the Washington State Department of Ecology.

"Plans" -- The plans, profiles, cross sections, elevations, details and supplementary specifications signed by a licensed professional Engineer and approved by the City, which show the location, character, dimensions and details of the work to be performed.

"Pretreatment" -- The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutants in wastewater prior to discharge to the City's system.

"Pretreatment Program" -- An approved plan that provides for pretreatment, monitoring, sampling, and conditioning of wastewater prior to discharge to the City system.

"Private Pump Station" -- A private pump station is a facility connected to a private sewer main, lateral or side sewer which conveys sewage or effluent by pumping to a City lateral, trunk, or interceptor sewer line. The design and construction of the private pump station must receive approval of the City prior to use. The private property owner will own, operate and maintain this pump station.

"Private Sewer" -- Pertains to a sewer not owned or maintained by the City.

"Private Street" -- Privately owned and maintained vehicular access, not including driveways, serving at least two (2) but no more than four (4) lots, extending across a private lot or tract with an access easement that originates from a public right-of-way. The number of lots served by the private street shall include the parcel the private street crosses unless the parcel’s sole purpose is to provide access.

"Project" -- General term encompassing all phases of the work to be performed and is synonymous to the term "improvement" or "work".

"Property" -- A lot, parcel, or tract of land together with the building and structures located thereon.

"Public Sewer" -- That portion of the system located within public rights-of-way or easements and which are operated and maintained by the City, including interceptors, trunks, mains and force mains along with all publicly controlled and maintained manholes, pump stations and other appurtenances.

"Public Street" -- Publicly owned and maintained street.

"Redevelopment" -- The conversion, structural alteration, relocation, significant alteration or improvement, or enlargement of any structure; and/or the addition or improvement of site features; for the purpose of changing the type of, or increasing the intensity of use of a site.

"Right-of-Way" -- A general term denoting public land, property, or interest therein acquired for or devoted to a public street, public access or public use.

"Road" -- An open general public way for the passage of persons and vehicles. Used interchangeably with street.

"Sanitary Sewage" -- Wastewater derived from domestic, commercial and industrial pretreated waste to which storm, surface and ground water are not intentionally admitted.

"Sewer Main or Trunk" -- A sewer that receives flow from individual services and from one or more mains.

“SCADA” -- (supervisory control and data acquisition) is a category of software application program for process control, the gathering of data in real time from remote locations in order to control equipment and conditions.

"Side Sewer" -- That portion of the system located on private property connecting the building sewer to the lateral. Maintenance of side sewers is the responsibility of the property owner.

"SMC" -- Shelton Municipal Code.

"State" -- Wherever the *Standard Specifications* uses the term "State" to define "owner", the term "State" shall be construed to mean the City of Shelton.

"Street" -- A public thoroughfare used for the passage of persons and vehicles from one place to another, including the sidewalks lining one or both sides. Used interchangeably with roads.

"Street Frontage of Lot" -- The distance between the two points where the lot lines intersect the boundary of public street right-of-way.

"Subgrade" -- The top surface of the roadbed on which sub-base, base, surfacing, pavement or layers of similar materials are placed.

“Unpaved Street” - An existing street segment within the City that is actively maintained by City crews and which has a gravel or compacted dirt driving surface.

"Utility" -- A company providing public service including but not limited to, gas, electric power, street, street lighting, telephone and other communication lines, water, sewer, solid waste, storm drainage, or cable television whether or not such utility is privately owned or owned by a governmental entity.

"Urban Density" -- Development of land at a minimum of four dwelling units per acre. Development for commercial or industrial uses that require urban services such as municipal water or sewer is considered to be urban in nature.

1.050 Changes to Standards

Changes and revisions to the City of Shelton Design and Construction Standards shall be considered on an annual basis, and revised as a new version each year with the title indicating the year which the revised standards shall be in effect. The Public Works Director shall provide a report to the City Council summarizing the revisions being considered as part of the annual update prior to implementing the proposed revisions.

1.060 Severability

If any part of these *City of Shelton Development Standards* shall be found invalid, all other parts shall remain in effect.

1.070 Design Standards

Detailed plans for new development or redevelopment within the City of Shelton, or proposed actions that would cause modifications to existing public roads, public rights of way, or

existing utility infrastructure, must be prepared by the Engineer and submitted to the City for plan review and approval prior to the commencement of any construction. The Engineer shall be a Professional Engineer, registered as such in the State of Washington.

Officially designated historical facilities and districts shall be highlighted.

All plans must be signed and stamped by the Engineer prior to submittal for plan review. Final plans shall be approved by the City prior to the start of construction. Any alteration(s) to the approved Final Plans shall be submitted by the Engineer and approved by the Public Works Director prior to construction.

Plan Preparation Standards: The plans prepared by the Engineer shall show all relevant surface features and all subsurface utilities, and shall show both plan and profile views. Separate plan sheets shall highlight the location of individual utilities (water, sewer, storm drainage, etc.) while also showing the other utilities. The plans shall show easements where utilities are on private property, and all utility facilities within those easements must be shown. The plans shall show invert elevations of water, sewer and storm drain mains at the outlet and all inlets of each manhole, slope of the main(s), and surface elevations of all surface structures. In the profile view, the finish ground elevation over the pipe(s) shall be shown. Notes shall be provided on the plans that refer to specific City standards for such things as catch basins, manholes, lampholes, crosswalks, water meter boxes, side sewers, etc. Horizontal and vertical clearances shall be shown between proposed and existing utilities. All cross connection control devices shall be detailed on the plans. If the Engineer is aware of any known or potential conflicts, these shall be highlighted.

Eight (8) sets of plans are required. All drawings shall be on 24" x 36" sheet size or as otherwise approved by the City. The minimum allowable scale shall be 1 inch = 40 feet. On small projects, the scale will be enlarged to adequately utilize the full plan sheet. Final plans for construction and As-Built plans shall be good quality reproducible ink on Mylar. The original reproducible copy of the drawings will be returned to the applicant’s Engineer after approval by the City.

Within 30 days following the completion of construction, the original signed plan on Mylar shall be modified as needed to be

"As-Built", and certified by the Engineer. "As-Built" plans shall be submitted to the City showing the true condition or configuration of what has been built. "As-Built" plans shall be on 24-inch x 36-inch sheet size and accompanied by the redlined drawing plans digital file in AutoCAD release 2011 or above, with plot files, fonts, shape files, and x-ref, as well as properly executed easement deeds as applicable. "As-Built" plans shall become the property of the City.

Plans and profile drawings, showing all existing and proposed facilities are required for all proposed transportation-related improvements, street illumination, traffic signalization, storm drainage, and sewer and water improvements. Specifications shall be required and submitted with the plans if General Notes do not adequately cover the project requirements. If the project is to be done in phases, each phase shall be clearly defined and the entire project shall be designed by an Engineer and approved by the City before any portions of the proposed improvement can be constructed. Sizing and layout shall take into account the entire project.

On occasion, the scope of the project (i.e., relocation of a hydrant or installing a new driveway to an existing single-family home) may not require engineered plans and can instead be handled via a Right-of-Way Access Permit. This option will be decided by the City.

1.080 Plan Review

All plans are to be submitted to the City together with any necessary easements or dedications. A preliminary check of the plans and other documents will be made by the City to ensure that the plans meet minimum requirements. If the plans appear to meet minimum requirements as to completeness, they will then be routed to the appropriate City staff for substantive/content review and the plan review process begins.

Submittals of plans may include construction drawings, specifications, design calculations, drainage calculations, Maintenance and Operations Manuals, and accompanying deeds, easements and/or other documents pertaining to the project. Additional information may be required from the applicant to ensure that the City's infrastructure needs are met and that the project is consistent with City of Shelton Comprehensive Plans, and future City needs.

Initial turnaround time for the review of plans is normally two weeks, but may be longer for larger projects. (Note: This is also the review time for any subsequent submittals.) The Engineer is then contacted by City staff, is notified of required revisions, or is requested to submit the original drawings for final approval. Additional review time will be required if revisions are necessary.

Some proposed projects may require other governing agency approval(s), which might require additional time.

If revisions to the plans require three (3) or more submittals, additional fees will be levied by the City. The fee for third submittal review is established by Resolution of the City Council. Third submittal shall mean the third and any subsequent submittal. Once all the corrections have been made, the original reproducible plans shall be submitted for City signature. The originals will be returned and the City shall receive five (5) copies for official records. All prints used for construction shall bear the City approval.

Approved plans will be returned to the Engineer after all plan review fees have been paid.

1.090 Construction Control

Work performed for or impacting the construction of streets and utilities, or private development that falls under these *Standards*, whether by or for a private developer, by City forces, or by a City contractor, shall be done to the satisfaction of the City and in accordance with approved plans. It is emphasized that no work shall be started until such plans are approved. Any revisions to such plans shall be submitted by the Engineer and approved by the City before being implemented. Failure to receive the City's approval can result in removal or modification of construction not in conformance with approved plans, at the developer’s expense. All improvements shall be staked by a licensed professional civil engineer or surveyor and appropriate right-of-way/easement locations shall be determined.

The Engineer shall include the General Construction Notes in Section 1.220 on any plans dealing with construction of alternations, extensions or connections to public facilities, unless otherwise directed by the City.

1.100 Inspection

All work performed within the public rights-of-way, easements, private development that falls under these *Standards*, or as otherwise described in these *Standards*, whether by or for a private developer, by City forces, or by a City contractor, shall be done to the satisfaction of the City and in accordance with the approved plans and these *Standards*. Any revision(s) to the Final Plans must be submitted by the Engineer and approved by the City before being implemented.

It is the responsibility of the developer, the developer's contractor or their agents to notify the City in advance of the commencement of any construction work. The contractor shall contact the City to schedule a preconstruction meeting and/or field review prior to the commencement of work (two business days' notice is required). Inspections are to be scheduled through the Public Works Department.

It is the responsibility of the developer, the contractor or their agents to have an approved set of plans and any necessary permits on the job site whenever work is being performed. The City shall have authority to enforce construction authorized by the approved plans and these *Standards* as well as other referenced or pertinent specifications. The City will assign personnel as necessary to inspect the work being performed.

All specific inspections, test measurements or actions required of all work and materials are set forth herein. All tests shall be performed at the developer's or contractor's expense and witnessed by the City Inspector. Failure to comply with the provisions of these *Standards* may result in stop work orders, removal of work accomplished, at the developer's expense, or other penalties as established by Ordinance.

Failure to contact the City for required inspection may result in claims against bonds or other penalties as established by Ordinance.

A project is considered final when the City issues a letter of Final Acceptance.

1.110 Fees

Fees and applicable charges shall be as established by the City Council by the passage of a Resolution adopting a fee charge schedule except where specifically set forth in the Shelton Municipal Code (SMC).

All plan review fees are due prior to the release of approved plans. In addition, there may be various miscellaneous connection, inspection, system development charges and/or impact fees imposed as applicable. The City will not release the approved plans and/or issue a letter of Final Acceptance until **all** fees and charges have been paid to the City.

1.120 Permits

Some of the work covered under these *Standards* may require multiple permit reviews and approvals from the responsible authority. Any questions about permits, approvals and agreements should be directed to the City as soon as possible.

The following general categories describe some of the permits, approvals and agreements that may be needed along with the issuing permit/code authority identified in parentheses.

A. Environmental Review

For most projects, an environmental checklist must be completed by the project representative and submitted along with plans, specifications, and other information when approval or permits are being requested for a project. The City will conduct the environmental review and make the SEPA threshold determination.

B. Construction Permits

1. Business License: All entities doing business in the City must obtain a City of Shelton Business License (Community Development).

2. Right-of-Way Permit. Because of the need to preserve public safety for vehicular and pedestrian traffic, a Right-of-Way permit (Public Works) is required for any work within the public right-of-way. Such work may include utilities, lane closures, parking strips, driveways, curbs, sidewalks, haul routes and/or permission to temporarily close a street or a portion thereof for construction activities.

   A traffic control plan shall be submitted for approval. In the case of contracted work by the City, the signing of the contract shall constitute the Right of Way Permit. The contractor shall notify all appropriate agencies of approved closures and/or detours (Fire, Dispatch, Mason

Transit Authority, School Districts, media (Journal, ifiberone radio).

A separate Right-of-Way Permit shall be obtained for each separate project before any person, firm, or corporation shall commence or permit any person, firm, or corporation to commence any work within a public right-of-way.

Work includes:, grading, paving, leveling, altering, constructing, repairing, removing, excavating or placement of any pavement, sidewalk, crosswalk, curb, gutter, driveway, gutter, drain, sewer facility, water facility, conduit, tank, vault, utility pole, mailbox, street banner or any other structure, utility or improvement located over, under or upon any public right-of-way or easement in the City of Shelton, or place any other material or item tending to obstruct, damage, disturb, occupy, or interfere with the free use thereof or any improvement situated therein, or cause a dangerous condition.

3. Building Permit: The project may require a Building Permit (Community Development). A Building Permit is required for most construction work including alteration, repairs and demolition. Construction of structures greater than 4,000 square feet requires the submittal of an environmental checklist.

4. Excavation and Grading Permit: The project may require a Clearing and Grading Permit (Public Works) if the amount of earthen material being moved exceeds 50 cubic yards.

5. State Highway (WSDOT): Some City streets are also State highways. The contractor shall obtain approval for work upon or temporary closure of State highways from WSDOT as required.

6. County Right of Way Permit: Application to and approval of a Right of Way Permit from Mason County may be required for work on City of Shelton facilities in unincorporated Mason County.

7. Other: There are several other permits or approvals that may be required and which may be referred to in these *Standards* including but not limited to Site Plan Review

approval, plat and short plat approvals, Certificate of Occupancy issuance, zoning and other land use approvals, planned unit development approval, and shoreline substantial development approval.

1.130 Financial Guarantees for Public Projects

Financial guarantees in the form of bonds or other allowable securities may be required by the City on all projects affecting public facilities to guarantee the performance of or maintenance of required improvements, including improvements constructed within unincorporated areas of Mason County. The type and amount of security shall be per code, or, if not specified, be at the discretion of the City. Types of securities include, but are not limited to, a bond with a surety licensed to do bonding business in the State of Washington, a cash deposit, an assigned savings account, a set-aside letter, or a letter of credit.

A. Performance Guarantee. No construction permit (See Section 1.120.b above) shall be issued until a performance bond or other allowable security as outlined above, has been posted with the City in an amount equal to one hundred fifty percent (150%) of the cost of the public works improvements. A building permit and/or certificate of occupancy shall not be issued until all public improvements are completed and final acceptance granted, unless otherwise allowed by the City.

B. Maintenance Guarantee. Prior to the final acceptance of public improvements, a maintenance guarantee for materials and workmanship shall be posted with the City for a period of 24 months after final acceptance of construction and in the amount equal to 20 percent of the estimated cost of the public improvements. Release of the maintenance guarantee will occur 18 months from the date of final acceptance of construction if all maintenance has been performed as required and accepted by the City.

1.140 Utility Alignments

Locations of new or relocated utilities shall conform to City Standards as nearly as practical, be compatible with the existing installations and shall comply with all provisions as set forth in SMC Chapter 12.20 Excavations and Encroachments. Existing utilities shall be shown on the plans using the best information available. This verification will require exploration/excavation (potholing) if utilities are in conflict with the proposed design. The

contractor/developer shall be responsible for utility locates in conjunction with the project.

Utilities converted from overhead to underground on existing roadways will be considered as if they are new utilities.

1.150 Easements

Utilities shall be placed in the public right-of-way unless terrain or other topographic obstacles dictate otherwise, or as otherwise approved by the City. Where the City approves public utilities and/or their conveyance systems across private lands, an easement must be granted to the City. It is the developer's responsibility to provide the required documentation to the City to process, record, and file all easements. If the property is platted, the easement may be conveyed when the short plat or final plat is filed. All easements not shown on a plat must be prepared by a licensed land surveyor.

Easement widths shall be fifteen (15) feet minimum for a single utility and twenty (20) feet minimum for dual utilities, unless a wider width is determined to be necessary by the City.

Construction easements shall be thirty (30) feet minimum in total width, including the permanent easement. When trench depths dictate or where pipe diameter or vault widths exceed four (4) feet, a wider easement may be required by the City.

Easements are required to be submitted in draft, unsigned for review and approval. Signed copies are required prior to plan approval. Any change in design that places a public facility, i.e., water main, sewer main, sidewalk, etc., outside of an easement may necessitate the stopping of construction until plans and easements can be resubmitted and approved. Easements will be filed by the City upon satisfactory completion of work.

1.160 Latecomers Agreement

Any person who constructs water or sewer main extension (including pump stations) that will benefit properties abutting the extension may enter into a contract with the City that is commonly termed a "Latecomers Agreement." As determined by the City at its sole discretion, the Latecomers Agreement may allow the developer to be reimbursed for that portion of the construction cost which benefits adjoining properties. To be considered by the City, the format for a Latecomers Agreement **must** be submitted for review and approval prior to plan approval.

Latecomers Agreements submitted after plan approval **will not** be accepted.

The developer is responsible for initiating, executing and submitting the Latecomers Agreement to the City. The Latecomers Agreement shall include a list of those properties which will benefit from the extension, a map outlining and designating these properties, legal descriptions as required by the City, and backup data supporting the costs submitted. The City shall be responsible for filing and recording a covenant on all affected parcels and property and notifying current and future owners of the Latecomers Agreement reimbursement encumbrance.

The developer will be responsible for all fees, charges, and expense involved for the City to perform this procedure. The City will collect the latecomer's fee from persons wanting to connect to the extension and subsequently see that the developer receives the payment. Expiration of this agreement shall be fifteen (15) years from the date of execution.

1.170 Traffic Control

As specified in Section 1.120 above, the contractor must obtain a Right of Way Permit before commencing any work in the public right-of-way. The contractor shall also be responsible for interim traffic control during construction on or along traveled roadways. Traffic control shall follow the guidelines of the WSDOT/APWA Standard Specifications. All barricades, signs, and flagging shall conform to the requirements of the MUTCD.

City utilities constructed within Mason County right-of-way shall follow all traffic control requirements as set forth by Mason County Department of Public Works and the MUTCD.

Signs must be legible and visible and shall be removed at the end of each workday if not applicable after construction hours.

When road closures and detours cannot be avoided, the contractor shall notify the City. The City may require a detour plan to be prepared, submitted and approved prior to closing any portion of a City right-of-way.

1.180 Call Before You Dig

All developers/contractors are responsible for timely notification of all utilities in advance of any construction in right-of-way or utility

easements. The utilities one-call Underground Location Center phone number is 1-800-424-5555 (or 811).

The City is not responsible for locating private lines or other utilities in the right-of-way. The contractor shall be responsible for field verifying by pot-holing or other means as needed, all potential public or private utility conflicts.

1.190 Utility Extension

Anyone who wishes to extend any City utility should contact the City to see if there are any extension/connection fees or any special extension requirements.

For service to adjacent property and/or future development, as determined by the City, utility mains shall be extended across the face of or to and through the extremes of the property being developed. Extensions shall be to the middle of intersections and through to the end of any pavement. Utility extensions shall be sized per the appropriate utilities' Comprehensive Plan or to provide for further extensions, as directed by the City.

1.200 Annexation Requirement

Every applicant for water and sewer service outside the city limits, except for municipal corporations or quasi-municipal corporations, must sign an agreement with the City not to protest annexation. The owner shall provide the City with an irrevocable power of attorney to allow a City representative to sign a petition for annexation on behalf of the property owner or the property owner shall agree to sign a petition for annexation of his/her property when requested to do so by the City. The agreement shall be recorded against the property in the Mason County Auditor's office and shall constitute a covenant running with the land. All provisions of the agreement shall be binding on the owner and all other persons subsequently acquiring any right, title or interest in or to said property.

Owners of property located outside the City Urban Growth Area boundary may make application for sewer and water service to their property. The City Council shall review the application and may, in its sole discretion, allow the extension or expansion of sewer and water service if the Council finds:

1. That the requested service is necessary to protect basic public health and safety and the environment;

2. That the requested service is financially supportable at rural densities and does not permit urban development;
3. That the City's NPDES permit will not be affected by the extension or expansion; and
4. That the extension or expansion is consistent with the goals of the City's Sewer Comprehensive Plan, its Water Comprehensive Plan, and all other applicable law.

1.210 Standards in Shelton Urban Growth Area

City utilities may be extended to properties within the Shelton Urban Growth Area only after the property is legally committed to eventual annexation per Section 1.200. Utility extensions may be permitted after the following policies are satisfied. These policies have been adopted by both the City of Shelton and Mason County.

A. City utilities may be extended to properties within the Urban Growth Area (UGA) either upon annexation or through the creation of a Utility Extension Agreement with the owners of properties not annexed. (County Policy U-151 B1)

B. No utility extension will be permitted to any non-annexed property within the UGA unless a Utility Extension Agreement is signed between the owner of the subject property and the City of Shelton. The agreement shall provide for the following: (County Policy U-151 B2):

    1. Utility Extension Agreements will be an instrument recorded against the title of the property and the responsibilities therein shall transfer to successors in ownership of all or part of the property. (County Policy U-151 B2a)

    2. Extension and hook-up must not result in lowering of service delivery below adopted City LOS standards as determined by the City. Hook-ups outside of the City shall not be permitted until such standards are adopted, as determined by the City. (County Policy U-151 B2b)

    3. Water hook-up will not be allowed until a contribution to a source development fund is made by the property owner/developer, as determined by the City. (County Policy U-151 B2d)

    4. Extensions will not be permitted unless agreement is made to pay a system development charge as identified by the City in a rate study. (County Policy U-151 B2e)

5. All costs for a utility system extension, the steps necessary to maintain level of service (LOS), sewer system I&I fund contributions, water source development fund contributions and system development charges shall be borne by the property owner served. (County Policy U-151 B2f)

6. All served property must have a commitment to annex when contiguous and requested by the City placed on the property title. (County Policy U-151 B2g)

7. All utility users shall be subject to rates and surcharges as established by the City of Shelton. (County Policy U-151 B2h)

8. In the event that a Utility Extension Agreement is approved by the City in an area that is served by an existing State Department of Health approved water system; that system may continue to be operated by the present owners or their satellite management agency. Fire flow, service line size, and main size will remain until State DOH requires an upgrade in order to obtain a green operating permit. (County Policy U-151 B2i)

C. In addition to all conditions listed above, the following must be provided in Utility Extension Agreements to extend City services to new development not vested by virtue of a complete development application prior to the adoption of (these standards). (County Policy U-151 B3)

1. City owned utilities will only be extended to land uses consistent with the City's Comprehensive Plan Future Land Use Map as determined by the City. (County Policy U-151 B3a)

2. City owned utilities will only be extended to development meeting City development standards. (County Policy U-151 B3b)

3. When extended to residential development, City owned utilities will only be extended to development that meets the definition of urban densities as per Joint Planning Agreement and is consistent with the policies for subdivision of land therein. (County Policy U-151-B3c)

4. Storm water systems (in the UGA) shall be designed and constructed in compliance with the requirements of the Washington State Department of Ecology Stormwater Manual for the Puget Sound Basin and all adopted storm water master plans or storm water ordinances and basin plans. Those properties designated by these plans as draining to City of Shelton owned and maintained facilities shall be included in the City Storm Water Utility Program. (County Policy U-151 B3d)

1.220 General Notes (For all Projects)

1. All workmanship and materials shall be in accordance with the most current City of Shelton *Standards* and the most current edition of the State of Washington Standard Specifications for Road, Bridge and Municipal Construction (WSDOT/APWA).

2. All safety standards and requirements shall be complied with as set forth by OSHA, WISHA, and the Washington State Department of Labor and Industries.

3. All work in the City requires a City of Shelton Business License.

4. Prior to working within the City right-of-way or on City property, the contractor must obtain a City of Shelton Right-of-Way Permit. All contractors shall be licensed and bonded in the State of Washington. Proponent shall comply with all other permits and other requirements of the governing authority or agency. It is the contractor's responsibility to verify the location of the right-of-way.

4. A pre-construction meeting with the City of Shelton is required. The meeting shall be scheduled a minimum of two (2) days before the start of construction. Contact the City Engineering Department at (360) 426-9731 to schedule.

5. It is the contractor's responsibility to notify the City of his/her schedule. Inspection by City personnel shall be during City work hours. City inspection hours are 8:00 AM to 5:00 PM Monday through Friday, except holidays. The proponent must give the City a minimum of 24-hour notice for inspections. No trenching on public right-of-way after 4:00 PM unless otherwise approved by the City. Other work such as backfilling, cleanup, etc., or as approved by the City is acceptable if 24 hours' prior notice is provided to the City.

6. Temporary erosion/water pollution measures shall be required in accordance with section 1-07.15 of the WSDOT/APWA Standard

Specifications the Washington State Department of Ecology Storm Water Management Manual for the Puget Sound Basin, and the Shelton Municipal Code.

At no time will silts and debris be allowed to drain into an existing or newly installed storm water facility or onto adjacent roads or properties. The contractor shall not release storm water to the sanitary sewer system. All erosion control and water pollution prevention measures shall be regularly inspected and maintained by the contractor.

7. It is the Contractor's responsibility to notify all emergency services (Fire, Police, etc.) if streets or other accesses are obstructed. Within the City of Shelton, Dispatch at (360) 426-4441 will notify Police and Ambulance. The Contractor shall be responsible for notifying the Shelton Fire Department.

The following are telephone numbers the contractor may need. These are provided for convenience only and are subject to change without notice.

City Shop	(360) 432-5189
City Engineering	(360) 426-9731
City Treatment Plant	(360) 426-6521
City Hall	(360) 426-4491
Fire Department	(360) 426-5533
Mason Transit Authority	(360) 427-5033
Shelton School District	(360) 427-8610

8. The Contractor shall notify and work with all affected property owners. The Contractor shall provide the City with emergency telephone numbers at the preconstruction meeting and shall provide a foreman on site during all working hours.

9. The Contractor shall be responsible for all traffic control in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and Department of Labor and Industries. Prior to disruption of any traffic, traffic control plans shall be prepared and submitted to the City for approval. No work shall commence until all approved traffic control is in place.

10. The Contractor shall be fully responsible for the location and protection of all existing utilities. The contractor shall verify all utility locations prior to construction by calling the Underground Locate line at 1-800-424-5555 or 811 a minimum of two (2) business days prior to any excavations.

11. Water, sewer or storm service lines broken on private property shall be repaired immediately by the contractor in accordance with the Uniform Plumbing Code (UPC) or other appropriate standards and may require a permit, contact the City Building Official

    City service lines broken in the City right-of-way shall be reported to the City and repaired immediately by the contractor. If not repaired within 24 hours, the City will repair and the contractor will be billed for the repair work on a time and materials basis for marked utility lines. Reports should be directed to (360) 432-5189 during regular business hours, or (360) 426-4441 during non-business hours.

12. All utilities shall be staked for grades and alignment by a licensed Engineering or Surveying firm capable of performing such work.

13. Signed, approved blueprints shall be on site at all times while work is being performed.

14. The Contractor shall restore work area to same or better condition unless otherwise approved or specified.

15. All disturbed areas, other than pavement and rocked surfaces, shall be seeded and mulched, or similarly stabilized to the satisfaction of the City and in accordance with the Standards. For sites where grass has been planted, the performance and/or maintenance guarantees will not be released until the grass has been thoroughly established, unless otherwise approved by the City.

16. If existing native material is determined by the City to be suitable for backfill, the Contractor may use the native material.

17. All asphalt restoration shall be as specified in the Standard Detail T-18 or to the depth of the existing pavement, whichever is greater. Existing asphalt edges shall be saw cut to a smooth straight edge prior to final patching, unless otherwise approved by the City.

18. All concrete restoration shall be saw cut to a smooth, straight edge prior to final patching, unless otherwise approved by the City. 3000 psi concrete shall be used, and shall be poured to the same depth and alignment as the existing pavement. The City will require doweling per Standard Detail T-18.

19. All permanent patching shall be accomplished within seven (7) calendar days unless otherwise approved by the City. Any temporary patch that requires more than seven (7) calendar days shall be hot mix asphalt concrete.

Temporary patching shall be 2-inch depth Class B asphalt concrete pavement, 2-inch medium curing (MC-250) liquid asphalt (cold mix), 2-inch asphalt treated base (ATB) or steel plates.

The Contractor shall maintain the patch. If not properly maintained, the City will perform any necessary repair and bill the Contractor.

LIST OF DRAWINGS
CHAPTER 1 MISCELLANEOUS

MISCELLANEOUS

Title	Drawing
Garbage Enclosure Detail	M-01
Rock Wall (4' or Less)	M-02
Root Control Barrier Plan Views	M-03
Root Control Barrier Section Views	M-04
Mailbox Cluster Wood Structure	M-05
Mailbox Setbacks	M-06
Bollard Detail	M-07
Sign Post Installation for Outside Paved Area	M-08
Sign Post Installation for Inside Paved Area	M-09
Single Mailbox for Outside Paved Area	M-10
Single Mailbox for Inside Paved Area	M-10A

TEMPORARY EROSION AND SEDIMENTATION CONTROL

Title	Drawing
CB/Inlet Sedimentation Trap Outside Paved Area	E-01
CB/Inlet Sediment Trap Inside Paved Area	E-01A
Catch Basin Silt Fence Detail	E-02
Rock Check Dam Details	E-03
Sediment Trap Outlet Detail	E-04
Silt Fence Details	E-05
Sod Filter Typical Layout	E-06
Stabilized Construction Entrance	E-07
Small Parcel Erosion Control	E-08

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M-01 GARBAGE ENCLOSURE DETAIL

M-02 ROCK WALL (4' OR LESS)

M-03 ROOT CONTROL BARRIER PLAN VIEWS

M-04 ROOT CONTROL BARRIER SECTION VIEWS

M-05 MAILBOX CLUSTER INSIDE/OUTSIDE OF PAVED AREA

M-05A MAILBOX CLUSTER INSIDE/OUTSIDE OF PAVED AREA

M-06 MAILBOX SETBACKS

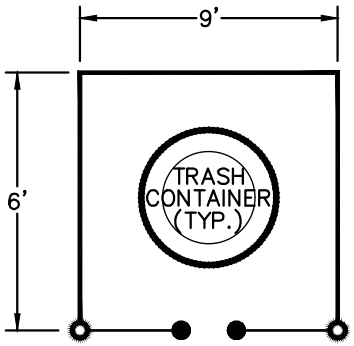
M-07 BOLLARD DETAIL

M-08 SIGN POST INSTALLATION FOR OUTSIDE PAVED AREAS

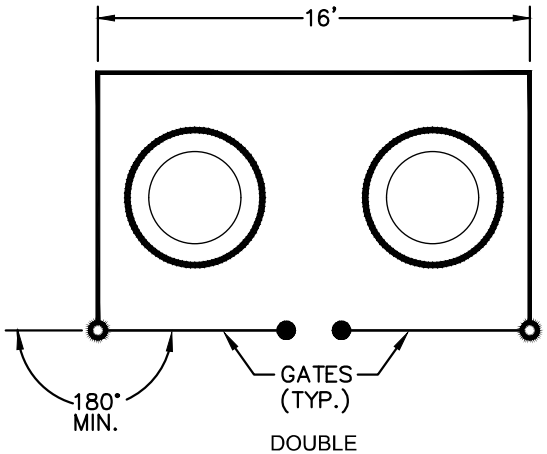
M-09 SIGN POST INSTALLATION FOR INSIDE PAVED AREAS

M-10 SINGLE MAILBOX INSIDE PAVED AREA

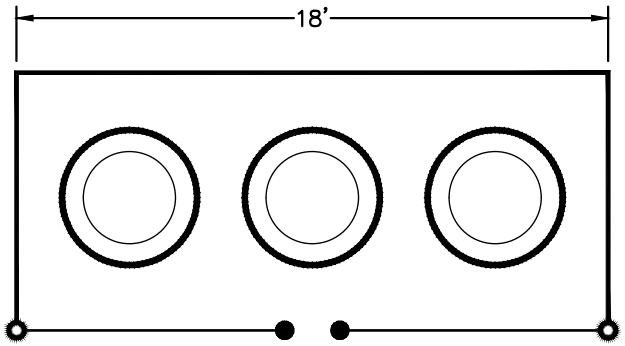
M-10A SINGLE MAILBOX INSIDE PAVED AREA



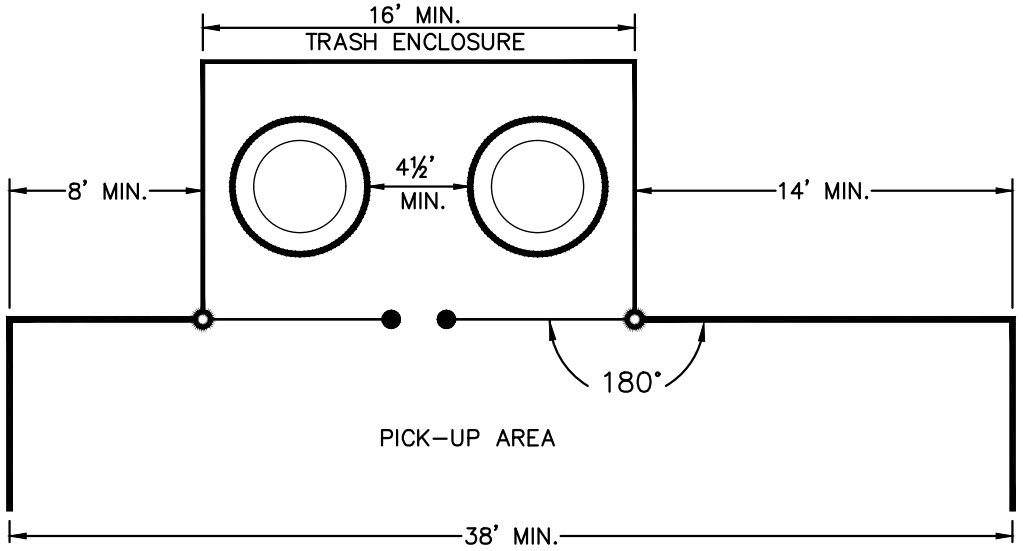
SINGLE
CONTAINER ENCLOSURE



DOUBLE
CONTAINER ENCLOSURE



TRIPLE
CONTAINER ENCLOSURE



NOTES:

1. GATES MUST SWING A FULL 180° MIN.
   HEIGHT OF ENCLOSURE 5'–0". THESE ENCLOSURES ARE ONLY LARGE ENOUGH FOR GARBAGE CONTAINERS. OTHER CONTAINERS OR ITEMS PLACED IN ENCLOSURE WILL MAKE PICKUP DIFFICULT OR IMPOSSIBLE.

2. A GARBAGE ENCLOSURE IS NOT REQUIRED, HOWEVER, IF ONE IS BUILT, IT MUST CONFORM TO THESE SPECIFICATIONS.

CONTAINER SIZE	DIAMETER TOP	DIAMETER BOTTOM
300 GAL.	60"	41"
90 GAL.	36"	24"
60 GAL.	32"	24"

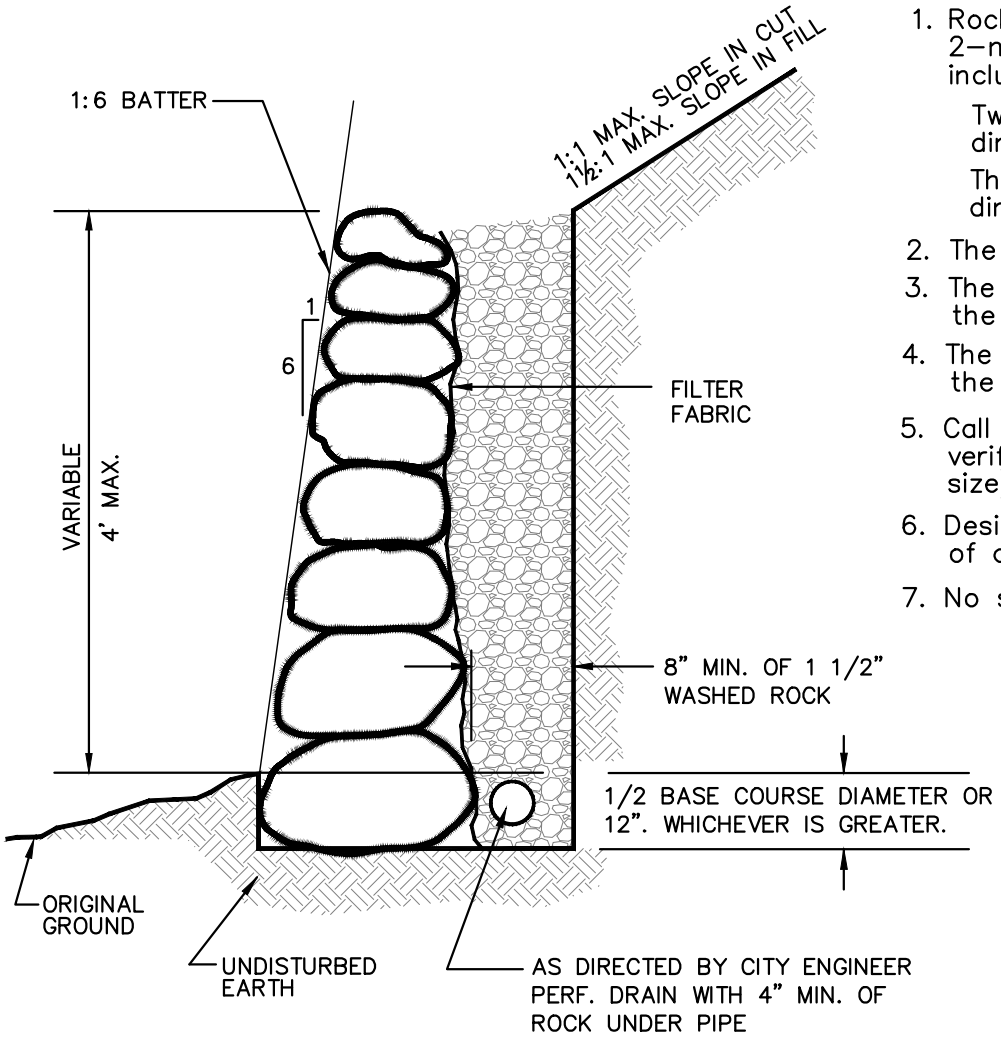
CITY of SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

GARBAGE ENCLOSURE DETAIL

APPROVED: CRAIG GREGORY
Public Works Director

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	M-01



GENERAL NOTES:

1. Rockeries of 4' or lower shall be constructed of 3–man to 2–man from bottom to top. Rock size catagories shall include:

   Two–man rocks (300 to 600 pounds), 13 inches in least dimension;

   Three–man rocks (800 to 1200 pounds), 16 inches in least dimension;

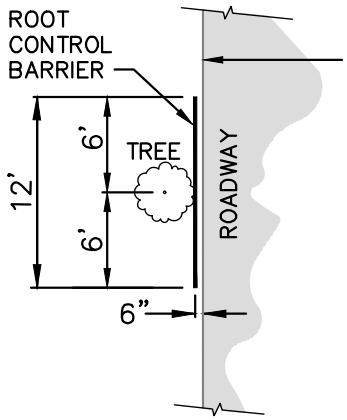
2. The rockery shall be installed with a smooth face.
3. The long dimension of the rocks shall be oriented towards the bank to provide maximum stability.
4. The rock shall be placed so as to lock into two rocks in the lower tier.
5. Call for inspection prior to base course being placed (for verification of rockery height, foundation material and rock size).
6. Design varying from those indicated shall carry the seal of a civil engineer experienced in soil mechanics.
7. No surcharge

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ROCK WALL
4' HIGH OR LESS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	M-02



ATTENTION

USE ONE OF THE FOLLOWING TYPES:

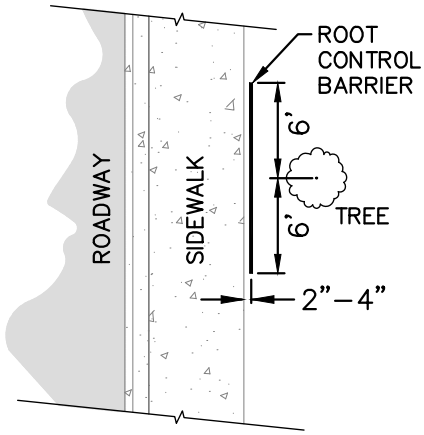
CO. NAME: DEEPROOT
ITEM: TREE BARRIER
MODEL NO.: UB36–2

CO. NAME: CENTURY PRODUCTS
ITEM: TREE BARRIER PANEL
MODEL NO.: CPU 36–2

AN EQUAL PRODUCT MAY BE USED AS APPROVED BY CITY ENGINEER.

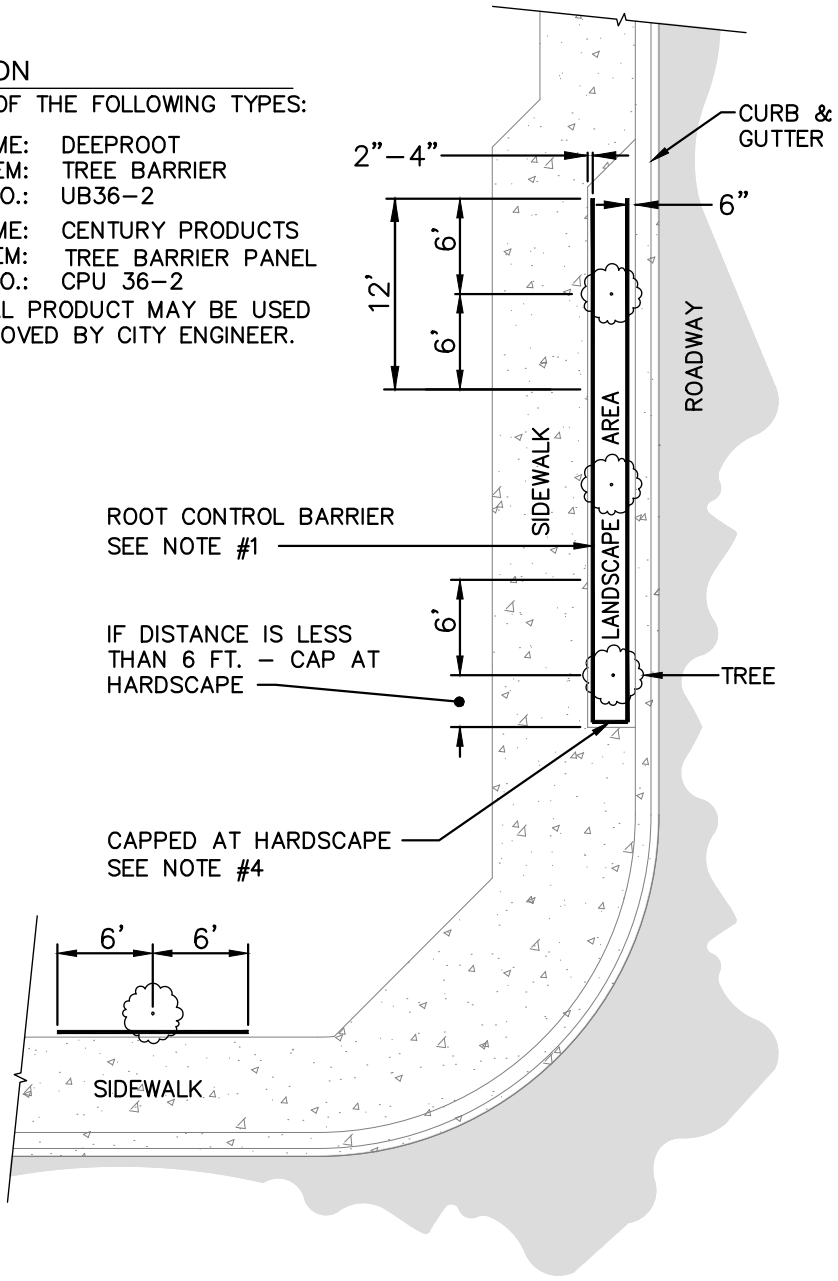
TREE BY ROADWAY

NTS



TREE BY SIDEWALK

NTS



TREES BY SIDEWALK & IN LANDSCAPE STRIP

NTS

NOTES

1. IF THE DISTANCE BETWEEN TREE TRUNKS ARE 12 FT. OR LESS, INSTALL CONTINUOUS BARRIER ALONG HARDSCAPE UNTIL 6 FT. BEYOND LAST TREE TRUNK.

2. OFFSET ROOT CONTROL BARRIER 6 INCH MIN. FROM ROADWAY AND CURB & GUTTER AND 2" TO 4" FROM SIDEWALKS.

3. IF NO HARDSCAPE IS ENCOUNTERED, DISTANCE FROM TRUNK OF TREE TO ROOT CONTROL BARRIER CANNOT BE LESS THAN 6 FT. IN ANY DIRECTION.

4. HARDSCAPE DEFINED HERE AS ANY PUBLIC OWNED SURFACE TREATMENT SUCH AS SIDEWALK, CURB & GUTTER, AND ROADWAY.

SPECIAL NOTE:

SEE SHELTON STD. DETAIL M–04 FOR ADDITIONAL NOTES & DETAILS.

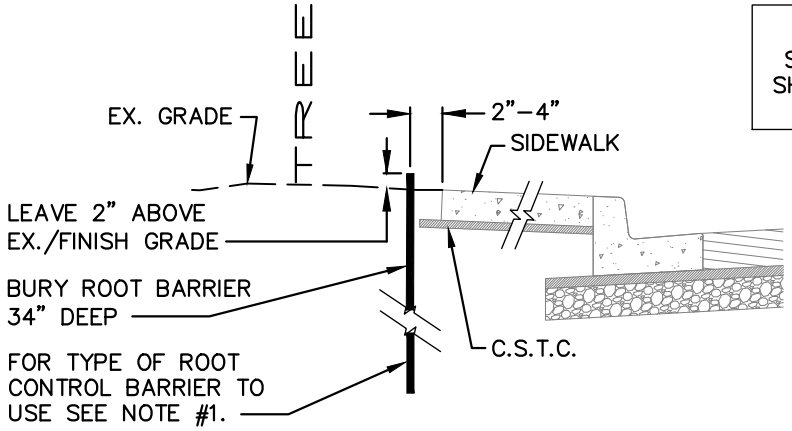
"Building A Stronger Community TOGETHER"

ROOT CONTROL BARRIER PLAN VIEWS

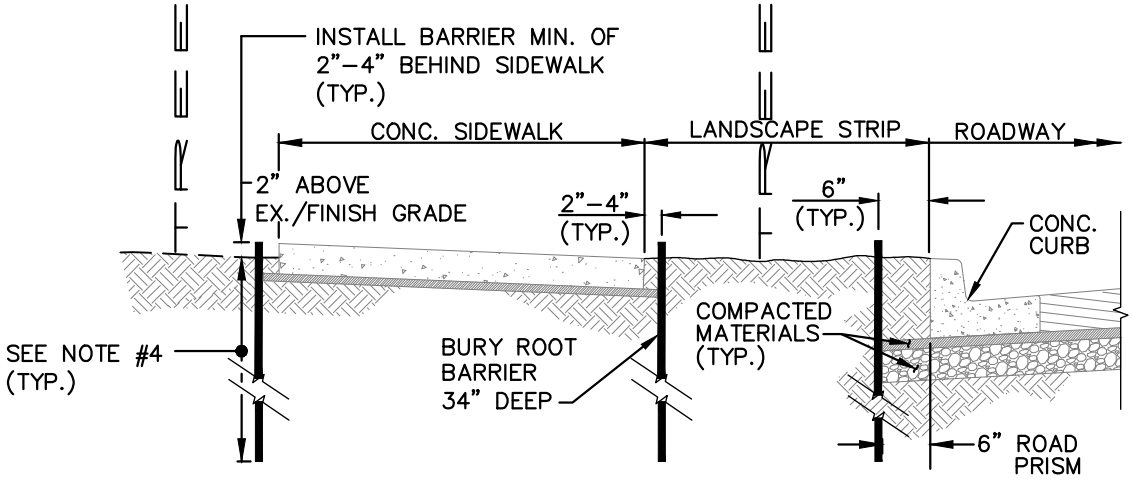
APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	M-03

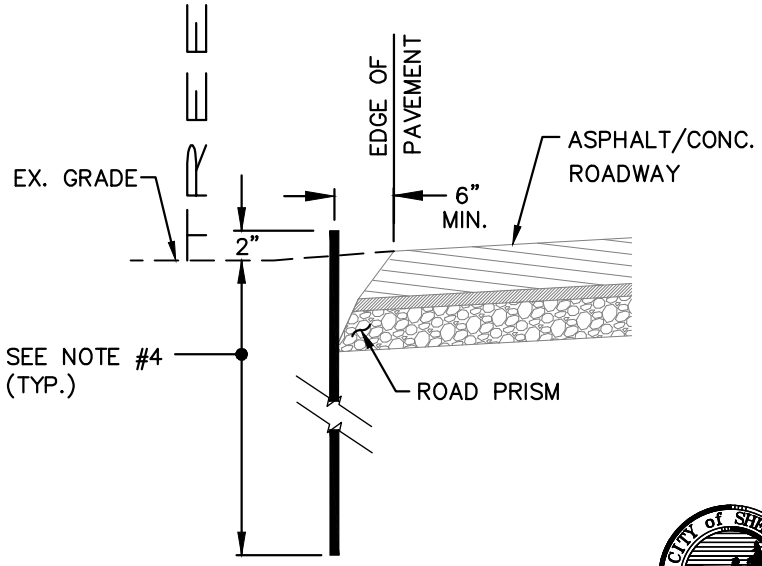
SPECIAL NOTE:
SEE SHELTON STD. DETAIL SHT. M-03 FOR ADDITIONAL NOTES & DETAILS.



TREE BY SIDEWALK
NTS



TREES BY SIDEWALK w/ LANDSCAPE STRIP
NTS



TREE BY ROADSIDE
NTS

NOTES

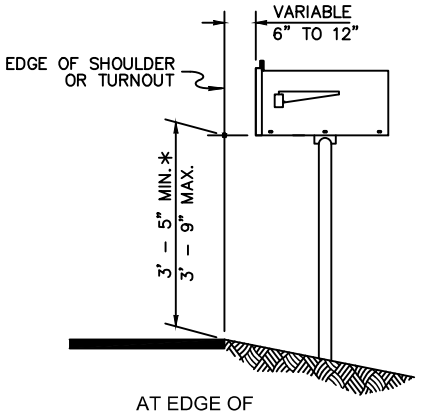
1. USE ONE OF THE FOLLOWING TYPES:
   CO. NAME: DEEPROOT
   ITEM: TREE BARRIER
   MODEL NO.: UB36-2
   CO. NAME: CENTURY PRODUCTS
   ITEM: TREE BARRIER PANEL
   MODEL NO.: CPU 36-2
   AN EQUAL PRODUCT MAY BE USED AS APPROVED BY CITY ENGINEER.
2. AFTER ROOT BARRIER IS INSTALLED, BACKFILL w/ APPROVED MATERIAL AND COMPACT TO 95% MAX. DENSITY.
3. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS & AS APPROVED BY CITY ENGINEER.
4. INSTALL 36" LONG ROOT CONTROL BARRIER 34" DEEP. LEAVE 2" EXPOSED ABOVE FINISHED ELEVATION.

"Building A Stronger Community TOGETHER"

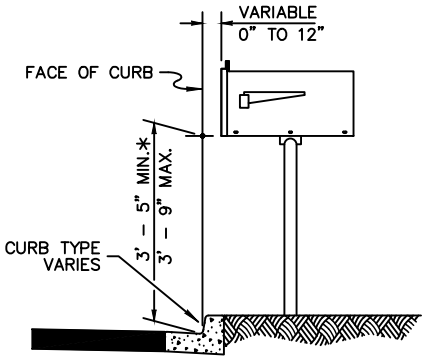
ROOT CONTROL BARRIER SECTION VIEWS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

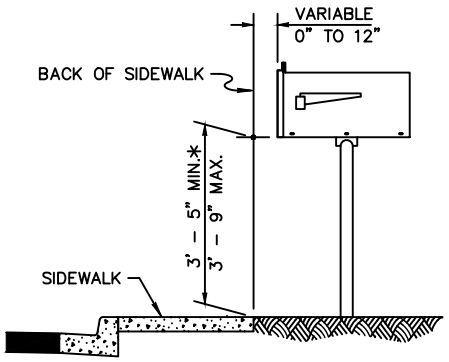
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1/2019	GS	NTS	M-04



AT EDGE OF SHOULDER



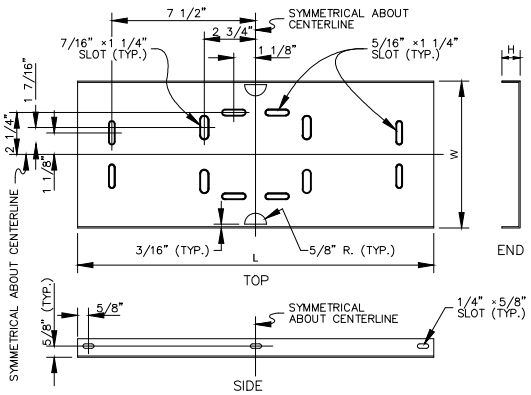
BEHIND CURB



BEHIND SIDEWALK

* UNLESS OTHERWISE SHOWN IN THE PLANS

MAILBOX & PLATFORM DIMENSIONS						
SIZE	MAILBOX DIMENSIONS			PLATFORM DIMENSIONS		
	L	W	H	L	W	H
1	19"	6 1/2"	8 1/2"	17"	6"	1"
1A	21"	8"	10 1/2"	19"	7 1/2"	1"
2	24"	11 1/2"	13 1/2"	21"	11"	1"



PLATFORM DETAIL

MAIL BOX NOTES:

A. LOCATION OF PEDESTAL PARCEL LOCKER WILL BE APPROVED BY PUBLIC WORKS DIRECTOR AND THE POSTAL SERVICE.

B. THIS DRAWING DEPICTS A MINIMUM STRUCTURAL AND DIMENSIONAL STANDARD FOR NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT AND PADS. FOR SPECIFIFC POSTAL REQUIREMENTS, CONTACT THE POSTMASTER.

C. MAILBOXES MUST BE POSTMASTER APPROVED WITH A UNIFORM BOX STYLE AND METHOD OF ADDRESS IDENTIFICATION.

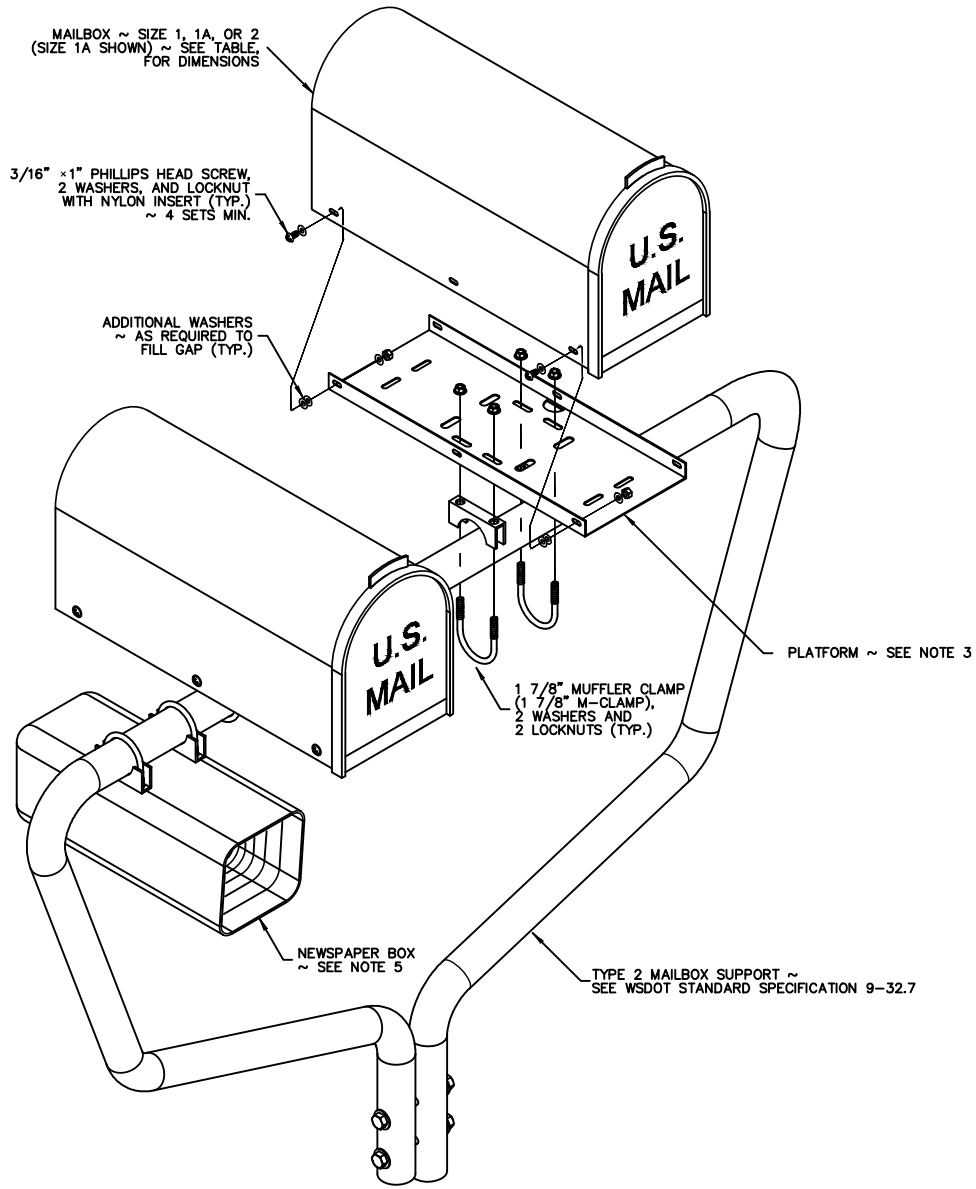
D. LOCATIONS OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE PUBLIC WORKS DIRECTOR FOR PROTECTION OF VIEWS AND ACCESS.

"Building A Stronger Community Together"

MAILBOX CLUSTER INSIDE/OUTSIDE PAVED AREAS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	M-05A



NOTES

1. THE ANCHORING SYSTEM SHALL MEET NCHRP 350 CRASH TEST CRITERIA. USE A SOCKET AND WEDGE SYSTEM OR THE ANCHORING SYSTEM SUPPLIED BY OR RECOMMENDED BY THE TYPE 2 SUPPORT MANUFACTURER.
2. A MAXIMUM OF FIVE MAILBOXES MAY BE INSTALLED ON A TYPE 2 SUPPORT.
3. THE PLATFORM DESIGN SHOWN IN THIS PLAN IS DETAILED IN THE PLATFORM DETAIL, SHEET 2. THE DESIGN FEATURES SLOTS THAT ACCOMMODATE SEVERAL TYPES OF MAILBOX SUPPORTS; ONLY THOSE SLOTS NECESSARY FOR ASSEMBLING THE TYPE BEING INSTALLED ARE REQUIRED. AN ADJUSTABLE PLATFORM MAY BE USED IN LIEU OF THIS PLATFORM DESIGN. ADJUSTABLE PLATFORMS MUST FIT THE 1 7/8" M-CLAMP.
4. CENTER THE MAILBOX ON THE PLATFORM TO ENSURE SPACE FOR THE MAILBOX DOOR TO OPEN AND TO ALLOW SPACE FOR INSTALLING THE FASTENERS. SPACING OF MAILBOX MOUNTING HOLES VARIES AMONG MANUFACTURERS. ATTACHMENT OF THE MAILBOX TO THE PLATFORM MAY REQUIRE DRILLING ADDITIONAL HOLES THROUGH THE MAILBOX TO FIT THE PLATFORM.
5. ATTACH A NEWSPAPER BOX TO A TYPE 2 SUPPORT WITH TWO 1 7/8" MUFFLER CLAMPS SPACED 4" APART. FIELD DRILL 7/16" HOLES IN THE NEWSPAPER BOX TO FIT. NEWSPAPER BOXES MUST NOT EXTEND BEYOND THE FRONT OF THE MAILBOX WHEN THE MAILBOX DOOR IS CLOSED.

MAIL BOX NOTES:

A. LOCATION OF PEDESTAL PARCEL LOCKER WILL BE APPROVED BY PUBLIC WORKS DIRECTOR AND THE POSTAL SERVICE.

B. THIS DRAWING DEPICTS A MINIMUM STRUCTURAL AND DIMENSIONAL STANDARD FOR NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT AND PADS. FOR SPECIFIFC POSTAL REQUIREMENTS, CONTACT THE POSTMASTER.

C. MAILBOXES MUST BE POSTMASTER APPROVED WITH A UNIFORM BOX STYLE AND METHOD OF ADDRESS IDENTIFICATION.

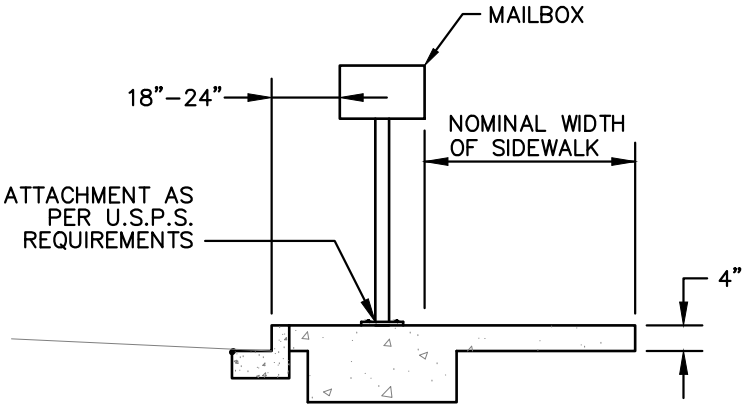
D. LOCATIONS OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE PUBLIC WORKS DIRECTOR FOR PROTECTION OF VIEWS AND ACCESS.

"Building A Stronger Community TOGETHER"

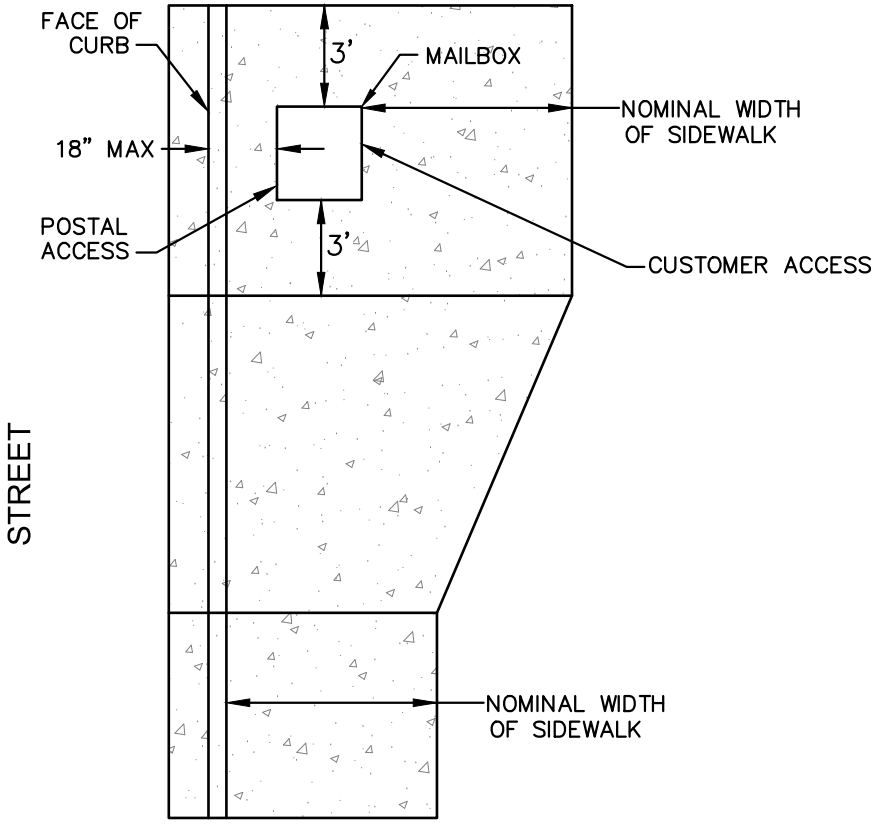
MAILBOX CLUSTER INSIDE/OUTSIDE OF PAVED AREA

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

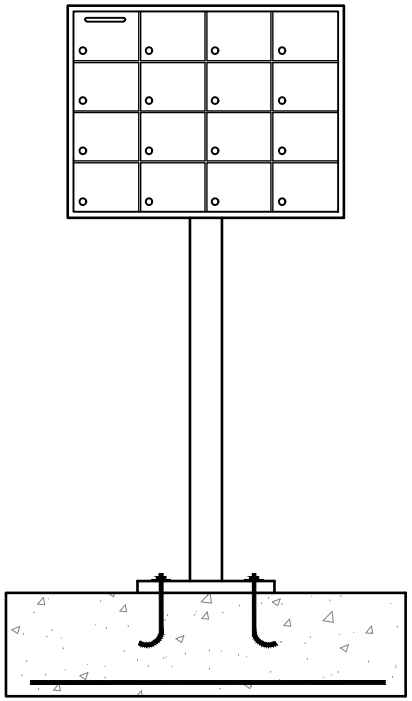
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	M-05



SIDE VIEW



PLAN VIEW



FRONT VIEW

MAIL BOX NOTES:

1. LOCATION OF PEDESTAL PARCEL LOCKER WILL BE APPROVED BY THE CITY ENGINEER AND THE POSTAL SERVICE.
2. THIS DRAWING DEPICTS A MINIMUM STRUCTURAL AND DIMENSIONAL STANDARD FOR NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT AND PADS. FOR SPECIFIFC POSTAL REQUIREMENTS, CONTACT THE POSTMASTER.
3. MAILBOXES MUST BE POSTMASTER APPROVED WITH A UNIFORM BOX STYLE AND METHOD OF ADDRESS IDENTIFICATION.
4. LOCATIONS OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE CITY ENGINEER FOR PROTECTION OF VIEWS AND ACCESS.

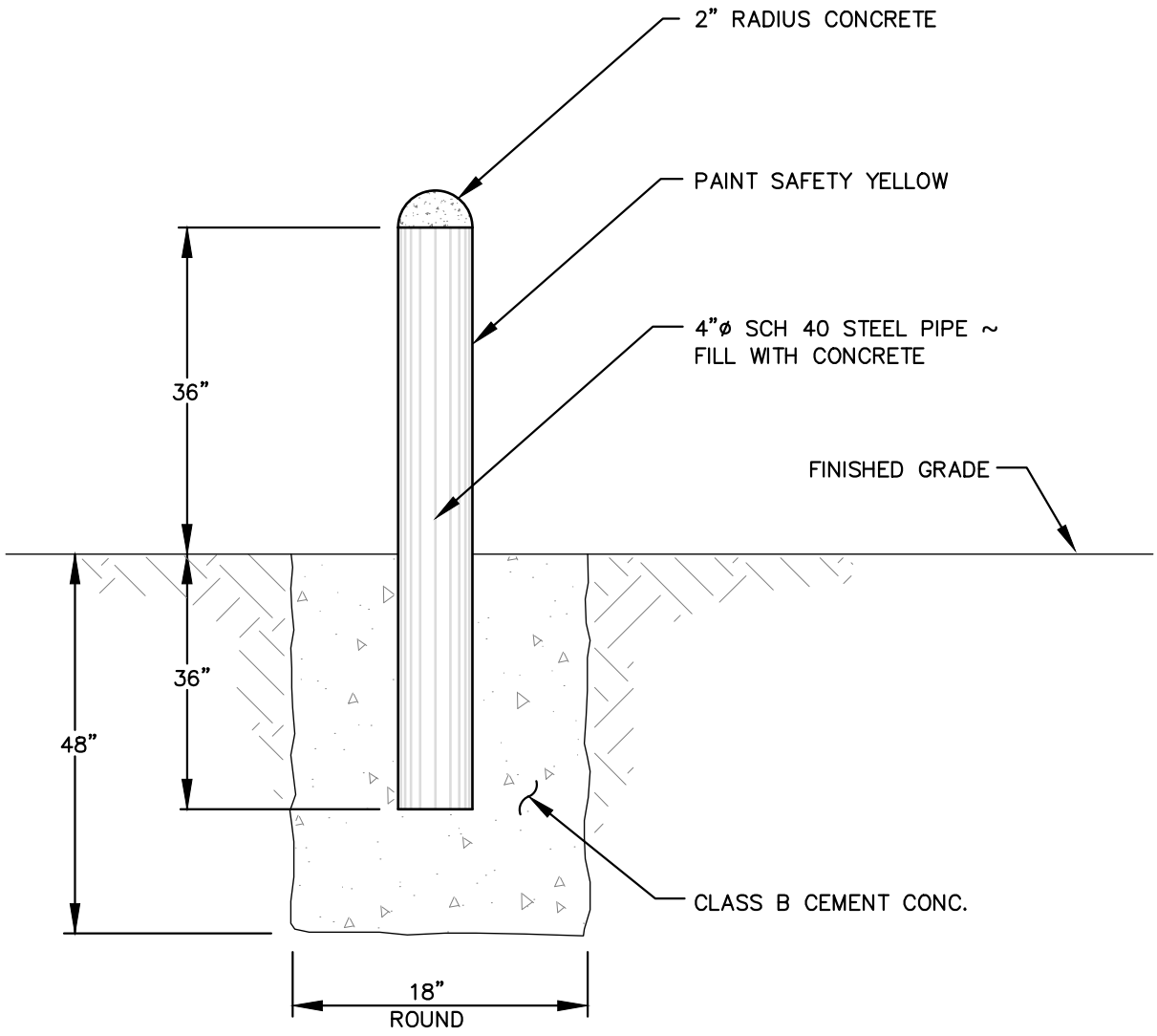
CITY of SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

MAILBOX SETBACKS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	M-06

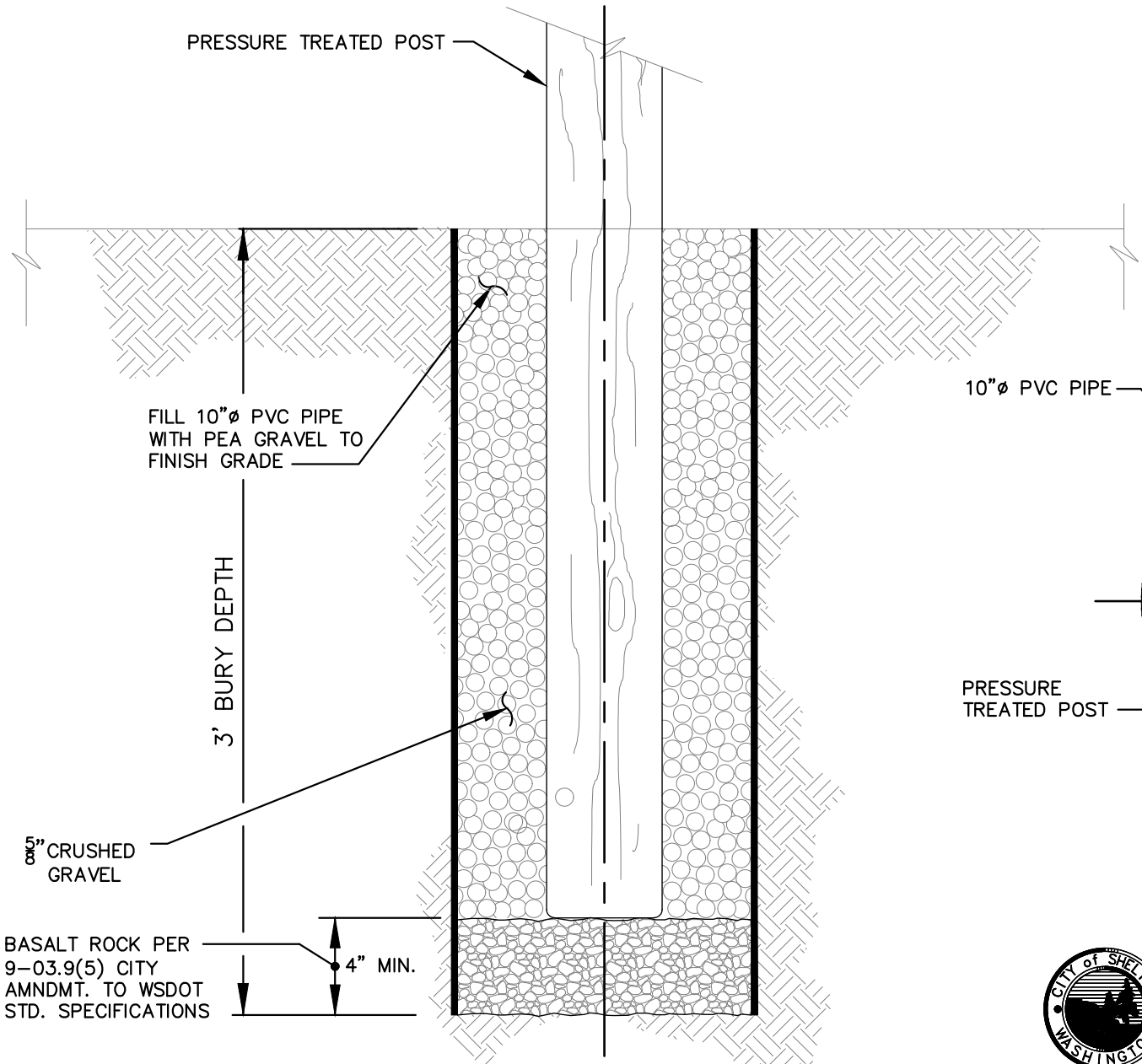


"Building A Stronger Community TOGETHER"

BOLLARD DETAIL

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

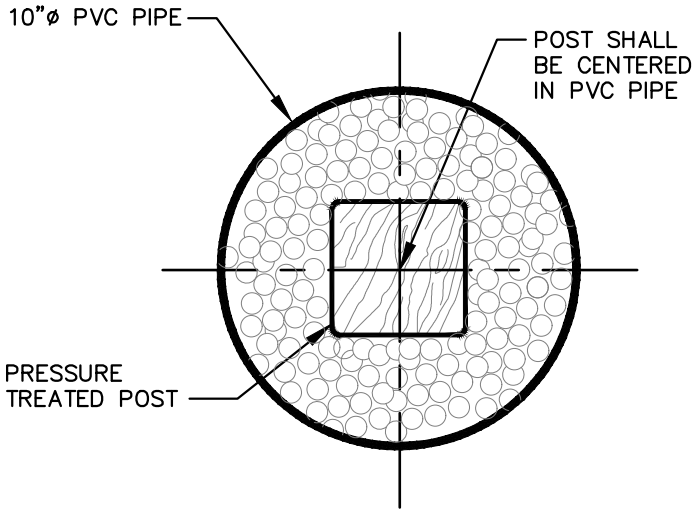
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1/2019	GS	NTS	M-07



SECTION VIEW

SCALE: NTS

NOTE: INSTALLATION AND LOCATION OF SIGNS SHALL ADHERE TO CITY & STATE STANDARD SPECIFICATIONS



PLAN VIEW

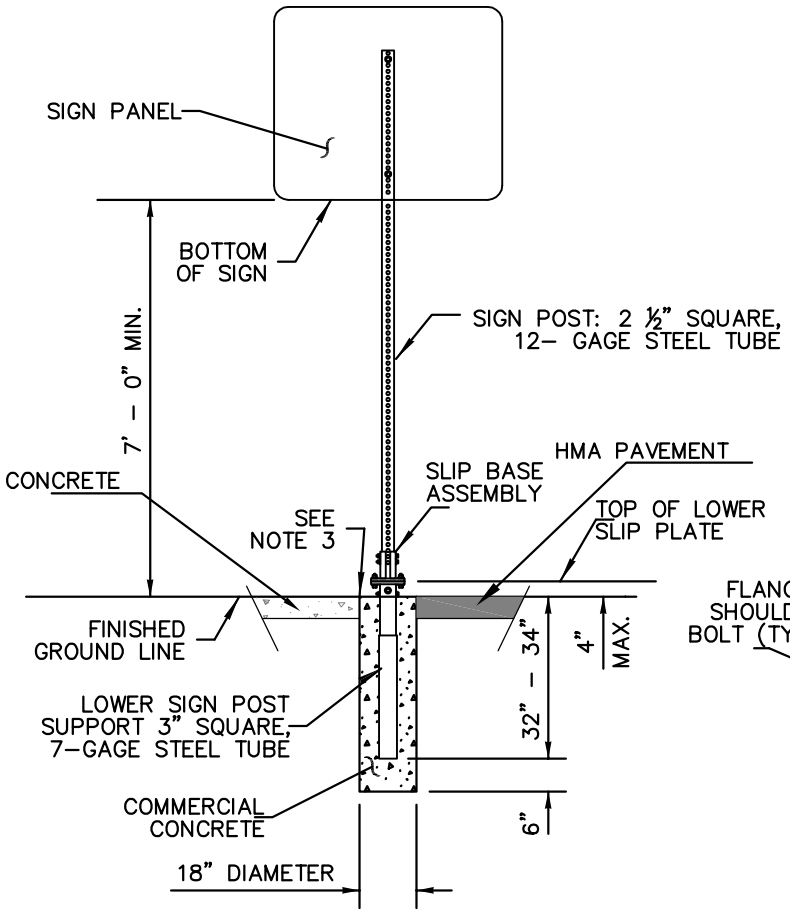
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SIGN POST INSTALLATION FOR OUTSIDE PAVED AREA

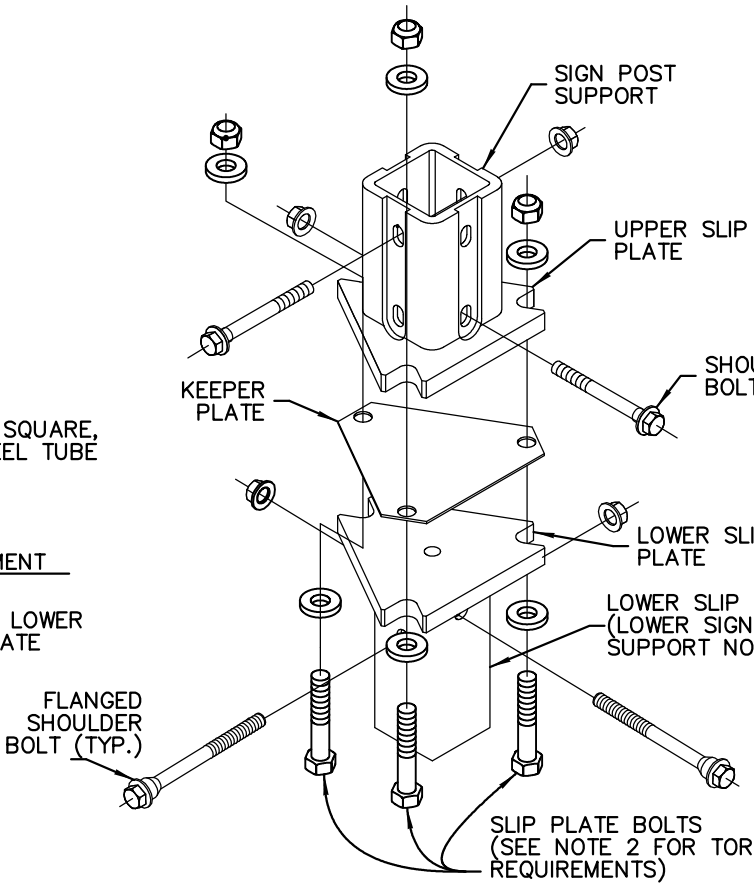
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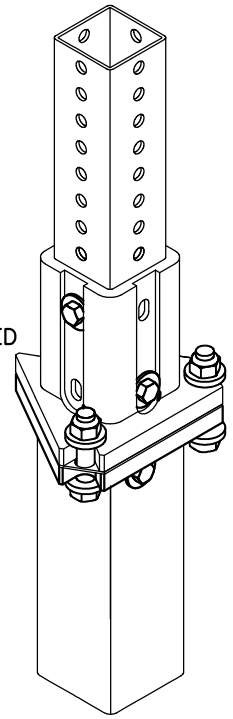
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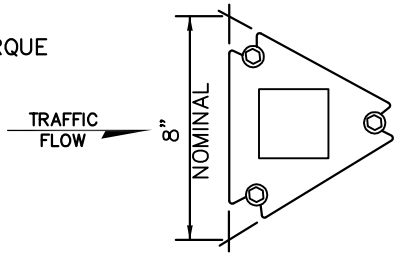
ELEVATION



EXPLODED VIEW
TYPE SB-3 SLIP BASE ASSEMBLY



ISOMETRIC VIEW



SLIP PLATE DETAIL
FOR TYPE SB-3

NOTES:

1. DIMENSIONS FOR THE PARTS USED TO ASSEMBLE THE BASE CONNECTIONS ARE INTENTIONALLY NOT SHOWN. BASE CONNECTIONS ARE PATENTED, MANUFACTURED PRODUCTS THAT ARE IN COMPLIANCE WITH NCHRP 350 CRASH TEST CRITERIA. THE BASE CONNECTION DETAILS ARE ONLY SHOWN TO ILLUSTRATE HOW PARTS ARE ASSEMBLED.
2. DO NOT TIGHTEN ANY SINGLE SLIP PLATE BOLT TO THE RECOMMENDED TORQUE BEFORE PRETIGHTENING THE OTHER BOLTS. PROGRESSIVELY TIGHTEN THE THREE SLIP PLATE BOLTS IN 10 FT-LB INCREMENTS, ALTERNATELY, TO A FINAL TORQUE OF 40 FT-LB ON EACH.
3. TOP OF CONCRETE FOUNDATION SHALL BE SMOOTH, DENSE AND UNIFORM TO FINISHED GROUND LINE.

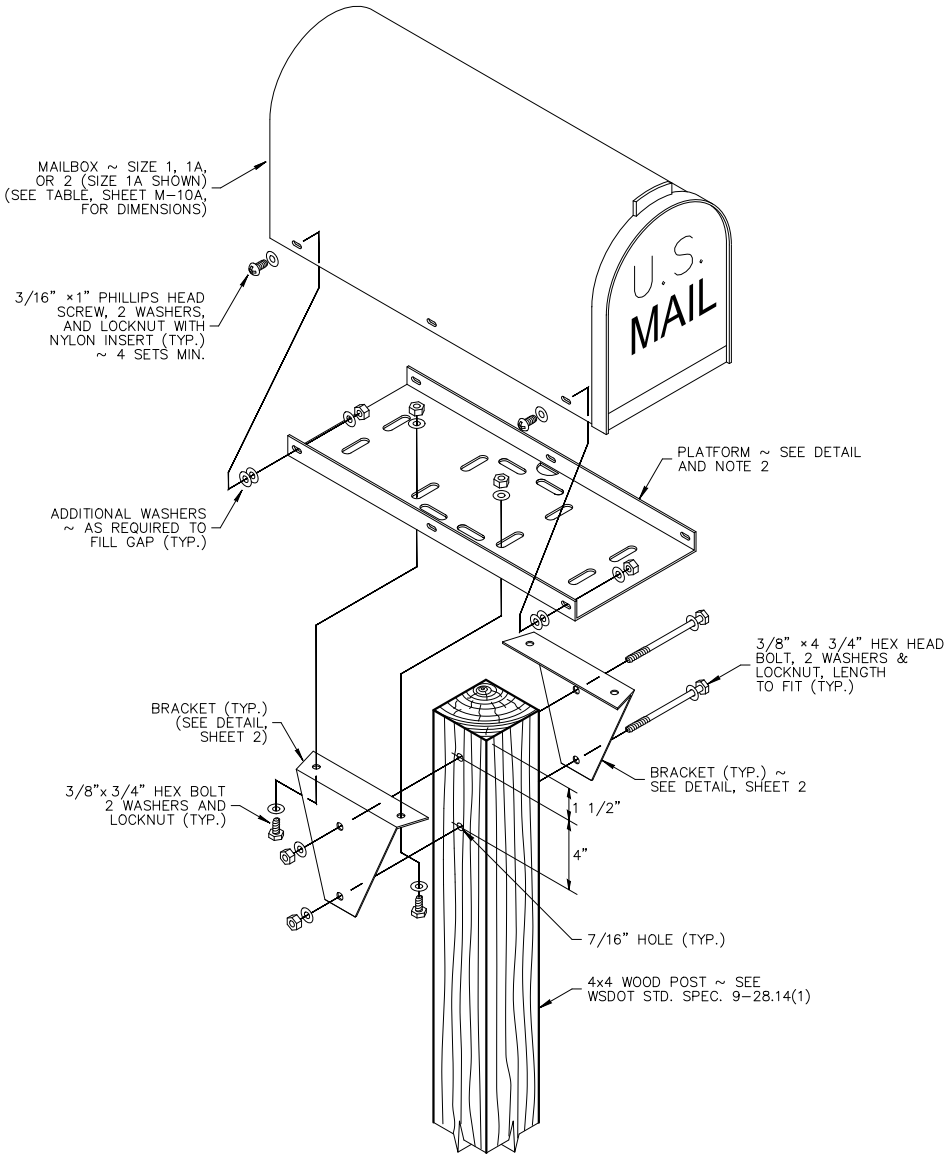
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SIGN POST INSTALLATION FOR INSIDE PAVED AREA

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WOOD POST ASSEMBLY DETAIL

NOTES

1. A SOCKET AND WEDGE ANCHORING SYSTEM THAT MEETS THE NCHRP 350 CRASH TEST CRITERIA MAY BE SUBSTITUTED IN LIEU OF THE ANTI-TWIST PLATE DESIGNS SHOWN. ANTI-TWIST PLATES ARE NOT REQUIRED FOR WOOD POST INSTALLATIONS.
2. THE PLATFORM DESIGN SHOWN ON THIS PLAN FEATURES SLOTS THAT ACCOMMODATE SEVERAL TYPES OF MAILBOX SUPPORTS; ONLY THOSE SLOTS NECESSARY FOR ASSEMBLING THE TYPE BEING INSTALLED ARE REQUIRED. AN ADJUSTABLE PLATFORM MAY BE USED IN LIEU OF THIS DESIGN, BUT IT MUST FIT THE BRACKET DESIGN SHOWN ON THIS PLAN. BRACKETS ARE REQUIRED FOR ALL SINGLE-POST INSTALLATIONS. FIELD DRILLING MAY BE NECESSARY.
3. CENTER THE MAILBOX ON THE PLATFORM TO ENSURE SPACE FOR THE MAILBOX DOOR TO OPEN AND TO ALLOW SPACE FOR INSTALLING THE FASTENERS (SEE ALIGNMENT DETAIL, SHEET M-10A). SPACING OF MAILBOX MOUNTING HOLES VARIES AMONG MANUFACTURERS. ATTACHMENT OF THE MAILBOX TO THE PLATFORM MAY REQUIRE DRILLING ADDITIONAL HOLES THROUGH THE MAILBOX TO FIT THE PLATFORM.
4. ATTACH A NEWSPAPER BOX TO A STEEL POST WITH TWO 1 7/8" MUFFLER CLAMPS SPACED 4" APART. FIELD DRILL 7/16" HOLES IN THE NEWSPAPER BOX TO FIT. USE 2 1/2" x 1/4" LAG BOLTS TO ATTACH NEWSPAPER BOXES TO WOOD POSTS. NEWSPAPER BOXES MUST NOT EXTEND BEYOND THE FRONT OF THE MAILBOX WHEN THE MAILBOX DOOR IS CLOSED.
5. A TYPE 2 SUPPORT (CITY DRAWING M-10) IS REQUIRED WHEN 2 OR MORE MAILBOXES ARE TO BE INSTALLED ON ONE SUPPORT.

WOOD POST FASTENERS			
SIZE / TYPE	QUANTITY	WASHERS	LOCKNUTS
3/8" DIAM. x 4 3/4" BOLT	2	4	2
3/8" DIAM. x 3/4" BOLT	4	8	4
3/16" DIAM. x 1" SCREW	4	8	4

MAIL BOX NOTES:

A. LOCATION OF PEDESTAL PARCEL LOCKER WILL BE APPROVED BY PUBLIC WORKS DIRECTOR AND THE POSTAL SERVICE.

B. THIS DRAWING DEPICTS A MINIMUM STRUCTURAL AND DIMENSIONAL STANDARD FOR NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT AND PADS. FOR SPECIFIFC POSTAL REQUIREMENTS, CONTACT THE POSTMASTER.

C. MAILBOXES MUST BE POSTMASTER APPROVED WITH A UNIFORM BOX STYLE AND METHOD OF ADDRESS IDENTIFICATION.

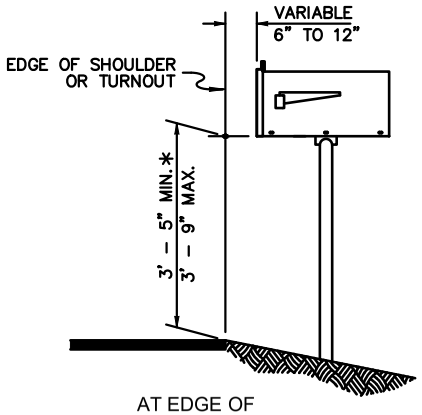
D. LOCATIONS OF MAILBOXES ARE SUBJECT TO APPROVAL BY THE CITY ENGINEER FOR PROTECTION OF VIEWS AND ACCESS.

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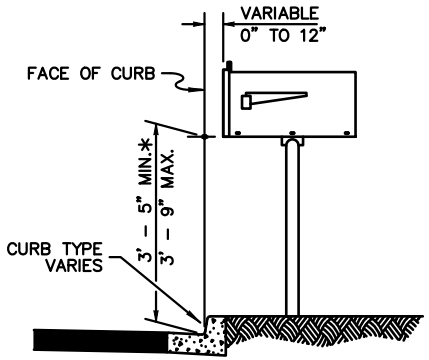
SINGLE MAILBOX INSIDE PAVED AREAS

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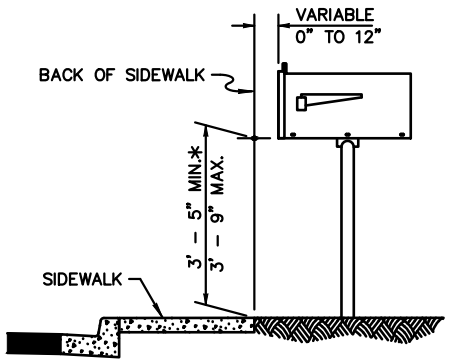
DATE:	BY:	SCALE:	DWG#
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AT EDGE OF SHOULDER



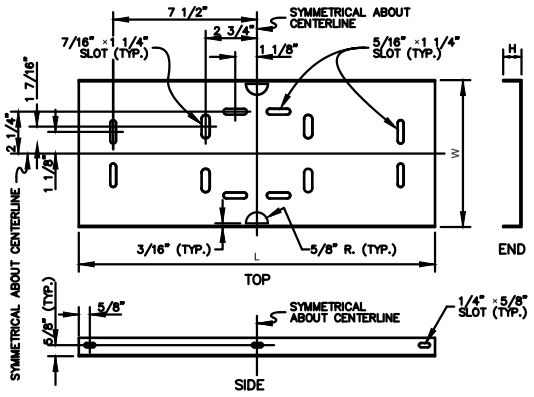
BEHIND CURB



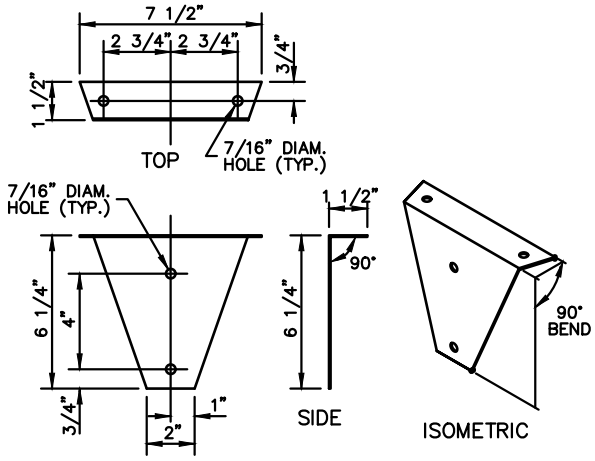
BEHIND SIDEWALK

* UNLESS OTHERWISE SHOWN IN THE PLANS

MAILBOX & PLATFORM DIMENSIONS						
SIZE	MAILBOX DIMENSIONS			PLATFORM DIMENSIONS		
	L	W	H	L	W	H
1	19"	6 1/2"	8 1/2"	17"	6"	1"
1A	21"	8"	10 1/2"	19"	7 1/2"	1"
2	24"	11 1/2"	13 1/2"	21"	11"	1"



PLATFORM DETAIL



BRACKET DETAIL

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SINGLE MAILBOX INSIDE PAVED AREAS

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
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E-01A CB/INLET SEDIMENTATION TRAP INSIDE PAVED AREA

E-02 CATCH BASIN w/ SILT FENCE PROTECTION

E-03 ROCK CHECK DAM DETAILS

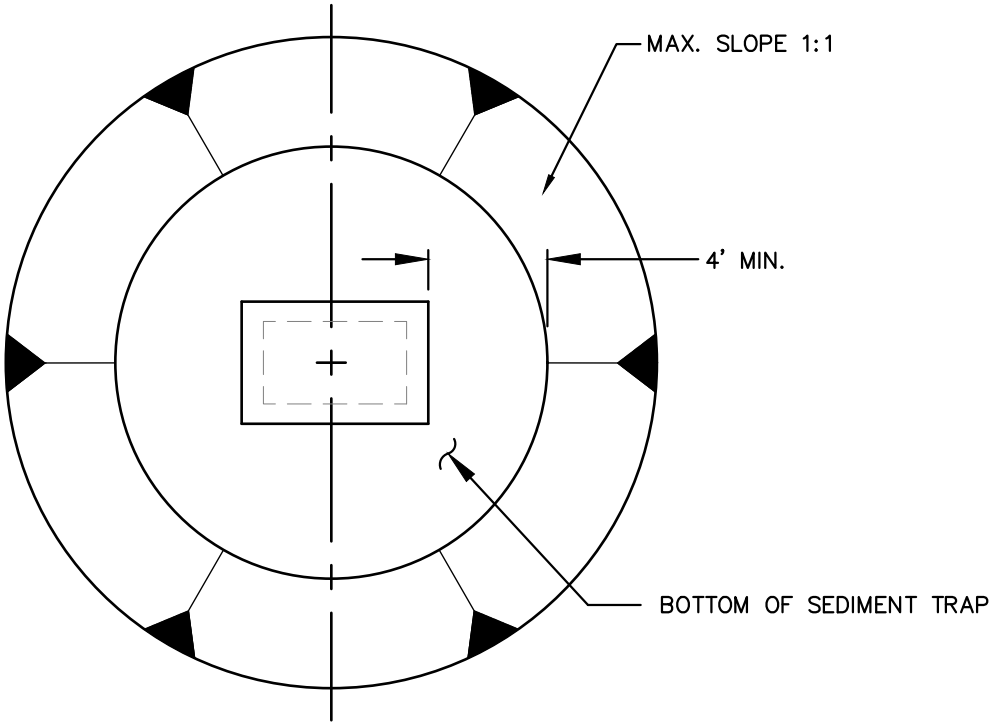
E-04 SEDIMENT TRAP OUTLET DETAIL

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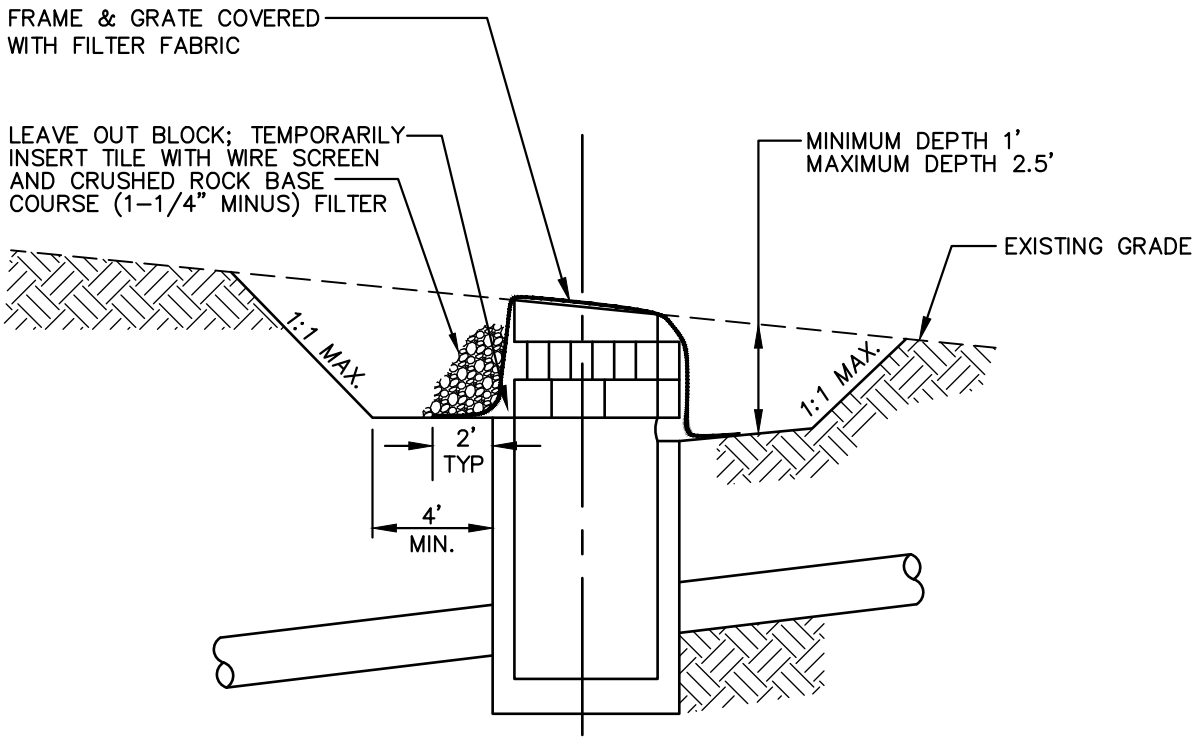
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PLAN VIEW



SECTION VIEW

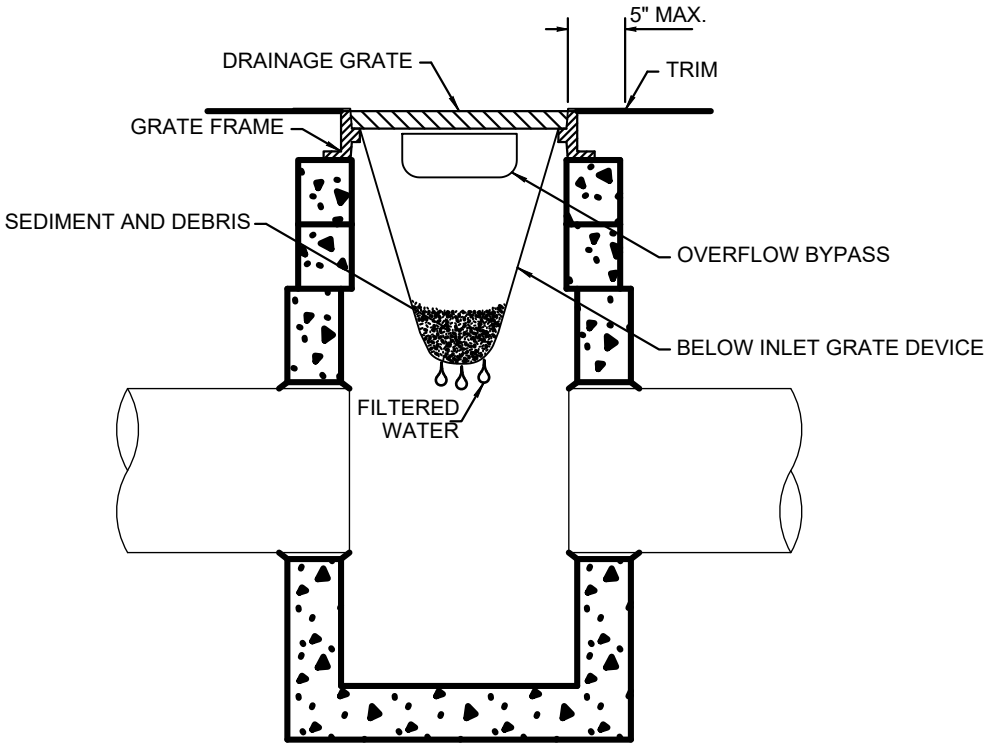
CB/INLET SEDIMENTATION TRAP OUTSIDE PAVED AREA

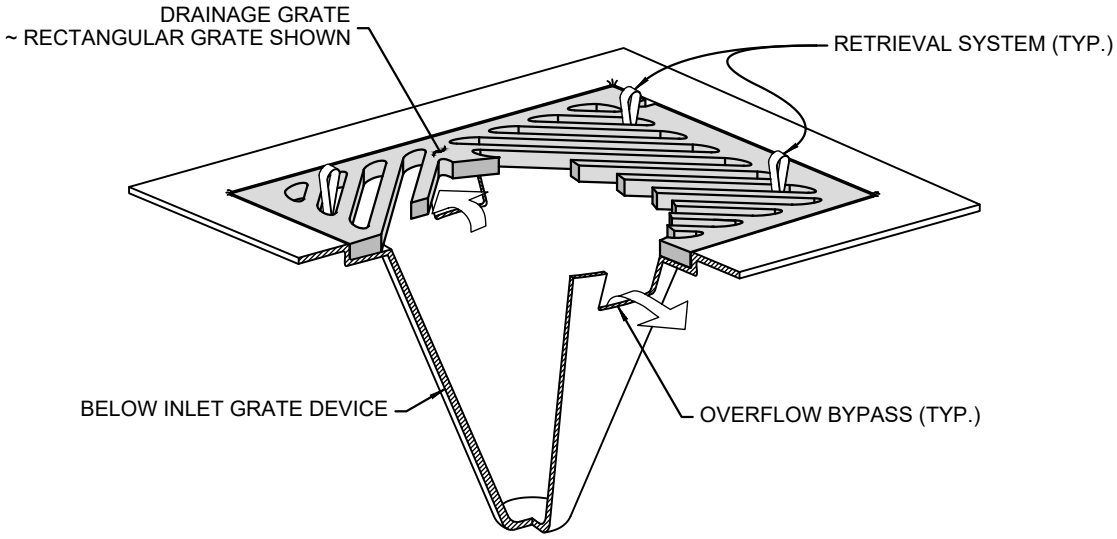
NOTE:
CLEAN OUT SUMP AND REPLACE FILTER MATERIAL WHEN SEDIMENT IS WITHIN 6" OF THE RIM.

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	E-01





NOTES:

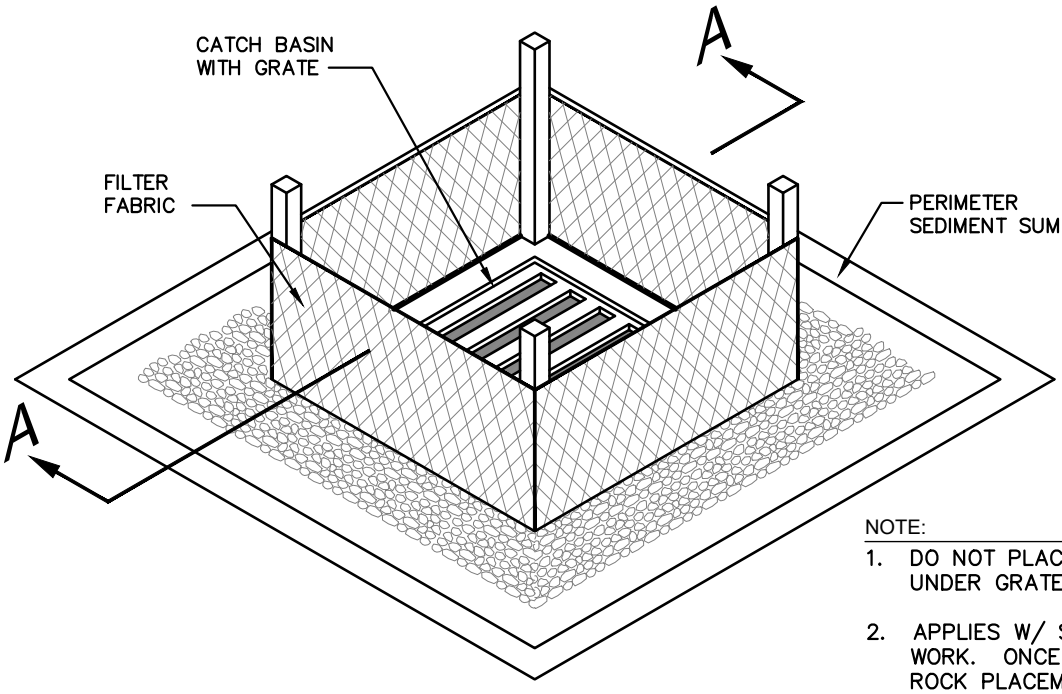
1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
2. THE BIGD SHALL HAVE A BUILT–IN HIGH–FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 8–01.3(15).

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CB/INLET SEDIMENTATION TRAP INSIDE PAVED AREA

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	E-01A

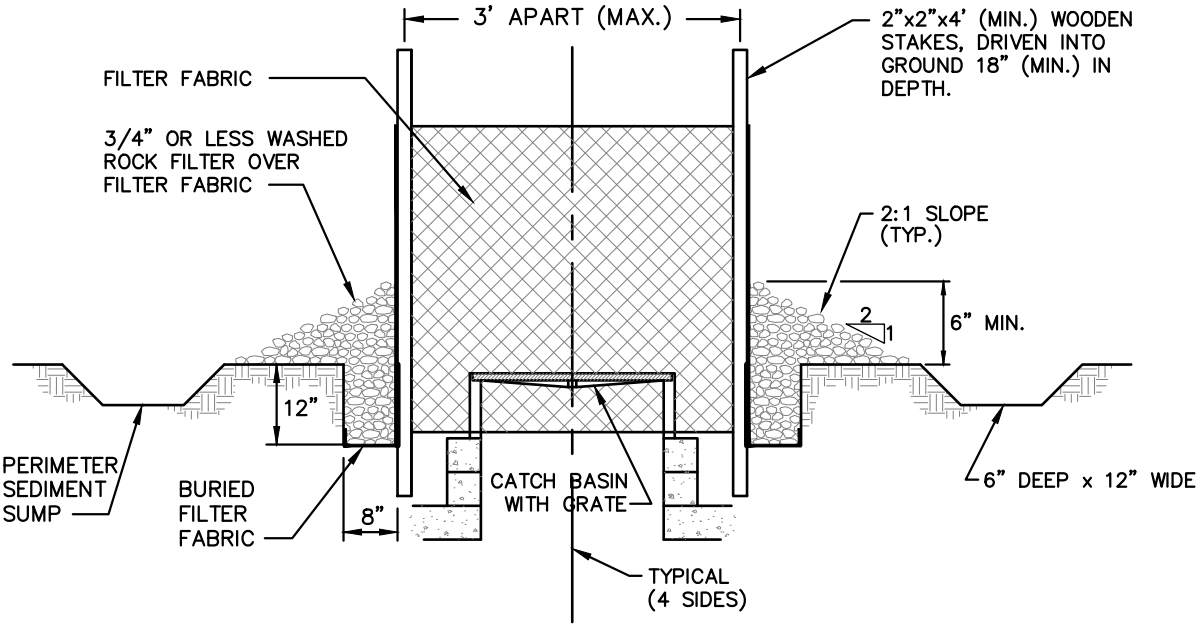


ISOMETRIC PLAN VIEW

NOT TO SCALE

NOTE:

1. DO NOT PLACE FABRIC UNDER GRATE.
2. APPLIES W/ SUBGRADE WORK. ONCE CRUSHED ROCK PLACEMENT PROCEDES FOR FINAL PAVING, WRAP GRATE W/ FABRIC. REMOVE BEFORE COMPLETING CB ADJUSTMENT & MAKING WATERTIGHT.



SECTION A-A

NOT TO SCALE

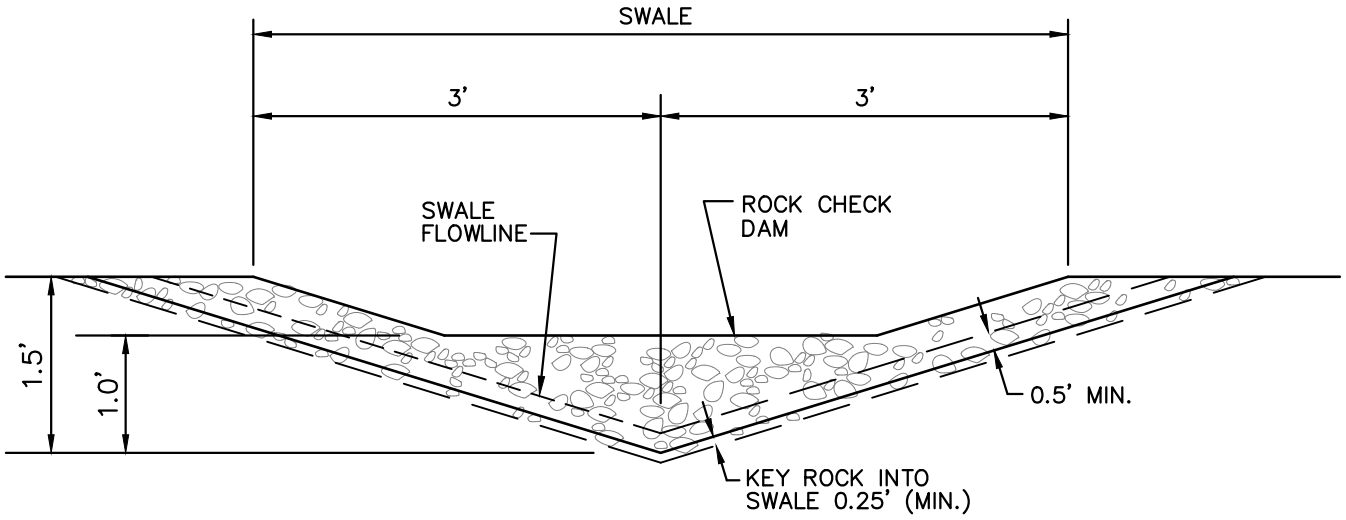
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CATCH BASIN SILT FENCE PROTECTION

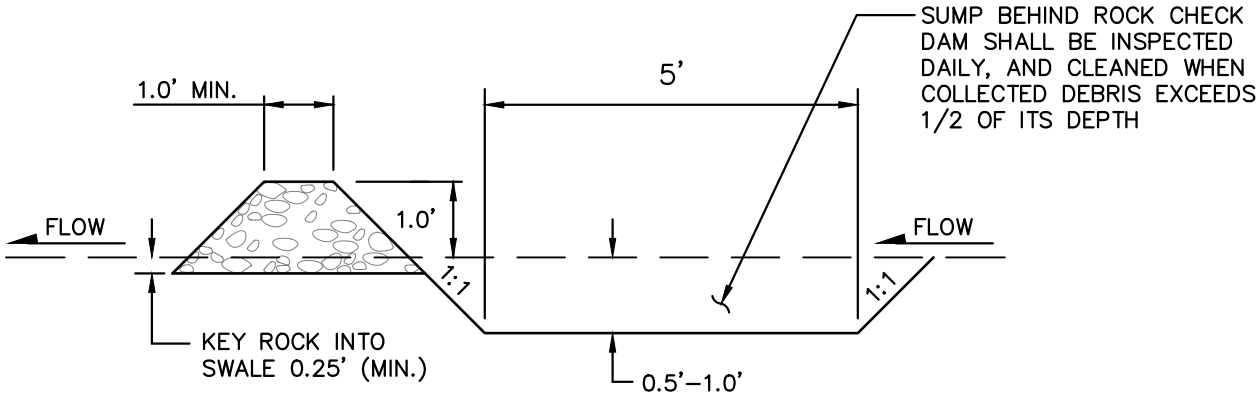
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DATE:	BY:	SCALE:	DWG#
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SWALE SLOPE	CHECK DAM SPACING
0% – 5%	150'
5% – 10%	100'
> 10%	50'



SWALE CROSS SECTION @ ROCK CHECK DAM



ROCK CHECK DAM CROSS SECTION

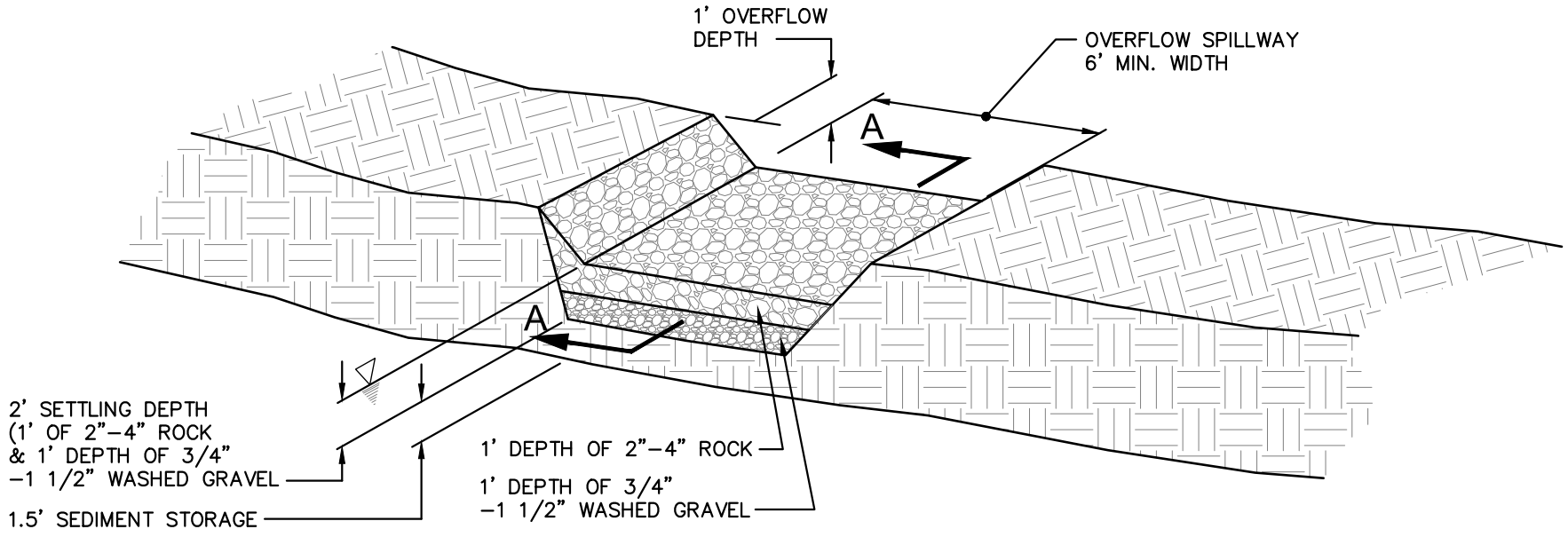
NOTE: ROCK SHALL BE 4" MINUS QUARRY ROCK.

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ROCK CHECK DAM DETAILS

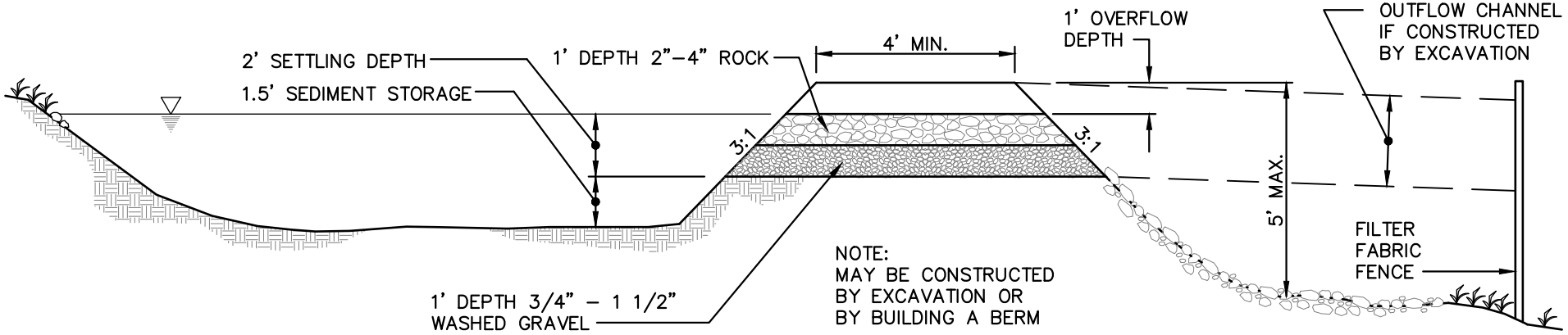
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DATE:	BY:	SCALE:	DWG#
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ISOMETRIC VIEW

NOT TO SCALE



SECTION A-A

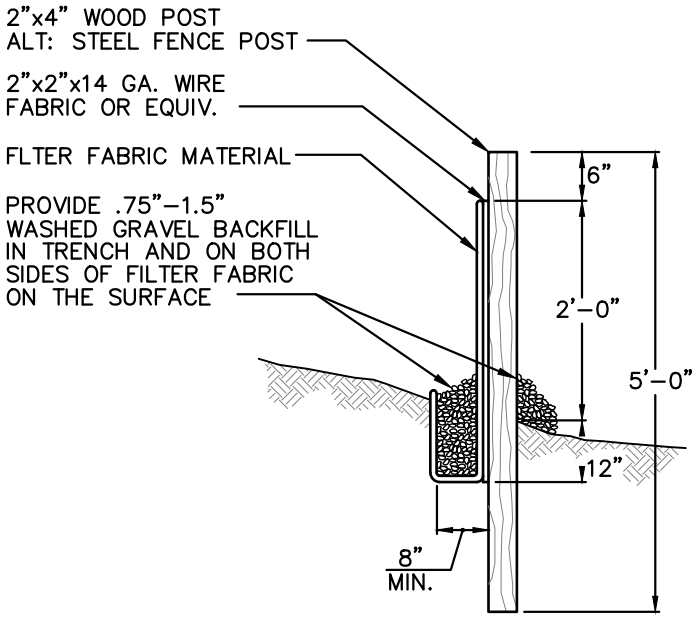
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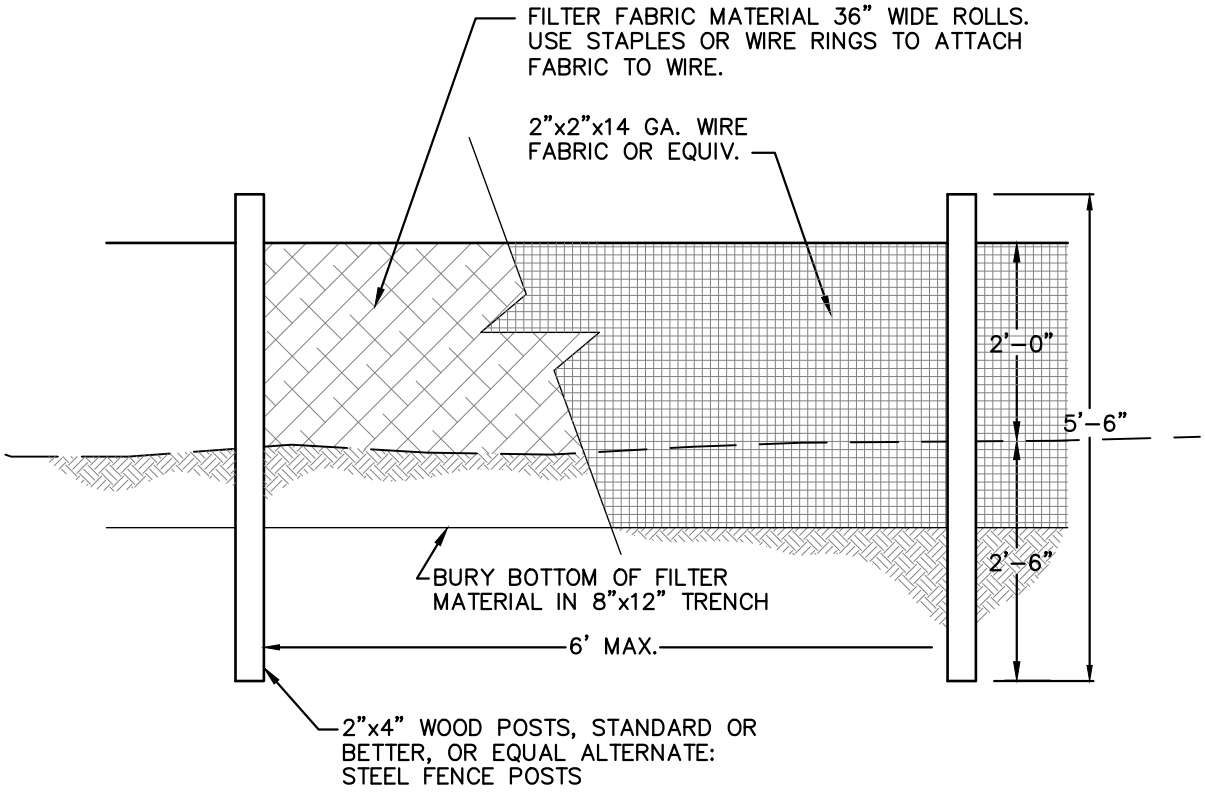
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SEDIMENT TRAP OUTLET DETAIL

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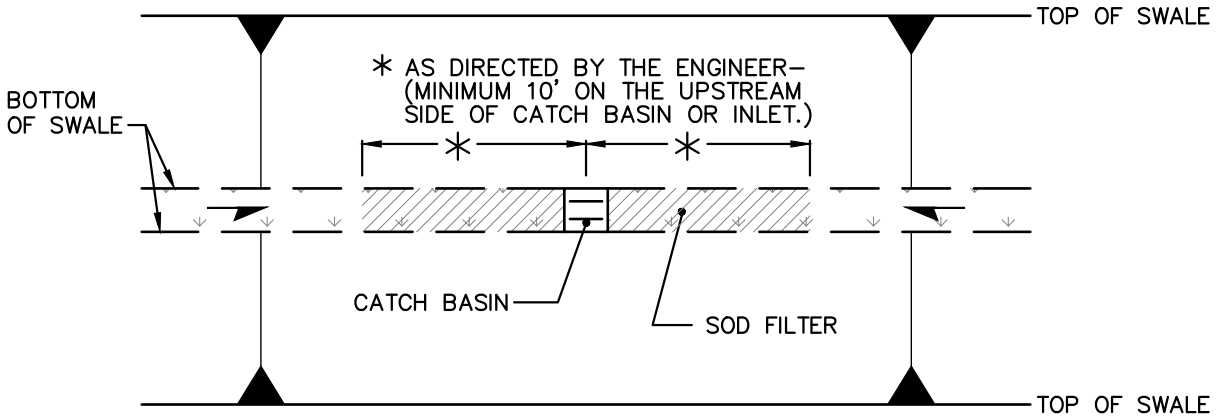


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SILT FENCE DETAIL

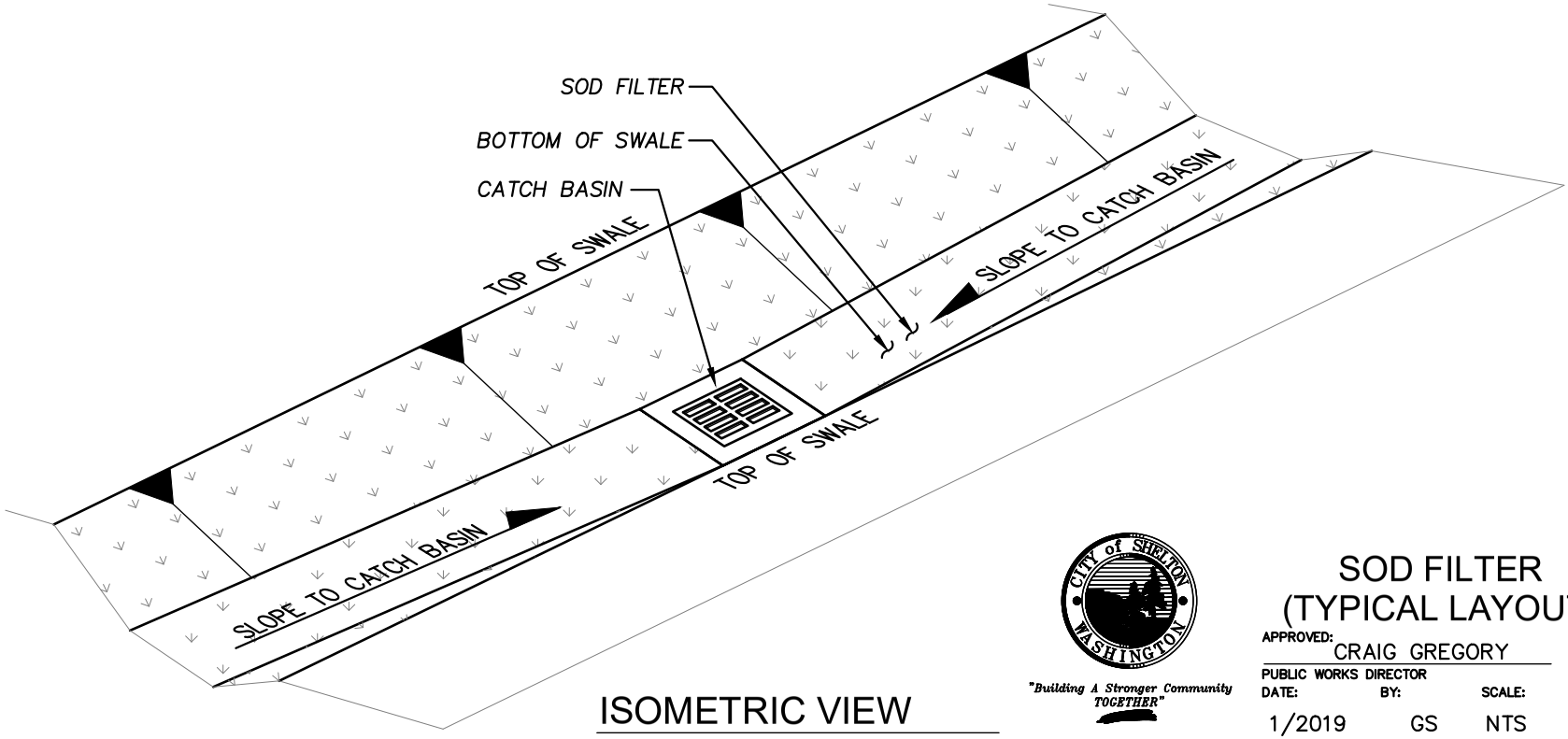
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PLAN VIEW

NOT TO SCALE



ISOMETRIC VIEW

NOT TO SCALE

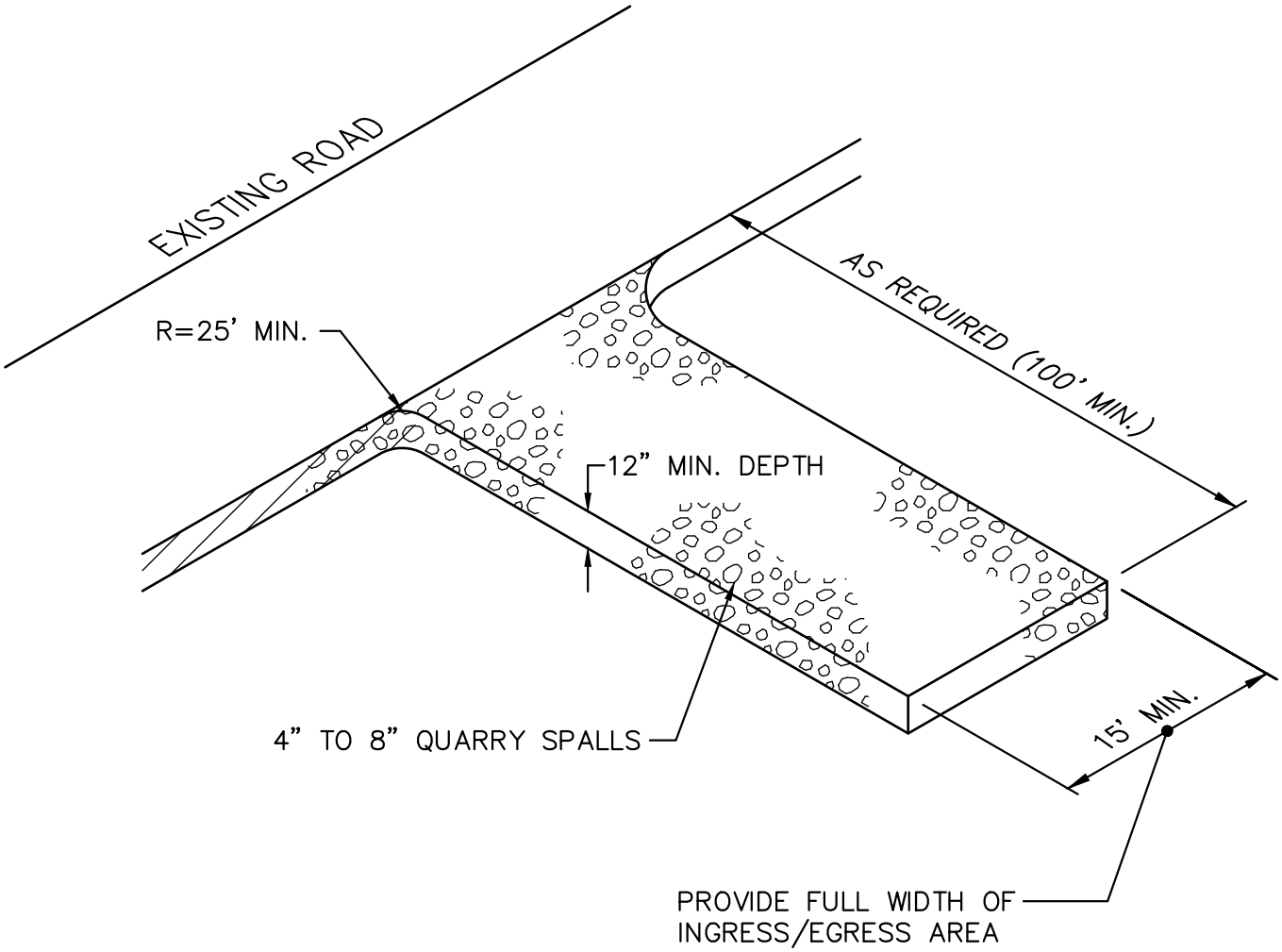
CITY of SHELTON WASHINGTON

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SOD FILTER (TYPICAL LAYOUT)

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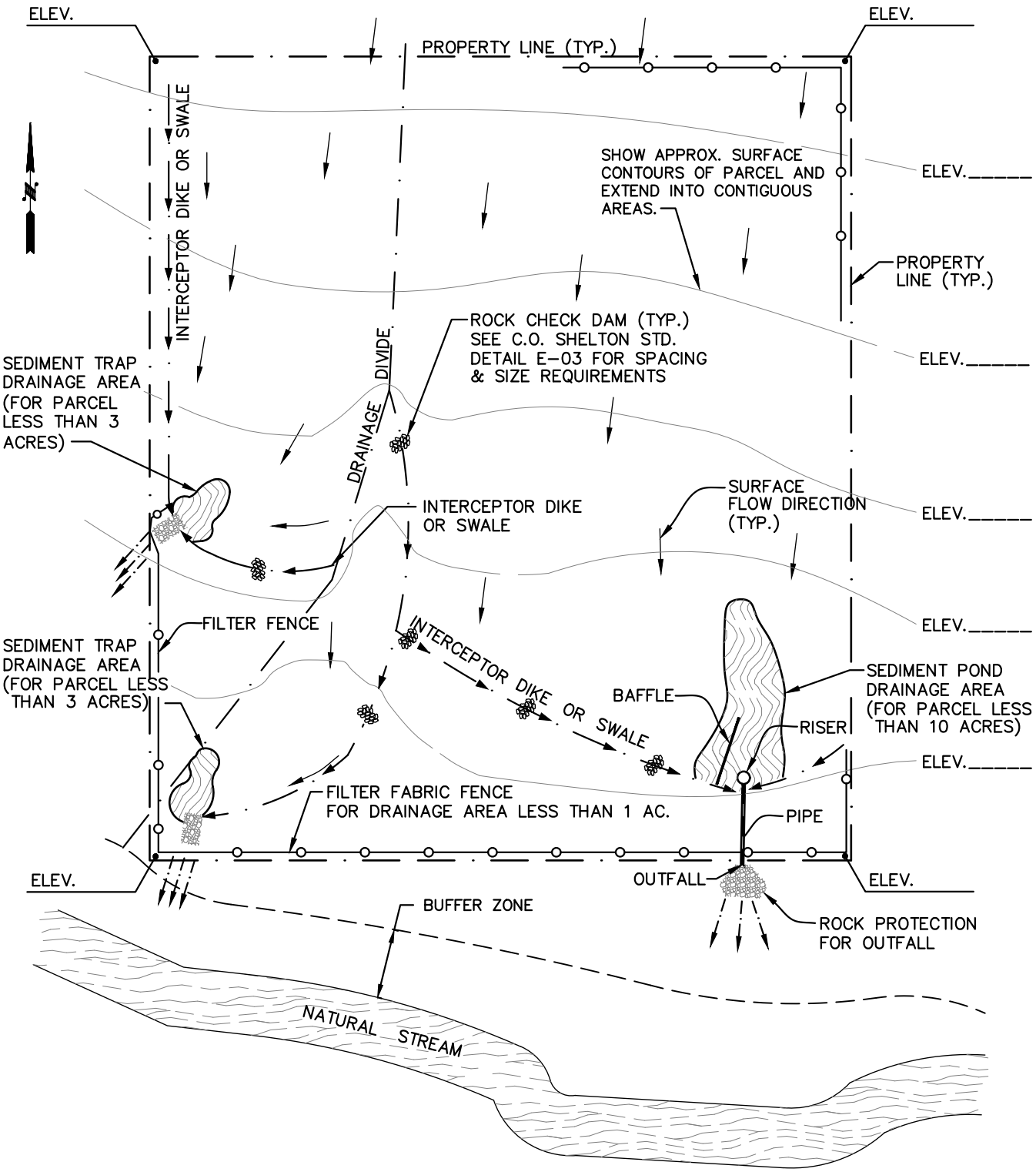


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STABILIZED CONSTRUCTION ENTRANCE

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DATE:	BY:	SCALE:	DWG#
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NOTES:

THE FOLLOWING ITEMS MUST BE SHOWN ON SUBMITTAL:

1. ALL INFORMATION SHOWN ABOVE RELEVANT TO THE SUBJECT PROPERTY.
2. A NORTH ARROW.
3. THE ADDRESS AND/ OR PARCEL NUMBER.
4. ALL ABUTTING STREET(S) (IF APPLICABLE).

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SMALL PARCEL EROSION CONTROL EXAMPLES

APPROVED: CRAIG GREGORY
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DATE:	BY:	SCALE:	DWG#
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C H A P T E R 2

2.000 TRANSPORTATION

2.010 Transportation System Alterations, Extensions and Connections

To allow the City to provide timely assistance and advice, anyone who wishes to alter, extend or connect to the City's transportation system should contact the City as soon as possible. Any alteration of, extension of, or connection to the City's transportation system must conform to the Comprehensive Plan, SEPA determinations, Final Plat approval, Site Plan approval, Subdivision approval, Final Planned Unit Development approval, Binding Site Plan approval, the WSDOT *Standard Specifications for Road, Bridge and Municipal Construction,* the WSDOT *Design Manual*, the WSDOT Construction Manual, Title 17 of the *Shelton Municipal Code,* and these Standards.

The design of streets and roads shall depend upon type and usage. The width and grade of pavement shall provide for safety and uniformity as required by the standards.

2.020 Functional Classification

City streets are divided into principal arterials, minor arterials, major collectors, minor collectors, and local access streets in response to regional transportation needs and the functional use each serves. See the Comprehensive Plan Transportation Element for a listing of arterials. Function is the controlling element for classification and shall govern right-of-way, road width, and road geometrics. Streets will be classified or reclassified by the City as deemed necessary. See Table 2.050 Minimum Design Standards.

2.030 Roadway Classification Definitions

A. Principal Arterial: Serves regional major activity areas. Carries all inter-urban and significant intra-urban auto and transit trips. Carries the highest traffic and longest trips. Offers most mobility, least land access. Fully or partially controlled access.

B. Minor Arterial: Interconnects and augments principal arterials. Distributes travel to areas smaller than those

associated with major arterials. Places more emphasis on land access than principal arterials.

C. Major Collector: Provides both land access and traffic circulation within residential areas. Provides intra-community continuity but doesn't penetrate identifiable neighborhoods. Carries local bus routes.

D. Minor Collector: Collects traffic from local system and channels it to arterials. Provides both land access and traffic circulation within residential neighborhoods, commercial areas and industrial areas.

E. Local: Provides direct access to abutting land and access to higher classified streets. Offers least mobility. Usually contains no bus routes. Through traffic deliberately discouraged.

2.040 Streets and Alleys

The design of streets and roads shall depend upon type and usage. Street design shall provide for the maximum weight loading conditions as determined by the City. The width and grade of the pavement shall provide for safety and uniformity as required by the Standards.

The layout of streets shall provide for preserving and extending the connectivity of the pedestrian, bicycle and grid street system. The layout shall also ensure that new development that is bordered or surrounded by areas of undeveloped land provides for future street extensions, connections, rights-of-way etc. so that undeveloped areas do not become isolated from the transportation network. Existing streets and alleys and their proper projection shall be considered. Streets that primarily serve to provide access to abutting property shall be designed to discourage regular use by cut-through traffic while maintaining the connectivity of the transportation system. See the table of Minimum Street Design Standards.

A. Alignment: The alignment of alleys, arterials and collectors shall conform as nearly as possible to the Comprehensive Plan.

B. Grade: Street grades should conform closely to the natural contour of the land. In some cases a different grade may be required by the City depending upon the street classification. The minimum allowable profile grade shall

be 0.5 percent. The maximum allowable profile grade shall be as specified on Table 2.050, Minimum Street Design Standards.

C. Width: Street pavement and right-of-way width depend upon the street classification. The table of Minimum Street Design Standards shows the minimum widths allowed. Street widths shall be measured from face-of-curb to face-of-curb on streets with cement concrete curb and gutter or the edge-of-pavement where no curb and gutter exists.

2.050 Minimum Street Design Standards

TABLE 2.050
MINIMUM STREET DESIGN STANDARDS (2)

DESIGN STANDARDS (1)	PRINCIPAL ARTERIAL	MINOR ARTERIAL	MAJOR COLLECTOR	MINOR COLLECTOR (2)	LOCAL RESIDENTIAL (2)	LOCAL COMMERCIAL	PRIVATE STREET	ALLEY
DESIGN LIMITATIONS	Access should be limited. No on-street parking allowed.	Access should be limited. NO on-street parking allowed.	Access should be limited. On-street parking allowed.	Access should be limited. On-street parking allowed.	On-street parking allowed	On-street parking allowed.		No parking allowed. Loading and unloading allowed.
MINIMUM STRUCTURAL DESIGN	See Development Section 2.190							
MINIMUM RIGHT-OF-WAY	92'-96' See Standard Drawing #T-25, T-26. See Note 1.	69'-73' See Standard Drawing #T-25, T-26. See Note 1.	61'-84'. See Standard Drawing # T-22, T-23, T-24. See Note 1.	61'-84'. See Standard Drawing # T-22, T-23, T-24. See Note 1.	60'-76'. See Standard Drawing # T-20, T-21. See Note 1.	61'-65' 75'-84' See Standard Drawing # T-22, T-23, T-24. See Note 1		20' See Note 1
MINIMUM PAVEMENT WIDTH	48-64 feet, with four travel lanes, median, turning pockets and 5' bike lanes on both sides.	48-60 feet, with 4 travel lanes, one 2-1ay turning lane and 5' bike lanes on both sides.	44-48 feet with 4 travel lanes and 5' bike lanes on both sides.	24 feet, with 5' bike lanes on both sides.	24 feet without on-street parking; 40 feet with on-street parking.	40 feet, includes on-street parking.	Fire Departme nt standards	20'
PARKING LANE	None allowed	None allowed	Allowed; 8 foot minimum	Allowed; 8 foot minimum	Allowed; 8 foot minimum	Allow; 8 foot minimum		

DESIGN STANDARDS (1)	PRINCIPAL ARTERIAL	MINOR ARTERIAL	MAJOR COLLECTOR	MINOR COLLECTOR (2)	LOCAL RESIDENTIAL (2)	LOCAL COMMERCIAL	PRIVATE STREET	ALLEY
MINIMUM/ MAXIMUM GRADE	0.5%-8.0%	0.5%-8.0%	0.5%-8.0%	0.5%-8.0%	0.5%-10.0%	0.5%-10.0%	0.5%-10.0%	0.5%-10.0%
CURB	Cement concrete curb and gutter	Cement concrete curb and gutter	Cement concrete curb and gutter	Cement concrete curb and gutter	Cement concrete curb and gutter	Cement concrete curb and gutter		N/A
SIDEWALKS	Both sides, minimum 8' width, 10' with zero lot setback	Both sides, minimum 8' width	Both sides, minimum 8' width	Both sides, minimum 6' width	Both sides, minimum 6' in residential zone, 8' in commercial zone	Both sides, minimum 8' in commercial zone, 10; with zero lot line		N/A
CUL-DE-SAC RADIUS (PAVEMENT WIDTH)	N/A	N/A	N/A	N/A	Fire Dept Standards, minimum 55' radius	Fire Dept Standards, minimum 55' radius	Fire Dept standards	N/A
INTERSECTION CURB RADIUS	35 feet, 55 feet on Freight Mobility routes	35 feet, 55 feet on Freight Mobility routes	35 feet, 55 feet on Freight Mobility routes	35 feet, 55 feet on Freight Mobility routes	Not less than 30 feet at edge of travel lane, 25 feet minimum	Not less than 30 feet at edge of travel lane, 25 feet minimum		N/A
DESIGN SPEED (MPH)	With super elevation per AASHTO, Without super elevation 600', maximum super elevation = 6%	With super elevation per AASHTO, Without super elevation 600', maximum super elevation = 6%	150'	150'	100'	100'		N/A

(1) Additional right of way may be required to accommodate street tree corridor and bus turnout.
(2) An exception to these standards for in-fill development within the Neighborhood Residential (NR) Zoning District provided in 2.100.A.

2.060 Traffic Impact Analysis

A Traffic Impact Analysis (TIA) is a specialized study of the impacts a certain type and size of development will have on the surrounding transportation system. The traffic impact analysis is an integral part of the environmental review process and is specifically concerned with the generation, distribution, and assignment of traffic to and from the proposed development.

The purpose of a TIA is to determine what impact development traffic will have on the existing and proposed street network and what impact the existing and projected traffic on the street system will have on the "new development". (Refer to definition of "development" in Chapter One).

This section has been prepared to establish the requirements for a Traffic Impact Analysis. The Community and Economic Development Director is responsible under SEPA and City Ordinances for determining the need for a Traffic Impact Analysis. The Public Works Director will approve the scope of work, review the Traffic Impact Analysis and make recommendations to the SPRC and/or the ERC.

All reports shall be submitted in a professional format that can be interpreted by all departments. Exhibits shall include a border with a title block identifying the project and a description with legible text clearly identifying all items. Exhibits shall be constructed with approved graphical software.

To adequately assess traffic impacts on the transportation system, the Community and Economic Development Director or designee may require a Traffic Generation Worksheet be prepared to determine if a Traffic Impact Analysis (TIA) or traffic mitigation is required.

A full or partial TIA may be required if any of the following conditions are met:

1. The development will generate more than 10 PM peak hour trips.

2. The development will generate more than 100 peak hour trips at a time other than PM peak.

3. The Public Works Department is unable to determine the traffic generation characteristics of the development.

4. The developer feels further traffic analysis may clarify questions about the identified traffic mitigation assessment for the project.

5. The development access to the roadway network may create an impact as determined by the Public Works Department.

6. The development impacts an area identified by the Public Works Department that does not meet the concurrency requirements of the Growth Management Act.

7. The development may potentially affect the implementation of the street system outlined in the Transportation Element of the Comprehensive Plan or any other documented transportation project.

8. If modifications are required to the original TIA that is more than two years old, or where the increase in traffic volume as measured by ADT, peak hour, or peak hour of critical movement is more than 10 percent.

9. The development may have an impact to the roadway or transportation system as determined by the Public Works Department.

10. The City has required that an Environmental Assessment or Environmental Impact Statement be prepared.

If the Public Works Director requires a TIA, the general guidelines for content and structure shall follow the following format.

A. Qualifications for preparing TIA Documents

The Traffic Scoping and/or the TIA shall be prepared and stamped by an engineer licensed to practice in the State of Washington with special training and experience in traffic engineering and who preferably is a member of the Institute of Transportation Engineers (ITE). The developer shall provide the

Public Works Department the credentials of the individual(s) selected to perform the report(s).

B. Scoping Report

If a Traffic Impact Analysis is required, the engineer shall submit 5 copies of a Scoping Report to the City. The Scoping Report will be used by the City to develop the scope of work for the TIA. The Scoping Report shall include all items in the following checklist:

- ☐ Traffic Scoping Information Worksheet (see following pages)
- ☐ Project Size in Square Feet and Acres
- ☐ General Location
- ☐ Proposed Use
- ☐ Phasing Plan
- ☐ Number of Lots or Units
- ☐ Trip Generation
- ☐ Daily Trips
- ☐ PM Peak Hour
- ☐ Year of Occupancy (Horizon year of project)
- ☐ Land Use Code
- ☐ Ambient Growth (to be determined by Public Works Director)
- ☐ Approved Development Projects in the Vicinity
- ☐ Intersections Impacted by 20 or more PM Peak Hour Trips
- ☐ A reduced copy of the "Site Plan" showing the type of development, street system, right-of-way limits, proposed access points, and other features of significance in the development. The "Site Plan" shall also include pertinent "off-site" information such as dimensioning to all existing intersections and driveways with the existing channelization, land use descriptions, street right-of-way limits with respect to the existing roadway and other features of significance. Exhibit "B" illustrates an example site plan for reference purposes.
- ☐ A graphical distribution map showing site generated PM peak hour traffic. Generally, traffic shall be distributed to one PM peak trip within the Transportation Plan Area. This map shall clearly identify all traffic movements and the percentage of site traffic. Include a copy of an approved link-node map or identify the Traffic Analysis Zone (TAZ) of the generic distribution used. Exhibits "E" and "F" illustrate examples of distribution maps. Exhibit "G" illustrates an example of the link-node map.
- ☐ Name, address and phone number of project developer and traffic consultant.
- ☐ If streets or intersections affected are in the neighboring jurisdiction of Mason County, or the Washington State Department of Transportation, identify issues that may impact those jurisdictions.

Traffic Scoping Information Worksheet
(Include Site Plan)
Project Information

Project Title: _____
Project Description: _____
Parcel Number(s): _____
Trip Generation: _____

Quantity	Units	Land Use Code and Description	Daily Generation Rate	AM Generation Rate	PM Generation Rate	Proposed Pass-by Rate

Total PM Peak Hour Trips: _____

New PM Peak Hour Trips: _____

Total AM Peak Hour Trips: _____

Total Daily Trips: _____

Year of Occupancy (Horizon Year of Project): _____

Phasing Plan:_____

_____

Identify all intersections that are affected by more than 20 new PM Peak Hour Trips: Use additional sheets if necessary.

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Include: Name, address, phone number and fax number of project developer and traffic consultant. Include site plan showing all existing roadways and driveways.

C. Traffic Impact Analysis

The level of detail and scope of work of a TIA may vary with the size, complexity, and location of the development. A TIA shall be a thorough review of the immediate and long-range effects of the development on the transportation system

1. Prospectus

    a. Provide a "Vicinity Map" of the project area showing the transportation system to be impacted by the development.

    b. Provide a reduced copy of the Site Plan showing the type of development, street system, right-of-way limits, proposed access points, and other features of significance in the development. The Site Plan shall also include pertinent off-site information such as dimensioning to all existing intersections and driveways with the existing channelization, land use descriptions, and street right-of-way limits with respect to the existing roadway and other features of significance.

    c. Discuss specific development characteristics such as type of development proposed (single-family, multi-family, retail, industrial), internal street network, proposed access locations, parking requirements, zoning, and other pertinent factors attributable to the development.

    d. Discuss project completion, phasing plan and occupancy schedule for the development. Identify horizon years for traffic analysis purposes.

2. Existing Conditions

    a. Discuss street characteristics including functional classification, number of traveled lanes, lane width, shoulder treatment, posted speed limit, bicycle path corridors, transit routes, transit accessibility and traffic control at study intersections. An Exhibit may be used to illustrate existing transportation facilities.

    b. Identify approved nearby land development (planned or under construction) and associated traffic.

c. Identify safety and access issues including discussions on crash potential, sight distance restrictions, traffic control and pedestrian conflicts.

d. Obtain all available traffic data from the City of Shelton and surrounding jurisdictions if applicable. If data is unavailable, the individual or firm preparing the TIA shall collect the necessary data to support the discussions and analysis in the TIA.

e. Conduct manual peak hour turning movement counts at study intersections if traffic volume data is more than 2 years old unless otherwise directed by the Public Works Department. A copy of the summarized data shall be attached to the TIA when submitted.

f. An Exhibit shall be prepared showing existing average daily traffic (ADT) and peak hour traffic volumes on the adjacent streets and intersections in the study area. This Exhibit shall represent the "base-line" traffic volumes for analysis purposes. Complete turning movement volumes shall be illustrated.

3. Development Traffic

This element of the TIA shall be conducted to identify the limits of the study area. The study area shall include all site access drives, pertinent intersections and streets impacted by development traffic. The limits of the study area shall be representative of the specific conditions outlined in the Scoping process. The threshold requirement of development traffic is ten vehicles in the peak hour on the adjacent streets and intersections. Each intersection and street impacted as described shall be included in the Plan Area for mitigation or analysis purposes.

4. Trip Generation

The methodology and procedures used in preparing the trip generation of the development are as follows:

Site-generated traffic from the development shall be estimated using the latest edition of the ITE *Trip Generation Manual*. **Average trip rates shall be used for**

all land-use categories where applicable. Trip rate equations will only be allowed for those land-uses without average rates. Table formats for trip generation shall not be interpolated. Generally, the consultant shall use individual rates for mixed-use developments.

Variations from the trip rates will be considered in the scoping process. The consultant shall submit a letter explaining the reason for the variation and all supporting documentation. Trip generation studies shall follow standard ITE guidelines and shall be statistically valid for approval by the Public Works Director.

Site traffic shall be estimated for daily, AM peak hour and PM peak hour periods as directed by the City. A "pass-by" traffic volume discount for applicable commercial development shall be calculated based on the *Trip Generation Handbook*, most current edition, published by the Institute of Transportation Engineers (ITE). If a comparable use is not identified in the ITE *Trip Generation Handbook*, an independent study of a minimum three comparable uses shall be used. The comparable sites must be approved by the City. Land uses not identified in the ITE *Trip Generation Handbook* will typically have a "pass-by" rate between 0% and 25% maximum and shall be consistent with similar land uses approved by the City. If a minimum three comparable uses cannot be identified, the developer may use rates previously approved by the City for similar uses if available. "Pass-by" discounts will not be permitted for residential or office developments.

For multi-use and/or phased projects, a trip generation table shall be prepared showing proposed land-use, trip rates, and vehicle trips for daily and peak hour periods and appropriate traffic volume discounts if applicable.

5. Trip Distribution

Projects that generate more than 250 PM peak hour trips may be required to generate a project specific distribution.

The Public Works Director shall approve the trip distribution for a development during the formal scoping process.

A graphical distribution map shall be submitted showing site generated PM peak hour traffic. Generally, traffic shall

be distributed to one PM peak trip within the Transportation Plan Area if a generic distribution is not used (20 trips if a generic distribution is used). This map shall clearly identify all traffic movements and the percentage of site traffic. Include a copy of the link-node map or identify the Traffic Analysis Zone (TAZ) if the generic distribution is used.

6. Future Traffic Conditions

   Future traffic volumes shall be estimated by including an annual growth rate to the existing (base-line) traffic volumes and shall include all traffic generated by anticipated nearby land development (projects with an approved traffic scope) when forecasting future traffic volumes. The future traffic volumes shall be representative of the year the project development is scheduled to be completed (horizon year). The Public Works Director will determine an appropriate growth rate.

   The site-generated traffic shall be assigned to the street network in the study area based on the approved trip distribution. The site traffic shall be combined with the forecasted traffic volumes to show the total traffic conditions estimated at development completion. An exhibit will be required showing daily and peak period turning movement volumes for each traffic study intersection.

7. Traffic Operations

   The Level of Service (LOS) and capacity analysis shall be conducted for each pertinent intersection in the study area as determined by the Public Works Department. The methodology and procedures for conducting the capacity analysis shall follow the guidelines specified in the current version of the *Highway Capacity Manual - Special Report 209*. The individual or firm preparing the TIA shall calculate the intersection LOS for each of the following conditions:

   a. Existing PM peak hour traffic volumes (Exhibit required).

   b. Future PM peak hour traffic volumes not including site traffic (Exhibit required).

c. Future PM peak hour traffic volumes including site traffic (Exhibit required).

d. Level of Service results for each traffic volume scenario (Table required).

The Level of Service table shall include LOS results for the key peak periods if applicable. The table shall show LOS conditions with corresponding vehicle delays for signalized intersections and un-signalized intersections. The LOS conditions and average vehicle delay shall be provided for each approach and the intersection as a whole.

If the development will be completed in phases, the TIA shall conduct a LOS analysis for each separate development phase. The incremental increases in site traffic from each phase shall be included in the LOS analysis for each succeeding year of development completion. An Exhibit will be required for each horizon year of phased development.

The capacity analysis shall be conducted using computer software compatible with the Public Works Department's software package. The individual or firm preparing the TIA shall use SIGNAL 2000 or an approved equivalent for capacity analysis of signalized intersections. SIDRA5 or latest version shall be used for analysis of modern roundabouts. Other computer software packages used for capacity analysis applications will not be accepted unless approved beforehand by the City.

If the development impacts a traffic signal coordination system, the Public Works Department may require the TIA to include operational analysis of the system. Timing plans and proposed modifications to the coordination system may be required. The latest version of Passer II, Transyt-7F, or Synchro shall be used depending on the signal system. The Public Works Director will determine the appropriate software on a case-by-case basis.

The capacity analyses for each intersection shall be analyzed using the existing timing and phasing for both existing and future volumes. If the intersection runs free during the analysis period, phasing shall remain the same and existing minimums shall not be violated. All traffic signal system operational data will be made available by

the Public Works Department and adjacent jurisdictions if applicable.

Generally, default values identified in the *Highway Capacity Manual-Special Report 209* shall be used in the analysis. The following values shall be used:

- Peak Hour Factor (PHF) shall be calculated for each intersection. At no time shall the PHF be higher than 0.90, regardless of the calculated value.

- Right Turn On Red (RTOR) shall not be used unless the approach has an exclusive right turn lane. If the approach has a right turn lane the maximum value shall be 100 vehicles per hour, unless otherwise approved by the Public Works Director.

Include turning movement volumes in the report. The latest City counts shall be used if available. If not, an independent count must be submitted in graphical format similar to the City's format.

A disk of the analysis model and a hard copy explanation of the scenarios by filename or line number are required. The computer worksheets that identify the input and output data shall be included in a technical appendix along with an electronic version (i.e., compact disk, flash drive or email) of the program data of each capacity analysis.

For unsignalized intersections, the *Highway Capacity Manual* methodology shall be used in the analysis. If the intersection or a particular movement fails, a signal warrant analysis shall be completed for the intersection.

8. Access Management

Requests for site access shall be addressed in the Traffic Impact Analysis. Recommendations shall include site access and transportation improvements needed to maintain traffic flow to, from, within and past the site at an acceptable and safe level of service.

Areas to address include:

- Separate conflict areas. Reduce the number of access points or increase their spacing so conflict areas or maneuver areas do not overlap.
- Limit the type of conflict areas by preventing certain maneuvers.
- Remove turning vehicles or queues from through lanes.
- Safety of a proposed access (sight distance both horizontally and vertically), including pedestrian features.
- Reduce the speed differential in through lanes between through vehicles and turning vehicles.
- Consider the impact of access points on adjacent or nearby properties on both sides of the roadway.

Improvements include such things as: relocation, restriction, or elimination of access point(s); roadway widening; turning lanes; traffic signals; modern roundabouts; and pedestrian facilities.

9. Traffic Calming

Internal traffic calming shall be incorporated into all developments to control cut-through traffic and reduce speed within the development. The Traffic Impact Analysis shall identify and propose specific traffic calming measures and locations to be incorporated in the development. Traffic calming shall be aesthetically pleasing. Public transportation shall also be evaluated. The traffic-calming plan shall include an overall drawing of the development and identify specific locations and features to be included in the development. The proponent's Traffic Engineer shall work with the Public Works Department to develop a traffic-calming plan for the development.

10. Alternate Modes of Transportation

Identify deficiencies in other modes of travel and strategies to encourage these alternate modes. New developments are encouraged to implement Transportation Demand Management practices. An Exhibit should be prepared to identify existing transit routes and stops, bicycle lanes and sidewalks within the vicinity of the development. The

Traffic Impact Analysis shall identify deficiencies in the system to be mitigated.

11. Mitigation

The Traffic Impact Analysis shall include a proposed mitigation plan. The mitigation may be either the construction or financial commitment of the necessary transportation system improvements, or contributions to the City for the development's proportionate share of the improvements.

The Level of Service standards shall be used as the threshold for determining appropriate mitigating measures in the study area. The adopted level of service standards for the intersection of Wallace Kneeland Boulevard and Olympic Highway North is LOS E. All other areas have an adopted LOS of D.

The following guidelines shall be used to determine appropriate mitigating measures of traffic impacts generated by the development.

a. To maintain the adopted Level of Service standard, the development shall provide a financial guarantee or construct improvements to maintain the level of service at or above the adopted standard. This improvement must be consistent with the Transportation Element of the *City of Shelton Comprehensive Plan* goals and policies.

b. Transportation facilities affecting neighboring jurisdictions shall mitigate the impacts based on a per trip methodology approved by the jurisdiction.

c. On transportation facilities where the existing Level of Service condition is less than the adopted LOS standard and where no improvements are planned to improve capacity and traffic operations, the development shall mitigate the intersection to an acceptable Level of Service condition or wait until the improvements are implemented by the City or other developments.

If the analysis identifies a LOS deficiency for an un-signalized intersection that is not scheduled for an improvement, alternate roadway connections or non-

controlled intersection improvements approved by the Public Works Director shall be appropriate mitigating measures. A controlled intersection (traffic signal, modern roundabout) to alleviate a LOS deficiency is not required. If sufficient alternate routes exist as determined by the Public Works Director mitigation will not be required.

If there are no alternatives to installation of a controlled intersection, and two or more traffic signal warrants, as outlined in the MUTCD (*Manual on Uniform Traffic Control Devices*) are satisfied within the horizon year of the development, a traffic signal or modern roundabout will be required as a mitigating measure for the development.

2.070 Signing

The developer is responsible for providing and installing all necessary traffic control signs (including poles and hardware). Traffic control signing shall comply with the provisions as established by the *Manual on Uniform Traffic Control Devices* (MUTCD).

2.080 Right-of-Way

Right-of-way is determined by the functional classification of a street. See Table 2.050, Section 2.020, and Section 2.030.

2.090 Private Streets

A. Private streets may be approved under the following conditions:

1. Permanently established by tract or easement providing legal access to serve more than one but no more than 4 dwelling units or businesses on separate parcels, or unlimited dwellings units or businesses situated on one parcel and sufficient to accommodate required improvements, to include provisions for future use by adjacent property owners when applicable, and,

2. Accessible at all times and with sufficient load bearing capacity for emergency and public service vehicle use, and,

3. Will not result in land-locking parcels nor obstruct public street circulation nor be inconsistent with the surrounding grid system and,

4. Covenants have been approved, recorded, and verified with the City that provide for maintenance of the private streets and associated parking areas by the owner or homeowners association or other legal entity.

5. Owners may be required to sign an indemnification for any damages.

B. Private Streets will not be approved by the City in an area or location that is identified by the City as a known or potential extension of existing public rights-of-way.

C. Acceptance as Public Streets. Acceptance of private streets as public streets will be considered only if the street(s) meet all applicable public street and utility standards.

2.100 Street and Alley Frontage Improvements

A. All new construction projects, substantial remodels on existing lots, and all short platting of land within Neighborhood Residential (NR) Zoning District shall complete improvements (as shown in drawing (T-27) or pay a Frontage Improvement Charge (FIC) in conformance with these standards and SMC 12.36 in lieu of the more formal improvements identified in Table 2.050.

All projects on the critical pedestrian route (see page 2-20a) shall pay the Frontage Improvement Charge (FIC).

B. When constructing right-of-way improvement not associated with new development projects, such as the construction of improved driving surfaces, new or upgraded sidewalks/paths, or the installation of new stormwater system improvements, it is not necessary that the road system be improved to include all elements that constitute full frontage improvements as required by these Standards. In this instance, constructed improvements shall meet the minimum standard for the element being constructed and ADA standards for accessibility.

C. Unless payment of a FIC is an option, street frontage improvements, in conformance with these standards, will be required along all street frontages adjacent to a development. Corner lots are also responsible for improving adjacent street intersections.

D. Minimum improvements, of any development, will require the developer to clear and grade 15' of right-of-way measured from the centerline of the right-of-way irrespective of the location of the existing traveled way.

E. Alley frontage improvements will be required along all adjacent development and shall meet the following requirements:

1. Alleys within the residential zones of the city shall be constructed of compacted crushed aggregate for the full width of the alleys.
2. Alleys within the Mixed-Use and Non-Residential zones of the city shall be constructed per section 2.180 of these Standards for the Full width of the alleyway.

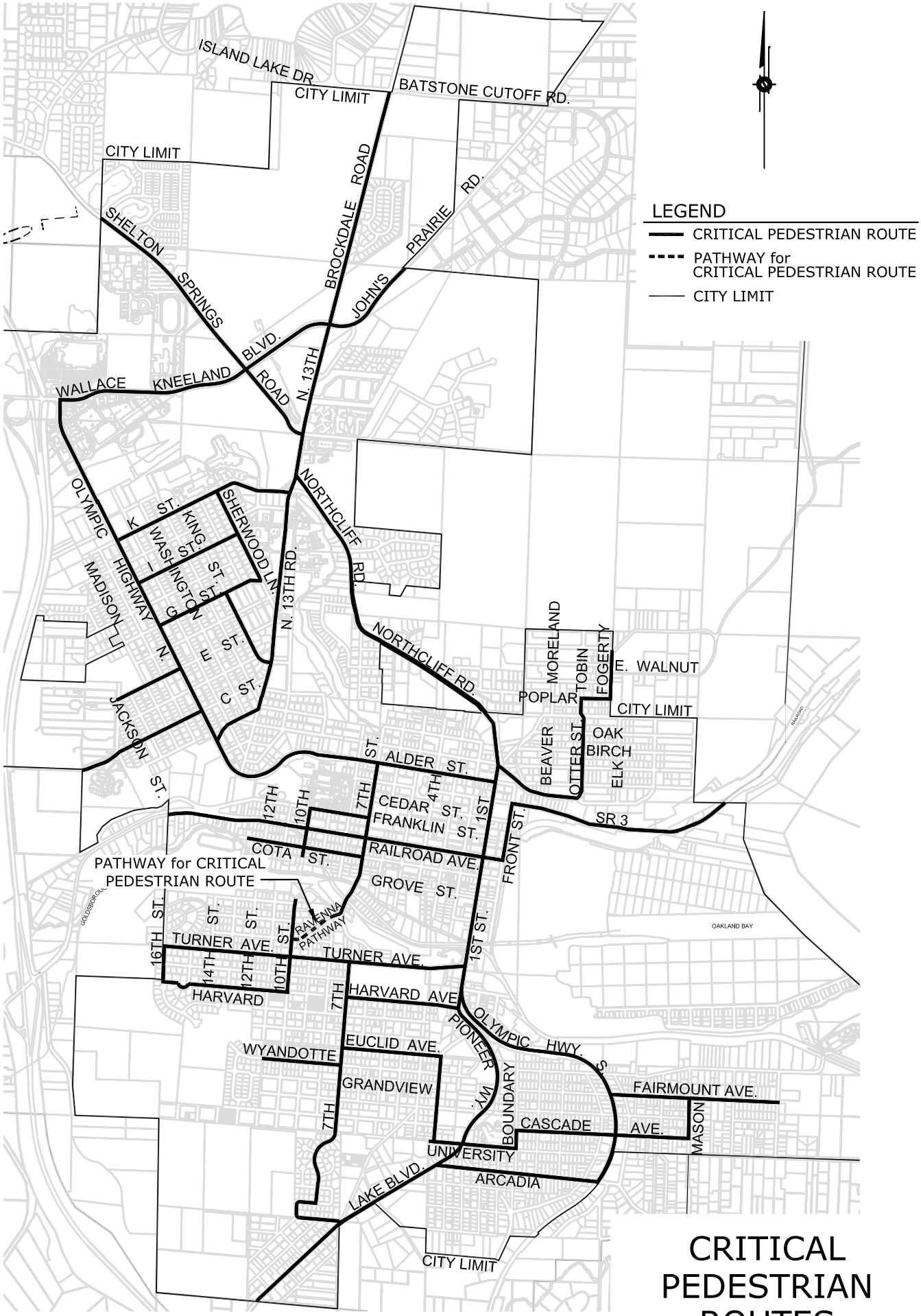
All plats and re-plats shall install all street and alley frontage improvements at the time designated in the municipal code. Such improvements shall include: curb and gutter; sidewalk; storm drainage; street lighting system; traffic signal modification, relocation, or installation; utility relocation; landscaping and irrigation; and street improvements per Table 2.050; and any other applicable sections of these Standards. Plans shall be prepared and signed by a licensed civil engineer register in the State of Washington.

2.110 Cul-de-sac

In general, the City discourages the use of cul-de-sacs per Section 2.040 of these Standards. Streets designed to have one end permanently closed shall be no longer than 400-feet. At the closed end, there shall be a widened "bulb" having a minimum paved traveled radius as shown in the Minimum Street Design Table.

2.120 Temporary Dead Ends

Where a street is temporarily dead ended, turn-around provisions must be provided where the road extends more than 150 feet. The turnaround may be a hammerhead with a



CRITICAL PEDESTRIAN ROUTES

minimum distance on both sides at the centerline intersection of 60 feet to facilitate emergency vehicle turn-around.

2.130 Half Street

A half street is an otherwise acceptable arterial roadway section modified to conform to limited right-of-way on the boundary of the property subject to development, or when constructing a portion of the road section when less capacity is necessary for adequate levels of service. A half street may be permitted by the Public Works Director when:

A. Design of a full street, including phasing of construction, is prepared by a licensed professional civil engineer and submitted for review and approval by the City; and,

B. A traffic impact analysis is prepared by a licensed professional traffic engineer and submitted for review and approval by the City that fulfills City guidelines for a traffic impact analysis and which demonstrates that the half-street will be safe and of adequate capacity for the use being proposed; and,

C. When required, there is written assurance of obtaining the prescribed additional right-of-way from the adjoining property suitable for completion of a full-section roadway; and,

D. Such alignment is consistent with or will establish a circulation pattern.

2.140 Medians

Medians shall be in addition to, not part of, the specified roadway width. Medians shall be designed so as not to limit the turning radius or the sight distance at intersections. Landscaping and irrigation, hardscape, or a combination shall be installed in all medians.

2.150 Intersections

A. Traffic control will be as specified in the *Manual on Uniform Traffic Control Devices (MUTCD)* or as modified by the City as a result of appropriate traffic engineering studies.

B. Street intersections shall be laid out so as to intersect as nearly as possible at right angles. For safe design, the following types of intersection features shall be avoided:

1. Intersections with more than four intersecting streets;

2. "Y" type intersections where streets meet at acute angles;

3. Intersections adjacent to bridges and other sight obstructions.

C. Spacing between adjacent intersections, whether crossing or "T", shall be a minimum of 300 feet measured centerline to centerline, unless otherwise approved by the City. When the roadway is classified as a Principal Arterial, the minimum offset for the centerline involved shall be 350 feet.

D. On sloping approaches at an intersection, landings shall be provided with a grade not to exceed one foot difference in elevation for a distance of 30-feet approaching any arterial or 20-feet approaching a collector or local access street, measured from nearest right-of-way line (extended) of the intersecting street. The Public Works Director may direct the use of a greater distance when required for public safety.

2.160 Driveways

A. All driveway approaches crossing sidewalks shall be constructed of Portland Concrete Cement and shall be subject to the same testing and inspection requirements as curb, gutter and sidewalk construction. See Standard Detail T-04.

B. Joint-use driveways serving two adjacent parcels may be built on their common boundary upon formal written agreement by both property owners and approval of the City. The agreement shall be a recorded easement for both parcels specifying maintenance and joint usage in perpetuity.

C. All abandoned driveways shall be removed and the curbing and sidewalk or shoulder and ditch section shall be properly restored.

D. Grade breaks, including the tie to the roadway, shall be constructed as smooth vertical curves. The maximum change in driveway grade shall be 8 percent within any 10 feet of distance on a crest and 12 percent within any 10 feet of distance in a sag vertical curve.

E. No driveway may access an arterial street within 75 feet (measured along the arterial) of any other such arterial street access on either side of the street; provided that such access maybe located directly opposite another access, if approved by the City, or when lot dimension limitations will not permit this requirement to be met. No driveway access shall be allowed to an arterial street within 150 feet of the nearest right-of-way line of an intersecting street, unless otherwise approved by the City.

F. Within the limitations set forth above, access to arterial streets shall be limited to one driveway for each tract of property separately owned. Properties contiguous to each other and owned by the same person are considered to be one tract where practical. Shared access with adjacent properties will be encouraged.

G. Driveways giving direct access onto arterial streets may be denied if alternate access is available. No commercial driveway shall be approved where backing onto the sidewalk or street right-of-way will occur. No residential driveway shall be allowed to back out onto a sidewalk or street right of way unless otherwise approved by the Public Works Director, provided the developer can show that adequate sight distance exists and all safety issues are addressed.

H. The maximum driveway width for two-way access drives onto an arterial or collector shall be 24 feet for residential uses, 30 feet for commercial uses, and 35 feet for industrial uses. Maximum driveway widths for one way access drives onto an arterial or collector shall be 20 feet for residential, 20 feet for commercial, and 25 feet for industrial uses. A wider driveway width may be approved by the City where a substantial percentage of oversized vehicle traffic exists, where divisional islands are proposed, or where multiple exit or entrance lanes are needed.

I. Driveways shall be designed and constructed to not restrict surface water flow, and to provide positive drainage at the point of connection to the street.

J. The maximum driveway width onto a local access street shall be 24 feet for residential uses and 25 feet for commercial uses, unless otherwise approved by the Public Works Director. The maximum one way driveway width shall be 14 feet for residential and 22 feet for commercial driveways. Parking lot circulation and signing needs shall be met on site. The public right-of-way shall not be utilized as part of a one-way parking lot flow.

K. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as directed by the City. Tapers shall be designed per the current edition of the *AASHTO Manual.*

L. Maintenance of sidewalks and driveways is the responsibility of the property owner per Section 12.08.030 of the Shelton Municipal Code.

2.170 Sight Obstruction

The following sight clearance requirements take into account the proportional relationship between speed and stopping distance. The sight distance area is a clear-view triangle formed on all intersections by extending two lines of specified length (A) and (B) from the center of the intersecting streets along the centerlines of both streets and connecting those endpoints to form the hypotenuse of the triangle. The area within the sight distance triangle shall be subject to restrictions to maintain a clear view of the intersection approaches. See Detail T-12.

A. Sight Distance Triangle for Stop or Yield-Controlled Intersections:

	Sight Distance (Feet)	
Speed Limit	Major Street (A)	Minor Street (B)
20 mph	200	*
25 mph	250	*
30 mph	300	*
35 mph	350	*
40 mph	400	*

B. Sight Distance Triangle for Uncontrolled Intersections:

	Sight Distance (Feet)	
Speed Limit	Major Street (A)	Minor Street (B)
20 mph	90	90
25 mph	110	110
30 mph	130	130
35 mph	155	155
40 mph	180	180

The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 3-feet and 10-feet above the existing surface of the street. Sight distance is measured from a point on the minor road 15 feet from the edge (extended) of the major road edge of traveled way, and from a height of 3.50 feet on the minor road to a height of 4.25 feet on the major road.

Where different sight obstruction requirements are set forth in the Shelton Municipal Code than are set forth in these *Standards,* the most stringent requirement shall apply

2.180 Surfacing Requirements

A. The following are the surfacing requirements for each application listed. These designs are based on Washington stabilometer subgrade R-value of 5, and assumes that no analysis of the properties of the on-site “native” material has been conducted. The “ballast” material may be eliminated from the standard pavement sections where testing shows that the native material conforms to the material properties for ballast (or an approved equivalent) as indicated in the WSDOT standard specifications.

Alternate structures will be accepted if soil tests based on a 25-year life using standard AASHTO (WSDOT) engineering analysis is provided to justify the alternative section. Soil tests and a completed analysis for each road classification shall accompany plans submitted if structures other than those shown below are used.

B. Soil tests shall be performed by an Engineer specializing in soils analysis. One soil sample per each 500 LF of centerline with 3 minimum per project representative of

the roadway subgrade shall be taken to determine a statistical representation of the existing soil conditions.

C. The soils report, signed and stamped by a soils engineer licensed by the State of Washington, shall be based on actual soils tests and submitted with the plans. All depths indicated are a minimum compacted depth.

Principal and Minor Arterial Streets

Surfacing:	0.50' HMA Class 1/2" PG 64-22 Asphalt
Top Course:	0.17' Crushed Surfacing Top Course
Base:	2.08' Ballast

Alternate	
Surfacing:	0.50' HMA Class 1/2" PG 64-22 Asphalt
Top Course:	0.61' Asphalt Treated Base (ATB)
Base:	0.17' Crushed Surfacing Top Course

Major Collector Streets

Surfacing:	0.33' HMA Class 1/2" PG 64-22 Asphalt
Top Course:	0.17' Crushed Surfacing Top Course
Base:	2.09' Ballast

Alternate:	
Surfacing:	0.33' HMA Class 1/2" PG 64-22 Asphalt
Top Course:	0.62' Asphalt Treated Base (ATB)
Base:	0.17' Crushed Surfacing Top Course

Minor Collector Streets

Surfacing:	0.33' HMA Class 1/2" PG 64-22 Asphalt
Top Course:	0.17' Crushed Surfacing Top Course
Base:	1.36' Ballast

Alternate:	
Surfacing:	0.33' HMA Class 1/2" PG 64-22 Asphalt
Top Course:	0.39' Asphalt Treated Base (ATB)
Base:	0.17' Crushed Surfacing Top Course

Local Streets/Private Streets

Surfacing:	0.25' HMA Class 1/2" PG 64-22 Asphalt
Top Course:	0.17' Crushed Surfacing Top Course
Base:	0.69' Ballast

Alternate:
Surfacing: 0.25' HMA Class 1/2" PG 64-22 Asphalt
Top Course: 0.20' Asphalt Treated Base (ATB)
Base: 0.17' Crushed Surfacing Top Course

Alleys

Surfacing: 0.33' HMA Class 1/2" PG 64-22 Asphalt
Top Course: 0.17' Crushed Surfacing Top Course
Base: 2.09' Ballast

Alternate:
Surfacing: 0.33' HMA Class 1/2" PG 64-22 Asphalt
Top Course: 0.62' Asphalt Treated Base (ATB)
Base: 0.17' Crushed Surfacing Top Course

Sidewalks

Surfacing: 4" 3000 psi Concrete
Base: 2" Crushed Surfacing Top Course/well-graded sand
Asphalt sidewalks are not permitted.

Driveways

Surfacing: 6" 3000 psi Concrete, plus rebar as per Detail T-04
Base: 1" Crushed Surfacing Top Course/well-graded sand

Class 1 Bikeway or Pedestrian Path

Surfacing: 4" 3000 psi Concrete
Base: 2" Crushed Surfacing Top Course

Alternate:
Surfacing: 3" HMA Class 1/2" PG 64-22 Asphalt
Top Course: 2" Crushed Surfacing Top Course
Base: 4" Ballast

2.190 Street Pavement Patching

A. Temporary restoration of trenches shall be accomplished by using 2" HMA Asphalt Concrete Pavement when available, 2" medium-curing (MC-250) Liquid Asphalt (cold mix), 2" Asphalt Treated Base (ATB) or steel plates.

B. ATB used for temporary restoration may be placed directly into the trench, bladed, and rolled and compacted. After

rolling, the trench must be filled flush with asphalt concrete pavement to provide a smooth riding surface.

C. All temporary patches shall be maintained in good condition by the contractor until such time as the permanent pavement patch is in place. The permanent patch shall be accomplished within 7 calendar days unless otherwise approved by the City. Any temporary patch that requires more than 7 calendar days shall be hot mix asphalt concrete pavement.

D. If the contractor does not maintain a temporary pavement patch for whatever reason, the City will patch it and bill the contractor for actual costs plus overhead.

2.200 Trench and Pavement Cut, Backfill and Restoration

A. All work done in roadways is subject to the requirements of the City Right of Way permits, which may include performance and/or maintenance bonding.

B. Trenches shall be excavated to the line and depth designated by the City. Except for unusual circumstances where approved by the City, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space. Federal, state and local regulations for safety must be adhered to. Surface water shall be diverted so as not to enter the trench. Where water is encountered in the trench, it shall be removed during pipe laying operations, and shall be so maintained until the ends of the pipe are sealed and provisions are made to prevent floating of the pipe. Except in the case of unusual circumstances, trench water or other deleterious materials shall not be allowed to enter the pipe at any time. The contractor shall maintain sufficient pumping equipment on the job to ensure that these provisions are carried out.

1. All initial trench and pavement cuts shall be made by milling HMA, a spade bladed jackhammer or with saw cuts. All final cuts shall be made by saw cuts placed at a minimum of 1-foot outside the trench width.

2. Bank Run Gravel for Trench Backfill meeting WSDOT Standard Specification 9-03.19 shall be used for the backfilling of trenches in the pavement area of streets,

unless otherwise approved by the City. When public safety concerns exist, the City may require more stringent backfilling standards. The trench shall be compacted to 95% per WSDOT Standard Specification 2-03.3(14)C method C. Daily compaction reports from an independent, certified testing agency licensed in the state of Washington.

3. All trenching in a gravel shoulder section outside of the pavement or in a Gravel Surfaced Roadway shall be backfilled with Bank Run Gravel for Trench Backfill meeting WSDOT Standard Specification 9-03.19. The trench shall be compacted to 95% per WSDOT Standard Specification 2-03.3(14)C method C. Daily compaction reports from an independent, certified testing agency licensed in the state of Washington.

If the existing native material is determined by the City to be suitable for backfill in trenches in either a paved or gravel roadway, the contractor may use the native material with City approval prior to placement up to the bottom of the surfacing requirements. The trench shall be compacted to 95% per WSDOT Standard Specification 2-03.3(14)C method C. Daily compaction reports from an independent, certified testing agency licensed in the state of Washington.

C. All asphalt restoration shall be as specified in these Standards, or to the depth of the existing pavement, whichever is greater. Existing asphalt edges shall be sawcut to a smooth straight edge prior to final patching, unless otherwise approved by the City.

D. All concrete restoration shall be sawcut to a smooth, straight edge prior to final patching, unless otherwise approved by the City. 3000 psi concrete shall be used, and shall be poured to the same depth and alignment as the existing pavement. Dowling may be required by the City.

E. If an existing concrete is overlaid with asphalt, the asphalt shall be replaced as described below:

1. Tack coat shall be emulsified asphalt grade CSS-1 as specified in Section 9-02.1(6) of the WSDOT/APWA *Standard Specifications*. Tack coat shall be applied as

specified in Section 5-04.3(5)A; joint sealing shall comply with Section 5-04.3(5)C.

2. HMA shall be placed on the prepared surface by an approved paving machine and shall be in accordance with the applicable requirements of Section 5-04 of the WSDOT/APWA *Standard Specifications*, except that longitudinal joints between successive layers of asphalt concrete shall be displaced laterally a minimum of 12-inches unless otherwise approved by the City. Fine and course aggregate shall be in accordance with Section 9-03.9 of the WSDOT/APWA *Standard Specifications*. Asphalt concrete shall be placed in equal 2-inch lifts unless otherwise approved by the City. In no case shall an asphalt lift exceed 3-inches. Tack coat is required between each lift.

F. All street surfaces, walks or driveways within the street trenching areas affected by the pavement cut shall be feathered and shimmed to an extent that provides a smooth riding connection and expeditious drainage flow for the newly paved surface. Shimming and feathering shall be accomplished by raking out the oversized aggregates from the mix as appropriate. Surface smoothness shall be in accordance with Section 5-04.3(13) of the WSDOT *Standard Specifications*. All joints shall be sealed using paving asphalt CSS-1.

G. The final patch shall be completed within 7 calendar days unless otherwise approved by the City, but in no case later than 30 days after first opening the trench. The contractor shall re-establish pavement markings in all locations where the existing pavement markings were disturbed by the contractor's operations.

H. When trenching within the road right of way(s), the right-of-way shall be restored to its original or better condition. All disturbed areas shall be seeded and mulched or similarly stabilized according to Best Management Practices outlined in the Department of Ecology *Stormwater Management Manual for Western Washington* within 14 days of disturbance. For sites where grass has been planted, the contractor's performance or maintenance bond will not be released until the grass has been thoroughly established, unless otherwise approved by the City.

2.210 Staking

All surveying and staking shall be performed by a Professional Land Surveyor, licensed within the State of Washington. A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction. The minimum staking of streets shall be as follows or as otherwise directed by the City:

A. Stake centerline every 50-feet in tangent sections and 25-feet in curved sections plus grade breaks, PCs PTs, high point and low points, with cut and/or fill to subgrade.

B. Stake top of ballast with red tops and top of crushed surfacing with blue tops, at centerline and at edge of pavement at the above-described intervals, and at grade breaks.

C. Stake top back of curb at the above described intervals with cut or fill to finished grade.

Any deviations from these minimum staking requirements shall be approved by the City.

2.220 Testing

Testing shall be required at the developer's or contractor's expense and shall be ordered by the developer or contractor. Testing shall be done on all materials and construction as specified in the WSDOT/APWA *Standard Specifications for Road, Bridge and Municipal Construction* with the frequency as specified herein, unless otherwise approved by the City.

In addition, the City shall be notified a minimum of 24-hours before work commences on each phase of street construction (i.e. staking, grading, subgrade, ballast, base, top course, and surfacing.)

2.230 Sidewalks, Curbs and Gutters, Driveways

These Standards as specified herein shall be met in the design and construction of sidewalks, curbs and gutters. Because these are minimum standards, the minimum requirements may be modified by the City when circumstances require increased or decreased widths, thicknesses or strengths.

A. Sidewalks

Sidewalks shall be required on both sides of all new streets.

1. Sidewalks shall be constructed of 3000 psi Portland Cement Concrete at a minimum of 4-inches thick. When the sidewalk, curb and gutter are contiguous, the width of the sidewalk shall be measured from back of curb and gutter to back of sidewalk (per Standard Detail T-02).

2. The project proponent is responsible for the design and construction or sidewalks on both sides of streets interior to a development, and on the development side of streets abutting the exterior of said development, including cul-de-sacs.

3. The width of sidewalks shall be shown in the approved design drawings. Those bicycle and pedestrian pathways designated in any adopted City of Shelton comprehensive bicycle and pedestrian plan shall, in addition, meet the minimum requirement established. The City shall require that the design of all sidewalks provide for a gradual rather than an abrupt transition between sidewalks of different widths or alignments. Plans for construction of sidewalks, curbs and gutters are to be submitted as part of the street plan when applicable.

4. Maintenance of sidewalks is the responsibility of the abutting property owner, per Section 12.08.030 of the Shelton Municipal Code.

5. Handicap Ramps
   All sidewalks must be constructed to provide for handicap ramps in accordance with the standards of state and federal law. Handicap ramps shall be

constructed of 3000 psi Portland Cement Concrete. Form and subgrade inspections by the City are required before each handicap ramp is poured. See Standard Details T-07 through T-11.

6. Utility Locations
All above-grade utilities shall be located outside of the edge of the sidewalk whenever possible. When it is necessary to place utilities within the limits of the sidewalk, such utilities shall be in compliance with all clear zone requirements and placed so as not to hinder pedestrian traffic.

B. Curb and Gutter

1. Curbs and gutters shall be required on both sides of all new streets. Cement concrete curb and gutter shall be used for all street edges, unless otherwise approved by the City. All curbs and gutters shall be constructed of 3000 psi Portland Concrete Cement. See Detail T-03. Extruded curb and gutter per WSDOT/APWA *Standard Specifications* may be approved by the City following submission and approval of the design mix.

2. Materials shall meet the requirements of Section 8-14 of the WSDOT *Standard Specifications.*

3. The use of calcium chloride as an admixture is prohibited.

C. Staking for Sidewalks, Curbs and Gutters

The minimum staking of sidewalk, curb and gutter shall be as follows, or as otherwise directed by the City:

1. Stake curb every 50-feet in tangent sections and 25-feet in curved sections plus grade breaks, PC's, PT's, high point and low points, with cut or fill to finished grade.

2. Staking shall be performed by a professional land surveyor, licensed within the State of Washington.

3. A pre-construction meeting shall be held with the City prior to commencing staking.

4. All construction staking shall be inspected by the City prior to construction.

D. Construction

1. The City shall be notified before each phase of sidewalk, curb and gutter construction begins. Form and subgrade inspections by the City are required before sidewalks, curbs and/or gutters are poured. Monolithic pour of curb, gutter and sidewalk will not be allowed. See Standard Details T-02, T-03 and T-06.

2. The curb and gutter section shall be placed prior to the placement of the sidewalk section unless otherwise approved by the City. Subgrade shall be approved by the City prior to concrete being placed. Expansion joints shall be placed to match those placed in curbs if new sidewalk is poured adjacent to a curb and gutter. In all other cases, the spacing on expansion joints shall be no greater than 15 feet center to center. Dummy joints shall be ¼ inch by 1 inch on 5-foot centers. Through joints shall be ½ inch, and shall extend to the bottom of the concrete. See Detail T-06.

3. A minimum distance of 2 feet is required from the face of curb to any obstruction on or within the sidewalk unless otherwise noted.

4. It is expected there will be sufficient native material excavated from various portions of the improvement to fill low areas in the sidewalk subgrade and planting strip area when needed. When there is insufficient suitable native material on the project site, the contractor shall furnish, place and compact Gravel Borrow. All sidewalks shall be constructed over a minimum 2 inches of crushed surfacing top course or well-graded sand meeting the requirements of Section 9-03.9(3) of the *WSDOT Standard Specifications* and compacted to 95% of maximum density.

5. Steel forms may be used upon approval of the City. Forms shall be staked to a true line and grade. A subgrade template shall then be set upon the forms and the fine grading completed so that the subgrade

will be a minimum of 3 5/8 inches below the top of the forms. Slip base break away assembly shall be provided for all street name sign and traffic sign posts, unless otherwise approved by the City. See Standard Detail M-09.

6. Around utility poles, blockouts shall be constructed around the pole of ¾ inch expansion joint material and 18" greater in diameter than the pole.

7. The concrete shall be spread uniformly between the forms and thoroughly compacted. Through joints and dummy joints shall be located and constructed in accordance with these *Standards.* See Detail T-06. In construction of through joints, the expansion joint material shall be adequately supported until the concrete is placed on both sides of the joint.

8. Whenever castings are located in the sidewalk area, joints shall be installed at the casting location to control cracking of the sidewalk. If spacing of joints or scoring is such that installation of joint material would be unsuitable, the contractor shall install rebar to strengthen the sidewalk section.

9. Expansion joints and dummy joints shall be positioned in true alignment at right angles to the line of the sidewalk and be normal to and flush with the surface.

10. After the concrete has been thoroughly compacted and leveled, it shall be finished with a float. The surface shall be broom finished in a transverse direction except that at driveway and alley crossings it shall be brushed longitudinally. After broom finish, the edges of the sidewalk and all joint shall be lightly edged again with an edging tool to provide a finished appearance.

11. Curing materials and procedures shall be as specified in Section 5-05.3(13) of the *WSDOT Standard Specifications*, except that white pigment curing compounds shall not be used on sidewalks.

12. The contractor shall have readily available sufficient protective covering, such as waterproof paper or plastic membrane, to cover the pour of an entire day

in event of rain or other unsuitable weather. In periods of low humidity, drying winds, or high temperatures, a fog spray shall be applied to concrete in order to prevent the formation of shrinkage cracks. The spray shall be continued until conditions permit the application of a liquid curing membrane or other curing media.

13. Specifications for hot and cold weather curing and protection of concrete sidewalks shall be consistent with 6-02.3 of the WSDOT *Standard Specifications.*

14. The sidewalk shall be protected against damage or defacement of any kind until it has been accepted by the City. Sidewalk which is not acceptable to the City shall be removed and replaced by the contractor at the contractor's expense.

E. Driveways

Driveways shall be constructed consistent with the specifications outlined in this section and with Standard Detail T-04.

F. Testing for Sidewalks, Curbs and Gutters

Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the Testing and Sampling Frequency Guide. See standard construction specifications.

2.240 Bikeways

Normally bikeways are shared with other transportation modes, although they may be provided exclusively for bicycle use. Bikeway or Urban Trail construction is required in conjunction with any new development or redevelopment, when the need for such a bikeway is indicated in an adopted City of Shelton Bikeway Plan. The design of bicycle paths shall depend upon their type and usage. Bikeway surfacing shall be as outlined in Section 2.190.

2.250 Street Illumination Design Standards

A. All development in the public right-of-way shall provide street lights in accordance with Section 840 of the WSDOT *Design Manual*, Illuminating Engineer Society (IES) and

American National Standards Institute (ANSI) approved design recommendations for roadway lighting, National Electrical Safety Code (NESC) requirements as specified by WAC 296-45-045; National Electric Code (NEC) requirements for roadway lighting, the *Mason County Public Utility District #3 Standards Book*, and these *Standards*.

B. A street lighting plan submitted by the applicant and approved by the City and Mason County PUD #3 shall be required for all street light installations. All public street light designs shall be prepared by a professional engineer licensed by the State of Washington and capable of performing such work. The street lighting plan shall be submitted on a separate sheet. The type of installation shall be as set forth in the *PUD #3 Standards Book* and as directed by PUD #3.

C. Areas that should be considered for roadway lighting include:

1. Areas where significant concentrations of pedestrians are crossing roads or any marked crosswalks such as near a school;

2. Curves or other abrupt change in the roadway direction;

3. Streets with frequent or hidden driveways and crossroads;

4. Locations with mid-street obstacles such as fountains, raised channelization or traffic circles;

5. Locations with measurably higher night to day accident ratios, merging lanes, intersections or any unusual roadway geometry.

D. The City should use a warrant system to assist its decision making on when and where new street lighting expenditures may be appropriate within available budgeted funds.

2.260 Street Illumination Construction (General Notes)

A. The General Notes as follow shall be included on any plans dealing with streetlight design and construction, in

addition to all applicable requirements of Mason County Public Utility District #3 and the City.

1. All workmanship, materials and testing shall be in accordance with the standards of Mason County PUD #3 and these *Standards.*

2. All safety standards and requirements shall be complied with as set forth by the State of Washington, Department of Labor & Industries.

3. A preconstruction meeting shall be held with the City of Shelton and Mason County PUD #3 prior to the start of construction.

4. All approvals and permits required by the City of Shelton and Mason County PUD #3 shall be obtained by the contractor prior to the start of construction.

5. The property owner is responsible for the payment of electrical charges prior to City acceptance of construction.

2.270 Traffic Signals

A. Traffic Signal Design Standards

Signal systems shall be designed in accordance with the specifications as set forth in the WSDOT *Design Manual* and the WSDOT/APWA *Standard Specifications* unless otherwise authorized by the City. All public traffic signal systems shall be prepared by an engineering firm capable of performing such work. The Engineer shall be licensed by the State of Washington. Traffic signals shall be installed per the requirements set forth herein. This work shall consist of furnishing and installing a complete and functional traffic control system of controllers, signals, pedestrian features, emergency preemption devices and appurtenances that meet traffic warrants.

B. Induction Loops

Induction loops shall be constructed per WSDOT/APWA *Standard Specifications* 8-20.3(14)C. Loops shall be performed in the crushed surfacing top course (CSTC) before paving, or shall be cut in existing asphalt or leveling course to sub-base before the intersection is overlaid.

C. Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor directing such work shall be licensed as a professional engineer or professional land surveyor by the State of Washington. A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction. The minimum staking for traffic signals shall be as follows:

1. Location, with cut or fill to center of all pole bases.
2. Location of junction box.
3. Location of all corners of controller base.
4. Location of service disconnect.

D. Testing

All signals shall be subject to any necessary electrical inspections by the State Department of Labor and Industries, Mason County PUD #3, and the City, as well as requirements as set forth in the WSDOT *Design Manual* and the WSDOT/APWA *Standard Specifications*. A signal system shall not be approved or accepted by the City until the signal has performed correctly to the City's satisfaction for a 30 day "check-out" period as outlined below. All parts and workmanship shall be warranted for one year from the date of acceptance.

Controller and cabinet testing by WSDOT District 3 laboratory shall be required by the City. All specifications and material samples shall be submitted to the City for review and approval prior to installation.

E. Traffic Signal Check-Out Procedures

The contractor shall call for an intersection check-out after completing the controller cabinet installation, along with all other signal equipment complete with wiring connections. New signals shall operate without any type of failure for a period of 30 days. The contractor shall have a person available to respond to system failures within 24 hours during the 30-day "check-out" period. Failure of any control equipment or hardware within the "check-out" period shall restart the 30-day "check-out"

2.280 Survey Monuments, Bus Stops, Benches, Mailboxes, Guard Rails, Retaining Walls, Street Trees and Parking Lots

A. Design Standards

Miscellaneous roadside features included herein shall be designed and constructed to encourage the uniform development and use of roadside features whenever possible.

The design and placement of roadside features shall adhere to Section 700, Roadside Safety, of the WSDOT *Design Manual*, the specific requirements as listed for each feature, and the applicable standards as set forth in Chapter One.

B. Survey Monuments

1. All existing survey control monuments and property corners that will be disturbed or destroyed during construction shall be referenced prior to construction and replaced after construction by a Professional Land Surveyor licensed by the State of Washington. All applicable RCW's and WAC's will be complied with, including but not limited to, WAC 332-120, WAC 332-130, and RCW 58.09. The monuments shall be replaced with the proper type as outlined below at the expense of the responsible builder or developer.

2. A pre-cast monument with cast iron monument case and cover installed per City of Shelton standards is required for all monumentation. See Detail T-15.

3. Appropriate monumentation shall be placed at all street intersections; at the PC and PTs of all horizontal curves

or at the PI if it lies in the traveled roadway; and at all dedicated land claim (DLC) corners, section corners, quarter corners and sixteenth corners that fall within the subdivision. The monument case shall be installed after the final course of surfacing has been placed.

C. Public Transit

Different population densities dictate the number and placement of transit bus stops:

1. The spacing, locations and design or specific bus stops shall be coordinated with the Mason County Transportation Authority. See Detail T-17.

2. Signage shall be placed in accordance with the MUTCD.

D. School Buses

1. The spacing, locations and design of specific bus stops shall be coordinated with the Mason County Transportation Authority. See Detail T-17.

2. Signage shall be placed in accordance with the MUTCD.

3. Location of school bus stops shall be designed with safety as a paramount concern. Major arterials with high traffic counts should be avoided where possible, and only used when bus pullouts are available and significant protection provided for children. School bus stops shall also be designed where possible to compliment residential development, and provide convenient location and access for neighborhood children.

E. Benches

Bench material and placement locations shall be approved by the City.

F. Mailboxes

During construction, existing mailboxes shall be accessible for the delivery of mail, or, if necessary, moved to a temporary location. Temporary relocation shall be coordinated with the U.S. Postal Service by the contractor. The mailboxes shall be reinstalled at the original location at the completion of construction or, if construction has made it impossible, to a location approved by the U.S. Postal Service and the City. New mailboxes shall be located as approved by the US Postal Service and the City of Shelton. Structures set in concrete shall adhere to the requirements of Details M-05, M-06, M-10 and M-10A.

G. Guardrails

For purposes of design and location, all guardrails along roadways shall conform to the criteria as outlined in the WSDOT *Design Manual* as may be amended or revised.

H. Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The engineer or surveyor shall be licensed as a Professional Engineer or Professional Land Surveyor by the State of Washington. A pre-construction meeting shall be held with the City prior to commencing staking. All staking shall be inspected by the City prior to construction.

I. Testing

Testing shall be required at the developer's or contractor's expense on all materials as specified in the WSDOT/APWA *Standard Specifications* and with a frequency as specified in the WSDOT *Construction Manual.*

2.290 Retaining Walls

A. Retaining walls proposed for development of private property shall be placed only on private property, and shall not be placed in the public right-of-way unless otherwise approved by the City. Design and construction shall conform to the Uniform Building Code, and the contractor shall obtain a building permit if required from the City.

B. If the City approves a retaining wall or walls to support the public right of way, such retaining wall(s) may occur in the right of way and shall be designed by an engineer licensed by the State of Washington and capable of performing such work. Retaining walls in the public right of way shall be designed to accommodate traffic loads as defined by the City. Plans for such retaining walls shall be submitted to the City for review and approval as to location, structural design, loading, and other relevant criteria as determined by the City.

2.300 Street Trees

A. Street trees shall be required within and along all designated tree corridors as defined in SMC 20.60.120. All street trees shall be installed with City approved root barriers. Designated tree corridors include:

- Railroad Avenue between Front Street and 7th Street,
- Cota Street between 1st Street and 6th street,
- 5th Street between Cota Street and Alder Street,
- Alder Street between 1st Street and 7th Street,
- Olympic Highway North between 13th Street and Wallace Kneeland Boulevard,
- Olympic Highway South between Fairmount Street and the City Limits.

Trees planted adjacent to streets on private property shall also comply with these specifications.

B. Unless otherwise approved by the City, street trees shall be installed in the numbers equal to one per forty feet of the sidewalk length to be constructed, excluding the sidewalk within a sight distance area as defined by Section 2.180 of these *Standards.* Street trees shall be planted at the edge of any such sight distance area(s) at intersections and driveways, but sight obstructions shall not be allowed within a sight distance area.

C. The design for street tree type(s), size, and locations(s) and planting procedures shall be prepared by a landscape architect licensed by the State of Washington and capable of performing such work. The plans for the installation of street trees, or any other proposed landscaping in the public right-of-way shall be submitted for review and approval by the City.

D. Street trees shall be of a type that will minimize the likelihood of future root upheaval or other damage to the sidewalk. In the selection of trees, consideration should be given to overall aesthetic impacts at maturity. The design of tree spacing should consider the tree canopy at maturity, which should be intended to connect and form a continuous tree canopy over the street, while not encroaching into pedestrian headroom or obstruct tall curbside vehicles such as buses. The type selected should be of a variety to reach a minimum of 20-feet in height at maturity, unless such height at maturity would generate conflicts with overhead electrical power lines. A 5-foot minimum clear zone shall be maintained between buildings and tree pits to allow adequate clearance for pedestrian. Design of street tree locations, tree pits and grates shall comply with all relevant Americans with Disabilities Act (ADA) requirements.

E. Trees shall be a minimum of 1-1/2 inches in trunk diameter at the time of installation. Each tree shall be installed in a tree well or pit with a minimum surface area of 3 feet x 3 feet. A 3'x3' cast iron grate with frame shall be installed at the top of the tree well or pit to match the surface of the adjacent sidewalk, as specified in the WSDOT/APWA *Standard Specifications for Road, Bridge and Municipal Construction.* The aesthetic design of the tree grate(s) shall be approved by the City.

F. Root control barriers should be installed for each tree per Standard Detail M-03 and M-04.

G. The owner shall be responsible for tree maintenance for one-year after Final Approval of construction and shall replace any damaged, diseased or dead trees within that year. The City will assume maintenance responsibility after that first year that better serves as street landscaping or beautification.

2.310 Parking Lots

A. All proposed parking lot construction requires a Site Plan Review, whether independent or in conjunction with a project that shall be determined through the Site Plan Review process.

B. Stormwater retention shall be provided and shall follow the criteria as set forth in Chapter 3 of these *Standards*, as

required by the Site Plan Review process. Plans and specifications shall be required to be submitted for review and approval by the City with respect to storm drainage discharge and on-site retention or detention, matching street and/or sidewalk grades, access locations, parking layout, and to check for future street improvement conformity and City zoning regulations.

C. If required through the Site Plan Review process and/or Chapter 20.40 of the Zoning Code, parking lot surfacing materials shall satisfy the requirement for a permanent all-weather surface. Asphalt concrete pavement and cement concrete pavement satisfy this requirement and are approved materials. All other proposed parking lot surface materials require specific approval by the City.

2.320 Roadside Safety Clear Zone

The clear zone is a primary consideration when analyzing roadside hazards. The intent is to provide as much clear, traversable area for a vehicle to recover as practical. The Design Clear Zone values shown in Exhibit 1600-1 of the WSDOT *Design Manual* are used to evaluate the adequacy of the existing clear zone and to provide a minimum target value for highway design. These values are not to be used as justification to compromise or take away from the existing clear zone.

A. Design Clear Zone inventory is required for all projects indicating evaluate upgrade (EU) or Full Design Level (F) for the clear zone columns on the design matrices. (See Chapter 1100 of the WSDOT *Design Manual*.) The Design Clear Zone Inventory Form (Exhibit 700-2) is to be used to inventory the roadside for potential hazards, identify the hazards and propose corrective actions. Eliminating the hazard is the preferred action. A roadside hazard shall be analyzed to determine if further mitigation is necessary even when it is beyond the values in Exhibit 1600-1. When locating a highway appurtenance (such as a sign bridge, bridge pier or sign post) in an otherwise unrecoverable area, the values in Exhibit 1600-2 are to be used as guidance in determining the need for mitigation.

B. The Design Clear Zone is a function of the posted speed, side slope, and traffic volume. There are no distances in the table for 1:3 fill slopes. Although fill slopes between 1:4 and 1:3 are considered traversable if free of fixed

objects, these slopes are defined as non-recoverable slopes. A vehicle may be able to begin recovery on the shoulder, but will be unable to further this recovery until reaching a flatter area (1:4 or flatter) at the toe of the slope. Under these conditions, the Design Clear Zone distance is called a recovery area. The method used to calculate the recovery area and an example are shown in Exhibit 1600-3.

C. For ditch sections, the following criteria determine the Design Clear Zone:

1. For ditch sections with foreslopes 4H:1V or flatter (See Exhibit 1600-4, Case 1, as an example), the Design Clear one distance is the greater of the following:

   - The Design Clear Zone distance for a 10H:1V cut section based on speed and ADT.
   - A horizontal distance of 5 feet beyond the beginning of the backslope. When a backslope steeper than 3H:1V continues for a horizontal distance of 5 feet beyond the beginning of the backslope, it is not necessary to use the 10H:1V cut slope criteria.

2. For ditch sections with foreslopes steeper than 4H:1V and backslopes steeper than 3H:1V, the Design Clear Zone distance is 10 feet horizontal beyond the beginning of the backslope (See Exhibit 1600-4, Case 2, for an example.)

3. For ditch sections with foreslopes steeper than 4H:1V or flatter, the Design Clear Zone distance is the distance established using the recovery area formula (See Exhibit 1600-3); also see Exhibit 1600-4, Case 3, as an example.)

Posted Speed (mph)	Average Daily Traffic	Cut Section (Backslope) (H:V)						Fill Section (H:V)					
		3:1	4:1	5:1	6:1	8:1	10:1	3:1	4:1	5:1	6:1	8:1	10:1
35 or Less		The Design Clear Zone Distance is 10 ft											
40	Under 250	10	10	10	10	10	10	*	13	12	11	11	10
	251 – 800	11	11	11	11	11	11	*	14	14	13	12	11
	801 – 2,000	12	12	12	12	12	12	*	16	15	14	13	12
	2,001 – 6,000	14	14	14	14	14	14	*	17	17	16	15	14
	Over 6,000	15	15	15	15	15	15	*	19	18	17	16	15
45	Under 250	11	11	11	11	11	11	*	16	14	13	12	11
	251 – 800	12	12	13	13	13	13	*	18	16	14	14	13
	801 – 2,000	13	13	14	14	14	14	*	20	17	16	15	14
	2,001 – 6,000	15	15	16	16	16	16	*	22	19	17	17	16
	Over 6,000	16	16	17	17	17	17	*	24	21	19	18	17
50	Under 250	11	12	13	13	13	13	*	19	16	15	13	13
	251 – 800	13	14	14	15	15	15	*	22	18	17	15	15
	801 – 2,000	14	15	16	17	17	17	*	24	20	18	17	17
	2,001 – 6,000	16	17	17	18	18	18	*	27	22	20	18	18
	Over 6,000	17	18	19	20	20	20	*	29	24	22	20	20
55	Under 250	12	14	15	16	16	17	*	25	21	19	17	17
	251 – 800	14	16	17	18	18	19	*	28	23	21	20	19
	801 – 2,000	15	17	19	20	20	21	*	31	26	23	22	21
	2,001 – 6,000	17	19	21	22	22	23	*	34	29	26	24	23
	Over 6,000	18	21	23	24	24	25	*	37	31	28	26	25
60	Under 250	13	16	17	18	19	19	*	30	25	23	21	20
	251 – 800	15	18	20	20	21	22	*	34	28	26	23	23
	801 – 2,000	17	20	22	22	23	24	*	37	31	28	26	25
	2,001 – 6,000	18	22	24	25	26	27	*	41	34	31	29	28
	Over 6,000	20	24	26	27	28	29	*	45	37	34	31	30
65	Under 250	15	18	19	20	21	21	*	33	27	25	23	22
	251 – 800	17	20	22	22	24	24	*	38	31	29	26	25
	801 – 2,000	19	22	24	25	26	27	*	41	34	31	29	28
	2,001 – 6,000	20	25	27	27	29	30	*	46	37	35	32	31
	Over 6,000	22	27	29	30	31	32	*	50	41	38	34	33
70	Under 250	16	19	21	21	23	23	*	36	29	27	25	24
	251 – 800	18	22	23	24	26	26	*	41	33	31	28	27
	801 – 2,000	20	24	26	27	28	29	*	45	37	34	31	30
	2,001 – 6,000	22	27	29	29	31	32	*	50	40	38	34	33
	Over 6,000	24	29	31	32	34	35	*	54	44	41	37	36

Notes:

This exhibit applies to:

- All state highways outside incorporated cities.
- Limited access state highways within cities.
- Median areas on managed access state highways within cities. (See 1600.04 for guidance on managed access state highways within incorporated cities.)

Curb is not considered adequate to redirect an errant vehicle.

Design Clear Zone distances are given in feet, measured from the edge of traveled way (see 1600.03.)

*When the fill section slope is steeper than 4H:1V, but not steeper than 3H:1V, the Design Clear Zone distance is modified by the recovery area formula (see Exhibit 1600-3) and is referred to as the recovery area. The basic philosophy behind the recovery area formula is that the vehicle can traverse these slopes but cannot recover (control steering); therefore, the horizontal distance of these slopes is added to the Design Clear Zone distance to form the recovery area.

Design Clear Zone Distance Table
Exhibit 1600-1



Washington State Department of Transportation

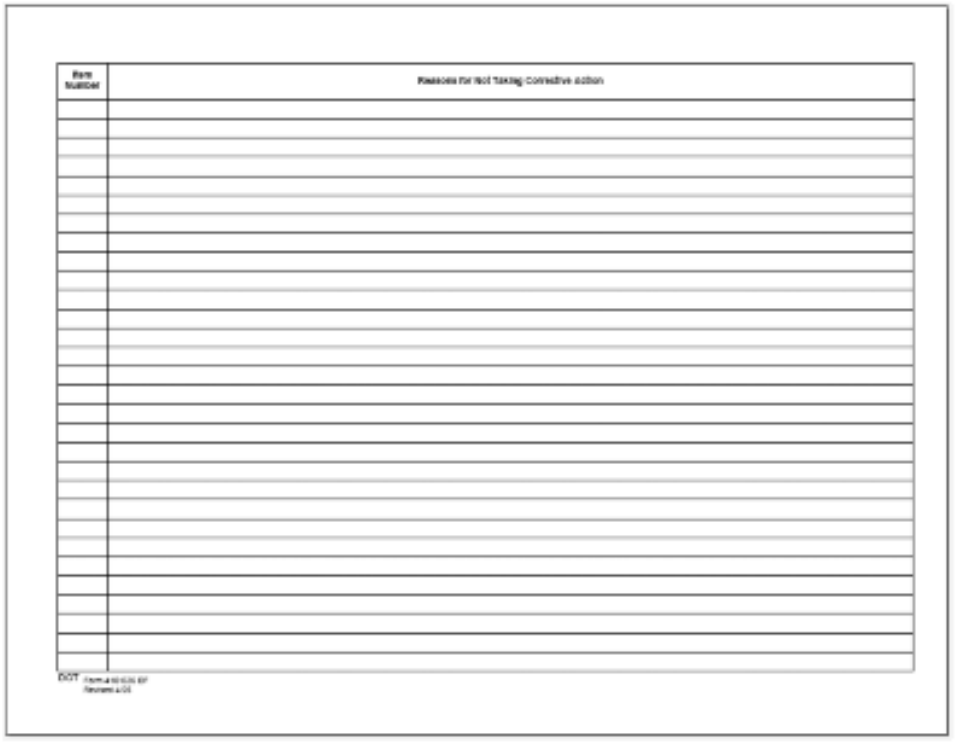
Design Clear Zone Inventory

Region	SR	Control Section	MP to MP	Date
Project Number	Project Title			Responsible Unit

Item Number	MP to MP	Distance From Traveled Way L	R	Description	Corrective Actions Considered (2)	Estimated Cost to Correct	Corrective Planned (1) Yes	No

(1) Only one "Yes" or "No" per item number. Corrections not planned must be explained on reverse side.
(2) A list of Location 1 & 2 Utility Objects to be forwarded to the region Utility Office for coordination per Control Zone Guidelines.

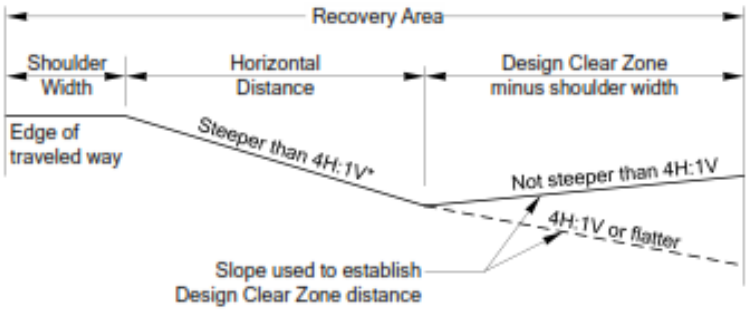
DOT Form 410-026 EF Revised 1/08



Item Number	Reasons for Not Taking Corrective Action

DOT Form 410-026 EF Revised 1/08

Design Clear Zone Inventory Form (# 410-026 EF)
Exhibit 1600-2



Recovery area normally applies to slopes steeper than 4H:1V, but not steeper than 3H:1V. For steeper slopes, the covery area formula may be used as a guide if the embankment height is 10 ft or less.

ormula:

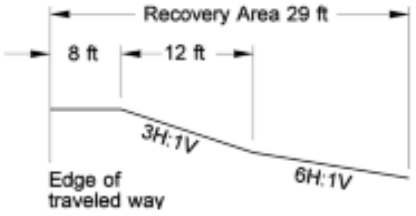
Recovery area = (shoulder width) + (horizontal distance)
+ (Design Clear Zone distance - shoulder width)

xample:

Fill section (slope 3H:1V or steeper)

Conditions: Speed – 45 mph
Traffic – 3,000 ADT
Slope – 3H:1V

Criteria: Slope 3H:1V – Use recovery area formula



Recovery area = (shoulder width) + (horizontal distance)
+ (Design Clear Zone distance - shoulder width)
= 8 + 12 + (17-8)
= 29 feet

Recovery Area
Exhibit 1600-3

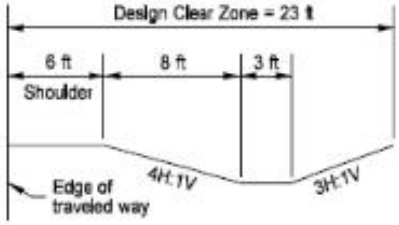
Cut section with ditch (foreslope 4H:1V or flatter)

Conditions: Speed – 55 mph
Traffic – 4,200 ADT
Slope – 4H:1V

Criteria: Greater of:

(1) Design Clear Zone for 10H:1V cut section, 23 feet
(2) 5 feet horizontal beyond beginning of backslope, 22 feet

Design Clear Zone = 23 feet



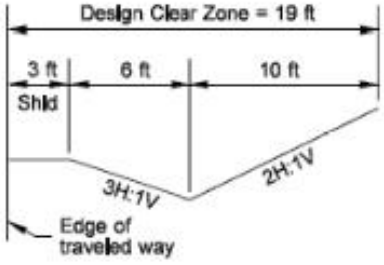
Case 1

Cut section with ditch (foreslope steeper than 4H:1V and backslope steeper than 3H:1V)

Conditions: NA

Criteria: 10 feet horizontal beyond beginning of backslope

Design Clear Zone = 19 feet



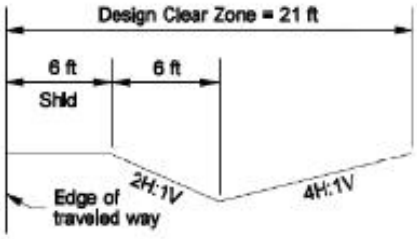
Case 2

Cut section with ditch (foreslope 3H:1V or steeper and backslope not steeper than 3H:1V)

Conditions: Speed – 45 mph
Traffic – 3,000 ADT
Foreslope – 2H:1V
Backslope – 4H:1V

Criteria: Use recovery area formula

Recovery Area = (shoulder width) + (horizontal distance) + (Design Clear Zone distance – shoulder width)
= 6 + 6 + (15 – 6)
= 21 feet



Case 3

Design Clear Zone for Ditch Sections
Exhibit 1600-4

2.330 Flashing Beacon

The City may require the installation of Warning Beacons or Rapid Flashing Beacons for intersection control, advanced warning, or to increase pedestrian safety at crosswalk locations. Installation of warning beacons and rapid flashing beacons shall meet the warrants listed in Chapter 4 of MUTCD, as indicated by pedestrian or traffic studies, or as directed by Public Works Director

A Flashing Beacon is a street traffic signal with one or more signal sections that operates in a flashing mode. It provides warning at crosswalks or supplemental emphasis to warning signs or regulatory signs, except STOP, DO NOT ENTER, WRONG WAY, and SPEED LIMIT sign.

Standard:

A. All Warning Beacons and Rapid Flashing Beacons shall be designed in accordance with the MUTCD, WSDOT Design Manual and WSDOT/APWA standard specification.

B. Flashing Beacon units and their mountings shall comply with the provisions of City of Shelton and the MUTCD, except as otherwise provided in this Chapter.

C. The flashing rates for warning beacons, rapid flashing beacons shall be in accordance with MUTCD.

D. Warning Beacon shall consist of one or more signal sections of a standard traffic signal capable of flashing operation.

E. A Warning Beacon shall be used only to supplement an appropriate warning or regulatory sign or marker.

F. Warning Beacons, if used at intersections, shall not face conflicting vehicular approaches.

G. Mounting heights for warning beacons mounted over the roadway shall meet the height requirement listed in Chapter 4 of the MUTCD.

H. Warning Beacons and Rapid Flashing Beacons shall be of TAPCO Inc. brand or approval equal.

Guidance:

A. The condition or regulation justifying Rapid Flashing Beacons should largely govern their location with respect to the roadway.

B. If an obstruction is in or adjacent to the roadway, illumination of the lower portion or the beginning of the obstruction or a sign on or in front of the obstruction, in addition to the beacon, should be considered.

C. Beacons should be operated only during those periods or times when the condition or regulation exists.

Option:

A. Warning Beacons that are actuated by pedestrians, bicyclists, or other road users may be used as appropriate to provide additional warning to vehicles approaching a crossing or other location.

B. If Warning Beacons have more than one signal section, they may be flashed either alternately or simultaneously.

C. A flashing yellow beacon interconnected with a traffic signal controller assembly may be used with a traffic signal warning sign.

D. An automatic dimming device may be used to reduce the brilliance of flashing yellow signal indications during night operation.

2.340 General Notes: Street Construction

In addition to the General Notes in Chapter One, the Engineer shall include the following notes on any plans dealing with the construction or alterations, extensions or connections to the transportation systems.

1. All work in the City requires a City of Shelton Business License.

2. Prior to working within the City right-of-way or on City property, the contractor must obtain a City of Shelton Right-of-Way permit. All contractors shall be licensed and bonded in the State of Washington. Proponent shall comply with all other permits and other requirements of the governing authority or agency. It is the contractor's responsibility to verify the location of right-of-way.

3. All curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment shall be staked by a licensed engineering or surveying firm capable of performing such work.

4. Where new asphalt joins existing asphalt, the existing asphalt shall be cut to a neat vertical edge and tacked with asphalt emulsion type CSS-1 per Section 9-02.1(6) of the WSDOT/APWA *Standard Specifications* . Tack coat shall be applied per Section 5-04.3(5)A. The new asphalt shall be feathered back over existing to provide for a seal at the saw cut location and the joint sealed In accordance with Section 5-04.3(5)C of the WSDOT/APWA *Standard Specifications.*

5. Compaction of subgrade, rock and asphalt shall be in accordance with the most current adopted version of the WSDOT/APWA *Standard Specifications*.

6. Form and subgrade inspection by the City is required before placing asphalt or concrete. 24-hour notice is required for form inspection.

7. Testing and sampling frequencies will be as described in the City of Shelton *Design and Construction Standards.*

8. The Contractor/Developer provides and installs street name and regulatory signs at their expense.

9. All curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment shall be staked by a licensed engineering firm or surveying firm capable of performing such work.

10. Compaction of subgrade, sub-base, base, surfacing, pavement, or layers of similar material shall be in accordance with Section 2-06 and Section 4.04.3(5) of the WSDOT/APWA *Standard Specifications.* Fill shall be provided in 6-inch maximum lifts unless otherwise approved by the City, and shall be compacted to 95 percent of its maximum relative density.

11. Fill shall be provided in 6-inch maximum lifts unless otherwise approved by the City, and shall be compacted to 95 percent of its maximum relative density.

12. Inspection by the City is required during all phases of construction. It is the contractor's responsibility to notify the City of his/her schedule. Inspection by City personnel shall be required during City work hours. City work hours are 8:00 AM to 5:00 PM Monday through Friday, except holidays. A minimum 24 hour notice is required for inspection of any work. No trenching on public right of way after 4:00 PM unless approved by the City. Other work such as backfilling, cleanup, etc., or as approved by the City is acceptable if 24 hours' prior notice is provided to the City.

LIST OF DRAWINGS
CHAPTER 2 TRANSPORTATION

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2 - 12' LANES W/ SIDEWALK & BIOSWALE (RESIDENTIAL)

T-22 CROSS SECTION RESIDENTIAL
2 - 12' LANES - 8' PARKING EACH SIDE & SIDEWALKS (NONRESIDENTIAL)

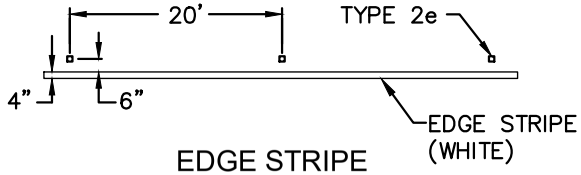
T-23 CROSS SECTION NON-RESIDENTIAL
2 - 12' LANES - 8' PARKING EACH SIDE & SIDEWALKS WITHIN
DESIGNATED STREET TREE CORRIDORS (NONRESIDENTIAL)

T-24 CROSS SECTION RESIDENTIAL
2 - 12' LANES - 8' PARKING EACH SIDE, BIKE LANES & SIDEWALKS
WITHIN DESIGNATED STREET TREE CORRIDORS (NONRESIDENTIAL)

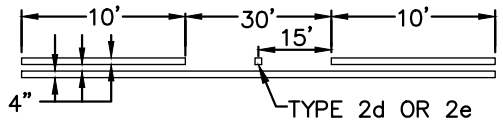
T-25 CROSS SECTION RESIDENTIAL
4 - 12' LANES W/ SIDEWALKS EACH SIDE (ARTERIAL)

T-26 CROSS SECTION RESIDENTIAL
4 - 12' LANES W/ 12' CENTER LANE FOR TREE CORRIDOR OR TURN LANE & W/ BIKE LANE
AND SIDEWALKS & STREET TREE CORRIDORS (ARTERIAL)

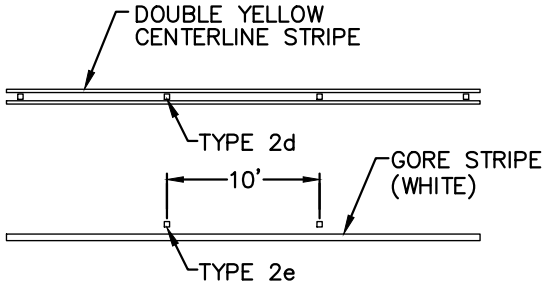
T-27 CROSS SECTION ARTERIAL
RIGHT-OF-WAY (R/W) IMPROVEMENTS FOR NEIGHBORHOOD RESIDENTIAL(NR) ZONE



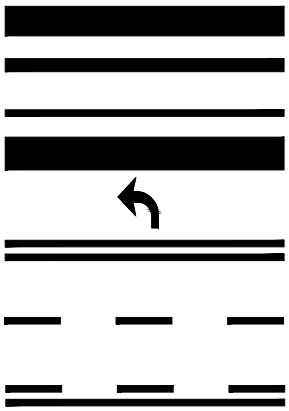
EDGE STRIPE



TWO WAY LEFT TURN



LEFT TURN LANE



STOP BAR (18" WHITE)

GORE STRIPE (8" WHITE OR YELLOW)

EDGE STRIPE (4" WHITE OR YELLOW)

CROSSWALK (24" WHITE)

ARROWS (WHITE)

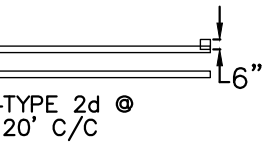
DOUBLE YELLOW CENTER STRIPE
(4" YELLOW)

SKIP LANE STRIPE
(4" WHITE OR YELLOW)

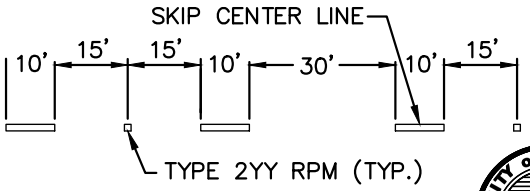
TWO-WAY LEFT TURN LANE

PAVEMENT MARKER KEY

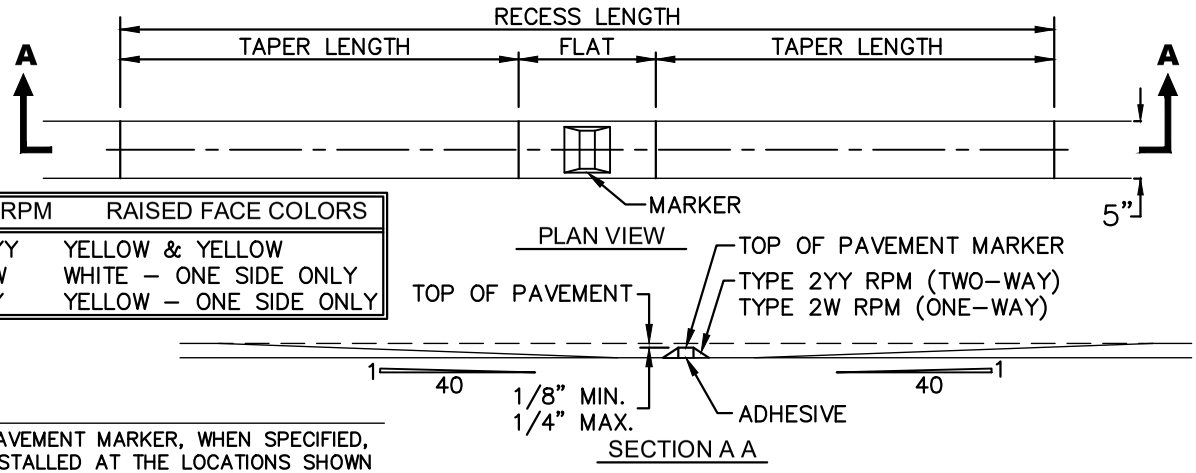
NOTE: ALL PAVEMENT MARKERS ARE TO BE RECESSED IN ACCORDANCE WITH THE STATE OF WASHINGTON'S DEPARTMENT OF TRANSPORTATION CURRENT STANDARD PLANS SECTION M – ROADWAY DELINEATION, OR AS DIRECTED BY THE CITY ENGINEER.



DOUBLE CENTERLINE STRIPE



TWO LANE TWO-WAY TRAFFIC



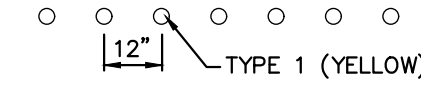
TYPE 2 RPM	RAISED FACE COLORS
TYPE 2YY	YELLOW & YELLOW
TYPE 2W	WHITE – ONE SIDE ONLY
TYPE 2Y	YELLOW – ONE SIDE ONLY

NOTES:

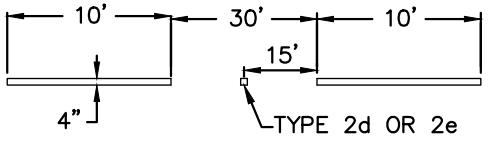
1. RECESSED PAVEMENT MARKER, WHEN SPECIFIED, SHALL BE INSTALLED AT THE LOCATIONS SHOWN FOR TYPE 2W RPM'S ON MULTILANE ONE-WAY ROADWAYS, AND TYPE 2YY RPM'S ON TWO LANE TWO-WAY ROADWAYS.
2. FOR LANE LINES, TYPE 2W RPM'S SHALL BE SPACED AT 80' INTERVALS ON TANGENTS AND HORIZONTAL CURVES WITH A RADIUS OF 5000' OR MORE, AND 40' INTERVALS ON HORIZONTAL CURVES HAVING RADII OF LESS THAN 5000'.
3. FOR CENTER LINES, TYPE 2YY RPM'S SHALL BE SPACED AT 80' INTERVALS ON TANGENTS AND HORIZONTAL CURVES WITH A RADIUS OF 5000' OR MORE, AND 40' INTERVALS ON HORIZONTAL CURVES HAVING RADII LESS THAN 5000' TYPE 2YY RPM'S ARE TO BE CENTERED BETWEEN SKIP LINES.

RECESSED PAVMENT MARKER DETAILS

FOR USE WHERE SPECIFIED IN CONTRACT



CENTERLINE GUIDE MARKERS



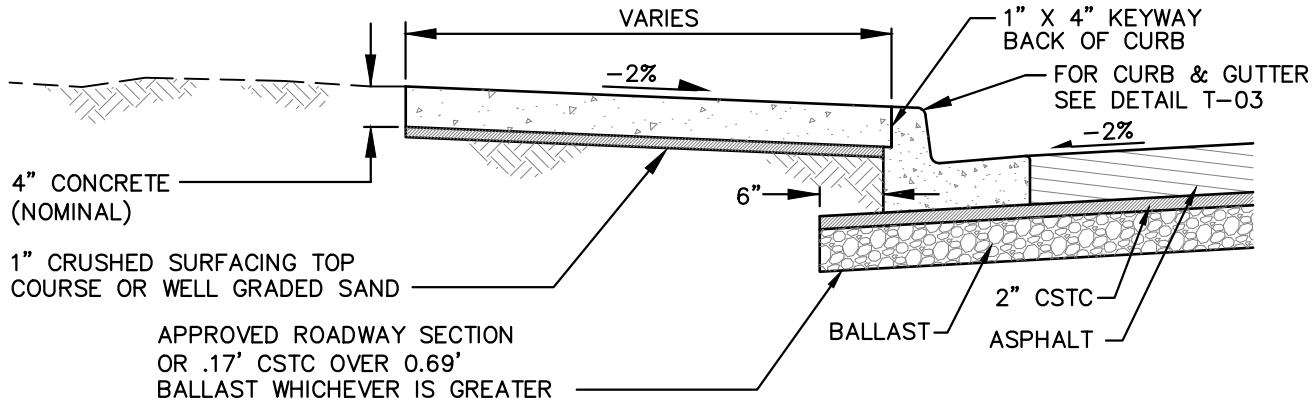
SKIP LANE STRIPE

"Building A Stronger Community TOGETHER"

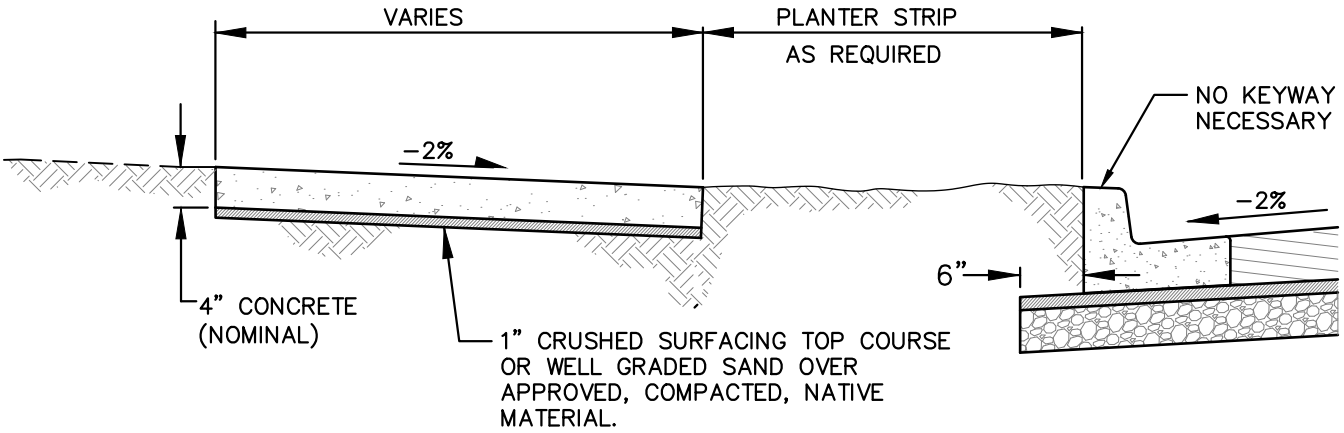
PAVEMENT MARKS & STRIPING DETAILS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

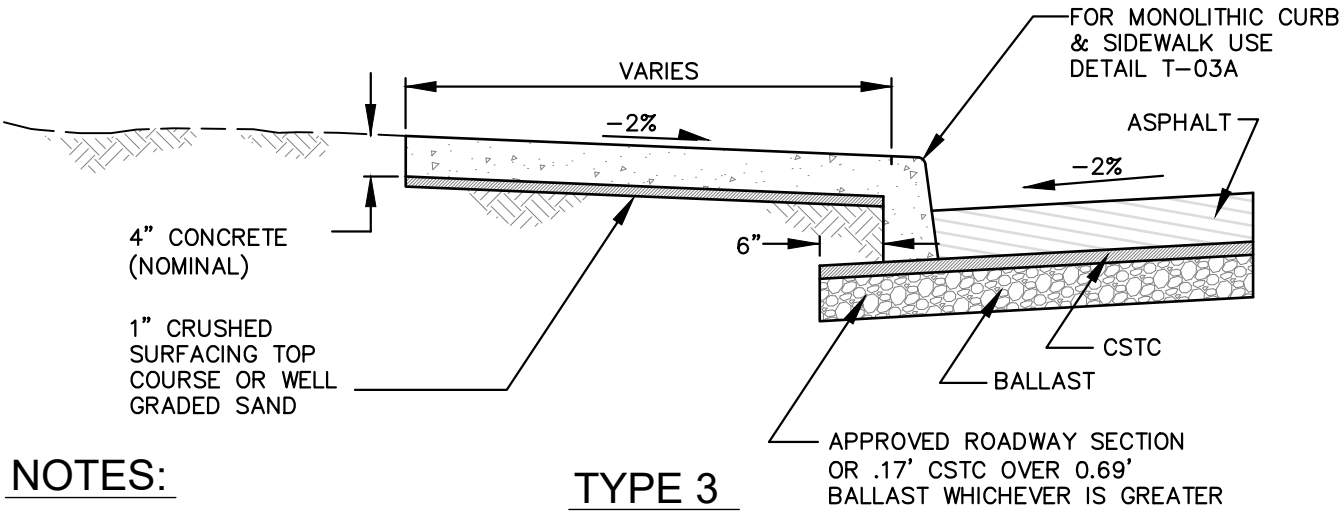
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-01



TYPE 1



TYPE 2



TYPE 3

NOTES:

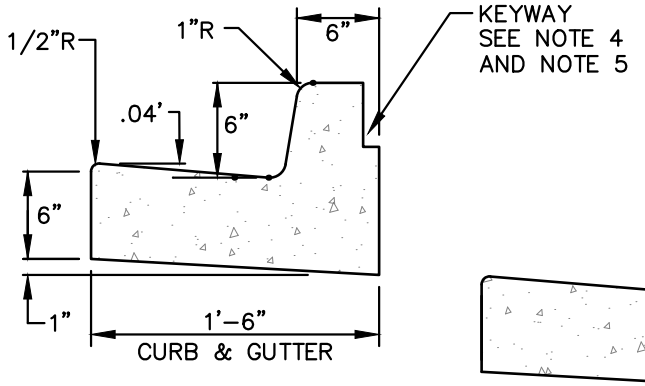
1. FOR EXPANSION, AND DUMMY JOINT REQUIREMENTS SEE CITY OF SHELTON STD. SIDEWALK DETAIL T-03A AND/ OR T-06.
2. CONCRETE DRIVEWAYS REQUIRE A MINIMUM DEPTH OF 6" WITH REBAR. SEE CITY OF SHELTON STD. DRIVEWAY DETAIL T-04.
3. BROOM FINISH TO BE PERPENDICULAR TO ROADWAY IN SIDEWALK SECTIONS.
4. CONCRETE SHALL BE COMMERCIAL CONCRETE 3,000 PSI HIGH EARLY STRENGTH.

"Building A Stronger Community TOGETHER"

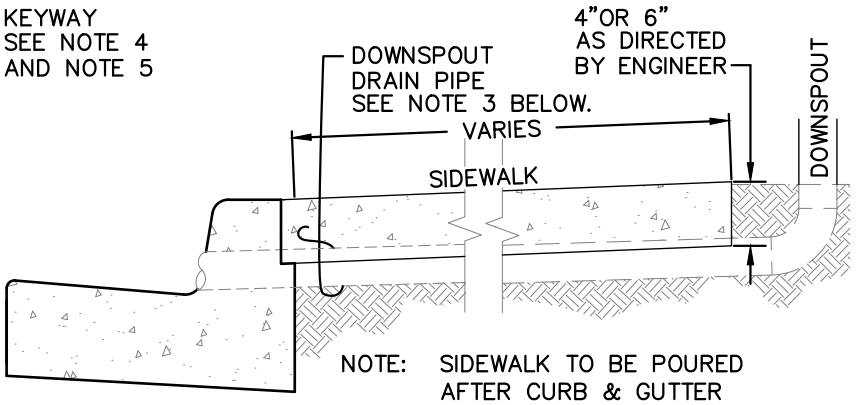
SIDEWALK DETAILS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-02



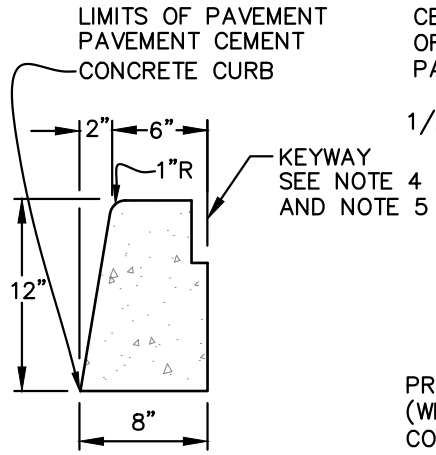
TYPE 1
CURB & GUTTER



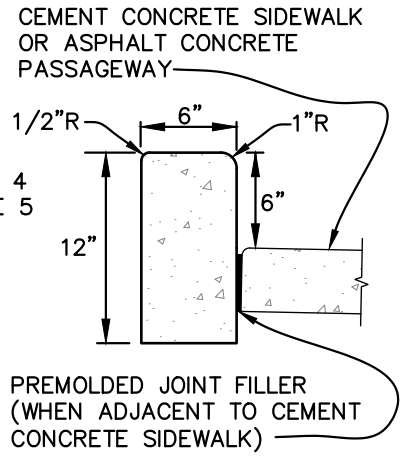
DOWNTOWN AREA ONLY
(as approved by City Engineering Dept.)

TYPE 1
CEMENT CONCRETE CURB & GUTTER

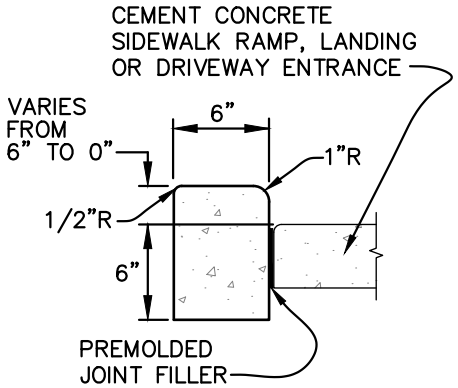
NOT TO SCALE



TYPE 2
TRAFFIC CURB



TYPE 3
PEDESTRIAN CURB



TYPE 3
PEDESTRIAN CURB
AT SIDEWALK RAMPS & LANDINGS
AND DRIVEWAY ENTRANCES

TYPE 2 AND TYPE 3
CEMENT CONCRETE CURBS

NOT TO SCALE

NOTES:

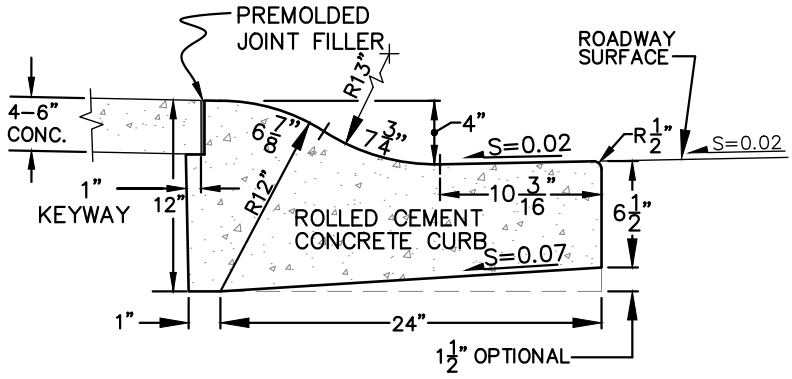
1. 1/2" EXPANSION JOINTS SHALL BE INSTALLED AT 15' C/C, OR AS DIRECTED BY THE ENGINEER, AND SHALL EXTEND TO THE BOTTOM OF THE CONCRETE.
2. ALL CURB, GUTTER & SIDEWALKS SHALL BE COMMERCIAL CONCRETE PER CURRENT WSDOT STD. SPECIFICATIONS IN SECTION 6–02.3(2)B.
3. DOWN SPOUT DRAINS SHALL BE PLACED PER WSDOT STD. PLANS & AS DIRECTED BY THE ENGINEER.
4. INSTALL KEYWAY, 1" x 4" (4" OR THICKNESS OF SIDEWALK/ DRIVEWAY), WHEN SIDEWALK ABUTS A TYPE 1 OR TYPE 2 CURB.
5. INSTALL EXPANSION JOINT MATERIAL BETWEEN IN KEYWAY DRIVEWAY AND/ OR SIDEWALK.

CITY of SHELTON WASHINGTON
"Building A Stronger Community TOGETHER"

CEMENT CONCRETE CURBS AND CURB & GUTTER

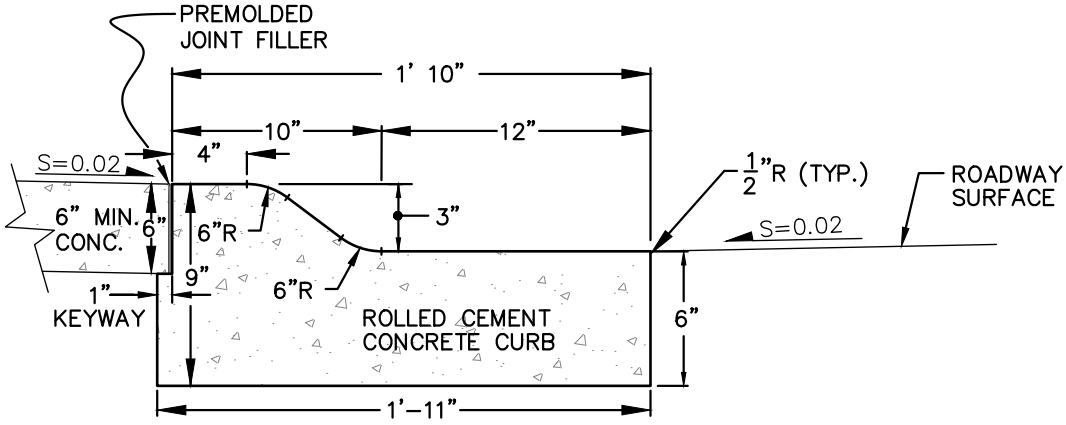
APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-03



ROLLED EDGE CONC. CURB & GUTTER w/ KEYWAY

NTS



ROLLED EDGE CONC. CURB & GUTTER
FOR ROUNDABOUT w/ KEYWAY

NTS

NOTE:

WHERE CURB DOES NOT ABUT
SIDEWALK NO KEYWAY IS NECESSARY.

"Building A Stronger Community TOGETHER"

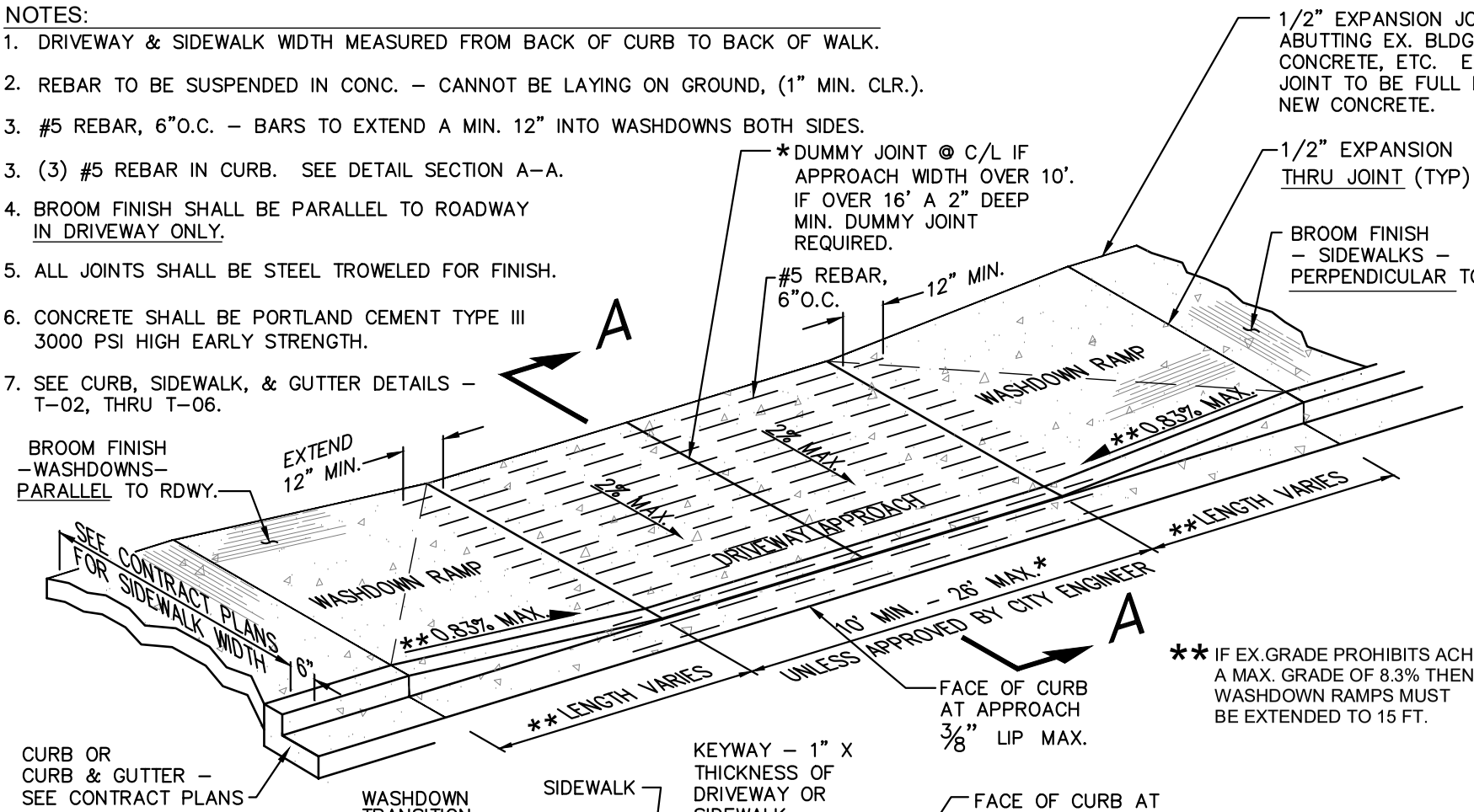
CONCRETE CURB & GUTTER DETAILS

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-03A

NOTES:

1. DRIVEWAY & SIDEWALK WIDTH MEASURED FROM BACK OF CURB TO BACK OF WALK.
2. REBAR TO BE SUSPENDED IN CONC. – CANNOT BE LAYING ON GROUND, (1" MIN. CLR.).
3. #5 REBAR, 6"O.C. – BARS TO EXTEND A MIN. 12" INTO WASHDOWNS BOTH SIDES.
3. (3) #5 REBAR IN CURB. SEE DETAIL SECTION A–A.
4. BROOM FINISH SHALL BE PARALLEL TO ROADWAY IN DRIVEWAY ONLY.
5. ALL JOINTS SHALL BE STEEL TROWELED FOR FINISH.
6. CONCRETE SHALL BE PORTLAND CEMENT TYPE III 3000 PSI HIGH EARLY STRENGTH.
7. SEE CURB, SIDEWALK, & GUTTER DETAILS – T–02, THRU T–06.



** IF EX.GRADE PROHIBITS ACHIEVING A MAX. GRADE OF 8.3% THEN WASHDOWN RAMPS MUST BE EXTENDED TO 15 FT.

DETAIL SECTION A-A

NTS

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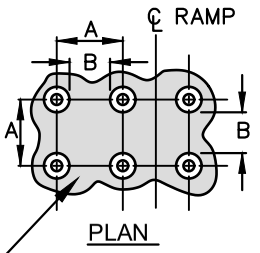
CEMENT CONCRETE DRIVEWAY

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-04

	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"

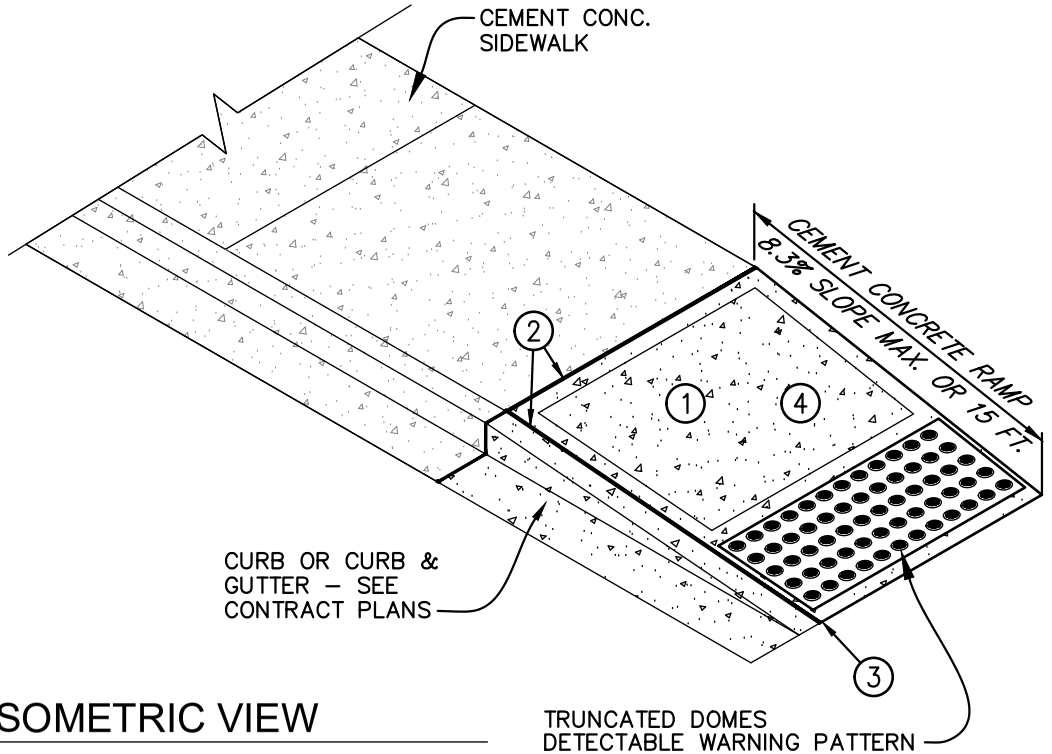
DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW, IN COMPLIANCE WITH STD. SPEC. 8-14.3(5)



TRUNCATED DOMES (SEE NOTE)

NOTE: DETECTABLE WARNING PATTERNS MAY BE CREATED BY ANY METHOD THAT WILL ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING SHOWN.

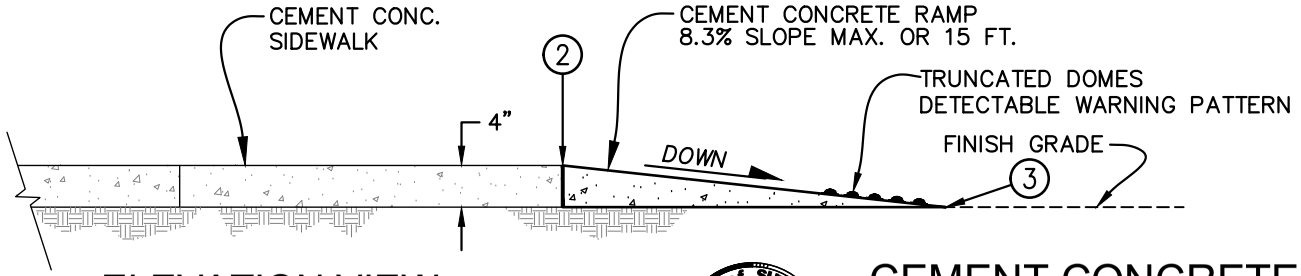
DETECTABLE WARNING PATTERN DETAIL



ISOMETRIC VIEW

NOTES:

1. CURB RAMPS SHALL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, BUT NOT AT BOTTOM OF RAMP.
2. 3/8" EXPANSION JOINT.
3. FLUSH AT GUTTER. NO EXPANSION JOINT MATERIAL.
4. IF EX. SLOPE PROHIBITS ACHIEVING A MAX. GRADE OF 8.3% THEN RAMP MUST BE EXTENDED TO 15 FT.



ELEVATION VIEW

"Building A Stronger Community TOGETHER"

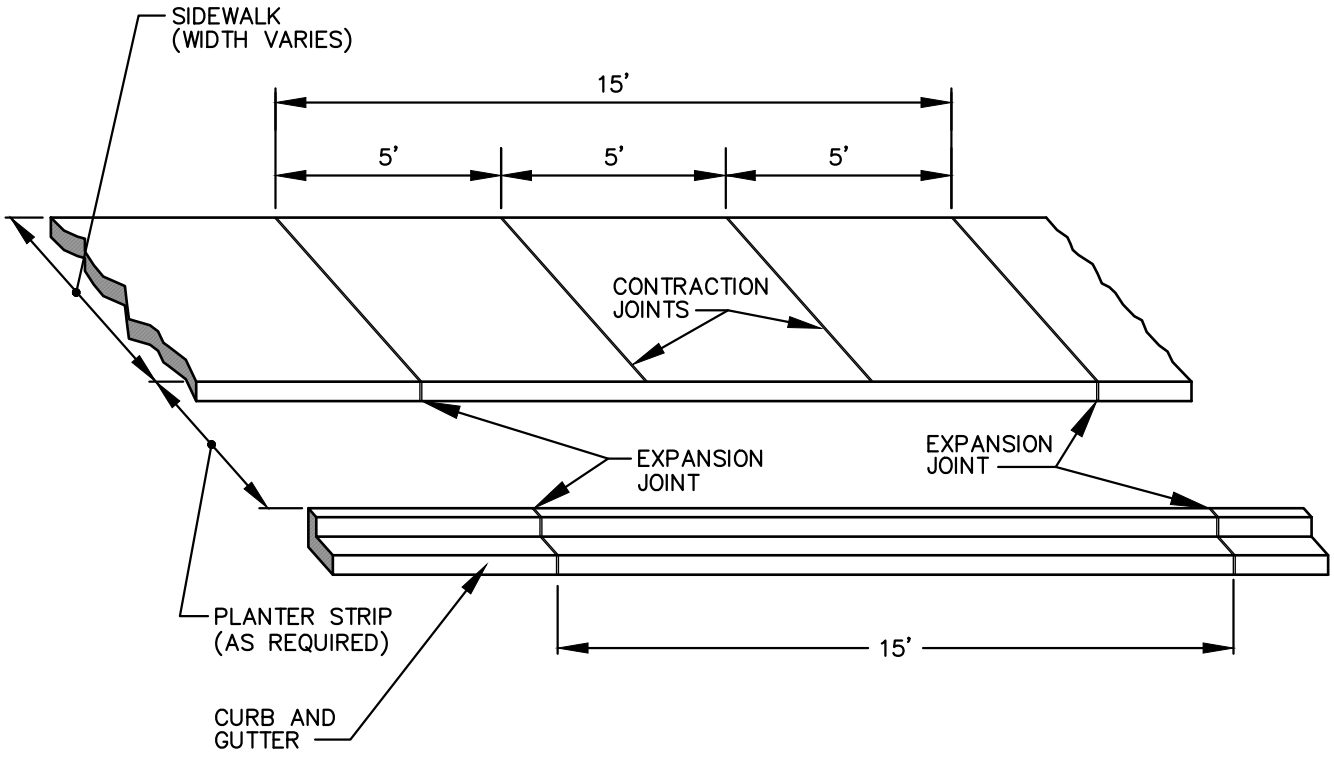
CEMENT CONCRETE RAMP

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-05

SPECIAL NOTE:

INSPECTION OF FORMS AND SUB GRADE BY CITY INSPECTOR IS REQUIRED BEFORE POURING CONCRETE.



GENERAL NOTES:

1. EXPANSION JOINT MATERIAL TO BE 1/2" THICK PRE MOLDED JOINT FILLER FULL THICKNESS OF CONCRETE.

2. SCORED MARKS (CONTRACTION JOINTS) SHALL BE ±1/8" WIDE BY ±1/4" DEEP. FOR ALL SIDEWALKS OVER 8' IN WIDTH MAKE A LONGITUDINAL (PARALLEL W/ CURB) SCORE MARK ALONG CENTER OF SIDEWALK.

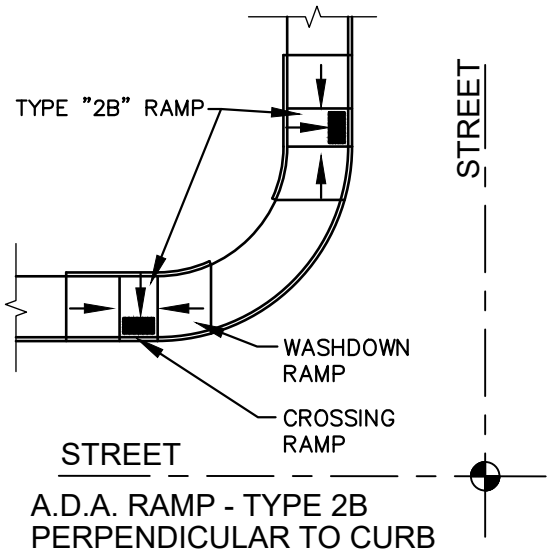
3. EXPANSION JOINTS SHALL BE INSTALLED IN CURB AND GUTTER, AND IN SIDEWALK AT PC AND PT AT ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS CONTIGUOUS TO CURB AND GUTTER, UNLESS OTHERWISE DIRECTED BY ENGINEER. CONTRACTION JOINTS IN SIDEWALK ONLY.

"Building A Stronger Community TOGETHER"

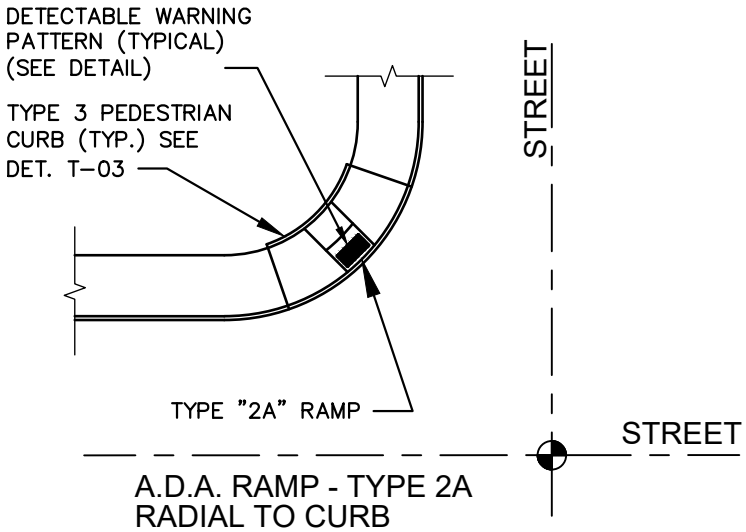
SIDEWALK EXPANSION AND CONTRACTION JOINT SPACING

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-06

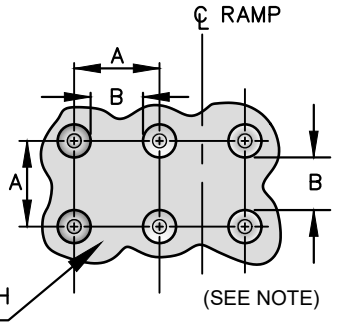


A.D.A. RAMP - TYPE 2B
PERPENDICULAR TO CURB

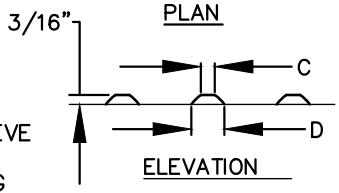


A.D.A. RAMP - TYPE 2A
RADIAL TO CURB

	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"



DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW, IN COMPLIANCE WITH STD. SPEC. 8-14.3(5)



PLAN

ELEVATION

NOTE: DETECTABLE WARNING PATTERNS MAY BE CREATED BY ANY METHOD THAT WILL ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING *SHOWN.*

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

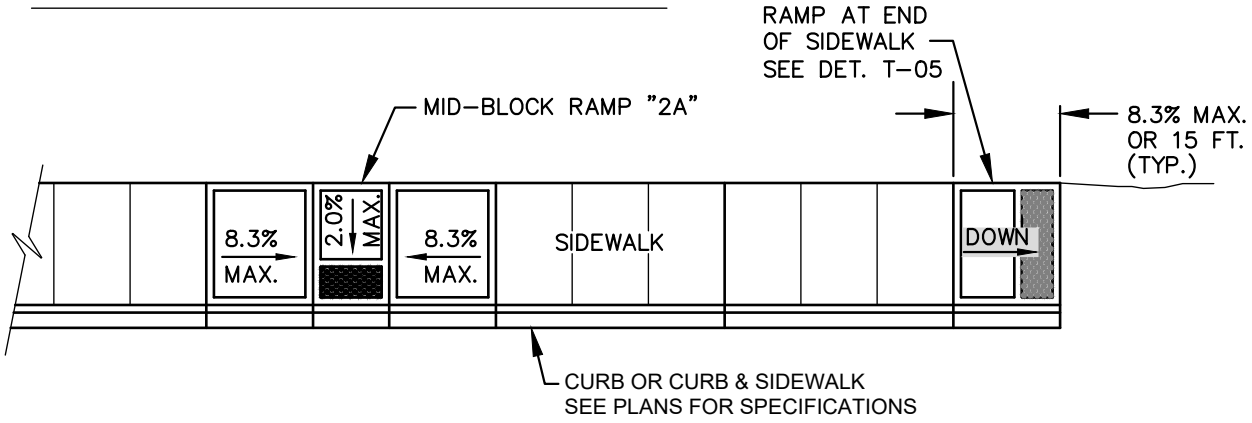
NOTES:

1.) THE TYPE "2A" RAMP IS USED TO PROVIDE ACCESS TO TWO CROSSWALKS ONLY WHEN IT IS NOT FEASIBLE TO PROVIDE A SEPARATE RAMP FOR EACH CROSSWALK.

2.) WASHDOWN RAMP GRADE IS 8.3% MAX. OR 15' IN LENGTH. CROSSING RAMP GRADE IS 2.0% MAX.

3.) IN SITUATIONS WHERE RAMP STYLE 2A OR 2B IS NOT FEASIBLE, CONTACT CITY FOR ALTERNATE CONFIGURATIONS.

4.) SEE C.O. SHELTON STD. DETAILS T-02 THRU T-11 FOR ADDITIONAL RAMP INFORMATION.



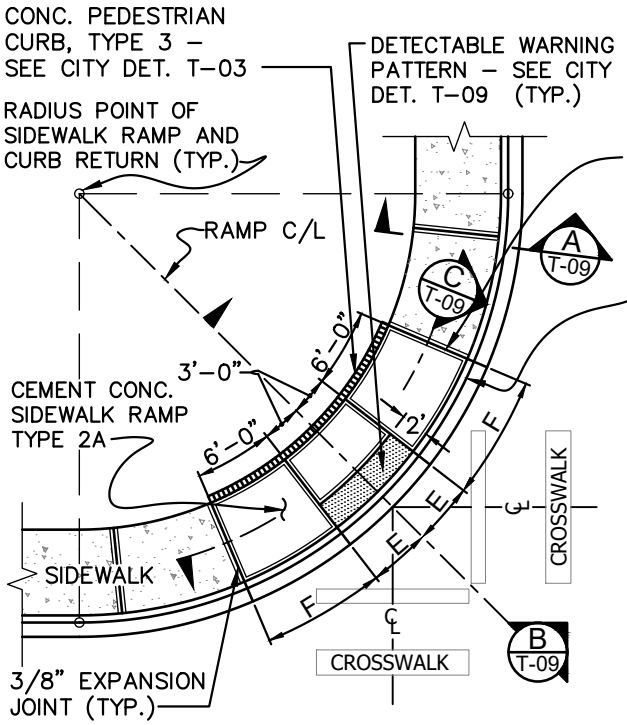
STREET

"Building A Stronger Community TOGETHER"

TYPES OF A.D.A. SIDEWALK RAMPS

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

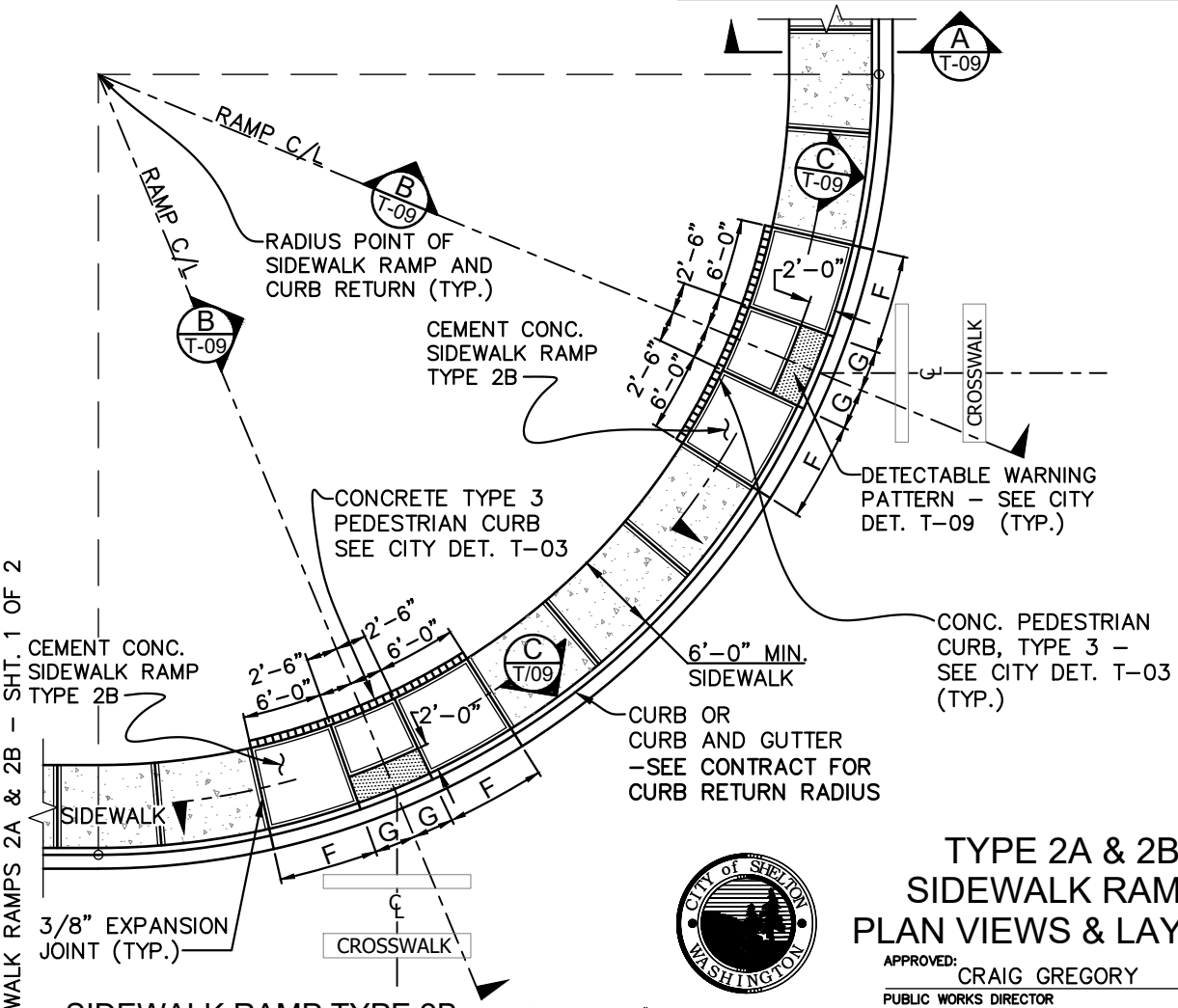
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-07



SIDEWALK RAMP TYPE 2A (NTS)

PLAN VIEW

RADIUS (AT CURB FACE)	E	F	G
20 FEET	4'–5¼"	8'–10½"	3'–8½"
30 FEET	3'–10"	7'–8"	3'–2¼"
40 FEET	3'–7"	7'–2"	3'–0"
50 FEET	3'–5½"	6'–10¾"	2'–10½"
60 FEET	3'–4½"	6'–8¾"	2'–9½"
70 FEET	3'–3¾"	6'–7½"	2'–9"
80 FEET	3'–3¼"	6'–6½"	2'–8½"
90 FEET	3'–2¾"	6'–5½"	2'–8¼"
100 FEET	3'–2½"	6'–5"	2'–8"



SIDEWALK RAMP TYPE 2B (NTS)

PLAN VIEW

SIDEWALK RAMPS 2A & 2B – SHT. 1 OF 2

"Building A Stronger Community TOGETHER"

TYPE 2A & 2B SIDEWALK RAMPS PLAN VIEWS & LAYOUTS

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-08

NOTES:

1.) THE TYPE 2A RAMP IS USED TO PROVIDE ACCESS TO TWO CROSSWALKS ONLY WHEN IT IS NOT FEASIBLE TO PROVIDE A SEPARATE RAMP FOR EACH CROSSWALK.

2.) THE TYPE 2B RAMP LAYOUT REQUIRES TWO (2) OF THIS BID ITEM: "CEMENT CONC. SIDEWALK TYPE 2B". THE BID ITEM DOES NOT INCLUDE THE ADJACENT CURB (OR CURB & GUTTER), THE SIDEWALK BETWEEN RAMPS, OR THE CEMENT CONC. PEDESTRIAN CURB.

3.) RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

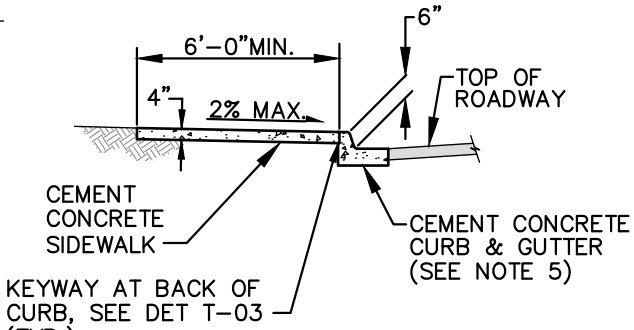
4.) AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

5.) CURB & GUTTER IS SHOWN, SEE THE CONTRACT PLANS FOR THE CURB DESIGN SPECIFIED. SEE CITY DETAIL T-03 & T-03A FOR CURB DETAILS.

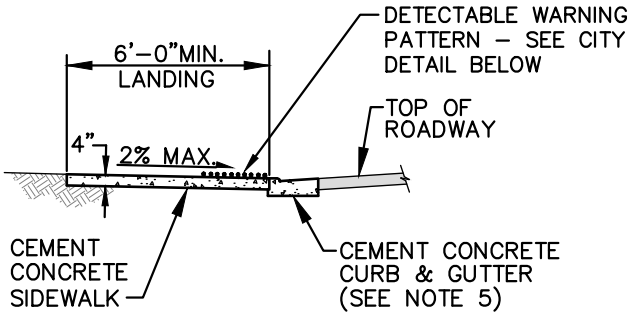
6.) SEE CITY DETAILS T-02 & T-06 FOR SIDEWALK JOINT PLACEMENT & DETAILS.

7.) CURB RAMPS WILL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, BUT NOT AT END OF RAMP ADJACENT TO ROADWAY.

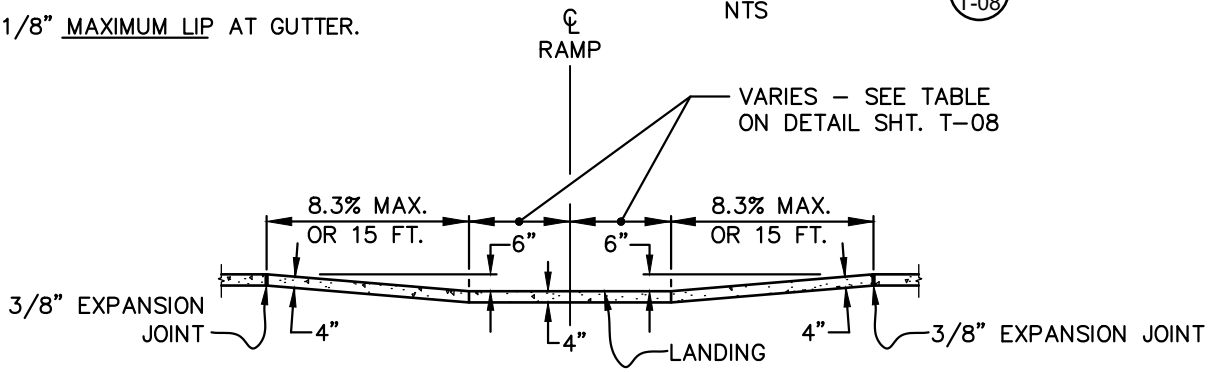
8.) 1/8" MAXIMUM LIP AT GUTTER.



SECTION 'A' (A / T-08)
NTS

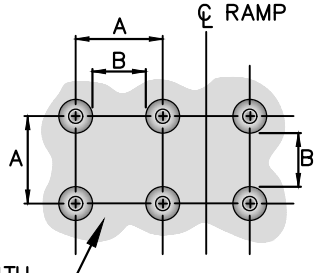


SECTION 'B' (B / T-08)
NTS



SECTION 'C' (C / T-08)
NTS

	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"

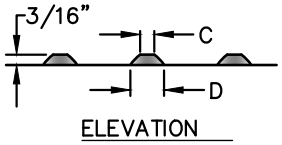


DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW, IN COMPLIANCE WITH STD. SPEC. 8-14.3(5)

PLAN

DETECTABLE WARNING PATTERN
(NTS)

NOTE: DETECTABLE WARNING PATTERNS MAY BE CREATED BY ANY METHOD THAT WILL ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING SHOWN.



ELEVATION

TRUNCATED DOMES (SEE NOTE)
DETECTABLE WARNING PATTERN DETAIL

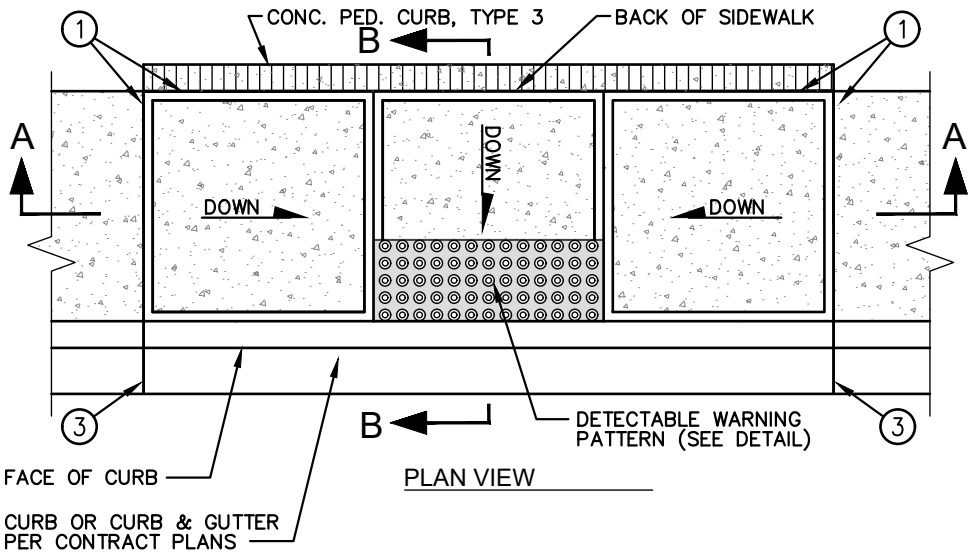
TUNCATED DOMES
(NTS)

TYPES 2A & 2B RAMP SECTIONS: NOTES AND DETAILS

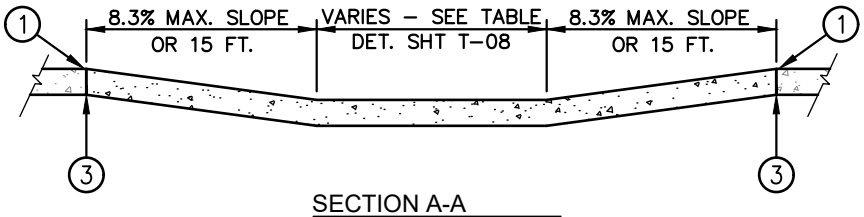
"Building A Stronger Community TOGETHER"

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

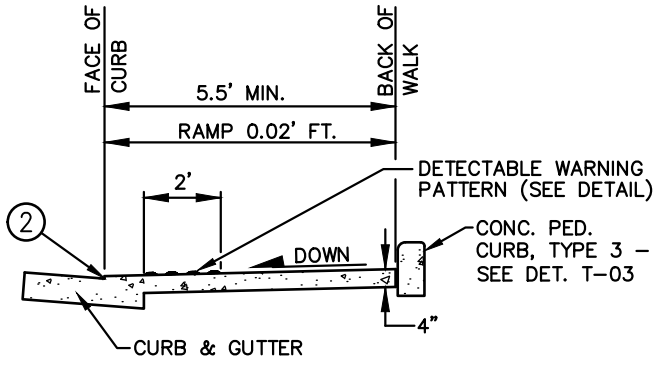
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-09



PLAN VIEW

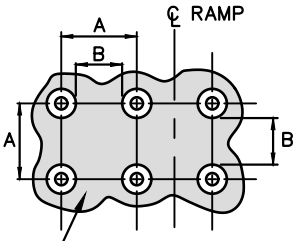


SECTION A-A



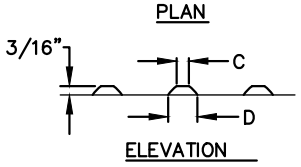
SECTION B-B

	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"



DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW, IN COMPLIANCE WITH STD. SPEC. 8–14.3(5)

NOTE: DETECTABLE WARNING PATTERNS MAY BE CREATED BY ANY METHOD THAT WILL ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING SHOWN.



TRUNCATED DOMES (SEE NOTE)

DETECTABLE WARNING PATTERN DETAIL

NOTES:

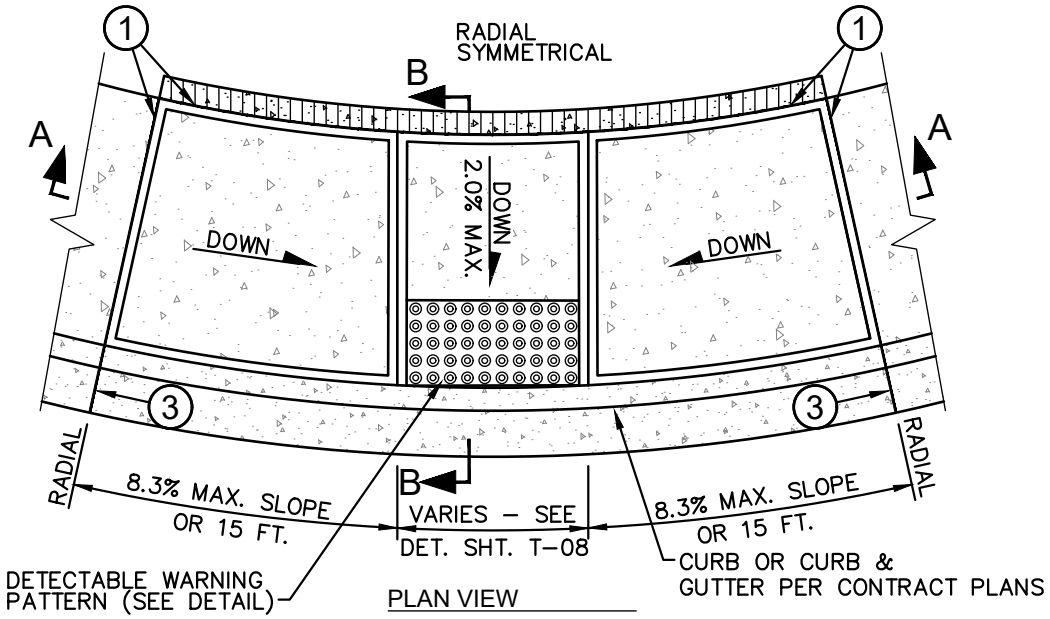
1. 3/8" EXPANSION JOINT.
2. FLUSH AT GUTTER.
3. CURB RAMPS SHALL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, BUT NOT AT END OF RAMP ADJACENT TO ROADWAY.

"Building A Stronger Community TOGETHER"

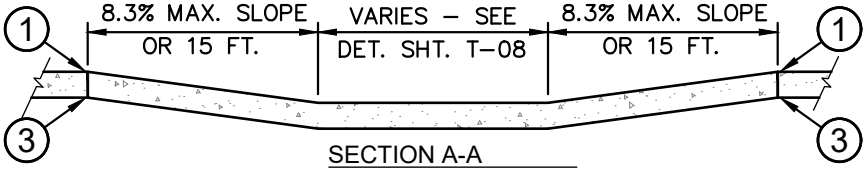
TYPE 2A & 2B RAMPS PERPENDICULAR TO CURB

APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-10



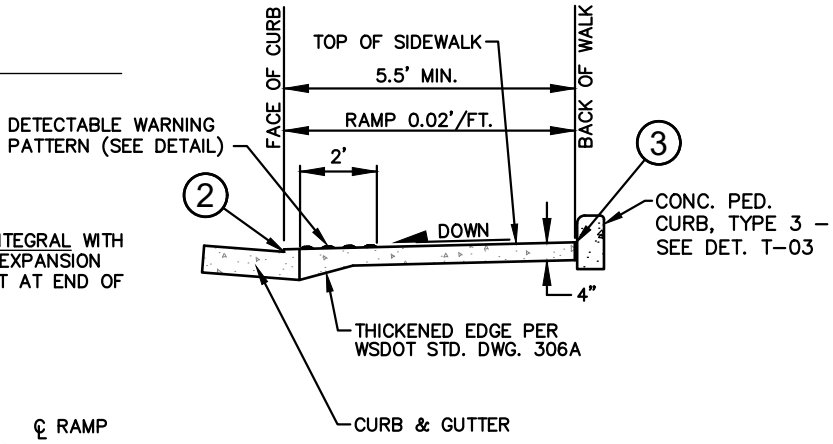
PLAN VIEW



SECTION A-A

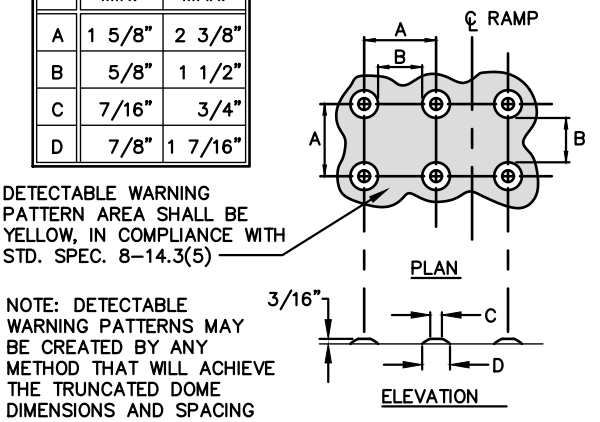
NOTES:

1. 3/8" EXPANSION JOINT.
2. FLUSH AT GUTTER.
3. CURB RAMPS SHALL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, BUT NOT AT END OF RAMP ADJACENT TO ROADWAY.



SECTION B-B

	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"



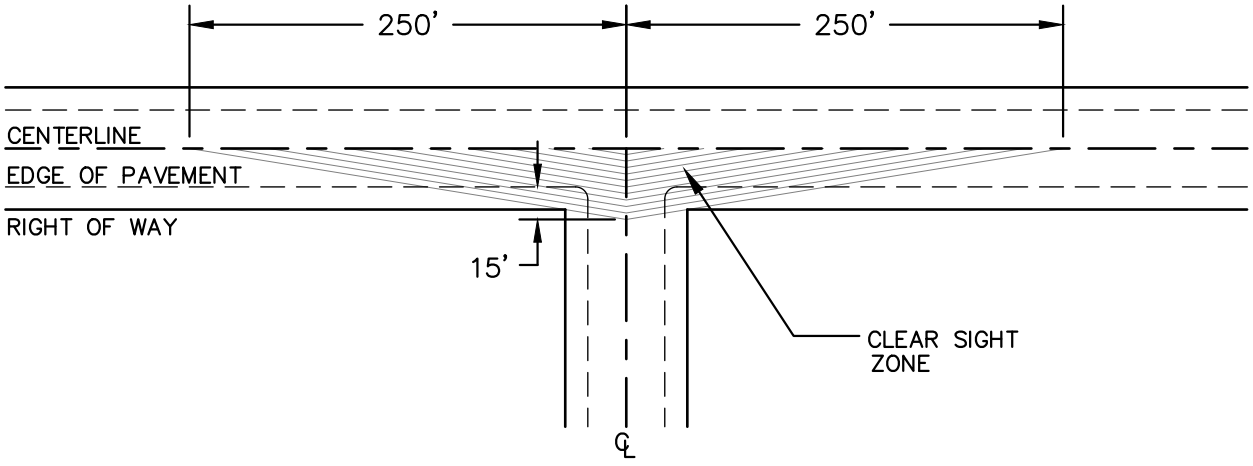
DETECTABLE WARNING PATTERN DETAIL

"Building A Stronger Community TOGETHER"

TYPE 2A & 2B RAMPS RADIAL TO CURB

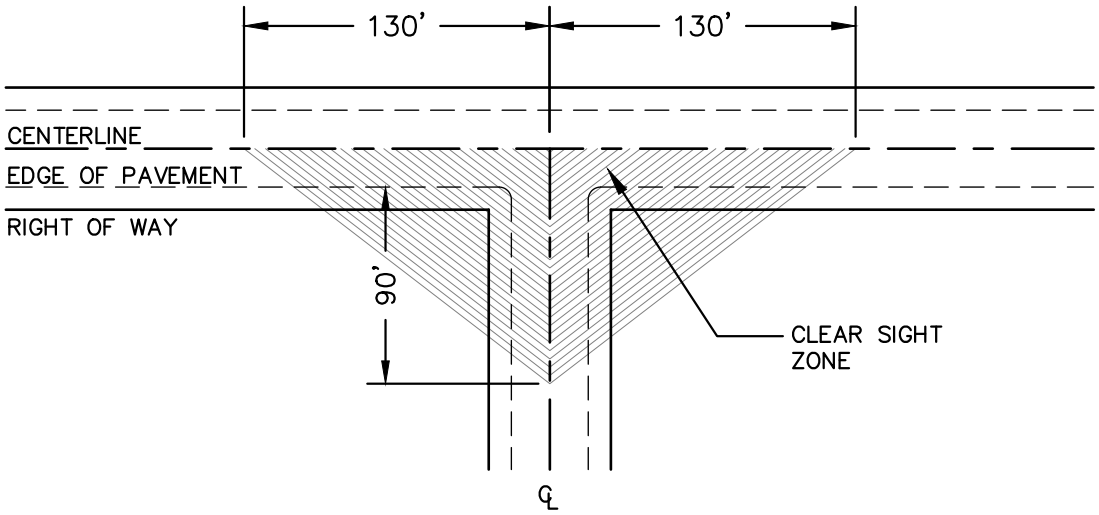
APPROVED:
CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-11



STOP OR YIELD CONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT=25 M.P.H.



UNCONTROLLED INTERSECTIONS

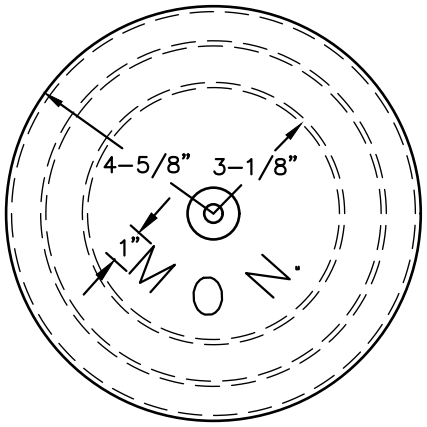
EXAMPLE: MAJOR STREET SPEED LIMIT=30 M.P.H.
MINOR STREET SPEED LIMIT=20 M.P.H.

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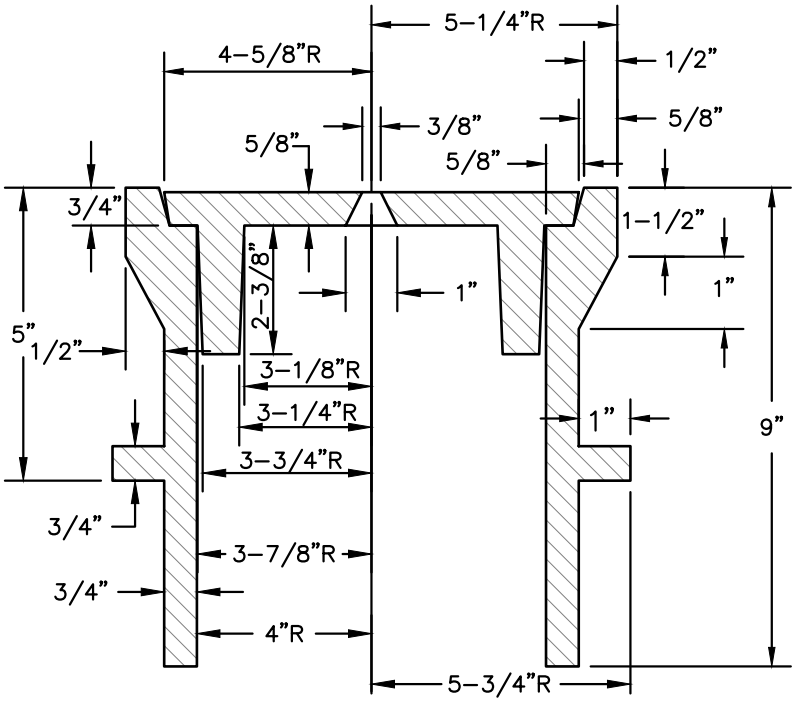
SIGHT OBSTRUCTION DETAILS

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1/2019	GS	NTS	T-12



COVER
PLAN VIEW



SECTION VIEW

RISER SIZES			
DIM.	1–1/2"	2"	3"
A	10–1/2"	10–1/2"	10–1/2"
B	9–1/2"	9–1/2"	9–1/2"
C	8"	8"	8"
D	9"	9"	9"
E	3/4"	3/4"	3/4"
F	1–1/2"	2"	3"
G	2–1/4"	2–3/4"	3–3/4"

NOTES:

DIMENSIONS MAY VARY ACCORDING TO MANUFACTURER.

BASE TO BE PLACED ON WELL COMPACTED FOUNDATION.

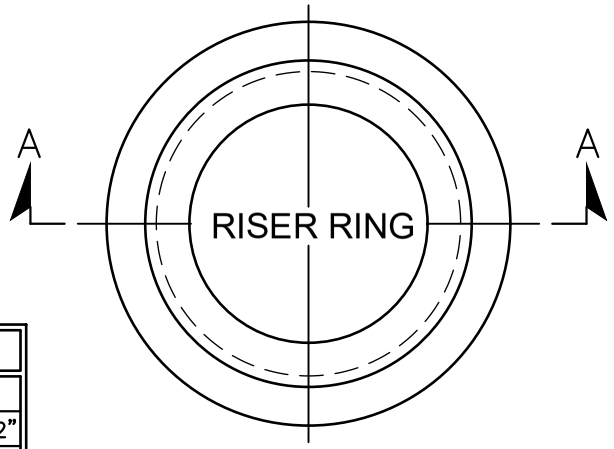
MONUMENT CASE TO BE INSTALLED BY CONTRACTOR.

SEE DET T–15 FOR MONUMENT CASE INSTALLATION.

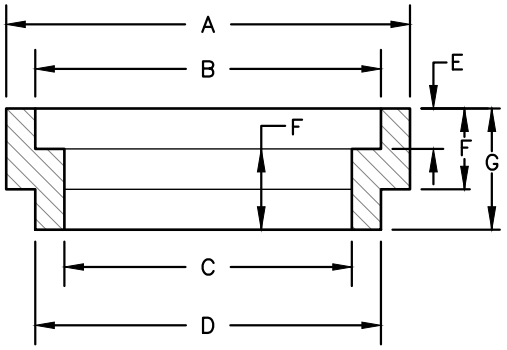
SEE DET T–14 FOR POURED IN PLACE CONCRETE MONUMENT.

APPROXIMATE WEIGHTS:

CASE	60 LBS.
COVER	19 LBS.
TOTAL	79 LBS.



RISER
PLAN VIEW



SECTION A - A

"Building A Stronger Community TOGETHER"

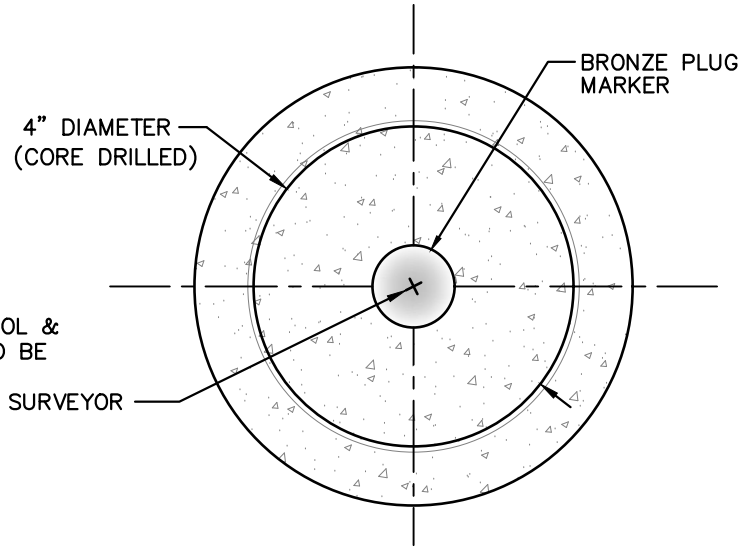
MONUMENT CASE & COVER w/ RISER

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

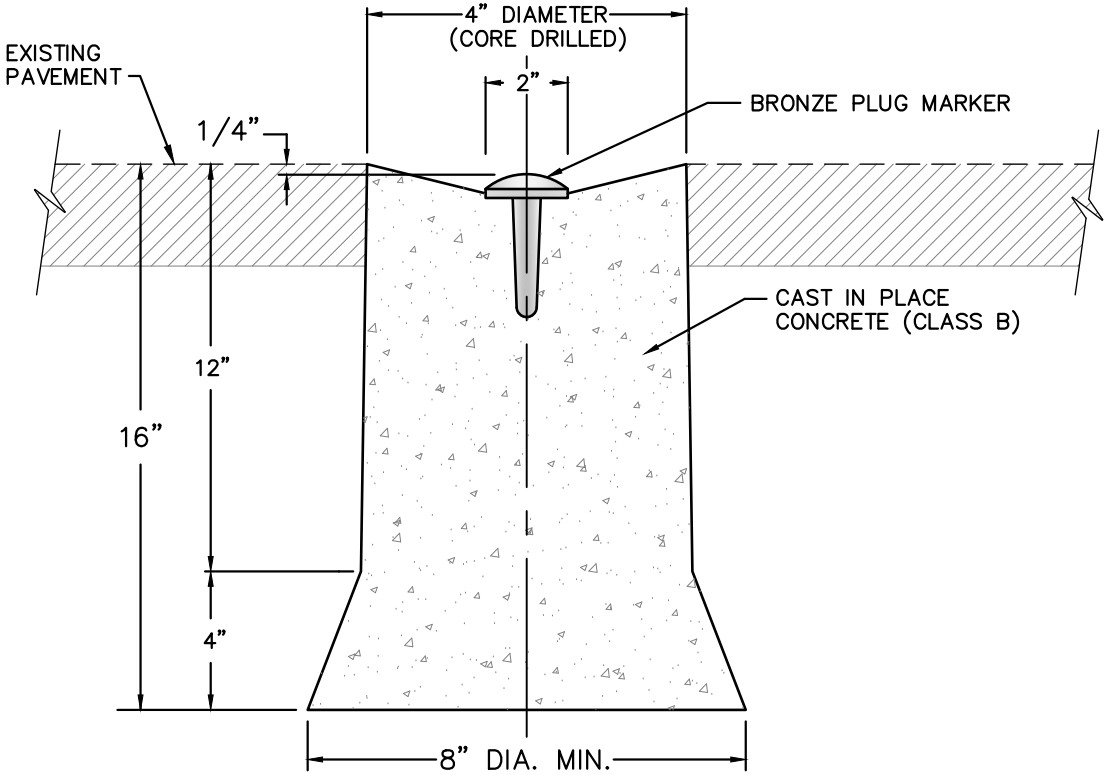
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-13

SPECIAL NOTE

THIS TYPE OF MONUMENT ONLY INSTALLED
W/ APPROVAL OF CITY ENGINEER.



PLAN VIEW



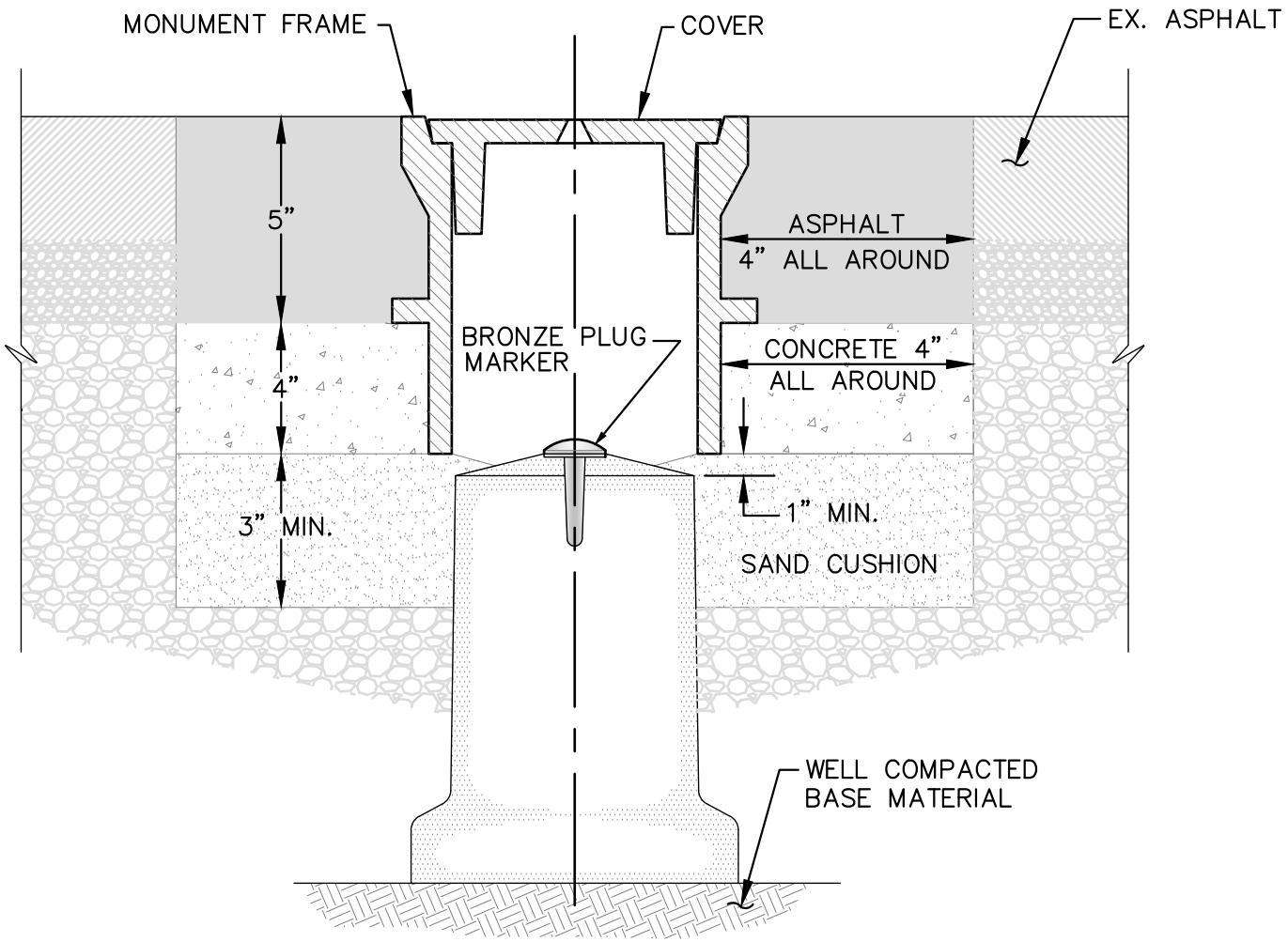
ELEVATION VIEW

"Building A Stronger Community TOGETHER"

POURED IN PLACE CONCRETE MONUMENT

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-14



NOTE:

FOR USE PRIMARILY ON ARTERIAL STREETS, STREETS WITH BUS TRAFFIC AND TRUCK ROUTES.

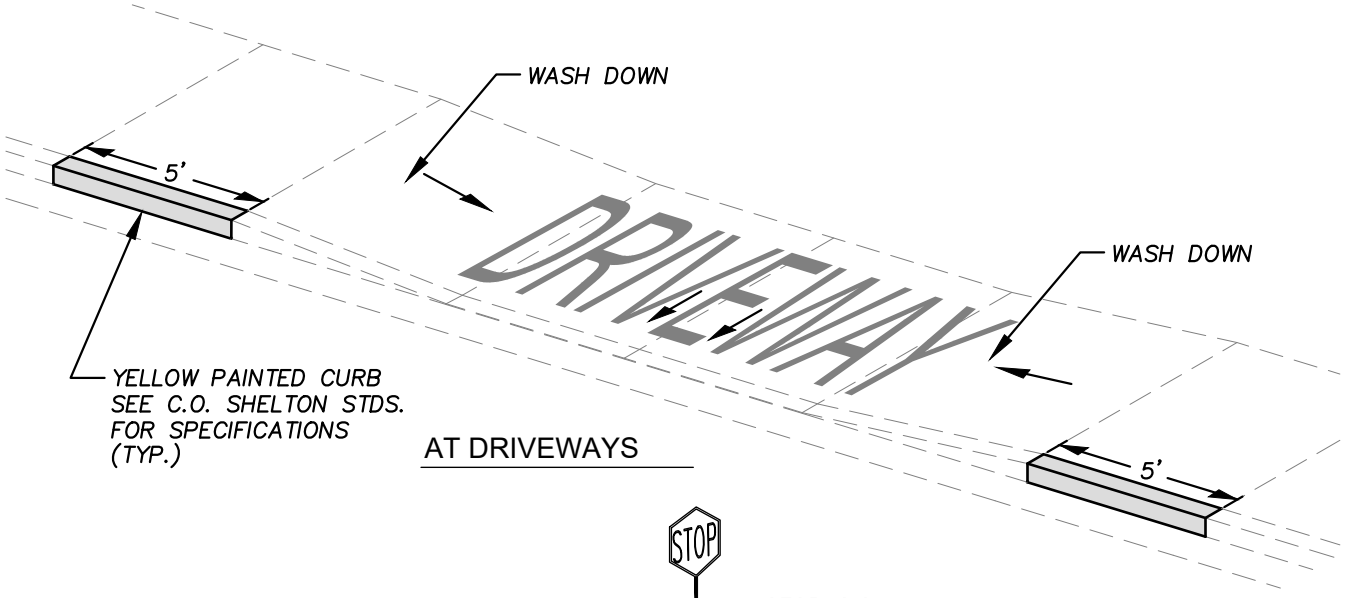
CITY of SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

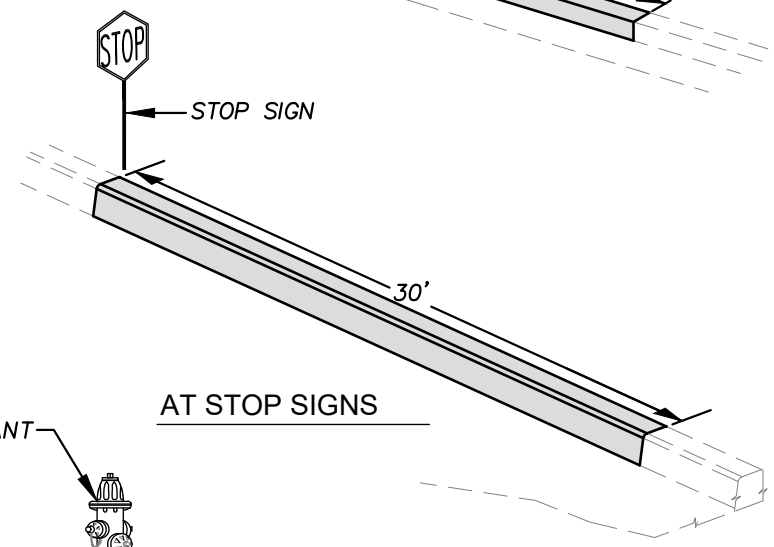
MONUMENT CASE INSTALLATION

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

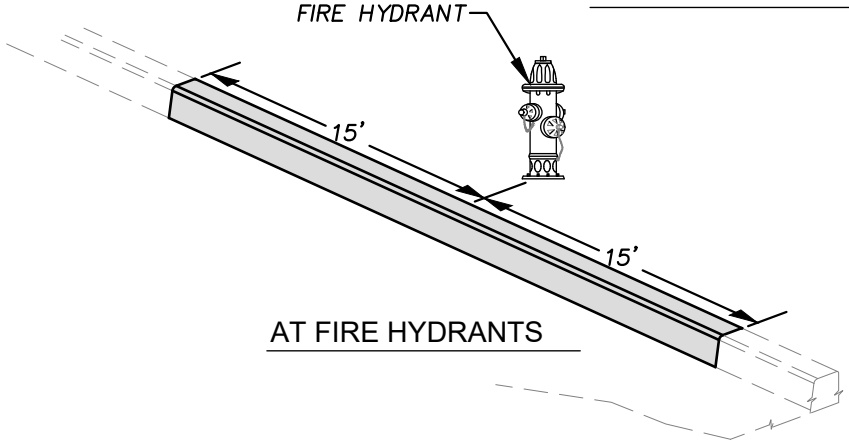
DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-15



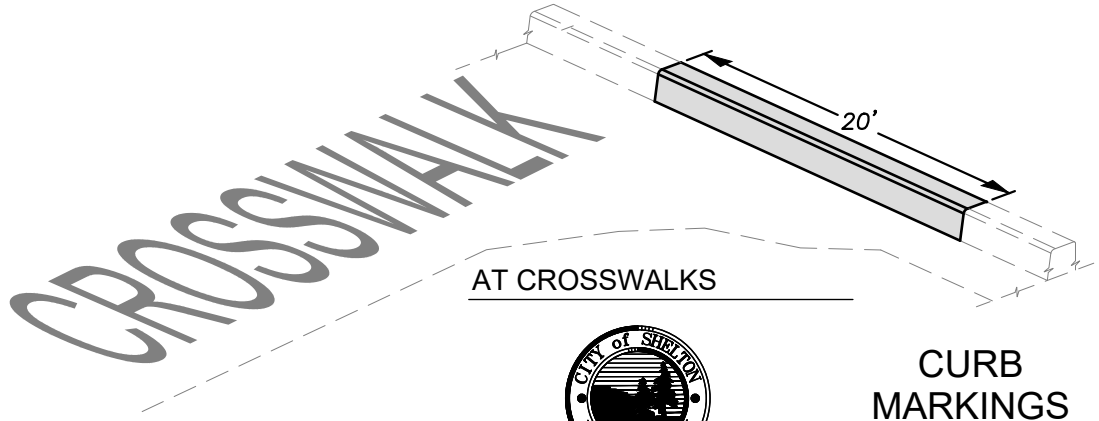
AT DRIVEWAYS



AT STOP SIGNS



AT FIRE HYDRANTS



AT CROSSWALKS

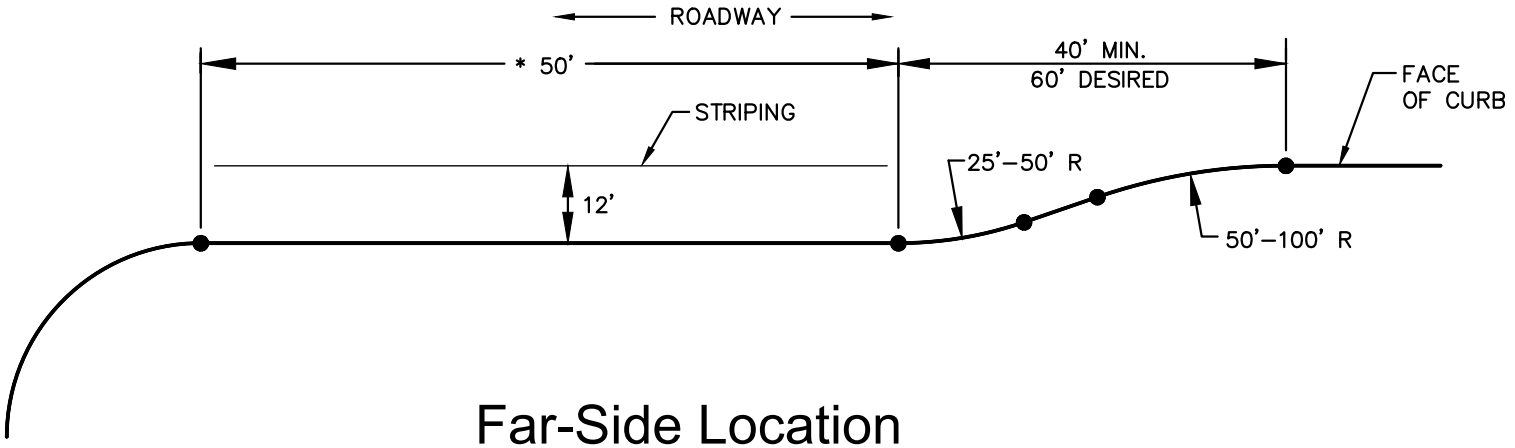
PER RCW 46.61.570

"Building A Stronger Community TOGETHER"

CURB MARKINGS

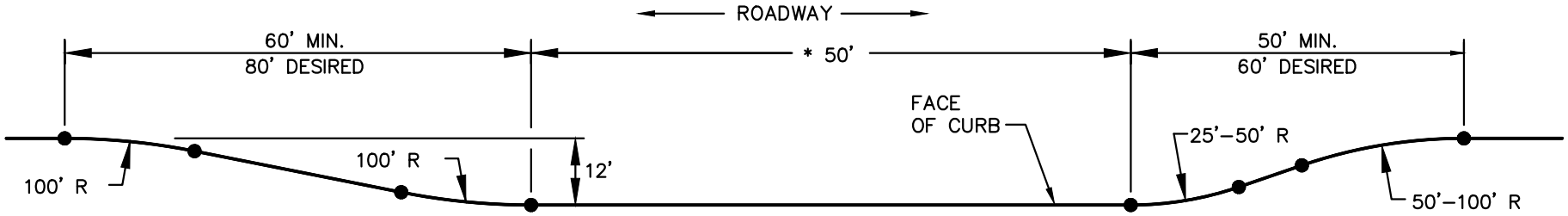
APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-16



Far-Side Location

Plan View



Mid-Block Location

Plan View

NOTES:

1.) * BASED ON A STANDARD 40 FT. LONG BUS
2.) ADD 40 FT. FOR EACH ADDITIONAL BUS
3.) ADD 20 FT. FOR ARTICULATED BUSES

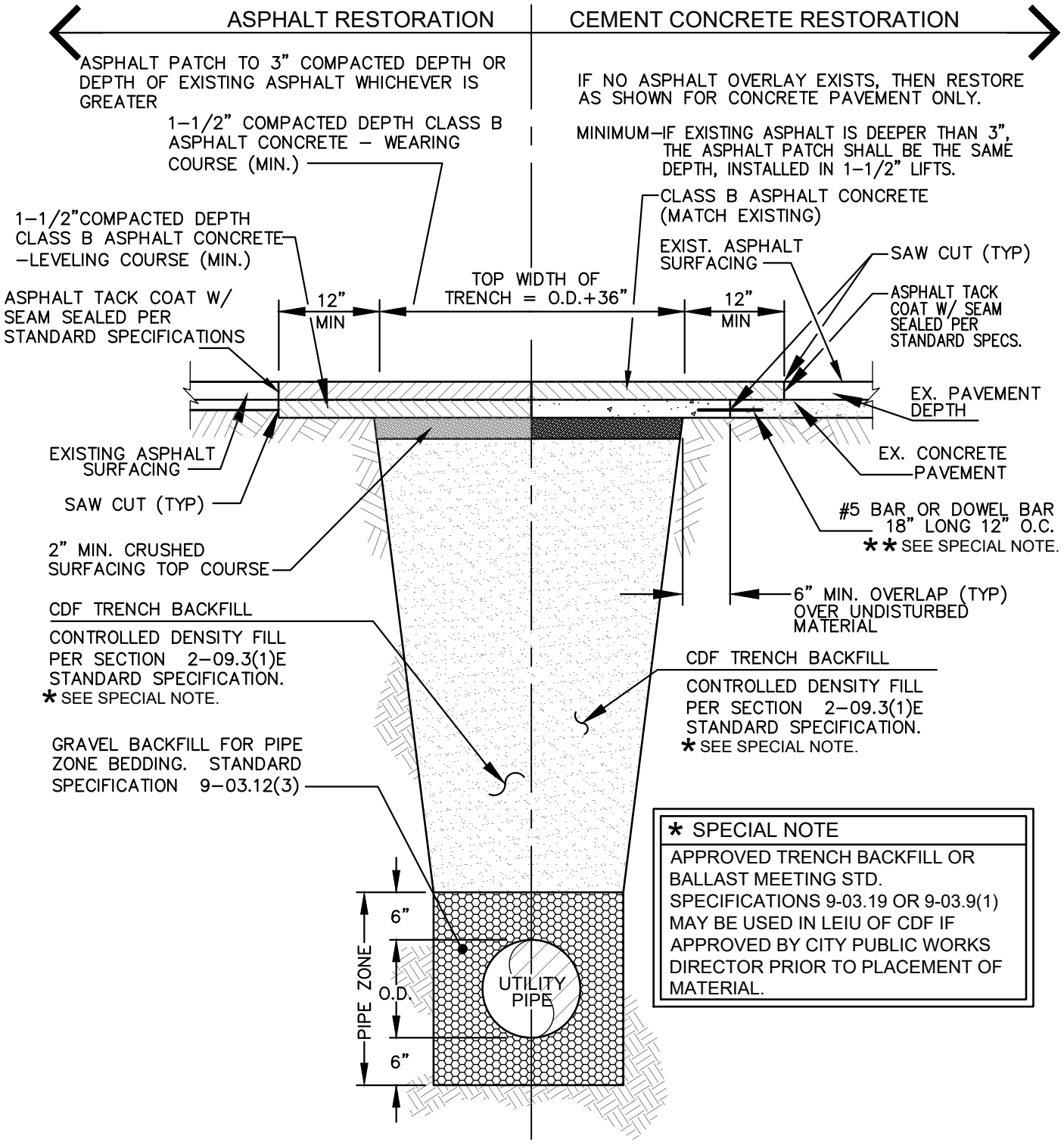
CITY of SHELTON WASHINGTON

"Building A Stronger Community TOGETHER"

BUS STOP PULLOUT ARTERIAL STREETS

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-17



*** SPECIAL NOTE**

APPROVED TRENCH BACKFILL OR BALLAST MEETING STD. SPECIFICATIONS 9-03.19 OR 9-03.9(1) MAY BE USED IN LEIU OF CDF IF APPROVED BY CITY PUBLIC WORKS DIRECTOR PRIOR TO PLACEMENT OF MATERIAL.

**** SPECIAL NOTE**

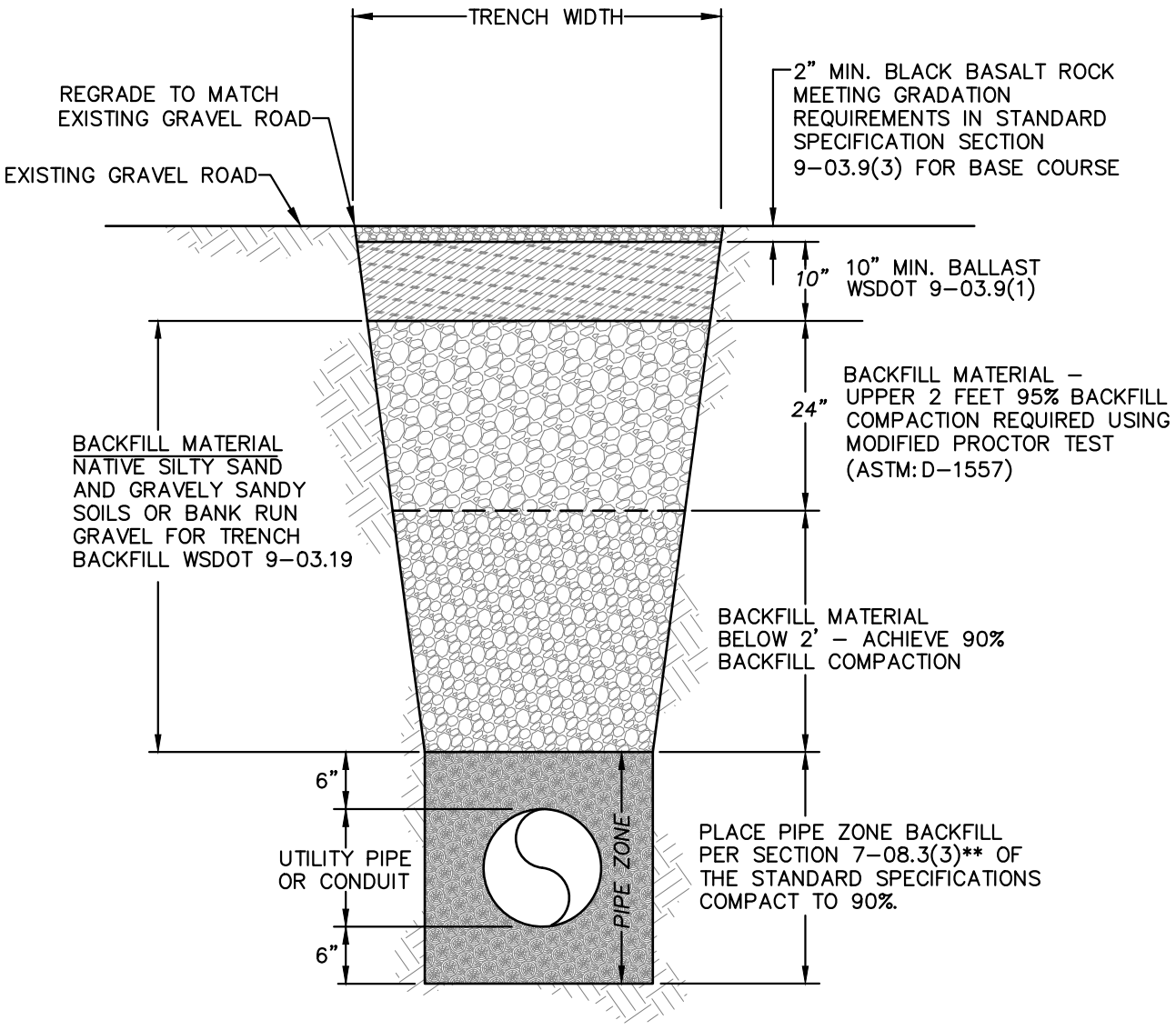
#5 BAR OR DOWEL BAR SHALL BE INSTALLED PER WSDOT STANDARDS PLAN A-40.10-03 IN CONFORMANCE WITH WSDOT STANDARD SPECIFICATION SECTION 5-05.3(10).

"Building A Stronger Community TOGETHER"

PAVEMENT SECTION UTILITY TRENCH RESTORATION

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-18



NOTES:

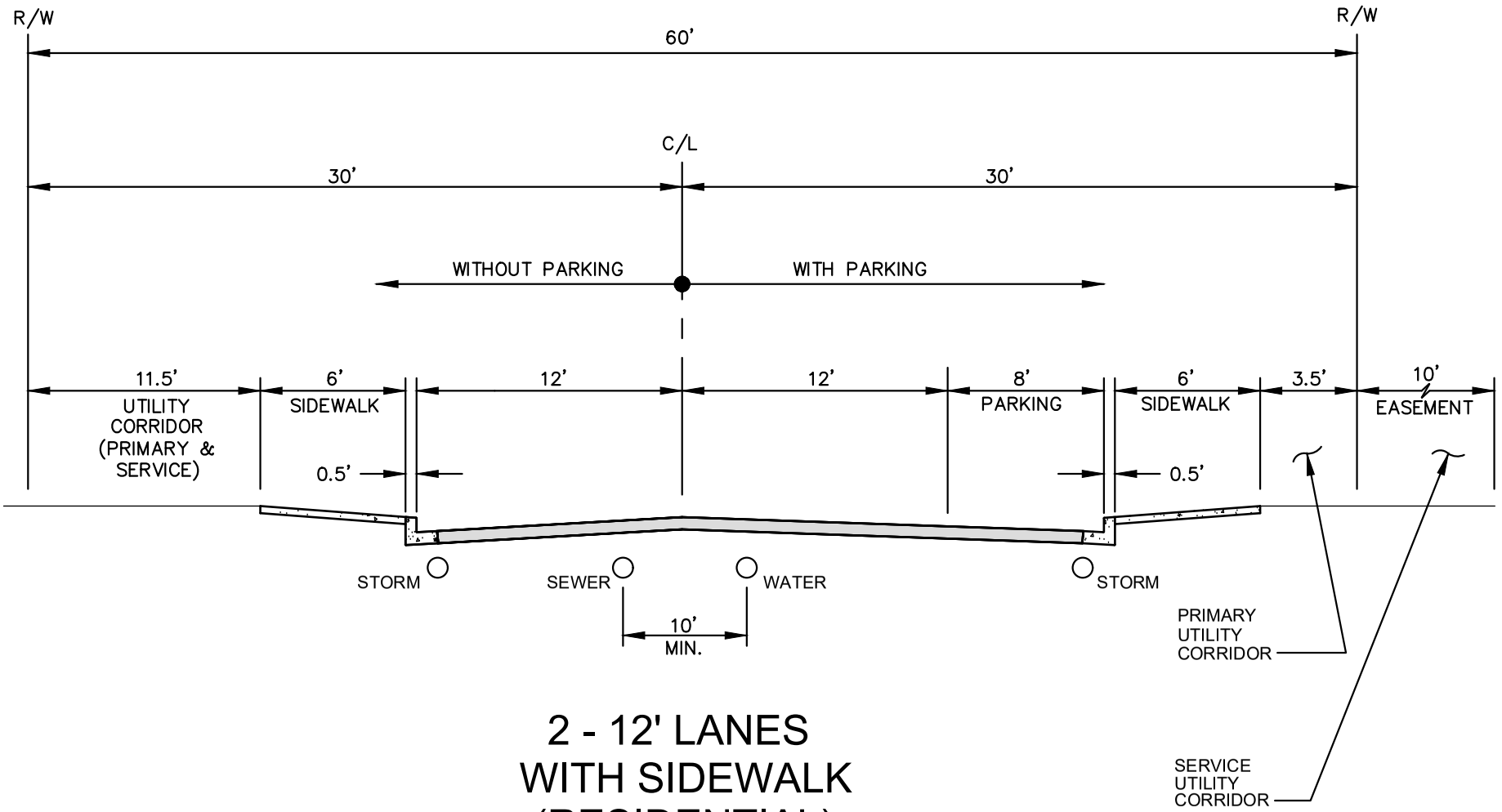
**PIPE ZONE BACKFILL MATERIAL SHALL CONFORM TO STANDARD SPECIFICATION SECTION 9-03.12(3)

"Building A Stronger Community TOGETHER"

GRAVEL SURFACE UTILITY TRENCH RESTORATION

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-19



2 - 12' LANES WITH SIDEWALK (RESIDENTIAL)

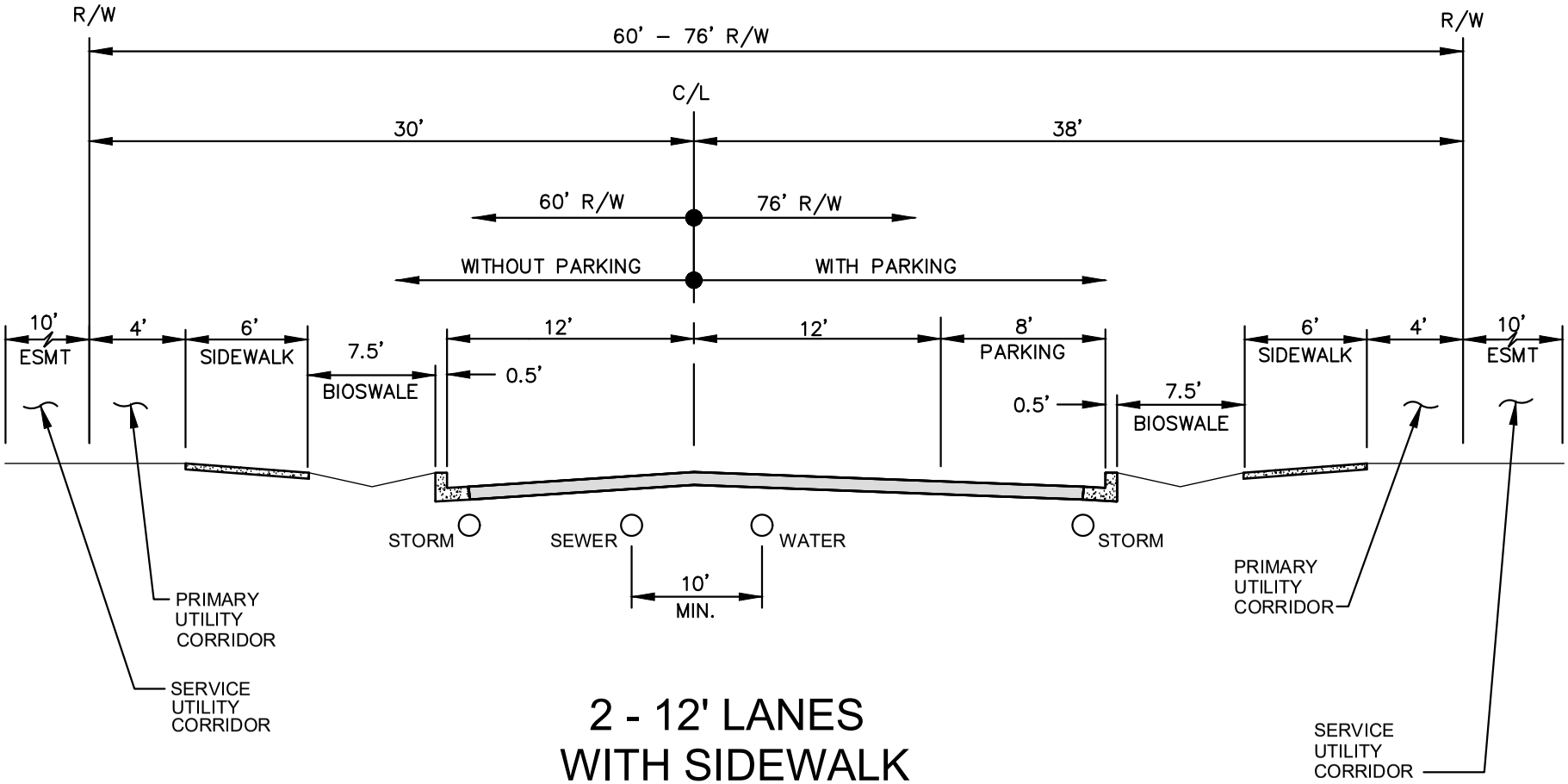
NOTE:
SEE SECTION 2.180 OF CURRENT DESIGN & CONSTRUCTION STANDARDS FOR REQUIRED ROADWAY STRUCTURAL SECTION.

"Building A Stronger Community TOGETHER"

CROSS SECTION RESIDENTIAL

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1/2019	GS	NTS	T-20



2 - 12' LANES WITH SIDEWALK & BIOSWALE (RESIDENTIAL)

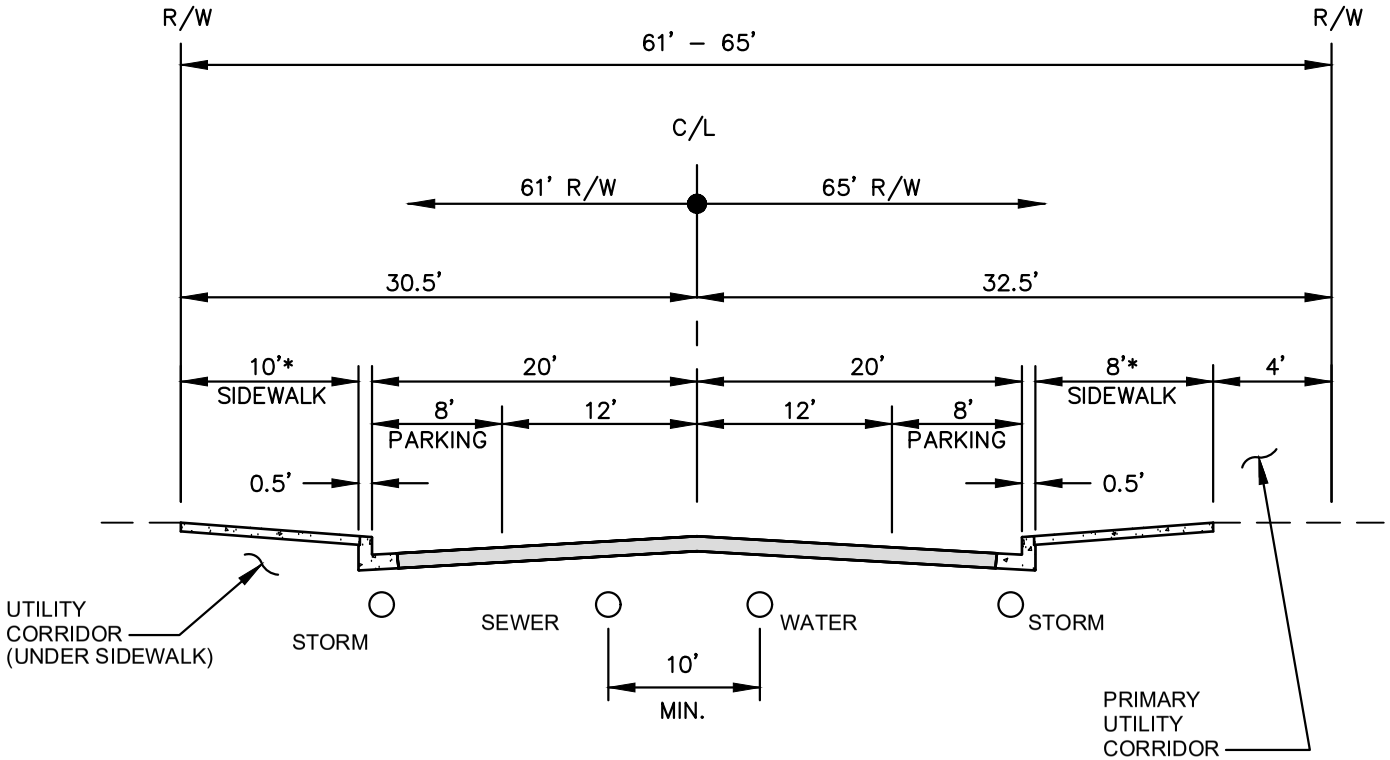
NOTE:
SEE SECTION 2.180 OF CURRENT DESIGN & CONSTRUCTION STANDARDS FOR REQUIRED ROADWAY STRUCTURAL SECTION.

"Building A Stronger Community TOGETHER"

CROSS SECTION RESIDENTIAL

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-21



2 - 12' LANES
8' PARKING - EACH SIDE
AND SIDEWALKS
(NON-RESIDENTIAL)

NOTE:
SEE SECTION 2.180 OF CURRENT DESIGN & CONSTRUCTION STANDARDS FOR REQUIRED ROADWAY STRUCTURAL SECTION.

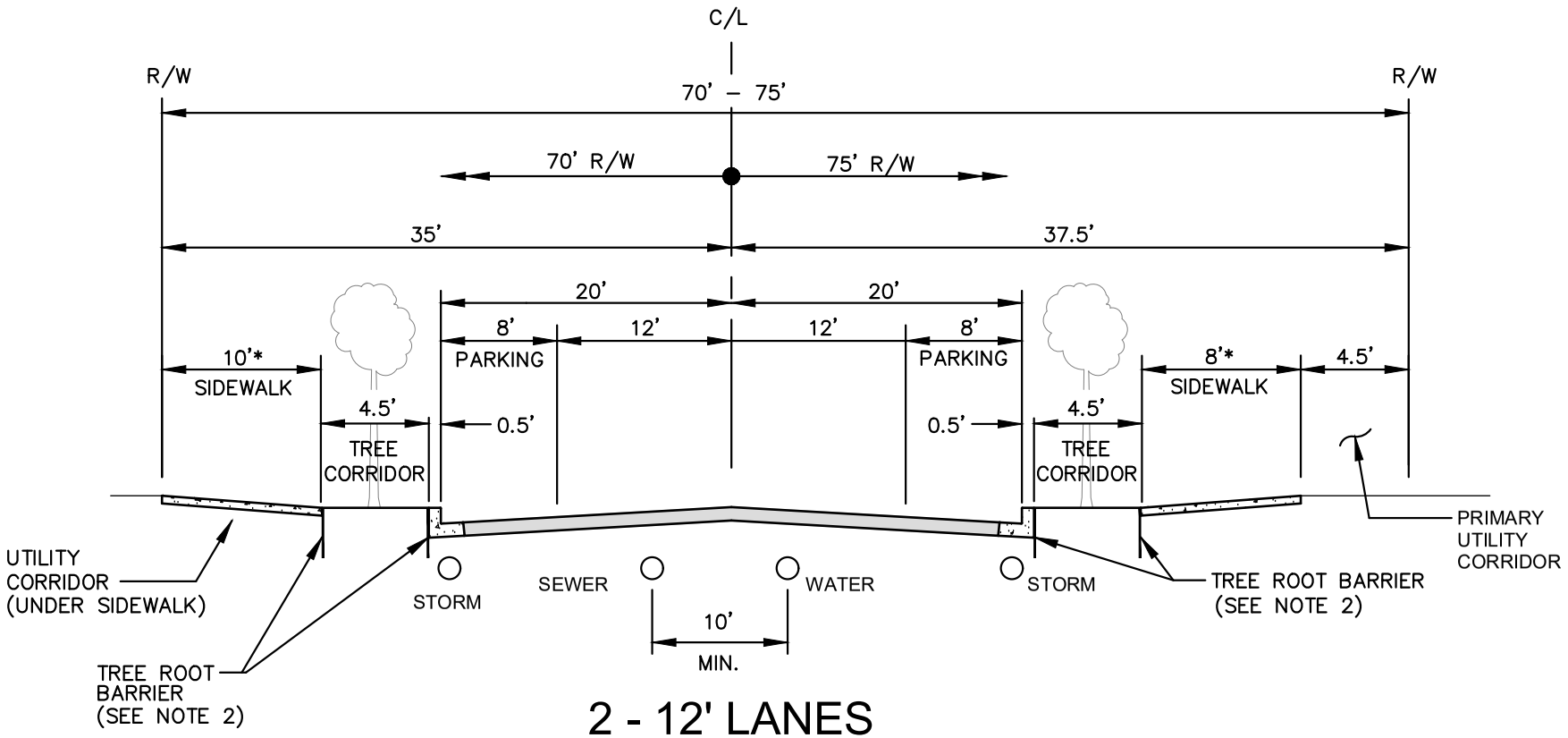
* SPECIAL NOTE:
10' SIDEWALKS REQUIRED IN ZONES OF 0' BLDG. SETBACKS.

"Building A Stronger Community TOGETHER"

CROSS SECTION
NON-RESIDENTIAL

APPROVED: CRAIG GREGORY
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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-22



2 - 12' LANES
8' PARKING - EACH SIDE
AND SIDEWALKS WITHIN
DESIGNATED STREET TREE CORRIDORS
(NON-RESIDENTIAL)

NOTE:

1. SEE SECTION 2.180 OF CURRENT DESIGN & CONSTRUCTION STANDARDS FOR REQUIRED ROADWAY STRUCTURAL SECTION.
2. TREE ROOT BARRIER REQUIRED ADJACENT TO ANY PAVEMENT. SEE C.O. SHELTON STD. DETAILS M-03 & M-04 FOR ROOT CONTROL BARRIER.

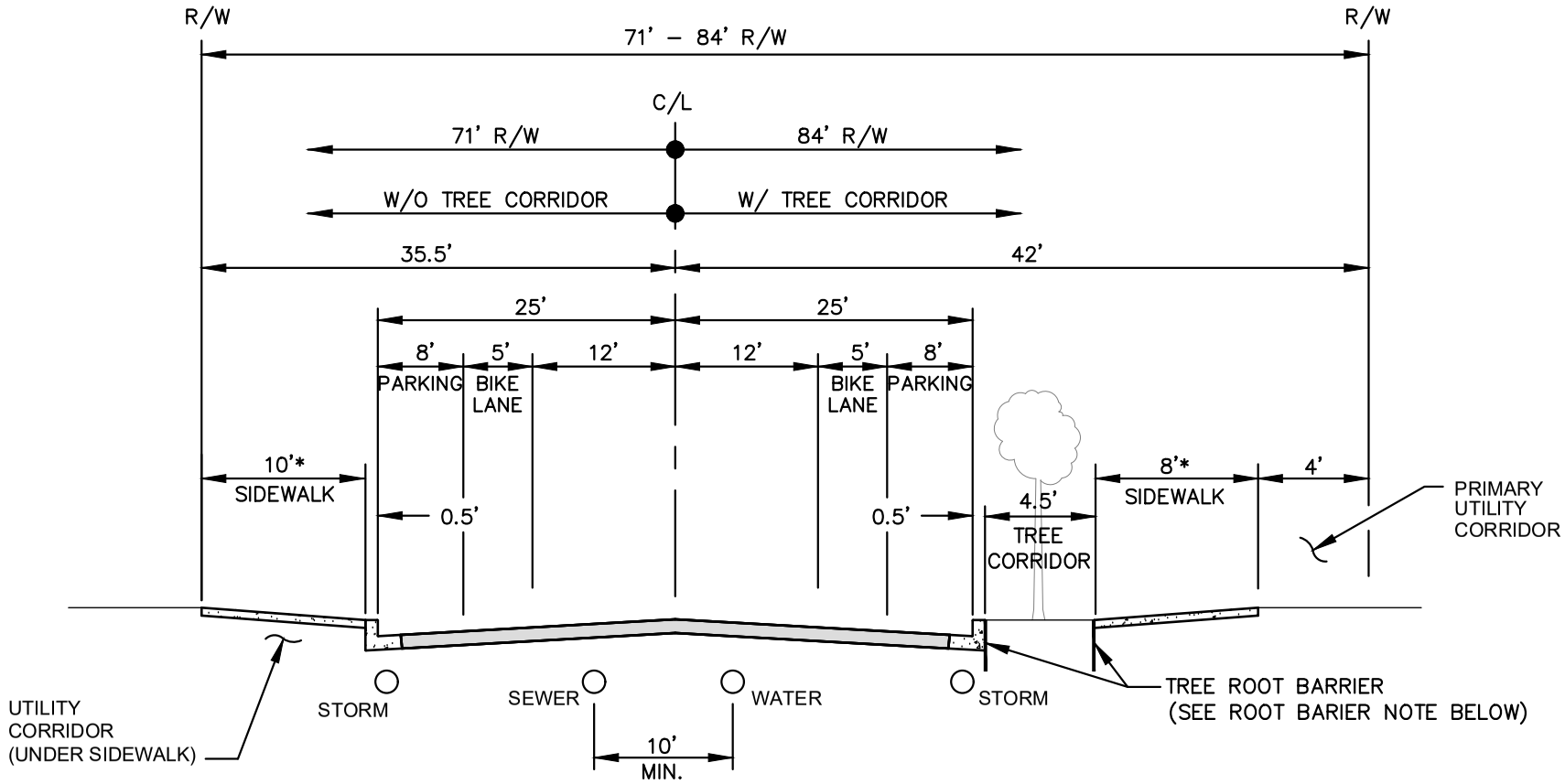
* SPECIAL NOTE:
10' SIDEWALKS REQUIRED IN ZONES OF 0' BLDG. SETBACKS.

"Building A Stronger Community TOGETHER"

CROSS SECTION
NON-RESIDENTIAL

APPROVED: CRAIG GREGORY
PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-23



2 - 12' LANES
8' PARKING - EACH SIDE
BIKE LANES AND SIDEWALKS
WITHIN DESIGNATED STREET TREE CORRIDORS
(NON-RESIDENTIAL)

NOTE:
SEE SECTION 2.180 OF CURRENT DESIGN & CONSTRUCTION STANDARDS FOR REQUIRED ROADWAY STRUCTURAL SECTION.

ROOT BARRIER NOTE:
TREE ROOT BARRIER REQUIRED ADJACENT TO ANY PAVEMENT. SEE C.O. SHELTON STD. DETAILS M-03 & M-04 FOR ROOT BARRIER CONTROL.

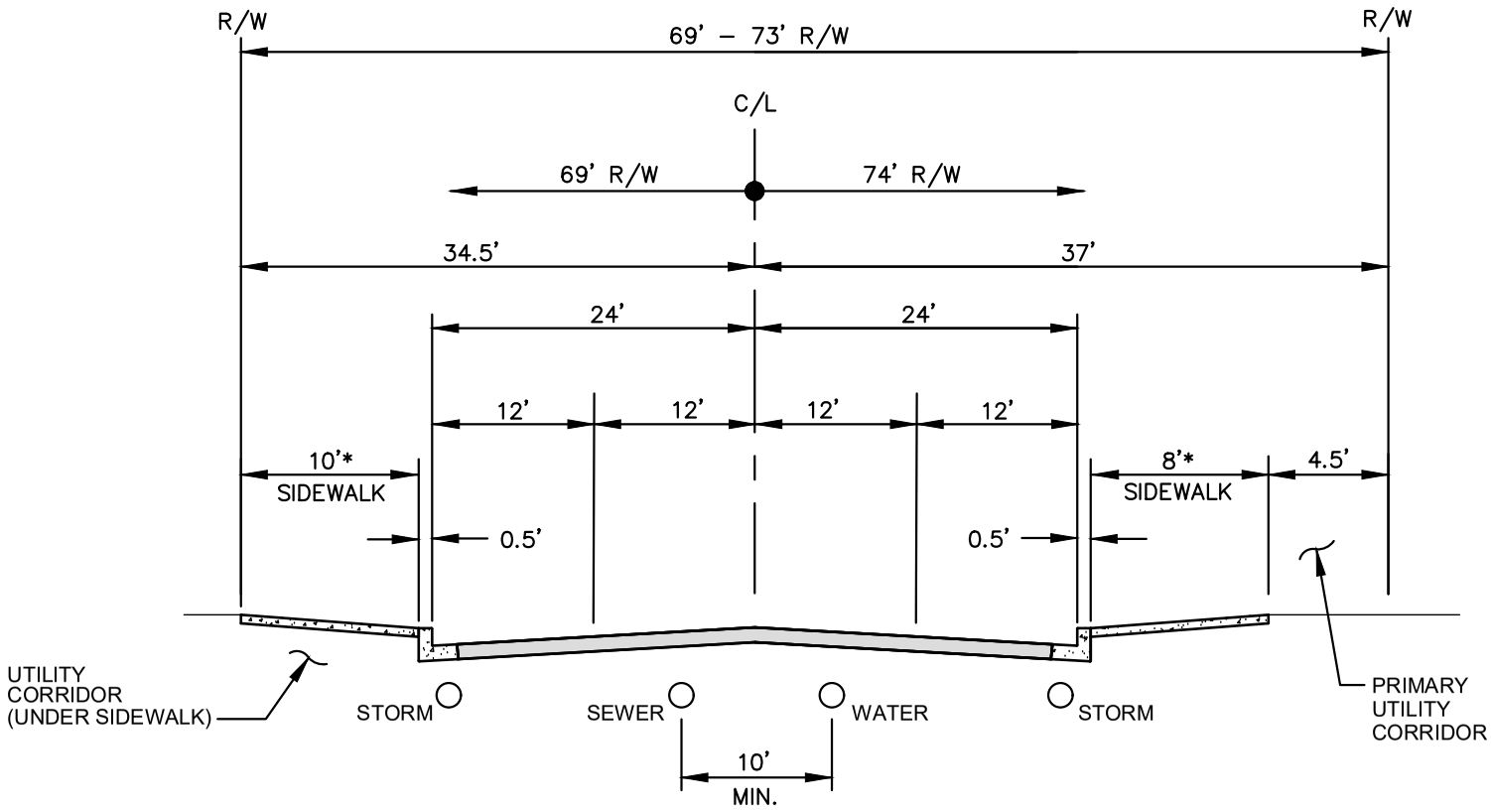
* SPECIAL NOTE:
10' SIDEWALKS REQUIRED IN ZONES OF 0' BLDG. SETBACKS.

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CROSS SECTION
NON-RESIDENTIAL

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-24



4 - 12' LANES
WITH SIDEWALKS EACH SIDE
(ARTERIAL)

SHARED DRIVEWAY ACCESSES ARE ENCOURAGED.

NOTE:
SEE SECTION 2.180 OF CURRENT DESIGN & CONSTRUCTION STANDARDS FOR REQUIRED ROADWAY STRUCTURAL SECTION.

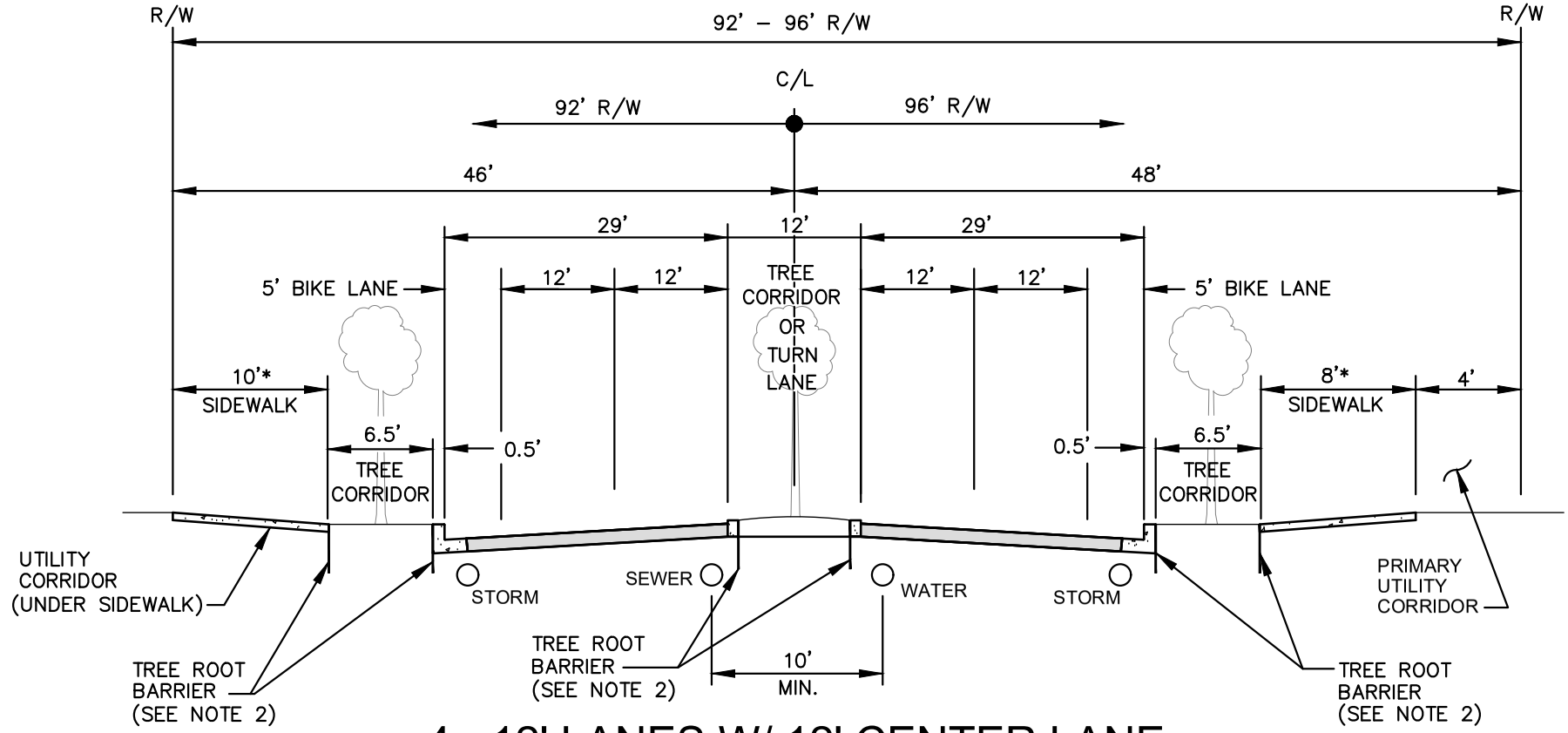
* SPECIAL NOTES:
10' SIDEWALKS REQUIRED IN ZONES OF 0' BLDG. SETBACKS.

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CROSS SECTION ARTERIAL

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DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-25



4 - 12' LANES W/ 12' CENTER LANE FOR TREE CORRIDOR OR TURN LANE & W/ BIKE LANE, & SIDEWALKS WITHIN STREET TREE CORRIDORS (ARTERIAL)

* SPECIAL NOTE:
10' SIDEWALKS REQUIRED IN ZONES OF 0' BLDG. SETBACK.

NOTE:
SEE SECTION 2.180 OF CURRENT DESIGN & CONSTRUCTION STANDARDS FOR REQUIRED ROADWAY STRUCTURAL SECTION.

NOTES:

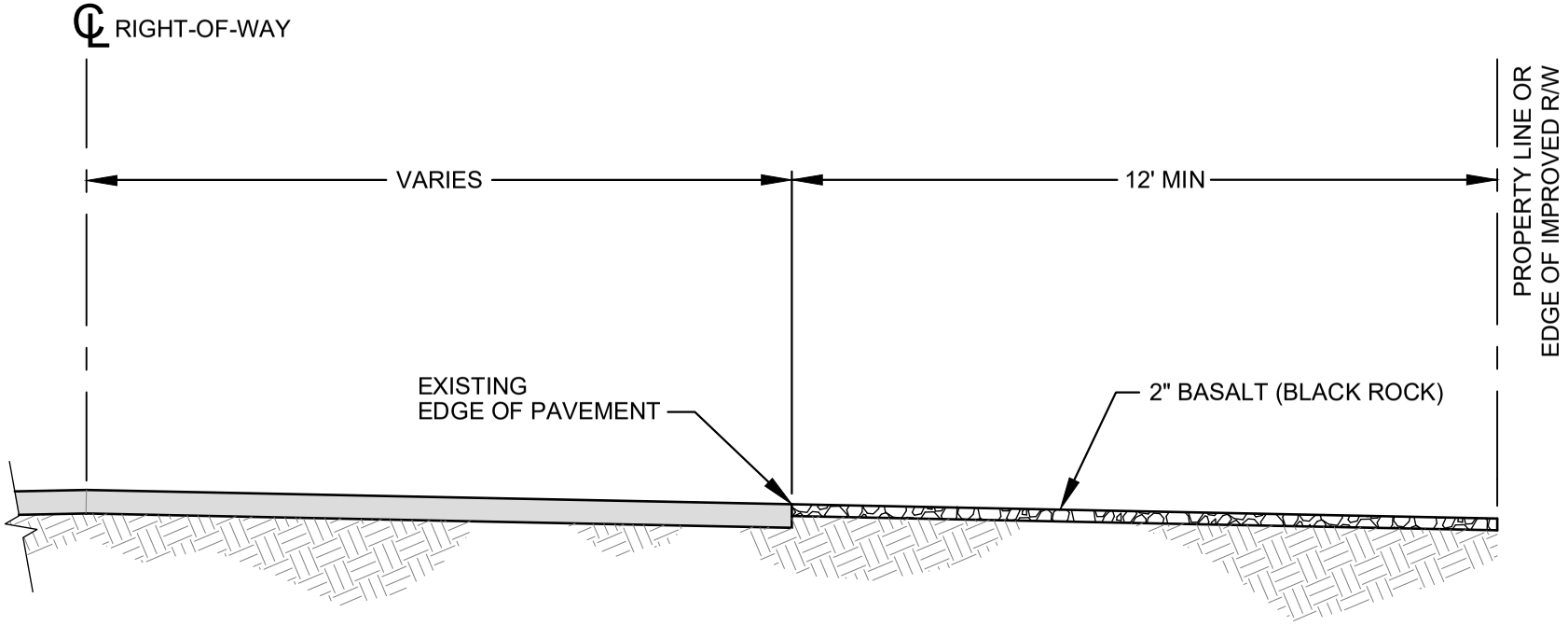
1. ACCESS TO ARTERIAL SHALL BE FROM SIDE STREET THAT INTERSECTS W/ THE ARTERIAL. IF DIRECT ACCESS TO AN ARTERIAL FROM AN ABUTTING PROPERTY IS ALLOWED BY THE CITY, SHARED ACCESS WILL BE MAXIMIZED.
2. TREE ROOT BARRIER REQUIRED ADJACENT TO ANY PAVEMENT. SEE C.O. SHELTON STD. DETAILS M-03 & M-04 FOR ROOT CONTROL BARRIER.

CITY of SHELTON WASHINGTON
"Building A Stronger Community TOGETHER"

CROSS SECTION ARTERIAL

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-26



CROSS SECTION

(FOR NR ZONE)

NOTE:
NR - NEIGHBORHOOD RESIDENTIAL ZONE

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R/W IMPROVMENTS FOR NR ZONING

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PUBLIC WORKS DIRECTOR

DATE:	BY:	SCALE:	DWG#
1/2019	GS	NTS	T-27

Chapter 1 General Standards Changes		
No.	**Section**	**Change**
1	**1.030 Applicability**	Added/Changed
2		Added to C. (Date)
3		Changed G. (AASHTO)
4		Changed H. (MUTCD)
5		Changed I. (WSDOT)
6		Changed J. (ECY) and (SMC Title 13)
7		Changed K. (DOH)
8		Changed L. (ECY Sewer)
9		Changed M. (L&I)
10		Changed N. (AASHTO)
11		Changed O. (DHUD) and (FHA)
12		Changed P. (AWWA)
13		Changed Q. (HCM Special Report 209)
14		Changed R. (AWWA Cross Connections)
15		Changed S. (DOH Water System Design)
16		Changed T. (ADA)
17		Changed U. (Required by the City)
	1.040 Definitions	Added/Changed
18		Added (As-Builts)
19		Added (Critical Pedestrian Route)
20		Added (Developed Parcel)
21		Added (Frontage)
22		Added (Interim Street)
23		Added (Infill Development)
24		Added to (Private Sewer)
25		Changed (Private Street)
26		Added to (Redevelopment)
27		Added (Redevelopment Site)
28		Added (Undeveloped Parcel)
29		Added (Unimproved Street)
	1.050 Changes to Standards	Added/Changed
30		Added to section (Authority & Tracking)
31		Added (Design Modification Requests)
	1.070 Design Standards	Added/Changed
32		Added requirements
	1.080 Plan Review	Added/Changed
33		Added Requirements
	1.110 Fees	Added/Changed

34		Added (Special Reports and Studies)
	1.120 Permits	Added/Changed
35		Added Requirements
	List of Drawings and Details	Removed All

Chapter 2 Transportation Standards Changes

No.	Section	Change
1	**2.010 Transportation System Alterations, Extensions and Connections**	Updated Requirements
2	**2.020 Functional Classification**	Updated References
3	**2.040 Streets and Alleys Design Standards**	Added Clarification, Requirements, and Added Alley Secondary Access and Roadway Geometrics
4	**2.050 Vertical Alignment**	New section (previously 2.050 Minimum Street Design Standards)
5	**2.060 Vertical Curve Criteria**	New Section (previously 2.060 Traffic Impact Analysis)
6	**2.070 Horizontal Curve Criteria**	New Section (previously 2.070 Signing)
7	**2.080 Curb Radii**	New Section (previously 2.080 Right-of-Way
8	**2.100 Minimum Street Design Standards**	New Section (previously 2.100 Street and Alley Frontage Improvements
9	**2.105 Surfacing Requirements**	New Section (no previous section numbered as 2.105) Surfacing requirements was previously 2.180 and has been updated within the new section
10	**2.110 Sidewalks, Curb and Gutter, & ADA Curb Ramps**	New Section (previously 2.110 Cul-de-sac)
11	**2.120 Driveways**	New Section (previously 2.120 temporary Dead Ends)

12	**2.130 Intersections**	New Section (previously 2.130 Half Street)
13	**2.140 Sight Obstruction**	New Section (previously 2.140 Medians)
14	**2.150 Private Streets**	New Section (previously 2.150 Intersections)
15	**2.160 Street and Alley Improvement Standards**	New Section (previously 2.160 Driveways)
16	**2.165 Infill Development Standards**	New Section (No previous section numbered as 2.165)
17	**2.170 Transitions**	New Section (previously 2.170 Sight Obstruction)
18	**2.180 Cul-de-sac**	New Section (previously 2.180 Surfacing Requirements)
19	**2.190 Temporary Dead Ends**	New Section (previously 2.190 Street Pavement Patching)
20	**2.200 Parking Lots**	New Section (previously 2.200 Trench and Pavement Cut, Backfill and Restoration)
21	**2.210 Medians**	New Section (previously 2.210 Staking)
22	**2.220 Bikeways**	New Section (previously 2.220 Testing)
23	**2.230 Street Illumination**	New Section (previously 2.230 Sidewalks, Curbs and Gutters, Driveways)
24	**2.240 Traffic Signals and Roundabouts**	New Section (previously 2.240 Bikeways)
25	**2.250 Flashing Beacons**	New Section (previously 2.250 Street Illumination Design Standards)
26	**2.260 Signing and Pavement Markings**	New Section [previously Street Illumination Construction (General Notes)]
27	**2.270 Survey Monuments**	New Section (previously 2.270 Traffic Signals)

28	**2.275 Existing and proposed Roadside Features**	New Section (no previous section numbered as 2.275)
29	**2.280 Retaining Walls**	New Section (previously Survey Monuments, Bus Stops, Benches, Mailboxes, Guard Rails, Retaining Walls, Street Trees and Parking Lots)
30	**2.290 Bus Stops and Benches**	New Section (previously 2.290 Retaining Walls)
31	**2.300 Street Trees**	Updated and Added Requirements Within Existing Section
32	**2.310 Street Construction General Notes**	New Section (previously 2.310 Parking Lots)
33	**2.330 Traffic Signal and Illumination Construction**	New Section (previously 2.330 Flashing Beacon)
34	**2.340 Construction Staking**	New Section (previously 2.340 General Notes: Street Construction)
35	**2.350 Testing**	New Section (no previous section numbered as 2.350)
36	**Appendix A: Traffic Impact Analysis**	New Appendix (provides detailed information, requirements, and standards for completing a traffic impact analysis)
37	**Appendix B: Street Tree List**	New Appendix (provides list of all City of Shelton approved street trees for different applications and vital specifications of the various tree species)
38	**Appendix C: Street Lighting Standards**	New Appendix (provides specifications and standards for street lighting including: Lighting Levels, Conduit, Cable and Wire, Poles, Lighting Fixtures, Control Cabinets, and Junction Boxes)

39	**Appendix D: Critical Pedestrian Route Map**	New Appendix (provides an updated Critical Pedestrian Route Map with more detail on each route depicted)

Transportation Standard Details Change Log

Old Detail #	New Detail #	Name	City Recommendations	Consultant Comments/Changes Made
T-01	T-01A	Pavement Striping	(updated to 2019 detail w/ hydrant marker)	2019 detail does not include hydrant markers
T-01	T-01A	Pavement Striping	add WSDOT spec for paint type, add dimension for turn arrow	Added note 5 with WSDOT reference to paint materials. Added T-01B with turn arrow dimensions (from Buckley).
T-01	T-01A	Pavement Striping	thermoplastic - add specs and location (?), t's and l's, low traffic area	Need info
T-01	T-01A	Pavement Striping	change cross walk to linear bars (?)	Added T-01C with crosswalk dimensions (from Buckley).
No Previous Detail	T-01B	Pavement Turn Arrows Markings	(new detail downtown district striping: painted cross walks/medians, stop bars)	Need to compile info on downtown pavement markings. Included crosswalk on T-01C.
No Previous Detail	T-01C	Crosswalk Markings	Update city detail T-01 and create separate detail.	
T-02	T-02A	Sidewalk Details	switch type 1 and type 2 (type 2 w/ planter is new requirement, type 1 is with design modification request)	Added a note clarifying that Type 1 is only allowed w/ design modification request.
T-02	T-02A	Sidewalk Details	type 2: planter strip (add or bioswale)	
T-02	T-02A	Sidewalk Details	remove sections under sidewalk (leave hatch, add reference to T-22 pavement section detail)	Assuming this meant to say "remove sections under roadway"
T-02	T-02A	Sidewalk Details	change under Type 1 and Type 2, 2" CSTC under sidewalk (not 1" CSTC)	
T-02	T-02A	Sidewalk Details	remove type 3	
T-02	T-02A	Sidewalk Details	Note 1, remove reference to 3A, change reference from T-06 to T-02B	
T-06	T-02B	Sidewalk Expansion and Contraction Joint Spacing	move T-06 to new detail T-02B, add table for joint spacing	Detail T-06 is now T-02B. Need standards for joint spacing table
T-03	T-03A	Vertical Curb and Gutter	remove cement from title, rename to T-03A	
T-03	T-03A	Vertical Curb and Gutter	Type 1: label 12" gutter (verify 12" gutter is a common standard in other cities, or move to 18"), is keyway possible with curbing machine?	Need standards for gutter width and keyway. 12" gutter is now labeled; 12" is standard for at least Buckley.
T-03	T-03A	Vertical Curb and Gutter	Downtown Area: define limits (saw cut all joints downtown)	
T-03	T-03A	Vertical Curb and Gutter	remove type 2, type 3/type 3 (middle section)	
T-03	T-03A	Vertical Curb and Gutter	note: curing compound specs	Curing compounds contained in WSDOT specs 9-23.
T-03	T-03A	Vertical Curb and Gutter	Note 1: specify expansion joint material	Pointing to WSDOT specs
T-03A	T-03B	Rolled Curb	rename to T-03B, rolled curb	
T-03A	T-03B	Rolled Curb	remove "cement" from detail (middle of each detail)	"Concrete curb" instead of "cement concrete curb"
			new median detail: under median, show driveway section under curb (show rock/6" concrete)	
T-03A	T-03B	Rolled Curb	Divide into two details A. Commercial/Alley (yes to rebar), B. Residential (use wire mesh), A&B need one with planter and one without planter?	
			New detail: weepholes, stamps	
T-04	T-04	Cement Concrete Driveway	T-04 calls it dummy, T-06 call is contraction, they are same/create consistency	T-06 is now T-02B. "Contraction joint" is now used.
	T-05	Intersection Sidewalk Ramps	create one detail for new location of ramps, reference WSDOT for ADA ramps, call out WSDOT standard for black truncated domes or equal (higher end?)	
T-07			remove	ADA sidewalk ramp detail removed. Now referenced on T-05.
T-08			remove	ADA sidewalk ramp detail removed. Now referenced on T-05.
T-09			remove	ADA sidewalk ramp detail removed. Now referenced on T-05.
T-10			remove	ADA sidewalk ramp detail removed. Now referenced on T-05.
T-11			remove	ADA sidewalk ramp detail removed. Now referenced on T-05.
T-12	T-12	Site Obstruction Details	reference AASHTO section/chapter, reference SMC 20.60.190 & what is says, require site distance certification	SMC 20.60.190 is a grandfather clause for landscaping and is not directly applicable to this detail.
T-13	T-13A	Monument case and Cover With Riser	new A detail, all intersections (add RCW)	Check added RCW reference (58.28.270).
T-15	T-13B	Monument case Installation	T-15 as new T-13B detail	T-15 is now T-13B
T-15	T-13B	Monument case Installation	T-13B, modify note: at all PC, PT, PRC, intersections	
T-15	T-13B	Monument case Installation	T-13B, modify note: move up, not as deep (3"-4" down), typ paving section T-22, add bronze marker part number, add stamp requirements, add precast base requirements	RCW 58.28.270 requires all monuments to be situated 1' below ground surface.
T-14			remove	Poured-in-place concrete monument detail removed.
T-16	T-16	Curb Markings	possibly remove, thermoplastic?, check RCW - is city required to, if so thermoplastic top and face of curb, reference T-16 on curb detail	RCW 46.61.570 indicates lengths. Unsure of thermoplastic requirements; not included in Shelton Standards as indicated in detail.
T-17	T-17	Bus Stop Pullout for Arterial Streets	all designs approved by City and MTA	
T-18	T-18A	Asphalt Pavement Section Utility Trench Restoration	T-18A, HMA (add note for gravel road)	
New Detail For Concrete Road Section Restoration	T-18B	Concrete Pavement Utility Trench Restoration	T-18B, concrete panel replacement, trenching through panel - replace whole panel, adjacent to other patches, incorporate	Split T-18 into T-18A and T-18B.
	T-18A and T-18B		update (2) WSDOT references	WSDOT references appear up-to-date without any changes.
T-19	T-19	Gravel Surface Utility Trench Restoration	check reference to modified proctor test ASTM D1557	
			Multiuse path	
			Median	
	T-21		Utility Spacing	
New Detail	T-22	Pavement Sections and Access Spacing	Pavement Sections	Add updated Detail
T-26 and T-25	T-23A	Major Arterial or Collector Road With Multiuse Path	Major Collector, p&m arterial A (w/ multiuse path)	Now includes one travel lane in each direction no on street parking, a center 12' turn lane or 8' median with street trees, multiuse path and 6' sidewalk on other side of the travel lanes from path with street trees between curb and sidewalk. Curb to curb width 40' to 36'.
T-26 and T-26	T-23B	Major Arterial or Collector Road with Bike Lanes	Major Collector, p&m arterial B (w/ bike lanes)	Now includes one travel lane in each direction no on street parking, a center 12' turn lane or 8' median with street trees, 5' bike lane off of each travel lane, and 8' sidewalks on both sides with Street trees between curb and sidewalk. Curb to curb width 46' or 42'.
T-23 and T-22	T-24	Minor Collector Road	Minor Collector	Now includes 6' sidewalks on each side two travel lanes with parking on both sides and street trees between curb and sidewalk on both sides. Curb to curb width 36'. No center turn lane or tree corridor.

T-21 and T-20	T-25	Local Residential Road	Local Residential	Now includes 6' sidewalks on each side, parking on both sides, and tree corridor between curb and sidewalk on both sides. Curb to curb width 32'.
New Detail created for industrial roads	T-26	Local Industrial or Commercial Road	Local Industrial or Commercial	Includes 6' sidewalks on each side, street tree corridor on each side between curb and sidewalk, parking on both sides, and a 36' curb to curb width.
	T-27	Alley	Alley	Includes 20' curb to curb width pavement with inverted crown and 4.5' planter strip on each side of pavement section, (rolled curb allowed).

2023 DESIGN & CONSTRUCTION STANDARDS PRESENTATION



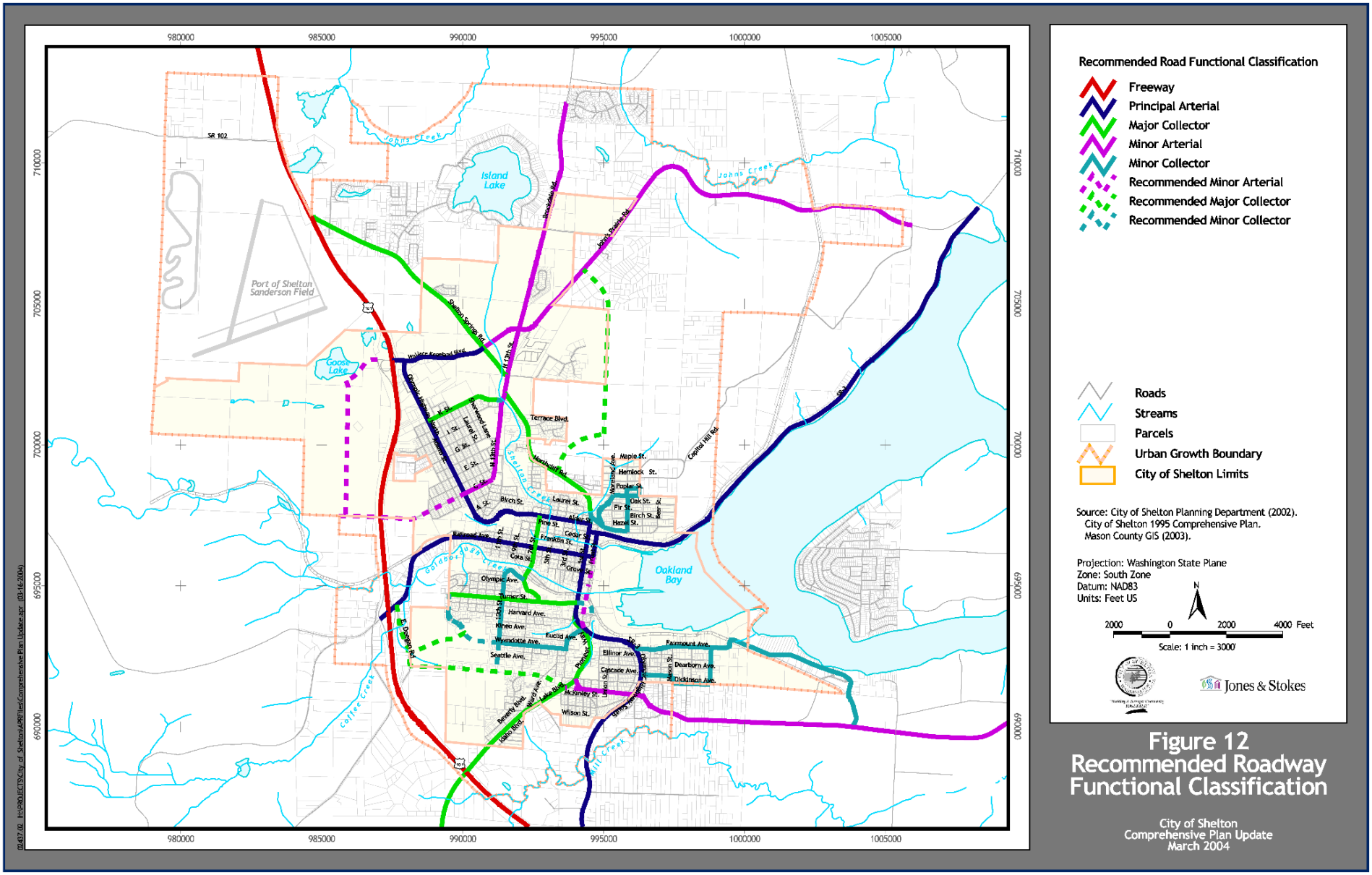
Railroad Avenue



First Street Roundabout

August 15, 2023

2017 COMPREHENSIVE PLAN FUNCTIONAL CLASSIFICATION MAP



Functional Classification Roadway Descriptions:



Freeway: Limited Access, High Average Daily Traffic (ADT)
E.g.: Highway 101



Principal Arterial: Limited Access, High ADT
E.g.: Highway 3, Railroad Ave (shown), Olympic Highway N.



Minor Arterial: Limited Access, Moderate ADT
E.g.: Brockdale Road, N. 13th St (shown), E. Arcadia Ave, Johns Prairie Rd.



Major Collector: Increased Access, Moderate ADT
E.g.: Lake Blvd, Turner Ave, Northcliff Rd (shown), Shelton Springs Rd.

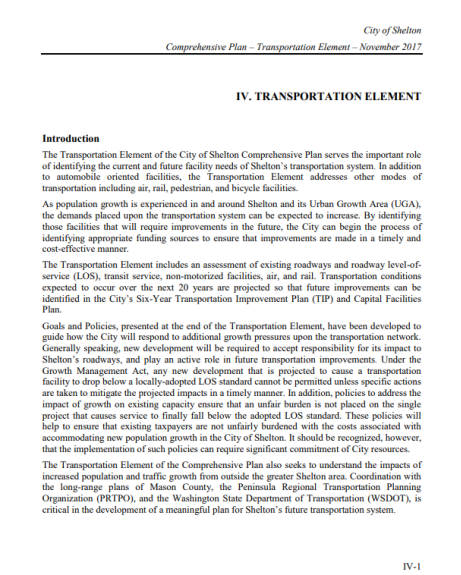


Minor Collector: Increased Access, Lower ADT
E.g.: Wyandotte Ave (shown partially improved), Fairmont Ave, San Joaquin Ave.



Local Street: Full Access, Low ADT
E.g.: Cota St, Bayview Ave, Washington St, Thyme St. (shown)

Shelton Street Standards Reference Documents:



City of Shelton
Comprehensive Plan – Transportation Element – November 2017

IV. TRANSPORTATION ELEMENT

Introduction

The Transportation Element of the City of Shelton Comprehensive Plan serves the important role of identifying the current and future facility needs of Shelton's transportation system. In addition to automobile oriented facilities, the Transportation Element addresses other modes of transportation including air, rail, pedestrian, and bicycle facilities.

As population growth is experienced in and around Shelton and its Urban Growth Area (UGA), the demands placed upon the transportation system can be expected to increase. By identifying those facilities that will require improvements in the future, the City can begin the process of identifying appropriate funding sources to ensure that improvements are made in a timely and cost-effective manner.

The Transportation Element includes an assessment of existing roadways and roadway level-of-service (LOS), transit service, non-motorized facilities, air, and rail. Transportation conditions expected to occur over the next 20 years are projected so that future improvements can be identified in the City's Six-Year Transportation Improvement Plan (TIP) and Capital Facilities Plan.

Goals and Policies, presented at the end of the Transportation Element, have been developed to guide how the City will respond to additional growth pressures upon the transportation network. Generally speaking, new development will be required to accept responsibility for its impact to Shelton's roadways, and play an active role in future transportation improvements. Under the Growth Management Act, any new development that is projected to cause a transportation facility to drop below a locally-adopted LOS standard cannot be permitted unless specific actions are taken to mitigate the projected impacts in a timely manner. In addition, policies to address the impact of growth on existing capacity ensure that an unfair burden is not placed on the single project that causes service to finally fall below the adopted LOS standard. These policies will help to ensure that existing taxpayers are not unfairly burdened with the costs associated with accommodating new population growth in the City of Shelton. It should be recognized, however, that the implementation of such policies can require significant commitment of City resources.

The Transportation Element of the Comprehensive Plan also seeks to understand the impacts of increased population and traffic growth from outside the greater Shelton area. Coordination with the long-range plans of Mason County, the Peninsula Regional Transportation Planning Organization (PRTPO), and the Washington State Department of Transportation (WSDOT), is critical in the development of a meaningful plan for Shelton's future transportation system.

IV-1

2017 City of Shelton Comprehensive Plan
Section IV



code PUBLISHING CO.

Shelton Municipal Code

Title 12 STREETS AND SIDEWALKS

Title 12
STREETS AND SIDEWALKS*

Chapters:

12.04 Sidewalk Specifications
12.08 Sidewalk Construction
12.12 Local Improvement Districts
12.16 Local Improvement Guaranty Fund
12.16 Vacation of Streets and Alleys
12.20 Right-of-Way Use Code
12.32 Protection and Preservation of Trees
12.34 Overhanging Trees and Shrubs
12.28 Numbering of Houses and Buildings
12.30 Street Excavation Prohibitions
12.36 Frontage Improvement Charge
12.40 Transportation Benefit District

* For statutory provisions authorizing cities of the second class to provide for the construction, regulation and repair of sidewalks, see RCW 35.23.440.

Home < >

The Shelton Municipal Code is current through Ordinance 1141-0320, and legislation passed through July 21, 2020.

Shelton Municipal Code
Title 12, Streets and Sidewalks



2018

INTERNATIONAL CODES®

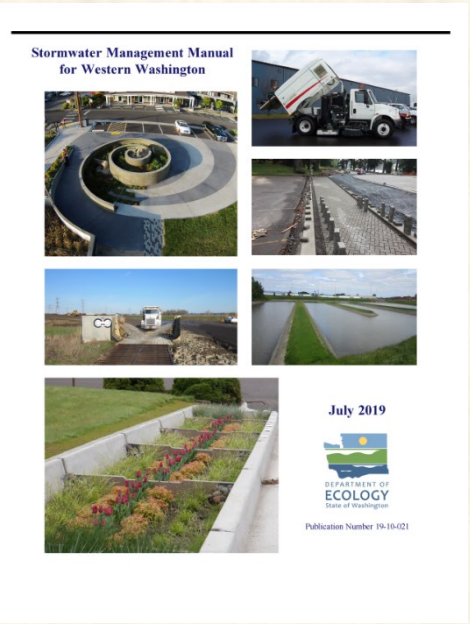
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INTERNATIONAL
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ICC

2018 International Fire Code
Appendix D



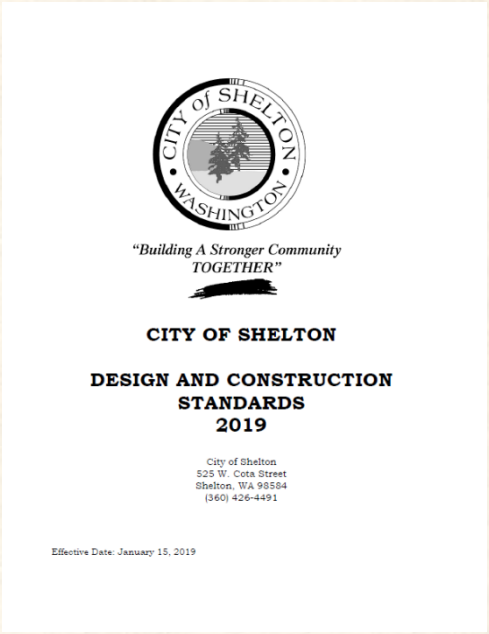
Stormwater Management Manual for Western Washington

July 2019

DEPARTMENT OF ECOLOGY
State of Washington

Publication Number 19-10-021

2019 Department of Ecology Storm
Water Management Manual



CITY OF SHELTON
WASHINGTON

"Building A Stronger Community TOGETHER"

CITY OF SHELTON

DESIGN AND CONSTRUCTION STANDARDS 2019

City of Shelton
525 W. Cota Street
Shelton, WA 98584
(360) 426-4491

Effective Date: January 15, 2019

2019 Shelton Design and Construction
Standards Chapter 2

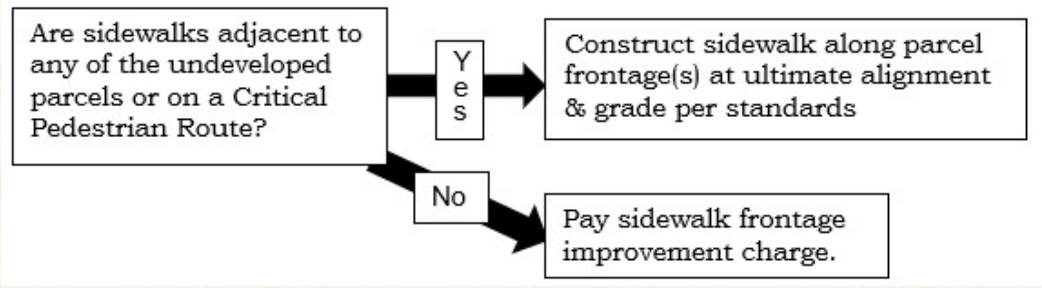
Updated Street Design and Construction Standards Discussion:

- The 2019 City of Shelton Engineering Design and Construction Standards should be consistent with the Transportation Comprehensive Plan, the International Fire Code, the Municipal Code, and the DOE Stormwater Management Manual.
- Clear roadway and sidewalk improvement standards need to be prepared that apply to new development, subdivisions, partitions, commercial sites, infill lots, or redevelopment of property within all Zoning Districts in the City and UGA. Clarity on when and what standards apply for various developments.

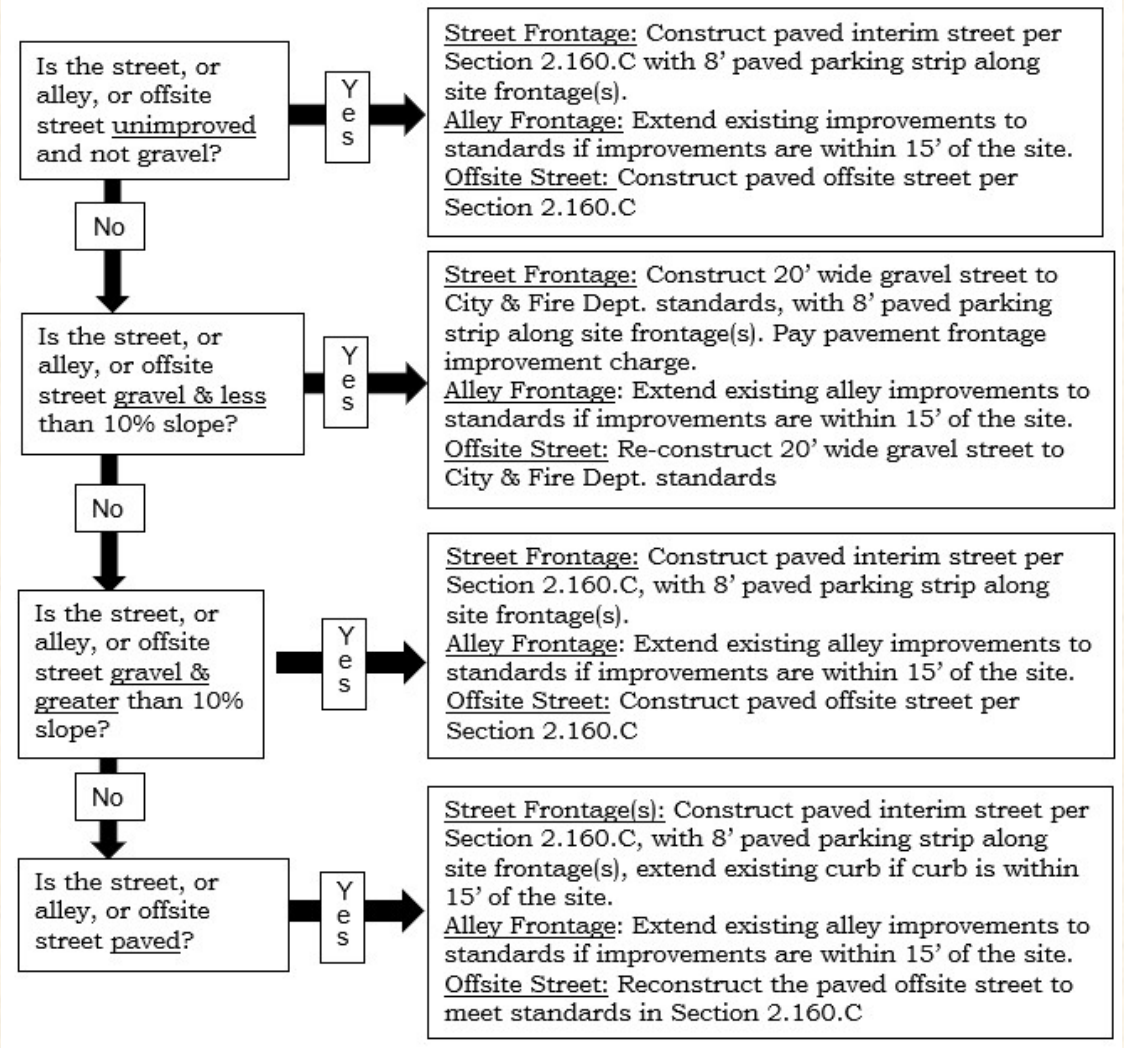
City staff met with the Development Code Update Committee multiple times last year to discuss the street standards and recently with Council at multiple Study Sessions. Most discussions focused on Neighborhood Residential infill development, redevelopment sites, and the requirements for street and sidewalk improvements. These are the final decision diagrams that City staff will use to determine street and sidewalk improvement standards for infill development sites.

"Infill Development" -- A infill development is defined as an undeveloped parcel(s) with frontage(s) that have a distance of undeveloped frontage including the project frontage between developed parcels and/or side streets of 150 feet or less in length, as measured between existing property lines.

Infill Development sidewalk improvement standards determination diagram.



Infill Development Street frontage, alley frontage, and offsite street extension improvement standards determination diagram.



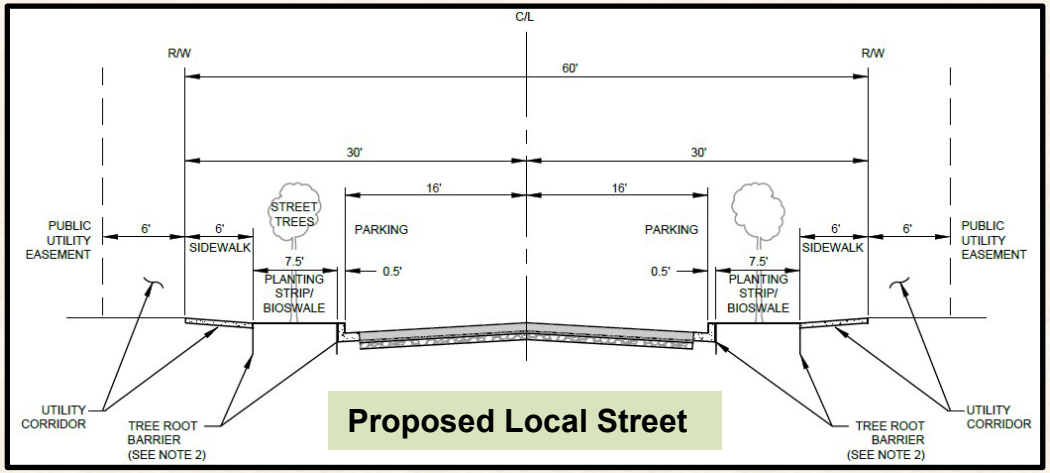
Street Trees & Vegetated Planter Strips:

- The City of Shelton Storm Water Phase 2 Permit with the State Department of Ecology requires that storm runoff from newly created impervious surfaces does not exceed pre-development runoff rates with treatment provided prior to entering the conveyance system.
- The proposed street standards include provisions for a vegetated planter strip with street trees between the curb and sidewalk to allow for storm water infiltration, detention, and treatment.
- Street Trees offer the following benefits:
  - Summertime shading of the roadway improvements to lower the water runoff temperature.
  - Tree shading also helps to cool adjacent structures.
  - Leaves capture/evaporate rain and tree roots uptake water and transpiration occurs from the tree surfaces.
  - Trees remove carbon dioxide from the atmosphere.
  - Habitat is provided for birds and other wildlife.
  - Trees improve the “Streetscape”, breaking up view corridors and adds value to nearby properties and the community.
  - The DOE manual gives stormwater reduction credits for trees planted on larger project sites.





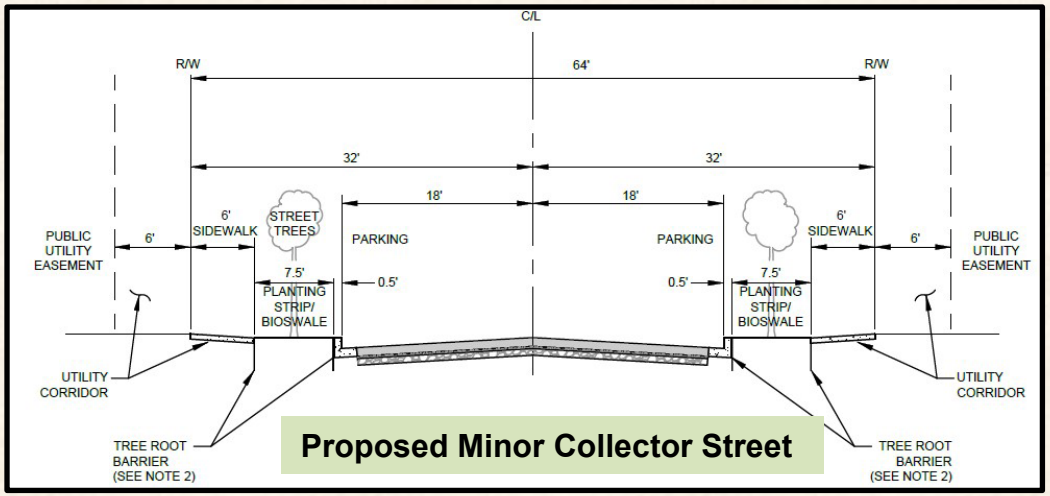
Proposed Street Typical Cross Sections:



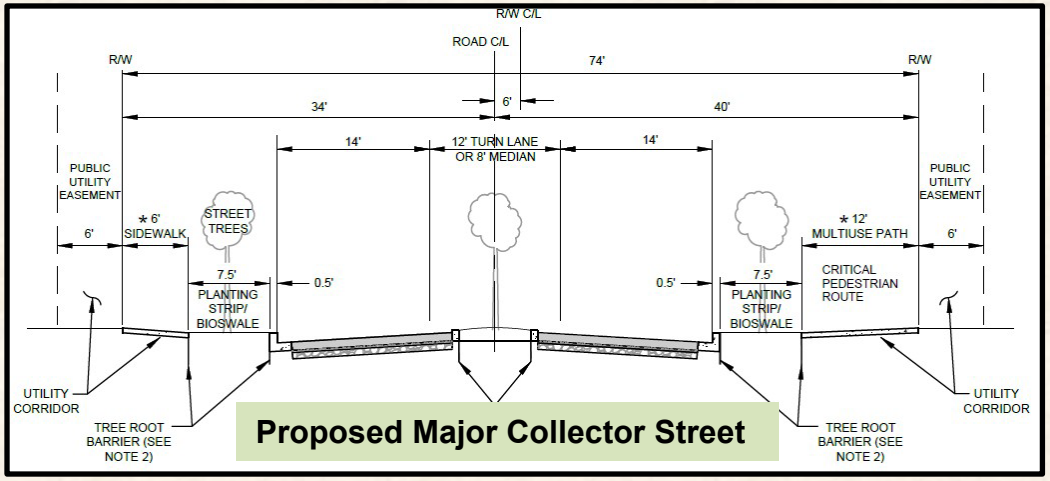
Proposed Local Street



Local Street Example



Proposed Minor Collector Street



Proposed Major Collector Street



Major Collector Example

Other Engineering Process Improvements:

City of Shelton

City Council Strategic 2022 - 2025 Goals

1. **CLEARLY DEFINE THE FUTURE**

- Plan Proactively.
- Develop and maintain clear, concise, and consistent guiding documents (Comprehensive Plan, Municipal Code, Engineering Standards, etc.).
- Focus on workforce development and succession planning.
- Develop and maintain transparent long range financial plans across funds.

A. EnerGov Online Permitting System: Engineering permitting has been online for over a year now with hundreds of permits issued to date.

B. Improved Forms: Design Modification Request, Public Easements, Civil Review Intake Checklist, Sight Distance Certification, and UGA development utility connection permit forms.

C. Small development stormwater manual and improved comprehensive stormwater reviews with full time Stormwater Technician.

D. GIS system, utility layers, historical aerial photographs, 2' contours, as-builts scanned and into GIS for easy reference.

E. Multiple weekly team meetings and group review of permit applications.

F. Improved coordination with City outside review consultants to complete comprehensive reviews of development projects water, sewer, geotechnical, or traffic studies

Upcoming Improvements:

- Scanned easements in GIS
- Sewer and storm drain line inspection reports and videos
- Field surveyed accurate GIS asset locations
- Addition of water meter and street sign assets into GIS,
- Additional forms and simple flow charts for permit processing
- Public access to City GIS layers and as-built plans.

Any Questions?



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