CITY OF WALLA WALLA

2024 STANDARD PLANS

APPROVED FOR PUBLICATION 01/11/2024,

BY: _____

NEAL CHAVRE, P.E., CITY ENGINEER

EFFECTIVE JANUARY 11, 2024

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WATER STANDARD PLANS

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STORM SEWER STANDARD PLANS

STREET LIGHTING STANDARD PLANS

THE FOLLOWING IS A LIST OF UPDATES TO THE CITY OF WALLA WALLA STANDARD PLANS. THESE UPDATES ARE PROPOSED TO BE EFFECTIVE JANUARY 11, 2024. INCLUDED IS A BRIEF EXPLANATION OF THE EDITS TO THE CORRESPONDING STANDARD PLAN. EACH STANDARD PLAN SHOULD BE VIEWED FOR COMPLETE CHANGES AND REQUIREMENTS.

STANDARD PLAN UPDATES 2024

STANDARD PLAN	**UPDATE**
1-4……	Amendment to note for clarity- Updated reference number.
1-6……	Amendment to drawing for clarity- Lid dimensions and elevation.
1-7……	Amendment to note for clarity- Updated reference number.
1-8……	Amendment to drawing for clarity- Updated note 1.
1-8……	Amendment to note for clarity- Updated reference number.
1-9a..……	Amendment to note for clarity- Updated reference to number.
1-12..……	Amendment to note for clarity- Updated reference number.
2-3……	Amendment to drawing for clarity- Road vertical clearance.
2-5a…..…..……..	Amendment to notes for clarity-Added note 9
2-5b..……	Amendment to note for clarity- Updated reference number.
3-5b……..……	Removed standard drawing- Drop Manhole-Interior
3-9..……..…	Amendment to drawing for clarity- Gravel base for clean out
3-10…….	Amendment to drawing for clarity- Cleanout location
4-1a…….	Amendment to notes for clarity- Updated note 1 & 2
4-7……	Amendment to note for clarity- Material for permanent blow-off
5-10……..……	Amendment to note for clarity- Updated note 7
6-2……	Amendment to note for clarity- Updated note 3.

6-3……	Amendment to note for clarity- Added note 8 & 9
7-8a……..……	Amendment to drawing and note for clarity- Updated reference number and added note 12.
7-8b……..……	Amendment to drawing for clarity- Updated reference number.
7-11.……	New Typical Striping Detail Drawing.

1) ALL WORK IN THE IN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT VERSION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. GENERALLY, MOST WORK IN THE CITY RIGHT OF WAY IMPACTING THE LOCATION OR OPERATION OF CITY UTILITY MAINS, ROADWAY, CURB AND GUTTER, DRAINAGE, LIGHTING, OR PEDESTRIAN FACILITIES WILL REQUIRE A DESIGN STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

2) ALL WORK IN THE RIGHT OF WAY SHALL BE APPROVED BY THE CITY ENGINEER EITHER BY ISSUANCE OF A RIGHT OF WAY PERMIT, APPROVED CIVIL PLANS, OR AS A PART OF A CITY SPONSORED CONTRACT. NO CONTRACTOR OR UTILITY SHALL WORK IN THE RIGHT OF WAY WITHOUT AUTHORIZED APPROVAL.

3) ALL TEMPORARY TRAFFIC CONTROL IN THE RIGHT OF WAY SHALL COMPLY WITH THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND SHALL BE APPROVED BY THE CITY ENGINEER EITHER BY A RIGHT OF WAY PERMIT OR UNDER A CITY SPONSORED CONTRACT.

4) CONTRACTORS WORKING IN THE RIGHT OF WAY SHALL SCHEDULE THEIR WORK TO BE DONE IN COMPLIANCE WITH CITY CODE FOR WORK HOURS (NO WORK ALLOWED BEFORE 7 AM OR AFTER 10 PM). ANY WORK AFTER REGULAR WORKING HOURS (MONDAY-FRIDAY,7:30 AM TO 5PM) SHALL ONLY BE ALLOWED WITH PRE-APPROVAL BY THE CITY ENGINEER. FOR ANY WORK AFTER REGULAR HOURS, INCLUDING EMERGENCY ISSUES, THE CONTRACTOR SHALL REIMBURSE THE CITY FOR OVERTIME INSPECTION HOURS. WORK SCHEDULED TO BEGIN ON FRIDAY AFTERNOON IS NOT ALLOWED.

5) ALL CONTRACTORS WORKING IN THE PUBLIC RIGHT OF WAY UNDER A RIGHT OF WAY PERMIT. SHALL HAVE LIABILITY INSURANCE IN FORCE AND A COPY OF FORM CG2012 ON FILE WITH THE DEVELOPMENT SERVICES DEPARTMENT. INSURANCE REQUIREMENTS FOR CITY PROJECTS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS FOR THAT PROJECT.

6) NO TRENCHES OR EXCAVATION BACKFILL WILL BE ALLOWED WITHOUT INSPECTION. CONTRACTORS ARE RESPONSIBLE TO SCHEDULE FOR INSPECTIONS THROUGH THE INSPECTION CALL NUMBER AT 509-524-4729 24 HOURS IN ADVANCE OR BY PRE-AGREEMENT WITH THE INSPECTOR. LAST MINUTE CALLS FOR INSPECTION WILL NOT BE RESPONDED TO. ANY WORK COMPLETED WITHOUT INSPECTION IS SUBJECT TO REJECTION AND REMOVAL AT THE DISCRETION OF THE CITY ENGINEER.

7) NO TRENCHES SHALL BE LEFT UNSECURED AFTER NORMAL WORK HOURS. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH WORK DAY. ALTERNATIVES TO BACKFILLING SUCH AS COVERING THE TRENCH WITH STEEL PLATES OR BARRICADING THE TAKE-OFF TRENCH WITH EQUIPMENT MAY BE USED ONLY UPON THE APPROVAL OF THE CITY ENGINEER.

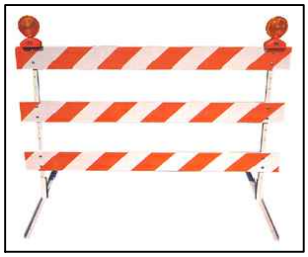
8) ALL TRENCHES SHALL MEET THE MINIMUM REQUIREMENTS FOR SHORING AND TRENCH SAFETY IN ACCORDANCE WITH WISHA AND OSHA STANDARDS. NO WORKERS, INCLUDING OWNERS SHALL WORK IN UNSHORED TRENCHES. THE CITY ENGINEER OR HIS DESIGNATED REPRESENTATIVE WILL SHUT DOWN ANY NON-CONFORMING TRENCH EXCAVATION AND NOTIFY THE APPROPRIATE AUTHORITY OF THE VIOLATION.

9) PUBLIC SAFETY IS PARAMOUNT IN THE PUBLIC RIGHT OF WAY. WORK ZONES SHALL BE DELINEATED WITH THE APPROPRIATE SIGNAGE AND DEVICES AT ALL TIMES. FOR WORK ZONES THAT WILL REMAIN IN PLACE AFTER DARK, DELINEATION SHALL INCLUDE BARRELS AND/OR BARRICADES (AS APPROPRIATE), EQUIPPED WITH OPERATING FLASHERS. ANY WORK SITE FOUND TO BE IMPROPERLY SIGNED AND LIGHTED WILL BE CORRECTED BY THE CITY AT THE CONTRACTOR'S EXPENSE. WALK WAYS SHALL BE EITHER FILLED WITH COMPACTED GRAVEL OR BRIDGED WITH A SOLID UNYIELDING MATERIAL WHICH IS ADA ACCESSIBLE .

BARREL
(WITH FLASHER)

VERTICADE
(WITH FLASHER)

TYPE II BARRICADE
(WITH FLASHER)



TYPE III BARRICADE
(WITH FLASHER)

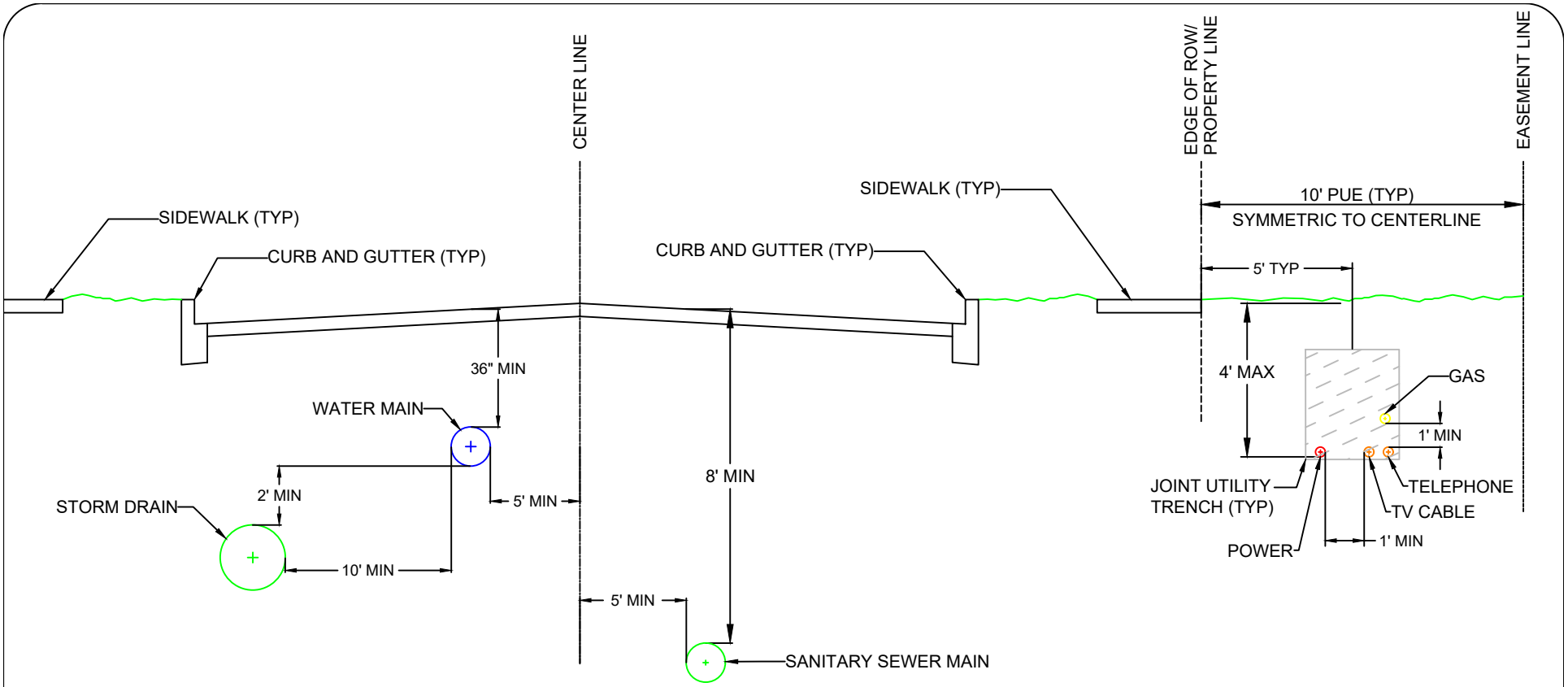
STANDARD PLAN 1-1

GENERAL CONSTRUCTION REQUIREMENTS

APPROVED BY:

DATE: 12/30/2016

City of Walla Walla



PUBLIC UTILITY NOTES:

WATER AND SEWER SERVICES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET AND A MINIMUM VERTICAL SEPARATION OF 2 FEET FROM EACH OTHER. PUBLIC UTILITY MAINS SHOULD BE LOCATED AT CENTER OF TRAVEL LANES

WATER AND SEWER SERVICES SHALL HAVE A MINIMUM OF 5 FEET HORIZONTAL SEPARATION AND A MINIMUM VERTICAL SEPARATION OF 1 FOOT FROM SERVICE UTILITIES SUCH AS GAS, POWER AND COMMUNICATIONS.

WATER AND SEWER PIPE CROSSINGS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 24". WHEN THIS SEPARATION CANNOT BE PROVIDED SEE STD PLAN 3-1.

WATER SERVICE TAPS SHALL MAINTAIN A MINIMUM SEPARATION OF 24" AT WATER MAIN.

SERVICE UTILITY NOTES:

ALL PRIVATE UTILITIES SHALL BE LOCATED IN PUBLIC UTILITY EASEMENT (PUE) UNLESS ONE IS NOT AVAILABLE; IN WHICH CASE UTILITIES SHALL BE PLACED UNDER SIDEWALK OR PLANTER STRIP INSIDE THE PUBLIC ROW. IF BOTH OF PREVIOUSLY MENTIONED ARE NOT AVAILABLE UTILITIES SHALL BE LOCATED IN THE STREET 4 FEET FROM FACE OF CURB AS APPROVED BY CITY ENGINEER.

NO PRIVATE UTILITY SHALL BE PLACED WITHIN 5 FEET WHEN RAN PARALLEL TO ANY CITY UTILITIES INCLUDING SERVICES. NO PRIVATE UTILITY SHALL CROSS WITHIN 1 FOOT VERTICALLY OF ANY CITY UTILITIES INCLUDING SERVICES.

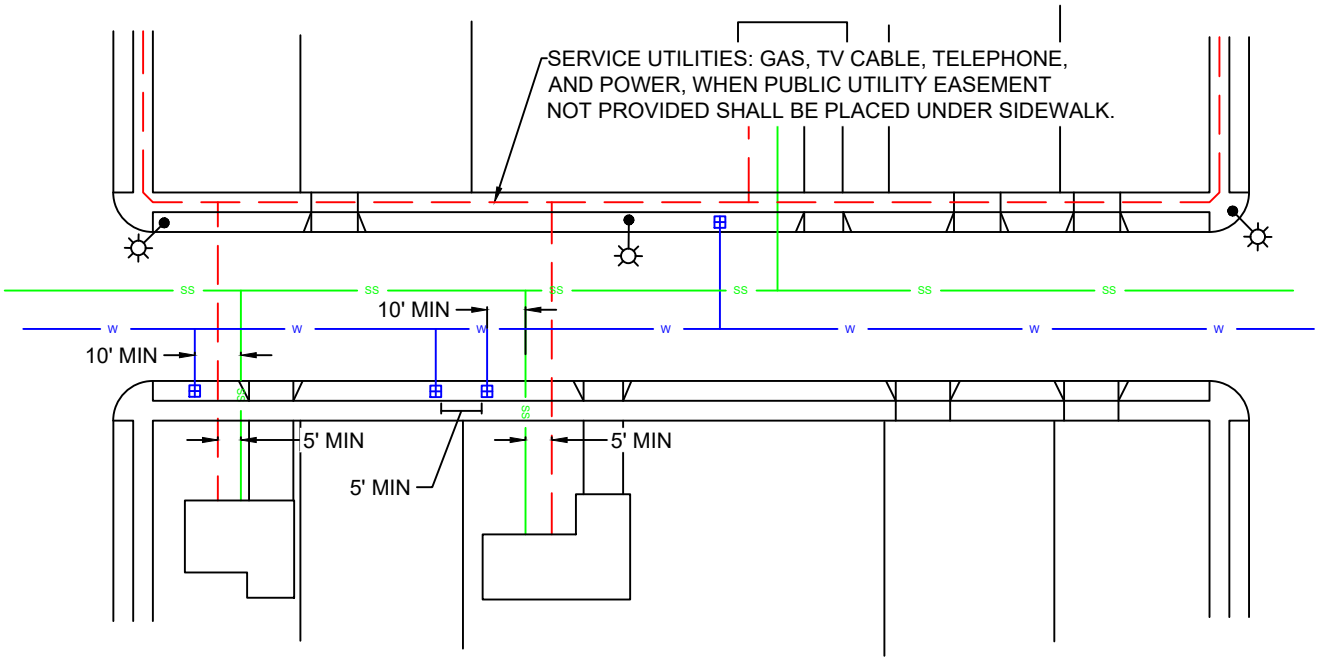
City of Walla Walla

STANDARD UTILITY LOCATIONS

DATE: 12/30/2016

APPROVED BY:

STANDARD PLAN 1-2a



NOTES:

WATER AND SEWER SERVICES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET AND A MINIMUM VERTICAL SEPARATION OF 2 FEET.

WATER AND SEWER SERVICES SHALL HAVE A MINIMUM OF 5 FEET HORIZONTAL SEPARATION AND A MINIMUM VERTICAL SEPARATION OF 1 FOOT FROM SERVICE UTILITIES SUCH AS GAS, POWER AND COMMUNICATIONS.

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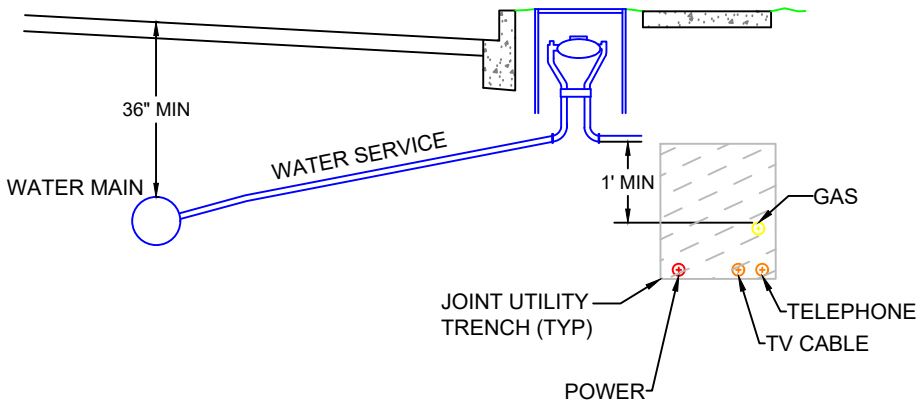


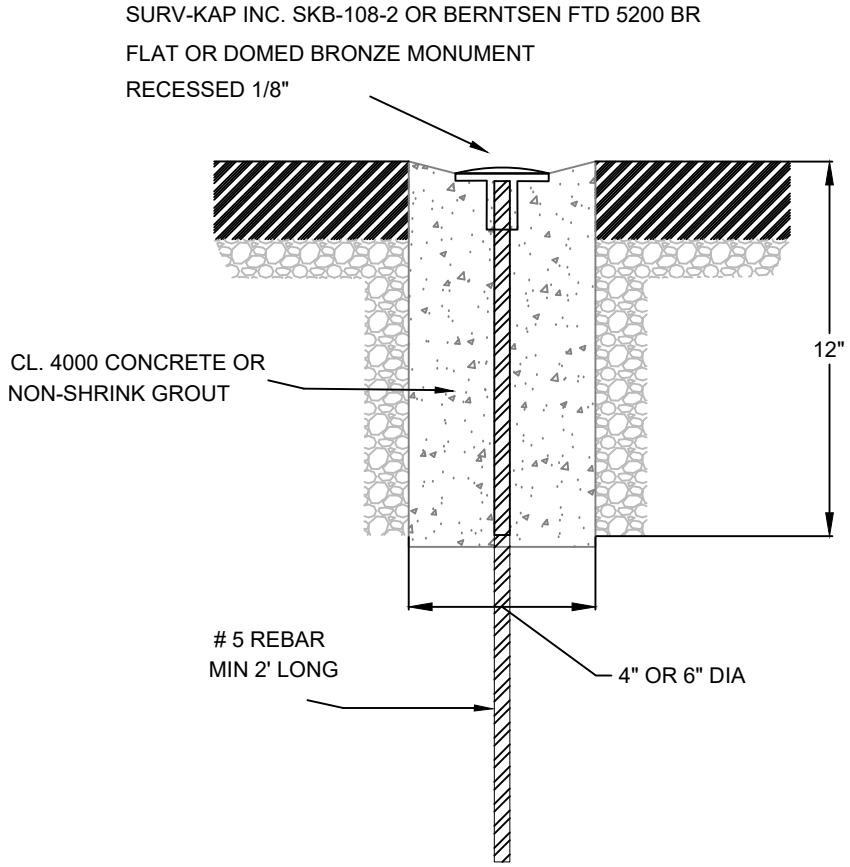
City of Walla Walla

STANDARD UTILITY LOCATIONS

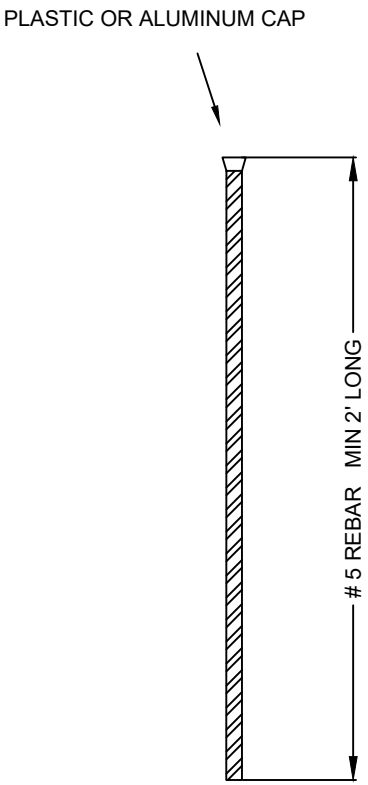
DATE: 12/30/2016

APPROVED BY:

STANDARD PLAN 1-2b



MONUMENT PLACEMENT IN PAVED SURFACE



MONUMENT OUTSIDE OF PAVEMENT

PURSUANT TO THE REQUIREMENTS ESTABLISHED BY RCW 58.09.120, ANY MONUMENT SET BY A LAND SURVEYOR TO MARK OR REFERENCE A POINT ON A PROPERTY OR LAND LINE SHALL BE PERMANENTLY MARKED OR TAGGED WITH THE CERTIFICATE NUMBER OF THE LAND SURVEYOR SETTING IT.

RECORDING REQUIREMENTS FOR ALL SURVEYS SHALL COMPLY WITH RCW 58.09.

City of Walla Walla

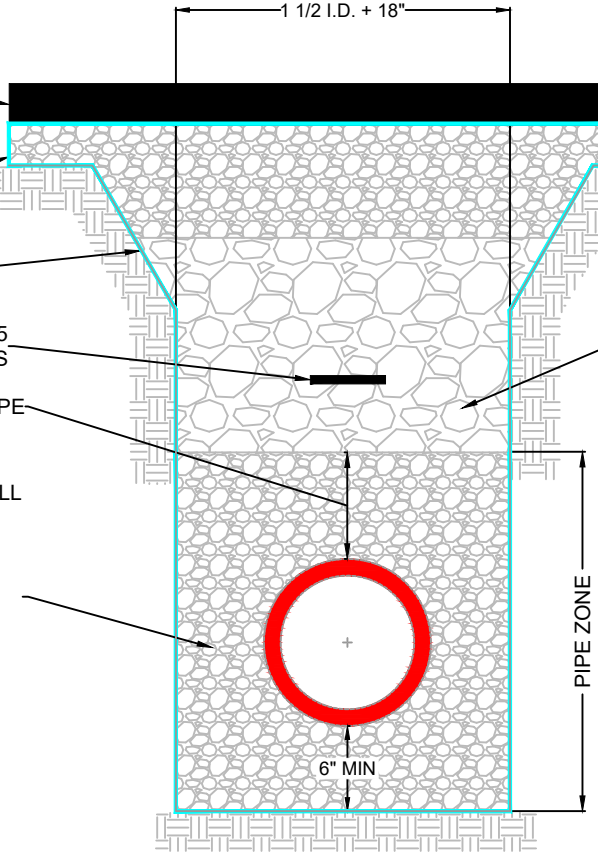
MONUMENT DETAIL

DATE: 01/15/2018

APPROVED BY:

STANDARD PLAN 1-3

PAY WIDTH LIMITS FOR PIPE BEDDING, EXCAVATION, FOUNDATION BACKFILL AND BANK RUN BACKFILL, UNLESS OTHERWISE SPECIFIED.



SEE STANDARD PLAN 2-5 SHEET A & B FOR SURFACING THICKNESS.

PAY WIDTH LIMITS FOR HMA PATCH SHALL BE ACTUAL SAW CUT OPENING.

SLOPE, BENCH OR SHORE AS REQUIRED FOR TRENCH SAFETY

SEE STANDARD PLAN 1-5 FOR ID TAPE DETAILS

12" MINIMUM FOR PVC - 6" FOR ALL OTHER PIPE

ALL PIPE SHALL BE BEDDED. NATIVE MATERIAL WILL NOT BE PERMITTED IN THE PIPE ZONE. BEDDING SHALL MEET THE FOLLOWING GRADATION:

Sieve Size	Percent Passing
1" square	100
5/8" square	50-100
U.S. No. 4	20-80
U.S. No. 40	3-24
U.S. No. 200	10.0 max.
Sand Equivalent	35 min.

TRENCH BACKFILL MATERIAL SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS AND A PROCTOR WILL BE REQUIRED.

- 'BANK RUN GRAVEL FOR TRENCH BACKFILL', PER WSDOT STANDARD SPECIFICATIONS SECTION 9-03.19.
- COMPACTED CRUSHED SURFACING TOP COURSE
- COMPACTED CRUSHED SURFACING BASE COURSE
- PIPE ZONE BEDDING

TRENCH BACKFILL SHALL BE PLACED PER WSDOT STANDARD SPECIFICATIONS SECTION 7-08.3(3).

NATIVE BACKFILL, IF APPROVED BY CITY ENGINEER, SHALL REQUIRE LABORATORY TESTING TO DETERMINE MAXIMUM MODIFIED PROCTOR DENSITY.

GENERAL NOTES:

1) TRENCH EXCAVATION SHALL BE NOT MORE THAN 100 FEET AHEAD OF THE PIPE LAYING OPERATION.

2) TRENCHES ARE TO BE BACK FILLED AT THE END OF EACH DAY. IN LIEU OF BACK FILLING, SMALL EXCAVATIONS MAY BE LEFT OPEN AND COVERED WITH STEEL PLATES OR A SAFETY FENCE, IF APPROVED. IF A FENCE IS USED, IT SHALL BE AT LEAST 4' HIGH AND BE ADEQUATELY SUPPORTED AT A MAXIMUM SPACING OF 6' C-C TO PROVIDE AN IMPASSABLE BARRIER.

COMPACTION TESTING:

SUBGRADE SHALL HAVE COMPACTION TESTS PERFORMED EVERY 150 LINEAR FEET OF TRENCH OR A MINIMUM OF 2 PER TRENCH AND 1 TEST PER 150 SQUARE FEET FOR ISOLATED PATCHES.

TESTING SHALL BE PERFORMED BY A CERTIFIED INDEPENDENT TESTING LABORATORY OR A CERTIFIED TESTER AS APPROVED BY THE CITY ENGINEER. THE COST OF TESTING IS THE RESPONSIBILITY OF THE PERMITTEE. TESTS SHALL BE COMPLETED AND REPORTS SUBMITTED TO THE CITY ENGINEERING OFFICE WITHIN 48 HOURS OF TESTS.

SUBGRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY, AS VERIFIED BY COMPACTION TESTING, BEFORE PROCEEDING TO PLACEMENT OF BASE ROCK AND PAVING. CITY INSPECTOR MAY REQUIRE EXCAVATION AND REMOVAL OF SOIL WHERE COMPACTION IS IN QUESTION.

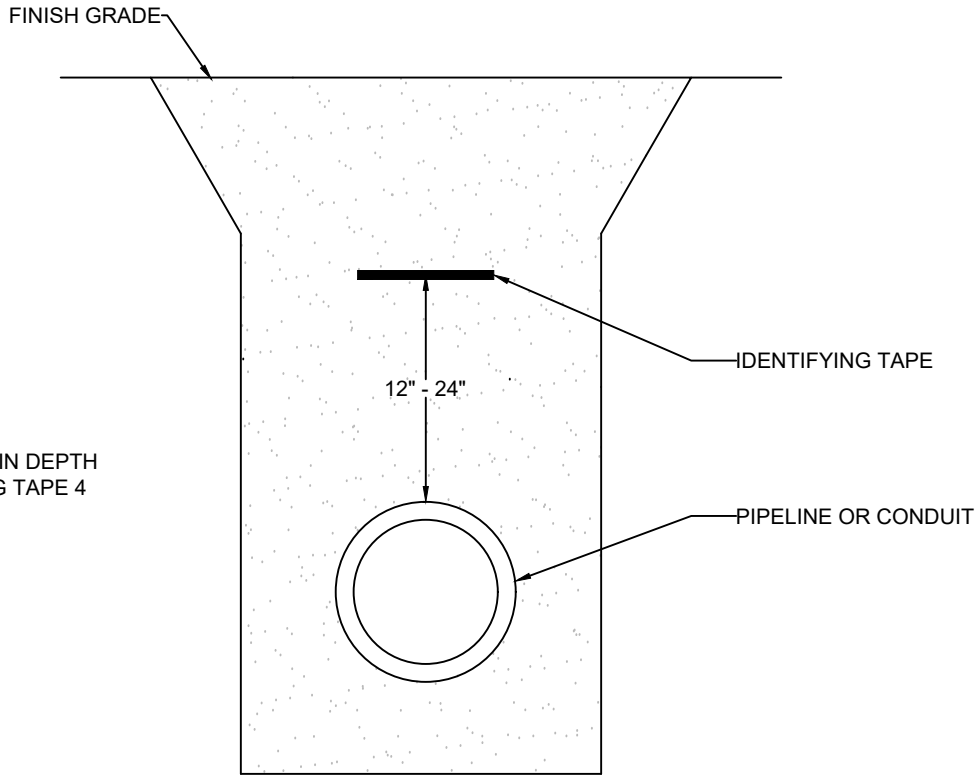
City of Walla Walla

TRENCH DETAILS

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 1-4



NOTE:

FOR SEWER PIPE LAID AT 6 FEET IN DEPTH AND DEEPER, PLACE IDENTIFYING TAPE 4 FEET BELOW FINISH GRADE.

TYPE	COLOR	SIZE	DETECTABLE	IMPRINT
STORM SEWER	GREEN	3"	YES	CAUTION BURIED SEWER LINE BELOW
SANITARY SEWER	GREEN	3"	YES	CAUTION BURIED SEWER LINE BELOW
WATER	BLUE	3"	YES	CAUTION BURIED WATER LINE BELOW
TRAFFIC CONDUIT ELECTRIC CONDUIT & DIRECT BURY WIRE	RED	3"	NO	CAUTION ELECTRIC LINE BELOW

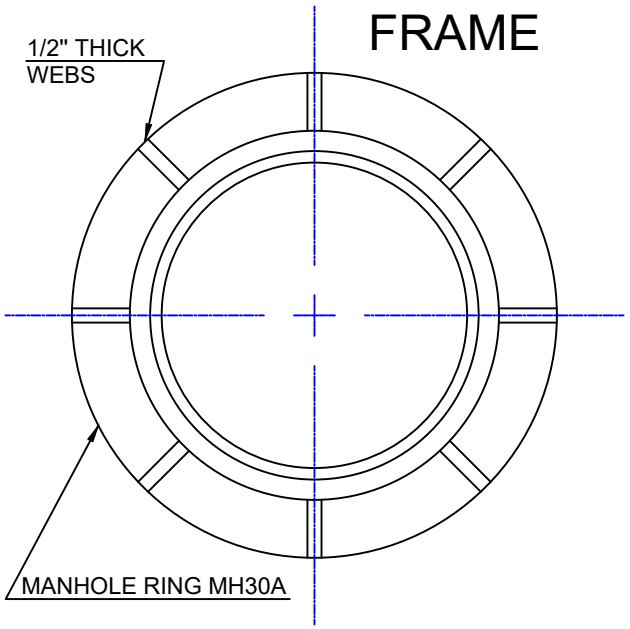
City of Walla Walla

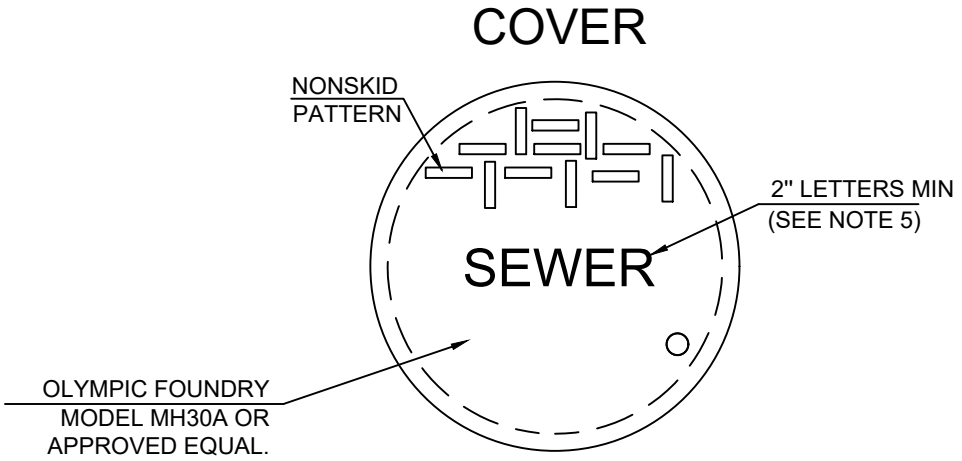
IDENTIFYING TAPE DETAIL

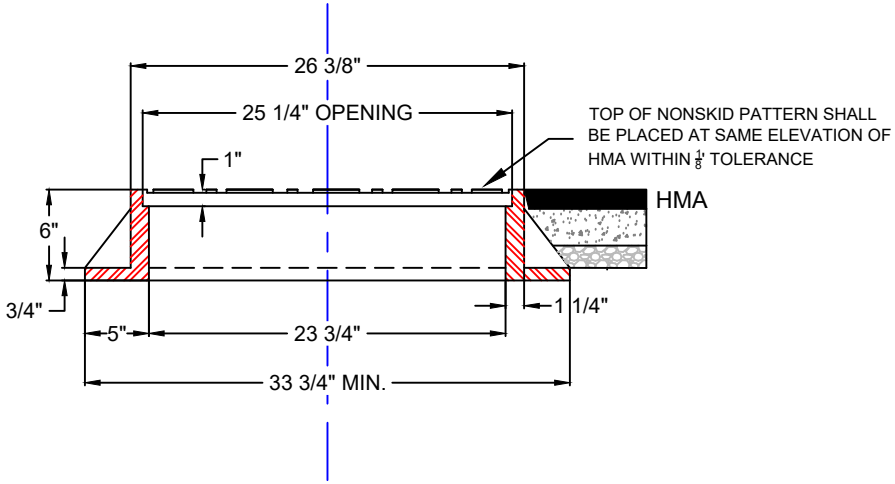
DATE:
06/05/2006

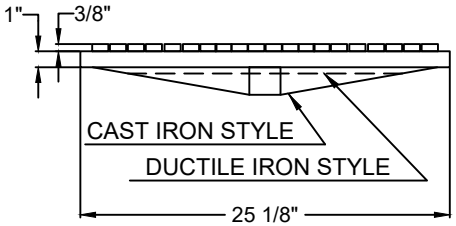
APPROVED BY:

STANDARD PLAN
1-5









NOTE:

1. FRAME AND COVER SHALL BE CAST OR DUCTILE IRON.
2. COVER WEIGHT - MIN. 147 LBS.
   FRAME WEIGHT - MIN. 210 LBS.
3. MACHINE COVER SEAT & COVER FACE.
4. LOADING - 40,000 LBS. HEAVY TRAFFIC LOADING.
5. MANHOLE COVERS TO BE LETTERED AS "WATER", "SEWER", OR "STORM" AS REQUIRED BY TYPE OF APPLICATION.

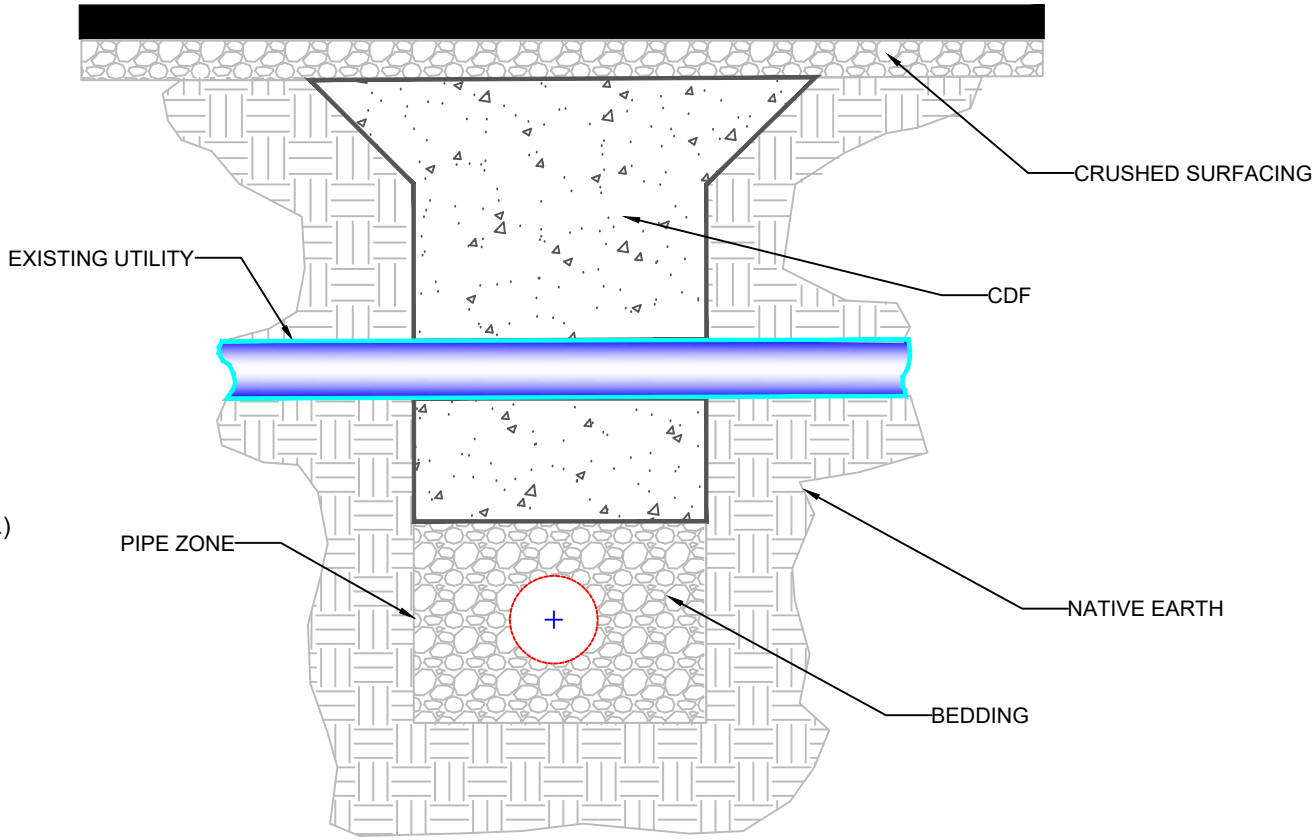
City of Walla Walla

MANHOLE FRAME & COVER

DATE:
01/11/2024

APPROVED BY:

STANDARD PLAN
1-6



MIX SPECIFICATIONS FOR
CDF BACKFILL:

PCC	94 LBS.
SAND	3,100 LBS
AIR	9 OZ
WATER	420 LBS (51 GAL.)

MIX SPECIFICATIONS FOR
PUMP-ABLE CDF FILL:

PCC	94 LBS.
SAND	2,455 LBS
FLY ASH	500 LBS
AIR	9 OZ
WATER	420 LBS (51 GAL.)

NOTES:

TRENCH BACKFILL ABOVE THE BEDDING ZONE AND BELOW THE SURFACING MAY BE BACK FILLED WITH CONTROLLED DENSITY FILL (SLURRY GROUT) AT THE OPTION OF THE CONTRACTOR. IF EXISTING UTILITIES CROSSING THE TRENCH CREATE A VOID AREA THAT IS NOT READILY COMPACTIBLE, THE CONTRACTOR SHALL USE CONTROLLED DENSITY FILL TO BACKFILL TO SIX INCHES ABOVE THE UTILITY. THE CONTRACTOR MAY ELECT TO BACKFILL THE REMAINING AREA WITH CDF OR USE SELECT BACKFILL.

ALL TRENCH WORK SHALL BE IN CONFORMANCE WITH STANDARD PLAN 1-4.

ALL CDF TRENCH FILL MATERIAL SHALL BE THOROUGHLY SET TO THE SATISFACTION OF THE ENGINEER BEFORE ANY ADDITIONAL FILL MATERIALS, CRUSHED SURFACING OR PAVEMENT IS PLACED.

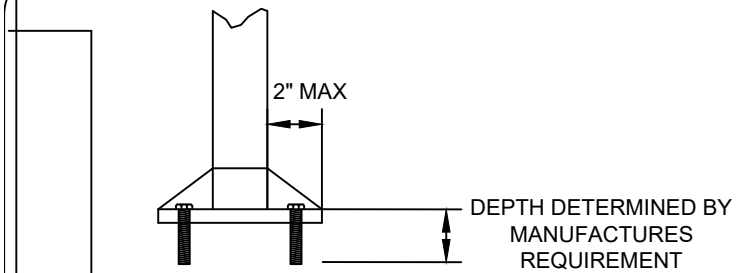
City of Walla Walla

CONTROLLED DENSITY FILL

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 1-7



RAILING ANCHOR DETAIL

NOTES:

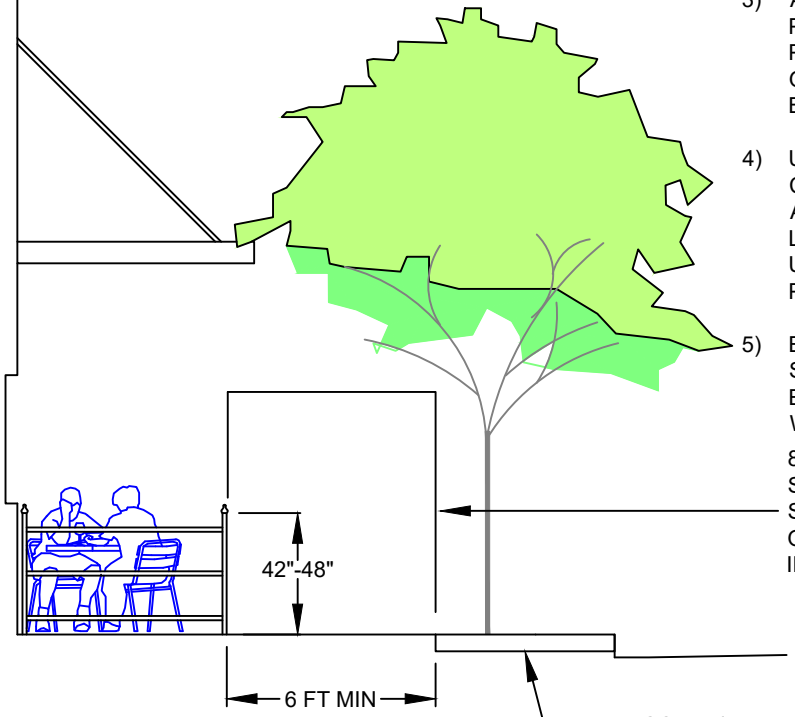
1) RAILING MATERIAL SHALL BE WROUGHT IRON WITH A HEIGHT OF 42"-48" MAX FROM THE SIDEWALK. PAINTED BLACK, DOWNTOWN GREEN (AS DESCRIBED IN CITY STANDARD PLAN 7-4), OR BRUSHED STEEL FINISH.

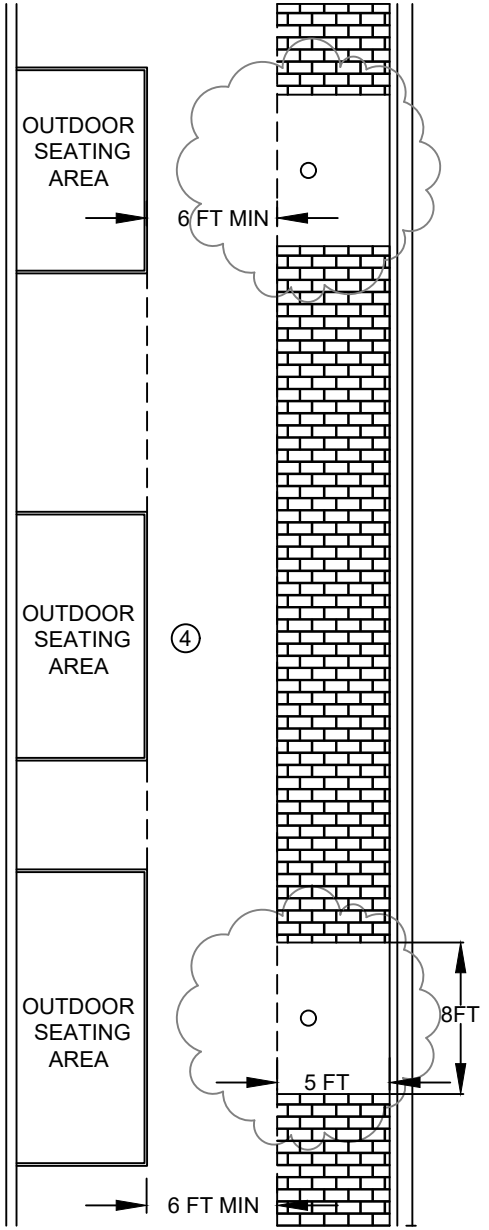
2) THE BASE OF THE RAILING POSTS SHALL BE ANCHORED TO THE SIDEWALK WITH NUMBER OF ANCHORS PER POST DETERMINED BY MANUFACTURER.

3) A MINIMUM OF 6 FEET IN WIDTH SHALL BE PROVIDED FOR AN OBSTRUCTION FREE PATHWAY BETWEEN THE RAILING AND TREE GRATE/WELL, TRASH RECEPTACLES, BICYCLE RACKS, BENCHES, ECT.

4) UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, THE FRONTAGE OF ADJACENT SEATING AREAS SHALL BE IN LINE WITH EACH OTHER, TO PROMOTE A UNIFORM AND CLEARLY DEFINED PEDESTRIAN ZONE.

5) EGRESS OPENING FROM SEATING AREA SHALL BE ALIGNED WITH THE BUILDING EGRESS, AND SHALL BE A MINIMUM OF 6" WIDER THAN THE BUILDING EGRESS.





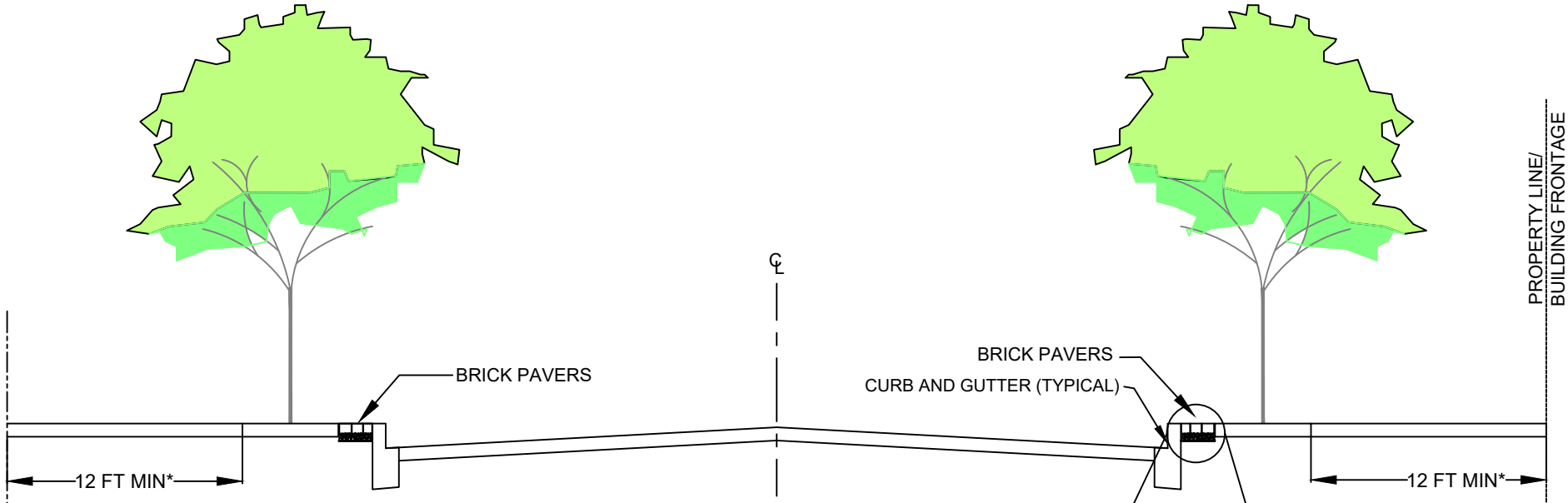
City of Walla Walla

DOWNTOWN OUTDOOR SEATING

DATE: 01/11/2024

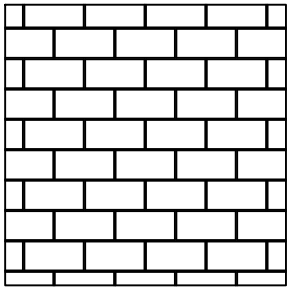
APPROVED BY:

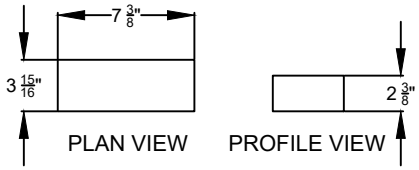
STANDARD PLAN 1-8



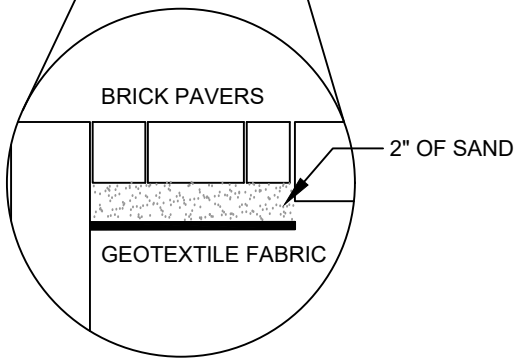
ALL DOWNTOWN PUBLIC RIGHT OF WAY SHALL HAVE BRICK PAVERS ALONG THE CURB AND GUTTER WITH STREET TREES INSIDE TREE WELLS (DIMENSIONS SHOWN ON 1-10). ADDITIONAL ELECTRICAL CONDUIT SHALL BE INSTALLED FOR FUTURE POWER (SEE STANDARD PLAN 1-09b & 1-10). PAVERS TO BE INSTALLED TO THE APPROPRIATE DISTANCE SET FORTH BY THE CITY ENGINEER. BRICK PAVERS TO MATCH DOWNTOWN MASTER PLAN STANDARDS.

*SIDEWALK TO BE 12' WIDE MIN. WHERE IT ALLOWS.





CONCRETE PAVERS



BRICK PAVER PATTERN SHALL BE RUNNING BOND STYLE AND BE LAID PERPENDICULAR TO THE ROADWAY. SEE STANDARD PLAN 1-8 FOR PLAN VIEW EXAMPLE

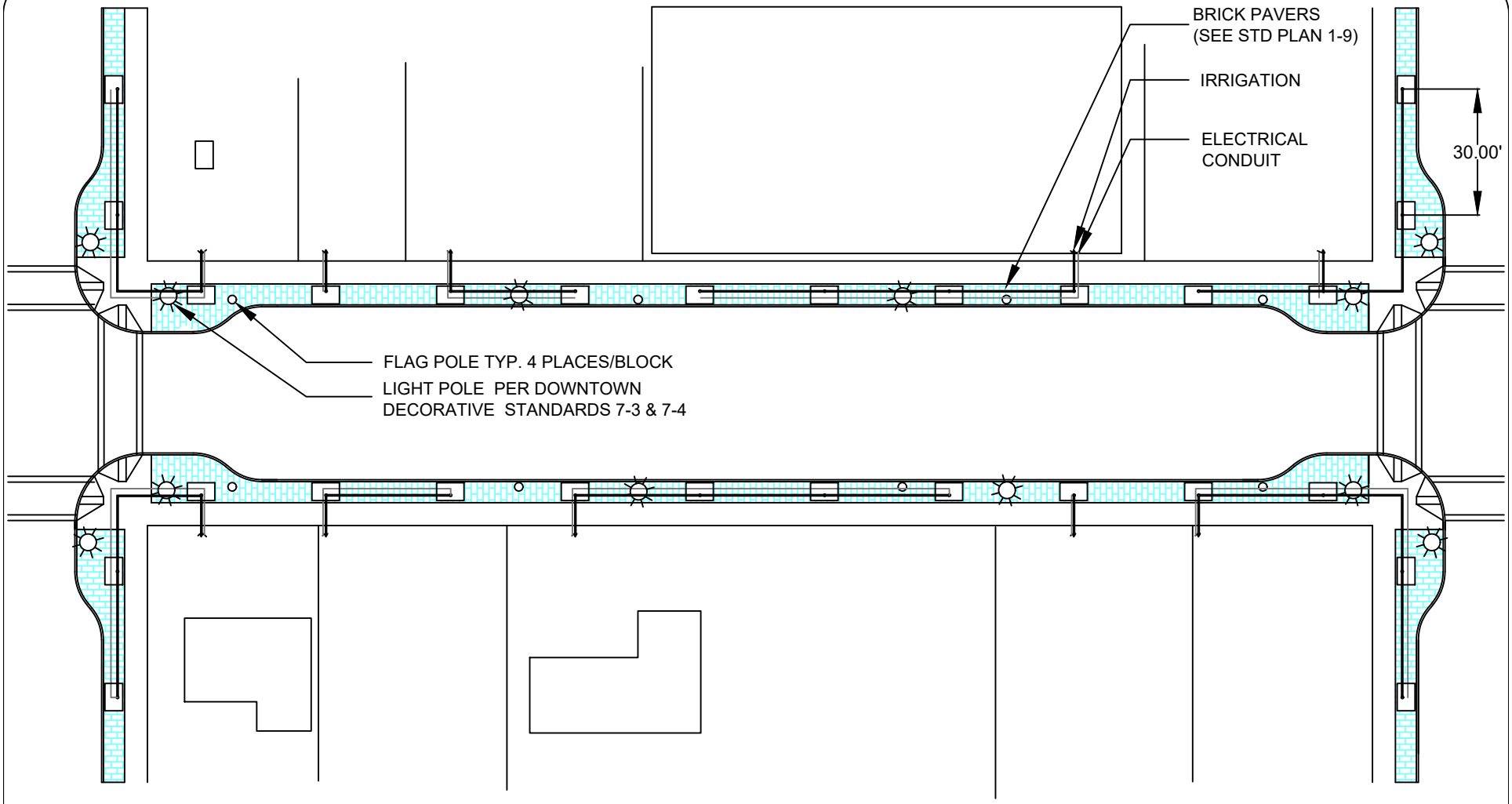
City of Walla Walla

DOWNTOWN TREES & PAVER LAYOUT

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 1-9a



NOTE:
PROVIDE IRRIGATION AND ELECTRICAL POWER TO ALL TREE WELLS. SEE STANDARD PLAN 1-10 FOR DETAILS AND LOCATIONS.

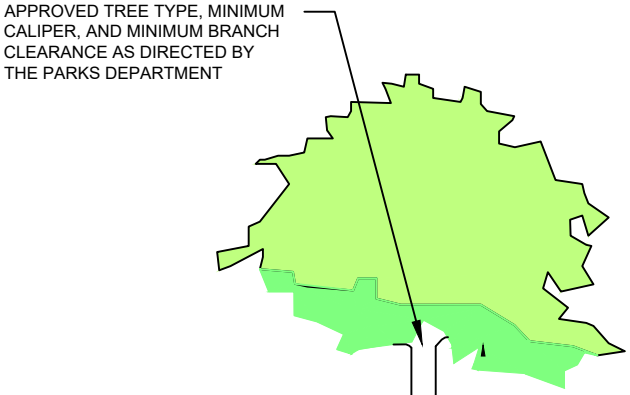
City of Walla Walla

DOWNTOWN TREES & PAVER LAYOUT

DATE:
12/23/2021

APPROVED BY:

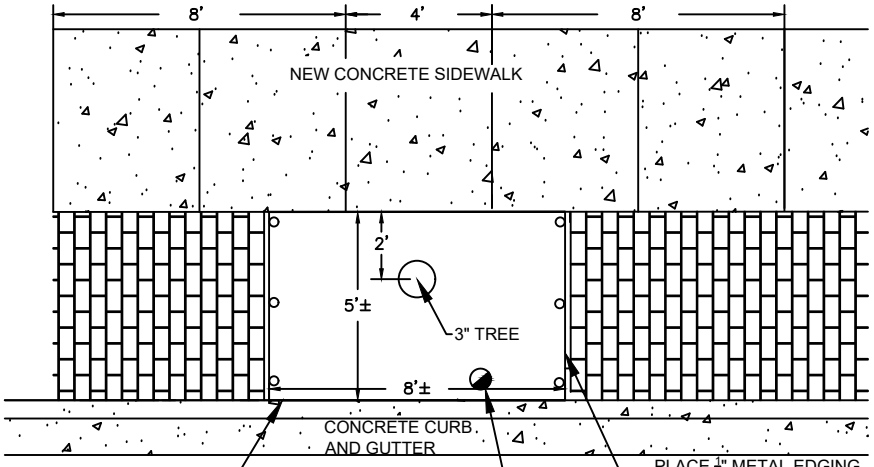
STANDARD PLAN
1-9b



TREE PLANTING / TREE WELL - PROFILE VIEW

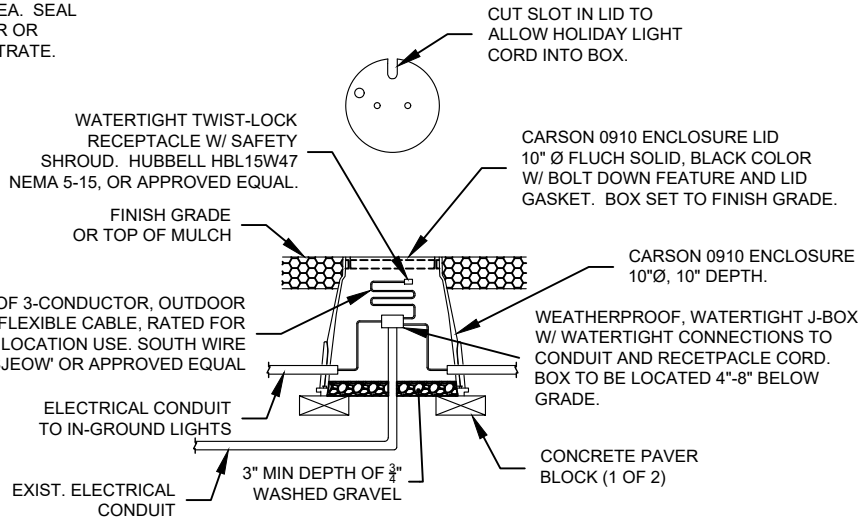
NOTE: AFTER PLANTING AND THOROUGHLY WATERING, APPLY ANTI-DESICCANT SPRAY IF TREE IS IN LEAF

N.T.S.



TREE PLANTING / TREE WELL - PLAN VIEW

N.T.S.



LOCKING JUNCTION BOX DETAIL A

N.T.S.

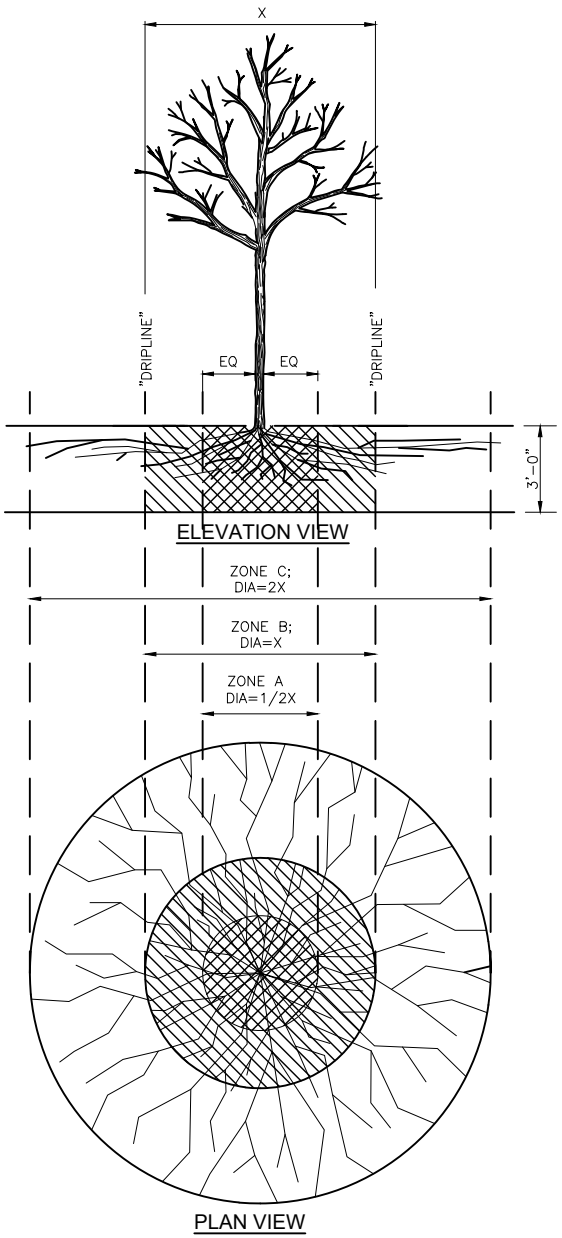
City of Walla Walla

DOWNTOWN TREES DETAIL

DATE: 04/05/2023

APPROVED BY:

STANDARD PLAN 1-10



TREE PROTECTION AREAS
N.T.S.

TRENCHING AND EXCAVATION

GENERAL:

1. CITY ARBORIST OR URBAN FORESTER SHALL DESIGNATE ALL SIGNIFICANT TREES ON THE PROJECT SITE TO BE PROTECTED.
2. MINIMUM PROTECTED AREA SHALL BE 1.5' RADIUS FOR EVERY 1" OF TRUNK DIAMETER MEASURED AT 54" ABOVE GRADE, OR 10' WHICHEVER IS GREATER.
3. CONTRACTOR SHALL SUBMIT A TREE INVENTORY PLAN, AND A TREE PROTECTION PLAN FOR ALL TREES OVER 3" IN DIAMETER WHOSE CRITICAL ROOT ZONE IS ON THE PROPERTY TO TO BE DEVELOPED. CITY APPROVAL IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
4. 4' TALL HIGH VISIBILITY PLASTIC FENCE SHALL BE ERECTED AROUND THE CRITICAL ROOT ZONE, OR AS DIRECTED BY THE CITY, FOR ALL TREES TO BE PROTECTED PRIOR TO ANY CONSTRUCTION ON THE PROJECT. NO PERSON OR EQUIPMENT SHALL BE PERMITTED WITHIN THE TREE PROTECTION AREA.

ZONE A (CRITICAL ROOT ZONE):

1. NO DISTURBANCE SHALL BE ALLOWED WITHOUT A SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE
2. SEVERANCE OF ROOTS LARGER THAN 2" DIAMETER REQUIRE THE CITY ARBORIST APPROVAL.
3. TUNNELING REQUIRED FOR TRENCHES 36 INCHES BELOW GRADE OR DEEPER.

ZONE B (DRIPLINE):

1. ZONE B FOR ASYMMETRICAL CLOUMNAR AND NARROW CONICAL TREE FORMS. ZONE B= 1' RADIUS FOR EVERY 1" OF TRUNK DIAMETER MEASURED 54" ABOVE FINISH GRADE.
2. TUNNELING MAY BE REQUIRED FOR TRENCHES 36 INCHES OR DEEPER.

ZONE 3 (ROOT ZONE):

1. BEST MANAGEMENT PRACTICES REQUIRED TO PRESERVE AND PROTECT ROOT ZONE, AS DIRECTED BY CITY ARBORIST.

City of Walla Walla

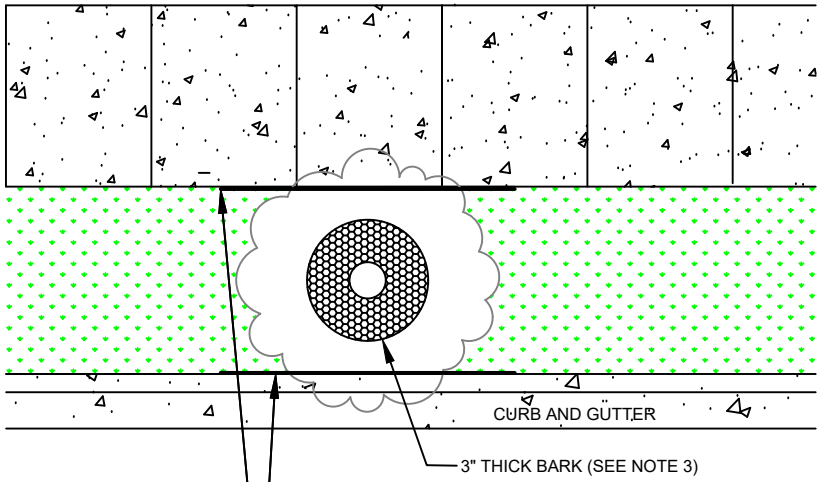
TREE PROTECTION DURING CONSTRUCTION

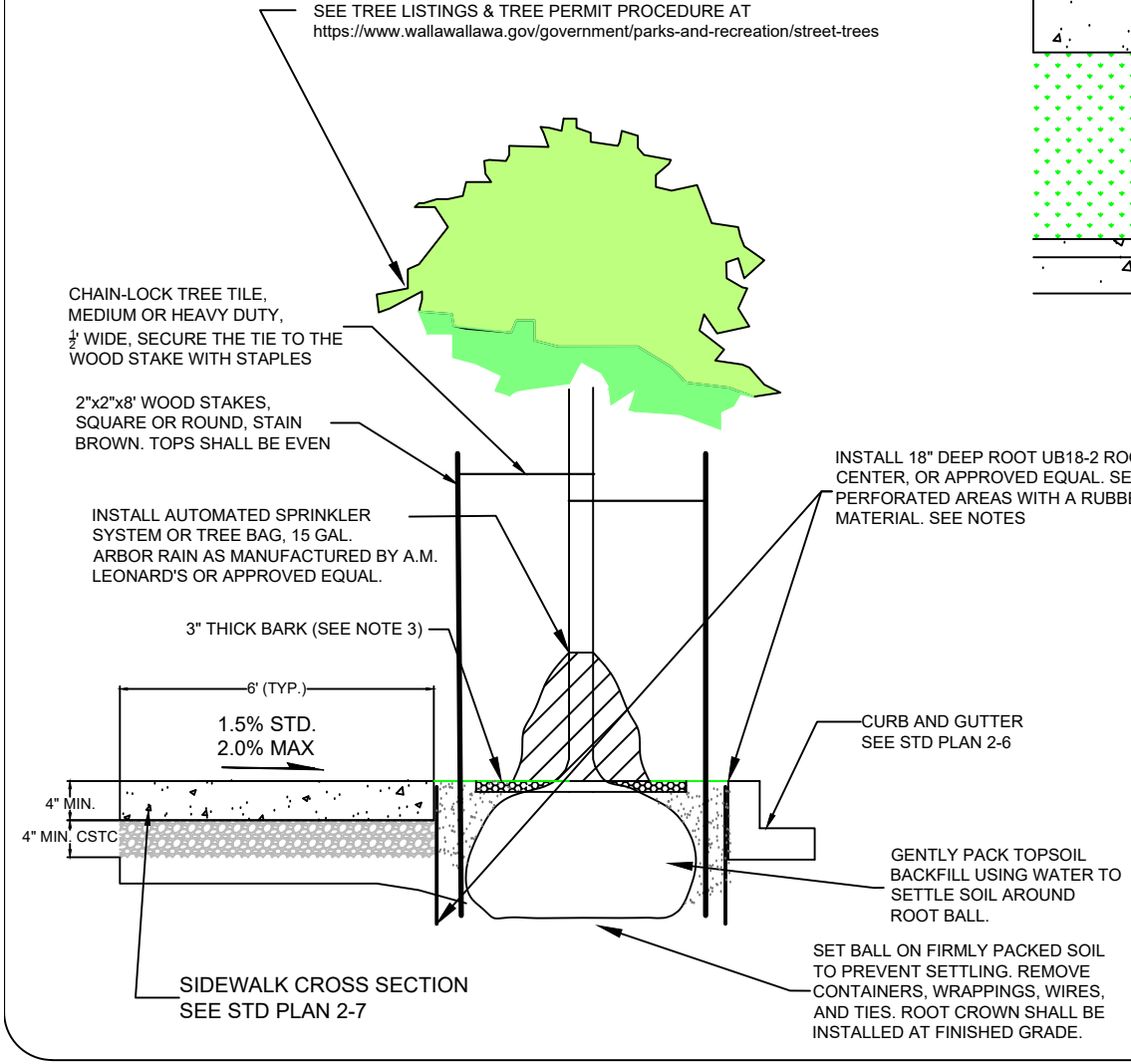
DATE: 01/16/2018

APPROVED BY:

STANDARD PLAN 1-11

TREE PLANTING ROOT BARRIER - PLAN VIEW
N.T.S.





NOTES:

1) CLASS I TREES-THE ROOT BARRIER SHALL BE A MINIMUM OF 4' IN LENGTH.

2) CLASS II, CLASS III, & CLASS IV TREES- THE ROOT BARRIER SHALL BE A MINIMUM OF 8' IN LENGTH.

3) 3" THICK BARK. A 3' BARK DIAMETER SHALL BE PLACED 1"-2" BACK FROM TRUNK FOR TREES THAT ARE LESS THAN 3" DBH. TREE DBH GREATER THAN 3" WILL REQUIRE A 1 FOOT PER TREE DIAMETER BARK RADIUS ON NEW PLANTINGS.

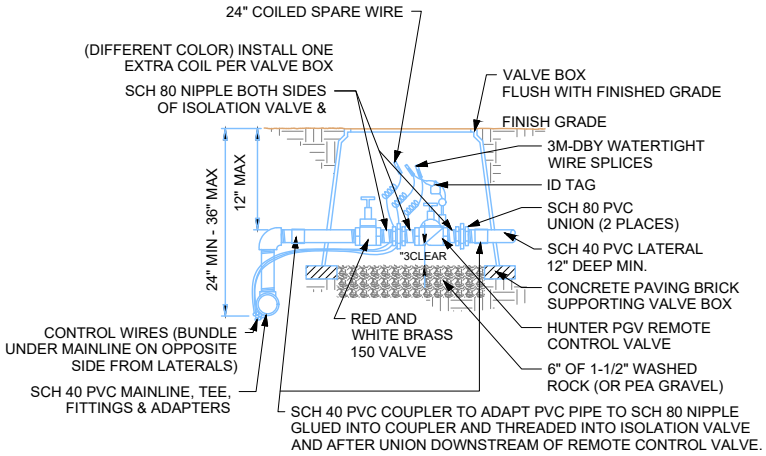
City of Walla Walla

TYPICAL LANDSCAPED TREE DETAIL

DATE: 01/11/2024

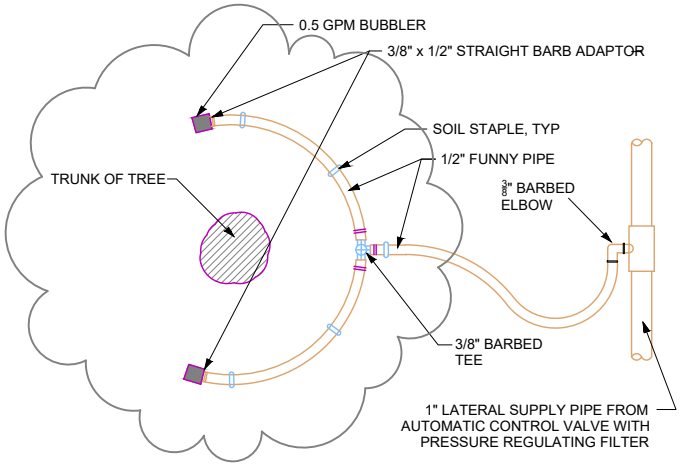
APPROVED BY:

STANDARD PLAN 1-12



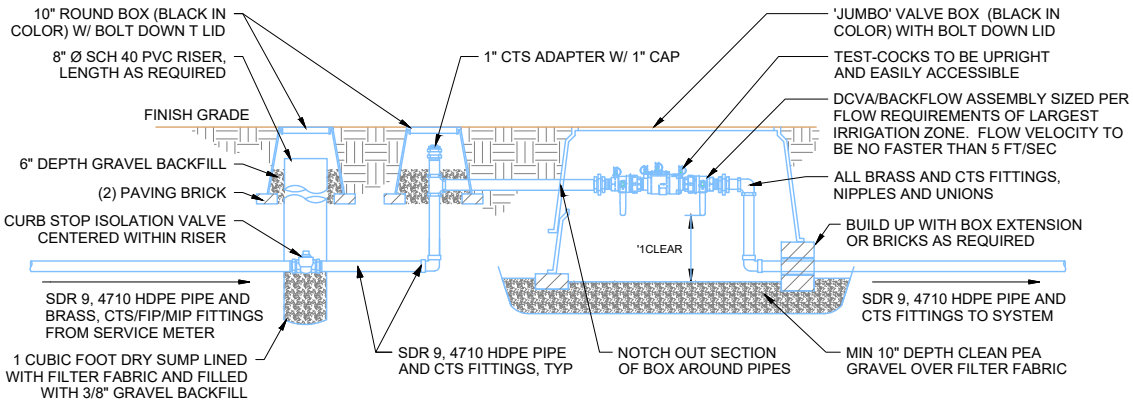
NOTE:
1. CUT 'U' SHAPED NOTCHES IN BOTH SIDES OF VALVE BOX THAT ALLOW 2" MIN CLEARANCE FROM TOP OF PIPE TO TOP OF CUT-OUT.
2. USE TEFLON TAPE ON ALL THREADED FITTINGS.
3. ONLY ONE AUTOMATIC VALVE PER VALVE BOX.
4. VALVE BOX TO REST ON CONCRETE PAVER BRICKS, NO PRESSURE TO BE PLACED ON MAINLINE OR LATERAL LINE.
5. 2" OR GREATER SHALL USE A JUMBO VALVE BOX. SYSTEMS WITH LARGER ZONE(S) UP TO 2" PIPE AT MAX 41 GPM. SDR 9, 4710 HDPE

REMOTE CONTROL VALVE
N.T.S.

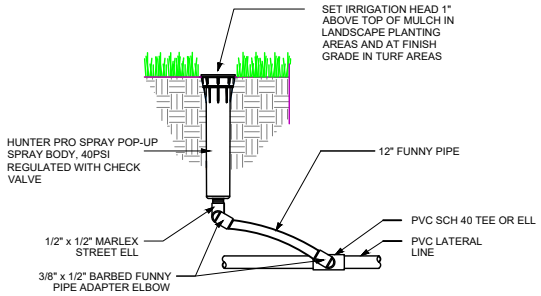


NOTE:
1. INSTALL BUBBLERS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION GUIDELINES.
2. LOCATE BUBBLERS ACROSS ROOT BALL FROM EACH OTHER TO PROMOTE BALANCED/SYMMETRICAL ROOT ZONE GROWTH.
3. INSTALL BUBBLERS TWO-THIRDS OUT FROM THE TRUNK TO THE EDGE OF ROOT BALL.
4. STAPLE IN PLACE PER MANUFACTURER'S RECOMMENDATIONS, BACKFILL AND SPREAD SURFACE TREATMENT AS DIRECTED BY OTHERS.

TREE BUBBLERS
N.T.S.



DOUBLE CHECK VALVE
N.T.S.



POP-UP HEAD W/ SWING JOINT
N.T.S.

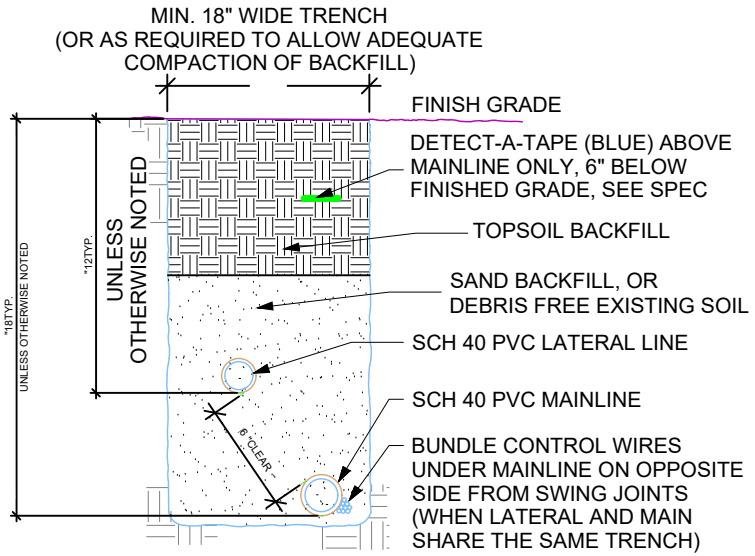
City of Walla Walla

TYPICAL IRRIGATION DETAILS

DATE: 4/24/2023

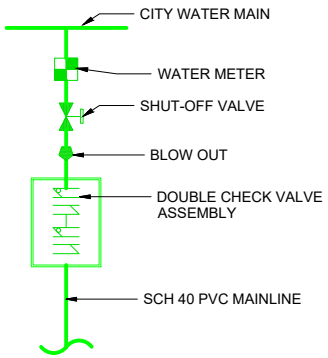
APPROVED BY:

STANDARD PLAN 1-13a

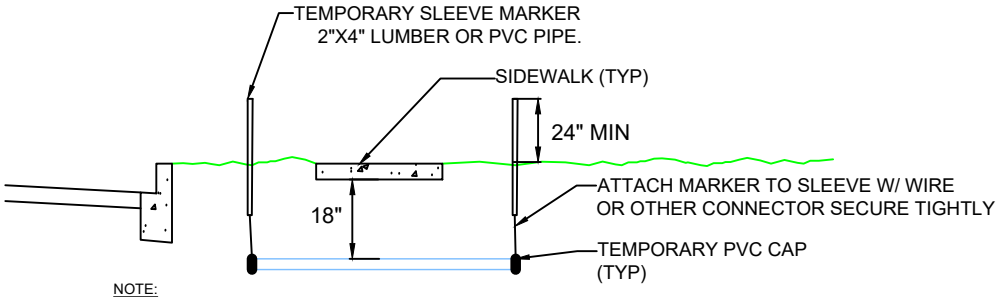


NOTE:
1. TAPE CONTROL WIRES TOGETHER BUT DO NOT TAPE BUNDLED WIRES TO MAINLINE
2. FOR IRRIGATION MAINS BIGGER THAN 1", DEPTHS WILL BE DETERMINED BY ENGINEER

IRRIGATION TRENCH FOR 1" MAIN
N.T.S.

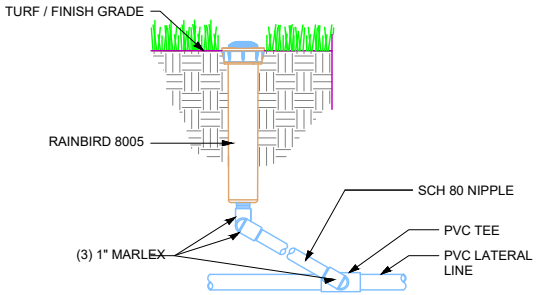


CONNECTION SCHEMATIC DETAIL
N.T.S.



NOTE:
1. ALL PVC IRRIGATION SLEEVES TO BE SCHEDULED 80 PVC PIPE
2. ALL JOINTS SHALL BE SOLVENT WELDED AND WATERTIGHT
3. MECHANICALLY TAMP TO 95% PROCTOR

SLEEVING
N.T.S.



RAINBIRD 8005 POP-UP HEAD W/ SWING JOINT
N.T.S.

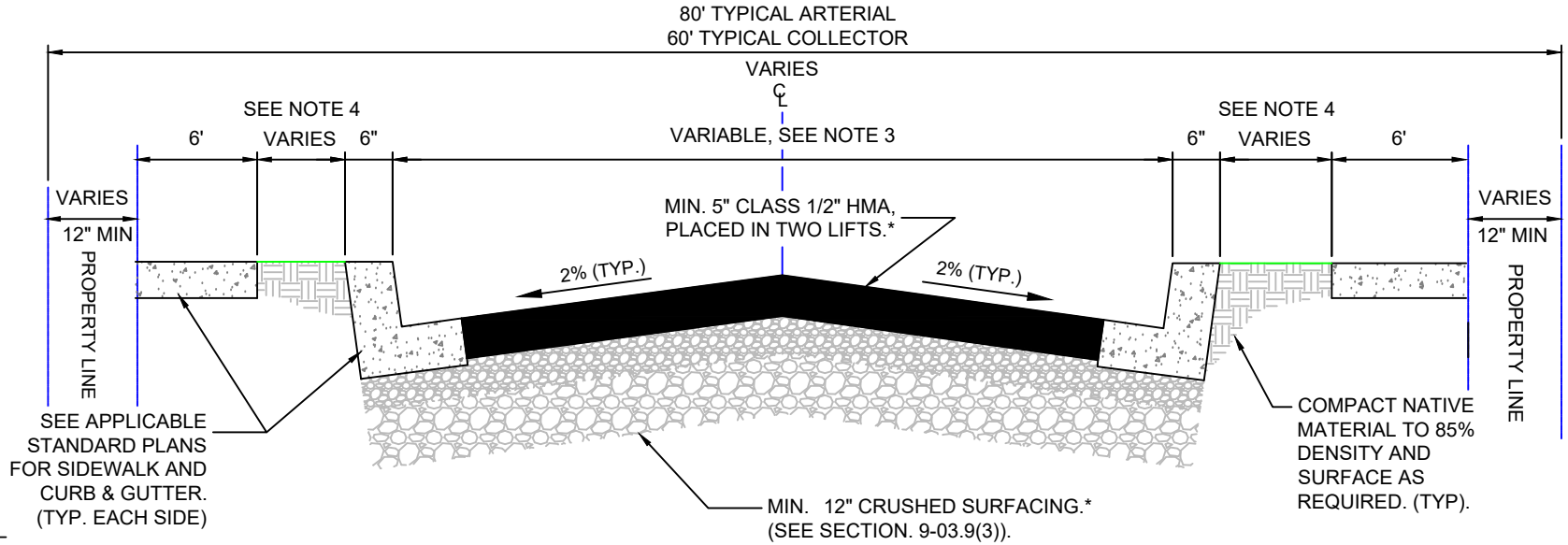
City of Walla Walla

TYPICAL IRRIGATION DETAILS

DATE: 4/24/2023

APPROVED BY:

STANDARD PLAN 1-13b



NOTES

1. FOR PLACEMENT OF CRUSHED SURFACING, REFER TO THE MOST CURRENT WSDOT STANDARD SPECIFICATIONS, SECTION 4-04.3(4) FOR MAXIMUM NOMINAL DEPTH OF COMPACTED MATERIAL PER LIFT.
2. CRUSHED SURFACING SHALL HAVE DENSITY TESTING PERFORMED AT A MINIMUM OF FOUR (4) PER LANE WIDTH FOR THE FIRST 1,000 LINEAR FEET, AND TWO (2) PER LANE WIDTH FOR EACH ADDITIONAL 1,000 LINEAR FEET, OR AS DIRECTED BY THE ENGINEER.
3. DEPENDING ON LOCATION, AS APPROVED BY CITY ENGINEER. TYPICALLY 44 FEET FOR ARTERIAL. TYPICALLY 36 FEET FOR COLLECTOR
4. DEPENDING ON LOCATION, AS APPROVED BY CITY ENGINEER. TYPICALLY 8' MIN FOR ARTERIAL. TYPICALLY 5' MIN. FOR COLLECTOR.
5. ASPHALT TACK COAT SHALL BE APPLIED BETWEEN EACH LIFT OF H.M.A., REGARDLESS OF TIME BETWEEN LIFT PLACEMENTS.
6. RAISE UTILITIES TO FINISH GRADE PRIOR TO FINAL LIFT
7. DESIGN OF GEOTEXTILE FABRIC SHALL MEET REQUIREMENT GUIDELINES OF SECTION 630.05 OF THE WSDOT DESIGN MANUAL. MATERIAL PROPERTIES OF THE GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF THE MOST CURRENT WSDOT STANDARD SPECIFICATIONS SECTION 9-33 FOR WOVEN SOIL STABILIZATION FABRIC.
8. POTHOLE PATCHING OR PATCHING FOR CURB AND GUTTER WORK SHALL USE THIS CROSS SECTION.
9. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE MOST CURRENT VERSION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
10. SUBGRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY, AS VERIFIED BY COMPACTION TESTING, BEFORE PROCEEDING TO PLACEMENT OF BASE ROCK AND PAVING. CITY INSPECTOR MAY REQUIRE EXCAVATION AND REMOVAL OF SOIL WHERE COMPACTION IS IN QUESTION.

* MINIMUM SURFACING DESIGN ALLOWED. THICKER SECTIONS MAY BE REQUIRED AS DETERMINED BY A GEOTECHNICAL REPORT.

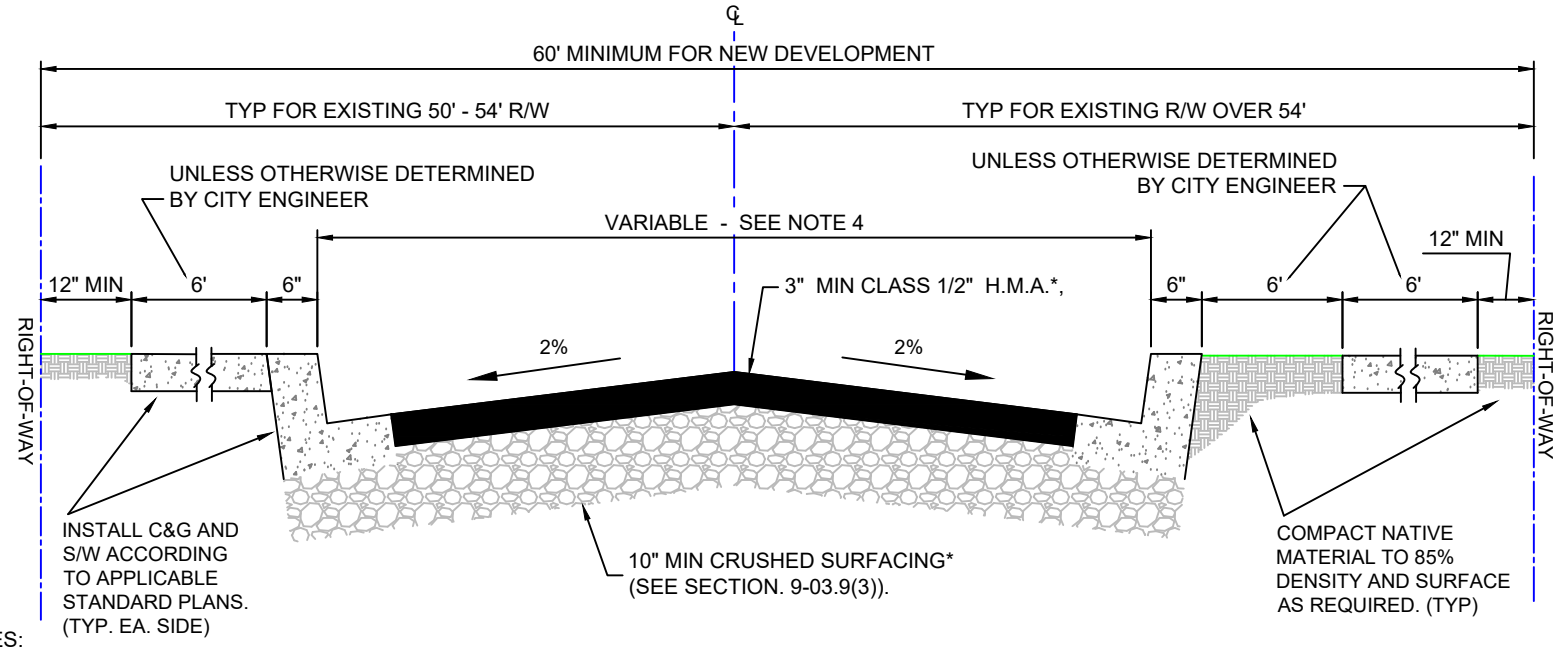
City of Walla Walla

ARTERIAL/COLLECTOR ROADWAY SECTION

DATE: 03/10/2021

APPROVED BY:

STANDARD PLAN 2-1



NOTES:

1. FOR PLACEMENT OF CRUSHED SURFACING, REFER TO THE MOST CURRENT WSDOT SPECIFICATIONS SECTION 4-04.3(4) FOR MAXIMUM NOMINAL DEPTH OF COMPACTED MATERIAL PER LIFT.
2. CRUSHED SURFACING SHALL HAVE DENSITY TESTING PERFORMED AT A MINIMUM OF FOUR (4) PER LANE WIDTH FOR THE FIRST 1,000 LINEAR FEET, AND TWO (2) PER LANE WIDTH FOR EACH ADDITIONAL 1,000 LINEAR FEET, OR AS DIRECTED BY THE ENGINEER.
3. POTHOLE PATCHING OR PATCHING FOR CURB AND GUTTER WORK SHALL USE THIS CROSS SECTION.
4. DEPENDING ON LOCATION, AS APPROVED BY CITY ENGINEER. TYPICALLY 36 FEET. 36' MINIMUM FOR PARKING ON BOTH SIDES. PARKING RESTRICTED BOTH SIDES FOR ROADWAY WIDTHS LESS THAN 28'
5. RAISE UTILITIES TO FINISH GRADE PRIOR TO FINAL LIFT
6. DESIGN OF GEOTEXTILE FABRIC SHALL MEET REQUIREMENT GUIDELINES OF SECTION 630.05 OF THE WSDOT DESIGN MANUAL. MATERIAL PROPERTIES OF THE GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF THE MOST CURRENT WSDOT STANDARD SPECIFICATIONS SECTION 9-33.2 FOR WOVEN SOIL STABILIZATION FABRIC.
7. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE MOST CURRENT VERSION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
8. SUBGRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY, AS VERIFIED BY COMPACTION TESTING, BEFORE PROCEEDING TO PLACEMENT OF BASE ROCK AND PAVING. CITY INSPECTOR MAY REQUIRE EXCAVATION AND REMOVAL OF SOIL WHERE COMPACTION IS IN QUESTION.

* MINIMUM SURFACING DESIGN ALLOWED. THICKER SECTIONS MAY BE REQUIRED AS DETERMINED BY A GEOTECHNICAL REPORT.

City of Walla Walla

LOCAL ROADWAY SECTION

DATE: 12/21/2022

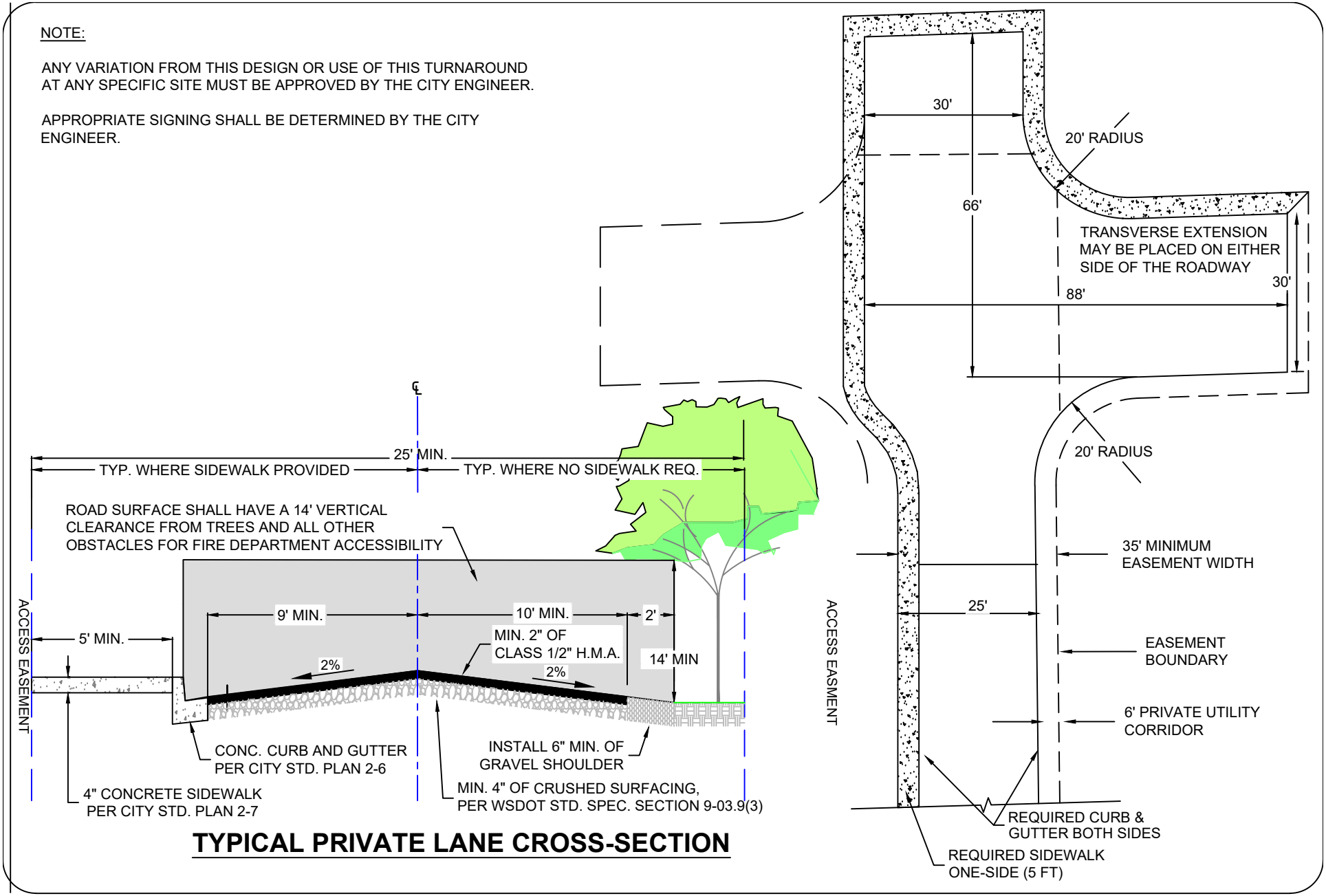
APPROVED BY:

STANDARD PLAN 2-2

NOTE:

ANY VARIATION FROM THIS DESIGN OR USE OF THIS TURNAROUND AT ANY SPECIFIC SITE MUST BE APPROVED BY THE CITY ENGINEER.

APPROPRIATE SIGNING SHALL BE DETERMINED BY THE CITY ENGINEER.



TYPICAL PRIVATE LANE CROSS-SECTION

City of Walla Walla

DEAD-END HAMMERHEAD FOR PRIVATE LANE

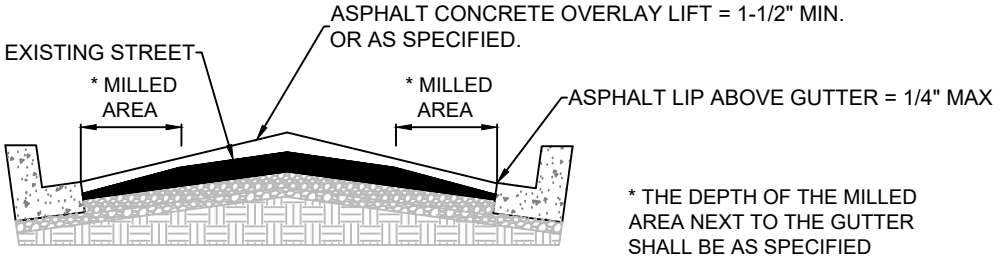
DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 2-3

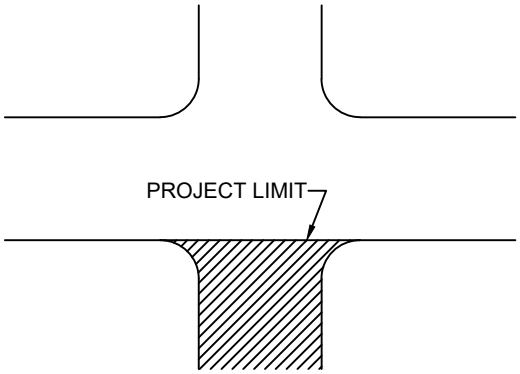
STREET SURFACE TREATMENT

CHIP SEAL AND OVERLAY



* THE DEPTH OF THE MILLED AREA NEXT TO THE GUTTER SHALL BE AS SPECIFIED

TYPICAL OVERLAY SECTION

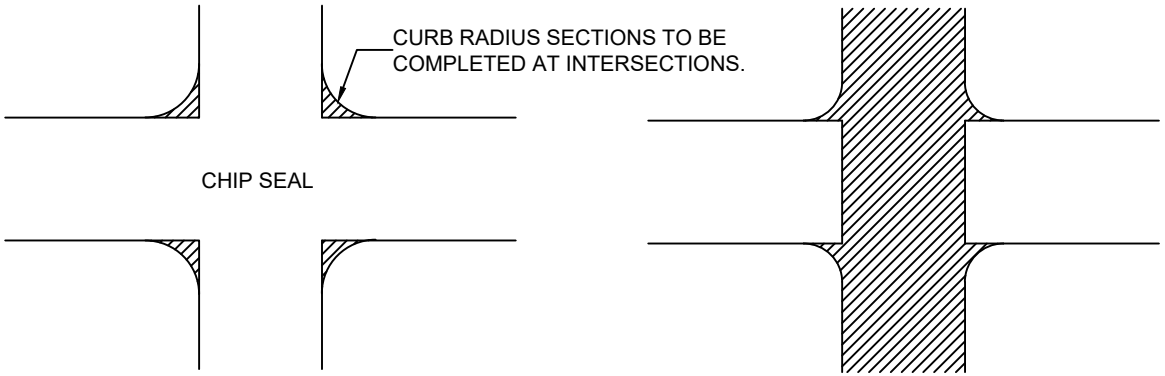


FOR CHIP SEAL OR OVERLAY PROJECTS TERMINATING AT AN INTERSECTION, THE PROJECT LIMIT SHALL BE THE PROJECTION OF THE CURB LINE ON THE CROSS STREET, AS SHOWN ABOVE.

FOR CHIP SEAL OR OVERLAY PROJECTS EXTENDING THROUGH AN INTERSECTION, THE LIMITS SHALL BE AS SHOWN BELOW.

NOTES:

1. THE WORK SHALL BE DONE IN ACCORDANCE WITH SECTIONS 5-02 AND 5-04 OF THE CURRENT WSDOT STANDARD SPECIFICATIONS.
2. THE MAXIMUM TEMPERATURE LEAVING THE PLANT SHALL BE 325 °F AND THE MINIMUM TEMPERATURE AT THE JOB SITE SHALL BE 250 °F.
3. MAXIMUM ROLLER SPEEDS ARE:
   - VIBRATORY: 3 mph
   - PNEUMATIC: 5 mph
   - STEEL WHEEL: 4 mph
4. THE BREAKDOWN ROLLER SHALL BE WITHIN 50 FEET OF THE PAVER
5. TACK COAT SHALL BE APPLIED EVENLY OVER THE ENTIRE AREA TO BE OVERLAID AT THE RATE OF 0.08 GALLONS PER SQUARE YARD.



CURB AND GUTTERS TO BE CLEANED OF OIL AND/OR COVER STONE.

City of Walla Walla

STREET SURFACE TREATMENT

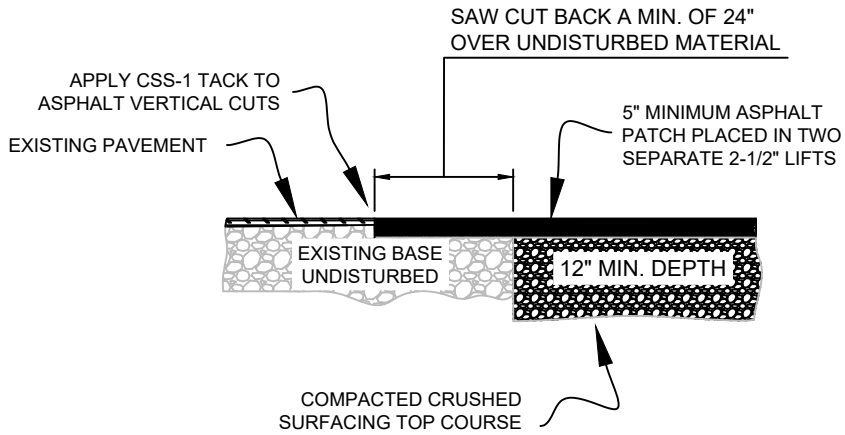
DATE: 06/05/2006

APPROVED BY:

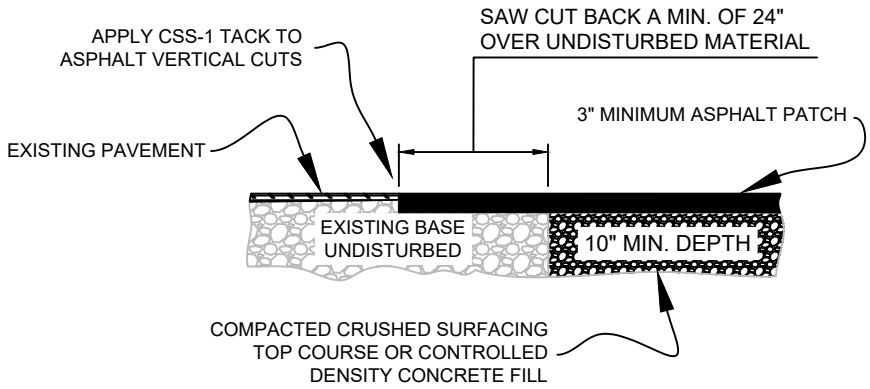
STANDARD PLAN 2-4

PAVEMENT PATCHING DETAILS

ARTERIAL & COLLECTOR STREETS



LOCAL STREETS



NOTES:

1. AFTER DITCH BACK FILL HAS BEEN COMPACTED, AN ADDITIONAL 24" WILL BE REMOVED FROM EACH EDGE OF THE ORIGINAL CUT. THE ENGINEER MAY REQUIRE MORE THAN THE 24" ADDITIONAL CUT IF THE EXISTING PAVEMENT HAS BEEN LIFTED IN THE REMOVAL PROCESS, IF THE JOINT DOES NOT OCCUR ON UNDISTURBED MATERIAL, OR IF THE JOINT FALLS WITHIN THE TRAVEL LANE.

2. LONGITUDINAL CONSTRUCTION JOINTS SHALL ONLY BE LOCATED AT THE CENTER OR EDGE OF AFFECTED LANES.

   STREETS 20 FT OR LESS IN WIDTH AND ALL ALLEYS ARE CONSIDERED ONE-LANE STREETS. NON-ARTERIAL STREETS GREATER THAN 20 FT IN WIDTH WITH NO TRAFFIC CHANNELIZATION ARE CONSIDERED TWO-LANE STREETS WITH ONE-LANE EITHER SIDE OF THE CENTERLINE OF THE STREET. NON-ARTERIAL STREETS GREATER THAN 32 FT IN WIDTH WITH NO TRAFFIC CHANNELIZATION MAY BE CONSIDERED THREE LANE STREETS UPON PRIOR APPROVAL FROM THE CITY ENGINEER.

3. ALL PERMANENT FINAL PATCHES SHALL BE RECTANGULAR IN SHAPE AND CONSTRUCTED PARALLEL AND PERPENDICULAR TO THE ROAD CENTERLINE.

4. THE FINAL CUT EDGE OF PAVED SURFACES SHALL BE SMOOTH AND STRAIGHT, CONSISTANT WITH GRINDING OR SAW CUTTING DEVICES. NO JAGGED, BROKEN OR UNDERMINED EDGES ARE ALLOWED. THE ENGINEER MAY REQUIRE THE REMOVAL AND REPLACEMENT OF ADDITIONAL PAVEMENT IF IT IS CRACKED OR BROKEN ADJACENT TO THE WORK SITE.

5. FOR SUBGRADE COMPACTION REQUIREMENTS SEE STD. PLAN 1-4

6. FINAL COMPACTION OF HMA SHALL BE 91% OF MAXIMUM DENSITY.

   ISOLATED PATCHES: MINIMUM 1 TEST PER PATCH UP TO 150 SQUARE FEET, AND 1TEST REQUIRED EVERY ADDITIONAL 300 SQUARE FEET THEREAFTER.

   TRENCH PATCHES: 1 TEST EVERY 150 LINEAR FEET OF TRENCH WITH A MINIMUM OF 2 TESTS PER TRENCH.

   TESTING SHALL BE PERFORMED BY A CERTIFIED INDEPENDENT TESTING LABORATORY OR CERTIFIED TESTER, AS APPROVED BY THE CITY ENGINEER. TESTS SHALL BE COMPLETED AND REPORTS IDENTIFYING THE PROJECT SUBMITTED TO THE CITY ENGINEERING OFFICE WITHIN 48 HOURS OF TEST.

7. COLD MIX SHALL BE USED IF PAVING DOESN'T OCCUR WITHIN 24 HOURS

8. ASPHALT THICKNESS FOR PATCHES SHALL MEET OR EXCEED THE THICKNESS OF THE EXISTING ASPHALT, BUT SHALL NOT BE LESS THAN THE AMOUNTS SHOWN ABOVE FOR THE ROADWAY CLASSIFICATION. ASPHALT THICKNESS MAY ALSO BE DETERMINED BY ENGINEERS RECOMMENDATION

9. ASPHALT PATCHING MAY ONLY BE DELAYED DURING WINTER, BUT SHALL BE COMPLETED BEFORE MAY 15 OF THE FOLLOWING SPRING.

City of Walla Walla

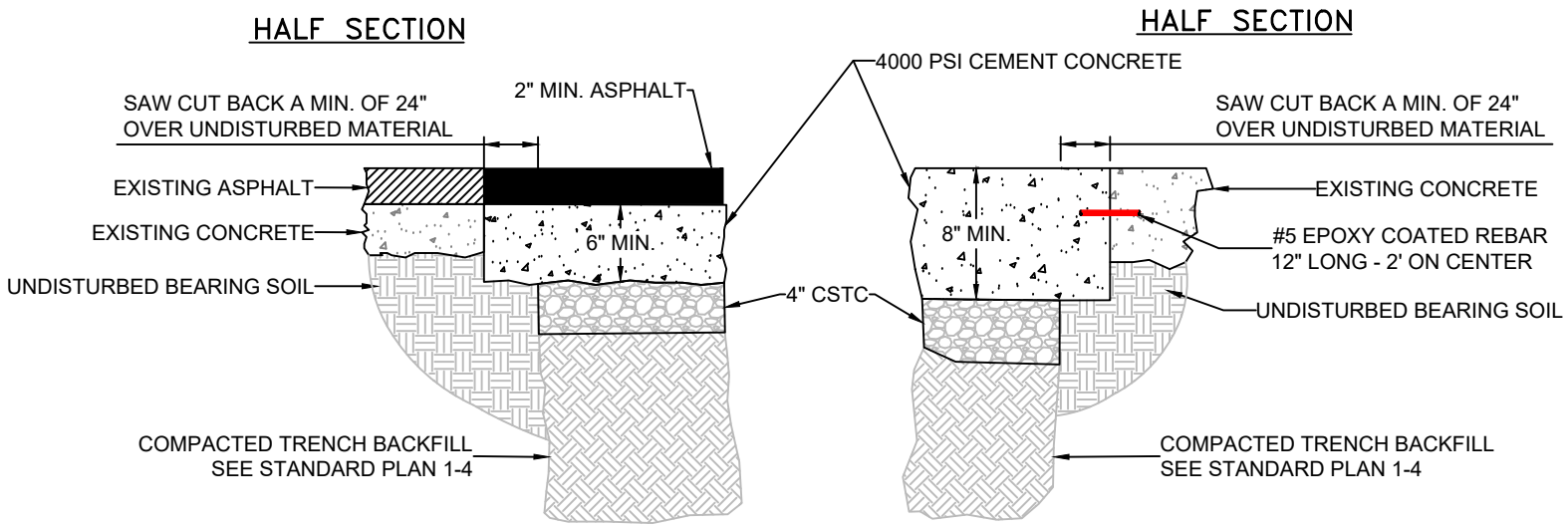
TYPICAL PATCH FOR FLEXIBLE PAVEMENT

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 2-5a

PAVEMENT PATCHING DETAILS



NOTES:

1. AFTER DITCH BACK FILL HAS BEEN COMPACTED, AN ADDITIONAL 24" WILL BE REMOVED FROM EACH EDGE OF THE ORIGINAL CUT. THE ENGINEER MAY REQUIRE MORE THAN THE 24" ADDITIONAL CUT IF THE EXISTING PAVEMENT HAS BEEN LIFTED IN THE REMOVAL PROCESS, IF THE JOINT DOES NOT OCCUR ON UNDISTURBED MATERIAL, OR IF THE JOINT FALLS WITHIN THE TRAVEL LANE.

2. ALL BACK FILL SHALL BE UNIFORMLY MOISTURE CONDITIONED AND COMPACTED TO 95% MAX. DENSITY. BASE ROCK SHALL BE PLACED IN 9" OR LESS LIFTS. CRUSHED SURFACING SHALL BE PLACED IN 4" OR LESS LIFTS.

3. SEE STANDARD PLAN 2-7 NOTE 2, FOR MATERIAL SPECIFICATIONS

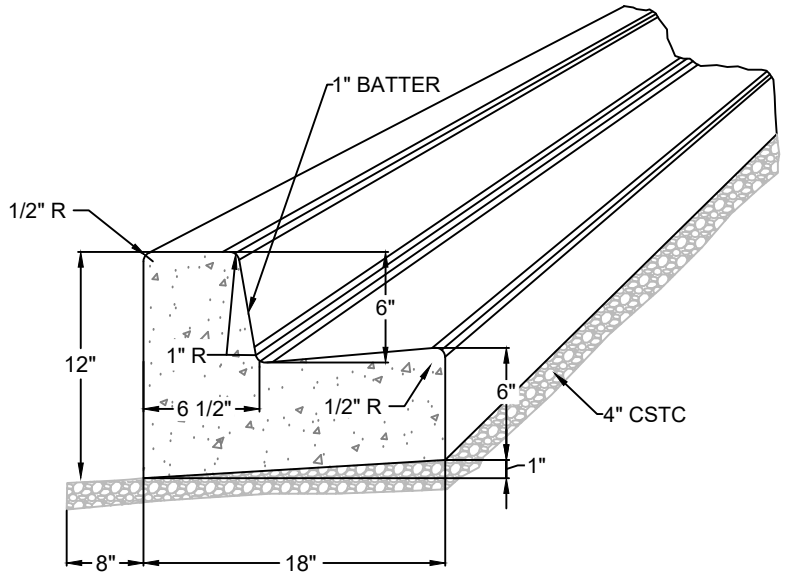
City of Walla Walla

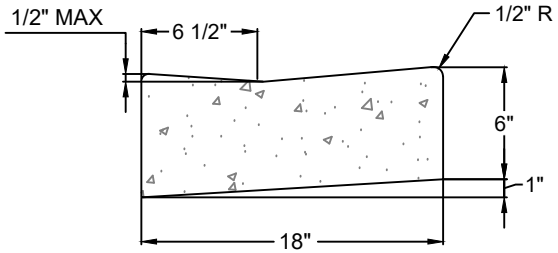
TYPICAL PATCH FOR RIGID PAVEMENT

DATE: 01/11/2024

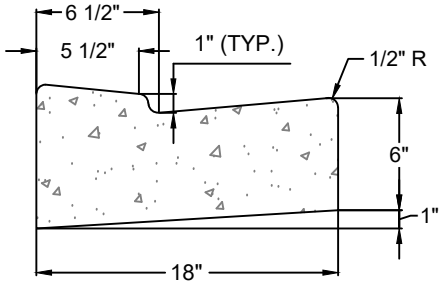
APPROVED BY:

STANDARD PLAN 2-5b





DEPRESSED AT CURB RAMP



DEPRESSED AT DRIVEWAY APPROACH

NOTES:

1. FORMS, PROCEDURES AND COMPACTION SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE WSDOT STANDARD SPECIFICATIONS.
2. ASPHALT SHALL BE SAW CUT 24" MINIMUM FROM FACE OF GUTTER AND HAVE A SMOOTH EDGE BEFORE BEING PATCHED. SEE STANDARD PLAN 2-5.
3. GRADE BREAKS SHALL BE FLUSH.
4. WHERE HITCHING RINGS EXIST IN THE CURB TO BE REPLACED, THE RING SHALL BE REMOVED AND REPLACED IN THE CURB IN THE SAME LOCATION
5. SEE STANDARD PLAN 2-7, NOTE 2, FOR MATERIAL SPECIFICATIONS.
6. JOINTS

6.3. DUMMY JOINTS SHALL BE PLACED NOT TO EXCEED 15' C/C NOR LESS THAN 10' C/C. DUMMY JOINTS SHALL BE STABBED OR SAWED THROUGH THE CURB AND GUTTER TO PROVIDE A SHEAR PLANE FOR CONTRACTION CRACKS.

6.4. THROUGH JOINTS SHALL BE PREMOLDED 3/8" EXPANSION JOINT FILLER, PLACED ONLY AT POINTS OF HORIZONTAL TANGENCY ON STREETS, RETURNS AND AT THE HIGH POINT OF DRIVEWAYS, CURB RAMPS, AND ALLEY CUTS.

6.5. ALL JOINTS SHALL BE CLEAN AND EDGED WITH A 1/2" RADIUS EDGER.

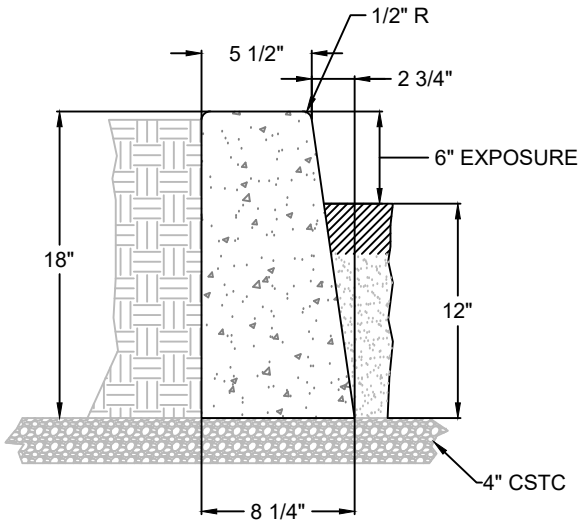
City of Walla Walla

STANDARD CURB & GUTTER

DATE: 05/03/2022

APPROVED BY:

STANDARD PLAN 2-6a



STANDARD CURB

NOTES:

1. FORMS, PROCEDURES AND COMPACTION SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE WSDOT STANDARD SPECIFICATIONS.
2. SEE STANDARD PLAN 2-7, NOTE 2, FOR MATERIAL SPECIFICATION
3. JOINTS
   - 3.1. DUMMY JOINTS SHALL BE PLACED NOT TO EXCEED 15' C/C NOR LESS THAN 10' C/C. DUMMY JOINTS SHALL BE STABBED OR SAWED THROUGH THE CURB AND GUTTER TO PROVIDE A SHEAR PLANE FOR CONTRACTION CRACKS.
   - 3.2. THROUGH JOINTS SHALL BE PREMOLDED 3/8" MASTIC, PLACED ONLY AT POINTS OF HORIZONTAL TANGENCY ON STREETS, RETURNS AND AT THE HIGH POINT OF DRIVEWAYS, CURB RAMPS, AND ALLEY CUTS.
   - 3.3. ALL JOINTS SHALL BE CLEAN AND EDGED WITH A 1/2" RADIUS EDGER.

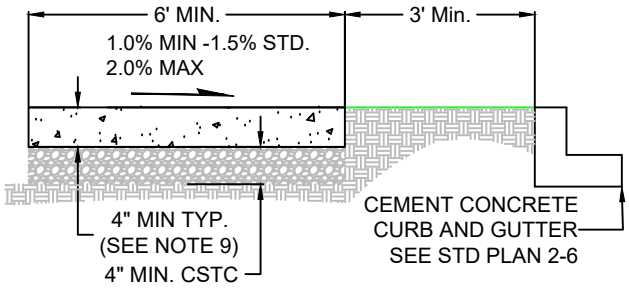
City of Walla Walla

STANDARD CURB

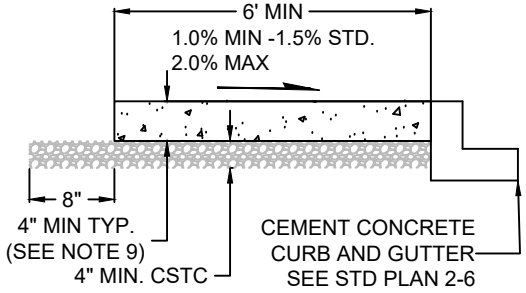
DATE: 05/03/2022

APPROVED BY:

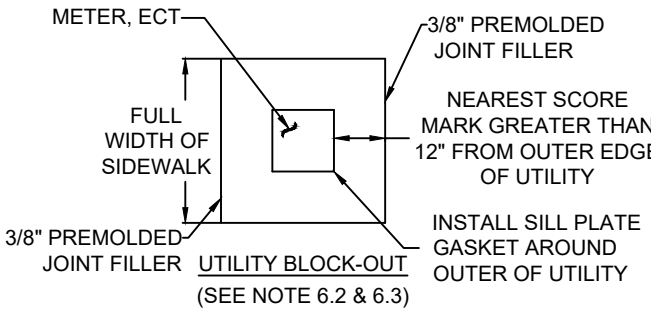
STANDARD PLAN 2-6b



SIDEWALK CROSS SECTION W/ PLANTER STRIP



SIDEWALK CROSS SECTION AGAINST CURB



NOTES:

1. FORMS, PROCEDURES AND COMPACTION SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE WSDOT STANDARD SPECIFICATIONS. SIDEWALK FORMS SHALL BE SET TO STANDARD SLOPES. FIELD SURFACE SHALL NOT EXCEED MAX SLOPES SHOWN ON STANDARD DRAWINGS. IF MAX SLOPE IS EXCEEDED, SIDEWALK WILL BE REMOVED AND REPLACED TO MEET SLOPE REQUIREMENTS.
2. MATERIALS:
   - 2.1. CONCRETE SHALL MEET 4000 PSI GIVEN IN 6-02 WSDOT STANDARD SPECIFICATION.
   - 2.2. PREMOLDED EXPANSION JOINT FILLER SHALL BE 3/8" THICK AND FILL THE FULL CROSS-SECTION OF THE CONCRETE
   - 2.3. CONCRETE SHALL BE CURED PER WSDOT STANDARD SPECIFICATION. NO WATER SHALL BE APPLIED TO CONCRETE DURING FINISHING
   - 2.4. LIQUI-HARD ULTRA, OR APPROVED EQUAL, SHALL BE APPLIED ON ALL CONCRETE PER MANUFACTURERS INSTRUCTIONS .
3. ALL RESTORATION WORK SHALL BE SAW CUT SMOOTH AND EVEN AT THE CURB, SIDEWALK, AND GUTTER EDGES.
4. CURB & GUTTER, DRIVEWAY & SIDEWALK SHALL NOT BE POURED AS ONE SECTION
5. OBSTRUCTIONS:
   - 5.1. ANY OBSTRUCTION IN THE SIDEWALK SHALL PROVIDE A MINIMUM 4 FOOT CLEAR WIDTH.
   - 5.2. A MINIMUM 2 FOOT CLEAR SPACE SHALL BE MAINTAINED BEHIND THE FACE OF CURB.
6. JOINTS:
   - 6.1. CONTRACTION JOINTS SHALL BE TRAVERSE 'V' GROOVE 1/4" TO 3/4" DEEP TO CREATE SQUARE PANELS NOT TO EXCEED 10 FEET.
   - 6.2. EXPANSION JOINTS SHALL BE PLACED NOT TO EXCEED 30' C/C OF THE RUNNING SIDEWALK, AS WELL AS AT DRIVEWAYS, ALLEYS, CURB RAMPS, AND WHERE THERE IS A CHANGE IN DIRECTION.
   - 6.3. INSTALL SILL PLATE GASKET, FOAM SEALER SILL PLATE GASKET 5-1/2" BY OWENS CORNING, OR APPROVED EQUAL AROUND ANY OBJECT WITHIN THE CONCRETE INCLUDING BUT NOT LIMITED TO METER BOXES, WATER VALVES, FIRE HYDRANTS, MANHOLES, UTILITY POLES, PHONE PEDESTALS. INSTALL 3/8" PREMOLDED EXPANSION JOINT FILLER AT THE NEAREST SCORE MARKS GREATER THAN 12" FROM THE OUTER EDGE OF THE UTILITY.
   - 6.4. EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE BACK OF SIDEWALK AND A STRUCTURE WHEN THE SIDEWALK IS RESTRICTED ON ALL SIDES.
   - 6.5. ALL JOINTS SHALL BE CLEAN AND EDGED WITH A 1/2" RADIUS EDGER.
7. FINISH GRADE SHALL NOT EXCEED 2.0% MAX SLOPE AS SHOWN ON STANDARD DRAWING. ALL SURFACES SHALL BE LIGHT BROOM IN A TRANSVERSE DIRECTION.
8. WHERE STREET NAMES AND/OR ORIGINAL INSTALLATION DATES ARE STAMPED ON EXISTING SIDEWALK PANELS THAT ARE TO BE REPLACED, STAMPED PORTIONS SHALL BE SAWCUT OUT OF THE EXISTING PANELS AND PLACED INTO THE NEW SIDEWALK IN THE SAME LOCATION AND ORIENTATION WHEN FEASIBLE, OR AS CLOSE THERETO AS POSSIBLE
9. MINIMUM CONCRETE THICKNESS FOR SIDEWALK AND RAMPS LOCATED WITHIN THE CURB RETURN SHALL BE 6" WITH 4" CSTC AT THE INTERSECTION OF TWO ARTERIAL STREETS, OR OTHER AREAS WHERE TRUCK TRAFFIC IS ANTICIPATED, UNLESS OTHERWISE APPROVED BY THE ENGINEER

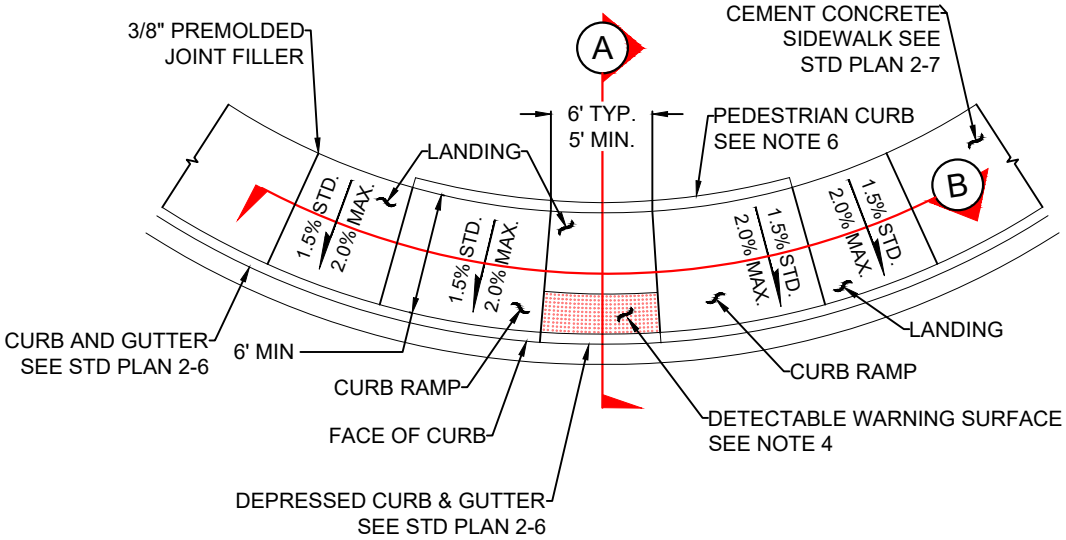
City of Walla Walla

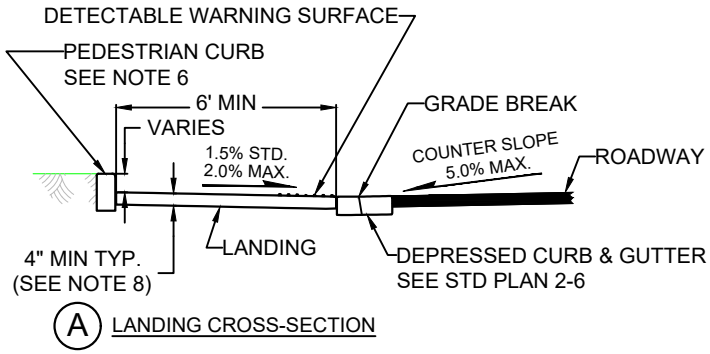
SIDEWALK CROSS-SECTION

DATE: 05/03/2022

APPROVED BY:

STANDARD PLAN 2-7

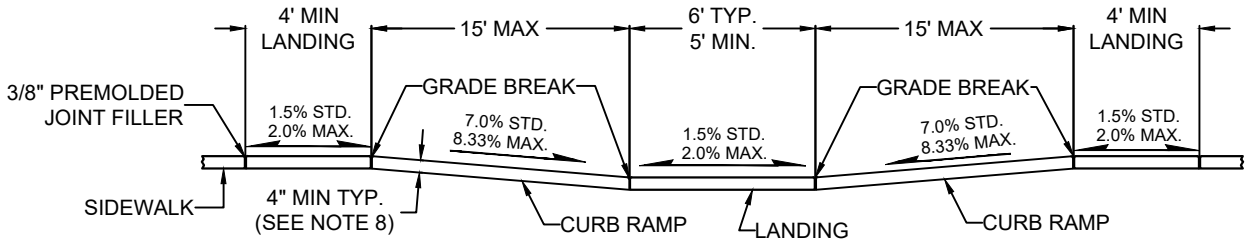




A LANDING CROSS-SECTION

NOTES:

1. FORMS, PROCEDURES AND COMPACTION SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE WSDOT STANDARD SPECIFICATIONS.
2. PURSUANT TO THE REQUIREMENTS ESTABLISHED BY RCW 35.68.075, WHEN A RAMP IS CONSTRUCTED, A SUBSEQUENT RECEIVING RAMP SHALL ALSO BE CONSTRUCTED ACROSS THE STREET.
3. SEE STANDARD PLAN 2-7 FOR MATERIAL SPECIFICATIONS
4. DETECTABLE WARNING SURFACE SHALL BE ARMOR TILE - REPLACEABLE CAST IN PLACE - HERCULITE SERIES OR APPROVED EQUAL. DETECTABLE WARNING SURFACE SHALL BE THE FULL WIDTH OF THE RAMP AND A MINIMUM OF 2 FEET IN DEPTH. PER WSDOT STD PLAN F-45.10-02.
5. GRADE BREAKS SHALL BE FLUSH.
6. PEDESTRIAN CURB MAY BE OMITTED IF THE GROUND SURFACE AT THE BACK OF THE CURB RAMP AND/OR LANDING WILL BE AT THE SAME ELEVATION AS THE CURB RAMP OF LANDING AND THERE WILL BE NO MATERIAL TO RETAIN.
7. FINISH SHALL BE LIGHT BROOM IN A TRANSVERSE DIRECTION.
8. MINIMUM CONCRETE THICKNESS FOR SIDEWALK AND RAMPS LOCATED WITHIN THE CURB RETURN SHALL BE 6" WITH 4" CSTC AT THE INTERSECTION OF TWO ARTERIALS STREETS, OR OTHER AREAS WHERE TRUCK TRAFFIC IS ANTICIPATED, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.



B RAMP CROSS-SECTION

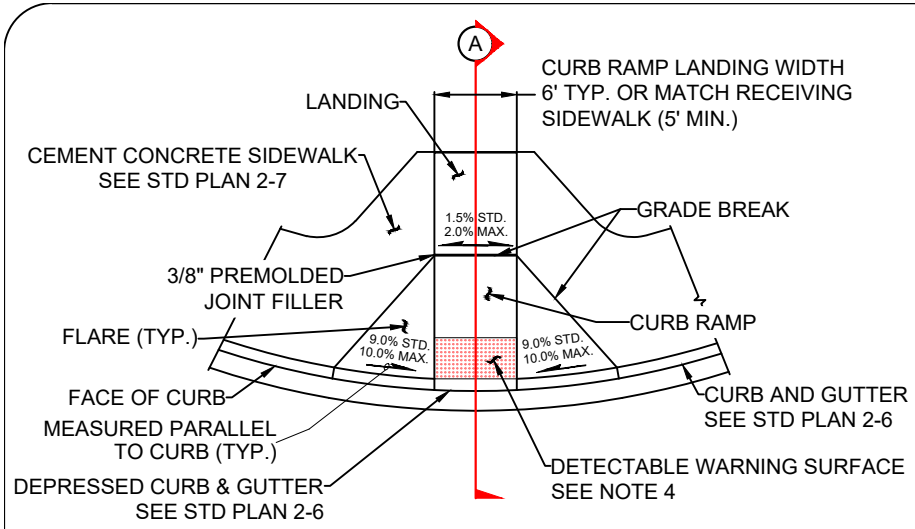
City of Walla Walla

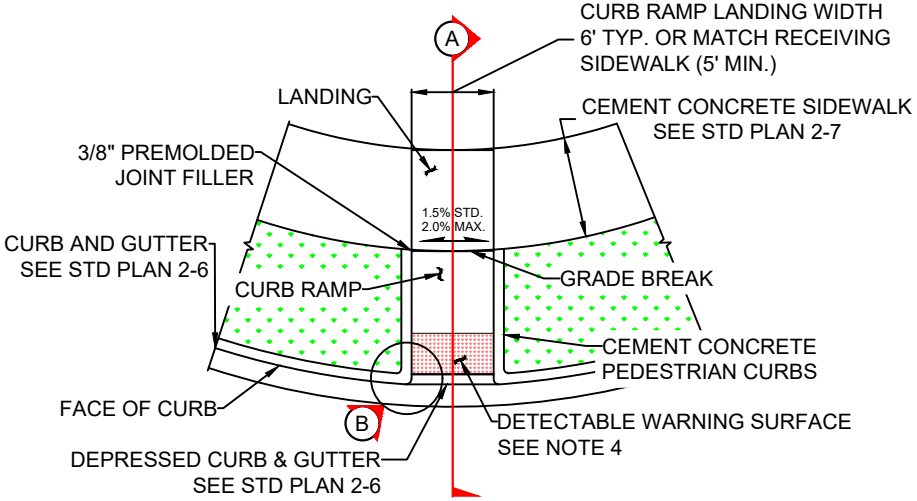
PARALLEL CURB RAMP

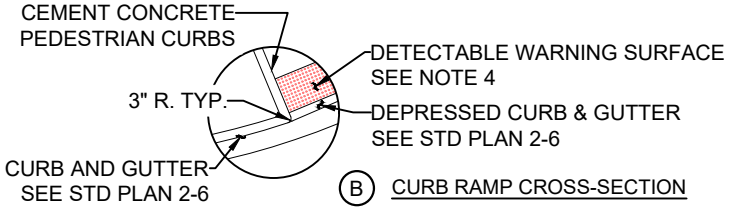
DATE: 09/21/2021

APPROVED BY:

STANDARD PLAN 2-8



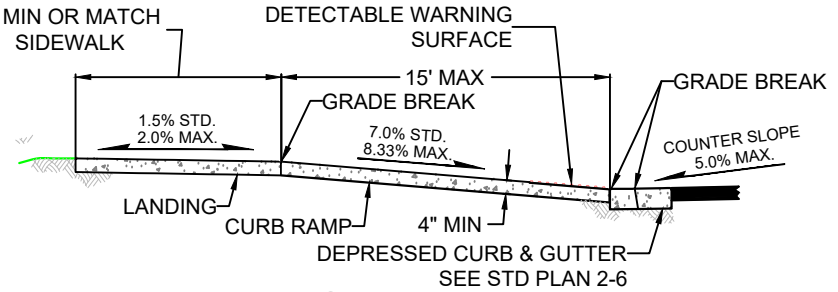




B CURB RAMP CROSS-SECTION

NOTES:

1. FORMS, PROCEDURES AND COMPACTION SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE WSDOT STANDARD SPECIFICATIONS.
2. PURSUANT TO THE REQUIREMENTS ESTABLISHED BY RCW 35.68.075, WHEN A RAMP IS CONSTRUCTED, A SUBSEQUENT RECEIVING RAMP SHALL ALSO BE CONSTRUCTED ACROSS THE STREET.
3. SEE STANDARD PLAN 2-7 FOR MATERIAL SPECIFICATIONS
4. DETECTABLE WARNING SURFACE SHALL BE ARMOR TILE - REPLACEABLE CAST IN PLACE - HERCULITE SERIES, OR APPROVED EQUAL. DETECTABLE WARNING SURFACE SHALL BE THE FULL WIDTH OF THE RAMP, AND A MINIMUM OF 2 FEET IN DEPTH. PER WSDOT STD PLAN F-45.10-02.
5. GRADE BREAKS SHALL BE FLUSH.
6. PEDESTRIAN CURB MAY BE OMITTED IF THE GROUND SURFACE AT THE BACK OF THE CURB RAMP AND/OR LANDING WILL BE AT THE SAME ELEVATION AS THE CURB RAMP OF LANDING AND THERE WILL BE NO MATERIAL TO RETAIN.
7. FINISH SHALL BE LIGHT BROOM IN A TRANSVERSE DIRECTION.
8. MINIMUM CONCRETE THICKNESS FOR SIDEWALK AND RAMPS WITHIN THE CURB RETURN SHALL BE 6" WITH 4" CSTC AT THE INTERSECTION OF TWO ARTERIAL STREETS, OR OTHER AREAS WHERE TRUCK TRAFFIC IS ANTICIPATED, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. USE OF PEDESTRIAN CURBS & LANDSCAPING SHOULD BE AVOIDED WHERE TRUCK OFF TRACKING IS LIKELY.



A CURB RAMP CROSS-SECTION

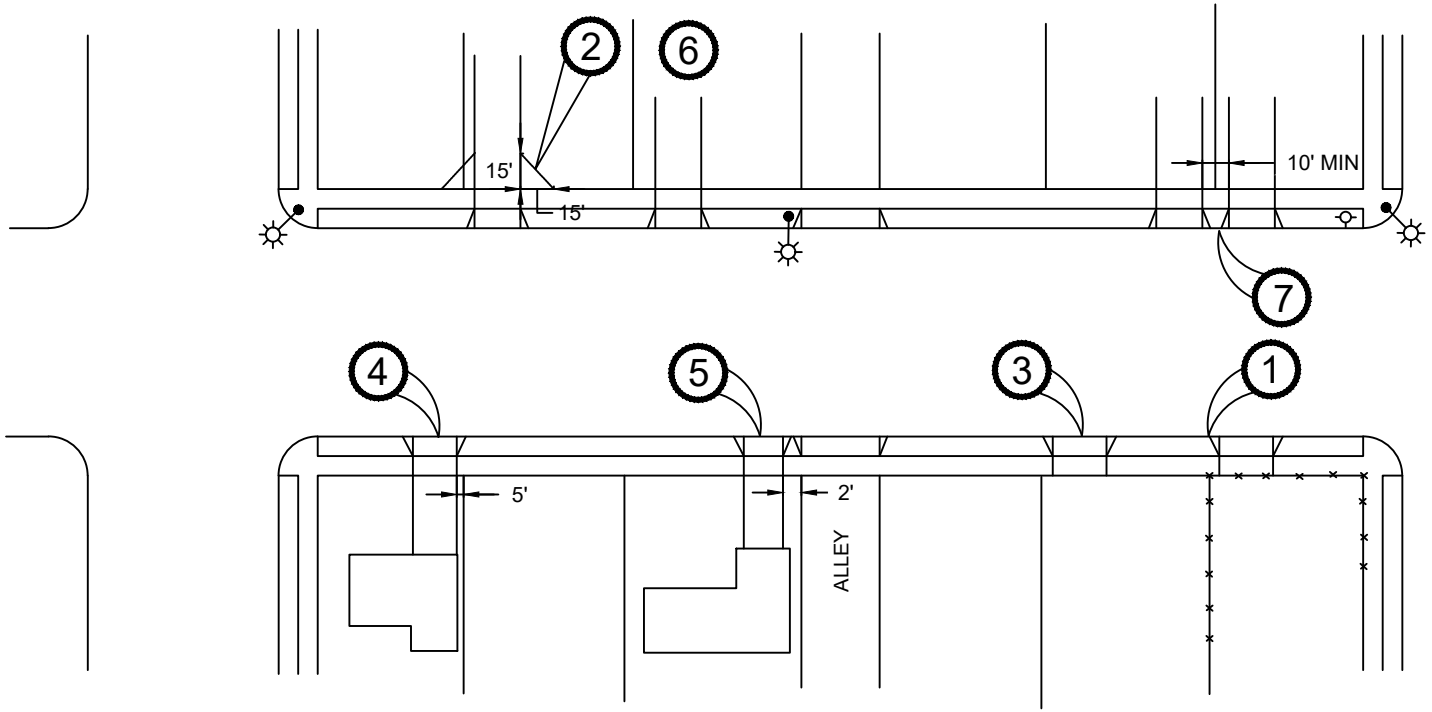
City of Walla Walla

PERPENDICULAR CURB RAMP

DATE: 09/21/2021

APPROVED BY:

STANDARD PLAN 2-9



NTS

1. DRIVEWAYS MUST PROVIDE ACCESS TO A GARAGE, CARPORT, PARKING APRON, OR OTHER STRUCTURE ON PRIVATE PROPERTY. DRIVEWAYS THAT PROVIDE ACCESS ONLY TO THE PLANTING STRIP OR THAT ALLOWS PARKING ON THE SIDEWALKS ARE NOT PERMITTED.

2. DRIVEWAYS MUST BE POSITIONED TO PRESERVE A CLEAR VIEW TRIANGLE OF 15 FEET ALONG THE PROPERTY LINE.

3. DRIVEWAYS SHALL BE POSITIONED TO MAINTAIN A MINIMUM 2' SEPARATION FROM ANY AND ALL UTILITIES, UNLESS OTHERWISE APPROVED BY THE SERVICE PROVIDER..

4. ON CORNER OR DOUBLE FRONTAGE LOTS, DRIVEWAYS SHALL BE LOCATED ON THE LOWER FUNCTIONAL CLASSIFICATION ROADWAY AND BE ALONG THE PROPERTY LINE FURTHEST FROM THE INTERSECTION.

5. ON LOTS ADJACENT TO ALLEYS, IT IS PERMISSIBLE FOR DRIVEWAYS TO BE POSITIONED WITHIN TWO FEET OF THE ALLEY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

6. DRIVEWAYS SHOULD BE POSITIONED TO AVOID CONFLICT WITH POLES, FIRE HYDRANTS, STREET LIGHTS, AND TRAFFIC SIGNS.

7. WHERE EXISTING WATER METERS ARE LOCATED ON EITHER SIDE OF A COMMON PROPERTY LINE, THE ADJACENT DRIVEWAYS MUST BE A MINIMUM OF 5 FEET FROM THE PROPERTY LINE. FOR CURB TIGHT SIDEWALK, DISTANCES MAY NEED TO BE ADJUSTED TO ENSURE ALL ADA REQUIREMENTS ARE MET.

8. FOR CURB TIGHT SIDEWALK SPACING SEE STD. PLAN 2-12

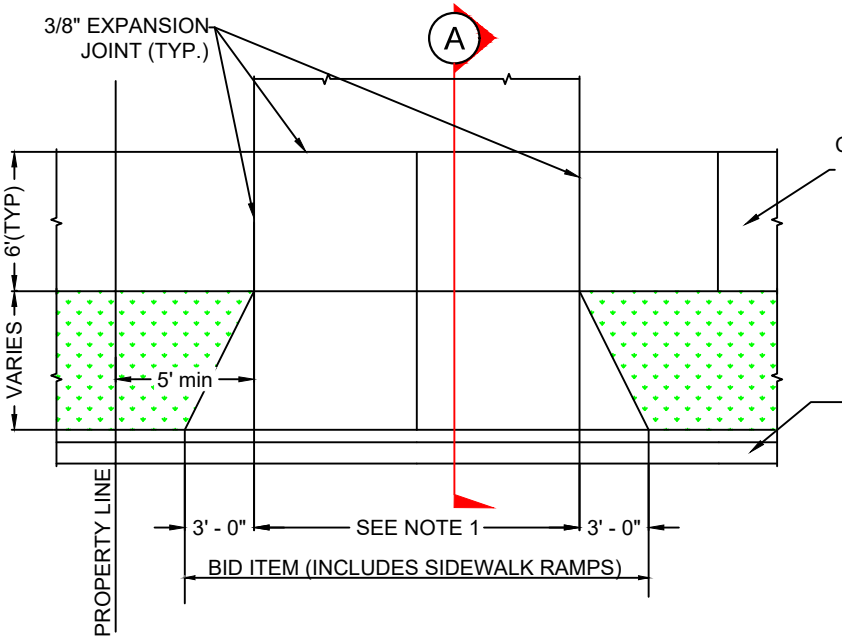
City of Walla Walla

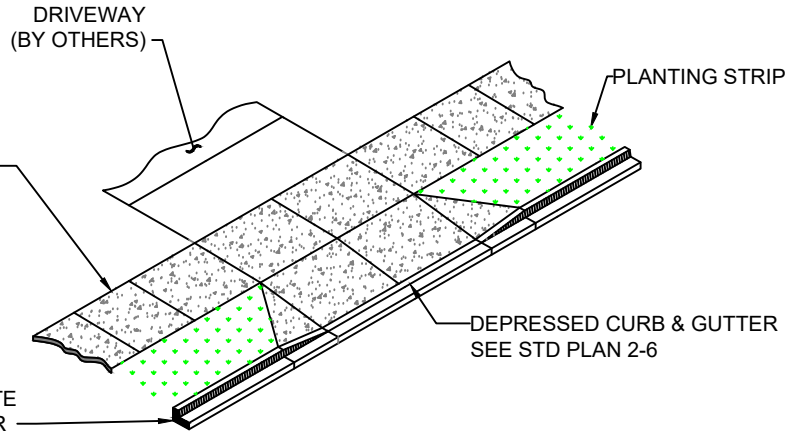
DRIVEWAY LOCATIONS

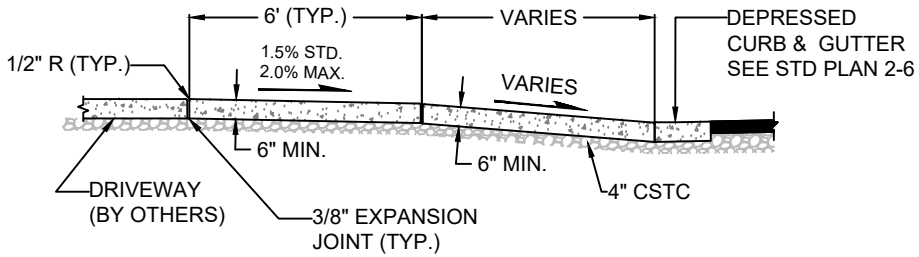
DATE: 12/21/2022

APPROVED BY:

STANDARD PLAN 2-10







A DRIVEWAY APPROACH AND SIDEWALK CROSS-SECTION

NOTES:

1. Driveway widths shall be measured perpendicular to the centerline of the driveway exclusive of the flare. Exceptions to the measurements may be approved by the City Engineer for specific unique reasons:

	Minimum	Maximum
Residential		
Circular drive	15 feet	20 feet
Single drive	15 feet	20 feet
Commercial/Industrial		
Circular drive	15 feet	20 feet
Single drive	30 feet	40 feet

2. Driveway widths exceeding 30 feet shall have a 3/8 inch expansion joint placed at the mid point.
3. No monolithic pours are allowed. Sidewalks, curb & gutter and driveways shall be poured separately with expansion joints as noted.
4. There shall not be more than two driveways on one street for any one ownership. For exceptions see WWMC 12.04.140 C
5. For driveway approaches proposed where sidewalk does not exist, the approach must meet these standards set forth to accommodate the future construction of sidewalk.
6. See Standard Plan 2-7 for material and finish requirements.
7. See Standard Plan 2-5 for street patch requirements.

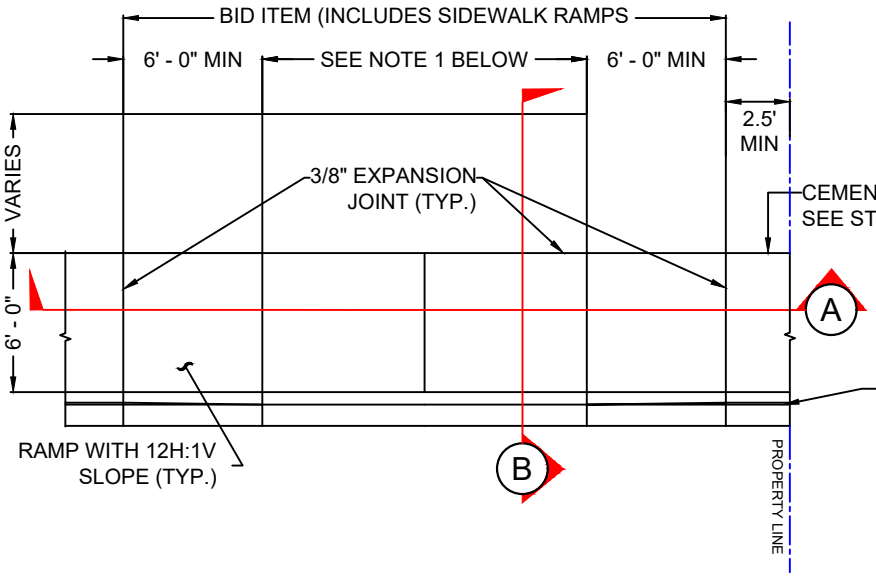
City of Walla Walla

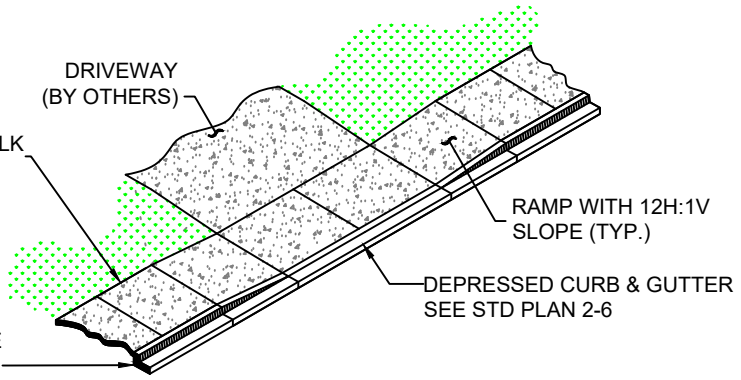
CEMENT CONCRETE DRIVEWAY AND ALLEY APPROACH ALTERNATE # 1

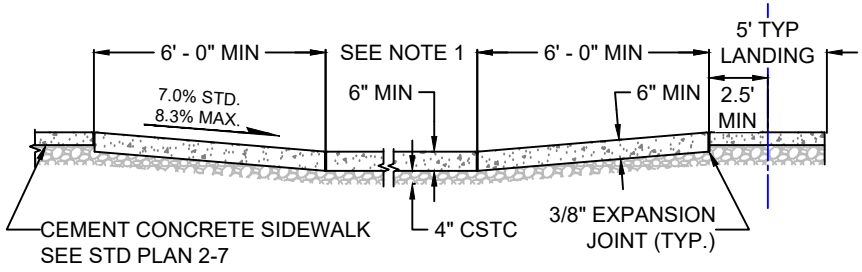
DATE: 01/02/2020

APPROVED BY:

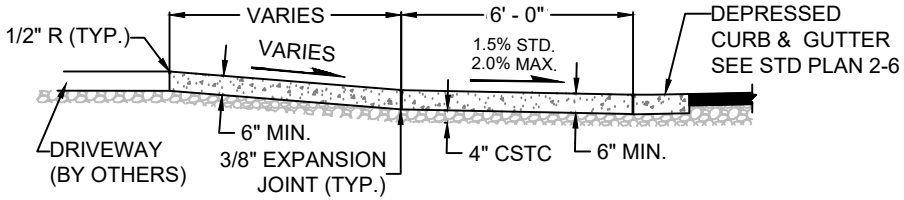
STANDARD PLAN 2-11







A SIDEWALK CROSS-SECTION



B DRIVEWAY APPROACH AND SIDEWALK CROSS-SECTION

NOTES:

1. Driveway widths shall be measured perpendicular to the centerline of the driveway exclusive of the flare. Exceptions to the measurements may be approved by the City Engineer for specific unique reasons:

	Minimum	Maximum
Residential		
Circular drive	15 feet	20 feet
Single drive	15 feet	20 feet
Commercial/Industrial		
Circular drive	15 feet	20 feet
Single drive	30 feet	40 feet

2. Driveway widths exceeding 30 feet shall have a 3/8 inch expansion joint placed at the mid point.
3. No monolithic pours are allowed. Sidewalks, curb & gutter and driveways shall be poured separately with expansion joints as noted.
4. There shall not be more than two driveways on one street for any one ownership. For exceptions see WWMC 12.04.140 C
5. For driveway approaches proposed where sidewalk does not exist, the approach must meet these standards set forth to accommodate the future construction of sidewalk.
6. See Standard Plan 2-7 for material and finish requirements.
7. See Standard Plan 2-5 for street patch requirements.

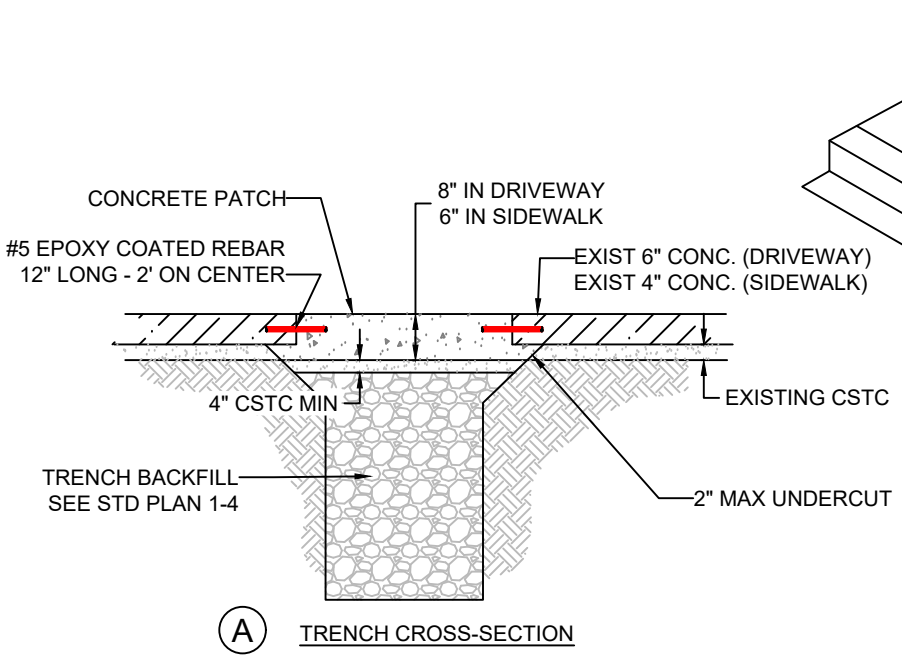
City of Walla Walla

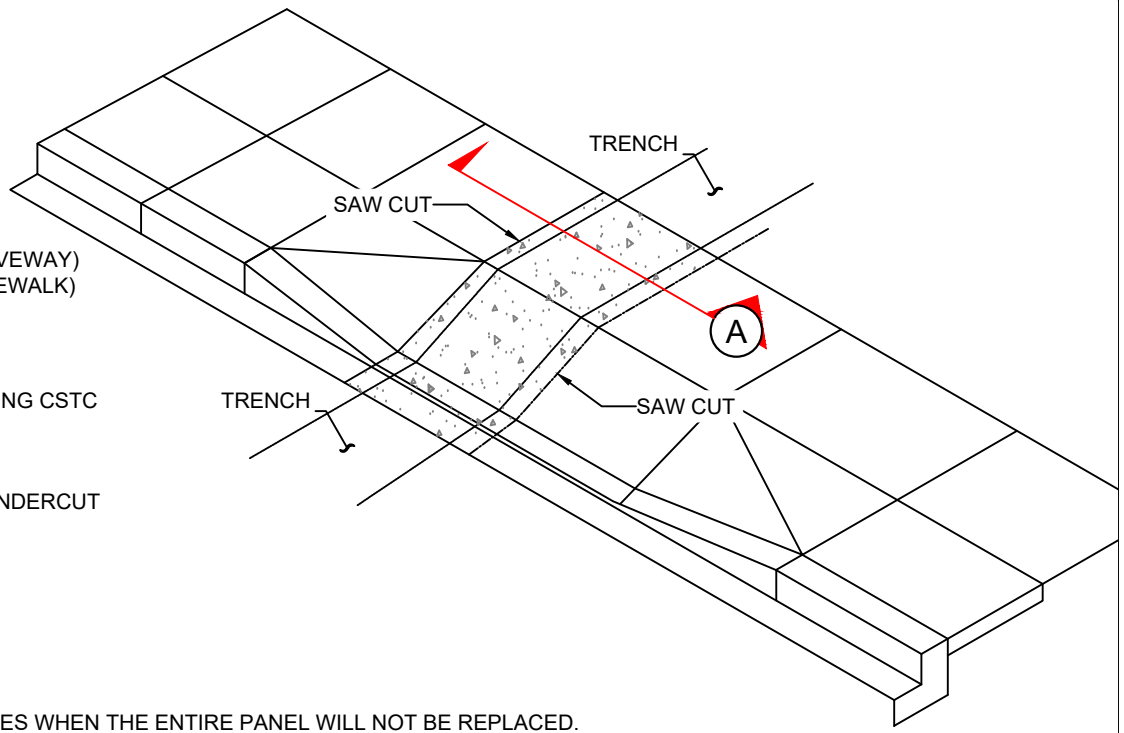
CEMENT CONCRETE DRIVEWAY AND ALLEY APPROACH ALTERNATE # 2

DATE: 12/21/2022

APPROVED BY:

STANDARD PLAN 2-12





THIS DETAIL ONLY APPLIES WHEN THE ENTIRE PANEL WILL NOT BE REPLACED.

NOTES

1) IF THE TRENCH WIDTH IS GREATER THAN ½ OF THE FULL PANEL WIDTH, THEN REMOVE TO THE NEXT JOINT.
2) IF UTILITY CUTS MUST BE CLOSER THAN 2 FEET, THEN REMOVE EXISTING CONCRETE TO THE NEAREST JOINT.
3) IF EXISTING CONCRETE IS UNDERMINED BY MORE THAN 1 FOOT, THEN SAW CUT FULL DEPTH AND REMOVE BACK TO UNDISTURBED SUB-GRADE.
4) SAW CUT OF SIDEWALK AND DRIVEWAY SHALL BE FULL DEPTH AND ONE CUT MUST ABUT AN EXISTING JOINT BEFORE REMOVAL.
5) WHEN PANELS ARE OFFSET OR IRREGULAR IN ANY MANNER, THE CITY ENGINEER SHALL DETERMINE THE PATTERN OF REPLACEMENT.
6) PATCH THICKNESS SHALL BE 8 INCH FOR ALL DRIVEWAYS AND ALLEY APPROACHES, 6 INCH FOR ALL OTHER.
7) ALL CROSSING CONTROL JOINTS SHALL BE RECONNECTED WITH A ½ INCH RADIUS EDGER OR BY SAW CUTTING A DEPTH OF ¼ INCH.
8) CONCRETE SHALL MEET 4000 PSI SPECIFICATION.
9) FORMS SHALL MEET REQUIREMENT OF THE W.S.D.O.T. STANDARD SPECIFICATIONS.
10) CRUSHED SURFACING TOP COURSE MUST BE MOISTURE CONDITIONED BEFORE PLACEMENT AND COMPACTED TO A NON-YEILDING CONDITION.
11) FINISH SHALL BE LIGHT BROOM.
12) COMPACTION OF SUBGRADE SHALL MEET REQUIREMENT OF THE W.S.D.O.T. STANDARD SPECIFICATIONS.
13) SEE STANDARD PLAN 2-7 FOR MATERIAL SPECIFICATION

City of Walla Walla

UTILITY CUT IN SIDEWALK & DRIVEWAY

DATE: 12/30/2016

APPROVED BY:

STANDARD PLAN 2-13

MANHOLE NOTES:

1. STATIONS SHOWN ON PLANS ARE REFERENCED TO MANHOLE CENTERLINES. PIPELINE DIRECTIONAL NOTATION (I.E. N.S.E.W.) AT MANHOLE ARE SHOWN FOR ORIENTATION PURPOSES ONLY.

2. JOINT SEAL MATERIAL SHALL BE TYLOX 'SUPER SEAL' OR APPROVED EQUAL. JOINTS SHALL BE FURTHER SEALED WITH 12" WIDE 'BESTSEAL WRAP' JOINT SEALANT FROM BESTFITT GASKET CO., BESTSEAL WRAP MAY BE OMITTED WITH PRIOR APPROVAL FROM THE CITY ENGINEER.

3. WHERE CONCRETE OR DUCTILE IRON PIPE IS USED, STANDARD COUPLINGS SHALL BE PROVIDED FOR FLEXIBLE CONNECTIONS TO MANHOLES.

4. ALL 'U' SHAPED CHANNEL SHALL BE CONSTRUCTED IN THE MANHOLE BASE BY USE OF A PROPERLY SHAPED FORM.

5. BRANCH LINE INVERTS SHALL NORMALLY BE D/2 ABOVE THE INVERT OF THE MAIN CHANNEL AT THE JUNCTION UNLESS OTHERWISE SPECIFIED ON THE PLANS.

6. CONSTRUCT MANHOLE LID 18" ABOVE EXISTING GROUND IN AREAS OUTSIDE R.O.W. WHEN SHOWN ON PLANS OR REQUIRED BY ENGINEER.

7. NO PICK HOLES IN PRE FORMED MANHOLES. USE PICK BALLS THAT ARE FORMED INTO THE BARRELS.

8. FOR A 48" DIAM. MANHOLE, THE MAXIMUM PIPE SIZE ALLOWABLE IS 21". PIPE DIAMETERS LARGER THAN 21" MUST BE APPROVED BY THE CITY ENGINEER.

9. MANHOLES SHALL BE INSTALLED VERTICAL AND PLUMB IN ALL DIRECTIONS WITH AN OVERALL TOLERENCE OF 1" VERTICAL FOR THE OVERALL MANHOLE.

10. ALL PIPE CONNECTIONS SHALL BE SEALED ON THE INTERIOR OF THE MANHOLE WITH NON-SHRINK GROUT.

11. USE THE FEWEST ADJUSTMENT RINGS / LARGEST SIZE POSSIBLE TO ACHIEVE DESIRED HEIGHT. WHERE ADJUSTMENT HEIGHT IS LESS THAN 6", USE NO MORE THAN TWO RINGS. WHERE ADJUSTMENT IS BETWEEN 6" AND 15", USE NO MORE THAN THREE RINGS.

12. ALL CONNECTIONS TO EXISTING MANHOLES SHALL UTILIZE A SAND COLLAR

CAST IN PLACE MANHOLE BASE NOTES:

1. SEE STANDARD PLAN 3-7 FOR MANHOLE CONSTRUCTION ON EXISTING SEWER.

2. PRE CAST BASES SHALL BE USED WHENEVER POSSIBLE. IF NECESSARY TO CAST IN PLACE AND WITH ENGINEER'S APPROVAL, USE CLASS 4000 CONCRETE.

3. PLACE 20 SQUARE FEET OF VISQUEEN BEFORE POURING BASE WHEN GROUNDWATER EXISTS.

4. LOWER PRE CAST CONCRETE BARREL ONTO CMU BLOCKS AND LEVEL BEFORE CONCRETE IS PLACED.

5. ALLOW A MINIMUM OF 24 HOURS TO ELAPSE BEFORE PLACING REMAINING RINGS AND CONE.

SANITARY SEWER MAIN AND SERVICE NOTES:

1. ALL SEWER MAINS, LATERALS, AND FITTINGS IN THE ROW SHALL BE PVC 3034 SDR 35 UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

2. EXISTING SEWER REHABILITATION CONNECTIONS SHALL BE WITH REINFORCED COUPLINGS. REINFORCED COUPLINGS SHALL BE INDIANA SEAL-AMAZON SHEAR RING COUPLING, FERNCO-STRONGBACK COUPLING, OR APPROVED EQUAL.

3. SEWER LINE PAY LIMIT SHALL BE MEASURED HORIZONTALLY FROM CENTER TO CENTER OF MANHOLE.

WATER - SANITARY SEWER CROSSING NOTES:

1. A MINIMUM OF 24" VERTICAL SEPARATION IS REQUIRED AT WATER AND SEWER CROSSINGS.

2. WHERE SEWER IS TO CROSS UNDER A WATER MAIN WITH LESS THAN 24" SEPARATION, A FULL STICK OF SEWER PIPE MUST BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN.

3. WHERE SEWER IS TO CROSS OVER A WATER MAIN, THE SEWER SHALL BE CASED IN EITHER C900 OR DUCTILE IRON USING CASING SPACERS AND GROUTED ENDS. SEE STANDARD PLAN 4-12 FOR CASING SPACER REQUIREMENTS.

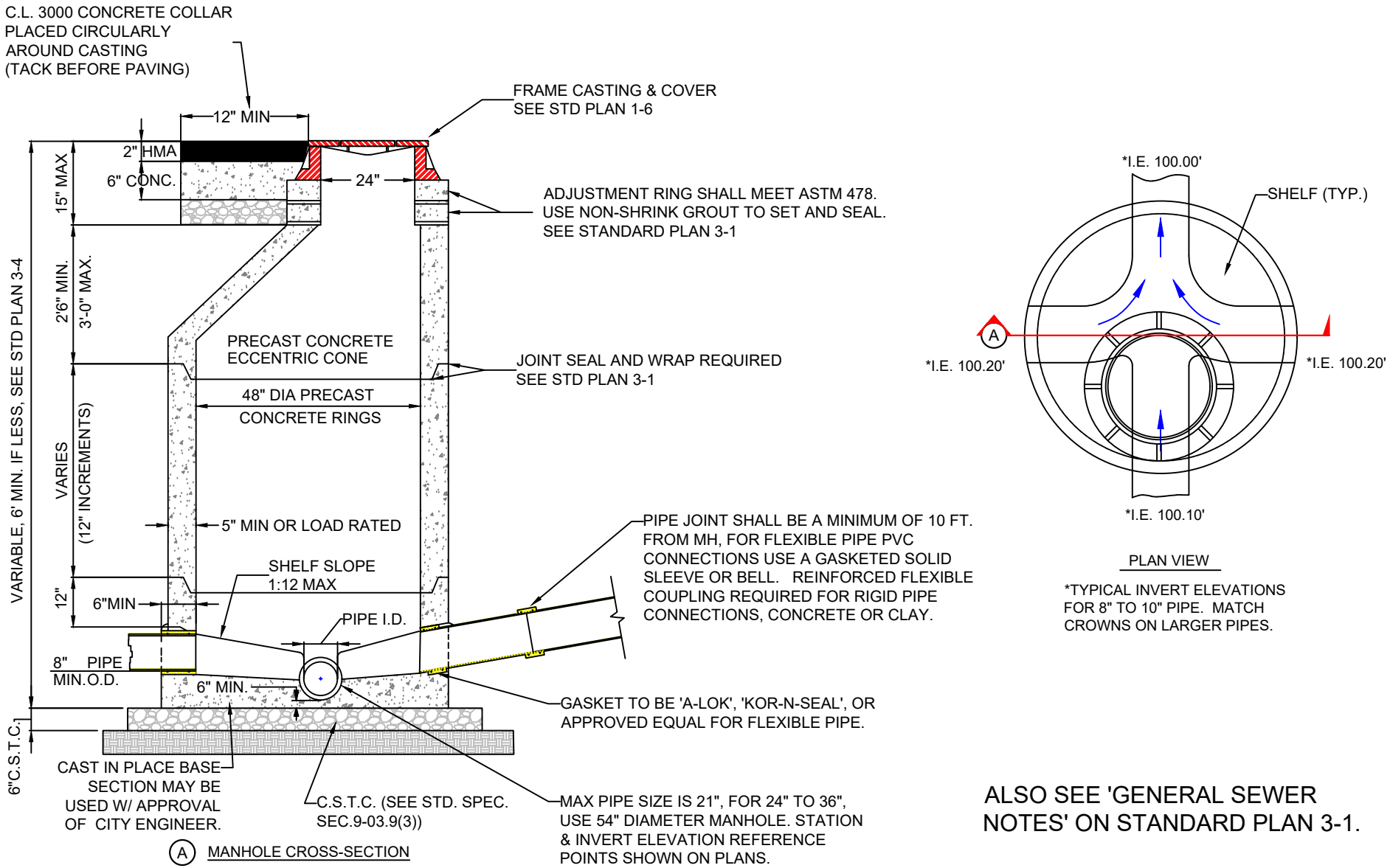
City of Walla Walla

GENERAL SEWER NOTES

DATE: 12/21/2022

APPROVED BY:

STANDARD PLAN 3-1



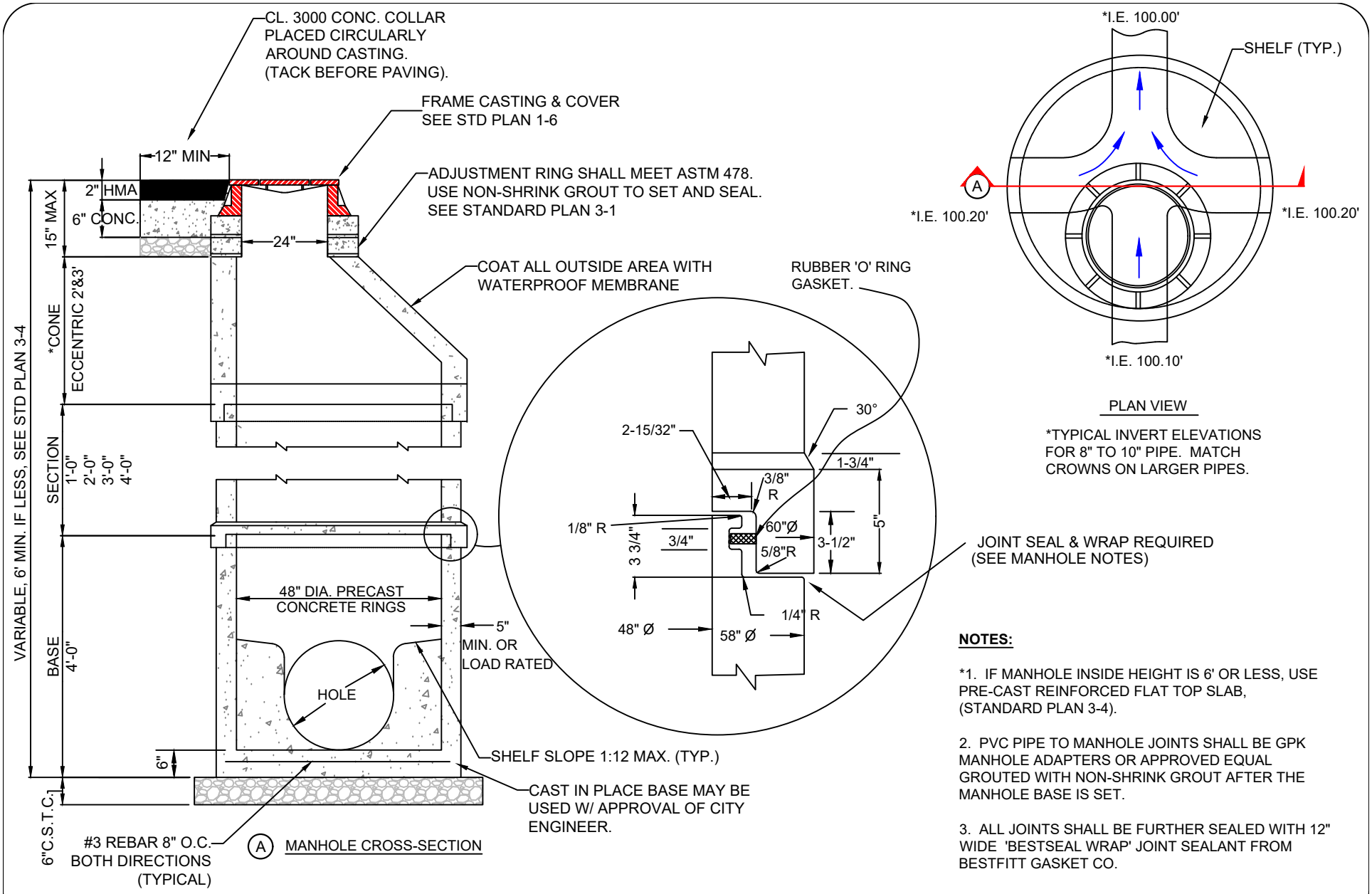
City of Walla Walla

STANDARD MANHOLE

DATE: 12/23/2020

APPROVED BY:

STANDARD PLAN 3-2



NOTES:

*1. IF MANHOLE INSIDE HEIGHT IS 6' OR LESS, USE PRE-CAST REINFORCED FLAT TOP SLAB, (STANDARD PLAN 3-4).

2. PVC PIPE TO MANHOLE JOINTS SHALL BE GPK MANHOLE ADAPTERS OR APPROVED EQUAL GROUTED WITH NON-SHRINK GROUT AFTER THE MANHOLE BASE IS SET.

3. ALL JOINTS SHALL BE FURTHER SEALED WITH 12" WIDE 'BESTSEAL WRAP' JOINT SEALANT FROM BESTFITT GASKET CO.

(ALSO SEE 'MANHOLE NOTES' ON STANDARD PLAN 3-1)

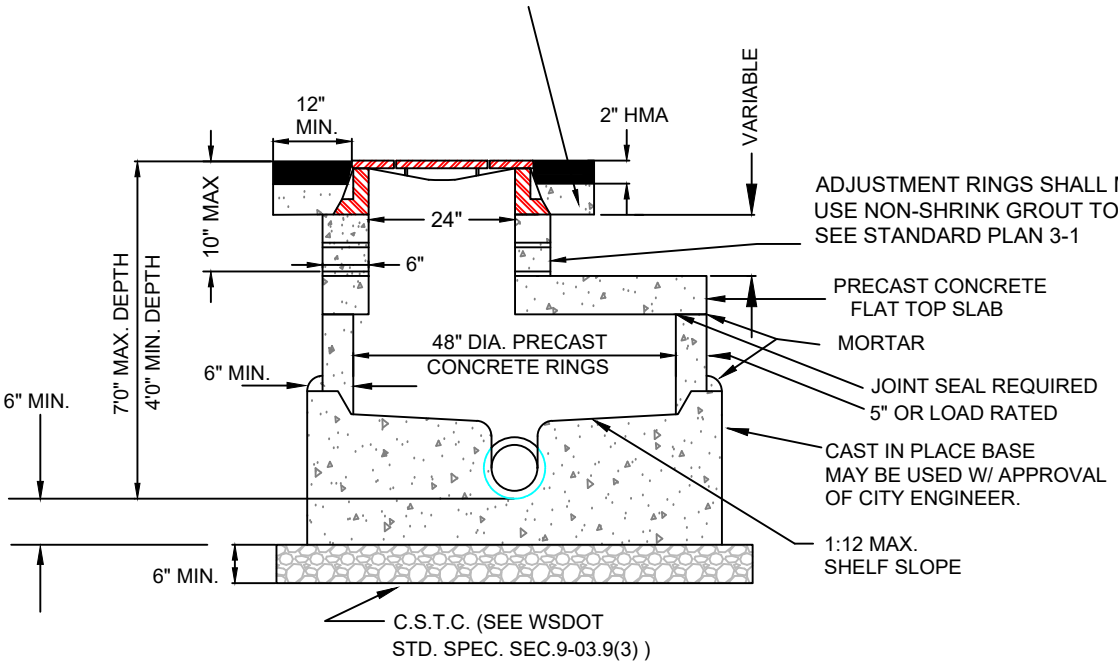
City of Walla Walla

MANHOLE - HIGH GROUNDWATER

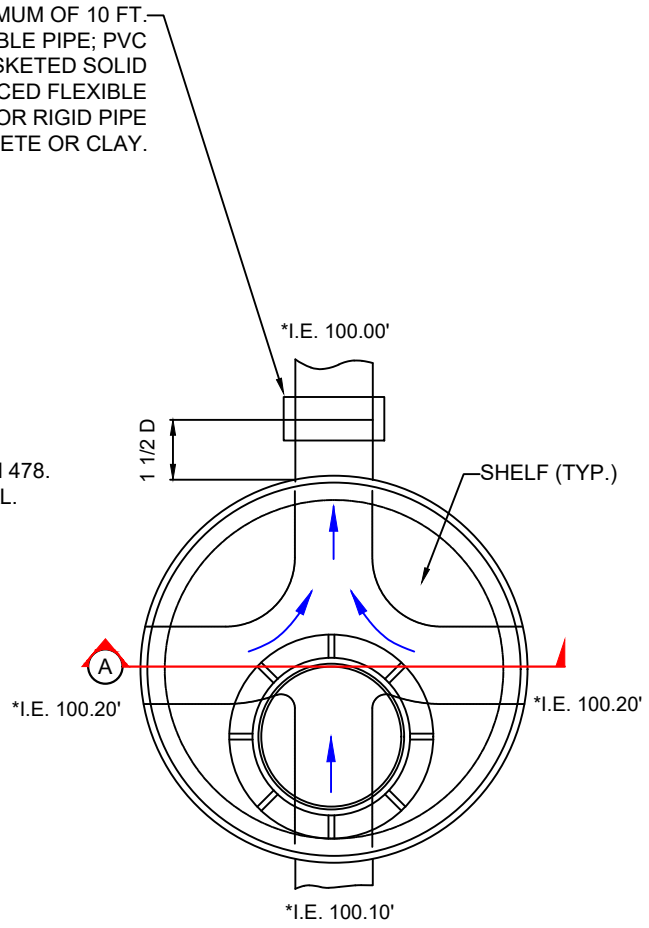
DATE: 12/23/2021

APPROVED BY:

STANDARD PLAN 3-3



A MANHOLE CROSS-SECTION



PLAN VIEW

*TYPICAL INVERT ELEVATIONS FOR 8" TO 10" PIPE. MATCH CROWNS ON LARGER PIPES.

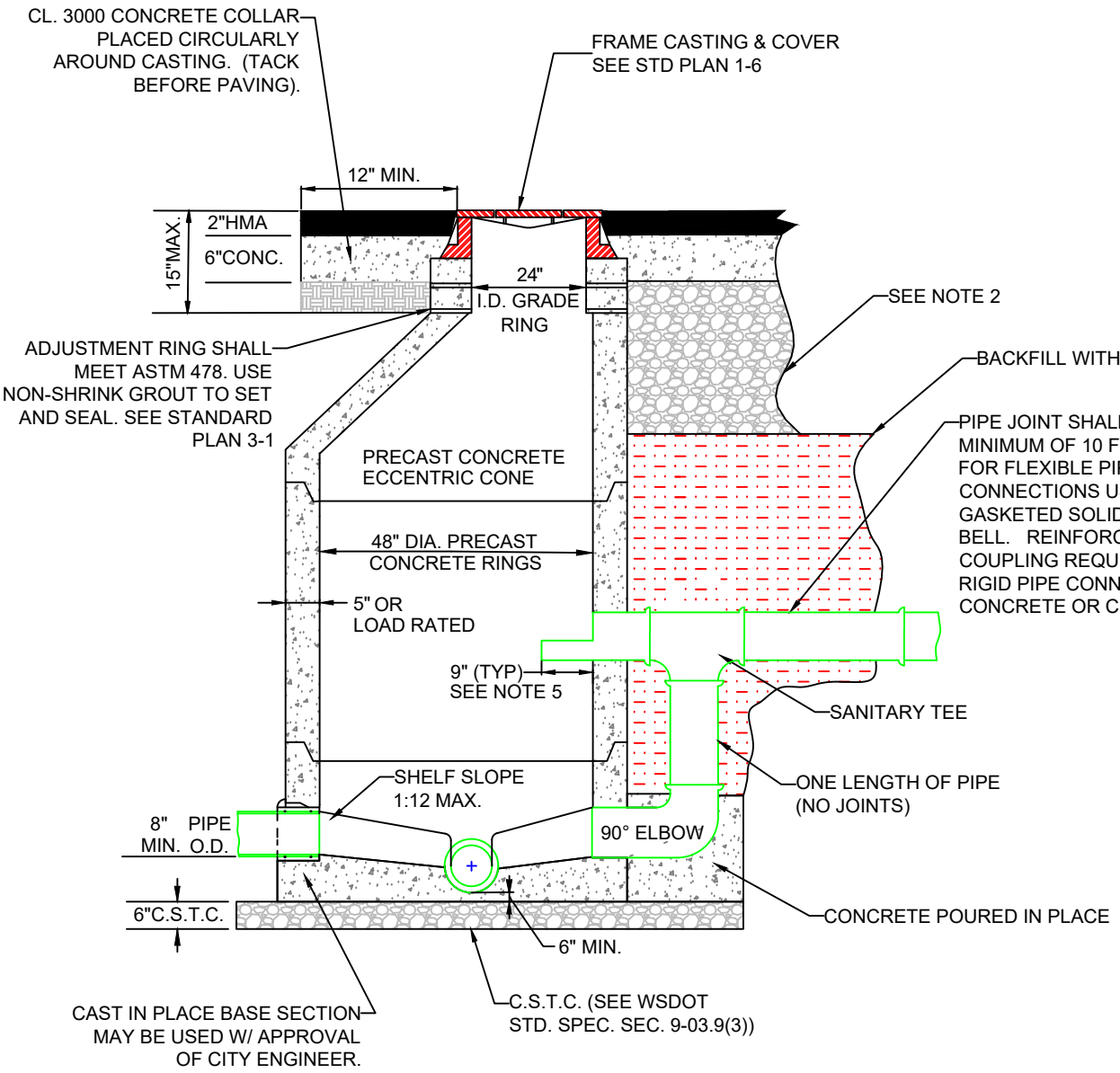
City of Walla Walla

SHALLOW MANHOLE

DATE: 01/16/2018

APPROVED BY:

STANDARD PLAN 3-4



NOTES:

1. DROP PIPING TO BE SAME DIAMETER AS SEWER LINE SERVED UNLESS OTHERWISE NOTED.
2. IMPORTED GRANULAR BACKFILL MATERIAL COMPACTED TO 95% OF MAX DENSITY ASTM D698.
3. DROP CONNECTION PIPE DIAMETER AND FITTINGS SHALL BE EQUAL TO OR GREATER THAN THE DIAMETER OF THE SEWER MAIN.
4. SEE 'GENERAL SEWER NOTES' ON STD PLAN 3-1 & 3-2.
5. ACCESSIBILITY BELOW SHALL NOT BE OBSTRUCTED.

City of Walla Walla

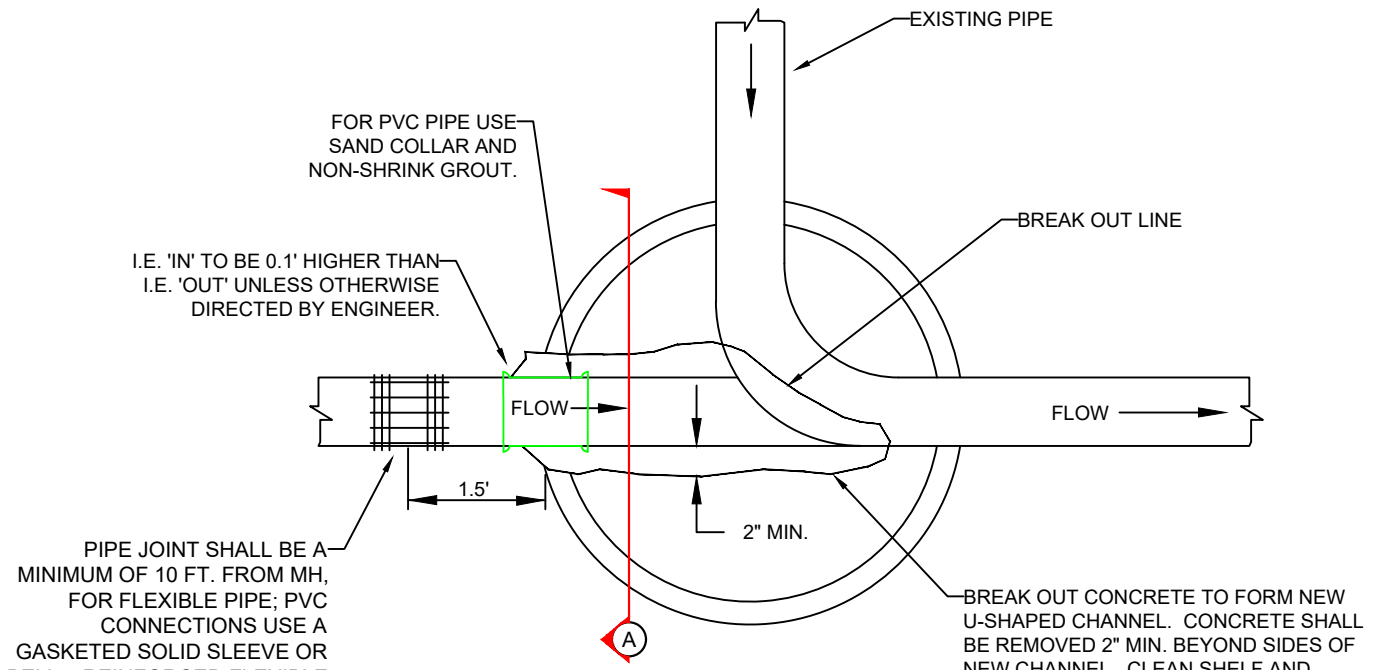
DROP MANHOLE - EXTERIOR

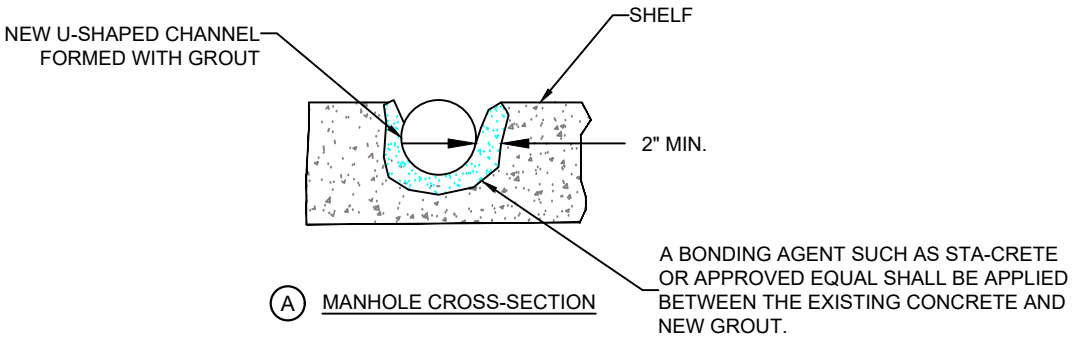
DATE: 04/05/2023

APPROVED BY:

STANDARD PLAN 3-5

PLAN





(A) MANHOLE CROSS-SECTION

City of Walla Walla

SEWER CONNECTION TO EXISTING MANHOLE

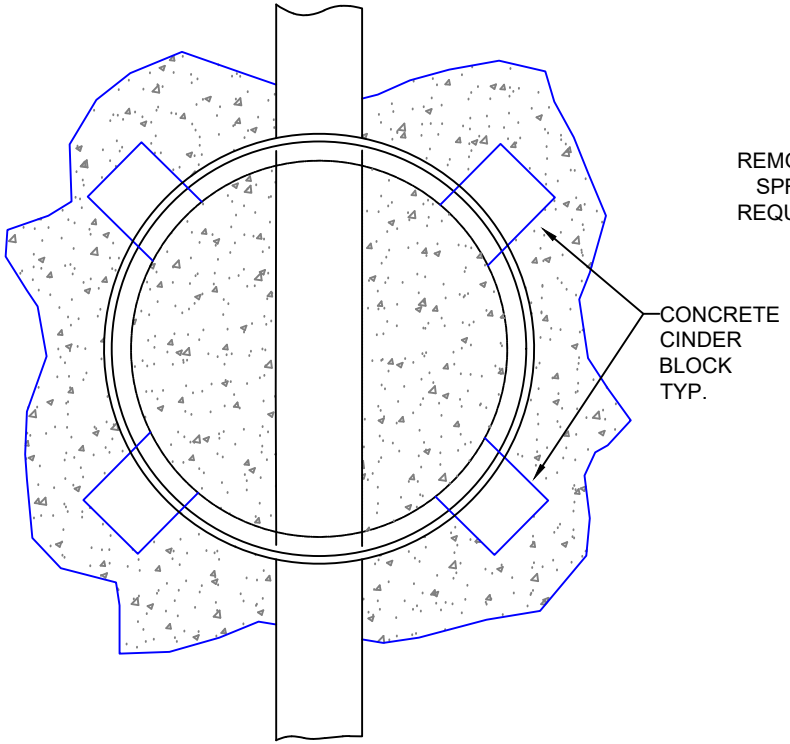
DATE: 12/21/2022

APPROVED BY:

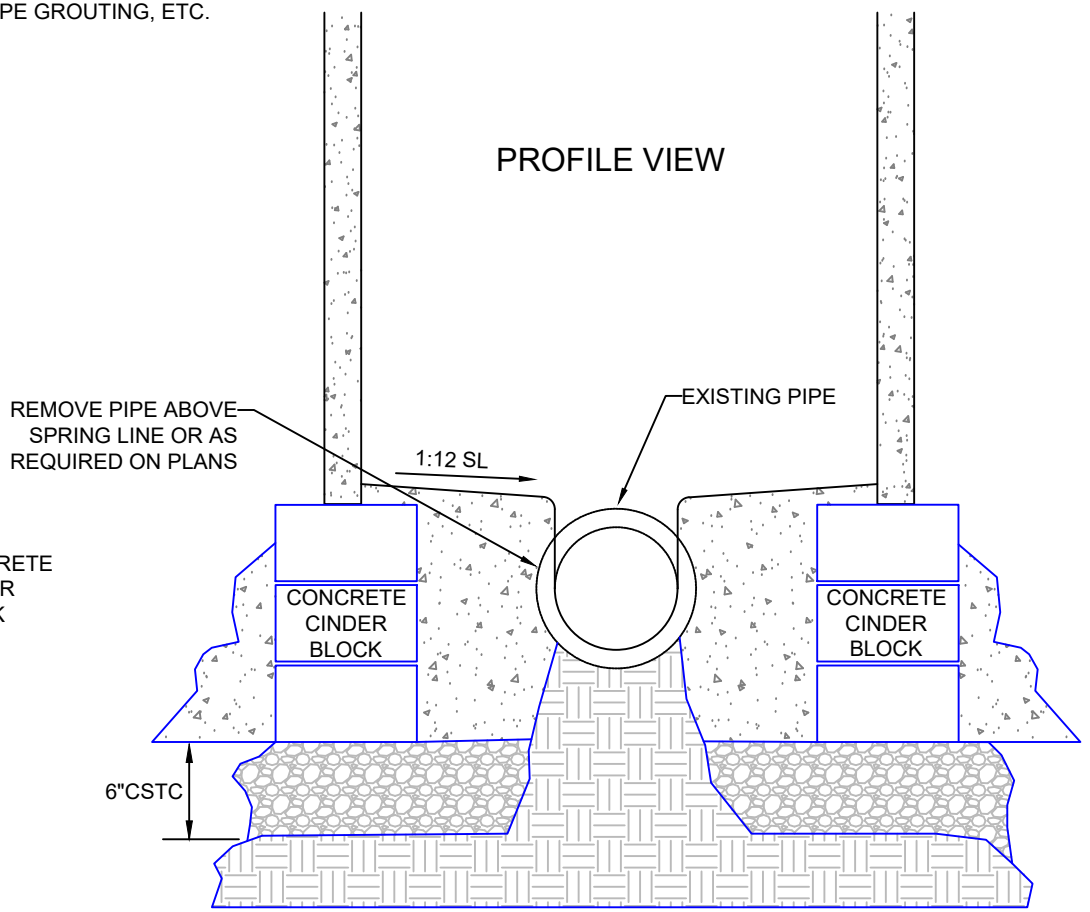
STANDARD PLAN 3-6

ALSO SEE 'GENERAL SEWER NOTES' ON STANDARD PLAN 3-1, AND STANDARD PLAN 3-2 FOR CONCRETE, CONNECTIONS, CHANNELING, PIPE GROUTING, ETC.

PLAN VIEW



PROFILE VIEW



CLEAN EXISTING PIPE WITH WIRE BRUSH & APPLY A COAT OF "BONDCRETE" ON ALL PIPE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED.

EARTH BRIDGE ONLY AVAILABLE WHEN EXISTING PIPE IS UNSTABLE. OTHERWISE SUPPORT PIPE WITH 6" CSTC.

City of Walla Walla

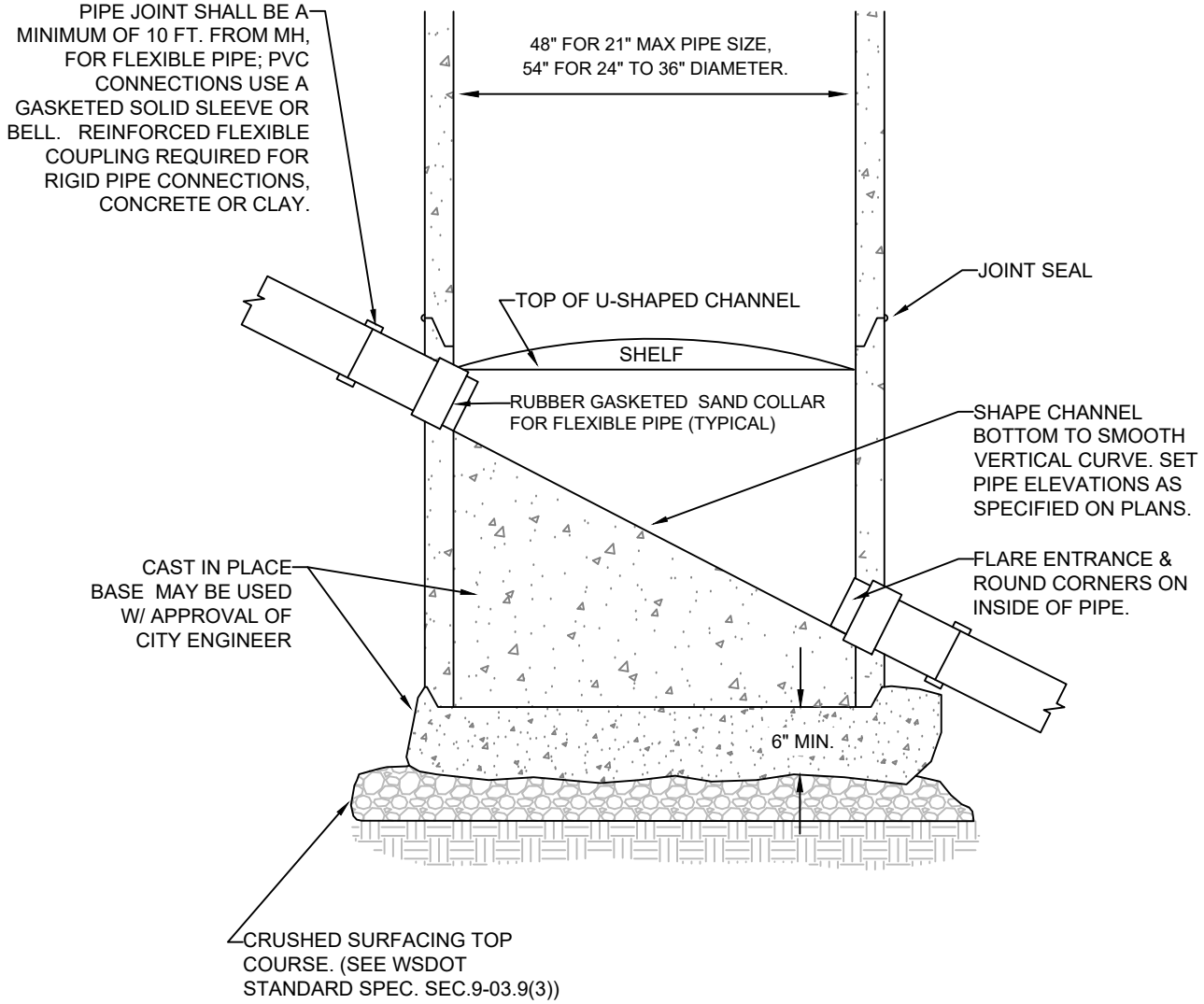
MANHOLE CONSTRUCTION ON EXISTING SEWER

DATE: 12/30/2016

APPROVED BY:

STANDARD PLAN 3-7

ALSO SEE 'GENERAL SEWER NOTES' ON STANDARD PLAN 3-1, AND STANDARD PLAN 3-2 FOR CONCRETE, CONNECTIONS, CHANNELING, PIPE GROUTING, ETC.



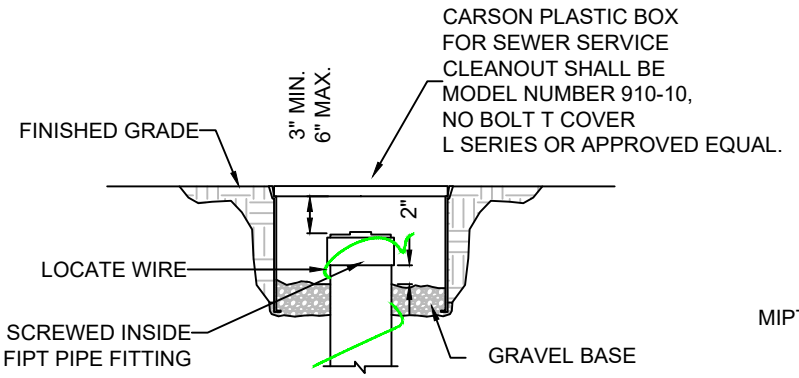
City of Walla Walla

MANHOLE BASE CONST. FOR STEEP SLOPES

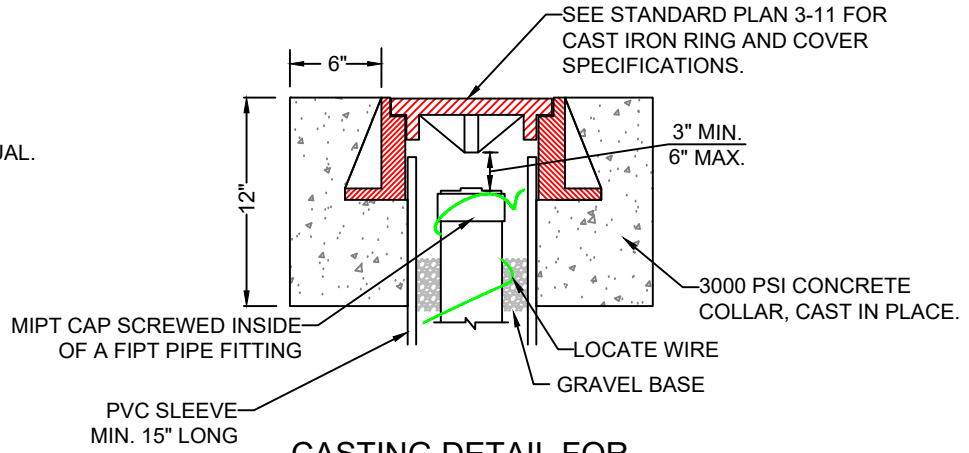
DATE:
01/16/2018

APPROVED BY:

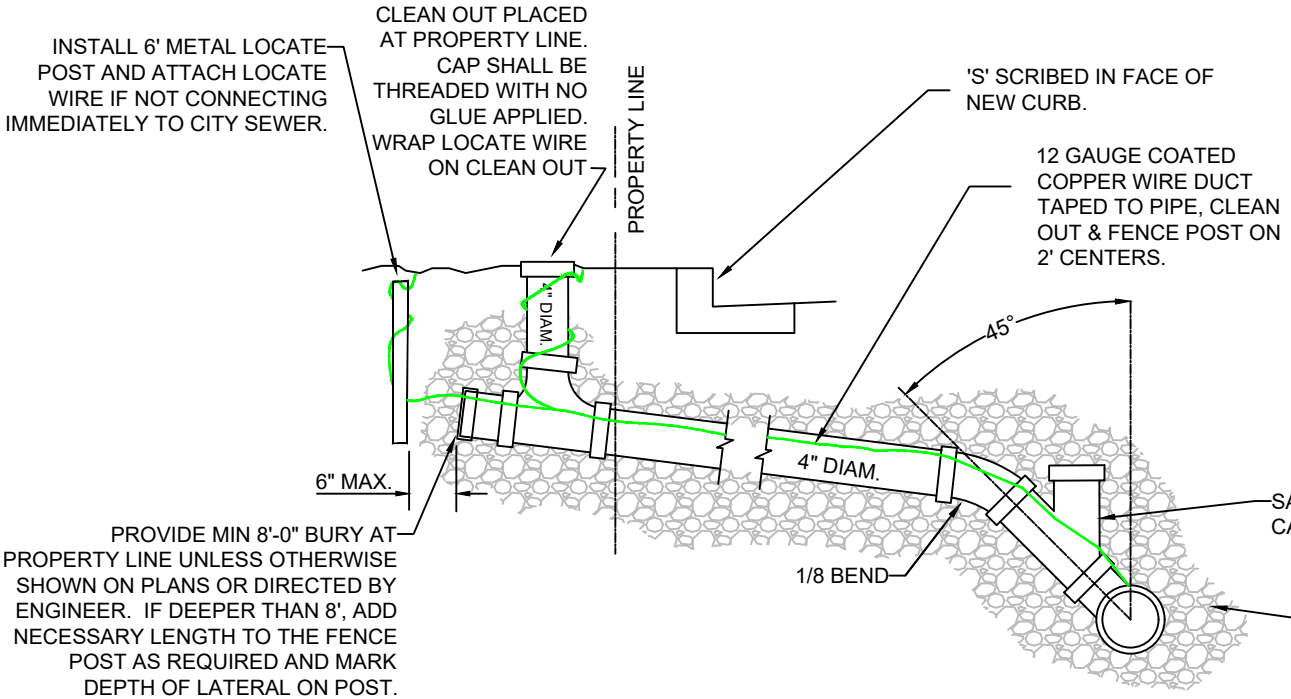
STANDARD PLAN
3-8



CASTING DETAIL FOR
CLEANOUTS IN LANDSCAPE AREAS



CASTING DETAIL FOR
CLEANOUTS IN HARDSCAPE AREAS



NOTES:

1. LATERALS CONNECTING TO NEW MAINS SHALL BE CONNECTED WITH WYE.

2. LATERALS CONNECTING TO EXISTING MAINS SHALL BE CONNECTED WITH "ROMAC CB", "INSERTA TEE", OR APPROVED EQUAL.

3. MAINS, LATERALS & FITTINGS IN THE ROW SHALL BE PVC 3034 SDR 35.

4. SERVICES AT A DEPTH OF 12 FEET OR GREATER SHALL USE SDR 26 FITTINGS. FITTINGS SHALL BE FIELD INSPECTED BY THE CITY PRIOR TO INSTALLATION.

5. HDPE MAY BE SUBSTITUTED FOR PVC FOR SEWER SERVICE REPAIRS USING PIPE BURSTING OR LONGITUDINAL BORE, UPON APPROVAL BY THE CITY ENGINEER.

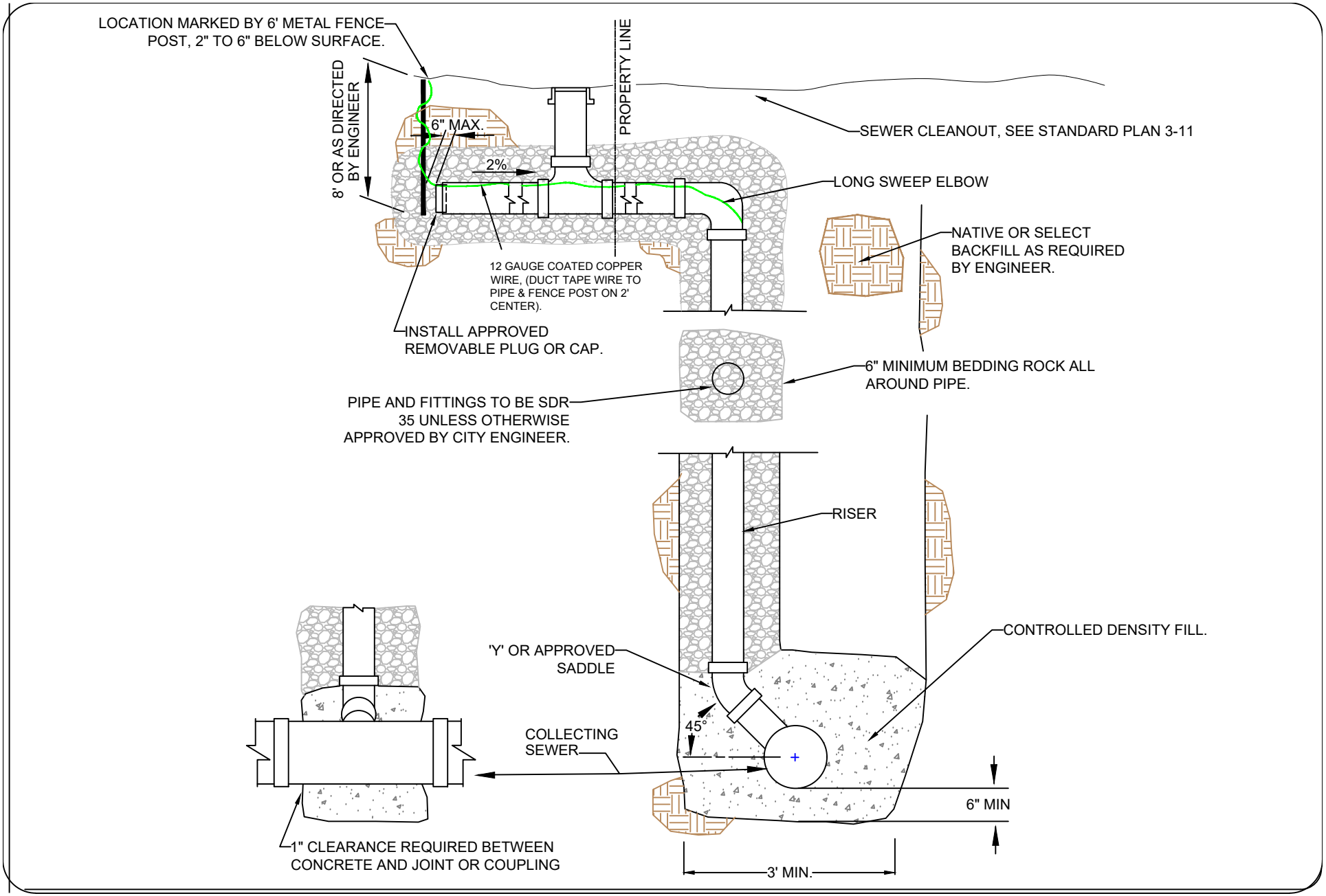
City of Walla Walla

SANITARY SEWER LATERAL AND CLEANOUT

DATE:
01/11/2024

APPROVED BY:

STANDARD PLAN
3-9



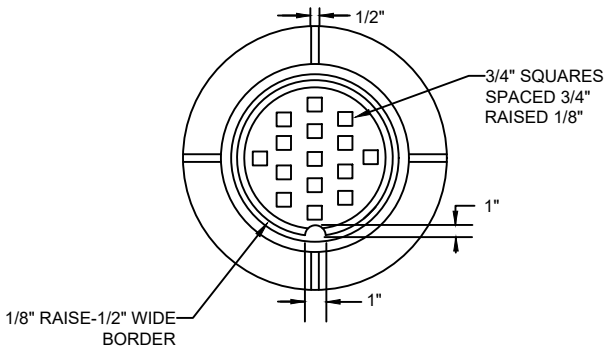
City of Walla Walla

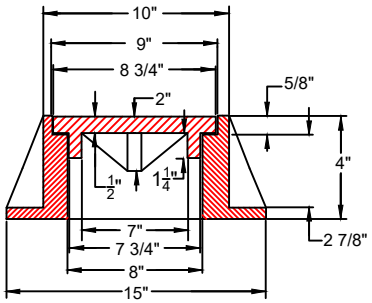
SERVICE CONNECTION OPTION FOR DEEP SEWER

DATE:
01/11/2024

APPROVED BY:

STANDARD PLAN
3-10



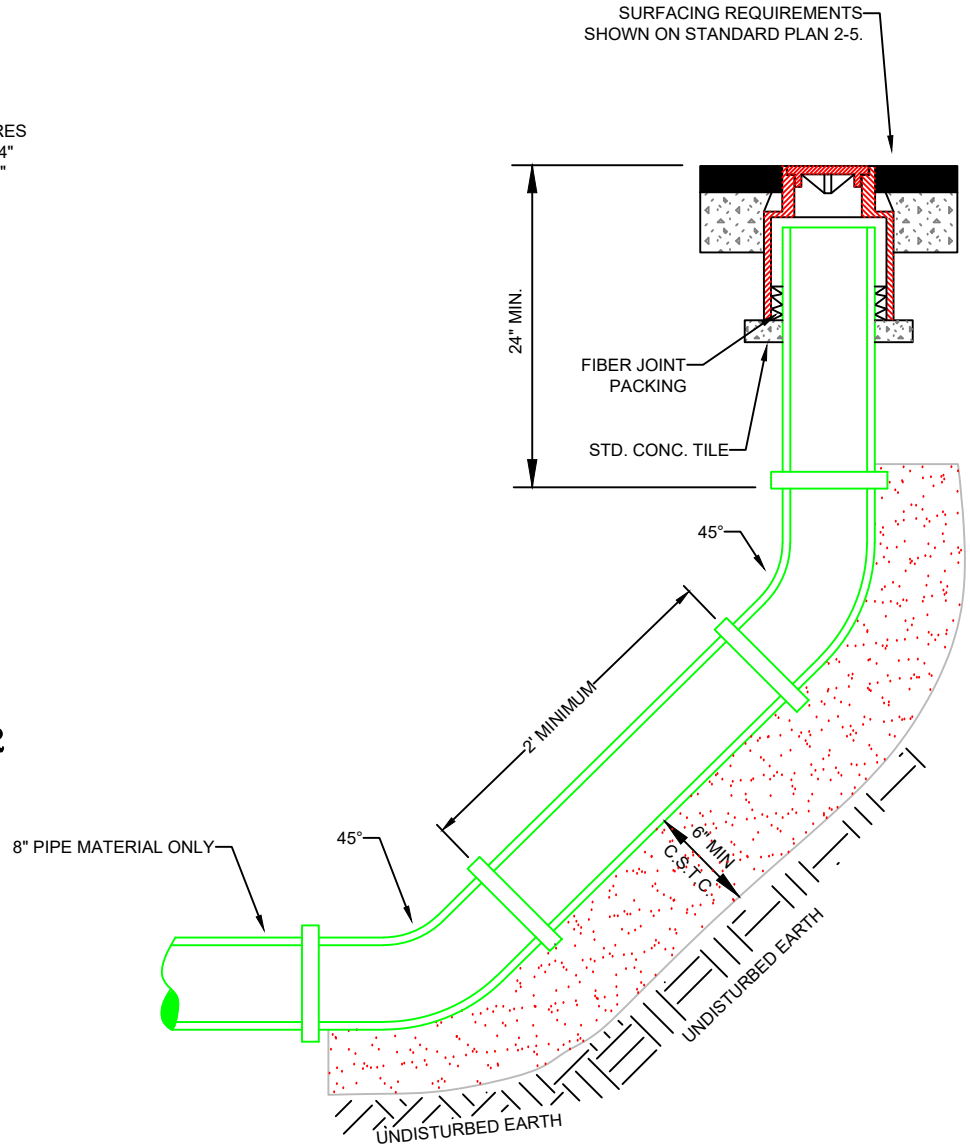


CAST IRON RING & COVER

INLAND FOUNDARY CO. RING & COVER
NO. 247 OR APPROVED EQUAL

RING AND COVER TO MEET REQUIREMENTS
OF THE CURRENT WSDOT STANDARD
SPECIFICATIONS SECTION 9-05.15

UNIT WEIGHT 64 POUNDS MINIMUM



CLEANOUTS ON MAINS ONLY ALLOWED WHEN APPROVED BY CITY ENGINEER

City of Walla Walla

SANITARY SEWER MAIN CLEANOUT

DATE:
12/30/2016

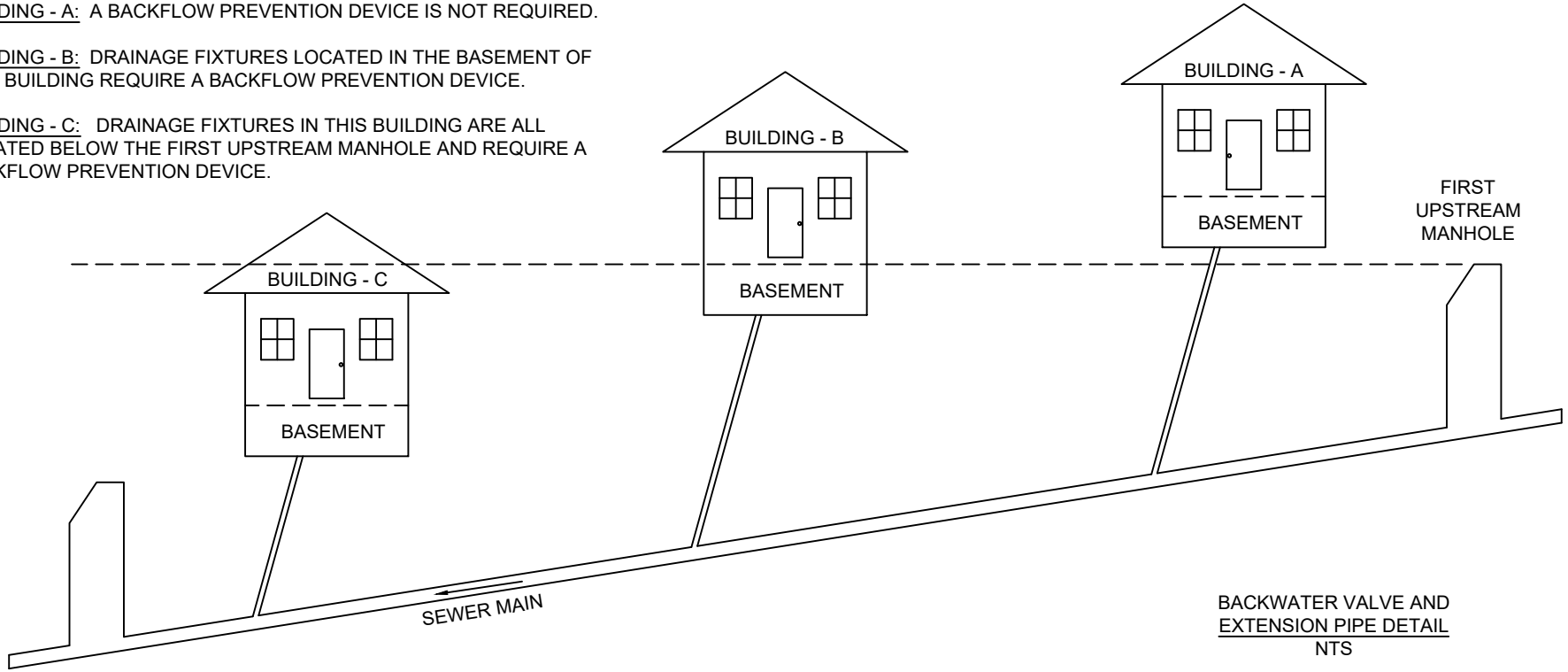
APPROVED BY:

STANDARD PLAN
3-11

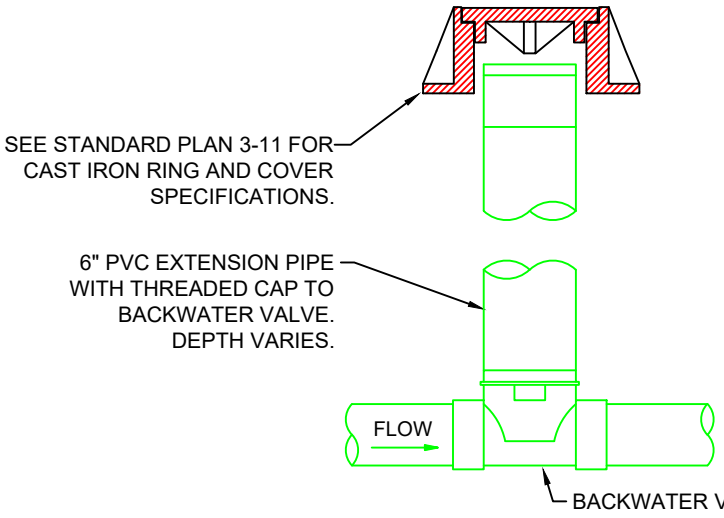
BUILDING - A: A BACKFLOW PREVENTION DEVICE IS NOT REQUIRED.

BUILDING - B: DRAINAGE FIXTURES LOCATED IN THE BASEMENT OF THIS BUILDING REQUIRE A BACKFLOW PREVENTION DEVICE.

BUILDING - C: DRAINAGE FIXTURES IN THIS BUILDING ARE ALL LOCATED BELOW THE FIRST UPSTREAM MANHOLE AND REQUIRE A BACKFLOW PREVENTION DEVICE.



BACKWATER VALVE AND
EXTENSION PIPE DETAIL
NTS



NOTES:

1. IF RIM (LID) OF THE NEAREST UPSTREAM MANHOLE IS HIGHER THAN THE HOUSE OR THE BASEMENT FLOOR, THEN A BACKFLOW PREVENTION DEVICE IS REQUIRED PER 2015 UNIFORM PLUMBING CODE SECTION 710.1.

2. BACKFLOW PREVENTION DEVICE SHALL BE A SIOUX CHIEF PROCHECK BACKWATER VALVE OR APPROVED EQUAL.

City of Walla Walla

SANITARY SEWER LATERAL BACKFLOW PREVENTION

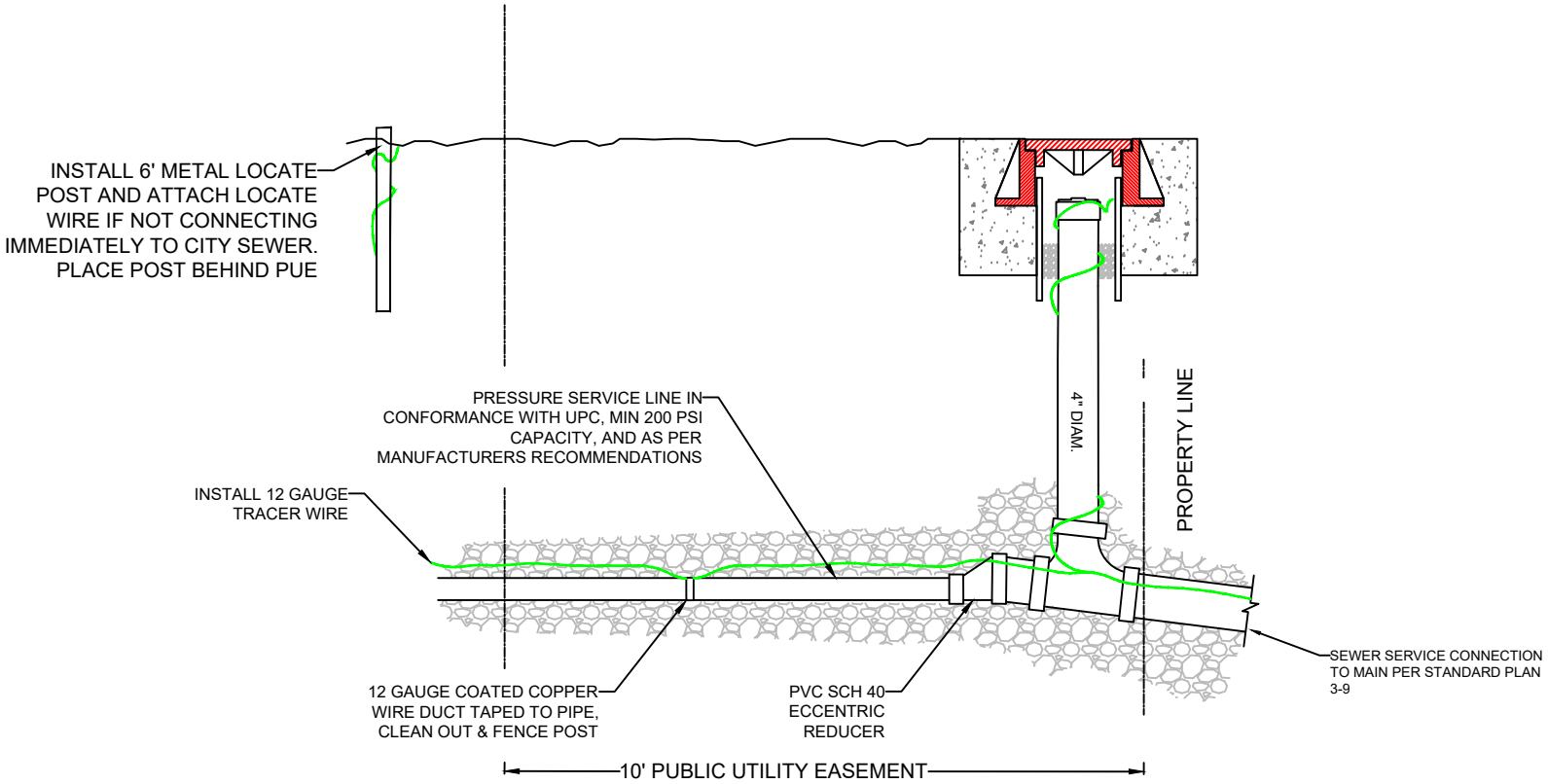
DATE:
01/16/2018

APPROVED BY:

STANDARD PLAN
3-12

NOTES:

1. 10' MINIMUM SECTION OF 4' SEWER SERVICE PIPE SHALL BE LAID AT MIN 1/4 " FT WHICH POINT THE PRESSURE SEWER IS TO BE CONNECTED TO SEWER SERVICE LINE WITH AN ECCENTRIC REDUCER
2. A SERVICE CLEANOUT SHALL BE INSTALLED IN 4" SERVICE LINE JUST DOWNSTREAM OF THE REDUCER.
3. PRIVATE PRESSURE SERVICE LINE SHALL BE OF MATERIAL AND SIZE PER PUMP MANUFACTURES RECOMMENDATION.
4. 2" MINIMUM WIDTH GREEN PLASTIC COATED ALUMINUM PIPE LOCATOR RIBBON OVER THE TOP PF THE PRESSURE SEWER SERVICE MARKED "CAUTION BURIED SEWER LINE" CONTINUOUSLY ALONG THE LENGTH OF THE SEWER SERVICE SHALL BE PLACED APPROXIMATELY 24" BELOW FINISHED GRADE.
5. 12 GAGE SOLID COOPER WIRE, 600V WITH GREEN UF INSTALLATION NOMINAL THICKNESS 0.06". WIRE SHALL BE BROUGHT TO SURFACE AT PUMP LOCATION AND CLEAN OUT AT TRANSITION FROM 4" SERVICE LINE.
6. MINIMUM VERTICAL CLEARANCE TO WATER LINE OF 12" IS REQUIRED



City of Walla Walla

PRESSURE SEWER CONNECTION

DATE: 03/03/2020

APPROVED BY:

STANDARD PLAN 3-13

1. PIPE:
   ALL PIPE FOR WATER MAINS SHALL BE DUCTILE IRON OR PVCO (C909). PIPE 6" AND SMALLER SHALL BE CLASS 52 AND PIPE 8" AND LARGER SHALL BE CLASS 50. PVCO PIPES 6"-12" SHALL BE PRESSURE CLASS 235 PSI . PVCO PIPE 16" SHALL BE PRESSURE CLASS 165 PSI. ALL PVCO GASKETS SHALL BE RIEBERLOK RESTRAINING GASKETS. ALL PIPES, FITTINGS AND RELATED PRODUCTS INSTALLED, WHICH CONTACT CITY WATER, MUST CONFORM TO NSF/ANSI STANDARD 61. THE MAINLINE COVER DEPTH SHALL BE A MINIMUM OF 36".

2. TRACER WIRE:
   ALL PVCO PIPE SHALL HAVE TRACER WIRE. TRACER-LOCK CONNECTOR, OR APPROVED EQUAL, SHALL BE USED FOR SERVICES, HYDRANTS,T-CONNECTIONS, AND VALVE CLUSTERS. SPLICING ONLY WITH TRACER LOCK CONNECTORS. SEE STANDARD PLAN 4-1c

3. IDENTIFYING TAPE:
   IDENTIFYING TAPE SHALL BE USED WITH ALL WATER MAINS AS PER STANDARD PLAN 1-5.

4. RESTRAINED JOINTS:
   THRUST BLOCKS SHALL NOT BE USED UNLESS SPECIFICALLY AUTHORIZED BY WATER DISTRIBUTION SUPERVISOR OR CITY ENGINEER. RESTRAINED JOINTS SHALL BE MEGALUG, FIELD-LOK, OR APPROVED EQUAL. FOR DUCTILE IRON, A MINIMUM OF THREE JOINTS SHALL BE RESTRAINED FROM EACH FITTING, EACH WAY.FOR PVCO, ALL PIPE JOINTS SHALL BE RESTRAINED

5. WATER SYSTEM SHUTDOWNS:
   THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE WATER DIVISION 5 FULL WORKING DAYS IN ADVANCE OF A REQUESTED SHUTDOWN FOR RESIDENTIAL SERVICES. SEVEN FULL WORKING DAYS OF ADVANCE NOTICE ARE REQUIRED WHERE COMMERCIAL SERVICES ARE AFFECTED. A WORKING DAY SHALL BEGIN AT 8AM. A MINIMUM OF 24 HOURS IN ADVANCE OF THE SHUTDOWN (72 HOURS FOR RESTAURANTS, HOTELS, ETC.), THE CONTRACTOR SHALL DISTRIBUTE NOTICES (SUPPLIED BY WATER DIVISION) TO THE EFFECTED WATER USERS. THE WATER DIVISION WILL DETERMINE THE REQUIRED SHUTDOWN AREA AND SHALL TURN ALL MAIN DISTRIBUTION VALVES. SERVICE VALVES SHALL BE TURNED BY THE CONTRACTOR.

6. POLYETHYLENE SLEEVING:
   ALL DUCTILE IRON WATER MAIN SHALL BE PROTECTED BY POLYETHYLENE SLEEVING IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.

7. WATER MAIN TAPPING:
   ALL TAPS ON EXISTING AND/OR CHARGED WATER MAINS MUST BE PERFORMED BY THE CITY OF WALLA WALLA WATER DEPARTMENT. THE OWNER / CONTRACTOR/ OR AUTHORIZED AGENT IS REQUIRED TO REIMBURSE THE WATER DEPARTMENT FOR EXPENSES AT COST OF THE UTILITY. WHEN A TAP MUST BE PERFORMED ON A WATER MAIN 3" IN DIAMETER AND LARGER, A ROMAC SST STAINLESS STEEL TAPPING SLEEVE WITH DUCTILE IRON OR STAINLESS STEEL FLANGE MUST BE USED. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

8. WATER VALVES:
   RESILIENT SEAT GATE VALVES TO BE INSTALLED ON ALL BRANCHES AND AT ALL INTERSECTIONS FOR 4"-10" DIAMETER PIPING. BUTTERFLY VALVES TO BE USED FOR 12" AND LARGER DIAMETER VALVES. DEPTH TO TOP OF NUT ON VALVE SHALL BE FOUR FEET OR LESS. IF DEPTH EXCEEDS FOUR FEET A NUT EXTENSION SHALL BE USED. EXTENSION SHALL HAVE A SET SCREW TO ATTACH TO NUT AND CENTERING RING ON THE TOP OF THE EXTENSION. THIS SHALL BE STANDARD UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

9. DISINFECTION AND TESTING REQUIREMENTS:
   FOR ALL NEW INSTALLATIONS OF WATER MAIN, CONTRACTOR SHALL BE RESPONSIBLE TO MEET ALL DISINFECTION AND TESTING REQUIREMENTS (SEE STANDARD PLAN 4-2). A MAXIMUM LENGTH OF 750 FEET PER TEST SECTION SHALL BE ALLOWED WHEN PRESSURE TESTING UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. . AN ENGINEERING REPRESENTATIVE SHALL BE PRESENT FOR ALL TESTING.

10. WORK DAYS:
    NO MAIN WATER LINE WILL BE INSTALLED DURING THE WEEKEND OR ANY HOLIDAY UNLESS APPROVED BY THE CITY ENGINEER

City of Walla Walla

GENERAL WATER MAINS AND SERVICE NOTES

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 4-1a

HDPE WATER SERVICE LINES

ALL HDPE PIPE AND TUBING SHALL COMPLY WITH THE FOLLOWING STANDARDS AND SPECIFICATIONS:

ANSI/AWWA C901 OR C906
NSF 61/14.
PPI PE 4710, SDR9, CC3

PRESSURE RATING:

200 PSI OR HIGHER.

SIZE:

HDPE MAY BE ACCEPTED FOR WATER SERVICE LINES 1-INCH OR 2-INCH IN DIAMETER ONLY.
HDPE SHALL BE CTS, OUTSIDE CONTROL DIAMETER PER ASTM D 3035.

COLOR:

ALL HDPE PIPING AND TUBING SHALL BE SOLID BLUE FOR POTABLE WATER SYSTEMS.

MARKINGS:

MARKINGS SHALL BE APPLIED AT AN INTERVAL OF NOT MORE THAN 5 FEET, TO INCLUDE: AWWA C901, NOMINAL PIPE SIZE, CTS, MANUFACTURERS NAME, MATERIAL DESIGNATION CODE PE 4710, AWWA PRESSURE CLASS (PC 200 PSI) MINIMUM.

FITTINGS:

USE FORD PACK JOINT COUPLINGS WITH STAINLESS STEEL CLAMP SCREW AND FORD 50 SERIES INSERT STIFFENERS FOR POLYETHYLENE TUBING OR APPROVED EQUAL.

TRACER WIRE:

TRACER WIRE SHALL BE DOUBLE INSULATED NO. 12 AWG COPPER TRACER WIRE CONNECTED TO BALLCORP STOP AT MAIN, TAPED EVERY FIVE FEET, WITH COPPER ENDS SEALED WITH 3M SCOTCHKOTE OR APPROVED EQUAL. 3 FEET OF TRACER WIRE SHALL EXTEND ABOVE METER.

INSTALLATION:

SNAKE PIPE IN OPEN TRENCHES TO ALLOW FOR PIPE EXPANSION AND CONTRACTION.
PULL PIPE BEYOND TARGET POINT AND PROVIDE SLACK PRIOR TO CONNECTION.
LET PIPE COOL TO SOIL TEMPERATURE PRIOR TO CONNECTING ENDS.
DO NOT INSTALL IN PETROLEUM OR SOLVENT STORAGE OR DISTRIBUTION FACILITIES, OR IN CONTAMINATED SOILS.

BEDDING:

BEDDING SHALL BE 3/4-INCH MINUS WSDOT 9-03.9(3), CRUSHED SURFACING TOP COURSE.

DISINFECTION:

DISINFECTION OF NEW PIPE SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF ANSI/AWWA C651.
NEW SUBDIVISION- DISINFECT SERVICE LINES AT THE SAME TIME AS THE WATER MAIN.
REPLACEMENT PROJECTS-INSTALL SERVICES AFTER THE WATER MAIN HAS BEEN DISINFECTED AND ACCEPTED. THEN FLUSH EACH SERVICE INSTALLED AT FULL VELOCITY FOR A MINIMUM OF ONE MINUTE PRIOR TO CONNECTING TO THE SETTER.

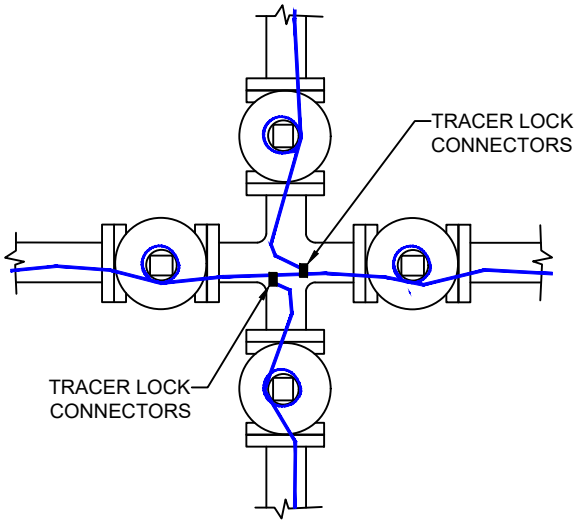
City of Walla Walla

HDPE WATER SERVICE (1" AND 2" ONLY)

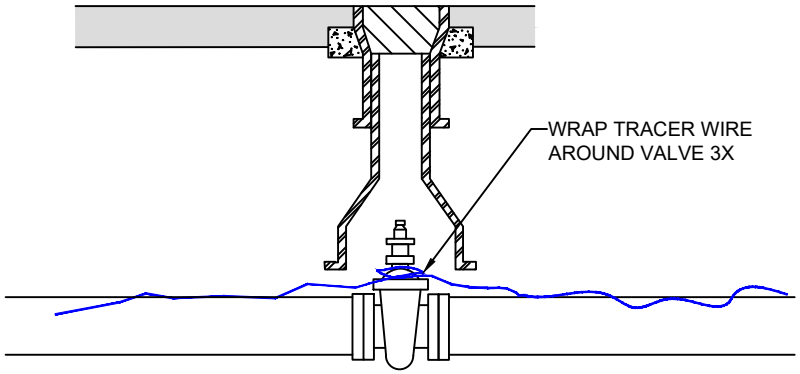
DATE: 01/02/2020

APPROVED BY:

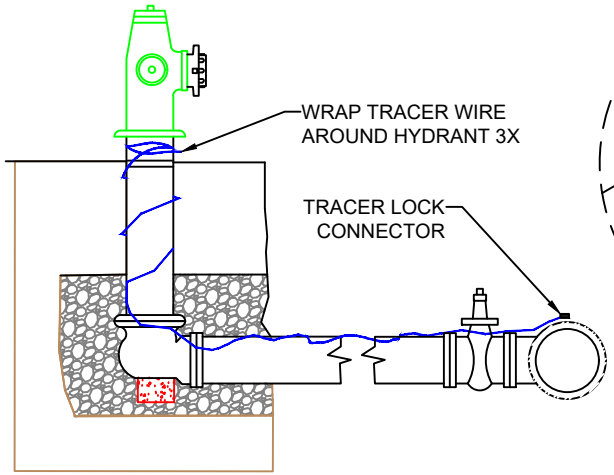
STANDARD PLAN 4-1b



TRACER WIRE FOR VALVE CLUSTER
N.T.S.

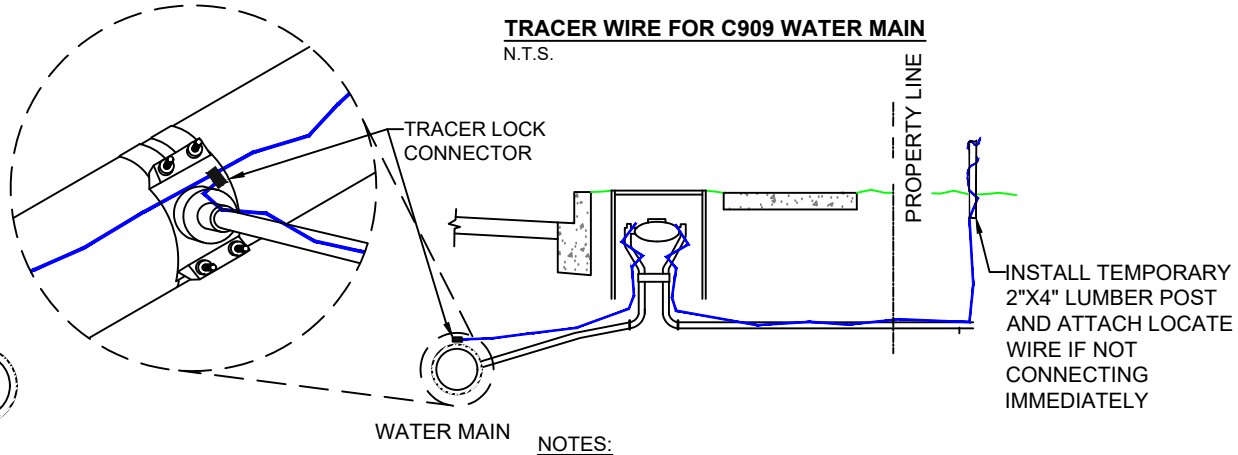


NOTES:
1. 12 GAUGE PIPE LINE TRACER WIRE (TYP) SHALL BE USED FOR ALL WATER PIPE.
2. PRIOR TO PAVING CONTRACTOR SHALL SCHEDULE WITH THE CITY TO TEST FOR ELECTRICAL CONTINUITY
3. DUCT TAPE OR ZIP TIE ON 5' SPACING
4. USE SILICONE CAP ON BEGINNING OF RUNS TO PREVENT CORROSION



TRACER WIRE FOR FIRE HYDRANT
N.T.S.

TRACER WIRE FOR C909 WATER MAIN
N.T.S.



NOTES:
CONNECTION TO SERVICE SHALL BE MADE BY USING TRACER-LOCK CONNECTOR OR APPROVED EQUAL. NO SPLICING SHALL BE ALLOWED

TRACER WIRE FOR WATER SERVICE
N.T.S.

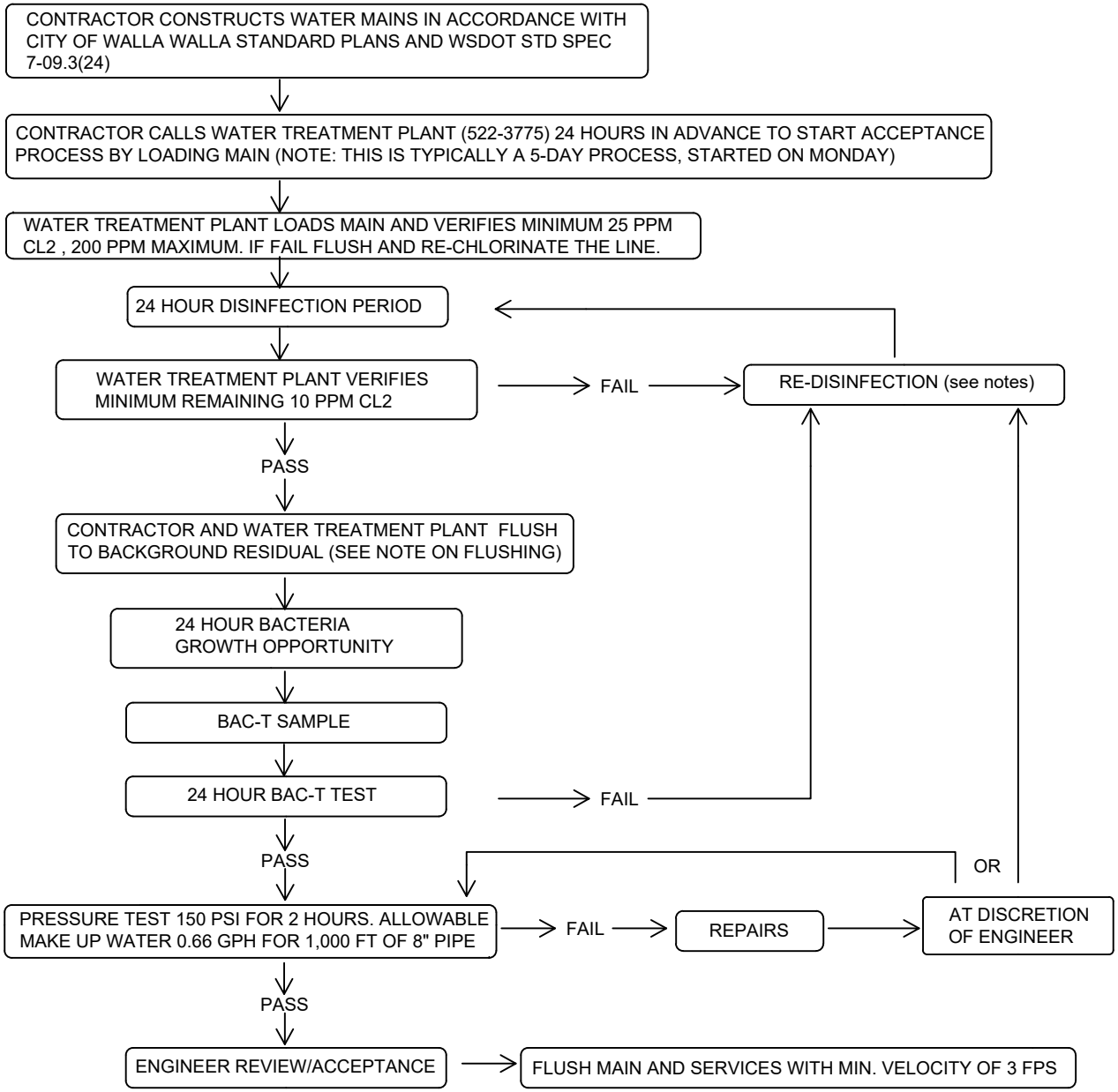
City of Walla Walla

TRACER WIRE FOR WATER MAIN

DATE:
04/18/2023

APPROVED BY:

STANDARD PLAN
4-1c



NOTES:

1. GENERAL
   - 1.1. WATER MAINS AND APPURTENANCES SHALL BE CONSTRUCTED, DISINFECTED, FLUSHED, AND TESTED IN ACCORDANCE WITH WSDOT STANDARD SPEC 7-09.3(24) AND THE LATEST EDITION OF AWWA C651, AWWA C600 UNLESS OTHERWISE STATED HEREIN.
2. RE-DISINFECTION
   - 2.1. RE-DISINFECTION METHODS AND TECHNIQUE SHALL BE PRE-APPROVED BY THE ENGINEER.
3. SERVICE LINES
   - 3.1. SERVICE LINES SHALL BE INSTALLED AND INCLUDED IN THIS ACCEPTANCE PROCESS (INCLUDING DISINFECTION AND PRESSURE TESTING) UNLESS OTHERWISE APPROVED BY THE ENGINEER. APPROPRIATE STEPS SHALL BE TAKEN TO ENSURE FLOW THROUGH THE SERVICE LINE TO ENSURE THOROUGH DISINFECTION AND FLUSHING.
   - 3.2. SPECIAL CARE SHALL BE TAKEN WITH HDPE SERVICE LINES TO PREVENT DAMAGE FROM LONG TERM EXPOSURE TO HIGH CHLORINE LEVELS.
4. SHORT PIPE SECTIONS
   - 4.1. PIPE SECTIONS OR REPAIRS SMALLER THAN 20 FEET IN LENGTH MAY (AT THE DISCRETION OF THE ENGINEER) BE DISINFECTED WITH AN ALTERNATIVE METHOD PER ANSI/AWWA C651 (LATEST EDITION)
5. TOOLS AND MATERIALS
   - 5.1. CONTRACTOR SHALL PROVIDE ALL TOOLS, MATERIALS, AND LABOR FOR FLUSHING AND DISINFECTION OF WATER MAIN AND APPURTENANCES.
6. FLUSHING
   - 6.1. FLUSH WATER SHALL BE DISCHARGED TO THE SANITARY SEWER UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE WASTEWATER TREATMENT PLANT SHALL BE NOTIFIED PRIOR TO FLUSHING TO SANITARY SEWER (527-4509).
7. VERIFICATION
   - 7.1. BACTERIOLOGICAL TESTING SHALL BE VERIFIED WITH A COLIFORM PRESENCE/ABSENCE TEST (BAC-T) BY THE WATER TREATMENT PLANT LABORATORY AND APPROVED BY THE ENGINEER.

City of Walla Walla

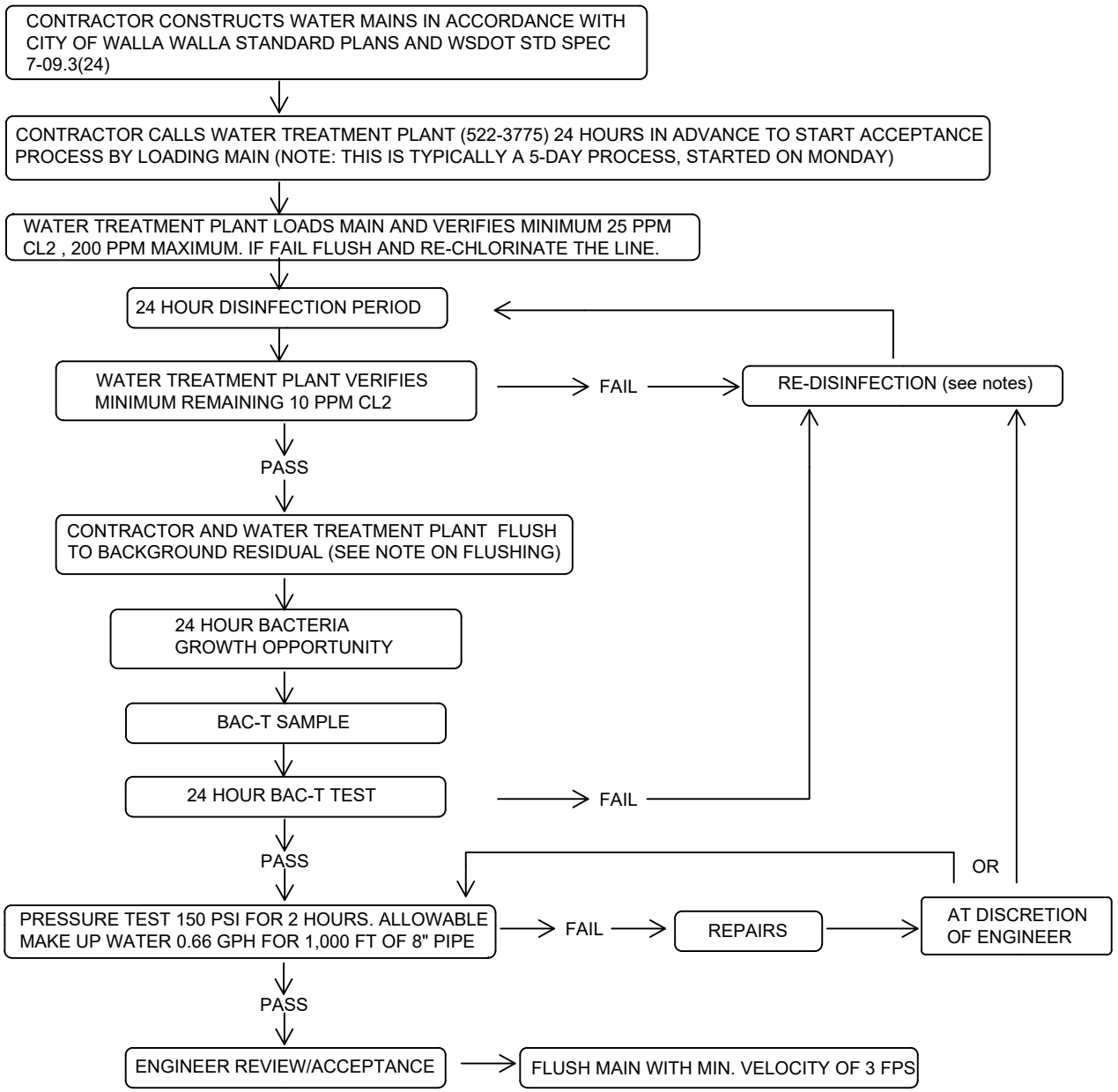
WATER MAIN ACCEPTANCE PROCESS

NEW DEVELOPMENT

DATE: 01/02/2020

APPROVED BY:

STANDARD PLAN 4-2a



NOTES:

1. GENERAL
   - 1.1. WATER MAINS, CORP STOPS, AND APPURTENANCES SHALL BE CONSTRUCTED, DISINFECTED, FLUSHED, AND TESTED IN ACCORDANCE WITH WSDOT STANDARD SPEC 7-09.3(24) AND THE LATEST EDITION OF AWWA C651 UNLESS OTHERWISE STATED HEREIN.
2. RE-DISINFECTION
   - 2.1. RE-DISINFECTION METHODS AND TECHNIQUE SHALL BE PRE-APPROVED BY THE ENGINEER.
3. SERVICE LINES
   - 3.1. SERVICE LINES SHALL BE INSTALLED AFTER THE WATER MAIN HAS BEEN DISINFECTED.
   - 3.2. FLUSH FOR A MINIMUM OF ONE MINUTE PRIOR TO CONNECTING TO THE SETTER
4. SHORT PIPE SECTIONS
   - 4.1. PIPE SECTIONS SMALLER THAN 20 FEET IN LENGTH OR REPAIRS MAY (AT THE DISCRETION OF THE ENGINEER) BE DISINFECTED WITH AN ALTERNATIVE METHOD PER ANSI/AWWA C651 (LATEST EDITION).
5. TOOLS AND MATERIALS
   - 5.1. CONTRACTOR SHALL PROVIDE ALL TOOLS, MATERIALS, AND LABOR FOR FLUSHING AND DISINFECTION OF WATER MAIN AND APPURTENANCES.
6. FLUSHING
   - 6.1. FLUSH WATER SHALL BE DISCHARGED TO THE SANITARY SEWER UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE WASTEWATER TREATMENT PLANT SHALL BE NOTIFIED PRIOR TO FLUSHING TO SANITARY SEWER (527-4509).
7. VERIFICATION
   - 7.1. BACTERIOLOGICAL TESTING SHALL BE VERIFIED WITH A COLIFORM PRESENCE/ABSENCE TEST (BAC-T) BY THE WATER TREATMENT PLANT LABORATORY AND APPROVED BY THE ENGINEER.

City of Walla Walla

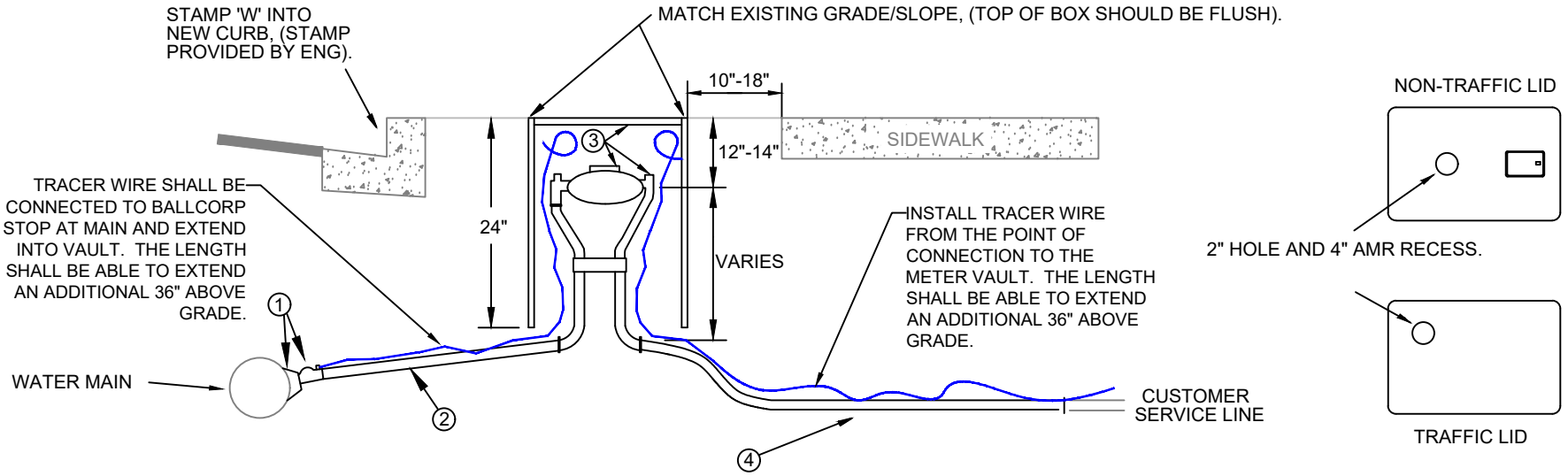
WATER MAIN ACCEPTANCE PROCESS

REPLACEMENT PROJECTS

DATE: 01/02/2020

APPROVED BY:

STANDARD PLAN 4-2b



NOTES:

1. CONNECTION TO MAIN SHALL BE AS FOLLOWS:

   OPTION 1: 1" DIRECT TAP FORD BALLCORP STOP (CTS) FB1000-4-TW-Q-NL 1" INLET AWWA/CC THREAD (IN DUCTILE IRON PIPE ONLY).

   OPTION 2: SERVICE SADDLE USING A SMITH-BLAIR 317X1" AWWA CC THREAD TAP OR ROMAC 202S X1" AWWA CC THREAD TAP.

   (BOTH OPTIONS SHALL UTILIZE A MCDONALD OR FORD 'GRIP OR QUICK JOINT' COMPRESSION CONNECTORS TO CONNECT THE STOP TO THE SERVICE PIPE)

2. CITY SERVICE LINE SHALL BE EITHER 1" TYPE K COPPER SERVICE PIPE, 1" TYPE K TUBING, 1" TYPE K SOFT 20' JOINTS, OR 1" HDPE (SEE STANDARD PLAN 4-1 SHEET 2). PIPE SHALL HAVE A MINIMUM OF 4" CSTC BEDDING ON ALL SIDES.

3. METER SETTER SHALL BE 1" FORD VB74-18W-44-44-Q-NL, OR EQUIVALENT TO A MCDONALD METER SETTER, SIZED TO MATCH THE DEPTH OF THE SERVICE LINE.

   METER LOCATION (NEW OR REPLACEMENT) SHALL BE IN FRONT OF SIDEWALK AS SHOWN UNLESS OTHERWISE APPROVED BY THE ENGINEER. IF THE ENGINEER APPROVES PLACING METER BEHIND SIDEWALK, METER SHALL BE LOCATED 10”-18” FROM THE BACK OF SIDEWALK.

   METER BOXES FOR TRAFFIC AND NON-TRAFFIC AREAS FOR 3/4" & 1" METERS SHALL BE SYNERTECH OR DURALITE 1324 X 24" DEEP. OLDCASTLE FIBRELYTE FL30 OPTION C LID WITH 2" HOLE AND 4" AMR RECESS FOR RADIO TRANSMITTER WILL BE USED IN SIDEWALK OR LANDSCAPE AREAS. OLDCASTLE FIBRELYTE FL30 OPTION C LID SHALL BE USED FOR TRAFFIC AREAS. HOLES FOR RADIO TRANSMITTER SHALL BE AT ANY CORNER CENTERED AT 5-INCHES FROM THE EDGES OF THE LID.

(NOTES ARE CONTINUED ON STANDARD PLAN 4-3b.)

City of Walla Walla

3/4" - 1" WATER METER & VAULT

DATE: 02/03/2023

APPROVED BY:

STANDARD PLAN 4-3a

(CONTINUED FROM STANDARD PLAN 4-3A)

METERS SHALL BE MANUFACTURED BY SENSUS. ¾" METERS SHALL BE IPERL MODEL I2X8FLXX AND 1" METERS SHALL BE IPERL MODEL I4X8FLXX. ALL METERS SHALL BE EQUIPPED WITH SENSUS 520M RADIO TRANSMITTER CONNECTED TO THE IPERL METER WITH A 6' TRPL THE CITY WATER DIVISION WILL PROVIDE & INSTALL IPERL METERS FOR ALL PROJECTS EXCEPT C.I.P. PROJECTS. ON C.I.P. PROJECTS THE CONTRACTOR SHALL SUPPLY TWO (2) FORD A-24 METER ADAPTERS WHEN INSTALLING 3/4" WATER METERS.

4. CUSTOMER CONNECTIONS TO THE SETTER ON SERVICES WITHOUT AN EXISTING CUSTOMER SERVICE LINE SHALL BE NEW, EITHER 1" TYPE K COPPER OR HDPE PIPE, EXTENDING A MINIMUM OF 24" BEYOND EDGE OF METER BOX, VAULT, OR PUE, WHICHEVER IS GREATER. NOTE - CONNECTION TO THE METER SETTER MUST BE EITHER 1" TYPE K COPPER OR HDPE PIPE. ANY OTHER TYPE OF PIPE (I.E. GALVANIZED, PEX) MUST BE CONNECTED OUTSIDE OF BOX TO EXISTING COPPER OR HDPE STUB. NO EXCEPTIONS WILL BE ALLOWED. STUBS MUST BE MARKED WITH METAL LOCATE POST AND BLUE PAINT.

   CUSTOMER CONNECTIONS TO THE SETTER ON SERVICES WITH AN EXISTING CUSTOMER SERVICE LINE SHALL CONNECT TO EXISTING WATER SERVICE AT THE SERVICE LINE DEPTH USING 1" MINIMUM TYPE K COPPER OR HDPE PIPE. THE CONTRACTOR MAY USE "GRIP OR QUICK CONNECT" COMPRESSION FITTINGS, AND SHALL SUPPLY ALL FITTINGS AND GASKETS TO MAKE THE CONNECTIONS. COMPRESSION FITTINGS MUST CONFORM TO SECTION 9-30.6(4) OF STANDARD SPECIFICATIONS. THE CONTRACTOR IS ALERTED THAT THE EXISTING SERVICE LINE WILL MOST PROBABLY BE RUSTY GALVANIZED STEEL. IF THERE ARE NOT EXISTING SERVICEABLE THREADS WITH WHICH TO CONNECT A FITTING, THE ONLY METHOD THAT WILL BE ACCEPTABLE IS: 1" TYPE K COPPER TUBING WITH TWO 1" COPPER TO EXISTING", OR 1" GALVANIZED PIPE CONNECTORS (FORD C45-43-Q-NL OR FORD C45-44-Q-NL).

5. EXISTING METER AND RADIO SHALL BE REINSTALLED IN NEW METER BOX. EXISTING METER BOX, METER STOP, AND OTHER APPURTENANCES ASSOCIATED WITH EXISTING METER SHALL BE REMOVED AND RETURNED TO CITY WATER SHOP. IF A STOP FALLS IN AN EXISTING CONCRETE SIDEWALK OR DRIVEWAY, LID SHALL BE REMOVED AND RETURNED TO CITY AND RISER SHALL BE FILLED WITH CONCRETE OR GROUT.

6. NEW DEVELOPMENT SERVICES SHALL HAVE CUSTOMER SIDE OF METER SETTER EXTEND MINIMUM 10' TO THE EXTENT OF THE PUBLIC UTILITY EASEMENT.

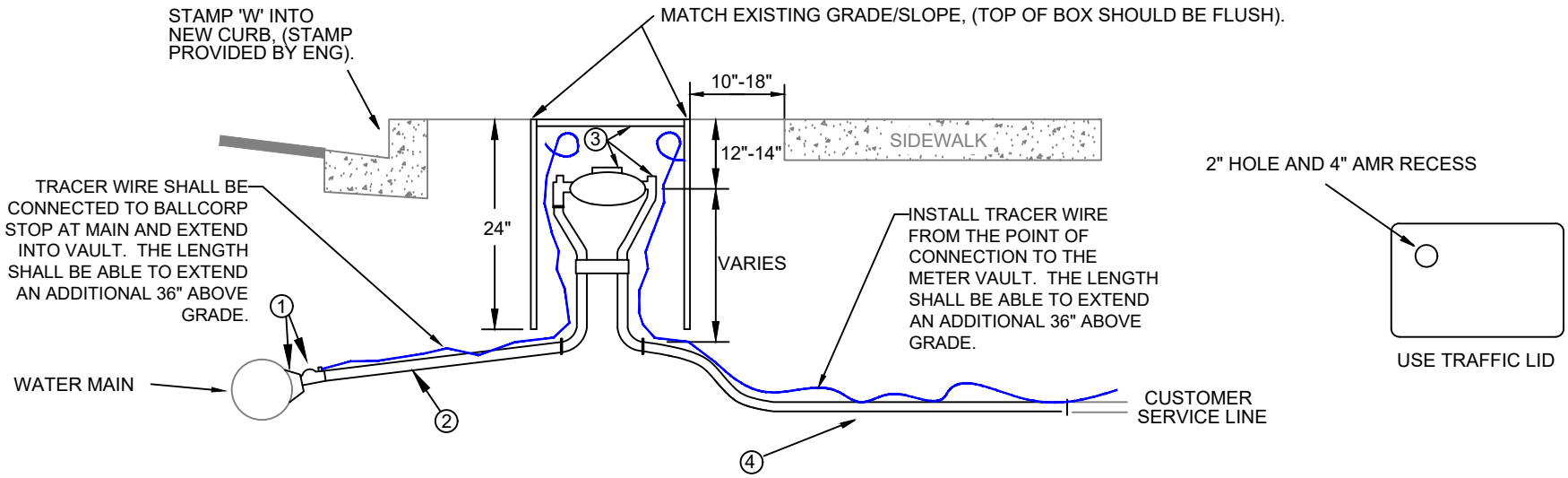
City of Walla Walla

3/4" - 1" WATER METER & VAULT (CONTINUED)

DATE: 01/02/2020

APPROVED BY:

STANDARD PLAN 4-3b



NOTES:

1. CONNECTION TO MAIN SHALL BE AS FOLLOWS:

   OPTION 1: 2" FORD BALLCORP STOP (CTS) FB1100-7-TW-Q-NL 2" MIP X QUICK JOINT (CTS).

   OPTION 2: SERVICE SADDLE USING A ROMAC 202S X 2" FIP THREAD TAP OR SMITH BLAIR EQUIVALENT.

   (BOTH OPTIONS SHALL UTILIZE A MUELLER 110 OR FORD 'GRIP OR QUICK JOINT COMPRESSION CONNECTORS TO CONNECT THE STOP TO THE SERVICE PIPE)

2. CITY SERVICE LINE SHALL BE EITHER 2" TYPE K COPPER SERVICE PIPE, 2" TYPE K TUBING, 2" TYPE K SOFT 20' JOINTS, OR 2" HDPE (SEE STANDARD PLAN 4-1 SHEET 2). PIPE SHALL HAVE A MINIMUM OF 4" CSTC BEDDING ON ALL SIDES.
3. METER SETTER SHALL BE 2" FORD VBB77-18B-44-77-NL, OR EQUIVALENT MUELLER METER SETTER, SIZED TO MATCH THE DEPTH OF THE SERVICE LINE.
4. METER LOCATION (NEW OR REPLACEMENT) SHALL BE IN FRONT OF SIDEWALK AS SHOWN UNLESS OTHERWISE APPROVED BY THE ENGINEER. IF THE ENGINEER APPROVES PLACING METER BEHIND SIDEWALK, METER SHALL BE LOCATED 10"-18" FROM THE BACK OF SIDEWALK.

(NOTES ARE CONTINUED ON STANDARD PLAN 4-3d.)

City of Walla Walla

1-1/2" - 2" WATER METER & VAULT

DATE: 01/02/2020

APPROVED BY:

STANDARD PLAN 4-3c

(CONTINUED FROM STANDARD PLAN 4-3c)

ALL METER BOXES FOR 1-1/2" & 2" METERS SHALL BE 2436 OLDCASTLE SYNERTECH OR DURALITE UTILITY BOXES, WITH LIDS TRAFFIC-RATED FOR 20K LBS OR HIGHER. ALL METER BOX LIDS SHALL BE PRE-DRILLED WITH 2-INCH HOLES AND 4-INCH AMR RECESS FOR RADIO TRANSMITTER. HOLES SHALL BE AT ANY CORNER CENTERED AT 5-INCHES FROM THE EDGES OF THE LID.

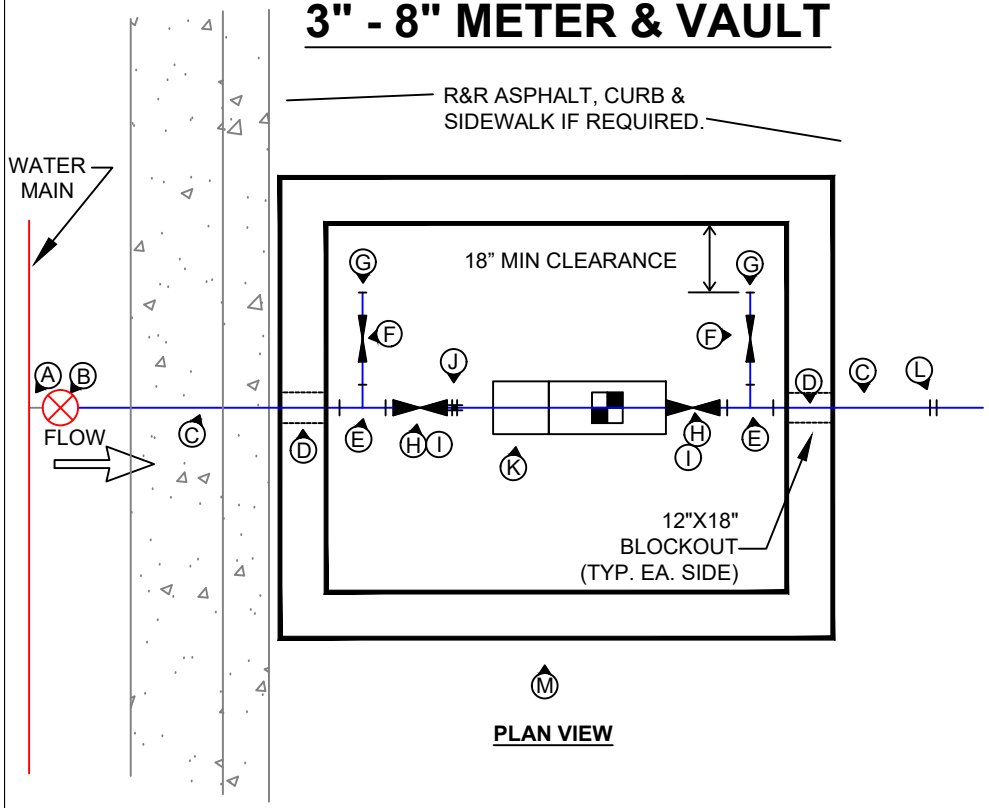
METER TYPE TO BE SPECIFIED BY THE CITY WATER DIVISION. METER TO BE SUPPLIED AND INSTALLED BY CITY WATER DIVISION. TOP OF METER DEPTH FROM FINISH GRADE SHALL BE 10" MINIMUM AND 14" MAXIMUM.

4. CUSTOMER CONNECTIONS TO THE SETTER ON SERVICES WITHOUT AN EXISTING CUSTOMER SERVICE LINE SHALL BE NEW, EITHER 2" TYPE K COPPER OR HDPE PIPE, EXTENDING A MINIMUM OF 24" BEYOND EDGE OF METER BOX, VAULT, OR PUE, WHICHEVER IS GREATER. NOTE - CONNECTION TO THE METER SETTER MUST BE EITHER 2" TYPE K COPPER OR HDPE PIPE. ANY OTHER TYPE OF PIPE (I.E. GALVANIZED, PEX) MUST BE CONNECTED OUTSIDE OF BOX TO EXISTING COPPER OR HDPE STUB. NO EXCEPTIONS WILL BE ALLOWED. STUBS MUST BE MARKED WITH METAL LOCATE POST AND BLUE PAINT.

CUSTOMER CONNECTIONS TO THE SETTER ON SERVICES WITH AN EXISTING CUSTOMER SERVICE LINE SHALL CONNECT TO EXISTING WATER SERVICE AT THE SERVICE LINE DEPTH USING 2" MINIMUM TYPE K COPPER OR HDPE PIPE. THE CONTRACTOR MAY USE "GRIP OR QUICK CONNECT" COMPRESSION FITTINGS, AND SHALL SUPPLY ALL FITTINGS AND GASKETS TO MAKE THE CONNECTIONS. COMPRESSION FITTINGS MUST CONFORM TO SECTION 9-30.6(4) OF STANDARD SPECIFICATIONS. THE CONTRACTOR IS ALERTED THAT THE EXISTING SERVICE LINE WILL MOST PROBABLY BE RUSTY GALVANIZED STEEL. IF THERE ARE NOT EXISTING SERVICEABLE THREADS WITH WHICH TO CONNECT A FITTING, THE ONLY METHOD THAT WILL BE ACCEPTABLE IS: 2" TYPE K COPPER TUBING WITH TWO 2" COPPER TO EXISTING", OR 2" GALVANIZED PIPE CONNECTORS (FORD C45-77-Q OR EQUIVALENT MUELLER FITTING).

5. EXISTING METER, METER BOX, METER STOP, AND OTHER APPURTENANCES ASSOCIATED WITH EXISTING METER SHALL BE REMOVED AND RETURNED TO CITY WATER SHOP. IF A STOP FALLS IN AN EXISTING CONCRETE SIDEWALK OR DRIVEWAY, LID SHALL BE REMOVED AND RETURNED TO CITY AND RISER SHALL BE FILLED WITH CONCRETE OR GROUT.

3" - 8" METER & VAULT



PLAN VIEW

NOTES:

A DETAILED PLAN, WITH LOCATION AND PARTS LIST WHICH FOLLOWS THE GUIDANCE BELOW, MUST BE SUBMITTED TO AND APPROVED BY THE CITY WATER DIVISION PRIOR TO METER AND VAULT PLACEMENT.

A. DUCTILE IRON TEE, OR LIVE TAP BY WATER DIVISION.
B. FLANGE BY MJ RSGV WITH SQUARE NUT AND VALVE CAN.
C. SERVICE PIPE
   - DUCTILE IRON FULLY RESTRAINED.
   - 4" MINIMUM DIAMETER.
   - 12" MINIMUM CLEARANCE TO VAULT FLOOR.
   - LENGTH & FITTINGS VARY AS REQUIRED BY INSTALLATION.
   - MINIMUM PIPE BEDDING SHALL BE 4" OF CSTC AROUND PIPE.
D. INLET AND OUTLET PIPES TO BE FULLY RESTRAINED, SEE ENGINEER OR WATER DIVISION FOR DETAILS.
E. FLANGED TEE.
F. FLANGE BY FLANGE GATE VALVE WITH HANDWHEEL.
   - 1/2 DIA. OF SERVICE PIPE.
   - 1/2" CHAIN TO BE INSTALLED ON VALVE.
   - LOCK SUPPLIED BY CITY.
G. BLIND FLANGE.
H. GATE VALVE WITH HANDWHEEL (SAME DIA. AS SERVICE PIPE).
I. SUPPORTS SHALL BE GRINNELL PRODUCT #264 OR APPROVED EQUAL.
J. THRUST OR NON-THRUST TYPE DISMANTLING JOINT.
K. METER TYPE, SIZE, MODEL AND STRAINER TO BE SPECIFIED BY THE CITY WATER DIVISION.
   - METER TO BE SUPPLIED AND INSTALLED BY CITY WATER DIVISION.
L. DRESSER COUPLING.
M. VAULT SHALL BE 'UTILITY VAULT CO.' PRE-CAST VAULT MODEL AS FOLLOWS):
   - 3" & 4" METER - #675-LA W/#675-T-2-332P TOP.
   - 6" & 8" METER - #612-3-LA W/#612-3-T-3-332P TOP - INCLUDE OPTIONAL SUMP AND GRATE.
   - ALL VAULTS SHALL INCLUDE PULL UP EXTENSION LADDERS AND RECTANGULAR DOORS WITH SPRING ASSIST CYLINDER AND HOLD OPEN ARMS AS SUPPLIED BY UTILITY VAULT CO.
   - BACKFILL AROUND VAULT AND COMPACT TO 95% DENSITY.
   - 4" MINIMUM CTSC BASE UNDER VAULT.
   - DRAINAGE REQUIREMENTS TO BE SPECIFIED BY CITY ON CASE BY CASE BASIS.
   - BLOCKOUTS AND OTHER HOLES TO BE FILLED WITH NON-SHRINK GROUT. ADJUST INLET & OUTLET PIPES AS REQUIRED TO MEET THE 12" MINIMUM PIPE SUPPORT HEIGHT. PIPE SUPPORTS SHALL BE GRINNELL PRODUCT #264 OR EQUAL.

City of Walla Walla

3" - 8" WATER METER & VAULT

DATE: 12/30/2016

APPROVED BY:

STANDARD PLAN 4-3e

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City of Walla Walla

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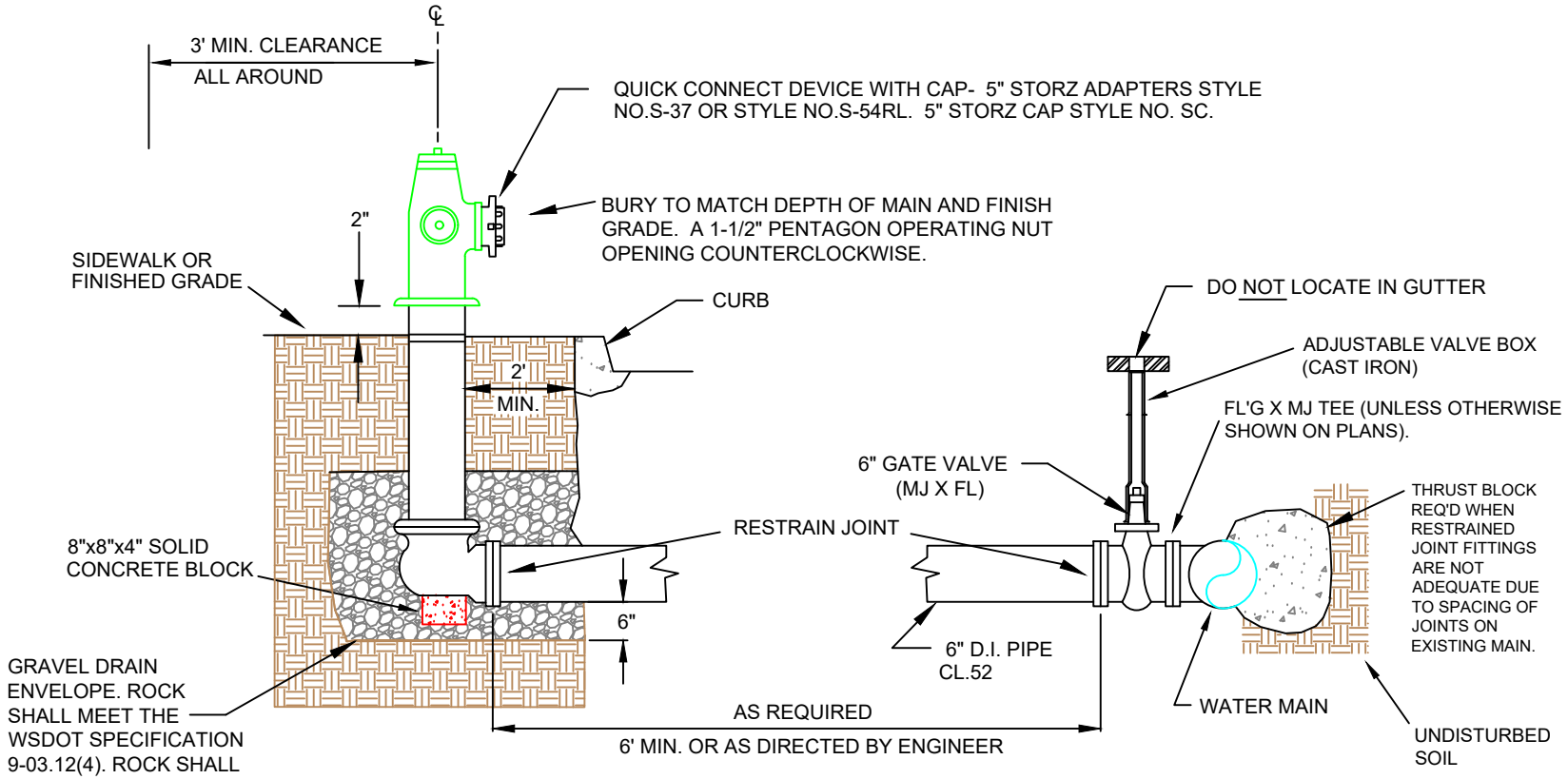
DATE:

APPROVED BY:

STANDARD PLAN
4-4

NOTES:

1. HYDRANT SHALL BE PAINTED OSHA SAFETY YELLOW. HYDRANTS IN THE DOWNTOWN AREA SHALL BE PAINTED 'DOWNTOWN GREEN'.
2. TRAFFIC MODEL REQUIRED.
3. HYDRANTS SHALL BE FURNISHED WITH 5-1/4" MAIN VALVE OPENING.
4. HYDRANTS SHALL BE HOODED UNTIL OPERATIONAL.
5. HYDRANTS SHALL BE MUELLER SUPER CENTURION 250-A-423, CLOW MEDALLION OR WATEROUS PACER WB-67.
6. HYDRANTS TO BE DRY BARREL WITH BURY TO MATCH DEPTH OF MAIN AND FINISH GRADE. A 1 1/2" PENTAGON OPERATING NUT OPENING COUNTERCLOCKWISE.
7. HYDRANT SHALL BE INSTALLED WITH STEAMER PORT FACING PERPENDICULAR TO NEAREST STREET CENTERLINE.



* FURNISH AND INSTALL RETAINER GLANDS AS SHOWN ADDITIONAL GLANDS OR RESTRAINED JOINTS REQUIRED FOR PIPE LENGTHS EXCEEDING ONE SECTION. FIELD-LOK GASKET IN PUSH JOINT PIPE MAY BE SUBSTITUTED.

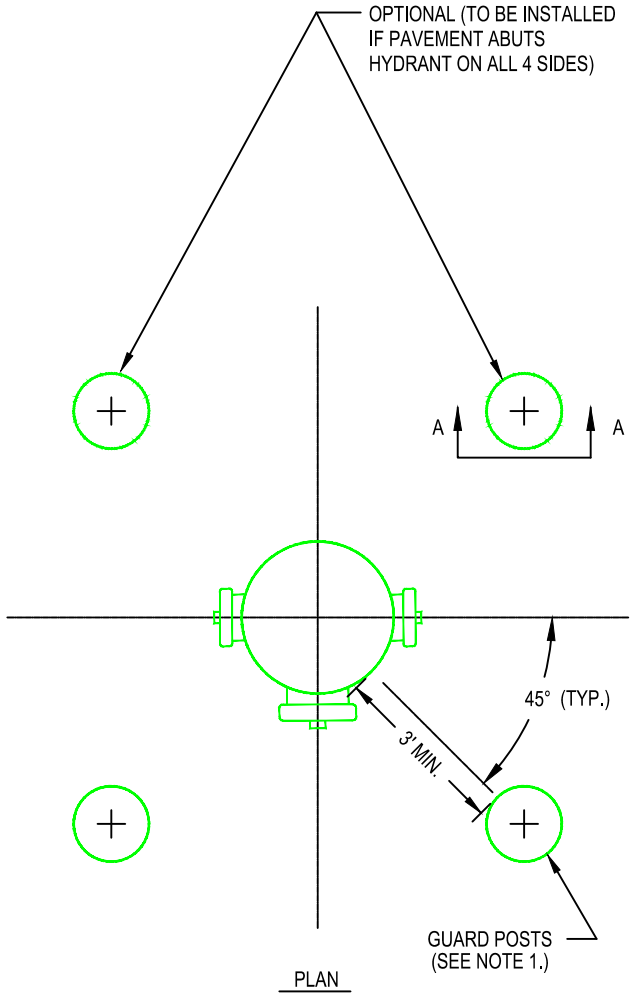
City of Walla Walla

FIRE HYDRANT

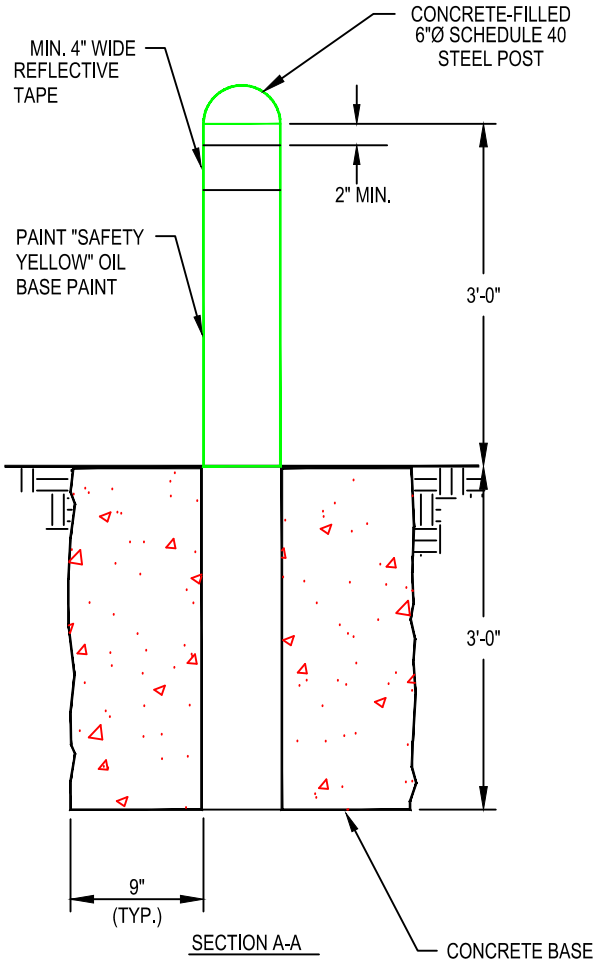
DATE: 01/02/2020

APPROVED BY:

STANDARD PLAN 4-5



PLAN



SECTION A-A

NOTES:

1. WHERE CONCRETE CURBING IS NOT INSTALLED, GUARD POSTS (2 EA. MIN) SHALL BE INSTALLED ON SIDE FACING PAVED SURFACE.
2. GUARD POSTS TO BE PAINTED SAME AS HYDRANT.

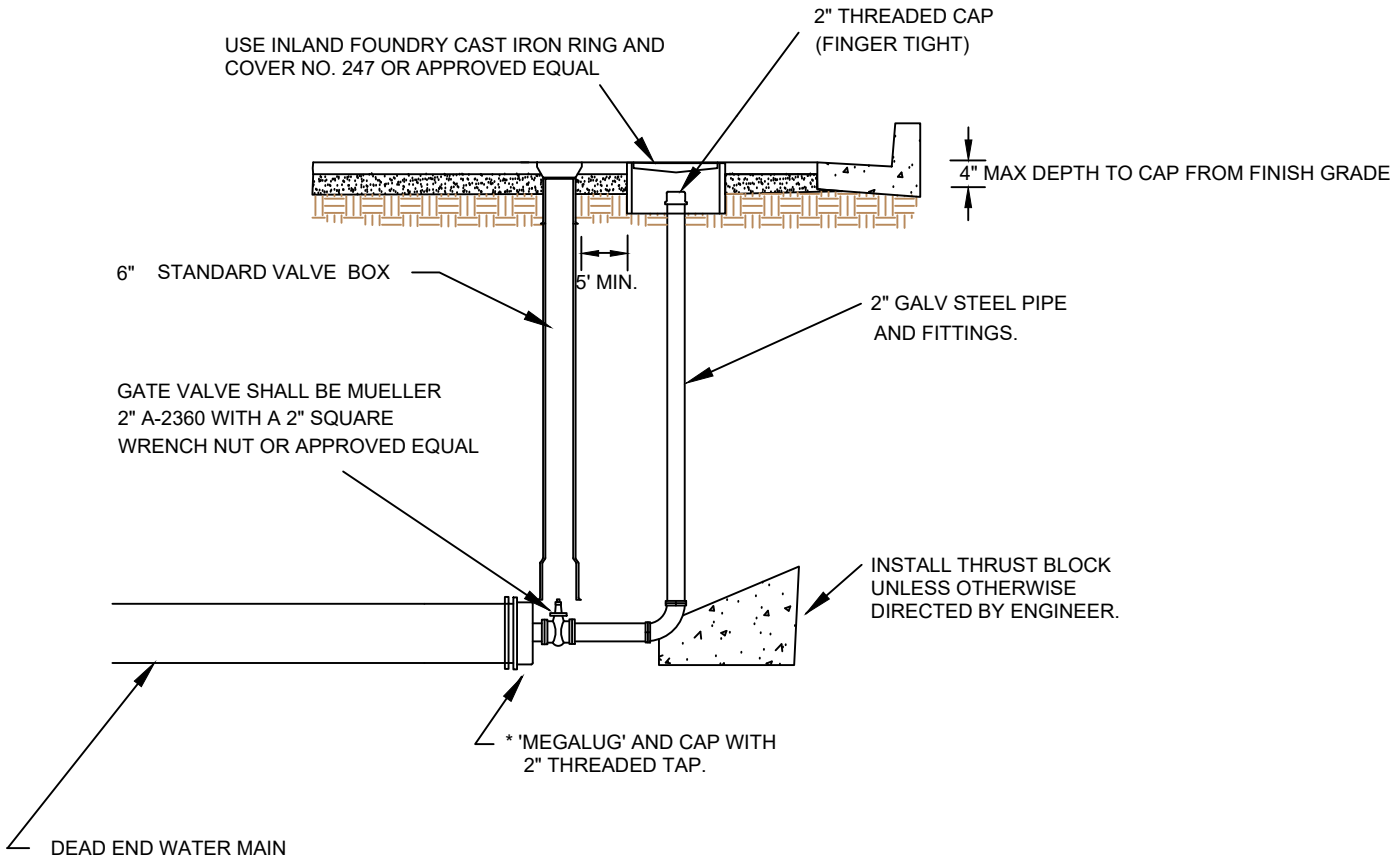
City of Walla Walla

HYDRANT GUARD POSTS

DATE:
06/05/2006

APPROVED BY:

STANDARD PLAN
4-6



* THE NUMBER OF RESTRAINED JOINTS SHALL BE DETERMINED BY THE CITY ENGINEER.

NOTE: PERMANENT BLOW-OFF SHALL BE BRASS PIPE AND FITTINGS

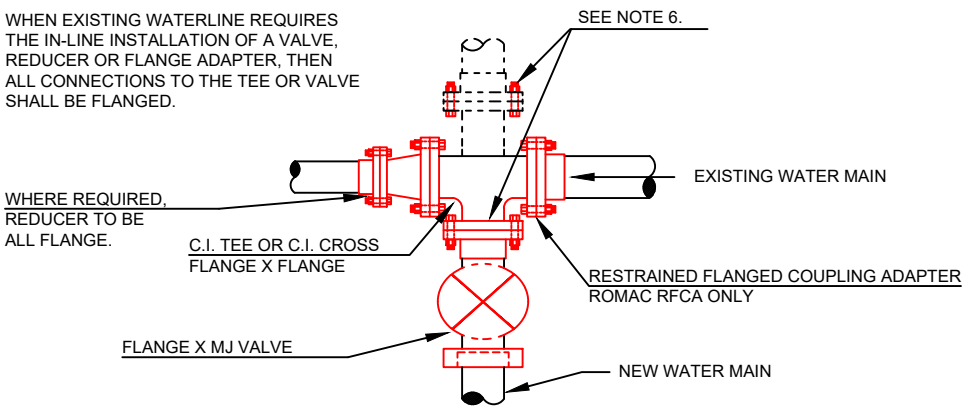
City of Walla Walla

TEMPORARY AND PERMANENT WATER BLOW-OFF ASSEMBLY

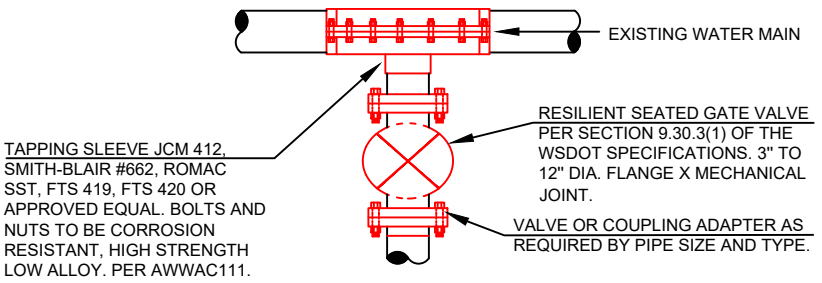
DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 4-7



CUT-IN TEE



TAPPING SLEEVE AND VALVE

NOTES:

2. TAPS ON EXISTING AND/OR CHARGED WATER MAINS SHALL BE PERFORMED BY THE CITY OF WALLA WALLA WATER DEPARTMENT PER STANDARD PLAN 4-1. TEN (10) WORKING DAYS NOTICE SHALL BE REQUIRED TO SCHEDULE CITY CREWS FOR TAP.
3. CONTRACTOR TO DIG & VERIFY WATER MAIN SIZE, TYPE AND LOCATION TWO WEEKS PRIOR TO SCHEDULING CITY CREWS FOR TAP.
4. PRIOR TO CITY CREWS CONDUCTING TAP THE CONTRACTOR SHALL EXCAVATE A MINIMUM, 10 FEET X 3 FEET TRENCH AND ENSURE 3 FEET OF THE MAIN IS CLEANED AND PREPARED WITH 6 INCHES OF CLEARANCE ON ALL SIDES OF THE MAIN. CONTRACTOR SHALL PROVIDE AND ESTABLISH SHORING FOR ALL TRENCHES OVER 4 FEET IN DEPTH.
5. CHLORINATE VALVE & FITTINGS PER SECTION 7-09.3 OF SPECIFICATIONS.
6. MAXIMUM TAP TO EXISTING LINE NOT TO EXCEED 75% OF MAIN DIAMETER ON STEEL. DUCTILE IRON SHALL BE SIZE ON SIZE. MAXIMUM TAP FOR CROSS NOT TO EXCEED 50% OF MAIN.
7. INSTALL THRUST BLOCKS PER STANDARD PLAN 4-9 AND 4-10.
8. ON STEEL PIPE, CONTRACTOR TO RESTORE ALL DISTURBED COAL TAR AND WRAPPING.

City of Walla Walla

CONNECTION TO EXISTING WATER MAIN

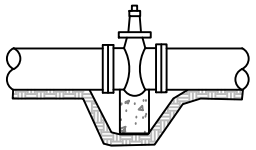
DATE: 01/02/2020

APPROVED BY:

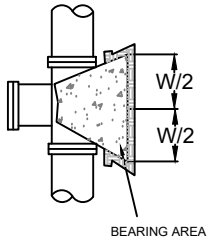
STANDARD PLAN 4-8

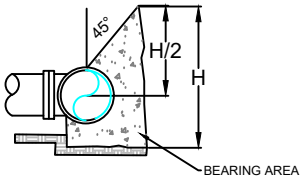
THRUST BLOCK NOTES

1. THRUST BLOCKS SHALL ONLY BE USED WHEN PRE APPROVED BY THE CITY ENGINEER AND WHEN 'MEGALUG' RESTRAINED JOINTS CAN NOT BE UTILIZED.
2. THRUST BLOCKS SHALL BE SIZED AS REQUIRED BY SOIL CONDITIONS AND OPERATING PRESSURE.
3. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL.
4. CONCRETE SHALL BE CLASS 4000.
5. ALL CONCRETE SHALL BE PLACED SO PIPE AND FITTING JOINTS WILL BE ACCESSIBLE FOR REPAIRS.
6. WRAP FITTING WITH 6 MIL PLASTIC BEFORE PLACING CONCRETE TO PROTECT ALL BOLT THREADS.



FOR 12" VALVES & LARGER OR AS SPECIFIED BY THE ENGINEER.





DETERMINATION OF THRUST BLOCK AREA

NOTE:
WHEN THRUST BLOCK BEARING IN NOT SPECIFIED ON THE PLANS OR BY THE ENGINEER. THE FOLLOWING PROCEDURE SHALL BE USED.

1. DETERMINE THRUST (T) AT FITTING AS REQUIRED FOR TYPE OF FITTING. SIZE OF PIPE, AND WORKING PRESSURE FROM TABLE NO. 1.
2. DETERMINE BEARING CAPACITY (B) OF SOIL FROM TABLE NO. 2.
3. DETERMINE REQUIRED BEARING AREA (A) USING FORMULA A = T/B.

TABLE NO.1

PIPE SIZE	TEES AND DEAD ENDS	90 DEGREE BEND	45 DEGREE BEND	22-1/2 DEGREE BEND
4"	1850	2610	1420	720
6"	3800	5370	2910	1470
8"	6580	9300	5040	2550
10"	10750	15200	8240	4170
12"	15310	21640	11720	5940
14"	20770	29360	15910	8060
16"	26880	38010	20590	10430

TABLE NO.2

SOIL	SAFE BEARING LOAD LB. PER SQ. FT.
SOFT CLAY	500
SAND	2000
SAND & GRAVEL	3000
SAND & GRAVEL CEMENTED W/CLAY	4000
HARD CLAY	4000

NOTE: FOR WATER PRESSURES DIFFERENT THAN 100 P.S.I., MULTIPLY THRUST FOUND IN TABLE NO. 1 BY REQUIRED PROPORTION.

EXAMPLE: IF PRESSURE IS 175 PSI, MULTIPLY VALUE IN TABLE BY 1.75.

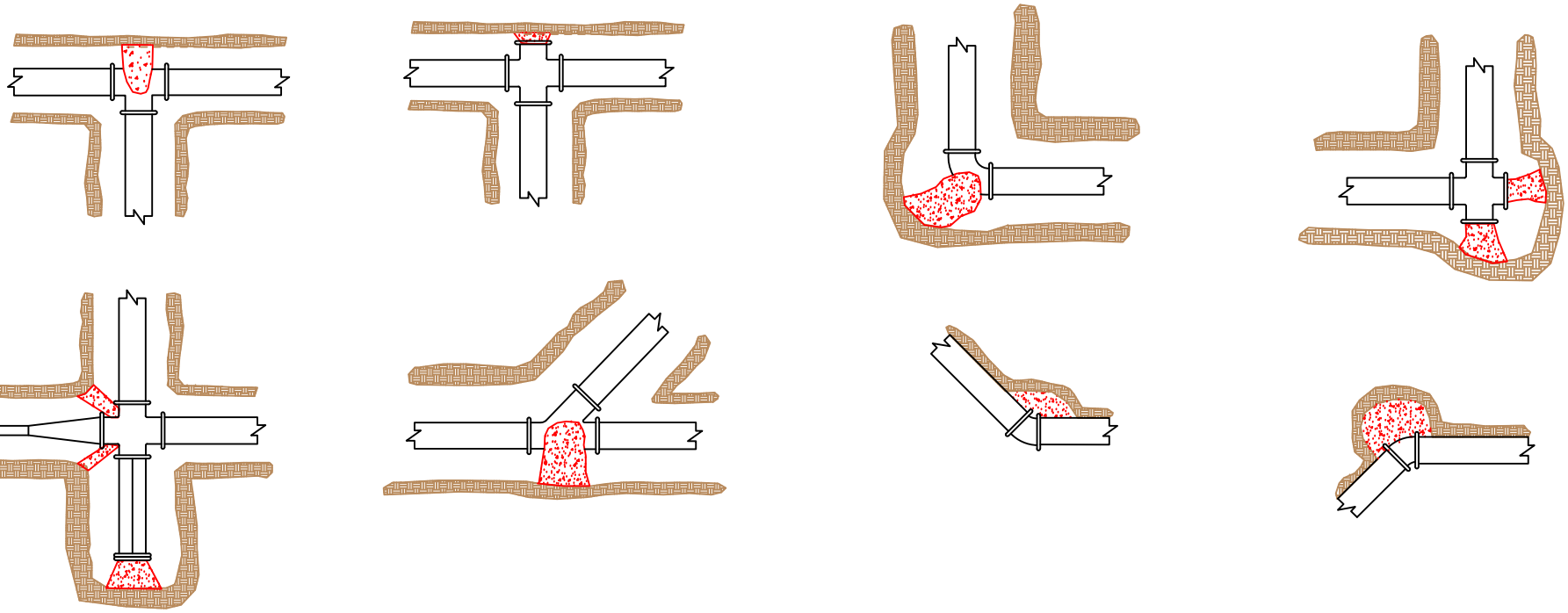
City of Walla Walla

THRUST BLOCKS

DATE: 12/30/22

APPROVED BY:

STANDARD PLAN 4-9



(WHEN THRUST BLOCKS ARE REQUIRED - SEE NOTE #1 ON STD PLAN 4-9 FOR THRUST BLOCKS)

City of Walla Walla

TYPICAL THRUST BLOCK LOCATION

DATE:
12/30/2022

APPROVED BY:

STANDARD PLAN
4-10

INTENTIONALLY LEFT BLANK

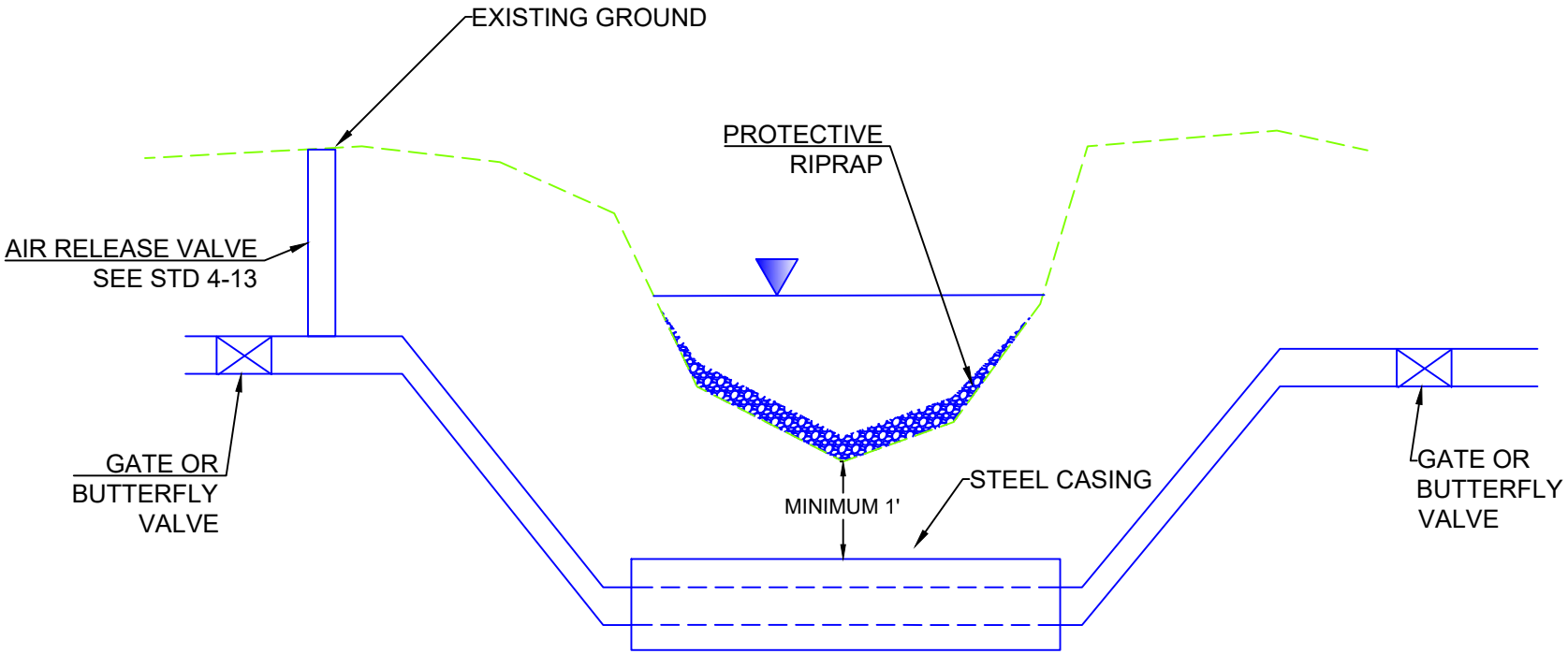
City of Walla Walla

INTENTIONALLY LEFT BLANK

DATE:

APPROVED BY:

STANDARD PLAN
4-11



GENERAL NOTES

1. THE LENGTH OF THE STEEL CASING SHALL BE DETERMINED BY THE CITY ENGINEER ON A CASE BY CASE BASIS. AT A MINIMUM THE CASING SHALL EXTEND FIVE FEET HORIZONTALLY BEYOND THE HIGH WATER MARK ON EACH SIDE OF THE CHANNEL.OR TO THE TOP OF THE CHANNEL BANK.

2. STEEL CASING SHALL MET THE REQUIREMENTS OF SECTION 9-30.1(4)A OF THE WSDOT STANDARD SPECIFICATIONS.

3. CASING SPACERS SHALL HAVE A MINIMUM OF FOUR RUNNERS MANUFACTURED FROM GLASS REINFORCED POLYESTER WITH THE FOLLOWING PROPERTIES:
   A. TENSILE STRENGTH (ASTM D638): 17,600 PSI
   B. FLEXURAL STRENGTH (ASTM D790): 25,300 PSI
   C. COMPRESSION STRENGTH (10% DEFORMATION) (ASTM D695): 18,000 PSI
   D. DEFLECTION TEMP. @ 264 PSI. (ASTM D648): 405°F. (205°C.)
   E. DEFORMATION UNDER LOAD (@ 122°F (50°C) 2,000 lb. LOAD) (ASTM D621): 1.2%
   F. ALL RUNNERS ARE PROJECTION WELDED TO BAND PER AWS SPECIFICATIONS OR ATTACHED TO PROJECTIONS WELDED STUDS.

   BANDS SHALL BE TWO PIECES AND SHALL BE MANUFACTURED FROM 14 GAUGE 304 SS. ALL BAND CONNECTION NUTS, WASHERS, AND BOLTS SHALL BE STAINLESS STEEL

4. END SEALS SHALL BE ONE PIECE NEOPRENE RUBBER WITH A MINIMUM THICKNESS OF 1/4 INCH. BAND CLAMS SHALL BE STAINLESS STEEL.

5. PRIOR TO BEGINNING CONSTRUCTION PERMIT REQUIREMENTS SHALL BE MET THROUGH THE DEPARTMENT OF ECOLOGY.

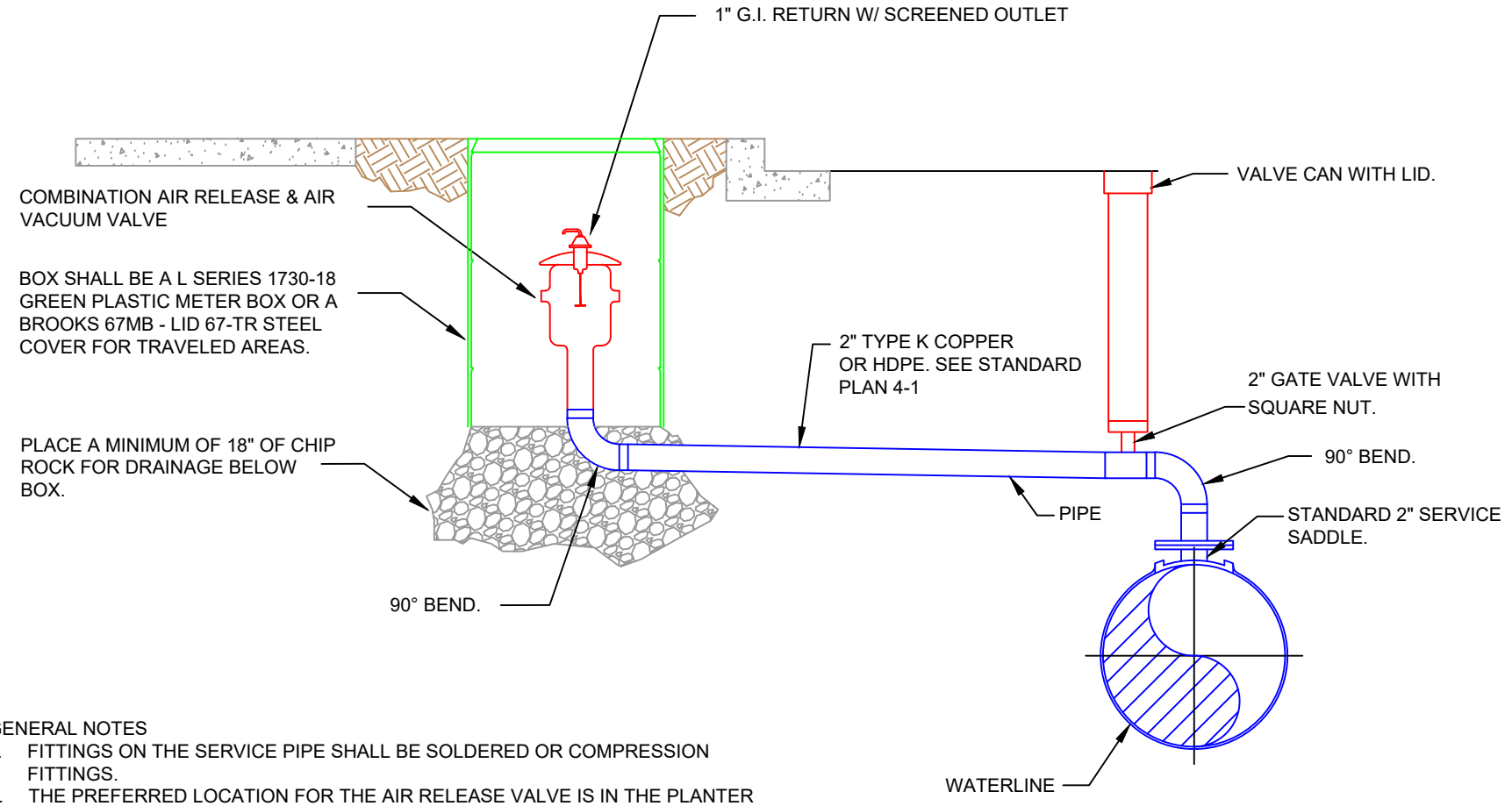
City of Walla Walla

WATER/CREEK CROSSING

DATE:
10/13/2009

APPROVED BY:

STANDARD PLAN
4-12



GENERAL NOTES

1. FITTINGS ON THE SERVICE PIPE SHALL BE SOLDERED OR COMPRESSION FITTINGS.
2. THE PREFERRED LOCATION FOR THE AIR RELEASE VALVE IS IN THE PLANTER STRIP. IF ONE IS NOT AVAILABLE PLACE BEHIND CURB IN THE RIGHT OF WAY. IF LOCATION IS IN AN UNIMPROVED AREA SET THE BOX 3" ABOVE GRADE.

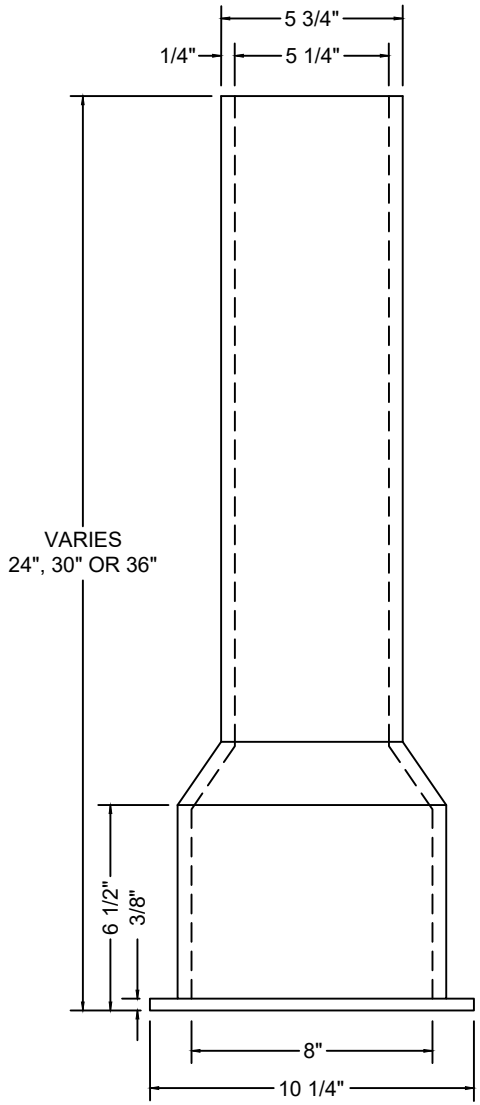
City of Walla Walla

AIR RELEASE VALVE

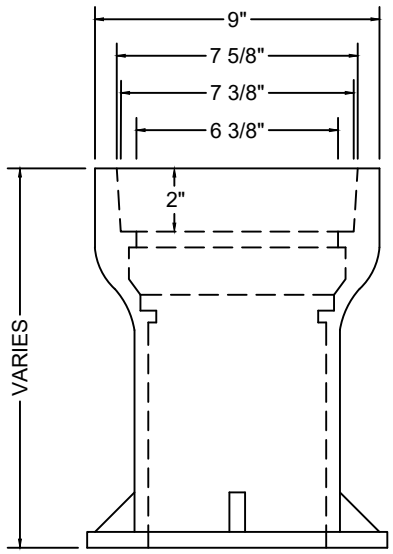
DATE: 12/30/2016

APPROVED BY:

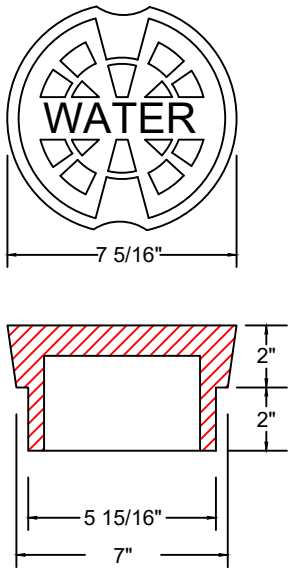
STANDARD PLAN 4-13



VALVE BOX BASE



VALVE BOX TOP



VALVE BOX LID

NOTES

1. CAST IRON ADJUSTABLE VALVE BOX SHALL BE A TYLER / UNION MODEL NUMBER 6855 OR APPROVED EQUAL.
2. INTERMEDIATE RISER SECTION FROM VALVE TO VALVE BOX SHALL BE CAST IRON ASTM A-48.
3. THE ADJUSTABLE VALVE BOX, INTERMEDIATE RISER SECTION, AND BASE SE SECTION SHALL BE INSTALLED PLUMB AND CENTERED OVER THE OPERATING NUT ON THE VALVE.
4. VALVE BOX LID SHALL BE TYLER-145325 "HEAVY DUTY". ITEM NUMBER TYLBCOUER

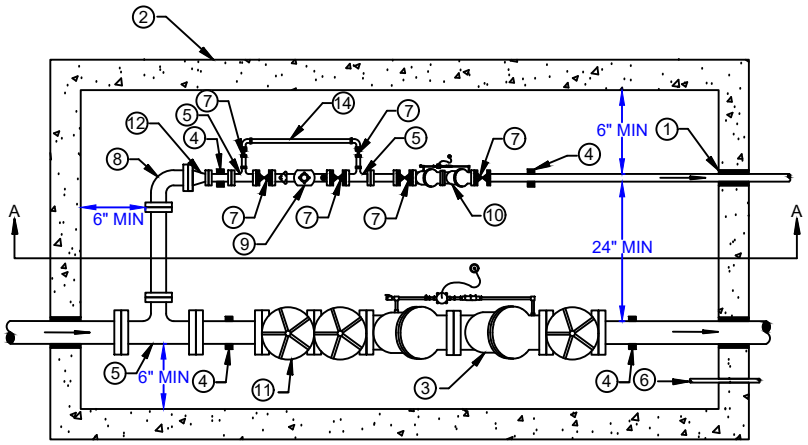
City of Walla Walla

STANDARD VALVE BOX

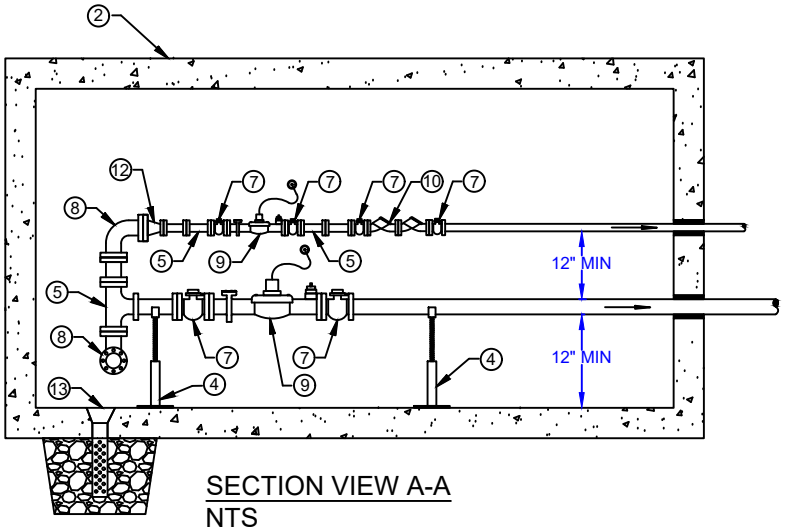
DATE: 04/24/2023

APPROVED BY:

STANDARD PLAN 4-14



PLAN VIEW



SECTION VIEW A-A
NTS

COMBINED WATER SERVICE VAULT NOTES:

GENERAL:

1. THESE ARE FOR GENERAL SCHEMATIC LAYOUT ONLY. INDIVIDUAL SITE REQUIREMENTS ARE DEPENDENT ON DEMAND AND/OR USAGE.
2. ALL PIPES 3" OR SMALLER SHALL BE SOFT TYPE K COPPER, IN STRAIGHT PIPE LENGTHS, WITH RESTRAINED JOINTS. ALL PIPING 4" TO 6" SHALL BE DUCTILE IRON CLASS 52, FULLY RESTRAINED. ALL PIPING 8" AND LARGER SHALL BE DUCTILE IRON CLASS 50, FULLY RESTRAINED.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CITY OF WALLA WALLA FOR SUBMITTAL REVIEW, INSPECTIONS AND TAP OF EXISTING MAINS.
4. PROVIDE MONITORING SWITCHES FOR ALL FIRE LINE VALVES LOCATED IN VAULT, AS APPROVED BY THE FIRE MARSHAL.
5. PROVIDE PULL UP EXTENSION LADDER.
6. SEE CITY STANDARD DRAWING 5-3 FOR CLEARANCE REQUIREMENTS.
7. THERE SHALL BE 2-1/2 PIPE DIAMETERS OF STRAIGHT RUN IMMEDIATELY UPSTREAM AND DOWNSTREAM OF WATER METERS. THIS MAY INCLUDE STRAIGHT PIPE, FULL OPEN VALVES, BYPASS TEES, AND CONCENTRIC REDUCERS.

KEY NOTES:

(1) ALL PIPES EXTENDING THROUGH WALLS AND/OR TOP OF VAULT SHALL BE GROUTED, SEALED, AND RESTRAINED OUTSIDE OF VAULT

(2) TRAFFIC RATED CONCRETE WATER METER UTILITY VAULT. WILBERT PRECAST, OR APPROVED EQUAL. DOORS SHALL BE RECTANGULAR WITH SPRING ASSIST CYLINDER AND HOLD OPEN ARMS. PROVIDE A 6" THICK CONCRETE BASE.

(3) DOUBLE CHECK DETECTOR VALVE ASSEMBLY PER CITY OF WALLA WALLA STANDARDS. PROVIDE TAMPER SWITCHES ON OS&Y VALVES

(4) INSTALL PIPE SUPPORT JACKS AS REQUIRED

(5) TEE

(6) 1" SCH40 PVC CONDUIT TO BUILDING FOR TAMPER SWITCH ON DOUBLE CHECK DETECTOR VALVE ASSEMBLY GATE VALVES.

(7) BALL VALVE FOR LESS THAN 3", GATE VALVE FOR 3" OR GREATER.

(8) 90° BEND

(9) WATER METER PER CITY OF WALLA WALLA REQUIREMENTS

(10) DOUBLE CHECK VALVE ASSEMBLY PER CITY OF WALLA WALLA REQUIREMENTS.

(11) OS&Y VALVE

(12) REDUCER (AS NEEDED)

(13) 6" AREA DRAIN AND PERFORATED PIPING TO DRAIN ROCK AND FILTER FABRIC.

(14) BYPASS FOR DOMESTIC SERVICE

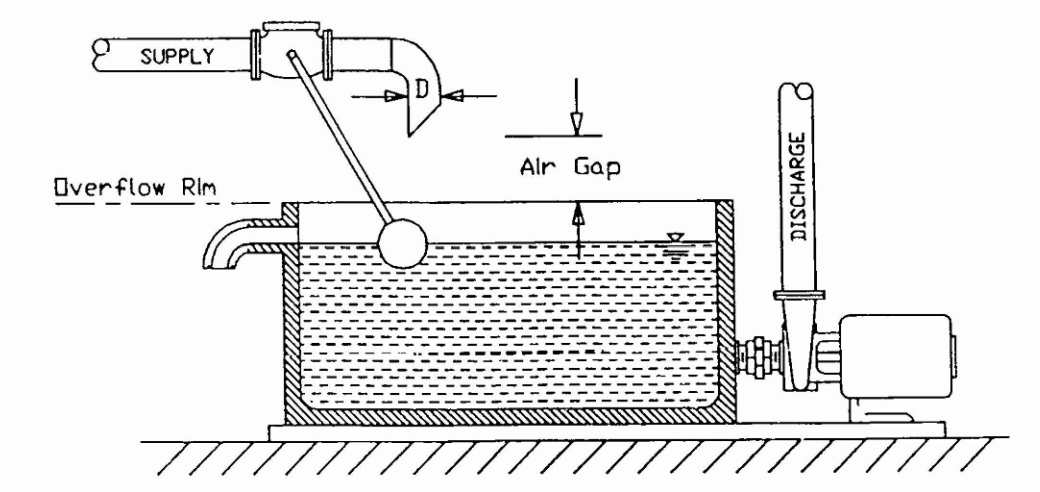
City of Walla Walla

COMBINED WATER SERVICE

DATE: 02/20/2023

APPROVED BY:

STANDARD PLAN 4-15



MINIMUM AIR GAP DIMENSIONS			
EFFECTIVE DIAMETER OF SUPPLY PIPE OPENING "D"	MINIMUM AIR GAP SEPARATION	IF WALLS, RIBS, OR OBSTRUCTIONS ARE WITHIN 3 TIMES D FROM THE AIR GAP CENTERLINE	IF INTERSECTING WALLS ARE WITHIN 4 TIMES D FROM THE AIR GAP CENTERLINE
NOT GREATER THAN 0.5 INCH	1 INCH	1.5 INCHES	2 INCHES
NOT GREATER THAN 0.75 INCH	1.5 INCHES	2.25 INCHES	3 INCHES
NOT GREATER THAN 1 INCH	2 INCHES	3 INCHES	4 INCHES
1 INCH AND GREATER	2 TIMES D	3 TIMES D	4 TIMES D

NOTES

MANUFACTURED AIR GAP FITTINGS MUST MEET THE DIMENSION CRITERIA OF AN APPROVED AIR GAP AS SHOWN IN THIS DOCUMENT.

FLEXIBLE HOSES OR TUBING WHICH MAY BE BENT OR EASILY ALTERED TO REDUCE THE AIR GAP ARE NOT ALLOWED.

AIR GAPS MUST BE INSTALLED ABOVE GRADE UNLESS OTHERWISE APPROVED BY THE CROSS CONNECTION CONTROL SPECIALIST.

ADEQUATE ACCESS AND CLEARANCES FOR INSPECTION, TESTING, AND REPAIRS MUST BE PROVIDED.

ALL INSTALLATIONS ARE SUBJECT TO APPROVAL BY THE CROSS CONNECTION CONTROL SPECIALIST.

A CITY OF WALLA WALLA CROSS CONNECTION CONTROL SPECIALIST MUST INSPECT EVERY INSTALLATION BEFORE RESTORATION OF WATER SERVICE.

OCCASIONAL DEVIATION FROM THIS STANDARD MAY BE NECCESSARY TO ENSURE THE OPERABILITY AND SERVICEABILITY OF BACKFLOW PREVENTION EQUIPMENT AS REQUIRED BY WASHINGTON STATE ADMINISTRATIVE CODE 246-290-490 AND WALLA WALLA MUNICIPAL CODE 13.05. IN ACCORDANCE WITH THESE LAWS, ALL INSTALLATIONS ARE SUBJECT TO APPROVAL BY THE CITY'S DESIGNATED, LICENSED CROSS CONNECTION CONTROL SPECIALIST.

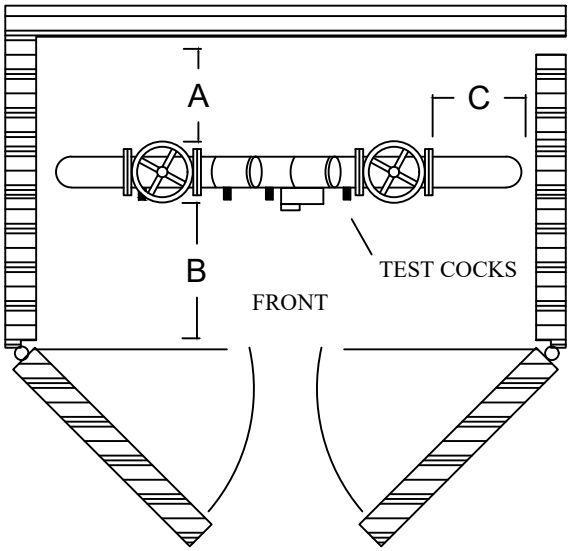
City of Walla Walla

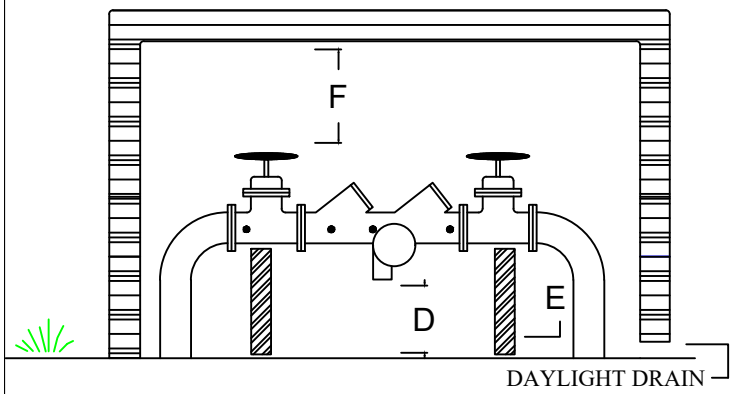
APPROVED AIR GAP

DATE: 12/30/2016

APPROVED BY:

STANDARD PLAN 5-1





REQUIREMENTS

1. ORIENTATION:
   1.1. INSTALL IN HORIZONTAL ORIENTATION WITH ID PLATE FACING UP AND TEST COCKS FACING UP OR TOWARD SERVICE PERSONNEL UNLESS OTHERWISE APPROVED BY THE CITY'S CROSS CONNECTION CONTROL SPECIALIST.

2. COLD WEATHER:
   2.1. IF OPERATED IN FREEZING TEMPERATURE, PROVIDE FREEZE PROTECTION (E.G. HEAT SOURCE AND INSULATION OR ENCLOSURE).

3. DRAINAGE:
   3.1. ADEQUATE DAYLIGHT DRAIN MUST BE PROVIDED TO PREVENT FLOODING OF ASSEMBLY OR WORK AREA. DRAIN SIZES APPROXIMATELY TWICE THE DIAMETER OF THE ASSEMBLY PIPE SIZE ARE USUALLY SUFFICIENT.
   3.2. ANY DRAIN LINE ATTACHED DIRECTLY TO RELIEF VALVE OUTLET MUST INCLUDE AN AIR GAP FITTING APPROVED BY THE CROSS CONNECTION CONTROL SPECIALIST.
   3.3. UNDERGROUND INSTALLATION OF RPBA/RPDA PROHIBITED WITHOUT WRITTEN PRE-APPROVAL OF CROSS CONNECTION CONTROL SPECIALIST.

4. SMALL ASSEMBLIES (SMALLER THAN 2.5 INCHES) :
   A - 8 INCH MINIMUM CLEARANCE TO BACK WALL.
   B - 8 INCH MINIMUM CLEARANCE TO FRONT WALL, 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED FROM FRONT THROUGH DOOR(S).
   C - 6 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
   D - 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF ASSEMBLY TO STANDING SURFACE.
   E - N/A.
   F - 3 INCH MINIMUM CLEARANCE ABOVE HIGHEST POINT ON BACKFLOW PREVENTER. 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED TOP THROUGH DOOR(S).

5. LARGE ASSEMBLIES (2.5 INCHES AND LARGER):
   A - 12 INCH MINIMUM CLEARANCE TO BACK WALL.
   B - 12 INCH MINIMUM CLEARANCE TO FRONT WALL, 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED FROM FRONT THROUGH DOOR(S).
   C - 12 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
   D - 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF ASSEMBLY TO STANDING SURFACE OR BOTTOM OF ENCLOSURE.
   E - STABLE, PERMANENT SUPPORTS REQUIRED.
   F - 12 INCH MINIMUM CLEARANCE REQUIRED ABOVE HIGHEST POINT ON BACKFLOW PREVENTER, (MEASURE WHEN VALVE FULLY OPENED FOR OS&Y VALVES). 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED TOP THROUGH DOOR(S).
   G - TOP ENTRY VAULTS MUST HAVE RECTANGULAR DOORS WITH SPRING ASSIST CYLINDER AND HOLD OPEN ARMS. ACCESS OPENING MUST BE LARGE ENOUGH TO ACCOMMODATE THE COMPLETE REMOVAL AND REPLACEMENT OF THE BACKFLOW PREVENTER AND ASSOCIATED EQUIPMENT.

6. DETECTOR TYPE ASSEMBLIES:
   6.1. METER ON DETECTOR CHECK BYPASS SHALL BE EITHER SENSUS SRII OR NEPTUNE T-10 MODELS EQUIPPED WITH TOUCHREAD REMOTE READING PAD.
   6.2. INSTALLER SHALL COORDINATE WITH WATER DIVISION FOR PROPER LOCATION AND INSTALLATION OF TOUCHREAD REMOTE READING PAD.

OCCASIONAL DEVIATION FROM THIS STANDARD MAY BE NECCESSARY TO ENSURE THE OPERABILITY AND SERVICEABILITY OF BACKFLOW PREVENTION EQUIPMENT AS REQUIRED BY WASHINGTON STATE ADMINISTRATIVE CODE 246-290-490 AND WALLA WALLA MUNICIPAL CODE 13.05. IN ACCORDANCE WITH THESE LAWS, ALL INSTALLATIONS ARE SUBJECT TO APPROVAL BY THE CITY'S DESIGNATED, LICENSED CROSS CONNECTION CONTROL SPECIALIST.

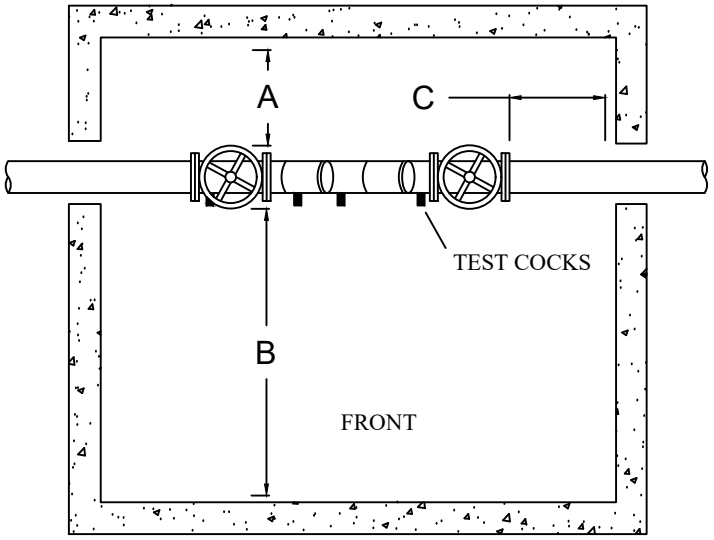
City of Walla Walla

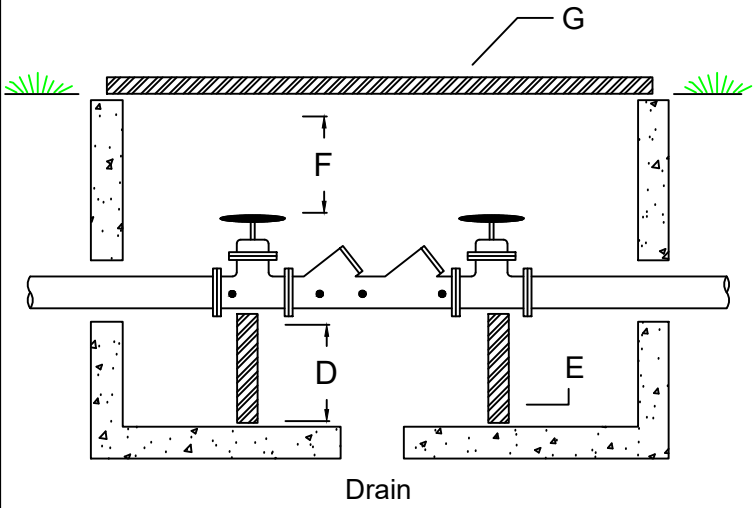
REDUCED PRESSURE BACK FLOW ASSEMBLY (RPBA/RPDA)

DATE: 10/25/2012

APPROVED BY:

STANDARD PLAN 5-2





REQUIREMENTS

1. ORIENTATION:
   1.1. INSTALL IN HORIZONTAL ORIENTATION WITH ID PLATE FACING UP AND TEST COCKS FACING UP OR TOWARD SERVICE PERSONNEL UNLESS OTHERWISE APPROVED BY THE CITY'S CROSS CONNECTION CONTROL SPECIALIST.

2. COLD WEATHER:
   2.1. IF OPERATED IN FREEZING TEMPERATURE, PROVIDE FREEZE PROTECTION (E.G. HEAT SOURCE AND INSULATION OR ENCLOSURE).
   2.2. UPON APPROVAL BY THE CITY'S CROSS CONNECTION CONTROL SPECIALIST, A WINTERIZATION ARRANGEMENT (SEE STANDARD PLAN 5-7) MAY BE ALLOWED UPSTREAM OF ASSEMBLY FOR THE PURPOSE OF WINTERIZING WITH COMPRESSED AIR.
   2.3. QUICK CONNECT FITTINGS ARE PROHIBITED UPSTREAM OF ASSEMBLY.

3. DRAINAGE:
   3.1. ADEQUATE DRAINAGE MUST BE PROVIDED TO PREVENT FLOODING OF ASSEMBLY OR WORK AREA.

4. SMALL ASSEMBLIES (SMALLER THAN 2.5 INCHES) :
   A - 6 INCH MINIMUM CLEARANCE TO BACK WALL.
   B - 6 INCH MINIMUM CLEARANCE TO FRONT WALL.
   C - 3 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
   D - 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF ASSEMBLY TO STANDING SURFACE OR BOTTOM OF VAULT.
   E - N/A.
   F - 3 INCH MINIMUM CLEARANCE ABOVE HIGHEST POINT ON BACKFLOW PREVENTER.

5. LARGE ASSEMBLIES (2.5 INCHES AND LARGER):
   A - 12 INCH MINIMUM CLEARANCE TO BACK WALL.
   B - 36 INCH MINIMUM CLEARANCE TO FRONT WALL.
   C - 12 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
   D - 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF ASSEMBLY TO STANDING SURFACE OR BOTTOM OF VAULT.
   E - STABLE, PERMANENT SUPPORTS REQUIRED.
   F - 12 INCH MINIMUM CLEARANCE REQUIRED ABOVE HIGHEST POINT ON BACKFLOW PREVENTER. (MEASURE WHEN VALVE FULLY OPENED FOR OS&Y VALVES).
   G - TOP ENTRY VAULTS MUST HAVE RECTANGULAR DOORS WITH SPRING ASSIST CYLINDER AND HOLD OPEN ARMS. ACCESS OPENING MUST BE LARGE ENOUGH TO ACCOMMODATE THE COMPLETE REMOVAL AND REPLACEMENT OF THE BACKFLOW PREVENTER AND ASSOCIATED EQUIPMENT.

6. DETECTOR TYPE ASSEMBLIES:
   6.1. METER ON DETECTOR CHECK BYPASS SHALL BE EITHER SENSUS SRII OR NEPTUNE T-10 MODELS EQUIPPED WITH TOUCHREAD REMOTE READING PAD.
   6.2. INSTALLER SHALL COORDINATE WITH WATER DIVISION FOR PROPER LOCATION AND INSTALLATION OF TOUCHREAD REMOTE READING PAD.

OCCASIONAL DEVIATION FROM THIS STANDARD MAY BE NECCESSARY TO ENSURE THE OPERABILITY AND SERVICEABILITY OF BACKFLOW PREVENTION EQUIPMENT AS REQUIRED BY WASHINGTON STATE ADMINISTRATIVE CODE 246-290-490 AND WALLA WALLA MUNICIPAL CODE 13.05. IN ACCORDANCE WITH THESE LAWS, ALL INSTALLATIONS ARE SUBJECT TO APPROVAL BY THE CITY'S DESIGNATED, LICENSED CROSS CONNECTION CONTROL SPECIALIST.

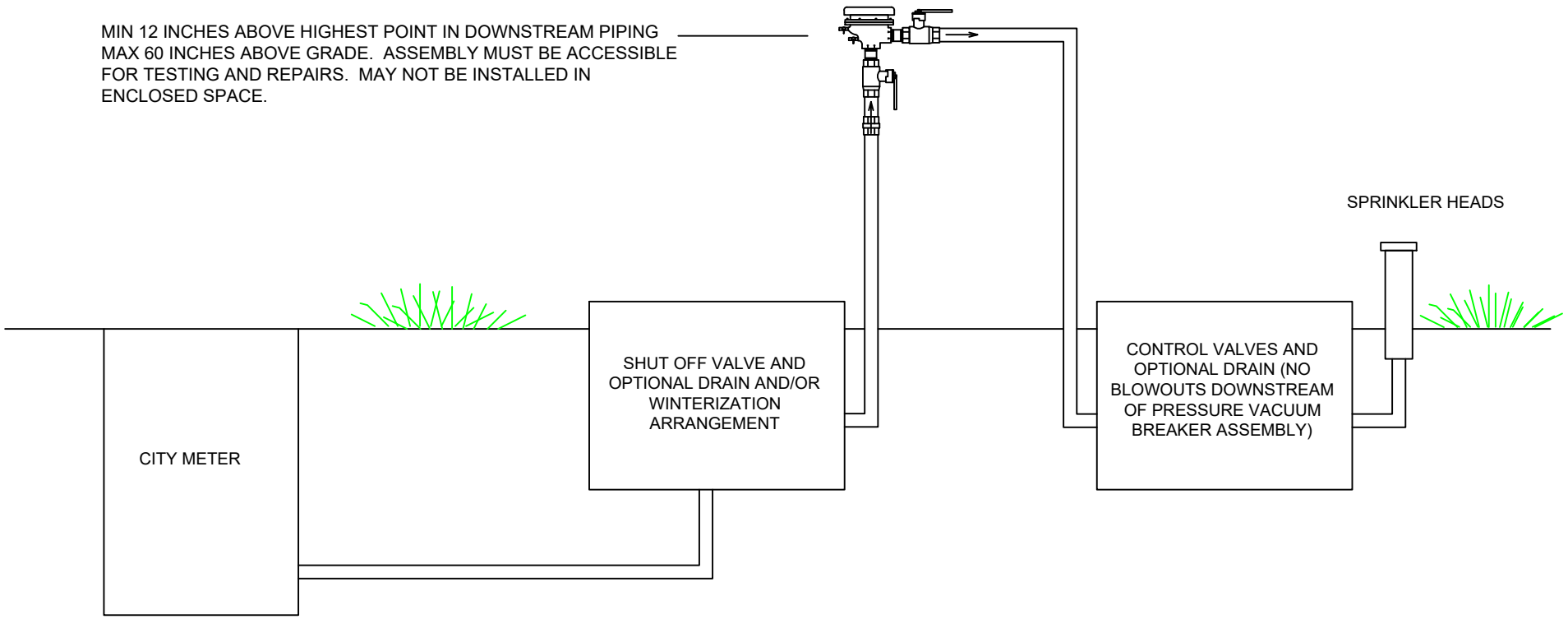
City of Walla Walla

DOUBLE CHECK VALVE ASSEMBLY (DVCA/DVDA)

DATE: 10/25/2012

APPROVED BY:

STANDARD PLAN 5-3



REQUIREMENTS

1. ORIENTATION:
   1.1. INSTALL IN ORIENTATION SHOWN.

2. COLD WEATHER:
   2.1. UPON APPROVAL BY THE CITY'S CROSS CONNECTION CONTROL SPECIALIST, A WINTERIZATION ARRANGEMENT (SEE STANDARD PLAN 5-7) MAY BE ALLOWED UPSTREAM OF ASSEMBLY FOR THE PURPOSE OF WINTERIZING WITH COMPRESSED AIR.
   2.2. QUICK CONNECT FITTINGS ARE PROHIBITED.

OCCASIONAL DEVIATION FROM THIS STANDARD MAY BE NECCESSARY TO ENSURE THE OPERABILITY AND SERVICEABILITY OF BACKFLOW PREVENTION EQUIPMENT AS REQUIRED BY WASHINGTON STATE ADMINISTRATIVE CODE 246-290-490 AND WALLA WALLA MUNICIPAL CODE 13.05. IN ACCORDANCE WITH THESE LAWS, ALL INSTALLATIONS ARE SUBJECT TO APPROVAL BY THE CITY'S DESIGNATED, LICENSED CROSS CONNECTION CONTROL SPECIALIST.

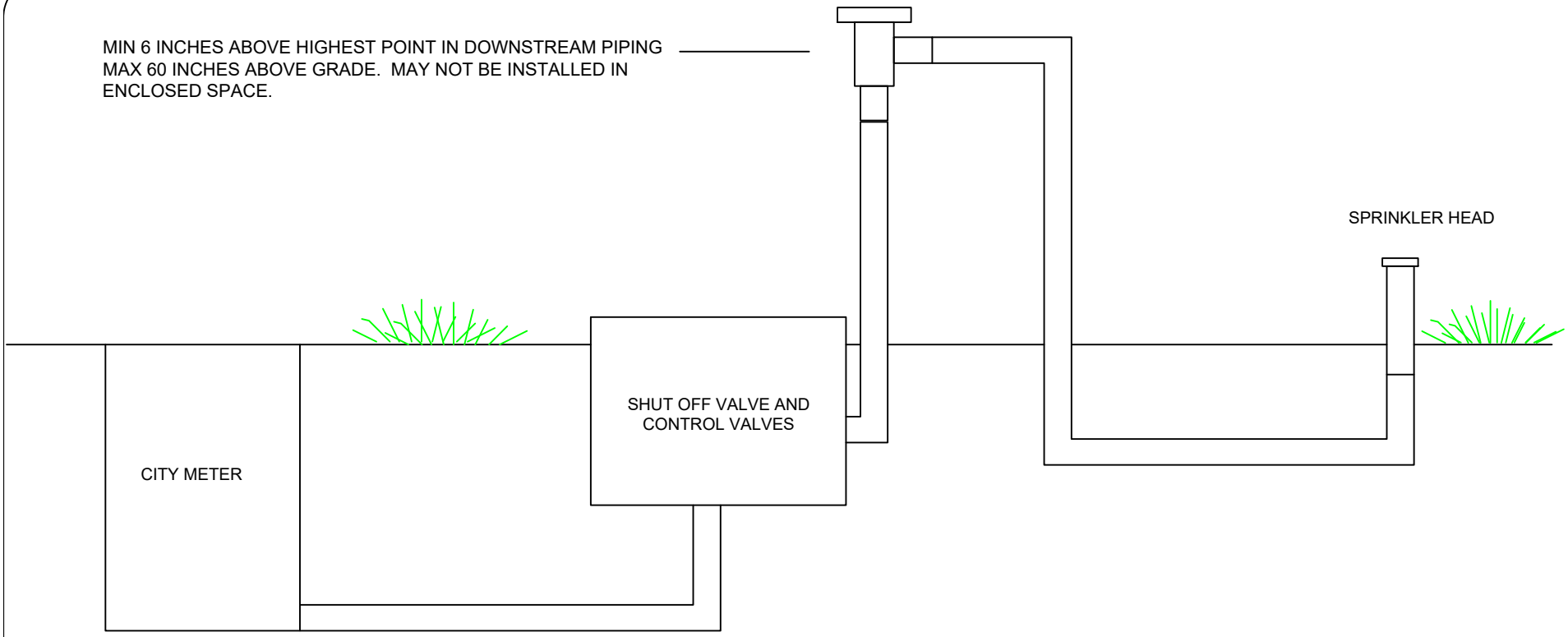
City of Walla Walla

PRESSURE VACUUM BREAKER ASSEMBLY (PVBA/SVBA)

DATE: 07/06/2012

APPROVED BY:

STANDARD PLAN 5-4



REQUIREMENTS

1. ATMOSPHERIC VACUUM BREAKER MUST BE INSTALLED DOWNSTREAM OF CONTROL VALVE. (NO VALVES ARE ALLOWED DOWNSTREAM OF ATMOSPHERIC VACUUM BREAKER).

2. ORIENTATION:
   2.1. INSTALL IN ORIENTATION SHOWN.

3. COLD WEATHER:
   3.1. UPON APPROVAL BY THE CITY'S CROSS CONNECTION CONTROL SPECIALIST, A WINTERIZATION ARRANGEMENT (SEE STANDARD PLAN 5-7) MAY BE ALLOWED UPSTREAM OF ASSEMBLY FOR THE PURPOSE OF WINTERIZING WITH COMPRESSED AIR.
   3.2. QUICK CONNECT FITTINGS ARE PROHIBITED.

OCCASIONAL DEVIATION FROM THIS STANDARD MAY BE NECCESSARY TO ENSURE THE OPERABILITY AND SERVICEABILITY OF BACKFLOW PREVENTION EQUIPMENT AS REQUIRED BY WASHINGTON STATE ADMINISTRATIVE CODE 246-290-490 AND WALLA WALLA MUNICIPAL CODE 13.05. IN ACCORDANCE WITH THESE LAWS, ALL INSTALLATIONS ARE SUBJECT TO APPROVAL BY THE CITY'S DESIGNATED, LICENSED CROSS CONNECTION CONTROL SPECIALIST.

City of Walla Walla

ATMOSPHERIC VACUUM BREAKER (AVB)

DATE: 07/06/2012

APPROVED BY:

STANDARD PLAN 5-5

City of Walla Walla Cross Connection Control Program
Location of Backflow Prevention Equipment for Premises Isolation

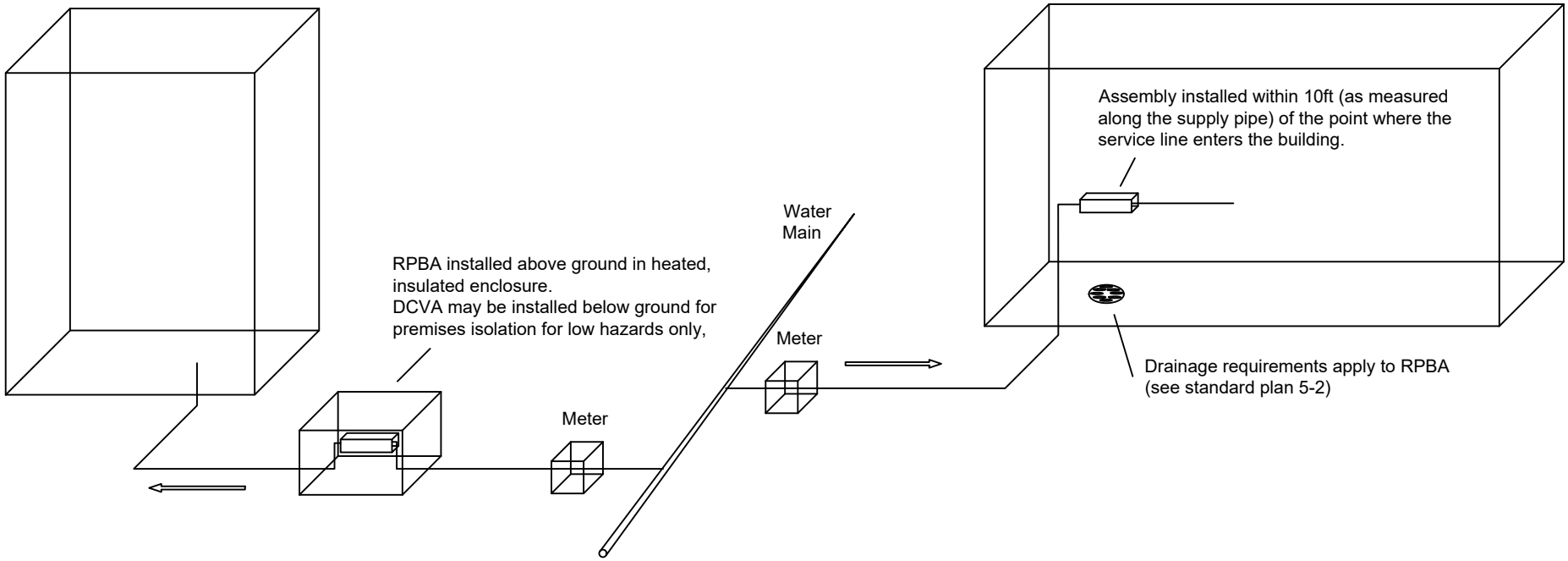
To reduce the risk of contamination of the public water supply, the City of Walla Walla requires premises isolation on certain water services. The purpose of premises isolation is to isolate the city mains from potentially contaminated water in a customer's building. This is done by installing a backflow prevention assembly between the city's main and the customer's plumbing system. This hand–out explains basic locations for premises isolation equipment. Premises isolation systems are installed according to City of Walla Walla Municipal Code 13.05 and the Washington State Administrative Code 246–290–490.

There are two basic locations where backflow assemblies may be installed. The City's Water Cross Connection Control Specialist determines which location is used in a particular building based on the length of the line to the building, possible future modifications, the degree of hazard presented by the use of the building, and other factors.

The following diagrams show the two locations where backflow assemblies may be installed. Final approval of the location by the City's designated, licensed Cross Connection Control Specialist is required prior to water service being provided.

LOCATION OF PREMISES ISOLATION BACKFLOW PREVENTER OUTSIDE OF BUILDING

LOCATION OF PREMISES ISOLATION BACKFLOW PREVENTER INSIDE BUILDING



Notes:

- No branch lines or points of use are allowed upstream of assemblies installed for premises isolation, with one exception; upon prior approval by the Cross Connection Control Specialist, a single irrigation line isolated with a backflow preventer may be allowed.
- Plan approval from the Cross Connection Control Specialist is required prior to installation of backflow prevention equipment.
- Premises isolation backflow preventers must be accessible for inspection at all times by the City.

City of Walla Walla

PREMISES ISOLATION GUIDELINES

DATE: 4/10/2023

APPROVED BY:

STANDARD PLAN 5-6

Irrigation Winterization Arrangement
(CITY OF WALLA WALLA GUIDELINES FOR INSTALLATION)

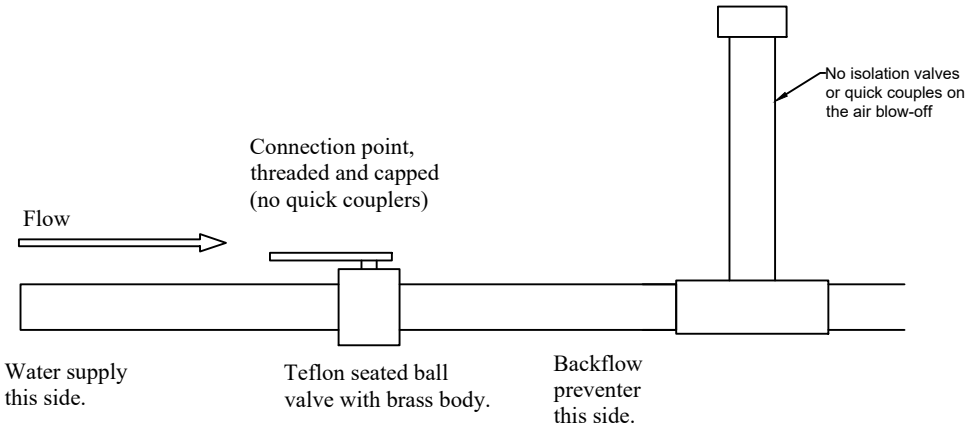
Many water system customers choose to winterize their underground sprinkler systems with compressed air. When this is done properly, an entire irrigation system from downstream of the backflow assembly to sprinkler head may be winterized without harming the quality of the potable water supply. When this is not done properly, compressed air may enter the customer's plumbing system or the City's public water system, creating a host of water quality problems. To prevent such problems, customers are generally required to have a double check valve assembly as a minimum upstream of any fixtures used for inserting compressed air into the piping. This requirement necessitates drainage or removal of the backflow preventer for winterization purposes for many customers as the backflow preventer does not pass air through it in the reverse direction.

In response to this problem, the following arrangement has been approved for use on irrigation systems connected to the City of Walla Walla water system. If you choose to winterize with compressed air, and would like to be able to remove the water in your backflow preventer with compressed air, please read these directions carefully and follow them exactly as stated. When you are finished with your installation, call the Cross Connection Control Specialist at the Water Division (527-4380) for an inspection and approval.

The winterization arrangement is for the blowoff to be installed in the supply line downstream of the backflow preventer. This arrangement consists of a resilient seated ball valve with brass body, followed downstream by a tee fitting, from which a capped, threaded section of pipe is extended as a tie-in for connecting the compressed air.

The valve must have a Teflon or other resilient seat, and must be a ball valve in a brass body. Any other type of valve such as plastic valves may result in air being passed through the valve and causing water quality problems for you and for your neighbors.

The tie-in for the compressed air must not have a quick connect fitting of any kind on it. It must be threaded and capped. This is so that the compressed air cannot be connected until the valve has been shut off.



Winterization Steps:

1. Turn off water at ball valve.
2. Remove the cap and connect air hose at connection point.
3. Apply air pressure to remove water from your system (be careful not to exceed the pressure rating of your plumbing). A good rule of thumb is not to exceed your normal water pressure.
4. Remove air hose connection.
5. Replace cap.
6. Leave valve off until sprinkler system is recharged for the next season.

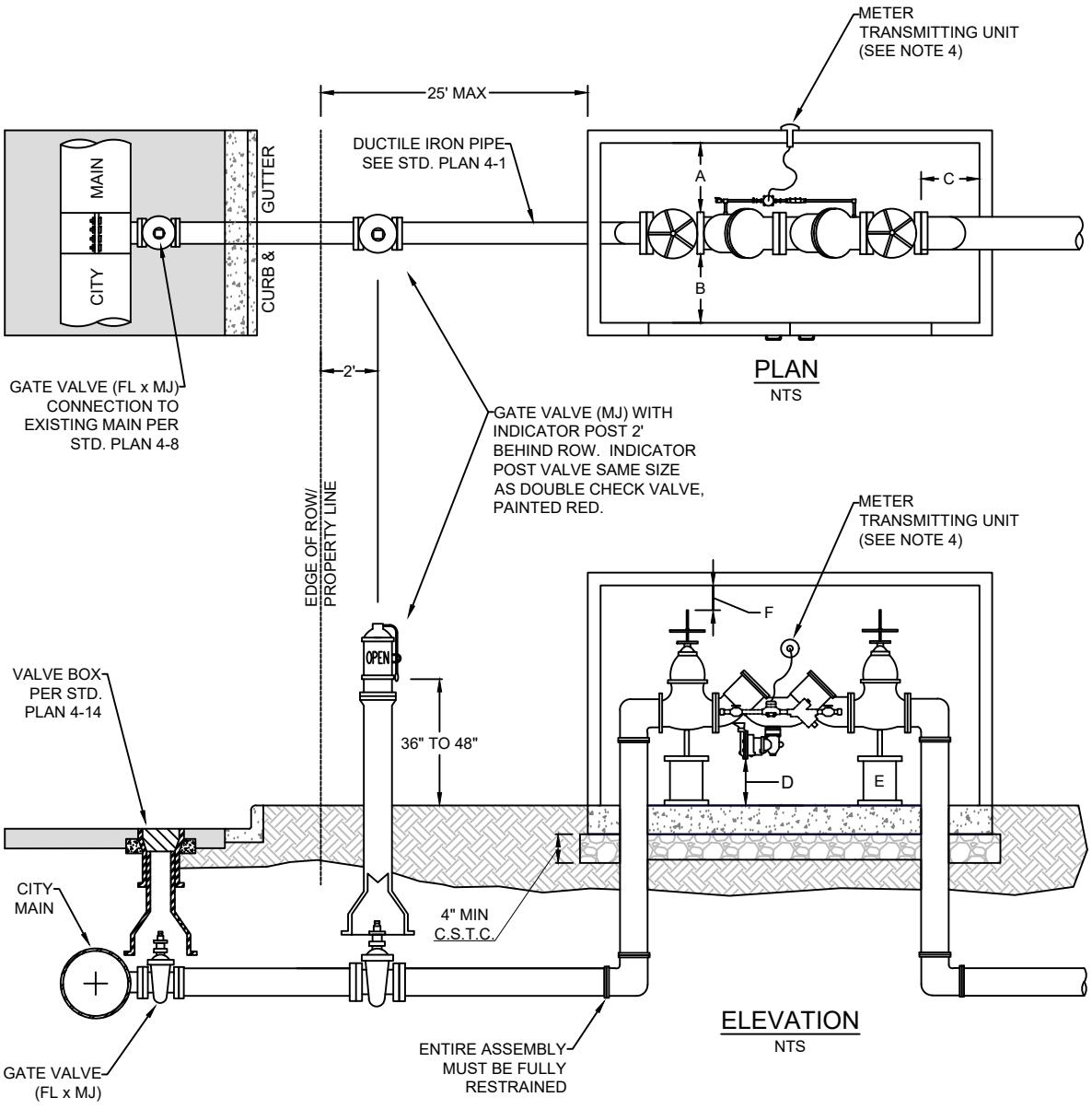
City of Walla Walla

IRRIGATION WINTERIZATION ARRANGEMENT

DATE: 4/05/2023

APPROVED BY:

STANDARD PLAN 5-7



NOTES:

1. CITY OWNERSHIP ENDS AT THE PRIVATE PROPERTY SIDE OF THE VALVE LOCATED TWO FEET BEHIND ROW. CONTRACTOR IS REQUIRED TO INSTALL SERVICE FROM TWO FEET BEHIND ROW TO BACKFLOW DEVICE. PER WALLA WALLA MUNICIPAL CODE 13.04.240, THE CITY SERVICE LINE WILL BE INSTALLED AND MAINTAINED BY THE WATER DIVISION.
2. INSTALL RPDA IN HORIZONTAL ORIENTATION WITH ID PLATE FACING UP.
3. ALL REDUCED PRESSURE DETECTOR ASSEMBLIES SHALL INCLUDE RESILIENT SEATED OS&Y SHUTOFF VALVES AND TEST COCKS AND CAPS AND APPROVED CROSS - CONNECTION CONTROL ASSEMBLIES PER LATEST DOH USC APPROVED LIST.
4. METER ON DETECTOR CHECK BYPASS SHALL BE SENSUS IPERL EQUIPPED WITH A METER TRANSMITTING UNIT PROVIDED AND INSTALLED BY THE CITY.
5. PRIOR TO ACTIVATION OF THE NEW LINE, INSTALL 1/4" FLARE TEST COCKS WITH 1/4" FLARE CAPS FACING UP OR TOWARD SERVICE PERSONNEL.
6. AFTER FIELD INSTALLATION, MAIN RPDA AND BY-PASS RPVA MUST BE TESTED SATISFACTORILY BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SUBMITTED TO THE CITY.
7. IF OPERATED IN FREEZING TEMPERATURE, PROVIDE FREEZE PROTECTION.
8. UNDERGROUND INSTALLATION OF RPDA PROHIBITED WITHOUT APPROVAL OF CITY ENGINEER. UNDERGROUND INSTALLATIONS MUST INCLUDE A DRAIN TO DAYLIGHT.

CLEARANCE REQUIREMENTS:

1. SMALL ASSEMBLIES (SMALLER THAN 2.5 INCHES) :

A. 8 INCH MINIMUM CLEARANCE TO BACK WALL.
B. 8 INCH MINIMUM CLEARANCE TO FRONT WALL, 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED FROM FRONT THROUGH DOOR(S).
C. 6 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
D. 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF ASSEMBLY TO STANDING SURFACE.
E. N/A.
F. 3 INCH MINIMUM CLEARANCE ABOVE HIGHEST POINT ON BACKFLOW PREVENTER. 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED TOP THROUGH DOOR(S).

2. LARGE ASSEMBLIES (2.5 INCHES AND LARGER):

A. 12 INCH MINIMUM CLEARANCE TO BACK WALL.
B. 12 INCH MINIMUM CLEARANCE TO FRONT WALL, 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED FROM FRONT THROUGH DOOR(S).
C. 12 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
D. 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF RELIEF VALVE TO STANDING SURFACE OR BOTTOM OF ENCLOSURE.
E. STABLE, PERMANENT SUPPORTS REQUIRED.
F. 12 INCH MINIMUM CLEARANCE REQUIRED ABOVE HIGHEST POINT ON BACKFLOW PREVENTER, (MEASURE WHEN VALVE FULLY OPENED FOR OS&Y VALVES). 18 INCH MAXIMUM IF ASSEMBLY IS SERVICED TOP THROUGH DOOR(S).

A FIRE SERVICE IS DEFINED AS ANY CONNECTION TO THE CITY WATER SYSTEM FOR THE SOLE INTENDED PURPOSE OF STAND ALONE FIRE PROTECTION.

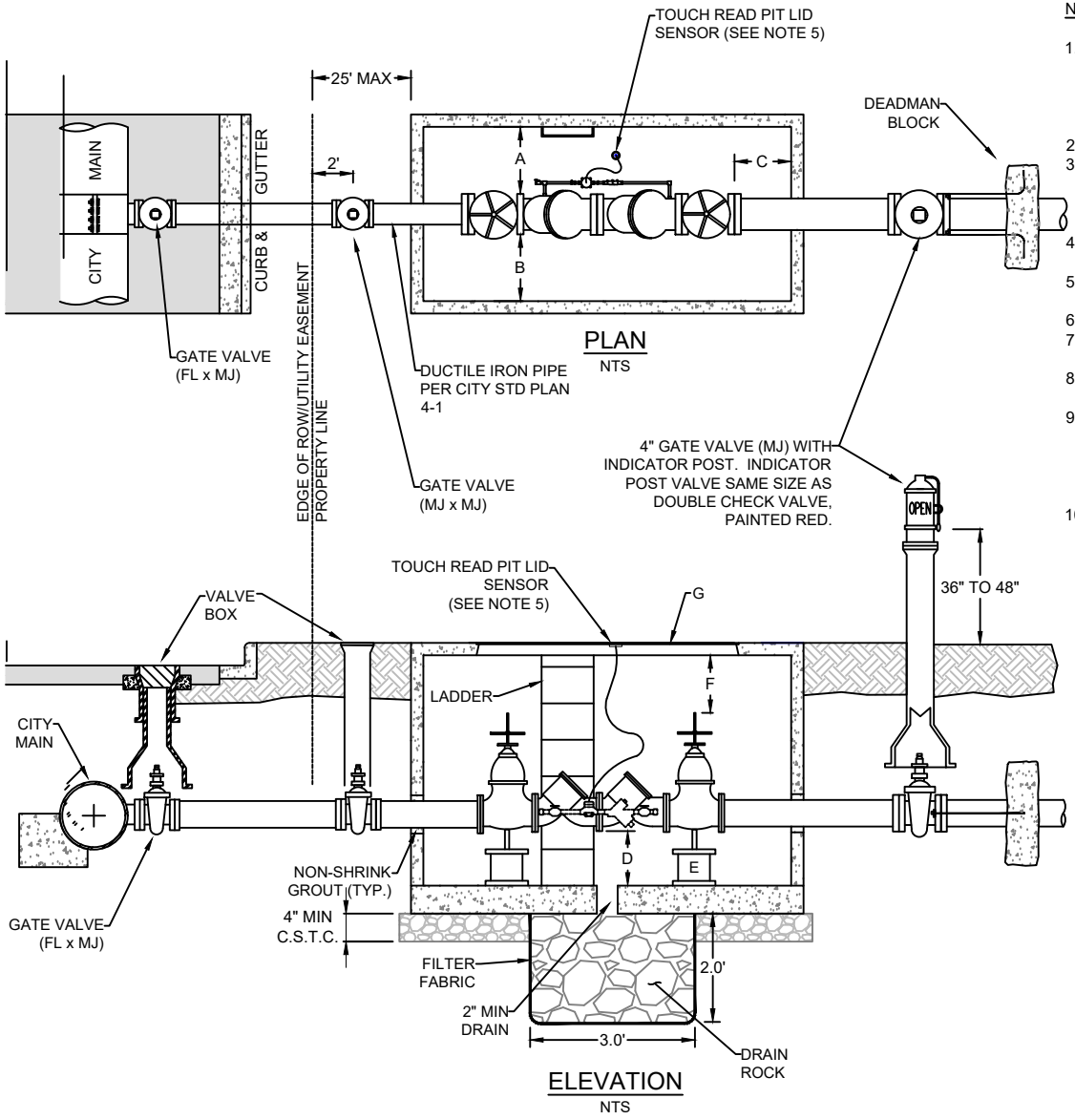
City of Walla Walla

STAND ALONE FIRE SERVICE REDUCED PRESSURE BACK FLOW ASSEMBLY (RPDA)

DATE: 01/16/2018

APPROVED BY:

STANDARD PLAN 5-8



NOTES:

1. CITY OWNERSHIP ENDS AT THE PRIVATE PROPERTY SIDE OF THE VALVE LOCATED TWO FEET BEHIND ROW. CONTRACTOR IS REQUIRED TO INSTALL SERVICE FROM TWO FEET BEHIND ROW TO BACKFLOW DEVICE. PER WALLA WALLA MUNICIPAL CODE 13.04.240, THE CITY SERVICE LINE WILL BE INSTALLED AND MAINTAINED BY THE WATER DIVISION.
2. INSTALL DCDA IN HORIZONTAL ORIENTATION WITH ID PLATE FACING UP.
3. ALL DOUBLE CHECK DETECTOR ASSEMBLIES SHALL INCLUDE RESILIENT SEATED OS&Y SHUTOFF VALVES WITH TAMPER SWITCH AND TEST COCKS AND CAPS AND APPROVED CROSS - CONNECTION CONTROL ASSEMBLIES PER DOH USC LATEST APPROVED LIST.
4. THE BYPASS ASSEMBLY SHALL BE INCLUDED AS PART OF THE DOUBLE CHECK DETECTOR ASSEMBLY.
5. METER ON DETECTOR CHECK BYPASS SHALL BE A 3/4" SENSUS IPERL EQUIPPED WITH METER TRANSMITTING UNIT PROVIDED AND INSTALLED BY THE CITY.
6. TOUCH READ PIT LID SENSOR SHALL BE MOUNTED THROUGH LID.
7. PRIOR TO ACTIVATION OF THE NEW LINE, INSTALL 1/4" FLARE TEST COCKS WITH 1/4" FLARE CAPS FACING UP OR TOWARD SERVICE PERSONNEL.
8. AFTER FIELD INSTALLATION, MAIN DCDA AND BY-PASS DCVA MUST BE TESTED SATISFACTORILY BY A CERTIFIED BACKFLOW ASSEMBLY TESTER.
9. IF OPERATED IN FREEZING TEMPERATURE, PROVIDE FREEZE PROTECTION. UPON APPROVAL BY THE CITY'S CROSS CONNECTION CONTROL SPECIALIST, A WINTERIZATION ARRANGEMENT (SEE STANDARD PLAN 5-7) MAY BE ALLOWED UPSTREAM OF ASSEMBLY FOR THE PURPOSE OF WINTERIZING WITH COMPRESSED AIR. QUICK CONNECT FITTINGS ARE PROHIBITED UPSTREAM OF ASSEMBLY.
10. ANY WORK PERFORMED TO AN EXISTING FIRE SERVICE SHALL BE PERFORMED BY A WASHINGTON STATE LICENSED LEVEL-U CONTRACTOR. ALL APPROPRIATE NFPA STANDARDS SHALL BE FOLLOWED IN THE PERFORMANCE OF SUCH WORK AND A PERMIT SHALL BE SECURED FROM THE FIRE DEPARTMENT.

CLEARANCE REQUIREMENTS

1. SMALL ASSEMBLIES (SMALLER THAN 2.5 INCHES) :

A. 6 INCH MINIMUM CLEARANCE TO BACK WALL.
B. 6 INCH MINIMUM CLEARANCE TO FRONT WALL.
C. 3 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
D. 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF ASSEMBLY TO STANDING SURFACE OR BOTTOM OF VAULT.
E. N/A.
F. 3 INCH MINIMUM CLEARANCE ABOVE HIGHEST POINT ON BACKFLOW PREVENTER.

2. LARGE ASSEMBLIES (2.5 INCHES AND LARGER):

A. 12 INCH MINIMUM CLEARANCE TO BACK WALL.
B. 36 INCH MINIMUM CLEARANCE TO FRONT WALL.
C. 12 INCH MINIMUM DISTANCE FROM SIDE WALL TO FITTINGS.
D. 12 INCH MINIMUM, 48 INCH MAXIMUM CLEARANCE FROM BOTTOM OF ASSEMBLY TO STANDING SURFACE OR BOTTOM OF VAULT.
E. STABLE, PERMANENT SUPPORTS REQUIRED.
F. 12 INCH MINIMUM CLEARANCE REQUIRED ABOVE HIGHEST POINT ON BACKFLOW PREVENTER. (MEASURE WHEN VALVE FULLY OPENED FOR OS&Y VALVES).
G. TOP ENTRY VAULTS MUST HAVE RECTANGULAR DOORS WITH SPRING ASSIST CYLINDER AND HOLD OPEN ARMS. ACCESS OPENING MUST BE LARGE ENOUGH TO ACCOMMODATE THE COMPLETE REMOVAL AND REPLACEMENT OF THE BACKFLOW PREVENTER AND ASSOCIATED EQUIPMENT.

City of Walla Walla

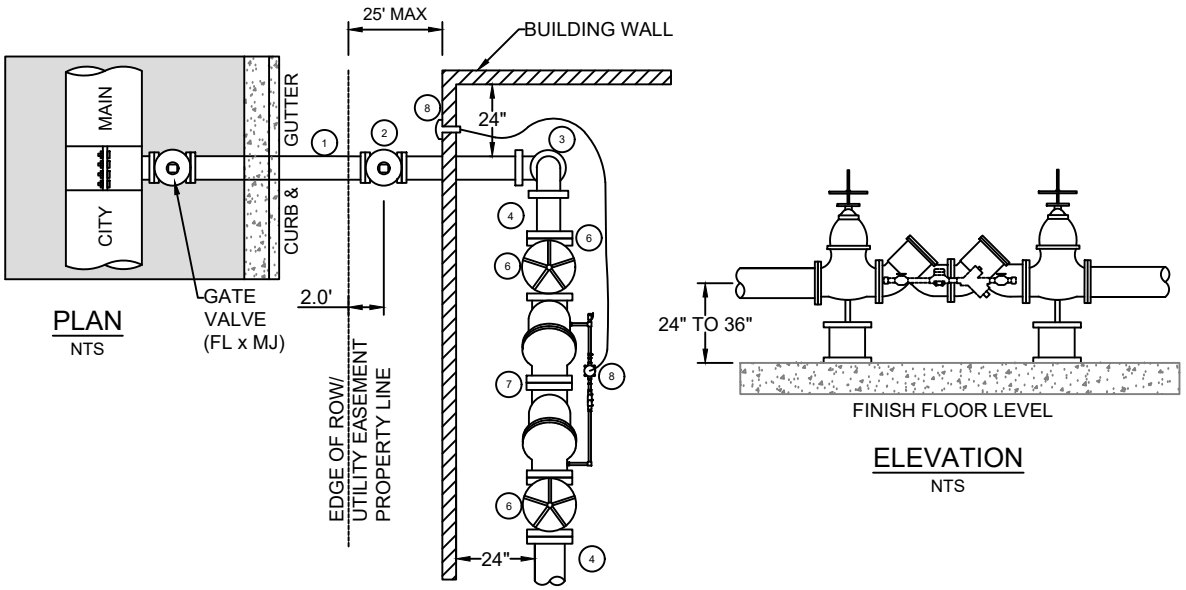
STAND ALONE FIRE SERVICE EXTERIOR DCDA INSTALLATION

DATE: 03/21/2023

APPROVED BY:

STANDARD PLAN 5-9a

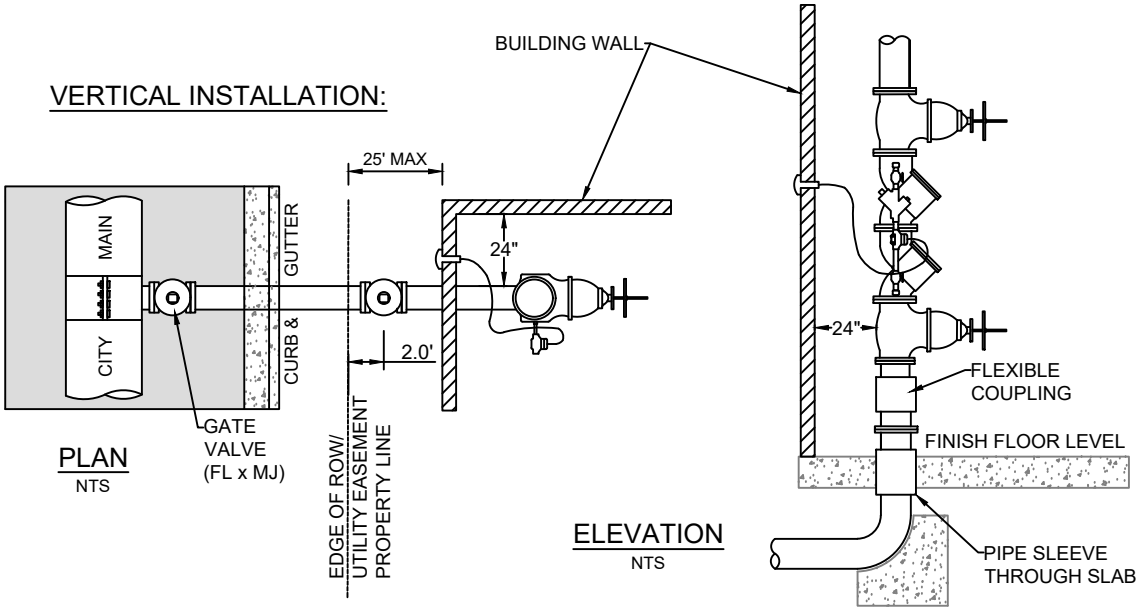
HORIZONTAL INSTALLATION:



PLAN
NTS

ELEVATION
NTS

VERTICAL INSTALLATION:



PLAN
NTS

ELEVATION
NTS

GENERAL NOTES:

1. A FIRE SERVICE IS DEFINED AS AN CONNECTION TO THE CITY WATER SYSTEM FOR THE SOLE INTENDED PURPOSE OF STAND ALONE FIRE PROTECTION.
2. CITY OWNERSHIP ENDS AT THE PRIVATE PROPERTY SIDE OF THE VALVE LOCATED TWO FEET BEHIND ROW. CONTRACTOR IS REQUIRED TO INSTALL SERVICE FROM TWO FEET BEHIND ROW TO BACKFLOW DEVICE. PER WALLA WALLA MUNICIPAL CODE 13.04.240, THE CITY SERVICE LINE WILL BE INSTALLED AND MAINTAINED BY THE WATER DIVISION.
3. DCDA MUST BE INSTALLED IMMEDIATELY AFTER PIPE PENETRATION THROUGH BUILDING FLOOR.

CONSTRUCTION NOTES:

1. DUCTILE IRON PIPE PER CITY STANDARD PLAN 4-1 ALL PIPE AND FITTINGS SHALL BE RESTRAINED WITH MEGALUGS OR EQUIVALENT AND FIELD LOCK GASKETS OR EQUIVALENT.
2. BRANCH VALVE (MJ) WITH VALVE BOX AND COVER OR POST-INDICATOR VAVLE (MJ) WITH TAMPER SWITCH.
3. 2 - 90° BENDS.
4. 18" LONG SPOOL (FL x PE)
5. FOR HORIZONTAL INSTALLATIONS, BOTTOM OF DCDA SHALL BE A MINIMUM OF 24 INCHES ABOVE FLOOR LEVEL AND NOT HIGHER THAN 36 INCHES MAXIMUM. INSTALL CONCRETE PADS OR ADJUSTABLE PIPE SUPPORT COLUMNS UNDER DCDA.
6. O.S & Y VALVES TO BE RESILIENT SEATED WITH TAMPER SWITCHES.
7. DOUBLE CHECK VALVE ASSEMBLY (DCVA) WITH 3/4" BY-PASS.
8. METERED 3/4" BY-PASS DCVA -- BY-PASS METER SHALL BE A 3/4" SENSUS IPERL EQUIPPED WITH METER TRANSMITTING UNIT PROVIDED AND INSTALLED BY THE CITY.

ROOM IN WHICH DCDA IS LOCATED SHALL:

A. HAVE FLOOR DRAIN CONNECTED TO THE SANITARY SEWER SYSTEM

B. HAVE A HEATING SYSTEM (40° F MIN. TEMP.) NO HEAT TAPE

C. NOT BE USED FOR STORAGE AROUND THE DCDA

D. HAVE CLEARLY DELINEATED ACCESS WAYS TO DCDA AND PIVS

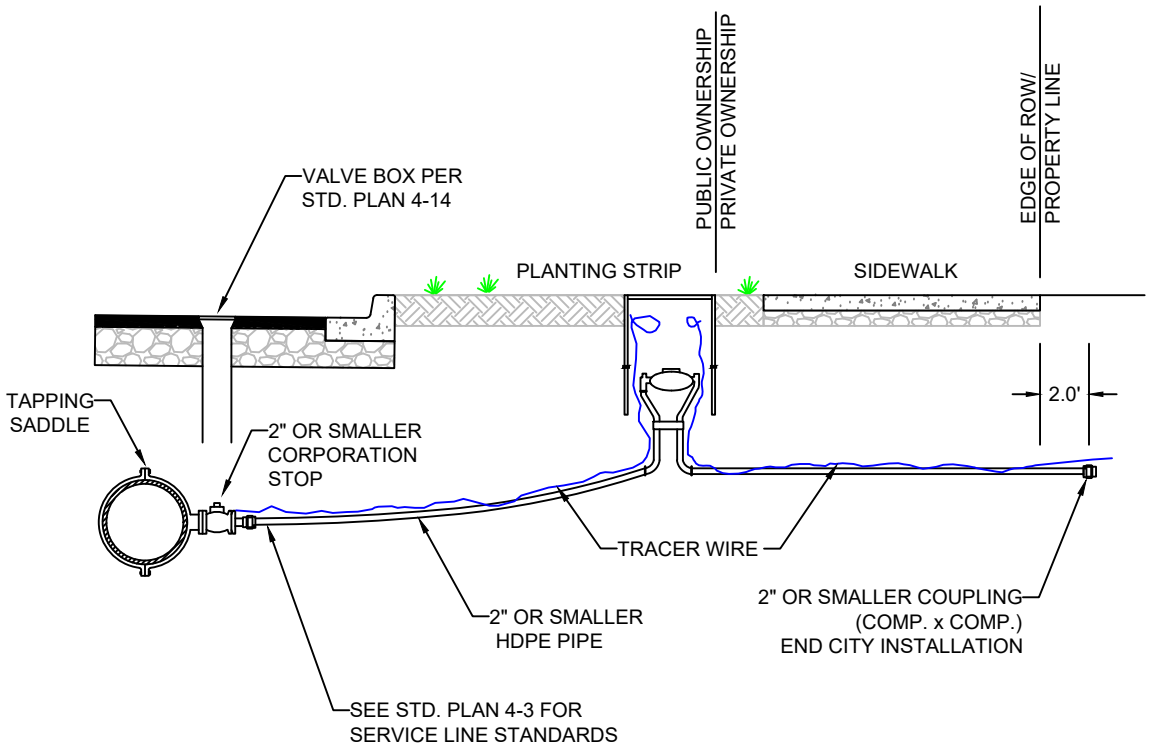
City of Walla Walla

STAND ALONE FIRE SERVICE INTERIOR DCDA INSTALLATION

DATE:
01/13/2020

APPROVED BY:

STANDARD PLAN
5-9b



APPROVED FITTINGS			
DESCRIPTION	MUELLER	FORD	JONES
COUPLING (MIPTxCOMP)	H-15428	C84-77Q	J2605SG
COUPLING (COMPxCOMP)	H-15403	C44-77Q	J2609SG
90° BEND (COMPxCOMP)	H-15526	L44-77Q	J2611SG

NOTES:

1. CITY OWNERSHIP ENDS ON THE PRIVATE PROPERTY SIDE OF THE METER ASSEMBLY. CONTRACTOR IS REQUIRED TO INSTALL SERVICE FROM TWO FEET BEHIND ROW TO BACKFLOW DEVICE. PER WALLA WALLA MUNICIPAL CODE 13.04.240, THE CITY SERVICE LINE WILL BE INSTALLED AND MAINTAINED BY THE WATER DIVISION.
2. BACKFLOW PREVENTION DEVICES ARE REQUIRED ON ALL SERVICES AND MUST BE APPROVED CROSS - CONNECTION CONTROL ASSEMBLIES PER DOH USC LATEST APPROVED LIST.
3. SERVICES SHALL NOT BE LOCATED WITHIN A DRIVEWAY OR DRIVEWAY APPROACH.
4. SERVICE SHALL BE A MINIMUM OF 24" FROM ANY TAP, BELL, FITTING, OR OTHER SERVICE.
5. EXISTING WATER MAINS SHALL BE HOT-TAPPED BY CITY FORCES AT DEVELOPER'S EXPENSE. HOT-TAP INCLUDES SADDLE, VALVE, G5 BOX, AND PVC RISER.
6. ONLY PRIVATE FIRE PROTECTION SYSTEMS (INCLUDING BUT NOT LIMITED TO FIRE SPRINKLERS AND FIRE HYDRANTS) SHALL BE CONNECTED TO FIRE SERVICES. OTHER USES MUST BE SERVED FROM METERED WATER SERVICES.
7. THE SIZE OF A FIRE SERVICE LATERAL SHALL BE IN CONFORMANCE WITH STD. PLAN 4-5
8. ALTERNATE MATERIALS MUST BE APPROVED BY THE CITY ENGINEERING DIVISION PRIOR TO USE.
9. TRACER WIRE SHALL BE DOUBLE INSULATED NO. 12 AWG COPPER TRACER WIRE CONNECTED TO BALLCORP STOP AT MAIN, TAPED EVERY FIVE FEET, WITH COPPER ENDS SEALED WITH 3M SCOTCHKOTE OR APPROVED EQUAL. 3 FEET OF TRACER WIRE SHALL EXTEND ABOVE METER.

A FIRE SERVICE IS DEFINED AS ANY CONNECTION TO THE CITY WATER SYSTEM FOR THE SOLE INTENDED PURPOSE OF STAND ALONE FIRE PROTECTION.

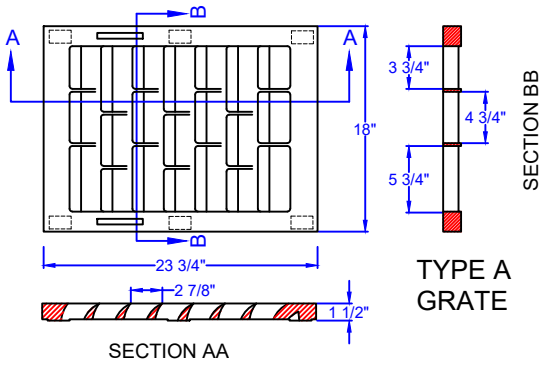
City of Walla Walla

STAND ALONE FIRE SERVICE 2" AND SMALLER

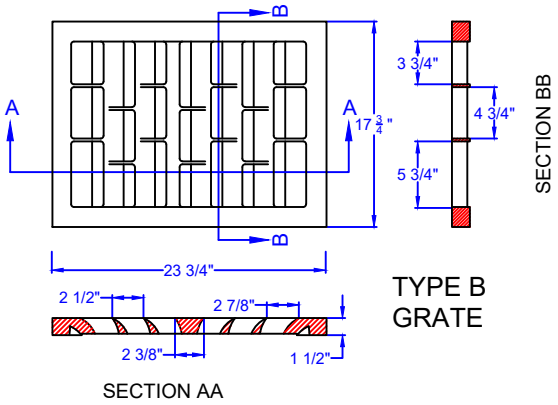
DATE: 01/11/2024

APPROVED BY:

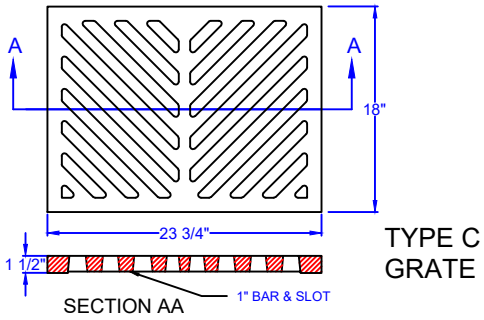
STANDARD PLAN 5-10



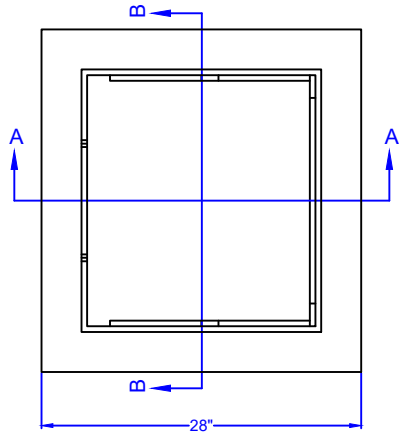
TYPE A GRATE

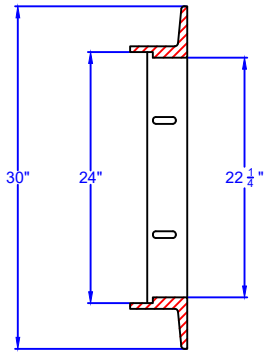


TYPE B GRATE

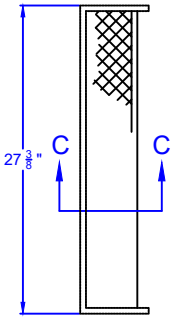


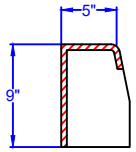
TYPE C GRATE



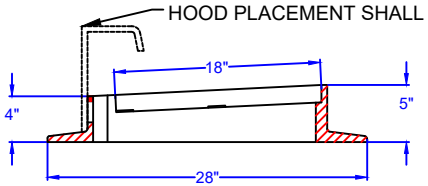


SECTION BB





SECTION CC



SECTION AA

1. THE TYPE "A" GRATE SHALL BE USED WHERE THE GUTTER GRADE FLOWS THROUGH THE INLET UNLESS OTHERWISE NOTED IN THE PLANS.
2. THE TYPE "B" GRATE SHALL BE USED AT LOW POINT LOCATIONS WHERE THE GUTTER GRADE FLOWS FROM BOTH DIRECTIONS TO THE INLET UNLESS OTHERWISE NOTED IN THE PLANS.
3. THE TYPE "C" GRATE SHALL ONLY BE USED IN PARKING LOTS OR AS APPROVED BY THE CITY ENGINEER.
4. THE NAME OF THE MANUFACTURER AND DIRECTION OF THE FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
5. THE MATERIAL USED FOR THE GRATE SHALL BE EMBOSSED EITHER D (FOR DUCTILE IRON) OR C (FOR CAST IRON) NEAR THE NAME OF THE MANUFACTURER.
6. THE EDGES SHALL HAVE A 1/8" RADIUS, 1/8" CHAMFER, OR COMPLETE DEBURRING.
7. WELDING IS NOT PERMITTED.

City of Walla Walla

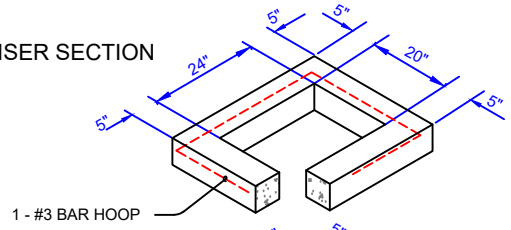
CURB INLET GRATE AND DETAILS

DATE:
09/21/2021

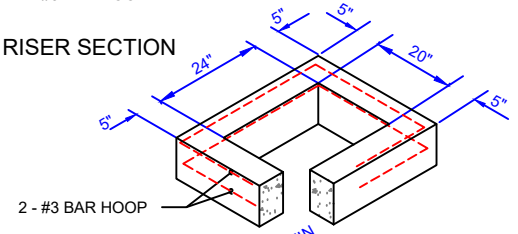
APPROVED BY:

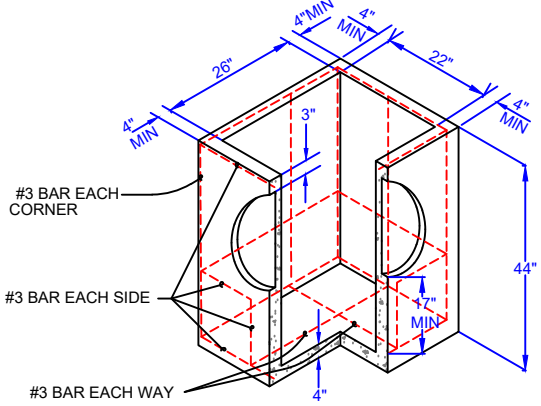
STANDARD PLAN
6-1

6" RISER SECTION

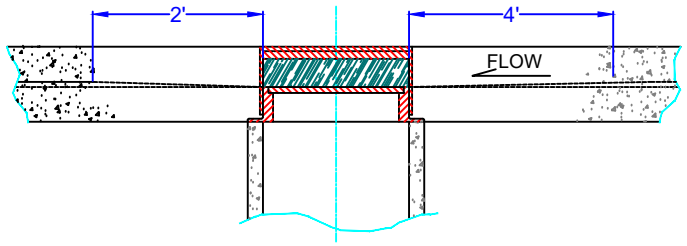


12" RISER SECTION

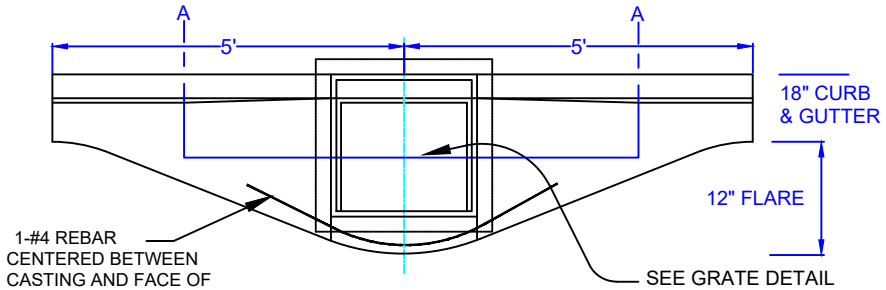




PRECAST BASE SECTION



SECTION A-A



PLAN VIEW

1. THE INLET FRAME & GRATE SHALL BE PLACED 1" BELOW THE NORMAL FLOW LINE OF THE GUTTER.
2. THE GUTTER SECTION SHALL BE FORMED AND SLOPED 4' ON THE UPSTREAM SIDE AND 2' ON THE DOWNSTREAM SIDE.
3. SEE STANDARD PLAN 6-1 FOR CURB AND INLET FRAME AND GRATE.
4. USE A MINIMUM 1/2" OF NON-SHRINK GROUT BETWEEN THE CASTING AND TOP OF THE BARREL AND BETWEEN ANY ADJUSTMENT RINGS BEING USED. USE THE FEWEST ADJUSTMENT RINGS / LARGEST SIZE POSSIBLE TO ACHIEVE DESIRED HEIGHT. WHERE ADJUSTMENT HEIGHT IS LESS THAN 6", USE NO MORE THAN TWO RINGS. WHERE AJUSTMENT IS BETWEEN 6" AND 15", USE NO MORE THAN THREE RINGS.
5. INLET IS TO BE PLACED WITHIN A TOLERANCE 1/2" HORIZONTAL FROM THE CURB LINE.
6. CONCRETE SHALL BE CL. 4000
7. INLET TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN IN THE PLANS OR NOTED IN THE SPECIFICATIONS.
8. AS AN ACCEPTABLE ALTERNATE TO REBAR, WELDED WIRE FABRIC HAVING A MINIMUM AREA OF 0.12 SQ. INCHES PER FOOT SHALL MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A 497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN THE THE KNOCKOUTS.
9. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. KNOCKOUTS MAY BE ON ALL 4 SIDES, EITHER ROUND OR "D" SHAPED. FLEXIBLE PIPE SHALL BE INSTALLED USING A SAND COLLAR AND NON-SHRINK GROUT. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO THE OUTER DIAMETER PLUS INLET WALL THICKNESS. 20" MINIMUM.
10. THE BOTTOM OF THE PRECAST BASE SECTION MAY BE ROUNDED.
11. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0". THE MINIMUM DEPTH FROM FINISHED GRADE TO THE TOP OF PIPE IS 18" AT THE CURB INLET.
12. BACK OF INLET HOOD SHALL BE FLUSH WITH BACK OF CURB.
13. NEW CONNECTIONS TO EXISTING INLETS USING PVC PIPE SHALL UTILIZE SAND COLLAR AND NON SHRINK GROUT

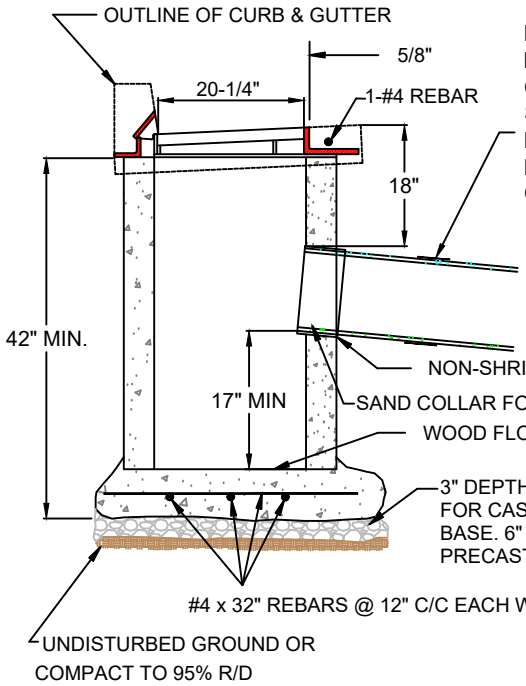
City of Walla Walla

CURB INLET DETAIL

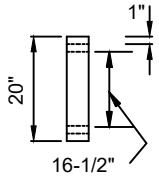
DATE: 01/11/2024

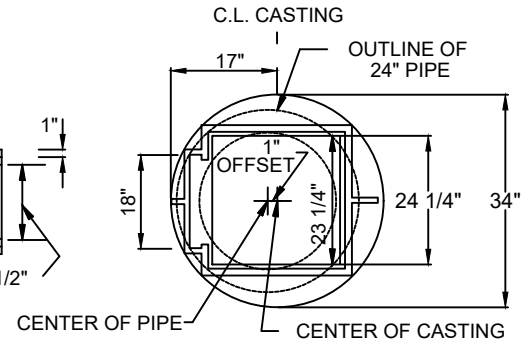
APPROVED BY:

STANDARD PLAN 6-2

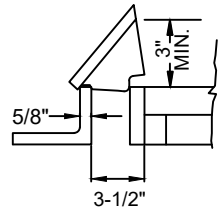


PIPE JOINT SHALL BE A MINIMUM OF 10 FT. FROM MH, FOR FLEXIBLE PIPE PVC CONNECTIONS USE A GASKETED SOLID SLEEVE OR BELL. REINFORCED FLEXIBLE COUPLING REQUIRED FOR RIGID PIPE CONNECTIONS, CONCRETE OR CLAY.

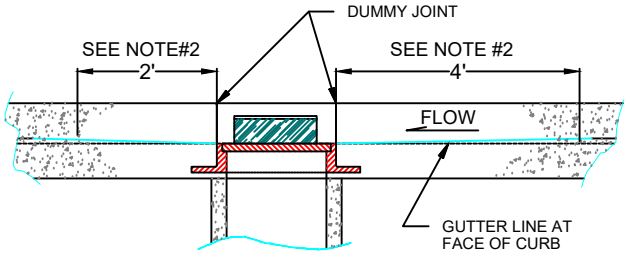




SECTION A-A

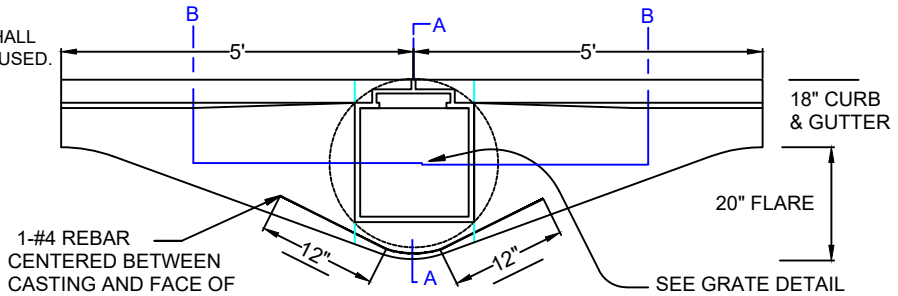


BACKPLATE SETTING



SECTION B-B

1. THE INLET FRAME & GRATE SHALL BE PLACED 1" BELOW THE NORMAL FLOW LINE OF THE GUTTER.
2. THE GUTTER SECTION SHALL BE FORMED AND SLOPED 4' ON UPSTREAM SIDE AND 2' ON DOWNSTREAM SIDE.
3. SEE STANDARD PLAN 6-1 FOR CURB INLET GRATE STYLE.
4. THE ROUND INLET ALTERNATIVE MAY ONLY BE USED WITH THE APPROVAL OF THE CITY ENGINEER.
5. USE A MINIMUM 1/2" OF NON-SHRINK GROUT BETWEEN CASTING AND TOP OF BARREL AND BETWEEN ANY ADJUSTMENT RINGS BEING USED. USE THE FEWEST ADJUSTMENT RINGS / LARGEST SIZE POSSIBLE TO ACHIEVE DESIRED HEIGHT. WHERE ADJUSTMENT HEIGHT IS LESS THAN 6", USE NO MORE THAN TWO RINGS. WHERE AJUSTMENT IS BETWEEN 6" AND 15", USE NO MORE THAN THREE RINGS.
6. INLET IS TO BE PLACED WITHIN A TOLERANCE OF 1" HORIZONTAL FROM CURB LINE.
7. CONCRETE SHALL BE CL. 4000.
8. MINIMUM PIPE SIZE FOR STORM LATERALS SHALL BE 10". NO MORE THAN A 22° BEND SHALL BE USED.
9. NO BLIND CONNECTIONS TO MID RUNS ARE ALLOWED.



PLAN VIEW

(USED ONLY WITH CITY ENGINEER APPROVAL)

City of Walla Walla

CURB INLET DETAIL - ROUND ALTERNATIVE

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 6-3

1. DRYWELLS SHALL BE SIZED AND DESIGNED BY A LICENSED PROFESSIONAL ENGINEER AND APPROVED BY THE CITY ENGINEER.

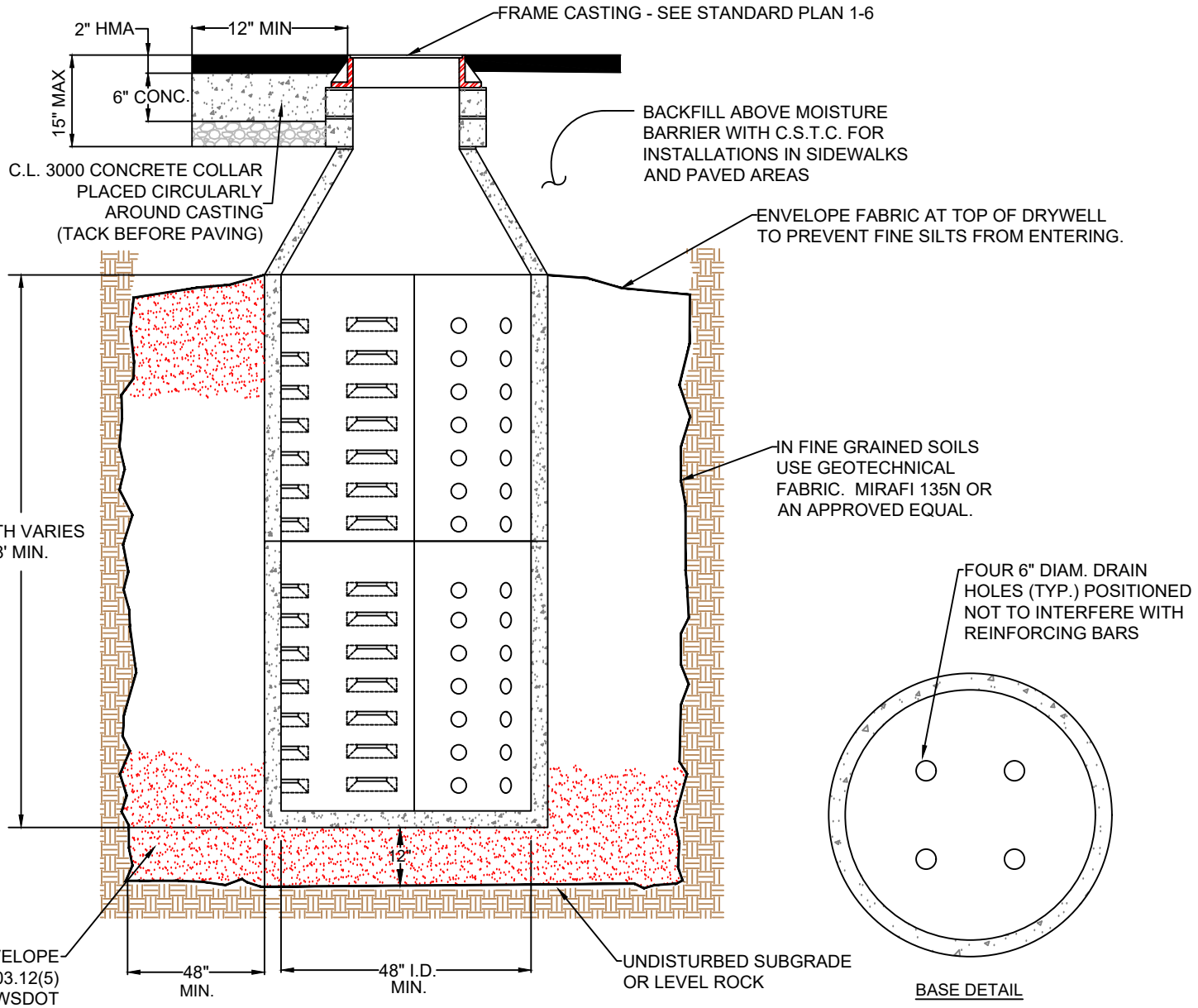
2. REFER TO THE CURRENT WSDOT STANDARD SPECIFICATIONS SEC. 9-05.50(5).

3. ADJUSTMENT RING SHALL MEET ASTM 478. USE NON-SHRINK GROUT TO SET AND SEAL. USE THE FEWEST ADJUSTMENT RINGS / LARGEST SIZE POSSIBLE TO ACHIEVE DESIRED HEIGHT. WHERE ADJUSTMENT HEIGHT IS LESS THAN 6", USE NO MORE THAN TWO RINGS. WHERE AJUSTMENT IS BETWEEN 6" AND 15", USE NO MORE THAN THREE RINGS.

4. ALL UIC DRYWELLS AND INFILTRATION GALLERIES ARE REGULATED BY ECOLOGY'S UIC PROGRAM IN WAC 173-218 AND MUST BE REGISTERED WITH ECOLOGY AT LEAST 60 DAYS BEFORE CONSTRUCTION.

5. OIL/DEBRIS HOOD SHALL BE INSTALLED ON THE OUTLET PIPE FROM THE STRUCTURE THAT PRECEDES THE PERFORATED PIPE. OIL/DEBRIS HOOD SHALL BE A RAVEN OIL/WATER SEPARATOR MODEL OWS-LP-4-15 OR APPROVED EQUAL.

6. ALL SMOOTH WALLED CONNECTIONS SHALL UTILIZE A SAND COLLAR & NON SHRINK GROUT



BASE DETAIL

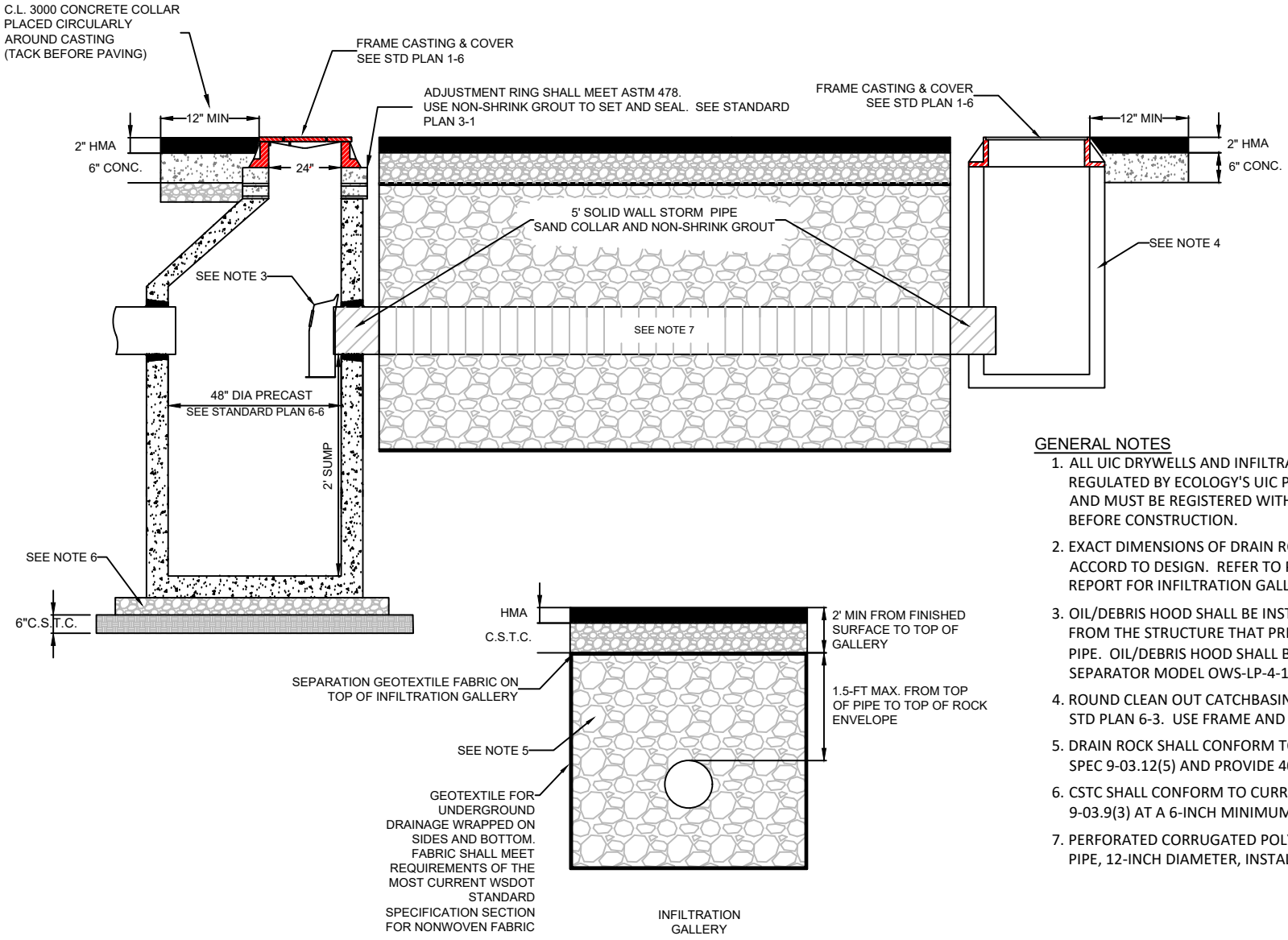
City of Walla Walla

UIC-STANDARD DRYWELL

DATE: 02/03/2023

APPROVED BY:

STANDARD PLAN 6-4a



GENERAL NOTES

1. ALL UIC DRYWELLS AND INFILTRATION GALLERIES ARE REGULATED BY ECOLOGY'S UIC PROGRAM IN WAC 173-218 AND MUST BE REGISTERED WITH ECOLOGY AT LEAST 60 DAYS BEFORE CONSTRUCTION.
2. EXACT DIMENSIONS OF DRAIN ROCK ENVELOPE WILL VARY ACCORD TO DESIGN. REFER TO P&P SHEETS OR DESIGN REPORT FOR INFILTRATION GALLERY DIMENSIONS.
3. OIL/DEBRIS HOOD SHALL BE INSTALLED ON THE OUTLET PIPE FROM THE STRUCTURE THAT PRECEDES THE PERFORATED PIPE. OIL/DEBRIS HOOD SHALL BE A RAVEN OIL/WATER SEPARATOR MODEL OWS-LP-4-15 OR APPROVED EQUAL.
4. ROUND CLEAN OUT CATCHBASIN 24-INCH DIAMETER. SEE STD PLAN 6-3. USE FRAME AND COVER FROM STD PLAN 1-6.
5. DRAIN ROCK SHALL CONFORM TO CURRENT WSDOT STD SPEC 9-03.12(5) AND PROVIDE 40% VOID SPACE.
6. CSTC SHALL CONFORM TO CURRENT WSDOT STD SPEC 9-03.9(3) AT A 6-INCH MINIMUM DEPTH.
7. PERFORATED CORRUGATED POLYETHYLENE UNDERDRAIN PIPE, 12-INCH DIAMETER, INSTALLED FLAT.

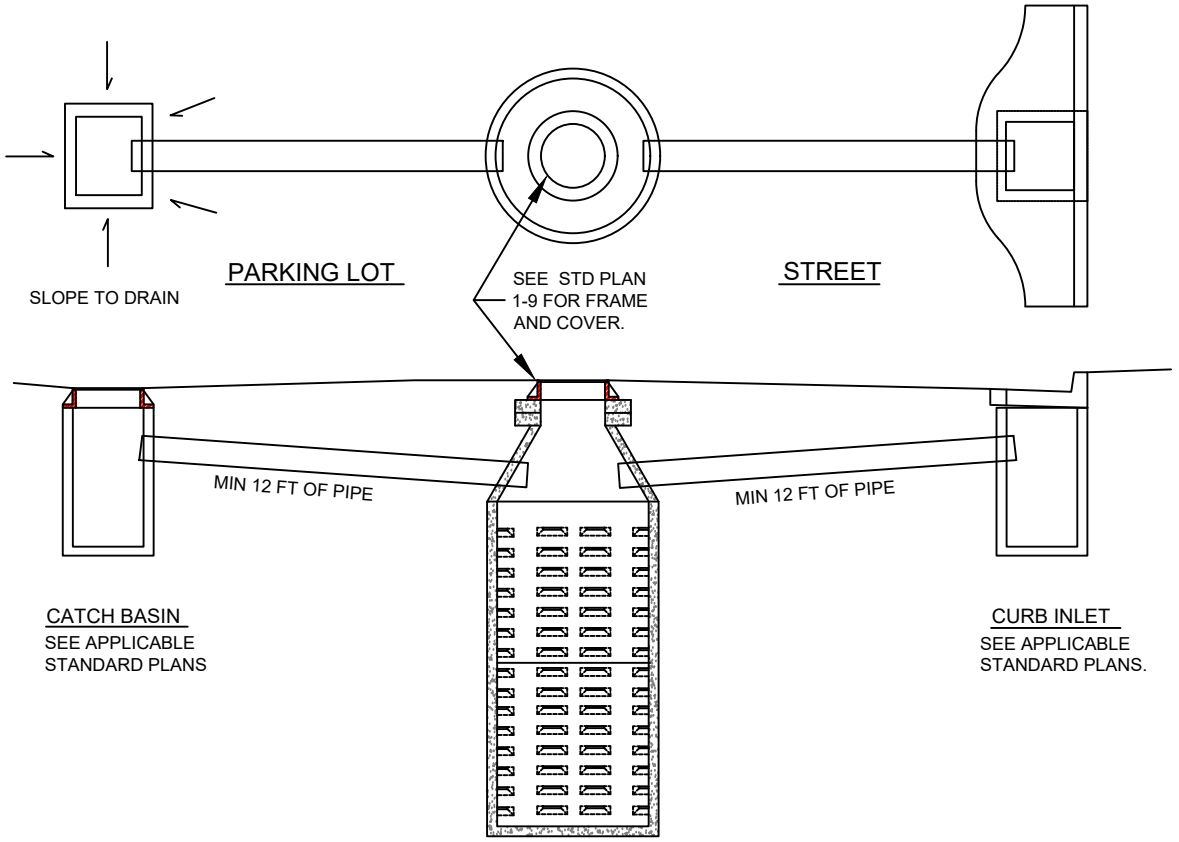
City of Walla Walla

UIC-INFILTRATION GALLERY

DATE: 02/03/2023

APPROVED BY:

STANDARD PLAN 6-4b



NOTES

1. LOCATION OF THE DRYWELL, CATCH BASIN AND CURB INLET ARE SHOWN SCHEMATICALLY FOR CLARITY. THE ACTUAL LOCATION OF THE DRYWELL WILL DEPEND ON EXISTING UTILITIES.

2. CATCH BASIN OR CURB INLET TO DRY WELL PIPE RUNS SHALL BE 10" P.V.C. PIPE MEETING THE REQUIREMENTS OF 3034 SDR 35 WITH A MINIMUM COVER OF 18" AT THE CURB INLET OR CATCH BASIN AND A MINIMUM OF 32" AT THE DRYWELL. IF THE MINIMUM COVER CAN NOT BE MET, DUCTILE IRON PIPE SHALL BE SUBSTITUTED. THE ANGLE OF THE PIPE FROM THE PERPENDICULAR SHALL NOT EXCEED 30°. ALL PIPE CONNECTIONS TO DRYWELLS CATCH BASINS, OR INLETS SHALL BE MADE AT KNOCKOUTS UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER. SAND COLLARS AND NON SHRINK GROUT SHALL BE USED WITH P.V.C. PIPE.

3. OPEN GRATES FOR DIRECT FLOW INTO THE DRYWELL WILL NOT BE PERMITTED UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER. DRYWELL FRAME AND COVER SHALL BE SOLID, AND SHALL BE LABELED "DRY WELL" OR "DRAIN".

4. WHEN CATCH BASIN OR SEDIMENTATION MANHOLE PRECEDES UIC WELL, PROVIDE APPROVED OIL/DEBRIS HOOD PER 2019 STORM WATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON

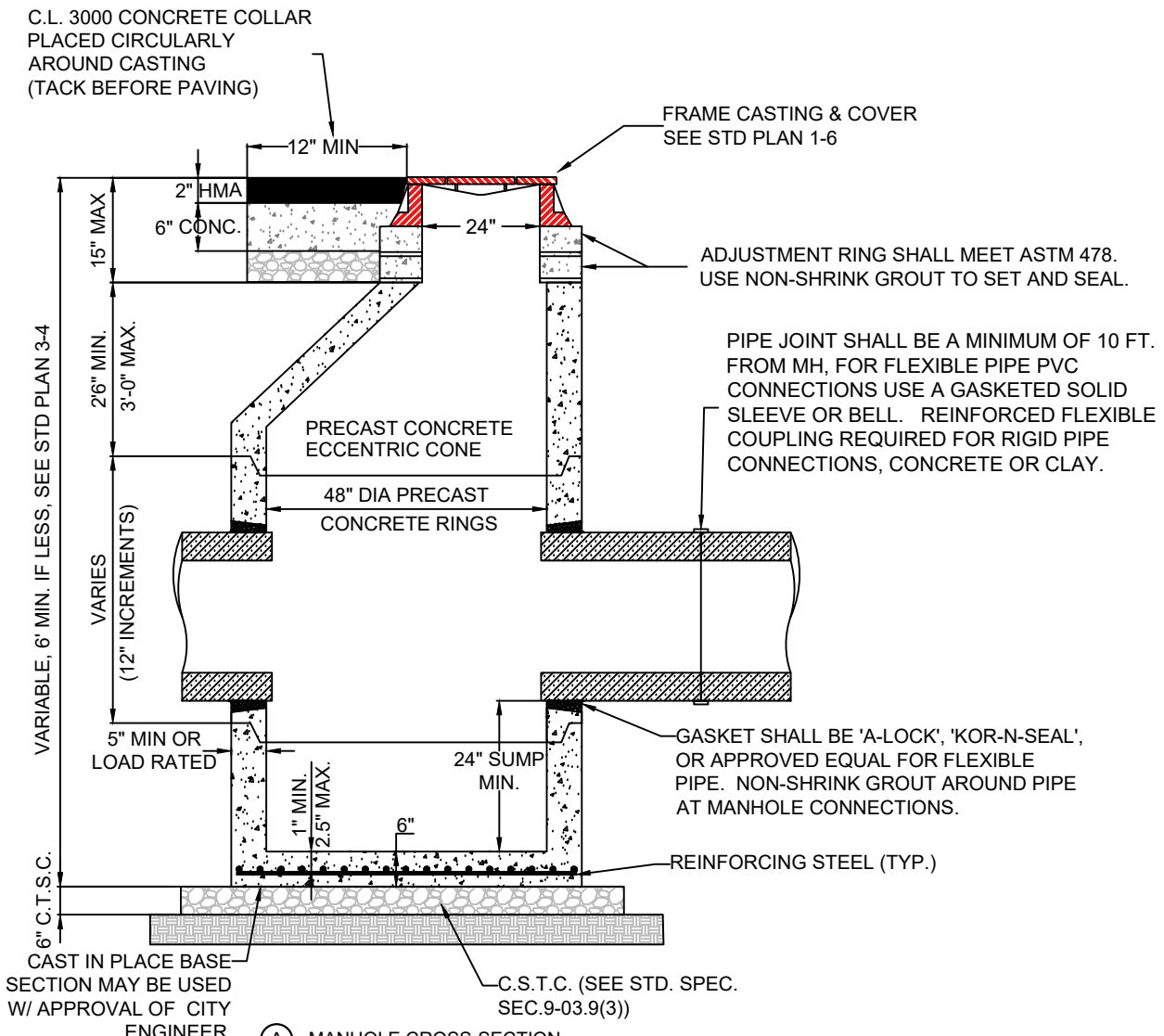
City of Walla Walla

CATCH BASIN-DRYWELL-CURB INLET DETAIL

DATE: 01/06/2023

APPROVED BY:

STANDARD PLAN 6-5



(A) MANHOLE CROSS-SECTION

MANHOLE NOTES:

1. FOR A 48" DIAM. MANHOLE, THE MAXIMUM PIPE SIZE ALLOWABLE IS 21". PIPE DIAMETERS LARGER THAN 21" MUST BE APPROVED BY THE CITY ENGINEER.
2. MANHOLES SHALL BE INSTALLED VERTICAL AND PLUMB IN ALL DIRECTIONS WITH AN OVERALL TOLERENCE OF 1" VERTICAL FOR THE OVERALL MANHOLE.
3. ALL PIPE CONNECTIONS SHALL BE SEALED ON THE INTERIOR OF THE MANHOLE WITH NON-SHRINK GROUT.
4. USE THE FEWEST ADJUSTMENT RINGS / LARGEST SIZE POSSIBLE TO ACHIEVE DESIRED HEIGHT. WHERE ADJUSTMENT HEIGHT IS LESS THAN 6", USE NO MORE THAN TWO RINGS. WHERE ADJUSTMENT IS BETWEEN 6" AND 15", USE NO MORE THAN THREE RINGS.
5. THE BOTTOM OF THE PRECAST STORM SEWER MANHOLE MAY BE SLOPED TO FACILITATE CLEANING.

STORM MAIN AND LATERAL NOTES:

6. ALL STORM MAINS, LATERALS, AND FITTINGS IN THE ROW SHALL BE PVC 3034 SDR 35.
7. EXISTING STORM REHABILITATION CONNECTIONS SHALL BE WITH REINFORCED COUPLINGS. REINFORCED COUPLINGS SHALL BE INDIANA SEAL-AMAZON SHEAR RING COUPLING, FERNCO-STRONGBACK COUPLING, OR APPROVED EQUAL.
8. STORM LINE PAY LIMIT SHALL BE MEASURED HORIZONTALLY FROM CENTER TO CENTER OF MANHOLE.
9. NEW CONNECTIONS TO EXISTING MANHOLES SHALL UTILIZE A SAND COLLAR AND NON SHRINK GROUT WHEN INSTALLING PVC PIPE

City of Walla Walla

SEDIMENTATION MANHOLE

DATE: 12/21/2022

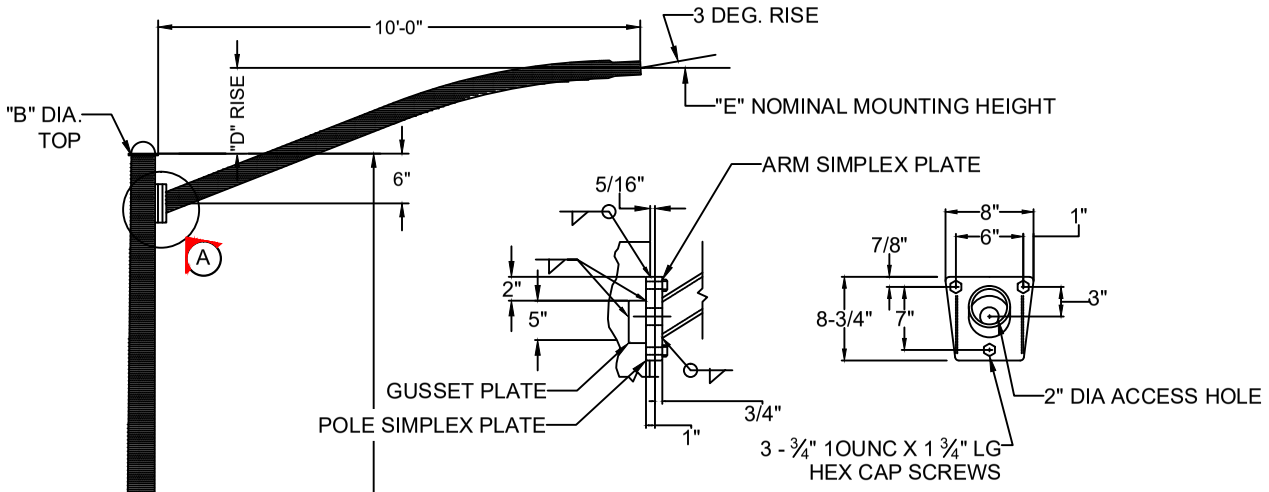
APPROVED BY:

STANDARD PLAN 6-6

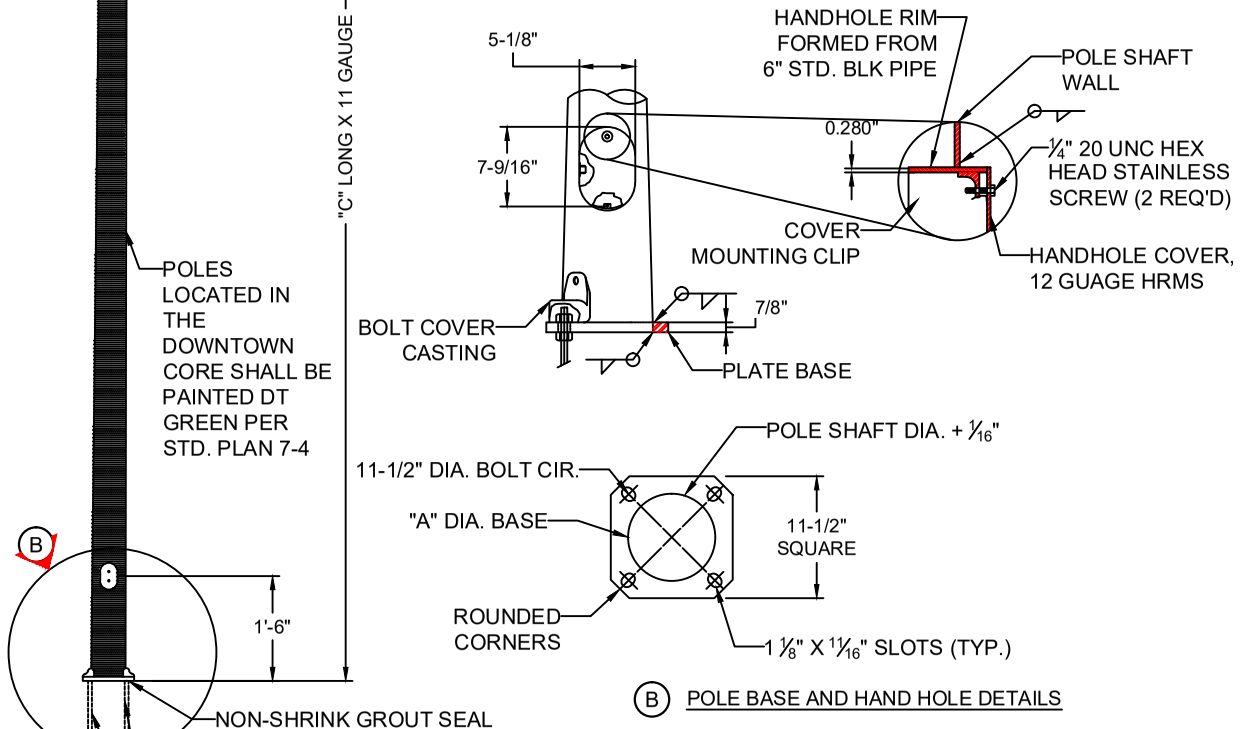
	"A"	"B"	"C"	"D"	"E"
RESIDENTIAL	7.5"	4.0"	25'0"	5'0"	30'
ARTERIAL	8.0"	3.8"	30'0"	5'0"	35'

NOTE:

ALL POLES SHALL BE VALMONT DRWG #MTB-04 FOR THE CITY OF WALLA WALLA.
SEE STD PLANS 7-2 & 7-3 FOR ADDITIONAL NOTES.



A MAST ARM CONNECTION DETAILS



B POLE BASE AND HAND HOLE DETAILS

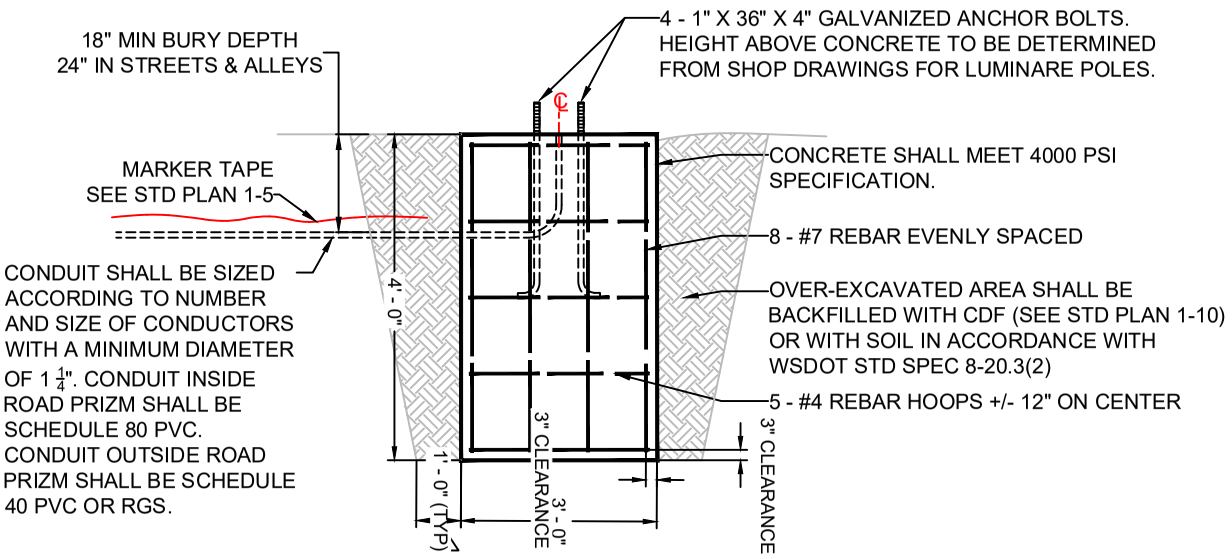
STANDARD PLAN 7-1

STREET LIGHT POLE DETAIL

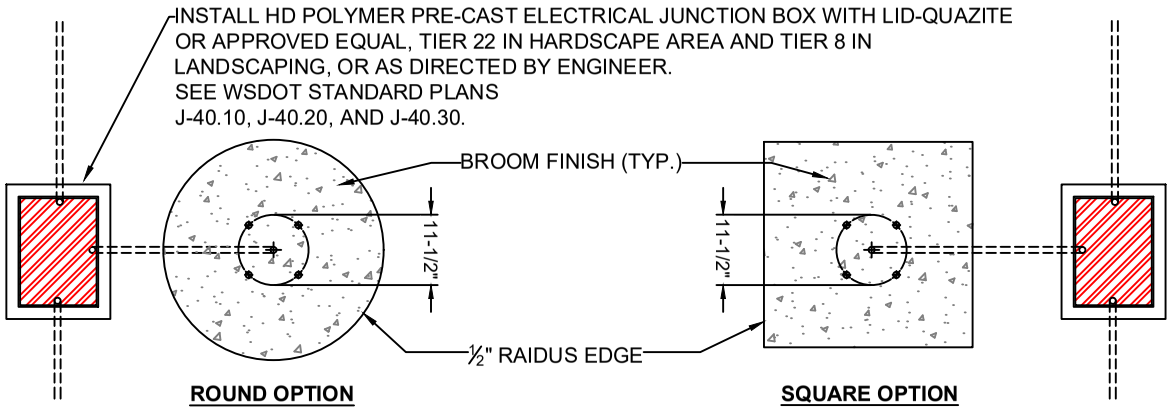
APPROVED BY:

DATE: 12/30/2016

City of Walla Walla



LUMINARE BASE - ELEVATION



ROUND OPTION **SQUARE OPTION**

PLAN VIEW

NOTES:

1. WHERE THE POLE BASE FALLS OUT SIDE OF THE SIDEWALK AREA, THE TOP OF BASE ELEVATION SHALL BE SET 1" ABOVE EXISTING GROUND SURFACE.

2. WHERE THE POLE BASE FALLS PARTIALLY OR WHOLLY INSIDE THE SIDEWALK, THAT PORTION BORDERED BY THE SIDEWALK SHALL BE SEPARATED WITH 3/8" TO 1/2" JOINT MATERIAL PROVIDING A VERTICAL PLANE SEPARATION BETWEEN THE SIDEWALK AND THE BASE.

3. WHEN APPROVED BY THE ENGINEER, THE BASE MAY BE SET BELOW SIDEWALK ELEVATION. A THRU JOINT WILL BE REQUIRED ON EITHER SIDE OF THE VERTICAL PROJECTION OF THE BASE TO CONTROL CRACKING DUE TO MOVEMENT. THE SIDEWALK CONCRETE SHALL MAKE CONTACT WITH THE TOP OF THE BASE AND SHALL COMPLETELY SEAL THE BOLTS.

4. CONDUIT RUNS SHALL TERMINATE IN JUNCTION BOXES. CONDUCTOR WIRE SHALL BE CONTINUOUS FROM BOX TO BOX AND BOX TO POLE. NO SPLICES WILL BE ALLOWED IN CONDUIT RUNS. SPLICES IN JUNCTION BOXES SHALL BE 3M-tm SPLICE KIT. EACH POLE SHALL HAVE A QUICK DISCONNECT FUSE IN THE POLE.

STANDARD PLAN 7-2

STREET LIGHT FOUNDATION PLAN DETAIL

APPROVED BY:

DATE: 05/03/2022

City of Walla Walla

LUMINAIRE NOTES

ALL LUMINAIRES SHALL BE LED COBRA HEAD STYLE FIXTURES. GE EVOLVE LED ROADWAY LIGHTING OR LEOTEK LED GREEN COBRA STREET LIGHT MODELS SHALL BE USED UNLESS AN EQUAL PRODUCT IS APPROVED BY THE CITY ENGINEER

LUMINAIRES SHALL MEET THE FOLLOWING SPECIFICATIONS:

1) LUMINAIRE SHALL BE SIZED ACCORDING TO THE ILLUMINATION REQUIREMENTS OF THE ROADWAY.

2) TYPE III MEDIUM DISTRIBUTION WITH CUTOFF OPTICS.

3) LED LIGHT SOURCES SHALL PRODUCE A LIGHT COLOR TEMPERATURE BETWEEN 3,000 TO 4,000K.

4) ENERGIZED BY 240 VOLTS,

5) LUMINAIRE SHALL INCLUDE "PER" RECEPTACLE AND PHOTOCELL.

6) FINISH SHALL BE BATTLESHIP GRAY.

7) LIGHT SOURCES WILL MEET OR EXCEED THE FOLLOWING EFFICIENCY AND LONGEVITY BENCHMARKS:
   * LUMINOUS EFFICACY: 65 LUMENS/WATT
   * AVERAGE LAMP LIFE: >50,000 HOURS.
   * MAINTENANCE FACTOR @ 50,000 HOURS: 0.80

PLACEMENT OF STREET LIGHTS SHALL BE DETERMINED BY THE CITY ENGINEER.

POLE NOTES

(SEE STD. PLAN 7-1 FOR PLAN DETAILS)

1) POLE SHAFT-HOT ROLLED COMMERCIAL QUALITY CARBON STEEL CONFORMING TO ASTM DESIGNATION: A 595 GRADE A - 55,000 PSI MINIMUM YIELD STRENGTH. LINEAR TAPER - 0.14"/FT.

2) LUMINAIRE ARM SHAFT - 11GA. HOT ROLLED COMMERCIAL QUALITY CARBON STEEL WITH 55,000 PSI MINIMUM YIELD STRENGTH. LINEAR TAPER 0.14"/FT WITH 2-3/8" O.D. x 8" STRAIGHT SECTION LUMINAIRE END.

3) ARM CONNECTION SIMPLEX PLATES 36,000 PSI MINIMUM YIELD STRENGTH. GUSSET PLATES 36,000 PSI MINIMUM YIELD STRENGTH.

4) BASE PLATE - 36,000 PSI MINIMUM YIELD STRENGTH.

5) FOUR CAST ANCHOR BOLT COVERS SECURED IN PLACE WITH STAINLESS STEEL SELF-TAPPING SCREWS

6) CAST POLE TOP CAP SECURED IN PLACE WITH 3 PLATED SET SCREWS.

7) ALL THREADED FASTENERS TO BE GALVANIZED UNLESS OTHERWISE NOTED.

8) ANCHOR BOLTS CONFORM TO ASTM DESIGNATION: A449.

9) EACH LUMINAIRE SHALL HAVE AN INLINE FUSEHOLDER, SEC MODEL 1791-SF, WITH A FRM-5 FUSE ON EACH PHASE CONDUCTOR AT THE BASE OF THE POLE. ACCESS TO THESE FUSEHOLDERS SHALL BE THROUGH THE HAND HOLE ON THE POLE. ADDITIONAL CONDUCTOR LENGTH SHALL BE LEFT INSIDE THE POLE TO EQUAL A LOOP HAVING A DIAMETER OF ONE (1) FOOT.

FINISH NOTES:

1) ACCESSORIES TO BE HOT DIP GALVANIZED TO ASTM DESIGNATION: A 153.

2) POLE TO BE HOT DIP GALVANIZED TO ASTM DESIGNATION: A 123.

3) ARM TO BE HOT DIP GALVANIZED TO ASTM DESIGNATION: A 123.

4) DOWNTOWN CORE AREA SHALL BE PAINTED GREEN IN COLOR. COLOR CODE RAL6005 PER STD. PLAN 7-4

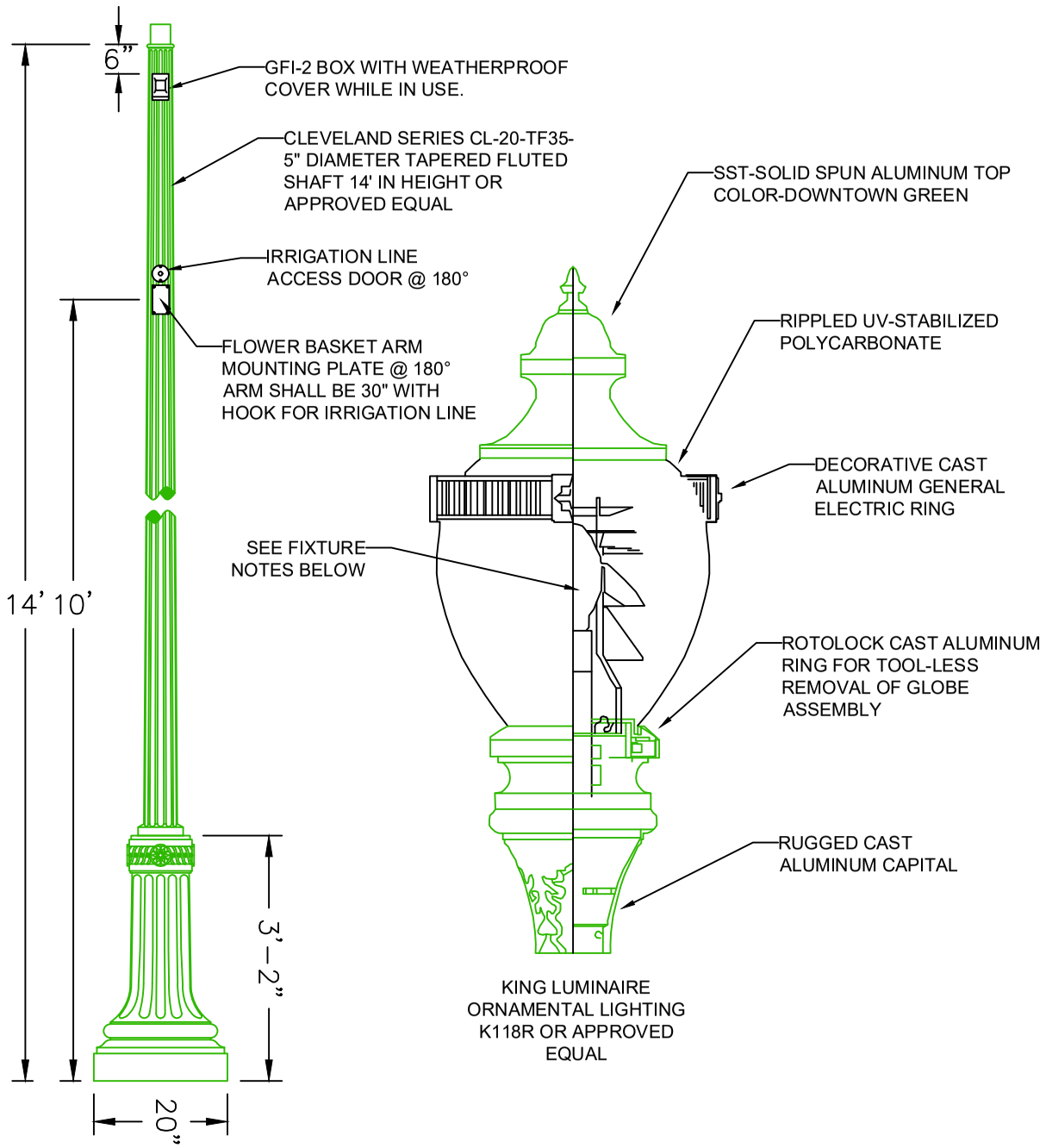
STANDARD PLAN 7-3

STREET LIGHTING LUMINAIRE DETAIL

APPROVED BY:

DATE: 12/21/2022

City of Walla Walla



FIXTURE NOTES

FIXTURE SHALL MEET THE FOLLOWING SPECIFICATIONS:
- LED
- SERIES PTGL (POST TOP GLOBE)
- 240 VOLTAGE.
- IES TYPE V OPTICS WITH DARK SKY COMPLIANT OPTICS.
- COLOR TEMPERATURE 3,000K-4,000K
- MINIMUM LAMP LIFE (HOURS) >50,000
- DRIVER: CLASS 1 OR 2
- MINIMUM LUMINOUS EFFICIENCY: 65 LUMENS / WATT
- LUMENS: 3,000 - 5,000

PLACEMENT OF STREET LIGHTS SHALL BE DETERMINED BY THE CITY ENGINEER.

POLE NOTES

1) PAINT FOR POLE, BASE, AND SOLID SPUN ALUMINUM TOP SHALL BE DOWNTOWN GREEN IN COLOR. COLOR CODE RAL6005
   - PAINT SHALL BE PITT TECH DTM (DIRECT TO METAL) GLOSS 100% ACRYLIC 90-377 PAINT. THE DTM PAINT SHALL BE TINTED WITH 896 COLORANTS INSTEAD OF THE NORMAL GLYCOL COLORANTS.

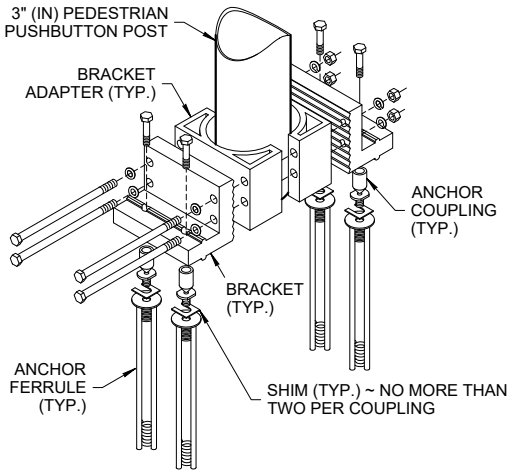
STANDARD PLAN 7-4

ALTERNATIVE/DOWNTOWN STREET LIGHT STANDARD

APPROVED BY:

DATE: 3/31/2023

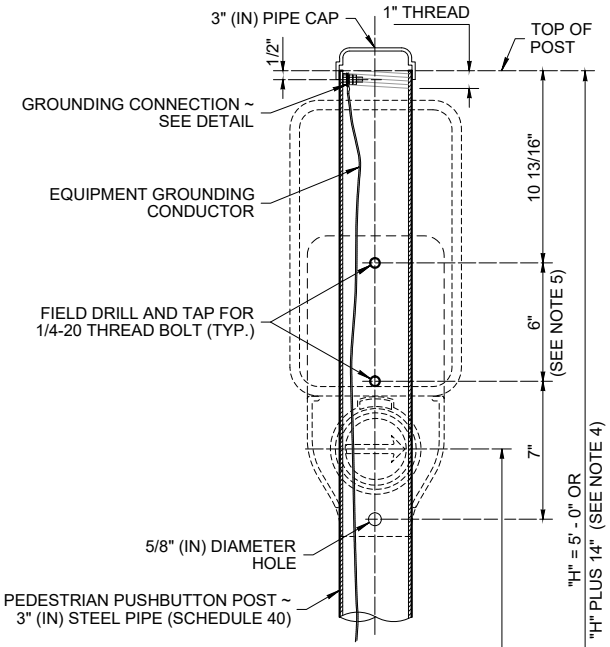
City of Walla Walla



EXPLODED VIEW

BREAKAWAY BASE CONNECTOR

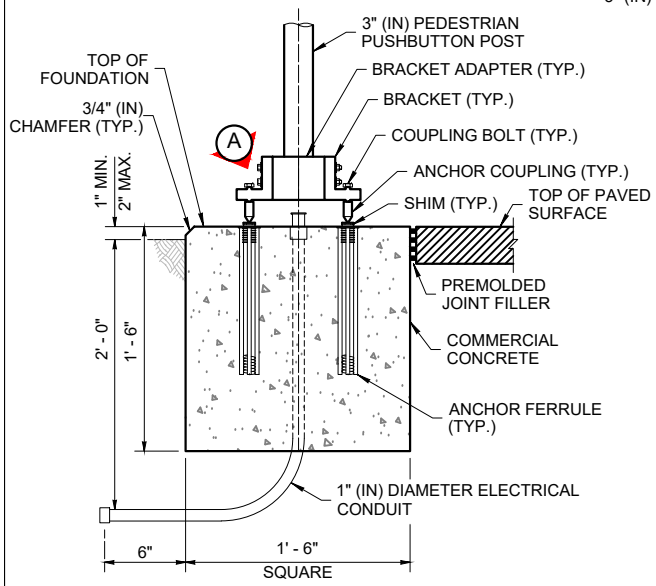
(SEE NOTE 1)



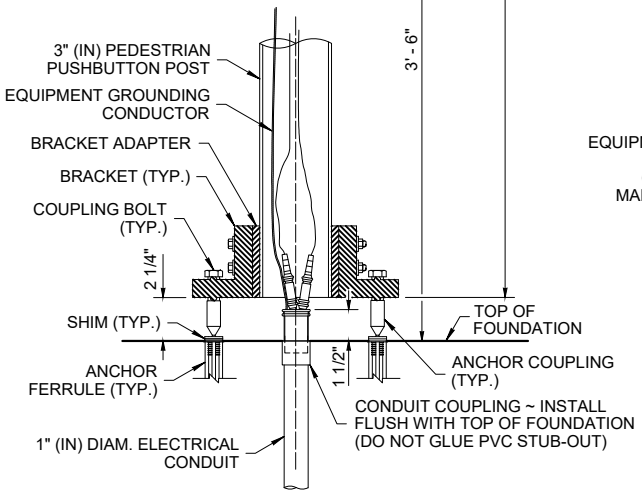
POST DETAIL

NOTES:

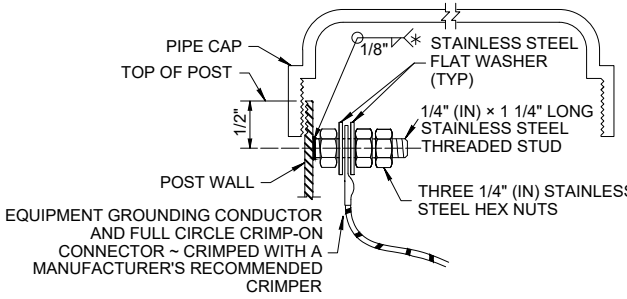
1. SEE CURRENT WSDOT STANDARD SPECIFICATION FOR BREAKAWAY BASE CONNECTION DETAILS. DIMENSIONS FOR THE PARTS USED TO ASSEMBLE THE BASE CONNECTIONS ARE INTENTIONALLY NOT SHOWN. BASE CONNECTIONS ARE PATENTED MANUFACTURED PRODUCTS THAT ARE IN COMPLIANCE WITH NCHRP 350 CRASH TEST CRITERIA. THE BREAKAWAY BASE CONNECTION DETAILS ARE ONLY SHOWN ON THIS PLAN TO ILLUSTRATE HOW PARTS ARE ASSEMBLED.
2. SEE CURRENT WSDOT STANDARD PLAN FOR ACCESSIBLE PEDESTRIAN PUSHBUTTON DETAILS.
3. SECURE CONDUCTOR IN ADJACENT JUNCTION BOX PER DETAIL IN CURRENT WSDOT STANDARD PLAN.
4. WHERE SHOWN IN THE PLANS, INSTALL PLAQUE (R10-32P) "PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME" ABOVE THE ACCESSIBLE PEDESTRIAN SIGNAL (APS) ASSEMBLY. ADD 14" TO POST HEIGHT TO ACCOMMODATE PLAQUE AND LEAVE A 2" SPACE BETWEEN SIGNS.
5. MOUNTING DISTANCES VARY BETWEEN MANUFACTURERS. SEE MANUFACTURER'S RECOMMENDATIONS FOR MOUNTING INFORMATION.
6. JUNCTION BOX SERVING THE STANDARD SHALL PREFERABLY BE LOCATED 5'-0" (10'-0" MAX.) FROM THE STANDARD.



FOUNDATION DETAIL



Ⓐ DETAIL



∗WELD STUD TO POLE WALL TO MAXIMUM EXTENT POSSIBLE ~ 1/2" (IN) MINIMUM WELD

CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS (SHOWN EXPLODED FOR CLARITY)

GROUNDING CONNECTION DETAIL

City of Walla Walla

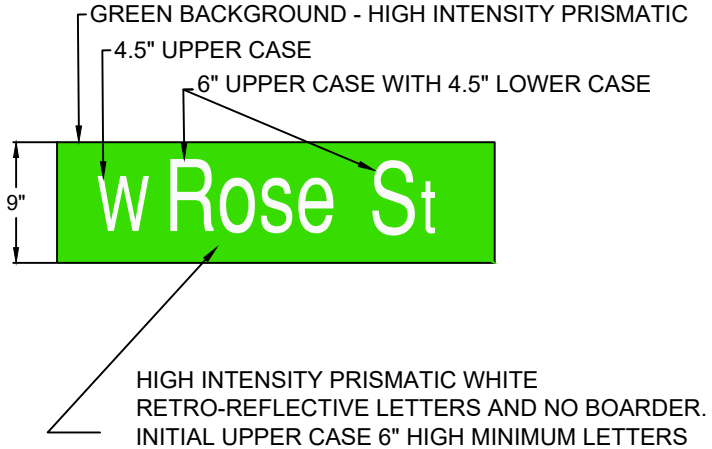
BREAKAWAY PEDESTRIAN PUSHBUTTON POST

DATE:
12/30/2016

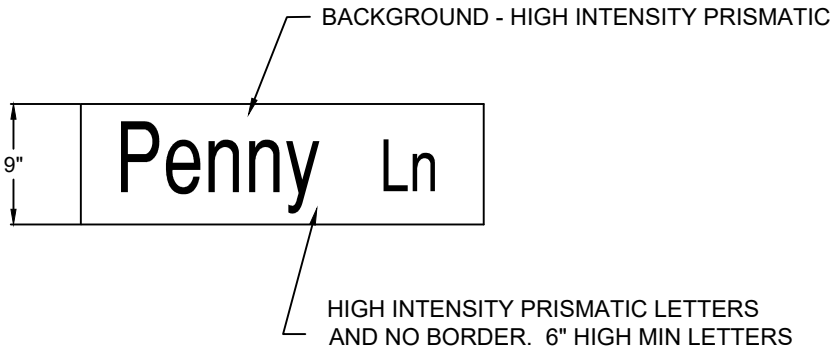
APPROVED BY:

STANDARD PLAN
7-5

CITY STREET



PRIVATE STREET
(WHITE BACKGROUND) - BLACK LETTER



NOTES:

1) ALL SIGNS SHALL BE IN CONFORMANCE WITH, AND INSTALLED ACCORDING TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR HIS REPRESENTATIVE.

2) STREET NAME SIGNS SHALL BE ALUMINUM AND SHALL BE MOUNTED ON BREAKAWAY GALVANIZED STEEL TELESPAR POSTS MANUFACTURED BY UNI-STRUT OR APPROVED EQUAL. SEE STANDARD PLAN 7-8 FOR POST DETAILS.

3) STREET NAME SIGNS SHALL BE EXTRUDED BLADE AND MOUNTED ABOVE STOP SIGNS, IF THEY ARE PRESENT OR REQUIRED. IF STOP SIGNS ARE NOT REQUIRED, THE STREET NAME SIGNS SHALL BE MOUNTED ON NEW POSTS ON THE SOUTHEAST AND NORTHWEST CORNERS FOR EQUALLY CLASSIFIED STREETS, OR AT THE FAR RIGHT HAND SIDE OF THE HIGHER CLASSIFIED STREET. EACH LOCATION SHALL HAVE TWO SIGNS AT 90° WITH THE FACE OF EACH SIGN PARALLEL TO THAT STREET.

4) FOR INTERSECTIONS THAT HAVE TRAFFIC SIGNALS, SEE STANDARD PLAN 7-7, 'SIGNAL MAST-ARM STREET SIGN DETAIL'.

5) FONT FOR TYPICAL LETTERS SHALL USE SHWA SERIES C 2000 EX. FONT FOR NARROW LETTERS SHALL USE SHWA SERIES C 2000 EX

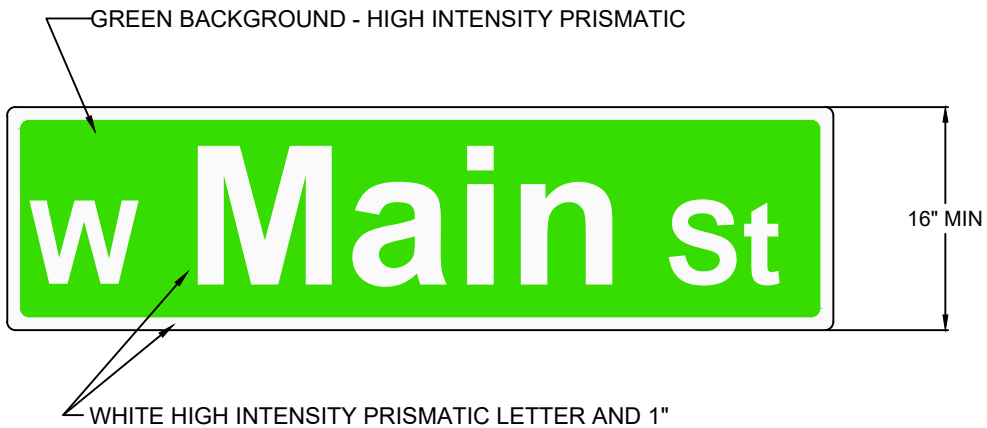
City of Walla Walla

STREET SIGN DETAIL

DATE: 02/03/2023

APPROVED BY:

STANDARD PLAN 7-6



NOTES:

1) THE STREET NAME SIGN SHALL BE MOUNTED ON THE MAST ARM IF IT IS CAPABLE OF CARRYING THE EXTRA WIND LOAD AS DETERMINED BY THE ENGINEER. IF THE MAST CANNOT CARRY THE EXTRA LOAD, THE SIGN SHALL BE MOUNTED ON THE POLE ABOVE THE MAST ARM.

2) SPAN WIRE MOUNTS ARE TO BE IN ACCORDANCE WITH WSDOT STANDARD PLAN J-15.15-02.

3) ALL SIGN STOCK TO BE ⅛" MINIMUM THICKNESS ALUMINUM.

City of Walla Walla

SIGNAL MAST-ARM STREET SIGN DETAIL

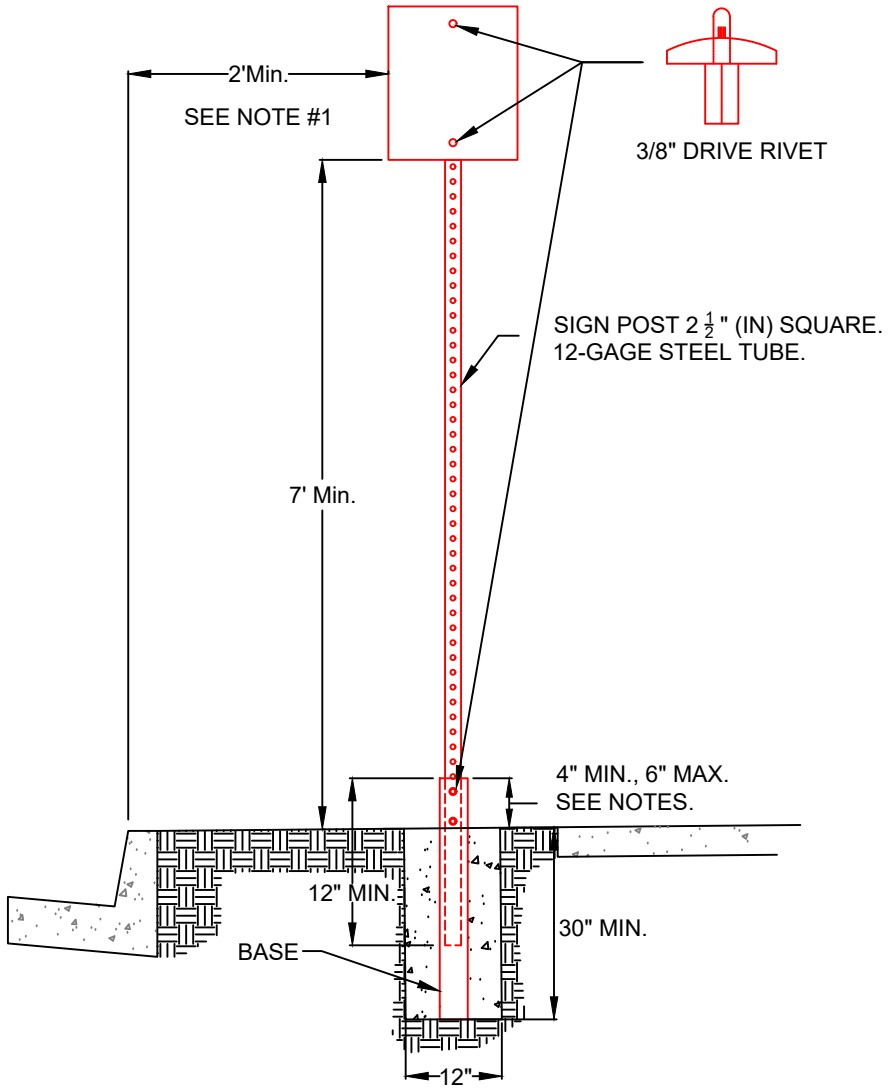
DATE: 12/21/2022

APPROVED BY:

STANDARD PLAN 7-7

NOTES:

1. THE SIGN SHALL BE LOCATED A MINIMUM OF 2 FEET FROM THE FACE OF CURB OR EDGE OF ROADWAY IF NO CURB EXISTS. WHERE NARROW SIDEWALKS EXIST, THE SIGN SHALL BE PLACED AT THE BACK EDGE OF THE SIDEWALK. THE SIGN LOCATION SHALL BE VERIFIED BY THE CITY ENGINEER PRIOR TO PLACEMENT.
2. SECONDARY SIGNS MOUNTED BELOW ANOTHER SIGN MAY BE 1 FOOT LOWER THAN THE PRIMARY SIGN. IF THE SECONDARY SIGN IS MOUNTED LOWER THAN 7 FEET ABOVE PEDESTRIAN SIDEWALK OR PATHWAY, THE SECONDARY SIGN SHALL NOT PROJECT MORE THAN 4 INCHES INTO THE PEDESTRIAN FACILITY.
3. TWO ⅜ INCH DRIVE RIVETS SHALL BE INSTALLED TO CONNECT THE POST AND BASE, AND TWO TO CONNECT THE SIGN TO THE POST.
4. THE POST SHALL BE INSERTED A MINIMUM OF 12" INTO THE BASE.
5. THE SIGN POST SHALL BE A MINIMUM OF 12 GAUGE, GALVANIZED PERFORATED STEEL AND SHALL BE 2 ½ INCH SQUARE MEETING THE REQUIREMENTS OF WSDOT STANDARD SPECIFICATION 9-06.
6. THE BASE SHALL BE A MIN 36" LONG HEAVY DUTY, 3 INCH SQUARE, 7 GAUGE, GALVANIZED SOLID SLEEVE STEEL TUBE.
7. IN HIGH WIND AREAS AS DETERMINED BY THE CITY ENGINEER, SIGN BRACING IS REQUIRED. BRACING SHALL MEET THE REQUIREMENTS OF WSDOT STANDARD PLAN G-50.10.
8. THE BASE SHALL BE HAND DUG USING POST HOLE DIGGER OR VACTOR TRUCK TO ENSURE MINIMUM DISTURBANCE. THE HOLE SHALL BE 12" DIAMETER AND BACKFILLED WITH CONCRETE.
9. ALL SIGNS SHALL BE A MINIMUM HIGH INTENSITY PRISMATIC, RETRO-REFLECTIVE SHEETING
10. ADVANCED CROSSWALK, CROSSWALK, SCHOOL ZONE, AND SUPPLEMENTAL SIGNS SHALL BE FLORESCENT YELLOW-GREEN IN COLOR.
11. ANTI-GRAFFITI 3M 1160i FILM SHALL BE APPLIED
12. TOP OF CONCRETE FOUNDATION SHALL BE SMOOTH AND UNIFORM TO FINISH GRADE.



City of Walla Walla

LANDSCAPING STREET SIGN POST DETAIL

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 7-8a

NOTES:

1. THE SIGN SHALL BE LOCATED A MINIMUM OF 2 FEET FROM THE FACE OF CURB OR EDGE OF ROADWAY IF NO CURB EXISTS. WHERE NARROW SIDEWALKS EXIST, THE SIGN SHALL BE PLACED AT THE BACK EDGE OF THE SIDEWALK. THE SIGN LOCATION SHALL BE VERIFIED BY THE CITY ENGINEER PRIOR TO PLACEMENT.

2. SECONDARY SIGNS MOUNTED BELOW ANOTHER SIGN MAY BE 1 FOOT LOWER THAN THE PRIMARY SIGN. IF THE SECONDARY SIGN IS MOUNTED LOWER THAN 7 FEET ABOVE PEDESTRIAN SIDEWALK OR PATHWAY, THE SECONDARY SIGN SHALL NOT PROJECT MORE THAN 4 INCHES INTO THE PEDESTRIAN FACILITY.

3. TWO $\frac{3}{8}$ INCH DRIVE RIVETS SHALL BE INSTALLED TO CONNECT THE POST AND BASE, AND TWO TO CONNECT THE SIGN TO THE POST.

4. SIGNS LOCATED IN HARDSCAPE AREAS SHALL FOLLOW THIS DETAIL UNLESS OTHERWISE DIRECTED BY THE CITY

5. THE SIGN POST SHALL BE A MINIMUM OF 12 GAUGE, GALVANIZED PERFORATED STEEL AND SHALL BE 2 1/2 INCH SQUARE. MEETING THE REQUIREMENT OF WSDOT STANDARD SPECIFICATION 9-06

6. SLIP BASE ASSEMBLY TYPE SB-3B SHALL BE USED PER WSDOT STANDARD PLANS G-24-40-07. THE BASE SHALL BE A MIN 36" LONG HEAVY DUTY, 3 INCH SQUARE, 7 GAUGE, GALVANIZED SOLID SLEEVE STEEL TUBE. SLIP BASE ASSEMBLY AND ALL OTHER MATERIALS SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 9-06 AND 9-28

7. IN HIGH WIND AREAS AS DETERMINED BY THE CITY ENGINEER, SIGN BRACING IS REQUIRED. BRACING SHALL MEET THE REQUIREMENTS OF WSDOT STANDARD PLAN G-50.10.

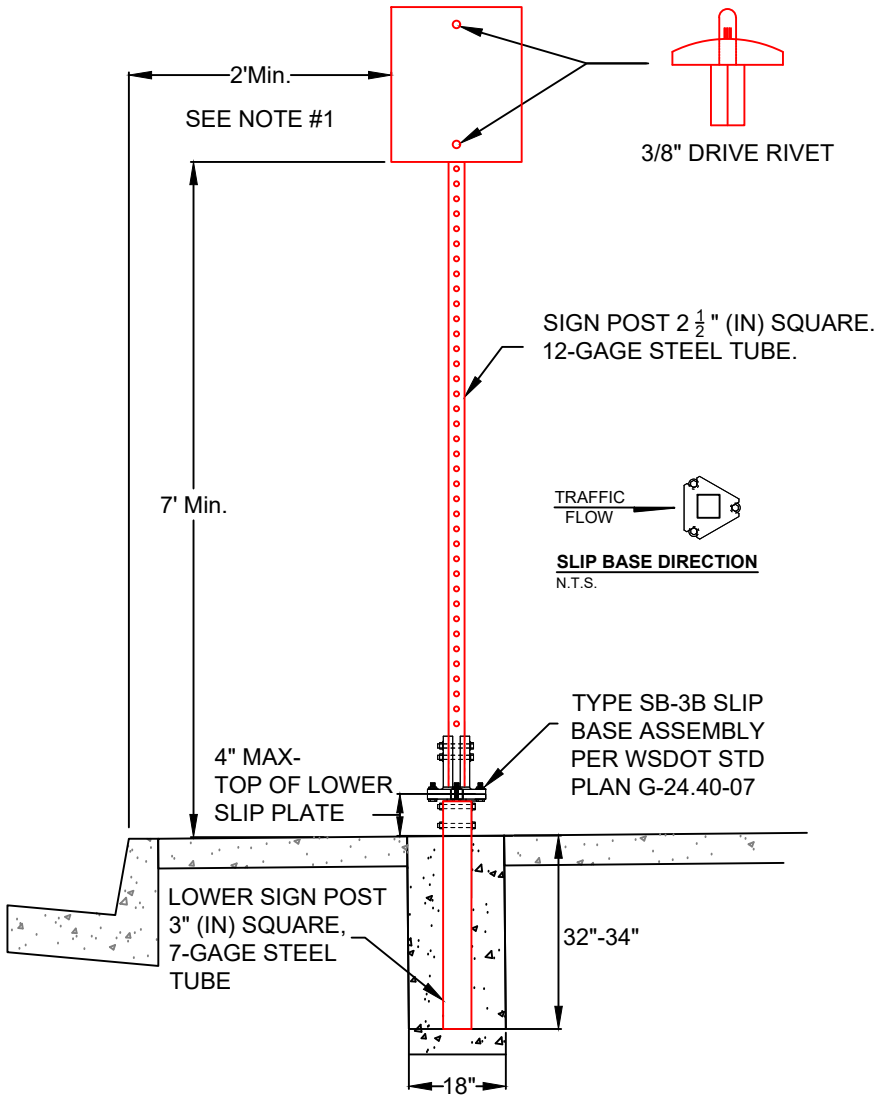
8. THE BASE SHALL BE HAND DUG USING POST HOLE DIGGER OR VACTOR TRUCK TO ENSURE MINIMUM DISTURBANCE. THE HOLE SHALL BE A 18" DIAMETER AND BACKFILLED WITH CONCRETE.

9. ALL SIGNS SHALL BE A MINIMUM HIGH INTENSITY PRISMATIC, RETRO-REFLECTIVE SHEETING

10. ADVANCED CROSSWALK, CROSSWALK, SCHOOL ZONE, AND SUPPLEMENTAL SIGNS SHALL BE FLORESCENT YELLOW-GREEN IN COLOR.

11. ANTI-GRAFFITI 3M 1160i FILM SHALL BE APPLIED

12. TOP OF CONCRETE FOUNDATIONS SHALL BE SMOOTH AND UNIFORM TO FINISH GROUND



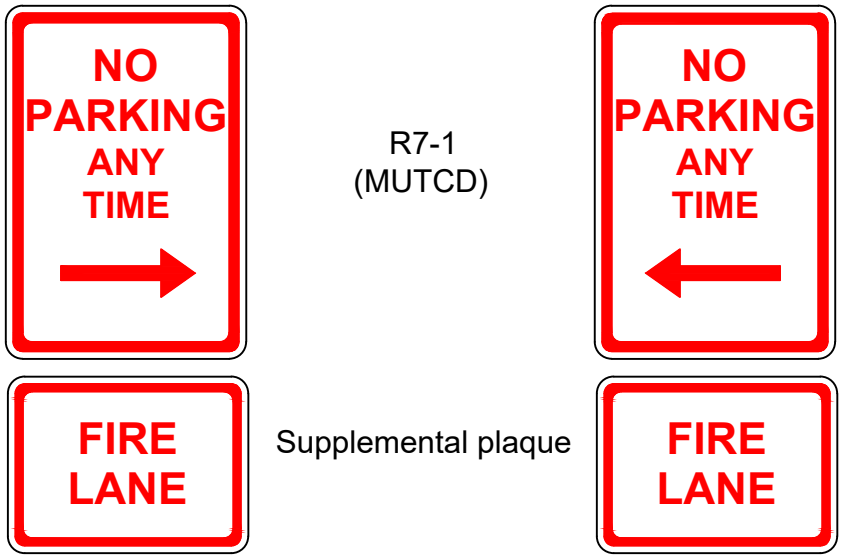
City of Walla Walla

HARDSCAPE STREET SIGN POST DETAIL

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 7-8b



NOTES:

FIRE APPARATUS ACCESS ROADS SHALL BE MARKED WITH PERMANENT **NO PARKING - FIRE LANE** SIGNS COMPLYING WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). SIGNS SHALL BE HIGH INTENSITY PRISMATIC AND HAVE RED LETTERS ON A WHITE REFLECTIVE BACKGROUND. SIGNS SHALL BE POSTED ON ONE OR BOTH SIDES OF THE FIRE APPARATUS ROAD AS REQUIRED BY THE FOLLOWING CLASSIFICATIONS:

--ROADS LESS THAN 28 FEET IN WIDTH SHALL BE POSTED ON BOTH SIDES OF THE ROAD AS A FIRE LANE.

--ROADS 28 FEET IN WIDTH BUT LESS THAN 36 FEET IN WIDTH SHALL BE POSTED ON ONE SIDE OF THE ROAD AS A FIRE LANE.

--PLACEMENT OF SIGNS AS DETERMINED BY THE CITY ENGINEER.

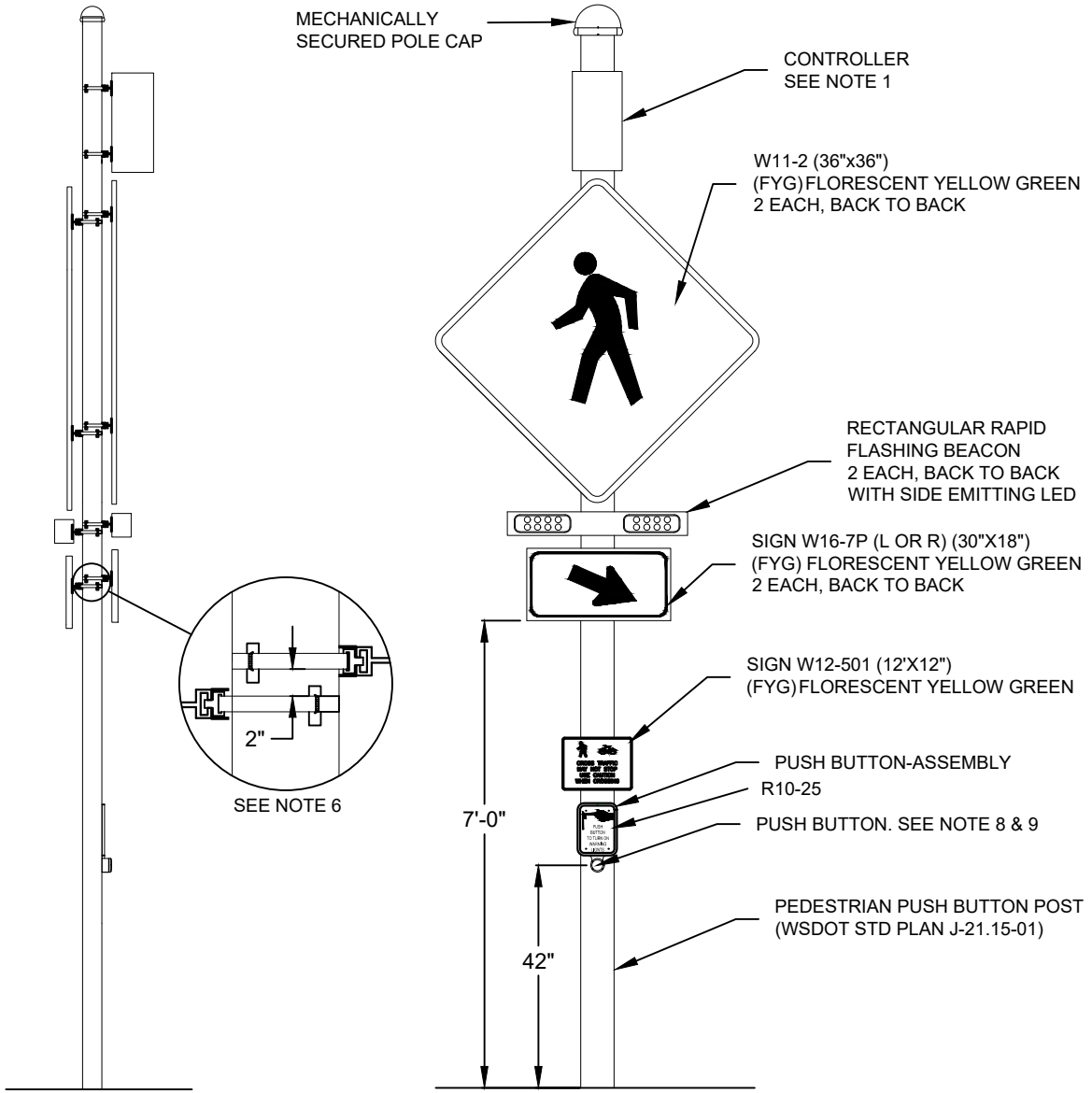
City of Walla Walla

FIRE LANE SIGNS

DATE: 12/23/2021

APPROVED BY:

STANDARD PLAN 7-9



NOTES:

1. THE CONTROLLER ENCLOSURE AND CABINETS SHALL MEET MANUFACTURE SPECIFICATIONS.
2. THE LIGHTBAR HOUSING SHALL HAVE THE APPROXIMATE DIMENSIONS: 24" L X 1.5" D X 4.5" H.
3. LED INDICATORS SHALL BE RATED TO MIL-STD-810F, METHOD 506.4 FOR INGRESS PROTECTION.
4. ALL RRFBS IN THE SYSTEM SHALL INITIATE ACTIVATION SIMULTANEOUSLY WITHIN 150MS OF ACTUATION.
5. REFER WSDOT STD PLAN J-21.10 FOR ROUND FOUNDATION DETAIL AND SLIP BASE
6. ALL MOUNTING BRACKETS SHALL BE SEPARATED BY 2" MIN CLEAR SPACE
7. RRFB'S SHALL BE MANUFACTURED BY CARMANAH OR TSSCO.
8. SOLAR POWERED RRFB'S SHALL MEET THE FOLLOWING REQUIREMENTS
   - -POLARA BULLDOG PUSHBUTTON
   - -BATTERY SHALL BE A MINIMUM 48 AHR
   - -SOLAR PANEL SHALL BE A MINIMUM 50 WATT, POST TOP OR SIDE MOUNTED
9. HARD-WIRED RRFB'S SHALL HAVE AN AUDIBLE APS PUSHBUTTON
10. SEE WSDOT STD PLAN J-28.70 FOR WIRING DETAILS NOT SHOWN.

City of Walla Walla

RECTANGULAR RAPID FLASHING BEACON

DATE: 12/21/2022

APPROVED BY:

STANDARD PLAN 7-10

PURPOSE

THIS STANDARD PLAN IS TO PROVIDE UNIFORM GUIDANCE FOR THE INSTALLATION OF PAVEMENT MARKING WITHIN THE CITY OF WALLA WALLA. VARIATIONS WILL BE ALLOWED ONLY IF APPROVED BY THE CITY ENGINEER.

THE FOLLOWING IDENTIFIES THE TYPE OF STRIPING TO USE FOR EACH PAVEMENT SURFACE TYPE.

LONG LINE MARKINGS:

NEW HOT MIX ASPHALT (HMA)	NEW PRESERVATION APPLICATIONS	EXISTING STREETS
TYPE C COLD APPLIED PRE-FORMED TAPE*	TYPE D METHYL METHACRYLATE (MMA)	TYPE A LIQUID HOT APPLIED THERMOPLASTIC

* INSTALLED IN CONJUNCTION WITH THE FINAL LIFT OF PAVING WITH THE FINISH PRODUCT FLUSH WITH THE SURFACE OF THE PAVEMENT.

ALL OTHER MARKINGS - STOP BARS, CROSSWALKS, SYMBOLS, ETC.:

TYPE B PRE-FORMED FUSED VISZIGRIP (NONSKID + GLASS BEADS) THERMOPLASTIC

GENERAL NOTES:

1. ALL STRIPING SHALL BE IN ACCORDANCE WITH THE MUTCD
2. ALL STRIPING SHALL BE INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS
3. STOP BARS SHALL BE 24" IN WIDTH
4. ALL TRAFFIC ARROW DIMENSIONS SHALL BE PER WSDOT STANDARD PLAN M-24.20-02 FOR HIGH SPEED ROADWAYS. FOR STRAIGHT ARROWS, TYPE 1 SHALL BE USED.
5. STANDARD BIKE LANE STRIPING ADJACENT A TRAVEL LANE SHALL BE 8" IN WIDTH. A 6" WIDE LINE MAY BE USED WITH CITY ENGINEER APPROVAL.
6. INTERSECTION LANE LINES SHALL BE 8" IN WIDTH

City of Walla Walla

TYPICAL STRIPING DETAIL

DATE: 01/11/2024

APPROVED BY:

STANDARD PLAN 7-11