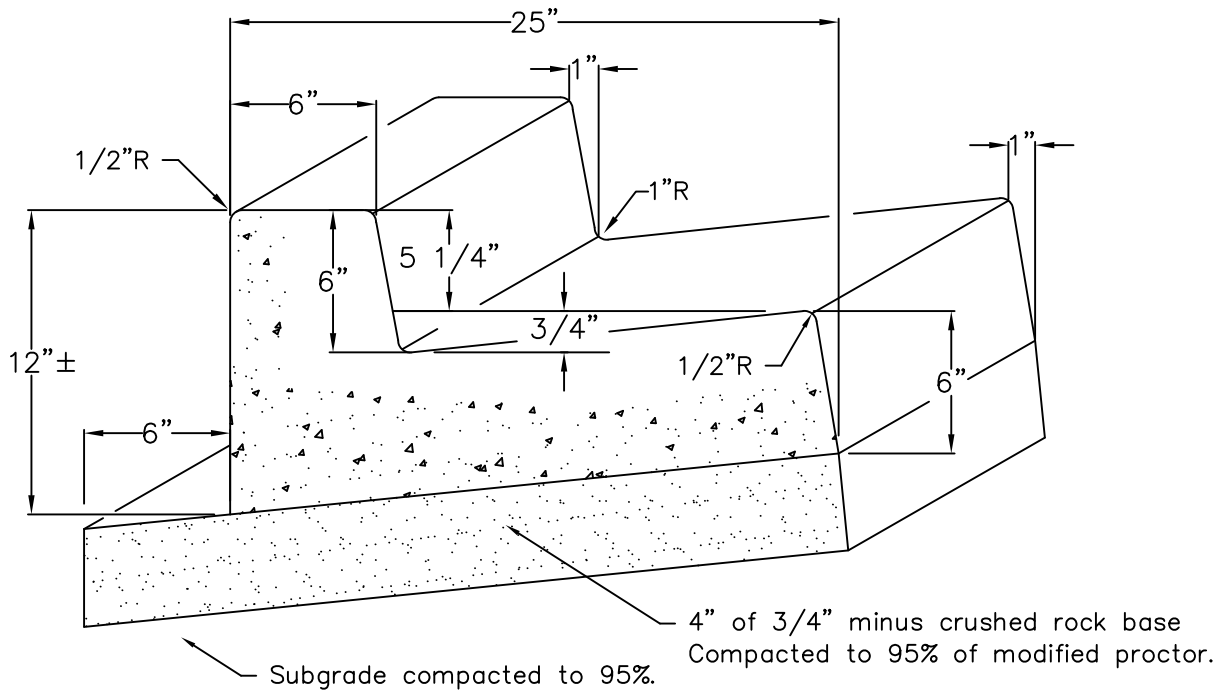


"Dump" Curb Option



NOTES:

Not to Scale

1. Weakened plane joints shall be installed every ten (10) feet with expansion joint filler at curb returns and every one hundred (100) feet per Standard Drawing C-5.
2. Machine-placed curb does not require expansion material.
3. When existing curb is removed care shall be taken not to disturb existing asphalt pavement. Refer to Standard Drawing M-11 for asphalt street repair.
4. Joints between existing and new curb shall be sawed.
5. A light broom finish is required.
6. Compressive Strength of Concrete shall be 4000 PSI minimum.
7. Ensure that grade breaks at pedestrian ramps are less than 13%.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

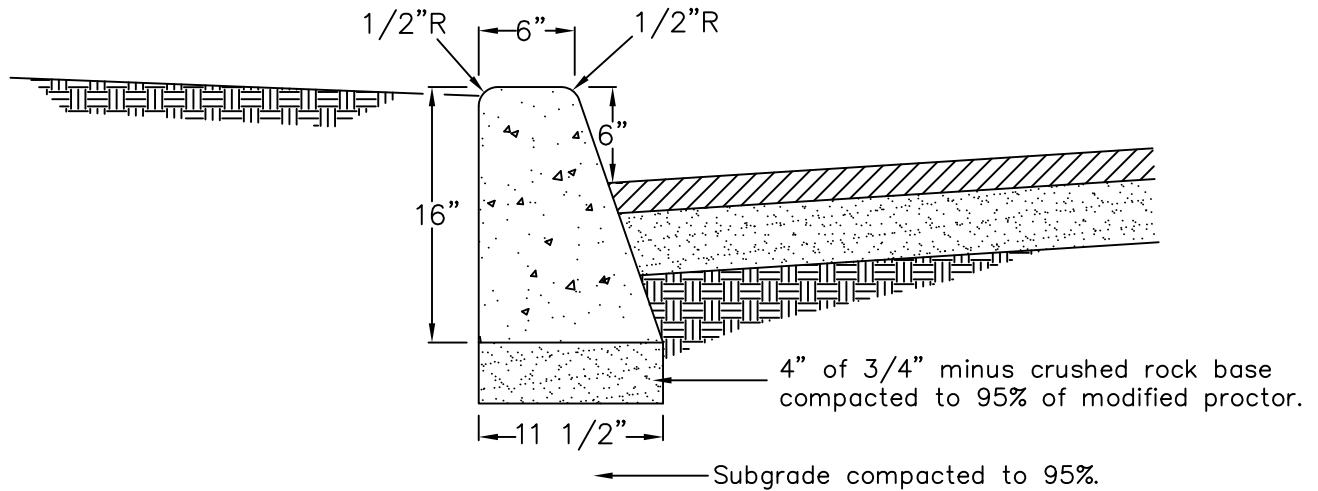
**STANDARD
CURB AND GUTTER**

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

C-1



Not to Scale

NOTES:

1. Weakened plane joints shall be installed every ten (10) feet with expansion joint filler at curb returns and every one hundred (100) feet. per Standard Drawing **C-5**.
2. When existing curb is removed care shall be taken not to disturb existing asphalt pavement. Refer to Standard Drawing M-11 for asphalt street repair.
3. Joints between existing and new curb shall be sawed.
4. A light broom finish is required.
5. Compressive Strength of Concrete shall be 4000 PSI minimum.
6. Machine-placed curb does not require expansion material.
7. Match curb height and reveal to existing curb when present.



CITY OF COEUR D'ALENE STANDARD DRAWING

**STANDARD
CURB**

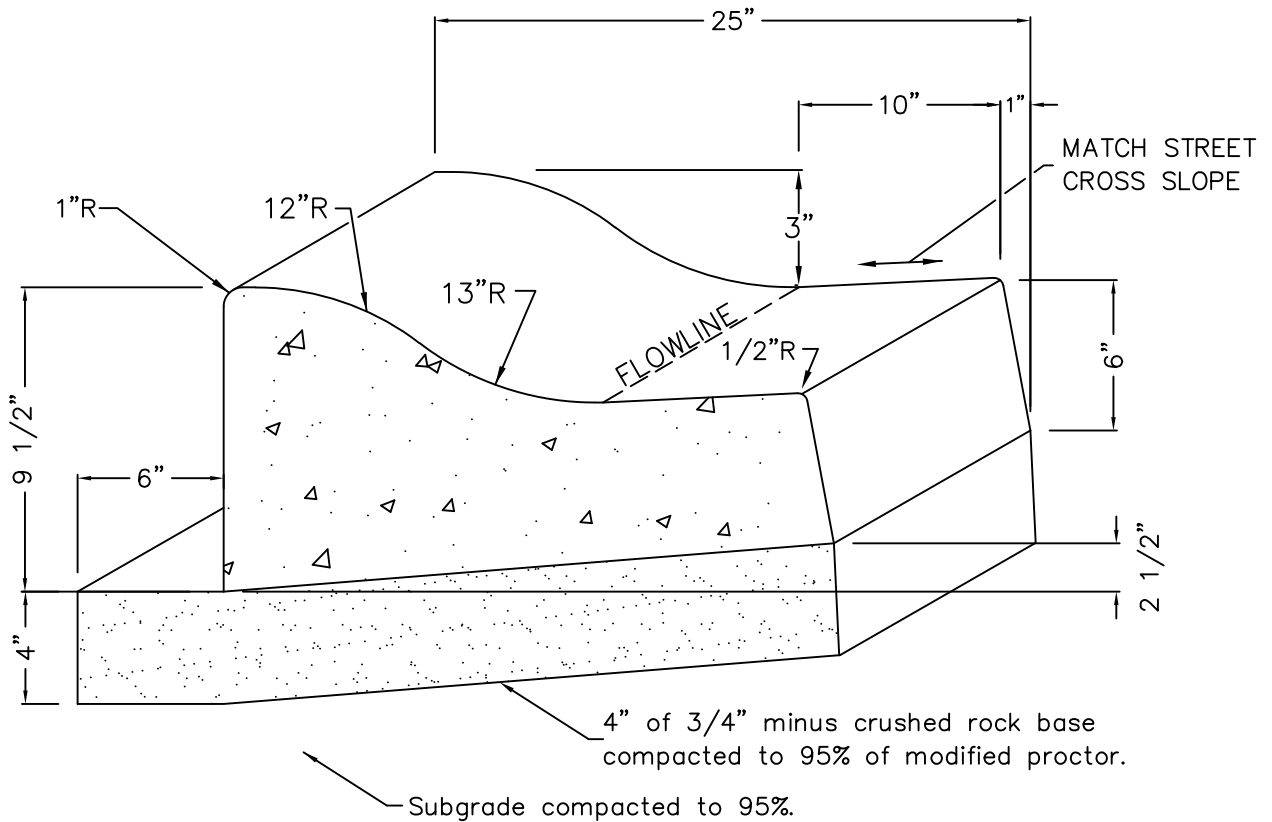
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

C-2



Not to Scale

NOTES:

1. Weakened plane joints shall be installed every ten (10) feet with expansion joint filler at curb returns and every one hundred (100) feet. per Standard Drawing **C-5**.
2. When existing curb is removed care shall be taken not to disturb existing asphalt pavement. Refer to Standard Drawing M-11 for asphalt street repair.
3. Joints between existing and new curb shall be sawed.
4. A light broom finish is required.
5. Compressive Strength of Concrete shall be 4000 PSI minimum.
6. Ensure that grade breaks at pedestrian ramps are less than 13%.
7. **Installation of rolled curb and gutter must be approved in writing by the City Engineer.**
8. Machine-placed curb and gutter does not require expansion material.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

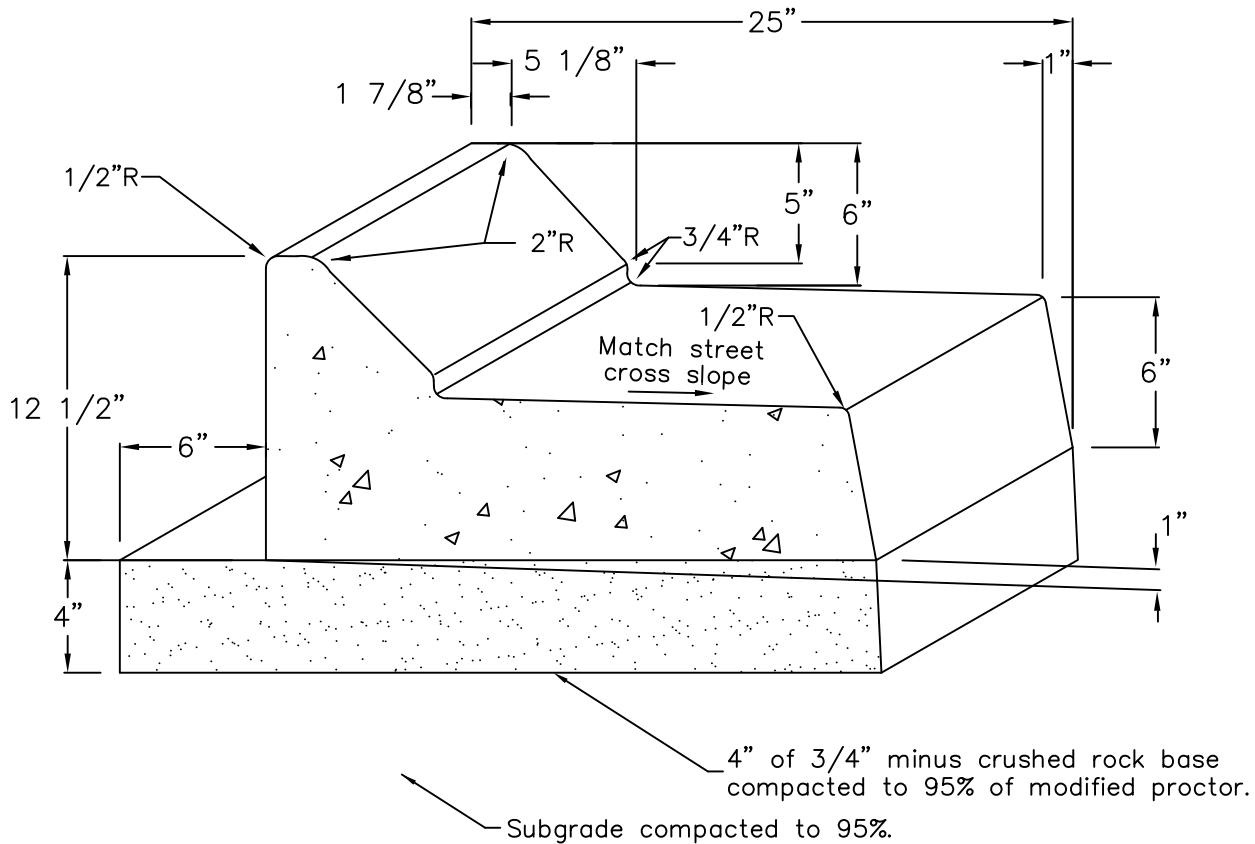
**ROLLED
CURB AND GUTTER**

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

C-3



Not to Scale

NOTES:

1. Weakened plane joints shall be installed every ten (10) feet with expansion joint filler at curb returns and every one hundred (100) feet. per Standard Drawing C-5.
2. When existing curb is removed care shall be taken not to disturb existing asphalt pavement. Refer to Standard Drawing M-11 for asphalt street repair.
3. Joints between existing and new curb shall be sawed.
4. A light broom finish is required.
5. Compressive Strength of Concrete shall be 4000 PSI minimum.



CITY OF COEUR D'ALENE STANDARD DRAWING

**MEDIAN
CURB AND GUTTER**

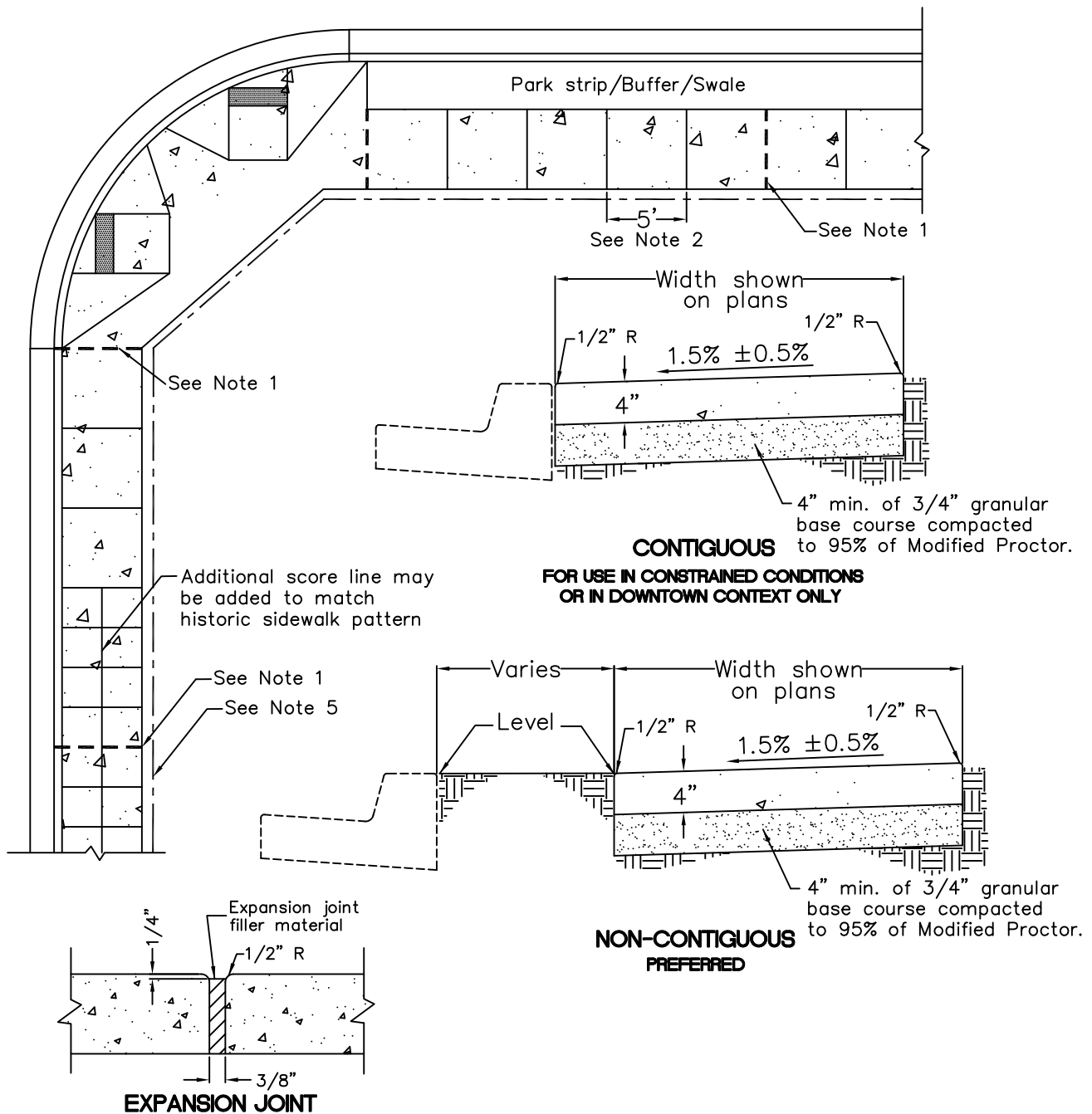
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

C-4



Not to Scale

NOTES:

1. - - - - Expansion joints at curb returns, adjacent to structures, at 25' intervals, and between new and existing sidewalk.
2. ——— 3/4" grooves with 1/2" radius edges at 5' intervals.
3. Concrete shall be Portland Concrete Cement with a minimum 28 day compressive strength of 4000 PSI.
4. Non-contiguous sidewalk shall be used where feasible to provide a buffer from the roadway and space for snow storage, drainage swales, and utilities.
5. Public sidewalk must be within City right-of-way or dedicated easement.
6. Concrete surface must be finished with a light broom finish.



CITY OF COEUR D'ALENE STANDARD DRAWING

**SIDEWALK JOINTS
AND SECTIONS**

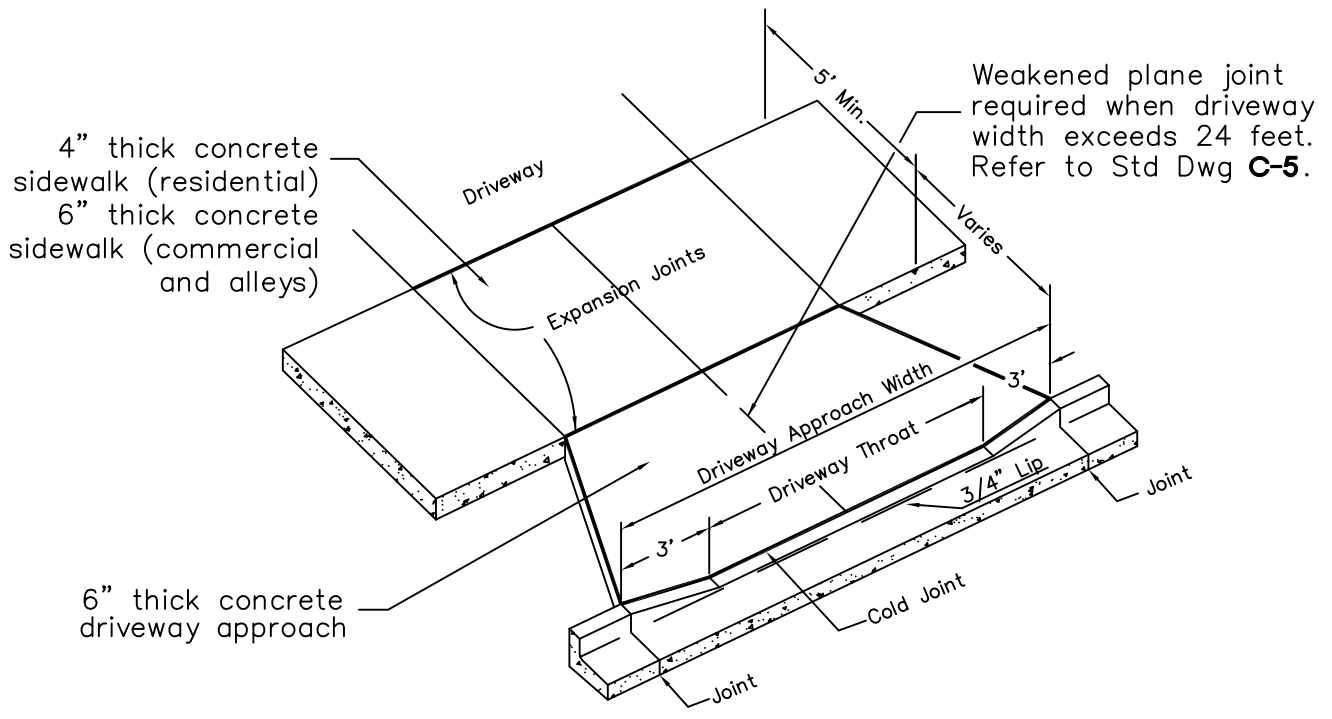
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

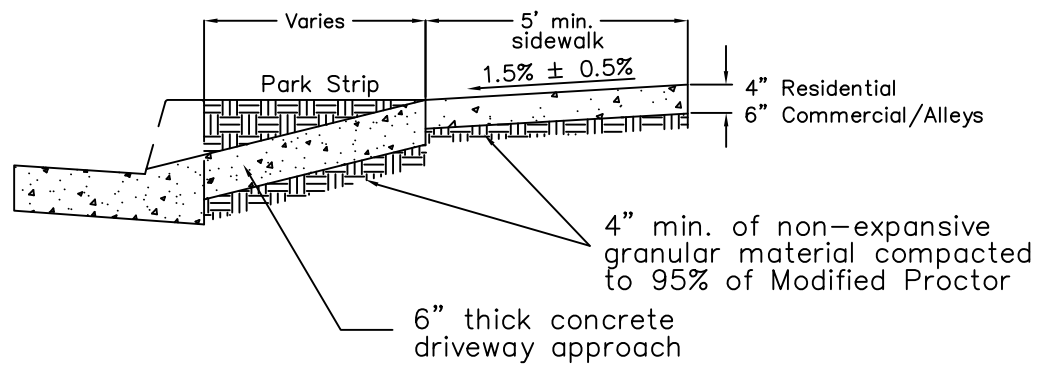
10/1/24
DATE:

DWG NO.

C-5



Weakened plane joint required when driveway width exceeds 24 feet. Refer to Std Dwg **C-5**.



Not to Scale

NOTES

1. Residential approach width: 16' Min. – 36' Max.
2. Commercial approach width: 18' Min. – 40' Max.
3. See Std. Dwg. **C-13** for Driveway Locations.
4. Concrete shall be a minimum 28 day compressive strength of 4000 PSI.



CITY OF COEUR D'ALENE STANDARD DRAWING

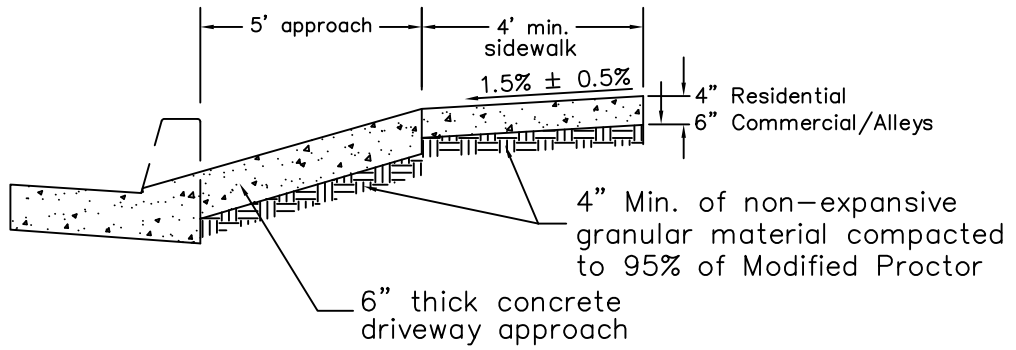
**STANDARD DRIVEWAY
APPROACH w/ PARK STRIP**

APPROVED BY:

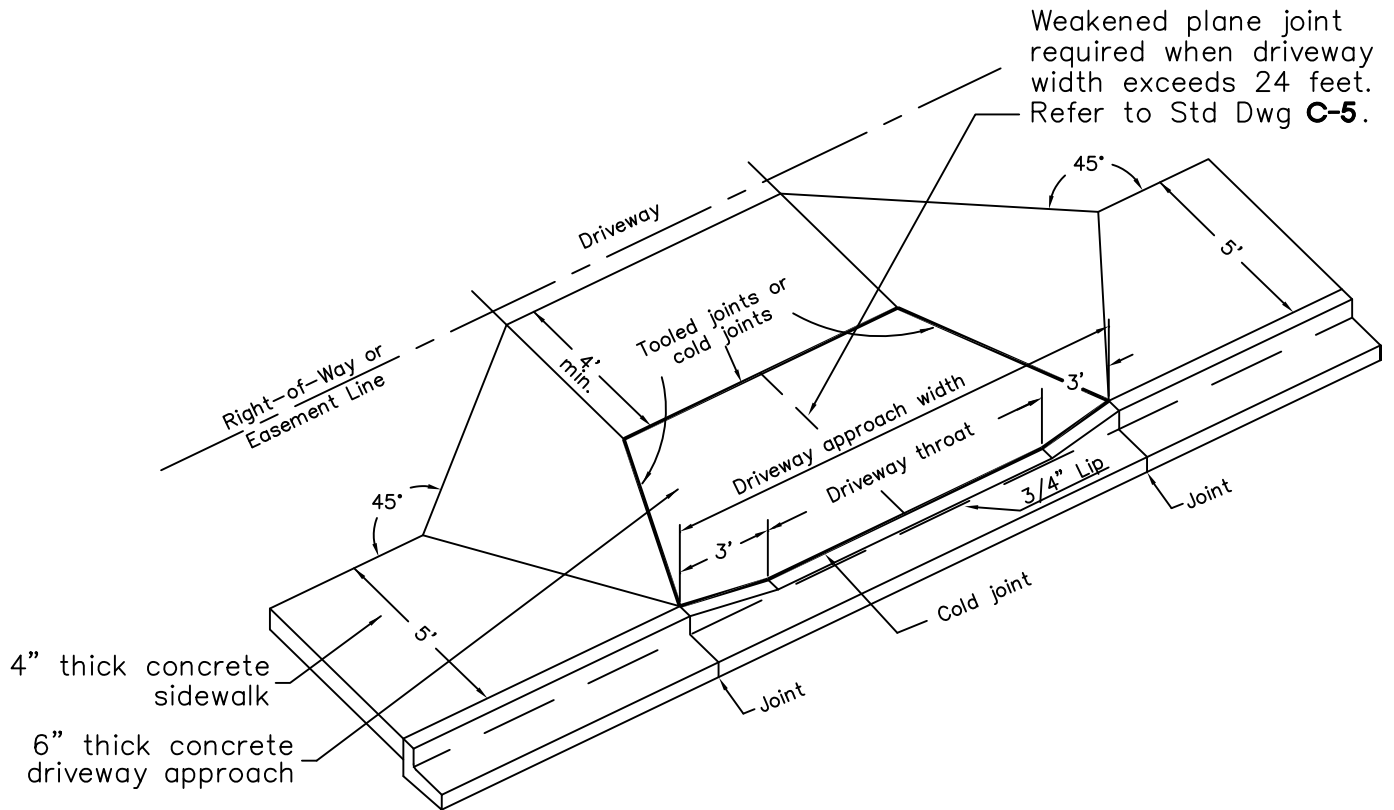
Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO. C-6



APPROACH SECTION



Not to Scale

Notes

1. Residential approach width: 16' Min. – 36' Max.
2. Commercial approach width: 18' Min. – 40' Max.
3. See Std. Dwg. **C-13** for driveway locations.
4. Concrete shall be a minimum 28 day compressive strength of 4000 PSI.
5. The pedestrian access route must be within City right-of-way or an easement.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

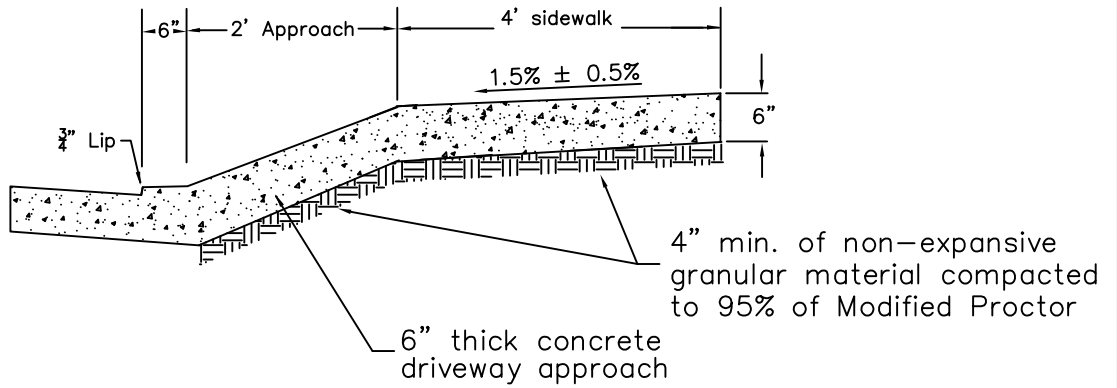
**STANDARD DRIVEWAY
APPROACH w/o PARK STRIP**

Chris Bosley
CITY ENGINEER, PE 10804

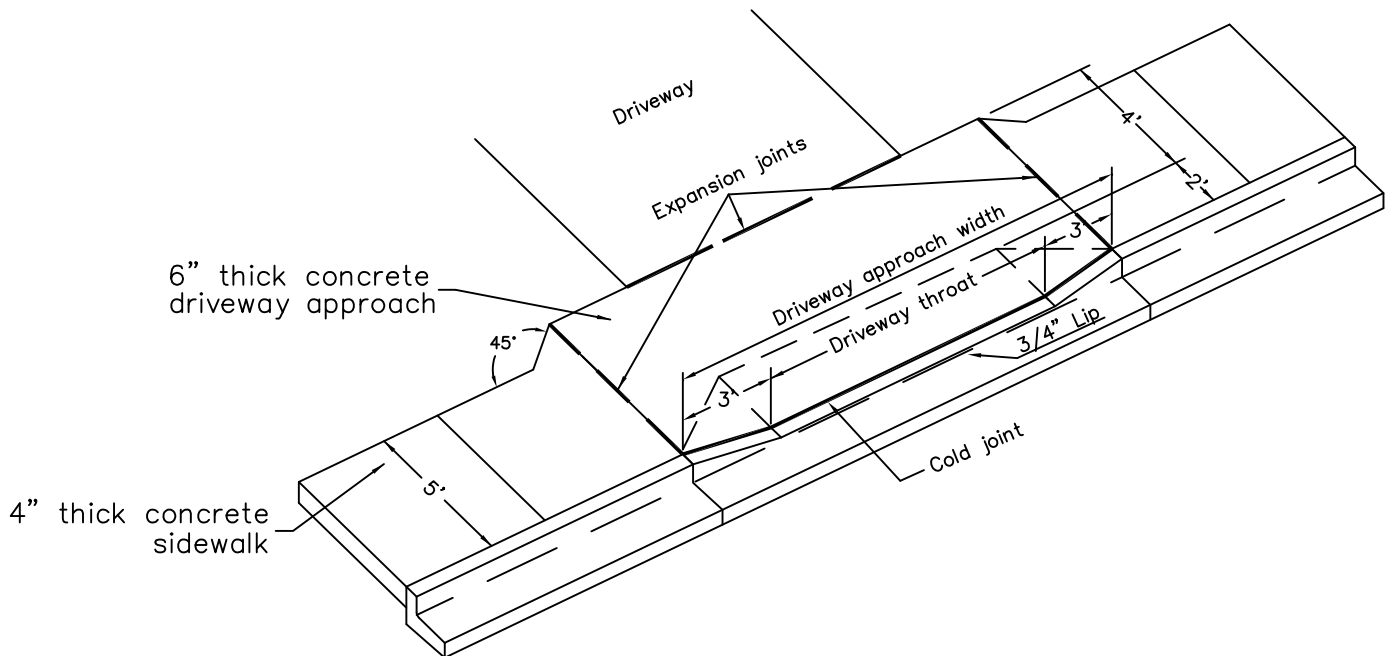
10/1/24
DATE:

DWG NO.

C-7



APPROACH SECTION



Not to Scale

NOTES:

1. Maintain 5' panel joint spacing in sidewalk through approach.
2. Residential approach width: 16' Min. – 36' Max.
3. Commercial approach width: 18' Min. – 40' Max.
4. See Std. Dwg. **C-13** for driveway locations.
5. Concrete shall be a minimum 28 day compressive strength of 4000 PSI.
6. The required minimum pedestrian route width at any point is 4'.
7. If the sidewalk and/or approach do not fit within the right-of-way or easement, a Depressed Driveway Approach should be used. See Std. Dwg. **C-20**



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

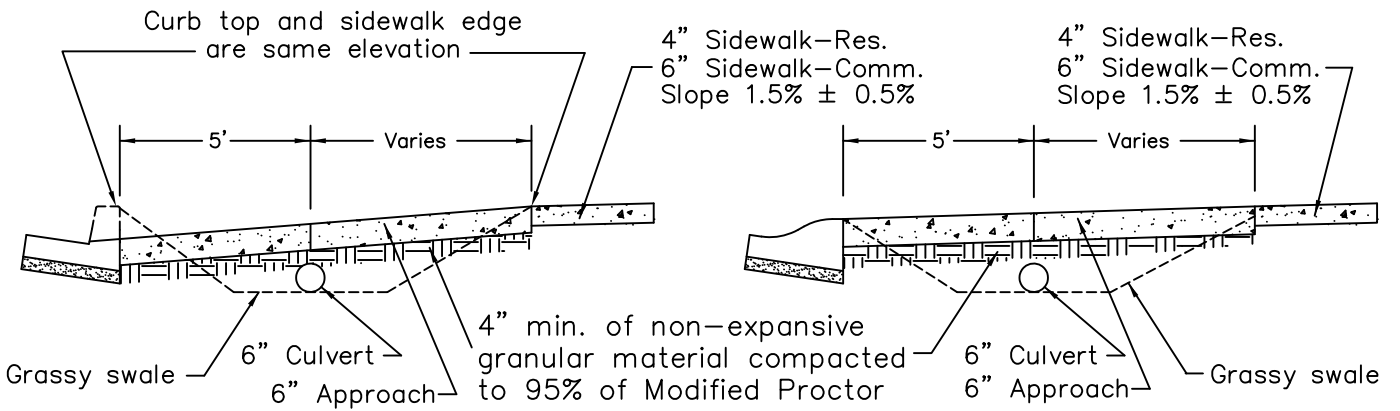
**STANDARD DRIVEWAY
APPROACH w/o PARK STRIP**

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

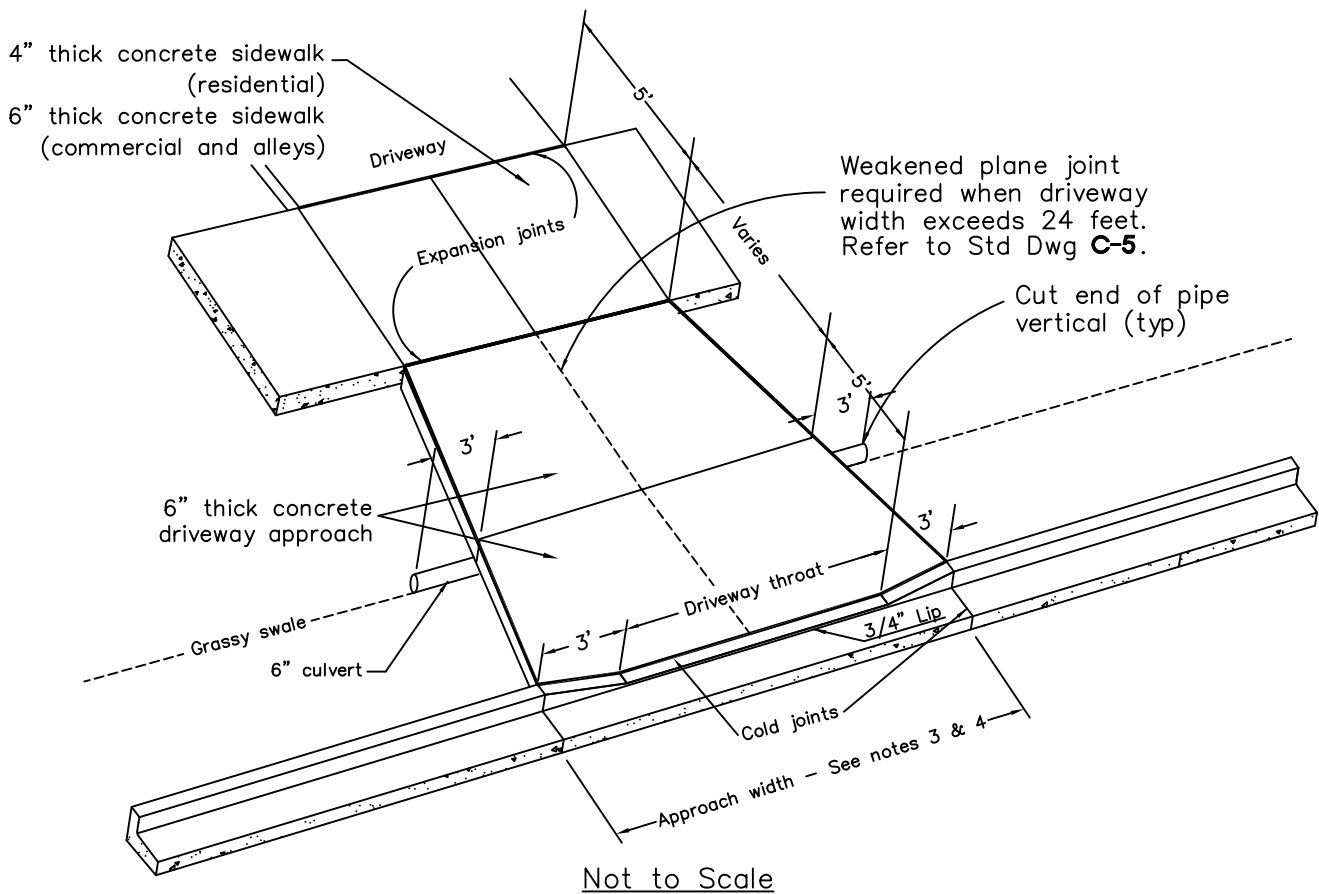
DWG NO.

C-8



STANDARD CURB AND GUTTER SECTION

ROLLED CURB AND GUTTER SECTION



NOTES:

1. Concrete shall be a minimum 28 day compressive strength of 4000 PSI.
2. Culvert material shall be Schedule 40 or equal, with smooth interior wall.
3. Residential approach width: 16' min - 36' max.
4. Commercial approach width: 18' min - 40' max.
5. See Standard Drawing **C-13** for driveway location.
6. See Standard Drawing **SD-7** for grassy swale detail.



CITY OF COEUR D'ALENE STANDARD DRAWING

**DRIVEWAY APPROACH
WITH CULVERT**

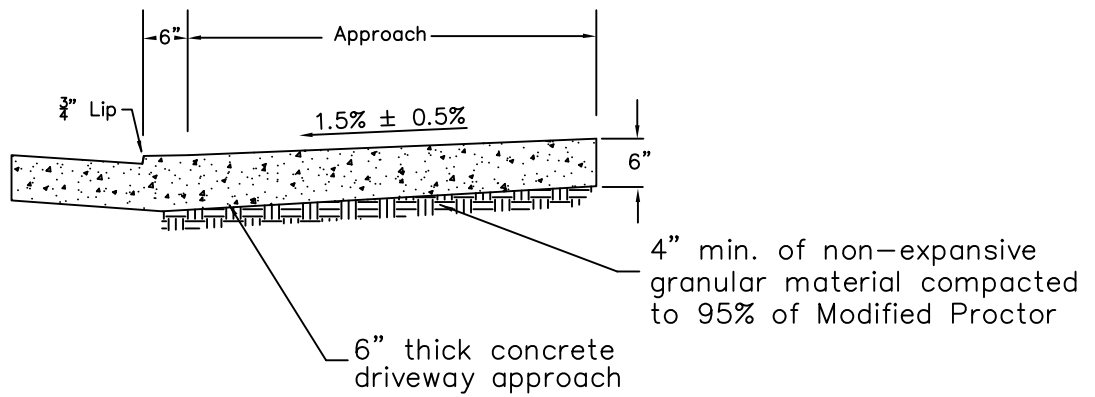
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

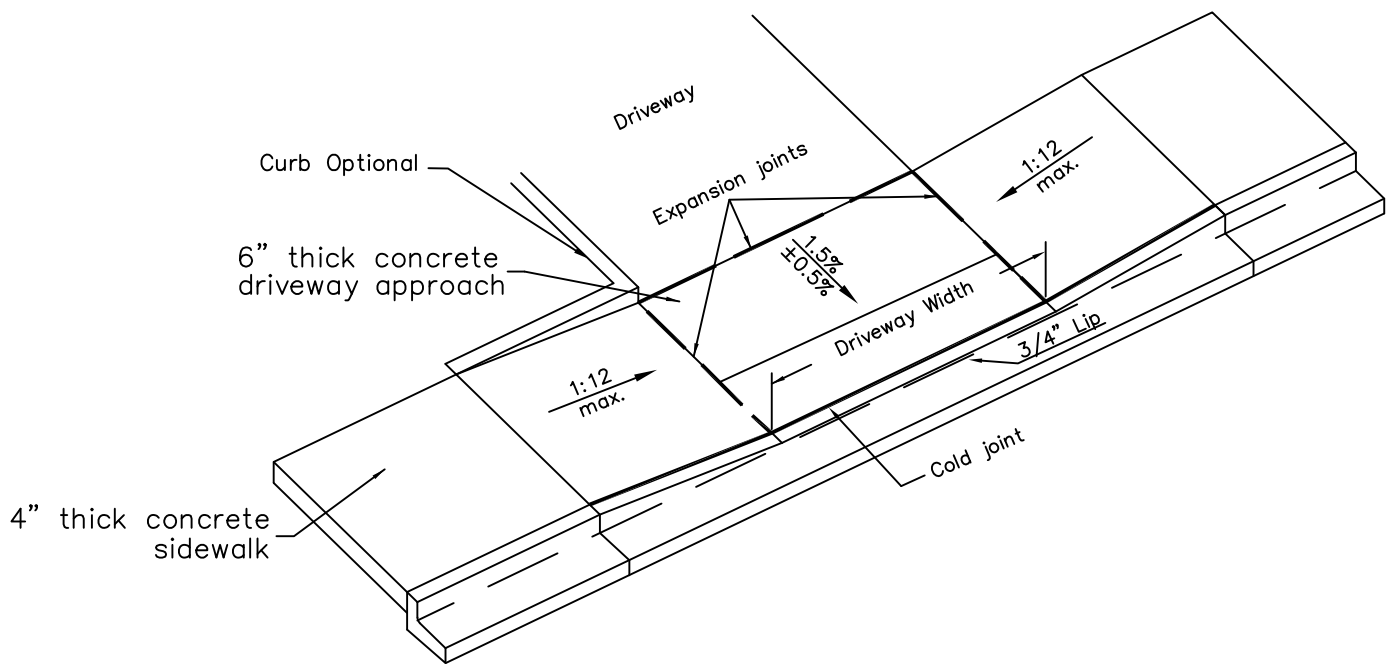
10/1/24
DATE:

DWG NO.

C-9



APPROACH SECTION



Not to Scale

1. Maintain 5' panel joint spacing in sidewalk through approach.
2. Residential approach width: 16' Min. – 36' Max.
3. Commercial approach width: 18' Min. – 40' Max.
4. See Std. Dwg. **C-13** for driveway locations.
5. Concrete shall be a minimum 28 day compressive strength of 4000 PSI.
6. City Engineer approval required for Depressed Driveway Approaches.



CITY OF COEUR D'ALENE STANDARD DRAWING

**DEPRESSED DRIVEWAY
APPROACH**

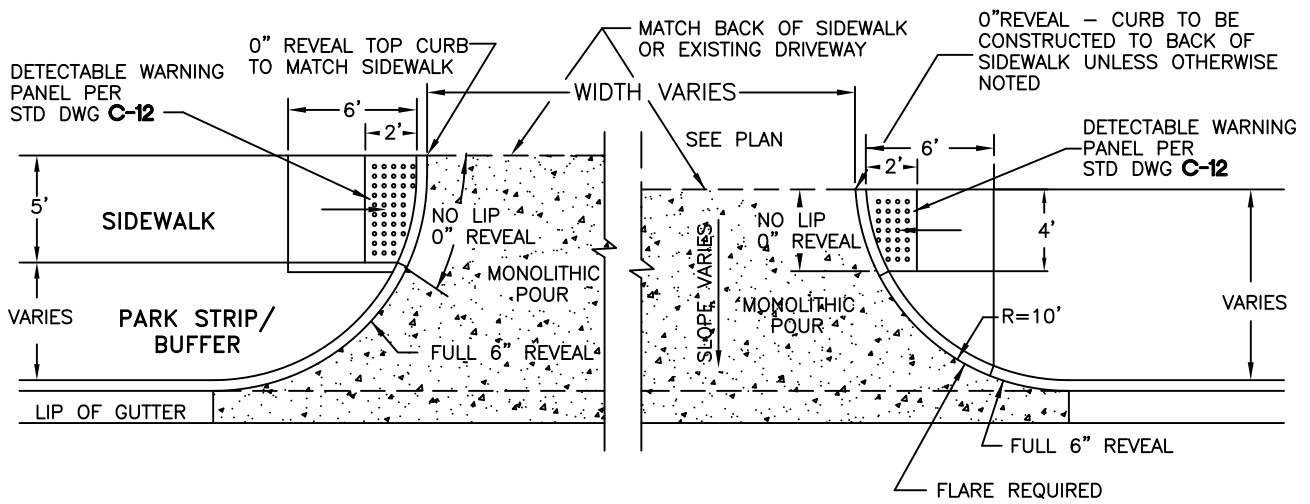
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

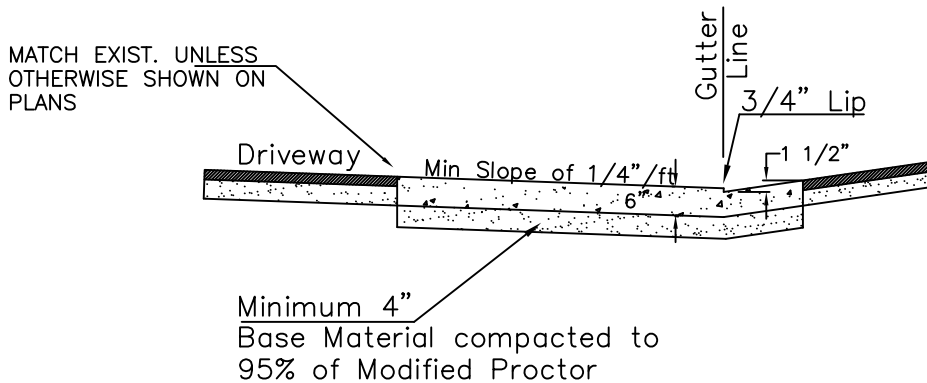
C-10



PLAN

RADIUS APPROACH

NOT TO SCALE



RADIUS APPROACH

NOT TO SCALE

NOTES:

1. Truncated domes shall be installed on high volume approaches.
2. Radius shall be a 10 feet minimum, 20 feet maximum.
3. Concrete shall have a 28 day compressive strength of 4000 PSI.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

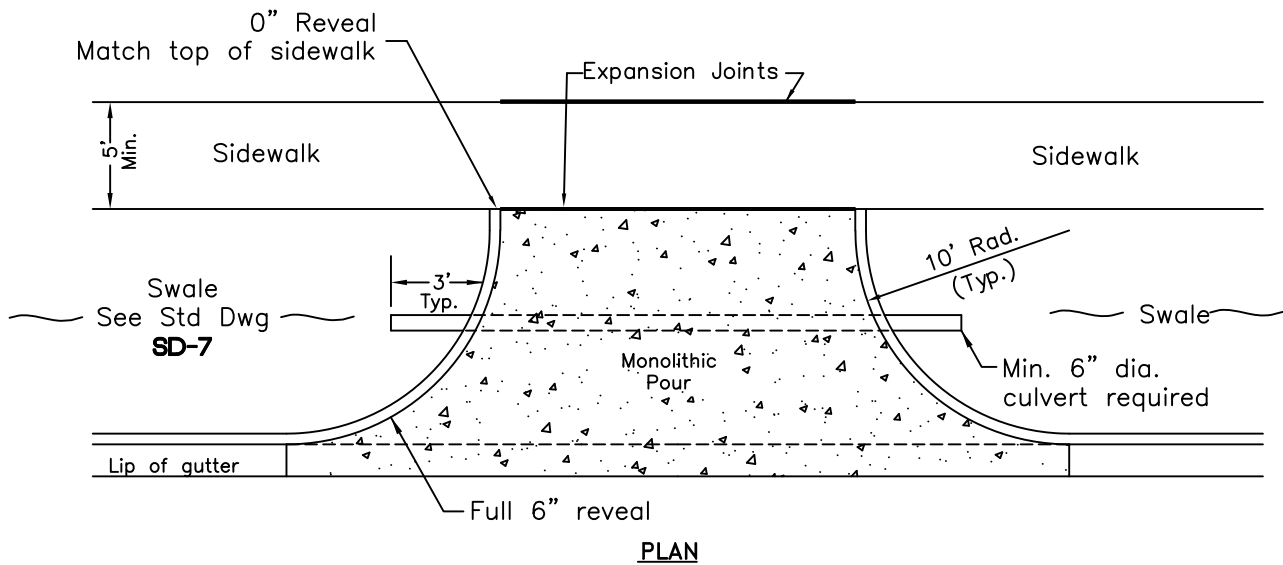
**COMMERCIAL
APPROACH**

Chris Bosley

10/1/24
DATE:

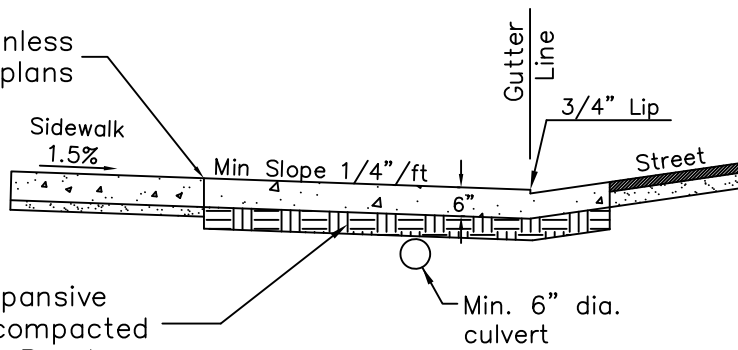
DWG NO.

C-11



RADIUS APPROACH
NOT TO SCALE

Match existing unless otherwise shown on plans



4" min. of non-expansive granular material compacted to 95% of Modified Proctor

NOTES:

1. Radius shall be a minimum of 10 feet, maximum of 20 feet.
2. Concrete shall have a 28 day compressive strength of 4000 PSI.
3. Commercial/multi-family sidewalk shall be 6" thick through approach.
4. See Standard Drawing **C-13** for approach locations.
5. Culvert material shall be Schedule 40 or equal, with smooth interior wall.



CITY OF COEUR D'ALENE STANDARD DRAWING

**COMMERCIAL APPROACH
WITH GRASSY SWALE**

APPROVED BY:

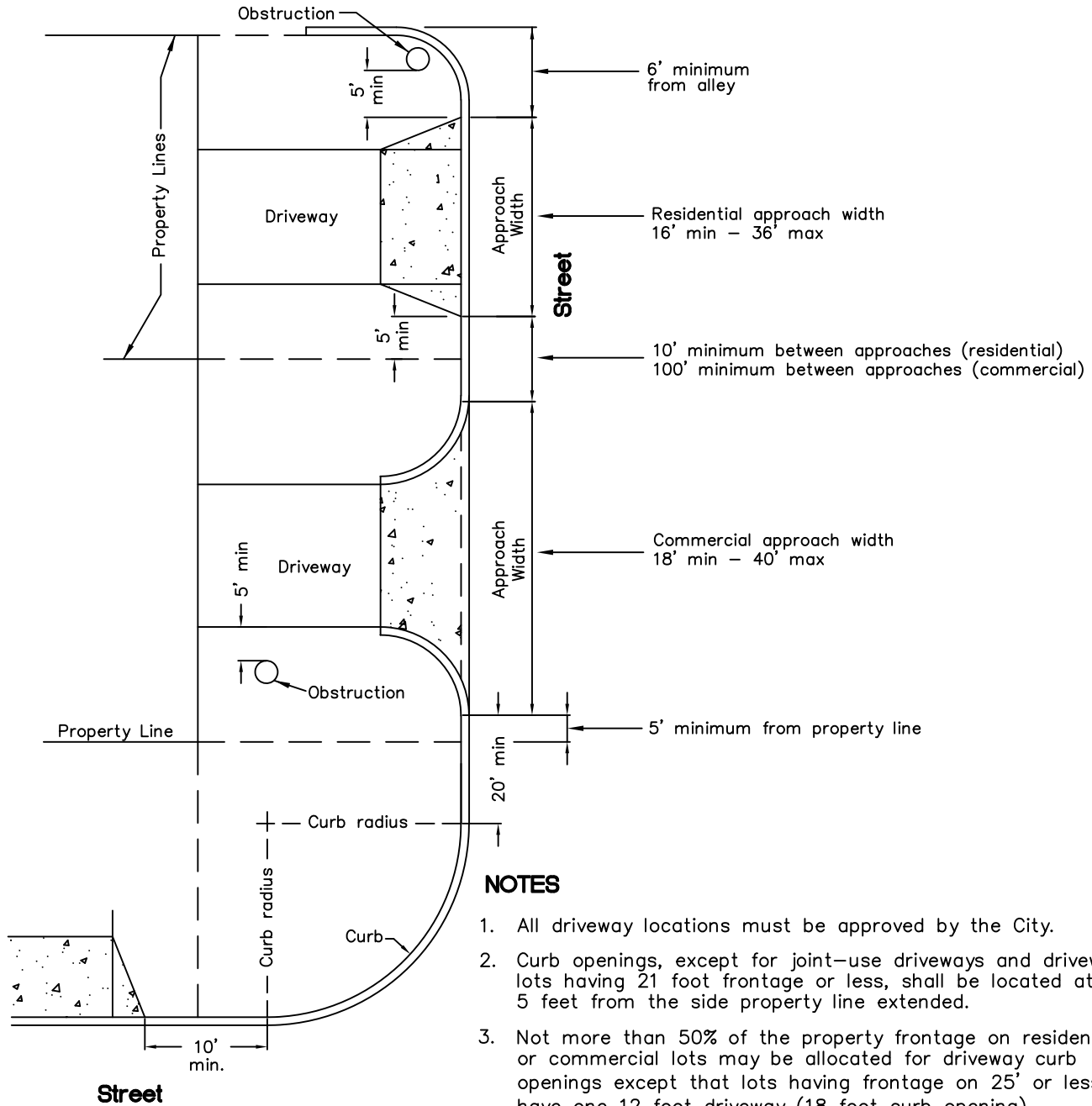
Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

C-12

Alley



NOTES

1. All driveway locations must be approved by the City.
2. Curb openings, except for joint-use driveways and driveways on lots having 21 foot frontage or less, shall be located at least 5 feet from the side property line extended.
3. Not more than 50% of the property frontage on residential lots or commercial lots may be allocated for driveway curb openings except that lots having frontage on 25' or less may have one 12 foot driveway (18 foot curb opening).
4. All driveways and curb openings shall be a minimum of 5 feet from any obstruction (i.e. poles, mailboxes, hydrants, etc.).
5. No portion of any driveway shall be allowed across a property line extended normal to the roadway from the front corner of the property, except that joint-use driveways may be permitted in special instances where written approval of both property owners is filed with the City.
6. Driveways shall not be placed within the functional area of a signalized intersection.

Not to Scale



CITY OF COEUR D'ALENE STANDARD DRAWING

**DRIVEWAY APPROACH
LOCATIONS AND WIDTHS**

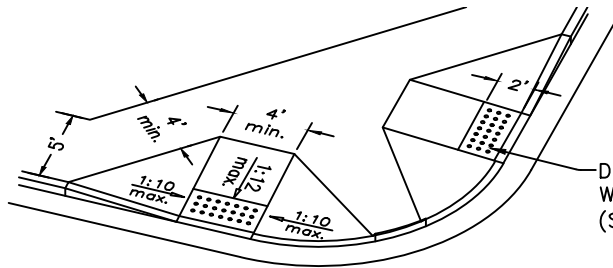
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

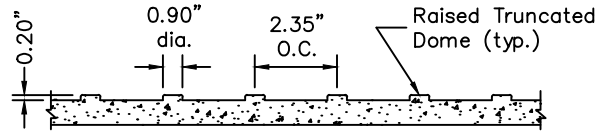
10/1/24
DATE:

DWG NO.

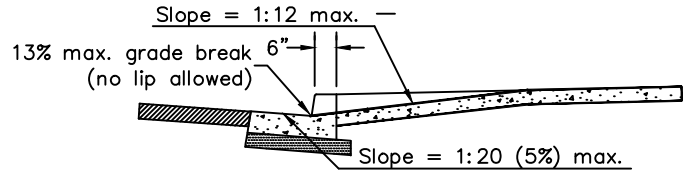
C-13



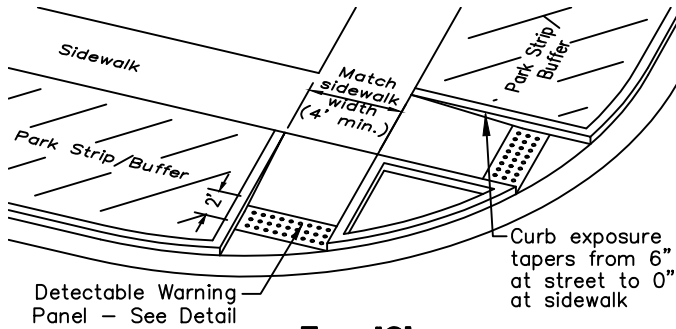
Type 'B'
Double Ramp, Contiguous Sidewalk



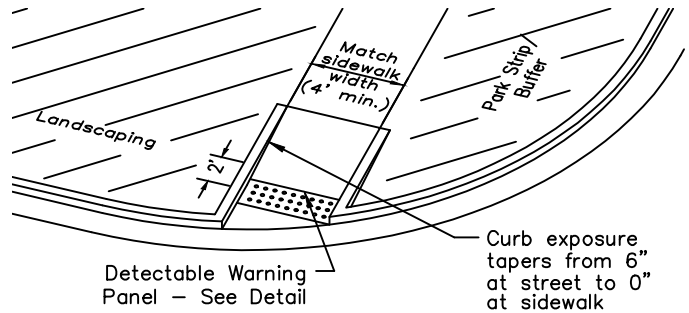
Detectable Warning Panel
"Equaltile" or Approved Equal
Cast Iron Preferred (Required Downtown)



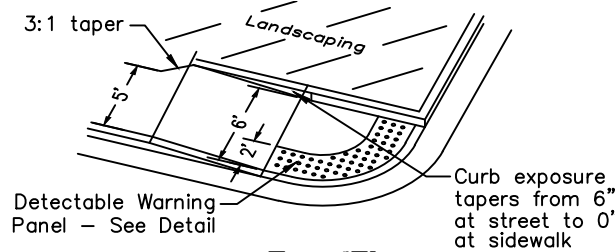
Section View



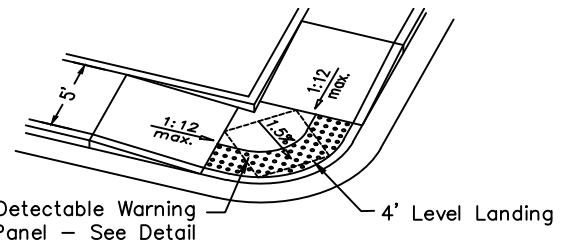
Type 'C'
Double Ramp, Detached Sidewalk



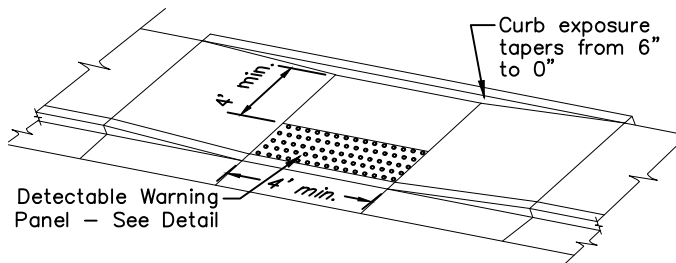
Type 'D'
Single Ramp, Detached Sidewalk



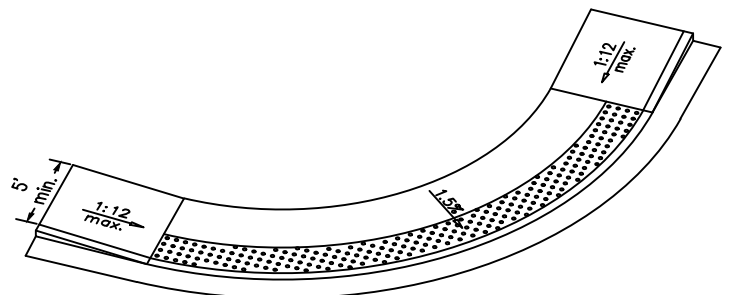
Type 'E'
Small Radius, Single Ramp, Sidewalk in One Direction



Type 'F'
Small Radius Blended Transition
Constrained Conditions Only



Type 'G'
Parallel Type, Constrained Conditions



Type 'H'
Large Radius Blended Transition

NOTES:

1. Two ramps per corner are required unless approved by the City Engineer.
2. Ramps shall not conflict with catch basins or curb inlets.
3. Maximum ramp running slope = 8.3%
4. Maximum ramp cross slope = 2.0%
5. Combinations of ramp types may be required at some intersections
6. Ramp must be flush with gutter/pavement (no lip allowed)



CITY OF COEUR D'ALENE STANDARD DRAWING

**PEDESTRIAN
RAMP**

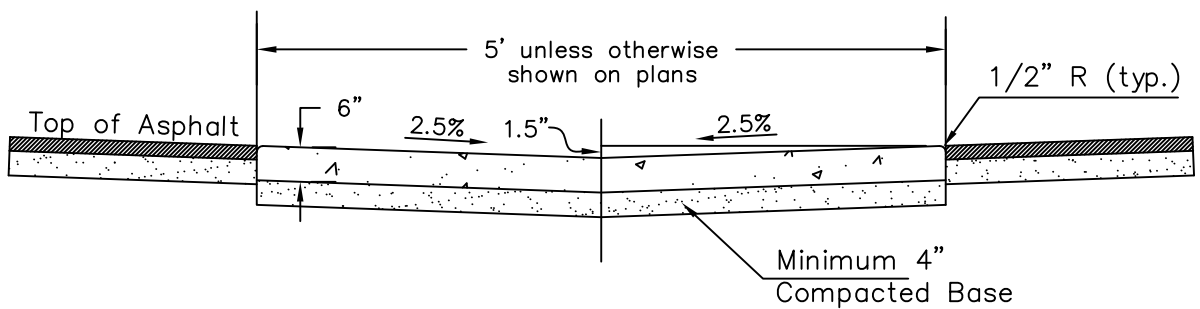
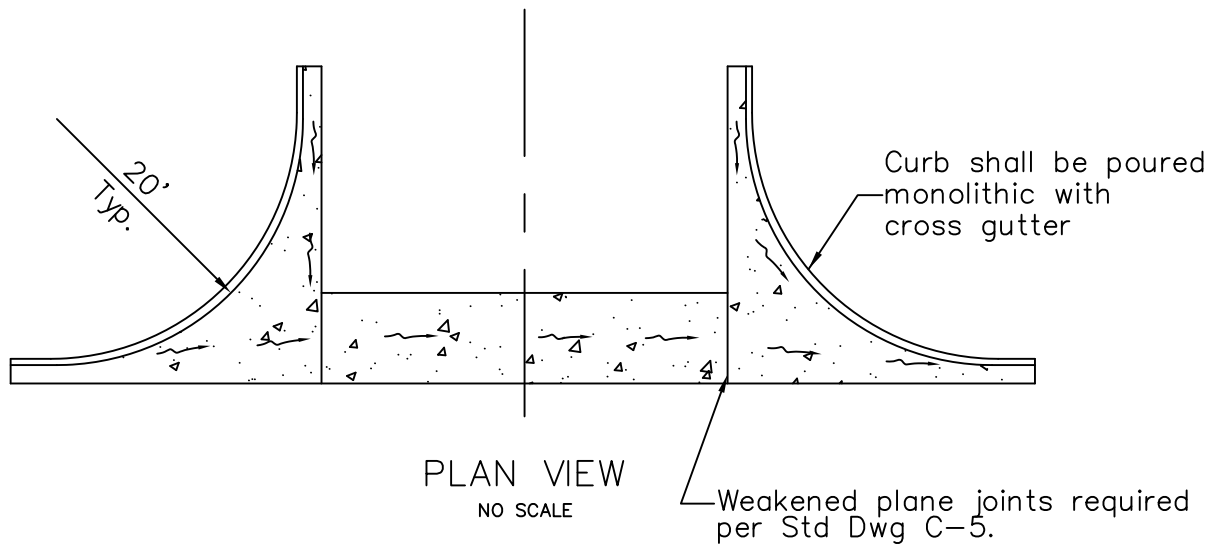
APPROVED BY:

Chris Bodley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

C-14



NOTES:

1. Concrete shall be 28 day minimum compression strength of 4000 PSI.
2. Typical flowlines



CITY OF COEUR D'ALENE STANDARD DRAWING

**CROSS
GUTTER**

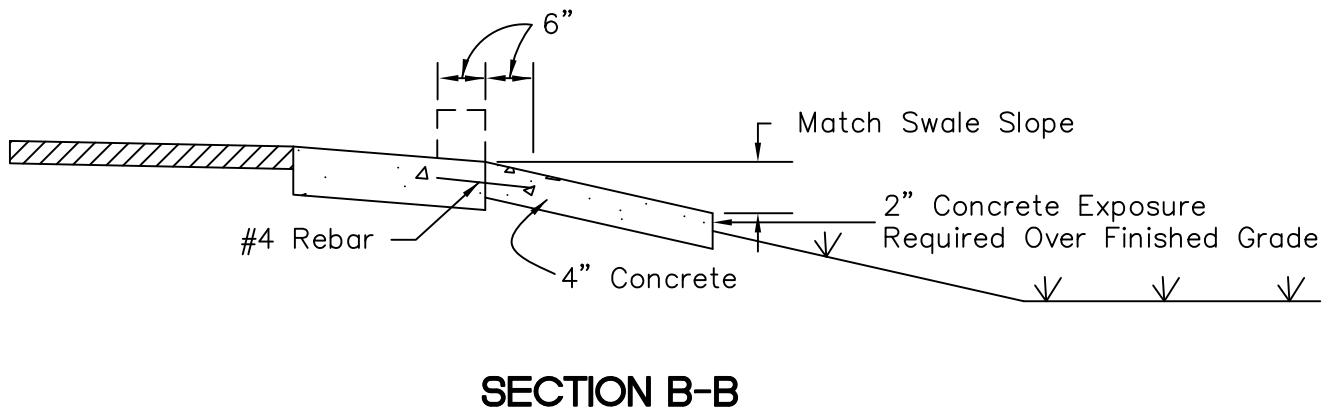
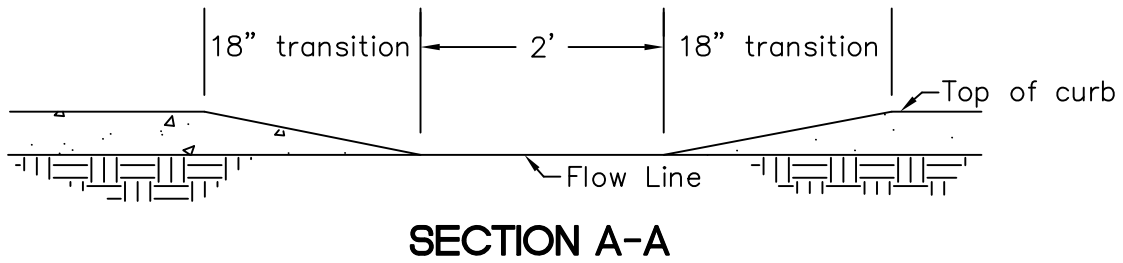
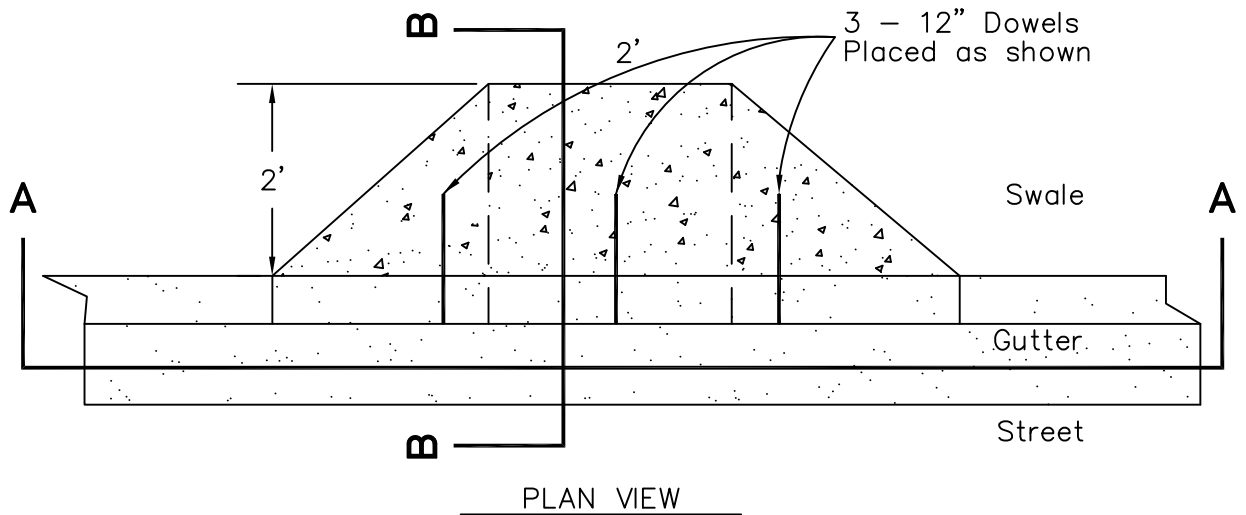
APPROVED BY:

Chris Busby
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

C-15



Not to Scale



CITY OF COEUR D'ALENE STANDARD DRAWING

**INLET
APRON**

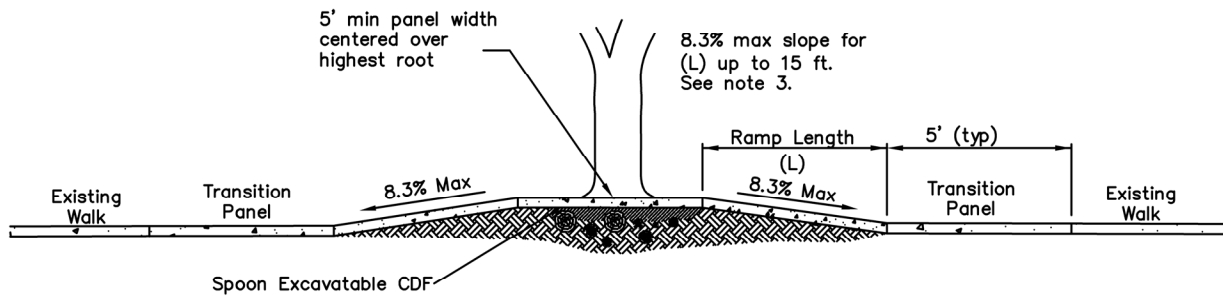
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

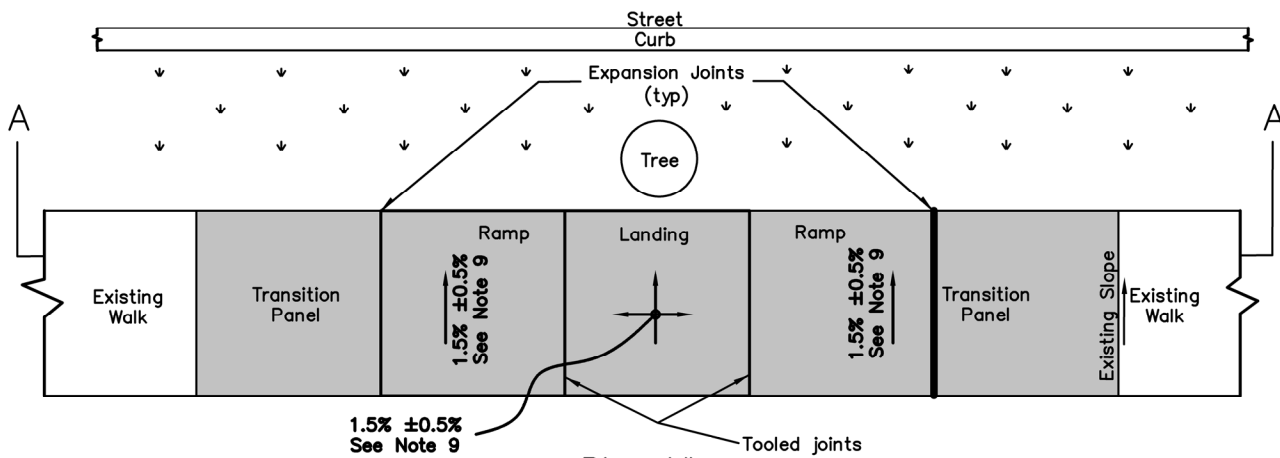
10/1/24
DATE:

DWG NO.

C-17



Section A-A



Plan View

Notes:

1. This plan does not apply for new sidewalk construction in undeveloped areas.
2. A 5-ft transition panel is required when cross slope of adjacent existing walk exceeds 2.0%
3. The maximum ramp running slope shall not require the ramp length (L) to exceed 15 ft to avoid chasing the slope indefinitely; increase the maximum running slope as directed by the Engineer. No additional construction tolerance is allowed.
4. Root areas shall be undisturbed as much as practical. Loose soil shall be lightly hand tamped. If root trimming is necessary contact the City Urban Forestry department.
5. Fill voids around roots to provide sidewalk support w/ layer of spoon excavatable Controlled Density Fill (CDF). A 1-inch minimum cover over the highest root is required.
6. See Std Dwg C-5 for general sidewalk requirements.
7. Place topsoil and hydroseed or sod as directed by the Engineer to match existing conditions.
8. Raise, relocate, or replace existing sprinkler system as needed.
9. 1.0% minimum cross slope and 2.0% maximum cross slope. No additional construction tolerance is allowed.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

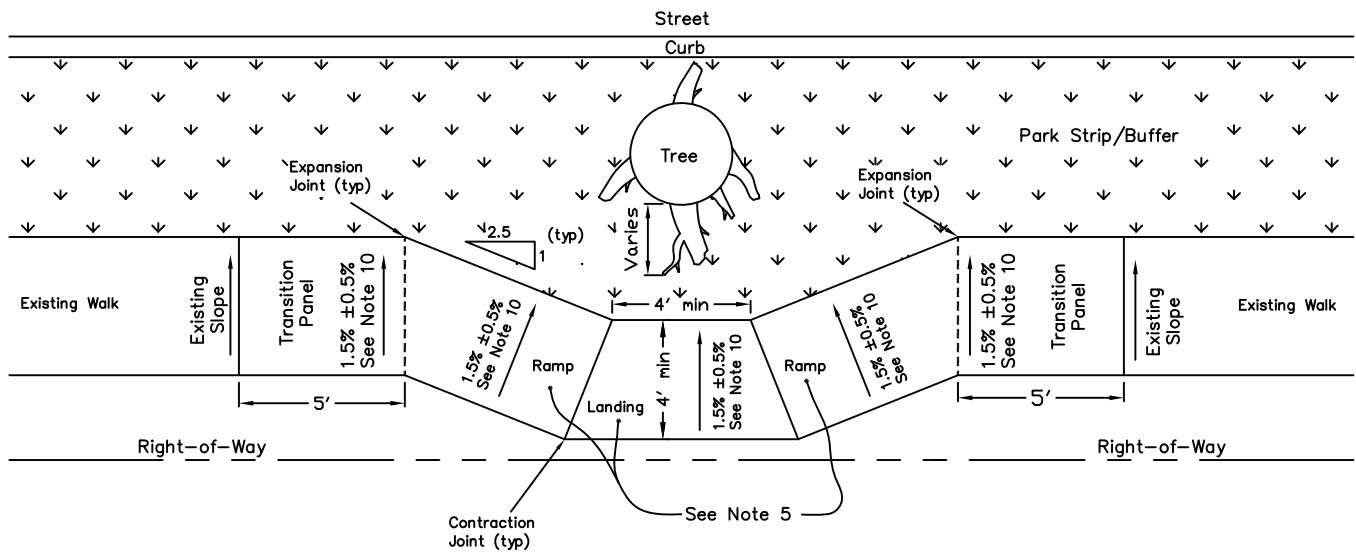
**SIDEWALK REPAIR
RAMPING AT TREES**

Chris Bosley
CITY ENGINEER, PE 10864

10/1/24
DATE:

DWG NO.

C-18



NOTES:

1. This plan does not apply for new sidewalk construction in undeveloped areas.
2. 5-ft transition panels are required when cross slope of adjacent existing walk exceeds 2.0%.
3. Root areas shall be undisturbed as much as practical. Loose soil shall be lightly hand tamped. If root trimming is necessary, contact the City Urban Forestry department.
4. Typical sidewalk diversion angle shall be 2.5 to 1. The diversion angle may be increased to 1 to 1 as directed by the engineer.
5. Use in conjunction w/ Std Dwg C-18 when ramping over and diverting around tree roots is required.
6. See Std Dwg C-5 for general sidewalk requirements. Provide additional expansion joints as shown.
7. Place topsoil and hydroseed or sod as directed by the Engineer.
8. Relocate or replace existing sprinkler systems as needed.
9. 1.0% minimum cross slope and 2.0% maximum cross slope. No additional construction tolerance is allowed.



CITY OF COEUR D'ALENE STANDARD DRAWING

**SIDEWALK REPAIR
DIVERSION AT TREES**

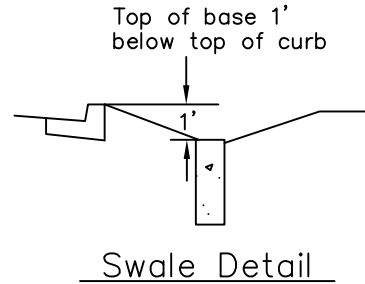
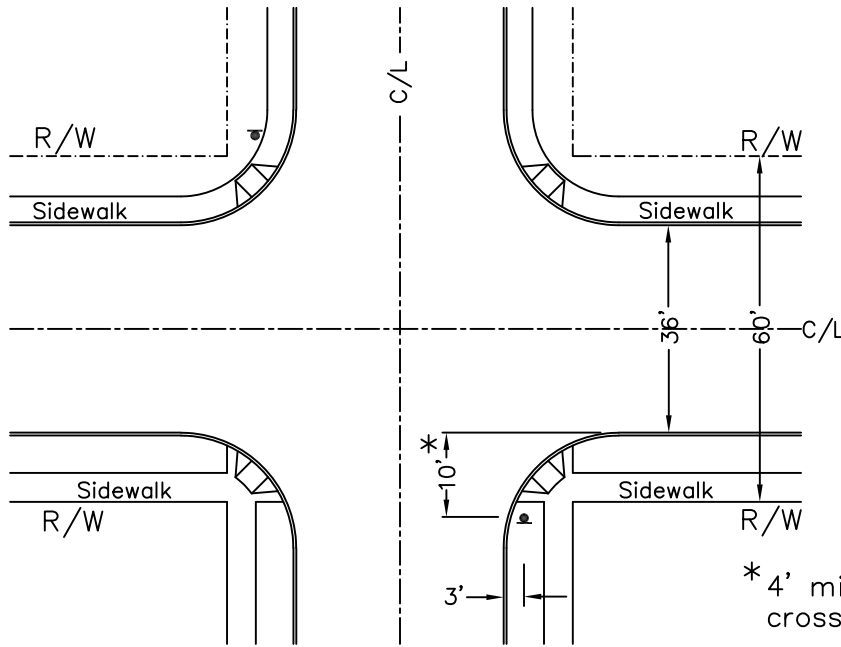
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

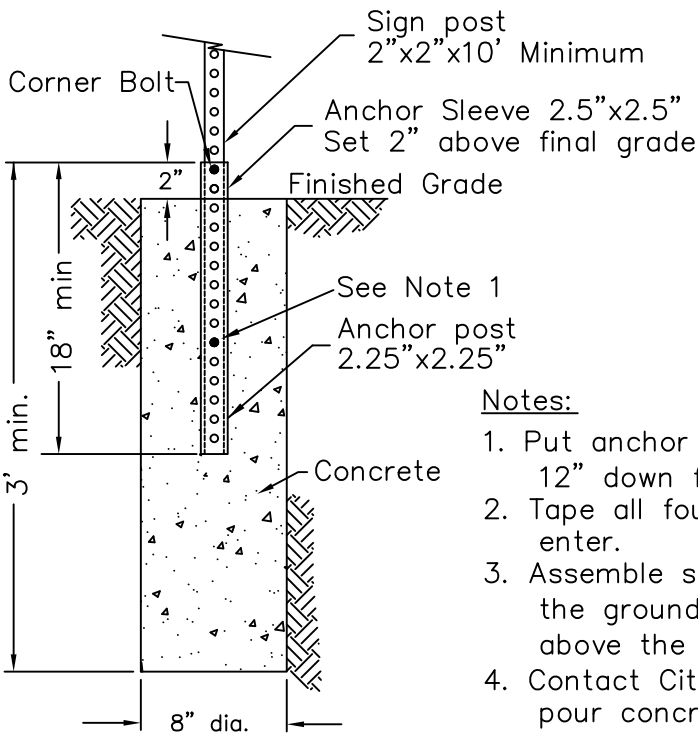
DWG NO.

C-19



Standard Intersection Signage

Not to Scale



Sign Post and Base Installation

Not to Scale

Typical Post Size		
	Tube Size	Ga./inch
Sign post	2" x 2" x 10'	14(.08)
Anchor	2.25" x 2.25" x 36"	12(.11)
Anchor sleeve	2.50" x 2.50" x 18"	12(.11)
Use Telespar only		

Notes:

1. Put anchor and sleeve unit together using 7/16" bolt 12" down from top.
2. Tape all four sides of base unit so concrete can not enter.
3. Assemble sign post and base unit, set base unit into the ground 3'. Leave 2 holes of base unit exposed above the finished grade (for the bolt connection).
4. Contact City of Coeur d'Alene Sign Shop when ready to pour concrete to install bases.
5. After the concrete has been poured, plumb and align post to 90° of roadway.
6. A minimum of 7' from roadway surface to bottom of sign.
7. See Standard Drawing **M-2** for Sign Details.



CITY OF COEUR D'ALENE STANDARD DRAWING

STREET NAME
SIGN LOCATION

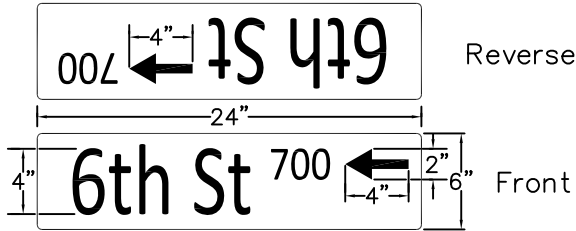
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

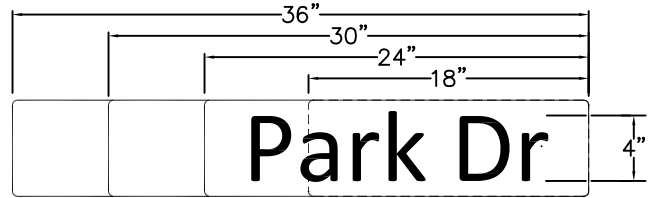
10/1/24
DATE:

DWG NO.

M-1



Numbered Streets



Named Streets

Signs and Mounting Hardware Specifications

Typical Street Name Sign Details

6" blanks to be sheeted with 3-M high-intensity white with a green translucent overlay.
 Numbered streets to have 4" arrows shown pointing INTO the hundred block.

No borders are required.

6" blanks to be 0.080 Aluminum with 3/4" radius corners.

Lettering to be 4" Highway series "B" in title case.

Abbreviations such as "Av, Dr, Pl, Ct, St, Ext" to be 2" series "B."

All Aluminum sign blanks to be FHWA or State specification conversion coated.

All street names must fit the blanks they are installed on.

9" blanks (0.125 Aluminum with 1-1/4" radius corners) are required for streets with speed limit of 35 mph or greater.

Street Name Signs For Signal Mastarm Mounting

All signal mastarm mounted street name signs will be of .125 Aluminum and will be FHWA or State specification conversion coated.

All letters to be 10" series "C" 3-M High Intensity grade white reflective, on an diamond grade reflective green background with a white border.

3M 4000 Series Diamond Grade 18" blanks to be sheeted with white and green translucent overlay with a white border.

All Other Signs

All other signs to be of .080 Aluminum.

All signs to be FHWA or State specification conversion coated.

All sheeting materials to be 3-M High Intensity grade reflective.

All signs to meet MUTCD specifications.

Sign Mounting Hardware

5/16" X 2-1/2" stainless steel Hex bolts, flat washers and locking nuts.

Mastarm Mounting Hardware

Astro brackets only.

Stainless steel bolts, flat washers and locking nuts.

Post and Base Materials

Post to be 14 ga. Telespar pre-punched only.

2"x2"x10' or 12' lengths only.

Bases to be 12 ga. Telespar pre-punched only.

Anchor to be 2-1/4" square by 36" in length.

Sleeve to be 2-1/2" square by 18" in length.

Post and Base Mounting Hardware

Sleeve to anchor 7/16" x 3" bolt with locking nut.

Post to base 5/16" corner bolt with locking nut. (Only)

Street Name Sign Mounting Hardware

Style 5" SUPER-LOK PRUF 91-U-F top with staggered holes. (Only)

Style 5" SUPER-LOK PRUF 90F crosspiece with staggered holes. (Only)



CITY OF COEUR D'ALENE STANDARD DRAWING

TYPICAL STREET NAME SIGN DETAILS

APPROVED BY:

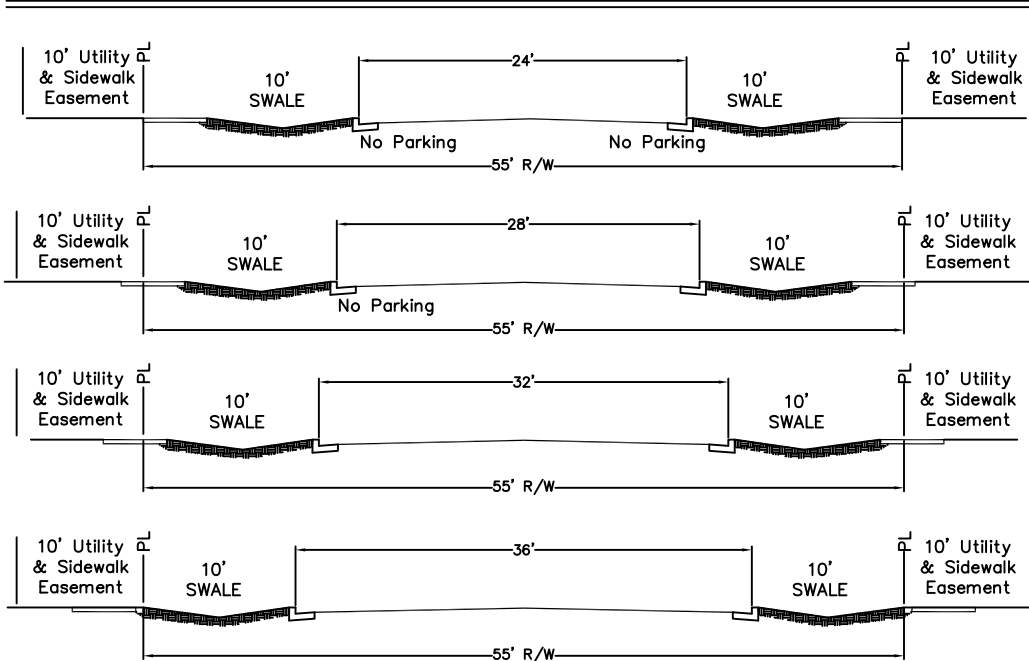
Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

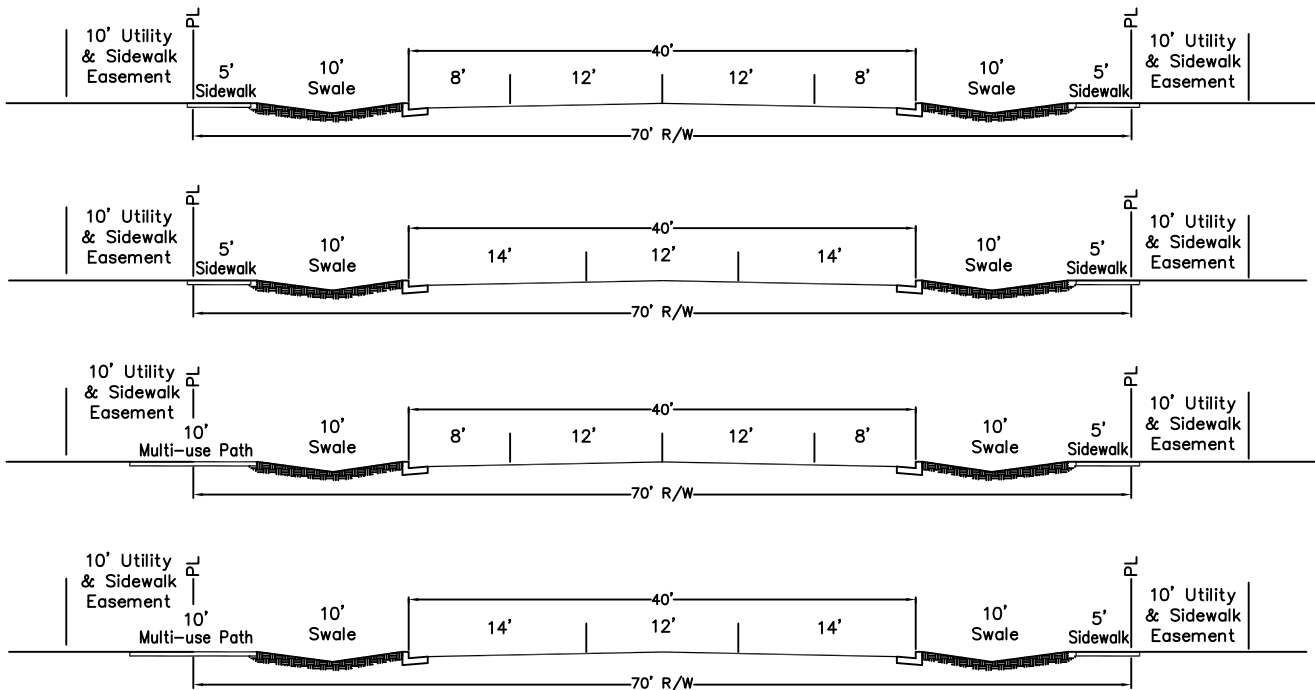
DWG NO.

M-2

Residential



Collector



CITY OF COEUR D'ALENE STANDARD DRAWING

TYPICAL STREET SECTIONS

APPROVED BY:

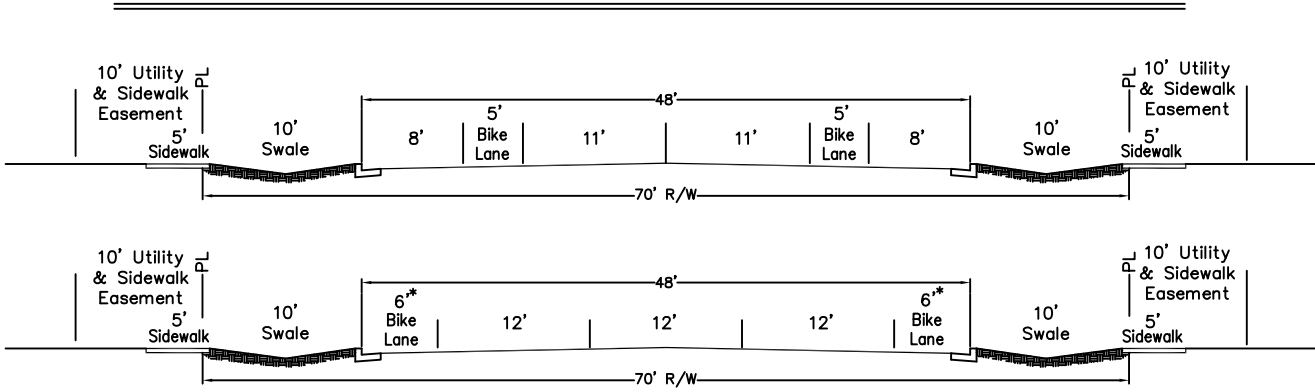
Chris Busby
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

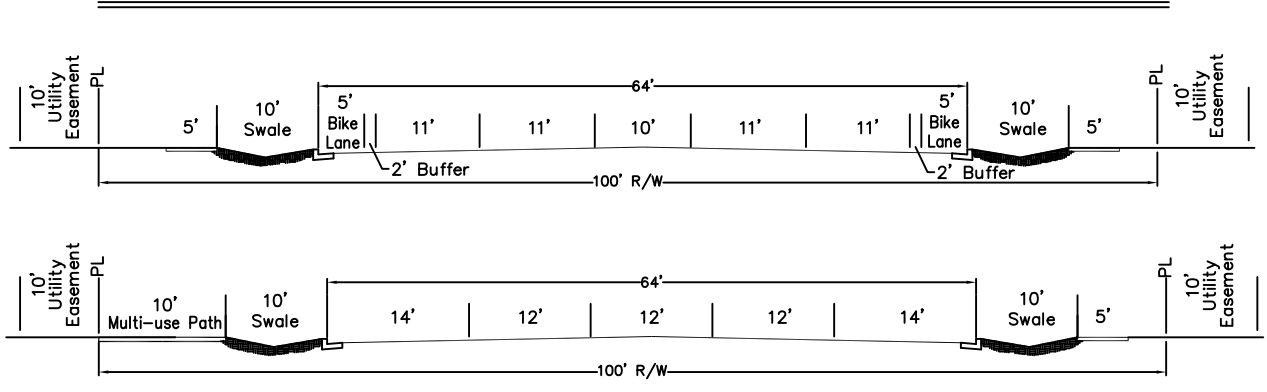
M-4

Collector (continued)



*A painted buffer strip may be warranted on bike lanes with high traffic speeds and volumes

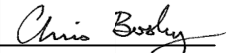
Arterial

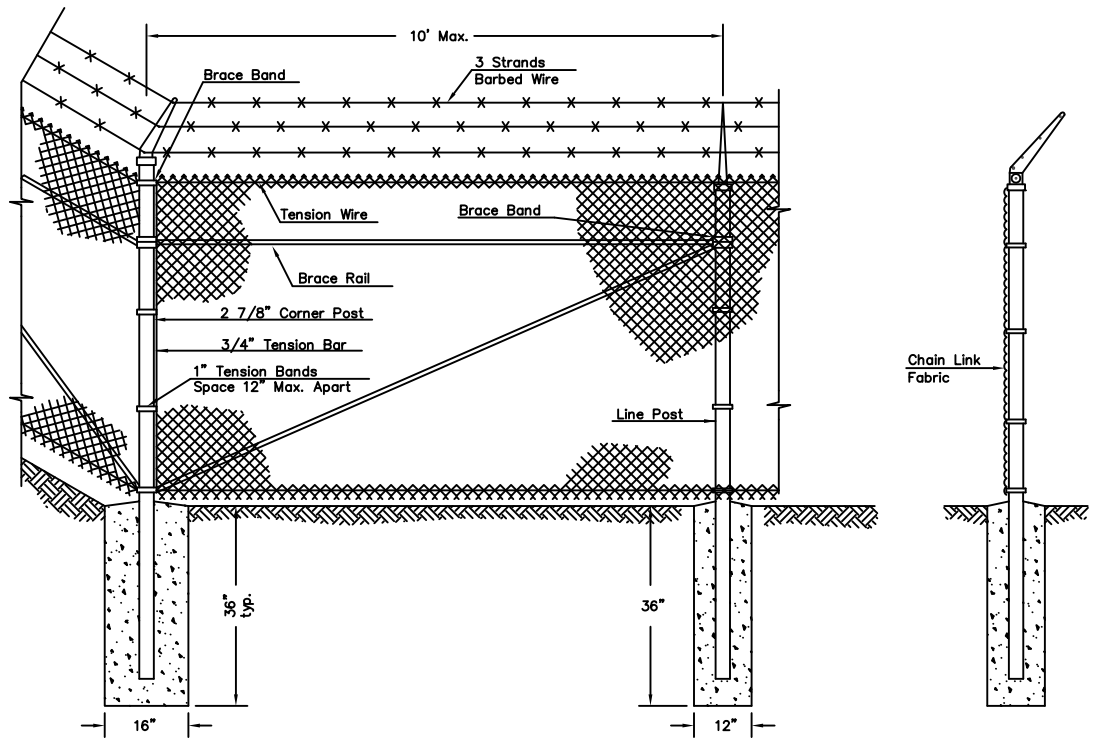


CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

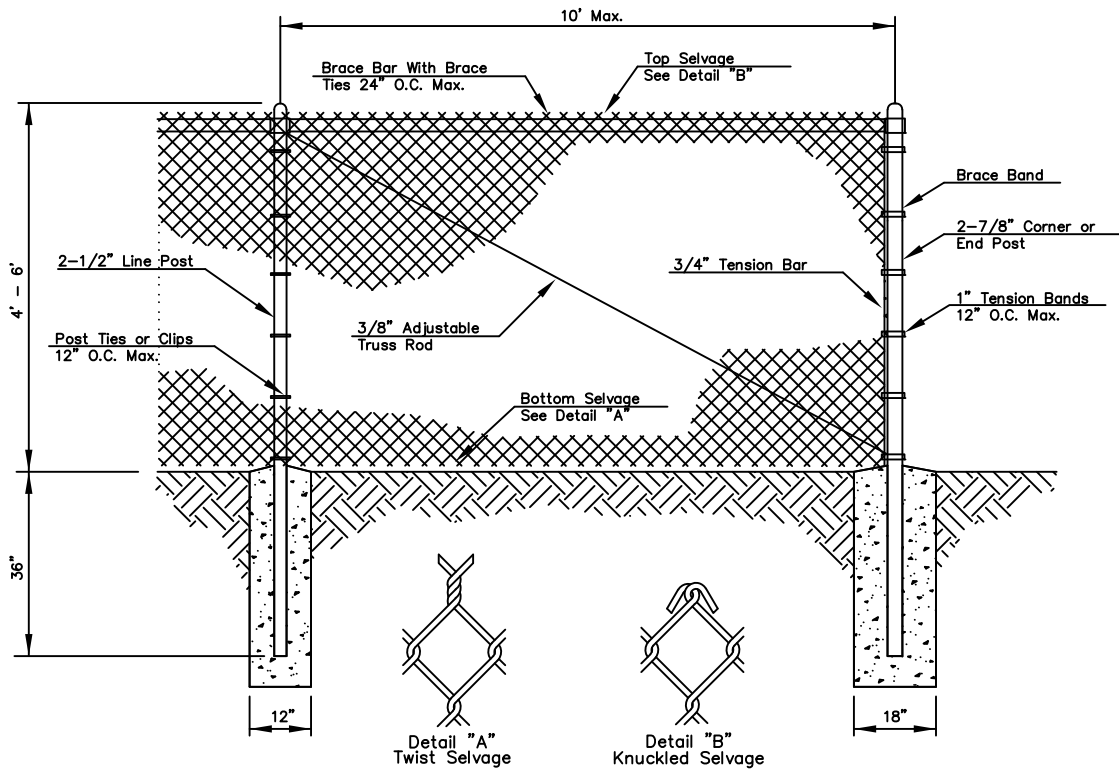
TYPICAL STREET SECTIONS


 CITY ENGINEER, PE 10804 10/1/24
 DATE:
 DWG NO. M-5



Chain Link Corner Brace

Not to Scale



CITY OF COEUR D'ALENE STANDARD DRAWING

CHAIN LINK FENCE

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-7

4"

2"

2"

City of Coeur d'Alene Approval		SHEET	
Approved By:			
City Engineer	Date		
Wastewater			
Water			

NOTE: Signature Block shall be located in the lower right hand corner of the cover sheet of the Improvement plans.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

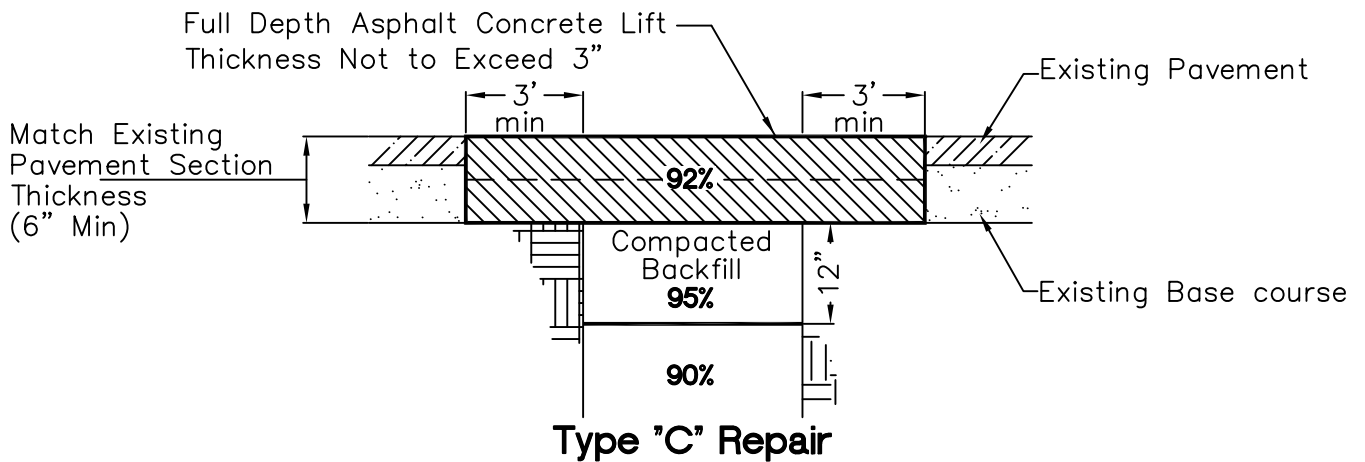
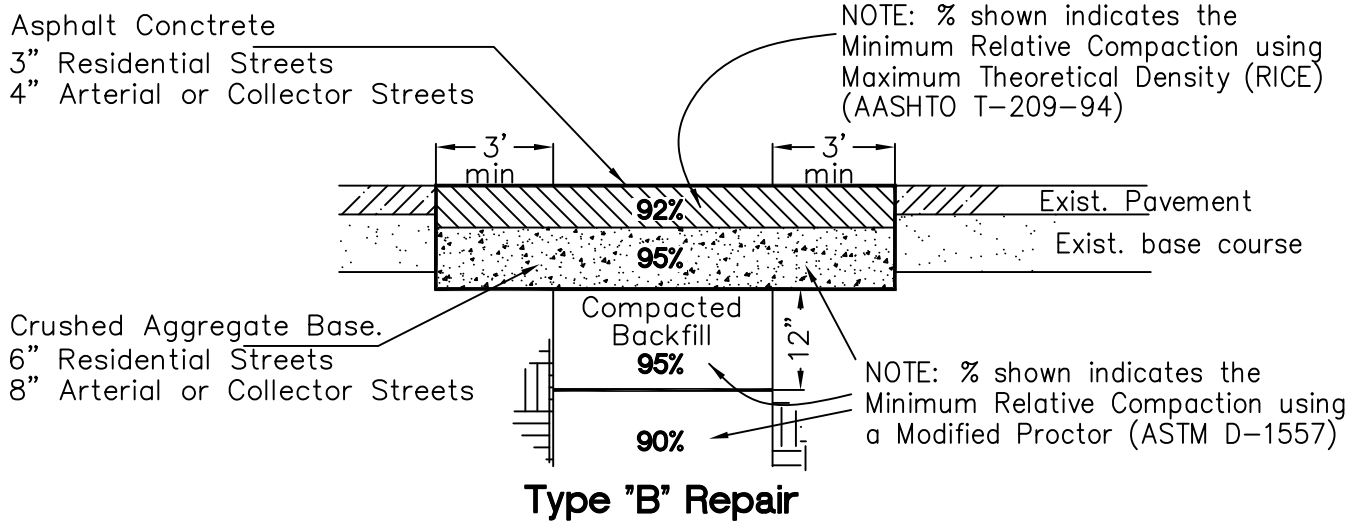
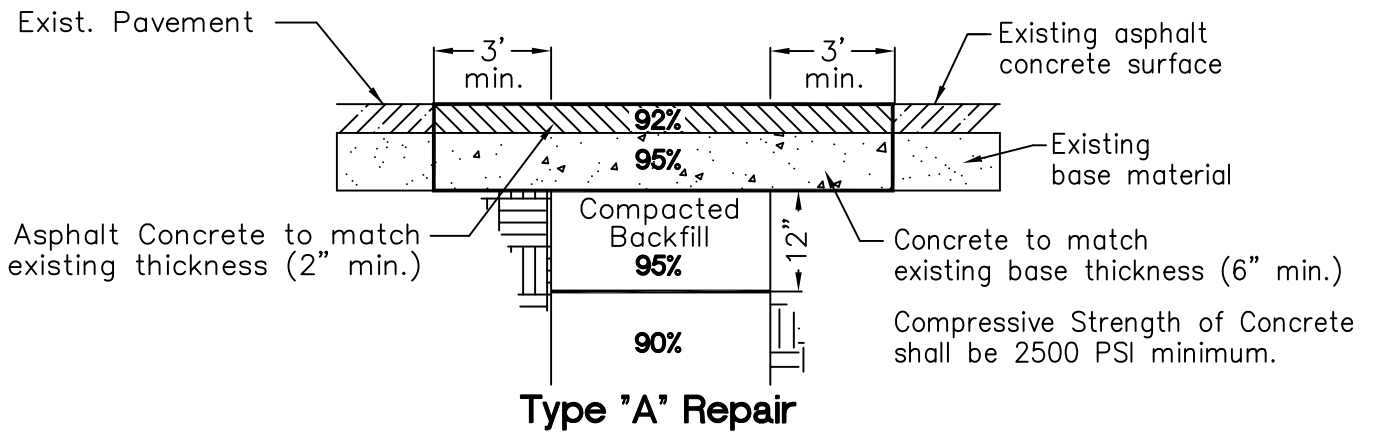
*SIGNATURE
BLOCK*

Chris Bosley
 CITY ENGINEER, PE 10804

10/1/24
 DATE:

DWG NO.

M-10



Notes:

1. All street cuts must follow City of Coeur d'Alene Pavement Cut Policy.
2. Trench must be approved by public works inspection prior to crushed rock placement.



CITY OF COEUR D'ALENE STANDARD DRAWING

**TRENCH CUT
PAVEMENT REPAIR**

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-11

Mast Arm length 6' - 12'
Curb Overhang 6" min - 7.5' max

LED Cobra Head Luminaire

Mast Arm

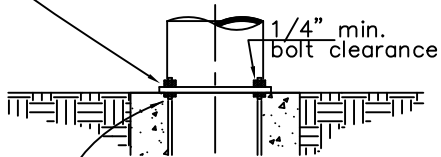
Light Standard

APPLICATION	LUMENS
Residential	9,500
Collectors	22,000
Arterials	50,000

Hand hole to face street
4"x6 1/2" with removable cover

Finished Grade

Bolts shall protrude 4"-4 1/2"
above foundation.



Galvanized Anchor Bolts per
Manufacturers Recommendations.
Use Two leveling nuts with washers
(all Galv.) on each bolt.

ANCHOR BASE FOUNDATION

N.T.S.

Precast Base, or Poured
in Place Concrete Per
Manufacturers Recommendations.

1" Galvanized
Steel Conduit
with 90° Bend

Notes:

1. See Standard Drawing M-15 for Street Lighting Notes.
2. Luminaire type to be approved by the City Engineer.



CITY OF COEUR D'ALENE STANDARD DRAWING

**PEDESTAL MOUNT
LIGHT STANDARD**

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-13

POLE AND MASTARM:

Poles and Mastarms shall be a minimum of 10 ga. (48 kpsi) steel. They shall be galvanized inside and out per ASTM A-123.

LUMINAIRES:

Street light luminaires shall be two-way Cobra head furnished with a Light Emitting Diode (LED) lamp, internal ballast, and an external twist lock photoelectric control unit. Luminaires shall be designed for horizontal mounting with a horizontal burning lamp. They shall be cutoff type that does not allow light above the horizontal. Luminaires shall be cast aluminum with a baked gray enamel finish. They shall be marked to indicate wattage.

PHOTOCELL:

The photocell unit shall consist of a 120 Volt Photoelectric cell in a weatherproof housing which plugs into a 3 terminal twist lock NEMA receptacle integral with the luminaire. The control shall have an activation level between 1 and 2 foot-candles and a shut-off level of 3 times the activation level.

FUSES:

Fuses shall be in-line cartridge type 35 amp fuses installed in the hot leg of the conductor. The fuse shall be located in the base of the pole or in the transformer. Fuse holders shall be Bussman #516-0100 and #516-0110 (boots) or approved equal.

WIRING:

Service runs to lights shall be solid or stranded THW copper wire No. 10 minimum. Size of wire shall be selected so that the voltage drop to the farthest light does not exceed 3% and shall be indicated on the As-Built plans.

SPLICING:

Splices shall be permitted in pull boxes and lighting standard bases only. All splices shall be waterproof, with epoxy encapsulation or heatshrink tubing.

CONDUIT:

All conduit shall be 1-inch UL approved heavy wall polyvinyl chloride (PVC schedule 40). Conduit shall be laid to a depth of not less than thirty (30) inches. Conduit laid in open trench shall not be covered nor shall any trench or inspection hole be backfilled until installation has been accepted by the City Engineer or designee.



CITY OF COEUR D'ALENE STANDARD DRAWING

***STREET LIGHTING
NOTES***

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-15

1. Approval of this Erosion/Sedimentation Control (ESC) plan does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
2. The implementation of this ESC plan and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the Permittee / Contractor until all construction is approved.
3. The boundaries of the clearing limits shown on this plan shall be clearly flagged in the field by a clearing control fence prior to construction. During the construction period, no disturbance or removal of any ground cover beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the Permittee / Contractor for the duration of construction. All ground cover is to remain outside of clearing area(s).
4. The ESC facilities shown on this plan must be constructed in conjunction with all clearing and grading activities in such a manner as to ensure that sediment-laden water does not enter the drainage system, leave the site, or violate applicable water standards, and must be installed and in operation prior to any grading or land clearing. Wherever possible, maintain natural vegetation for erosion control.
5. The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded (e.g., additional sumps, relocation of ditches and silt fences, etc.) as needed for unexpected storm events. Additionally, more ESC facilities may be required to ensure complete siltation control. Therefore, during the course of construction it shall be the obligation and responsibility of the Contractor to address any new conditions that may be created by his activities and to provide additional facilities over and above the minimum requirements as may be needed.
6. The ESC facilities shall be inspected by the Permittee / Contractor daily during non-rainfall periods, every hour (daylight) during a rainfall event, and at the end of every rainfall, and maintained as necessary to ensure their continued functioning. In addition, temporary siltation ponds and all temporary siltation controls shall be maintained in a satisfactory condition until such time as clearing and/or construction is completed, permanent drainage facilities are operational, and the potential for erosion has passed.
7. The ESC facilities on inactive sites shall be inspected and maintained a minimum of once a week or within 48 hours following a storm event.
8. At no time shall more than 1 foot of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system.
9. Stabilized construction entrances and wash pads shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.
10. Any permanent retention/detention facility used as a temporary settling basin shall be modified within the necessary erosion control measures and shall provide adequate storage capacity. If the permanent facility is to function ultimately as an infiltration or dispersion system, the facility shall not be used as a temporary settling basin. No underground detention tank, detention vault, or system which backs under or into a pond shall be used as a temporary settling basin.



CITY OF COEUR D'ALENE STANDARD DRAWING

***EROSION/SEDEMENTATION
CONTROL NOTES PAGE 1***

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-16

11. Where straw mulch is required for temporary erosion control, it shall be applied at a minimum thickness of 2”.

12. All erosion / sedimentation control ponds with a dead storage depth exceeding 12” must have a perimeter fence with a minimum height of 3 feet.

13. All work and materials shall be in accordance with the City of Coeur d’Alene Standards and Specifications.

14. The ESC facilities shall be constructed in accordance with the details on the approved plans. Locations may be moved to suit field conditions, subject to approval by the Engineer and the City of Coeur d’Alene Inspector.

15. A copy of the approved erosion control plans must be on the job site whenever construction is in progress.

16. Any catch basins or drywells collecting runoff from the site, whether they are on or off the site, shall have their grates covered with filter fabric during construction, and shall be removed upon project completion or vegetative establishment.

17. The washed gravel backfill adjacent to the filter fabric fence shall be replaced and the filter fabric cleaned if it is nonfunctional by excessive silt accumulation as determined by the City of Coeur d’Alene. All interceptor swales shall be cleaned if silt accumulation exceeds one-quarter depth.

18. Rock for erosion protection of channels and ditches, where required, must be of sound quarry rock, placed to a depth of 1 foot and must meet the following specifications:

4”-8” rock: 40%-70% passing

2”-4” rock: 30%-40% passing

1”-2” rock: 10%-20% passing

19. If any part(s) of the clearing limit boundary or temporary erosion / sedimentation control plan is/are damaged, it shall be repaired immediately.

20. All properties adjacent to the project site shall be protected from sediment deposition and runoff.

21. Do not flush concrete byproducts or trucks near or into the storm drainage system.



CITY OF COEUR D’ALENE STANDARD DRAWING

***EROSION/SEDIMENTATION
CONTROL NOTES PAGE 2***

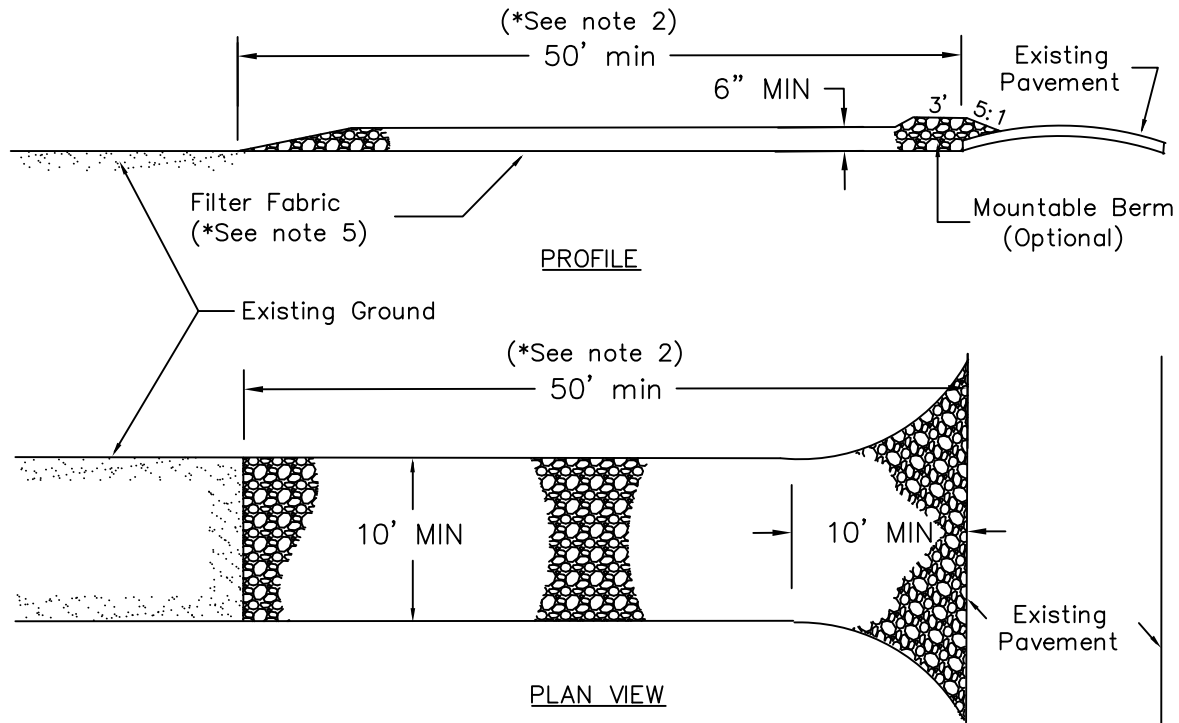
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-17



CONSTRUCTION SPECIFICATIONS

1. Stone size: 2" stone or reclaimed or recycled concrete equivalent.
2. Length: as required, but not less than 50 feet (except 20 foot minimum on a single family residence).
3. Thickness: not less than 6 inches.
4. Width: 10 foot minimum, but not less than the full width of ingress and egress locations.
5. Filter fabric shall be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
6. Surface water: all surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be required.
7. Maintenance: the entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
8. Washing: wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done in an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.



CITY OF COEUR D'ALENE STANDARD DRAWING

STABILIZED CONSTRUCTION ENTRANCE

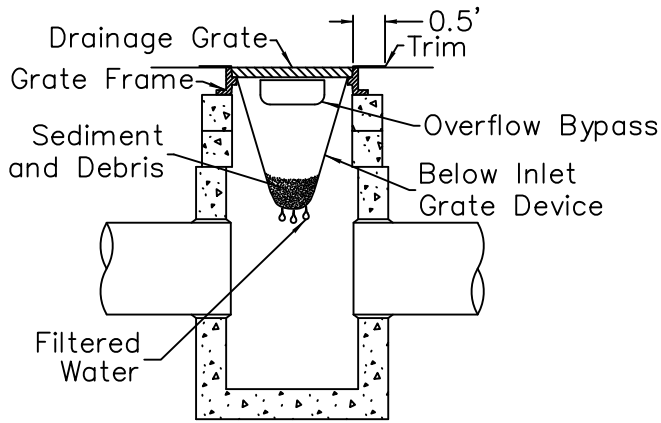
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

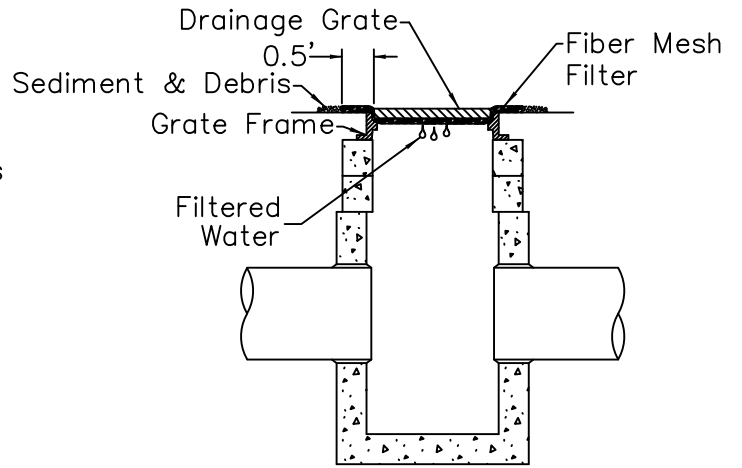
10/1/24
DATE:

DWG NO.

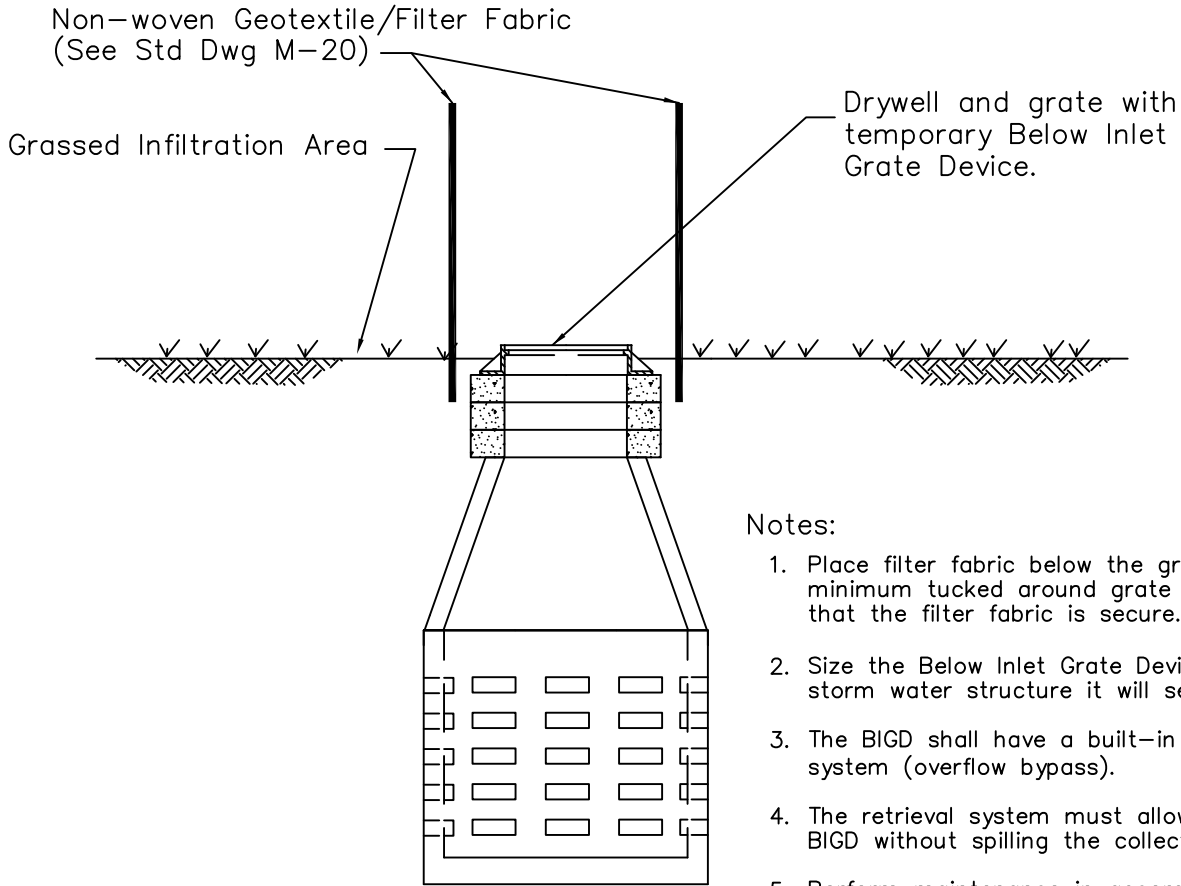
M-18



Below Inlet Gate Filter
Not to Scale



Fiber Mesh Filter
Not to Scale



Drywell
Not to Scale

Notes:

1. Place filter fabric below the grate with 0.5' minimum tucked around grate sides to ensure that the filter fabric is secure.
2. Size the Below Inlet Gate Device (BIGD) for the storm water structure it will service.
3. The BIGD shall have a built-in high-flow relief system (overflow bypass).
4. The retrieval system must allow removal of the BIGD without spilling the collected material.
5. Perform maintenance in accordance with Std Dwg M-16.



CITY OF COEUR D'ALENE STANDARD DRAWING

INLET PROTECTION

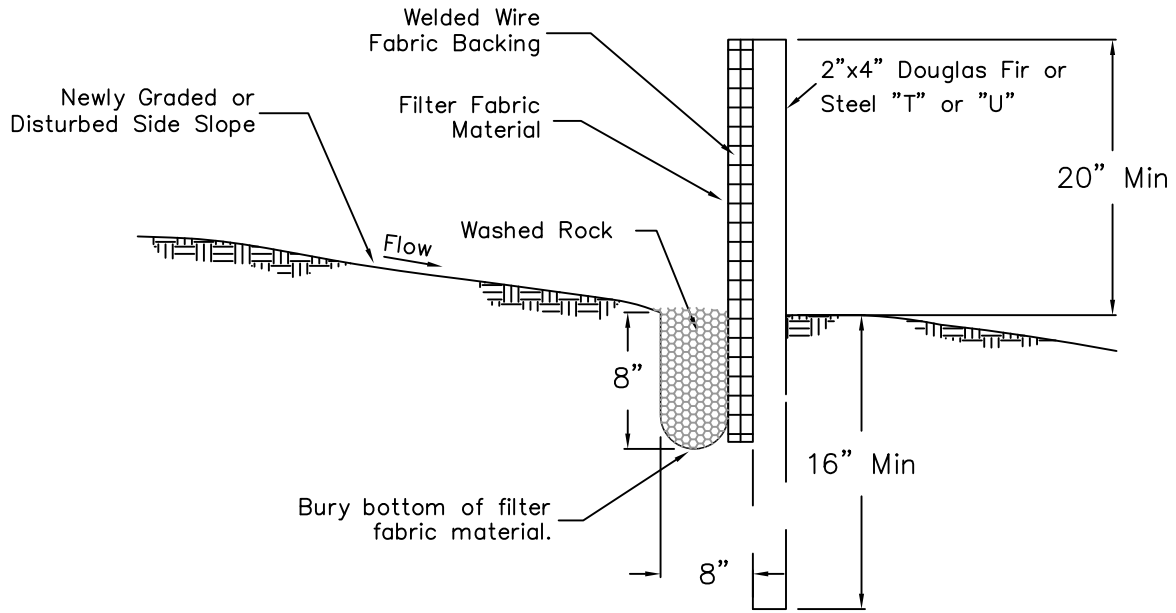
APPROVED BY:

Chris Bushy
CITY ENGINEER, PE 10804

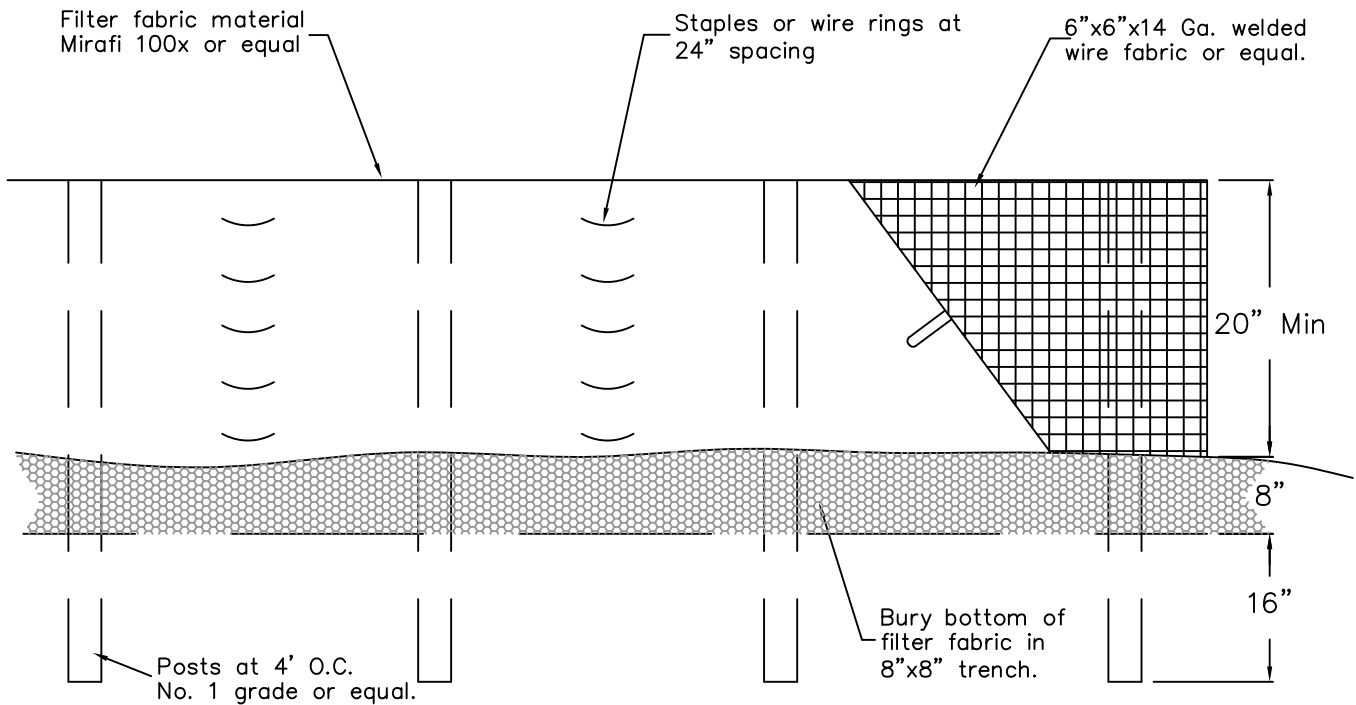
10/1/24
DATE:

DWG NO.

M-19



Typical Cross Section
Not to Scale



Elevation
Not to Scale



CITY OF COEUR D'ALENE STANDARD DRAWING

SILT FENCE

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-20



CITY OF COEUR D'ALENE STANDARD DRAWING

UTILITY LOCATIONS

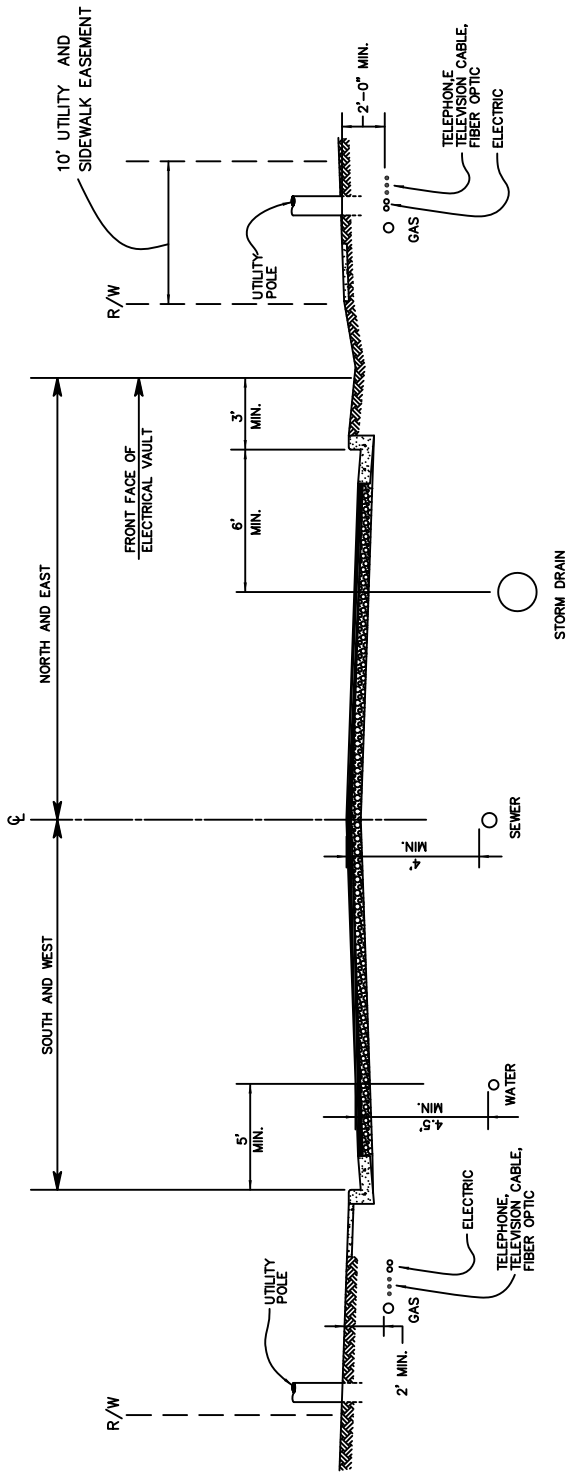
APPROVED BY:

Chris Bosley
 CITY ENGINEER, PE 10804

10/1/24
 DATE:

DWG NO.

M-21



OBSERVE MINIMUM UTILITY SEPARATIONS

- A. A MINIMUM OF FIVE (5') FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED FROM OTHER UTILITIES SUCH AS GAS, POWER, PHONE AND TV CABLE. PUBLIC UTILITIES WISHING TO INSTALL LINES WITHIN A PUBLIC UTILITY EASEMENT SHALL REQUIRE WRITTEN PERMISSION FROM THE CITY FOR ACCESS. THE CITY SHALL RETAIN THE RIGHT TO REQUIRE THE OTHER UTILITY TO VACATE THE EASEMENT SHOULD ANY CONFLICTS EXIST.
- B. THE STANDARD MINIMUM OF TEN (10') FEET FROM ANY NON-POTABLE LINE SHALL BE MAINTAINED. NO OTHER UTILITIES SHALL BE LAID IN OR OVER THE SAME TRENCH AS THE WATER MAIN AND SHALL OBSERVE THE MINIMUM FIVE (5') FOOT HORIZONTAL SEPARATION REQUIREMENTS.

GENERAL NOTES

1. THIS PLAN SHOWS TYPICAL LOCATIONS FOR ALL UTILITY INSTALLATIONS.
2. LOCATIONS OF EXISTING UTILITIES MUST BE FIELD LOCATED WITH THEIR RESPECTIVE OWNERS BEFORE MAKING NEW CONNECTIONS.

1. All work shall conform to the "Idaho Standards for Public Works Construction" and the City of Coeur d'Alene Standard Drawings and Specifications. In the case of a conflict, City of Coeur d'Alene Standards shall prevail.

2. The contractor shall notify the appropriate utility company prior to starting work near any facilities and shall coordinate his work with company representatives. All utility services shall be installed underground, for existing utility locations, contact "call before you dig" at *811 at least 48 hours prior to starting any excavations.

3. Work shall not begin until a notice to proceed is issued by the City.

4. The contractor shall notify the City of Coeur d'Alene Streets & Engineering Inspector 48 hours prior to starting work.

5. An encroachment permit shall be obtained from the City Streets & Engineering Department for work within existing City right-of-way.

6. The contractor shall have an approved set of improvement plans on the job site at all times.

7. Construction expansion joints are required in curb and gutter at returns and at driveway intersections per City Standards. Weakened plane joints are required every twentyfive (25) feet per City Standards.

8. All underground utility laterals shall be installed before construction of curbs, cross gutters, or surfacing of the streets.

9. Where trenches are within public easements, compaction test results shall be submitted to the Engineer of work and the City Engineer by a qualified engineer which certify that trench backfill was compacted as required in accordance with ISPWC and City of Coeur d'Alene Specifications.

10. All testing required by the City of Coeur d'Alene shall be at no cost to the City.



CITY OF COEUR D'ALENE STANDARD DRAWING

GENERAL NOTES
PAGE 1

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-22

11. All operations conducted on the premises, including the warming up, repair, arrival, departure or running of trucks, earthmoving equipment, construction equipment and any other associated equipment shall be limited to the period between 7:00 A.M. and 5:00 P.M. everyday unless otherwise approved by the City of Coeur d'Alene.

12. All existing improvements including curb and gutter, sidewalks, asphaltic concrete or Portland Cement Concrete paving, which are being joined or matched in connection with this project shall be joined or matched in a manner satisfactory to the City Engineer, including necessary sawcutting, removal, replacement and capping.

13. No revisions shall be made to these plans without the approval of the City Engineer.

14. Compaction testing shall be performed on the following:

- Utility trench backfill
- Roadway embankment
- Curb and gutter subgrade
- Road subgrade
- Road base
- Asphalt paving

The City may require additional testing if deemed necessary.
Compaction frequency shall generally adhere to the following guidelines:

- | | | |
|-----------------|---|--|
| Embankment | - | 1 per 50 cy |
| Trench | - | 1 per 50 cy located in pipe zone, mid-depth, surface, and around manholes and valves. |
| Subgrade | | |
| Road base | - | 1 per 750-1000 sf |
| Asphalt paving | | |
| Curb and gutter | - | 1 per 75-100 lf |
| Sidewalk | | |



CITY OF COEUR D'ALENE STANDARD DRAWING

GENERAL NOTES

PAGE 2

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-23

1. All work shall conform to the requirements of Division 800 of the "Idaho Standards for Public Works Construction" (ISPWC). latest edition.
2. The upper twelve inches (12") of subgrade shall be compacted to a relative compaction of 95%.
3. Prior to placing base material, the following shall be completed:
 - A. Provide compaction test results for all utility trenches, subgrade, and areas under curb and gutter to the City's Engineering Inspector.
 - B. Obtain authorization from the City Inspector to proceed with placement of base material. The City Engineer shall be notified at least forty-eight (48) hours prior to placement of base material.
 - C. Prior to placing base, the subgrade shall be proof-rolled and observed by the City's Streets & Engineering Inspector.
4. Compaction of the crushed aggregate base shall conform to the requirements of Section 802, Part 3.4 of the ISPWC, latest edition.
5. Compaction of the aggregate base shall be tested and approved by a qualified engineer prior to placement of asphaltic concrete.
6. A tack coat shall be applied to the adjacent curbs prior to placement of asphaltic concrete.



CITY OF COEUR D'ALENE STANDARD DRAWING

PAVEMENT NOTES
PAGE 1

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-24

7. Prior to placing of asphaltic concrete, the following shall be completed:
 - A. Provide compaction test results for base material to the City's Engineering Inspector.
 - B. Obtain authorization from the City Inspector to proceed with Asphalt paving. The City Inspector shall be notified at least forty-eight (48) hours prior to placement of Asphalt paving.
 - C. Obtain approval of all underground utilities which will lie under the pavement.
8. Placement of Asphaltic Concrete shall be observed by a representative of the Engineer of work.
9. Asphaltic Concrete shall be compacted to at least 92% of the maximum theoretical density - AASHTO T209-94.
10. Prior to approval by the City, the pavement shall be water tested for proper drainage and approved by the City Inspector.
11. The City Engineer may require the pavement sections shown on the plans to be verified by the "R" value tests taken from the exposed subgrade.
12. The City Engineer may require coring of the asphalt pavement to verify pavement thickness or density.



CITY OF COEUR D'ALENE STANDARD DRAWING

PAVEMENT NOTES
PAGE 2

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-25

1. No disruption of existing sanitary sewer service will be permitted without the written approval of the City's Wastewater Utility.
2. A removable plug shall be installed in the lowest sanitary sewer manhole pipe inlet(s) with no active upstream sewer laterals for all phased developments, sewer extensions and connections. Unless otherwise directed by City Inspectors, this plug is required to remain in place during construction until final acceptance of this sewer project.
3. All public sanitary sewer mains shall be PVC, ASTM D 3034, SDR 35 pipe with flexible gasketed joints constructed at the line and uniform grade indicated on the approved construction plans.
4. All sewer lateral connections to public sanitary sewer mains shall be GPK saddle taps or pre-approved equivalent for existing sewers or PVC tee branches for new sewers and constructed 45° above the spring line of the sewer main at the locations indicated on the approved construction plans.
5. All sewer laterals shall be constructed at 90° right angles to the public sewer main alignment at the locations shown on the approved construction plans, except in cul-de-sacs or street knuckles where the "90° Rule" is not practical. Cul-de-sacs or street knuckle sewer laterals may enter sanitary manholes (4 max) with the pre-approval of the City's Wastewater Utility and shall be constructed with cored-in sand collars for existing sewers and precast sand collars for new sewers with matching pipe crown elevations and individually formed channels.
6. All public pressure sewer lines shall be PVC AWWA C900 or C905 DR 25 pipe constructed with a minimum bury of 5 feet from the top of the pipe to finish grade at the line and grades indicated on the approved construction plans.
7. All thrust blocking shall be formed against undisturbed or compacted soil conforming to the City Water Department's Thrust Blocking Standard Drawings. All bolts and nuts shall be stainless steel and free of concrete and accessible by wrench. All fittings with alignment angles less than 45° require both thrust blocks and mechanical joint restraints approved by the City's Wastewater Utility.
8. All constructed sewer lines shall be installed with continuous sewer warning tape placed 24" directly over entire length of newly installed pipe. Pressure sewer lines shall also include continuous tracer wire taped securely to top of the pipe and brought to the finish grade inside all sewer valves, locating wire boxes, vaults and manhole structures.
9. All sewer laterals shall be referenced on the record "As-built" drawings with centerline stationing, off-set length and invert elevation at the end of lateral prior to the City's Wastewater Utility final approval and acceptance of sewer improvements.



CITY OF COEUR D'ALENE STANDARD DRAWING

SEWER SYSTEM NOTES

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-26A

10. All existing public sanitary sewer connections, modifications and extensions require the City Wastewater Utility's inspection and approval at least 48 hours prior to backfill. Call 208.769.2213. Any scheduled requests not ready for inspection will require another 48-hour inspection notification.

11. All private sewers and sewer lateral replacement/repairs shall conform to the City's adopted Idaho State Plumbing Code and require the City Building Department's inspection and approval prior to backfill. Call 208.769.2391.

12. All new sanitary sewer construction shall require the following prior to the City Wastewater Utility's final approval and acceptance of sewer improvements:
 - a. All sanitary sewer tees and laterals shall be inspected and approved by City Inspectors at least 48 hours prior to backfill. Call 208.769.2285, and;

 - b. All sewer lines, lateral connections, vaults and manhole structures shall be cleaned of any debris prior to pavement. Hydrant flushing of debris into downstream sewers is not acceptable means of cleaning, and;

 - c. All sanitary sewer lines shall be pressure tested in accordance with the latest edition of the Idaho Standards for Public Works Construction (ISPWC) and City Standards. All testing shall be witnessed, recorded and signed off by City Inspectors prior to pavement. Call 208.769.2285, and;

 - d. All tracer wires shall be tested and locate painted for continuous continuity and witnessed and signed off by City Inspectors prior to sub grade approval. Call 208.769.2213, and;

 - e. All public sanitary sewer lines shall be CCTV and submitted on DVD in a usable formatted template using "POSM" or another pre-approved equivalent program to the City Wastewater Utility's for review and approval prior to pavement. Please allow 48 hours for review. Call 208.769.2213, and;

 - f. All sanitary sewer vaults and manhole structures shall be adjusted to finish grade per City Standard Drawings and inspected and approved by the City Wastewater Utility prior to pavement and immediately after pavement (2 Inspections Required) Call 208.769.2213, and;

 - g. Secure authorization from the City Inspectors to clean out and dispose of all debris and remove the plug installed at the beginning of this sewer project at the lowest sanitary sewer manhole pipe inlet(s).

13. All sanitary sewer lines shall be separated at least 10 feet horizontally and a minimum 18-inch vertical separation with domestic water lines. Any anticipated separation differing from the minimum standards contained herein shall conform to IDAPA 58.01.16.



CITY OF COEUR D'ALENE STANDARD DRAWING

SEWER SYSTEM NOTES

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-26B

1. The minimum water service shall be one inch (1"). All new water service taps shall be one of the following: one inch (1"), two inch (2"), four inch (4"), six inch (6") or eight inch (8"), unless otherwise approved. Meter sizes shall range from three quarter inch ($\frac{3}{4}$ ") to eight inch (8").
2. Water mains shall be AWWA C900 PVC pipe (DR-18) four inch (4") to twelve inch (12"), C905 PVC fourteen inch (14") and larger, and shall be constructed with the top of the pipe at a minimum of 54 inches below finish grade except where otherwise indicated with specific elevations and approved by the City Engineer.
3. No disruption of existing water services while making connection to existing mains shall be allowed without specific approval from the City of Coeur d'Alene Water Division. All affected properties must be notified at least 48 hours prior to shut-off. Failure to comply with noticing or other requirements could result in a stop-work notice, fines, and /or other penalties.
4. No connections for the purpose of obtaining water supply during construction shall be made without first obtaining approval from the City of Coeur d'Alene Water Division. Bulk water for construction and dust control shall be purchased through approved filling stations.
5. The existence and location of water facilities shown on the plans were obtained by a search of available City records. Location and elevation of existing water facilities shall be confirmed by field measurements and excavation exploration by the contractor prior to beginning of new work.
6. The City's Engineering Inspector shall be notified at least 48 hours prior to any inspection.
7. All fittings or appurtenances removed from the City water lines shall be returned by the contractor to the City of Coeur d'Alene Water Division unless otherwise specified by the contract documents or Superintendent.
8. All water mains, valves and valve boxes, fire hydrants, services, and appurtenances shall be installed, tested, and approved prior to paving.
9. All mains shall be tested in accordance with City requirements. Hydrostatic testing shall be witnessed by a City Inspector. Results of chlorination and bacteria tests shall be submitted to the City of Coeur d'Alene water division for approval.



CITY OF COEUR D'ALENE STANDARD DRAWING

**WATER SYSTEM
NOTES**

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-27

1. No disruption of existing sanitary sewer service will be permitted without the written approval of the City's Wastewater Utility.
2. A removable plug shall be installed in the lowest sanitary sewer manhole pipe inlet(s) with no active upstream sewer laterals for all phased developments, sewer extensions and connections. Unless otherwise directed by City Inspectors, this plug is required to remain in place during construction until final acceptance of this sewer project.
3. All public sanitary sewer mains shall be PVC, ASTM D 3034, SDR 35 pipe with flexible gasketed joints constructed at the line and uniform grade indicated on the approved construction plans.
4. All sewer lateral connections to public sanitary sewer mains shall be GPK saddle taps or pre-approved equivalent for existing sewers or PVC tee branches for new sewers and constructed 45° above the spring line of the sewer main at the locations indicated on the approved construction plans.
5. All sewer laterals shall be constructed at 90° right angles to the public sewer main alignment at the locations shown on the approved construction plans, except in cul-de-sacs or street knuckles where the "90° Rule" is not practical. Cul-de-sacs or street knuckle sewer laterals may enter sanitary manholes (4 max) with the pre-approval of the City's Wastewater Utility and shall be constructed with cored-in sand collars for existing sewers and precast sand collars for new sewers with matching pipe crown elevations and individually formed channels.
6. All public pressure sewer lines shall be PVC AWWA C900 or C905 DR 25 pipe constructed with a minimum bury of 5 feet from the top of the pipe to finish grade at the line and grades indicated on the approved construction plans.
7. All thrust blocking shall be formed against undisturbed or compacted soil conforming to the City Water Department's Thrust Blocking Standard Drawings. All bolts and nuts shall be stainless steel and free of concrete and accessible by wrench. All fittings with alignment angles less than 45° require both thrust blocks and mechanical joint restraints approved by the City's Wastewater Utility.
8. All constructed sewer lines shall be installed with continuous sewer warning tape placed 24" directly over entire length of newly installed pipe. Pressure sewer lines shall also include continuous tracer wire taped securely to top of the pipe and brought to the finish grade inside all sewer valves, locating wire boxes, vaults and manhole structures.
9. All sewer laterals shall be referenced on the record "As-built" drawings with centerline stationing, off-set length and invert elevation at the end of lateral prior to the City's Wastewater Utility final approval and acceptance of sewer improvements.



CITY OF COEUR D'ALENE STANDARD DRAWING

SEWER SYSTEM NOTES
PAGE 1

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-28

10. All existing public sanitary sewer connections, modifications and extensions require the City Wastewater Utility's inspection and approval at least 48 hours prior to backfill. Call 208.769.2213. Any scheduled requests not ready for inspection will require another 48-hour inspection notification.

11. All private sewers and sewer lateral replacement/repairs shall conform to the City's adopted Idaho State Plumbing Code and require the City Building Department's inspection and approval prior to backfill. Call 208.769.2391.

12. All new sanitary sewer construction shall require the following prior to the City Wastewater Utility's final approval and acceptance of sewer improvements:
 - a. All sanitary sewer tees and laterals shall be inspected and approved by City Inspectors at least 48 hours prior to backfill. Call 208.769.2285, and;

 - b. All sewer lines, lateral connections, vaults and manhole structures shall be cleaned of any debris prior to pavement. Hydrant flushing of debris into downstream sewers is not acceptable means of cleaning, and;

 - c. All sanitary sewer lines shall be pressure tested in accordance with the latest edition of the Idaho Standards for Public Works Construction (ISPWC) and City Standards. All testing shall be witnessed, recorded and signed off by City Inspectors prior to pavement. Call 208.769.2285, and;

 - d. All tracer wires shall be tested and locate painted for continuous continuity and witnessed and signed off by City Inspectors prior to sub grade approval. Call 208.769.2213, and;

 - e. All public sanitary sewer lines shall be CCTV and submitted on DVD in a usable formatted template using "POSM" or another pre-approved equivalent program to the City Wastewater Utility's for review and approval prior to pavement. Please allow 48 hours for review. Call 208.769.2213, and;

 - f. All sanitary sewer vaults and manhole structures shall be adjusted to finish grade per City Standard Drawings and inspected and approved by the City Wastewater Utility prior to pavement and immediately after pavement (2 Inspections Required) Call 208.769.2213, and;

 - g. Secure authorization from the City Inspectors to clean out and dispose of all debris and remove the plug installed at the beginning of this sewer project at the lowest sanitary sewer manhole pipe inlet(s).

13. All sanitary sewer lines shall be separated at least 10 feet horizontally and a minimum 18-inch vertical separation with domestic water lines. Any anticipated separation differing from the minimum standards contained herein shall conform to IDAPA 58.01.16.



CITY OF COEUR D'ALENE STANDARD DRAWING

SEWER SYSTEM NOTES
PAGE 2

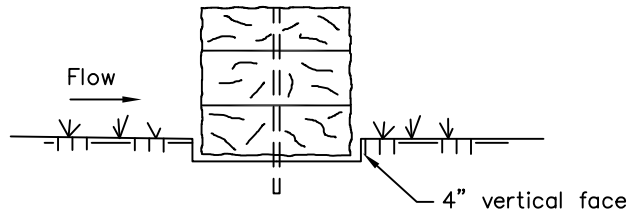
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

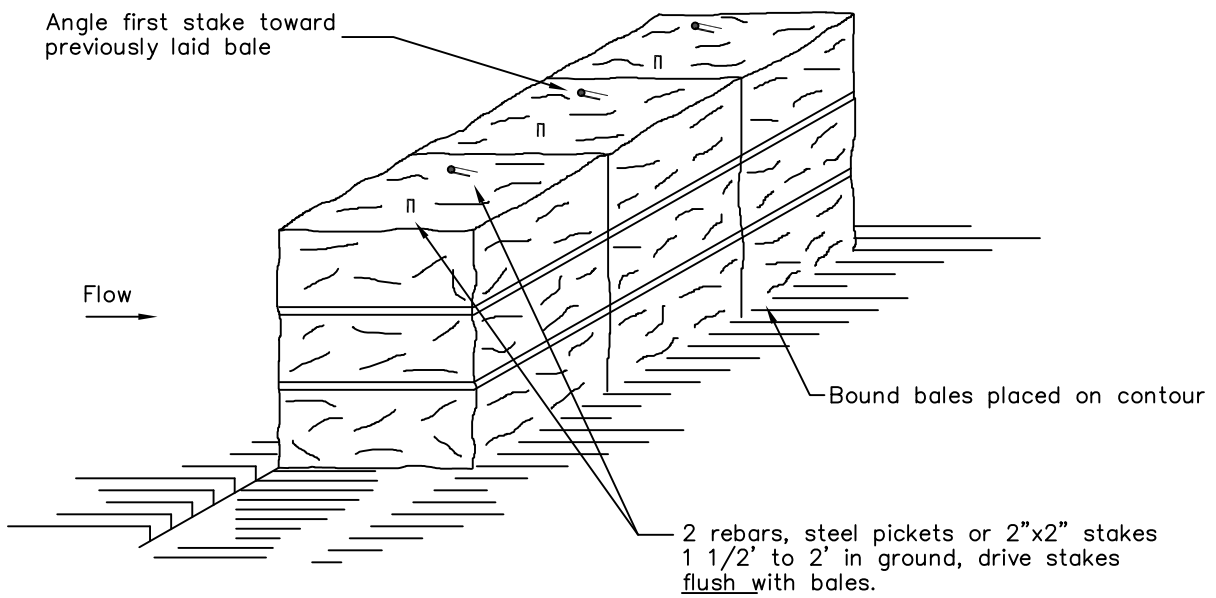
10/1/24
DATE:

DWG NO.

M-29



BEDDING DETAIL



ANCHORING DETAIL

CONSTRUCTION SPECIFICATIONS

1. Bales shall be placed at the toe of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a minimum of 4 inches (4") and placed so the bindings are horizontal.
3. Bales shall be securely anchored in place by either two (2) stakes or rebars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bale.
4. Inspection shall be frequent and repair replacement shall be made promptly as needed.
5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or damage.



CITY OF COEUR D'ALENE STANDARD DRAWING

STRAW BALE DIKE

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-30

**CITY OF COEUR D'ALENE
PAVEMENT DESIGN STANDARDS**

STREET CLASSIFICATION	MAX DESIGN ADT	TRAFFIC INDEX	30.0 - 39.9		40.0 - 49.9		> 50.0	
			Asphalt	Base	Asphalt	Base	Asphalt	Base
LOCAL RESIDENTIAL	1200	6	3.0	7.5	3.0	5	2.0	6
LOCAL RESIDENTIAL	2500	7	3.5	9	3.5	6.5	3.0	6
LOCAL INDUSTRIAL	2500	8	4.0	11	4.0	8	3.5	6
COLLECTOR RESIDENTIAL	8750	8	4.0	11	4.0	8	3.5	6
COLLECTOR	15000	9	4.5	12.5	4.5	9.5	4.0	7.5
COLLECTOR INDUSTRIAL	8750	9.5	5.0	13	5.0	10	4.5	7.5
MINOR ARTERIAL - 4 LN	22500	9.5	5.0	13	5.0	10	4.5	7.5
MINOR ARTERIAL - 4 LN+M	30000	10	5.5	13.5	5.5	10	4.5	8.5
PRINCIPAL ARTERIAL	40000	10.5	6.0	14.5	6.0	10.5	5.0	8.5

NOTES:

1. Based on 4% trucks.
2. Industrial roads are based on 6% trucks.
3. 20 yr design life.
4. Use "R" determined from site-specific tests or as recommended by City Engineer.



CITY OF COEUR D'ALENE STANDARD DRAWING

**PAVEMENT
DESIGN STANDARDS**

APPROVED BY:

Chris Busby
 CITY ENGINEER, PE 10804

10/1/24
 DATE:

DWG NO.

M-31

Pavement Markings

General

1. Pavement markings shall be painted to the widths, lengths and locations as shown on the plans unless otherwise directed by the Engineer.
2. Pavement markings for all stenciled lettering, arrows, stop bars, cross walks, and eight (8) inch gore strips shall be thermoplastic.
3. All other pavement markings shall be yellow or white latex traffic paint or approved equal.
4. Asphalt surfaces shall be properly cured before applying any pavement markings.
5. Asphalt surfaces shall be dry, clean, and free of contaminants such as surface oils or existing road marking materials. Contaminants shall be removed by mechanical means.
6. Pressurized glass beads shall be applied at a rate of at least 7 pounds of glass beads per gallon of applied paint.

Thermoplastic pavement marking system

1. Apply pavement markings in accordance with the manufacturer's installation instructions.
2. Surface temperature shall be in a range of 30 to 105 degrees Fahrenheit.
3. Material shall be applied to a minimum thickness of 125 mils.
4. Provide a minimum retroreflectivity of 325 millicandelas per square meter per lux for white pavement markings and 200 millicandelas per square meter per lux for yellow pavement markings.
5. The material shall be free from defects and imperfections that might adversely affect the serviceability of the finished product. It shall be free from dirt and other foreign material and cure within the time specified to a tough, serviceable film.

Waterborne Traffic Paint

1. Paint shall be yellow, white, green and/or blue waterborne traffic paint or approved equal. The Contractor shall submit paint product information and application rates for the City Engineer's approval two weeks prior to paint application.



CITY OF COEUR D'ALENE STANDARD DRAWING

PAVEMENT MARKING NOTES

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-32

1. All work shall conform to the requirements of Section 600 of the "Idaho Standards for Public Works Construction" (ISPWC) and the City of Coeur d'Alene Standard Drawings and Specifications. In the case of conflict, City of Coeur d'Alene Standards shall prevail.
2. Location and elevation of existing facilities should be confirmed by field measurements and excavation exploration by the contractor, prior to beginning of new work.
3. Stormwater Division does not respond to "One-Call" notification. They must be called separately for locates on Storm Drain at (208)769-2235.
4. The contractor must secure approval from the City of Coeur d'Alene Streets & Engineering Inspector prior to backfill over Storm Drain mainline.
5. The City of Coeur d'Alene Streets & Engineering Inspector shall be notified at least forty-eight (48) hours prior to commencing work on Storm Drains.
6. All public storm drain lines shall be CCTV and submitted on DVD in a usable formatted template using "POSM" or another pre-approved equivalent program to the City Streets and Engineering Department for review and approval prior to pavement. Please allow 48 hours for review. Call (208)769-2285 for inspection scheduling.
7. Manholes and pipes shall be identified using City provided Asset ID numbers. Call (208)769-2285 for Asset ID numbers.
8. All manholes, drywells, and catch basins shall be inspected twice by the City of Coeur d'Alene Streets & Engineering Inspector - prior to backfill and prior to acceptance of improvements. Call (208)769-2285 for inspection scheduling.



CITY OF COEUR D'ALENE STANDARD DRAWING

STORM SYSTEM NOTES

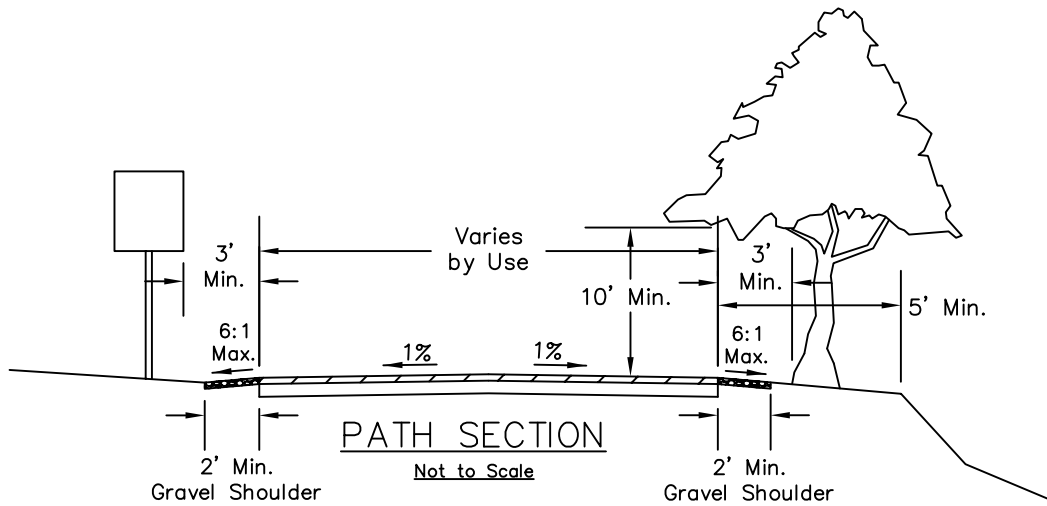
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-33



NOTES:

1. Width – 15' in high pedestrian/bicycle traffic areas
 – 12' standard for two-way multi-use path
 – 12' minimum on arterials
 – 10' minimum on collectors/local streets
 *Contact City Trails Coordinator to confirm width.

2. Lateral Clearance – A 3ft "shy" or clear distance (2' min.) shall be included on both sides of a multi-use path for safe operation.

3. Overhead Clearance – The standard clearance to overhead obstructions is 10 ft.

4. Separation from roadway – Where a path is parallel and adjacent to a roadway, there shall be a 5 ft or greater width separating the path from the edge of roadway, or a physical barrier of sufficient height should be installed.

5. Grades & Cross-slope – Maximum grade of 5% for bicycle use, with steeper grades allowed for up to 500 ft. When the terrain dictates, up to 8% may be used for short sections (< 300ft).

6. Curb Cuts – Curb cuts for bicycle access to multi-use paths should be built so they match the road grade without a lip. The width of the curb cut is the full width of the path when the approaching path is perpendicular to the curb and a minimum of 8 ft wide when the approaching path is parallel and adjacent to the curb. Greater widths may be needed on downhill grades.

7. Horizontal curve minimum radius = 50'.

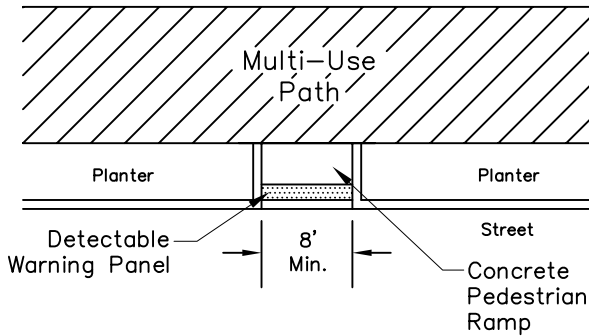
8. Crossings – Roadway striping ladder style crosswalk. Street signing per MUTCD.

9. Pathway signage – Install yield or stop signs where paths cross streets.

10. Pavement section – 2" asphaltic concrete over 4" of $\frac{3}{4}$ " crushed rock base on compacted subgrade.

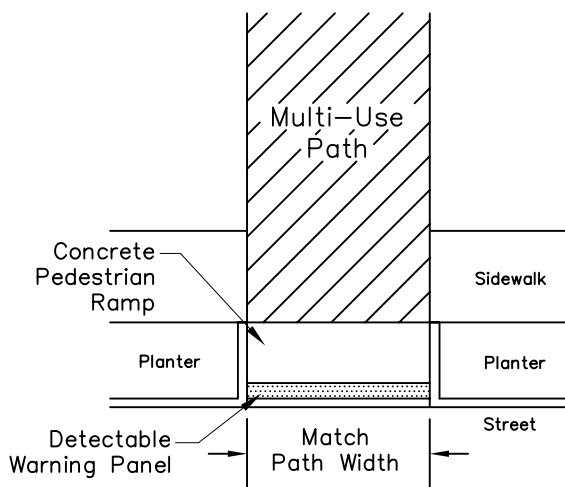
11. Gravel Shoulder – 2' minimum with maximum 6:1 slope.

12. Asphalt Mix – A smooth surface $\frac{1}{2}$ " SP-3 PG 58-28 asphalt mix or approved equal shall be used on all trails.



PARALLEL APPROACH

Not to Scale



PERPENDICULAR APPROACH

Not to Scale



CITY OF COEUR D'ALENE STANDARD DRAWING

**MULTI-USE
PATH**

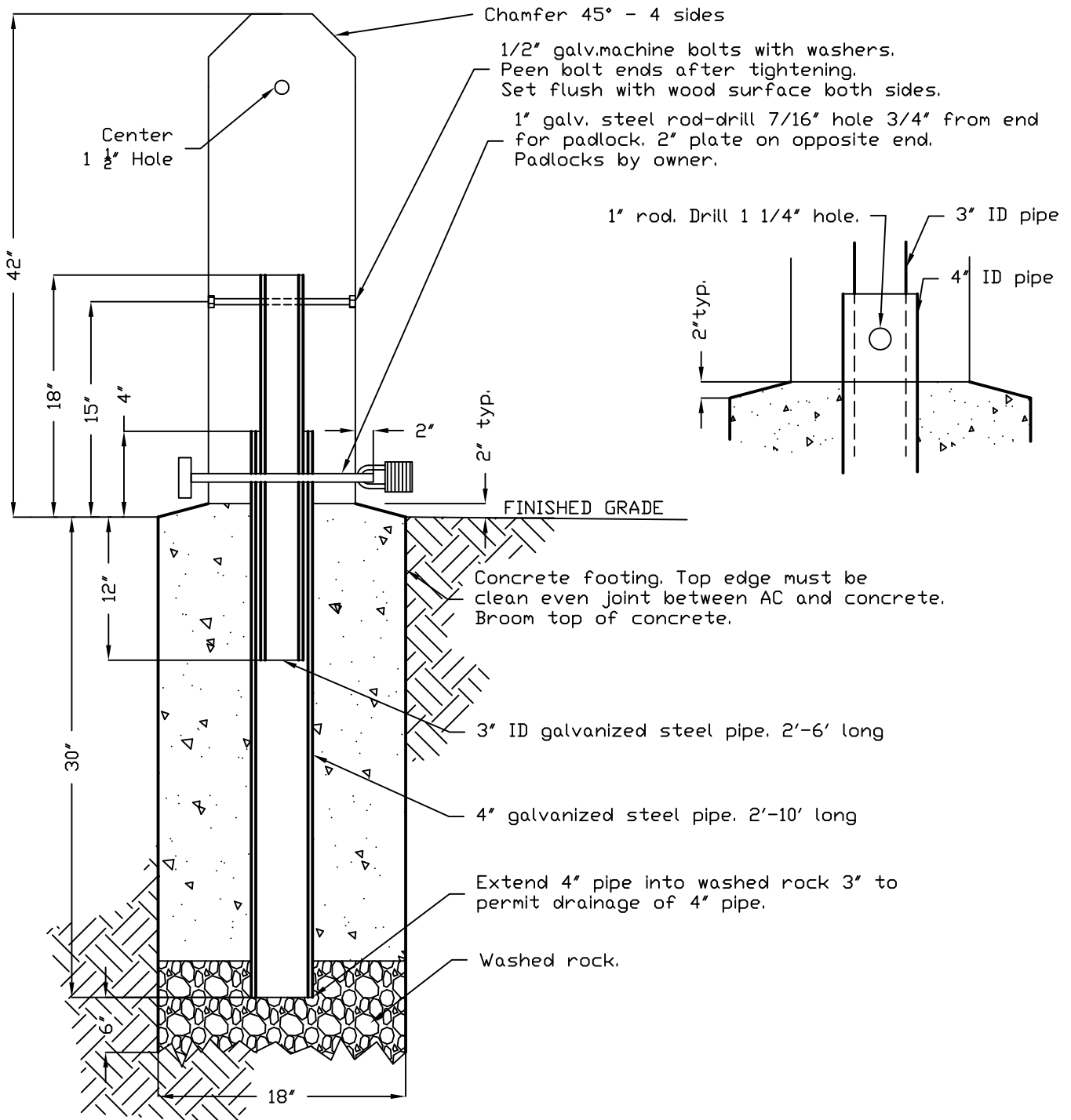
APPROVED BY:

Chris Bosley
 CITY ENGINEER, PE 10804

10/1/24
 DATE:

DWG NO.

M-34



NOTE:

1. Timber shall be Douglas Fir, dense construction grade, pressure treated. Size to be submitted for each application.
2. Steel tube shall conform to ASTM A53 or ASTM A# Grade A.
3. Nuts, bolts and washers shall conform to ASTM A307.
4. All steel parts shall be galvanized.
5. Concrete shall be 3000 PSI.
6. Removable bollards are required for restricted access roadways such as maintenance easements.



CITY OF COEUR D'ALENE STANDARD DRAWING

**REMOVABLE
BOLLARD**

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

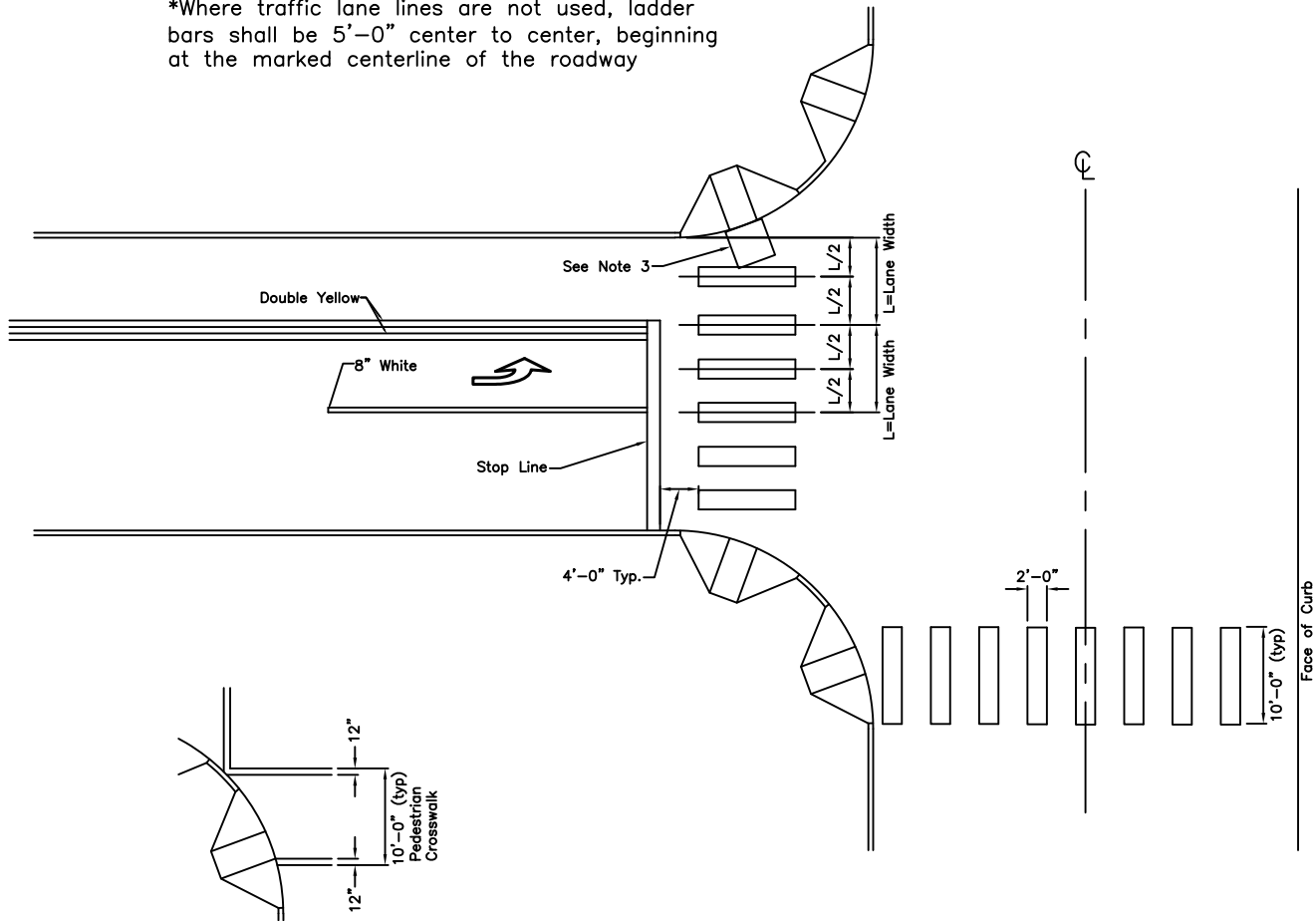
DWG NO.

M-35

Typical "Ladder Style" Pedestrian Crosswalk

(showing curb ramps & stop line placement)

*Where traffic lane lines are not used, ladder bars shall be 5'-0" center to center, beginning at the marked centerline of the roadway



Typical Transverse Line Crosswalk

To be used only at stop controlled or signalized intersections

NOTES:

1. "Ladder Style" crosswalks shall be used at uncontrolled crosswalk locations and where additional emphasis is needed.
2. "Transverse Line" crosswalks shall be used at stop sign or signal controlled locations.
3. The lower landing of the curb ramp shall fall wholly within crosswalk lines.
4. Uncontrolled crosswalk locations shall be approved by the City Engineer.
5. Colored or textured pavement crosswalks shall be supplemented with either "ladder style" or "transverse line" crosswalk markings.
6. Existing crosswalk markings that conflict with new crosswalk markings must be removed.

Not to Scale

Advanced Yield Line

To be used 30-50' in advance of crosswalks on streets with two or more lanes in one direction



CITY OF COEUR D'ALENE STANDARD DRAWING

CROSSWALK & STOP BAR STRIPING

APPROVED BY:

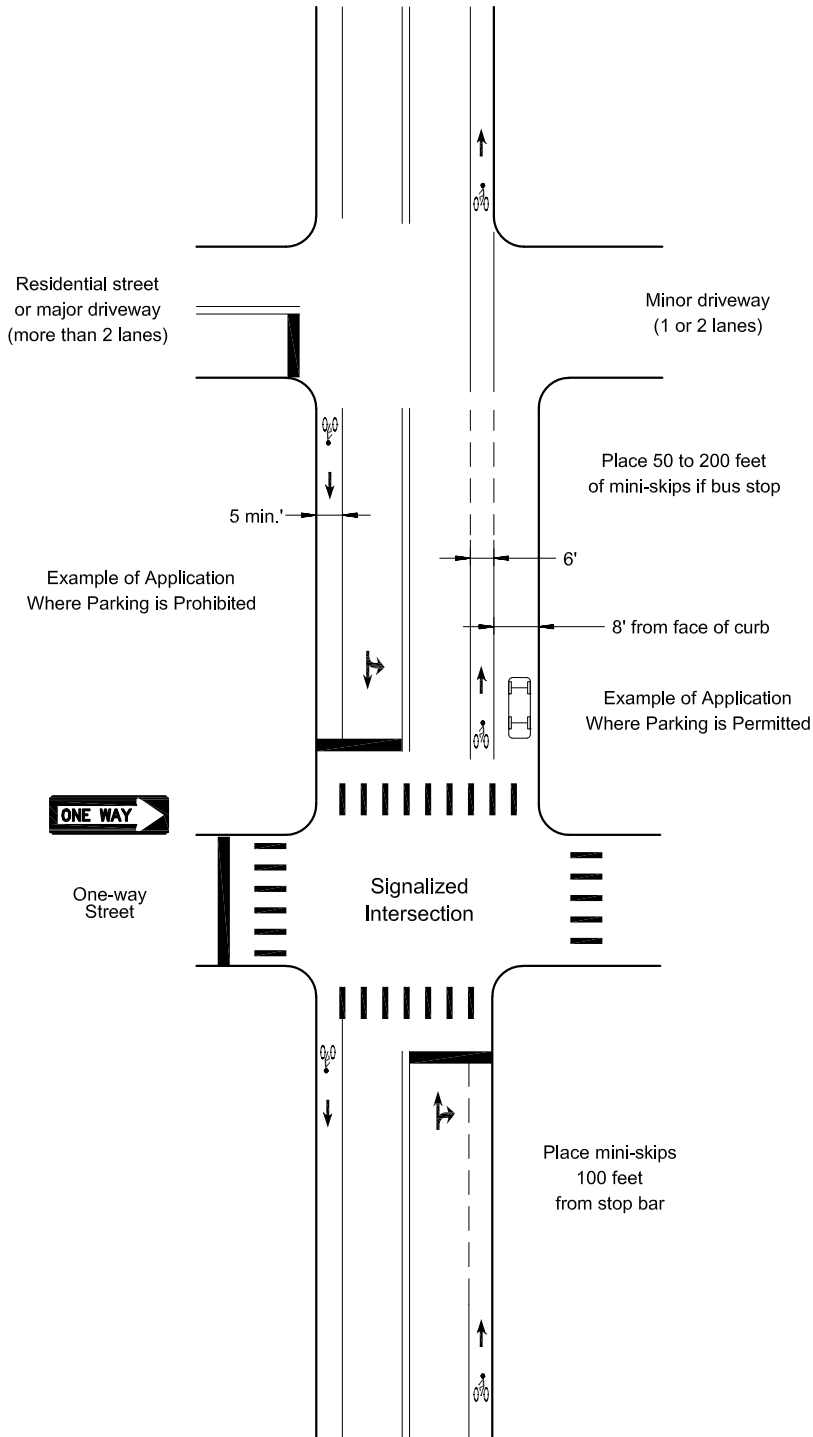
Chris Busby
CITY ENGINEER, PE 10804

6/18/18
DATE:

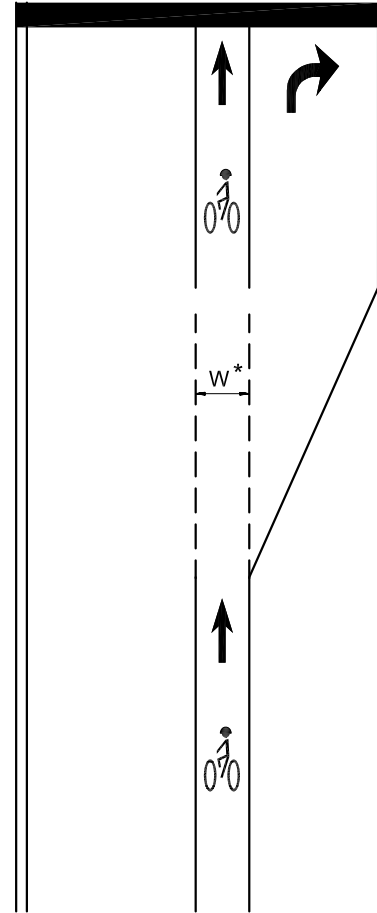
DWG NO.

M-36

Example of Bicycle Lane Treatment on a Two-Way Street



Example of Bicycle Lane Treatment at a Right Turn Only Lane



* Minimum Width = 5'
Preferred Width = 6'



CITY OF COEUR D'ALENE STANDARD DRAWING

BIKE LANE STRIPING

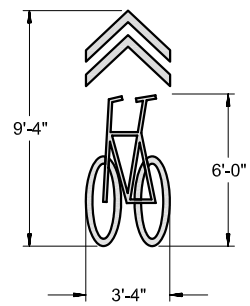
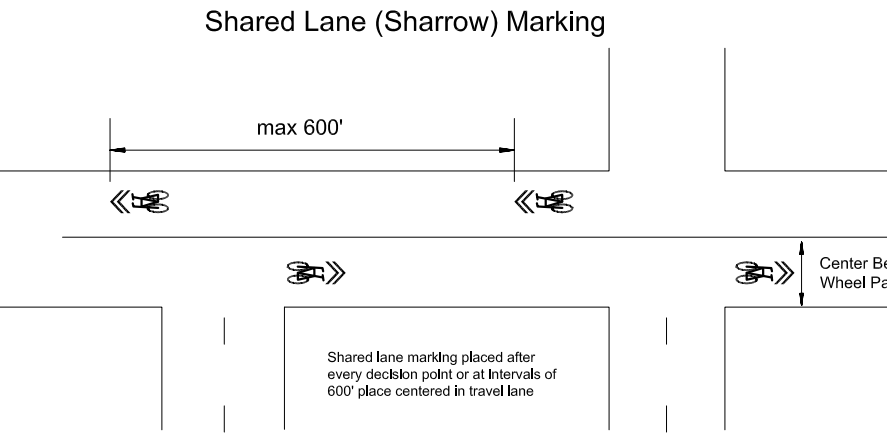
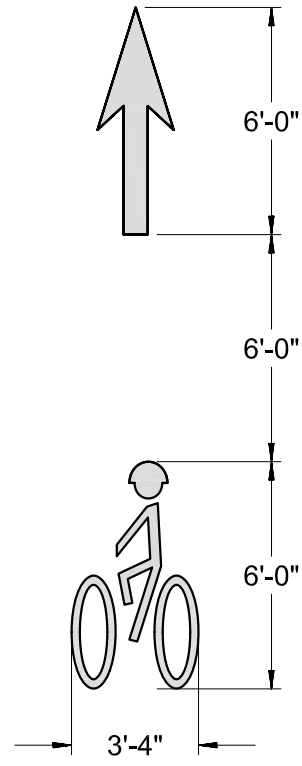
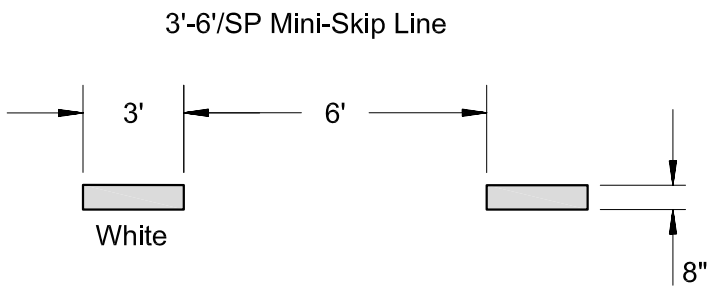
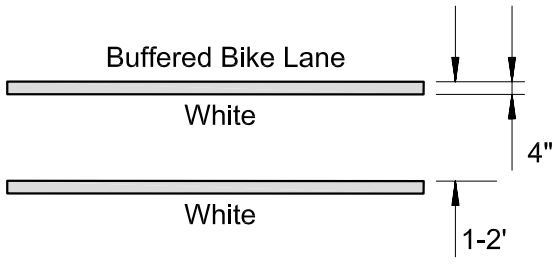
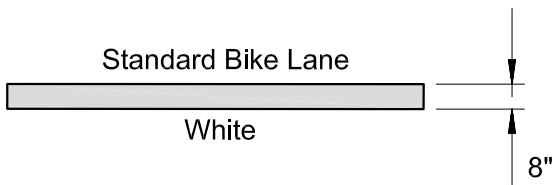
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-37



General Notes:

1. Shared lane markings shall not be placed on streets with speed limit above 35mph.
2. Shared lane markings shall not be used on shoulders or in designated bike lanes.



CITY OF COEUR D'ALENE STANDARD DRAWING

BIKE LANE MARKINGS

APPROVED BY:

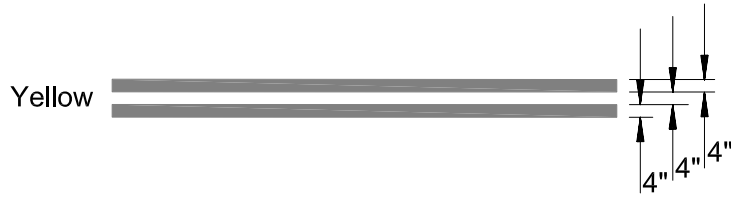
Chris Bodley
CITY ENGINEER, PE 10804

10/1/24
DATE:

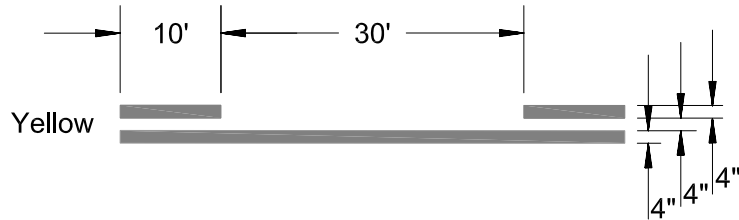
DWG NO.

M-38

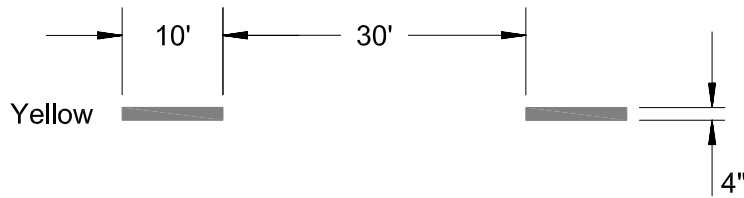
Standard Double Yellow Line (No Passing)



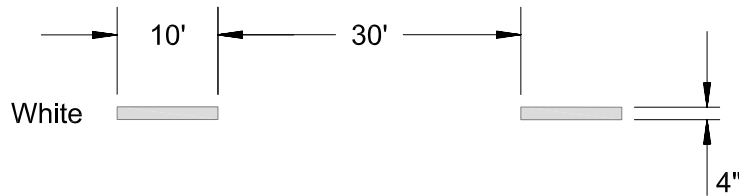
Standard Solid/Skip Line (Two-way Center Turn Lanes)



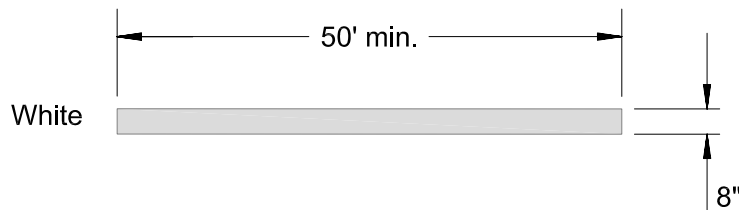
Standard Skip Line (Passing Permitted)



Standard Lane Line (Separating Same-Direction Travel)



Standard Gore Line (Separating Same-Direction Travel)



General Notes:

1. See Standard Drawing M-32 for Pavement Marking Notes.



CITY OF COEUR D'ALENE STANDARD DRAWING

PAVEMENT MARKINGS

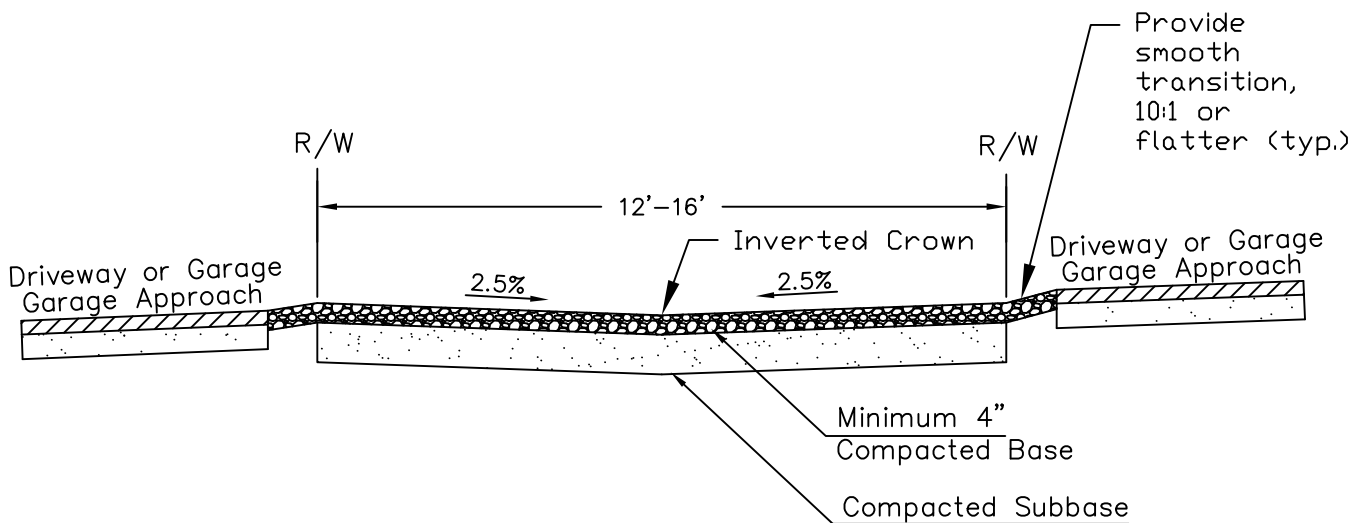
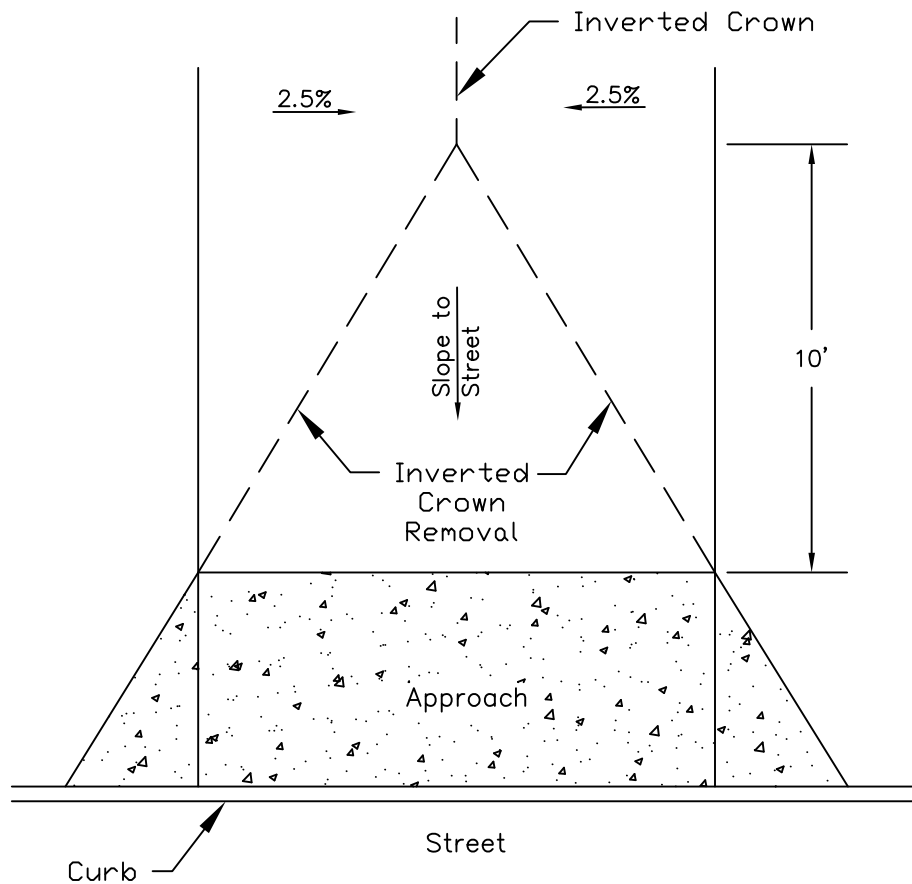
APPROVED BY:

Chris Bodley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-39



NOTES:

1. Ensure that drainage flows uninterrupted to nearest street or catchbasin/drywell.
2. Ensure that all alley drainage is contained in the alley and does not discharge onto adjacent properties.



CITY OF COEUR D'ALENE STANDARD DRAWING

GRAVEL ALLEY DETAIL

APPROVED BY:

Chris Busby
CITY ENGINEER, PE 10804

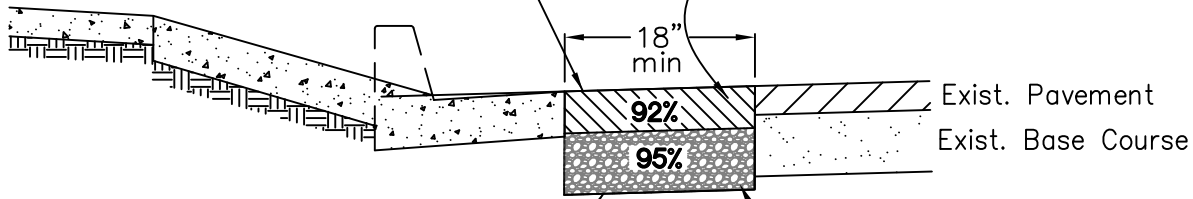
10/1/24
DATE:

DWG NO.

M-40

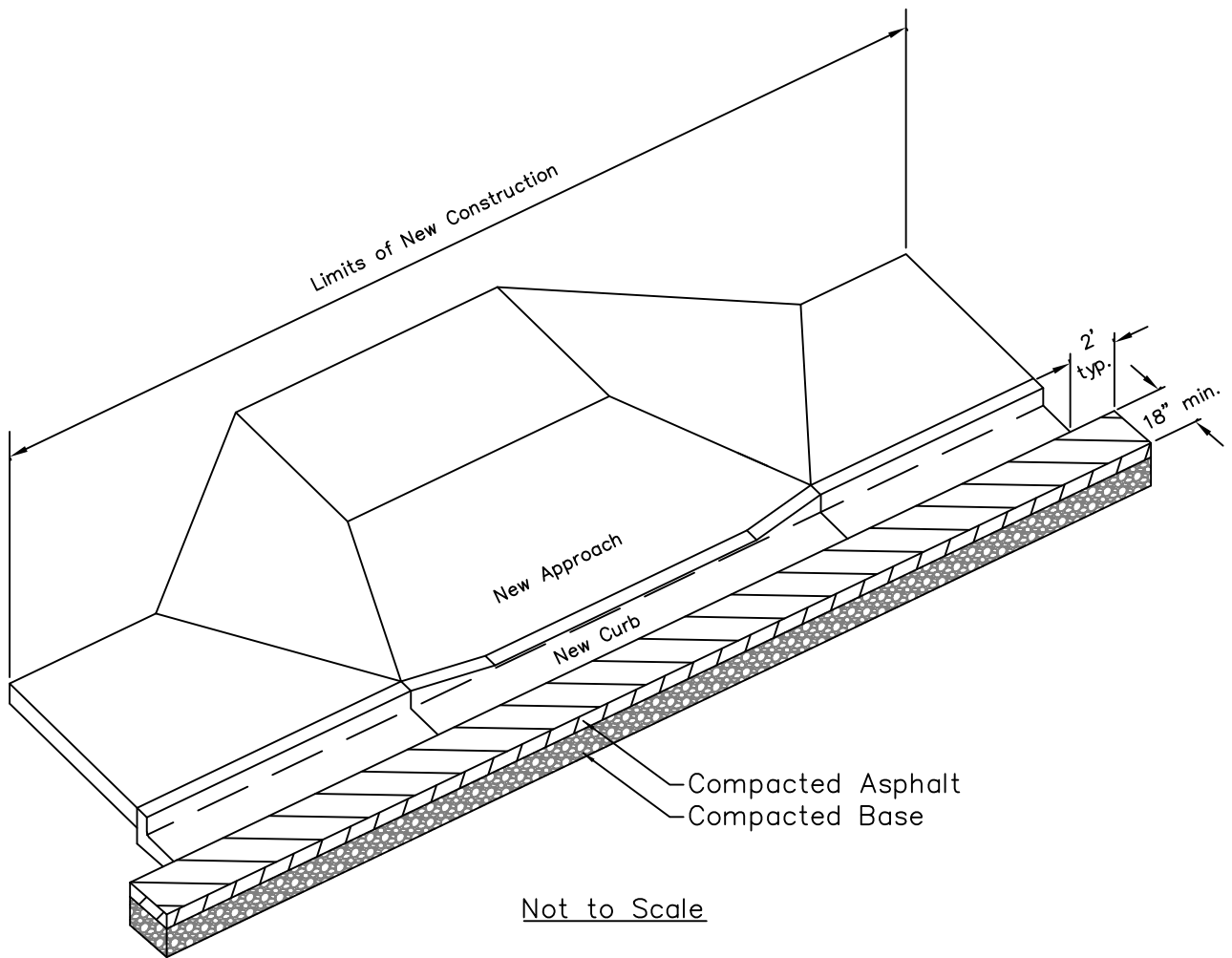
Asphalt Concrete
 3" Residential Streets
 4" Arterial/Collector Streets

NOTE: % shown indicates the Minimum Relative Compaction using Maximum Theoretical Density (RICE) (AASHTO T-209-94)



Crushed Aggregate Base.
 6" Residential Streets
 8" Arterial or Collector Streets

NOTE: % shown indicates the Minimum Relative Compaction using a Modified Proctor (ASTM D-1557)



CITY OF COEUR D'ALENE STANDARD DRAWING

**CURB INSTALLATION
 PAVEMENT REPAIR**

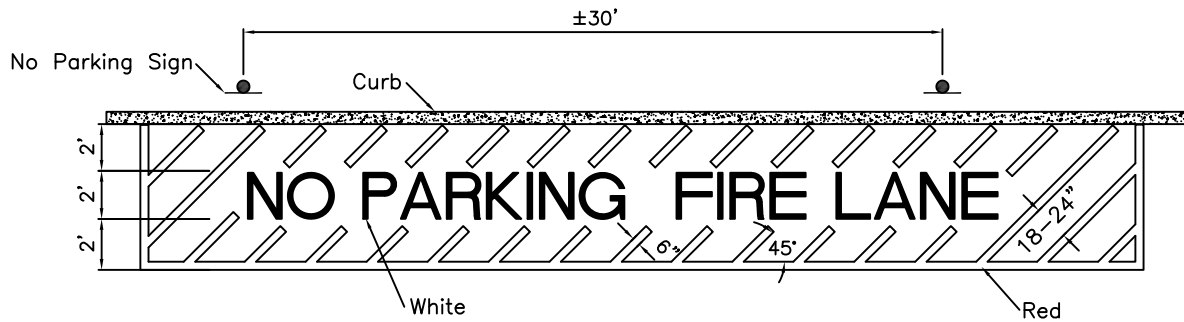
APPROVED BY:

Chris Bosley
 CITY ENGINEER, PE 10804

10/1/24
 DATE:

DWG NO.

M-41



Pavement Marking
Not to Scale



No Parking Signs

NOTES:

1. Pavement markings shall be Red and White traffic marking paint or thermoplastic.
2. Pavement markings shall conform to the Idaho Standards for Public Works Construction Section 1104.
3. No glass beads are required.
4. Submit pavement marking plan and material cut sheets to Fire Department for approval prior to application.
5. "NO PARKING FIRE LANE" shall be repeated as needed along designated No Parking zone, leaving no gap greater than 15' between each occurrence.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

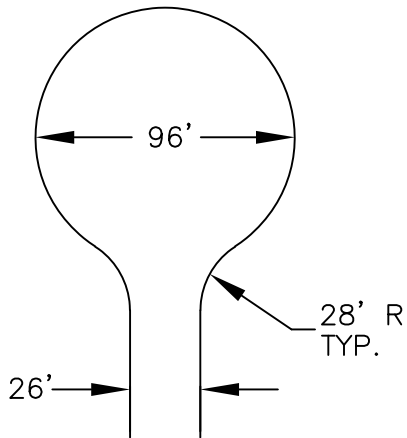
***FIRE LANE STRIPING
AND SIGNAGE***

Chris Busby
CITY ENGINEER, PE 10804

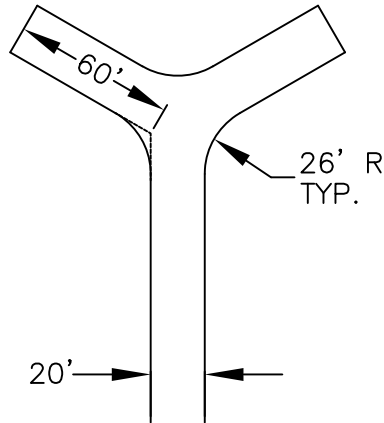
10/1/24
DATE:

DWG NO.

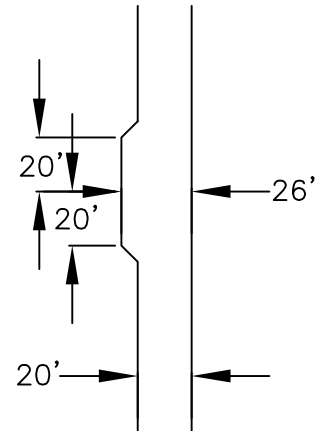
M-42



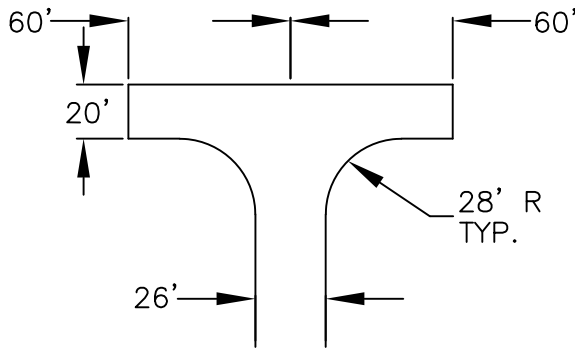
96-FOOT DIAMETER
CUL-DE-SAC



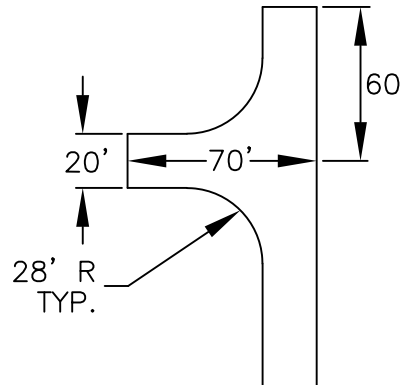
60-FOOT "Y"



MINIMUM CLEARANCE
AROUND FIRE HYDRANT



120-FOOT HAMMERHEAD



ACCEPTABLE ALTERNATIVE
TO 120-FOOT HAMMERHEAD

NOTES:

1. Minimum dimensions: The minimum unobstructed width shall be 20' and the minimum unobstructed vertical clearance shall be not less than 13'-6".
2. Surface: Fire Department access roads shall be designed and maintained to support the imposed loads of a fire apparatus (75,000 lbs.) and shall be an all-weather surface.
3. Turning radius: A 25' inside and 50' outside radius shall be provided unless otherwise directed by the fire code official.
4. Dead-end streets in excess of 150' in length shall be provided with an approved fire apparatus turn around area as shown above.
5. Grade shall be 8% maximum unless otherwise directed by the fire code official based on the Fire Department's fire apparatus
6. Angle of approach and departure must be within the limits established by the fire code official based on Fire Department apparatus.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

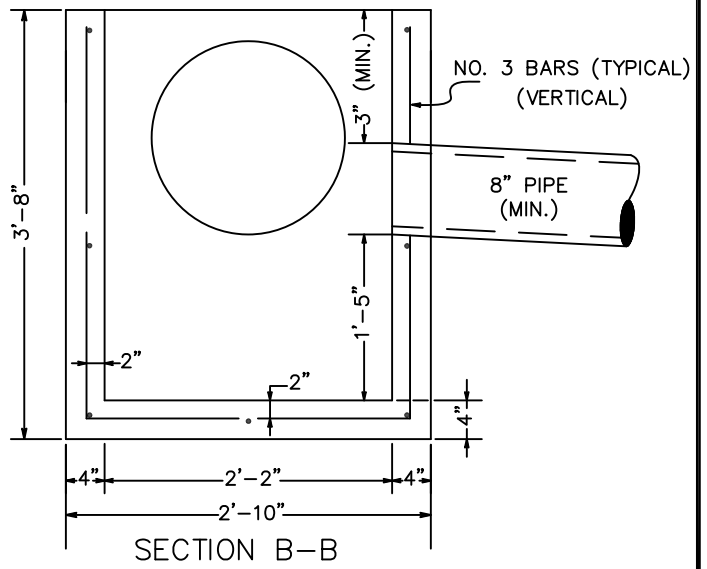
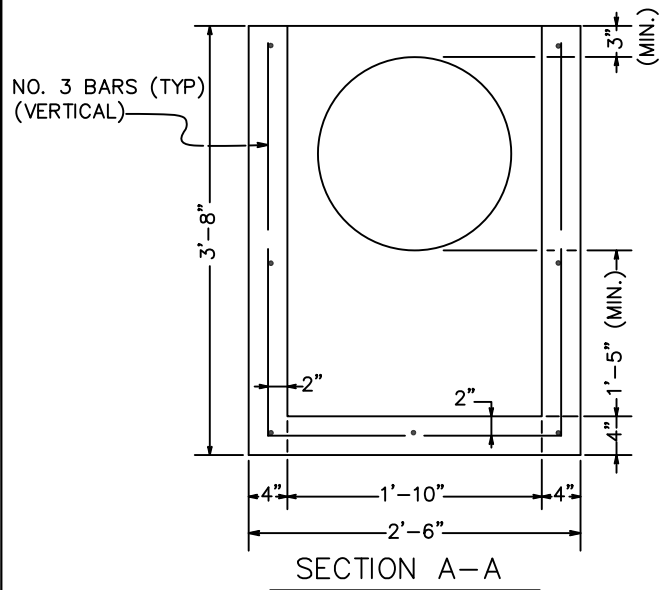
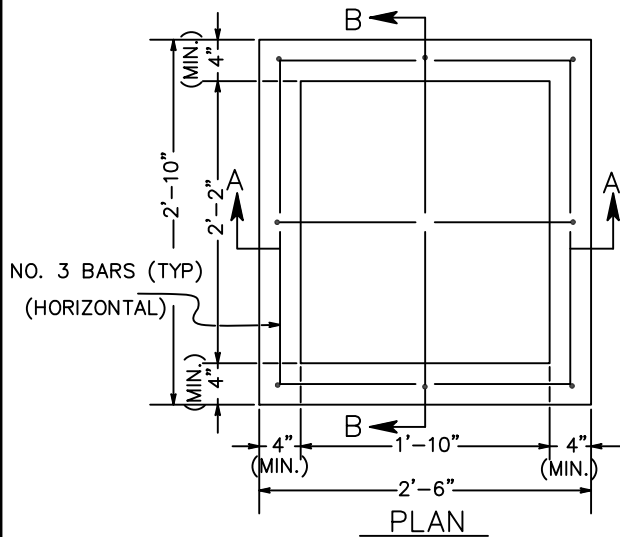
**FIRE ACCESS
REQUIREMENTS**

Chris Busby
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

M-43



GENERAL NOTES

1. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE PROJECT SPECIAL PROVISIONS.
2. PRECAST BASINS SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
3. KNOCKOUTS SHALL BE ON ALL 4 SIDES WITH MAXIMUM DIAMETER OF 20". KNOCKOUTS SHALL BE ROUND. PIPE SHALL BE INSTALLED IN FACTORY SUPPLIED KNOCKOUTS.
4. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS.
5. WHEN PVC PIPE IS USED, A SAND COLLAR SHALL BE GROUTED INTO CATCH BASIN.
6. BASIN TO BE INSTALLED PERPENDICULAR TO CURB WHEN HOODED FRAME USED (TYPE 2).
7. GROUT FROM OUTSIDE FIRST. PACK WITH BRICK/ROCK, IF NEEDED, TO PREVENT GROUT FROM FALLING IN.



CITY OF COEUR D'ALENE STANDARD DRAWING

**TYPE 1
CATCH BASIN**

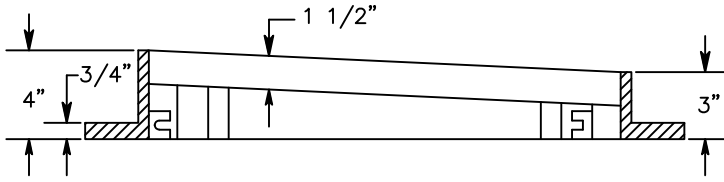
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

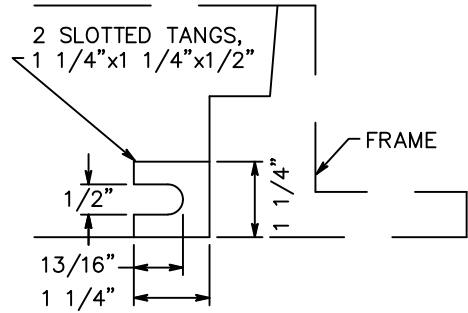
10/1/24
DATE:

DWG NO.

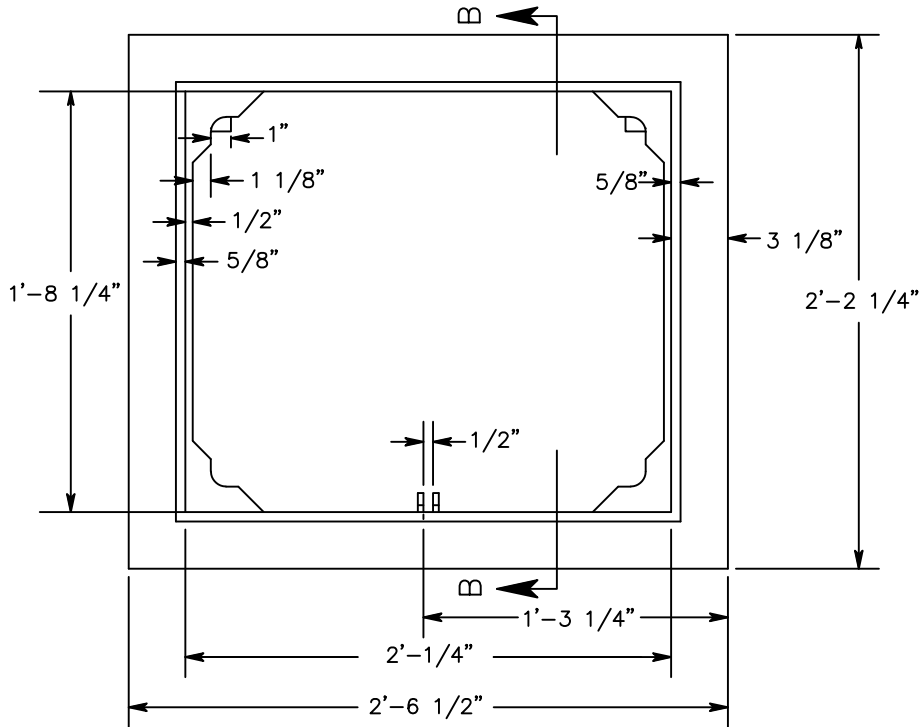
SD-1



SECTION B-B



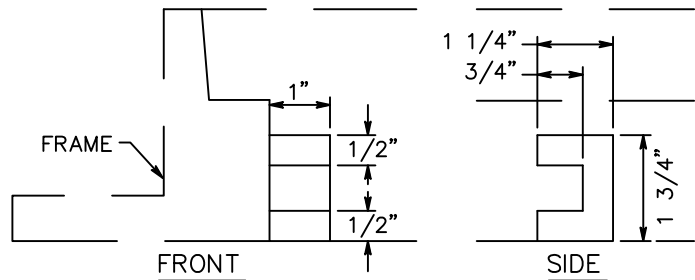
TANG DETAIL



FRAME - TYPE 1

GENERAL NOTES

1. FRAME SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48-90, GRADE 30. THE GRATE SHALL BE DUCTILE IRON CONFORMING TO A.S.T.M. A536-84, GRADE 80-55-06.
2. USE WITH CATCH BASIN AND CONCRETE INLET TYPE 1, SEE STD. DRAWING SD-1.
3. FIT TOLERANCE SHALL BE $1/8" \pm$.
4. WELDING IS NOT PERMITTED.
5. FOR GRATE DETAIL SEE STD. DRAWING SD-4.



SLOT DETAIL



CITY OF COEUR D'ALENE STANDARD DRAWING

GRATE FRAME
TYPE 1

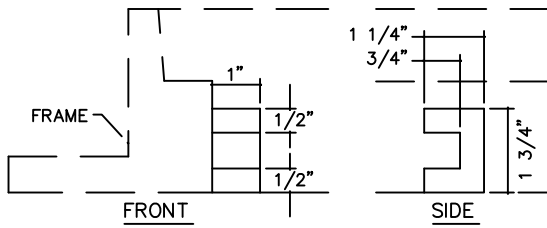
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

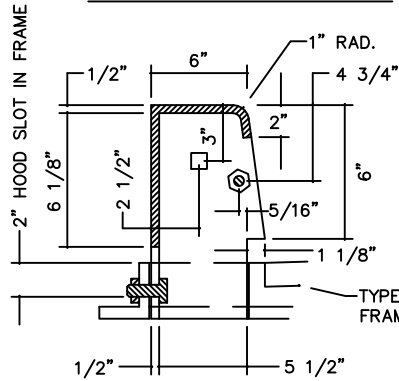
10/1/24
DATE:

DWG NO.

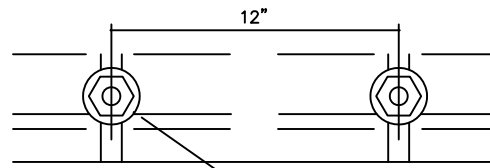
SD-2



GUARD SLOT DETAIL

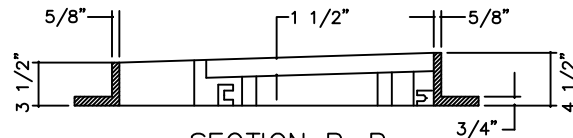


SECTION D-D

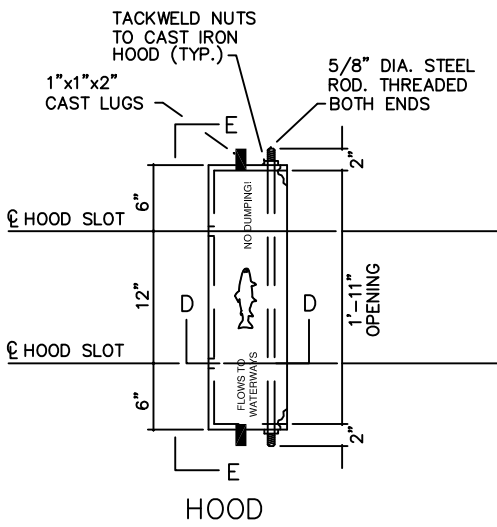


VIEW E-E

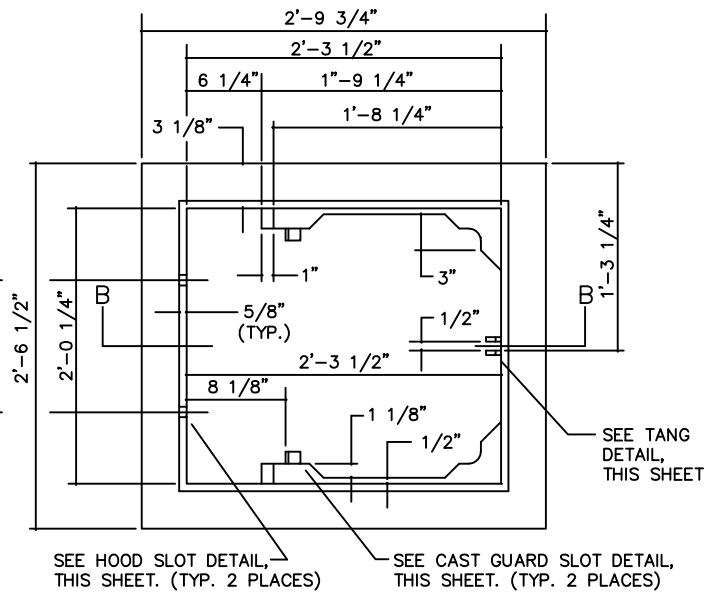
TWO (2) 3/4"x2" BOLTS
W/STD. FLAT WASHER
AND NUT



SECTION B-B



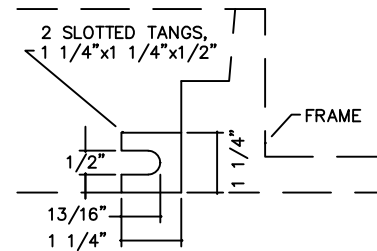
HOOD



FRAME - TYPE 2

GENERAL NOTES

1. FRAME SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48-90, GRADE 30. THE GRATE SHALL BE DUCTILE IRON CONFORMING TO A.S.T.M. A536-84, GRADE 80-55-06.
2. BOLTS AND ROD SHALL CONFORM TO A.S.T.M. DESIGNATION A307, GRADE A.
3. USE WITH CATCH BASIN AND CONCRETE INLET, SEE STD DRAWING SD-1.
4. FIT TOLERANCE SHALL BE 1/8" ±.
5. FOR GRATE DETAILS SEE STD. DRAWING SD-4.



TANG DETAIL



CITY OF COEUR D'ALENE STANDARD DRAWING

GRATE FRAME
TYPE 2

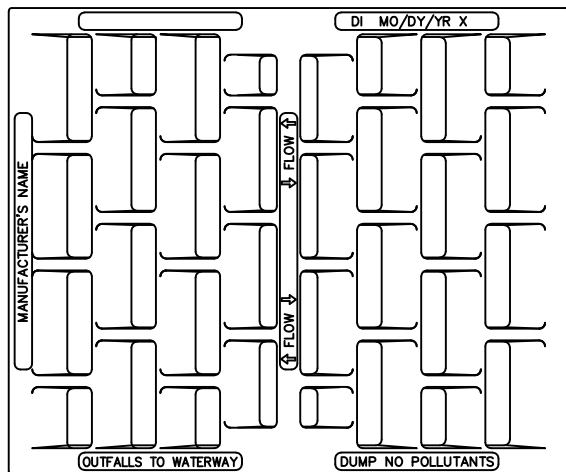
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

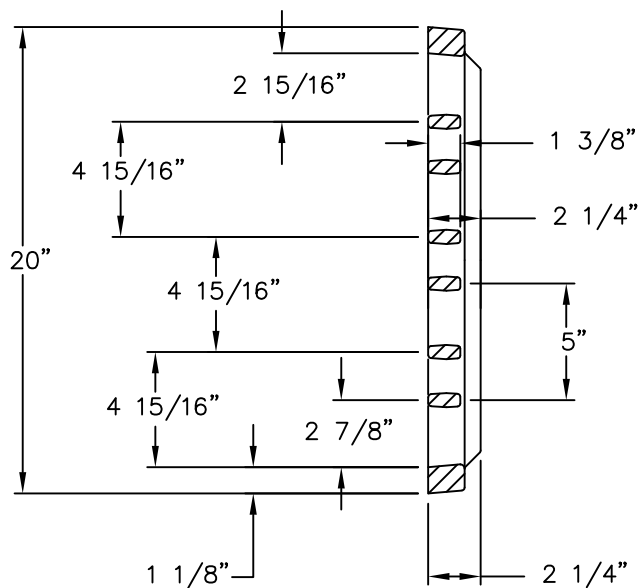
10/1/24
DATE:

DWG NO.

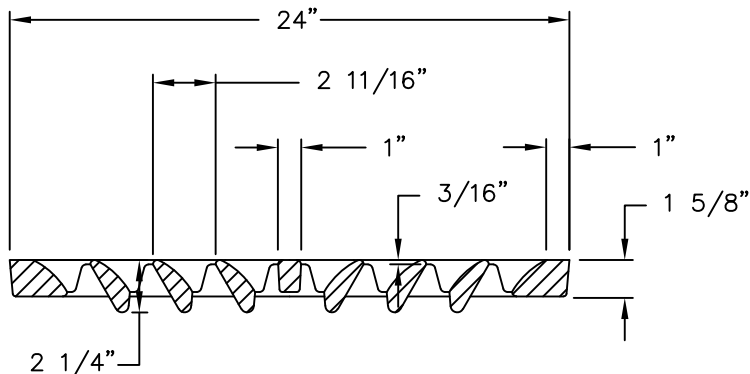
SD-3



PLAN VIEW



SECTION VIEW



SECTION VIEW

GENERAL NOTES

1. THE NAME OF THE MANUFACTURER AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
2. FRAME SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48-90, GRADE 30. THE GRATE SHALL BE DUCTILE IRON CONFORMING TO A.S.T.M. A536-84 GRADE 80-55-06.
3. DIMENSIONS SHALL HAVE ±1/16" TOLERANCE, EXCEPT AS NOTED.
4. EDGES SHALL HAVE 1/8" RADIUS, 1/8" CHAMFER OR COMPLETE DEBURRING.
5. THE FRAME SHALL BE MANUFACTURED IN ACCORDANCE WITH STANDARD FOR TYPE 1 FRAME.
6. WELDING IS NOT PERMITTED.



CITY OF COEUR D'ALENE STANDARD DRAWING

CATCH BASIN GRATE
2 - WAY

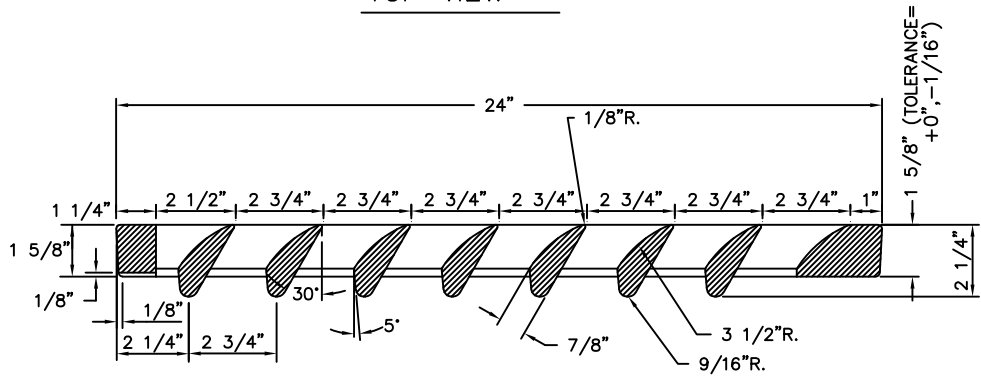
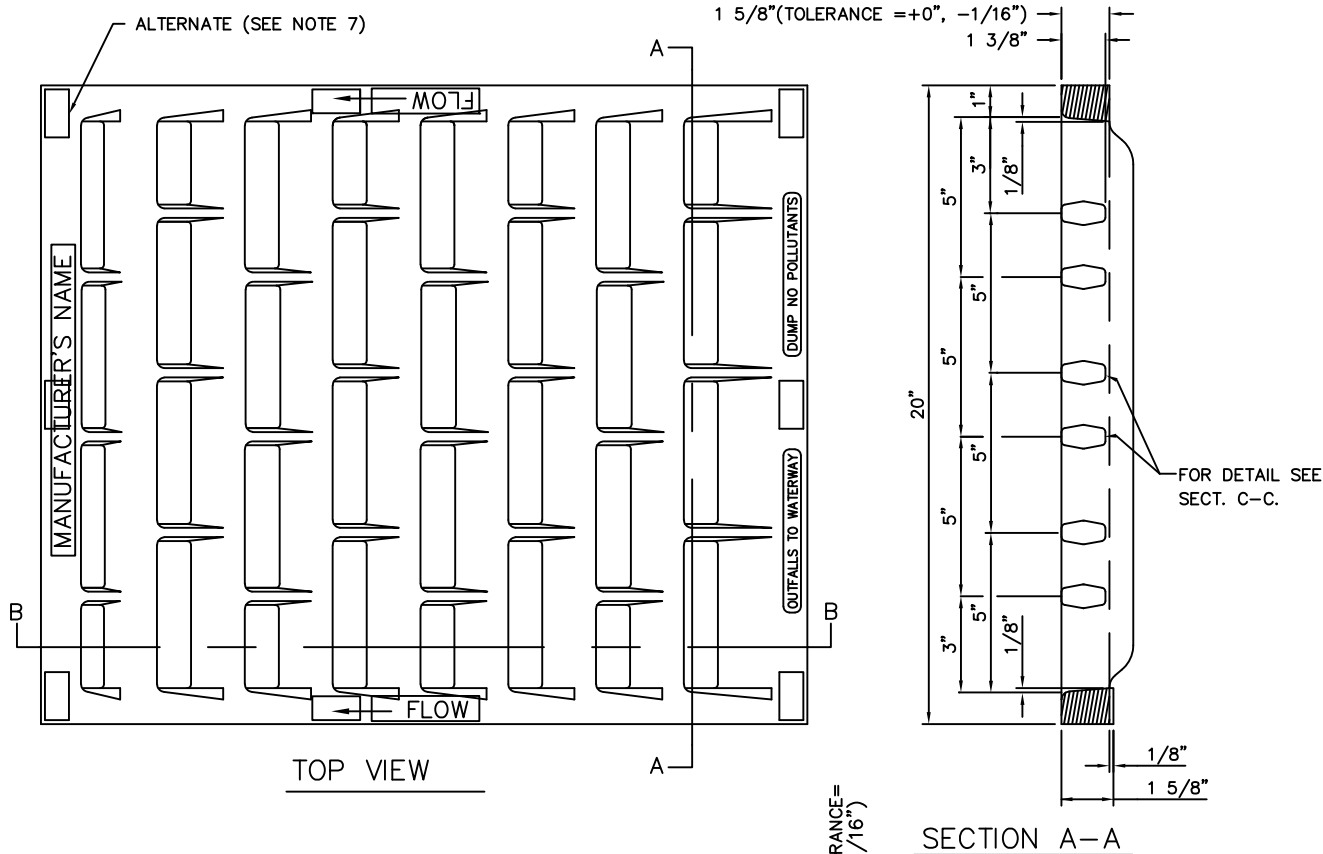
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

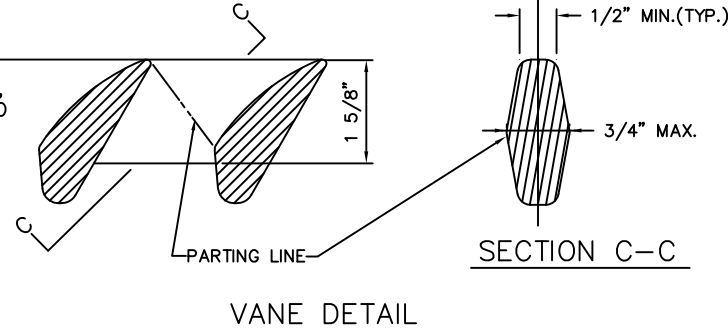
DWG NO.

SD-4A



GENERAL NOTES

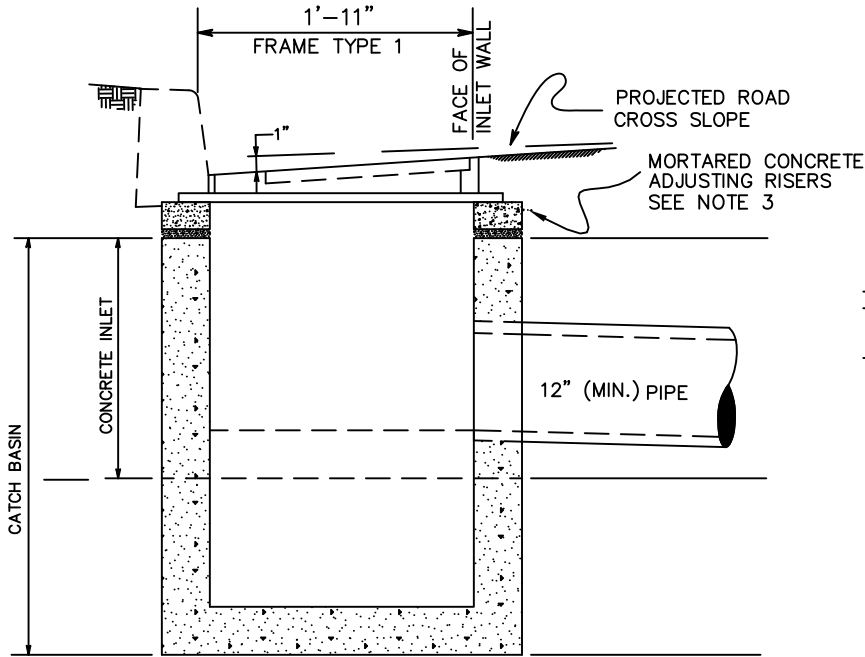
1. THE NAME OF THE MANUFACTURER AND DIRECTION OF FLOW SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
2. FRAME SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48-90, GRADE 30. THE GRATE SHALL BE DUCTILE IRON CONFORMING TO A.S.T.M. A536-84 GRADE 80-55-06.
3. DIMENSIONS SHALL HAVE ±1/16" TOLERANCE, EXCEPT AS NOTED.
4. EDGES SHALL HAVE 1/8" RADIUS, 1/8" CHAMFER OR COMPLETE DEBURRING.
5. THE FRAME SHALL BE MANUFACTURED IN ACCORDANCE WITH STANDARD FOR TYPE 1 FRAME.
6. WELDING IS NOT PERMITTED.
7. AS AN ALTERNATE, 8 PADS 1 1/2" X 3/4" X 1/8", INTEGRALLY CAST WITH THE GRATE, MAY BE USED.



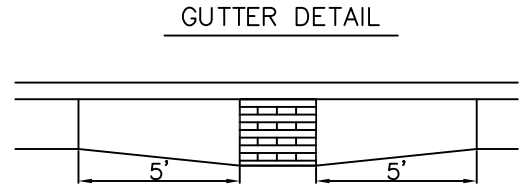
CITY OF COEUR D'ALENE STANDARD DRAWING

CATCH BASIN GRATE
1 - WAY

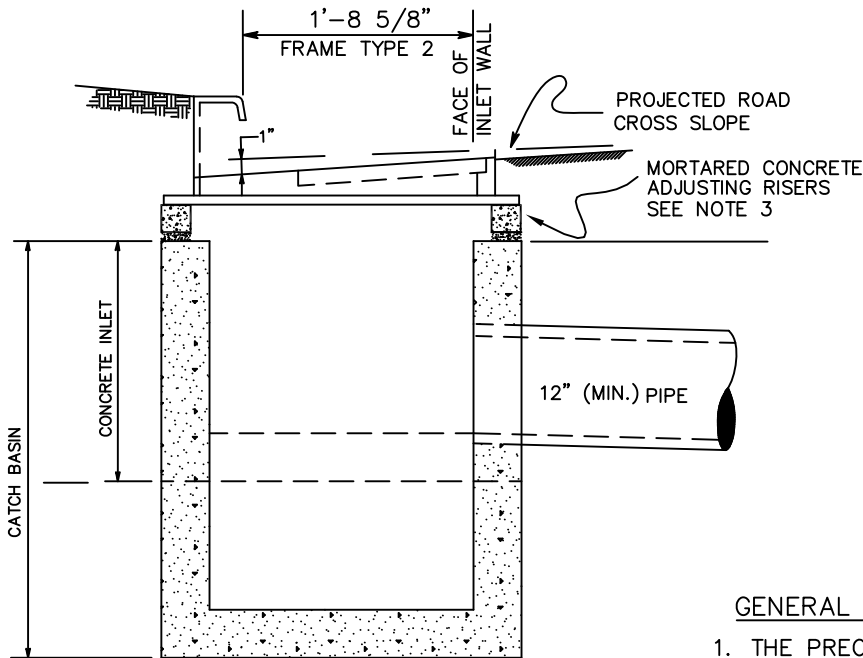
APPROVED BY:
Chris Bosley
CITY ENGINEER, PE 10804
DATE: 10/1/24
DWG NO. SD-4B



STANDARD
CATCH BASIN OR INLET



GUTTER DETAIL



CATCH BASIN OR INLET
FOR USE AT LOW POINTS

GENERAL NOTES

1. THE PRECAST CONCRETE INLET SHALL BE PLACED ON THE SAME GRADE AS THE CURB.
2. TYPE 2 FRAME TO BE USED WITH CATCH BASIN
3. A MINIMUM OF 1 RISER REQUIRED TO ADJUST HOOD OF TYPE 2 FRAME



CITY OF COEUR D'ALENE STANDARD DRAWING

**CATCH BASIN
INSTALLATION DETAILS**

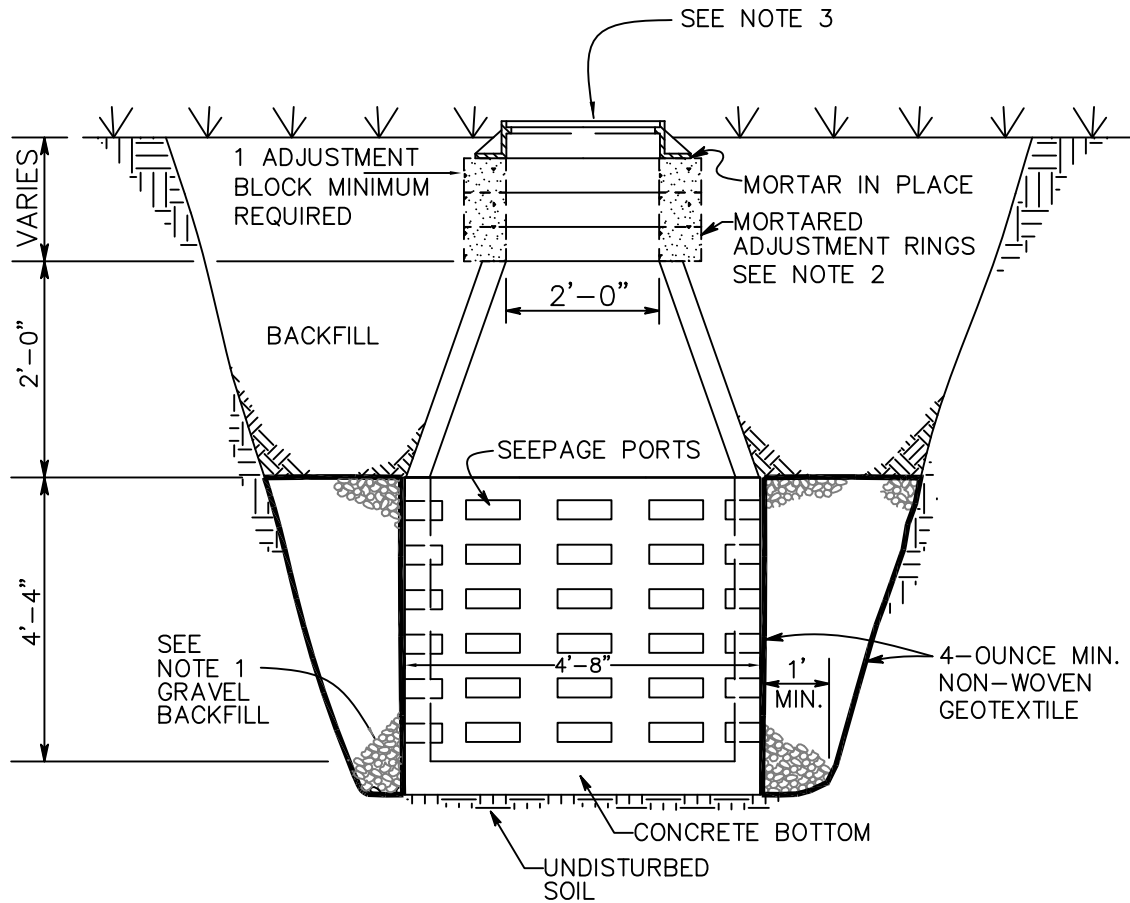
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

SD-5



DRYWELL - TYPE 'A'

NOTES

1. SPECIAL BACKFILL MATERIAL FOR DRYWELLS SHALL CONSIST OF WASHED GRAVEL GRADED FROM 1" TO 3" WITH A MAXIMUM OF 5% PASSING THE U.S. No. 200 SCREEN, AS MEASURED BY WEIGHT.

GRAVEL BACKFILL QUANTITY FOR DRYWELLS:

TYPE "A" - 30 CUBIC YARDS MINIMUM

TYPE "B" - 40 CUBIC YARDS MINIMUM

OR AS SPECIFIED ON PLANS.

2. ADJUSTMENT BLOCKS SHALL BE CEMENT CONCRETE. ONE BLOCK MINIMUM REQUIRED.

3. SEE STANDARD DRAWING SS-5 FOR FRAME AND COVER DETAIL.



CITY OF COEUR D'ALENE STANDARD DRAWING

TYPE A DRYWELL

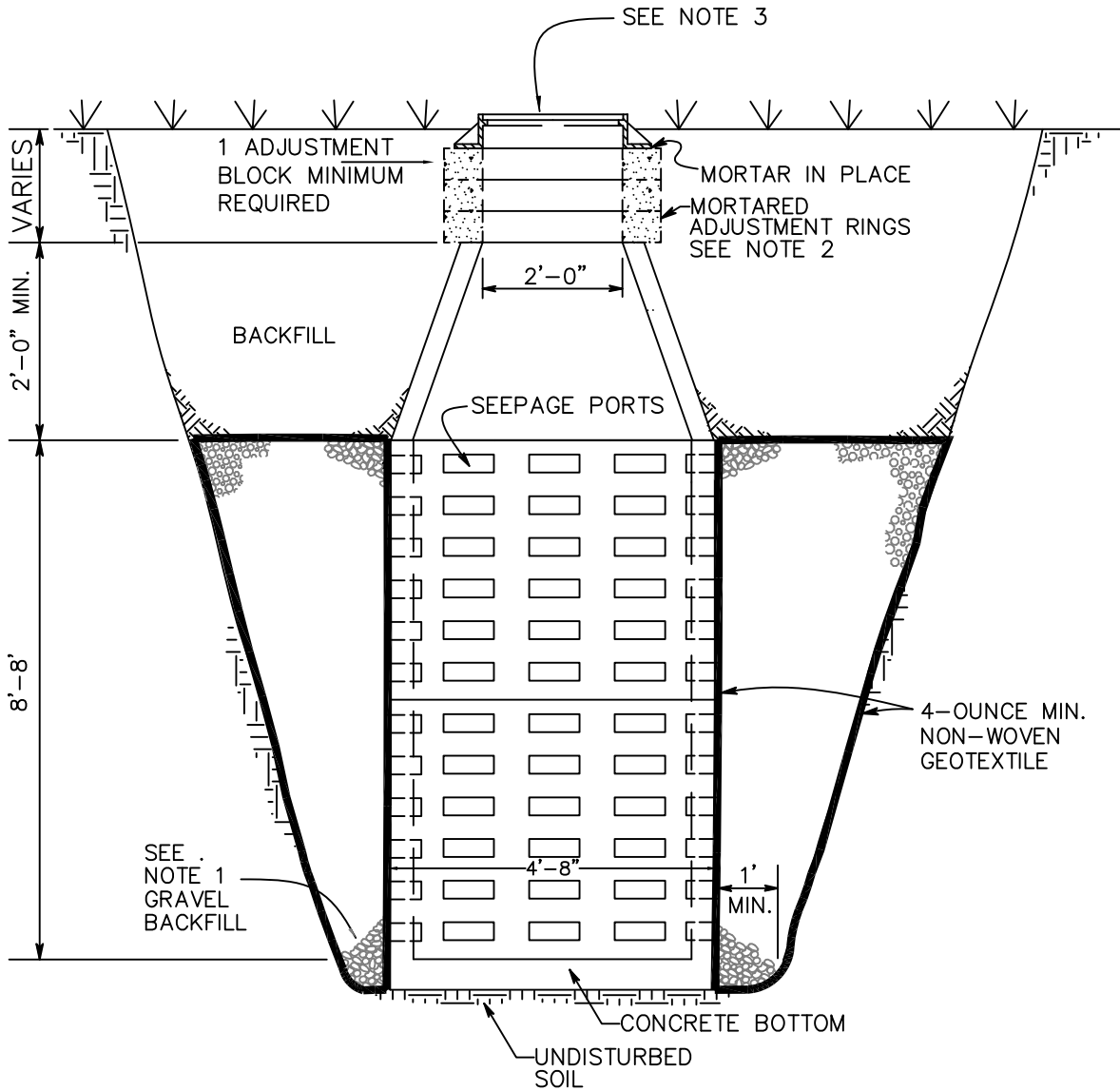
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

SD-6A



DRYWELL - TYPE 'B'

NOTES

1. SPECIAL BACKFILL MATERIAL FOR DRYWELLS SHALL CONSIST OF WASHED GRAVEL GRADED FROM 1" TO 3" WITH A MAXIMUM OF 5% PASSING THE U.S. No. 200 SCREEN, AS MEASURED BY WEIGHT.

GRAVEL BACKFILL QUANTITY FOR DRYWELLS:
 TYPE "A" - 30 CUBIC YARDS MINIMUM
 TYPE "B" - 40 CUBIC YARDS MINIMUM
 OR AS SPECIFIED ON PLANS.

2. ADJUSTMENT BLOCKS SHALL BE CEMENT CONCRETE. ONE BLOCK MINIMUM REQUIRED.
 3. SEE STANDARD DRAWING SS-5 FOR FRAME AND COVER DETAIL.



CITY OF COEUR D'ALENE STANDARD DRAWING

TYPE B DRYWELL

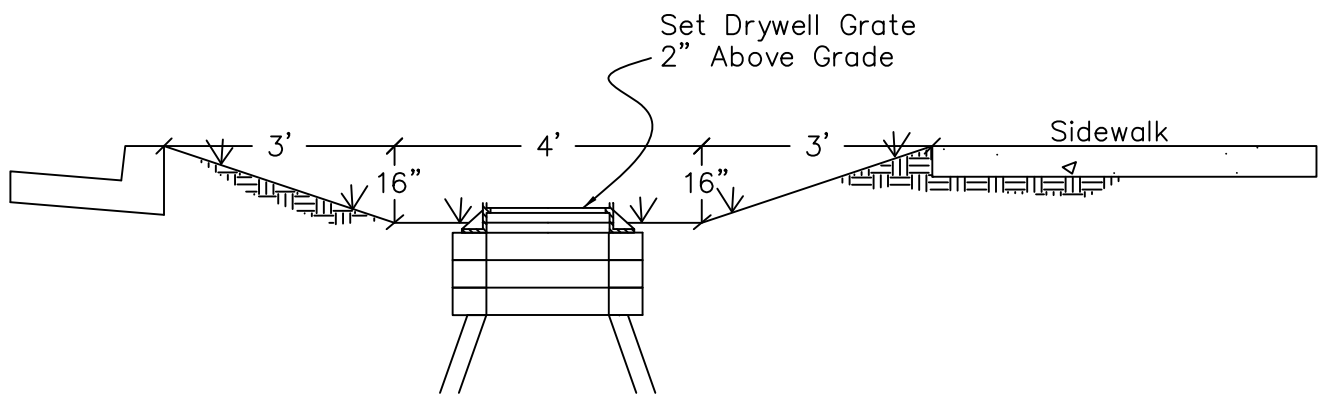
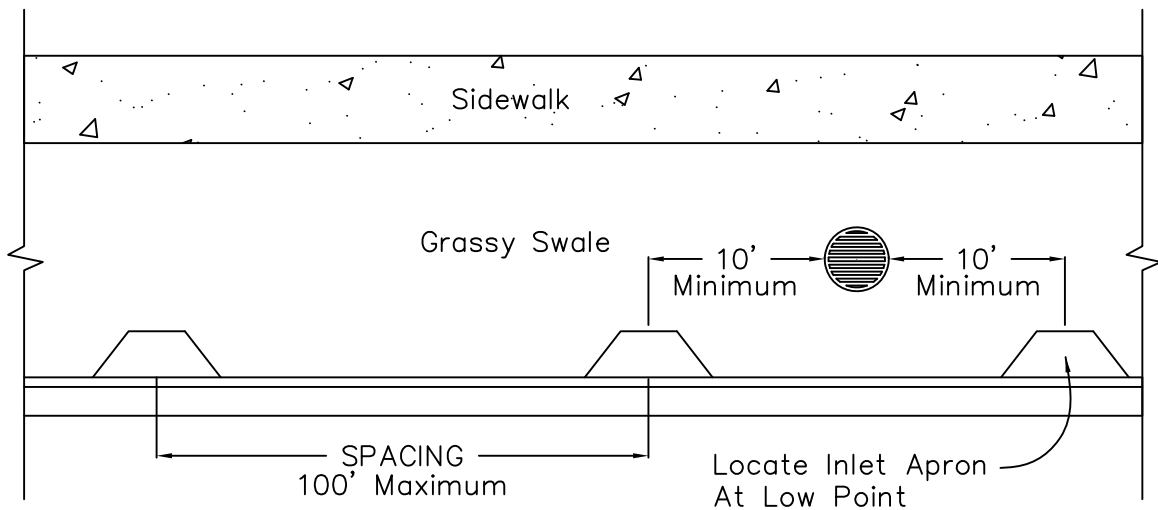
APPROVED BY:

Chris Bosley
 CITY ENGINEER, PE 10804

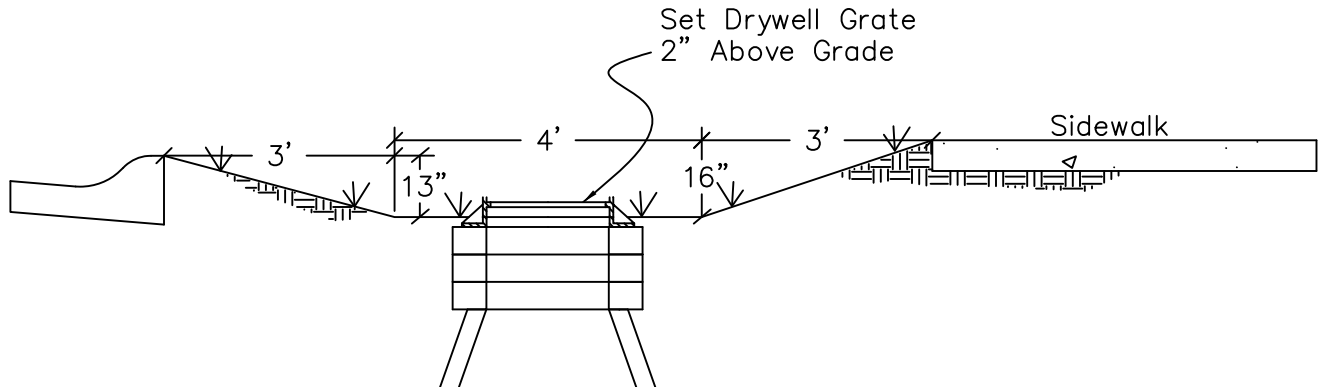
10/1/24
 DATE:

DWG NO.

SD-6B



STANDARD CURB AND GUTTER SECTION



ROLLED CURB AND GUTTER SECTION

NOTES:

1. Swales infiltration rate shall meet or exceed the approved design rate.
2. See Standard Drawing **SD-6A AND SD-6B** for drywell details.
3. See Standard Drawing **C-17** for Inlet Apron detail.



CITY OF COEUR D'ALENE STANDARD DRAWING

**GRASSY
INFILTRATION SWALE**

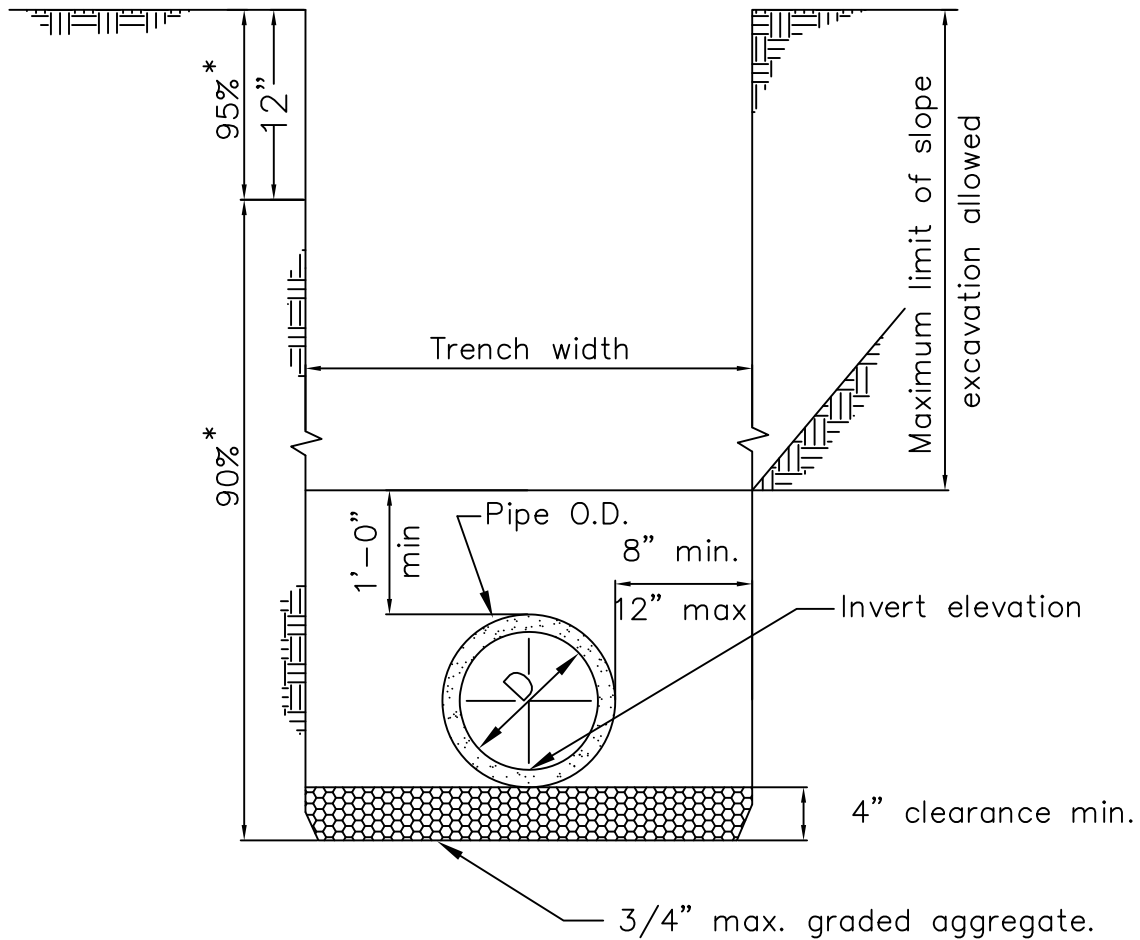
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

SD-7



SECTION

Not to Scale

NOTES

1. For trenching in improved streets, see Standard Drawing M-11 for trench resurfacing.
2. (*) indicates minimum relative compaction using modified proctor (ASTM D-1557).
3. Bedding Material shall be Sand, Gravel, crushed Aggregate, or Native Granular material having a sand equivalent of not less than 30.



CITY OF COEUR D'ALENE STANDARD DRAWING

**PIPE BEDDING & BACKFILL
FOR STORM DRAINS**

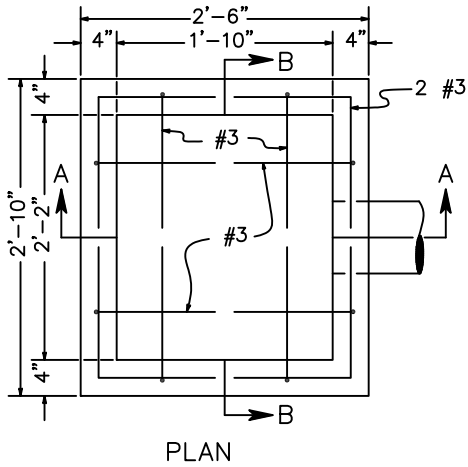
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

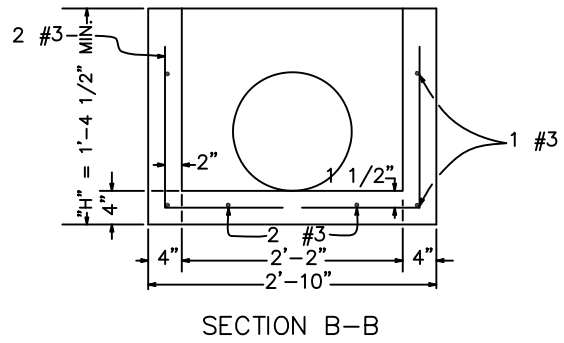
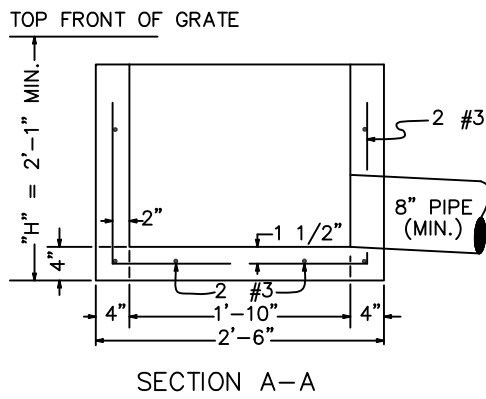
10/1/24
DATE:

DWG NO.

SD-8



PIPE Ø	"H"
8"	1'-4 1/2"
12"	1'-8 1/2"
15"	2'-0"
18"	2'-3"
21"	2'-6"
24"	2'-9"



PRECAST UNIT

GENERAL NOTES

1. CONCRETE INLET SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE PROJECT SPECIAL PROVISIONS.
2. REINFORCING STEEL SHALL BE GRADE 40 OR GRADE 60.
3. CONCRETE INLETS SHALL BE SET ON A COMPACTED OR UNDISTURBED LEVEL FOUNDATION.
4. AS AN ACCEPTABLE ALTERNATE TO REBAR, WELDED WIRE FABRIC HAVING A MINIMUM AREA OF .12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A 497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN THE KNOCKOUTS.
5. "H" SHALL BE SHOWN ON CONSTRUCTION PLANS.
6. INLET PIPE SHALL BE GROUTED INTO CONCRETE INLET.



CITY OF COEUR D'ALENE STANDARD DRAWING

**CURB INLET BOX
TYPE 1**

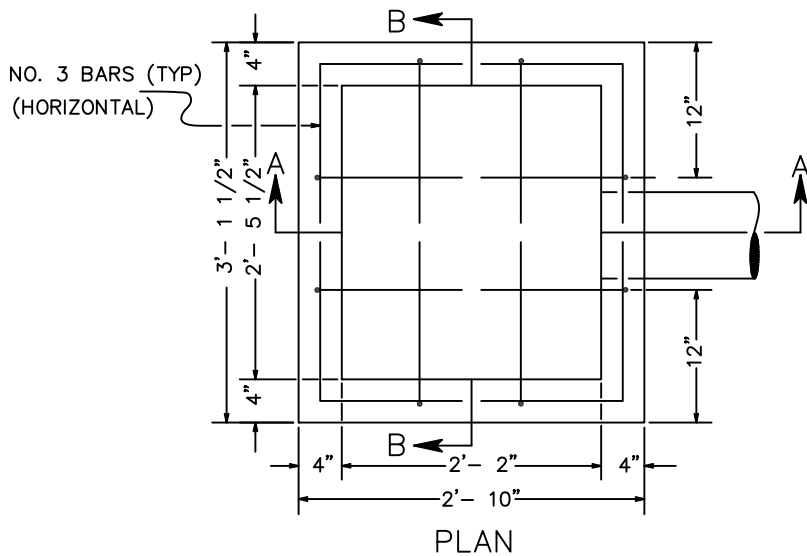
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

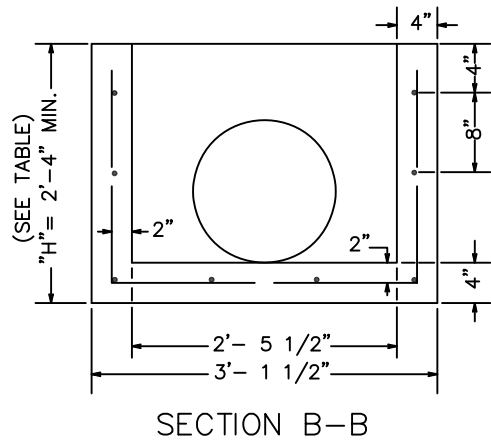
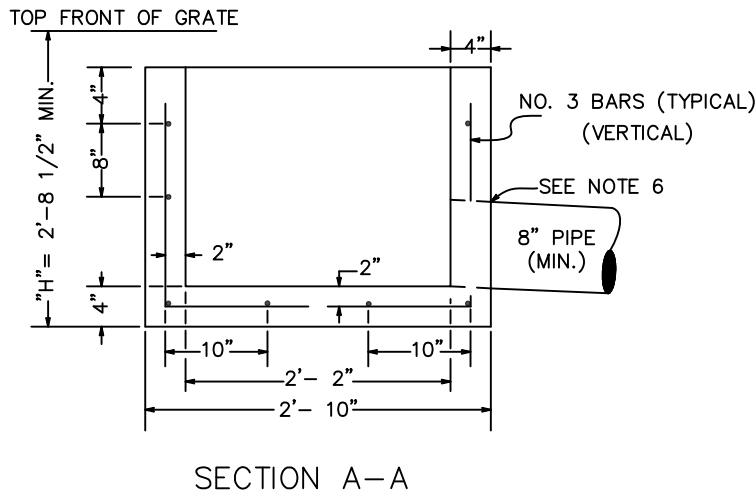
10/1/24
DATE:

DWG NO.

SD-9



PIPE Ø	"H"
8"	2'-1 1/2"
12"	2'-5 1/2"
15"	2'-9"
18"	3'-0"
21"	3'-3"
24"	3'-6"



NOT TO SCALE

GENERAL NOTES

1. CONCRETE INLET SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE PROJECT SPECIAL PROVISIONS.
2. REINFORCING STEEL SHALL BE GRADE 40 OR GRADE 60.
3. CONCRETE INLETS SHALL BE SET ON A COMPACTED OR UNDISTURBED LEVEL FOUNDATION.
4. AS AN ACCEPTABLE ALTERNATE TO REBAR, WELDED WIRE FABRIC HAVING A MINIMUM AREA OF .12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A 497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN THE KNOCKOUTS.
5. "H" SHALL BE SHOWN ON CONSTRUCTION PLANS.
6. INLET PIPE SHALL BE GROUTED INTO CONCRETE INLET.



CITY OF COEUR D'ALENE STANDARD DRAWING

**CURB INLET BOX
TYPE 2**

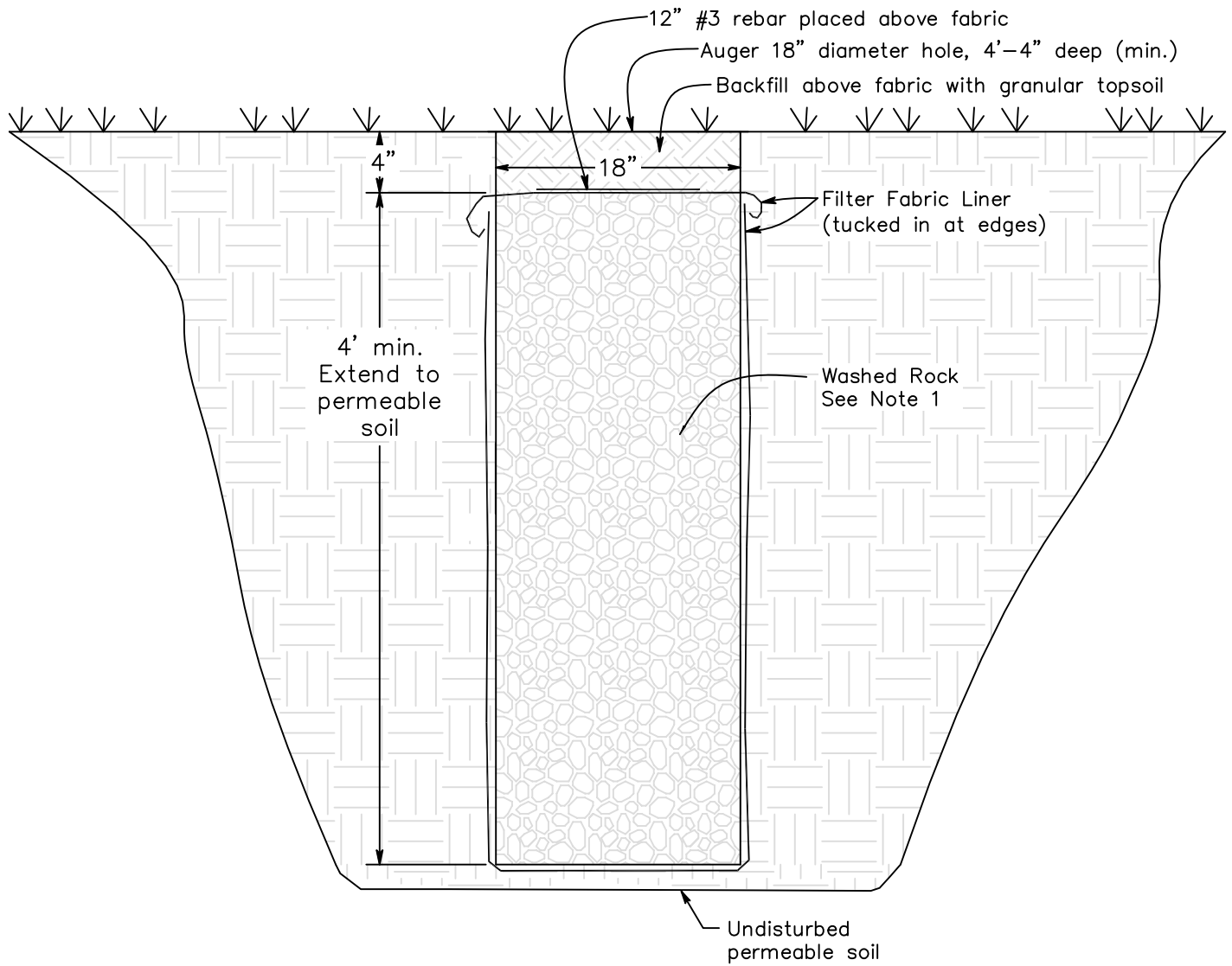
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

SD-10



Not to Scale

GENERAL NOTES

1. Special backfill material for wells shall consist of washed gravel graded from 1" to 3" with a maximum of 5% passing the No. 200 screen, as measured by weight.
2. Space multiple drains 10' apart and 10' from driveways and curb inlet aprons.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

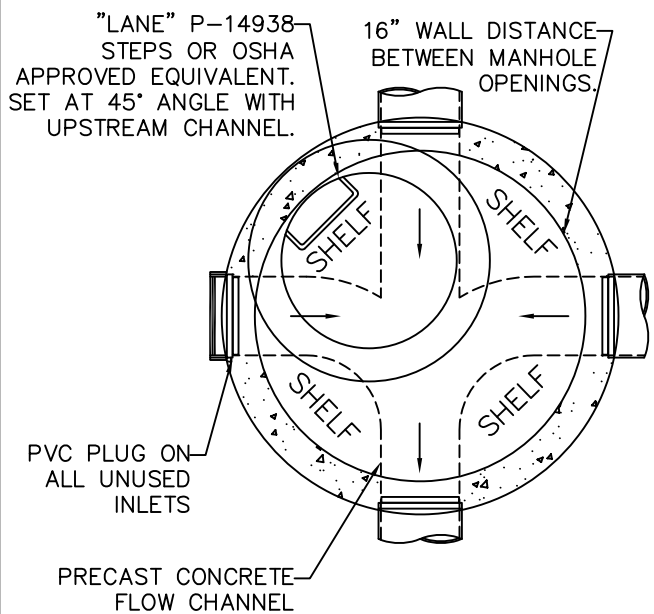
Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

SWALE DRAIN

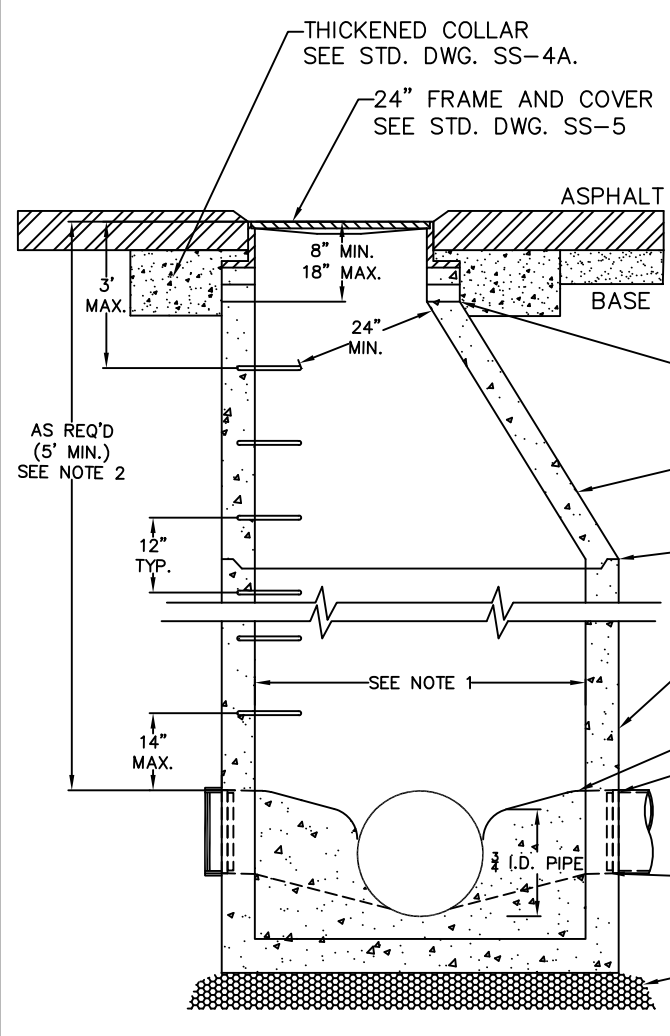
DWG NO.

SD-11



NOTES THIS DETAIL:

1. MANHOLE INSIDE DIAMETERS SHALL BE 48" FOR PIPE DIAMETERS 24" OR LESS, 60" FOR ANY PIPE DIAMETER GREATER THAN 24" AND/OR PIPE DEPTHS GREATER THAN 25'.
2. MANHOLES WITH PIPE DEPTHS LESS THAN 5' REQUIRE PRE-APPROVAL FROM THE WASTEWATER UTILITY.
3. INVERT ELEVATIONS FOR STRAIGHT THROUGH CHANNELS SHALL HAVE 0.10' FALL FROM INLET TO OUTLET. MANHOLES WITH CHANNEL BENDS OR CHANGE IN FLOW DIRECTION SHALL HAVE 0.15' FALL BETWEEN THE INLET AND OUTLET. FIELD VERIFY PRIOR TO BACKFILLING.
4. INLET INVERT ELEVATIONS INTO MANHOLES WITH INTERCEPTOR PIPES (15" DIA.) SHALL MATCH UPSTREAM INTERCEPTOR PIPE CROWN ELEVATIONS.
5. ALL MANHOLE PIPE PENETRATIONS SHALL BE INSTALLED WITH WATERTIGHT PVC SAND COLLARS CAST-IN-PLACE FOR NEW MANHOLES OR CORE & GROUT-IN-PLACE FOR EXISTING MANHOLES. BOOTS ARE NOT ACCEPTABLE.
6. PRIOR TO PAVING, FRAME AND COVER SHALL BE ADJUSTED TO 1/4" BELOW FINISH SURFACE ELEVATION & SECURED TO CONCRETE GRADE RINGS ON FULLY DEPRESSED RAMNECK OR APPROVED EQUIVALENT. BIODEGRADABLE MATERIALS ARE NOT ACCEPTABLE.
7. PRIOR TO PAVING, THICKENED COLLARS SHALL BE CONSTRUCTED & CURED. WASTEWATER UTILITY INSPECTION IS REQUIRED.




- CONCRETE GRADE RINGS. 24" CLEAR OPENING.
- PRECAST REINFORCED CONCRETE MONOLITHIC ECCENTRIC CONE SECTION. HEIGHT 2' MIN., 4' MAX. FLAT TOP MANHOLES ARE NOT ACCEPTABLE.
- SEAL ALL JOINTS WITH RAMNEK OR MASTIC WATERTIGHT SEALANT EQUIVALENT.
- PRECAST REINFORCED CONCRETE BASE AND BARREL SECTIONS. INSTALL TO H-20 LOADING REG.
- CONCRETE SHELF SLOPE 1"/1' (TYP.)
- MATCH SMALLER PIPE CROWN ELEVATIONS TO LARGER "NON-INTERCEPTOR" PIPE UPSTREAM CROWN ELEVATIONS AND FORM ALL CHANNELS TO MATCH & DRAIN INTO MANHOLE BASE CENTERLINE CHANNEL INVERT.
- GROUT ALL PIPE PENETRATIONS, SEAMS AND PICK HOLES SMOOTH AND BURR-FREE.
- 6" FREE DRAINING MATERIAL OR WASHED ROCK COMPACTED TO 90% RELATIVE COMPACTION EXTENDED 12" MIN. BEYOND MANHOLE OUTSIDE DIAMETER.

UPDATE  MMB 01/31/24
 City of
Coeur d'Alene
 IDAHO

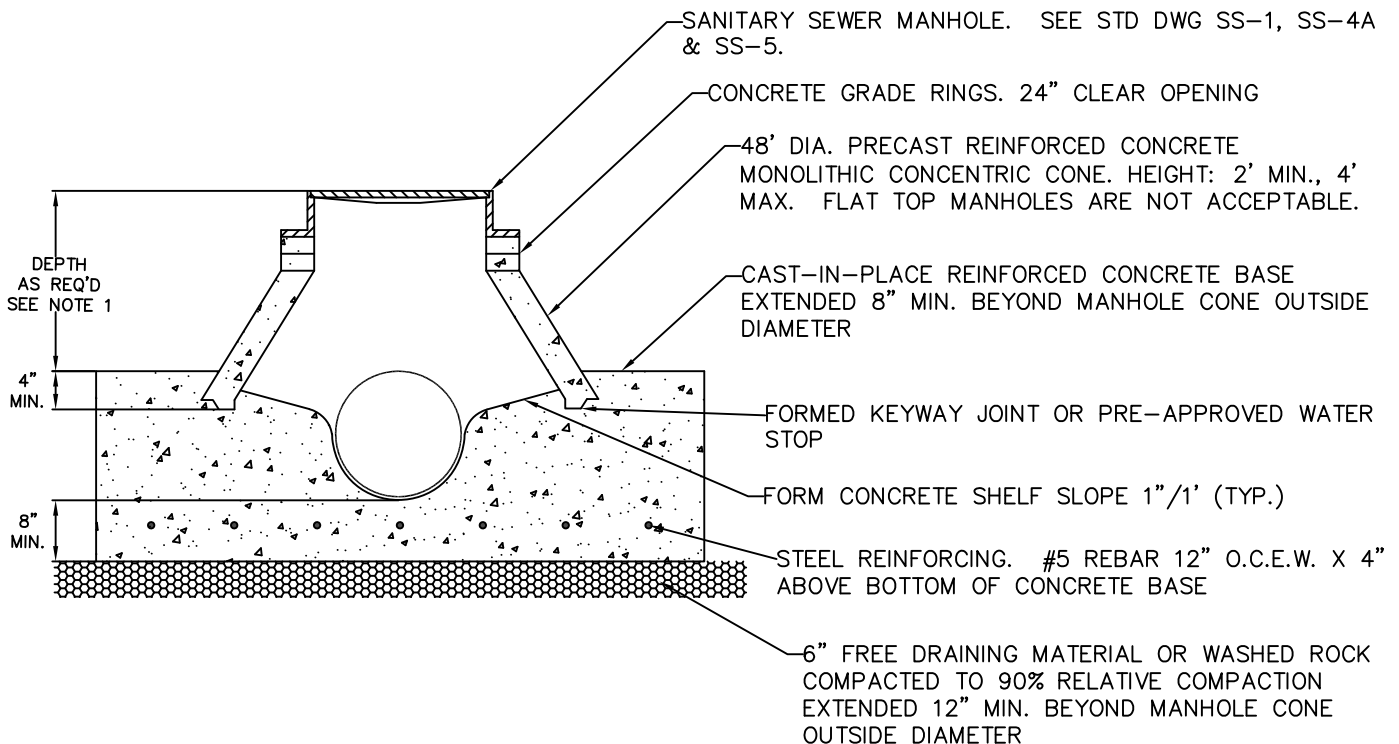
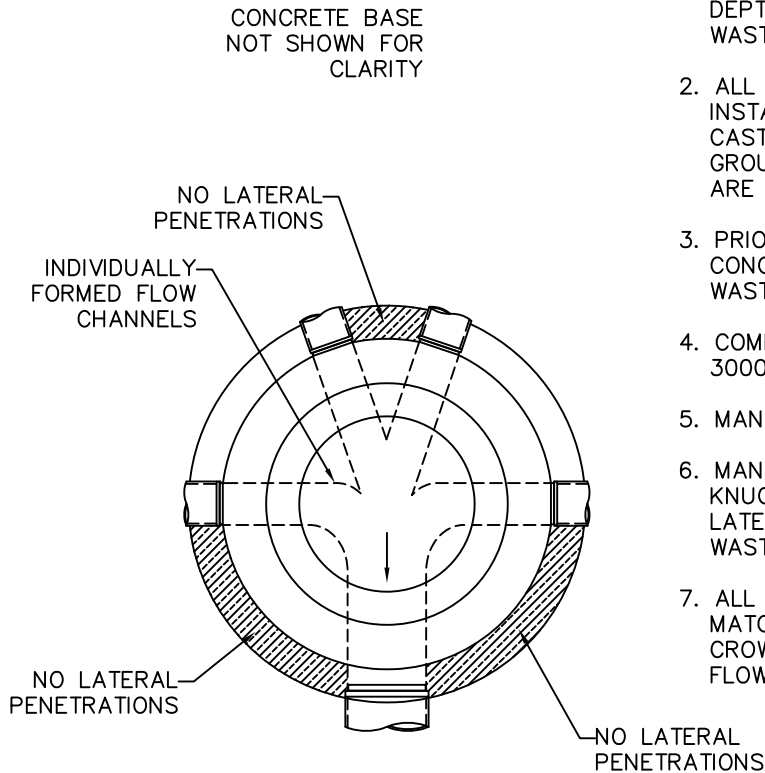
CITY OF COEUR D'ALENE STANDARD DRAWING

STANDARD SEWER MANHOLE

APPROVED BY:

 CITY ENGINEER, PE 10804
 DATE: 10/1/24
 DWG NO. SS-1

NOTES THIS DETAIL:

1. SHALLOW MANHOLES SHALL BE USED ONLY ON PUBLIC SEWER LINES GREATER THAN 3' AND LESS THAN 5' IN DEPTH AND MUST BE PRE-APPROVED BY THE WASTEWATER UTILITY.
2. ALL MANHOLE PIPE PENETRATIONS SHALL BE INSTALLED WITH WATERTIGHT PVC SAND COLLARS; CAST-IN-PLACE FOR NEW MANHOLES OR CORE & GROUT-IN-PLACE FOR EXISTING MANHOLES. BOOTS ARE NOT ACCEPTABLE.
3. PRIOR TO BACKFILL, CAST-IN-PLACE REINFORCED CONCRETE BASE SHALL BE CONSTRUCTED & CURED. WASTEWATER UTILITY INSPECTION IS REQUIRED.
4. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3000 PSI MINIMUM.
5. MANHOLE STEPS ARE NOT ACCEPTABLE.
6. MANHOLES LOCATED IN CUL-DE-SACS, STREET KNUCKLES OR TERMINUS MANHOLES MAY HAVE LATERAL PENETRATIONS PRE-APPROVED BY THE WASTEWATER UTILITY AS SHOWN HEREIN.
7. ALL INLET PIPE PENETRATIONS ARE REQUIRED TO MATCH PIPE CROWN ELEVATIONS TO OUTLET PIPE CROWN ELEVATION AND HAVE INDIVIDUALLY FORMED FLOW CHANNELS.



CITY OF COEUR D'ALENE STANDARD DRAWING

SHALLOW MANHOLE TERMINUS/LATERALS

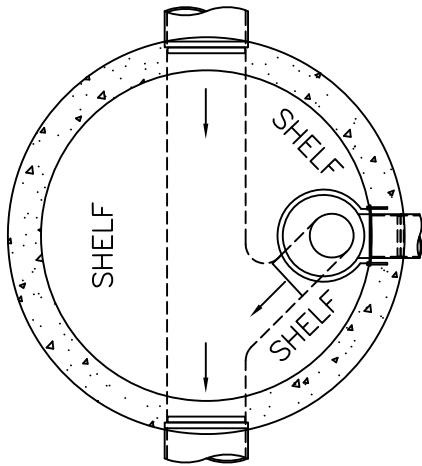
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

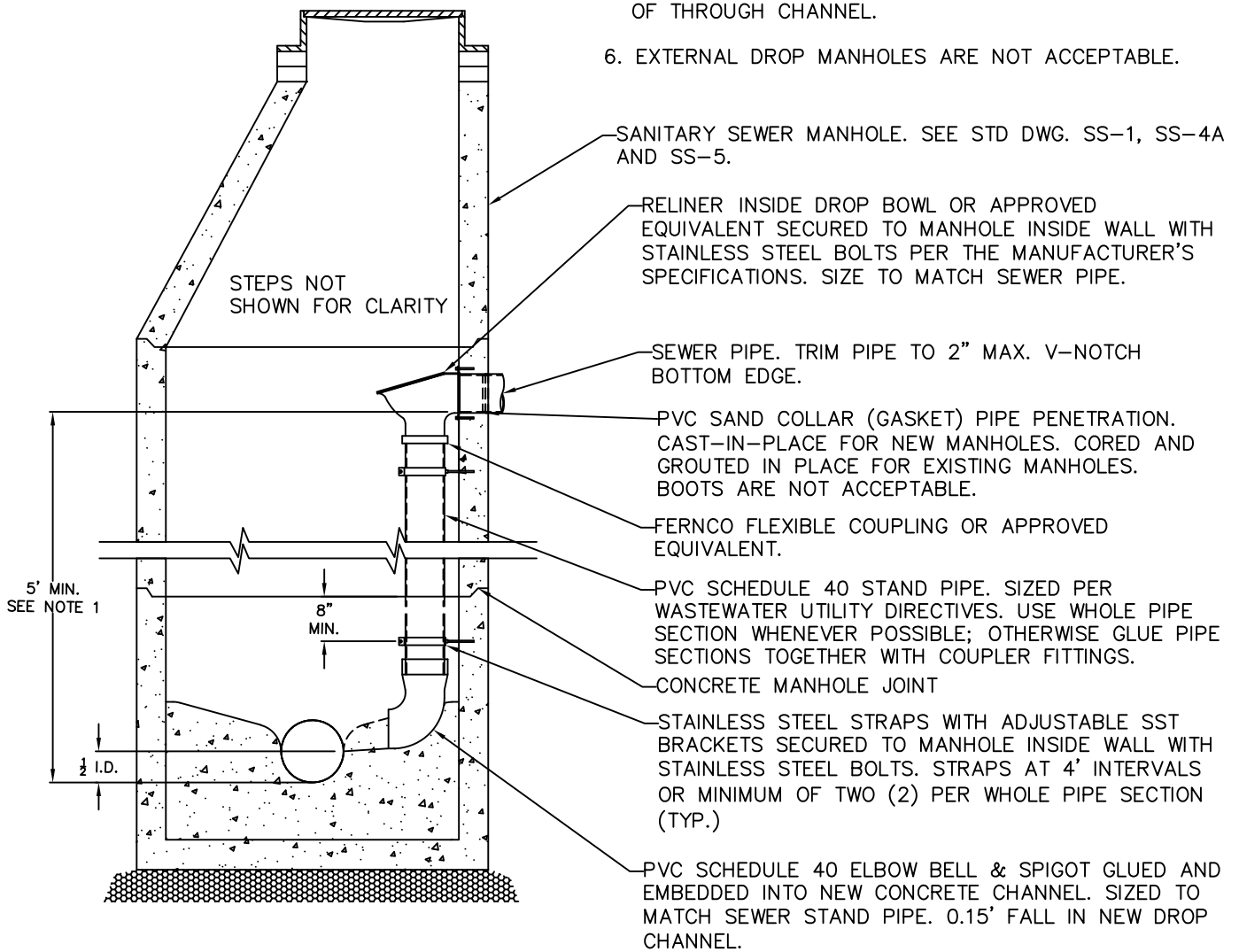
DWG NO.

SS-1A

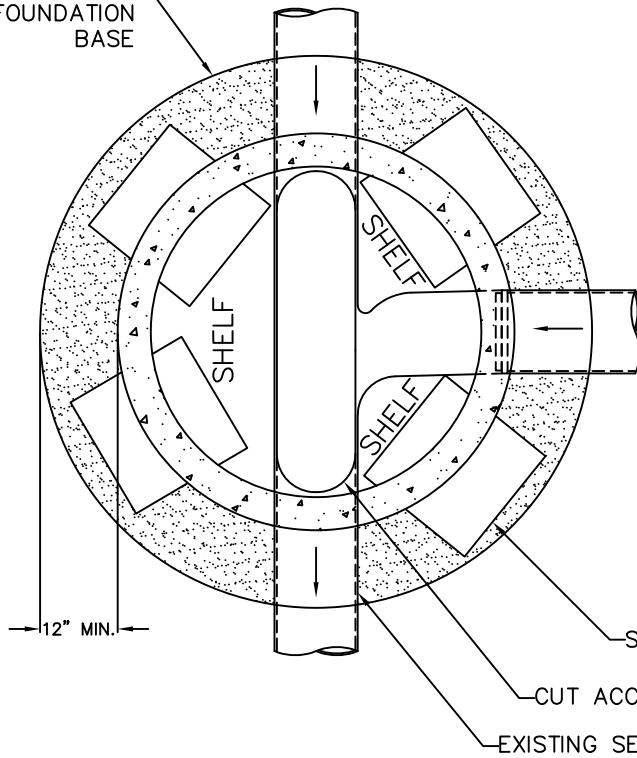


NOTES THIS DETAIL:

1. INTERIOR DROP MANHOLES WILL ONLY BE ALLOWED FOR GRAVITY SEWER PIPES (NON-PRESSURIZED FLOW) REQUIRING VERTICAL DROP STRUCTURES FIVE FEET (5') OR GREATER.
2. ALL STAINLESS STEEL ADJUSTABLE BRACKETS SHALL BE PLACED 8" MINIMUM SEPARATION FROM ANY JOINT OR OTHER PIPE PENETRATIONS WITHIN MANHOLE.
3. ORIENTATE DROP BOWL AND STANDPIPE STRUCTURE PLACEMENT TO AVOID OBSTRUCTION WITH MANHOLE STEPS.
4. ALL FASTENING HARDWARE SHALL BE STAINLESS STEEL 300 SERIES OR BETTER.
5. CHANNEL AT BASE OF DROP STRUCTURE SHALL BE FORMED WITH 0.15' FALL INTO CONCRETE BENCH AND MATCH NEW OUTLET CHANNEL INVERT TO SPRING LINE OF THROUGH CHANNEL.
6. EXTERNAL DROP MANHOLES ARE NOT ACCEPTABLE.



CONCRETE FOUNDATION BASE



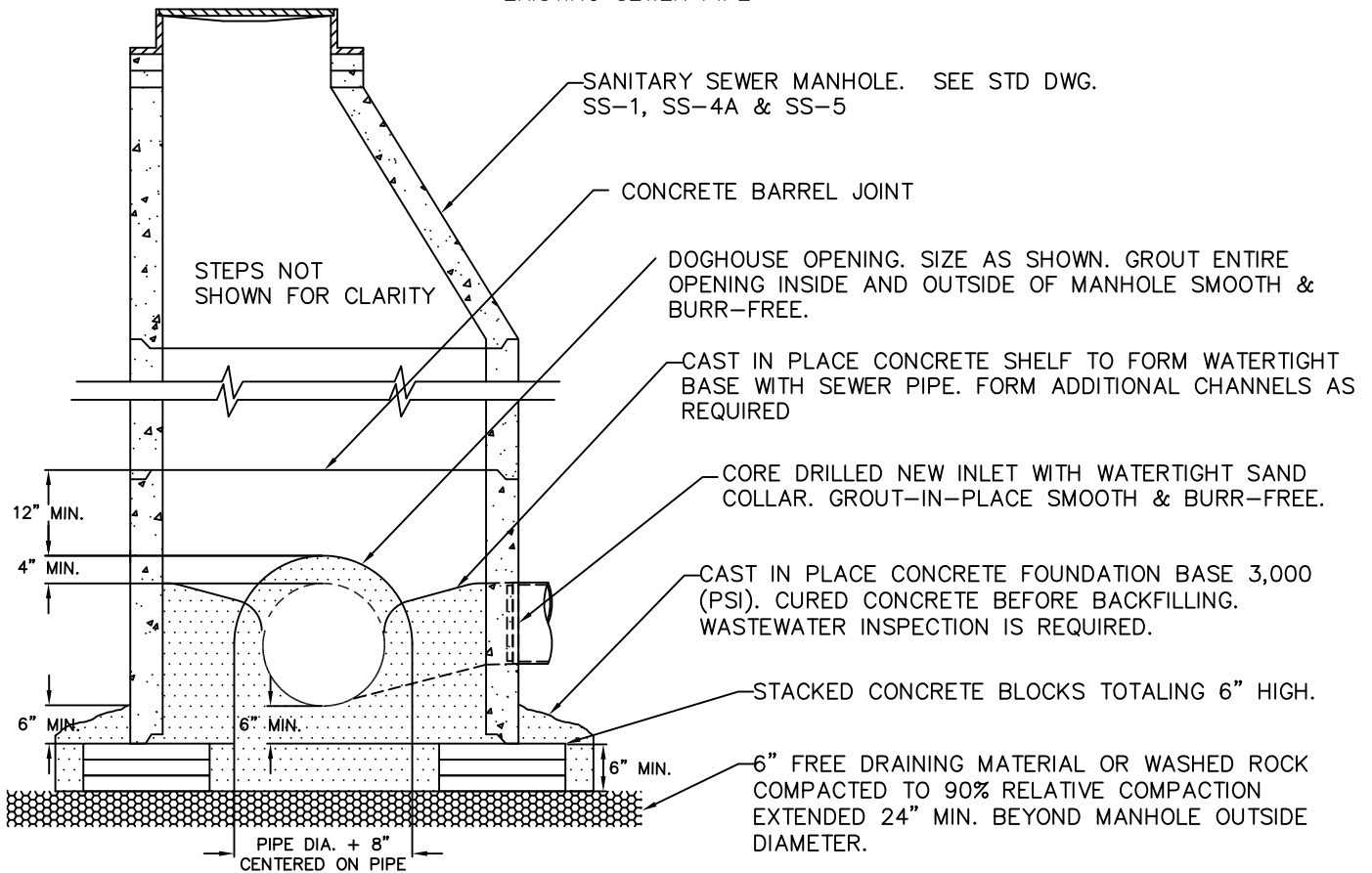
NOTES THIS DETAIL:

1. DOGHOUSE MANHOLES ARE ONLY USED WHEN PLACING A NEW MANHOLE DIRECTLY OVER AN EXISTING ACTIVE SEWER PIPE AND MUST BE PRE-APPROVED BY THE WASTEWATER UTILITY.
2. DOGHOUSE MANHOLE SHALL BE CENTERED OVER EXISTING SEWER PIPE AND MUST MAINTAIN A 24" MINIMUM SEPARATION FROM THE NEAREST PIPE JOINT OR FITTING.
3. PRIOR TO CUTTING AN ACCESS OPENING INTO THE EXISTING SEWER PIPE, A PASSING HYDROSTATIC WATER TEST MAY BE REQUIRED BY THE WASTEWATER UTILITY. HYDROSTATIC TEST SHALL CONFORM TO I.S.P.W.C. SPECIFICATIONS (LATEST REVISION).
4. CUT ACCESS OPENING INTO TOP OF EXISTING SEWER PIPE BOTH SIDES TO MATCH FLUSH WITH MANHOLE SHELF. REMOVE ALL SHARP OR IRREGULAR EDGES AND DISPOSE OF REMOVED SECTION OF PIPE. WASTEWATER UTILITY INSPECTION IS REQUIRED.

STACKED CONCRETE BLOCKS (TYP.)

CUT ACCESS OPENING

EXISTING SEWER PIPE



SANITARY SEWER MANHOLE. SEE STD DWG. SS-1, SS-4A & SS-5

CONCRETE BARREL JOINT

STEPS NOT SHOWN FOR CLARITY

DOGHOUSE OPENING. SIZE AS SHOWN. GROUT ENTIRE OPENING INSIDE AND OUTSIDE OF MANHOLE SMOOTH & BURR-FREE.

CAST IN PLACE CONCRETE SHELF TO FORM WATERTIGHT BASE WITH SEWER PIPE. FORM ADDITIONAL CHANNELS AS REQUIRED

CORE DRILLED NEW INLET WITH WATERTIGHT SAND COLLAR. GROUT-IN-PLACE SMOOTH & BURR-FREE.

CAST IN PLACE CONCRETE FOUNDATION BASE 3,000 (PSI). CURED CONCRETE BEFORE BACKFILLING. WASTEWATER INSPECTION IS REQUIRED.

STACKED CONCRETE BLOCKS TOTALING 6" HIGH.

6" FREE DRAINING MATERIAL OR WASHED ROCK COMPACTED TO 90% RELATIVE COMPACTION EXTENDED 24" MIN. BEYOND MANHOLE OUTSIDE DIAMETER.

PIPE DIA. + 8" CENTERED ON PIPE



CITY OF COEUR D'ALENE STANDARD DRAWING

DOGHOUSE MANHOLE

APPROVED BY:

Chris Boddy
CITY ENGINEER, PE 10804

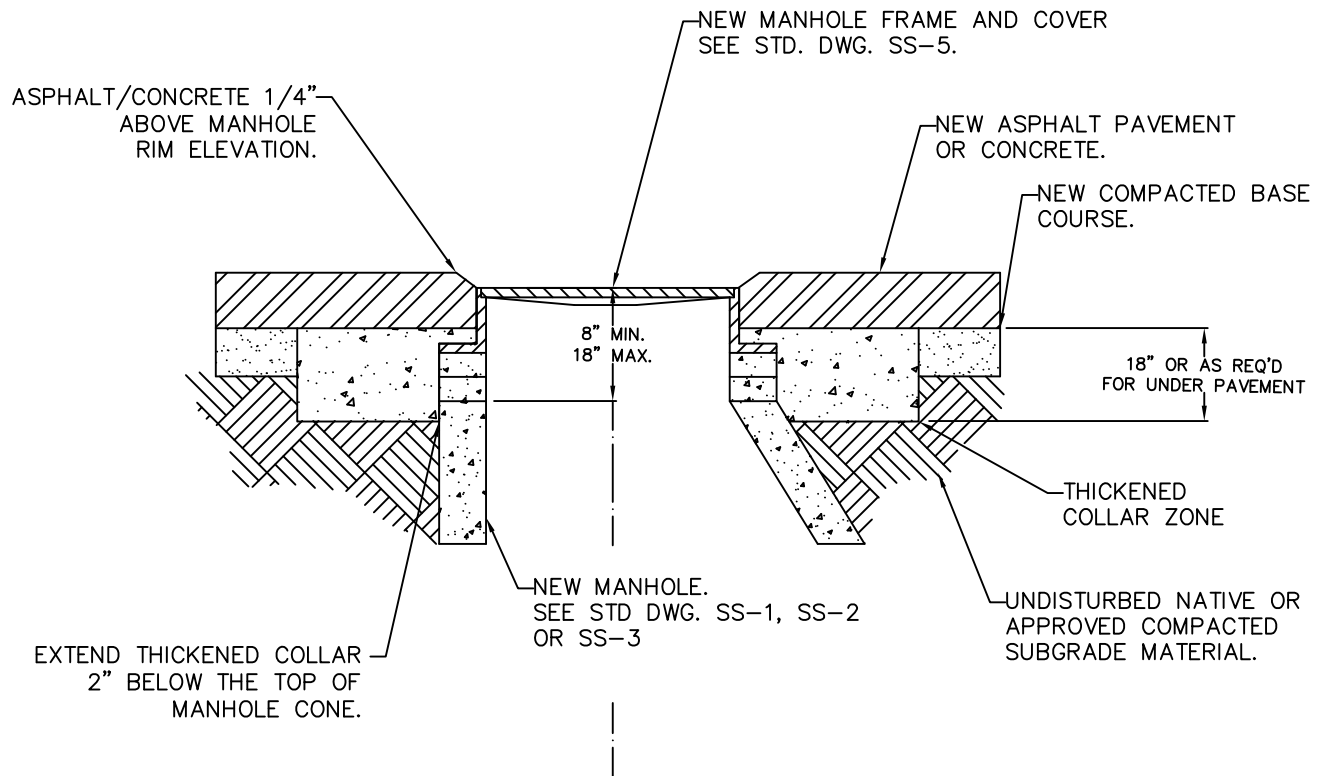
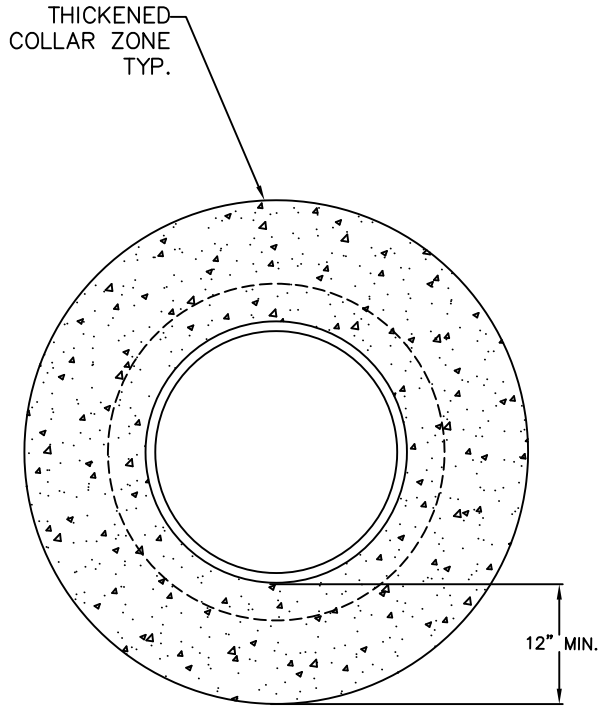
10/1/24
DATE:

DWG NO.

SS-3

NOTES THIS DETAIL:

1. THICKENED COLLARS SHALL BE INSTALLED AROUND ALL SEWER MANHOLES, CLEANOUTS AND VALVE BOX STRUCTURES UTILIZING CONTROL DENSITY FILL "CDF", 3 SACK MIX. ALLOW TO CURE PRIOR TO PAVEMENT.
2. NO NATIVE, SUB-GRADE, BASE COURSE OR BEDDING MATERIAL MAY BE BACKFILLED AND COMPACTED WITHIN EXCAVATED THICKENED COLLAR ZONE. ALL DISTURBED MATERIAL SHALL BE REMOVED, HAULED AND DISPOSED OF OFFSITE.
3. ALL THICKENED COLLARS SHALL BE COMPLETED AND INSPECTED BY THE WASTEWATER UTILITY PRIOR TO PAVING. PROVIDE 48-HOUR NOTICE.



CITY OF COEUR D'ALENE STANDARD DRAWING

NEW MANHOLE THICKENED COLLAR

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE-10804

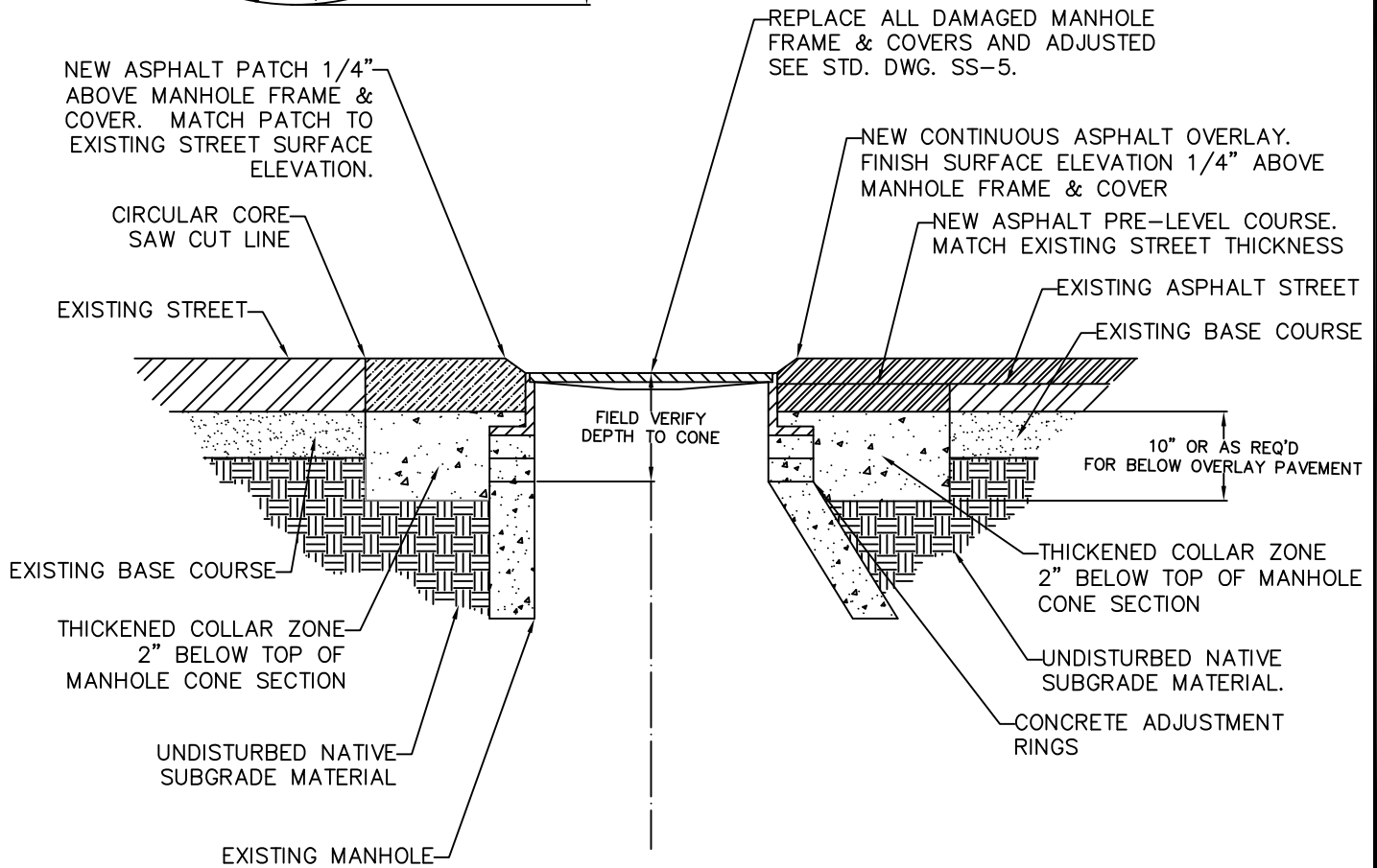
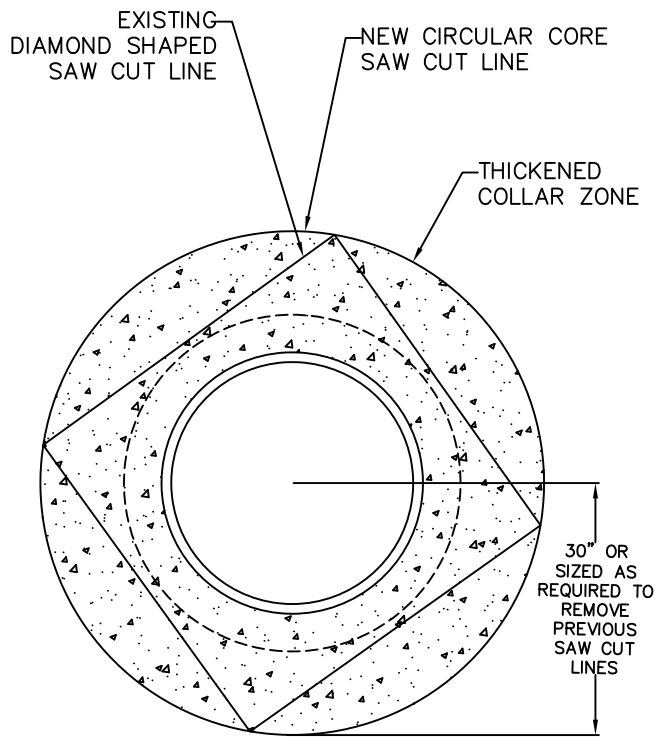
10/1/24
DATE:

DWG NO.

SS-4A

NOTES THIS DETAIL:

1. THICKENED COLLARS SHALL BE CONSTRUCTED AROUND AND OUTSIDE PREVIOUS DIAMOND-SHAPE ADJUSTMENT WITH CONTROL DENSITY FILL "CDF" 3 SACK MIX. ALLOW TO CURE PRIOR TO STREET OVERLAY OR PAVEMENT.
2. NO NATIVE, SUB-GRADE OR BASE COURSE MATERIAL MAY BE BACKFILLED AND COMPACTED WITHIN EXCAVATED THICKENED COLLAR ZONE. ALL DISTURBED MATERIAL SHALL BE REMOVED, HAULED AND DISPOSED OF OFFSITE.
3. ALL THICKENED COLLARS SHALL BE COMPLETED AND INSPECTED BY THE WASTEWATER UTILITY PRIOR TO PAVING. PROVIDE 48-HOUR NOTICE.



CITY OF COEUR D'ALENE STANDARD DRAWING

EXISTING MANHOLE THICKENED COLLAR

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

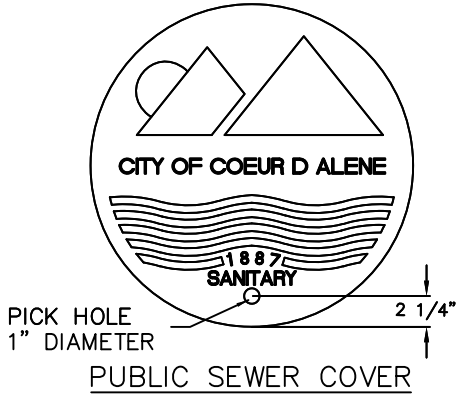
SS-4B

NOTES THIS DETAIL:

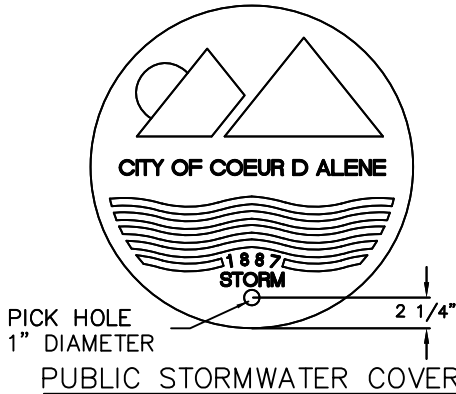
1. ALL LETTERING & ARTWORK SHALL BE FLUSH WITH FRAME RIM/LIP MOLDED INTO THE TOP OF THE COVER.
2. FRAME & COVER SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48-90, GRADE 30.
3. FIT TOLERANCES SHALL BE $< 1/8"$ ±.
4. WELDED FRAME & COVERS ARE NOT ACCEPTABLE.
5. ALL FRAME & COVERS SET ON MANHOLES IN DEPRESSION AREAS SUBJECTED TO STORM WATER PONDING AND/OR RUNOFF SHALL BE WATERTIGHT AND INSTALLED WITH RAINGUARD® INFLOW PAN OR APPROVED EQUIVALENT.
6. INSTALLATION OF FRAME & COVERS WITHIN CURB & GUTTER, VALLEY GUTTERS, OR SWALES ARE NOT ACCEPTABLE.



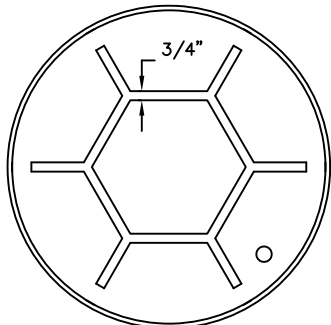
PRIVATE SEWER COVER



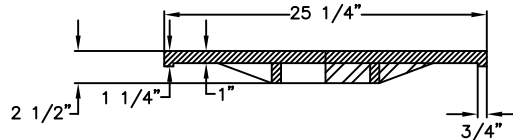
PUBLIC SEWER COVER



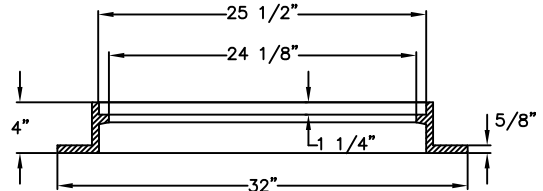
PUBLIC STORMWATER COVER



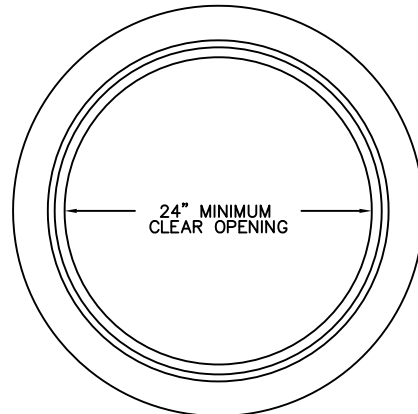
BOTTOM OF COVER



COVER SECTION VIEW



FRAME SECTION VIEW



FRAME



CITY OF COEUR D'ALENE STANDARD DRAWING

MANHOLE FRAME AND COVER

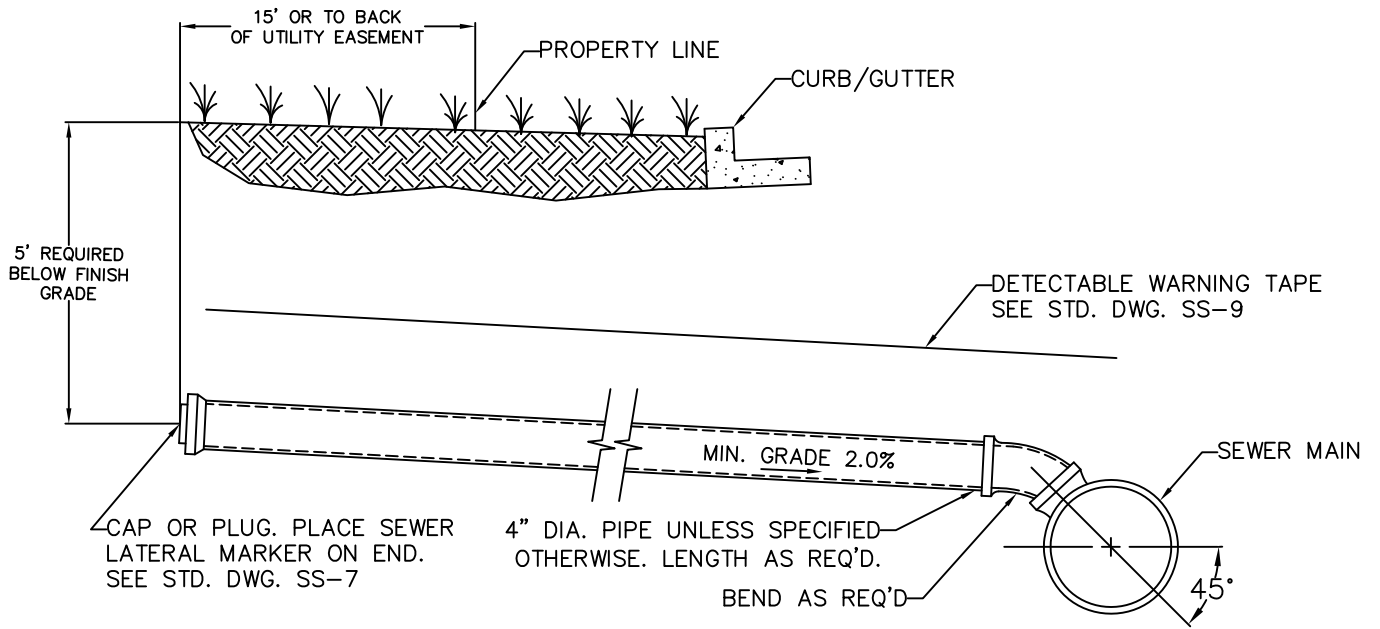
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

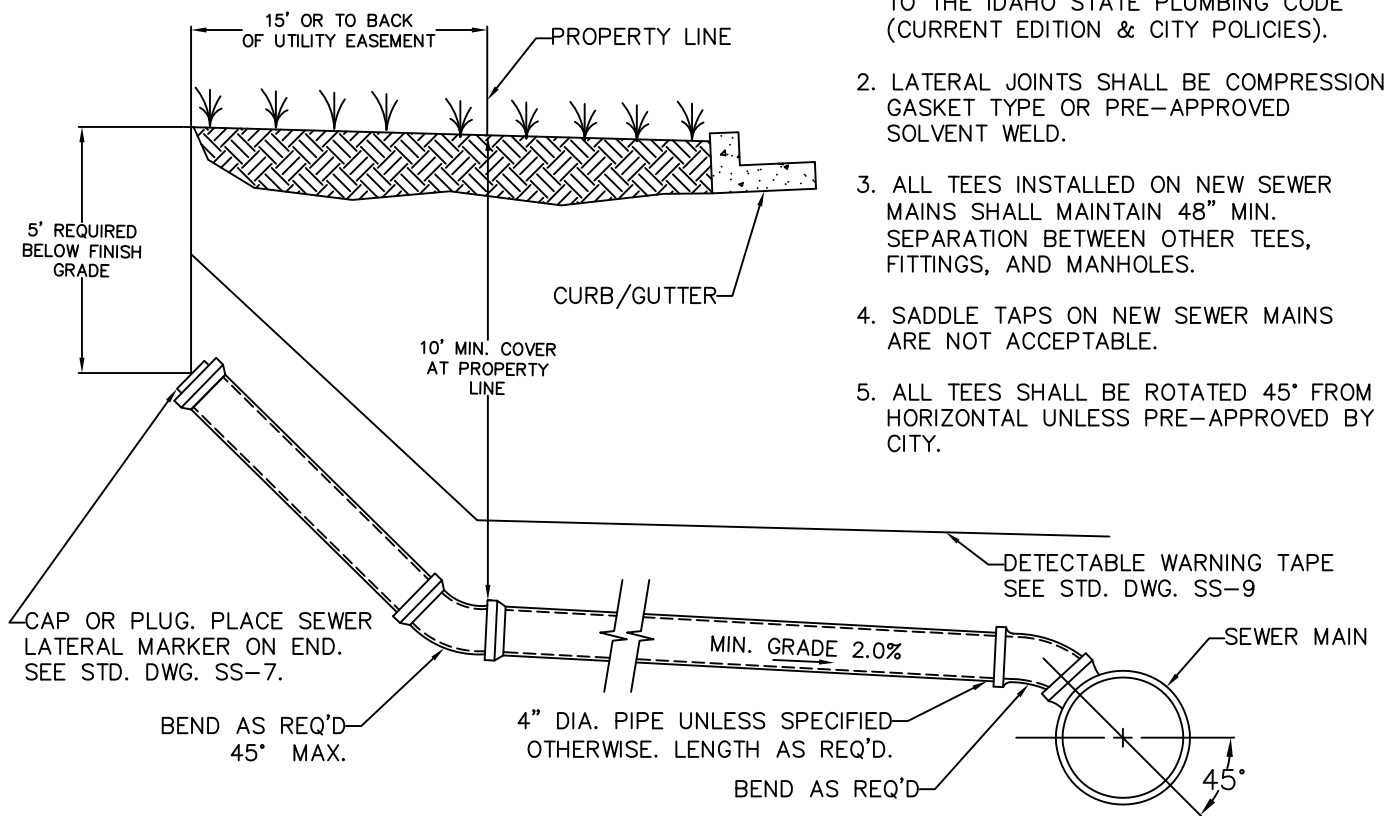
SS-5



TYPE "A"
STANDARD LATERAL CONNECTION

NOTES THIS DETAIL:

1. ALL SEWER LATERALS SHALL CONFORM TO THE IDAHO STATE PLUMBING CODE (CURRENT EDITION & CITY POLICIES).
2. LATERAL JOINTS SHALL BE COMPRESSION GASKET TYPE OR PRE-APPROVED SOLVENT WELD.
3. ALL TEES INSTALLED ON NEW SEWER MAINS SHALL MAINTAIN 48" MIN. SEPARATION BETWEEN OTHER TEES, FITTINGS, AND MANHOLES.
4. SADDLE TAPS ON NEW SEWER MAINS ARE NOT ACCEPTABLE.
5. ALL TEES SHALL BE ROTATED 45° FROM HORIZONTAL UNLESS PRE-APPROVED BY CITY.



TYPE "B"
DEEP LATERAL CONNECTION



CITY OF COEUR D'ALENE STANDARD DRAWING

**SEWER SERVICE
LATERALS**

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

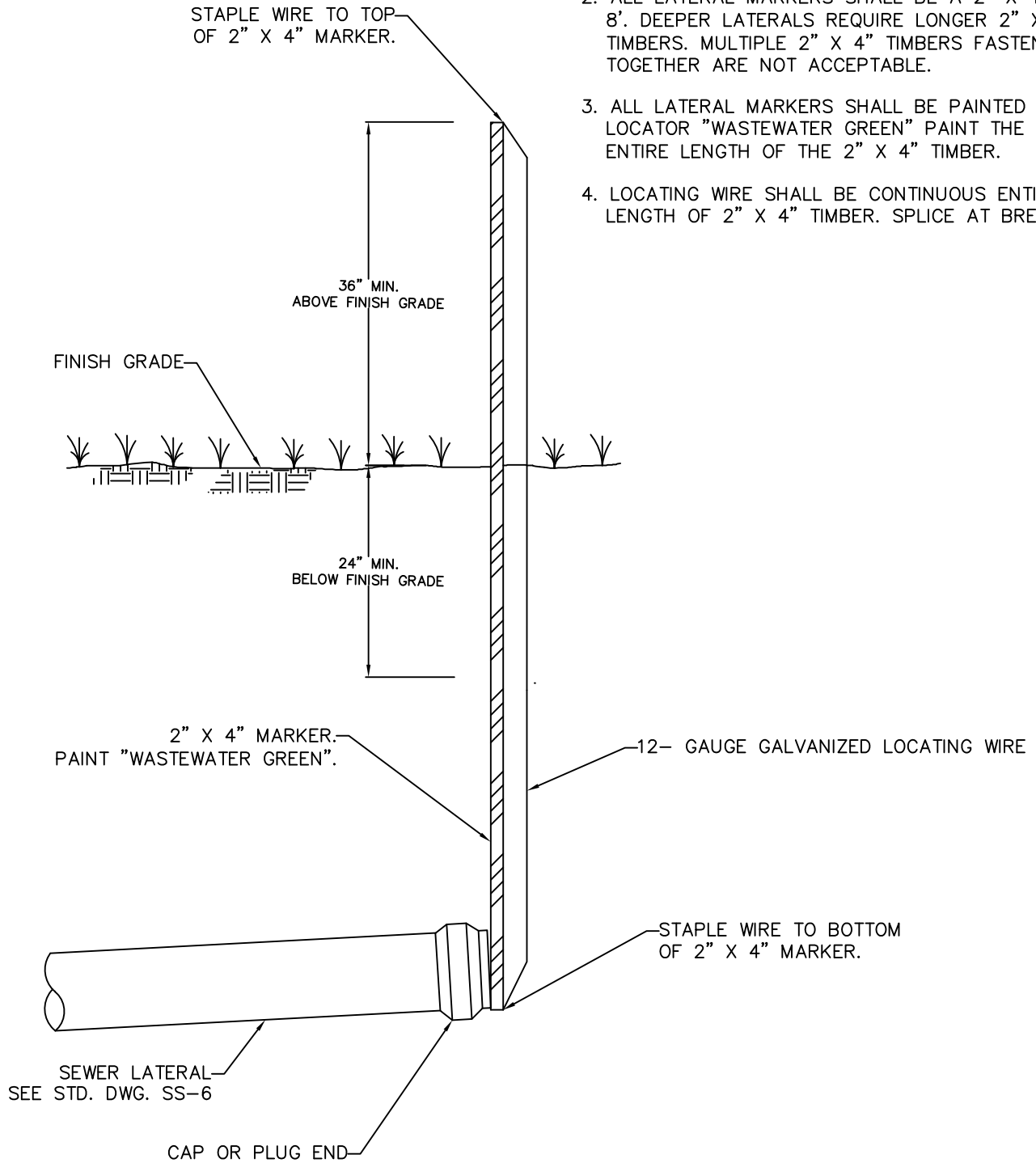
10/1/24
DATE:

DWG NO.

SS-6

NOTES:

1. ALL LATERAL MARKERS SHALL BE SET VERTICALLY AGAINST COMPACTED BACKFILL OR UNDISTURBED NATIVE GROUND MATERIAL.
2. ALL LATERAL MARKERS SHALL BE A 2" X 4" X 8'. DEEPER LATERALS REQUIRE LONGER 2" X 4" TIMBERS. MULTIPLE 2" X 4" TIMBERS FASTENED TOGETHER ARE NOT ACCEPTABLE.
3. ALL LATERAL MARKERS SHALL BE PAINTED WITH LOCATOR "WASTEWATER GREEN" PAINT THE ENTIRE LENGTH OF THE 2" X 4" TIMBER.
4. LOCATING WIRE SHALL BE CONTINUOUS ENTIRE LENGTH OF 2" X 4" TIMBER. SPLICE AT BREAKS.



CITY OF COEUR D'ALENE STANDARD DRAWING

**SEWER SERVICE
LATERAL MARKERS**

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

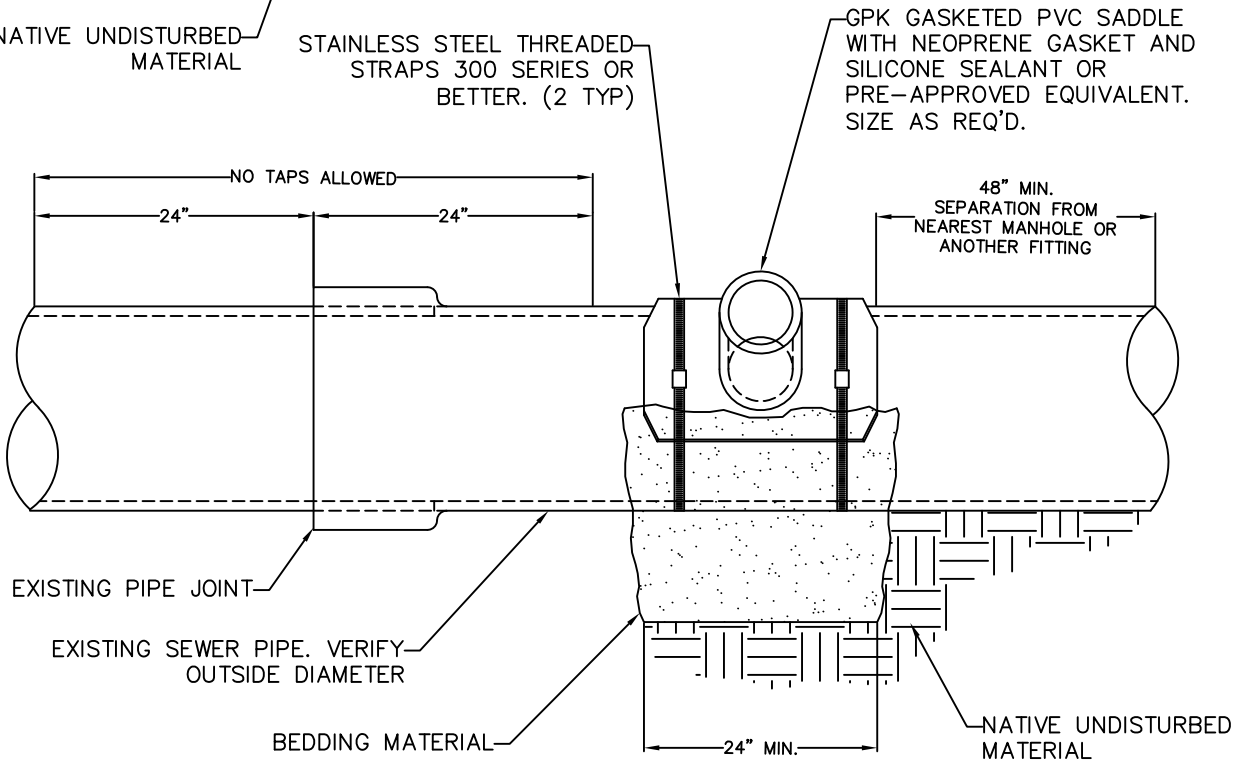
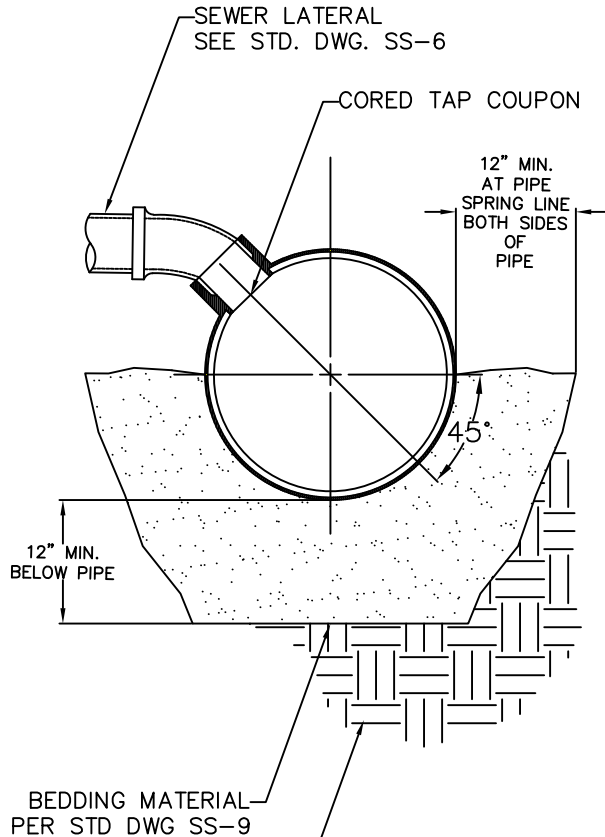
5/16/18
DATE:

DWG NO.

SS-7

NOTES THIS DETAIL:

1. TAP SADDLES ARE ONLY USED WHEN CONNECTING A NEW SEWER LATERAL TO AN EXISTING SEWER MAIN AND MUST BE PRE-APPROVED BY THE CITY.
2. ALL SADDLES SHALL BE GPK FOR CIPP LINED OR PVC PIPES AND CB-STYLE ROMAC FOR CONCRETE PIPES AND SHALL BE SIZED BASED ON THE OUTSIDE DIAMETER OF THE SEWER MAIN OR PLASTIC LINED PIPE (CIPP).
3. TWO (2) STAINLESS STEEL (SERIES 300 OR BETTER) THREADED STRAPS CAPABLE OF 60 LBS. TORQUE SHALL SECURE SADDLE TO SEWER MAIN. GLUED OR CEMENTED SADDLES ARE NOT ACCEPTABLE.
4. UNLESS PRE-APPROVED BY THE CITY, ALL TAPS SHALL BE ORIENTATED AT 45° ABOVE SEWER MAIN SPRING LINE (ABOVE HORIZONTAL). TAPS ON PIPE CROWN OR SPRING LINE ARE NOT ACCEPTABLE.
5. ALL TAPS TO EXISTING SEWER MAIN SHALL BE CLEAN CUT BY DRILLING OR CORING METHOD ONLY. NO "BREAK-IN" OR HAMMERING TAPS WILL BE ALLOWED. PRESENT CORED TAP COUPON FOR WASTEWATER UTILITY INSPECTION.
6. IF TAPPING A NEW SADDLE ONTO A CIPP LINED SEWER MAIN, GENTLY DEMO AND REMOVE CONCRETE/CLAY HOST PIPE AND ATTACH NEW SADDLE DIRECTLY ONTO THE CIPP LINED PIPE.



CITY OF COEUR D'ALENE STANDARD DRAWING

SEWER TAPPING SADDLE

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

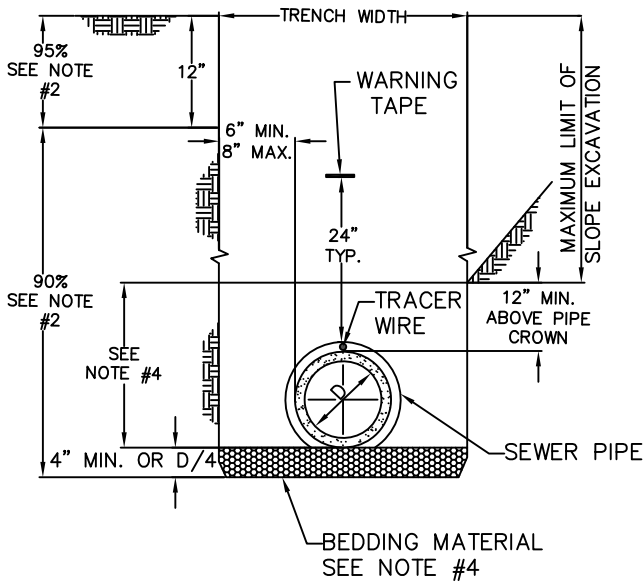
10/1/24
DATE:

DWG NO.

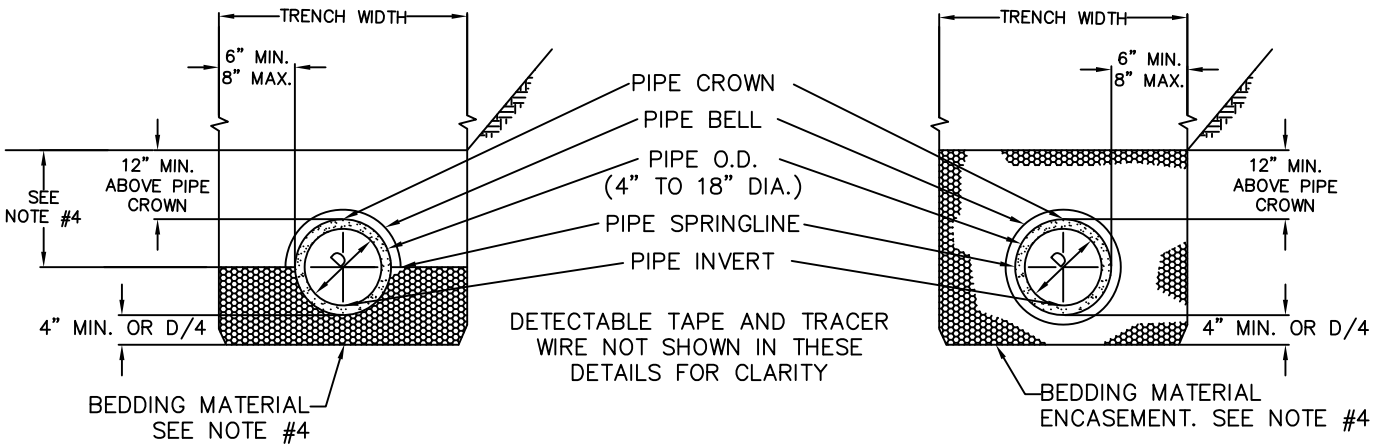
SS-8

NOTES THIS DETAIL:

1. FOR TRENCHING WITHIN IMPROVED STREETS, SEE STD. DWG. M-11 FOR TRENCH RESURFACING SPECIFICATIONS.
2. MINIMUM RELATIVE COMPACTION USING A MODIFIED PROCTOR (ASTM D-1557). SUBMIT ALL COMPACTION TEST REPORTS TO CITY.
3. UNLESS PRE-APPROVED BY THE CITY, MINIMUM COVER OVER THE TOP OF ALL NEWLY INSTALLED PIPE TO FINISH GRADE SHALL BE 5 FEET (MIN.).
4. BEDDING MATERIAL SHALL BE SAND, GRAVEL, CRUSHED AGGREGATE, OR NATIVE GRANULAR MATERIAL HAVING A SAND EQUIVALENT NO LESS THAN 12% BY WEIGHT PASSING A #200 SCREEN AND 100% PASSING A #4 SCREEN.
5. WHEN APPLICABLE (UNIQUE SEWERS & FORCE MAINS) CONTINUOUS #10 SOLID T.H.H.N. TRACER WIRE SHALL BE TAPED DIRECTLY TO TOP OF PIPE. ALL BREAKS SHALL BE SPLICED WITH 3M SPLICE KIT OR EQUIVALENT "WATERTIGHT" SPLICE KIT. TRACER WIRE SHALL EXTEND TO FINISH GRADE INSIDE ALL LOCATING WIRE BOXES AND SEWER STRUCTURES. SEE STD DWG SS-10.
6. DETECTABLE WARNING TAPE MARKED "SEWER LINE BELOW" SHALL EXTEND CONTINUOUSLY 24" ABOVE ALL NEWLY INSTALLED SEWER LINES INCLUDING LATERALS.



TYPE A TRENCH
STANDARD INSTALLATION FOR
NATIVE SANDY MATERIAL



TYPE B TRENCH
REQUIRED WHEN HARD ROCK OR
GRAVEL IS WITHIN 6" OF PIPE
INVERT, BUT BELOW SPRINGLINE.

TYPE C TRENCH
ROCK ENVELOPE REQUIRED WHEN
HARD ROCK OR GRAVEL IS AT
AND/OR ABOVE PIPE SPRINGLINE



CITY OF COEUR D'ALENE STANDARD DRAWING

SEWER TRENCH & BACKFILL DETAIL

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

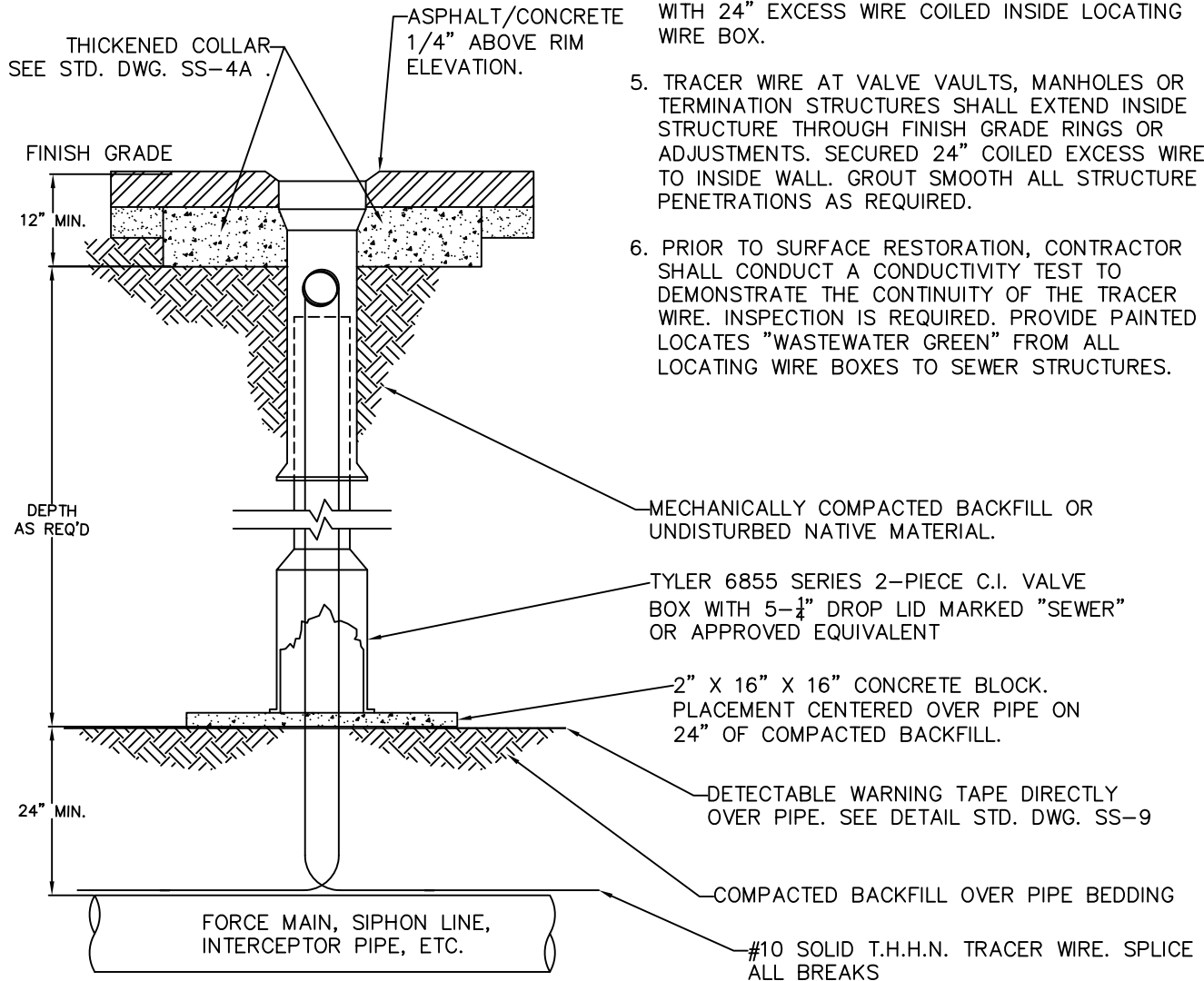
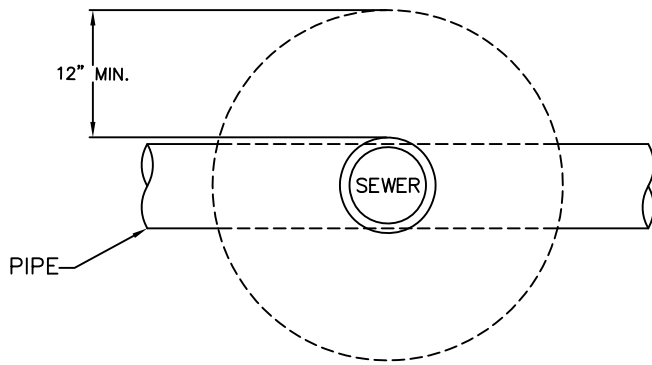
10/1/24
DATE:

DWG NO.

SS-9

NOTES THIS DETAIL:

1. UNLESS SPECIFIED OTHERWISE, AN ABOVE GROUND "SEWER LINE" MARKER OR SIGNED WITNESS POST SHALL BE INSTALLED AS CLOSE TO THE LOCATING WIRE BOX AS POSSIBLE.
2. TRACER WIRE SHALL BE TAPED DIRECTLY TO TOP OF ALL NEWLY INSTALLED PIPE WITH ELECTRICAL TAPE AT A MINIMUM OF 10' INTERVALS.
3. ALL BREAKS IN LOCATING WIRE SHALL BE SPLICED WITH 3M "WATERTIGHT" SPLICE KIT OR PRE-APPROVED EQUIVALENT.
4. TRACER WIRE SHALL RUN CONTINUOUSLY BETWEEN WIRE BOXES LOCATED AT EQUAL 1,000 FOOT STATIONS. EXTEND TRACER WIRE TO FINISH GRADE WITH 24" EXCESS WIRE COILED INSIDE LOCATING WIRE BOX.
5. TRACER WIRE AT VALVE VAULTS, MANHOLES OR TERMINATION STRUCTURES SHALL EXTEND INSIDE STRUCTURE THROUGH FINISH GRADE RINGS OR ADJUSTMENTS. SECURED 24" COILED EXCESS WIRE TO INSIDE WALL. GROUT SMOOTH ALL STRUCTURE PENETRATIONS AS REQUIRED.
6. PRIOR TO SURFACE RESTORATION, CONTRACTOR SHALL CONDUCT A CONDUCTIVITY TEST TO DEMONSTRATE THE CONTINUITY OF THE TRACER WIRE. INSPECTION IS REQUIRED. PROVIDE PAINTED LOCATES "WASTEWATER GREEN" FROM ALL LOCATING WIRE BOXES TO SEWER STRUCTURES.



CITY OF COEUR D'ALENE STANDARD DRAWING

FORCE MAIN LOCATING WIRE BOX

APPROVED BY:

Chris Booley
CITY ENGINEER, PE 10804

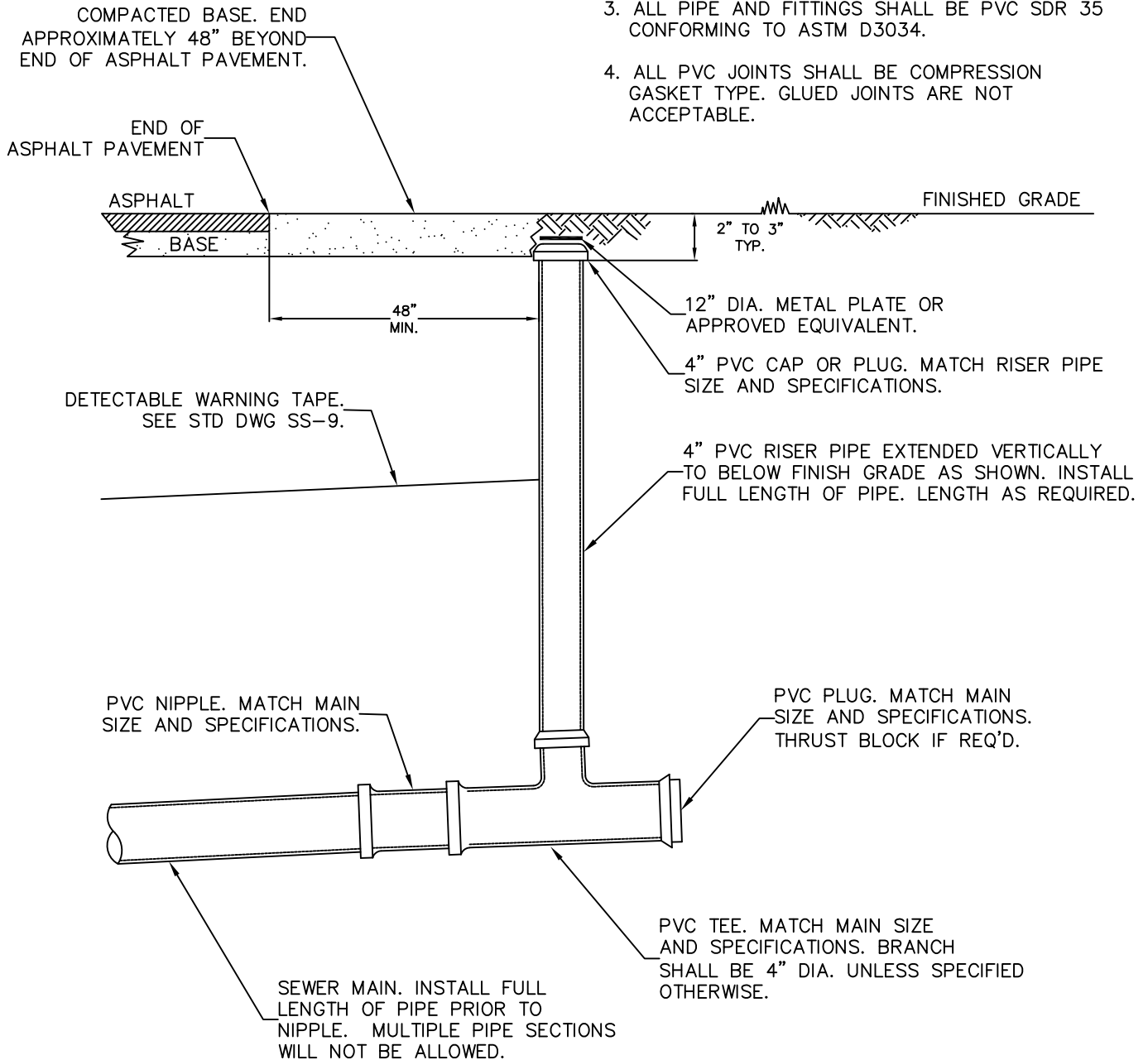
10/1/24
DATE:

DWG NO.

SS-10

NOTES THIS DETAIL:

1. TEMPORARY TEES ARE ONLY PERMITTED WHEN A FUTURE PUBLIC SEWER EXTENSION IS PLANNED WITHIN A PHASED DEVELOPMENT OR AS APPROVED BY THE CITY.
2. TEMPORARY TEES ON SEWER MAINS WITH LATERAL CONNECTIONS BETWEEN DOWNSTREAM MANHOLE AND TEMPORARY TEE ARE NOT ACCEPTABLE.
3. ALL PIPE AND FITTINGS SHALL BE PVC SDR 35 CONFORMING TO ASTM D3034.
4. ALL PVC JOINTS SHALL BE COMPRESSION GASKET TYPE. GLUED JOINTS ARE NOT ACCEPTABLE.



CITY OF COEUR D'ALENE STANDARD DRAWING

TEMPORARY TEE SEWER EXTENSION

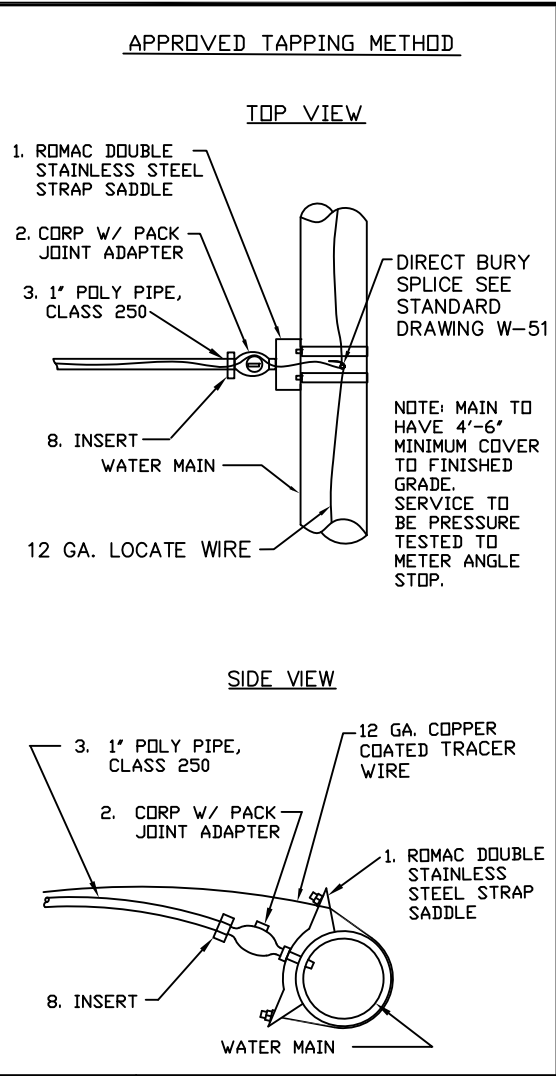
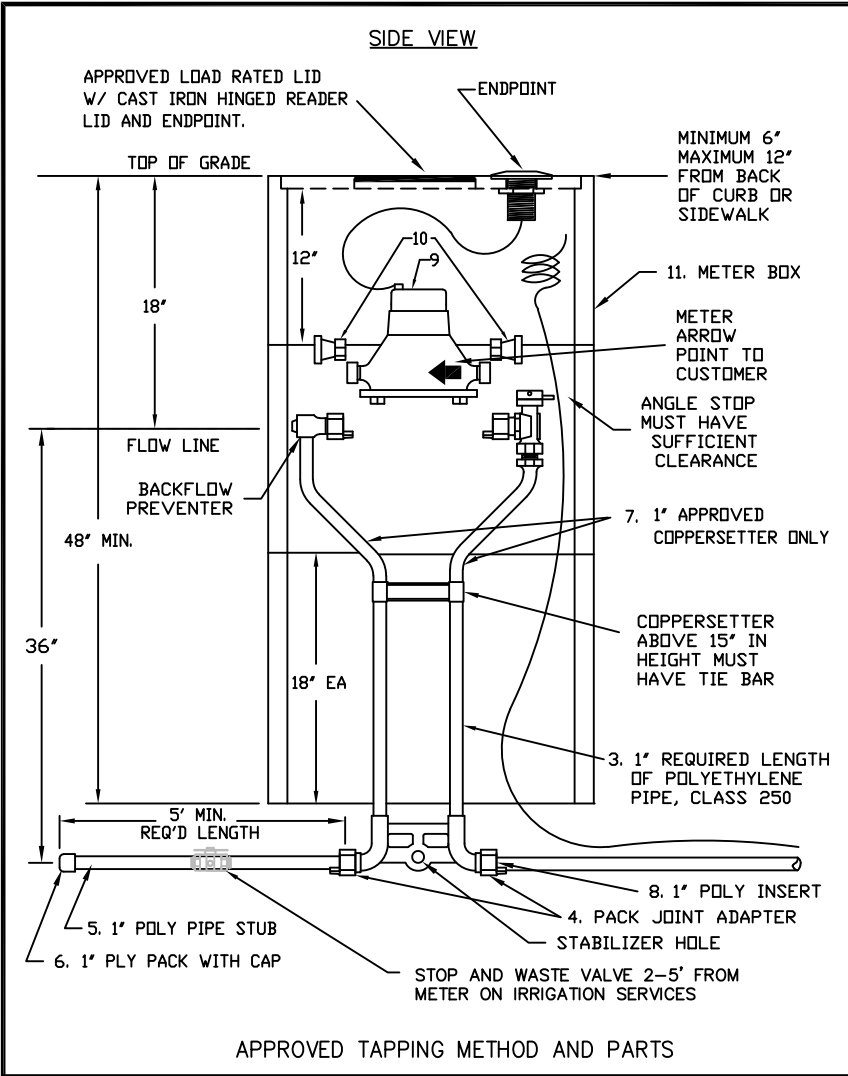
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

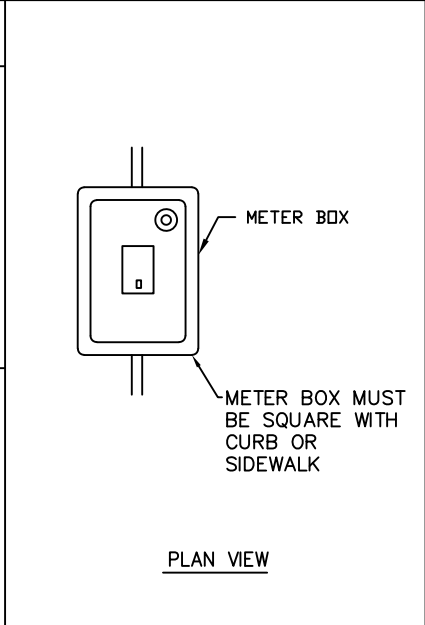
DWG NO.

SS-11



ITEM NO.	NO. REQ'D.	DESCRIPTION
1	1	1" ROMAC DOUBLE STRAP SERVICE SADDLE
2	1	IPS x 1" POLY PACK JOINT BRONZE CORPORATION STOP
3	1	1" x REQ. LENGTH - USE PIPE SIZE, 250 PSI POLYETHYLENE SERVICE LINE
4	2	1" IPS x 1" POLY BRASS PACK JOINT ADAPTER
5	1	1" x MIN 5' LONG - POLY PIPE STUB DISCHARGE SIDE
6	1	1" MALE POLY PACK WITH CAP
7	1	1" APPROVED NSF 61 COMPLIANT COPPERSETTER, ALL COMPONENTS
8	3	1" POLY INSERTS WHERE NEEDED
9	1	3/4" OR 1" BADGER CELLULAR READ METER (METER LAY LENGTH=7 1/2")
10	2	A24 ADAPTERS
11	3	ARMORCAST 13X24 RPM OR HUBBEL/QUASITE 1130 BOX W/ RADIO READ LID AND HINGED CAST IRON READER LID. BOX WILL CONSIST OF 18" BOTTOM AND MIDDLE SECTIONS, 12" TOP SECTION

- NOTES:**
- ALL MATERIALS USED IN CONTACT WITH POTABLE WATER ARE TO BE NSF-61 COMPLIANT.
 - STABILIZER BAR MUST BE USED FOR SETTINGS HAVING POLY PIPE ON BOTH FRONT AND BACK SIDES.
 - NO PRIVATE CONNECTIONS OR FITTINGS ALLOWED INSIDE THE METER BOX.
 - POLY PIPE MAY BE USED WHEN CONNECTING TO AN EXISTING SERVICE WHEN A GALVANIZED CONNECTION CANNOT BE EASILY MADE.
 - SEE STANDARD DRAWING W-2 FOR METER LOCATION.



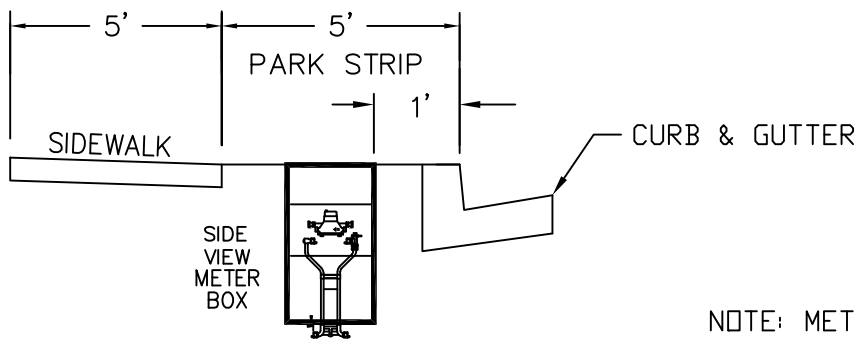
CITY OF COEUR D'ALENE STANDARD DRAWING

1" COPPERSETTER STANDARD PIT SETTINGS

APPROVED BY:

Chris Bosley 10/1/24
CITY ENGINEER, PE 10600 DATE:

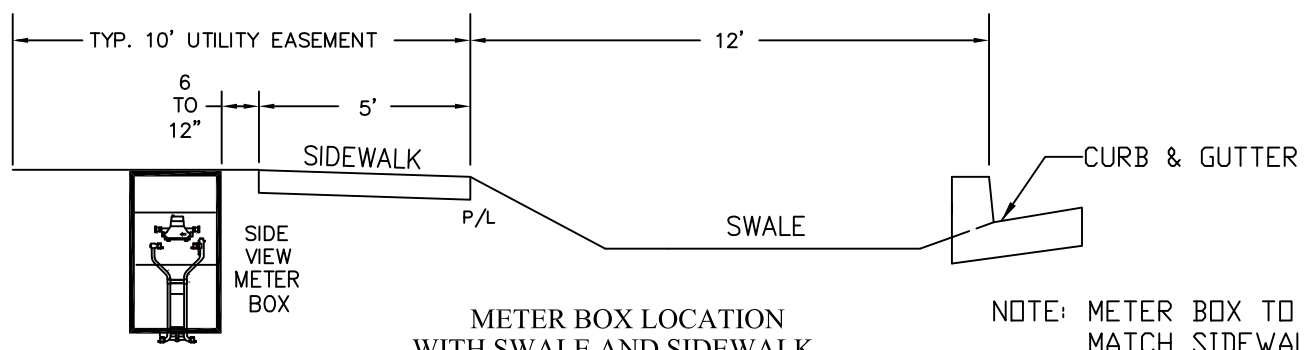
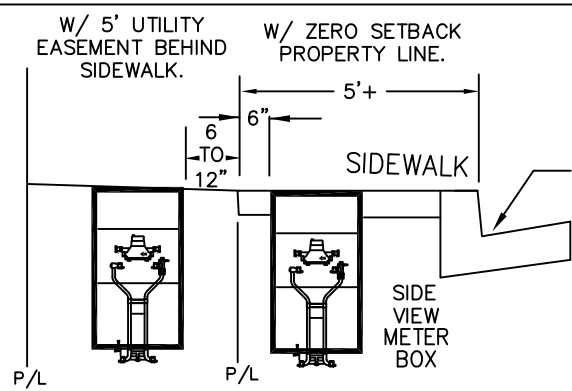
DWG NO. W-1



METER BOX LOCATION WITH PARK STRIP AND SIDEWALK

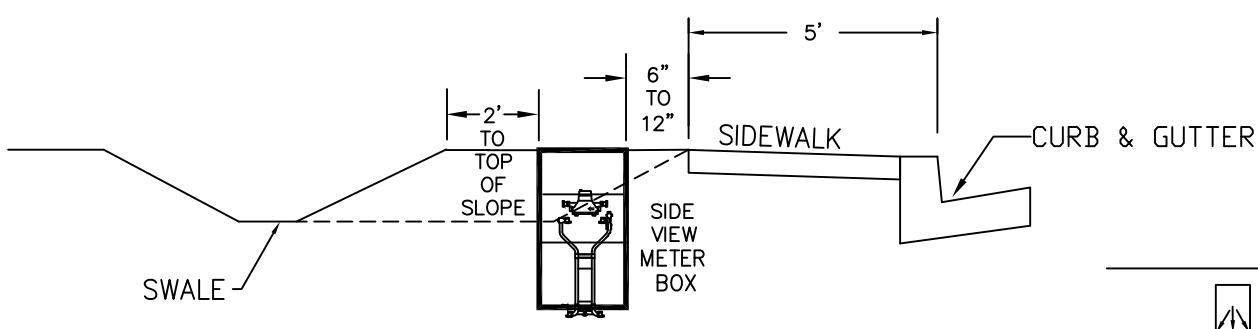
NOTE: METER BOX TO MATCH CURB ELEVATION

METER BOX LOCATION W/ METER BOX IN SIDEWALK AND PROPERTY LINE AT BACK OF SIDEWALK - OR - METER BOX LOCATION W/ METER BOX IN 5' UTILITY EASEMENT BEHIND THE SIDEWALK.

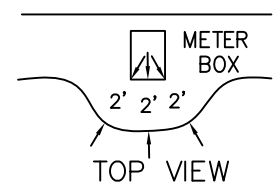


METER BOX LOCATION WITH SWALE AND SIDEWALK

NOTE: METER BOX TO MATCH SIDEWALK ELEVATION



METER BOX LOCATION WITH SIDEWALK



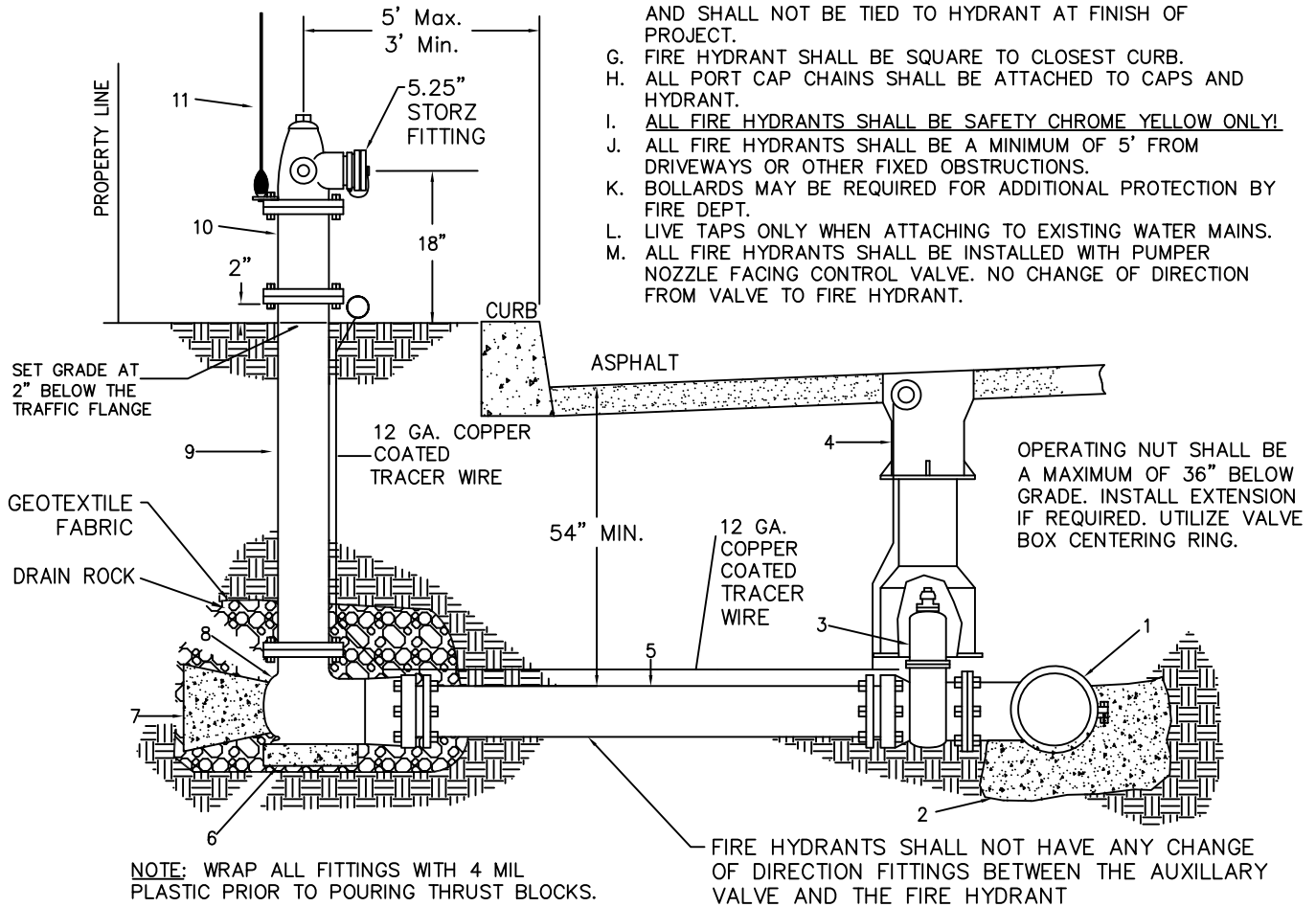
CITY OF COEUR D'ALENE STANDARD DRAWING

WATER METER LOCATIONS

APPROVED BY:
Chris Busby
 CITY ENGINEER, PE 10804
 DATE: 10/1/24
 DWG NO. W-2

NOTES:

- A. CURRENT ACCEPTED FIRE HYDRANTS (ONLY)
 - MUELLER CENTURION
 - WATEROUS PACER (WITH 16" UPPER STANDPIPE)
- B. ONLY NEW ASSEMBLIES WILL BE USED TO REPLACE OR RELOCATE AN EXISTING HYDRANT
- C. ALL FIRE HDYRANTS SHALL BE PRESSURE TESTED, DISINFECTED, FLUSHED AND SAMPLED PRIOR TO PLACING IN SERVICE.
- D. FIRE HYDRANT MUST BE LEVEL AND PLUMB.
- E. CORRECT BURY DEPTH SHALL BE USED FOR NEW INSTALLATIONS. ALL EXTENSIONS TO HAVE PRIOR APPROVAL OF CITY WATER DEPT.
- F. TRACER WIRE TO BE A MAXIMUM OF 2' ABOVE FINAL GRADE AND SHALL NOT BE TIED TO HYDRANT AT FINISH OF PROJECT.
- G. FIRE HYDRANT SHALL BE SQUARE TO CLOSEST CURB.
- H. ALL PORT CAP CHAINS SHALL BE ATTACHED TO CAPS AND HYDRANT.
- I. ALL FIRE HYDRANTS SHALL BE SAFETY CHROME YELLOW ONLY!
- J. ALL FIRE HYDRANTS SHALL BE A MINIMUM OF 5' FROM DRIVEWAYS OR OTHER FIXED OBSTRUCTIONS.
- K. BOLLARDS MAY BE REQUIRED FOR ADDITIONAL PROTECTION BY FIRE DEPT.
- L. LIVE TAPS ONLY WHEN ATTACHING TO EXISTING WATER MAINS.
- M. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH PUMPER NOZZLE FACING CONTROL VALVE. NO CHANGE OF DIRECTION FROM VALVE TO FIRE HYDRANT.



ITEM NO.	NO. REQ'D	DESCRIPTION
1	1	MAIN SIZE MJ x 6" FLANGE CAST IRON TEE OR DIRECT TAP SADDLE.
2	1	CONCRETE BLOCKING PER STD DWG W-9, W-10
3	1	6" FLANGE x MJ GATE VALVE
4	1	TYLER CAST IRON VALVE BOX W/LID. SERIES 6855 OR APPROVED EQUAL.
5	1	6" C-900 PVC PIPE x REQ'D LENGTH OR APPROVED EQUAL
6	1	CONCRETE BLOCKING - 12" WIDE x 12" LONG x 4" THICK.
7	1	CONCRETE BLOCKING PER STD DWG W-9, W-10
8	1	BASE
9	1	EXTENSION - SIZED AS NEEDED FOR CORRECT BURY DEPTH.
10	1	FIRE HYDRANT - 5 1/4 WATEROUS PACER TRAFFIC MODEL OR MUELLER CENTURION MODEL 200.
11	1	FIRE HYDRANT FLAG - 36" YELLOW FIBERGLASS WITH SPRING LOADED BASE.
NOTE: NUMBERS 8-10 COME PREASSEMBLED AS ONE UNIT.		

HYDRANT SPECIFICATIONS

- * 6" DRYBARREL FIRE HYDRANT SUITABLE FOR A 5' TRENCH.
- * 6" MECHANICAL JOINT BOTTOM CONNECTION.
- * 1 1/2" PENTAGON OPERATING NUT, OPEN LEFT.
- * TWO 2 1/2" HOSE NOZZLES NST.
- * ONE PUMPER NOZZLE 4 1/2" STORZ PORT.
- * HYDRANT COLOR-CHROME YELLOW.
- * 150 IBS. W.W.P., 300 IBS. WTP.
- * MODERN PROFILE TYPE.



CITY OF COEUR D'ALENE STANDARD DRAWING

TYPICAL 6" FIRE HYDRANT SETTING

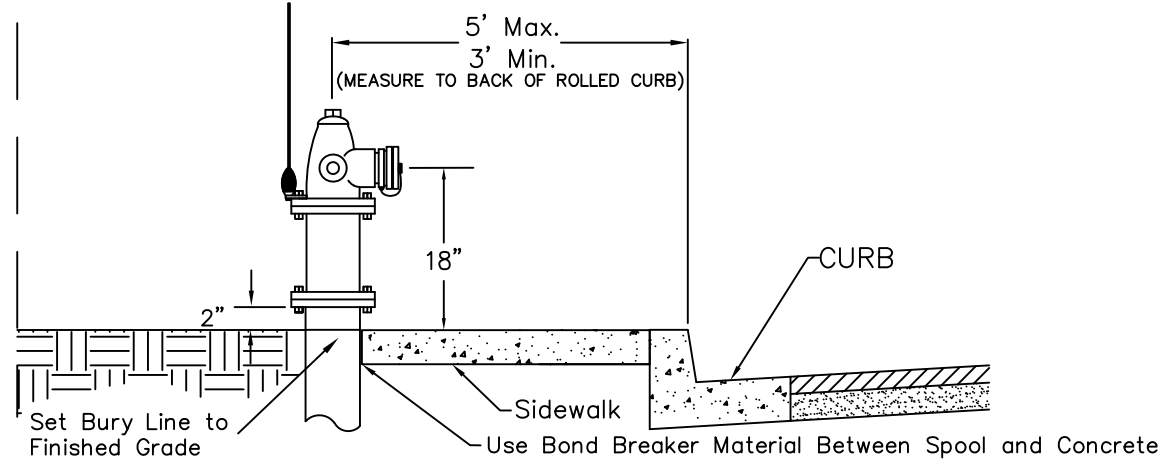
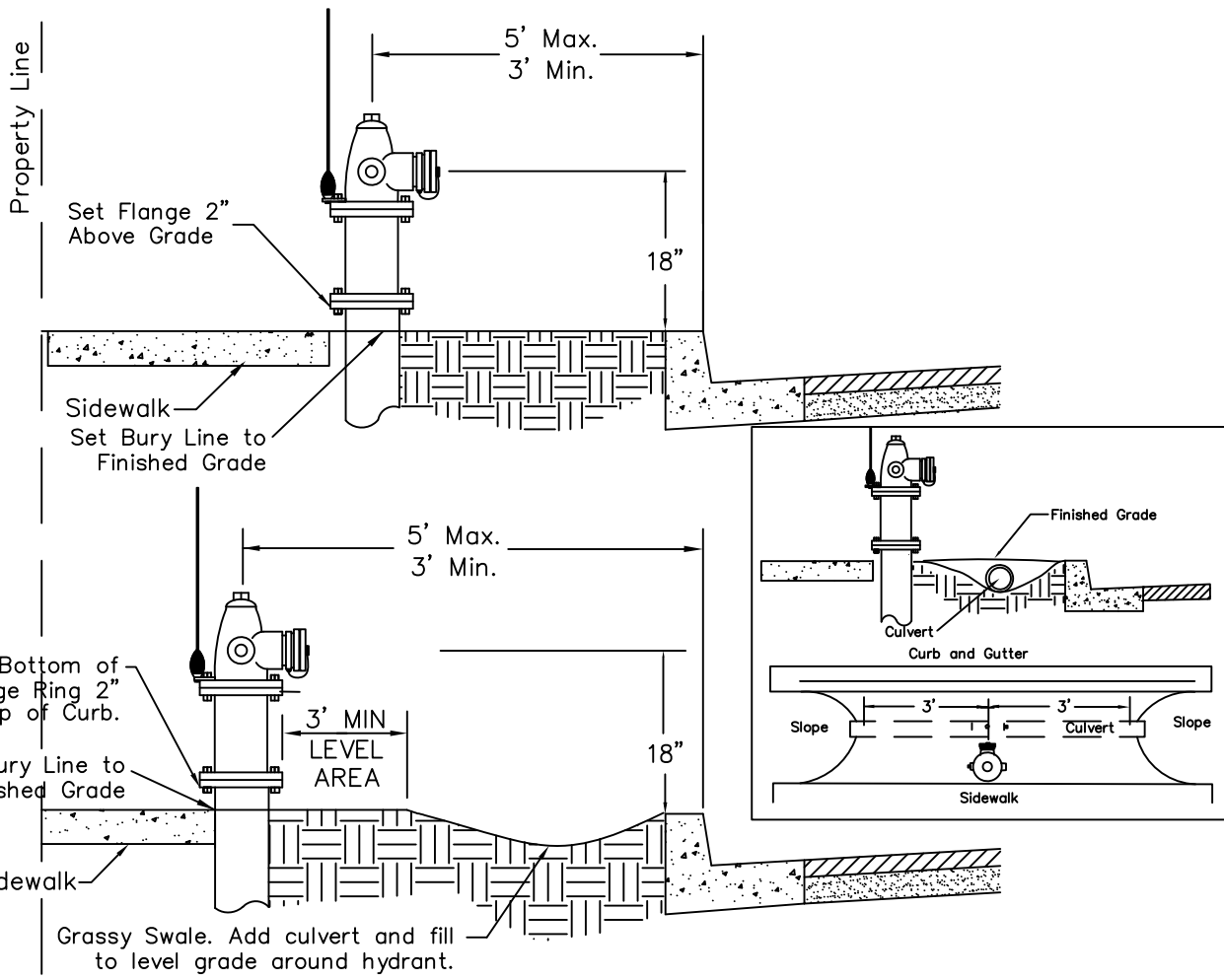
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-3



NOTES

1. When distance from hydrant to the top or toe of slope is less than 2 feet, special installation will be required by the City Engineer.
2. Where hydrant is not protected by a vertical face of curb protective posts are required. See standard drawing w-53
3. The centerline of the hydrant shall be located 5' minimum from curb return and 5' minimum from a driveway or any fixed obstruction.



CITY OF COEUR D'ALENE STANDARD DRAWING

**FIRE HYDRANT
LOCATIONS**

APPROVED BY:

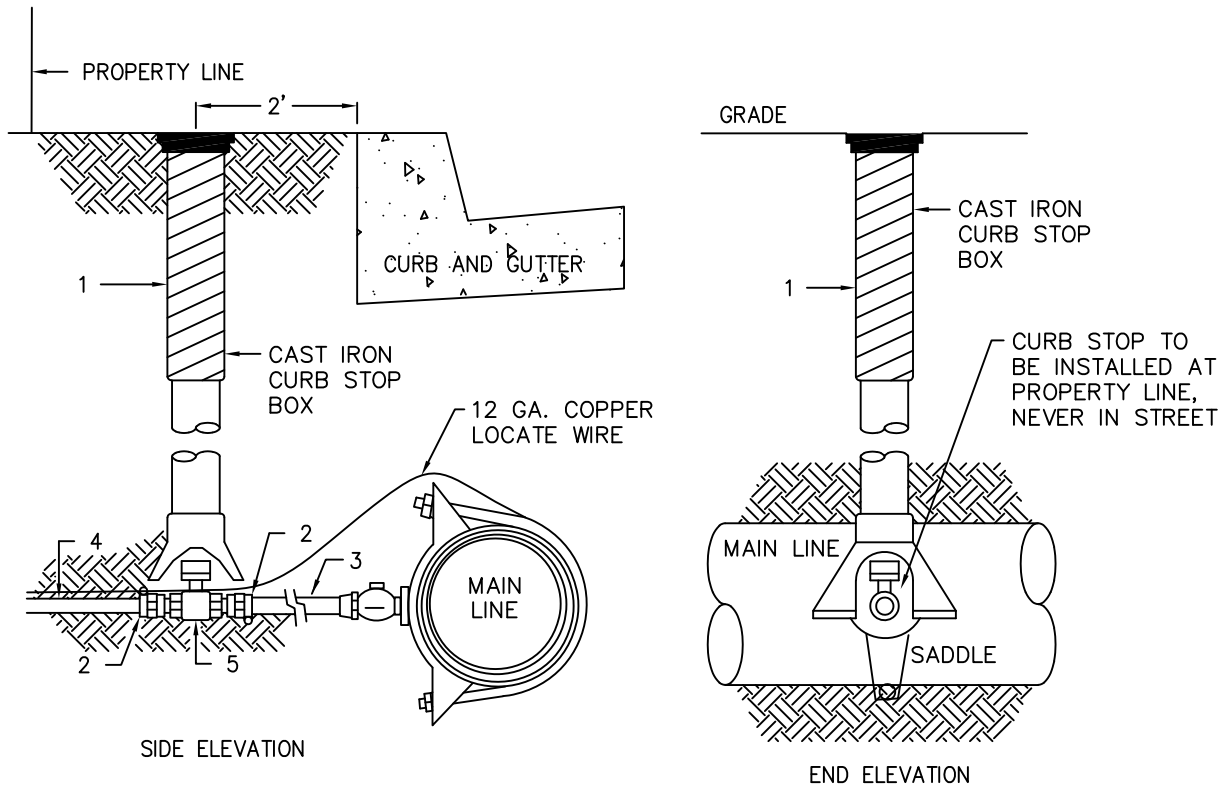
Chris Busby
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-4

ONLY TO BE USED IN EMERGENCIES OR SAMPLE STATION INSTALLATIONS



APPROVED TAPPING METHOD:

1. ROMAC DOUBLE STAINLESS STEEL SADDLE TAP
2. SEE STD DWG W-1 FOR TAPPING DETAILS

NOTE: CURB STOP BOX SETTINGS

- A. ONLY CAST IRON CURB STOP BOXES SHALL BE USED.
- B. LID SHALL BE AT FINISHED GRADE.
- C. LID SHALL HAVE "WATER" IMPRINTED ON LID.

ITEM NO.	NO. REQD.	DESCRIPTION
1	1	CAST IRON CURB STOP BOX
2	3	1" BRASS PACK JOINT ASSEMBLY
3	1	1" x REQD. LENGTH -- USE IRON PIPE SIZE POLYETHYLENE HDPE (250 PSI)
4	1	1" x REQD. LENGTH (STOPPING AT PROPERTY LINE)- USE PIPE SIZE GALV. OR IRON PIPE SIZE POLYETHYLENE PIPE
5	1	1" BRASS CURB STOP WITH PACK JOINT ASSEMBLY.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

**1" - 2" CURB STOP
C.I. BOX ASSEMBLY**

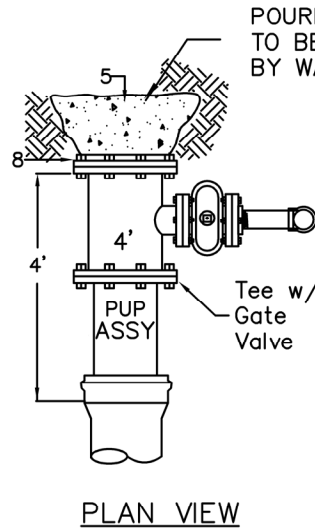
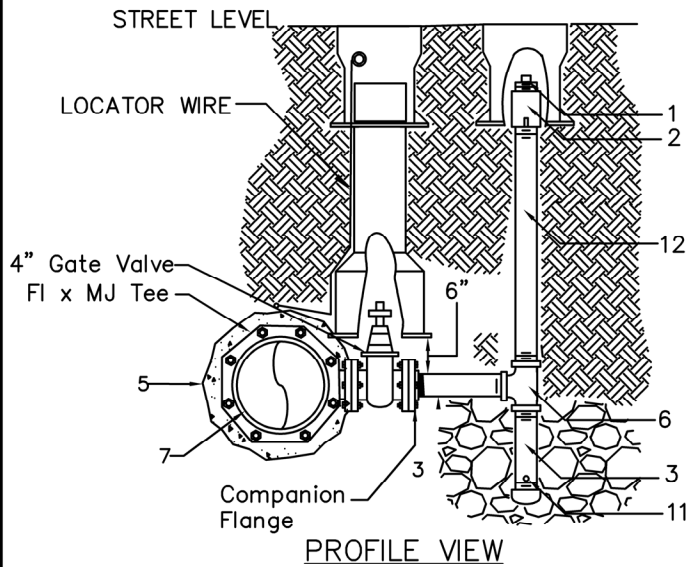
Chris Bosley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-5

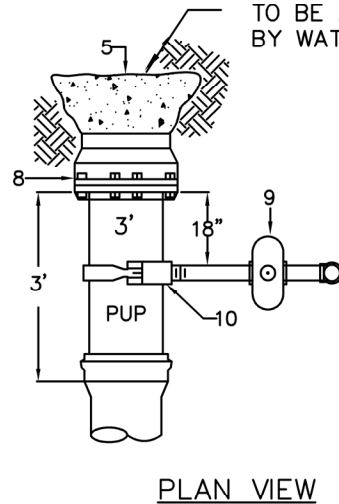
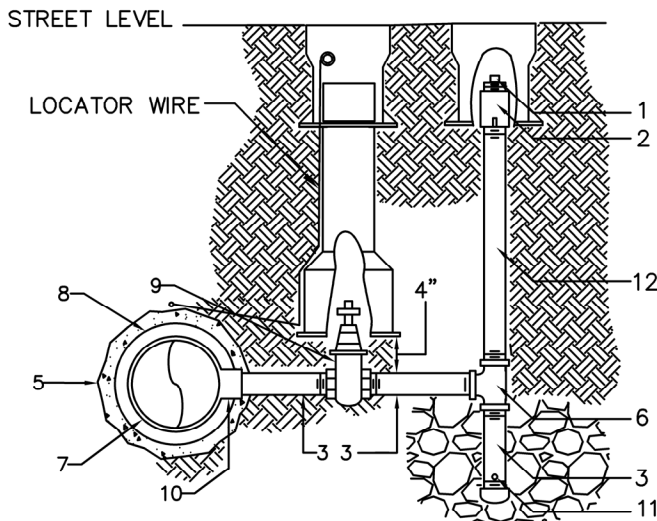
OFFSET CONNECTION/SIDE TAP – 12" AND LARGER C905 MAIN



POURED BLOCK TO BE APPROVED BY WATER DEPT.

NOTE: THE OFFSET CONNECTION SHALL ALWAYS BE ON THE RIGHT HAND SIDE OF MAIN LOOKING FROM THE MAIN CONTROL VALVE.

OFFSET CONNECTION/SIDE TAP FOR 6" & 8" C900



POURED BLOCK TO BE APPROVED BY WATER DEPT.

NOTE: THE OFFSET CONNECTION SHALL ALWAYS BE ON THE RIGHT HAND SIDE OF MAIN LOOKING FROM THE MAIN CONTROL VALVE.

ITEM NO.	NO. REQD.	DESCRIPTION
1	2	APP. PIPE DIA THREADED PLUG AND/OR CAP AS NEEDED
2	1	THREAD IRON PIPE COUPLING
3	3	APP. PIPE DIA x 8" LONG GALVANIZED PIPE NIPPLE
4	2	TYLER CAST IRON VALVE BOX W/16" TOP SECTION & LID. SERIES 6855-HD OR APPROVED EQUAL.
5	1	CONCRETE BLOCKING – PER DRAWING W-9 & W-10
6	1	APP PIPE DIA THREADED IRON PIPE TEE -- GALVANIZED
7	1	WATER MAIN, MINIMUM 3' PUP AT END
8	1	MAIN SIZE MJ CAP (6-8") OR BLIND FLANGE/MJ PLUG.
9	1	APP DIA IPxIP THREADED GATE VALVE W/ 2" OPER. NUT
10	1	MAIN SIZE x APP. TAP SIZE DOUBLE STRAP SADDLE.
11	4	DRILL 1/8" HOLE OR CUT 1/2" SLOT WITH CHOP SAW
12	1	APP DIA X REQUIRED LENGTH GALV. PIPE NIPPLE

NOTE: STANDARD 2" BLOW OFF ASSY. IS ADEQUATE FOR 8" AND SMALLER MAINS TO ACHIEVE 2.5 FT/SEC VELOCITY. REFERENCE WATER DEPT. STANDARD DRAWING W-35 "MAIN FLUSHING CHART", TO DETERMINE PROPER SIZE OF ASSEMBLY FOR 12" AND LARGER MAINS.



CITY OF COEUR D'ALENE STANDARD DRAWING

TYP. FROST FREE BLOWOFF ASSEMBLY

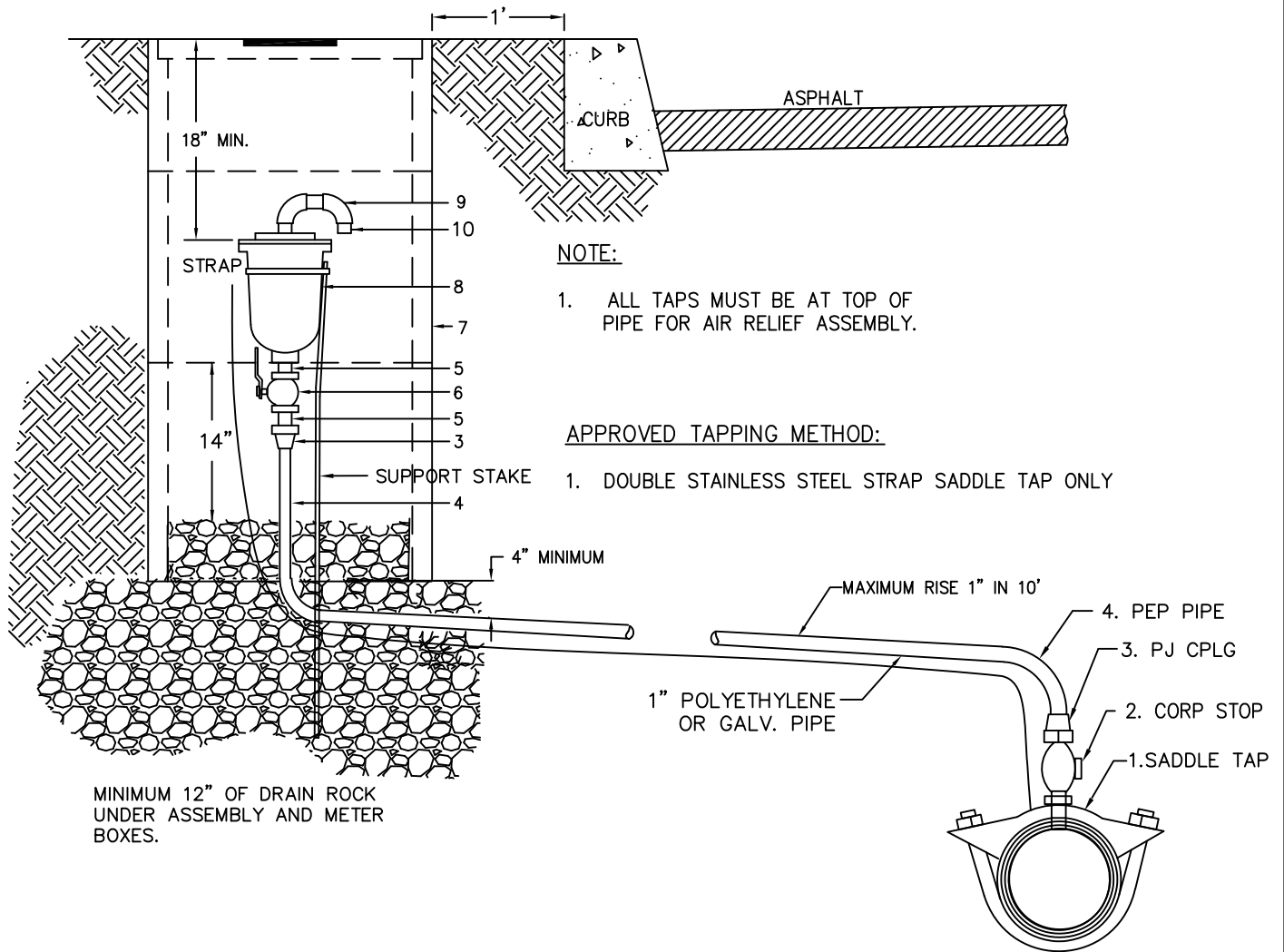
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-6



NOTE:

1. ALL TAPS MUST BE AT TOP OF PIPE FOR AIR RELIEF ASSEMBLY.

APPROVED TAPPING METHOD:

1. DOUBLE STAINLESS STEEL STRAP SADDLE TAP ONLY

MINIMUM 12" OF DRAIN ROCK UNDER ASSEMBLY AND METER BOXES.

ITEM NO.	NO. REQ.	DESCRIPTION
1	1	ROMAC DOUBLE STRAP TAPPING SADDLE
2	1	1" BRONZE CORPORATION STOP
3	2	1" PACK JOINT AS REQUIRED
4	1	1" IPS POLYETHELENE OR GALV. PIPE
5	4	1" x 2" GALVANIZED NIPPLES
6	1	1" APPROVED BALL VALVE
7	4	13 x 24 RPM - MIN 3 REQ. PLUS 1 WITH READER LID (NO MXU HOLE)
8	1	APCO (REGULAR) COMBINATION AIR RELEASE VALVE (150 PSI)
9	2	1" 90 DEGREE GALVANIZED ELBOWS
10	1	INSECT SCREEN

ISPWC STANDARD # 408 AIR RELIEF VALVES

UNLESS OTHERWISE SPECIFIED, THESE APPURTENANCES SHALL BE OF THE MATERIAL SPECIFIED OR SHOWN ON THE PLANS AND SHALL MEET PRESSURE REQUIREMENTS EQUAL TO OR EXCEEDING THE MAIN INSTALLATION AND SHALL BE NSF-61 CERTIFIED.



CITY OF COEUR D'ALENE STANDARD DRAWING

1" AIR RELIEF ASSEMBLY

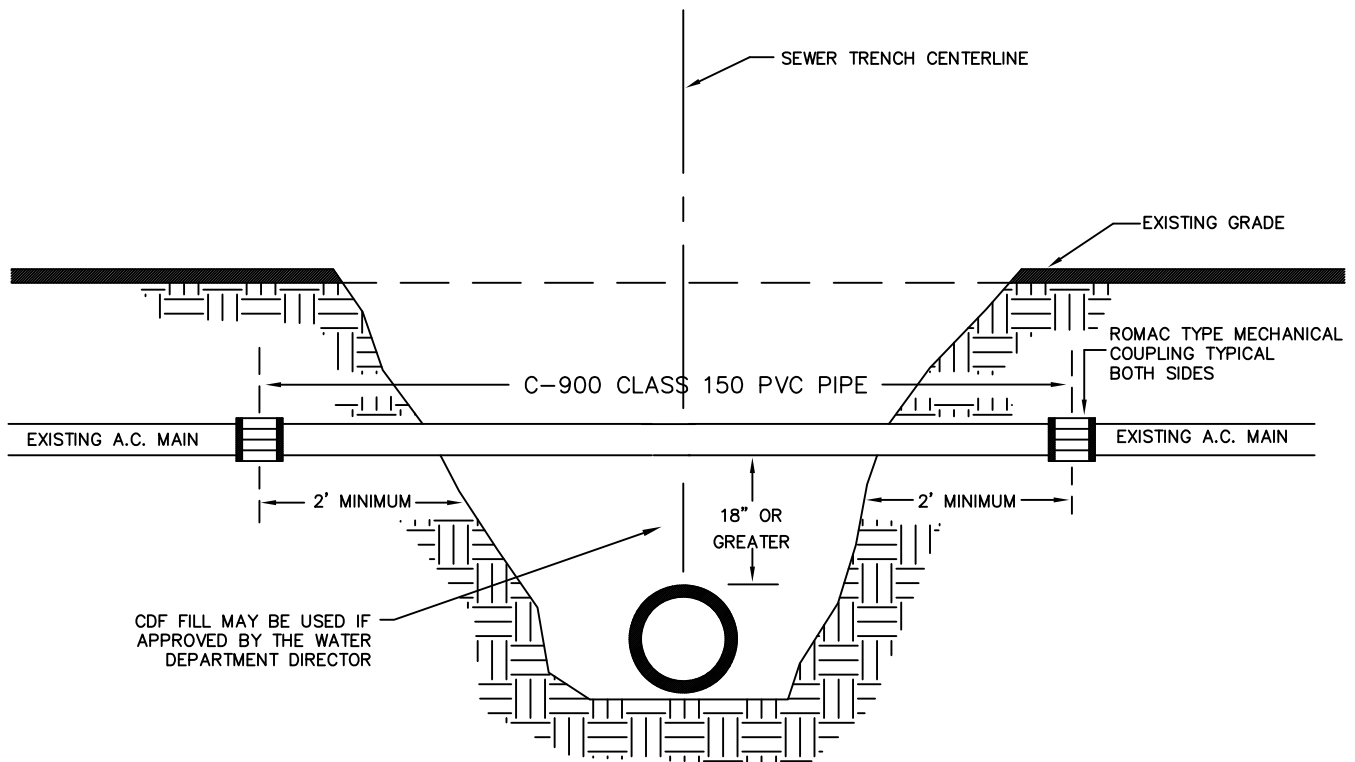
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-7



NOTES:

1. COORDINATE WATER CUSTOMER NOTIFICATION AND WATER SERVICE SHUT DOWNS WITH WATER DEPT. BY CALLING 208-769-2210.
2. FOR ALL EXISTING A.C. MAINS, REPLACE WITH C900 PVC, CLASS 150 PIPE.
3. FOR ALL INSTALLATIONS WHERE SEWER MAIN IS GREATER THAN 18" BELOW EXISTING A.C. PIPE.
4. FOR INSTALLATIONS WITH LESS THAN 18" SEPARATION, COMPACT DENSITY FILL (CDF) MAY BE USED.
5. COMPLETE INSTALLATION OF PVC PIPE PRIOR TO EXCAVATION FOR SEWER MAIN.
6. IF REPAIR REQUIRES MORE THAN ONE SECTION OF PIPE, BELL AND SPIGOT OF PVC PIPE MUST BE AT LEAST 10' AWAY FROM SEWER MAIN CENTER LINE. PIPE MUST BE SUPPORTED DURING EXC. JOINT CAN BE ELIMINATED IF CROSSING CAN BE MADE WITH ONE SINGLE LENGTH OF PIPE.
7. ALL PIPE, COUPLINGS AND MISC. PARTS SHALL BE CLEANED AND DISINFECTED WITH A CHLORINE SOLUTION PRIOR TO INSTALLATION.
8. ANY MODIFICATIONS TO EXISTING MAINS SHALL BE NOTED ON RESPECTIVE AS-BUILTS.
9. ALL INSTALLATIONS MUST BE INSPECTED BY THE WATER DEPT. PRIOR TO BACKFILL.
10. COMPACTION MUST MEET ALL CITY STANDARDS.
11. REPLACEMENT WITH C900 OR C905 PVC PIPE ONLY.
12. FOR CROSSINGS LESS THAN 18" VERTICAL SEPARATION, AN APPROVED SLEEVE WILL BE REQUIRED. CDF MAY BE APPROVED AT THE SUPERINTENDENTS DISCRETION FOR CROSSINGS LESS THAN 18".



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED A.C. MAIN
REPLACED CROSSING**

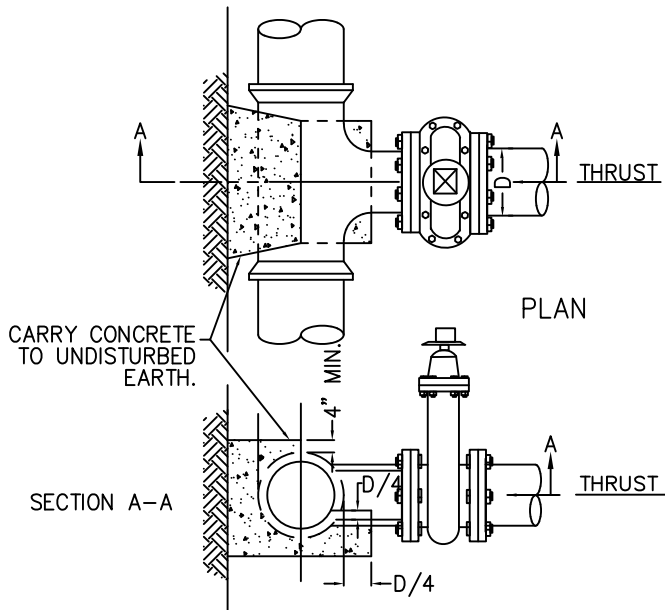
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10800

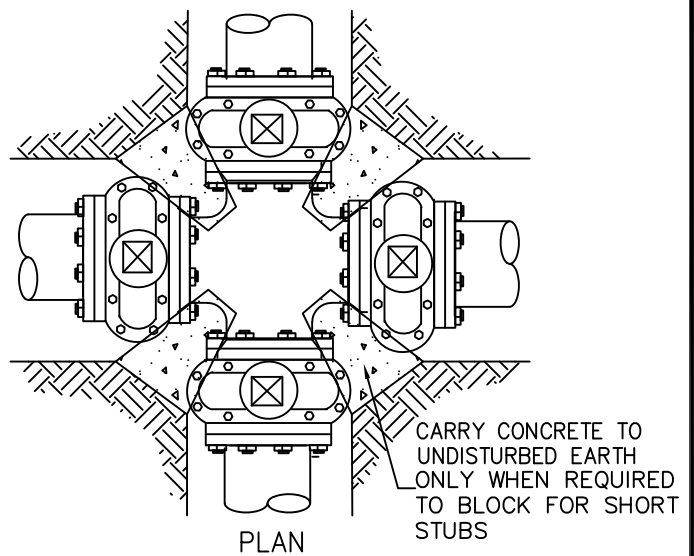
10/1/24
DATE:

DWG NO.

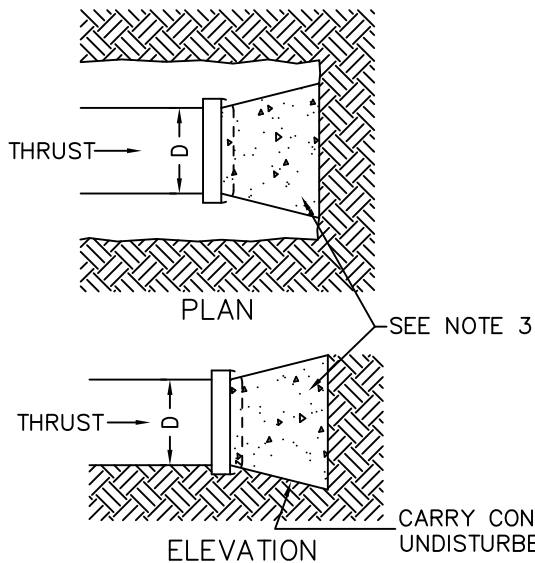
W-8



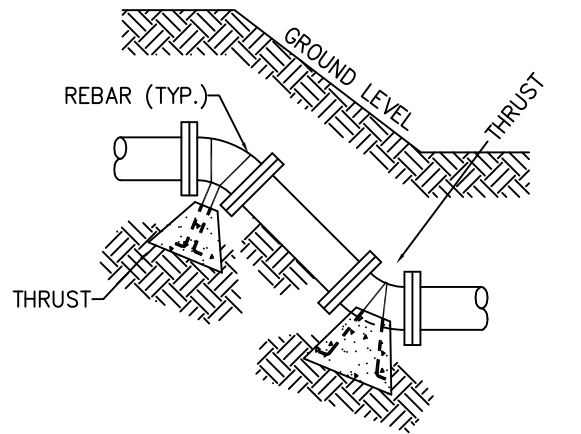
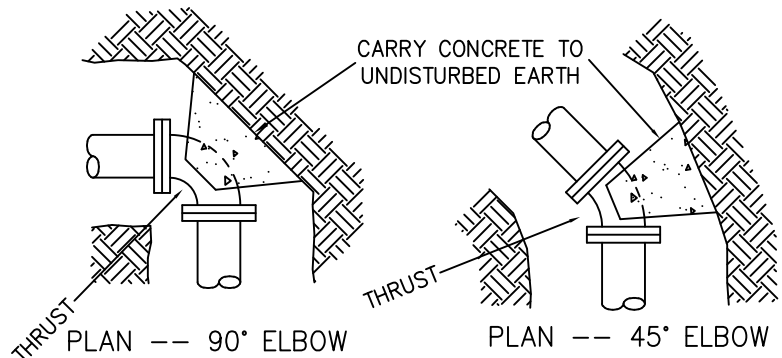
THRUST BLOCKING FOR TEES



THRUST BLOCKING FOR CROSS AS DIRECTED



THRUST BLOCKING FOR CAPS



THRUST BLOCKING FOR ELBOWS

- NOTES:**
1. ALL CONCRETE TO BE MIN 2500 P.S.I. KEEP CONCRETE CLEAR OF NUTS AND BOLTS WHEN USING FLANGED FITTINGS.
 2. SEE STANDARD DRAWING W-10 FOR THRUST BLOCK BEARING AREAS.
 3. USE MIN 4 MILL PLASTIC WRAPPED AGAINST FITTINGS TO PROTECT BOLTS.
 4. ECOLOGY BLOCKS MAY BE USED IF WITH PRIOR APPROVAL FOR MAINS 12" & LESS WITH THRUST CALCS PROVIDED TO CITY.
 5. 11 1/4" FITTINGS DO NOT REQUIRE THRUST BLOCKS IF MEGALUGGED.



CITY OF COEUR D'ALENE STANDARD DRAWING

THRUST BLOCKING

APPROVED BY:

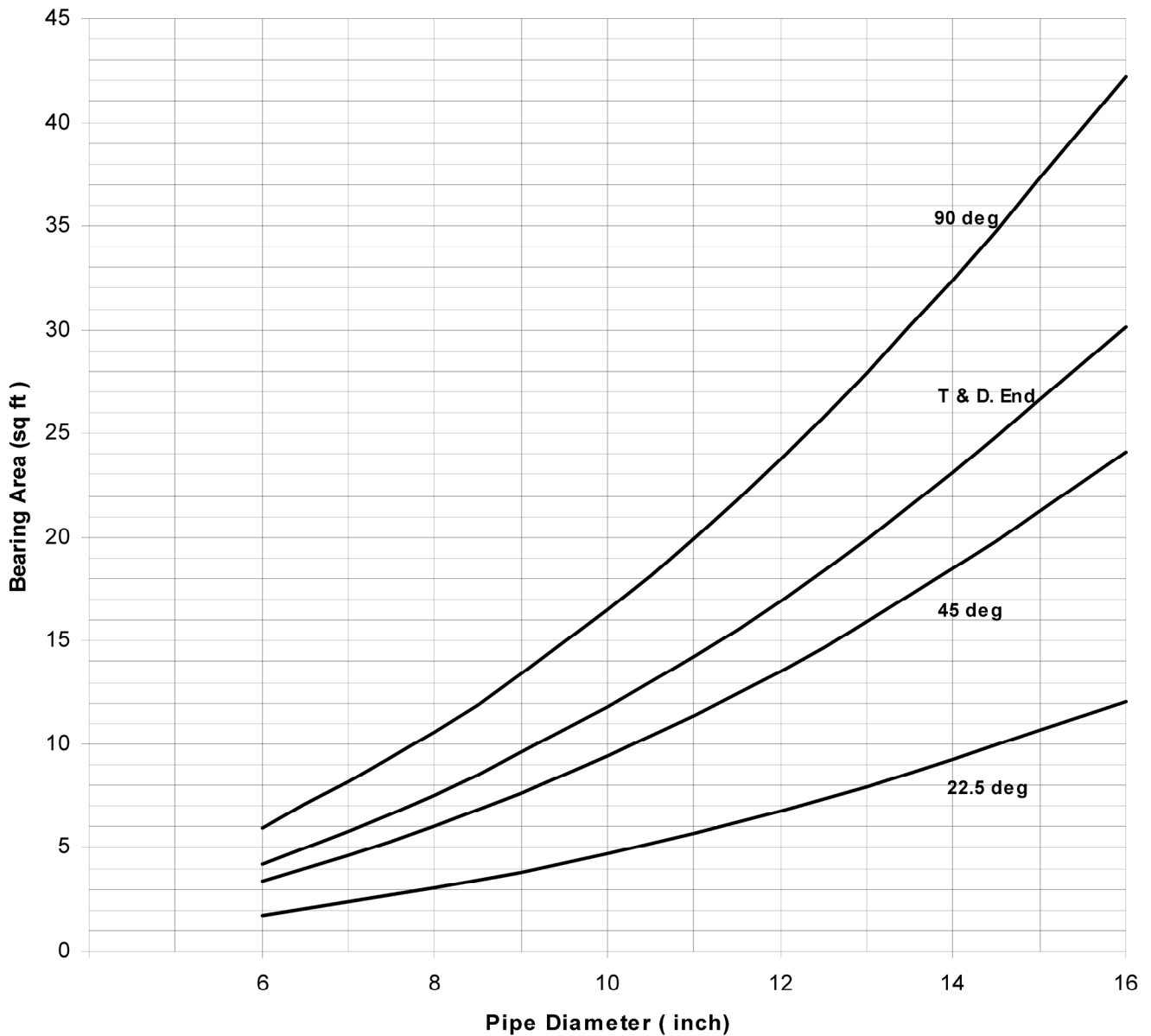
Chris Bosley
CITY ENGINEER, PE 10802

10/1/24
DATE:

DWG NO.

W-9

THRUST BLOCK BEARING AREA



NOTES

1. Based on 150 psi test pressure and a soil bearing pressure of 1500psf
2. For conditions not covered by these curves, special thrust blocks must be designed and approved.
3. Ecology blocking may be used with prior approval from the City Engineer and/or the Superintendent for mains 12" and less in size.
4. The Design Engineer shall provide thrust bearing area calculations using 1500psf as the desired standard prior to block approval.



CITY OF COEUR D'ALENE STANDARD DRAWING

THRUST BLOCK BEARING AREA

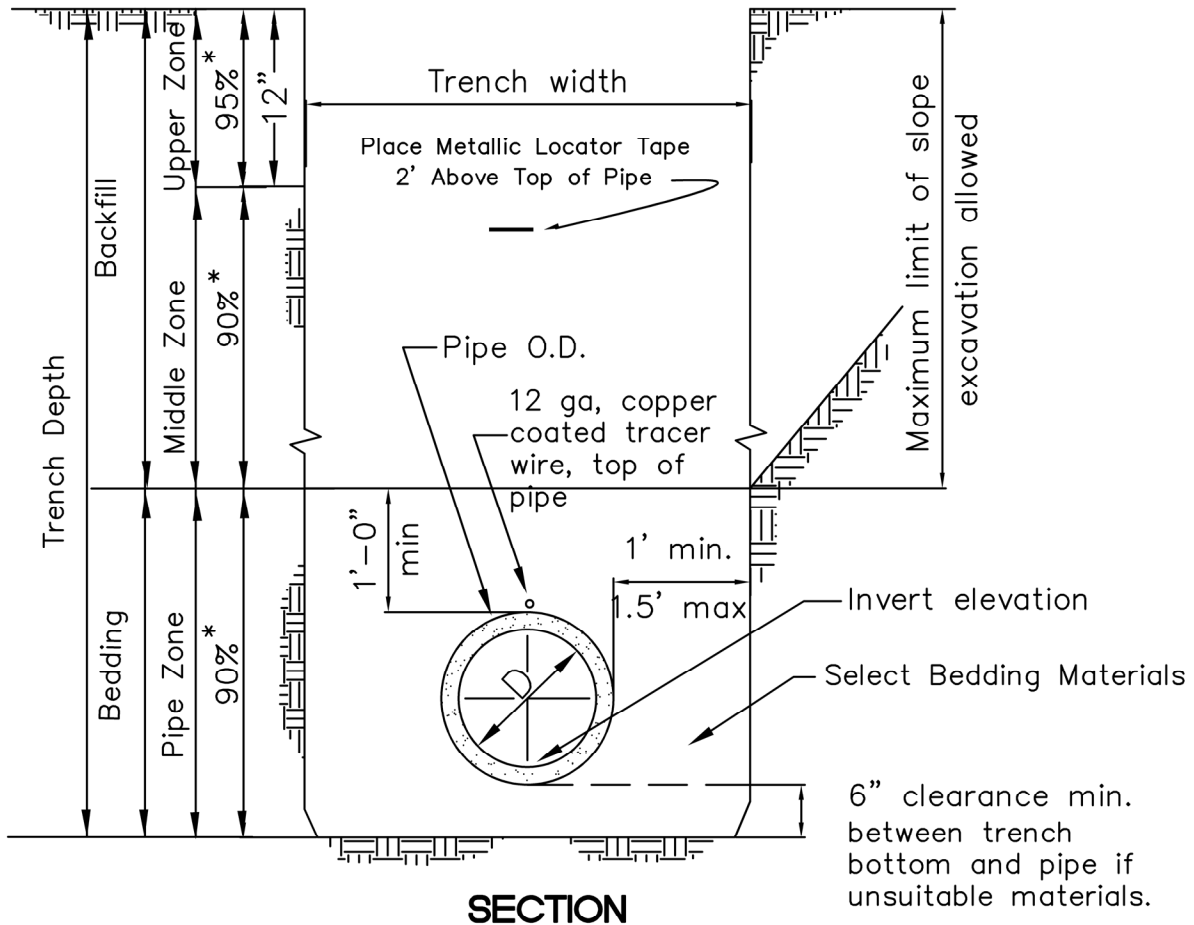
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-10



NOTES

1. For trenching in improved streets, see Standard Drawing M-11 for trench resurfacing.
2. (*) indicates minimum relative compaction using modified proctor (ASTM D-1557).
3. Minimum depth of cover from the top of pipe to finished grade shall be 4'6".
4. Bedding Material shall be Sand, Gravel, Crushed Aggregate, or Native material which shall be approved by the Water Dept. prior to using. Bedding shall be placed at least 6" below the pipe if the native materials are unsuitable to a minimum depth of 12" above the pipe unless the backfill is judged to be excessively coarse. Then the Water Dept. may require 24" or more of select bedding materials over the main.
5. Backfill with rocks in excess of 5" diameter or sharp jagged rock shall not be allowed in the trench at any time from bottom of trench to finished grade. Only select material shall be used.
6. Bedding material shall be distributed to an even grade across the width of the trench profile.
7. Compaction shall be accomplished by approved methods in maximum 12" lifts above the compacted bedding materials.



CITY OF COEUR D'ALENE STANDARD DRAWING

**PIPE BEDDING AND BACKFILL
FOR WATER MAINS**

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

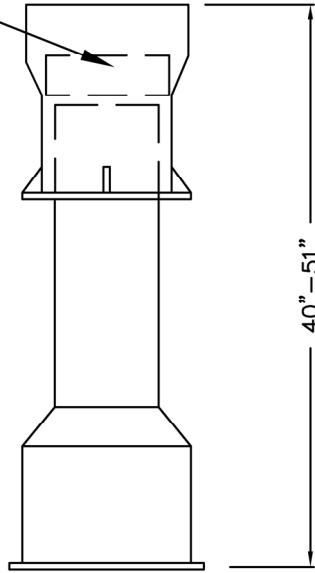
10/1/24
DATE:

DWG NO.

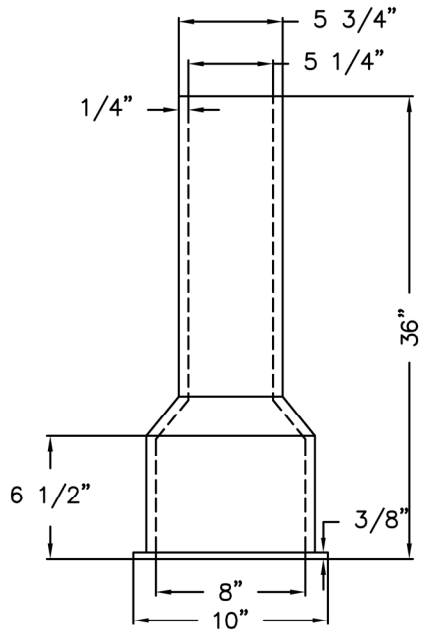
W-11

TYLER 6855 HD SERIES CAST IRON VALVE BOX

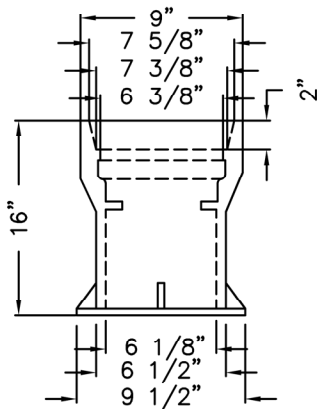
MUD PLUG



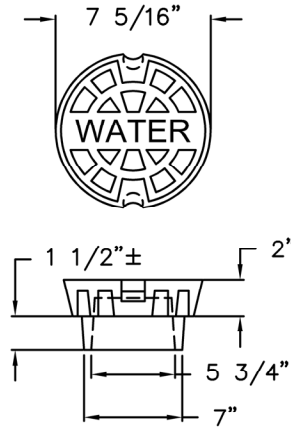
BOX COMPLETE



BOTTOM



TOP



5 1/4" DROP LID

BOX COMPLETE EXTENSION.		TOP SECTION W/LID		BOTTOM	
IN INCHES	WEIGHT	LENGTH	WEIGHT	LENGTH	WT.
40"-51"	90 LB.	16"	45 LB.	36"	45 LB.

Tyler Cast Iron Valve Box Series 6855 HD with heavy lid or approved equal
Accommodates 4" Through 12" Valves, 5 1/4" Shafts, Slip-Type



CITY OF COEUR D'ALENE STANDARD DRAWING

**CAST IRON VALVE BOX
TWO PIECE**

APPROVED BY:

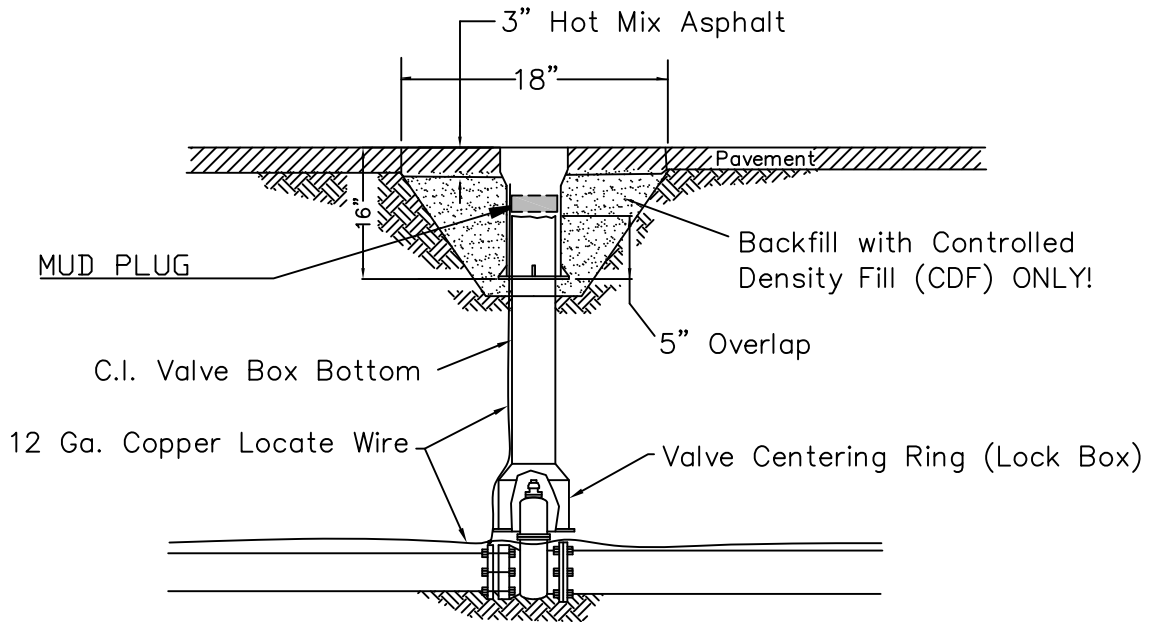
Chris Boddy
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-12

FOR NEW WATER MAIN INSTALLATIONS OR ADJUSTMENTS TO EXISTING VALVES



TYLER CAST IRON VALVE BOX 6855 HD, WITH NO FLIP "WATER" HEAVY LID, 16" x 6 1/8" ID TO SLIP OVER C.I. VALVE BOX BOTTOM SECTION.

FOR OVERLAY PROJECTS WHERE EXISTING TYLER VALVE BOXES ARE PRESENT, MAY USE 5" DOUBLE HUB SOIL PIPE AS BOTTOM BOX EXT.

Note: See Standard Drawing W-12 for Valve Box Details.



5" C.I. double hub soil pipe extension, cut to length as required.
(Makes two extensions)



CITY OF COEUR D'ALENE STANDARD DRAWING

VALVE BOX ADJUSTMENT

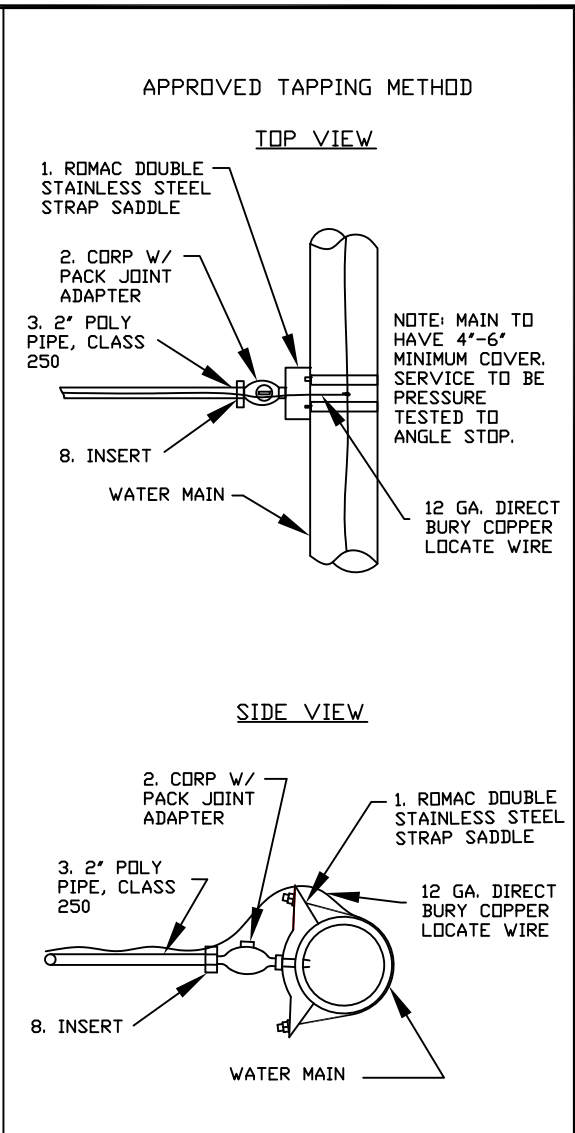
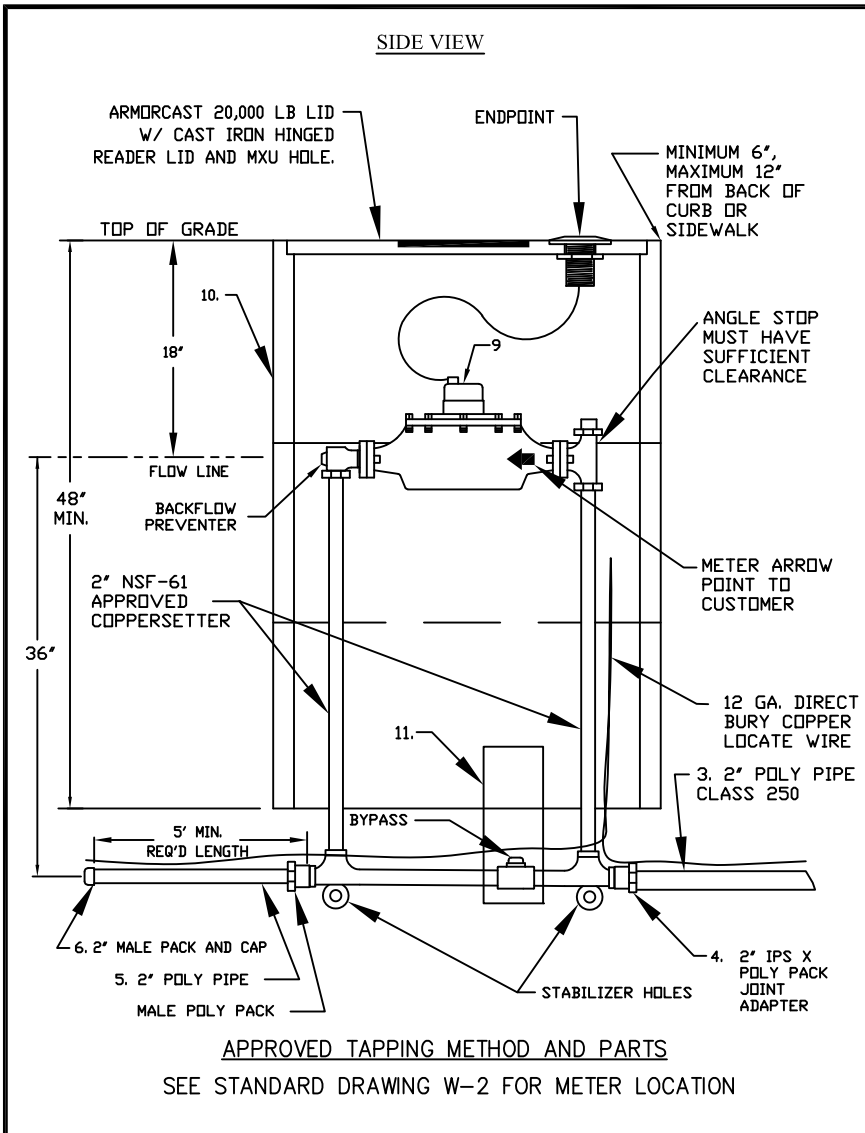
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

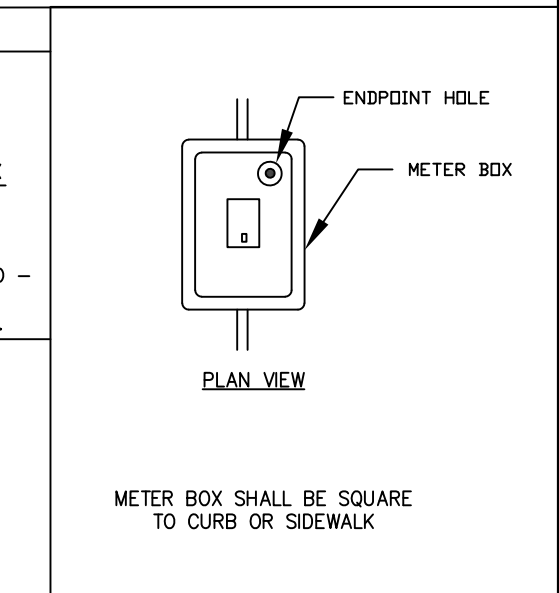
W-13



APPROVED TAPPING METHOD AND PARTS
SEE STANDARD DRAWING W-2 FOR METER LOCATION

ITEM NO.	NO. REQ'D.	DESCRIPTION
1	1	2" ROMAC DOUBLE STRAP SERVICE SADDLE
2	1	IPS x 2" POLY PACK JOINT BRONZE CORPORATION STOP.
3	1	2" x REQ. LENGTH - USE PIPE SIZE, 250 PSI POLYETHYLENE SERVICE LINE
4	1	2" IPS x 2" POLY BRASS PACK JOINT ADAPTER
5	1	2" x MIN 5" LONG - POLY AND MALE PACK JOINT BACK SIDE OF BOX
6	1	2" GALVANIZED CAP.
7	1	2" NSF-61 APPROVED COPPERSETTER, ALL COMPONENTS
8	2	2" POLY INSERTS WHERE NEEDED.
9	1	2" BADGER DISC TYPE CELLULAR READ METER (METER LENGTH=17")
10	4	ARMORCAST OR HUBBEL METER BOX SECTIONS W/ CELLULAR READ LID - 17" X 30"
11	1	6" x 8" PVC SLEEVE SADDLE NOTCHED OVER BYPASS VALVE.

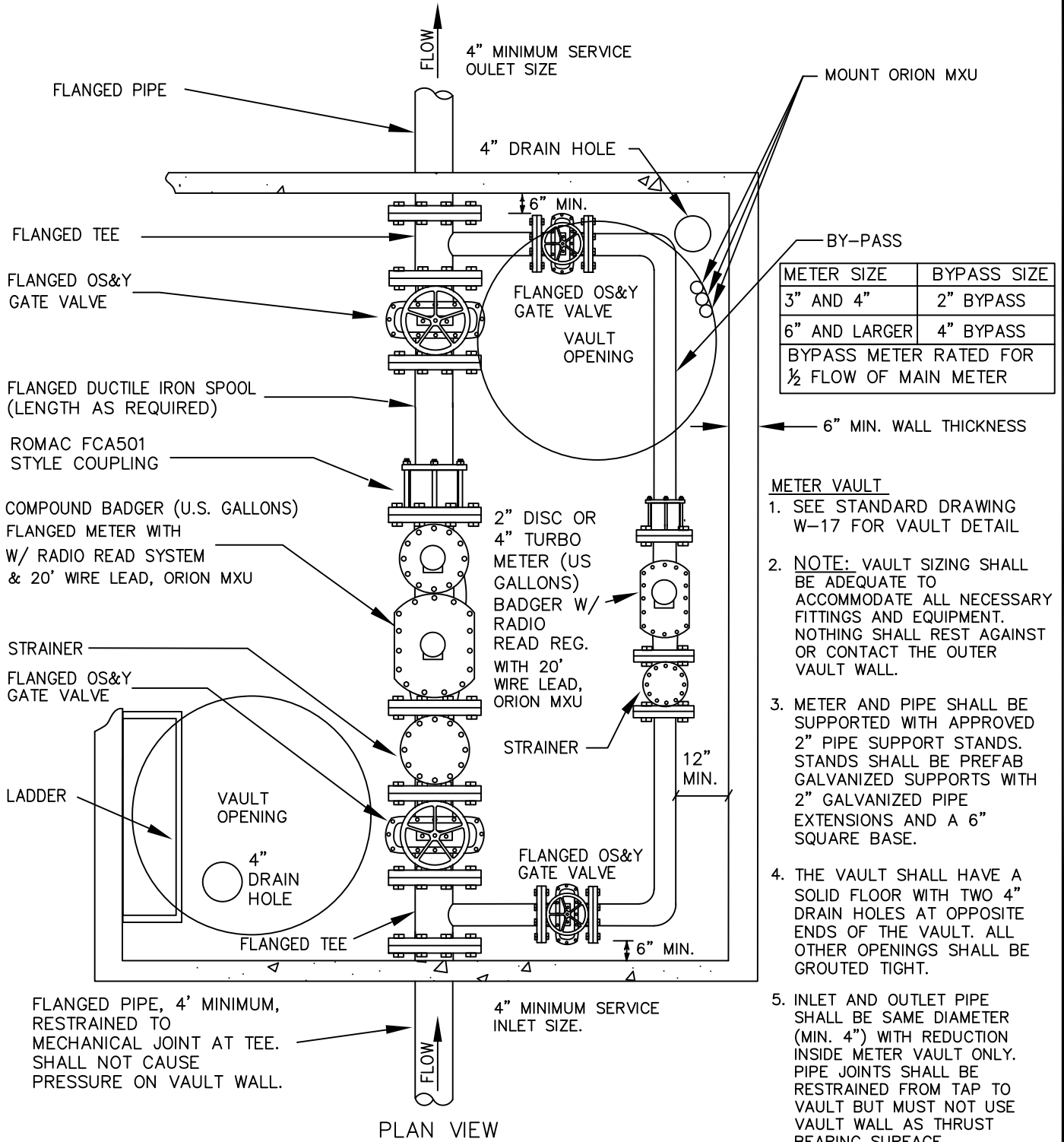
NOTES:
 1. ALL MATERIALS USED IN CONTACT WITH POTABLE WATER ARE TO BE NSF-61 COMPLIANT.
 2. STABILIZER BAR MUST BE USED FOR SETTINGS HAVING POLYPIPE ON BOTH FRONT AND BACK SIDES.
 3. NO PRIVATE CONNECTIONS OR FITTINGS ALLOWED INSIDE THE METER BOX.**
 4. POLY PIPE MAY BE USED WHEN CONNECTING TO AN EXISTING SERVICE IN THE EVENT THAT A GALVANIZED CONNECTION CANNOT BE EASILY MADE.
 5. OBSERVE MINIMUM UTILITY SEPARATION (WATER DEPARTMENT CONSTRUCTION STANDARDS - SUBSECTION 1.5.02)



CITY OF COEUR D'ALENE STANDARD DRAWING
**2" COPPERSETTER
 STANDARD PIT SETTING**

APPROVED BY:
Chris Bosley 10/1/24
 CITY ENGINEER, PE 10604 DATE:
 DWG NO. W-14

NOTE: ALL METER VAULT INSTALLATIONS TO HAVE A PRECONSTRUCTION MEETING WITH THE WATER DEPT. SCHEDULED PRIOR TO INSTALLATION.



METER SIZE	BYPASS SIZE
3" AND 4"	2" BYPASS
6" AND LARGER	4" BYPASS
BYPASS METER RATED FOR 1/2 FLOW OF MAIN METER	

- METER VAULT**
- SEE STANDARD DRAWING W-17 FOR VAULT DETAIL
 - NOTE:** VAULT SIZING SHALL BE ADEQUATE TO ACCOMMODATE ALL NECESSARY FITTINGS AND EQUIPMENT. NOTHING SHALL REST AGAINST OR CONTACT THE OUTER VAULT WALL.
 - METER AND PIPE SHALL BE SUPPORTED WITH APPROVED 2" PIPE SUPPORT STANDS. STANDS SHALL BE PREFAB GALVANIZED SUPPORTS WITH 2" GALVANIZED PIPE EXTENSIONS AND A 6" SQUARE BASE.
 - THE VAULT SHALL HAVE A SOLID FLOOR WITH TWO 4" DRAIN HOLES AT OPPOSITE ENDS OF THE VAULT. ALL OTHER OPENINGS SHALL BE GROUTED TIGHT.
 - INLET AND OUTLET PIPE SHALL BE SAME DIAMETER (MIN. 4") WITH REDUCTION INSIDE METER VAULT ONLY. PIPE JOINTS SHALL BE RESTRAINED FROM TAP TO VAULT BUT MUST NOT USE VAULT WALL AS THRUST BEARING SURFACE..
 - SEE STANDARD DRAWING W-30 FOR RING AND LID DETAIL.



CITY OF COEUR D'ALENE STANDARD DRAWING

**4" & LARGER DOMESTIC
METER VAULT SET**

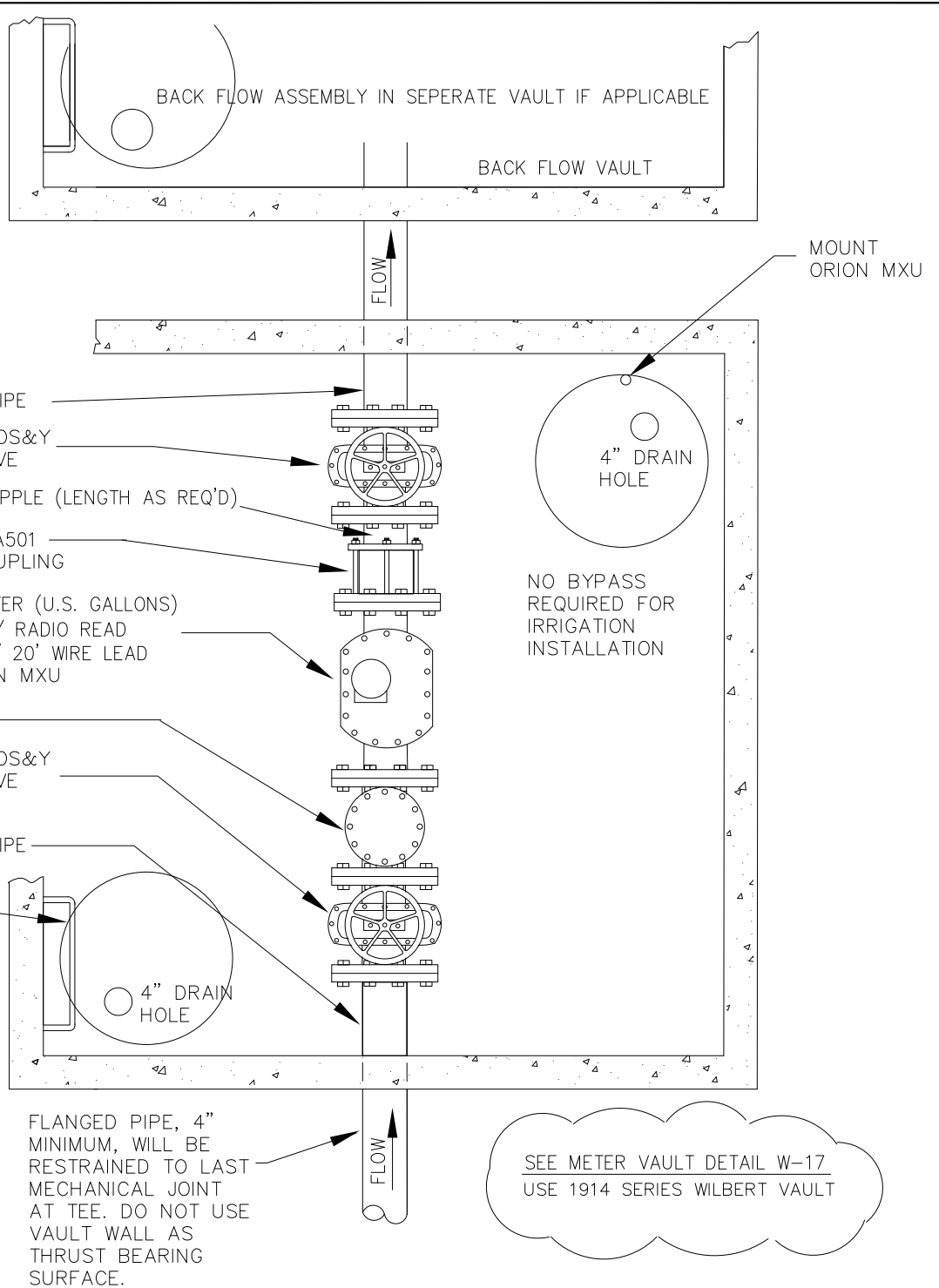
APPROVED BY:

Chris Bodley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-15



PLAN VIEW

NOTES:

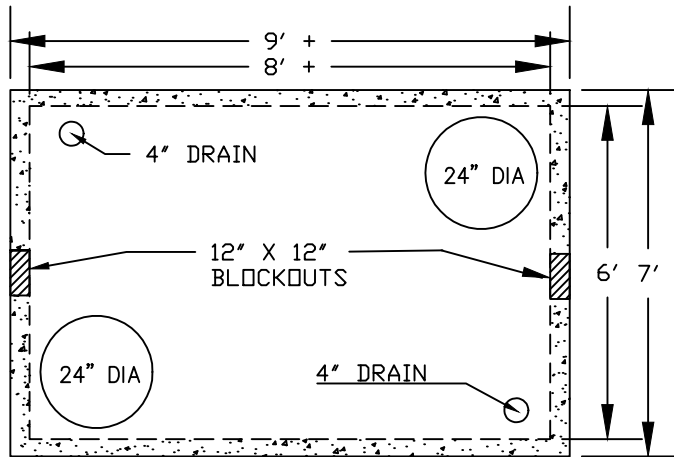
1. GATE VALVE TO BE INSTALLED AT HOT TAP TO WATER MAIN
2. 3" OR LARGER METER IN VAULT WILL BE RADIO READ

SEE METER VAULT DETAIL W-17
USE 1914 SERIES WILBERT VAULT



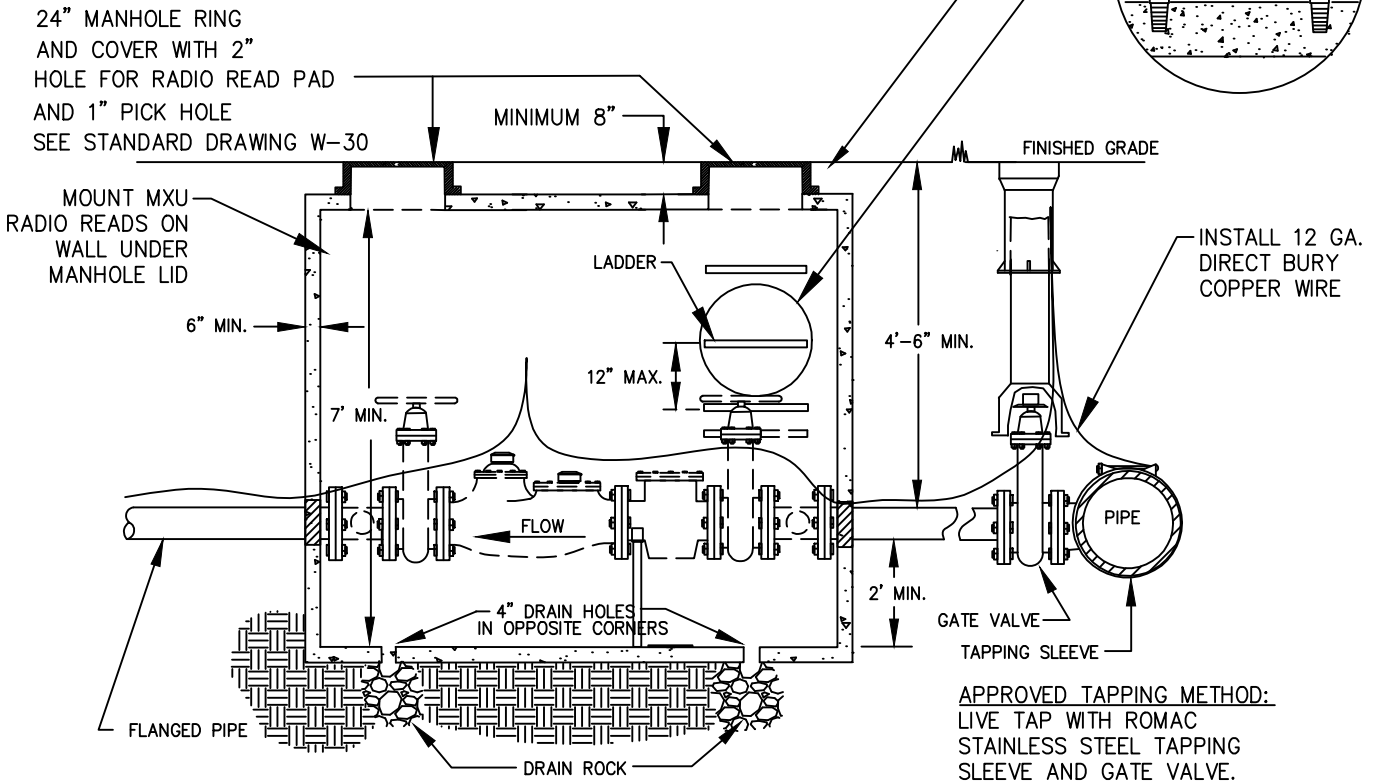
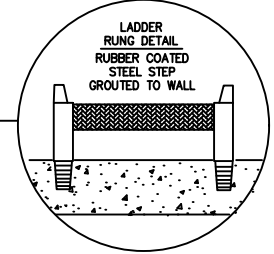
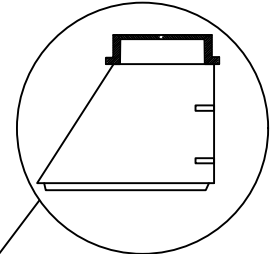
CITY OF COEUR D'ALENE STANDARD DRAWING
**4" & LARGER SERVICE SETTING
SETTING IRRIGATION VAULT**

APPROVED BY:
Chris Boddy
CITY ENGINEER, PE 10604
DATE: 10/1/24
DWG NO. W-16



PLAN VIEW

OPTIONAL 24" HIGH
OFFSET MANHOLE CONE
W/ STEPS FOR BURY
DEPTH OVER 30"



SECTION VIEW

NOTES:

1. VAULT CONSTRUCTION TO BE DESIGNED BASED ON POTENTIAL TRAFFIC LOAD. WILBERT 1914 SERIES VAULT W/ INSIDE DIMENSIONS TO ACCOMMODATE ALL EQUIPMENT AS NOTED BELOW.
2. LENGTH AND WIDTH OF VAULT SHALL ACCOMMODATE EQUIPMENT WITH ADEQUATE CLEARANCE FROM WALLS. MUST HAVE APPROVED WALL MOUNTED LADDER RUNGS WITH RUBBER COATING AS ILLUSTRATED.
3. PIPE SHALL BE RESTRAINED TO LAST MECHANICAL JOINT AT TEE AND SHALL NOT USE THE VAULT WALL FOR THRUST BLOCKING.
4. THE VAULT SHALL HAVE A MINIMUM INTERIOR HEIGHT OF 6'.
5. CONCRETE RISER RINGS IN EXCESS OF 8" HIGH SHALL REQUIRE THE INSTALLATION OF ADDITIONAL STEP(S).
6. VAULT SHALL BE INSTALLED LEVEL AND PLUMB TO PROVIDE ADEQUATE DRAINAGE TO 4" DRAIN HOLES.
7. PIPE HOLES SHALL BE CAST MIN 4" LARGER THAN PIPE TO BE USED.

APPROVED TAPPING METHOD:
LIVE TAP WITH ROMAC
STAINLESS STEEL TAPPING
SLEEVE AND GATE VALVE.



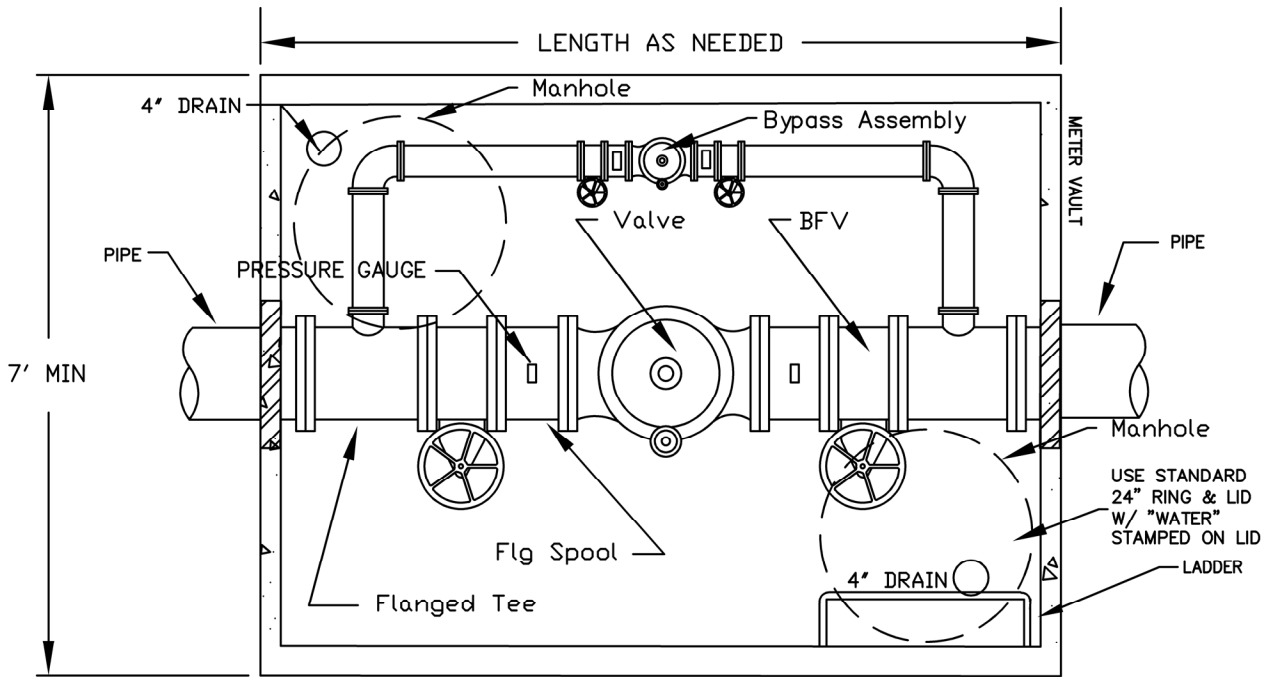
CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

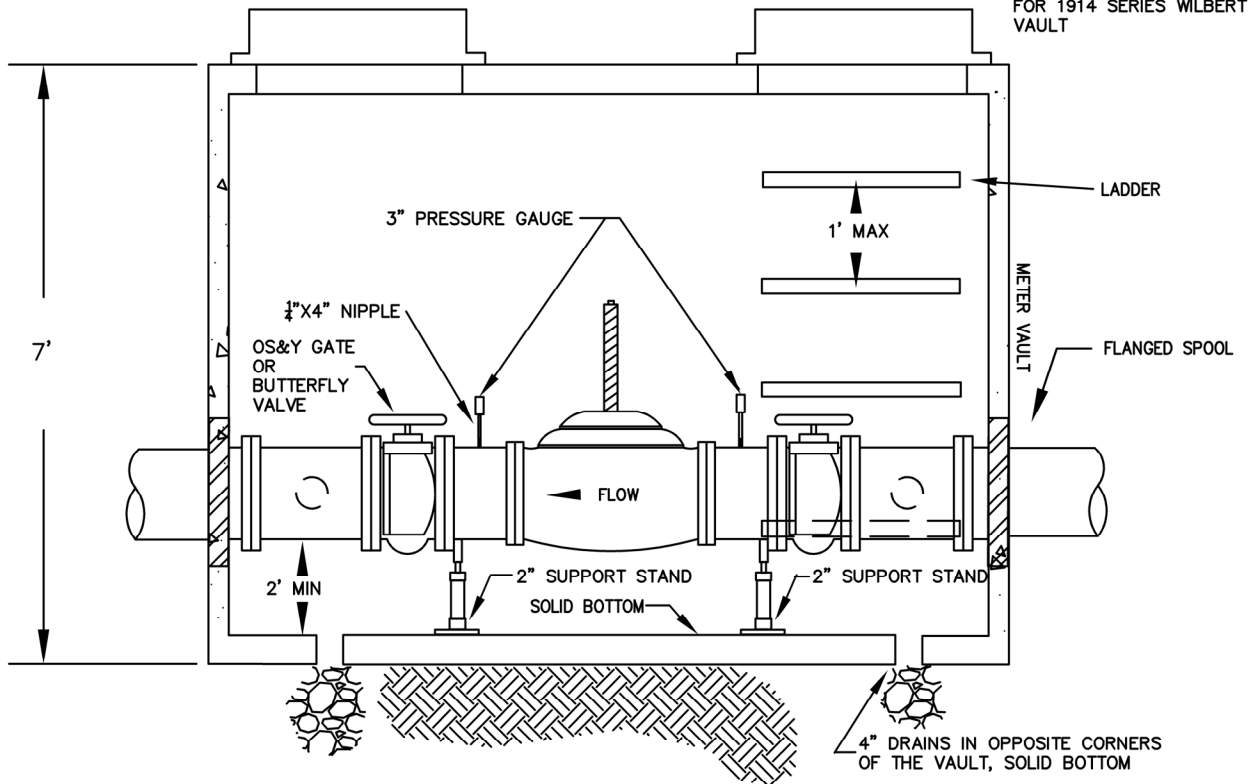
**4" & LARGER DOMESTIC
SERVICE VAULT SET**

Chris Bosley 10/1/24
CITY ENGINEER, PE 10804 DATE:

DWG NO. W-17



SEE METER VAULT DETAIL,
STANDARD DRAWING W-17
FOR 1914 SERIES WILBERT
VAULT



PLAN VIEW



CITY OF COEUR D'ALENE STANDARD DRAWING

**PRESSURE SUSTAINING
VALVE ASSEMBLY**

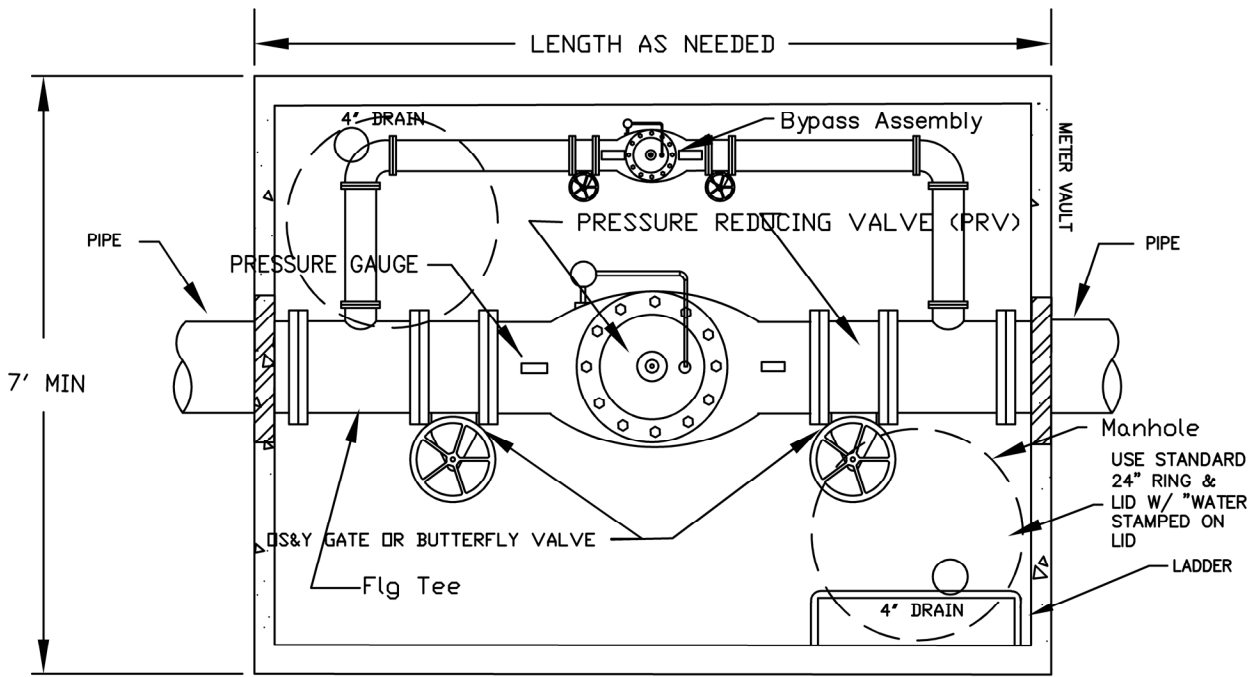
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

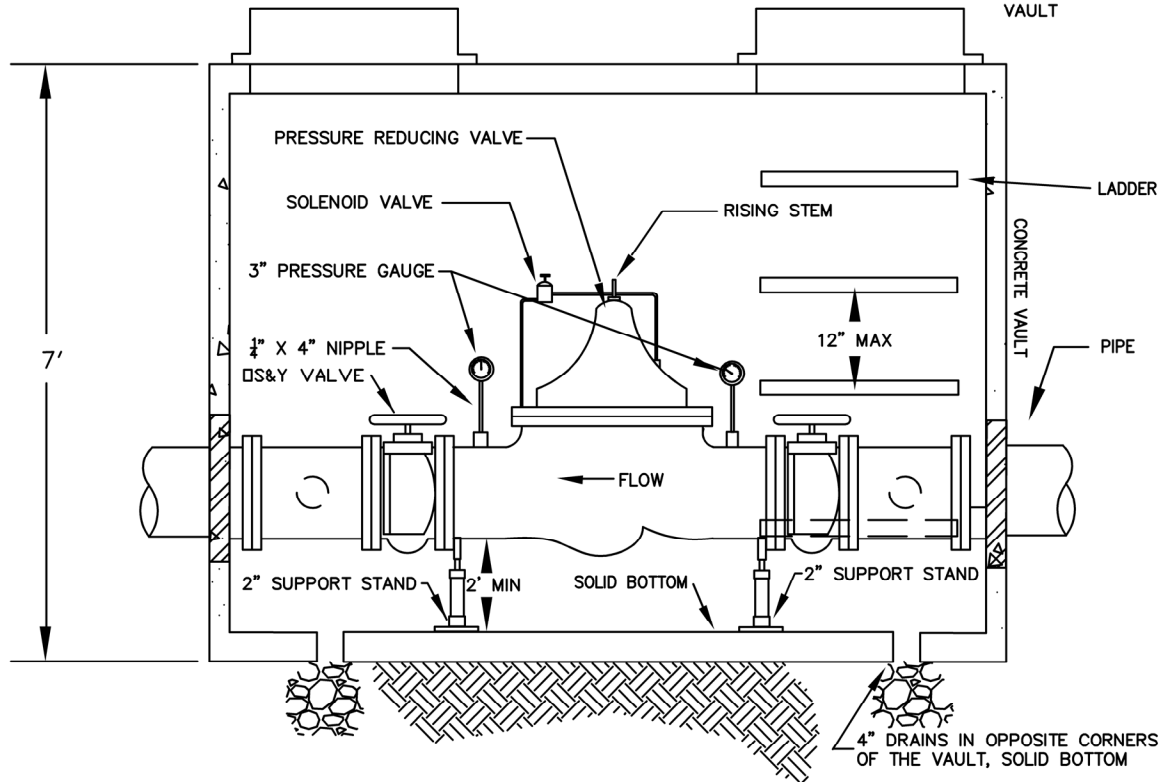
10/1/24
DATE:

DWG NO.

W-18



SEE METER VAULT DETAIL,
STANDARD DRAWING W-17
FOR 1914 SERIES WILBERT
VAULT



PLAN VIEW



CITY OF COEUR D'ALENE STANDARD DRAWING

**PRESSURE REDUCING
STATION ASSEMBLY**

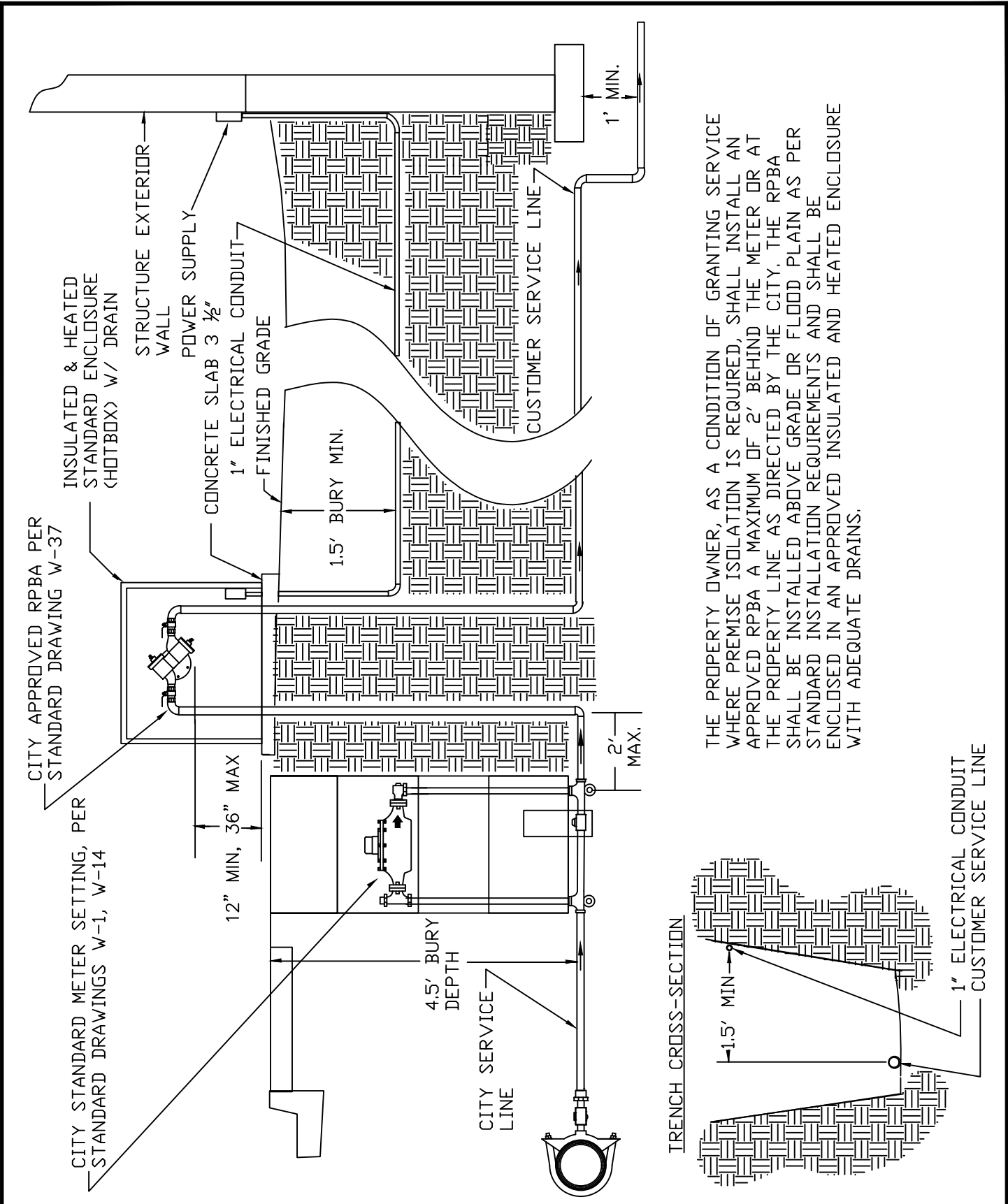
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

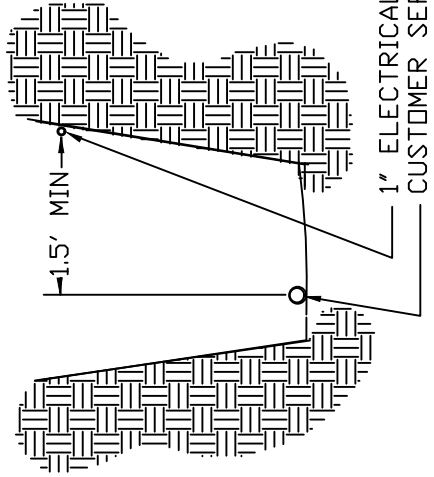
DWG NO.

W-19



THE PROPERTY OWNER, AS A CONDITION OF GRANTING SERVICE WHERE PREMISE ISOLATION IS REQUIRED, SHALL INSTALL AN APPROVED RPBA A MAXIMUM OF 2' BEHIND THE METER OR AT THE PROPERTY LINE AS DIRECTED BY THE CITY. THE RPBA SHALL BE INSTALLED ABOVE GRADE OR FLOOD PLAIN AS PER STANDARD INSTALLATION REQUIREMENTS AND SHALL BE ENCLOSED IN AN APPROVED INSULATED AND HEATED ENCLOSURE WITH ADEQUATE DRAINS.

TRENCH CROSS-SECTION

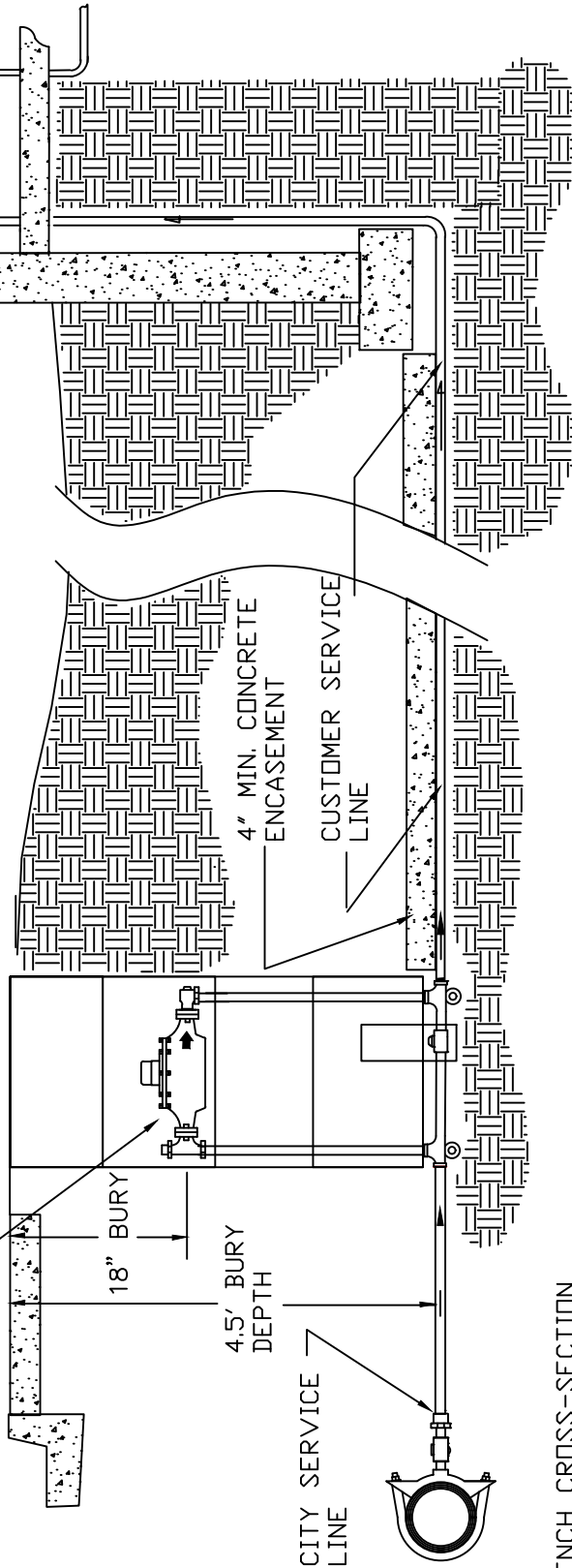


CITY OF COEUR D'ALENE STANDARD DRAWING
**RPBA PREMISE ISOLATION
 STANDARD METHOD**

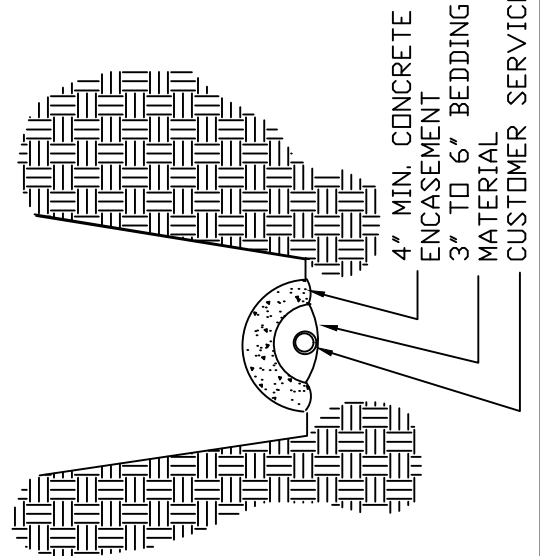
APPROVED BY:
Chris Busby
 CITY ENGINEER, PE 10604
 DATE: 10/1/24
 DWG NO. W-20

CITY APPROVED RPBA PER
STANDARD DRAWING W-32

CITY STANDARD METER
SETTING, PER STANDARD
DRAWINGS W-1, W-14



TRENCH CROSS-SECTION



1. THE PROPERTY OWNER, AS A CONDITION OF ALLOWING THE RPBA TO BE INSTALLED INSIDE THE STRUCTURE, SHALL COVER THE CUSTOMER SERVICE LINE FROM THE BASE OF THE METER BOX TO THE BASE OF THE INLET RISER AT THE RPBA WITH A MINIMUM OF 4" OF CONCRETE OVER 3 TO 6" OF FINE BEDDING MATERIAL AS ILLUSTRATED.

2. THE PROPERTY OWNER SHALL SIGN A RECORDABLE EASEMENT PROHIBITING CONNECTIONS INTO THE SERVICE LINE BETWEEN THE METER AND THE RPBA.

3. THIS METHOD SHALL BE UTILIZED WHERE AUXILIARY SOURCES OF WATER EXIST ON THE PROPERTY TO BE SERVED PER SPECIAL APPROVAL OF THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY.



CITY OF COEUR D'ALENE STANDARD DRAWING

**RPBA PREMISE ISOLATION
ALTERNATE METHOD**

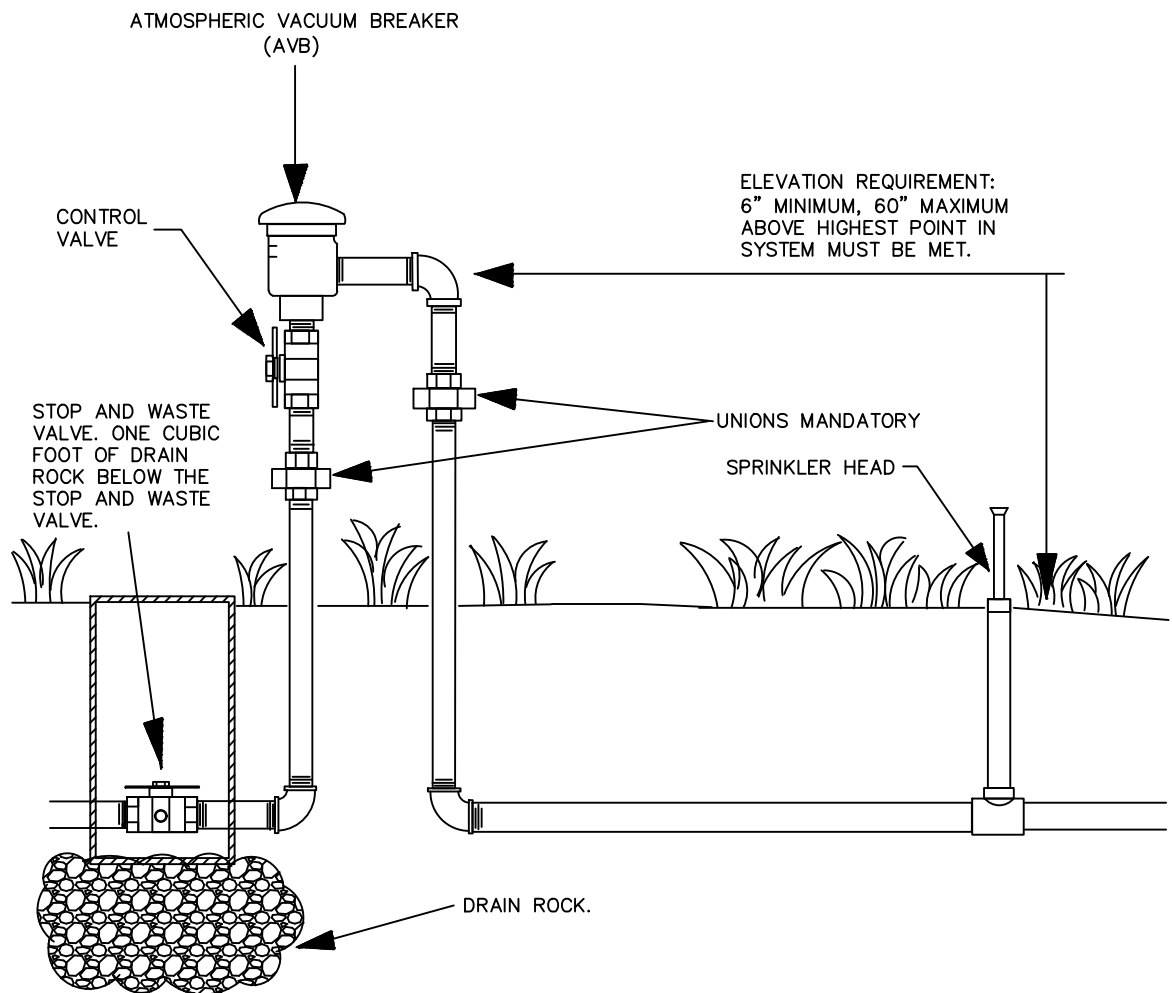
APPROVED BY:

Chris Bodley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-21



NOTE:

1. NO BLOW OFF PORTS ARE ALLOWED UPSTREAM OR DOWNSTREAM OF THE AVB. THE DEVICE MUST BE REMOVED FROM THE SYSTEM PRIOR TO BLOWING OUT THE IRRIGATION SYSTEM.
2. NO MANUAL OR AUTOMATIC VALVES ALLOWED DOWNSTREAM OF AVB.
3. AVB CANNOT BE PRESSURIZED MORE THAN 12 HOURS IN A 24 HOUR PERIOD.



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED ATMOSPHERIC
VACUUM BREAKER INSTALL**

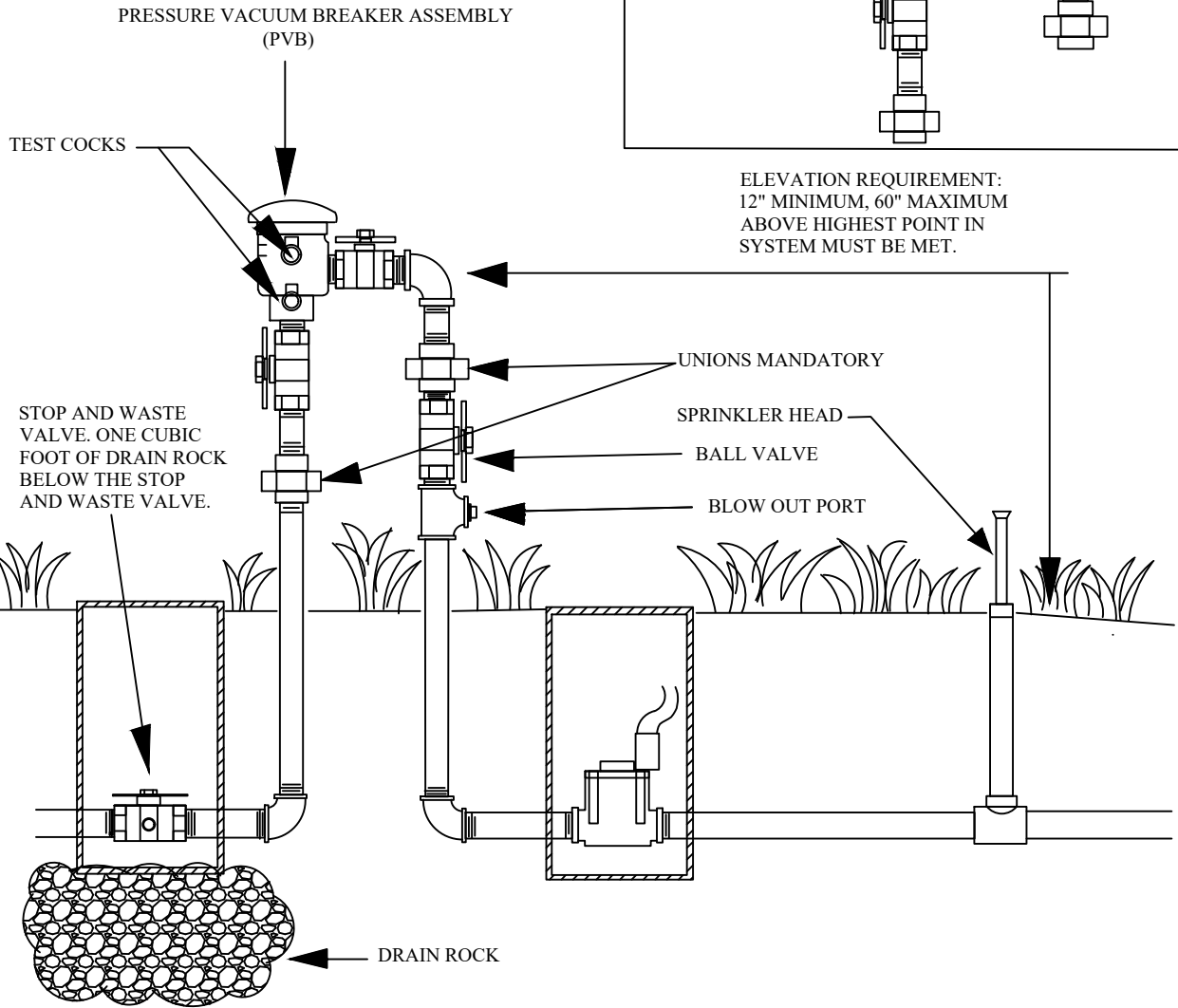
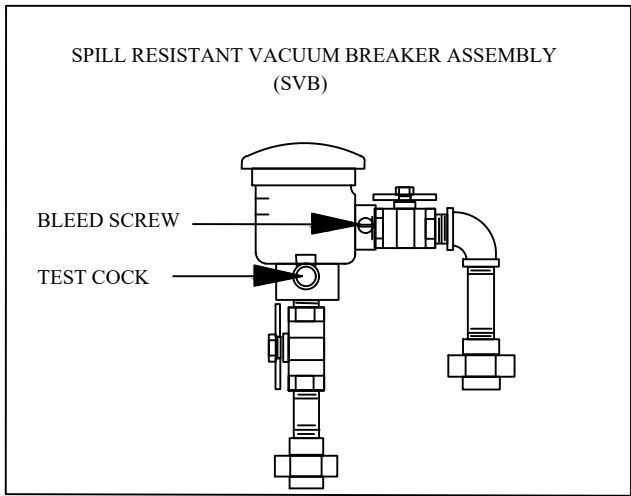
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-22



NOTE:

1. NO BLOW OFF PORTS ARE ALLOWED UPSTREAM OR DOWNSTREAM OF THE PVB ASSEMBLY. THE ASSEMBLY MUST BE REMOVED FROM THE SYSTEM PRIOR TO BLOWING OUT THE IRRIGATION SYSTEM.
2. MANUAL OR AUTOMATIC VALVES ALLOWED DOWNSTREAM OF PVB.
3. MAY BE PRESSURIZED FOR MORE THAN 12 HOURS IN A 24 HOUR PERIOD.



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED PRESSURE
VACUUM BREAKER ASSY.**

APPROVED BY:

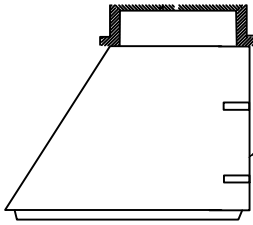
Chris Boddy
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

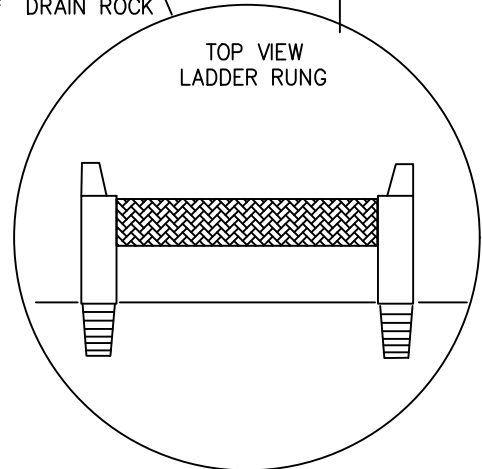
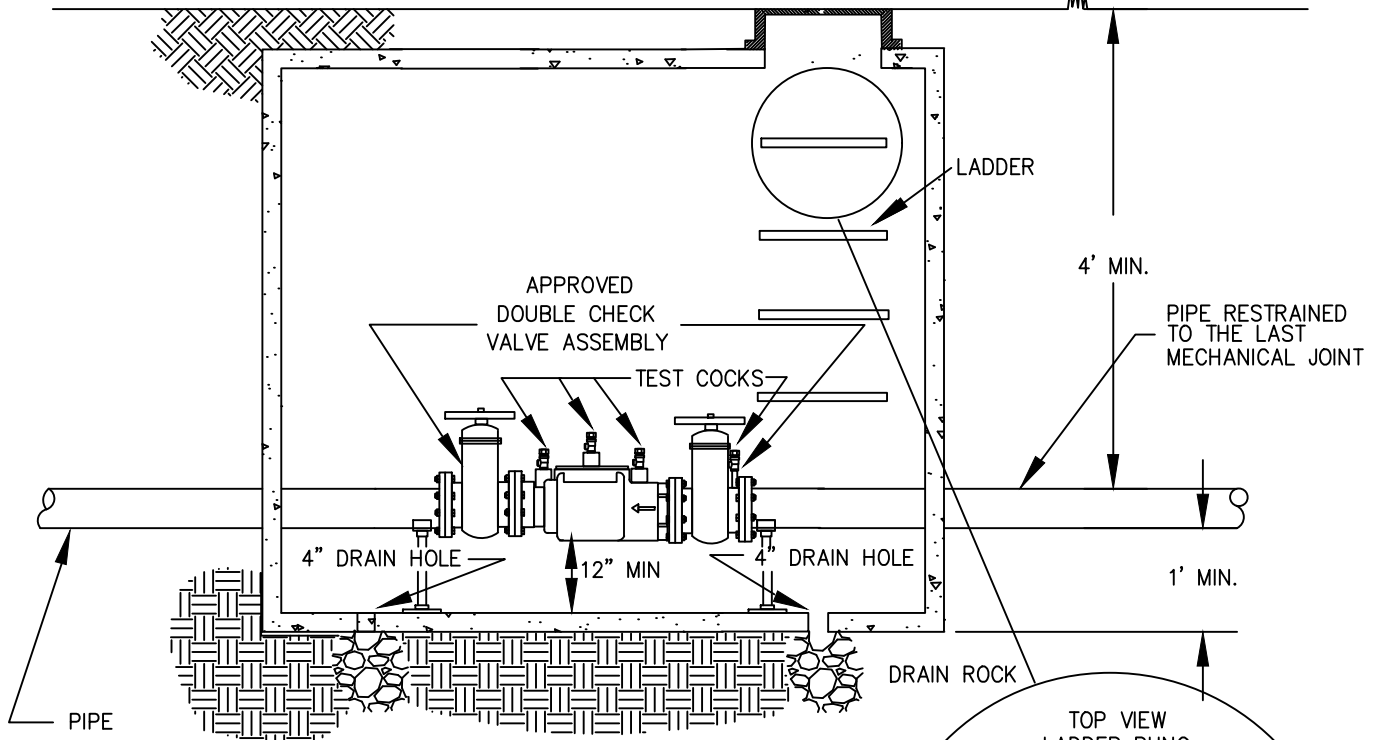
W-23

OPTIONAL 24" HIGH OFFSET
MANHOLE CONE W/ STEPS FOR
BURY DEPTH OVER 30".



24" MANHOLE RING
AND COVER WITH 1 7/8"
HOLE FOR TOUCH READ PAD

FINISHED GRADE



NOTES:

1. VAULT CONSTRUCTION TO BE DESIGNED BASED ON POTENTIAL TRAFFIC LOAD. WILBERT 1900 SERIES OR APPROVED EQUAL.
2. LENGTH AND WIDTH OF VAULT SHALL ACCOMMODATE EQUIPMENT WITH ADEQUATE OR VENDORS RECOMMENDED CLEARANCE FROM WALLS TO REMOVE OR MAINTAIN EQUIPMENT. MUST HAVE ACCESS LADDER.
3. MUST PROVIDE ADEQUATE CLEARANCE FOR TESTING AND MAINTENANCE OF THE ASSEMBLY – 12" MINIMUM FOR THE NON TEST SIDE, 24" MINIMUM FOR THE TEST SIDE.
4. THERE SHALL BE NO UPSTREAM CONNECTIONS OR TEES INSTALLED BETWEEN THE METER VAULT AND THE BACKFLOW ASSEMBLY EXCEPT FOR PARALLEL ASSEMBLY INSTALLATION.



CITY OF COEUR D'ALENE STANDARD DRAWING

**4" OR LARGER
DC IN VAULT**

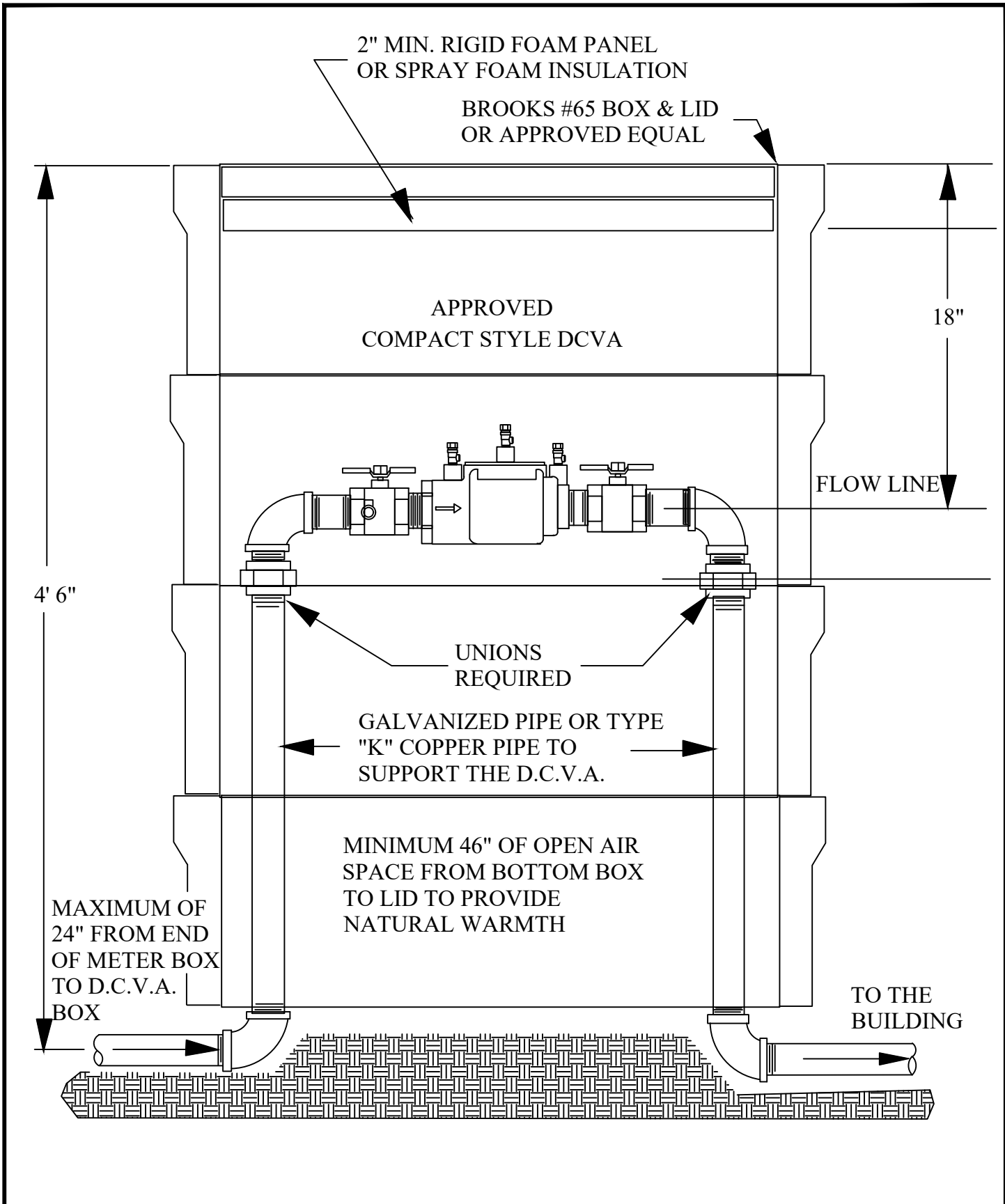
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-24



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED 1" & 2" DC
FOR PREMISE ISOLATION**

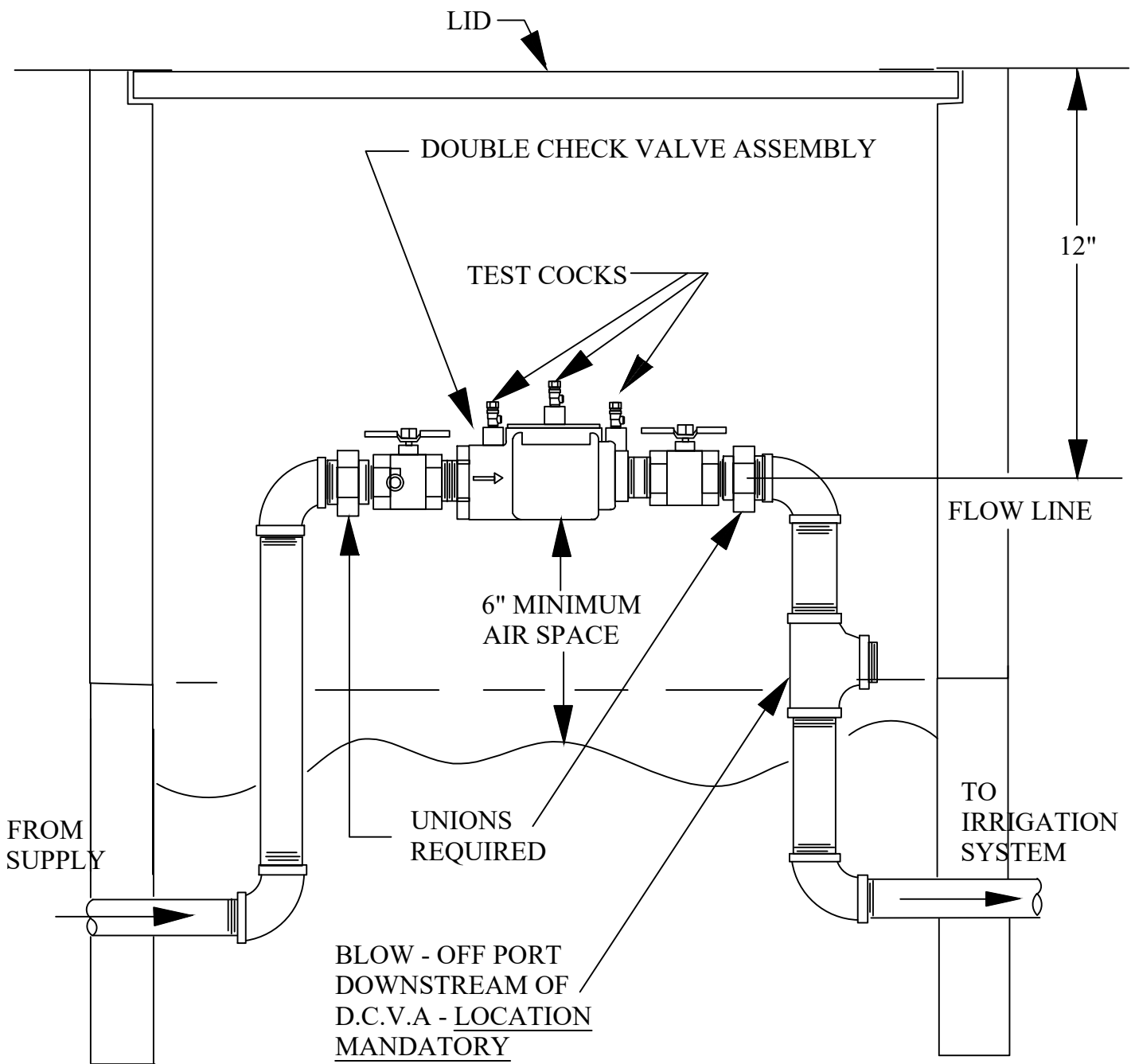
APPROVED BY:

Chris Bodley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-25



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED DC FOR
IRRIGATION INSTALLATION**

APPROVED BY:

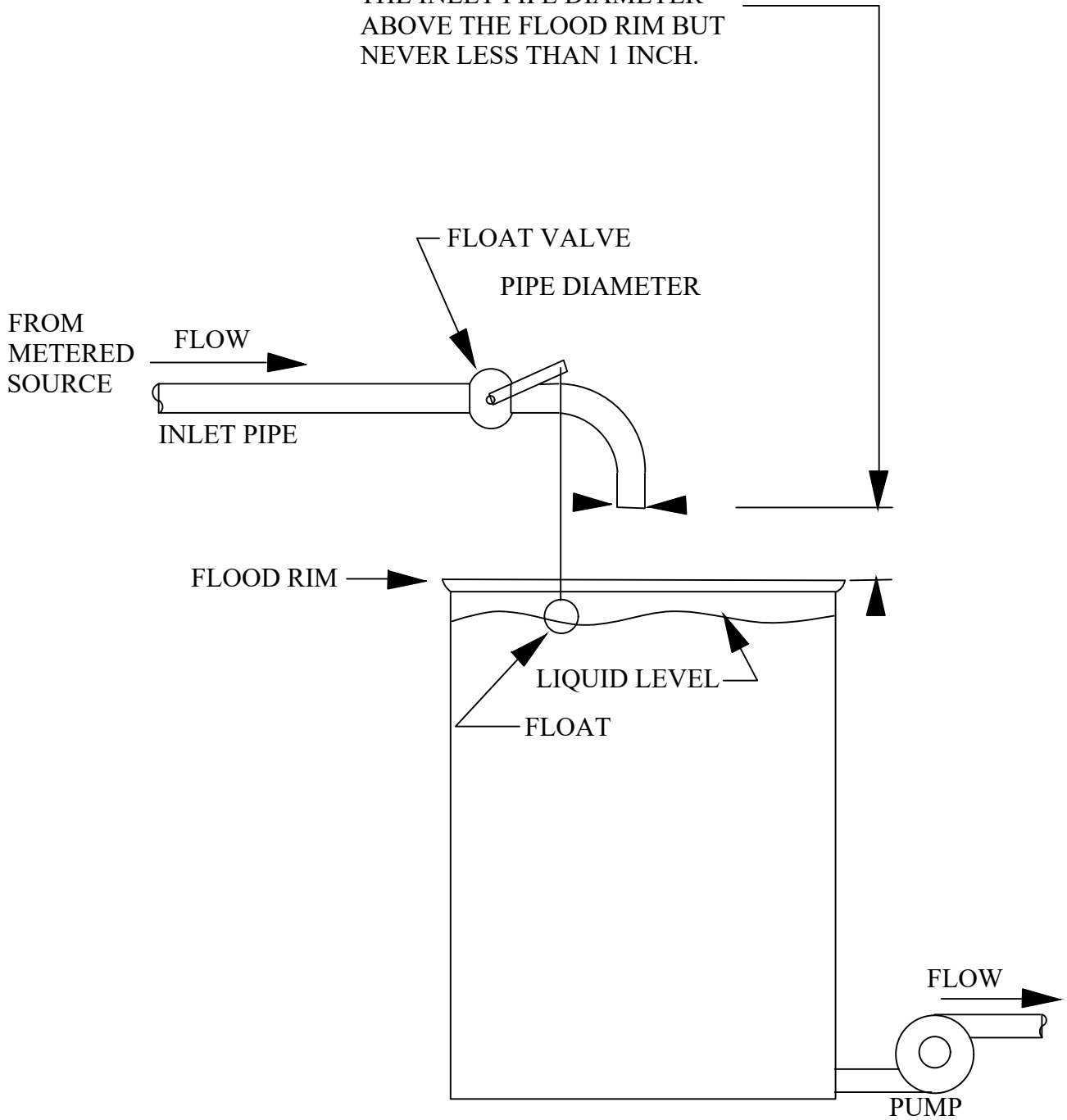
Chris Boshy
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-26

AIR GAP - MINIMUM OF TWICE
THE INLET PIPE DIAMETER
ABOVE THE FLOOD RIM BUT
NEVER LESS THAN 1 INCH.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED AIR GAP

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-27

36" MANHOLE WATER
TIGHT LID, TRAFFIC RATED
AS REQUIRED.

36"

GRADE

2" THREADED CAP

WELL
CASING

APPROVED
WELL CAP,
WELDED
OR
RESILIENT
SEAL 6"
BELOW
LID.

5" THICK
CONCRETE
VAULT

24"

2" DRAIN PIPE EXTENDED TO
AN APPROVED DRAINFIELD.

PREVIOUSLY
ABANDONED WELL
CASING



CITY OF COEUR D'ALENE STANDARD DRAWING

MONITORING WELL MODIFICATIONS

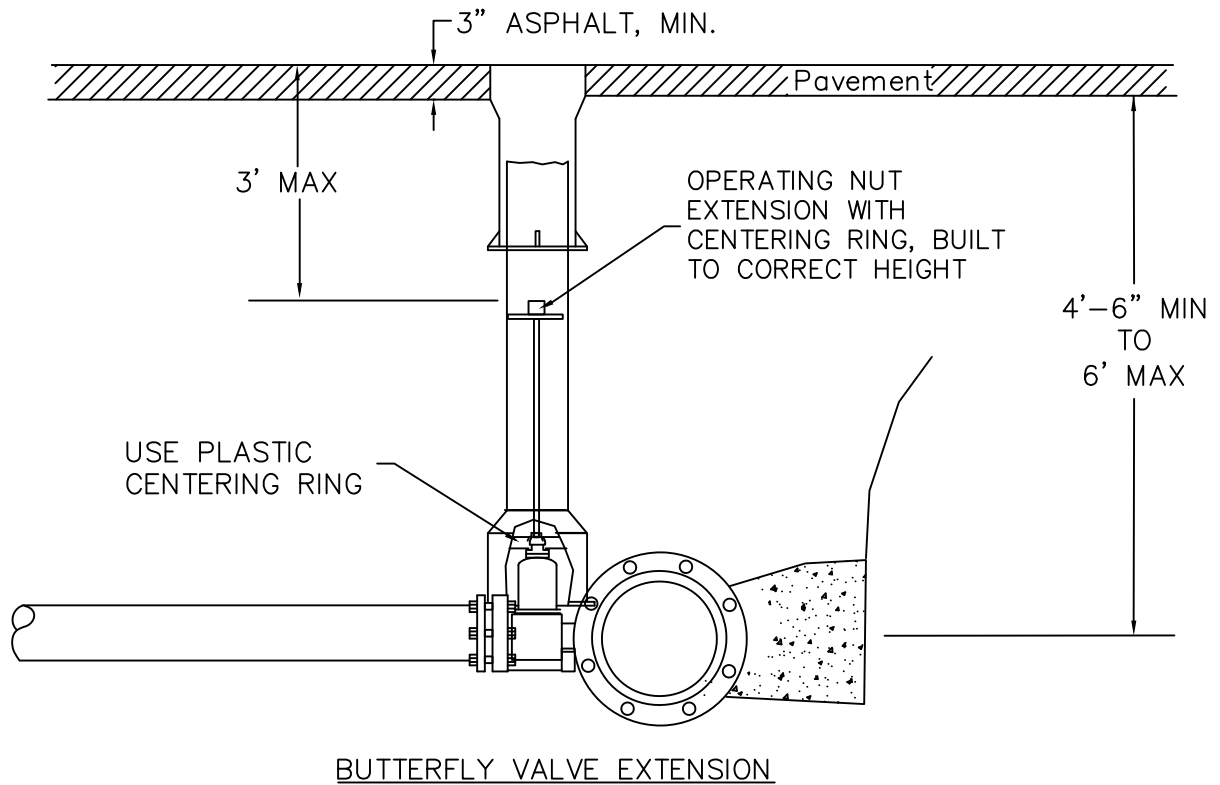
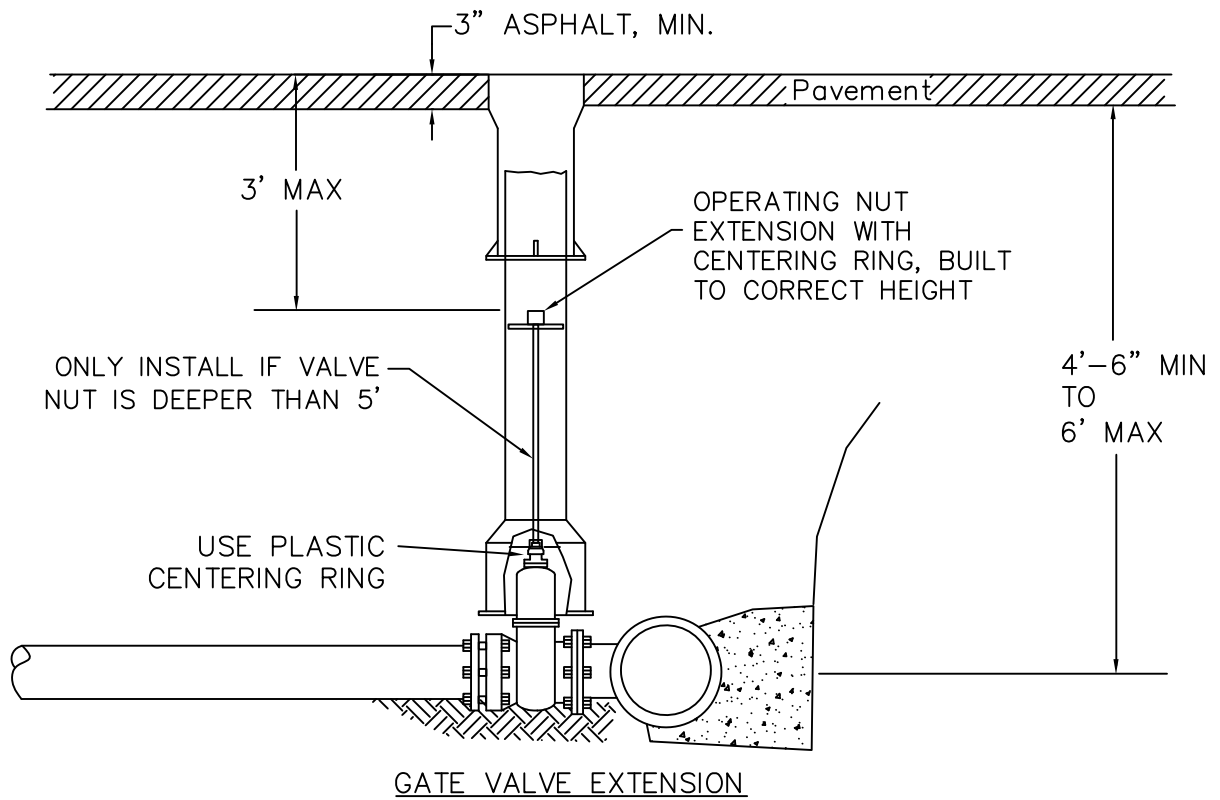
APPROVED BY:

Chris Booley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-28



CITY OF COEUR D'ALENE STANDARD DRAWING

**VALVE OPERATING NUT
EXTENSION**

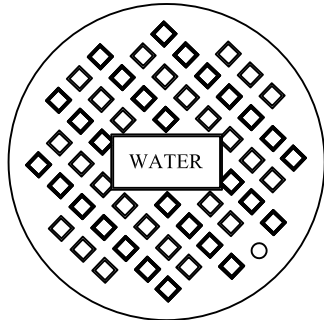
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

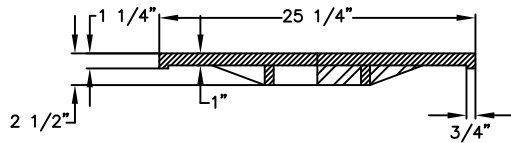
W-29



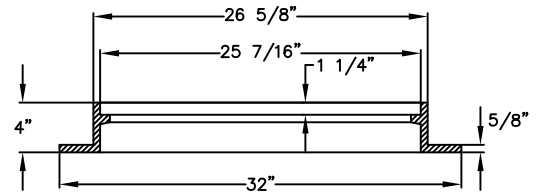
VAULT MANHOLE COVER

NOTES THIS DETAIL:

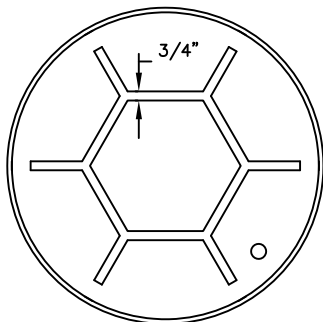
1. ALL LETTERING & ARTWORK SHALL BE FLUSH WITH FRAME RIM/LIP MOLDED INTO THE TOP OF THE COVER.
2. FRAME SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48-90, GRADE 30. COVER SHALL BE DUCTILE IRON CONFORMING TO A.S.T.M. A536-84, CLASS 80-50-06.
3. FIT TOLERANCES SHALL BE $< 1/8" \pm$.
4. WELDED FRAME AND COVERS ARE NOT ACCEPTABLE.



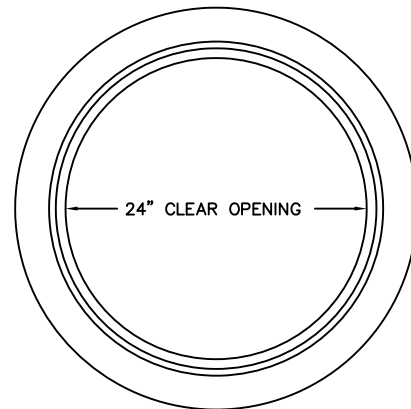
SECTION VIEW



SECTION VIEW



BOTTOM OF COVER



FRAME



CITY OF COEUR D'ALENE STANDARD DRAWING

**24" MANHOLE COVER
FOR METER VAULT**

APPROVED BY:

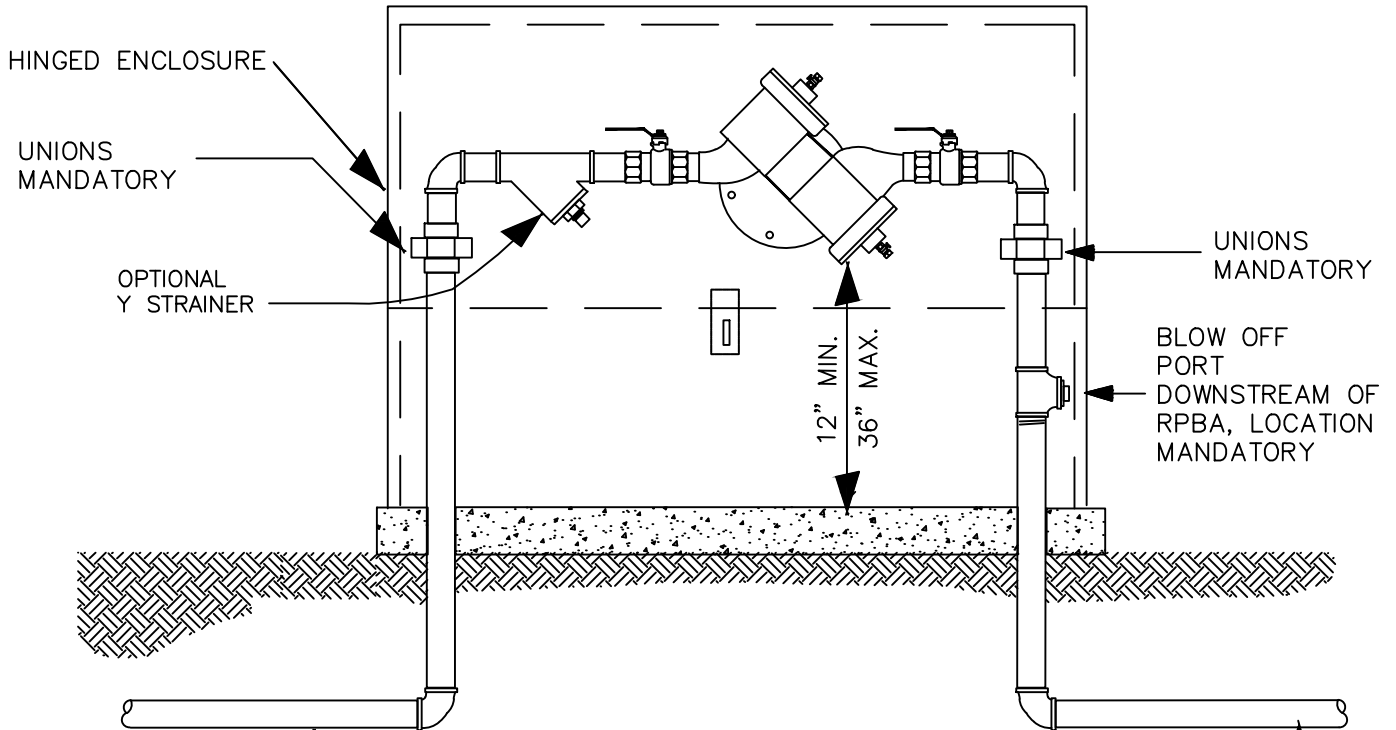
Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

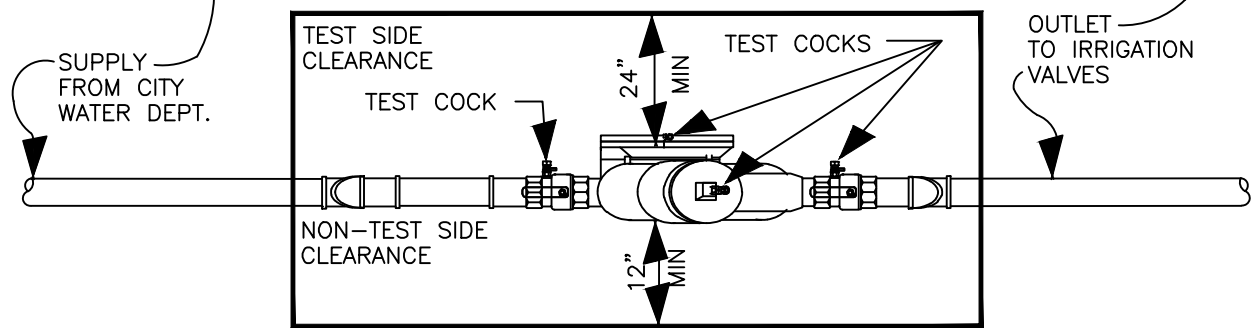
DWG NO.

W-30

SIDE VIEW



TOP VIEW



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED ABOVE GRADE IN A HORIZONTAL ORIENTATION ONLY.
3. ENCLOSURE FOR OUTDOOR PROTECTION OF THE ASSEMBLY IS ALLOWED, BUT MUST PROVIDE IMMEDIATE TOP ACCESS OF 12" FOR TESTING AND MAINTENANCE.
4. TEST COCKS ARE REQUIRED TO FACE AWAY FROM WALLS AND NEAREST STATIONARY OBJECT, AND AT NO TIME BE LESS THAN 24" CLEARANCE.
5. IF A DEDICATED IRRIGATION SERVICE, THERE MUST BE NO BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
6. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
7. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
8. ADEQUATE DRAINAGE FROM THE ASSEMBLY MUST BE PROVIDED.
9. NO ASSEMBLIES OR ENCLOSURES ARE TO BE INSTALLED OVER THE WATER METER VAULT.
10. BLOW OFF PORT MUST BE DOWNSTREAM OF ASSEMBLY.



CITY OF COEUR D'ALENE STANDARD DRAWING

**TYPICAL APPROVED RP
FOR IRRIGATION SYSTEM**

APPROVED BY:

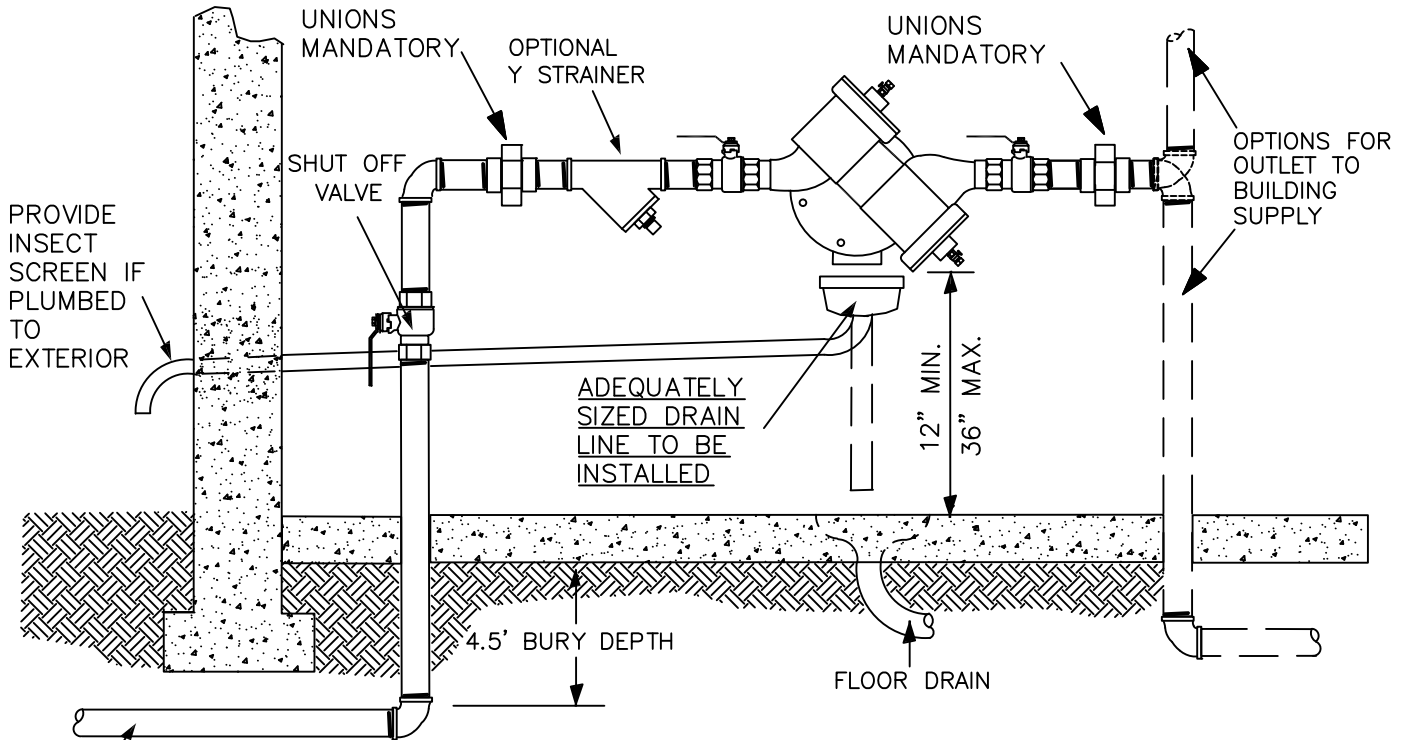
Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

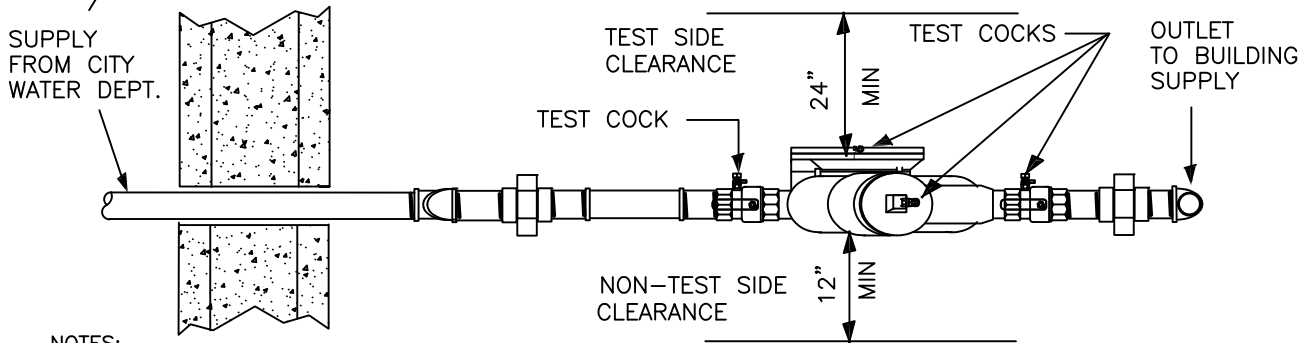
DWG NO.

W-31

SIDE VIEW



TOP VIEW



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED ABOVE GRADE OR HIGHEST FLOOD PLAIN IN A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED BY THE CITY FOR VERTICAL ORIENTATION.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR TESTING AND MAINTENANCE OF ASSEMBLY, MINIMUM 12" FOR NON-TEST SIDE, MINIMUM 24" FOR THE TEST SIDE, FACING AWAY FROM WALLS AND NEAREST STATIONARY OBJECTS.
4. THERE MUST BE NO UNPROTECTED BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
5. IF AUXILIARY WATER SOURCE IS PRESENT AND THE RP HAS NOT BEEN INSTALLED IMMEDIATELY DOWNSTREAM OF THE METER BOX, THE ENTIRE LENGTH OF THE WATER SERVICE FROM METER BOX TO THE BACKFLOW ASSEMBLY SHALL BE ENCASED IN MINIMUM 4" OF CONCRETE PER STANDARD DRAWING W-21.
6. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
7. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
8. ADEQUATE DRAINAGE FROM THE ASSEMBLY MUST BE PROVIDED PER THE PNWS/AWWA RP DISCHARGE RATE CHART.
9. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

**APPROVED RP FOR
BUILDING ISOLATION**

Chris Bosley
CITY ENGINEER, PE 10804

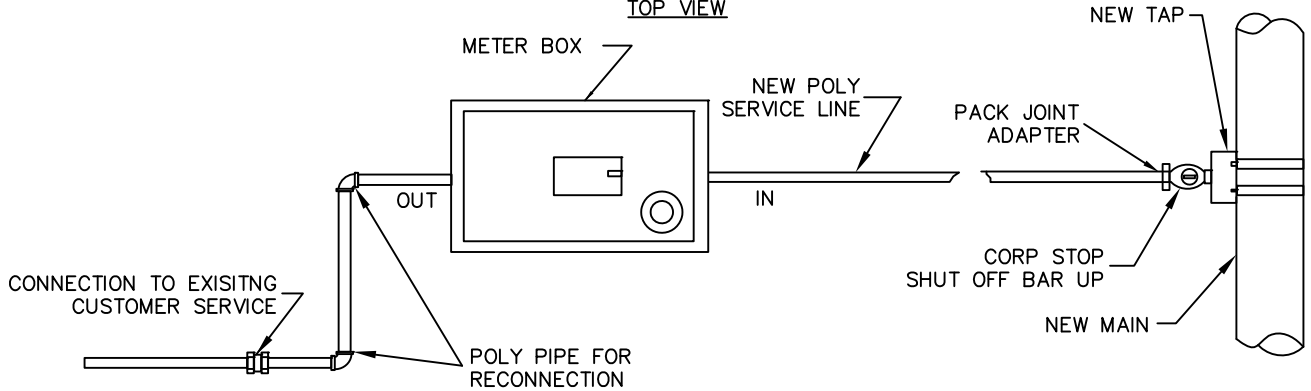
10/1/24
DATE:

DWG NO.

W-32

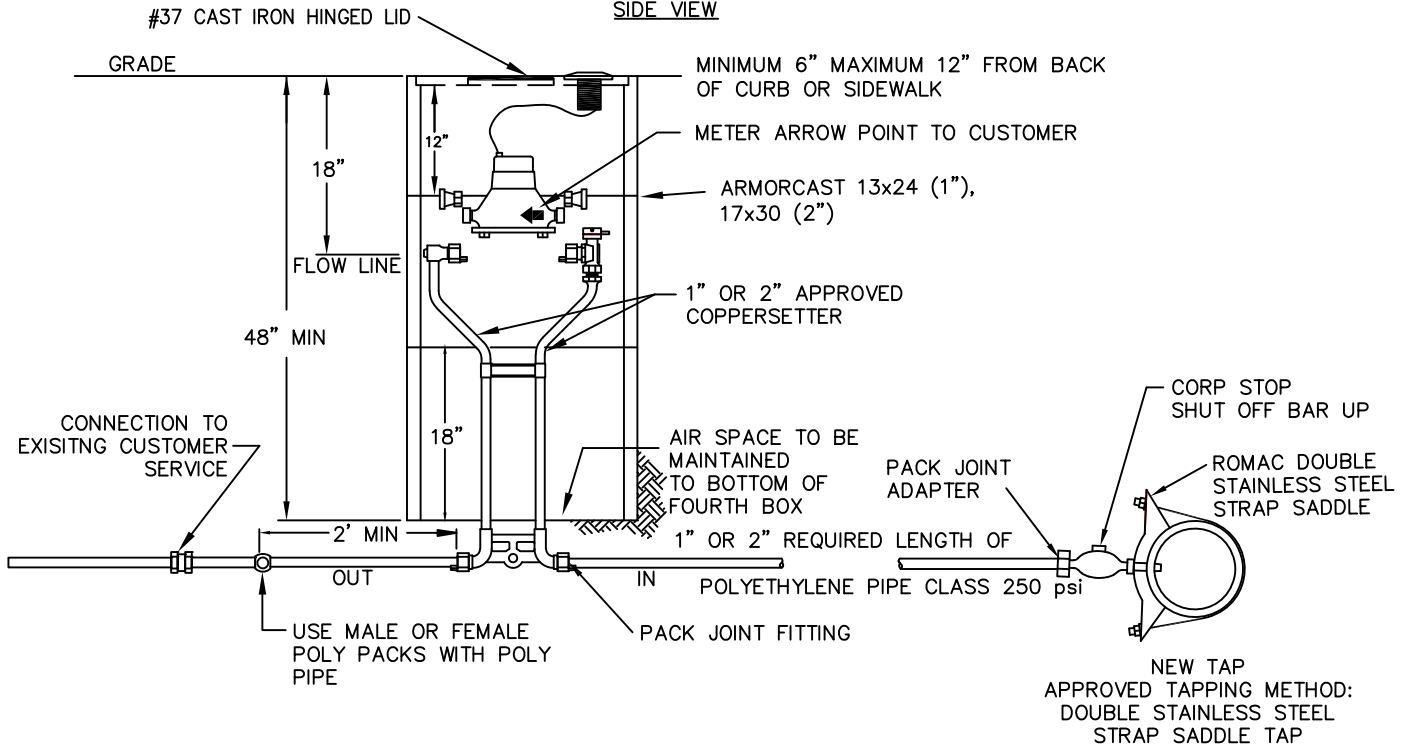
SERVICE LINE RECONNECTION TO REPLACED WATER MAIN

TOP VIEW



SERVICE LINE RECONNECTION TO REPLACED WATER MAIN

SIDE VIEW



NOTES:

1. MAIN TO HAVE 4'-6" MINIMUM OF COVER TO FINISHED GRADE.
2. SERVICE TO BE PRESSURE TESTED TO METER ANGLE STOP.
3. ALL MATERIALS TO CONFORM TO NSF-61 STANDARDS FOR LEAD FREE MATERIALS WHICH MAY COME INTO CONTACT WITH POTABLE WATER SUPPLY.
4. RECONNECTION TO EXISTING SERVICE WILL BE ACCOMPLISHED USING EITHER A MALE OR FEMALE POLY PACK WITH A SECTION OF POLY PIPE OR COPPER PIPE, OR A PACK JOINT ADAPTER FOR POLY PIPE. GALVANIZED NO LONGER ALLOWED.
5. THE SWING JOINT FROM THE COPPERSETTER TO THE EXISTING SERVICE SHALL BE POLY PIPE WITH A BAR IN THE STABILIZER HOLE ON THE SETTER TO STABILIZE THE COPPERSETTER..
6. POLYETHYLENE PIPE SHALL BE USED FOR SERVICE REPLACEMENT FROM THE MAIN TO THE COPPERSETTER.
7. NO PRIVATE CONNECTIONS OR FITTINGS ARE ALLOWED IN OR UNDER THE METER BOX.
8. ALL WORK SHALL BE INSPECTED BY THE WATER DEPT. INSPECTOR BEFORE BACKFILLING CAN TAKE PLACE.
9. OBSERVE MINIMUM UTILITY SEPARATION (WATER DEPARTMENT CONSTRUCTION STANDARDS - SUBSECTION 1.5.02)



CITY OF COEUR D'ALENE STANDARD DRAWING

1" & 2" SERVICE
RECONNECT

APPROVED BY:

Chris Busby 10/1/24
CITY ENGINEER, PE 10804 DATE:

DWG NO.

W-33

WATER MAIN FLUSHING

PIPE DIAMETER (INCH)	FLOW REQUIRED TO PRODUCE 2.5 F.FPS (APPROX.)	SIZE OF FLUSHING TAP (INCH) (1") (1 1/2") (2")			HYDRANT OUTLETS	
	VELOCITY IN MAIN, (GPM)	NUMBER OF TAPS ON PIPE (2)			NUMBER OF PORTS	SIZE IN (INCH)
4"	100	1			1	2 1/2"
6"	220		1		1	2 1/2"
8"	400		2	1	1	2 1/2"
10"	600		3	2	1	2 1/2"
12"	900			2	2	2 1/2"
16"	1600			4	2	2 1/2"
18"	2000			6	1	4 1/2"
20"	2500			8	1	4 1/2"
24"	3500			11	2	4 1/2"
(1)	WITH A 40 PSI RESIDUAL PRESSURE IN THE MAIN WITH THE FIRE HYDRANT OR FLUSH PORT FLOWING TO ATMOSPHERE, A 2 1/2" HYDRANT OUTLET WILL DISCHARGE APPROX. 1000 GPM AND A 4 1/2" HYDRANT NOZZLE WILL DISCHARGE APPROX. 2500 GPM					
(2)	NUMBER OF TAPS ON PIPE BASED ON DISCHARGE RATE THROUGH 5 FEET OF GALVANIZED IRON (GI) PIPE WITH ONE 90 DEGREE ELBOW.					

FLUSHING:

1. MAINS DO NOT NEED TO BE THOROUGHLY FLUSHED PRIOR TO PRESSURE TEST. FLUSH ONLY ENOUGH TO RELEASE ANY TRAPPED AIR. PRESSURE TEST WILL BE CONDUCTED PRIOR TO COLLECTION OF BACTERIA SAMPLES.
2. MUST USE A MINIMUM SCOURING VELOCITY OF 2.5 FEET PER SECOND (FPS).
3. IF NO FIRE HYDRANT IS PROVIDED NEAR THE END OF THE MAIN, PROVIDE A FLUSHING TAP OF THE SIZE SUFFICIENT TO PROVIDE A MINIMUM VELOCITY IN THE MAIN OF 2.5 FPS.
4. REFER TO THE TABLE ABOVE FOR THE MINIMUM VELOCITY REQUIRED THROUGH A FLUSH PORT OR FIRE HYDRANT TO ACHIEVE SCOURING VELOCITY.
5. EXERCISE EXTREME CARE AND CONDUCT A THOROUGH INSPECTION DURING WATER MAIN INSTALLATION TO PREVENT SMALL STONES, CONCRETE, WILDLIFE AND DEBRIS FROM ENTERING THE MAINS.
6. CLEAR LARGE MATERIAL BY FLUSHING AND INSPECTING ALL HYDRANTS ON THE MAINS TO ENSURE THAT ALL VALVES ARE CLEAR AND AND IN GOOD CONDITION.
7. CONTRACTOR MUST RECEIVE APPROVAL FROM THE CDA WATER DEPT. PRIOR TO FLUSHING ANY WATER MAIN.
8. THE CDA WATER DEPT. WILL NOT BE LIABLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR WHILE FLUSHING A WATER MAIN. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHERE TO DISPOSE OF EXCESS WATER.



CITY OF COEUR D'ALENE STANDARD DRAWING

**WATER MAIN
FLUSHING CHART**

APPROVED BY:

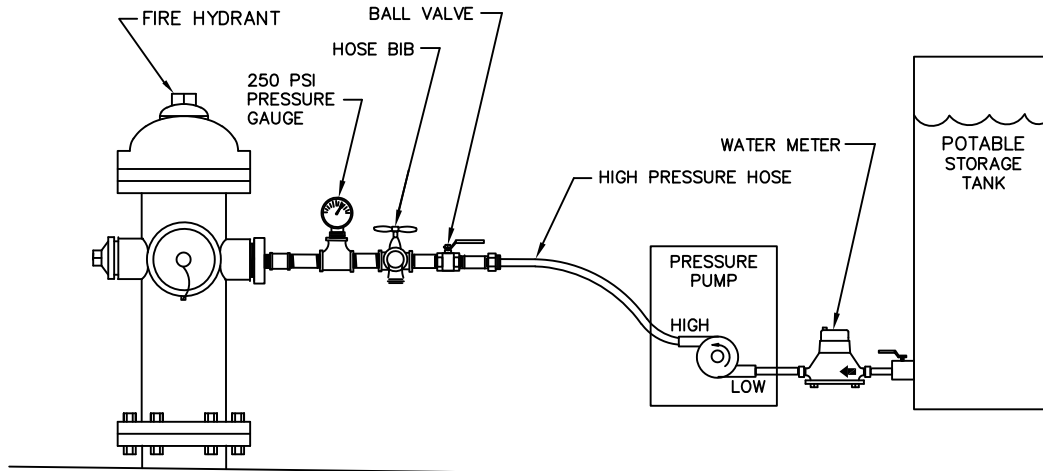
Chris Bosley
CITY ENGINEER, PE 10604

10/1/24
DATE:

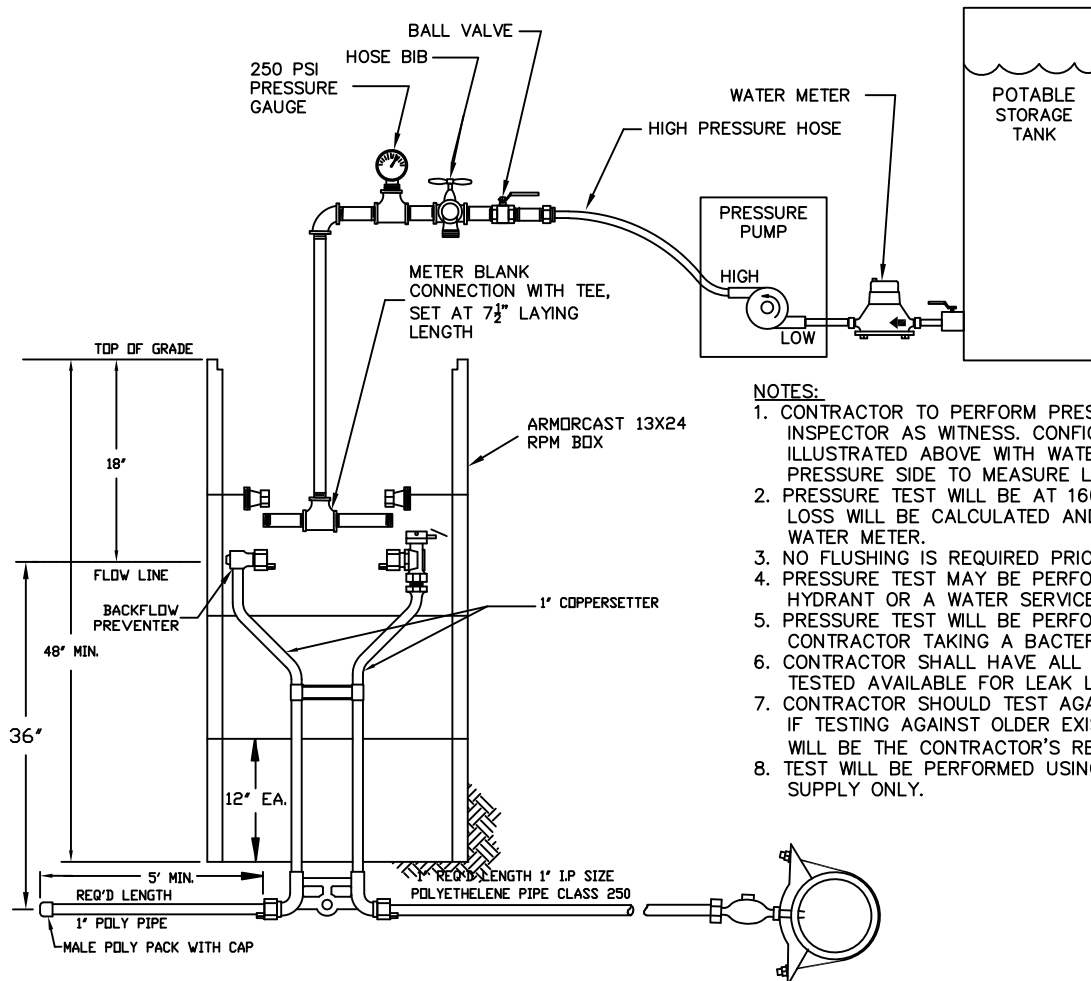
DWG NO.

W-34

PRESSURE TEST THROUGH FIRE HYDRANT



PRESSURE TEST THROUGH COPPERSETTER



NOTES:

1. CONTRACTOR TO PERFORM PRESSURE TEST WITH CITY INSPECTOR AS WITNESS. CONFIGURATION MUST BE AS ILLUSTRATED ABOVE WITH WATER METER ON LOW PRESSURE SIDE TO MEASURE LOSS.
2. PRESSURE TEST WILL BE AT 160 PSI FOR 2 HOURS. LOSS WILL BE CALCULATED AND MEASURED WITH A WATER METER.
3. NO FLUSHING IS REQUIRED PRIOR TO PRESSURE TEST.
4. PRESSURE TEST MAY BE PERFORMED THROUGH A FIRE HYDRANT OR A WATER SERVICE COPPERSETTER.
5. PRESSURE TEST WILL BE PERFORMED PRIOR TO CONTRACTOR TAKING A BACTERIA SAMPLE.
6. CONTRACTOR SHALL HAVE ALL FOOTAGE OF PIPE TO BE TESTED AVAILABLE FOR LEAK LOSS CALCULATIONS.
7. CONTRACTOR SHOULD TEST AGAINST NEW VALVES ONLY. IF TESTING AGAINST OLDER EXISTING VALVES, FAILURE WILL BE THE CONTRACTOR'S RESPONSIBILITY.
8. TEST WILL BE PERFORMED USING A POTABLE WATER SUPPLY ONLY.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

APPROVED PRESSURE TESTING METHOD

Chris Boddy
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-35

ALLOWABLE LEAKAGE FOR AWWA PVC PIPE C-900

Allowable Leakage per 1000' or 50 joints: gal/hr x 2

Average Test Pressure in Line: psi

Nominal Pipe Size (in.)	150	175	200	225	250	275	300
4	0.33	0.36	0.38	0.41	0.43	0.45	0.47
6	0.50	0.54	0.57	0.61	0.64	0.67	0.70
8	0.66	0.72	0.76	0.81	0.85	0.90	0.94
10	0.83	0.89	0.96	1.01	1.07	1.12	1.17
12	0.99	1.07	1.15	1.22	1.28	1.34	1.40
14	0.83	1.25	1.34	1.42	1.50	1.57	1.64
16	1.32	1.43	1.53	1.62	1.71	1.79	1.87
18	1.49	1.61	1.72	1.82	1.92	2.02	2.11
20	1.66	1.79	1.91	2.03	2.14	2.24	2.34
24	1.99	2.15	2.29	2.43	2.56	2.69	2.81
30	2.48	2.68	2.87	3.04	3.21	3.36	3.51
36	2.98	3.22	3.44	3.65	3.85	4.03	4.21
42	3.48	3.75	4.01	4.26	4.49	4.71	4.92
48	3.97	4.29	4.59	4.86	5.13	5.38	5.62

NOTE:

To calculate the allowable leakage for the pressure test, take the total footage of each individual size of main and divide by 1000, and then multiply results by allowable leak loss per table above. This will give the allowable loss per hour which then can be multiplied by 2 hours to give the total allowable leak loss (see example below). If several pipe sizes are installed, then calculate for each size and add total quantities if performing one test.

Testing 1,180' of 8" C900 PVC pipe: $1180/1000 = 1.180 \times 0.66 = .778 \times 2 \text{ hrs} = 1.557 \text{ gals. total allowable leak loss.}$

Testing 1,244' of 12" C900 and 660' of 6" C900: $1244/1000 = 1.244 \times 0.99 = 1.23 \times 2 \text{ hrs} = 2.46 \text{ gals. Plus, } 660/1000 = 0.66 \times 0.50 = 0.33 \times 2 \text{ hrs} = 0.66 \text{ gals. For a total } 3.12 \text{ gals. Of allowable leak loss.}$



CITY OF COEUR D'ALENE STANDARD DRAWING

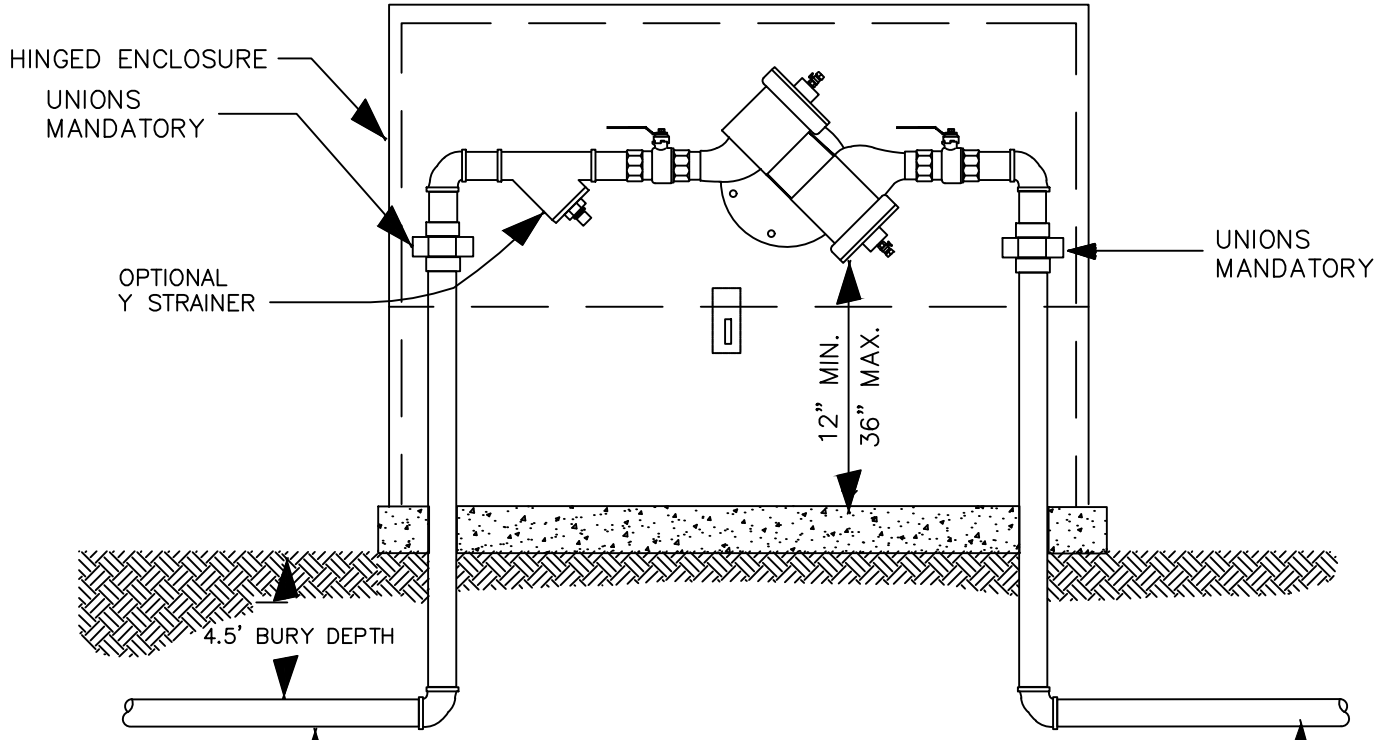
ALLOWABLE LEAK LOSS TABLE

APPROVED BY:

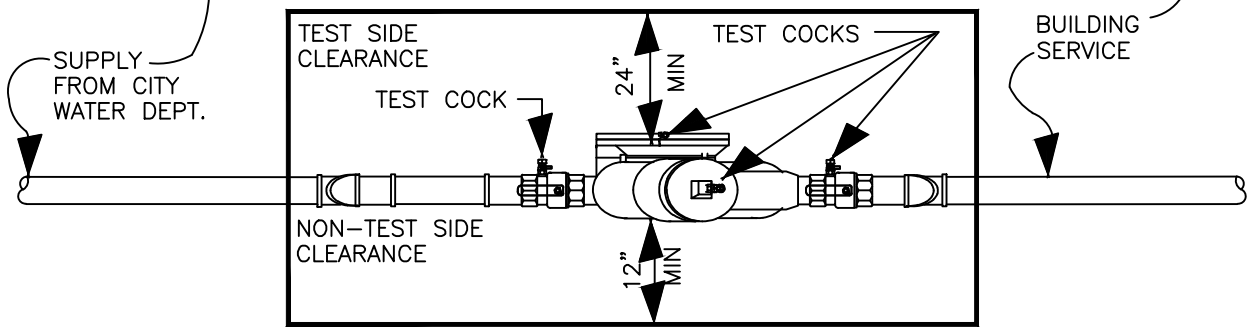
Chris Bosley 10/1/24
CITY ENGINEER, PE 10604 DATE:

DWG NO. W-36

SIDE VIEW



TOP VIEW



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED ABOVE GRADE IN A HORIZONTAL ORIENTATION ONLY.
3. ENCLOSURE FOR OUTDOOR PROTECTION OF THE ASSEMBLY IS ALLOWED, BUT MUST PROVIDE IMMEDIATE TOP ACCESS OF 12" FOR TESTING AND MAINTENANCE.
4. TEST COCKS ARE REQUIRED TO FACE AWAY FROM WALLS AND NEAREST STATIONARY OBJECT, AND AT NO TIME BE LESS THAN 24" CLEARANCE.
5. THERE MUST BE NO BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
6. IF A BACKFLOW ASSEMBLY IS REQUIRED FOR PREMISE ISOLATION DUE TO AN AUXILIARY SOURCE AND HAS NOT BEEN INSTALLED IMMEDIATELY DOWNSTREAM OF THE WATER METER BOX, THE ENTIRE LENGTH OF THE WATER SERVICE FROM THAT POINT TO THE BACKFLOW ASSEMBLY SHALL BE ENCASED IN MINIMUM 4" OF CONCRETE.
7. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
8. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
9. ADEQUATE DRAINAGE FROM THE ASSEMBLY MUST BE PROVIDED.
10. NO ASSEMBLIES OR ENCLOSURES ARE TO BE INSTALLED OVER THE WATER METER VAULT TO ALLOW ACCESS FOR MAINTENANCE OF WATER METER.



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED RP FOR
PREMISE ISOLATION**

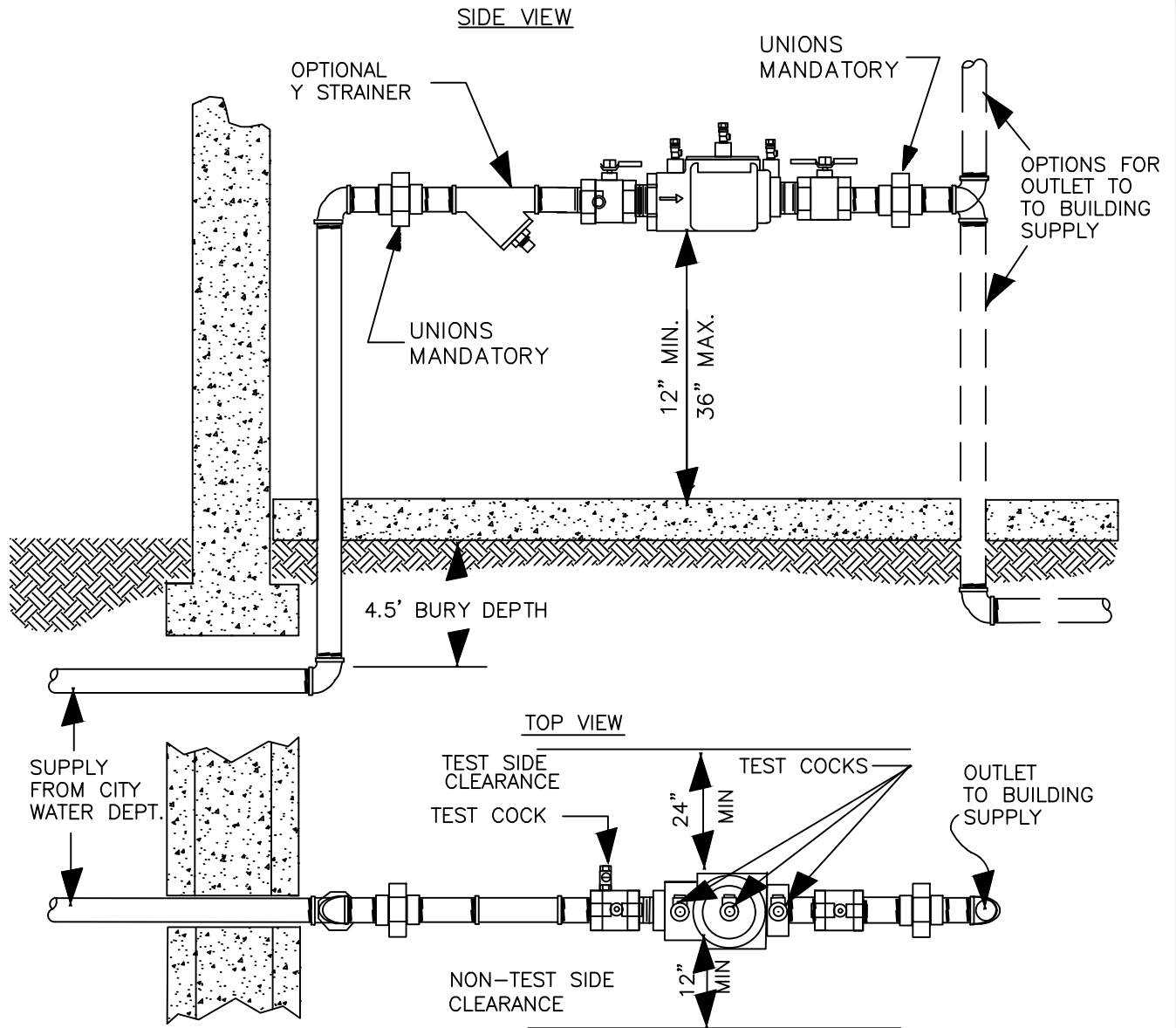
APPROVED BY:

Chris Bodley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-37



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED IN A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED FOR VERTICAL INSTALLATION.
3. THE ASSEMBLY SHALL HAVE THE MINIMUM PERIMETER OF SPACE AROUND THE ASSEMBLY AT ALL TIMES AND MUST HAVE ADEQUATE ACCESS AT ALL TIMES FOR TESTING AND MAINTENANCE OF ASSEMBLY, MIN. 12" FOR NON TEST SIDE, 24" FOR THE TEST SIDE.
4. TEST COCKS ARE REQUIRED TO FACE AWAY FROM WALLS AND NEAREST STATIONARY OBJECT, AND AT NO TIME BE LESS THAN 24" CLEARANCE.
5. THERE MUST BE NO UNPROTECTED BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY IF USED FOR BUILDING ISOLATION.
6. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
7. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
8. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.



CITY OF COEUR D'ALENE STANDARD DRAWING

**TYPICAL APPROVED DC
FOR BUILDING ISOLATION**

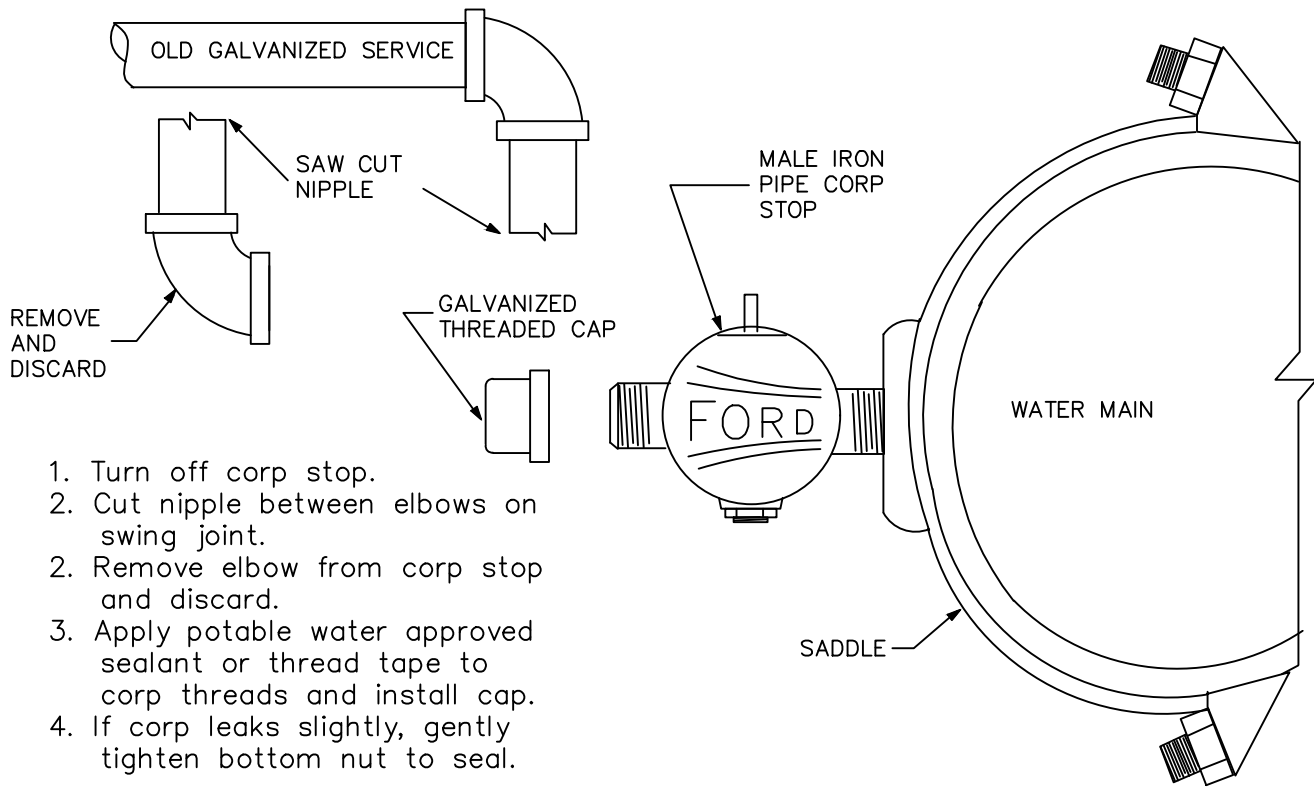
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

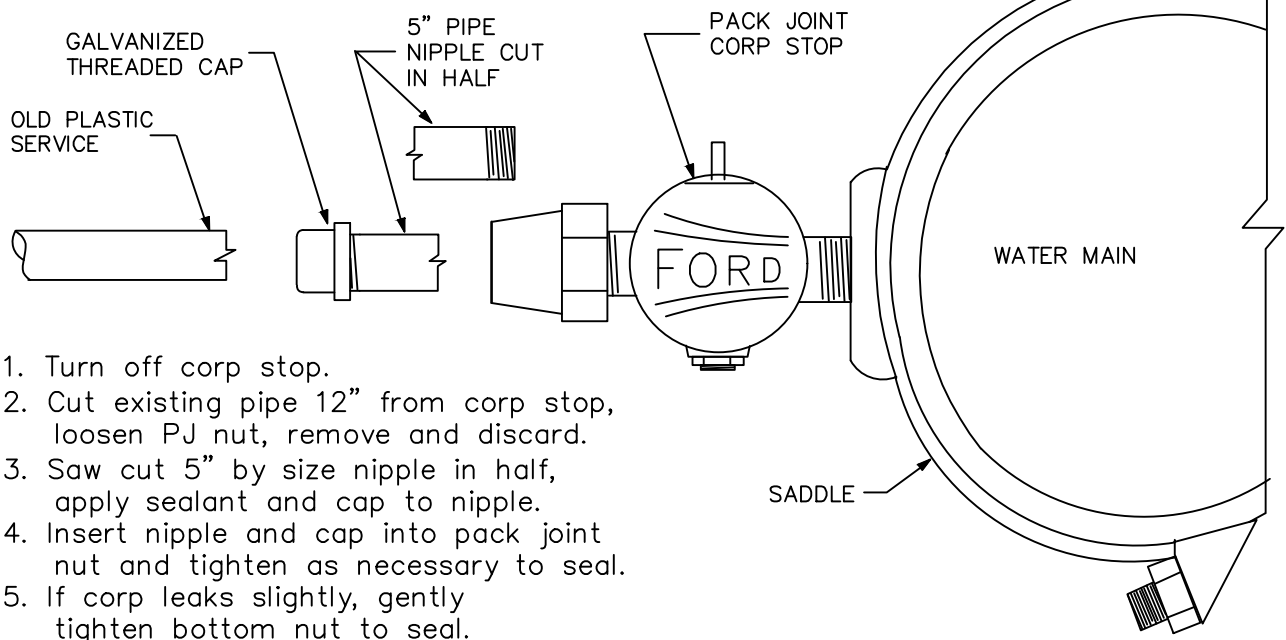
10/1/24
DATE:

DWG NO.

W-38



1. Turn off corp stop.
2. Cut nipple between elbows on swing joint.
2. Remove elbow from corp stop and discard.
3. Apply potable water approved sealant or thread tape to corp threads and install cap.
4. If corp leaks slightly, gently tighten bottom nut to seal.



1. Turn off corp stop.
2. Cut existing pipe 12" from corp stop, loosen PJ nut, remove and discard.
3. Saw cut 5" by size nipple in half, apply sealant and cap to nipple.
4. Insert nipple and cap into pack joint nut and tighten as necessary to seal.
5. If corp leaks slightly, gently tighten bottom nut to seal.



CITY OF COEUR D'ALENE STANDARD DRAWING

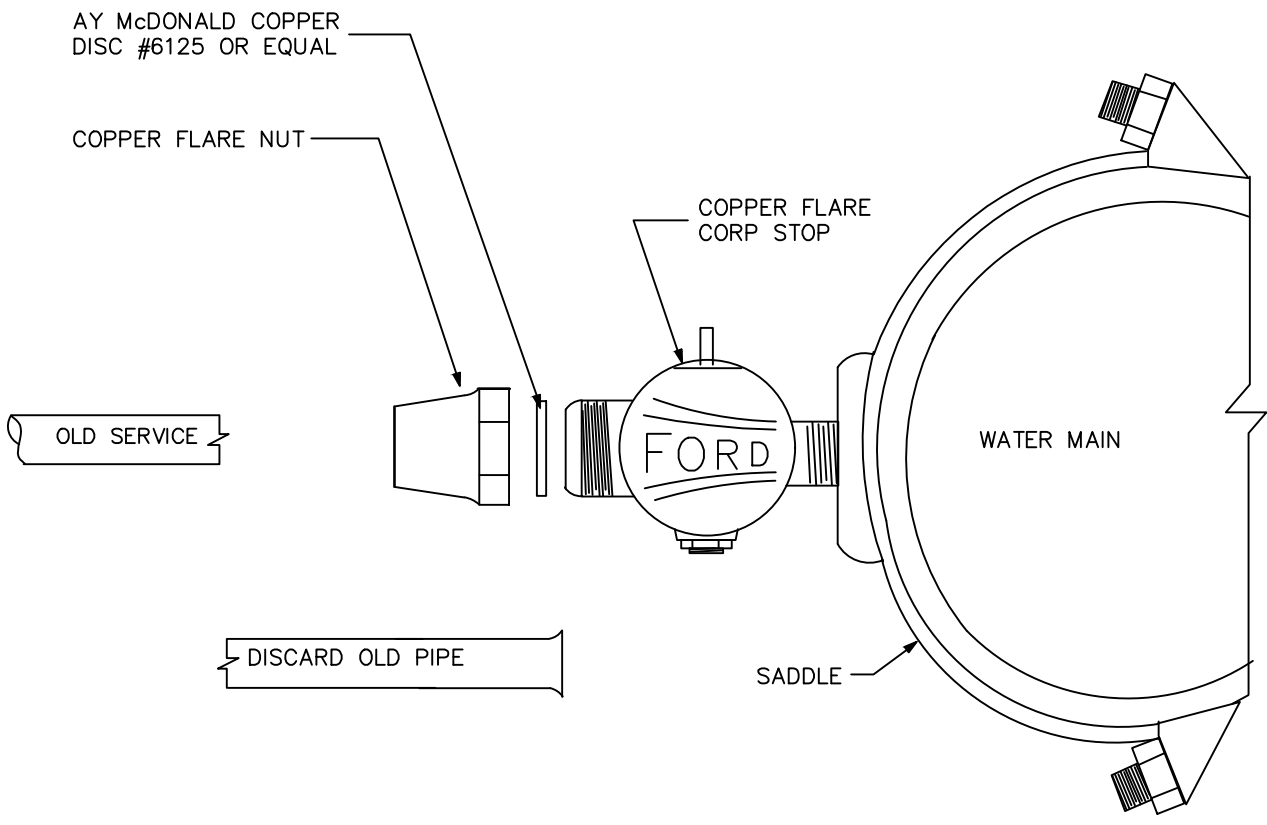
APPROVED BY:

**SERVICE ABANDONED AT
CORP STOP – IPS & PJ**

Chris Busby
CITY ENGINEER, PE 10804 10/1/24
DATE:

DWG NO.

W-39



1. Turn off corp stop.
2. Cut existing copper pipe 12" from corp stop, loosen and remove flare nut, remove and discard copper pipe.
3. Insert a copper disc #6125 into flare nut, reconnect and tighten as necessary to seal.
4. If corp leaks slightly, gently tighten bottom nut to seal.



CITY OF COEUR D'ALENE STANDARD DRAWING

**SERVICE ABANDONED AT
CORP STOP – COPPER**

APPROVED BY:

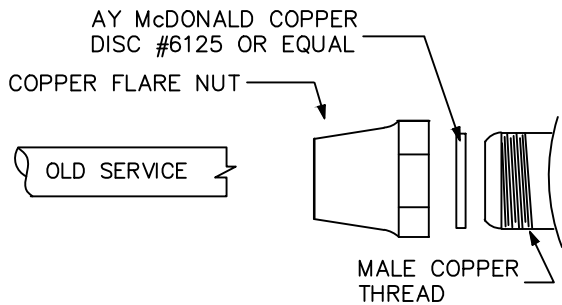
Chris Bosley
CITY ENGINEER, PE 10604

10/1/24
DATE:

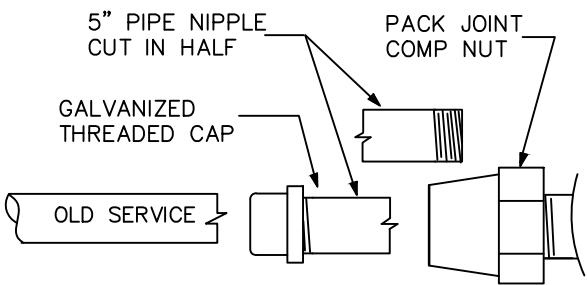
DWG NO.

W-40

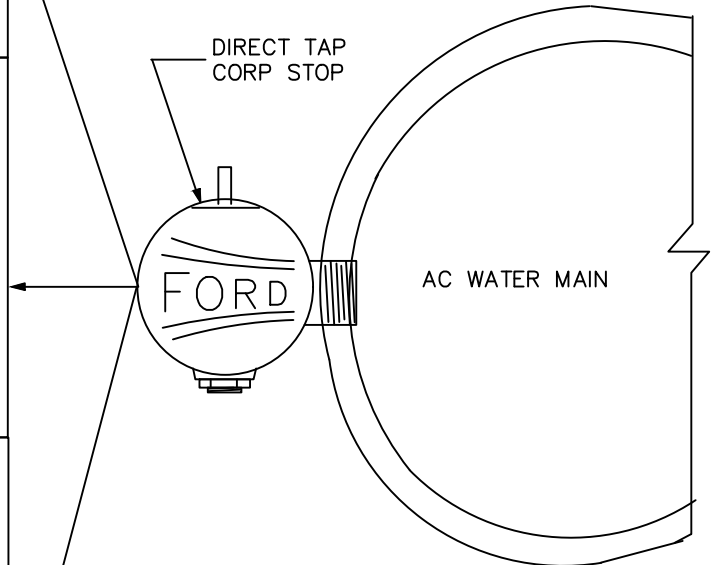
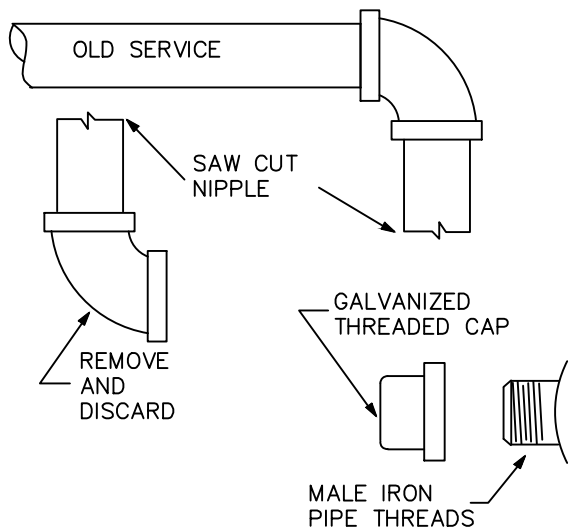
FLARED COPPER TUBE SERVICE



POLYETHYLENE PIPE SERVICE



GALVANIZED PIPE SERVICE



1. Very gently turn off corp stop.
2. Cut existing service pipe the recommended distance from corp stop, loosen and remove flare nut, elbow or pack joint nut, remove and discard pipe section.
3. Insert a copper disc #6125 into flare nut, or nipple and cap into pack joint nut or threaded cap for male thread, reconnect and tighten as necessary to seal.
4. If corp leaks slightly, gently tighten bottom nut to seal.
5. If corp is leaking or blows out of AC pipe, loosely install Romac repair band, remove corp, slide band into position and tighten to specified torque.



CITY OF COEUR D'ALENE STANDARD DRAWING

APPROVED BY:

**ABANDONING AC PIPE
DIRECT TAP CORP STOP**

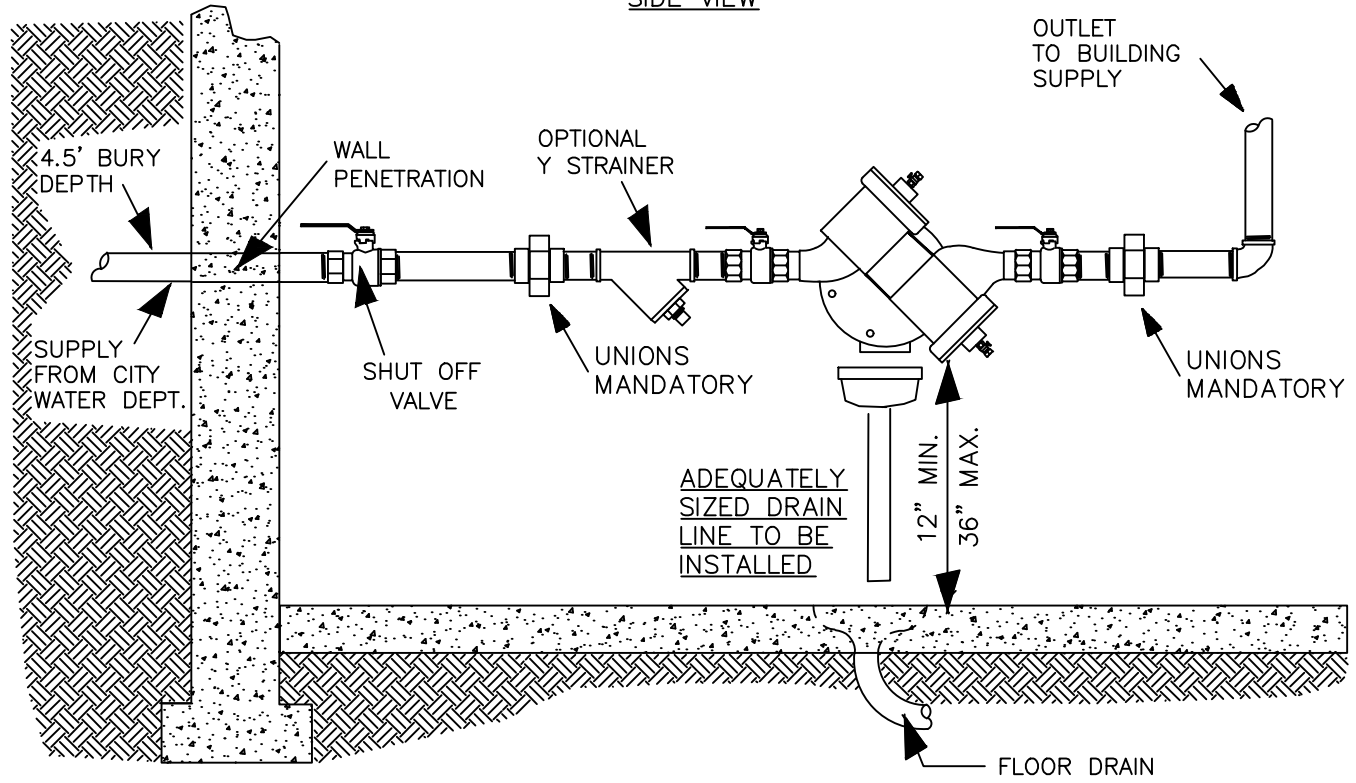
Chris Boohy
CITY ENGINEER, PE 10804

10/1/24
DATE:

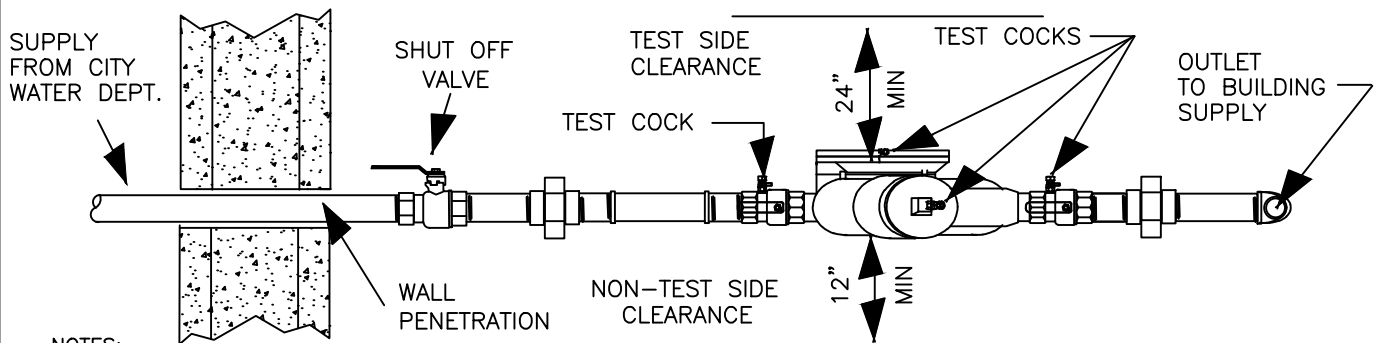
DWG NO.

W-41

SIDE VIEW



TOP VIEW



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED IN A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED BY THE CITY FOR VERTICAL ORIENTATION.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR TESTING AND MAINTENANCE OF ASSEMBLY, MINIMUM 12" FOR NON-TEST SIDE, MINIMUM 24" FOR THE TEST SIDE, FACING AWAY FROM WALLS AND NEAREST STATIONARY OBJECTS.
4. THERE MUST BE NO UNPROTECTED BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
5. IF AUXILIARY WATER SOURCE IS PRESENT AND THE RP HAS NOT BEEN INSTALLED IMMEDIATELY DOWNSTREAM OF THE METER BOX, THE ENTIRE LENGTH OF THE WATER SERVICE FROM METER BOX TO THE BACKFLOW ASSEMBLY SHALL BE ENCASED IN MINIMUM 4" OF CONCRETE PER STANDARD DRAWING W-21.
6. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
7. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
8. ADEQUATE DRAINAGE FROM THE ASSEMBLY MUST BE PROVIDED PER THE PNWS/AWWA RP DISCHARGE RATE CHART.
9. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED RP FOR
BASEMENT ISOLATION**

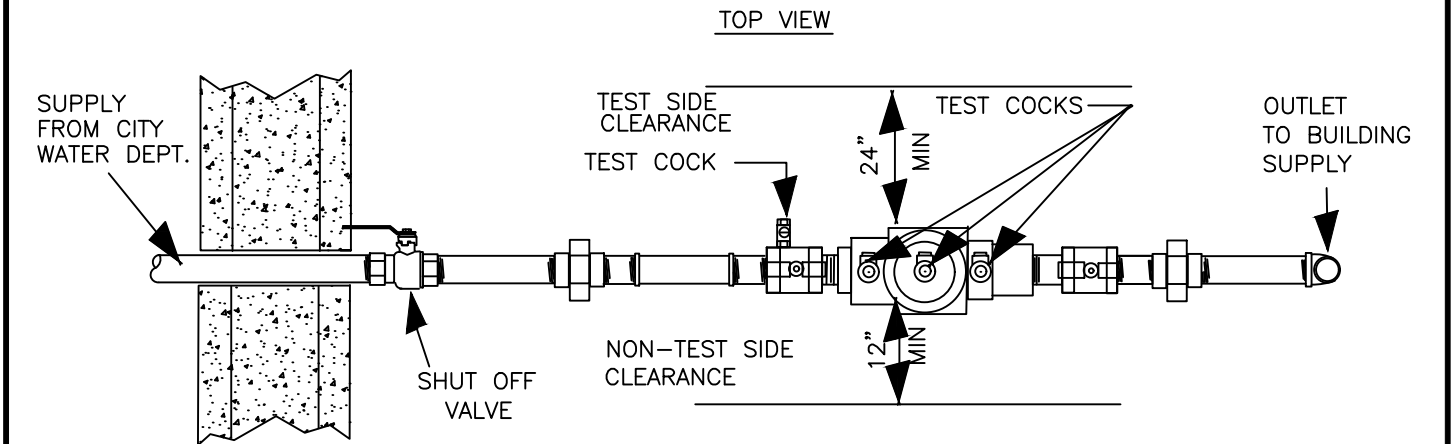
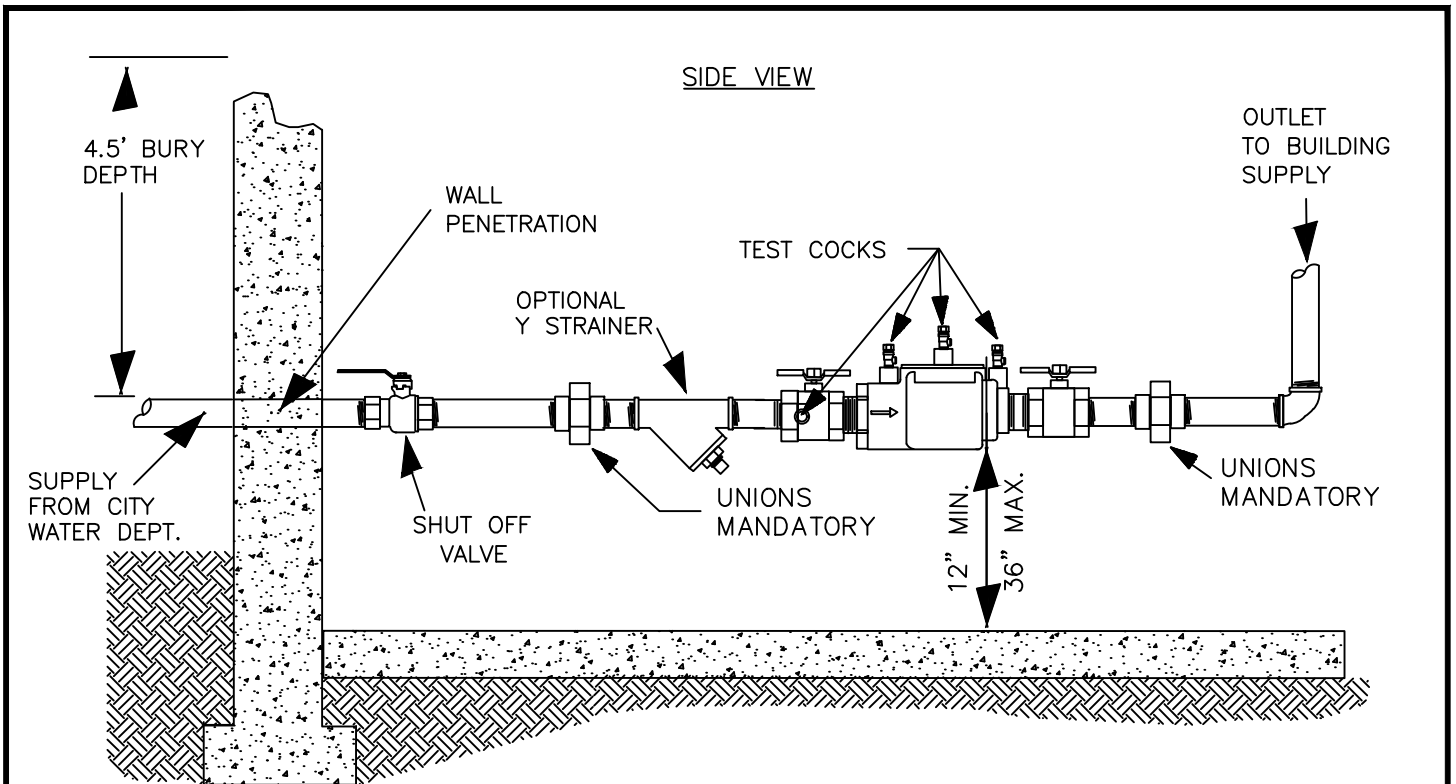
APPROVED BY:

Chris Bodley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-42

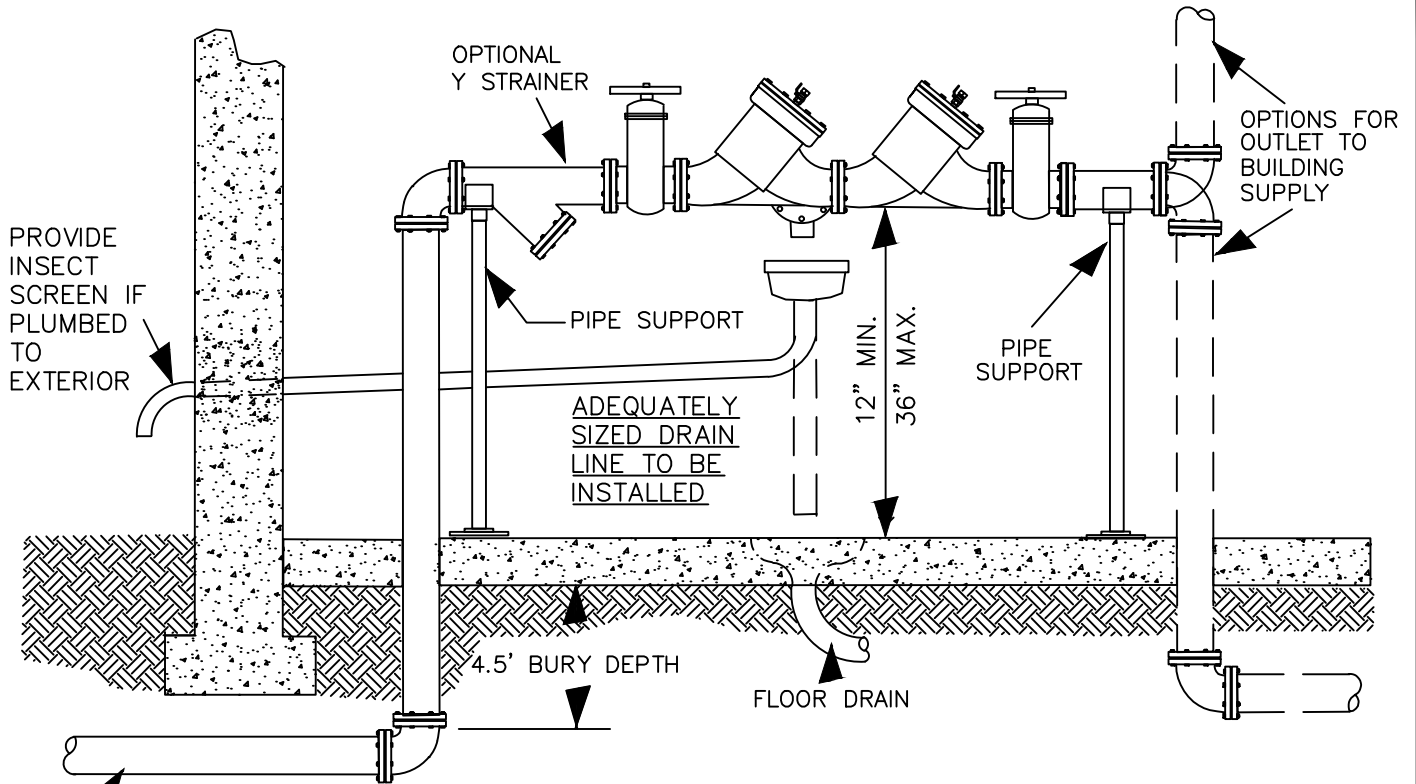


NOTES:

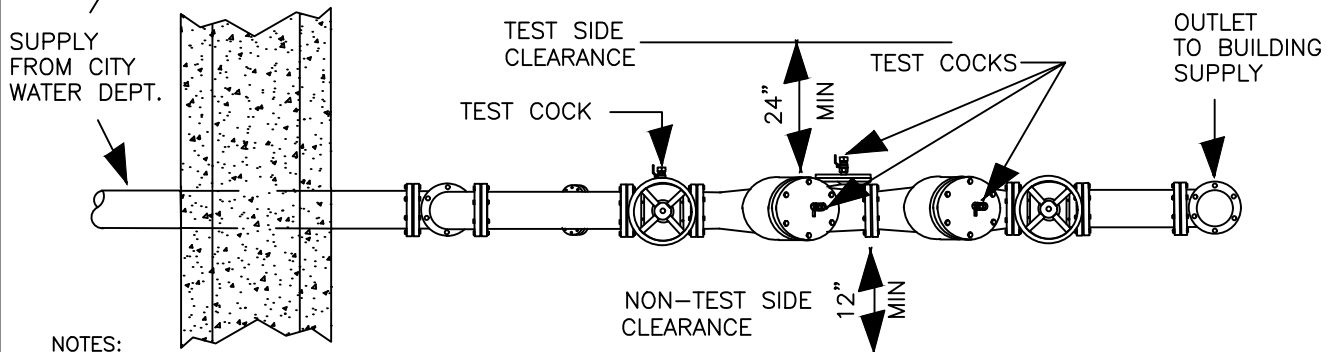
1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED IN A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED FOR VERTICAL ORIENTATION.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR TESTING AND MAINTENANCE OF ASSEMBLY, MINIMUM 12" FOR NON-TEST SIDE, MINIMUM 24" FOR THE TEST SIDE, FACING AWAY FROM WALLS AND NEAREST STATIONARY OBJECTS.
4. TEST COCKS ARE REQUIRED TO FACE AWAY FROM WALLS AND NEAREST STATIONARY OBJECT, AND AT NO TIME BE LESS THAN 24" CLEARANCE.
5. THERE MUST BE NO UNPROTECTED BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY IF USED FOR BUILDING ISOLATION.
6. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
7. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
8. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.

 <p>City of Coeur d'Alene IDAHO</p>	<p>CITY OF COEUR D'ALENE STANDARD DRAWING</p> <p>APPROVED DC FOR BASEMENT ISOLATION</p>	<p>APPROVED BY:</p> <p><i>Chris Bosley</i> CITY ENGINEER, PE 10604</p> <p>DWG NO. W-43</p> <p>DATE: 10/1/24</p>
--	--	---

SIDE VIEW



TOP VIEW



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED ABOVE GRADE OR HIGHEST FLOOD PLAIN IN A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED BY THE CITY FOR VERTICAL ORIENTATION.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR TESTING AND MAINTENANCE OF ASSEMBLY, MINIMUM 12" FOR NON-TEST SIDE, MINIMUM 24" FOR THE TEST SIDE, FACING AWAY FROM WALLS AND NEAREST STATIONARY OBJECTS.
4. THERE MUST BE NO BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
5. IF AUXILIARY WATER SOURCE IS PRESENT AND THE RP HAS NOT BEEN INSTALLED IMMEDIATELY DOWNSTREAM OF THE METER BOX, THE ENTIRE LENGTH OF THE WATER SERVICE FROM METER BOX TO THE BACKFLOW ASSEMBLY SHALL BE ENCASED IN MINIMUM 4" OF CONCRETE PER STANDARD DRAWING W-21.
6. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
7. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
8. ADEQUATE DRAINAGE FROM THE ASSEMBLY MUST BE PROVIDED PER THE PNWS/AWWA RP DISCHARGE RATE CHART.
9. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED LARGE RP FOR
BASEMENT ISOLATION**

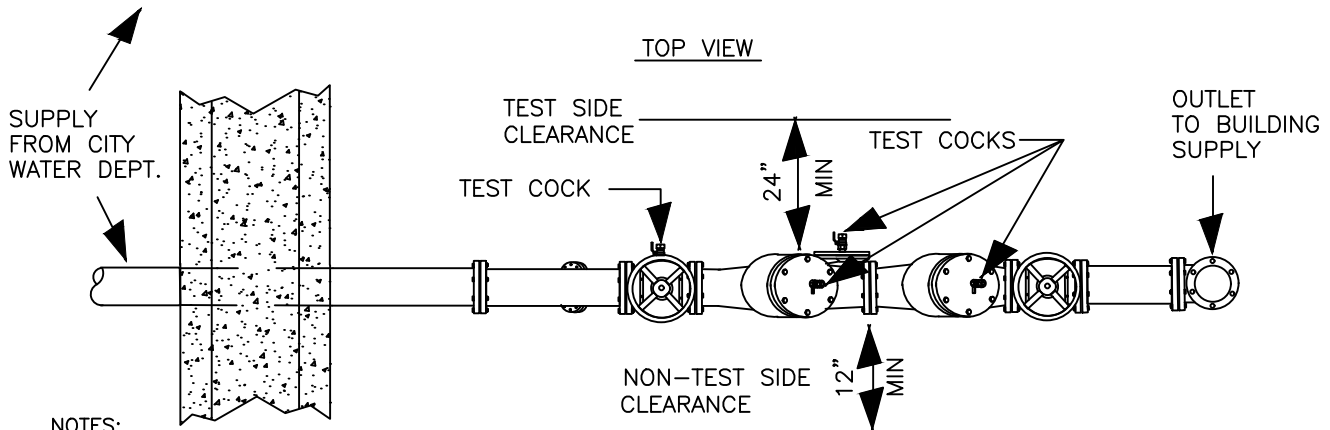
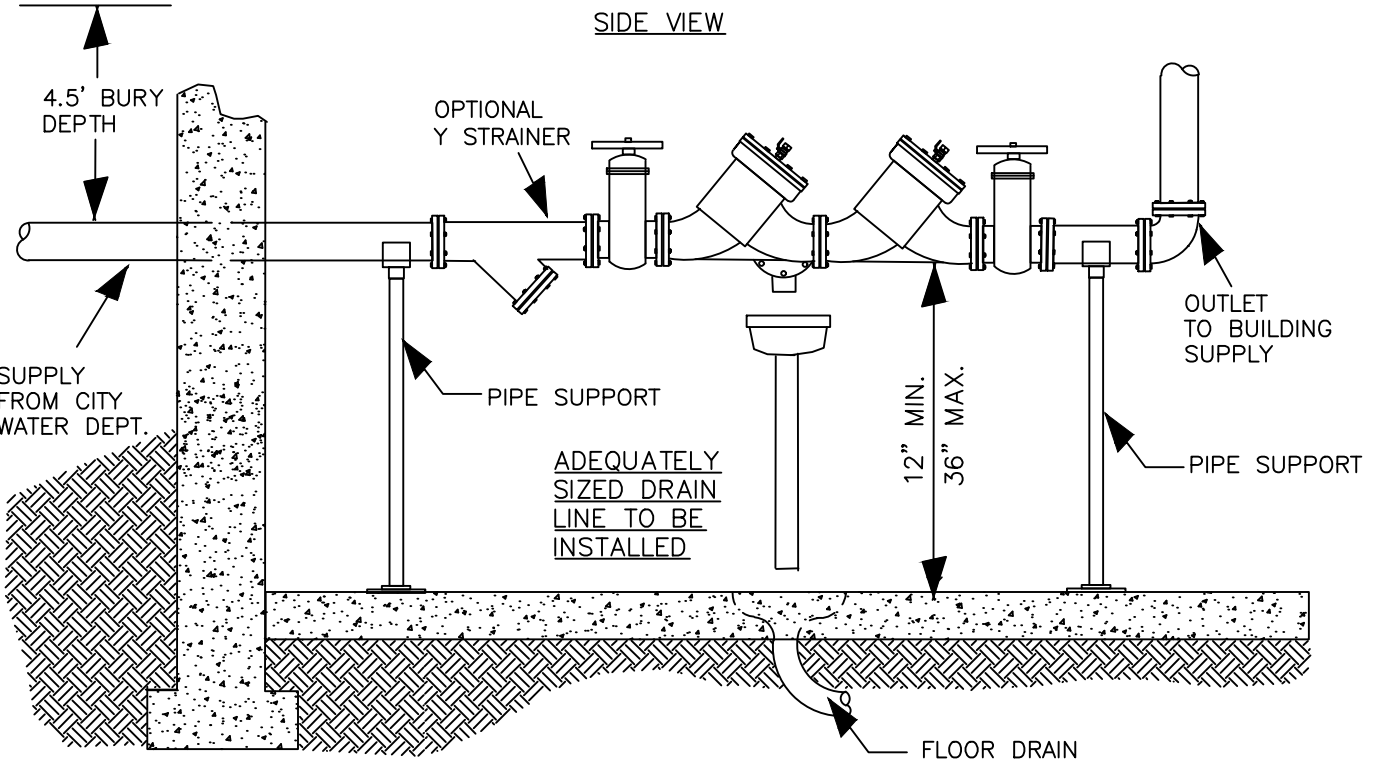
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-44



NOTES:

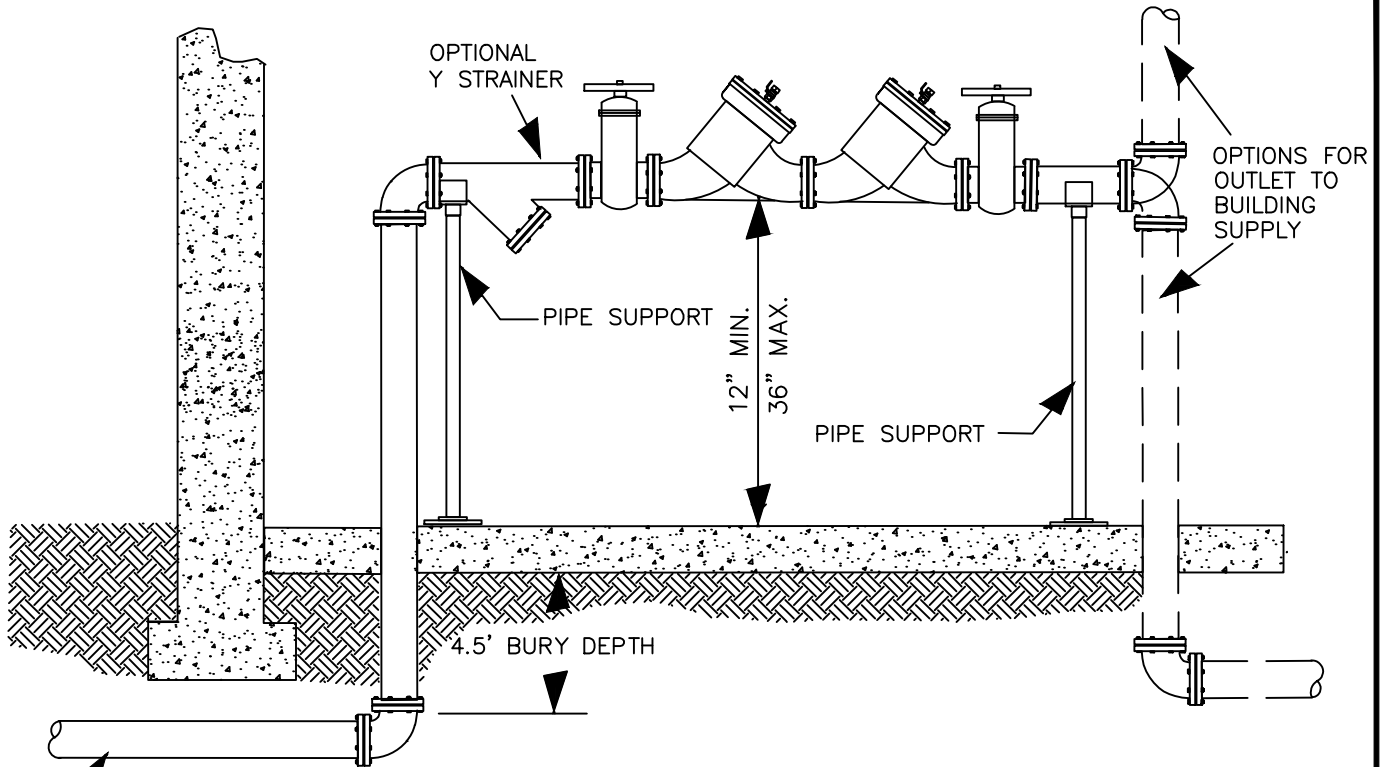
1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED ABOVE GRADE OR HIGHEST FLOOD PLAIN IN A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED BY THE CITY FOR VERTICAL ORIENTATION.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR TESTING AND MAINTENANCE OF ASSEMBLY, MINIMUM 12" FOR NON-TEST SIDE, MINIMUM 24" FOR THE TEST SIDE, FACING AWAY FROM WALLS AND NEAREST STATIONARY OBJECTS.
4. THERE MUST BE NO UNPROTECTED BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
5. IF AUXILIARY WATER SOURCE IS PRESENT AND THE RP HAS NOT BEEN INSTALLED IMMEDIATELY DOWNSTREAM OF THE METER BOX, THE ENTIRE LENGTH OF THE WATER SERVICE FROM METER BOX TO THE BACKFLOW ASSEMBLY SHALL BE ENCASED IN MINIMUM 4" OF CONCRETE PER STANDARD DRAWING W-21.
6. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
7. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
8. ADEQUATE DRAINAGE FROM THE ASSEMBLY MUST BE PROVIDED PER THE PNWS/AWWA RP DISCHARGE RATE CHART.
9. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.



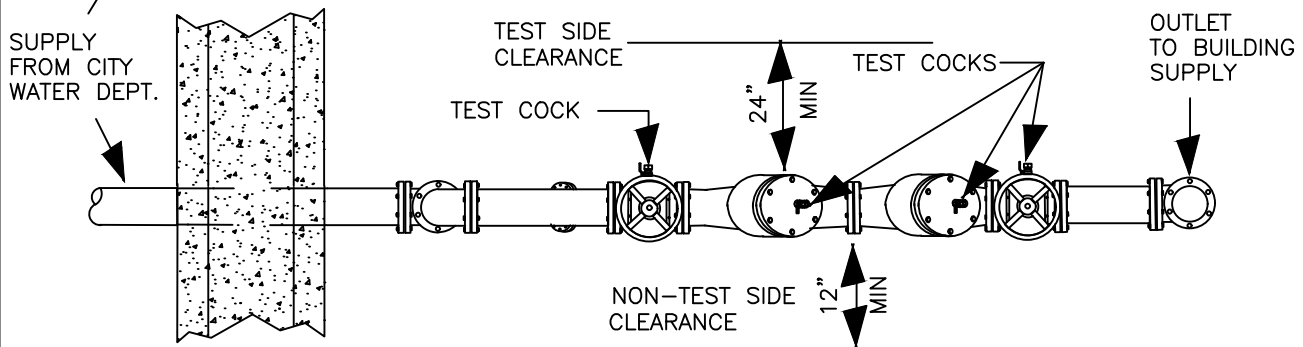
CITY OF COEUR D'ALENE STANDARD DRAWING
**APPROVED LARGE RP FOR
 BASEMENT ISOLATION**

APPROVED BY:
Chris Bosley
 CITY ENGINEER, PE 10604
 DATE: 10/1/24
 DWG NO. W-45

SIDE VIEW



TOP VIEW



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED BY THE CITY FOR VERTICAL ORIENTATION.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR TESTING AND MAINTENANCE OF ASSEMBLY, MINIMUM 12" FOR NON-TEST SIDE, MINIMUM 24" FOR THE TEST SIDE, FACING AWAY FROM WALLS AND NEAREST STATIONARY OBJECTS.
4. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
5. THERE MUST BE NO UNPROTECTED BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
6. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
7. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED LARGE DC FOR
BASEMENT ISOLATION**

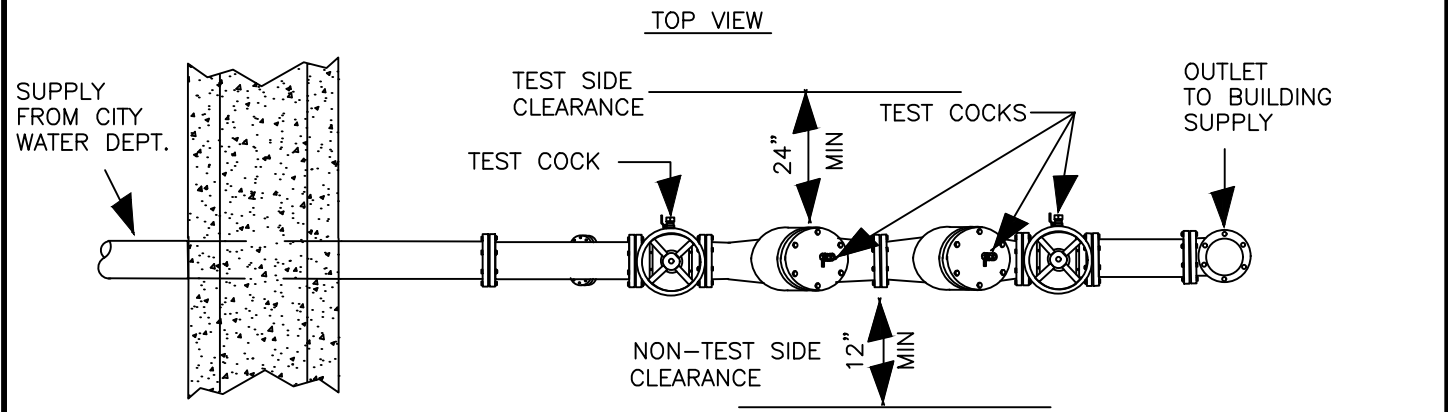
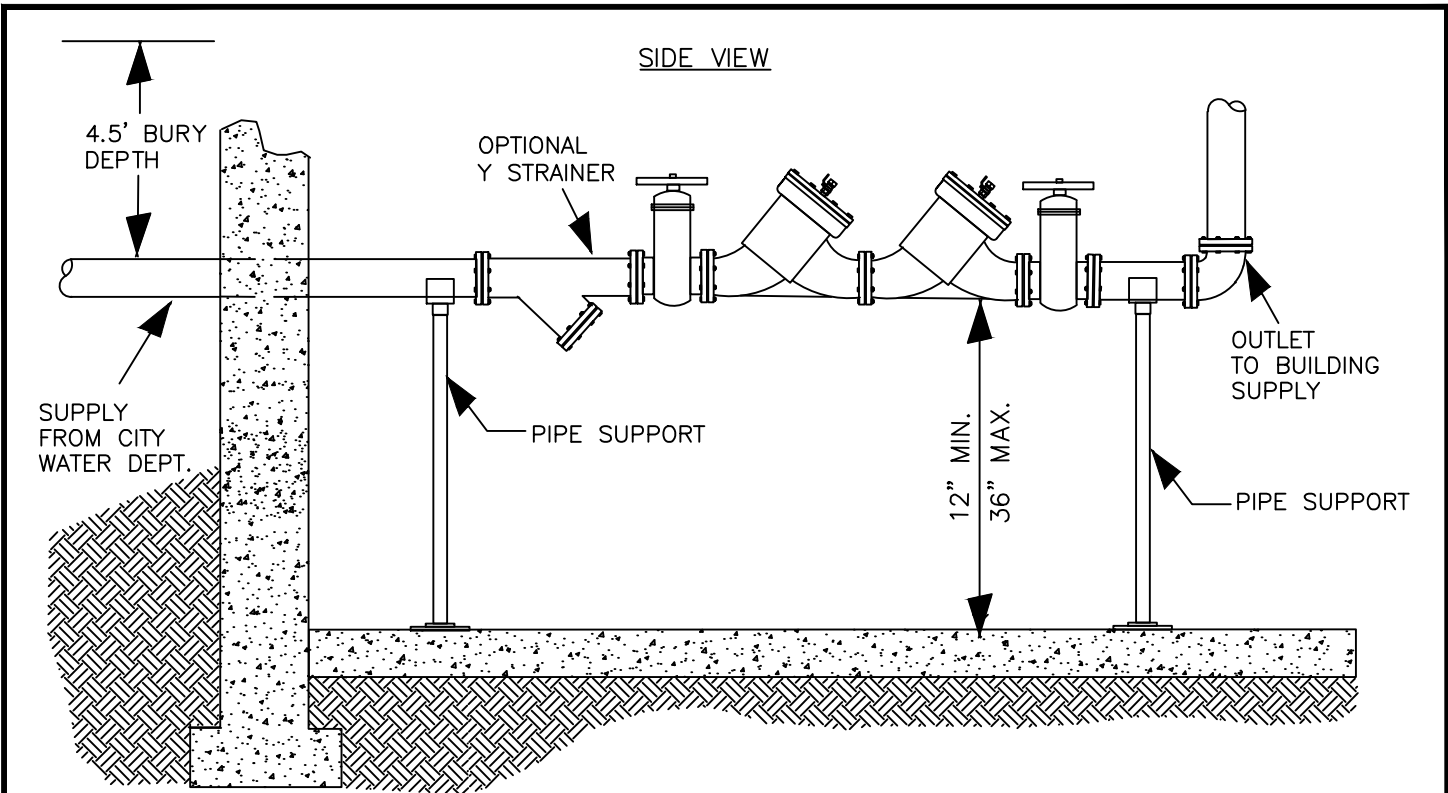
APPROVED BY:

Chris Busby
CITY ENGINEER, PE 10602

10/1/24
DATE:

DWG NO.

W-46



NOTES:

1. BACKFLOW ASSEMBLY MUST MEET U.S.C./IDAPA STANDARDS AND SPECIFICATIONS, PLEASE CALL BEFORE ORDERING.
2. ASSEMBLIES MUST BE INSTALLED A HORIZONTAL ORIENTATION ONLY UNLESS THE ASSEMBLY HAS BEEN APPROVED BY THE CITY FOR VERTICAL ORIENTATION.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR TESTING AND MAINTENANCE OF ASSEMBLY, MINIMUM 12" FOR NON-TEST SIDE, MINIMUM 24" FOR THE TEST SIDE, FACING AWAY FROM WALLS AND NEAREST STATIONARY OBJECTS.
4. ALL MEASUREMENTS ARE FROM THE LOWEST OR WIDEST PART OF THE ASSEMBLY.
5. THERE MUST BE NO UNPROTECTED BRANCH PIPING OR TEES CONNECTED TO THE SUPPLY PIPE BETWEEN THE CITY SERVICE SUPPLY LINE AND THE ASSEMBLY.
6. ALL ASSEMBLIES ARE SUSCEPTIBLE TO FREEZING AND SHALL BE ADEQUATELY FREEZE PROTECTED.
7. BACKFLOW ASSEMBLY MUST BE INSTALLED WITHIN 2' OF FLOOR OR WALL SERVICE PENETRATION.



CITY OF COEUR D'ALENE STANDARD DRAWING

**APPROVED LARGE DC FOR
BASEMENT ISOLATION**

APPROVED BY:

Chris Bosley 10/1/24
CITY ENGINEER, PE 10604 DATE:

DWG NO. W-47

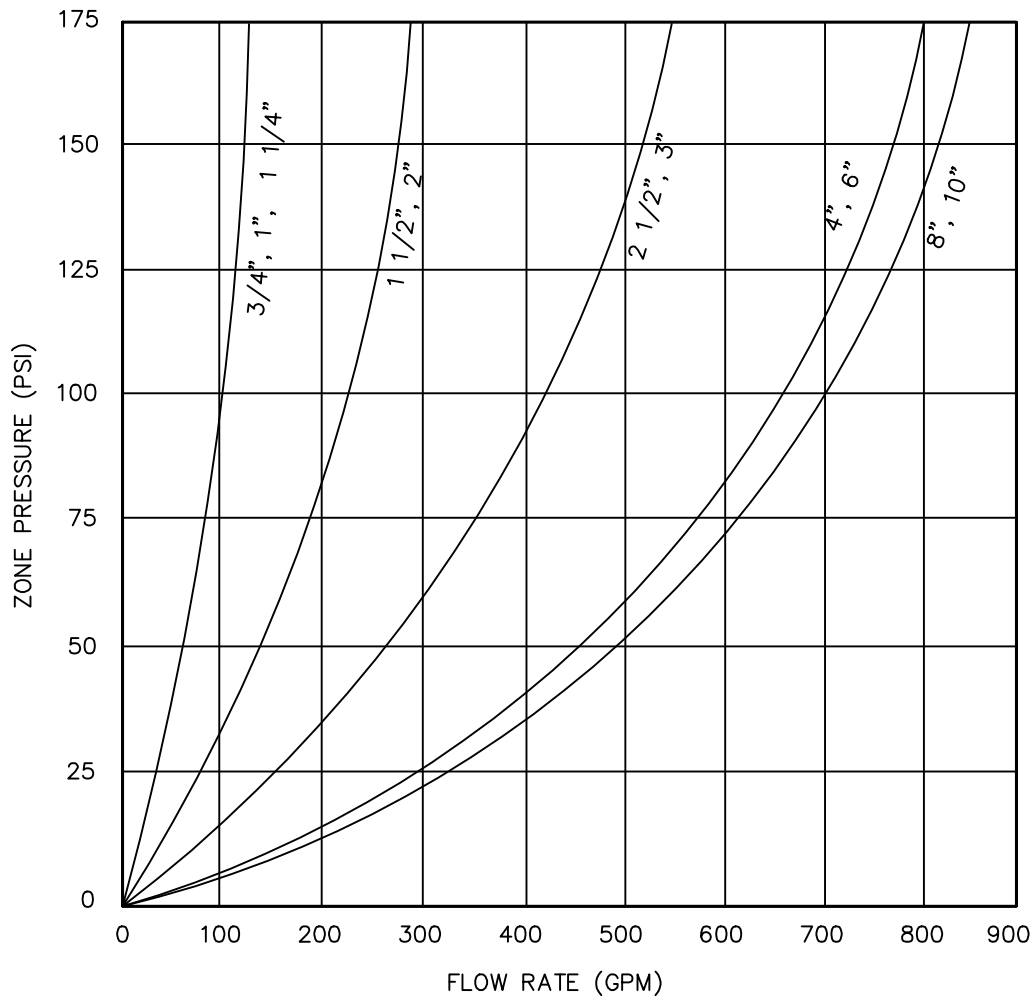


Figure 6-8

Approximate Relief Valve Discharge Rates
For Reduced Pressure Backflow Assemblies

Care should be taken to ensure that the entire drainage system has adequate capacity to carry the continuous discharge rates shown above. The following are typical flow rates as sized by one floor drain manufacturer and represent only the floor drain capacity;

Size:	2"	3"	4"	6"	8"
Capacity (gpm)	55	112	170	450	760

For parallel assemblies, the drainage system should be designed for the discharge from both assemblies.

Chapter 6 (6th Edition)



CITY OF COEUR D'ALENE STANDARD DRAWING

**PNWS –AWWA
RP DISCHARGE RATES**

APPROVED BY:

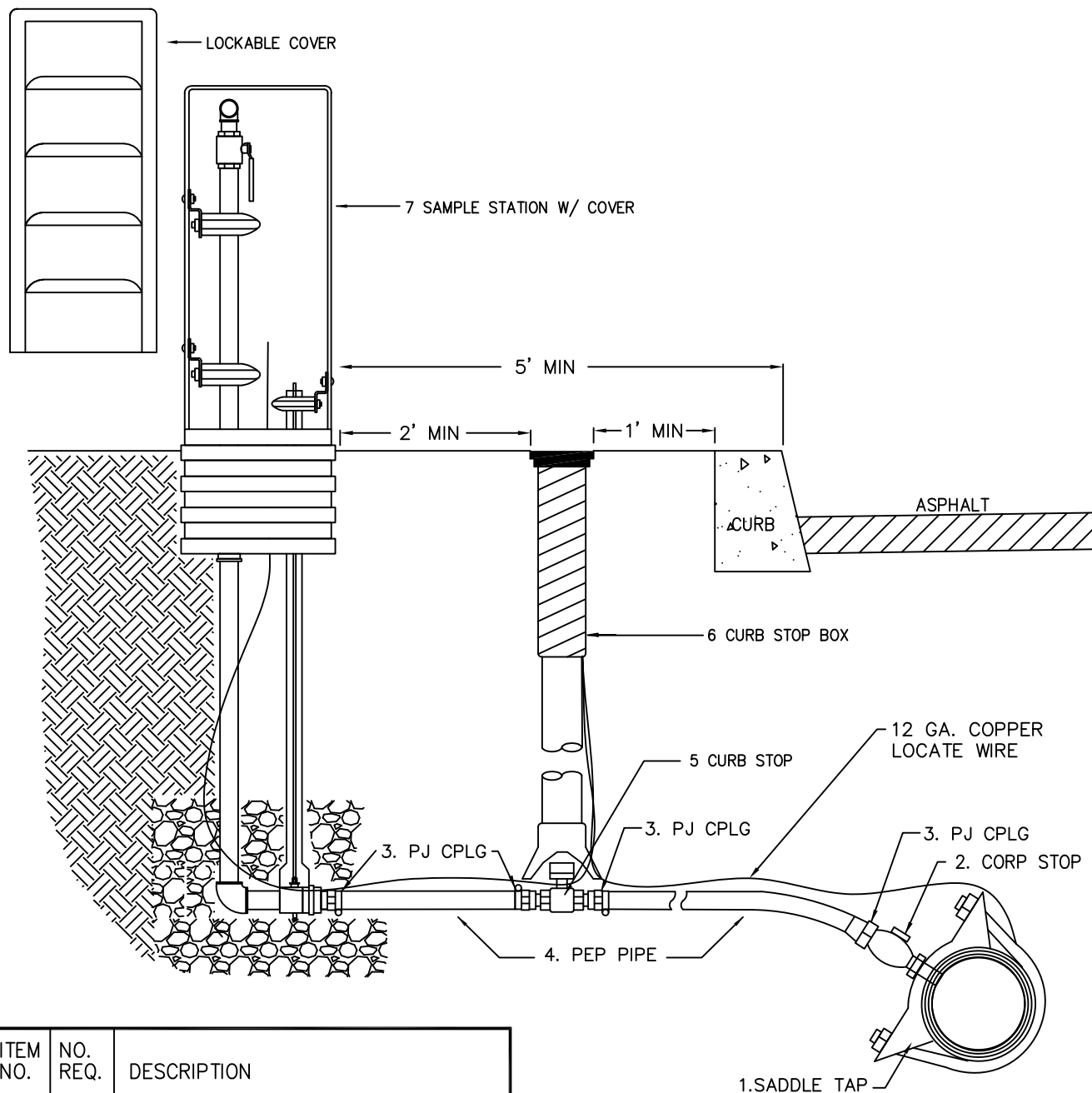
Chris Bushy
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-48

APPROVED SAMPLE STATION INSTALLATION



ITEM NO.	NO. REQ.	DESCRIPTION
1	1	ROMAC DOUBLE STRAP TAPPING SADDLE
2	1	1" BRONZE CORPORATION STOP
3	4	1" PACK JOINT AS REQUIRED
4	2	1" IPS POLYETHELENE PIPE
5	1	1" CURB STOP
6	1	APPROVED CURB STOP BOX
7	1	MUELLER SAMPLE STATION OR EQUAL
8	1	WASHED DRAIN ROCK AS NEEDED

UNLESS OTHERWISE SPECIFIED, THESE APPURTENANCES SHALL BE OF THE MATERIAL SPECIFIED OR SHOWN ON THE PLANS AND SHALL MEET PRESSURE REQUIREMENTS EQUAL TO OR EXCEEDING THE MAIN INSTALLATION AND SHALL BE NSF-61 CERTIFIED.



CITY OF COEUR D'ALENE STANDARD DRAWING

1" SAMPLE STATION ASSEMBLY

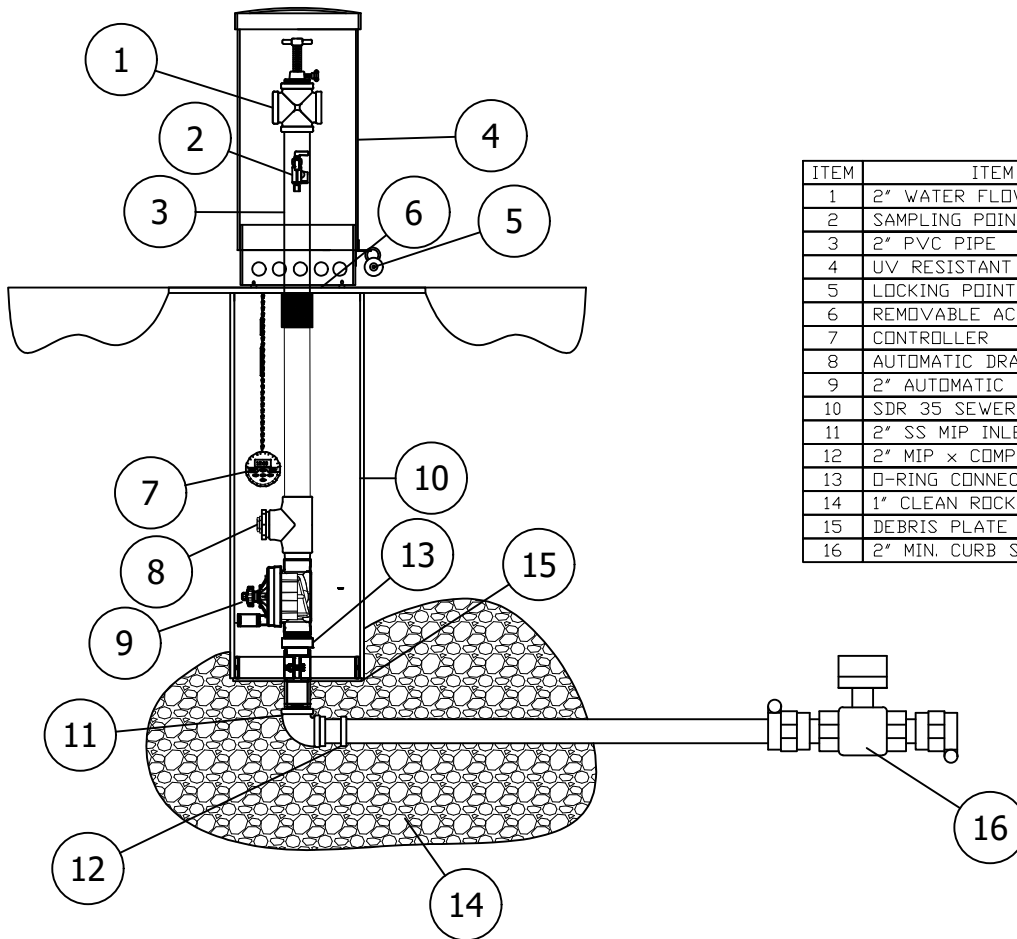
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-49



ITEM	ITEM / DESCRIPTION
1	2" WATER FLOW RESTRICTOR
2	SAMPLING POINT
3	2" PVC PIPE
4	UV RESISTANT LOCKABLE DOME ENCLOSURE
5	LOCKING POINT
6	REMOVABLE ACCESS PLATE
7	CONTROLLER
8	AUTOMATIC DRAIN
9	2" AUTOMATIC VALVE
10	SDR 35 SEWER PIPE
11	2" SS MIP INLET
12	2" MIP x COMPRESSION ADAPTER
13	O-RING CONNECTOR
14	1" CLEAN ROCK
15	DEBRIS PLATE
16	2" MIN. CURB STOP VALVE

Notes:

1. Unit shall be Kupferle Foundry Company Model #9400, Mueller Model #FC100, or approved equal.
2. Flush water lines free of debris before installation.
3. Automatic flushing device shall have a 2" Stainless Steel MIP inlet, that will lead vertically to the bottom into a 2" automatic flushing valve.
4. The flushing valve shall control the flow of water through the hydrant and its diaphragm with the extension and retraction of a DC latching solenoid and have a 220 PSI rating.
5. Each unit shall be furnished with a stand-alone valve controller.
6. Valve controller will not require a second hand-held device for programming.
7. Controller must have minimum of 12 possible flushing cycles per day.
8. Shall be submersible to 12 feet, operate with a 9 volt battery and have resin-seated electrical components.
9. Solenoid shall have no loose parts when removed from valve.
10. Removal of 2" solenoid valve shall be possible via an o-ring connector located under the valve after removal of stainless steel access plate.
11. Valve assembly shall be contained within a UV-resistant locking cover.



CITY OF COEUR D'ALENE STANDARD DRAWING

AUTOMATIC FLUSHING DEVICE

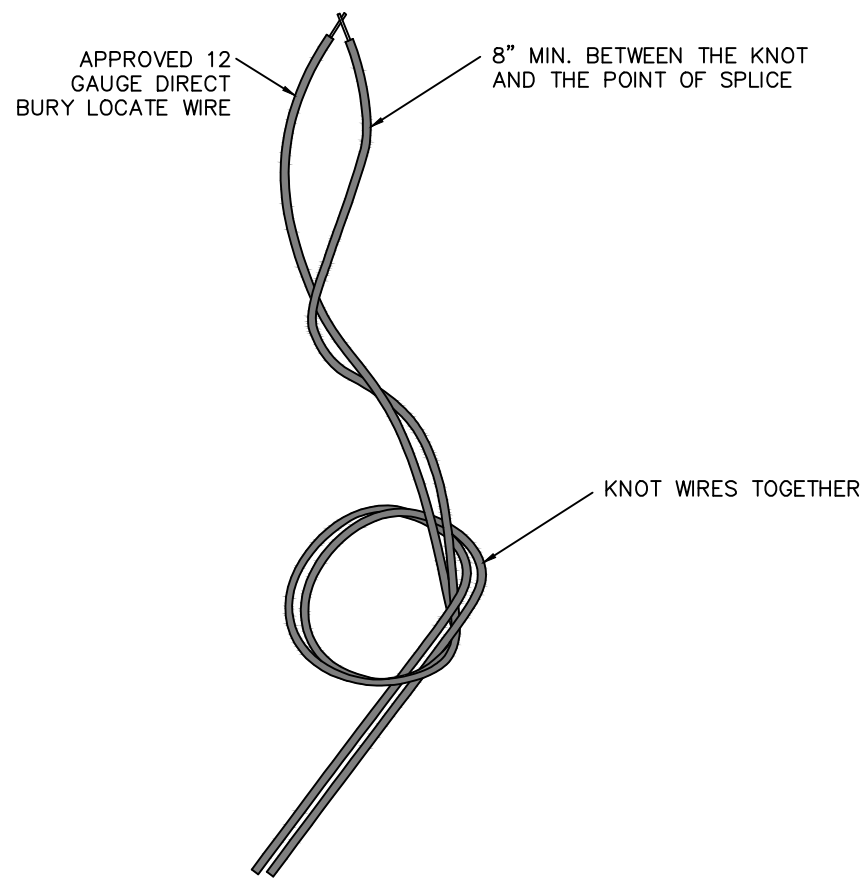
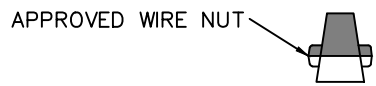
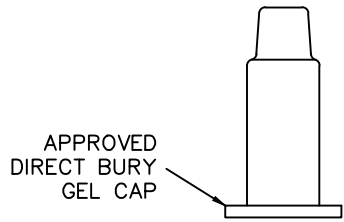
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-50



CITY OF COEUR D'ALENE STANDARD DRAWING

SPLICE KIT INSTALLATION

APPROVED BY:

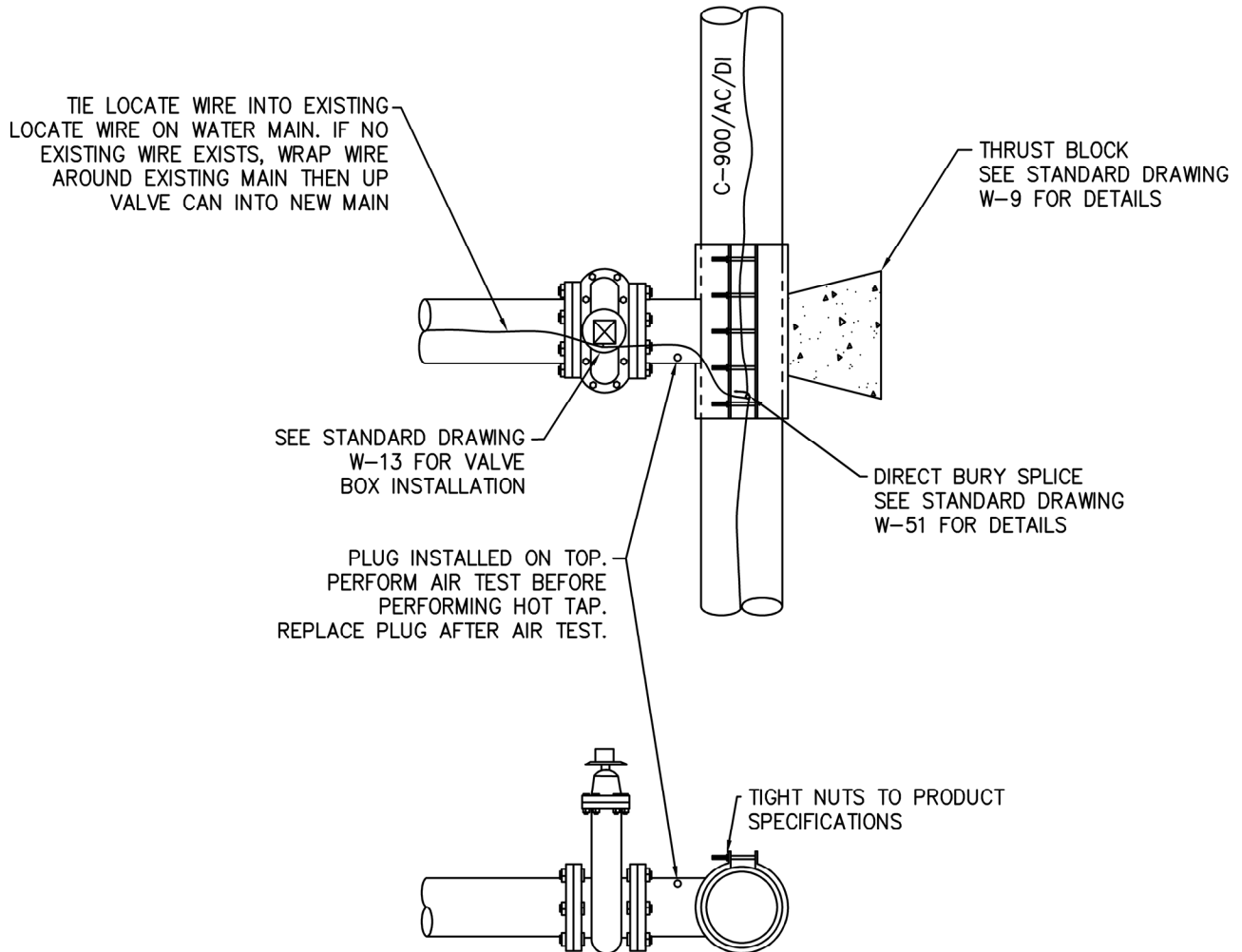
Chris Bosley
CITY ENGINEER, PE 10604

10/1/24
DATE:

DWG NO.

W-51

4" AND GREATER HOT TAP FOR FIRE SERVICE,
FIRE HYDRANTS, AND NEW WATER MAINS



NOTES:

1. CLEAN EXISTING WATER MAIN, TAPPING SADDLE, AND NEW GATE VALVE WITH SODIUM HYPOCHLORITE SOLUTION OR EQUIVALENT.
2. ALL HOT TAPS 4" AND GREATER SHALL HAVE AN AIR TEST PERFORMED BY THE CONTRACTOR PRIOR TO PERFORMING THE HOT TAP.
3. AIR TEST SHALL HOLD 50 PSI FOR A MINIMUM OF 5 MINUTES OR AS LONG AS DIRECTED BY FIELD INSPECTOR.
4. THRUST BLOCK SHALL BE INSTALLED PER STANDARD DRAWING W-9.
5. 12 GAUGE BURY LOCATE WIRE SHALL BE INSTALLED TO THE EXISTING MAINS THAT DO NOT HAVE LOCATE WIRE. LOCATE WIRE THEN SHALL BE WRAPPED AROUND EXISTING WATER MAIN AND RAN UP VALVE CAN AND OUT TO NEW WATER MAIN.



CITY OF COEUR D'ALENE STANDARD DRAWING

**4" AND GREATER
HOT TAP**

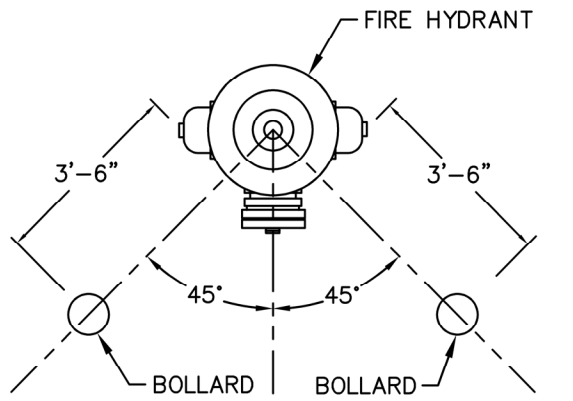
APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

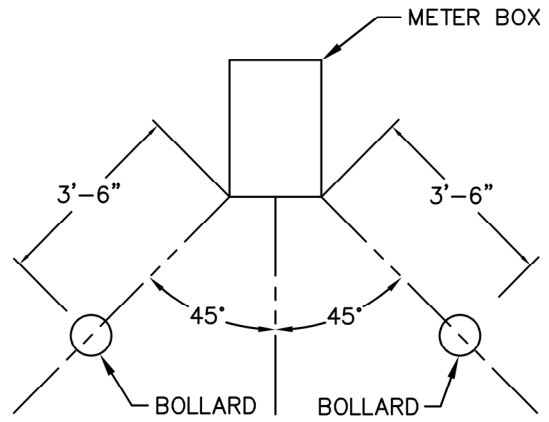
10/1/24
DATE:

DWG NO.

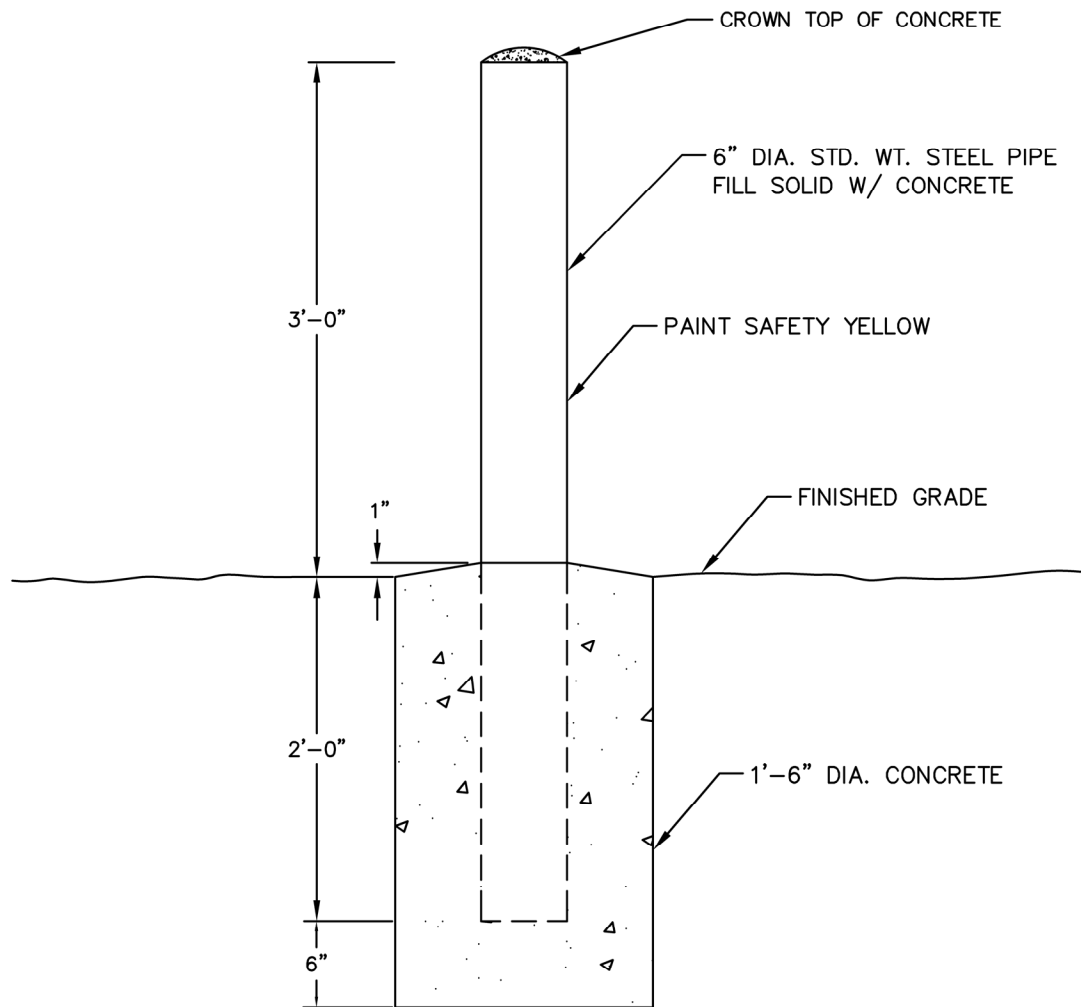
W-52



CURB
STREET
PLAN VIEW



CURB
STREET
PLAN VIEW



CITY OF COEUR D'ALENE STANDARD DRAWING

BOLLARDS

APPROVED BY:

Chris Bosley
CITY ENGINEER, PE 10804

10/1/24
DATE:

DWG NO.

W-53