Proposed **Redline** Markups

for the

2023 City of Seattle Standard Plans for Municipal Construction

The Standard Plans shown here depict the proposed edits of the 2020 Standard Plans.

REV DATE: AUG 2022

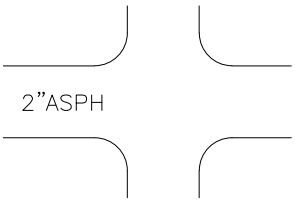
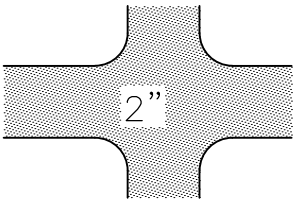
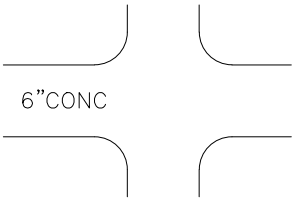
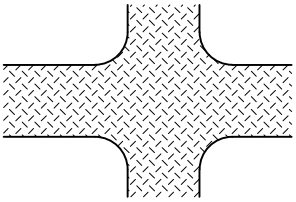
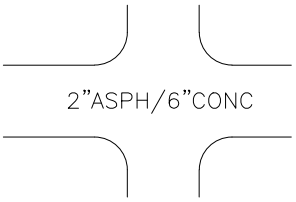
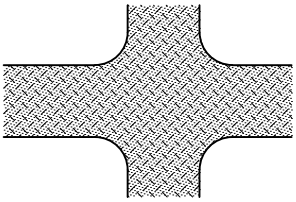
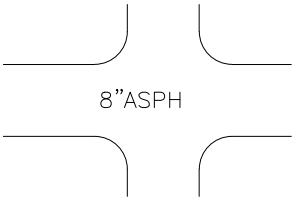
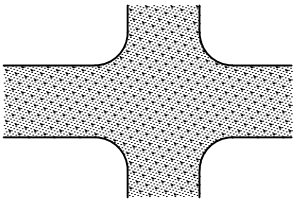
RDWY	Roadway
RECONN	Reconnect
RED	Reducer
REF	Refer/Reference
REINF	Reinforce/Reinforcement
RELOC	Relocate
REM	Remove
REPL	Replace
REQD	Required
RET	Retire/Retired
RET WALL	Retaining Wall
RF	Rock Facing
RGS	Rigid Galvanized Steel
RIT	Round Inlet Top
RJ	Restrained Joint
RLWY	Railway
RP	Rock Pocket
RPBA	Reduced Pressure Backflow Assembly
RR	Railroad
RS	Rigid Steel
RT	Right
S	South
SB	Sandbox
SCH	Schedule
SCL	Seattle City Light
SDCI	Seattle Department of Construction & Inspections
SDS	Street Designation Sign
SD	Service Drain
SDOT	Seattle Department of Transportation
SEC	Section
SHLD	Shield
SHT	Sheet
SL	Sleeve, Street Light

added

℄	Survey Line
SLHH	Street Light Handhole
SNS	Street Name Sign
SP	Strain Pole
SPCS	Spaces
SPEC	Specifications
SPR	Seattle Parks & Recreation
SPU	Seattle Public Utilities
SQ	Square
SS	Stainless Steel, Side Sewer–Combined
SSD	Sub–Surface Drain
SSS	Side Sewer–Sanitary
SSTONE	Sandstone
ST	Street
STA	Station
STD	Standard
STL	Steel
STL P	Steel Pipe
STM LOG	Steam Log
STRUCT	Structure/Structural
SW	Sidewalk
SY	Square Yard
SYS	System
T	Tee
TB	Test Boring
TC	Traffic Control
TCB	Telephone Cable
TCD	Telephone Conduit
TCHH	Traffic Control Handhole
TD	Telephone Duct
TEB	Telephone Enclosure Box
TEL	Telephone
TEMP	Temporary

REF STD SPEC SEC 1-01.2

City of Seattle | NOT TO SCALE | ABBREVIATIONS

ITEM	EXISTING	PROPOSED
Pavement, HMA or WMA (CL ½")		
Roadway Cement Concrete, (type to be shown in drawings)		
2" HMA or WMA, CL ½" Over Roadway Cement Concrete Base		
2" HMA or WMA, CL ½" over HMA or WMA, CL 1"		

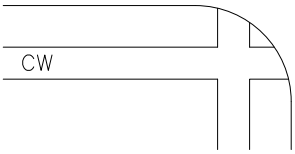
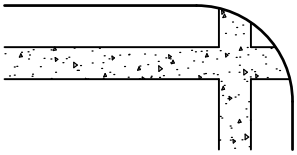
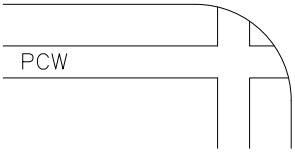
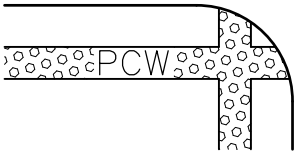
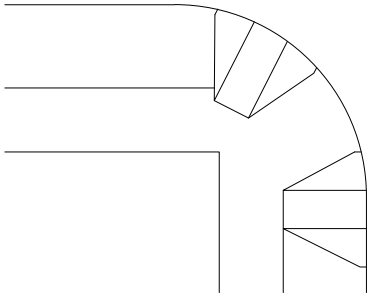
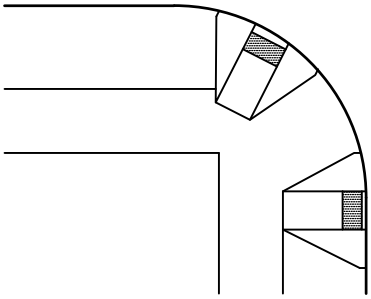
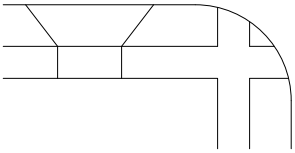
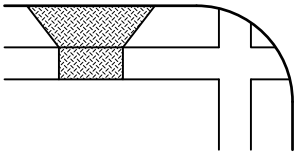
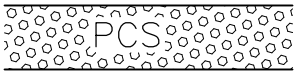
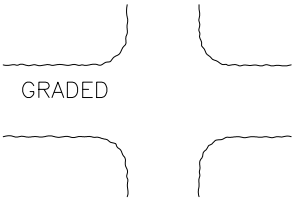
REF STD SPEC SEC

City of Seattle

NOT TO SCALE

STANDARD SYMBOLS
PAVING

REV DATE: SEP 2022

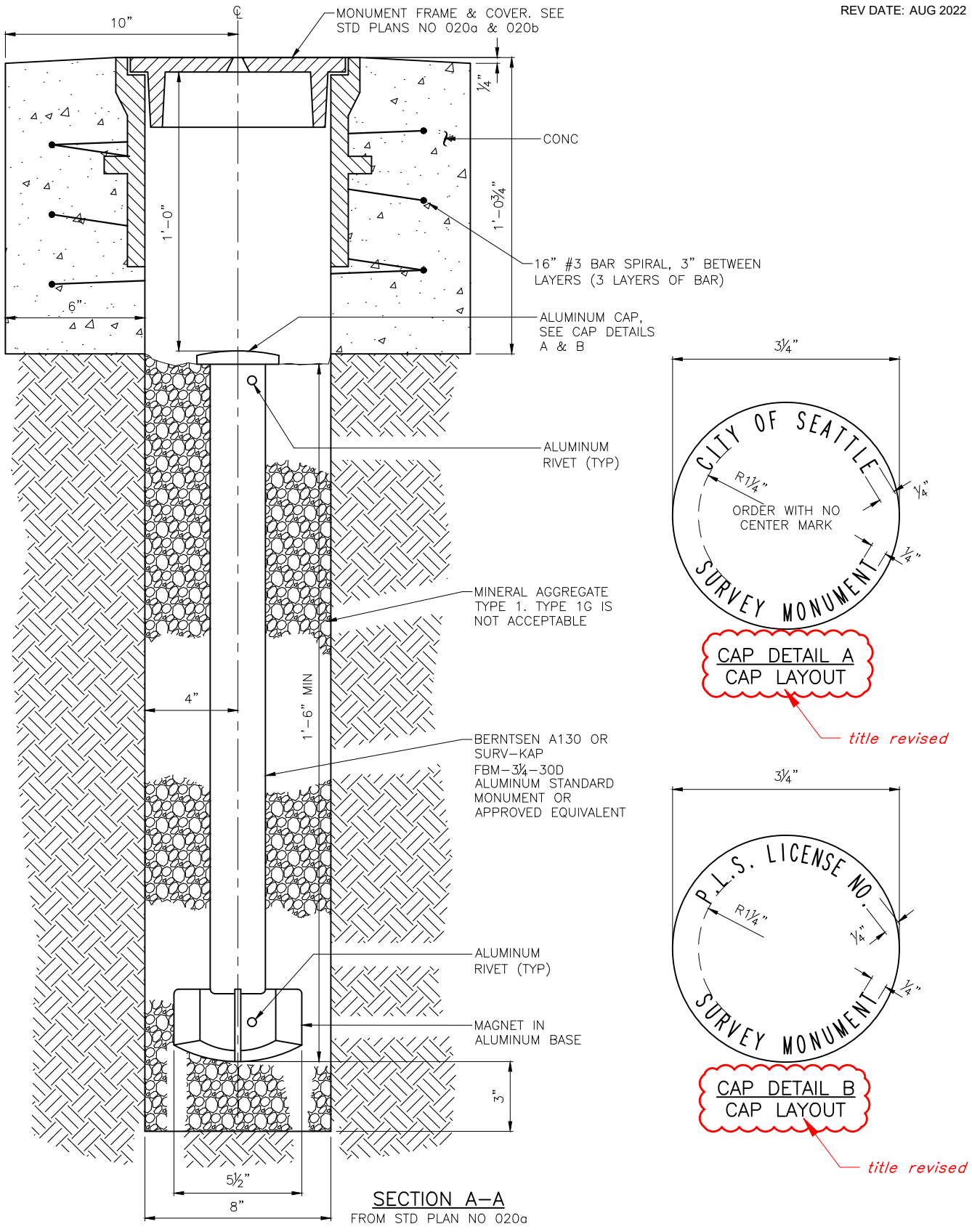
ITEM	EXISTING	PROPOSED
Type 410b Curb & Gutter		
Type 410c Curb		
Cement Concrete Walk		
Pervious Concrete Walk		
Curb Ramp		
Type 430a Conc Dwy		
Pervious Concrete Surface		
Grading		

REF STD SPEC SEC

City of Seattle | NOT TO SCALE | STANDARD SYMBOLS PAVING

STANDARD PLAN NO 020c

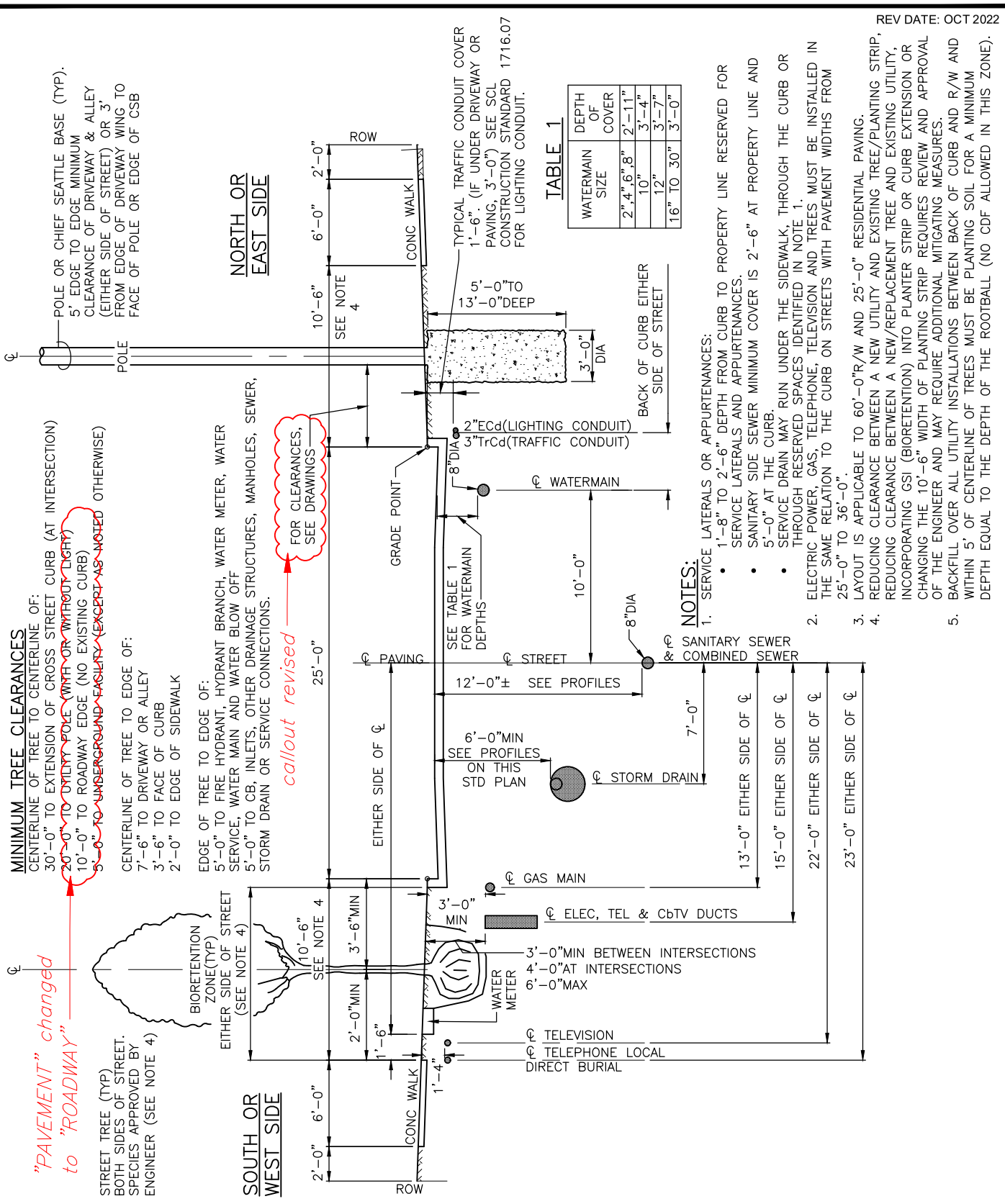
REV DATE: AUG 2022



REF STD SPEC SEC 8-13

City of Seattle	NOT TO SCALE	SURVEY MONUMENT

REV DATE: OCT 2022



REF STD SPEC SEC 1-07.16, 1-07.17, 1-07.28

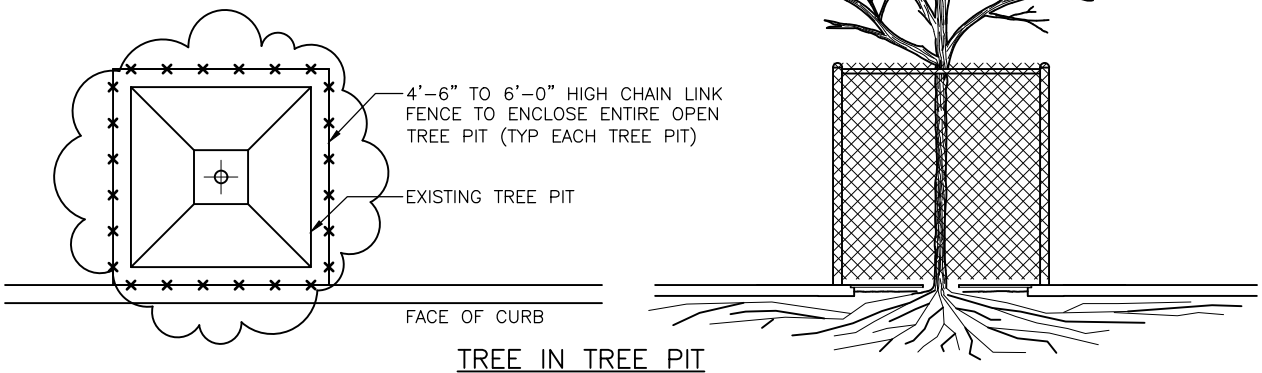
City of Seattle

NOT TO SCALE

DESIRABLE LOCATIONS FOR UTILITIES (RESIDENTIAL STREET)

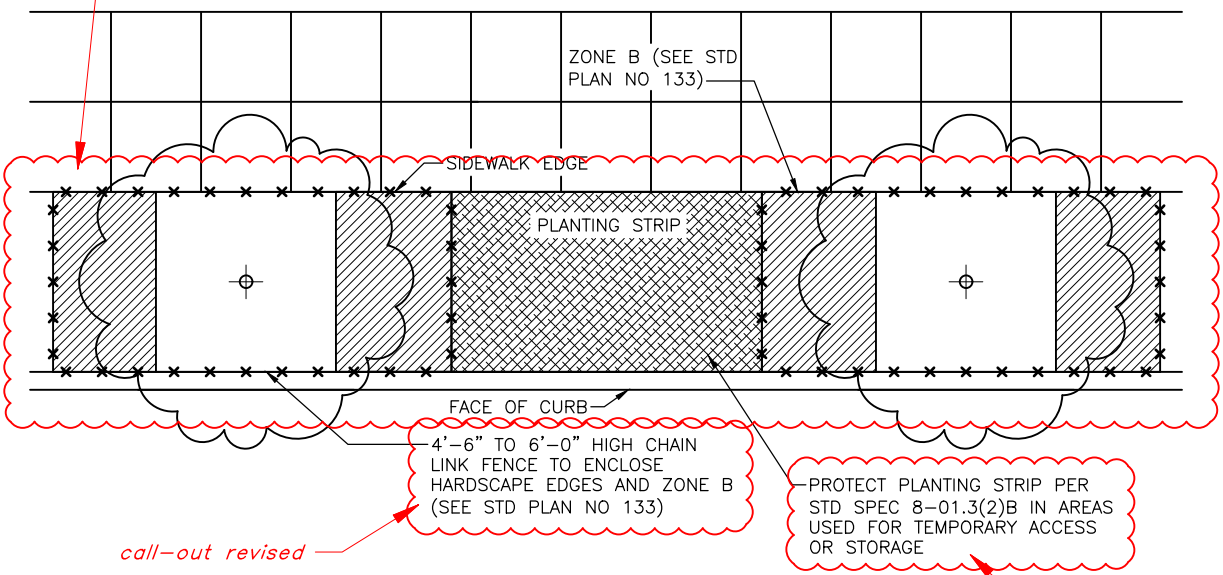
REV DATE: OCT 2022

NOTE:
CONSIDER TRAFFIC TURNING VISIBILITY AND PEDESTRIAN VISIBILITY WHEN SELECTING FENCE HEIGHT; TYPICALLY SHORTER FENCING AROUND TREE PITS BETWEEN SIDEWALK AND ROADWAY IS DESIRED.



TREE IN TREE PIT

layout revised



call–out revised

new call–out

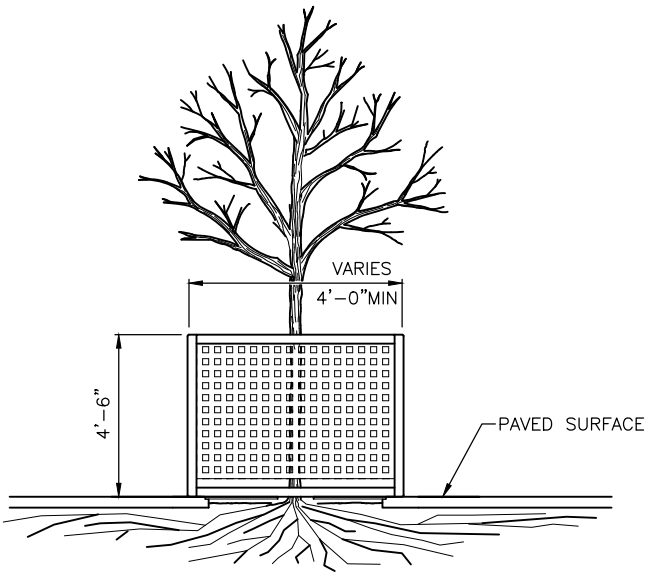
TREE IN PLANTING STRIP

"TREE IN PLANTING STRIP–OPTION 2" removed

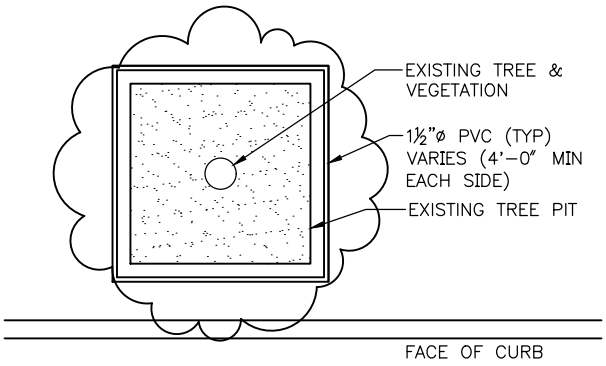
REF STD SPEC SEC 1-07.16(2), 8-01

City of Seattle	NOT TO SCALE	TREE PROTECTION DURING CONSTRUCTION

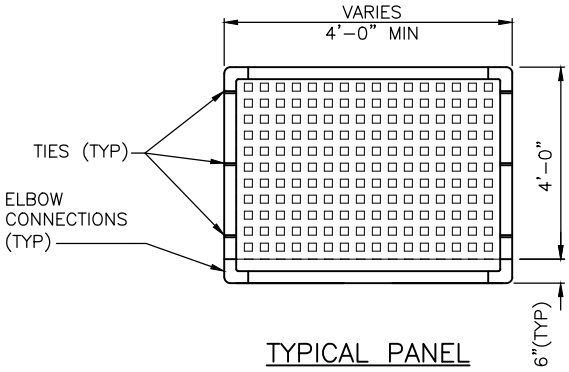
REV DATE: OCT 2022



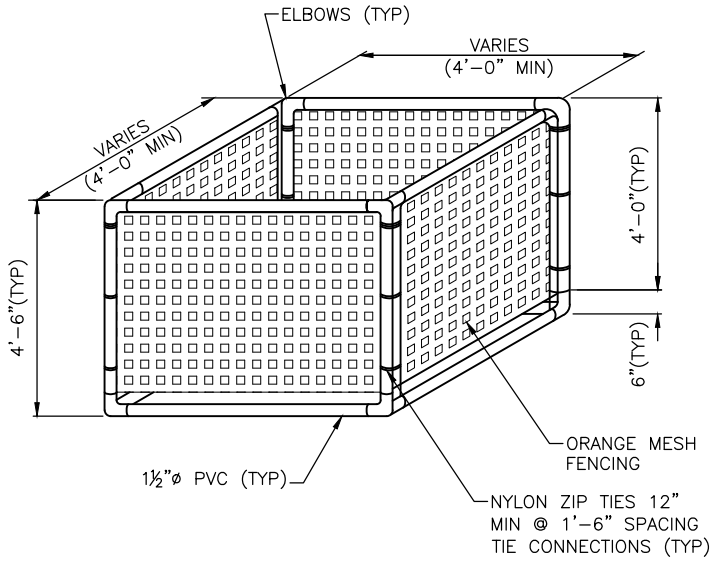
TYPICAL TREE GUARD RAIL



PLAN VIEW



TYPICAL PANEL



NOTES:

note 2 added

1. REUSABLE TEMPORARY PROTECTION FENCING USED TO PROTECT TREES IN TREE PITS MUST SURROUND THE ENTIRE UNPAVED TREE PIT AREA AND BE ANCHORED AND MAINTAINED IN A STABLE UPRIGHT CONDITION. SEE SECTION 8-01.3(2)B.
2. REUSABLE TEMPORARY PROTECTION FENCING USED ONLY FOR TREES IN TREE PITS AND ONLY FOR WORK LASTING 30 DAYS OR LESS. FOR TREES IN THE PLANTING STRIP AND WORK LASTING LONGER THAN 30 DAYS, SEE STD PLAN 132a.

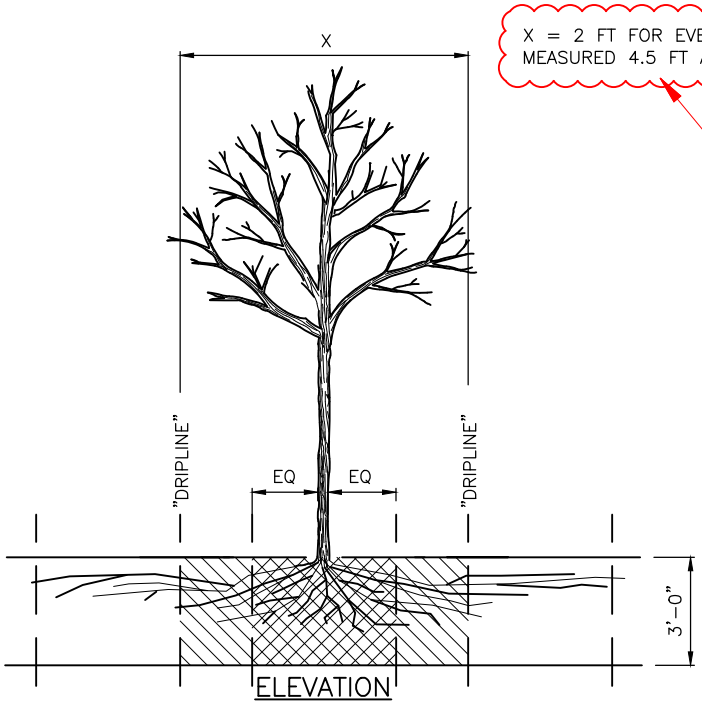
REF STD SPEC SEC 1-07.16(2), 8-01

City of Seattle	NOT TO SCALE	REUSABLE TEMPORARY PROTECTION FENCE

REV DATE: OCT 2022

X = 2 FT FOR EVERY 1 INCH OF TRUNK DIA MEASURED 4.5 FT ABOVE GRADE (MIN 8 FT)

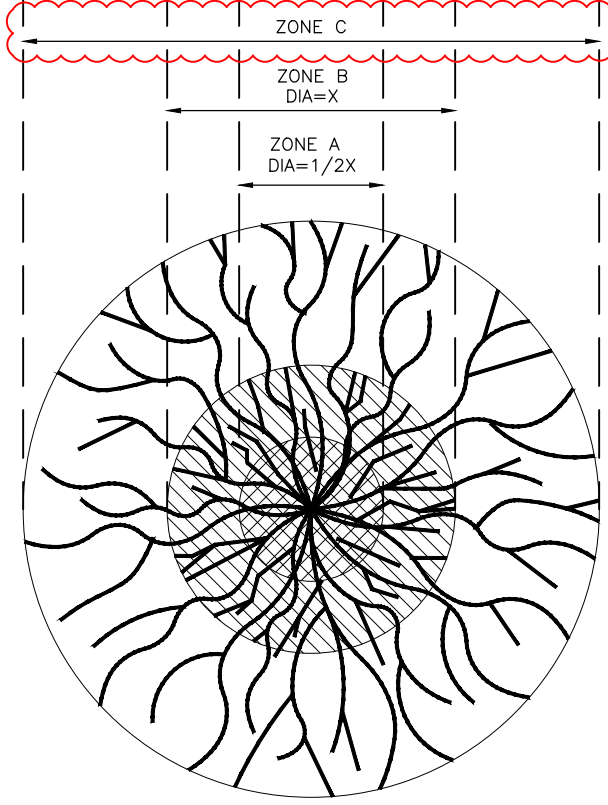
call-out added



ELEVATION

dim revised

notes revised



PLAN

TRENCHING/EXCAVATION

ZONE A (INTERIOR CRITICAL ROOT ZONE)

1. NO DISTURBANCE ALLOWED WITHOUT SITE VISIT AND APPROVED TVSPP PER SECTION 8-01.3(2)B.
2. TUNNELING REQUIRED TO INSTALL UTILITIES 3'-0" OR DEEPER.

ZONE B (CRITICAL ROOT ZONE)

1. NO DISTURBANCE ALLOWED WITHOUT APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
2. NO MORE THAN 30 PERCENT OF ZONE B SHALL BE DISTURBED.
3. TUNNELING MAY BE REQUIRED FOR BELOW-GRADE IMPROVEMENTS.

ZONE C (EXTENDED ROOT ZONE)

1. DISTURBANCE ALLOWED BASED ON APPROVED PLANS. SEE NOTE.

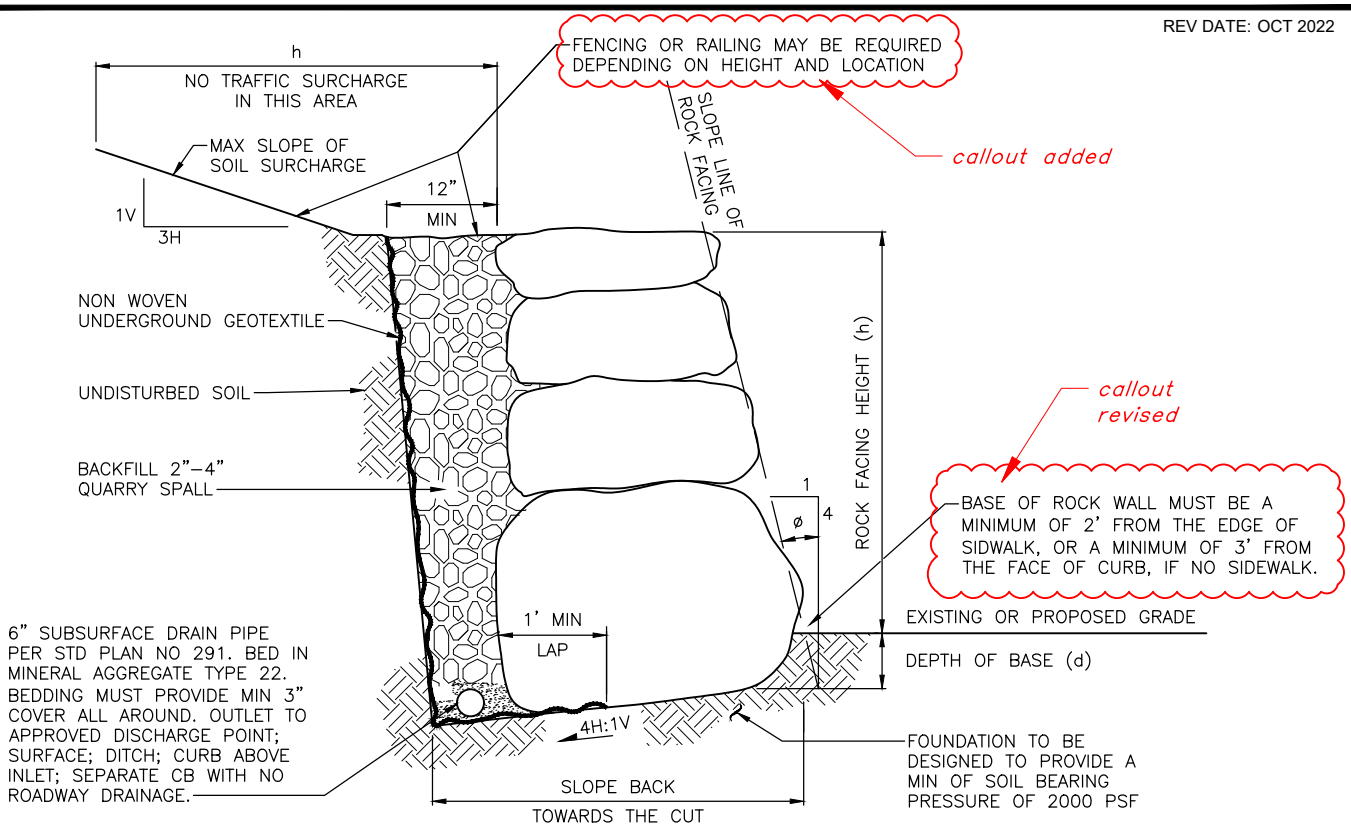
NOTE:

SEVERANCE OF ROOTS LARGER THAN 2" REQUIRES ENGINEER'S APPROVAL.

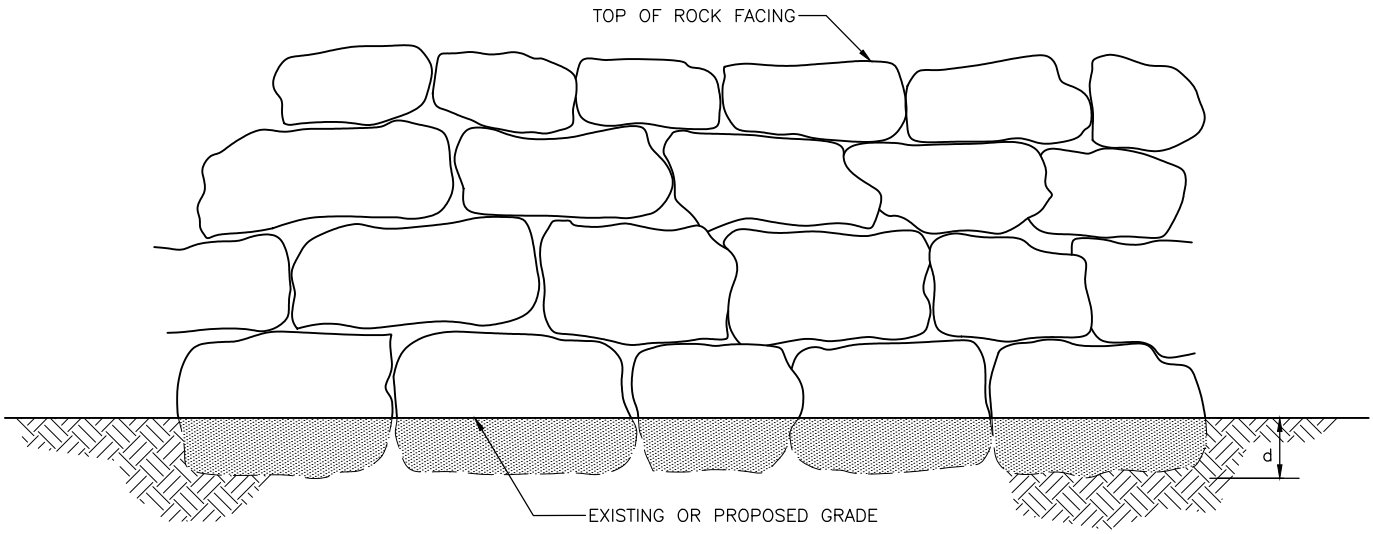
REF STD SPEC SEC 1-07.16(2), 8-01

City of Seattle	NOT TO SCALE	TREE PROTECTION DURING TRENCHING, TUNNELING OR EXCAVATION

REV DATE: OCT 2022



SECTION



ELEVATION

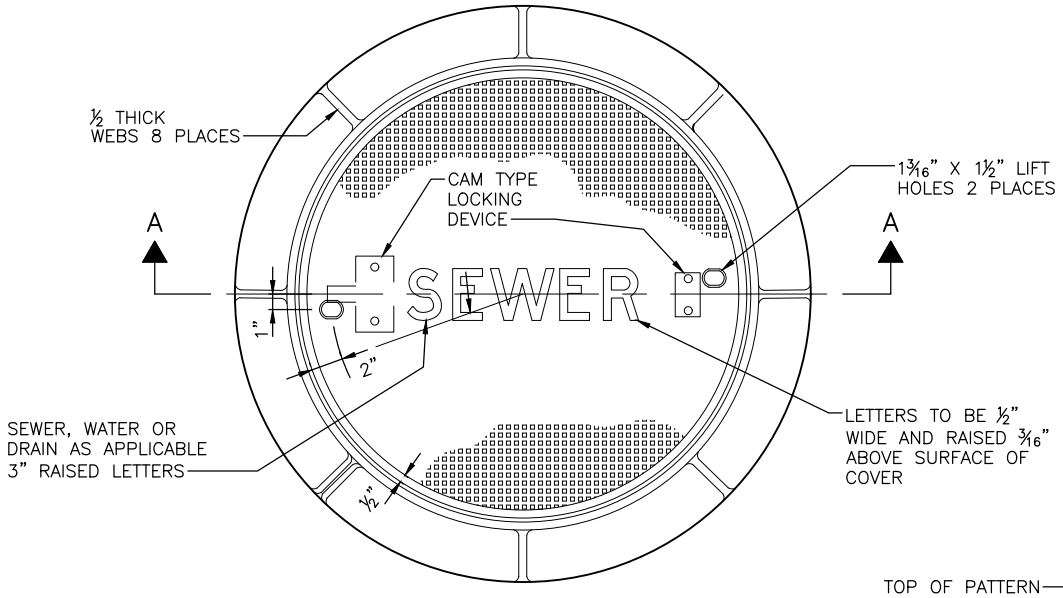
		MINIMUM ROCK	
(h)	(d)	SIZE(BASE)	SIZE(TOP)
2 FEET	3 INCHES	2–MAN	1–MAN
4 FEET	6 INCHES	3–MAN	2–MAN
6 FEET	9 INCHES	4–MAN	2–MAN
8 FEET	12 INCHES	5–MAN	2–MAN

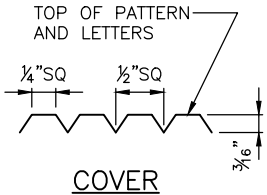
ø = 14° ±1°

REF STD SPEC SEC 2-13

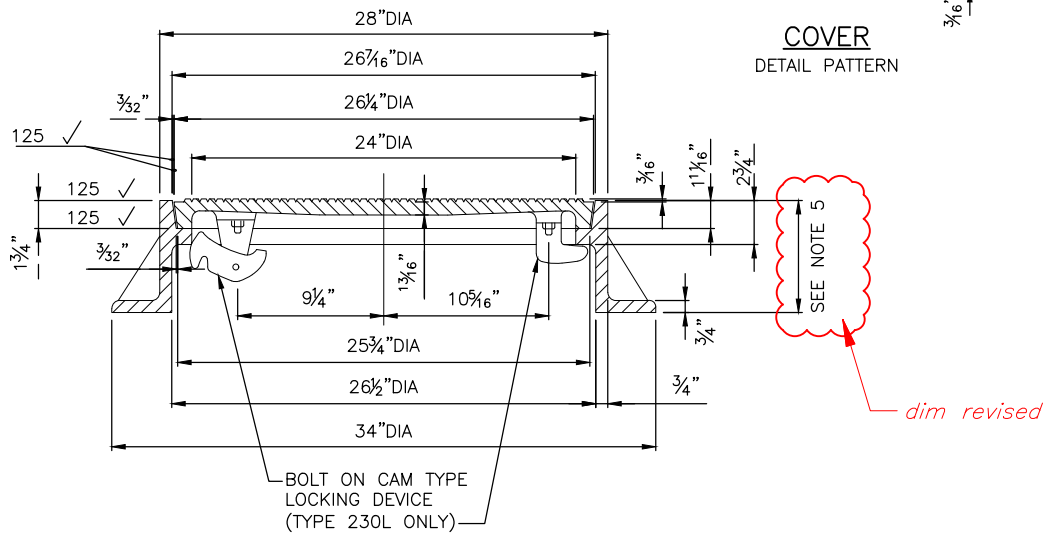
City of Seattle | NOT TO SCALE | ROCK FACING

REV DATE: OCT 2022





COVER
DETAIL PATTERN



SECTION A–A

NOTES:

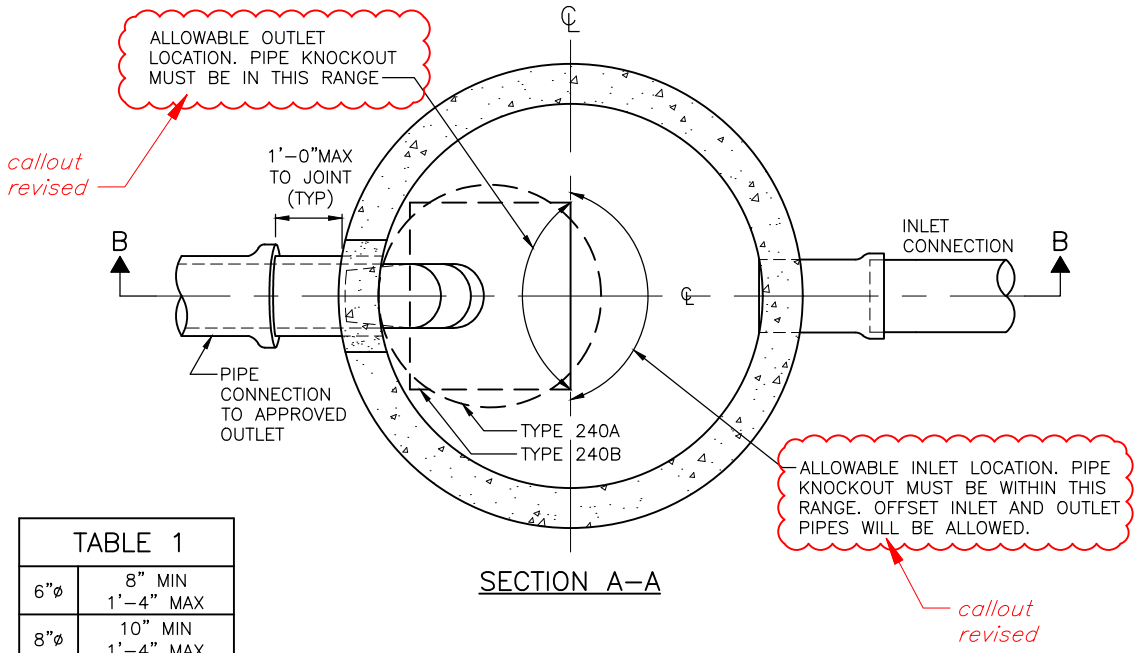
1. DESIGNATE LOCKING COVER AS TYPE 230L FOR USE IN NON–VEHICULAR TRAFFIC AREAS.
2. COVER THICKNESS IS MEASURED FROM THE BOTTOM OF THE PATTERN.
3. FRAMES MUST BE MANUFACTURED FROM CAST IRON OR DUCTILE IRON.
4. ~~COVERS MUST BE MANUFACTURED FROM DUCTILE IRON.~~
5. CASTING HEIGHT MUST BE 7" OR 10". WHERE CASTING IS WITHIN ROADWAY, 10" MUST BE USED. SEE ALSO STD PLAN NO. 406.

note 5 added

REF STD SPEC SEC 7-05, 9-12

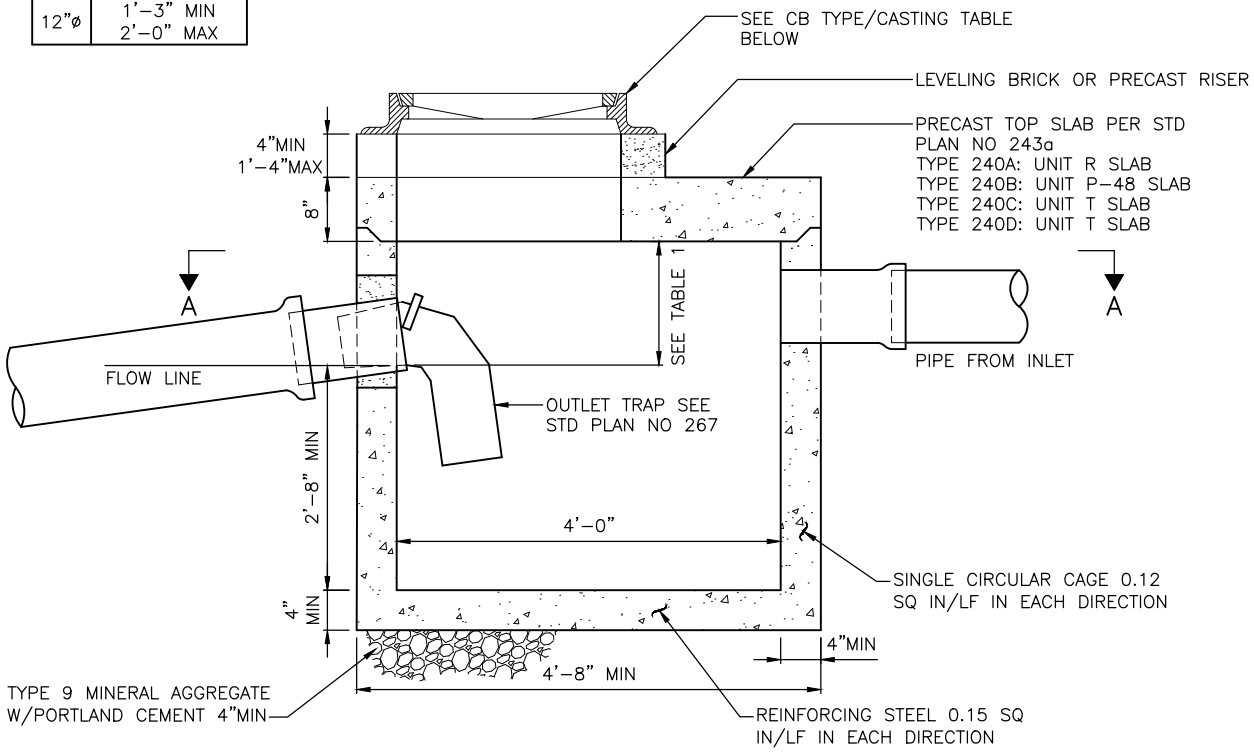
City of Seattle	NOT TO SCALE	2'-0" DIAMETER FRAME & COVER

REV DATE: SEP 2021



SECTION A–A

TABLE 1	
6"ø	8" MIN 1'–4" MAX
8"ø	10" MIN 1'–4" MAX
12"ø	1'–3" MIN 2'–0" MAX



SECTION B–B

NOTES:

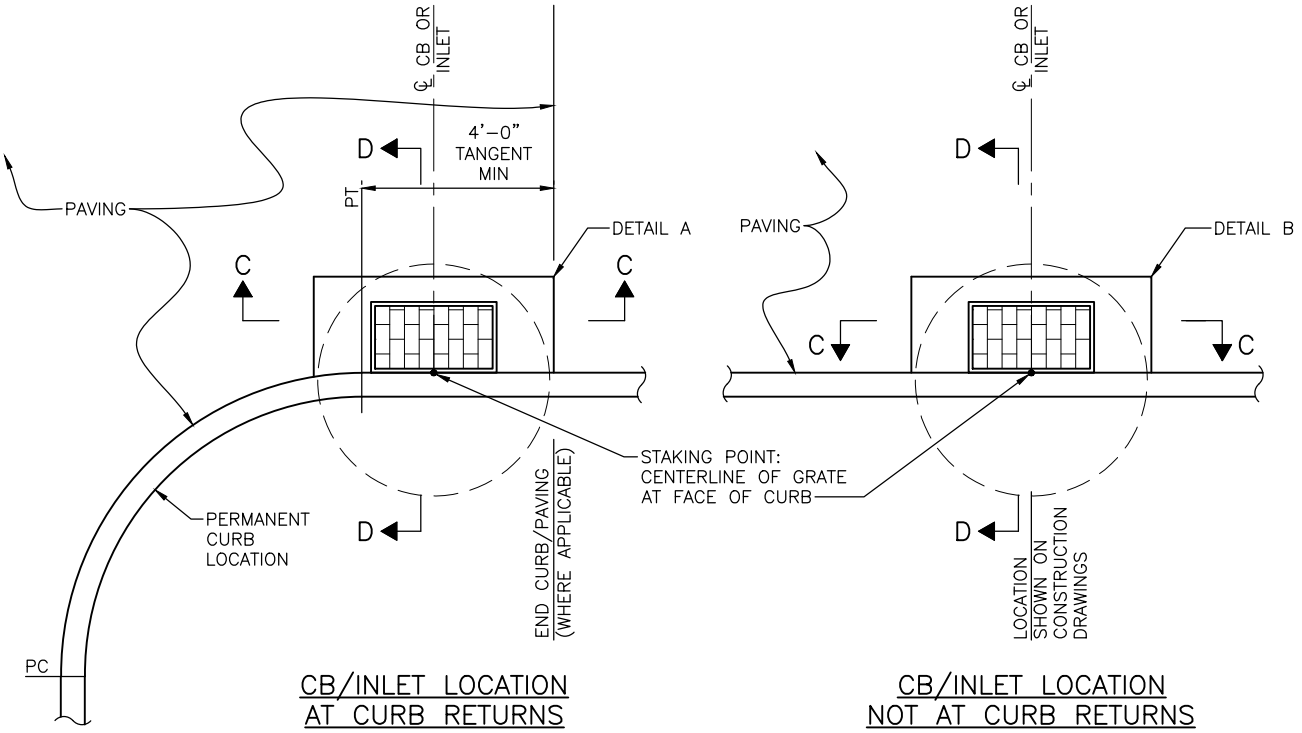
1. FRAME & GRATE OR FRAME & COVER MUST BE LOCATED OVER TRAP.
2. INVERT OF INLET PIPE MUST BE 2"MIN ABOVE INVERT OF OUTLET PIPE.
3. SEE STD PLAN 261 FOR ALLOWABLE OUTLET LOCATIONS.

CB TYPE	CASTING	
	FRAME	COVER
240A	PER STD PLAN 230	PER STD PLAN 230
240B	PER STD PLAN 264	PER STD PLAN 264
240C	PER STD PLAN 262	PER STD PLAN 265
240D	PER STD PLAN 263A	PER STD PLAN 265

REF STD SPEC SEC 7-05

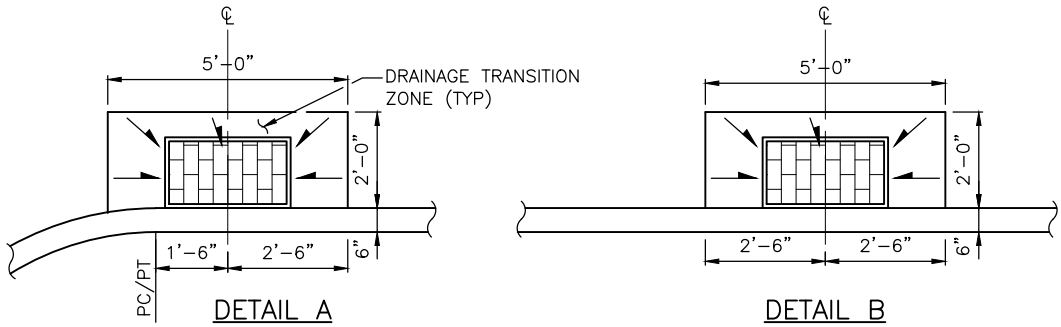
City of Seattle | NOT TO SCALE | TYPE 240 CATCH BASIN

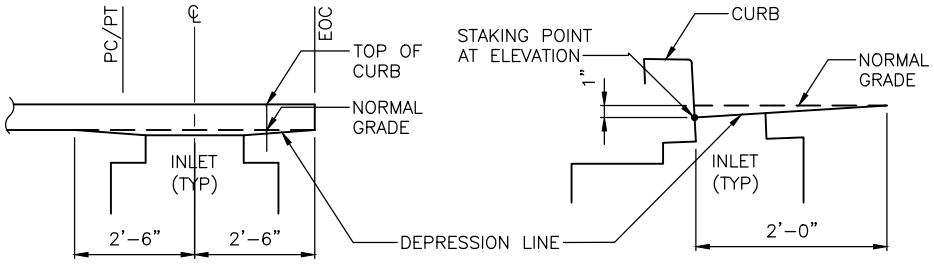
REV DATE: OCT 2022



CB/INLET LOCATION AT CURB RETURNS

CB/INLET LOCATION NOT AT CURB RETURNS





note 3 added

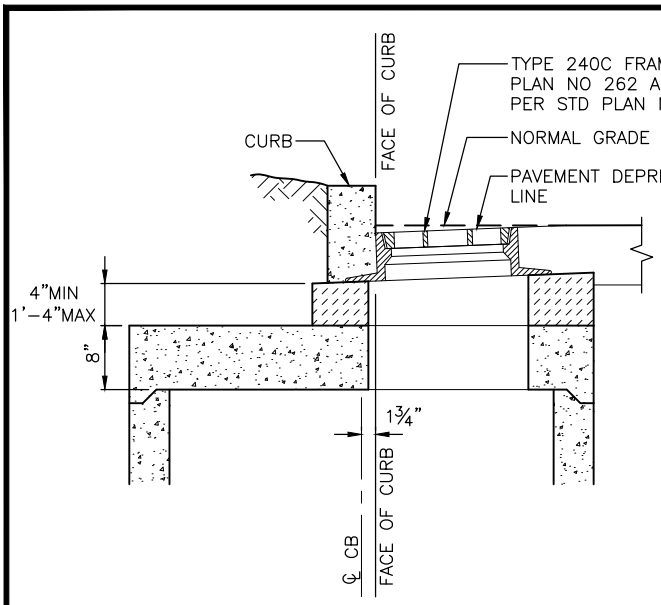
NOTES:

1. CB INLET GRATES MUST NOT BE PLACED IN CROSSWALKS.
2. CB INLETS MUST NOT BE PLACED IN CURB RAMP LANDINGS.
3. CASTINGS LOCATED WITHIN THE CROSSWALK MUST BE ADA ACCESSIBLE.

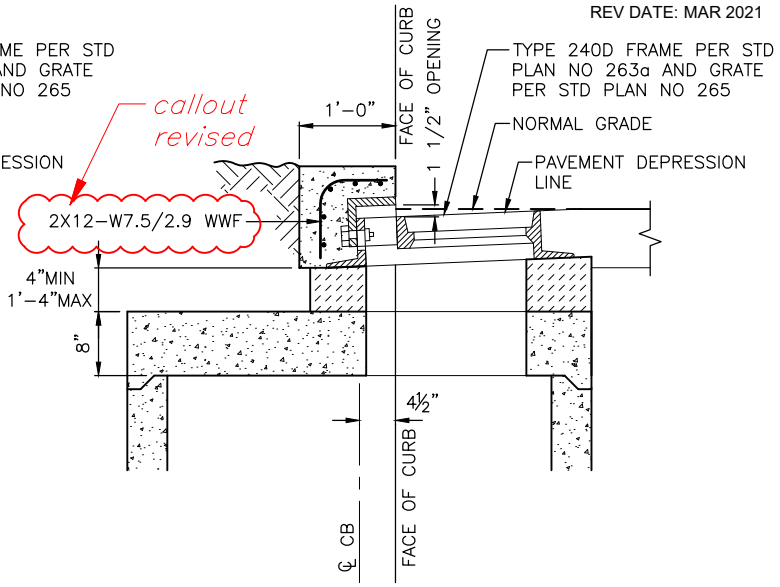
REF STD SPEC SEC 7-05

City of Seattle	NOT TO SCALE	INLET / CATCH BASIN LOCATION & INSTALLATION

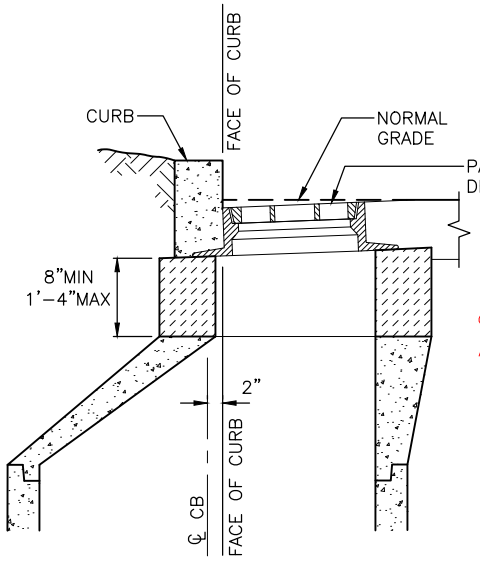
REV DATE: MAR 2021



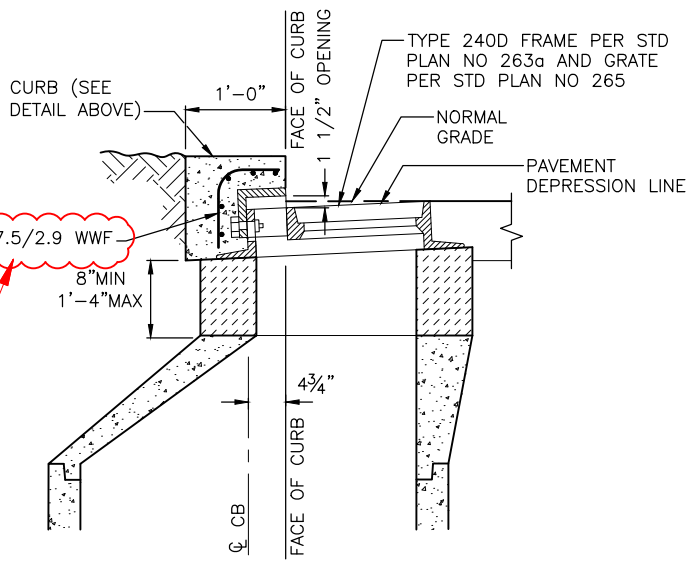
TYPE 240C CB



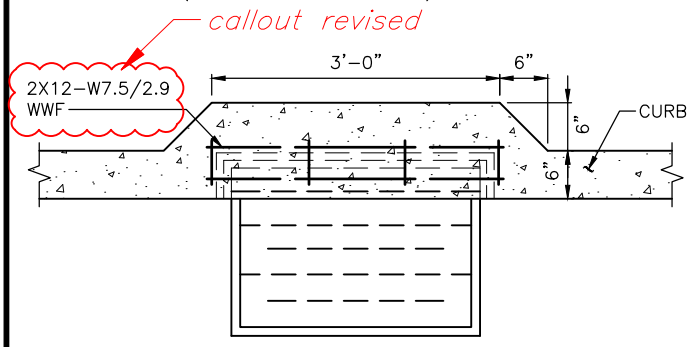
TYPE 240D CB



TYPE 242A CB
(TYPE 250A INLET SIMILAR)



TYPE 242B CB
(TYPE 250B INLET SIMILAR)

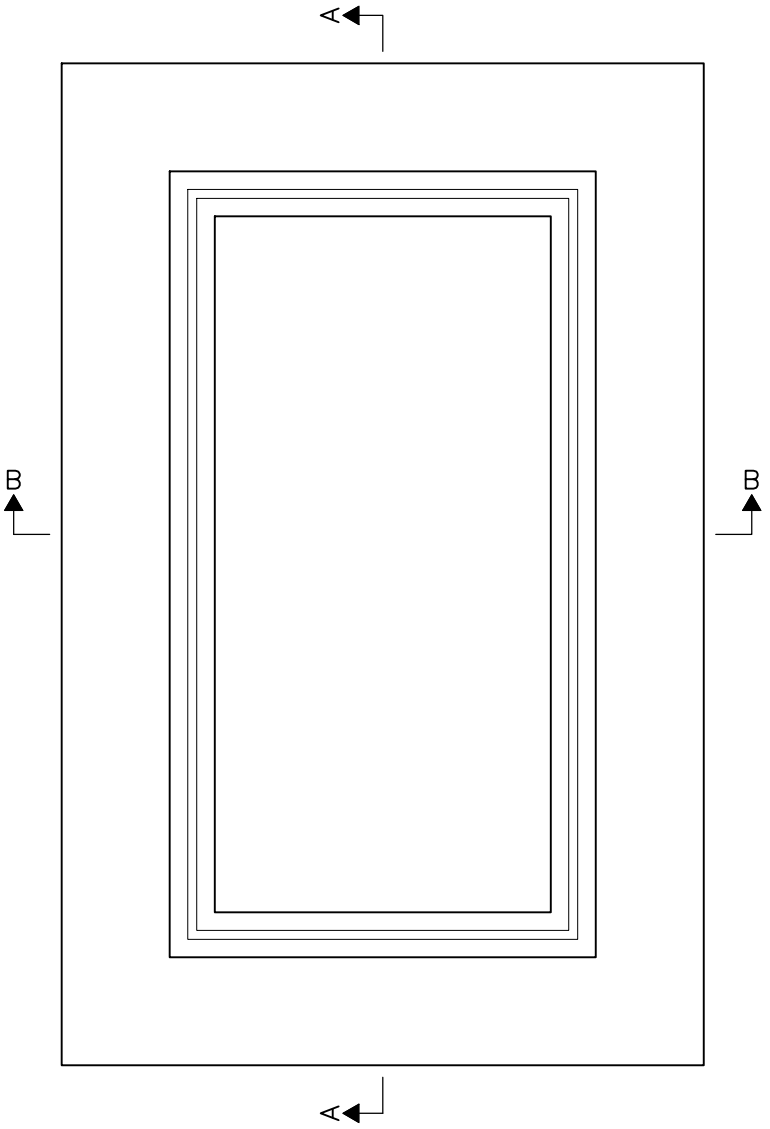


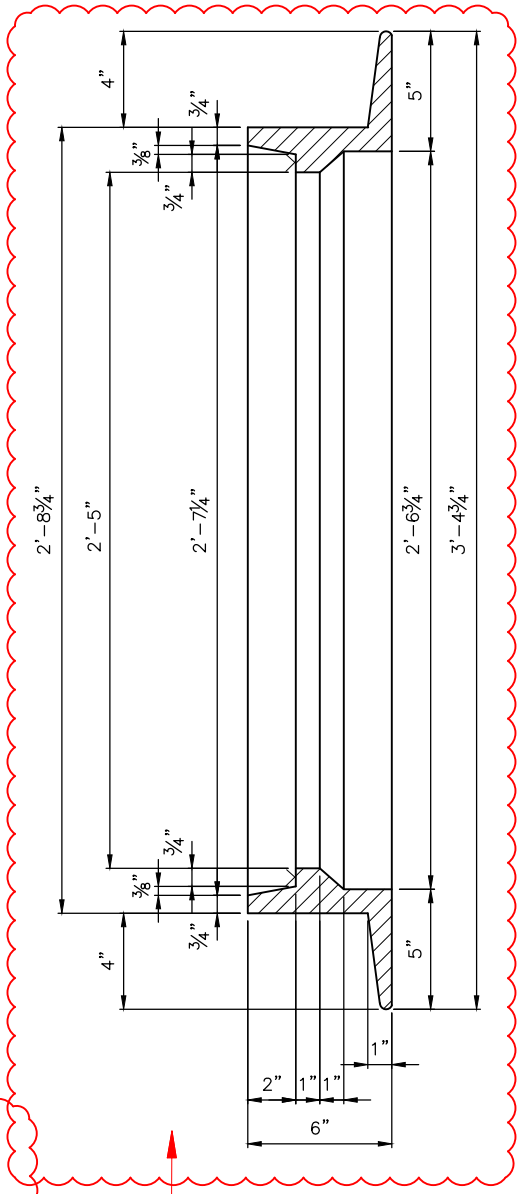
CURB DETAIL (PLAN VIEW) FOR
TYPE 240D & 242B CB & TYPE 250B INLET

REF STD SPEC SEC 7-05

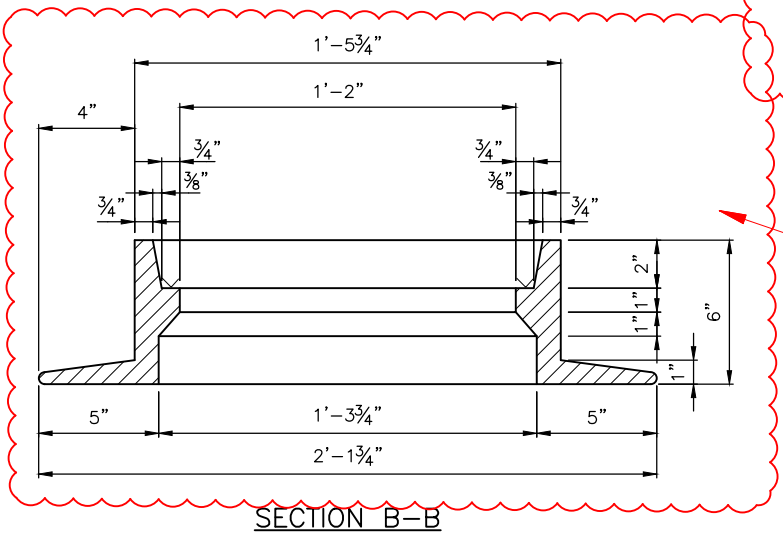
City of Seattle	NOT TO SCALE	CATCH BASIN & INLET INSTALLATION

REV DATE: OCT 2022





SECTION A–A



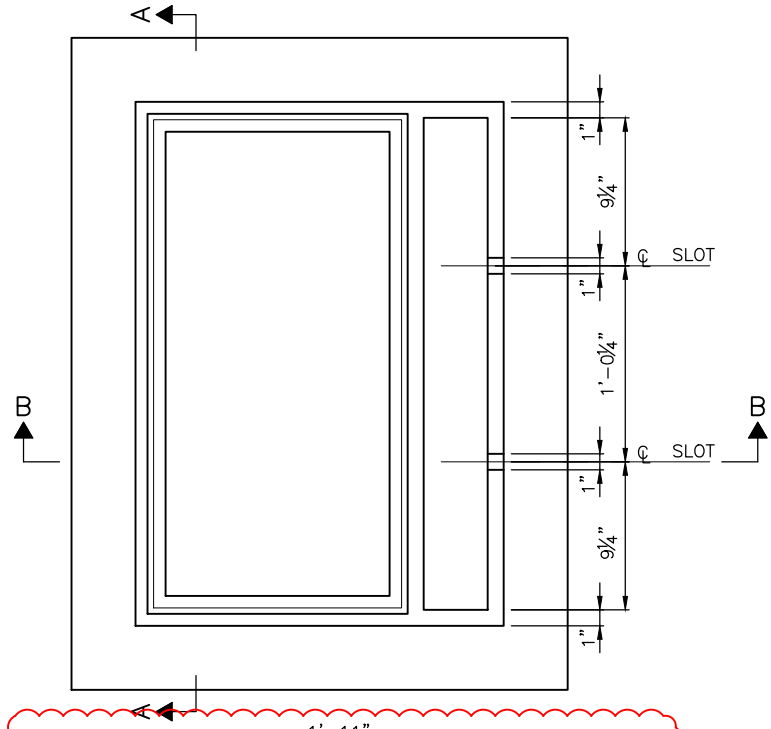
SECTION B–B

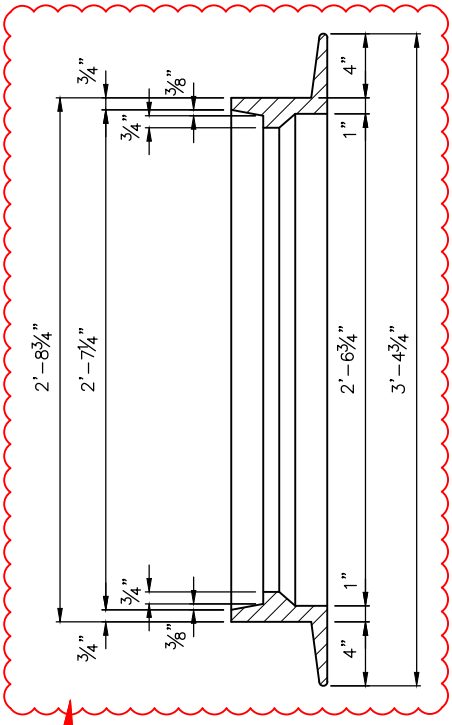
dimensions added

REF STD SPEC SEC 9-12

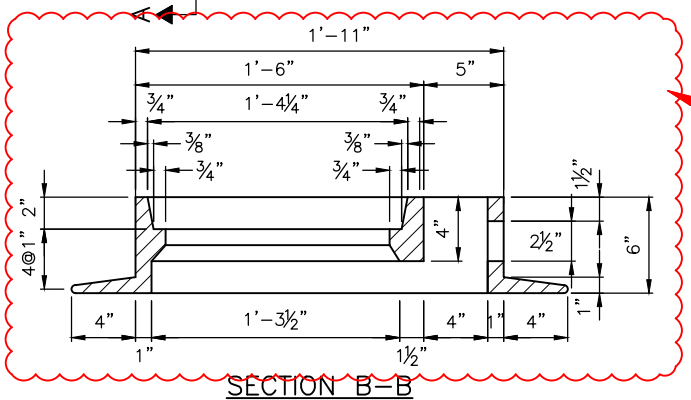
City of Seattle	NOT TO SCALE	TYPE 262 INLET FRAME

REV DATE: OCT 2022



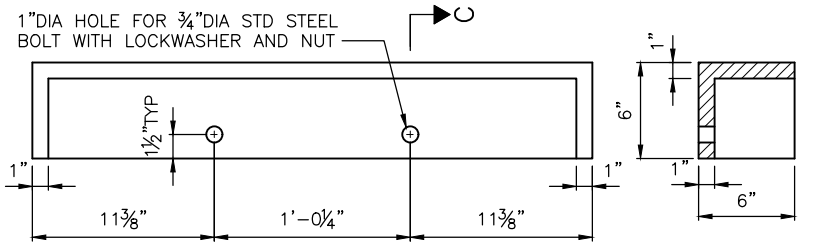


SECTION A–A



SECTION B–B

dimensions added

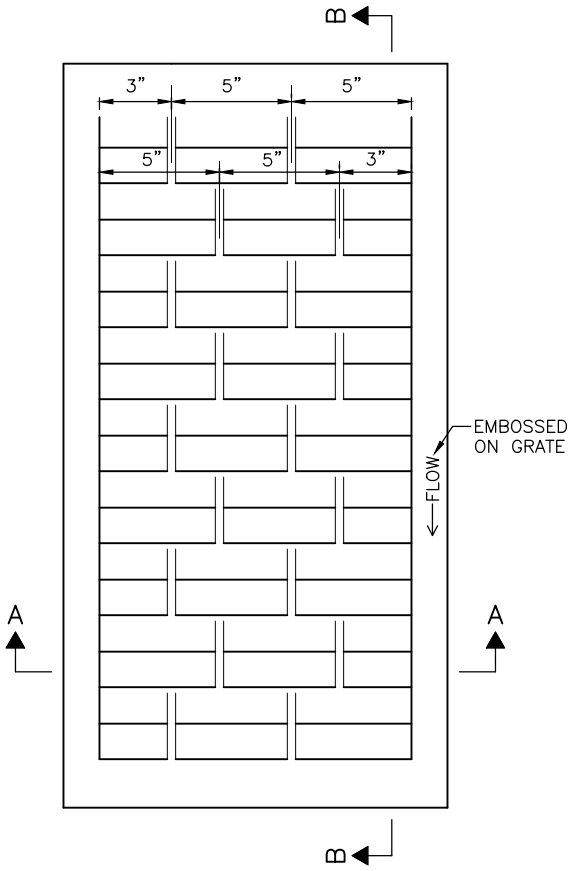


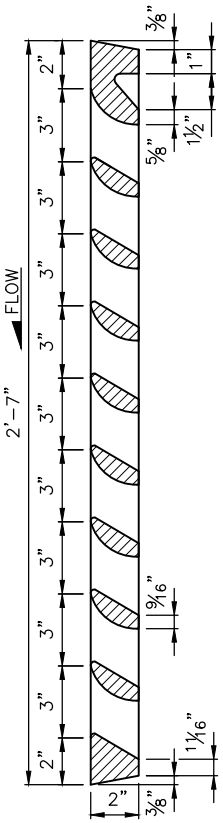
CURB INLET SECTION C–C

REF STD SPEC SEC 9-12

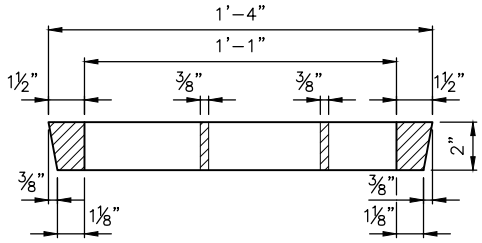
City of Seattle	NOT TO SCALE	TYPE 263 INLET FRAME AND HOOD

REV DATE: OCT 2022





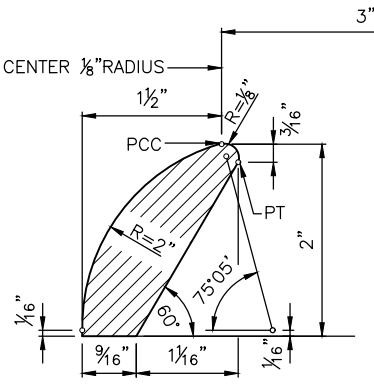
SECTION B–B



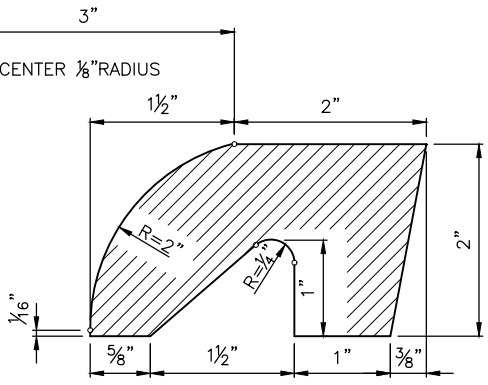
SECTION A–A

NOTES:
1. OTHER GRATES ACCEPTABLE; SPECIFY VANE, SOLID COVER, BI-DIRECTIONAL VANE, ADA OR BEEHIVE ON PLANS.
2. GRATE MATERIAL: DUCTILE IRON

notes added



VANE DETAIL



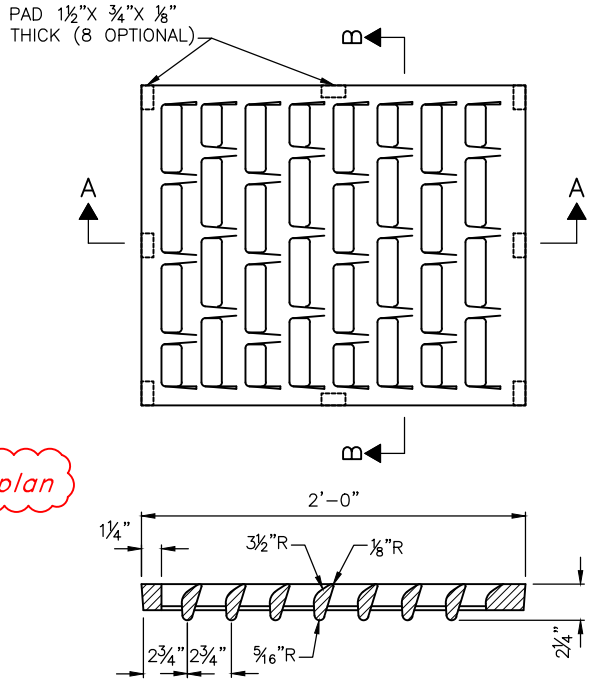
END DETAIL

REF STD SPEC SEC 7-05

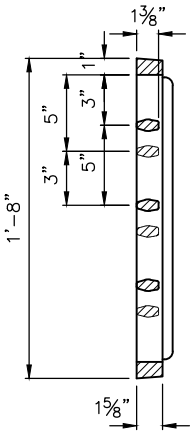
City of Seattle	NOT TO SCALE	VANED GRATE

REV DATE: OCT 2022

new standard plan



SECTION A–A



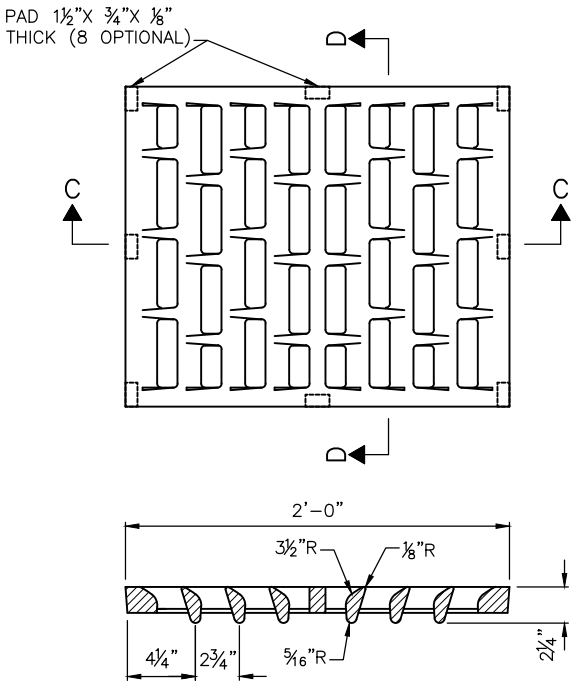
SECTION B–B

DIRECTIONAL VANED GRATE

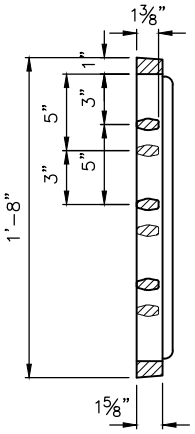
TO BE USED WITH FRAME 264

NOTES:

1. OTHER GRATES ACCEPTABLE; SPECIFY VANE, SOLID COVER, BI–DIRECTIONAL VANE, ADA OR BEEHIVE ON PLANS.
2. GRATE MATERIAL: DUCTILE IRON



SECTION C–C



SECTION D–D

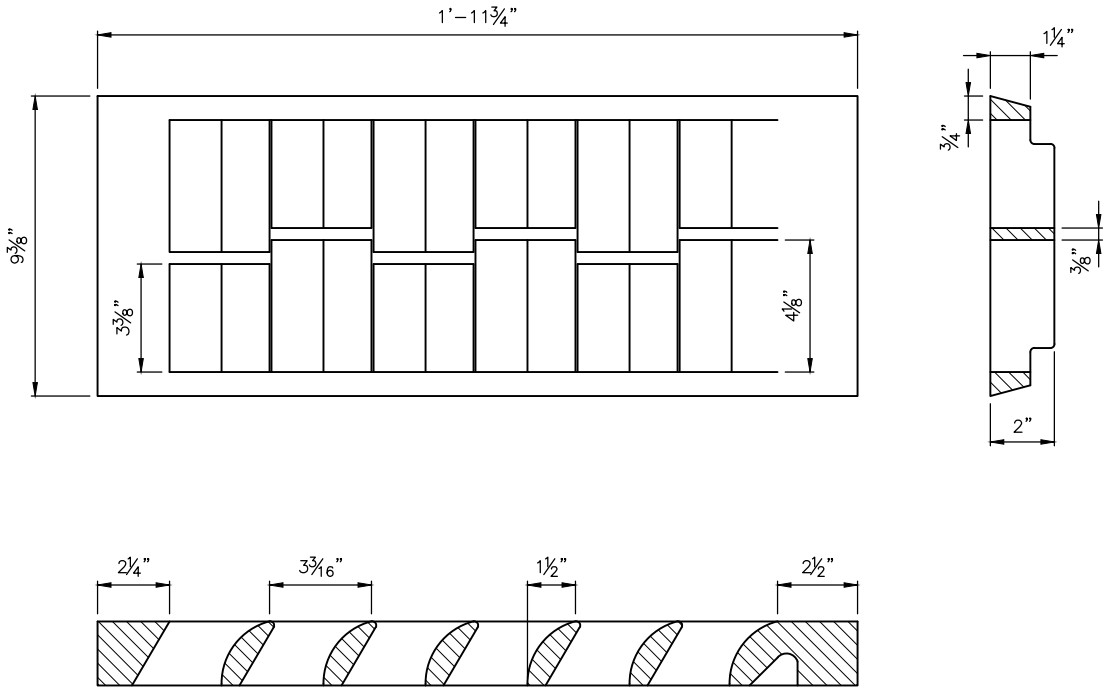
BI–DIRECTIONAL VANED GRATE

TO BE USED WITH FRAME 264

REF STD SPEC SEC 7-05

City of Seattle	NOT TO SCALE	VANED GRATES

REV DATE: OCT 2022



note 2 added

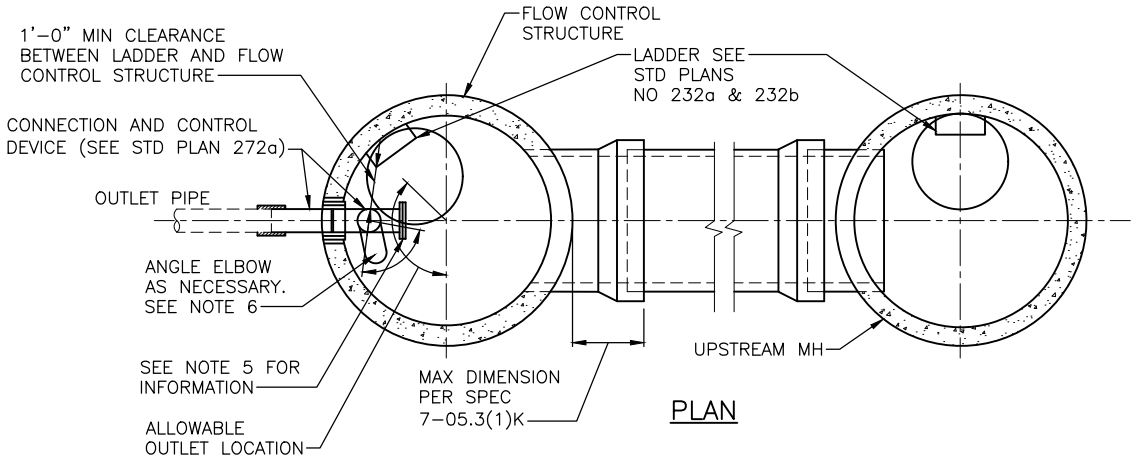
NOTES:

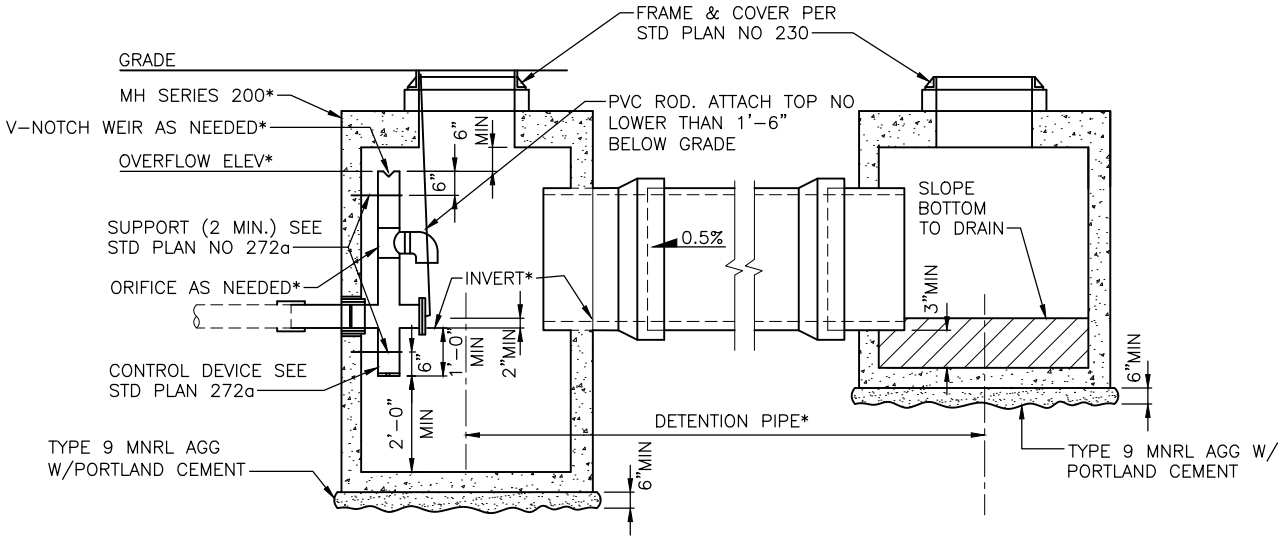
1. ~~OPEN AREA – 100 SQUARE INCHES.~~
2. 1. OTHER GRATES ACCEPTABLE; SPECIFY VANE, SOLID COVER, BI–DIRECTIONAL VANE, ADA OR BEEHIVE ON PLANS.
3. SEE STD PLAN NO 265 FOR VANE AND END DETAIL.
4. STD PLAN NO 266 DIMENSIONS GOVERN ON END DETAIL.
5. REPLACEMENT VANED GRATE FOR TYPE 164 INLET FRAMES.

REF STD SPEC SEC 7-20.3(6), 9-12

City of Seattle	NOT TO SCALE	TYPE 266 REPLACEMENT VANED GRATE

REV DATE: OCT 2021





ELEVATION

*SPECIFIC DESIGN INFORMATION AS INDICATED ON CONSTRUCTION DRAWINGS

table removed

NOTES:

1. DETENTION PIPE MATERIAL MUST BE AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. MATERIALS THAT MAY BE APPROVED FOR USE IN THE ROW INCLUDE:
   - DUCTILE IRON PIPE (DIP)
   - REINFORCED CONCRETE PIPE (RCP)
   - POLYPROPYLENE PIPE (PP DETENTION)
   - STEEL REINFORCED POLYETHYLENE PIPE (STL REINF PE DETENTION). ONLY MANUFACTURER SUPPLIED TEES MUST BE USED FOR CONNECTIONS.
2. BEDDING FOR DETENTION PIPE MUST BE CLASS B. DIP AND RCP MUST BE BEDDED IN MINERAL AGGREGATE TYPE 9. FLEXIBLE PIPE MUST BE BEDDED IN MINERAL AGGREGATE TYPE 22.
3. INTERMEDIATE MHS WILL BE REQUIRED FOR DETENTION PIPE LENGTHS GREATER THAN 350LF.
4. OUTLET PIPE MUST CONNECT TO MH ON MAINLINE.
5. STRUCTURE DESIGN MUST BE MODIFIED FOR PRIVATE SYSTEM WITH EXCLUSION OF SHEAR GATE.
6. ROTATE ELBOW RESTRICTOR CLEAR OF ACCESS OPENING.
7. FRAME LADDER AND STEPS OFFSET:
   7.1. CLEAN OUT IS VISIBLE FROM TOP
   7.2. CLIMB DOWN SPACE IS CLEAR OF RISER AND CLEAN OUT GATE
   7.3. MH OPENING MUST NOT BE PLACED DIRECTLY OVER THE TOP OF INLET PIPE.
8. THE MAINTENANCE HOLES MUST BE SIZED FOR THE OUTSIDE DIAMETER OF THE DETENTION PIPE, WHICH WILL VARY DEPENDING ON THE DETENTION PIPE MATERIAL.

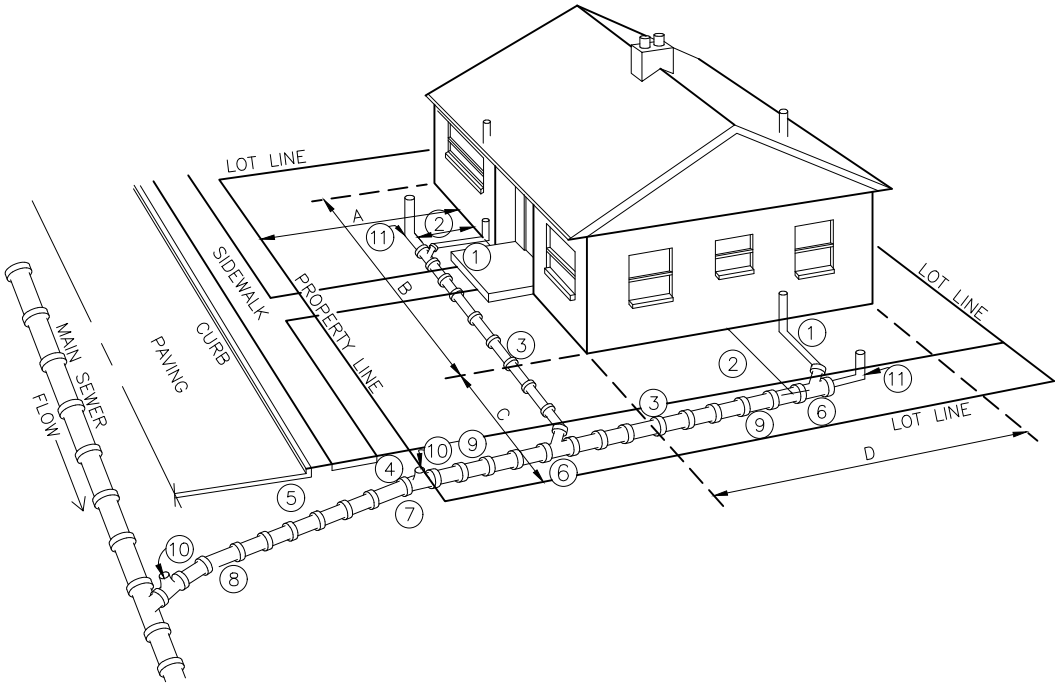
"*" note moved to above, "**" note converted to Note 8

note 8 added

REF STD SPEC SEC 7-16

City of Seattle	NOT TO SCALE	FLOW CONTROL STRUCTURE WITH DETENTION PIPE

REV DATE: AUG 2022



NOTES:

1. ALL SANITARY PLUMBING OUTLETS MUST BE CONNECTED TO THE SANITARY SEWER OR COMBINED SEWER.
2. 2'–6"MIN DISTANCE FROM HOUSE, EXCEPT FOR SOIL PIPE CONNECTION.
3. 1'–6"MIN COVER OF PIPE.
4. 2'–6"MIN COVER AT PROPERTY LINE.
5. 5'–0"MIN COVER AT CURB LINE.
6. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH BENDS OR WYES.
7. STANDARD 4" TO 6" INCREASER.
8. 6" SEWER PIPE: MIN SIZE IN STREET, AND ELSEWHERE AS DIRECTED. 2% MIN GRADE, 100% MAX.
9. 4" SEWER PIPE: MIN SIZE ON PROPERTY. 2% MIN GRADE, 100% (45°) MAX.
10. TEST "T" WITH PLUG
11. CLEANOUT AT UPSTREAM END OF SIDE SEWER.
12. CONSTRUCTION IN STREET MUST BE DONE BY A REGISTERED SIDE SEWER CONTRACTOR.
13. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE CURRENT SIDE SEWER ORDINANCE.

notes added

DIMENSIONS:

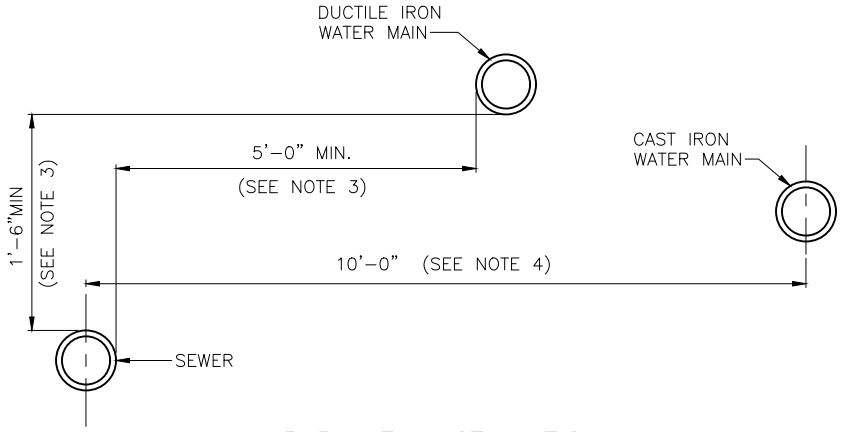
A = FRONT YARD SETBACK
B = LENGTH OF HOUSE
C = SIDE YARD SETBACK
D = WIDTH OF HOUSE

dimensions added

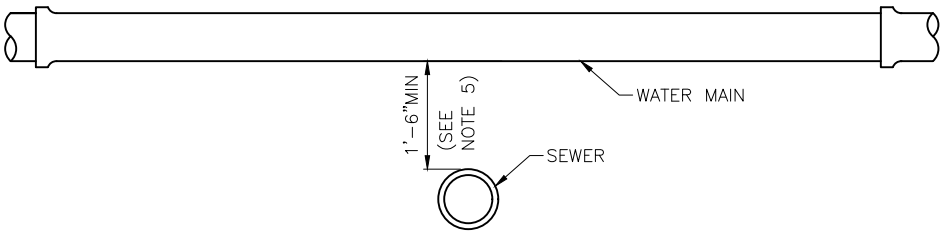
REF STD SPEC SEC 7-18

City of Seattle	NOT TO SCALE	SIDE SEWER INSTALLATION

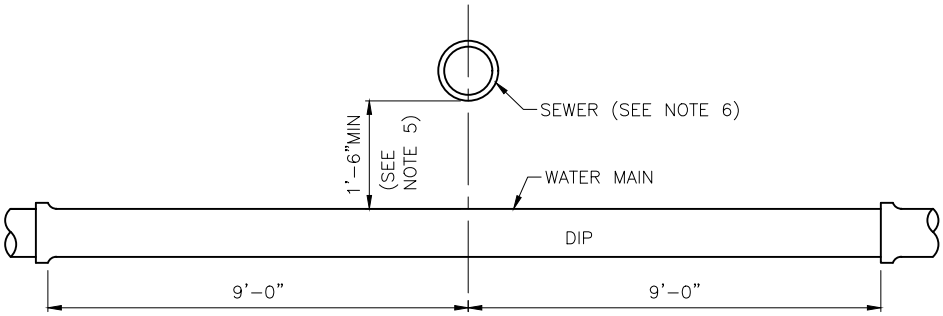
REV DATE: AUG 2022



PARALLEL INSTALLATION



CROSSING WATER OVER SEWER



STANDARD SINGLE 18'–0" NOMINAL LENGTH DUCTILE IRON WATER MAIN SECTION CENTERED AT THE POINT OF CROSSING

CROSSING WATER UNDER SEWER

note revised

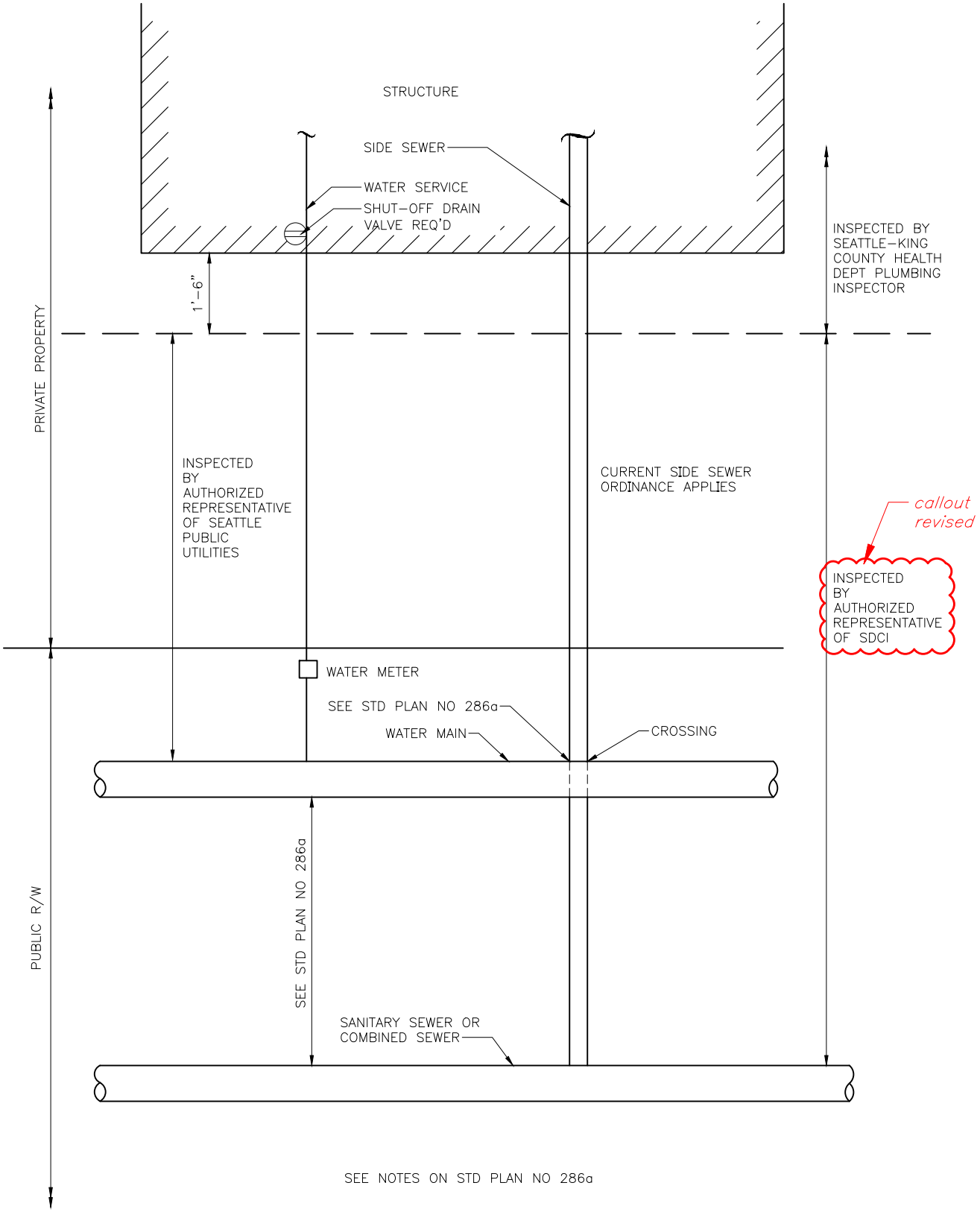
NOTES:

1. EXCEPTIONS TO STD PLAN NO 286a & 286b MUST BE APPROVED BY SEATTLE PUBLIC UTILITIES.
2. "SEWER" INCLUDES SANITARY SEWER, COMBINED SEWER AND SIDE SEWER.
3. WHERE MINIMUM CLEARANCES CANNOT BE MET, SEWER MUST BE CONSTRUCTED OF MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS INCLUDING WATER MAIN PRESSURE TESTING REQUIREMENTS.
4. NO VERTICAL CLEARANCE REQUIRED.
5. IF MINIMUM VERTICAL SEPARATION CANNOT BE MET, WATER MAIN MUST BE A STANDARD SINGLE 18'–0" NOMINAL LENGTH DUCTILE IRON WATER MAIN SECTION CENTERED AT THE POINT OF CROSSING.
6. SEWER MUST HAVE ADEQUATE FOUNDATION SUPPORT TO PREVENT SETTLEMENT ON THE WATER MAIN AND TO PREVENT DEFLECTION OF WATER MAIN JOINTS.
7. CROSSINGS AT AN ANGLE BETWEEN 90° AND 45° MAY OCCUR BETWEEN 9'–0" AND 6'–0" OF WATER MAIN JOINT. FOR CROSSINGS LESS THAN 45°, SEE NOTE 1.

REF STD SPEC SEC 1-07.17, 7-11

City of Seattle	NOT TO SCALE	SEWER & WATER SPACING & CLEARANCES

REV DATE: AUG 2022

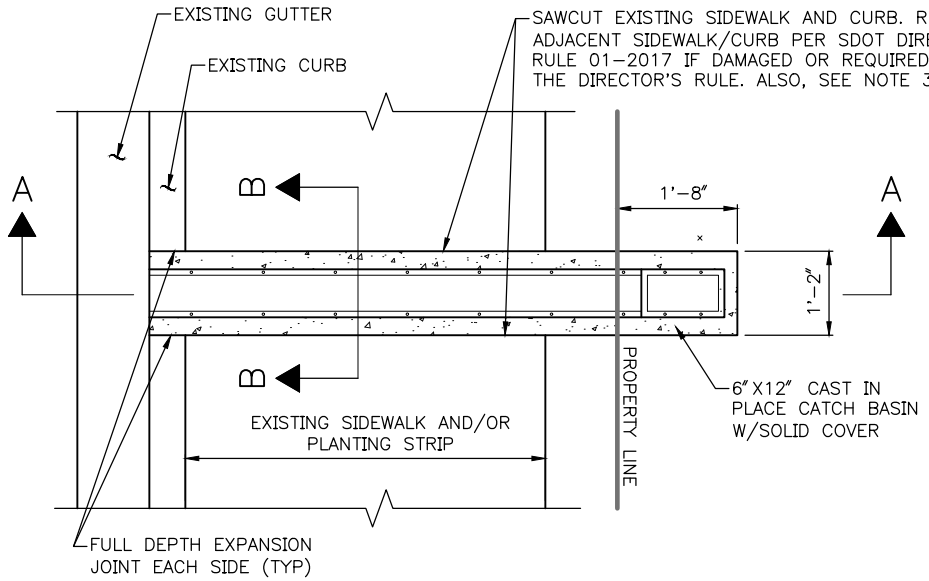


SEE NOTES ON STD PLAN NO 286a

REF STD SPEC SEC 1-07.17, DIV 7

City of Seattle	NOT TO SCALE	SEWER & WATER SPACING & CLEARANCES

REV DATE: OCT 2022

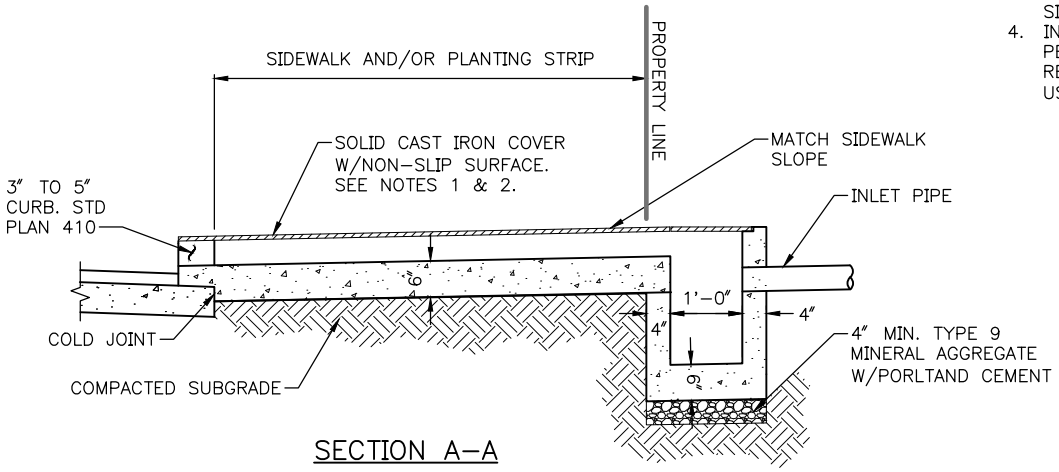


PLAN VIEW

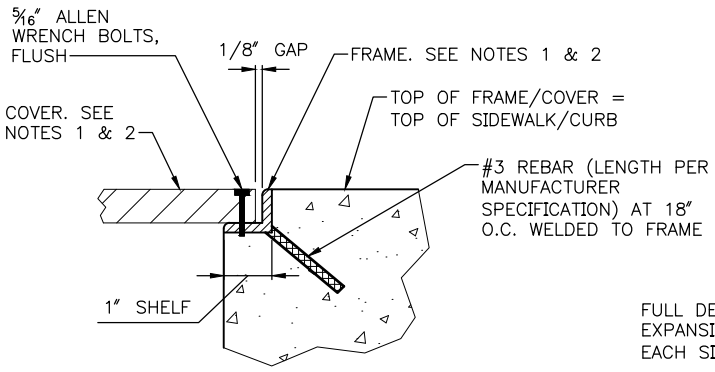
new standard plan

NOTES:

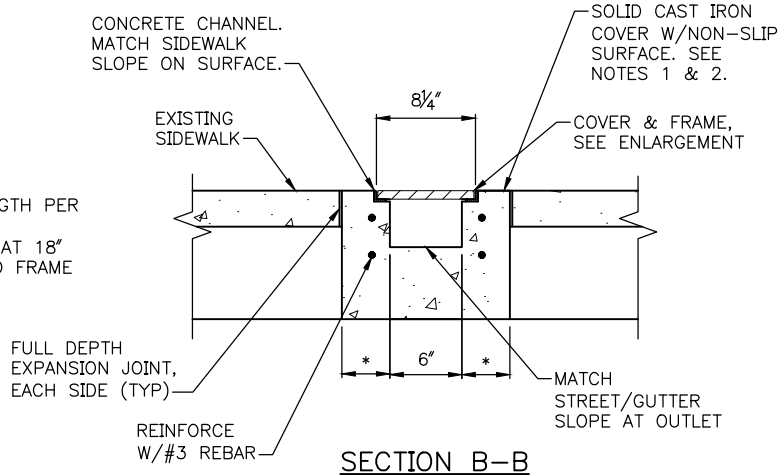
1. FRAME & COVER MUST HAVE NON-SKID/NON-SLIP SURFACE PER STD SPEC 9-34.6. SCL MATERIAL STD 7203.10.
2. FRAME & COVER TO BE URBAN ACCESSORIES TRENCH DRAIN FRAME WITH SOLID CAST IRON COVER OR APPROVED EQUAL. (TRENCH WIDTH=6", SOLID GRATE/COVER WIDTH=7⅞", FRAME WIDTH=8⅛")
3. CURB WEEP CHANNEL BOX JOINT SHALL BE 2' MIN FROM ADJACENT SIDEWALK JOINTS.
4. IN ADDITION TO THE SIDE SEWER PERMITS, USE OF THIS DETAIL REQUIRES AN SDOT LONG TERM USE PERMIT (ANNUAL PERMIT).



SECTION A-A



COVER & FRAME ENLARGEMENT



SECTION B-B

*6" EACH SIDE OR PER MANUFACTURER SPECIFICATION (4" MIN)

REF STD SPEC SEC 1-07.1(3)

City of Seattle	NOT TO SCALE	CURB WEEP CHANNEL BOX

REV DATE: SEP 2021

new standard plan

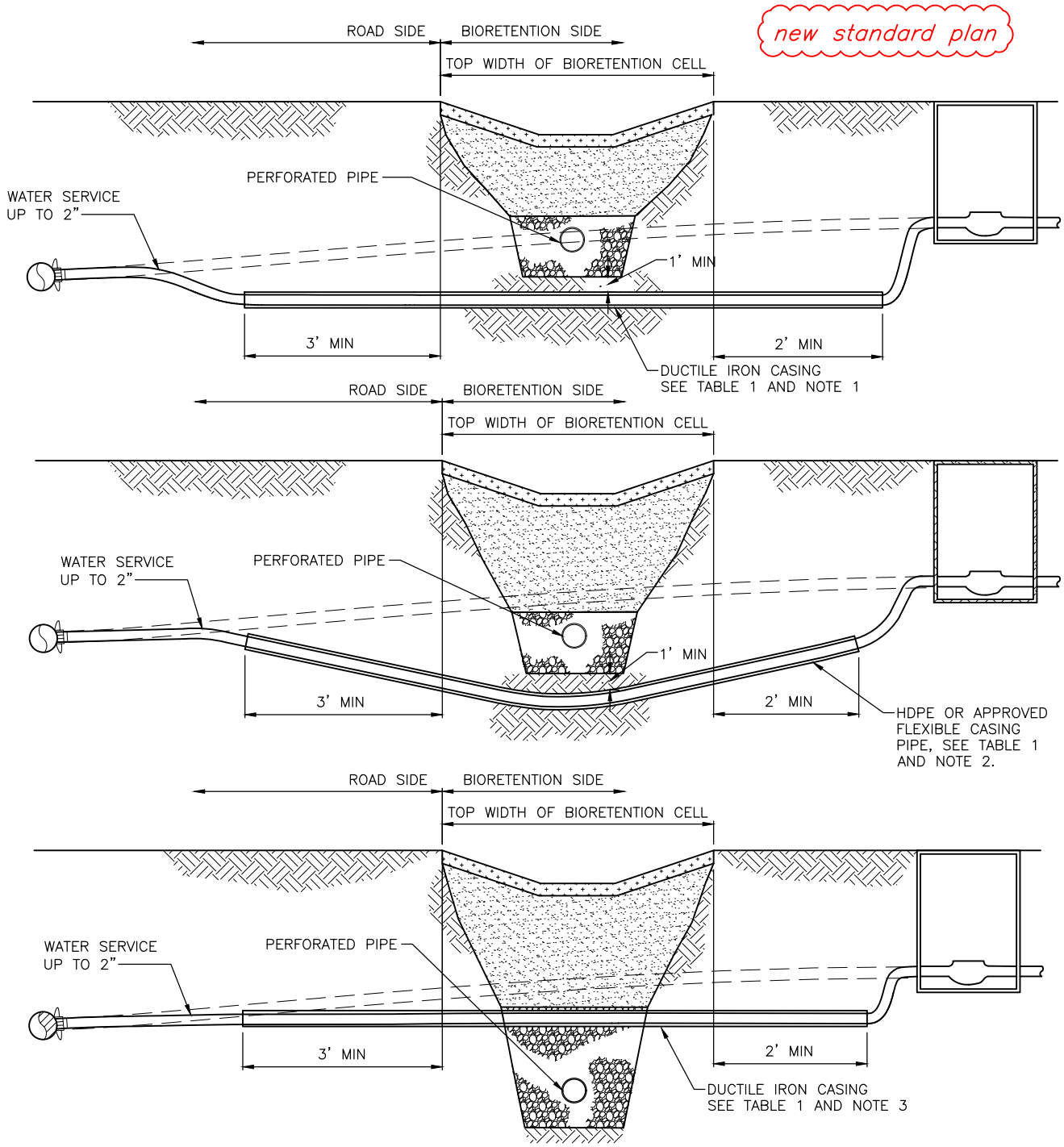


TABLE 1
CASING SIZE

WATER SERVICE ø	CASING ø
3/4"	2"
1.5"	2"
2"	3"

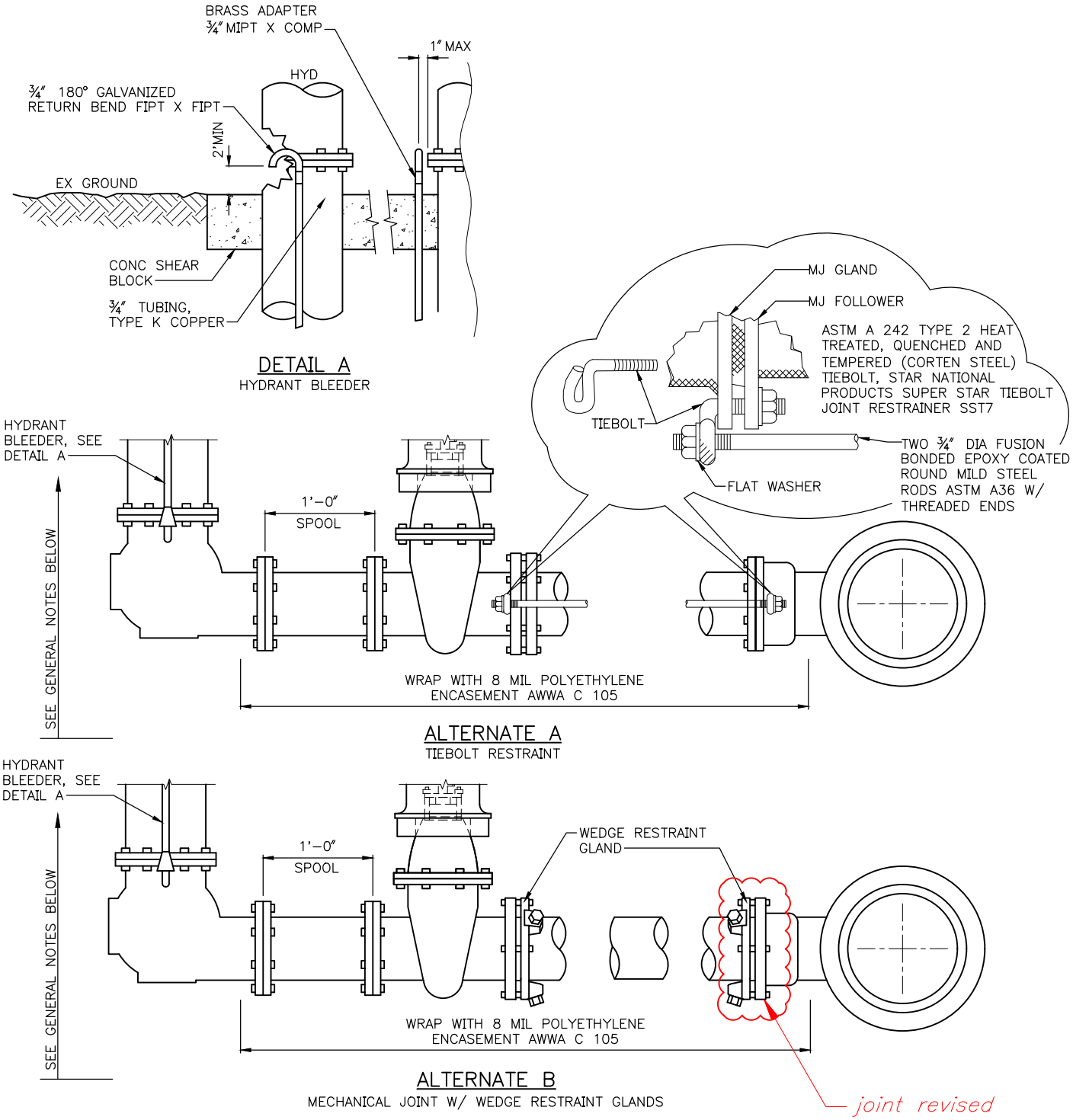
NOTES:

1. THIS CONFIGURATION APPLIES TO WATER SERVICE RELOCATION DEPTH 5' OR LESS.
2. THIS CONFIGURATION APPLIES TO WATER SERVICE RELOCATION DEPTH BETWEEN 5' AND 6'
3. THIS CONFIGURATION APPLIES TO WATER SERVICE RELOCATION DEPTH GREATER THAN 6'
4. FOR BIORETENTION CELLS WITH LINERS, ANY PENETRATION OF THE LINER MUST BE SEALED
5. THIS CONFIGURATION ALSO APPLIES TO OTHER UTILITIES UNLESS THE OTHER UTILITY HAS MORE STRINGENT CLEARANCE REQUIREMENTS.

REF STD SPEC SEC 1-07.17

City of Seattle | NOT TO SCALE | WATER SERVICE RELOCATION FOR UP TO 2" SERVICE PIPE THROUGH BIORETENTION

REV DATE: MAR 2021



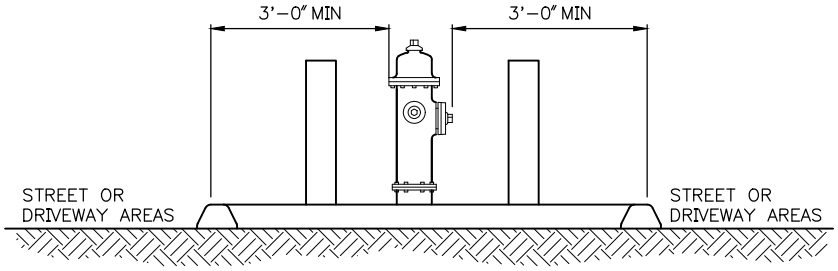
NOTES:

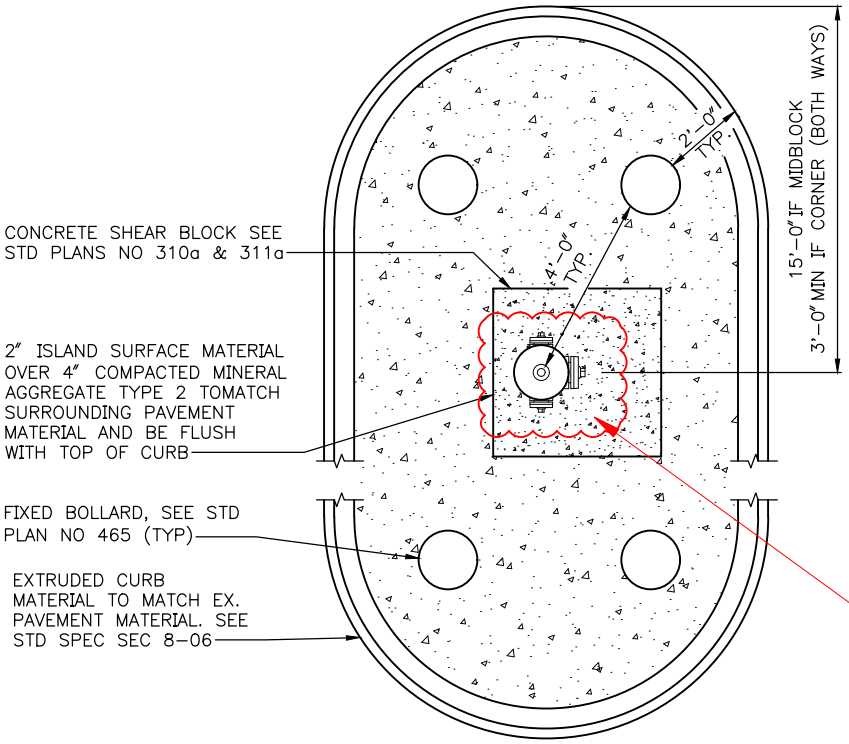
1. WHERE WATERMAINS ARE INSTALLED WITH POLYETHYLENE ENCASEMENT OR TAPE COATINGS, THE HYDRANT BARREL AND VALVE MUST BE SIMILARLY ENCASED, COATED AND/OR JOINTS BONDED. WHERE WATERMAIN IS THERMOPLASTIC COATED, THE HYDRANT BARREL MUST BE TAPE COATED
2. WHERE 6" GATE VALVE IS TO BE LOCATED WITHIN A PARKING–PERMITTED AREA, A SECOND 6" GATE VALVE MUST BE INSTALLED AT THE HYDRANT ASSEMBLY PER STD PLAN NO 310a

REF STD SPEC SEC 7-14

City of Seattle	NOT TO SCALE	TYPE 310 HYDRANT SETTING DETAIL

REV DATE: OCT 2021

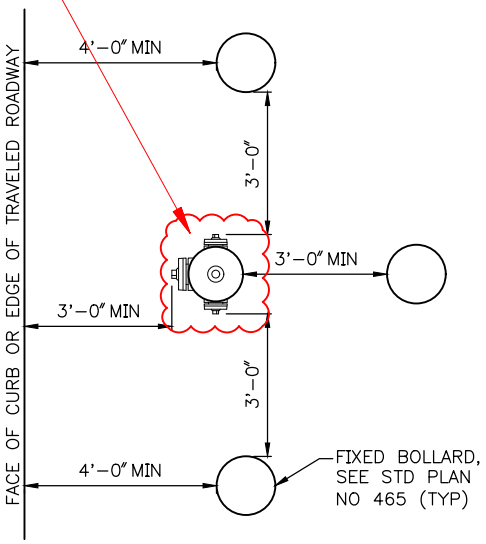




TRAFFIC ISLAND MARKER POST LAYOUT FOR
FIRE HYDRANTS IN PARKING AREAS

NOTE:
LAYOUT OF MARKER POST MUST BE VERIFIED FIRST WITH SPU AND SDOT

nut moved to center of hydrant

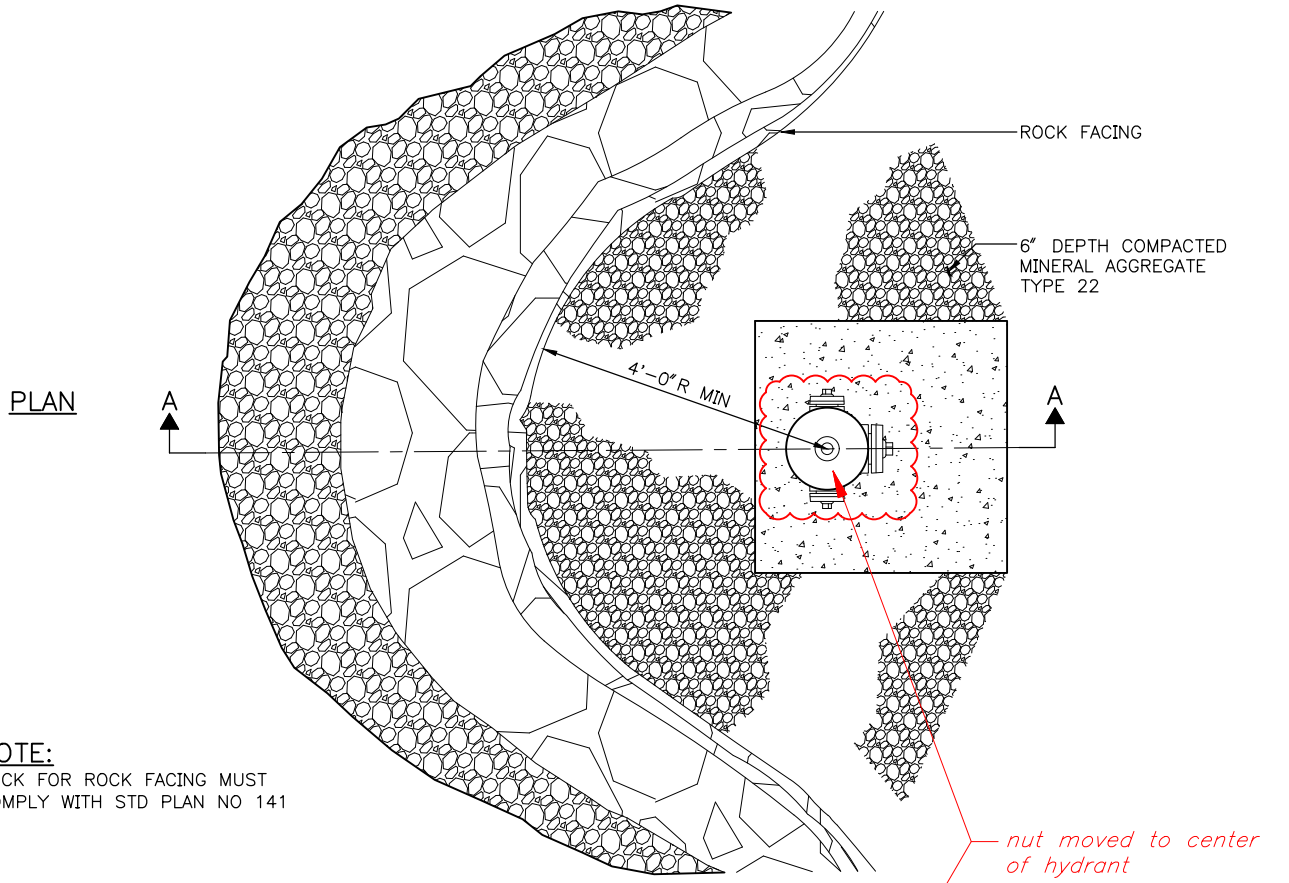


MARKER POST LAYOUT FOR
FIRE HYDRANTS IN PARKING AREAS

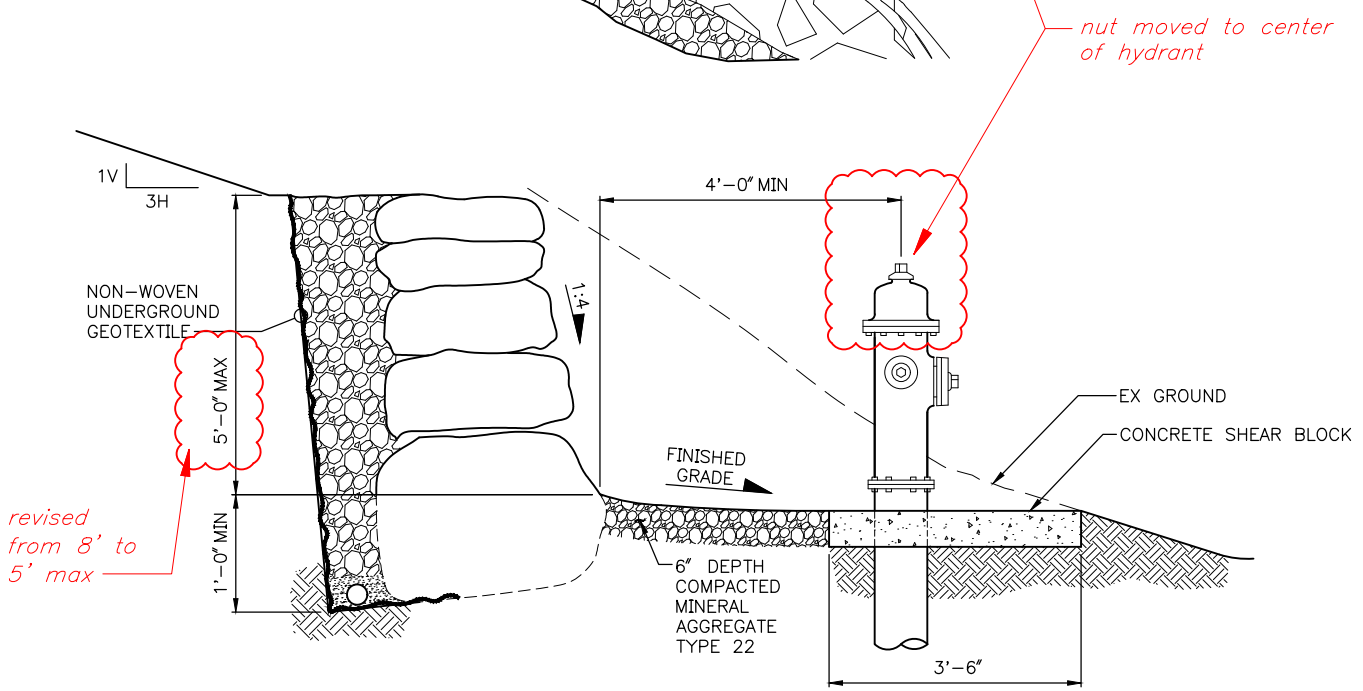
REF STD SPEC SEC 7-14

City of Seattle	NOT TO SCALE	FIRE HYDRANT MARKER LAYOUT

REV DATE: OCT 2022



NOTE:
ROCK FOR ROCK FACING MUST COMPLY WITH STD PLAN NO 141



SECTION A-A

REF STD SPEC SEC 2-13

City of Seattle	NOT TO SCALE	WALL REQUIREMENTS FOR HYDRANTS

REV DATE: OCT 2022

NOTES:

1. ~~NO PARKING ZONE WITHIN 15'–0" RADIUS OF FIRE HYDRANT.~~
2. MIN DISTANCE FROM CENTER OF HYDRANT TO FIXED OBJECT 4'.
3. MIN DISTANCE FROM HYDRANT PUMPER PORT TO CURB FACE/ROADWAY 3'
4. MIN DISTANCE FROM HYDRANT TO ANY PART OF CURB RAMP MUST BE 2'
5. BLUE LANE MARKER MUST BE 6" OFFSET FROM CENTER OF ROADWAY IF CENTERLINE IS NOT STRIPED, OR 6" OFF STRIPED CENTERLINE. WHERE MEDIANS OR TWO–WAY LEFT TURN LANES EXIST, MARKER MUST BE INSTALLED WITH 6" OFFSET FROM THE LANE LINE CLOSEST TO THE HYDRANT

notes added/revised

CORNER

INSTALL BLUE TYPE 2A LANE MARKER ADJACENT TO FIRE HYDRANTS. SEE NOTE 5 (TYP)

3'–0" MIN, 15'–0" MAX ON CORNERS
7'–0" MAX MIDBLOCK

CURB OR EDGE OF TRAVELED PORTION OF ROADWAY

R/W MARGIN

5'–0" STD

5'–0" MIN

R/W MARGIN

detail revised

HYDRANT SHEAR BLOCK SEE STD PLAN NO 310a & 311a FOR SHEAR BLOCK INFORMATION

dims revised

FACE OF CURB

3'–0" MIN

1'–0"

1'–9"

1'–9"

MID–BLOCK

SHEAR BLOCK FULL DEPTH JOINT, ALL SIDES

TREE

dims removed

LOT LINE

SIDE SEWER

10'–0" STD
N OR E

℄ STREET

layout revised

DETAIL A
HYDRANT NEAR CURB RAMP

CORNER

5'–0" STD

R/W MARGIN

SEE DETAIL A

REF STD SPEC SEC 7-14, 8-08

City of Seattle

NOT TO SCALE

FIRE HYDRANT LOCATIONS & CLEARANCES

REV DATE: OCT 2022

notes 1 & 2 revised

NOTES:

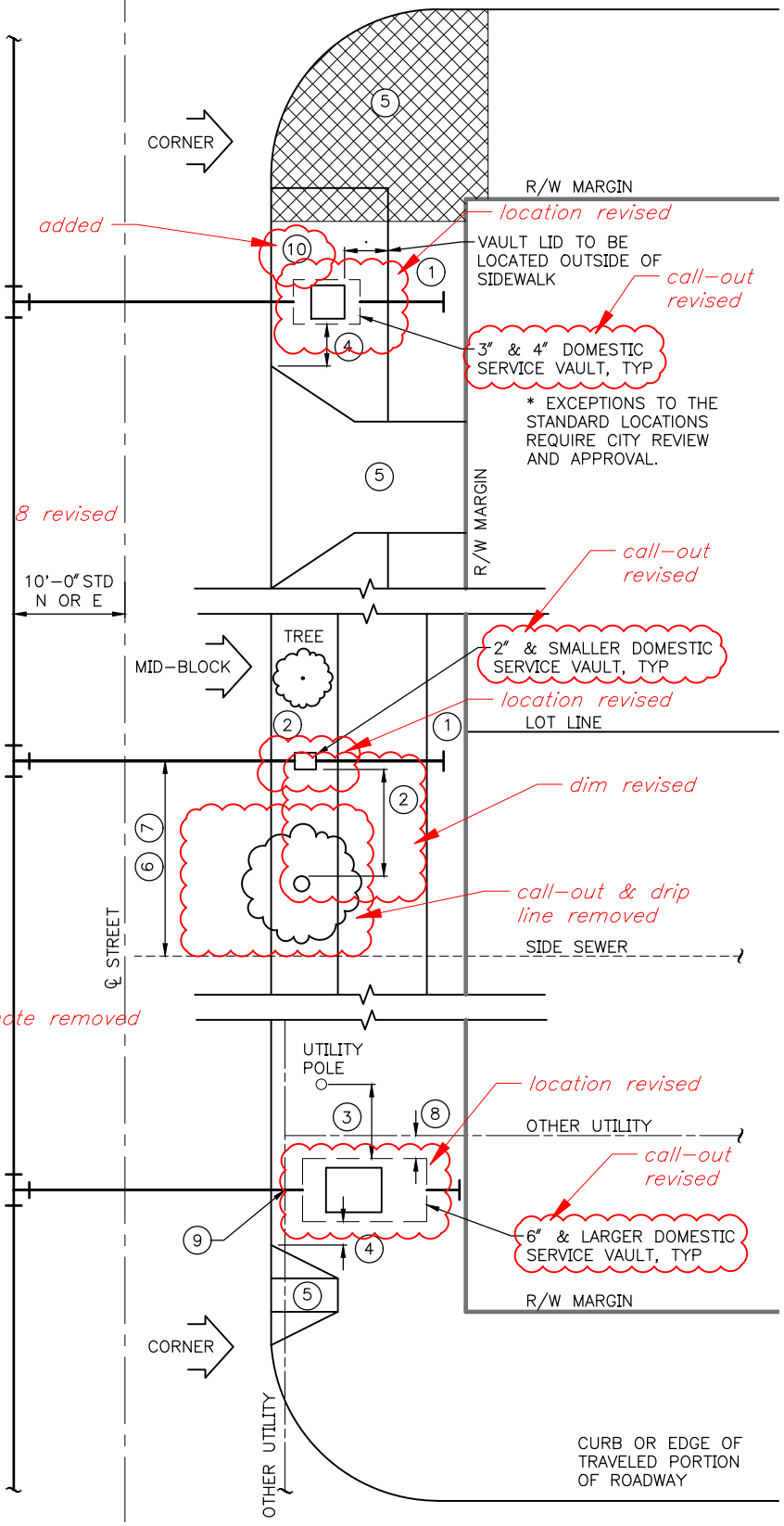
1. UNION POINT 2″ OUTSIDE OF VAULT UNLESS OTHERWISE NOTED ON PLANS.
2. 5' CLEARANCE MINIMUM FROM NEW OR EXISTING TREES. IF EXCAVATION IS REQUIRED WITHIN ROOT ZONE OF EXISTING TREES, THE EXCAVATION MUST BE ACCOMPLISHED BY HAND METHODS, CONDUCTED TO PREVENT DAMAGE TO FEEDER AND SURFACE ROOTS, AND MINIMIZE COMPACTION SOILS.
3. 5' CLEAR FROM POLES.
4. 2' CLEAR FROM EDGE OF DRIVEWAY OR ADA RAMP.
5. WATER SERVICE NOT TO BE INSTALLED IN DRIVEWAY, BEHIND ADA RAMP, OR STREET CORNER.
6. SIDE SEWER HORIZONTAL CLEARANCE 10' FOR CAST IRON WATER PIPE OR 5' FOR DUCTILE IRON WATER PIPE.
7. SIDE SEWER VERTICAL CLEARANCE 1.5" MIN.
8. VAULT HORIZONTAL CLEARANCE 3' MIN FROM OTHER UTILITIES. UNLESS OTHERWISE NOTED IN STD SPECS.
9. VERTICAL CLEARANCE 12" MIN FOR ALL OTHER UTILITY CROSSINGS UNLESS OTHERWISE NOTED IN STD SPECS.
10. ALLOWABLE LOCATION OF WATER SERVICE VAULT, 2' MINIMUM CLEAR OF CURB.

note 8 revised

PERMIT REQUIREMENTS WILL DETERMINE LOCATION AND ORIENTATION OF ALL SERVICE VAULTS IN THE RIGHT OF WAY. VAULTS SHOWN ON THIS STD PLAN ARE FOR GRAPHICAL PURPOSES ONLY.

note removed

notes added



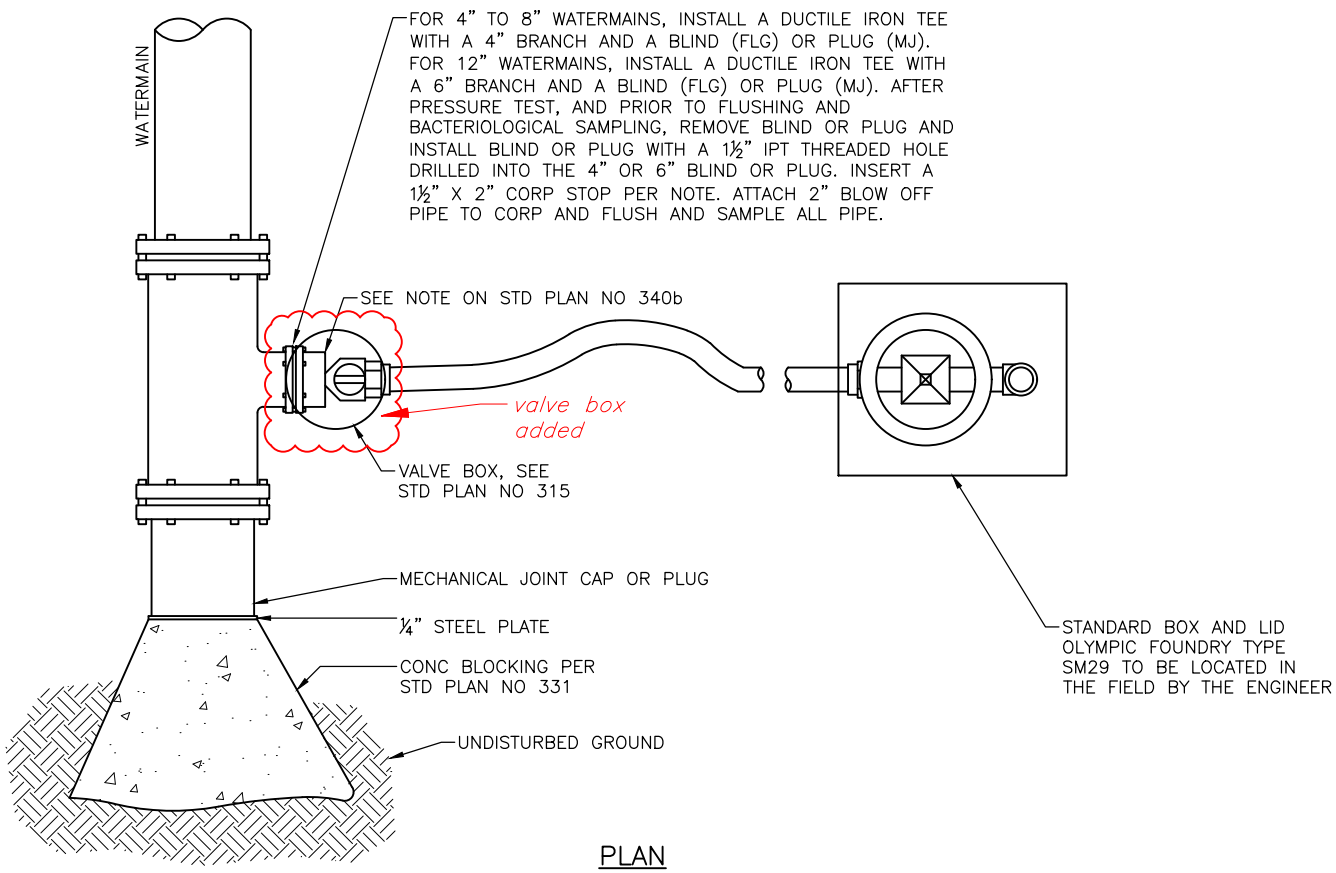
REF STD SPEC SEC 1-07.17(2)

City of Seattle

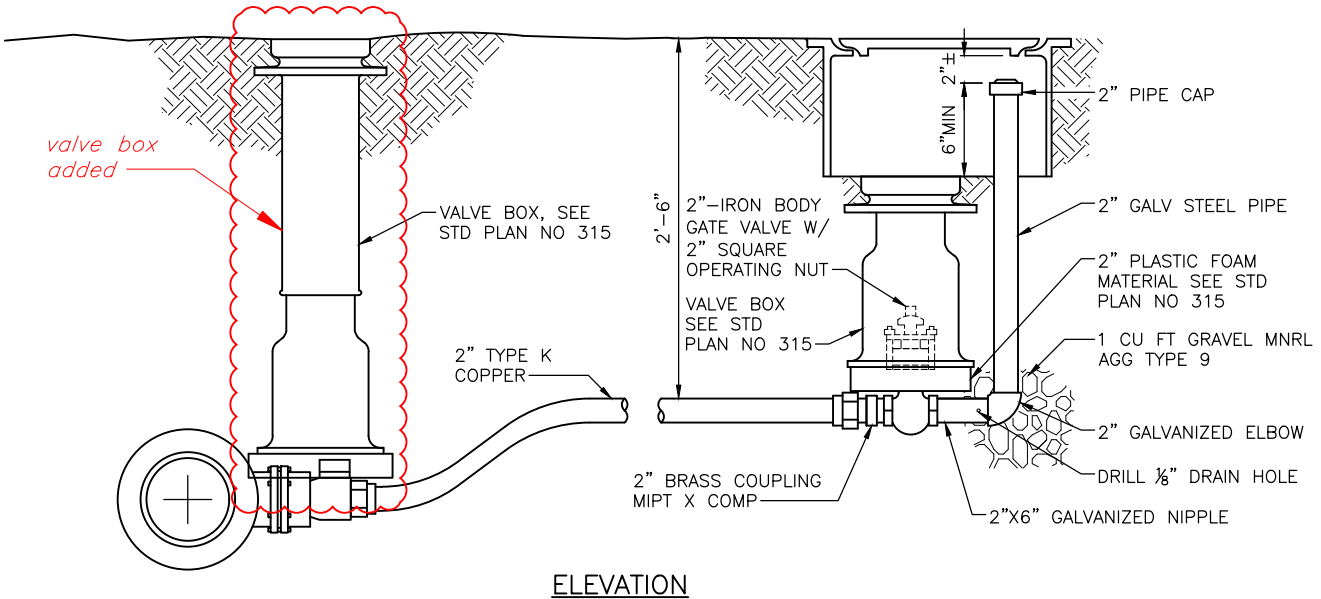
NOT TO SCALE

CLEARANCES FOR TYPICAL WATER SERVICE VAULTS

REV DATE: MAY 2021



PLAN

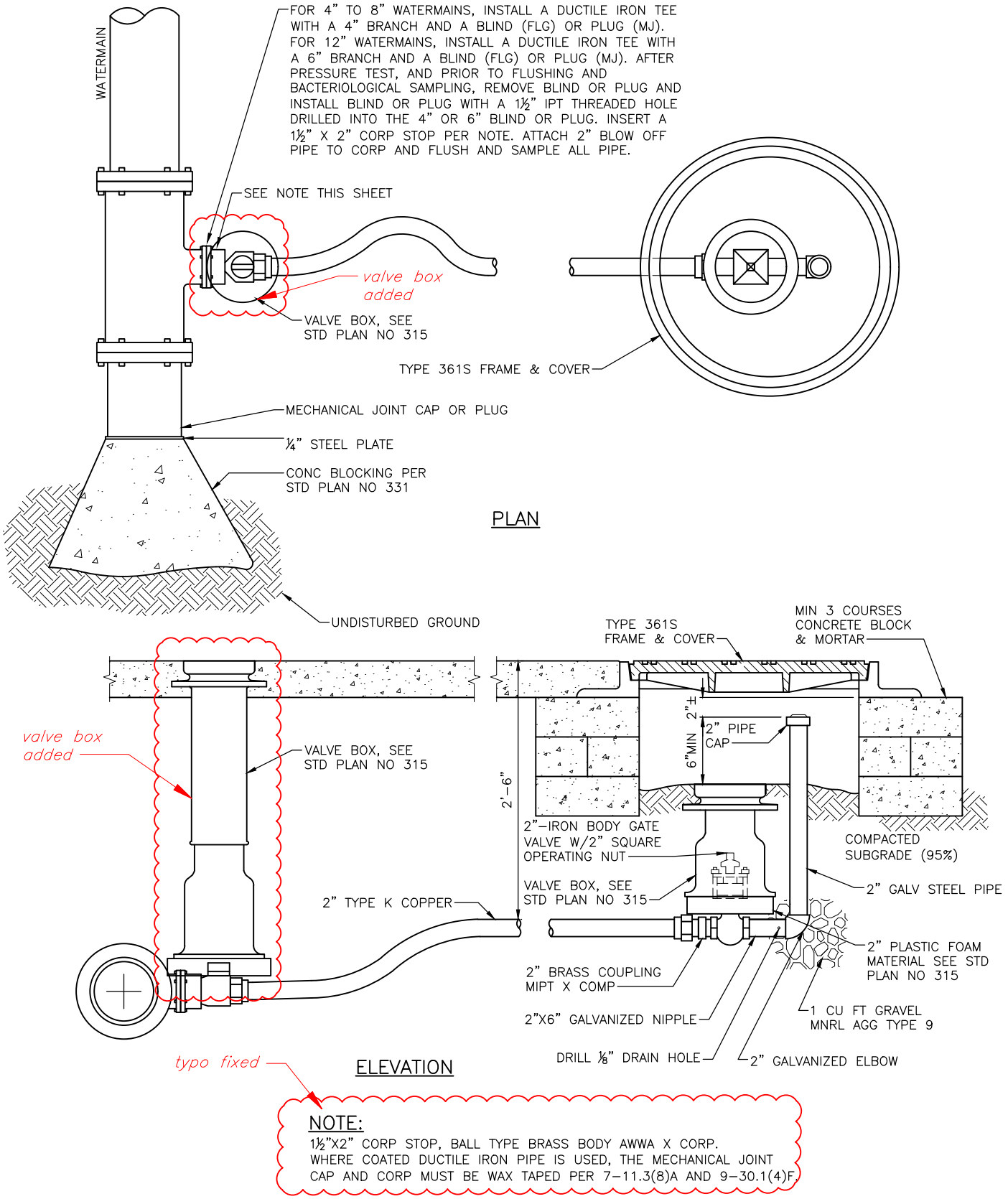


ELEVATION

REF STD SPEC SEC 7-11

City of Seattle	NOT TO SCALE	2" BLOW OFF TYPE A NON TRAFFIC INSTALLATION

REV DATE: MAR 2021

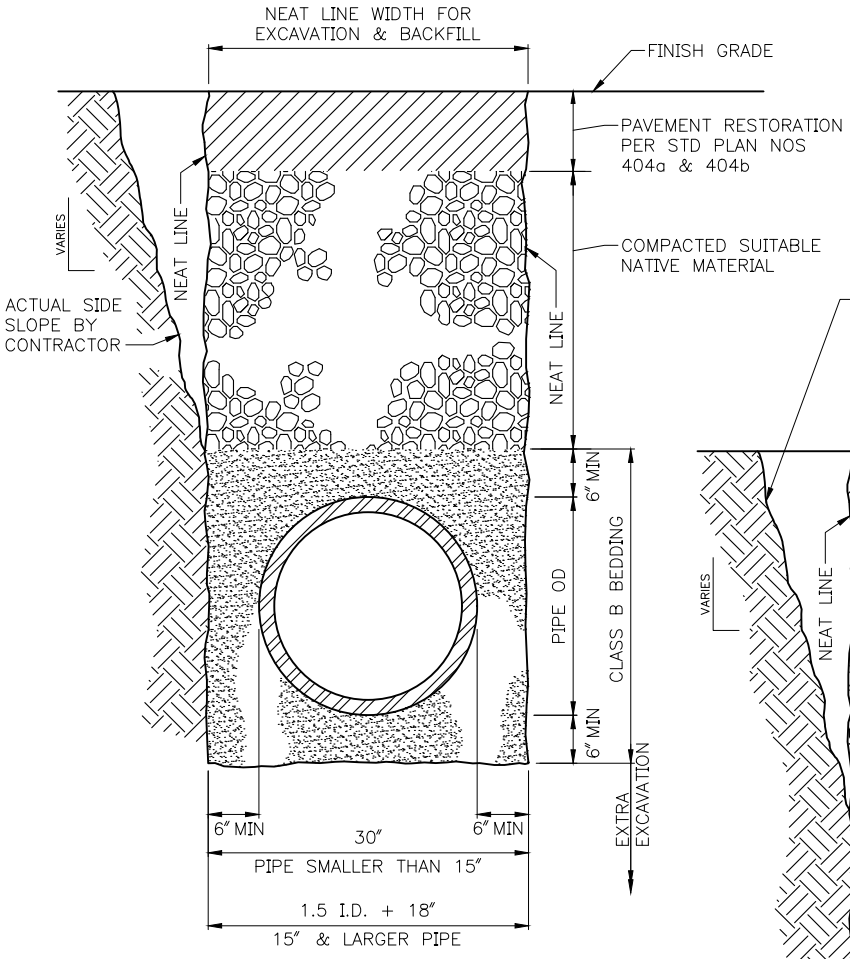


NOTE:
1½"X2" CORP STOP, BALL TYPE BRASS BODY AWWA X CORP. WHERE COATED DUCTILE IRON PIPE IS USED, THE MECHANICAL JOINT CAP AND CORP MUST BE WAX TAPED PER 7-11.3(8)A AND 9-30.1(4)F.

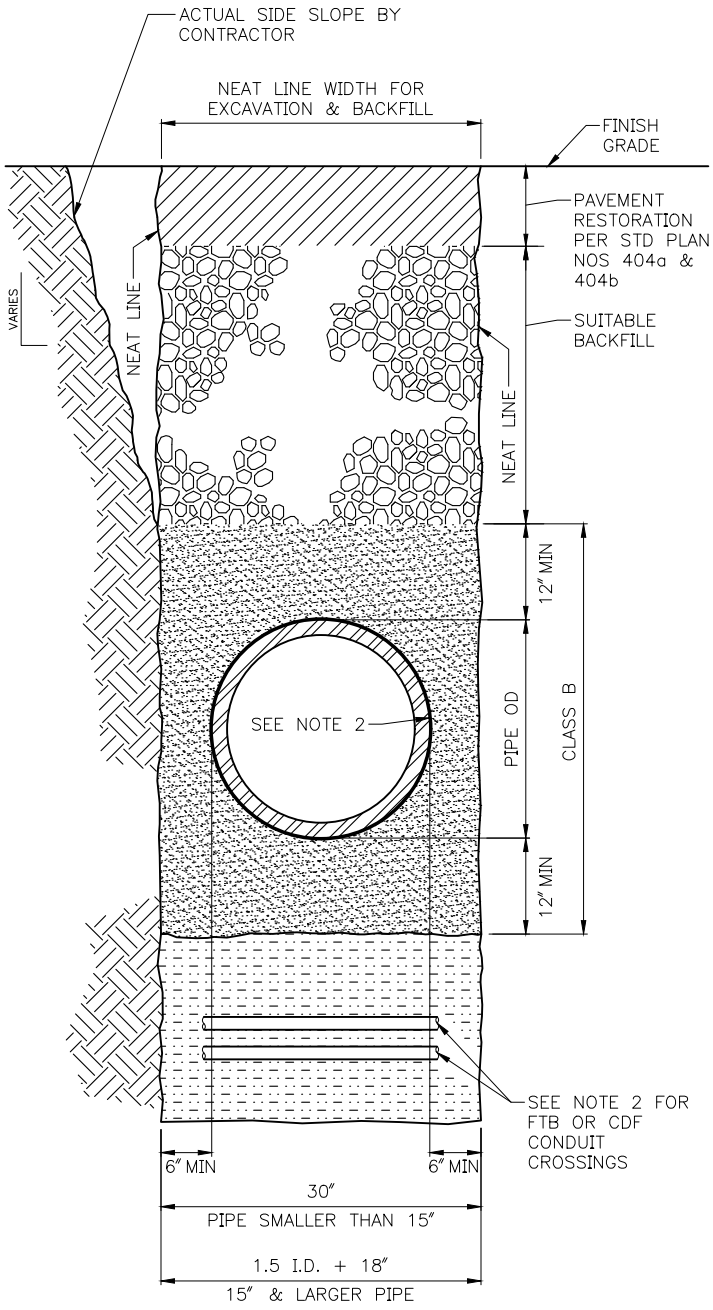
REF STD SPEC SEC 7-11

City of Seattle	NOT TO SCALE	2" BLOW OFF DETAIL TYPE B TRAFFIC INSTALLATION

REV DATE: OCT 2022



TYPICAL BEDDING



BEDDING AT TRENCH CROSSING

BEDDING MATERIAL

CLASS B:

- FOR DISTRIBUTION WATERMAIN, MINERAL AGGREGATE PER STD SPEC 9-03.14 TYPE 6 OR TYPE 7
- FOR TRANSMISSION WATERMAIN, MINERAL AGGREGATE PER STD SPEC 9-03.14 TYPE 9
- SPECIAL BEDDING TO BE INDICATED ON DRAWINGS

revised from 9-03.16

NOTES:

1. EXCAVATE FOR THE BELL TO ENSURE UNIFORM SUPPORT FOR THE PIPE BARREL
2. FOR FLUIDIZED THERMAL BACKFILL (FTB) OR CDF CROSSINGS OF METALLIC PIPE, WRAP METALLIC PIPE IN 8 MIL POLYETHYLENE ENCASEMENT FOR FULL TRENCH WIDTH.
3. FLUIDIZED THERMAL BEDDING PER SCL MATERIAL STANDARD 7150.00

9-03.16 removed

REF STD SPEC SEC 7-11

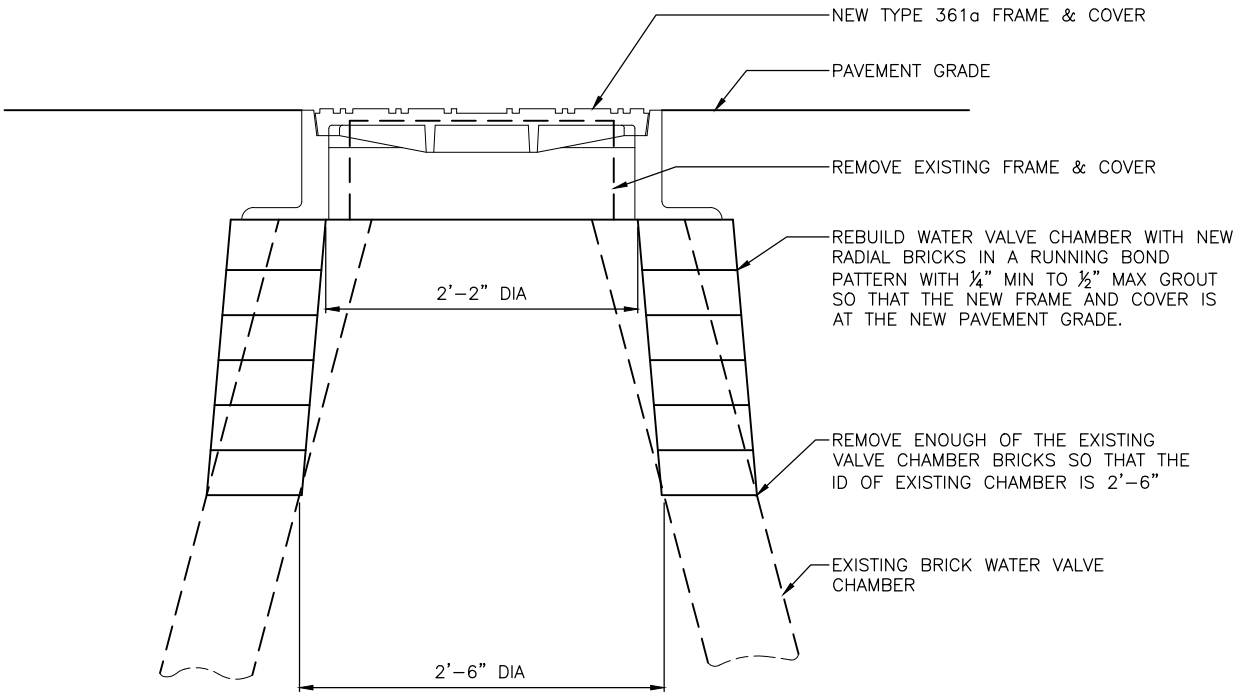
City of Seattle

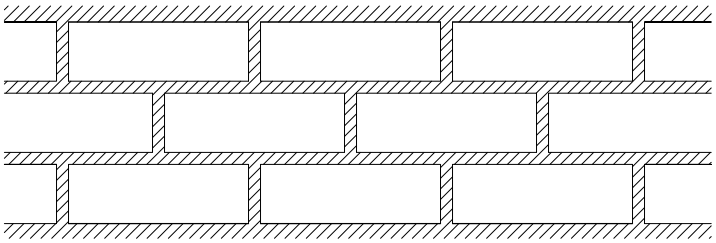
NOT TO SCALE

WATERMAIN TRENCH AND BEDDING

REV DATE: SEP 2021

new standard plan



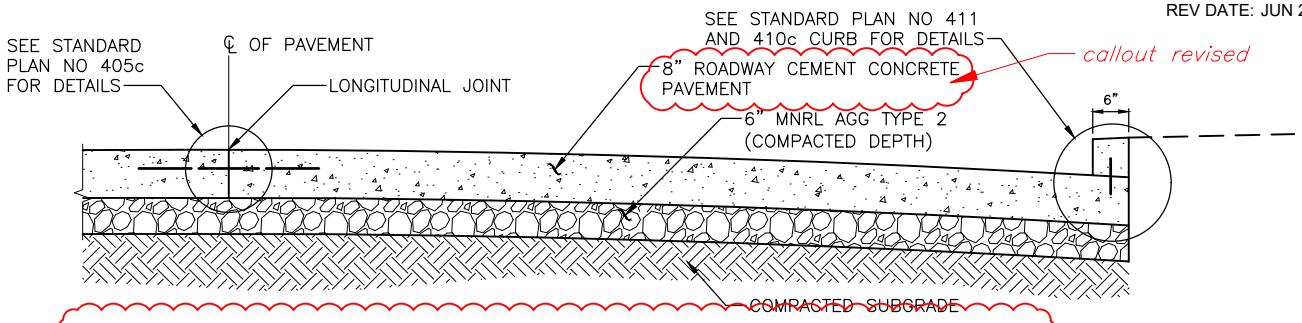


RUNNING BOND PATTERN
GROUT BETWEEN ALL BRICKS

REF STD SPEC SEC 7-20

City of Seattle	NOT TO SCALE	REBUILD EXISTING BRICK WATER VALVE CHAMBER

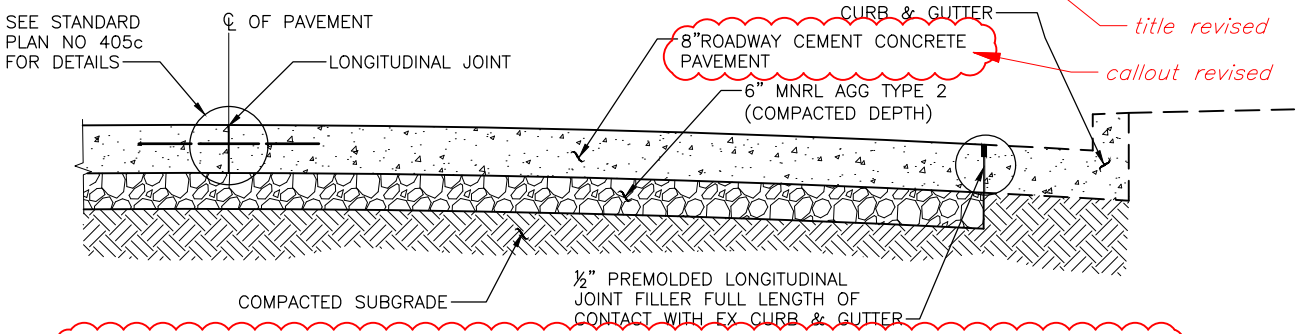
REV DATE: JUN 2021



401A–ROADWAY CEMENT CONCRETE PAVEMENT ON CRUSHED ROCK

callout revised

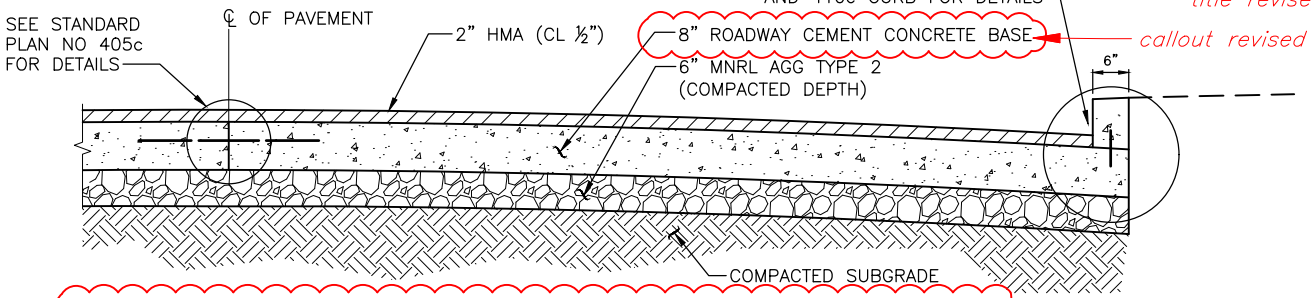
title revised



401B–ROADWAY CEMENT CONCRETE PAVEMENT ON CRUSHED ROCK WITH EXISTING CURB & GUTTER

callout revised

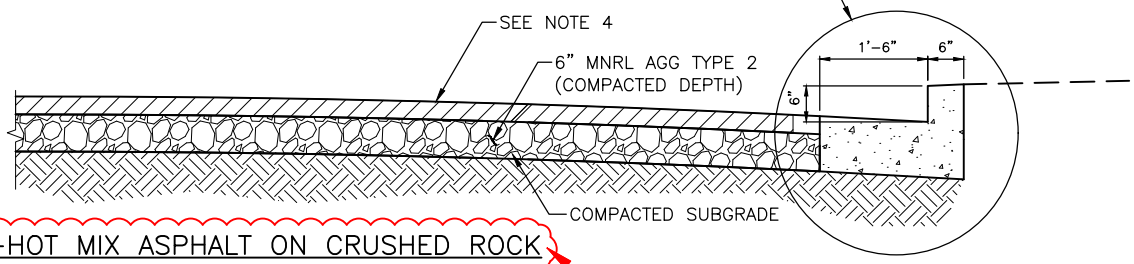
title revised



401C–HOT MIX ASPHALT ON ROADWAY CEMENT CONCRETE BASE ON CRUSHED ROCK

callout revised

title revised



401D–HOT MIX ASPHALT ON CRUSHED ROCK

title revised

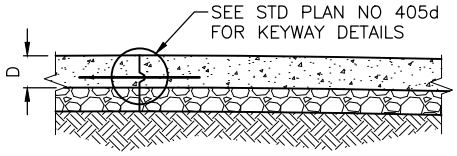
HMA DESIGN CRITERIA:

1. 3 MILLION ESAL'S UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS
2. ASPHALT PG 58H–22 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS
3. WARM MIX ASPHALT MAY BE USED IN PLACE OF HMA WHERE SHOWN ON THE DRAWINGS
4. PAVEMENT DEPTH MUST BE 3" HMA (CL ½") WHEN REPLACING BITUMINOUS SURFACE TREATED RESIDENTIAL STREETS OR 2" HMA (CL ½") OVER 6" HMA (CL 1") FOR ALL OTHER RESIDENTIAL STREETS.
5. PROTECT ADJACENT PANELS FROM DAMAGE DUE TO UNDERMINING DURING EXCAVATION & PLACEMENT OF SUBGRADE. SEE SPEC SECTION 1–07.13.

REF STD SPEC SEC 4-04, 5-04, 5-05, 8-04

City of Seattle	NOT TO SCALE	RESIDENTIAL PAVEMENT SECTIONS

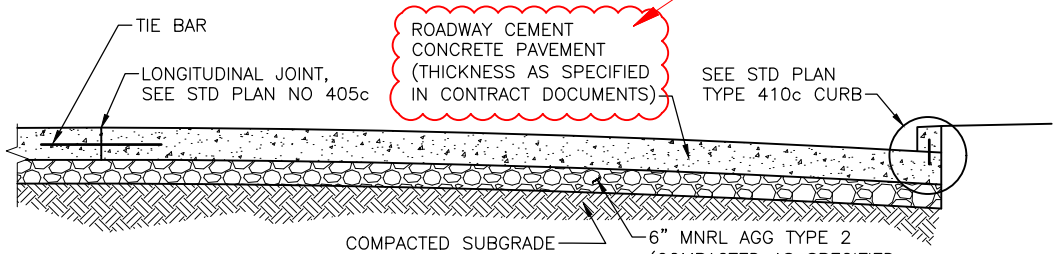
REV DATE: JUN 2021



OPTIONAL KEYWAY
FOR LONGITUDINAL JOINT

NOTES:
IF CONC THICKNESS IS 9 INCH OR GREATER OPTIONAL KEYWAY MAY BE USED SEE STD PLANS NO 405c & 405d FOR DETAILS

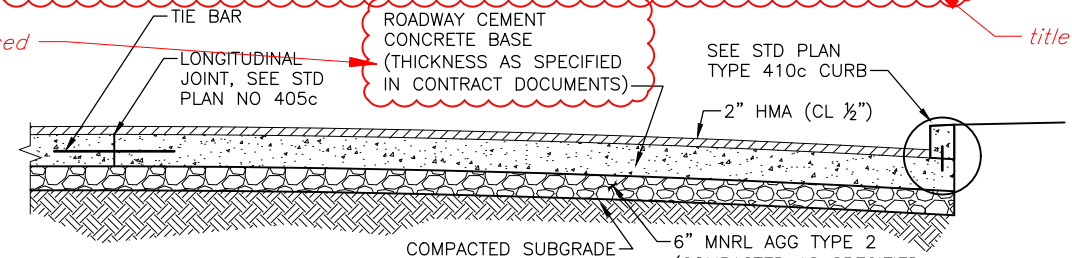
callout revised



402A–ROADWAY CEMENT CONCRETE PAVEMENT ON CRUSHED ROCK

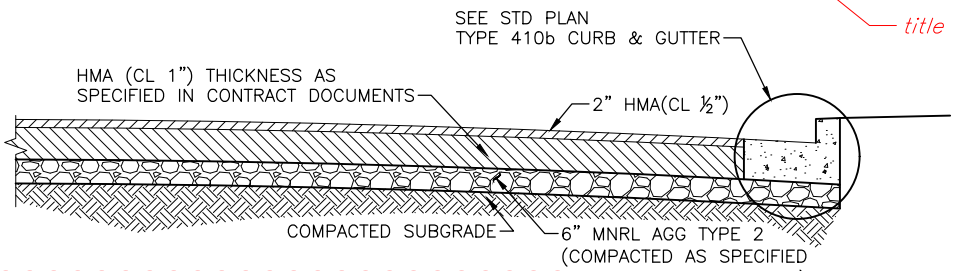
title revised

callout revised



402B–HOT MIX ASPHALT ON ROADWAY CEMENT CONCRETE BASE ON CRUSHED ROCK

title revised



402C–HOT MIX ASPHALT ON CRUSHED ROCK

title revised

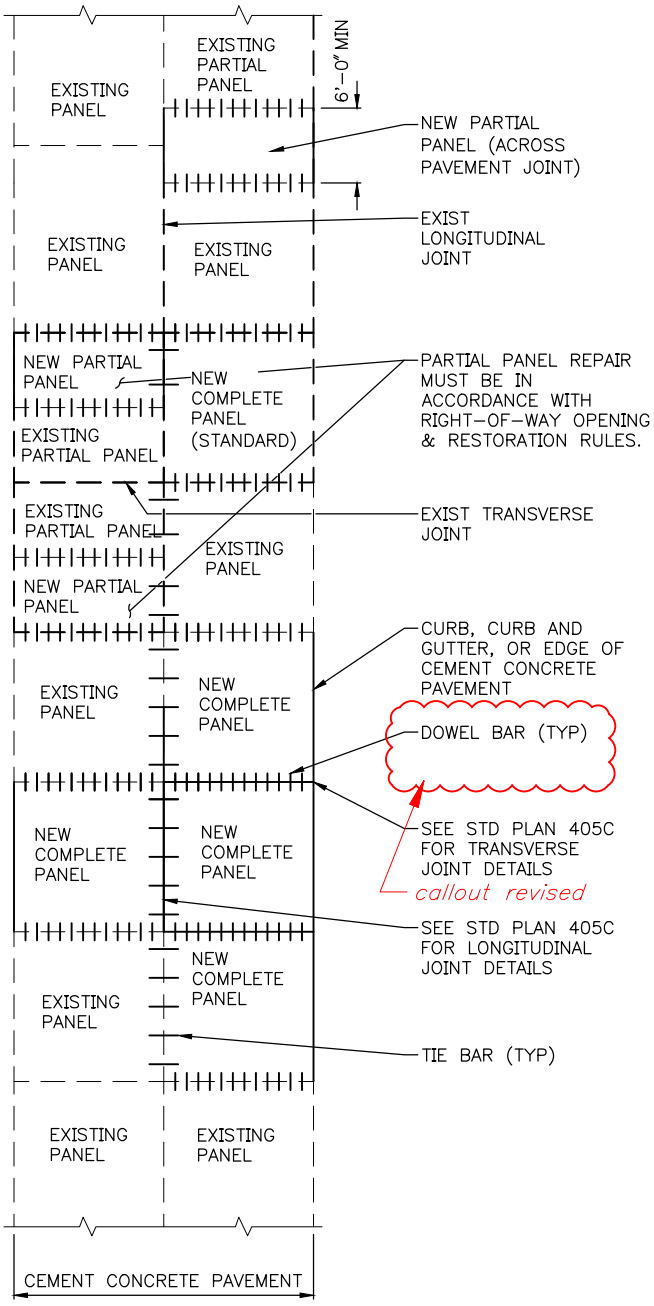
HMA DESIGN CRITERIA:

1. 10 MILLION ESAL'S UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
2. ASPHALT PG 58H–22 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
3. WARM MIX ASPHALT MAY BE USED IN PLACE OF HMA WHERE SHOWN ON THE DRAWINGS.
4. PROTECT ADJACENT PANELS FROM DAMAGE DUE TO UNDERMINING DURING EXCAVATION & PLACEMENT OF SUBGRADE. SEE SPEC SECTION 1–07.13.

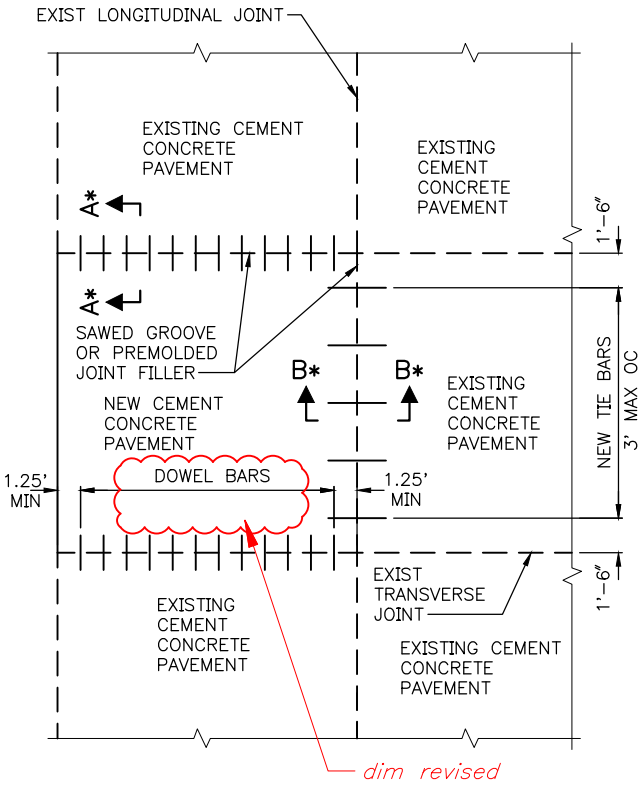
REF STD SPEC SEC 4-04, 5-04, 5-05, 8-04

City of Seattle	NOT TO SCALE	COMMERCIAL AND ARTERIAL PAVEMENT SECTIONS

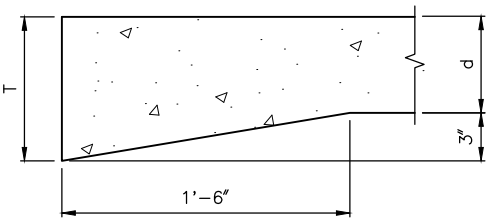
REV DATE: MAY 2021



PLAN VIEW
PANEL REPLACEMENT



PLAN VIEW
COMPLETE PANEL REPLACEMENT



THICKENED EDGE DETAIL
(REQUIRED ONLY WHERE SHOWN ON THE DRAWINGS)

NOTES

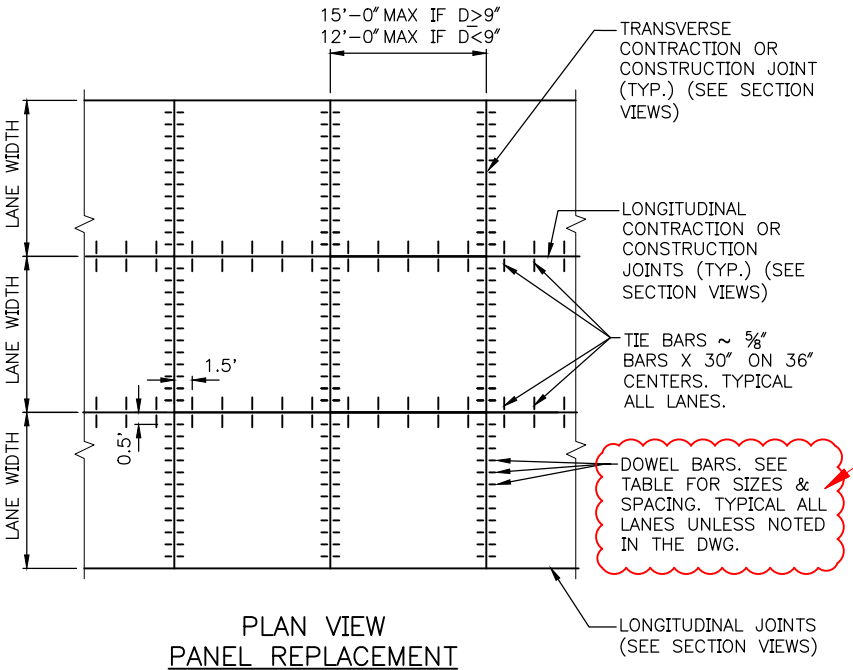
1. INSTALL TIE BARS ALONG LONGITUDINAL JOINT BETWEEN FULL PANEL REPLACEMENT AND EXIST CEMENT CONC PAVEMENT. TIE BARS ARE NOT INSTALLED BETWEEN CEMENT CONC PAVEMENT AND HOT MIX ASPHALT SHOULDERS.
2. TIE BARS AND DOWELS ARE NOT REQUIRED:
   - 2.1. WHEN INDICATED ON THE DRAWINGS BY "NO TIE BARS" OR "NO DOWEL BARS".
   - 2.2. WHEN EXISTING PAVEMENT IS 8" OR LESS OR WHEN THE ENGINEER DETERMINES THE EXISTING CONC NOT TO BE COMPETENT.
3. DO NOT PLACE LONGITUDINAL JOINTS OR SKEWED JOINTS WITHIN BIKE LANES.
4. WHEN PAVING ADJACENT TO EXISTING PANELS, THE NEW TRANSVERSE JOINTS MUST BE PLACED TO MATCH JOINT LOCATIONS OF THE EXISTING ADJACENT PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SEE STD PLAN NO 405C FOR MAXIMUM TRANSVERSE JOINT SPACING.

A* SEE SECTION A–A STANDARD PLAN 405b
B* SEE SECTION B–B STANDARD PLAN 405b

REF STD SPEC SEC 5-05

City of Seattle	NOT TO SCALE	ROADWAY CONCRETE PAVEMENT REPAIR

REV DATE: MAY 2021



PLAN VIEW
PANEL REPLACEMENT

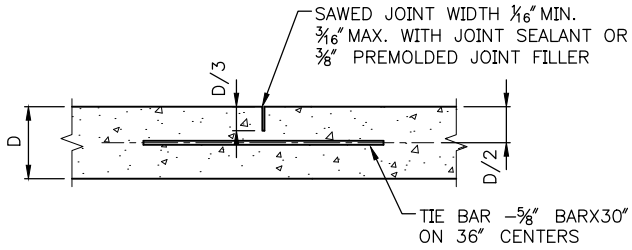
callout revised

NOTES:

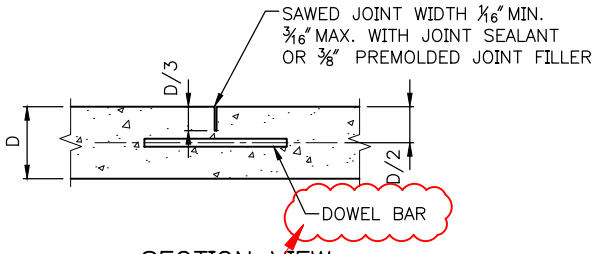
1. DO NOT PLACE LONGITUDINAL JOINTS OR SKEWED JOINTS WITHIN BIKE LANES.
2. WHEN A JOINT IS WITHIN 18 INCHES OF A CASTING JOINTS SHOULD BE SKEWED TO MEET THE CASTING AT 90 DEGREES UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR SHOWN ON THE DRAWINGS.
3. SEE STD PLAN NO 406 OR DRAWINGS FOR REBAR DETAIL AROUND CASTING 18 INCHES OR GREATER FROM JOINTS.
4. DOWEL BARS MUST NOT BE PLACED WITHIN 15 INCHES OF THE EDGE OF PAVEMENT OR A PARALLEL JOINT.
5. DOWEL BARS NOT REQUIRED FOR RESIDENTIAL PAVEMENT SECTIONS. SEE STD PLAN NO 401.

table revised

DEPTH (D) OF RDWY CEM. CONC	SOLID STEEL DOWEL BAR SIZE OUTSIDE DIAMETER (OD) X LENGTH (L) @ ON CENTER (OC)	TUBULAR DOWEL BAR SIZE OUTSIDE DIAMETER (OD), WALL THICKNESS X LENGTH (L) @ ON CENTER (OC)
6" ≤ D <9"	1.00" OD X 18" L @ 12" OC	1.375" OD, 0.120: MIN X 18" L @ 12" OC
9" ≤ D <11"	1.25" OD X 18" L @ 12" OC	1.375" OD, 0.120: MIN X 18" L @ 12" OC
11" ≤ D	1.50" OD X 18" L @ 12" OC	1.625" OD, 0.120: MIN X 18" L @ 12" OC

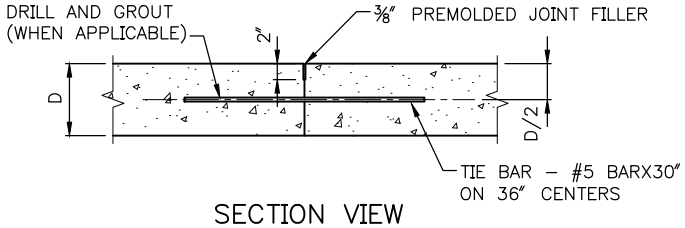


SECTION VIEW
LONGITUDINAL CONTRACTION JOINT

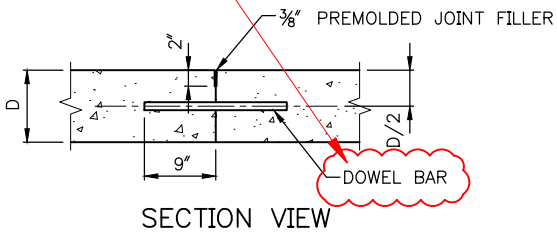


SECTION VIEW
TRANSVERSE CONTRACTION JOINT

callouts revised



SECTION VIEW
LONGITUDINAL CONSTRUCTION JOINT

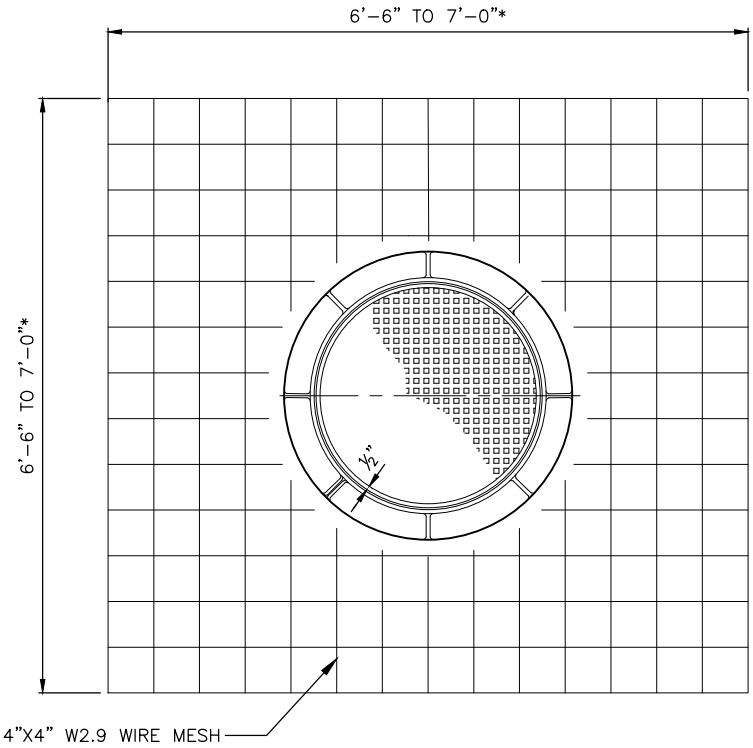


SECTION VIEW
TRANSVERSE CONSTRUCTION JOINT

REF STD SPEC SEC 5-05

City of Seattle | NOT TO SCALE | ROADWAY CONCRETE PAVEMENT JOINTS

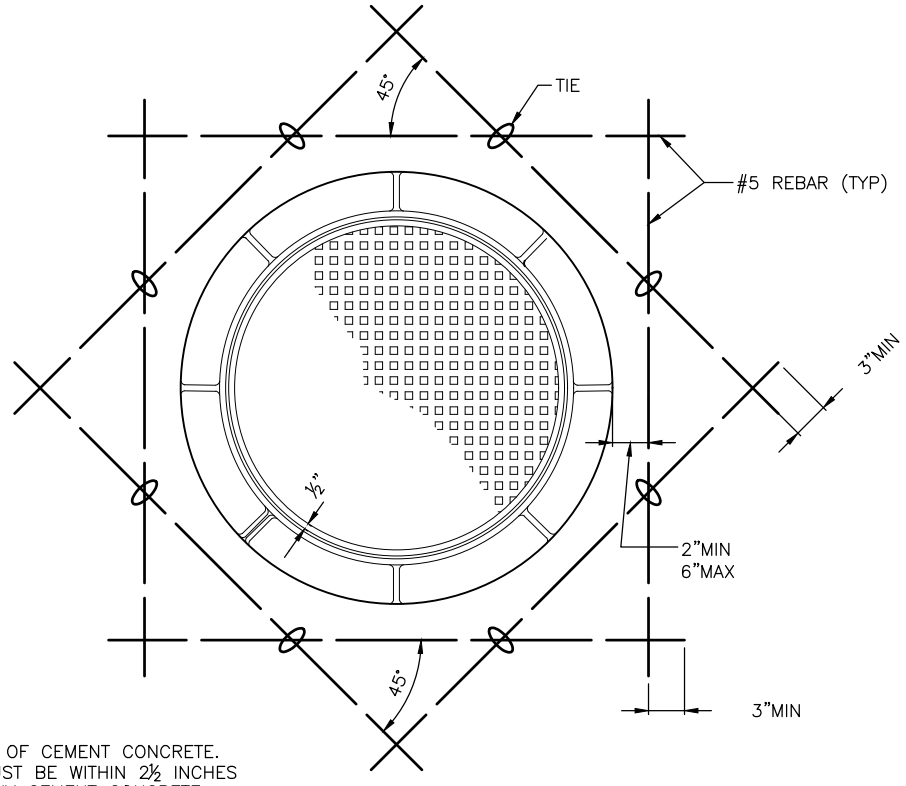
REV DATE: AUG 2022



NOTES:

1. PLACE WIRE MESH AT ½ DEPTH OF CEMENT CONCRETE.
2. *THE DIMENSIONS OF THE MESH MUST BE ADJUSTED WHERE PAVEMENT JOINTS ARE ENCOUNTERED.
3. NO REINFORCING STEEL MUST BE WITHIN 2½ INCHES (3 INCHES DESIRED) OF ANY CEMENT CONCRETE SURFACE OR JOINT.

note 3 revised



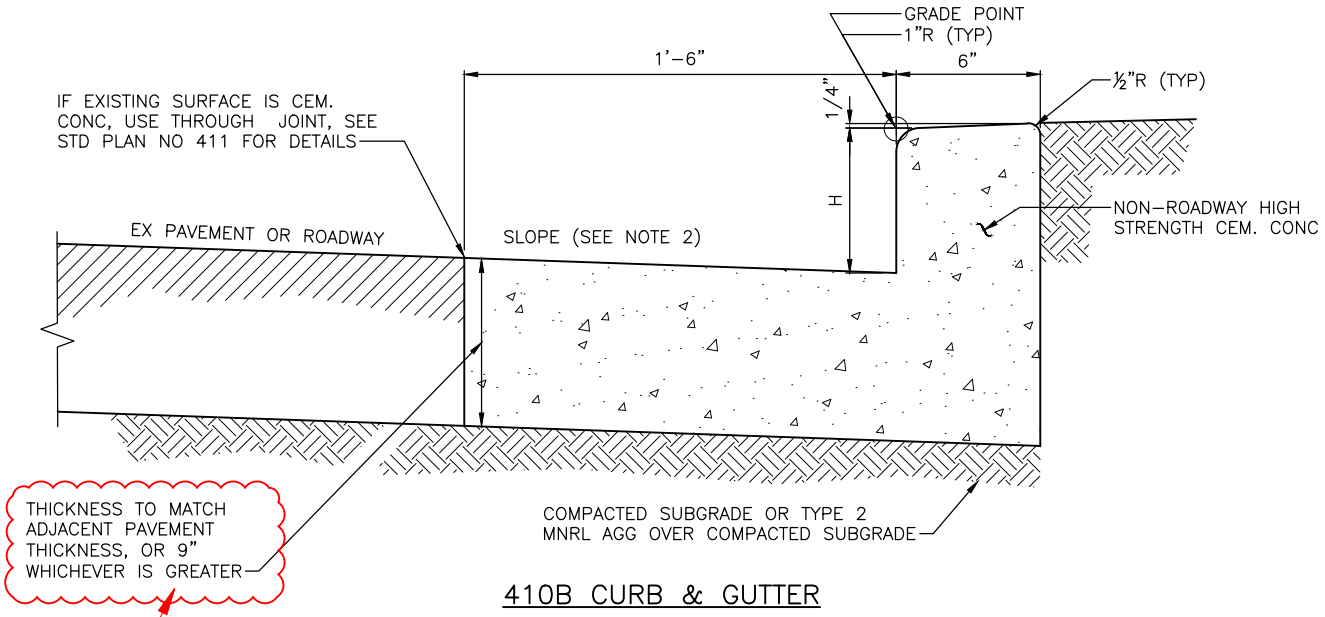
NOTES:

1. PLACE REBAR AT ½ DEPTH OF CEMENT CONCRETE.
2. NO REINFORCING STEEL MUST BE WITHIN 2½ INCHES (3 INCHES DESIRED) OF ANY CEMENT CONCRETE SURFACE OR JOINT.

REF STD SPEC SEC 5-05

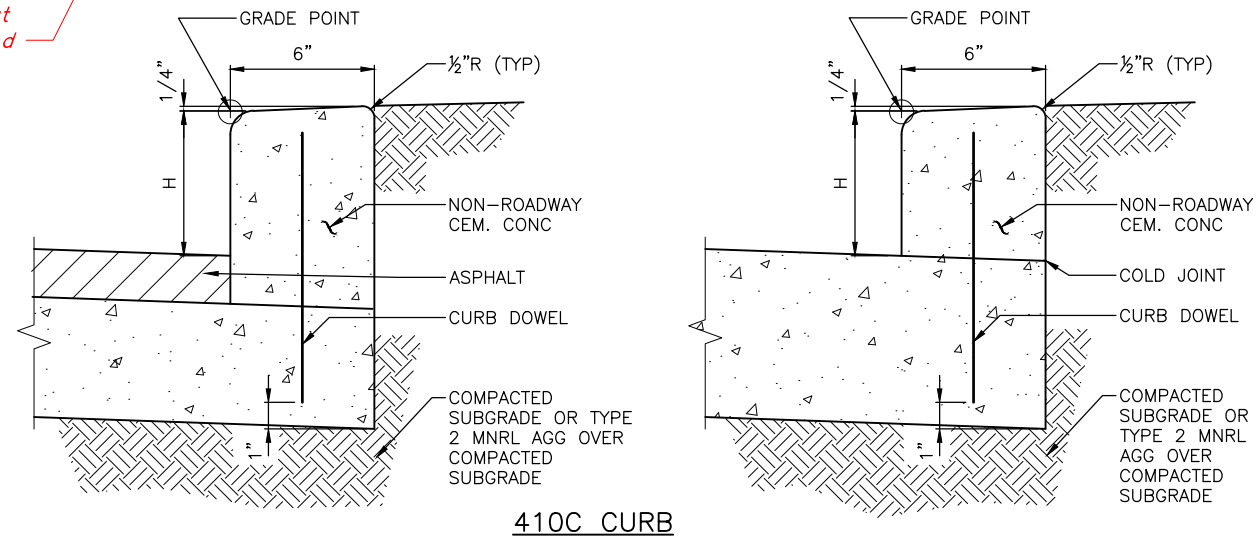
City of Seattle	NOT TO SCALE	FRAME & COVER CEMENT CONCRETE REINFORCEMENT DETAIL

REV DATE: AUG 2022



410B CURB & GUTTER

callout revised



410C CURB

NOTES:

1. "H" MUST BE 6" FROM FINISHED ROADWAY GRADE UNLESS OTHERWISE SHOWN ON DRAWINGS
2. GUTTER MUST BE SLOPED THE SAME AS ADJACENT PAVEMENT OR 2% MIN, WHICHEVER IS GREATER.
3. SEE STD PLAN NO 411 FOR CURB DOWELS

REF STD SPEC SEC 8-04

City of Seattle	NOT TO SCALE	TYPE 410 CURB

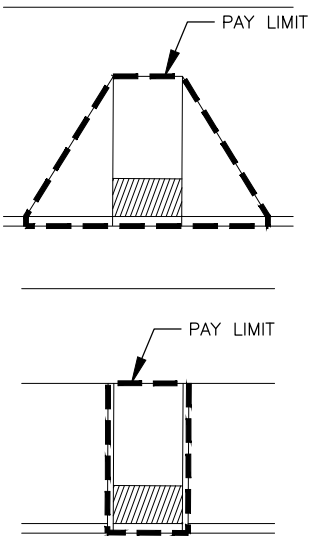
REV DATE: OCT 2022

note 2 revised, note 3 added

NOTES:

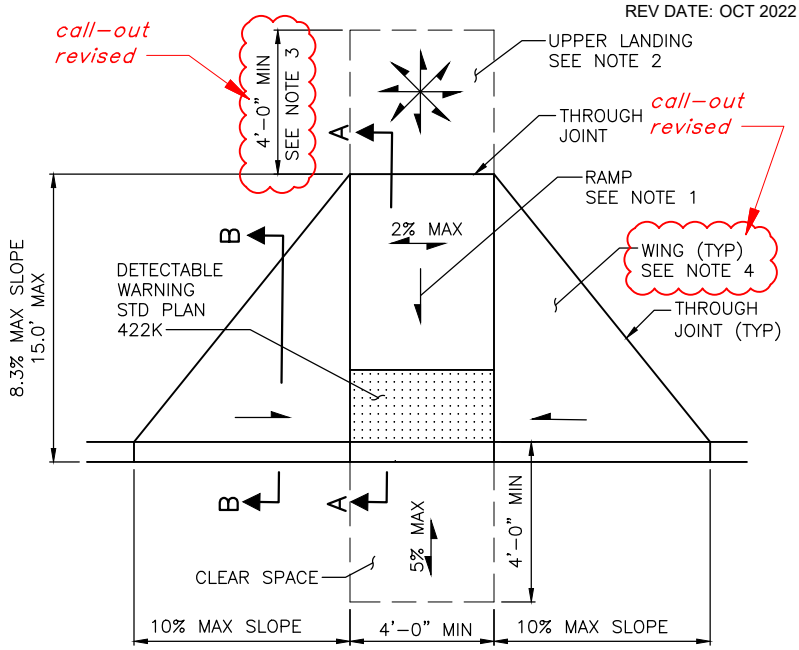
1. RAMP CENTERLINE MUST BE RADIAL/PERPENDICULAR TO THE ALIGNMENT OF THE FACE OF CURB.
2. THE SLOPE ON THE LANDING MUST BE A MINIMUM OF 0.5% IN ANY ONE DIRECTION AND MUST NOT EXCEED 2% IN ANY DIRECTION. UPPER LANDING AT THE TOP OF THE CURB RAMP MUST MATCH THE FULL WIDTH OF THE RAMP AND MUST HAVE A MINIMUM DEPTH OF 4'–0".
3. IF THE LANDING IS LIMITED AT THE BACK–OF–SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE MUST BE 5'–0" MINIMUM.
4. WINGS MUST HAVE A MAXIMUM SLOPE OF 10%. WINGS MUST HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB MUST CONTINUE THROUGH EACH WING.
5. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE PARALLEL TO THE CURB.
6. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.
7. RAMP WIDTH MUST BE 5' –0" MINIMUM WHEN SIDE CURB IS USED ON BOTH SIDES INSTEAD OF WINGS.

2% MAX → = MAX SLOPE IN EITHER DIRECTION

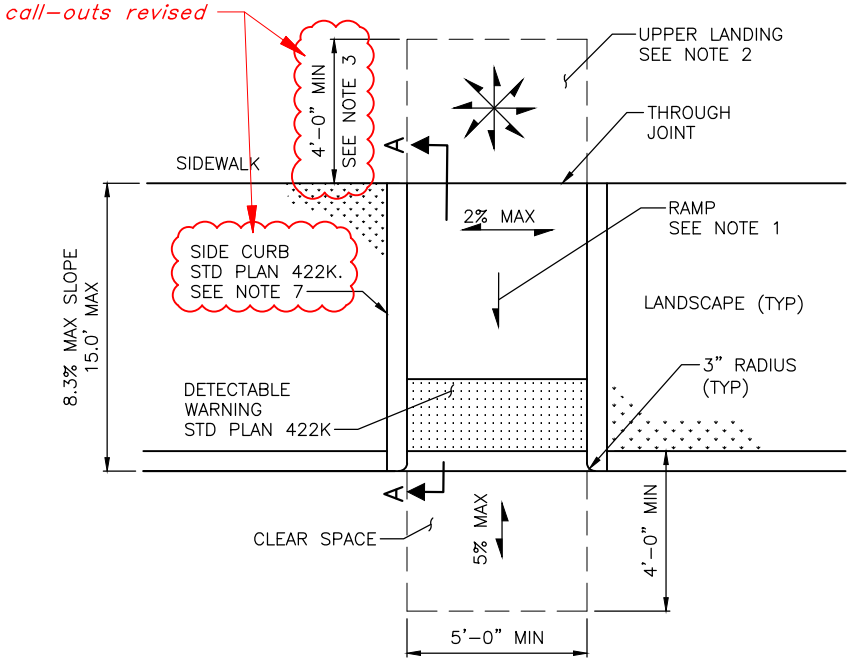


PAY LIMITS

call–out revised

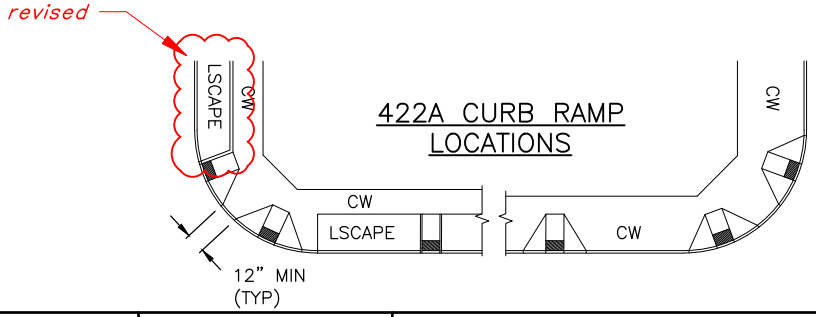


call–outs revised



PERPENDICULAR CURB RAMPS
(TYPE 422A)

revised



422A CURB RAMP LOCATIONS

REF STD SPEC SEC 8-14

City of Seattle	NOT TO SCALE	CURB RAMP DETAILS

REV DATE: OCT 2022

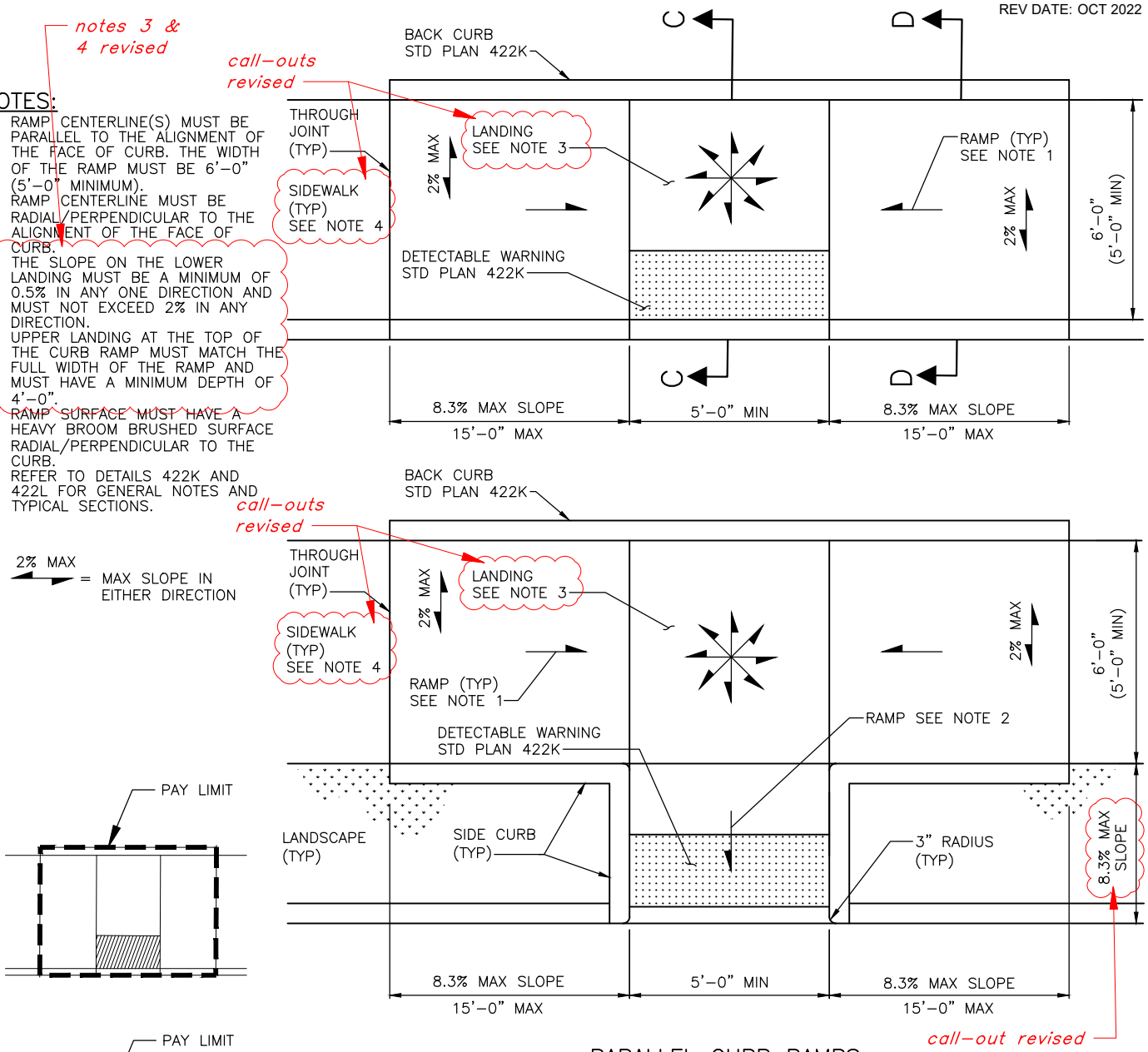
notes 3 & 4 revised

call–outs revised

NOTES:

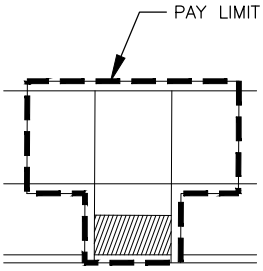
1. RAMP CENTERLINE(S) MUST BE PARALLEL TO THE ALIGNMENT OF THE FACE OF CURB. THE WIDTH OF THE RAMP MUST BE 6'–0" (5'–0" MINIMUM).
2. RAMP CENTERLINE MUST BE RADIAL/PERPENDICULAR TO THE ALIGNMENT OF THE FACE OF CURB.
3. THE SLOPE ON THE LOWER LANDING MUST BE A MINIMUM OF 0.5% IN ANY ONE DIRECTION AND MUST NOT EXCEED 2% IN ANY DIRECTION.
4. UPPER LANDING AT THE TOP OF THE CURB RAMP MUST MATCH THE FULL WIDTH OF THE RAMP AND MUST HAVE A MINIMUM DEPTH OF 4'–0".
5. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE RADIAL/PERPENDICULAR TO THE CURB.
6. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

2% MAX = MAX SLOPE IN EITHER DIRECTION

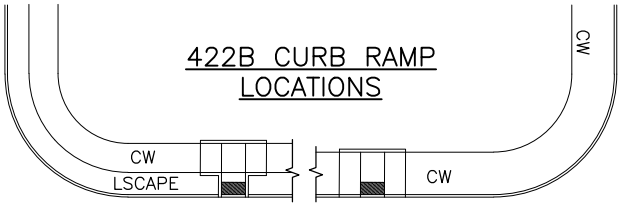


call–out revised

PARALLEL CURB RAMPS
(TYPE 422B)



PAY LIMITS



REF STD SPEC SEC 8-14

City of Seattle	NOT TO SCALE	CURB RAMP DETAILS

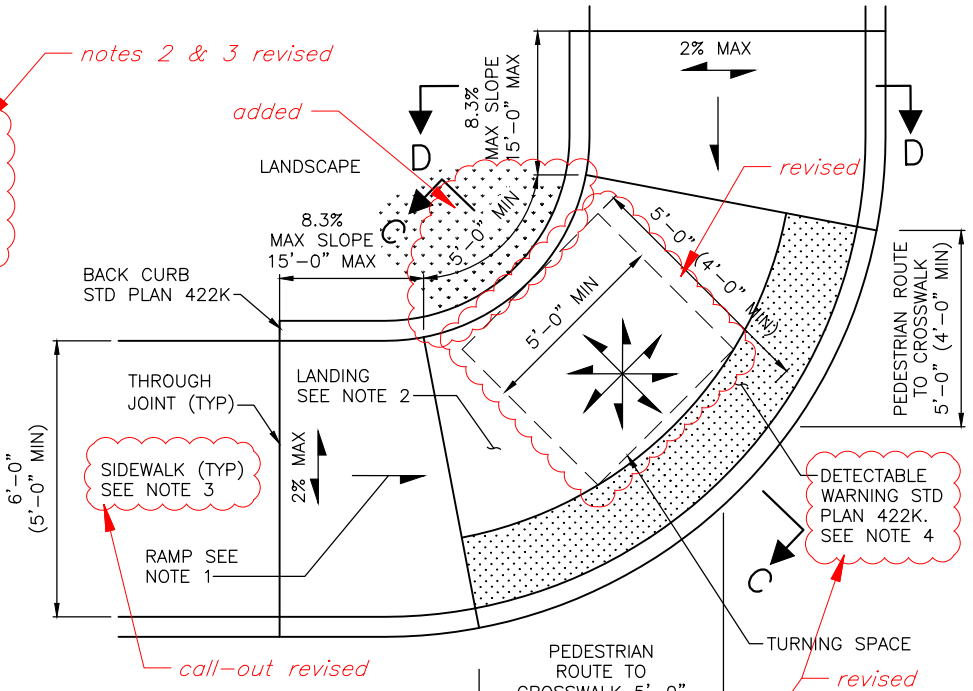
REV DATE: OCT 2022

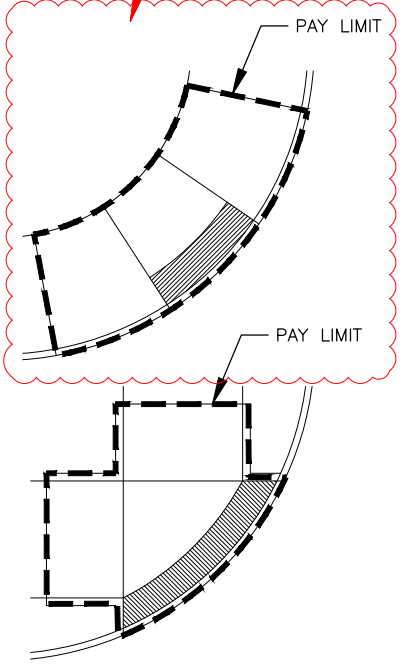
NOTES:

1. RAMP CENTERLINE MUST BE PARALLEL TO THE ALIGNMENT OF THE FACE OF CURB. THE WIDTH OF THE RAMP MUST BE 6'–0" (5'–0" MINIMUM).
2. THE SLOPE ON THE LOWER LANDING MUST BE A MINIMUM OF 0.5% IN ANY ONE DIRECTION AND MUST NOT EXCEED 2% IN ANY DIRECTION.
3. UPPER LANDING AT THE TOP OF THE CURB RAMP MUST MATCH THE FULL WIDTH OF THE RAMP AND MUST HAVE A MINIMUM DEPTH OF 4'–0".
4. RADIAL TILE MUST BE USED. CUTTING OR ALTERING DETECTABLE WARNING SURFACES MUST BE FIRST APPROVED BY THE ENGINEER.
5. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE, RADIAL/PERPENDICULAR TO THE CURB.
6. REFER TO DETAILS 422k AND 422l FOR GENERAL NOTES AND TYPICAL SECTIONS.

notes 2 & 3 revised

2% MAX = MAX SLOPE IN EITHER DIRECTION





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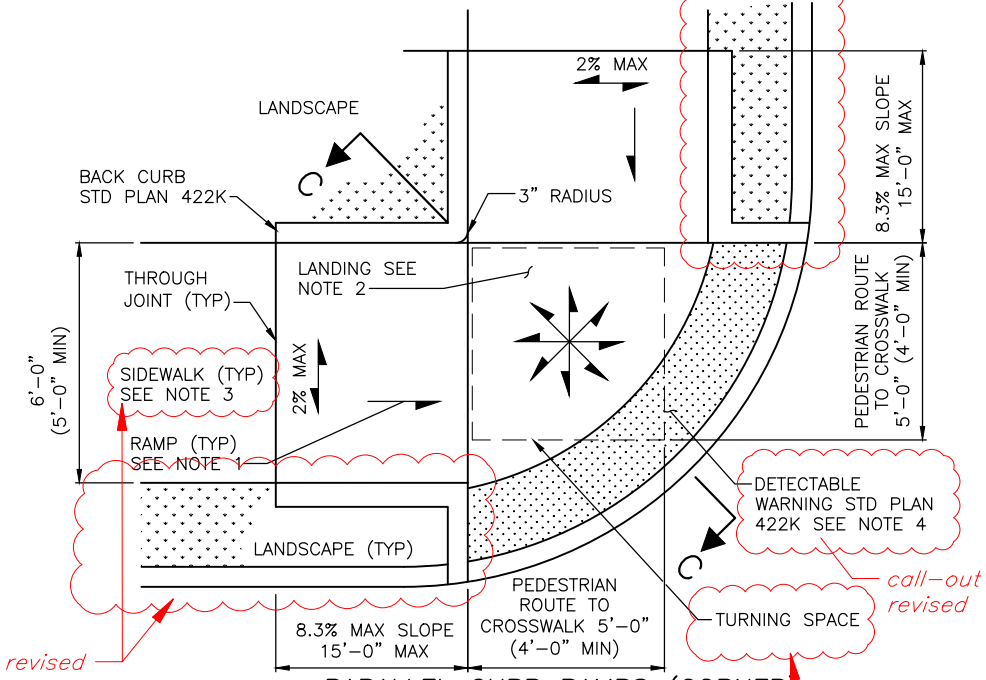
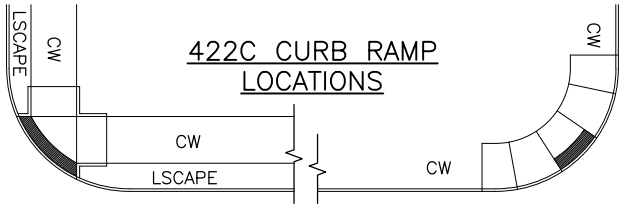


PARALLEL CURB RAMPS (CORNER)
(TYPE 422C)



REF STD SPEC SEC 8-14

City of Seattle	NOT TO SCALE	CURB RAMP DETAILS

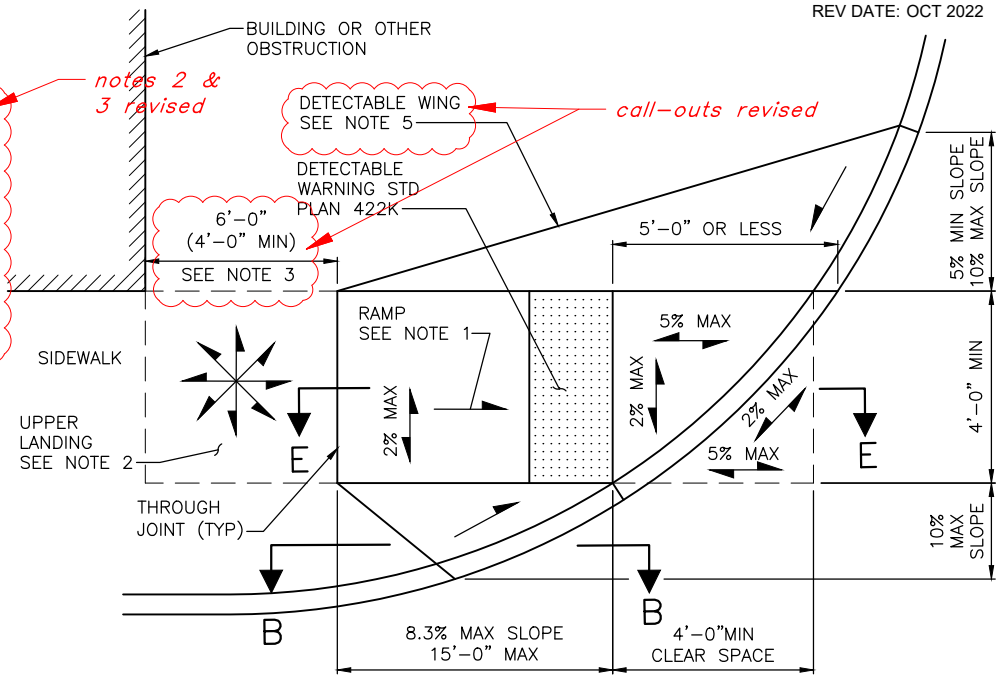
REV DATE: OCT 2022

NOTES:

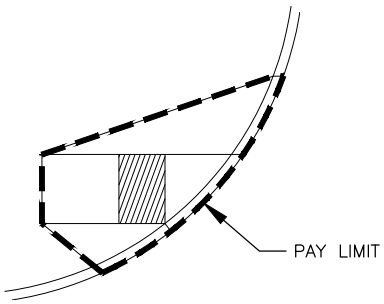
1. RAMP CENTERLINE MUST BE PARALLEL TO CROSSWALK AND/OR THE SIDEWALK.
2. THE SLOPE ON THE LANDING MUST BE A MINIMUM OF 0.5% IN ANY ONE DIRECTION AND MUST NOT EXCEED 2% IN ANY DIRECTION. UPPER LANDING AT THE TOP OF THE CURB RAMP MUST MATCH THE FULL WIDTH OF THE RAMP AND MUST HAVE A MINIMUM DEPTH OF 4'–0".
3. IF THE LANDING IS LIMITED AT THE BACK–OF–SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE MUST BE 5'–0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP.
4. WINGS MUST HAVE A MAXIMUM SLOPE OF 10%. WINGS MUST HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB MUST CONTINUE THROUGH EACH WING.
5. WING ON THE OPEN SIDE OF THE CURB RAMP MUST HAVE A MINIMUM SLOPE OF 5% TO ASSIST PEDESTRIANS WITH VISUAL IMPAIRMENTS WHERE THE DETECTABLE WARNING SURFACE IS OFFSET FROM THE CURB LINE.
6. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED FINISH PERPENDICULAR TO THE PATH OF TRAVEL.
7. REFER TO DETAILS 422k AND 422l FOR GENERAL NOTES AND TYPICAL SECTIONS.

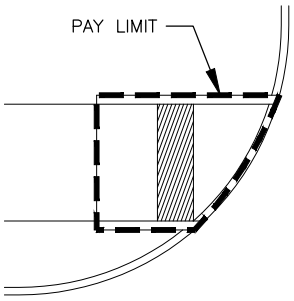
notes 2 & 3 revised

call–outs revised

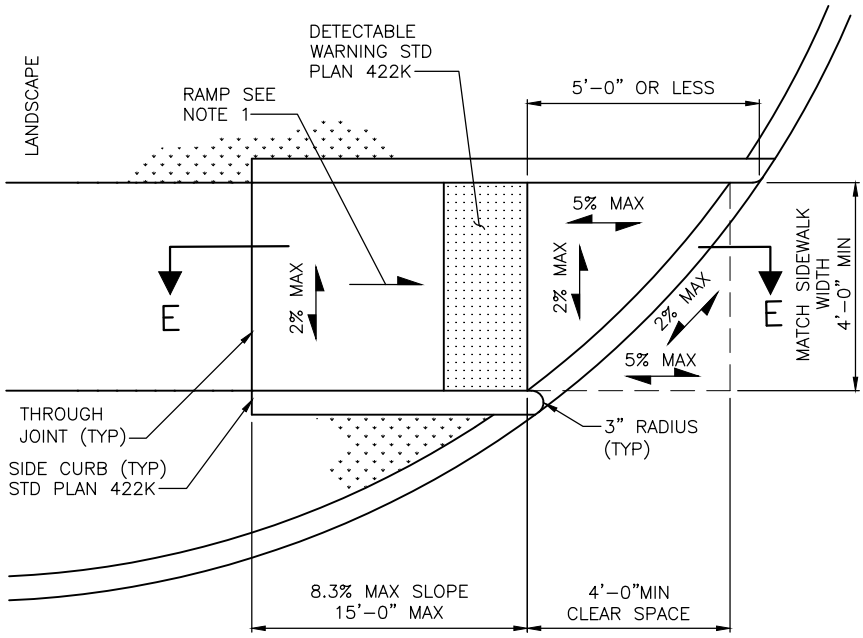


2% MAX = MAX SLOPE IN EITHER DIRECTION

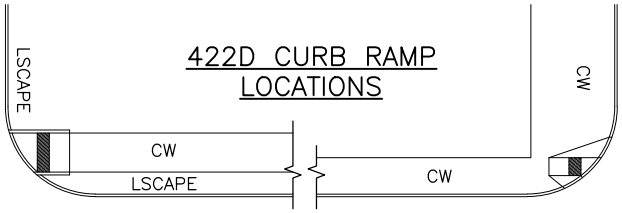




PAY LIMITS



DIRECTIONAL CURB RAMPS
(TYPE 422D)



REF STD SPEC SEC 8-14

City of Seattle	NOT TO SCALE	CURB RAMP DETAILS

REV DATE: OCT 2022

notes 2 & 3 revised

NOTES:

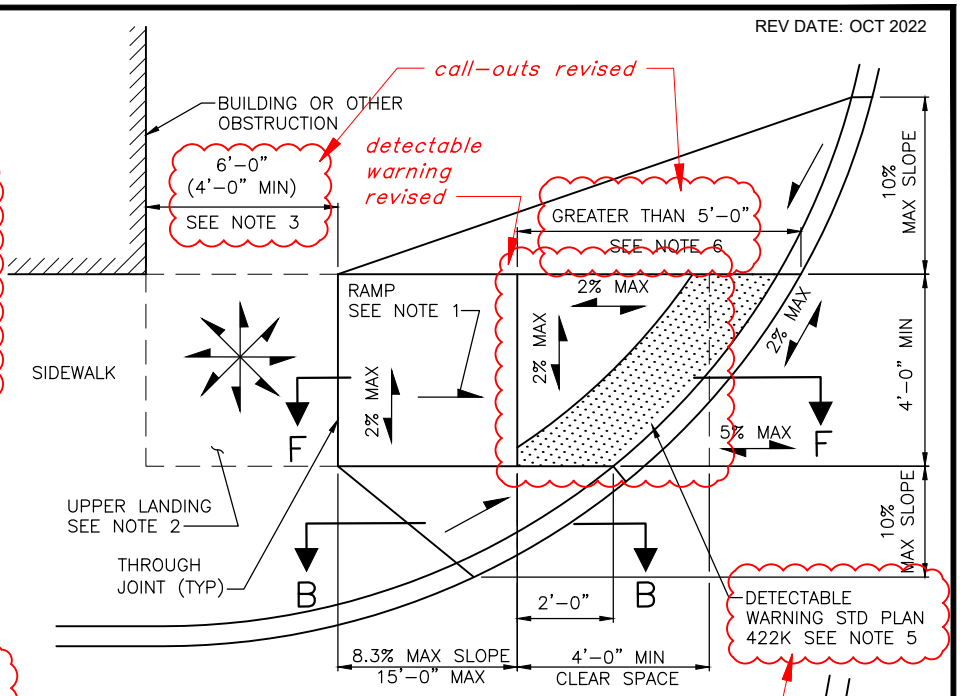
1. RAMP CENTERLINE MUST BE PARALLEL TO CROSSWALK AND/OR THE SIDEWALK.
2. THE SLOPE ON THE LANDING MUST BE A MINIMUM OF 0.5% IN ANY ONE DIRECTION AND MUST NOT EXCEED 2% IN ANY DIRECTION. UPPER LANDING AT THE TOP OF THE CURB RAMP MUST MATCH THE FULL WIDTH OF THE RAMP AND MUST HAVE A MINIMUM DEPTH OF 4'–0".
3. IF THE LANDING IS LIMITED AT THE BACK–OF–SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE MUST BE 5'–0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP.
4. WINGS MUST HAVE A MAXIMUM SLOPE OF 10%. WINGS MUST HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB MUST CONTINUE THROUGH EACH WING.
5. WHERE THE SETBACK FROM THE BOTTOM OF THE CURB RAMP TO THE BACK OF CURB LINE EXCEEDS 5'–0", THE DETECTABLE WARNING SURFACE MUST BE INSTALLED AT THE BACK OF CURB (NOT AT THE BOTTOM OF RAMP). RADIAL TILE MUST BE USED. CUTTING OR ALTERING DETECTABLE WARNING SURFACE MUST BE FIRST APPROVED BY THE ENGINEER.
6. DIRECTIONAL CURB RAMPS WITH LARGE SETBACK FROM BACK OF CURB TO BOTTOM OF THE CURB RAMP ARE NOT PREFERRED DESIGNS BUT MAY BE USED IF NECESSARY DUE TO EXISTING SITE CONSTRAINTS.
7. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED FINISH PERPENDICULAR TO THE PATH OF TRAVEL.
8. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

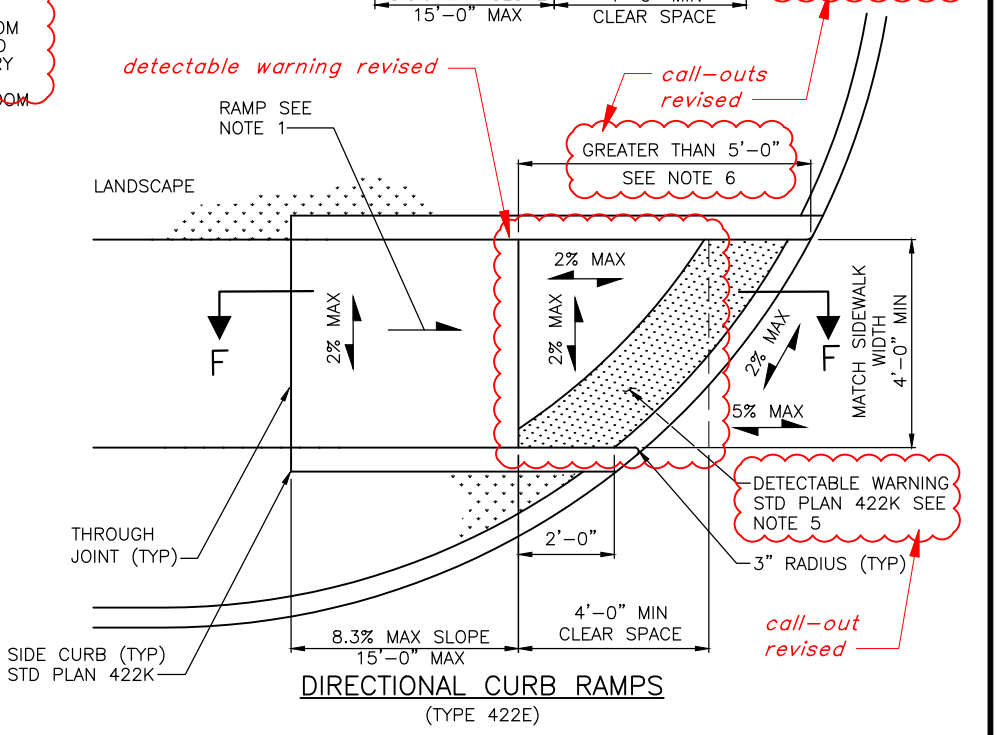
2% MAX = MAX SLOPE IN EITHER DIRECTION

previous note 6 removed

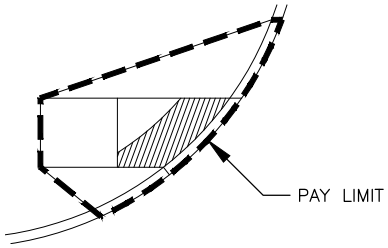
call–outs revised

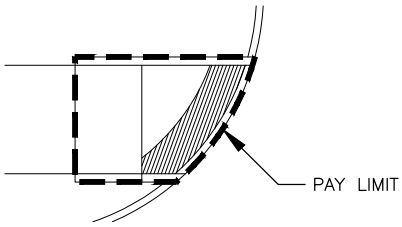
detectable warning revised



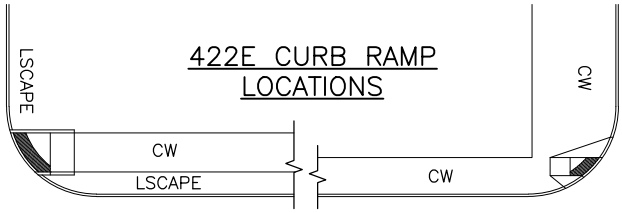


DIRECTIONAL CURB RAMPS
(TYPE 422E)





PAY LIMITS



422E CURB RAMP LOCATIONS

REF STD SPEC SEC 8-14

City of Seattle	NOT TO SCALE	CURB RAMP DETAILS

REV DATE: OCT 2022

notes 2 & 3 revised

NOTES:

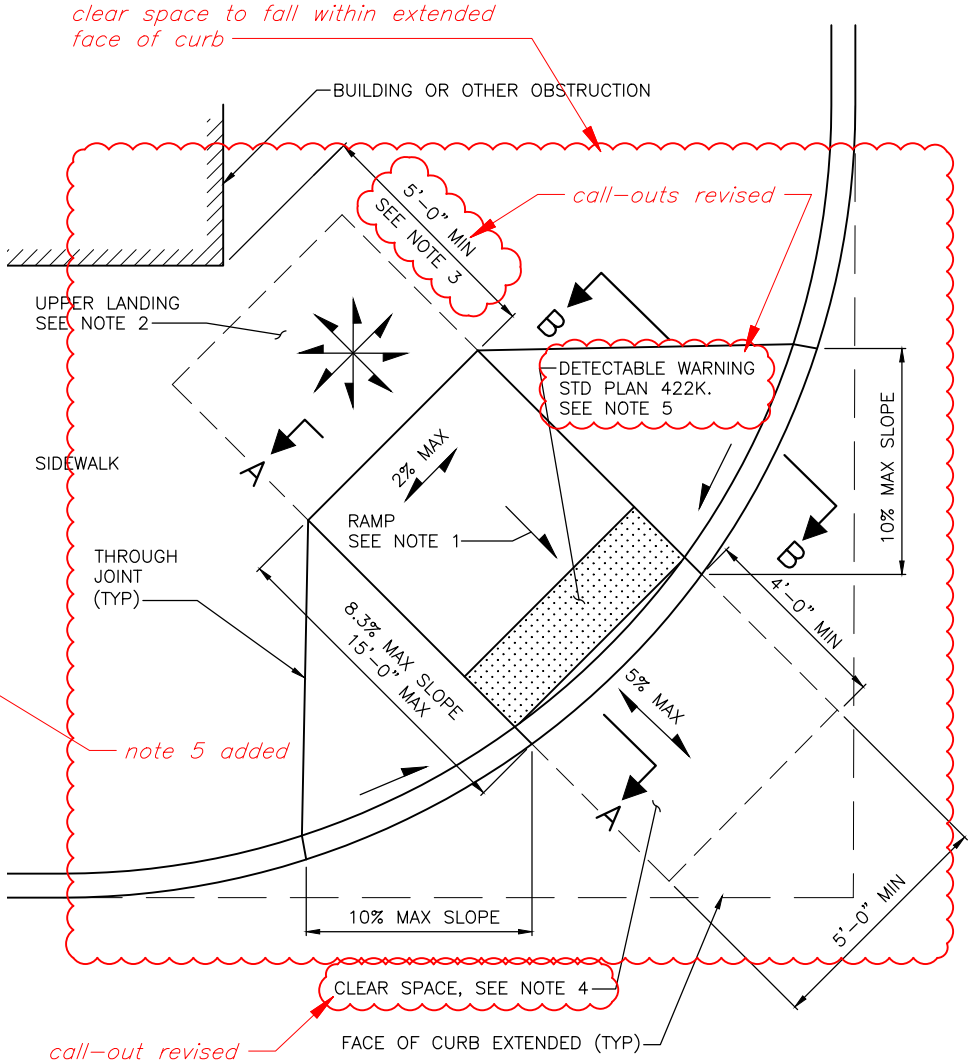
1. RAMP CENTERLINE MUST BE RADIAL/PERPENDICULAR TO THE ALIGNMENT OF THE FACE OF CURB.
2. THE SLOPE ON THE LANDING MUST BE A MINIMUM OF 0.5% IN ANY ONE DIRECTION AND MUST NOT EXCEED 2% IN ANY DIRECTION. UPPER LANDING AT THE TOP OF THE CURB RAMP MUST MATCH THE FULL WIDTH OF THE RAMP AND MUST HAVE A MINIMUM DEPTH OF 4'–0".
3. IF THE LANDING IS LIMITED AT THE BACK–OF–SIDEWALK BY A PERMANENT VERTICAL BARRIER, THE DEPTH OF THE TURNING SPACE MUST BE 5'–0" MINIMUM, MEASURED PARALLEL TO THE RUN OF THE CURB RAMP.
4. CLEAR SPACE AT THE BOTTOM OF THE RAMP MUST BE 5–0" MINIMUM IN WIDTH AND MUST EXTEND A MINIMUM OF 4'–0' BEYOND THE RAMP LOWER GRADE BREAK. THE CLEAR SPACE MUST FALL WHOLLY WITHIN THE LEGAL CROSSWALK, MARKED OR UNMARKED. THE CLEAR SPACE MUST FIT BEHIND LINES EXTENDING FROM THE FACE OF CURB RUNNING PARALLEL TO EACH ROADWAY. THERE IS NO ALLOWABLE EXEMPTION FOR MINIMUM CLEAR SPACE REQUIREMENTS AT SHARED DIAGONAL PERPENDICULAR CURB RAMPS.
5. DETECTABLE WARNING SURFACE MUST BE 8" MAXIMUM FROM FACE OF CURB.
6. WINGS MUST HAVE A MAXIMUM SLOPE OF 10%. WINGS MUST HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB MUST CONTINUE THROUGH EACH WING.
7. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE PARALLEL TO THE CURB.
8. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTIONS.

note 5 added

2% MAX ◄► = MAX SLOPE IN EITHER DIRECTION

curb return redrafted to allow for clear space to fall within extended face of curb

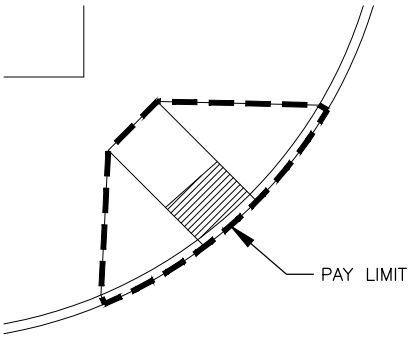
call–outs revised



call–out revised

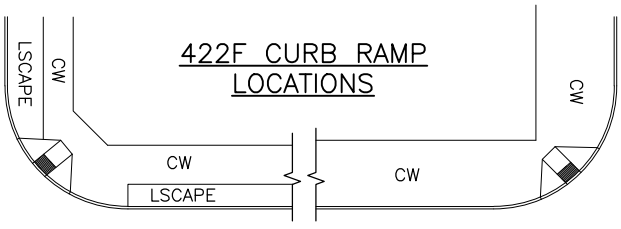
SHARED DIAGONAL PERPENDICULAR CURB RAMP

(TYPE 422F)



PAY LIMITS

422F CURB RAMP LOCATIONS



REF STD SPEC SEC 8-14

City of Seattle	NOT TO SCALE	CURB RAMP DETAILS

REV DATE: OCT 2022

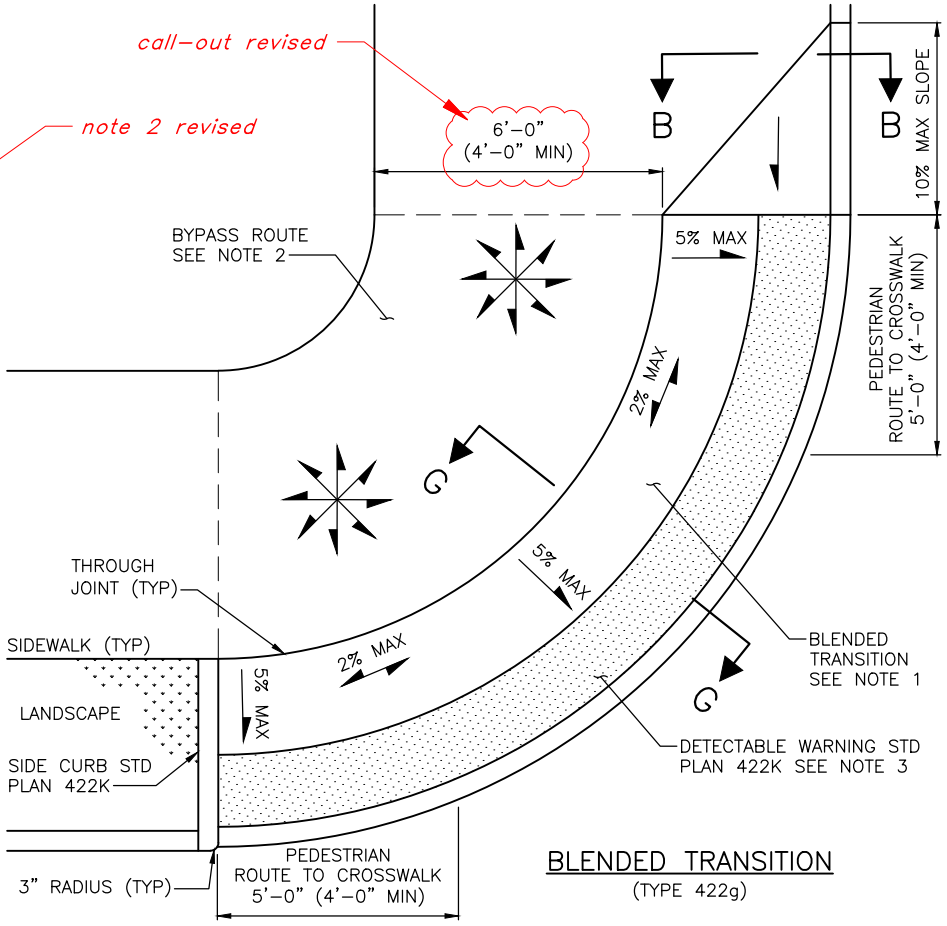
NOTES:

1. THE SIDEWALK MUST TRANSITION DOWN TO THE ROADWAY WITH A MAXIMUM RUNNING SLOPE OF 5%. THE CROSS SLOPE ON THE TRANSITION MUST NOT EXCEED 2% AT ANY POINT.
2. A BYPASS ROUTE MUST BE PROVIDED AT THE TOP OF THE BLENDED TRANSITION WITH A MINIMUM WIDTH OF 6'–0" (4'–0" MIN). THE CROSS SLOPE OF THE BYPASS ROUTE MUST BE A MINIMUM OF 0.5% IN ANY DIRECTION AND MUST NOT EXCEED 2% IN ANY DIRECTION.
3. ~~RADIAL TILE MUST BE USED. CUTTING OR~~ ALTERING DETECTABLE WARNING SURFACES MUST BE FIRST APPROVED BY THE ENGINEER.
4. WINGS MUST HAVE A MAXIMUM SLOPE OF 10%. WINGS MUST HAVE A BRUSHED FINISH PARALLEL TO THE CURB. THE CONCRETE WALK THICKENED EDGE ALONG THE CURB MUST CONTINUE THROUGH EACH WING.
5. BLENDED TRANSITION SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE RADIAL/PERPENDICULAR TO THE CURB.
6. REFER TO DETAILS 422K AND 422L FOR GENERAL NOTES AND TYPICAL SECTION B.

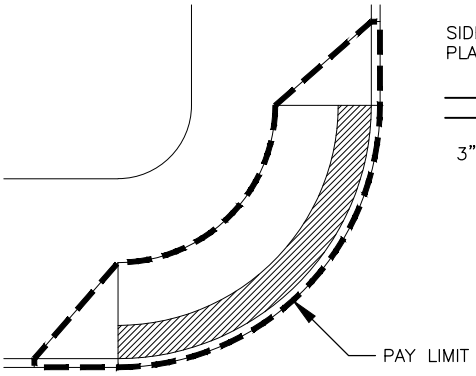
call–out revised

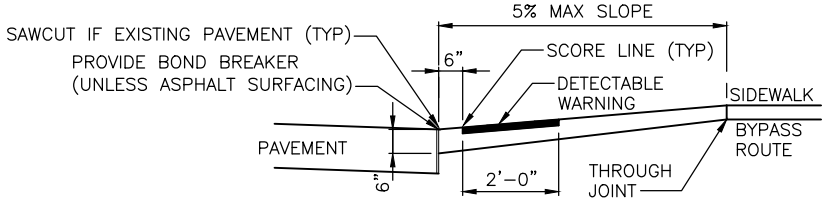
note 2 revised

2% MAX = MAX SLOPE IN EITHER DIRECTION

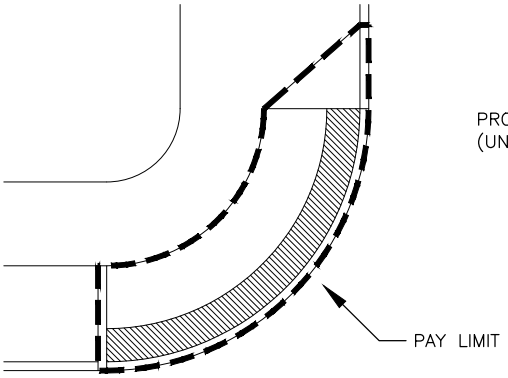


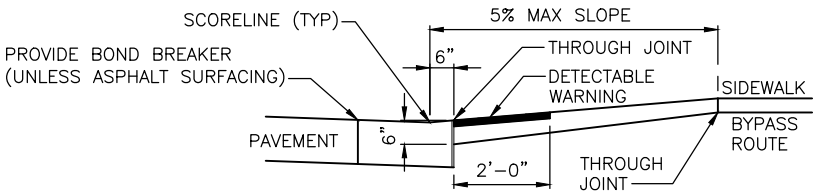
BLENDED TRANSITION
(TYPE 422g)





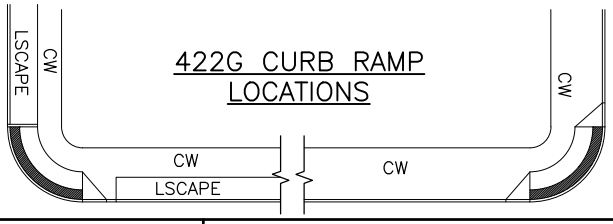
SECTION G–G
CURB MONOLITHIC WITH RAMP. NEW PAVEMENT BLOCKED OUT FULL DEPTH. EXISTING PAVEMENT REMOVED AT FACE OF CURB





SECTION G–G
DEPRESSED CURB & GUTTER SEPARATE FROM RAMP.

PAY LIMITS



422G CURB RAMP LOCATIONS

REF STD SPEC SEC 8-14

City of Seattle	NOT TO SCALE	CURB RAMP DETAILS

REV DATE: OCT 2022

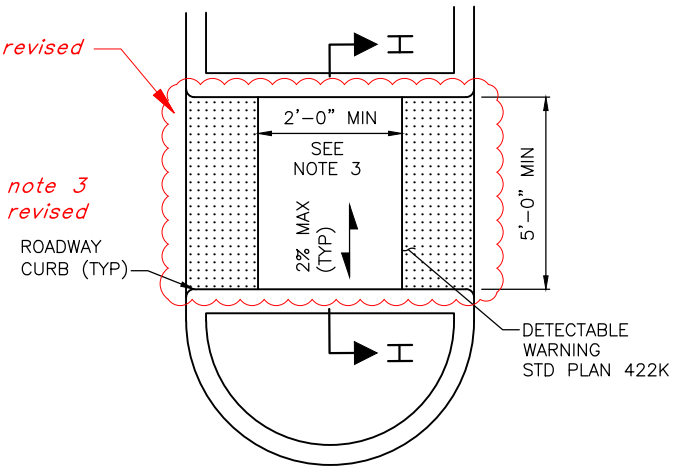
NOTES:

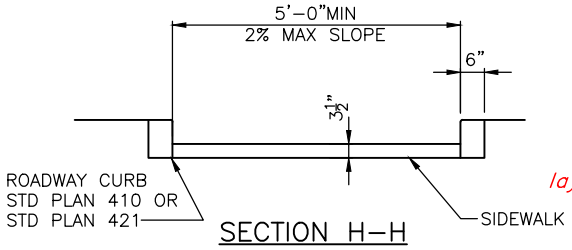
1. SIZE, SHAPE, AND/OR DIMENSIONS OF CHANNELIZING ISLANDS OR PEDESTRIAN REFUGE ISLANDS MAY VARY. DETAILS SHOWN ARE INTENDED TO SHOW MINIMUM REQUIRED CLEARANCES AND DETECTABLE WARNING SURFACE PLACEMENT LOCATIONS.
2. ACCESS THROUGH CHANNELIZING ISLANDS OR PEDESTRIAN REFUGE ISLANDS MAY BE CUT–THROUGH OR ACCESS MAY BE PROVIDED USING STANDARD CURB RAMP DETAILS.
3. AT PEDESTRIAN REFUGE ISLANDS, DETECTABLE WARNING MUST NOT TO BE INSTALLED IF THE REFUGE AREA IS LESS THAN 6'–0" IN DEPTH (IN THE DIRECTION OF TRAVEL).
4. PROVIDE A MINIMUM 4'–0" WIDTH x 4'–0" DEPTH CLEAR SPACE FOR ACCESS FROM THE CHANNELIZING ISLAND OR PEDESTRIAN REFUGE ISLAND FOR EACH CROSSWALK.

2% MAX
MAX SLOPE IN EITHER DIRECTION

note 3 revised

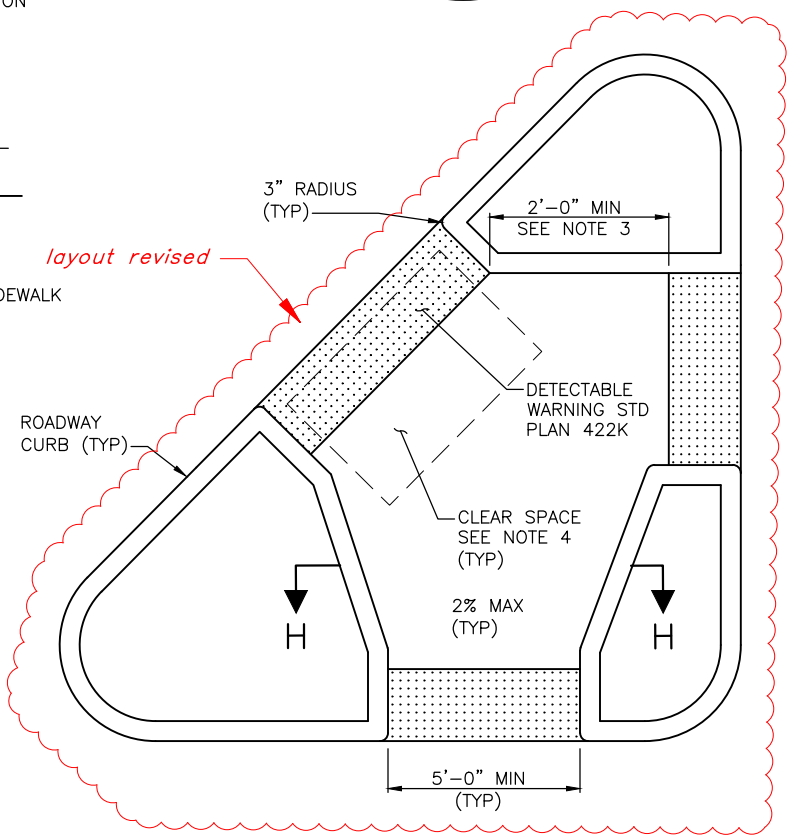
layout revised





SECTION H–H

layout revised



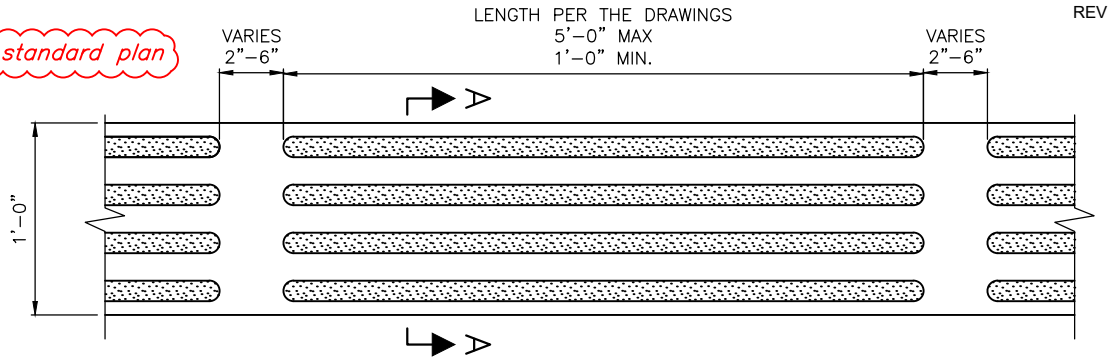
ISLAND CUT–THROUGHS
(TYPE 422H)

REF STD SPEC SEC 8-14

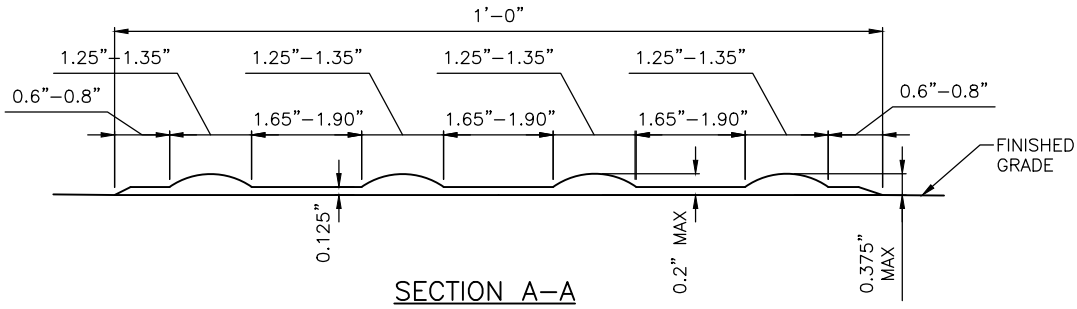
City of Seattle	NOT TO SCALE	CURB RAMP DETALS

REV DATE: OCT 2022

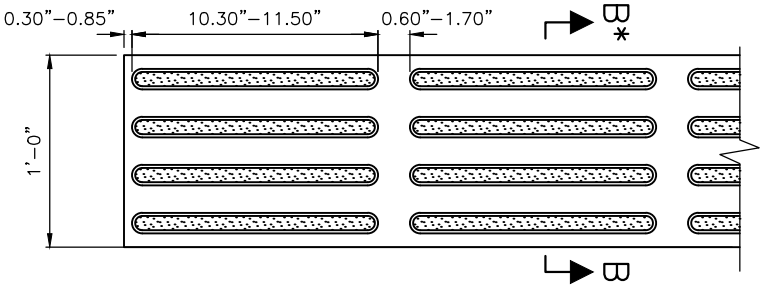
new standard plan



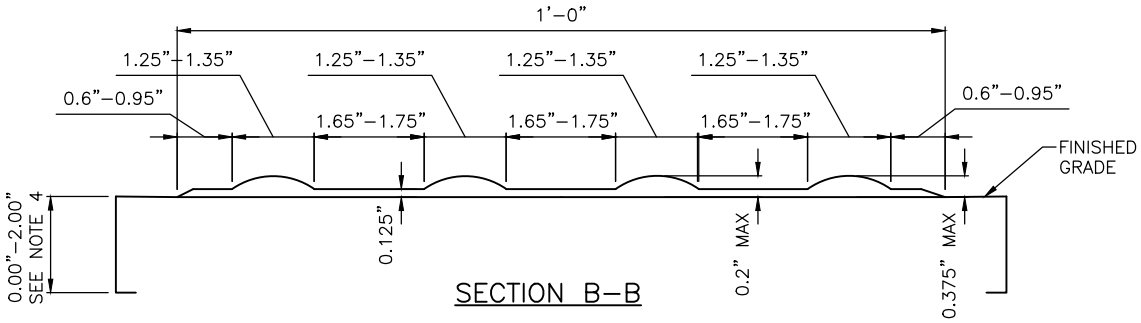
DETECTABLE DIRECTIONAL STRIP – SURFACE APPLIED



SECTION A–A



DETECTABLE DIRECTIONAL STRIP – CAST–IN–PLACE



SECTION B–B

NOTES:

1. DETECTABLE DIRECTIONAL STRIP MUST BE "FEDERAL YELLOW", UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. STRIP CENTERLINE MUST BE PARALLEL TO THE ALIGNMENT OF THE PEDESTRIAN ACCESS ROUTE.
3. METHYL METHACRYLATE (MMA) DIRECTIONAL STRIP MUST COMPLY WITH ALL THE DIMENSIONS RANGES SHOWN ON THIS STANDARD PLAN FOR SURFACE APPLIED.
4. CAST–IN–PLACE DIRECTIONAL STRIP MAY BE BOLTED DOWN IF APPROVED BY THE ENGINEER.

REF STD SPEC SEC 8-14, 9-36

City of Seattle	NOT TO SCALE	DETECTABLE DIRECTIONAL STRIP

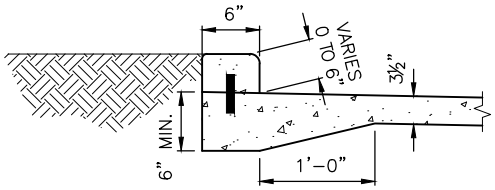
REV DATE: OCT 2022

CURB RAMP GENERAL NOTES:

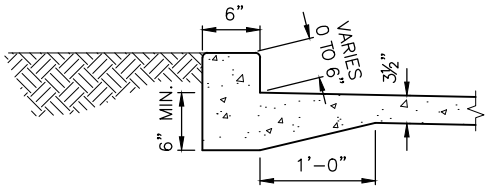
1. TWO CURB RAMPS MUST BE INSTALLED AT EACH CORNER UNLESS OTHERWISE DIRECTED BY ENGINEER. SHARED DIAGONAL PERPENDICULAR RAMPS MUST NOT BE INSTALLED UNLESS ALL OTHER DESIGN OPTIONS ARE UNABLE TO BE CONSTRUCTED DUE TO EXISTING SITE CONSTRAINTS.
2. CURB RAMPS MUST BE AS CLOSELY ALIGNED WITH THE SIDEWALK AND THE PEDESTRIAN STREET CROSSING SERVED AS POSSIBLE.
3. CURB RAMP MUST BE CONSTRUCTED WITH COMPANION RAMP ON OPPOSITE SIDE OF THE ROADWAY WHERE NO RAMP IS PROVIDED UNLESS OTHERWISE DIRECTED BY ENGINEER.
4. CURB RAMPS MUST HAVE A MAXIMUM RUNNING SLOPE OF 8.3% AND A MINIMUM WIDTH OF 4'–0" UNLESS OTHERWISE DIRECTED BY ENGINEER. THE CROSS SLOPE OF CURB RAMPS MUST BE A MAXIMUM OF 2%. CURB RAMPS ARE NOT REQUIRED TO EXCEED A LENGTH OF 15 FEET UNLESS OTHERWISE DIRECTED BY ENGINEER.*
5. GRADE BREAKS AT THE TOP AND THE BOTTOM OF CURB RAMP RUNS MUST BE PERPENDICULAR TO THE PATH OF TRAVEL. CURB RAMP RUNS ARE DEFINED BY RUNNING SLOPES THAT EXCEED 5% BUT ARE NO MORE THAN 8.3%. SURFACES ABUTTING AT CURB RAMP GRADE BREAKS MUST BE FLUSH.
6. AREAS ADJACENT TO CURB RAMPS OR CURB RAMP LANDINGS USABLE BY PEDESTRIANS MUST COMPLY WITH STANDARD PLAN SIDEWALK SLOPE LIMITS OR A CURB RAMP WING MUST BE PROVIDED AS SHOWN IN THE APPLICABLE CURB RAMP DETAILS. THE INSTALLATION OF CURBED EDGES MAY BE USED AT THE SIDES OR BACKS OF CURB RAMPS OR CURB RAMP LANDING WHERE THE ADJACENT SURFACE IS LANDSCAPED OR OTHERWISE NOT USABLE BY PEDESTRIANS.
7. THE COUNTER SLOPE OF THE GUTTER OR THE STREET AT THE BOTTOM OF CURB RAMP RUNS MUST BE 5% MAXIMUM. IF TURNING OR CHANGE OF ORIENTATION IS REQUIRED WITHIN THE PEDESTRIAN CROSSING AT THE BOTTOM OF CURB RAMP RUNS, THE SLOPE MUST BE 2% MAXIMUM IN ANY DIRECTION FOR A MINIMUM 4'–0" WIDTH X 4'–0" DEPTH MEASURED FROM THE RAMP BOTTOM GRADE BREAK.
8. CURB RAMPS WITH RUNS THAT TERMINATE AT THE ENTRANCE TO THE PEDESTRIAN STREET CROSSING MUST HAVE A CLEAR SPACE AT THE BOTTOM OF THE RAMP. "CLEAR SPACE" IS DEFINED AS A NAVIGABLE 4'–0" BY 4'–0" SPACE, EXTENDING FROM THE RAMP LOWER GRADE BREAK, THAT FALLS WHOLLY WITHIN THE LEGAL CROSSWALK, MARKED OR UNMARKED, AND OUTSIDE THE PARALLEL VEHICULAR TRAFFIC LANE.
9. A 4'–0" MINIMUM WIDTH UNOBSTRUCTED PEDESTRIAN ACCESS ROUTE MUST BE PROVIDED FROM EACH CURB RAMP, BLENDED TRANSITION, OF FLUSH TRANSITION TO THE LEGAL CROSSWALK THAT IS SERVED, MARKED OR UNMARKED, AND LOCATED OUTSIDE THE PARALLEL VERTICAL TRAFFIC LANE.
10. DETECTABLE WARNING MUST BE PROVIDED AT CURB RAMPS AND AT LOCATIONS WHERE THE SIDEWALK AND ROADWAY ARE FLUSH. THE DETECTABLE WARNING SURFACE MUST HAVE A TRUNCATED DOME PATTERN AS SHOWN, WITH A MINIMUM DEPTH OF 2'–0", AND MUST BE PLACED AT THE BACK OF CURB BUT NO MORE THAN 8" FROM THE FACE OF CURB FOR MONOLITHIC CURBS OR ATYPICAL CURB WIDTHS. DETECTABLE WARNING MUST MATCH THE WIDTH OF THE RAMP RUN OR THE OPENING WHERE THE SIDEWALK AND ROADWAY ARE FLUSH. THE TRUNCATED DOMES ON THE DETECTABLE WARNING SURFACE SHOULD ALIGN WITH THE CURB RAMP RUN OR THE DIRECTION OF TRAVEL. DOMES MAY BE ON A RADIAL GRID PATTERN WHERE RADIAL DETECTABLE WARNING SURFACE IS PLACED AT CURB RADII.
11. DETECTABLE WARNING COLOR MUST BE "FEDERAL SAFETY YELLOW", UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
12. DETECTABLE WARNING SURFACES MUST NOT BE CUT OR ALTERED TO FIT UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IT APPROVED, CUT OR ALTER THE DETECTABLE WARNING SURFACE PER THE MANUFACTURER'S DIRECTIONS. DETECTABLE WARNING SURFACES PLACED AT CURB RADII MUST MATCH THE CURB RADII WITHOUT GAPS OR INCONSISTENCIES IN PLACEMENT.
13. HANDHOLES, UTILITY CASTINGS, OR ANY OTHER SURFACE OBSTRUCTIONS MUST NOT BE INSTALLED IN THE CURB RAMP RUN(S) OR LANDING(S) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF NECESSARY DUE TO EXISTING CONSTRAINTS, HANDHOLES, UTILITY CASTINGS, OR OTHER SURFACE OBSTRUCTIONS MAY BE LOCATED WITHIN A RAMP RUN, LANDING, OR TURNING SPACE BUT MUST ADHERE TO SURFACE REQUIREMENTS. LEVEL CHANGES BETWEEN SURFACES MUST NOT EXCEED ¼" OR ½" WITH A 1:2 BEVEL. GAPS BETWEEN SURFACES OR GRATINGS MAY NOT EXCEED ½". SURFACES MUST BE FIRM, STABLE, AND SLIP RESISTANT.
14. HANDHOLES, UTILITY CASTINGS, OR OTHER SURFACE OBSTRUCTIONS MUST NOT REDUCE THE REQUIRED DEPTH OF DETECTABLE WARNING.
15. POLES, HYDRANTS AND OTHER ABOVE GROUND OBSTRUCTIONS MUST HAVE A MINIMUM LATERAL CLEARANCE OF 1'–0" FROM RAMP RUN(S) OR LANDING(S). EXCEPT FOR PUSHBUTTON POSTS.
16. ALL CHANGES IN LEVEL ACROSS JOINTS MUST BE FLUSH. ANY DIFFERENCE IN ELEVATION OF 3/16 INCH OR GREATER MUST BE REPAIRED OR REPLACED.
17. CURB RAMPS ARE DESIGNED TO ENSURE THAT WATER DOES NOT ACCUMULATE ON RAMP SURFACES AND IN FRONT OF THE CURB RAMP WHERE IT IS FLUSH WITH THE ROADWAY. THE CONTRACTOR MUST CHECK GRADE LINES AND GUTTER FLOW LINE PRIOR TO CONSTRUCTION. IF THE CHECK REVEALS THAT SITE CONDITIONS WOULD RESULT IN PONDING, OR WOULD CONFLICT WITH OBTAINING THE GRADES AT THE BOTTOM OF CURB RAMPS OR AT CURB RAMP LOWER LANDINGS AS SHOWN ON THE DRAWINGS OR PLANS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY AND STOP WORK ON THE CURB RAMP UNTIL DIRECTED TO CONTINUE BY THE ENGINEER.

** IT IS RECOMMENDED THAT CURB RAMPS RUNNING SLOPES BE DESIGNED TO 7.5% MAX. AND CURB RAMP LANDINGS BE DESIGNED TO 1.5% MAX TO allow FOR A LIMITED MARGIN OF ERROR DURING CONSTRUCTION.

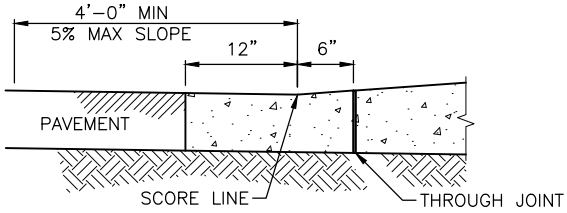
notes 4, 6, 10, 12, 13, 15 & 17 revised



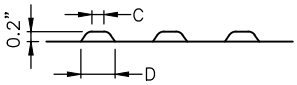
SIDE/BACK CURB – DOWELED



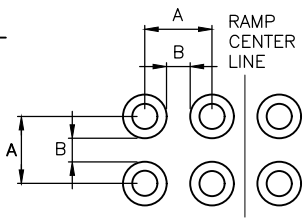
SIDE/BACK CURB – MONOLITHIC



DEPRESSED CURB AND GUTTER DETAIL



	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	50% TO 65% OF D	
D	0.9"	1.4"

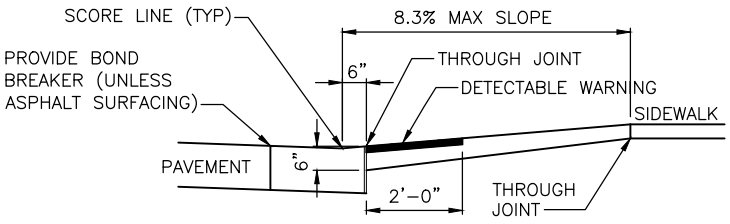


DETECTABLE WARNING TRUNCATED DOMES PATTERN

REF STD SPEC SEC 8-14

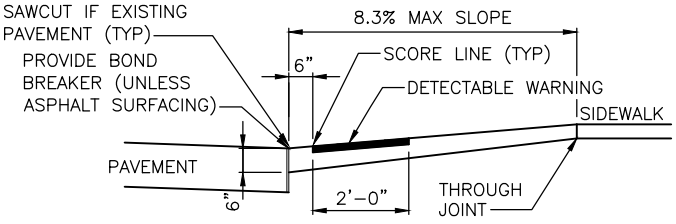
City of Seattle | NOT TO SCALE | CURB RAMP DETAILS

REV DATE: OCT 2022



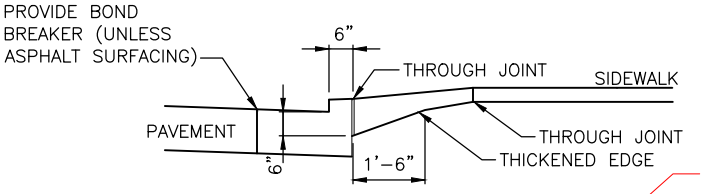
SECTION A–A

DEPRESSED CURB & GUTTER SEPARATE FROM RAMP.

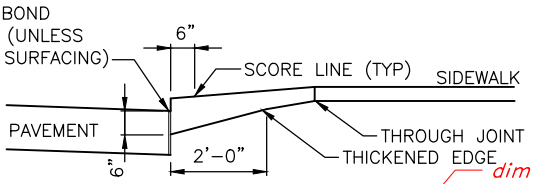


SECTION A–A

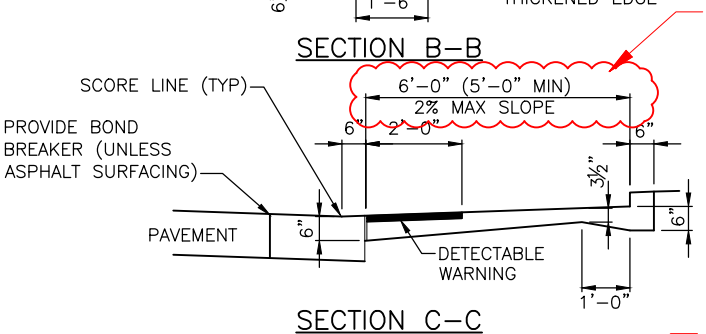
CURB MONOLITHIC WITH RAMP. NEW PAVEMENT BLOCKED OUT FULL DEPTH. EXISTING PAVEMENT REMOVED AT FACE OF CURB



SECTION B–B

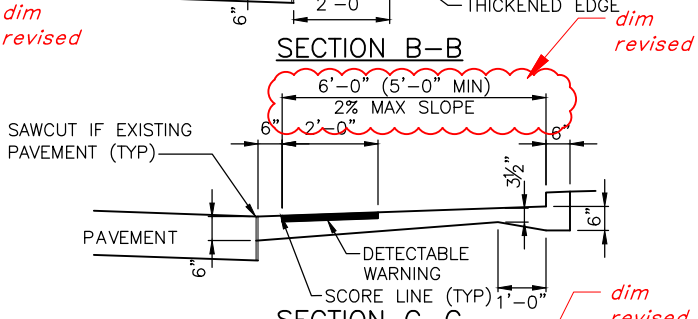


SECTION B–B



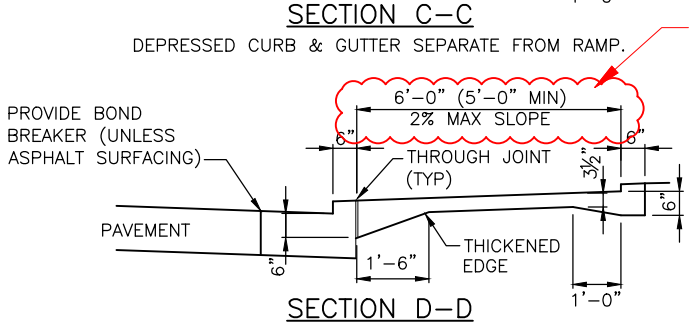
SECTION C–C

DEPRESSED CURB & GUTTER SEPARATE FROM RAMP.

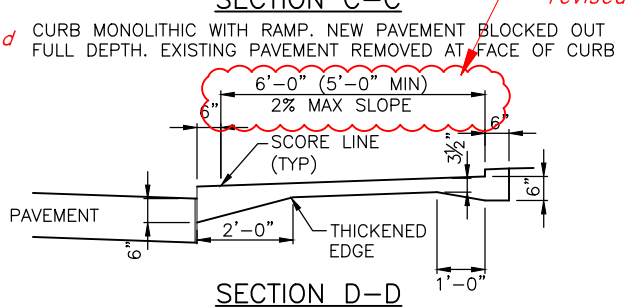


SECTION C–C

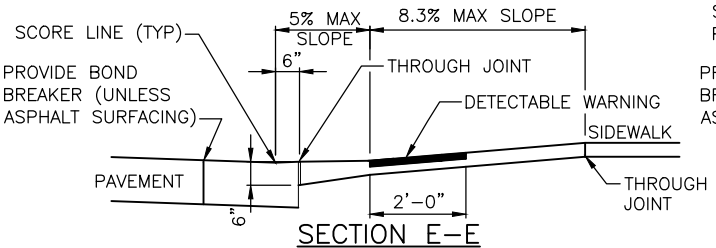
CURB MONOLITHIC WITH RAMP. NEW PAVEMENT BLOCKED OUT FULL DEPTH. EXISTING PAVEMENT REMOVED AT FACE OF CURB



SECTION D–D

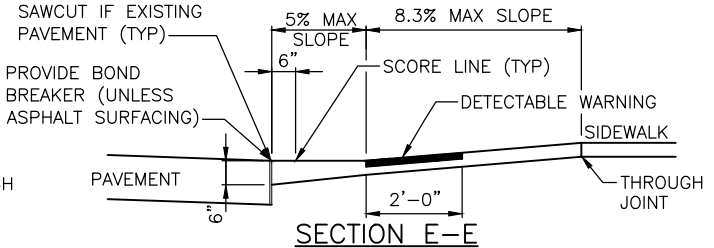


SECTION D–D



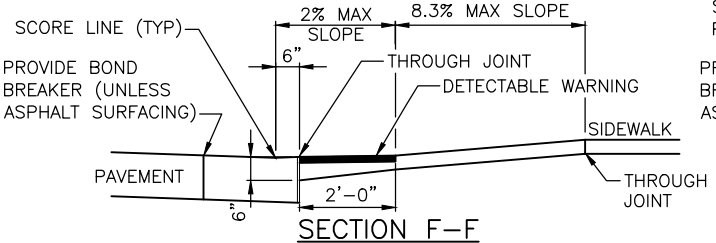
SECTION E–E

DEPRESSED CURB & GUTTER SEPARATE FROM RAMP.



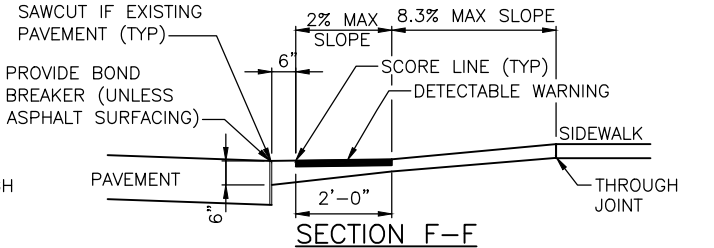
SECTION E–E

CURB MONOLITHIC WITH RAMP. NEW PAVEMENT BLOCKED OUT FULL DEPTH. EXISTING PAVEMENT REMOVED AT FACE OF CURB



SECTION F–F

DEPRESSED CURB & GUTTER SEPARATE FROM RAMP



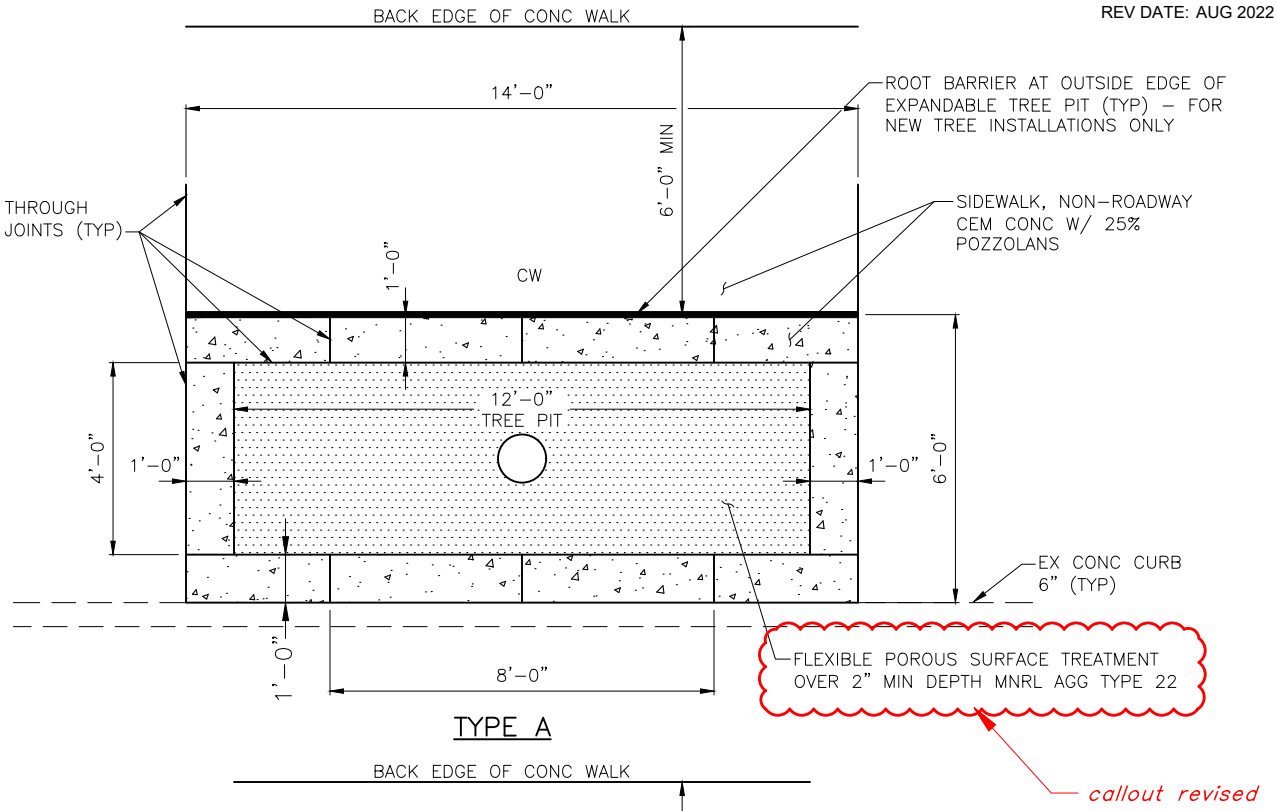
SECTION F–F

CURB MONOLITHIC WITH RAMP. NEW PAVEMENT BLOCKED OUT FULL DEPTH. EXISTING PAVEMENT REMOVED AT FACE OF CURB

REF STD SPEC SEC 8-14

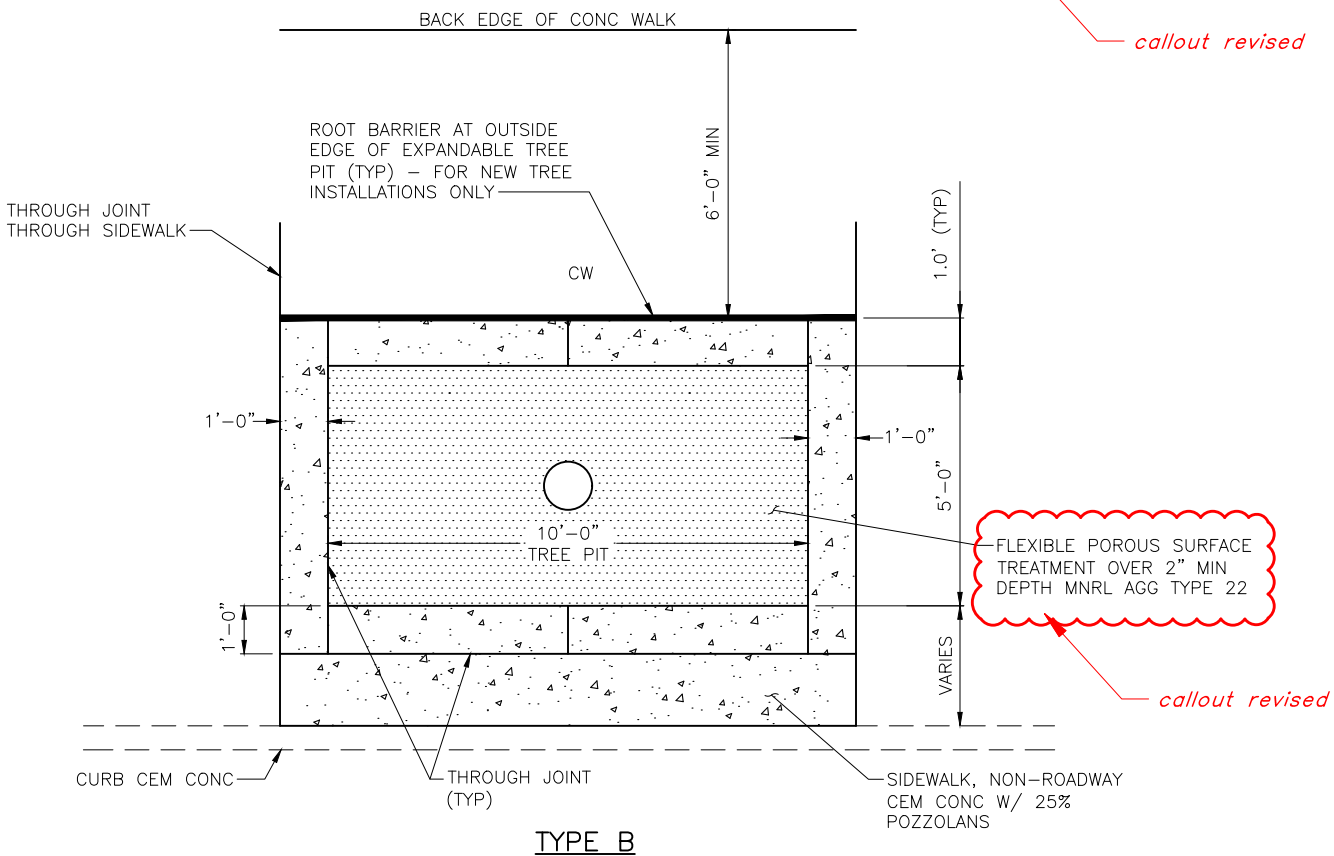
City of Seattle	NOT TO SCALE	CURB RAMP SECTIONS

REV DATE: AUG 2022



TYPE A

callout revised



TYPE B

callout revised

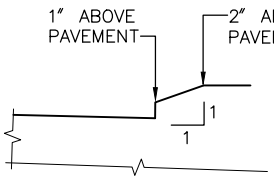
NOTES:

1. SEE STD PLAN 420 FOR CW SCORING DETAILS.
2. INSTALL ROOT BARRIER PER STANDARD PLAN NO 100a.
3. WHEN INSTALLING NEW TREE PITS IN EXISTING SIDEWALK, REMOVE SIDEWALK TO FULL PANEL WIDTH. INSTALL TREE PIT AS SHOWN ON THIS DETAIL.

REF STD SPEC SEC 8-02, 8-14

City of Seattle	NOT TO SCALE	EXPANDABLE TREE PIT DETAIL

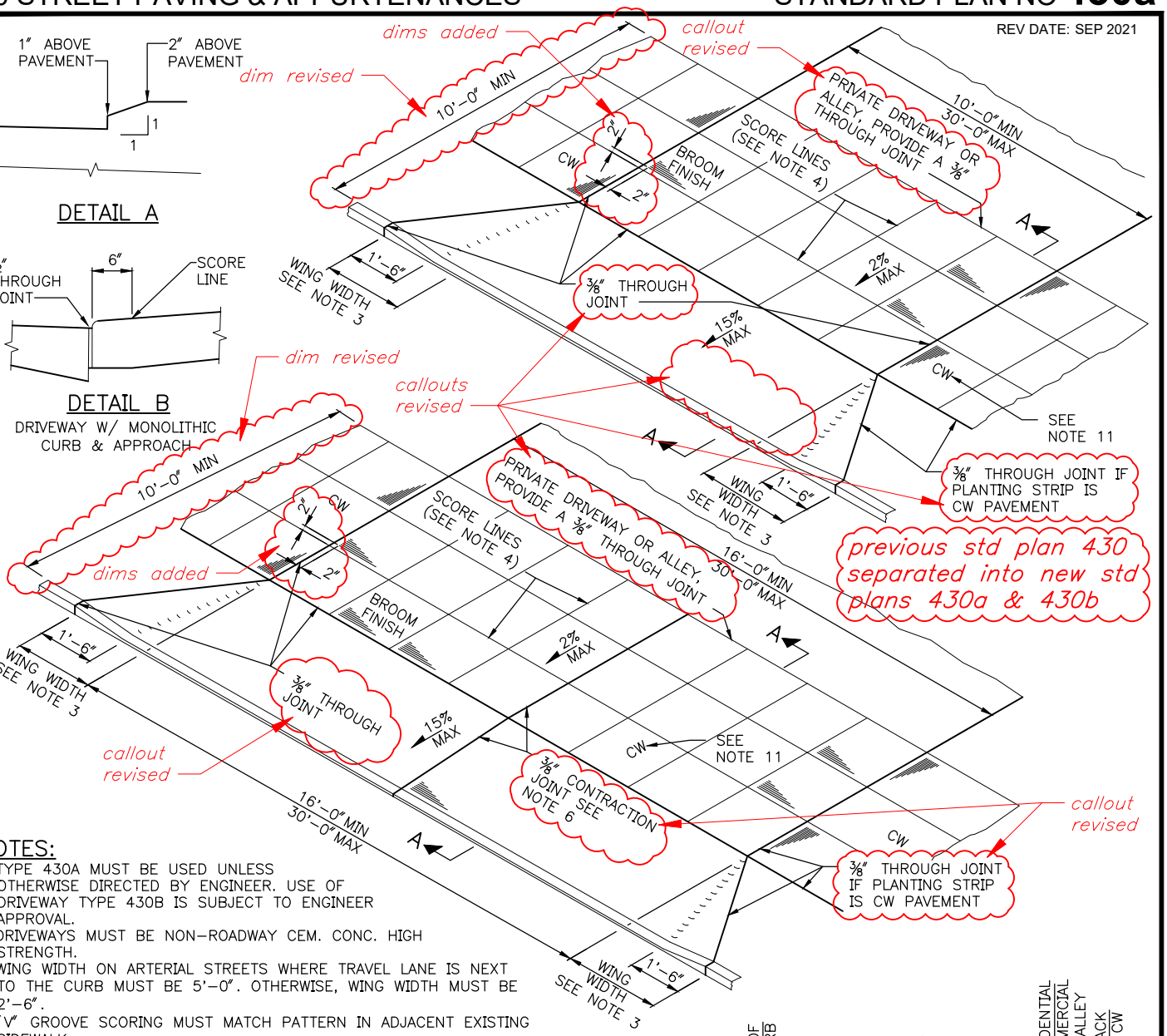
REV DATE: SEP 2021



DETAIL A

DETAIL B

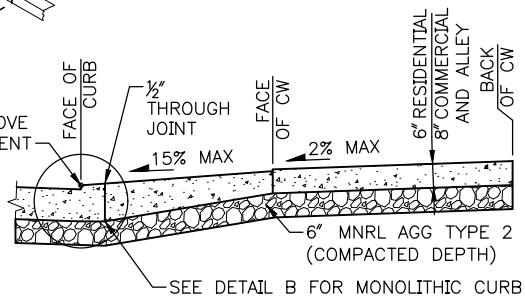
DRIVEWAY W/ MONOLITHIC CURB & APPROACH



previous std plan 430 separated into new std plans 430a & 430b

NOTES:

1. TYPE 430A MUST BE USED UNLESS OTHERWISE DIRECTED BY ENGINEER. USE OF DRIVEWAY TYPE 430B IS SUBJECT TO ENGINEER APPROVAL.
2. DRIVEWAYS MUST BE NON-ROADWAY CEM. CONC. HIGH STRENGTH.
3. WING WIDTH ON ARTERIAL STREETS WHERE TRAVEL LANE IS NEXT TO THE CURB MUST BE 5'-0". OTHERWISE, WING WIDTH MUST BE 2'-6".
4. "V" GROOVE SCORING MUST MATCH PATTERN IN ADJACENT EXISTING SIDEWALK.
5. FOR CONCRETE DRIVEWAY CONSTRUCTED WITH CONCRETE SIDEWALK, SEE STANDARD PLAN NO 431.
6. CONCRETE DRIVEWAYS WITH A WIDTH GREATER THAN 15'-0" MUST HAVE A ⅜" TRANSVERSE CONTRACTION JOINT NEAR THE CENTERLINE OF DRIVEWAY.
7. FOR TYPE 430A CROSS-SLOPE IN THE 6'-0" MINIMUM WIDE AREA CONNECTING TO CW ON EACH SIDE OF THE DRIVEWAY MUST BE MAXIMUM 2% AND MINIMUM 0.5% (1.5% DESIRABLE) AND MUST SLOPE TOWARDS THE STREET. FOR TYPE 430B, CROSS-SLOPE OF THE DRIVEWAY BETWEEN THE TWO RAMP SECTIONS MUST BE MAXIMUM 2% AND MINIMUM 0.5%.
8. RAMP MUST HAVE A MAXIMUM SLOPE OF 8.3% AND A MINIMUM WIDTH OF 6'-0". THE CROSS SLOPE OF THE RAMP MUST BE MAXIMUM OF 2.0%. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE PERPENDICULAR TO THE CURB.
9. ALL CHANGES IN LEVEL ACROSS JOINTS MUST BE FLUSH WITH A MAXIMUM DIFFERENCE IN ELEVATION OF 3/16 INCH.
10. ALL SLOPE GRADES MUST BE MEASURED OFF THE HORIZON-LINE. IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE CONTRACTOR MUST MAKE MINIMUM ADJUSTMENTS TO THE GRADES TO ACCOMMODATE EXISTING SITE CONDITIONS, ADJUSTMENTS ARE SUBJECT TO ENGINEER APPROVAL.
11. CONCRETE WALKWAY OUTSIDE OF THE DRIVEWAY CROSSING MAY BE PERVIOUS.
12. PROTECT ADJACENT PANELS FROM DAMAGE DUE TO UNDERMINING DURING EXCAVATION & PLACEMENT OF SUBGRADE. SEE SPEC SECTION 1-07.13.



SECTION A-A

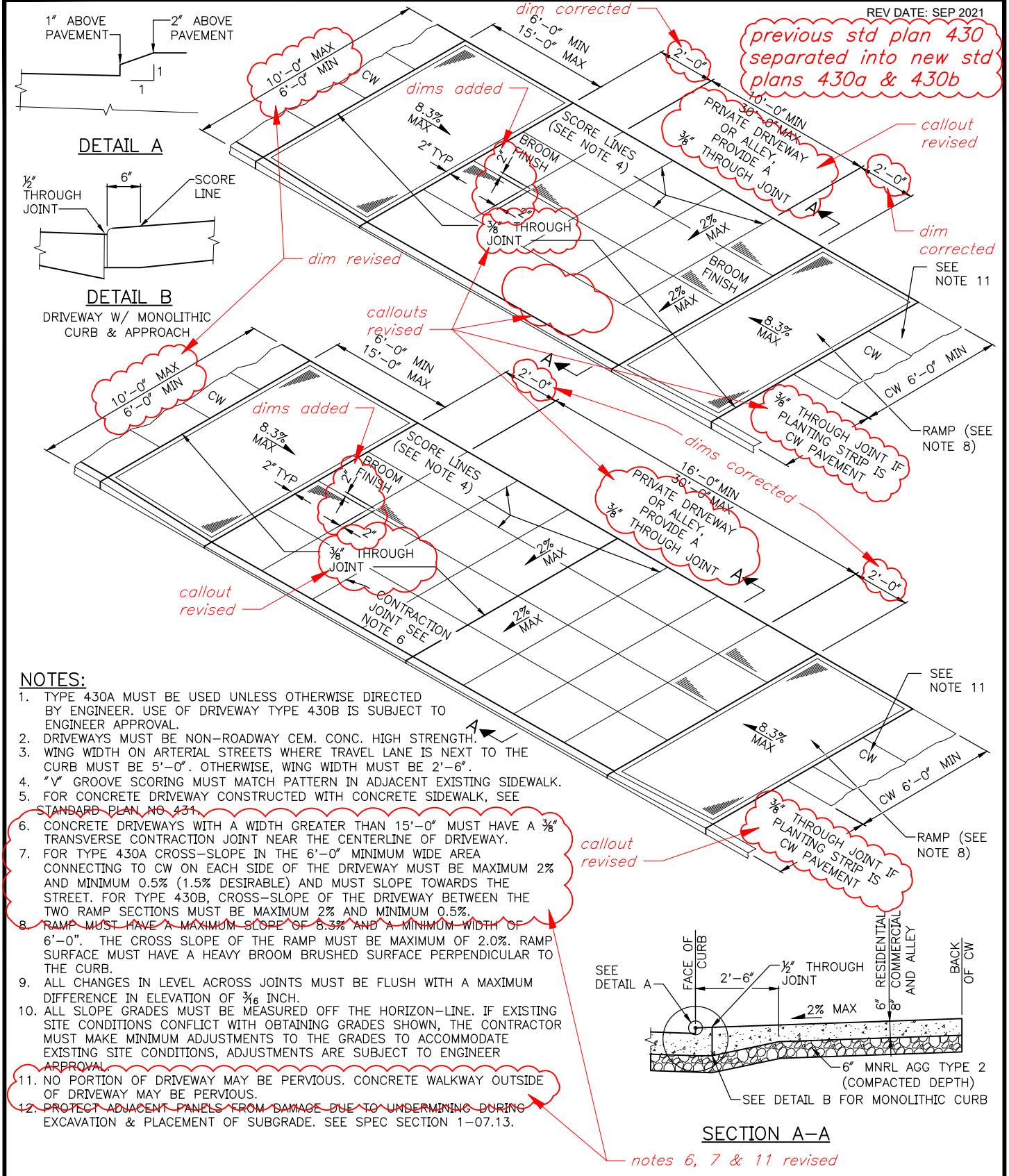
notes 6, 7 & 11 revised

REF STD SPEC SEC 8-19

City of Seattle	NOT TO SCALE	TYPE 430A DRIVEWAY

REV DATE: SEP 2021

previous std plan 430 separated into new std plans 430a & 430b



NOTES:

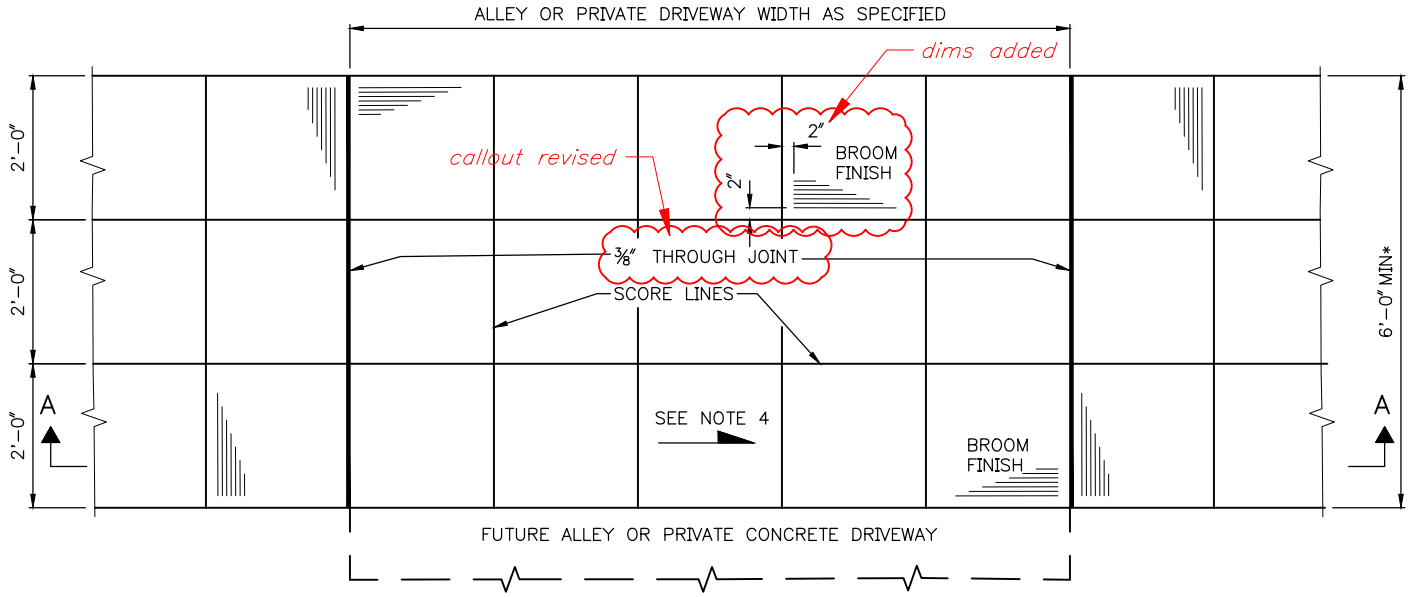
1. TYPE 430A MUST BE USED UNLESS OTHERWISE DIRECTED BY ENGINEER. USE OF DRIVEWAY TYPE 430B IS SUBJECT TO ENGINEER APPROVAL.
2. DRIVEWAYS MUST BE NON–ROADWAY CEM. CONC. HIGH STRENGTH.
3. WING WIDTH ON ARTERIAL STREETS WHERE TRAVEL LANE IS NEXT TO THE CURB MUST BE 5'–0". OTHERWISE, WING WIDTH MUST BE 2'–6".
4. "V" GROOVE SCORING MUST MATCH PATTERN IN ADJACENT EXISTING SIDEWALK.
5. FOR CONCRETE DRIVEWAY CONSTRUCTED WITH CONCRETE SIDEWALK, SEE STANDARD PLAN NO 431.
6. CONCRETE DRIVEWAYS WITH A WIDTH GREATER THAN 15'–0" MUST HAVE A ⅜" TRANSVERSE CONTRACTION JOINT NEAR THE CENTERLINE OF DRIVEWAY.
7. FOR TYPE 430A CROSS–SLOPE IN THE 6'–0" MINIMUM WIDE AREA CONNECTING TO CW ON EACH SIDE OF THE DRIVEWAY MUST BE MAXIMUM 2% AND MINIMUM 0.5% (1.5% DESIRABLE) AND MUST SLOPE TOWARDS THE STREET. FOR TYPE 430B, CROSS–SLOPE OF THE DRIVEWAY BETWEEN THE TWO RAMP SECTIONS MUST BE MAXIMUM 2% AND MINIMUM 0.5%.
8. RAMP MUST HAVE A MAXIMUM SLOPE OF 8.3% AND A MINIMUM WIDTH OF 6'–0". THE CROSS SLOPE OF THE RAMP MUST BE MAXIMUM OF 2.0%. RAMP SURFACE MUST HAVE A HEAVY BROOM BRUSHED SURFACE PERPENDICULAR TO THE CURB.
9. ALL CHANGES IN LEVEL ACROSS JOINTS MUST BE FLUSH WITH A MAXIMUM DIFFERENCE IN ELEVATION OF $\frac{3}{16}$ INCH.
10. ALL SLOPE GRADES MUST BE MEASURED OFF THE HORIZON–LINE. IF EXISTING SITE CONDITIONS CONFLICT WITH OBTAINING GRADES SHOWN, THE CONTRACTOR MUST MAKE MINIMUM ADJUSTMENTS TO THE GRADES TO ACCOMMODATE EXISTING SITE CONDITIONS, ADJUSTMENTS ARE SUBJECT TO ENGINEER APPROVAL.
11. NO PORTION OF DRIVEWAY MAY BE PERVIOUS. CONCRETE WALKWAY OUTSIDE OF DRIVEWAY MAY BE PERVIOUS.
12. PROTECT ADJACENT PANELS FROM DAMAGE DUE TO UNDERMINING DURING EXCAVATION & PLACEMENT OF SUBGRADE. SEE SPEC SECTION 1–07.13.

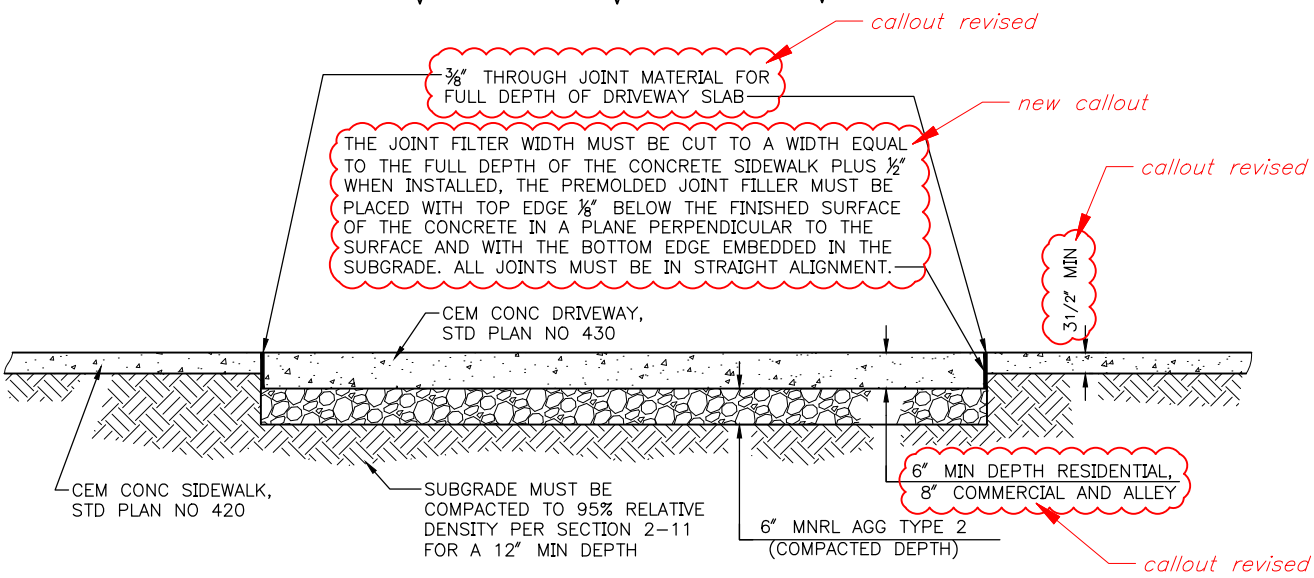
notes 6, 7 & 11 revised

REF STD SPEC SEC 8-19

City of Seattle	NOT TO SCALE	TYPE 430B DRIVEWAY

REV DATE: SEP 2021





SECTION A–A

* UNLESS OTHERWISE APPROVED

notes 1 & 2 revised

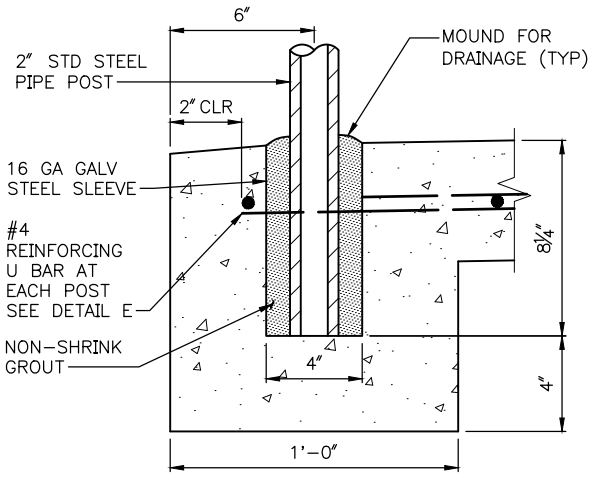
NOTES:

1. DRIVEWAY WIDTH GREATER THAN 15'–0" MUST HAVE ⅜" TRANSVERSE CONTRACTION JOINT AT OR NEAR ITS CENTER.
2. DRIVEWAY GREATER THAN 30'–0" REQUIRES APPROVAL. SET ⅜" TRANSVERSE CONTRACTION JOINTS AT INTERVALS OF 8' TO 15', UNLESS OTHERWISE SPECIFIED.
3. PROVIDE SCORE LINES PER STD PLAN NO 420 AND THE DRAWINGS.
4. THE SURFACE MUST BE BRUSHED IN THE TRANSVERSE DIRECTION IN RELATION TO THE CENTERLINE OF THE DRIVEWAY OR ALLEY WITH A FIBER HAIR BRUSH OR OTHER APPROVED BRUSH TYPE.
5. PROTECT ADJACENT PANELS FROM DAMAGE DUE TO UNDERMINING DURING EXCAVATION & PLACEMENT OF SUBGRADE. SEE SPEC SECTION 1–07.13.

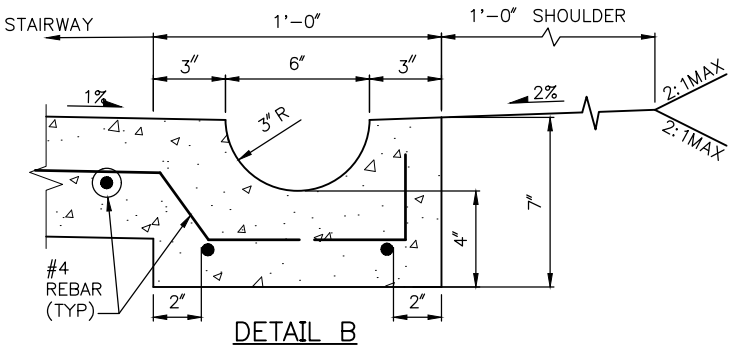
REF STD SPEC SEC 8-19

City of Seattle	NOT TO SCALE	CEMENT CONCRETE DRIVEWAY PLACED WITH CEMENT CONCRETE SIDEWALK

REV DATE: OCT 2022

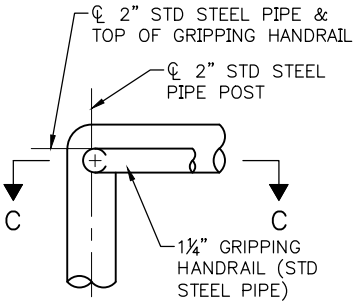


DETAIL A

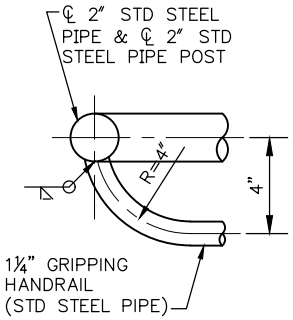


DETAIL B

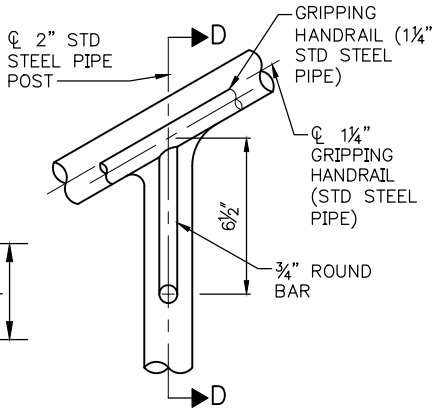
SEE NOTE 11 ON STD PLAN NO 440a



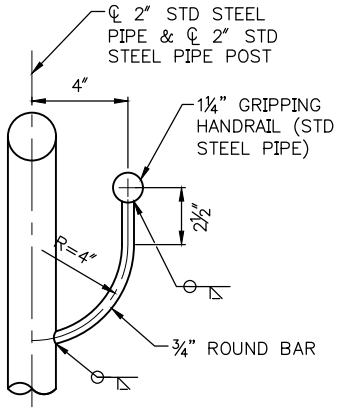
DETAIL C
HAND GRIP TERMINATION



SECTION C–C



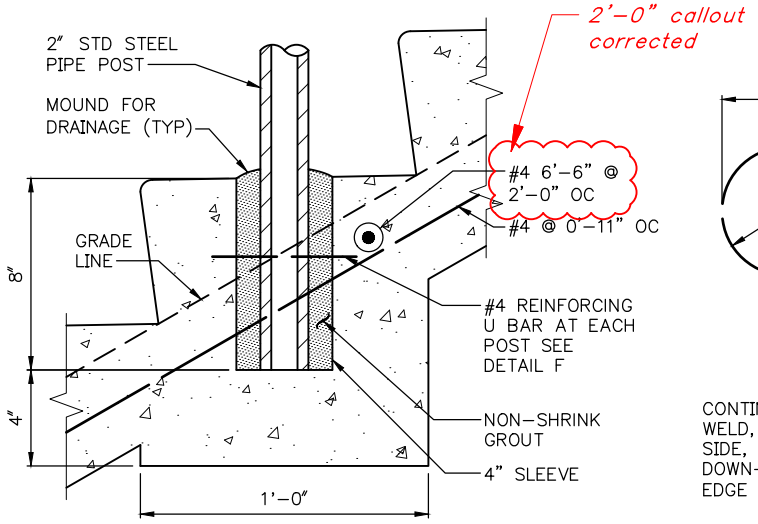
DETAIL D



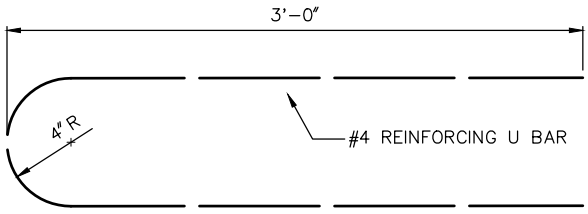
SECTION D–D

NOTE:

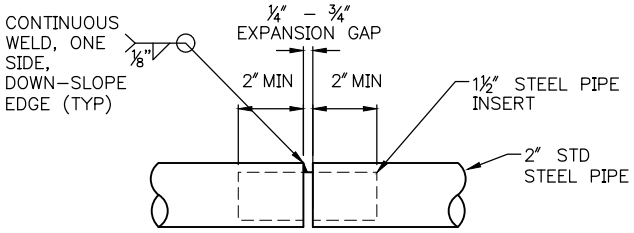
PIPE DIAMETERS SHOWN CORRESPOND TO PIPE "SHAPE" AS DEFINED IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.



DETAIL E



DETAIL F

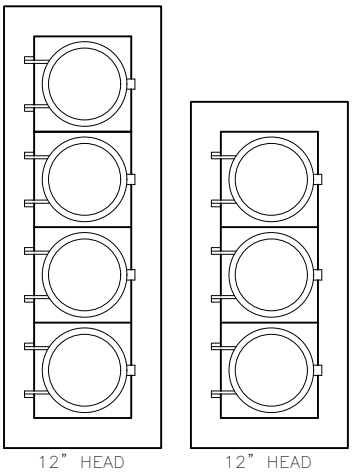


DETAIL G
SLIP JOINT

REF STD SPEC SEC 8-18

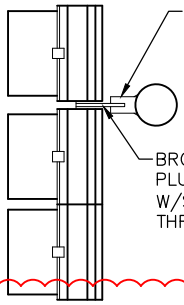
City of Seattle	NOT TO SCALE	CEMENT CONCRETE STAIRWAY & HANDRAIL

REV DATE: OCT 2022



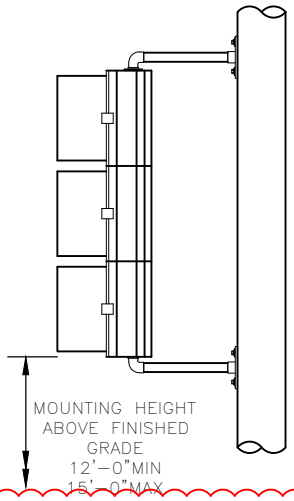
TYPICAL SIGNAL FACES

W/ TUNNEL VISORS & 5" BACKPLATE (LOUVERED)
1" YELLOW, DIAMOND GRADE RETRO REFLECTIVE TAPE



MAST ARM MOUNTING USING COUPLING OR BRACKET

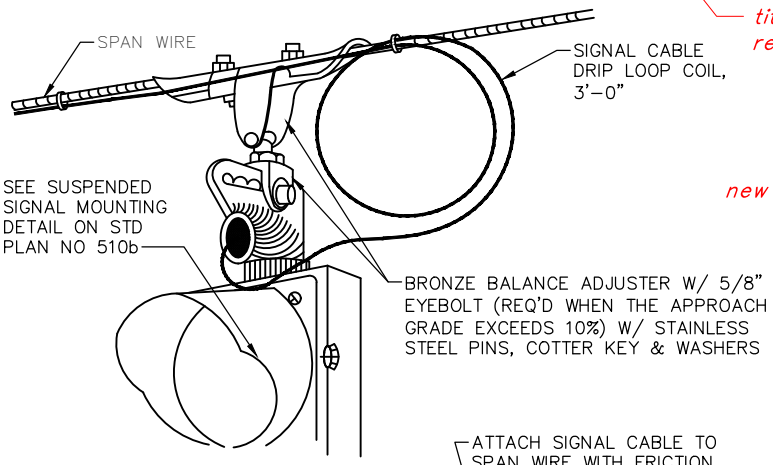
SEE NOTE 1



BRACKET MOUNTING FOR POLE MOUNTED

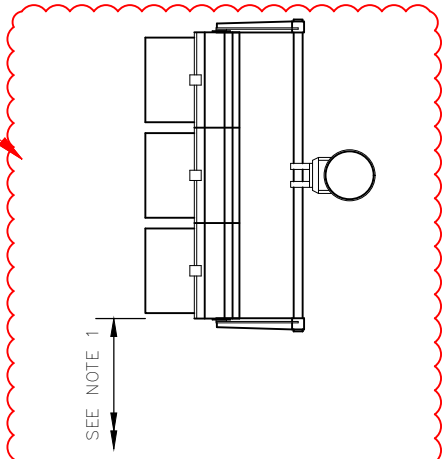
FOR SIGNAL HEAD BRACKET ASSEMBLY SEE STD PLAN NO 511

titles revised



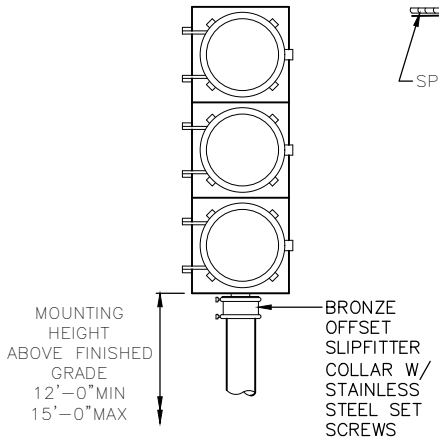
SIGNAL HANGER DETAIL

new detail



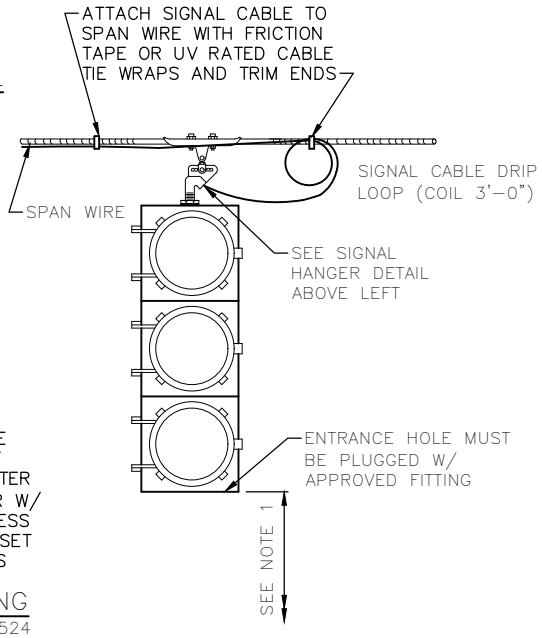
BRACKET MOUNTING FOR MAST ARM MOUNTED

FOR SIGNAL HEAD BRACKET ASSEMBLY SEE STD PLAN NO 526b



PEDESTAL TOP MOUNTING

FOR PEDESTAL SEE STD PLAN NO 524



SPAN MOUNTING

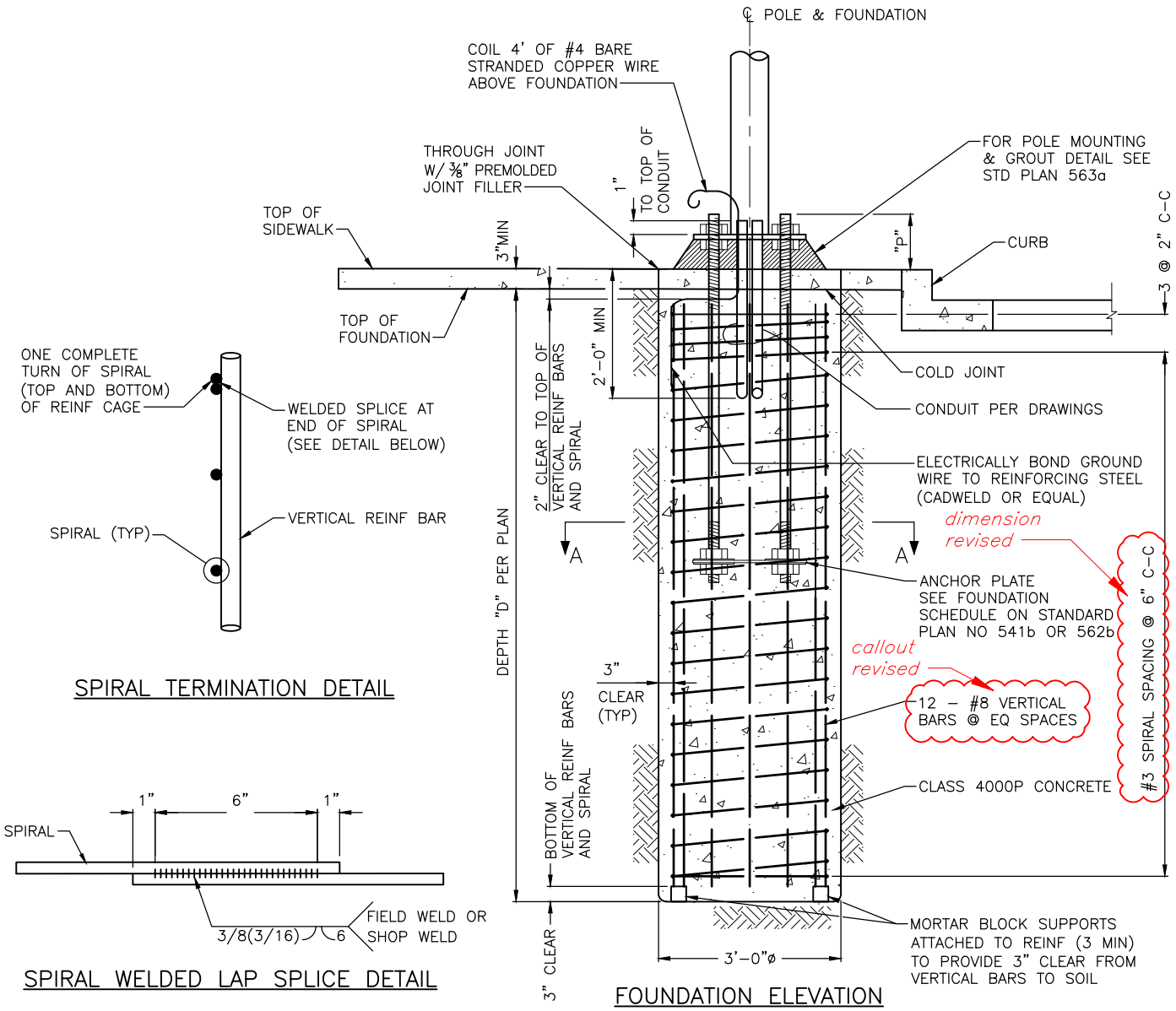
NOTES:

1. VERTICAL CLEARANCE: 17' MIN TO ROADWAY 19'-0" MAX (ON TRUCK ROUTES USE 18' TO 19')
2. BACKPLATES HAVE BEEN OMITTED FROM VARIOUS VIEWS FOR CLARITY

REF STD SPEC SEC 8-31

City of Seattle	NOT TO SCALE	VEHICULAR SIGNAL MOUNTING

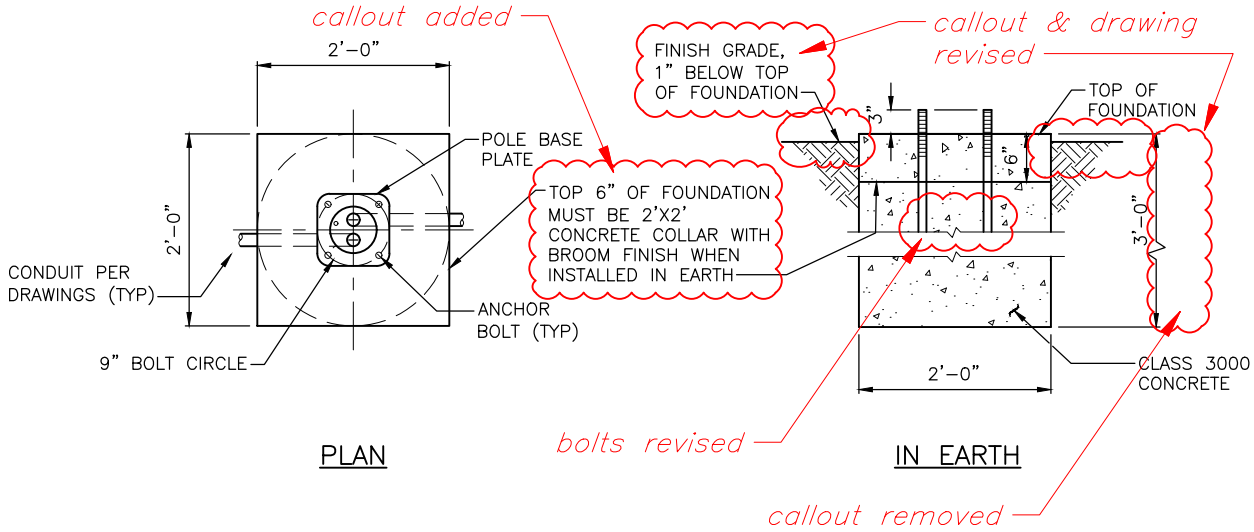
REV DATE: MAY 2021

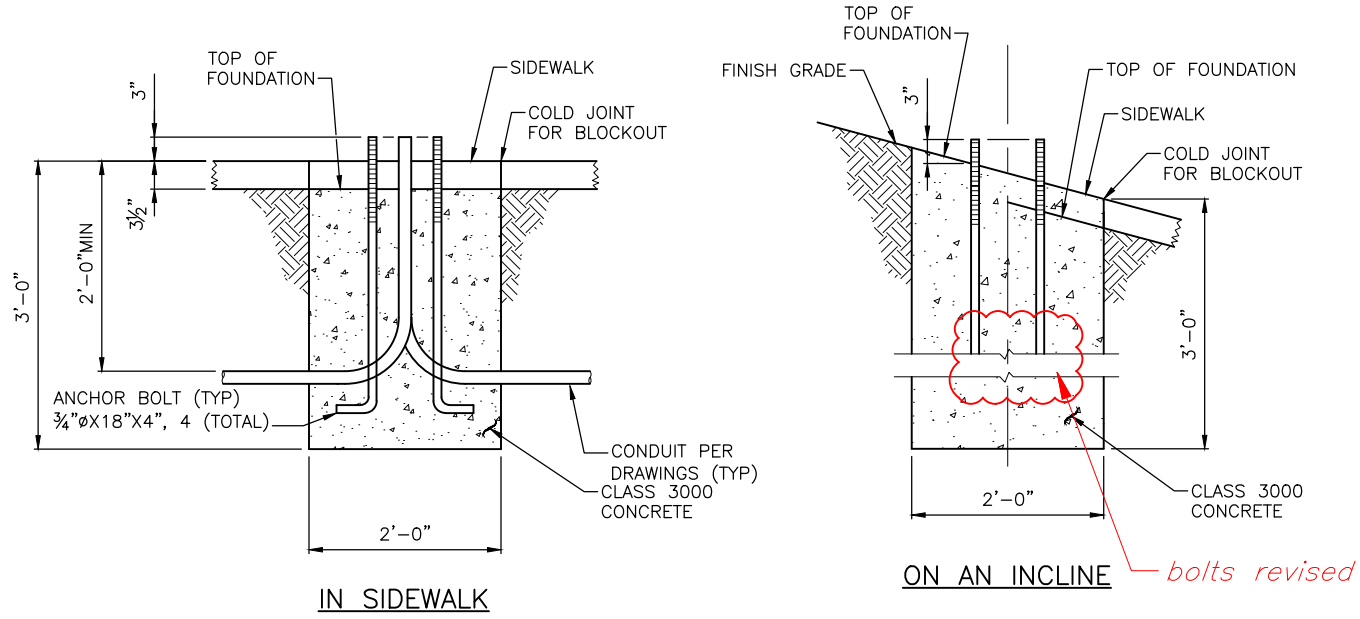


REF STD SPEC SEC 8-32, 6-02

City of Seattle	NOT TO SCALE	TRAFFIC SIGNAL POLE FOUNDATION DETAIL

REV DATE: MAR 2021





former note 1 removed

NOTES:

1. SEE SCL CONSTRUCTION STANDARD 1716.34 FOR POLE MOUNTING AND GROUT DETAIL
2. ANCHOR BOLTS MUST BE HOT DIP GALVANIZED TO ASTM A153 OR F2329, FULL LENGTH AND FABRICATED FROM ASTM F1554 OR A576 WITH 8" OF THREADS ON TOP
3. SEE SCL MATERIAL STANDARD 5756.09 FOR POLES
4. SEE SCL CONSTRUCTION STANDARD 1716.07 FOR STREETLIGHT HANDHOLE AND CONDUIT REQUIREMENTS.
5. ALL SHRUBBERY AND FOLIAGE MUST BE PLANTED A MINIMUM OF 2' FROM SCL STRUCTURE PER SCL CONSTRUCTION STANDARD 0214.00

note added

REF STD SPEC SEC 8-32

City of Seattle	NOT TO SCALE	PEDESTRIAN STREET LIGHT POLE FOUNDATIONS

REV DATE: OCT 2022

NOTES:

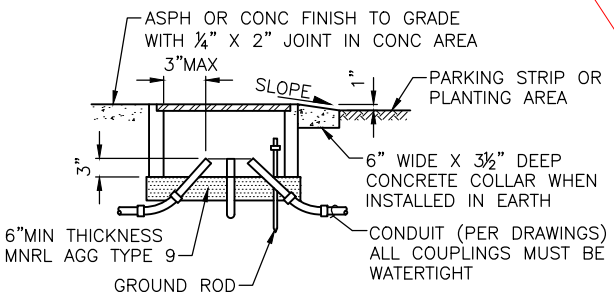
type 1 dimensions corrected

1. THE COVER MUST HAVE 1/16" TO 1/8" CLEARANCE ON EACH EDGE WITHIN THE FRAME AFTER GALVANIZING.
2. THE GROUND ROD MUST EXTEND 4" ABOVE THE BOTTOM OF THE HANDHOLE OR MINERAL AGGREGATE.
3. TYPE 1, 2, 3, 5 & 6 HANDHOLE COVERS MUST HAVE "SDOT" OR "SL" ON THEM, AS APPROPRIATE.
4. TYPE 4 HANDHOLE MUST BE INSTALLED IN ROADWAYS, PARKING LOTS, ETC.
5. FOR PAVEMENT DEPTH GREATHER THAN 7" USE FRAME EXTENSIONS (SEE STD PLAN NO 231) TO BRING THE COVER UP THE THE LEVEL OF THE FINISHED PAVEMENT WITHOUT EMBEDDING THE BOTTOM FLANGE OF THE CASTING IN THE PAVEMENT.
6. A 4' LENGTH OF #6 THWN OR THHN COPPER WIRE MUST BE SECURED FROM THE HANDHOLE COVER TO THE FRAME. BOND FROM FRAME LID, AND LID TO GROUND ROD.
7. ALL HANDHOLE COVERS AND FRAMES MUST HAVE A NON-SKID SURFACE (SEE STD SPEC SEC 9-34.6)
8. ALL HANDHOLES MUST HAVE A LOAD RATING OF H20.
9. GROUND ROD REQUIRED IN ALL STREETLIGHT HANDHOLES PER SCL CONSTR STD 1714.50
10. SEE SCL CONSTRUCTION STANDARD 1716.07 & SCL MATERIAL STD 7203.10 FOR ~~STREETLIGHT HANDHOLE AND CONDUIT REQUIREMENTS.~~
11. ALL SHRUBBERY AND FOLIAGE MUST BE PLANTED A MINIMUM OF 2' FROM SCL STRUCTURE PER SCL CONSTRUCTION STANDARD 0214.00

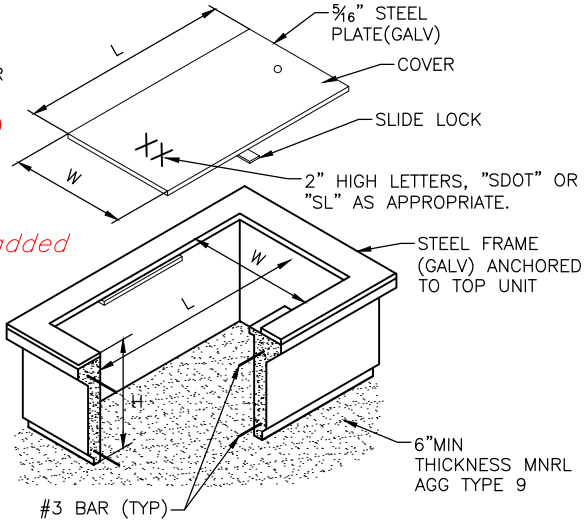
note added

HANDHOLE SCHEDULE

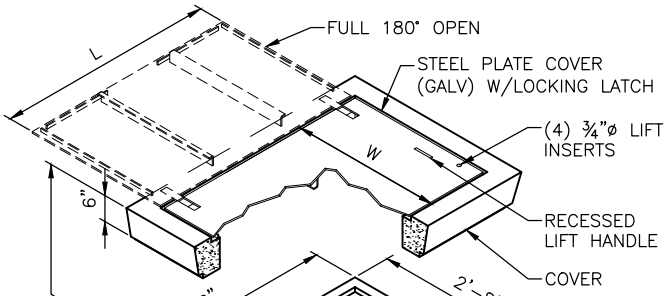
HANDHOLE TYPE	TOP UNIT INSIDE DIMENSION			EXTENSION UNIT(E)	COVER DIMENSIONS	
	L	W	H	H	L	W
1	22"	17"	12"	12"	17¾"	12¾"
2	33"	22"	12"	12"	27¾"	16¾"
3	36"	24"	12"	12"	33"	24"
4	24"ø		VAR	NA	NA	NA
5	36"	24"	32"	NA	35"	24"
6	42"	42"	38½"	NA	33½"	33¾"
GRHH	8"ø			NA		

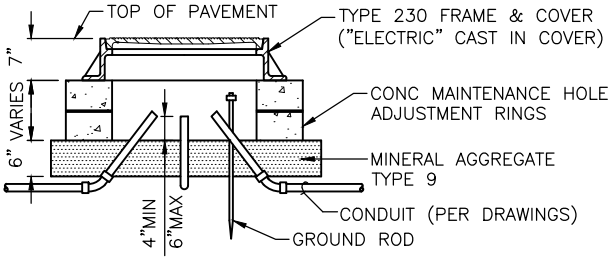


HANDHOLE INSTALLATION DETAIL

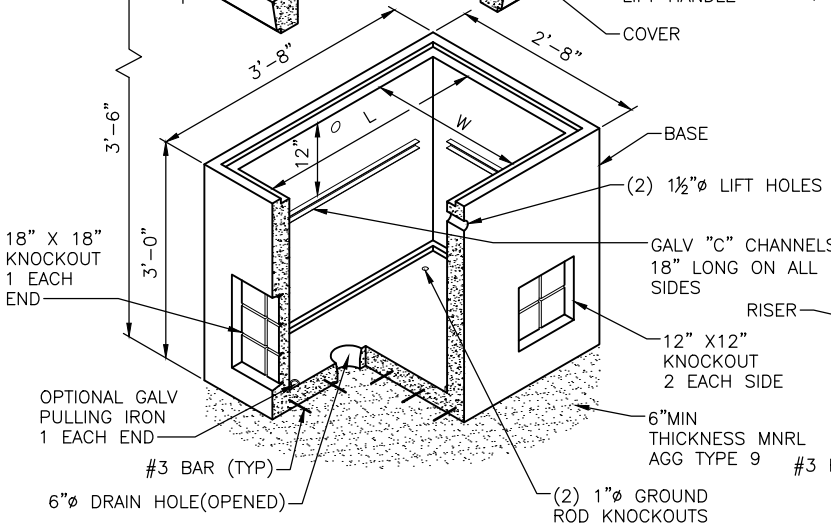


TYPE 1 & 2 HANDHOLE

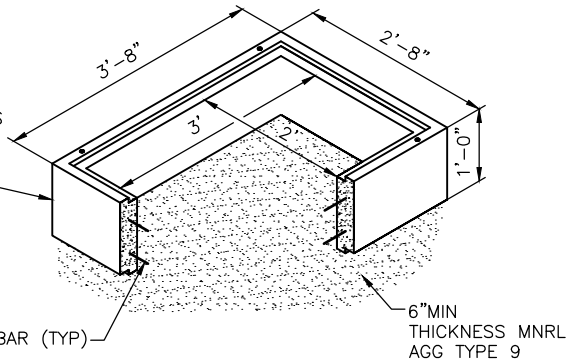




TYPE 4 HANDHOLE
TRAFFIC BEARING



TYPE 5 HANDHOLE

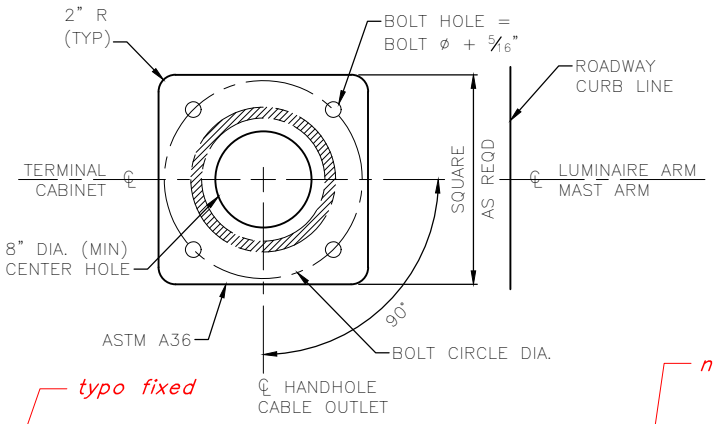


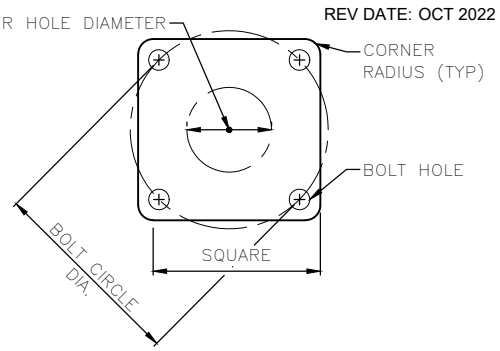
TYPE 3 HANDHOLE
(COVER SAME AS TYPE 5)

REF STD SPEC SEC 8-33

City of Seattle	NOT TO SCALE	HANDHOLES

REV DATE: OCT 2022

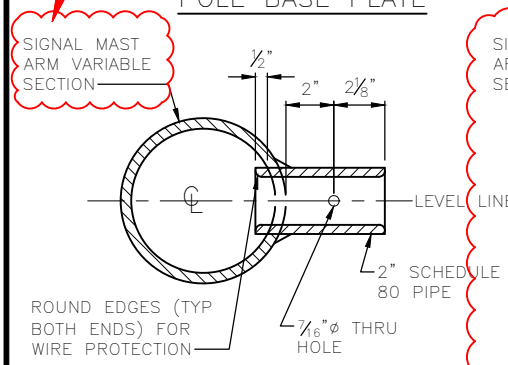




ANCHOR PLATE
PER FOUNDATION SCHEDULE

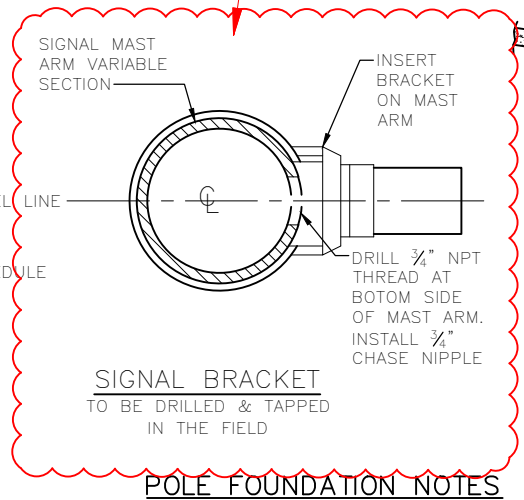
typo fixed

POLE BASE PLATE

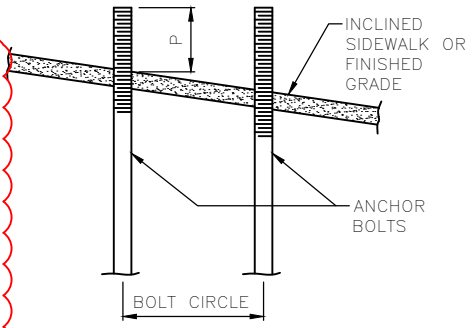


SIGNAL COUPLING
COUPLING TO BE FABRICATED & INSTALLED BEFORE GALVANIZING

new detail



SIGNAL BRACKET
TO BE DRILLED & TAPPED IN THE FIELD



INCLINED CONDITION

POLE SCHEDULE

MAST ARM LENGTH	POLE BASE PLATE		
	SQUARE	BOLT CIRCLE 'A"	BOLT HOLE
15'–0" TO 30'–0"	16" X 16"	14½"	1 13/16"
31'–0" TO 40'–0"	18" X 18"	16½"	2 1/16"
41'–0" TO 45'–0"	18" X 18"	18"	2 1/16"
46'–0" TO 60'–0"	20" X 20"	20"	2 5/16"

POLE FOUNDATION NOTES

1. CONCRETE MUST BE CLASS 4000P.
2. ANCHOR BOLTS MUST BE ASTM F1554 GRADE 105 CLASS 2A THREADS INCLUDING SUPPLEMENTARY REQUIREMENTS S2 THROUGH S4. NUTS: ASTM A563 HEAVY HEX GRADE DH. HARDENED STEEL WASHERS: ASTM F436.
3. BOTTOM ANCHOR PLATE: ASTM A36. HOT DIP GALVANIZED PER ASTM A123.
4. ALL REINFORCING BARS MUST BE DEFORMED BILLET STEEL CONFORMING TO ASTM CLASS A706, GRADE 60.
5. ANCHOR BOLTS MUST BE HOT DIP GALVANIZED PER ASTM F2329 INCLUDING NUTS & WASHERS (FULL LENGTH) WITH A MINIMUM OF 18" OF THREADS ON TOP & 12" ON BOTTOM.
6. TAPE THE TOP OF ANCHOR BOLTS WITH CORROSION PROTECTION TAPE PER STD SPEC SEC 8–32.3(2)A PRIOR TO POURING CONCRETE.
7. SEE STD PLAN NO 541a FOR FOUNDATION DETAILS.
8. FOUNDATION DEPTH, REINFORCEMENT AND ANCHOR BOLTS MUST BE IN CONFORMANCE WITH "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" (6TH EDITION, 2013). DESIGN BASIC WIND SPEED IS 85 MPH AND RECURRENCE INTERVAL/DESIGN LIFE IS 50 YEARS

FOUNDATION SCHEDULE

MAST ARM LENGTH	ANCHOR BOLTS			ANCHOR PLATE DIMENSIONS			
	PROJECTION "P"	BOLT CIRCLE DIA	SIZE	SIZE	BOLT HOLE	CENTER HOLE	CORNER RADIUS
15'–0" TO 30'–0"	7½"	14½"	1½" X 60"	⅜" X 16" X 16"	1⅝"	10"	1⅝"
31'–0" TO 40'–0"	9"	16½"	1¾" X 72"	⅜" X 16" X 16"	1⅞"	12½"	1⅝"
41'–0" TO 45'–0"	9"	18"	1¾" X 72"	⅜" X 16" X 16"	1⅞"	12½"	1⅝"
46'–0" TO 60'–0"	10"	20"	2" X 72"	⅜" X 18" X 18"	2⅛"	14"	2"

FOUNDATION DEPTH MUST BE PER PLANS.

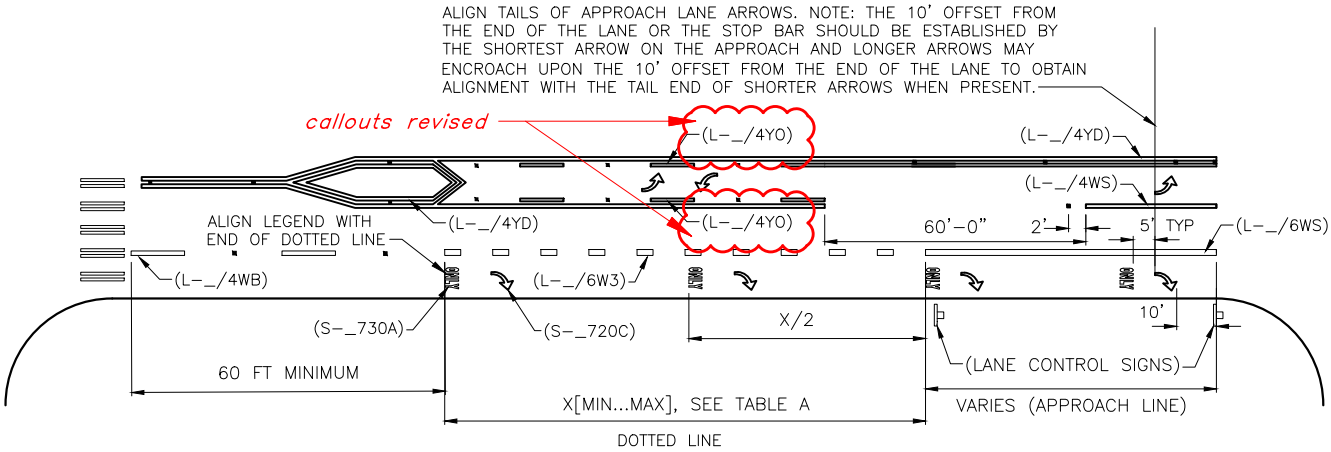
REF STD SPEC SEC 8-31, 8-32

City of Seattle

NOT TO SCALE

STEEL MAST ARM POLE FOUNDATION SCHEDULE & DETAIL W/O METRO TROLLEY LOADS)

REV DATE: AUG 2022



NOTE:
LEGENDS, SYMBOLS & ARROWS MUST BE CENTERED WITHIN THE LANE TO WHICH THEY APPLY, AS SHOWN.

TABLE A

POSTED OR 85TH-PERCENTILE SPEED	X MAX MUTCD TABLE 2C-4 CONDITION A	X MIN MERGING TAPER
20 MPH	225 FT	75 FT
25 MPH	325 FT	115 FT
30 MPH	460 FT	165 FT
35 MPH	565 FT	225 FT
40 MPH	670 FT	295 FT
45 MPH	775 FT	375 FT

TYPICAL LEGEND AND SYMBOL INSTALLATION DETAILS

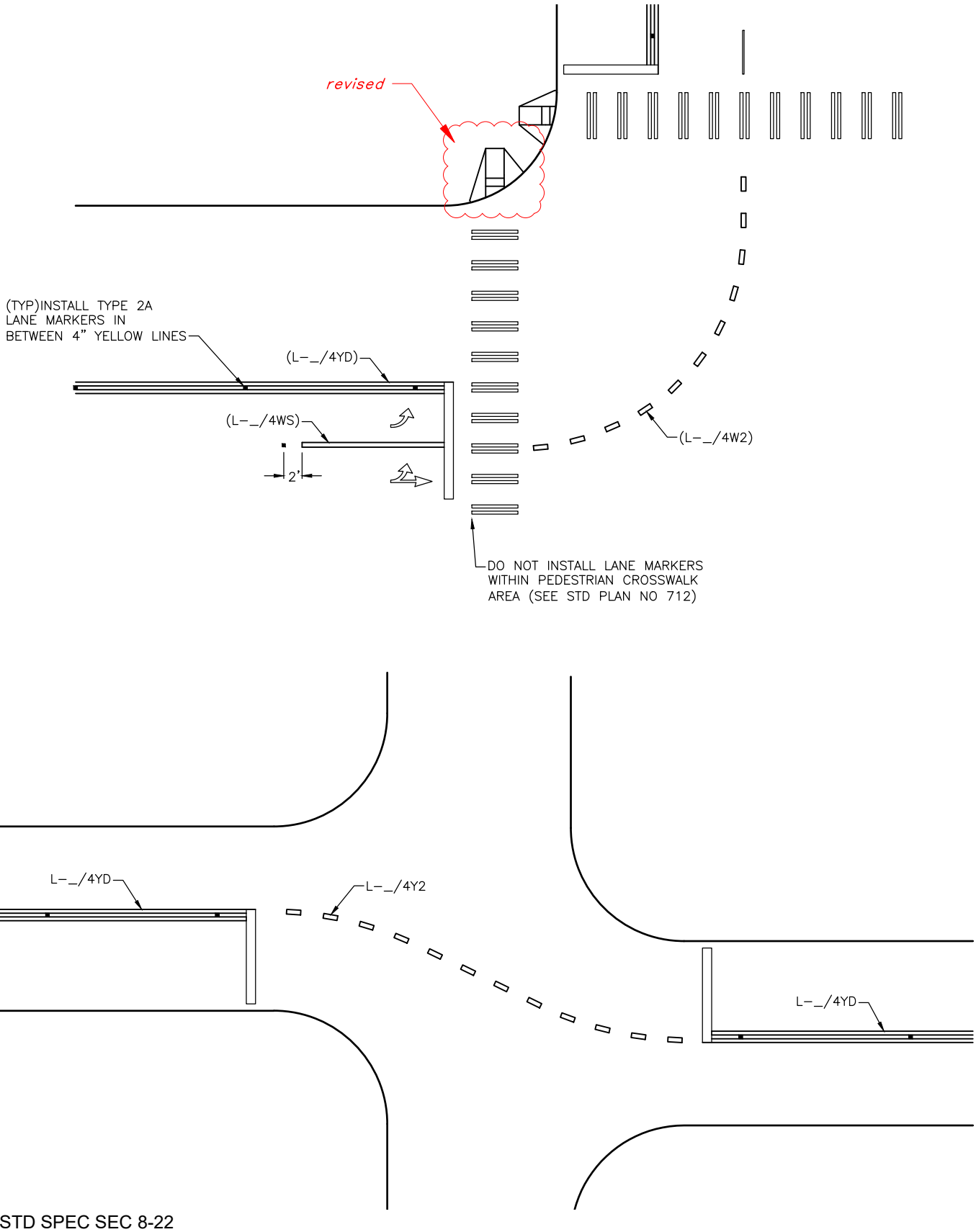
LINE LENGTH	LEGEND SETS	
	WITHIN APPROACH LINE	WITHIN DOTTED LINE
LESS THAN 50 FEET	APPROACH LINE (1 TOTAL)	NA
50 FEET TO 120 FEET	ADD 1 SET AT BEGINNING OF APPROACH LINE (2 TOTAL)	ADD 1 SET MIDWAY BETWEEN FIRST SET AND APPROACH LINE (2 TOTAL)
125 FEET TO 300 FEET	ADD 1 SET LOCATED MIDWAY BETWEEN FIRST AND LAST SETS (3 TOTAL)	ADD 1 SET, WITH EQUAL INTERVALS, BETWEEN FIRST SET AND APPROACH LINE (3 TOTAL)
OVER 300 FEET	ADD SETS SPACED AT APPROX. 100 FEET INTERVALS BETWEEN FIRST AND LAST SETS	

NOTE:
1. SEE MUTCD SECTION 2B.20 FOR GUIDANCE ON SIGNS.
2. MANDATORY MOVEMENT LANE CONTROL SIGNS MUST BE PAIRED WITH LEGENDS PLACED WITHIN THE APPROACH LINE

REF STD SPEC SEC 8-22

City of Seattle | NOT TO SCALE | TYPICAL LANE DROP CHANNELIZATION AND LEGEND PLACEMENT

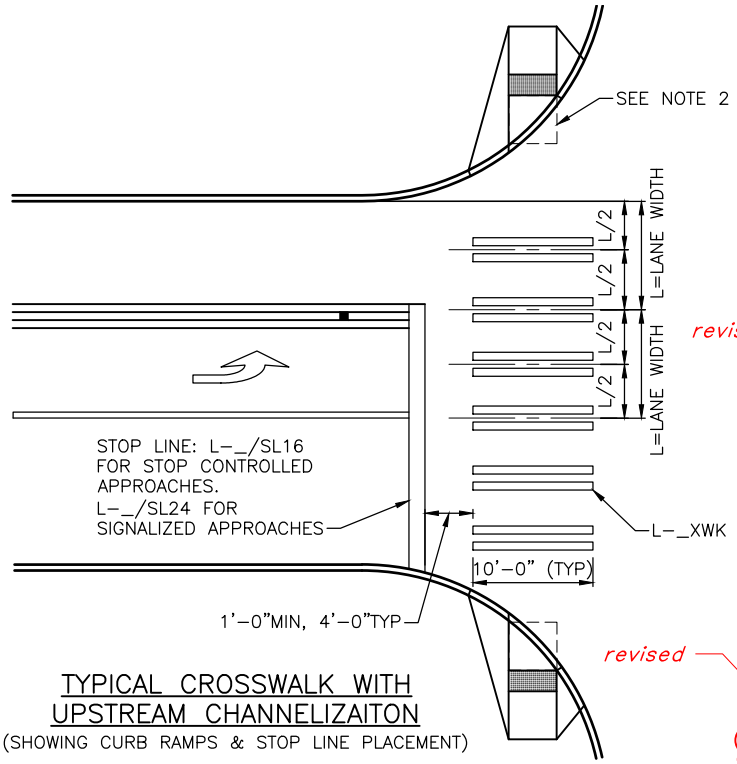
REV DATE: OCT 2022



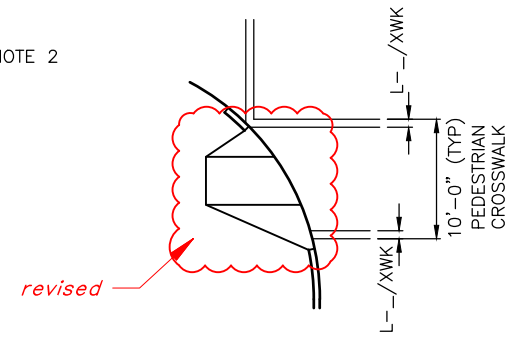
REF STD SPEC SEC 8-22

City of Seattle	NOT TO SCALE	TYPICAL INTERSECTION GUIDELINE CHANNELIZATION

REV DATE: OCT 2022



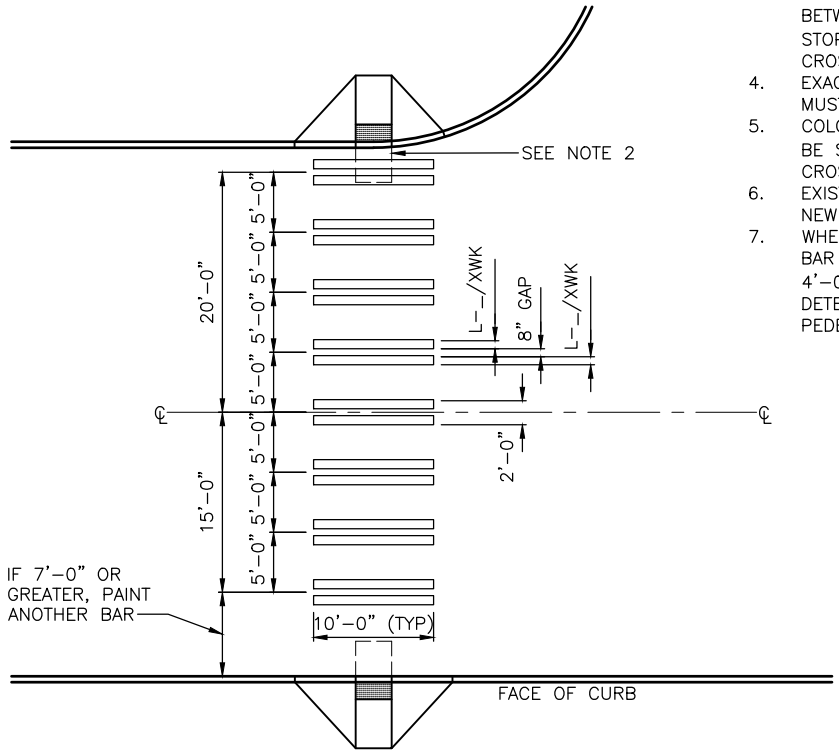
TYPICAL CROSSWALK WITH UPSTREAM CHANNELIZAITON
(SHOWING CURB RAMPS & STOP LINE PLACEMENT)



TYPICAL TRANSVERSE LINE CROSSWALK

NOTES:

1. "LADDER STYLE" CROSSWALK MUST BE USED IN MOST APPLICATIONS. "TRANSVERSE LINE" CROSSWALK (L–_/XWK2, L–_/XWK) MAY ONLY BE USED WITH APPROVAL OF ENGINEER.
2. LOWER LANDING OF CURB RAMP MUST FALL WHOLLY WITHIN CROSSWALK LINES.
3. WHERE EXISTING TRAFFIC LOOP LOCATIONS ARE BETWEEN 1' AND 4' FROM THE EDGE OF CROSSWALK, STOP LINE MAY BE PLACED UP TO 2' FROM THE CROSSWALK WITH THE APPROVAL OF ENGINEER.
4. EXACT LOCATION OF CROSSWALK AND STOP LINES MUST BE APPROVED BY SDOT.
5. COLORED OR TEXTURED PAVEMENT CROSSWALKS MUST BE SUPPLEMENTED WITH "TRANSVERSE LINE" CROSSWALK MARKINGS.
6. EXISTING CROSSWALK MARKINGS THAT CONFLICT WITH NEW CROSSWALK MARKINGS MUST BE REMOVED.
7. WHEN MARKED CROSSWALK ARE NOT PRESENT, STOP BAR MUST BE PLACED AT A MINIMUM DISTANCE OF 4'–0" UPSTREAM FROM THE EDGE OF THE DETECTABLE WARNING SURFACE OR ANTICIPATED PEDESTRIAN TRAVEL PATH, WHICHEVER IS GREATER.



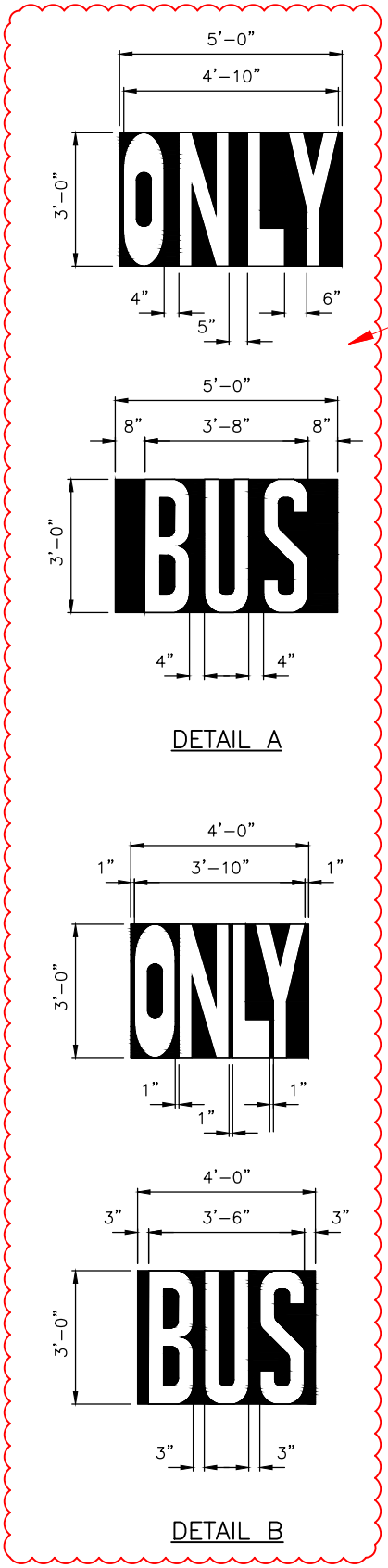
TYPICAL CROSSWALK WITHOUT UPSTREAM CHANNELIZATION
(SHOWING CURB RAMPS & STOP LINE PLACEMENT)

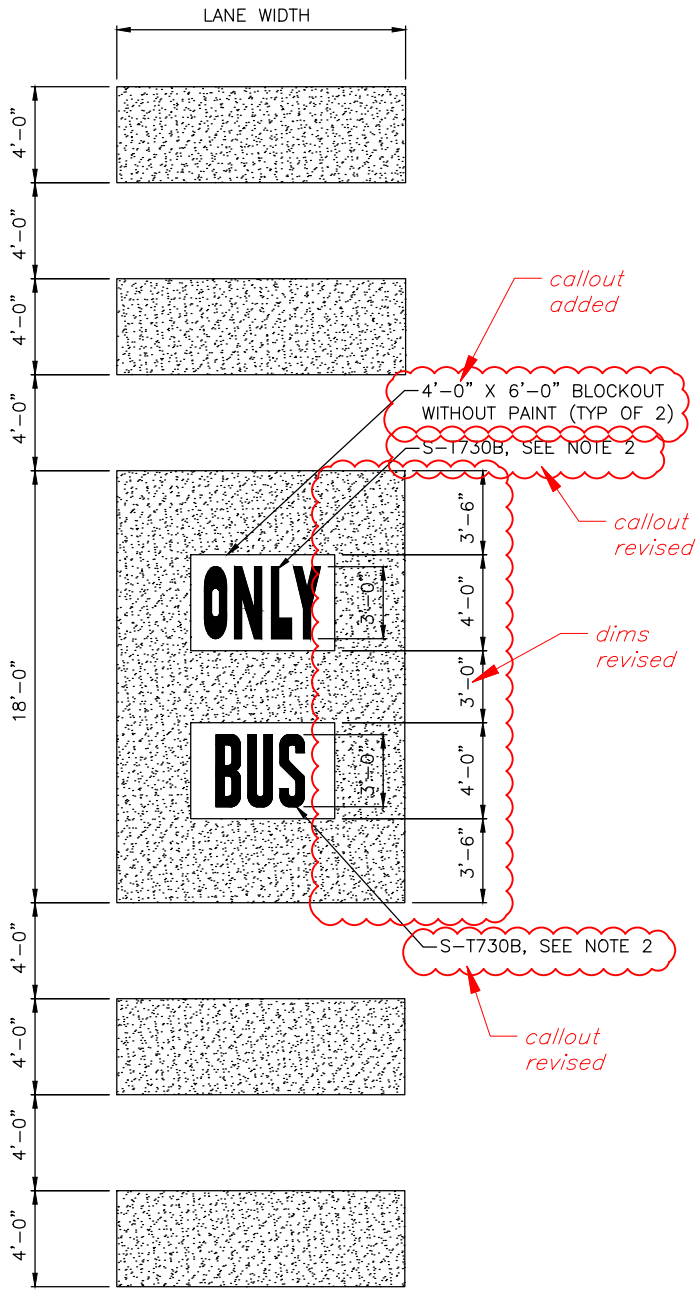
WHERE TRAFFIC LANE LINES ARE NOT USED, LADDER BARS MUST BE 5'–0" CENTER TO CENTER, BEGINNING AT THE MARKED CENTERLINE OF THE ROADWAY

REF STD SPEC SEC 8-22

City of Seattle	NOT TO SCALE	TYPICAL CROSSWALK & STOP LINE INSTALLATION DETAILS

REV DATE: SEP 2021





NOTES:

1. FHWA APPROVED RED COLOR FOR BUS LANES MUST BE USED WITH MMA.
2. FOR APPLICATION ON CEM CONC PVMT, LEGENDS PER STANDARD PLAN 730 MUST HAVE A 5'–0" X 3'–0" COLOR BLACK THERMOPLASTIC BACKGROUND PER DETAIL A. FOR APPLICATION ON CEM CONC PVMT IN A STREET CAR TRACK, LEGENDS PER STANDARD PLAN 730 MUST HAVE A 4'–0" X 3'–0" COLOR BLACK THERMOPLASTIC BACKGROUND PER DETAIL B. PROVIDE 6" MINIMUM GAP BETWEEN THERMO LEGENDS AND RED MMA.

note 1 revised, note 2 added

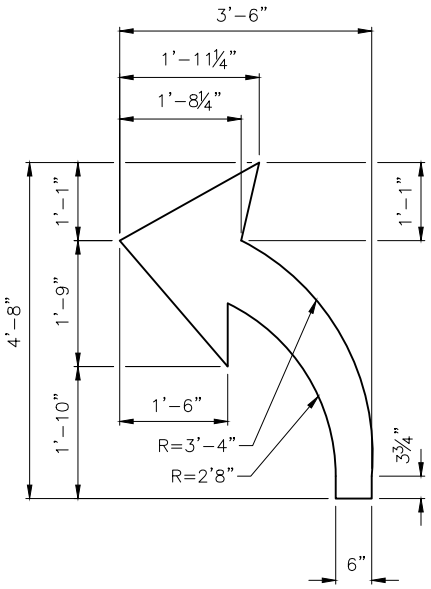
750
RED BUS LANE MARKINGS

REF STD SPEC SEC 8-22

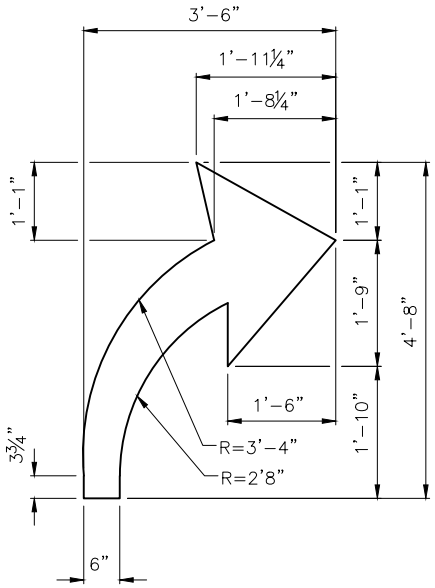
City of Seattle	NOT TO SCALE	RED BUS LANE MARKINGS

REV DATE: AUG 2022

new standard plan



775A
NARROW BIKE LANE
LEFT ARROW



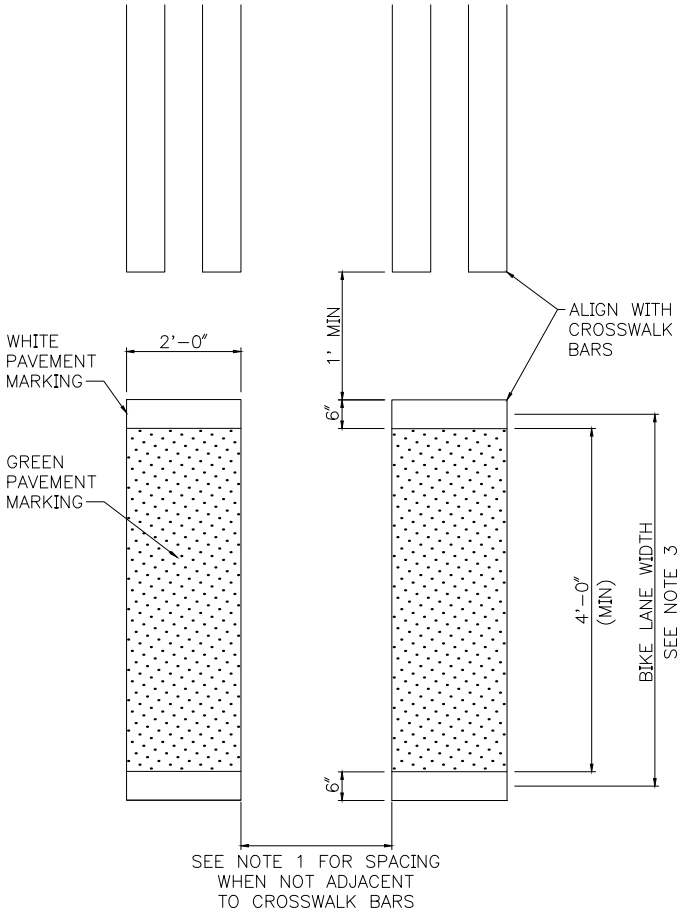
775B
NARROW BIKE LANE
RIGHT ARROW

NOTES:
1. TURN ARROWS TO BE USED IN BIKE LANES LESS THAN 5' WIDE IN COMBINATION WITH THE HELMETED BICYCLIST SYMBOL 770C.
2. LAYOUT SIMILAR TO 770A WITH 6' SPACING.

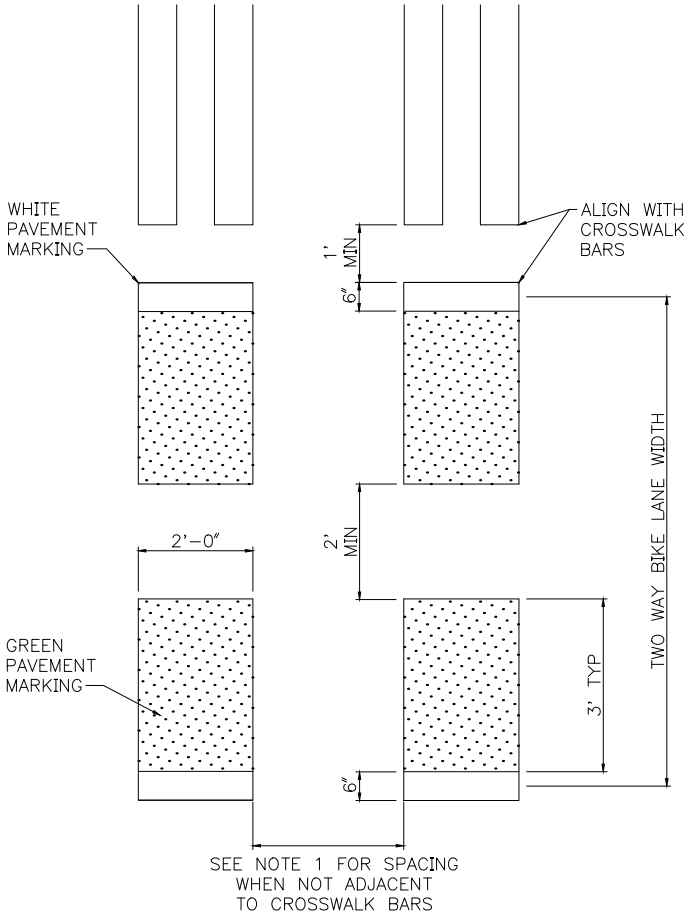
REF STD SPEC SEC 8-22

City of Seattle	NOT TO SCALE	NARROW BIKE LANE TURN ARROW SYMBOLS

REV DATE: AUG 2022



780A
ONE-WAY CROSS BIKE LAYOUT



780B
TWO-WAY CROSS BIKE LAYOUT

NOTES:

1. WHERE STRIPED CROSSWALK DOES NOT EXIST, CROSS BIKE MUST BE PLACED AT LANE LINE AND 1/2 LANE WIDTH CONSISTENT WITH STANDARD PLAN 712. IF NO CROSSWALK OR LANE LINE EXISTS, CROSSBIKE MUST BE PLACED AT 5' ON CENTERS.
2. CROSS BIKE MATERIAL MUST BE MMA OR PRE-FORMED THERMOPLASTIC.
3. WHEN CONNECTING BIKE LANES OF VARYING WIDTH, THE CROSSBIKE WIDTH MUST BE SIZED TO THE NARROWER OF THE TWO FACILITIES.

typo corrected

REF STD SPEC SEC 8-22

City of Seattle	NOT TO SCALE	CROSS BIKE PAVEMENT MARKING