CALV 1/2” STL CHAIN, WELD ONE END TO GRATE AND OTHER END TO FRAME, UNLESS DIRECTED OTHERWISE.

ALL GRATES SHALL HAVE "PROPERTY OF CITY OF SACRAMENTO" LABEL

18" TYP.

1/2" BURNED LETTERS

PROPERTY OF CITY OF SACRAMENTO

ELEVATION
NOTES:
1. CAST-IN-PLACE CONCRETE DRAIN INLETS SHALL CONFORM TO SECTION 20 OF THE STANDARD SPECIFICATIONS. BOTTOM OF INLET SHALL BE PLACED AT SAME TIME AS SIDE WALLS, UNLESS NOTED OTHERWISE.
2. DROP INLET MAY BE PRE-CAST OR CAST-IN-PLACE. PRECAST DRAIN INLETS TO BE RATED FOR H2O LOADING AND SHALL BE APPROVED BY THE ENGINEER.
3. FRAME & GRATE SHALL CONFORM TO STANDARD DWG. S-40.
4. REBAR SHOWN FOR CAST-IN-PLACE.
5. IF PLACED NEXT TO PARK STRIP, EXTEND BACK WALL OF DROP INLET TO SURFACE.
NOTES:
1. CAST-IN-PLACE CONCRETE DRAIN INLETS SHALL CONFORM TO SECTION 20 OF THE STANDARD SPECIFICATIONS. BOTTOM OF INLET SHALL BE PLACED AT SAME TIME AS SIDE WALLS, UNLESS NOTED OTHERWISE.
2. DROP INLET MAY BE PRE-CAST OR CAST-IN-PLACE. PRECAST DRAIN INLETS TO BE RATED FOR H2O LOADING AND SHALL BE APPROVED BY THE ENGINEER.
3. FRAME & GRATE SHALL CONFORM TO STANDARD DWG. S-40.
4. REBAR SHOWN FOR CAST-IN-PLACE.
5. IF PLACED NEXT TO PARK STRIP, EXTEND BACK WALL OF DROP INLET TO SURFACE.
NOTES:
1. THERE SHALL BE A SIDE INLET FACING EACH CHANNEL THAT DISCHARGES TO THE BOX, AND A GRATE COVERED TOP OPENING. MINIMUM OF TWO SIDE INLETS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. CAST-IN-PLACE CONCRETE DRAIN INLETS SHALL CONFORM TO SECTION 20 OF THE STANDARD SPECIFICATIONS. BOTTOM OF INLET SHALL BE PLACED AT SAME TIME AS SIDE WALLS, UNLESS NOTED OTHERWISE.
3. PRECAST DRAIN INLETS TO BE RATED FOR H2O LOADING & SHALL BE APPROVED BY THE ENGINEER.
PLAN

BOTH ENDS (TYP.)

ANCHORS ON OUTSIDE FRAME ANGLE ONLY

BAR 3-1/2” x 1/4” (TYP.)

SECTION B-B

5/8” DIA TYP.
HOT PRESS FIT
(TYP. AT 4 ANCHORS)

4”x3”x 1/4 MIN.” FRAME ANGLE

4”x3”x 1/4 MIN.” ANCHORS (TYP.)

SECTION A-A

2 ANCHORS - 1/2” DIA x 6” @ 20” O.C.

(TYP. AT 2 ANCHORS)

4”x3”x 1/4 MIN.
FRAME ANGLE

NOTES:
1. GRATE SHALL CONFORM TO REQUIREMENTS OF SECTION 75-1.02 OF CALTRANS STANDARD SPECIFICATION. GALVANIZING IS NOT REQUIRED.
2. ALL WELDS ON FRAME TO BE FULL PENETRATION DOUBLE V-GROOVE WELDS IN CONFORMANCE WITH AMERICAN WELDING SOCIETY STD. A-2.0.
3. LOCATE FRAME ANCHORS TO PROVIDE MINIMUM 2” CLEAR COVER.
4. SEE DWG S-9, UNLESS DIRECTED OTHERWISE.
NOTES:
1) PIPE & FITTINGS SHALL BE SDR 35 PVC.

SECTION A-A

SECTION B-B
NOTES:
1) PIPE & FITTINGS SHALL BE SDR 35 PVC.
NOTES:
1) PIPE & FITTINGS SHALL BE SDR 35 PVC.
NOTES:
1) PIPE & FITTINGS SHALL BE SDR 35 PVC UNLESS OTHERWISE NOTED.
FINAL LOCATION AND ELEVATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

SECTION A-A

GUTTER DRAIN No. 20 DITCH INSTALLATION

SECTION B-B

GUTTER DRAIN No. 24 DITCH INSTALLATION

NOTE:
NOT TO BE USED WITHOUT DEPARTMENTAL APPROVAL.
NOTES:
1. SEE STD DWG. S-30 SIMILAR, EXCEPT OMIT SIDE INLET OPENINGS.
   GUTTER CONC POUR 4" MIN THICK ATOP INLET BOX SIDES.
2. TRANSITION TO BACK EDGE OF GRATE 1 1/2" BELOW DESIGN FLOWLINE.
   FRONT LIP OF GRATE FLUSH WITH STD GUTTER PROFILE.
NOTE:
1" GAP BETWEEN GRATE FRAME AND HOOD
NOTES:

1. MANHOLES SHALL CONFIRM TO SECTION 25 OF THE STANDARD SPECIFICATIONS. ANY CONNECTIONS ABOVE MANHOLE BASE SHALL BE CORED AND INSTALLED WITH RESILIENT FLEXIBLE CONNECTION. AN ADDITIONAL FLEXIBLE CONNECTION SHALL BE PLACED 24" OUTSIDE BASE.

2. FLOWLINE MATERIAL FOR MAIN PIPE AND INTERSECTING MAINS UP TO 36" DIAMETER SHALL BE VITRIFIED CLAY. EXCEPTING PVC MAINS, IF MANHOLE BASE IS PRECAST CONCRETE, OR MANHOLE BASE IS PLACED OVER MAIN WHICH IS "LAID THROUGH", FLOWLINE MATERIAL SHALL BE SAME AS MAIN.

3. MANHOLE BENCH SHALL SLOPE UPWARDS FROM THE SPRING-LINE, WHICHEVER IS LESS.

4. IF PIPE CROWN TO FINISH GRADE IS BETWEEN 30" AND 39", USE A 18" CONE. IF LESS THAN 30", USE A FLAT SLAB TOP.

INTERSECTING MANHOLE MAINS (TYP)
1. Use standard manhole 3A when greater than 8 feet deep, for sanitary sewer pipes less than 21” diameter and for storm drain pipe less than 27” diameter.
2. Manholes shall conform to Sec. 25 of the city standard specifications.
3. Excepting PVC, flowline material for sewer mains and intersecting mains up to 36” diameter shall be vitrified clay. If manhole base is precast concrete or manhole base is placed over main which is “laid through”, flowline material shall be same as main.
4. Excepting PVC, flowline material for storm drain pipe shall be the same as the main line pipe when “laid through”, or grouted to the springline matching the existing pipe diameter.
5. Manhole bench shall slope upwards from the spring-line of the pipe to the projected level of the crown of the pipe at the manhole wall or 12 inches above the spring-line, whichever is less.
6. Core opening and use “KOR-N-SEAL” or approved equal flexible couplings on all connections to manhole except if pipe is “laid through” and cast into base. If pipe is “laid through”, contractor shall provide water stop where pipe is cast into base.
7. If manhole is placed in non-paved area, see section 25.
8. PVC is not allowed as flowline material.

**Notes:**

The diagram illustrates the section A-A of a standard manhole 3A with various components labeled:
- Tongue and groove joint
- Bell joint or tongue and groove joint
- Barrel height varies
- Springline
- Grout or concrete
- Precast base
- 12” clean, crushed rock
- Compacted or undisturbed soil

**Plan:**

- Place eccentric cone toward closest curb

**Section A-A:**

- Standard head 1 and cover unless otherwise specified. See S-140

**Cut Sections:**

- Grade ring
- Minimum 60
- Variations

**Dimensions:**

- Tongue and groove joint: 24”
- Bell joint or tongue and groove joint: 43”
- Barrel height varies
- Springline
- Grout or concrete
- Precast base
- 12” clean, crushed rock
- Compacted or undisturbed soil

**Intersecting Manhole Flow Lines (Typ):**

- Less than 80°
- 80° or more

**Intersecting Manhole Flow Lines (Typ):**

- C.L.
- 12” TYP.

**City of Sacramento**

**Department of Utilities**

**Standard Manhole**

No. 3A

**Rev.**

- Date
- Description

**Approved by:**

[Signature]

[Date: February 2020]

[ DWG. NO: S-80 ]
NOTES:
1. MANHOLES SHALL CONFORM TO SECTION 25 OF THE STANDARD SPECIFICATIONS. ANY CONNECTIONS ABOVE MANHOLE BASE SHALL BE CORED AND INSTALLED WITH RESILIENT FLEXIBLE CONNECTION. AN ADDITIONAL FLEXIBLE CONNECTION SHALL BE PLACED 24" OUTSIDE BASE.

BELLS & SPIGOT COUPLING, TYP.

"KOR-N-SEAL" FLEXIBLE CONNECTOR TYP., SEE NOTE #1

PLAN

PROVIDE FRAME & COVER IN ACCORDANCE WITH STANDARD DWG S-140

PRE CAST REINFORCED MANHOLE SECTIONS (REBAR NOT SHOWN)

"KOR-N-SEAL" FLEXIBLE CONNECTOR

INLET PIPE

45° ELBOWS
10" PVC (SDR 35)

PRECAST (REBAR NOT SHOWN)

12" COMPACTED CLEAN, CRUSHED ROCK

SECTION

COMPACTED OR UNDISTURBED EARTH

TO COMBINATION SEWER
6" OR 8" LATERAL
"KOR-N-SEAL" FLEXIBLE CONNECTOR

WATERSTOP

12" SUMP

6" SEAL

3" 48"

2'-0"

4" MAX.

30"

2'-0" MAX.

CITY OF SACRAMENTO
DEPARTMENT OF UTILITIES

MANHOLE #3
(WITH TRAP & SUMP)

APPROD BY:

DATE: FEBRUARY 2020 DWG. NO.: S-90
NOTES:
1. NO. 4 MANHOLES SHALL BE USED OVER SEWER PIPE BETWEEN 21" AND 42" DIAMETER AND STORM DRAIN PIPE BETWEEN 27" AND 42" DIAMETER OR AS DIRECTED BY THE ENGINEER.
2. MANHOLES SHALL CONFORM TO SEC. 25 OF THE CITY STANDARD SPECIFICATIONS.
3. EXCEPTING PVC, EXCEPTING PVC, FLOWLINE MATERIAL FOR SEWER MAINS AND INTERSECTING MAINS UP TO 36" DIAMETER SHALL BE VITRIFIED CLAY. IF MANHOLE BASE IS PRECAST CONCRETE, OR MANHOLE BASE IS PLACED OVER MAIN WHICH IS "LAID THROUGH", EXCEPTING PVC, FLOWLINE MATERIAL SHALL BE THE SAME AS MAIN. CLAY LINER MAY BE OMITTED FOR MANHOLES WITH MAINS OF 36" DIAMETER OR LARGER UPON WRITTEN APPROVAL BY THE ENGINEER.
4. EXCEPTING PVC, FLOWLINE MATERIAL FOR STORM DRAIN PIPE SHALL BE THE SAME AS MAIN LINE PIPE WHEN "LAID THROUGH", OR GROUTED TO THE SPRINGLINE MATCHING THE EXITING PIPE DIAMETER.
5. MANHOLE BENCH SHALL SLOPE UPWARDS FROM THE SPRING-LINE OF THE PIPE TO THE PROJECTED LEVEL OF THE CROWN OF THE PIPE AT THE MANHOLE WALL OR 12 INCHES ABOVE THE SPRING-LINE, WHICHEVER IS LESS.
6. CORE OPENING AND USE "KOR-N-SEAL" OR APPROVED EQUAL FLEXIBLE COUPLINGS ON ALL CONNECTIONS TO MANHOLE EXCEPT IF PIPE IS "LAID THROUGH" AND CAST INTO BASE. IF PIPE IS "LAID THROUGH", CONTRACTOR SHALL PROVIDE WATER STOP WHERE PIPE IS CAST INTO BASE.
7. IF MANHOLE IS PLACED IN NON-PAVED AREA, SEE SECTION 25.

---

PLAN "KOR-N-SEAL" FLEXIBLE COUPLING, TYP.
Note:
1. Use saddle type manhole on storm drain and sanitary sewer lines larger than 42 inches in diameter or as directed by engineer.
OUTSIDE DROP CONNECTION
FOR 10" AND LARGER DROP OR WHERE SPECIFICALLY
INDICATED ON THE DRAWINGS

INSIDE DROP CONNECTION

NOTES:
1. ALL INSIDE AND OUTSIDE DROP PIPING TO BE P.V.C. IN CONFORMANCE WITH ASTM D3034 (SDR 35).
2. ALL JOINTS SHALL BE SOLVENT WELDED.
3. DROP CONNECTION PIPE AND FITTINGS TO BE SAME SIZE AS LATERAL.
4. INSIDE DROP CONNECTIONS SHALL BE CORE-BORED, PROVIDE WATER-TIGHT
   CONNECTIONS WITH NON-SHRINK EPOXY GROUT AS DIRECTED BY ENGINEER.
5. PIPE JOINTS SHALL BE BELL & SPIGOT OR FLEXIBLE COUPLERS
   SUCH AS "FERNCO" OR APPROVED EQUAL.
NOTES:
   LIME, CT 06351

2. DROP BOWL MODEL "A–4" SHALL BE USED FOR ALL LINES UP THROUGH FULL 6" INLETS. DROP BOWL MODEL "A–6" SHALL BE USED FOR ALL 8" INLETS. DROP BOWLS MODEL "B–8" SHALL BE USED FOR ALL 10" INLETS. LINES LARGER THAN 10 SHALL BE AS DIRECTED BY THE DIRECTOR.

3. THE FORCE LINE HOOD SHALL BE ATTACHED ON MODELS "A–4" & "A–6" WHEN THE INCOMING LINE IS FROM A FORCE MAIN OR THE SLOPE IS S=0.03 OR GREATER.

4. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER–DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS OR EQUAL.

5. ATTACH THE DROP BOWL & EACH CLAMPING BRACKET TO THE MANHOLE WALL WITH 3/8"x3 3/4" RAMSET/RED HEAD BOLTS HELD IN PLACE WITH 2 STAGE EPOXY PASTE. EPOXY SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. EPOXY PASTE SHALL BE A TWO COMPONENT, 100% SOLID SYSTEM. EPOXY SHALL BE SIKA ADUR 31 HI-MOD GEL BY SIKA CORPORATION (PHONE (592)941–0231) OR EQUAL.
   B. THE EPOXY SHALL DEVELOP A MINIMUM COMpressive STRENGTH OF 5,000 PSI IN 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM D695 AT 73 DEGREES.
   C. THE EPOXY PASTE SHALL DEVELOP A MINIMUM TENSILE STRENGTH OF 3,000 PSI IN 14 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM D638.
   D. THE EPOXY PASTE SHALL DEVELOP A MINIMUM BOND STRENGTH OF 2,000 PSI IN 2 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C882. (HARDENED CONCRETE TO HARDENED CONCRETE)
   E. MANUFACTURER'S INSTRUCTIONS SHALL BE PRINTED ON EACH CONTAINER IN WHICH THE MATERIALS ARE PACKAGED.

REV. DATE DESCRIPTION

CITY OF SACRAMENTO  INSIDE DROP CONNECTION FOR MAIN LINES & SERVICES ≤ 6"  APRR'D BY:
DEPARTMENT OF UTILITIES  NO SCALE  DATE: FEBRUARY 2020 Dwg. No. S-135
1. All castings to conform to ASTM A48, Class 30, and be H-20 traffic rated.
2. 1" tall letters raised 1/4" cast into cover.
**SECTION C-C HANDLE SLOT DETAIL**

**HALF PLAN OF HEADS 3 & 4 COVER B**

**SECTION D-D HANDLE SLOT DETAIL**

**NOTES:**
1. ALL COVERS TO BE H-20 TRAFFIC RATED
2. 1" TALL LETTERS RAISED 1/4" CAST INTO COVER.

**SECTION A-A HEAD 3, COVER B**

**SECTION A-A HEAD 4, COVER B**

**SECTION B-B, COVER B**
NOTE:
1. ALL CASTINGS TO COMFORM TO ASTM A48, CLASS 30
2. 1" TALL LETTERS RAISED 1/4" CAST INTO COVER.
UTILITY CROSSING NOTES:

1. INSIDE DIAMETER OF PVC PIPE TO BE THE SAME AS THE PIPE TO WHICH IT CONNECTS.

2. USE PVC PIPE WHEN THE LATERAL OR HOUSE CONNECTION IS CUT OR DAMAGED.

3. ALTERATION OF SEWER GRADES WILL BE PERMITTED ONLY AFTER WRITTEN PERMISSION HAS BEEN RECEIVED FROM THE ENGINEER.

4. WHenever THE SPAN, WHETHER CAUSED BY TRENCH WIDTH OR CROSSING ANGLE OF THE PVC PIPE, EXCEEDS 3' - 0" REPLACEMENT PROCEDURE AND MATERIAL SHALL BE AS DIRECTED BY THE ENGINEER.

5. BEDDING MATERIAL SHALL BE IMPORTED TYPE 'A' CLEAN CRUSHED ROCK.

6. PVC PIPE SHALL CONFORM TO SECTION 10-28(4) OF THE STANDARD SPECIFICATIONS.

7. BACKFILL IN CONFORMANCE WITH SECTION 26 OF STANDARD SPECIFICATIONS.
CLASS "A" PORTLAND CEMENT CONCRETE
CONTROL DENSITY FILL CAN BE USED
FOR C900, C905 OR DUCTILE IRON PIPE.

MIN. 1 FOOT WIDER THAN OUTSIDE DIAMETER OF BELL OF PIPE
MINIMUM WIDTH OF 20 INCHES
OR ENTIRE TRENCH WIDTH – WHICHEVER IS GREATER

NOTE:
EXACT COVER REQUIREMENT TO BE DETERMINED BY ENGINEER.
**A.B.S. SEWER SERVICE WITH CLEANOUT BOX**

1. SEE "CONNECTION DETAIL."
2. CRUSHED ROCK BEDDING; SEE STD. SPEC., SECTION 26.
3. 4" OR 6" DIA. ABS SLIP CAP.
4. PROVIDE 2" x 3" x 8" REDWOOD, PRESSURE TREATED OR MASONARY SUPPORT.
5. 10" SEWER CLEAN-OUT BOX WITH LOCK BOLT FLUSH COVER (GREEN COLOR)
   CARSON IND. MODEL NO. 910-10 BODY w/ 910-3 LID, OR APPROVED EQUAL.
6. 4" OR 6" DIA. MECHANICAL WING NUT PLUG, CHERNE INDUST., OR APPROVED EQUAL, SECURE WITH
   A LOOSE FIT AND PEEN END OF BOLT OR OTHERWISE SCORE THREADS TO PREVENT REMOVAL OF WING NUT.
7. BACKFILL IN CONFORMANCE WITH SEC. 26 OF THE STD. SPECs.

**A.B.S. SEWER SERVICE WITHOUT CLEANOUT BOX**

1. SEE "CONNECTION DETAIL."
2. CRUSHED ROCK BEDDING; SEE STD. SPEC., SECTION 26
3. 4" OR 6" DIA. ABS SLIP CAP.
4. 2" x 4" x 5" REDWOOD OR APPROVED EQUAL PAINTED GREEN ON THE TOP 12".
5. 4" OR 6" WELD-ON ABS OR APPROVED EQUAL CAP.
6. BACKFILL IN CONFORMANCE WITH SEC. 26 OF THE STD. SPECs.

**P.V.C. SEWER MAIN**

4" OR 6" DIA. – ASTM D 2661
ABS – DWV (SCHEDULE 40).

**V.C.P. SEWER MAIN A.B.S. SEWER MAIN**

**CONNECTION DETAIL**

4" OR 6" DIA. – ASTM D 2661
ABS – DWV (SCHEDULE 40).

**APPR'D BY:**

**DATE:** FEBRUARY 2020 DWG. NO. S-260
NOTES:
1. MIN 5/8" TALL OR LARGER LETTERS RAISED 1/8" ABOVE CASTING FINISH.
2. ALL CASTING TO CONFORM TO ASTM A-48, CLASS 30 OR HIGHER AND BE H-20 TRAFFIC RATED. SAND FINISH TOP, UNLESS OTHERWISE APPROVED.
3. 1" PICK HOLE.
ALLEY TAP

1. If building is on R.O.W. line, construct cleanout within 2' of face of building.

2. Alternate cleanout location when main is located outside property line.

3. Cast-iron cover see dwg. S-261
4. 4" or 6" dia. mechanical wing nut plug, Cherne Industry, or approved equal.
5. Provide 3" clearance between top of cap and bottom of cover.
6. Grout 2" thick minimum, slope to top of pipe.

CAST-IRON CLEAN-OUT BOX

STREET TAP WITH SIDEWALK

1. When applicable, adjust cleanout location to avoid water main conflict.

2. Use alternate cleanout location when main is located outside property line.

3. Planting strip curb & gutter

STREET TAP WITH PLANTING STRIP

1. Provide 2" x 3" x 8" redwood, pressure treated or masonry support.
2. 10" sewer clean-out box with lock bolt cover (green color) Caron Ind. Model No. 910-10 body w/ 910-3 lid or approved equal.
3. 4" or 6" dia. mechanical wing nut plug, Chernen Ind., or approved equal. (Provide 3" clearance between top of cap and bottom of cover)
4. Backfill in conformance with sec. 26 of the std. specs.

CARSON BOX

NOTES:
1. Cleanouts located in non-traveled way shall have Caron box or approved equal.
2. Cleanouts in traveled way shall have Cast Iron Cleanout Box as shown above.
NOTES:
1. CHAMFER ALL EXPOSED EDGES OF CONCRETE
2. USE CLASS B CONCRETE
3. PROVIDE TRASH RACK IN ACCORDANCE WITH S-290 MODIFIED (WITHOUT SIDE BARS)
4. ALL REINFORCING SHALL BE #4@12" CC.
5. COMPACT SUBGRADE TO 90% RELATIVE COMPACTION.
   SCARIFY AND RECOMPACT TOP 6" TO 95% RELATIVE COMPACTION.
NOTES:
1. 'B' MAY BE REDUCED IF REQUIRED BY CHANNEL DIMENSIONS WITH ENGINEER’S APPROVAL.
2. REINFORCING BAR SPACING SHOWN IS MAXIMUM SPACING.
3. USE CLASS 'B' CONCRETE.
4. CHAMFER ALL EXPOSED EDGES.
5. FOR TRASH RACK SEE S-290
6. FOR PIPES LARGER THAN 60", STRUCTURES SHALL BE ENGINEERED.
7. COMPACT SUBGRADE TO 90% RELATIVE COMPACTION. SCARIFY AND RECOMPACT TOP 6" TO 95% RELATIVE RECOMPACT TOP 6" TO 95% RELATIVE COMPACTION.

### DIMENSIONING AND REINFORCING

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PLAN VIEW

SEE DETAIL "B"

SEE DETAIL "A"

NOTE:
PIPE NOT SHOWN

SIDE VIEW

BRACKET DETAIL

TRASH RACK DIMENSIONING

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<th>B IN.</th>
<th>S IN.</th>
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NOTES:
1. THIS TRASH RACK MAY BE USED WITH PIPE INLET STRUCTURES.
2. MATERIAL TO CONFORM TO ASTM DESIGNATION A-36
3. ALL FILLET WELDS TO BE 1/8"
4. 3 EQUALLY SPACED HINGES REQUIRED FOR 24, 27, 30, 33, 36 AND 42 INCH PIPES. 4 EQUALLY SPACED HINGES REQUIRED FOR 48, 54 AND 60 INCH PIPES.
5. FOR DIMENSIONS AND REINFORCING OF CONCRETE SEE S-270 AND S-280
6. FOR PIPES LARGER THAN 60", TRASH RACK SHALL BE ENGINEERED.

CITY OF SACRAMENTO
DEPARTMENT OF UTILITIES

TRASH RACK
24" TO 60" PIPE

REV.  DATE  DESCRIPTION

APPROD BY:  DATE: FEBRUARY 2020  Dwg. No. S-290
TRASH RACK LATCH LINKAGE—SEE TABLE AT RIGHT FOR SIZE OF SQUARE TUBING STOCK FOR FABRICATION

#4 BARS EACH FACE

RACK LATCH—SEE DETAIL BELOW

HINGED BRACKET

#4 BARS EACH FACE

NOTE:
FABRICATE LATCH FROM STEEL PLATE THICKNESS SHOWN IN TABLE

3"x3" STEEL ANGLE SAME THICKNESS AS LATCH PLATE

1/2" DRILL 2 HOLES

NOTE:
1. ENTIRE RACK TO BE WELDED REINFORCING STEEL OR ROUND BARS OF EQUAL DIA.
2. USE CLASS "B" CONCRETE.
3. ROOM SHALL BE PROVIDED DOWNSTREAM TO LAY RACK FLAT
4. FASTEN LATCH BRACKET TO HEADWALL WITH 1/2" x 6" BOLTS WITH HEX NUTS, OR 1/2" EXPANSION BOLTS.
5. WHEN RACK IS IN THE CLOSED POSITION, THE BOTTOM RACK BAR SHALL BE TIGHT AGAINST THE TOP OF THE HINGE BRACKET SO THAT THE RACK CANNOT BE LIFTED OFF THE LATCH.
6. FABRICATE HINGE BRACKETS FROM #4 RE-BAR.
7. CHAMFER ALL EXPOSED EDGES OF CONCRETE.
8. ALL REINFORCING STEEL SHALL HAVE MIN. 2" COVER EXCEPT AS NOTED.

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>RACK BAR SIZE</th>
<th>BAR SPACING</th>
<th>LATCH PLATE BAR SIZE</th>
<th>LATCH LINKAGE SIZE</th>
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<tbody>
<tr>
<td>21&quot;</td>
<td>#4</td>
<td>4&quot;</td>
<td>1/4&quot;</td>
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CITY OF SACRAMENTO
DEPARTMENT OF UTILITIES

PIPE OUTLET ACCESS CONTROL RACK

APPR'D BY:

DATE: FEBRUARY 2020 Dwg. No. 8-300
1. THESE CONNECTION DETAILS ARE FOR PIPES WITH INSIDE DIAMETER GREATER THAN 15". FOR SMALLER PIPES, KOR-N-SEAL CONNECTIONS SHALL BE USED.

2. PRIOR TO THE INSTALLATION OF STORM DRAIN JUNCTION BOXES, CONTRACTOR SHALL SUBMIT PLANS, SPECIFICATIONS AND CALCULATIONS TO THE DEPARTMENT OF UTILITIES FOR REVIEW AND APPROVAL. THE JUNCTION BOX PLANS, SPECIFICATIONS AND CALCULATIONS SHALL BE STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.

3. PRECAST JUNCTION BOXES SHALL BE SUPPORTED ON A LEVELING COURSE OF AT LEAST TWELVE INCHES OF 3/4 INCH CRUSHED ROCK. PRIOR TO PLACEMENT OF THE CRUSHED ROCK, THE EXCAVATION SUBGRADE SHALL BE CLEARED OF ALL LOOSE, SOFT AND DISTURBED SOILS SO THAT ONLY FIRM, UNDISTURBED SOILS ARE EXPOSED. THE CRUSHED ROCK LEVELING COURSE MAY BE THICKENED AS NECESSARY TO BACKFILL AREAS OVEREXCAVATED TO REMOVE DISTURBED SOILS.

4. JUNCTION BOX BENCH SHALL SLOPE UPWARDS FROM THE SPRING-LINE OF THE PIPE TO THE PROJECTED LEVEL OF THE CROWN OF THE PIPE AT THE MANHOLE WALL OR 12 INCHES ABOVE THE SPRING-LINE, WHICHERSOEVER IS LESS. ALL HOLES, CRACKS, AND SEAMS SHALL BE GROUTED FLUSH USING NONSHRINK GROUT IN THE JUNCTION BOX INIERIOR. NON-SHRINK GROUT SHALL BE "METALLIC GROUTING COMPOUND" BY BURKE, "EMECO" BY MASTER BUILDERS, "FERROLITH-C" BY SONNEBORN-DESOTO, OR APPROVED EQUAL. ALL INTERNAL SURFACES SHALL HAVE A SMOOTH FINISH.
6"x6"x6'-0" DOUGLAS FIR POST ROUGH, CONSTRUCTION GRADE (PRESSURE TREATED FOR UNDERGROUND USE)

SEE BOLTING DETAIL BELOW

3'-0"

1/2" CABLE, TYP.

1" CHAMFER @ 45'

6"

3/4" CENTERED HOLE, TYP.

SLOPE TO DRAIN

NATIVE UNDISTURBED SOIL

CONCRETE FOOTING

TERMINAL POST

LINE POST

LINE POST

18" TYP.

6"x6"x6' POST

6"x6"x6' POST

1/2" CABLE W/ CLAMP, TYP.

1/2" DIA. EYE-BOLT W/ 2 WASHERS, COUNTERSINK AS SHOWN, PEEN END, TYP.

NOTES:
1. PROVIDE CONCRETE FOOTING AT ALL END POSTS, AT ALL BENDS AND AS SPECIFIED ON APPROVED PLANS.
2. USE 3/8"X2" GALVANIZED WIRE ROPE CLIPS FOR CONNECTION AND SPLICES. ALL CLIPS SHALL BE PLACED WITH NUTS FACING DOWNWARD.