PROFILE SYMBOLS

EXISTING GROUND
ASPHALT CONCRETE (AC)
AGGREGATE BASE (AB)
CONCRETE W/O REBAR
SAND
NATIVE GROUND

EXISTING PROPOSED

SEWER S S
WATER W W
STORM DRAIN SD SD
GAS G G
ELECTRICAL E E
TELEPHONE T T
TELEVISION TV TV
ROLL CURB
VERTICAL CURB

COMMERCIAL DRIVEWAY
RESIDENTIAL DRIVEWAY

CATCH BASIN
DROP INLET D.I. D.I.
MANHOLE
RODHOLE
WATER VALVE

FIRE HYDRANT SINGLE SINGLE
WATER METER DOUBLE DOUBLE
REDUCER
BLOW-OFF

PLAN SYMBOLS

CITY LIMIT LINE
R/W OF PROPERTY LINE
CENTERLINE OF R/W
EDGE OF TRAVELED WAY
DRAINAGE DITCH
FENCE W/ GATE
RAIL ROAD TRACKS
TOP OF SLOPE
TOE OF SLOPE
BUILDING
TIMBER BARRICADE
STREET NAME SIGN
CENTERLINE MONUMENT
BENCH MARK

TRANSFORMER
ELEC. PULL BOX W/ SERVICE
POLE AND GUY
ELECTROLIER
TRAFFIC SIGNAL

NOTES:
1. STREET GRADES TO BE LABELED AS PERCENT, I.E. (2%).
2. PIPE GRADES TO BE LABELED AS SLOPE, I.E. (S=0.020).
3. PLACE PLAN DIRECTLY BELOW PROFILE, MATCHING STATIONS.
4. STATIONS TO RUN LEFT TO RIGHT.
5. NORTH ARROW SHALL POINT UPWARD OR TO THE RIGHT.
6. USE ESTABLISHED CITY STATIONING FOR ALL STREET WORK OR EXTENSIONS.
7. BENCH MARK INFORMATION SHALL BE SHOWN.
8. TITLE SHEET, PLAN SHEET, AND PROFILE SHEETS SHALL BE IN A FORMAT ACCEPTABLE BY THE CITY OF REDDING.

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<td>CITY OF REDDING • PUBLIC WORKS DEPARTMENT • ENGINEERING DIVISION</td>
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STANDARD DRAFTING SYMBOLS
TYPICAL HALF SECTION

DENSITY REFERENCES:

THE FOLLOWING CRITERIA SHALL APPLY TO THE COMPACTION OF STREET SUBGRADE AND BASE MATERIALS:

FILLS/EMBANKMENTS (90%) - PAGE 700.00 & 705.10, GREENBOOK SECTION 300-6.5
SUBGRADE (90%-95%) - THIS PAGE & GREENBOOK SECTION 301-1.3
AGGREGATE BASE (90%-95%) - THIS PAGE & GREENBOOK SECTION 301-2.3
ASPHALT CONCRETE (95%) - THIS PAGE & GREENBOOK SECTION 302-5.6.2
JOINT TRENCH (90%-95%) - PAGE 620.00 & THIS PAGE
UTILITY TRENCH (90%-95%) - PAGE 610.00 & THIS PAGE

* MAXIMUM DENSITY AND OPTIMUM MOISTURE RELATIONSHIPS (COMPACTION TESTS) WILL BE DETERMINED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS (GREENBOOK), SECTION 211-2.1.

MINIMUM TESTING FREQUENCY

RESULTS FOR THE FOLLOWING TESTS SHALL BE TAKEN BY AN INDEPENDENT GEOTECHNICAL ENGINEER AND SHALL BE PROVIDED TO THE CITY CONSTRUCTION INSPECTOR PRIOR TO ANY SUBSEQUENT LAYER OF MATERIAL BEING PLACED.

TRENCHES - ONE (1) TEST FOR EVERY 500 FEET OF TRENCH LENGTH AND FOR EVERY THREE (3) FOOT OF TRENCH DEPTH WITH A MINIMUM OF THREE (3) TESTS PER PROJECT, OR AS DETERMINED NECESSARY BY THE GEOTECHNICAL ENGINEER.

SUBGRADE & AGGREGATE BASE - ONE (1) TEST FOR EVERY 300 FEET OF STREET LENGTH WITH A MINIMUM OF THREE (3) TESTS PER PROJECT.

ASPHALT PAVING - ONE (1) TEST FOR EVERY 200 FEET OF PAVEMENT PASS WITH A MINIMUM OF TEN (10) TESTS PER PROJECT.

RE-TESTING - ANY TESTED AREA FAILING TO MEET THE SPECIFIED COMPACTION REQUIREMENT SHALL BE REWORKED AND/OR RE-COMPACTED UNTIL A MINIMUM OF TWO (2) PASSING TESTS ARE ACHIEVED.

THE ABOVE FREQUENCIES MAY BE ALTERED UPON THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER WITH THE APPROVAL OF THE CITY ENGINEER.

THE REQUIREMENTS FOR MAXIMUM DENSITY—OPTIMUM MOISTURE RELATIONSHIPS FOR ALL OTHER FILLS (AS SPECIFIED IN THE GRADING ORDINANCE) SHALL APPLY TO THOSE FILLS PLACED ON PRIVATE PROPERTIES OUTSIDE OF STREET RIGHTS-OF-WAY.
NOTES:
1. LOCATING WIRE SHALL BE INSTALLED WITH ALL NON-METALLIC MAINS AND OFF STREET FIRE SERVICES AND HYDRANTS.
2. WIRE SHALL BE BLUE COATED (WATER) OR GREEN COATED (SEWER/STORM) #10 AWG SOLID COPPER.
3. WIRE SHALL BE PLACED ON TOP OF PIPE, ATTACHED TO THE PIPE W/ DUCT TAPE @ 10" O.C.
4. WIRE SHALL BE CONTINUOUS BETWEEN STRUCTURES, EXCEPT WHERE WATER VALVE BOXES ARE WITHIN TEN (10) FEET OF PIPE INTERSECTION.
5. WIRE SHALL NOT TOUCH METALLIC STRUCTURES, VALVES, OR FITTINGS (MAINTAIN 3 INCHES CLEAR DISTANCE).
6. WIRE SHALL BE PLACED WITHIN 6"-12" OF TOP OF STRUCTURES AND WITH SUFFICIENT EXCESS TO ALLOW FOR ABOVE GROUND CONNECTION TO LOCATING EQUIPMENT (TWO FOOT MINIMUM).
7. ALL VALVES, INCLUDING FIRE HYDRANT VALVES, SHALL HAVE LOCATING WIRES.
8. ALL SPICE INSTALLATIONS SHALL BE WITHIN A STRUCTURE.
9. ALL NON-METALLIC UTILITY MAIN INSTALLATIONS OUTSIDE OF THE PUBLIC RIGHT-OF-WAY SHALL INCLUDE LOCATING WARNING TAPE INSTALLED 12 INCHES ABOVE THE MAIN AND SHALL BE UNBROKEN THE ENTIRE RUN OF THE PIPE.
10. TAPE SHALL BE 2 INCH WIDE DETECTABLE METALLIC WARNING TAPE, COLOR CODED AND IMPRINTED APPROPRIATE TO THE MATERIAL TO BE CONTAINED WITHIN THE PIPE (E.G. POTABLE WATER, RAW SEWAGE) (I.E. "CAUTION - BURIED WATER LINE BELOW").
SPLICE DETAIL

CROSS

TEE

TYPICAL WATER LAYOUT

DETAIL AT MANHOLE

DETAIL AT WATER VALVE
NOTES:
1. THIS STANDARD DOES NOT APPLY TO JOINT UTILITY TRENCHING. FOR DETAILS, SEE PAGE 620.00.
2. CONCRETE FOR ENCASING PIPE SHALL BE CLASS 450-C-2000 PER THE STANDARD SPECIFICATIONS.
3. ON ALL CONCRETE ENCASED PIPES, PIPE SHALL BE SUPPORTED ON CONCRETE BLOCKS, GROUT PADS, OR BY OTHER APPROVED METHOD. TWO SUPPORTS SHALL BE REQUIRED PER JOINT OF PIPE. CARE SHALL BE TAKEN NOT TO FLOAT PIPE WHILE PLACING CONCRETE.
4. BACKFILL BY HAND, COMPACT OR CONSOLIDATE TO PROVIDE SOLID BEDDING UNDER AND AROUND PIPE.
5. BEDDING MATERIAL FOR:
   - FLEXIBLE SEWER PIPE SHALL BE PER PAGE 300.80.
   - WATER MAINS SHALL BE SAND PER PAGE 400.00.
   - REINFORCED CONCRETE PIPE AND CORRUGATED HDPE PIPE SHALL MEET THE "COARSE" GRADING REQUIREMENTS OF SECTION 200-1.2.1 OF THE STANDARD SPECIFICATIONS.
6. TRENCH WIDTH ON EACH SIDE OF THE PIPE SHALL BE A MINIMUM OF EITHER FOUR (4) INCHES OR THE PIPE MANUFACTURER'S RECOMMENDED MINIMUM, WHICHERSOEVER IS GREATER.
7. FOR REQUIRED COMPACTION DENSITY AND TESTING FREQUENCY, SEE PAGE 601.00.
CONCRETE CAP

SLURRY BACKFILL MIX DESIGN:
2600# PEA GRAVEL
800# SAND
1 SACK CEMENT
11 GALLON WATER

NOTES:
1. THIS STANDARD DOES NOT APPLY TO JOINT UTILITY TRENCHING. FOR DETAILS, SEE PAGE 620.00.
2. IMPORT BACKFILL MATERIAL:
   • MAY BE STREAM GRAVEL OR CRUSHED ROCK, AND
   • SHALL BE REASONABLY WELL GRADED FROM COARSE TO FINE WITH A MAXIMUM SIZE OF 3" AND A
     MINIMUM SAND EQUIVALENT GREATER THAN 25.
3. SLURRY BACKFILL SHALL BE PER MIX DESIGN ABOVE, AND SHALL BE PLACED AND COMPACTED IN LIFTS
   NOT EXCEEDING THREE (3) FEET.
4. NATIVE BACKFILL MAY BE USED IN-LIEU OF IMPORT BACKFILL ONLY IF AN INDEPENDENT GEOTECHNICAL
   ENGINEERING COMPANY MONITORS AND TESTS THE BACKFILL DURING THE ENTIRE BACKFILLING OPERATION.
5. FOR REQUIRED COMPACTION DENSITY AND TESTING FREQUENCY, SEE PAGE 601.00.
6. COMPACTION BY JETTING IS NOT PERMITTED.
7. CONCRETE CAP SHALL BE PLACED OVER PIPE WHEN THE DEPTH OF COVER IS LESS THAN THE MINIMUM
   FOR THE SPECIFIC TYPE OF PIPE PER THESE STANDARDS.
8. CONCRETE CAP SHALL BE CLASS 450-C-2000 PER THE STANDARD SPECIFICATIONS.

TRENCH BACKFILL
AC DEPTH 1" THICKER THAN EXISTING AC (4" MIN) SLURRY BACKFILL, FULL DEPTH

36" MIN. FINAL LIFT

NEAT VERT. EDGE (TYP.)

EDGE OF TRENCH (TYP.)

CASE 1
CASE '1" REQUIRED ON ALL ARTERIALS AND COLLECTORS

SEE NOTE 1

3.0" AC 8.0" AB

NEAT VERT. EDGE (TYP.)

EDGE OF TRENCH (TYP.)

TRENCH BEDDING AND BACKFILL (SEE NOTE 3)

CASE 2
FULL DEPTH AC PAVEMENT OPTION

6.0" AB

NEAT VERT. EDGE (TYP.)

EDGE OF TRENCH (TYP.)

TRENCH BEDDING AND BACKFILL (SEE NOTE 3)

CASE 3
UNIMPROVED AREAS

CASE 4

DEFINITIONS:
AB = AGGREGATE BASE
AC = ASPHALT CONCRETE

NOTES:
1. EXCEPT AS NOTED IN CASE 1, MINIMUM THICKNESS OF AC RESURFACING IS THREE (3) INCHES OR MATCH EXISTING THICKNESS, WHICHERVER IS GREATER.
2. FOR TRENCH BEDDING, SEE PAGE 609.00 AND FOR TRENCH BACKFILL, SEE PAGE 610.00.
3. FOR REQUIRED COMPACTION DENSITY AND TESTING FREQUENCY, SEE PAGE 601.00.
4. FOR ANY TRENCH CUT WITHIN TWO (2) FEET OF THE EDGE OF PAVEMENT AND/OR AN EXISTING PAVEMENT REPAIR, THE EXISTING AC SHALL BE REMOVED AND RESURFACED TO THE EDGE OF THE ADJACENT FEATURE.
5. ANY PAVEMENT DELINEATION AND/OR MARKINGS REMOVED DURING TRENCHING OPERATIONS SHALL BE REPLACED IN KIND AS THERMOPLASTIC STRIPING AT 90 MIL (MIN) AND MARKINGS AT 120 MIL (MIN) THICK.

AC THICKNESS PAVING LIFTS
0 - 2.5" 1 LIFT
2.6 - 5.0" 2 LIFTS
5.1 - 7.5" 3 LIFTS
> 7.5" 2.5" PER LIFT
ADJUSTMENT DETAIL
TO BE USED IN PAVED STREET SECTIONS

NOTES:
1. FOR SEWER MANHOLE CONSTRUCTION, SEE PAGE 360.00.
2. FOR STORM DRAIN MANHOLE CONSTRUCTION, SEE PAGE 260.00.
3. WHEN MANHOLE IS PART OF A NON–METALLIC PIPE NETWORK, LOCATING WIRE PER PAGE 608.00 SHALL BE MAINTAINED. CORE 1” HOLE THRU GRADE RING AS NECESSARY TO MAINTAIN REQUIREMENT FOR EXCESS WIRE TO BE WITHIN 6”–12” OF THE FINISHED GRADE.

CITY OF REDDING • PUBLIC WORKS DEPARTMENT • ENGINEERING DIVISION

MANHOLE ADJUSTMENT DETAIL
NOTES:
1. ALL DIMENSIONS SHOWN ARE MINIMUM REQUIREMENTS. TRENCH DEPTHS AND CONDUIT SEPARATIONS WILL VARY DUE TO CONDUIT SIZE, LATERAL INTERFERENCE, AND CONFLICT WITH OTHER UTILITIES.
2. NORMAL LOCATION FOR UTILITY TRENCH IN PARKWAY SHALL BE UNDER SIDEWALK SECTION.
3. ALL UNDERGROUND CABLE OR CONDUCTORS SHALL BE INSTALLED IN APPROVED CONDUIT (E.G. NO DIRECT BURIAL CABLE WILL BE PERMITTED).
   A. PLASTIC CONDUIT FOR ELECTRIC CONDUCTORS SHALL BE NEMA PVC-DB-TC-6, AS APPROVED FOR DIRECT BURIAL INSTALLATION PER PAGE 521.00.
   B. ALL CONDUITS INSTALLED SHALL INCLUDE PULL STRINGS PER PAGE 501.00.
4. AT NO TIME SHALL "DRY" UTILITIES (GAS, PRIMARY OR SECONDARY ELECTRIC, PHONE, OR CABLE) BE ALLOWED TO OCCUPY THE SAME TRENCH AS ANY "WET" UTILITY (WATER, SEWER, OR STORM DRAIN).
5. GAS FACILITIES MUST ADHERE TO GO112A.
   A. WHERE 10" SEPARATION CANNOT BE OBTAINED IN A 18" WIDE TRENCH, SEPARATION MAY BE REDUCED TO NOT LESS THAN 6" INSTEAD OF WIDENING TRENCH.
   B. WHERE PRIMARY ELECTRICAL AND GAS ARE NOT INVOLVED, SECONDARY ELECTRICAL MAY OCCUPY THE POSITION SHOWN FOR GAS.
6. EACH UTILITY MAY HAVE ONE OR MORE CONDUITS IN A TRENCH.
7. SAND SHALL BE USED TO PROVIDE A SMOOTH BEDDING AND COVER FOR THE CONDUITS. CRUSHED ROCK OR SHARP-EDGED MATERIAL OF ANY KIND IS UNACCEPTABLE PER PAGES 400.00 AND 520.80.
8. SLURRY BACKFILL SHALL CONFORM WITH PAGE 610.00, AND SHALL BE PLACED AND COMPACTED IN LIFTS NOT EXCEEDING THREE (3) FEET. WHERE STREETS HAVE NOT YET BEEN CONSTRUCTED, IMPORT MATERIAL MAY BE USED IN LIEU OF SLURRY.
9. IMPORT MATERIAL SHALL BE STREAM GRAVEL OR CRUSHED ROCK, AND SHALL BE REASONABLY WELL GRADED FROM COARSE TO FINE WITH A MAXIMUM SIZE OF 3" AND A MINIMUM SAND EQUIVALENT GREATER THAN 25.
10. COMPACTION OF NATIVE SOILS BY JETTING IS NOT PERMITTED.
11. FOR REQUIRED COMPACTION DENSITY AND TESTING FREQUENCY, SEE PAGE 601.00.

JOINT UTILITY TRENCH DETAILS

LEGEND
G  GAS (P.G.&E.)
P  PRIMARY ELECTRIC
T  TELEPHONE
S  SECONDARY ELECTRIC
L  STREET LIGHT

RIGHT-OF-WAY
PARALLEL TO STREET

RIGHT-OF-WAY
CROSSING STREET

OFF RIGHT-OF-WAY
UTILITY DISTRIBUTION LINES

SIDEWALK (WHEN OCCURS)
SLURRY BACKFILL (SEE NOTE 8)
IMPORT MATERIAL (SEE NOTE 9)
SAND (SEE NOTE 7)

SEE TRENCH RESURFACING PAGE 611.00
SLURRY BACKFILL (SEE NOTE 8)
SAND (SEE NOTE 7)

SEE PAGE 521.00 AS REQ'D.

SEE PAGE 521.00 AS REQ'D.

SEE PAGE 521.00 AS REQ'D.

MARK    DATE    REVISION
6  7/13    4/06    REVISE STD
5  7/13    4/06    ADD SLURRY

APPROVED BY

CITY ENGINEER
10/9/13

CITY OF REDDING • PUBLIC WORKS DEPARTMENT • ENGINEERING DIVISION
TYPICAL STREET SECTION

NOTES:
1. ALL DIMENSIONS SHOWN ARE DESIRABLE MINIMUMS. TRENCH DEPTHS AND CONDUIT SEPARATIONS WILL VARY DUE TO CONDUIT SIZE, LATERAL INTERFERENCE, AND CONFLICT WITH OTHER UTILITIES.
2. NORMAL LOCATION FOR UTILITY TRENCH IN PARKWAY SHALL BE UNDER SIDEWALK (SEE SECTION ABOVE).
3. ALL ELECTRIC CONDUCTORS PLACED UNDERGROUND SHALL BE INSTALLED IN APPROVED CONDUIT:
   a. PLASTIC CONDUIT SHALL BE NEMA PVC-DB-TC-6 PVC, APPROVED FOR DIRECT BURIAL INSTALLATION PER PAGE 521.00.
   b. ALL CONDUITS INSTALLED SHALL INCLUDE PULL STRINGS PER PAGE 501.00.
4. ALL CABLE OR CONDUCTORS SHALL BE IN CONDUIT AT ALL STREET CROSSINGS (E.G. NO DIRECT BURIAL CABLE WILL BE INSTALLED IN STREET).
5. AT NO TIME SHALL "DRY" UTILITIES (GAS, PRIMARY OR SECONDARY ELECTRIC, PHONE, OR CABLE) BE ALLOWED TO OCCUPY THE SAME TRENCH AS ANY "WET" UTILITY (WATER, SEWER, OR STORM DRAIN).
6. FOR SPECIFIC JOINT TRENCH DETAILS, SEE PAGE 620.00.
LEGEND

E  ELECTRIC BOX  P  TELEPHONE PEDESTAL  G  GAS
C  CABLE TV BOX  TV  CABLE PEDESTAL  C.O.  S.S. LATERAL CLEANOUT
T  TELEPHONE BOX  W  WATER METER  ▲  TRANSFORMER

LOT A  5 FT. PUBLIC SERVICE ESMT.

LOT B

3 FT X 3 FT MIN.
CLEAR AREA FOR STREET LIGHT OR FIRE HYD.

LOCATION A
FOR FIRE HYDRANT OR STREET LIGHT

LOCATION B
FOR ELECTRIC TRANSFORMER

STREET

CITY OF REDDING • PUBLIC WORKS DEPARTMENT • ENGINEERING DIVISION

UTILITY SERVICE BOX LOCATION

DWG DATE: 1/98  SCALE: NTS

4  7/13  UPDATE
3  4/06  ADD SS C.O.

MARK DATE REVISION

CITY ENGINEER

APPROVED BY

10/9/13
STREET

DIMENSIONS:

'A' - THE DISTANCE WHERE THE BACK EDGE OF THE MEANDERING SIDEWALK IS AT ITS CLOSEST TO THE BACK OF CURB.

'B' - WIDTH OF SIDEWALK PER IMPROVEMENT PLANS.

'C' - NO GREATER THAN THE WIDTH OF THE SIDEWALK.

'D' - LOCATION OF UTILITY SPLICE BOXES, TRANSFORMERS, TERMINATIONS, VALVES, ETC. (AS SHOWN ON UTILITY CONSTRUCTION PLANS). SEE PAGE 623.00 FOR DETAILS.

NOTES:

1. THE MAIN UTILITY TRENCH SHALL ALWAYS BE LOCATED UNDER THE MEANDERING SIDEWALK, SHALL PARALLEL THE BACK EDGE OF THE CURB, AND SHALL REMAIN EQUAL DISTANCE TO THE CURB BETWEEN STREET INTERSECTIONS OR PROJECT BOUNDARIES.

2. UNDERGROUND UTILITIES LOCATED WITHIN THE STREET LIGHT ZONE SHALL ACCOMMODATE STREET LIGHT FOUNDATIONS PER PAGE 556.00.

3. UTILITY SPLICE BOXES, TRANSFORMERS, TERMINATIONS, HAND HOLDS, PEDESTALS, ETC., SHALL ALWAYS BE LOCATED BEHIND THE SIDEWALK. SEE PAGE 623.00.

4. DEPENDING ON LOCATION OF SIDEWALK, A PUBLIC SERVICE EASEMENT MAY BE REQUIRED. THE EASEMENT WIDTH SHALL BE 5' MINIMUM AND SHALL NOT EXCEED THE BUILDING SETBACK LINE.
LOCATION A
LOCATION OF UTILITY TRENCH AND BOX LOCATION(S) IF SIDEWALK IS ADJACENT TO CURB (SEE NOTE 1)

NOTES:

1. MAIN UTILITY TRENCH SHALL BE LOCATED UNDER THE SIDEWALK.
   a. The trench shall be located under the back edge of sidewalk if the sidewalk is adjacent to the curb or if parkway strip width is less than 5 feet.
   b. If parkway strip width is greater than 5 feet, the utility trench may be located on either side of the sidewalk.

2. ALL ABOVE GROUND STRUCTURES SHALL BE PLACED BEHIND THE SIDEWALK. ALL BELOW GROUND SPLICE BOXES, TERMINATIONS, HAND HOLDS, ETC., SHALL BE LOCATED ON THE SAME SIDE OF THE SIDEWALK AS THE TRENCH.

3. ELECTRICAL TRANSFORMERS SHALL ALWAYS BE LOCATED AT BACK SIDE OF SIDEWALK.
MINIMUM TRENCH RADIUS SHALL BE EQUAL TO THE LARGEST NATURAL BEND OF THE CONDUIT.

MINIMUM TRENCH RADIUS SHALL BE EQUAL TO THE LARGEST NATURAL BEND OF THE CONDUIT.

MINIMUM TRENCH RADIUS SHALL BE EQUAL TO THE LARGEST NATURAL BEND OF THE CONDUIT.

EXHIBIT 'A'
WHERE ALL UTILITY CONDUITS ENTER THE BOTTOM OF SPLICE BOXES, ETC. WITH 90° BENDS.

EXHIBIT 'B'
WHERE ONE OR MORE CONDUITS MUST ENTER A BOX PERPENDICULAR (90°) TO THE BOX WALL OR WHERE A GAS LINE MUST BE TAPPED.

DISTANCE AS REQUIRED TO PLACE UTILITIES AT BACK EDGE OF SIDEWALK

AS REQUIRED TO TRAIN CONDUIT USING NATURAL BEND OF CONDUIT ONLY. NO MANUFACTURED OR 'HEATED' BENDS ALLOWED IN THIS AREA.

AS REQUIRED TO TRAIN CONDUIT USING NATURAL BEND OF CONDUIT ONLY. NO MANUFACTURED OR 'HEATED' BENDS ALLOWED IN THIS AREA.
PUBLIC OPEN SPACE ACCESS DETAIL

TYPICAL SECTION

GREEN BELT ACCESS

NOTES:
1. ALL MATERIALS SUPPLIED AND ALL WORK DONE SHALL BE PER STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK).
2. A SIGN READING "EMERGENCY ACCESS ONLY" SHALL BE INSTALLED ON GATE.
3. CONCRETE SLAB SHALL BE A MIN. OF 6" THICK AND SHALL HAVE A 2% SLOPE TO THE CURB.
4. CHAIN LINK FENCE SHALL BE SIX (6) FOOT HIGH, EXCEPT WITHIN THE FRONT YARD SETBACK WHERE THE HEIGHT SHALL BE THREE (3) FOOT MAXIMUM.
5. WHEN PUBLIC ACCESS IS TO BE GRANTED TO OPEN SPACE AREAS, CONFIGURE GATE TO PROVIDE ACCESSIBLE PASSAGE PER DETAIL ABOVE.
NOTES:
1. INSTALL 3/8" HARDENED CHAIN, WELD ONE END TO GATE RAIL AND SECURE FREE END WITH CITY PROVIDED LOCK.
2. CONTRACTOR SHALL PREPARE AND PAINT ALL SURFACES WHITE PER SECTION 210-1.5 (PAGES B3 & B4) OF THE MODIFICATIONS TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK).
3. HDG = HOT-DIPPED GALVANIZED
4. CONCRETE FOR FOOTINGS SHALL COMPLY WITH CLASS 500-C-2500 PER SECTION 201 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK)

ACCESS CONTROL GATE
### PROFILE GRADE vs RESTING INTERVAL SPACING

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<th>RESTING INTERVAL SPACING</th>
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<tr>
<td>&gt;5%</td>
<td>NO RESTING INTERVAL REQ'D</td>
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<tr>
<td>5% - 8.33%</td>
<td>200'</td>
</tr>
<tr>
<td>8.33% - 10%</td>
<td>30'</td>
</tr>
<tr>
<td>10% - 12.5%</td>
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**NOTES:**

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREENBOOK).
2. MATERIALS SHALL BE PER PAGE 100.00.
3. ALL BROOM FINISHING SHALL BE PERPENDICULAR TO THE ALIGNMENT.
4. 1/2-INCH PRE-MOLDED JOINT FILLER SHALL BE LEFT INSTALLED IN EXPANSION JOINTS AT EACH 'BC' AND 'EC' AND SHALL BE HELD FIRMLY IN PLACE PRIOR TO PLACING CONCRETE (SEE PAGE 126.00).
5. CONTROL JOINTS SHALL BE TWO (2) INCHES DEEP AND AT INTERVALS NOT TO EXCEED 16 FT. 0C.
6. A FOUR (4) FOOT HIGH, VINYL COATED CHAIN LINK FENCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS IN AREAS WHERE THE DISTANCE FROM THE EDGE OF CONCRETE TO THE HINGE POINT IS LESS THAN 2 1/2 FEET AND IN AREAS WHERE THE SIDE SLOPE IS STEEPER THAN 2:1. IN AREAS WHERE A FENCE IS REQUIRED, THE FENCE SHALL BE CONSTRUCTED BETWEEN THE EDGE OF PATH AND THE HINGE POINT.
7. ALTERNATE ASPHALT CONCRETE/AGGREGATE BASE STRUCTURAL SECTIONS MAY BE CONSTRUCTED WHEN APPROVED BY THE CITY ENGINEER. SEE PAGE 111.00 "TYPICAL STREET CROSS SECTIONS" FOR ASPHALT CONCRETE/AGGREGATE BASE DETAILS.
8. PASSING SPACE AT LEAST 8 FEET WIDE AND 8 FEET LONG SHALL BE PROVIDED AT LEAST EVERY 1000' WHERE TRAIL WIDTH IS LESS THAN FIVE (5) FEET.
9. SIGNS SHALL BE INSTALLED AT DESIGNATED TRAIL HEADS INDICATING THE LENGTH OF THE TRAIL SEGMENT.
10. RESTING LOCATIONS SHALL BE PROVIDED ALONG THE TRAIL PER THE "RESTING INTERVAL SPACING" CHART ABOVE. EACH RESTING LOCATION SHALL BE NO LESS THAN FIVE (5) FEET IN LENGTH.
NOTES:
1. WALL AESTHETICS SHALL BE APPROVED BY THE PLANNING DEPARTMENT.
2. STRUCTURAL CALCULATIONS AND CONSTRUCTION DETAILS (SIGNED AND STAMPED BY A CALIFORNIA LICENSED CML OR STRUCTURAL ENGINEER) SHALL BE PROVIDED TO AND APPROVED BY THE BUILDING DEPARTMENT FOR ALL RIGHT-OF-WAY FENCE DESIGNS PRIOR TO CONSTRUCTION.

SPECIFICATIONS:
1. CONCRETE: CLASS 500-C-2500 (GREENBOOK)
2. REBAR: ASTM A615 GRADE 40 (OR GRADE 60)
3. CMU BLOCK: ASTM C90 - f'cu=1900 PSI
4. GROUT: f'c=2000 PSI
   a. FINE GROUT PER ASTM C476 SHALL BE USED AT ALL 4" CMU
   b. COURSE GROUT PER ASTM C476 SHALL BE USED AT ALL 6" AND LARGER CMU
5. MORTAR: TYPE S
   1 PART CEMENT
   1/4 TO 1/2 PART LIME
   2 1/4 TO 3 PARTS SAND
6. LAP REBAR SPLICES 40 BAR DIAMETERS MIN.
8"

6x6 W1.4xW1.4 WWF

SECTION

SLAB WIDTH:
SINGLE UNIT 4'-0"
TWO UNITS 6'-6"

SLAB TO HAVE BROOM FINISH

BASE PLATE(S) AND ANCHOR BOLTS (SUPPLIED BY U.S. POSTAL SERVICE) TO BE INSTALLED PER POSTAL SERVICE SPECIFICATIONS.

CENTER ON PAD.

BACK EDGE OF SIDEWALK

PLAN VIEW

CITY OF REDDING • PUBLIC WORKS DEPARTMENT • ENGINEERING DIVISION

POSTAL PAD
NDCBU "CLUSTER BOX"
CONCRETE PAD WITHOUT J-BOLTS

3 7/13 2/03 UPDATE SLAB THICK.
MARK DATE REVISION

APPROVED BY

10/9/13
CITY ENGINEER
2 TIMES THE EXISTING PIPE DIAMETER

SLURRY BACKFILL PER PAGE 610.00

EXISTING PIPE

NEW PIPE INSTALLATION

TRENCH WIDTH

EXISTING PIPE

BACKFILL PER PAGE 610.00

SLURRY BACKFILL PER PAGE 610.00

2"

NEW PIPE INSTALLATION

PIPE BEDDING PER 609.00 (COMPACTED PRIOR TO SLURRY BACKFILL)
CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES

A. THE CONSTRUCTION OF NEW MAIN LINES FOR THE CONVEYANCE OF POTABLE WATER AND NON-POTABLE MATERIAL SHALL CONFORM TO CALIFORNIA TITLE 22 CODE OF REGULATIONS, DIVISION 4 — ENVIRONMENTAL HEALTH, CHAPTER 16 — CALIFORNIA WATERWORKS STANDARDS, ARTICLE 4 — MATERIALS AND INSTALLATION OF WATER MAINS AND APPURTENANCES, §64572 — WATER MAIN SEPARATION. SAID REGULATION AND APPROVED CASES EXCEPTIONS ARE DETAILED HEREIN.

B. FOR THE PURPOSE OF THIS STANDARD, NON-POTABLE MATERIAL SHALL INCLUDE: UNTREATED SEWAGE, PRIMARY OR SECONDARY TREATED SEWAGE, RECYCLED WATER, AND HAZARDOUS FLUIDS SUCH AS FUELS, INDUSTRIAL WASTES, ETC.

C. IN NO CASE, SHOULD WATER MAINS AND NON-POTABLE PIPELINES CONVEYING SEWAGE OR OTHER LIQUIDS BE INSTALLED IN THE SAME TRENCH.

D. INSTALLATION OF WATER MAINS OR NON-POTABLE PIPELINES 24-INCHES IN DIAMETER OR LARGER SHALL BE REVIEWED AND APPROVED IN WRITING BY THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH ON A CASE-BY-CASE BASIS PRIOR TO CONSTRUCTION.

E. THE CONSTRUCTION CRITERIA PRESENTED IN THIS STANDARD SHALL APPLY TO HOUSE LATERALS THAT CROSS ABOVE A WATER MAIN, BUT NOT TO THOSE HOUSE LATERALS THAT CROSS BELOW A WATER MAIN.

STANDARD MAIN SEPARATION

A. NEW WATER MAINS SHALL BE AT LEAST TEN (10) FEET HORIZONTALLY FROM, AND ONE (1) FOOT VERTICALLY ABOVE, ANY PARALLEL NON-POTABLE PIPELINE.

B. NEW WATER MAINS SHALL BE INSTALLED AT LEAST FOUR (4) FEET HORIZONTALLY FROM, AND ONE (1) FOOT VERTICALLY ABOVE, ANY PARALLEL STORM DRAIN.

C. NEW RAW WATER SUPPLY LINES SHALL BE INSTALLED AT LEAST FOUR (4) FEET HORIZONTALLY FROM, AND ONE (1) FOOT VERTICALLY BELOW, ANY PARALLEL WATER MAIN.

D. IF CROSSING A NON-POTABLE PIPELINE, A NEW WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45-DEGREES TO AND AT LEAST ONE (1) FOOT ABOVE THAT PIPELINE. NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN EIGHT HORIZONTAL FEET OF THE NON-POTABLE PIPELINE.

E. THE VERTICAL SEPARATION SPECIFIED IN (A), (B), AND (C) IS REQUIRED ONLY WHEN THE HORIZONTAL DISTANCE BETWEEN A WATER MAIN AND NON-POTABLE PIPELINE IS LESS THAN TEN (10) FEET.

F. THE MINIMUM SEPARATION DISTANCES ABOVE SHALL BE MEASURED FROM THE NEAREST OUTSIDE EDGE OF EACH PIPE BARREL.

ALTERNATE CRITERIA FOR MAIN SEPARATION

A. WHEN NEW WATER MAINS OR NON-POTABLE PIPELINES CANNOT BE CONSTRUCTED IN ACCORDANCE WITH THE ABOVE STANDARD DUE TO LIMITING EXISTING CONDITIONS, THE APPROPRIATE ALTERNATE CONSTRUCTION CRITERIA DESCRIBED IN THE CASES BELOW SHALL APPLY EITHER ONE OR BOTH OF THE SYSTEMS.

- CASE 1: A NEW NON-POTABLE PIPELINE AND A NEW OR EXISTING WATER MAIN.
- CASE 2: A NEW WATER MAIN AND AN EXISTING NON-POTABLE PIPELINE.
CASE 1  
NEW NON-POTABLE PIPELINE

CASE 2  
NEW WATER MAIN

### Description of Special Conditions by Zone

<table>
<thead>
<tr>
<th>ZONE</th>
<th>CASE 1: NEW NON-POTABLE MAIN</th>
<th>CASE 2: NEW WATER MAIN</th>
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<tbody>
<tr>
<td>P</td>
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<tr>
<td>B</td>
<td>NEW CONSTRUCTION WITHIN THIS AREA SHALL BE DIP WITH COMPRESSION JOINTS OR PVC WITH RUBBER RING JOINTS (ASTM D3034)</td>
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<tr>
<td>C</td>
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