

SECTION E PIPE BEDDING AND TRENCH BACKFILL

- E-1-1 Pipe Bedding and Trench Backfill
- E-1-2 Pipe Bedding and Trench Backfill Notes
- E-2-1 Trench Resurfacing
- E-3-1 Unattended Excavation Safety Notes
- E-3-2 Unattended Trench Excavation Cross Sections

GENERAL BACKFILL REQUIREMENTS

1. ALL EXISTING, NEW AND FUTURE ROADWAY AREAS WITH TRENCH WIDTH GREATER THAN 2' AND LESS THAN 6' - IMPORTED SANDY MATERIAL WITH S.E. > 30.
2. ALL EXISTING NEW AND FUTURE ROADWAY AREAS WHERE TRENCH WIDTH EXCEEDS 6' AND OPEN FIELDS OUTSIDE PLANNED AND PRESENT RIGHT-OF-WAYS - NATIVE MATERIAL WITH 2" MAXIMUM GRADATION.
3. EXISTING ROADWAYS WITH TRENCH WIDTHS OF 2' OR LESS OR HAVING LESS THAN 25 SQ. FEET OR WHEN DIRECTED IN ANY EXISTING ROADWAY TRENCH - CLASS 100-E-100 P.C.C.

BEDDING REQUIREMENTS:

WATER PIPES

- D.I. PIPE - TYPE 1 OR 2
- P.V.C. PIPE - TYPE 1
- POLYETHYLENE TUBING - TYPE 1

SANITARY SEWER PIPE

- P.V.C. OR A.B.S. COMPOSITE TRUSS PIPE - TYPE 1 OR 3
- P.V.C. SCH. 40 OR A.B.S. SOLID WALL S.D.R. 23.5 - TYPE 1 OR 3
- P.V.C. SOLID WALL S.D.R. 35.0 - TYPE 3
- H.D.P.E. PROFILED WALL PIPE - TYPE 3

MINIMUM DEPTH OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR ALL SANITARY SEWER INSTALLATIONS SHALL BE 3 FEET, UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE CITY ENGINEER. FOR COVER LESS THAN 3 FEET, COMPOSITE TRUSS AND SOLID WALL SDR 23.5 PIPE SHALL BE USED. TYPE 3 BEDDING SHALL BE USED ALL CASES WHEN DEPTH TO INVERT IS LESS THAN 3 FEET.

STORM DRAIN PIPE

- REINFORCED CONCRETE PIPE - TYPES 1, 2, OR 3.
- H.D.P.E. PROFILE PIPE AND P.V.C. SOLID WALL SDR 35.0 PIPE - TYPE 1 OR 3

BEDDING TYPES

- TYPE 1 - SANDY MATERIAL WITH S.E. > 30. HAND TAMP BOTTOM SEGMENT PRIOR TO PLACING PIPES.
- TYPE 2 - IN FREE DRAINING GRANULAR NATIVE MATERIALS, HAND EXCAVATE AND SHAPE BOTTOM OF TRENCH TO SUPPORT PIPE TO MIN. DEPTH OF O.D./3. REMAINING BEDDING TO BE SANDY MATERIAL WITH S.E. > 30.
- TYPE 3 - CRUSHED AGG. BASE MATERIAL OR CRUSHED MISCELLANEOUS BASE MATERIAL OF FINE GRADATION.

PIPE BEDDING AND TRENCH BACKFILL - NOTES

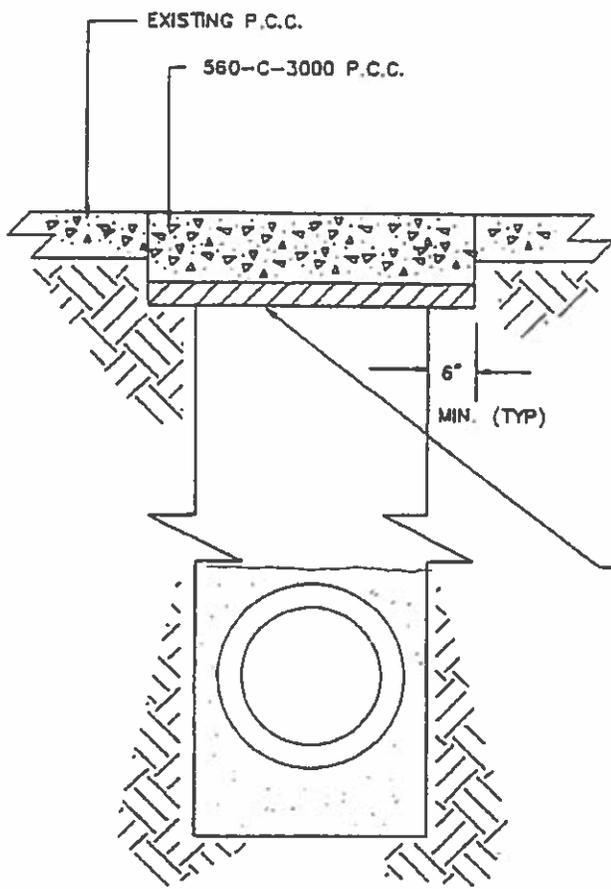
CITY OF SAN JUAN BAUTISTA

STANDARD PLANS

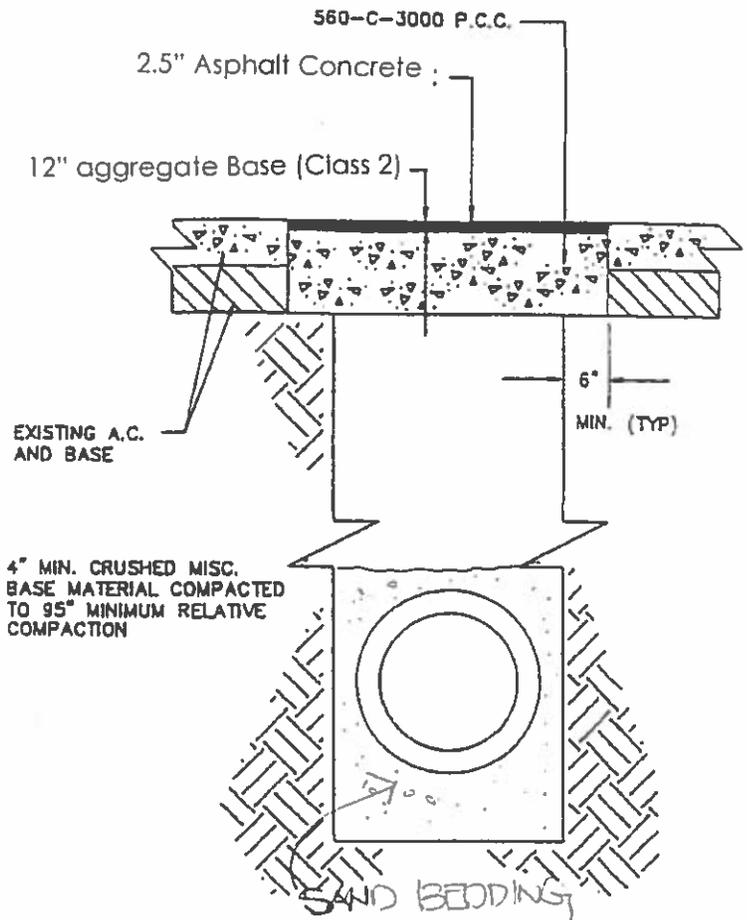
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SHEET 2 OF 2



TYPE - C



TYPE - D

GENERAL NOTES:

1. EXISTING A.C. OR P.C.C. SHALL BE CUT AND REMOVED IN SUCH A MANNER SO AS NOT TO TEAR, BULGE, BREAK, OR DISPLACE ADJACENT PAVEMENT. EDGES SHALL BE CLEAN AND VERTICAL. ALL CUTS SHALL BE PARALLEL OR PERPENDICULAR TO STREET CENTERLINE, WHEN PRACTICAL.
2. SEE STANDARD PLANS E-1-1 AND E-1-2 FOR PIPE BEDDING AND TRENCH BACKFILL REQUIREMENTS.

NOTES TYPE - C

1. CONCRETE SHALL BE EQUAL THICKNESS TO EXISTING P.C.C. WITH A MINIMUM OF 7 INCHES.

NOTES TYPE - D

1. A.C. SHALL BE HOT PLANT MIX. A.C. SHALL BE LAID DOWN USING A SPREADER BOX WHEN TRENCH WIDTH EXCEEDS 4 FEET.
2. CONCRETE TO BE PLACED TO DEPTH OF EXISTING BASE WITH A MINIMUM THICKNESS OF 7 INCHES.
3. A TACK COAT OF ASPHALTIC EMULSION OR PAVING ASPHALT SHALL BE APPLIED TO THE A.C. AT ALL CONTACT SURFACES AND TO ALL CONCRETE PRIOR TO PLACING THE NEW A.C.
4. A.C. RESURFACING SHALL BE SEAL COATED WITH AN EMULSIFIED ASPHALT AND COVERED WITH CLEAN SAND.
5. NOT TO BE USED UNLESS SHOWN ON THE PLANS OR APPROVED BY THE PUBLIC WORKS INSPECTOR.

TRENCH RESURFACING

CITY OF SAN JUAN BAUTISTA

STANDARD PLANS

APPROVED: Roger Grimsley City Engineer

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MINIMUM PUBLIC SAFETY REQUIREMENTS FOR UNATTENDED EXCAVATIONS

PRIOR TO THE CONTRACTOR'S DEPARTURE FROM THE SITE OF ANY EXCAVATION, PROVISIONS SHALL BE MADE FOR COMPLIANCE WITH THESE MINIMUM REQUIREMENTS OR EXCAVATIONS SHALL BE BACKFILLED. THE FOLLOWING ARE MINIMUM ACCEPTABLE MEASURES ONLY, AND COMPLIANCE WITH THIS STANDARD DOES NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO PROTECT THE PUBLIC BY ALL NECESSARY MEANS.

FENCES OR COVERS MAY BE OMITTED AT THE OPTION OF THE CONTRACTOR IF THE EXCAVATION IS MORE THAN 6 FEET FROM THE EDGE OF ANY VEHICULAR LANE OR PEDESTRIAN WAY IN ANY OF THE FOLLOWING INSTANCES:

- a. LESS THAN 3 1/2 FEET DEEP WITH SUFFICIENT WARNING DEVICES SUCH AS BARRICADES WITH FLASHERS.
- b. CASE - B, LESS THAN 3 FEET DEEP IN THE VERTICAL PORTION WITH UPPER SIDE SLOPES OF 1:1 OR FLATTER.
- c. IN ANY AREA THAT IS NOT ACCESSIBLE TO THE PUBLIC OR THAT IS MORE THAN 1/2 MILE FROM ANY PLACE OF PUBLIC USE OR HABITATION.

FENCING MAY BE STEEL POST WITH WIRE MESH OR WOODEN RAIL WITH 2" X 4" POSTS. FENCES SHALL BE CONSTRUCTED SUFFICIENTLY TO PRECLUDE A 6 INCH SPHERE. FENCE HEIGHT SHALL BE 6 FEET MINIMUM FOR ANY EXCAVATION EXCEEDING 5 FEET IN DEPTH, WITH 3 1/2 FEET MINIMUM FENCE HIGHT FOR SHALLOWER EXCAVATIONS.

COVERS MAY BE 1/4 INCH STEEL PLATES, 2 INCH PLANKS, OR 3/4 INCH PLYWOOD FOR NON VEHICULAR TRAFFIC. ONLY STEEL PLATES SHALL BE USED FOR VEHICULAR TRAFFIC COVERS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE PROPER TRENCH BRACING AND STEEL PLATES WITH SUFFICIENT STRENGTH TO WITHSTAND TRAFFIC LOADS.

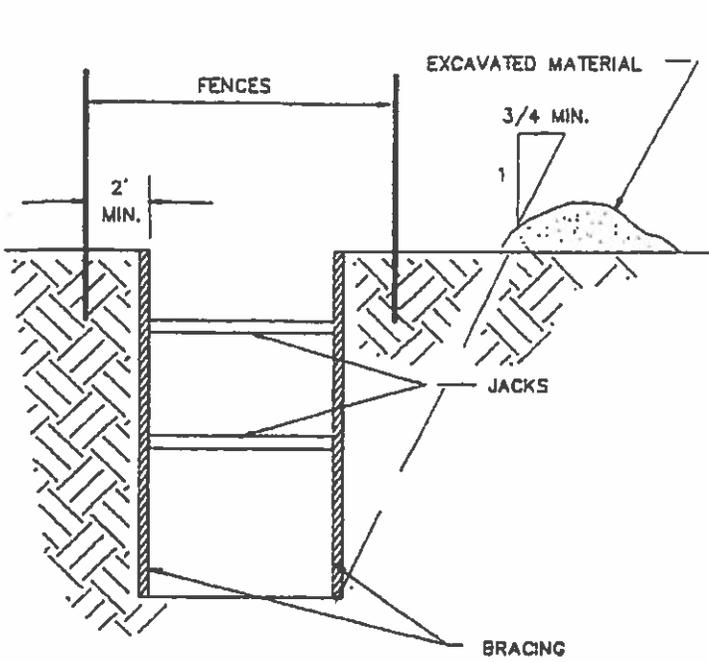
UNATTENDED EXCAVATION SAFTEY

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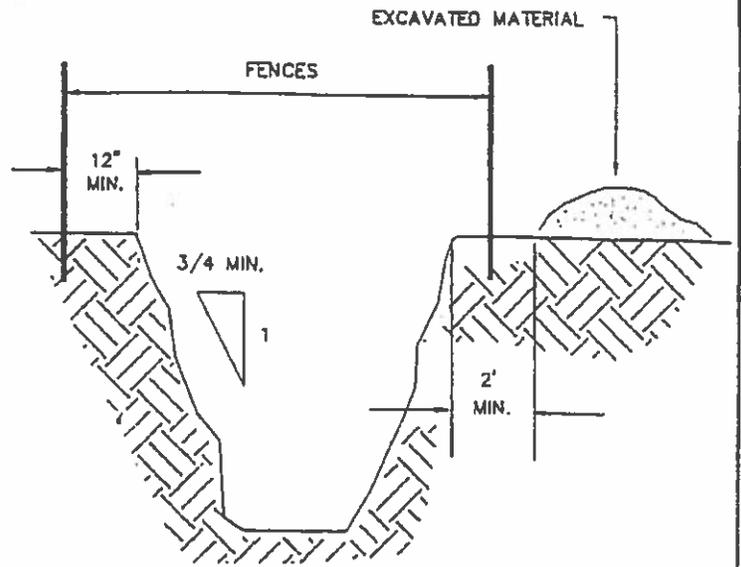
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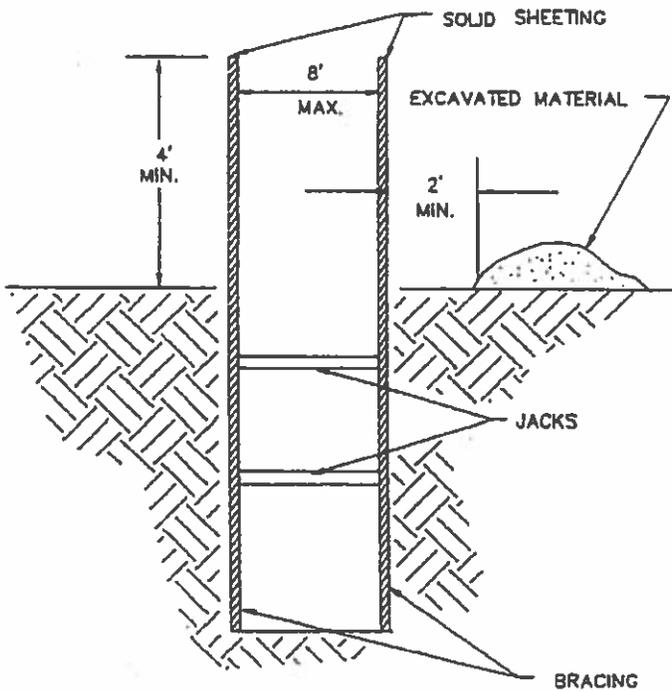
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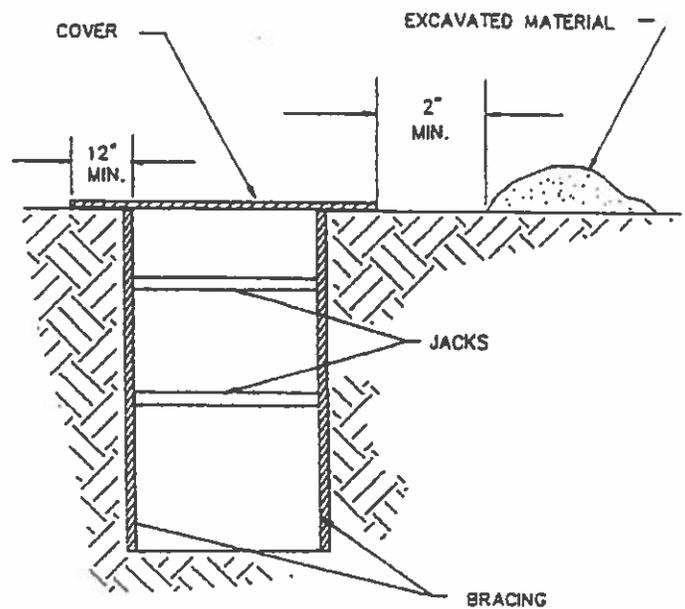
FENCE DETAIL CASE - A



FENCE DETAIL CASE - B



FENCE DETAIL CASE - C



COVER DETAIL

UNATTENDED EXCAVATION SAFETY

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