

NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

**FOCUS**

CORPORATION

HYDRANT CONNECTION

DRAWN BY

MF

DATE

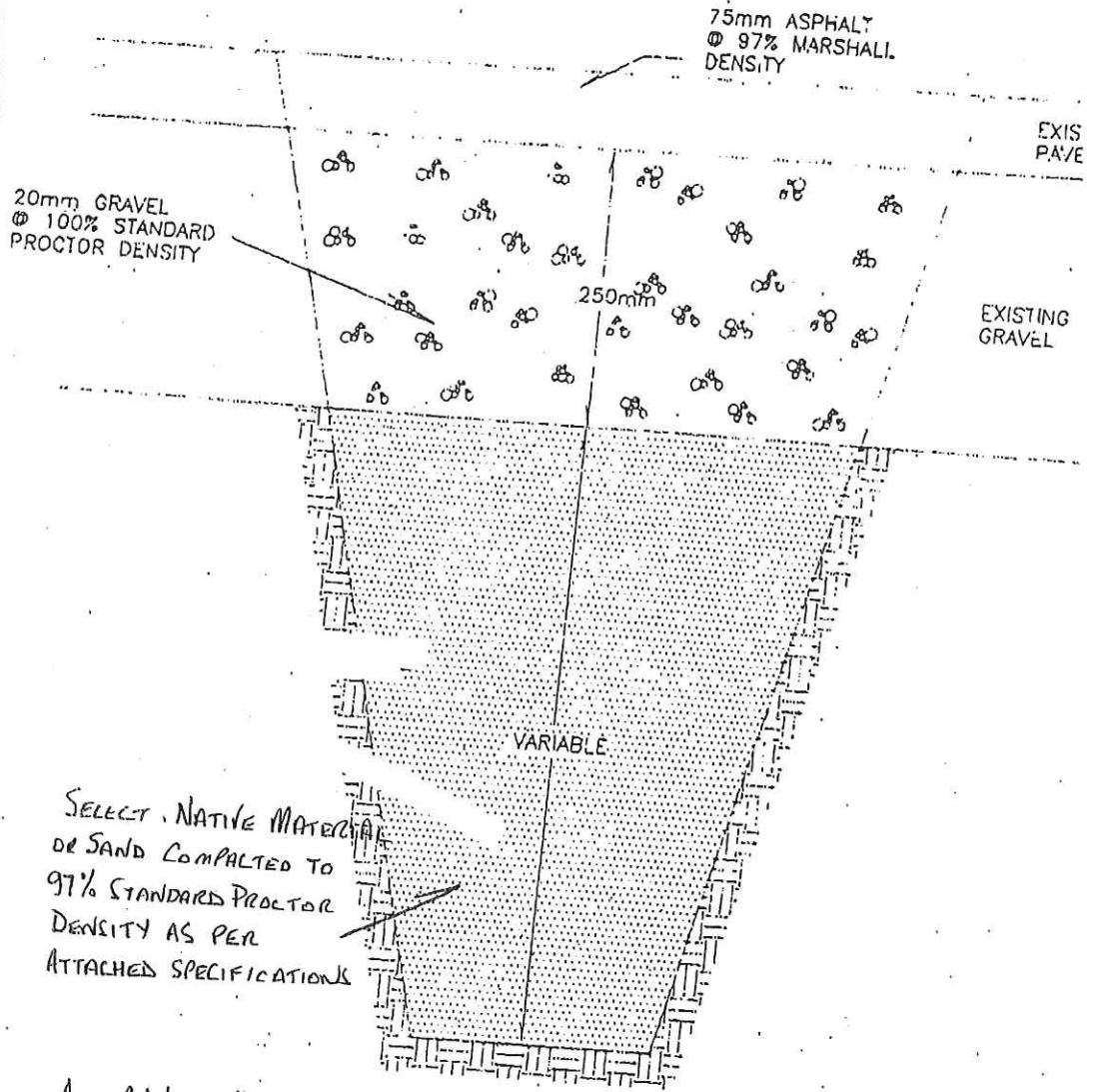
5/20/98

SCALE

N.T.S.

DRAWING NO.

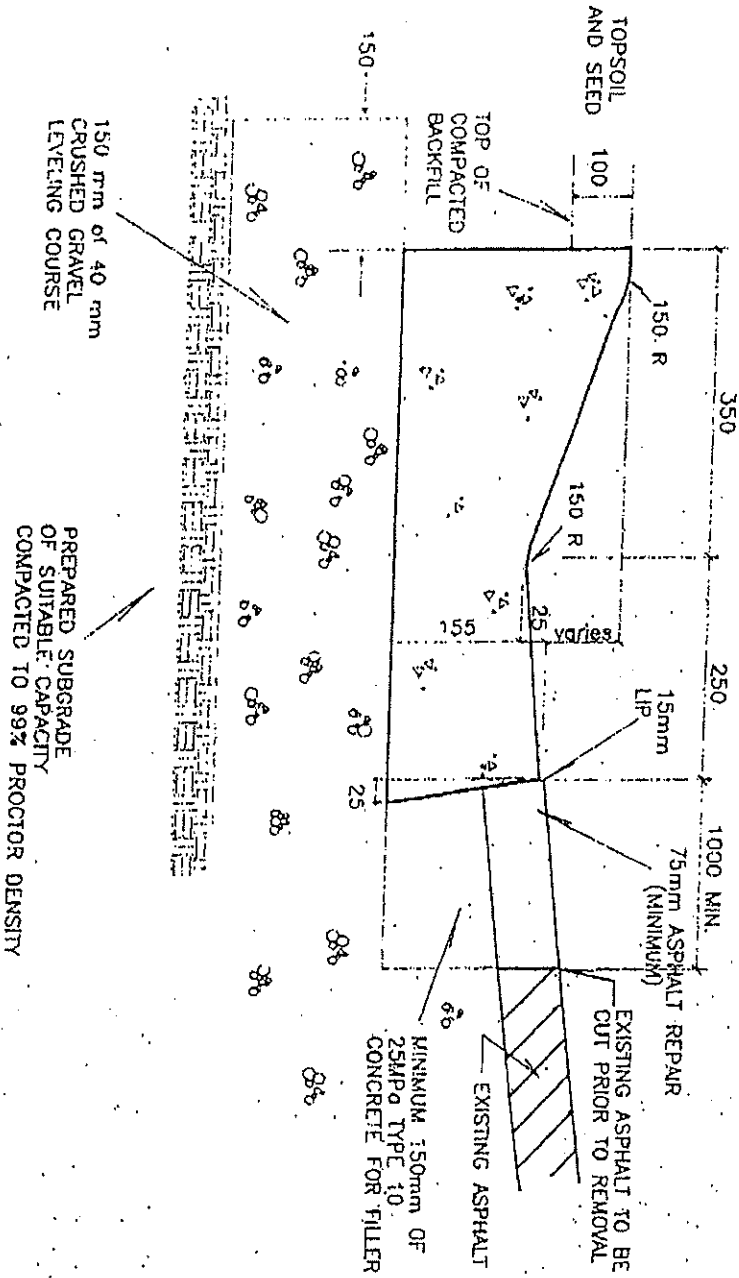
91-02



ALL PUBLIC R/W AND ROAD CROSSINGS SHALL BE WARRANTED FROM DEFECTS AND SETTLEMENTS BY THE CONTRACTOR FOR A PERIOD OF ~~ONE~~ (2) YEAR FOLLOWING CONSTRUCTION COMPLETION.

CROSS SECTION OF PAVEMENT RESTORATION DETAIL

PAVEMENT RESTORATION DETAIL



150 mm of 40 mm  
CRUSHED GRAVEL  
LEVELING COURSE

PREPARED SUBGRADE  
OF SUITABLE CAPACITY  
COMPACTED TO 99% PROCTOR DENSITY

## **MATERIALS**

### **NATIVE**

Shall consist of material excavated from the trench. It shall contain no frozen soil, roots, rocks or other objectionable material in quantities that might cause pipe damage, excessive settlement or inadequate compaction. The moisture content shall be such as to allow proper placing and compaction.

### **SAND**

Shall consist of soil not excavated from the trench which has an even gradation falling within the following limits:

<b>Screen Size (microns)</b>	<b>Allowable Passing (percent)</b>
400	95 to 100
80	2 to 10

### **GRAVEL**

Shall consist of soil not excavated from the trench which has an even gradation falling within the following limits and with a 25% fracture count and a plasticity index below 8%:

<b>Screen Size (microns)</b>	<b>Allowable Passing (percent)</b>
20,000	100
10,000	35 to 77
5,000	15 to 55
1,250	0 to 30
80	0 to 12

## **INSTALLATION**

### **BACKFILLING**

- a) Backfilling shall consist of the supply, installation and compaction of material into the backfill zone of the trench. The backfill zone is that part of the trench between the surface of the undisturbed ground and an elevation 300 mm above the top of the pipe.
- b) Material used as backfill shall be in accordance with the material specifications. The various classes of material shall be placed and compacted as follows:
  - i) Native backfill shall be placed in layers not greater than would allow the firm compaction of the material. The backfill should be placed so as to minimize future trench settlement.
  - ii) Compacted Native backfill shall be placed in layers no greater than 300mm and then compacted to 97% as measured with the Standard Proctor Density test.
  - iii) Compacted Sand backfill shall be placed in layers no greater than 300mm and then be compacted to 97% as measured with the Standard Proctor test.
  - iv) Compacted Granular backfill shall be placed in layers no greater than 150mm and then be compacted to 97% as measured with the Standard Proctor test.
- c) Backfill material shall be rolled down the trench sideslope and shall not be pushed over the edge and dropped into the trench. In no case shall backfilling cause damage to the pipe or fittings.
- d) In below freezing temperatures the work shall be planned to minimize exposure of the backfill to frost action. Frozen chunks of material shall not be used as backfill.

Any frozen material removed from the trenches shall be replaced with sand or other suitable unfrozen backfill material. The frozen material that is not to be used shall be stockpiled within the limits of the construction site in an area designated by the Developer's Engineer.
- e) The Contractor shall repair, without cost, all settlements of the backfill material which occur during the maintenance period. This includes, but is not inclusive to, asphalt cracking, sidewalk cracking, driveway cracking and settlement around utilities.