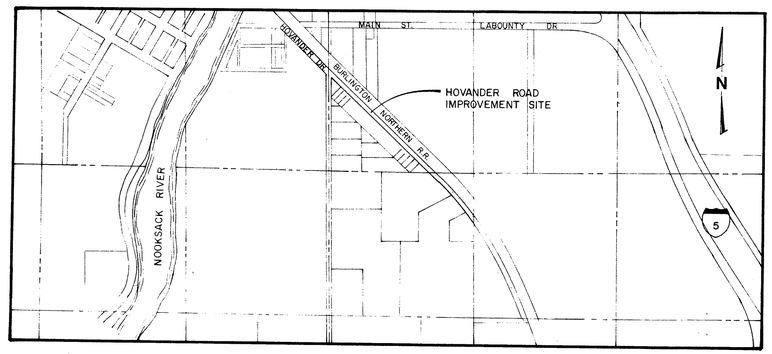
CITY OF FERNDALE

WASHINGTON

SANITARY SEWER & WATER DISTRIBUTION

HOVANDER ROAD



VICINITY MAP

CITY OFFICALS

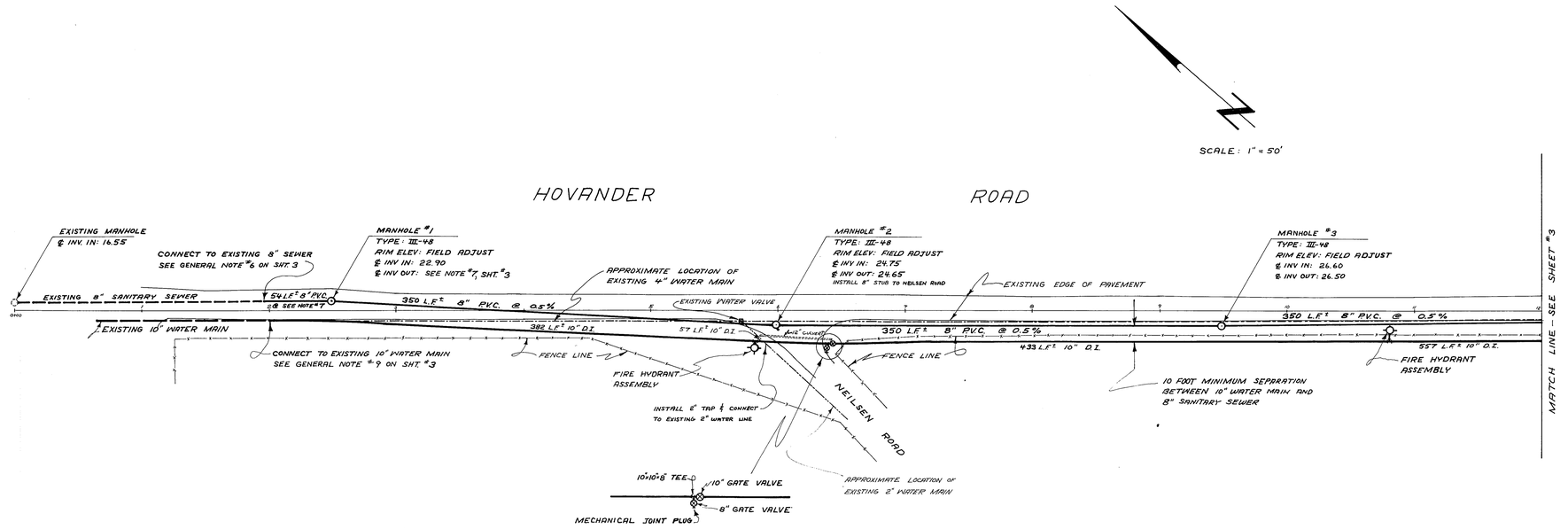
CITY MANAGER
RON PETERSON

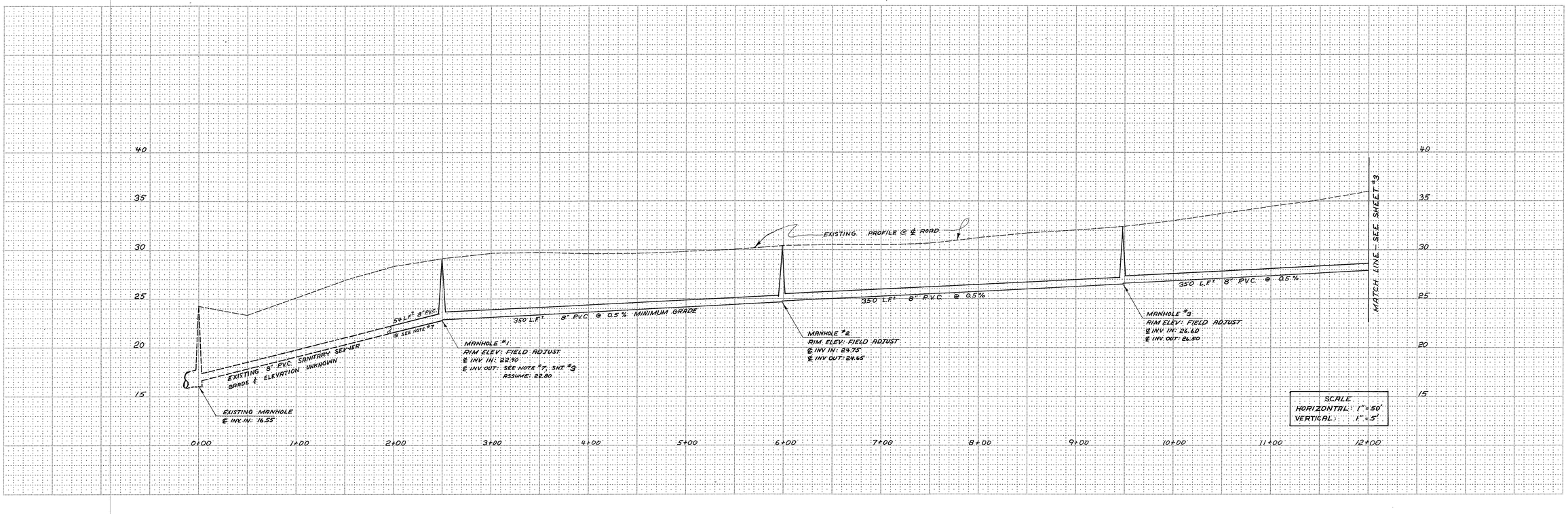
CITY COUNCIL
GARY GIBBONS, D.P. SIZEMORE, AL SCHMIDT
LORNA McNALL, JACK WILLIAMS, DENNIS HAWKINSON, LEROY EGGERS

CLERK TREASURER
ROLAND SIGNETT

UTILITIES SUPERINTENDENT
JOHN ELEY

INDEX OF SHEETS





493.002

NORTHWEST CONSULTANTS
CIVIL & STRUCTURAL ENGINEERING
1401 ASTOR, BELLINGHAM, WA. (206) 676-9058

HOVANDER ROAD U.L.I.D.
FERNDALE CITY HALL
FERNDALE, WA. 98248

SCALE: HORIZ: 1"=50' VERT: 1"=5'
DATE: 25 August 1982
DRAWN BY: EF
CHECKED BY: E.F. & T.T.
JOB NO: 81-971

REVISIONS
MARK | DESCRIPTION | DATE | BY

HOVANDER ROAD

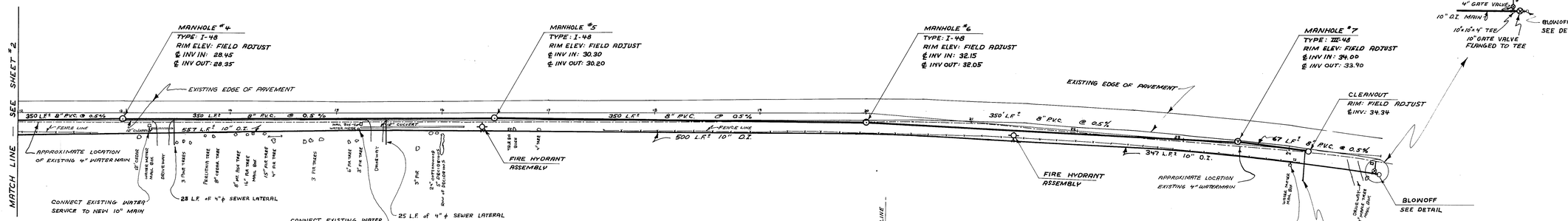
SANITARY SEWER & WATER DISTRIBUTION SYSTEM
PLAN AND PROFILE

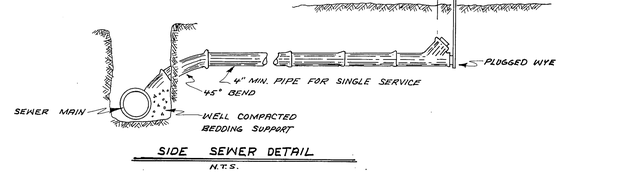
SHEET 1 OF 3

JOB NO. 81-971

HOVANDER ROAD

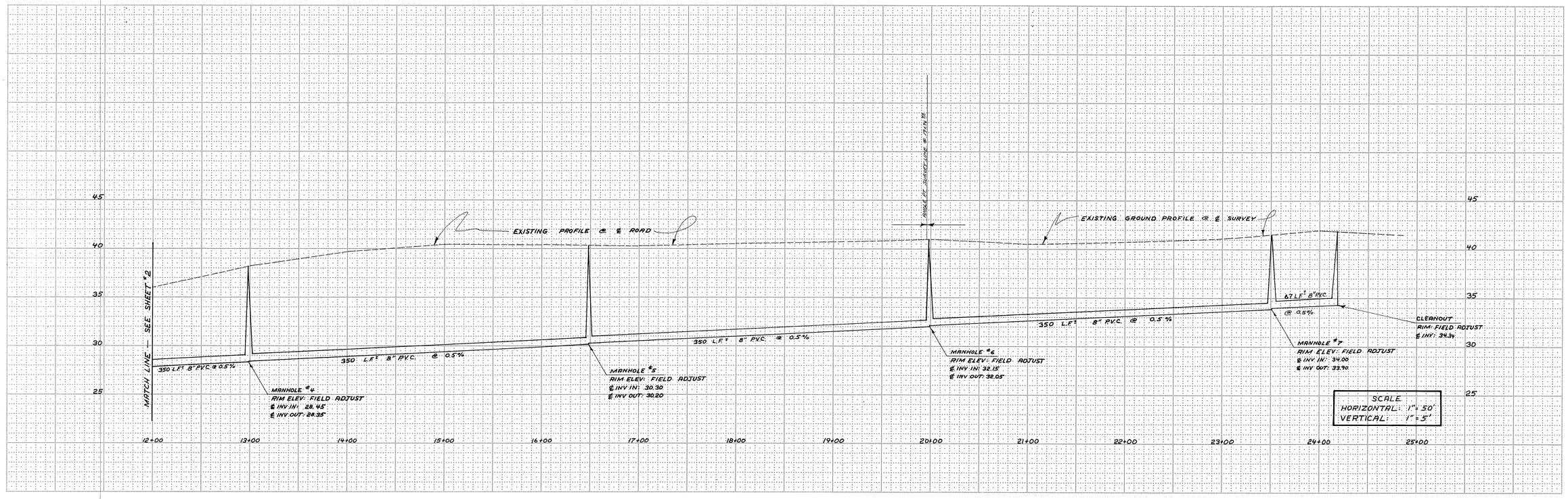
SCALE: 1" = 50'





SIDE SEWER DETAIL
N.T.S.

BLOWOFF DETAIL
N.T.S.



SCALE
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

473.60 3

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FERNDALE CITY HALL
FERNDALE, WA. 98248

SCALE: HORIZ: 1"=50' VERT: 1"=5'
DATE: 26 AUGUST 1982
DRAWN BY: E.F.C.
CHECKED BY: E.F.C.J.T.
JOB NO: 81-971

REVISIONS			
MARK	DESCRIPTION	DATE	BY

HOVANDER ROAD

SANITARY SEWER & WATER DISTRIBUTION SYSTEM

PLAN AND PROFILE

SHEET 2 OF 3

JOB NO. 81-971

GENERAL CONDITIONS

1. All materials, workmanship and testing shall conform to A.P.W.A. 1981 Edition Specifications, unless otherwise noted within these plans.

2. The contractor must assume the risk of meeting quicksand, hardpan, boulders, clay, rubbish, existing utility lines, water table and other unforseen obstacles.

3. The vertical datum is a U.S.G.S. bench mark (brass disk) located at the southeast corner of the main street bridge. Elevation = 34.90.

4. All pipe grades and inverts are computed from centerline of manhole to centerline of manhole.

5. A one-year maintenance bond in an amount to be dertermined by the City (but not less than 25% of the project cost) shall be submitted prior to acceptance of the project.

6. The contractor shall locate and expose the existing sanitary sewer before any work is started on the sanitary sewer system. He shall give a 48 hour notice to the engineer before exposing of the line.

7. The grade on this run shall match the grade of the existing pipe. The invert out elevation on manhole #1 may have to be adjusted higher depending on the depth of the existing pipe.

8. The sanitary sewer shall be laid a minimum of at least 10 feet, horizontally, from any existing or proposed water main.

9. The construction shall be scheduled so that the existing water lines will be in service at all times. The only exception being when the actual connections to the existing water mains at both ends are being made.

10. The water main shall be laid first, because of the possible conflicts of the new sanitary sewer and the existing water main.

11. All locations of existing utilities shown are approximate. It shall be the responsibility of the contractor to verify the true and correct location of them.

12. The contractor shall maintain and/or relocate, where required all existing traffic signs, fences, mail boxes, driveways and other miscellaneous surface structures which are in conflict with the proposed improvements. Payment for these items will be considered as incidental to the lump sum bid for clearing and grubbing.

13. The restoration and clean-up of the water and sewer main construction shall conform to the applicable portions of section 57 of the Standard Specifications. Payment shall be considered as incidental to the construction of the project and all costs thereof shall be included by the contractor in other items of work.

14. The contractor shall obtain a revocable encroachment permit issued by the City of Ferndale before construction begins.

15. The contractor shall obtain and follow the City of Ferndale's standards and requirements for all utility cuts in street right of ways.

SPECIFICATIONS FOR WATER DISTRUBUTION SYSTEM

GENERAL:

"Standard Specifications" referred to herein refer to the Standard Specifications for Municipal Public Works Construction as prepared by the Washington State Chapter, A.P.W.A., 1981 Edition and all material and construction shall comply with and be done in accordance with said Standard Specifications, or as shown on the plans.

The following specifications are to be read in conjunction with the Standard Specifications and these detailed specifications are herby made a part of this contract.

WATER DISTRUBUTION SYSTEM

1. Water mains, service lines, valves, hydrants and fittings shall be constructed as shown on the plans, as required by the State Department of Public Health, the City of Ferndale, and specified hereon.

2. Water pipe and fittings shall be ductile iron pipe Class 50 and shall comply with Section 72-3 of the Standard Specifications.

3. Buried gate valves shall meet the material and installation requirements as outlined in Section 75 of the Standard Specifications. They shall have a non-rising stem, shall open counterclockwise and sufficient wrenches to operate all valves shall be provided.

4. All gate valves adjacent to a tee or cross shall be flange connected.

5. Fire hydrants shall meet the material and installation requirements as outlined in Section 77 of the Standard Specifications. The hydrant shall be installed so that the direction of the pumper connection faces the roadway. Hydrant shall be of traffic type with designated replaceable break points.

6. Valve boxes shall be cast iron, 2-piece, screw type extension, equal to Atlas Foundry Company or Olympic Foundry Company and shall conform to Section 75 and Section 76 of the Standard Specifications.

7. All backfill in trenches shall meet the material and compaction requirements of Section 73 of the Standard Specifications or as approved by the Public Works Department and shall be compacted to 95% of its maximum dry density as defined by ASTM D-1557-64T.

8. The pipe shall be laid to the alignment and grades furnished by the engineer. Deflections from a straight line or grade as required by vertical curves, horizontal curves, or offsets shall not exceed the maximum deflections recommended by the pipe manufacturer. Where the alignment or grade requires deflections in excess of recommended limits with standard pipe lengths, a sufficient number of shorter lengths shall be used.

9. Trench depth shall be as required to provide a minimum of 36" cover from finished grade.

10. No pipe shall be covered until it has been inspected and permission to backfill has been obtained. Backfilling and surface restoration shall follow closely the installation and the testing of the pipe.

11. Where governmental agencies, other than the owner, have jurisdiction over roadways, the backfill and compaction shall be done to the satisfaction of the agency having the jurisdiction.

12. Concrete blocking shall meet the requirements of Section 74-2.13 of the Standard Specifications.

13. Concrete blocking shall be placed at all abrupt bends, both horizontal and vertical, and at tees and dead ends. No blocking shall be required at hydrant tees if hydrant is secured to water main by flanged pipe, restraining joints or by rods and shackles.

14. Prior to acceptance of the work, all sections of pipe shall be subjected to a hydrostatic test as per Section 74-2.11 of the Standard Specifications.

15. Sterilization of water mains shall be accomplished by the contractor in accordance with the requirements of the State Health Department, the City of Ferndale and in a manner satisifactory to the engineer and as outlined in Section 74-2.12 of the Standard Specifications.

16. Butterfly valves are acceptable and shall meet all the requirements of Section 75-2.05 of the Standard Specifications.

17. The fire hydrants shall be a Iowa F5110 or approved equal.

18. The water services shall meet all the material and workmanship requirements of the City of Ferndale.

SPECIFICATIONS FOR SANITARY SEWERS

GENERAL:

"Standard Specifications" referred to herein refer to the Standard Specifications for Municipal Public Works Construction as prepared by the Washington State Chapter, A.P.W.A., 1981 Edition, and all material and construction shall comply with and be done in accordance with said Standard Specifications, or as shown on the plans.

The following specifications are to be read in conjunction with the Standard Specifications and these detailed specifications hereby made a part of the contract.

GRAVITY SEWER

1. Non-reinforced concrete sewer pipe with bell and spigot end shall conform to ASTM Designation C-14 Extra Strength. All pipe shall be coupled with a "Standard O-Rinz" type of rubber gasket.

2. PVC pipe and fitting shall conform to ASTM Specifications D-3033 latest issue: Type PSP Poly (vinyl-chloride) (PVC) Sewer Pipe and Fitting". All pipe and fittings shall be made from PVC compounds as defined and described in ASTM D1784. Joints made with pipe and fittings or with belled end pipe shall have elastomeric gasket joints.

3. Fittings, unless otherwise indicated, for various pipe shall be the same as the pipe material.

4. Manhole installation and testing shall conform to the requirements of Section 63 of the Standard Specifications and shall be constructed at such locations and to such dimensions as shown on plans and standard detail. Manholes, Type I-48 shall be used for depths greater than 8'-0".

5. Cleanouts shall be constructed as per Standard Plan #45 of the A.P.W.A. Specifications. Cleanouts on service lines shall be constructed as shown in the side sewer details.

CONSTRUCTION SPECIFICATIONS

1. Pipe joints shall be made in strict conformance with the manufacturers recommendations and directions.

2. Pipe installation and testing at locations, lines and grades as shown on the plans, shall be in conformance with provisions of Sections 60, 61 and 62 of the Standard Specifications.

3. Bedding for PVC pipe shall be Type 2 and shall be in accordance with Section 61-5 of the Standard Specifications.

4. All backfill in trenches shall be in accordance with Sections 61-6 of the Standard Specifications.

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SCALE:
DATE: 7 SEP 82
DRAWN BY: E.F.
CHECKED BY:
JOB NO: 81-971

REVISIONS
MARK DESCRIPTION DATE BY

HOVANDER ROAD

SANITARY SEWER & WATER DISTRIBUTION SYSTEM
SPECIFICATIONS

SHEET 3 OF 3

JOB NO 81-971