

LOCATION MAP

(NOT TO SCALE)



GRADING NOTES

1. A Geotechnical Engineer shall be employed by the owner and be on site during grading operations. All soil tests shall be verified by the Geotechnical Engineer concurrent with the grading and backfilling operations.
2. The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reasonably implied therefrom, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.
3. The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.
4. All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
5. A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded area is to be allowed to remain bare over the winter without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and silt up existing downstream storm drainage system.
6. Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.
7. Any existing trash and debris currently on this property must be removed and disposed of off-site.
8. Soft soil in the bottom and banks of any existing or former pond sites or tributaries should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right-of-way locations or on storm sewer locations.
9. Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and weeds; the grubbing and removal of roots and other surface obstructions from the site, and the demolition and removal of any man-made structures. Topsoil and grass in the fill areas shall be thoroughly diced prior to the placement of any fill. The Soils Engineer shall approve the dicing operation.
10. Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory roller, or high speed impact type drum rollers acceptable to the Soils Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
11. The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to the Owner at regular intervals.
12. The Soils Engineer shall notify the Contractor of rejection of a lift of fill or portion thereof. The Contractor shall rework the rejected portion of fill and obtain notification from the Soils Engineer of its acceptance prior to the placement of additional fill.
13. All areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted in accordance with the specifications given below. Natural slopes steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches cut into the slopes before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptability of soils placed. Any unacceptable soils placed shall be removed at the Contractor's expense.
14. The sequence of operation in the fill areas will be fill, compact, verify acceptable soil density, and repetition of the sequence. The acceptable moisture contents during the filling operation are those at which satisfactory dry densities can be obtained. The acceptable moisture contents during the filling operation in the remaining areas are from 2 to 5 percent above the optimum moisture control.
15. The surface of the fill shall be finished so that it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.

PLANS FOR THE CONSTRUCTION OF SANITARY SEWERS, STORM SEWERS, GRADING, PAVING, AND WATER MAINS FOR

WINCHESTER ESTATES

A TRACT OF LAND BEING PART OF THE NORTHWEST QUARTER OF FRACTIONAL SECTION 34, TOWNSHIP 47 NORTH, RANGE 3 EAST OF THE FIFTH PRINCIPAL MERIDIAN, ST. CHARLES COUNTY, MISSOURI

WATER, SANITARY & STORM SEWER AS-BUILTS

LEGEND

- CL CURB INLET
- D.C.I. DOUBLE CURB INLET
- A.I. AREA INLET
- M.H. MANHOLE
- F.E. FLARED END SECTION
- E.P. END PIPE
- C.P. CONCRETE PIPE
- R.C.P. REINFORCED CONCRETE PIPE
- C.M.P. CORRUGATED METAL PIPE
- C.I.P. CAST IRON PIPE
- P.V.C. POLY VINYL CHLORIDE (PLASTIC)
- G.O. GLEAN OUT
- *— FIRE HYDRANT
- *— STORM SEWER
- *— SANITARY SEWER
- *— STREET LIGHT
- *— EXISTING CONTOUR
- *— PROPOSED CONTOUR
- *— STREET SIGN
- *— NO PARKING SIGN
- *— WATER VALVE
- *— WATER OFF ASSEMBLY
- *— FUTURE ELEVATION OF HOUSE CONNECTION
- *— FUTURE ELEVATION OF SEWER MAIN
- *— STREET ADDRESS

CATEGORY	MINIMUM PERCENT COMPACTION
Fill in building steel work footings	90%
Fill under slabs, walls, and pavement	90%
Fill other than building areas	85%
Natural subgrade	85%
Pavement subgrade	90%
Pavement base course	90%

Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM-D-1557).

Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

NOTE: Non-organic and incompressible trash and debris shall be disposed of in the detention basin area and other designated areas. All debris shall be buried a minimum of 3 feet below finished grade. Location of debris buried within the limits of the detention basin shall be shown on the as-builts for this project.

GENERAL NOTES

1. Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to any grading or construction of the improvements.
2. All manhole tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
3. 8" P.V.C. sanitary sewer pipe shall meet the following standards: A.S.T.M. - D-3034 SDR-35, with wall thickness compression joint A.S.T.M. - D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
4. All filled places, including trench backfills, under buildings, proposed storm and sanitary sewer lines and/or paved areas, shall be compacted to 90% maximum density as determined by the "Modified AASHTO T-99 Compaction Test" (A.S.T.M. - D-1557). All other trench backfills may be earth material (free of large solids or stones). All trench backfills shall be water settled.
5. All trench backfills under paved areas shall be granular backfill and shall be compacted to 90% of the maximum density as determined by the "Modified AASHTO T-99 Compaction Test" (A.S.T.M. - D-1557). All other trench backfills may be earth material (free of large solids or stones). All trench backfills shall be water settled.
6. All sanitary house connections have been designed so that the minimum vertical distance from the low point of the pavement to the flow line of a sanitary sewer at the corresponding house connection is not less than the diameter of the pipe plus the vertical distance of 2 1/2 feet.
7. No area shall be cleared without the permission of the Project Engineer.
8. All grades shall be within 0.2 feet of those shown on the grading plan.
9. No slope shall be steeper than 3:1 or as called for in the soils report for the project. All slopes shall be sodded or seeded and mulched.
10. All construction and materials used shall conform to current City of O'Fallon Standards.
11. All P.V.C. sanitary sewer pipe shall have crushed stone bedding uniformly graded between 1" and 1/4" size. This bedding shall extend from 4" below the pipe to 6" above the top of the pipe.
12. All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
13. Easements shall be provided for sanitary sewers, and all utilities on the Record Plat. See Record Plat for location and size of easements.
14. Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors.
15. A 25' building line shall be established along all Public Right-Of-Way.

16. Fill and backfill should be compacted to the criteria specified in the following table:
17. All water lines shall be laid at least 10 feet horizontally from any sanitary sewer, storm sewer, or manhole. Whenever water lines must cross sanitary sewers, laterals, or storm sewers, the water line shall be laid at such an elevation that the bottom of the water line is above the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equidistant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet horizontally of any sewer or drain it crosses.
18. Sanitary manholes shall be waterproofed on the exterior in accordance with Missouri Department of Natural Resources specifications (D-CSP-8-120 (7)E).
19. The grading contractor shown on the drawings is an approximate only and is not for bidding purposes. The contractor shall verify quantities prior to construction. It is the intention of the Engineer for the earthwork to balance onsite. The Engineer shall be notified if any difficulties arise in achieving the balance.

DEVELOPMENT NOTES

1. Area of Tract: 10,908 Acres
2. Existing Zoning: R - 1 - P.O.D.
3. Proposed use: Single Family Homes
4. Number of Lots Proposed: 31 Lots
5. Area in Common Ground: 0.865 Acres
6. Area in Right-of-Way: 2.195 Acres
7. Area in Lots: 7.548 Acres
8. Minimum Lots Area: 7,500 Square Feet
9. Average Lot Area (not including common ground): 10,908 Square Feet
10. Average Lot Area including Common Ground: 11,821 Square Feet
11. The proposed height and lot setbacks are as follows:
 Minimum Front Yard: 88 feet
 Minimum Side Yard: 8 feet
 Minimum Rear Yard: 25 feet
 Minimum Lot Area: 7,500 square feet
 Maximum Height of Building: 2 1/2 stories or 35 feet
12. Current Owner and Developer: Sappington Jackson Inc. 103 Woodmere Trail Court St. Charles, MO 63301 314-441-7244
13. Site is served by:
 City of O'Fallon Sewers
 Union Electric Company
 St. Charles Gas Company
 Missouri Cities Water Company
 STE Telephone Company
 Fort Zumwalt School District
 O'Fallon Fire Protection District
14. No Flood Plain exists on this tract per F.R.M. #2183C 0116 D.
15. Topographic information is per survey by Box Engineering Co. during February, 1994.
16. Boundary information is per survey by Box Engineering Co. during October, 1993.
17. No driveways shall enter or exit onto Mexico Road right-of-way.
18. All streets will be constructed to City of O'Fallon standards. Streets will consist of 26 foot wide concrete pavement with integral rolled curb centered in a 50 foot right-of-way. Minimum radius shall be 150 feet.
19. All cul-de-sacs and bays shall have pavement radii of 42 feet with right-of-way radii of 54 feet. Street intersections shall have a minimum rounding radius of 25 feet and pavement radii of 33 feet.
20. The Stormwater Detention Basin shall be sized to detain a 100 year design storm.
21. Minimum street grades shall be 1%.
22. A 4 foot wide concrete sidewalk shall be constructed on streets where indicated.
23. All homes shall have a minimum of 2 off-street parking spaces with 2-car garages.
24. All utilities must be located underground.
25. The developer shall comply with current Tree Preservation Ordinance Number 1488 and provide landscaping as set forth in Article 21 of the City of O'Fallon Zoning Ordinance.
26. Minimum square feet of dwelling space to be 1,100 square feet.
27. All plans used for the sale of property for the development shall show the location of the multi-purpose court and the soccer field and state that it may be lighted one day.

SITE BENCHMARK:

Old cross @ centerline Aspen Point Dr. @ property line of lots 105-106 in Aspen Pointe Plat One Elevation 553.58 (IGGS DATUM)



KEY MAP

(NOT TO SCALE)

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- 11 OF 13 - CONSTRUCTION DETAILS
- 12 OF 13 - CONSTRUCTION DETAILS
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This is to certify that following as-built locations were located in the field and are correctly shown herein.



PREPARED FOR:

SAPPINGTON JACKSON INC.
 103 JULIE LANE
 ST. PETERS, MO 63376
 TELEPHONE 314-441-7244

PREPARED BY:

ENGINEERING
PLANNING
SURVEYING

221 Point West Boulevard
 St. Charles, MO 63301
 314-648-6588
 314-754-3330

FEBRUARY, 1994
 DATE

4/1/94
 REVISIONS

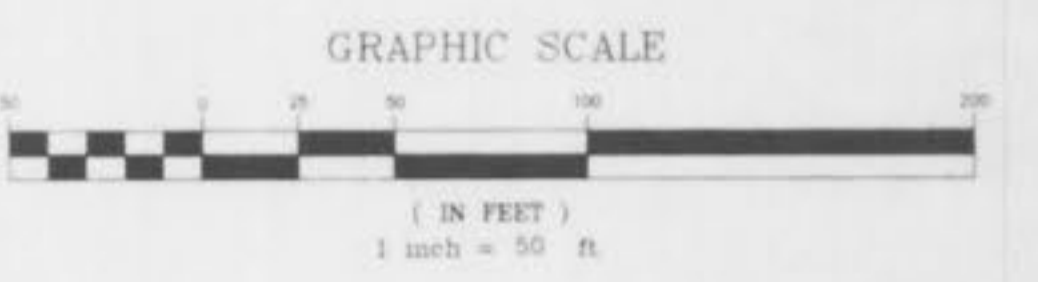
93-3961
 PROJECT NUMBER

1 OF 5
 SHEET

AS-BUILTS ADDED OCTOBER, 1994

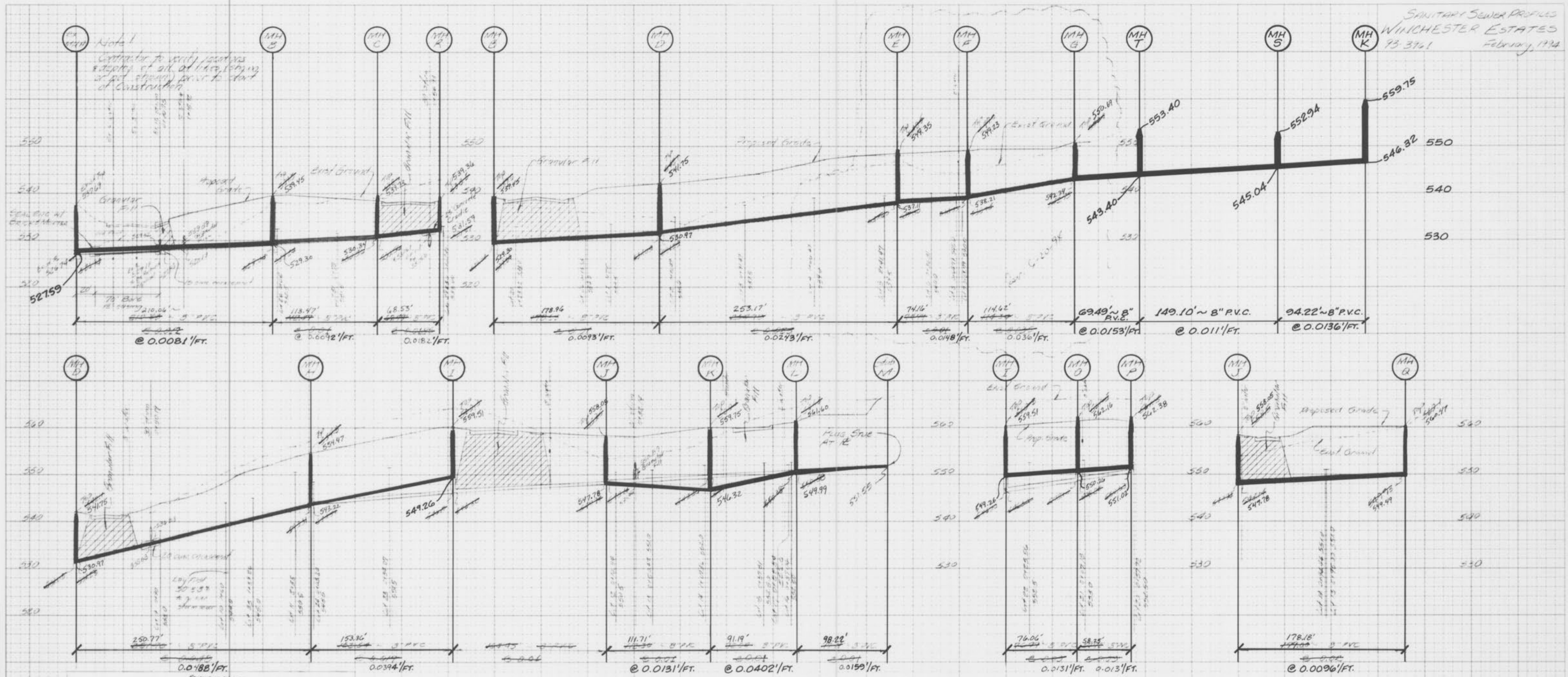
AS-Builts; Sanitary, storm sewers
 Winchester Estates

NOTE!
EXCESS EXCAVATION AT THE DETENTION
BASIN SHALL BE MADE TO ACCOMMODATE
FOR SEDIMENT STORAGE. WHEN THE
DEVELOPMENT IS FOR COMPLETE OR AT
THE TIME AS DIRECTED BY THE CITY OF
DALLAS, THE DETENTION BASIN BOTTOM
SHALL BE BROUGHT UP TO GROUND GRADE
TO PERMIT PROPER DRAINAGE OF THE
BASIN.



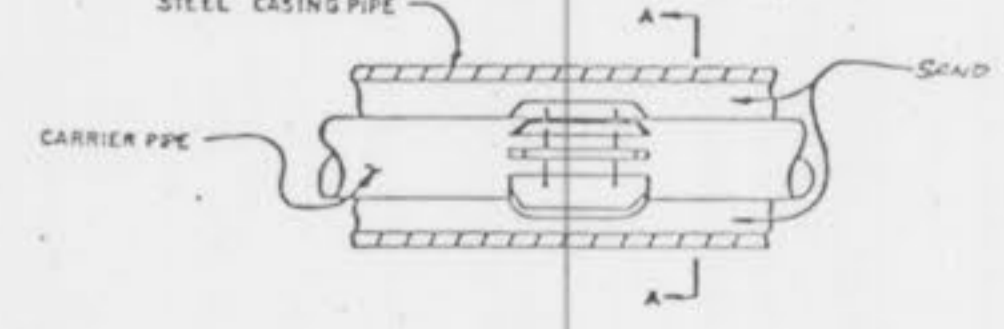
AS-BUILTS ADDED OCTOBER, 1994

FINAL SURVEY
 ORIGINAL SURVEY
 DATE: 10/15/93
 BY: [illegible]

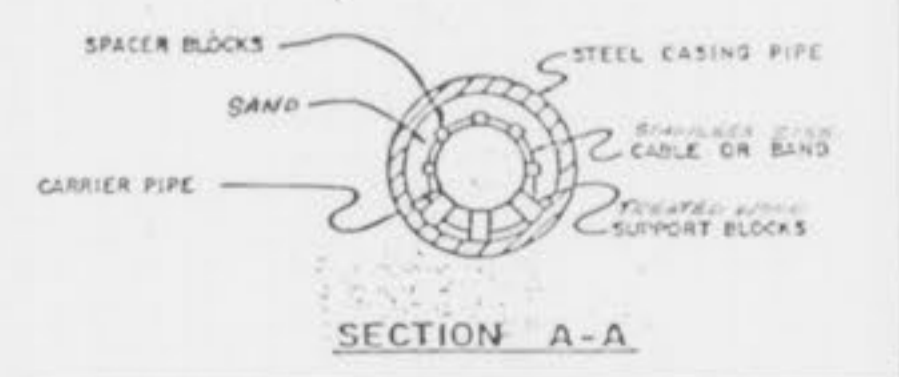


BORING DETAIL

- NOTES:
1. INSIDE DIAMETER OF CASING PIPE TO BE MINIMUM OF 4" GREATER THAN COUPLING DIAMETER OF CARRIER PIPE.
 2. ENCASEMENTS TO BE INSTALLED UNDER THE ROAD BY MEANS OF JACKING IT THROUGH, OR BY DRY-BORING A HOLE THAT WILL RECEIVE THE CASING WITH A SNUG FIT.
 3. THE OUTSIDE DIAMETER OF THE CASING SHALL NOT BE LESS THAN, NOR MORE THAN ONE INCH GREATER THAN THE BORED HOLE.
 4. THE ANNULAR SPACE BETWEEN THE CASING PIPE AND THE BORED HOLE SHALL BE FILLED WITH SAND.
 5. 2" DIA. STEEL CARRIER PIPE WITH 1/2" DIA. HOLES.



SUPPORT OF CARRIER PIPE OR FORCE MAIN IN CASING



SECTION A-A



Scale: 1" = 50' Hor.
 1" = 10' Vert.

AS-BUILTS ADDED OCTOBER, 1994



**FIRE HYDRANTS, WATER VALVES & WATER METERS
 FIELD LOCATED OCTOBER, 1994**



THIS PLAN FOR WATER LAYOUT PURPOSES ONLY
 AS-BUILTS ADDED OCTOBER, 1994

As Built
 Winchester Estates