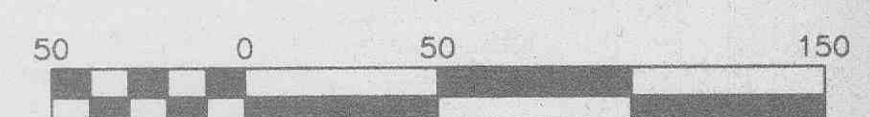


STORM SEWER PLAN AND PROFILE



SCALE 1" = 50'
MARCH 1996

JUN 12 1996

STORM SEWER PLAN AND PROFILE FOR SCHNUCK'S MARKETS O'FALLON MISSOURI

TELEPHONE (314) 239-4751
BUESCHER FRANKENBERG ASSOCIATES INC.
CONSULTANTS & ENGINEERS
1030 ELM STREET WASHINGTON, MISSOURI 63090

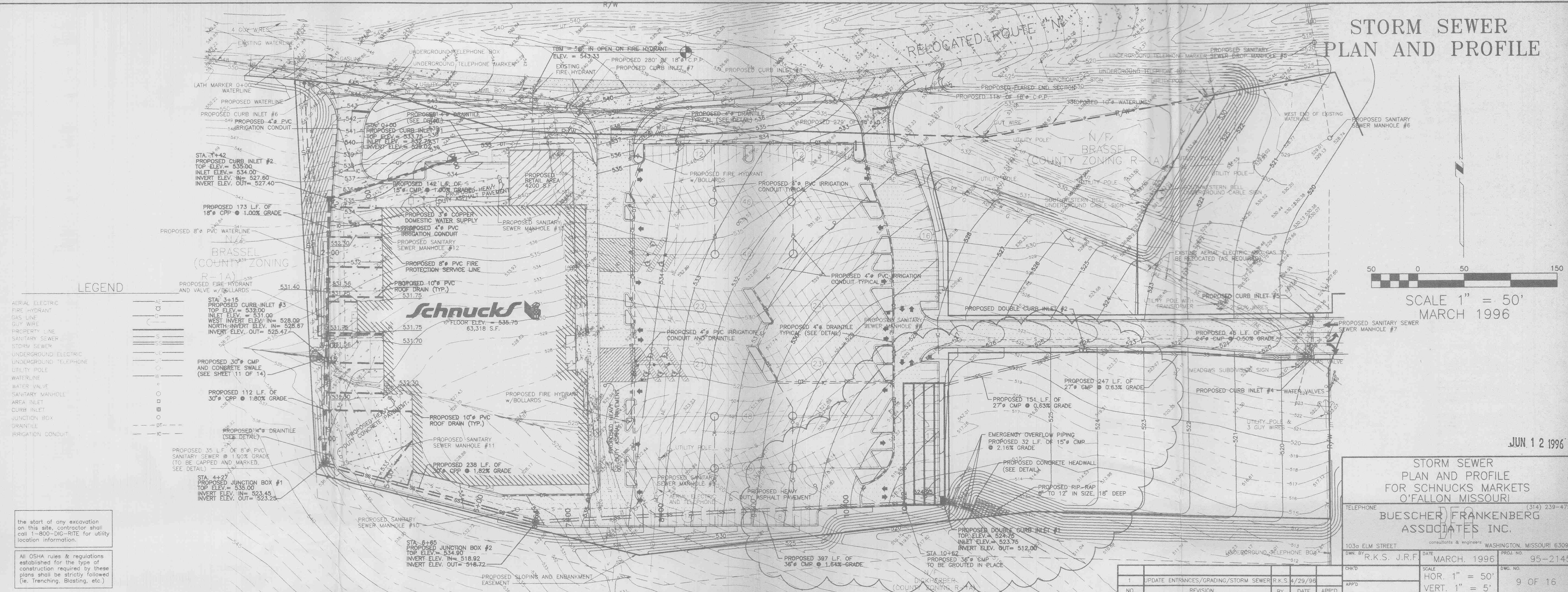
DATE	BY	SCALE	DATE	APP'D	NO.	REVISION
MARCH, 1996	R.K.S. J.R.F.	HOR. 1" = 50' VERT. 1" = 5'	4/29/96		1	UPDATE ENTRANCES/GRADING/STORM SEWER

Soil Preparation and Compaction
Remove all stumps, bushes, trees, weeds, roots, and other surface obstructions from the site. Contractor to strip all topsoil from the entire area to be graded. After the removal of all foreign organic matter, and after stripping of topsoil, the entire surface to be filled or areas that are cut to subgrade shall be scarified to a minimum depth of 12 inches, and then compacted by proof-rolling with suitable compaction equipment weighing not less than 4000 psi based on the contact area of one row of feet, or pneumatic-tired roller of equivalent compaction characteristics.

The maximum thickness of fill shall be in lifts not to exceed 8 inches. The proof-rolling and the fill compaction operations under the building and paved areas shall produce at least 95% of the Maximum Dry Density as determined by the Standard Method of Compaction Test ASTM D-698. Any soft areas encountered during proof-rolling shall be undercut and replaced with a properly compacted fill. The compaction of the fill shall be tested during placement by a qualified soil technician to determine if proper densification is taking place. All fill used on the site should consist of low plasticity soils as approved by the soils engineer. After proof-rolling, no water should be allowed to pond on the surface. The work for all building foundations and slabs shall be in accordance with architectural building plans and specifications. Compaction equipment shall be operating on the site at all times during filling operations.

CONTRACTOR TO PROVIDE NEENAH R-1981-N OR EQUAL MANHOLE STEPS ON 16" CENTERS FOR ACCESS TO THE DETENTION BASIN THROUGH DOUBLE CURB INLET #1

SEE SHEET 10 OF 16

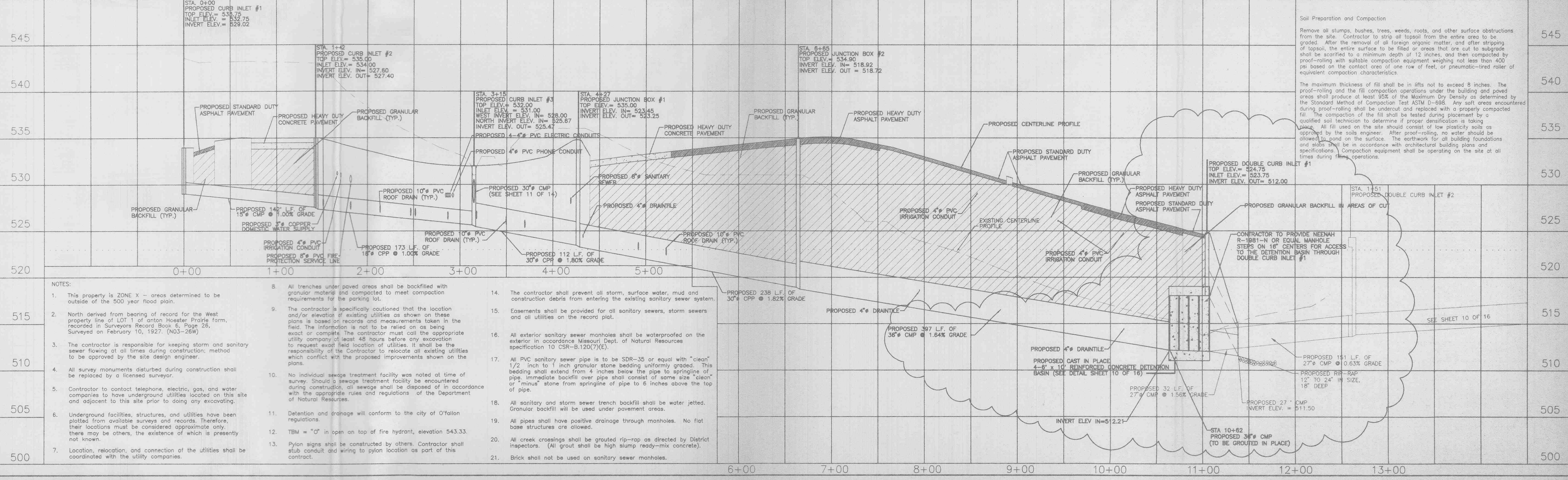


LEGEND

—	AERIAL ELECTRIC
—	FIRE HYDRANT
—	GAS LINE
—	GUY WIRE
—	PROPERTY LINE
—	SANITARY SEWER
—	STORM SEWER
—	UNDERGROUND ELECTRIC
—	UNDERGROUND TELEPHONE
—	UTILITY POLE
—	WATERLINE
—	WATER VALVE
—	SANITARY MANHOLE
—	AREA INLET
—	CURB INLET
—	JUNCTION BOX
—	DRAIN TILE
—	IRRIGATION CONDUIT

the start of any excavation on this site, contractor shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (ie. Trenching, Blasting, etc.)



- ### NOTES:
- This property is ZONE X - areas determined to be outside of the 500 year flood plain.
 - North derived from bearing of record for the West property line of LOT 1 of Anton Hoester Prairie farm, recorded in Surveyors Record Book 6, Page 26, Surveyed on February 10, 1927. (NO3-26W)
 - The contractor is responsible for keeping storm and sanitary sewer flowing at all times during construction; method to be approved by the site design engineer.
 - All survey monuments disturbed during construction shall be replaced by a licensed surveyor.
 - Contractor to contact telephone, electric, gas, and water companies to have underground utilities located on this site and adjacent to this site prior to doing any excavating.
 - Underground facilities, structures, and utilities have been plotted from available surveys and records. Therefore, their locations must be considered approximate only; there may be others, the existence of which is presently not known.
 - Location, relocation, and connection of the utilities shall be coordinated with the utility companies.
 - All trenches under paved areas shall be backfilled with granular material and compacted to meet compaction requirements for the parking lot.
 - The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records and measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
 - No individual sewage treatment facility was noted at time of survey. Should a sewage treatment facility be encountered during construction, all sewage shall be disposed of in accordance with the appropriate rules and regulations of the Department of Natural Resources.
 - Detention and drainage will conform to the city of O'Fallon regulations.
 - TBM = "O" in open on top of fire hydrant, elevation 543.33.
 - Pylon signs shall be constructed by others. Contractor shall stub conduit and wiring to pylon location as part of this contract.
 - The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
 - Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
 - All exterior sanitary sewer manholes shall be waterproofed on the exterior in accordance Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
 - All PVC sanitary sewer pipe is to be SDR-35 or equal with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of some size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe.
 - All sanitary and storm sewer trench backfill shall be water jetted. Granular backfill will be used under pavement areas.
 - All pipes shall have positive drainage through manholes. No flat base structures are allowed.
 - All creek crossings shall be grouted rip-rap as directed by District inspectors. (All grout shall be high slump ready-mix concrete).
 - Brick shall not be used on sanitary sewer manholes.