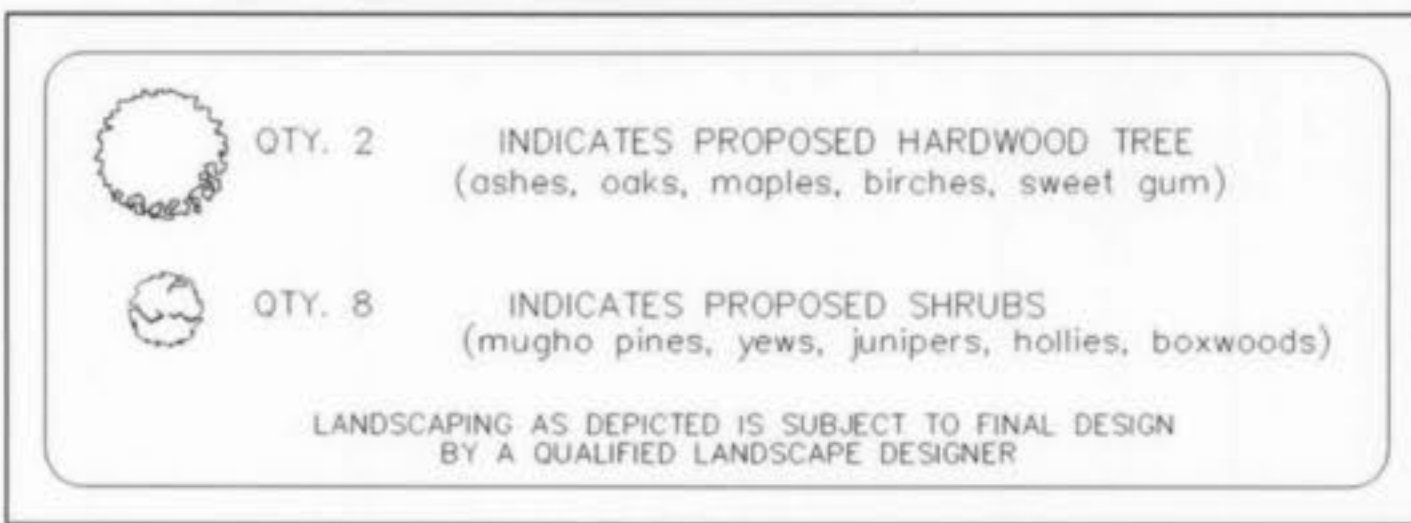


LANDSCAPE LEGEND



A SET OF AS-BUILT PLANS FOR "KEATON CROSSING" A TRACT OF LAND BEING PART OF LOT 15 OF "JOHN D. COALTERS HOWELL PRARIE TRACT", IN U.S. SURVEY 1669, TOWNSHIP 46 NORTH, RANGE 3 EAST, OF THE FIFTH PRINCIPAL MERIDIAN, ST. CHARLES COUNTY, MISSOURI

GENERAL NOTES

- 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.
- 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-180 COMPACTION TEST," (A.S.T.M.-D-1557). ALL FILLED PLACES WITHIN PUBLIC ROADWAYS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE "STANDARD PROCTOR TEST AASHTO T-99, METHOD C" (A.S.T.M.)
- RETRENCH BACKFILLS SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST," (A.S.T.M.-D-1557). ALL TRENCH BACKFILLS UNDER PAVED AREAS INCLUDING SIDEWALKS SHALL BE GRANULAR FILL. ALL OTHER TRENCH BACK FILLS MAY BE EARTH MATERIAL (FREE OF LARGE CLODS OR STONES).
- NO AREA SHALL BE CLEARED WITHOUT THE PERMISSION OF THE PROJECT ENGINEER.
- ALL GRADES SHALL BE WITHIN 0.2 FEET OF THOSE SHOWN ON THE GRADING PLAN.
- NO SLOPE SHALL BE STEEPER THAN 3:1. ALL SLOPES SHALL BE SOODED OR SEEDED AND MULCHED.
- ALL CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO CURRENT CITY OF OTTALON STANDARDS.
- ALL UTILITIES SHOWN ARE EXISTING UNLESS OTHERWISE NOTED. ALL NEW UTILITIES SHALL BE LOCATED UNDERGROUND.
- ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
- THE DEVELOPER SHALL COMPLY WITH CURRENT TREE PRESERVATION ORDINANCE NUMBER 1689 AND PROVIDE LANDSCAPING AS SET FORTH IN ARTICLE 23 OF THE CITY OF OTTALON ZONING ORDINANCES.
15 Trees per Acre Cleared: 9.49 Ac. x 15 = 142.35 ~ 142 Trees
TOTAL TREES FOR KEATON CROSSING COMMERCIAL TRACT = 142 Trees (Excluding Outlot 1 under separate ownership)
LOT 2 Requirement = 75 Trees Required
LOT 3 Requirement = 46 Trees Required
LOT 4 Requirement = 21 Trees Required
OUTLOT 1 Requirement = Under separate plan - Knoust Business Park
LANDSCAPE PLAN TO BE PROVIDED WITH DEVELOPMENT OF EACH INDIVIDUAL LOT.
- THE DEVELOPER SHALL COMPLY WITH CURRENT ARTICLE 13 PERFORMANCE STANDARDS.
- ONE LANE OF ROADWAY SHALL REMAIN OPEN AT ALL TIMES AND TRAFFIC CONTROL SHALL MEET MISSOURI DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
- ALL CONSTRUCTION METHODS AND PRACTICES TO CONFORM WITH OSHA STANDARDS.
- DETENTION FOR THIS SITE IS SHOWN FOR ALL PARCELS WITHIN THIS DEVELOPMENT.
- OFF-SITE EASEMENTS WILL BE REQUIRED WHERE THEY ARE NECESSARY.
- ALL UTILITIES WILL BE LOCATED UNDERGROUND.
- DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOILS REPORTS PRIOR TO OR DURING SITE SOIL TESTING.
- INLETS TO BE LOCATED 2' BEHIND CURB.
- INLETS TO HAVE 5/8" TRASHBAR IN ALL THROATS.
- CONSTRUCTION ENTRANCE WILL BE REMOVED ONCE BOTH ROADS ARE CONSTRUCTED.

PRINCIPALS & STANDARDS

- All excavations, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33%). Steeper grades may be approved by the designated official if the excavation is through rock or the excavation or the fill is adequately protected (a designed head wall or toe wall may be required). Retaining walls that exceed a height of four (4) feet shall require the construction of safety guards as identified in the appropriate section(s) of the adopted BOCA Codes and must be approved by the City Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.
- Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment or debris basins, silt traps or filters, staked straw bates or other approved measures to remove sediment from run-off waters. Temporary siltation control measures shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
- Where natural vegetation is removed during grading, vegetation shall be re-established in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible during the next seeding period after grading has been completed.
- When grading operations are completed or suspended for more than 30 days permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided.
All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and locked at the rate of 100 pounds per 1,000 square feet when seeded.
- Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unvegetated open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less than 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock riprap or concrete or other suitable materials. Detention basins, diversions or any other appropriate structures shall be constructed to prevent velocities above 5 fps.
- The adjoining ground to development sites (lots) shall be provided with protection from accelerated and increased surface water, silt from erosion, and any other consequence of erosion. Run-off water from developed areas (parking lots, paved sites and buildings) above the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bates may be temporarily substituted.
- Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways set back a minimum of 25 feet from the top of the existing stream bank. The watercourse shall be maintained and made the responsibility of the subdivision trustees or in the case of a site plan by the property owner. Permanent vegetation should be left intact. Variances will include designed streambank erosion control measures. FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
- All lots shall be seeded and mulched or sodded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorable ground conditions.

GRADING NOTES

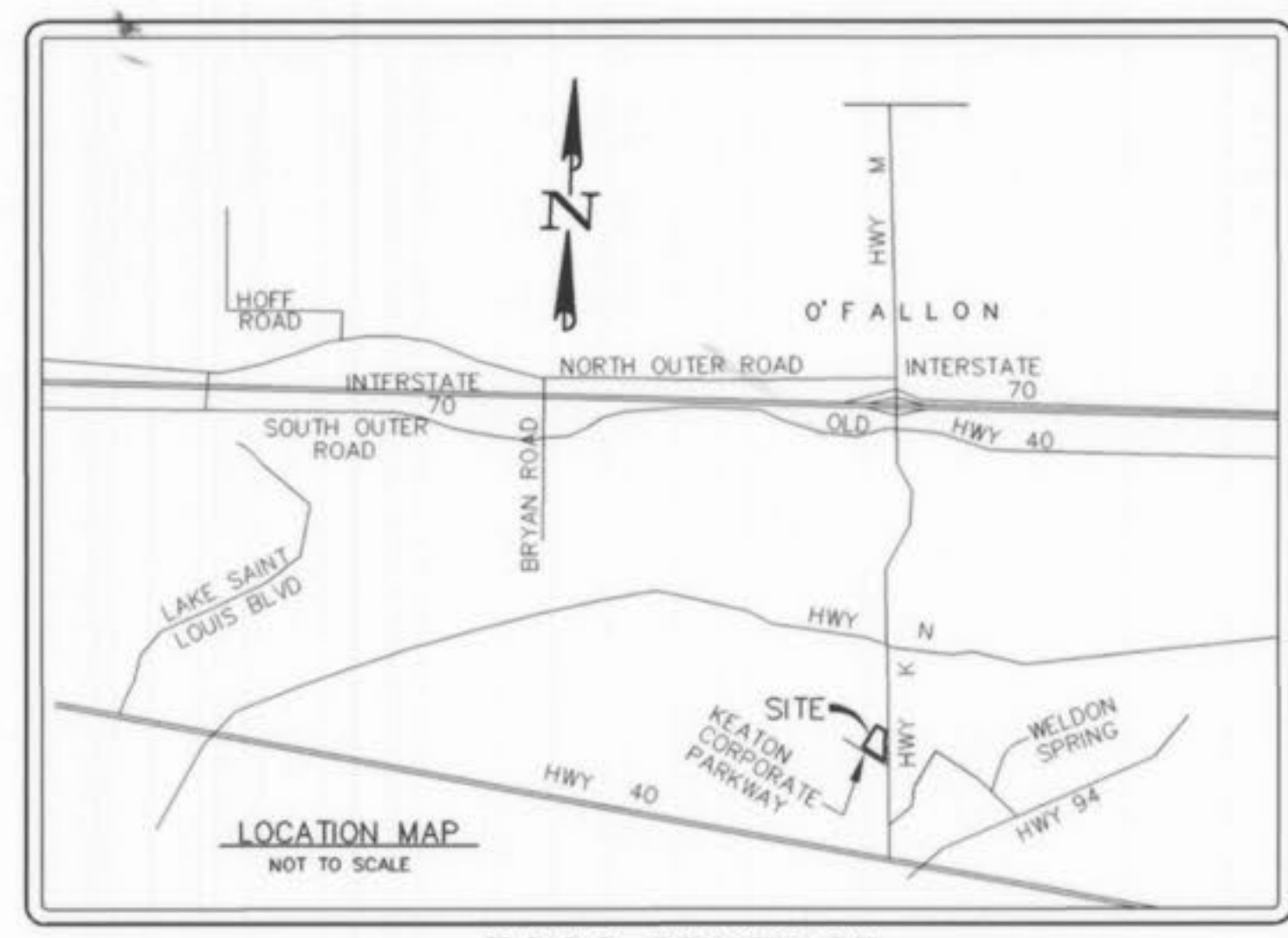
- A Geotechnical Engineer shall be employed by the owner and be on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and backfilling operations.
- The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reasonably implied there from, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.
- The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.
- All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
- A sediment control plan that includes monitored and maintained sediment control basins and/or straw bates should be implemented as soon as possible. No graded area is to be allowed to remain bare without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and siltting up existing downstream storm drainage system.
- 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.
- All trash and debris on site, either existing or from construction, must be removed and properly disposed of off-site.
- Soft soil in the bottom and banks of any existing or former pond sites or tributaries or on any sediment basins or traps should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right-of-way locations or on any storm sewer locations.
- 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. The material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly disced prior to the placement of any fill. The Soils Engineer shall approve the discing operation.
- Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory rollers, 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.
- 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.
- 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.
- 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.
- 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 8 percent above the optimum moisture content.
- 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.
- Fill and backfill should be compacted to the criteria specified in the following table:

CATEGORY	MINIMUM PERCENT COMPACTION
Fill in building areas below footings	90%
Fill under slabs, walls, and pavement	90%
Fill other than building areas	90%
Natural subgrade	90%
Pavement subgrade	90%
Pavement base course	92%

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.

All site construction shall conform to the design recommendations as outlined in the "Exploration of Subsurface Conditions and Foundation Recommendations" prepared by GeoTest, Inc. (May 2000).



U.S.C.S. BENCHMARK

REFERENCE BENCHMARK - RM57 ELEV. 548.01 "CHISELED SQUARE" ON THE SOUTHWEST END OF THE SOUTH HEADWALL OF THE CULVERT LOCATED AT THE JUNCTION OF U.S. HIGHWAY 40 AND MISSOURI STATE HIGHWAY K. FEMA MAP 29183C0430 E.

SITE BENCHMARK ELEV=560.07 CHISELED SQUARE IN CENTER OF CABLE PEDESTAL, 75' WEST OF CENTERLINE OF HIGHWAY K AND 75' SOUTH OF CENTERLINE OF GRAVEL ROAD (ACCESS DRIVE)

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- The contractor shall prevent storm, surface water, mud and construction debris from entering the existing sewer system.
- All sanitary sewer flowlines and taps built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
- All construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
- All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, 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 backfills shall be water jetted. Granular backfill will be used under pavement areas.
- All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- Pre-manufactured adaptors shall be used at all PVC to DIP connections. Rubber boot/Mission-type couplings will not be allowed.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- Class III "O" rig gasket pipe shall be used on all public storm sewer pipes.
- All storm sewer pipe and water main within the right-of-way shall have rock backfill to within 6" below grade.

SHEET INDEX

- SHEET 1 COVER SHEET
- SHEET 2 SITE PLAN
- SHEET 3 STORM/SANITARY SEWER PROFILES & DETAILS

VEGETATION ESTABLISHMENT

For Urban Development Sites
APPENDIX A

SEEDING RATES:

PERMANENT:
Tall Fescue - 30 lbs./ac.
Smooth Brome - 20 lbs./ac.
Combined - Fescue @ 15 lbs./ac. AND Brome @ 10 lbs./ac.

TEMPORARY:
Wheat or Rye - 150 lbs./ac. (3.5 lbs. per sq. ft.)
Oats - 120 lbs./ac. (2.75 lbs. per sq. ft.)

SEEDING PERIODS:
Fescue or Brome - March 1 to June 1
Wheat or Rye - August 1 to October 1
Oats - March 15 to November 1

MULCH RATES:
100 lbs. per 1000 sq. ft. (4,356 lbs. per ac.)

FERTILIZER RATES:
Nitrogen 30 lbs./ac.
Phosphate 30 lbs./ac.
Potassium 30 lbs./ac.
Lime 600 lbs./ac. ENM*

* ENM = effective neutralizing material as per State evaluation of quarried rock.

GRADING QUANTITIES:
39,818 C.Y. CUT
39,818 C.Y. FILL (INCLUDES 15% SHRINKAGE)
= SITE BALANCE

THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY, NOT FOR BEDDING PURPOSES. CONTRACTOR SHALL VERIFY QUANTITIES PRIOR TO CONSTRUCTION.

ASBUILTS NOTE:

ALL DISTANCE AND SLOPE CALCULATIONS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

AS-BUILTS ADDED SEPTEMBER 2003

PREPARED FOR:

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7-17-03	DCSD COMMENTS




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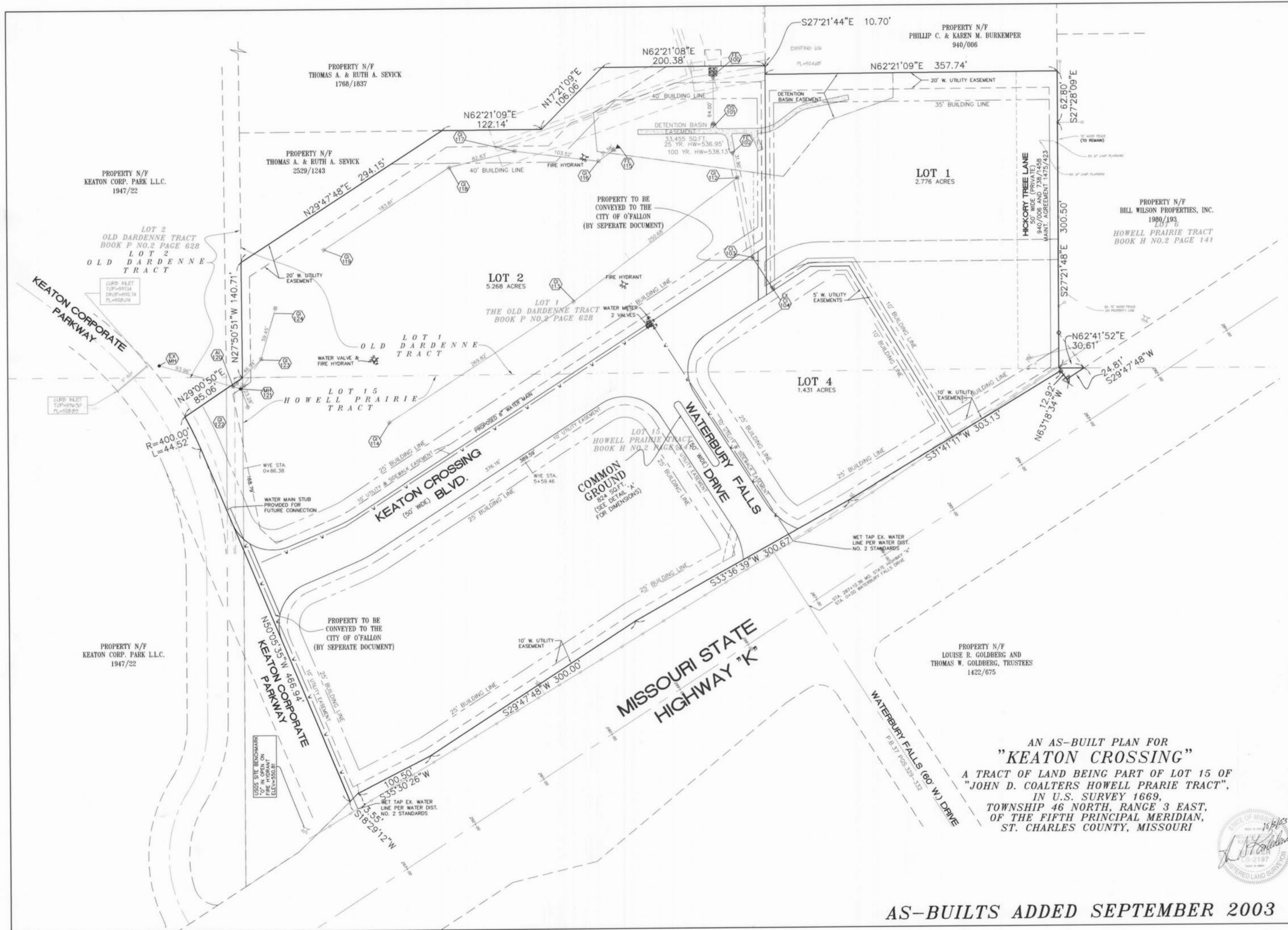
SEWER MEASUREMENTS

THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS.

ALL PUBLIC SEWERS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS FOLLOWS:

SIGNED: 
P.E./L.S. DATE: 10/30/02

ASBUILTS NOTE: ALL DISTANCE AND SLOPE CALCULATIONS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.



AN AS-BUILT PLAN FOR
"KEATON CROSSING"
 A TRACT OF LAND BEING PART OF LOT 15 OF
 "JOHN D. COALTERS HOWELL PRAIRIE TRACT",
 IN U.S. SURVEY 1669,
 TOWNSHIP 46 NORTH, RANGE 3 EAST,
 OF THE FIFTH PRINCIPAL MERIDIAN,
 ST. CHARLES COUNTY, MISSOURI



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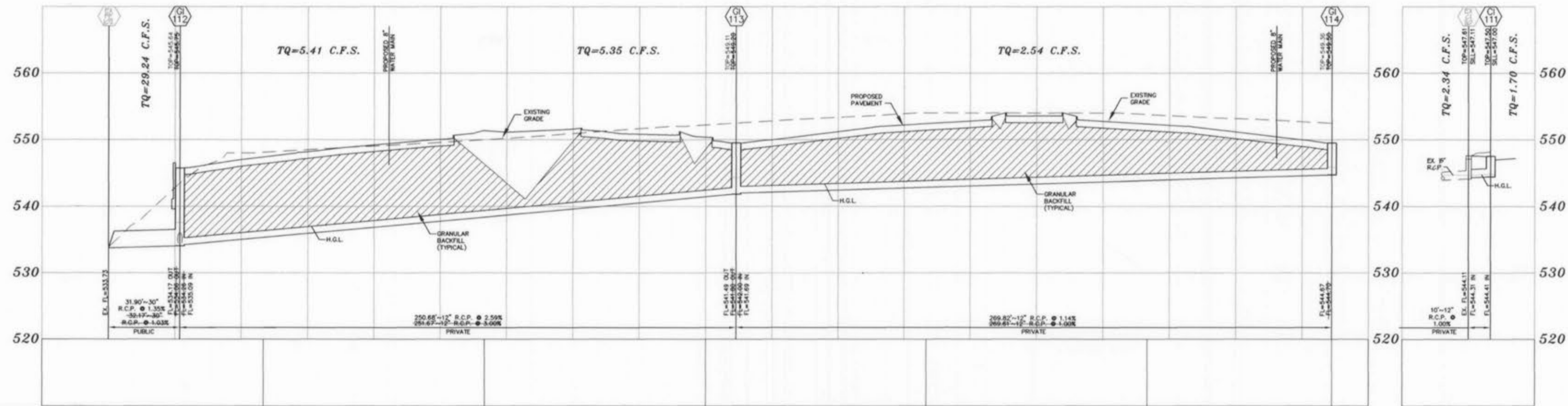
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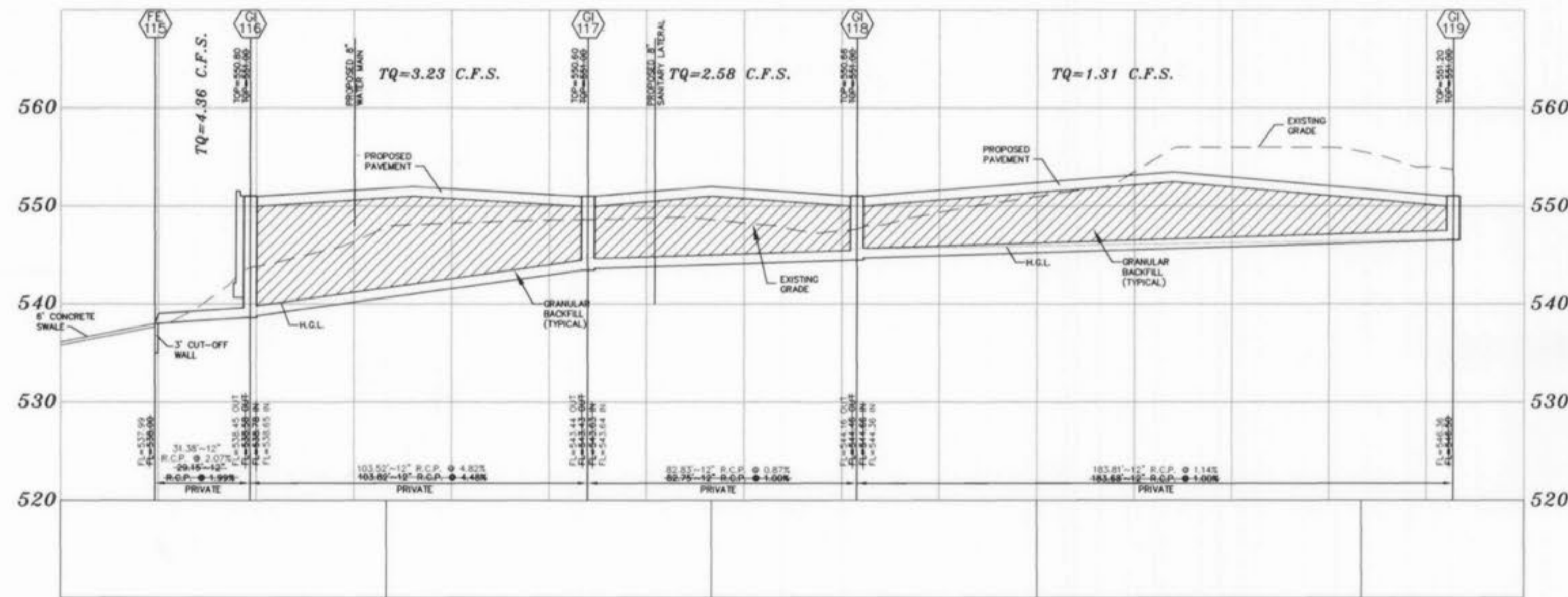
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TRL BC	DRAWN CHECKED
	SURVEY BY DATE

Keaton Dressing in Ashliths 3/8



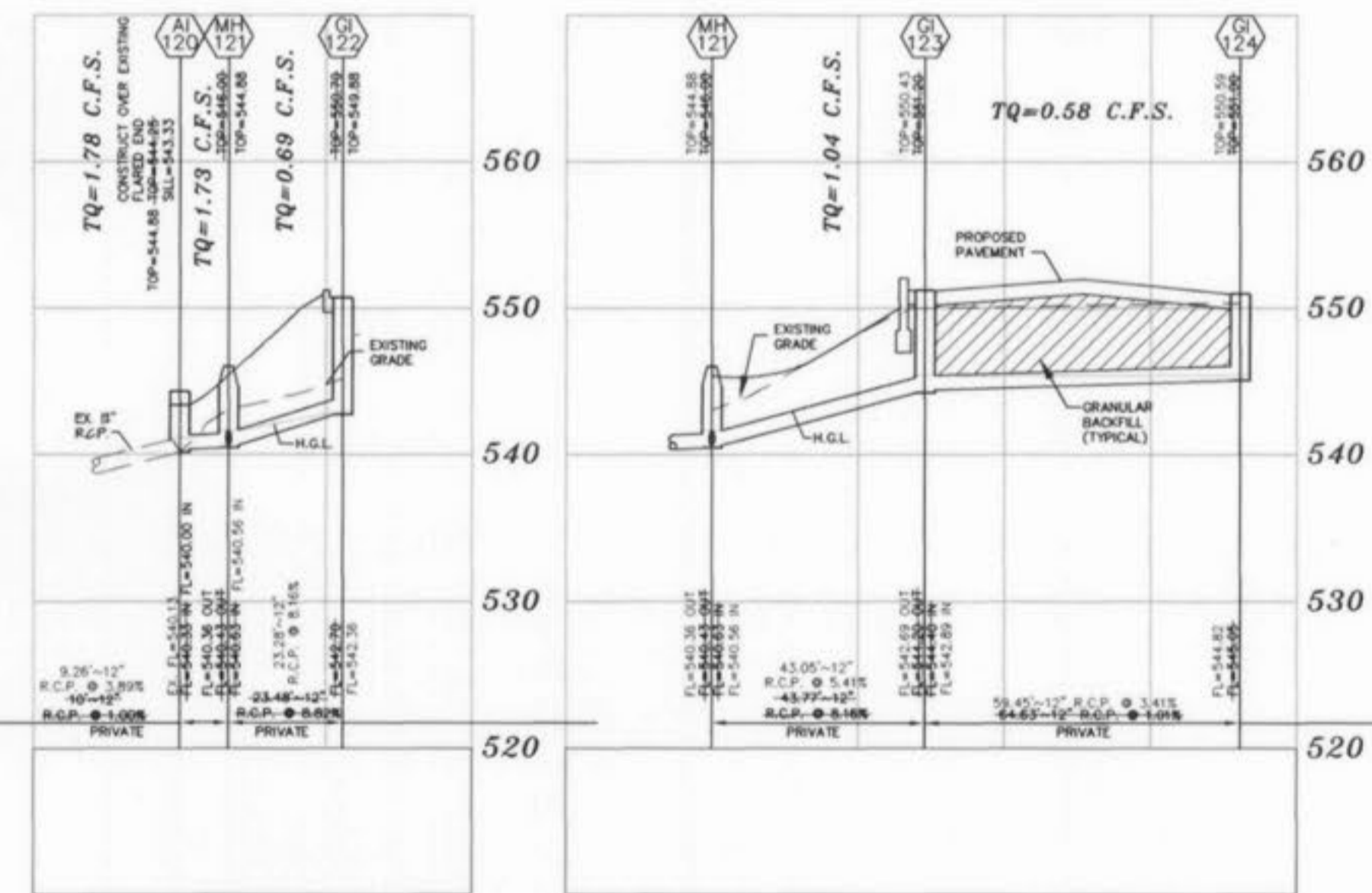
STORM SEWER PROFILES

SCALE: 1" = 10' VERTICAL
1" = 30' HORIZONTAL



STORM SEWER PROFILES

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STORM SEWER PROFILES

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STATE OF MISSOURI
2019/03
WILLIAM J. FOSTER
REGISTERED LAND SURVEYOR
No. 2197

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