

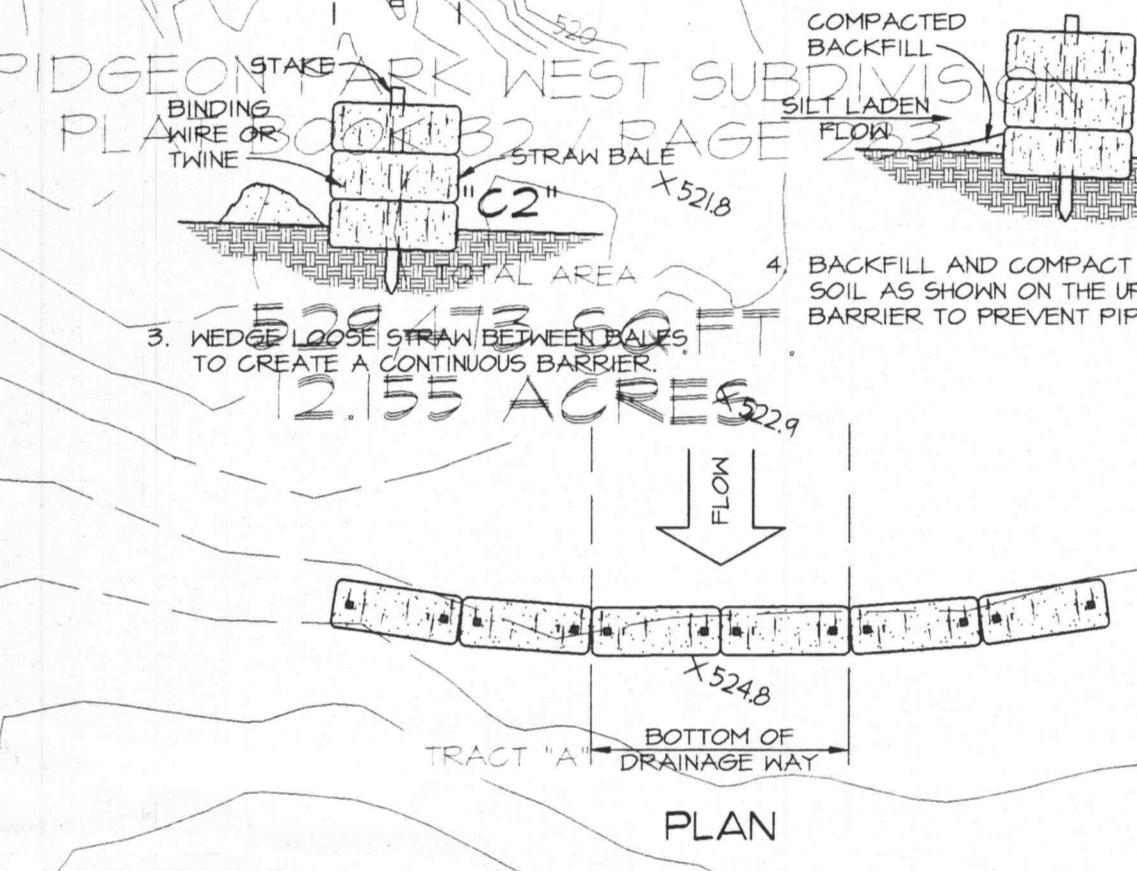
THE SEAL OF STANLEY F. VISNOVSKE ON THIS DRAWING APPLIED ONLY TO THE CIVIL ENGINEERING SHOWN. IT DOES NOT APPLY, NOR IS ANY RESPONSIBILITY TAKEN FOR GEOTECHNICAL (INCLUDING BUT NOT LIMITED TO SOIL STABILITY), STRUCTURAL, HVAC, PLUMBING, ELECTRICAL, FIRE PROTECTION, TRAFFIC ENGINEERING, SURVEYING (BOUNDARY AND TOPOGRAPHIC), OR ARCHITECTURAL (BUILDING OR LANDSCAPE).

B.M. STATE HIGHWAY JOB NO. 6-U-K-562
PROJECT NO. RS-497 (SHEET 5)
ON SOUTHEAST CORNER OF HEADWALL
HIGHWAY ROUTE 'K' AT STATION 545.62' LEFT.
ELEV. = 510.64

SCALE: 1" = 50'

LEGEND	
CONTOUR	500
SPOT ELEVATION	500.00
STORM SEWER	—
SANITARY SEWER	—
MANHOLE	●
CURB INLET	■
CLEAN OUT	○
DOWNSPOUT	○
CONCRETE PAVEMENT	▭
HEAVY DUTY ASPHALT PAVEMENT (ALL OTHER ASPHALT PAVEMENT TO BE STANDARD DUTY UNLESS OTHERWISE NOTED)	▭
SILTATION CONTROL (STRAW BALE BARRIER - SEE DETAIL THIS SHT.)	▭
TO BE REMOVED	T.B.R.
USE IN PLACE	U.I.P.
ADJUST TO GRADE	A.T.G.
CORRUGATED PLASTIC PIPE	C.P.P.
SMOOTH INTERIOR CORRUGATED PLASTIC PIPE	S.I.C.P.

SEDIMENTATION CALCULATION FOR BASIN
 TRIBUTARY AREA = 18.22 ACRES
 RUNOFF COEFFICIENT = 0.60
 SEDIMENT STORAGE = 120 C.F. PER YEAR
 TOTAL SEDIMENT STORAGE = 120 x 18.22 = 2,186 c.f. per year



EROSION CONTROL NOTES:

- NO LAND CLEARINGS OR GRADINGS SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 30 DAYS OF FINAL GRADING.
- SHOULD CONSTRUCTION STOP FOR LONGER THAN 15 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED.
- MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN AND AT LEAST ONCE A WEEK.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
- CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
- LAND DISTURBING ACTIVITIES SHALL NOT BEGIN UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY HEAVY OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- ALL EXISTING STRUCTURES, FENCINGS, TREES, AND ETC. WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. ANY BURNING ON SITE SHALL BE SUBJECT TO LOCAL ORDINANCES AND LOHES SPECIFICATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
- SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN BEFORE IT IS 50%.
- SEDIMENT BASIN OUTLET STRUCTURE & CMP SIZED TO INCLUDE EMERGENCY SPILLWAY FOR 10 YR. STORM.

GRADING AND DRAINAGE NOTES

- ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCINGS, TREES, & ETC. WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE. BURNING ON SITE IS NOT PERMITTED.
- ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADINGS AND BE INSTALLED ACCORDINGLY.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
- SITE GRADINGS SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- SICP - SMOOTH INTERIOR CORRUGATED PLASTIC PIPES & FITTINGS SHALL BE: A.D.S.-N2 MFRD. BY ADVANCED DRAINAGE SYSTEMS, INC. 3300 RIVERSIDE DRIVE, COLUMBUS, OHIO 43221 (614) 451-3051 OR HI-O MFRD. BY HANGCOR INC. P.O. BOX 1041 FINDLAY, OH. 45834-1041 1-800-531-4520 SICP SHALL BE INSTALLED PER MANUFACTURER'S GUIDELINE FOR HEAVY DUTY DRAINAGE APPLICATIONS.
- FRENCH DRAIN SHALL BE INSTALLED IF DIRECTED BY THE GEOTECHNICAL ENGINEER OR AS SHOWN ON PLANS.
- NO EARTH SLOPE TO BE GREATER THAN 3' HORIZONTAL TO 1' VERTICAL.
- BEFORE LEAVING SITE, CONTRACTOR TO BE RESPONSIBLE FOR REMOVAL OF SILT FROM DETENTION BASIN & RESTORING GRADES TO DESIGN ELEVATIONS.

ESTIMATE OF EARTHWORK

BULK CUT (TO SUBGRADE) 15,478 CY
 BULK FILL (TO SUBGRADE) AUTUMN CHASE PLAT. 1,06,151 CY
 * 12% ASSUMED SHRINKAGE FACTOR

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCAVATED MATERIALS OR SHORTAGES OF FILL.

THE QUANTITIES ESTIMATED FOR EACH OF THE IMPROVEMENT ITEMS LISTED ABOVE ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY HEIDEMAN + ASSOCIATES, INC.

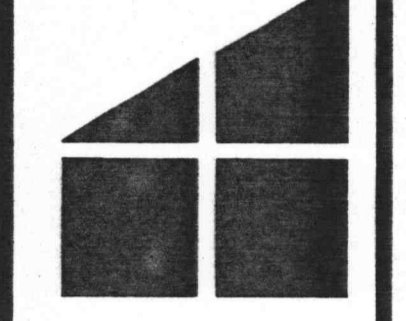
THE ENGINEER'S EARTHWORK ESTIMATE INCLUDES ONLY THOSE IMPROVEMENT ITEMS LISTED ABOVE. UNLISTED ITEMS REQUIRING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT INCLUDE, BUT ARE NOT LIMITED TO, MISCELLANEOUS UNDERGROUND CONDUITS INCLUDING SEWER LINES AND WATER MAINS, STANDARD MANHOLES, PROCESS OR TRANSFER PIPING, ELECTRICAL OR TELEPHONE CONDUITS, BASES FOR LIGHT STANDARDS, BUILDINGS FOOTINGS AND FOUNDATIONS, ETC.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND AS SUCH, THE ACTUAL QUANTITIES OF EARTHWORK FROM SUCH ITEM MAY VARY FROM THE ESTIMATE SHOWN ABOVE.

THE ESTIMATED QUANTITY OF UNSUITABLE MATERIALS TO BE REMOVED FROM THE SITE IS SHOWN ABOVE AND IS BASED UPON SITE CONDITIONS READILY APPARENT TO THE ENGINEER. ACTUAL QUANTITIES REMOVED IN THE FIELD MAY VARY, AND THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO THE VARIANCE.

SHRINKAGE FACTOR USED TO DETERMINE THE REQUIRED BULK FILL WILL VARY ON EACH PROJECT DUE TO SPECIFIC SOIL CHARACTERISTICS. THE SHRINKAGE FACTOR USED FOR THIS PROJECT IN PARTICULAR IS AS INDICATED ABOVE, AND MAY BE ONLY AN ASSUMED VALUE IN THE ABSENCE OF A DETAILED SOILS INVESTIGATION.

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 Fax: 314-822-7858



Erosion Control / Grading Plan
LOWE'S OF O'FALLON
 O'Fallon, Missouri

DATE	REVISIONS
11/24/98	PRELIMINARY COMMENTS
12/23/98	COMMENTS
3/1/99	REVISED RET. WALL
4/4/99	REV. ENTRANCES
5/28/99	CON. PIPE
6/10/99	REVISED GRADES
7/9/99	CON. PIPE
7/12/99	REV. SAN. SEWER
8/6/99	COMMENTS
8/30/99	COMMENTS
9/22/99	COMMENTS
DATE	11-10-98
CHECKED BY	SVF
DRAWN BY	DFB
SHEET NO.	C-4
JOB NO.	98293