

GENERAL NOTES

- 1.) ALL UTILITIES SHOWN HAVE BEEN LOCATED BY OTHERS FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
2.) ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.
3.) ALL MATERIALS AND METHODS OF CONSTRUCTION TO MEET THE CURRENT STANDARDS AND SPECIFICATIONS AS REQUIRED BY THE CITY OF O'FALLON.
...
25.) TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS AND OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

NON-SEDIMENT POLLUTION CONTROL NOTES

- 1. HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS
DO: PREVENT SPILLS
USE PRODUCTS UP
FOLLOW LABEL DIRECTIONS FOR DISPOSAL
REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
RECYCLE WASTES WHENEVER POSSIBLE
DON'T: DON'T POUR WASTE INTO SEWERS OR WATERWAYS ON THE GROUND
DON'T POUR WASTE DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
DON'T BURY CHEMICALS OR CONTAINERS, OR DISPOSE OF THEM WITH CONSTRUCTION DEBRIS
DON'T BURN CHEMICALS OR CONTAINERS
DON'T MIX CHEMICALS TOGETHER
2. CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS TO BE USED ON-SITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.
...
8. STATE LAW REQUIRES THE PARTY RESPONSIBLE FOR A PETROLEUM PRODUCT SPILL IN EXCESS OF 50 GALLONS TO REPORT THE SPILL TO MODRN (537-634-2438) AS SOON AS PRACTICAL AFTER DISCOVERY. FEDERAL LAW REQUIRES THE RESPONSIBLE PARTY TO REPORT ANY RELEASE OF OIL IF IT REACHES OR THREATENS A SEWER, LAKE, CREEK, STREAM, RIVER, GROUNDWATER, WETLAND, OR AREA, LIKE A ROAD DITCH, THAT DRAINS INTO ONE OF THE ABOVE

EARTHWORK

TOTAL AREA OF SITE: 8 Acres
ESTIMATED AREA TO BE DISTURBED: 7.08 Acres
ESTIMATED AREA TO BE DEVELOPED: 6.60 Acres
15% SHRINKAGE FACTOR
ESTIMATED GRADING QUANTITIES:
CUT VOLUME - 8,398 CUBIC YDS
FILL VOLUME - 19,239 CUBIC YDS
TOTAL SHORT - 10,841 CUBIC YDS (SEE ATTACHED HAUL ROUTE)

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 EXCESS EXCAVATED MATERIALS OR SHORTAGES OF 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 COLE AND ASSOCIATES CONSULTING ENGINEERS. THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING ITEMS REQUIRING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS INCLUDING SEWER LINES AND WATER MAINS LESS THAN TWENTY-FOUR INCHES IN DIAMETER, STANDARD MANHOLES, PROCESS OR TRANSFER PIPING, ELECTRICAL OR TELEPHONE CONDUITS; BASES FOR LIGHT STANDARDS; BUILDING FOOTINGS AND FOUNDATIONS, STRIPPING OF TOPSOIL, 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 ITEMS MAY VARY FROM THE ESTIMATE SHOWN ABOVE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO REMOVAL OF UNSUITABLE MATERIAL FROM SITE. THE ABOVE QUANTITIES ARE AN ESTIMATE AND SHOULD BE CONSIDERED AS SUCH. IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO PREPARE A QUANTITY TAKEOFF AND NOTE ANY DISCREPANCIES TO THE ENGINEER.

GRADING/SEDIMENT & EROSION CONTROL NOTES

- 1) SEDIMENT AND EROSION CONTROL SHALL NOT BE LIMITED TO THE MEASURES SHOWN ON THE PLANS. THE CONTRACTOR, WITH THE APPROVAL OF THE CITY INSPECTOR, SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, ROADWAYS, STORM SEWERS, AND DRAINAGE WAYS.
2) ALL FILLED PLACES UNDER PROPOSED STORM AND SANITARY SEWER LINES AND/OR PAVED AREAS INCLUDING TRENCH BACKFILLS WITHIN AND OFF THE ROAD, RIGHT-OF-WAY SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (ASTM D-1557). ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS.
...
19) ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.

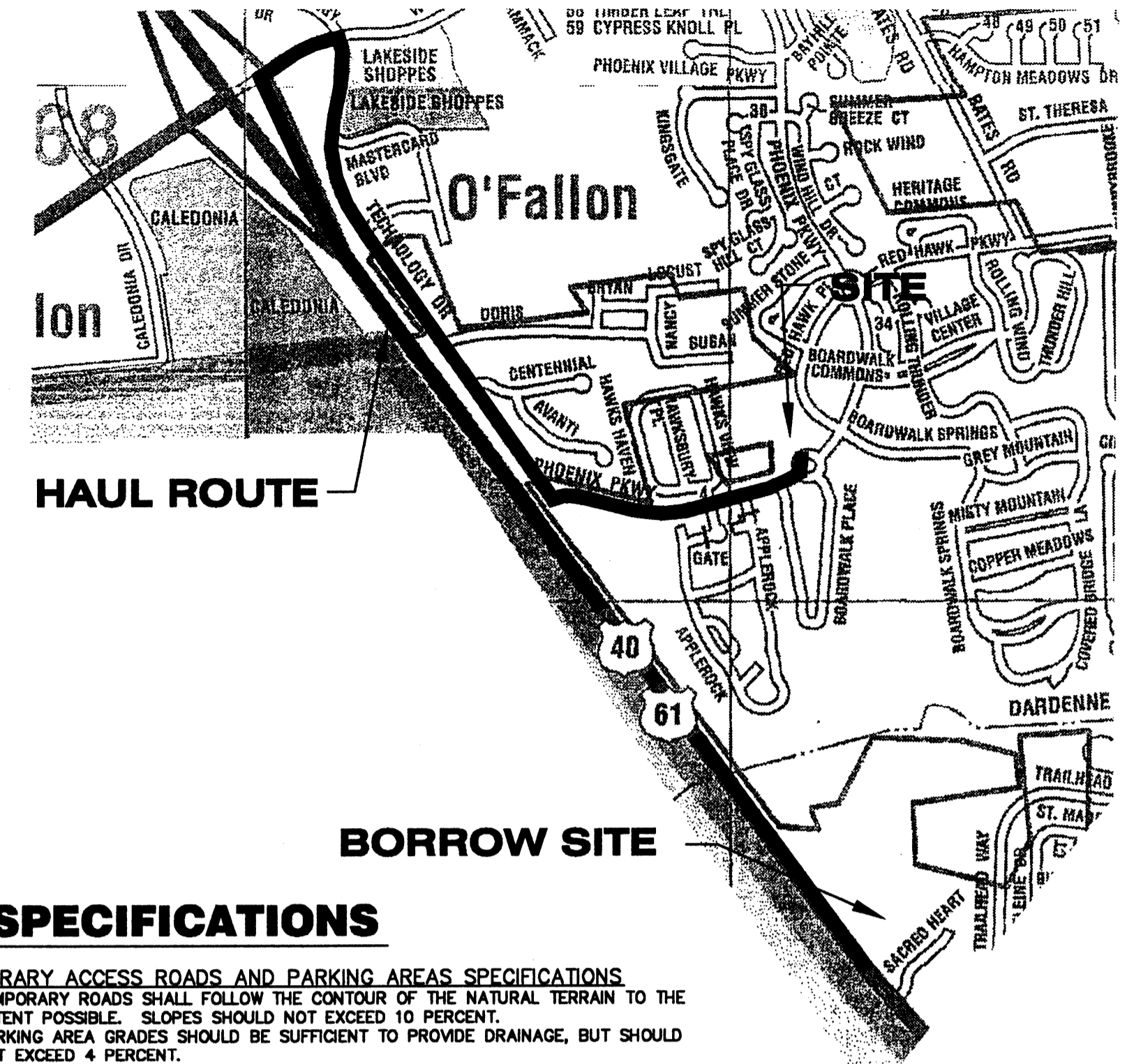
- 11) TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
12) WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION, SHALL BE REESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION.
13) WHEN MECHANIZED LAND CLEARING ACTIVITIES ARE COMPLETED OR SUSPENDED FOR MORE THAN 2 WEEKS, EITHER TEMPORARY VEGETATION MUST BE ESTABLISHED OR TEMPORARY SILTATION CONTROL MEASURES MUST BE PUT IN PLACE WITH THE REVIEW AND APPROVAL OF THE CITY ENGINEER.

- 14) WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 2 WEEKS, 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 ACCORDING TO THE RECOMMENDATION OF THE CITY ENGINEER.

- 15) ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.
16) ALL LOTS SHALL BE SEEDED AND MULCHED AT THE MINIMUM RATES DEFINED IN THE ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT GUIDELINES OR SODDED BEFORE AN OCCUPANCY PERMIT MAY BE ISSUED BY THE CITY IN CASES OF UNDUE HARDSHIP BECAUSE OF FAVORABLE GROUND CONDITIONS.

- 17) THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN.) CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MODOT. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MODOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MODOT.

- 18) ALL EROSION CONTROL SYSTEMS ARE INSPECTED AND NECESSARY CORRECTIONS MADE WITHIN 24 HOURS OF ANY RAINSTORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE.
19) ALL LOW PLACES EITHER ON-SITE OR OFF-SITE SHALL BE GRADED TO ALLOW DRAINAGE.



SILTATION CONTROL SPECIFICATIONS

- SILTATION CONTROL GENERAL NOTES
1. INSTALLATION OF ALL PERIMETER SEDIMENT CONTROL SHALL BE IMPLEMENTED PRIOR TO CLEARING, GRUBBING, OR GRADING.
2. INSPECTION OF SILTATION CONTROL DEVICES SHALL TAKE PLACE ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS OF ANY RAIN EVENT. ANY SILTATION CONTROL IN NEED OF REPAIR SHALL BE ADDRESSED A COPY OF THE INSPECTION REPORT SHALL BE KEPT ON THE CONSTRUCTION SITE.
...
5. ALL SILTATION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED WITH VEGETATION.

- SILTATION CONTROL SCHEDULE IMPLEMENTATION
1. CONTRACTOR SHALL INSTALL PERIMETER SILTATION CONTROL DEVICES AS SHOWN ON THE PLAN, PER ATTACHED SPECIFICATIONS.
2. AFTER ALL CLEARING, GRUBBING, AND EROSION CONTROL MEASURES ARE IN PLACE, GRADING AND UTILITY INSTALLATION CAN BEGIN.
3. CONTRACTOR SHALL INSTALL INLET PROTECTION, AS IDENTIFIED IN THE PLANS, AROUND EACH STORM SEWER STRUCTURE AS IT IS COMPLETED.
...
5. SEDIMENT SHALL BE REMOVED FROM THE DETENTION BASINS WHEN APPROXIMATELY ONE-HALF OF THE STORAGE VOLUME HAS BEEN FILLED, BUT IN NO CASE LESS THAN ONCE EVERY WEEK.

- INLET PROTECTION
1. INLET PROTECTION SHALL CONSIST OF FURNISHING, PLACING, MAINTAINING, AND REMOVING THE GUTTERBUDDY SEDIMENT CONTROL DEVICE OR APPROVED EQUAL AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE GRADING/SWPPP DRAWINGS.
2. THE GUTTERBUDDY SHALL BE SYNTHETIC FILTER MATERIAL MANUFACTURED FROM RECYCLED SYNTHETIC FIBERS.
3. THE GUTTERBUDDY WILL BE MANUFACTURED TO BE 9" IN DIAMETER AND ARE AVAILABLE IN 4', 6', 8', 10', 12', 14', AND 16' LENGTHS AND A MINIMUM OF 24 INCHES LONGER THAN THE CURB INLET OPENING. THIS WILL ALLOW FOR SUFFICIENT LENGTH TO COVER THE INLET WITH 12 INCHES BEYOND THE INLET ON BOTH ENDS.
...
5. THE GUTTERBUDDY SHOULD BE CLEANED IF A VISUAL INSPECTION SHOWS SILT AND DEBRIS BUILD UP AROUND THE GUTTERBUDDY.

- TEMPORARY ACCESS ROADS AND PARKING AREAS SPECIFICATIONS
1. TEMPORARY ROADS SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE EXTENT POSSIBLE. SLOPES SHOULD NOT EXCEED 10 PERCENT.
2. PARKING AREA GRADES SHOULD BE SUFFICIENT TO PROVIDE DRAINAGE, BUT SHOULD NOT EXCEED 4 PERCENT.
3. ROADBEDS SHALL BE AT LEAST 14 FEET WIDE FOR ONE-WAY TRAFFIC AND 24 FEET WIDE FOR TWO-WAY TRAFFIC. TWO-WAY TRAFFIC WIDTHS SHALL BE INCREASED A MINIMUM OF 4 FEET FOR TRAILER TRAFFIC, DEPENDING ON THE TYPE OF VEHICLES OR EQUIPMENT, SPEED, LOADS, CLIMATIC, AND OTHER CONDITIONS UNDER WHICH VEHICLES AND EQUIPMENT OPERATE AN INCREASE IN THE MINIMUM WIDTH MAY BE REQUIRED BY CITY OF O'FALLON.
...
5. DRAINAGE DITCHES SHALL BE PROVIDED AS NEEDED. THE ROADBED OR PARKING SURFACE SHALL BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.

- MAINTENANCE
SEEDING AREAS ADJACENT TO THE ROADS AND PARKING AREAS SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT A VIGOROUS STAND OF VEGETATION IS MAINTAINED. ROADSIDE DITCHES SHALL BE SODDED AND OTHER DRAINAGE STRUCTURES SHOULD BE CHECKED REGULARLY TO ENSURE THAT THEY DO NOT BECOME CLOGGED WITH SILT OR OTHER DEBRIS.

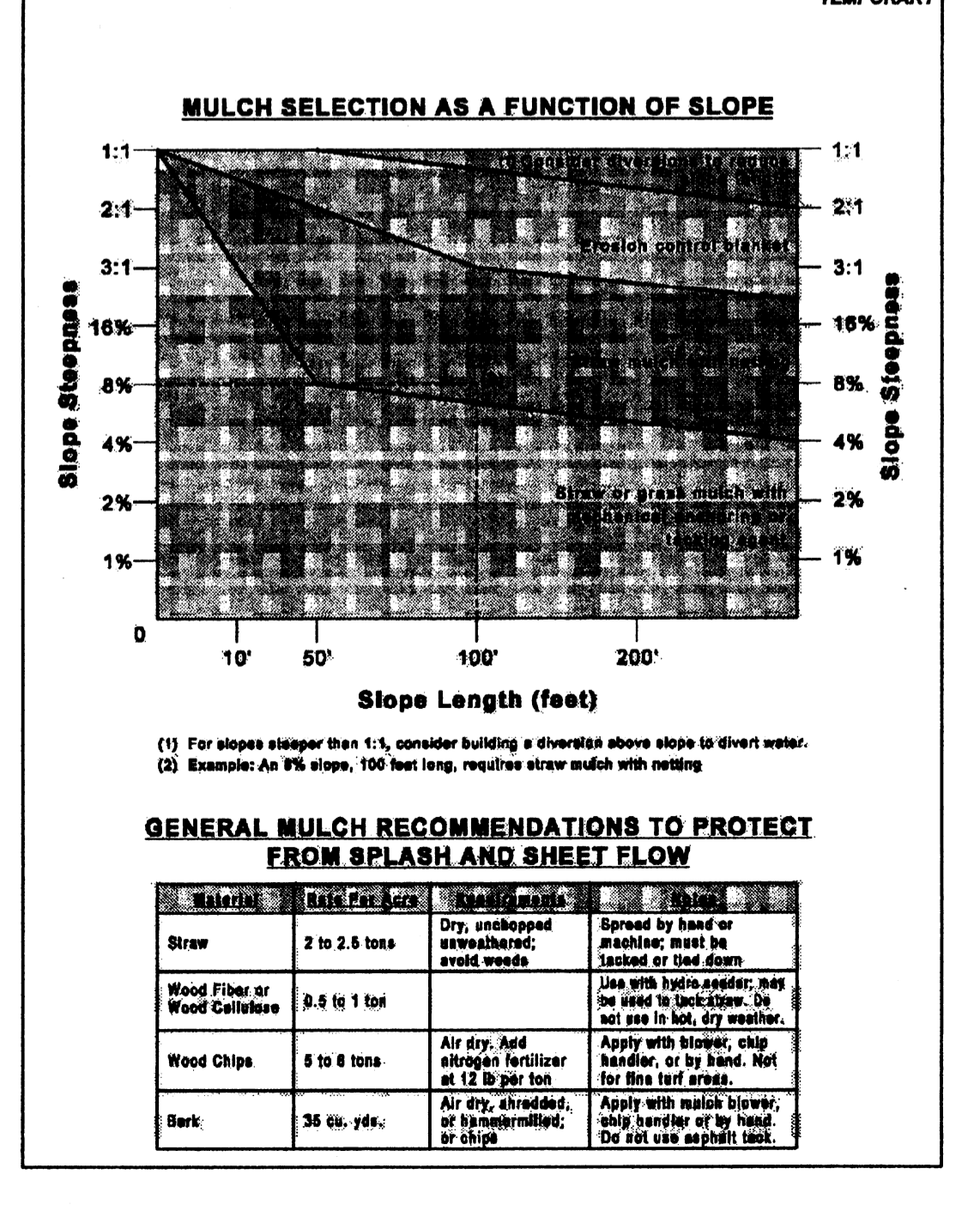
- CHANNEL FLOW APPLICATIONS:
1. CHECK DAMS ARE TO BE CONSTRUCTED OF ROCK, SAND BAGS, OR GRAVEL BAGS.
2. THE TOP OF THE DOWNSTREAM CHECK DAM SHOULD BE LEVEL WITH THE BASE OF THE UPSTREAM CHECK DAM.
3. CONSTRUCT CHECK DAMS IN ACCORDANCE WITH THE DETAILS PROVIDED AND CITY OF O'FALLON REQUIREMENTS.

- SHEET FLOW APPLICATIONS:
1. SILT FENCES SHALL BE USED ON ALL SHEET FLOW CONDITIONS.
2. SILT FENCE TO BE WOVEN GEOTEXTILE FABRIC MIRAFI 100X OR EQUAL OVER 9 GAUGE, 8"x8" WIRE MESH.
3. FABRIC TO BE SUPPORTED 2"x2" CONSTRUCTION GRADE LUMBER, 4' LONG, ON 10' CENTERS.
4. FABRIC SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED A MINIMUM OF 6 INCHES DEEP FOR THE LENGTH OF THE FENCE. THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE FENCE.
5. FENCE HEIGHT SHALL BE A MINIMUM OF 2 FEET IN HEIGHT, WITH THE FABRIC INSTALLED ON THE FENCE ON THE UPSTREAM SIDE.

TABLE 2: SEEDING REQUIREMENTS

Table with 3 parts: SEEDING REQUIREMENTS (Permanent/Temporary seeding rates), Minimum Fertilizer and Seeding Rates, and Mulch Schedule. Includes columns for material types and application rates.

TABLE 3: MULCH SCHEDULE



REVISIONS table with columns for DATE, DESCRIPTION, and REVISIONS. Includes project information: MCEAGLE DEVELOPMENT, 1001 BOARDWALK SPRINGS PL, O'FALLON, MO 63366. Includes a professional seal for Matthew R. Koster.

PARK AVENUE VILLAGE MASS GRADING PLANS. Includes project location: PHOENIX PARKWAY, O'FALLON, MO. Includes a professional seal for Cole and Associates.

COLE and ASSOCIATES INCORPORATED. Includes contact information: 10777 sunset office drive, saint louis, missouri 63127. Includes project details: DESIGNED BY CJB, DRAWN BY CJB, CHECKED BY TDB, DATE 8/17/07, Job Number 07-075, Sheet Number G2.0.

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