### **GRADING NOTES**

- 1. DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH AN ENGINEER'S SOIL REPORTS PRIOR TO AND DURING SITE GRADING. THE SOIL REPORT WILL BE REQUIRED TO CONTAIN THE FOLLOWING INFORMATION ON SOIL TEST CURVES (PROCTOR REPORTS) FOR PROJECTS WITHIN THE CITY:
- 1.1. MAXIMUM DRY DENSITY OPTIMUM MOISTURE CONTENT 1.2.
- 1.3. MAXIMUM AND MINIMUM ALLOWABLE MOISTURE CONTENT
- 1.4. CURVE MUST BE PLOTTED TO SHOW DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (A.S.T.M.-D-1157) OR FROM A MINIMUM OF 95% AS DETERMINED BY THE "STANDARD PROCTOR TEST ASSHTO T-99, METHOD C" (A.S.T.M.-D-698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.
- 1.5. CURVE MUST HAVE AT LEAST 5 DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT 1.6. SPECIFIC GRAVITY
- 1.7. NATURAL MOISTURE CONTENT

1.8. LIQUID LIMIT 1.9. PLASTIC LIMIT

- BE ADVISED THAT IF THIS INFORMATION IS NOT PROVIDED TO THE CITY'S CONSTRUCTION INSPECTOR THE CITY WILL NOT ALLOW GRADING OR CONSTRUCTION ACTIVITIES TO PROCEED ON ANY PROJECT SITE
- ALL FILL PLACED IN AREAS OTHER THAN PROPOSED STORM SEWERS, SANITARY SEWERS, PROPOSED ROADS, AND PAVED AREAS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP IN 8" LIFTS AND COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ENSURE THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS CORRESPONDS TO THE COMPACTIVE EFFORT AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST. OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF O'FALLON PRIOR TO THE PLACEMENT OF FILL.
- THE SURFACE OF THE FILL SHALL BE FINISHED SO 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 4. ALL SEDIMENT AND DETENTION BASINS ARE TO BE CONSTRUCTED DURING THE INITIAL PHASE OF THE GRADING OPERATION OR IN
- ACCORDANCE WITH THE APPROVED SWPPP. WHEN GRADING OPERATIONS ARE COMPLETE OR SUSPENDED FOR MORE THAN 14 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO MISSOURI DEPARTMENT OF NATURAL RESOURCES PROTECTING WATER QUALITY - A FIELD GUIDE TO EROSION, SEDIMENT AND STORMWATER BEST MANAGEMENT PRACTICES FOR DEVELOPMENT SITES IN MISSOURI AND KANSAS.ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY IMPROVEMENTS) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT A RATE OF 100 POUNDS PER 1000 SQUARE FEET WHEN SEEDED.
- NO SLOPES SHALL EXCEED 3 (HORIZONTAL): 1 (VERTICAL) UNLESS OTHERWISE APPROVED BY THE SOILS REPORT AND SPECIFICALLY LOCATED ON THE PLANS AND APPROVED BY THE CITY ENGINEER.
- ALL LOW PLACES WHETHER ON SITE OR OFF SHALL BE GRADED TO PROVIDE DRAINAGE WITH TEMPORARY DITCHES.
- 8. ANY EXISTING WELLS AND/OR SPRINGS WHICH MAY EXIST ON THE PROPERTY MUST BE SEALED IN A MANNER ACCEPTABLE TO THE CITY OF O'FALLON CONSTRUCTION INSPECTION DEPARTMENT AND FOLLOWING MISSOURI DEPARTMENT OF NATURAL RESOURCES STANDARDS AND SPECIFICATIONS. 9. (INTENTIONALLY OMITTED)
- 10. ALL TRENCH BACK FILLS UNDER PAVED AREAS SHALL BE GRANULAR BACK FILL, AND COMPACTED MECHANICALLY. ALL OTHER TRENCH BACK FILLS MAY BE EARTH MATERIAL (FREE OF LARGE CLODS, OR STONES) AND COMPACTED USING EITHER MECHANICAL TAMPING OR WATER JETTING, GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5 FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10 FEET WILL REQUIRE MULTIPLE PROBES EVERY 7.5 FOOT CENTERS.
- 10.1. DEPTH, TRENCH BACK FILLS LESS THAN 8 FEET DEEP SHALL BE PROBED TO A DEPTH EXTENDING HALF THE DEPTH OF THE TRENCH BACK FILL, BUT NOT LESS THAN 3 FEET. TRENCH BACK FILL GREATER THAN 8 FEET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACK FILL BUT NOT GREATER THAN 8 FEET.
- 10.2. EQUIPMENT, THE JETTING PROBE SHALL BE A METAL PIPE WITH AN INTERIOR DIAMETER OF 1.5 TO 2 INCHES. 10.3. METHOD, JETTING SHALL BE PERFORMED FROM THE LOWEST SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE
- HIGHEST POINT, AND FROM THE BOTTOM OF THE TRENCH BACK FILL TOWARD THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE TRENCH WITHOUT FIRST SATURATING THE TRENCH.
- 10.4. SURFACE BRIDGING, THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER SURFACE TO CRUST AND ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAK DOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACK FILLED WITH THE SAME MATERIAL USED AS TRENCH BACK FILL AND RE-JETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS. 11. SITE GRADING
- 11.1. WITHIN CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED EVERY TWO HUNDRED FIFTY (250) FEET ALONG THE CENTERLINE FOR EACH LIFT.
- 11.2. OUTSIDE OF CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED AT TWO (2) FOOT VERTICAL INTERVALS AND APPROXIMATELY EVERY ONE THOUSAND (1,000) CUBIC YARDS.
- 12. ACCESS TO THE SITE FROM ANY OTHER LOCATION OTHER THAN THE PROPOSED CONSTRUCTION ENTRANCE IS STRICTLY PROHIBITED!

## EARTHWORK COMPUTATIONS

BULK	EXCAVATION (T	O SUBGRADE)	382	CUBIC YARDS
BULK	EMBANKMENT	(TO SUBGRADE)	13,221	CUBIC YARDS

INCLUDES ASSUMED SHRINKAGE FACTOR OF 15%.

IMPORT OF 12,839 CUBIC YARDS.

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 FILL.

THESE QUANTITIES ESTIMATED FOR EARTHWORK ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS, TO SUBGRADE.

THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS, INCLUDING SEWER LINES AND WATER MAINS, STANDARD MANHOLES, ELECTRICAL OR TELEPHONE CONDUITS, BASES FOR LIGHT STANDARDS, BUILDING FOOTINGS OR PIERS, BACKFILL OF EXISTING BLDG. FOUNDATIONS, RETAINING WALLS, REMEDIATION WORK INSIDE THE BUILDING AREA, OR ISOLATED AREAS LACKING GEOTECHNICAL INVESTIGATION AND REPORTS AT TIME OF PLAN PREPARATION.

IT IS NOT INTENDED FOR THE ENGINEERS QUANTITIES TO BE UTILIZED BY THE CONTRACTOR FOR BIDDING PURPOSES. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO CALCULATE BULK MOVEMENT AND REDISTRIBUTION OF SOILS FOR THIS PROJECT AND BADE HIS BID ACCORDINLY. LDC INC. WILL BE HELD HARMLESS.

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 WHICH MUST BE REMOVED FROM THE SITE.

SHRINKAGE FACTORS USED TO DETERMINE THE BULK FILL WILL VARY ON EACH PROJECT DUE TO SPECIFIC SOIL CHARACTERISTICS. THE SHRINKAGE FACTOR USED FOR THIS PROJECT AS INDICATED ABOVE, IS AN ASSUMED VALUE.

IF EXESS OR IMPORT MATERIAL IS TO BE TRUCKED, IT SHALL BE TO OR FROM AN APPROVED SITE IN ACCORDANCE WITH ALL GOVERNING AUTHORITIES.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE A PERMIT FOR HAULING FROM THE APPROPRIATE GOVERNING AUTHORITY.

- STORM.

# OWNER:

SITE ADD

CURRENT LOCATO

AREA OI

FEMA FLO

DISTURB OWNER: 30' MIN.

FRONT: 4' MIN. SIDE:

PLANT SF SIDE WIN WINTE ORCHA PERENNI TALL K-3 LADIN CRIMS ORCHARD

- WALL

### STORM SEWER NOTES

- INI FTS

- REQUIRED.

SITE.

## EROSION CONTROL NOTES

1. THE PERMITTEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE PERMITTEE 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 THE CLEARING OPERATIONS AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY CITY OF O'FALLON AND AS NEEDED BY MODOT. THE PERMITTEE'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE CITY OF O'FALLON AND AS REQUIRED BY MODOT MAY AT THEIR OPTION DIRECT THE PERMITTEE 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 AND/OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE CITY OF O'FALLON AND AS REQUIRED BY MODOT.' 2. ALL EROSION CONTROL SYSTEMS ARE TO BE INSPECTED AND CORRECTED WEEKLY, ESPECIALLY WITHIN 48 HOURS OF ANY RAIN STORM RESULTING IN ONE-QUARTER INCH OF RAIN OR MORE. ANY SILT OR DEBRIS LEAVING THE SITE AND AFFECTING PUBLIC RIGHT OF WAY OR STORM WATER DRAINAGE FACILITIES SHALL BE CLEANED UP WITHIN 24 HOURS AFTER THE END OF THE

3. EROSION CONTROL DEVICES (SILT FENCE, SEDIMENT BASIN, ETC.) SHALL BE IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES PROTECTING WATER QUALITY - A FIELD GUIDE TO EROSION, SEDIMENT AND STORMWATER BEST MANAGEMENT PRACTICES FOR DEVELOPMENT SITES IN MISSOURI AND KANSAS.

4. THIS DEVELOPMENT IS REQUIRED TO PROVIDE LONG TERM POST CONSTRUCTION BMP'S SUCH AS; LOW IMPACT DESIGN, SOURCE CONTROL AND TREATMENT CONTROLS THAT PROTECTS WATER QUALITY AND CONTROLS RUN OFF TO MAXIMUM EXTENT PRACTICAL IN COMPLIANCE WITH PHASE II ILLICIT STORM WATER DISCHARGE GUIDELINES. (ORD. 5082, SECTION 405.245) 5. GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES

UNLESS IT CAN BE SHOWN TO THE CITY ENGINEER THAT WEATHER CONDITIONS ARE NOT FAVORABLE, VEGETATIVE GROWTH IS TO BE ESTABLISHED WITHIN 6 WEEKS OF STOPPING GRADING WORK ON THE PROJECT. THE VEGETATIVE GROWTH ESTABLISHED SHALL BE SUFFICIENT TO PREVENT EROSION AND THE STANDARD SHALL BE AS REQUIRED BY EPA AND DNR. (70% COVERAGE PER SQUARE FOOT) ORD. 6496. SECTION 405.095

TREE PRESERVATION

TOTAL PAVEMENT AREA:

TOTAL OPEN SPACE:

### SITE INFORMATION:

INFORMATION:		AREA OF TREES TO BE DRESERVED SHALL BE FOLIAL TO 75%
	GREATER MISSOURI BUILDERS LTD	OF THE EXISTING WOODLAND AREA.
DRESS:	VETERANS MEMORIAL PKWY.	EXISTING WOODLAND AREA = 0.65 AC. X 75% = 0.49 AC TO BE PRESERVED
T SITE ZONING:	C-3 (HIGHWAY COMMERCIAL DISTRICT)	TREES REMOVED = $0.58$ ACRES TREES PRESERVED = $0.07$ ACRES
R NO.:	2-0141-0055-00-0021.0000000	CLEARING LIMITS SHALL BE VISIBLY MARKED IN THE FIELD PRIOR
F TRACT:	3.30 ACRES	TO REMOVAL OF TREES.
OOD MAP:	29183C0266G DATED 1/20/2016	
ED AREA:	2.91 AC.	SITE COVERAGE CALCULATIONS
CK AND YARD RE	QUIREMENTS:	TOTAL SITE AREA:3.307 Ac. (144,052 s.f.)TOTAL BUILDING AREA:0.99 Ac. (43,200 s.f.) 30%

SET BACK AND YARD REQUIREMENTS:

SIDE: 20' MIN.

REAR: 25' MIN.

MINIMUM PARKING SETBACKS:

4' MIN. (20' ADJACENT TO RESIDENTIAL) REAR: 4' MIN. (20' ADJACENT TO RESIDENTIAL)

## SEEDING NOTE:

THE FOLLOWING SUBMITTALS ARE REQUIRED PRIOR TO TEMPORARY AND PERMANENT SEEDING:

1. SOIL TEST REPORT 2. SEEDING DATE

3. FERTILIZATION MIXTURE AND RATE

4. SEED MIXTURE(S) AND RATE(S), SUPPLIER, PURITY PERCENTAGE

5. MULCHING MATERIAL(S) AND APPLICATION RATE(S) 6. MOWING HEIGHT AND SCHEDULE SEEDED AREAS SHALL BE RE-FERTILIZED 4 WEEKS AFTER INITIAL SEEDING. ALL AREAS IDENTIFIED AS BARE AND SPARSE (LESS THAN 30% GROUND COVER) DURING THE INSPECTION SHALL BE RE-SEEDED AND MULCHED. GRASS SHALL NOT BE CUT UNTIL 4 INCHES OF GROWTH OCCURS

### FALL SEEDING

PECIES	RATE (Ib/acre)	SEEDING TIMES
E-OATS	65	8/16 - 9/30
TER RYE	50	8/01 - 10/15
ER WHEAT	60	8/01 - 10/15
ARD GRASS	120	8/01 - 10/15
AL RYEGRASS	80	8/01 - 10/15
FESCUE	80	8/01 - 10/15
1 FESCUE	120	9/01 - 11/15
O CLOVER	2	8/15 - 9/15
ON CLOVER	6	8/15 - 9/15
GRASS +OATS	15	8/15 - 9/15

## SPRING SEEDING

PLANT SPECIES	RATE (Ib/acre)	SEEDING TIMES		
WINTER RYE	50	3/15 - 5/31		
SPRING OATS	65	3/15 - 5/31		
ANNUAL RYEGRASS	4	3/15 - 6/15		
SUDANGRASS	16	4/15 - 6/15		
K-31 FESCUE	30	3/15 - 5/31		
RED CLOVER	2	3/15 - 5/31		
OATS	30	3/15 - 5/31		

0.941 Ac. (29,910 s.f.) 21%

1.830 Ac. (70,942 s.f.) 49%

### RETAINING WALLS: TERRACED AND VERTICAL

1. A PERMIT IS REQUIRED FOR ALL RETAINING WALLS THAT ARE 48 INCHES OR TALLER IN HEIGHT, MEASURED FROM THE TOP OF THE FOOTING TO THE TOP OF THE WALL OR FOR WALLS THAT SUPPORT A SURCHARGE LOAD OR THAT ALTERS THE CHANNELIZED DRAINAGE OF ANY LOT OR DRAINAGE AREA. 2. RETAINING WALLS WILL NOT BE ALLOWED IN PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER.

3. ANY RETAINING WALL MORE THAN THIRTY (30) INCHES TALL WHICH SUPPORTS A WALKING SURFACE THAT IS WITHIN TWO (2) FEET OF THE WALL WILL REQUIRE A GUARD ON THE RETAINING WALL. 4. RETAINING WALLS THAT ALTER THE CHANNELED DRAINAGE OF ANY LOT OR DRAINAGE AREA SHALL NOT BE CONSTRUCTED WITHOUT PRIOR APPROVAL AND PERMITTING FROM THE CITY OF O'FALLON ENGINEERING DEPARTMENT REGARDLESS OF THE HEIGHT OF THE

5. SEE SECTION 405.275 OF THE CITY CODE FOR ADDITIONAL DESIGN REQUIREMENTS.

1. ALL STORM SEWER INSTALLATION IS TO BE IN ACCORDANCE WITH M.S.D. STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES. 2. BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES. PRE CAST CONCRETE STRUCTURES ARE TO

BE USED UNLESS OTHERWISE APPROVED BY THE CITY OF O'FALLON. 3. A 5/8" TRASH BAR SHALL BE INSTALLED HORIZONTALLY IN THE CENTER OF THE OPENING(S) IN ALL CURB INLETS AND AREA

4. INCASE WITH CONCRETE BOTH SANITARY AND STORM SEWER AT CROSSING WHEN STORM SEWER IS WITHIN 18 INCHES ABOVE SANITARY SEWER. ADD CONCRETE CRADLE TO ONLY RCP STORM SEWER AND ENCASE FLEXIBLE STORM SEWER WHEN IT IS MORE THAN 18 INCHES ABOVE SANITARY LINE. SHOW ON PROFILE SHEET. 5. THE STORM SEWERS SHOULD RUN DIAGONALLY THROUGH THE SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS

ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.

CONNECTIONS AT ALL STORM STRUCTURES ARE TO BE MADE WITH A-LOCK JOINT OR EQUAL. PRE CAST CONCRETE INLET COVERS ARE NOT TO BE USED.

9. THE SWALE IN THE DETENTION BASINS SHALL HAVE A MINIMUM 2% LONGITUDINAL SLOPE AND BE LINED WITH A PERMANENT EROSION CONTROL BLANKET THAT WILL ALLOW INFILTRATION OF STORM WATER. 10. ALL STRUCTURES AND FLARED END SECTIONS MUST BE CONCRETE. H.D.P.E. PIPE WILL NOT BE ALLOWED FOR DETENTION BASIN OUTFLOWS, FINAL PIPE RUN TO DETENTION BASINS, CREEK DISCHARGE OR OTHER APPROVED MEANS. 11. RIP RAP SHOWN AT FLARED END SECTIONS WILL BE EVALUATED IN THE FIELD BY THE ENGINEER, CONTRACTOR, AND CITY INSPECTORS AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY TO REDUCE EROSION ON AND OFF

12. ADD 1" MINUS ROCK BACK FILL TO ALL STORM SEWER THAT LIE WITHIN THE 1:1 SHEAR PLANE OF THE ROAD. 13. HDPE pipe is to be N-12WT or equal and to meet ASTM F1417 water tight field

## SWPPP NOTES:

- 1. ALL CONTRACTORS AND SU STORM WATER POLLUTION GENERAL PERMIT (NPDES 2. CONTRACTOR SHALL IMPLE
- PRACTICES SHALL BE IMPL OF CONSTRUCTION. 3. BEST MANAGEMENT PRACTIC
- MANUAL OF PRACTICE, AS AGENCY OR OWNER. 4. CONTRACTOR SHALL MINIM
- GENERAL CONTRACTOR SHA THE EQUIPMENT MAINTENAN OFFICE TRAILERS, AND TOIL
- 6. ALL WASH WATER (CONCRE TREATED OR DISPOSED.
- 7. SUFFICIENT OIL AND GREAS TO CONTAIN AND CLEAN-U
- 8. DUST ON THE SITE SHALL
- DUST SUPPRESSION OPERA 9. RUBBISH, TRASH, GARBAGE SHALL BE PREVENTED FRO DRAINAGE DITCHES OR WAT
- 10. THE LOCAL AGENCY(IES) M OPERATIONS.
- 11. NO GRADED AREA IS TO R SEEDED AND MULCHED OR 12. DISTURBED PORTIONS OF
- TEMPORARILY SEEDED. THE OCCURRING IN THESE AREA
- 13. IF THE ACTION OF VEHICLE MAJORITY OF DIRT OR MUE USED, PROVISIONS MUST E SITE. 14. ALL MATERIALS SPILLED. D
- REMOVED IMMEDIATELY. 15. CONTRACTORS OR SUBCON
- STORM SEWER DRAINAGE 16. SLOPES SHALL BE LEFT IN 17. DUE TO THE GRADE CHANC
- ADJUSTING THE EROSION (
- 18. ALL CONSTRUCTION SHALL UTILITY CONSTRUCTION AND
- 19. THE CONTRACTOR IS SPEC THESE PLANS IS BASED O FIELD. THE INFORMATION I UTILITY COMPANY AT LEAST
- RELOCATION AND CONNECT 20. UNDERGROUND STRUCTURE THEREFORE, THEIR LOCATIO PRESENTLY NOT KNOWN.
- 21. TEMPORARY SILTATION CON ESTABLISHED AT A SUFFICI 22. WHERE NATURAL VEGETATIC
- DISTURBED AS TO PREVEN THE NEXT SEEDING PERIOD 23. WHEN GRADING OPERATION
- ESTABLISHED TO VEGETATIV PERIODS, TEMPORARY COVE (AREAS NOT TO BE DISTUR SHALL BE MULCHED.
- 24. ALL EROSION AND SEDIME RUNOFF, OR BEING OF SU CONTROL FACILITIES SHALL . EROSION SEDIMENT HA 2. SEDIMENT EROSION CO 3. OBVIOUS GULLIES OR
- 4. SEDIMENT HAS BEEN 25. THE CONTRACTOR MUST SU
- 26. ALL FILLED PLACES UNDER AREAS SHALL BE COMPAC PLACED IN PROPOSED ROA
- SOILS ENGINEER CONCURR 27. AREA SHALL BE TEMPORAR

### APPLIED AT A RATE OF 50 GENERAL NOTES

TRAFFIC CONTROL IS TO BE P LIGHTING VALUES WILL BE REVIE

SWPPP NOTES:			
<ol> <li>ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF MISSOURI NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.</li> <li>CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.</li> <li>BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING ACENCY OR OWNER.</li> <li>CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.</li> <li>GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.</li> <li>ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.</li> <li>SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOATATION BOOM SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS</li> <li>DUST ON THE SITE SHALL BE CONTROLLED, THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.</li> <li>RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.</li> <li>THE LOCAL ACCONCYLED AT LEAST FORTY_EICHT HOURS DRIOR TO THE COMMENCEMENT OF ANY CRADING</li> <!--</td--><td>PROJECT TITLE</td><td>StorCo Self Storage New Buildings and Drive</td><td>O'Fallon, Mo.</td></ol>	PROJECT TITLE	StorCo Self Storage New Buildings and Drive	O'Fallon, Mo.
<ol> <li>The LOCATIONS.</li> <li>NO GRADED AREA IS TO REMAIN WITHOUT VEGETATIVE GROUND COVER FOR MORE THAN THIRTY (30) DAYS WITHOUT BEING SEEDED AND MUCHED OR SODDED.</li> <li>DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAS CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.</li> <li>IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MAKE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.</li> <li>ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.</li> <li>CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGES SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.</li> <li>SLOPES SHALL BE LEFT IN ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.</li> <li>DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES) TO PREVENT EROSION.</li> <li>ALL CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PANING.</li> <li>THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD AND FLACEMENT OF THE UNITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD AND ILCAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIEL OLOCATION OF UTILITIES, LOCATION, RELOCATION AND CONNECTION OF THE UTILITIES SHALL BE COORDINATED WITH THE UTILITY COMPANIES.</li>     LUNDERGROUND STRUCTURE</ol>	ID PI ANNING • CIVIL ENGINEERING	4053 North St. Peters Pkwy. Ste D St. Peters, MISSOURI. 63304 PH: (636) 477-6466	MO. CERT. OF AUTHORITY FOR ENGINEERING LIC. NO. 2019001202
<ol> <li>21. TEMPORARY SILTATION CONTROL STRUCTURES SHALL BE MAINTAINED UNTIL A VEGETATIVE COVER OF AREA DISTURBED IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE, AS DETERMINED BY THE CITY ENGINEER.</li> <li>22. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED VEGETATIVE COVER OF AREA DISTURBED AS TO PREVENT EROSION. PERMANENT TYPE GRASSES SHALL BE ESTABLISHED AS SOON AS POSSIBLE OR DURING THE NEXT SEEDING PERIOD AFTER GRADING HAS BEEN COMPLETED.</li> <li>23. WHEN GRADING OPERATION ARE COMPLETED OR SUSPENDED FOR MORE THAT THIRTY (30) DAYS, PERMANENT GRASS MUST BE ESTABLISHED TO VEGETATIVE COVER TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE CITY ENGINEER'S RECOMMENDATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENTS) IN TWENTY (20) PERCENT SLOPES (5 HORIZONTAL TO 1 VERTICAL) SHALL BE MULCHED.</li> <li>24. ALL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSPECTED FOLLOWING EACH RAINSTORM CAUSING SIGNIFICANT RUNOFF, OR BEING OF SUFFICIENT INTENSITY OR DURATION AS TO STOP CONSTRUCTION OR GRADING PROGRESS. THE SEDIMENT</li> </ol>			ENGINEERING ITC.
<ol> <li>EROSION SEDIMENT HAS ACCUMULATED IN SIT DEVICES.</li> <li>SEDIMENT EROSION CONTROL DEVICES HAVE BEEN DAMAGED.</li> <li>OBVIOUS GULLIES OR SEDIMENT DEPOSITS HAVE BEEN FORMED ON THE DOWNSTREAM SIDE OF CONTROL DEVICES.</li> <li>SEDIMENT HAS BEEN CARRIED BEYOND THE WORKING SITE.</li> <li>THE CONTRACTOR MUST SUPPLY CITY ENGINEER WITH ALL COPIES OF INTERIM SOIL TESTING REPORTS.</li> <li>ALL FILLED PLACES UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OF PAVED OR FUTURE PAVED AREAS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD COMPACTION TEST. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS.</li> <li>AREA SHALL BE TEMPORARILY RE-SEEDED AT A RATE OF 6-8 LBS. OF RYE GRASS BE 1,000 SQ.FT. FERTILIZER SHALL BE APPLIED AT A RATE OF 50 LBS. PER 10,000 SQ.FT.</li> </ol>	WILLIA PROFE	M AUGUST HEYSE P Essional Engineer	'.Е. Е-24297
BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN WAS OBTAINED FROM PLAN PREPARED BY LAND DEVELOPMENT CONSULTANTS INC., ALL SIGNAGE AND FENCING WILL REQUIRE A SEPARATE PERMIT. ALL UTILITIES WILL BE LOCATED UNDERGROUND. DETENTION WILL BE PROVIDED FOR THE 100 YEAR STORM. ALL HVAC AND MECHANICAL UNITS ON SITE SHALL BE PROPERLY SCREENED AS REQUIRED BY CITY CODE. ROOFTOP UNITS SHALL BE SCREENED BY A PARAPET WALL THAT EXTENDS AROUND THE ENTIRE PERIMETER OF THE BUILDING.; THE PARAPET SHALL HAVE A MINIMUM HEIGHT THAT IS AT LEAST AS TALL AS THE TALLEST UNIT MOUNTED ON THE ROOF; GROUND MOUNTED HVAC AND MECHANICAL UNITS SHALL BE SCREENED BY FENCING, VEGETATION, OR SOME OTHER MEANS (APPROVED BY THE PLANNING AND ZONING COMMISSION) THAT HAS A MINIMUM HEIGHT THAT IS AT LEAST AS TALL AS THE TALLEST UNIT BEING SCREENED. ALL FINAL SLOPES SHALL BE MAXIMUM OF 3:1 CITY OF O'FALLON CONSTRUCTION WORKING HOURS PER CITY ORDINANCE 3429. CONSTRUCTION WORK SHALL ONLY BE ALLOWED DURING THE FOLLOWING HOURS: COTODER 1. MAY 31	Developer	StorCo LLC 24 O'Fallon Sq. O'Fallon, Missouri 63366	Plan
OCHOLER TO 7:00 PM       MONDAY - SUNDAY         JUNE 1 - SEPTEMBER 30         6:00 AM TO 8:00 PM       MONDAY - FRIDAY         7:00 AM - 8:00 PM       SATURDAY AND SUNDAY.         CONSTRUCTION WORK TO BE DONE OUTSIDE OF THESE HOURS REQUIRED PRIOR WRITTEN APPROVAL FROM THE CITY         ADMINISTRATOR OR CITY ENGINEER.         CITY APPROVAL OF THE CONSTRUCTION SITE PLANS DOES NOT MEAN THAT ANY BUILDING CAN BE CONSTRUCTED ON THE LOTS         WITHOUT MEETING THE BUILDING SETBACKS AS REQUIRED BY THE ZONING CODE.         ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE         CITY OF O'FALLON ORDINANCES.         SIDEWALKS, CURB RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENTLY         APPROVED AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES ALONG WITH THE REQUIRED GRADES, SIGNAGE,	er Information	ater Midwest Builder LTD I Wall St. Ste. 220 Charles, Missouri 63303	:y of O'Fallon Site
SPECIFICATIONS AND CONSTRUCTION MATERIALS. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL BE FOLLOWED AND THE CONTRACTOR, PRIOR TO ANY CONSTRUCTION, SHALL NOTIFY THE PROJECT ENGINEER. ALL INSTALLATIONS AND CONSTRUCTION SHALL CONFORM TO THE APPROVED ENGINEERING DRAWINGS. HOWEVER, IF THE DEVELOPER CHOOSES TO MAKE MINOR MODIFICATIONS IN DESIGN AND/OR SPECIFICATIONS DURING CONSTRUCTION, HE/SHE SHALL MAKE SUCH CHANGES AT HIS/HER OWN RISK, WITHOUT ANY ASSURANCE THAT THE CITY ENGINEER WILL APPROVE THE COMPLETED INSTALLATION OR CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO NOTIFY THE CITY ENGINEER OF ANY CHANGES FROM THE APPROVED DRAWINGS. THE DEVELOPER MAY BE REQUIRED TO CORRECT THE INSTALLED IMPROVEMENTS SO AS TO CONFORM TO THE APPROVED ENGINEERING DRAWINGS. THE DEVELOPER MAY REQUEST A LETTER FROM THE CONSTRUCTION INSPECTION DIVISION REGARDING ANY FIELD CHANGES APPROVED BY THE CITY INSPECTORS	MO P+ Ap Pe Pi	-Z No. 22- proval Da 3-2 prmit No.	.010078 ate 2-2023
ALL IDENTIFICATION OR DIRECTIONAL SIGN(S) MUST HAVE THE LOCATIONS AND SIZES APPROVED AND PERMITTED SEPARATELY THROUGH THE PLANNING AND DEVELOPMENT DIVISION. TRAFFIC CONTROL IS TO BE PER MODOT OR MUTCD WHICHEVER IS MORE STRINGENT.		C	2