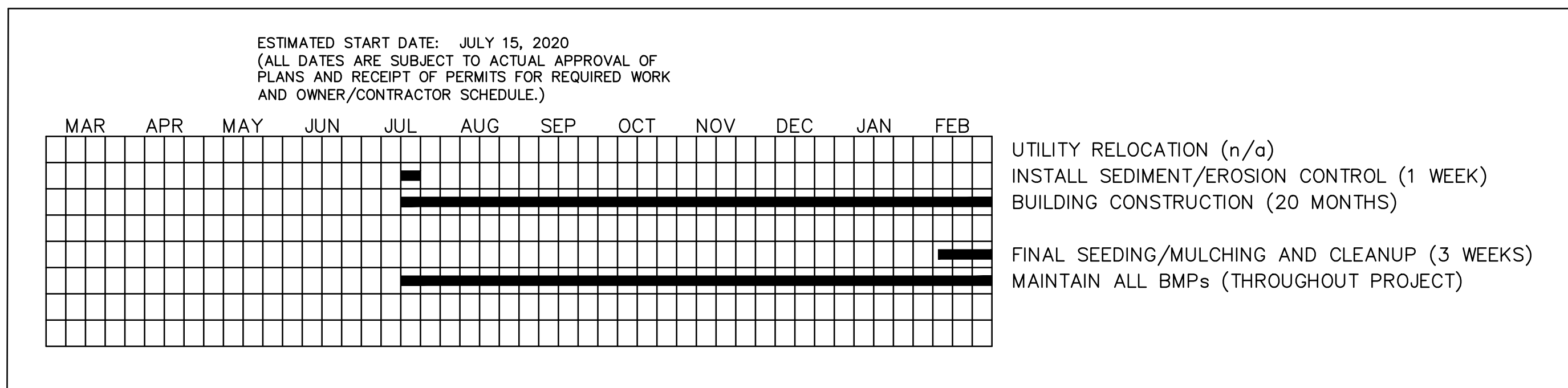


GENERAL NOTES:

1. ADDITIONAL SWPPP DETAILS AS REQUIRED BY THE CITY OF OFFALLON, ST. CHARLES COUNTY AND/OR MISSOURI DEPARTMENT OF NATURAL RESOURCES.
2. PRIOR TO THE ISSUANCE OF A MAJOR LAND DISTURBANCE PERMIT, A GRADING SURETY AND INSPECTION FEES MUST BE APPROVED BY AND PAID TO THE CITY OF OFFALLON.
3. PRIOR TO ANY MAJOR LAND DISTURBANCE ACTIVITY, A LAND DISTURBANCE PERMIT FROM THE STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES WILL BE REQUIRED.
4. ANY LAND CLEARING, CONSTRUCTION, OR DEVELOPMENT INVOLVING THE MOVEMENT OF EARTH SHALL BE IN ACCORDANCE WITH THE SWPPP, AND THE PERSON ISSUED A LAND DISTURBANCE PERMIT ASSUMES AND ACKNOWLEDGES RESPONSIBILITY FOR COMPLIANCE WITH THE CITY OF OFFALLON LAND DISTURBANCE CODE AND THE APPROVED SWPPP AT THE SITE OF THE PERMITTED ACTIVITY.
5. ALL LAND DISTURBANCE PERMITS AND THE SWPPP SHALL BE MAINTAINED IN THE CONSTRUCTION TRAILER AS ESTABLISHED BY THE CONTRACTOR TO BE AVAILABLE FOR VIEWING AT ALL TIMES.
6. ADDITIONAL SILTATION CONTROL SHALL BE INSTALLED AS REQUIRED BY THE CITY OF OFFALLON, ST. CHARLES COUNTY AND/OR MDNR.
7. NO ENDANGERED SPECIES AND HISTORIC PROPERTIES DOCUMENTATION ARE KNOWN AT THIS TIME.
8. ANTICIPATED DE-WATERING METHODS SHALL INCLUDE THE USE OF A PORTABLE PUMP POWERED BY A GENERATOR.
9. SEDIMENT SHALL BE WASHED FROM ALL VEHICLES AT WASH DOWN STATION PRIOR TO LEAVING THE SITE. NO TRACKING OF MUD ONTO ANY ROADWAY SHALL BE ALLOWED.
10. NO ON-SITE TEMPORARY ACTIVITIES LIKE A CONCRETE OR ASPHALT BATCH PLANT IS EXPECTED.
11. NOTE OMITTED.
12. A "SPECIAL INSPECTOR", APPROVED BY ST. CHARLES COUNTY, SHALL BE RETAINED BY THE PERMIT HOLDER TO CONDUCT REGULAR INSPECTION OF LAND DISTURBANCE ACTIVITIES AND SWPPP MEASURES AS DETAILED IN THE SEDIMENT AND EROSION CONTROL MANUAL.
13. CLEARING, EXCEPT THAT NECESSARY TO ESTABLISH SEDIMENT CONTROL DEVICES, SHALL NOT BEGIN UNTIL ALL SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED AND HAVE BEEN STABILIZED.
14. CLEARING TECHNIQUES THAT RETAIN EXISTING VEGETATION TO THE MAXIMUM EXTENT PRACTICABLE SHALL BE USED AND THE TIME PERIOD FOR DISTURBED AREAS TO BE WITHOUT VEGETATIVE COVER SHALL BE MINIMIZED TO THE EXTENT PRACTICAL. IF TREES ARE TO BE REMOVED AS A RESULT OF CLEARING, GRUBBING OR CONSTRUCTION, CONSIDER CHIPPING, GRINDING OR SHREDDING THEM FOR USE ON SITE AS A TEMPORARY, EROSION CONTROL BMP DURING CONSTRUCTION.
15. ROADWAY CONSTRUCTION WASTE MATERIAL AND FUEL FOR CONSTRUCTION EQUIPMENT MAY BE STORED ON SITE DURING CONSTRUCTION ACTIVITIES. THE ROADWAY CONSTRUCTION WASTE MATERIAL SHALL BE HAULED TO AN APPROVED LANDFILL AS APPROPRIATE AND SHALL BE CONTAINED BY SILT FENCE. CONSTRUCTION EQUIPMENT FUEL, IF STORED, SHALL BE STORED IN APPROVED CONTAINERS SUITABLE FOR TRANSPORT.
16. AREAS SHALL BE IMMEDIATELY SEEDED (OR OTHERWISE STABILIZED) WHEN NO ACTIVITY IS EXPECTED TO OCCUR WITHIN FOURTEEN (14) CALENDAR DAYS.
17. IF SEEDING OR ANOTHER VEGETATIVE EROSION CONTROL METHOD IS USED, IT SHALL BECOME ESTABLISHED WITHIN TWO (2) WEEKS OR THE SITE SHALL BE RE-SEEDED OR A NON-VEGETATIVE OPTION EMPLOYED.
18. TECHNIQUES SHALL BE EMPLOYED TO ENSURE STABILIZATION ON STEEP SLOPES AND IN DRAINAGE WAYS.
19. SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY OR PERIMETER CONTROLS MUST BE IN PLACE TO PREVENT SILT FROM THE STOCKPILE FROM LEAVING THE SITE.
20. THE ENTIRE SITE MUST BE STABILIZED, USING A HEAVY MULCH LAYER OR ANOTHER METHOD THAT DOES NOT REQUIRE GERMINATION TO CONTROL EROSION, AT THE CLOSE OF THE CONSTRUCTION SEASON.
21. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
22. TECHNIQUES SHALL BE EMPLOYED TO DIVERT UPLAND RUNOFF PAST DISTURBED SLOPES.
23. AT LEAST ONCE EVERY WEEK AND NO LATER THAN 48 HOURS AFTER EVERY RAINFALL EVENT WHICH RESULTS IN STORMWATER RUNOFF ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE INSPECTED FOR DAMAGE AND AMOUNT OF SEDIMENTATION ACCUMULATED AND CORRECTIVE ACTIONS TAKEN. REPORTS OF THESE INSPECTIONS AND CORRECTIVE ACTIONS SHALL BE PREPARED ON THE FORMS PROVIDED BY THE CITY OF OFFALLON AND SUBMITTED TO THE CITY OF OFFALLON WITHIN 5 DAYS OF THE INSPECTION.
26. THE CONTRACTOR SHALL MAINTAIN A 10% SURPLUS OF ALL EROSION AND SILTATION CONTROL DEVICES FOR EMERGENCY REPAIRS WHICH THE SURPLUS SHALL BE STORED AT THE CONSTRUCTION OFFICE.
27. SEDIMENT BUILD-UP REMOVED DURING ROUTINE BMP MAINTENANCE SHALL REMAIN ON-SITE. SEDIMENT SHALL BE RELOCATED TO WITHIN THE STOCKPILE AREA OR TO A LEVEL AREA (1% MAX.) ABSENT OUT SEDIMENT AND ALLOW TO DRY.
28. ACTION PLAN FOR RESPONDING TO ANY LOSS OF SEDIMENT OFF-SITE:  
CONTRACTOR TO REMOVE BY HAND OR BY SKID-STEER OR BOBCAT VEHICLE. SEDIMENT TO BE TRANSPORTED BACK ONTO GRADING SITE. INSPECT AND REPAIR BMPS AS REQUIRED. REPORTS TO THE CITY OF OFFALLON SHALL BE SUBMITTED AS REQUIRED.
29. ACTUAL SIZE AND LOCATION OF THE CONSTRUCTION TRAILER, STAGING & WASHDOWN AREA TO BE COORDINATED WITH THE SITE CONTRACTOR AND CITY OF OFFALLON. THE CONSTRUCTION ENTRANCE SHALL MEET ST. CHARLES COUNTY SIGHT DISTANCE REQUIREMENTS. THE PROPOSED LOCATION MUST BE APPROVED BY CITY OF OFFALLON.
30. SEE BMP QUANTITY TABLE FOR DESCRIPTIONS OF PRACTICES TO BE USED DURING CONSTRUCTION. WHEN CONSTRUCTION IS COMPLETE, THE GROUND WILL BE COVERED WITH A COMBINATION OF SOD, SEED & MULCH AND ROCK LINING.
31. A LIST OF EPA ALLOWABLE NON-STORM WATER DISCHARGES MAY INCLUDE: WATER LINE FLUSHING, LANDSCAPE IRRIGATION, UNCONTAMINATED PUMPED GROUND WATER, DISCHARGE FROM POTABLE WATER SOURCES, LAWN WATERING, WASH DOWN STATION AND STREET WASH WATER.
32. IF CUT AND FILL OPERATIONS OCCUR DURING A SEASON NOT FAVORABLE FOR IMMEDIATE ESTABLISHMENT OF PERMANENT GROUND COVER, A FAST GERMINATING ANNUAL SUCH AS RYE GRASSES OR SUDAN GRASSES SHALL BE UTILIZED TO RETARD EROSION, IF ADEQUATE STORMWATER CONVEYANCE AND EROSION CONTROL DEVICES HAVE NOT BEEN ESTABLISHED.
33. STORM WATER PIPES, OUTLETS AND CHANNELS SHALL BE PROTECTED BY SILT BARRIERS AND KEPT FREE OF WASTE AND SILT AT ALL TIMES PRIOR TO FINAL SURFACE STABILIZATION AND/OR PAVING.
34. ALL STORMWATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE DISCHARGE POINTS.
35. ADDITIONAL SILTATION CONTROL SHALL BE INSTALLED AS REQUIRED BY THE CITY OF OFFALLON.
36. A PERMIT SHALL BE OBTAINED FROM THE CITY OF OFFALLON BUILDING DEPARTMENT FOR CONSTRUCTION OF RETAINING WALLS.
37. A PERMIT SHALL BE OBTAINED FROM THE CITY OF OFFALLON BUILDING DEPARTMENT FOR ROOF DRAIN CONNECTIONS.

ESTIMATED SCHEDULE OF OPERATIONS



SEQUENCE OF GRADING AND BMP IMPLEMENTATION SCHEDULE

1. CONTACT THE CITY OF OFFALLON DEPARTMENT OF ENGINEERING 48 HOURS PRIOR TO ANY GRADING OPERATIONS.
2. OBTAIN PERMITS (SEPARATE PERMIT PROCESS) TO DEMOLISH EXISTING STRUCTURES TO BE REMOVED (IF REQUIRED), IMPLEMENT NON-SEDIMENT CONTROLS.
2. INSTALL SILT FENCE AROUND PERIMETER OF SITE AND AS CONSTRUCTION ACTIVITIES PROGRESS.
3. INSTALL CONSTRUCTION ENTRANCE, WASH DOWN STATION AND PARKING AREAS.
4. INSTALL INLET/OUTLET PROTECTION AS STORM SEWERS ARE CONSTRUCTED.
5. TEMPORARY SEED AND MULCH DISTURBED AREAS (AS REQUIRED).
6. INSTALL FINAL GROUND COVERING AFTER FINAL GRADING IS COMPLETED.

S.W.P.P. NOTE:

SEE SHEET C4.0 FOR S.W.P.P. BMP LOCATIONS

TOTAL AREA : 19.112 Ac.  
TOTAL AREA DISTURBED BY GRADING: 18.70 ± Ac.

EMERGENCY CONTACT INFORMATION

SPECIAL INSPECTOR	OWNER/OWNER IN CHARGE
ERIC FISCHER, P.E. STOCK & ASSOCIATES 257 CHESTERFIELD BUSINESS HWY ST. LOUIS, MO 63205 636.530.9100 (OFFICE)	TAYLOR DIAL WATERMARK RESIDENTIAL 1111 N. LINCOLN BLVD., SUITE 1600 INDIANAPOLIS, IN 46204 317.525.9813 (24-HOUR)

EXISTING SITE RUNOFF COEFFICIENT: 0.10  
PROPOSED SITE RUNOFF COEFFICIENT: 0.65  
SITE SOILS: HYDROLOGIC SOIL GROUP: C

BMP QUANTITIES

TYPE	BMP	QUANTITY	10% SURPLUS	TOTAL	UNIT	USAGE
SEEDING/SODDING/MULCH	60-20	5.10	0.51	5.61	AC.	PERMANENT
CHECK DAM	ESC-11	5	1	6	EACH	TEMPORARY
CONSTRUCTION ROAD	ESC-4	-	-	-	EACH	TEMPORARY
WASHDOWN STATION	ESC-4	1	-	1	EACH	TEMPORARY
CONSTRUCTION ENTRANCE	ESC-4	1	-	1	EACH	TEMPORARY
INLET PROTECTION-GUTTER	ESC-17	5	1	6	EACH	TEMPORARY
INLET PROTECTION-DROP	ESC-14	64	6	70	EACH	TEMPORARY
SILT FENCE	ESC-5	2,230	223	2,453	LF	TEMPORARY

NOTE

SWPPP INSPECTIONS MUST BE SCHEDULED AT LEAST ONCE PER WEEK AND NO LATER THAN 48 HOURS AFTER A RAINFALL THAT CAUSES STORMWATER RUNOFF TO OCCUR ON-SITE.

NOTIFICATION

IN THE EVENT OF SILT RUNOFF FROM THE SUBJECT PROPERTY ONTO OFFSITE PROPERTY OWNERS

- 1.) THE CONTRACTOR SHALL NOTIFY OFFSITE PROPERTY OWNER AND OBTAIN CONSENT TO REMOVE SEDIMENT AND RESTORE TO ORIGINAL CONDITION.
- 2.) THE SPECIAL INSPECTOR MUST DOCUMENT ANY SILT RUNOFF FROM THE SITE AND REPORT WHEN THE CLEAN-UP HAS BEEN COMPLETED ON THE ST. CHARLES COUNTY SWPPP INSPECTION REPORT. ALL REPORTS MUST BE SUBMITTED TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, CITY OF OFFALLON AND/OR ST. CHARLES COUNTY DEPARTMENT OF PUBLIC WORKS.

GRADING NOTES

1. ON-SITE GRADING WILL UTILIZE STANDARD GRADING EQUIPMENT TO ACHIEVE THE PROPOSED GRADES SHOWN ON THIS PLAN.
2. ALL GRADING OPERATIONS SUBJECT TO THE CONDITIONS AND RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY SGI ENGINEERING, INC.

SILTATION NOTES

1. EROSION AND SILTATION CONTROL SHALL BE INSTALLED AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR CONTROLLING REGULATORY AGENCY AND ADEQUATE VEGETATIVE GROWTH INSURES NO FURTHER EROSION OF THE SOIL.
2. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
3. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE RE-ESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION.
4. IF CUT AND FILL OPERATIONS OCCUR DURING A SEASON NOT FAVORABLE FOR IMMEDIATE ESTABLISHMENT OF PERMANENT GROUND COVER, A FAST GERMINATING ANNUAL SUCH AS RYE GRASSES OR SUDAN GRASSES SHALL BE UTILIZED TO RETARD EROSION, IF ADEQUATE STORMWATER DETENTION AND EROSION CONTROL DEVICES HAVE NOT BEEN ESTABLISHED.
5. STORM WATER PIPES, OUTLETS AND CHANNELS SHALL BE PROTECTED BY SILT BARRIERS AND KEPT FREE OF WASTE AND SILT AT ALL TIMES PRIOR TO FINAL SURFACE STABILIZATION AND/OR PAVING.
6. DUST CONTROL MEASURES TO BE USED DURING PERIODS OF DRY WEATHER TO REDUCE POLLUTANTS FROM ENTERING INTO STORMWATER.
7. CONTRACTOR TO MAINTAIN CLEAN STREETS SURROUNDING THE DEVELOPMENT AND REDUCE/PREVENT DUST POLLUTION BY USING DUST CONTROL MEASURES. SPRINKLING IS ONE TYPE OF DUST CONTROL THAT MAY BE USED ON HAUL ROUTE AND OTHER TRAFFIC AREAS ON SITE.
8. ANY LAND CLEARING, CONSTRUCTION, OR DEVELOPMENT INVOLVING THE MOVEMENT OF EARTH SHALL BE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN. THE CONTRACTOR IS TO MAINTAIN A CURRENT COPY OF THE SWPPP ON-SITE AT ALL TIMES AND NOTIFY ALL SUBCONTRACTORS AND OTHER ENTITIES WHO WILL PERFORM WORK AT THE SITE OF THE EXISTENCE OF THE SWPPP AND WHAT ACTIONS OR PRECAUTIONS SHALL BE TAKEN WHILE ON SITE TO MINIMIZE THE POTENTIAL FOR EROSION AND THE POTENTIAL FOR DAMAGING ANY BMP.
9. AT LEAST ONCE EVERY WEEK AND AFTER EVERY RAINFALL EVENT THAT CAUSES STORMWATER RUNOFF, EROSION AND SILTATION CONTROL DEVICES SHALL BE INSPECTED FOR DAMAGE AND AMOUNT OF SEDIMENTATION ACCUMULATED AND CORRECTIVE ACTIONS TAKEN. ANY DEFICIENCIES SHALL BE CORRECTED WITHIN ONE (1) CALENDAR DAY OF THE INSPECTION IN EMERGENCY CONDITIONS AND FOUR (4) CALENDAR DAYS OF THE INSPECTION FOR ROUTINE MAINTENANCE.
10. ANY DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR 14 DAYS OR MORE SHALL BE STABILIZED WITH SEEDING AND MULCHING PER CITY STANDARDS. IF SEASONAL CONDITIONS PROHIBIT SEEDING OR MULCHING, MATTING SHALL BE USED.
11. ALL SLOPES OR DRAINAGE CHANNELS, ONCE CONSTRUCTED TO FINAL GRADE, SHALL BE SEEDED AND MULCHED PER SPECIFICATIONS WITHIN SEVEN (7) DAYS. EVERY EFFORT SHALL BE MADE TO STABILIZE AND VEGETATE THESE AREAS UNTIL THE CONSTRUCTION MANAGER HAS GIVEN FINAL APPROVAL TO THEM.
12. SILT FENCES SHALL BE INSTALLED IMMEDIATELY AROUND EACH STORM SEWER STRUCTURE ONCE FINAL CONSTRUCTION OF EACH INDIVIDUAL STRUCTURE IS COMPLETE AND THE CONSTRUCTION MANAGER HAS GIVEN HIS APPROVAL.
13. ALL SILTATION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.
14. SEDIMENT BUILD-UP REMOVED DURING ROUTINE BMP MAINTENANCE SHALL REMAIN ON-SITE. SEDIMENT SHALL BE RELOCATED TO WITHIN THE STOCKPILE AREA OR TO A LEVEL AREA (1% MAX.) ABSENT OF CONCENTRATED FLOWS. LEVEL OUT SEDIMENT AND ALLOW TO DRY.
15. DEFICIENCIES REPORTED BY THE SPECIAL (SWPPP) INSPECTOR SHALL BE CORRECTED WITHIN ONE (1) CALENDAR DAY OF THE INSPECTION IN EMERGENCY CONDITIONS AND FOUR (4) CALENDAR DAYS OF THE INSPECTION FOR ROUTINE MAINTENANCE.
16. PRIOR TO ANY MAJOR LAND DISTURBANCE ACTIVITY, A LAND DISTURBANCE PERMIT FROM THE STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES WILL BE REQUIRED.
17. IN THE EVENT OF SILT RUNOFF FROM SUBJECT PROPERTY ONTO OFFSITE PROPERTY, THE CONTRACTOR SHALL NOTIFY THE OFFSITE PROPERTY OWNER AND OBTAIN CONSENT TO REMOVE SEDIMENT AND RESTORE PROPERTY TO ORIGINAL CONDITION.

CONTRACTOR NOTES:

1. PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT OWNER'S PERSONNEL AND GENERAL PUBLIC FROM INJURY DUE TO SELECTIVE DEMOLITION WORK.
2. PROTECT AND SUPPORT CONDUITS, DRAINS, AND WIRE TO REMAIN IN USE AND SUSCEPTIBLE TO DAMAGE BY CONSTRUCTION ACTIVITIES.
3. REMOVE PROTECTIONS AT COMPLETION OF WORK.
4. PROMPTLY REPAIR ANY AND ALL DAMAGES TO ADJACENT FACILITIES OR ITEMS TO REMAIN.
5. PROVIDE SIGNAGE AT CONSTRUCTION ENTRANCES TO THE SITE TO WARN PEDESTRIAN TRAFFIC ABOUT INCOMING AND OUTGOING CONSTRUCTION TRAFFIC.
6. THIS PLAN IS ONLY A GENERAL GUIDE, CONTRACTOR IS RESPONSIBLE FOR APPROPRIATE METHODS AND LOCATIONS OF STORMWATER PROTECTIONS DURING CONSTRUCTION, REGARDLESS OF WHAT IS SHOWN.
7. ALL TEMPORARY SEEDING FOR SITE STABILIZATION SHALL BE PERFORMED BY THE GENERAL CONTRACTOR.

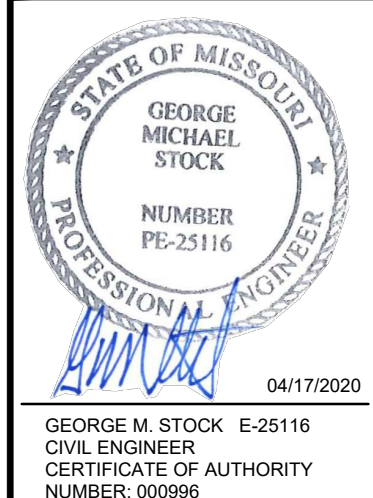
PREPARED BY:



SITE IMPROVEMENT PLANS FOR:

WATERMARK APARTMENTS AT O'FALLON

CRUISER ROAD & WELDON SPRING ROAD  
CITY OF OFFALLON, ST. CHARLES COUNTY, MISSOURI 63368



REVISIONS:

1	01/16/2020 - 60% PRINTING
2	02/14/2020 - PERMIT SET
3	03/25/2020 - REVISED PER OWNER / CITY UTILITY COMMENTS
4	04/17/2020 - AGENDUM 'A'

DRAWN BY: G.M.S. CHECKED BY: G.M.S.  
DATE: 01/16/2019 JOB NO: 219-6494

SHEET TITLE:  
SWPPP DETAILS AND SPECIFICATIONS

SHEET NO.:  
C4.2

STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE REQUIREMENTS OF THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPLIES. THE CONTRACTOR MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO REPLY FINAL APPROVALS ARE SHOWN ON THIS PLAN UNLESS SPECIFICALLY DESIGNATED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.