### SPECIFICATION DIVISION 31

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SECTION 312500 – EROSION AND SEDIMENTATION CONTROLS

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DIVISION 31 EARTHWORK
SECTION 312500 – EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY
A. This Section includes conducting earthwork and earth change activity operations in a manner to protect Waters of the State (of Michigan), storm drains, and adjacent properties from soil erosion and sedimentation.

1.2 DEFINITIONS
A. "Waters of the State" includes the Great Lakes and their connecting waters, lakes, ponds and streams which may or may not be serving as a County drain as defined by the drain code; or any other body of water that has definite banks, a bed and visible evidence of a continued flow or continued occurrence of water or wetlands regulated under Part 303.

1.3 SUBMITTALS
A. Submit product information for materials proposed for use.

1.4 QUALITY CONTROL
A. Requirements of Regulatory Agencies: For earth changes, comply with the following:
   1. Part 91, Soil Erosion and Sedimentation Control (SESC) of the Natural Resource & Environmental Protection Act, 1994 PA 451, as amended (Part 91).
   2. The University of Michigan Soil Erosion & Sedimentation Control Procedures.

1.5 INSPECTIONS

U-M OSEH or their designee, who have received a MDEQ SESC certificate of training, will inspect sites weekly during construction activites and within 24 hours of a significant rain event (for sites 1 acre or more in size) to ensure compliance with the U-M SESC Procedures and Part 91 SESC Regulations. These inspections will continue from the beginning of earthwork until the site is stabilized.

1.6 PERFORMANCE REQUIREMENTS
A. Implement the soil erosion and sedimentation control plan including required maintenance during construction and final removal as directed in the plans, and as needed per site conditions and as required by site inspections by University of Michigan Occupational Safety and Environmental Health (OSEH).
B. Control runoff, soil erosion, and sedimentation. No sediment should leave the site.

C. Prevent wind erosion. No visible emissions (dust) should leave the site.

D. Comply with The University of Michigan Soil Erosion and Sedimentation Control Procedures.

1.7 REFERENCES

A. The University of Michigan Soil Erosion & Sedimentation Control Procedures.

http://www.oseh.umich.edu/pdf/guideline/SESCprogram.pdf

http://www.michigan.gov/deq/0,1607,7-135-3313_3682_3714-118554--,00.html

PART 2 - MATERIALS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 GENERAL

A. Where the following events result in the need for additional or modified soil erosion and sedimentation control installations to meet the objective of the referenced procedures, provide remedial installations on a timely basis.

1. Unanticipated alterations to the construction schedule.
2. Unanticipated site conditions except Acts of God such as a tornado or fire.

B. Install temporary erosion and sedimentation control measures prior to or upon commencement to earthwork activities.

1. Install an entrance anti-tracking pad with a minimum of 50 feet in length. A geotextile filter fabric should be placed under 6 inches of limestone aggregate.
2. Install temporary inlet protection at all adjacent and down-gradient storm water inlets, catch basins and manholes that may be impacted.
3. Install silt fence with stakes on the side down gradient from the disturbed area. Toe in six inches of the fencing material.
4. Place stockpiles and other spoil piles away from the drainage system to minimize sediment transport. Keep as few stockpiles as possible during the course of the project. If the stockpile and/or spoil pile must remain on-site overnight, or if the weather conditions indicate the chance for precipitation,
   a. cover the pile with water repellent material to prevent erosion or
b. install silt fencing or appropriate sedimentation barrier around the base of the pile to prevent transport of sediment to the storm water system and wet the pile as needed to prevent wind erosion, or
c. apply other control methods as appropriate to the site.

5. Where runoff enters the existing storm water system, protect the storm system from sedimentation.
   a. Temporary inlet protection must prevent the release of sediment and allow for proper drainage.
      1) Use of burlap is not acceptable as a SESC measure.
      2) If filter fabric is used on drains, ensure the filter fabric is placed over (not under) the storm grates to facilitate maintenance (cleaning) of the controls.
      3) If high storm water flows are expected, use silt sacks in lieu of filter fabric for drain protection. Based on site conditions select regular or high flow silt sacks as appropriate.

C. Utilize a water truck as needed for dust control.

D. Utilize a sweeping machine to remove sediment tracked onto the pavement on a daily basis at minimum. Use sweeper more frequently as dictated by site conditions and/or as recommended by U-M OSEH Inspector.

E. Maintain erosion and sedimentation controls on a daily basis until the contract has been completed and accepted. Maintenance shall include:
   1. Repair of damaged installations.
   2. Replacement of lost soil erosion & sedimentation control measures.
   3. Periodic removal of collected silt and sedimentation as required or directed to maintain effectiveness of the silt traps, filters and basins.

F. Correct non-conforming soil erosion and sedimentation control measures on a timely basis within 24 hours, if Waters of the State are being impacted, or could be impacted, or within 5 days if not impacting Waters of the State.

G. Complete permanent soil erosion control measures for all slopes, channels, ditches, or any disturbed land area within 5 calendar days after final grading or the final earth change has been completed. Maintain temporary control measures until permanent soil erosion control measures are in place and the area is stabilized.

3.2 CLEAN UP

A. Remove temporary erosion control measures after permanent soil erosion measures are in place and the area is stabilized, unless ordered by the U-M OSEH Inspector to remain in place. Care shall be taken during removal to prevent soil erosion and sedimentation.

END OF SECTION 312500