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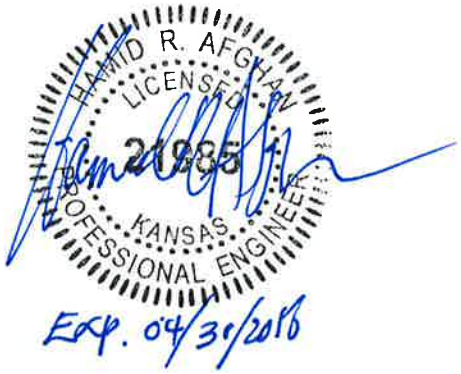
ENGINEERING

# Reser's Fine Foods East Development

## SWPPP Report

401-545 SE Croco Rd.
Topeka, Kansas




November 2rd, 2016
PROJECT NUMBER: A16186.11

**AAI Engineering**
4875 S.W. Griffith Drive
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# Stormwater Pollution Prevention Plan

# For:

Reser's Fine Foods East Development
401-545 SE Croco Rd.
Topeka, KS 66607

# Operator(s):

Reser's Fine Foods
Mark Reser
P.O. Box 8
Beaverton, OR 97006

# SWPPP Contact(s):

Reser's Fine Foods
TBD
3167 SE 10th St.
Topeka, KS 66607

# SWPPP Preparation Date:

**10/26/16**

*Estimated Project Dates:*

**Project Start Date: 11 / 15 / 2016**
**Project Completion Date: 11 / 15 / 2018**

# Contents

# SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

## *1.1 Project/Site Information*

**Instructions:**

- In this section, you can gather some basic site information that will be helpful to you later when you file for permit coverage.
- For more information, see *Developing Your Stormwater Pollution Prevention Plan: A SWPPP Guide for Construction Sites* (also known as the *SWPPP Guide*), Chapter 2
- Detailed information on determining your site's latitude and longitude can be found at www.epa.gov/npdes/stormwater/latlong

Project/Site Name: Reser's Croco

Project Street/Location: 401-545 SE Croco RD.

City: Topeka State: KS ZIP Code: 66607

County or Similar Subdivision: Shawnee

Latitude/Longitude (Use **one** of three possible formats, and specify method)

Latitude: 39 º 02 ' 35.9 N (degrees, minutes, seconds)

Longitude: -95 º 36' 54.0 W (degrees, minutes, seconds)

Method for determining latitude/longitude:

☐ USGS topographic map (specify scale: _____) ☐ EPA Web site ☐ GPS

X Other (please specify): Google Earth

Is the project located in Indian country? Yes ☒ No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable."_____

Is this project considered a federal facility? ☐ Yes ☒ No

NPDES project or permit tracking number*:_____

**(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate National Pollutant Discharge Elimination System (NPDES) construction general permit.)*

## 1.2 Contact Information/Responsable Parties

**Instructions:**

- List the operator(s), project managers, stormwater contact(s), and person or organization that prepared the SWPPP. Indicate respective responsibilities, where appropriate.
- Also, list subcontractors expected to work on-site. Notify subcontractors of stormwater requirements applicable to their work.
- See *SWPPP Guide*, Chapter 2.B.

**Operator(s):**

Reser's Fine Foods
Mark Reser
P.O. Box 8
Beaverton, OR 97006

**Project Manager(s) or Site Supervisor(s):**

Reser's Construction LLC
Allan Mollere
P.O. Box 8
Beaverton, OR 97006
(541) 280-2420 cell
Amollere.topeke.dc@gmail.com

**SWPPP Contact(s):**

Reser's Fine Foods
TBD
3167 SE 10th St.
Topeka, KS 66607

**This SWPPP was Prepared by:**

AAI Engineering:
Craig Harris, PE
4875 SW Griffith Drive, Suite 300
Beaverton, OR 97005
503-620-3030
503-620-5539

**Subcontractor(s):**

Insert Company or Organization Name: TBD
Insert Name: TBD
Insert Address: TBD
Insert City, State, Zip Code: TBD
Insert Telephone Number: TBD
Insert Fax/Email: TBD

**Emergency 24-Hour Contact:**

Reser's Construction LLC
Allan Mollere
(541) 280-2420

## *1.3 Nature and Sequence of Construction Activity*

**Instructions:**

- Briefly describe the nature of the construction activity and approximate time frames (one or more paragraphs, depending on the nature and complexity of the project).
- For more information, see *SWPPP Guide*, Chapter 3.A.

Construction will consist of a food manufacturing facility (approx. 290,000SF) and an office building (approx. 27,500SF) for a national food product brand. The contractor is responsible for overall site development and building construction. Soil disturbing activities will include clearing and grubbing, excavation/fill, rough grading, building foundation and final grading/top soil placement. BMP's used for erosion and sediment control will include: stabilized construction entrance, sediment fencing (at perimeter and on-site as necessary), existing inlets will be protected with sediment fencing and/or gravel bags (per county standards), after utilities are constructed each inlet will have a fabric insert to collect any sediment that might find its way to the inlet.

What is the function of the construction activity?

☐ Residential ☐ Commercial ☐ Industrial ☐ Road Construction ☐ Linear Utility

☒ Other (please specify): PUD

Estimated Project Start Date: 11 / 15 / 2016

Estimated Project Completion Date: 11 / 15 / 2018

## *1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns*

**Instructions:**

- Describe the existing soil conditions at the construction site including soil types, slopes and slope lengths, drainage patterns, and other topographic features that might affect erosion and sediment control.
- Also, note any historic site contamination evident from existing site features and known past usage of the site.
- This information should also be included on your site maps (See *SWPPP Guide*, Chapter 3.C.).
- For more information, see *SWPPP Guide*, Chapter 3.A.

Soil type(s): According to the USDA Natural Resources Conservation Service soil map, for Shawnee County Kansas, on-site soil consists of Ladysmith silty clay loam, Martin silty clay loam, Morrill clay loam, Pawnee clay loam, and Sharpsburg silty clay loam.

According to the USDA Natural Resources Conservation Service soil map, for Shawnee County Kansas, on-site soils consist of: Reading silty clay loam, Gymer silt loam (3 -7 percent slopes) and Martin silty clay loam (7 - 12 percent slopes). Reading silty clay loam and Gymer silt loam are well drained while Martin silty clay loam is moderately well drained.

Slopes (describe current slopes and note any changes due to grading or fill activities):

The Ladysmith silty clay loam in the site area has a 1 to 3 percent slope and is somewhat poorly drained. Martin silty clay loam in the site area has a 3 to 7 percent slope and is moderately well drained. Morrill clay loam is also 3 to 7 percent slope and is well drained. Pawnee clay loam in the site area has a 4 to 8 percent slope and is moderately well drained. Sharpsburg silty clay loam is also 4 to 8 percent slope and is moderately well drained. Site grading is proposed to minimize soil import or off-haul, create positive drainage, and to not impact nearby flood plains. The cut portion will be utilized to fill out areas of the site to achieve the required grades. After construction, the on-site slopes around the building and parking area will be less than 5 percent. Areas that are to receive fill will be graded out at 3:1 max to catch existing grades.

Drainage Patterns (describe current drainage patterns and note any changes dues to grading or fill activities):

Existing Conditions: Currently the runoff from the site flows mostly from the southeast to the northwest. The southeast corner drains in to catchbasins that connect to a 15" RCP in the on the north side of SE 6th Street. (See Appendix B)

Post Construction: All on-site drainage from impervious areas will be conveyed to a stormwater pond in the northwest corner of the property. From the pond the runoff will be released through a control structure to a dispersion trench west of the pond.

Vegetation: The current site consists of native grasses, weeds, shrubs. and trees.

## *1.5 Construction Site Estimates*

**Instructions:**

- Estimate the area to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas.
- Calculate the percentage of impervious surface area before and after construction
- Calculate the runoff coefficients before and after construction.
- For more information, see *SWPPP Guide*, Chapter 3.A and Appendix C.

The following are estimates of the construction site.

| | |
|---|---|
| Total project area: | 25.3 acres |
| Construction site area to be disturbed: | 23.8 acres |
| Percentage impervious area before construction: | 4.61% |
| Runoff coefficient before construction: | 0.90 |
| Percentage impervious area after construction: | 79.66% |
| Runoff coefficient after construction | 0.94 |

## 1.6 Receiving Waters

**Instructions:**

- List the waterbody(s) that would receive stormwater from your site, including streams, rivers, lakes, coastal waters, and wetlands. Describe each as clearly as possible, such as *Mill Creek, a tributary to the Potomac River*, and so on.
- Indicate the location of all waters, including wetlands, on the site map.
- Note any stream crossings, if applicable.
- List the storm sewer system or drainage system that stormwater from your site could discharge to and the waterbody(s) that it ultimately discharges to.
- If any of the waterbodies above are impaired and/or subject to Total Maximum Daily Loads (TMDLs), please list the pollutants causing the impairment and any specific requirements in the TMDL(s) that are applicable to construction sites. Your SWPPP should specifically include measures to prevent the discharge of these pollutants.
- For more information, see *SWPPP Guide*, Chapter 3.A and 3.B.
- Also, for more information and a list of TMDL contacts and links by state, visit www.epa.gov/npdes/stormwater/tmdl.

Description of receiving waters:

Stromwater will be collected in on-site catchbasins and conveyed to a pond in the northwest corner of the property. The runoff will then be released through a control structure to a dispersion trench located west of the pond. The water will then meet a conveyance channel that runs to the Shunganunga Creek.

Description of storm sewer systems:

The proposed storm sewer system consists of catchbasins, with traps and sumps, that will collect the runoff, and underground storm pipes for conveyance to the pond. The runoff collected in the stormwater pond will be released through a control structure that will release water at pre-developed rates to a dispersion trench located to the west of the pond.

Description of impaired waters or waters subject to TMDLs:

According to the 2010 303(d) list of impaired waters for Kansas, Shunganunga Creek in Shawnee County is listed as impaired water or subject to TMDL's. The TMDL regulated parameter is E. Coli, 30% removal or greater.

## 1.7 Site Features and Sensitive Areas to be protected

**Instructions:**

- Describe unique site features including streams, stream buffers, wetlands, specimen trees, natural vegetation, steep slopes, or highly erodible soils that are to be preserved.
- Describe measures to protect these features.
- Include these features and areas on your site maps.
- For more information, see *SWPPP Guide*, Chapter 3.A and 3.B.

Description of unique features that are to be preserved:

None observed.

Describe measures to protect these features:

N/A.

## 1.8 Potential Sources of Pollution

**Instructions:**

- Identify and list all potential sources of sediment, which may reasonably be expected to affect the quality of stormwater discharges from the construction site.
- Identify and list all potential sources of pollution, other than sediment, which may reasonably be expected to affect the quality of stormwater discharges from the construction site.
- For more information, see *SWPPP Guide*, Chapter 3.A.

Potential sources of sediment to stormwater runoff:

Potential sources of sediment in stormwater runoff from construction activities are: clearing and

grubbing, grading and excavation, top soil stockpiling, vehicle tracking, final stabilization (landscaping).

Potential pollutants and sources, other than sediment, to stormwater runoff:

Potential pollutants other than sediment to stormwater could come from the following activities.
Staging area: construction vehicle fueling, minor repairs, port-a-potties, hazardous waste storage.
Construction material storage area: paving materials and trash.
Construction activities: Concrete pouring and paving.
Concrete washout: Excess concrete.

| Trade Name Material | Stormwater Pollutants | Location |
|---|---|---|
| Pesticides (insecticides, fungicides, herbicides, rodentcides) | Chlorinated hydrocarbons, organophosphates, carbamates, arsenic. | Herbicide may be used to control noxious weed control. |
| Fertilizer | Nitrogen, phosphorous | Landscaping |
| Asphalt | Oil, Petroleum distillates | Parking Lot |
| Concrete | Limestone, Sand, pH, chromium | Curbs, Truck Dock, Building Pad |
| Gasoline | Benzene, ethyl benzene, toluene, xylene, MTBE | Staging area |
| Diesel Fuel | Petroleum distillates, oil & grease, naphthalene, xylene | Staging Area |
| Sanitary "Port-a-potties" | Bacteria, parasites, viruses | Staging Area |

## *1.9 Endangered Species Certification*

**Instructions:**

- Before beginning construction, determine whether endangered or threatened species or their critical habitats are on or near your site.
- Adapt this section as needed for state or tribal endangered species requirements and, if applicable, document any measures deemed necessary to protect endangered or threatened species or their critical habitats.
- For more information on this topic, see *SWPPP Guide*, Chapter 3.B.
- Additional information on Endangered Species Act (ESA) provisions is at www.epa.gov/npdes/stormwater/esa

Are endangered or threatened species and critical habitats on or near the project area?

☐ Yes X No

Describe how this determination was made:

The Endangered Species Act (ESA), was reviewed for procedures and for the endangered species list for Kansas. No endangered or threatened species were found on the project site.

If yes, describe the species and/or critical habitat: N/A

If yes, describe or refer to documentation that determines the likelihood of an impact on identified species and/or habitat and the steps taken to address that impact. (Note, if species are on or near your project site, EPA strongly recommends that the site operator work closely with the appropriate field office of the U.S. Fish and Wildlife Service or National Marine Fisheries Service. For concerns related to state or tribal listing of species, please contact a state or tribal official.) N/A

## *1.10 Historic Preservation*

**Instructions:**

- Before you begin construction, you should review federal and any applicable state, local, or tribal historic preservation laws and determine if there are historic sites on or near your project. If so, you might need to make adjustments to your construction plans or to your stormwater controls to ensure that these historic sites are not damaged.
- For more information, see *SWPPP Guide*, Chapter 3.B or contact your state or tribal historic preservation officer.

Are there any historic sites on or near the construction site?

☐ Yes ☒ No

If yes, describe or refer to documentation that determines the likelihood of an impact on this historic site and the steps taken to address that impact. N/A

## 1.11 Applicable Federal, Tribal, State or Local Programs

**Instructions:**

- Note other applicable federal, tribal, state or local soil and erosion control and stormwater management requirements that apply to your construction site.

All applicable erosion control requirements are proposed and will be implemented.

## 1.12 Maps

**Instructions:**

- Attach site maps. For most projects, a series of site maps is recommended. The first should show the undeveloped site and its current features. An additional map or maps should be created to show the developed site or for more complicated sites show the major phases of development.

**These maps should include the following:**

- Direction(s) of stormwater flow and approximate slopes before and after major grading activities;
- Areas and timing of soil disturbance;
- Areas that will not be disturbed;
- Natural features to be preserved;
- Locations of major structural and non-structural BMPs identified in the SWPPP;
- Locations and timing of stabilization measures;
- Locations of off-site material, waste, borrow, or equipment storage areas;
- Locations of all waters of the United States, including wetlands;
- Locations where stormwater discharges to a surface water;
- Locations of storm drain inlets; and
- Areas where final stabilization has been accomplished.
- For more information, see *SWPPP Guide*, Chapter 3.C.

See Appendix B – Site Maps.

# SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

**Instructions:**

- Describe the BMPs that will be implemented to control pollutants in stormwater discharges. For each major activity identified, do the following
  - ✓ Clearly describe appropriate control measures.
  - ✓ Describe the general sequence during the construction process in which the measures will be implemented.
  - ✓ Describe the maintenance and inspection procedures that will be used for that specific BMP.
  - ✓ Include protocols, thresholds, and schedules for cleaning, repairing, or replacing damaged or failing BMPs.
  - ✓ Identify staff responsible for maintaining BMPs.
  - ✓ (If your SWPPP is shared by multiple operators, indicate the operator responsible for each BMP.)
- Categorize each BMP under one of the following 10 areas of BMP activity as described below:
  - ***2.1 Minimize disturbed area and protect natural features and soil***
  - ***2.2 Phase Construction Activity***
  - ***2.3 Control Stormwater flowing onto and through the project***
  - ***2.4 Stabilize Soils***
  - ***2.5 Protect Slopes***
  - ***2.6 Protect Storm Drain Inlets***
  - ***2.7 Establish Perimeter Controls and Sediment Barriers***
  - ***2.8 Retain Sediment On-Site and Control Dewatering Practices***
  - ***2.9 Establish Stabilized Construction Exits***
  - ***2.10 Any Additional BMPs***
- Note the location of each BMP on your site map(s).
- For any structural BMPs, you should provide design specifications and details and refer to them. Attach them as appendices to the SWPPP or within the text of the SWPPP.
- For more information, see *SWPPP Guide*, Chapter 4.
- Consult your state's design manual or one of those listed in Appendix D of the *SWPPP Guide*.
- For more information or ideas on BMPs, see EPA's National Menu of BMPs http://www.epa.gov/npdes/stormwater/menuofbmps

## 2.1 Minimize Disturbed Area and Protect Natural Features and Soil

**Instructions:**

- Describe the areas that will be disturbed with each phase of construction and the methods (e.g., signs, fences) that you will use to protect those areas that should not be disturbed. Describe natural features identified earlier and how each will be protected during construction activity. Also describe how topsoil will be preserved. Include these areas and associated BMPs on your site map(s) also. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 1.)
- Also, see EPA's *Preserving Natural Vegetation BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/perserve_veg

***BMP Description***: Top soil stripped during construction will be stockpiled in an area that will not interfere with construction activities, with side slopes not to exceed 2:1. To limit sediment escaping the stockpile area the pile shall be covered when not in use with straw mulch, plastic or other suitable material and a sediment fence shall be constructed on the downhill side of the pile to encompass at least 3 full sides of the pile.

| | |
|---|---|
| ***Installation Schedule***: | To be established with initial grading activities and maintained throughout the construction period. |
| ***Maintenance and Inspection***: | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Any areas found to be eroded or to have defects (silt fencing and stockpile cover) shall be repaired immediately. |
| ***Responsible Staff***: | Contractor |

## 2.2 Phase Construction Activity

**Instructions:**

- Describe the intended construction sequencing and timing of major activities, including any opportunities for phasing grading and stabilization activities to minimize the overall amount of disturbed soil that will be subject to potential erosion at one time. Also, describe opportunities for timing grading and stabilization so that all or a majority of the soil disturbance occurs during a time of year with less erosion potential (i.e., during the dry or less windy season). (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 2.) It might be useful to develop a separate, detailed site map for each phase of construction.
- Also, see EPA's *Construction Sequencing BMP Fact Sheet* at http://www.epa.gov/npdes/stormwater/menuofbmps/construction/cons_seq)

***BMP Description***: No phasing of this project will occur. To minimize erosion; site work will be constructed after the rainy season, after most significant threats of storm events has passed. Prior to any soil disturbance, silt fencing shall be placed around the site (see Appendix L); a graveled construction entrance will be constructed and both shall be inspected to assure they are installed

| | |
|---|---|
| properly and will work adequately. | |
| ***Installation Schedule***: | To be established with initial grading activities and maintained throughout the construction period. For a timeline of construction activity see Section 1.3. |
| ***Maintenance and Inspection***: | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Any areas found to be eroded or to have defects (silt fencing, stockpile cover) shall be repaired immediately. |
| ***Responsible Staff***: | Contractor |

## 2.3 Control Stormwater Flowing onto and through the Project

**Instructions:**

- Describe structural practices (e.g., diversions, berms, ditches, storage basins) including design specifications and details used to divert flows from exposed soils, retain or detain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 3.)

| | |
|---|---|
| ***BMP Description***: Silt fences will be installed on the downhill side of the project site (north side, and west side) and around soil stockpiles and the staging area. Install silt fencing per detail included in Appendix L. | |
| ***Installation Schedule***: | Silt fence to be installed, per plan and details, prior to beginning of any earth work. |
| ***Maintenance and Inspection***: | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Any tears, gaps shall be repaired immediately. If repairs are not able to be made the damaged section of fence shall be removed and replaced. Sediment accumulation shall be removed when it reaches 1/3 the height of the barrier. Before removing the sediment fence all accumulated sediment shall be removed. |
| ***Responsible Staff***: | Contractor |

## 2.4 Stabilize Soils

**Instructions:**

- Describe controls (e.g., interim seeding with native vegetation, hydro seeding) to stabilize exposed soils where construction activities have temporarily or permanently ceased. Also describe measures to control dust generation. Avoid using impervious surfaces for stabilization whenever possible. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 4.)
- Also, see EPA's *Seeding BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/seeding

***BMP Description:*** For areas of exposed soils not under immediate construction, (if construction will cease for more than 48 hours), exposed soils shall be covered with straw mulch or other suitable temporary cover. If work ceases form more than 14 days, all exposed soil shall be hydro-mulched (straw mulch and wood fibers, mixed with tackifier), hydro-mulch to be applied per manufactures recommendations.

| ☐ ***Permanent*** | X ***Temporary*** |
|---|---|
| ***Installation Schedule:*** | When site becomes inactive for 48 hours or more. |
| ***Maintenance and Inspection:*** | Mulched areas shall be inspected weekly and after storm events. If erosion is evident the area in question shall be re-mulched. |
| ***Responsible Staff:*** | Contractor |

***BMP Description:*** Permanent stabilization, hydro-seeding shall be applied no later than 14 days after final grading activities.

| X ***Permanent*** | ☐ ***Temporary*** |
|---|---|
| ***Installation Schedule:*** | To be completed within 14 days of final grading activities. |
| ***Maintenance and Inspection:*** | Inspect hydro-seeded areas weekly until a thick and uniform cover of vegetation is achieved. Any areas of failure are noticed the area shall be re-seeded immediately. |
| ***Responsible Staff:*** | Contractor |

***BMP Description:*** Dust control.

| | |
|---|---|
| ***Installation Schedule:*** | To be implemented as needed, during construction activities, to control dust. |
| ***Maintenance and Inspection:*** | Contractor to have water truck available at all times to spray the site with potable water as needed. |
| ***Responsible Staff:*** | Contractor |

## 2.5 Protect Slopes

**Instructions:**

- Describe controls (e.g., erosion control blankets, tackifiers) including design specifications and details that will be implemented to protect all slopes. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 5.)
- Also, see EPA's *Geotextiles BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/geotextiles

***BMP Description:*** During grading activities, slope protection will be accomplished by maintaining a max slope of 3:1 on all slopes and with the use of straw mulching.

| | |
|---|---|
| ***Installation Schedule:*** | To be implemented during grading activities and until final stabilization measures are in place. |
| ***Maintenance and Inspection:*** | Inspection of the slopes shall be done daily or after a storm event for signs of erosion. Any erosion found shall be fixed immediately. |
| ***Responsible Staff:*** | Contractor |

## 2.6 Protect Storm Drain Inlets

**Instructions:**

- Describe controls (e.g., inserts, rock-filled bags, or block and gravel) including design specifications and details that will be implemented to protect all inlets receiving stormwater from the project during the entire project. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 6.)
- Also, see EPA's *Storm Drain Inlet Protection BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/storm_drain

***BMP Description:*** Gravel Filter Bags shall be installed at all on-site catch basins once they have been installed. Install gravel filter bags per detail included in Appendix L.

| | |
|---|---|
| ***Installation Schedule:*** | Inserts to be installed once the catchbasins have been constructed as part of the conveyance system. |
| ***Maintenance and Inspection:*** | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Clean or replace the insert once debris reached 50% of inserts capacity or if functionality becomes impaired. Clean or replace per manufacturers recommendations. |
| ***Responsible Staff:*** | Contractor |

## 2.7 Establish Perimeter Controls and Sediment Barriers

**Instructions:**

- Describe structural practices (e.g., silt fences or fiber rolls) including design specifications and details to filter and trap sediment before it leaves the construction site. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 7.)
- Also see, EPA's *Silt Fence BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/silt_fences, or *Fiber Rolls BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/fiber_rolls

***BMP Description:*** Silt fences will be installed on the downhill side of the project site (north site, and west side) and around soil stockpiles. Install silt fencing per detail included in Appendix L.

| | |
|---|---|
| ***Installation Schedule:*** | Silt fence to be installed, per plan and details, prior to beginning of any earth work. |
| ***Maintenance and Inspection:*** | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Any tears, gaps shall be repaired immediately. If repairs are not able to be made the damaged section of fence shall be removed and replaced. Sediment accumulation shall be removed when it reaches 1/3 the height of the barrier. Before removing the sediment fence all accumulated sediment shall be removed. |
| ***Responsible Staff:*** | Contractor |

## 2.8 Retain Sediment On-Site

**Instructions:**

- Describe sediment control practices (e.g., sediment trap or sediment basin), including design specifications and details (volume, dimensions, outlet structure) that will be implemented at the construction site to retain sediments on-site. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 8.)
- Also, see EPA's *Sediment Basin BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/sediment_basins

***BMP Description:*** Silt fences will be installed on the downhill side of the project site (north side and west side) and around soil stockpiles. Install silt fencing per detail included in Appendix L.

| | |
|---|---|
| ***Installation Schedule:*** | Silt fence to be installed, per plan and details, prior to beginning of any earth work. |
| ***Maintenance and*** | Inspect every 14 days at a minimum and within 24 hours after |

| | |
|---|---|
| ***Inspection:*** | storm events greater than 1/2". If repairs are not able to be made the damaged section of fence shall be removed and replaced. Sediment accumulation shall be removed when it reaches 1/3 the height of the barrier. Before removing the sediment fence all accumulated sediment shall be removed. |
| ***Responsible Staff:*** | Contractor |

## 2.9 Establish Stabilized Construction Exits

**Instructions:**

- Describe location(s) of vehicle entrance(s) and exit(s), procedures to remove accumulated sediment off-site (e.g., vehicle tracking), and stabilization practices (e.g., stone pads or wash racks or both) to minimize off-site vehicle tracking of sediments and discharges to stormwater. (For more information, see *SWPPP Guide*, Chapter 4, ESC Principle 9.)
- Also, see EPA's *Construction Entrances BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/cons_entrance

***BMP Description:*** Construct a stabilized construction entrance/exit per detail in Appendix L. The stabilized construction entrance will help limit tracking of soil onto roadways as it provides construction vehicles tires a rough and solid area where any soils trapped in the tires tread will be removed.

| | |
|---|---|
| ***Installation Schedule:*** | Install the stabilized construction entrance prior to any earth work activities on site and to remain in place until the pavement subgrade is established. |
| ***Maintenance and Inspection:*** | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2" or after heavy use. Any areas where settling occurs shall be amended with additional rock. If top layer of rock becomes clogged with sediment add a topping layer of additional stone. |
| ***Responsible Staff:*** | Contractor |

## 2.10 Additional BMPs

**Instructions:**

- Describe additional BMPs that do not fit into the above categories.

***BMP Description:*** Road sweeping to be conducted whenever soils are tracked onto paved roadways.

| | |
|---|---|
| ***Installation Schedule:*** | Road sweeping to be conducted whenever soils are tracked onto roadways and before a forecasted storm event. |

| | |
|---|---|
| ***Maintenance and Inspection:*** | All materials collected during sweeping shall be disposed of per jurisdictional requirements. |
| ***Responsible Staff:*** | Contractor |

# SECTION 3: GOOD HOUSEKEEPING BMPS

**Instructions:**

- Describe the key good housekeeping and pollution prevention (P2) BMPs that will be implemented to control pollutants in stormwater.
- Categorize each good housekeeping and pollution prevention (P2) BMP under one of the following seven categories:
  - ***3.1 Material Handling and Waste Management***
  - ***3.2 Establish Proper Building Material Staging Areas***
  - ***3.3 Designate Washout Areas***
  - ***3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices***
  - ***3.5 Allowable Non-Stormwater Discharges and Control Equipment/Vehicle Washing***
  - ***3.6 Spill Prevention and Control Plan***
  - ***3.7 Any Additional BMPs***
- For more information, see *SWPPP Guide*, Chapter 5.
- Consult your state's design manual or resources in Appendix D of the *SWPPP Guide*.
- For more information or ideas on BMPs, see EPA's National Menu of BMPs http://www.epa.gov/npdes/stormwater/menuofbmps

## *3.1 Material Handling and Waste Management*

**Instructions:**

- Describe measures (e.g., trash disposal, sanitary wastes, recycling, and proper material handling) to prevent the discharge of solid materials to receiving waters, except as authorized by a permit issued under section 404 of the CWA (For more information, see *SWPPP Guide*, Chapter 5, P2 Principle 1.)
- Also, see EPA's *General Construction Site Waste Management BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/cons_wasteman

***BMP Description:*** Waste materials shall be disposed of in metal dumpsters located in the staging area. Only trash and construction debris shall be placed in these dumpsters. The location size and type of dumpster shall meet all jurisdictional requirements.

| | |
|---|---|
| ***Installation Schedule:*** | Install dumpsters once the staging area has been established. |

| | |
|---|---|
| ***Maintenance and Inspection:*** | Empty dumpsters before they get full and the lids no longer fit tightly. Inspect dumpsters and areas surrounding them weekly and after storm events. Replace damaged dumpsters as necessary. |
| ***Responsible Staff:*** | Contractor |

***BMP Description:*** Hazardous materials (petroleum products, vehicle maintenance products) shall be stored on sealed structurally sound containers in staging area. Store hazardous materials in appropriately (and clearly) labeled containers, separated from other non-hazardous wastes. Dispose of all hazardous wastes in accordance to federal, state and local requirements at an approved disposal site.

| | |
|---|---|
| ***Installation Schedule:*** | Install hazardous waste containers once staging area has been established. |
| ***Maintenance and Inspection:*** | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Hazardous waste area/containers shall be kept clean and organized with ample clean-up supplies for the wastes being stored. Material safety data sheets, material inventory, and emergency contact numbers shall be kept on the job site trailer. |
| ***Responsible Staff:*** | Contractor |

***BMP Description:*** Temporary sanitary facilities (port-a-potties) shall be provided and located in the staging area away from traffic flow and away from areas of concentrated flows.

| | |
|---|---|
| ***Installation Schedule:*** | Install port-a-potties once staging area has been established. |
| ***Maintenance and Inspection:*** | Inspect weekly for evidence of leaking and daily for volume of holding tanks. Leaking tanks shall be replaced immediately and tanks shall be emptied before they become full. Collection times will depend on amount of usage and collection schedule will be determined once volume of usage is established. |
| ***Responsible Staff:*** | Contractor |

## *3.2 Establish Proper Material Staging Areas*

**Instructions:**

- Describe construction materials expected to be stored on-site and procedures for storage of materials to minimize exposure of the materials to stormwater. (For more information, see *SWPPP Guide*, Chapter 5, P2 Principle 2.)

***BMP Description:*** Building materials (wood, piping, plastics, metals, mortar) shall be located in a portion of the staging area away from the hazardous materials and sanitary facilities. Larger

| | |
|---|---|
| building materials such as framing materials, bricks and doors and windows shall be placed on blocking to elevate them from contact with runoff. | |
| ***Installation Schedule:*** | Material storage to be installed after grading and before infrastructure is constructed. |
| ***Maintenance and Inspection:*** | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Keep area well organized and clean and maintain ample cleanup supplies for types of materials stored on-site |
| ***Responsible Staff:*** | Contractor |

## 3.3 Designate Washout Areas

**Instructions:**

- Describe location(s) and controls to eliminate the potential for discharges from washout areas for concrete mixers, paint, stucco, and so on. (For more information, see *SWPPP Guide*, Chapter 5, P2 Principle 3.)
- Also, see EPA's *Concrete Washout BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/concrete_wash

***BMP Description:*** Concrete washout area to be constructed within 5 feet of the stabilized construction entrance/exit per detail in Appendix L. Concrete washout areas provide a location for concrete truck to hose out there hoppers before leaving the site. Once concrete work is completed remove the facility and disposed of contents per jurisdictional requirements in an approved location.

| | |
|---|---|
| ***Installation Schedule:*** | Install prior to any concrete work on-site. |
| ***Maintenance and Inspection:*** | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Remove contents when the capacity of the washout area reached 50%. Dispose of contents per jurisdictional requirements. |
| ***Responsible Staff:*** | Contractor |

## 3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

**Instructions:**

- Describe equipment/vehicle fueling and maintenance practices that will be implemented to control pollutants to stormwater (e.g., secondary containment, drip pans, and spill kits) (For more information, see *SWPPP Guide*, Chapter 5, P2 Principle 4.)
- Also, see EPA's *Vehicle Maintenance and Washing Areas BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/vehicile_maintain

***BMP Description:*** Several different types of construction equipment will be used during the course of this project. Major fueling will be done off-site with minor fueling activities limited to the staging area. Minor maintenance will be conducted in the staging area with major repairs conducted off-site. All fluids used/produced during fueling/maintenance shall be stored in the hazardous waste area in the appropriate containers. Clean-up supplies for such fluids shall be readily available for use.

| | |
|---|---|
| ***Installation Schedule:*** | BMP's for fueling/maintenance shall be in place at the beginning of the project after the staging area has been established. |
| ***Maintenance and Inspection:*** | Inspect every 14 days at a minimum and within 24 hours after storm events greater than 1/2". Inspect vehicles daily for signs of leakage of fluids. Clean-up spills/leaks using appropriate supplies and dispose of per jurisdictional requirements. |
| ***Responsible Staff:*** | Contractor |

## 3.5 Control Equipment/Vehicle Washing

**Instructions:**

- Describe equipment/vehicle washing practices that will be implemented to control pollutants to stormwater. (For more information, see *SWPPP Guide*, Chapter 5, P2 Principle 5.)
- Also, see EPA's *Vehicle Maintenance and Washing Areas BMP Fact Sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/vehicile_maintain

***BMP Description:*** All vehicle washing to be conducted off-site

| | |
|---|---|
| ***Installation Schedule:*** | N/A |
| ***Maintenance and Inspection:*** | N/A |
| ***Responsible Staff:*** | N/A |

## 3.6 Spill Prevention and Control Plan

**Instructions:**

- Describe the spill prevention and control plan to include ways to reduce the chance of spills, stop the source of spills, contain and clean up spills, dispose of materials contaminated by spills, and train personnel responsible for spill prevention and control. (For more information, see *SWPPP Guide*, Chapter 5, P2 Principle 6.)
- Also, see EPA's *Spill Prevention and Control Plan BMP Fact sheet* at www.epa.gov/npdes/stormwater/menuofbmps/construction/spill_control

I. Employee Training: All employees will be trained via biweekly tailgate sessions, as detailed in Section 6, Part 6.3.
II. Vehicle Maintenance: Vehicles and equipment will be maintained off-site. All vehicles and equipment including subcontractor vehicles will be checked for leaking oil and fluids. Vehicles leaking fluids will not be allowed on-site. Drip pans will be placed under all vehicles and equipment that are parked overnight.
III. Hazardous Material Storage: Hazardous materials will be stored in accordance with Section 3, Part 1 and federal and municipal regulations.
IV. Spill Kits: Spill kits will be within the materials storage area and concrete washout areas.
V. Spills: All spills will be cleaned up immediately upon discovery. Spent absorbent materials and rags will be hauled off-site immediately after the spill is cleaned up for disposal at Middletown Landfill. Spills large enough to discharge to surface water will be reported to the National Response Center at 1-800-424-8802.

Material safety data sheets, a material inventory, and emergency contact information will be maintained at the on-site project trailer

| | |
|---|---|
| ***Installation Schedule:*** | Spill prevention and control procedures shall be implemented once construction activities begin. |
| ***Maintenance and Inspection:*** | All construction personnel shall be instructed at the beginning of the project and updated to new procedures as necessary. Notices stating these practices shall be posted in the job trailer. |
| ***Responsible Staff:*** | Contractor |

## 3.7 Any Additional BMPs

**Instructions:**

- Describe any additional BMPs that do not fit into the above categories. Indicate the problem they are intended to address.

| | |
|---|---|
| ***BMP Description:*** No additional BPM's are identified | |
| ***Installation Schedule:*** | N/A |

| | |
|---|---|
| ***Maintenance and Inspection:*** | N/A |
| ***Responsible Staff:*** | N/A |

## *3.8 Allowable Non-Stormwater Discharge Management*

**Instructions:**

- Identify all allowable sources of non-stormwater discharges that are not identified. The allowable non-stormwater discharges identified might include the following (see your permit for an exact list):
  - ✓ Waters used to wash vehicles where detergents are not used
  - ✓ Water used to control dust
  - ✓ Potable water including uncontaminated water line flushings
  - ✓ Routine external building wash down that does not use detergents
  - ✓ Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used
  - ✓ Uncontaminated air conditioning or compressor condensate
  - ✓ Uncontaminated ground water or spring water
  - ✓ Foundation or footing drains where flows are not contaminated with process materials such as solvents
  - ✓ Uncontaminated excavation dewatering
  - ✓ Landscape irrigation
- Identify measures used to eliminate or reduce these discharges and the BMPs used to prevent them from becoming contaminated.
- For more information, see *SWPPP Guide*, Chapter 3.A.

List allowable non-stormwater discharges and the measures used to eliminate or reduce them and to prevent them from becoming contaminated:

Any changes to the construction activities which produce non-allowable stormwater discharges will be indentified and the SWPPP will be amended. Appropriate BMP's to control the non-allowable discharge shall be implemented.

***BMP Description:*** Dust control.

| | |
|---|---|
| ***Installation Schedule:*** | To be implemented as needed, during construction activities, to control dust. |
| ***Maintenance and Inspection:*** | Contractor to have water truck available at all times to spray the site with potable water as needed. |
| ***Responsible Staff:*** | Contractor |

# SECTION 4: SELECTING POST-CONSTRUCTION BMPs

**Instructions:**

- Describe all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed. Examples of post-construction BMPs include the following:
  - ✓ Biofilters
  - ✓ Detention/retention devices
  - ✓ Earth dikes, drainage swales, and lined ditches
  - ✓ Infiltration basins
  - ✓ Porous pavement
  - ✓ Other proprietary permanent structural BMPs
  - ✓ Outlet protection/velocity dissipation devices
  - ✓ Slope protection
  - ✓ Vegetated strips and/or swales
- Identify any applicable federal, state, local, or tribal requirements for design or installation.
- Describe how low-impact designs or smart growth considerations have been incorporated into the design.
- For any structural BMPs, you should have design specifications and details and refer to them. Attach them as appendices to the SWPPP or within the text of the SWPPP.
- For more information on this topic, see your state's stormwater manual.
- You might also want to consult one of the references listed in Appendix D of the *SWPPP Guide*.
- Visit the post-construction section of EPA's Menu of BMPs at: www.epa.gov/npes/menuofbmps

| ***BMP Description:*** N/A | |
|---|---|
| ***Installation Schedule:*** | N/A |
| ***Maintenance and Inspection:*** | N/A |
| ***Responsible Staff:*** | N/A |

# SECTION 5: INSPECTIONS

## *5.1 Inspections*

**Instructions:**

- Identify the individual(s) responsible for conducting inspections and describe their qualifications. Reference or attach the inspection form that will be used.
- Describe the frequency that inspections will occur at your site including any correlations to storm frequency and intensity.
- Note that inspection details for particular BMPs should be included in Sections 2 and 3.
- You should also document the repairs and maintenance that you undertake as a result of your inspections. These actions can be documented in the corrective action log described in Part 5.3 below.
- For more on this topic, see *SWPPP Guide*, Chapters 6 and 8.
- Also, see suggested inspection form in Appendix B of the *SWPPP Guide*.

1. ***Inspection Personnel:*** Identify the person(s) who will be responsible for conducting inspections and describe their qualifications:

2. ***Inspection Schedule and Procedures:***

See Appendix E.

## 5.2 Delegation of Authority

**Instructions:**

- Identify the individual(s) or specifically describe the position where the construction site operator has delegated authority for the purposes of signing inspection reports, certifications, or other information.
- Attach the delegation of authority form that will be used.
- For more on this topic, see *SWPPP Guide*, Chapter 7.

**Duly Authorized Representative(s) or Position(s):**

Reser's Construction LLC
Allan Mollere - Superintendent
P.O. Box 8
Beaverton, OR 97006
(541) 280-2420 cell
Amollere.topeke.dc@gmail.com

See Appendix K.

## 5.3 Corrective Action Log

**Instructions:**

- Create here, or as an attachment, a corrective action log. This log should describe repair, replacement, and maintenance of BMPs undertaken as a result of the inspections and maintenance procedures described above. Actions related to the findings of inspections should reference the specific inspection report.
- This log should describe actions taken, date completed, and note the person that completed the work.

Corrective Action Log:
See Appendix F.

# SECTION 6: RECORDKEEPING AND TRAINING

## 6.1 Recordkeeping

**Instructions:**

- The following is a list of records you should keep at your project site available for inspectors to review:
- Dates of grading, construction activity, and stabilization (which is covered in Sections 2 and 3)
- A copy of the construction general permit (attach)
- The signed and certified NOI form or permit application form (attach)
- A copy of the letter from EPA or/the state notifying you of their receipt of your complete NOI/application (attach)
- Inspection reports (attach)
- Records relating to endangered species and historic preservation (attach)
- Check your permit for additional details
- For more on this subject, see *SWPPP Guide*, Chapter 6.C.

Records will be retained for a minimum period of at least 3 years after the permit is terminated.

Date(s) when major grading activities occur:
See Appendix I.
Date(s) when construction activities temporarily or permanently cease on a portion of the site:
See Appendix I.
Date(s) when an area is either temporarily or permanently stabilized:
See appendix I.

## 6.2 Log of Changes to the SWPPP

**Instructions:**

- Create a log here, or as an attachment, of changes and updates to the SWPPP. You should include additions of new BMPs, replacement of failed BMPs, significant changes in the activities or their timing on the project, changes in personnel, changes in inspection and maintenance procedures, updates to site maps, and so on.

Log of changes and updates to the SWPPP
See Appendix G.

## 6.3 Training

**Instructions:**

- Training your staff and subcontractors is an effective BMP. As with the other steps you take to prevent stormwater problems at your site, you should document the training that you conduct for your staff, for those with specific stormwater responsibilities (e.g. installing, inspecting, and maintaining BMPs), and for subcontractors.
- Include dates, number of attendees, subjects covered, and length of training.
- For more on this subject, see *SWPPP Guide*, Chapter 8.

Individual(s) Responsible for Training:

Reser's Construction LLC
Allan Mollere - Superintendent
P.O. Box 8
Beaverton, OR 97006
(541) 280-2420 cell
Amollere.topeke.dc@gmail.com

# SECTION 7: FINAL STABILIZATION

**Instructions:**

- Describe procedures for final stabilization. If you complete major construction activities on part of your site, you can document your final stabilization efforts for that portion of the site. Many permits will allow you to then discontinue inspection activities in these areas (be sure to check your permit for exact requirements). You can amend or add to this section as areas of your project are finally stabilized.
- Update your site plans to indicate areas that have achieved final stabilization.
- Note that dates for areas that have achieved final stabilization should be included in Section 6, Part 6.1 of this SWPPP.
- For more on this topic, see *SWPPP Guide*, Chapter 9.

***BMP Description:*** Permanent seeding and Landscaping shall be conducted when finished grading is achieved, but no more than 14 days after construction ceases. Paving shall be completed during the scheduled time of construction.

| | |
|---|---|
| ***Installation Schedule:*** | Final stabilization is to be achieved as soon as final grading is accomplished or within 14 day after construction ceases. |
| ***Maintenance and Inspection:*** | Vegetation will be monitored closely until well established (thick mat that covers the basin(s) completely). Any bare areas or erosion observed shall be correct as necessary. |
| ***Responsible Staff:*** | Contractor |

# SECTION 8: CERTIFICATION AND NOTIFICATION

**Instructions:**

– The SWPPP should be signed and certified by the construction operator(s). Attach a copy of the NOI and permit authorization letter received from EPA or the state in Appendix D.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

Repeat as needed for multiple construction operators at the site

# SWPPP APPENDICES

Attach the following documentation to the SWPPP:

***Appendix A – General Location Map***

***Appendix B – Site Maps***

***Appendix C – Construction General Permit***

***Appendix D – NOI and Acknowledgement Letter from EPA/State***

***Appendix E – Inspection Reports***

***Appendix F – Corrective Action Log (or in Part 5.3)***

***Appendix G – SWPPP Amendment Log (or in Part 6.2)***

***Appendix H – Subcontractor Certifications/Agreements***

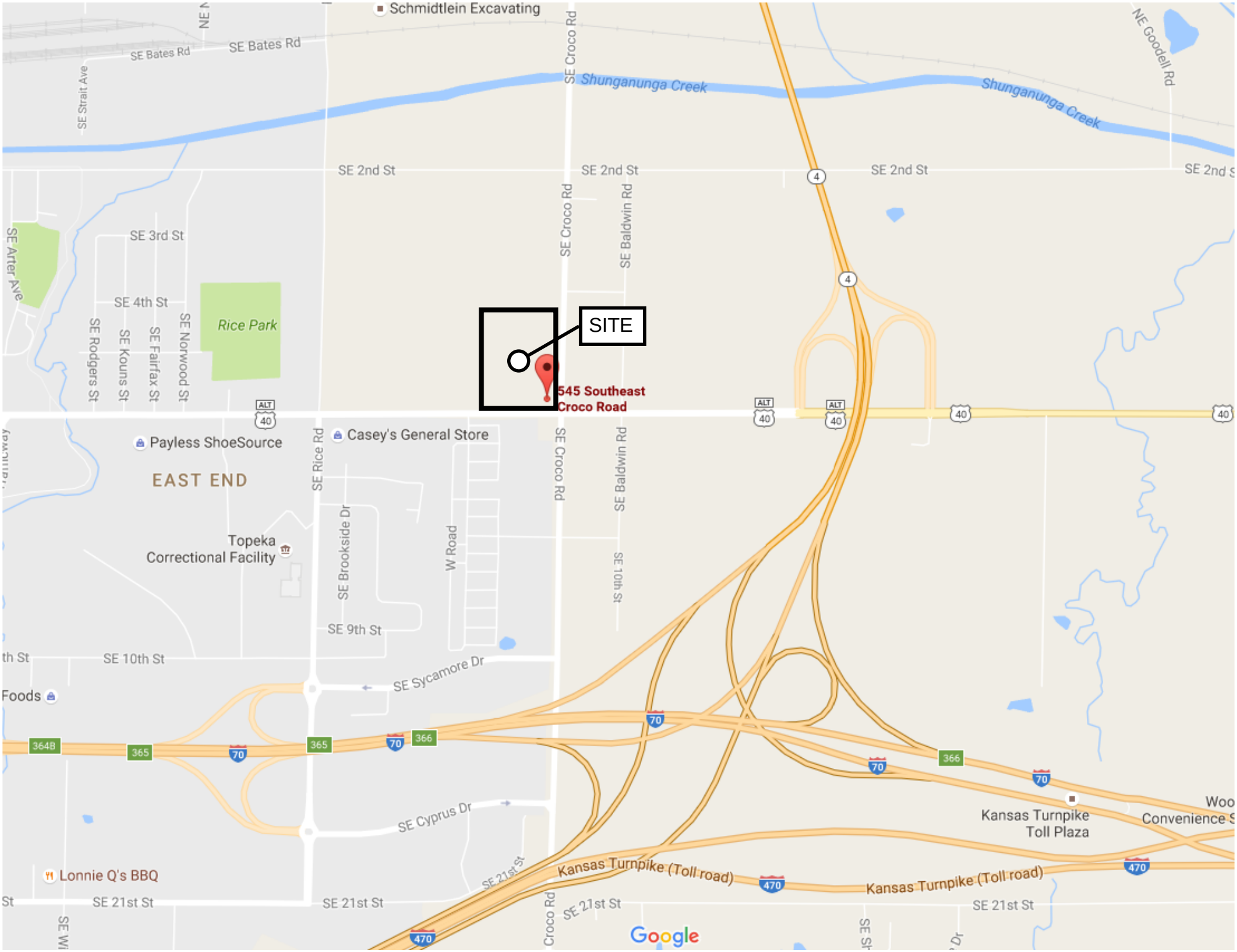
***Appendix I – Grading and Stabilization Activities Log (or in Part 6.1)***

***Appendix J – Training Log***

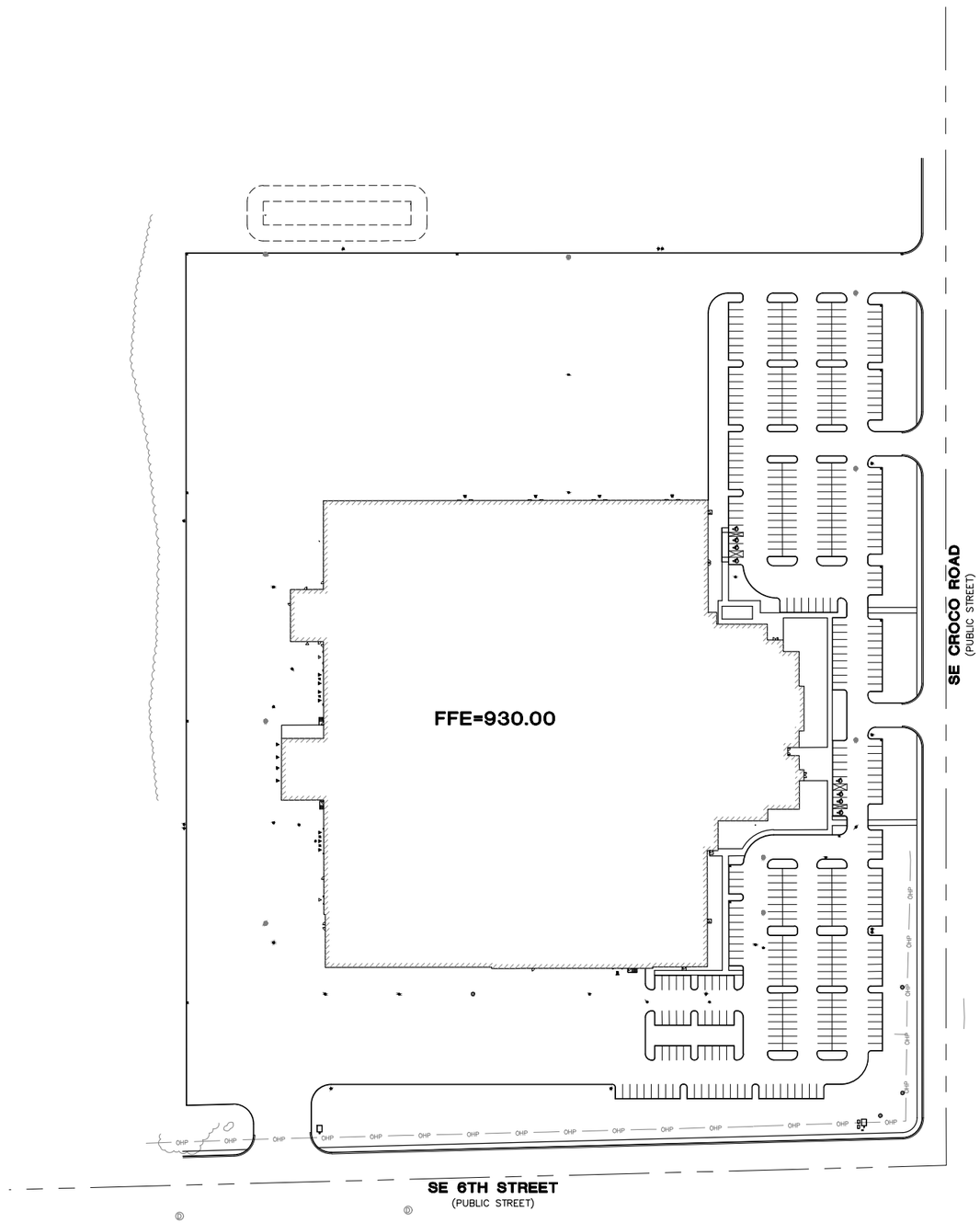
***Appendix K – Delegation of Authority***

***Appendix L – Additional Information (i.e., Endangered Species and Historic Preservation Documentation)***

# Appendix A – General Location Map


SITE
545 Southeast
Croco Road
Schmidtlein Excavating
SE Bates Rd
SE Strait Ave
Shunganunga Creek
NE Goodell Rd
SE 2nd St
SE Croco Rd
SE Baldwin Rd
SE 3rd St
SE Arter Ave
SE 4th St
Rice Park
SE Rodgers St
SE Kouns St
SE Fairfax St
SE Norwood St
Payless ShoeSource
Casey's General Store
EAST END
SE Rice Rd
SE Brookside Dr
W Road
SE 10th St
SE 9th St
Topeka
Correctional Facility
SE Sycamore Dr
SE Cyprus Dr
Lonnie Q's BBQ
SE 21st St
Kansas Turnpike (Toll road)
Kansas Turnpike
Toll Plaza
Google

# Appendix B – Site Maps




## SHEET NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE JURISDICTION, THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT, AND THE PROJECT SPECIFICATIONS.
2. THE CONTRACTOR SHALL HAVE A FULL SET OF THE CURRENT APPROVED CONSTRUCTION DOCUMENTS INCLUDING ADDENDA ON THE PROJECT SITE AT ALL TIMES.
3. THE CONTRACTOR SHALL KEEP THE ENGINEER AND JURISDICTION INFORMED OF CONSTRUCTION PROGRESS TO FACILITATE SITE OBSERVATIONS AT REQUIRED INTERVALS. 24-HOUR NOTICE IS REQUIRED.
4. SEE ARCHITECTURAL PLANS FOR ADDITIONAL SITE LAYOUT INFORMATION.
5. ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF WALL.

## ABBREVIATIONS

FFE = FINISHED FLOOR ELEVATION

NORTH

GRAPHIC SCALE

80 0 40 80 160 320

( IN FEET )
1 inch = 80 ft.

CONCEPT PLAN – 11/03/16

HEMID R. AFGHANI LICENSED 21ST YEARS PROFESSIONAL ENGINEER

PRELIMINARY

ISSUED DATE

AAI ENGINEERING
4875 SW Griffith Drive | Suite 300 | Beaverton, OR | 97005
503.620.3033 tel | 503.620.3039 fax | www.aaieng.com
Project No. A16186.11

CIDA 1991 2016 25
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PORTLAND, OREGON 97224
TEL: 503.226.1285
FAX: 503.226.1670
WWW.CIDAINC.COM

SITE DEVELOPMENT FOR

# RESER'S FINE FOODS EAST DEVELOPMENT

6TH AND CROCO
TOPEKA, KANSAS

SITE PLAN

C1.0

JOB NO. 160213.01

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F:\2016 Continued\A16186.11 - Resers - Croco\Civil Cad\Sheets\Onsite\A16186.11.C1.0.SITE.dwg Nov 02, 2016 - 3:19pm

# Appendix C – Construction General Permit

# Appendix D – NOI and Acknowledgement Letter from EPA/State

Kansas
Department of Health and Environment

# NOTICE OF INTENT (NOI)

## For Authorization to Discharge Stormwater Runoff from Construction Activities In accordance with the Kansas Water Pollution Control General Permit Under the National Pollutant Discharge Elimination System (NPDES)

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form requests authorization for coverage under the Kansas Water Pollution Control general permit, or KDHE issued successor permits, issued for stormwater runoff from construction activities in the State of Kansas. Becoming a permittee obligates the discharger to comply with the terms and conditions of the general permit. **Completion of this NOI does not provide automatic coverage under the general permit. Coverage is provided and discharge permitted when the Kansas Department of Health and Environment (KDHE) authorizes the discharge of stormwater runoff from the construction activities identified on the NOI and supporting documentation. A signed and dated copy of the first page of the NOI indicating the Authorization will be provided to the owner or operator, or all three pages for Conditional Authorizations.** Upon authorization of the construction activity discharge, a Kansas permit number and a Federal permit number will be assigned to the construction project. **A complete request for Authorization for coverage under the general permit must be submitted or the request will not be processed (see listing on Page 3 of this NOI).** KDHE will notify owners or operators whose Notice of Intent (NOI) and supporting documentation for Authorization of stormwater runoff associated with construction activities are incomplete, deficient, or denied.
**Please Print or Type.**

## I. OWNER OR OPERATOR ADDRESS, BILLING, CONTACT & RECORDS LOCATION INFORMATION

**A.** Owner or Operator's Name: Mark Reser
Company Name: Reser's Fine Foods
Owner or Operator's Phone: 503-643-6431
Mailing Address: P.O. Box 8
City: Beaverton State: OR Zip: 97075

**B.** Billing Contact Name: _____
Billing Contact Address (if different): _____
City: _____ State: ____ Zip: _____

**C.** Contact Name: _____
Company Name: _____
Contact Phone: _____
Mailing Address: _____
City: _____ State: ____ Zip: _____
E-mail Address (optional): _____

**D.** Address where records will be kept (if not on-site):
Records Address: _____
City: _____ State: ____ Zip: _____

## II. SITE INFORMATION

**A.** Project Name: Reser's Fine Foods East Development
Site Address: 401-545 SE Croco Rd.
City: Topeka State: KS Zip: 66607
(Nearest City to Project)
County: Shawnee

**B.** LEGAL SITE DESCRIPTION:
____ QTR of ____ QTR of ____ QTR Section: ____
Township: ____ South; Range: ____ ☐ E ☐ W
Latitude: 39d02m35.9s Longitude: -95d36m54.0s
Deg. Min. Sec. Deg. Min. Sec.

**For Official Use Only:**

| | | |
|---|---|---|
| Received | Amount Paid: | Authorized: ☐ Y; ☐ N |
| | Date: | Is Authorization Conditional? ☐ Y; ☐ N (if yes, see page 3 of NOI for conditions) |
| | Initials: | |
| | Check No.: | |
| _____ Secretary, Kansas Department of Health and Environment | | _____ Reviewer _____ Date |
| KS Permit No.: _____ | | Federal Permit No.: _____ |

**Send completed 3 page NOI form with original signature and all appropriate submittals (see page 3 of NOI) to:**

Kansas Department of Health and Environment
Bureau of Water, Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, KS 66612-1367

Note: A copy of the permit can be obtained at: www.kdheks.gov/stormwater or by submitting a written request to KDHE.

**KDHE Contact Information:**
Phone: (785) 296-5545
E-mail: stormwater@kdheks.gov

## C. Existing Conditions/Uses

1) Is any part of the project located on Indian Country land? ☐ Y; ☒ N
**If yes**: Contact EPA regarding discharging stormwater runoff from industrial activities on Indian Country land.

2) If stormwater runoff drains to or through a Municipal Separate Storm Sewer System (MS4): MS4 Name: unknown

3) Name of the first receiving water, stream, or lake: Shunganunga Creek, River Basin: _____

4) Are contaminated soils present on the site or is there groundwater contamination located within the site boundary? ☐ Y; ☒ N
**If yes:** On separate paper please explain in detail the locations, contaminants and concentrations.

5) Are there any contaminated soils that will be disturbed or any contaminated groundwater that will be pumped by the proposed construction activity? ☐ Y; ☒ N
**If yes:** On separate paper provide a description of the special erosion and sediment control measures to be utilized.

6) Are there any surface water intakes for public drinking water supplies located within ½ mile of the site discharge points? ☐ Y; ☒ N

7) Are there any known historical or archeological sites present within the site boundary or any historic structures located within 1000 feet of the project site? ☐ Y; ☒ N
**Note:** Include documentation of project-specific coordination with the Kansas Historical Society in making this determination.

8) Is any threatened or endangered species habitat located within the site boundary or in the receiving water body? ☐ Y; ☒ N
**Note**: Include documentation of project-specific coordination with the Kansas Department of Wildlife, Parks & Tourism in making this determination.

9) Will the project impact the line or grade of a stream or does it include dredge or fill of a potential jurisdictional water body or wetlands? ☐ Y; ☒ N
**If yes:** Include documentation of project-specific coordination with the US Army Corps of Engineers and/or the Kansas Department of Agriculture, Division of Water Resources in making this determination.

10) Are any Critical Water Quality Management Areas, Special Aquatic Life Use Waters, or Outstanding National Resource Waters located within ½ mile of the facility boundary? ☐ Y; ☒ N

**If yes,** list the names of all such areas and waters: _____

## D. Project Description

1) Project Description: Construction of a food manufacturing building, office building, parking lot, and maneuvering area.

2) Does this NOI include all proposed soil disturbing activities associated with the entire common plan of development? ☒ Y; ☐ N

**If no,** explain what development areas of the site are not included in this NOI and provide contact information, if available, for the party or parties that own or have operational control of these areas:

3) Anticipated project Start Date: 11/15/16, and Completion Date: 11/15/18

4) Estimated total area to be disturbed: 15.98 Acres Total area of the site: 25.56 Acres

5) Do you plan to disturb ten or more acres that are within a common drainage area? ☒ Y; ☐ N

**If yes,** will a sedimentation basin be installed in that drainage area? (Attach design calculations for each sedimentation basin.) If a sediment basin is not feasible, on a separate sheet explain what similarly effective erosion and sediment control measures will be implemented in lieu of a sedimentation basin. ☐ Y; ☐ N

## E. Maps

Include an area map showing the outline of the construction site and the general topographic features of the area at least one mile beyond the project site boundary.

## F. Erosion Control Plan and Best Management Practices

1) Provide a site plan showing the existing contour, proposed contour, the erosion control measures and the locations of stormwater management or pollution control features including BMPs. Incorporate details and notes as necessary to describe the erosion control plans and BMPs.

2) Provide a description of the best management practices which will be utilized to control erosion, sedimentation and other pollutants in stormwater runoff during construction.

3) Provide a summary of the sequence of major soil disturbing activities and the corresponding erosion control measures or BMPs.

4) Provide the name and License or Certification Number of the engineer, geologist, architect, landscape architect, or Certified Professional in Erosion and Sediment Control (CPESC) under which the construction stormwater pollution prevention plan has been developed.

| Hamid R. Afghan | 21985 | |
|---|---|---|
| Name | License or Certification Number | Profession or Field (Engineer, Architect, etc.) |

## III. ANNUAL FEE

**Enclose a check for the first year of the annual permit fee specified in K.A.R. 28-16-56 et seq. as amended. Make the check payable to "KDHE". Per K.A.R. 28-16-56, as amended, the current annual permit fee for this general permit is $60.** An invoice for the annual permit fee will be sent to the contact person requesting a permit until such time as the permittee submits a Notice of Termination (NOT).

Failure to pay the annual fee will result in termination of the construction stormwater discharge Authorization.

## IV. OWNER OR OPERATOR CERTIFICATIONS

I, the undersigned, certify that a Stormwater Pollution Prevention Plan (SWP2 Plan) will be or has been developed for the construction site described in this NOI and supporting documentation. I further certify that the plan will be implemented at the time construction begins, and, as required by the NPDES general permit for Stormwater Runoff from Construction Activity, will revise the SWP2 plan if necessary.

I understand that continued coverage under the NPDES general permit for Stormwater Runoff from Construction Activities is contingent upon maintaining eligibility as provided for in the requirements and conditions of the general permit, and paying the annual fee.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

**Signature (owner or operator)** **Date**

Name and Official Title (Please print or type. **Form with original signature must be sent to KDHE.)**

**Conditions of Authorization - For Official Use Only:**

When indicated, Conditions of Authorization are as follows:

**A complete request for Authorization for coverage under the general permit must be submitted or the request will not be processed. A complete request for Authorization includes:**

- **An NOI form (construction stormwater) with an original authorized signature;**
- **The annual permit fee for the first year; ($60.)**
- **An area map showing the outline of the construction site and the general topographic features of the area at least one mile beyond the project site boundary;**
- **A detailed site plan showing the existing contours, proposed contours, erosion and sediment control features, locations where stormwater runoff leaves the construction site;**
- **A narrative summary of the additional erosion and sediment control and other best management practices that will be utilized to prevent or reduce contamination of stormwater runoff from the construction activities;**
- **Total drainage area, storage capacity and design calculations for each sedimentation basin; and**
- **Copies of letters or e-mails documenting coordination with appropriate local, state or federal agencies.**

Kansas
Department of Health and Environment

See Attached Sheet for Instructions

**NOTICE OF INTENT (NOI)**
For Stormwater Runoff from Industrial Activity
Authorized by a Kansas Water Pollution Control General Permit
Under the National Pollutant Discharge Elimination System

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form desires to be authorized by an NPDES permit issued for stormwater runoff from industrial activity in the State of Kansas. Becoming a permittee obligates the discharger to comply with the terms and conditions of the Kansas NPDES Stormwater Runoff from Industrial Activity General Permit. **Completion of this NOI does not provide automatic coverage under the general permit. Coverage is provided and discharge permitted when the Kansas Department of Health and Environment (KDHE) authorizes the NOI. A signed and dated copy of the authorized NOI will be provided to the owner or operator.** Upon authorization of the NOI, a Kansas permit number and a Federal permit number will be assigned to the industrial facility. ONLY COMPLETE NOI FORMS ACCOMPANIED BY THE $60 ANNUAL PERMIT FEE WILL BE PROCESSED. KDHE WILL NOTIFY PERSONS WHOSE NOI FORMS ARE INCOMPLETE, DEFICIENT, OR DENIED.

**Please Print or Type**.

## I. FACILITY OWNER OR OPERATOR INFORMATION

Owner or Operator's Name: Mark Reser
Company Name: Reser's Fine Foods
Owner or Operator's Phone: 503-643-6431
Mailing Address: P.O. Box 8
City: Beaverton State: OR Zip Code: 97075

Contact Name: _____
Company Name: _____
Contact Phone: _____
E-mail Address: _____

### PERMIT FEE BILLING INFORMATION

Billing contact name: _____
Billing Address (if different): _____
City: _____ State: _____ Zip Code: _____

Phone: _____
Email Address: _____

## II. FACILITY INFORMATION

### A. LOCATION

Industrial Facility Name: Reser's Fine Foods East Development
Street Address: 401-545 SE Croco Rd.
City: Topeka State: KS Zip Code: 66607
County: Shawnee
Physical Location: _____

Facility Contact Name: _____
Company Name: _____
Contact Phone: _____
E-mail Address: _____

____, ____, ____, ____South, ____ □ E; □W; or 39.043306 -95.615000
QTR QTR Section Township Range Decimal Degrees Latitude Decimal Degrees Longitude

**For Official Use Only:**

| | | |
|---|---|---|
| **Received** | **Paid:** | **Accepted** □ Y; □ N |
| | **Date:** | |
| | **Initials:** | **Reviewer** |
| | **Check No.:** | **Date** |
| **Authorized by:** | | |
| **Secretary, Kansas Department of Health and Environment** | | **Date** |
| **KS Permit No.** | **Federal Permit No.** | |



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**B. EXISTING CONDITIONS/USES**

Is any part of the Facility located on Indian lands? ☐ Y; ☒ N

If yes, contact EPA Region VII regarding discharging stormwater runoff from industrial activities on Indian lands.

If stormwater runoff drains to or through a Municipal Separate Storm Sewer System; MS4 Name: _____

Name of the first receiving water; stream; or lake: Shunganunga Creek River Basin: _____

Are any Critical Water Quality Management Areas, Special Aquatic Life Use Waters, or Outstanding National Resource Waters located within . mile of the facility boundary? _____ ☐ Y; ☒ N

SIC/Activity Codes: Primary: 20 Secondary (if applicable): _____ _____ _____

If this facility has another existing NPDES or Kansas Water Pollution Control permit(s). Enter the permit number(s): _____

**C. FACILITY DESCRIPTION**

Facility Description: Food manufacturing facility

Is this a new facility? ☒ Y; ☐ N

Approximate total facility size 6.64 acres. Approximate size 6.64 acres of industrial development on site.

Provide an area location map that shows the boundaries of the industrial site and arrows showing direction(s) of stromwater flow from the industrial site to the first receiving water.

**III. ANNUAL FEE**

Enclose a check for the first year of the annual permit fee specified in K.A.R. 28-16-56 et seq. as amended. Make the check payable to "KDHE". Per K.A.R. 28-16-56, as amended. The current annual permit fee for this general permit is $60. An invoice for future annual permit fees will be sent to the identified billing contact person requesting a permit until such time as the permittee submits a Notice of Termination (NOT).

**IV. NOI CERTIFICATIONS**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I understand that continued coverage under the NPDES general permit for Stormwater Runoff from Industrial Activity is contingent upon maintaining eligibility as provided for in the requirements and conditions of the general permit, and paying the annual fee.

_____ _____

Signature (owner, operator, or duly authorized representative) Date

_____

Name and Official Title (Please Print)

To receive a hard copy of the general permit packet, check yes: ☐Y; ☐ N

(Note: A copy of the permit can be obtained at www.kdheks.gov/stormwater )

Send completed form to:
Kansas Department of Health and Environment
Bureau of Water, Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, KS 66612 - 1367

KDHE Contact Information:
Phone: (785) 296-4347
E-mail: stormwater@kdheks.gov



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# Appendix E: **Inspection Report**

## Instructions

This sample inspection report has been developed as a helpful tool to aid you in completing your site inspections. This sample inspection report was created consistent with EPA's Developing Your Stormwater Pollution Prevention Plan. You can find both the guide and the sample inspection report (formatted in Microsoft Word) at www.epa.gov/npdes/swpppguide

This inspection report is provided in Microsoft Word format to allow you to easily customize it for your use and the conditions at your site. You should also customize this form to help you meet the requirements in your construction general permit related to inspections. **If your permitting authority provides you with an inspection report, please use that form.**

For more information on inspections, please see Developing Your Stormwater Pollution Plan Chapters 6 and 8.

Using the Inspection Report
This inspection report is designed to be customized according to the BMPs and conditions at your site. For ease of use, you should take a copy of your site plan and number all of the stormwater BMPs and areas of your site that will be inspected. A brief description of the BMP or area should then be listed in the site-specific section of the inspection report. For example, specific structural BMPs such as construction site entrances, sediment ponds, or specific areas with silt fence (e.g., silt fence along Main Street; silt fence along slope in NW corner, etc.) should be numbered and listed. You should also number specific non-structural BMPs or areas that will be inspected (such as trash areas, material storage areas, temporary sanitary waste areas, etc).

You can complete the items in the "General Information" section that will remain constant, such as the project name, NPDES tracking number, and inspector (if you only use one inspector). Print out multiple copies of this customized inspection report to use during your inspections.

When conducting the inspection, walk the site by following your site map and numbered BMPs/areas for inspection. Also note whether the overall site issues have been addressed (customize this list according to the conditions at your site). Note any required corrective actions and the date and responsible person for the correction in the Corrective Action Log.

# Stormwater Construction Site Inspection Report

| General Information | | | |
|---|---|---|---|
| **Project Name** | | | |
| **NPDES Tracking No.** | | **Location** | |
| **Date of Inspection** | | **Start/End Time** | |
| **Inspector's Name(s)** | | | |
| **Inspector's Title(s)** | | | |
| **Inspector's Contact Information** | | | |
| **Inspector's Qualifications** | Insert qualifications or add reference to the SWPPP. (See Section 5 of the SWPPP Template) | | |
| **Describe present phase of construction** | | | |
| **Type of Inspection:**<br>❑ Regular ❑ Pre-storm event ❑ During storm event ❑ Post-storm event | | | |
| **Weather Information** | | | |
| **Has there been a storm event since the last inspection?** ❑Yes ❑No<br>**If yes, provide:**<br>Storm Start Date & Time: Storm Duration (hrs): Approximate Amount of Precipitation (in): | | | |
| **Weather at time of this inspection?**<br>❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snowing ❑ High Winds<br>❑ Other: Temperature: | | | |
| **Have any discharges occurred since the last inspection?** ❑Yes ❑No<br>**If yes, describe:** | | | |
| **Are there any discharges at the time of inspection?** ❑Yes ❑No<br>**If yes, describe:** | | | |

**Site-specific BMPs**

- *Number the structural and non-structural BMPs identified in your SWPPP on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.*
- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*

| | **BMP** | **BMP Installed?** | **BMP Maintenance Required?** | **Corrective Action Needed and Notes** |
|---|---|---|---|---|
| **1** | | **❑Yes ❑No** | **❑Yes ❑No** | |

| | BMP | BMP Installed? | BMP Maintenance Required? | Corrective Action Needed and Notes |
|---|---|---|---|---|
| 2 | | ❑Yes ❑No | ❑Yes ❑No | |
| 3 | | ❑Yes ❑No | ❑Yes ❑No | |
| 4 | | ❑Yes ❑No | ❑Yes ❑No | |
| 5 | | ❑Yes ❑No | ❑Yes ❑No | |
| 6 | | ❑Yes ❑No | ❑Yes ❑No | |
| 7 | | ❑Yes ❑No | ❑Yes ❑No | |
| 8 | | ❑Yes ❑No | ❑Yes ❑No | |
| 9 | | ❑Yes ❑No | ❑Yes ❑No | |
| 10 | | ❑Yes ❑No | ❑Yes ❑No | |
| 11 | | ❑Yes ❑No | ❑Yes ❑No | |
| 12 | | ❑Yes ❑No | ❑Yes ❑No | |
| 13 | | ❑Yes ❑No | ❑Yes ❑No | |
| 14 | | ❑Yes ❑No | ❑Yes ❑No | |
| 15 | | ❑Yes ❑No | ❑Yes ❑No | |
| 16 | | ❑Yes ❑No | ❑Yes ❑No | |
| 17 | | ❑Yes ❑No | ❑Yes ❑No | |
| 18 | | ❑Yes ❑No | ❑Yes ❑No | |
| 19 | | ❑Yes ❑No | ❑Yes ❑No | |
| 20 | | ❑Yes ❑No | ❑Yes ❑No | |

**Overall Site Issues**

*Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.*

| | BMP/activity | Implemented? | Maintenance Required? | Corrective Action Needed and Notes |
|---|---|---|---|---|
| 1 | Are all slopes and disturbed areas not actively being worked properly stabilized? | ❑Yes ❑No | ❑Yes ❑No | |
| 2 | Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs? | ❑Yes ❑No | ❑Yes ❑No | |
| 3 | Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained? | ❑Yes ❑No | ❑Yes ❑No | |
| 4 | Are discharge points and receiving waters free of any sediment deposits? | ❑Yes ❑No | ❑Yes ❑No | |
| 5 | Are storm drain inlets properly protected? | ❑Yes ❑No | ❑Yes ❑No | |
| 6 | Is the construction exit preventing sediment from being tracked into the street? | ❑Yes ❑No | ❑Yes ❑No | |

| | BMP/activity | Implemented? | Maintenance Required? | Corrective Action Needed and Notes |
|---|---|---|---|---|
| 7 | Is trash/litter from work areas collected and placed in covered dumpsters? | ❑Yes ❑No | ❑Yes ❑No | |
| 8 | Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained? | ❑Yes ❑No | ❑Yes ❑No | |
| 9 | Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material? | ❑Yes ❑No | ❑Yes ❑No | |
| 10 | Are materials that are potential stormwater contaminants stored inside or under cover? | ❑Yes ❑No | ❑Yes ❑No | |
| 11 | Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled? | ❑Yes ❑No | ❑Yes ❑No | |
| 12 | (Other) | ❑Yes ❑No | ❑Yes ❑No | |

**Non-Compliance**

| Describe any incidents of non-compliance not described above: |
|---|

**CERTIFICATION STATEMENT**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Print name and title:** _____

**Signature:**_____ **Date:**_____

# Appendix F – Corrective Action Log

**Project Name:**
**SWPPP Contact**:

| Inspection Date | Inspector Name(s) | Description of BMP Deficiency | Corrective Action Needed (including planned date/responsible person) | Date Action Taken/Responsible person |
|---|---|---|---|---|
| | | | | |
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# Appendix G – SWPPP Amendment Log

**Project Name:**
**SWPPP Contact:**

| Amendment No. | Description of the Amendment | Date of Amendment | Amendment Prepared by [Name(s) and Title] |
|---|---|---|---|
| | | | |
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# Appendix H – Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

**I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.**

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

# Appendix I – Grading and Stabilization Activities Log

**Project Name:**
**SWPPP Contact:**

| Date Grading Activity Initiated | Description of Grading Activity | Date Grading Activity Ceased (Indicate Temporary or Permanent) | Date When Stabilization Measures are Initiated | Description of Stabilization Measure and Location |
|---|---|---|---|---|
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# Appendix J – SWPPP Training Log

## Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- ❑ **Erosion Control BMPs**
- ❑ **Emergency Procedures**
- ❑ **Sediment Control BMPs**
- ❑ **Good Housekeeping BMPs**
- ❑ **Non-Stormwater BMPs**

Specific Training Objective:_____

_____

Attendee Roster: *(attach additional pages as necessary)*

| No. | Name of Attendee | Company |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

# Appendix K – Delegation of Authority Form

## Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in _____ (Reference State Permit), and that the designee above meets the definition of a "duly authorized representative" as set forth in _____ (Reference State Permit).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**Name:** _____

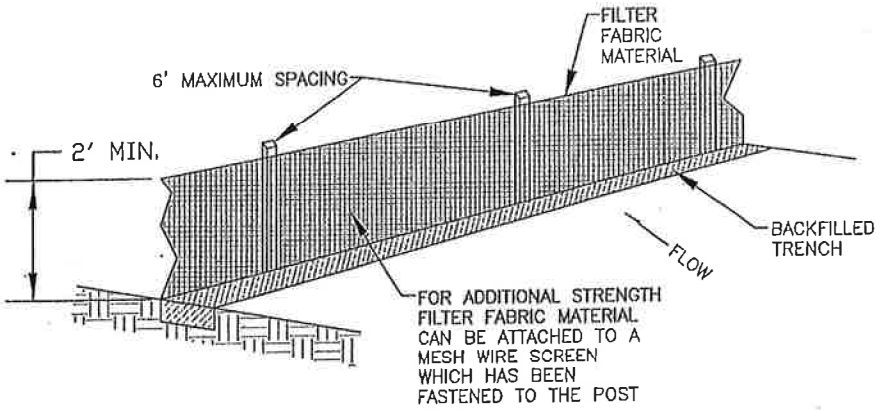
**Company:** _____

**Title:** _____

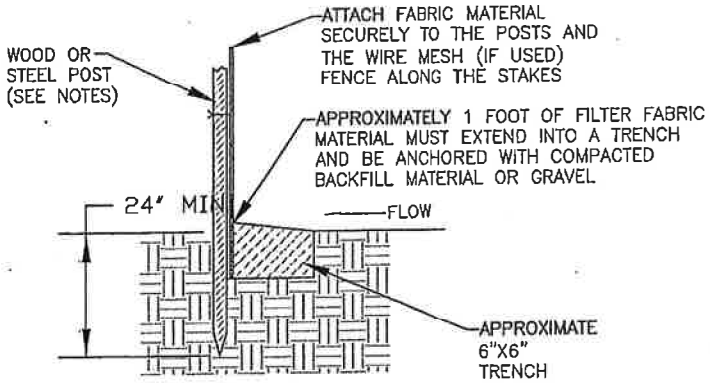
**Signature:** _____

**Date:** _____

# Appendix L – Additional Information




PLAN




PROFILE

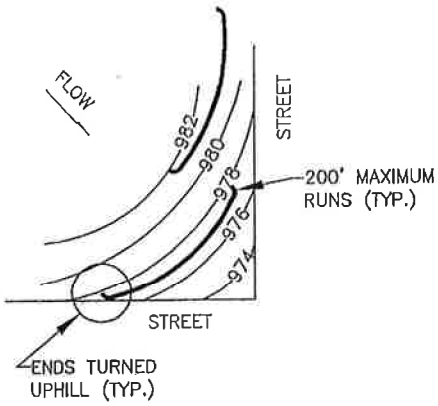



FIGURE A

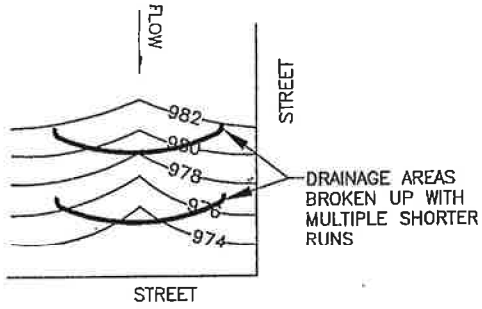



FIGURE B

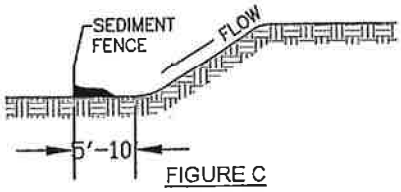



FIGURE C

NOTES:

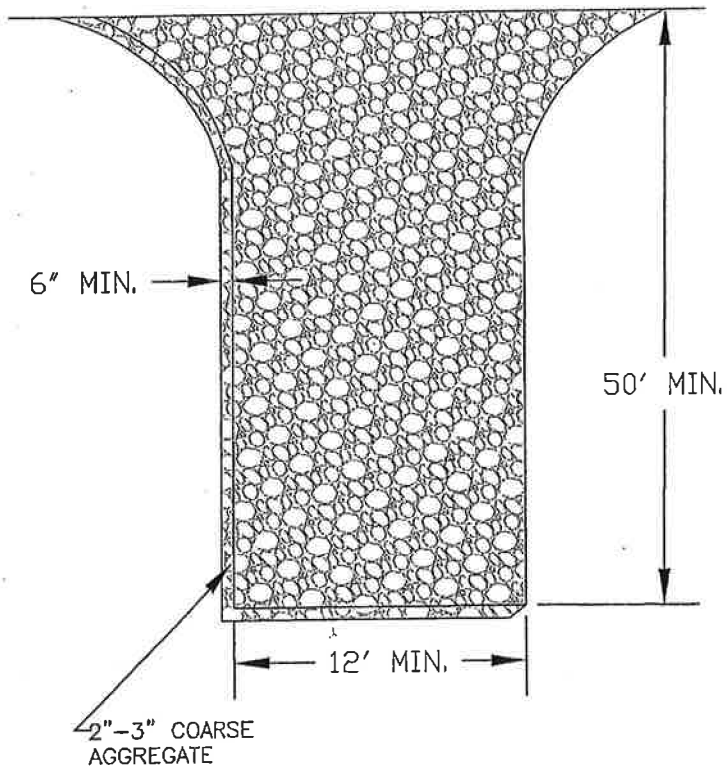
1. THE USE OF OR HAY/STRAW BALES IS THE CONTRACTOR'S OPTION. IF HAY BALES ARE USED PLACE TIGHTLY TOGETHER AND WOOD STAKED IN CENTER OF BALES WITH 2"X2"X4' (MIN.) LENGTH STAKES. BALES SHOULD EMBEDDED INTO THE SOIL A MINIMUM OF 6".
2. THE SEDIMENT FENCES SHALL BE PLACED ALONG CONTOUR LINES, WITH A SHORT SECTION TURNED UPGRADE AT EACH END OF THE BARRIER TO HOLD WATER AND SEDIMENT (SEE FIGURE A).
3. AREAS THAT CONTAIN LARGER CONCENTRATIONS OF WATER SHALL LIMIT LENGTHS OF SILT FENCES TO NO LONGER THAN 200 FOOT LENGTHS (SEE FIGURE A).
4. AREAS SHOULD BE BROKEN UP WITH INTERIOR SEDIMENT FENCE TO MINIMIZE WATER CONCENTRATIONS AND LONG SLOPES (SEE FGURE B).
5. SEDIMENT FENCES INSTALLED AT TOE OF SLOPES SHALL BE PLACED 5 FEET TO 10 FEET AWAY (DOWNSTREAM) TO CREATE SEDIMENT STORAGE (SEE FIGURE C).
6. DEPTH OF WATER CONCENTRATIONS SHOULD NOT EXCEED 1.5 FEET AT ANY POINT ALONG THE FENCE.

1
C1.1

# SILT FENCE

NOT TO SCALE

ADJOINING ROADWAY



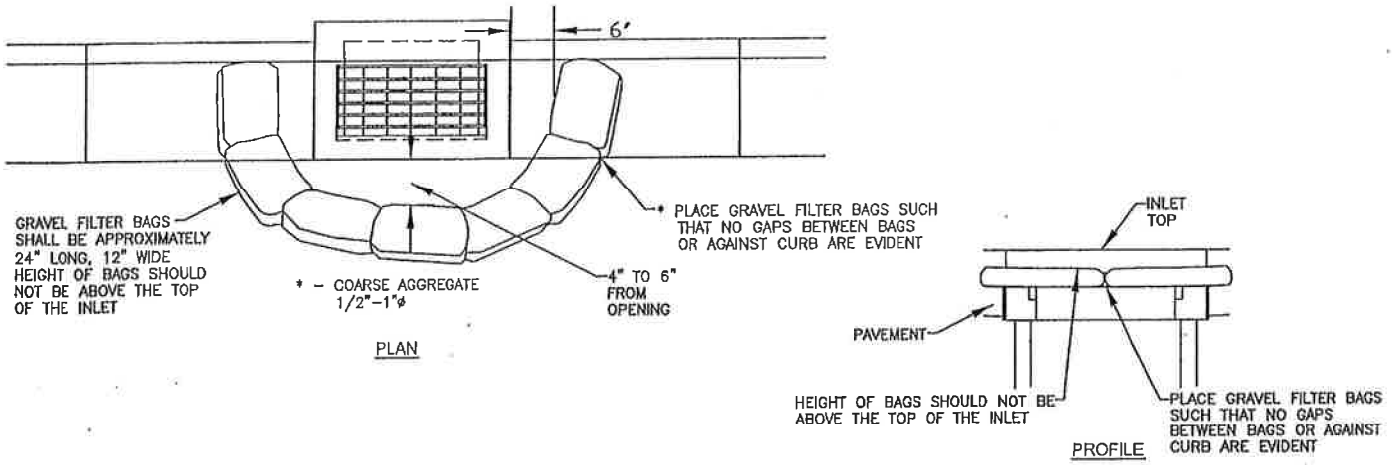

NOTES:

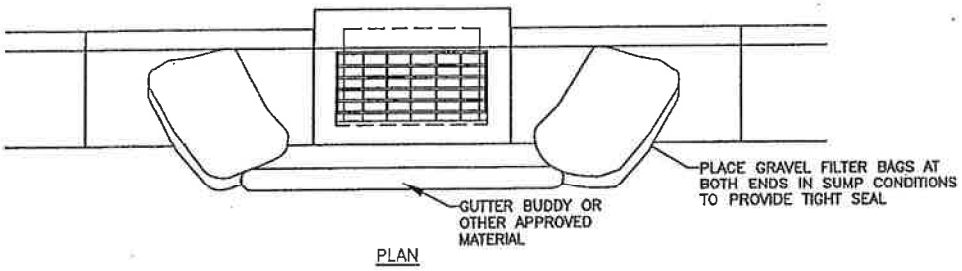
1. GEOTEXTILE FABRIC MAY BE USED AS AN UNDERLINER IN WET CONDITIONS TO PROVIDE STABILITY.
2. TURNING RADIUS SUFFICIENT TO ACCOMODATE LARGE TRUCKS IS TO BE PROVIDED.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF SEDIMENT ON TO STREETS.

2
C1.1

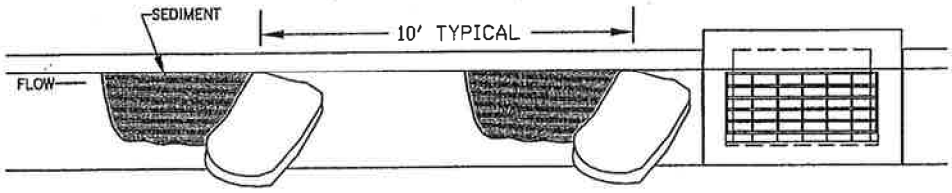
# CONSTRUCTION ENTRANCE

NOT TO SCALE




SUMP CONDITIONS




IN GRADE CONDITIONS

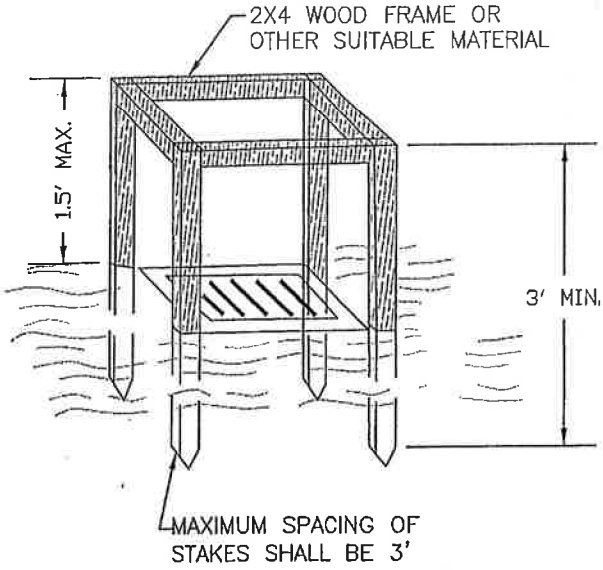
NOTES:

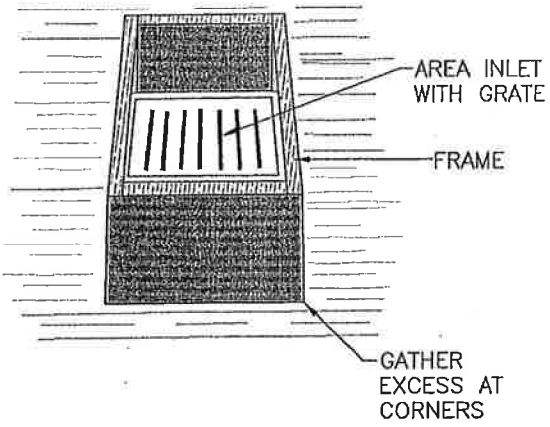
1. OTHER APPROVED CURB INLET SEDIMENT FILTERS MAY BE USED.
2. IMMEDIATELY FOLLOWING INLET CONSTRUCTION AND PRIOR TO CONSTRUCTION OF CURB AND INLET THROAT, PROTECT INLET OPENING BY INSTALLING A 2"X6" BOARD WRAPPED IN SILT FENCE AROUND PERIMETER. SEE AREA INLET DETAIL THIS PAGE.
3. CONTRACTOR TO CLEAN OUT SEDIMENT AFTER EACH SIGNIFICANT RAINFALL EVENT.
4. DURING CONSTRUCTION OF RESIDENTIAL SUBDIVISIONS, GRAVEL FILTER BAGS SHALL BE REPLACED PRIOR TO DEGRADATION.
5. ANY SEDIMENT OR GRAVEL DEPOSITED IN INLET SHALL BE REMOVED PROMPTLY.

3 / C1.1

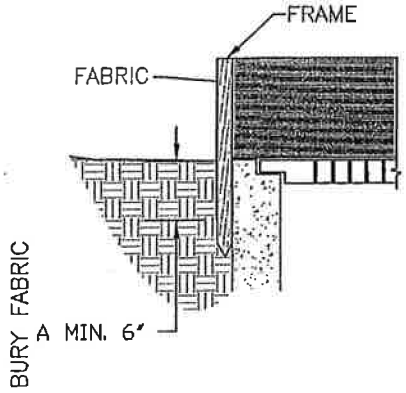
## CURB INLET SEDIMENT PROTECTION

NOT TO SCALE




TOP VIEWS

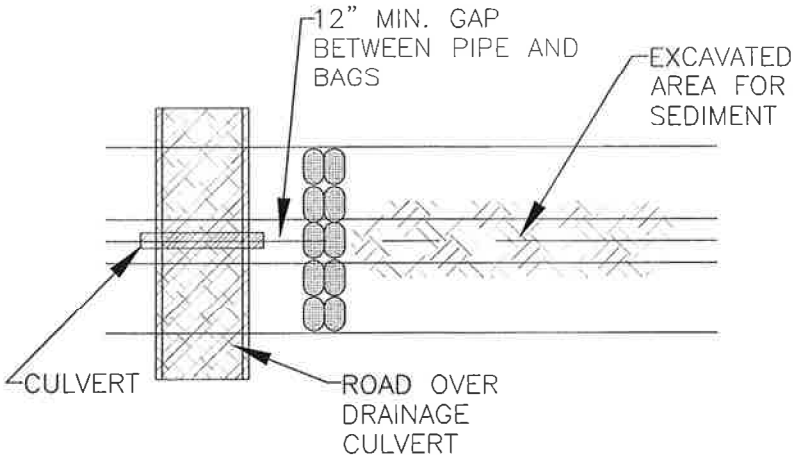



PROFILE VIEW

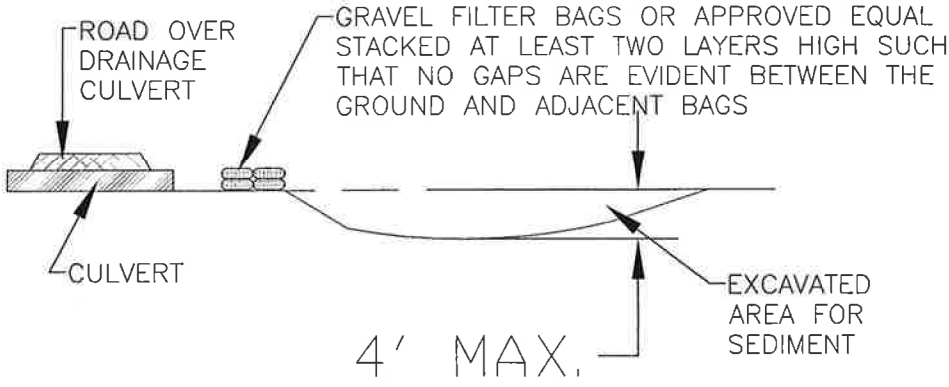
4
C1.1

# AREA INLET PROTECTION

NOT TO SCALE




TOP VIEW




SIDE VIEW

NOTES:

1. GRAVEL FILTER BAGS SHALL BE 24 INCHES LONG, 12 INCHS WIDE AND 6 INCHES HIGH FILLED WITH COARSE AGGREGATE BETWEEN 1/2"–1" DIA.
2. WHEN SEDIMENT FILLS THE AREA BEHIND THE SILT FENCE TO 1/2 THE HEIGHT OF THE SILT FENCE, THE CONTRACTOR SHALL REMOVE THE SEDIMENT.
3. SIZE OF THE BASIN SHALL CONFORM TO DESIGN.

5
C1.1

# SEDIMENT TRAP

NOT TO SCALE

NOTES:

1. BASE OF FABRIC SHALL BE BURIED AT LEAST 6" BELOW GROUND SURFACE AND BACKFILLED WITH CRUSHED STONE OR COMPACTED MATERIAL.
2. MESH WIRE FENCE MAY BE USED TO SUPPORT FABRIC. TOP OF FENCE SHOULD BE LEVEL WITH FRAME AND BOTTOM BURIED 6 INCHES BELOW GROUND.
3. MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON DOWN-SLOPE SIDE OF STRUCTURE TO PREVENT BYPASS FLOW.
4. STRAW BALES OR GRAVEL FILLED FILTER BAGS MAY BE USED IN LIEU OF FABRIC. IF STRAW BALES ARE USED, TWO 36" (MINIMUM) LONG, 2" X 2" HARDWOOD STAKES SHALL BE DRIVEN THROUGH EACH BALE AND SET BACK 12" TO 24" FROM INLET. IF FILTER BAGS USED, PLACE BAGS SUCH THAT NO GAPS ARE EVIDENT.

GENERAL NOTES:

1. ANY EROSION AND SEDIMENT CONTROL MEASURES INTENDED TO CONTROL EROSION OF AN EARTH DISTURBANCE OPERATION SHALL BE INSTALLED BEFORE ANY EARTH DISTURBANCE OPERATIONS TAKE PLACE.
2. THE CONTRACTOR SHALL INSPECT THE LAND DISTURBANCE SITE AFTER EACH SIGNIFICANT RAINFALL EVENT WITHIN A 24-HOUR PERIOD AND ASSURE THAT ALL EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING CONDITION PRIOR TO ANY FORECASTED RAINFALL. SEDIMENT REMOVAL SHALL AND ALL NECESSARY REPAIRS SHALL BE MADE TO MAINTAIN THE INTEGRITY OF THE EROSION AND SEDIMENT CONTROL MEASURES. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF OF THE INSTALLED HEIGHT OF MEASURE.
3. THE CONTRACTOR SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING ALL PHASES OF CONSTRUCTION UNTIL OWNER ACCEPTS WORK AS COMPLETE. THE CONTRACTOR SHALL PROVIDE TEMPORARY SEEDING, BERMS, SILT FENCE, SEDIMENT TRAPS OR OTHER MEANS TO PREVENT SEDIMENT FROM REACHING STREAMS, PUBLIC RIGHT-OF-WAY OR ADJACENT PROPERTY.
4. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED ONCE 70 PERCENT OF THE PERMANENT COVER IS ESTABLISHED.
5. THE CONTRACTOR SHALL TEMPORARILY SEED AND MULCH ALL DISTURBED AREAS IF THERE HAS BEEN NO CONSTRUCTION ACTIVITY ON THEM FOR A PERIOD OF 14 CALENDAR DAYS. IF THE ENGINEER DETERMINES THAT A SITE HAS A POTENTIAL FOR EROSION, STABILIZATION OF SOIL MAY BE REQUIRED BY THE ENGINEER. TEMPORARY SEED MIXTURE SHALL BE APPROVED BY THE ENGINEER OR AS FOLLOWS:

| TYPE: | APPLICATION RATE: |
|---|---|
| WINTER WHEAT | 120 LBS PER ACRE |
| RYEGRASS | 75 LBS PER ACRE |

REPAIRS AND RESEEDING SHALL BE PERFORMED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CITY. IF VEGETATIVE MEASURES ARE NOT EFFECTIVE, NON-VEGETATIVE OPTION MAY BE REQUIRED.


Map Scale: 1:2,290 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Shawnee County, Kansas
Survey Area Data: Version 14, Sep 14, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 5, 2011—Apr 12, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Shawnee County, Kansas (KS177) | | | |
|---|---|---|---|
| **Map Unit Symbol** | **Map Unit Name** | **Acres in AOI** | **Percent of AOI** |
| 3891 | Ladysmith silty clay loam, 1 to 3 percent slopes | 6.3 | 23.3% |
| 7303 | Martin silty clay loam, 3 to 7 percent slopes, eroded | 3.7 | 13.8% |
| 7423 | Morrill clay loam, 3 to 7 percent slopes | 1.5 | 5.5% |
| 7501 | Pawnee clay loam, 4 to 8 percent slopes, eroded | 13.0 | 48.0% |
| 7541 | Sharpsburg silty clay loam, 4 to 8 percent slopes | 2.5 | 9.4% |
| **Totals for Area of Interest** | | **27.0** | **100.0%** |

# Shawnee County, Kansas

## 3891—Ladysmith silty clay loam, 1 to 3 percent slopes

### Map Unit Setting

*National map unit symbol:* 1igwl
*Elevation:* 1,310 to 1,640 feet
*Mean annual precipitation:* 26 to 34 inches
*Mean annual air temperature:* 54 to 57 degrees F
*Frost-free period:* 165 to 200 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Ladysmith and similar soils:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Ladysmith

#### Setting

*Landform:* Interfluves
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Interfluve
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Residuum weathered from limestone and shale

#### Typical profile

*Ap - 0 to 8 inches:* silty clay loam
*Bt - 8 to 36 inches:* silty clay
*BC - 36 to 49 inches:* silty clay
*C - 49 to 79 inches:* silty clay

#### Properties and qualities

*Slope:* 1 to 3 percent
*Depth to restrictive feature:* More than 80 inches
*Natural drainage class:* Somewhat poorly drained
*Runoff class:* High
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
*Depth to water table:* About 24 to 35 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum in profile:* 3 percent
*Available water storage in profile:* High (about 9.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 3s
*Land capability classification (nonirrigated):* 3s
*Hydrologic Soil Group:* D
*Ecological site:* Clay Upland (PE 26-30) (R074XY007KS)

*Hydric soil rating:* No

**Minor Components**

**Irwin**

*Percent of map unit:* 5 percent
*Landform:* Interfluves
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Interfluve
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* Upland Hills 32-40" (R076XY100KS)
*Hydric soil rating:* No

**Dwight**

*Percent of map unit:* 5 percent
*Landform:* Hillslopes
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Interfluve
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Ecological site:* Claypan 32-40" (R076XY103KS)
*Hydric soil rating:* No

**Aquolls**

*Percent of map unit:* 0 percent
*Landform:* Depressions
*Down-slope shape:* Concave
*Across-slope shape:* Concave
*Hydric soil rating:* Yes

# Data Source Information

Soil Survey Area: Shawnee County, Kansas
Survey Area Data: Version 14, Sep 14, 2015

# Shawnee County, Kansas

## 7303—Martin silty clay loam, 3 to 7 percent slopes, eroded

### Map Unit Setting

*National map unit symbol:* 1lg96
*Elevation:* 800 to 1,700 feet
*Mean annual precipitation:* 31 to 47 inches
*Mean annual air temperature:* 50 to 57 degrees F
*Frost-free period:* 175 to 215 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Martin, eroded, and similar soils:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Martin, Eroded

#### Setting

*Landform:* Hillslopes
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Parent material:* Silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale

#### Typical profile

*A - 0 to 7 inches:* silty clay loam
*Bt - 7 to 30 inches:* silty clay
*C - 30 to 72 inches:* silty clay

#### Properties and qualities

*Slope:* 3 to 7 percent
*Depth to restrictive feature:* More than 80 inches
*Natural drainage class:* Moderately well drained
*Runoff class:* High
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
*Depth to water table:* About 21 to 26 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum in profile:* 1 percent
*Available water storage in profile:* High (about 9.5 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4e
*Hydrologic Soil Group:* D
*Ecological site:* Loamy Upland (Draft) (PE 35-42) (R112XY015KS)
*Hydric soil rating:* No

**Minor Components**

**Elmont, eroded**

*Percent of map unit:* 10 percent
*Landform:* Hillslopes
*Ecological site:* LIMY UPLAND (PE35-42) (R112XY012KS)
*Hydric soil rating:* No

# Data Source Information

Soil Survey Area: Shawnee County, Kansas
Survey Area Data: Version 14, Sep 14, 2015

# Shawnee County, Kansas

## 7423—Morrill clay loam, 3 to 7 percent slopes

### Map Unit Setting

*National map unit symbol:* 1lg9d
*Elevation:* 700 to 1,500 feet
*Mean annual precipitation:* 31 to 47 inches
*Mean annual air temperature:* 52 to 59 degrees F
*Frost-free period:* 175 to 215 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Morrill and similar soils:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Morrill

#### Setting

*Landform:* Hillslopes
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Parent material:* Fine-loamy glaciofluvial deposits

#### Typical profile

*A - 0 to 10 inches:* clay loam
*BA - 10 to 16 inches:* clay loam
*Bt - 16 to 56 inches:* clay loam
*C - 56 to 66 inches:* clay loam

#### Properties and qualities

*Slope:* 3 to 7 percent
*Depth to restrictive feature:* More than 80 inches
*Natural drainage class:* Well drained
*Runoff class:* Medium
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water storage in profile:* High (about 10.3 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3e
*Hydrologic Soil Group:* C
*Ecological site:* Loamy Upland (PE 30-37) (R106XY015KS)
*Hydric soil rating:* No

**Minor Components**

**Oska**

*Percent of map unit:* 5 percent
*Landform:* Hillslopes
*Ecological site:* Loamy Upland (Draft) (PE 35-42) (R112XY015KS)
*Hydric soil rating:* No

**Pawnee**

*Percent of map unit:* 5 percent
*Landform:* Hillslopes
*Ecological site:* Clay Upland (PE 30-37) (R106XY007KS)
*Hydric soil rating:* No

**Aquolls**

*Percent of map unit:* 0 percent
*Landform:* Depressions, drainageways, hillslopes
*Down-slope shape:* Concave
*Across-slope shape:* Concave
*Hydric soil rating:* Yes

# Data Source Information

Soil Survey Area: Shawnee County, Kansas
Survey Area Data: Version 14, Sep 14, 2015

# Shawnee County, Kansas

## 7501—Pawnee clay loam, 4 to 8 percent slopes, eroded

### Map Unit Setting

*National map unit symbol:* 2lpsn
*Elevation:* 800 to 1,680 feet
*Mean annual precipitation:* 29 to 39 inches
*Mean annual air temperature:* 51 to 55 degrees F
*Frost-free period:* 163 to 186 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Pawnee, eroded, and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Pawnee, Eroded

#### Setting

*Landform:* Hillslopes on till plains
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Parent material:* Till

#### Typical profile

*Ap - 0 to 7 inches:* clay loam
*BA - 7 to 13 inches:* clay loam
*Bt - 13 to 53 inches:* clay
*C - 53 to 79 inches:* clay loam

#### Properties and qualities

*Slope:* 4 to 8 percent
*Depth to restrictive feature:* More than 80 inches
*Natural drainage class:* Moderately well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
*Depth to water table:* About 7 to 18 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum in profile:* 10 percent
*Available water storage in profile:* Moderate (about 8.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3e
*Hydrologic Soil Group:* D
*Ecological site:* Clayey Upland (R106XY074NE)
*Other vegetative classification:* Clayey Subsoil (G106XY210NE)

*Hydric soil rating:* No

**Minor Components**

**Morrill, eroded**

*Percent of map unit:* 5 percent
*Landform:* Hillslopes on till plains
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Ecological site:* Loamy Upland (R106XY075NE)
*Other vegetative classification:* Loam (G106XY100NE)
*Hydric soil rating:* No

**Shelby, eroded**

*Percent of map unit:* 4 percent
*Landform:* Hillslopes on till plains
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Ecological site:* Loamy Upland (R106XY075NE)
*Other vegetative classification:* Loam (G106XY100NE)
*Hydric soil rating:* No

**Grundy, eroded**

*Percent of map unit:* 3 percent
*Landform:* Hillslopes on till plains
*Landform position (two-dimensional):* Summit
*Landform position (three-dimensional):* Interfluve
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Ecological site:* Clayey Upland (R106XY074NE)
*Other vegetative classification:* Clayey Subsoil (G106XY210NE)
*Hydric soil rating:* No

**Wymore, eroded**

*Percent of map unit:* 3 percent
*Landform:* Hillslopes on till plains
*Landform position (two-dimensional):* Backslope, summit
*Landform position (three-dimensional):* Side slope, interfluve
*Down-slope shape:* Convex
*Across-slope shape:* Convex
*Ecological site:* Clayey Upland (R106XY074NE)
*Other vegetative classification:* Clayey Subsoil (G106XY210NE)
*Hydric soil rating:* No

# Data Source Information

Soil Survey Area: Shawnee County, Kansas
Survey Area Data: Version 14, Sep 14, 2015

# Shawnee County, Kansas

## 7541—Sharpsburg silty clay loam, 4 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* 2scy3
*Elevation:* 980 to 1,660 feet
*Mean annual precipitation:* 28 to 39 inches
*Mean annual air temperature:* 50 to 55 degrees F
*Frost-free period:* 158 to 203 days
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Sharpsburg and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Sharpsburg

#### Setting

*Landform:* Hillslopes
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Parent material:* Loess

#### Typical profile

*Ap - 0 to 6 inches:* silty clay loam
*A - 6 to 11 inches:* silty clay loam
*Bt1 - 11 to 18 inches:* silty clay loam
*Bt2 - 18 to 46 inches:* silty clay loam
*BC - 46 to 58 inches:* silty clay loam
*C - 58 to 79 inches:* silty clay loam

#### Properties and qualities

*Slope:* 4 to 8 percent
*Depth to restrictive feature:* More than 80 inches
*Natural drainage class:* Moderately well drained
*Runoff class:* Medium
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
*Depth to water table:* About 45 to 50 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum in profile:* 2 percent
*Salinity, maximum in profile:* Nonsaline (0.0 to 0.4 mmhos/cm)
*Available water storage in profile:* High (about 9.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 3e
*Hydrologic Soil Group:* C
*Ecological site:* Loamy Upland (PE 30-37) (R106XY015KS)
*Other vegetative classification:* Loam (G106XY100NE)
*Hydric soil rating:* No

**Minor Components**

**Martin**

*Percent of map unit:* 5 percent
*Landform:* Hillslopes
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Ecological site:* Loamy Upland (PE 30-37) (R106XY015KS)
*Other vegetative classification:* Loam (G106XY100NE)
*Hydric soil rating:* No

**Pawnee**

*Percent of map unit:* 5 percent
*Landform:* Hillslopes
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Ecological site:* Clayey Upland (R106XY074NE)
*Other vegetative classification:* Clayey Subsoil (G106XY210NE)
*Hydric soil rating:* No

**Shelby**

*Percent of map unit:* 5 percent
*Landform:* Hillslopes
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Ecological site:* Loamy Upland (PE 30-37) (R106XY015KS)
*Other vegetative classification:* Loam (G106XY100NE)
*Hydric soil rating:* No

# Data Source Information

Soil Survey Area: Shawnee County, Kansas
Survey Area Data: Version 14, Sep 14, 2015