

**GENERAL NOTES:**  
**SITE CONDITIONS**

- Prior to all construction, the Contractor will be responsible for locating all public and private underground utilities and will avoid damage to all utilities during the course of the scope of work. The Contractor will be responsible for repairing any and all damage to utilities, structures, site appurtenances, etc. which occur as a result of the landscaping and/or grading. Maintain all stakes set by other until the Engineer has authorized the removal.
- When conditions detrimental to plant growth are encountered, such as rubble fill, rock, adverse drainage conditions, or obstruction, the landscaper/grading contractor will notify the Engineer.
- The Contractor will keep the site clean.

**MATERIALS**

- The Contractor will provide the grass seed mixtures and plugs of plants of proper quantity and quality, size, genus and species, as specified and scheduled for the landscaping scope of work. All plants will comply with recommendations and requirements of American Standard for Nursery Stock (ANSI) Z60.1. Provide healthy, vigorous stock grown in a recognized nursery in accordance with good horticultural practices free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions, or disfigurement. Place all plants in shaded area, protected from weather, mechanical damage and dehydration prior to planting. Plant materials delivered to the Project site and not planted within 24 hours of delivery will be "healed" or watered.
- Quantities listed in the plant list schedule are for convenience only. Grass plugs and seed mixture of contract quantities will be the number of items shown in the drawings.

- The Contractor is responsible for verifying all quantities shown in these plans before pricing this scope of work. Any differences in quantities should be brought to the attention of the Engineer for clarification.

- No substitutions of plant materials will be made without prior written authorization of the Engineer.

- The Contractor will utilize top soil from on-site. It will be without a mixture of subsoil and free of stones lumps, sticks, toxic substances, or other extraneous matter that may be harmful to plant growth or that would interfere with future maintenance.

- All plant material will be tagged and approved by the Engineer

- Each tray of plugs will be securely labeled with a waterproof tag indicating botanical name and common name for the delivery site.

**INSTALLATION**

- The landscaper will be contracted to a single firm specializing in landscape construction.
- The Contractor will coordinate all work with other contractors on site throughout the construction process.
- All discrepancies and/or field changes will be reported to the Engineer for approval prior to implementation.
- All site work, including plant locations will be installed as specified on the drawings and will be approved by the Engineer.
- The Contractor will use a low pressure bulldozer with GPS capabilities to excavate the potholes shown on the site plans.
- All plants and installation are subject to the approval of the US Army Corps of Engineers and/or the Engineer. Plant locations may be subject to change for logistical purposes.
- All plants will be in containers and/or flats and seed mix will be contained in standard

**SUBMITTALS:**

Planting Schedule: Submit proposed detailed planting schedule indicating anticipated dates and locations for each type of planting. The schedule must comply with the Cadillac Lake and Cowskin Creek Mitigation Plan (late September early October 2008 planting). If the anticipated scheduled planting date can not be met, a revised planting schedule and justification must be submitted to the Engineer within 10 working days of the revised planting date.

Maintenance Instructions: Submit instructions recommending procedures to be established by owner for maintenance of plants during entire year. Submit prior to expiration of required maintenance periods.

**Wetland Plug Planting List**

Common Name	Scientific Name	Indicator Status	Size of Plugs	Plant Placement	No. of Plugs
Woolley sedge	<i>Carex lanuginosa</i>	FACW	2-inch	18-inch centers	8,000
Avil sedge	<i>Carex stipata</i>	FACW	2-inch	18-inch centers	8,000
Burr reed sedge	<i>Carex sparganoides</i>	OBL	2-inch	18-inch centers	8,000
Inland rush	<i>Juncus effusus</i>	OBL	2-inch	18-inch centers	8,000
Softstem bulrush	<i>Scirpus validus</i>	OBL	2-inch	18-inch centers	8,000
Olney's bulrush	<i>Scirpus americanus</i>	FACW+	2-inch	18-inch centers	8,000
Torrey's sedge	<i>Juncus torreyi</i>	OBL	2-inch	18-inch centers	8,000
Nebraska sedge	<i>Carex nebrascensis</i>	OBL	2-inch	18-inch centers	8,000

Wetland seed mix is consistent with the Shoreline (Emergent Wetland) seed mixed stocked by

Critical Site Products Inc.-Prairie and Wetland Center, 16245 South Highway 71, Belton, Kansas

64012

**Wetland Seed Mix**

Common Name	Scientific Name	Indicator Status
<b>Grasses, Sedges, and Rushes</b>		
Common rush	<i>Juncus effusus</i>	OBL
Dark green bulrush	<i>Scirpus americanus</i>	OBL
Fox sedge	<i>Carex wrightii</i>	OBL
Frank's sedge	<i>Carex frankii</i>	FACW+
Switch grass	<i>Panicum virgatum</i>	FACW+
Parake conegrass	<i>Sporobolus pergrinus</i>	FACW
Rice cut grass	<i>Lacerta oryzoides</i>	OBL
Soft-stem bulrush	<i>Scirpus validus</i>	OBL
Spike rush	<i>Eleocharis ovata</i>	OBL
Sartwell's sedge	<i>Carex sartwellii</i>	OBL
Wool grass	<i>Scirpus cyperinus</i>	OBL
<b>Forbs</b>		
blue flag iris	<i>Iris versicolor</i>	OBL
honeysuckle	<i>Epiglotium perfoliatum</i>	FACW+
bur marigold	<i>Bidens polylopha</i>	FACW
false aster	<i>Sporobolus americanus</i>	OBL
ironweed	<i>Rhynchospora virginica</i>	OBL
Joe Pye weed	<i>Veronica missouriensis</i>	FACW+
mush buzzingsaur	<i>Epigonolobos maculatus</i>	OBL
monkey flower	<i>Liatris spicata</i>	FACW
Riddell's goldenrod	<i>Minutella ditans</i>	OBL
rose mallow	<i>Solidago riddellii</i>	OBL
sedocks	<i>Hibiscus larvis</i>	OBL
sneezeweed	<i>Ludwigia sp.</i>	OBL
swamp milkweed	<i>Helenium autumnale</i>	FACW+
water plantain	<i>Aeschynomene incanata</i>	OBL
	<i>Alisma subcordatum</i>	OBL

Wetland seed mix is consistent with the Shoreline (Emergent Wetland) seed mixed stocked by Critical Site Products Inc.-Prairie and Wetland Center, 16245 South Highway 71, Belton, Kansas 64012. The seedling rate is 5 lbs/acre. The total area

**Landscaping/Stabilization For Wetland Areas:**

- A low pressure bulldozer will be utilized to shape the potholes
- The bulldozer will have GPS on-board to grade the potholes consistent with the site plan.
- The potholes will have an uneven bottom (maximum depth 12-inches with an island in the middle) as shown in the typical cross section.
- The Contractor will minimize the amount of activity when constructing the potholes in the wetland.

**Sequence of grading**

- The grading of the mitigation site will start upon completing the construction of the adjacent detention basin.
- Emergency drainage ditch will be constructed to discharge into the newly constructed stormwater detention basin. Once the potholes in wetland area are constructed the temporary drainage ditch shall be filled.
- Construct the potholes within the existing wetland prior to creating the wetlands and potholes adjacent to the stormwater detention basin. Once potholes have been graded as shown in the grading plans, then begin grading of the wetlands adjacent to the stormwater detention basin.

**Planting Seasons**

The recommendations below are only general guidelines. There are many other factors that play a role in determining if a plant will survive that must be considered by the Contractor of the construction. Planting may need to be delayed to accommodate soil conditioning procedures or the removal of invasive species at planting site

- Planting shall not occur if the ground is frozen.
- Tubers, bulbs and rhizomes must be transplanted before new growth emerges. Therefore, they are best planted in the fall after dormancy, or in the winter before dormancy breaks.
- Most of the edges and grasses are best planted immediately after dormancy breaks in the spring.
- It is recommended that wetland plant species be planted in the fall or early winter, after the onset of dormancy. However, if winter flooding is anticipated, species selection and water level management is crucial to survival.

**Plant transport, Handling and Storage**

- Plants shall be transported in a covered vehicle, and if the weather is very hot, protected from the heat.
- Plant material shall not be exposed to night winds.
- Plant material shall be shipped in quantities that can be planted quickly to reduce on-site storage requirements and limit plant mortality.
- All plants shall be stored in a cool, shaded environment and watered routinely so that the soil and roots are kept moist at all times prior to planting.
- The root system of emergent species shall be kept in water or in contact with a saturated mulch material.

**Sequence of Planting**

- Before plants are installed, the Contractor shall verify that as-built elevations within each planting zone do not exceed the maximum water depth for each species as shown on the plant list. Maximum water depth shall be referred to the permanent pool elevation.
- If necessary, the Contractor shall adjust planting zones shown on the drawings to accommodate as-built conditions, subject to approval by the Engineer.
- If as-built conditions appear to be detrimental for plant growth and/or survivability, as determined by the Engineer or their representative Contractor, the Contractor shall make all repairs and adjustments required to establish proper planting conditions at no additional cost to owner.

**Fertilizer**

- Each plant (except woody plants) shall be fertilized with a slow release fertilizer, Osmocote, or approved equal, for planting in dry conditions. Agriform 2-year release 10-gram tablets, or approved equal, for planting under water. The Osmocote should be mixed in with the planting soil for each hole before backfilling. The Agriform tablets should be placed directly in the hole with the plant materials.
- The following time frame releases are recommended when using Osmocote:
  - For summer planting of herbaceous plants use 8- to - 9-month release.
  - For winter/fall planting of herbaceous plants use 12- to - 14-month release.
- Following are quantities of fertilizer that should be used for specific types of plant materials:
  - Dominal (Propaque SL, herbaceous bulbs, tubers, rhizomes), 15 grams (0.5 oz) Osmocote OR 1 tablet Agriform
  - Plasticizer pot up to quart size, 30 grams (1.0 oz) Osmocote OR 3 tablets Agriform
  - Plug (seedling), 15 grams (0.5 oz) Osmocote OR 1 tablet Agriform

**Seeding Procedures**

- Seeding shall occur mid September or before April 1st. If seeded "out of season", seed must be stratified.
- The following are various seed applications that may be applied when sowing seed in the pond and/or wetland areas. The Contractor shall employ the seed application method(s) most appropriate for the site conditions at time of construction.
- It is important to evaluate the suitability of the seeded species and seeding methods to the prevailing site conditions at the time of construction and make appropriate adjustments as needed with approval of the Engineer.
  - Broadcast Seeding (Dry): May be applied by hand or equipment. For successful seeding broadcast 1 part seed mixture to 10 parts wet sand, and survive, 1 part seed to 10 parts wet sand.
  - Wet Seeding: Seeds are soaked until they sink and then they are broadcast. This process is only suitable for seeds that absorb water and can tolerate standing water to germinate.
  - Once the seed is surface sown, it must be pushed into contact with the soil using a drag or other appropriate equipment suitable for use. Mulch or bark are not appropriate for wet areas as they will wash away as water levels rise.

**General Seeding Application**

- Prior to sowing, the finished grade shall be of friable non-compacted nature to ensure good soil to seed contact. The area may be deconsolidated through discing, rototilling, or ripping to a depth of at least one quarter of an inch.
- For smaller seeds (greater than 500,000 seed per pound) dilute and mix with sand or cat litter to provide an even seeding distribution. Press the seed into contact with the final grade.
- Seeding applications shall occur using one of the methods specified above making certain that even coverage has been achieved.

**Plugs**


- The Plugs will be planted on the island and an 8-foot fringe around the potholes.
- Plugs shall be planted on 18-inch centers in clusters by species.
- Each pothole will have multiple clusters of plant species.
- Plugs shall be 2" in size and shall be planted in a 4" augured hole.

**Upland Buffer Zone Seed Mix**

Common Name	Scientific Name	Indicator Status
blue grama	<i>Bouteloua gracilis</i>	UPL
sidcoats grama	<i>Bouteloua curtipendula</i>	UPL
buffalo grass	<i>Bouteloua dactyloides</i>	FACW-
birdsfoot trefoil	<i>Lonicera corniculatus</i>	FACW-
Missouri prairie	<i>Oenothera macrourpa</i>	FACW
dwarf red conopsis	<i>Coreopsis sp.</i>	UPL
California poppy	<i>Echscholzia californica</i>	UPL
prairie aster	<i>Aster rubrifolius</i>	NI
slipst daisy	<i>Eriogon arifoliosus</i>	NI
red yarrow	<i>Achillea sp.</i>	NI
upright prairie coneflower	<i>Ranibida sp.</i>	NI
blanket flower	<i>Gaillardia aristata</i>	NI
comblower	<i>Centaurea cyanus</i>	NI
lance leaved conopsis	<i>Coreopsis lanceolata</i>	FACW
blue flax	<i>Linum sp.</i>	NI
perennial lupine	<i>Lupinus polyphyllus</i>	NI

Upland buffer zone seed mix is consistent with the Roadside Mixture seed mix stocked by Stock Seed Farms, 28008 Mill Road, Murdock, NE 68407.

no.	date	by	cd	description

	
date	06/26/08
designed	ROOT
checked	REB
checked	REB

**GENERAL NOTES**  
CADILLAC LAKE MITIGATION SITE  
MAIZE ROAD AND 29TH STREET NORTH  
WICHITA, KS

project	49469
drawing	C1
sheet	of
file	drawing1.dwg