DANE COUNTY DEPARTMENT of PUBLIC WORKS, HIGHWAY and TRANSPORTATION

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Commissioner / Director
Gerald J. Mandli

March 20, 2015

ATTENTION ALL REQUEST FOR BID (RFB) HOLDERS

RFB NO. 315022 - ADDENDUM NO. 1

BADGER PRAIRIE HEALTH CARE CENTER – REGRADING AND PRAIRIE RESTORATION

BIDS DUE: THURSDAY, MARCH 26, 2015, 2:00 PM. DUE DATE AND TIME **ARE NOT** CHANGED BY THIS ADDENDUM.

This Addendum is issued to modify, explain or clarify the original Request for Bid (RFB) and is hereby made a part of the RFB. Please attach this Addendum to the RFB.

PLEASE MAKE THE FOLLOWING CHANGES:

1. **Document Index**
   Delete current Document Index; replace with new Index, issued with this Addendum.

2. **Section 31 05 13**
   Delete current Section 31 05 13; replace with new Section 31 05 13, issued with this Addendum.

3. **Section 31 25 13**
   Delete current Section 31 25 13; replace with new Section 31 25 13, issued with this Addendum.

4. **Section 32 90 10**
   Delete current Section 32 90 10; replace with new Section 32 90 10, issued with this Addendum.

5. **Section 32 90 15**
   Add Secton 32 90 15 – Restoration Management Zone Guidance.

6. **Section 32 90 20**
   Delete Secton 32 90 20.

7. Section 32 90 30
Delete this Section.

8. Appendix A
Add Appendix A, Provided with this Addendum.

9. Grading and Erosion Control Plan Sheet 2A
Add Grading and Erosion Plan Sheet 2A to Drawing set.

10. Figure 1. Aerial View of Parking Lot
Add Figure 1. Aerial View of Parking Lot, Provided with this Addendum.

11. Figure 2. Typical Fire Access Section
Add Figure 2. Typical Fire Access Section, Provided with this Addendum.

If any additional information about this Addendum is needed, please call Eric Urtes at 608/266-4798, Urtes.Eric@countyofdane.com.

Sincerely,
Eric Urtes
Project Manager

Enclosures:

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31 25 13 - Erosion Control
32 90 10 - Restoration
32 90 15 – Restoration Management Zone Guidance
Appendix A
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Figure 1
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DOCUMENT INDEX FOR RFB NO. 315022

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DIVISION 01 - GENERAL REQUIREMENTS
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DIVISION 32 – PRAIRIE RESTORATION
32 90 10 - Restoration
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Appenix A

DRAWINGS

Plot sheets on 42” x 30” (ARCH E1), paper for correct scale or size.
Sheet 1 - Existing Conditions
Sheet 2 - Grading and Erosion Control Plan
Sheet 2A –Grading and Erosion Control Plan
Sheet 3 - Grading/Drainage Improvement Areas
Sheet 4 - Prairie Restoration Plan
Sheet 5 – Details

Figure 1
Figure 2

SECTION 31 05 13
EARTHWORK

PART 1 GENERAL

1.1 DESCRIPTION

A. Providing, moving, placing, and compacting fill materials in accordance with the lines, grades, thicknesses, and typical sections shown on the Drawings.

B. Trenching, backfilling, compaction and grading for utility installation.

C. Excavating, moving, loading, hauling, regrading, stockpiling, and/or disposal of excavation waste materials, including finish grading to the extent and elevations shown on the Drawings.

1.2 REFERENCES

A. State of Wisconsin Department of Transportation (WI DOT):

1. Standard Specifications for Highway and Structure Construction, latest edition.

B. Erosion Control Permit Application, Badger Prairie Health Care Center (SCS Engineers, May 2014).

1.3 SUBMITTALS

A. Submit engineered soil mix composition data 2 weeks prior to placement.

PART 2 PRODUCTS

2.1 FILL MATERIAL

A. USDA Sand:

1. Meet one of the following gradations:
   - USDA Coarse Sand (0.02-0.04 inches)
   - ASTM C33 (Fine aggregate concrete sand)
   - Wisconsin Standard Specifications for Highway Construction, Section 501.2.5.3.4 (Fine Aggregate Sand) 2005 edition, or an equivalent as approved by Engineer

B. Engineered Soil:

1. As specified on Drawings.
2. WDNR Technical Standard 1004

C. General Fill:

1. Soil that is free of vegetation, ash, wood, organics, debris, refuse, masonry, metal, sharp objects, boulders, snow, and ice.
2. No solid material larger than 4 inches in its largest dimension.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where Work will be performed and notify the Engineer in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

3.2 EXCAVATION

A. General:

1. Excavate to the limits and depths shown on the Drawings.
2. Segregate and stockpile excavated materials.
3. Removal of materials beyond the limits and depths shown on the Drawings without authorization of Engineer shall be at the Contractor's expense, including backfill and compaction.

B. Trenching:

1. Unauthorized trenching: Removal of materials beyond the elevations or dimensions indicated on the Drawings without authorization of Engineer shall be at the Contractor's expense, including backfill and compaction.
2. Excavate to the dimensions and elevations shown on the Drawings to permit proper installation of utility piping.
3. Grade bottom of trench so that pipes can be laid without sags or humps.
4. Unsuitable soil: Remove unsuitable soils as required by pipe manufacturer's specifications. Replace the excavated material in accordance with manufacturer's recommendations.

C. Do not backfill trenches until an inspection has been made and backfilling authorized by the Engineer.

D. Proofrolling:

1. Proofroll subgrade with a loaded triaxle dump truck or loaded scraper as directed by Engineer.
2. Excavate or stabilize soft or loose soils, if any, as directed by Engineer.
3. Stabilize a soft subgrade as provided in Geotechnical Exploration Report (GCG, Inc., September 2013).

E. Re-establish subgrade elevation with backfill materials as recommended in Geotechnical Exploration Report (GCG, Inc., September 2013).

F. Perform all Work in accordance with OSHA requirements.

3.3 PREPARATION AND RESTORATION

A. Remove ice and snow before placing fill. Do not place fill on frozen subgrade.

B. Cut out soft areas of unsuitable subgrade.

C. Contractor is responsible for preparing, maintaining, and documenting proper sub-base.

3.4 FILLING

A. General:

1. Clear trenches of trash and debris before backfilling.

2. Carefully place fill material to protect underground structures and utilities.
3. Do not fill with frozen material.
4. Inspect excavation prior to backfilling to ensure suitable for backfilling.
5. If fill settles below the adjacent ground surface, prior to one year following completion of Work, Contractor shall refill settled area and mechanically compact the surface. If backfill settlement damages structures, pavement, landscaping or buried utilities, Contractor shall repair damaged facilities to the satisfaction of the Owner.

B. Fill in Non-Paved Area:

1. Fill shall consist of non-organic general fill. Place in 10 inch lifts, mechanically compact to at least 85%, based on modified Proctor maximum dry density as defined by ASTM D 1557.

C. Testing:

1. Test backfill for compaction twice per every other lift in non-paved areas.
2. Field density testing shall be in accordance with ASTM D 2922.
3. Retest any failed tests after re-compaction.

3.5 GRADING

A. Grade and finish to within 0.10 foot of grades provided.

B. Uniformly grade areas within limits of backfilled trenches, including adjacent transition areas.

C. Blend slopes with existing landscape features at the intersection of cuts and fills; provide gradual slope between new and existing construction.

D. Rip subsoil to a depth of 6” prior to installing topsoil.

3.6 EXCESS SOIL

A. Load, haul, and properly dispose off-site any excess fill material not usable or used during construction.

END OF SECTION

SECTION 31 25 13
EROSION CONTROL

PART 1 GENERAL

1.1 DESCRIPTION

A. Section includes silt fence, riprap, geotextile, erosion control mat, stabilized construction entrance, inlet protection, and mulch for site work erosion control.

1.2 REFERENCES

A. State of Wisconsin Department of Transportation (WI DOT):

1. Standard Specifications for Road and Bridge Construction, latest edition.

2. Erosion Control Product Acceptability List, latest edition.

B. State of Wisconsin Department of Natural Resources (WDNR)

1. Stormwater Management Technical Standards, latest edition.

C. Erosion Control Permit Application and WDNR Notice of Intent renewal, Badger Prairie Health Care Center (SCS Engineers, May 2014).

1.3 QUALITY ASSURANCE

A. Geotextile:

1. Geotextile shall be free of defects, rips, holes or flaws.
2. It shall be manufactured in widths and lengths that will permit installation of geotextile with as few laps a possible.
3. During shipment and storage, geotextile shall be wrapped in relatively impermeable and opaque protective covers.
4. Geotextile shall be marked with Manufacturer's name, product identification, lot number, roll number and roll dimensions.
5. Storage area shall be such that geotextile is protected from mud, dirt, dust, debris, moisture, and exposure to ultraviolet light and heat.

B. General:

1. Contractor shall repair any areas damaged by erosion for a period of one year following completion of construction.

1.4 SUBMITTALS

A. Submit silt fence and geotextile product identification and material specifications 2 weeks prior to installation.

B. Submit erosion control mat product identification and Manufacturer's installation recommendations 2 weeks prior to installation.

PART 2 PRODUCTS

2.1 GEOTEXTILE

A. Conform to WI DOT Type HR geotextile.

2.2 RIPRAP

A. Salvage and reuse existing riprap.
B. New riprap shall conform to WI DOT Medium Riprap for culvert outlet protection.

2.3 EROSION CONTROL MAT

A. Class I, Type B erosion mat included on WI DOT Product Acceptability List (PAL). Utilized in all stabilization areas except for bioretention practices.
B. Class II, Type B erosion mat included on WDOT Product Acceptability List (PAL). Utilized in bioretention practices.

2.4 STABILIZED CONSTRUCTION ENTRANCE

A. Stone shall consist of 3- to 6-inch clear or washed stone. All material shall be retained on a 3-inch sieve.

2.5 SILT FENCE

A. Comply with the requirements of WDNR Stormwater Management Technical Standard 1056 (Silt Fence).

2.6 INLET PROTECTION

A. Comply with the requirements of WDNR Stormwater Management Technical Standard 1060 (Storm Drain Inlet Protection for Construction Sites).

2.7 SEDIMENT LOG TEMPORARY DITCH CHECKS

A. Temporary 12” ditch check included on WI DOT Product Acceptability List (PAL).
B. Designed for channel applications.

2.8 TEMPORARY USE OF PERMANENT FEATURES

A. When the contract contains items of work, which are of an erosion control or storm water nature, and are intended to be a permanent installation, the Contractor may employ these items in his control of erosion and storm water during his construction activities. However, these items shall be fully cleaned, restored, and in every way fully functioning for its intended permanent use prior to acceptance of the work.

PART 3 EXECUTION

3.1 GENERAL

A. Examine the areas and conditions where Work will be performed and notify Engineer in writing of conditions detrimental to proper and timely completion of Work. Do not proceed with Work until unsatisfactory conditions have been corrected.

B. Minimize the amount of disturbed area open at a given time. Restoration activities will closely follow grading operations to reduce the amount of open soil present at any given time.

C. Execute construction to minimize surface water runoff from or to disturbed areas.

D. Avoid runoff or deposition of site materials into drainage features or off the property.

E. Do no track or spill site materials off the property. Off-property tracking or spills must be cleaned up immediately by the Contractor.

F. Contractor shall periodically inspect, throughout the day, site work and erosion controls for erosion, sedimentation, or defects. Contractor is to correct deficiencies identified in a timely manner.

G. Contractor is to replace or repair erosions controls affected by the construction. Erosion controls are to be returned to installed conditions or reinstalled to accommodate construction.

H. Install erosion controls for soil stockpiled for seven or more days during the Work and/or when rain is expected.

I. Alterations or additions to the existing erosion controls shall not affect the performance of the erosion control plan and must conform to WDNR best management practices.

J. Remove temporary erosion control features once site is stabilized and with approval of Engineer.

3.2 GEOTEXTILE PLACEMENT AND HANDLING

A. Installer shall handle all geotextiles in such a manner as to ensure they are not damaged in any way.

B. Provide a minimum geotextile overlap width of 2 ft.

C. Any holes or tears in geotextile shall be repaired using a patch made from same geotextile that is spot-seamed in place with a minimum of 24 in. overlap in all directions.

D. Installer shall place all materials located on top of geotextile in such a manner as to ensure no damage of geotextile.

3.3 RIPRAP PLACEMENT

A. Place riprap by hand using larger stones for lower courses. Lay stones perpendicular to slope with ends in contact. Chink spaces between stones with spalls firmly rammed into place.

B. Compact riprap in place.

C. Provide an even, tight finished riprap surface.

D. Inspect weekly and within 24 hours after each rainfall.

3.4 EROSION CONTROL MAT PLACEMENT

A. Install in accordance with Manufacturer's recommendations.

B. Inspect weekly and within 24 hours after each rainfall.

3.5 STABILIZED CONSTRUCTION ENTRANCE

A. Install in accordance with WDNR Technical Standard 1057 (Stone Tracking Pad and Tire Washing).

B. Inspect weekly and within 24 hours after each rainfall.

C. Remove sediment tracked onto public or private roads by street cleaning (not flushing) at the end of each working day.

3.6 SILT FENCE INSTALLATION AND MAINTENANCE

A. Overlap ends of silt fence at joints for a length equal to distance between two stakes.

B. Inspect weekly and within 24 hours after each rainfall until site is stabilized and accepted.

C. Repair or replace if silt fence is torn, sagging, overtopped, blown over (lying down), or in any way is not functioning for sediment containment.

D. Remove sediment when sediment deposits reach no more than one half of silt fence height.

E. Remove silt fence once contributing drainage area is stabilized with vegetation or impervious surface.

3.7 INLET PROTECTION PLACEMENT AND MAINTENANCE

A. Install inlet protection as shown on Drawings prior to site disturbance.

B. Maintain inlet protection throughout site construction duration.

C. Inspect weekly and within 24 hours after each rainfall until site is stabilized and accepted.

D. Remove inlet protection once the contributing drainage area is stabilized with vegetation or impervious surface.

3.8 SEDIMENT LOG TEMPORARY DITCH CHECK PLACEMENT AND MAINTENANCE

A. Install sediment logs as shown on Drawings

B. Install in accordance with manufacturer's specifications.

C. Inspect weekly and within 24 hours after each rainfall.

D. Repair or replace if sediment log is damaged, washed away.

E. Remove sediment when sediment deposits reach no more than one third of the sediment log height.

END OF SECTION

SECTION 32 90 10
Restoration

PART 1 - GENERAL

1.1 INTRODUCTION

A. The work under this section shall consist of providing all work, materials, labor, equipment and supervision necessary to complete seeding, plug plant installation, native vegetated mat (NVM) installation, erosion control blanket installation, and maintenance as indicated on the drawings and described in included, subsequent sections.

1.2 DEFINITIONS

A. Long Term Restoration Contractor – Contractor who will complete restoration work in a forthcoming contract after Final Acceptance of work included in the contract to which this specification applies.

B. Weeds - Species defined as weeds include, but are not limited to, common buckthorn (Rhamnus cathartica), bush honeysuckle (Lonicera x bella), reed canary grass (Phalaris arundinacea), Canada thistle (Cirsium arvense), common read (Phragmites australis), purple loosestrife (Lythrum salicaria), dame's rocket (Hesperis matronalis), garlic mustard (Alliaria petiolata), hybrid cattail (Typha x glauca)), narrow leaf cattail (Typha angustifolia), and Canada thistle (Cirsium arvense). Native species that appear in the planting zones but were not planted, will be protected and maintained unless deemed not appropriate by the Engineer/Consultant.

C. Coverage – The degree to which bare ground or bare soil is covered by vegetation.

D. PLS – Pure Live Seed

E. Native Species – Species of plants that were present prior to soil manipulation by man. Native Species for this project will have origins from within a 200 mile radius of the project location and produced by an accredited native seed, plant, or native vegetated mat nursery. If species are not available, present options for substitution to Engineer/Consultant.

1.3 QUALITY ASSURANCE

A. Contractor's field supervision: Contractor shall maintain an experienced full-time supervisor on project site when plug planting, seeding and related operations are in progress.

C. Contractor's meeting attendance: Contractor shall attend scheduled construction meetings at the request of Engineer/Consultant. Contractor shall attend a pre-construction meeting.

D. Contractor's Coordination: Contractor shall notify the Engineer at least two business days prior to the anticipated commencement of plug planting and seeding work so the Engineer can inspect for adequate preparation per Section 3.4. Contractor shall coordinate with the Engineer on changes to the schedule due to weather and other conditions. If Engineer determines that preparation is inadequate, Contractor must make required corrections in a timely manner.

E. Failure to complete these quality assurance efforts may result in the Contractor partially or fully re-seeding and re-planting, at the Engineer's/Consultant's discretion and at the Contractor's expense. Cost for Engineer/Consultant oversight related to this re-work shall also be at Contractor's expense.

1.4 SUBMITTALS

A. Contractor shall provide seed weight calculations for each seed species based on the seed mixes and seeding zones shown on the Drawings and based on the seeding rates in Section 3.

B. Contractor shall provide seed samples and data showing seed mix species composition by weight and PLS percentage, seed source, seed origin, and germination rate.

C. Contractor shall provide origin of seed source used to produce plant plugs and Native Vegetated Mat (NVM).

D. Contractor shall provide information on method of sowing seed.

E. All submittals require written approval by the Engineer/Consultant.

F. If Engineer/Consultant determines that submitted information is inadequate, re-submittals shall be made in a timely manner.

G. Failure to complete these submittals may result in the Contractor partially or fully re-seeding and re-planting, at the Engineer's/Consultant's discretion and at the Contractor's expense. Cost for Engineer/Consultant oversight related to this re-work shall also be at Contractor's expense.

1.5 INSPECTIONS

A. Contractor shall make available plug plants, NVM documentation, and seed and/or seed packages for inspection by the Engineer/Consultant prior to or during plug planting, NVM or seeding operations.

B. Engineer/Consultant may require Contractor to replace plug plants, NVM rolls, and/or seed that is not per specification, at Contractor's expense.

1.6 SUBSTITUTIONS

A. If certain native plant plug and seed species are unavailable (or for a reason acceptable to the Engineer/Consultant), Contractor may submit suggested substitutions to the Engineer/Consultant for approval; submittals should generally follow Section 1.4. If substitutions are accepted, the Contract price may need to be adjusted accordingly.

1.7 DELIVERY, STORAGE AND HANDLING

A. Seed shall be delivered to the site in its original, unopened container, labeled as to weight, analysis, and producer. Any seed delivered prior to use must be stored in a manner safe from damage from heat, moisture, rodents, or other causes. Storage of seed in full sun shall be avoided. Seed and plants shall always be stored in cool areas away from direct sunlight.

B. Plant plugs and NVM shall be kept hydrated and in good health prior to planting. Any seed or plant damaged after inspection shall be replaced by the Contractor at Contractor's expense.

1.8 JOB CONDITIONS

A. Work areas shall be kept clean and orderly during the installation period. Under no condition shall debris from seeding or planting activities result in a safety hazard on-site or to adjacent off-site property.

B. During any operation, contractor is responsible for picking up and the proper disposal of any and all trash found on site.

1.9 VHS and INVASIVE SPECIES

A. To the extent practicable, equipment and gear used on infested waters and lands should not be used on other non-infested waters and lands without appropriate cleansing and decontamination.

B. All equipment used for the project including but not limited to tracked vehicles, barges, boats, silt/turbidity curtains, sheet piles, hoses and pumps shall be decontaminated for invasive and exotic viruses and species prior to use and after use. The following steps should be taken every time equipment is moved to avoid transporting invasive and exotic viruses and species:

1. Inspect and remove aquatic plants, animals and mud from equipment
2. Drain all water from equipment that comes in contact with infested waters,
3. Dispose of aquatic plants, animals in the trash. Never release or transfer aquatic plants, animals or water from one water body to another.
4. Wash equipment with hot (> 104 F) and / or high pressure water OR allow your equipment to dry thoroughly for 5 days.

PART 2 – PRODUCTS

2.1 COOL SEASON SEED

A. Cool Season Grass Mix – Badger Prairie (Appendix A) shall be hardy to the area and perennial.

B. Madison Parks Mix shall be hardy to the area and perennial.

2.2 NATIVE SEED

A. Seed must be provided as Pure Live Seed (PLS) equivalents.

B. Seed shall contain a nurse crop of annual oats if seeding occurs before September 15 or after November 20. Seed shall contain a nurse crop of annual oats and winter wheat if seeding occurs after September 15 and before November 20.

C. Seed products shall conform to the Wisconsin Statutes and Wisconsin Administrative Code Chapter ATCP 20 regarding noxious weed seed content, labeling, and current laws and rules for sale of seed in Wisconsin.

D. Seed used shall be tested according to the methods and procedures used for sampling and analyzing seed for purity, germination, and noxious weed seed content specified in the current edition of Rules for Testing Seed, published by the Association of Official Seed Analysts. This information is found on appropriate seed labels.

E. "Native Seed" must be native to Wisconsin or be a genotype from within 200 miles from the planting site. Seed shall be from Wisconsin or Minnesota nurseries specializing in growing native species from Wisconsin genotypes or similar nurseries in Iowa or parts of Illinois, Zones 4 or 5a of the USDA Plant Hardiness Zone Map, miscellaneous publication 1475, revised 1990. Some potential sources include but are not limited to:

Agrecol
2918 Agriculture Drive
Madison, Wisconsin 53718
(608) 223-3571

Prairie Nursery
Post Office Box 306
Westfield, Wisconsin 53964
1-800-476-9453

Prairie Moon Nursery
31837 Bur Oak Lane
Winona, MN 55987-4219
(507) 452-1362

Minnesota Native Landscapes
14088 Hwy 95 N.E.
Foley, MN 56329
(320) 980-2822

2.3 TEMPORARY SEED

A. If seeding occurs before September 15 or after November 20 the crop shall be annual oats

B. If seeding occurs after October 15 and before November 20 the crop shall be a combination of annual oats and winter wheat.

2.4 NATIVE PLANT PLUGS

A. Native plant plugs must be grown from a seed source that is native to Wisconsin or be a genotype from within 200 miles from the planting site. Some potential sources include but are not limited to:

Agrecol
2918 Agriculture Drive
Madison, Wisconsin 53718
(608) 223-3571

Prairie Nursery
Post Office Box 306
Westfield, Wisconsin 53964
1-800-476-9453

Prairie Moon Nursery
31837 Bur Oak Lane
Winona, MN 55987-4219
(507) 452-1362

Minnesota Native Landscapes
14088 Hwy 95 N.E.
Foley, MN 56329
(320) 980-2822

B. Plant sizes should be 2.5" * 2.5" square with a depth of 3.5" supplied in flats of 32 plants per flat, or approved equal. Plugs shall have well developed root systems inside the pots. The top growth of the plants shall be well developed and adequately prepared for outdoor planting. Plugs must be delivered to the project site adequately hydrated, must be disease free, mold and pest free, and lacking any other defects or signs of stress.

2.5 NATIVE VEGETATED MAT (NVM)

A. NVM is a pre-grown mat of native prairie species, grown on an erosion control blanket, a native vegetated mat which has a similar appearance to traditional sod.

B. NVM producer: Company specializing in growing NVM specified in this section shall have a minimum of three (3) years documented experience growing the product.

C. Delivery of product will conform with manufactures recommended delivery methods and be approved by Engineer/Consultant.

D. NVM will be kept in a cool and moist environment during transportation and storage.

E. NVM will be grown on a type B mat, with the vegetation mix being the Rainwater Renewal Seed Mix.

F. .35 acres of NVM will be required for this project.

2.6 WATER

A. Water shall be fresh water that is free from toxic substances and chemicals that may be injurious to plant growth. Pumping of water from the lake or river is allowed for the purpose of watering vegetation associated with restoration goals. Trucks, hoses, and other watering equipment required to transport water from a source to the planting area shall be included as part of the work.

2.7 HERBICIDES / PESTICIDES

A. Nonselective herbicides: EPA registered and approved, glyphosate herbicide intended for vegetation removal should invasive species become problematic (Round-up, Rodeo, Ranger, or Kleen-up) and recommended surfactants and adjutants.

B. Selective herbicides: EPA registered and approved specific herbicide such as sethoxydim intended for grass removal, and clopyralid ("Stinger") intended for robust broadleaf plants like Canada thistle, Habitat intended for common read (Phragmites australis) and recommended surfactants and adjutants.

C. All herbicides must be approved by WDNR for use in specific work zones.

D. All herbicides will be applied by licensed, certified professional applicators.

2.8 MULCH AND MULCHING MATERIALS

A. Mulch shall meet the requirements of DOT Section 627 standard specifications, applicable WDNR Technical Standards, the WISDOT Product Acceptability List (PAL), latest edition, and shall in no case originate from a source containing reed canary grass.

2.9 EROSION CONTROL PRODUCTS

A. Erosion control products shall be as specified on the Drawings.

B. Erosion control products shall meet the requirements of applicable sections in the SSHSC, applicable WDNR Technical Standards, and the WISDOT Product Acceptability List (PAL), latest edition.

c. All erosion control products will be installed according to manufacturer's specifications.

2.10 POLYMER

A. Polymer shall meet the requirements of Section 628 in the SSHSC, applicable WDNR Technical Standards, and the WISDOT Product Acceptability List (PAL), latest edition.

2.11 FERTILIZER

A. Fertilizer will be applied by contractor as needed based upon soil test results.
B. Fertilizer will be in compliance with local ordinance.
C. Fertilizer will be applied per manufactures specifications.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify that your work area is ready for work to be performed.

B. In dry detention basins it is the contractor's responsibility to confirm that infiltration rates are adequate to support specified vegetation. Recommended method of determining infiltration rates is the utilization of a double ring infiltrometer ASTM D3385.

C. Confirm that grading operations are satisfactory before commencing planting operations. Including soil compaction as described in 3.4

D. In areas where new topsoil or recently manipulated soil is present soil testing for nutrient load and pH levels is recommended at a rate of no less than one test per 10,000 square feet of disturbed soil area.

3.1 WEED CONTROL UPON ENTRANCE TO SITE

A. Prior to entering the project site, all equipment to be used at the project shall be sprayed clean of all dirt, sod, or foreign matter with high-pressure water in an upland location

outside of the project site that does not drain to the site or in Contractor's shop. Equipment cleaned shall include, but is not limited to, all dozers, scrapers, backhoes, trucks, seed drills, shovels, picks, and hand tools that enter the project site. Special care shall be taken to cleanse the underbody, suspension, tracks, wheels, tires, and wheel wells of all motorized equipment. If necessary, hand tools, brushes, or scrapers may be required to remove heavy accumulations of debris from any item.

B. After a thorough cleaning and inspection, each item of equipment shall be allowed to enter and be used on the project site. If it is necessary for the equipment to leave and reenter the project site, each item shall be cleaned and inspected.

3.2 PRE-SEEDING WEED CONTROL

A. If vegetative cover consists of more than 25 percent weeds or contains species that are not compliant with expected requirements associated with final acceptance at any point prior to seeding in the specified areas, Contractor shall treat the vegetation with a glyphosate-based, or species specific herbicide at the rate recommended on the label at two-week intervals until the weed cover, including weed seed sprouts, is reduced to less than 5 percent of the total vegetative cover, dead or alive. This does not include temporary cover species. As this site will be top dressed with soils brought in from outside sources, it is imperative that weed seed banks carried in with the soil are adequately controlled.

3.3 HERBICIDE

A. Herbicides shall be applied per the product manufacturer's label. Seeding or planting following herbicide application shall occur after the time period specified by the product manufacturer. All herbicides used must be DNR approved for use in specific work zones.

B. All herbicides will be applied by licensed, certified applicators.

3.4 PREPARATION OF SEEDING, PLANTING, AND NVM AREAS

A. Upon completion of excavating & grading operations, a loose, friable ground surface shall be prepared for installation of seed.

B. Care shall be taken to minimize soil compaction during construction activity. By example of a standard soil penetrometer (compaction tester), the topsoil compaction readings shall be less than 200 psi at the 0-6 inch depth and less than 250 psi at the 6-18 inch depths in all areas to be seeded.

C. Having topsoil present on site is not a prerequisite and where possible, placing granular material at the surface is desirable.

Areas to be seeded shall not contain any undulations or irregularities which would interfere with a consistent seeding operation.

E. Final surface to be seeded shall consist of a smooth, free draining, even surface with a loose porous texture, free of clods and debris which could pass a 2-inch sieve or larger.

F. All areas to be plug planted will be prepared to a standard that is adequate for seeding, so this section applies to preparation of all area to be seeded and/or plug planted, and NVM installation.

3.5 COOL SEASON SEED INSTALLATION

A. Cool Season Grasses shall be planted per manufacturer's specifications. Planting season is from April 1 and June 15 and from August 15 to October 15.

B. Turf Grass Mix shall be planted per manufacturer's specifications. Planting season is from April 1 and June 15 and from August 15 to October 15.

3.6 NATIVE SEED INSTALLATION

A. Seed shall be installed as soon as sensible upon final grading and seedbed preparation.

B. Seed must be planted at a depth of ¼" or less.

C. Any seed of legumes used in seed mix shall be inoculated prior to seeding unless previously inoculated by the vendor. Follow inoculation recommendations provided by vendor or consultant.

D. Any seed species of legumes used in seed mix shall be scarified prior to seeding unless previously scarified by the vendor. Follow scarification recommendations provided by vendor or consultant.

E. Install Initial Cover Seed Mix (as shown on Drawings) at a seeding rate of 75 PLS seeds per square foot.

F. For seeding operations that occur before September 15 or after November 20 install a nurse crop of annual oats at a rate of 75 pounds per acre. For seeding operations that occur after September 15 and before November 20 install a nurse crop of annual oats at a rate of 40 pounds per acre plus winter wheat at a rate of 50 pounds per acre.

G. Seed installed shall be free from mold, excessive moisture, or any other deficit occurring from transport or poor storage conditions.

H. The seed shall be installed using a no-till, broadcast, conventional, or similar type seed planter adapted for planting of native seeds. Hand broadcast methods may also be used in certain situations. Seed shall be distributed evenly over entire area to be seeded as indicated on the plans. The contractor is to ensure that good seed to soil contact occurs as a result of the seeding operation. Any dispersal agents used to plant the seed shall be free from noxious weed seed as defined by local seed laws and local environmental agencies. Seed shall be installed in or on the surface, with no seed being planted greater than 1/4 inch deep. Following seeding, the seeded areas shall not be disturbed in any way that could cause erosion of any kind, soil compaction, or other that may hinder the seeds' ability to germinate and establish. Any areas with inadequate coverage may require re-seeding upon review by the Engineer.

3.7 TEMPORARY SEED INSTALLATION

A. Seeding that occurs before October 15 or after November 20 install annual oats at a rate of 75 pounds per acre. Seeding that occurs after October 15 and before November 20 install annual oats at a rate of 75 pounds per acre plus winter wheat at a rate of 30 pounds per acre

B Should temporary soil stabilization be necessary when temperatures are not warm enough for seed germination, polymer applications, erosion control mat, or mulching will be considered temporary ground cover with Engineer/Consultant approval.

3.8 NATIVE PLANT PLUG INSTALLATION

A. Plants shall be installed between May 1 and October 1.

B. Plant plugs will be spaced 12 inches on center throughout all areas as indicated on the Drawings.

C. During installation of root bound containerized plants, installation contractor shall ensure that the roots are ripped or pulled apart slightly to begin to train the roots to grow outward in their new environment.

D. Plants should be watered after installation to the point of saturation but stopping short of soil displacement. Plants will be water up to three times per week should rainfall amounts be less than 1". Watering activity will continue as needed until the point of final acceptance. See Section 2.6 for additional watering provisions.

3.9 NATIVE VEGETATED MAT (NVM)

A. Eliminate surface and subsurface compaction to allow rapid deep root development of native sod roots.

B. Eliminate all unwanted vegetation. Use non-selective, non-persisting herbicide like glyphosate or repeated mechanical weed control cultivations or smothering techniques.

C. Eliminate surface roughness (soil clods, root clumps, rocks) to prevent mat root pruning from air gaps.

D. If soil conditions are poor amend soil with clean compost or other media and mix into surface to decrease transitional rooting time into existing soil.

E. Insure that voids between seams and junctions with neighboring erosion control products are eliminated to prevent any points where soil erosion could potentially begin.

F. Handle NVM with care to minimize root and vegetative damage. Keep mat moist and cool at all times while at the installation site. Install mat within 48 hours of being loaded on the truck at the nursery.

G. Tuck the edges of mat into the ground by cutting a lip into the soil with a spade.

H. Stagger seams and utilize shingle method of overlap of mat to prevent erosion.

I. Anchor mat with wood stakes, landscape staples, J hooked rebar or earth anchors to prevent mat from moving, slipping or floating. Stake NVM at 6" intervals along all perimeter edges of the planting area, 12" intervals at seams between NVM pieces, and 18" intervals throughout the remainder of the planting.

J. If soils are very dry and warm, pre-water the soil prior to installing NVM. Thoroughly water NVM immediately after installation. Water NVM thoroughly every day for the first 5-7 days. Plan to apply at least 1" + of water per week to the NVM for the next 2-6 weeks. When watering NVM it is very important to water with a fine spray/mist as heavy hard watering may dislodge seeds that have not yet germinated, causing a reduction in germination ability of the remaining desirable seed.

K. High quality NVM will require less maintenance than normal native seed plantings. If soil is excessively dry watering may be required beyond the 6 week period, 3.9 (J). NVM does not require mowing operations. Should weed species occur in the planting area, simply hand remove or selectively apply a species specific herbicide to eradicate the targeted weed.

3.10 MULCHING

A. Mulch shall be applied as noted on the Drawings.

3.11 POLYMER APPLICATION

A. Polymer shall be applied per the requirements of WDNR Conservation Practice Standard 1051 and Section 628 of the SSHSC.

3.12 CLEANING AND REPAIR

A. Waste and excess material from the seeding operations shall be promptly removed. Adjacent paved areas are to be cleaned, and any damage to existing adjacent turf areas shall be repaired.

3.13 INITIAL ACCEPTANCE

A. All seeding and planting areas shall be evaluated for Initial Acceptance after the entire seeding area has been covered with the specified seed, the appropriate soil protection measure (such as mulch or erosion control blanket, etc. as shown on the Drawings), and plant plugs (if necessary). Initial Acceptance shall be based on the Contractor providing the Engineer/Consultant with the specified submittals and a visual inspection by the Contractor and the Engineer/Consultant of the seeding and planting area to evaluate that the appropriate seed and plants have been applied at the specified density.

B. Submittals associated with all restoration components will be reviewed for completeness at the time of initial acceptance.

3.14 MAINTENANCE

A. Following Initial Acceptance and prior to Final Acceptance, the Contractor shall:

1. Inspect restored areas at a sufficient frequency to ensure that weeds do not re-seed themselves, vegetation is adequately hydrated, specified species are thriving, and project goals are being met. Minimum inspection frequency shall include a spring, summer, and fall inspections. The Contractor shall notify the Engineer/Consultant of the inspection no less than two business days prior to an inspection.

2. Implement the appropriate maintenance tasks within 7 calendar days of the inspection, or as conditions and task requirements allow. If weather and/or site conditions are such that performing the maintenance within the 7 calendar days of inspection would cause unnecessary damage to the site, the Contractor shall notify the Engineer/Consultant and provide a schedule for implementing the maintenance protocols.

3. Maintain weed populations in seeded areas at less than the coverage outlined in the Final Acceptance section. Weed control methods shall be approved by the Engineer/Consultant should they differ from the Initial Growing Season Maintenance Guidelines listed below.

B. Initial Growing Season Maintenance Guidelines

1. Contractor is responsible for mowing native plantings at a frequency to prevent significant flowering and seed set of annual weed species and cover crops. Mowing should be timed to maximize the annual weeds and cover crop cut down in one mowing. Mowing should not be so frequent as to train non-native weeds or cover crops to spread laterally and become shading ground covers. Vegetation should be mowed at a height of approximately 6-12 inches allowing ample sunlight to still reach the ground after the mowing. Care should be taken during the mowing operation to prevent the creation of ruts, sources of erosion,

or other damage to the restored landscape. Expect two to three mowing applications in the initial growing season after seeding.

2. Contractor is responsible for a spot selective invasive weed control treatment on the entire seeded area at least once in the initial growing season. This can include combinations of hand weed control and selective herbicide treatment. Herbicide treatment can be conducted with tools such as hand held or backpack sprayers. Applications to perennial weeds need to occur prior to seed formation of such species. If such species do go to seed, contractor is responsible for cutting the seed heads, bagging them, and removing them from the project site. Herbicide applications that are necessary must be performed by qualified personnel trained in the identification of native species and also licensed appropriately for herbicide applications in the state or region in which they are applying.

3. Contractor shall water plant plugs if more than three days elapse without a rain event significant enough to saturate the soil. This may constitute watering 2 to 3 times per week. A single watering event involves watering the soil in the planted areas to the point of saturation but stopping short of soil displacement

C. Other maintenance activities may be completed at the Contractor's discretion to meet the Final Acceptance performance criteria. Contractor shall notify the Engineer/Consultant of planned additional maintenance activities prior to implementation.

3.15 FINAL ACCEPTANCE

A. Engineer/Consultant shall determine if planted materials are in a healthy condition prior to Final Acceptance of project. More specifically, areas seeded with the native stabilization / nurse crop shall have 70% total native vegetative coverage with no bare soil areas larger than 2 square feet. The planting evaluation will involve trained professionals who will be conducting transects and meander surveys.

B. If the Contractor fails to achieve Final Acceptance at either the end of the first , second or third growing seasons, the Engineer/Consultant and Contractor shall agree to an approach for increasing the density of the seeded species and/or decreasing the density of weeds, which may include but not be limited to (at the Engineer's/Consultant's discretion):

- Herbicide applications to portions of (selective) or the entire (non-selective) seeded area
- Re-seeding portions of or the entire seeded area
- Selective use of live plants
- Installation of NVM.

C. Unless weather conditions were either extremely dry or wet causing the seeding to not meet Final Acceptance criteria as determined by the Engineer/Consultant, remediation activities shall be at Contractor's expense.

END OF SECTION

Section 32 90 15

RESTORATION MANAGEMENT ZONE PLAN

PART 1 RESTORATION MANAGEMENT ZONE GUIDANCE

1.1 INTRODUCTION

A. The information noted in this section is intended to provide general information associated with the tasks required within each management zone.
B. Specific details of restoration activities associated with tasks depicted in this section are further explained in sections 31 05 13 (Earth Work), 31 25 13 (Erosion Control), 32 90 10 (Restoration General Guidance), and Appendix – A.
C. Acreage quantities written within this section are to match Engineer's drawings. Should there be a discrepancy between this document and Engineer's drawings, Engineer's drawings will take precedence.

1.2 PERIMETER SWALE

A. 2.46 ACRES

B. Preparation
- Two broad spectrum herbicide applications were completed over the entire Perimeter Swale area in 2014.
- Upon completion of grading operations any portion of the Perimeter Swale that was not disturbed by grading operations will be reviewed to determine if additional herbicide applications are required to control existing weed problems. If the Restoration Contractor determines that existing weed growth will adversely affect the native vegetation installation, herbicide applications should be completed prior to seeding operations.
- Soils will be prepared per Section 32 90 10 and 31 05 13.
- Disturbed soils will be sampled and tested for nutrient and pH levels, at a minimum of 1 sample per 10,000 square feet. Testing will be responsible for soil testing.

C. Grading
- The majority of the swale will be affected by grading operations.
- All disturbed areas will contain a minimum of 4" of quality well prepared topsoil upon completion of operations.

D. Seeding
- The entire Perimeter Swale area will be seeded with native seed and cover crop seed. Utilize appropriate seed mix for site conditions. Approved seed mixes can be found in Appendix – A. If the Restoration Contractor wishes to utilize as alternate seed mix, not found in Appendix – A, approval must be granted by Engineer/Consultant prior to installation.
- Please see Section 32 90 10 for soil preparation and additional seed installation details.

E. Erosion Control
- In effort to reduce the amount of open soil and the amount of time open soil persists, the Restoration Contractor will work closely with the Grading Contractor so restoration activities can closely follow grading operations.

- Erosion control blanket, Class I, Type B, see section 32 90 10 for details, and shall be installed immediately following seeding operations.
- Special attention will be paid to insuring that seams between erosion control blanket and the Native Vegetated Mat, located within the perimeter swale, to insure that seams are tight and no voids in erosion control protection exist.
- Any soils that will be left open for more than 7 days shall be seeded with annual cover crop see section 32 90 10 for details.

F. Watering
- Other than in drought situations, the Native Seed areas within the perimeter swale should not require watering. If watering is required on seeded areas this will be considered a special circumstance and will be addressed based upon need.

G. Management
- A minimum of two mowing operations are expected in 2015.
- A minimum of two spot herbicide applications will be required in 2015
- Restoration Contractor will be prepared to overseed any areas where native species densities are marginal.
- Please follow management guidelines located in Section 32 90 10 for additional management and acceptance guidelines beyond 2015.
- Management will continue through 2017 when final acceptance is expected.

1.3 EXISTING STORMWATER BASIN

A. 1.81 ACRES

B. Existing Conditions
- The basin is a degraded native stormwater planting.
- There are some scour areas that will be addressed during Bioretention and stone weeper installation processes.

C. Stone Weeper
- Three stone weepers will be installed into the Existing Stormwater basins, noted on Engineer's Drawings.
- Restoration Contractor will be responsible to stabilize and repair any soil disturbance associated with Stone Weeper installation. This stabilization will include installation of native seed, cover crop seed, erosion control blanket, and or weed free straw mulch.

D. Management
- As much of this area was at one point restored to native vegetation and some of the original native vegetation is still present, it may be worth saving if the Restoration Contractor deems appropriate.
- The goal of this portion of the project is to convert this entire basin back to a native planting void of invasive and noxious weed species.
- Utilization of mowing operation, herbicide applications, installation of native seed mixes and cover crops are suggested. Section 32 90 10 and Appendix – A address the specifics of these operations.
- Note that some areas within this basin have variable hydrologic conditions. Please insure that appropriate seed mixes are utilized in varying hydrologic situations.
- Acceptance guidelines for this zone follow Section 32 90 10.
- Management will continue through 2017 when final acceptance is expected.
- Surrounding turf grass margins of this zone will be maintained by Badger Prairie personnel.

1.4 BIORETENTION AREAS

A. .04 ACRES

B. Existing Conditions
- The bioretention components of this project are variable. In some situations bioretention devices are expanding and in other situations the bioretention device is being created. In each circumstance, planting guidelines, erosion control products, watering and management will remain constant. Planting guidelines, species selections, erosion control products, and watering guidelines can be found in Section 32 90 10.

C. Examination
- Before the Restoration Contractor begins the installation of native vegetation effort must be made to insure that construction activities are complete and infiltration rates are as expected.
- Use of a double ring infiltrometer, as described in Section 32 90 10 is recommended prior to vegetation installation.

D. Planting
- Please note that native plant plugs (Appendix – A) are to be planted on the flat bottom of the bioretention device. Turf grass will be seeded on the side slopes of the bioretention device. Side slopes will be covered with erosion control blanket upon completion of turf grass seeding. Please see Appendix – A and Section 32 90 10 for seed mix and seeding rate details.

E. Management
- Watering is expected in these facilities. Please follow the watering guidelines depicted in Section 32 90 10.
- Weed control is expected within these devices. Weed control will only be handled through the use of hand cutting, hand pulling, and selective herbicide use. Mowing will not occur in bioretention devices.
- Acceptance for these devices will follow Section 32 90 10.
- Turf grass on side slopes will be the responsibility of the Restoration Contractor until final acceptance which could occur following the 5th mowing, should stem densities be high enough and weed densities be low enough per acceptance documents.
- Management will continue through 2017 when final acceptance is expected

1.5 PRAIRIE RESTORATION

A. 6.63 ACRES

B. Existing Conditions
- The current state of the prairie Restoration Area contains a sizeable amount of weed growth and some native species.
- The area or portions of the area were hand seeded by volunteers during the summer of 2014.
- Some specific herbicide applications were made in 2014. The applications targeted wild parsnip and Birdsfoot trefoil.

C. Management
- As much of this area was to some extent restored to native vegetation and some of the original native vegetation is still present, it may be worth saving if the Restoration Contractor deems appropriate.

- The goal of this portion of the project is to convert this entire zone back to a native prairie planting void of invasive and noxious weed species.
- Utilization of mowing operation, herbicide applications, installation of native seed mixes and cover crops are suggested. Section 32 90 10 and Appendix – A address the specifics of these operations.
- Acceptance guidelines for this zone follow Section 32 90 10.
- Management will continue through 2017 when final acceptance is expected.

1.6 PERIPHERIAL AREA (INCLUDING PRAIRIE RESTORATION)

A. 4.40 ACRES, WHICH INCLUDES 2.3 ACRES OF PRAIRIE INSTALLATION AREA

B. Existing Conditions
- This area currently contains existing turf or cool season grass, some woody invasive species, construction debris, topsoil stockpiles, temporary parking area, large barn, and gravel parking/driveways.
- The existing temporary parking area and some of the cool season turf areas will be removed and soil will be added to the area to establish desired grades. This area will encompass 2.3 acres of land. Once grading operations are complete this 2.3 acre area will be converted to native prairie by the restoration contractor.
- As this area will be changing substantially during grading operations, the site will eventually be comprised of two management zones. Those zones will be Invasive Species Control and Prairie Establishment. All areas outside of the 2.3 acre prairie establishment zone will be considered invasive species control area.

C. Prairie Establishment
- As the entire 2.3 acre area will be established with introduced topsoil, the Restoration Contractor will be responsible for the control of the weed seed bank present in the introduced topsoil. The Restoration Contractor may choose to utilize annual cover crops to hold soil in place while controlling the weed seed bank, prior to native seed installation.
- Native seed installation will follow the guidelines depicted in Section 32 90 10. Should the Restoration Contractor determine that an alternate native seed mix is best suited for this zone, provide the alternate seed mix to the Engineer/Consultant for review and potential approval.
- If cover crops are utilized at native seeding time, mulch will not be required. If seeding occurs at a date deemed too late for cover crop germination, the Restoration Contractor may be required to apply polymer to the site to prevent soil erosion over the winter months.
- Post native seed installation management will follow standard prairie management techniques, including; mowing, spot herbicide treatment, and potentially re-seeding operations. These operations are described in section 32 90 10.
- Acceptance guidelines for this zone follow section 32 90 10.

D. Invasive Species Control Area
- The primary objective for this area is to prevent the establishment, growth, reproduction of invasive and noxious weed species.
- Processes involved with achieving this goal may include but are not limited to; mowing, spot herbicide treatment, hand cutting, stump treatment, eradication and re-seeding.
- At no point should any invasive or noxious weed be allowed to grow or reproduce within this zone.
- Attention will be paid to the cool season grasses associated with this zone. The reason for this is to insure that the cool season grasses are not encroaching into the perimeter swale area.

- Any voids in vegetation resulting in open soil will be seeded with a seed mix that closely matches the surrounding, existing desirable vegetation.
- Acceptance of this area will be based upon the lack of invasive and or noxious weed species. If there is a presence of invasive and or noxious weeds in the area, it will not be accepted as complete until eradication is complete.
- Management will continue through 2017 when final acceptance is expected.

1.7 COOL SEASON GRASS

A. 0.32 ACRES (perimeter buffer of Small Dog Park Area)

B. Existing Conditions
- At this time the existing vegetation is very similar to that of the Prairie Restoration zone.
- As this general area is scheduled to be graded, as part of the overall Small Dog Park project, seeding may be done on recently graded soil. Should portions of the area not be graded, existing vegetation should be eradicated through the use of a broad spectrum herbicide before seeding of the cool season grass mix.

C. Seeding
- Seeding will be done on well prepared topsoil, capable of allowing sound root development. See Sections 31 05 13 and 32 90 10 for additional detail
- Seed mix, Cool Season Grass Mix, can be found in Appendix – A. If the Restoration Contractor has reason for utilizing a different seed mix, notify the Engineer/Consultant for approval.

D. Erosion Control
- The open soil associated with seeding operations will be covered with weed free straw mulch or erosion control blanket. The decision to utilize straw mulch or erosion control blanket will be based upon slope, water movement tendencies, and points of concentrated flow. Restoration Contractor will be responsible for any repairs associated with inadequate erosion control methods.

E. Management
- Utilization of mowing operations, herbicide applications, installation of Cool Season Grass seed mix and cover crops are suggested. Section 32 90 10 and Appendix – A address the specifics of these operations.
- Acceptance guidelines for this zone follow Section 32 90 10.
- Contractor can piggy back management operations associated with this zone on the management operations associated with prairie restoration (1.5 above).
- Final acceptance of this area will coincide with acceptance of neighboring prairie restoration areas. Please see acceptance guidelines in Section 32 90 10.
- Management will continue through 2017 when final acceptance is expected

1.8 TURF GRASS

A. 0.46 ACRES

B. Existing Conditions
- Existing conditions consist of sound turf grass.
- The reason for grading activity in this location is to create better drainage patterns in this area of the property.

C. Seeding

- Seeding will be done on well prepared topsoil, capable of allowing sound root development. See Sections 31 05 13 and 32 90 10 for additional detail
- Seed Mix will be Madison Parks or equal, see Section 32 90 10 and Appendix – A for details.

D. Erosion Control
- The open soil associated with seeding operations will be covered with weed free straw mulch or erosion control blanket. The decision to utilize straw mulch or erosion control blanket will be based upon slope, water movement tendencies, and points of concentrated flow. Restoration Contractor will be responsible for any repairs associated with inadequate erosion control methods.
- Please see Section 32 90 10

E. Management
- Seeded area will be fertilized as deemed necessary by the Restoration Contractor. This decision will be based upon soil test and plant health observations.
- Restoration contractor will be responsible for watering this location, as needed, through five mowing operations.
- Restoration Contractor is responsible for the control of broadleaf weeds. Final acceptance will not be granted until weed control is achieved throughout the planting zone.
- Final Acceptance may occur after the 5th mowing operation if stem densities are high enough, weed populations are low enough, and the site is deemed well established.
- At point of final acceptance, management activities will be carried out by Badger Prairie personnel.
- Please seed Section 32 90 10 for watering, and acceptance guidelines.

1.9 NATIVE VEGETATED MAT (NVM)

A. 0.35 ACRES

B. Existing Conditions
- The NVM locations are surrounded by Perimeter Swale. The preparation for soils in this area will match those found in the perimeter swale as a whole.
- Soil conditions in NVM areas will be freshly placed and will have either been hauled in or will have been stockpiled and replaced to site.

C. Examination
- Before the Restoration Contractor begins the installation of NVM effort must be made to insure that construction activities are complete and infiltration rates are as expected.
- Use of a double ring infiltrometer, as described in Section 32 90 10 is recommended prior to vegetation installation.

D. Installation
- Please see Section 32 90 10 for installation guidelines.
- Please see Section 32 90 10 and Appendix – A for species information.
- When installing NVM Restoration Contractor will coordinate the installation to avoid unnecessary disturbance to Perimeter Swale restoration and to address the handling requirements specified in NVM specifications.

E. Management
- Please see Section 32 90 10 for management guidelines
- Acceptance of this zone will coincide with Perimeter Swale acceptance. Please section 32 90 10 for acceptance details.

- Management will continue through 2017 when final acceptance is expected

1.10 SMALL DOG PARK

A. 2.02 ACRES

B. Existing Conditions
- Existing conditions consist of mixed prairie, cool season grass and weeds.
- The reason for grading activity in this location is to insure proper grade elevations for the dog park as current elevations are lower than desired.
- Soils that will be seeded as part of this operation will be hauled into the site.

C. Seeding
- Seeding will be done on well prepared topsoil, capable of allowing sound root development. See Sections 31 05 13 and 32 90 10 for additional detail
- Seed Mix will be Madison Parks Grass Seed Mix, or equal, see Section 32 90 10 and Appendix – A for details.

D. Erosion Control
- The open soil associated with seeding operations will be covered with weed free straw mulch or erosion control blanket. The decision to utilize straw mulch or erosion control blanket will be based upon slope, water movement tendencies, and points of concentrated flow. Restoration Contractor will be responsible for any repairs associated with inadequate erosion control methods.
- Please see Section 32 90 10 for details.

E. Management
- Seeded area will be fertilized as deemed necessary by the Restoration Contractor. This decision will be based upon soil test and plant health observations.
- Restoration contractor will be responsible for watering this location, as needed, through five mowing operations.
- Restoration Contractor is responsible for the control of broadleaf weeds. Final acceptance will not be granted until weed control is achieved throughout the planting zone.
- Final Acceptance may occur after the 5th mowing operation if stem densities are high enough, weed populations are low enough, and the site is deemed well established.
- At point of final acceptance, management activities will be carried out by Badger Prairie personnel.
- Please seed Section 32 90 10 for watering, and acceptance guidelines.

APPENDIX – A

Seed Mixes

Native Seed Mix for Mesic Conditions

- Short Grass Prairie for Mesic Soil
- Agrecol Corporation
- Adjusted to 120 Seeds per square foot 60/40 grass to forb ratio
- Or Equal

Native Seed Mix for Upland Conditions

- Short Grass Prairie for Dry or Upland Soil
- Agrecol Corporation
- Adjusted to 120 Seeds per square foot 60/40 grass to forb ratio
- Or Equal

Native Seed Mix for Infiltration / Basin Bottom Conditions

- Infiltration Swale (Basin) Seed Mix
- Agrecol Corporation
- Adjusted to 120 Seeds per square foot 60/40 grass to forb ratio
- Or Equal

Native Seed Mix for Biroretention Conditions

- Rainwater Renewal
- Agrecol Corporation
- Adjusted to 120 Seeds per square foot 60/40 grass to forb ratio
- Or Equal

Turf Grass

- Madison Parks
- Various vendors
- Adjusted to 6# per 1000 sq. ft.
- Or Equal

Annual Cover Crops

- Annual Oats if seeding is done on or prior to September 15 (75 Lbs. / Acre)
- Winter Wheat if seeding is done after September 15 (65 Lbs. / Acre)

Cool Season / Fire Break Mix

Cool Season Grass Mix - Badger Prairie

Common Name	Genus Species	%of Mix
Timothy	Phlem praetense	8.33%
Redtop	Agrostis alba	8.33%
Perennial Rye	Lolium perenne	25.00%
Annual Alfalfa	Medicago stavia	8.33%
White Clover	Trifolium repens	16.67%
Red Clover	Trifolium prantense	16.67%
Alsike Clover	Trifolium prantense	16.67%
	12 PLS Lbs. per Acre	

Native Plant Plugs

- Rainwater Renewal Species Selections– Agrecol Corporation or equal
- 60% Grasses, 40% Forbs
- Species selections will contain a minimum of 3 Grasses and 4 Forbs
- Native plant plugs installed at 1 plant per 1 sq. ft.

Native Vegetated Mat

- Native Vegetated Mat Type B; Rainwater Renewal
- Agrecol Corporation
- Or Equal

Erosion Control Blankets

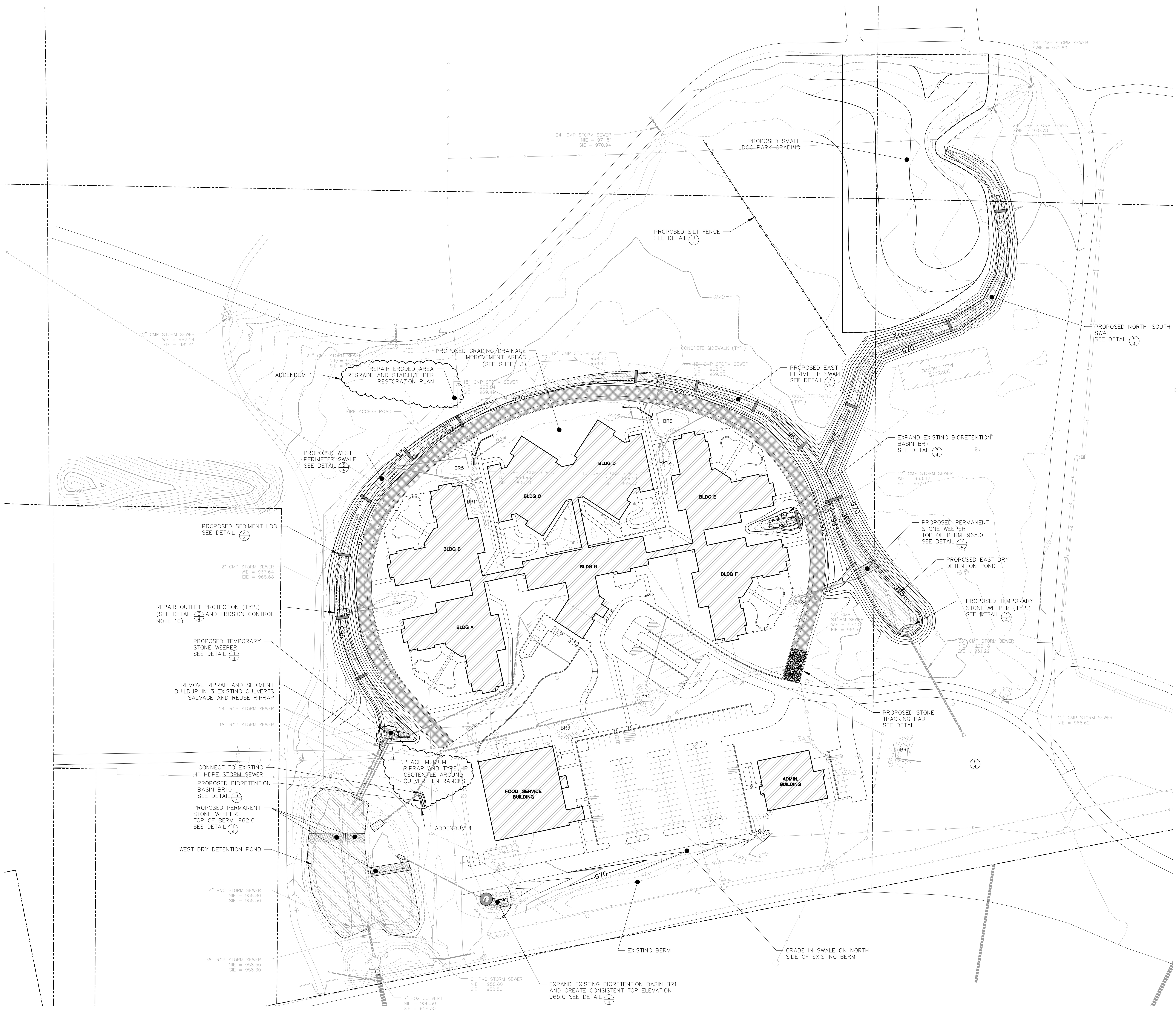
- Class 1 Type B – See WISDOT Product Acceptability List for options
- Class II Type C – See WISDOT Product Acceptability List for options
- 6” wire staples

Polymer

- Natural Earth Poly Stable Plus – Earth and Road Corporation
- Or Equal
- Polymer shall meet the requirements of Section 628 in the SSHSC, applicable WDNR Technical Standards, and the WISDOT Product Acceptability List (PAL), latest edition.

Fertilizer / Soil Amendments

- Fertilizer will be compliant with local ordinance
- Fertilizer usage will be determined by soil test results
- Soil Amendments will be selected based upon soil test results and general soil conditions, soil amendments may include but are not limited to Certified Compost, pH correcting products such as lime.



LEGEND

- 975 EXISTING GRADE (5' CONTOUR)
- EXISTING GRADE (1' CONTOUR)
- 965 PROPOSED GRADE (5' CONTOUR)
- PROPOSED GRADE (1' CONTOUR)
- PROPERTY LINE
- EXISTING PAVED ROAD
- EXISTING UNPAVED ROAD
- EXISTING FIRE ACCESS ROAD
- EXISTING CULVERT/STORM SEWER
- EXISTING FIELD INLET
- EXISTING PERFORATED BIORETENTION BASIN UNDERDRAIN PIPING
- EXISTING NON-PERFORATED BIORETENTION BASIN UNDERDRAIN PIPING
- EXISTING SANITARY SEWER
- EXISTING GAS
- EXISTING ELECTRIC
- EXISTING TELEPHONE
- EXISTING WATER
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING LIGHT POLE
- EXISTING HYDRANT
- EXISTING ELECTRICAL JUNCTION BOX (APPROXIMATE)
- EXISTING LANDFILL TEST WELL (APPROXIMATE)
- EXISTING TRANSFORMER (APPROXIMATE)
- EXISTING FENCE
- PROPOSED OUTLET PROTECTION (PERMANENT)
- PROPOSED SEDIMENT LOG (TEMPORARY)
- PROPOSED STONE WEEPER/SEDIMENT TRAP (PERMANENT AND TEMPORARY, AS NOTED)
- PROPOSED EROSION MAT (PERMANENT)
- PROPOSED INLET PROTECTION (TEMPORARY) (SEE EROSION CONTROL NOTE 13)
- PROPOSED SILT FENCE (TEMPORARY)

EROSION CONTROL NOTES:

1. EROSION CONTROLS SHALL BE INSTALLED PRIOR TO GRADING ACTIVITIES AND SHALL BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION UNTIL VEGETATION IS ESTABLISHED. EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR DURING CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER.
2. ALL EROSION CONTROL MEASURES AND STORM WATER STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY AND WITHIN 24 HOURS OF A 0.5 INCH OR GREATER RAINFALL. NECESSARY MAINTENANCE AND REPAIRS SHALL BE PERFORMED WITHIN 24 HOURS OF THE INSPECTION.
3. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIRED PRECAUTIONS.
4. SEDIMENT REACHING THE PUBLIC ROAD SHALL BE REMOVED BY STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY.
5. SITE STABILIZATION AND RESTORATION SHALL BE IN ACCORDANCE WITH "BADGER PRAIRIE STORM WATER FACILITY INSTALLATION SPECIFICATION AND THREE YEAR MANAGEMENT PLAN".
6. A ROW OF SILT FENCE SHALL BE PLACED DOWNSLOPE AND AT LEAST 10 FEET AWAY FROM ANY STOCKPILE. SOIL STOCKPILES THAT ARE INACTIVE FOR MORE THAN 7 CONSECUTIVE DAYS SHALL BE STABILIZED WITH SEED AND MULCH, EROSION MAT, POLYMER, OR COVERED WITH TARPS OR SIMILAR MATERIAL TO PREVENT OR REDUCE THE DISCHARGE OF SEDIMENT ERODING FROM THE STOCKPILE.
7. TEMPORARY STABILIZATION MEASURES SHALL COMMENCE WHEN LAND DISTURBING CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. TEMPORARY STABILIZATION MAY INCLUDE TEMPORARY SEEDING, MULCHING, OR WISDOT TYPE B SOIL STABILIZERS. TEMPORARY SEED SHALL BE IN ACCORDANCE WITH "BADGER PRAIRIE STORM WATER FACILITY INSTALLATION SPECIFICATION AND THREE YEAR MANAGEMENT PLAN".
8. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM 4 INCHES OF SALVAGED TOPSOIL/TOPSOIL, SEED, FERTILIZER, AND MULCH. RESTORATION SHALL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. PERVIOUS AREAS SHALL BE SEEDED IN ACCORDANCE WITH "BADGER PRAIRIE STORM WATER FACILITY INSTALLATION SPECIFICATION AND THREE YEAR MANAGEMENT PLAN".
9. INSTALL EROSION MAT (CLASS I, TYPE B) ON ALL SLOPES 3H:1V OR GREATER. SEE DETAIL 7/4 WHERE VEGETATIVE MAT IS INSTALLED FOR FINAL RESTORATION AN ADDITIONAL, SEPARATE LAYER OF EROSION MAT IS NOT REQUIRED.
10. REMOVE AND SALVAGE EXISTING RIPRAP AT PROPOSED OUTLET PROTECTION LOCATIONS SHOWN. PLACE GEOTEXTILE AND SALVAGED/NEW RIPRAP IN ACCORDANCE WITH DETAIL 2/4
11. REMOVE TEMPORARY EROSION CONTROLS UPON COMPLETION OF SITE STABILIZATION AS DIRECTED BY ENGINEER OR OWNER.
12. CONSTRUCT/REPAIR BIORETENTION BASINS AS NOTED ONCE CONTRIBUTING DRAINAGE AREA IS STABILIZED.
13. INLET PROTECTION TO CONFORM WITH WISCONSIN DEPARTMENT OF TRANSPORTATION TYPE A PROTECTION.

NOTES:

1. EXISTING TOPOGRAPHY BASED ON SITE SURVEYS PERFORMED BY DANE COUNTY ON JUNE 12, 2013 (PERIMETER SWALE, GEOTHERMAL BERM, AND SOUTH OF FOOD SERVICE/ADMIN. BUILDING PARKING LOT), AND BY SCS ENGINEERS ON OCTOBER 26, 2011 (BR4, BR7, AND WEST DRY DETENTION BASIN) AND NOVEMBER 13, 14, AND 20, 2013 (REMAINING AREAS).
2. BUILDING, PARKING LOT, SIDEWALK AND ROAD LAYOUT FROM BT^2, INC. EROSION CONTROL PLAN DRAWING C4, DATED OCTOBER 16, 2012.
3. UTILITIES OBTAINED FROM BT^2, INC. UTILITIES PLAN DRAWING, DATED JULY 20, 2012, WITH MODIFICATIONS PROVIDED BY DANE COUNTY.
4. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. CONTRACTOR IS REQUIRED TO VERIFY SITE CONDITIONS AND SUBSURFACE UTILITIES PRIOR TO STARTING WORK. PRIVATE UTILITY LOCATORS OTHER THAN DIGGERS HOTLINE MAY BE REQUIRED PER CONTRACT DOCUMENTS.

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60 0 60

SCALE: 1" = 60'

DIGGERS HOTLINE

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

TOLL FREE: (800) 242-8511
TDD: (800) 542-2289
ONLINE: WWW.DIGGERSHOTLINE.COM

SHEET 2A

GRADING AND EROSION CONTROL PLAN

BADGER PRAIRIE HEALTH CARE CENTER
DANE COUNTY
VERONA, WISCONSIN

SITE

DANE COUNTY PUBLIC WORKS
1919 ALLIANT ENERGY WAY
MADISON WI, 53713

CLIENT

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

ENGINEER

PROJECT NO.	25213211.00	DRAWN BY:	JB/KP/BJM
DRAWN:	01/22/14	CHECKED BY:	BP
REVISED:	03/20/15	APPROVED BY:	

NOTES

1. Area=2.31 Acres
2. Area will be excavated to 12” depth and replaced with suitable fill material and 6” of top soil.
3. Area to be sloped to drain towards swale.

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DANE COUNTY PUBLIC WORKS, HIGHWAY & TRANSPORTATION	PROJECT NO.: 315022		DATE: 03/20/15	**DANE COUNTY BPHCC PERIPHERAL MGMT AREA**	**FIGURE 1 AERIAL VIEW OF PARKING LOT**
	DR'N BY: MM	C'KD BY: EU	SCALE: NTS		

G:\SWC Files\PWHT detail-portrait

DANE COUNTY PUBLIC WORKS, HIGHWAY & TRANSPORTATION

PROJECT NO.:	DRN BY:
315022	MM
CKD BY:	SCALE:
EU	NTS
DATE:	
03/20/15	

DANE COUNTY
BPHCC
PERIPHERAL MGMT AREA

FIGURE 2
Typical Fire Access Section

Remove existing gravel along fire lane to provide a 4 foot buffer from the edge of the gravel to the top of the adjacent perimeter swale. Grade buffer to drain to swale. Restore 4 foot section with 4-inches of topsoil and vegetate in accordance with restoration plan.