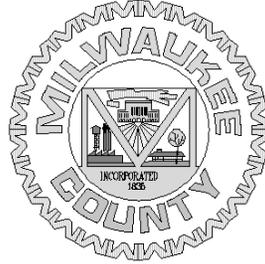


MILWAUKEE COUNTY



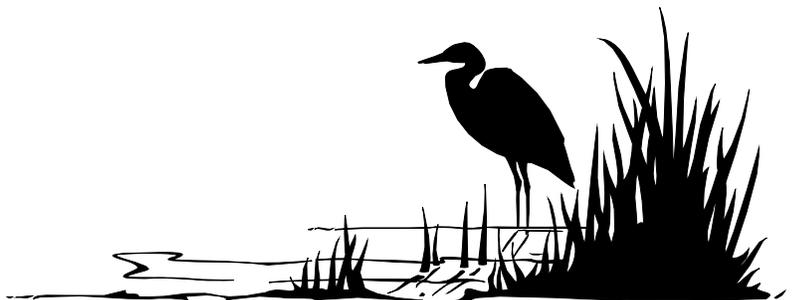
Department of Administrative Services A&E and Environmental Services

**Milwaukee County
633 West Wisconsin Avenue
Milwaukee, Wisconsin 53203**

**REQUEST FOR QUALIFICATIONS
FOR**

**Native Landscaping
and Native Landscape Maintenance**

August 2015



DEPARTMENT OF ADMINISTRATIVE SERVICES

Milwaukee County



8/4/15

To: Interested Contractors
From: Sean Hayes, Milwaukee County - DAS
Project: Native Landscaping and Native Landscape Maintenance
Subject: Request for Qualifications

Milwaukee County is issuing this request for qualifications (RFQ) to pre-qualify landscape contractors for Milwaukee County work involving native restoration, native seeding, native planting and native plant establishment and maintenance over multiple growing seasons. Milwaukee County will require the use of contractors meeting the qualifications outlined in this RFQ for upcoming native landscaping work.

Contractors meeting the requirements of this RFQ will remain on the pre-qualified contractor list for a period of 24-months or longer at the discretion of Milwaukee County staff. Milwaukee County reserves the right to remove a contractor from the pre-qualified list at any time.

Contractors seeking pre-qualification may submit qualifications at any time. Contractors seeking pre-qualification for a specific project must submit qualifications a minimum of four days prior to project bid opening.

Contractors seeking to be included on the initial pre-qualification list should submit qualifications by 2pm, August 26th, 2015.

Milwaukee County will review all submitted qualifications and notify the contractor of prequalification status.

Direct questions related to this RFQ to the following:

Sean J. Hayes, PE
Environmental Engineer
Milwaukee County DAS-FM
633 W. Wisconsin Ave. Suite 1003
Milwaukee, WI 53203
sean.hayes@milwaukeecounty.gov
414-278-4891

Request for Qualifications

Native Landscaping and Native Landscape Maintenance – Milwaukee County.

Sample Projects Descriptions

Milwaukee County has completed numerous native landscape projects in recent years. These projects range in scale from 500 square foot rain gardens to multi-acre wetland restorations. These projects take place along highways, within parks, in urban, suburban and rural settings. Below are some examples of past project. See Appendix A for sample plans and specifications for selected projects.

1. Menomonee River Parkway Wetland
 - a. >two acres of native wetland seeding.
 - b. Approximately 1,000 wetland plugs.
 - c. Invasive species removal.
 - d. 2-years establishment and maintenance.
2. Menomonee River Parkway Reconstruction
 - a. Installation of storm water rain gardens and bio retention areas (roughly two acres total).
 - b. Native seeding and planting.
3. Bradford Beach Stormwater Controls
 - a. Installation of stormwater rain gardens and bio retention-areas (roughly two acres total).
 - b. Creation of native dune environments
 - c. Native seeding and planting.
 - d. Extended plant maintenance.
4. Milwaukee County Sports Complex
 - a. One-acre natives seeding.
 - b. Two years of establishment and maintenance.
5. Milwaukee County Pond and Lagoon Restorations (multiple projects; typical project 1000 linear feet bank restoration & 2000 square feet rain garden installation)
 - a. Shoreline bank stabilization.
 - b. Wetland and upland seeding and planting.
 - c. Installation of storm water rain gardens and bio-retention areas.
 - d. Extended plant maintenance.
6. Milwaukee County Stream Bank Stabilizations (multiple projects; typical project 2000 linear feet restoration)
 - a. Stabilization of stream banks.
 - b. Native seeding and planting.
 - c. Extended plant maintenance.

Scope of Native Landscape and Maintenance Work

The native landscape work described below represents typical work anticipated for future work.

- Seed bed preparation
- Native seeding
- Native plug planting
- Native tree and shrub planting
- Stormwater best management practice construction
- Native habitat creation and restoration
- Preparatory and ongoing weed and invasive management
- Maintenance and management through multiple growing seasons

Request for Qualification Schedule for Initial Listing

- Receipt of RFQ packages 2pm, August 26th, 2015
- Notification of qualified contractors before September 24, 2015

Contract Documents

Contract requirements for native landscaping and maintenance work on future Milwaukee County projects:

- The entity performing the native landscaping work must be pre-approved. Preapproved contractors will be listed in the contract documents.
- A contractor may receive pre-approval by meeting the qualifications of this RFQ and submitting the requested information a minimum of four days prior to the bid opening.
- The entity performing the native landscaping work must be identified within the bid package at the time of bid opening or the bid will be rejected as nonresponsive.
- The pre-approved firm must provide the personnel as stated in its submitted RFQ package. In the event the personnel cannot be assigned as stated for reasons outside the control of the landscape firm, replacement personnel of equal qualifications must be submitted for approval by the Department.
- The contract will include performance, warranty and maintenance criteria. Work that fails to meet these criteria will be required to be replaced or reworked until it does meet the criteria at no additional cost to the Department.

Request for Pre-Approval

Contractors seeking pre-approval to perform the native landscaping and maintenance work for Milwaukee County must submit the following pre-approval information to Milwaukee County.

Contractors seeking to be included on the initial pre-qualification list should submit qualifications by 2pm, August 26th, 2015.

Send submittals to:

Sean Hayes, PE
Milwaukee County DAS-FM
633 W. Wisconsin Ave. Suite 1003
Milwaukee, WI 53203

Submittal Requirements

1) Experience and qualifications of key staff

- a) Submit information on key staff with experience described below. Please indicate if key proposed personnel may serve in more than one role on projects. If your firm is selected, the key staff listed here is considered a requirement of their pre-approval and must perform the work to maintain pre-approved status.
 - i) Experience and qualifications of project manager
 - (1) Provide the name of the individual who will be the contractor's principal in charge of all operations and will be the contractor's main contact for the project.
 - (2) Must have at least five years of experience overseeing projects of similar scope and scale.
 - (3) Must have experience with stormwater best management practices, native planting, native landscape restoration, native landscape maintenance, and invasive species control.
 - (4) Provide a minimum of three projects that outline the following:
 - (a) Type of native plant community.
 - (b) Acreage
 - (c) Herbicide methods used
 - (d) # of crews supervised
 - (e) Role in ongoing management and maintenance.
 - (f) Native landscape management over a period of a minimum of two years on a single site.
 - (5) List, as a minimum, three owner client references familiar with the individual and provide address, phone, and email contact information for each reference.
 - ii) Experience and qualifications of onsite supervisor. (The project manager can also be the onsite supervisor.)
 - (1) Provide name of the individual who will be the contractor's principal on site person in charge of daily on site operations and will be the contractor's main day to day contact for the project.
 - (2) Must have at least five years of experience overseeing projects of similar scope and scale.
 - (3) Must have experience with stormwater best management practices, native planting, native landscape restoration, native landscape maintenance, and invasive species control.
 - (4) Provide a minimum of three projects that outline the following:
 - (a) Type of native plant community.
 - (b) Acreage
 - (c) Herbicide methods used
 - (d) # of crews supervised
 - (e) Role in ongoing management and maintenance.
 - (f) Native landscape management over a period of a minimum of two years on a single site.
 - (5) List, as a minimum, three owner client references familiar with the individual and provide address, phone, and email contact information for each reference.

iii) Crew members

- (1) At least 50% of the crew must have at least two years of experience in native landscape restoration work.

iv) Corporate experience, Qualifications and References

- (1) Provide a list of three owner project references most comparable with typical Milwaukee County Native Landscape projects that have been completed within the last five years. List must include projects which were both installed and managed for a minimum of two growing seasons. Provide client name, dates work was performed, contract value, brief description of contract scope, site address, owner address, phone and e-mail contact information for all references.

Appendix A

Sample Project Plans and Specifications

WETLAND CREATION MENOMONEE RIVER PARKWAY LAGOON TO WETLAND

East Side of the Menomonee River, 600 Feet North of Burleigh Street, Wauwatosa, WI, 53222

SET INDEX

Project Cover Sheet CS.1

CIVIL

Civil Existing Site Plan C100
 Civil Site Plan C101
 Civil Demolition & Erosion Contr. C102
 Civil Details A C500
 Civil Details B C501
 Schedules-Legends-Symbols C600

LANDSCAPE

Landscape Site Plan L100
 Landscape Details L500

Milwaukee County Dept. of Parks, Recreation and Culture
PLANNING & DEVELOPMENT DIVISION
PARKS ADMIN. 9480 WATERTOWN PLANK RD. WAUWATOSA, WI 53226



MILWAUKEE COUNTY PARKS

CALL DIGGER'S HOTLINE (414-259-1181) AND PARKS MAINTENANCE DIVISION (414-258-2322) FOR UTILITIES LOCATION PRIOR TO START OF CONSTRUCTION

Project #: **P275-12615** Site #:
 Building #:
 Date: **3/04/2014**



DIRECTOR, (DEPARTMENT): _____

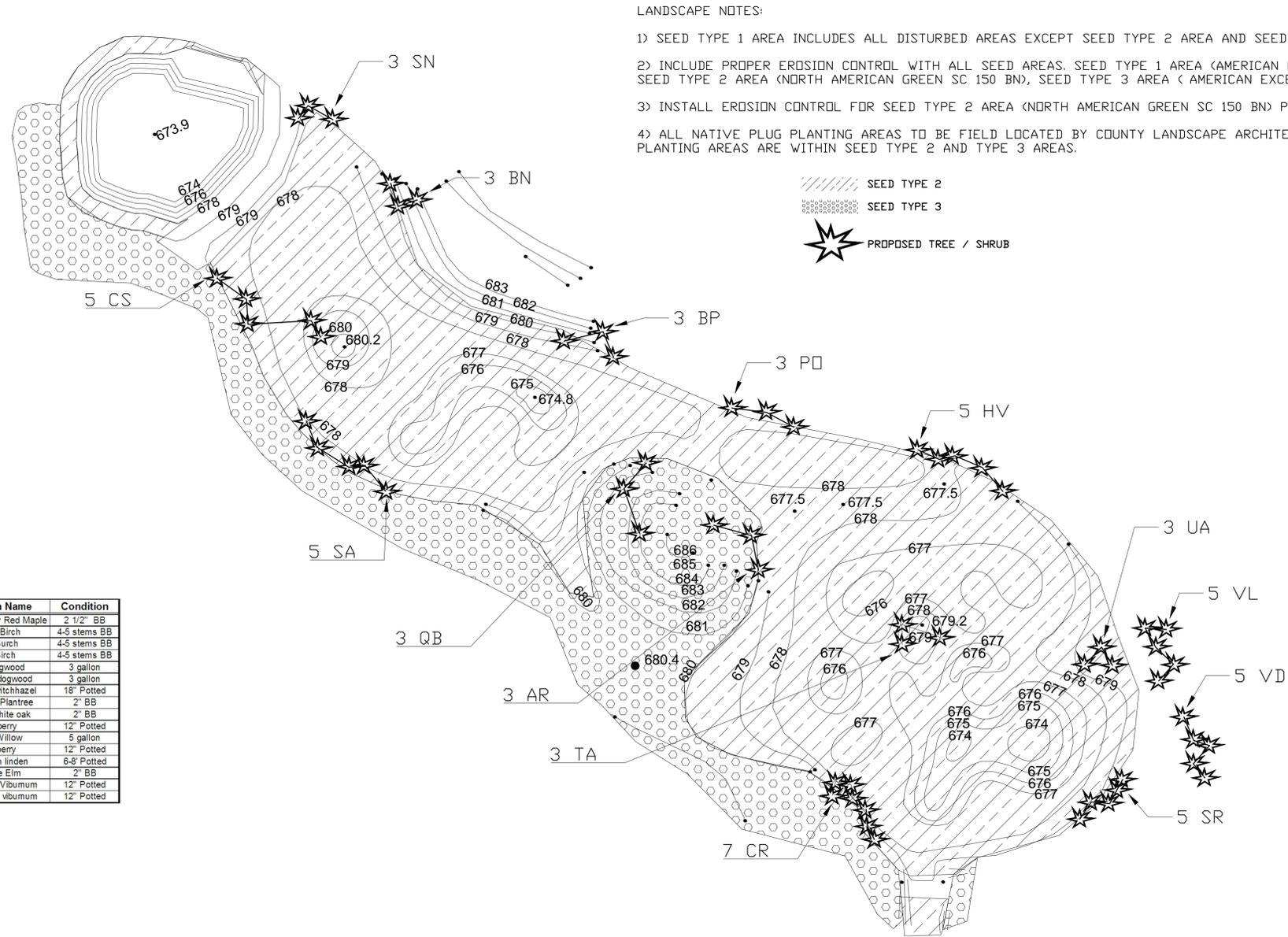
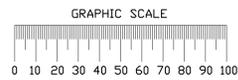
DIRECTOR, DPRC: _____

PROJECT MGR./ SECTION HEAD: _____

3/4/2014:O:\EXPDOC\PROJECTS\P27512615-Menomonee River Parkway Wetland\Plans\P275_Menomonee River Parkway Lagoon_AE&ES_T1b_v2013.8.dwg

O:\EXPOC\PROJECTS\P27512615-Menomonee River Parkway Wetland\Plans\P275_AE&ES_T1b_v2013.8.dwg

Numbers	Abrev.	Latin Name	Common Name	Condition
3	AR	<i>Acer rubrum</i> "October Glory"	October Glory Red Maple	2 1/2" BB
3	BA	<i>Betula alleghaniensis</i>	Yellow Birch	4-5 stems BB
3	BN	<i>Betula nigra</i>	River Birch	4-5 stems BB
3	BP	<i>Betula pumila</i> var. <i>grandulifera</i>	Bog Birch	4-5 stems BB
7	CR	<i>Cornus racemosa</i>	Grey dogwood	3 gallon
5	CS	<i>Cornus stolonifera</i>	Red twig dogwood	3 gallon
5	HV	<i>Hammamelis virginiana</i>	Common witchhazel	18" Potted
6	PO	<i>Plantanus occidentalis</i>	American Planttree	2" BB
3	QB	<i>Quercus bicolor</i>	Swamp white oak	2" BB
5	SA	<i>Symnocarppus albus</i>	Snowberry	12" Potted
3	SN	<i>Salix nigra</i>	Black Willow	5 gallon
5	SR	<i>Sambucus racemosa</i>	Elderberry	12" Potted
3	TA	<i>Tilia americana</i>	American linden	6-8" Potted
3	UA	<i>Ulmus american</i> 'chinensis'	Chinese Elm	2" BB
5	VD	<i>Vibumum dentatum</i>	Arrowwood Vibumum	12" Potted
5	VL	<i>Vibumum lentago</i>	Nannyberry vibumum	12" Potted



LANDSCAPE NOTES:

- 1) SEED TYPE 1 AREA INCLUDES ALL DISTURBED AREAS EXCEPT SEED TYPE 2 AREA AND SEED TYPE 3 AREA.
- 2) INCLUDE PROPER EROSION CONTROL WITH ALL SEED AREAS. SEED TYPE 1 AREA (AMERICAN EXCELSIOR NET FREE MATTING), SEED TYPE 2 AREA (NORTH AMERICAN GREEN SC 150 BN), SEED TYPE 3 AREA (AMERICAN EXCELSIOR NET FREE MATTING).
- 3) INSTALL EROSION CONTROL FOR SEED TYPE 2 AREA (NORTH AMERICAN GREEN SC 150 BN) PER DETAILS L500-1 AND L500-2
- 4) ALL NATIVE PLUG PLANTING AREAS TO BE FIELD LOCATED BY COUNTY LANDSCAPE ARCHITECT AFTER SEEDING. ASSUME ALL PLANTING AREAS ARE WITHIN SEED TYPE 2 AND TYPE 3 AREAS.

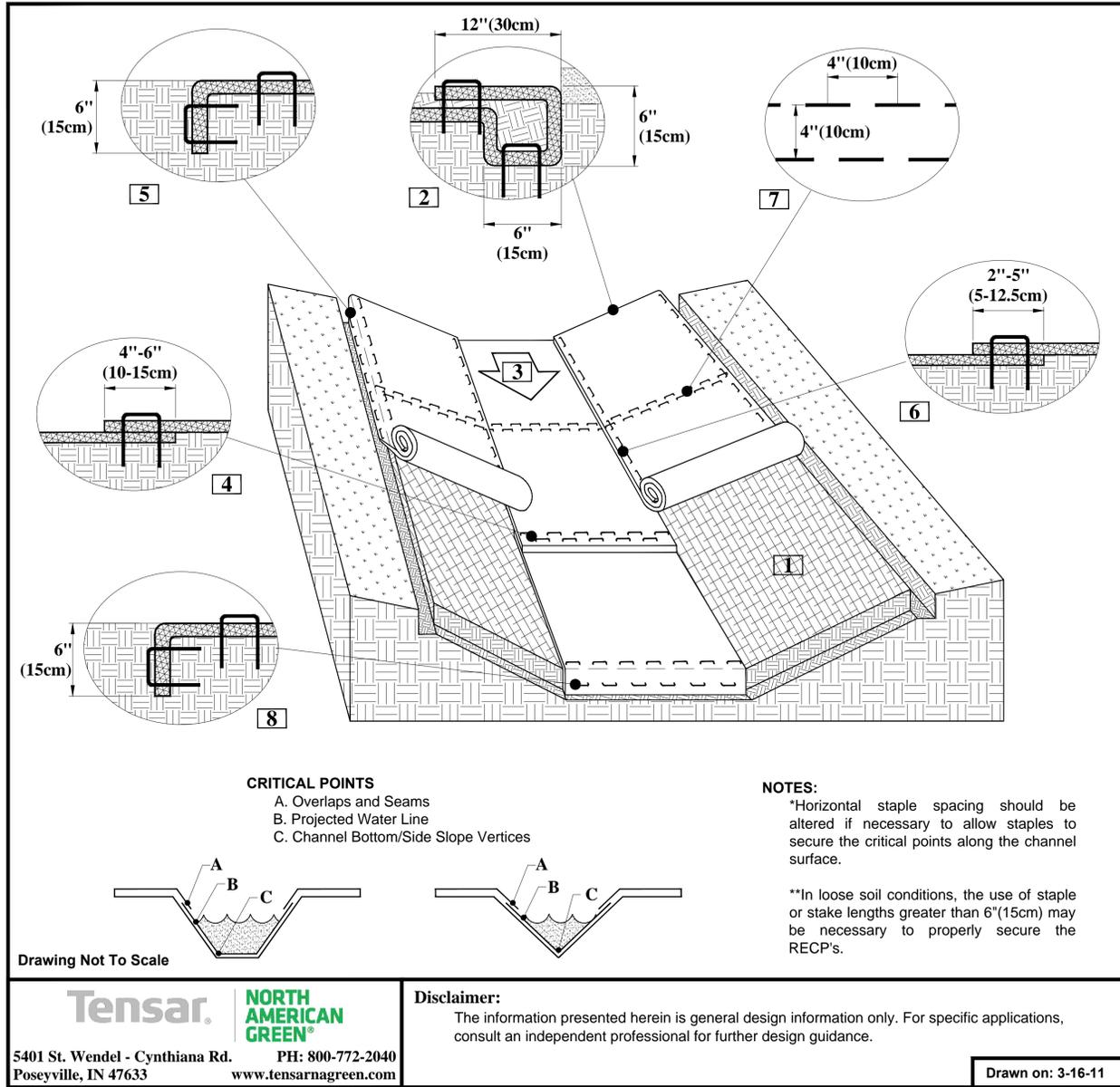
SEED TYPE 2
 SEED TYPE 3
 PROPOSED TREE / SHRUB



REVISIONS:

DATE:
3/04/2014
 PROJECT:
P275-12615
 SITE NO.:
-
 BUILDING NO.:
-

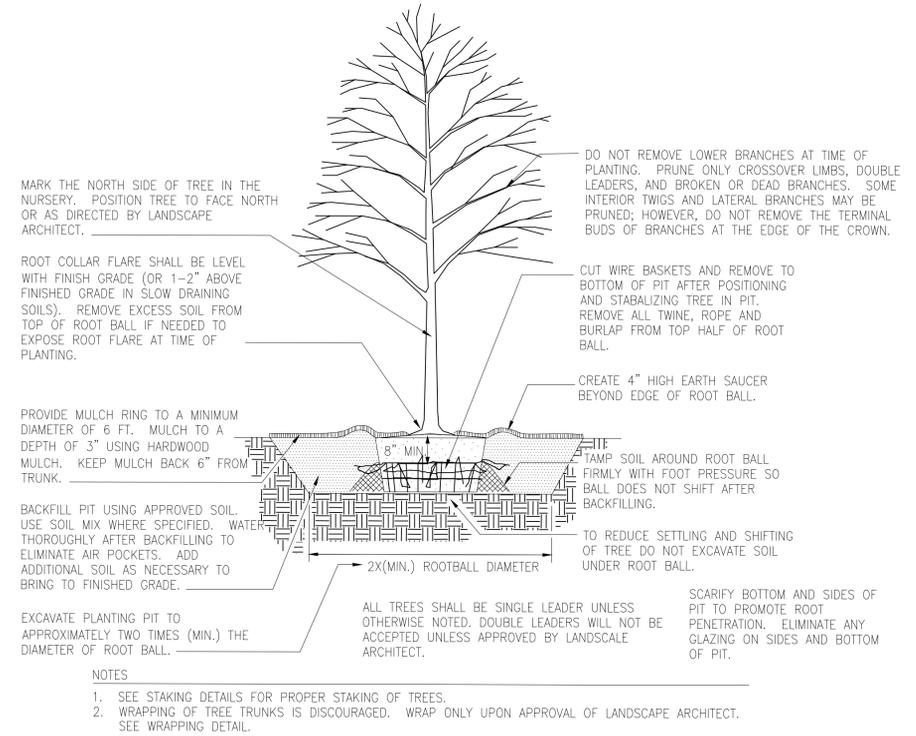
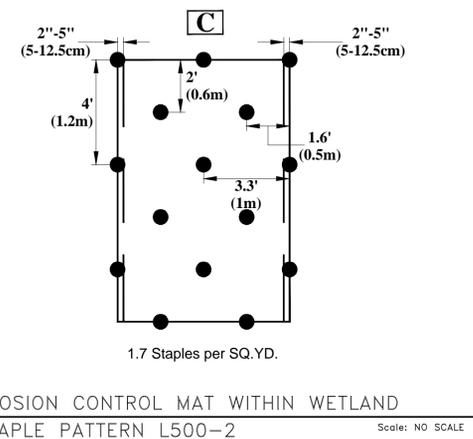
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EROSION CONTROL MAT INSTALLATION WITHIN WETLAND L500-1
Scale: NO SCALE

WETLAND INSTALLATION DETAIL ENTIRE SEED TYPE 2 AREA

- Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
- Begin at the top of the channel by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12"(30cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes approximately 12"(30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12" apart across the width of the RECPs.
- Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
- Place consecutive RECPs end-over-end (Shingle style) with a 4"-6" overlap. Use a double row of staples staggered 4" apart and 4" on center to secure RECPs.
- Full length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12"(30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.
- Adjacent RECPs must be overlapped approximately 2"-5" (5-12.5cm) (Depending on RECPs type) and stapled.
- In high flow channel applications a staple check slot is recommended at 30 to 40 foot (9 -12m) intervals. Use a double row of staples staggered 4"(10cm) apart and 4"(10cm) on center over entire width of the channel.
- The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12" (30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.



LEGEND:

□ ⊗	EXISTING CATCH BASIN OR INLET	—	EXISTING PAVEMENT	XXXXXXXXXX	BUTT JOINT
○	EXISTING LIGHT POLE	—	EXISTING CURBFACE	~~~~~	EXISTING TREE/BUSH LINE
⊗	EXISTING GAS METER	●	IRON PIPE (PROPERTY CORNER)	~~~~~	PROPOSED TREE/BUSH LINE
⊞	EXISTING TELEPHONE BOX	□	PROPOSED CATCH BASIN	—	EXISTING PROFILE
△	EXISTING TRANSFORMER	⊕	SURVEY CONTROL POINT	—	PROPOSED PROFILE
○	EXISTING MANHOLE	●	PROPOSED LIGHT POLE	✱	EXISTING CONIFEROUS TREE
—x—	EXISTING FENCE	—SAN—	PROPOSED SANITARY SEWER	○	EXISTING DECIDUOUS TREE
—w—	EXISTING UNDERGROUND WATER LINE	—	PROPOSED PAVEMENT	✱	PROPOSED DECIDUOUS TREE
—e—	EXISTING UNDERGROUND ELECTRIC LINE	—	PROPOSED CURBFACE	X	TREE TO BE REMOVED
—l—	EXISTING UNDERGROUND LIGHTING	—700—	PROPOSED CONTOURS	∇	SOD AREA
—SS—	EXISTING STORM SEWER	—L—	PROPOSED UNDERGROUND LIGHTING		
—700—	EXISTING CONTOURS	—SS—	PROPOSED STORM SEWER		

ABBREVIATIONS:

ASP	ASPHALT	HOR	HORIZONTAL	RCP	REINFORCED CONCRETE PIPE
CABC	CRUSHED AGGREGATE BASE COURSE	HP	HIGH POINT	RD	ROAD
CB	CATCH BASIN	I.E.	INVERT ELEVATION	SAN	SANITARY SEWER
C.I.	CAST IRON	LT	LEFT	SS	STORM SEWER
CL	CENTERLINE	L	LIGHTING CABLE/CONDUIT	ST	STREET
CMP	CORRUGATED METAL PIPE	MAX	MAXIMUM	STA	STATION
CONC	CONCRETE	MIN	MINIMUM	T	TELEPHONE
COND	CONDUIT	MH	MANHOLE	TYP	TYPICAL
DIA.	DIAMETER	N	NORTHING	UD	UNDER DRAIN
E	ELECTRICAL	PAVT	PAVEMENT	VERT	VERTICAL
ELEV	ELEVATION	PKG	PARKING	W	WATER
EXST	EXISTING	PKWY	PARKWAY	WEPCO	WI ELECTRICAL POWER CO
E	EASTING	PROP	PROPOSED	X	EXTRA
F TO F	FACE TO FACE	PVC	POLYVINYL CHLORIDE		
FOC	FACE OF CURB	R	RADIUS		
G	GAS	RT	RIGHT		
G.W.I.	GALVANIZED WROUGHT IRON				

DRAWING INDEX:

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MENOMONEE RIVER PARKWAY CONGRESS TO BURLEIGH

PARKWAY RECONSTRUCTION AND GREEN INFRASTRUCTURE

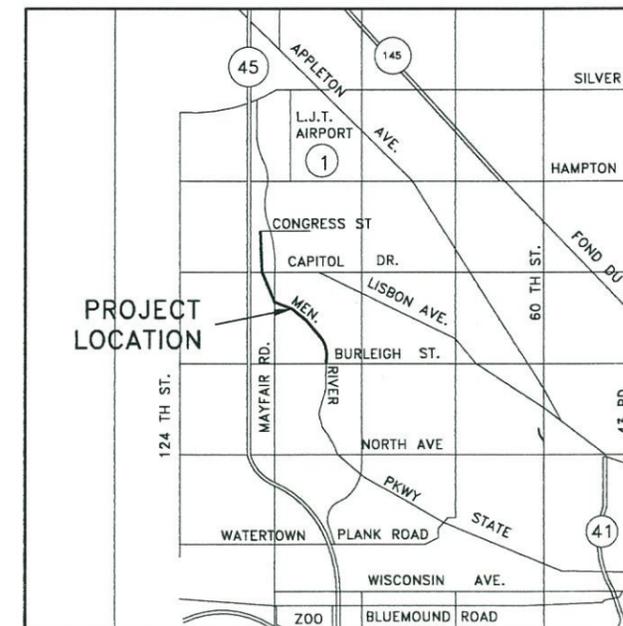


MILWAUKEE COUNTY DEPARTMENT OF
Administrative Services
Architecture, Engineering &
Environmental Services Section



P280-13626

07/03/2014



PROJECT APPROVAL BY	DIRECTOR-DAS
DATE	
RECOMMENDED FOR APPROVAL BY	
DATE	
UNIT MANAGER REVIEW BY	
DATE	
PROJECT MANAGER	

BUILDING NO.	
SITE NO.	
PROJECT NO.	P280-1362
SHEET NO.	1
1 OF 110	
FILE NO.	

KEN SAIKI DESIGN
LANDSCAPE ARCHITECTS

gaj consultants

PLAN UPDATED 8/8/14

GENERAL NOTES

APPLICATION SPECIFICATIONS - STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, 2008 EDITION, WITH AMENDMENTS TO DATE, AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.

ALL INFORMATION SHOWN ON EXISTING CONDITIONS IS BASED ON RECORDS AVAILABLE TO MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS AS OF AUGUST 2013, ALTHOUGH THE COUNTY IN NO WAY GUARANTEES THE INFORMATION AS BEING ENTIRELY ACCURATE IN THE EVENT PERSONS PERFORMING WORK FOR MILWAUKEE COUNTY SHOULD ENCOUNTER ERRORS OR OMISSIONS IN THESE DRAWINGS DURING CONSTRUCTION OF THIS PROJECT, IT SHALL BE THEIR RESPONSIBILITY TO INFORM THE COUNTY AS SOON AS POSSIBLE.

ALL RADII SHOWN ON THE PLAN WHERE THERE IS CONCRETE CURB & GUTTER ARE MEASURED TO THE BACK OF CURB.

CONCRETE CURB & GUTTER GRADES ARE TO THE TOP OF CURB, UNLESS OTHERWISE NOTED.

CURB AND GUTTER JOINT SPACING SHALL BE 10 FEET.

CONTRACTOR SHALL GRUB SHRUBS AND BUSHES WITHIN SLOPE LIMITS AS DIRECTED AND APPROVED BY THE ENGINEER.

MULTI-USE PATH WILL BE CONSTRUCTED TO MATCH EXISTING GRADE WHERE PATH IS LOCATED 15' BEYOND NEW BACK OF CURB UNLESS NOTED.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.

FERTILIZE, SEED AND MULCH ALL TOPSOILED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

REMOVAL OF EROSION CONTROL DEVICES WILL BE INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT THE APPROVAL OF THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

2% CROSS SLOPE UNLESS OTHERWISE NOTED.

ALL TRAFFIC CONTROL, SIGNS & DETOUR PLAN SHALL FOLLOW MUTCD GUIDELINES.

ALL CITY OF WAUWATOSA SANITARY MANHOLE ADJUSTMENTS SHALL REQUIRE NEW NEENAH R-1661-B FRAME WITH SELF SEALING LID & 1" VENT HOLE & PLUG. AND NEW CHIMNEY WITH INTERNAL SEAL.

ALL CITY & COUNTY STORM MANHOLE ADJUSTMENTS REQUIRE NEW CHIMNEY WITH NEENAH R-3222-1A FRAME & GRATE (COUNTY) OR NEENAH R-1661-B FRAME & GRATE (CITY)

THE CONTRACTOR SHALL BUILD RAIN GARDENS & BIO BASINS PER EACH SPECIFIED SEGMENT. TEMPORARY SEED WITH RYE SEED IF WEATHER DOES NOT ALLOW FOR PERMANENT SEEDING. COST INCIDENTAL TO OTHER ITEMS.

EXISTING CROSS-SECTIONS DETAIL EXISTING ASPHALT, CONCRETE & BASE TO BE REMOVED, SALVAGED/RECYCLED, STOCKPILED ON SITE & RE-USED AS BASE COURSE ON THE ROAD & PATH. THE CONTRACTOR WILL BE REQUIRED TO REMOVE & PROCESS THE EXISTING MATERIAL TO MEET SPECIFICATIONS & MAXIMIZE THE AMOUNT OF RECYCLED MATERIAL UTILIZED. POTENTIAL STOCK PILE LOCATIONS ARE SHOWN ON THE PLAN BUT CONTRACTOR WILL BE REQUIRED TO SUBMIT FINAL STOCKPILE LOCATIONS WHICH COULD INCLUDE LOCATIONS ON THE ROADWAY. COMMON EXCAVATION WILL INCLUDE DEPTH BELOW THESE LOCATIONS.

SET CATCH BASIN CASTINGS 1/2-INCH BELOW FINISHED GRADE WITH SMOOTH TROWELED EDGES.

CURB FLARES FOR DEPRESSED CURB OPENINGS WHERE SHOWN ON PLAN SHALL BE AT A 6:1 SLOPE.

CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS.

SAWCUT LIMITS OF REMOVAL OF EXISTING PAVEMENT.

DETAILS OF CONSTRUCTION NOT SHOWN ON THE PLAN SHALL CONFORM TO THE PERTINENT REQUIREMENTS AND APPLICABLE SPECIAL PROVISIONS. CONTRACTOR SHALL UNCOVER AND CHECK ELEVATION OF EXISTING UTILITIES WHERE CROSSED BY NEW STORM SEWER. ALTERATION OF UTILITY OR REVISION OF SEWER ELEVATION MAY BE NECESSARY.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS EBS. THE LOCATION FOR EBS WILL BE DETERMINED BY THE ENGINEER.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT APPROXIMATE LOCATIONS. THE EXACT LOCATION AND DIMENSIONS SHALL BE DETERMINED BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

THE LOCATION OF EXISTING, ABANDONED AND PROPOSED UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA NOT SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL UTILITIES LOCATED BEFORE EXCAVATION.

EXISTING SIGNS AFFECTED BY CONSTRUCTION SHALL BE PROTECTED OR RELOCATED AS DIRECTED BY THE ENGINEER. CONTRACTOR TO SALVAGE EXISTING SIGNS AND INSTALL NEW SIGNS AS SHOWN. CLEARANCE TO THE BOTTOM OF SIGNS SHALL BE 7 FEET. WHEN TWO SIGNS ARE MOUNTED ON A SINGLE POST, THE BOTTOM OF SIGN SHALL BE 5 FEET MEASURED FROM THE BOTTOM OF THE SIGN. WHEN THREE SIGNS ARE MOUNTED ON A SINGLE POST, THE BOTTOM SIGN SHALL BE 4 FEET MEASURED FROM THE BOTTOM OF THE SIGN. MOUNT ALL NO PARKING SIGNS AT 45° ANGLE TO PARKWAY. SALVAGED SIGNS SHALL BE DELIVERED TO PARKS MAINTENANCE AT 1150 N. 68TH STREET.

ALL NEW CABLE & DUCT FOR LIGHTING SHALL BE INSTALLED 1' BACK OF CURB TO AVOID INSTALLATION BELOW RAIN GARDENS OR BIOFILTRATION BASINS.

WETLAND LINES ARE APPROXIMATE BASED UPON DNR SURFACE DATA VIEWER.

HORIZONTAL DATUM IS BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM GRID, SOUTH ZONE, (NAD 1927). ALL BEARINGS ARE REFERENCED TO GRID NORTH. COORDINATES SHOWN ON PLAN ARE GRID COORDINATES. COMBINATION SCALE AND SEA LEVEL REDUCTION FACTOR = 0.99991464. VERTICAL DATUM IS BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929.

MENOMONEE RIVER PARKWAY
HMA PAVEMENT SHALL BE 4 INCH THICK CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS. HMA PAVEMENT, 2-1/4 INCH LOWER LAYER, TYPE E-1, NOMINAL 19.00 MM, AND ASPHALTIC MATERIAL WITH A PERFORMANCE GRADED DESIGNATION OF PG 58-28. 1-3/4 INCH UPPER LAYER, TYPE E-1, NOMINAL 9.50 MM, AND ASPHALTIC MATERIAL WITH A PERFORMANCE GRADED DESIGNATION OF PG 64-22.

BIKE PATH
HMA PAVEMENT SHALL BE 3 INCH THICK CONSTRUCTED WITH ONE LAYER HMA PAVEMENT, 3 INCH, TYPE E-0.3, NOMINAL 9.50 MM, AND ASPHALTIC MATERIAL WITH A PERFORMANCE GRADED DESIGNATION OF PG 64-22.

WHEN QUANTITY OF THE ITEMS OF LOWER OR UPPER LAYER OF ASPHALT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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



**Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com**

WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

PARKS MAINTENANCE DIVISION

(414) 258-2322

THE CONTRACTOR MUST NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. PARKS MAINTENANCE WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST ALSO BE CONTACTED SEPARATELY AT LEAST 5 DAYS IN ADVANCE OF EXCAVATION.

DRAWN BY: BJC
CHECKED BY:

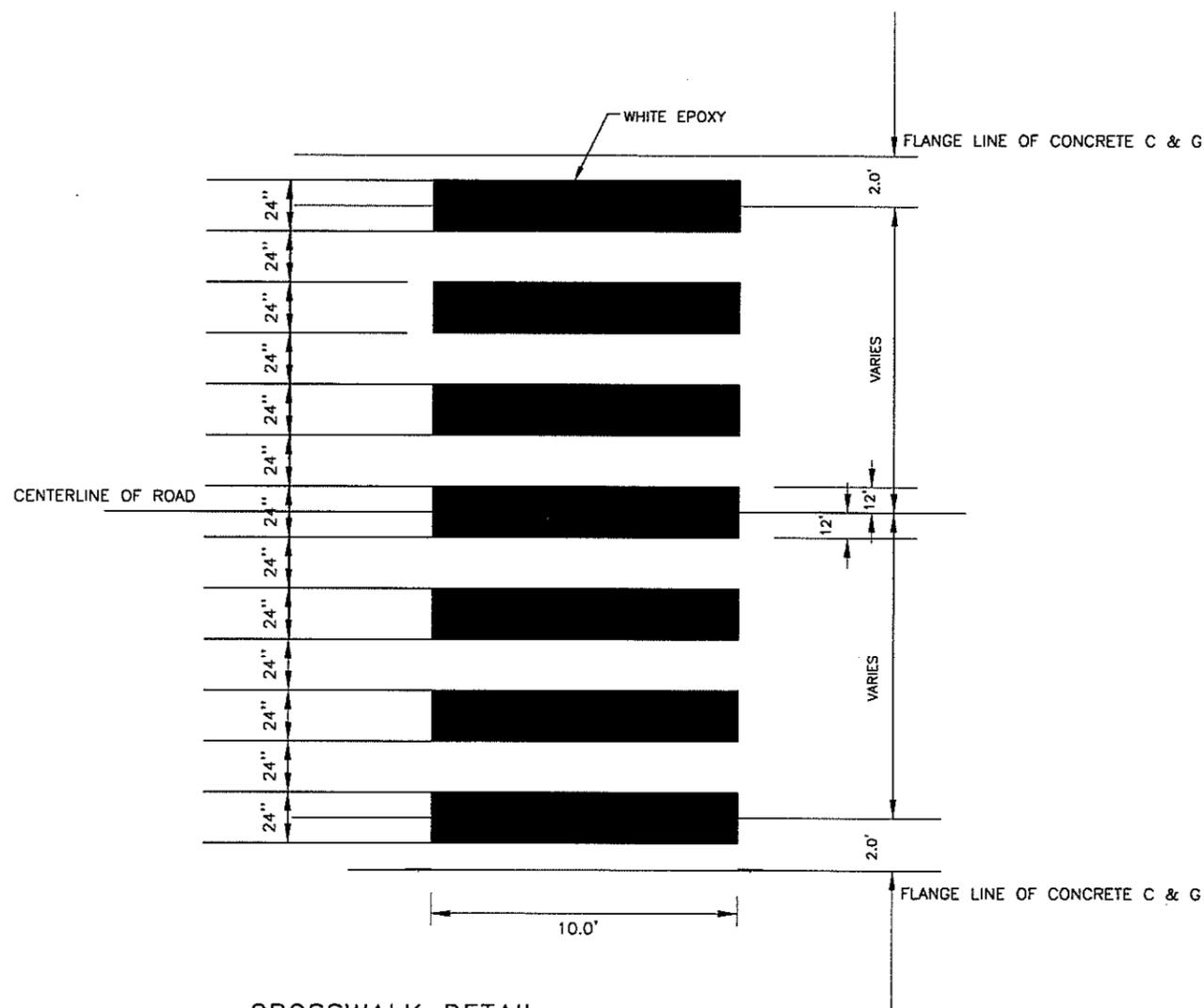
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DATE:

PROJECT TITLE: MENOMONEE RIVER PARKWAY
SHEET DESCRIPTION:

SITE NO.:
BUILDING NO.:

PROJECT NO.: P280-13626

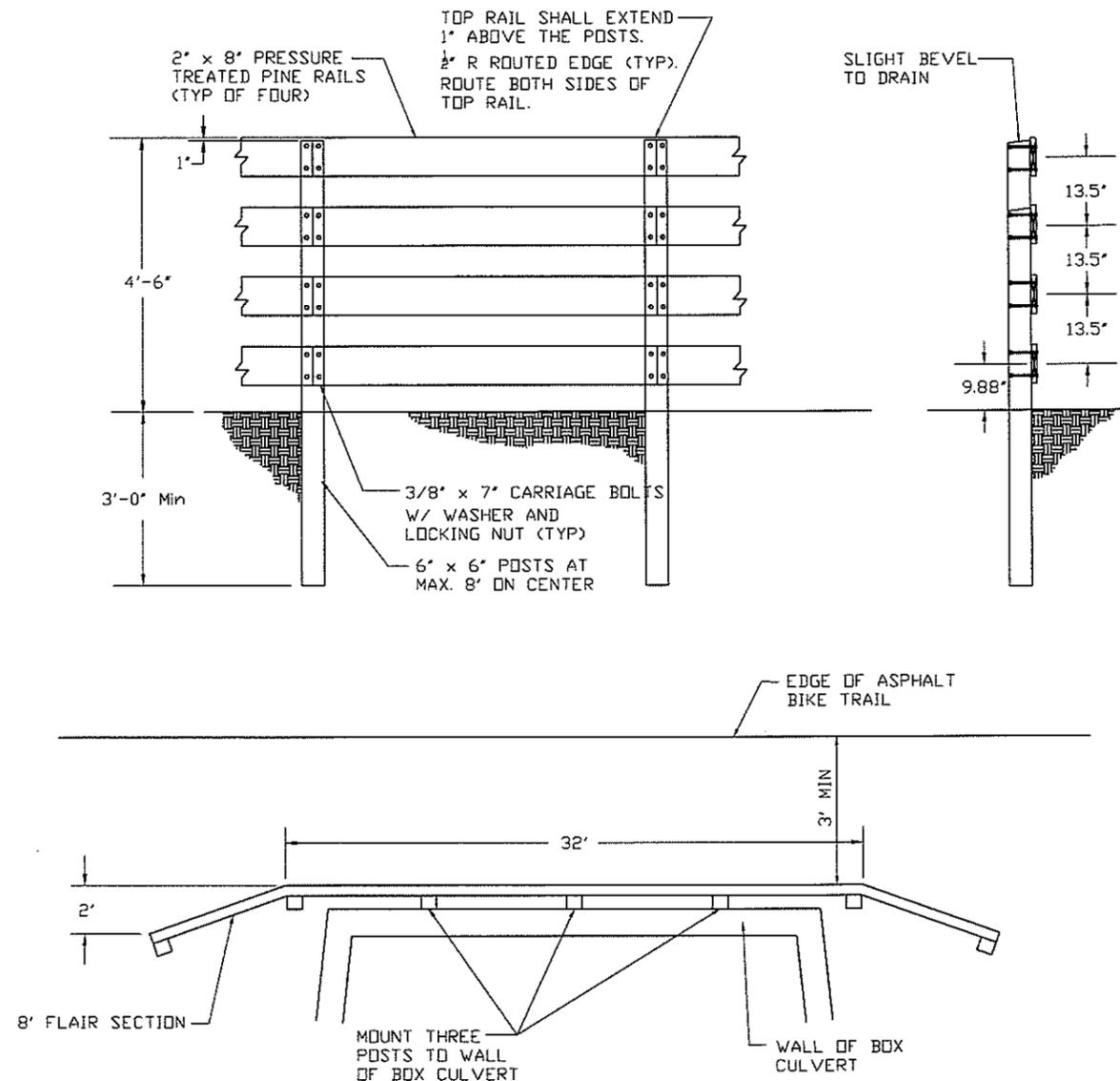
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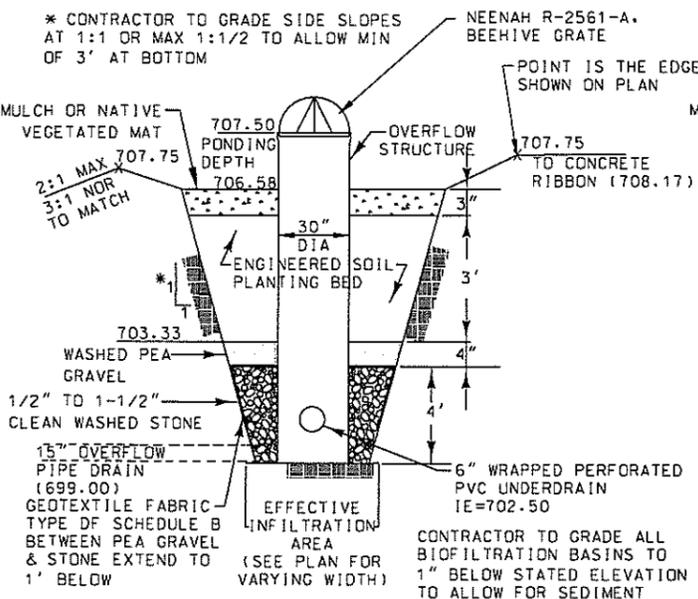
CROSSWALK DETAIL

SECTION

Scale: NO SCALE

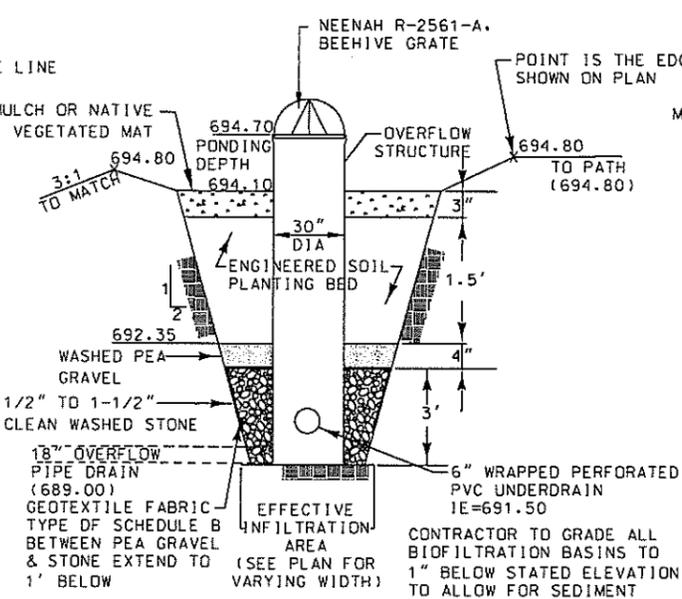


WOODEN RAILING DETAILS AT BOX CULVERT (59+00±)
NO SCALE



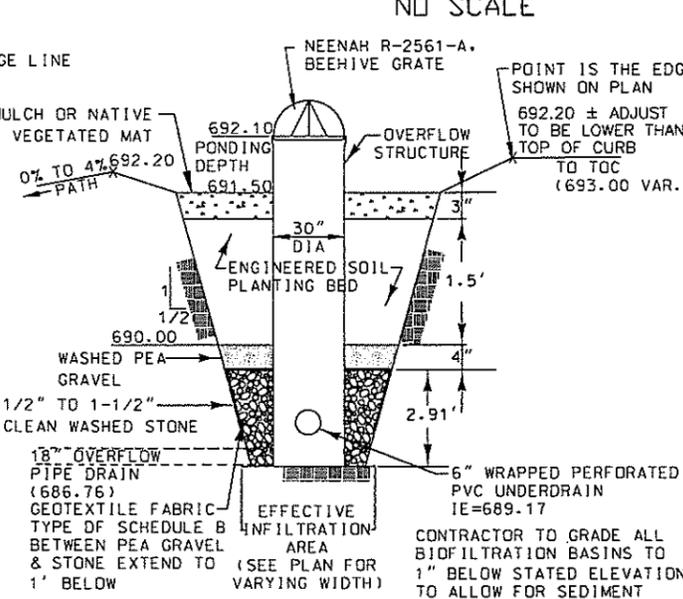
BIOFILTRATION BASIN #1 STA 31+50

NTS



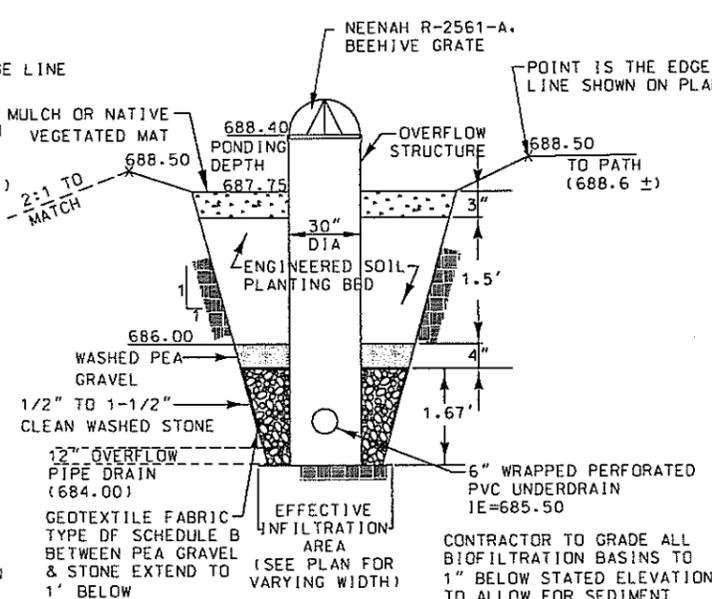
BIOFILTRATION BASIN #2 STA 65+00

NTS



BIOFILTRATION BASIN #3 STA 81+00

NTS



BIOFILTRATION BASIN #4 STA 92+00

NTS

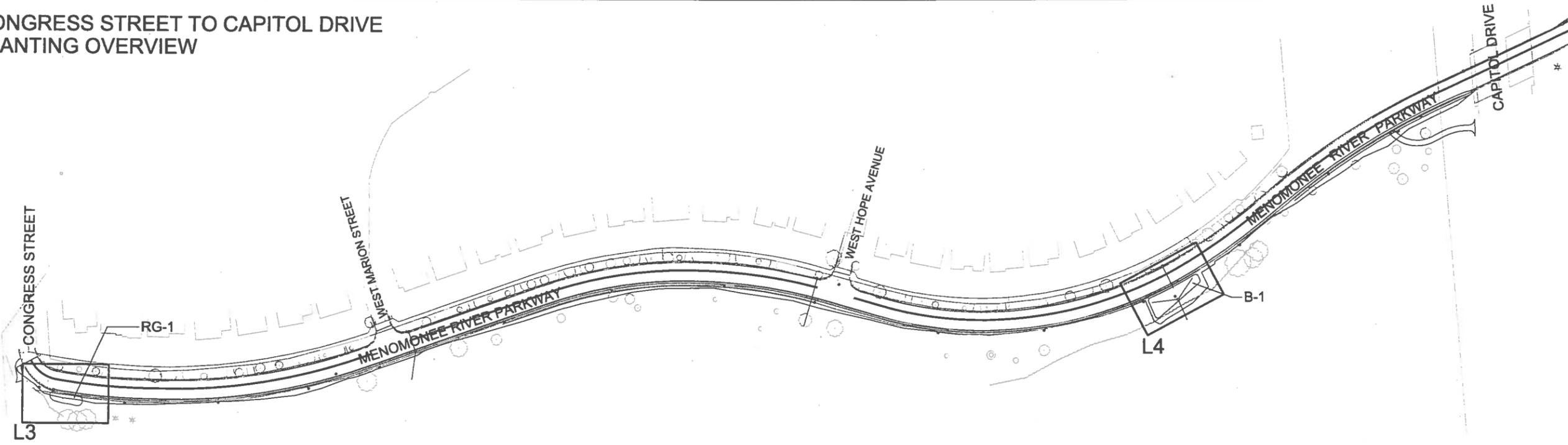
MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES Architecture, Engineering & Environmental Services Section	
PROJECT TITLE	MENOMONEE RIVER PARKWAY
SCALE	NTS
DRAWN BY	BJG
CHECKED BY	
SHEET NO.	5
PROJECT NO.	P280-13626
BUILDING NO.	
SHEET DESCRIPTION	

GENERAL NOTES:

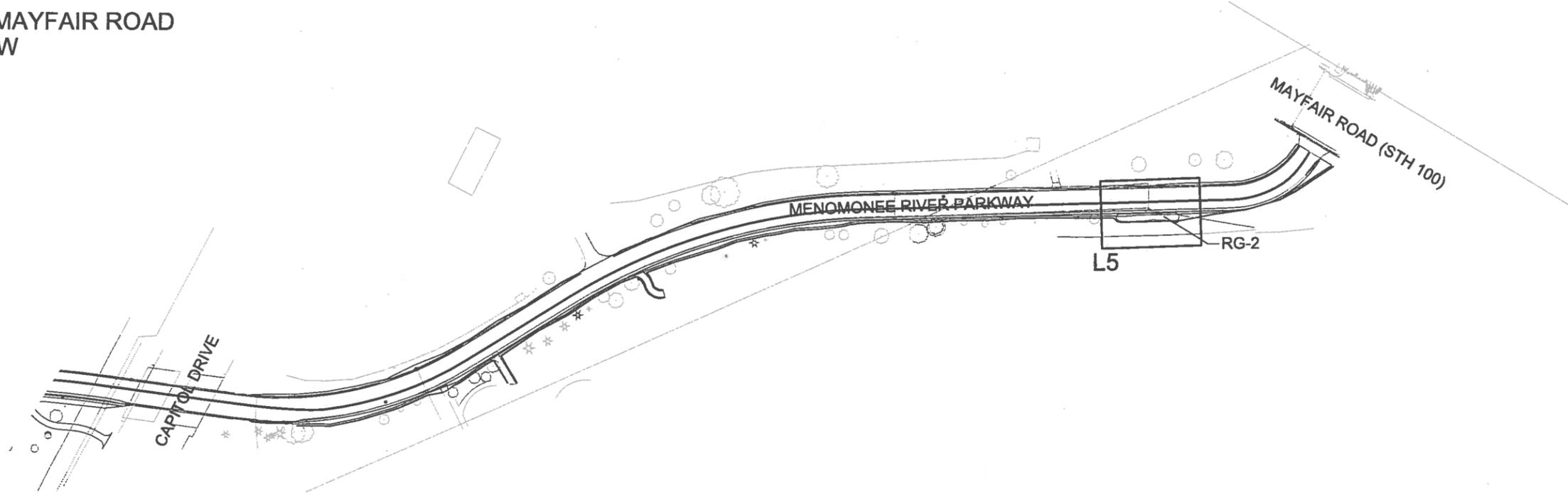
1. SEE ENGINEERING DRAWINGS FOR ADDITIONAL GENERAL NOTES AND OTHER INFORMATION PERTAINING TO RAIN GARDENS AND BIOFILTRATION BASINS.
2. FIELD VERIFY ALL EXISTING AND PROPOSED SITE UTILITIES. CONTACT DIGGERS HOTLINE AND MILWAUKEE COUNTY FOR UNDERGROUND UTILITY LOCATIONS. NOTIFY CONSTRUCTION REPRESENTATIVE OF ANY PROBLEMS.
3. PROTECT ALL PAVEMENTS, CURBS, UTILITIES, AND OTHER SITE ELEMENTS DURING PLANTING OPERATIONS. ANY ELEMENTS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED TO EXISTING CONDITION BY CONTRACTOR.
4. RECREATIONAL PATHS SHALL NOT BE DISTURBED BY CONSTRUCTION ACTIVITIES AND MUST REMAIN OPEN AT ALL TIMES.
5. SUBMIT TOPSOIL TESTING REQUIREMENTS AS OUTLINED IN THE PROJECT SPECIFICATIONS.
6. RAIN GARDEN AND BIOFILTRATION GRADES AND PLANTING SOIL/ENGINEERED SOIL DEPTHS SHALL BE APPROVED BEFORE BEGINNING PLANTING.
7. LAYOUT, STAKE OR PAINT THE PROPOSED LOCATION OF ALL PLANTINGS FOR APPROVAL BY CONSTRUCTION REPRESENTATIVE PRIOR TO PLANTING.

8. SPACE SHRUBS AND PERENNIALS PER PLANT SCHEDULE.
9. ALL WRAPPINGS, WIRE BASKETS, BURLAP, TWINE AND OTHER MISCELLANEOUS MATERIAL SHALL BE REMOVED FROM ENTIRE ROOT BALL PRIOR TO INSTALLATION.
10. ALL PLANTED AREAS, INCLUDING BIORETENTION BASINS ADJACENT TO LAWN SHALL HAVE SHOVEL CUT EDGING.
11. ALL PLANTED AREAS NOT COVERED BY NATIVE VEGETATED MAT SHALL HAVE 3 INCHES TWICE-SHREDDED HARDWOOD BARK MULCH.
12. ALL LAWN AREAS ADJACENT TO THE PROJECT SITE THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES INCLUDING, BUT NOT LIMITED TO, UTILITY TRENCHING, ACCESS, OR MATERIALS STORAGE SHALL BE REPAIRED PER PROJECT SPECIFICATIONS.
13. REPAIR TO ORIGINAL CONDITION ALL EXISTING PLANTING BEDS NOTED TO REMAIN INCLUDING VEGETATION, MULCH AND EDGING THAT HAVE BEEN DISTURBED BY CONSTRUCTION ACTIVITIES.

**CONGRESS STREET TO CAPITOL DRIVE
PLANTING OVERVIEW**



**CAPITOL DRIVE TO MAYFAIR ROAD
PLANTING OVERVIEW**



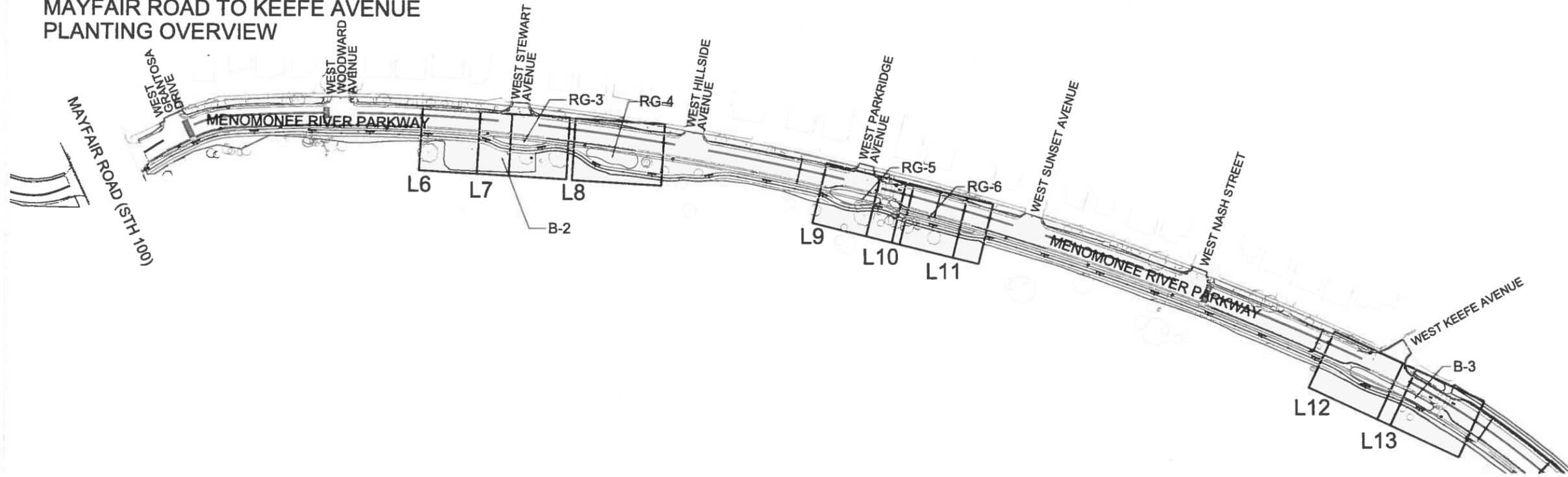
MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES Architecture, Engineering & Environmental Services Section		CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208	
			
BY:	DATE:	REVISION DESCRIPTION:	
SCALE:	1" = 100'	DRAWN BY:	KSD
PROJECT TITLE:	MENOMONEE RIVER PARKWAY	CHECKED BY:	KSD
SHEET DESCRIPTION:	PLANTING OVERVIEW PLAN CONGRESS TO MAYFAIR	DATE:	7/03/14
SITE NO:		BUILDING NO:	
PROJECT NO:	P280-13626		
SHEET NO:	L1		
	1 OF 110		
FILE NO:			

GENERAL NOTES:

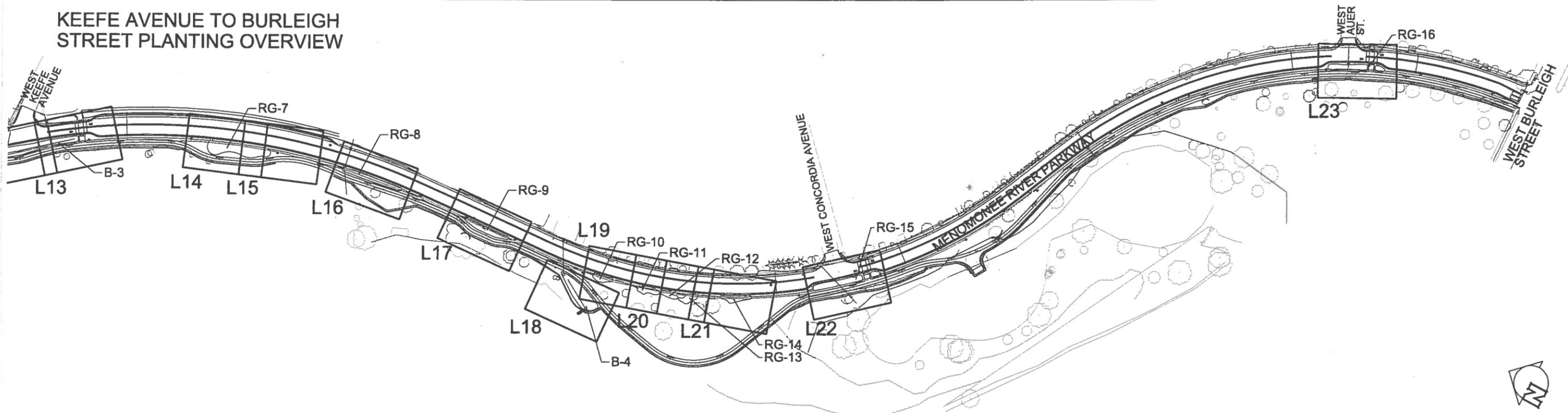
1. SEE ENGINEERING DRAWINGS FOR ADDITIONAL GENERAL NOTES AND OTHER INFORMATION PERTAINING TO RAIN GARDENS AND BIOFILTRATION BASINS.
2. FIELD VERIFY ALL EXISTING AND PROPOSED SITE UTILITIES. CONTACT DIGGERS HOTLINE AND MILWAUKEE COUNTY FOR UNDERGROUND UTILITY LOCATIONS. NOTIFY CONSTRUCTION REPRESENTATIVE OF ANY PROBLEMS.
3. PROTECT ALL PAVEMENTS, CURBS, UTILITIES, AND OTHER SITE ELEMENTS DURING PLANTING OPERATIONS. ANY ELEMENTS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED TO EXISTING CONDITION BY CONTRACTOR.
4. RECREATIONAL PATHS SHALL NOT BE DISTURBED BY CONSTRUCTION ACTIVITIES AND MUST REMAIN OPEN AT ALL TIMES.
5. SUBMIT TOPSOIL TESTING REQUIREMENTS AS OUTLINED IN THE PROJECT SPECIFICATIONS.
6. RAIN GARDEN AND BIOFILTRATION GRADES AND PLANTING SOIL/ENGINEERED SOIL DEPTHS SHALL BE APPROVED BEFORE BEGINNING PLANTING.
7. LAYOUT, STAKE OR PAINT THE PROPOSED LOCATION OF ALL PLANTINGS FOR APPROVAL BY CONSTRUCTION REPRESENTATIVE PRIOR TO PLANTING.

8. SPACE SHRUBS AND PERENNIALS PER PLANT SCHEDULE.
9. ALL WRAPPINGS, WIRE BASKETS, BURLAP, TWINE AND OTHER MISCELLANEOUS MATERIAL SHALL BE REMOVED FROM ENTIRE ROOT BALL PRIOR TO INSTALLATION.
10. ALL PLANTED AREAS, INCLUDING BIORETENTION BASINS ADJACENT TO LAWN SHALL HAVE SHOVEL CUT EDGING.
11. ALL PLANTED AREAS NOT COVERED BY NATIVE VEGETATED MAT SHALL HAVE 3 INCHES TWICE-SHREDDED HARDWOOD BARK MULCH.
12. ALL LAWN AREAS ADJACENT TO THE PROJECT SITE THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES INCLUDING, BUT NOT LIMITED TO, UTILITY TRENCHING, ACCESS, OR MATERIALS STORAGE SHALL BE REPAIRED PER PROJECT SPECIFICATIONS.
13. REPAIR TO ORIGINAL CONDITION ALL EXISTING PLANTING BEDS NOTED TO REMAIN INCLUDING VEGETATION, MULCH AND EDGING THAT HAVE BEEN DISTURBED BY CONSTRUCTION ACTIVITIES.

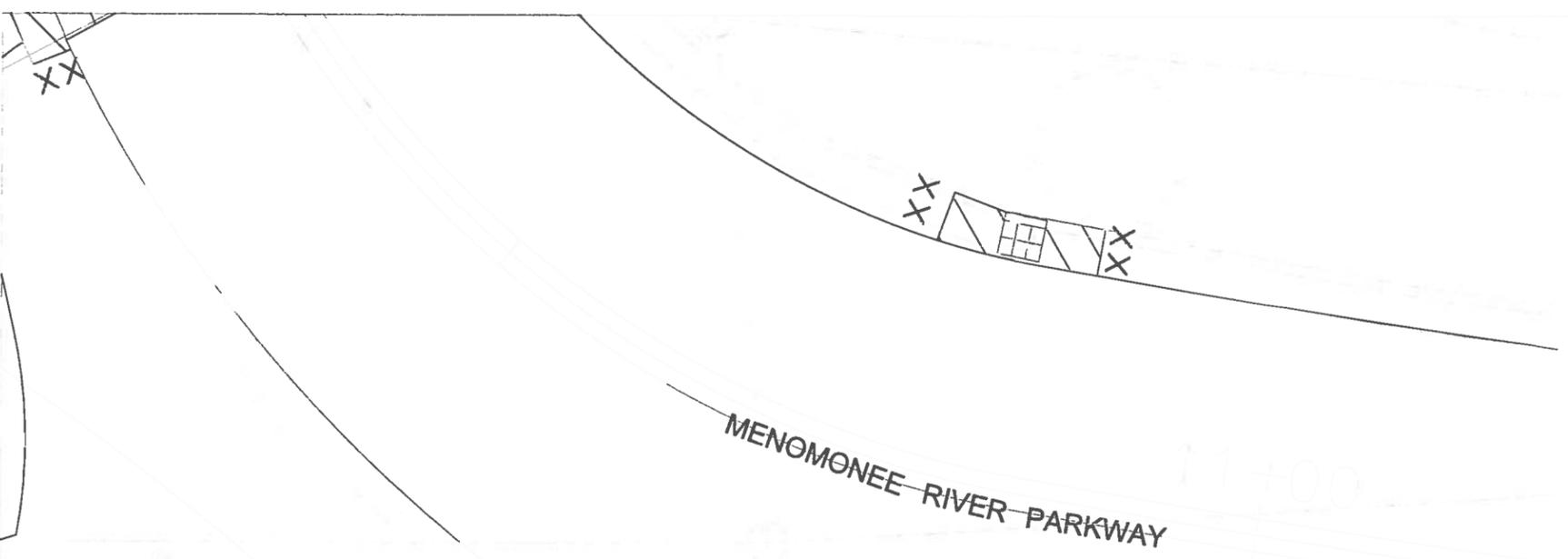
**MAYFAIR ROAD TO KEEFE AVENUE
PLANTING OVERVIEW**



**KEEFE AVENUE TO BURLEIGH
STREET PLANTING OVERVIEW**



BY: _____		MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES Architecture, Engineering & Environmental Services Section	
DATE: _____	REVISION DESCRIPTION: _____	CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208	
SCALE: 1" = 100'	DATE: 7/03/14	PROJECT TITLE: MENOMONEE RIVER PARKWAY	SHEET DESCRIPTION: PLANTING OVERVIEW PLAN MAYFAIR TO BURLEIGH
DRAWN BY: KSD	CHECKED BY: KSD	SITE NO. _____	BUILDING NO. _____
PROJECT NO. P280-13626	FILE NO. L2	2 OF 110	



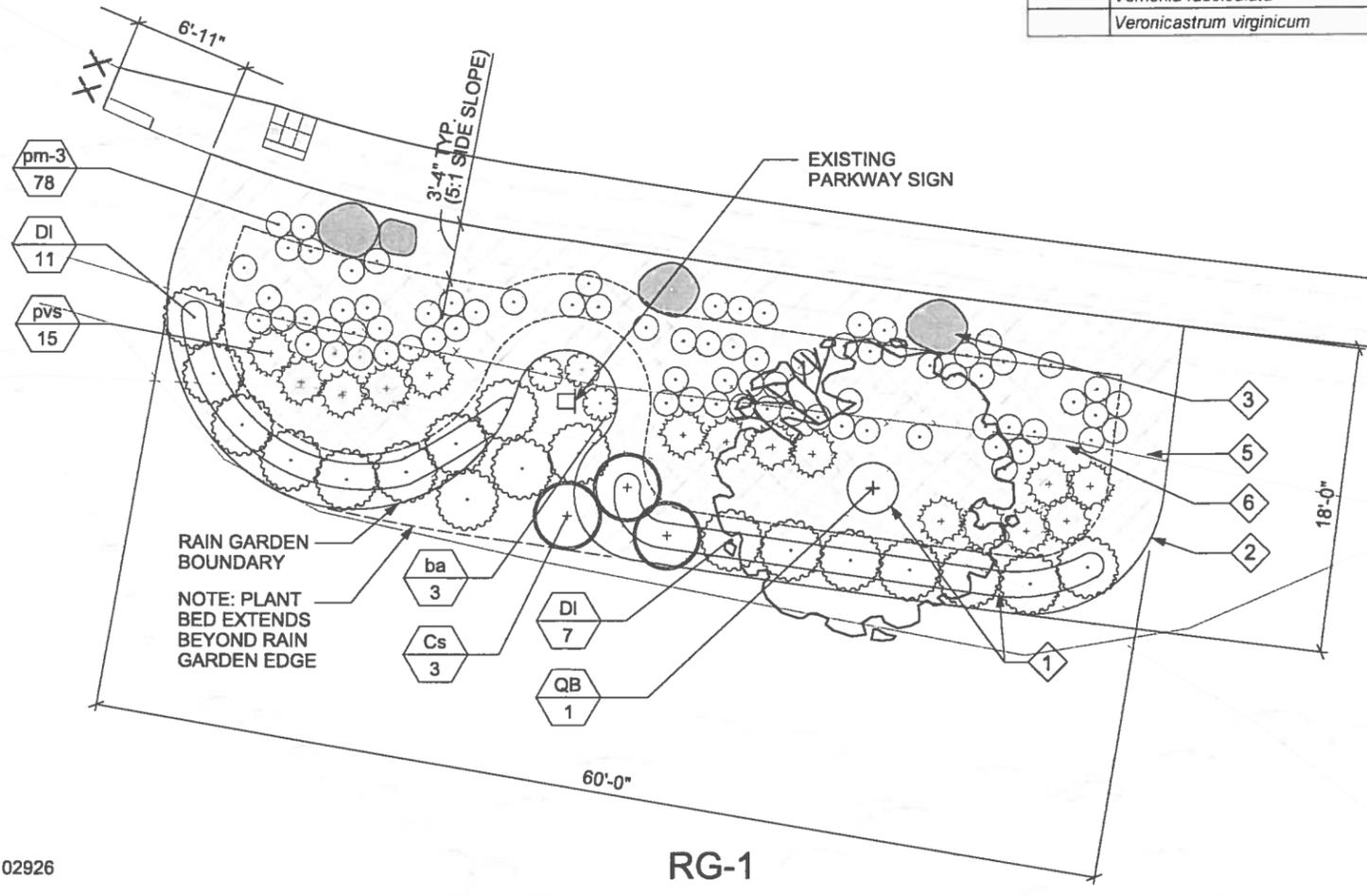
PLANT LIST - RAIN GARDEN 1		
Key	Botanical Name	Common Name
Deciduous Trees		
QB	<i>Quercus bicolor</i>	Swamp White Oak
Deciduous Shrubs & Vines		
Cs	<i>Cornus sericea</i>	Redosier Dogwood
DI	<i>Diervilla lonicera</i>	Bush Honeysuckle
Grasses and Sedges		
pvs	<i>Panicum virgatum 'Shenandoah'</i>	Switch Grass
Perennials		
ba	<i>Baptisia australis</i>	Blue False Indigo
Perennial Mix:		
pm-3	<i>Liatris spicata</i>	Marsh Blazingstar
	<i>Monarda fistulosa</i>	Wild Bergamot
	<i>Rudbeckia fulgida</i>	Orange Coneflower
	<i>Solidago rigida</i>	Stiff Goldenrod
	<i>Vernonia fasciculata</i>	Ironweed
	<i>Veronicastrum virginicum</i>	Culver's Root

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 LANDSCAPE BOULDER; SEE L25 FOR DETAIL
- 4 UNUSED
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 UNUSED



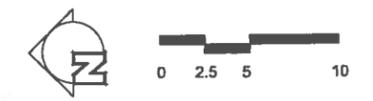
MILWAUKEE COUNTY DEPARTMENT OF
 ADMINISTRATIVE SERVICES
 Architecture, Engineering &
 Environmental Services Section
 CITY CAMPUS 2711 W. WELLS ST SECOND FLOOR MILWAUKEE, WI 53208

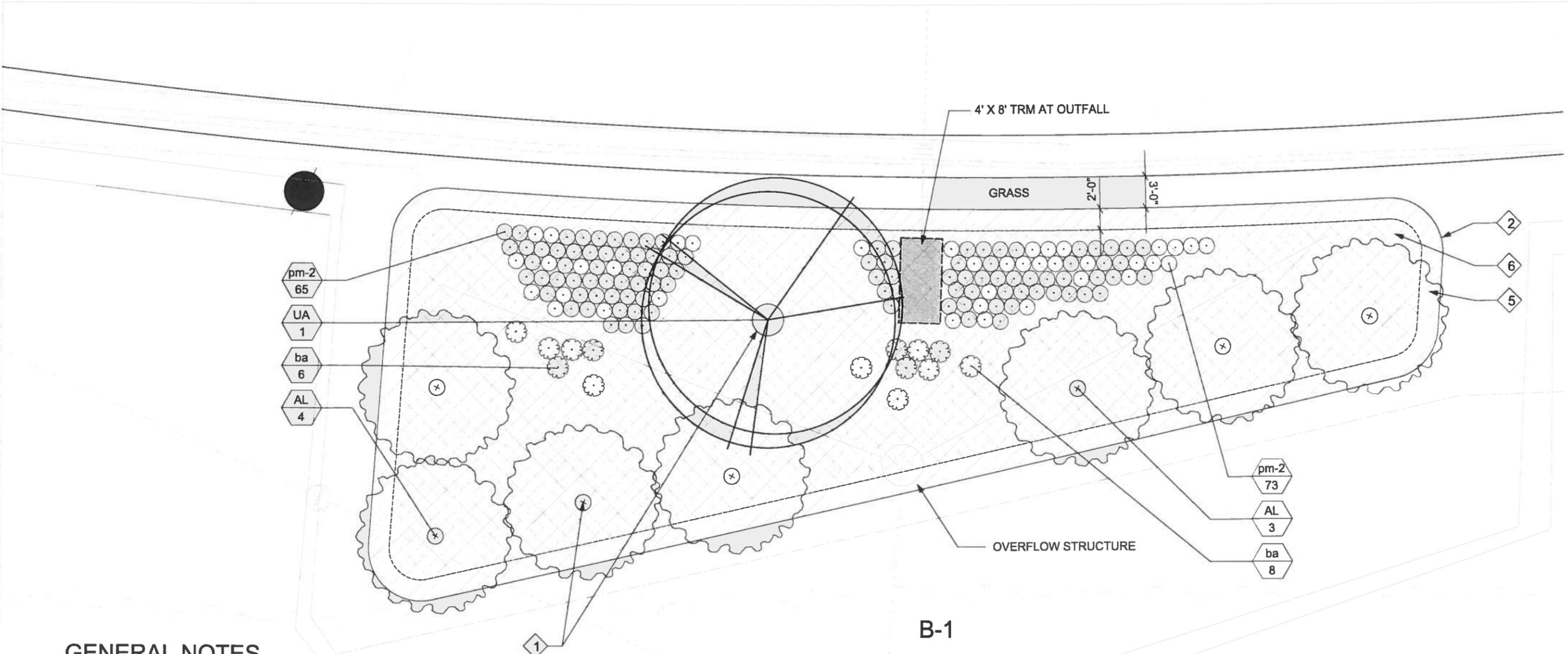


SCALE: 1" = 10'
 DATE: 7/03/14
 DRAWN BY: KSD
 CHECKED BY: KSD

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
 RG-1

SHEET NO. L3
 PROJECT NO. P280-13626
 3 OF 110
 FILE NO.





GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE ENGINEERING DRAWINGS FOR BIOFILTRATION DETAILS

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 UNUSED

PLANT LIST - BIOFILTRATION BASIN 1		
Key	Botanical Name	Common Name
Deciduous Trees		
UA	<i>Ulmus americana</i> 'Princeton'	Princeton American Elm
Ornamental Trees		
AL	<i>Amelanchier laevis</i>	Allegheny Serviceberry
Perennials		
ba	<i>Baptisia australis</i>	Blue False Indigo
pm-2	Perennial Mix:	
	<i>Agastache foeniculum</i>	Anise Hyssop
	<i>Aster prenanthoides</i>	Crooked-stem Aster
	<i>Desmodium canadense</i>	Canada Tick Trefoil
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Helenium autumnale</i>	Sneezeweed
	<i>Lobelia cardinalis</i>	Cardinal Flower



MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES
 Architecture, Engineering & Environmental Services Section
 CITY CAMPUS 2711 W WELLS ST SECOND FLOOR MILWAUKEE, WI 53208



DATE: _____ REVISION DESCRIPTION: _____ BY: _____

SCALE: 1"=10'	DRAWN BY: KSD
DATE: 7/03/14	CHECKED BY: KSD
PROJECT TITLE: MENOMONEE RIVER PARKWAY	SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN B-1
SITE NO. _____	BUILDING NO. _____
PROJECT NO. P280-13626	SHEET NO. L4 4 OF 110
FILE NO. _____	FILE NO. _____

54+00

MENOMONEE RIVER PARKWAY

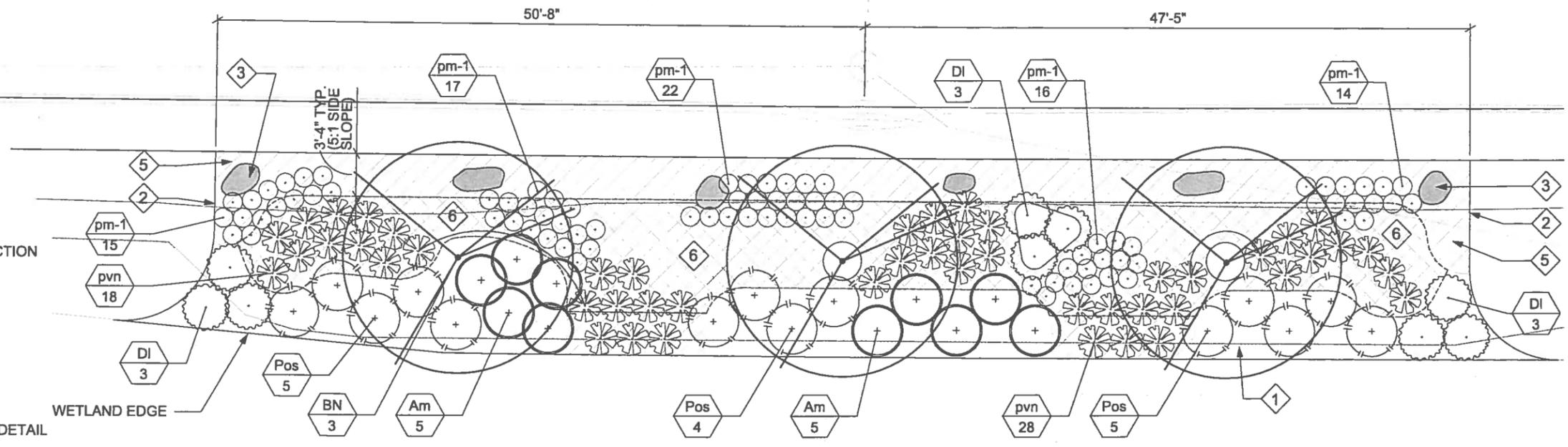
PLANT LIST - RAIN GARDEN 2		
Key	Botanical Name	Common Name
Deciduous Trees		
BN	<i>Betula nigra</i>	River Birch
Deciduous Shrubs & Vines		
Am	<i>Aronia melanocarpa</i>	Black Chokeberry
DI	<i>Diervilla lonicera</i>	Bush Honeysuckle
Pos	<i>Physocarpus opulifolius 'Seward'</i>	Summer Wine Ninebark
Grasses and Sedges		
pvn	<i>Panicum virgatum 'Northwind'</i>	Northwind Switch Grass
Perennials		
pm-1	Perennial Mix:	
	<i>Asclepias incarnata</i>	Rose Milkweed
	<i>Aster nova-angliae</i>	New England Aster
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Parthenium integrifolia</i>	Wild Quinine
	<i>Rudbeckia hirta</i>	Black-Eyed Susan
	<i>Solidago ridellii</i>	Ridell's Goldenrod

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 LANDSCAPE BOULDER; SEE L25 FOR DETAIL
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 UNUSED



RG-2

MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES
 Architecture, Engineering & Environmental Services Section
 CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208



DATE: _____
 REVISION DESCRIPTION: _____
 BY: _____

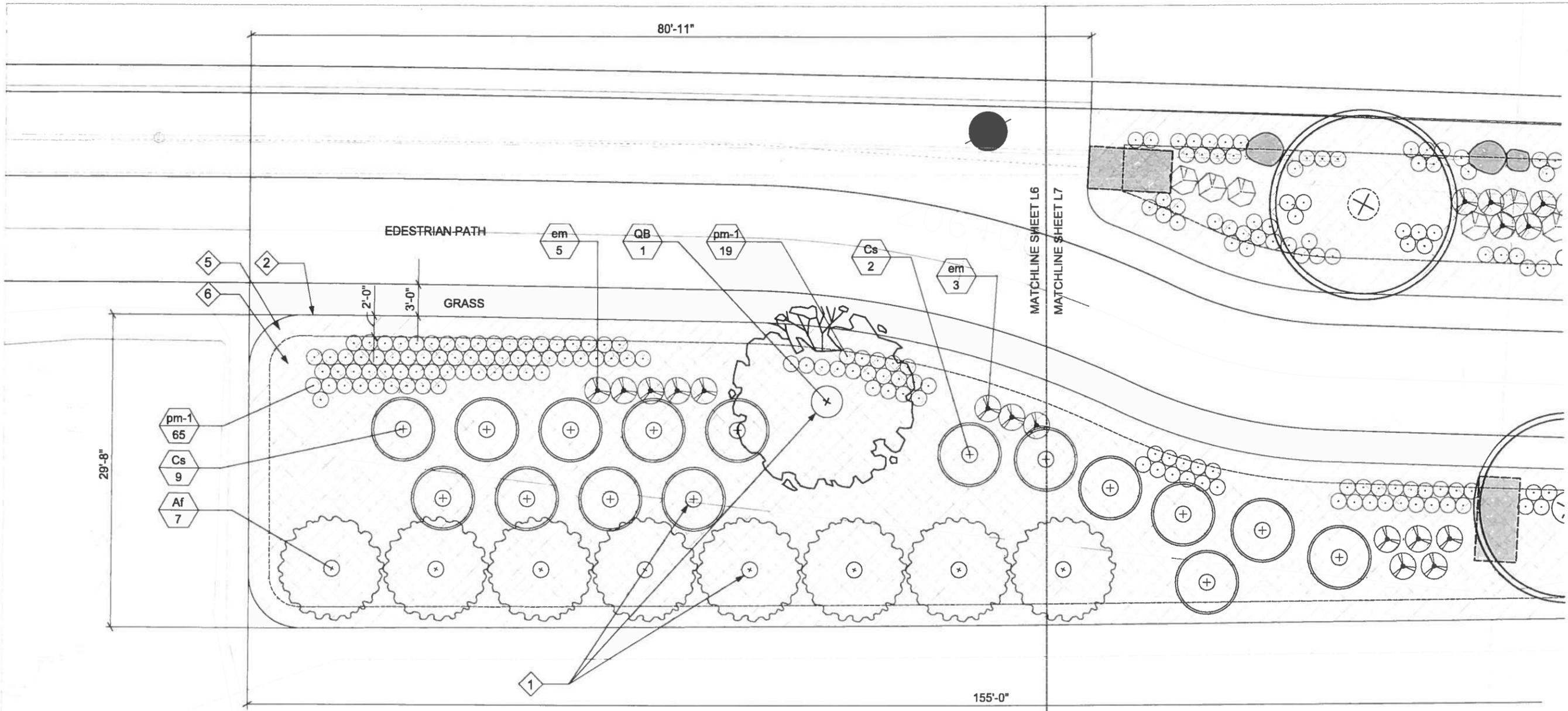
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 CHECKED BY: KSD
 SCALE: 1" = 10'
 DATE: 7/03/14

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
 RG-2

SITE NO. _____
 BUILDING NO. _____

PROJECT NO. P280-13626

SHEET NO. L5
 5 OF 110
 FILE NO. _____



PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 UNUSED

B-2

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE ENGINEERING DRAWINGS FOR BIOFILTRATION DETAILS

NOTE: THIS IS COMPLETE PLANT LIST FOR B-2

PLANT LIST - BIOFILTRATION BASIN 2		
Key	Botanical Name	Common Name
Deciduous Trees		
CO	<i>Celtis occidentalis</i>	Hackberry
QB	<i>Quercus bicolor</i>	Swamp White Oak
Deciduous Shrubs		
Af	<i>Amorpha fruticosa</i>	Desert False Indigo
Cs	<i>Comus sericea</i>	Redosier Dogwood
Perennials		
em	<i>Eupatorium maculatum</i> 'Gateway'	Gateway Spotted Joe-pye Weed
pm-1	Perennial Mix:	
	<i>Asclepias incarnata</i>	Rose Milkweed
	<i>Aster nova-angliae</i>	New England Aster
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Parthenium integrifolia</i>	Wild Quinine
	<i>Rudbeckia hirta</i>	Black-Eyed Susan
	<i>Solidago ridellii</i>	Ridell's Goldenrod



MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES
Architecture, Engineering & Environmental Services Section

CITY CAMPUS 2711 W WELLS ST SECOND FLOOR MILWAUKEE, WI 53208

MILWAUKEE COUNTY

PROJECT TITLE: **MENOMONEE RIVER PARKWAY**

SHEET DESCRIPTION: **PLANTING ENLARGEMENT PLAN B-2**

PROJECT NO: **P280-13626**

SHEET NO: **L6**

FILE NO: **6 OF 110**

SCALE: **1"=10'**

DATE: **7/03/14**

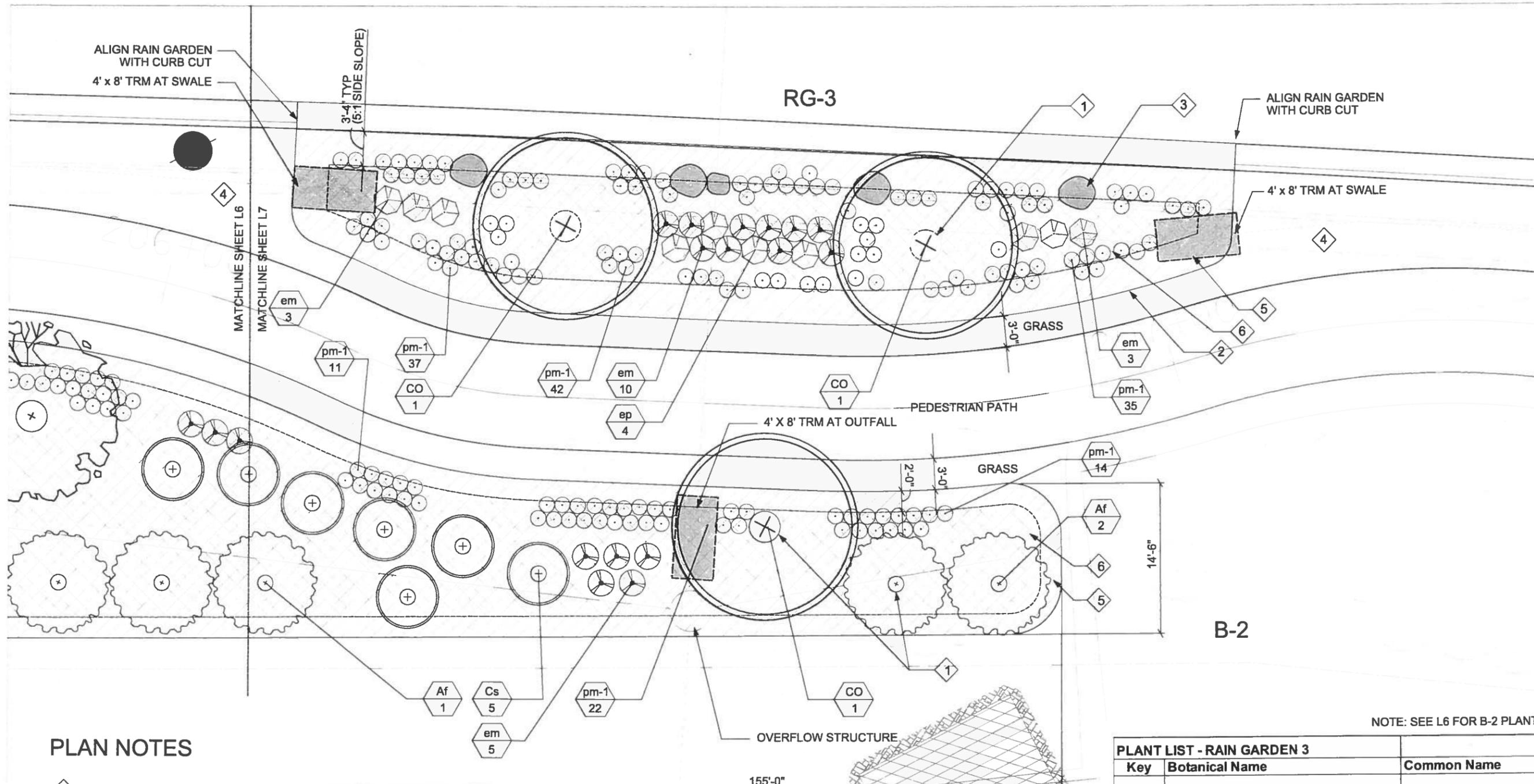
DRAWN BY: **KSD**

CHECKED BY: **KSD**

REVISION DESCRIPTION: _____

DATE: _____

BY: _____



PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 LANDSCAPE BOULDER; SEE L25 FOR DETAIL
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 UNUSED

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE ENGINEERING DRAWINGS FOR BIOFILTRATION DETAILS
- 3. SEE L25 FOR TYPICAL RAINGARDEN SECTION

PLANT LIST - RAIN GARDEN 3

Key	Botanical Name	Common Name
Deciduous Trees		
CO	<i>Celtis occidentalis</i>	Hackberry
Perennials		
em	<i>Eupatorium maculatum</i> 'Gateway'	Gateway Spotted Joe-pye Weed
ep	<i>Eupatorium perfoliatum</i>	Boneset
pm-1	Perennial Mix:	
	<i>Asclepias incarnata</i>	Rose Milkweed
	<i>Aster nova-angliae</i>	New England Aster
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Parthenium integrifolia</i>	Wild Quinine
	<i>Rudbeckia hirta</i>	Black-Eyed Susan
	<i>Solidago ridellii</i>	Ridell's Goldenrod

NOTE: SEE L6 FOR B-2 PLANT LIST



MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES
 Architecture, Engineering & Environmental Services Section
 CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208



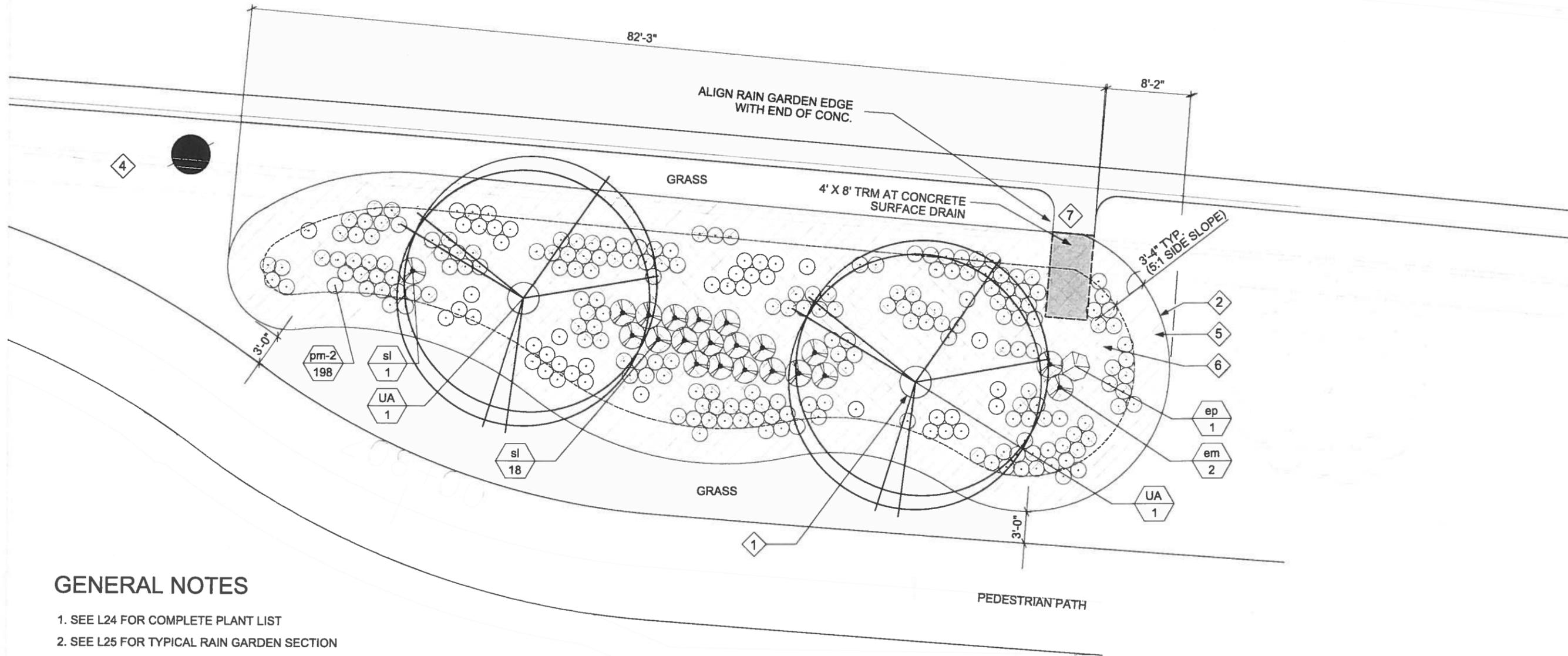
SCALE: 1" = 10'
 DATE: 7/03/14
 DRAWN BY: KSD
 CHECKED BY: KSD

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN B-2, RG-3

PROJECT NO. P280-13626
 BUILDING NO.

SHEET NO. L7
 FILE NO. 7 OF 110

DATE: _____
 REVISION DESCRIPTION: _____
 BY: _____



GENERAL NOTES

1. SEE L24 FOR COMPLETE PLANT LIST
2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

RG-4

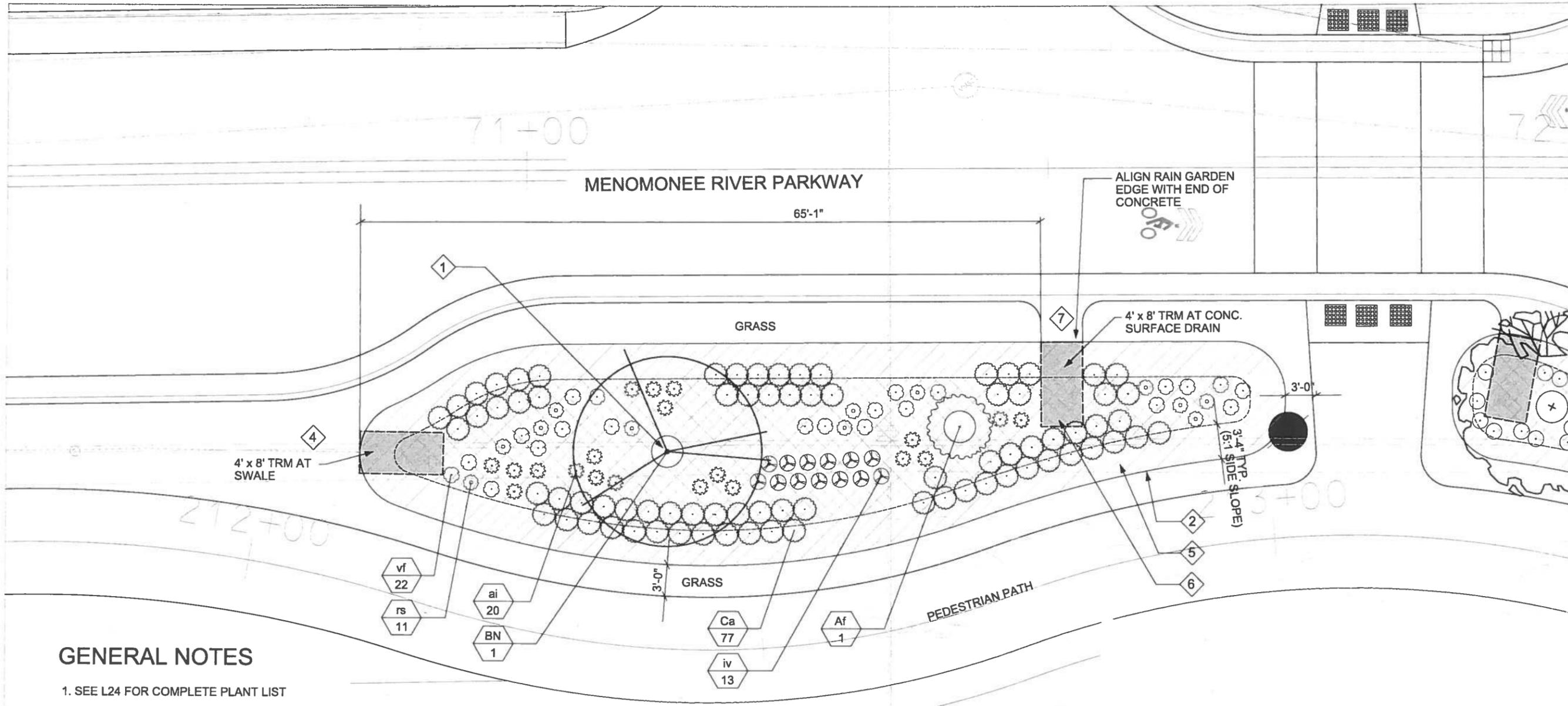
PLANT LIST - RAIN GARDEN 4		
Key	Botanical Name	Common Name
Deciduous Trees		
UA	<i>Ulmus americana</i> 'Princeton'	Princeton American Elm
Perennials		
sl	<i>Silphium laciniatum</i>	Compass Plant
pm-2	Perennial Mix:	
	<i>Agastache foeniculum</i>	Anise Hyssop
	<i>Aster prenanthoides</i>	Crooked-stem Aster
	<i>Desmodium canadense</i>	Canada Tick Trefoil
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Helenium autumnale</i>	Sneezeweed
	<i>Lobelia cardinalis</i>	Cardinal Flower



MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES
 Architecture, Engineering & Environmental Services Section
 CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208



DATE	REVISION DESCRIPTION	DRAWN BY	CHECKED BY
		KSD	KSD
SCALE:	1" = 10'		
DATE:	7/03/14		
PROJECT TITLE:	MENOMONEE RIVER PARKWAY		
SHEET DESCRIPTION:	PLANTING ENLARGEMENT PLAN		
SITE NO.		BUILDING NO.	
PROJECT NO.	P280-13626		
SHEET NO.	L8	FILE NO.	8 OF 110



GENERAL NOTES

1. SEE L24 FOR COMPLETE PLANT LIST
2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

PLANT LIST - RAIN GARDEN 5		
Key	Botanical Name	Common Name
Deciduous Trees		
BN	<i>Betula nigra</i>	River Birch
Deciduous Shrubs		
Af	<i>Amorpha fruticosa</i>	Desert False Indigo
Ca	<i>Ceanothus americanus</i>	New Jersey Tea
Perennials		
ai	<i>Asclepias incarnata</i>	Marsh Milkweed
iv	<i>Iris virginica shrevei</i>	Southern Blue Flag Iris
rs	<i>Rudbeckia subtomentosa</i>	Sweet Black-eyed Susan
vf	<i>Vernonia fasciculata</i>	Ironweed



BY: _____
DATE: _____

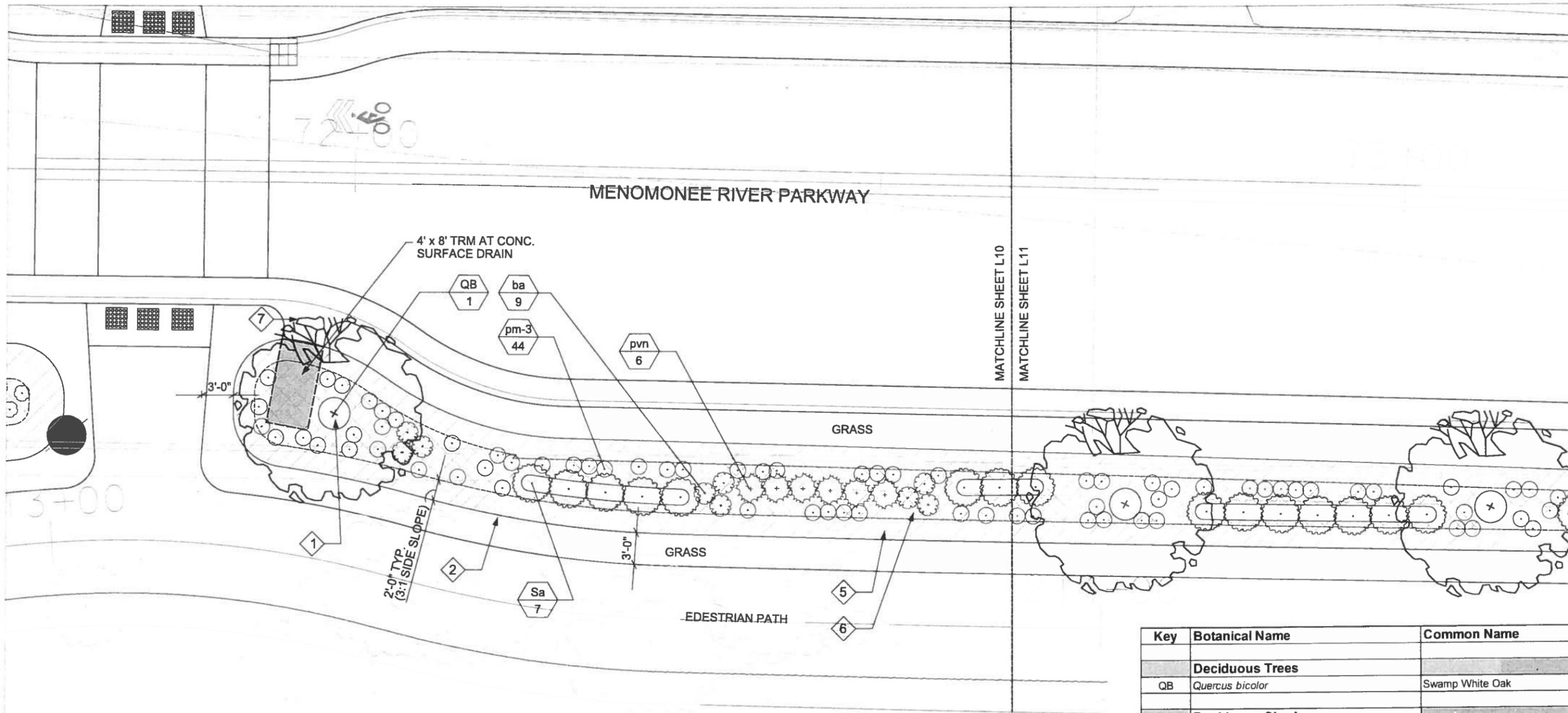
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DATE: _____

DRAWN BY: KSD
SCALE: 1" = 10'
PROJECT TITLE: MENOMONEE RIVER PARKWAY

CHECKED BY: KSD
DATE: 7/03/14
SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
BUILDING NO. RG-5

PROJECT NO. P280-13626
SHEET NO. L9
FILE NO. 9 OF 110

MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES
Architecture, Engineering & Environmental Services Section
CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208



PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 UNUSED
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

RG-6

Key	Botanical Name	Common Name
Deciduous Trees		
QB	<i>Quercus bicolor</i>	Swamp White Oak
Deciduous Shrubs		
Sa	<i>Symphoricarpos albus</i>	Snowberry
Grasses and Sedges		
pvn	<i>Panicum virgatum</i> 'Northwind'	Northwind Switch Grass
Perennials		
ba	<i>Baptisia australis</i>	Blue False Indigo
pm-3	Perennial Mix:	
	<i>Liatris spicata</i>	Marsh Blazingstar
	<i>Monarda fistulosa</i>	Wild Bergamot
	<i>Rudbeckia fulgida</i>	Orange Coneflower
	<i>Solidago rigida</i>	Stiff Goldenrod
	<i>Veronica fasciculata</i>	Ironweed
	<i>Veronicastrum virginicum</i>	Culver's Root



BY: _____

REVISION DESCRIPTION: _____

DATE: _____

DRAWN BY: KSD

CHECKED BY: KSD

SCALE: 1"=10'

DATE: 7/03/14

PROJECT TITLE: MENOMONEE RIVER PARKWAY

SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN RG-6

SITE NO. _____

BUILDING NO. _____

PROJECT NO. P280-13626

SHEET NO. L10

OF 110

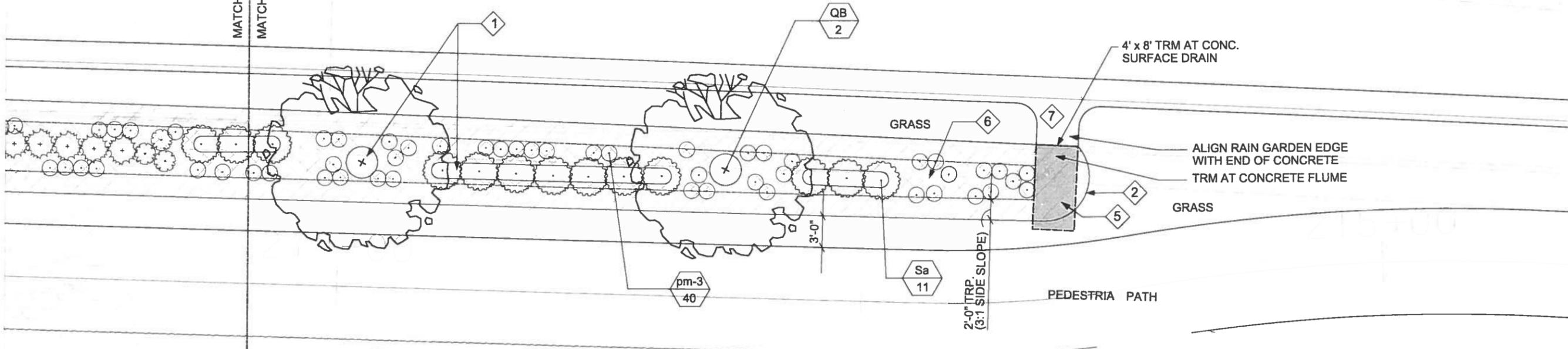
FILE NO. _____

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 CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208

PARKWAY

MENOMONEE RIVER PARKWAY

MATCHLINE SHEET L10
MATCHLINE SHEET L11



RG-6

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 UNUSED
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

Key	Botanical Name	Common Name
Deciduous Trees		
QB	<i>Quercus bicolor</i>	Swamp White Oak
Deciduous Shrubs		
Sa	<i>Symphoricarpos albus</i>	Snowberry
Grasses and Sedges		
pvn	<i>Panicum virgatum</i> 'Northwind'	Northwind Switch Grass
Perennials		
ba	<i>Baptisia australis</i>	Blue False Indigo
pm-3	Perennial Mix:	
	<i>Liatris spicata</i>	Marsh Blazingstar
	<i>Monarda fistulosa</i>	Wild Bergamot
	<i>Rudbeckia fulgida</i>	Orange Coneflower
	<i>Solidago rigida</i>	Stiff Goldenrod
	<i>Vernonia fasciculata</i>	Ironweed
	<i>Veronicastrum virginicum</i>	Culver's Root



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PROJECT TITLE: MENOMONEE RIVER PARKWAY
SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
RG-6

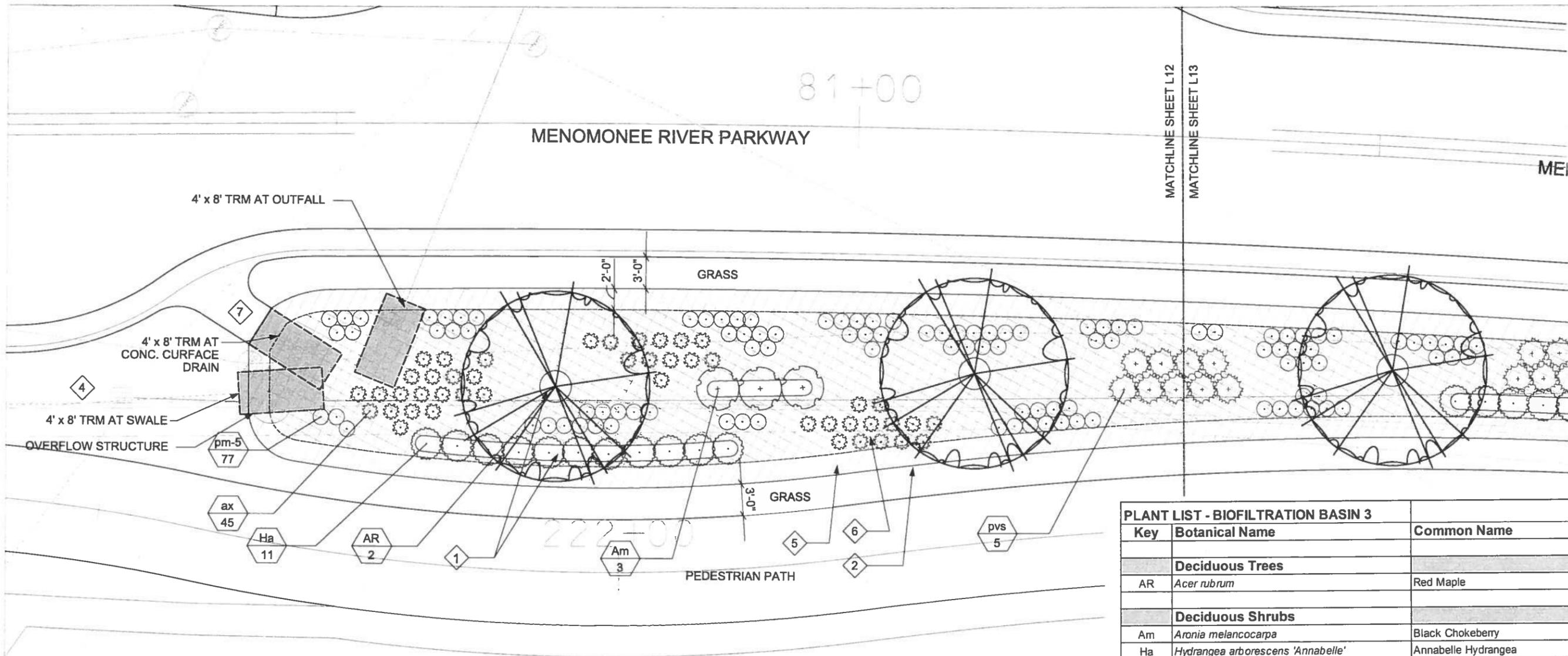
PROJECT NO. P280-13626

SHEET NO. L11
11 OF 110
FILE NO.

BY: _____
DATE: _____
REVISION DESCRIPTION: _____

SCALE: 1"=10'
DATE: 7/03/14

DRAWN BY: KSD
CHECKED BY: KSD



MENOMONEE RIVER PARKWAY

81+00

B-3

222+00

MATCHLINE SHEET L12
MATCHLINE SHEET L13

MEI

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE ENGINEERING DRAWINGS FOR BIOFILTRATION DETAILS

PLANT LIST - BIOFILTRATION BASIN 3		
Key	Botanical Name	Common Name
Deciduous Trees		
AR	<i>Acer rubrum</i>	Red Maple
Deciduous Shrubs		
Am	<i>Aronia melanocarpa</i>	Black Chokeberry
Ha	<i>Hydrangea arborescens 'Annabelle'</i>	Annabelle Hydrangea
Hk	<i>Hypericum kalmianum</i>	Kalm's St. Johnswort
Grasses and Sedges		
pvs	<i>Panicum virgatum 'Shenandoah'</i>	Switch Grass
Perennials		
ax	<i>Athyrium filix-femina</i>	Lady Fern
pm-3	Perennial Mix:	
	<i>Liatris spicata</i>	Marsh Blazingstar
	<i>Monarda fistulosa</i>	Wild Bergamot
	<i>Rudbeckia fulgida</i>	Orange Coneflower
	<i>Solidago rigida</i>	Stiff Goldenrod
	<i>Vernonia fasciculata</i>	Ironweed
	<i>Veronicastrum virginicum</i>	Culver's Root
pm-5	Perennial Mix:	
	<i>Aquilegia canadensis</i>	Wild Columbine
	<i>Aster Drummondii</i>	Drummond's Aster
	<i>Campanula americana</i>	American Bellflower
	<i>Cimicifuga racemosa</i>	Black Snakeroot
	<i>Geranium maculatum</i>	Spotted Geranium
	<i>Solidago ulmifolia</i>	Elm-leaf Goldenrod



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Architecture, Engineering & Environmental Services Section
CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208



DATE: _____ REVISION DESCRIPTION: _____

BY: _____

SCALE: 1" = 10'

DATE: 7/03/14

PROJECT TITLE: MENOMONEE RIVER PARKWAY

SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN B-3

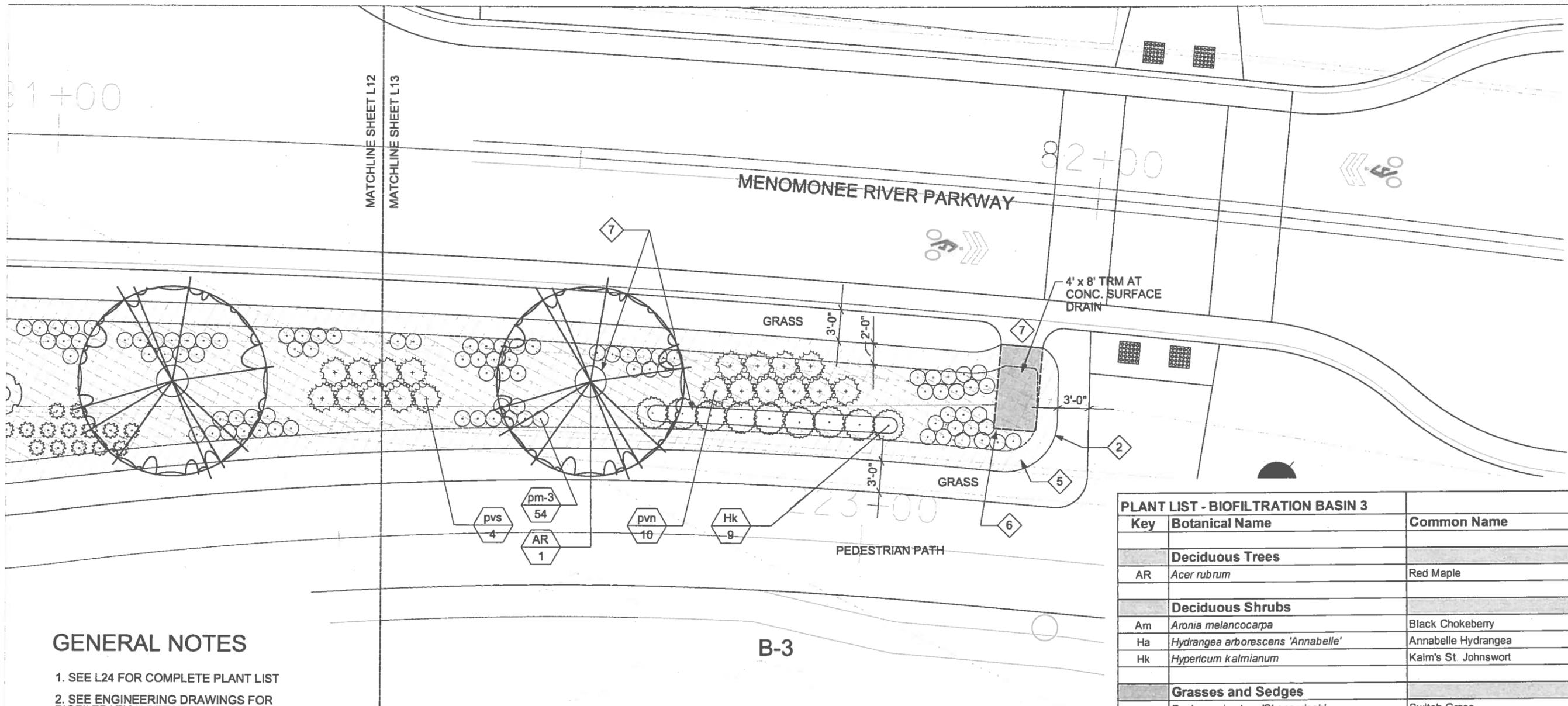
SITE NO. _____ BUILDING NO. _____

PROJECT NO. P280-13626

SHEET NO. L12 OF 110

FILE NO. _____

DRAWN BY: KSD
CHECKED BY: KSD



GENERAL NOTES

1. SEE L24 FOR COMPLETE PLANT LIST
2. SEE ENGINEERING DRAWINGS FOR BIOFILTRATION DETAILS

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 UNUSED
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

PLANT LIST - BIOFILTRATION BASIN 3		
Key	Botanical Name	Common Name
Deciduous Trees		
AR	<i>Acer rubrum</i>	Red Maple
Deciduous Shrubs		
Am	<i>Aronia melanocarpa</i>	Black Chokeberry
Ha	<i>Hydrangea arborescens</i> 'Annabelle'	Annabelle Hydrangea
Hk	<i>Hypericum kalmianum</i>	Kalm's St. Johnswort
Grasses and Sedges		
pvs	<i>Panicum virgatum</i> 'Shenandoah'	Switch Grass
Perennials		
ax	<i>Athyrium filix-femina</i>	Lady Fern
pm-3	Perennial Mix:	
	<i>Liatris spicata</i>	Marsh Blazingstar
	<i>Monarda fistulosa</i>	Wild Bergamot
	<i>Rudbeckia fulgida</i>	Orange Coneflower
	<i>Solidago rigida</i>	Stiff Goldenrod
	<i>Vernonia fasciculata</i>	Ironweed
	<i>Veronicastrum virginicum</i>	Culver's Root
pm-5	Perennial Mix:	
	<i>Aquilegia canadensis</i>	Wild Columbine
	<i>Aster Drummondii</i>	Drummond's Aster
	<i>Campanula americana</i>	American Bellflower
	<i>Cimicifuga racemosa</i>	Black Snakeroot
	<i>Geranium maculatum</i>	Spotted Geranium
	<i>Solidago ulmifolia</i>	Elm-leaf Goldenrod



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CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208

MILWAUKEE COUNTY

REVISION DESCRIPTION: _____
DATE: _____

DRAWN BY: KSD
SCALE: 1" = 10'
PROJECT TITLE: MENOMONEE RIVER PARKWAY
SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN B-3

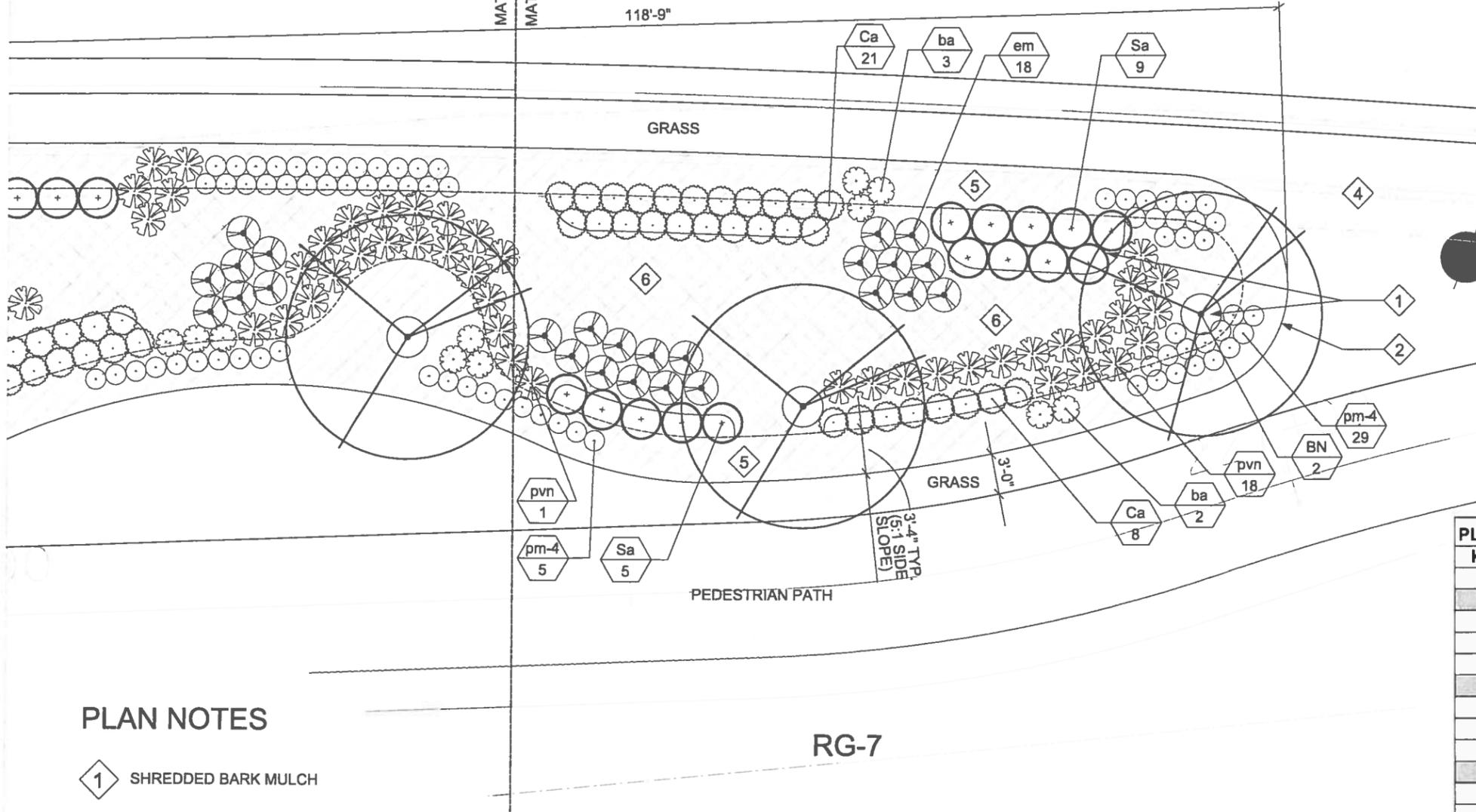
CHECKED BY: KSD
DATE: 7/03/14
SITE NO.: _____
BUILDING NO.: _____
PROJECT NO.: P280-13626
SHEET NO.: L13
FILE NO.: 13 OF 110

RKWAY

MATCHLINE SHEET L14
MATCHLINE SHEET L15

118'-9"

86+00
MENOMONEE RIVER PARKWAY



PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 UNUSED
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 UNUSED

GENERAL NOTES

1. SEE L24 FOR COMPLETE PLANT LIST
2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLANT LIST - RAIN GARDEN 7

Key	Botanical Name	Common Name
Deciduous Trees		
BN	<i>Betula nigra</i>	River Birch
QB	<i>Quercus bicolor</i>	Swamp White Oak
Deciduous Shrubs & Vines		
Ca	<i>Ceanothus americanus</i>	New Jersey Tea
Sa	<i>Symphoricarpos albus</i>	Snowberry
Grasses and Sedges		
pvn	<i>Panicum virgatum</i> 'Northwind'	Northwind Switch Grass
Perennials		
ba	<i>Baptisia australis</i>	Blue False Indigo
em	<i>Eupatorium maculatum</i> 'Gateway'	Gateway Spotted Joe-pye Weed
pm-4	Perennial Mix:	
	<i>Aster laevis</i>	Sky Blue Aster
	<i>Helenium autumnalis</i>	Sneezeweed
	<i>Liatris pycnostachya</i>	Prairie Blazingstar
	<i>Penstemon digitalis</i>	Smooth Penstemon
	<i>Phlox pilosa</i>	Prairie Phlox
	<i>Physotstegia virginiana</i>	Obedient Plant



DATE: _____
 REVISION DESCRIPTION: _____
 BY: _____

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 Architecture, Engineering &
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SCALE: 1" = 10'
 DATE: 7/03/14
 DRAWN BY: KSD
 CHECKED BY: KSD

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
 RG-7

SITE NO. _____
 BUILDING NO. _____

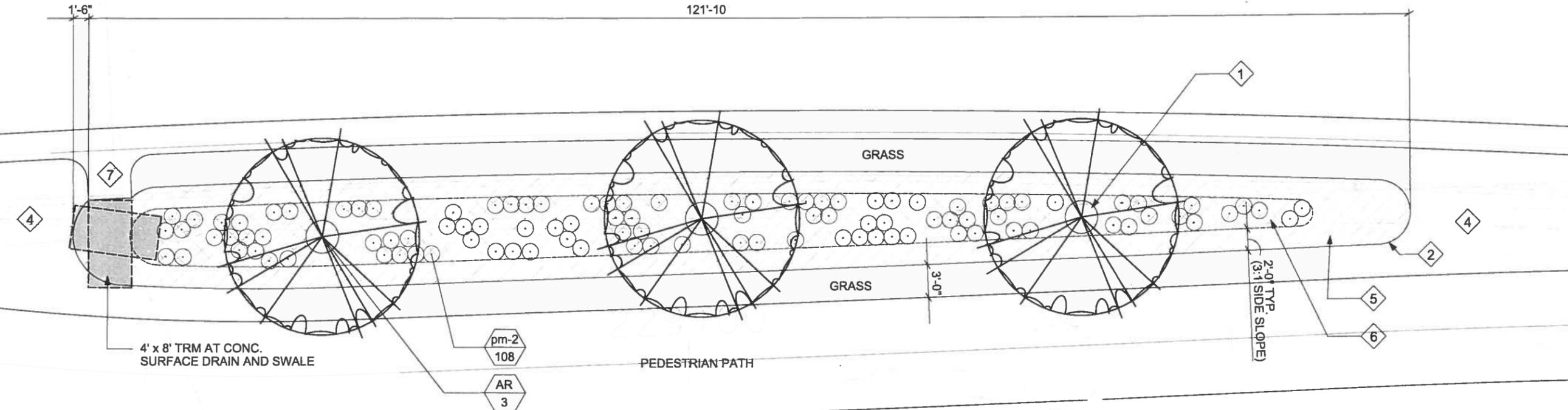
PROJECT NO. P280-13626

SHEET NO. L15
 15 OF 110
 FILE NO. _____

MENOMONEE RIVER PARKWA

88+00

121'-10"



RG-8

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLANT LIST - RAIN GARDEN 8		
Key	Botanical Name	Common Name
Deciduous Trees		
AR	<i>Acer rubrum</i>	Red Maple
Perennials		
pm-2	Perennial Mix:	
	<i>Agastache foeniculum</i>	Anise Hyssop
	<i>Aster prenanthoides</i>	Crooked-stem Aster
	<i>Desmodium canadense</i>	Canada Tick Trefoil
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Helenium autumnale</i>	Sneezeweed
	<i>Lobelia cardinalis</i>	Cardinal Flower



BY: _____

REVISION DESCRIPTION: _____

DATE: _____

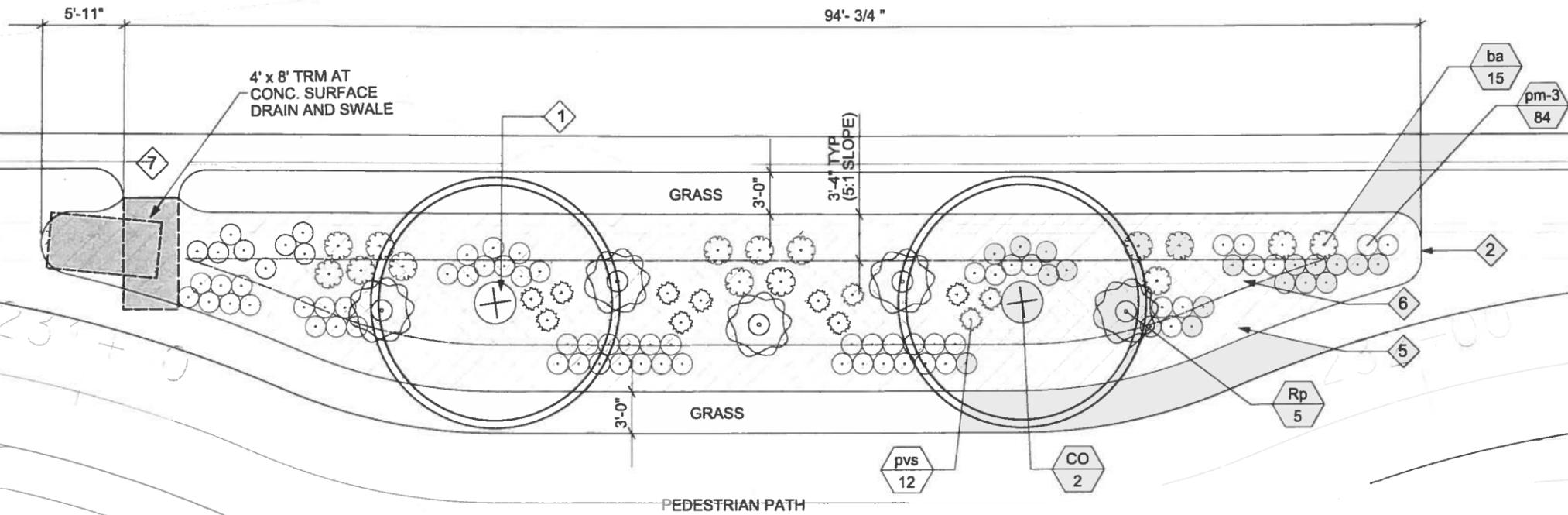
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SCALE:	1" = 10'	DATE:	7/03/14
PROJECT TITLE:	MENOMONEE RIVER PARKWAY		
SHEET DESCRIPTION:	PLANTING ENLARGEMENT PLAN RG-8		
SITE NO.	P280-13626		
BUILDING NO.			
SHEET NO.	L16		
FILE NO.	16 OF 110		

90+00

91+00

MENOMONEE RIVER PARKWAY



RG-9

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLANT LIST - RAIN GARDEN 9		
Key	Botanical Name	Common Name
Deciduous Trees		
CO	<i>Celtis occidentalis</i>	Hackberry
Deciduous Shrubs & Vines		
Rp	<i>Rosa palustris</i>	Swamp Rose
Grasses and Sedges		
pvs	<i>Panicum virgatum 'Shenandoah'</i>	Shenandoah Switch Grass
Perennials		
ba	<i>Baptisia australis</i>	Blue False Indigo
pm-3	Perennial Mix:	
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Helenium autumnale</i>	Sneezeweed
	<i>Iris virginica shrevei</i>	Southern Blue Flag Iris
	<i>Liatis spicata</i>	Marsh Blazingstar
	<i>Physostegia virginiana</i>	Obedient Plant
	<i>Rudbeckia laciniata</i>	Wild Golden Glow



DATE: _____ REVISION DESCRIPTION: _____ BY: _____

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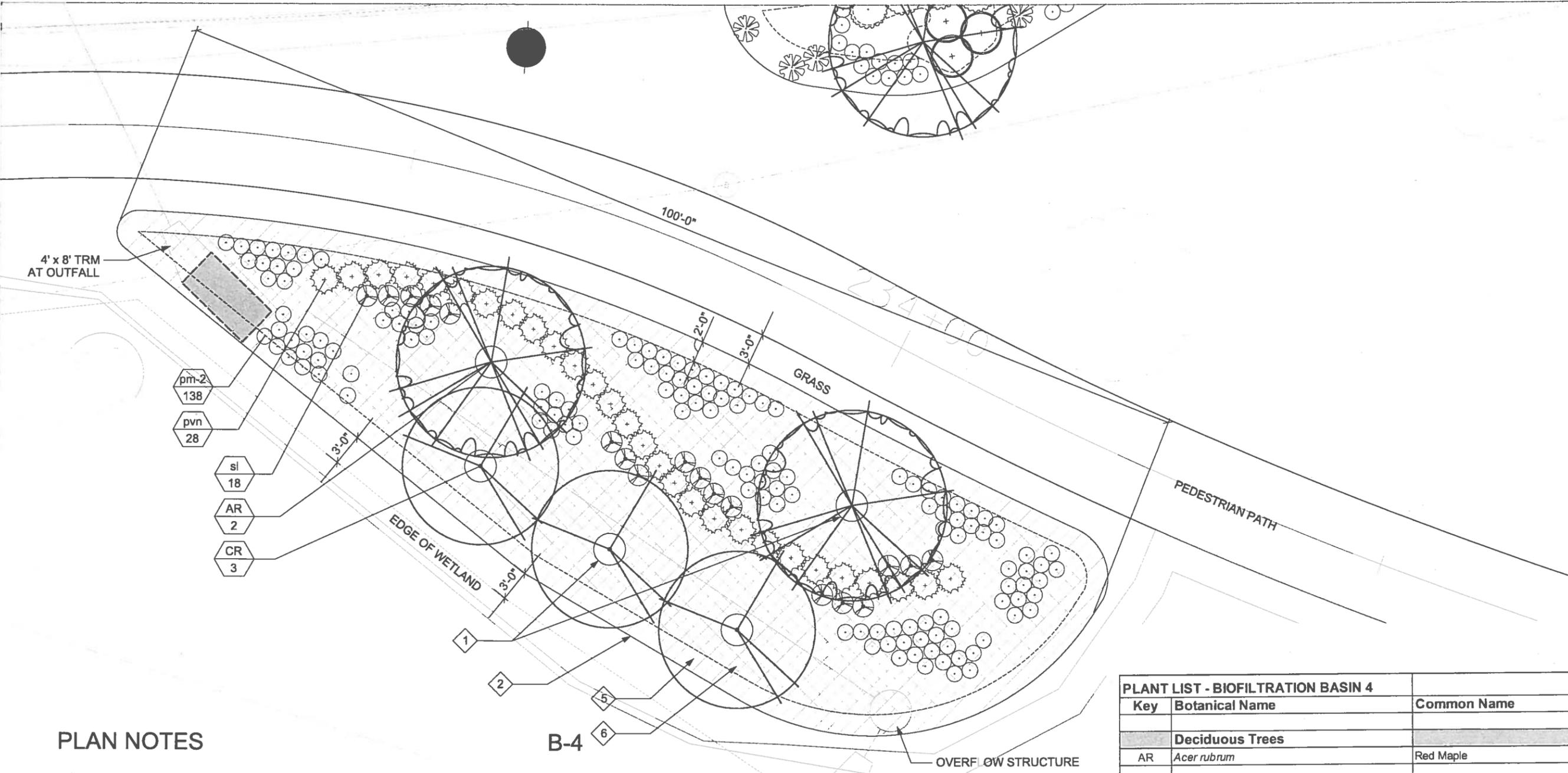


SCALE: 1" = 10'
 DATE: 7/03/14
 DRAWN BY: KSD
 CHECKED BY: KSD

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
 RG-9

SITE NO.: _____ BUILDING NO.: _____
 PROJECT NO: P280-13626

SHEET NO: L17
 FILE NO: 17 OF 110



PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 UNUSED
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 UNUSED

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE ENGINEERING DRAWINGS FOR BIOFILTRATION DETAILS

PLANT LIST - BIOFILTRATION BASIN 4		
Key	Botanical Name	Common Name
Deciduous Trees		
AR	<i>Acer rubrum</i>	Red Maple
Ornamental Trees		
CR	<i>Comus alternifolia</i>	Pagoda Dogwood
Grasses and Sedges		
pvn	<i>Panicum virgatum</i> 'Northwind'	Northwind Switch Grass
Perennials		
sl	<i>Silphium laciniatum</i>	Compass Plant
pm-2	Perennial Mix:	
	<i>Agastache foeniculum</i>	Anise Hyssop
	<i>Aster prenanthoides</i>	Crooked-stem Aster
	<i>Desmodium canadense</i>	Canada Tick Trefoil
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Helenium autumnale</i>	Sneezeweed
	<i>Lobelia cardinalis</i>	Cardinal Flower



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 CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208



DATE: _____ REVISION DESCRIPTION: _____ BY: _____

SCALE: 1" = 10' PROJECT TITLE: MENOMONEE RIVER PARKWAY SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN B-4

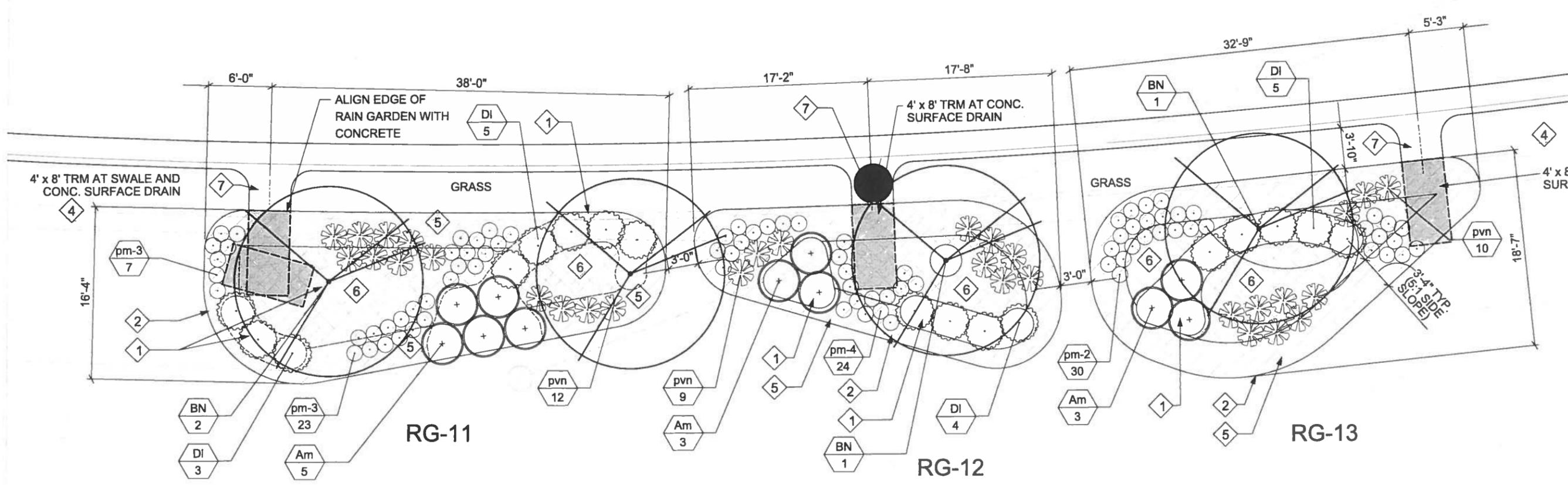
DRAWN BY: KSD CHECKED BY: KSD

DATE: 7/03/14

SHEET NO. L18 PROJECT NO. P280-13626 BUILDING NO. FILE NO. 18 OF 110

94+00

MENOMONEE RIVER PARKWAY



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 CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208



BY: _____
 DATE: _____
 REVISION DESCRIPTION: _____

SCALE: 1" = 10'
 DATE: 7/03/14
 DRAWN BY: KSD
 CHECKED BY: KSD

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
 RG-11, RG-12, RG-13

SITE NO. _____ BUILDING NO. _____
 PROJECT NO. P280-13626
 SHEET NO. L20 OF 110
 FILE NO. _____

GENERAL NOTES

- SEE L24 FOR COMPLETE PLANT LIST
- SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

PLANT LIST - RAIN GARDEN 11		
Key	Botanical Name	Common Name
Deciduous Trees		
BN	<i>Betula nigra</i>	River Birch
Deciduous Shrubs & Vines		
Am	<i>Aronia melanocarpa</i>	Black Chokeberry
DI	<i>Diervilla lonicera</i>	Bush Honeysuckle
Grasses and Sedges		
pvn	<i>Panicum virgatum 'Northwind'</i>	Northwind Switch Grass
Perennials		
pm-3	Perennial Mix:	
	<i>Liatris spicata</i>	Marsh Blazingstar
	<i>Monarda fistulosa</i>	Wild Bergamot
	<i>Rudbeckia fulgida</i>	Orange Coneflower
	<i>Solidago rigida</i>	Stiff Goldenrod
	<i>Veronica fasciculata</i>	Ironweed
	<i>Veronicastrum virginicum</i>	Culver's Root

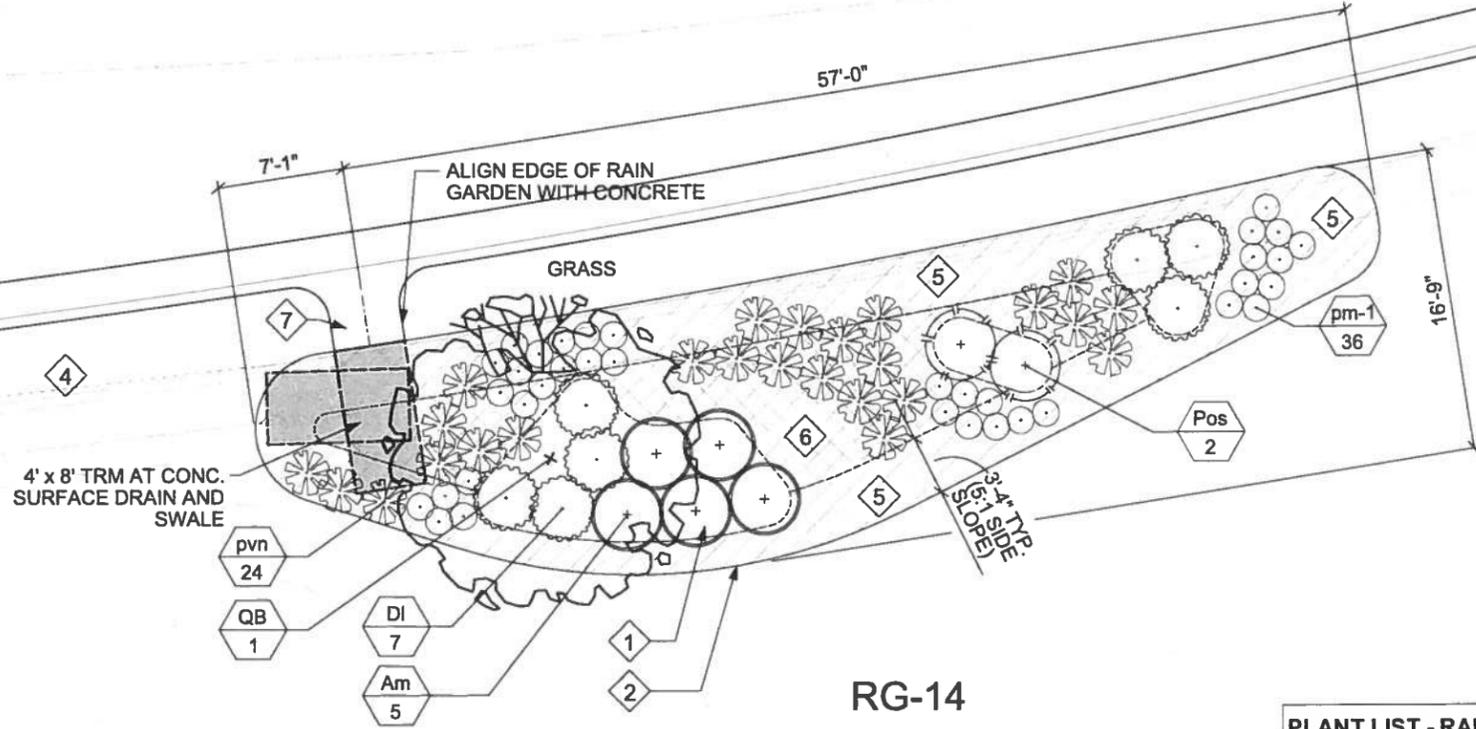
PLANT LIST - RAIN GARDEN 12		
Key	Botanical Name	Common Name
Deciduous Trees		
BN	<i>Betula nigra</i>	River Birch
Deciduous Shrubs & Vines		
Am	<i>Aronia melanocarpa</i>	Black Chokeberry
DI	<i>Diervilla lonicera</i>	Bush Honeysuckle
Grasses and Sedges		
pvn	<i>Panicum virgatum 'Northwind'</i>	Northwind Switch Grass
Perennials		
pm-4	Perennial Mix:	
	<i>Aster laevis</i>	Sky Blue Aster
	<i>Helenium autumnalis</i>	Sneezeweed
	<i>Liatris pycnostachya</i>	Prairie Blazingstar
	<i>Penstemon digitalis</i>	Smooth Penstemon
	<i>Phlox pilosa</i>	Prairie Phlox
	<i>Physotegia virginiana</i>	Obedient Plant

PLANT LIST - RAIN GARDEN 13		
Key	Botanical Name	Common Name
Deciduous Trees		
BN	<i>Betula nigra</i>	River Birch
Deciduous Shrubs & Vines		
Am	<i>Aronia melanocarpa</i>	Black Chokeberry
DI	<i>Diervilla lonicera</i>	Bush Honeysuckle
Grasses and Sedges		
pvn	<i>Panicum virgatum 'Northwind'</i>	Northwind Switch Grass
Perennials		
pm-2	Perennial Mix:	
	<i>Agastache foeniculum</i>	Anise Hyssop
	<i>Aster prenanthoides</i>	Crooked-stem Aster
	<i>Desmodium canadense</i>	Canada Tick Trefoil
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Helenium autumnale</i>	Sneezeweed
	<i>LOBELIA cardinalis</i>	Cardinal Flower



95+00

MENOMONEE RIVER PARKWAY



RG-14

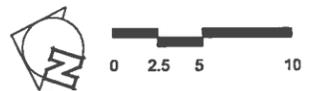
PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLANT LIST - RAIN GARDEN 14		
Key	Botanical Name	Common Name
Deciduous Trees		
UA	<i>Ulmus americana</i> 'Princeton'	Princeton American Elm
Deciduous Shrubs & Vines		
Am	<i>Aronia melanocarpa</i>	Black Chokeberry
DI	<i>Diervilla lonicera</i>	Bush Honeysuckle
Pos	<i>Physocarpus opulifolius</i> 'Seward'	Summer Wine Ninebark
Grasses and Sedges		
pvn	<i>Panicum virgatum</i> 'Northwind'	Northwind Switch Grass
Perennials		
pm-1	Perennial Mix:	
	<i>Asclepias incarnata</i>	Rose Milkweed
	<i>Aster nova-angliae</i>	New England Aster
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Parthenium integrifolia</i>	Wild Quinine
	<i>Rudbeckia hirta</i>	Black-Eyed Susan
	<i>Solidago idellii</i>	Ridell's Goldenrod



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 Architecture, Engineering & Environmental Services Section
 CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208

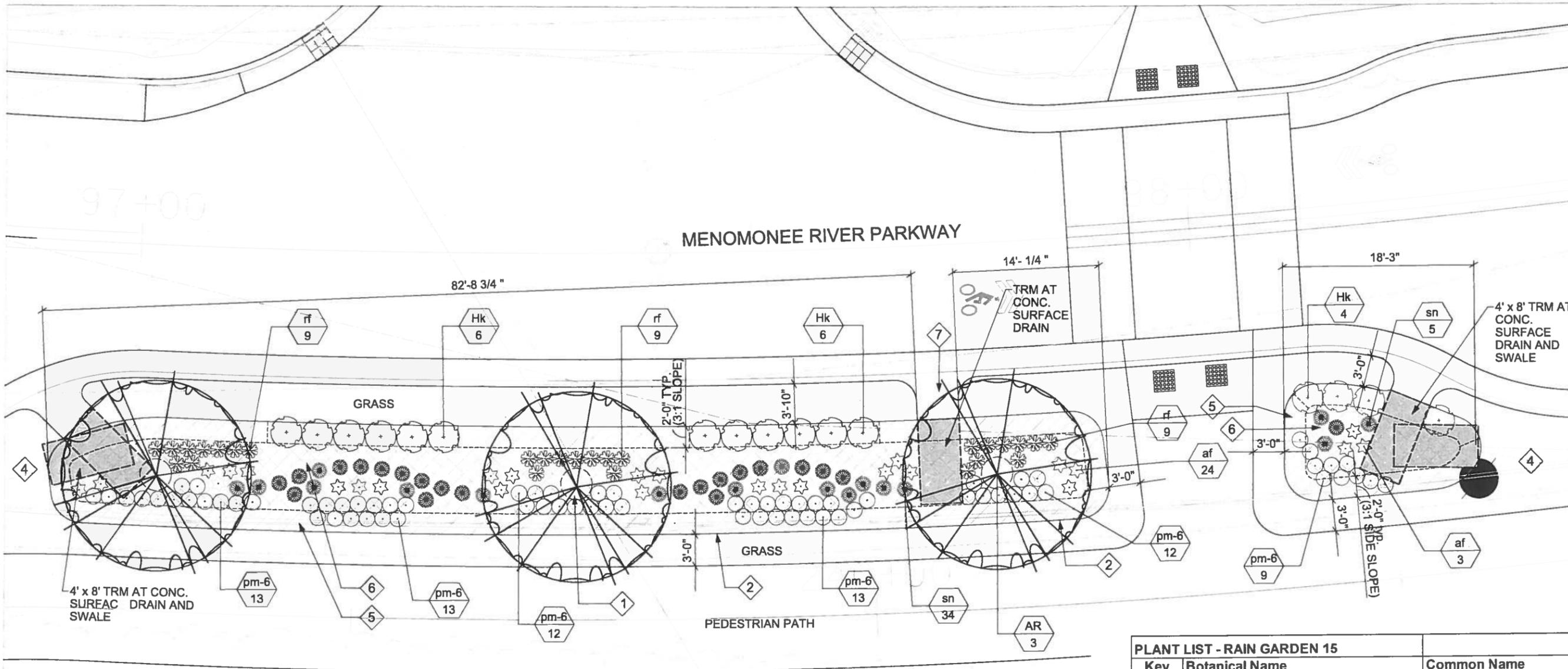


SCALE: 1" = 10'
 DATE: 7/03/14
 DRAWN BY: KSD
 CHECKED BY: KSD

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
 RG-14

SITE NO.
 BUILDING NO.
 PROJECT NO. P280-13626

SHEET NO. L21
 FILE NO. 21 OF 110



RG-15

PLAN NOTES

- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 INFILTRATION SWALE; SEE ENGINEERING DRAWINGS
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

PLANT LIST - RAIN GARDEN 15		
Key	Botanical Name	Common Name
Deciduous Trees		
AR	<i>Acer rubrum</i>	Red Maple
Deciduous Shrubs & Vines		
Hk	<i>Hypericum kalmianum</i>	Kalm's St. Johnswort
Grasses and Sedges		
sn	<i>Sorghastrum nutans</i>	Indian Grass
Perennials		
af	<i>Agastache foeniculum</i>	Anise Hyssop
rf	<i>Rudbeckia fulgida</i>	Orange Coneflower
pm-6	Perennial Mix:	
	<i>Anemone canadensis</i>	Canada Anemone
	<i>Heuchera richardsonii</i>	Prairie Alumroot
	<i>Lobelia cardinalis</i>	Cardinal Flower
	<i>Phlox glaberrima</i>	Marsh Phlox
	<i>Thalictrum dasycarpum</i>	Meadow Rue
	<i>Zizia aurea</i>	Golden Alexanders



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CITY CAMPUS 2711 W. WELLS ST. SECOND FLOOR MILWAUKEE, WI 53208

MILWAUKEE COUNTY

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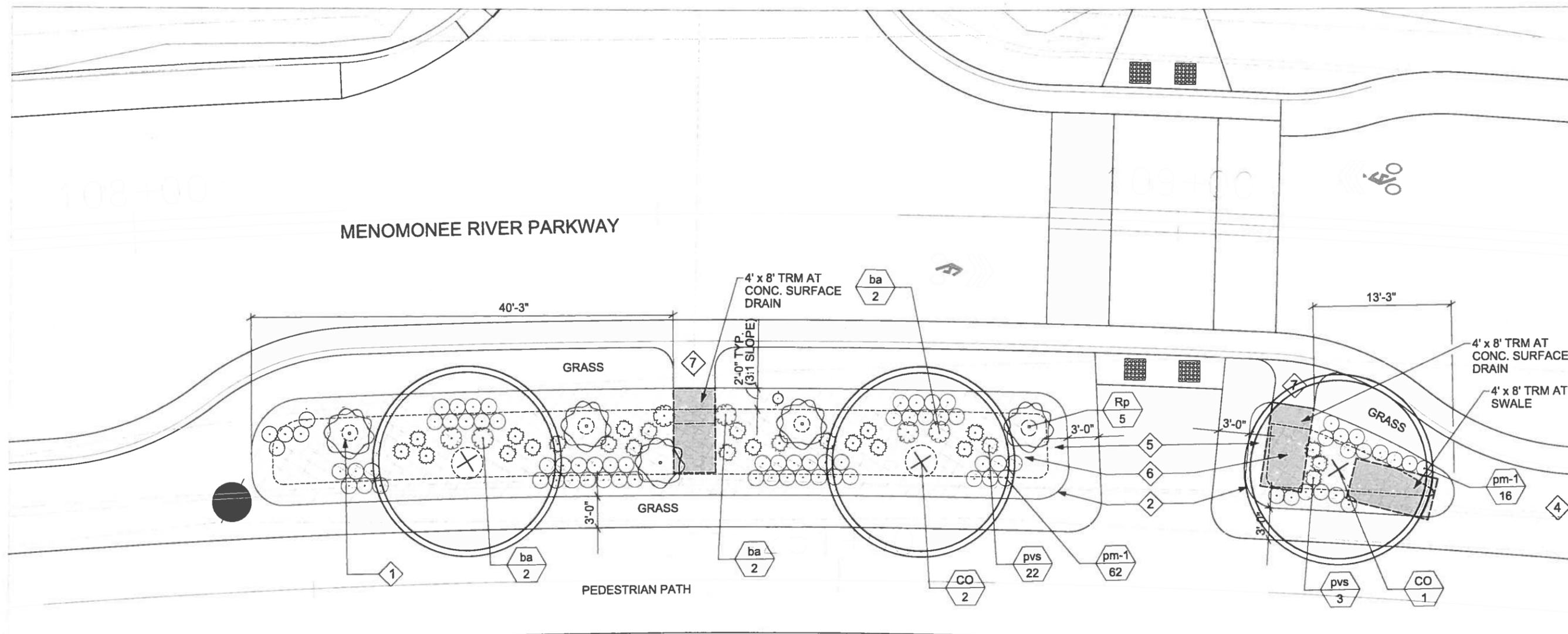
PROJECT TITLE: MENOMONEE RIVER PARKWAY
SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
RG-15

SITE NO. _____ BUILDING NO. _____

PROJECT NO. P280-13626

SHEET NO. L22
FILE NO. 22 OF 110

MENOMONEE RIVER PARKWAY



PLAN NOTES

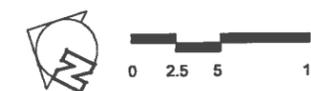
- 1 SHREDDED BARK MULCH
- 2 SHOVEL CUT EDGING; SEE L25 FOR DETAIL
- 3 UNUSED
- 4 UNUSED
- 5 NATIVE VEGETATED MAT - TYPE A; SEE SPEC. SECTION 02926
- 6 NATIVE VEGETATED MAT - TYPE B OR C; SEE SPEC. SECTION 02926
- 7 CONCRETE SURFACE DRAIN; SEE ENGINEERING DRAWINGS

GENERAL NOTES

- 1. SEE L24 FOR COMPLETE PLANT LIST
- 2. SEE L25 FOR TYPICAL RAIN GARDEN SECTION

RG-16

PLANT LIST - RAIN GARDEN 16		
Key	Botanical Name	Common Name
Deciduous Trees		
CO	<i>Celtis occidentalis</i>	Hackberry
Deciduous Shrubs & Vines		
Rp	<i>Rosa palustris</i>	Swamp Rose
Grasses and Sedges		
pvs	<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switch Grass
Perennials		
ba	<i>Baptisia australis</i>	Blue False Indigo
pm-1	Perennial Mix:	
	<i>Asclepias incarnata</i>	Rose Milkweed
	<i>Aster nova-angliae</i>	New England Aster
	<i>Echinacea purpurea</i>	Purple Coneflower
	<i>Parthenium integrifolia</i>	Wild Quinine
	<i>Rudbeckia hirta</i>	Black-Eyed Susan
	<i>Solidago ridellii</i>	Ridell's Goldenrod



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MILWAUKEE COUNTY

PROJECT TITLE: MENOMONEE RIVER PARKWAY
 SHEET DESCRIPTION: PLANTING ENLARGEMENT PLAN
 RG-16

SCALE: 1" = 10'
 DATE: 7/03/14

DRAWN BY: KSD
 CHECKED BY: KSD

PROJECT NO. P280-13626
 SHEET NO. L23
 BUILDING NO.
 FILE NO. 23 OF 110

BY: _____
 REVISION DESCRIPTION: _____
 DATE: _____

Plant List						
Key	Botanical Name	Common Name	Size	Spec	Comments	Total Quantity
Deciduous Trees						
AR	<i>Acer rubrum</i>	Red Maple	2.5" cal.	B&B	Single, straight leader	11
BN	<i>Betula nigra</i>	River Birch	2.5" cal.	B&B	Multistem, min. 3 leaders	11
CO	<i>Celtis occidentalis</i>	Hackberry	2.5" cal.	B&B	Single, straight leader	8
QB	<i>Quercus bicolor</i>	Swamp White Oak	2.5" cal.	B&B	Single, straight leader	6
UA	<i>Ulmus americana</i> 'Princeton'	Princeton American Elm	2.5" cal.	B&B	Single, straight leader	5
Ornamental Trees						
AL	<i>Amelanchier laevis</i>	Allegheny Serviceberry	6' ht.	B&B	Multistem, min. 3 leaders	7
CR	<i>Comus alternifolia</i>	Pagoda Dogwood	6' ht.	B&B	Multistem, min. 3 leaders	3
Deciduous Shrubs & Vines						
Af	<i>Amorpha fruticosa</i>	Desert False Indigo	3 gal.	Cont.	Space 10' on center	11
Am	<i>Aronia melanocarpa</i>	Black Chokeberry	3 gal.	Cont.	Space 4' on center	32
Ca	<i>Ceanothus americanus</i>	New Jersey Tea	1 gal.	Cont.	Space 2' on center	123
Cs	<i>Comus sericea/alba</i>	Redosier Dogwood	3 gal.	Cont.	Space as indicated on plans	19
DI	<i>Diervilla lonicera</i>	Bush Honeysuckle	3 gal.	Cont.	Space 3.5' on center	52
Ha	<i>Hydrangea arborescens</i> 'Annabelle'	Annabelle Hydrangea	3 gal.	Cont.	Space 3' on center	11
Hk	<i>Hypericum kalmianum</i>	Kalm's St. Johnswort	3 gal.	Cont.	Space 3' on center	26
Pos	<i>Physocarpus opulifolius</i> 'Seward'	Summer Wine Ninebark	3 gal.	Cont.	Space 4' on center	16
Rp	<i>Rosa palustris</i>	Swamp Rose	3 gal.	Cont.	Space as indicated on plans	10
Sa	<i>Symphoricarpos albus</i>	Snowberry	3 gal.	Cont.	Space 3' on center	50
Grasses and Sedges						
pvn	<i>Panicum virgatum</i> 'Northwind'	Northwind Switch Grass	1 gal.	Cont.	Space 2.5' on center	205
pvs	<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switch Grass	1 gal.	Cont.	Space 2.5' on center	71
sn	<i>Sorghastrum nutans</i>	Indian Grass	1 gal.	Cont.	Space 2' on center	38

Key	Botanical Name	Common Name	Size	Spec	Comments	
Perennials						
af	<i>Agastache foeniculum</i>	Anise Hyssop	1 gal.	Cont.	Space 2' on center	27
ai	<i>Asclepias incarnata</i>	Marsh Milkweed	1 gal.	Cont.	Space as indicated on plans	20
ax	<i>Athyrium filix-femina</i>	Lady Fern	1 gal.	Cont.	Space 2' on center	45
ba	<i>Baptisia australis</i>	Blue False Indigo	1 gal.	Cont.	Space 2.5' on center	61
em	<i>Eupatorium maculatum</i> 'Gateway'	Gateway Spotted Joe-pye Weed	1 gal.	Cont.	Space 2.5' on center	62
ep	<i>Eupatorium perfoliatum</i>	Boneset	1 gal.	Cont.	Space 2.5' on center	4
iv	<i>Iris virginica shrevei</i>	Southern Blue Flag Iris	1 gal.	Cont.	Space 2' on center	13
ip	<i>Liatris pycnostachya</i>	Prairie Blazingstar	1 gal.	Cont.	Space 1.5' on center	44
rh	<i>Rudbeckia hirta</i>	Black-Eyed Susan	1 gal.	Cont.	Space 1.5' on center	42
rs	<i>Rudbeckia subtomentosa</i>	Sweet Black-eyed Susan	1 gal.	Cont.	Space as indicated on plans	11
rf	<i>Rudbeckia fulgida</i>	Orange Coneflower	1 gal.	Cont.	Space 1.5' on center	27
sl	<i>Silphium laciniatum</i>	Compass Plant	1 gal.	Cont.	Space 2' on center	40
vf	<i>Veronica fasciculata</i>	Ironweed	1 gal.	Cont.	Space as indicated on plans	22
pm-1	Perennial Mix:					
	<i>Asclepias incarnata</i>	Rose Milkweed	2" sq. x 5" deep	Plug	Mix species and arrange randomly in planting area area as indicated; space 1.5' on center	74
	<i>Aster nova-angliae</i>	New England Aster				74
	<i>Echinacea purpurea</i>	Purple Coneflower				74
	<i>Parthenium integrifolia</i>	Wild Quinine				74
	<i>Rudbeckia hirta</i>	Black-Eyed Susan				74
	<i>Solidago ridellii</i>	Ridell's Goldenrod				74
pm-2	Perennial Mix:					
	<i>Agastache foeniculum</i>	Anise Hyssop	2" sq. x 5" deep	Plug	Mix species and arrange randomly in planting area area as indicated; space 1.5' on center	107
	<i>Aster prenanthoides</i>	Crooked-stem Aster				107
	<i>Desmodium canadense</i>	Canada Tick Trefoil				107
	<i>Echinacea purpurea</i>	Purple Coneflower				107
	<i>Helenium autumnale</i>	Sneezeweed				107
	<i>Lobelia cardinalis</i>	Cardinal Flower				107
pm-3	Perennial Mix:					
	<i>Liatris spicata</i>	Marsh Blazingstar	2" sq. x 5" deep	Plug	Mix species and arrange randomly in planting area area as indicated; space 1.5' on center	55
	<i>Monarda fistulosa</i>	Wild Bergamot				55
	<i>Rudbeckia fulgida</i>	Orange Coneflower				55
	<i>Solidago rigida</i>	Stiff Goldenrod				55
	<i>Veronica fasciculata</i>	Ironweed				55
	<i>Veronicastrum virginicum</i>	Culver's Root				55
pm-4	Perennial Mix:					
	<i>Aster laevis</i>	Sky Blue Aster	2" sq. x 5" deep	Plug	Mix species and arrange randomly in planting area area as indicated; space 1.5' on center	24
	<i>Helenium autumnale</i>	Sneezeweed				24
	<i>Liatris pycnostachya</i>	Prairie Blazingstar				24
	<i>Penstemon digitalis</i>	Smooth Penstemon				24
	<i>Phlox pilosa</i>	Prairie Phlox				24
	<i>Physotragia virginiana</i>	Obedient Plant				24
pm-5	Perennial Mix:					
	<i>Aquilegia canadensis</i>	Wild Columbine	2" sq. x 5" deep	Plug	Mix species and arrange randomly in planting area area as indicated; space 1.5' on center	13
	<i>Aster drummondii</i>	Drummond's Aster				13
	<i>Campanula americana</i>	American Bellflower				13
	<i>Cimicifuga racemosa</i>	Black Snakeroot				13
	<i>Geranium maculatum</i>	Spotted Geranium				13
	<i>Solidago ulmifolia</i>	Elm-leaf Goldenrod				13
pm-6	Perennial Mix:					
	<i>Anemone canadensis</i>	Canada Anemone	2" sq. x 5" deep	Plug	Mix species and arrange randomly in planting area area as indicated; space 1.5' on center	12
	<i>Heuchera richardsonii</i>	Prairie Alumroot				12
	<i>Lobelia cardinalis</i>	Cardinal Flower				12
	<i>Phlox glaberrima</i>	Marsh Phlox				12
	<i>Thalictrum dasycarpum</i>	Meadow Rue				12
	<i>Zizia aurea</i>	Golden Alexanders				12

BY: _____

REVISION DESCRIPTION: _____

DATE: _____

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SCALE: NO SCALE
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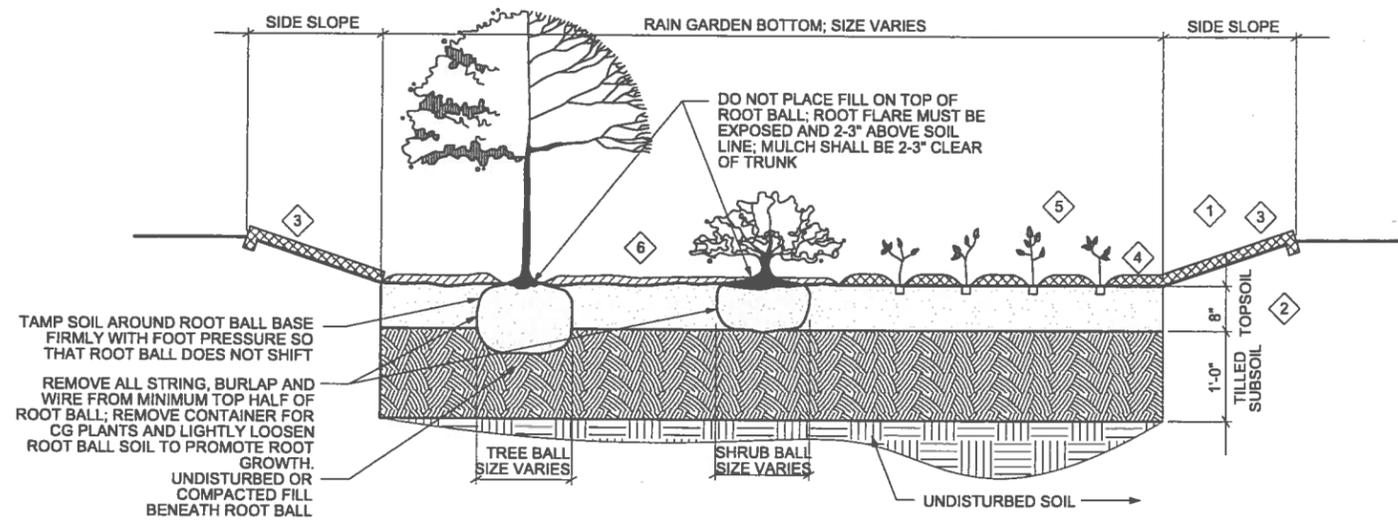
PROJECT TITLE: MEMONEE RIVER PARKWAY
SHEET DESCRIPTION: PLANT LIST

SITE NO. _____ BUILDING NO. _____

PROJECT NO. P280-13626

SHEET NO. L24
24 OF XX

FILE NO. _____



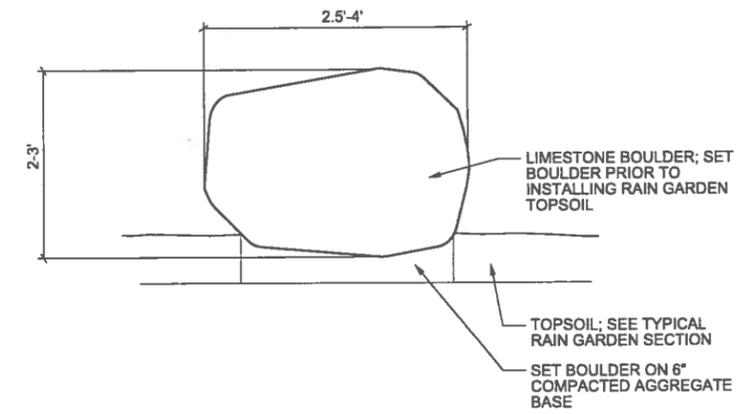
TAMP SOIL AROUND ROOT BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT ROOT BALL DOES NOT SHIFT

REMOVE ALL STRING, BURLAP AND WIRE FROM MINIMUM TOP HALF OF ROOT BALL; REMOVE CONTAINER FOR CG PLANTS AND LIGHTLY LOOSEN ROOT BALL SOIL TO PROMOTE ROOT GROWTH. UNDISTURBED OR COMPACTED FILL BENEATH ROOT BALL

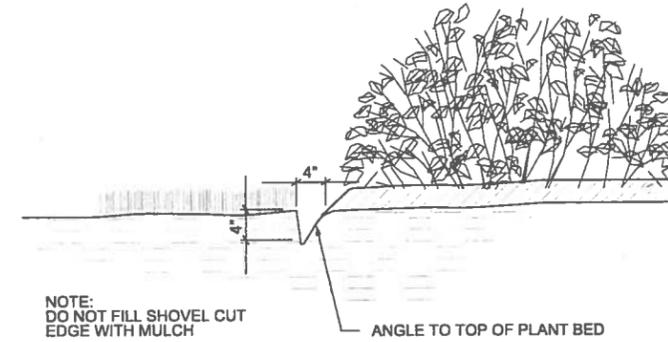
NOTES: SEE SPECIFICATION 02930 FOR MORE INFORMATION

- 1 PONDING DEPTH FOR ALL RAINGARDENS IS 8".
- 2 IMPORTED TOPSOIL; TESTED AND APPROVED
- 3 SIDE SLOPES ARE TYPICALLY 40" WIDE (APPROX. 5:1; SOME RAINGARDENS HAVE STEEPER SIDE SLOPES (3:1) - SEE PLANS FOR LOCATIONS
- 4 NATIVE VEGETATED MAT (NVM) TYPE A ON SIDE SLOPES, TYPE B ON RAIN GARDEN BOTTOM; INSTALL PER MANUFACTURER'S INSTRUCTIONS; CUT TO FIT SHAPE OF RAINGARDEN
- 5 PERENNIAL PLUGS - INSTALL THROUGH NVM; SPACE PER PLANT LIST. WHERE PLUGS ARE PLANTED IN BARE SOIL, APPLY TWICE-SHREDDED HARDWOOD MULCH.
- 6 TREES AND SHRUBS - PLANT BEFORE INSTALLING NVM. CUT NVM TO FIT AROUND INDIVIDUAL OR GROUPS OF TREES OR SHRUBS. APPLY 3" TWICE-SHREDDED HARDWOOD MULCH TO BARE SOIL AROUND TREES AND SHRUBS.

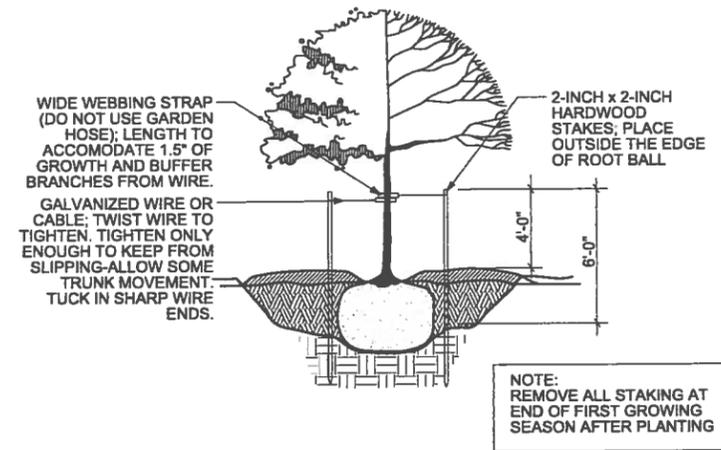
TYPICAL RAIN GARDEN SECTION



LANDSCAPE BOULDER SETTING DETAIL



SHOVEL CUT EDGING DETAIL



TREE STAKING DETAIL

MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATIVE SERVICES
 Architecture, Engineering & Environmental Services Section
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BY:	
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SCALE:	NTS
DATE:	7/03/14
PROJECT TITLE:	MENOMONEE RIVER PARKWAY
SHEET DESCRIPTION:	PLANTING DETAILS
SITE NO.:	
BUILDING NO.:	
PROJECT NO.:	P280-13626
SHEET NO.:	L25
FILE NO.:	25 OF XX

SECTION 02925
SPECIALIZED SEEDING AND SOIL SUPPLEMENTS

PART 1 GENERAL

1.1 SUMMARY

This section includes several types of seeding mixes that are required for this specialized project. The seed types are:

- A. Temporary seed matrix
- B. Upland / Wetland seed matrix
- C. Wetland seed matrix
- D. Section Includes:
 - 1. Seed Matrix specifications.
 - 2. Preparation of subsoil.
 - 3. Placing clean (vegetation free) salvaged topsoil.
 - 4. Seeding
 - 5. Herbicides/pesticides
 - 6. Matting.
 - 7. Exclusion Fencing
 - 8. Maintenance.
- E. Related Sections:
 - 1. Section 01200 - Price and Payment Procedures – Requirements applicable to unit prices for the work of this section.
 - 2. Section 02211– Grading and Site Clearing.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Seeding (Type 2 and Type 3): By the square yard. Includes preparing subsoil, furnishing and or replacing salvaged topsoil, final grading, preparing seedbed, furnishing and installing erosion control material, fertilizing, seeding, mulching, watering, weeding, and maintaining until final acceptance. Contractor shall refer to the project drawings for the location and the layout of the areas to be seeded and for additional information concerning the seed matrix's. Use of a prequalified contractor required for this item per specification section 00200(14.5)

1.3 REFERENCES

- A. State of Wisconsin Department of Transportation (WDOT) Standard Specifications for Highway and Structure Construction, 2008 Edition.

1.4 DEFINITIONS

- A. Weeds: Vegetative species, other than specified species, established in given area.
- B. Acceptable stand of seed matrix
 - 1. Temporary Seed Matrix: Vigorous growth and establishment of the two seed types at maturity with seed heads forming.
 - 2. Seed Type 3 Area - Upland / Wetland Seed Matrix: Verified germination of the seed matrix.
Plants healthy and thriving, multiplying via seeds, rhizomes and additional plants.
 - 3. Seed Type 2 Area - Wetland Seed Matrix: Plants healthy and thriving, multiplying via seeds, rhizomes and additional plants.

1.5 SUBMITTALS

A. Section 01330 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data for each seed matrix type and other accessories.

1. Seed: Provide data (purchase list and labels from seed bags) on seed mixture showing name of seed supply company and percentage of seed mix. No seed cultivars unless directed by County staff.
2. Herbicides/pesticides: Provide data on herbicides/pesticides. Material Safety Data Sheets and recommended application rates (active ingredient rates).
3. Mulch: American Excelsior Net Free matting.

1.6 CLOSEOUT SUBMITTALS

A. Section 01700 - Execution Requirements: Requirements for submittals.

B. Maintenance Data: Include maintenance instructions, cutting method and maximum vegetation height; pesticide types, and application frequency

1.7 QUALITY ASSURANCE

A. Provide seed mixture in sealed containers showing name of seed supply company, pure live seed rates for each species, weed percentage, year of production, net weight, date of packaging, location of packaging, and seed source origin (original collection site). Seed source should be within 150 miles west or south from planting location. No northern or eastern seed sources accepted.

1.8 REGULATORY REQUIREMENTS

A. Comply with applicable regulations for herbicide composition and application. Include evidence of compliance from applicable agencies having jurisdiction over herbicide/pesticide application and copies of applicator's current and pertinent pesticide application license. Contractor is required to obtain all necessary permits for herbicide applications within delineated wetlands. Provide certificate of compliance from authority having jurisdiction indicating approval of seed mixture.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Section 01600 - Product Requirements: Product storage and handling requirements.

B. Delivered in sealed original containers. Seed in damaged packaging is not acceptable. Deliver materials at time of application. Do not store on site.

1.10 MAINTENANCE SERVICE

A. Maintain seeded areas immediately after placement until and Acceptable Stand of Matrix is established. Required maintenance shall include, but not necessarily be limited to, watering, weeding, eradicating weeds from the site, application of herbicides, and minimum of two mowings, one at three inches and one at 6 inches. Provide maintenance until final acceptance.

2.0 PART 2 PRODUCTS

- A. Temporary Seed Matrix: If seeding before June 15 use annual oats (98% purity and 90% germination) or after June 15 use winter wheat (95% purity and 90 % germination at a rate of 3 LBS per 1000 SF.
- B. Seed Type 3 Area - Upland/Wetland Seed Matrix: See Seeding Specification Sheet
- C. Seed Type 2 Area - Wetland Seed Matrix: See Seeding Specification Sheet

2.1 SOIL MATERIALS

- A. Salvaged topsoil shall meet the requirements of paragraph 625.2 of the applicable WDOT Standard Specifications; free of objectionable debris such as sod, stones, roots weed seed, twigs, and any other vegetative material.

2.2 ACCESSORIES

- A. Seed Type 2 Area - Wetland Seed Matrix: North American Green SC 150 BN
- B. Seed Type 3 Area - Upland/Wetland Seed Matrix: American Excelsior Net Free Matting
- C. Water: Clean, fresh and free of substances or matter capable of inhibiting vigorous growth of planted seed matrix.

Part 3 EXECUTION

3.1 EXAMINATION

- A. Section 01300 - Administrative Requirements: Coordination and project conditions.
- B. Section 01700 – Execution Requirements: Verify existing conditions before starting work.

3.2 PREPARATION OF SUBSOIL

- A. Prepare sub-soil to eliminate uneven areas and low spots. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated sub-soil and debris. Remove stones two inches or larger.
- C. Scarify subsoil to depth of 6 inches. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted sub-soil.

3.3 PLACING TOPSOIL

- A. Spread topsoil to minimum depth of 6 inches. Rake until smooth.
- B. Place topsoil during dry weather and on dry unfrozen subgrade.
- C. Remove vegetable matter and foreign non-organic material from topsoil while spreading. Remove stones 1 inch or larger.
- D. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.
- E. Place topsoil in accordance with Section 625 of the WDOT Standard Specifications.

F. Place topsoil from the top of the back of curb or edge of pavements and extend into abutting areas as directed.

3.4 FERTILIZING

A. Do not apply fertilizer for these seed matrixs.

3.5 SEEDING AND MULCHING

A. Temporary Seed Matrix:

Apply Temporary seed matrix to all areas except the area designated for the Wetland Seed matrix. Seed at the rate of 1 LB per 1000 SF, evenly, 1/2 in one direction and the other 1/2 in perpendicular direction. Rake in lightly.

B. Planting Seasons: Spring, April 1st through June 1st; Fall, August 15th through September 15th (native cool season grasses only). Seeding outside the specified time periods requires written approval. Pre-approval from Milwaukee County is required for dormant seeding. Prepared seedbed areas shall be inspected and approved by Parks Landscape Architect prior to seeding. Failure to comply may result in rejection of seeding work.

C. Do not sow immediately following rain, when ground is too dry, or when winds are over 12 mph. Do not seed areas in excess of that which can be mulched on same day.

D. Roll seeded area with roller not exceeding 112 lbs./linear foot.

E. Immediately following seeding and compacting, apply weed free straw mulch to thickness of 1/8 inch. Maintain clear of shrubs and trees. All straw mulch material is to be machine crimped into topsoil. Hydro mulching allowed on steep slopes at the approval of Milwaukee County.

F. Apply water with fine spray immediately after each area has been mulched. Saturate to 4 inches of soil.

G. Seeding shall comply with the requirements of Section 630 of the WDOT Standard Specifications.

H. Seed may be sown by either Method A or Method B as defined in Section 630.3.3 of the WDOT Standard Specifications. Preferred equipment for Method A shall be a multi-packer type seeder. Light rolling or compacting will be required after seeding by Method A if it is not accomplished by the seeding equipment.

I. Mulching shall comply with the requirements of Section 627 of the applicable WDOT Standard Specifications. Method C, as defined in Section 627.3.2.3 shall be used for placing the mulch.

J. Upland / Wetland Seed Matrix: Verified germination of the seed matrix. Plants healthy and thriving, multiplying via seeds, rhizomes and additional plants.

K. Apply Temporary seed matrix to all Upland / Wetland Seed Matrix areas. Seed the Upland/ Wetland Seed Matrix at a rate of 0.6 LB per 1000 SF, evenly, 1/2 in one direction and the other 1/2 in perpendicular direction. Rake in lightly.

3.6 MAINTENANCE

- A. Water to prevent seed matrix and soil from drying out. The specified seed mix requires minimum of one-inch of water per week until germination.
- B. Mow seeded areas at a height of 3" and 6".
- C. Eradicate the growth of weeds with the physical removal or the use of herbicides.
- D. Repair washouts or gullies.
- E. Install exclusion fencing around the perimeter of the seeded areas. Protect seeded areas with warning signs during maintenance period. Exclusion fencing and other techniques must be able to discourage waterfowl from damaging plantings adjacent to water bodies.

3.7 FINAL ACCEPTANCE

- A. Payment for seeding will be based on an acceptable stand of the seed matrix grown on site. If an acceptable stand of the seed matrix is not produced within two growing seasons of initial seeding, Owner reserves right to perform seeding or hiring a different contractor to complete the seeding and cost of this work will be deducted from the Contract.
- B. Weeds- Final acceptance will not be approved if any non-native invasive species list by the state of Wisconsin's NR40 invasive species rule are present within the designated planting area.
- C. Complete seeding and obtain approval before final acceptance of the project. Include a minimum of two mowings as described under the Maintenance item.

3.8 SCHEDULE

- A. Determine the most appropriate time for seeding with the owner.

END OF SECTION

SAMPLE

SECTION 02930
FURNISHING AND INSTALLING PLANT MATERIALS

PART 1 - GENERAL

1.1 Summary

- A. Section includes furnishing and planting plant materials of the species, varieties and sizes specified, complete in place at the location designated on plans or as directed by the Landscape Architect. It shall include furnishing all necessary materials and supplies, and performing all necessary labor and supervision for preparing planting beds, excavating plant holes, salvaging topsoil, transplanting, backfilling, pruning, mulching, watering, fertilizing, guying and bracing. It shall also include protection of existing vegetation and site features, disposing of surplus and waste materials, necessary maintenance and required replacements pending acceptance, and such work necessary or incidental thereto to complete the item in accordance with the plans, specifications and contract. The types of plants included in this section are woody and herbaceous native plant material. Use of a prequalified contractor required for this item per specification section 00200(14.5)
- B. Related Sections:
 - 1. Section 02923 - Topsoil and Fertilizing
 - 2. Section 02924 – Seeding

1.2 Unit Price - Measurement and Payment

- A. Related Sections:
 - 1. Section 01200 - Price and Payment Procedures
- B. Plant Material:
 - 1. Basis of Measurement: Each
 - 2. Basis of Bid: includes full compensation for all labor, material, equipment, and supervision required for planting, staking, mulching, watering, and maintaining for the specified period for each specified plant as noted in the Unit Price Schedule.

1.3 References

- A. *American Standard for Nursery Stock, ANSI Z60.1* - most current edition. American Association of Nurserymen, Inc., 1250 I Street NW, Suite 500, Washington DC 20005.
- B. *American National Standard for Tree Care Operations, ANSI A300* - most current edition. International Society of Arboriculture, PO Box 3129, Champaign, IL 61826-3129.
- C. *Index of Garden Plants: The New Royal Horticultural Society Dictionary*, by Mark Griffiths, 1994, Timber Press, Inc., Portland, OR. and *Hortus Third*, by the Staff of the L.H. Bailey Hortorium, 1976. MacMillan Publishing Co., New York, NY.
- D. Fossett, N.C. 1975 A manual of Aquatic Plants, UW Press
- E. Fossett, N.C. 1976 Fossett, NC 1976, Spring Flora of Wisconsin, UW Press

1.4 Definitions

- A. Weeds: any plant life not specified for this project site.
- B. Plants: living trees, shrubs, wetland and native plant materials specified in this Section and described in ANSI Z60.1.

SAMPLE

1.5 Submittals

A. Related Sections:

1. Section 01330 - Submittal Procedures: Requirements for submittals. Submittals for this Section (02930 - Furnishing and Planting Plant Materials) shall be submitted to the Landscape Architect/Engineer for approval
2. Product Data: Submit samples of all topsoil, soil mixes, fertilizers, mulches and organic materials. Samples shall weigh two (2) lbs. and be packaged in plastic bags. Samples shall be typical of the lot of material to be delivered to the site and provide an accurate indication of color, texture and organic makeup of the material. Submit representative samples of all staking and guying materials and landscape edging materials
3. Nursery Sources: submit a list of all nurseries that will supply plants, per "Verification of Compliance with all Project Requirements Pertaining to Furnishing and Planting Trees and Shrubs" Submittal Form.

B. Certificates:

1. Certificates of inspection shall accompany the invoice for each shipment of plants as may be required by law for transportation. The certificate shall bear the name and address of the source (genetic location) of the stock.
2. File certificates with the Landscape Architect prior to acceptance of the material. Inspection by federal, state or local authorities at place of growth does not preclude rejection of the plants at the site.

1.6 Closeout submittals

A. Related Sections:

1. Section 01700 - Execution Requirements: Closeout procedures.
2. Receipts from all suppliers of materials with guarantee and warranty material.

1.7 Qualifications

- A. Nursery: company specializing in growing, cultivating and planting plants with a minimum of five years documented experience.
- B. Contractor: Company specializing in the installation of trees, shrubs, wetlands, and related landscape work shall be performed by a firm with a minimum of five years documented experience specializing in this type of work. The General and Subcontractor that will execute this work shall provide four examples with reference and contact information that will be approved by the owner. The owner reserves the right to approve the contractor that is in the best interest of Milwaukee County. Prior to award of contract, the Contractor and any sub-contractors who will be performing planting and landscape work included in this section, must present satisfactory evidence that they have been regularly engaged in this type of work and they are prepared with the necessary labor, materials and equipment to execute work in this section to the satisfaction of the Owner.
- C. Tree Pruner: Contractor or company specializing in pruning trees with proof of International Society of Arboriculture, Arborist Certification or National Arborist Association, Certified Tree Care Specialist.
- D. Maintenance Services: to be performed by the Contractor.

SAMPLE

1.8 Delivery, Storage and Handling

A. Related Sections:

1. Section 01600 - Product Requirements: Product storage and handling requirements.

B. All plant stock shall be handled with care and skill to prevent injuries to the trunk, branches and roots, and shall be packed in an approved manner to ensure arrival at the project site in good condition. The plant stock shall be transported in enclosed vehicles, or in lieu of enclosed vehicles, the plant tops shall be suitably protected from sun and drying wind. Plants shall not be bound with wire or rope at any time so as to damage the bark or break tree branches. Plants shall be lifted with suitable support of the soil ball to avoid damaging it. Plant material damaged as a result of delivery, storage or handling will be rejected.

C. At least three days prior to each delivery of plant material to the project site, the Contractor shall notify the Landscape Architect of such contemplated delivery. Insofar as possible, deliver plant materials immediately prior to placement. Keep plants moist. Those plants that cannot be planted immediately shall be kept in a secure location with shade, well protected with soil, wet mulch, or other suitable material and kept well watered. Plants shall not remain unplanted any longer than three days after delivery.

D. Mechanized Tree Spade Delivery Requirements: Will not be used on this project.

1.9 Warranty Period

A. Related Sections:

1. Section 01700 - Execution Requirements: product warranties and product bonds.

B. Provide minimum 24 month warranty for all plant material.

Part 2 - PRODUCTS

2.1 Plant Materials

A. Plants shall be true to species and variety and nursery-grown in accordance with good horticultural practices under climatic conditions similar to those in the locality of the project. They shall have been dug (trees and shrubs) during the most recently favorable harvest season.

1. All plant names and descriptions shall be as defined in *Index of Garden Plants* or *Hortus Third*.

2. All plants shall be grown and harvested in accordance with *The American Standard for Nursery Stock*.

B. All plants shall be of high quality and shall be sound, healthy and vigorous. They shall be free of disease and insects and shall have healthy, well-developed root systems. They shall be well proportioned and free from physical damage or other conditions that would prevent vigorous growth. Trees with multiple leaders, unless specified, will be rejected. Plants shall conform to the measurements specified, except plants larger than those specified may be used if approved by the Landscape Architect. Use of larger plants shall not increase the contract price. If larger plants are approved, the root ball shall be increased in proportion to the size of the plant.

SAMPLE

1. Contractor shall provide a written list of the sources from which the Contractor proposes to obtain plant materials for the project as outlined in the "Verification of Compliance with all Project Requirements Pertaining to Furnishing and Planting Trees and Shrubs" Submittal Form. Such list shall be furnished to the Landscape Architect on or before April 1st of each planting year.
2. All plants will be subject to the approval of the Landscape Architect. Plants may be inspected at the grower's nursery. Representative plants may be tagged at the grower's nursery. Approval of plants at the source does not alter the right of rejection at the project site.
3. All rejected plant materials must be replaced with acceptable plants of the same species, variety and size, unless otherwise directed by the Landscape Architect. All field-grown deciduous trees shall be marked to indicate the tree's north orientation in the nursery (see Tree Planting Detail). Place a one-inch diameter spot of white paint on the north side of the trunk within the bottom 12-inches of the trunk.
4. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to branch tip. Plants shall be measured when their branches are in their normal position. Measurements specified are the minimum sizes acceptable after pruning, where pruning is required.
5. Plants must possess a standard acceptable relationship between height and spread, according to the *American Standards for Nursery Stock*.
6. If a range of plant sizes is given, no plant shall be less than the minimum size, and at least 50 percent of the plants shall be as large as the maximum specified. Measurements specified are the minimum sizes acceptable after pruning, where pruning is required.
7. Contractor shall verify that all plant materials shown on the drawings are accounted for in the Bid. If there are any discrepancies between the Plant Materials Schedule, the Unit Price Schedule and the drawings, the drawings shall be the basis for the Bid. Notify Landscape Architect of any such discrepancies for clarification.
8. All plant materials must be labeled by plant name (common and scientific). Labels shall be securely attached to all plants, bundles and containers of plant materials when delivered. Plant labels must be durable and legible, with information given in weather-resistant ink or embossed process lettering.

A. NATIVE PLUG PLANTINGS A –250 PLUGS

The Contractor shall provide equal numbers of 75% or more of the following species (but using only listed species) to be installed as directed by the owner. All plugs shall be at least one (1) year old and a minimum plug size of 2 ½ x 3 inches. Contractor may seek owner's approval for substitutions of plants listed below.

<u>Botanical Name</u>	<u>Common Name</u>
Carex lacustris	Common Lake Sedge
Carex granularis	Meadow Sedge
Carex lupulina	Hop Sedge
Carex scoparia	Broom sedge
Carex vulpinoidea	Fox sedge
Calamagrostis Canadensis	Blue Joint Grass
Lobelia siphilitica	Great Blue Lobelia
Mimulus ringens	Monkey Flower
Scirpus acutus	Hard-stemmed bulrush
Scirpus atrovirens	Dark Green Bullrush
Scirpus pendulus	Red Bullrush
Scirpus validus	Soft-stemmed Bullrush

SAMPLE

B. NATIVE PLUG PLANTINGS B – 250 PLUGS

The Contractor shall provide equal numbers of 75% or more of the following species (but using only listed species) to be installed as directed by the owner. All plugs shall be at least one (1) year old and a minimum plug size of 2 ½ x 3 inches. Contractor may seek owner's approval for substitutions of plants listed below.

<u>Botanical Name</u>	<u>Common Name</u>
Rudbeckia subtomentosa	Sweet Black-eyed Susan
Rudbeckia triloba	Brown-eyed Susan
Physostegia virginiana	Obedient Plant
Monarda fistulosa	Wild Bergamot
Solidago graminifolia	Grass leaved Goldenrod
Pycnanthemum virginianum	Mountain Mint
Aster laevis	Smooth Blue Aster
Asclepias incarnata	Marsh Milkweed
Tradescantia ohiensis	Common Spiderwort
Andropogon scoparius	Big Blue Stem
Helianthus Grosseserratus	Sawtoothed Sunflower
Aster Novae-Angliae	New England Aster
Chelone glabra	Turtlehead
Rudbeckia laciniata	Green-headed Coneflower
Liatris Pycnostachya	Prairie Blazingstar
Ratibida Pinnata	Yellow Coneflower
Calamagrostis Canadensis	Bluejoint grass
Sorghastrum nutans	Indiangrass
Panicum virgatum	Switchgrass

C. NATIVE PLUG PLANTINGS C – 400 PLUGS

The Contractor shall provide equal numbers of 75% or more of the following species to be installed as directed by the owner. All plugs shall be at least one (1) year old and a minimum plug size of 2 ½ x 3 inches. Contractor may seek owner's approval for substitutions of plants listed below.

<u>Botanical Name</u>	<u>Common Name</u>
Rudbeckia subtomentosa	Sweet Black-eyed Susan
Rudbeckia triloba	Brown-eyed Susan
Physostegia virginiana	Obedient Plant
Monarda fistulosa	Wild Bergamot
Solidago graminifolia	Grass leaved Goldenrod
Pycnanthemum virginianum	Mountain Mint
Aster laevis	Smooth Blue Aster
Asclepias incarnate	Marsh Milkweed
Tradescantia ohiensis	Common Spiderwort
Andropogon gerardii	Big Blue Stem
Helianthus Grosseserratus	Saw-toothed Sunflower
Aster Novae-Angliae	New England Aster
Chelone glabra	Turtlehead
Rudbeckia laciniata	Green-headed Coneflower
Liatris Pycnostachya	Prairie Blazingstar
Ratibida Pinnata	Yellow Coneflower
Elymus virginicus	Virginia Wildrye

SAMPLE

Elymus Canadensis	Canada Wild Rye
Calamagrostis Canadensis	Bluejoint grass
Sorgastrum nutans	Indiangrass
Panicum virgatum	Switchgrass

D NATIVE PLUG PLANTINGS D – 400 PLUGS

The Contractor shall provide equal numbers of 75% or more of the following species from each of the subsets; wildflowers, grasses and sedges (but using only listed species) to be installed as directed by the owner. All plugs shall be at least one (1) year old and a minimum plug size of 2 ½ x 3 inches. Contractor may seek owner's approval for substitutions of plants listed below.

<u>Botanical Name</u>	<u>Common Name</u>
<u>WILDFLOWERS</u>	
Acorus calamus	Sweet Flag
Alisma subcordatum	Common Water Plantain
Bidens forndosa	Common Beggars's Tick
Iris virginica shrevei	Blue Flag Iris
Mimulus ringens	Monkey Flower
Sagittaria latifolia	Arrowhead
Sparganium eurycarpum	Giant Bur-Reed
<u>GRASSES</u>	
Calamagrostis canadensis	Blue Joint Grass
Glyceria canadensis	Rattlesnake Grass
Glyceria grandis	Reed Manna Grass
Leersia oryzoides	Rice Cutgrass
Spartina pectinata	Prairie Cord Grass
<u>SEDGES</u>	
Carex comosa	Bristly Sedge
Carex crinita	Fridge Sedge
Carex hystericina	Porcupine Sedge
Carex stricta	Tussock Sedge
Juncus dudleyi	Dudley's Rush
Juncus effusus	Common Rush
Juncus tenuis	Path Rush
Juncus torreyi	Torrey's Rush
Scirpus acutus	Hard-Stemmed Bulrush
Scirpus atrovirens	Dark-Green Bullrush
Scirpus cyperinus	Wool Grass
Scirpus pendulus	Red Bullrush
Scirpus pungens	Common Three Square Rush
Scirpus validus	Soft-Stem Bullrush

SAMPLE

NATIVE TREE / SHRUB PLANTING The Contractor shall provide the following species shown below to be installed as per plans and as directed by the owner. Contractor may seek owner's approval for substitutions of plants listed below. Any changes in the plant list must be approved by Owner prior to installation.

Numbers	Abrev.	Latin Name	Common Name	Condition
3	AR	Acer rubrum "October Glory"	October Glory Red Maple	2 1/2" BB
3	BA	Betula alleghaniensis	Yellow Birch	4-5 stems BB
3	BN	Betula nigra	River Burch	4-5 stems BB
7	CR	Cornus racemosa	Grey dogwood	3 gallon
5	CS	Cornus stolonifera	Red twig dogwood	3 gallon
5	HV	Hammemalis virginiana	Common witchhazel	18" Potted
6	PO	Plantnus occidentalis	American Plantree	2" BB
3	QB	Quercus bicolor	Swamp white oak	2" BB
5	SA	Cornus amomum	Silky Dogwood	12" Potted
3	SN	Salix nigra	Black Willow	5 gallon
5	SR	Sambucus racemosa	Elderberry	12" Potted
3	TA	Tilia americana	American linden	6-8' Potted
5	VD	Viburnum dentatum	Arrowwood Viburnum	12" Potted
5	VL	Viburnum lentago	Nannyberry viburnum	12" Potted

2.2 Soil Materials

- A. Imported topsoil Non required
- B. Salvaged topsoil: topsoil salvaged from site work and/or tree hole excavations, should be used for tree planting, whenever such topsoil conforms to Section 02923 - Topsoiling and Fertilizing.

2.3 Soil Amendment Materials

- A. Fertilizer: No fertilizer for native herbaceous plants.
 - 1. Test and apply fertilizer for only area designated Type 1 Seeding and as specified in 02923 (per soil test results). For bidding purposes, assume application rate of 20 pounds per 1,000 square feet of granular, slow release type, 1-1-1 ratio, meeting the following requirements:

Nitrogen	10% min.
Phosphoric Acid	10% min.
Potash	10% min.

SAMPLE

Contractor shall provide Landscape Architect with recommendations from soil testing laboratory for fertilizer application rates for specified planting areas and tree planting per submittal procedures as outlined in subsection 1.5 of this Section.

2.4 Mulch Materials

- A. Mulch Material: fine textured, shredded oak bark, dark brown in color. Contractor shall submit sample to Landscape Architect per submittal procedures as outlined in subsection 1.5 of this Section prior to placement. Contractor to provide a 6' diameter mulch circle at 6" depth. Needs to be clean mulch with no foreign debris.

2.5 Accessories

A. Bracing and Guying Materials:

1. Stakes: shall be non-flanged metal or two-inch by two-inch hardwood, six- feet in length (see Staking/Guying Details on drawings or in these specifications).
2. Support Ties: shall be two inches or wider bands of polypropylene, or elasticized or webbed strapping (see Staking/Guying Details on drawings or in these specifications).
 2. Cable, Wire, Eye-Bolts: non-corrosive, of strength sufficient to withstand wind pressure and resulting movement of trees (see Staking/Guying Details on drawings or in these specifications).
 3. Ground Anchors: shall be 32-inch long, two-inch by two-inch hardwood stakes or other as approved by Landscape Architect.

B. Wrapping:

1. Tree Wrap: where specified, shall be "Breathable Fabric Tree Wrap" as manufactured by the DeWitt Company, Inc., Sikeston, MO, or approved equal. Submit manufacturer's literature and sample to Landscape Architect for approval.
2. Tree wrap shall be secured to the tree using biodegradable tape suitable for nursery use and which is expected to degrade in sunlight in less than two years after installation. If it does not degrade in two years then the tree wraps need to be manually removed 3-years from planting date.

- C. Rodent Protection: where specified, shall consist of aluminum or other metal commercial window screening material.

2.6 Herbicides

- A. Vegetation Control Herbicide: vegetation control herbicide, when specified, shall be a post-emergence herbicide which, when applied to leaves and stems of vegetation is absorbed and translocated to all parts of the plant including roots and underground stems and thereby capable of killing the entire plant. It shall be water-soluble and deactivate upon contact with soil, leaving no harmful residue.
- B. Selective Pre-emergence Herbicide: the selective pre-emergence herbicide, when specified, shall be a type which controls plants emerging from seed, but has no harmful effect on established plants when applied at recommended rates. The material shall resist leaching and remain effective throughout one growing season.

PART 3 - EXECUTION

02930-8

SAMPLE

3.1 Delivery and Temporary Storage of Plant Materials

- A. Related Sections:
 - 1. Section 01600 - Product Requirements: product storage and handling requirements.
 - 2. PART 1, Subsection 1.8 of this Section (02930).

3.2 Planting Season

- A. Planting shall be done within the following time frames:
 - 1. Deciduous trees and shrubs and herbaceous material:
April 1 to June 1 – OR – October 1 to Dec. 1 (under frost free conditions)
- B. Variance: if special conditions exist that warrant a variance in the above planting dates, a written request shall be submitted to the Landscape Architect stating the special conditions and the need for this variance. Permission for the variance will be granted if warranted in the judgement of the Landscape Architect. Any variance in the planting season will not affect the warranty period.
- C. Do not install plant materials when ambient temperatures may drop below 35 degrees F or rise above 90 degrees F or when wind velocities exceed 30 mph.

3.3 Layout

- A. Contractor shall contact Digger's Hotline at (1-800- 242-8511) and Milwaukee County Park Maintenance at (414-258-2322) for verification of the locations of all underground utility lines. Contractor shall be responsible for assuring that all utility marking is complete before excavation begins. Contractor will be responsible for all damage resulting from neglect or failure to comply with this requirement.
- B. Locations for trees and shrubs and the outlines of individual plant beds are to be staked or marked on the site. Written or verbal approval of the staking by the Landscape Architect is required before excavation begins.

3.4 Excavation for Woody Plant Material

- A. Excavations for Individual Trees and Shrubs:
 - 1. The hole shall be a minimum of two (2) times the diameter of the root ball.
 - 2. The soil pad on which the root ball will be placed shall be undisturbed soil. The depth of the pad shall correspond to the distance from the bottom of the root ball to the root collar, or slightly less. In areas of poorly draining soils, the root collar will be set two-inches above the ground level after planting.
 - 3. Slope the sides of the excavation at a 45 degree angle up and away from the bottom of the excavation. Glazed planting hole surfaces shall be roughened prior to backfilling.
 - 4. On steep slopes, the depth of the excavation shall be measured at the center of the hole.
 - 5. See planting details on the drawings and in this specification.
 - 6. Subgrade soils shall be separated from the topsoil, removed from the area, and not used as backfill in any planted or lawn area.
 - 7. Contractor shall notify the Landscape Architect, in writing, of soil conditions or other obstructions the Contractor considers detrimental to plant growth. Such conditions shall be described, as well as suggestions for correcting them. Proper drainage must be assured.

SAMPLE

8. Where soil conditions or below ground obstructions which cannot be remedied are encountered, the Landscape Architect shall designate alternate planting locations.
9. Excavated planting holes that will be left open when work is not in progress or pose an immediate and considerable hazard to pedestrians or vehicles shall be adequately barricaded with appropriate warning devices.

3.5 Installation of plant material

- A. Plants must be protected from excessive vibrations. Plants shall not be thrown or bounced off a truck or loader to the ground. Plants shall not be dragged, lifted or pulled by the trunk or foliage parts in a manner that will loosen the roots in the ball.
- B. Plants must be centered in their hole and set plumb. Place plants to north orientation and/or for best appearance for review and final orientation by Landscape Architect.
- C. Remove, plastic, paper, fiber or other non-biodegradable pots from containerized plant material. Pull roots out from the root mat, and cut circling roots with a clean, sharp knife. Loosen the potting medium and shake away from the root mat. Immediately after removing the container, install the plant such that the roots do not dry out. Pack planting mix around exposed roots while planting.
- D. Bare root plants, if specified for this project, shall have their roots spread into a natural position, free of bunching, kinking, or circling. All broken or damaged roots shall be cut back to a point where they are clean and free of rot. Planting-soil backfill shall be worked firmly into and around the roots, with care taken to fill in completely with no air pockets.
- E. For all plants moved with a tree spade, all holes and cavities between the ball and the surrounding soil shall be filled. Glazed planting hole surfaces shall be sufficiently roughened prior to backfilling. The ball shall be thoroughly soaked with water after planting.
- F. B & B Material: after plant has been set and stabilized, ropes, strings, wire baskets, burlap and other wrappings shall be removed from the top one half of the root ball. If the root collar is deep in the ball, carefully remove excess soil away from the trunk.
- G. Planting holes shall be backfilled with approved topsoil to which peat moss has been added at the ratio of six parts soil to one part peat moss by volume. The soil shall be placed in layers around the roots or ball. Each layer shall be carefully tamped in place in a manner to avoid injury to the roots or ball or disturbing the position of the plant. When approximately two-thirds of the plant hole has been backfilled, the hole shall be filled with water and the soil allowed to settle around the roots. After the water has been absorbed, the plant hole shall be filled with topsoil and tamped lightly to grade. Any settlement shall be brought to grade with topsoil.
- H. After the plantings have been in place for at least two days, but not more than five, an inspection of such plantings shall be made. Plant depths and plumbness shall be adjusted as necessary and any additional required backfill shall be placed.
- I. Native herbaceous plants should be planted on a 1-ft by 1-ft spacing at the same soil depth as found in the pot.

3.6 Mulching

- A. All trees, shrubs and other plantings shall be mulched with mulch previously approved by the Landscape Architect. Mulch to a minimum four-inch depth as indicated on the planting details. Mulch must not be placed nearer than six- inches to the trunks of trees or shrubs.

3.7 Plant Support and Protection

SAMPLE

A. Staking and Guying:

1. Contractor shall stake or guy all trees per planting details unless otherwise directed by the Landscape Architect. Stakes and guys shall be installed immediately upon approval of planting, and shall be removed at the end of the warranty period. Any tree that is not stable at the end of this time shall be rejected.

B. Wrapping:

1. Wrap the trunk of any tree only when necessary for the specific conditions encountered and with the approval of the Landscape Architect.
2. Wrapping material shall be as specified in this Section.
3. Wrapping material shall be fastened using biodegradable tape. All tape shall be loosely wrapped around the wrapping material in a single layer to permit its breakdown in sunlight and permit a minimum one-inch of unrestricted trunk growth. Stapling or tying the wrap with non- or slowly biodegradable tape or any synthetic or natural fiber string shall be prohibited.
4. Wrapping material shall be applied from the base of the tree to the first branch.
5. The Contractor shall remove all wrapping materials no later than the end of the warranty period or as specified by the Landscape Architect.

C. Rodent Protection:

1. Provide rodent protection when necessary for specific conditions encountered or on susceptible species and with the approval of the Landscape Architect.
2. Rodent protection material, as specified in subsection 2.5-B of this Section, shall be placed around each tree trunk with the bottom of the material resting on the soil surface and the top a minimum of 4-feet above the surrounding earth surface, or up to the lowest branches on small trees. The rodent protection material shall be wrapped loosely around the tree trunk and stapled to itself with three rows of staples spaced at a maximum of six-inch intervals along the seam.

3.8 Tree Pruning

- A. Plants shall not be heavily pruned at time of planting. Pruning is required at planting time to correct defects in the tree structure, including removal of injured or dead branches, branches competing with the dominant central leader, watersprouts, suckers, and interfering branches.
- B. All required pruning shall conform to American National Standards for Tree Care Operations, ANSI A300 (Pruning Standards for Woody Plants).
 1. Pruning shall be completed using clean, sharp tools. All cuts shall be clean and smooth, with the bark intact with no rough edges or tears.
 2. Except in circumstances dictated by the needs of specific pruning practices, tree paint shall not be used. Tree paint, when required, shall be paint specifically formulated and manufactured for horticultural use and approved by the Landscape Architect. Pruning of large trees shall be done from a hydraulic man-lift, or in an approved alternative manner, such that it is not necessary to climb the tree.

3.9 Application of Herbicide

SAMPLE

- A. Vegetation Control Herbicide: when required, prior to installation of plant materials or during guarantee period, vegetation control herbicide shall be applied according to manufacturer's instructions to unwanted vegetation (weeds) and in plant bed areas as designated on the plans. A minimum of 10 days shall be allowed between application and disturbance of the area. Use of herbicides must first be approved by the Landscape Architect.
- B. Selective Pre-emergence Herbicide: the selective pre-emergence herbicide, when specified, shall be applied in accordance with manufacturer's instructions for surface application to plant bed areas as designated on the plans just before applying mulch.

3.10 Cleanup

- A. Soil, branches, binding and wrapping material, rejected plants, or other debris resulting from any tree planting shall be promptly cleaned up and removed. The work area shall be kept safe and neat at all times until the project is completed. Under no condition shall the accumulation of soil, branches, or other debris be allowed upon a public property in such a manner as to result in a public hazard.

PART4 - MAINTENANCE, GUARANTEE AND ACCEPTANCE

4.1 Maintenance of Planted Material

- A. Related Sections:
 - 1. Section 01700 - Execution Requirements: maintenance service

4.2 Acceptance of work

- A. Landscape Architect shall inspect all work for acceptance upon written request of the Contractor. The request shall be received at least ten calendar days before the anticipated date of inspection.
- B. Acceptance of planted material shall be for general conformance to the specified size, character, and quality and shall not relieve the Contractor of responsibility for full conformance to the contract documents, including correct species.
- C. Upon completion and re-inspection of all repairs and replacement plantings necessary in the judgement of the Landscape Architect, the Landscape Architect shall certify in writing that the work has been accepted.
- D. Acceptance in Part: work may be accepted in parts when the Landscape Architect and Contractor deem that practice to be in their mutual best interest. Approval must be given in writing by the Landscape Architect to the Contractor verifying that the work is to be completed in parts. Acceptance of work in parts shall not waive any other provisions of this contract.

4.3 Warranty Period and Replacements

- A. Warranty period for plant materials provided in this contract shall begin at the date of acceptance of work. The warranty does not include vandalism or damage unrelated to contractor activities.
- B. Contractor shall warranty all plant materials to be in healthy and flourishing condition for a minimum of 24 months from the date of acceptance of work.

SAMPLE

- C. Should the work be accepted in parts, the warranty periods extend from each of the partial acceptances to the terminal date of the warranty of the last acceptance. Thus, all warranty periods terminate at one time.
- D. Contractor shall remove and replace, without cost, and as soon as weather conditions permit within a specified planting period, all plants not in a healthy and flourishing condition as determined by the Landscape Architect at any time during the warranty period. Replacements shall be subject to requirements stated in this specification.
- E. Warranty period for replacement plants shall extend for an additional 12 months from the date of their acceptance after replacement. In the event that a replacement plant is not acceptable during or at the end of said extended warranty period, the Landscape Architect may elect subsequent replacement or credit for that item.

4.4 Final Inspection and Acceptance

- A. At the end of the 24 month warranty period and upon written request of the Contractor, the Landscape Architect will inspect all warrantied work for final acceptance. The request shall be received at least 10 calendar days before the anticipated final inspection. Upon completion and re-inspection of all repairs or replacement plantings necessary in the judgement of the Landscape Architect at that time, the Landscape Architect shall certify, in writing, that the project has received final acceptance.

END OF SECTION.