COLONIAL PARK WETLAND RESTORATION PROJECT
WAYNE COUNTY, MICHIGAN

FOR BIDDING - DECEMBER, 2021

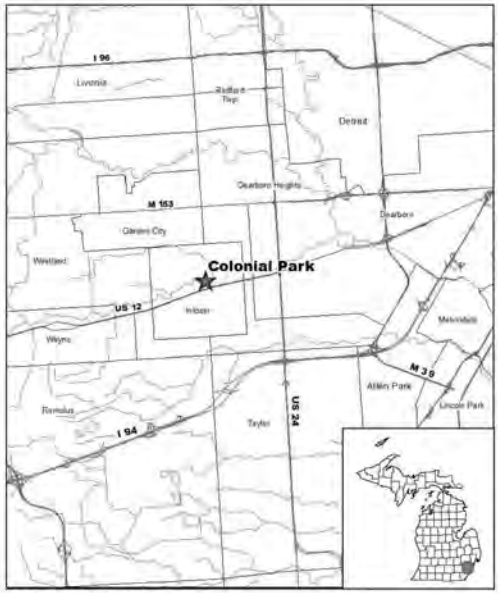
PREPARED BY:

ECT Environmental Consulting & Technology, Inc.
2200 Commonwealth Blvd, Suite 300
Ann Arbor, Michigan 48105
734.769.3004
734.769.3164 fax
www.ectinc.com

WITH:

MIDWESTERN CONSULTING

Somat Engineering INCORPORATED



PROJECT LOCATION MAP
NOT TO SCALE

NORTH

PROJECT VICINITY MAP
NOT TO SCALE

NORTH

DRAWING INDEX

1. COVER SHEET
2. EXISTING CONDITIONS
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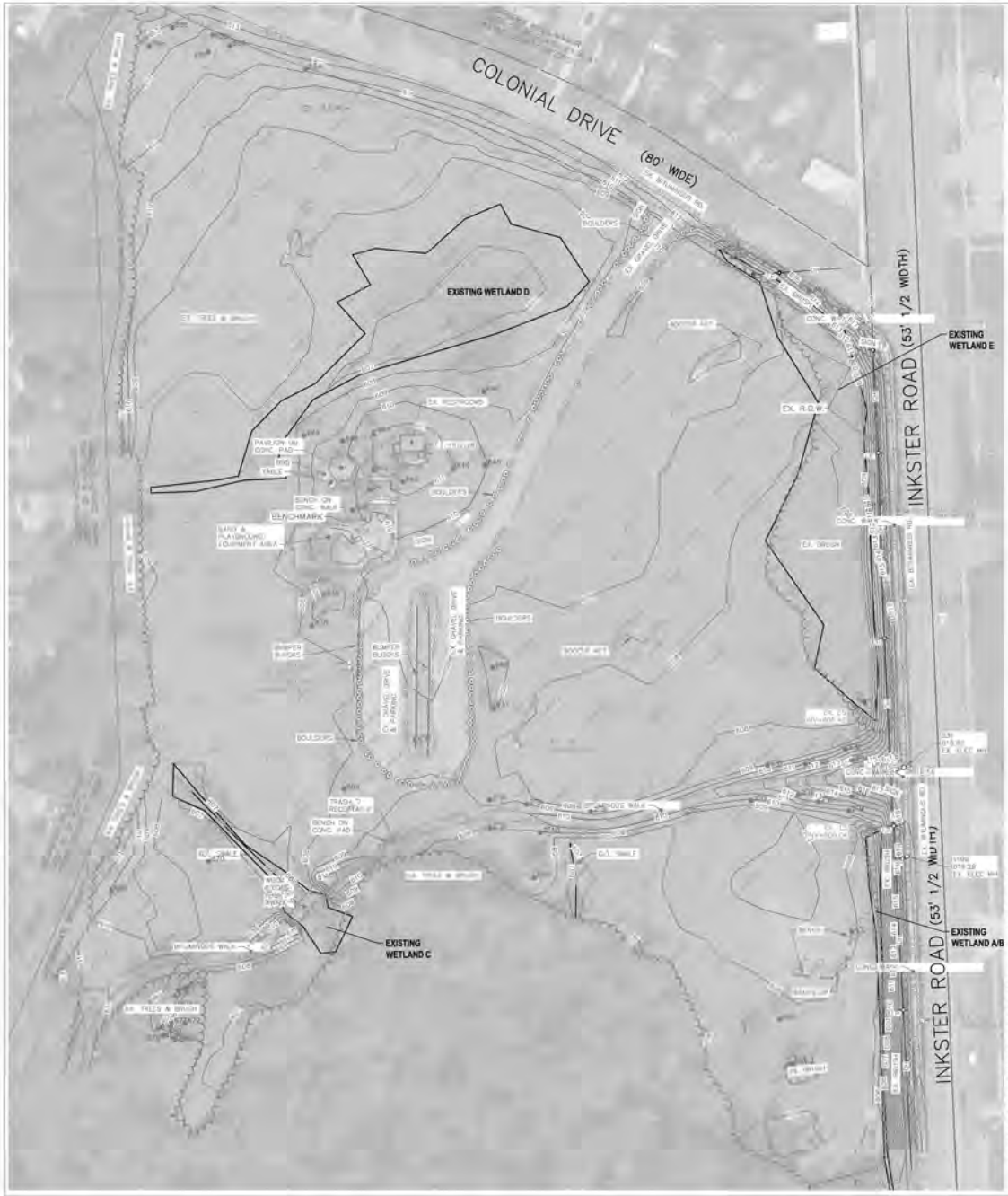
PROJECT FUNDED BY THE US ENVIRONMENTAL PROTECTION AGENCY THROUGH A GREAT LAKE RESTORATION INITIATIVE GRANT. GLRI EPA AWARD NO. GL-00E02830-0



LEGEND

- EXIST. CONTOUR
- EXIST. SPOT ELEVATION
- EXIST. UTILITY POLE
- EXIST. TRAFFIC SIGNAL POLE
- EXIST. LIGHT POLE
- GUY WIRE
- EXIST. OVERHEAD UTILITY LINE
- EXIST. STORM SEWER
- EXIST. CATCH BASIN OR INLET
- END SECTION
- C/L OF SWALE
- SIGN
- POST
- FENCE
- GUARDRAIL
- SINGLE TREE
- TREE OR BRUSH LIMIT
- EXIST. BOULDER
- CONTROL PT.
- C/L — CENTERLINE
- R.O.W. — RIGHT-OF-WAY
- SECTION CORNER
- EX. WETLAND BOUNDARY

MAJORITY OF PROJECT LIES WITHIN THE 100-YEAR FLOODPLAIN, AND IS APPROXIMATED TO BE AT EL. 610.

EXISTING SITE CONDITIONS:

1. CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING SITE CONDITIONS PRIOR TO STARTING WORK.

2. THE CONTRACTOR UNDERSTANDS AND ACKNOWLEDGES THAT THE PERFORMANCE OF THE WORK IS REQUIRED WITHIN THE ROUGE RIVER SYSTEM AND FLOODPLAIN AND THAT THE ROUGE RIVER WATER LEVEL FLUCTUATES.

3. THE CONTRACTOR UNDERSTANDS AND ACKNOWLEDGES THAT THEY HAVE TAKEN INTO ACCOUNT THE POTENTIAL FOR ANY WATER LEVEL CHANGES THAT MIGHT OCCUR IN COSTING, SCHEDULING, AND FEASIBILITY OF PERFORMING THE CONTRACT WORK UNDER THE PREVAILING ENVIRONMENTAL CONDITIONS. THEREFORE THE CONTRACTOR ACKNOWLEDGES THAT ANY FLUCTUATION IN WATER LEVELS, FLOODING, OR INUNDATION DURING/OVER THE COURSE OF THE PROJECT IS LIKELY AND DOES NOT CONSTITUTE A CHANGE IN CONDITIONS OR AN UNFORESEEN SITE CONDITION.

4. THE CONTRACTOR SHALL BE FULLY AWARE OF THE ROUGE RIVER HYDROLOGY AND CURRENT WEATHER CONDITIONS SO THAT WORK CAN BE SECURED AND PROTECTED AT ALL TIMES, SO THAT SAFE JOB SITE WORKING CONDITIONS ARE MAINTAINED, AND SO THAT SOIL EROSION IS CONTROLLED IN ACCORDANCE WITH ALL APPLICABLE PERMITS AND ENVIRONMENTAL LAWS.

5. THE CONTRACTOR ACKNOWLEDGES THAT DELAYS IN THE START OF, OR COMPLETION OF, WORK DUE TO FLUCTUATIONS IN WATER LEVEL THROUGHOUT THE DURATION OF THE PROJECT SHALL NOT CONSTITUTE A CHANGE IN CONDITIONS NOR SHALL BE A BASIS FOR ANY EXTENSION OF TIME OR DAMAGES. IF THE CONTRACTOR SHALL BE UNAVOIDABLE DELAYED IN BEGINNING OR FULFILLING THIS CONTRACT BY REASONS OF CHANGING WATER LEVELS, STORMS, INUNDATION OR FLOODS, THE CONTRACTOR SHALL HAVE NOT VALID CLAM FOR DAMAGES, BUT SHALL IN SUCH CASE BE ENTITLED TO AN EXTENSION OF TIME AS THE ENGINEER SHALL ADJUDGE TO BE JUST AND REASONABLE, PROVIDED THAT FORMAL CLAIM FOR AN EXTENSION OF TIME IS MADE IN WRITING BY THE CONTRACTOR WITHIN 14 DAYS OF THE ALLEGED DELAY.

6. THE ENGINEER RESERVES THE RIGHT TO SUSPEND WORK ACTIVITIES WHEN IT IS IN THE BEST INTEREST OF THE PROJECT TO DO SO DUE TO WEATHER, FLOW, OR WATER LEVEL CONDITIONS. THE DIRECTIVE TO SUSPEND WORK ACTIVITIES SHALL BE SUBMITTED TO THE CONTRACTOR, BY THE ENGINEER, IN WRITING. SUCH SUSPENSION SHALL NOT BE BASIS FOR CLAIM FOR ADDITIONAL COST BUT CAN BE BASIS FOR EXTENSION OF TIME.

7. THE CONTRACTOR SHALL RESEARCH AVAILABLE INFORMATION AND PERFORM ITS OWN INDEPENDENT INVESTIGATIONS AS NEEDED IN AN EFFORT TO FULLY UNDERSTAND ENVIRONMENTAL CONDITIONS ASSOCIATED WITH THE PROJECT SITE. THE CONTRACTOR SHALL UNDERSTAND THE SITE CONDITIONS THAT WILL AFFECT THE COST, SCHEDULE, OR PERFORMANCE OF WORK IN ADVANCE OF STARTING SUCH WORK.

8. TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY MIDWESTERN CONSULTING, INC. SURVEY CONDUCTED IN DECEMBER, 2018.

9. ALL ELEVATIONS SHOWN ARE IN NAVD88 DATUM.

10. CONTRACTOR TO CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO PROJECT TEAM PRIOR TO COMMENCING WORK ACTIVITIES.

11. SEDIMENT SAMPLE LABORATORY DATA IS AVAILABLE UPON REQUEST

12. FULL TREE INVENTORY IS AVAILABLE UPON REQUEST

13. BENCHMARK INFORMATION SHOWN BELOW.

BENCHMARK
BACK OF WALK AT NORTH SIDE OF PLAYGROUND AREA.
ELEVATION = 609.44 (NAVD 88 DATUM)

NOTES:
1. SURVEY INFORMATION PROVIDED BY MIDWESTERN CONSULTING, INC.
2. SURVEY WAS CONDUCTED IN AUGUST, 2020
3. ALL ELEVATIONS SHOWN ARE IN NAVD88 DATUM
4. CONTRACTOR TO CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION AS NEEDED

GENERAL NOTES:
1. UNDERGROUND UTILITIES: FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, 1974, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
2. SURVEY DATA PRESENTED IN THESE DRAWINGS WAS PROVIDED BY:
MIDWESTERN CONSULTING
3815 PLAZA DRIVE
ANN ARBOR, MICHIGAN 48108
(734) 995-0200 (PH)
3. THE SOIL LOG INFORMATION (ATTACHED TO BID SPECIFICATIONS) REPRESENTS POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY INFERS THAT SUBSURFACE CONDITIONS ARE THE SAME OTHER THAN THE EXACT LOCATION OF THE BORINGS.
4. STORAGE OF EQUIPMENT AND CONSTRUCTION MATERIALS SHALL BE RESTRICTED TO DESIGNATED STAGING AREAS AS INDICATED ON THE PLANS, UNLESS OTHERWISE APPROVED BY ENGINEER.
5. ALL UTILITIES, CULVERTS AND BENCHMARKS SHALL BE PRESERVED DURING CONSTRUCTION ACTIVITIES UNLESS OTHERWISE SHOWN ON THE DRAWINGS. CONTRACTOR TO REPLACE DAMAGED UTILITIES, CULVERTS OR BENCHMARKS AT OWN EXPENSE.
6. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO 'LIMIT OF DISTURBANCE' LINE. WORK BEYOND THESE LIMITS SHALL BE AS DIRECTED BY ENGINEER.
7. TRANSPORTATION OF EQUIPMENT AND MATERIALS TO/FROM THE SITE ON STATE HIGHWAYS AND TRUNK LINES SHALL CONFORM TO ALL LOCAL AND STATE TRAFFIC LAWS. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PERTAINING TO DELIVERY OF EQUIPMENT AND MATERIALS TO/FROM THE SITE. COSTS OF OBTAINING NECESSARY PERMITS IS INCIDENTAL TO THE WORK.
8. ALL WORK SHALL BE COMPLETED BETWEEN THE HOURS OF 7:00AM AND 6:00PM. ALL WORK SHALL BE COMPLETED MONDAY THROUGH SATURDAY.
9. CONSTRUCTION ACCESS TO THE SITES FOR ALL ACTIVITIES WILL BE FROM COLONIAL DRIVE (OFF OF INKSTER ROAD) AS INDICATED ON THE SITE ACCESS PLAN. NO OTHER ACCESS IS ALLOWED WITHOUT WRITTEN PERMISSION FROM THE OWNER.
10. ALL MATERIALS REMOVED, EXCEPT WHERE OTHERWISE INDICATED ON THE PLANS, SHALL BE LEGALLY DISPOSED OF OFF SITE.
11. ALL EXCESS SOIL AND FILL GENERATED DURING REQUIRED EXCAVATION AS SHOWN ON DRAWINGS SHALL BE LEGALLY DISPOSED OF OFF-SITE.
12. THE CONTRACTOR SHALL OBTAIN PERMITS AS REQUIRED FOR THE PROJECT, INCLUDING THE SOIL EROSION AND SEDIMENT CONTROL PERMIT.
13. THE EGLE/USACE PERMIT HAS BEEN APPLIED FOR. WHEN RECEIVED, A COPY OF THE PERMIT WILL BE PROVIDED TO THE CONTRACTOR. ALL WORK SHALL BE DONE TO MEET THE REQUIREMENTS OF EGLE AND/OR USACE PERMITS ISSUED FOR THIS PROJECT.

3 WORKING DAYS
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Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12-15-20

200383
ECT PROJECT NUMBER

AB — DESIGNED BY	AB — CHECKED BY
AK — DRAWN BY	APPROVED BY

SHEET TITLE

EXISTING CONDITIONS

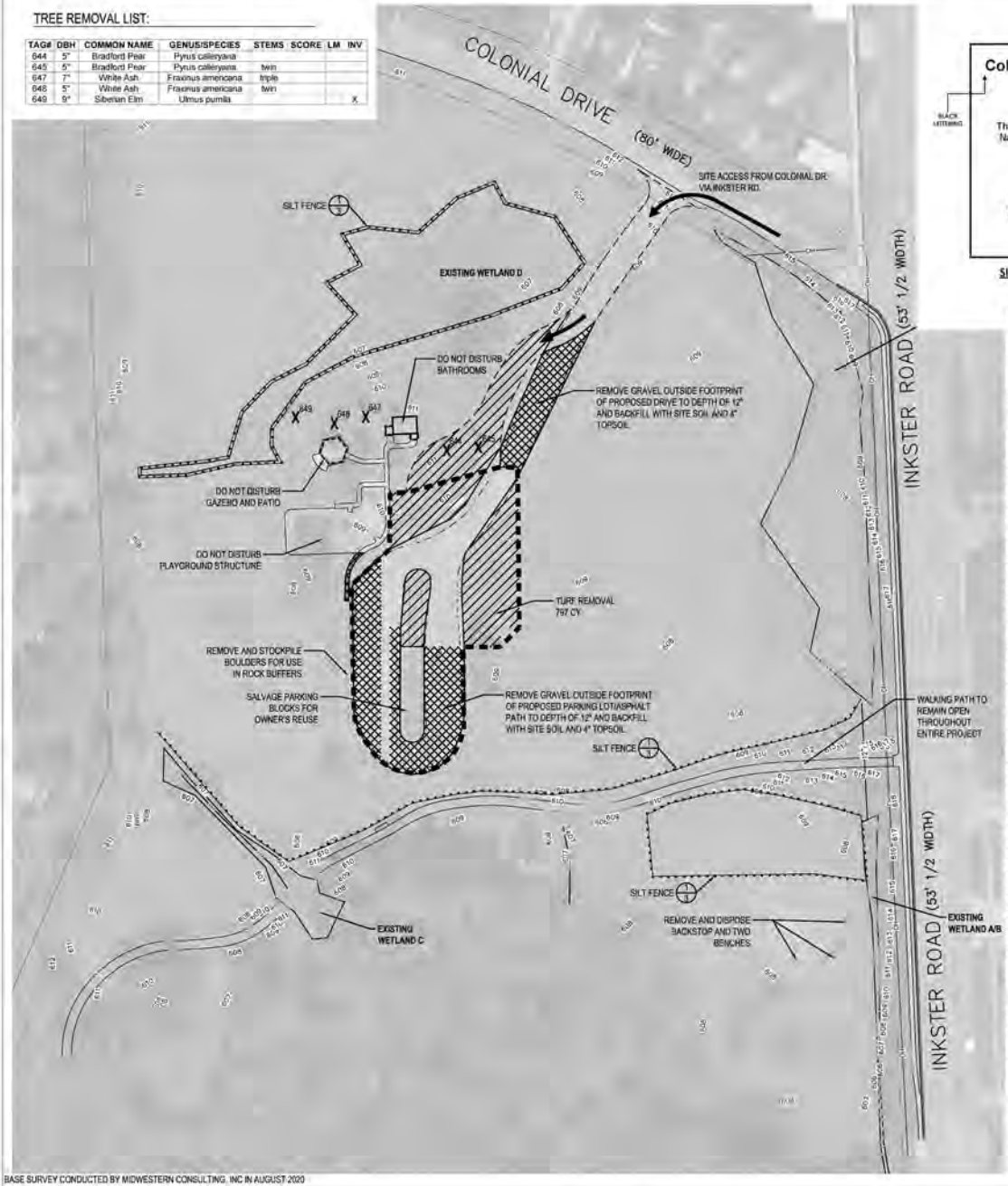
SCALE: 1" = 60' @ 22" x 34"
0 30 60 120

NORTH

SHEET NUMBER 2

TREE REMOVAL LIST:

TAG#	DBH	COMMON NAME	GENUS/SPECIES	STEMS	SCORE	LM	INV
644	5"	Bradford Pear	Pyrus calleryana				
645	5"	Bradford Pear	Pyrus calleryana	twin			
647	7"	White Ash	Fraxinus americana	triple			
648	5"	White Ash	Fraxinus americana	twin			
649	9"	Siberian Elm	Ulmus pumila				X



BASE SURVEY CONDUCTED BY MIDWESTERN CONSULTING, INC IN AUGUST 2020

TEMPORARY CONSTRUCTION SIGN

WHITE BACKGROUND

Colonial Park – Wetland Restoration and Reforestation
Rouge River AOC Habitat Design

Alliance of Rouge Communities

This project is funded by the U.S. Environmental Protection Agency Great Lakes National Program Office. A portion of a $1,834,000.000 Great Lakes Restoration Initiative Grant (Grant No. 00E02830) funds project implementation. The grant was received by the Alliance of Rouge Communities.

BLACK LETTERING

Engineer: ECT Contractor: (Insert Logo Here)

SIGN DIMENSIONS: 1200 mm x 2400 mm x 19 mm (approx. 4' x 8' x ¾")
PLYWOOD PANEL (APA RATED A-B GRADE-EXTERIOR)

SIGN LOCATION WILL BE DETERMINED WITH SITE OWNER PRIOR TO CONSTRUCTION

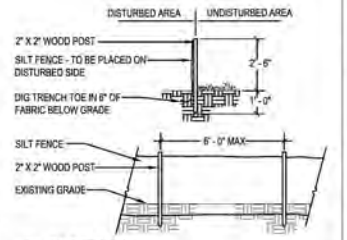
LEGEND

- 838 EXIST. CONTOUR
- U.P. EXIST. UTILITY POLE
- GUY WIRE
- OH EXIST. OVERHEAD UTILITY LINE
- W EXIST. WATER MAIN
- EXIST. CATCH BASIN OR INLET
- CULVERT
- SIGN
- SINGLE TREE
- TREE OR BRUSH LIMIT
- PROPOSED STAGING AREA
- PROPOSED ACCESS ROUTE
- PROPOSED SILT FENCING
- PROPOSED GRAVEL REMOVAL
- PROPOSED TURF REMOVAL
- PROPOSED CONCRETE REMOVAL
- 647 PROPOSED TREE REMOVAL

NOTE:
- ALL BOULDERS TO BE SALVAGED AND INCORPORATED INTO NEW ROCK BUFFER AND REVEGETATION PLAN.
- ALL PARKING BLOCKS TO BE STOCKPILED FOR OWNER'S REUSE.

TRAFFIC CONTROL NOTES:
- PARK WILL BE OPEN TO RENTING RESERVATIONS THROUGH JULY.
- AFTER JULY, PARK WILL BE CLOSED
- WALKING PATH ON SOUTH END OF PARK TO REMAIN OPEN THROUGHOUT PROJECT

CLEARING AND GRUBBING NOTES
1. REVIEW CLEARING LIMITS AND TREE REMOVALS WITH PROJECT ENGINEER PRIOR TO BEGINNING WORK.
2. ALL SILT FENCE AND PROTECTIVE FENCE SHALL BE INSTALLED PRIOR TO CLEARING OPERATIONS. ALL FENCING SHALL BE MAINTAINED THROUGHOUT DURATION OF PROJECT. FENCING SHALL BE REMOVED ONLY UPON APPROVAL BY ENGINEER.
3. ALL PLANT MATERIAL NOT MARKED FOR REMOVAL SHALL BE DISTURBED AS LITTLE AS POSSIBLE DURING THE CLEARING AND CONSTRUCTION OPERATIONS. NO EXCAVATION SHALL BE DONE WITHIN THE DRIP LINE (LIMIT OF OVERHANGING BRANCHES) OF TREES TO BE SAVED, UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. THE LOWER BRANCHES OF ALL TREES TO REMAIN SHALL NOT BE REMOVED, OR DAMAGED BY CONSTRUCTION EQUIPMENT. AVOID COMPACTION OF ROOTS.
4. HYDRO AXE AND/OR SIMILAR CLEARING EQUIPMENT SHALL NOT BE PERMITTED ON SITE.



1/3 SILT FENCE
NOT TO SCALE

SOIL EROSION CONTROL NOTES:
1. IN ACCORDANCE WITH RULE 1709 PROMULGATED UNDER THE AUTHORITY OF PART 91, SOIL EROSION AND SEDIMENT CONTROL, OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED, AND IN ADDITION TO THE INFORMATION IN THE PROJECT PLANS AND SPECIFICATIONS, THE FOLLOWING GENERAL CONDITIONS APPLY TO THE EARTH CHANGE AUTHORIZED BY THIS DOCUMENT.
2. CONSTRUCT AND COMPLETE THE EARTH CHANGE IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL PERMIT AND IN A MANNER THAT LIMITS THE EXPOSED AREA OF DISTURBED LAND FOR THE SHORTEST PERIOD OF TIME.
3. TEMPORARY OR PERMANENT CONTROL MEASURES SHALL BE INSTALLED TO CONVEY WATER AROUND, THROUGH OR FROM THE EARTH CHANGE AT A NON-EROSIVE VELOCITY.
4. REMOVE SEDIMENT CAUSED BY ACCELERATED SOIL EROSION FROM RUNOFF WATER BEFORE IT LEAVES THE SITE OF THE EARTH CHANGE.
5. INSTALL TEMPORARY SOIL EROSION AND SEDIMENTATION MEASURES BEFORE OR UPON COMMENCEMENT OF THE EARTH CHANGE ACTIVITY AND MAINTAIN THE MEASURES ON A DAILY BASIS. REMOVE TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED. ("STABILIZED" MEANS THE ESTABLISHMENT OF VEGETATION OR THE PROPER PLACEMENT, GRADING OR COVERING OF SOIL TO ENSURE ITS RESISTANCE TO SOIL EROSION, SLIDING, OR OTHER EARTH MOVEMENT.)
6. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SITE DRAINAGE.
7. CONTRACTOR IS RESPONSIBLE TO PROTECT ADJACENT WATER COURSES FROM THE DISCHARGE OF SEDIMENT DURING CONSTRUCTION.
8. INSTALL PERMANENT EROSION CONTROL MEASURES WITHIN 5 DAYS OF COMPLETING FINAL GRADING OR MAINTAIN TEMPORARY MEASURES UNTIL PERMANENT MEASURES ARE INSTALLED.
9. SILT FENCE TO BE INSTALLED AROUND OFF-SITE STOCKPILE AREAS.
10. APPLY TEMPORARY EROSION CONTROL ON OVER EXPOSED SOILS DURING WET WEATHER AND WHEN SITE IS INACTIVE FOR MORE THAN 24 HOURS.
11. DO NOT CONSTRUCT DURING HIGH FLOW OR WET WEATHER.
12. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING LANDSCAPING DURING THE WARRANTY PERIOD.
13. PROTECT ALL DRAIN INLETS WITH SEDIMENT FILTERS.
14. EXISTING LOW AREAS TO BE USED FOR STORMWATER DETENTION AND SETTLING DURING CONSTRUCTION.
15. INSTALL TEMPORARY INLET FILTERS AT ALL ADJACENT AND DOWN-GRADIENT STORM WATER INLETS, CATCH BASINS AND MANHOLES THAT MAY BE IMPACTED. CATCH BASIN INLET FILTERS SHALL BE MAINTAINED CLEAN AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD. IF A FILTER HAS HOLES OR IS INUNDATED WITH SEDIMENT, THE FILTER WILL REQUIRE REPLACEMENT.
16. INSTALL AN ANTI-TRACKING PAD AT THE SITE ENTRY AND EXIT(S). THE ANTI-TRACKING PAD SHOULD BE CONSTRUCTED OF GEOTEXTILE FABRIC WITH LIMESTONE OVER IT.
17. SILT FENCE AND/OR TURBIDITY BARRIER SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD. IF REPAIR OR REPLACEMENT IS NECESSARY, IT SHALL BE PERFORMED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. MAINTENANCE INCLUDES THE REMOVING OF BUILT-UP SEDIMENT. CONTRACTOR SHALL REMOVE, REPLACE IF IT FAILS. ADDITIONALLY, THE CONTRACTOR SHALL REINSTALL ANY PORTION OF THE FENCING/ BARRIER DAMAGED BY CONSTRUCTION MACHINERY.
18. PLACE STOCKPILES AND OTHER SPOIL PILES AWAY FROM THE DRAINAGE SYSTEM TO MINIMIZE SEDIMENT TRANSPORT. IF THE STOCKPILE AND/OR SPOIL PILE MUST REMAIN ON-SITE OVERNIGHT, OR IF THE WEATHER CONDITIONS INDICATE THE CHANCE FOR PRECIPITATION, A.) COVER THE PILE WITH WATER REPELLENT MATERIAL TO PREVENT EROSION AND/OR B.) INSTALL SILT FENCING AROUND THE BASE OF THE PILE TO PREVENT TRANSPORT OF SEDIMENT TO THE STORM WATER SYSTEM, OR APPLY OTHER CONTROL METHODS APPROPRIATE TO THE SITE. CONTROL MEASURES TO GUARD AGAINST WIND EROSION MUST ALSO BE EMPLOYED, SUCH AS WETTING OR COVERING THE STOCKPILES. KEEP AS FEW STOCKPILES AS POSSIBLE DURING THE COURSE OF THE PROJECT.
19. THROUGHOUT THE CONSTRUCTION PERIOD, ALL MUD/SILT TRACKED ONTO EXISTING ROADS FROM THE SITE DUE TO CONSTRUCTION SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR.
20. SEEDING OR OTHER STABILIZATION SHALL BE REQUIRED IMMEDIATELY TO AREAS WHICH HAVE BEEN DAMAGED BY RUNOFF.
21. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL ON THE SITE THROUGHOUT THE DURATION OF THE CONSTRUCTION PROCESS.

STAGING/ ACCESS NOTES:
1. EQUIPMENT ACCESS AND STAGING AND MATERIALS STORAGE CAN OCCUR WITHIN THE LIMITS OF DISTURBANCE IN ADDITION TO DESIGNATED STAGING AREAS. NO ADDITIONAL VEGETATION CLEARING FOR ACCESS OR STAGING IS PERMITTED WITHOUT APPROVAL OF THE ENGINEER AND OWNER.
2. NO MATERIAL STORAGE OR EQUIPMENT STAGING IS PERMITTED ON ANY PORTION OF COLONIAL DRIVE OR INKSTER ROAD INCLUDING AREAS CLOSED TO TRAFFIC.
3. CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION OVER EXISTING ASPHALT ON COLONIAL DRIVE TO PREVENT PHYSICAL DAMAGE OR CHEMICAL DAMAGE FROM LEAKING PETROLEUM PRODUCTS. REPAIR OF DAMAGED ROAD SHALL BE AT CONTRACTOR'S EXPENSE UNLESS SPECIFICALLY ACCOUNTED FOR UNDER CONTRACTOR'S SITE RESTORATION LINE ITEM.

3 WORKING DAYS
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OARS TO PROTECT
Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
PRELIMINARY	05-12-20

30693
ECT PROJECT NUMBER

AB DESIGNED BY | AB CHECKED BY
AK DRAWN BY | APPROVED BY

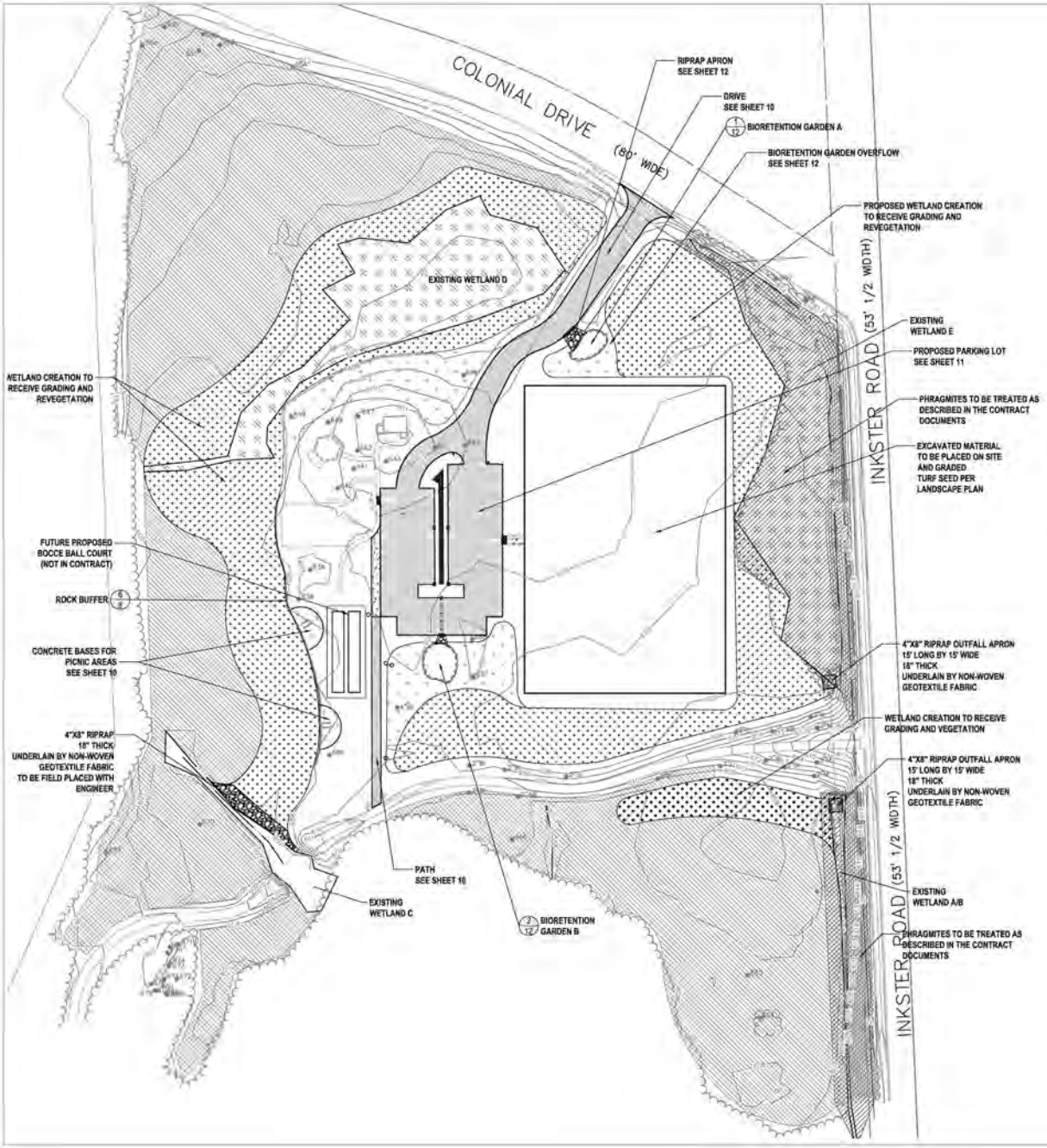
SHEET TITLE:

SITE PREPARATION PLAN

SCALE: 1" = 60' @ 22" x 34"
0 30' 60' 120'

NORTH

SHEET NUMBER 3



LEGEND

- EXIST. CONTOUR
- EXIST. UTILITY PIPE
- GUY WIRE
- EXIST. OVERHEAD UTILITY LINE
- EXIST. WATER MAIN
- EXIST. CATCH BASIN OR INLET
- CULVERT
- SIGN
- SINGLE TREE
- TREE OR BRUSH LIMIT
- PROPOSED DRIVE, MAINTENANCE LOT, AND PATH
- PICNIC AREA
- PROPOSED RIPRAP
- 608 / 607.5 PROPOSED CONTOURS
- PROPOSED WETLAND CREATION (GRADING AND REVEGETATION)
- PROPOSED REFORESTATION
- PROPOSED MEADOW HABITAT
- EXISTING WETLAND RESTORATION (INVASIVE SPECIES TREATMENT)
- EXISTING WETLAND RESTORATION (REVEGETATION)
- PROPOSED ROCK BUFFER

NOTES:

1. SEE SHEET 5 FOR GRADING PLAN.
2. SEE SHEET 7 FOR REVEGETATION PLAN.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT LAYOUT AND STAKING AS NEEDED TO CONDUCT WORK. DIGITAL AUTOCAD FILES SHALL BE PROVIDED TO THE CONTRACTOR TO FACILITATE LAYOUT OF PROPOSED WORK.
4. PER THE GLRI GRANT, THIS PROJECT IS COMMITTED TO MEETING THE FOLLOWING HABITAT METRICS:

	Metric (ac)	Currently on plans (ac)
Riparian wetland habitat creation	3.2	3.7
Tree plantings/reforestation	5.6	5.6
Meadow habitat creation	0.5	0.5
Invasive species treatment	1.3	1.3

ECT Environmental Consulting & Technology, Inc.

Great Lakes Restoration Initiative

Alliance of Rouge Communities — OURS TO PROTECT

Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12.2021
FOR PERMITTING	01-2021
SITE CONCEPT	12.15.20

28083 ECT PROJECT NUMBER

AB DESIGNED BY | AB CHECKED BY

MK DRAWN BY | APPROVED BY

SHEET TITLE

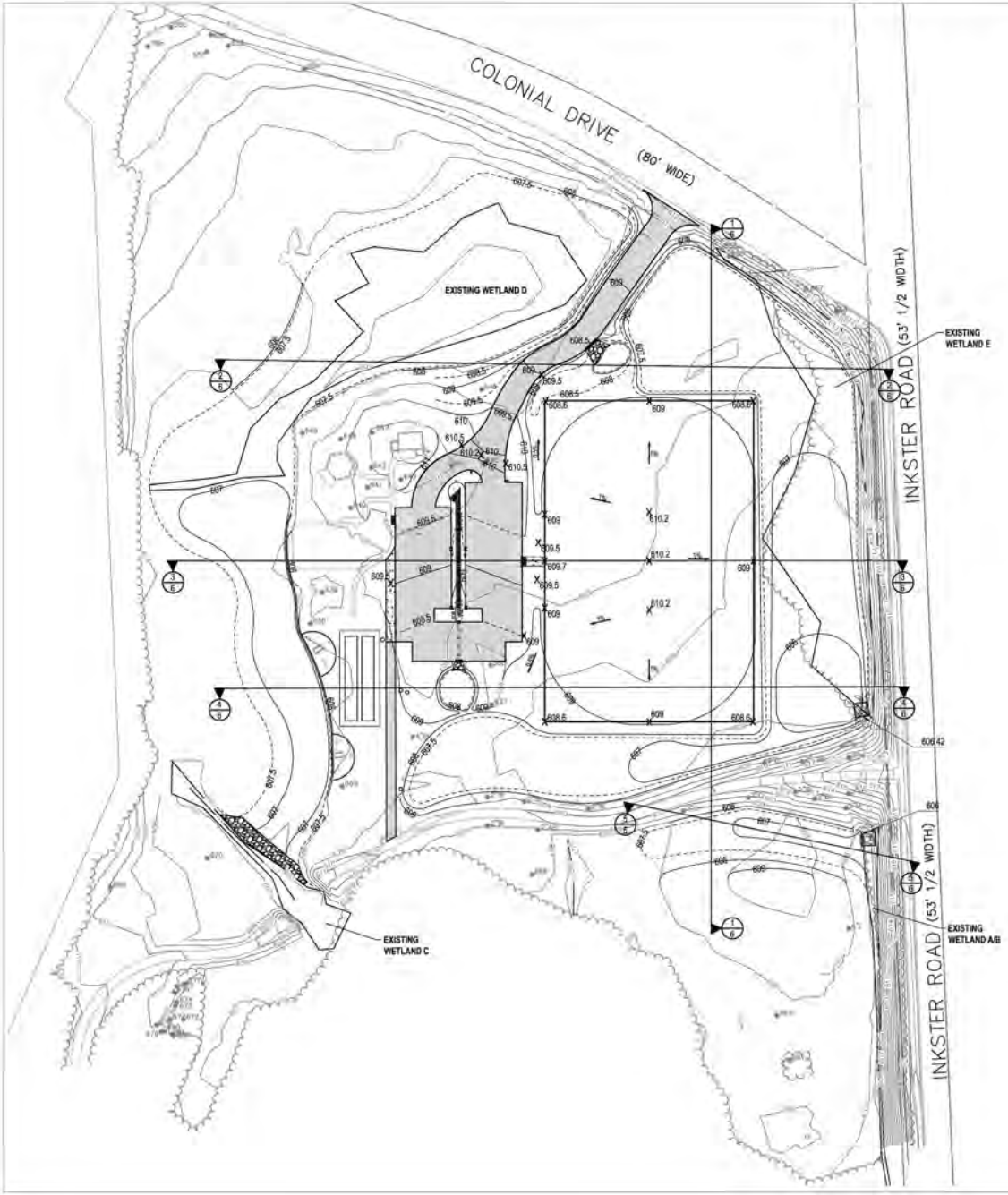
PROPOSED CONDITIONS

SCALE: 1" = 60' @ 22" x 34"

0 30 60 120

NORTH

SHEET NUMBER 4



LEGEND

- EXIST. CONTOUR
- EXIST. UTILITY POLE
- GUY WIRE
- EXIST. OVERHEAD UTILITY LINE
- EXIST. WATER MAIN
- EXIST. CATCH BASIN OR INLET
- CULVERT
- SIGN
- SINGLE TREE
- TREE OR BRUSH LIMIT
- PROPOSED DRIVE, PARKING LOT, AND PATH
- PICNIC AREA
- PROPOSED RIPRAP
- PROPOSED CONTOURS

NOTES:

1. SEE SHEET 4 FOR PROPOSED CONDITIONS.
2. SEE SHEET 7 FOR REVEGETATION PLAN.
3. SEE SHEET 6 FOR CROSS SECTIONS.
4. TOPSOIL IS TO BE STOCKPILED AND REAPPLIED AS NEEDED.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT LAYOUT AND STAKING AS NEEDED TO CONDUCT WORK. DIGITAL AUTOCAD FILES SHALL BE PROVIDED TO THE CONTRACTOR TO FACILITATE LAYOUT OF PROPOSED WORK.

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Great Lakes RESTORATION

Alliance of Rouge Communities — OURS TO PROTECT

Wayne County parks

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ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12-15-20

200983
ECT PROJECT NUMBER

AB	AB
DESIGNED BY	CHECKED BY
AK	
DRAWN BY	APPROVED BY

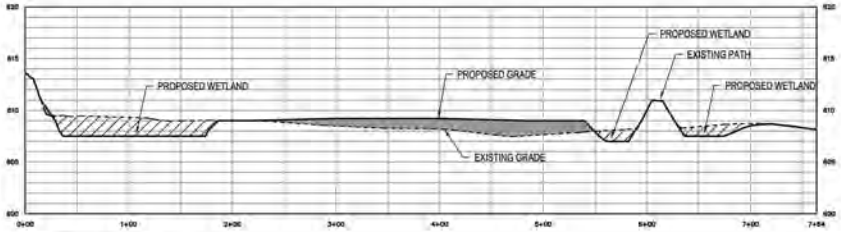
SHEET TITLE

GRADING PLAN

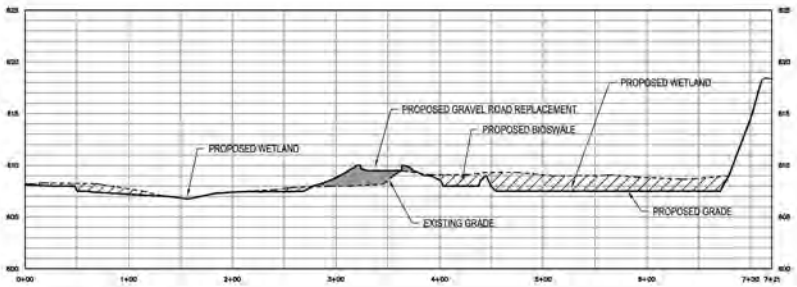
SCALE: 1" = 60' @ 22" x 34"

NORTH

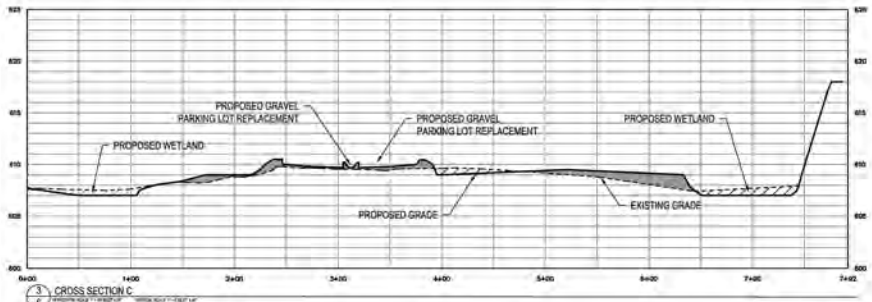
SHEET NUMBER 5



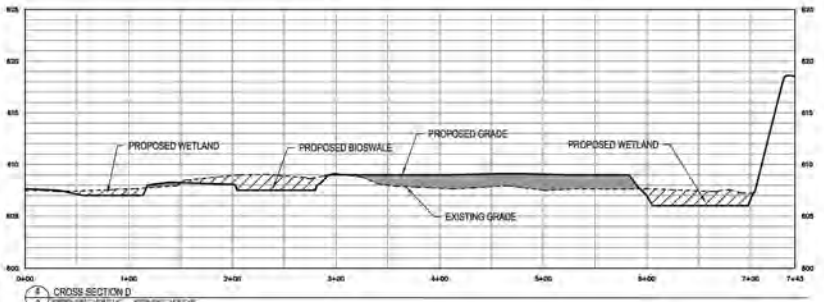
1/6 CROSS SECTION A



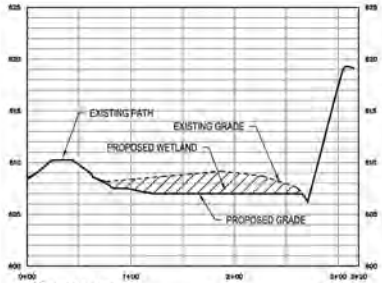
2/6 CROSS SECTION B



3/6 CROSS SECTION C



4/6 CROSS SECTION D



5/6 CROSS SECTION E

LEGEND

CUT

FILL

ECT Environmental Consulting & Technology, Inc.

Great Lakes Restoration Initiative

Alliance of Rouge Communities

OURS TO PROTECT

Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	11-2021
SITE CONCEPT	12/10/20

200361
ECT PROJECT NUMBER

AB DESIGNED BY | AB CHECKED BY

AM DRAWN BY | APPROVED BY

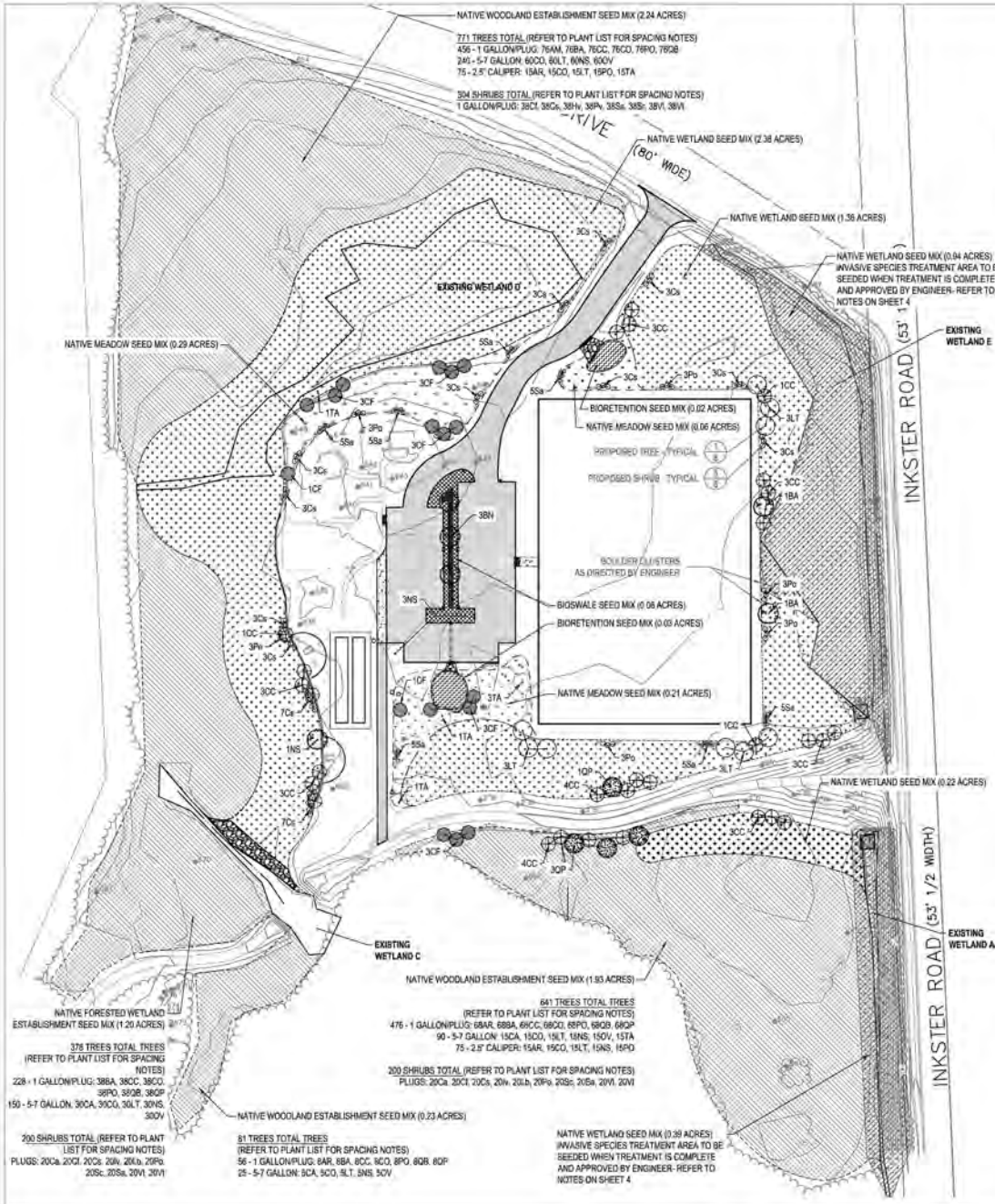
SHEET TITLE

CROSS SECTIONS

SCALE AS SHOWN

NORTH

SHEET NUMBER 6



LEGEND

EXIST. CONTOUR
SINGLE TREE
TREE OR BRUSH LIMIT
NATIVE WETLAND SEED MIX (+/- 5.29 AC.)
NATIVE FORESTED WETLAND ESTABLISHMENT SEED MIX (+/- 5.6 AC.)
INVASIVE SPECIES TREATMENT - REFER TO NOTES ON SHEET 4
NATIVE MEADOW SEED MIX (+/- 0.53 AC.)
PROPOSED DRIVE, PARKING LOT, AND PATH
PERIMETER AREA (SEE DETAIL B, SHEET 10)
NATIVE BIORETENTION SEED MIX (+/- 0.08 AC.)
NATIVE BIOSWALE SEED MIX (+/- 0.06 AC.)

PROPOSED PLANT LIST

Symbol	Quantity	Scientific Name	Common Name	Size	Cont.	Spacing
SHRUBS						
Ca	46	Cornus amomum	Silky Dogwood	Min. 24" ht.	Plug	6' o.c.
Cf	78	Cornus foemina	Gray Dogwood	Min. 24" ht.	Plug	6' o.c.
Cs	47	Cornus sericea	Red-osier Dogwood	Min. 30" ht.	5 gallon	6' o.c.
	78	Cornus sericea	Red-osier Dogwood	Min. 24" ht.	Plug	6' o.c.
Hv	36	Hamamelis virginiana	Witch Hazel	Min. 24" ht.	1 gallon	6' o.c.
Iv	40	Ilex verticillata	Winterberry	Min. 24" ht.	Plug	6' o.c.
Lb	40	Lindera benzoin	Spicebush	Min. 24" ht.	Plug	6' o.c.
Po	18	Physocarpus opulifolius	Common Ninebark	Min. 30" ht.	5 gallon	6' o.c.
	40	Physocarpus opulifolius	Common Ninebark	Min. 24" ht.	Plug	6' o.c.
Pv	38	Prunus virginiana	Choke Cherry	Plug/1 gal.	cont.	10' o.c.
Sr	38	Sambucus racemosa	Red Elderberry	Min. 24" ht.	Plug	6' o.c.
Sc	40	Sambucus canadensis	Common Elderberry	Min. 24" ht.	Plug	6' o.c.
Sa	20	Spiraea alba	Meadowsweet	Min. 30" ht.	3 gallon	6' o.c.
	78	Spiraea alba	Meadowsweet	Min. 24" ht.	Plug	6' o.c.
Vl	78	Viburnum lentago	Nannyberry	Min. 24" ht.	Plug	6' o.c.
Vt	78	Viburnum trilobum	American Highbush Cranberry	Min. 24" ht.	Plug	6' o.c.
TREES						
AM	76	Amelanchier sp.	Serviceberry	7 gal.	cont.	10' o.c.
AR	30	Acer Rubrum	Red Maple	2.5" Cal.	B&B	10' o.c.
	76	Acer Rubrum	Red Maple	Plug/1 gal.	cont.	10' o.c.
BA	2	Betula alleghaniensis	Yellow Birch	5-7' Ht.	B&B	As Shown
	193	Betula alleghaniensis	Yellow Birch	Plug/1 gal.	cont.	10' o.c.
BN	3	Betula nigra	Clump River Birch	8-10' Ht.	B&B	As Shown
CA	50	Carpinus caroliniana	Musclewood	5 gal.	cont.	10' o.c.
CO	30	Celtis occidentalis	Hackberry	2.5" Cal.	B&B	10' o.c.
	110	Celtis occidentalis	Hackberry	5gal.	cont.	10' o.c.
	190	Celtis occidentalis	Hackberry	Plug/1 gal.	cont.	10' o.c.
CC	26	Cercis canadensis	Eastern Redbud	5-7' Ht.	B&B	As Shown
	193	Cercis canadensis	Eastern Redbud	Plug/1gal.	cont.	10' o.c.
CF	17	Cornus florida	Flowering Dogwood	5-7' Ht.	B&B	As Shown
LT	39	Liriodendron tulipifera	Tulip Tree	2.5" Cal.	B&B	As Shown
	110	Liriodendron tulipifera	Tulip Tree	7 gal.	cont.	10' o.c.
NS	19	Nyssa sylvatica	Black Gum	2.5" Cal.	B&B	10' o.c. or As Shown
	116	Nyssa sylvatica	Black Gum	5 gal.	cont.	10' o.c.
OV	116	Ostrya virginiana	Ironwood	7 gal.	cont.	10' o.c.
PO	30	Platanus occidentalis	Sycamore	2.5" Cal.	B&B	10' o.c.
	190	Platanus occidentalis	Sycamore	Plug/1 gal.	cont.	10' o.c.
QB	190	Quercus macrocarpa	Bur Oak	Plug/1 gal.	cont.	10' o.c.
QP	8	Quercus palustris	Pin Oak	2.5" Cal.	B&B	As Shown
	114	Quercus palustris	Pin Oak	Plug/1 gal.	cont.	10' o.c.
TA	21	Tilia americana	American Basswood	2.5" Cal.	B&B	10' o.c. or As Shown
TA	15	Tilia americana	Basswood	5 gal.	cont.	10' o.c.

NOTES:
1. REFER TO SHEET 9 FOR GENERAL VEGETATION NOTES.
2. REFER TO THIS SHEET FOR OVERALL PLANT LIST AND QUANTITIES OF TREES AND SHRUBS.
3. STAKING REQUIREMENTS FOR TREES PER WAYNE COUNTY DETAILS, UNLESS OTHERWISE APPROVED BY ENGINEER/OWNER:
   - FOR TREES 2.5" CAL. AND GREATER - BELOW GRADE STABILIZATION, REFER TO SHEET 8
   - FOR 5-7 GAL. TREES - ABOVE GRADE STAKING, REFER TO SHEET 8
   - FOR PLUG/1 GAL. TREES - NO STAKING REQUIRED

PLANT TREE SPECIES IN GROUPS OF 3-7 AT 10FT, O.C. AND SHRUBS IN GROUPS OF 3-7 AT 6FT. O.C. THROUGHOUT REFORESTATION AREA. SPECIES AND SIZES SHALL BE EVENLY DISTRIBUTED THROUGHOUT PLANTING LIMITS TO MAXIMIZE DIVERSITY WITHIN EACH PLANTING AREA.

4. UNLESS OTHERWISE NOTED, ANY DISTURBED AREA TO BE RESEEDED ACCORDING TO THE WAYNE COUNTY LAWN RESTORATION STANDARDS.
5. ALL PLANT QUANTITIES SHALL BE CONFIRMED BY THE INSTALLATION CONTRACTOR.
6. IF SPECIAL CONDITIONS EXIST WHICH WARRANT INSTALLATION OUTSIDE THE PROPOSED PLANTING TIME FRAMES, SUBMIT A WRITTEN REQUEST TO THE LANDSCAPE ARCHITECT DESCRIBING CONDITIONS AND STATING THE PROPOSED VARIANCE. IF APPROVED, THE INSTALLATION CONTRACTOR MAY BE RESPONSIBLE FOR THE SUPPLEMENTAL WATERING AT A FREQUENCY AND DURATION FOR PROPER VEGETATION ESTABLISHMENT AND DEVELOPMENT.
7. LAYOUT NOTES:

CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT AND STAKING OF PROPOSED WORK. DIGITAL AUTOCAD FILES SHALL BE PROVIDED TO CONTRACTOR TO FACILITATE LAYOUT OF PROPOSED PLANTINGS

A. WOODY PLANTINGS

INDIVIDUAL SHRUB LOCATIONS SHALL BE STAKED ON THE PROJECT SITE BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT BEFORE ANY PLANTING PITS ARE DUG. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANT MATERIAL LOCATIONS PRIOR TO PLANTING TO MEET FIELD CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.

B. SEEDING

FLAG AND REVIEW AREAS TO BE SEEDED WITH OWNER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE CONTRACTOR SHALL SUPPLY ALL EQUIPMENT, MATERIALS, AND ITEMS NECESSARY FOR CLEAR LAYOUT ACCORDING TO THE PLANS.

C. NATIVE PLUGS

CONTRACTOR SHALL LAYOUT PLANTING ZONES BY SPECIES AS PER PLAN, STAKE OR FLAG LOCATIONS, OUTLINE AREAS, ADJUST AREAS WHEN REQUESTED, AND OBTAIN LANDSCAPE ARCHITECTS/OWNERS ACCEPTANCE OF LAYOUT PRIOR TO ANY PLANTING. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE FIELD ADJUSTMENTS WITHOUT ANY ADDITIONAL COST TO THE OWNER.

8. EROSION CONTROL BLANKET NOTES:
- NORTH AMERICAN GREEN SC-150BN TO BE USED ON ANY SLOPES STEEPER THAN 1V:6H
- S75BN ON SLOPES FLATTER THAN 1V:6H WITHIN EXISTING AND PROPOSED WETLAND BASIN AREAS
- HYDRAULIC MULCH OR CERTIFIED WEED FREE STRAW MULCH WITH TACKIFIER OR CRIMPING TO BE USED ON ANY SLOPES OUTSIDE OF WETLANDS FLATTER THAN 1V:5H
- ALL EROSION CONTROL BLANKET/MULCH TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

9. REFER TO SPECIFICATION SECTIONS 02930, 02931, AND 02932 FOR VEGETATION REQUIREMENTS.
10. EXISTING STOCKPILED BOULDERS TO BE USED FOR BOULDER CLUSTERS ALONGSIDE REVEGETATION AS DIRECTED BY ENGINEER/OWNER.

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Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12-15-20

250303	
ECT PROJECT NUMBER	
AS	AS
DESIGNED BY	CHECKED BY
MK	
DRAWN BY	APPROVED BY

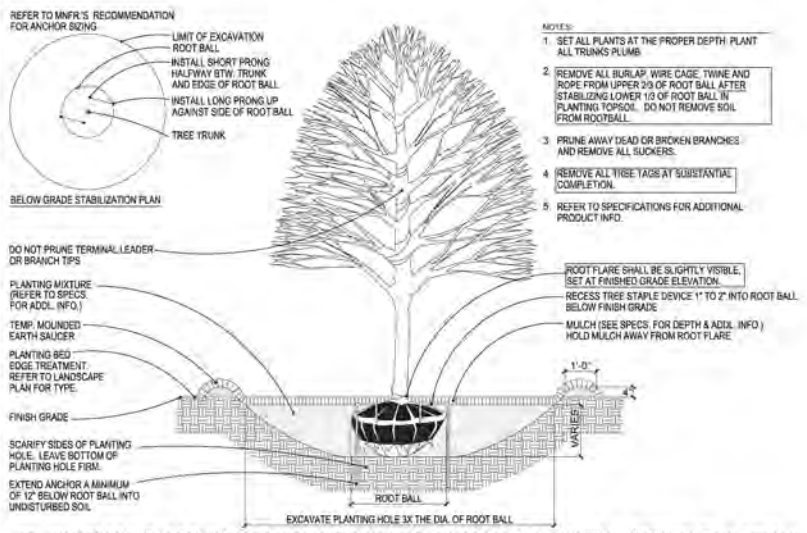
SHEET TITLE

REVEGETATION PLAN

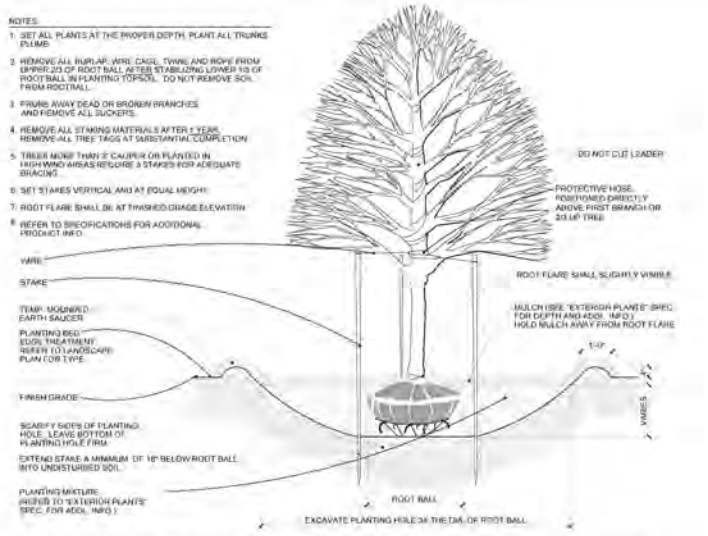
SCALE: 1" = 60' @ 22" x 34"

NORTH

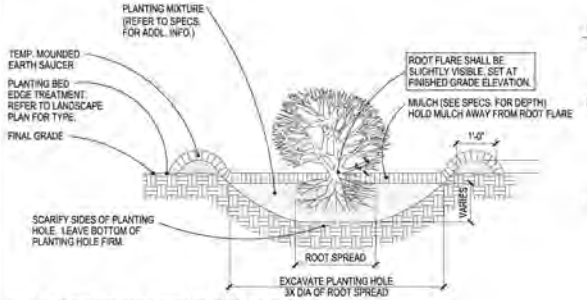
SHEET NUMBER 7



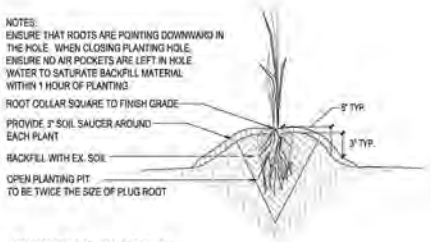
1/8 WAYNE COUNTY DECIDUOUS TREE PLANTING WITH BELOW GRADE STABILIZATION - GREATER THAN 2.5" CAL.
NOT TO SCALE



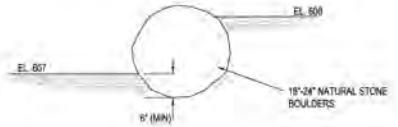
2/8 WAYNE COUNTY DECIDUOUS TREE PLANTING WITH TREE STAKES - LESS THAN 2.5" CAL.
NOT TO SCALE



3/8 WAYNE COUNTY SHRUB PLANTING DETAIL
NOT TO SCALE



4/8 PLUG PLANTING DETAIL
NOT TO SCALE



5/8 ROCK BUFFER DETAIL
NOT TO SCALE

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Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
PRELIMINARY	09-12-20

ECT PROJECT NUMBER

AB DESIGNED BY	AB CHECKED BY
AB DRAWN BY	APPROVED BY

SHEET TITLE

REVEGETATION DETAILS

SCALE: "VARIES"

NORTH

SHEET NUMBER

8

REVEGETATION NOTES

MAINTENANCE AND WARRANTY PERIOD:

1. MAINTENANCE PERIOD: ENSURE THAT ALL TREES, SHRUBS, SEEDING, AND HERBACEOUS PLANTS INSTALLED UNDER THIS CONTRACT WILL BE HEALTHY AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR TWO (2) FULL GROWING SEASONS (MAY THROUGH OCTOBER) FROM DATE OF PLANTING INSTALLATION ACCEPTANCE. THE CONTRACTOR SHALL RESPOND WITHIN TWO (2) WEEKS OF WRITTEN REQUESTS BY THE OWNER FOR REPLACEMENT OR REPAIR. IF THE CONTRACTOR FAILS TO RESPOND WITHIN THIS TIME, THE OWNER MAY PROCEED WITH REPLACEMENT WORK AND BILL THE CONTRACTOR.
2. WARRANTY PERIOD: ENSURE THAT ALL TREES, SHRUBS, SEEDING, AND HERBACEOUS PLANTS INSTALLED UNDER THIS CONTRACT WILL BE HEALTHY AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR ONE (1) FULL GROWING SEASON (MAY THROUGH OCTOBER) FROM DATE OF MAINTENANCE PERIOD ACCEPTANCE. THE CONTRACTOR SHALL RESPOND WITHIN TWO (2) WEEKS OF WRITTEN REQUESTS BY THE OWNER FOR REPLACEMENT OR REPAIR. IF THE CONTRACTOR FAILS TO RESPOND WITHIN THIS TIME, THE OWNER MAY PROCEED WITH REPLACEMENT WORK AND BILL THE CONTRACTOR.
3. ALL DELAYS IN COMPLETION OF PLANTING OPERATIONS WHICH EXTEND THE PLANTING INTO MORE THAN ONE PLANTING SEASON SHALL EXTEND THE WARRANTY PERIOD CORRESPONDINGLY.
4. REPLACEMENTS: AS SOON AS WEATHER CONDITIONS PERMIT, REPLACE, WITHOUT COST TO OWNER, ALL DEAD PLANTS AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE ENGINEER DURING AND AT THE END OF THE MAINTENANCE AND WARRANTY PERIODS.
5. PATCHY OR BARE AREAS (IN EXCESS OF 8 SQUARE FEET) WHERE SEED MIX FAILED TO CREATE SUFFICIENT DENSITY OF COVER SHALL BE RESEEDED BY HAND AT THE RECOMMENDED APPLICATION RATE AT NO ADDITIONAL COST TO OWNER.
6. INCORRECT MATERIALS: DURING WARRANTY PERIOD, REPLACE AT NO COST TO OWNER ALL PLANTS REVEALED AS BEING UNTRUE TO NAME. PROVIDE REPLACEMENTS OF A SIZE AND QUALITY TO MATCH THE PLANTED MATERIALS AT THE TIME THE MISTAKE IS DISCOVERED.
7. ALL PLANT STOCK SHALL BE WATERED BY THE CONTRACTOR TO ENSURE THE HEALTH AND VIGOR OF THE PLANTED MATERIALS. THE CONTRACTOR SHALL WATER AS NEEDED BASED ON NATURAL RAINFALL DURING THE MAINTENANCE AND WARRANTY PERIODS. WATERING SHALL CONTINUE SO SEEDLINGS DO NOT DRY OUT ONCE WATERING HAS BEGUN. THE WATERING SHALL BE DONE FROM SURFACE METHODS AT A PRESSURE NOT TO EXCEED THE INFILTRATION RATE OF THE SOIL, LIMITING RUNOFF DURING THE WATERING PERIOD. EACH AREA WILL BE WATERED WITH SUFFICIENT WATER TO COMPLETELY SATURATE THE ROOT ZONE. THE CONTRACTOR SHALL INSPECT ALL PLANTS FOR INSECT INFESTATION AND DAMAGE.
8. EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
9. PROTECTION FROM TRAFFIC AND EROSION IN NEWLY SEEDED AREAS AND THE MITIGATION AREAS IS THE RESPONSIBILITY OF THE CONTRACTOR. SAFETY FENCES AND/OR OTHER BARRIER METHODS WITH APPROPRIATE SIGNAGE MAY BE USED FOR ONE YEAR FROM COMPLETION OF CONSTRUCTION ACTIVITIES. ALL COSTS ASSOCIATED WITH THIS IS INCLUSIVE OF CONTRACTOR'S PRICING.
10. NOTIFY THE OWNER PRIOR TO AND FOLLOWING ANY MAINTENANCE ACTIVITY.
11. FINAL ACCEPTANCE OF WORK WILL BE SUBJECT TO ACCEPTANCE BY PROJECT MANAGER AND OWNER AT THE END OF WARRANTY PERIOD.

NATIVE PLANTINGS:

1. ALL PLANTS SHALL BE OF NATIVE PLANT MATERIAL OF GENOTYPES FROM THE NORTH CENTRAL STATES ONLY (IL, IN, IA, MI, OH), AND FROM A RECOGNIZED NURSERY OF THIS REGION. MICHIGAN SOURCES FOR SHRUBS, AND PLUGS SHALL BE LOCATED BEFORE BRANCHING OUT TO OTHER NORTH CENTRAL STATES. NATIVE PLANTINGS INCLUDE ALL SHRUBS AND PLUGS INSTALLED AS PART PF THIS PROJECT.
2. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES AND MUST MEET APPLICABLE REQUIREMENTS OF ICBN AND ICNCP. PLANTS SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS, OR LARVAE. PLANTS SHALL BE FREE OF KINKED, CIRCLING OR GIRDLING TRUNK SURFACE AND CENTER ROOTS, AND SHALL NOT BE ROOT-BOUND. RESPECT MAXIMUM STORAGE TIMES FOR PLANT STOCK.
3. NATIVE PLANTING AREAS SHALL BE INSTALLED AFTER MAY 15 (WHEN SOIL IS FREE OF FROST AND IN WORKABLE CONDITION), BUT BEFORE JUNE 30 OR AFTER SEPT. 1 BUT BEFORE OCTOBER 30 OR AS APPROVED BY THE LANDSCAPE ARCHITECT.
4. FURNISH PLANT SPECIES AND SIZES AS INDICATED ON THE PLANS. PLANT STOCK SHALL BE TRUE TO THEIR NAME (GENUS AND SPECIES), AS SPECIFIED. CULTIVARS AND SPECIMENS SHALL NOT BE USED WITHOUT PRIOR APPROVAL BY LANDSCAPE ARCHITECT.
5. NATIVE PLANTINGS TO BE INSTALLED PER DETAILS.
6. REMOVE ALL CONTAINERS, TAGS AND PACKAGING MATERIAL AND DISPOSE OF LEGALLY OFF-SITE.
7. WATER PLANT STOCK IMMEDIATELY AFTER PLANTING SUCH THAT ROOT ZONE IS THOROUGHLY SOAKED. CONTRACTOR SHALL BE RESPONSIBLE TO KEEP PLUGS ADEQUATELY WATERED, IF NECESSARY, TO ENSURE THEIR SURVIVAL.
8. IF EROSION CONTROL BLANKET IS NEEDED IN AREAS WHERE PLUGS ARE PRESENT, INSTALL EROSION CONTROL BLANKET AFTER SEEDING, BUT PRIOR TO PLANTING. EROSION CONTROL BLANKET SHALL BE INSTALLED WHERE THE CONTRACTOR FEELS IT NECESSARY TO STABILIZE THE SITE AT NO ADDITIONAL COST TO THE OWNER.
9. MULCH FOR TREES AND SHRUBS SHALL BE NATURAL DOUBLE SHREDDED HARDWOOD.

SEEDING:

1. SEED SHALL BE FRESH, CLEAN, NEW SEED OF NATIVE PLANT MATERIAL OF GENOTYPES FROM THE NORTH CENTRAL STATES ONLY (IL, IN, IA, MI, OH), AND FROM A RECOGNIZED NURSERY OF THIS REGION - REFER TO SPECIFICATION 02930.
2. NATIVE SEED AREAS SHALL BE SEEDED AFTER MAY 1, (WHEN SOIL IS FREE OF FROST AND IN WORKABLE CONDITION), BUT BEFORE JUNE 30 OR AFTER OCTOBER 1, BUT BEFORE NOVEMBER 30 (OR PRIOR TO FREEZE-UP) OR AS APPROVED BY THE LANDSCAPE ARCHITECT.
3. SEEDBED PREPARATION: CUT ANY EXISTING VEGETATION TO 4 (FOUR) INCH HEIGHT AND APPLY HERBICIDE AS NECESSARY, REFER TO SPECIFICATIONS. PRIOR TO SOWING NATIVE SEED, LIGHTLY SCARIFY SO THAT THE BED IS SMOOTH AND FREE OF LARGE CLUMPS. SEED BED SHALL BE FIRM, BUT NOT COMPACT. SEED IMMEDIATELY AFTER SCARIFYING AND ENSURE GOOD SOIL TO SEED CONTACT. DO NOT FERTILIZE.
4. DO NOT SOW SEED WHERE STANDING WATER IS PRESENT.
5. SOW NATIVE SEED AT A SPECIES RATE OF POUNDS PER ACRE INDICATED ON THE DRAWING AND PER SUPPLIERS RECOMMENDATIONS. LIGHTLY RAKE TO INCORPORATE SEED INTO SOIL. DO NOT COVER SEED MORE THAN 1/4 INCH WITH SOIL.
6. CONTRACTOR SHALL REPAIR DAMAGED VEGETATION AND AERATE SOIL OVER ROOT ZONE OF NEGATIVELY IMPACTED VEGETATION. RE-SEED ALL DISTURBED AREAS TO PRE-EXISTING CONDITIONS.

EXISTING SITE CONDITIONS:

1. CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING SITE CONDITIONS PRIOR TO STARTING WORK.
2. THE CONTRACTOR UNDERSTANDS AND ACKNOWLEDGES THAT THE PERFORMANCE OF THE WORK IS REQUIRED WITHIN A RIVER SYSTEM AND FLOODPLAIN.
3. THE CONTRACTOR SHALL BE FULLY AWARE OF THE ROUGE RIVER HYDROLOGY AND CURRENT WEATHER CONDITIONS SO THAT WORK IN PROGRESS CAN BE SECURED AND PROTECTED, SO THAT SAFE JOB SITE WORKING CONDITIONS ARE MAINTAINED, AND SO THAT SOIL EROSION IS MINIMIZED DURING AND FOLLOWING A RAIN EVENT.
4. ROUGE RIVER HAS A VERY SHORT RESPONSE TIME TO STORM RUNOFF.
5. THE CONTRACTOR ACKNOWLEDGES THAT DELAYS IN THE START OF OR COMPLETION OF WORK DUE TO TYPICAL SEASONAL RAINFALL AND DUE TO TYPICAL PERIODIC HIGH FLOWS IN THE ROUGE RIVER SHALL NOT CONSTITUTE A BASIS FOR ANY EXTENSION OF TIME OR DAMAGES. IF THE CONTRACTOR SHALL BE UNAVOIDABLY DELAYED IN BEGINNING OR FULFILLING THIS CONTRACT BY REASONS OF EXCESSIVE STORM OR FLOODS THE CONTRACTOR SHALL HAVE NO VALID CLAIM FOR DAMAGES, BUT THEY SHALL IN SUCH CASE BE ENTITLED TO AN EXTENSION OF TIME AS THE ENGINEER SHALL ADJUDGE TO BE JUST AND REASONABLE; PROVIDED THAT FORMAL CLAIM FOR AN EXTENSION OF TIME IS MADE IN WRITING BY THE CONTRACTOR WITHIN ONE WEEK OF THE ALLEGED DELAY.

PROPOSED SEED MIXES

NATIVE WOODLAND ESTABLISHMENT, NATIVE BIORETENTION & NATIVE BIOSWALE SEED MIXES SHALL BE PROVIDED BY: (OR APPROVED EQUAL)
NATIVE CONNECTIONS
[illegible]
PHONE: [illegible]
EMAIL: [illegible]

NATIVE WOODLAND ESTABLISHMENT SEED MIX
Total Seeding Rate: [illegible] lbs per acre

Grasses, Sedges, Rushes	Common Name	PLS Oz/A	Total PLS Oz.	Seeds per sq. ft.
[illegible]	[illegible]	12.00	12.00	1.65
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Long-beaked Sedge	[illegible]	[illegible]	[illegible]
[illegible]	Fox Sedge	[illegible]	[illegible]	[illegible]
Elymus canadensis	Canada Wild Rye	[illegible]	[illegible]	[illegible]
Elymus virginicus	Virginia Wild Rye	[illegible]	[illegible]	[illegible]
[illegible]	Fowl Manna Grass	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Switchgrass	[illegible]	[illegible]	[illegible]
Schizachyrium scoparium	Little Bluestem	[illegible]	[illegible]	[illegible]
	Grasses Oz per Acre	[illegible]		Grasses seeds/sq ft
	Grasses Lbs per Acre	[illegible]		[illegible]
Forbs	Common Name	PLS Oz/A	Total PLS Oz.	Seeds per sq. ft.
Achillea millefolium	Yarrow	[illegible]	[illegible]	[illegible]
Allium cernuum	Nodding Wild Onion	[illegible]	[illegible]	[illegible]
Anemone canadensis	[illegible]	[illegible]	[illegible]	[illegible]
Aquilegia canadensis	Wild Columbine	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lobelia siphilitica	Great Blue Lobelia	[illegible]	[illegible]	[illegible]
Monarda fistulosa	Wild Bergamot	[illegible]	[illegible]	[illegible]
Penstemon digitalis	Foxglove Beardtongue	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rudbeckia hirta	Black-eyed Susan	[illegible]	[illegible]	[illegible]
Rudbeckia triloba	Brown-eyed Susan	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Veronicastrum virginicum	Culver's Root	[illegible]	[illegible]	[illegible]
Zizia aurea	Golden Alexanders	[illegible]	[illegible]	[illegible]
	Forbs Oz per Acre	[illegible]		Forbs seeds/sq ft
	Forbs Lbs per Acre	[illegible]		[illegible]
Annuals, Temp Nurse Crop, etc.	Common Name	PLS Oz/A	Total PLS Oz.	Temp Seeds per sq. ft.
Lolium multiflorum	Annual Rye	[illegible]	[illegible]	[illegible]
Avena sativa	Seed Oats	[illegible]	[illegible]	[illegible]
	Temp Oz per Acre	[illegible]		Temp seeds/sq ft
	Temp Lbs per Acre	[illegible]		[illegible]

NATIVE BIORETENTION SEED MIX
Total Seeding Rate: [illegible] lbs per acre

Grasses, Sedges, Rushes	Common Name	PLS Oz/A	Total PLS Oz.	Seeds per sq. ft.
[illegible]	[illegible]	3.00	[illegible]	[illegible]
Carex vulpinoidea	Fox Sedge	[illegible]	[illegible]	[illegible]
Elymus canadensis	Canada Wild Rye	16.00	16.00	[illegible]
Elymus virginicus	Virginia Wild Rye	16.00	16.00	[illegible]
Glyceria striata	Fowl Manna Grass	[illegible]	[illegible]	[illegible]
Juncus effusus	Soft Rush	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Schizachyrium scoparium	Little Bluestem	24.00	[illegible]	[illegible]
	Grasses Oz per Acre	[illegible]		Grasses seeds/sq ft
	Grasses Lbs per Acre	[illegible]		[illegible]
Forbs	Common Name	PLS Oz/A	Total PLS Oz.	Seeds per sq. ft.
Allium cernuum	Nodding Wild Onion	[illegible]	[illegible]	[illegible]
Asclepias incarnata	Swamp Milkweed	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Wild Senna	[illegible]	[illegible]	[illegible]
Desmodium canadense	Showy Tick Trefoil	[illegible]	[illegible]	[illegible]
Echinacea purpurea	Purple Coneflower	[illegible]	[illegible]	[illegible]
Eupatorium purpureum	Sweet Joe Pye Weed	[illegible]	[illegible]	[illegible]
Heliopsis helianthoides	False Sunflower	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lobelia siphilitica	Great Blue Lobelia	[illegible]	[illegible]	[illegible]
Monarda fistulosa	Wild Bergamot	[illegible]	[illegible]	[illegible]
Pycnanthemum virginianum	Mountain Mint	[illegible]	[illegible]	[illegible]
Ratibida pinnata	Yellow Coneflower	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Verbena hastata	Blue Vervain	[illegible]	[illegible]	[illegible]
Zizia aurea	Golden Alexanders	[illegible]	[illegible]	[illegible]
	Forbs Oz per Acre	[illegible]		Forbs seeds/sq ft
	Forbs Lbs per Acre	[illegible]		[illegible]
Annuals, Temp Nurse Crop, etc.	Common Name	PLS Oz/A	Total PLS Oz.	Temp Seeds per sq. ft.
Lolium multiflorum	Annual Rye	[illegible]	[illegible]	[illegible]
Avena sativa	Seed Oats	[illegible]	[illegible]	[illegible]
	Temp Oz per Acre	[illegible]		Temp seeds/sq ft
	Temp Lbs per Acre	[illegible]		[illegible]

NATIVE BIOSWALE SEED MIX
Total Seeding Rate: [illegible] lbs per acre

Grasses, Sedges, & Rushes	Common Name	PLS Oz/A	Total PLS Oz.
Carex bebbii	Bebb's Sedge	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Carex granularis	Meadow Sedge	[illegible]	[illegible]
Carex sprengelii	Long-beaked Sedge	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Eleocharis palustris	Great Spike Rush	[illegible]	[illegible]
Juncus dudleyi	Dudley's Rush	[illegible]	[illegible]
Juncus tenuis	Path Rush	[illegible]	[illegible]
Juncus torreyi	Torrey's Rush	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
	Grasses Oz per Acre	[illegible]	
	Grasses Lbs per Acre	[illegible]	
Annuals, Temp Nurse Crop, etc.	Common Name	PLS Oz/A	Total PLS Oz.
Lolium multiflorum	Annual Rye	[illegible]	[illegible]
Avena sativa	Seed Oats	[illegible]	[illegible]
	Temp Oz per Acre	[illegible]	
	Temp Lbs per Acre	[illegible]	

NATIVE MEADOW SEED MIX AND NATIVE WETLAND SEED MIX SHALL BE PROVIDED BY: (OR APPROVED EQUAL)
MICHIGAN WILDFLOWER FARM
[illegible]
PHONE: [illegible]
EMAIL: [illegible]

Native Meadow Seed Mix
40% Forbs and 60% Grasses
Seeding rate: 5 oz/1000 sq.ft. or 10 lbs/acre

Scientific Name	Common Name	% by weight
FORBS		
Achillea millefolium	Yarrow	0.01
Allium cernuum	Nodding Wild Onion	0.01
Asclepias tuberosa	Butterfly Weed	0.02
Coreopsis lanceolata	Sand Tickseed	0.04
Echinacea purpurea	Purple Coneflower	0.07
Lupinus perennis	Wild Lupine	0.02
Monarda fistulosa	Wild Bergamot	0.04
Rudbeckia hirta	Black-eyed Susan	0.07
Rudbeckia triloba	Three-lobed Coneflower	0.03
Symphyotrichum laeve	Smooth Aster	0.12
Symphyotrichum oolentangiense	Prairie Heart-leaved Aster	0.03
Symphyotrichum pilosum	Hairy Aster	0.01
Zizia aurea	Golden Alexanders	0.03
Forbs total		**0.40**
GRASS		
Bouteloua curtipendula	Side Oats Grama	0.10
Schizachyrium scoparium	Little Bluestem	0.40
Sporobolus heterolepis	Prairie Dropseed	0.10
Grasses total		**0.60**

Native Wetland Seed Mix
40% Forbs and 60% Grass/Sedge/Rush
Seeding Rate: 3 oz./1000 s.f. or 8 lbs./acre

Scientific name	Common name	% by weight
FORBS		
Anemone canadensis	Canada anemone	0.02
Asclepias incarnata	Swamp milkweed	0.04
Eupatorium maculatum	Joe pye weed	0.05
Eupatorium perfoliatum	Boneset	0.02
Helenium autumnale	Sneezeweed	0.02
Iris virginica	Iris	0.08
Liatris spicata	Marsh blazing star	0.04
Lobelia siphilitica	Blue lobelia	0.01
Mimulus ringens	Monkey flower	0.05
Rudbeckia fulgida	Sweet Black-eyed Susan	0.01
Solidago graminifolia	Grass-leaved goldenrod	0.01
Thalictrum dioicum	Early meadowrue	0.01
Tradescantia ohiensis	Spiderwort	0.05
Total Forbs		**0.40**
GRASSES		
Carex comosa	Bristly sedge	0.10
Elymus virginicus	Virginia wild rye	0.40
Scirpus atrovirens	Bulrush	0.10
Total Grasses		**0.60**

Annual Cover Crop
[illegible]

Scientific Name	Common Name
Avena sativa	Seed Oats
Lolium multiflorum	Annual Rye

*NOTE: ANNUAL COVER CROP SHALL BE ADDED TO EACH MIX, OR SEEDED SEPARATELY OVER ENTIRE PROPOSED SEEDING AREA.

ECT Environmental Consulting & Technology, Inc.

Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12-10-20

200387
ECT PROJECT NUMBER

AB — DESIGNED BY
AB — CHECKED BY
AK — DRAWN BY
APPROVED BY

SHEET TITLE

REVEGETATION NOTES

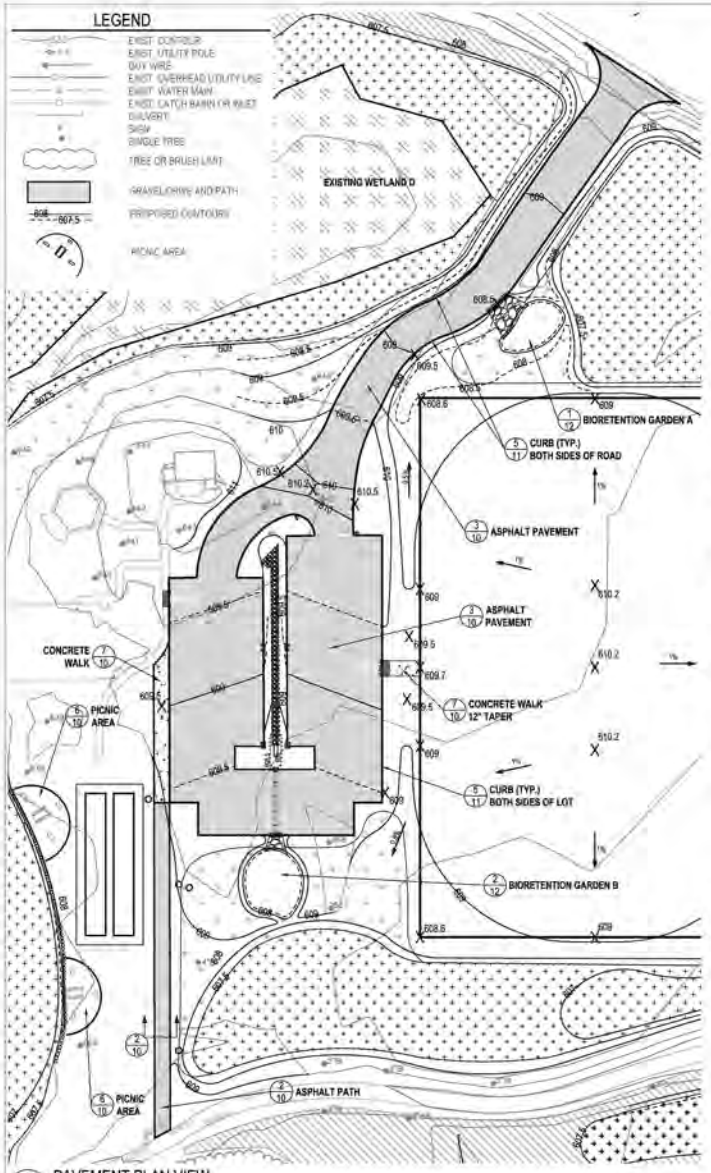
SCALE: 1" = 60' @ 22" x 34"

0 30' 60' 120'

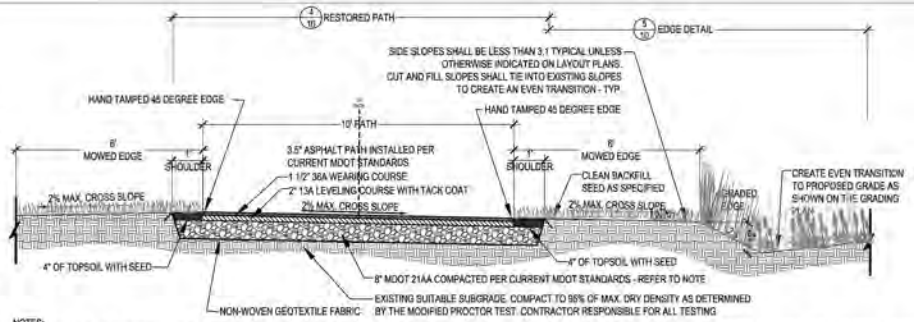
NORTH

SHEET NUMBER

9

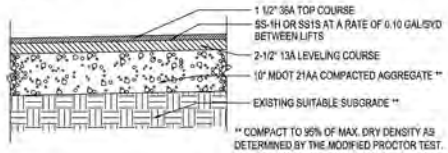


1 10 PAVEMENT PLAN VIEW



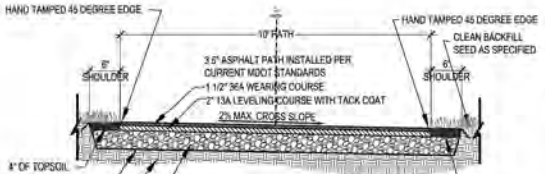
NOTES:
1. THE PROPOSED SECTION OF PAVEMENT SHALL INCLUDE AN 8" DEPTH 21AA AGGREGATE BASE COMPACTED PER CURRENT MDOT STANDARDS, 2" DEPTH 13A LEVELING COURSE, TACK COAT AND A 1.5" DEPTH 36A WEARING COURSE. THE BITUMINOUS PAVEMENT SHALL BE INSTALLED PER CURRENT MDOT INSTALLATION METHODS.
2. PATH MUST BE CONSTRUCTED SO THAT POSITIVE DRAINAGE AWAY FROM PATH IS ACHIEVED SUCH THAT WATER DOES NOT COLLECT ON THE PATH SURFACE AFTER CONSTRUCTION.
3. UNSUITABLE SOILS, SUCH AS MUCK PEAT, TOPSOIL, MARL, SILT OR OTHER UNSTABLE MATERIALS, SHALL BE UNDERCUT AND REPLACED WITH COMPACTED SAND SUBGRADE FILL WHERE INCIDENTAL TO ROUGH GRADING.
4. EXISTING GRAVEL MATERIAL MAY BE RE-USED AND 'SWEETENED' WITH PROPOSED BASE AGGREGATE, IF SUITABLE AND APPROVED BY ENGINEER.
5. CROSS SLOPE DIRECTION VARIES. SEE PLANS FOR DIRECTION OF SLOPE.
6. SHOULDERS TO MATCH CROSS SLOPE OF ASPHALT PATH.
7. CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING ALL SLOPES DISTURBED BY CONSTRUCTION.
8. NO UTILITY SURFACE COVERS/PLATES/MANHOLES (i.e. WATERLINE VALVE COVERS, ETC.) SHALL BE LOCATED WITHIN TRAIL AND SHALL BE MINIMUM 2 FEET FROM THE EDGE OF TRAIL.
9. DO NOT DISTURB EXISTING WETLANDS.

2 10 PEDESTRIAN WALKING PATH
NOT TO SCALE

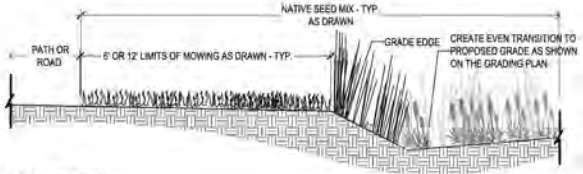


NOTES:
1. UNSUITABLE SOILS, SUCH AS MUCK PEAT, TOPSOIL, MARL, SILT OR OTHER UNSTABLE MATERIALS, SHALL BE UNDERCUT AND REPLACED WITH COMPACTED SAND SUBGRADE FILL WHERE INCIDENTAL TO ROUGH GRADING.
2. AREAS OF SUBGRADE FILL SHALL BE CONSTRUCTED USING 12" THICK LIFTS OF COMPACTED SAND, MDOT CLASS II OR EQUIVALENT ONSITE MATERIAL, AS APPROVED.
3. EXISTING GRAVEL MATERIAL MAY BE RE-USED AND 'SWEETENED' WITH PROPOSED BASE AGGREGATE, IF SUITABLE.

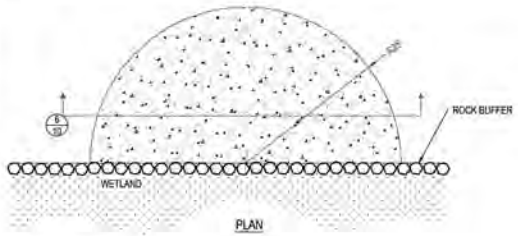
3 10 ASPHALT PAVEMENT DETAIL
NOT TO SCALE



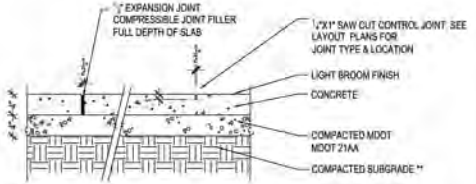
4 10 ASPHALT PAVEMENT DETAIL
NOT TO SCALE



5 10 EDGE DETAIL
NOT TO SCALE



6 10 CONCRETE BASE
NOT TO SCALE



NOTES:
1. UNSUITABLE SOILS, SUCH AS MUCK PEAT, TOPSOIL, MARL, SILT OR OTHER UNSTABLE MATERIALS, SHALL BE UNDERCUT AND REPLACED WITH COMPACTED SAND SUBGRADE FILL WHERE INCIDENTAL TO ROUGH GRADING.
2. AREAS OF SUBGRADE FILL SHALL BE CONSTRUCTED USING 12" THICK LIFTS OF COMPACTED SAND, MDOT CLASS II OR EQUIVALENT ONSITE MATERIAL, WHEN INSIDE ROAD INFLUENCE ZONE.

CONTRACTOR RESPONSIBLE FOR ALL TESTING.

** COMPACT TO 95% OF MAX. DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST.

7 10 CONCRETE TYP.
NOT TO SCALE

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ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12.10.20

200303
ECT PROJECT NUMBER

AR DESIGNED BY	AR CHECKED BY
AK DRAWN BY	APPROVED BY

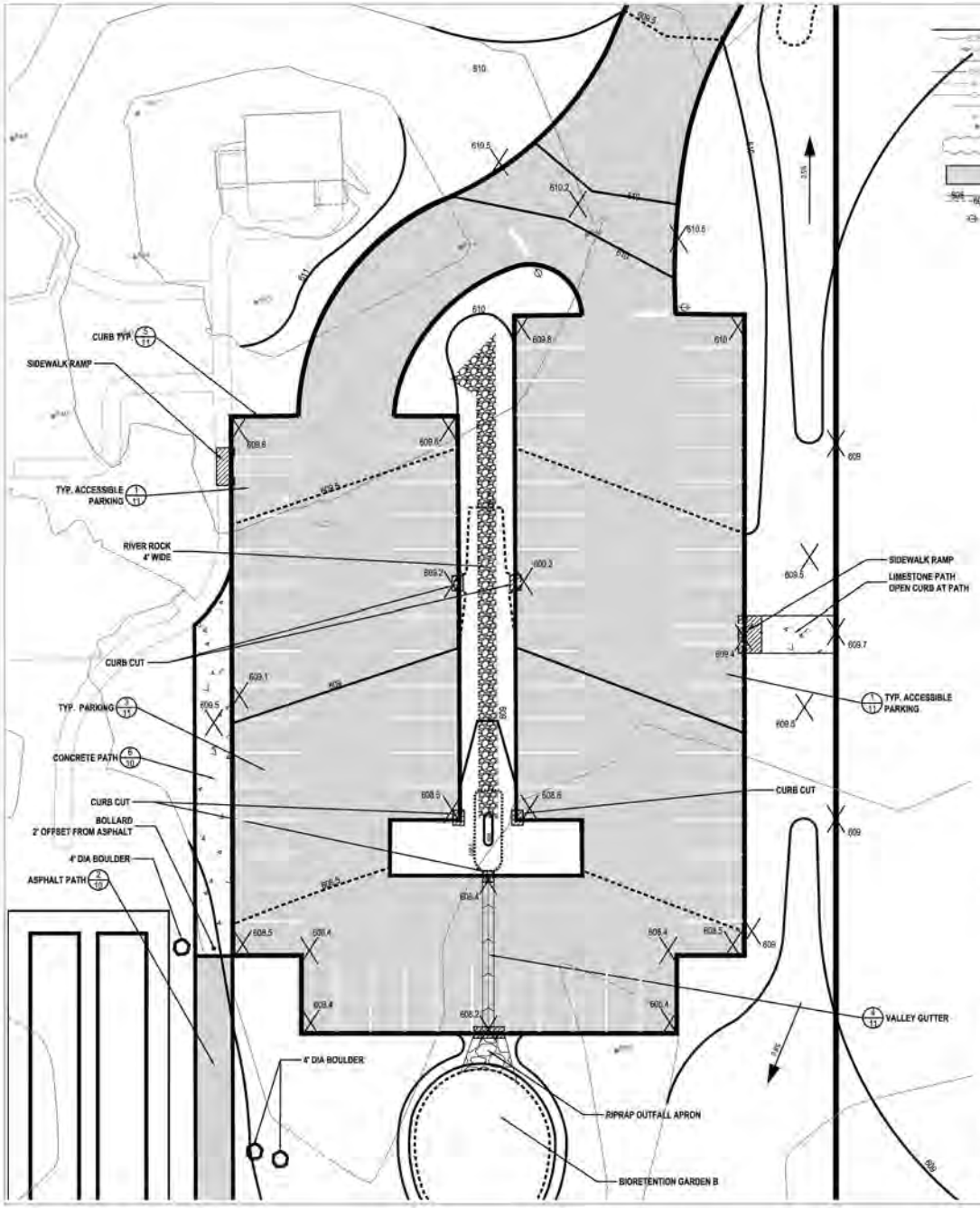
SHEET TITLE

PAVEMENT PLAN

SCALE: 1" = 40' @ 22" x 34"

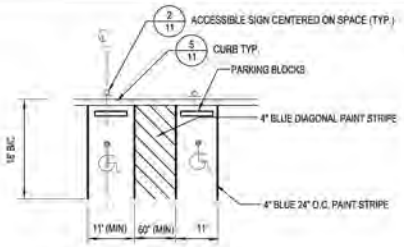
NORTH

SHEET NUMBER 10

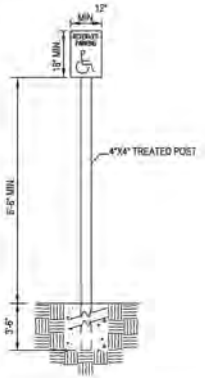


LEGEND

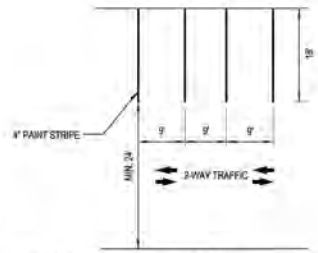
EXIST. CONTOUR
EXIST. UTILITY POLE
GUY WIRE
EXIST. OVERHEAD UTILITY LINE
EXIST. WATER MAIN
EXIST. CATCH BASIN OR INLET
CULVERT
SIGN
SINGLE TREE
TREE OR BRUSH LIMIT
GRAVEL DRIVE AND PATH
PROPOSED CONTOURS
PROPOSED TRAFFIC SIGN



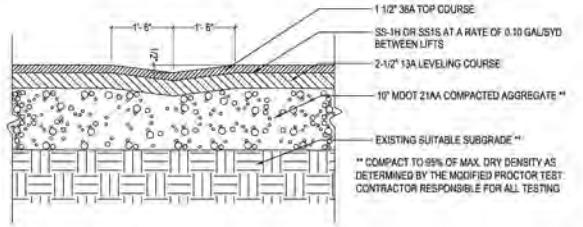
1/11 TYPICAL ACCESSIBLE PARKING DETAIL
NOT TO SCALE



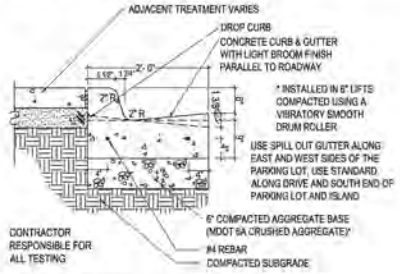
2/11 ACCESSIBLE SIGN
NOT TO SCALE



3/11 TYPICAL PARKING SPACE DETAIL
NOT TO SCALE



4/11 VALLEY GUTTER DETAIL
NOT TO SCALE



5/11 MDOT F4-STANDARD CURB AND GUTTER
NOT TO SCALE

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WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12.15.20

200063
ECT PROJECT NUMBER

AG DESIGNED BY | AG CHECKED BY
AK DRAWN BY | APPROVED BY

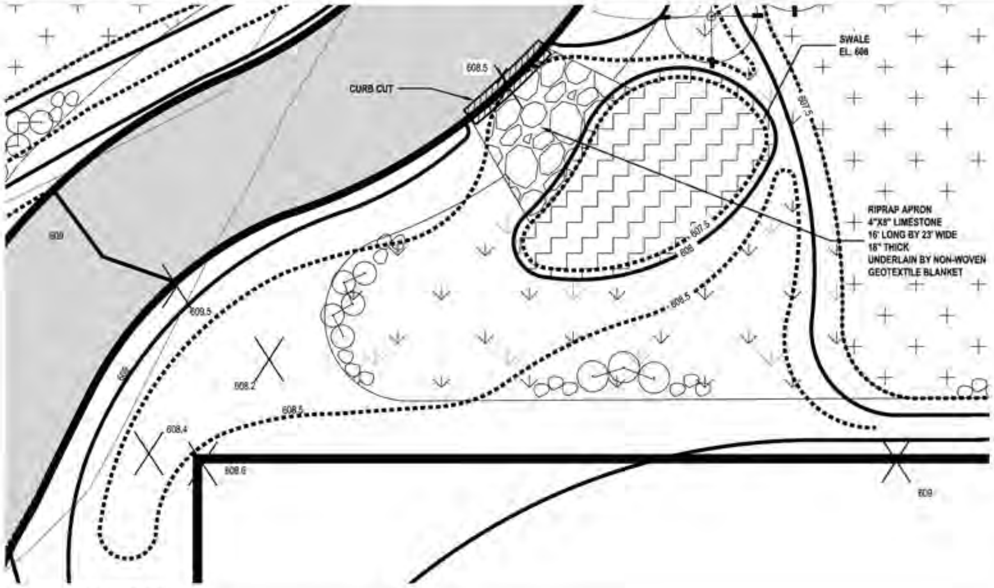
SHEET TITLE

PARKING LOT

SCALE: 1" = 15' @ 22" x 34"

NORTH

SHEET NUMBER 11



1 / 12 BIORETENTION GARDEN A

LEGEND

- EXIST. CONTOUR
- SINGLE TREE
- GRAVEL DRIVE AND PATH
- PROPOSED CONTOUR

BIO RETENTION CALCULATIONS

The proposed Parking Lot Bioretention and the proposed Asphalt Drive Bioretention outlet to nearby wetlands and subsequently into the Lower Rouge River. In accordance with Wayne County Storm Water Standards Section [illegible], untreated stormwater is not permitted to outlet directly into natural or mitigation wetlands and must, at a minimum, pass through a pretreatment system as described in Section [illegible] of the standards. Therefore, the proposed bioretention ponds have been designed to capture first flush volumes and [illegible].

Bioretention Calcs- Parking Lot

	Area [ac]	C	AxC
Pavement=	0.60	0.95	0.57
Lawn	0.23	0.25	0.06
Total=	0.83		0.63

Cavg = 0.76
A(area)= 0.83 Acres
Cavg= 0.76 imp
VFF= 1545.89 cf — =1815 x A x C

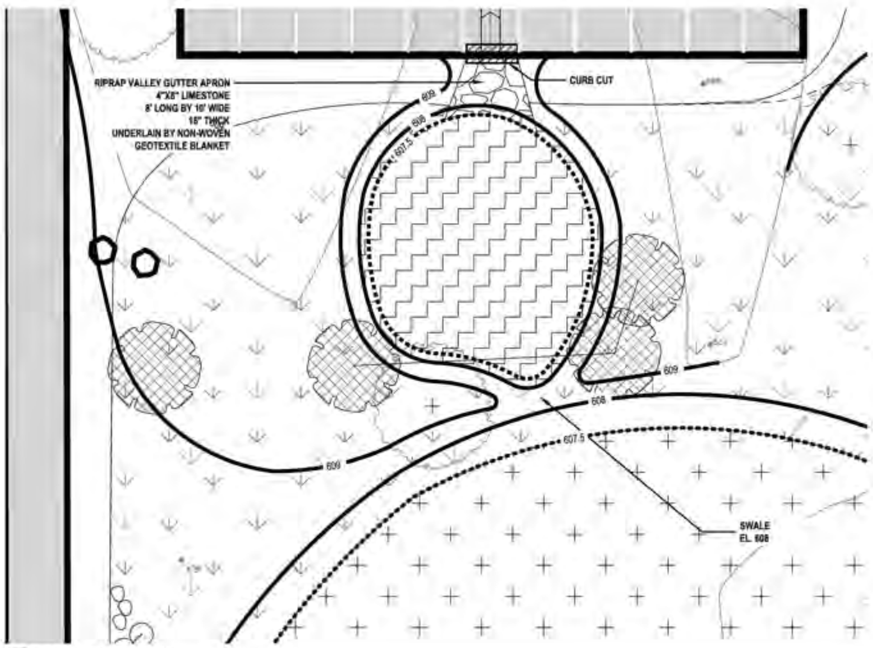
Bioretention	Elev.	Area (sf)	Volume (cf)	Total Volume (cf)
Ponding Storage --->	608	1374	0	
	607.5	1199	648.25	648.3
Planting Storage --->	607.5	1199		
[illegible]	604.5	230	502.25	502.3
				1150.50

Bioretention Calcs- Asphalt Drive

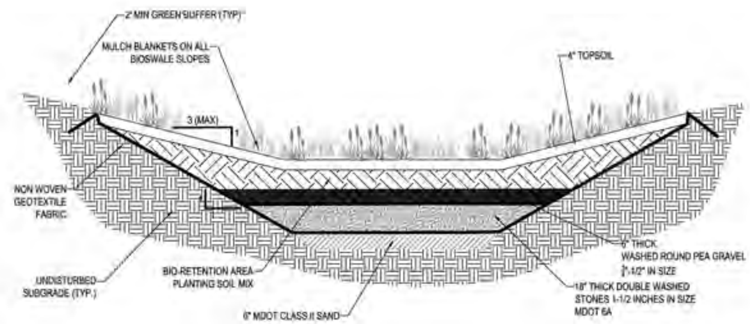
Area Type	Area [ac]	C	AxC
Pavement =	0.23	0.95	0.22
Lawn	0.65	0.25	0.16
Total=	0.88		0.38

Cavg = 0.42
A(area)= 0.88 Acres
Cavg = 0.42 imp
VFF= 695.66 cf — =1815 x A x C

Bioretention	Elev.	Area (sf)	Volume (cf)	Total Volume (cf)
Ponding Storage --->	608	929	0	
	607.5	709	427.00	427.0
Planting Storage --->	607.5	709		
[illegible]	604	20	278.25	278.3
				705.25



2 / 12 BIORETENTION GARDEN B



3 / 12 BIORETENTION GARDEN TYP.
NOT TO SCALE

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ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

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WAYNE COUNTY, MICHIGAN

FOR BIDDING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12-10-20

200382 — ECT PROJECT NUMBER
AS — DESIGNED BY; AB — CHECKED BY
AK — DRAWN BY; APPROVED BY

SHEET TITLE

BIORETENTION DETAILS

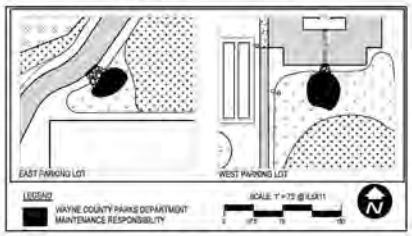
SCALE: 1" = 10' @ 22" x 34"
0 5 10 20

NORTH

SHEET NUMBER
12

EXHIBIT 'A'

PHYSICAL LIMITS OF STORM MANAGEMENT SYSTEM



LOCATION MAP N.T.S

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
PARKS DEPARTMENT
COLONIAL PARK HABITAT RESTORATION PROJECT

ECT Environmental Consulting & Technology, Inc.

EXHIBIT B:

STORM WATER MANAGEMENT SYSTEM LONG-TERM MAINTENANCE SCHEDULE

PROPERTY INFORMATION: Colonial Park
1592 Colonial Drive
Inkster, MI 48141

PROPERTY OWNER: Wayne County Department of
Public Services- Parks Department
33175 Ann Arbor Trail
Westland, MI 48185
Contact: Mr. John Gundry
734-466-3504

WAYNE COUNTY DPS PERMIT NO. / REVIEW NO.: R 19-997

A. PHYSICAL LIMITS OF THE STORM WATER MANAGEMENT SYSTEM

The storm water management system (SWMS) subject to this Long-Term Maintenance Plan (Plan) is depicted on Exhibit A to the Permit and includes without limitation bioretention area, overflow structures and outlet.

For purposes of this Plan, this storm water management system and all of its components as shown in Exhibit A is referred to as "Colonial Park Parking Lot SWMS".

B. TIME FRAME FOR LONG-TERM MAINTENANCE RESPONSIBILITY

Wayne County Department of Public Services Parks Department has assumed responsibility for maintaining the Colonial Park Parking Lot SWMS, including complying with applicable requirements until Wayne County releases the construction permit. Long-term maintenance responsibility for the Colonial Park Parking Lot SWMS commences when defined by the maintenance permit issued by the County. Long Term Maintenance continues in perpetuity.

C. MANNER OF ENSURING MAINTENANCE RESPONSIBILITY

Wayne County Department of Public Services Parks Department has assumed responsibility for long-term maintenance of the Colonial Park Parking Lot SWMS. The resolution by which the Wayne County Department of Public Services Parks Department has assumed maintenance responsibility is attached to the permit as Exhibit C.

To ensure that Wayne County Department of Public Services Parks Department is maintained in perpetuity, the map of the physical limits of the storm water management system (Exhibit A) this plan (Exhibit B), the resolution attached as Exhibit C, and the Maintenance Agreement by the Property Owner will be recorded with Wayne County Register of Deeds. Upon recording, a copy of the recorded document will be provided to the County.

D. LONG TERM MAINTENANCE PLAN AND SCHEDULE

Maintenance activities to be performed include mowing invasive species before they produce seed to prevent spread, on an as needed basis; inspection for sediment/ debris accumulation and erosion, semi-annually; removal of sediment and debris, as needed; repair of erosion, as needed; and sweeping of paved surfaces, as needed. These activities will ensure that the storm water management system functions properly as designed. Chemicals will not be applied to the bio-retentions and their buffer areas.

TABLE 1: STORMWATER MANAGEMENT SYSTEM LONG- TERM MAINTENANCE SCHEDU

	SYSTEM COMPONENT			
MAINTENANCE ACTIVITIES	BIO RETENTION AREAS	OVERFLOW STRUCTURES	PAVEMENT AREAS	FREQUENCY
MONITORING OR INSPECTION				
INSPECT FOR SEDIMENT ACCUMULATION, CLOGGING	X	X		ANNUALLY
INSPECT FOR FLOATABLE DEAD VEGETATION AND DEBRIS	X	X		ANNUALLY AND AFTER MAJOR STORM EVENTS
INSPECT FOR EROSION AND INTEGRITY OF BANKS AND BERMS	X			ANNUALLY AND AFTER MAJOR STORM EVENTS
INSPECT ALL COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILTS PLANS	X	X	X	ANNUALLY PLANTINGS AFTER MAJOR STORM EVENTS
MONITOR PLANTINGS VEGETATION	X			2 TIMES A YEAR
ENSURE MEANS OF ACCESS FOR MAINTENANCE REMAIN CLEAR/OPEN	X	X	X	ANNUALLY
PREVENTATIVE MAINTENANCE AND REMEDIAL ACTIONS				
MOWING	X			UP TO 2 TIMES PER YEAR
REMOVE ACCUMULATED SEDIMENT	X	X		AS NEEDED
REMOVE FLOATABLES, DEAD VEGETATION AND DEBRIS	X	X		AS NEEDED
WEEDING OF INVASIVE PLANT SPECIES	X			EVERY MONTH
REPLACE LOW QUALITY, DYING, OR DISEASED PLANTS	X			EVERY 3 MONTHS
REPLACING SOILS AND UNDERDRAINS AS NEEDED	X			EVERY 5 YEARS, OR IF WATER PONDS>6 HOURS
FUTURE FERTILIZING AS NEEDED TO BE ORGANIC	X			SEASONAL
PRUNING, PINCHING, OR DEAD HEAD	X			EVERY SPRING
WATER PLANTINGS	X			AS NEEDED
MAKE ADJUSTMENTS/ REPAIRS TO ENSURE PROPER FUNCTIONING	X	X	X	AS NEEDED
STRUCTURAL REPAIRS		X		AS NEEDED
TEST SOILS FERTILITY	X			ANNUALLY

ECT Environmental Consulting & Technology, Inc.

Great Lakes Restoration Initiative

Alliance of Rouge Communities

OURS TO PROTECT

Wayne County parks

ROUGE RIVER WATERSHED AOC- WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR MOWING	12-2021
FOR PERMITTING	01-2021
SITE CONCEPT	12-10-20

20-0267
ECT PROJECT NUMBER

AB DESIGNED BY | AB CHECKED BY

MC DRAWN BY | APPROVED BY

SHEET TITLE

WAYNE COUNTY EXHIBITS

SCALE: 1" = 10' @ 22" x 34"

0 5 10 20

NORTH

SHEET NUMBER 13

1

- 44 SE¼ Section 24

D409845

L10171 PG256

This Indenture, made the 15th day of November in the year of our Lord one thousand nine hundred and Forty-nine Between EDNA SABA, survivor of herself and Nicholas Saba, her husband, deceased,

party of the first part, and BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF WAYNE, 3800 CADILLAC TOWER, DETROIT 26, MICHIGAN party of the second part,

Witnesseth, that the said party of the first part, for and in consideration of the sum of One Dollar and other valuable consideration ... all that certain piece or parcel of land situate and being in the Village of Inkster County of Wayne and State of Michigan, and described as follows, to-wit:

The West 821.02 feet of that part of the S.E. 1/4 of Section 24, T2S, R9E, Nankin Township, Village of Inkster, Wayne County, Michigan, lying southerly of the southerly line of Dearborn Hills Manor Subdivision as recorded in Liber 52 of Plats on Page 93, Wayne County Records. 15.127 acres

NO REVENUE ATTACHED

2

L10171 PG257

In witness whereof, the said party of the first part has hereunto set her hand and seal the day and year first above written.

Signed, sealed and delivered in presence of

Edna Saba

STATE OF MICHIGAN, County of Wayne

On this 24 day of November in the year one thousand nine hundred and Forty-nine before me, a Notary Public in and for said county, personally appeared EDNA SABA, survivor of herself and Nicholas Saba, her husband, deceased,

to me known to be the same person described in and who executed the within instrument, who has acknowledged the same to be her free act and deed.

Jacob W. Abesty ... Notary Public, Wayne County, Michigan

WARRANTY DEED

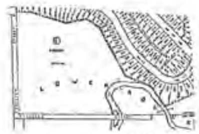
EDNA SABA, survivor of herself and Nicholas Saba, her husband, deceased,

TO

BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF WAYNE

L10171 — 256

LOWER ROUGE PARKWAY



Park Area: Inkster Valley

Municipality: Inkster

Parcel Name: 24E1

Tax Number: 6990001

Acreage: 15.127

Date of Acquisition: 11-15-49 Price: $ 2500.00

Former Owner: Edna Saba

Deed Number: D409845

Liber: 10171 Page: 256

Restrictions:

Comments: Part of the proposed Inkster Valley Golf Course.

Outline description:

The West 821.02 feet of that part of the S.E. 1/4 of Section 24, T2S, R9E, Nankin Township, Village of Inkster, Wayne County, Michigan, lying southerly of the southerly line of Dearborn Hills Manor Subdivision as recorded in Liber 52 of Plats on Page 93, Wayne County Records. 15.127 acres

3

L10538 PG318 WARRANTY DEED

24 E½ 4F1 E½ SE¼ Sec 24

D481365

KNOW ALL MEN BY THESE PRESENTS: That PETER A. KLEM, a single man

Convey and Warrant to BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF WAYNE, MICHIGAN,

whose Street Number and Post Office address is 3800 CADILLAC TOWER, DETROIT 26, MICHIGAN

the following described premises situated in the Village of Inkster, County of Wayne and State of Michigan, to-wit:

That part of the southeast quarter of Sec. 24, Town 2 south, Range 9 east, described as beginning at a point on the south line of Sec. 24 distant 821.02 ft. east of South 1/4 corner of said section, and proceeding thence northerly 531.59 feet to southerly line of Dearborn Hills Manor Subdivision; thence southeasterly along said line 678.9 feet; thence northeasterly and northerly along said line 1617.79 feet; thence easterly continuing along the southerly line of said subdivision 962.58 feet to east line of Section 24; thence southerly along the east line of said Sec. 949.09 feet to the southeast corner of Section 24; thence westerly along the south line of said Section 1806.25 feet to point of beginning, except East 60 feet of the following described property, that part of southeast quarter of Section 24 described as beginning at the southeast corner of Section 24 and proceeding thence north 89°40'50" west along the south line of said section 871.0 feet; thence due north 1351.09 feet to southerly boundary line of Dearborn Hills Manor Subdivision; thence easterly along said southerly boundary line 779.22 feet to east line of Section 24; thence due south along said line 949.29 ft. to point of beginning

for the sum of One Dollar and other valuable considerations

subject to all liens or encumbrances which may have accrued subsequent to August 15, 1946, this being the date of a certain land contract in pursuance of which this deed is being given.

Dated this 23rd day of August A.D. 1950

Peter A. Klem

Carl R. Holmberg

In the STATE OF MICHIGAN, COUNTY OF Wayne, On this 23rd day of August A.D. 1950 before me personally appeared Peter A. Klem, a single man

4

Middle half - Inkster E½ SE¼ Sec 24

QUIT CLAIM DEED

D481366

L10538 PG319

KNOW ALL MEN BY THESE PRESENTS: That LEONARD A. DAYMON and GLADYS DAYMON, his wife

Quit Claim to BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF WAYNE, MICHIGAN

whose Street Number and Post Office address is 3800 CADILLAC TOWER, DETROIT 26, MICHIGAN

the following described premises situated in the Village of Inkster, County of Wayne and State of Michigan, to-wit:

That part of the southeast quarter of Sec. 24, Town 2 south, Range 9 east, described as beginning at a point on the south line of Sec. 24 distant 821.02 ft. east of South 1/4 corner of said section, and proceeding thence northerly 531.59 feet to southerly line of Dearborn Hills Manor Subdivision; thence southeasterly along said line 678.9 feet; thence northeasterly and northerly along said line 1617.79 feet; thence easterly continuing along the southerly line of said subdivision 962.58 feet to east line of Section 24; thence southerly along the east line of said Sec. 949.09 feet to the southeast corner of Section 24; thence westerly along the south line of said Section 1806.25 feet to point of beginning, except East 60 feet of the following described property, that part of southeast quarter of Section 24 described as beginning at the southeast corner of Section 24 and proceeding thence north 89°40'50" west along the south line of said section 871.0 feet; thence due north 1351.09 feet to southerly boundary line of Dearborn Hills Manor Subdivision; thence easterly along said southerly boundary line 779.22 feet to east line of Section 24; thence due south along said line 949.29 ft. to point of beginning.

28.69 acres

for the sum of One Dollar and other valuable considerations.

Dated this 23rd day of August A.D. 1950

Leonard A. Daymon

Gladys Daymon

In the STATE OF MICHIGAN, COUNTY OF Wayne, On this 23rd day of August A.D. 1950 before me personally appeared Leonard A. Daymon and Gladys Daymon, his wife

5

LOWER ROUGE PARKWAY

Park Area: Inkster Valley

Municipality: Inkster

Parcel Name: 24E2,F1

Tax Number: 6990001,03

Acreage: 28.690

Date of Acquisition: 08-23-50 Price: $ .00

Former Owner: Leonard A.& Gladys Daymon

Deed Number: D481366

Liber: 10538 Page: 319 & 318

Restrictions:

Comments: Part of proposed Inkster Valley Golf Course. Interest in parcel also conveyed by Peter Klem in Deed D481365 Liber 10538 Page 318.

Outline description:

That part of the southeast quarter of Sec. 24, Town 2 south, Range 9 east, described as beginning at a point on the south line of Sec. 24 distant 821.02 ft. east of South 1/4 corner of said section, and proceeding thence northerly 531.59 feet to southerly line of Dearborn Hills Manor Subdivision; thence southeasterly along said line 678.9 feet; thence northeasterly and northerly along said line 1617.79 feet; thence easterly continuing along the southerly line of said subdivision 962.58 feet to east line of Section 24; thence southerly along the east line of said Sec. 949.09 feet to the southeast corner of Section 24; thence westerly along the south line of said Section 1806.25 feet to point of beginning, except East 60 feet of the following described property, that part of southeast quarter of Section 24 described as beginning at the southeast corner of Section 24 and proceeding thence north 89°40'50" west along the south line of said section 871.0 feet; thence due north 1351.09 feet to southerly boundary line of Dearborn Hills Manor Subdivision; thence easterly along said southerly boundary line 779.22 feet to east line of Section 24; thence due south along said line 949.29 ft. to point of beginning.

28.69 acres

6

Environmental Consulting & Technology, Inc.

ROUGE RIVER WATERSHED AOC-WAYNE COUNTY HABITAT RESTORATION

COLONIAL PARK WETLAND AND REFORESTATION PROJECT

ALLIANCE OF ROUGE COMMUNITIES

WAYNE COUNTY, MICHIGAN

FOR BIDDING 12-2021
FOR PERMITTING 01-2021
SITE CONCEPT 12-15-20

200367 ECT PROJECT NUMBER

AB DESIGNED BY — AB CHECKED BY

AK DRAWN BY — APPROVED BY

SHEET TITLE

PROPERTY BOUNDARY INFORMATION

SCALE: 1" = 10' @ 22" x 34"

NORTH

SHEET NUMBER 14