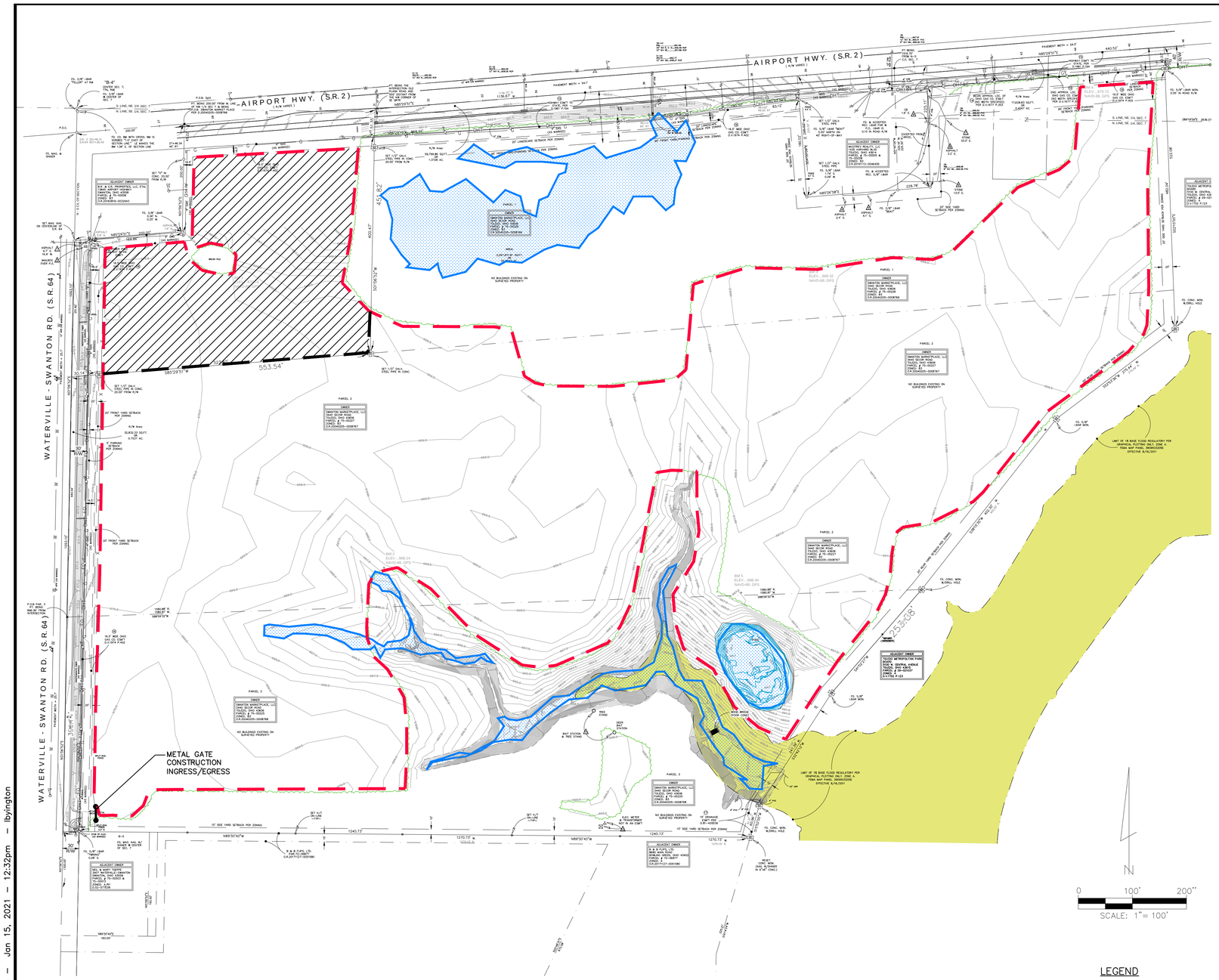


2021 CONSTRUCTION PACKAGE
WETLAND RESTORATION FOR METROPARKS TOLEDO OAK OPENINGS PRESERVE EXPANSION
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO

JANUARY 15, 2021

LIST OF DRAWINGS	
DRAWING NO.	DRAWING TITLE
MAD003-01	TITLE SHEET AND EXISTING CONDITIONS
MAD003-02	OVERALL SITE PLAN
MAD003-03	NORTH WEST SITE PLAN
MAD003-04	SOUTH WEST SITE PLAN
MAD003-05	SOUTH EAST SITE PLAN
MAD003-06	NORTH EAST SITE PLAN
MAD003-07	MISCELLANEOUS DETAILS, NOTES AND CROSS-SECTIONS
MAD003-08	SWP3 – OVERALL SITE PLAN
MAD003-09	SWP3 – SECTIONS
MAD003-10	SWP3 – NOTES AND DETAILS

PREPARED FOR

CLIENT:
METROPARKS TOLEDO
5100 W. CENTRAL AVENUE
TOLEDO, OH 43615

METROPARKS TOLEDO

PLANS PREPARED BY

MAD SCIENTIST ASSOCIATES, LLC
253 N. STATE STREET SUITE 101
WESTERVILLE, OHIO 43081
(614) 818-9156

MAD SCIENTIST ASSOCIATES LLC

ESTIMATED CUT/FILL Volume

Cut volume – 17044.40 Cu. Yd.
Fill volume – 6555.66 Cu. Yd.
Net volume – 10488.75 Cu. Yd.<Cut>

NOTICE TO CONTRACTOR

CONTRACTOR MUST NOTIFY ALL UTILITIES AT LEAST 48 HOURS, AND NOT MORE THAN 10 DAYS, PRIOR TO THE PLANNED COMMENCEMENT OF EXCAVATION.

1. MEMBER UTILITIES WILL BE CONTACTED BY CALLING OUPS (1-800-362-2764).
2. THE OIL AND GAS PRODUCER UNDERGROUND PROTECTION SERVICE (1-614-587-0444).
3. EACH LIMITED BASIS PARTICIPANT AND MEMBERS OF THE OHIO OIL AND GAS ASSOCIATION WILL BE CONTACTED BY THE EXCAVATOR USING THE TELEPHONE NUMBER PROVIDED.

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

LEGEND

- 900 — EXISTING TOPOGRAPHY
- CONSTRUCTION LIMITS
- EXISTING WETLANDS
- NOT PART OF METROPARKS TOLEDO PROPERTY, BUT AVAILABLE FOR FILL PLACEMENT

REVISIONS

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
CHECKED BY: MAD
FILE: MAD003-01

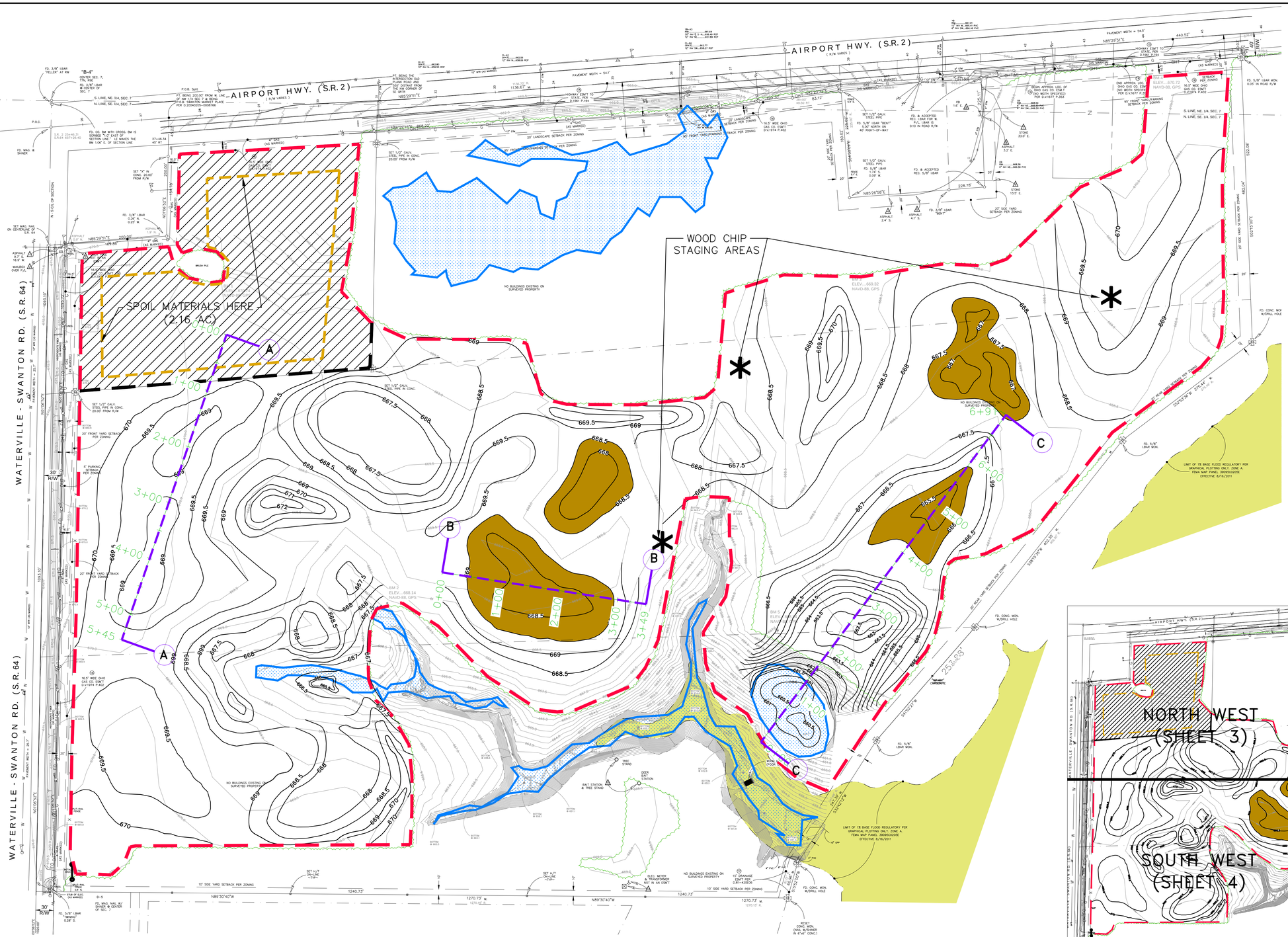
MAD SCIENTIST ASSOCIATES LLC

METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

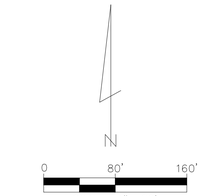
METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
TITLE SHEET
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO

J:\MAD003-METROPARKS TOLEDO\MAD003-01-TITLE SHEET.dwg – Jan 15, 2021 – 12:32pm – lbyington



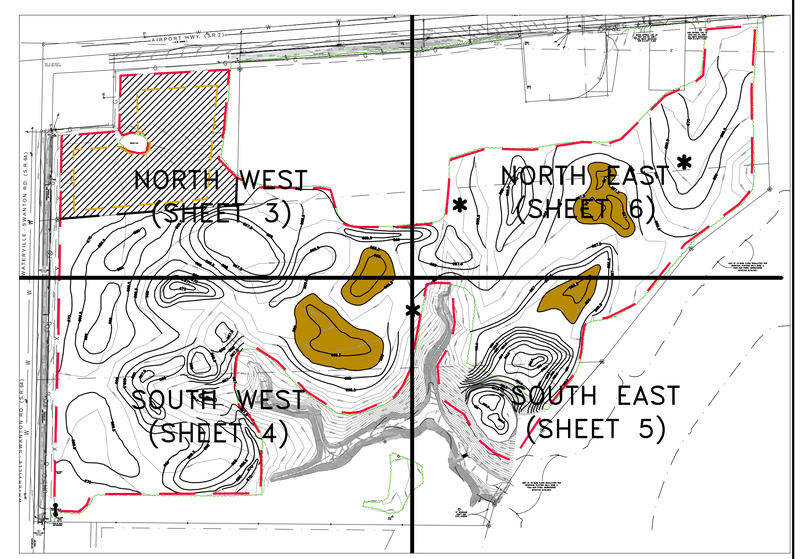
OVERALL SITE DEVELOPMENT PLAN

SCALE: 1"=80'



LEGEND

- 900 — EXISTING TOPOGRAPHY
- 900 — PROPOSED CONTOURS
- EXISTING WETLANDS
- A A — CROSS-SECTION (SEE SHEET 7)
- POOLS TO RECEIVE WOOD CHIPS
- * WOOD CHIP STAGING AREA
- CONSTRUCTION LIMITS



SHEET MATCHLINE OVERVIEW

SCALE: 1"=200'

REVISIONS				
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
CHECKED BY: MAD
FILE: MAD003-02

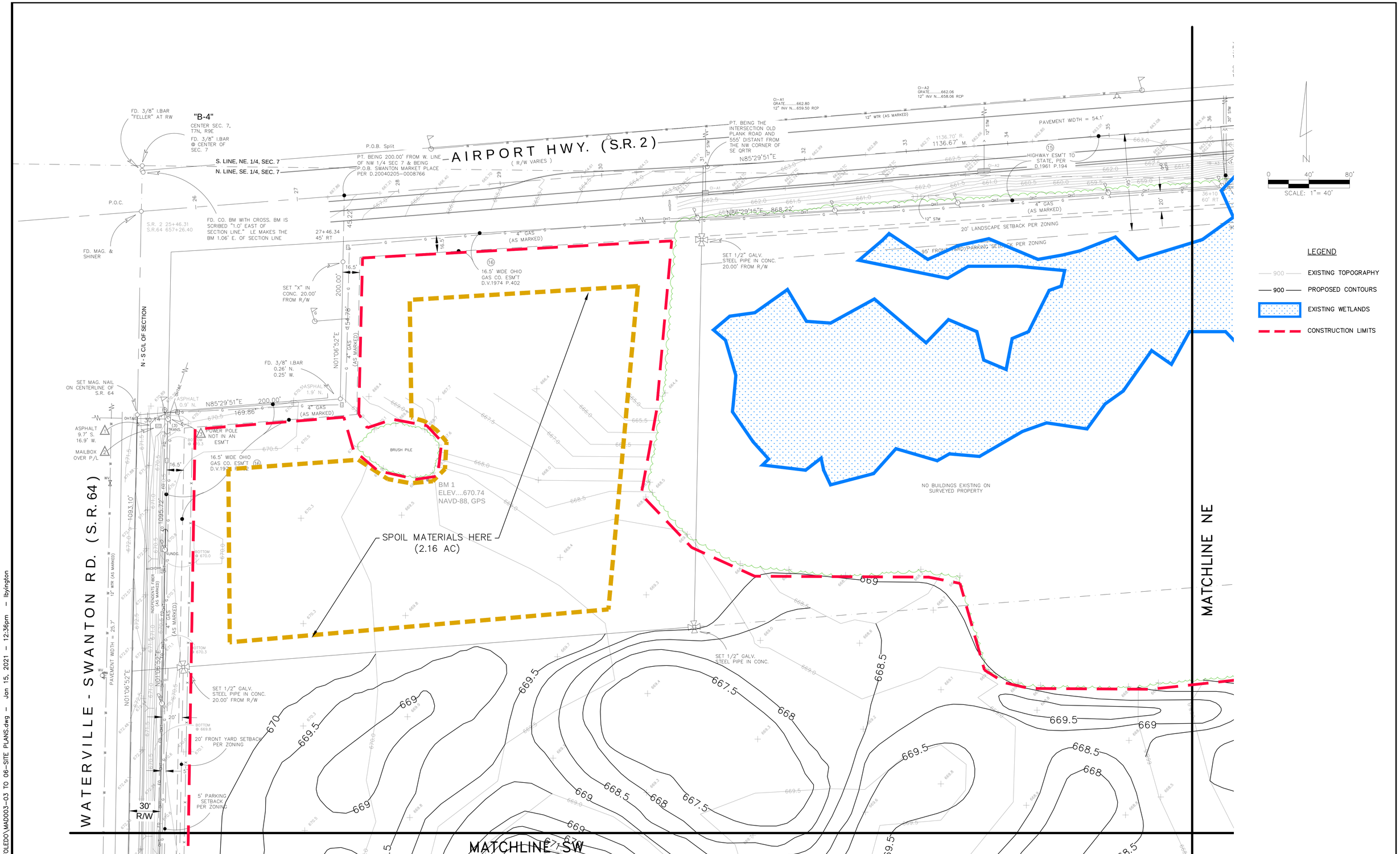
MAD SCIENTIST ASSOCIATES LLC

METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
OVERALL SITE DEVELOPMENT PLAN
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO

J:\MAD003-METROPARKS TOLEDO\MAD003-02-OVERALL DEV SITE PLAN.dwg – Jan 15, 2021 – 3:37pm – lbyington



J:\MAD003-METROPARKS TOLEDO\MAD003-03 TO 06-SITE PLANS.dwg – Jan 15, 2021 – 12:36pm – lbyington

REVISIONS				
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

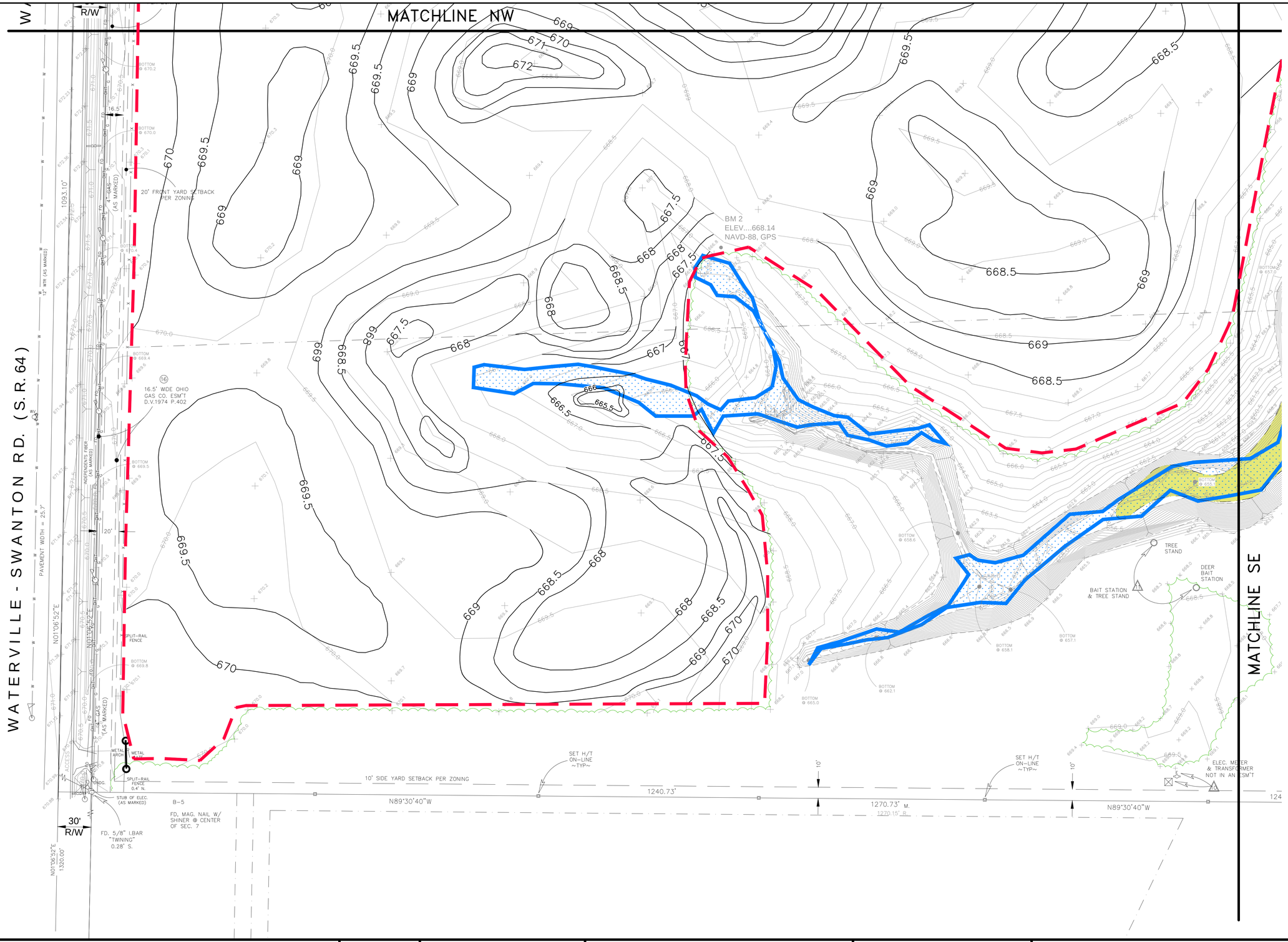
DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
CHECKED BY: MAD
FILE: MAD003-03

MAD SCIENTIST ASSOCIATES LLC

METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
SITE PLAN – NORTH WEST
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO



LEGEND

- 900 EXISTING TOPOGRAPHY
- 900 PROPOSED CONTOURS
- EXISTING WETLANDS
- CONSTRUCTION LIMITS

REVISIONS				
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
CHECKED BY: MAD
FILE: MAD003-04

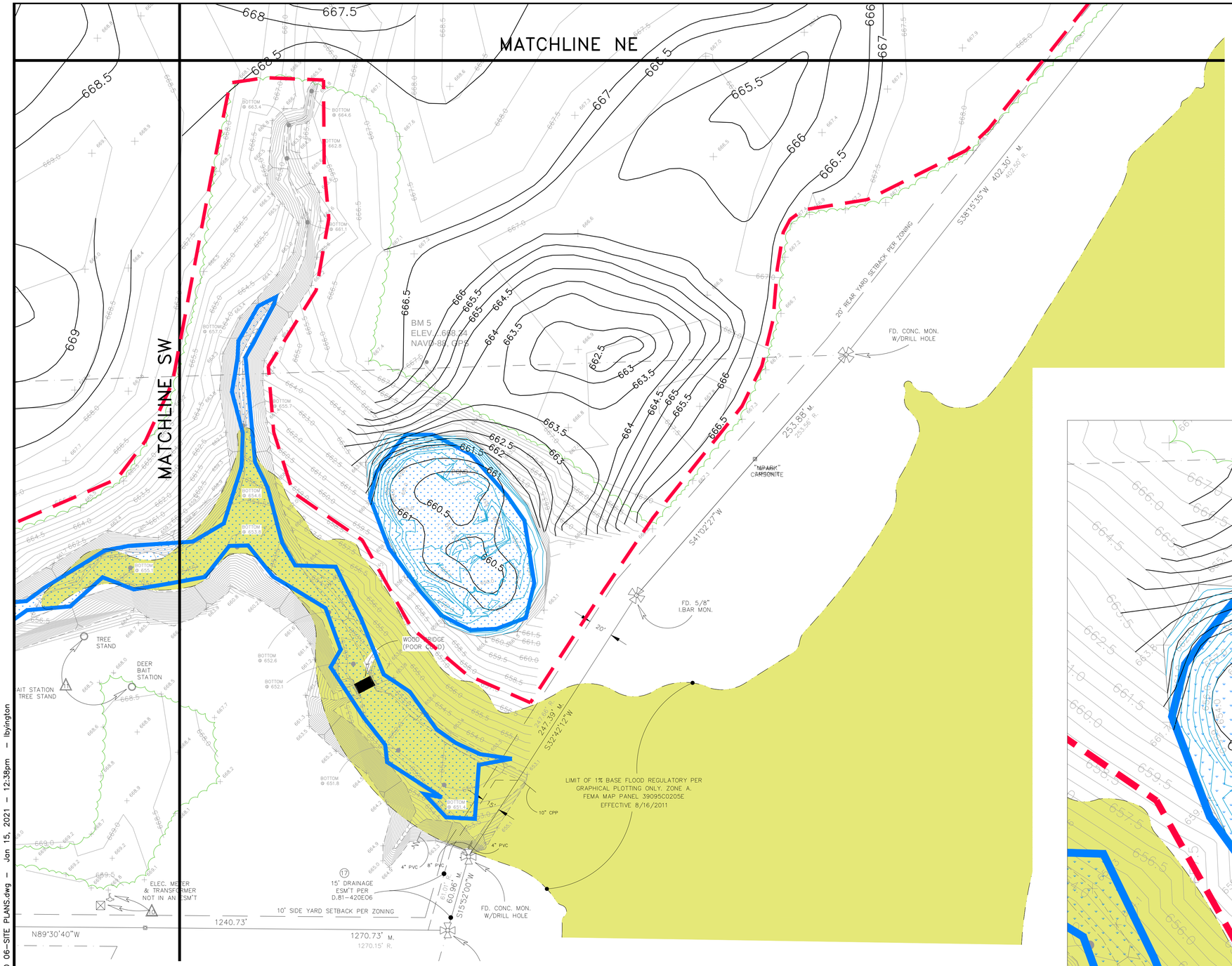
MAD SCIENTIST ASSOCIATES LLC

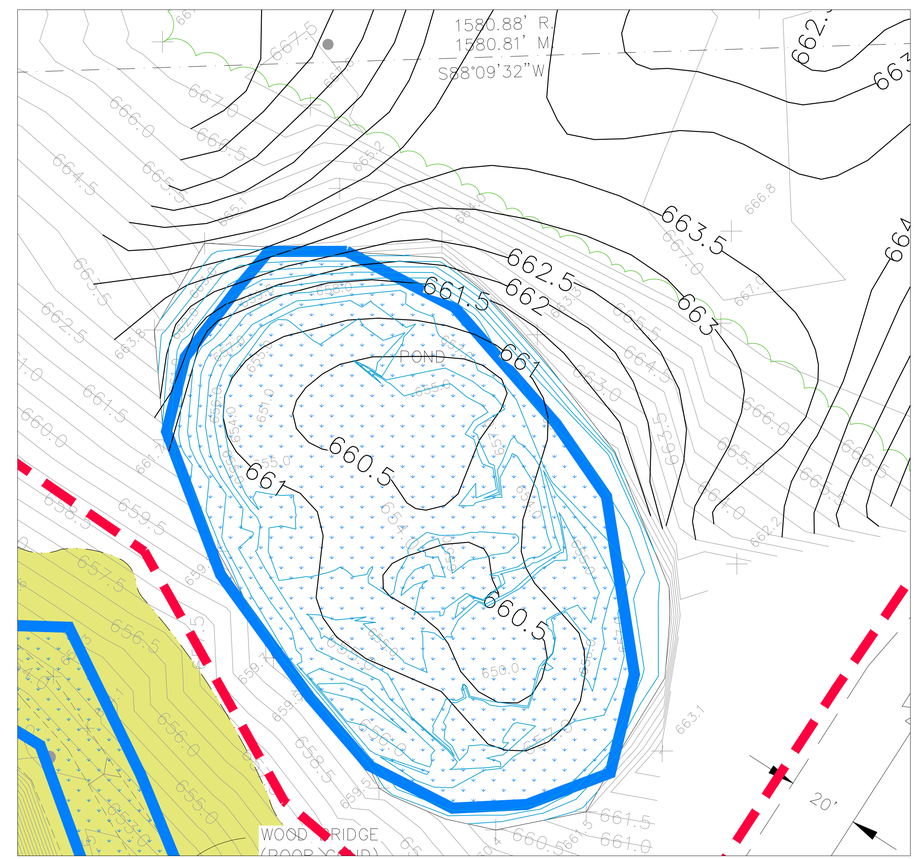
METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
SITE PLAN – SOUTH WEST
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO

J:\MAD003-METROPARKS TOLEDO\MAD003-03 TO 06-SITE PLANS.dwg – Jan 15, 2021 – 12:37pm – lbyington





POND AREA INSET PLAN
SCALE: 1"=20'

REVISIONS				
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
CHECKED BY: MAD
FILE: MAD003-05

MAD SCIENTIST ASSOCIATES LLC

METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
SITE PLAN – SOUTH EAST
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO

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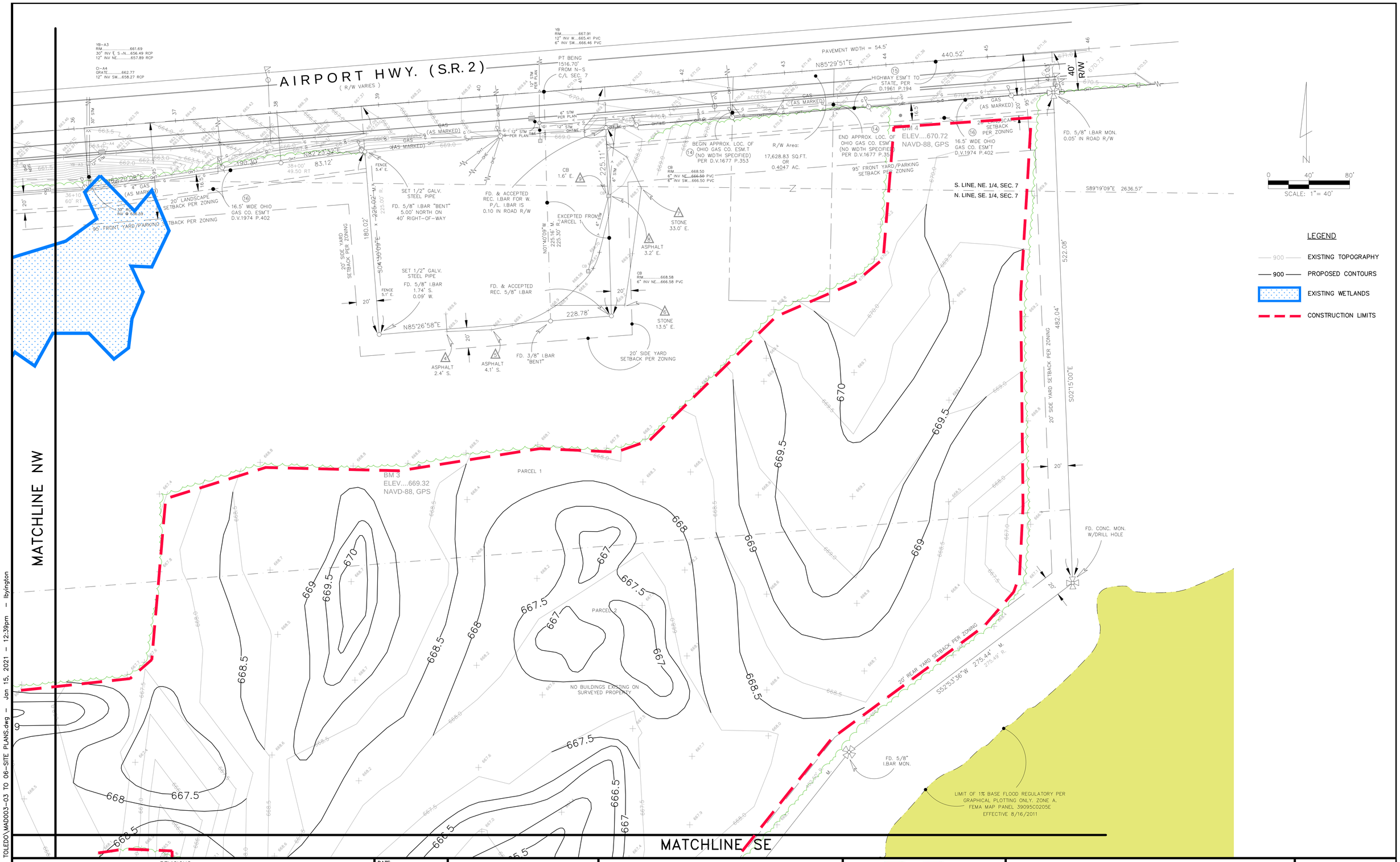

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REVISIONS				
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

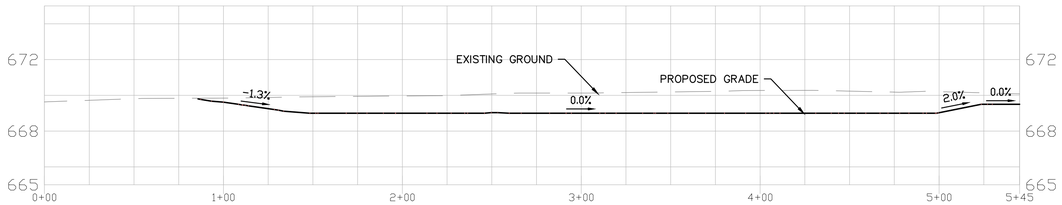
DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
CHECKED BY: MAD
FILE: MAD003-06

MAD SCIENTIST ASSOCIATES LLC

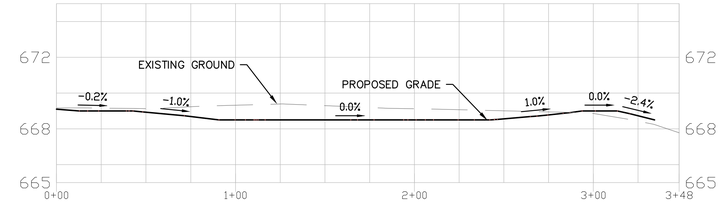
METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

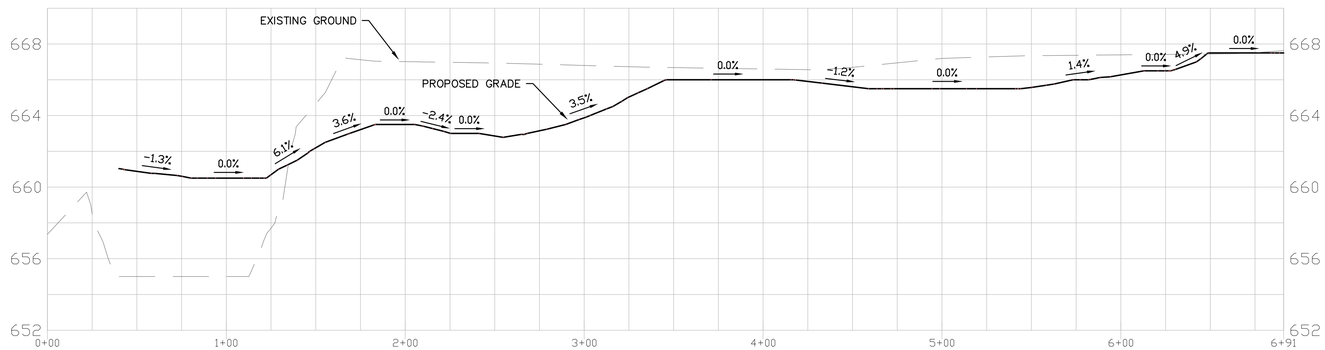
METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
SITE PLAN – NORTH EAST
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO



CROSS-SECTION A-A
SCALE: 1"=40' H, 1"=4' V



CROSS-SECTION B-B
SCALE: 1"=40' H, 1"=4'V



CROSS-SECTION C-C
SCALE: 1"=40'H, 1"=4'V

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR WILL NOTIFY OHIO UTILITY PROTECTION SERVICE (OHIO 811) TO VERIFY LOCATION OF UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT UTILITY MARKING IS COMPLETE BEFORE EXCAVATION BEGINS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM NEGLECT OR FAILURE TO COMPLY WITH THIS REQUIREMENT.
2. IF THE CONTRACTOR FINDS ANY SIGNIFICANT DISCREPANCY BETWEEN THESE CONSTRUCTION DRAWINGS AND ACTUAL FIELD CONDITIONS, THE OWNER OR ENGINEER SHALL BE NOTIFIED IMMEDIATELY. CONTRACTOR SHALL CONTACT THE OWNER OR ENGINEER BEFORE MAKING ANY DEVIATIONS FROM THE PROJECT DRAWINGS GREATER THAN SPECIFIED CONSTRUCTION TOLERANCES.
3. EXISTING TOPOGRAPHY ON THESE PROJECT DRAWINGS HAS BEEN GENERATED FROM A FIELD TOPOGRAPHIC SURVEY PERFORMED IN APRIL 2020.
4. CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITY IN COMPLIANCE WITH OSHA STANDARDS FOR SAFETY.
5. CONTRACTOR SHALL POWER-WASH ALL EQUIPMENT AT AN OFF-SITE LOCATION PRIOR TO MOBILIZATION TO THE SITE TO PREVENT THE INTRODUCTION AND/OR SPREAD OF INVASIVE PLANT SPECIES.
6. LEVELING INSTRUMENT, SURVEY ROD, AND A SKILLED INSTRUMENT PERSON SHALL BE MAINTAINED ON-SITE BY CONTRACTOR DURING WORK HOURS AND SHALL BE MADE AVAILABLE TO OWNER AND ENGINEER FOR CONDUCTING GRADE CHECKS AS NECESSARY.
7. ANY COMPLETED CONSTRUCTION THAT IS FOUND TO BE IN NON-CONFORMANCE WITH THE ELEVATIONS AND LOCATIONS SHOWN ON THE PROJECT DRAWING WILL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER UNLESS SUCH DEVIATIONS ARE APPROVED, IN ADVANCE, BY THE OWNER.
8. ALL SPOILS, TRASH, AND ITEMS ENCOUNTERED, REMOVED, OR DEMOLISHED DURING CONSTRUCTION SHALL BE REMOVED AT CONTRACTOR'S EXPENSE EXCEPT FOR THOSE EXCESS MATERIALS THAT MAY REMAIN ON-SITE IN LOCATIONS AS INDICATED ON THE PROJECT DRAWINGS OR AS SPECIFICALLY APPROVED, IN WRITING, BY OWNER OR OWNER'S REPRESENTATIVE.
9. CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL AND MANAGEMENT OF ALL WASTES AND UNUSED CONSTRUCTION MATERIALS. CONTRACTOR SHALL COMPLY WITH ALL STATE OR LOCAL REGULATIONS REGARDING WASTE MANAGEMENT AND DISPOSAL.
10. CONTRACTOR MAY UTILIZE TEMPORARY STORAGE AREAS WITHIN WORK LIMITS FOR THE PURPOSES OF STORAGE OF EQUIPMENT AND MATERIALS. ANY OTHER LOCATIONS THAT THE CONTRACTOR WISHES TO USE FOR STORAGE MUST BE APPROVED, IN ADVANCE, BY OWNER'S REPRESENTATIVE.
11. CONTRACTOR SHALL MAINTAIN AND PROVIDE THE OWNER WITH RECORD DRAWINGS INDICATING ANY CHANGES, REVISIONS, ADDITIONS, OR DELETIONS TO PROPOSED IMPROVEMENTS. RECORD DRAWINGS SHALL ALSO INCLUDE SURVEYED CERTIFICATION POINTS AS SHOWN ON THE DRAWINGS. CERTIFICATION POINTS SHALL BE MEASURED AND REPORTED TO OWNER IMMEDIATELY FOLLOWING ACHIEVEMENT OF FINAL GRADE TO VERIFY COMPLIANCE WITH THE DRAWINGS. FINAL PAYMENT WILL NOT BE MADE UNTIL SATISFACTORY RECORD DRAWINGS ARE PROVIDED TO THE OWNER.
12. ALL AREAS TEMPORARILY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL SIGNS, FENCES, DRAINAGE STRUCTURES, LANDSCAPING, CURBING AND PAVEMENT SURFACES, ETC., DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT, SHALL BE RESTORED BY THE CONTRACTOR TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION, UNLESS OTHERWISE SPECIFIED IN THE PLAN DRAWINGS.
13. DIRT MUST BE KEPT OFF ALL PUBLIC ROADS. VEHICLES LEAVING THE SITE SHOULD BE CLEANED PRIOR TO EXITING THE WORK SITE. ANY DIRT THAT COLLECTS ON THE ROADS ADJACENT TO THE SITE MUST IMMEDIATELY BE SHOVELED OR BROOMED OFF THE ROADS.

GENERAL WETLAND CONSTRUCTION SEQUENCE BEFORE ANY GRADING ACTIVITIES BEGIN

1. MOBILIZE;
2. INSTALL CONSTRUCTION ENTRANCE IN DESIGNATED AREA;
3. BEGIN CLEARING AND GRUBBING, GRADING, AND INSTALLATION OF ACCESS ROAD FOR SEDIMENT TRAP;
4. CONSTRUCT SEDIMENT TRAPS, ENSURING ALL GRADING IS ROUTED INTO TRAPS.

MAINTENANCE

5. DREDGE SEDIMENT TRAPS WHEN SEDIMENT OCCUPIES 50 PERCENT OF THE SEDIMENT STORAGE ZONE;
6. ENSURE ALL DISTURBED AREA IS BEING ROUTED TO SEDIMENT TRAPS AS SITE GRADING CONTINUES.

SITE GRADING

7. SITE LAYOUT;
8. BEGIN OVERALL SITE GRADING AND TOPSOIL STRIPPING, AS APPROPRIATE;
9. ESTABLISH TOPSOIL STOCKPILES;
10. APPLY TEMPORARY EROSION CONTROLS TO DISTURBED AREAS WHERE CONSTRUCTION WILL CEASE FOR MORE THAN 14 DAYS;
11. INCORPORATE STOCKPILED WOOD CHIPS INTO TOPSOIL TO BE RESPREAD OVER DESIGNATED POOLS;
12. ROUGHEN FINISHED SURFACE OF WETLANDS BY FIRST PLOWING IN ONE DIRECTION, AND THEN PLOWING AGAIN PERPENDICULAR TO THE FIRST PASS;
13. TILL OR DISC ALL OTHER AREAS AFFECTED BY CONSTRUCTION ACTIVITIES TO PREP SOIL FOR PLANTING.

FINAL STABILIZATION

14. CONVERT SEDIMENT TRAPS TO FINAL GRADED FORM;
15. APPLY COVER CROP OF ANNUAL RYE OR WINTER WHEAT TO PROTECT SOILS AND COVER WITH EROSION CONTROL MATTING (IF NECESSARY, AND AS NEEDED) UNTIL PERMANENT COVER IS ESTABLISHED;
16. MONITOR STABILIZED AREAS UNTIL FINAL STABILIZATION IS REACHED;
17. WHEN ALL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE SITE STABILIZED TO THE EXTENT REQUIRED BY THE PERMIT, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURES THAT ARE NOT INTENDED TO REMAIN AS PART OF THE FINAL PROJECT DESIGN AND RE-SEED ANY AREAS DISTURBED BY THEIR REMOVAL;
18. DEMOBILIZE FOLLOWING FINAL CONSTRUCTION MEETING.

PERMITS AND COMPLIANCE

1. THIS PROJECT INVOLVES CONSTRUCTION TO BE PERFORMED WITHIN A JURISDICTIONAL WETLAND AND IS ANTICIPATED TO BE PERMITTED UNDER THE U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NO. 27. CONTRACTOR SHALL PERFORM CONSTRUCTION IN STRICT CONFORMANCE WITH THESE PROJECT DRAWINGS AND SHALL COMPLY WITH ALL REQUIREMENTS OF THE CORPS PERMIT (PROVIDED BY OWNER). CONTRACTOR SHALL MAINTAIN A HARD-COPY OF NATIONWIDE PERMIT NO. 27 ON-SITE THROUGHOUT THE DURATION OF CONSTRUCTION (OWNER WILL PROVIDE COPY OF CORPS PERMIT TO CONTRACTOR PRIOR TO THE START OF CONSTRUCTION).
2. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE OHIO EPA NPDES GENERAL CONSTRUCTION PERMIT AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT HAS BEEN DEVELOPED FOR THIS PROJECT. CONTRACTOR SHALL MAINTAIN A HARD-COPY OF THE GENERAL STORMWATER PERMIT AND SWPPP ON-SITE THROUGHOUT THE DURATION OF CONSTRUCTION (SWPPP INCLUDED IN PROJECT MANUAL).
3. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE SWPPP. EROSION AND SEDIMENT CONTROL MEASURES DESCRIBED IN THE SWPPP REPRESENT A MINIMUM NUMBER OF CONTROLS. CONTRACTOR IS RESPONSIBLE FOR MAKING ANY NECESSARY FIELD ADJUSTMENTS IN THE LOCATION, NUMBER, AND/OR TYPE OF STORMWATER BEST MANAGEMENT PRACTICES (BMP) UTILIZED TO PREVENT SEDIMENT OR CONSTRUCTION WASTE RUNOFF IMPACTS ON RECEIVING WATERS. CONTRACTOR SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
4. NO DISTURBANCE SHALL COMMENCE UNTIL EROSION AND SEDIMENT CONTROLS ARE INSTALLED AND FUNCTIONAL.
5. CONTRACTOR SHALL CONTROL WASTE, GARBAGE, DEBRIS, WASTEWATER AND OTHER SUBSTANCES ON THE SITE TO ENSURE THAT THEY ARE NOT TRANSPORTED OFF-SITE THROUGH THE ACTION OF WIND, STORMWATER, OR OTHER FORCES.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR WITHIN 30 DAYS AFTER VEGETATION IS ESTABLISHED AND FINAL SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY PRACTICES ARE NO LONGER NEEDED.
7. SOIL AND OTHER FILL MATERIALS SHALL NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES.
8. ALL TREES AND SHRUBS OUTSIDE OF THE WORK LIMITS OR AREA OF DISTURBANCE SHALL BE AVOIDED UNLESS NOTED OTHERWISE ON THE DRAWINGS. TREES AND SHRUBS WITHIN THE AREA OF DISTURBANCE SHALL BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE.
9. CUTTING OF TREES GREATER THAN OR EQUAL TO 3 INCHES IN DBH SHALL OCCUR BETWEEN OCTOBER 1 AND MARCH 31 AND IN PRESENCE OF ENGINEER OR OWNER.

STOCKPILED WOOD CHIPS

1. STOCKPILED WOOD CHIPS CAN BE BLENDED DIRECTLY INTO THE STOCKPILES OF SOILS WHICH ARE TO BE RE-SPREAD ACROSS GRADING AREAS. THIS CAN BE DONE WITH THE BUCKET OF AN EXCAVATOR, A FRONT END LOADER, ETC., BY SLOWLY TURNING THE TWO MATERIALS TOGETHER.
2. WOOD CHIPS CAN BE SPREAD ACROSS GRADING AREAS, FOLLOWED BY SOME FORM OF TILLING OR PLOWING TO INCORPORATE THESE MATERIALS INTO THE SOIL.

UTILITY NOTES

1. EXISTING UTILITIES ARE SHOWN ON THE PROJECT DRAWINGS IN THEIR APPROXIMATE LOCATIONS BASED ON INFORMATION OBTAINED FROM UTILITY OWNERS DURING DESIGN. NO RESPONSIBILITY IS ASSUMED BY THE OWNER FOR THE ACCURACY OR COMPLETENESS OF UTILITY LOCATION INFORMATION. UTILITY LOCATIONS ARE INTENDED TO ONLY SERVE AS A GUIDE AND CANNOT BE GUARANTEED TO BE ACCURATE OR COMPLETE.
2. CONTRACTOR SHALL VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT ALL EXISTING UTILITIES, WHETHER SHOWN ON THE CONSTRUCTION DRAWINGS OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
   a. CONTACTING THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 BETWEEN 48 HOURS AND 10 DAYS PRIOR TO BREAKING GROUND.
   b. POTHOLING AND VERIFYING THE HORIZONTAL AND VERTICAL LOCATION OF EACH UTILITY IN THE WORK LIMITS BEFORE STARTING CONSTRUCTION.
   c. RESTORING AND REPAIRING ALL EXISTING UTILITIES, WHETHER SHOWN OR NOT, THAT ARE DISTURBED OR DAMAGED THROUGH THE CONTRACTOR'S ACTIONS. ALL RESTORATION AND REPAIR ACTIVITIES SHALL BE COORDINATED WITH THE UTILITY OWNER AND SHALL BE PERFORMED TO OWNER AND UTILITY OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
3. WHERE POTENTIAL CONFLICTS MAY OCCUR BETWEEN PROPOSED CONSTRUCTION AND UTILITIES, CONTRACTOR SHALL UNCOVER SUCH UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT EXACT ELEVATIONS MAY BE DETERMINED AND THE NECESSARY ADJUSTMENTS MADE. IF ANY REQUIRED ADJUSTMENTS ARE BEYOND REASONABLE CONSTRUCTION TOLERANCES, CONTRACTOR SHALL CONTACT OWNER BEFORE PROCEEDING WITH THAT WORK.
4. DO NOT INTERRUPT EXISTING UTILITY SERVICE UNLESS PERMITTED (IN WRITING) BY OWNER AND UTILITY OWNER. IF AN UNCHARTED OR IMPROPERLY LOCATED UTILITY IS ENCOUNTERED DURING CONSTRUCTION, CONTRACTOR SHALL CONSULT THE OWNER AND UTILITY OWNER IMMEDIATELY. CONTRACTOR SHALL COOPERATE WITH OWNER AND UTILITY OWNER TO MAINTAIN UTILITY SERVICE.

QUALITY ASSURANCE, QUALITY CONTROL, AND OWNER OVERSIGHT

1. FIELD OBSERVATIONS/CONSTRUCTION OVERSIGHT WILL BE CONDUCTED BY OWNER OR OWNER'S REPRESENTATIVE (REPRESENTATIVE AT MAD SCIENTIST ASSOCIATES). OWNER OR OWNER'S REPRESENTATIVE SHALL BE CONSULTED WITH PRIOR TO CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH THE OWNER OR OWNER'S REPRESENTATIVE FOR EVALUATION OF ALL GRADING ACTIVITIES.
2. THE OWNER OR OWNER'S REPRESENTATIVE SHALL DETERMINE THE ACCEPTABILITY OF ALL CONSTRUCTION AND ITS PROCEDURES. THERE WILL BE REGULAR AND FREQUENT REVIEW OF ALL MATERIALS, CONSTRUCTION PRACTICES, AND THE QUALITY AND QUANTITY OF ALL PHASES OF CONSTRUCTION. THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE AUTHORITY TO REQUEST ADJUSTMENTS AS MAY BE NECESSARY TO BEST MEET THE RESTORATION OBJECTIVES. EVALUATION OF CONSTRUCTED GRADES WILL DETERMINE APPROVAL. ALL RESTORATION ELEMENTS SHALL NOT BE CONSIDERED COMPLETE UNTIL APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, AND CONCRETE MONUMENTS, OR ANY TYPE OF LAND MONUMENT. THE CONTRACTOR SHALL HAVE ALL MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. THE CONTRACTOR SHALL REPLACE DESTROYED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

CLEARING AND GRUBBING

1. NO TREE REMOVAL WILL BE PERMITTED OUTSIDE THE LIMITS OF WORK INDICATED ON THE PLANS UNLESS AUTHORIZED. TREE REMOVAL IS SUBJECT TO THREATENED AND ENDANGERED BAT REQUIREMENTS.

COMPACTION MANAGEMENT

1. TO LIMIT DISTURBANCE, THE CONTRACTOR WILL CONFINE OPERATIONS TO AREAS IMMEDIATELY ASSOCIATED WITH IMPROVEMENTS. AVOID TRAVERSING WETLANDS TO THE EXTENT PRACTICABLE. WORK SHALL BE LIMITED TO THE WORK LIMITS SHOWN ON THE DRAWINGS.
2. CHOOSE EQUIPMENT TO MINIMIZE SOIL COMPACTION.
3. CONTRACTOR SHALL STRIP TOPSOIL TO A DEPTH OF 12 INCHES FROM ALL AREAS REQUIRING GRADING. TEMPORARILY STOCKPILE TOPSOIL OUTSIDE OF THE WORK LIMITS. INCORPORATE WOOD CHIPS AND/OR OTHER SOURCES OF ORGANIC MATTER INTO STOCKPILED TOPSOIL.
4. REGRADE THE SUBSOIL TO ACHIEVE GRADES ONE FOOT BELOW DESIGN ELEVATIONS. MAKE EFFORTS TO MINIMIZE COMPACTION AND LIMIT RUTTING AND SMEARING.
5. REAPPLY TOPSOIL ACROSS REGRADED SUBSOIL TO A DEPTH OF AT LEAST 12 INCHES TO ACHIEVE FINAL GRADES. REMOVE MOST CLUMPS AND SURFACE SOIL CLODS.
6. CONSTRUCTED WETLANDS SHALL BE ROUGHENED BY FIRST PLOWING IN ONE DIRECTION, AND THEN MAKING A SECOND PLOWING PASS PERPENDICULAR TO THE FIRST IN FURROWS SEPARATED BY A MAXIMUM DISTANCE OF 6 FEET. THE PLOW DEPTH MAY VARY, AND CARE SHOULD BE TAKEN TO NOT PENETRATE THE TOPSOIL, TO CREATE A PATTERN OF HUMMOCKS AND SMALL PITS TO IMPROVE WATER RETENTION BY SLOWING SURFACE SHEETFLOW, IMPROVING AND SUSTAINING SATURATION THROUGHOUT THESE AREAS. THE OWNER OR OWNER'S REPRESENTATIVE WILL PROVIDE ONSITE DIRECTION TO THE CONTRACTOR TO ENSURE ADEQUATE COVERAGE OF TOPSOIL DISTURBANCE.
7. ON DESIGNATED SLOPES, PLOW THE FINISHED SOIL PERPENDICULAR TO THE SLOPE IN ORDER TO CREATE A SERIES OF FURROWS THAT WILL SLOW RUNOFF RUNNING DOWNSLOPE. THE OWNER OR OWNER'S REPRESENTATIVE WILL PROVIDE ONSITE DIRECTION TO THE CONTRACTOR TO ENSURE ADEQUATE COVERAGE OF TOPSOIL DISTURBANCE.

DRAINAGE DISRUPTION

1. ALL DRAINAGE TILE SHALL BE CUT PERPENDICULAR TO DRAINAGE PATH USING AN EXCAVATOR BUCKET OR RIPPER ATTACHMENT. AT THE TILE JUNCTIONS, EFFORT SHOULD BE MADE TO LOCATE THE JUNCTION AND HAVE IT REMOVED AND THEN BACKFILLED WITH COMPACTIBLE MATERIAL, PREFERABLY CLAY. CLAY DRAINAGE TILE SHALL BE CUT OR CRUSHED.

PROTECTION OF WORK

1. IT IS NECESSARY FOR THE CONTRACTOR TO PROTECT BOTH THE WORK AREA AND THE COMPLETED WORK DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRS BOTH SMALL AND LARGE IF WORK IS NOT ADEQUATELY PROTECTED.
2. TOPSOIL SHALL BE PROTECTED UNTIL GRASS IS OF SUFFICIENT HEIGHT, THICKNESS, AND COVERAGE TO MEET SWPPP SPECIFICATIONS AND PROTECT TOPSOIL FROM WASHING AWAY. AREAS DETERMINED TO BE AT RISK DURING CONSTRUCTION AND ARE NOT SPECIFICALLY CALLED OUT ON PLANS DUE TO PRESENCE OF SWALES, MICROTOPOGRAPHY, OR SIMILAR CONDITIONS THAT ELEVATES THE RISK OF THE AREA SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER OR OWNER'S REPRESENTATIVE TO DISCUSS APPROPRIATE PROTECTION MEASURES. FAILURE TO PROPERLY PROTECT TOPSOIL BEFORE STABILIZATION WILL REQUIRE RE-INSTALLATION OF TOPSOIL AT THE COST OF THE CONTRACTOR. IN GENERAL, ANY AREA THAT IS SUSCEPTIBLE TO FLOWING WATER SHOULD BE INSPECTED AND ANY MINOR MODIFICATIONS/REPAIRS TAKEN AS PROTECTIVE MEASURES ARE REQUIRED AND EXPECTED.

FINAL WALKTHROUGH

1. A FINAL WALKTHROUGH FOR EACH MAJOR COMPONENT WILL BE COMPLETED BY THE OWNER OR OWNER'S REPRESENTATIVE. THE MAJOR COMPONENT WILL BE COMPLETED ONLY AFTER THE FINAL WALKTHROUGH AND ANY ASSOCIATED PUNCH LIST ITEMS ARE CORRECTED AS REQUIRED PER THE DRAWINGS AND SPECIFICATIONS.

TEMPORARY SEED INSTALLATION

1. TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 21 DAYS OR GREATER. THESE AREAS SHALL BE SEEDED WITHIN 7 DAYS AFTER GRADING.
2. AFTER TOPSOIL HAS BEEN REAPPLIED AND PREPPED FOR SEED INSTALLATION, APPLY TEMPORARY SEED MIX TO ALL DISTURBED AREAS AS FOLLOWS:
   a. FROM MID-MARCH TO JUNE, APPLY ANNUAL RYE AT A RATE OF 30 POUNDS PER ACRE.
   b. FROM JULY TO NOVEMBER, APPLY WINTER WHEAT AT A RATE OF 50 POUNDS PER ACRE.
3. FOLLOWING SEED APPLICATION ALL DISTURBED GROUND SHALL BE PROTECTED WITH SUITABLE STRAW MULCH OR EROSION FABRIC DEEMED SUITABLE TO WITHSTAND THE LEVEL OF RISK ASSOCIATED WITH POTENTIAL FLOODING, WIND, OR OTHER RISK WITH THE POTENTIAL TO THREATEN TOPSOIL OR SEED VIABILITY.
4. TOPSOILS SHALL NOT BE OVERCOMPACTED. OVERCOMPACTED TOPSOIL OR AREAS DEEMED UNSUITABLE UPON INSPECTION SHALL BE MODIFIED TO SUITABLE GROWING CONDITIONS.
5. ALL SEED MIXES SHALL BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO ORDERING.

ABBREVIATIONS

AC	ACRES
ACM	ARTICULATED CONCRETE MAT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APX	APPROXIMATELY
BKF	BANKFULL
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICE
CAD	COMPUTER-AIDED DESIGN
CL	CENTERLINE
DBH	DIAMETER AT BREAST HEIGHT
DIP	DUCTAL IRON PIPE
DND	DO NOT DISTURB
ECF	EROSION CONTROL FABRIC
ED	EDITION
EL	ELEVATION
ELEV	ELEVATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
EX	EXISTING
FT	FEET
GIS	GEOGRAPHIC INFORMATION SYSTEM
INV	INVERT
LDB	LEFT DESCENDING BANK
MIN	MINIMUM
NO	NUMBER
NPDES	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
ODOT	OHIO DEPARTMENT OF TRANSPORTATION
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OUPS	OHIO UTILITIES PROTECTION SERVICE
PL	PROPERTY LINE
PROP	PROPOSED
P&P	PLAN AND PROFILE
RCP	ROCK CHANNEL PROTECTION
RDB	RIGHT DESCENDING BANK
STA	STATION
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TYP	TYPICAL
TBR	TO BE REMOVED
VCP	VITRIFIED CLAY PIPE

REVISIONS

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
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METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
MISCELLANEOUS NOTES, DETAILS AND CROSS-SECTIONS
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO

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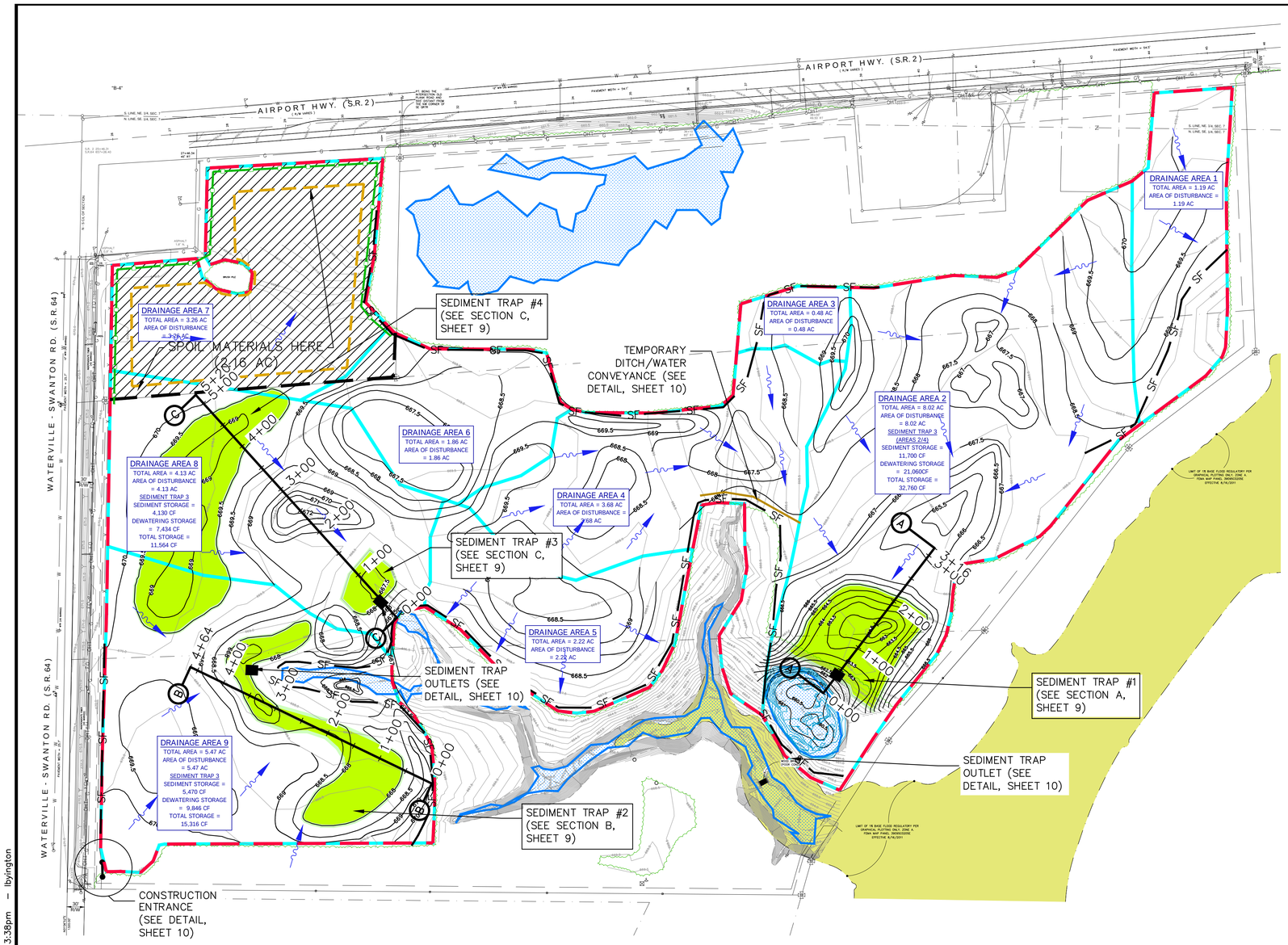

N

0 100' 200''

SCALE: 1"= 100'

LEGEND

- 900 — EXISTING TOPOGRAPHY
- 900 — PROPOSED GRADES
- CONSTRUCTION LIMITS
- SF — PROPOSED SILT FENCE
- PROPOSED FILTER SOCK
- SEDIMENT TRAPS
- DRAINAGE ARROW/DIRECTION
- DRAINAGE BOUNDARY
- CONSTRUCTION LIMITS

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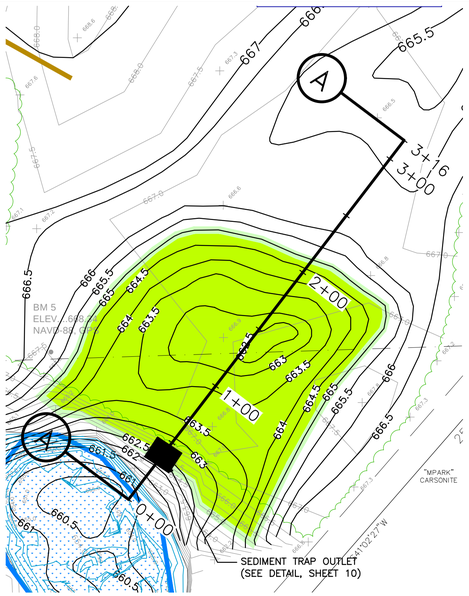
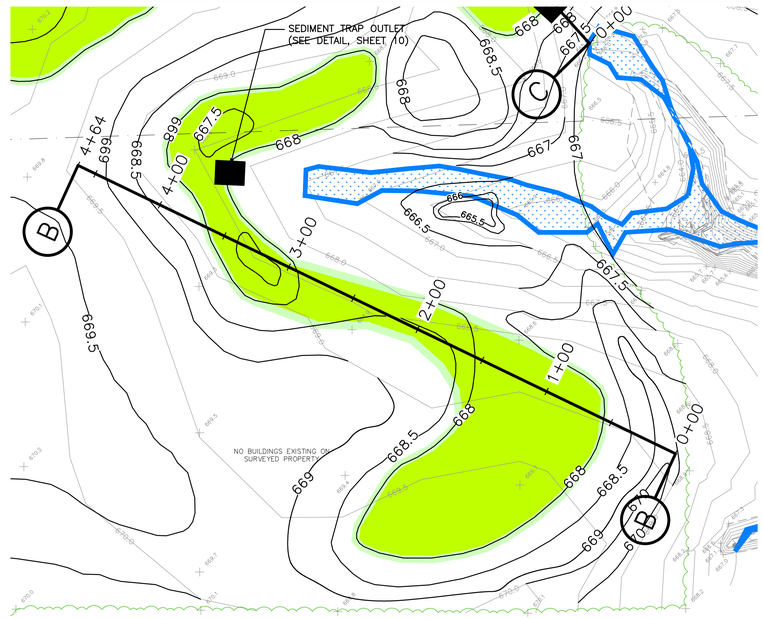
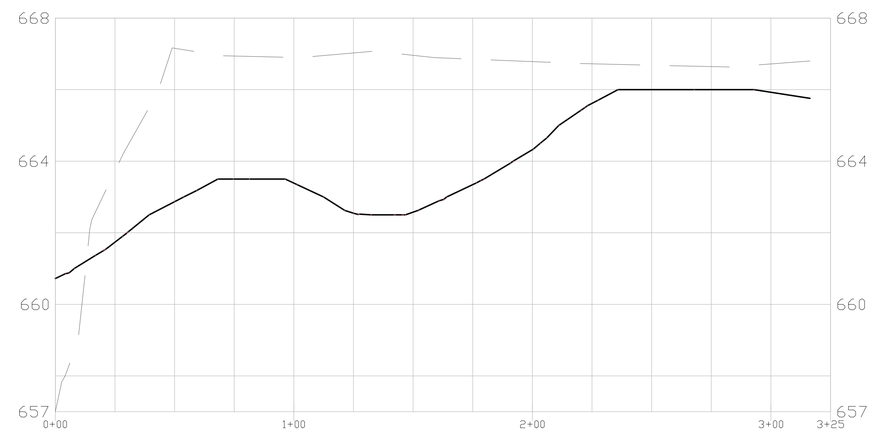
OAK OPENINGS PRESERVE EXPANSION
SWP3 SITE PLAN
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO



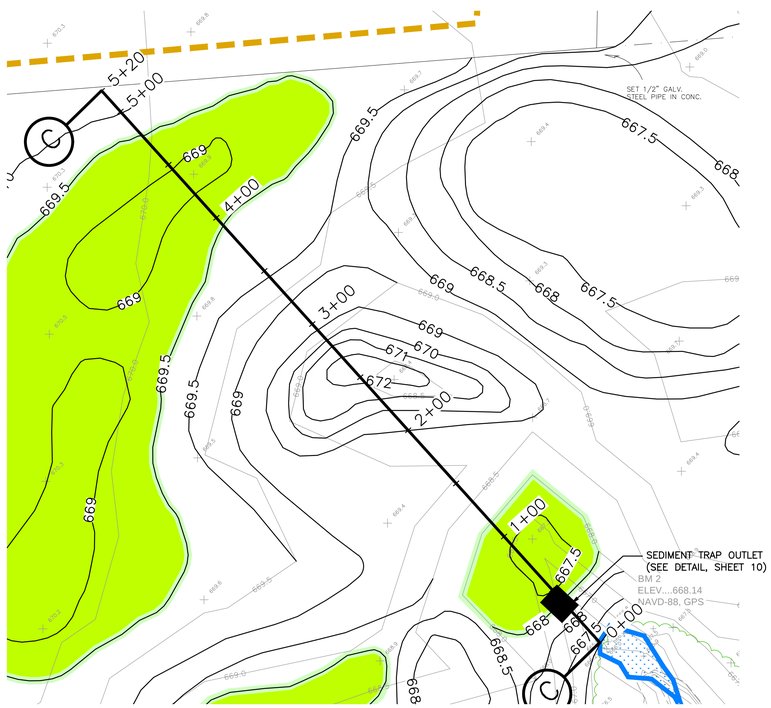
SEDIMENT TRAP AREA 1 PLAN
SCALE: 1" = 50'



SEDIMENT TRAP AREA 2 PLAN
SCALE: 1" = 50'



SECTION A SEDIMENT TRAP #1
SCALE: 1"=30' H, 1"=2' V



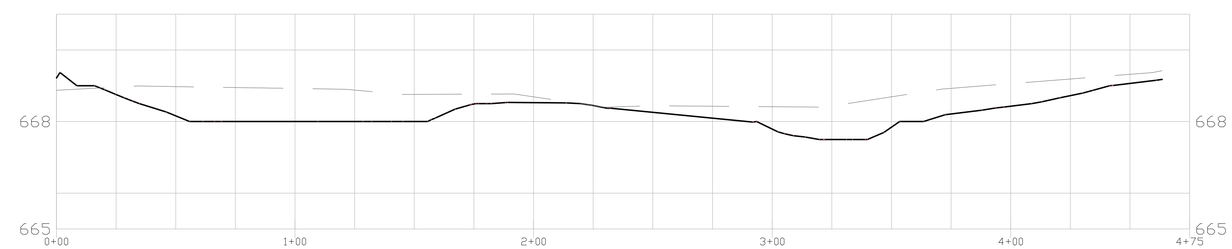
SEDIMENT TRAP AREA 3 PLAN
SCALE: 1" = 50'

LEGEND

670 — EXISTING TOPOGRAPHY

670 — PROPOSED CONTOURS

SEDIMENT TRAPS



SECTION B SEDIMENT TRAP #2
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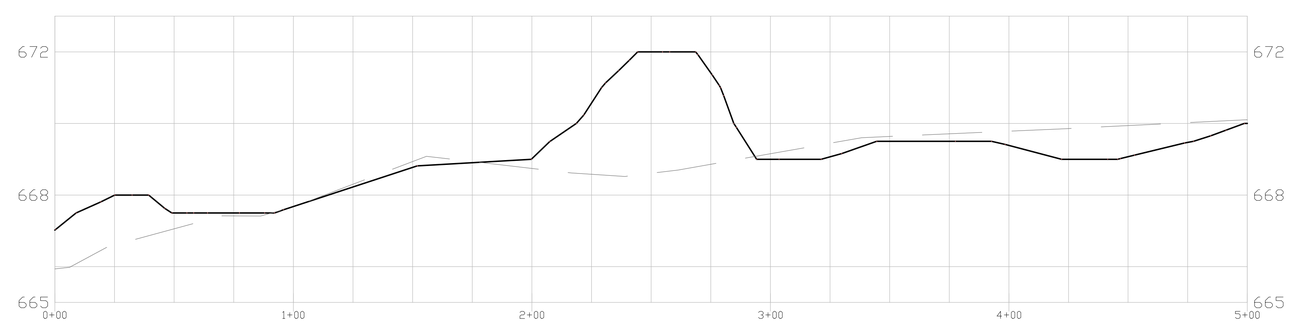

SECTION C SEDIMENT TRAP #3
SCALE: 1"=30' H, 1"=2' V

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DATE: 1-15-21
PREPARED BY: MAD
DRAWN BY: LMH
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OAK OPENINGS PRESERVE EXPANSION
SWP3 – SECTIONS
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO

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NON–SEDIMENT POLLUTANT CONTROL NOTES

1. ANY AND ALL WASTE MATERIALS (SOLID, HAZARDOUS, TOXIC, CONTAMINATED SOILS, ETC.) GENERATED AT THE SITE SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS. ON–SITE STORAGE CONTAINERS SHALL BE COVERED AND NOT LEAKING. IT IS PROHIBITED TO BURN, BURY, OR POUR OUT ON THE GROUND ANY SOLVENTS, PAINTS, GASOLINE, DIESEL FUEL, MOTOR OIL, HYDRAULIC FLUID, ANTIFREEZE, CURING COMPOUND, OR ANY OTHER TOXIC OR HAZARDOUS WASTES.
2. THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT ONLY AUTHORIZES THE DISCHARGE OF STORM WATER AND CERTAIN UNCONTAMINATED NON–STORM WATERS. THE DISCHARGE OF NON–STORM WATERS TO WATERS OF THE STATE MAY BE IN VIOLATION OF LOCAL, STATE, AND FEDERAL LAWS OR REGULATIONS. ALL PROCESS WASTEWATERS (E.G., EQUIPMENT WASHING) SHALL BE COLLECTED AND DISPOSED OF PROPERLY.
3. IN THE EVENT OF A LARGER RELEASE (25 OR MORE GALLONS) OF PETROLEUM WASTE, CONTRACTOR MUST CONTACT OHIO EPA (AT 1–800–282–9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS.
4. ALL CLEAN CONSTRUCTION WASTES TO BE DISPOSED OF ON THE PROPERTY MUST BE DONE SO IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS.
5. ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) WASTE WILL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714. NOTE: CONSTRUCTION DEBRIS MAY BE DISPOSED OF ON SITE, BUT DEMOLITION DEBRIS MUST BE DISPOSED OF IN AN OHIO EPA APPROVED LANDFILL.
6. IF THE CONTRACTOR WILL UTILIZE AN ABOVE GROUND STORAGE TANK (AST) OF 660 GALLONS OR MORE, TOTAL ABOVE GROUND TANK STORAGE OF 1,330 GALLONS OR BELOW GROUND STORAGE OF 42,000 GALLONS OF FUEL, HE SHALL SUBMIT A SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN TO THE CITY FOR APPROVAL PRIOR TO CONSTRUCTION.
7. FUEL STORAGE TANKS SHOULD BE LOCATED AWAY FROM DRAINAGE CHANNELS. CONTRACTOR SHALL UTILIZE SELF–CONTAINED SPILL PROOF TANKS.
8. DUST SUPPRESSANTS SHALL BE USED IN CASES OF EXCESSIVE DUST. OIL MAY NOT BE USED AS A DUST SUPPRESSANT. DUST SUPPRESSANTS MUST NOT BE STORED NEAR CATCH BASINS OR OTHER DRAINAGE WAYS. DUST SUPPRESSANT SHALL NOT BE UTILIZED/IMPLEMENTED NEAR CATCH BASINS, DITCHES, OR SWALES.
9. OPEN BURNING IS NOT ALLOWED.

SEDIMENT & EROSION CONTROL NOTES

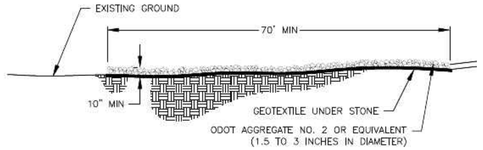
1. ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST CONFORM TO THE SPECIFICATION OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY RAINWATER AND LAND DEVELOPMENT MANUAL UNLESS OTHERWISE NOTED.
2. CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED SUCH THAT A MINIMUM (AS IS PRACTICABLE) AREA OF THE SITE IS DISTURBED AT A TIME. CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS. CONTRACTOR SHALL REDUCE EFFECTS OF STORM WATER BY USING AND/OR MAINTAINING GRASS SWALES, INFILTRATION STRUCTURES, OR WATER DIVERSIONS.
3. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
4. CLEANUP WILL BE DONE IN A MANNER TO ENSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
5. TEMPORARY SOIL STABILIZATION SHALL OCCUR WITHIN 7 DAYS AFTER ROUGH GRADING IF THE AREA WILL REMAIN IDLE LONGER THAN 14 DAYS. ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 OR MUST HAVE A DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH.
6. TRENCHES FOR UNDERGROUND UTILITY LINES AND PIPES SHALL BE TEMPORARILY STABILIZED WITHIN 7 DAYS IF THEY ARE TO REMAIN INACTIVE FOR 14 DAYS. DEWATERING DEVICES SHALL DISCHARGE IN A MANNER THAT FILTERS SOIL–LADEN WATER BEFORE DISCHARGING IT TO A RECEIVING DRAINAGE DITCH OR POND. IF SEEDING, MULCHING, OR OTHER EROSION AND SEDIMENT CONTROL MEASURES WERE PREVIOUSLY INSTALLED, THESE PROTECTIVE MEASURES SHALL BE REINSTALLED. PIPELINES WITH JOINTS THAT ALLOW A MANUFACTURED LENGTH OF PIPE TO BE PLACED IN THE TRENCH WITH THE PIPE JOINT ASSEMBLED/MADE IN THE TRENCH REQUIRE AN OPEN PIPELINE TRENCH THAT IS ONLY SLIGHTLY LONGER THAN THE LENGTH OF PIPE BEING INSTALLED. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF PIPELINE/UTILITY THAT CAN BE PLACED IN THE TRENCH AND BACK–FILLED IN ONE WORKING DAY. NO MORE THAN 50 LINEAR FEET OF OPEN TRENCH SHOULD EXIST WHEN PIPELINE/UTILITY LINE INSTALLATION CEASES AT THE END OF THE WORKDAY.
7. SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED TO PREVENT SOIL LOSS.
8. ALL DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED BY SEEDING WITH AN APPROVED ANNUAL COVER WITHIN 7 DAYS OF FINAL GRADING. THIS COVER CROP, ONCE GERMINATED AND GROWING, SHOULD COVER 80% OF THE SOIL SURFACE IN ALL DISTURBED AREAS. FURTHER, SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION (BY OTHERS) IS COMPLETE, AT WHICH TIME THE SOIL EROSION CONTROL MEASURES WILL BE REMOVED. THE PERMANENT VEGETATION TO BE ESTABLISHED BY OTHERS WILL BE CAPABLE OF SURVIVING WINTER WEATHER CONDITIONS.
9. SILT FENCE/FILTER SOCKS SHOULD BE PLACED NO CLOSER THAN 2' FROM PROPERTY LINES IN AREAS WHERE WORK IS NEAR ADJACENT PROPERTIES.
10. HAUL ROUTES–THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MUD, DIRT, OR DEBRIS DEPOSITED ON HAUL ROADS AS A RESULT OF HIS OPERATIONS. SOIL SHALL BE REMOVED FROM ROADS AND PAVED SURFACES AT THE END OF EACH DAY IN SUCH A MANNER THAT DOES NOT CREATE OFF–SITE SEDIMENTATION IN ORDER TO ENSURE SAFETY AND ABATE OFF–SITE SOIL LOSS. COLLECTED SEDIMENTS SHALL BE PLACED IN A STABLE LOCATION ON SITE OR TAKEN OFF–SITE TO A STABLE LOCATION. CONTRACTOR SHALL USE STATE ROUTES (AND SHORTEST DISTANCE NON–STATE ROUTES) FOR PROJECT HAUL ROUTE.
11. FOR DISTURBED AREAS WITHIN 50 FEET OF A STREAM OR DITCH THAT WILL REMAIN DORMANT FOR OVER 14 DAYS, TEMPORARY EROSION CONTROLS SHALL BE APPLIED WITHIN 2 DAYS.
12. FOR DISTURBED AREAS OVER 50 FEET AWAY FROM A STREAM OR DITCH REMAINING DORMANT FOR OVER 14 DAYS, TEMPORARY EROSION CONTROLS SHALL BE APPLIED WITHIN 7 DAYS.
13. FOR DISTURBED AREAS THAT WILL BE LEFT IDLE OVER WINTER, TEMPORARY EROSION CONTROLS SHALL BE APPLIED PRIOR TO ONSET OF WINTER.
14. SEDIMENT CONTROL DEVICES SHALL BE IMPLEMENTED FOR ALL AREAS REMAINING DISTURBED FOR OVER 14 DAYS.
15. SEDIMENT CONTROLS SHALL BE INSTALLED/IMPLEMENTED WITHIN 7 DAYS OF GRUBBING ACTIVITIES AND PRIOR TO GRADING.
16. THE SEDIMENT STORAGE ZONE OF ANY SILT TRAPS AND BASINS SHALL BE CLEANED OUT WHEN THE SILT OCCUPIES 40 PERCENT OF THE SEDIMENT STORAGE ZONE (APPROXIMATELY ONE–HALF OF THE SEDIMENT STORAGE ZONE DEPTH).
17. ALL SILT TRAPS AND SEDIMENTATION BASINS SHALL BE SURROUNDED BY ORANGE CONSTRUCTION FENCING.

INSPECTIONS

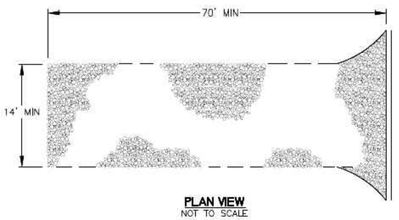
1. WEEKLY INSPECTIONS OF BMPS ARE REQUIRED AS WELL AS AN INSPECTION WITHIN 24 HOURS AFTER EVERY RAIN EVENT OF 0.5 INCHES WITHIN A 24 HOUR PERIOD.
2. IF THE SITE IS STABILIZED AND WILL BE DORMANT FOR A LONG PERIOD AND LESS FREQUENT INSPECTIONS ARE DESIRED, A WAIVER REQUEST SHALL BE SUBMITTED TO OEPA FOR A REDUCTION TO MONTHLY INSPECTIONS.
3. ONLY QUALIFIED INSPECTION PERSONNEL WILL PERFORM THE INSPECTIONS.
4. AN INSPECTION CHECKLIST WILL BE COMPLETED AND SIGNED BY THE INSPECTOR AFTER EVERY INSPECTION.
5. INSPECTION RECORDS WILL BE KEPT FOR 3 YEARS AFTER TERMINATION OF CONSTRUCTION ACTIVITIES.
6. FOR BMPS THAT REQUIRE REPAIR OR MAINTENANCE, NON–SEDIMENT POND BMPS SHALL BE REPAIRED WITHIN 3 DAYS OF INSPECTION AND SEDIMENT PONDS SHALL BE REPAIRED OR CLEANED OUT WITHIN 10 DAYS OF INSPECTION.
7. IN THE CASE THAT A BMP DOES NOT MEET THE INTENDED FUNCTION, A NEW BMP WILL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.
8. IF ANY BMP REQUIRED FOR INSTALLATION BY THE SWPPP IS MISSING, THE MISSING BMPS SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

PRESERVATION OF NATURAL VEGETATION

1. CARE SHALL BE TAKEN TO PRESERVE THE NATURAL VEGETATION OUTSIDE OF THE CONSTRUCTION LIMITS. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE AREAS WITHIN THE CONSTRUCTION LIMITS.
2. ANY DAMAGE TO TREES, SAPLINGS, AND GRASSES OUTSIDE OF CONSTRUCTION LIMITS SHALL BE REPAIRED BY THE CONTRACTOR. INJURIES TO BARK, TRUNKS, LIMBS, AND ROOTS OF TREES SHALL BE REPAIRED BY PROPERLY DRESSING, CUTTING, BRACING, AND PAINTING, USING ONLY APPROVED TREE SURGERY METHODS, TOOLS, AND MATERIALS.



CROSS SECTION
NOT TO SCALE



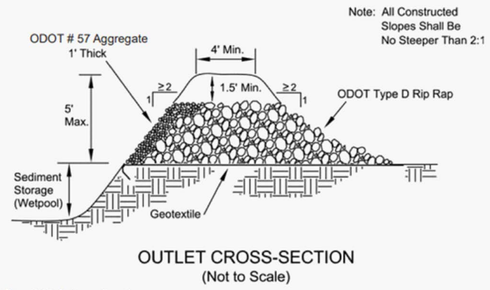
PLAN VIEW
NOT TO SCALE

1. STONE SIZE: ODOT #2 (1.5–2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH: THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT.
3. THICKNESS: THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
4. WIDTH: THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE: A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT–PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

   MINIMUM TENSILE STRENGTH: 200 LBS
   MINIMUM PUNCTURE STRENGTH: 80 PSI
   MINIMUM TEAR STRENGTH: 50 LBS
   MINIMUM BURST STRENGTH: 320 PSI
   MINIMUM ELONGATION: 20%
   EQUIVALENT OPENING SIZE: EOS < 0.6 MM
   PERMITTIVITY: 1 X 10–3 CM/SEC

6. TIMING: THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
7. CULVERT: A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
8. WATER BAR: A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
9. MAINTENANCE: TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
10. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF–SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
11. REMOVAL: THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

CONSTRUCTION ENTRANCE DETAIL



OUTLET CROSS-SECTION
(Not to Scale)

Figure 6.2.2 Outlet configuration

SEDIMENT TRAP OUTLET DETAIL

Specifications for

Silt Fence

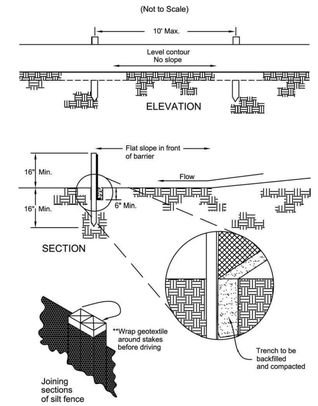
1. Silt fence shall be constructed before upslope land disturbance begins.
2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions that may carry small concentrated flows to the silt fence are dissipated along its length.
3. Ends of the silt fences shall be brought upslope slightly so that water ponded by the silt fence will be prevented from flowing around the ends.
4. Silt fence shall be placed on the flattest area available.
5. Where possible, vegetation shall be preserved for 5 feet (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7 days from the installation of the silt fence.
6. The height of the silt fence shall be a minimum of 16 inches above the original ground surface.
7. The silt fence shall be placed in an excavated or sliced trench cut a minimum of 6 inches deep. The trench shall be made with a trencher, cable laying machine, slicing machine, or other suitable device that will ensure an adequately uniform trench depth.
8. The silt fence shall be placed with the stakes on the downslope side of the geotextile. A minimum of 8 inches of geotextile must be below the ground surface. Excess material shall lay on the bottom of the 6-inch deep trench. The trench shall be backfilled and compacted on both sides of the fabric.
9. Seams between sections of silt fence shall be spliced together only at a support post with a minimum 6-in. overlap prior to driving into the ground, (see details).
10. Maintenance—Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under the fabric or around the fence ends, or in any other way allows a concentrated flow discharge, one of the following shall be performed, as appropriate: 1) the layout of the silt fence shall be changed, 2) accumulated sediment shall be removed, or 3) other practices shall be installed.

    Sediment deposits shall be routinely removed when the deposit reaches approximately one-half of the height of the silt fence.

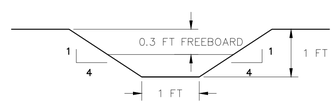
    Silt fences shall be inspected after each rainfall and at least daily during a prolonged rainfall. The location of existing silt fence shall be reviewed daily to ensure its proper location and effectiveness. If damaged, the silt fence shall be repaired immediately.

Criteria for silt fence materials

1. Fence post – The length shall be a minimum of 32 inches. Wood posts will be 2-by-2-in. nominal dimensioned hardwood of sound quality. They shall be free of knots, splits and other visible imperfections, that will weaken the posts. The maximum spacing between posts shall be 10 ft. Posts shall be driven a minimum 16 inches into the ground, where possible. If not possible, the posts shall be adequately secured to prevent overturning of the fence due to sediment/water loading.
2. Silt fence fabric – See chart below.



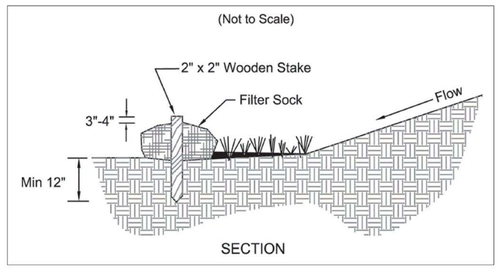
FABRIC PROPERTIES	VALUES	TEST METHOD
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	≤ 0.84 mm	ASTM D 4751
Minimum Permittivity	1X10-2 sec.-1	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355



TEMPORARY DITCH/WATER CONVEYANCE

Specifications for

Filter Sock



1. Materials - Compost used for filter socks shall be weed, pathogen and insect free and free of any refuse, contaminants or other materials toxic to plant growth. They shall be derived from a well-decomposed source of organic matter and consist of a particles ranging from 3/8" to 2".
2. Filter Socks shall be 3 or 5 mil continuous, tubular, HOPE 3/8" knitted mesh netting material, filled with compost passing the above specifications for compost products.

INSTALLATION:

3. Filter socks will be placed on a level line across slopes, generally parallel to the base of the slope or other affected area. On slopes approaching 2:1, additional socks shall be provided at the top and as needed mid-slope.
4. Filter socks intended to be left as a permanent filter or part of the natural landscape, shall be seeded at the time of installation for establishment of permanent vegetation.
5. Filter Socks are not to be used in concentrated flow situations or in runoff channels.

MAINTENANCE:

6. Routinely inspect filter socks after each significant rain, maintaining filter socks in a functional condition at all times.
7. Remove sediments collected at the base of the filter socks when they reach 1/3 of the exposed height of the practice.
8. Where the filter sock deteriorates or fails, it will be repaired or replaced with a more effective alternative.
9. Removal - Filter socks will be dispersed on site when no longer required in such as way as to facilitate and not obstruct seedings.

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REVISIONS				
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DATE: 1–15–21
PREPARED BY: MAD
DRAWN BY: LMH
CHECKED BY: MAD
FILE: MAD002–10

MAD SCIENTIST ASSOCIATES LLC

METROPARKS TOLEDO

MAD SCIENTIST ASSOCIATES, LLC.

METROPARKS TOLEDO
OAK OPENINGS PRESERVE EXPANSION
SWP3 NOTES AND DETAILS
VILLAGE OF SWANTON, LUCAS COUNTY, OHIO