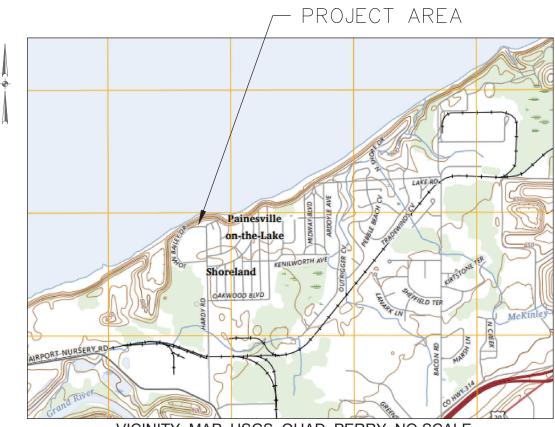
BLUFF STABILIZATION AT 1025 HARDY ROAD, PAINESVILLE TOWNSHIP BID NO. 2025-008



VICINITY MAP, USGS QUAD, PERRY, NO SCALE

GENERAL NOTES:

- CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS AS NOTED ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY OF ANY INCONSISTENCIES BETWEEN THE DRAWINGS AND THE FIELD MEASUREMENTS.
- AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION THE CONTRACTOR SHALL CONTACT PAINESVILLE TOWNSHIP AND OUPS TO DETERMINE THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES NOT INDICATED ON THE PRINTS. IF UNCHARTED UTILITIES ARE ENCOUNTERED THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY.

П	DATE	DESCRIPTION	BY
S			Н
<u>N</u>			Н
SIN			
RE			Ш
			Н

DRAWING TITLE SHEET No. TITLE SHEET **GENERAL NOTES EXISTING SITE PLAN** PROPOSED SITE PLAN LOCATION MAP SECTIONS **ELEVATION VIEW** DETAILS SITE ACCESS PLAN



DAVID A. PAULING. P.E. OHIO REG. NO. 87177



UNDERGROUND UTILITIES ARE SHOWN FROM RECORDS AND FIELD MARKINGS PROVIDED BY UTILITY COMPANIES AND AGENCIES. ACTUAL LOCATIONS MAY VARY, CONTACT OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 AT LEAST 48 HOURS PRIOR TO EXCAVATION.

CALL TWO WORKING DAYS BEFORE YOU DIG 2. VISIBLE SURFACE UTILITIES HAVE BEEN FIELD LOCATED (NON MEMBERS MUST BE CALLED DIRECTLY) UNLESS OTHERWISE NOTED.



BLUFF STABILIZATION AT PAINESVILLE PARK

SHEET 11

24072

REFERENCE

REFERENCES TO THE OWNER SHALL REFER TO LAKE METROPARKS.

REFERENCES TO ENGINEER SHALL REFER TO KS ASSOCIATES INC. OR ANOTHER FIRM PROVIDING ON SITE CONSTRUCTION INSPECTION SERVICES ON BEHALF OF THE OWNER.

ALL WORK SHALL CONFIRM TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (2019) EXCEPT WHERE NOTED HEREIN.

UTILITIES

AT LEAST TWO WORKING DAYS PRIOR TO DEMOLITION OR EXCAVATION, THE CONTRACTOR SHALL CONTACT THE TOWNSHIP AND OUPS TO DETERMINE THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES NOT INDICATED ON THE PRINTS. IF UNCHARTED UTILITIES ARE ENCOUNTERED THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES DURING CONSTRUCTION ACTIVITIES. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

REPORTING & STATUS MEETINGS

THE CONTRACTOR SHALL COORDINATE AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE OWNER AND THE ENGINEER.

THE CONTRACTOR SHALL PREPARE AND SUBMIT A CONSTRUCTION SCHEDULE PRIOR TO THE PRE-CONSTRUCTION MEETING.

GENERAL NOTES

- 1. THE CONTRACTOR SHALL PREPARE AND SUBMIT A SITE-SPECIFIC SAFETY PLAN FOR REVIEW BY THE OWNER.
- 2. THE CONTRACTOR SHALL PERSONALLY VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH THE NATURE OF THE WORK AND EXISTING SITE CONDITIONS.
- 3. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS AS NOTED ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IMMEDIATELY OF ANY INCONSISTENCIES BETWEEN THE DRAWINGS AND THE FIELD MEASUREMENTS.
- 4. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS INCLUDING SPECIFIC CONDITIONS IN THE PERMITS ISSUED BY THE PERMITTING AGENCIES.
- 5. ONCE CONSTRUCTION IS STARTED THE CONTRACTOR SHALL CONTINUE CONSTRUCTION THROUGH COMPLETION IN A SINGLE MOBILIZATION/OPERATION.
- 6. SECURITY OF ALL CONTRACTOR EQUIPMENT, MATERIALS, TOOLS AND HARDWARE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 7. EROSION AND SEDIMENT CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 8. COORDINATE WORK TO ASSURE EFFICIENT AND ORDERLY SEQUENCES OF INSTALLATION OF CONSTRUCTION ELEMENTS, WITH PROVISIONS FOR ACCOMMODATING ITEMS INSTALLED LATER.
- 9. FOR PRODUCTS SPECIFIED BY ASSOCIATION OR TRADE STANDARDS, COMPLY WITH REQUIREMENTS OF THE

STANDARD, EXCEPT WHEN MORE RIGID REQUIREMENTS ARE SPECIFIED OR ARE REQUIRED BY APPLICABLE CODES.

- 10. THE DATE OF THE STANDARD IS THAT WHICH IS IN EFFECT AS OF THE CONTRACT DATE.
- 11. OBTAIN COPIES OF STANDARDS WHEN REQUIRED BY SPECIFICATIONS. MAINTAIN COPY AT JOBSITE DURING PROGRESS OF THE SPECIFIC WORK.
- 12. ALL SOLIDS DISTURBED SHALL BE PUT BACK IN PLACE OR REMAIN ON-SITE. THE CONTRACTOR SHALL PROPERLY TRANSPORT AND DISPOSE OF ANY UNREUSABLE, EXCAVATED PROJECT SOIL AS A SOLID WASTE AT A LICENSED LANDFILL.
- 13. CONTRACTOR SHALL INSTALL TEMPORARY FENCING (ORANGE FENCE) TO ISOLATE CONSTRUCTION ACTIVITIES FROM ACCESS BY UNAUTHORIZED PERSONNEL.
- 14. ALL AREAS IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO THEIR PRECONSTRUCTION CONDITION OR BETTER.

ENVIRONMENTAL RESTRICTIONS

THE CONTRACTOR SHALL PROPERLY TRANSPORT AND DISPOSE OF ANY UN-REUSABLE, EXCAVATED PROJECT SOIL AT A LICENSED LANDFILL.

THE CONTRACTOR SHALL NOT PLACE ANY TEMPORARY OR PERMANENT FILL IN OR BELOW THE ORDINARY HIGH WATER MARK OF LAKE ERIE. IF DEBRIS ENTERS THE LAKE WATERS OUTSIDE THE CONFINES OF THE PROJECT AREA, THE CONTRACTOR SHALL REMOVE THE DEBRIS IMMEDIATELY UTILIZING EQUIPMENT STAGED ABOVE THE ORDINARY HIGH WATER MARK.

THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IMMEDIATELY IF ANY WORK IS ANTICIPATED TO BE REQUIRED LAKEWARD OF THE ORDINARY HIGH WATER MARK.

THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK SHALL BE OPERATED IN SUCH A WAY AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT PLANT AND ANIMAL LIFE.

SURVEYING PARAMETERS

UNITS ARE IN U.S. SURVEY FEET.

VERTICAL DATUM IS INTERNATIONAL GREAT LAKES DATUM 1985 (IGLD 1985).

- LOW WATER DATUM IS 569.2 FEET IGLD 1985.
- AVERAGE WATER LEVEL IS 571.2 FEET IGLD 1985.
- ORDINARY HIGH WATER IS 573.4 FEET IGLD 1985.

HORIZONTAL DATUM IS OHIO STATE PLANE NORTH ZONE NAD83(2011).

PRIMARY PROJECT CONTROL INFORMATION IS AS SHOWN ON THE CONTRACT DOCUMENTS.

CONTRACTOR FIELD ENGINEERING SERVICES: LOCATE SITE FEATURES AND ESTABLISH GRADES, LINES, AND LEVELS, BY USE OF RECOGNIZED ENGINEERING SURVEY PRACTICES.

CONTRACTOR SHALL LOCATE AND PROTECT CONTROL AND REFERENCE POINTS AND ESTABLISH NEW POINTS AS REQUIRED.

THE EXISTING CONDITIONS DEPICTED ON DRAWINGS WERE PREPARED FROM FIELD SURVEY DATA COLLECTED BY KS ASSOCIATES ON AUGUST 2 AND 19, 2024.

FIELD CONDITIONS MAY VARY FROM CONDITIONS SHOWN ON DRAWINGS.

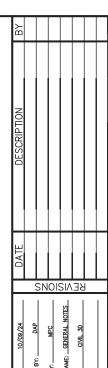
GENERAL STRUCTURE NOTES FOR STRUCTURES

- 1. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL, HYDROSTATIC, AND BACKFILL LOADS ON THE COMPLETED STRUCTURES. THE STRUCTURES HAVE NOT BEEN DESIGNED TO RESIST THESE LOADS WHILE ONLY PARTIALLY CONSTRUCTED. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED FROM ALL CONSTRUCTION LOADS BY BRACING AND BALANCING UNTIL ALL STRUCTURAL ELEMENTS ARE IN PLACE. OVERLOADING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.
- 2. ALL WELDING SHALL BE BY THE SHIELDED ARC METHOD AND SHALL CONFORM TO AWS D1.1 FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION.
 QUALIFICATIONS OF WELDERS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR STANDARD QUALIFICATION PROCEDURE OF THE AWS. CONTRACTOR SHALL SUBMIT CURRENT WELDERS CERTIFICATIONS PRIOR TO COMMENCING WORK ON THE FACILITY. ALL COSTS ASSOCIATED THERE TO SHALL BE BORN BY THE CONTRACTOR.

IN THE EVENT THAT ON-SITE VISUAL INSPECTIONS REVEAL WELDS OF MARGINAL QUALITY, POROSITY, CRACKS, ETC.; THE WELDS SHALL BE TESTED AND THE REPORT FORWARDED TO THE ENGINEER FOR REVIEW AND ACTION. THE COST OF TESTING IS CONSIDERED INCIDENTAL TO THE WELDING OPERATION AND SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL VISUALLY INSPECT ALL WELDS FOR WELD SIZE, DIMENSIONAL VARIANCES, WARPAGE, UNIFORMITY OF WELD BEAD, CRACKS, INADEQUATE PENETRATION, SURFACE POROSITY, UNFILLED CRATERS, APPEARANCE FLAWS, AND GAS OR SLAG INCLUSIONS.

3. THE CONTRACTOR SHALL ANTICIPATE INCLUSION OF SHIMS, SPACER PLATES AND FIELD WELDS TO ACCOMMODATE CONSTRUCTION TOLERANCES AND ALIGNMENTS. THE COST OF SPACER PLATES, SHIMS AND FIELD WELDS SHALL BE INCIDENTAL TO THE COST OF INSTALLATION FOR EACH ITEM. NO ADDITIONAL PAYMENT SHALL BE MADE FOR SPACER PLATES, SHIMS OR FIELD WELDS REQUIRED TO ACCOMMODATE CONSTRUCTION TOLERANCES AND ALIGNMENTS.



ciates, Inc.

ns Road, Suite 100

H 44035

S65 4730

PATH:

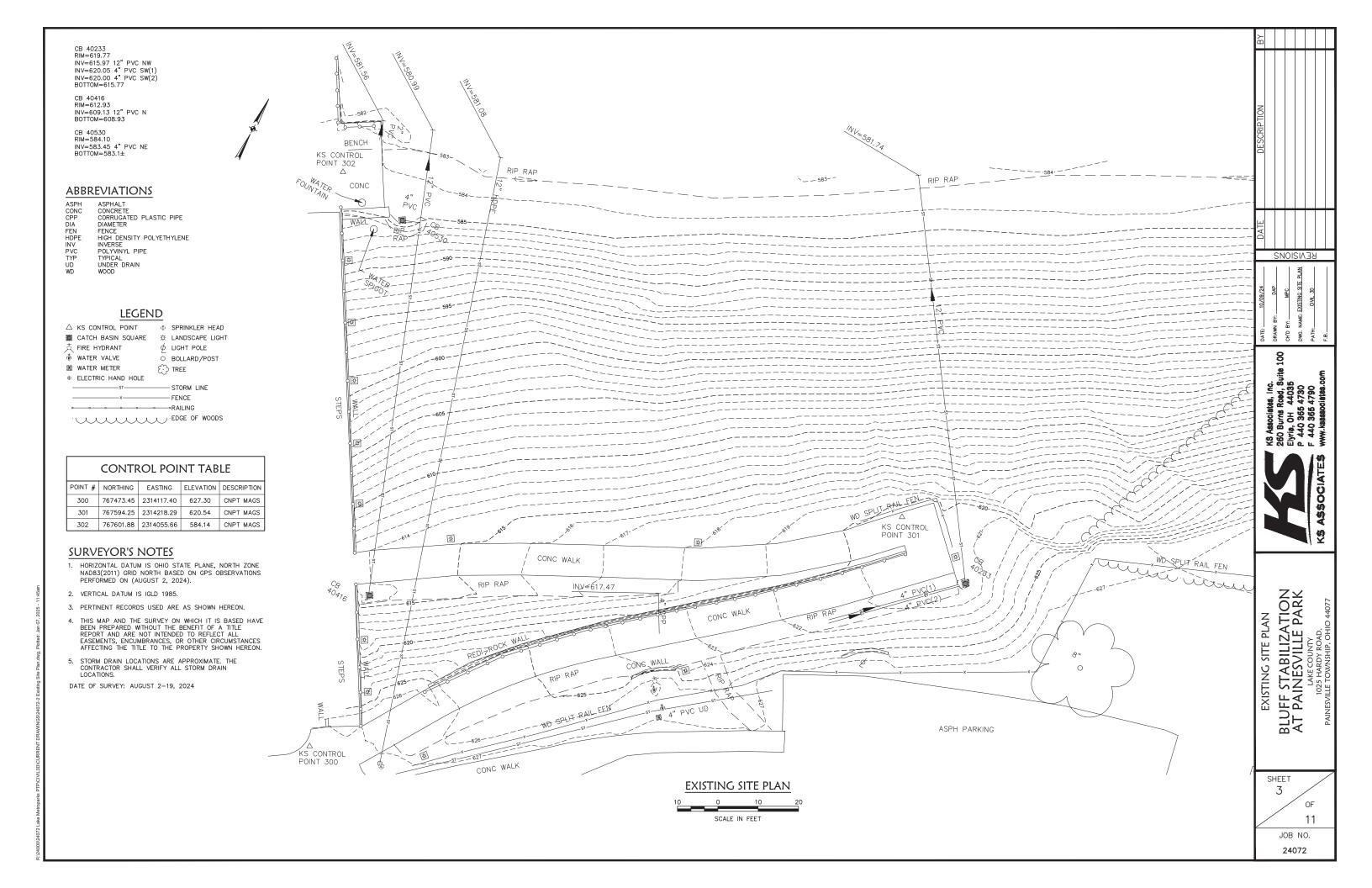
PATH:

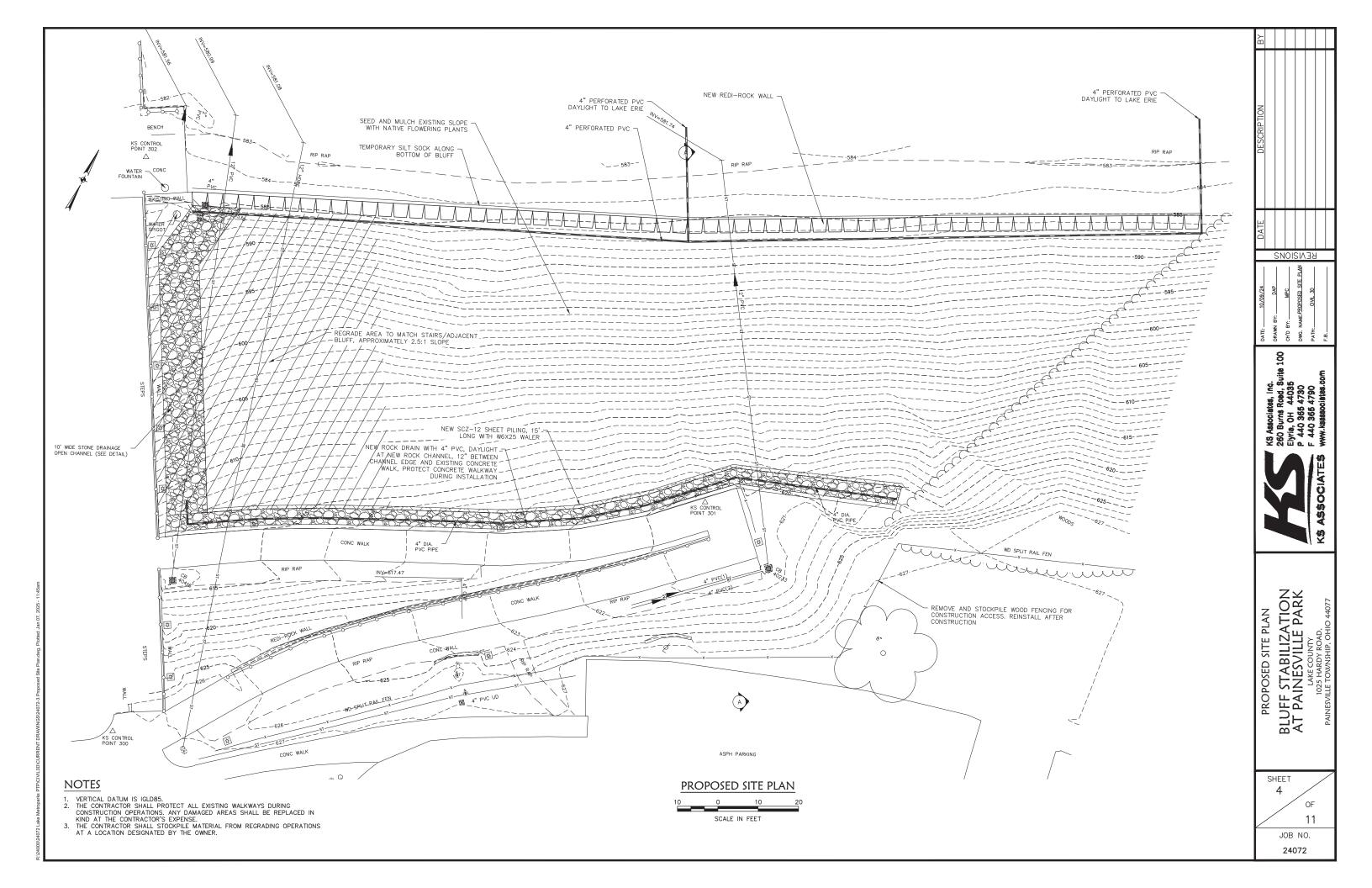
KS Associates 260 Burns Rc Elyria, 0H 4 P 440 365 4 F 440 365 4

BLUFF STABILIZATION
AT PAINESVILLE PARK PIER
LAKE COUNTY
1025 HARDY ROAD.

SHEET 2 OF 11 JOB NO. 24072

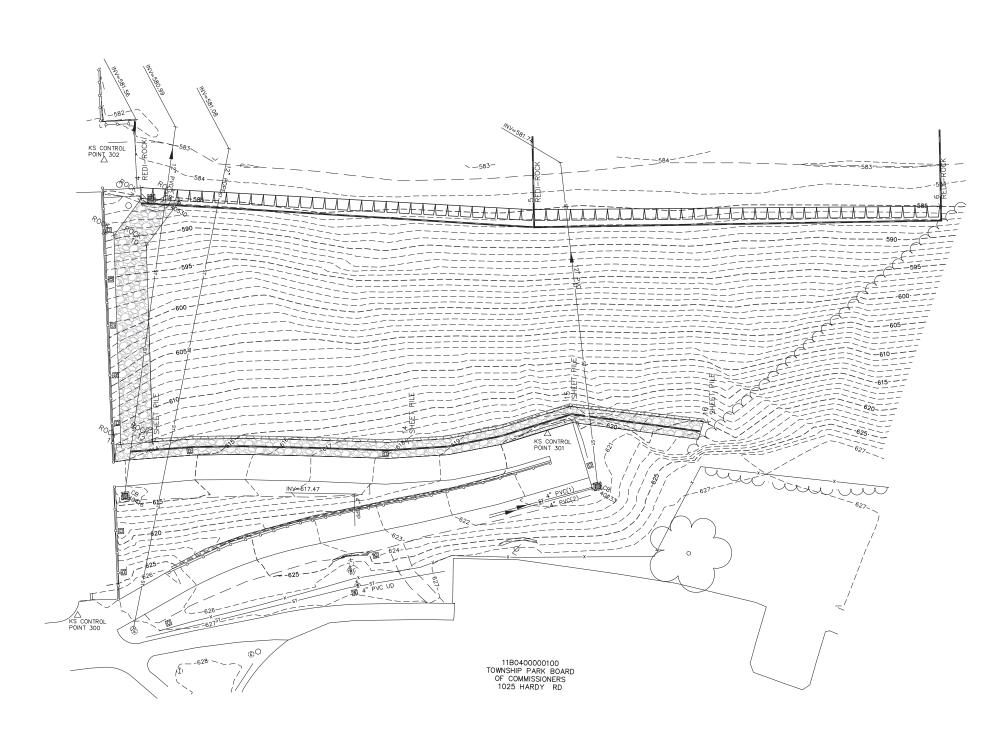
24000124072 Lake Metroparks PTPICIVIL3DICURRENT DRAWINGS124072-1 Title Sheet dwg, Plotted: Jan 07, 202





LOCATION POINT TABLE									
POINT #	NORTHING	EASTING	DESCRIPTION						
4	767599.9	2314069.8	REDI-ROCK						
5	767653.4	2314180.6	REDI-ROCK						
6	767715.8	2314291.0	REDI-ROCK						
7	767597.0	2314071.7	ROCK CHANNEL						
8	767602.2	2314082.5	ROCK CHANNEL						
9	767582.8	2314069.7	ROCK CHANNEL						
10	767584.9	2314080.1	ROCK CHANNEL						
11	767526.7	2314103.3	ROCK CHANNEL						
12	767532.2	2314111.6	ROCK CHANNEL						
13	767532.1	2314111.5	SHEET PILE						
14	767571.1	2314181.3	SHEET PILE						
15	767605.1	2314220.3	SHEET PILE						
16	767621.7	2314260.4	SHEET PILE						

CONTROL POINT TABLE							
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION			
300	767473.45	2314117.40	627.30	CNPT MAGS			
301	767594.25	2314218.29	620.54	CNPT MAGS			
302	767601.88	2314055.66	584.14	CNPT MAGS			



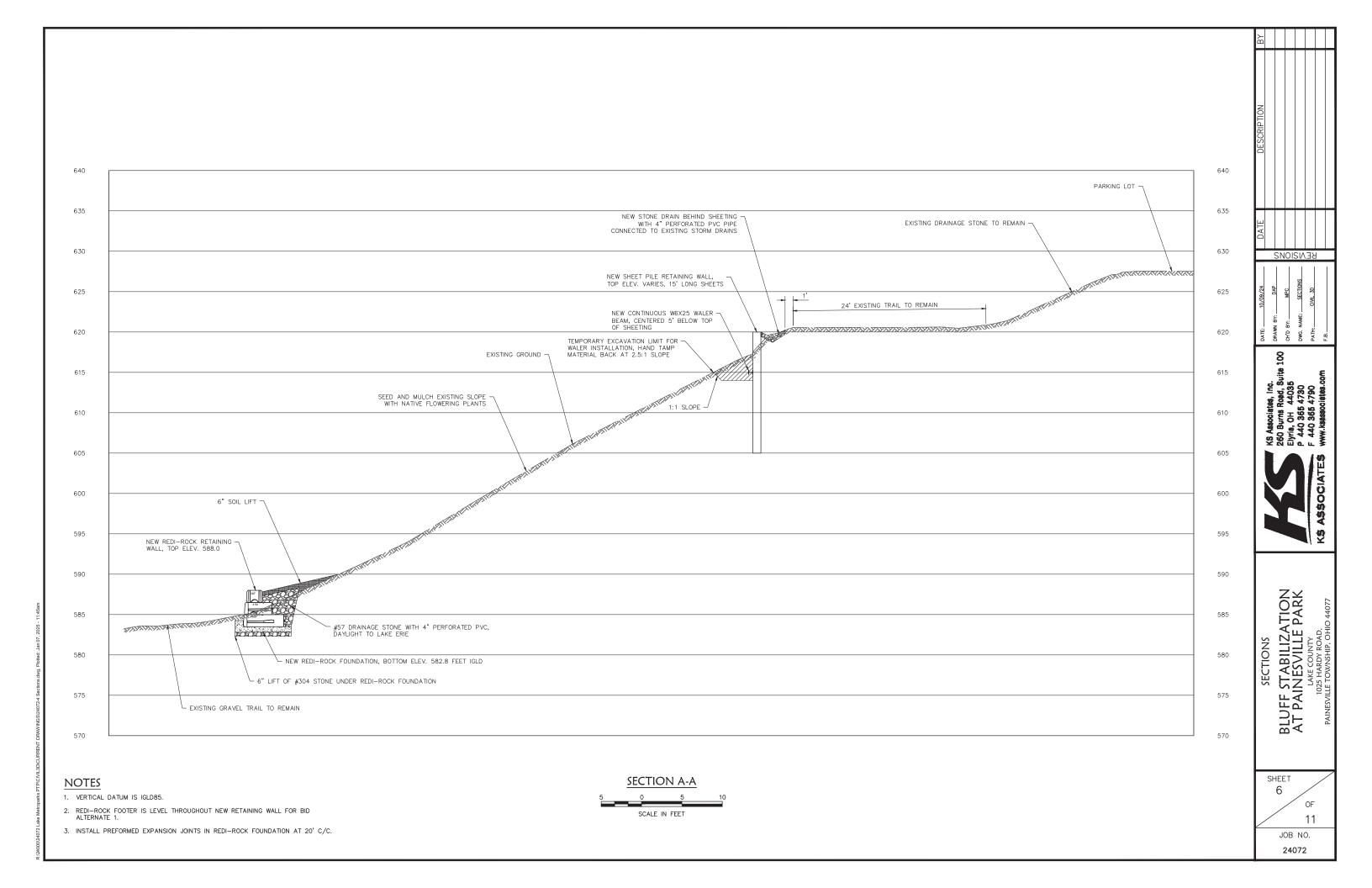
- 1. VERTICAL DATUM IS IGLD85.
 2. THE CONTRACTOR SHALL PROTECT ALL EXISTING WALKWAYS DURING CONSTRUCTION OPERATIONS. ANY DAMAGED AREAS SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
 3. POINTS FOR REDI—ROCK ARE THE LAKEWARD FACE OF THE NEW FINISHED WALL
 4. POINTS FOR ROCK CHANNEL ARE FOR THE EDGE OF THE NEW CHANNEL
 5. POINTS FOR THE SHEET PILE ARE THE LANDWARD FACE OF NEW WALER BEAM.

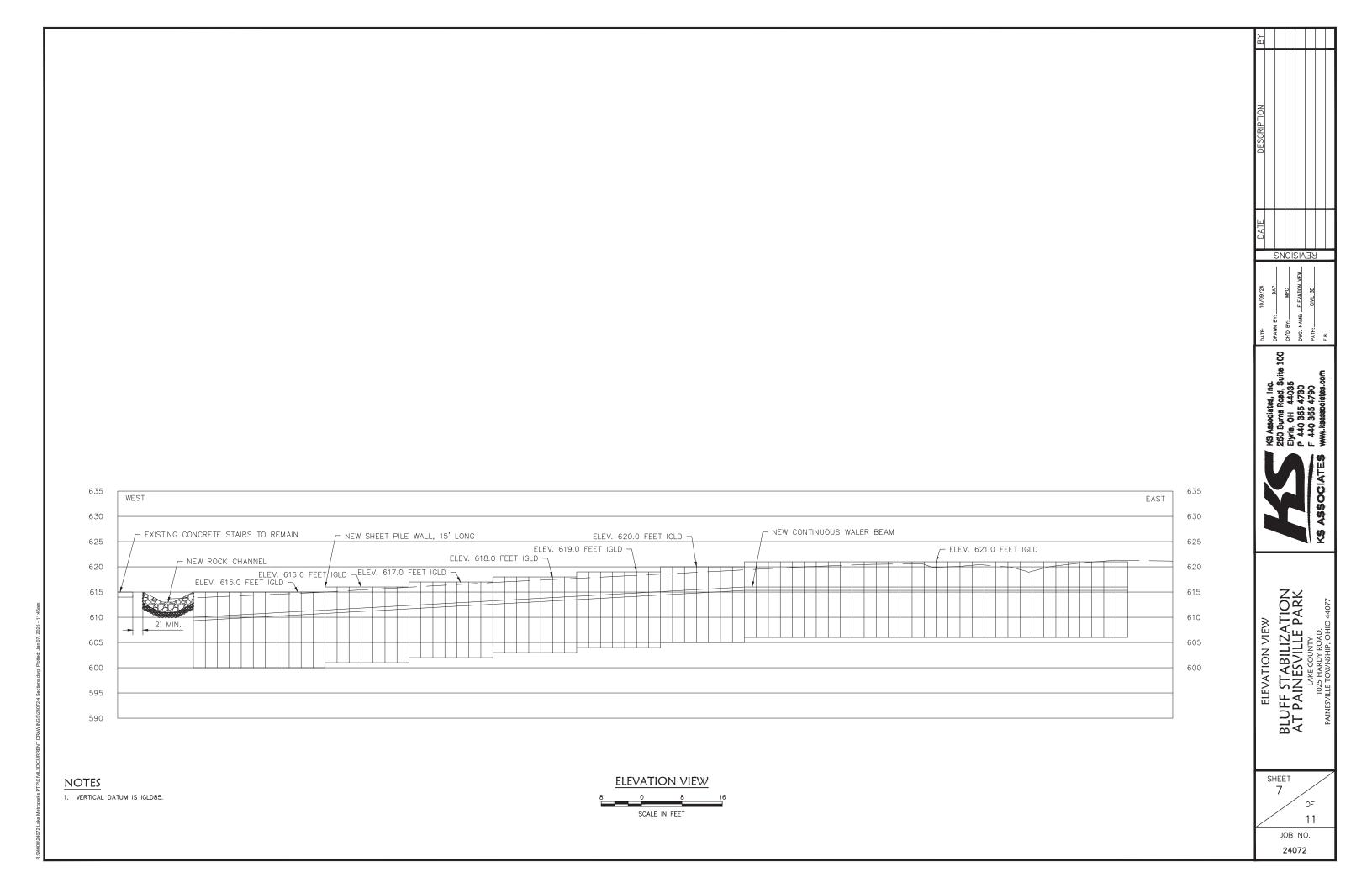


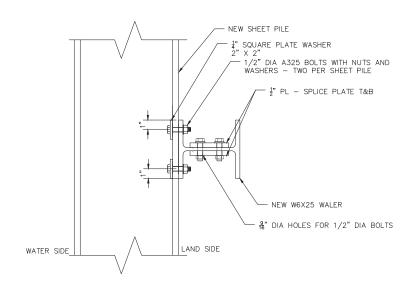
SHEET 5 OF 11 JOB NO. 24072

BLUFF STABILIZATION AT PAINESVILLE PARK

KENIZIONZ

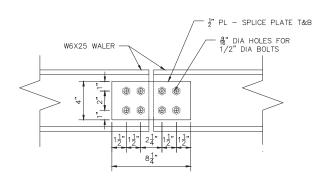






WALER SHEET PILE CONNECTION DETAIL

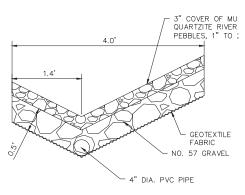






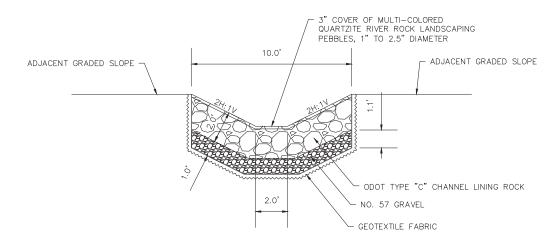
NOTES

1. VERTICAL DATUM IS IGLD85.



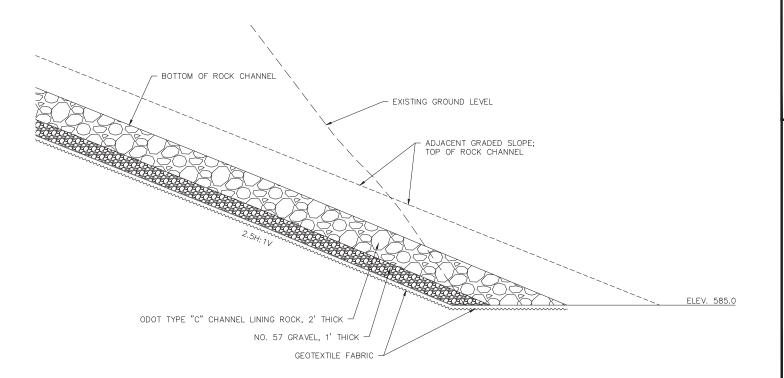
SHEET PILE ROCK DRAIN DETAIL

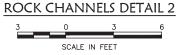




ROCK CHANNELS DETAIL 1





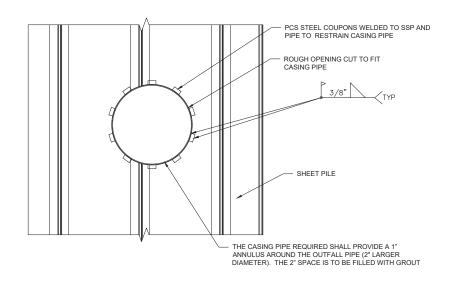


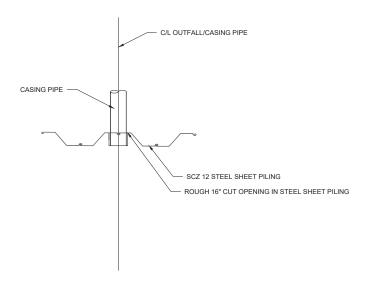


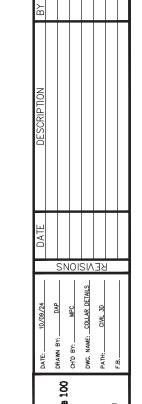
BLUFF STABILIZATION AT PAINESVILLE PARK

SHEET OF 11 JOB NO.

24072







ELEVATION VIEW - PENETRATION COLLAR





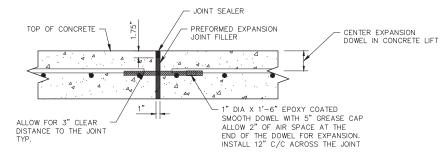


ROUGH OPENING CUT TO FIT CASING PIPE

C/L DRAIN PIPE

CASING PIPE

SCZ 12 STEEL SHEET PILING



CONCRETE EXPANSION JOINT DETAIL



NOTES

1. VERTICAL DATUM IS IGLD85.

NK RK KS ASSOCIATES

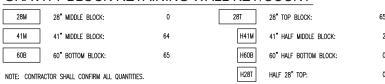
COLLAR DETAILS
BLUFF STABILIZATION
AT PAINESVILLE PARK
LAKE COUNTY
1025 HARDY ROAD.

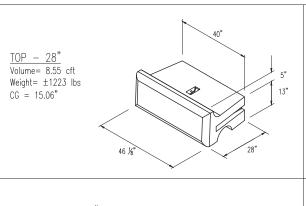
SHEET 9 0F 11 JOB NO. 24072

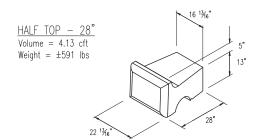
GRAVITY BLOCK RETAINING WALL NOTES:

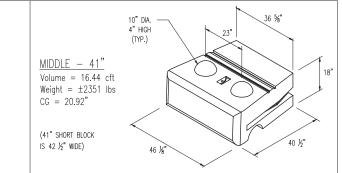
- 1. THE BLOCKS SHOWN ARE REDI-ROCK DESIGNATIONS AND DIMENSIONS. THE CONTRACTOR MAY USE AN APPROVED EQUAL.
- THE SECTIONS SHOWN ARE REPRESENTATIVE WALL SECTIONS. THE WALL HEIGHTS, ELEVATIONS, FOOTER WIDTH, TOE SLOPES AND BACK SLOPES VARY ACCORDING TO THE ELEVATION PLAN AND SITE PLAN, RESPECTIVELY. SECTIONS AND DETAILS APPLY TO SAME AND SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.
- UPON EXCAVATION, WHERE UNSUITABLE SOILS ARE FOUND, SUBCUT TO DEPTH REQUIRED AND REPLACE WITH SUITABLE COMPACTED STRUCTURAL FILL TO ACHIEVE THE REQUIRED BEARING CAPACITY. THE STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY.
- APPROXIMATE LIMITS OF EXCAVATION VARIES WHERE SUBCUT IS REQUIRED. ACTUAL LIMITS AND SIDE SLOPES SHALL BE DETERMINED BY OSHA REGULATIONS AND MATCH FIELD CONDITIONS AS DETERMINED BY THE CONTRACTOR.
- 5. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL STATE, COUNTY, AND CITY REGULATIONS AND CODES AS WELL AS OSHA STANDARDS.
- THE RETAINING WALLS SHALL BE CONSTRUCTED WITH REDI-ROCK (OR AN APPROVED EQUAL PRODUCT) 28" AND 41" DEEP UNITS USING 5.1° BATTER.
- 7. ALL WALLS ARE DESIGNED AS GRAVITY STRUCTURES. NO GEOGRID REINFORCEMENT
- THE WALL SHALL BE BACKFILLED AT A MINIMUM 1H:2V EXTENDING OFF THE BACK OF THE BOTTOM UNIT WITH SELECT GRANULAR PER AASHTO LRFD 2012
- 6" DIAMETER CORRUGATED PERFORATED PLASTIC DRAIN PIPE WRAPPED WITH A GEOTEXTILE FABRIC INSTALLED AS LOW AS POSSIBLE, OUTLET THROUGH WALL FACE AT THE CENTER OF EACH RETAINING WALL AND/OR INTO ONSITE DRAINAGE SYSTEM.
- 10. TO PREVENT PONDING OF WATER, POSITIVE DRAINAGE SHALL BE PROVIDED AT THE TOP AND BOTTOM OF THE WALL. INSPECT EXCAVATION SLOPES FOR ACTIVE SEEPAGE AND PLACE ADDITIONAL DRAINS WHERE SEEPAGE OCCURS.
- 11. SEE CONTRACT PLANS FOR FENCE/RAILING INSTALLATION DETAILS. KS ASSOCIATES INC. SHALL NOT BE RESPONSIBLE FOR ANY ADDITIONAL LOADING APPLIED TO THE RETAINING WALLS AS A RESULT OF FENCING OR TRAFFIC BARRIERS.
- 12. ALL AVAILABLE MEANS AND METHODS SHALL BE USED TO KEEP EXCAVATION FOR THE RETAINING WALLS WITHIN THE CONSTRUCTION LIMITS SHOWN ON THE PLANS. EXCAVATION SLOPES SHALL BE DETERMINED BY OSHA REGULATIONS AND IN-SITU SOIL CONDITIONS
- 13. DURING WALL EXCAVATION, BENCHCUT AS REQUIRED TO FACILITATE BACKFILL OPERATION AND BOND BETWEEN THE IN-SITU MATERIAL AND BACKFILL MATERIAL
- 14. FAT CLAYS AND SHALES ARE OF CONCERN WITH REGARDS TO THEIR POTENTIAL VOLUME CHANGES, ALL FAT CLAY WITHIN A 1H:1V INFLUENCE AREA IN THE FOUNDATION SOIL SHALL BE REMOVED DOWN TO FROST AND REPLACED WITH ADEQUATE SOIL PRIOR TO CONSTRUCTION.
- 15. THE CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. IF CONFLICTS EXIST THE ENGINEER SHALL BE CONTACTED IMMEDIATELY. THE CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING CONDUITS AND SERVICES WITH THE UTILITY PROVIDER.
- 16. DO NOT BRING HEAVY COMPACTION OR PAVING EQUIPMENT WITHIN 3 FEET OF THE BACK OF THE RETAINING WALL. ONLY HAND OPERATED COMPACTION EQUIPMENT (E.G. TAMPER, PLATE COMPACTOR, SHEEP'S FOOT ROLLER) SHALL BE USED WITHIN 3 FEET OF THE BACK OF THE RETAINING WALL UNITS.
- 17. SEE MANUFACTURERS INFORMATION FOR ADDITIONAL DETAILS ON THE RETAINING WALL SYSTEM. THE MANUFACTURER INFORMATION SHALL ACCOMPANY THE CONSTRUCTION PLANS

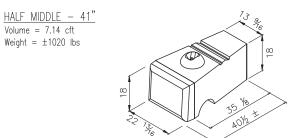
GRAVITY BLOCK RETAINING WALL KEY/COUNT

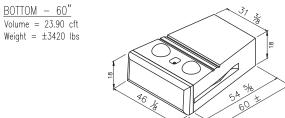


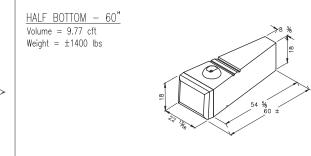


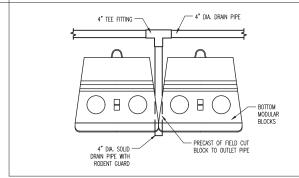


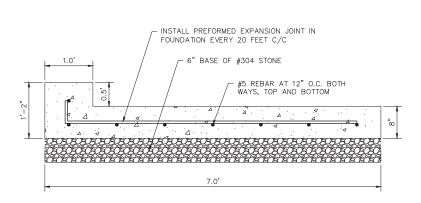




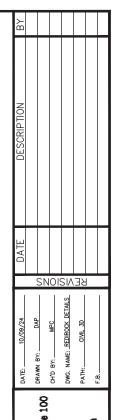








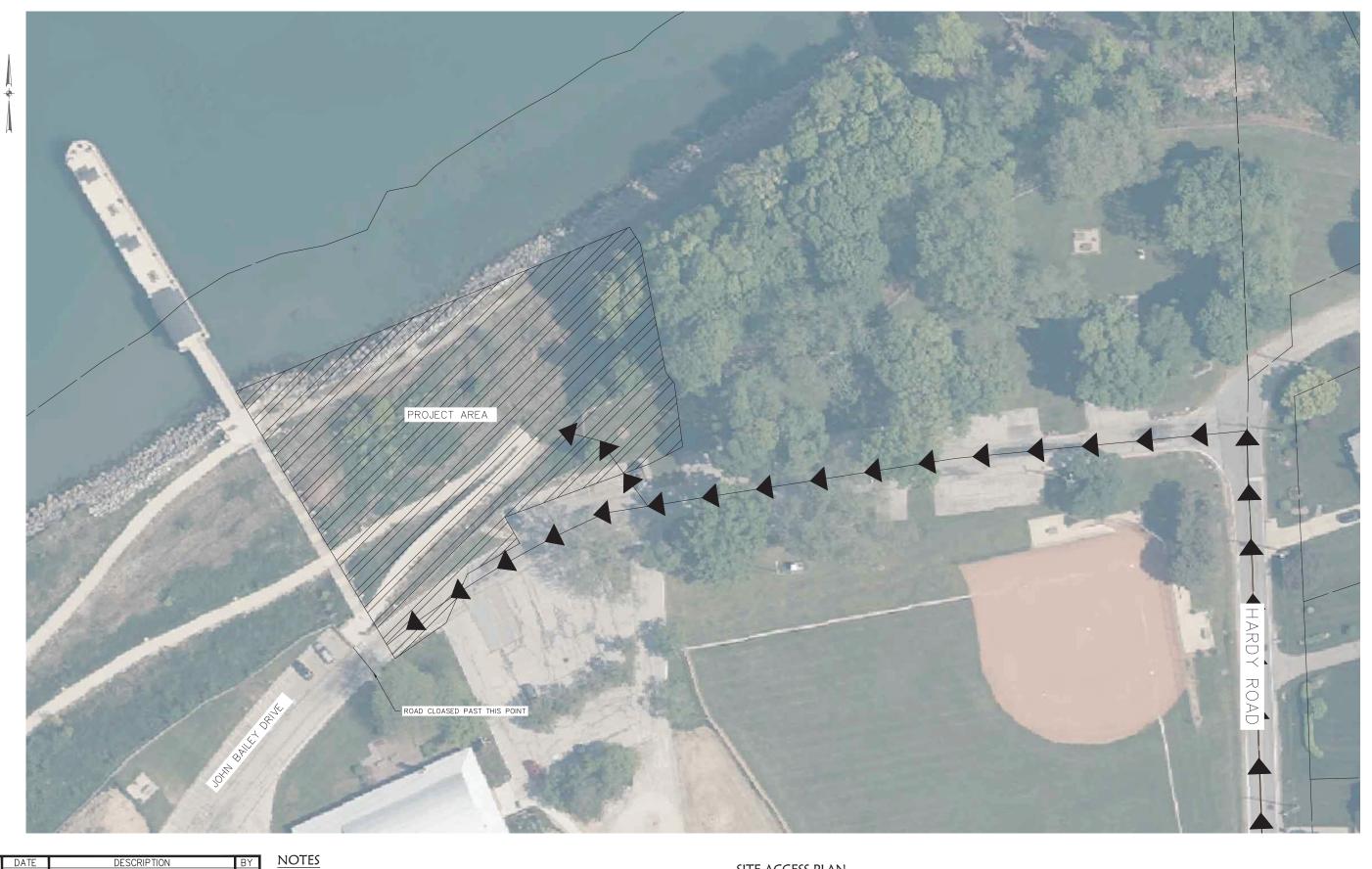






REDIROCK DETAILS
BLUFF STABILIZATION
AT PAINESVILLE PARK

SHEET 10 OF 11 JOB NO. 24072



NOTES

1. VERTICAL DATUM IS IGLD85.
2. REMOVE AND STOCKPILE WOOD FENCING FOR CONSTRUCTION ACCESS. REINSTALL AFTER CONSTRUCTION.
3. ALL DAMAGED ROADS SHALL BE REPAIRED.
4. DISTURBED AREAS IN THE PROJECT AREA SHALL BE SEEDED AND MULCHED. SEEDS SHALL COMPLY WITH ODOT SPECIFICATION 659.09 FOR NATIVE GRASSES AND WILDFLOWERS.



BLUFF STABILIZATION
AT PAINESVILLE PARK

LAKE COUNTY
1025 HARDY ROAD,
PAINESVILLE TOWNSHIP, OHIO 44077

