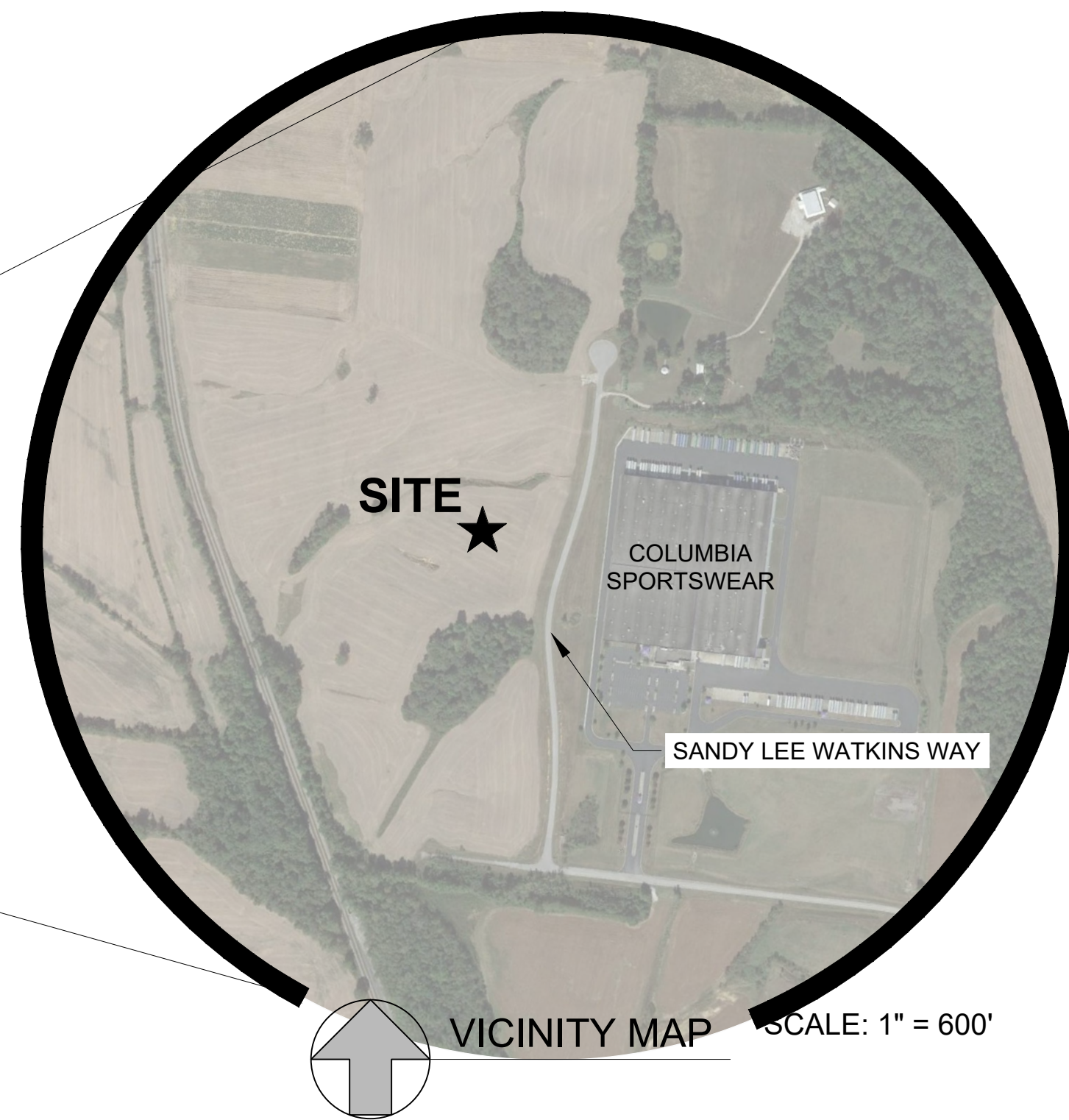
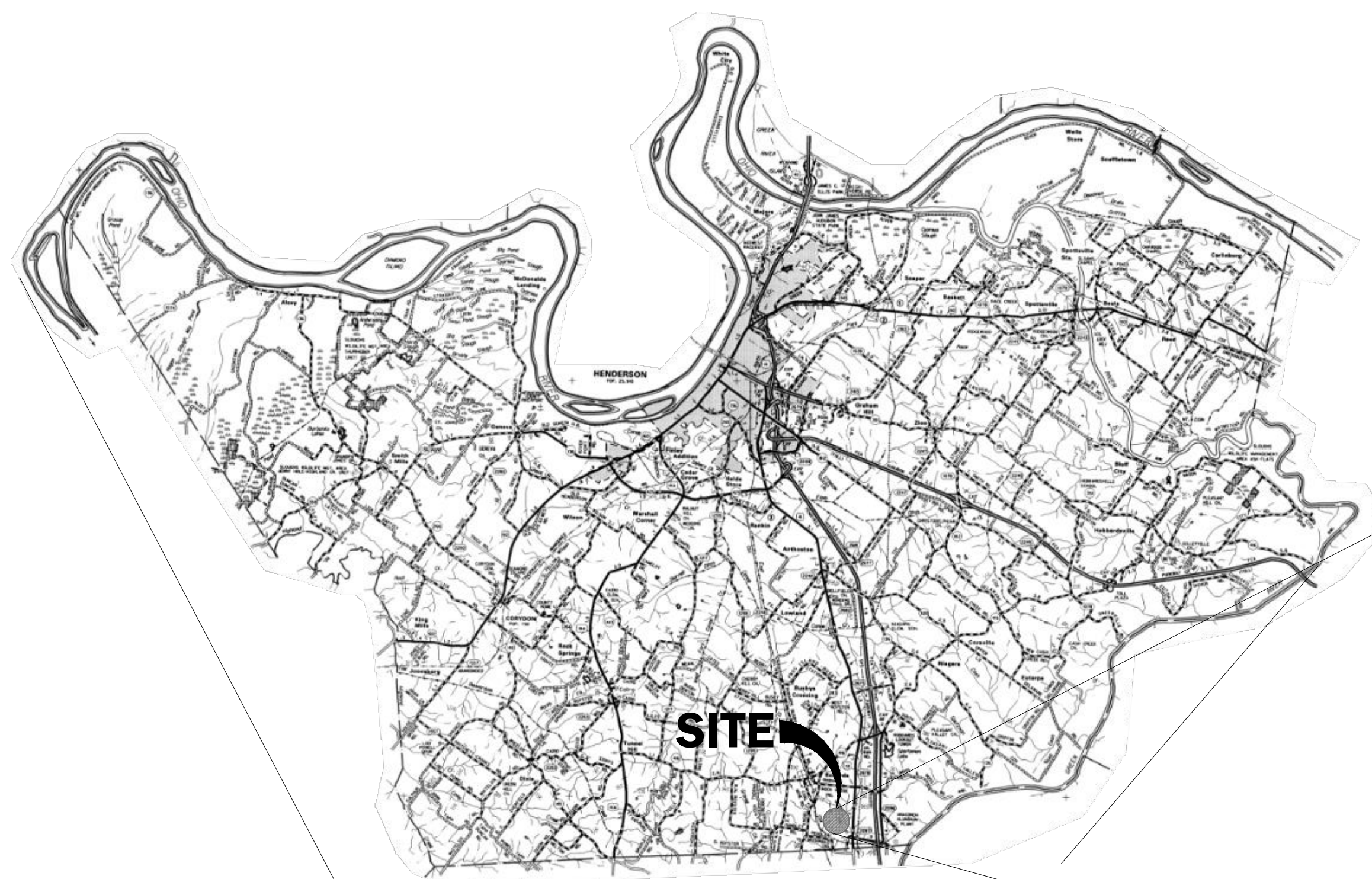


# BUILD READY PAD

# SANDY LEE WATKINS SITE

## FOURSTAR REGIONAL INDUSTRIAL PARK

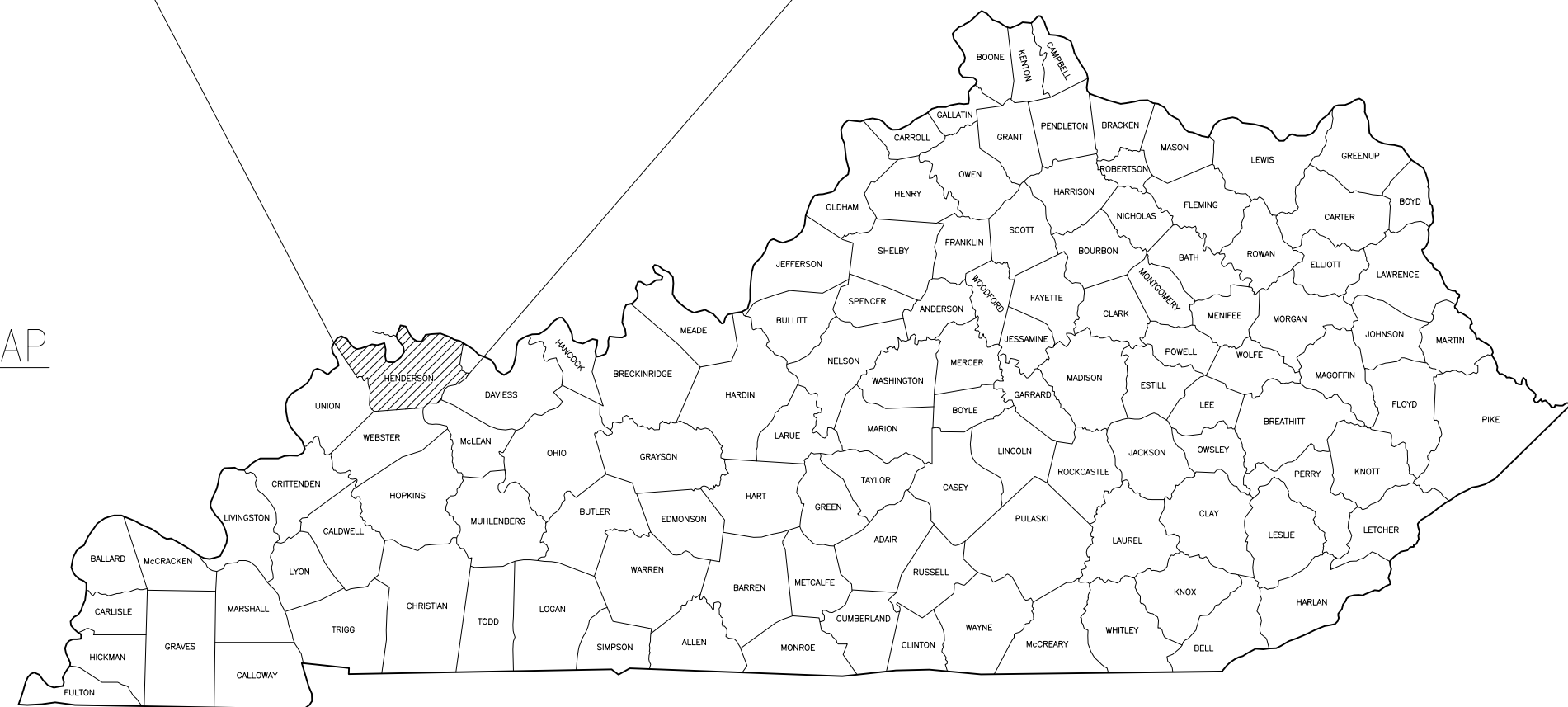
## HENDERSON, KENTUCKY



INDEX OF DRAWINGS	
Sheet Number	Sheet Title
-----	COVER
C-1	BUILD READY PAD REGRADE PLAN
GEN	GENERAL NOTES
EC-1	EROSION CONTROL DETAILS
EC-2	EROSION CONTROL PLAN
D-1	DETAILS



LOCATION MAP

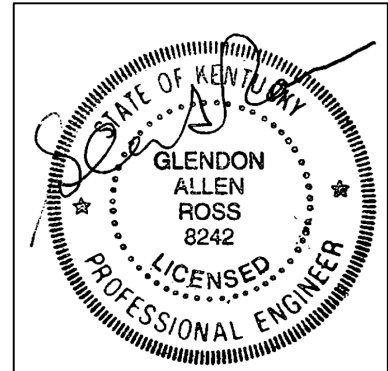


SEPTEMBER 2023

**nse** Engineers  
Architects  
Planners  
OF KENTUCKY, INC.

SET NO. \_\_\_\_\_

MSE PROJECT No. 2088-34



9/1/2023



K:\PROJECTS\Site-Sand Lee Watkins Site-Build Ready\Polymers\811\811.dwg, 9/13/2023 4:22:58 PM, DWG to PDF.plt

GENERAL NOTES:

1. PRIOR TO ANY CONSTRUCTION OR DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED UTILITY SERVICE TO ADJACENT FACILITIES DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WORK WITH UTILITY OWNERS. SHOULD DAMAGE OCCUR TO EXISTING OR NEW UTILITY SERVICES DURING CONSTRUCTION, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR AND/OR REPLACE SAID DAMAGE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER. NEW UTILITY WORK, REPAIRS, REPLACEMENTS AND/OR RELOCATIONS SHALL MEET THE APPROVAL OF THE UTILITY OWNER.
2. CONTRACTOR TO MARK AND PROTECT ALL UNDERGROUND UTILITIES AND OVERHEAD OBSTRUCTIONS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS INCLUDING GRADING PERMIT FROM LOCAL AUTHORITIES AND THE SUBMISSION OF A NOTICE ON INTENT (NOI) FOR STORMWATER DISCHARGE WITH THE KENTUCKY DEPARTMENT OF WATER PRIOR TO ANY CONSTRUCTION ACTIVITY. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO THE KENTUCKY DIVISION OF WATER. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF ALL PERMITS OBTAINED.
4. VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE "KENTUCKY BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES" DATED AUGUST 1994 AS PREPARED BY THE DIVISION OF CONSERVATION AND DIVISION OF WATER, NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET AND/OR THE KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARDS. CONTRACTOR SHALL USE THE "KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE" AS THE DEFINITION OF REQUIREMENTS FOR CONSTRUCTION ACTIVITY.
5. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN AND MUST BE PROPERLY MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY OWNER OR THE GOVERNING AGENCY. CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RUN-OFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MADE IMMEDIATELY WITHIN 24 HOURS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING CONSTRUCTION ENTRANCES AND SHALL KEEP ALL ROADS AND STREETS FREE ROM MUD, DIRT AND DEBRIS.
7. THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES AND THE KENTUCKY DEPARTMENT OF HIGHWAYS GUIDANCE MANUAL.
- 8.THE CONTRACTOR MUST MAINTAIN ACCESS TO EXISTING BUSINESSES AND EXISTING ROADS.
9. IN ADDITION TO PREVENTING SEDIMENT AND EROSION CONTROL DURING CONSTRUCTION, THE CONTRACTOR MUST MINIMIZE OR ELIMINATE THE POTENTIAL FOR CHEMICAL CONTAMINANTS TO ENTER THE SOIL OR BE CARRIED ACROSS THE SITE BY STORM WATER. POTENTIAL CONTAMINANTS NORMALLY ASSOCIATED WITH CONSTRUCTION ACTIVITY INCLUDE GASOLINE AND DIESEL FUEL, OIL, GREASE, ANTIFREEZE, TERMITE SOIL TREATMENT CHEMICALS, FERTILIZER, ASPHALT OILS, EMULSIONS AND SMALL PARTICLE SIZE CONSTRUCTION DEBRIS. THE CONTRACTOR MUST EMPLOY VARIOUS BEST MANAGEMENT PRACTICES TO ELIMINATE OR MINIMIZE THE POTENTIAL FOR THESE CONTAMINANTS TO REACH THE SOIL AND/OR DRAINAGE SYSTEMS.
10. ALL SURFACE RUNOFF SHALL BE DIRECTED AWAY FROM ROADWAYS AND BUILDINGS AND DIRECTED TO DRAINAGE STRUCTURES, DITCHES OR SWALES.
11. CONTRACTOR SHALL ACCURATELY RECORD ALL UTILITIES CONSTRUCTED OR ENCOUNTERED ON "AS-BUILT" DRAWINGS AND PROVIDE TO OWNER AND ENGINEER.S SHA
12. MATERIALS AND METHODS OF CONSTRUCTION FOR GRADING AND DRAINAGE STRUCTURES INCLUDING PIPING AND HEADWALLS SHALL BE IN ACCORDANCE WITH KENTUCKY TRANSPORTATION CABINET (KYTC) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY AREAS WHERE UNACCEPTABLE SOILS, SINKHOLES, WET AREAS OR OTHER CONDITIONS ARE ENCOUNTERED WHICH MAY ADVERSELY AFFECT THE SITE. IF DIRECTED BY ENGINEER, REMOVE UNSUITABLE SOILS AND REPLACE THEM WITH ACCEPTABLE SOILS.
14. EARTH AND ROCK WORK IS UNCLASSIFIED. NO EXTRA PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
15. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS IN GRADING PLAN AS NECESSARY TO PROVIDE FOR SMOOTH TRANSITION FOR EXISTING ENTRANCES.
16. ALL SPOT ELEVATIONS INDICATE FINISH GRADE OF SURFACE. CONTRACTOR SHALL MAKE ADJUSTMENTS TO ESTABLISH GRADES OF SUB-BASE OR SUBGRADE.
17. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE EARTHWORK (EXCAVATION AND EMBANKMENT) QUANTITIES.
18. AREAS TO BE FILLED, EXCAVATED, LANDSCAPED, OR REGRADED SHALL BE STRIPPED OF ALL VEGETATION AND TOPSOIL. ALL TOPSOIL SHALL BE STOCKPILED FOR REDISTRIBUTION. STOCKPILE AREAS SHALL HAVE SOIL EROSION PROTECTION IN THE FORM OF SILT FENCING INSTALLED AROUND THE PERIMETER OR OTHER SUCH ACCEPTABLE MEASURES.
19. ALL SOIL FILL MATERIAL PLACED ON THIS PROJECT SHOULD BE COMPACTED WITH APPROPRIATE EQUIPMENT IN UNIFORM LAYERS TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) AS RECOMMENDED IN THE GEOTECHNICAL REPORT FOR THIS PROJECT.
20. FILL MATERIAL SHALL BE PROPERTY MONITORED USING FIELD DENSITY TEST CHECKS. ALL TESTING SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT TESTING AGENCY. SHOULD REPORTS INDICATE SPECIFIED COMPACTION IS NOT ACHIEVED, THE CONTRACTOR SHALL REMOVE MATERIAL, REPLACE, AND RETEST AT NO ADDITIONAL COST TO THE OWNER UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. COPIES OF TEST REPORTS SHALL BE PROVIDED TO THE ENGINEER.
21. CONTRACTOR SHALL PROVIDE REDISTRIBUTION OF STOCKPILED OR IMPORT TOPSOIL AS REQUIRED OVER ALL FINISHED GRADE SOIL ARES TO A MINIMUM OF 12 INCHES AND PROVIDE FINAL SITE GRADING TO INSURE POSITIVE DRAINAGE AWAY FROM ROADWAYS AND BUILDINGS. AFTER FINAL GRADING, ANY LOW SPOTS WHICH ALLOW WATER TO POND SHALL MAKE ANY NECESSARY MINOR GRADE ADJUSTMENTS AS REQUIRED TO BEST FIT THE ACTUAL SITE CONDITIONS. CONTRACTOR SHALL PROVIDE BORROW MATERIAL AS REQUIRED FOR FILLING EXCAVATIONS, HOLES AND OTHER SUCH OPENINGS.
22. ALL EARTH GRADED AREAS SCARRED OR DENUDED BY THE CONSTRUCTION ACTIVITY SHALL BE SEEDED AND PROTECTED IN ADDITION TO THE PROVISIONS OF OTHER EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED.
23. ALL SURPLUS AND WASTE MATERIALS SHALL BE TRANSPORTED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS AND CODES UNLESS OTHERWISE APPROVED BY OWNER. NO BURNING OR BURYING OF TREES, BRUSH, CONSTRUCTION DEBRIS, RUBBISH, ETC. SHALL BE ALLOWED ON SITE UNLESS OWNER APPROVAL IS OBTAINED.

UTILITY CONSTRUCTION WITHIN ROADWAY AREA

NO ADDITIONAL FUNDS WILL BE PAID TO CONTRACTOR FOR SPECIAL CONSTRUCTION NECESSARY TO COMPLY WITH THE FOLLOWING REQUIREMENTS:

UTILITY CONTRACTOR SHALL INSURE THAT FINISHED PIPELINES, BOTH WATER AND SEWER, HAVE SPECIFIED DEPTH OF COVER FROM FINISHED GRADES, INCLUDING ROADWAY AND ROADWAY DITCHES. CAREFUL ATTENTION SHALL BE PAID TO AVOID CONFLICT WITH PROPOSED DITCHES, STORM DRAINS AND ROADWAY EXCAVATION. BACKFILL IN PIPELINES WITHIN THE ROADWAY LIMITS (PAVEMENT AND SHOULDERS) SHALL BE CRUSHED STONE AS SPECIFIED. UTILITY CONTRACTORS SHALL INCLUDE EXTRA DEPTH TRENCHING IF NECESSARY TO YIELD REQUIRED COVER AFTER ROADWAY EXCAVATION AND USE CRUSHED STONE TO THE ELEVATION NECESSARY TO YIELD A CRUSHED STONE TRENCH BACKFILL UNDER PAVEMENT AND SHOULDERS.

ROADWAY CONSTRUCTION NOTES

1. SUBGRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL SPECIFICATIONS. COMPACTION TESTS AT SPECIFIED INTERVALS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PLACING THE FIRST LIFT OF STONE.
2. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND TERMS OS THE ENTRANCE PERMIT ISSUED BY KTC FOR THIS PROJECT,

STORM DRAINAGE FACILITIES NOTES

1. STORM SEWER PIPE SHALL BE AS DESIGNATED ON THE APPROVED CONSTRUCTION PLANS, AND SHALL CONFORM TO THE GENERAL SPECIFICATIONS.
2. BEDDING AND BACKFILL SHALL CONSIST OF THE FOLLOWING:

A. WHEN THE TRENCH EXCAVATION IS IN ROCK, THE PIPE SHALL BE BEDDED ON AT LEAST 6 INCHES OF NO. 9 OR NO. 68 CRUSHED STONE, AND SHALL BE BACKFILLED WITH NO. 9 OR NO. 68 CRUSHED STONE FOR A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE PIPE. BACKFILL ABOVE THIS CUSHION SHALL NOT CONTAIN PIECES OF ROCK LARGER THAN 12 INCHES IN ANY DIMENSION.

B. WHEN THE TRENCH EXCAVATION IS IN SOIL, THE PIPE SHALL BE BEDDED ON AT LEAST 6 INCHES OF NO. 9 OR NO. 68 CRUSHED STONE, AND SHALL BE BACKFILLED WITH NO. 9 OR NO. 68 CRUSHED STONE TO THE SPRINGLINE OF THE PIPE. THE REMAINING PORTION OF THE TRENCH, NOT LOCATED WITHIN A STREET, CAN BE BACK FILLED WITH SELECT SOIL CONTAINING ROCKS NO LARGER THAN 1 1/2 INCH IN SIZE.

C. WHEN THE TRENCH EXCAVATION IS WITHIN A STREET (I.E., BACK OF CURB TO BACK OF CURB), THEN THE ENTIRE TRENCH SHALL BE BACKFILLED WITH NO. 9 OR NO. 68 CRUSHED STONE.
3. HEADWALLS AND OTHER CONCRETE STRUCTURES SHALL BE AS DESIGNATED ON THE APPROVED CONSTRUCTION PLANS, AND SHALL CONFORM TO THE GENERAL SPECIFICATIONS.
4. DRAINAGE SWALES SHALL CONFORM TO THE GENERAL SPECIFICATIONS. DRAINAGE SWALES SHALL BE SODDED OR HAVE VEGETATION BLANKETS USED TO THE ELEVATION OF THE 25-YEAR FREQUENCY STORM.
5. MINIMUM 3 FOOT HIGH CHAIN LINK FENCING SHALL BE REQUIRED ALONG THE PERIMETER OF THE HEADWALL IF THE DISTANCE FROM THE PIPE INVERT TO THE TOP OF THE HEADWALL EXCEEDS 3.5 FEET.

SPECIFICATIONS FOR GEOTEXTILE FABRIC

GRAB TENSILE STRENGTH 220 LBS. (MIN.)  
(ASTM D1682)  
ELONGATION FAILURE 60% (MIN.)  
(ASTM D1682)  
MULLEN BURST STRENGTH 430 LBS. (MIN.)  
(ASTM D3768)  
PUNCTURE STRENGTH 125 LBS. (MIN.)  
(ASTM D751)  
(MODIFIED)  
EQUIVALENT OPENING SIZE 40-80  
(US STD SIEVE)  
(CW-02215)

NOTES

1. A STABILIZED ENTRANCE PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. SOIL STABILIZATION FABRIC SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
5. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.

UTILITY NOTES

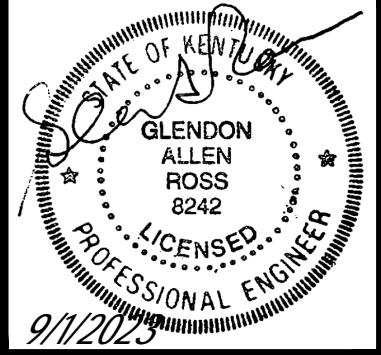
1. **UTILITY CONTACTS:**

**Henderson Water Utility**  
111 Fifth Street  
Henderson, KY 42420  
Tom Williams, Gen Mgr  
270-869-6621
2. CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION IN THE AREA OF THE AFFECTED UTILITY.
3. ANY INTERRUPTIONS IN SERVICE MUST BE MINIMIZED AND SCHEDULED WITH THE UTILITY.
4. ALL CASINGS FOR FUTURE USE MUST BE SEALED AND MARKED AT EACH END WITH A STEEL POST MIN. 6' LENGTH.
5. ALL PIPE MATERIALS, FITTINGS, ETC. MUST MEET THE APPROVAL OF THE APPLICABLE UTILITY.



Know what's below.  
Call before you dig.

GENERAL NOTES



BUILD READY PAD  
SANDY LEE WATKINS SITE  
FOURSTAR REGIONAL INDUSTRIAL PARK  
HENDERSON, KY

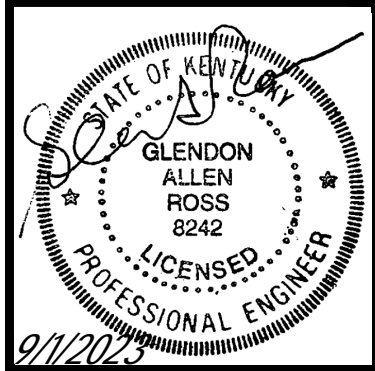
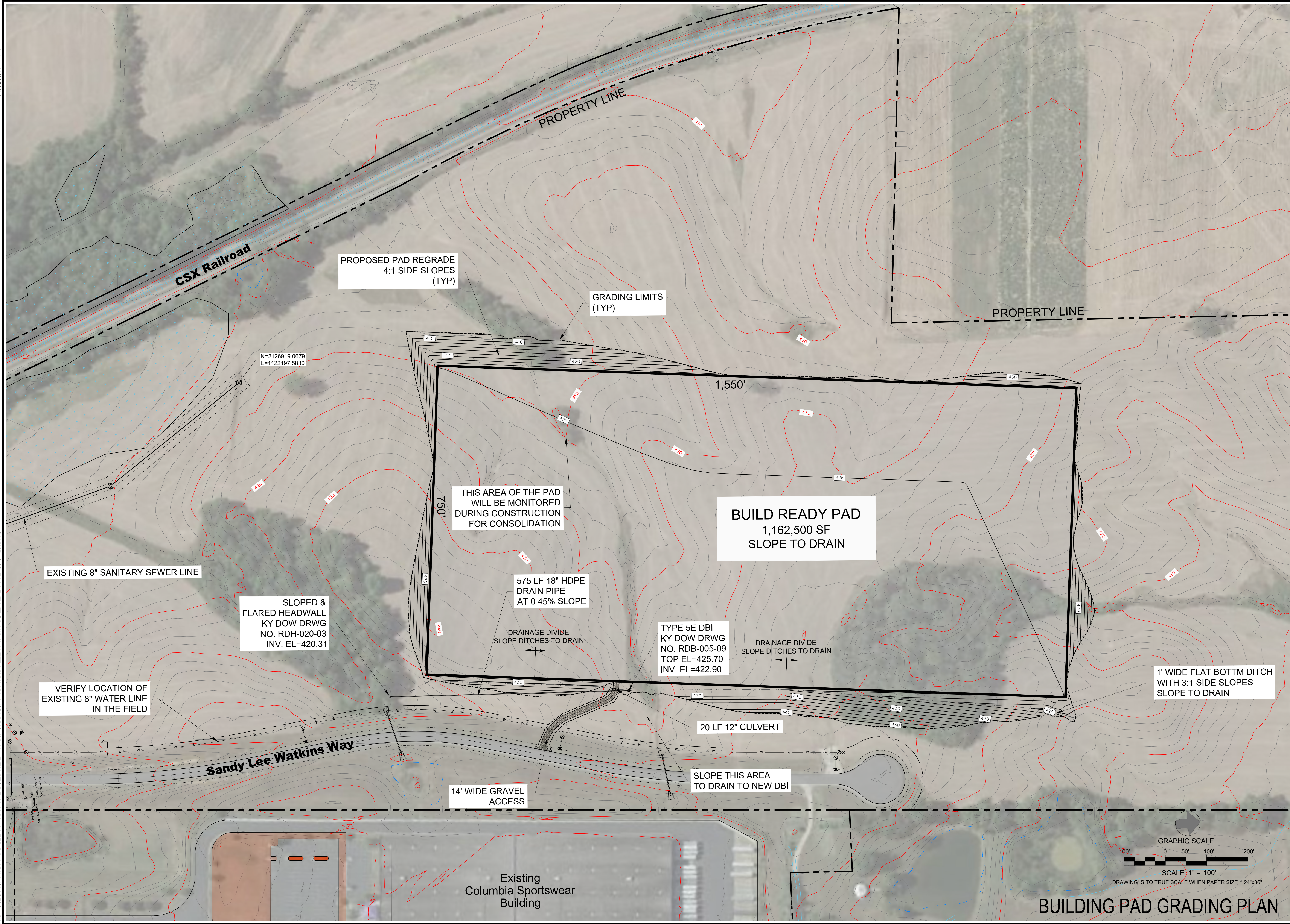
PROJECT NO. 2088-34		DATE		REVISION		BY
DESIGNED BY	G.A.R.					
DRAWN BY	G.A.R.					
CHECKED BY	J.D.W.					
REVIEWED BY	G.A.R.					
DATE	SEPTEMBER 2023	© copyright				
SCALE	AS NOTED	The undersigned declares that the attached is sufficient by ME, I, the undersigned, to and as witness, ME, I, the undersigned, to the				



M:\PROJECTS\4 STAR SAND LEE WATKINS SITE-BUILD READY PAD\WORKING\4 STAR SANDY LEE WATKINS BUILD READY PAD 09-01-23.DWG 11/15/2023 4:21 PM, DWG 11/15/2023

Plot Date: 9/1/2023 4:21 PM

M:\PROJECTS\4 STAR SAND LEE WATKINS SITE-BUILD READY PAD\WORKING\4 STAR SANDY LEE WATKINS BUILD READY PAD 09-01-23.DWG



**BUILD READY PAD  
SANDY LEE WATKINS SITE  
FOURSTAR REGIONAL INDUSTRIAL PARK  
HENDERSON, KY**

PROJECT NO.	DATE	REVISION	BY
2088-34			JDW
DESIGNED BY: <b>SAJR</b>			
DRAWN BY: <b>J.D.W.</b>			
CHECKED BY: <b>J.D.W.</b>			
REVIEWED BY: <b>SAJR</b>			
DATE: <b>SEPTEMBER 2023</b>			
SCALE: <b>AS SHOWN</b>			

**nse** Engineers  
Architects  
Planners  
**OF KENTUCKY, INC.**  
624 Wellington Way  
Lexington, KY 40503  
www.nseinc.com  
Phone: (606) 223-5694  
Fax: (606) 223-2607

DRAWING NO.  
**C-1**  
SHEET OF



THE EROSION CONTROL MEASURES NOTED BELOW ARE MINIMUMS AND DO NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY FOR COMPLIANCE WITH ANY AND ALL U.S. EPA , KENTUCKY DIVISION OF WATER AND/OR LOCAL REQUIREMENTS.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT EROSION ONTO ADJACENT PROPERTY. ANY REMEDIAL MEASURES REQUIRED TO CORRECT DAMAGE CREATED BY EROSION SHALL BE AT THE CONTRACTOR'S EXPENSE.

WHEN SEASONAL CONDITIONS PROHIBIT THE APPLICATION OF TEMPORARY OR PERMANENT SEEDING, NON-VEGETATIVE SOIL STABILIZATION PRACTICES SUCH AS MULCHING AND MATTING SHALL BE USED, UNTIL SUCH TIME AS CONDITIONS PERMIT.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT NO MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PART OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED UNLESS THAT ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.

PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES AND THE KENTUCKY DEPARTMENT OF HIGHWAYS GUIDANCE MANUAL.

ALL EARTHWORK TO COMPLY WITH KENTUCKY DEPT. OF HIGHWAYS (KY-DOH SECTION 400) SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, EDITION OF 2000 AND ANY AMENDMENTS.

**SECTION A - A**

EXISTING PAVED ROADWAY

DIVERSION RIDGE REQUIRED WHERE GRADE EXCEEDS 2%

2% OR GREATER

FILTER FABRIC

**PLAN**

EXISTING PAVED ROADWAY

20' R

20' MIN.

2" - 3" COURSE AGGREGATE MIN. 6" THICK

DIVERSION RIDGE

UNDERLAY WITH TYPE 4 FILTER FABRIC

SPILLWAY

SILT CHECK DAM

SUPPLY WATER TO WASH WHEELS IF NECESSARY.

NOTE: USE SANDBAGS, STONE OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

FLOW

FLOW

FLOW

FLOW

30' MIN.

The image contains two technical drawings of rock barrier bags.

**PLAN VIEW:** This top-down diagram shows a square arrangement of rock barrier bags. A central rectangular area contains eight vertical slots, labeled "DRAIN GRATE". The surrounding bags are labeled "ROCK BAGS". A line labeled "A" indicates the cross-section line. A note points to the bags: "1\" ROCK CONTAINED IN SYNTHETIC NET BAGS (33 M/M MESH), APPROXIMATELY TWENTY-FOUR (24\") INCH LONG, TWELVE (12\") INCHES WIDE AND SIX (6\") INCHES HIGH." Another note points to the slope: "LESS THAN 5% SLOPE". A label "PLAN VIEW" is centered below the diagram.

**SECTION A-A:** This cross-sectional diagram shows the bags in a trench. The bags are labeled "DOUBLE LAYER ROCK BARRIER BAGS". The height of the bags is indicated by a dashed line labeled "PONDING HEIGHT". The bottom of the trench is labeled "DROP INLET". A note points to the bags: "PLACE ROCK BARRIER BAGS SUCH THAT NO GAPS ARE EVIDENT". The label "SECTION A-A" is centered below the diagram.

Diagram illustrating Step No. 1: LINE TRENCH WITH GEOTEXTILE FABRIC AND ATTACH TO POSTS. The diagram shows a cross-section of a slope with a trench. A geotextile fabric is being attached to a post. A dimension line indicates a 6'-0" O.C. spacing between posts. An arrow labeled "SHEET FLOW" points towards the right.

CULVERT

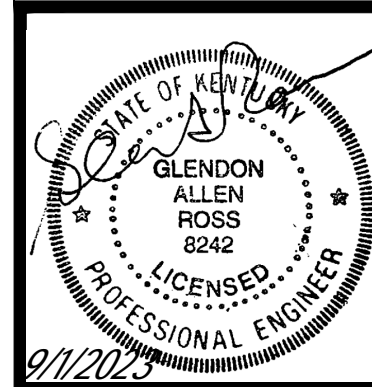
HEADWALL

TYPE GEOTEXTILE BAGS (2 FEET HIGH)

MINIMUM 4 FEET

NTS

**Call  
811  
Before you Dig**



**BUILD READY PAD  
SANDY LEE WATKINS SITE  
FOURSTAR REGIONAL INDUSTRIAL PARK  
HENDERSON, KY**

PROJECT NO. 2088-34	DATE	REVISION	BY
DESIGNED BY G.A.R.			
DRAWN BY J.D.W.			
CHECKED BY G.A.R.			
REVIEWED BY G.A.R.	© copyright		
DATE SEPTEMBER 2023	NOTICE: This document discloses subject matter considered confidential by M&E of Kentucky, Inc. and on any rights it may have in the information contained herein. It is not to be distributed or used for any other purpose without the prior written consent of M&E of Kentucky, Inc.		
SCALE	AS NOTED		

© COPYRIGHT NOTICE: This document discloses subject matter considered confidential by MSE of Kentucky, Inc. and on behalf of MSE of Kentucky, Inc. has property rights. Neither recipient nor possession thereof confers or transfers any rights to reproduce the document or any part thereof, or to disclose any information contained therein without the prior written consent of MSE of Kentucky, Inc.

**nse**  
OF KENTUCKY, INC.

Engineers  
Architects  
Planners

Phone: (609)223-5694  
Fax: (609)223-2607

624 Wellington Way  
Lexington, KY 40503

DRAWING NO.

EC-1

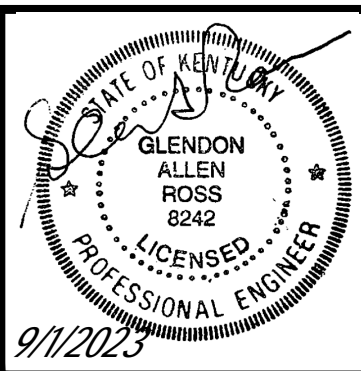
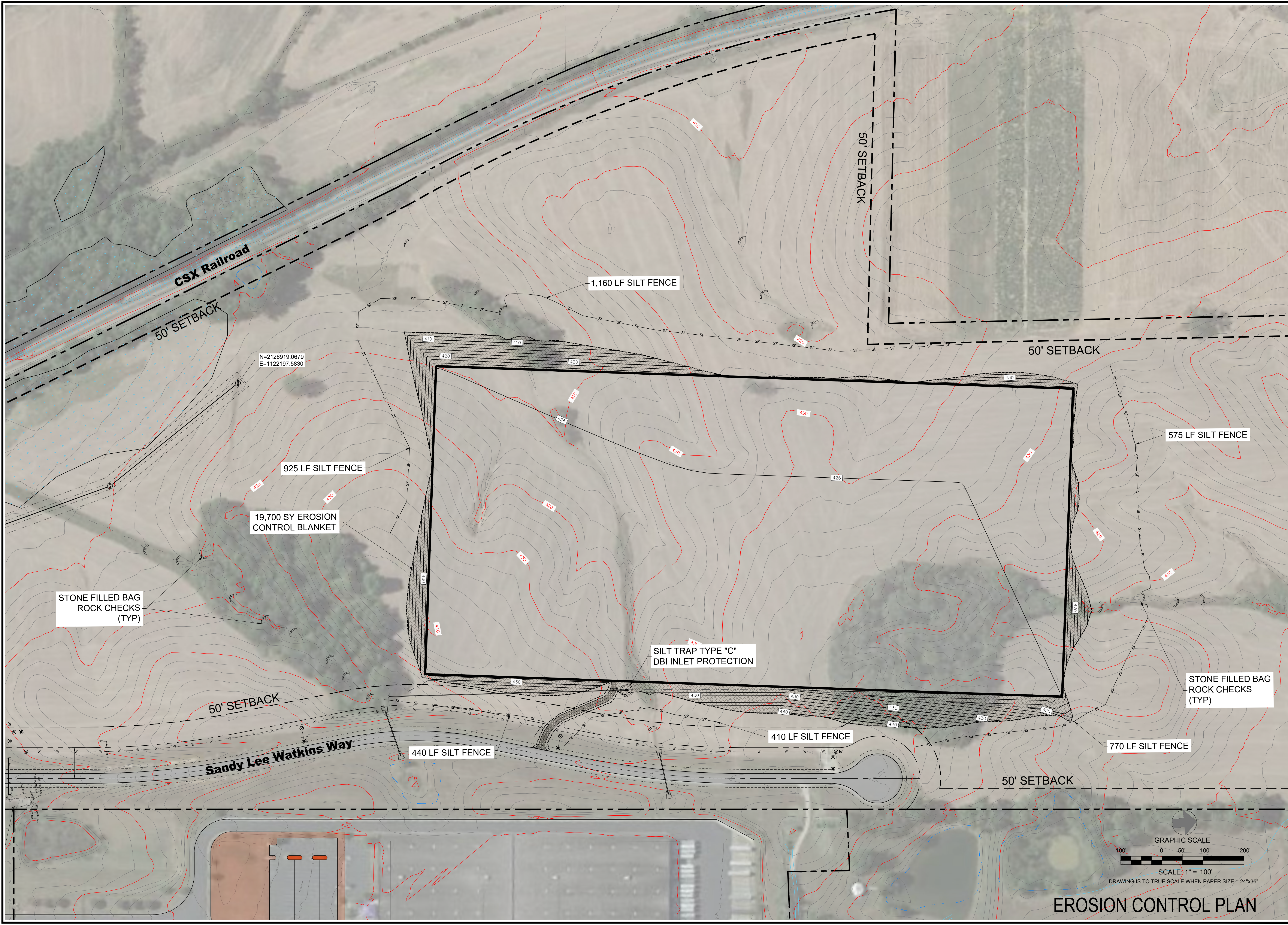
SHEET      OF



M:\PROJECTS\4 STAR-SAND LEE WATKINS SITE-Build Ready Pad\Working\4 STAR SANDY LEE WATKINS BUILD READY PAD 09-01-23.DWG 11/10/2023 4:35:27 PM, DWG 11/10/23

Plot Date: 9/11/2023 4:35 PM

M:\PROJECTS\4 STAR-SAND LEE WATKINS SITE-BUILD READY PAD\WORKING\4 STAR SANDY LEE WATKINS BUILD READY PAD 09-01-23.DWG



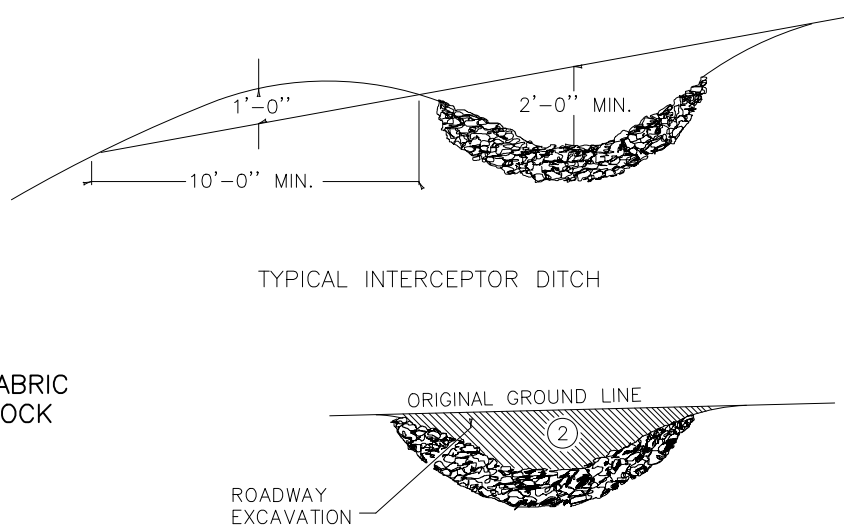
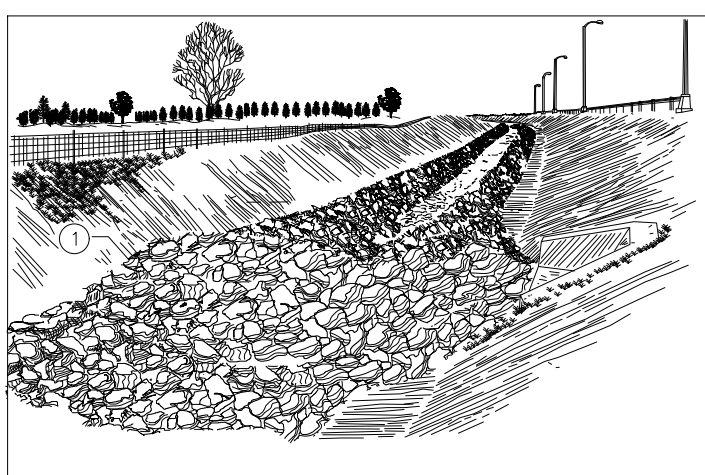
**BUILD READY PAD**  
**SANDY LEE WATKINS SITE**  
**FOURSTAR REGIONAL INDUSTRIAL PARK**  
**HENDERSON, KY**

PROJECT NO.	2088-34	DATE	BY
DESIGNED BY:	JD.W.		JD.W.
DRAWN BY:	JD.W.		
CHECKED BY:	JD.W.		
REVIEWED BY:	JD.W.		
DATE:	SEPTEMBER 2023		
SCALE:	AS SHOWN		

**Engineers**  
**Architects**  
**Planners**  
**msc**  
**OF KENTUCKY, INC.**  
624 Wellington Way  
Lexington, Ky. 40503  
Phone: (859)223-5694  
Fax: (859)223-2807  
www.mslex.com

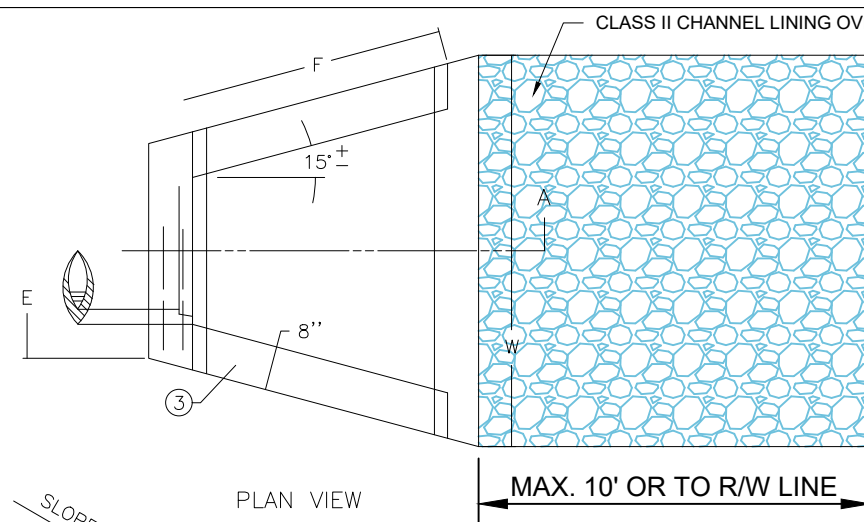
DRAWING NO.  
**EC-2**  
SHEET OF





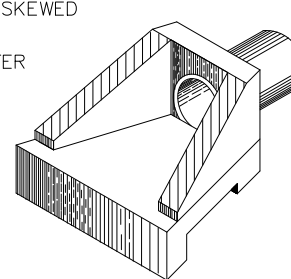
CHANNEL LINING WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR EACH CLASS.  
CHANNEL LINING WILL NOT BE REQUIRED IN THE BOTTOM OF THE DITCH WHERE SOLID ROCK IS ENCOUNTERED.  
CHANNEL LINING ESTIMATED ON THE BASIS OF 0.50 TON PER SQ. YD. PER FOOT OF DEPTH.  
WHEN CHANNEL LINING NEAR OUTLET END OF STRUCTURE AS DIRECTED BY THE ENGINEER,  
FROM THE TOP OF THE LINING TO THE ORIGINAL GROUNDLINE.  
ALTERNATE LOCATION OF GROUNDLINE.  
15" MIN. CLASS II, OR 24" MIN. CLASS III.  
D = DEPTH TO PROTECT, T = THICKNESS, (SEE PLAN NOTES FOR THESE VALUES)

RDD-040  
CHANNEL LINING  
CLASS II AND III

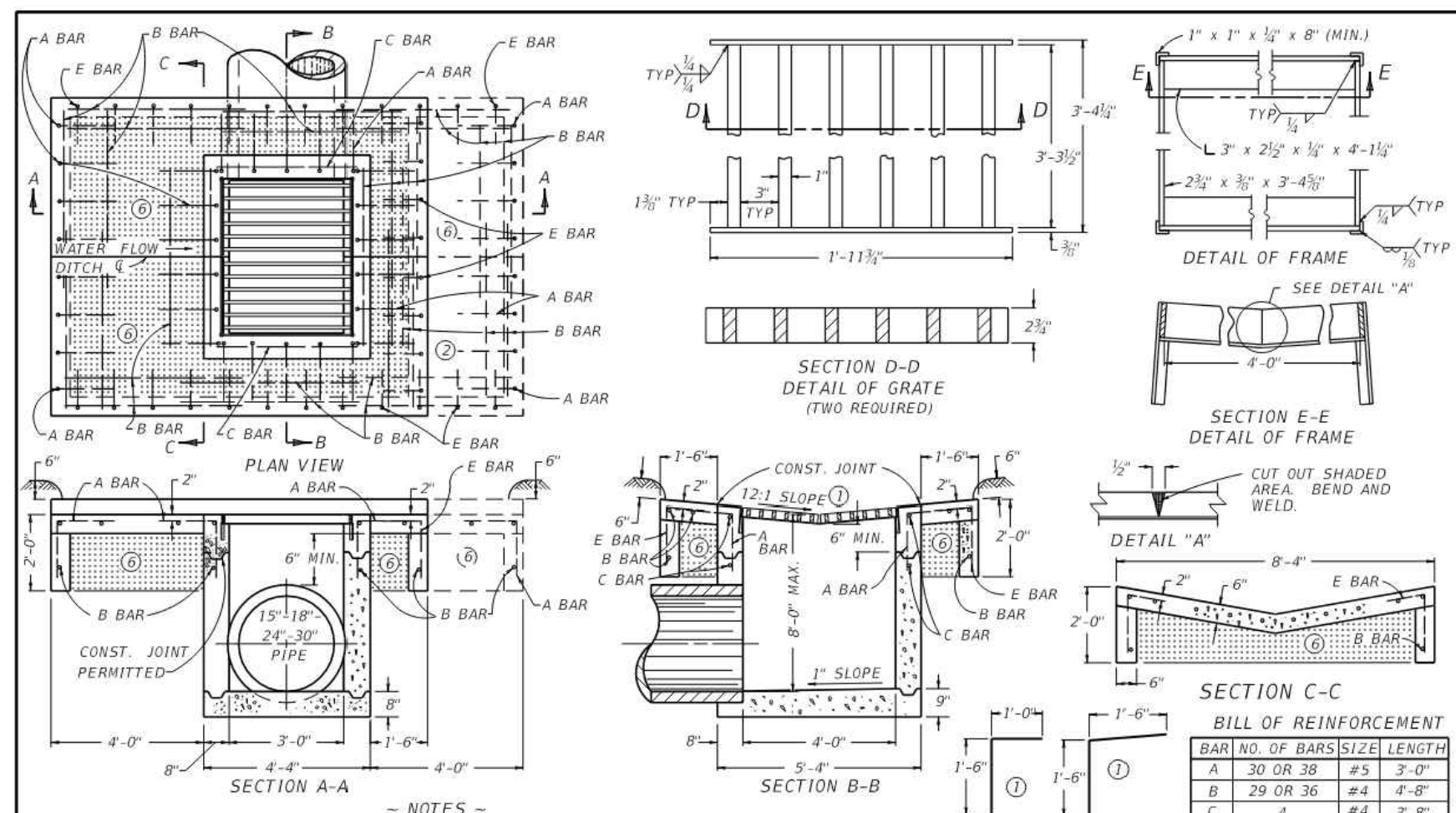


DIA. OR EQUIV. DIA.	PIPE SHAPE	DIMENSIONS							GLASS	REIN
		C	E	F	L	W	T	CLASS A CONC	STEEL LBS.	
12"	○	1'-9"	2'-6"	3'-5"	5'-6"	4'-0"	2"	0.58	7	
	○	2'-0"	2'-9"	3'-9"	4'-0"	4'-9"	2"	0.78		
15"	○	1'-9"	3'-0"	2'-6"	3'-6"	4'-9"	2 1/2"	0.65		
	○	2'-3"	3'-0"	3'-6"	4'-6"	5'-3"	2 1/2"	0.89	8	
18"	○	2'-6"	3'-6"	3'-0"	4'-0"	5'-6"	2 1/2"	1.14		
	○	2'-6"	3'-3"	3'-0"	4'-0"	5'-6"	2 1/2"	1.07		
21"	○	2'-3"	3'-3"	3'-6"	4'-6"	6'-0"	3"	1.35	9	
	○	2'-9"	3'-6"	4'-6"	4'-6"	6'-0"	3"	1.35		
24"	○	2'-6"	4'-0"	4'-0"	5'-0"	6'-9"	3 1/2"	1.30		
	○	3'-0"	3'-9"	4'-6"	6'-0"	7'-3"	3 1/2"	1.51		
27"	○	2'-9"	4'-6"	4'-3"	5'-3"	7'-0"	3 1/2"	1.57	10	
	○	3'-0"	4'-6"	4'-3"	5'-3"	7'-0"	3 1/2"	1.57		

1. DIMENSIONS AND QUANTITIES ARE BASED ON CONCRETE PIPE AND WILL VARY INSIGNIFICANTLY FOR CORRUGATED METAL PIPE.
2. REINFORCING BARS SHALL BE 1/2" TO 3/4" DIA, BARS EVENLY SPACED.
3. 6 - NO. 4 x 1'-0" DOWEL BARS.
4. 2 - NO. 4 x (E-10 MINUS 4").
5. SLOPE SHALL BE 1/2" PER 1' MINIMUM WHEN PIPE IS SLOPED AND/OR NORMAL SLOPE VARIES FROM 2:1.
6. VOLUME DISPLACED BY PIPE COMPUTED USING INSIDE DIAMETER OF PIPE.
7. JOINT ANGLES AND/OR DIMENSIONS MAY BE ALTERED DURING CONSTRUCTION TO ACCOMMODATE FLOW OF WATER.
8. APPROX BETWEEN RITES SHALL BE 1/2" MINIMUM.
9. FLOW EQUAL TO SLOPE OF PIPE. FRONT FACE OF HEADWALL SHALL REMAIN VERTICAL.
10. CIRCULAR HEADWALLS SHALL BE 12" AND 18" DIAMETER, AND HORIZONTAL ELLIPTICAL 12" - 27" EQUIVALENT PIPE SIZES. SEE CURRENT STD. DWD. RD-016, FOR NON-CIRCULAR PIPE EQUIVALENT SIZES.



RDH-020  
SLOPED & FLARED  
HEADWALLS FOR  
12" TO 27" PIPES



STR. STEEL WTS.			KENTUCKY DEPARTMENT OF HIGHWAYS	
1 GRATE	TOTAL	FRAME	DROP BOX INLET TYPE	
198 LBS	396 LBS	64 LBS	5A-5B-5C-5D-5E & 5F	
APPROX. QUANTITIES			STANDARD DRAWING NO. RDB-005-0	
TYPE	CONCRETE 3'-6" ③ BOX	REINF. STEEL	APPROVED: <i>[Signature]</i>	12-08-95
GRADE	4.0 CU. YD.	304 LBS	DESIGNED: <i>[Signature]</i>	12-08-95
SAG	3.4 CU. YD.	262 LBS		

**BUILD READY PAD  
SANDY LEE WATKINS SITE  
FOURSTAR REGIONAL INDUSTRIAL PARK  
HENDERSON, KY**

BY		REVISION	
DATE			
PROJECT NO. 2088-34			
DESIGNED BY G.A.R.			
DRAWN BY J.D.W.			
CHECKED BY G.A.R.			
REVIEWED BY G.A.R.			
SEPTEMBER 2023		© copyright	
SCALE		AS NOTED	

**msc** **OF KENTUCKY, INC.**

Engineers  
Architects  
Planners

Phone: (859)223-5694  
Fax: (859)223-2607

2624 Wellington Way  
Lexington, KY 40503  
[www.mslex.com](http://www.mslex.com)

DRAWING NO.

**D-1**

SHEET      OF

## DRAINAGE DETAILS