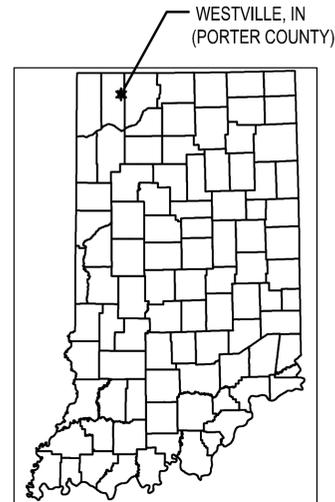


# PORTER COUNTY, INDIANA

## CARRIAGE LANE ROAD STORM SEWER AND ROADWAY IMPROVEMENTS

### DECEMBER 2023



PROJECT LOCATION (WESTVILLE, INDIANA)  
 SHOWN BY \*  
 LATITUDE: 41°33'57" N  
 LONGITUDE: 86°57'50" W

BEGIN PROJECT  
 STA. 10+30.36 LINE 'A'

BEGIN PROJECT  
 STA. 00+19.19 LINE 'B'

END PROJECT  
 STA. 17+05.20 LINE 'C'

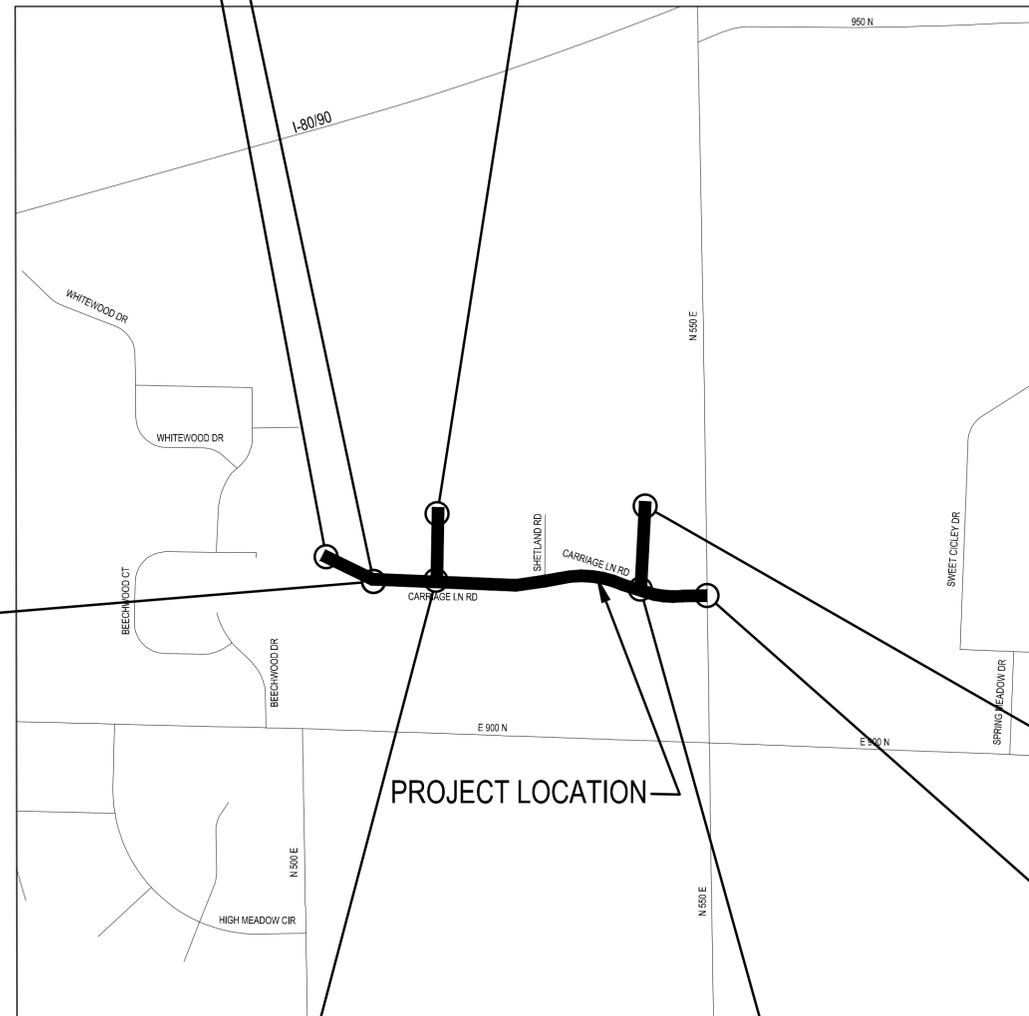
END PROJECT  
 STA. 03+92.86 LINE 'B'

BEGIN PROJECT  
 STA. 15+14.67 LINE 'C'

BEGIN PROJECT  
 STA. 20+10.82 LINE 'D'

END PROJECT  
 STA. 24+40.00 LINE 'D'

END PROJECT  
 STA. 33+10.72 LINE 'A'



INDEX OF DRAWINGS		
DWG. NO.	SHEET NO.	DESCRIPTION
C0.0	1	COVER
C0.1	2	DRAWING INDEX AND SURVEY CONTROL INFORMATION
C0.2	3	GENERAL NOTES LEGENDS AND TYPICAL SECTION
C0.3	4	MAINTENANCE OF TRAFFIC
C1.0-C1.7	5-12	PLAN AND PROFILE
C2.0-C2.2	13-15	CONSTRUCTION DETAILS
C3.0-C3.3	16-19	EROSION CONTROL PLAN
C3.4-C3.5	20-21	EROSION CONTROL DETAILS

**UTILITY CONTACT INFORMATION**

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 JIM POLAREK  
 PHONE: (219)465-3570

**PORTER COUNTY DEPARTMENT OF DEVELOPMENT & STORM WATER MANAGEMENT**  
 CHELSEY GORDON, PE  
 PHONE: (219)465-3652

LOCATION  
 PLAN SCALE: 1"=600'



DLZ INDIANA, LLC  
 900 RIDGE ROAD, SUITE L  
 MUNSTER, INDIANA 46321  
 TELE: (219) 836-5884  
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ANTHONY J. KENNING, CIVIL-STORMWATER  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF INDIANA NO. 10000097

SHAUN G. FINNEY, CIVIL  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF INDIANA NO. 11200270

12/08/2023

Date: December 08, 2023, 2:58pm User ID: sfinney File: X:\Projects\2022\2264\142490\_POCO Carriage Hills Stormwater\01\_ConstDocs\CAD\_Sheet\_Files\1424\_CV.dwg Layout Tab: C0.0

CARRIAGE LANE ROAD STORM SEWER AND ROADWAY IMPROVEMENTS



**GENERAL CONSTRUCTION NOTES**

**HOUSEKEEPING & SAFETY**

1. COMPLY WITH APPLICABLE OSHA REGULATIONS AND SAFETY REQUIREMENTS OF ANY OTHER AGENCY HAVING JURISDICTION.
2. PROVIDE SAFE ACCESS TO THE OWNER, MUNICIPALITY, AND/OR ENGINEER FOR COMPLETE OBSERVATION AND/OR INSPECTION AT THE PROJECT SITE.
3. NO OPEN TRENCHES WILL BE ALLOWED IN THE EVENING AFTER DAILY CONSTRUCTION OPERATIONS HAVE FINISHED, EXCEPT IN THE AREA OF THE TRENCHING BOX. THESE AREAS SHALL BE PROTECTED FULLY SO THAT THE PUBLIC CANNOT OBTAIN ACCESS TO THE TRENCH.
4. SHEET AND BRACE TRENCHES AS NECESSARY TO PROTECT WORKMEN, ADJACENT STRUCTURES, AND THE PUBLIC.

**EXISTING UTILITIES**

1. UTILITIES SHOWN ON PLANS ARE APPROXIMATE IN LOCATION, ARE FOR INFORMATIONAL PURPOSES ONLY, AND MAY NOT BE ALL INCLUSIVE.
2. CONTACT ALL UTILITY COMPANIES WITH FACILITIES IN THE PROJECT LIMITS AND CAUSE TO HAVE ALL UTILITIES LOCATED PRIOR TO THE INITIAL START OF CONSTRUCTION AND THROUGHOUT CONSTRUCTION AS NECESSARY.
3. POTHOLE (EXCAVATE, EXPOSE, AND SURVEY DEPTH) ALL UTILITIES, THEIR LATERALS, AND THEIR SERVICES TO VERIFY DEPTH, MATERIAL, AND SIZE PRIOR TO INSTALLATION OF OTHER IMPROVEMENTS.
4. SHOULD A POTENTIAL CONFLICT EXIST BETWEEN THE EXISTING UTILITY, LATERAL, AND/OR SERVICE, AND THE PROPOSED IMPROVEMENTS, IMMEDIATELY NOTIFY OWNER, MUNICIPALITY AND/OR ENGINEER FOR FURTHER DIRECTION.
5. MAINTAIN SERVICE TO ALL EXISTING UTILITIES THROUGHOUT THE DURATION OF THE PROJECT.
6. SECTIONS OF EXISTING SEWERS, LATERALS, SERVICES, OR CULVERTS TO BE REPLACED SHALL BE REMOVED AND REINSTALLED IN ACCORDANCE WITH MATERIALS, SIZES, AND COUPLINGS APPROVED BY THE OWNER AND/OR MUNICIPALITY HAVING JURISDICTION.
7. SUPPORT, BRACE, AND/OR SHORE EXISTING UTILITIES WHEN EXCAVATING ADJACENT TO, ABOVE, OR BELOW EXISTING UTILITIES.
8. BRACE ALL UTILITY POLES ADJACENT TO, WITHIN, OR INFLUENCED BY THE CONSTRUCTION IN ACCORDANCE WITH THE UTILITY'S REQUIREMENTS.

**SURVEY & LAYOUT**

1. VERIFY ALL BENCHMARK ELEVATIONS WITH A CLOSED LEVEL CIRCUIT PRIOR TO THE START OF CONSTRUCTION. REPORT ALL DISCREPANCIES TO OWNER OR MUNICIPALITY, AND/OR ENGINEER PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL PROVIDE SURVEY AND LAYOUT OF ALL PROPOSED FACILITIES INCLUDING LINE, GRADE, AND ELEVATIONS.
3. RESET ALL DAMAGED HORIZONTAL AND VERTICAL CONTROL UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE WHERE THE WORK IS PERFORMED.
4. RESET ALL DAMAGED PERMANENT MONUMENTS (E.G. SECTION CORNERS, QUARTER SECTION MONUMENTS, PROPERTY CORNERS). WORK SHALL BE PERFORMED BY A LAND SURVEYOR REGISTERED IN THE STATE WHERE THE WORK IS PERFORMED.
5. ALL RADI DIMENSIONS SHOWN ON THE DRAWINGS ARE FROM FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL STATION / OFFSET DIMENSIONS SHOWN ON PLAN AND PROFILE DRAWINGS REFER TO THE MAINLINE ALIGNMENT AND PROFILE UNLESS OTHERWISE INDICATED.
7. EXISTING UTILITIES OR OTHER OBSTACLES MAY AFFECT THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE PROPOSED INFRASTRUCTURE. UTILITIES, CONTOUR CHANGES, OR OTHER OBSTACLES MAY INCREASE OR DECREASE THE DEPTH OF ANY PROPOSED FACILITIES ACCORDINGLY. GRADE CHANGES TO ANY PROPOSED IMPROVEMENTS SHALL BE APPROVED BY THE OWNER OR MUNICIPALITY HAVING JURISDICTION.
8. THE CONTRACTOR SHALL FIELD VERIFY PLAN PROPOSED STRUCTURE TOP OF CASTING (RIM) ELEVATIONS PRIOR TO ORDERING ANY STRUCTURES. REPORT ALL DISCREPANCIES TO OWNER OR MUNICIPALITY, AND/OR ENGINEER SO THAT APPROPRIATE PLAN ADJUSTMENTS CAN BE MADE IF NECESSARY.

**CONSTRUCTION LIMITS**

1. IF THE CONSTRUCTION LIMITS ARE NOT DESIGNATED ON THE DRAWINGS, THEY SHALL BE THE TRENCH LIMITS, SAW CUT LIMITS, PAVING LIMITS, OR THE RIGHT-OF-WAY AND/OR EASEMENTS, WHICHEVER IS SMALLER IN WIDTH, SIZE, OR AREA.
2. RESTORE ALL AREAS AND/OR ITEMS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL CONDITION.
3. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ITEMS DISTURBED OR DAMAGED OUTSIDE THE CONSTRUCTION LIMITS.

**SAW CUTTING, DEMOLITION, AND SALVAGE**

1. PROVIDE FULL DEPTH SAW CUTS WHERE EXISTING PAVEMENT, CONCRETE, OR ASPHALT IS TO BE REMOVED.
2. PROVIDE ADEQUATE COMPACTED MATERIAL/GRAVEL AT THE SAW CUT EDGE TO SHORE UP AND PREVENT THE DEGRADATION OF THE EXISTING PAVEMENT TO REMAIN.
3. EXISTING BUILDING FOUNDATIONS, PAVEMENT, AND OTHER CONCRETE STRUCTURES MAY BE LOCATED WITHIN THE CONSTRUCTION LIMITS. INFORMATION MAY BE ON FILE WITH THE OWNER, MUNICIPALITY, AND/OR ENGINEER REGARDING THE LOCATION OF THESE FACILITIES. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND THE INFORMATION LOCATED WITHIN THE OFFICES OF THE OWNER, MUNICIPALITY, AND/OR ENGINEER SO THAT THE CONTRACTOR IS FULLY AWARE OF THE EXISTING CONDITIONS WHICH MAY EXIST.
4. THE CONTRACTOR SHALL REMOVE THE FOUNDATIONS, PAVEMENT, OTHER CONCRETE STRUCTURES, AND ALL MATERIALS TO BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
5. SALVAGE ALL STRUCTURE CASTINGS THAT ARE DESIGNATED TO BE REMOVED. COORDINATE DELIVERY TIME AND LOCATION WITH THE PORTER COUNTY HIGHWAY DEPARTMENT.
6. THE OWNER OR MUNICIPALITY RESERVES THE RIGHT TO RETAIN OTHER EXISTING INFRASTRUCTURE ITEMS (POLES, SIGNAGE, ETC.). AT THE REQUEST OF THE OWNER OR MUNICIPALITY, THE CONTRACTOR SHALL DELIVER THESE ITEMS TO THE OWNER'S OR MUNICIPALITY'S FACILITY.
7. DISPOSAL OF MATERIAL MAY NOT BE PERMITTED ON OWNER OR MUNICIPAL OWNED PROPERTY UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE OWNER OR MUNICIPALITY, WHICHEVER HAS JURISDICTION.

**DEWATERING**

1. PROVIDE ALL DEWATERING REQUIRED FOR THE COMPLETION OF THE PROJECT.
2. DEWATERING DISCHARGE SHALL NOT BE DISPOSED OF INTO THE SANITARY SEWER OR STORM SEWER WITHOUT WRITTEN APPROVAL BY THE OWNER AND/OR MUNICIPALITY HAVING JURISDICTION.
3. DEWATERING DISCHARGE SHALL NOT BE DISPOSED OF INTO DITCHES, STREAMS, CREEKS, RIVERS, LAKES, PONDS, OR OTHER WATER BODIES UNLESS WRITTEN PERMISSION IS GRANTED BY THE OWNER AND/OR MUNICIPALITY, OR OTHER REGULATORY AGENCIES HAVING CONTROL OF THE WATER BODY (E.G. IDEM, IDNR, USACE).

**CLEARING, GRUBBING, AND PROTECTION**

1. CLEAR AND GRUB ALL NON-PAVEMENT AREAS LOCATED WITHIN THE CONSTRUCTION LIMITS AS REQUIRED TO COMPLETE THE CONSTRUCTION.
2. PROTECT ALL TREES, BUSHES, SHRUBS, AND OTHER LANDSCAPING IDENTIFIED ON THE DRAWINGS AS BEING PROTECTED.
3. REMOVAL OF ALL TREES, BUSHES, SHRUBS, AND OTHER LANDSCAPING NOT SPECIFICALLY CALLED OUT TO BE PROTECTED UPON CONFIRMATION WITH THE OWNER, MUNICIPALITY, AND/OR ENGINEER.
4. DO NOT CUT ANY TREES SUITABLE FOR INDIANA BAT ROOSTING (GREATER THAN 3-INCHES DIAMETER AT BRESTH HEIGHT, LIVING OR DEAD, WITH LOOSE HANGING BARK) FROM APRIL 1ST THROUGH SEPTEMBER 30TH.

5. PROTECT TOPS, TRUNKS, AND ROOTS OF EXISTING TREES ON THE PROJECT PRIOR TO THE START OF CONSTRUCTION. BOX OR FENCE AREAS NOT TO BE DISTURBED.
6. EARTH, MATERIAL, AND/OR EQUIPMENT SHALL NOT BE STOCKPILED OR STORED WITHIN THE SPREAD OF BRANCHES.
7. BRANCHES WHICH NEED TO BE REMOVED, OR ARE DAMAGED, SHALL BE NEATLY TRIMMED. SCARS SHALL BE COVERED WITH TREE PAINT.
8. TO MINIMIZE STRESS TO TREES IN THE AREA OF CONSTRUCTION, TRENCHES SHALL BE OPEN FOR A MINIMUM AMOUNT OF TIME AND THE ROOTS ON THE TRENCH SIDE OF THE TREE SHALL BE SEVERED IN A CLEAN CUT MANNER.
9. PROTECT AND/OR REPLACE ALL CULVERTS, MAILBOXES, AND OTHER ITEMS NOT SHOWN ON THE DRAWINGS SHOULD THEY BE DISTURBED BY THE PROPOSED CONSTRUCTION.

**TOPSOIL**

1. STRIP AND STOCKPILE TOPSOIL AS REQUIRED FOR THE COMPLETION OF THE WORK.
2. REMOVE EXCESS TOPSOIL FROM THE SITE.
3. SEPARATE TOPSOIL FROM SUITABLE FILL MATERIALS.
4. TOPSOIL SHALL BE REASONABLY FREE FROM SUBSOIL, DEBRIS AND STONES.
5. STOCK TOPSOIL IN AREAS SHOWN ON THE PLANS. IN ABSENCE OF TOPSOIL STOCKPILE LOCATIONS ON THE PLANS, CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER AND/OR MUNICIPALITY AS TO THE LOCATION WHERE TOPSOIL WILL BE STOCKPILED.

**GRADING**

1. WHERE MANHOLES, UNINTENDED FOR THE PURPOSES OF SURFACE DRAINAGE, ARE LOCATED OUTSIDE OF PAVED AREAS, GRADE AROUND EACH CASTING SO THAT SURFACE WATER SHALL NOT DRAIN INTO OR OVER THE STRUCTURE.
2. ELEVATIONS OF INLETS SET IN CURB LINE ARE GIVEN AT THE EDGE OF PAVEMENT.
3. WHERE MANHOLES OR OTHER STRUCTURES ARE INTENDED TO DRAIN SURFACE WATER, VERIFY GRADES AROUND EACH CASTING TO ENSURE PROPER DRAINAGE OF SURFACE WATER.
4. DITCHES OR SWALES AFFECTED BY THE CONSTRUCTION SHALL BE RE-ESTABLISHED TO THEIR ORIGINAL LINE AND GRADE.
5. ALL PROPOSED GRADING SHALL MATCH EXISTING ADJACENT GRADES WITHOUT TRAPPING OR PONDING STORM WATER. SHOULD THE POTENTIAL FOR THE PROPOSED IMPROVEMENTS EXIST TO TRAP STORMWATER OR INHIBIT DRAINAGE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, MUNICIPALITY, AND/OR ENGINEER FOR FURTHER DIRECTION.
6. RESTORE ALL DRIVEWAYS, SIDEWALKS, AND/OR CURB RAMPS TO COMPLY WITH CURRENT ADA REQUIREMENTS.
7. RESTORE ALL DRIVEWAYS, SIDEWALKS, AND/OR CURB RAMPS TO COMPLY WITH MUNICIPALITY AND/OR INDOT REQUIREMENTS, WHICHEVER HAS JURISDICTION.

**RESTORATION**

1. ALL AFFECTED SITE CONDITIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UPON COMPLETION OF THE WORK.
2. UNLESS NOTED OTHERWISE IN THE PLANS, ALL DISTURBED GRASSSED AREAS WITHIN THE SHOWN CONSTRUCTION LIMITS SHALL BE RESTORED WITH 4-INCHES OF TOPSOIL AND SHALL BE HYDRO-SEEDED OR SODDED AS SHOWN ON THE PLANS.

**EXISTING LEGEND**

- INLET
- MANHOLE
- SANITARY MANHOLE
- STORM MANHOLE
- POST SIGN
- TELEPHONE PEDESTAL
- POWER POLE
- WATER VALVE
- BENCHMARK
- MONUMENT FOUND
- POST
- TREE
- HEDGE
- BUSH
- BUILDING
- R/W RIGHT-OF-WAY
- SOIL BORING# ELEVATION

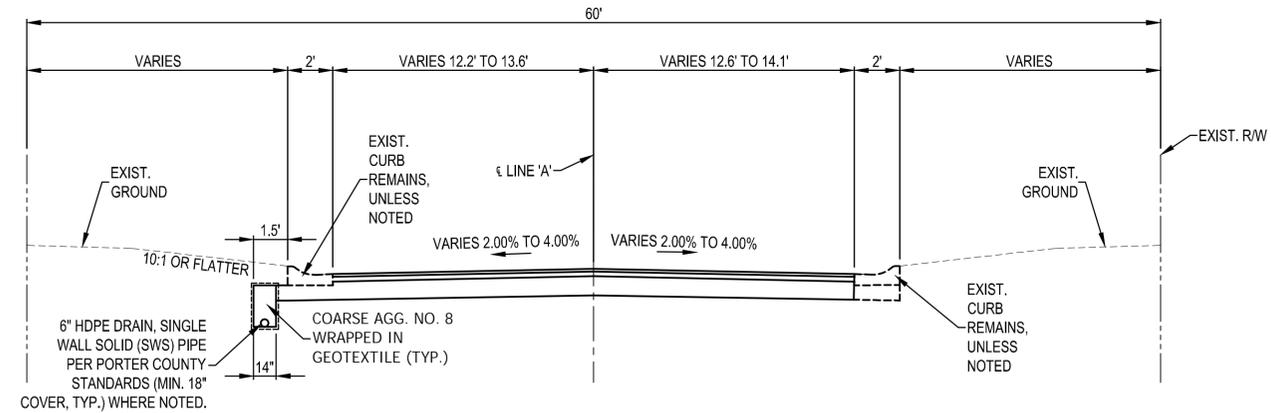
- OHE OVERHEAD ELECTRIC
- E BURIED ELECTRIC
- T BURIED TELEPHONE
- G BURIED GAS
- W BURIED WATER
- CaTV BURIED CABLE TV
- SEWER
- APPROXIMATE PROP. LINE
- APPROXIMATE RW

**ABBREVIATIONS**

- CMP - CORRUGATED METAL PIPE
- EX - EXISTING
- SAN - SANITARY SEWER
- SB - SOIL BORING
- STM - STORM SEWER
- STR - STRUCTURE
- SWR - SEWER
- RCP - REINFORCED CONCRETE PIPE
- HDPE - HIGH DENSITY POLYETHYLENE
- Ø - DIAMETER
- TBM - TEMPORARY BENCHMARK
- RJDI - RESTRAINED JOINT DUCTILE IRON
- ME - MATCH EXISTING

**PROPOSED LEGEND**

- A1 HMA PAVING, TYPE B, CONSISTING OF: 165#/SYD, HMA SURFACE, ON 275 #/SYD, HMA INTERMEDIATE, ON 10" COMPACTED AGGREGATE, NO. 53, ON GEOGRID (PER PORTER COUNTY STANDARDS), ON COMPACTED SUBGRADE
- CT CURB TURNOUT (SEE DETAIL 5, DWG. C2.0)
- D DRIVEWAY, REMOVE AND REPLACE WITH: 5" PLAIN CONCRETE WITH WELDED FABRIC, ON 6" COMPACTED AGGREGATE NO. 53, MATCH EXISTING JOINT PATTERN
- M ASPHALT MILLING, 1.5"
- O 165#/SYD HMA SURFACE, TYPE B
- P PROTECT
- TEMPORARY CURB INLET PROTECTION
- 11 SAWCUT
- 26 MULCHED SEEDING, TYPE U AND 6" OF TOPSOIL
- 66 CURB AND GUTTER, REMOVE AND REPLACE
- 74 TREE, REMOVE
- 87 MAILBOX REMOVE AND RESET
- 93 PIPE, GROUT
- 94 STRUCTURE, REMOVE
- 95 PIPE, REMOVE
- 96 STRUCTURE, ABANDON (SEE DETAIL 4, DWG C2.0)
- 97 SIGN, REMOVE AND RESET
- 98 FENCE, REMOVE AND RESET
- 99 UTILITY INVESTIGATION. CONFIRM LOCATION & DEPTH OF UTILITIES PRIOR TO START OF WORK



**CARRIAGE LANE ROAD  
TYPICAL SECTION LINE 'A'**

SCALE: NTS

1  
C0.2



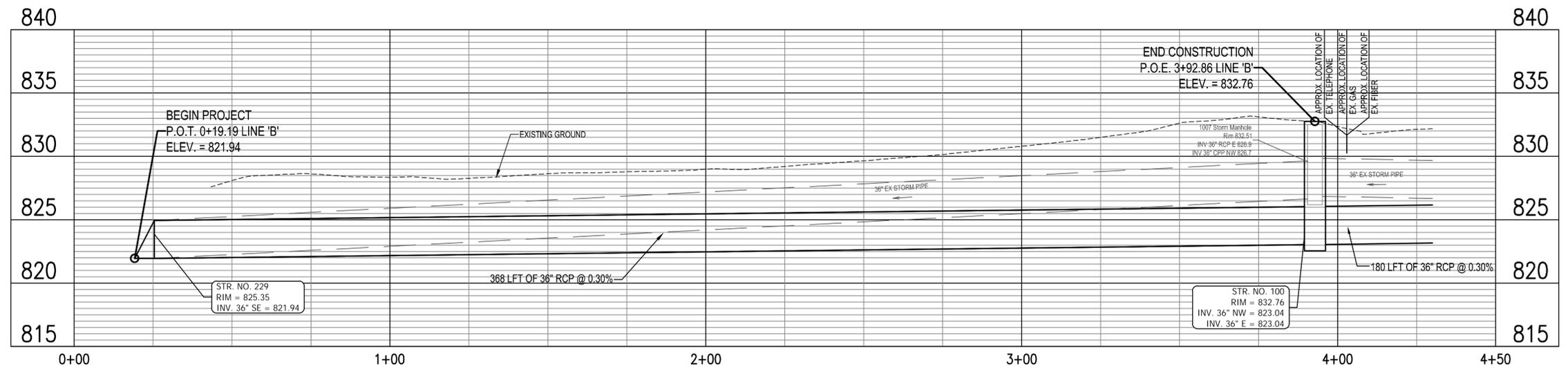
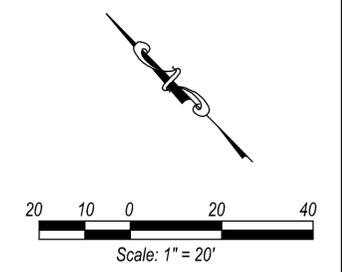
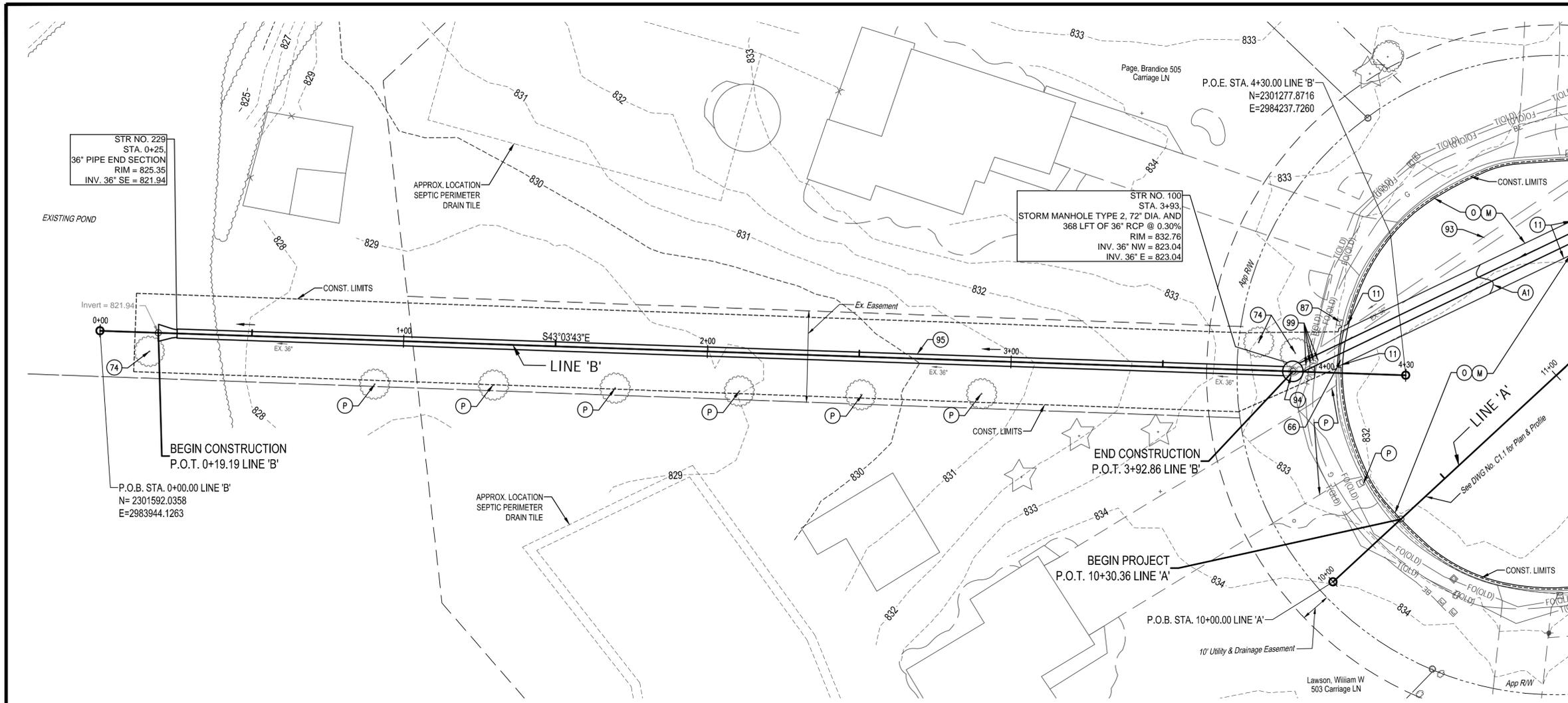
PORTER COUNTY INDIANA  
**CARRIAGE LANE ROAD  
 STORM SEWER & ROADWAY IMPROVEMENTS**  
 GENERAL NOTES, LEGENDS, AND TYPICAL SECTION

DRAWN:	BRA	CHK'D:	EMM	NO.	REVISION	BY	DATE
DESIGNED:	BRA	APPR'VD:	AJK				
DATE:	DECEMBER 2023						
HORIZ. SCALE:	N/A						
VERT. SCALE:	N/A						
PROJECT NUMBER	2264-1424-90						

12/08/2023  
DLZ INDIANA, LLC

SHEET 3  
OF 21  
DRAWING NUMBER  
**C0.2**





- NOTES**
- LINE 'B' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.
- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF:  
165#/SYD, HMA SURFACE, ON  
275 #/SYD, HMA INTERMEDIATE, ON  
10" COMPACTED AGGREGATE, NO. 53, ON  
GEOGRID (PER PORTER COUNTY  
STANDARDS), ON COMPACTED SUBGRADE
  - (M) ASPHALT MILLING, 1.5"
  - (O) 165#/SYD HMA SURFACE, TYPE B
  - (P) PROTECT
  - (11) SAWCUT
  - (66) CURB AND GUTTER,  
REMOVE AND REPLACE
  - (74) TREE, REMOVE
  - (87) MAILBOX REMOVE AND RESET
  - (93) PIPE, GROUT
  - (94) STRUCTURE, REMOVE
  - (95) PIPE, REMOVE
  - (99) UTILITY INVESTIGATION. CONFIRM  
LOCATION & DEPTH OF UTILITIES PRIOR  
TO START OF WORK

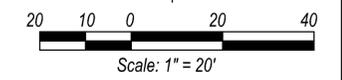
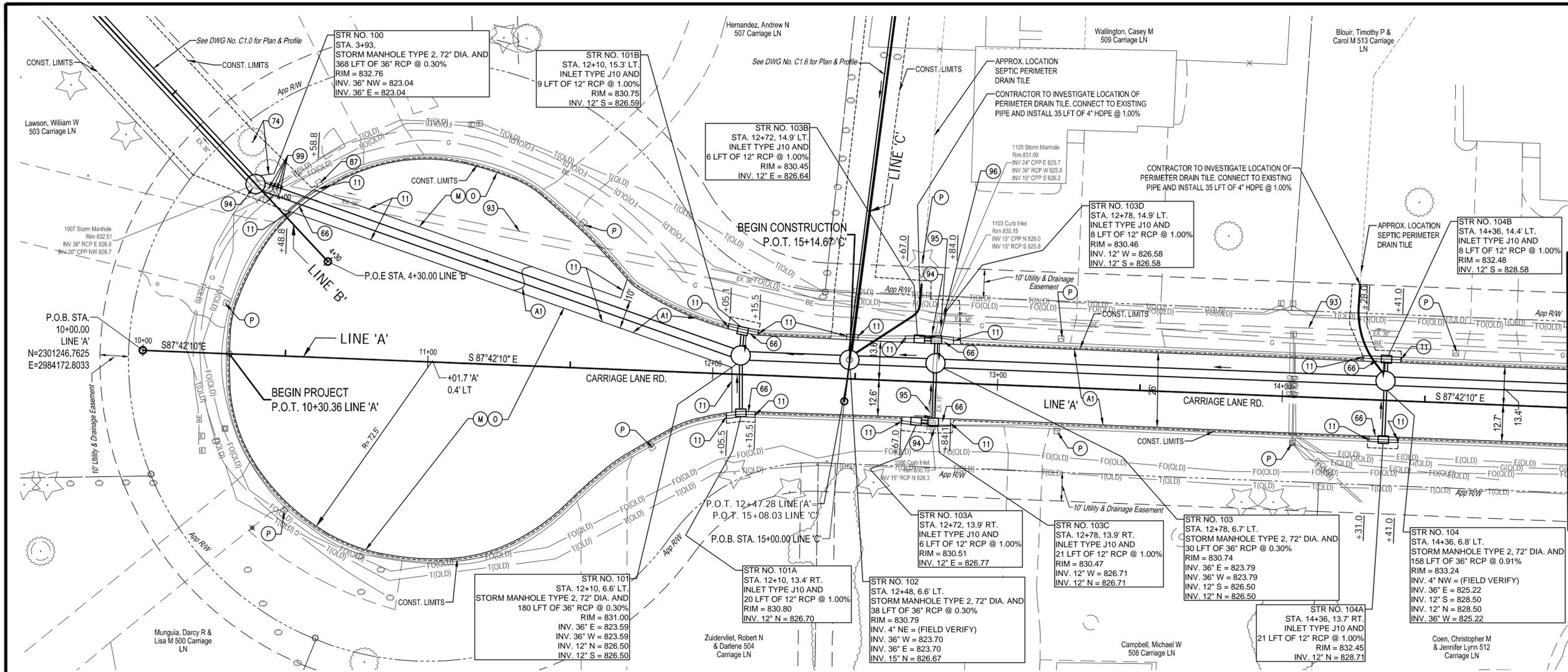


PORTER COUNTY  
**CARRIAGE LANE ROAD**  
 STORM SEWER & ROADWAY IMPROVEMENTS  
 INDIANA  
 PLAN & PROFILE - LINE 'B'  
 STA. 0+00 - 5+00

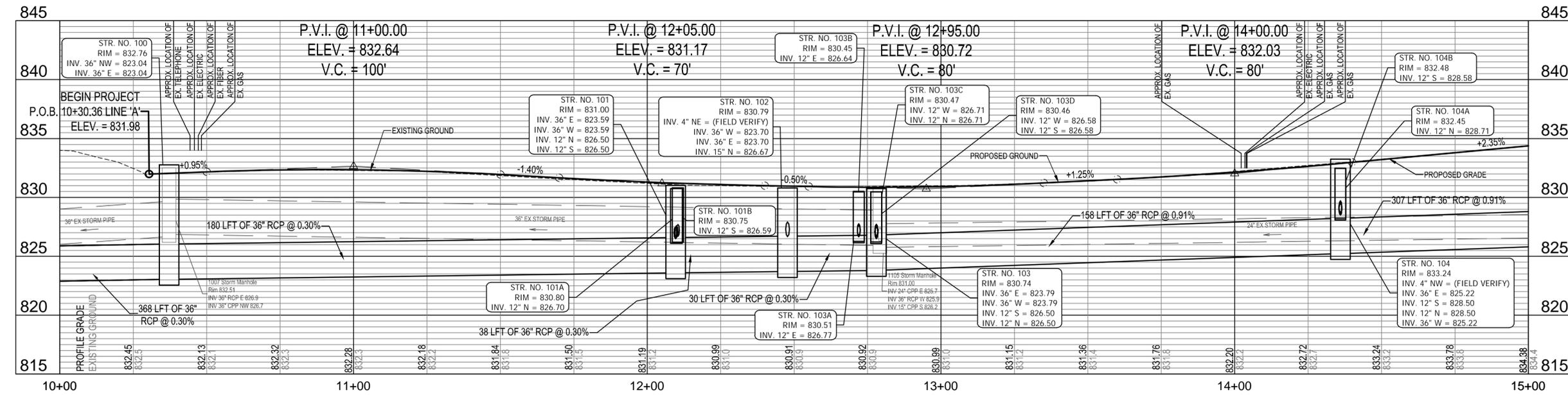
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DESIGNED:	APPR'VD:	▲			
BRA	AJK	▲			
DATE:		▲			
DECEMBER 2023		▲			
HORIZ. SCALE:		▲			
1" = 20'		▲			
VERT. SCALE:		▲			
1" = 5'		▲			
PROJECT NUMBER		▲			
<b>2264-1424-90</b>		▲			

12/08/2023  
 DLZ INDIANA, LLC

SHEET 5  
 OF 21  
 DRAWING NUMBER  
**C1.0**



MATCHLINE - SEE SHEET C1.2



- NOTES**
- LINE 'A' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.
- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF: 165# /SYD, HMA SURFACE, ON 275 #/SYD, HMA INTERMEDIATE, ON 10\"/>

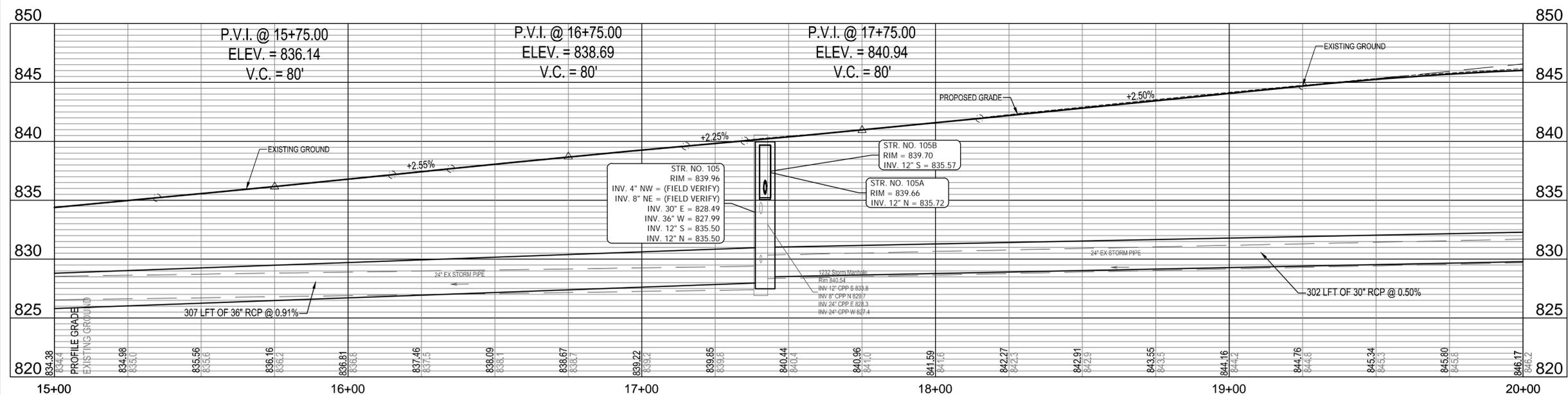
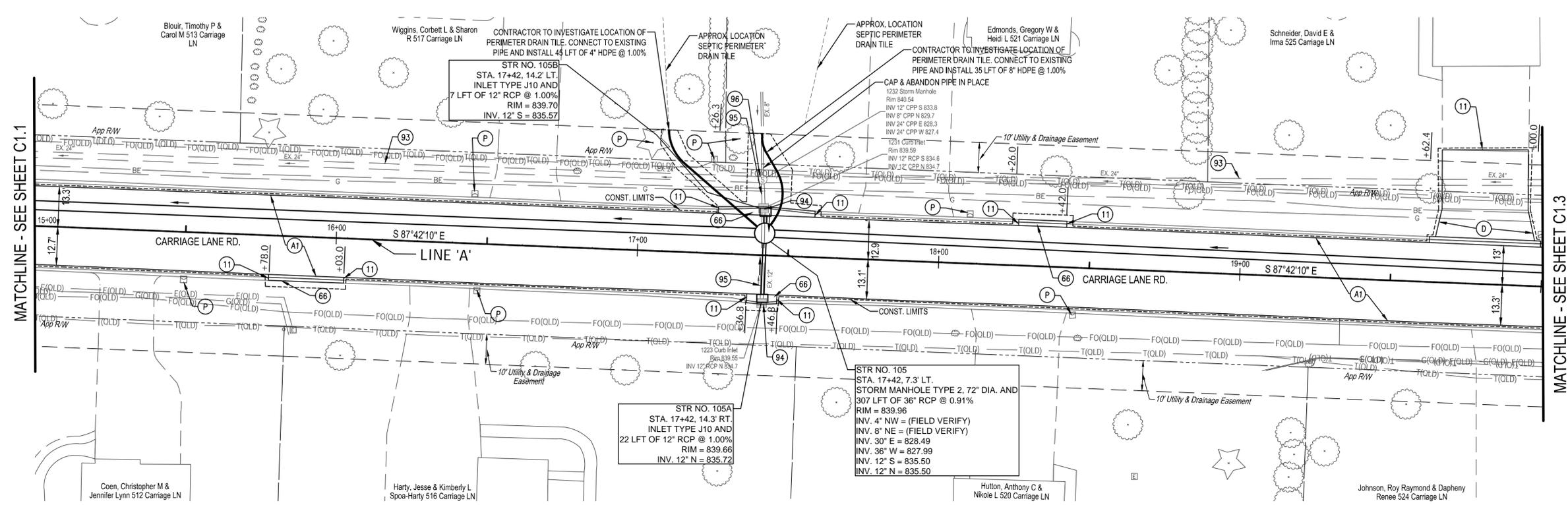
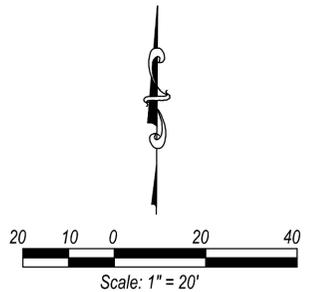


PORTER COUNTY  
**CARRIAGE LANE ROAD**  
 STORM SEWER & ROADWAY IMPROVEMENTS  
 INDIANA  
 PLAN & PROFILE - LINE 'A'  
 STA. 10+00 - 15+00  
 2264-1424-90

NO.	REVISION	BY	DATE

SHEET	6
OF	21
DRAWING NUMBER	C1.1

12/08/2023  
DLZ INDIANA, LLC



- NOTES**
- LINE 'A' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.

- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF:  
165#/SYD, HMA SURFACE, ON  
275 #/SYD, HMA INTERMEDIATE, ON  
10\"/>
  - (D) DRIVEWAY, REMOVE AND REPLACE WITH:  
5\"/>
  - (P) PROTECT
  - (11) SAWCUT
  - (66) CURB AND GUTTER, REMOVE AND REPLACE
  - (93) PIPE, GROUT
  - (94) STRUCTURE, REMOVE
  - (95) PIPE, REMOVE
  - (96) STRUCTURE, ABANDON (SEE DETAIL 4, DWG C2.0)

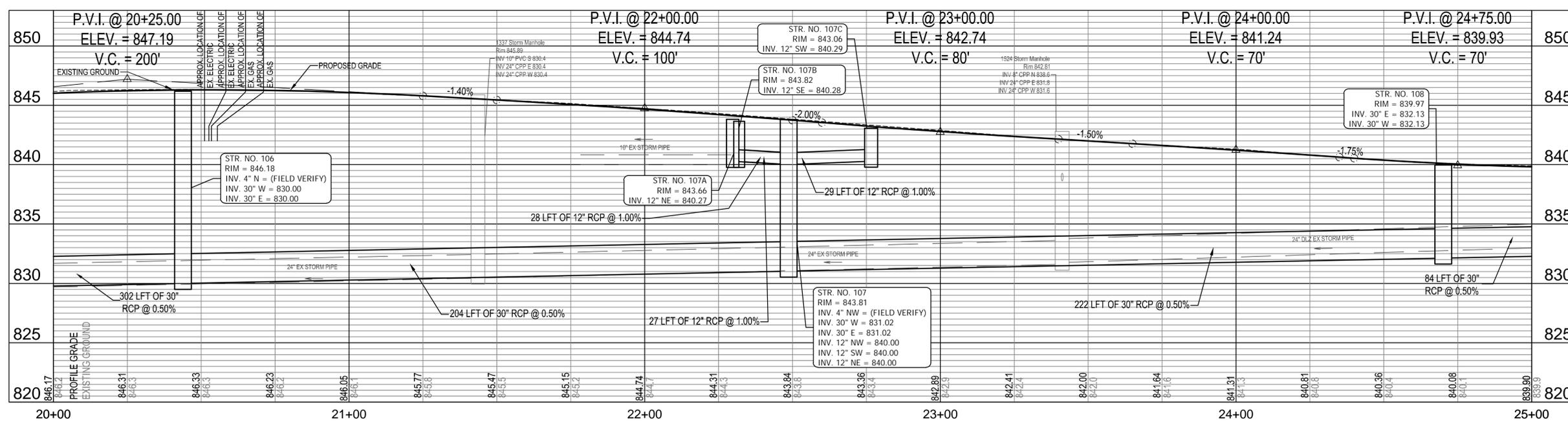
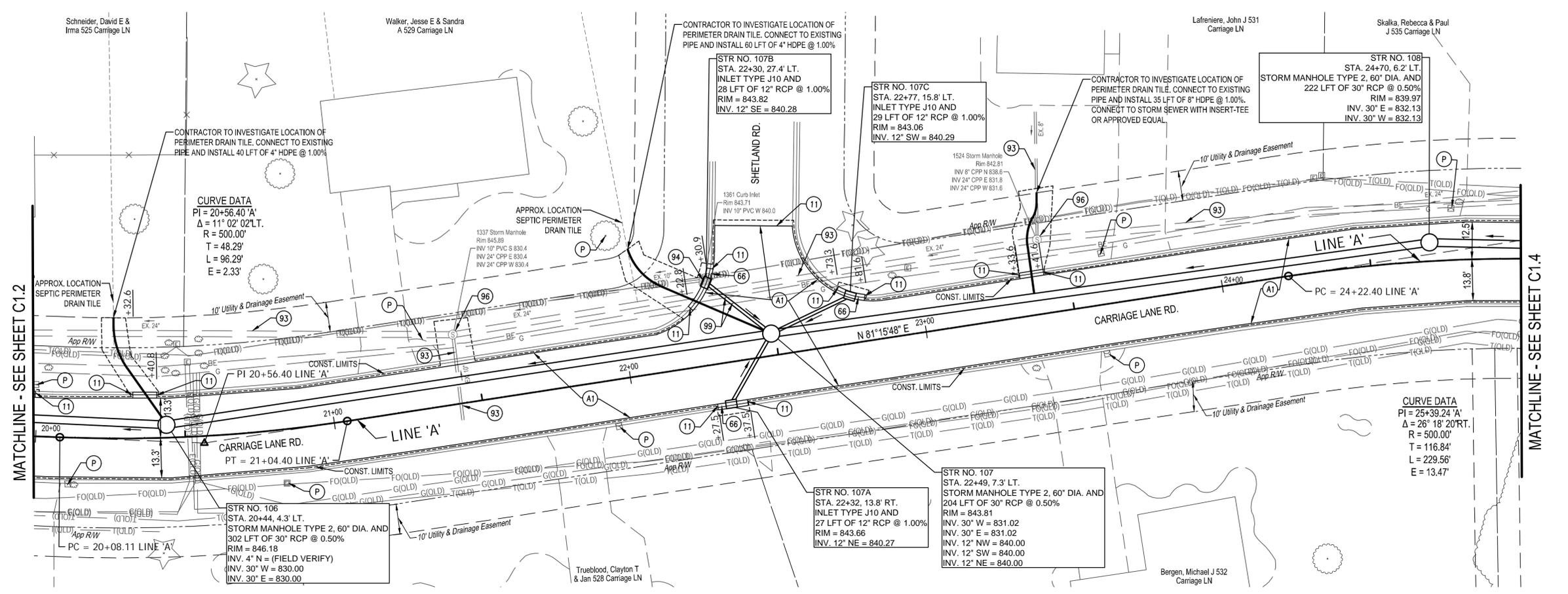
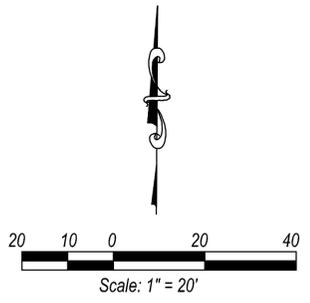


PORTER COUNTY  
**CARRIAGE LANE ROAD**  
 STORM SEWER & ROADWAY IMPROVEMENTS  
 INDIANA  
 PLAN & PROFILE - LINE 'A'  
 STA. 15+00 - 20+00

DRAWN: BRA	CHKD: EMM	NO.	REVISION	BY	DATE
DESIGNED: BRA	APPRVD: AJK				
DATE: DECEMBER 2023					
HORIZ. SCALE: 1" = 20'					
VERT. SCALE: 1" = 5'					
PROJECT NUMBER					
<b>2264-1424-90</b>					

12/08/2023  
 DLZ INDIANA, LLC

SHEET 7  
 OF 21  
 DRAWING NUMBER  
**C1.2**

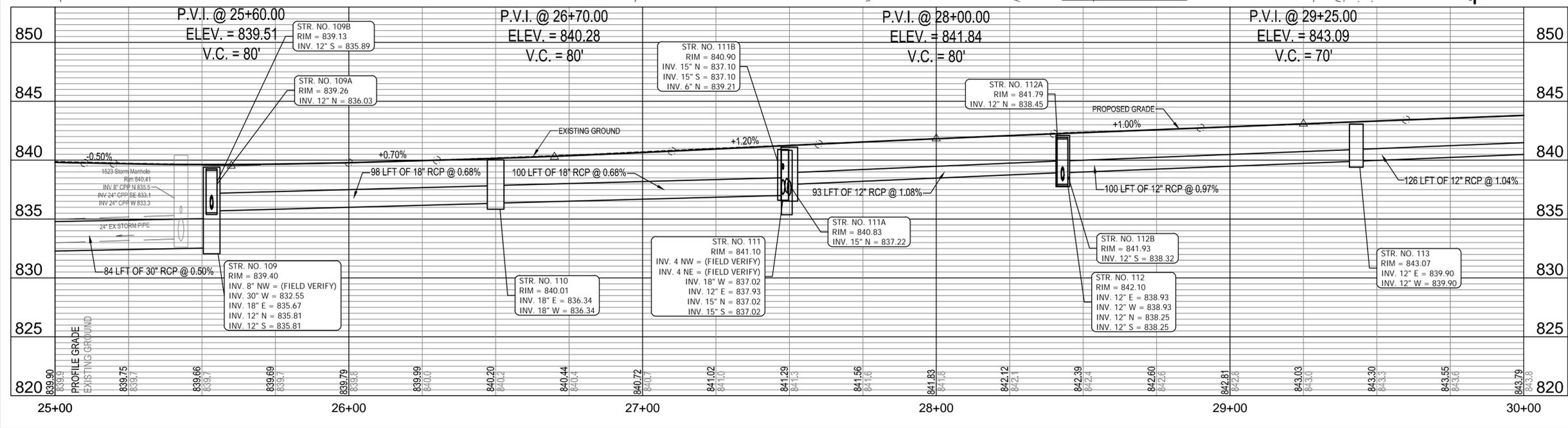
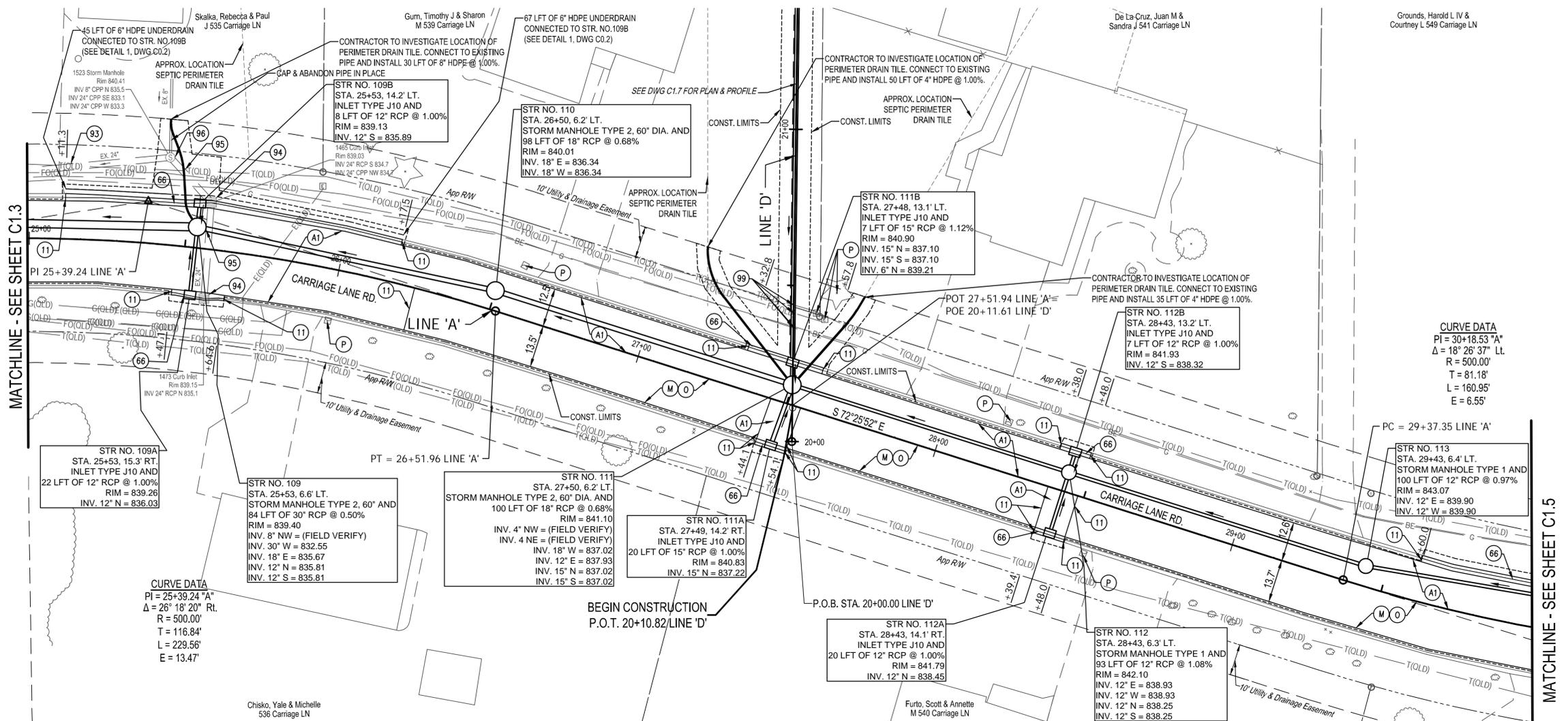
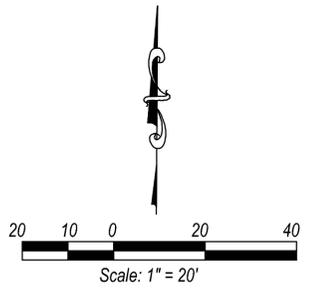


- NOTES**
- LINE 'A' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.
- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF:  
165#/SYD, HMA SURFACE, ON  
275 #/SYD, HMA INTERMEDIATE, ON  
10" COMPACTED AGGREGATE, NO. 53, ON  
GEOGRID (PER PORTER COUNTY  
STANDARDS), ON COMPACTED SUBGRADE
  - (P) PROTECT
  - (11) SAWCUT
  - (66) CURB AND GUTTER,  
REMOVE AND REPLACE
  - (93) PIPE, GROUT
  - (94) STRUCTURE, REMOVE
  - (95) PIPE, REMOVE
  - (96) STRUCTURE, ABANDON  
(SEE DETAIL 4, DWG C2.0)
  - (99) UTILITY INVESTIGATION. CONFIRM  
LOCATION & DEPTH OF UTILITIES PRIOR  
TO START OF WORK



PORTER COUNTY INDIANA  
**CARRIAGE LANE ROAD**  
**STORM SEWER & ROADWAY IMPROVEMENTS**  
 PLAN & PROFILE - LINE 'A'  
 STA. 20+00 - 25+00

DRAWN:	BRA	CHK'D:	EMM	NO.	REVISION	BY	DATE
DESIGNED:	BRA	APPR'VD:	AJK				
DATE:	DECEMBER 2023						
HORIZ. SCALE:	1" = 20'						
VERT. SCALE:	1" = 5'						
PROJECT NUMBER	<b>2264-1424-90</b>						

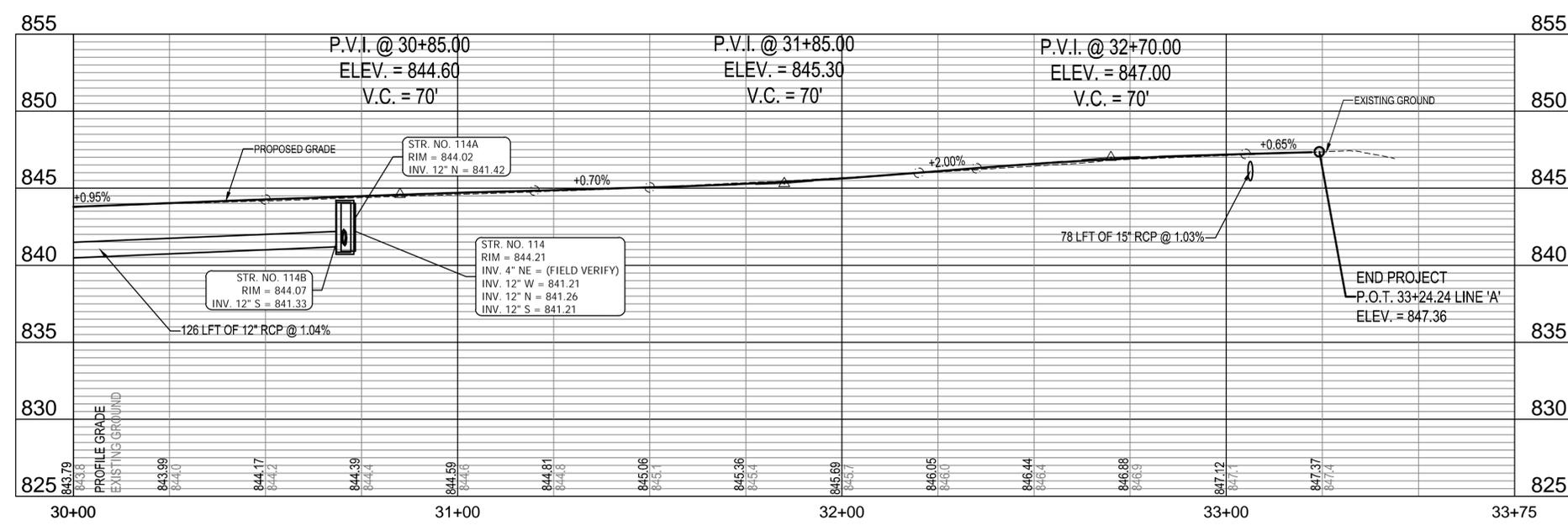
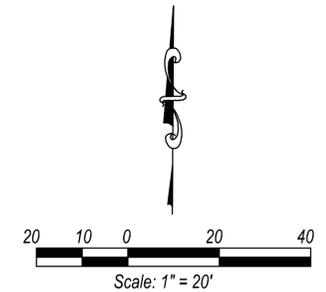
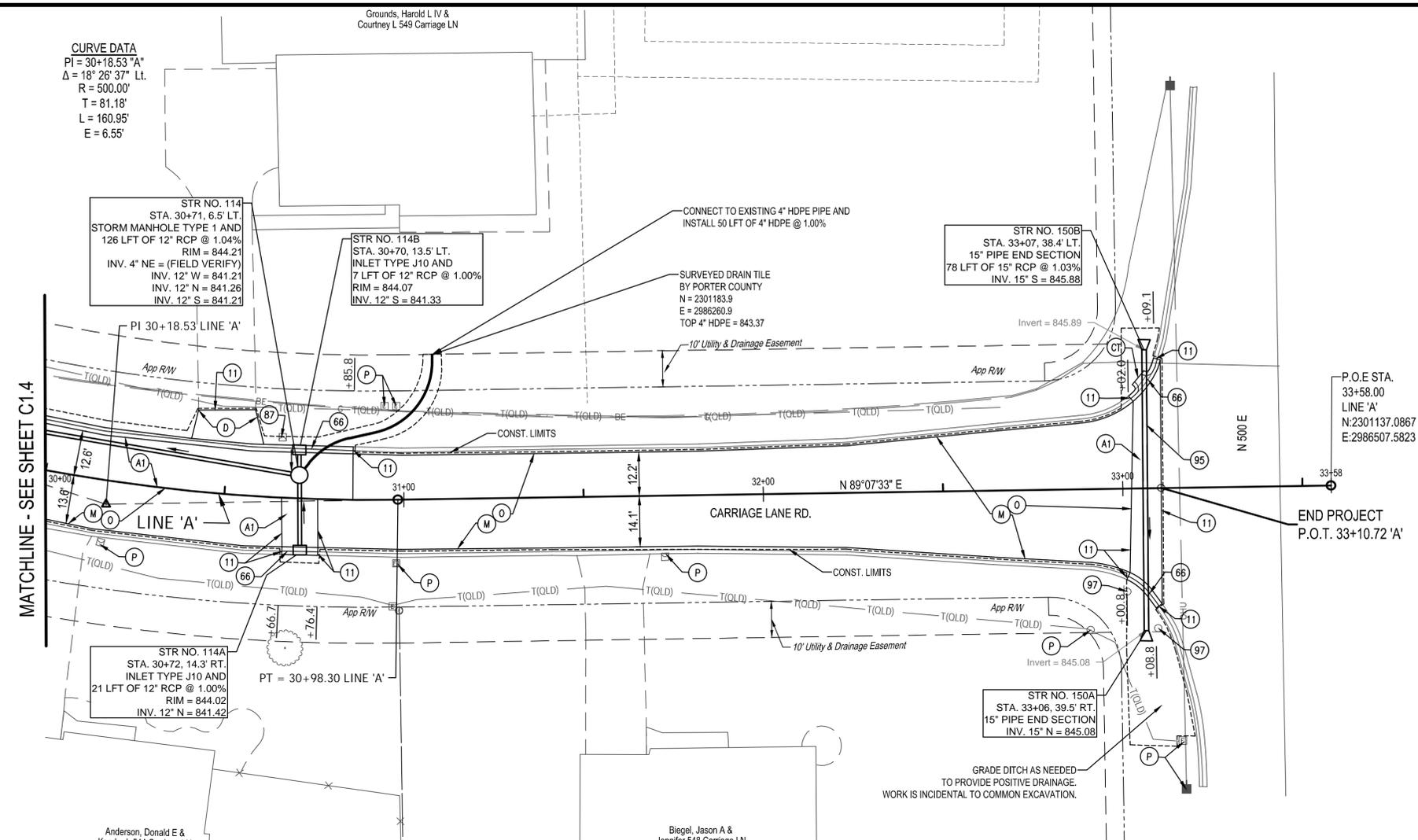


- NOTES**
- LINE 'A' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.

- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF: 165#/SYD, HMA SURFACE, ON 275 #/SYD, HMA INTERMEDIATE, ON 10" COMPACTED AGGREGATE, NO. 53, ON GEOGRID (PER PORTER COUNTY STANDARDS), ON COMPACTED SUBGRADE
  - (M) ASPHALT MILLING, 1.5"
  - (O) 165#/SYD HMA SURFACE, TYPE B
  - (P) PROTECT
  - (11) SAWCUT
  - (66) CURB AND GUTTER, REMOVE AND REPLACE
  - (93) PIPE, GROUT
  - (94) STRUCTURE, REMOVE
  - (95) PIPE, REMOVE
  - (96) STRUCTURE, ABANDON (SEE DETAIL 4, DWG C2.0)
  - (99) UTILITY INVESTIGATION, CONFIRM LOCATION & DEPTH OF UTILITIES PRIOR TO START OF WORK

	PORTER COUNTY	INDIANA	DRAWN: BRA CHK'D: EMM	NO.	REVISION	BY	DATE
	CARRIAGE LANE ROAD STORM SEWER & ROADWAY IMPROVEMENTS		DESIGNED: BRA APPR'D: AJK	DATE: DECEMBER 2023	HORIZ. SCALE: 1" = 20'	VERT. SCALE: 1" = 5'	PROJECT NUMBER
PLAN & PROFILE - LINE 'A' STA. 25+00 - 30+00		2264-1424-90					
							SHEET 9 OF 21 DRAWING NUMBER <b>C1.4</b>
12/08/2023 DLZ INDIANA, LLC							

**CURVE DATA**  
 PI = 30+18.53 "A"  
 $\Delta = 18^\circ 26' 37''$  Lt.  
 R = 500.00'  
 T = 81.18'  
 L = 160.95'  
 E = 6.55'



- NOTES**
- LINE 'A' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.
- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF: 165#/SYD. HMA SURFACE, ON 275 #/SYD. HMA INTERMEDIATE, ON 10\"/>
  - (CT) CURB TURNOUT (SEE DETAIL 5, DWG. C2.0)
  - (D) DRIVEWAY, REMOVE AND REPLACE WITH: 5\"/>
  - (M) ASPHALT MILLING, 1.5\"/>
  - (O) 165#/SYD HMA SURFACE, TYPE B
  - (P) PROTECT
  - (11) SAWCUT
  - (66) CURB AND GUTTER, REMOVE AND REPLACE
  - (93) PIPE, GROUT
  - (94) STRUCTURE, REMOVE
  - (95) PIPE, REMOVE
  - (96) STRUCTURE, ABANDON (SEE DETAIL 4, DWG C2.0)
  - (97) SIGN, REMOVE AND RESET

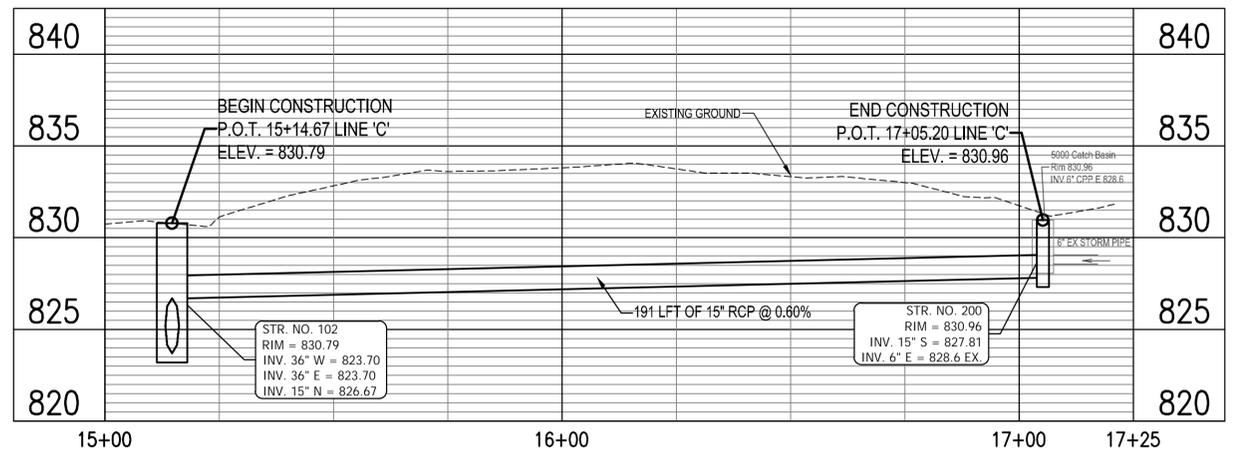
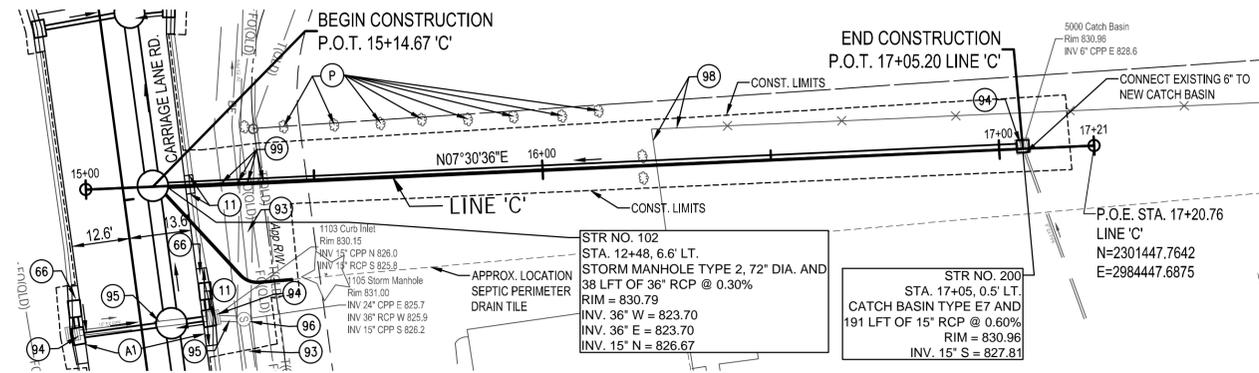
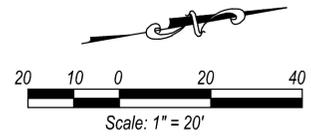


PORTER COUNTY INDIANA  
**CARRIAGE LANE ROAD**  
**STORM SEWER & ROADWAY IMPROVEMENTS**  
 PLAN & PROFILE - LINE 'A'  
 STA. 30+00 - 33+58

DRAWN:	BRA	CHKD:	EMM	NO.	REVISION	BY	DATE
DESIGNED:	BRA	APPRVD:	AJK				
DATE:	DECEMBER 2023						
HORIZ. SCALE:	1" = 20'						
VERT. SCALE:	1" = 5'						
PROJECT NUMBER	<b>2264-1424-90</b>						

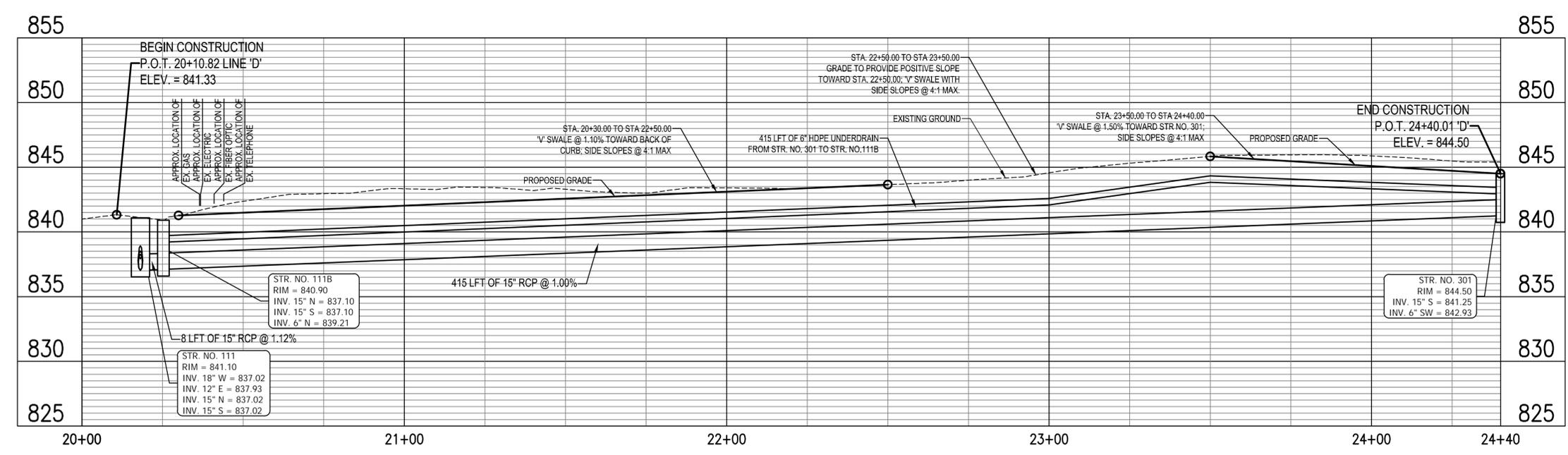
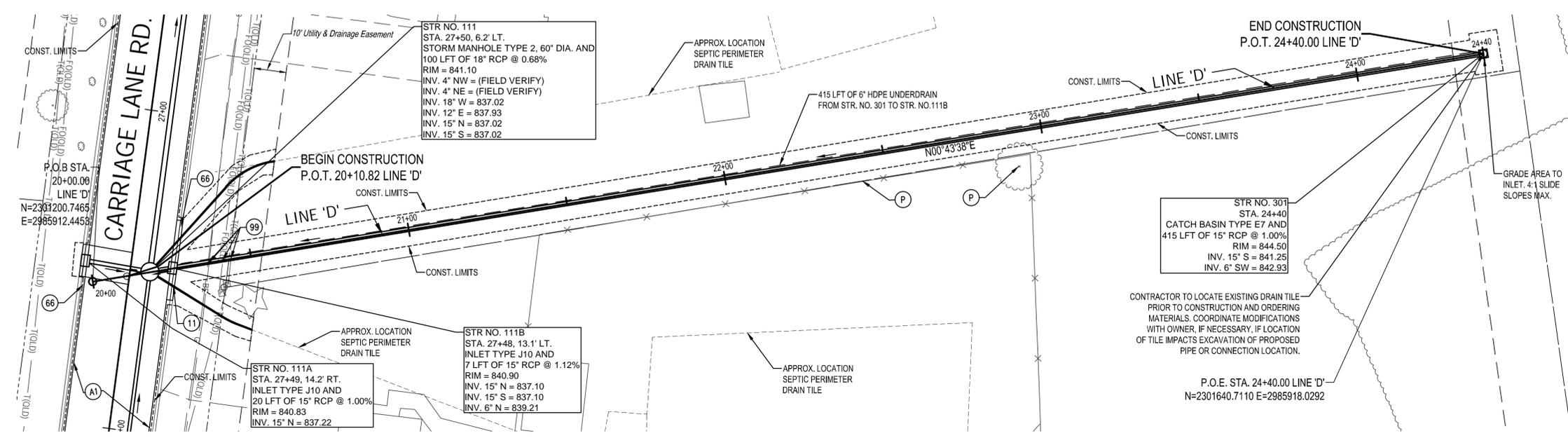
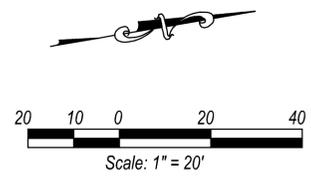
12/08/2023  
 DLZ INDIANA, LLC

SHEET 10  
 OF 21  
 DRAWING NUMBER  
**C1.5**



- NOTES**
- LINE 'C' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.
- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF:  
165#/SYD, HMA SURFACE, ON  
275 #/SYD, HMA INTERMEDIATE, ON  
10" COMPACTED AGGREGATE, NO. 53, ON  
GEOGRID (PER PORTER COUNTY  
STANDARDS), ON COMPACTED SUBGRADE
  - (P) PROTECT
  - (11) SAWCUT
  - (66) CURB AND GUTTER,  
REMOVE AND REPLACE
  - (93) PIPE, GROUT
  - (94) STRUCTURE, REMOVE
  - (95) PIPE, REMOVE
  - (96) STRUCTURE, ABANDON  
(SEE DETAIL 4, DWG C2.0)
  - (98) FENCE, REMOVE AND RESET
  - (99) UTILITY INVESTIGATION. CONFIRM  
LOCATION & DEPTH OF UTILITIES PRIOR  
TO START OF WORK

	PORTER COUNTY	INDIANA	DRAWN: BRA    CHK'D: EMM DESIGNED: BRA    APPR'D: AJK DATE: DECEMBER 2023 HORIZ. SCALE: 1" = 20' VERT. SCALE: 1" = 5' PROJECT NUMBER <b>2264-1424-90</b>	NO.	REVISION	BY	DATE	SHEET 11 OF 21 DRAWING NUMBER <b>C1.6</b>
	<b>CARRIAGE LANE ROAD</b> <b>STORM SEWER &amp; ROADWAY IMPROVEMENTS</b>  <b>PLAN &amp; PROFILE - LINE 'C'</b> <b>STA. 15+00 TO 17+00</b>							12/08/2023 DLZ INDIANA, LLC



- NOTES**
- LINE 'D' TO BE CONSTRUCTED.
  - ALL SOLID LID MANHOLE CASTINGS TO BE NEENAH R-1642.
- LEGEND**
- (A1) HMA PAVING, TYPE B, CONSISTING OF: 165# /SYD, HMA SURFACE, ON 275 #/SYD, HMA INTERMEDIATE, ON 10" COMPACTED AGGREGATE, NO. 53, ON GEOGRID (PER PORTER COUNTY STANDARDS), ON COMPACTED SUBGRADE
  - (P) PROTECT
  - (11) SAWCUT
  - (66) CURB AND GUTTER, REMOVE AND REPLACE
  - (99) UTILITY INVESTIGATION. CONFIRM LOCATION & DEPTH OF UTILITIES PRIOR TO START OF WORK

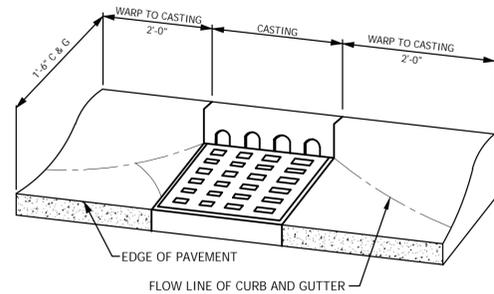


PORTER COUNTY INDIANA  
**CARRIAGE LANE ROAD**  
**STORM SEWER & ROADWAY IMPROVEMENTS**  
 PLAN & PROFILE - LINE 'D'  
 STA. 20+00 - 25+00

DRAWN:	CHK'D:	NO.	REVISION	BY	DATE
BRA	EMM				
DESIGNED:	APPR'VD:				
BRA	AJK				
DATE:					
DECEMBER 2023					
HORIZ. SCALE:					
1" = 20'					
VERT. SCALE:					
1" = 5'					
PROJECT NUMBER					
<b>2264-1424-90</b>					

12/08/2023  
 DLZ INDIANA, LLC

SHEET 12  
 OF 21  
 DRAWING NUMBER  
**C1.7**



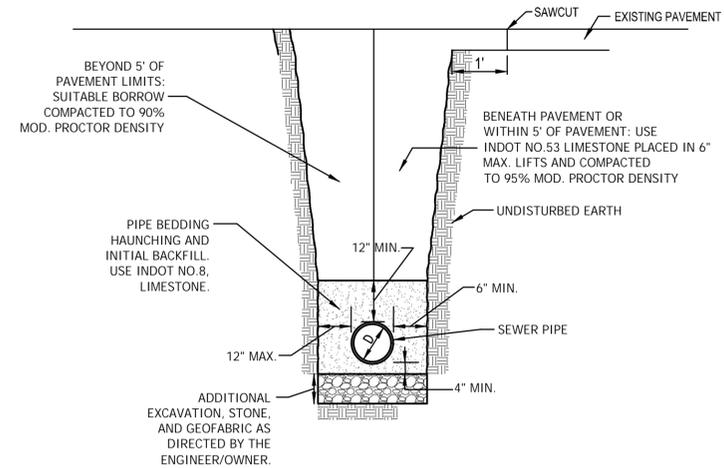
NOTE:  
ADJUST CURB HEIGHT TO MATCH CURB BOX MINIMUM HEIGHT.

### INLET OFFSET DETAIL

SCALE: N.T.S.

1

C2.0

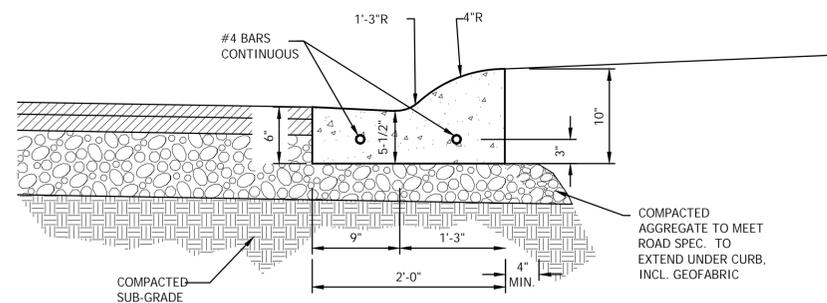


### SEWER TRENCH DETAIL

SCALE: N.T.S.

2

C2.0



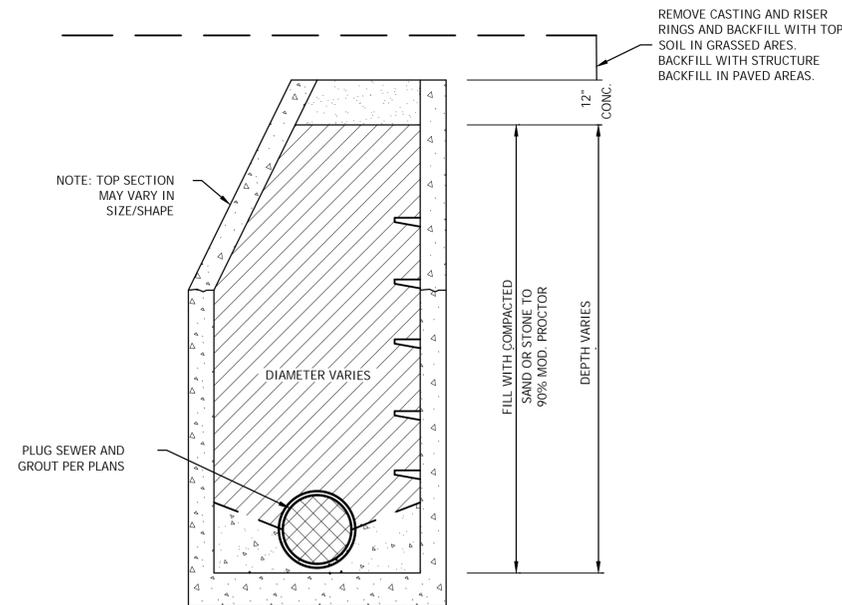
\* TRANSVERSE CONSTRUCTION JOINTS 20' ON CENTER.  
\* WHEN CURBS ARE MACHINE PLACED A STABLE ROADBED IS REQUIRED. MAXIMUM VERTICAL TRACK DEFLECTION DURING POUR SHALL BE LESS THAN 1/4 INCH.  
\* CURB SECTION SHALL BE A MONOLITHIC POUR.

### CURB AND GUTTER, CONCRETE, ROLLED

SCALE: N.T.S.

3

C2.0



NOTE: TOP SECTION MAY VARY IN SIZE/SHAPE

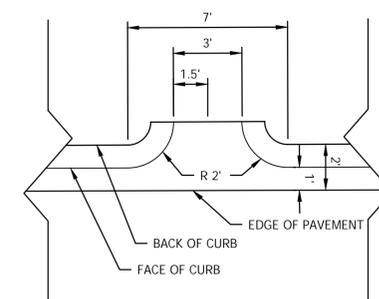
PLUG SEWER AND GROUT PER PLANS

### ABANDON EXISTING MANHOLE

SCALE: N.T.S.

4

C2.0



### CURB TURNOUT

SCALE: N.T.S.

5

C2.0



PORTER COUNTY INDIANA  
CARRIAGE LANE ROAD  
STORM SEWER & ROADWAY IMPROVEMENTS  
CONSTRUCTION DETAILS

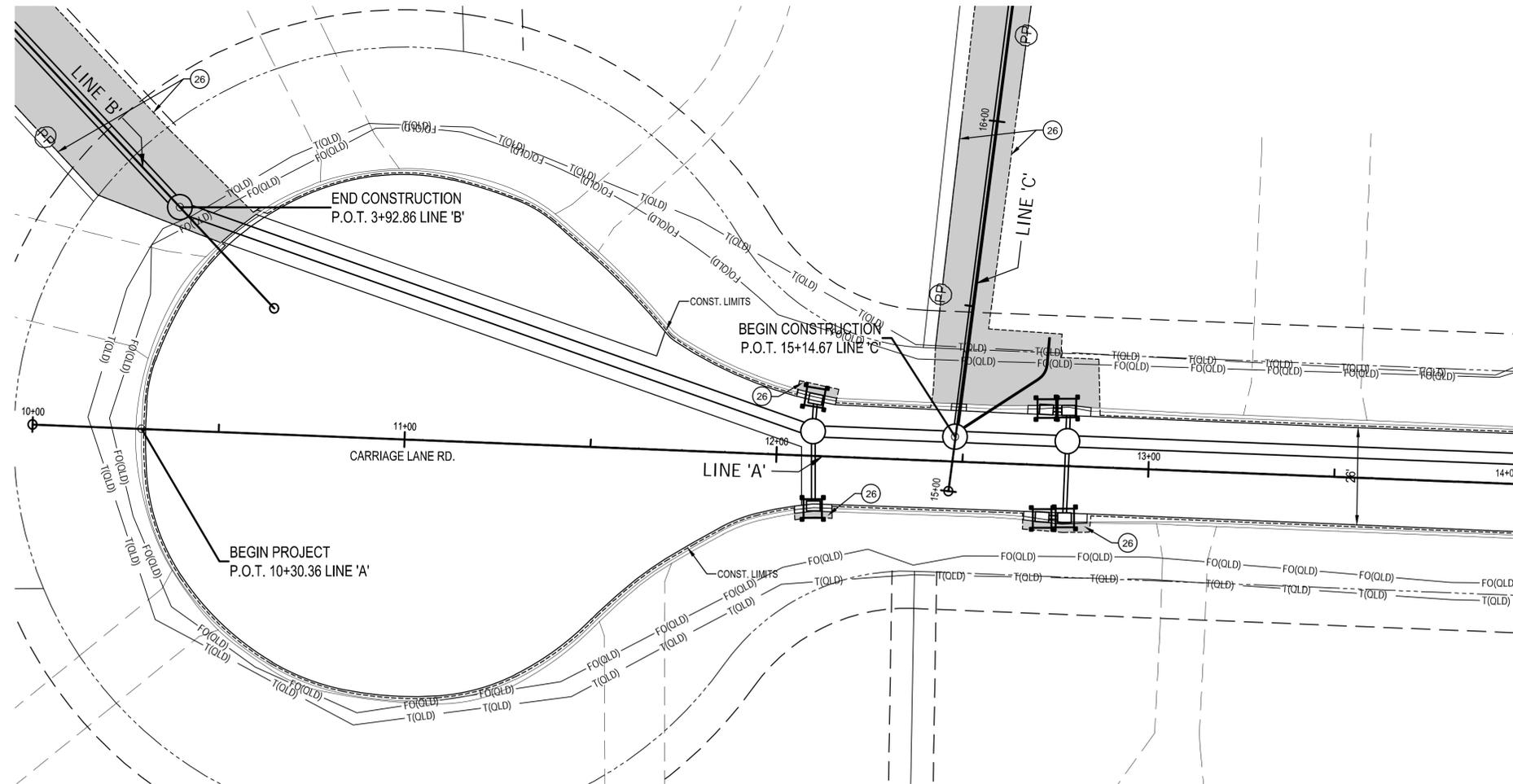
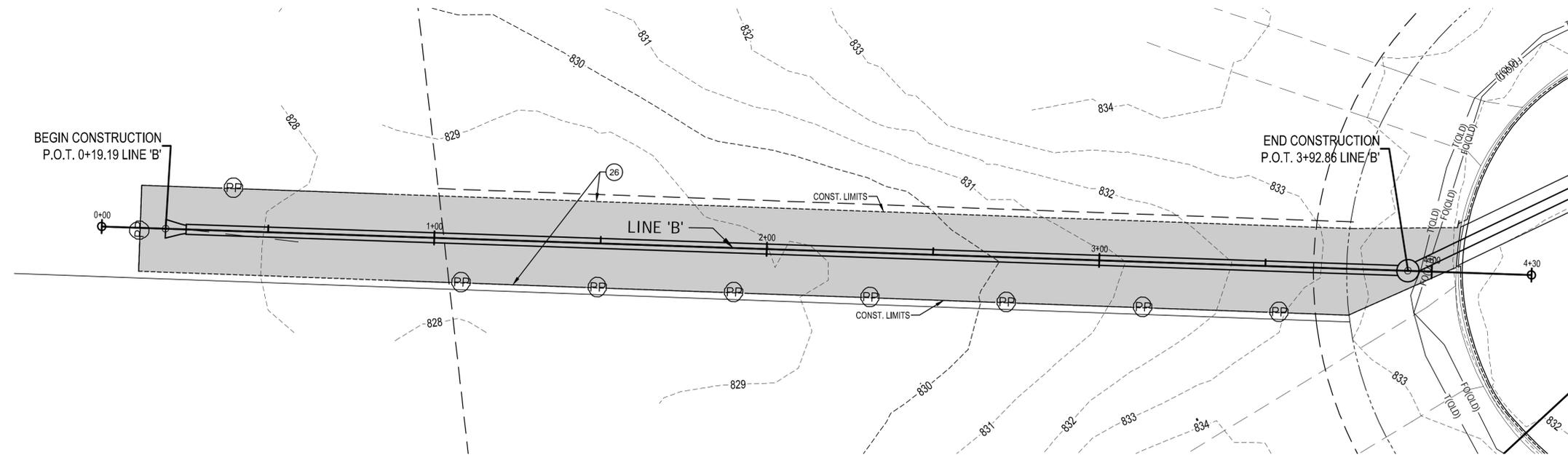
DRAWN:	BRA	CHK'D:	EMM	NO.	REVISION	BY	DATE
DESIGNED:	BRA	APPR'VD:	AJK				
DATE:	DECEMBER 2023						
HORIZ. SCALE:	N/A						
VERT. SCALE:	N/A						
PROJECT NUMBER	2264-1424-90						

12/08/2023  
DLZ INDIANA, LLC

SHEET 13  
OF 21  
DRAWING NUMBER  
C2.0







MATCHLINE - SEE SHEET C3.1

- LEGEND**
- PP PERIMETER PROTECTION
  - TEMPORARY CURB INLET PROTECTION
  - 26 MULCHED SEEDING, TYPE U AND 6" OF TOPSOIL



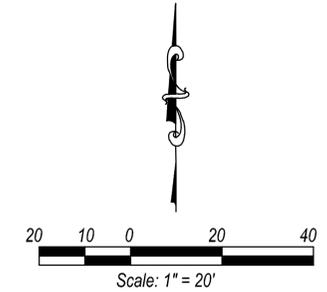
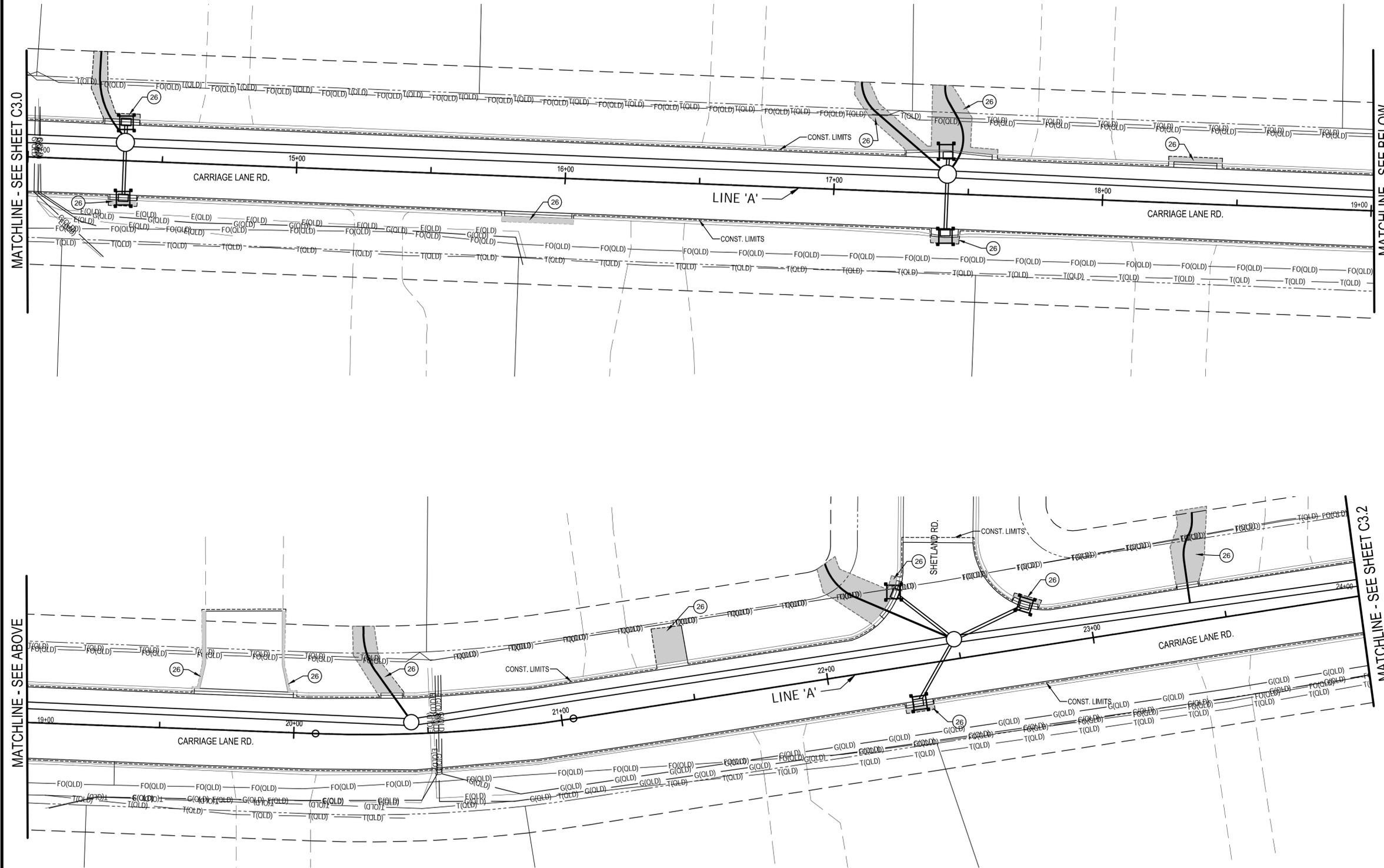
PORTER COUNTY  
**CARRIAGE LANE ROAD**  
 STORM SEWER & ROADWAY IMPROVEMENTS  
 INDIANA  
 EROSION CONTROL PLAN

NO.	REVISION	BY	DATE

DRAWN: BRA    CHK'D: EMM  
 DESIGNED: BRA    APPR'VD: AJK  
 DATE: DECEMBER 2023  
 HORIZ. SCALE: 1" = 20'  
 VERT. SCALE: N/A  
 PROJECT NUMBER  
**2264-1424-90**

SHEET 16	
OF 21	
DRAWING NUMBER	C3.0

12/08/2023  
 DLZ INDIANA, LLC



- LEGEND**
-  TEMPORARY CURB INLET PROTECTION
  -  MULCHED SEEDING, TYPE U AND 6" OF TOPSOIL

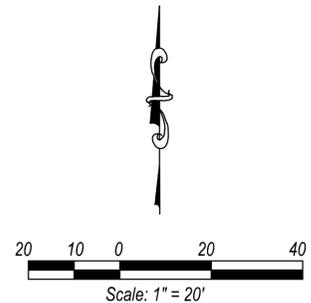
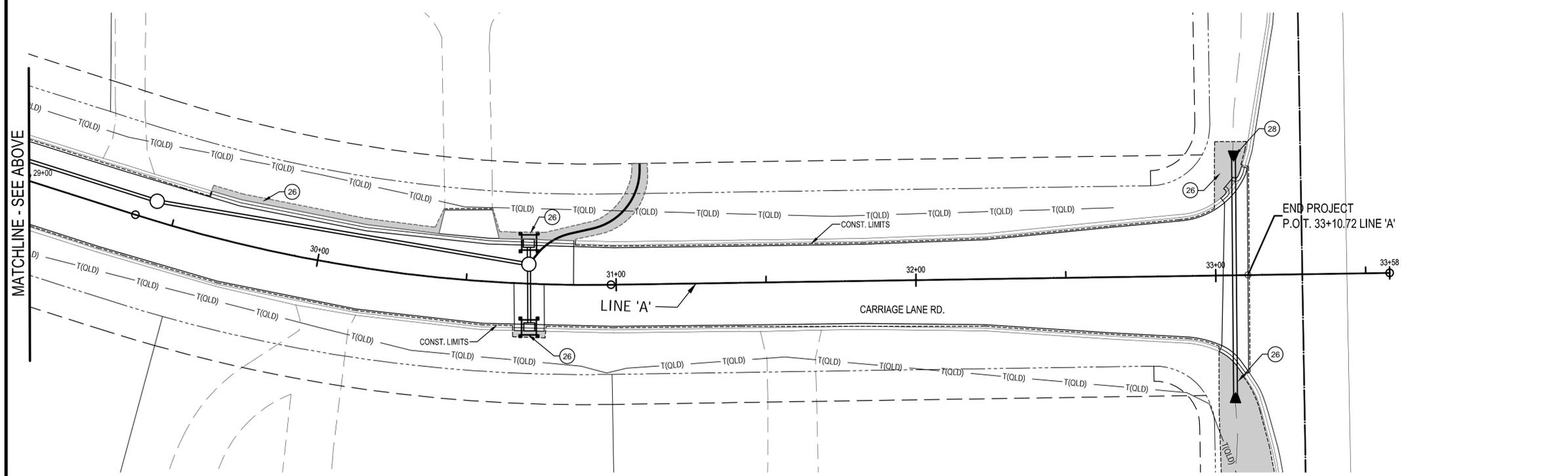
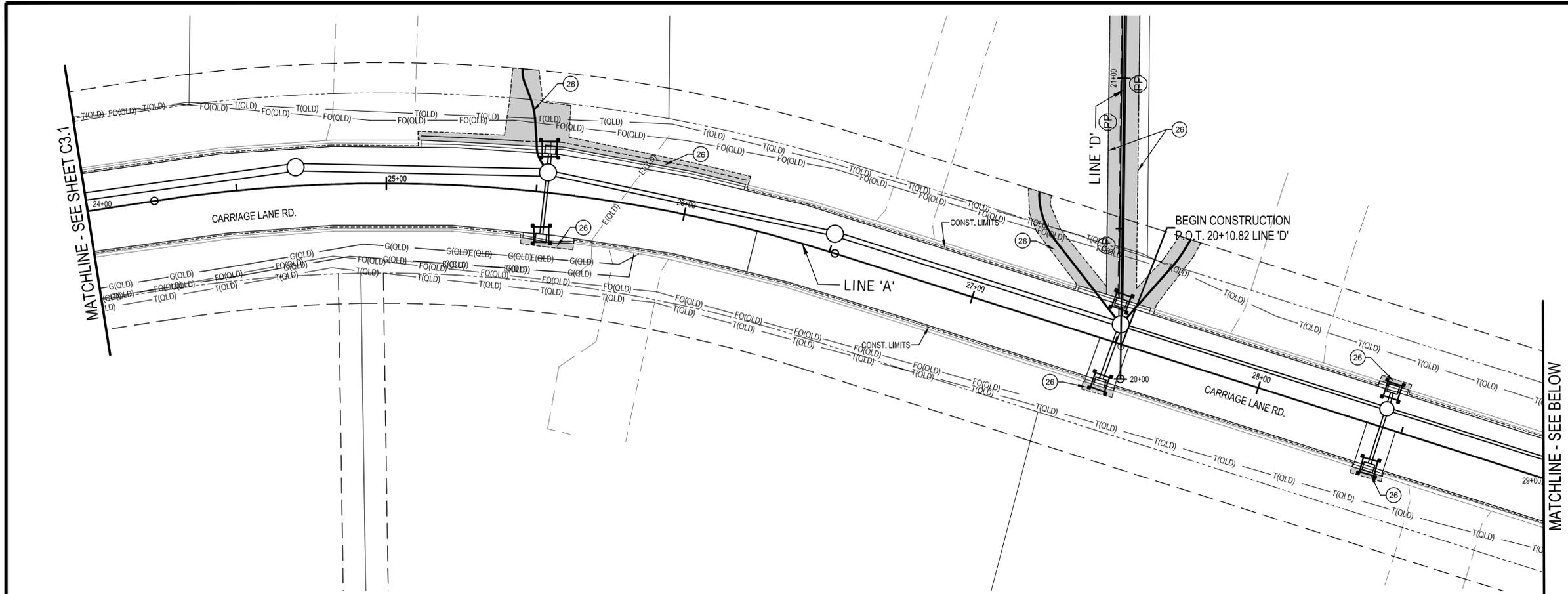


PORTER COUNTY  
**CARRIAGE LANE ROAD**  
 STORM SEWER & ROADWAY IMPROVEMENTS  
 INDIANA  
 EROSION CONTROL PLAN

DRAWN: BRA	CHK'D: EMM	NO.	REVISION	BY	DATE
DESIGNED: BRA	APPR'VD: AJK	▲			
DATE: DECEMBER 2023		▲			
HORIZ. SCALE: 1" = 20'		▲			
VERT. SCALE: N/A		▲			
PROJECT NUMBER		▲			
<b>2264-1424-90</b>		▲			

SHEET 17
OF 21
DRAWING NUMBER
<b>C3.1</b>

12/08/2023  
 DLZ INDIANA, LLC



- LEGEND**
- ⊖ PP PERIMETER PROTECTION
  - ⊞ TEMPORARY CURB INLET PROTECTION
  - ⊙ 26 MULCHED SEEDING, TYPE U AND 6" OF TOPSOIL
  - ⊙ 28 CULVERT ENTRANCE PROTECTION



PORTER COUNTY  
**CARRIAGE LANE ROAD**  
 STORM SEWER & ROADWAY IMPROVEMENTS

INDIANA

EROSION CONTROL PLAN

DRAWN:	CHK'D:	EMM	NO.	REVISION	BY	DATE
DESIGNED: BRA	APPR'VD: AJK		▲			
DATE: DECEMBER 2023			▲			
HORIZ. SCALE: 1" = 20'			▲			
VERT. SCALE: N/A			▲			
PROJECT NUMBER			▲			
<b>2264-1424-90</b>			▲			

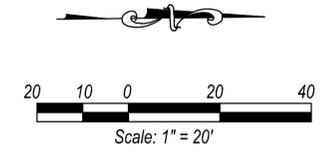
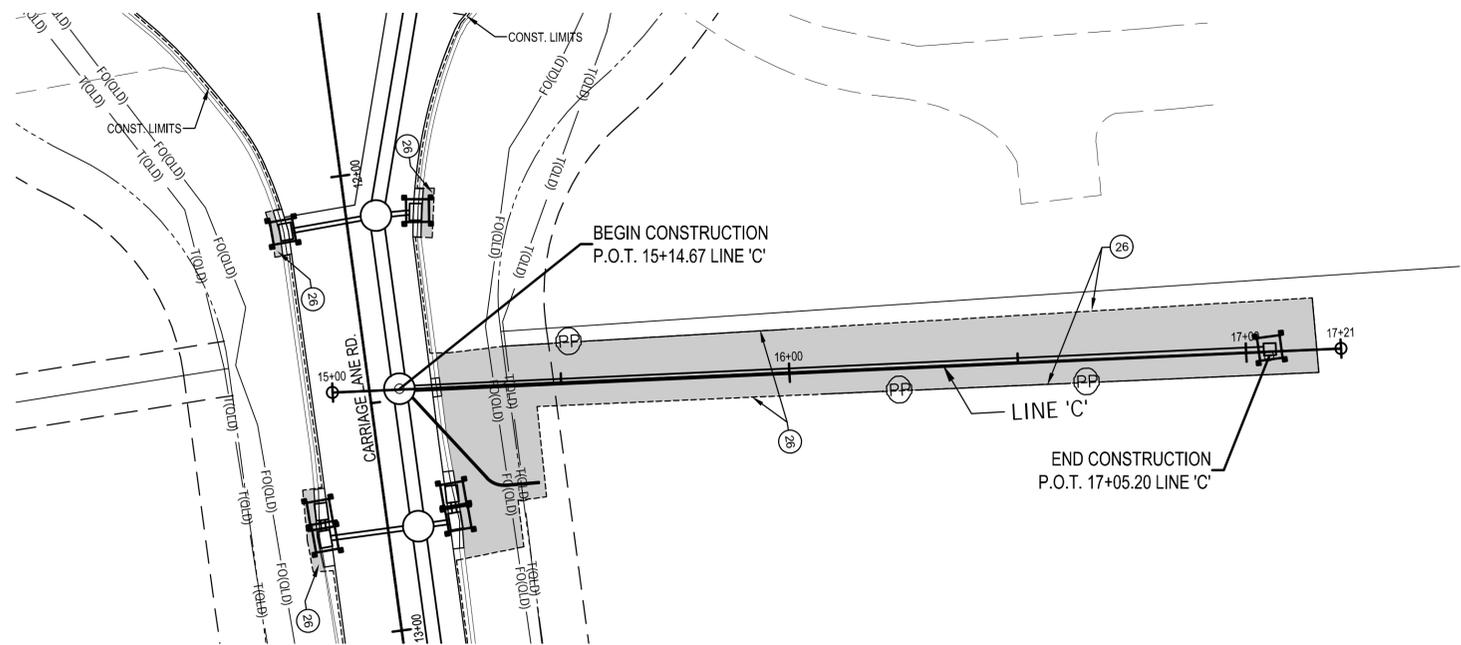
12/08/2023  
 DLZ INDIANA, LLC

SHEET 18

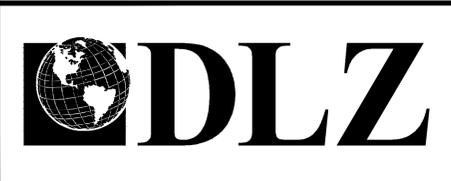
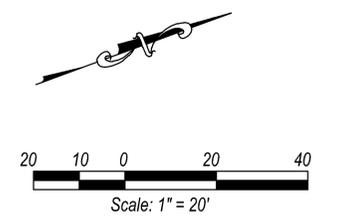
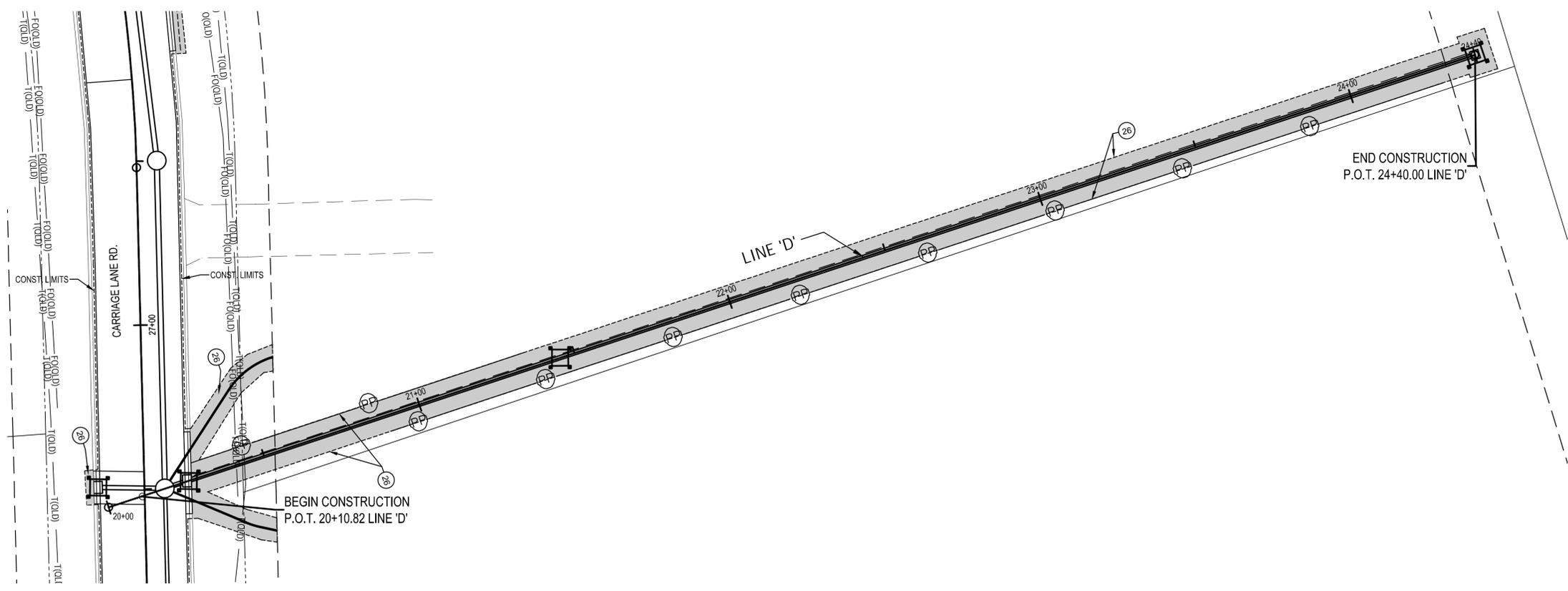
OF 21

DRAWING NUMBER

**C3.2**



- LEGEND**
- PERIMETER PROTECTION
  - TEMPORARY CURB INLET PROTECTION
  - MULCHED SEEDING, TYPE U AND 6" OF TOPSOIL



PORTER COUNTY INDIANA

**CARRIAGE LANE ROAD  
STORM SEWER & ROADWAY IMPROVEMENTS**

**EROSION CONTROL PLAN**

DRAWN:	CHK'D:	NO.	REVISION	BY	DATE
BRA	EMM	▲			
DESIGNED: BRA	APPR'VD: AJK	▲			
DATE: DECEMBER 2023		▲			
HORIZ. SCALE: 1" = 20'		▲			
VERT. SCALE: N/A		▲			
PROJECT NUMBER		▲			
<b>2264-1424-90</b>		▲			

SHEET	19
OF	21
DRAWING NUMBER	<b>C3.3</b>

12/08/2023  
DLZ INDIANA, LLC

## GENERAL EROSION CONTROL NOTES

1. ALL EROSION CONTROL MEASURES TO BE INSTALLED AND MAINTAINED PER THE INDIANA STORMWATER QUALITY MANUAL OR INDOT STANDARDS. PROPRIETARY EROSION CONTROL DEVICES ARE TO BE INSTALLED AND MAINTAINED PER THE MANUFACTURER'S RECOMMENDATIONS.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGES, RESTORATION AND CLEAN-UP ASSOCIATED WITH SEDIMENTS LEAVING THE SITE.
3. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING, INSPECTING AND MAINTAINING ALL NECESSARY EROSION CONTROL MEASURES UNTIL THE OWNER ACCEPTS THE PROJECT AS COMPLETE.
4. THE CONTRACTOR SHALL KEEP THE EXISTING PAVEMENT FREE OF SEDIMENT. THE CONTRACTOR SHALL REMOVE SEDIMENTS FROM PAVEMENT BY SWEEPING TECHNIQUES. FLUSHING THE PAVEMENT AS A CLEANING TECHNIQUE IS NOT ACCEPTABLE.
5. SLOPES GREATER THAN 4:1 WITH A VERTICAL CHANGE GREATER THAN TWO FEET SHALL RECEIVE AN EROSION CONTROL BLANKET. THE BLANKET SHALL HAVE A LIFE EXPECTANCY OF 24 MONTHS WITH BIODEGRADABLE NETTING.
6. ANY SOILS REMOVED FROM THE SITE ARE TO BE TREATED WITH THE SAME CARE AND REQUIREMENTS SET FORTH IN THIS PLAN.
7. THE CONTRACTOR SHALL KEEP A WEEKLY LOG OF EROSION CONTROL INSPECTIONS. THE LOG SHOULD IDENTIFY THE CONDITION OF THE EROSION CONTROL MEASURES, ANY REQUIRED MAINTENANCE TO THE EROSION CONTROL MEASURES AND ADDITIONAL STEPS TAKEN TO RECTIFY AND PREVENT EROSION AS IDENTIFIED DURING THE INSPECTION. THE LOG NEEDS TO BE AVAILABLE FOR REVIEW, IF REQUESTED, BY THE OWNER, THE ENGINEER OR ANY AGENCY WITH INSPECTION AUTHORITY.
8. CONTRACTOR IS FREE TO USE PROPRIETARY EROSION CONTROL PRODUCTS THAT ARE ACCEPTABLE IN THE STATE OF INDIANA. THE OWNER AND/OR ENGINEER MUST APPROVE THE SAID PROPRIETARY PRODUCT BEFORE INSTALLATION.
9. CONTRACTOR TO APPLY TEMPORARY SEEDING TO ANY DISTURBED SOIL THAT IS TO REMAIN UNWORKED FOR 15 DAYS OR MORE.
10. CONTRACTOR TO PROVIDE INLET PROTECTION MEASURES TO ALL GRATED STRUCTURES THAT COULD RESPONSIBLY BE EXPECTED TO COLLECT RUN-OFF FROM DISTURBED AREAS. INLET PROTECTION MEASURES CAN NOT BE A TRAFFIC HAZARD AND MUST BE ACCEPTABLE TO THE PORTER COUNTY COMMISSIONERS.
11. CONTRACTOR TO MAINTAIN A SPILL PROTECTION PLAN. THE PLAN NEEDS TO INCLUDE HAVING SPILL CLEAN-UP KITS ON SITE. ALL FUELING, MAINTENANCE ACTIVITIES AND LIQUID HANDLING ACTIVITIES SHALL OCCUR IN DESIGNATED AREA. THE SAID AREAS SHALL BE SURROUNDED BY IMPERMEABLE BERMS OR BOOMS TO CONTAIN POSSIBLE SPILLS.
12. CONTRACTOR (TBD) IS RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL ON SITE.

## CONSTRUCTION CONTAMINANTS OF CONCERN

FUEL AND MAINTENANCE FLUIDS	FUELING, VEHICLE MAINTENANCE AND PARKING SHALL BE ONLY IN DESIGNATED AREAS. AREAS SHALL BE PROTECTED WITH IMPERMEABLE BERM TO PREVENT SPILL MIGRATION. CONTRACTOR SHALL KEEP SPILL CLEAN-UP KITS ON SITE. CONTRACTOR SHALL FOLLOW EPA AND IDEM REQUIREMENTS FOR SPILLS
CONCRETE WASTE AND CONCRETE UTILITY CLEAN-UP	A DESIGNATED CONCRETE WASHOUT CLEAN-UP AREA SHALL BE DESIGNATED FOR CLEANING CONCRETE TOOLS AND UTILITY CLEAN-UPS. NO CONCRETE OR WATER LATENT WITH CONCRETE RESIDUE CAN BE DUMPED INTO SEWER FACILITIES OR WATERWAYS.
MATERIAL PACKAGING AND DEBRIS	CONTRACTOR SHALL ABIDE BY A GOOD HOUSEKEEPING POLICY. GENERAL TRASH AND DEBRIS SHALL BE COLLECTED AND DISPOSED OF PROPERLY ON A DAILY BASIS. CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING ANY TRASH THAT IS BLOWN FROM THE SITE.
SANITARY FACILITIES	CONTRACTOR SHALL PROVIDE THE APPROPRIATE TEMPORARY SANITARY FACILITIES ON SITE. FACILITIES SHALL BE MAINTAINED AND DISPOSED OF IN A LEGAL AND RESPONSIBLE FASHION.
FERTILIZERS, HERBICIDES AND SEEDS	CONTRACTOR SHALL STORE FERTILIZERS, HERBICIDES AND SEEDING SUPPLIES OFF-SITE OR WITHIN AN ENCLOSED FACILITY TO PROTECT FROM WEATHER. SPILLS OF FERTILIZERS AND HERBICIDES SHALL BE CLEANED AND COLLECTED FOR APPROPRIATE DISPOSAL. FLUSHING OF FERTILIZERS, HERBICIDES AND SEED MIXTURES INTO THE STORMWATER FACILITIES AND/OR DRAINAGE WAYS IS PROHIBITED.

### INSTALLATION

#### SEEDBED PREPARATION:

1. TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS.
2. APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.
3. WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF THE SOIL WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE.

#### SEEDING:

1. SELECT A SEED SPECIES OR AN APPROPRIATE SEED MIXTURE AND APPLICATION RATE FROM TABLE 1.
2. APPLY SEED UNIFORMLY WITH A DRILL SEEDER, CYCLONE SEEDER, HAND OR OTHER APPROVED EQUIPMENT WHICH ALLOWS FOR EVEN DISTRIBUTION OF THE SEED. PLANT OR COVER SEED TO THE DEPTH SHOWN IN TABLE 1.
  - IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL CONTACT BY FIRING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER COMPLETING SEEDING OPERATIONS.
  - DAILY SEEDING WHEN THE SOIL IS MOIST IS USUALLY MOST EFFECTIVE.
  - IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.
  - WITHIN 24 HOURS AFTER SEEDING, APPLY MULCH AND ANCHOR IT IN PLACE.

#### MAINTENANCE:

1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. IF AS A RESULT OF A RAIN EVENT, THE PREPARED SEED BED BECOMES RUTTED, CRUSTED OR ERODED, OR DEPRESSIONS EXIST, THE SOIL SHALL BE REWORKED UNTIL IT IS SMOOTH. REWORKED AREAS SHALL BE RE-SEEDDED.
2. CHECK FOR EROSION OR MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80 PERCENT DENSITY); RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
4. IF NITROGEN DEFICIENCY IS APPARENT, TOP-DRESS FALL SEEDDED WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

#### LIMITATIONS:

1. HIGH SLOPES AND AREAS OF CONCENTRATED RUNOFF FLOW SHOULD BE ADDRESSED WITH MORE RIGOROUS SURFACE STABILIZATION PRACTICES SUCH AS EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS

SEE SPECIFICATIONS FOR INFORMATION ON PERMANENT SEEDING.

SEED SPECIES	RATE PER ACRE	PLANTING DEPTH	OPTIMUM DATES
OATS	150 LBS	½ INCH	JAN 1 - JUNE 15
MULCHING	150 LBS	½ INCH	JUNE 16 - AUG 31
WINTER WHEAT	150 LBS	½ INCH	SEPT 1 - DEC 1

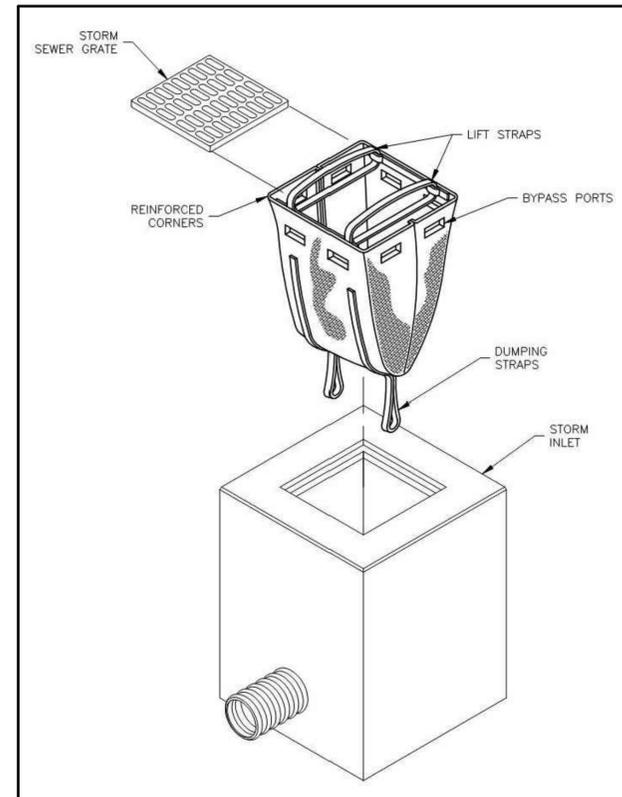
## TEMPORARY SEEDING

SCALE: NTS

2  
C3.4

## CONSTRUCTION SEQUENCE AND COMMON PRACTICES FOR EROSION AND SEDIMENT CONTROL

- |  |  |  |
|--|--|--|
| <ol style="list-style-type: none"> <li>1. EVALUATE THE SITE<br/>BEFORE CONSTRUCTION, CONTRACTOR SHALL EVALUATE THE SITE AND MARK VEGETATIVE AREAS AND TREES TO BE PROTECTED. UNIQUE AREAS TO PRESERVE, ON-SITE SEPTIC SYSTEM ABSORPTION FIELDS, AND VEGETATION SUITABLE FOR FILTER STRIPS, ESPECIALLY IN PERIMETER AREAS.</li> <li>2. PROTECT TREES AND SENSITIVE AREAS<br/>TO PREVENT ROOT DAMAGE, DO NOT GRAB, BURN, PLACE SOIL PILES, OR PARK VEHICLES NEAR TREES OR IN AREAS MARKED FOR PRESERVATION. PLACE PLASTIC MESH OR SNOW FENCE BARRIERS AROUND THE TREES' DRIFLINES TO PROTECT THE AREA BELOW THEIR BRANCHES.<br/>PLACE A PHYSICAL BARRIER, SUCH AS PLASTIC FENCING, AROUND THE AREA DESIGNATED FOR A SEPTIC SYSTEM ABSORPTION FIELD (IF APPLICABLE).</li> <li>3. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS<br/>IDENTIFY THE AREAS WHERE SEDIMENT LADEN RUNOFF COULD LEAVE THE CONSTRUCTION SITE, AND INSTALL PERIMETER CONTROLS TO MINIMIZE THE POTENTIAL FOR OFF-SITE SEDIMENTATION. IT'S IMPORTANT THAT PERIMETER CONTROLS ARE IN PLACE BEFORE ANY EARTHMOVING ACTIVITIES BEGIN.</li> <li>4. PROTECT DOWN-SLOPE AREAS WITH VEGETATIVE FILTER STRIPS<br/>ON SLOPES OF LESS THAN SIX PERCENT, PRESERVE A 20-TO 30-FOOT WIDE (MINIMUM) VEGETATIVE BUFFER STRIP AROUND THE PERIMETER OF THE PROPERTY, AND USE IT AS A FILTER STRIP FOR TRAPPING SEDIMENT. DO NOT MOW FILTER STRIP VEGETATION SHORTER THAN FOUR INCHES.</li> <li>5. PROTECT DOWN-SLOPE AREAS WITH SILT FENCES AND OTHER APPROPRIATE PRACTICES<br/>USE SILT FENCING ALONG THE PERIMETER OF THE LOT'S DOWNSLOPE SIDE(S) TO TRAP SEDIMENT. REFER TO SILT FENCES PRACTICES.</li> <li>6. INSTALL GRAVEL DRIVE<br/>RESTRICT ALL LOT ACCESS TO THIS DRIVE TO PREVENT VEHICLES FROM TRACKING MUD ONTO ROADWAYS. REFER TO GRAVEL</li> </ol> | <ol style="list-style-type: none"> <li>7. PROTECT STORM SEWER INLETS<br/>CURB INLET PROTECTION DEVICES ARE NOT EFFICIENT IN REMOVING SEDIMENT FROM STORM WATER RUNOFF. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INCORPORATED INTO THE PLAN AND THE DAY-TO-DAY CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF SEDIMENT ENTERING A STREET. THE BEST DEFENSE IN CONTROLLING SEDIMENTATION IS THE INSTALLATION OF PERIMETER PROTECTION DOWNSLOPE OF THE CONSTRUCTION ENTRANCES AND DAILY CLEANING AND REMOVAL OF SEDIMENT FROM STREETS. EVEN WITH THESE MEASURES IMPLEMENTED, SEDIMENT AND TRACKED SOIL WILL FIND THEIR WAY INTO THE STREET. CURB INLET PROTECTION DEVICES ARE DESIGNED TO CAPTURE SEDIMENT. HOWEVER, THESE PRACTICES ARE NOT DESIGNED TO TRAP LARGE AMOUNTS OF SEDIMENT AND REQUIRE FREQUENT MAINTENANCE IF THEY ARE TO REMAIN EFFECTIVE. WHEN SELECTING A CURB INLET PROTECTION MEASURE, IT IS IMPORTANT TO SELECT A DEVICE THAT DOES NOT BLOCK THE INLET ENTIRELY. TOTAL OBSTRUCTION OF THE INLET WILL CAUSE EXCESSIVE PONDING AND IN SOME SITUATIONS BYPASS FLOW THAT MAY RESULT IN EROSION.<br/>PROTECT ON-SITE STORM SEWER DROP INLETS WITH SILT FENCE MATERIAL OR EQUIVALENT MEASURES. REFER TO DROP INLET PROTECTION DRAWINGS.</li> <li>8. PREPARE THE SITE FOR CONSTRUCTION<br/>PREPARE THE SITE FOR CONSTRUCTION AND FOR INSTALLATION OF UTILITIES. MAKE SURE ALL CONTRACTORS (ESPECIALLY THE EXCAVATING CONTRACTOR) ARE AWARE OF AREAS TO BE PROTECTED.</li> <li>9. SALVAGE AND STOCKPILE TOPSOIL OR SUBSOIL<br/>REMOVE TOPSOIL (TYPICALLY THE UPPER FOUR TO SIX INCHES OF THE SOIL MATERIAL) AND STOCKPILE.<br/>REMOVE SUBSOIL, INCLUDING ANY EXCAVATED MATERIAL ASSOCIATED WITH BASEMENT CONSTRUCTION, AND STOCKPILE SEPARATELY FROM THE TOPSOIL.<br/>ON SMALL BUILDING SITES, IT MAY NOT BE FEASIBLE TO STOCKPILE SOIL MATERIAL ON EACH INDIVIDUAL LOT DUE TO SPACE LIMITATIONS. IN THESE SITUATIONS, SOIL</li> </ol> | <ol style="list-style-type: none"> <li>10. REMOVE REMAINING TEMPORARY CONTROL MEASURES<br/>MATERIAL SHOULD BE TRANSPORTED TO PROTECTED AREAS DESIGNATED ON THE OVERALL CONSTRUCTION PLAN OR THOSE AREAS DESIGNATED BY THE DEVELOPER. LOCATE THE STOCKPILES AWAY FROM ANY DOWNSLOPE STREET, DRIVEWAY, STREAM, LAKE, WETLAND, DITCH OR DRAINAGE WAY. IMMEDIATELY AFTER STOCKPILING, TEMPORARY SEED THE STOCKPILES WITH ANNUAL RYE OR WINTER WHEAT AND/OR INSTALL SEDIMENT BARRIERS AROUND THE PERIMETER OF THE PILES.<br/>DO NOT PLACE STOCKPILES IN A DRAINAGE EASEMENT.</li> <li>11. ONCE THE SOD AND/OR VEGETATION IS WELL ESTABLISHED, REMOVE ANY REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES, SUCH AS:<br/>REMOVE DOWNSPOUT EXTENDERS, OR, SHORTEN TO OUTLET ON AN ESTABLISHED VEGETATED AREA, ALLOWING FOR MAXIMUM FILTRATION.<br/>REMOVE STORM SEWER INLET PROTECTION MEASURES.</li> </ol> |
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### NOTES:

1. FRAME OPENING SIZED TO MATCH INLET OPENING.
2. GEOTEXTILE BAG SHALL BE FABRICATED FROM PIECE OF GEOTEXTILE 2 TIMES THE OPENING SIZE PUSHED THROUGH OPENING TO FORM WEEPHOLE. SECURED BY NAILS.
3. FRAME WITH BAG TO BE PLACED OVER INLET OPENING.
4. BAG FRAME SHALL BE SECURED IN PLACE BY WEIGHT OF INLET GRATE. GRATE MAY BE ROTATED 45 DEGREES TO THE BAG'S FRAME.

## CURB INLET PROTECTION

SCALE: NTS

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C3.4



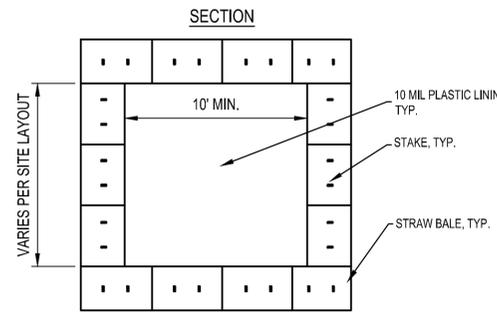
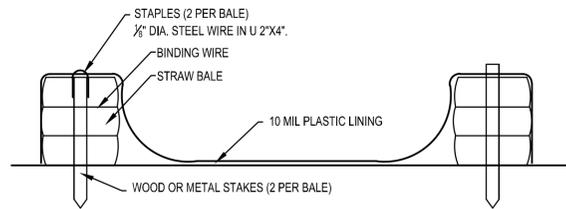
PORTER COUNTY INDIANA  
**CARRIAGE LANE ROAD**  
**STORM SEWER & ROADWAY IMPROVEMENTS**

EROSION CONTROL DETAILS

DRAWN: BRA	CHK'D: EMM	NO.	REVISION	BY	DATE
DESIGNED: BRA	APPR'VD: AJK	▲			
DATE: DECEMBER 2023		▲			
HORIZ. SCALE: N/A		▲			
VERT. SCALE: N/A		▲			
PROJECT NUMBER		▲			
<b>2264-1424-90</b>		▲			

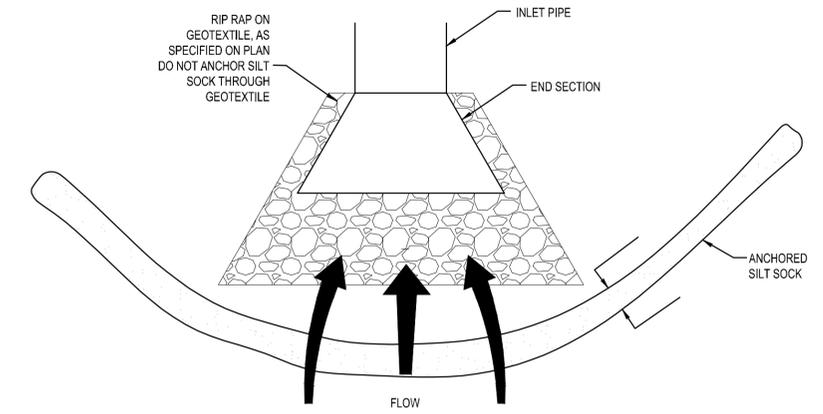
12/08/2023  
DLZ INDIANA, LLC

SHEET 20  
OF 21  
DRAWING NUMBER  
**C3.4**

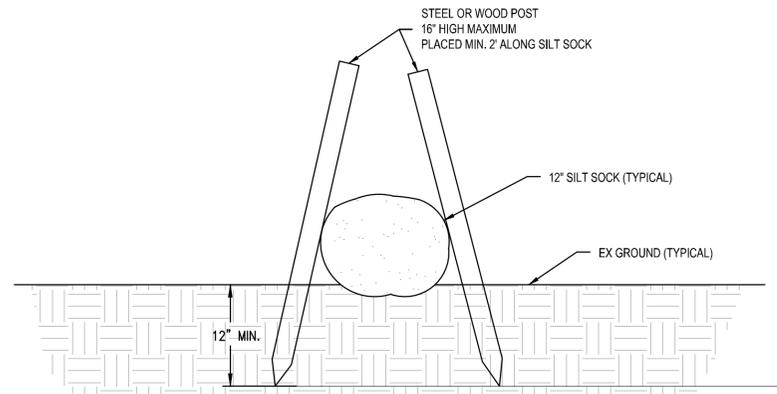


**CONCRETE WASHOUT**  
SCALE: NTS

- NOTES:**
1. INSTALL CONCRETE WASHOUT SIGN WITHIN 30' OF TEMPORARY WASHOUT FACILITY.
  2. LAYOUT OF WASHOUT FACILITY MAY VARY DEPENDING ON SPACE AVAILABLE WITHIN CONSTRUCTION STAGING AREA. WASHOUT FACILITIES SHALL BE DESIGNATED BY THE PERMIT HOLDER BEFORE WORK BEGINS AND SHALL BE LOCATED IN AN APPROPRIATE AREA WHERE THE WASTE RESULTING FROM THE WASHOUT CANNOT ENTER SEWER SYSTEMS OR LOCAL WATERWAYS.
  3. WASTE FROM THE WASHOUT FACILITIES SHALL BE DISPOSED OF IN AN APPROVED MANNER ACCORDING TO STATE LAWS.



**CULVERT ENTRANCE PROTECTION**  
SCALE: NTS



**PROFILE VIEW**

- NOTES:**
1. CONTRACTOR TO INSTALL SILT SOCK (PERIMETER PROTECTION) PER EROSION CONTROL PLAN ON SHEET C3.0-C3.2.
  2. THE CONTRACTOR SHOULD BE ADVISED THAT IN THE EVENT THAT THIS OUTLET EROSION PROTECTION FAILS THAT IT SHALL BE REPLACED WITH ANOTHER MEASURE.
  3. USE SILT SOCK, NO COIR LOG.
  4. THE GROUND UNDER THE SOCK SHALL BE SMOOTH GRADED WITH NO CHUNKS OF DIRT OR PILED-UP VEGETATION.
  5. SILT SOCK TO HAVE PARTIAL BURY IN EXISTING GROUND PER MANUFACTURER'S RECOMMENDATIONS.

**SILT SOCK**  
SCALE: NTS



PORTER COUNTY INDIANA  
**CARRIAGE LANE ROAD  
 STORM SEWER & ROADWAY IMPROVEMENTS**  
 EROSION CONTROL DETAILS

DRAWN:	BRA	CHK'D:	EMM	NO.	REVISION	BY	DATE
DESIGNED:	BRA	APPR'VD:	AJK				
DATE:	DECEMBER 2023						
HORIZ. SCALE:	N/A						
VERT. SCALE:	N/A						
PROJECT NUMBER	<b>2264-1424-90</b>						

SHEET	21
OF	21
DRAWING NUMBER	<b>C3.5</b>

12/08/2023  
DLZ INDIANA, LLC