F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6576	16-00006-00-BR	PEORIA	44	1
C.H. R51	ILLINOIS	CONTRACT NO.	89748	

44+1=45

LOCATION OF SECTION INDICATED THUS: –

PLANS FOR PROPOSED BRIDGE REPLACEMENT

KICKAPOO CREEK ROAD (FAU 6576)
OVER TRIBUTARY TO KICKAPOO CREEK
SECTION 16-00006-00-BR
PEORIA COUNTY
JOB C-94-093-18
PROJECT CW95(678)
STP – BRIDGE

INDEX OF SHEETS

LIST OF STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-04	NAME PLATES FOR BRIDGES
606001-07	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606201-04	TYPE B GUTTER (INLET, OUTLET & ENTRANCE)
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-09	TRAFFIC BARRIER TERMINAL TYPE 6A
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
701901-08	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
725001-01	OBJECT AND TERMINAL MARKERS
728001-01	TELESCOPING STEEL SIGN SUPPORT
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

IDOT DISTRICT 4 STANDARDS

406101-04	BUTT JOINTS
630101-04	GUARDRAIL EROSION CONTROL TREATMENTS
780001-04	TYPICAL PAVEMENT MARKINGS

PROJECT ENGINEER: BRYCE BECKSTROM, P.E.
PROJECT MANAGER: CINDY LOOS, P.E.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

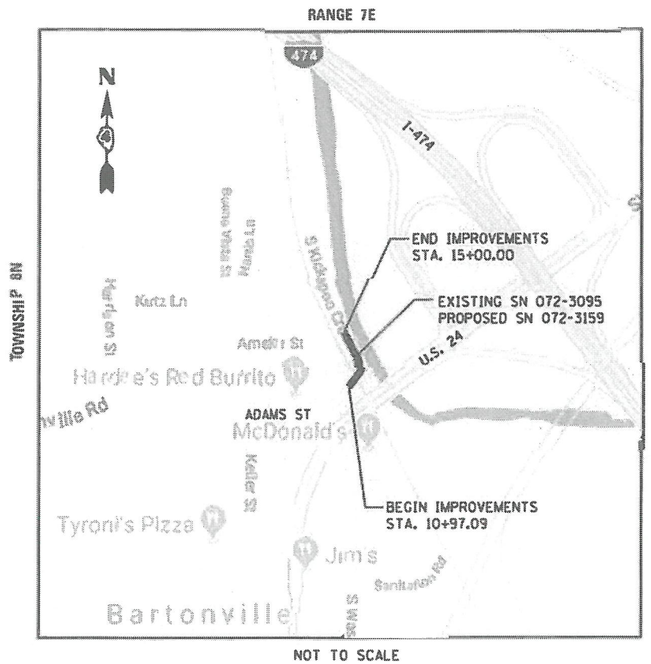
0 5' 10' 15' — 1"= 5'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 40'
50' 100' — 1"= 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. 89748
CAT NO. 035648-00D

Revised 12/24/19

RANGE 7E



NOT TO SCALE

GROSS LENGTH = 402.91 FT. = 0.076 MILE
NET LENGTH = 402.91 FT. = 0.076 MILE

ADT (2017) = 1,750, ADT (2040) = 1,750, SU=2%, MU=1%
HIGHWAY CLASS: III
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR
DESIGN SPEED: 40 MPH
POSTED SPEED LIMIT: 40 MPH
DESIGN POLICY: BLR MANUAL - 3R POLICY

STATE OF ILLINOIS
LICENSED PROFESSIONAL ENGINEER
BRYCE A. BECKSTROM
062-062864
CONTRACT

DATE SIGNED : 11/15/19
LIC. EXP. DATE : 11/30/2021

DATE: 11/15/19

HANSON
Hanson Professional Services Inc.
7625 N. University St., Suite 200
Peoria, Illinois 61614
Offices Nationwide

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

APPROVED November 15 20 19
Amy Benedetto Pontarelli
PEORIA COUNTY ENGINEER

PASSED November 18 20 19
DISTRICT FOUR ENGINEER OF LOCAL AGADS & STREETS

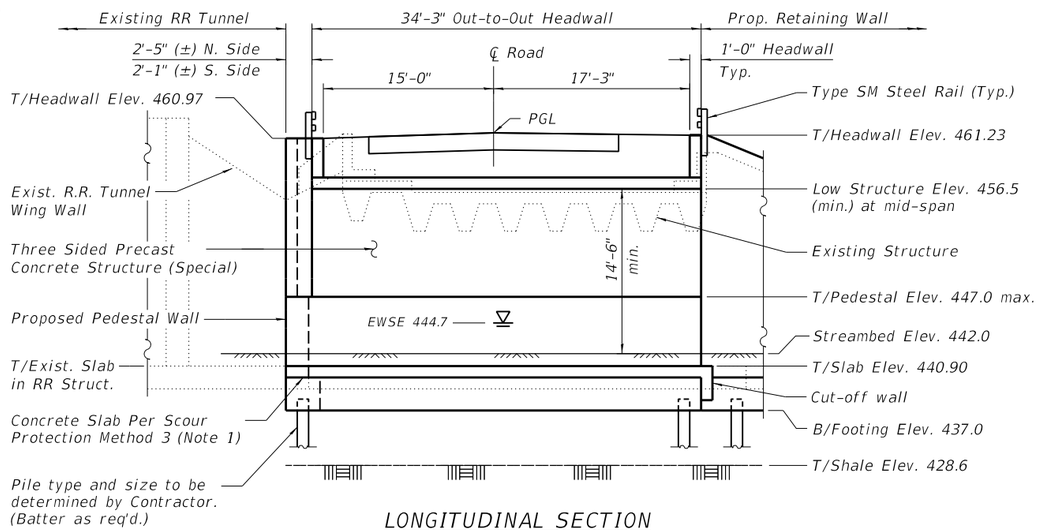
Releasing For Bid Based on Limited Review November 18 20 19
REGION THREE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark: Benchmark #401. Chiseled "X" on west side of top concrete "PSD" manhole riser. East of railroad bridge and south of Kickapoo Creek Road. Elev. 461.19

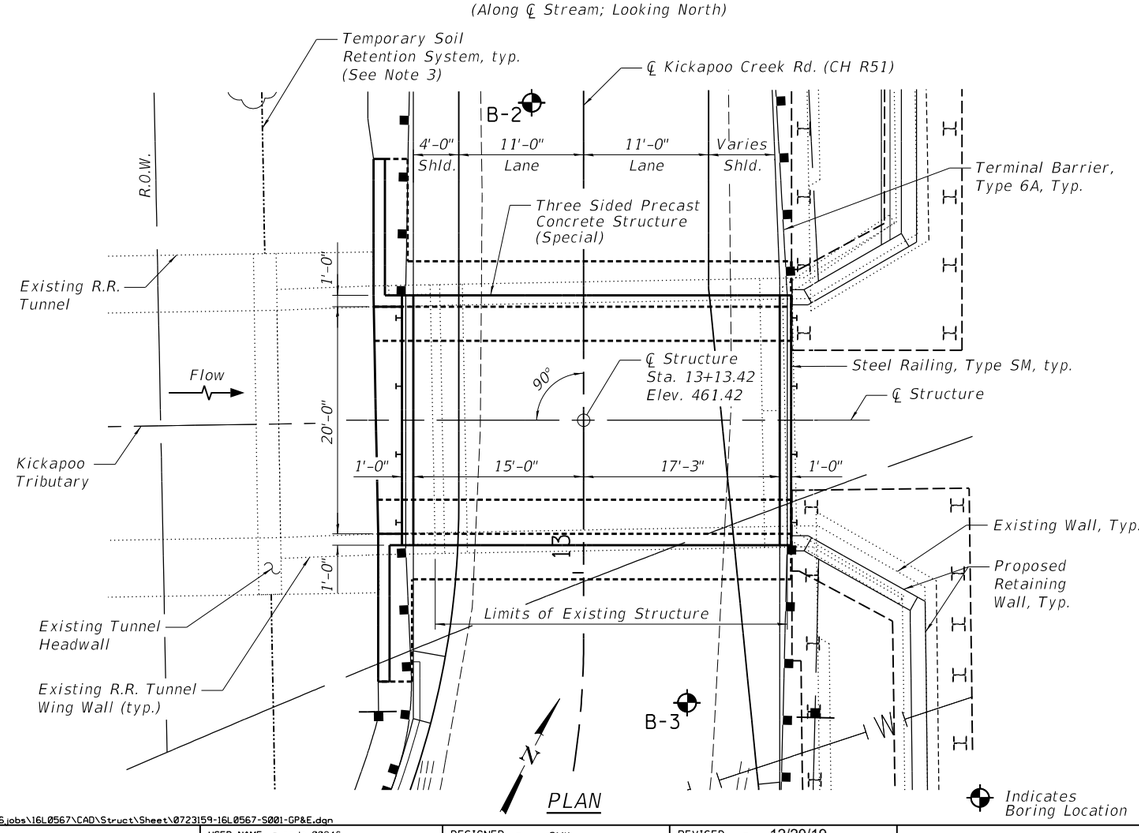
Existing Structure: SN. 072-3095. Constructed in 1960 and consists of a single span buried structure. The top slab consists of concrete T-beams with integral concrete deck. Closed concrete abutments support the superstructure. The structure has a clear span of 20 feet and a width of approximately 32 feet out-to-out of headwalls. The road will be closed during construction.

No salvage



LONGITUDINAL SECTION

(Along ℄ Stream; Looking North)



PLAN

INDEX OF SHEETS

NOTES:

1. Slab shall be designed to span opening; attached to wall or footing; and have minimum thickness of 8". Slab may be cast-in-place or precast with tongue-in-groove joints.
2. Footings, pedestals and concrete wing walls may be cast-in-place or precast.
3. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer. Type, length and configuration of Temporary Soil Retention System to be determined by Contractor.

1

KICKAPOO CREEK TRIBUTARY
BUILT 20__ BY
PEORIA COUNTY
SEC. 16-00006-00-BR
F.A.U. 6576 STA. 13+13.42
STR. NO. 072-3159 LOADING HL-93

NAME PLATE

See Std. 515001

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

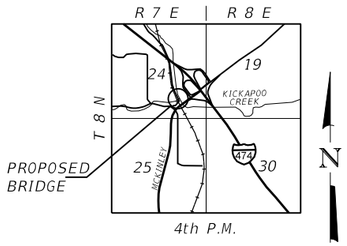
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement Bars)

PRECAST UNITS

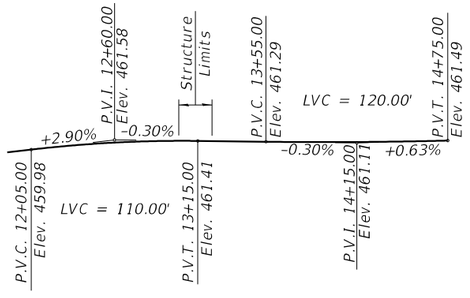
f'c = 5,000 psi
fy = 60,000 psi (Reinforcement Bars)
fy = 65,000 psi (Welded Wire Fabric)

SEISMIC DATA

Seismic Performance Zone (SPZ) =1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) =0.080g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) =0.13g
Soil Site Class = C



LOCATION SKETCH



PROFILE GRADE

WATERWAY INFORMATION

Drainage Area = 1.3 Sq. Mi. Low Grade Elev. 460.99 @ Sta. 12+50

Flood	Freq. Yr.	Q C.F.S Exist.	Q C.F.S Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	30	1,104	1,177	179	237	458.2	1.7	1.4	459.9	459.6
Base	100	1,370	1,543	179	237	458.2	2.3	2.0	460.5	460.2

STUART M. KEMP
081-004897
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

Stuart M. Kemp
SIGNATURE

8/6/2019
DATE

LIC. EXP. DATE: 11/30/2020

This seal only pertains to the design and detailing of Steel Railing, Type SM. The design of all other structural components is the responsibility of the Contractor's engineer in accordance with GBSP 90, Three Sided Precast Concrete Structure (Special).

GENERAL PLAN & ELEVATION
KICKAPOO CREEK ROAD (CH R51) OVER TRIBUTARY TO KICKAPOO CREEK
F.A.U. 6576 - SECTION 16-00006-00-BR
PEORIA COUNTY
STATION 13+13.42
STRUCTURE NO. 072-3159

DESIGNED	SMK	9/11/17
DRAWN	MGM	1/30/19
REVIEWED	SMK	1/30/19

I:\16jobs\16L0567\CAD\Struct\Sheet\0723159-16L0567-S001-GP&E.dgn

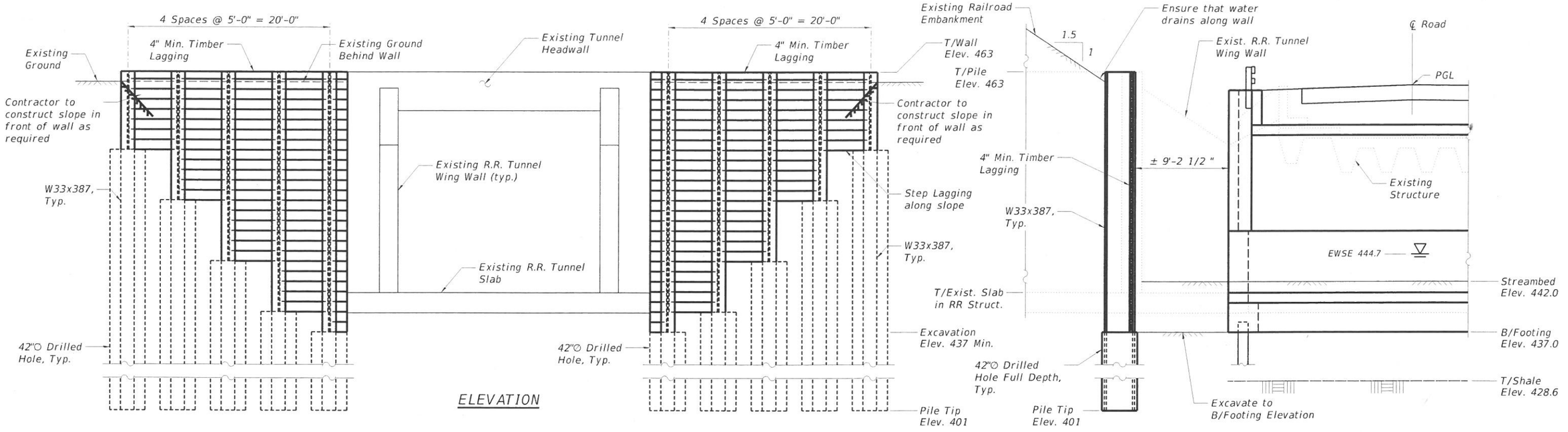
HANSON

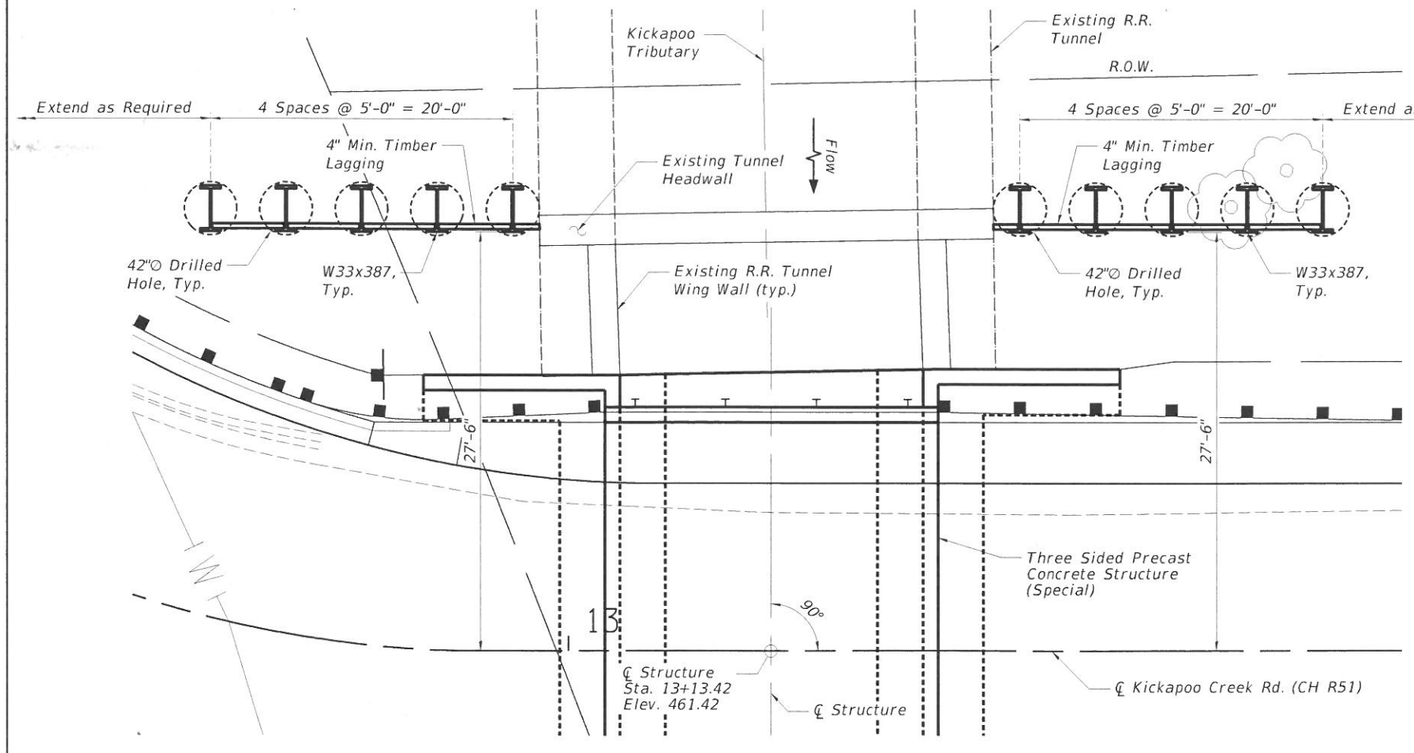
USER NAME = ander-00846	DESIGNED - SMK	REVISED - 12/20/19
	CHECKED - RGC	REVISED -
PLOT SCALE = 0.17 ' / in.	DRAWN - MGM	REVISED -
PLOT DATE = 11/15/2019	DATE - 11/15/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 072-3159
SHEET NO. 1 OF 4 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6576	16-00006-00-BR	PEORIA	44	20
		CONTRACT NO. 89748		
		ILLINOIS FED. AID PROJECT		





LICENSED STRUCTURAL ENGINEER
TRAVIS D. PAINTER
081-007439
STATE OF ILLINOIS

2019/12/20
Expires 2020/11/30

NOTES:

1. Soldier Piles shall be drilled and set in 42" diameter precored holes extending to elevation 401 according to Article 512.09(c) of the Standard Specifications. Cost included in Temporary Soil Retention System.
2. Precored holes shall be backfilled after pile is set. Backfill used shall be Concrete Class DS to Elev. 429 and CLSM Above Elev. 429. Cost included in Temporary Soil Retention System.
3. If the Contractor chooses to alter the temporary cantilevered soldier piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

Design Specifications:

2019 AREMA Manual for Railway Engineering
2004 BNSF/UP Guidelines for temporary shoring

Design Stresses:

fy = 50,000 psi (Soldier Piles)
fb = 1,450 psi (timber lagging)

BILL OF MATERIAL

Item	Unit	Quantity
Temporary Soil Retention System	LSUM	1

TEMPORARY SOLDIER PILE WALL
KICKAPOO CREEK ROAD (CH R51) OVER TRIBUTARY TO KICKAPOO CREEK
F.A.U. 6576 - SECTION 16-00006-00-BR
PEORIA COUNTY
STATION 13+13.42
STRUCTURE NO. 072-3159

Added 12-24-19

DESIGNED	TDP	12/9/19
DRAWN	CDP	12/17/19
REVIEWED		

J:\16.jobs\16L0567\CAD\Struct\Sheet\0723159-16L0567-S00X-Temporary Wall.dgn

HANSON

USER NAME = ander00846	DESIGNED - TDP	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE = 0.17 ' / in.	DRAWN - CDP	REVISED -	
PLOT DATE = 12/20/2019	DATE - 11/18/19	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SOIL RETENTION SYSTEM
STRUCTURE NO. 072-3159
SHEET NO. 1 OF 1 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6576	16-00006-00-BR	PEORIA	44	22A
		CONTRACT NO. 89748		
	ILLINOIS FED. AID PROJECT			