

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

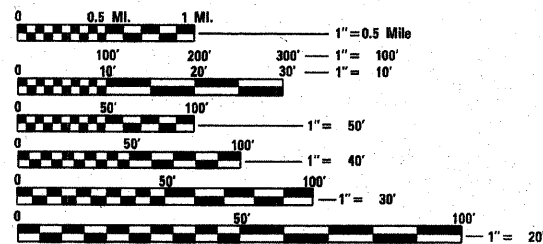
INDEX OF SHEETS

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19-21	CROSS SECTIONS
21A-21D	EXISTING BRIDGE PLANS

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
630001-08	STEEL PLATE BEAM GUARDRAIL
630101-07	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-03	OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701306-02	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-10	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

ENGLISH RATIOS

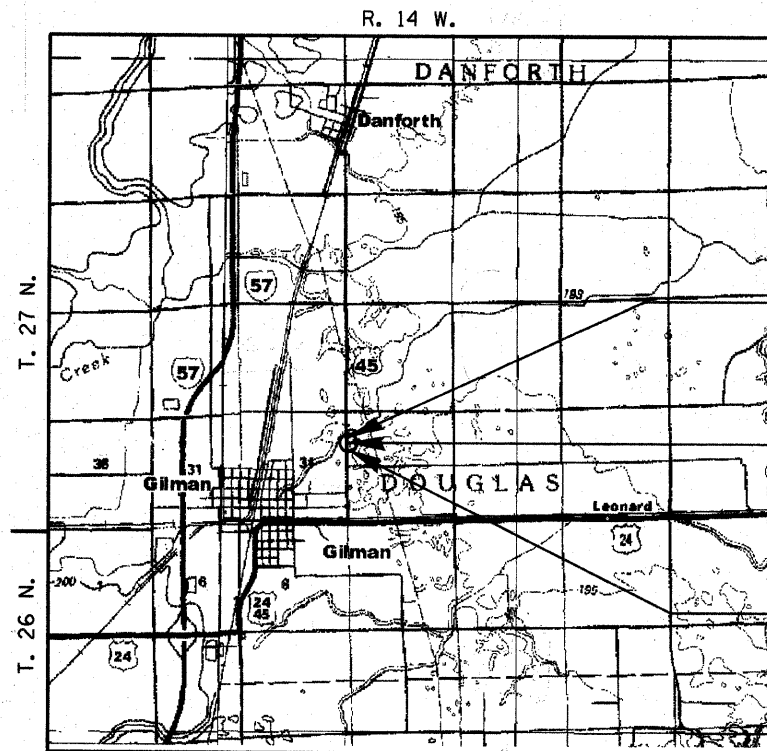


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: DAVE BROVIAK
UNIT CHIEF: MARK JONES
TOWNSHIP: DOUGLAS

**F.A.S. ROUTE 317 (U.S. 45)
SECTION 36 BR
IROQUOIS COUNTY
C-93-057-01**



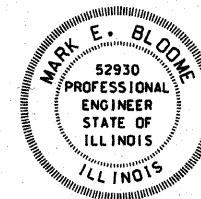
GROSS & NET LENGTH OF IMPROVEMENT = 650.00 FEET
= 0.123 MILES

SCALE: 1" = 0.5 MILE

BEGIN IMPROVEMENT
STA. 1248+00.00

SECTION 36 BR INCLUDES
REMOVE SN 038-0040, REPLACE WITH
TRIPLE 10' X 9' BOX CULVERT SN 038-2015

END IMPROVEMENT
STA. 1254+50.00



Mark E. Bloome
ILLINOIS PROFESSIONAL ENGINEER NO. 52930

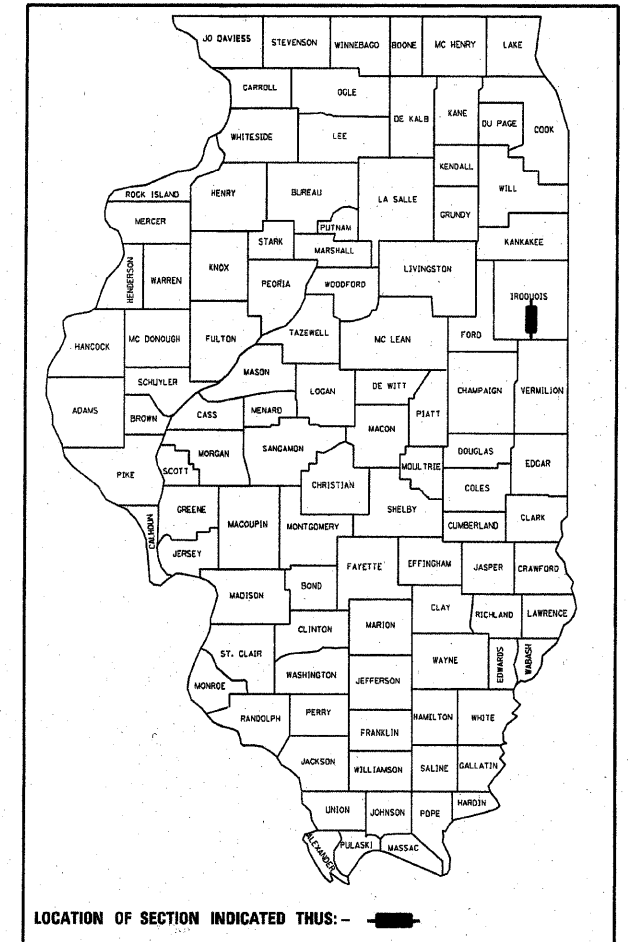
DATE SIGNED: 5-5-2005

LICENSE EXP. DATE: 11-30-2005

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	1
STA. 1248+00		TO STA. 1254+50		
FED. ROAD DIST. NO. 3 ILLINOIS FED. AID PROJECT				

D-93-063-98

CONTRACT NO. 66171



DESIGN DESIGNATION:
MAJOR COLLECTOR

2001 ADT 1875
PV 95% SU 3% MU 2%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED February 10 20 10
George Ryan
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 19 20 10
Scott E. Stitt, P.E./e
REGIONAL ENGINEER OF DESIGN AND ENVIRONMENT
March 19 20 10
Christine M. Reed/e
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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CONTRACT NO. 66171

SUMMARY OF QUANTITIES					
CODE NUMBER	PAY ITEMS	UNIT	TOTAL QUANT.	CONSTRUCTION TYPE CODE	
				I000	X028-2A
20200100	EARTH EXCAVATION	CU YD	350	350	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	620	620	
25000200	SEEDING, CLASS 2	ACRE	0.5	0.5	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	50	50	
28000305	TEMPORARY DITCH CHECKS	FOOT	80	80	
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	285	285	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	160	160	
40600300	AGGREGATE (PRIME COAT)	TON	4	4	
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1477	1477	
44000100	PAVEMENT REMOVAL	SQ YD	273	273	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	908	908	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50800105	REINFORCEMENT BARS	POUND	31640		31640
51205200	TEMPORARY SHEET PILING	SQ FT	1105		1105
51500100	NAME PLATES	EACH	1		1
54003000	CONCRETE BOX CULVERTS	CU YD	174.7		174.7
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	550	550	
* 63000025	STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	75		75
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	454	454	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
28100107	STONE RIPRAP, CLASS A 4	SQ YD	98		98
28200200	FILTER FABRIC	SQ YD	98		98
28000400	PERIMETER EROSION BARRIER	FOOT	900	900	
25100630	EROSION CONTROL BLANKET	SQ YD	2500	2500	

SUMMARY OF QUANTITIES					
CODE NUMBER	PAY ITEMS	UNIT	TOTAL QUANT.	CONSTRUCTION TYPE CODE	
				I000	X028-2A
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	11	11	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1950	1950	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1300	1300	
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	170	170	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	325	325	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	325	325	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	275	275	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1300	1300	
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	170	170	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	9	9	
* 78200405	GUARDRAIL MARKERS	EACH	12	12	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	62	62	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	9	9	
X0321100	GEOTEXTILE RETAINING WALL	SQ FT	94		94
35501332	HOT-MIX ASPHALT BASE COURSE, 12"	SQ YD	267	267	
35600712	HOT-MIX ASPHALT BASE COURSE WIDENING, 9"	SQ YD	129	129	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	150	150	
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	97	97	
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1	
50800515	BAR SPLICERS	EACH	154		154
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	

* SPECIALTY ITEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: VERT. NONE
HORIZ. NONE

DATE: _____ DRAWN BY: _____
CHECKED BY: _____

CONTRACT NO. 66171

SCHEDULE OF BITUMINOUS MATERIALS		
ITEM	LOCATION	QUANTITY
HMA BASE COURSE WIDENING, 9"	RT. STA. 1248+99 TO 1250+64	64.0 SY
	RT. STA. 1251+06 TO 1252+72	65.0 SY
HMA SHOULDERS 8"	RT. STA. 1248+00 TO 1254+50	454.0 SY
	LT. STA. 1248+00 TO 1254+50	454.0 SY
HMA BASE COURSE 12"	RT. STA. 1250+37 TO 1251+33	133.5 SY
	LT. STA. 1250+37 TO 1251+33	133.5 SY
HMA SURFACE REMOVAL, (VARIABLE DEPTH)	RT. & LT. STA. 1248+00 TO 1250+37	632.0 SY
	RT. & LT. STA. 1251+33 TO 1254+50	845.3 SY
LEVELING BINDER (MACHINE METHOD), N50	RT. & LT. STA. 1248+00 TO 1254+50	97.0 TON
HMA SURFACE COURSE, MIX "C", N50	RT. & LT. STA. 1248+00 TO 1254+50	150.0 TON

SCHEDULE OF PAINT PAVEMENT MARKING			
LOCATION	WHITE SOLID, 4"	YELLOW SKIP-DASH, 6"	
LT. 1248+00 TO 1254+50	650'		
1248+00 TO 1254+50		170	
RT. 1248+00 TO 1254+50	650'		
TOTAL	1300'	170	

GUARDRAIL REMOVAL		
LOCATION	LENGTH	
LT. 1249+74.5 TO 1250+63.5	89'	
1251+06.5 TO 1252+44.5	138'	
RT. 1249+25.5 TO 1250+63.5	138'	
1251+06.5 TO 1251+95.5	89'	
TOTAL	454'	

EARTHWORK SCHEDULE				
LOCATION	EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT*	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUDIC YARD
STA. 1248+00 TO 1250+37	135	101	58	43
STA. 1251+33 TO 1254+50	215	161	164	-3
TOTALS	350	262	222	40

*ASSUMED 25% SHRINKAGE FACTOR

SCHEDULE OF HMA SURFACE REMOVAL, VARIABLE DEPTH					
STATION	EXIST. ELEV.	PROP. ELEV.	DIFF.	REMOVAL (FT.)	REMOVAL (IN.)
1248+00	642.01	642.01	0.00	0.1875	2.25
1248+50	641.93	641.93	0.00	0.1875	2.25
1249+00	641.85	641.88	0.03	0.1575	1.89
1249+50	641.72	641.85	0.13	0.0575	0.69
1250+00	641.53	641.85	0.32	0.0000	0.00
1250+37	641.53	641.85	0.32	0.0000	0.00
1251+33	641.56	641.85	0.29	0.0000	0.00
1251+50	641.56	641.85	0.29	0.0000	0.00
1252+00	641.85	641.89	0.04	0.1475	1.77
1252+50	642.06	641.96	-0.10	0.2875	3.45
1253+00	642.08	642.07	-0.01	0.1975	2.37
1253+50	642.04	642.18	0.14	0.0475	0.57
1254+00	642.17	642.29	0.12	0.0675	0.81
1254+50	642.40	642.40	0.00	0.1875	2.25

SCHEDULE OF STEEL PLATE BEAM GUARDRAIL			
LOCATION	SPBGR, TYPE A	TERMINAL, TYPE 1 (SPL)	SPBGR ATTACHED TO STRUCTURES
LT. 1249+14 TO 1249+64		1 EACH	
1249+64 TO 1250+64	100		
1250+64 TO 1251+01.5			37.5
1251+01.5 TO 1252+76.5	175		
1252+76.5 TO 1253+26.5		1 EACH	
RT. 1248+43.50 TO 1248+93.5		1 EACH	
1248+93.50 TO 1250+68.50	175		
1250+68.5 TO 1251+06.0			37.5
1251+06.0 TO 1252+06.0	100		
1252+06.0 TO 1252+56		1 EACH	
TOTAL	550	4 EACH	75

BITUMINOUS MIXTURE TABLE					
MIX	PG GRADE	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	DENSITY CONTROL METHOD
HMA SHOULDERS	PG58-22	2.0% @ N30	IL 19.0	-----	* CORES
HMA LEVEL BINDER	PG64-22	4.0% @ N50	IL 9.5	-----	SATISFACTION OF ENG.
HMA SURFACE	PG64-22	4.0% @ N50	IL 12.5 OR IL 9.5	MIXTURE C	* CORES
HMA BASE COURSE	PG64-22	4.0% @ N50	IL 19.0	-----	* CORES

* MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		SCHEDULE OF QUANTITIES

SCALE: VERT. NONE
HORIZ. DATE: 01/14/05

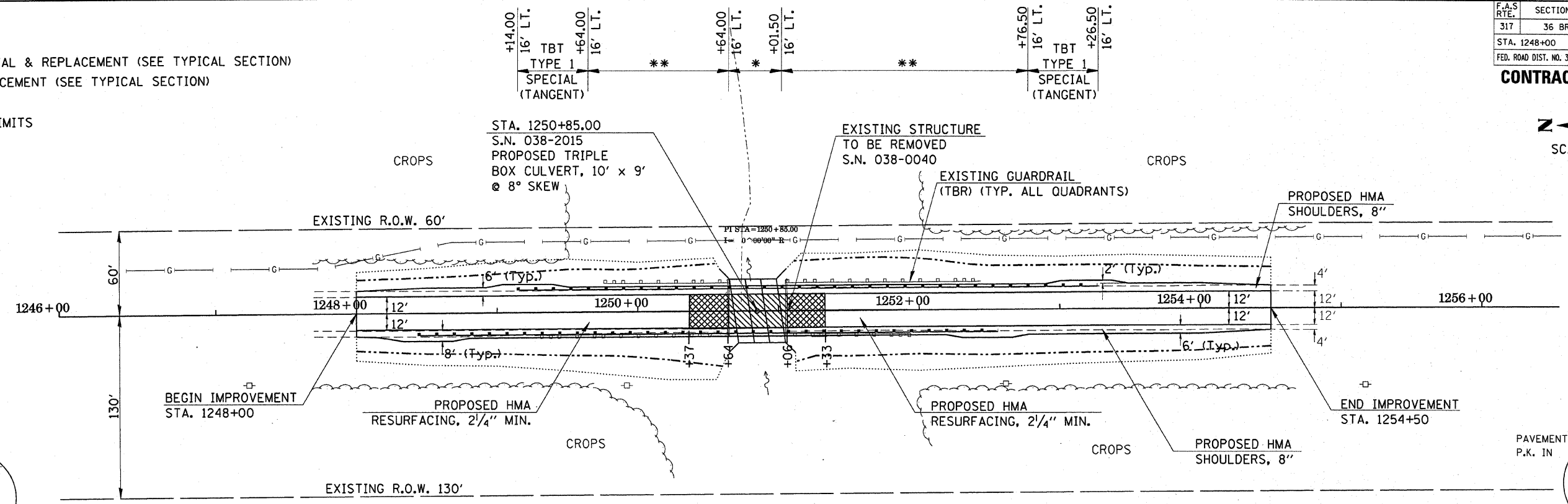
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CHECKED BY MEB

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	6
STA. 1248+00		TO STA. 1254+50		
FED. ROAD DIST. NO. 3 ILLINOIS FED. AID PROJECT				

CONTRACT NO. 66171

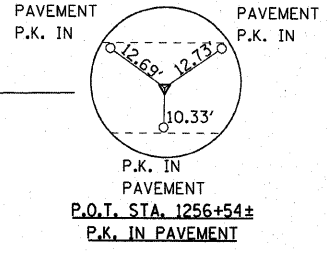
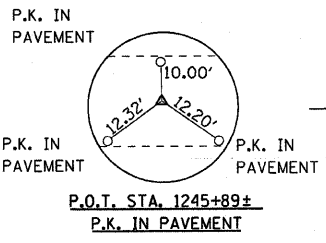


- LEGEND**
- PAVEMENT REMOVAL & REPLACEMENT (SEE TYPICAL SECTION)
 - PAVEMENT REPLACEMENT (SEE TYPICAL SECTION)
 - DITCH LINE
 - CONSTRUCTION LIMITS
 - TBR TO BE REMOVED



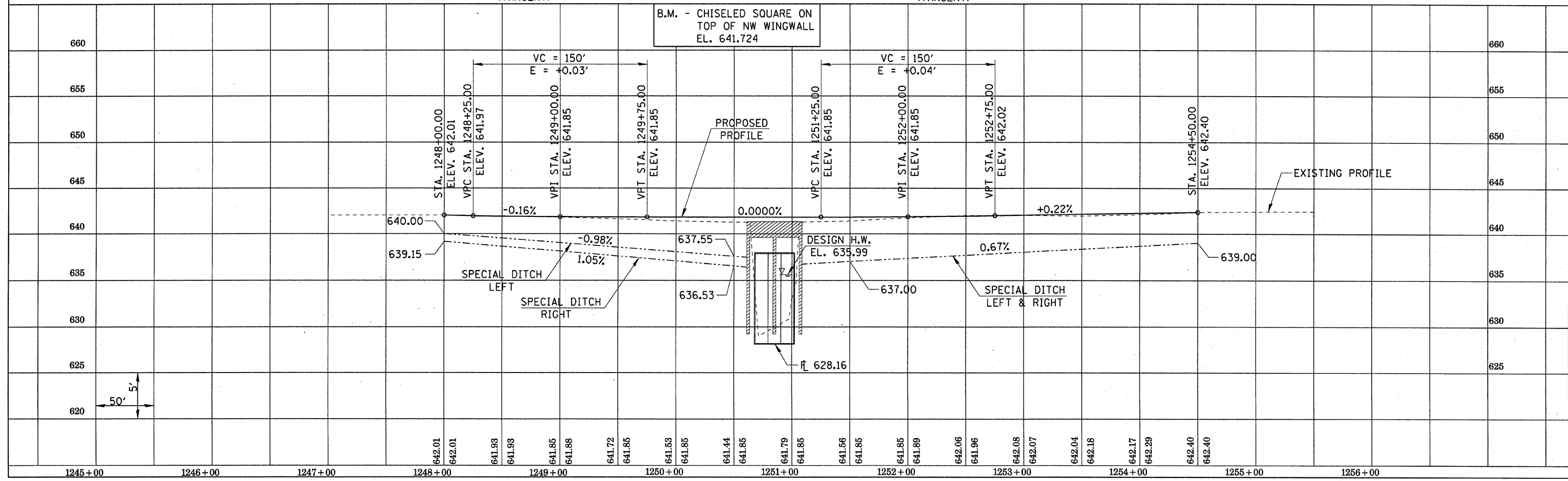
DATE	
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NO.	

PLAN	
NOTED	
ALIGNED	
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NO.	



- * STEEL PLATE BEAM GUARDRAIL ATTACHED TO STRUCTURES
- ** STEEL PLATE BEAM GUARDRAIL TYPE A 6' POST

PROFILE	
NOTED	
GRADES	
CHECKED	
STRUCTURE	
NOTATIONS	
CHFD	
NO.	










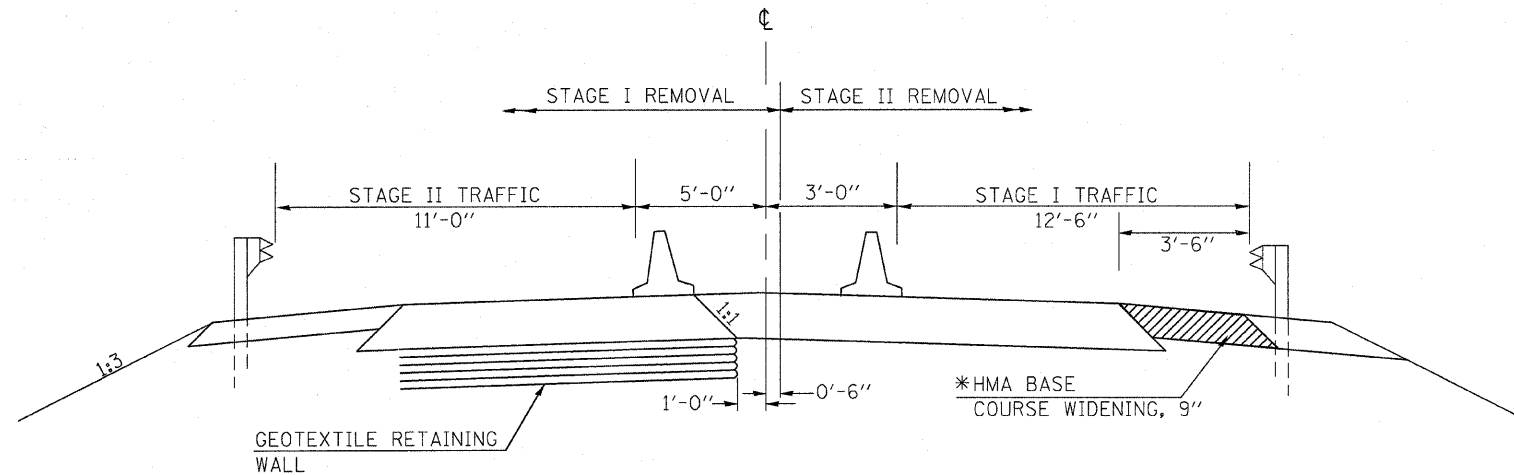
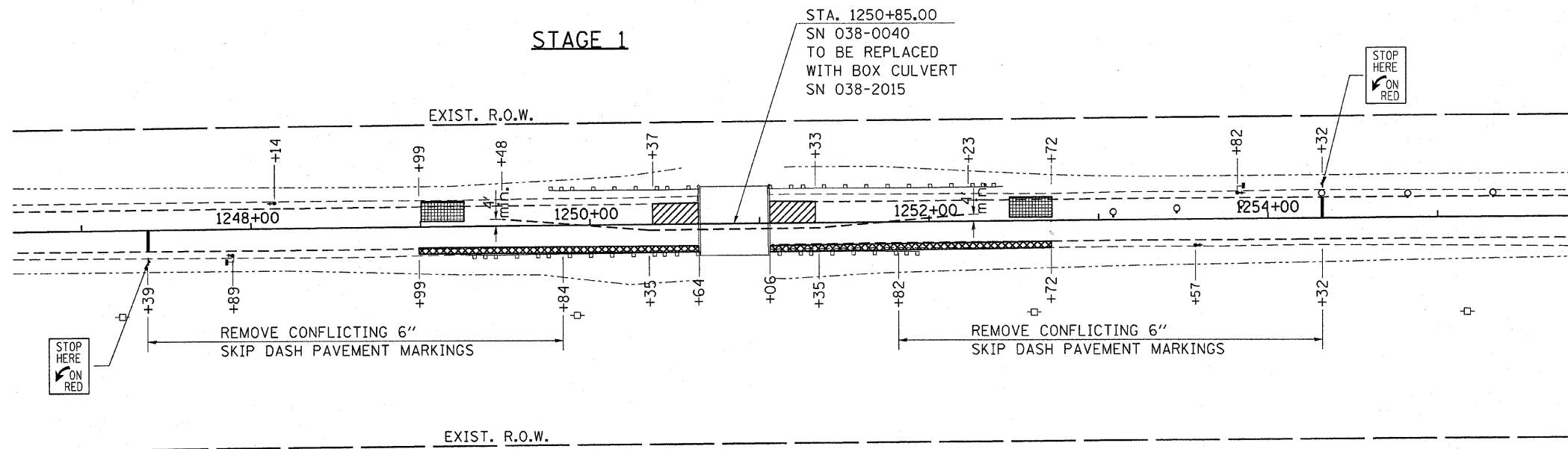
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	7
STA. 1248+00		TO STA. 1254+50		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 66171

SCALE 1" = 40'

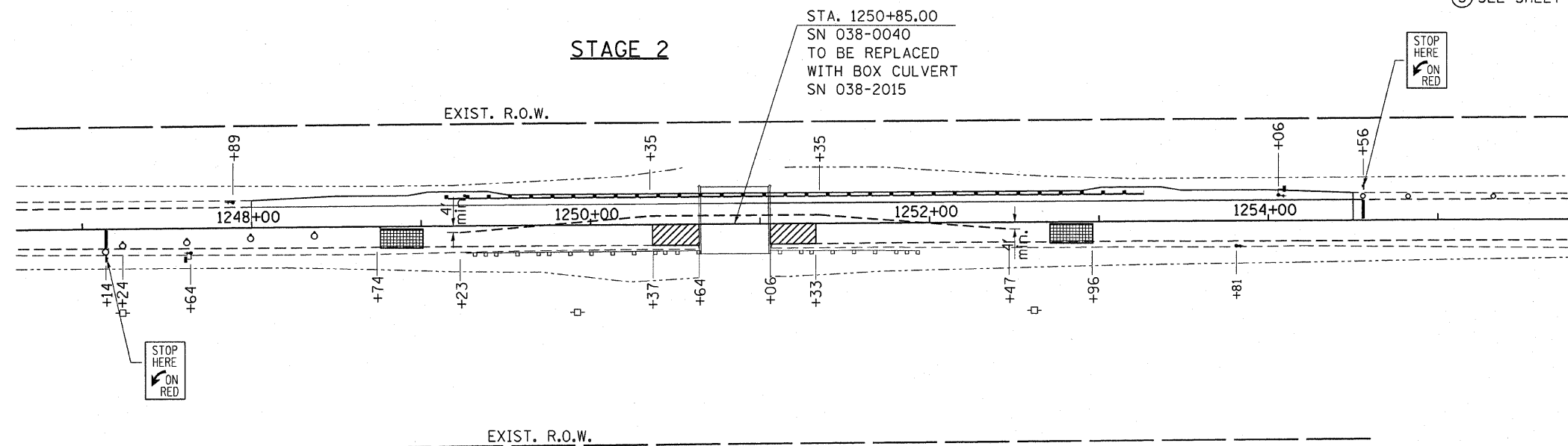
LEGEND

-  PAVEMENT REMOVAL
-  HMA BASE COURSE WIDENING, 9"
-  TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE
-  TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE & MICROWAVE DETECTOR
-  SAND MODULE IMPACT ATTENUATORS
-  DRUM WITH STEADY BURNING LIGHT
-  TEMPORARY CONCRETE BARRIER



STAGE CONSTRUCTION TYPICAL SECTION

TO BE REMOVED IN STAGE 2 CONSTRUCTION



STAGE CONSTRUCTION SEQUENCE

- ① ERECT TRAFFIC CONTROL & PROTECTION, STANDARD 701321, EARTH EXCAVATION AND HMA BASE COURSE WIDENING, 9" RT. STA. 1248+99 TO STA. 1250+64 RT. STA. 1251+06 TO STA. 1252+72
- ② STAGE I CONSTRUCTION, EAST SIDE GUARDRAIL AND PAVEMENT REMOVAL, PAVEMENT REPLACEMENT, EARTH EXCAVATION, HMA SHOULDERS, ERECT STEEL PLATE BEAM GUARDRAIL.
- ③ STAGE II CONSTRUCTION, RELOCATE TEMPORARY CONCRETE BARRIER, WEST SIDE GUARDRAIL AND PAVEMENT REMOVAL, PAVEMENT REPLACEMENT, EARTH EXCAVATION, HMA SHOULDERS, ERECT STEEL PLATE BEAM GUARDRAIL.

STAGE CONSTRUCTION NOTES

- ① THIS SHEET IS FOR THE LOCATION OF STAGE CONSTRUCTION, TEMPORARY CONCRETE BARRIER, SIGNALS AND STOP BARS. THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD 701321.
- ② SEE DETAIL 702.5 ON SHEET 5 OF 21 FOR WIDTH RESTRICTION SIGNING.
- ③ SEE SHEET 10 OF 21 FOR ADDITIONAL DETAILS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION

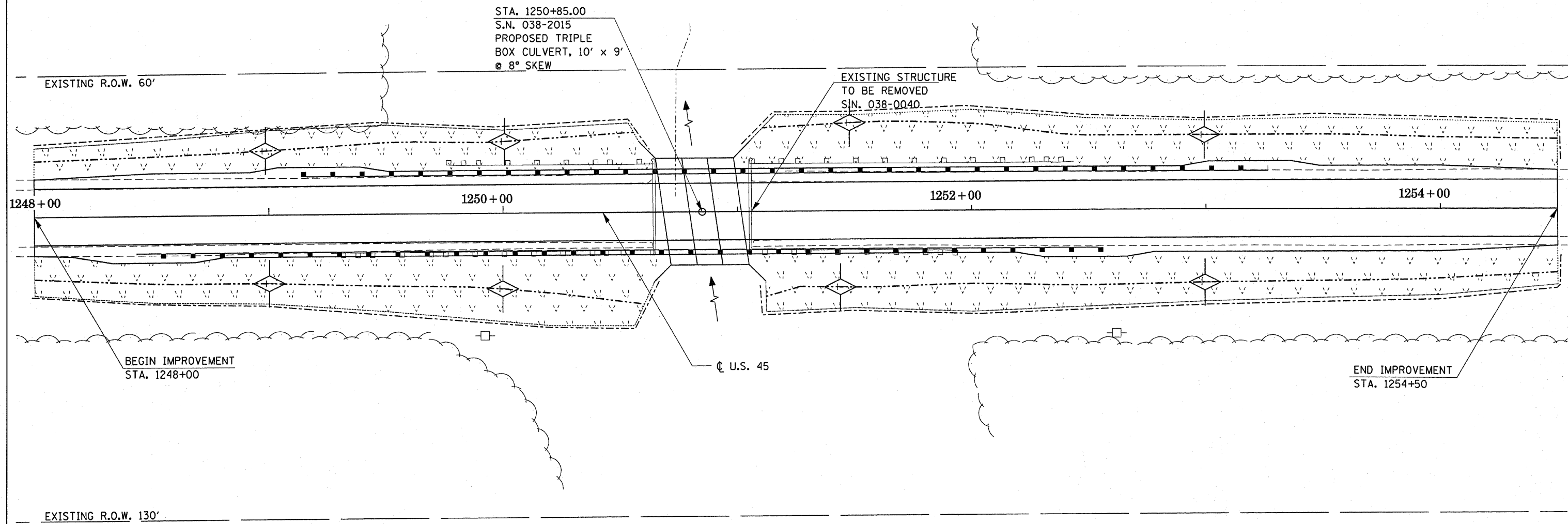
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HORIZ. DATE

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CHECKED BY



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36BR	IROQUOIS	21	8
STA. 1248+00		TO STA. 1254+50		
FED. ROAD DIST. NO. 3 ILLINOIS FED. AID PROJECT				

SCALE 1" = 20'

CONTRACT NO. 66171



LEGEND

- — — — — EXISTING R.O.W.
- CONSTRUCTION LIMITS
- PROPOSED DITCH LINE
- · - · - · PERIMETER EROSION BARRIER
-  SEEDING CLASS 2
-  TEMPORARY DITCH CHECK

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

SCALE: VERT. 1"=20'
HORIZ. 1"=20'

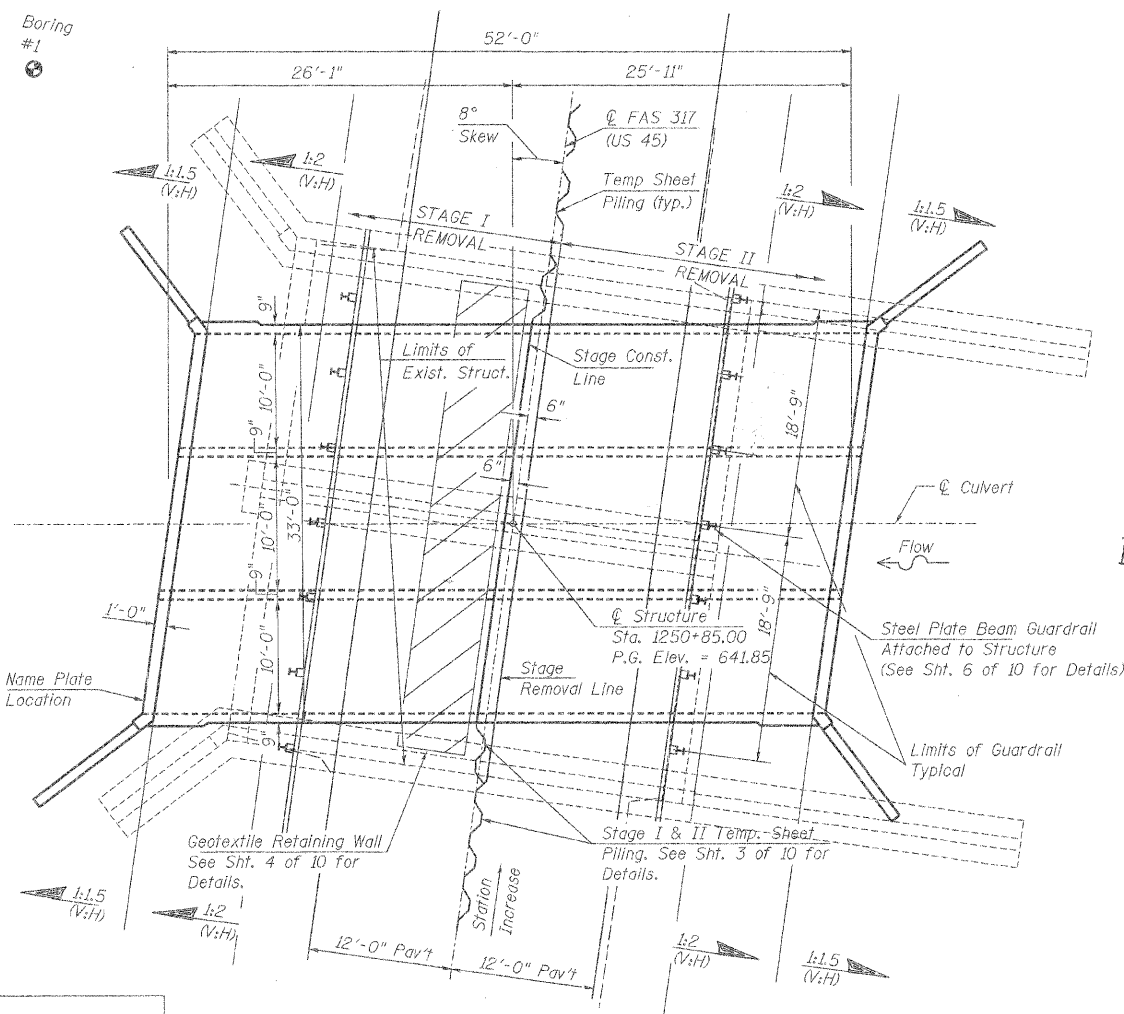
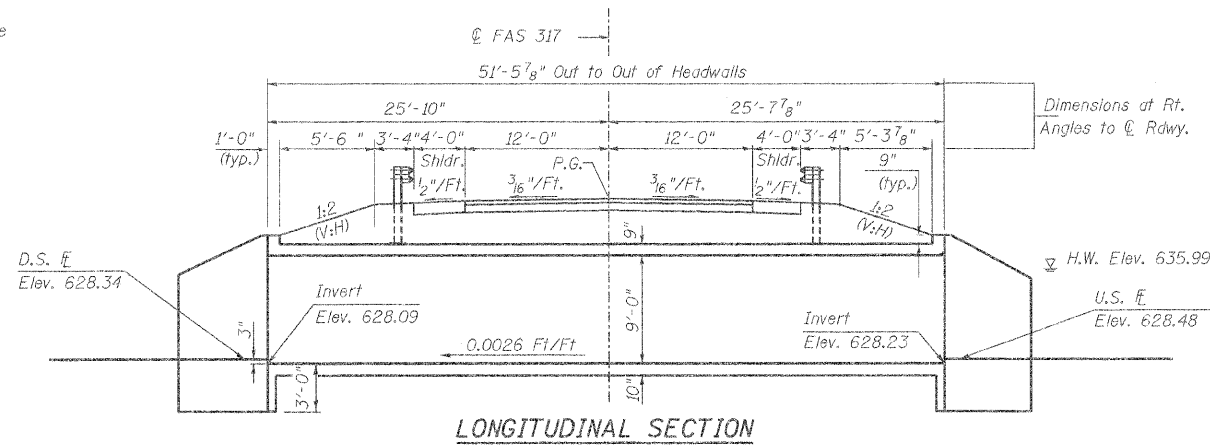
DATE _____ DRAWN BY _____
CHECKED BY _____

B.M. Top of N.W. Wingwall
Chis. Sq. Elev. 641.724

Existing Structure No. 038-0040 built as SBI Rte 25 Sec. 36 BY in 1952
is a two span continuous bridge with an 11" R.C. Slab, 43'-0" bk. to bk.
abutments, 2 Spans @ 20'-0" with closed abutments, 35'-0" f. to f. of
curb and 38'-4" o. to o. of deck.

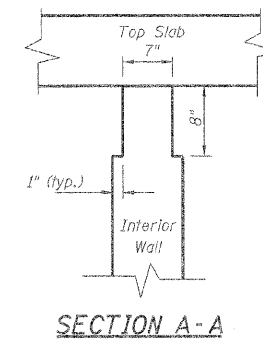
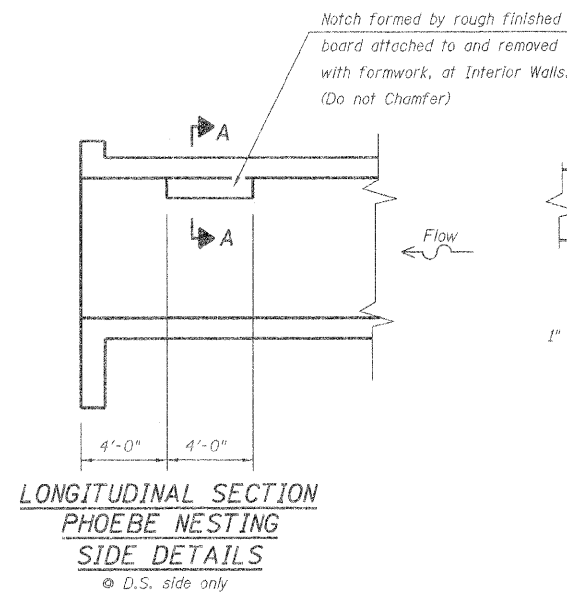
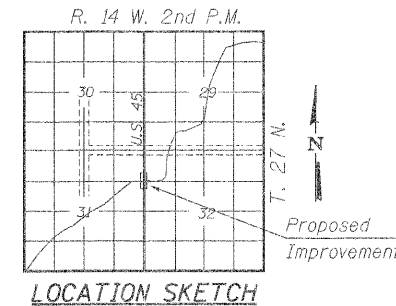
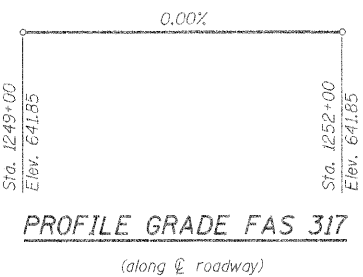
Structure to be replaced with a triple box culvert.
Traffic to be maintained utilizing stage construction

No Salvage



DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	J.T.C.
CHECKED	M.E.B.

PLAN

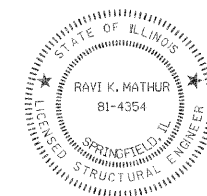


WATERWAY INFORMATION

Drainage Area = 2.8 sq. mi.		Low Grade Elev. 641.85		Sta. 1250+85.00			
Flood Yr.	Freq. C.F.S.	Opening Sq. Ft. Exist.	Prop.	*Nat. Head-Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	50	386	232	635.99	0.0	0.07	635.99
Base	100	434	239	636.22	0.0	0.10	636.22
Overtopping	NA						
Max. Calc.	500	544	208	252	636.65	0.03	0.10

* Upstream face of culvert

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (TS)
ENGINEER OF BRIDGES AND STRUCTURES



STATION 1250+85.00
BUILT 20___ BY
STATE OF ILLINOIS
F.A.S. RTE. 317 SEC. 36-BR
LOADING HS20
STR. NO. 038-2015
NAME PLATE
See Sld. 515001

Ravi K. Mathur 5/5/05
ILLINOIS STRUCTURAL NO. 081-004354 EXPIRES 11/30/2006

ROUTE NO.	SECTION	COUNTY	DISTRICT SHEETS	SHEET NO.	SHEET NO. 1
F.A.S. 317	36-BR	IROQUOIS	21	9	10 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

CONTRACT NO. 66171

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of AASHTO M31 or ASTM A 618 Grade 60.
- Exposed edges shall be beveled 3/4" unless otherwise noted.
- For backfilling and embankment, see Standard Specifications.
- The precast concrete alternate will not be allowed.
- Saw cut existing abutments and piers at stage removal line before removing the existing structures.
- The Contractor shall excavate behind the existing abutment walls prior to removal of the existing superstructure. Cost included with Removal of Existing Structures.
- All construction joints shall be bonded.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Reinforcement Bars	Pounds	31,640
Removal of Existing Structures	Each	1
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	174.7
Bar Splacers	Each	154
Temporary Sheet Piling	Sq. Ft.	1,105
Geotextile Retaining Wall	Sq. Ft.	10.5
Steel Plate Beam Guardrail Attached to Structures	Foot	75

* See Special Provisions.

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2002 Interims

LOADING HS20-44

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

DESIGN STRESSES

f_c = 3,500 psi (Concrete)
f_y = 60,000 psi (Reinforcement)

GENERAL PLAN & ELEVATION
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

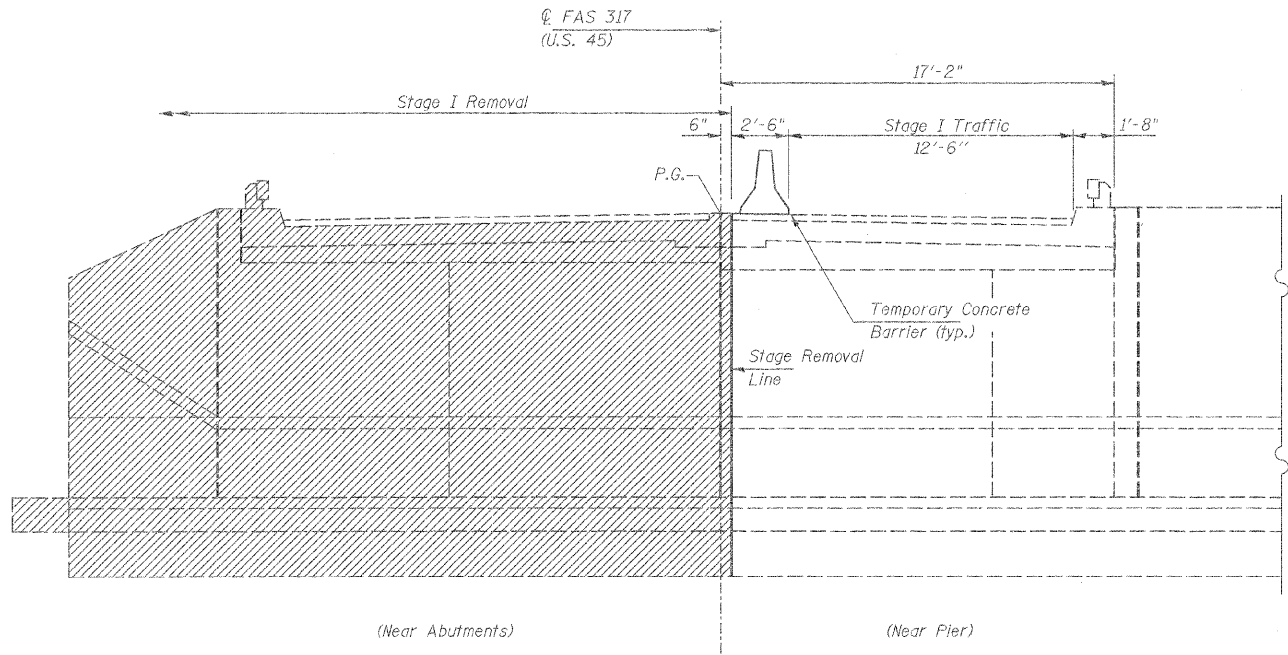


99-76/038-2015/10p6.e.dwg

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

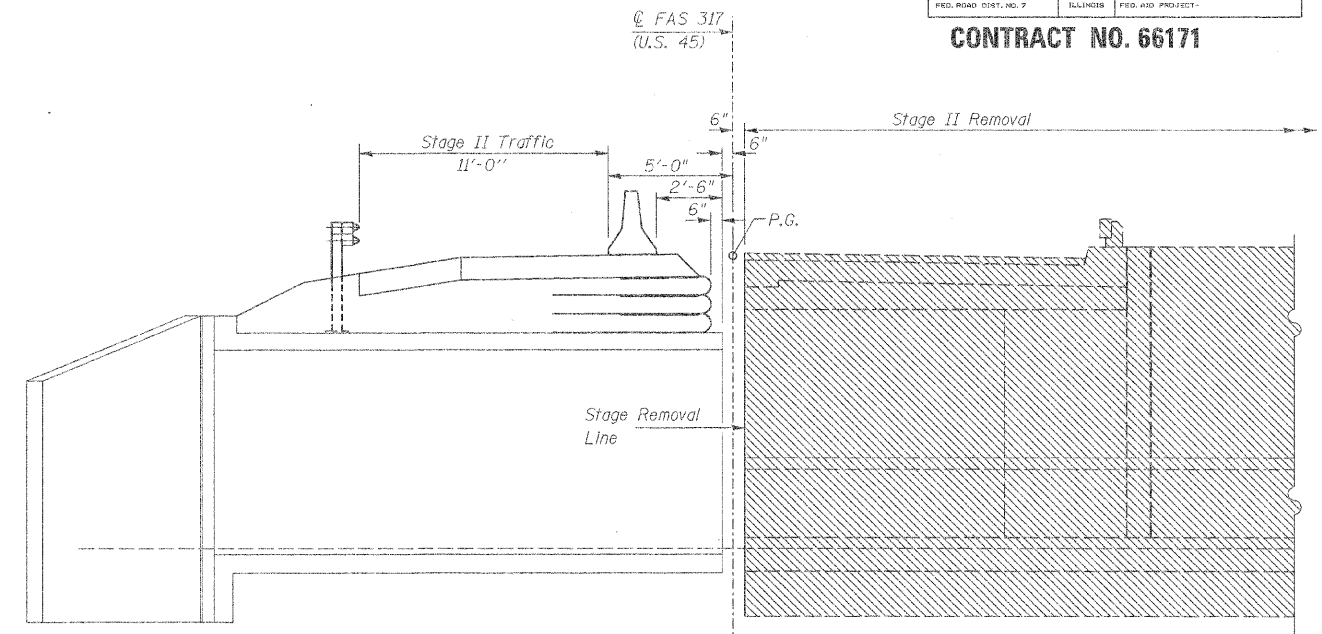
SHEET NO. 2
10 SHEETS

CONTRACT NO. 66171



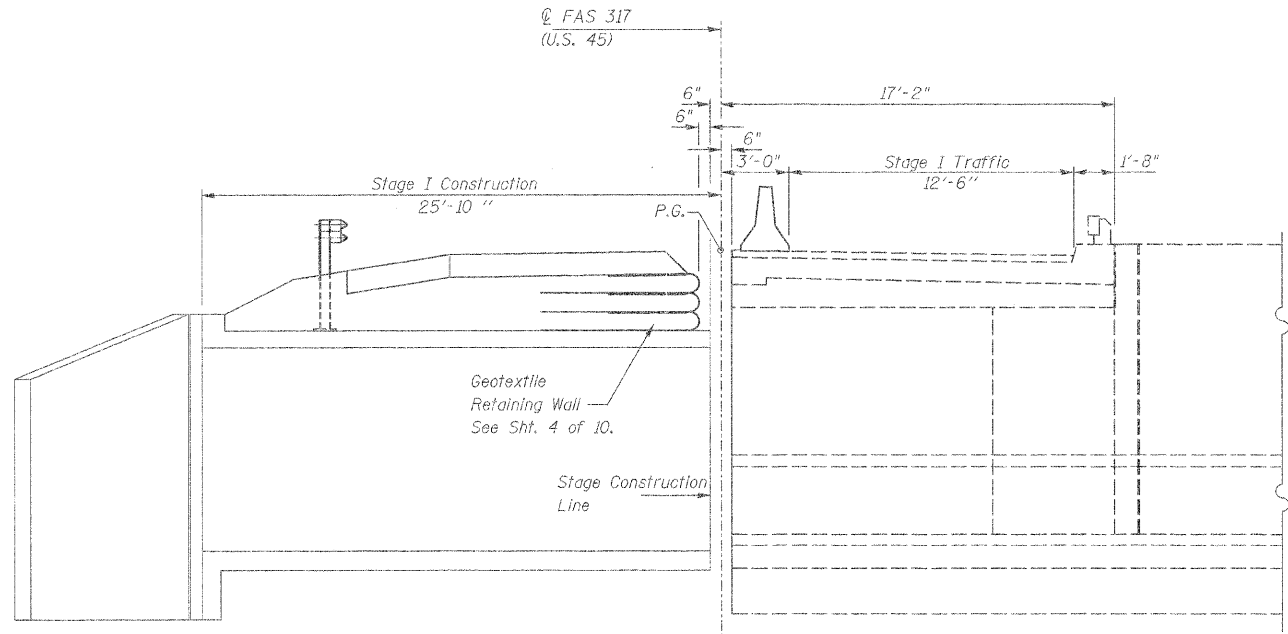
STAGE I REMOVAL

(Looking South)
(Dimensions are at Rt. Angles to CL Roadway)



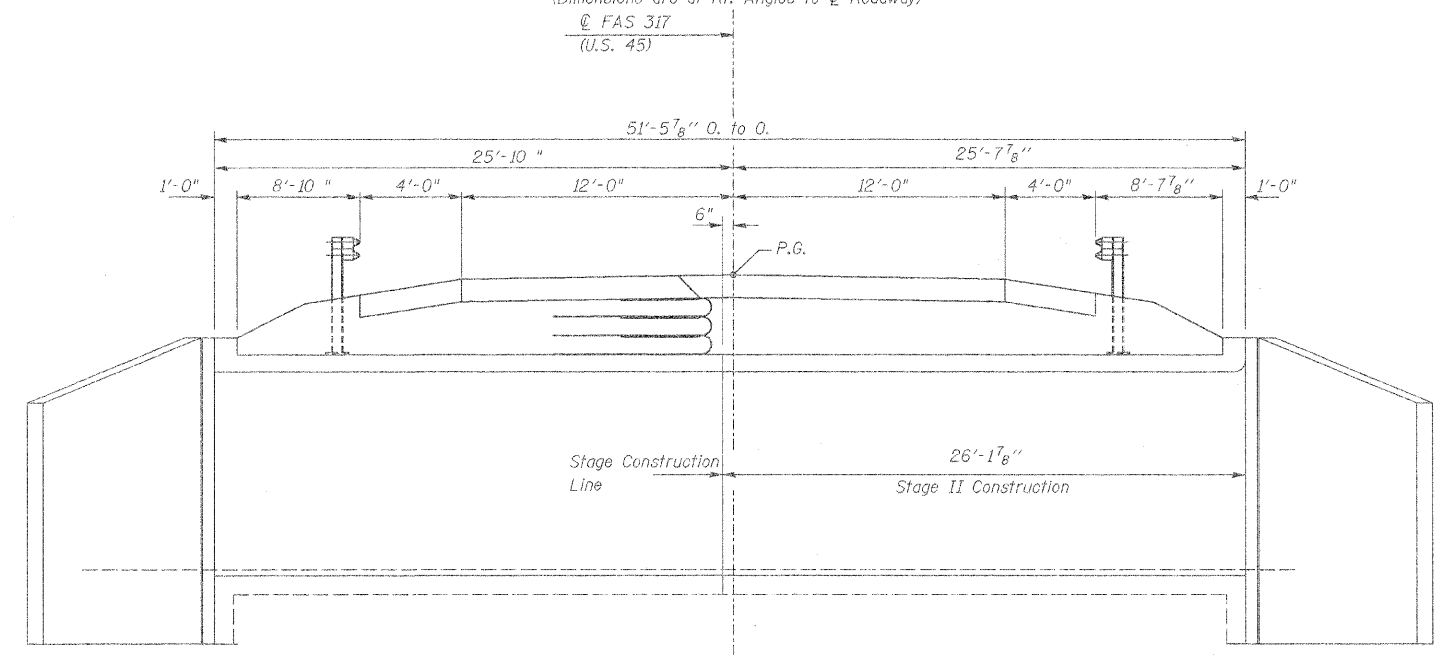
STAGE II REMOVAL

(Looking South)
(Dimensions are at Rt. Angles to CL Roadway)



STAGE I CONSTRUCTION

(Looking South)
(Dimensions are at Rt. Angles to CL Roadway)



STAGE II CONSTRUCTION

(Looking South)
(Dimensions are at Rt. Angles to CL Roadway)

NOTES:
One lane shall be available for traffic during Stage Construction.
Bracing the existing abutments is the responsibility of the Contractor, prior to removing the existing bridge superstructure.
Hatched area indicates "Removal of Existing Structures". Removal of existing hand rail and existing wearing surface is included with "Removal of Existing Structures".

STAGE CONSTRUCTION DETAILS
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	P.W.S.
CHECKED	M.E.B.



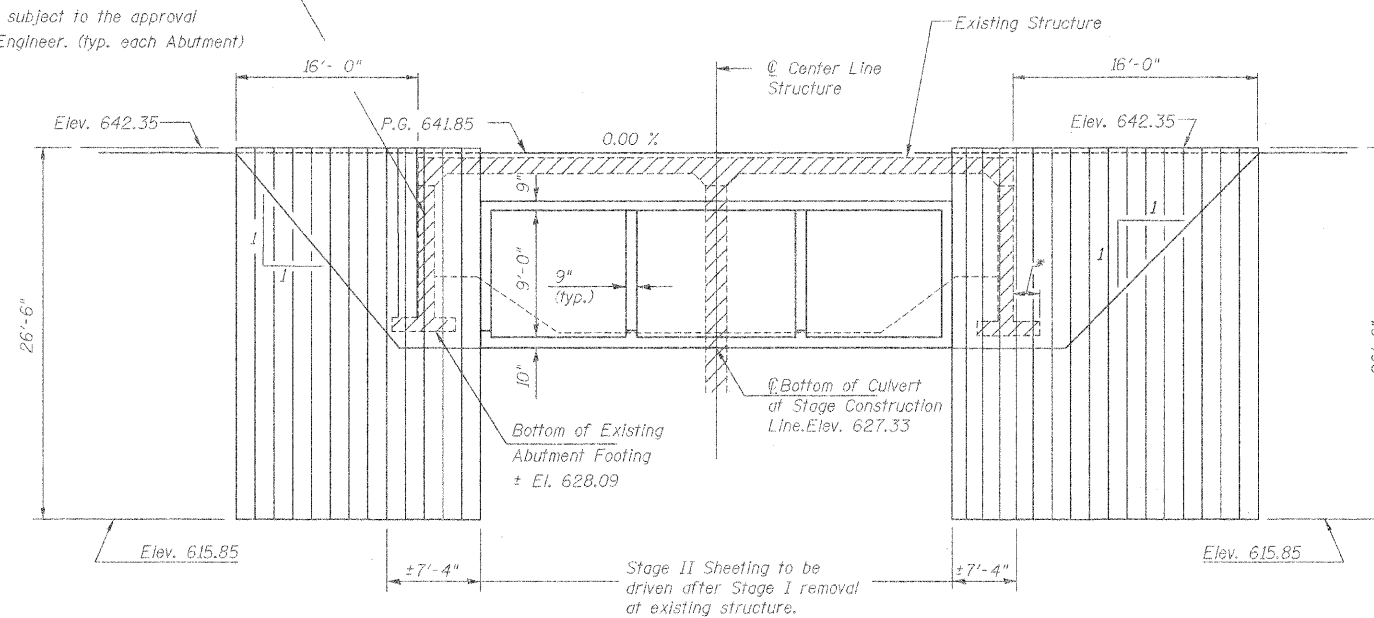
98-76703B-C040/2stages.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	11
FED. HIGH. DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
10 SHEETS

CONTRACT NO. 66171

Stage I Sheeting shall be attached to the back of the existing Abutments. Method of attachment shall be subject to the approval of the Engineer. (typ. each Abutment)



ELEVATION
(Looking West)

NOTE:
If the contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Department for review and approval.

Hatched areas indicate "Removal of Existing Structures".

SHEET PILE DATA

Minimum Required Section Modulus of Temporary Sheet Piling: 17.7 in³/ft
fy= 38 Ksi (Temporary Sheet Piling)

* Stage I Sheeting in this portion shall be driven to top of existing footing. (typ. each Abutment)

TEMPORARY SHEET PILING
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015

DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	M.D.
CHECKED	M.E.B.

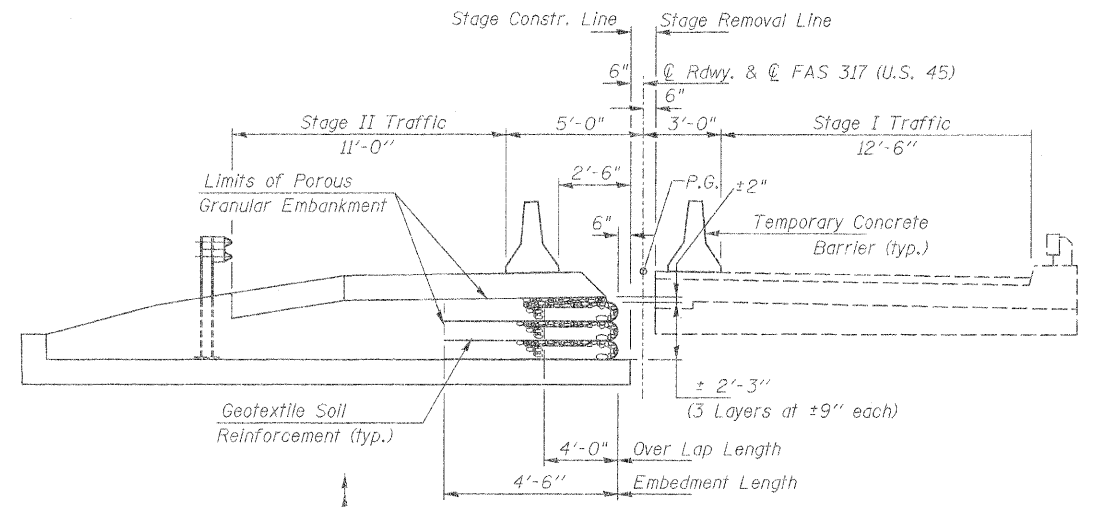
RC ENGINEERS, LTD.
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

98-76-038-2015.rshpfile.dgn

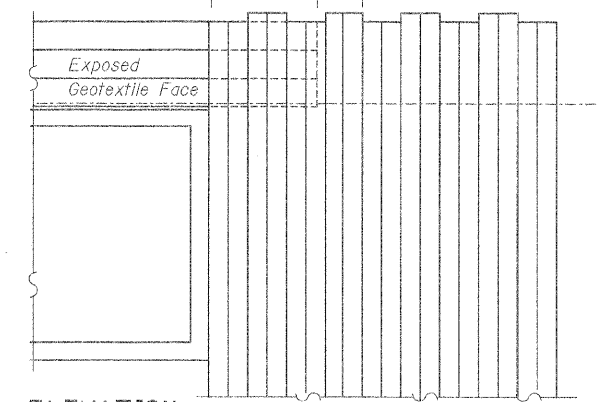
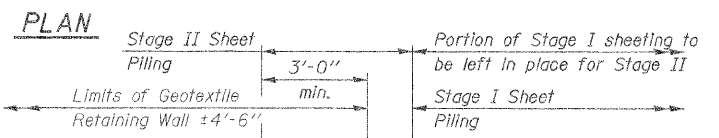
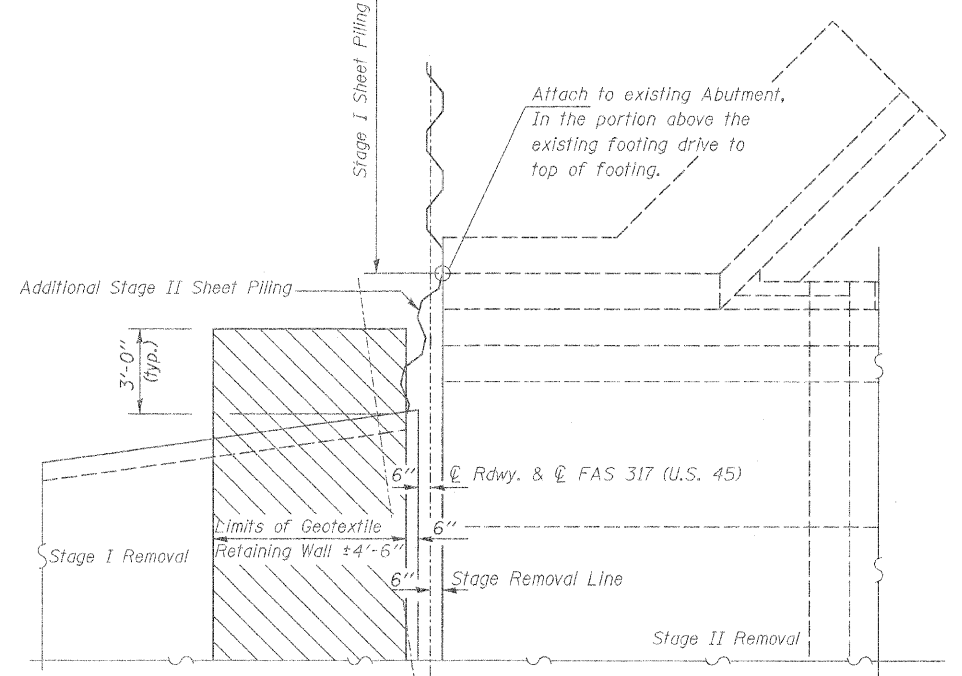
ROUTE NO.	SECTION	COUNT	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 66171

SHEET NO. 4
10 SHEETS



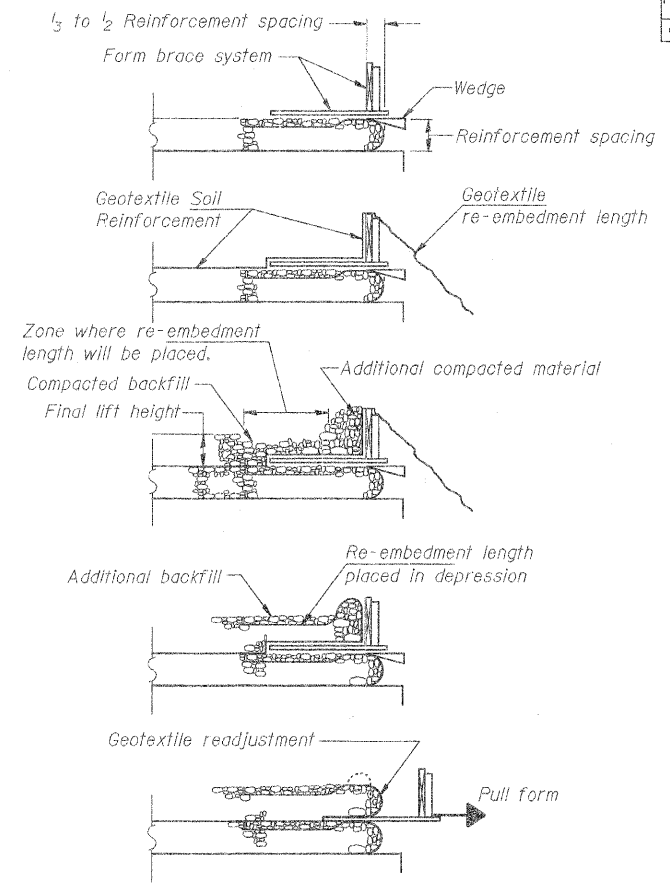
TYPICAL SECTION



ELEVATION

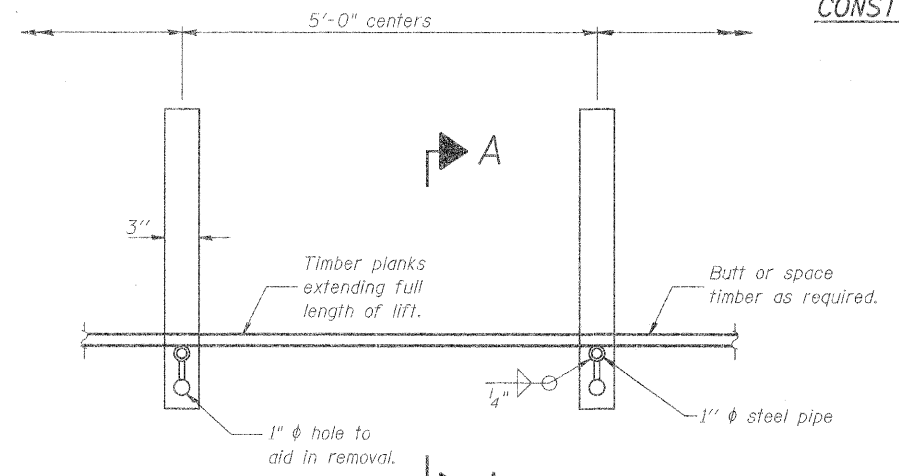
DESIGNED	M.E.B.
CHECKED	R.K.M.
DRAWN	P.W.S.
CHECKED	M.E.B.

Note:
The Geotextile Soil reinforcement shall have a minimum allowable tensile strength (T min.) of 80 lb./in. The computations supporting the determination of T min. shall be submitted to the engineer for approval.



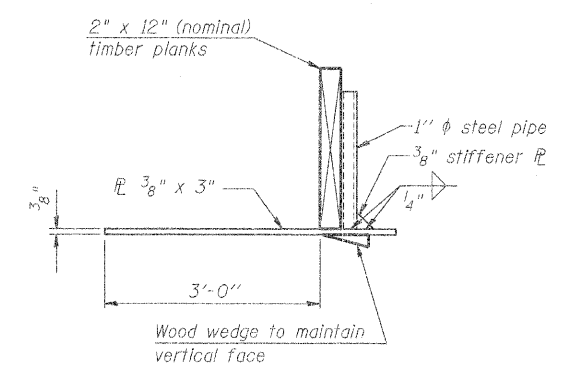
1. Place form brace system on completed reinforcement level; back from the finished fabric face a distance of $\frac{1}{3}$ to $\frac{1}{2}$ the geotextile reinforcement spacing.
2. Position fabric so that the required geotextile re-embedment length extends over the top of the form brace and the design reinforcement width is placed with no slack against the previous level.
3. Compact backfill material in lifts to final lift height, create ($\pm 3''$) depression in zone where re-embedment length will be located and place additional height of compacted material against form brace.
4. Fold Geotextile re-embedment length back over form brace into zone where depression was made in backfill and place additional compacted backfill, ($\pm 3''$) to embed geotextile and bring to final lift height.
5. Pull form brace outward allowing geotextile face to slightly readjust to form tight round face and level with plan reinforcement spacing.

GEOTEXTILE WALL CONSTRUCTION PROCEDURE



GEOTEXTILE TEMPORARY FORM BRACE DETAIL

Note:
The temporary form brace detail is provided as a guide. The contractor is responsible for the design and performance of the form system used.



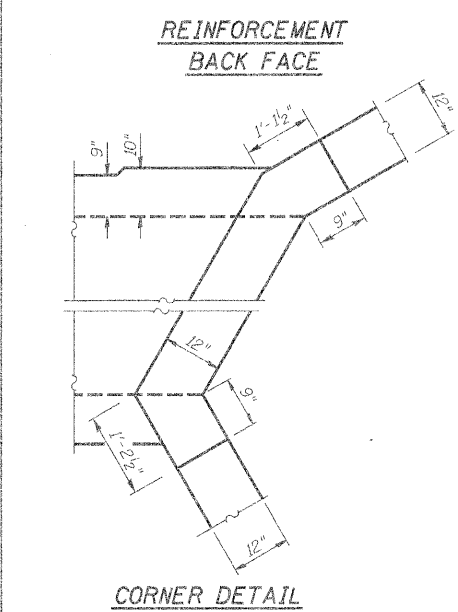
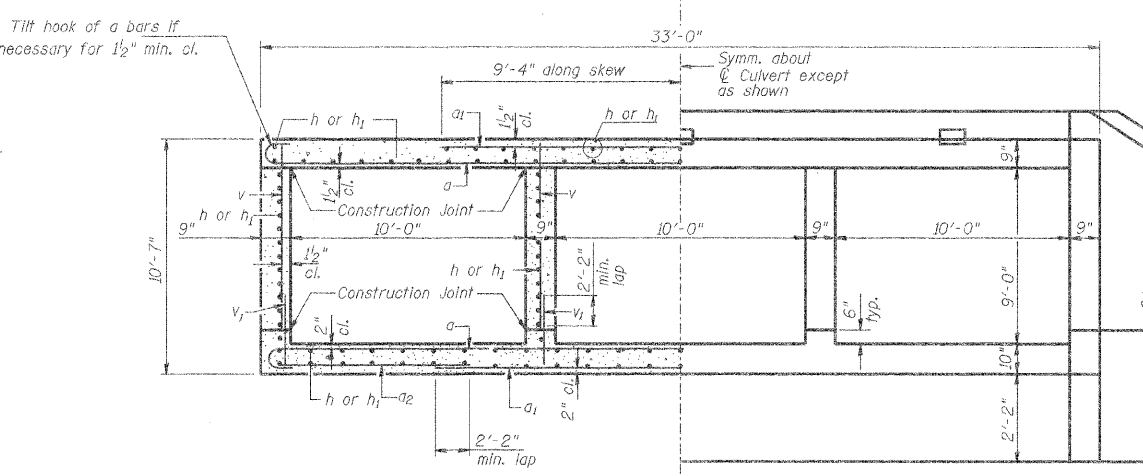
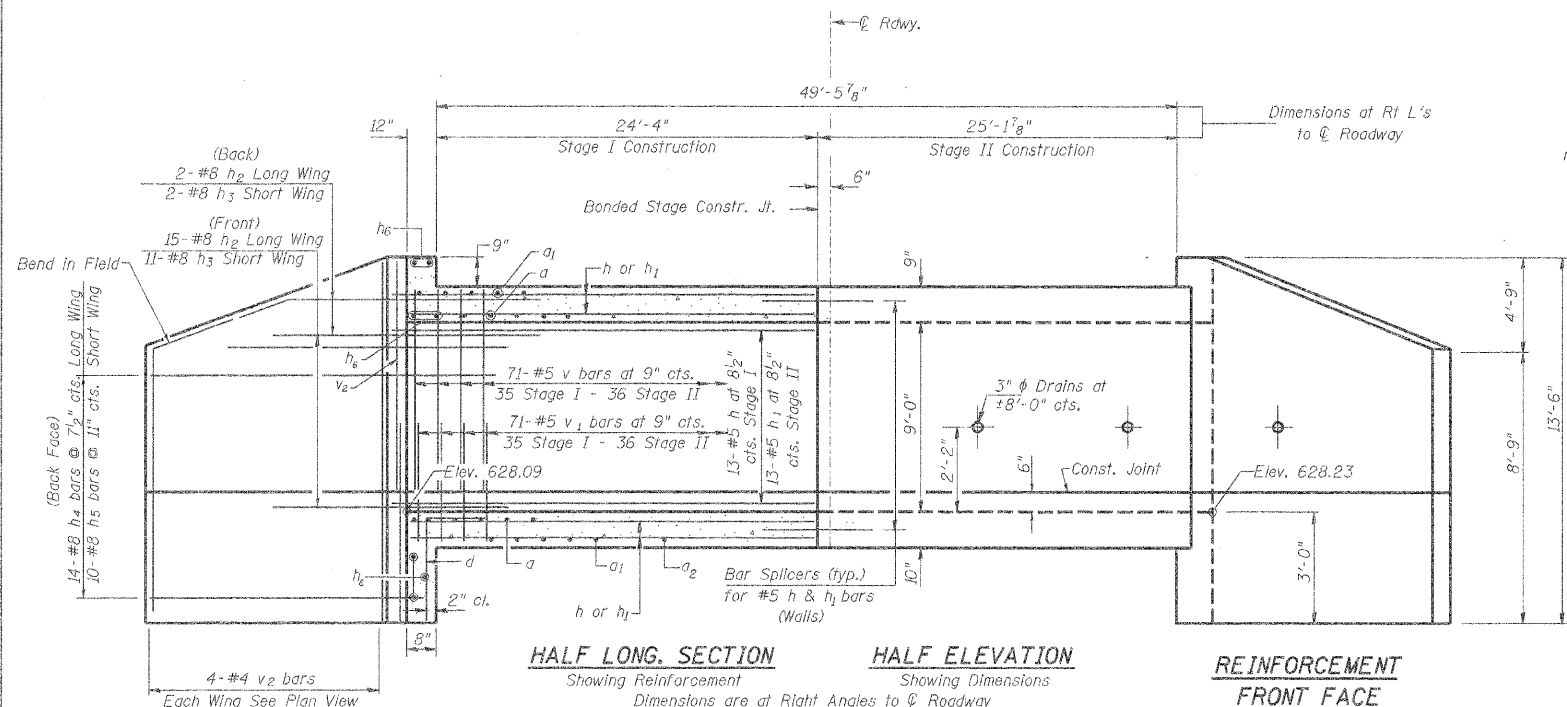
SECTION A-A

GEOTEXTILE WALL CONSTRUCTION
F.A.S. 317 (U.S. RTE 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STATION 1250+85.00
STRUCTURE NO. 038-2015



98-76/038-2015/Geotextile.dgn

CONTRACT NO. 66171



HALF LONG SECTION
Showing Reinforcement
Dimensions are at Right Angles to \varnothing Roadway

HALF ELEVATION
Showing Dimensions
Dimensions are at Right Angles to \varnothing Roadway

REINFORCEMENT FRONT FACE

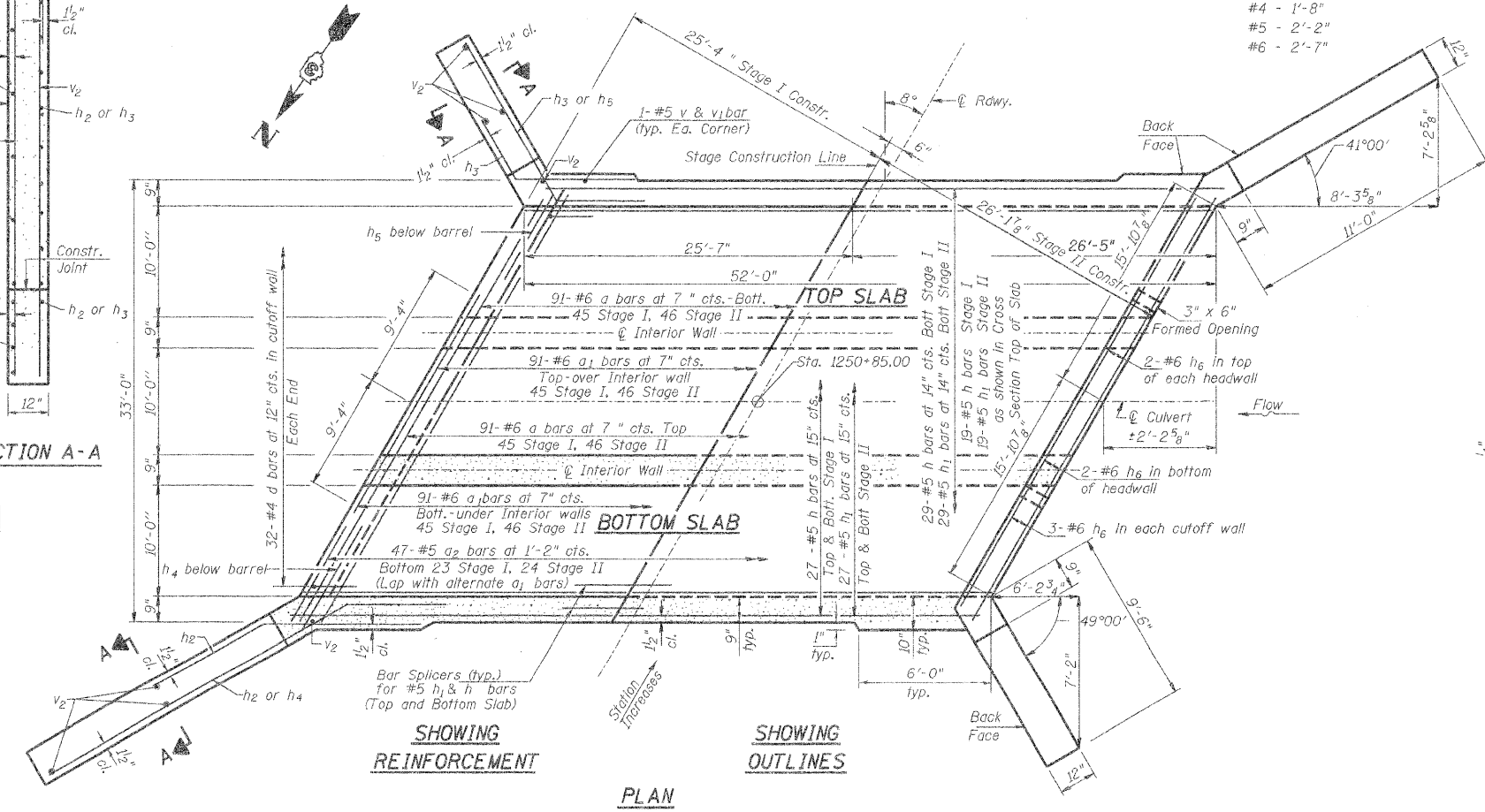
HALF SECTION THRU BARRELS

HALF END ELEVATION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape	
a	182	#6	34'-4"		v	288	#5	9'-0"		
a1	182	#6	18'-8"		v1	288	#5	3'-3"		
a2	94	#5	9'-5"		v2	16	#4	13'-3"		
d	64	#4	4'-9"							
h	154	#5	25'-4"							
h1	154	#5	26'-2"							
h2	34	#8	9'-3"							
h3	24	#8	9'-3"							
h4	28	#8	14'-7"							
h5	20	#8	13'-1"							
h6	18	#6	33'-6"							
									Cu. Yd.	174.7
									Pound	31,640

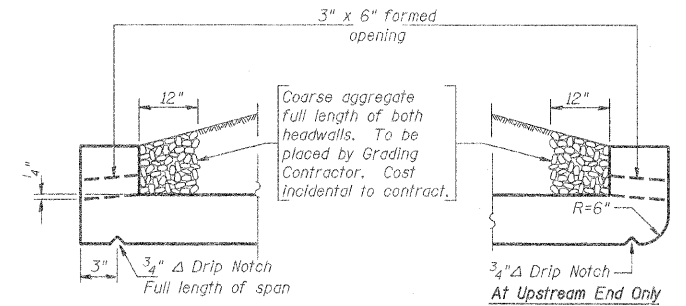
Min. Bar Lap
#4 - 1'-8"
#5 - 2'-2"
#6 - 2'-7"



SHOWING REINFORCEMENT

SHOWING OUTLINES

PLAN



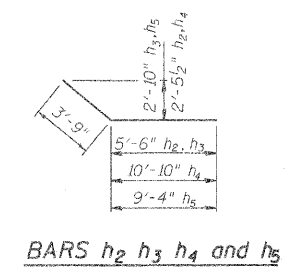
DRAIN DETAIL

Note:
A distance of not less than 6 feet of the barrel shall be poured monolithically with the wing walls.

CULVERT DETAILS
F.A.S. ROUTE 317 (US 45) OVER TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STA. 1250+85.00
STRUCTURE NO. 038-2015



DESIGNED	R.K.M.
CHECKED	M.E.B.
DRAWN	M.D.
CHECKED	M.E.B.

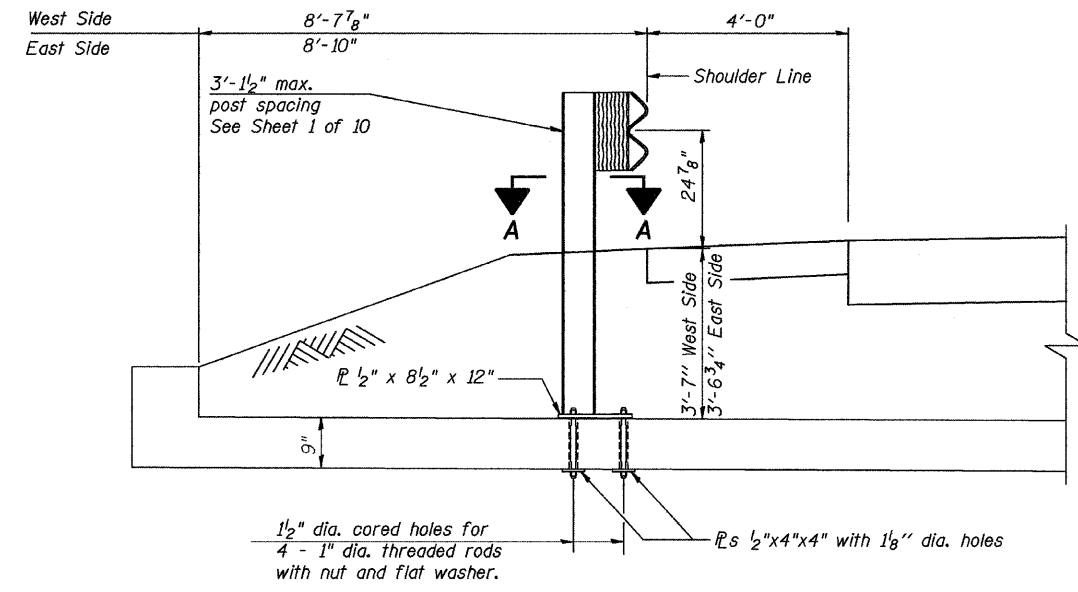


BARS h2 h3 h4 and h5

98-76/038-0015/5culvertdetails.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 10 SHEETS
F.A.S. 317	36-BR	IROQUOIS	21	14	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

CONTRACT NO. 66171

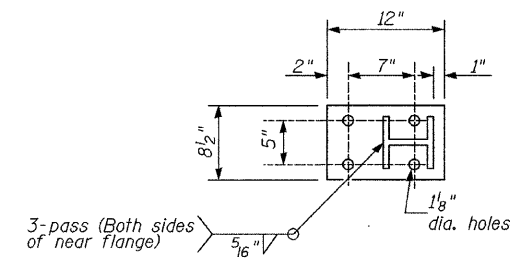


**STEEL PLATE BEAM GUARDRAIL.
ATTACHED TO STRUCTURES**

Lt. & Rt. Sta. 1250+64.00 to 1251+01.50 = 37.5 feet
 Lt. & Rt. Sta. 1250+68.50 to 1251+06.00 = 37.5 feet
 75 feet

GUARDRAIL ANCHORAGE DETAIL

(For Guardrail Details See Std. 630101 - Case IV)



SECTION A-A

NOTES

Railing shall be according to Section 630 of the Standard Specifications except as noted, and will be paid for at the contract unit price per foot for STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES.

Contractor shall space a & a_1 bars to miss cored holes.

All bolts, nuts and plates shall be galvanized. See Article 1006.25 of Standard Specifications.

98-767038-0015/culvertdetails.dgn

DESIGNED	M.E.B.
CHECKED	R.K.M.
DRAWN	P.W.S.
CHECKED	M.E.B.

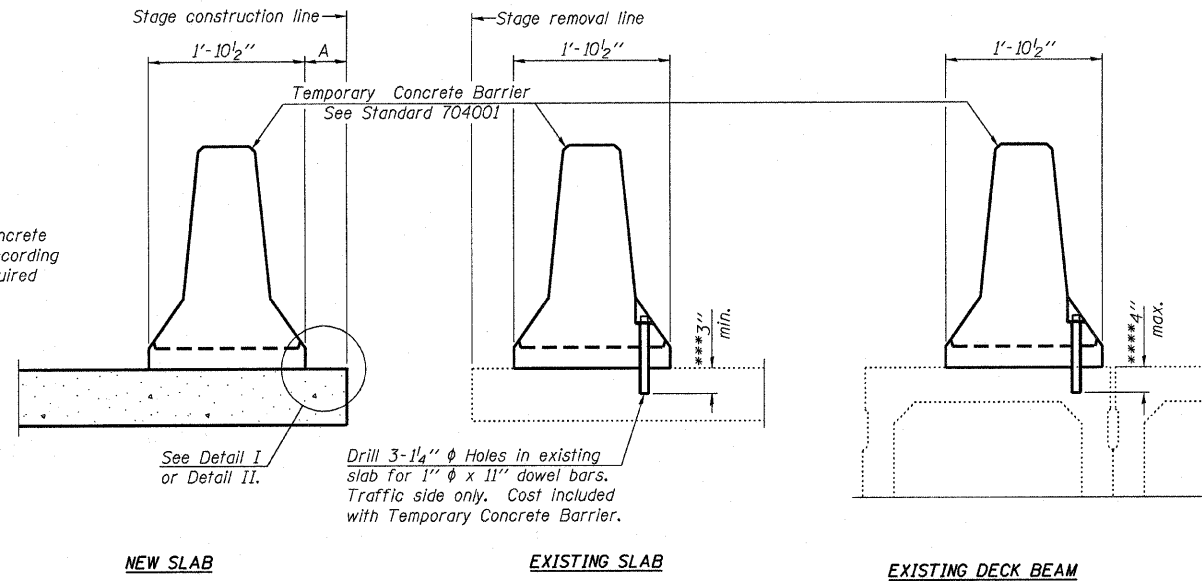
CULVERT DETAILS
F.A.S. ROUTE 317 (US 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STA. 1250+85.00
STRUCTURE NO. 038-2015

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 317	36-BR	IROQUOIS	21	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
10 SHEETS

CONTRACT NO. 66171

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

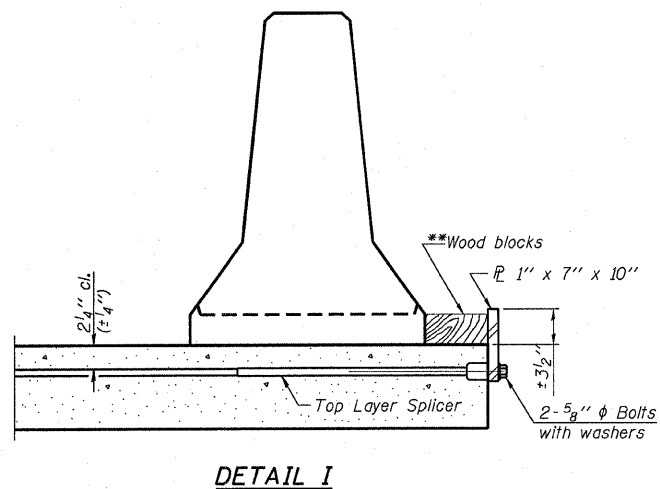
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

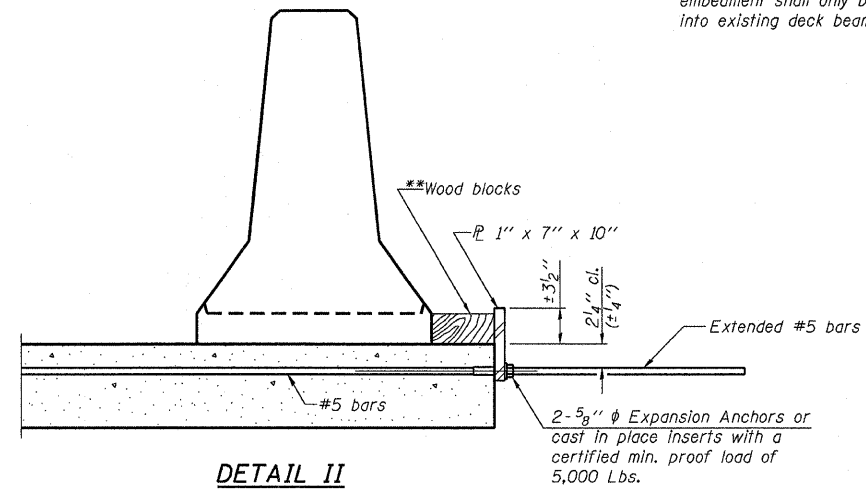
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

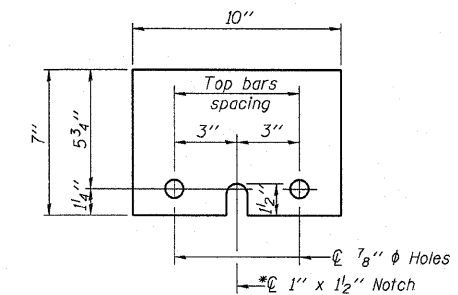


DETAIL I



DETAIL II

**Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



STEEL RETAINER PL 1" x 7" x 10"

* Required only with Detail II

DESIGNED	-
CHECKED	-
DRAWN	NV
CHECKED	JKC

R-27 10-1-08

TEMPORARY CONCRETE BARRIER
F.A.S. ROUTE 317 (US 45) OVER
TRIBUTARY TO SPRING CREEK
SECTION 36-BR
IROQUOIS COUNTY
STA. 1250+85.00
SN-038-2015

CONTRACT NO. 66171

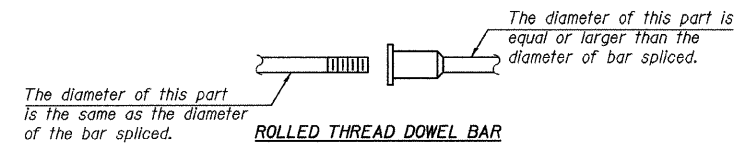
NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_s$
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_s$ (Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

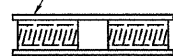


ROLLED THREAD DOWEL BAR



**** ONE PIECE**

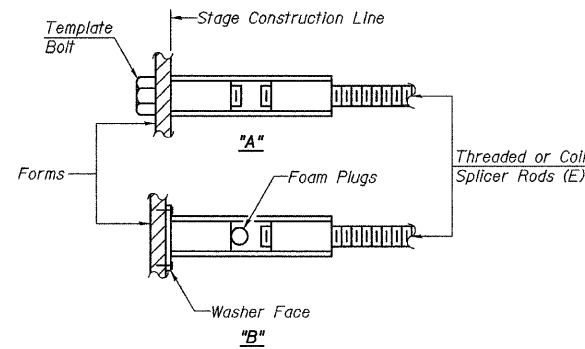
Wire Connector



WELDED SECTIONS

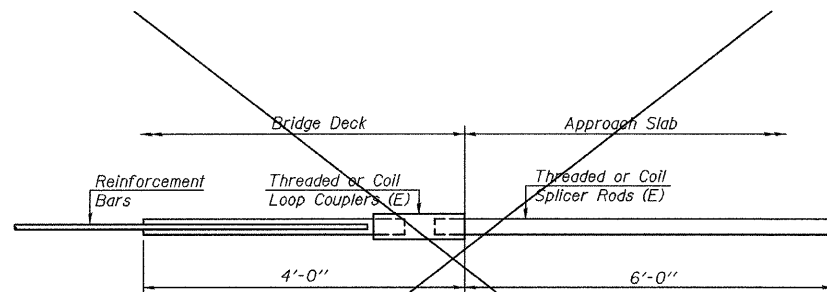
BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



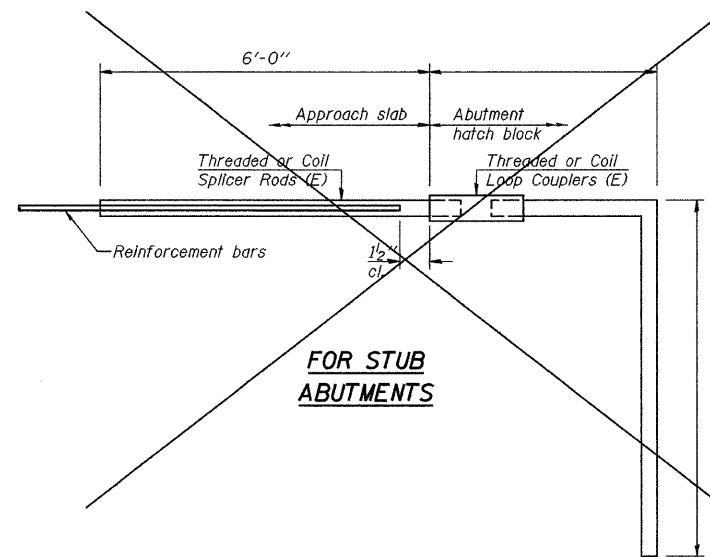
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



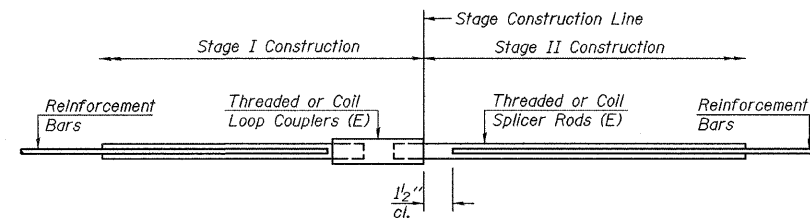
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar		
Min. Capacity =	23.0 kips - tension	
Min. Pull-out Strength =	12.3 kips - tension	
No. Required =		



FOR STUB ABUTMENTS

Bar Splicer for #5 bar		
Min. Capacity =	23.0 kips - tension	
Min. Pull-out Strength =	12.3 kips - tension	
No. Required =		



STANDARD

Bar Size	No. Assemblies Required	Location
#5	48	Top Slab
#5	52	Walls
#5	54	Bottom Slab

BAR SPLICER ASSEMBLY DETAILS

F.A.S. ROUTE 317 (US 45) OVER TRIBUTARY TO SPRING CREEK

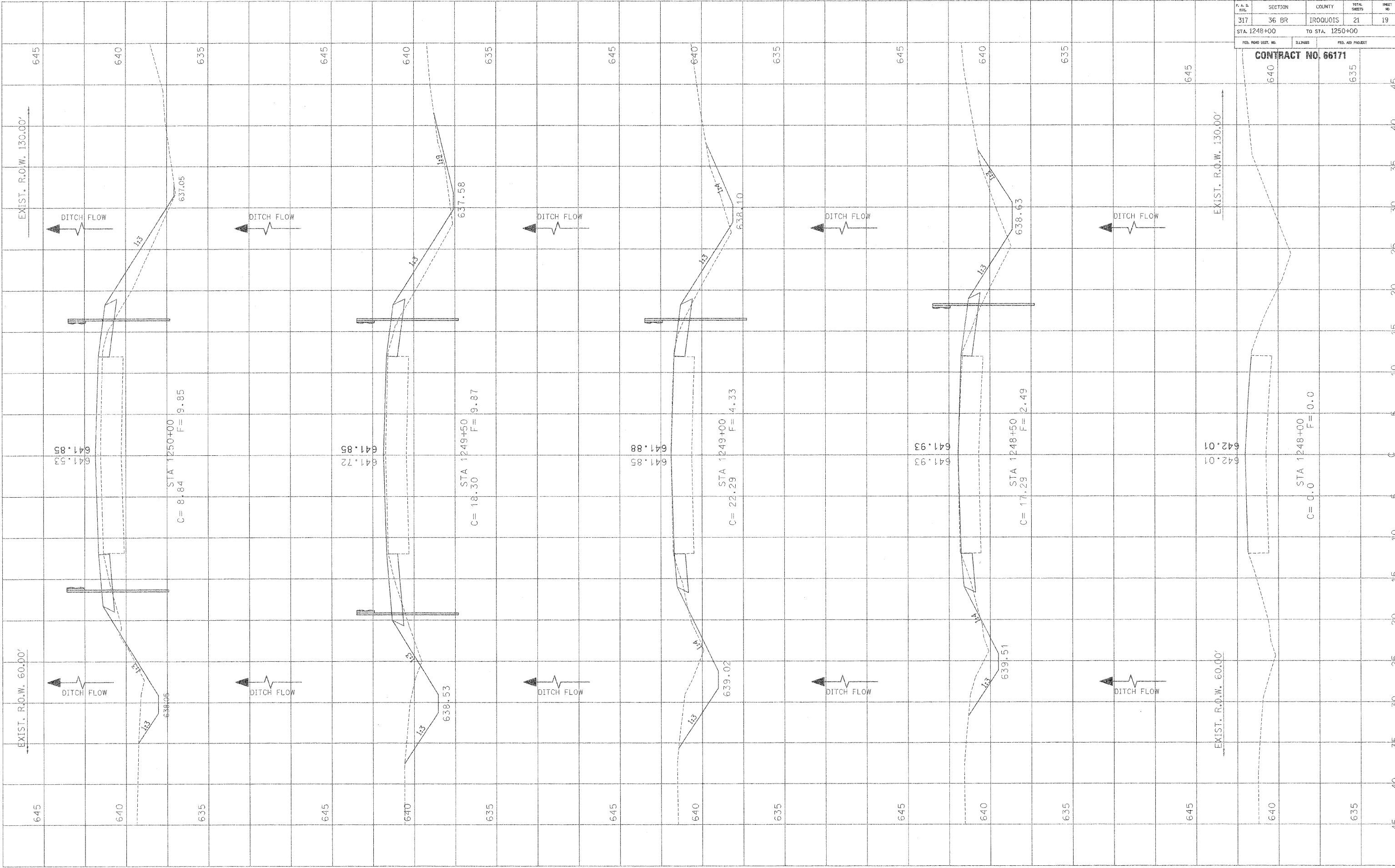
SECTION 36-BR
 IROQUOIS COUNTY
 STA. 1250+85.00
 SN-038-2015

DESIGNED	-
CHECKED	-
DRAWN	NV
CHECKED	JKC

BSD-1 10-1-08

BY: _____ DATE: _____
 FINN SURVEY SURVEYED _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

BY: _____ DATE: _____
 ORIGINAL SURVEY SURVEYED _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

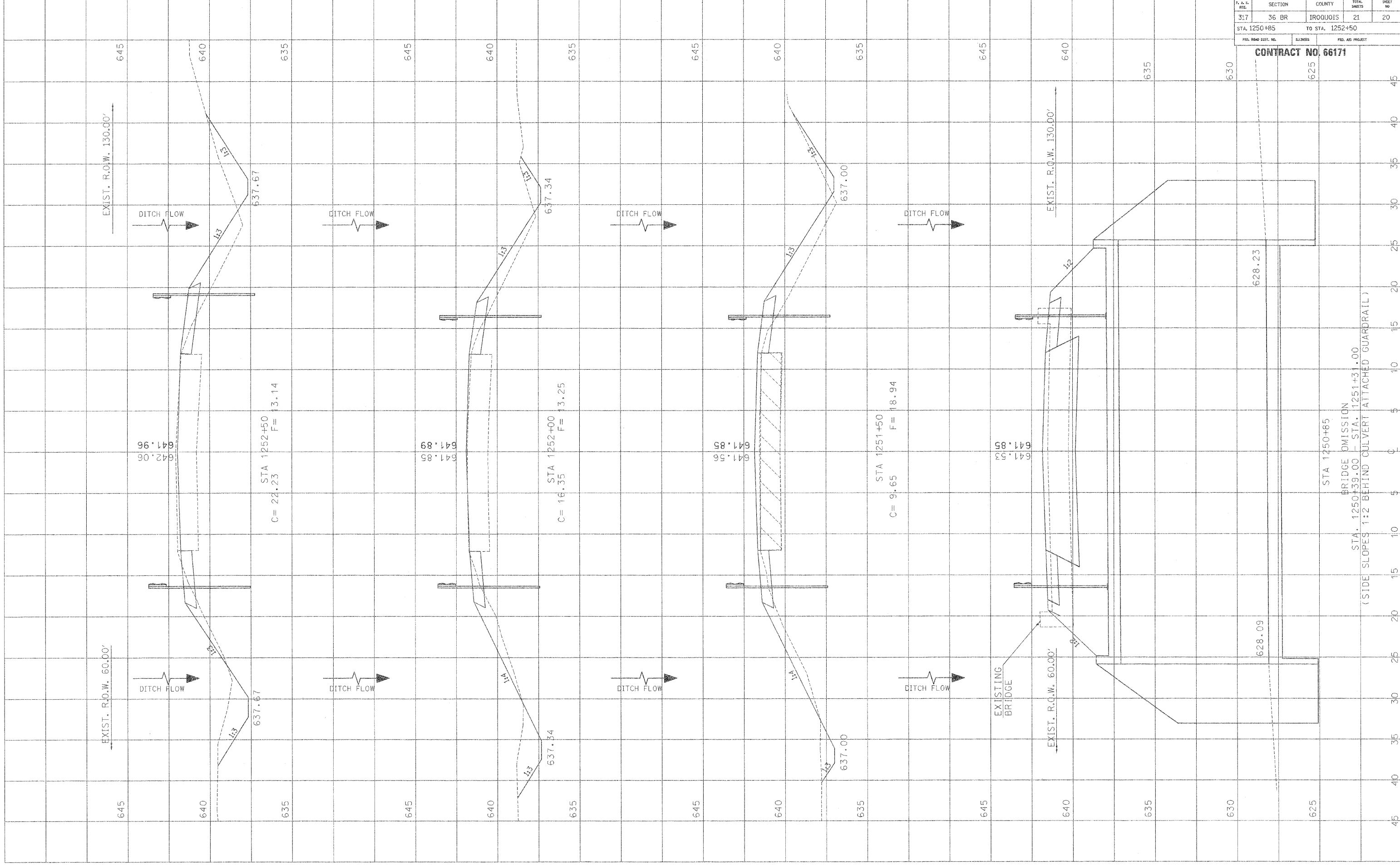


P.A. & R.L.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	19
STA. 1248+00		TO STA. 1250+00		
FED. ROAD DIST. NO.	ALIGNED	FED. AID PROJECT		

CONTRACT NO. 66171

ORIGINAL SURVEY SURVEYED BY DATE
 PLOTTED BY DATE
 NOTE BOOK NO.
 AREAS CHECKED

FINAL SURVEY SURVEYED BY DATE
 PLOTTED BY DATE
 NOTE BOOK NO.
 AREAS CHECKED



F. A. S. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	20
STA. 1250+85		TO STA. 1252+50		
FED. ROAD EST. NO.	ELLINGS	FED. AID PROJECT		

CONTRACT NO. 66171

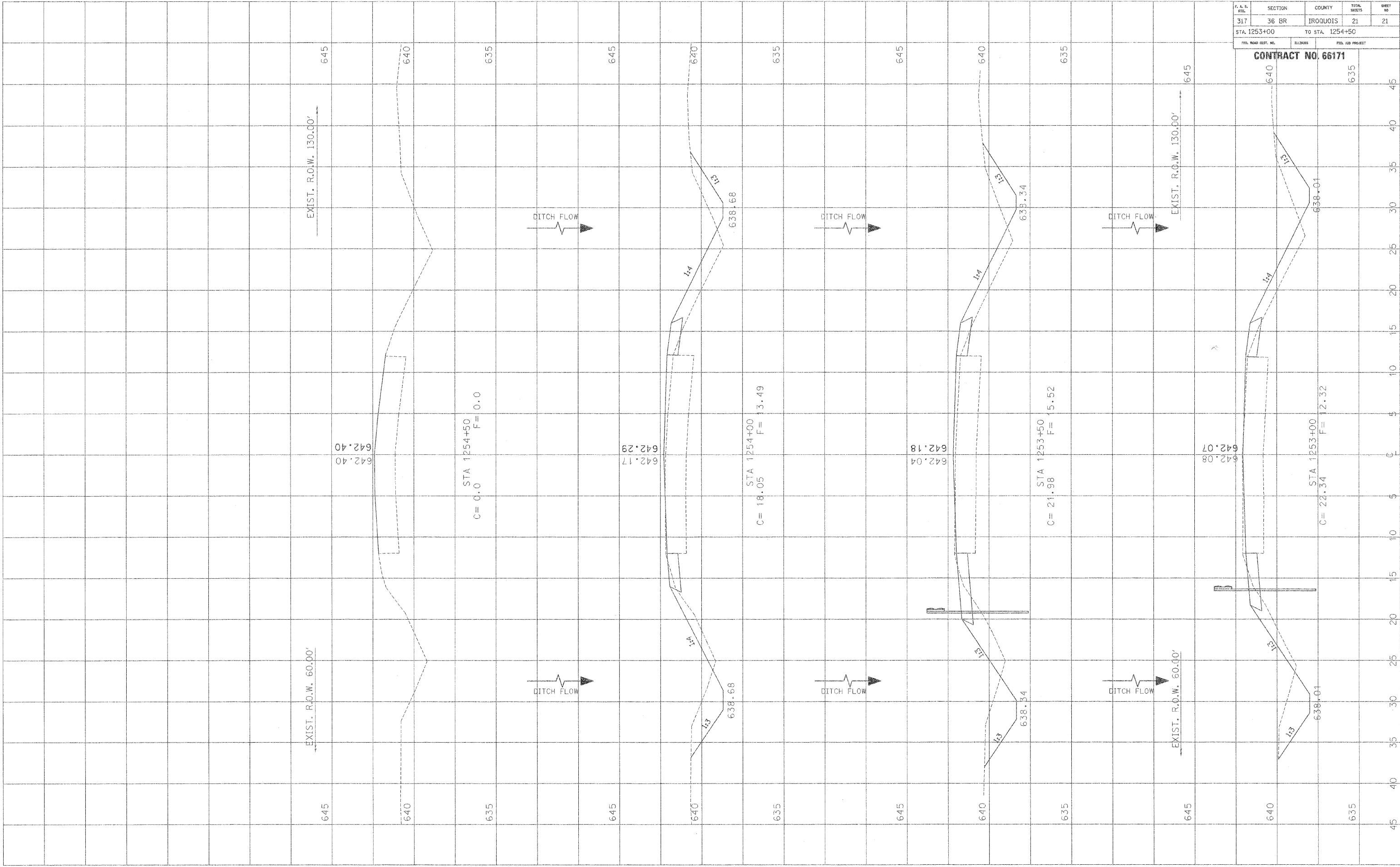
STA 1250+85
 BRIDGE OMISSION
 STA. 1250+39.00 - STA. 1251+31.00
 (SIDE SLOPES 1:2 BEHIND CULVERT ATTACHED GUARDRAIL)

FINAL SURVEY SURVEYED BY DATE
 PLOTTED BY DATE
 NOTE BOOK NO. AREAS CHECKED

ORIGINAL SURVEY SURVEYED BY DATE
 PLOTTED BY DATE
 NOTE BOOK NO. AREAS CHECKED

F. A. S. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	21
STA. 1253+00		TO STA. 1254+50		
FED. ROAD DIST. NO.		FED. AID PROJECT		

CONTRACT NO. 66171



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	21A
STA. 1248+00		TO STA. 1254+50		
FED. ROAD DIST. NO. 3 ILLINOIS FED. AID PROJECT				
CONTRACT NO. 66171				

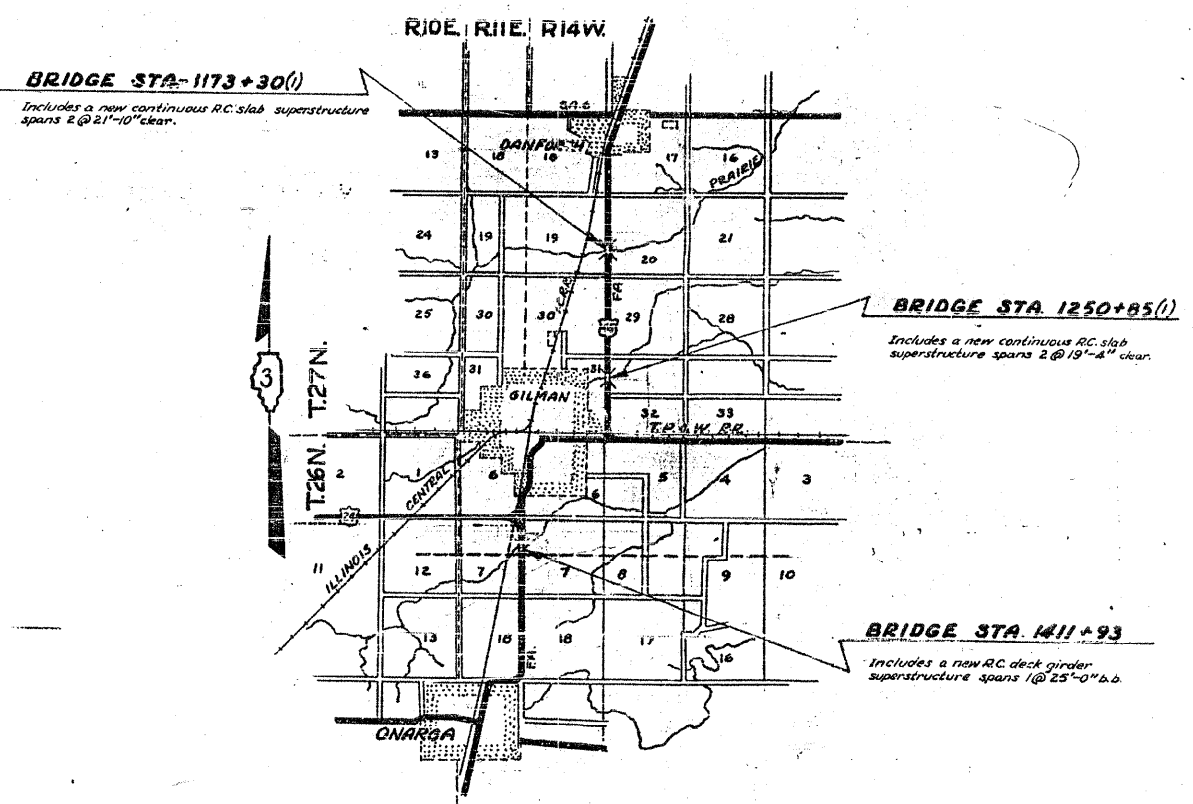
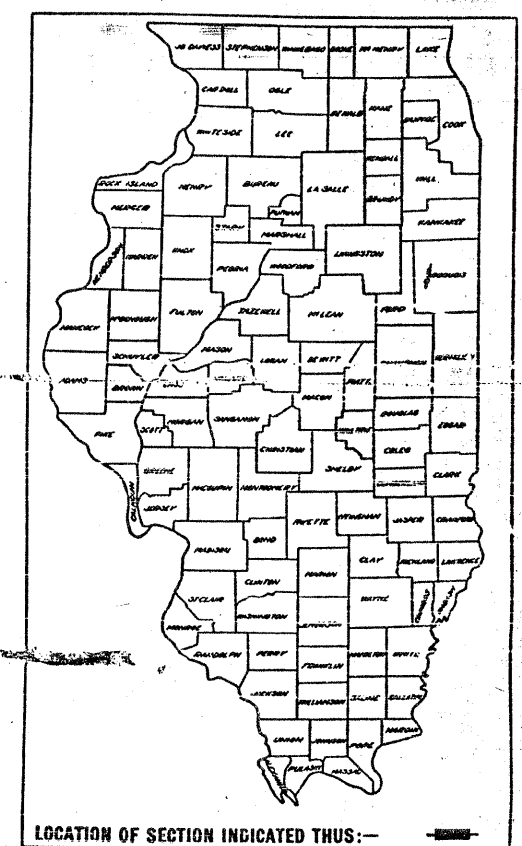
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
 DIVISION OF HIGHWAYS
 PLANS FOR PROPOSED
 STATE B. ISSUE HIGHWAY

SCALES

PLAN	1 INCH	100 FT.
PROFILE, HOR.	1 INCH	100 FT.
PROFILE, VERT.	1 INCH	10 FT.
CROSS-SECTIONS	1 INCH	8 FT. VERTICAL 10 FT. HORIZONTAL

S&I. ROUTE 25, SECTION 36 BY.
PROJECT F.I.-29 (13) IROQUOIS COUNTY.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BY	IROQUOIS	21	1
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT F.I.-29 (13)				



LAYOUT
 APPROXIMATE SCALE: 1" = 1 MILE

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
 DIVISION OF HIGHWAYS

SUBMITTED: March 13, 1952
Kenneth H. Hayes

EXAMINED: May 15, 1952
[Signature]

PASSED: May 15, 1952
[Signature]

APPROVED: May 15, 1952
[Signature]

APPROVED: May 15, 1952
[Signature]

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER _____ DATE _____

APPROVED _____ DATE _____

DIVISION ENGINEER _____ DATE _____

FOR INFORMATION ONLY

F.A.S. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	36 BR	IROQUOIS	21	21B
STA. 1248+00		TO STA. 1254+50		
FED. ROAD DIST. NO. 3		ILLINOIS FED. AID PROJECT		

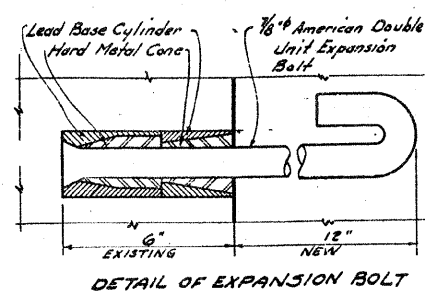
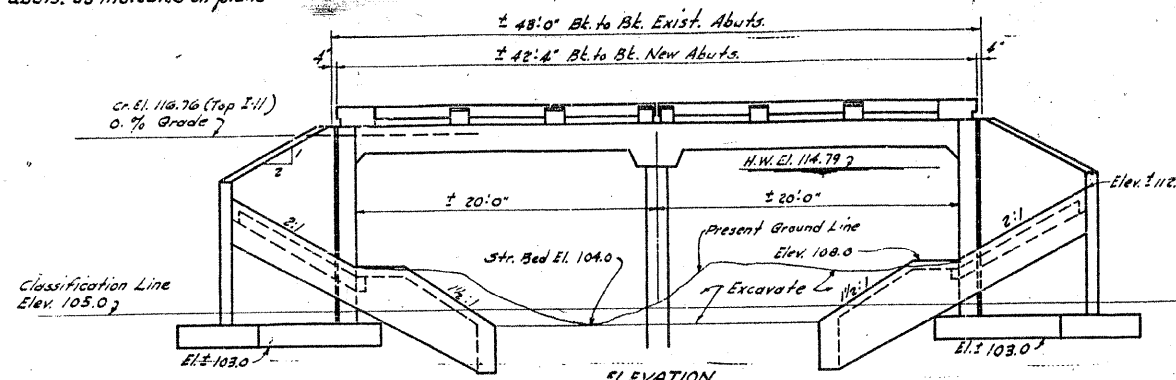
CONTRACT NO. 66171

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4.11.25	36 BR	Iroquois	21	15
FED. ROAD DIST. NO. 3		ILLINOIS FED. AID PROJECT		

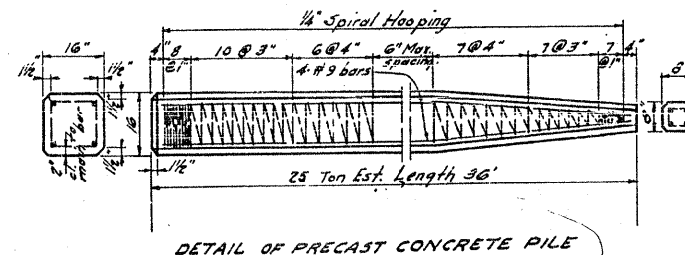
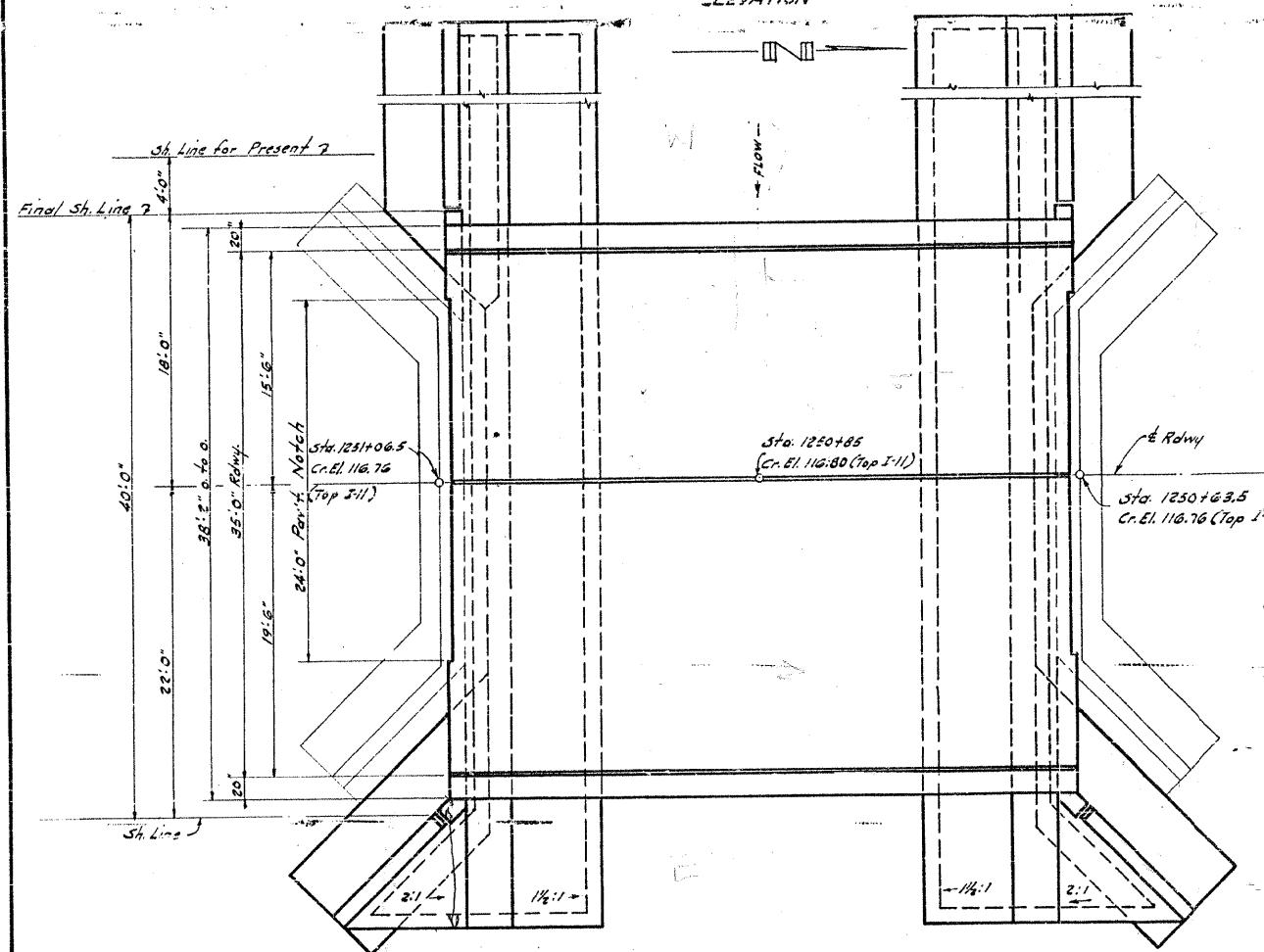
SHEET NO. 1
SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

B.M. Top S.W. Abut. Elev. 116.5
Existing Structure R.C. Thru Girder 1@40'-0"
Rdwy. 20'-0" R.C. Closed Abuts. Contractor
shall remove existing super & portions of
existing abuts. as indicated on plans



GENERAL NOTES
Class X Concrete shall be used throughout except in Handrail.
Handrail Concrete shall be used in Handrail.
The concrete floor slab on each side of the center line joint shall be
poured in one continuous operation.
Handrail shall not be poured until falsework has been removed.
The cost of cement nails and joint filler shall be included in the
unit price for Class X Concrete.
The contract unit price for Expansion Bolts shall include furnishing,
drilling holes, and setting Expansion Bolts.
Backfilling shall be done in accordance with Art. 50.10 of the
Std. Specs.
For water proofing see Special Provisions.
The Contractor shall drive one test pile in permanent location
as directed by the Engineer, before casting remainder of piles.
Concrete floor slabs shall be finished in accordance with the
applicable provisions of Section 59 of the Std. Specs.
Bridge Contractor shall excavate channel as shown for 50' each side
of Roadway



STA. 1250+85 (I)
BUILT 195 BY
STATE OF ILLINOIS
S.B.I. RT. 25 SEC. 36-BY
F.A. PROJ. ET. 29(13)
LOADING H-20-516

NAME & DATA
150 1001

WATERWAY INFORMATION

Drainage Area	3000 Acres
Character	Rolling, Cult. & City of Gilman
Req'd Opening (c=0.6 Tolerats)	243'
Present Opening	323'
Proposed Opening	369'

TOTAL BILL OF MATERIAL

ITEM	SUPER	SUB	TOTALS
Reinforcement Bars	Lbs. 15,140	4,930	20,070
Class X Concrete	Cu. Yds. 67.8	87.4	155.2
Handrail Concrete	Cu. Yds. 1.9		1.9
Name &	Ea. One		One
Expansion Bolts	Ea.	76	76
Slope Wall	Sq. Yds.	270	270
16" Precast Conc. Piles (Lx 36')	Lin. Ft.	216	216
Test Pile	Ea.	One	One
Class "A" Exca. for Struct.	Cu. Yds.	220	220
Class "B" Exca. for Struct.	Cu. Yds.	120	120
Channel Excavation	Cu. Yds.	250	250
Concrete Removal	Cu. Yds.	2.0	2.0
Removal of Exist. Super.	Ea.	One	One
Temporary Bridge Complete	Ea.		One
Removal of Temporary Bridge	Ea.		One
Transporting Temporary Bridge			Lump Sum

DESIGNED *Ralph H. Hallett*
CHECKED *James J. Hareveny*
DRAWN *R.H. Hallett*
CHECKED *James J. Hareveny*

APR 16 1952
EXAMINED *W.E. Hanson*
PASSED *F.P. Hareveny*
APPROVED *F.M. Barker*

STRESSES
f_c 20000 #/sq"
f_t 1400 #/sq" Positive
f_t 1400 #/sq" Negative
f_c 800 #/sq"
f_t 10
Loading H20-516

GENERAL PLAN & ELEVATION
PROJ. FI-29(13)
F.A. RTE. 26 (S.B.I. RT. 25) SEC. 36-BY
IROQUOIS CO.
STA. 1250+85 (I)

