04-24-2015 LETTING ITEM 181

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	1
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 87588		

INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM – BRIDGE
LASALLE COUNTY
SECTION 16–00732–00–BR
F.A.S. 272 (CH 6) OVER COVEL CREEK TRIBUTARY
PROJECT NO. BRS–0272(112)
JOB NUMBER C–93–078–14

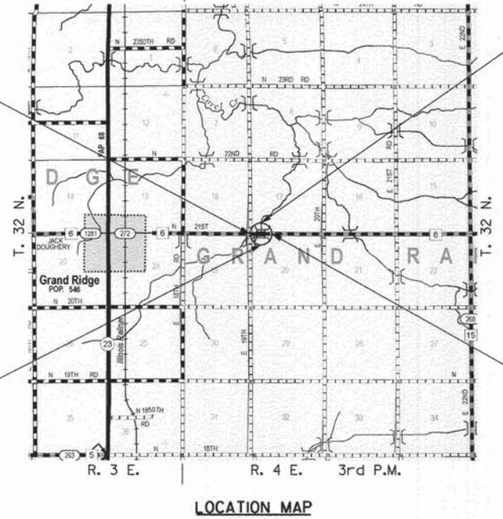
LOCATION OF SECTION INDICATED THUS: –■–

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REQUIRED HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420401-11	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
666001-01	RIGHT OF WAY MARKERS
701901-04	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 23-4	TRAFFIC BARRIER TERMINAL TYPE 1

SCALES
- PLAN, PROFILE HORIZ. — 30′ 0 30′
- PROFILE VERT. — 5′ 0 5′
- CROSS SECTIONS HORIZ., CROSS SECTIONS VERT. — 5′ 0 5′



SECTION 16-00732-00-BR
BEGINS
STATION 14+50.00

PROPOSED STRUCTURE NO. 050-3614
SINGLE SPAN 36″ P.P.C. I-BEAM WITH CONCRETE DECK SUPERSTRUCTURE ON CONC. INTEGRAL ABUTMENTS, 57′-0″ BK. TO BK. AND 35′-0″ O. TO O., NO SKEW.

EXISTING STRUCTURE SN 050-3464
SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM SUPERSTRUCTURE SUPPORTED ON TIMBER PILE CLOSED ABUTMENTS WITH REINFORCED CONCRETE CAPS, 37′-0″ BK. TO BK., AND 40′-0″ O. TO O., NO SKEW (TO BE REMOVED)

SECTION 16-00732-00-BR
ENDS
STATION 25+50.00

LOCATION MAP

1 MI 0 1 MI
APPROXIMATE SCALE

NET LENGTH OF PROJECT = 1,100.00 FEET = 0.208 MILES

DESIGN CLASSIFICATION: MAJOR-COLLECTOR (NON-URBAN)
DESIGN ADT = 1,410 (2035)
DESIGN SPEED = 50 MPH

UTILITY COMPANIES

CommED
JOLIET, ILLINOIS

AGL RESOURCES
NAPERVILLE, ILLINOIS

MEDIACOM
ELBURN, ILLINOIS

FRONTIER
NORMAL, ILLINOIS

MARSEILLES TELEPHONE
METAMORA, ILLINOIS

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

CONTRACT NO. 87588

3460C001

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD-PEORIA

2015 JOB#3460

JOSEPH E. HUTCHISON 56335 REGISTERED PROFESSIONAL ENGINEER 11/13/2015 ILLINOIS

Lic Exp 11/30/2015
SIGNATURE

ENGINEER'S SEAL

PLANS DESIGNED IN ACCORDANCE WITH BUREAU OF LOCAL ROADS AND STREETS MANUAL GUIDELINES FOR TWO LANE RURAL COLLECTORS - RECONSTRUCTION

APPROVED 1-8 2015
Lawrence J. Kinzie
LASALLE COUNTY ENGINEER

PASSED 1-20 2015
David R E
DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS

Released For Bid Based on Limited Review 1-20 2015
Paul A Lotze
DEPUTY DIRECTOR OF HIGHWAYS, REGION TWO ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

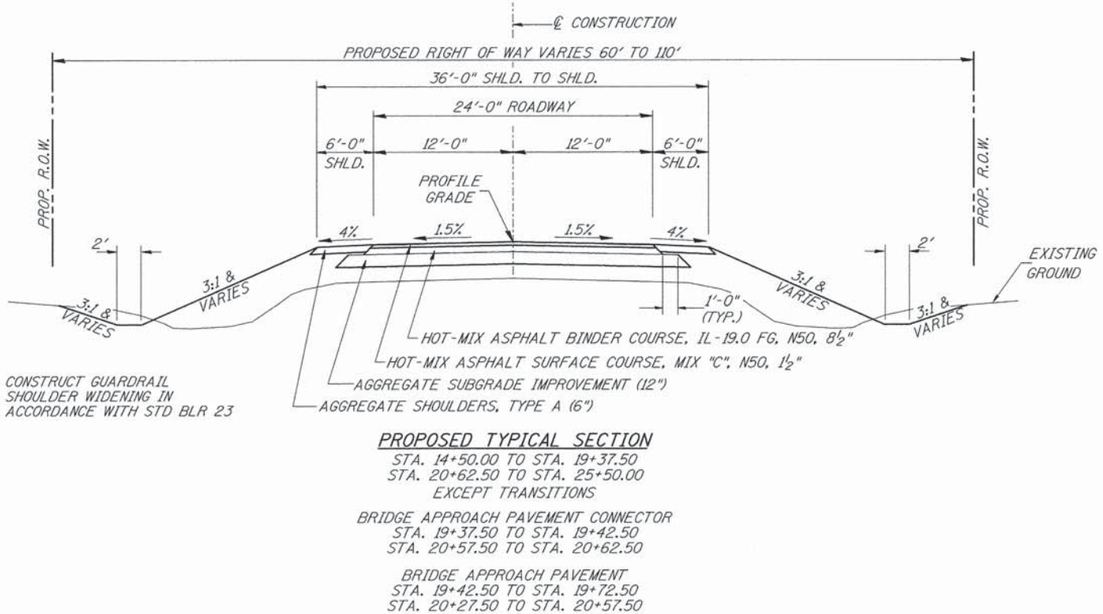
	HMA BINDER	HMA SURFACE
PG GRADE**	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4% @ N50	4% @ N50
MIXTURE COMPOSITION*	IL-19.0 FG	IL-9.5
FRICTION AGGREGATE		MIXTURE C
DENSITY TEST METHOD	CORES	CORES

* OTHER MIXES CAN BE USED WITH WRITTEN PERMISSION FROM THE ENGINEER.

** WHEN RAP/RAS ABR EXCEEDS 20 PERCENT, THE HIGH AND LOW VIRGIN ASPHALT BINDER GRADES SHALL EACH BE REDUCED BY ONE GRADE (i.e. 25% ABR WOULD REQUIRE A VIRGIN ASPHALT BINDER GRADE OF PG 64-22 TO BE REDUCED TO PG 58-28).

STRUCTURAL DESIGN INFORMATION
COUNTY HIGHWAY 6

ROAD CLASSIFICATION: CLASS III 80,000 lb./20 YEAR DESIGN
STRUCTURAL DESIGN TRAFFIC:
PV = 1,185 SU = 94 MU = 67
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:
P = 88% S = 7% M = 5%
MINIMUM SUBGRADE SUPPORT RATING: FAIR
FLEXIBLE PAVEMENT DESIGN: MINIMUM TF = 0.36
ASPHALT PAVEMENT THICKNESS: 10"
AGGREGATE SUBGRADE IMPROVEMENT: 12"



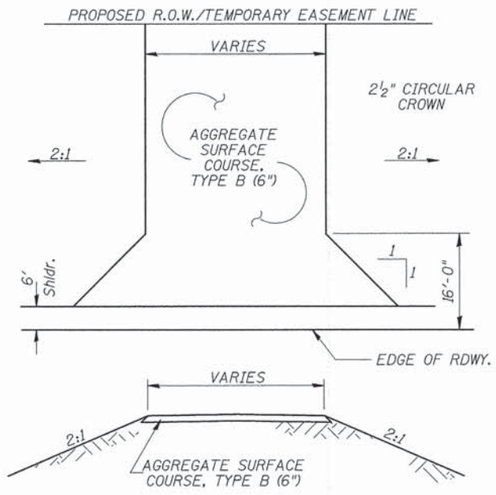
PROPOSED TYPICAL SECTION

STA. 14+50.00 TO STA. 19+37.50
STA. 20+62.50 TO STA. 25+50.00
EXCEPT TRANSITIONS

BRIDGE APPROACH PAVEMENT CONNECTOR
STA. 19+37.50 TO STA. 19+42.50
STA. 20+57.50 TO STA. 20+62.50

BRIDGE APPROACH PAVEMENT
STA. 19+42.50 TO STA. 19+72.50
STA. 20+27.50 TO STA. 20+57.50

BRIDGE OMISSION
STA. 19+72.50 TO STA. 20+27.50



PROPOSED FIELD ENTRANCES

STA 14+83 RT (24' WIDE)
STA 17+50 LT (26' WIDE)
STA 21+95 LT (22' WIDE)
STA 22+25 RT (25' WIDE)

GENERAL NOTES

THE REMOVAL OF EXISTING ASPHALT SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WHICH MAY BE NECESSARY FOR THE CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AS EARTH EXCAVATION AND NO COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR EQUIPMENT REQUIRED.

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.

THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

ALL EXISTING DRAINAGE STRUCTURES NOT BEING REMOVED BY THE CONTRACTOR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION

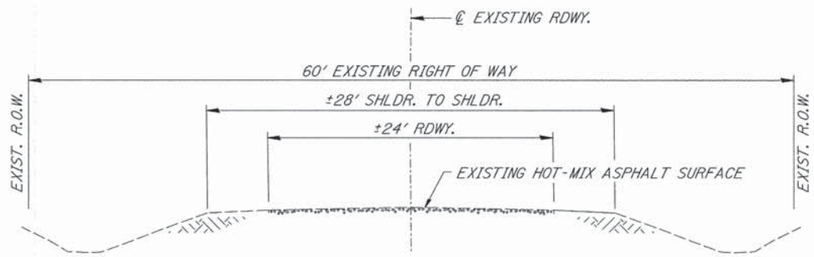
THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE FINAL SURFACE OF ALL DISTURBED/EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE COHESIVE VEGETATION SUSTAINING SOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING VEGETATION SUSTAINING SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED EXCAVATION. TOPSOIL MAY BE STRIPPED AND STOCKPILED FROM THE SITE OR HAULED IN FROM AN ALTERNATE LOCATION AS APPROVED BY THE ENGINEER.

ALL ELEVATIONS SHOWN REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.



EXISTING TYPICAL SECTION

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		DRAWN -	REVISED -
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	PLOT DATE = 1/6/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

GENERAL NOTES, DETAILS, TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 14+50.00 TO STA. 25+50.00

F.A.S. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	2
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	QUANTITY
	20200100	EARTH EXCAVATION	CU YD	1,500
	20300100	CHANNEL EXCAVATION	CU YD	230
①	20400800	FURNISHED EXCAVATION	CU YD	2,160
	25100630	EROSION CONTROL BLANKET	SQ YD	6,410
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	1,500
	28000305	TEMPORARY DITCH CHECKS	FOOT	84
	28000400	PERIMETER EROSION BARRIER	FOOT	245
	28000500	INLET AND PIPE PROTECTION	EACH	4
	28100109	STONE RIPRAP, CLASS A5	SQ YD	715
	28200200	FILTER FABRIC	SQ YD	715
①	30300011	AGGREGATE SUBGRADE IMPROVEMENT	TON	1,957
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	145
①	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	11,990
①	40603082	HOT-MIX ASPHALT BINDER COURSE, IL-19.0 FG, N50	TON	1,292
	40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	220
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	38
	48100100	AGGREGATE SHOULDERS, TYPE A	TON	478
①	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50105220	PIPE CULVERT REMOVAL	FOOT	295
	50200100	STRUCTURE EXCAVATION	CU YD	165
	50300100	FLOOR DRAINS	EACH	6
	50300225	CONCRETE STRUCTURES	CU YD	62.1
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	186.8
	50300260	BRIDGE DECK GROOVING	SQ YD	414
	50300280	CONCRETE ENCASEMENT	CU YD	4.3
	50300300	PROTECTIVE COAT	SQ YD	452
	50400805	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36 IN.	FOOT	272
①	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	51,600
②	50901050	STEEL RAILING, TYPE SM	FOOT	170
	51200958	FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	360
	51202305	DRIVING PILES	FOOT	360
	51203200	TEST PILE METAL SHELLS	EACH	2
	51500100	NAME PLATES	EACH	1
①	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	160
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	61
②	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
②	63200310	GUARDRAIL REMOVAL	FOOT	160
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	9
	67100100	MOBILIZATION	L SUM	1
②	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	4,400
②	78200410	GUARDRAIL MARKERS, TYPE A	EACH	8
②①	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
②	LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	4
①	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.4
①	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	108
①	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1
①	Z0013798	CONSTRUCTION LAYOUT	L SUM	1
①	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	124

① SEE SPECIAL PROVISIONS ② SPECIALTY ITEMS

CONSTRUCTION CODE TYPE: 0011

AGGREGATE SHOULDERS, TYPE A

	STATION TO STATION	SIDE	WIDTH	LENGTH	TON
	14+50.00 - 15+00.00	RIGHT	4.39' AVG.	50.00'	8
	14+50.00 - 15+00.00	LEFT	4.26' AVG.	50.00'	7
	15+00.00 - 18+56.24	RIGHT	6.00'	356.24'	75
	15+00.00 - 18+56.24	LEFT	6.00'	356.24'	75
*	18+56.24 - 19+71.50	RIGHT	VARIES	115.26'	37
*	18+56.24 - 19+71.50	LEFT	VARIES	115.26'	37
*	20+28.50 - 21+43.76	RIGHT	VARIES	115.26'	37
*	20+28.50 - 21+43.76	LEFT	VARIES	115.26'	37
	21+43.76 - 25+00.00	RIGHT	6.00'	356.24'	75
	21+43.76 - 25+00.00	LEFT	6.00'	356.24'	75
	25+00.00 - 25+50.00	LEFT	4.44' AVG.	50.00'	8
	25+00.00 - 25+50.00	RIGHT	4.24' AVG.	50.00'	7
			TOTAL		478

* AGGREGATE SHOULDER EXTENDS TO THE EDGE OF THE GUARDRAIL SHOULDER WIDENING.

PERIMETER EROSION BARRIER

STATION TO STATION	SIDE	FOOT
14+63 - 15+03	RIGHT	80
17+30 - 17+70	LEFT	60
21+75 - 22+15	LEFT	45
22+05 - 22+45	RIGHT	60
	TOTAL	245

INLET AND PIPE PROTECTION

STATION	SIDE	EACH
14+63	RIGHT	1
17+30	LEFT	1
22+15	LEFT	1
22+45	RIGHT	1
	TOTAL	4

TEMPORARY DITCH CHECKS

STATION	SIDE	FOOT
17+40	RIGHT	12
19+82	RIGHT	12
19+82	LEFT	12
20+18	LEFT	12
20+20	RIGHT	12
23+85	RIGHT	12
23+85	LEFT	12
	TOTAL	84

EROSION CONTROL BLANKET

STATION TO STATION	SIDE	WIDTH	LENGTH	AREA (SQ YD)
14+50 - 17+37	LEFT	VARIES	287'	803
14+50 - 19+72	RIGHT	VARIES	522'	1,687
17+63 - 19+72	LEFT	VARIES	209'	792
20+29 - 21+84	LEFT	VARIES	155'	574
20+29 - 22+13	RIGHT	VARIES	184'	691
22+06 - 25+50	LEFT	VARIES	344'	1,104
22+38 - 25+50	RIGHT	VARIES	312'	759
			TOTAL	6,410

PIPE CULVERT REMOVAL

℄ STATION	SIZE	SIDE	FOOT
14+83	15"	RIGHT	23
19+46	18"	LEFT	79
19+51	18"	RIGHT	67
20+41	24"	RIGHT	73
21+40	18"	RIGHT	21
21+95	12"	LEFT	32
		TOTAL	295

PIPE CULVERTS, CLASS D, TYPE 1 18"

STATION	SIDE	FOOT
14+83	RIGHT	40
17+50	LEFT	40
21+95	LEFT	40
22+25	RIGHT	40
	TOTAL	160

GUARDRAIL REMOVAL

STATION TO STATION	SIDE	FOOT
19+42 - 19+82	LEFT	40
19+42 - 19+82	RIGHT	40
20+18 - 20+58	LEFT	40
20+18 - 20+58	RIGHT	40
	TOTAL	160

TRAFFIC BARRIER TERMINAL, TYPE 1

SIDE	STATION TO STATION	EACH
LEFT	18+88.75 - 19+13.75	1
RIGHT	18+88.75 - 19+13.75	1
LEFT	20+86.25 - 21+11.25	1
RIGHT	20+86.25 - 21+11.25	1
	TOTAL	4

TRAFFIC BARRIER TERMINAL, TYPE 6A

SIDE	STATION TO STATION	EACH
LEFT	19+13.75 - 19+57.50	1
RIGHT	19+13.75 - 19+57.50	1
LEFT	20+42.50 - 20+86.25	1
RIGHT	20+42.50 - 20+86.25	1
	TOTAL	4

AGGREGATE SURFACE COURSE, TYPE B

STATION TO STATION	WIDTH	LENGTH	TON
ENTR. - 14+83.00 RT	24' & VAR.	37.5'	37
ENTR. - 17+50.00 LT	26' & VAR.	37.0'	38
ENTR. - 21+95.00 LT	22' & VAR.	37.0'	33
ENTR. - 22+25.00 RT	25' & VAR.	37.0'	37
		TOTAL	145

GUARDRAIL MARKERS, TYPE A

STATION TO STATION	SIDE	GUARDRAIL MARKERS (EACH)
18+88.75 - 21+11.25	RIGHT	4
18+88.75 - 21+11.25	LEFT	4
	TOTAL	8

ALL GUARDRAIL MARKERS SHALL BE BI-DIRECTIONAL

PAVEMENT SCHEDULE

STATION TO STATION	WIDTH	LENGTH	PRIME COAT POUND 4 LBS/SQ YD	HOT-MIX ASPHALT BINDER CSE TON 112#/SQ YD/IN	HOT-MIX ASPHALT SURF CSE TON 112#/SQ YD/IN	AGGREGATE SUBGRADE IMPROVEMENT TON	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) SQ YD
14+50.00 - 15+00.00	27.63' AVG.	50.00'	614				
15+00.00 - 19+37.50	27.67'	437.50'	5,380				
20+62.50 - 25+00.00	27.67'	437.50'	5,380				
25+00.00 - 25+50.00	27.74' AVG.	50.00'	616				
14+50.00 - 15+00.00	24.92' AVG.	50.00'		66			
15+00.00 - 19+37.50	24.96'	437.50'		580			
20+62.50 - 25+00.00	24.96'	437.50'		580			
25+00.00 - 25+50.00	25.03' AVG.	50.00'		66			
14+50.00 - 15+00.00	24.09' AVG.	50.00'			11		
15+00.00 - 19+37.50	24.13'	437.50'			99		
20+62.50 - 25+00.00	24.13'	437.50'			99		
25+00.00 - 25+50.00	24.20' AVG.	50.00'			11		
14+50.00 - 15+00.00	28.64' AVG.	50.00'				100	
15+00.00 - 19+37.50	28.67'	437.50'				878	
20+62.50 - 25+00.00	28.67'	437.50'				878	
25+00.00 - 25+50.00	28.74' AVG.	50.00'				101	
19+37.50 - 19+42.50	35.00'	5.00'					19
20+57.50 - 20+62.50	35.00'	5.00'					19
		TOTAL	11,990	1,292	220	1,957	38

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

STATION	SIDE	OFFSET	EACH
14+50	LEFT	30'	1
14+50	RIGHT	30'	1
15+50	RIGHT	45'	1
17+25	LEFT	55'	1
19+00	RIGHT	55'	1
22+50	RIGHT	55'	1
23+25	LEFT	55'	1
24+67.90	RIGHT	30'	1
25+50	LEFT	30'	1
		TOTAL	9

EARTHWORK SUMMARY

STATION TO STATION		EARTH EXCAVATION CU YD	CHANNEL EXCAVATION CU YD	STRUCTURE EXCAVATION CU YD	FILL CU YD	WASTE (SHORTAGE) CU YD
RDWY 14+50.00 - 19+71.50		676			1,760	(1,253)
RDWY 20+28.50 - 25+50.00		826			1,525	(906)
CHANNEL			230			
STRUCTURE				165		
	TOTAL	1,502	230	165	3,285	(2,159)
	USE	1,500	230	165	-	(2,160)

(© 25% SHRINKAGE)

PAINT PAVEMENT MARKING - LINE 4"

STATION TO STATION	SIDE	DESCRIPTION	FOOT
14+50.00 - 25+50.00	LEFT	WHITE SOLID	1,100
14+50.00 - 25+50.00	℄	DOUBLE YELLOW	2,200
14+50.00 - 25+50.00	RIGHT	WHITE SOLID	1,100
		TOTAL	4,400

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	PLOT DATE = 1/6/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

SUMMARY OF QUANTITIES & SCHEDULES OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 14+50.00 TO STA. 25+50.00

F.A.S. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	3
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

R 3 E, 3rd PM

R 4 E, 3rd PM

23rd ROAD

22nd ROAD

20th ROAD

T 32 N

SECTION 11

SECTION 12

SECTION 7

SECTION 8

SECTION 9

SECTION 10

SECTION 14

SECTION 13

SECTION 18

SECTION 17

SECTION 16

SECTION 15

SECTION 24

SECTION 19

SECTION 20

SECTION 21

SECTION 22

SECTION 25

SECTION 30

SECTION 29

SECTION 28

SECTION 27

IL ROUTE 23

18th ROAD

19th ROAD

20th ROAD

21st ROAD

COUNTY HIGHWAY 15

COUNTY HIGHWAY 6

GRAND RIDGE

1 ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY
R11-3
ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY

2 ROAD CLOSED 2 3/4 MILES AHEAD LOCAL TRAFFIC ONLY
R11-3
ROAD CLOSED 2 3/4 MILES AHEAD LOCAL TRAFFIC ONLY

3 ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY
R11-3
ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY

4 ROAD CLOSED 3/4 MILE AHEAD LOCAL TRAFFIC ONLY
R11-3
ROAD CLOSED 3/4 MILE AHEAD LOCAL TRAFFIC ONLY

5 ROAD CLOSED AHEAD
W20-3
ROAD CLOSED AHEAD

6 ROAD CLOSED 500 FT
W20-3
ROAD CLOSED 500 FT

7 TYPE III BARRICADES

SEE STANDARDS BLR 21 & BLR 22
AND SPECIAL PROVISIONS

1/2 MI 0 1/2 MI

GRAPHIC SCALE IN MILES

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	PLOT DATE = 1/6/2015	DATE -	REVISED -

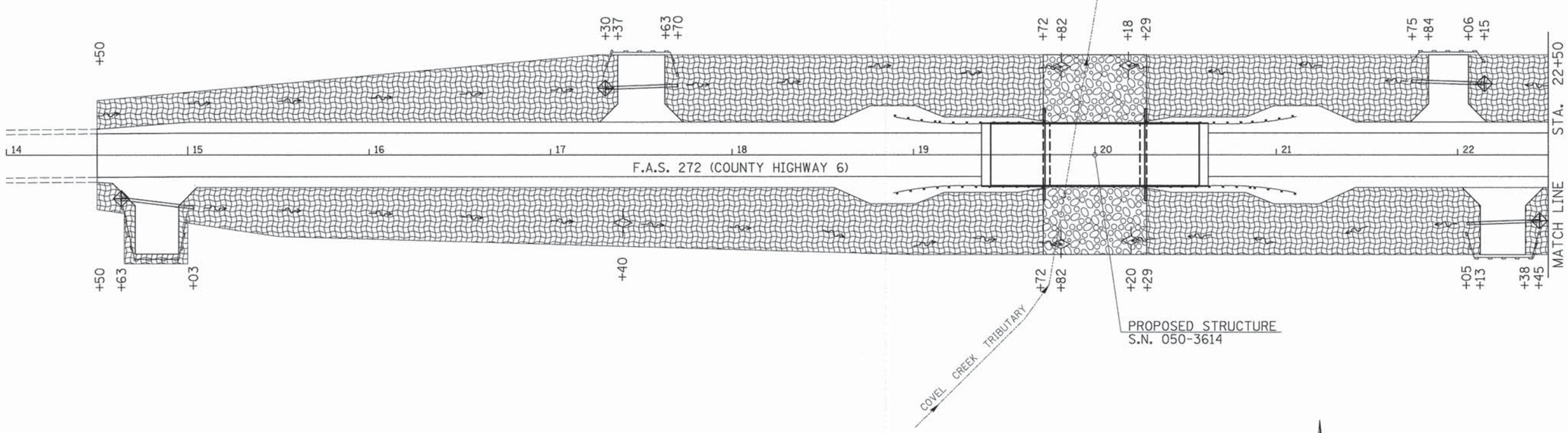
LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

TRAFFIC CONTROL PLAN

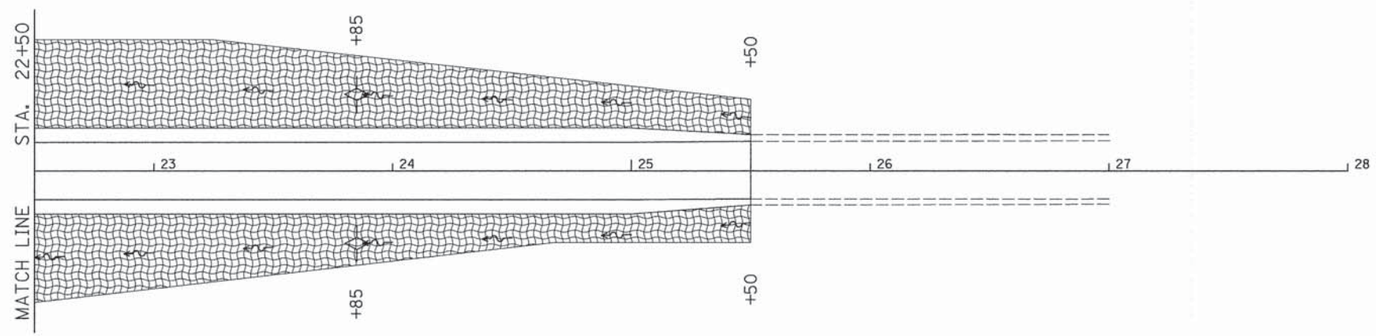
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 14+50.00 TO STA. 25+50.00

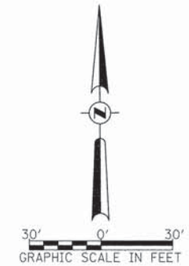
F.A.S. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	4
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

T 32 N, R 4 E, 3rd PM
SECTION 17



NOTE: TEMPORARY EROSION CONTROL SEEDING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 280.04 OF THE STANDARD SPECIFICATIONS



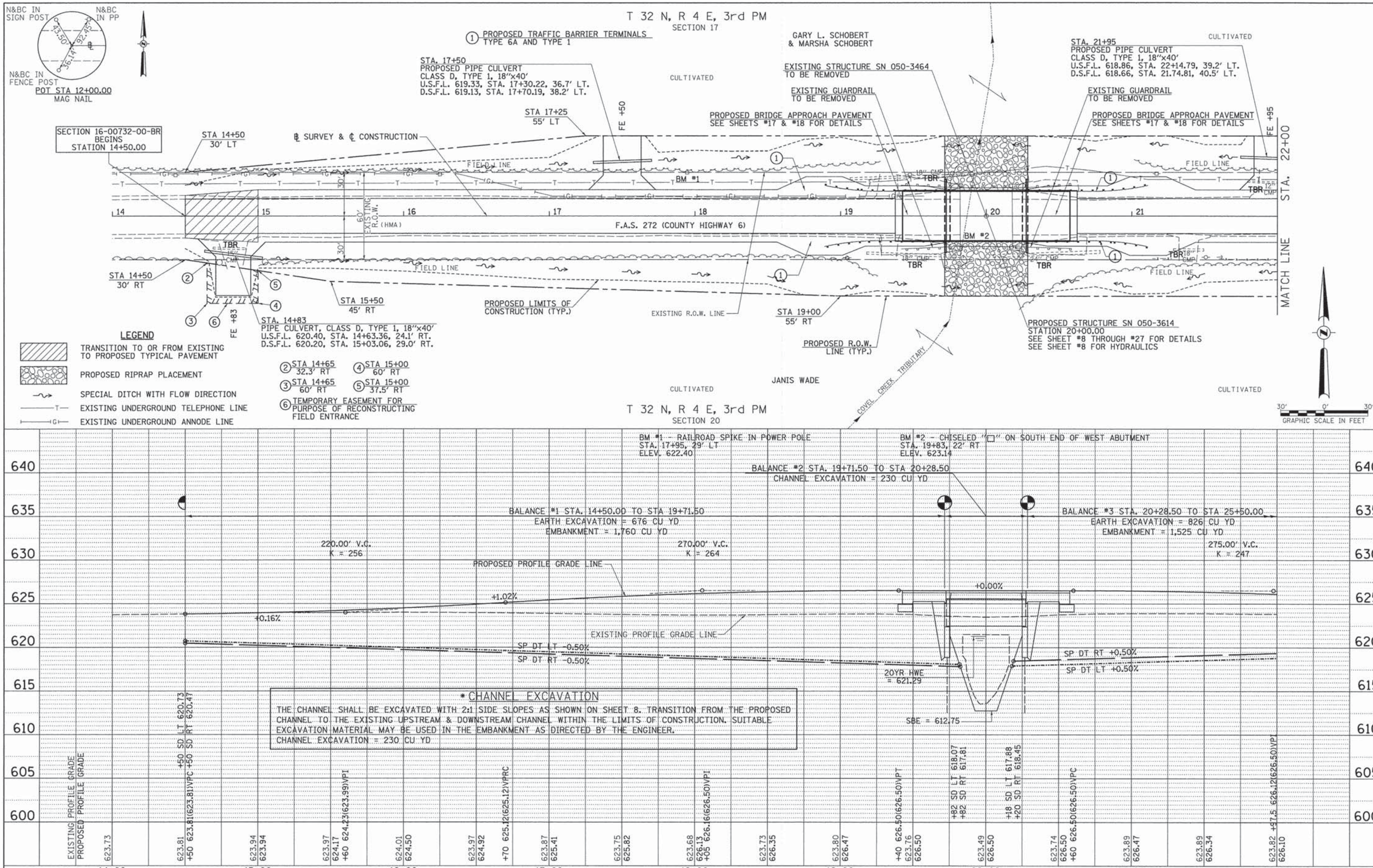


LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET & PIPE PROTECTION
- EROSION CONTROL BLANKET
- SPECIAL DITCH - FLOW LINE AND DIRECTION
- PROPOSED RIPRAP PLACEMENT

T 32 N, R 4 E, 3rd PM
SECTION 20

FILE NAME = V:\Bridge\3460-LaSalle\3460e001.dgn Default	USER NAME = cthomas	DESIGNED -	REVISED -	**LASALLE COUNTY** **COUNTY HIGHWAY 6 OVER** **COVEL CREEK TRIBUTARY**	**STORMWATER POLLUTION PREVENTION PLAN**	F.A.S. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			272	16-00732-00-BR	LASALLE	44	5
	PLOT SCALE = 30.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 87588		
	PLOT DATE = 1/6/2015	DATE -	REVISED -		SCALE: 1"=30' SHEET NO. 1 OF 1 SHEETS STA. 14+50 TO STA. 25+50	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		



LEGEND

- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- PROPOSED RIPRAP PLACEMENT
- SPECIAL DITCH WITH FLOW DIRECTION
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING UNDERGROUND ANNODE LINE

* CHANNEL EXCAVATION

THE CHANNEL SHALL BE EXCAVATED WITH 2:1 SIDE SLOPES AS SHOWN ON SHEET 8. TRANSITION FROM THE PROPOSED CHANNEL TO THE EXISTING UPSTREAM & DOWNSTREAM CHANNEL WITHIN THE LIMITS OF CONSTRUCTION. SUITABLE EXCAVATION MATERIAL MAY BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
CHANNEL EXCAVATION = 230 CU YD

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	PLOT DATE = 1/6/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

PLAN AND PROFILE

SCALE: 1"=30' | SHEET NO. 1 OF 2 SHEETS | STA. 14+50 TO STA. 22+00

F.A.S. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	6
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

T 32 N, R 4 E, 3rd PM
SECTION 17

GARY L. SCHOBERT
& MARSHA SCHOBERT

CULTIVATED

PROPOSED R.O.W. LINE (TYP.)

STA 23+25
55' LT

℄ SURVEY & ℄ CONSTRUCTION

SECTION 16-00732-00-BR
ENDS
STATION 25+50.00

STA 25+50
30' LT

STA. 22+00

BM #3

22 | 23 | 24 | (HMA) | 25 | 26 | 27 | 28

F.A.S. 272 (COUNTY HIGHWAY 6)

MATCH LINE

30'
60' EXISTING R.O.W.
30'

STA 24+67.90
30' RT

FE +25

STA 22+50
55' RT

PROPOSED LIMITS OF CONSTRUCTION (TYP.)

EXISTING R.O.W. LINE

STA. 22+25
PROPOSED PIPE CULVERT
CLASS D, TYPE 1, 18"x40'
U.S.F.L. 619.58, STA. 22+45.18, 36.4' RT.
D.S.F.L. 619.38, STA. 22+05.20, 37.8' RT.

JANIS WADE

CULTIVATED

T 32 N, R 4 E, 3rd PM
SECTION 20

MAG NAIL 1' FROM EOP
N&BC IN PP
30.16'
30.67'
39.23'
MAG NAIL 1' FROM EOP
POT STA 28+00.00
MAG NAIL

LEGEND

- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- SPECIAL DITCH WITH FLOW DIRECTION
- —T— EXISTING UNDERGROUND TELEPHONE LINE

30' 0' 30'
GRAPHIC SCALE IN FEET

PLAN — SURVEYED / PLOTTED / ALIGNMENT CHECKED / BY / DATE / NOTE BOOK / NO. / BY / DATE / GRADES CHECKED / BEAM NOTED / STRUCTURE NOTATING CHKD / CADD FILE NAME

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / BEAM NOTED / STRUCTURE NOTATING CHKD / NOTE BOOK / NO. / BY / DATE

BM #3 - RAILROAD SPIKE IN POWER POLE
STA. 22+90 30' LT
ELEV. 624.12

BALANCE #3 STA. 20+28.50 TO STA 25+50.00
EARTH EXCAVATION = 826 CU YD
EMBANKMENT = 1,525 CU YD

275.00' V.C.
K = 247

215.00' V.C.
K = 184

PROPOSED PROFILE GRADE LINE

-1.11%

+0.05%

SP DT RT +0.50%

EXISTING PROFILE GRADE LINE

SP DT LT +0.50%

640 635 630 625 620 615 610 605 600

	22+00		23+00		+35	24+00		+42.5	25+00		+50	26+00		27+00
EXISTING PROFILE GRADE	623.82	+17.5 626.12(626.50)VPI	623.72	623.65	624.97(624.97)VPRC	623.75	623.74	624.09(623.77)VPI	623.83	623.83	SD LT 620.54 SD RT 621.10 (623.83)VPT +50	623.86	623.71	623.74
PROPOSED PROFILE GRADE	626.10		625.77	625.33		624.81	624.36	623.73 624.05	623.87					

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	PLOT DATE = 1/6/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

PLAN AND PROFILE

SCALE: 1"=30' | SHEET NO. 2 OF 2 SHEETS | STA. 22+00 TO STA. 25+50

F.A.S. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	7
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

B.M.: RR Spike in Power Pole Sta. 17+95, 29' Lt. Elev. 622.40 — RR Spike in Power Pole Sta. 22+90, 30' Lt. Elev. 624.12

Existing Structure:
Single span precast prestressed concrete deck beam superstructure supported on timber pile closed abutments with reinforced concrete caps. The structure is 37'-0" back to back of abutments, 40'-0" out to out deck, and is not skewed. The structure was constructed in 1980.
Str. No. 050-3464

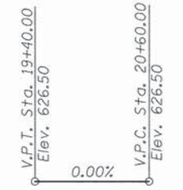
Salvage: None

Road to be closed to traffic during construction.

COVEL CREEK TRIBUTARY
BUILT 201_ BY
LASALLE COUNTY
SEC. 16-00732-00-BR
C.H. 6 STATION 20+00.00
F.A. PROJ. BRS-0272(112)
STR. NO. 050-3614 LOADING HL-93

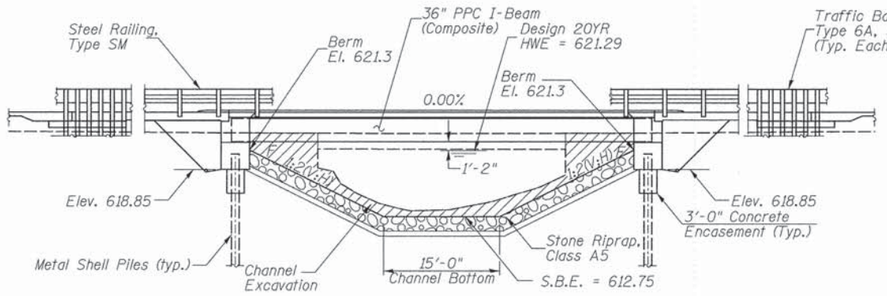
NAME PLATE

Locate Name Plate on Wingwall S.W. Corner of Bridge (See Std. 515001)

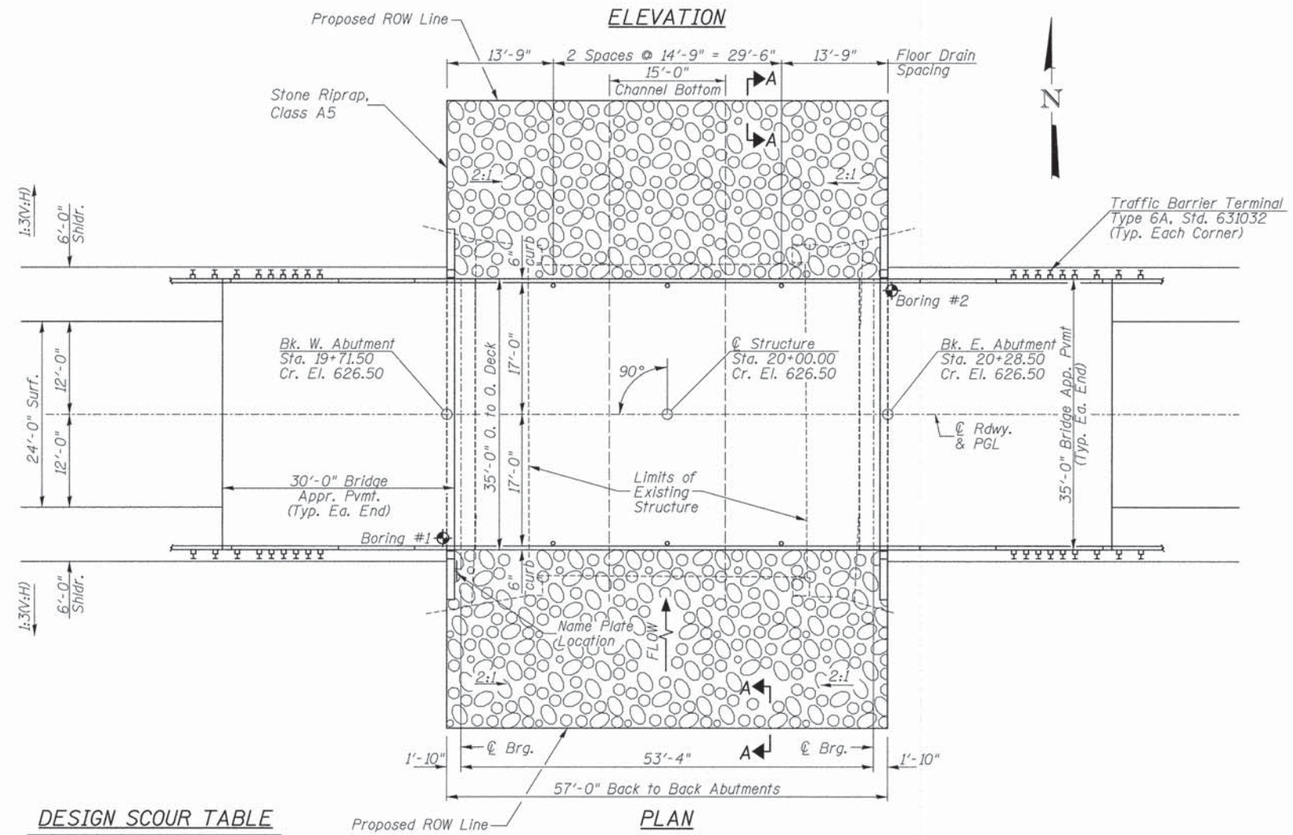


PROFILE GRADE

F.A.S. 272 (CH 6)



ELEVATION



PLAN

DESIGN SCOUR TABLE

Design Scour Elevation			
Flood	Freq. Yr.	Location W. Abut.	Location E. Abut.
Base	100	618.85	618.85
Max Calc.	500	618.85	618.85

WATERWAY INFORMATION

Drainage Area = 6.99 Sq. Mi.					Low Grade Elev. = 623.71 @ Sta. 26+50.00				
Flood	Freq. Yr.	Q C.F.S.	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	20	1,361	192	275	621.29	1.28	0.95	622.57	622.24
Base	100	2,025	198	291	621.62	3.00	1.98	624.62	623.60

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications
6th Edition with 2013 Interims

LOADING HL-93

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

DESIGN STRESSES

(FIELD UNITS)
f'c = 5,000 p.s.i. (superstructure)
f'c = 3,500 p.s.i. (substructure)
fy = 60,000 p.s.i. (Rein.)

(PRECAST PRESTRESSED UNITS)
f'c = 7,000 p.s.i.
f'ci = 6,000 p.s.i.
f's = 270,000 p.s.i. (½" Strands)
f'si = 201,960 p.s.i. (½" Strands)

SEISMIC DATA

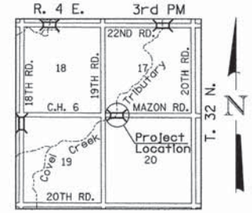
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.07g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.13g
Soil Site Class = C

NOTE:
See Sheet 2 of 20 for Bill of Material, General Notes and Section A-A.

INDEX OF SHEETS

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.
This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

1/6/15
Illinois Structural No. 6527
Expires 11/30/2016



LOCATION SKETCH

DESIGNED	N.P.H.
CHECKED	B.A.N.
DRAWN	N.P.H.
CHECKED	B.A.N./S.T.M.

3460b001

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD-PEORIA
2014 JOB#3460

SHEET NO. 1
20 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	8
	S.N. 050-3614	CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

GENERAL PLAN & ELEVATION

GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the engineer.

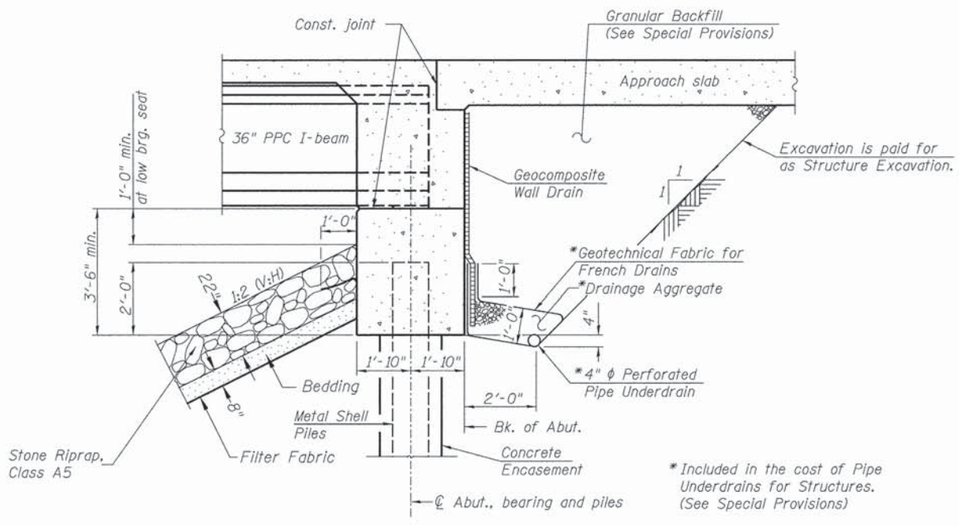
Protective Coat shall be applied to the top of the deck, approach pavement, and face and top of curbs.

Bridge Deck Grooving is figured 1'-0" from curb face and 1'-0" from the edge of approach pavement when the curb is omitted. It shall be applied to the bridge deck and the approach pavements.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

See Sheets 18 thru 20 of 20 for Soil Boring Logs.

Portions of the existing structure's tie rods and timber deadman may need to be removed to allow driving of new piles. Cost included with the Removal of Existing Structures. See Sheets 28 thru 32 of 44 for existing structure plans.

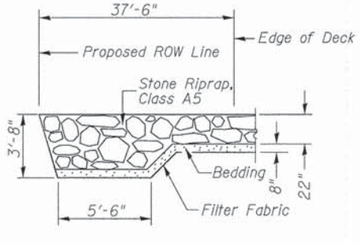


* Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

SECTION THRU INTEGRAL ABUTMENT

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into *concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)



SECTION A-A

TOTAL BILL OF MATERIAL

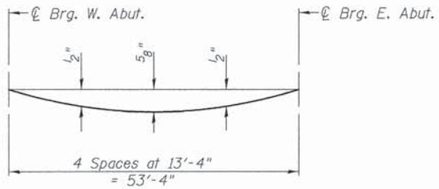
	ITEM	UNIT	SUPER	SUB	TOTAL
	Channel Excavation	CU YD	——	230	230
	Stone Riprap, Class A5	SQ YD	——	715	715
	Filter Fabric	SQ YD	——	715	715
(1)	Removal of Existing Structures	EACH	——	——	1
	Structure Excavation	CU YD	——	165	165
	Floor Drains	EACH	6	——	6
	Concrete Structures	CU YD	——	62.1	62.1
	Concrete Superstructure	CU YD	186.8	——	186.8
	Bridge Deck Grooving	SQ YD	414	——	414
	Concrete Encasement	CU YD	——	4.3	4.3
	Protective Coat	SQ YD	452	——	452
	Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	FOOT	272	——	272
(1)	Reinforcement Bars, Epoxy Coated	POUND	45,730	5,870	51,600
	Steel Railing, Type SM	FOOT	170	——	170
	Furnishing Metal Shell Piles 14"x0.250"	FOOT	——	360	360
	Driving Piles	FOOT	——	360	360
	Test Pile Metal Shells	EACH	——	2	2
	Name Plates	EACH	——	1	1
	Geocomposite Wall Drain	SQ YD	——	61	61
(1)	Granular Backfill For Structures	CU YD	——	108	108
(1)	Pipe Underdrains for Structures, 4"	FOOT	——	124	124

(1) See Special Provisions

BILL OF MATERIAL, DETAILS AND GENERAL NOTES

SHEET NO. 2	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	9
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

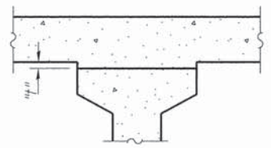
3460b002



DEAD LOAD DEFLECTION DIAGRAM

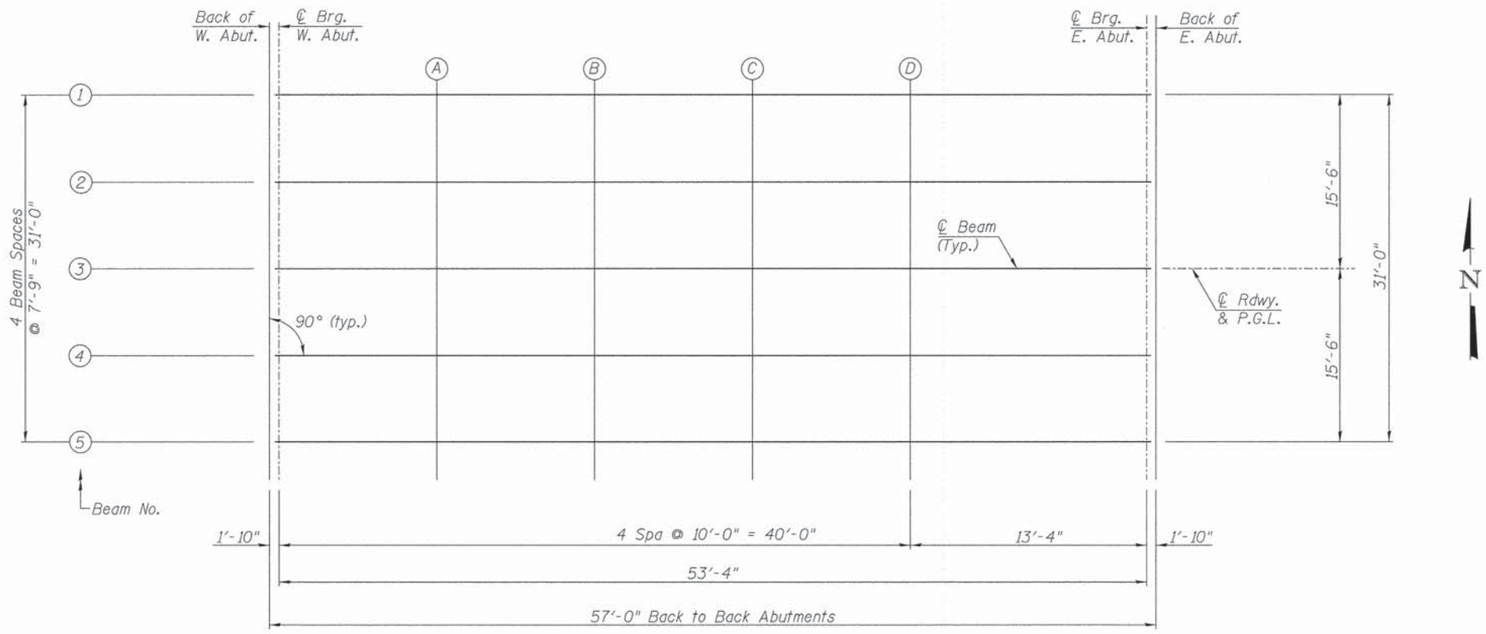
(Includes weight of concrete, excluding beams)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 4 of 20.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on Sheet 4 of 20, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



PLAN

TOP OF SLAB ELEVATIONS

SHEET NO. 3	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	10
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b003

BEAM #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abutment	19+71.50	-15.50	626.24	626.24
CL Brg. W. Abut.	19+73.33	-15.50	626.24	626.24
A	19+83.33	-15.50	626.24	626.27
B	19+93.33	-15.50	626.24	626.29
C	20+03.33	-15.50	626.24	626.29
D	20+13.33	-15.50	626.24	626.28
CL Brg. E. Abut.	20+26.67	-15.50	626.24	626.24
Bk. E. Abutment	20+28.50	-15.50	626.24	626.24

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abutment	19+71.50	-7.75	626.38	626.38
CL Brg. W. Abut.	19+73.33	-7.75	626.38	626.38
A	19+83.33	-7.75	626.38	626.41
B	19+93.33	-7.75	626.38	626.43
C	20+03.33	-7.75	626.38	626.43
D	20+13.33	-7.75	626.38	626.42
CL Brg. E. Abut.	20+26.67	-7.75	626.38	626.38
Bk. E. Abutment	20+28.50	-7.75	626.38	626.38

℄ ROADWAY, PROFILE GRADE, & BEAM #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abutment	19+71.50	0.00	626.50	626.50
CL Brg. W. Abut.	19+73.33	0.00	626.50	626.50
A	19+83.33	0.00	626.50	626.53
B	19+93.33	0.00	626.50	626.55
C	20+03.33	0.00	626.50	626.55
D	20+13.33	0.00	626.50	626.54
CL Brg. E. Abut.	20+26.67	0.00	626.50	626.50
Bk. E. Abutment	20+28.50	0.00	626.50	626.50

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abutment	19+71.50	7.75	626.38	626.38
CL Brg. W. Abut.	19+73.33	7.75	626.38	626.38
A	19+83.33	7.75	626.38	626.41
B	19+93.33	7.75	626.38	626.43
C	20+03.33	7.75	626.38	626.43
D	20+13.33	7.75	626.38	626.42
CL Brg. E. Abut.	20+26.67	7.75	626.38	626.38
Bk. E. Abutment	20+28.50	7.75	626.38	626.38

BEAM #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abutment	19+71.50	15.50	626.24	626.24
CL Brg. W. Abut.	19+73.33	15.50	626.24	626.24
A	19+83.33	15.50	626.24	626.27
B	19+93.33	15.50	626.24	626.29
C	20+03.33	15.50	626.24	626.29
D	20+13.33	15.50	626.24	626.28
CL Brg. E. Abut.	20+26.67	15.50	626.24	626.24
Bk. E. Abutment	20+28.50	15.50	626.24	626.24

TOP OF SLAB ELEVATIONS

SHEET NO. 4	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	11
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b004

NORTH EDGE OF APPR. SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	19+42.50	-17.50	626.20
A	19+52.50	-17.50	626.20
B	19+62.50	-17.50	626.20
E. End of West Appr. Pav't.	19+72.50	-17.50	626.20

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	19+42.50	-12.00	626.31
A	19+52.50	-12.00	626.31
B	19+62.50	-12.00	626.31
E. End of West Appr. Pav't.	19+72.50	-12.00	626.31

PROFILE GRADE & ℄ ROADWAY

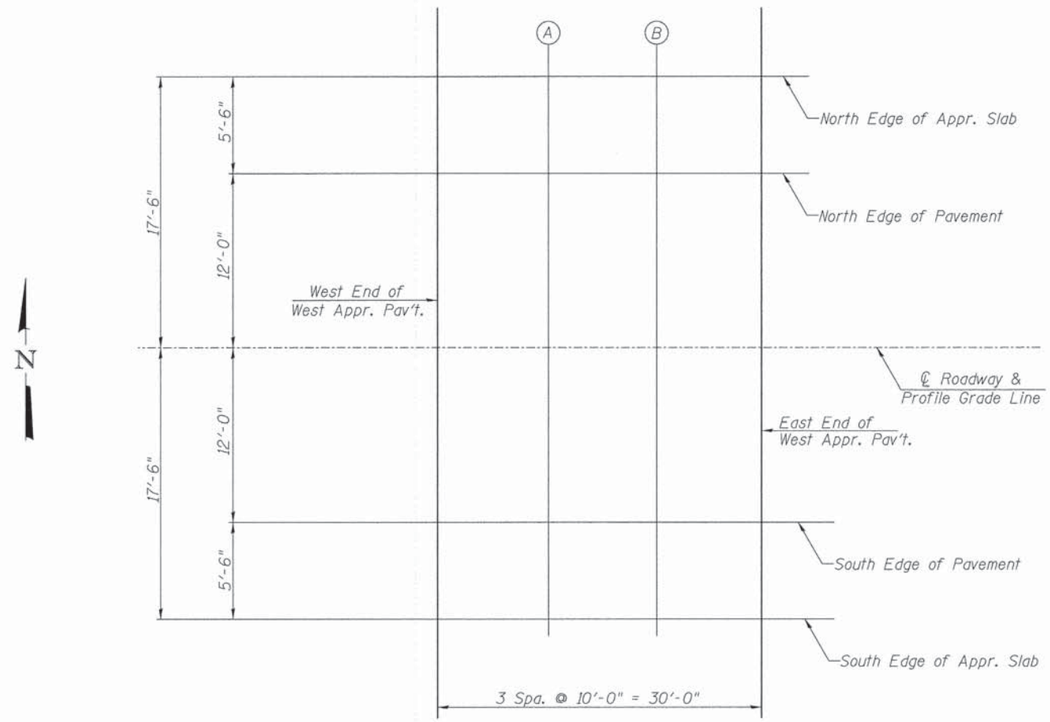
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	19+42.50	0.00	626.50
A	19+52.50	0.00	626.50
B	19+62.50	0.00	626.50
E. End of West Appr. Pav't.	19+72.50	0.00	626.50

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	19+42.50	12.00	626.31
A	19+52.50	12.00	626.31
B	19+62.50	12.00	626.31
E. End of West Appr. Pav't.	19+72.50	12.00	626.31

SOUTH EDGE OF APPR. SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	19+42.50	17.50	626.20
A	19+52.50	17.50	626.20
B	19+62.50	17.50	626.20
E. End of West Appr. Pav't.	19+72.50	17.50	626.20



PLAN WEST APPROACH PAVEMENT

TOP OF WEST APPROACH SLAB ELEVATIONS

SHEET NO. 5	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	12
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b005

NORTH EDGE OF APPR. SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	20+27.50	-17.50	626.20
A	20+37.50	-17.50	626.20
B	20+47.50	-17.50	626.20
E. End of East Appr. Pav't.	20+57.50	-17.50	626.20

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	20+27.50	-12.00	626.31
A	20+37.50	-12.00	626.31
B	20+47.50	-12.00	626.31
E. End of East Appr. Pav't.	20+57.50	-12.00	626.31

PROFILE GRADE & ℄ ROADWAY

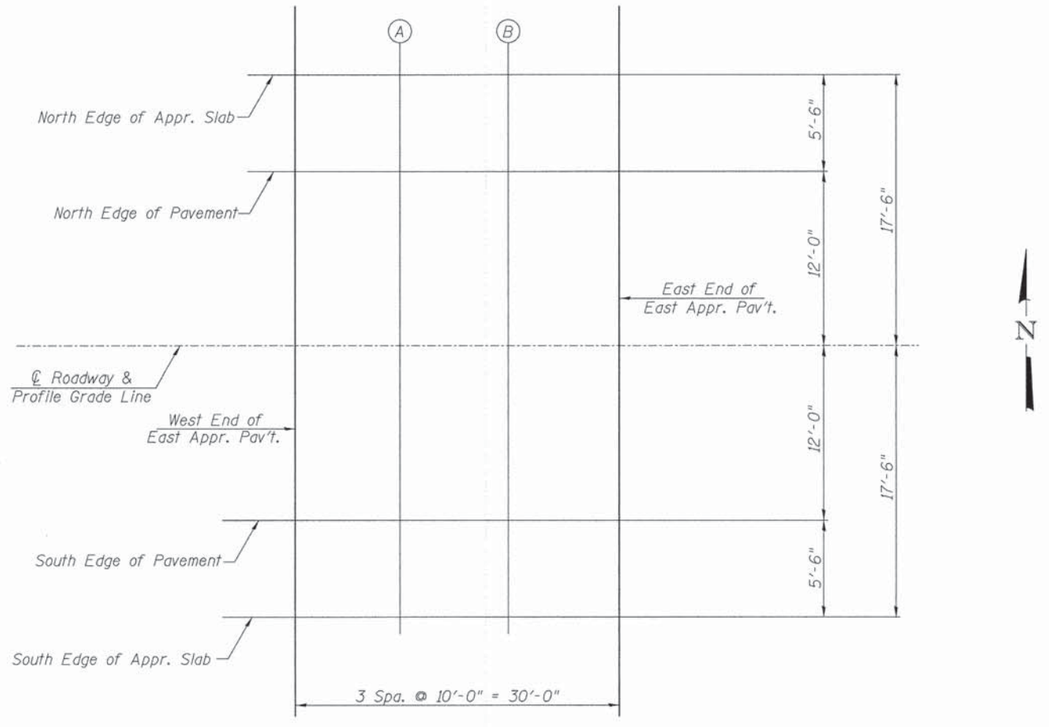
Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	20+27.50	0.00	626.50
A	20+37.50	0.00	626.50
B	20+47.50	0.00	626.50
E. End of East Appr. Pav't.	20+57.50	0.00	626.50

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	20+27.50	12.00	626.31
A	20+37.50	12.00	626.31
B	20+47.50	12.00	626.31
E. End of East Appr. Pav't.	20+57.50	12.00	626.31

SOUTH EDGE OF APPR. SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	20+27.50	17.50	626.20
A	20+37.50	17.50	626.20
B	20+47.50	17.50	626.20
E. End of East Appr. Pav't.	20+57.50	17.50	626.20

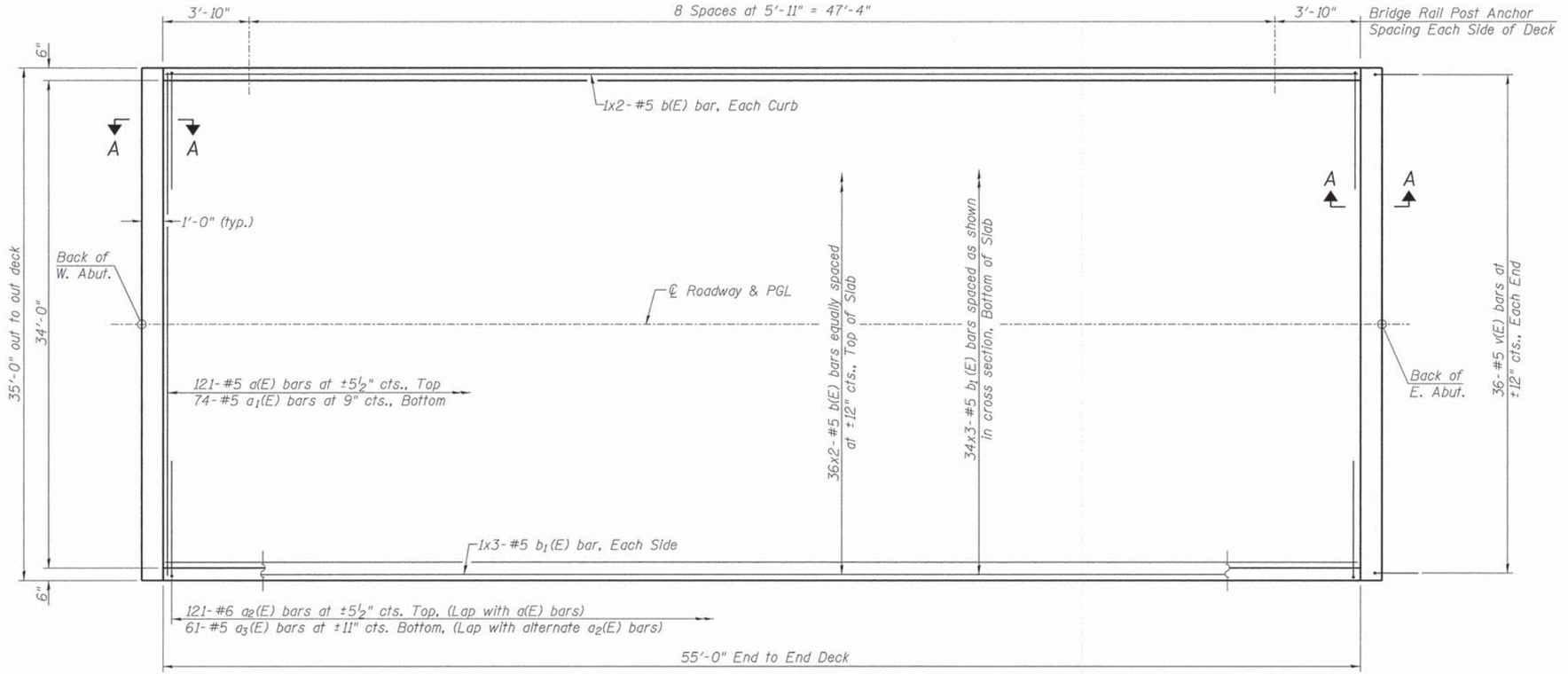


PLAN EAST APPROACH PAVEMENT

TOP OF EAST APPROACH SLAB ELEVATIONS

SHEET NO. 6	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	13
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b006

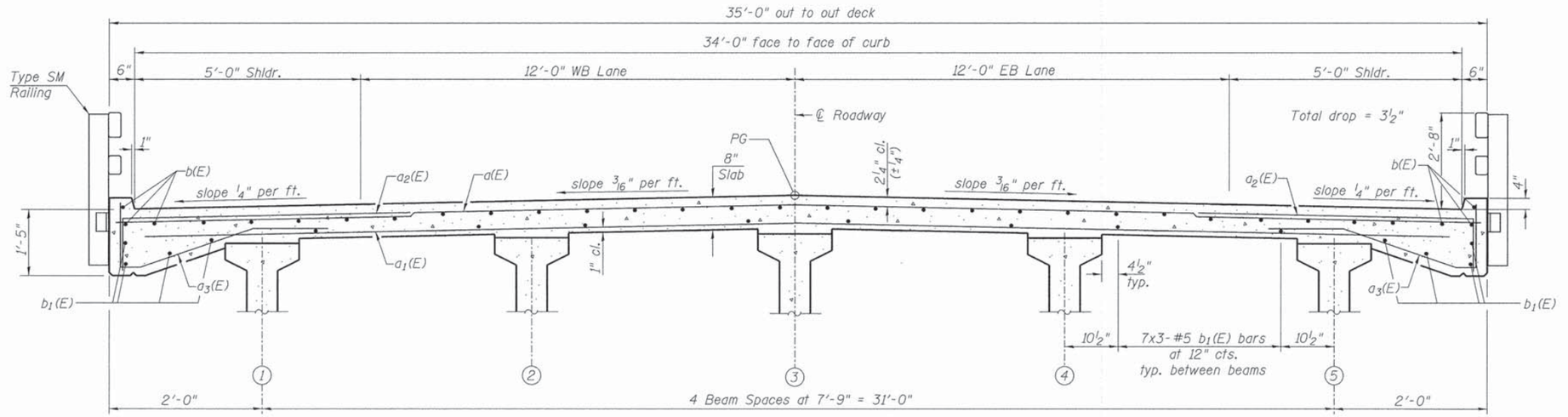


PLAN

MIN. BAR LAP

#5 = 2'-7"

Notes:
See Sheet 8 of 20 for superstructure details and Bill of Material.
Bars indicated thus 32x3-#5 etc. indicates 32 lines of bars with 3 lengths per line.
See Sheet 9 of 20 for Section A-A & Diaphragm Details.
See Sheet 12 of 20 for Rail Post Anchor Details.



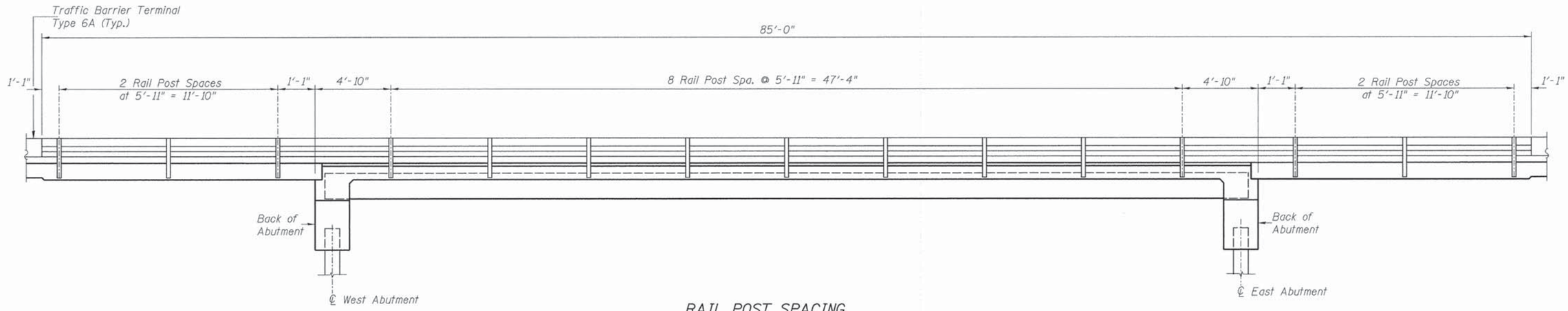
CROSS SECTION

(Looking East)

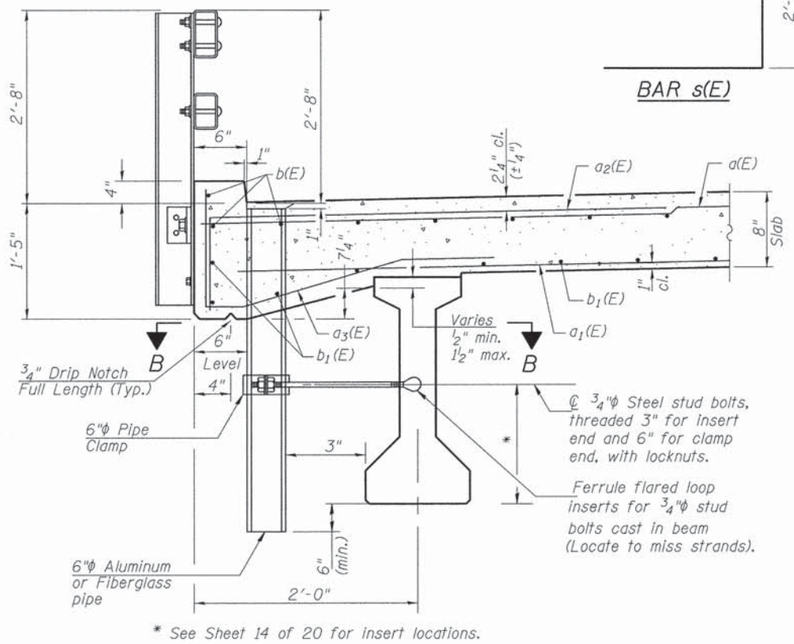
SUPERSTRUCTURE

SHEET NO. 7	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	14
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b007



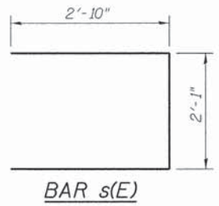
RAIL POST SPACING



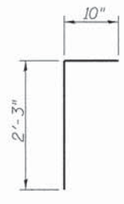
* See Sheet 14 of 20 for insert locations.

SECTION THRU DECK OVERHANG

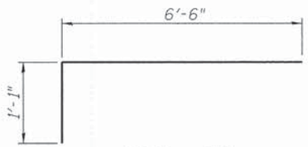
See Sheet 12 of 20 for Rail Post Anchor Details.



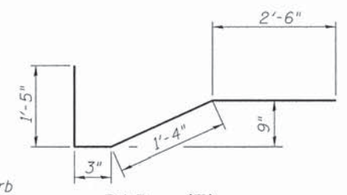
BAR s(E)



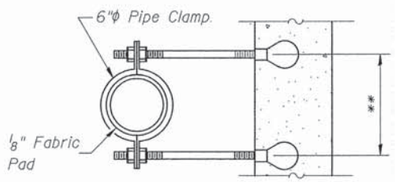
BAR v(E)



BAR a2(E)

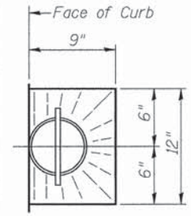


BAR a3(E)

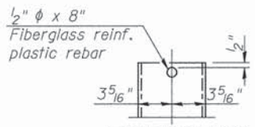


SECTION B-B

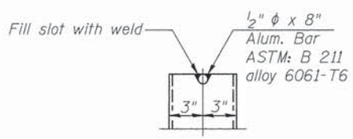
**Dimension as required by Pipe Clamp



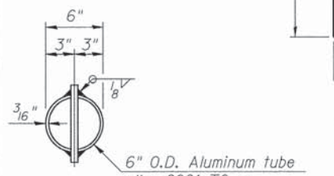
TOP PLAN



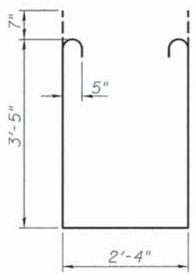
FIBERGLASS PIPE



ALUMINUM TUBE



TOP PLAN
(Showing aluminum tube)



BAR s1(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	121	#5	34'-9"	——
a1(E)	74	#5	33'-9"	——
a2(E)	242	#6	7'-7"	⌐
a3(E)	122	#5	5'-6"	⌐
b(E)	76	#5	28'-8"	——
b1(E)	108	#5	20'-0"	——
m(E)	8	#6	34'-9"	——
m1(E)	16	#6	7'-0"	——
m2(E)	8	#6	1'-6"	——
m3(E)	8	#6	6'-0"	——
m4(E)	4	#6	1'-0"	——
m5(E)	20	#5	4'-0"	——
s(E)	64	#5	7'-9"	⌐
s1(E)	64	#5	10'-4"	⌐
v(E)	72	#5	3'-1"	⌐
v5(E)	20	#4	2'-2"	——
① Reinforcement Bars, Epoxy Coated			POUND	17,210
Concrete Superstructure			CU YD	79.5

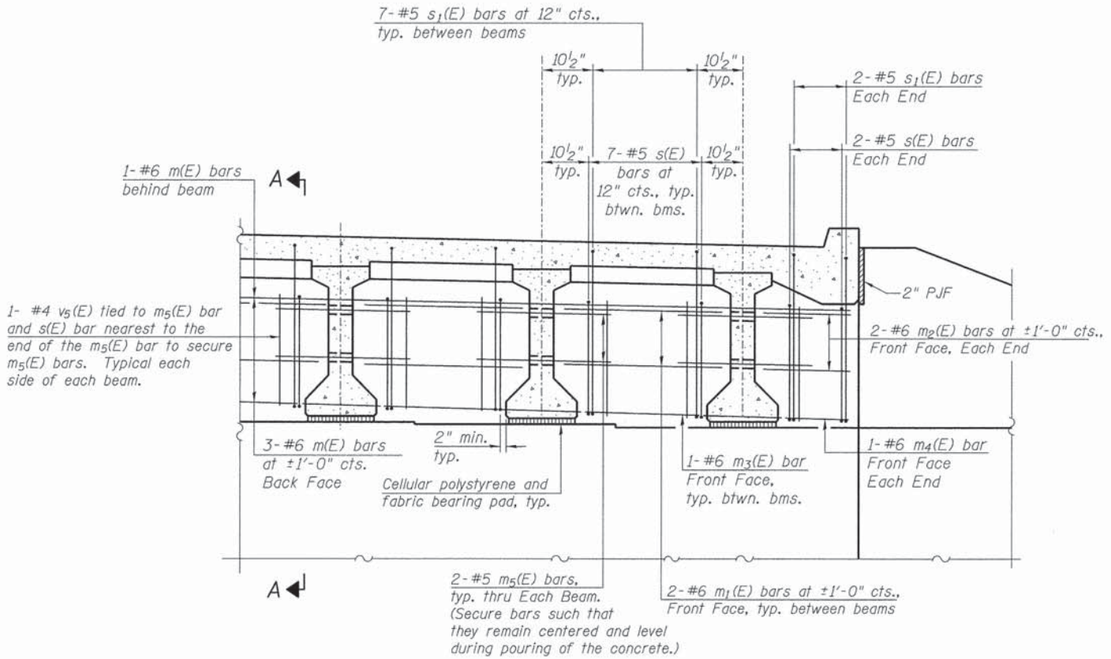
① See Special Provisions

Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
The clamping device and inserts shall be galvanized according to AASHTO M 232. Cost of clamping device and galvanizing included with Floor Drains.

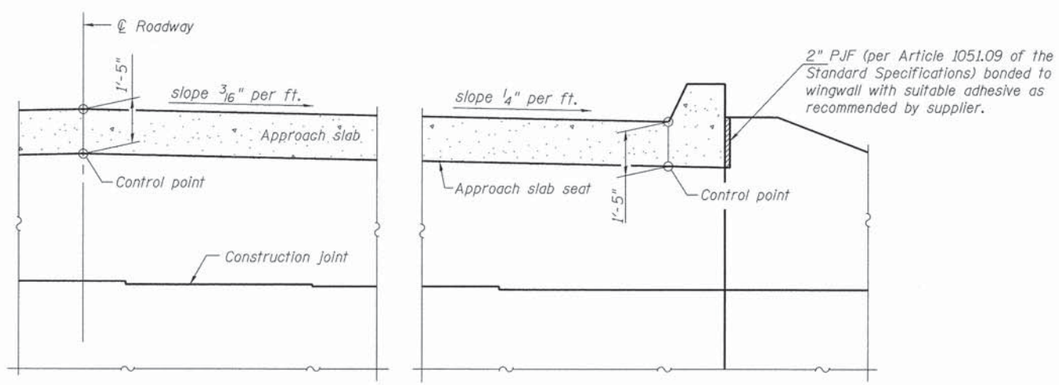
SUPERSTRUCTURE DETAILS

SHEET NO. 8	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	15
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

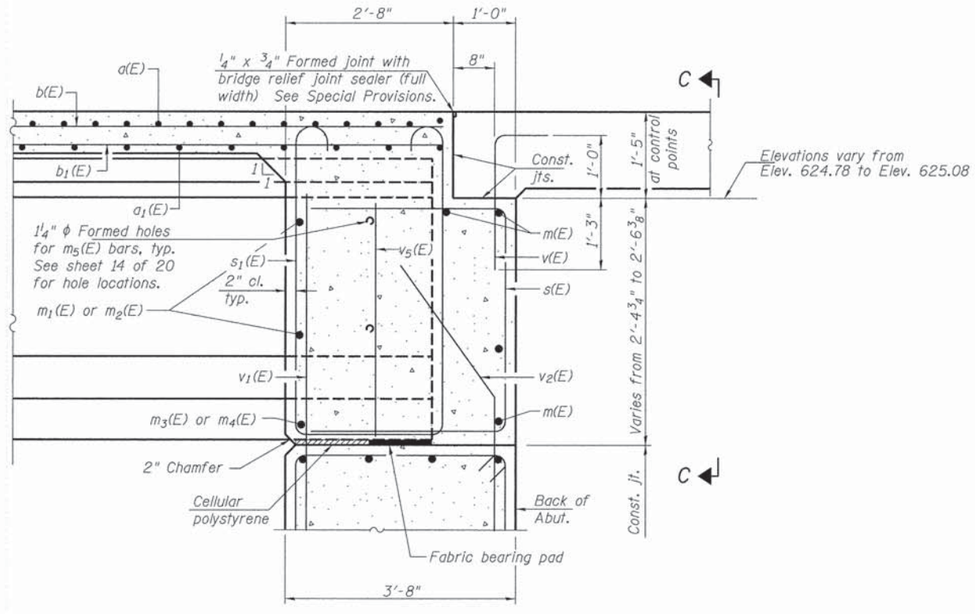
3460b008



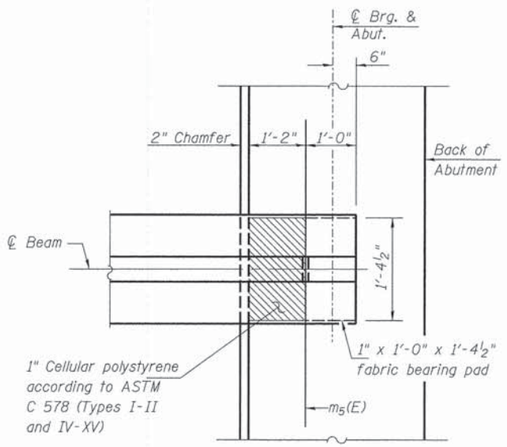
DIAPHRAGM ELEVATION AT ABUTMENT



VIEW C-C



SECTION A-A



PARTIAL PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 20.

Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 20.

See Sheet 8 of 20 for details of bars s(E), s_1(E), and v(E).

See Sheet 16 of 20 for v_1(E) and v_2(E) bar placement.

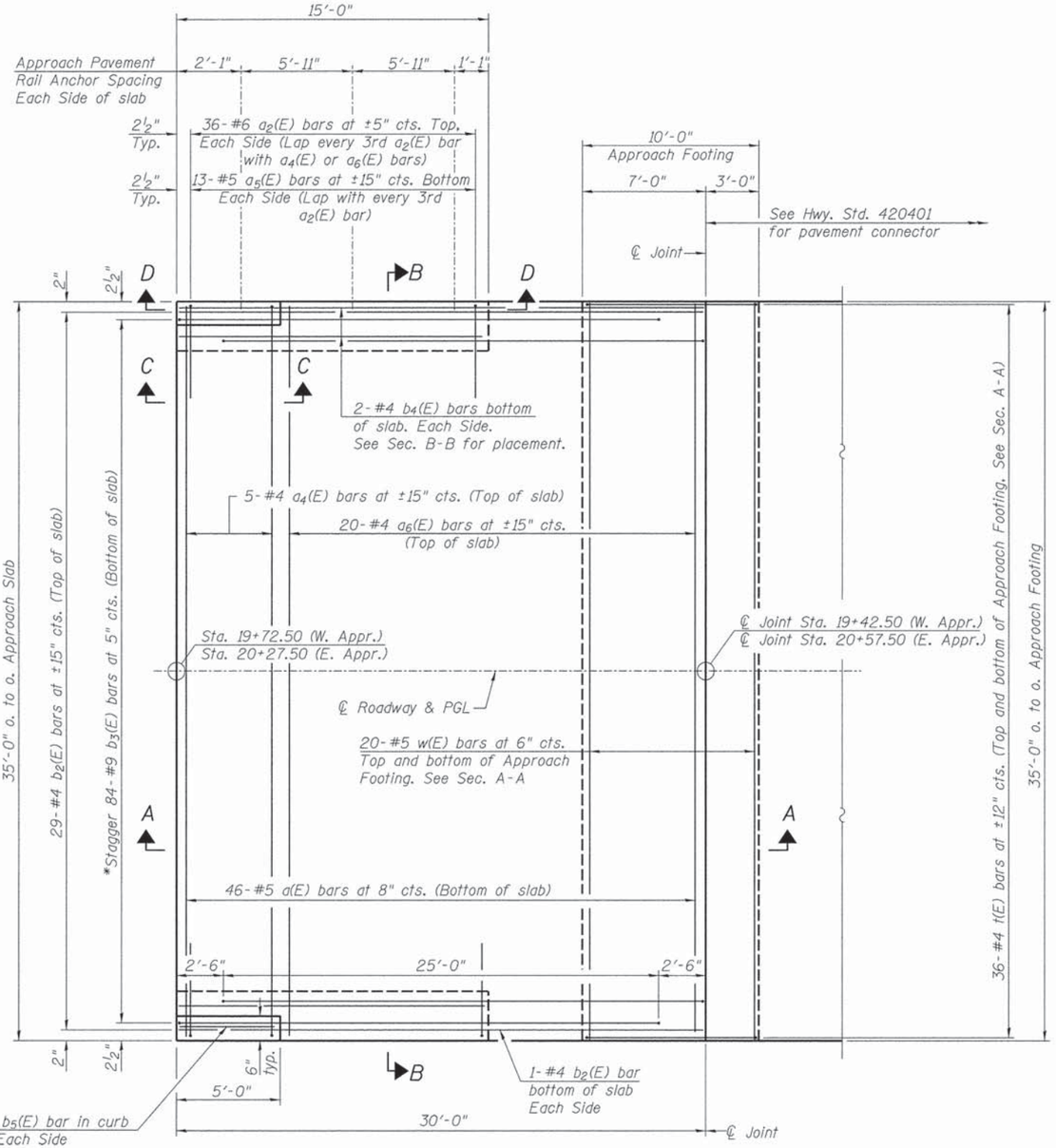
The approach slab seat shall have a constant slope determined from the control points shown.

Cost of cellular polystyrene is included with Concrete Superstructure.

DIAPHRAGM DETAILS

SHEET NO. 9	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	16
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

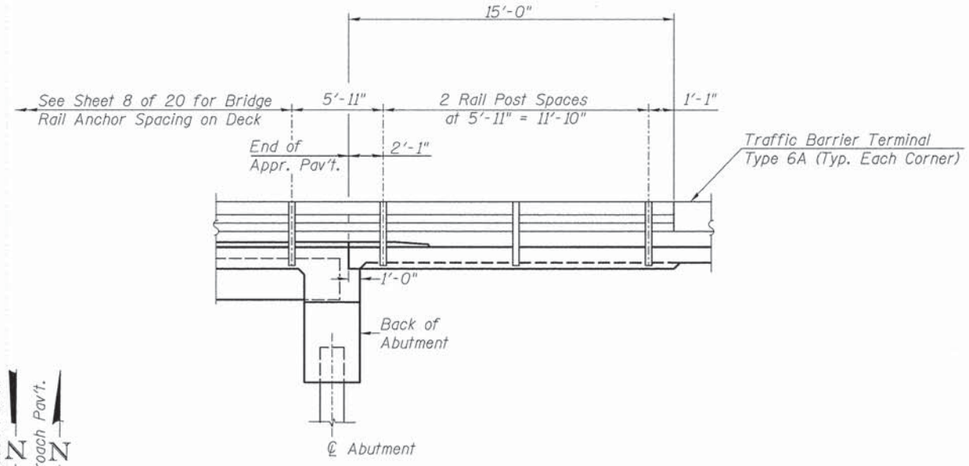
3460b009



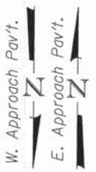
PLAN

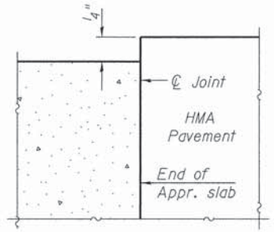
* Tilt #9 $b_3(E)$ bars as required to maintain clearance.

Notes:
See Sheet 11 of 20 for Sections A-A, B-B, D-D and View C-C.
d(E), $a_2(E)$, $a_4(E)$, $a_5(E)$, and $a_6(E)$ bar spacings measured along ℄ Rdwy.
See Sheet 12 of 20 for Rail Post Anchor Details.



RAIL POST ANCHOR SPACING





FLEXIBLE PAVEMENT

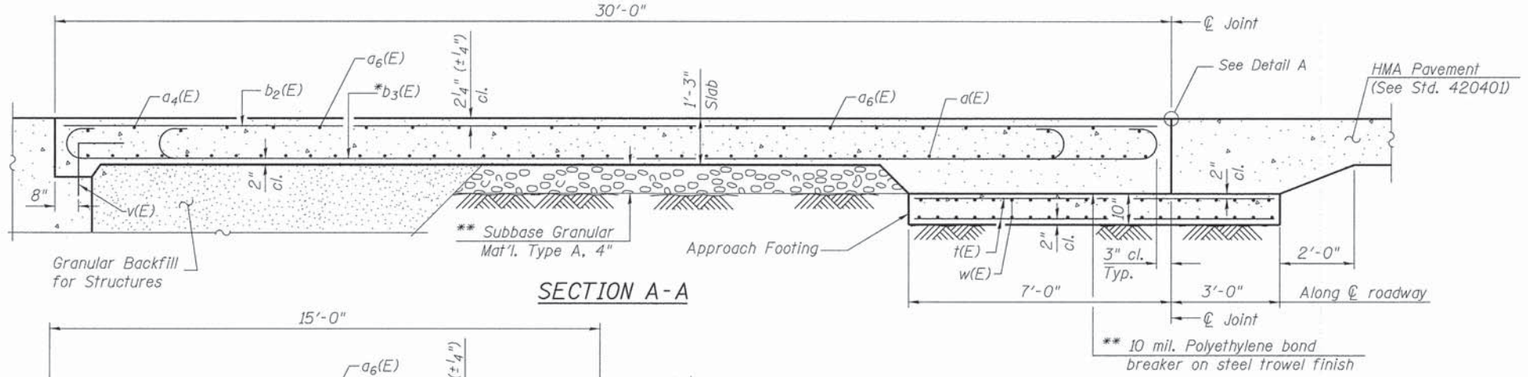
DETAIL A

(Sheet 1 of 2)

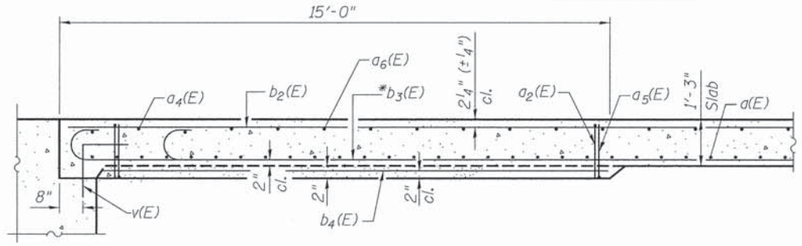
BRIDGE APPROACH SLAB DETAILS

SHEET NO. 10	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	17
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

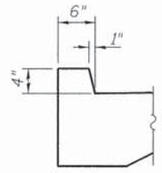
3460b010



SECTION A-A



SECTION D-D



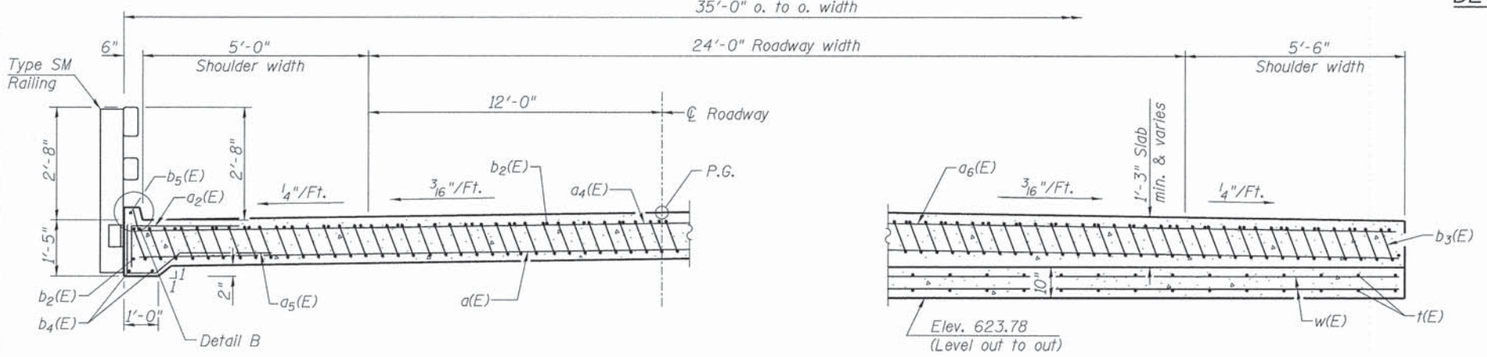
DETAIL B

Notes:

See Sheet 10 of 20 for Detail A.
Approach slab and curb shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
See Sheet 8 of 20 for v(E) bar details.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
Cost of excavation for approach footing included with Concrete Structures.
See Sheet 2 of 20 for Granular Backfill and drainage treatment details.

* Tilt #9 b_3(E) bars as required to maintain clearance.

** Cost included with Concrete Superstructure

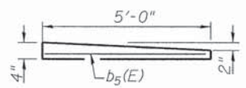


NEAR ABUTMENT

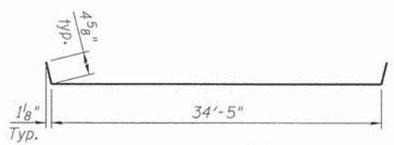
AT APPROACH FOOTING

SECTION B-B

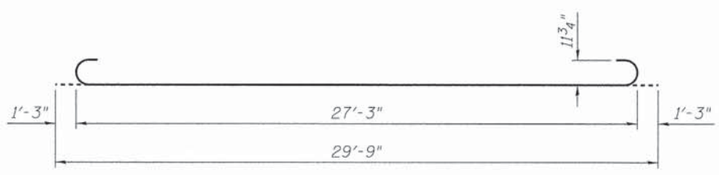
(See Plan for dimensions not shown)



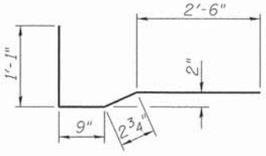
VIEW C-C



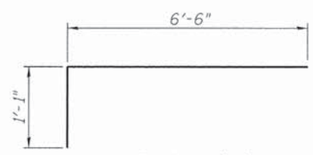
BAR a_4(E)



BAR b_3(E)



BAR a_5(E)



BAR a_2(E)

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	92	#5	34'-9"	
a_2(E)	144	#6	7'-7"	
a_4(E)	10	#4	35'-3"	
a_5(E)	52	#5	4'-7"	
a_6(E)	40	#4	34'-9"	
b_2(E)	62	#4	29'-8"	
b_3(E)	168	#9	29'-9"	
b_4(E)	8	#4	14'-8"	
b_5(E)	4	#4	4'-9"	
t(E)	144	#4	9'-8"	
w(E)	80	#5	34'-8"	
Concrete Superstructure			CU YD	107.3
Concrete Structures			CU YD	21.6
(1) Reinforcement Bars, Epoxy Coated			POUND	28,520

(1) See Special Provisions

(Sheet 2 of 2)

BRIDGE APPROACH SLAB DETAILS

SHEET NO. 11	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	18
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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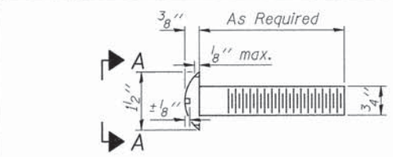
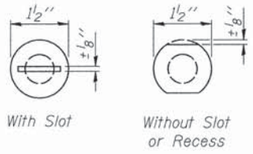
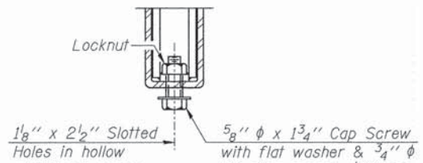
FOR RAIL POST SPACING SEE SHEET 8 OF 20.



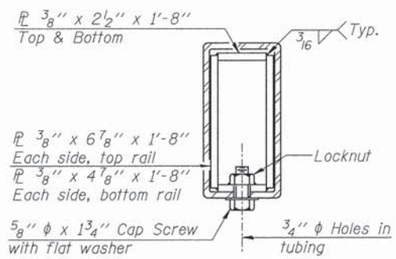
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



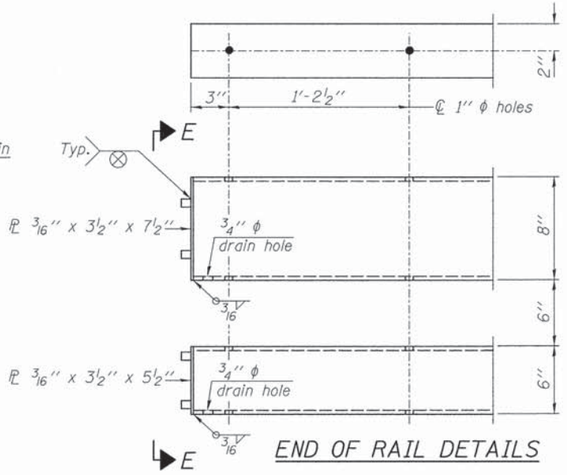
VIEW A-A



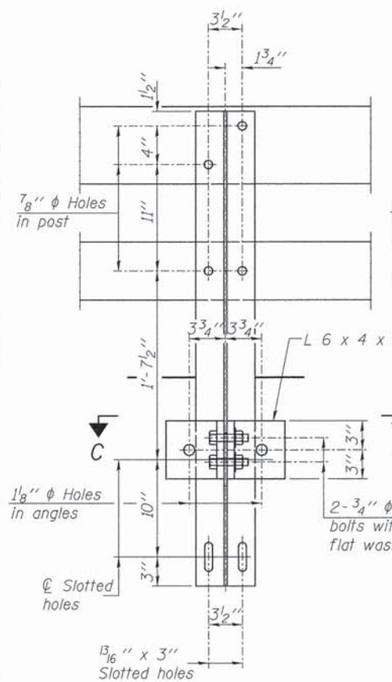
RAIL SPLICE CONNECTION AT EXPANSION JT.



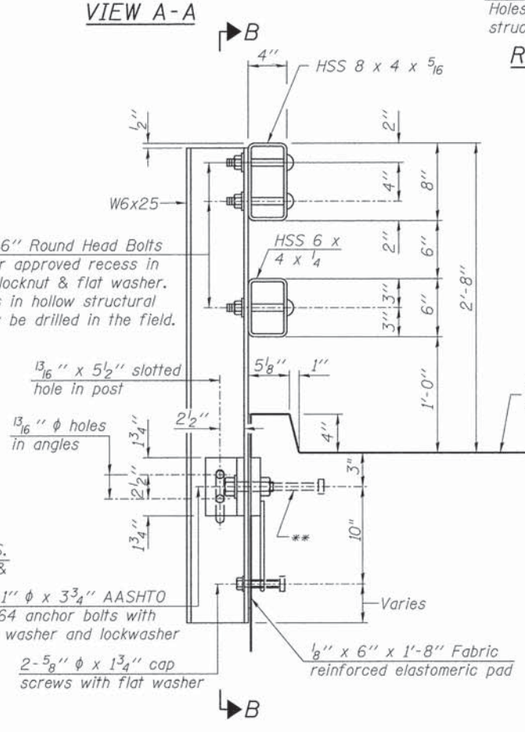
SECTION AT RAIL SPLICE



END OF RAIL DETAILS

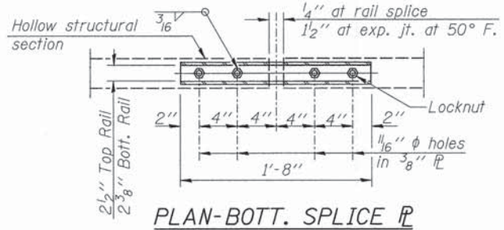


SECTION B-B

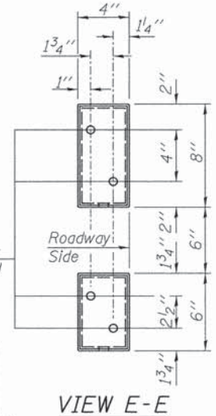


SECTION AT RAIL POST

Section of deck shown, Section at approach pavement similar (without curb).

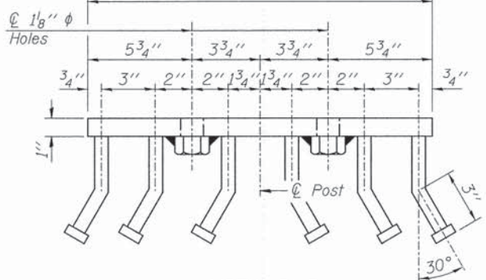


PLAN-BOTT. SPLICE PL TYPICAL



VIEW E-E

℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.



VIEW D-D

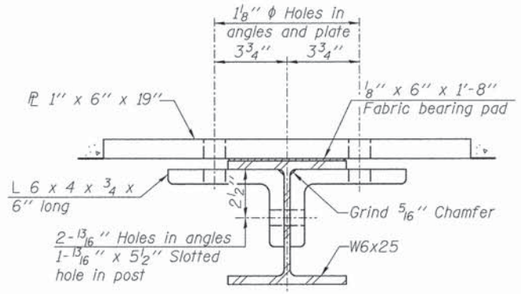
Notes:

All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

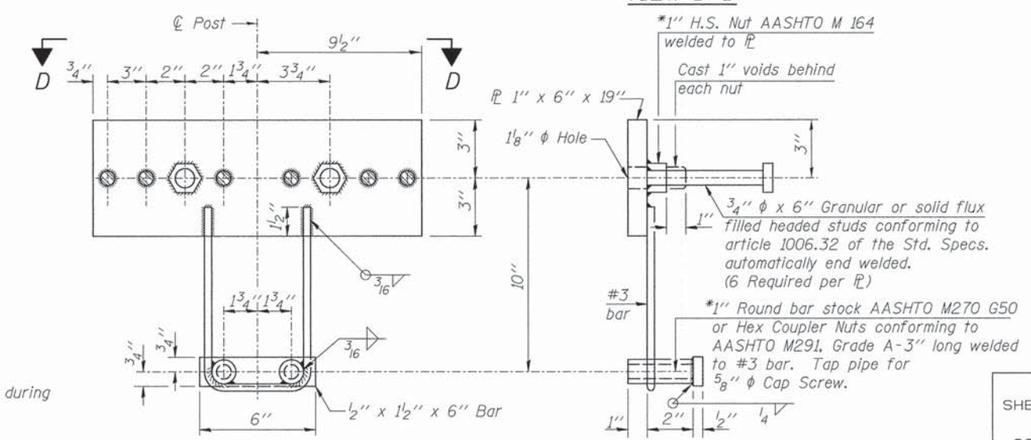
All steel railing elements shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



SECTION C-C

* Threaded areas shall be plugged or blocked off during pouring of deck. Galvanized after fabrication.



ANCHOR DEVICE

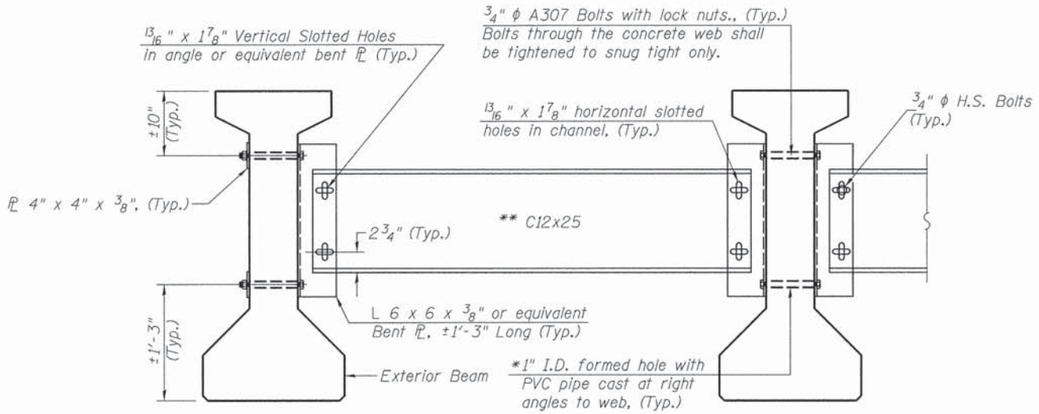
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	FOOT	170

STEEL RAILING TYPE SM

SHEET NO. 12	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	19
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b012



Notes:

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.

Two hardened washers are required for each set of oversized holes.

All holes shall be 15/16"ϕ unless otherwise noted.

5/16" x 3" x 3" plate washers are required over all slotted holes.

All bolts shall be galvanized according to AASHTO M232.

Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

All structural steel for permanent bracing shall be AASHTO M270 Gr. 50.

* Fabricator shall locate to miss strands within permissible tolerances.

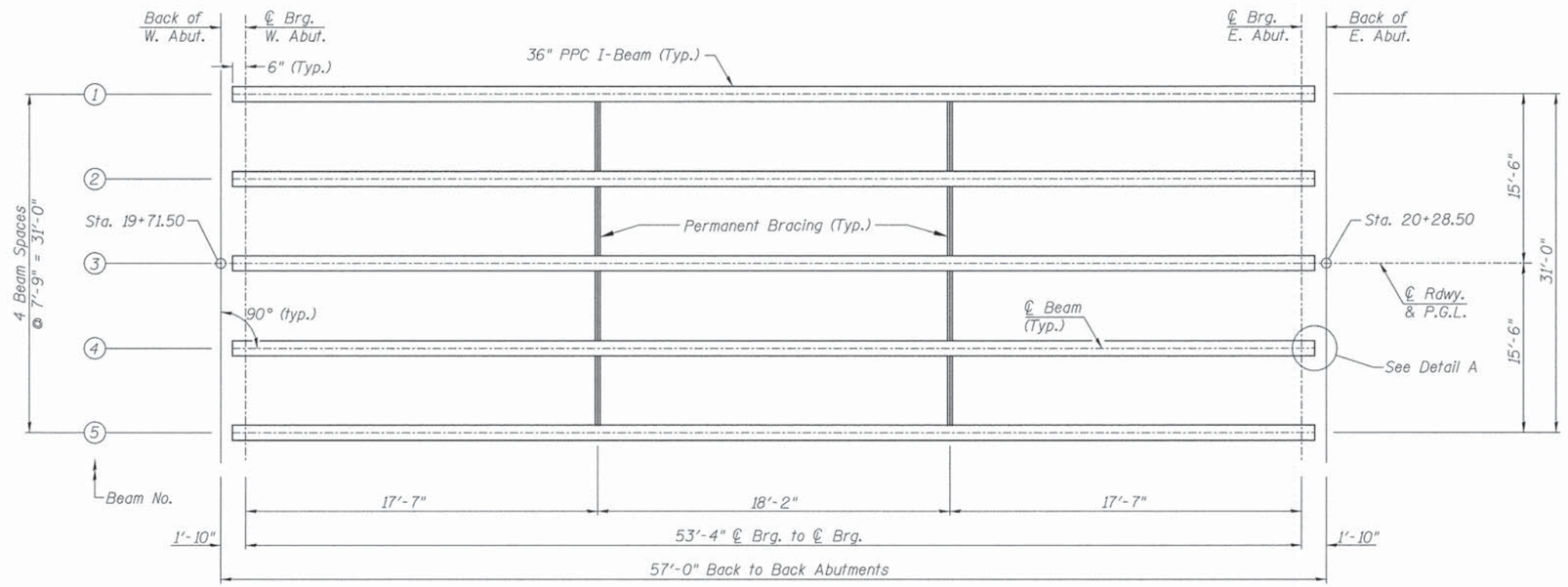
** Alternate C12x30 channels are permitted to facilitate material acquisition.

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

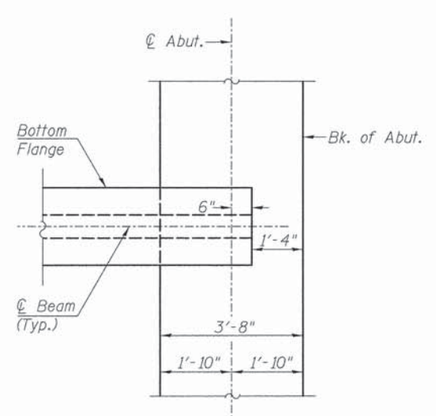
INTERIOR BEAM MOMENT TABLE		
		0.5 Sp. 1
I	(in^4)	48,648
I'	(in^4)	190,142
S_b	(in^3)	3,165
S_b'	(in^3)	6,086
S_t	(in^3)	2,358
S_t'	(in^3)	35,874
DC1	(k/')	1.213
M_{DC1}	('k)	431
DC2	(k/')	0.040
M_{DC2}	('k)	14
DW	(k/')	0.388
M_{DW}	('k)	138
M_{L+IM}	('k)	840

INTERIOR BEAM REACTION TABLE		
		Abut.
R_{DC1}	(k)	32.3
R_{DC2}	(k)	1.1
R_{DW}	(k)	10.3
R_{L+IM}	(k)	76.6
R_{Total}	(k)	120.3

PERMANENT BRACING DETAILS FOR 36" PPC I-BEAMS



PLAN

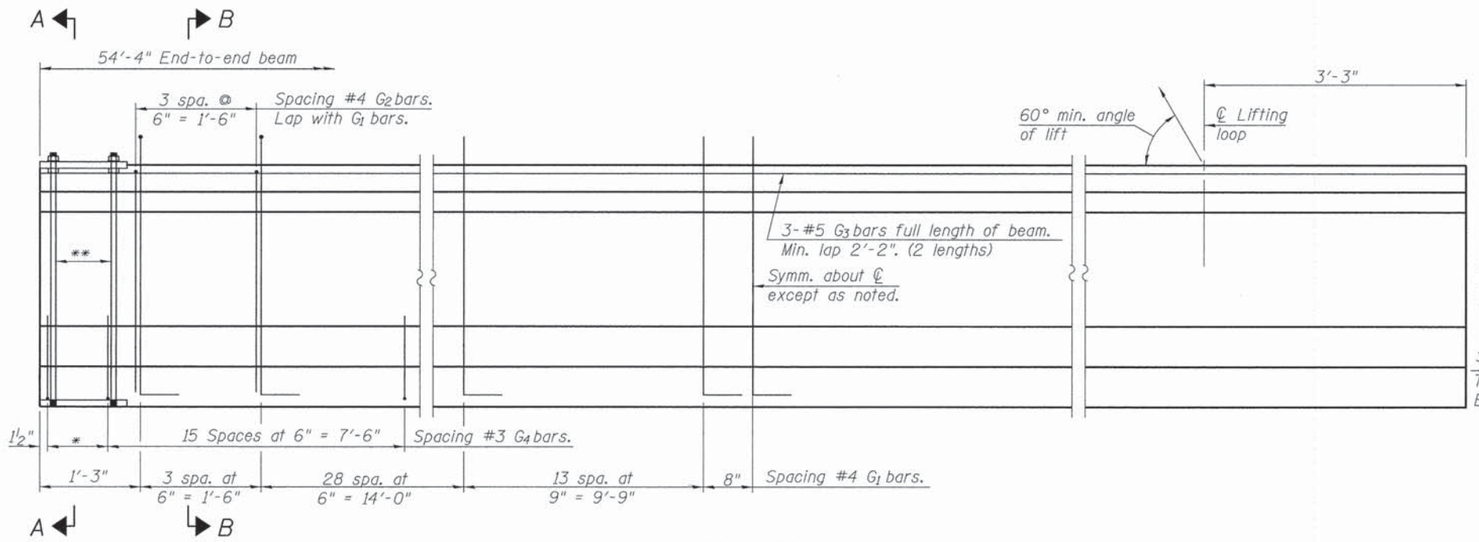


DETAIL A
(Typical @ Abutments)

FRAMING PLAN AND DETAILS

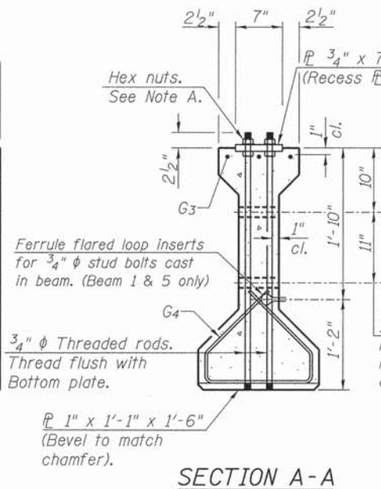
SHEET NO. 13	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	20
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b013

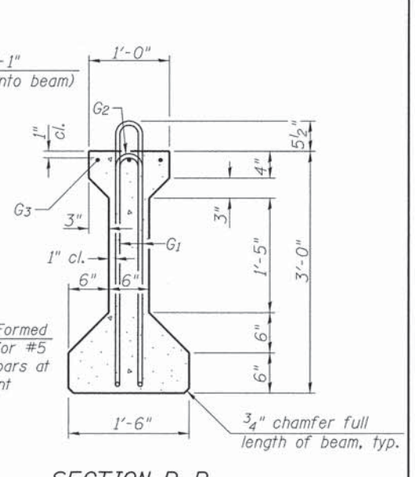


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

* 3 spaces at 3" = 9".
** 4-¾" ϕ threaded dowel rods at 3" cts., Each Face
*** Adjust these dimensions to miss draped strands.

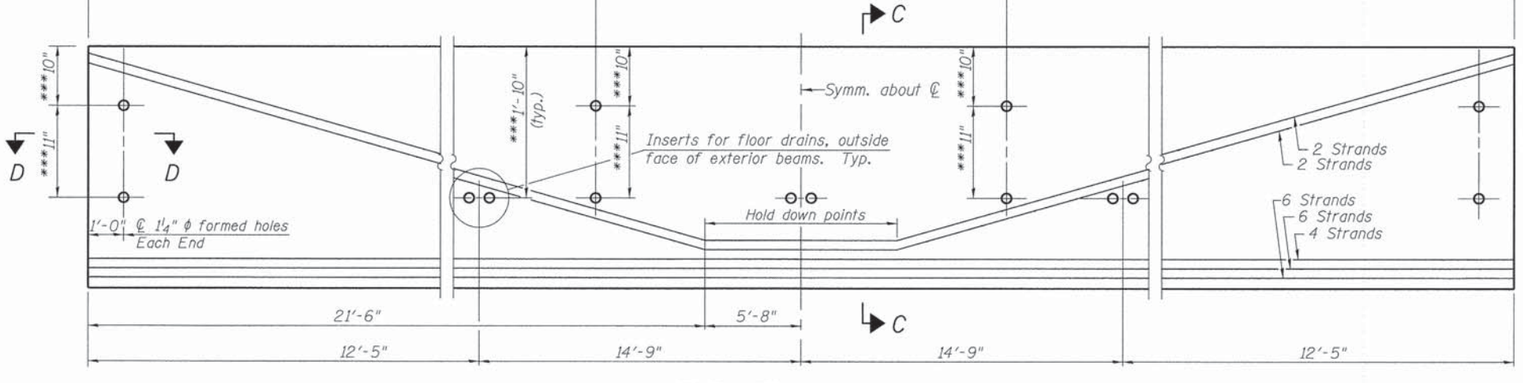


SECTION A-A

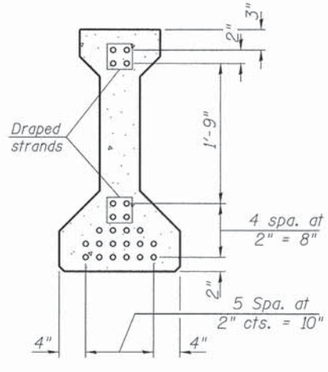


SECTION B-B

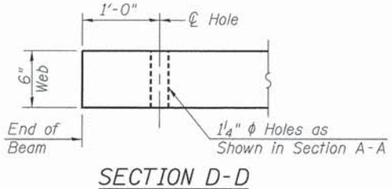
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C



SECTION D-D

****BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	91	#4	7'-7"	⊓L
G_2	8	#4	5'-8"	⊓
G_3	6	#5	28'-2"	——
G_4	38	#3	4'-1"	⌓

****For information only

Notes:
See Sheet 15 of 20 for additional details and Bill of Material.
Required release strength, f'ci, shall be 6,000 psi.

36" PPC I-BEAM

SHEET NO. 14	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	21
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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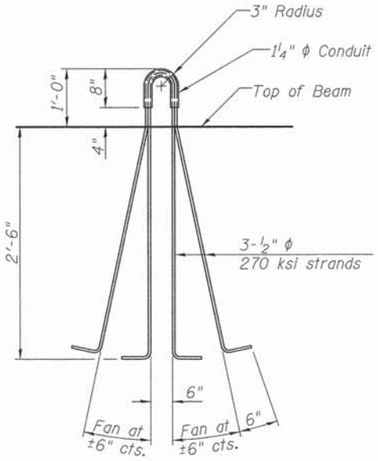
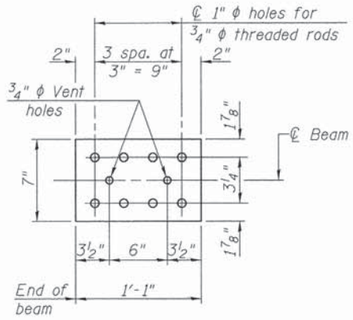
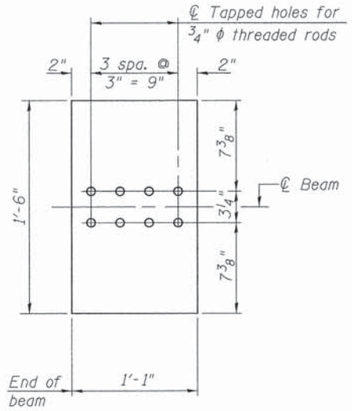


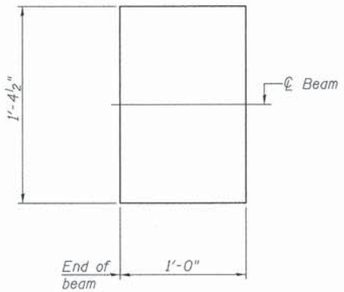
LIFTING LOOP DETAIL



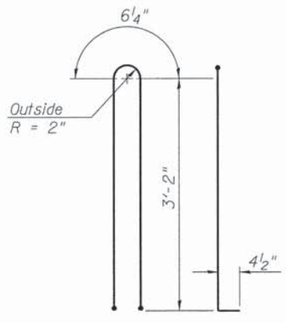
TOP PLATE



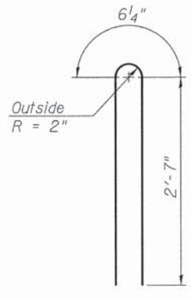
BOTTOM PLATE
(Showing threaded rods)



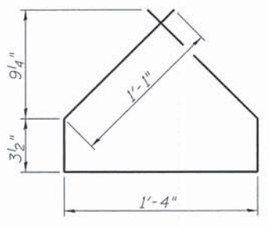
1" FABRIC BEARING PAD



BAR G1



BAR G2



BAR G4

NOTES

Inserts for ¾" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

The top and bottom plates shall be AASHTO M270 Grade 50.

The bottom plates shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.

Threaded rods shall be ASTM F 1554 Grade 55.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	FOOT	272

36" PPC I-BEAM DETAILS

SHEET NO. 15	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	22
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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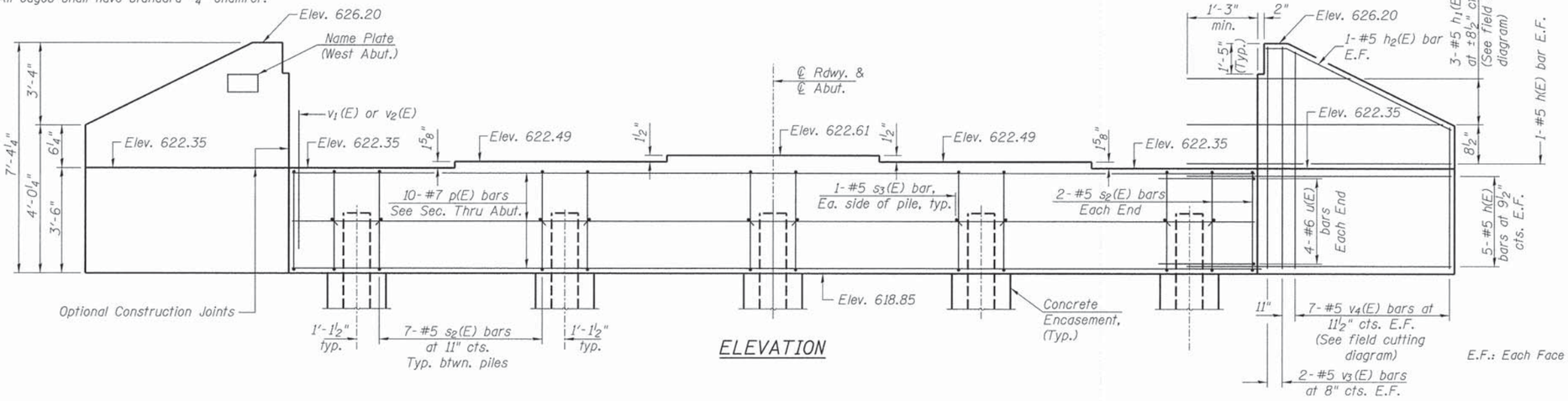
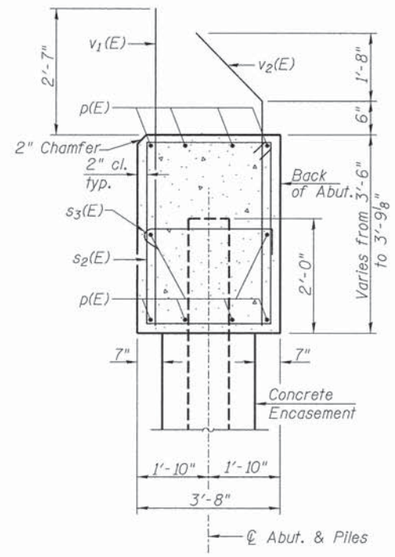
Notes:
Pour steps monolithically with cap.
All edges shall have standard $\frac{3}{4}$" chamfer.

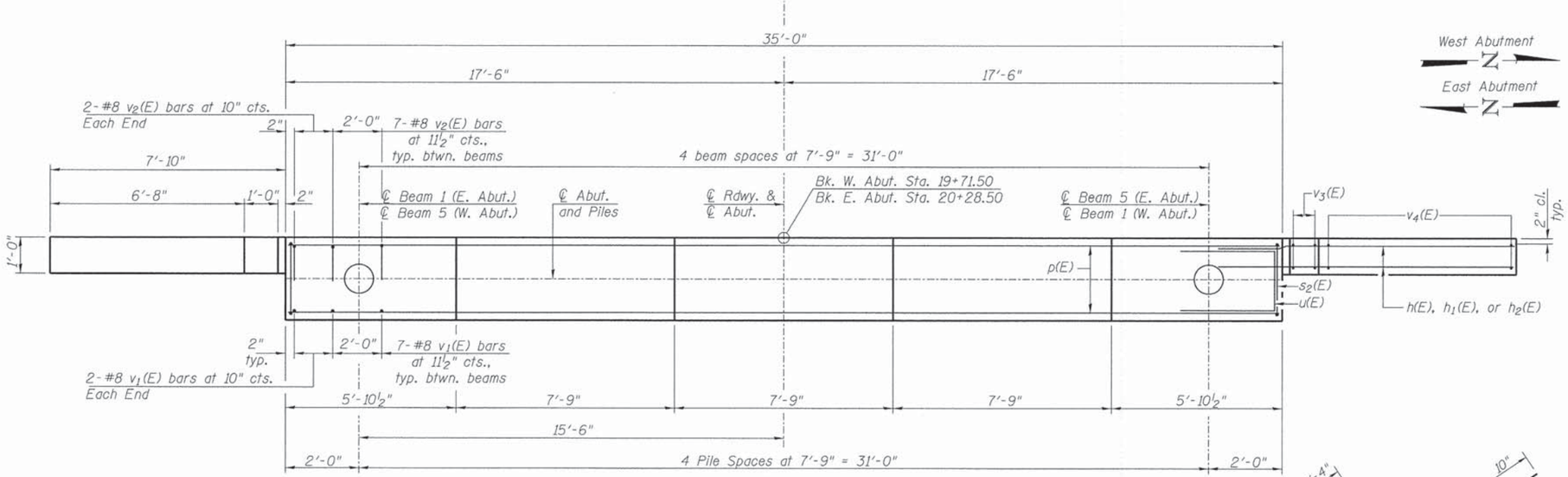


ELEVATION

E.F.: Each Face



SEC. THRU ABUT.



PLAN

West Abutment

East Abutment

BILL OF MATERIALS
TWO ABUTMENTS

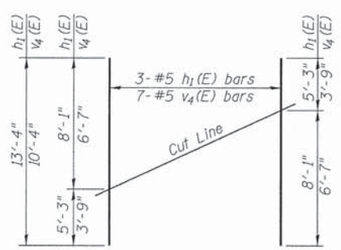
Bar	No.	Size	Length	Shape
h(E)	48	#5	9'-0"	
$h_1(E)$	12	#5	13'-4"	
$h_2(E)$	8	#5	8'-1"	
p(E)	20	#7	34'-9"	
$s_2(E)$	64	#5	13'-11"	
$s_3(E)$	20	#5	4'-4"	
u(E)	16	#6	10'-11"	
$v_1(E)$	64	#8	5'-11"	
$v_2(E)$	64	#8	6'-2"	
$v_3(E)$	16	#5	7'-0"	
$v_4(E)$	28	#5	10'-4"	
Structure Excavation		CU YD	165	
Concrete Structures		CU YD	40.5	
① Reinforcement Bars, Epoxy Coated		POUND	5,870	
Name Plates		EACH	1	
Furnishing Metal Shell Piles 14"x0.250"		FOOT	360	
Driving Piles		FOOT	360	
Test Pile Metal Shells		EACH	2	
Concrete Encasement		CU YD	4.3	

① See Special Provisions

See Sheet 17 of 20 for details of Piles and Concrete Encasement.

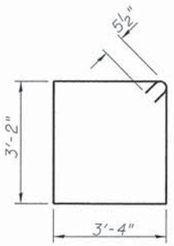
PILE DATA

Type: Metal Shell 14"x0.250"
Nominal Required Bearing: 370 kips
Factored Resistance Available: 204 kips
Est. Length: 45' W. Abutment
45' E. Abutment
No. Required: 10 (Includes 1 Test Pile at Each Abut.)

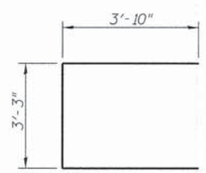


FIELD CUTTING DIAGRAM

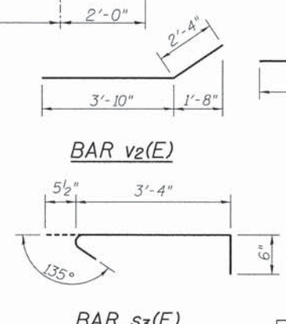
Order $h_1(E)$ and $v_4(E)$ full length. Cut as shown and use remainder of bars in opposite face.



BAR $s_2(E)$

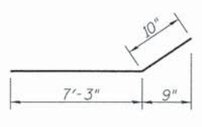


BAR u(E)



BAR $v_2(E)$

BAR $s_3(E)$



BAR $h_2(E)$

ABUTMENTS

SHEET NO. 16	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	23
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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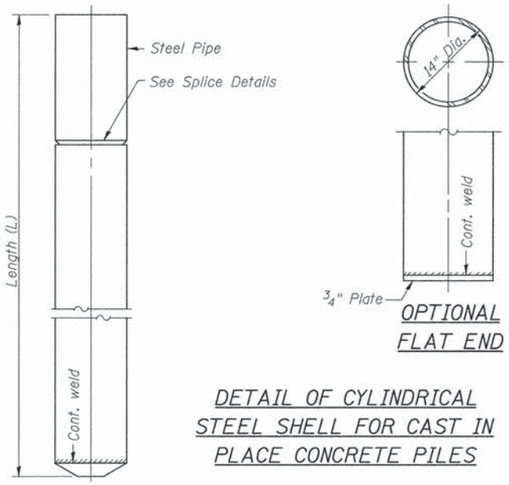
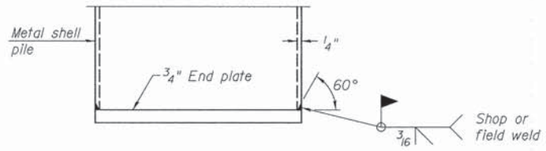
Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.25 inches with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications, and shall be ASTM A252 Grade 3.

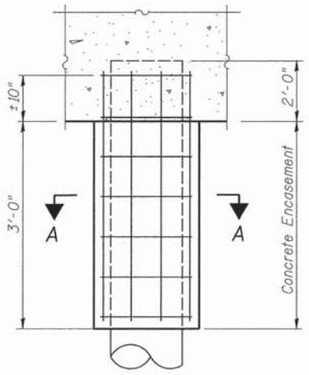


OPTIONAL FLAT END

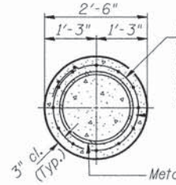
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



END PLATE ATTACHMENT



ELEVATION

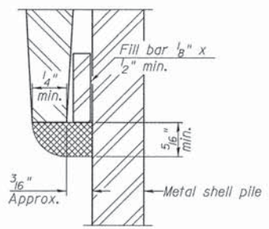


Welded wire fabric 6x6-W4.0xW4.0 weighing 58/100 sq. ft. The cost of Reinforcement and Excavation are included with Concrete Encasement. Forms for encasement may be omitted when soil conditions will permit.

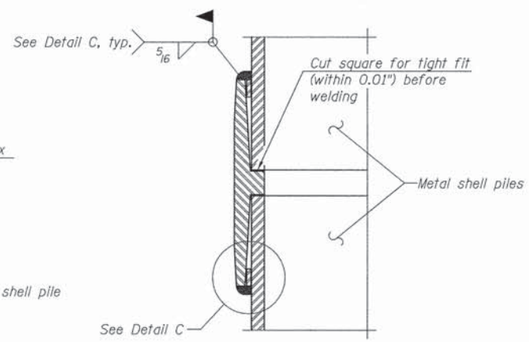
Metal shell pile

SECTION A-A

DETAIL OF METAL SHELL PILE ENCASEMENT AT ABUTMENTS

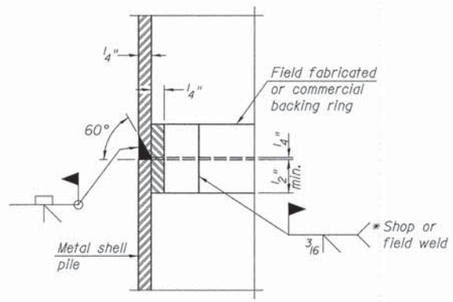


DETAIL C



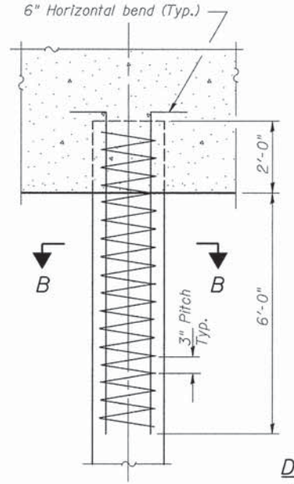
Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

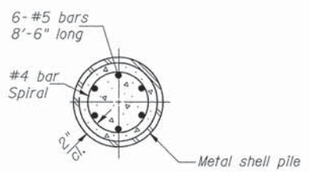
WELDED COMMERCIAL SPLICE



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.





SECTION B-B

The cost of Reinforcement is included with Furnishing Metal Shell Piles 14"x0.250"

DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS

METAL SHELL PILE DETAILS

SHEET NO. 17	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	24
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b017

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354
Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

BORING LOG

Sheet 1 of 3

Client: Hutchison Engineering, Inc.
Project Name: County Hwy 6 Over Covel Creek Tributary
Project Site: Section 16-00732-00-BR
LaSalle County, IL.

Location: 29' West of Center of Existing Bridge
16' South of centerline of roadway

Boring No. B-1
Surface Elev. 99.75
Auger Depth 61' Rotary Depth NA
Start Date 01/13/14 Finish Date 01/13/14

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) *ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
99.75	0 - 3" AC 3"-14" Agg.		1								
98.75			2								
97.75	Stiff Black/Gray Silty Clay Fill with Wood Fragments and Cobbles		3	1	SS	1.2	9	B	27		
96.75			4								
95.75			5	2	SS	1.2	9	B	26		
94.75			6								
93.75			7	3	SS	1.2	10	B	26		
92.75			8								
91.75			9	4	SS	---	11	---	14		
90.75			10								
89.75			11								
88.75	Medium Dense Gray Sand & Gravel		12	5	SS	3.5	16	B	15		
87.75			13								
86.75			14								
85.75			15	6	SS	4.0	19	B	15		
84.75	Very Stiff Gray Silty Clay Till		16								
83.75			17								
82.75			18	7	SS	3.3	18	B	16		
81.75			19								
80.75			20								
79.75				8	SS	3.1	18	B	17		

Water

Groundwater Data: Water after auger removal at 11' below ground level
Comments: ***Assumed centerline elevation of existing bridge to be 100.0***

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BORING LOG

Sheet 2 of 3

Client: Hutchison Engineering, Inc.
Project Name: County Hwy 6 Over Covel Creek Tributary
Project Site: Section 16-00732-00-BR
LaSalle County, IL.

Location: 29' West of Center of Existing Bridge
16' South of centerline of roadway

Boring No. B-1
Surface Elev. 99.75
Auger Depth 61' Rotary Depth NA
Start Date 01/13/14 Finish Date 01/13/14

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
78.75			22								
77.75			23	9	SS	2.8	17	B	20		
76.75	Very Stiff Gray Clay Till		24								
75.75			25	10	SS	2.7	17	B	22		
74.75			26								
73.75			27								
72.75			28								
71.75			29								
70.75			30	11	SS	2.0	17	B	24		
69.75	Very Stiff Gray Clay Till with Sand Seams		31								
68.75			32								
67.75			33								
66.75			34								
65.75			35	12	SS	3.7	22	B	10		
64.75	Very Stiff Gray Silty Clay Loam Till		36								
63.75			37								
62.75			38								
61.75			39								
60.75			40								
59.75	Very Stiff Gray Silty Clay Till		41	13	SS	3.9	22	B	20		
58.75											

Groundwater Data: Water after auger removal at 11' below ground level
Comments: ***Assumed centerline elevation of existing bridge to be 100.0***

SOIL BORING LOGS

SHEET NO. 18	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	25
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b018

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3705 Progress Blvd.
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BORING LOG

Sheet 3 of 3

Client: Hutchison Engineering, Inc.
Project Name: County Hwy 6 Over Covel Creek Tributary
Project Site: Section 16-00732-00-BR
LaSalle County, IL.

Boring No. B-1
Surface Elev. 99.75
Auger Depth 61' Rotary Depth NA
Start Date 01/13/14 Finish Date 01/13/14

Location: 29' West of Center of Existing Bridge
16' South of centerline of roadway

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
57.75											
56.75			43								
55.75			44								
54.75			45								
53.75	Very Stiff Gray Silty Clay Loam Till		46	14	SS	2.5	22	B/S	20		
52.75			47								
51.75			48								
50.75			49								
49.75			50	15	SS	2.3	26	B/S	20		
48.75			51								
47.75			52								
46.75			53								
45.75			54								
44.75			55	16	SS	---	52	---	12		
43.75			56								
42.75	Hard Pinkish/Gray Silty Clay Till with Cobbles		57								
41.75			58								
40.75			59								
39.75			60								
38.75	Boring Terminated		61	17	SS	---	25/1"	---	12		
37.75			62								

Groundwater Data: Water after auger removal at 11' below ground level
Comments: ***Assumed centerline elevation of existing bridge to be 100.0***

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BORING LOG

Sheet 1 of 3

Client: Hutchison Engineering, Inc.
Project Name: County Hwy 6 Over Covel Creek Tributary
Project Site: Section 16-00732-00-BR
LaSalle County, IL.

Boring No. B-2
Surface Elev. 99.67
Auger Depth 61' Rotary Depth NA
Start Date 01/13/14 Finish Date 01/13/14

Location: 29' East of Center of Existing Bridge
16' North of centerline of roadway

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) *ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
99.67	0 - 3" AC 3" - 12" Agg										
98.67			1								
97.67			2								
96.67			3	1	SS	1.0	7	B	27		
95.67			4								
94.67	Black Gray Silty Clay Fill with Wood Fragments and Cobbles		5	2	SS	0.6	4	B	29		
93.67			6								
92.67			7								
91.67			8	3	SS	---	4	---	28		
90.67			9								
89.67			10	4	SS	---	14	---	18		
88.67	Medium Dense Gray Sand & Gravel		11								
87.67			12								
86.67			13	5	SS	---	16	---	14		
85.67	Medium Dense Brown Sand & Gravel		14								
84.67			15								
83.67			16	6	SS	---	24	---	12		
82.67			17								
81.67	Very Stiff Gray Silty Clay Till		18	7	SS	3.0	26	B	16		
80.67			19								
79.67			20	8	SS	3.1	26	B	17		

Water

Groundwater Data: Water after auger removal at 11' below ground level
Comments: ***Assumed centerline elevation of existing bridge to be 100.0***

SOIL BORING LOGS

SHEET NO. 19	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	26
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b019

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

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Fax: 815-223-6659
e-mail: mts37@comcast.net

BORING LOG

Sheet 2 of 3

Client: Hutchison Engineering, Inc.
Project Name: County Hwy 6 Over Covel Creek Tributary
Project Site: Section 16-00732-00-BR
LaSalle County, IL.

Location: 29' East of Center of Existing Bridge
16' North of centerline of roadway

Boring No. B-2
Surface Elev. 99.67
Auger Depth 61' Rotary Depth NA
Start Date 01/13/14 Finish Date 01/13/14

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
78.67											
77.67			22								
76.67			23	9	SS	2.9	20	B	20		
75.67			24								
74.67			25								
73.67			26	10	SS	3.0	22	B	19		
72.67			27								
71.67			28								
70.67			29								
69.67	Very Stiff Gray Silty Clay Till		30	11	SS	2.3	15	B	22		
68.67			31								
67.67			32								
66.67			33								
65.67			34								
64.67			35								
63.67			36	12	SS	3.1	20	B	19		
62.67			37								
61.67			38								
60.67			39								
59.67			40								
58.67			41	13	SS	3.1	21	B	19		

Groundwater Data: Water after auger removal at 11' below ground level
Comments: ***Assumed centerline elevation of existing bridge to be 100.0***

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

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e-mail: mts37@comcast.net

BORING LOG

Sheet 3 of 3

Client: Hutchison Engineering, Inc.
Project Name: County Hwy 6 Over Covel Creek Tributary
Project Site: Section 16-00732-00-BR
LaSalle County, IL.

Location: 29' East of Center of Existing Bridge
16' North of centerline of roadway

Boring No. B-2
Surface Elev. 99.67
Auger Depth 61' Rotary Depth NA
Start Date 01/13/14 Finish Date 01/13/14

DRILLED BY: Randy Safranski, Diedrich D-120

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
57.67											
56.67			43								
55.67			44								
54.67	Very Stiff Gray Silty Clay Till		45	14	SS	2.7	22	B	22		
53.67			46								
52.67			47								
51.67			48								
50.67			49								
49.67			50	15	SS	3.5	29	S	15		
48.67	Very Stiff Gray Silty Clay Loam Till		51								
47.67			52								
46.67			53								
45.67			54								
44.67			55	16	SS	---	40	---	12		
43.67			56								
42.67	Hard Pinkish Gray Silty Clay with Cobbles		57								
41.67			58								
40.67			59								
39.67			60								
38.67	Boring Terminated		61	17	SS	---	90	---	12		
37.67			62								

Groundwater Data: Water after auger removal at 11' below ground level
Comments: ***Assumed centerline elevation of existing bridge to be 100.0***

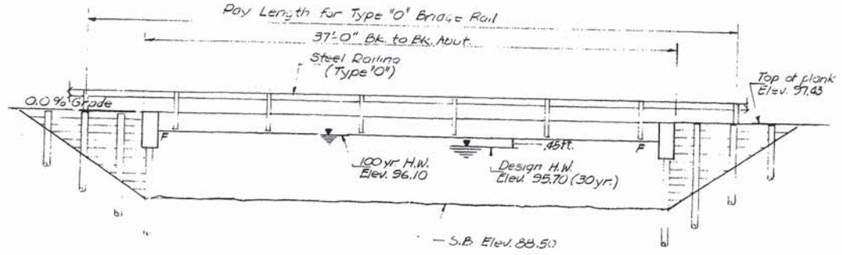
SOIL BORING LOGS

SHEET NO. 20	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 SHEETS	272	16-00732-00-BR	LASALLE	44	27
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

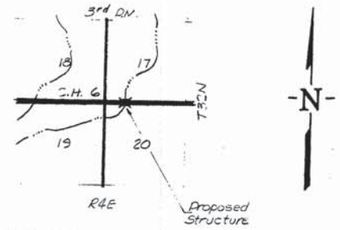
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 272 C.H. 6	*	LA SALLE	7	3
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

*SEC. 79-00024-00-BR.

SHEET 1 OF 5



ELEVATION



LOCATION SKETCH

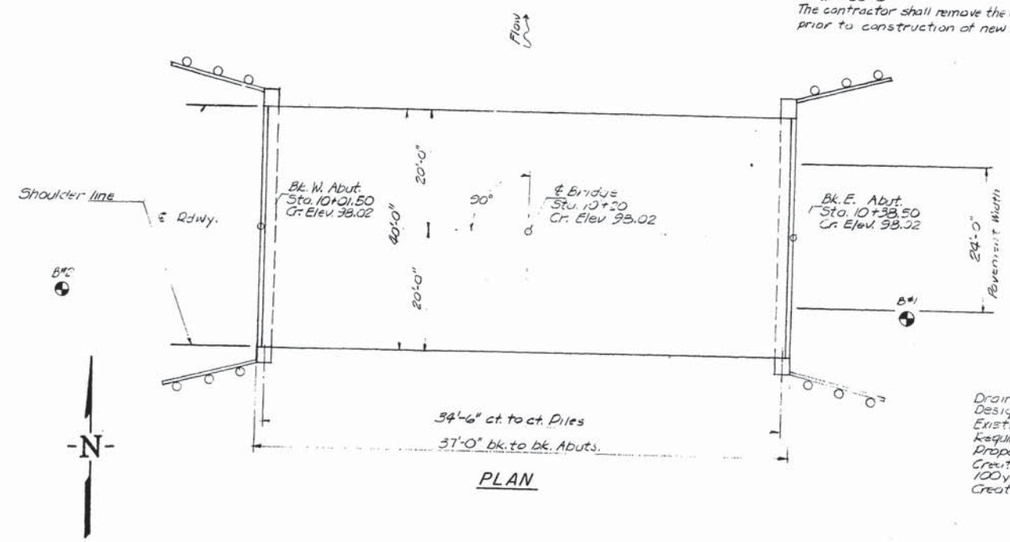
GENERAL NOTES

1. All work shall comply with the Standard Specifications for Road and Bridge Construction" adopted Oct. 1, 1978.
2. The Contractor shall drive 1 timber test pile in a permanent location at the west abutment prior to ordering the remaining piles.
3. See Special Provisions for Metal Fascia Bridge Rail, Name Plate & Waterproofing Membrane System requirement.
4. Channel excavated material will not be classified for payment but shall be considered incidental to the contract.
5. All hardware shall be hot dipped galvanized.
6. Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M31 or M53 Grade 60.

B.M. #1 - Top of R.O.W. Marker 32' Left of Sta. 1+91 Elev. 100.00

B.M. #2 - Chiseled "X" on top of N.W. Wingwall, Left of Sta. 9+98 Elev. 97.59

Existing Structure consists of a single span reinforced concrete thru girder with concrete wing walls and abutments. It is assumed that the bridge is supported by concrete spread footings. Bk. to bk. abuts. = 38'-0" width = 28'-0"
The contractor shall remove the existing superstructure and substructure prior to construction of new bridge.

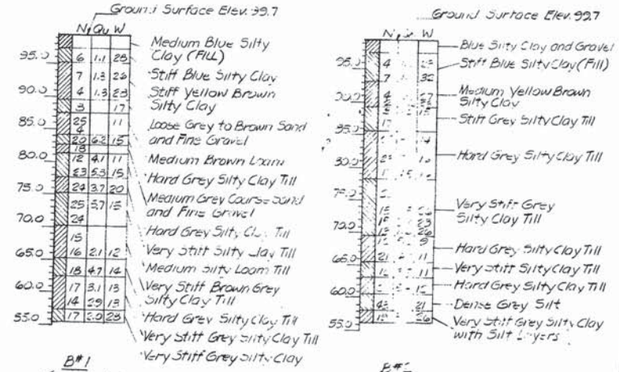


PLAN

WATERWAY DATA

Drainage Area	1.0 sq. mi.
Design Discharge (50 yr.)	1,110 c.f.s.
Existing Opening (below 50 yr. H.W.E.)	135 sq. ft.
Required Opening (below 50 yr. H.W.E.)	236 sq. ft.
Proposed Opening (below 50 yr. H.W.E.)	237 sq. ft.
Created Head for Design Flood	0.3 ft.
100 yr. Discharge	1,450 c.f.s.
Created Head for 100 yr. Flood	0.79 ft.

BORING DATA



N - Number of blows required to drive a 2" O.D. split spoon sampler 1' with a 140 lb. hammer falling 30"

Qu - Unconfined compressive strength tons/sq. ft.

W - Natural moisture content %

DESIGN STRESSES

SUPERSTRUCTURE
f'c - 5,000 psi. fs 270,000 psi (½" ϕ Strands)
fy - 60,000 psi. fsi 189,000 psi (" ")
f'ci - 4,000 psi

SUBSTRUCTURE
f'c - 2,500 psi.
fy - 60,000 psi.

Designed using 1977 A.A.S.H.T.O. Specification & 1978 Interim specifications

H-20-44 LOADING
plus 25 p.s.f. future wearing surface

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB.	TOTAL
Precast Prestressed Conc. Deck Beams 17"	sq. ft.	1,427		1,427
Class X Concrete	cu. yd.		19.6	19.6
Reinforcement Bars	lbs.		2,277	2,277
Treated Timber	f.b.m.		5,551	5,551
Hardware	lbs.		337*	337*
Steel Railing (Type "O")	lin. ft.	37.5		37.5
Test Pile (Timber)	ea.		1	1
Furnishing Creosoted Piles (20.1' to 35')	lin. ft.		782	782
Driving Timber Piles			782	782
Name Plate	ea.	1		1
Removal of Existing Structure	ea.	1		1
Portland Cement Mortar Fairing Course	lin. ft.	321		321
Waterproofing Membrane System	sq. yd.	158.6		158.6

*Includes 3½% for galvanizing

STATION 10+20
SEC. 79-00024-00-BR
F.A.S. RTE 272
LASALLE COUNTY
BUILT 197
LOADING HS20 BRIDGE NO. 050-34__

LETTERING FOR NAME PLATE

Locate Name Plate at N.W. corner of structure (The complete structure number will be furnished to the contractor after award of contract.)

Donald D. Fleming
Structural #18645
Mar. 7, 1979

GENERAL PLAN & ELEVATION
F.A.S. RTE. 272 - COUNTY HWY. 6
SECTION 79-00024-00-BR
LASALLE COUNTY
STATION 10+20

DESIGNED DNF
CHECKED PEB
DRAWN GDZ
CHECKED DNF

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 78092
DATE 3-7-79

EXISTING STRUCTURE PLANS

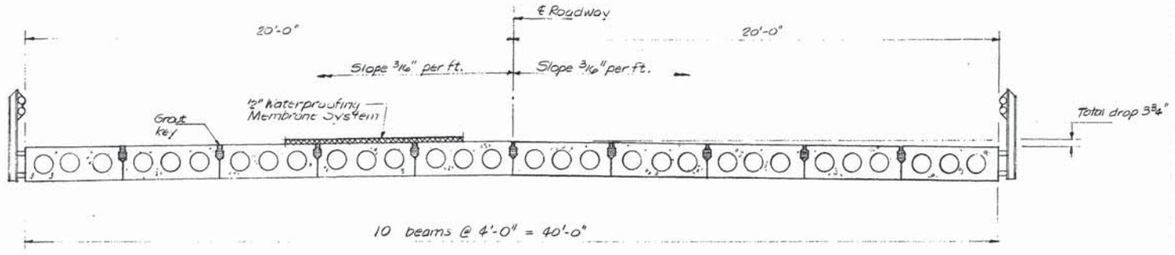
SHEET NO. 1	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 SHEETS	272	16-00732-00-BR	LASALLE	44	28
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b021

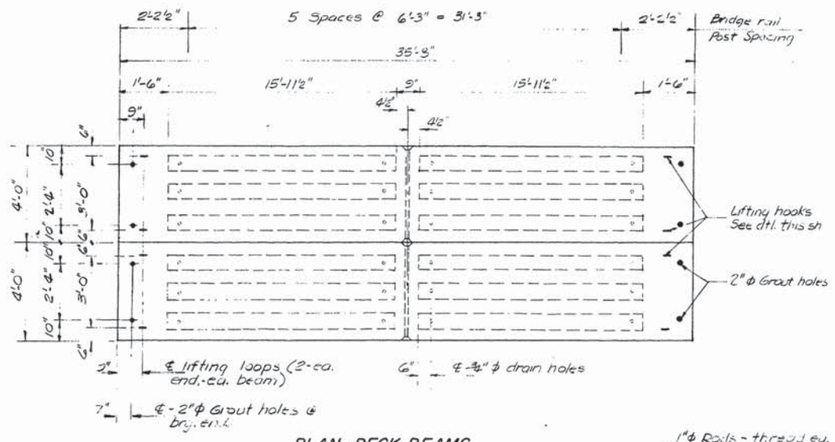
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
14-272 C.H.6	*	LASALLE	7	4
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

* SEC. 79-00024-00-BR

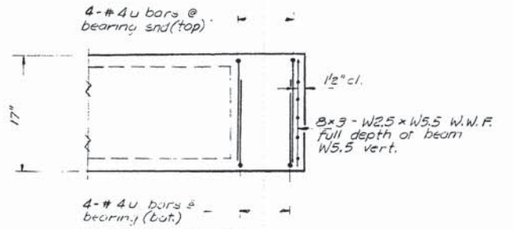
SHEET 2 OF 5



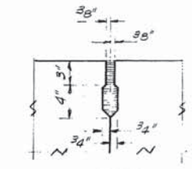
CROSS SECTION



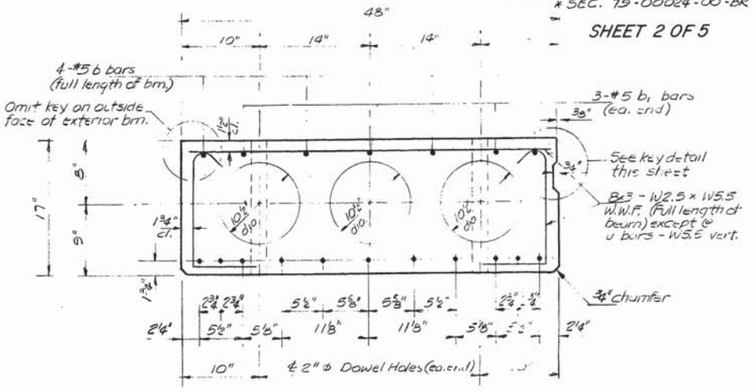
PLAN-DECK BEAMS



END BLOCK REINF.

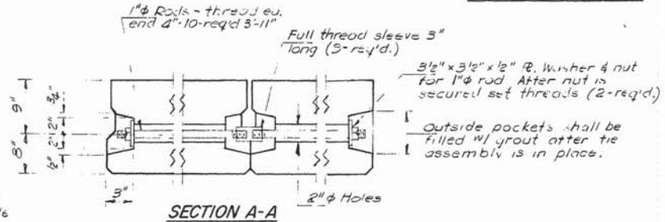


KEY DETAIL

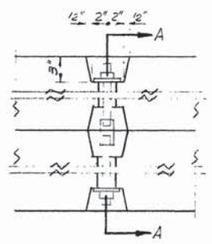


TYPICAL SECTION

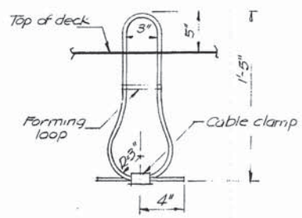
11-1/2" ℄ Strands @ 1 3/4"
℄ Strand Stressed to 29,900 lbs



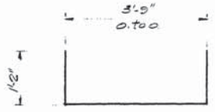
SECTION A-A



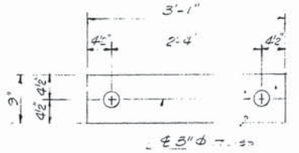
TRANSVERSE TIE ASSEMBLY



LIFTING LOOP DETAIL



BAR U



FABRIC BEARING PAD

1/2" thick (Sp. rqd)

PRECAST NOTES

1. Prestressing steel shall be non-galvanized extra strength, stress relieved 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
2. Lifting loops shall be 1/2" diameter, 6x25 Class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs.
3. The 1" ℄ rod in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie rods on the outside shall be filled with grout after tie assembly is in place.
4. Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand and PC. Mortar.
5. After beams have been erected, holes for the dowel anchors shall be drilled into the sub-structure and the anchor dowels shall be grouted in place.
6. Cost of reinforcing and accessories cast into the beams, of bearing pads, and of grouting longitudinal shear keys is included in the unit price for "Precast Prestressed Concrete Deck Beams."
7. After fabrication the transverse tie assembly (tie rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with A.A.S.H.T.O. M232.
8. Reinforcement bars shall conform to A.A.S.H.T.O. M31 or M53, Grade 60.

BILL OF MATERIAL (10-48" BEAMS)

BAR	NO	SIZE	LENGTH	SHAPE
a	40	#5	35'-5"	——
b1	60	#5	7'-2"	——
U	160	#4	4'-1"	⌊_⌋
Precast Prestressed Conc. Deck Beams 17"		sq.ft.	1,427	

SUPERSTRUCTURE
F.A.S. RTE. 272 - COUNTY HWY. 6
SECTION 79-00024-00-BR
LASALLE COUNTY
STATION 10+20

DESIGNED JNF
CHECKED DEB
DRAWN GDZ
CHECKED JNF

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 78092
DATE 3-7-79

EXISTING STRUCTURE PLANS

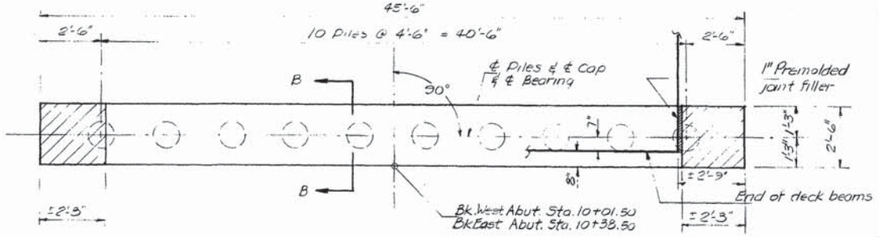
SHEET NO. 2	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 SHEETS	272	16-00732-00-BR	LASALLE	44	29
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b022

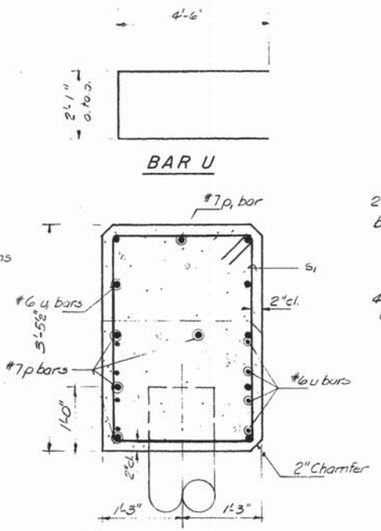
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA-272 C.H.6	*	LASALLE	7	5
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

* SEC. 79-00024-00-BR

SHEET 3 OF 5

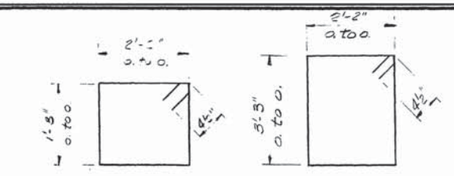


PLAN

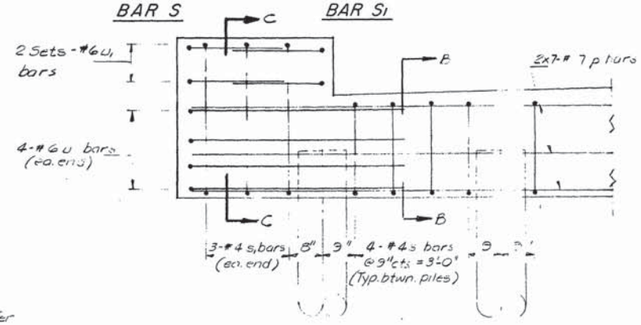


BAR U

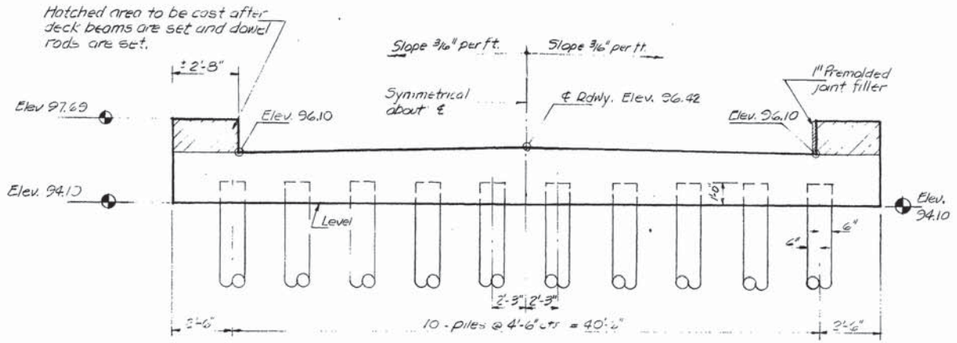
SECTION C-C



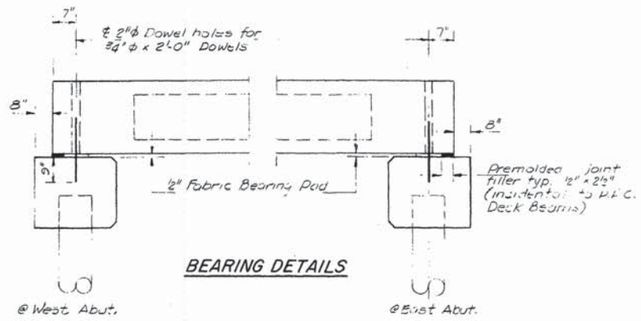
BAR S BAR S1



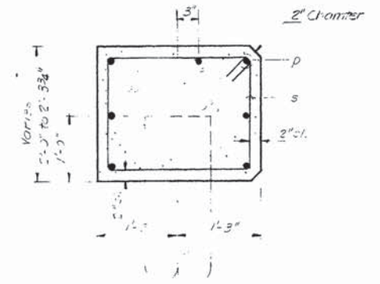
REINFORCEMENT DETAIL



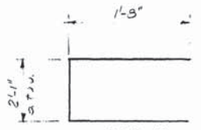
ELEVATION



BEARING DETAILS



SECTION B-B



BAR U1

PILE DATA

Abutments
- Type: Creosoted Timber (12"ϕ)
- No. Req'd.: * 40
- Est. Length: 26 ft.
- Capacity: 19 tons

Wingwalls
- Type: Creosoted Timber (12"ϕ)
- No. Req'd: 12
- Est. Length: 24 ft.
- Capacity: Min. Tip Elev. 73.5

Note: Precore a 10" diameter hole a minimum of 12'-0" below streambed, then drive to capacity.

* includes 1-test pile

BILL OF MATERIAL (2 PILE CAPS)

BAR	NO.	SIZE	LENGTH	SHAPE
p	25	#7	23'-10"	
p1	4	#7	21'-4"	
s	72	#4	8'-5"	
s1	12	#4	11'-7"	
u	16	#6	11'-1"	
u1	16	#6	5'-5"	
Class X Concrete			cu. yd	9.6
Reinforcement Bars			lbs.	4,277

BILL OF MATERIAL (2 ABUTMENTS)

ITEM	UNIT	TOTAL
Class X Concrete	cu. yd.	19.6
Reinforcement Bars	lbs.	2,277
Treated Timber	f.b.m.	5,551
Hardware	lbs.	3,114*
Furn. Creosoted Piles (20' to 38')	lin. ft.	782
Driving Timber Piles	lin. ft.	782
Test Pile (Furnish-Drive)	ea.	1

* Includes 32% for galvanizing

PILE CAP DETAILS
F.A.S. RTE. 272 - COUNTY HWY 6
SECTION 79-00024-00-BR
LASALLE COUNTY
STATION 10+20

DESIGNED DLF
CHECKED JBH
DRAWN GDZ
CHECKED JWF

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 78096
DATE 2-7-

EXISTING STRUCTURE PLANS

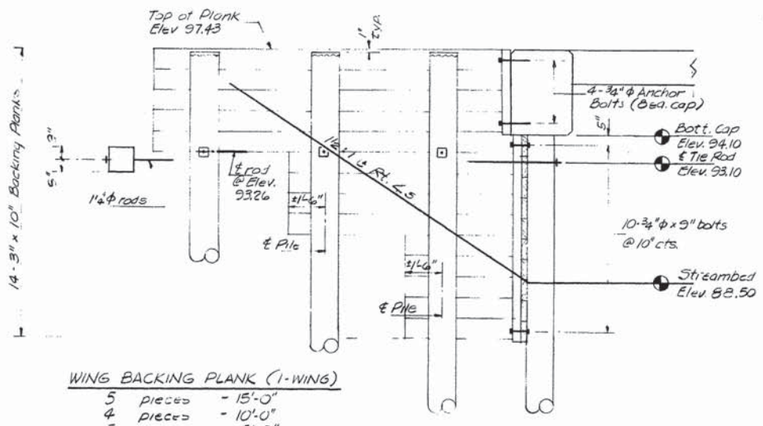
SHEET NO. 3	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 SHEETS	272	16-00732-00-BR	LASALLE	44	30
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

3460b023

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS - 272 (Co. Rte. 6)	*	LA SALLE	7	6
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

* SEC. 79-00024-00-BR

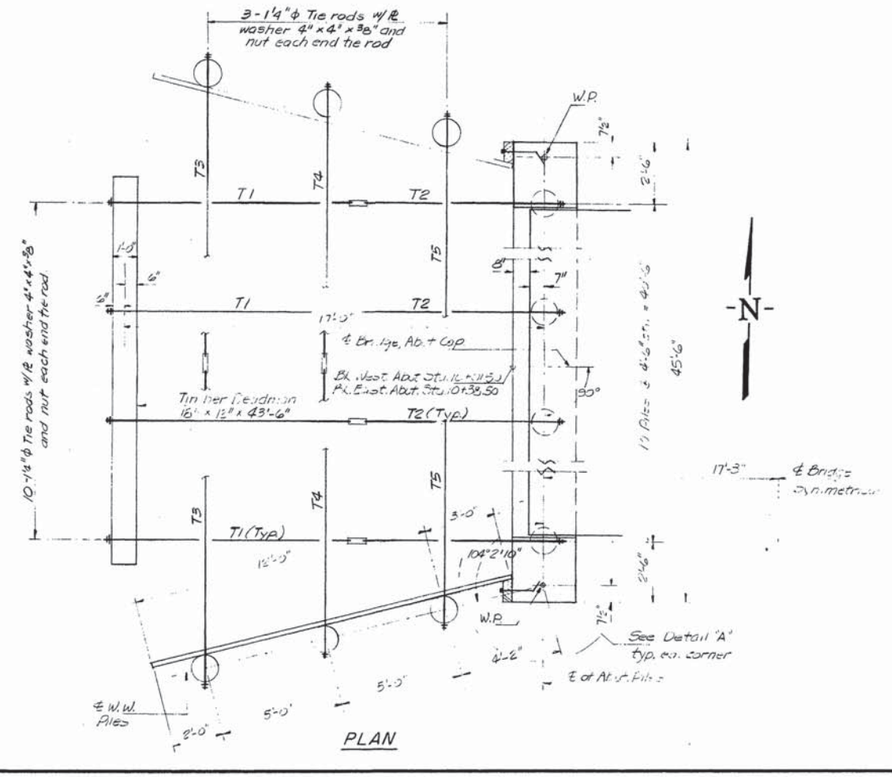
SHEET 4 OF 5



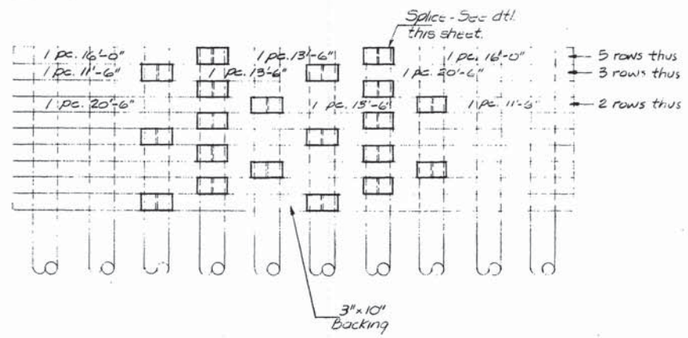
WING BACKING PLANK (1-WING)

5	pieces	- 15'-0"
4	pieces	- 10'-0"
5	pieces	- 5'-0"

ELEVATION

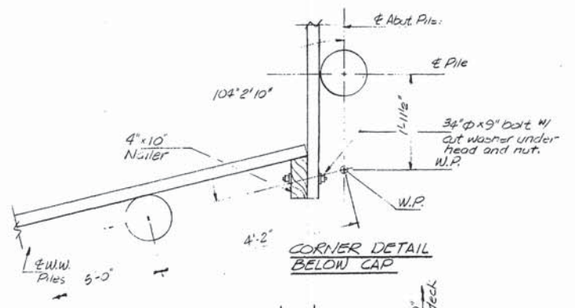


PLAN

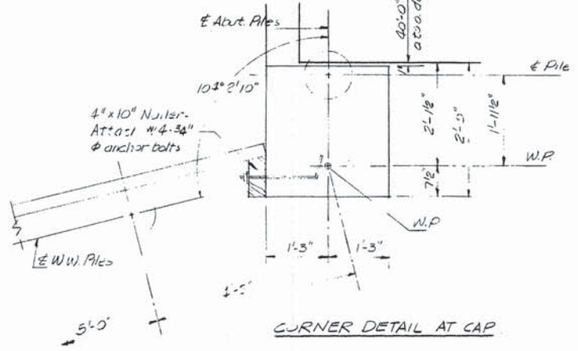


ELEVATION - BACKING PLANK

Note: Backing plank shall be fastened to each pile and nailer with 3-60 d nails.

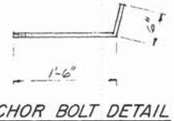


CORNER DETAIL BELOW CAP



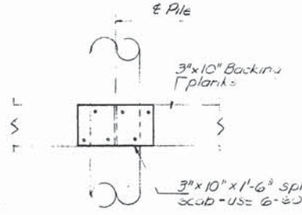
CORNER DETAIL AT CAP

DETAIL A



ANCHOR BOLT DETAIL

⅞" ϕ



SPLICE DETAIL

HARDWARE

ITEM	NO.		SIZE
Plate Washers	52		4" x 4" x ⅜"
Cut Washers	96		¾"ϕ
Anchor Bolts w/ nut	16		¾"ϕ
Bolts w/ nuts	40		⅞" ϕ x 0'-9"
Turnbuckles	20		2-¾ x 12"
	6		1¼ 1 x 12"
Spikes	1,464		20d
Tie Rods w/ Nuts	T-1	20	1¼" ϕ x 9'-4"
	T-2	20	1¼" ϕ x 9'-4"
	T-3	4	1¼" ϕ x 26'-4"
	T-4	4	1¼" ϕ x 25'-2"
	T-5	4	1¼" ϕ x 24'-0"

LUMBER

ITEM	PCS.	LENGTH	SIZE
Abutment Backing	20	16'-0	3" x 10"
	10	20'-6	3" x 10"
	10	11'-6	3" x 10"
	20	13'-6	3" x 10"
WING Backing	20	15'-6	3" x 10"
	16	10'-0	3" x 10"
	20	5'-0	3" x 10"
Nailers	4	12'-0	4" x 10"
Splice Scab	40	1'-6	3" x 10"
Leadmail	2	43'-6	12" x 12"

ABUTMENT & WINGWALL DETAILS
F.A.S. RTE. 272 - COUNTY HWY. 6
SECTION 79-00024-00-BR
LASALLE COUNTY
STATION 10+20

DESIGNED DNF
CHECKED WEE
DRAWN SCB
CHECKED DNF

HANSON ENGINEERS INCORPORATED
SPRINGFIELD, ILLINOIS PEORIA, ILLINOIS

FILE NO. 78092
DATE 3-7-79

EXISTING STRUCTURE PLANS

SHEET NO. 4	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 SHEETS	272	16-00732-00-BR	LASALLE	44	31
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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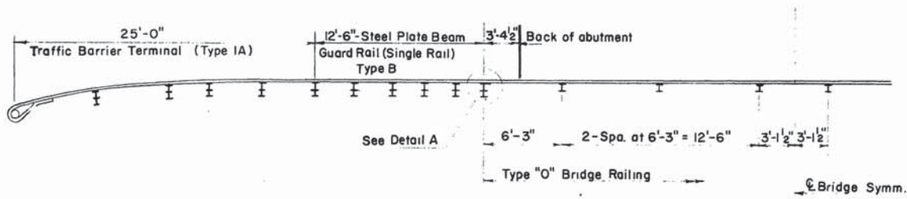
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 272 (IL 6)	*	LASALLE	7	7
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

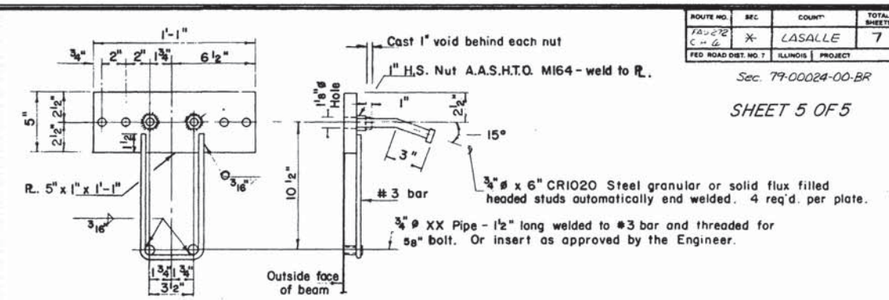
Sec. 79-00024-00-BR

SHEET 5 OF 5

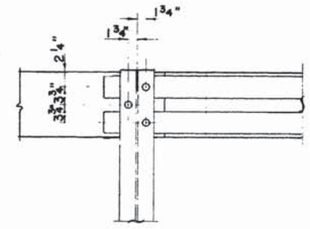


TYPICAL APPROACH GUARD RAIL & BRIDGE RAIL LAYOUT

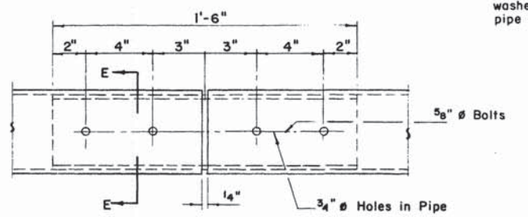
See Std. 2230-11 & 2336



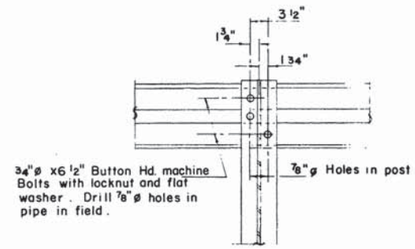
ANCHOR DEVICE



DETAIL A

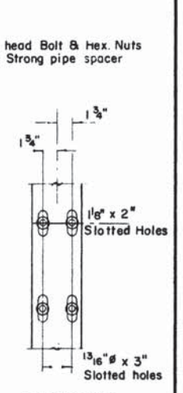


TOP VIEW AT RAIL SPLICE

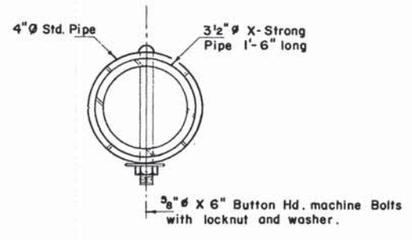


SECTION F-F

TYPICAL SECTION AT RAIL POST



SECTION G-G



SECTION AT RAIL SPLICE E-E

GENERAL NOTES

Steel shapes and plates shall conform to the requirements of A.A.S.H.T.O M-183 except as noted. Posts shall conform to A.A.S.H.T.O. M-223.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts, and washers noted shall conform to A.A.S.H.T.O M-164

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. M-232

All posts, railing, rail splices, anchor devices and angles shall be galvanized in accordance with A.A.S.H.T.O. M-111 and A.S.T.M. A-385 after shop fabrication. Galvanized rail shall not be painted.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange or spacer in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place ⅛" fabric bearing pad between the post and concrete.

Steel railing shall be in accordance with Section 508 of the Std. Spec. except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE O.

Steel tubing for rails shall conform to A.S.T.M. A-500 Grade B.

The 1" ø high strength bolts connecting the post to the concrete shall be tightened to a snug fit and given an additional ⅛ turn.

RAILING DETAIL
F.A.S. RTE. 272 - COUNTY HWY. 6
SECTION 79-00024-00-BR
LASALLE COUNTY
STATION 10+20

DESIGNED DNF
CHECKED PEB
DRAWN
CHECKED DNF

HANSON ENGINEERS INCORPORATED
SPRINGFIELD ILLINOIS PEORIA, ILLINOIS

FILE NO. 78092
DATE 3-7-79

EXISTING STRUCTURE PLANS

SHEET NO. 5	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 SHEETS	272	16-00732-00-BR	LASALLE	44	32
		S.N. 050-3614	CONTRACT NO. 87588		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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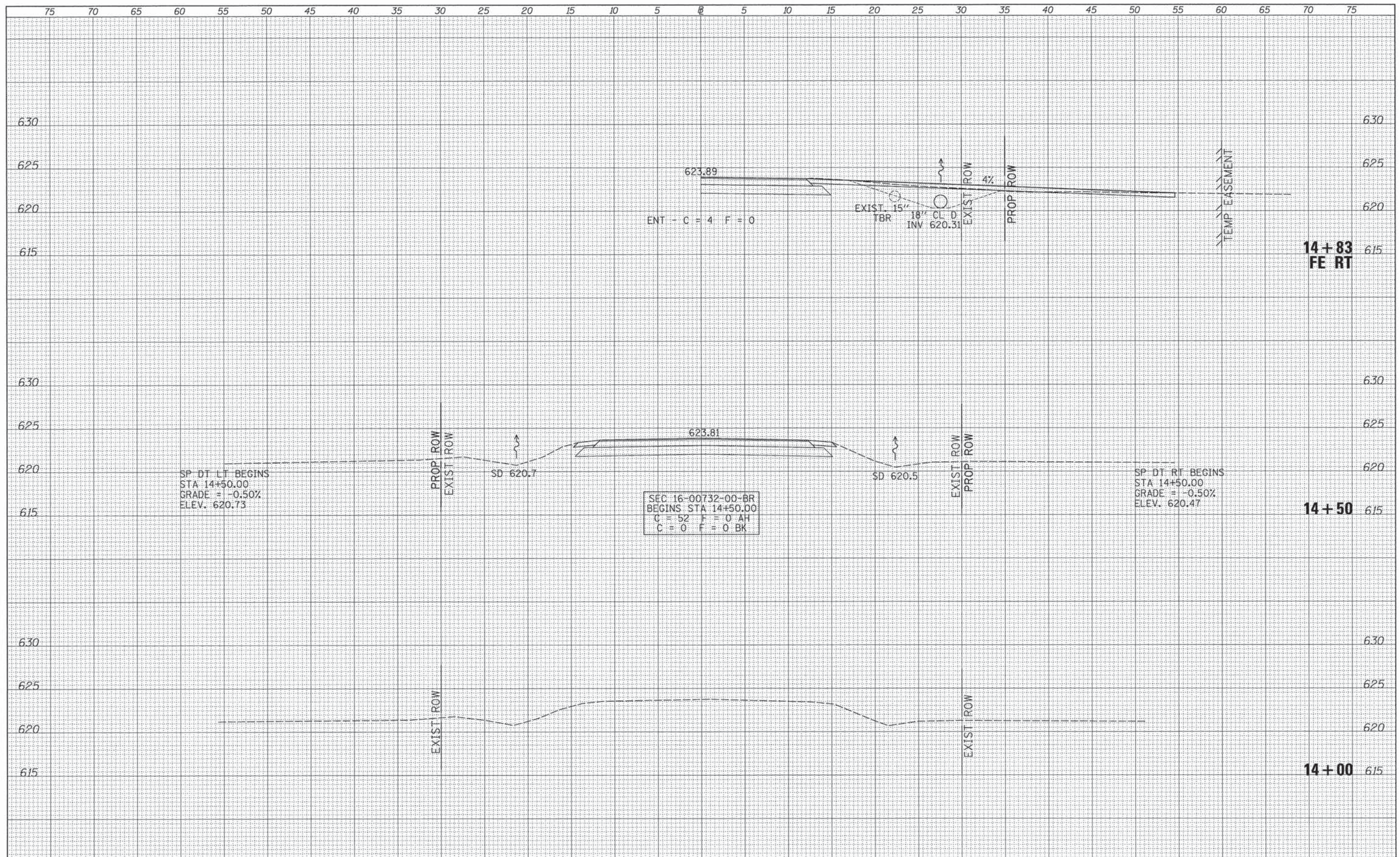

FINAL SURVEY

NO.	NOTE BOOK	SURVEYED	BY	DATE
		PLOTTED		
		TEMPLATE		
		AREAS		
		AREAS CHECKED		

ORIGINAL SURVEY

NO.	NOTE BOOK	SURVEYED	BY	DATE
		PLOTTED		
		TEMPLATE		
		AREAS		
		AREAS CHECKED		

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		DRAWN -	REVISED -
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Default	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

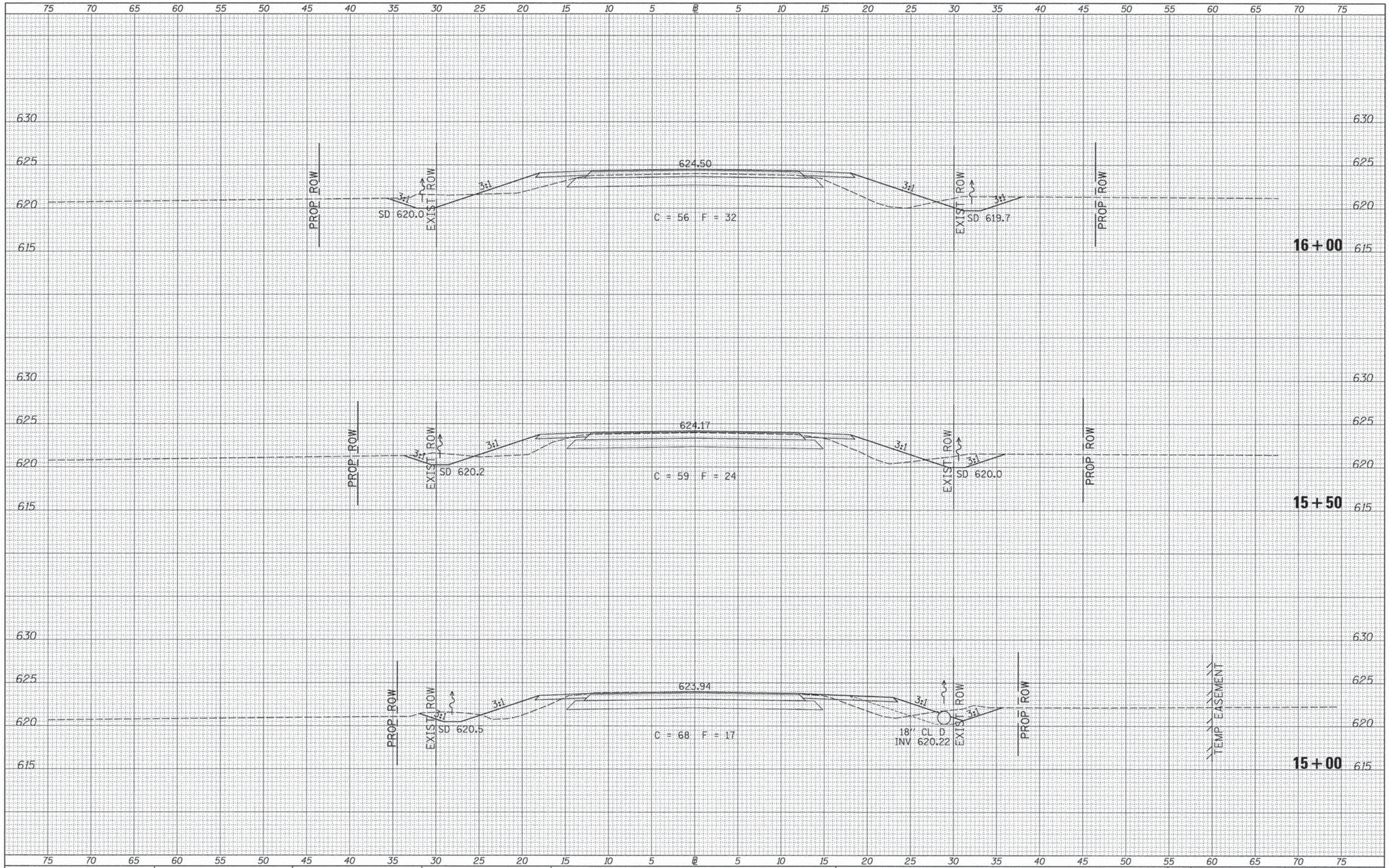
CROSS SECTIONS

SCALE: 1"=5' | SHEET 1 OF 12 SHEETS | STA. 14+00 TO STA.14+83

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	33
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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

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



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		DRAWN -	REVISED -
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Default	PLOT DATE = 1/5/2015	DATE -	REVISED -

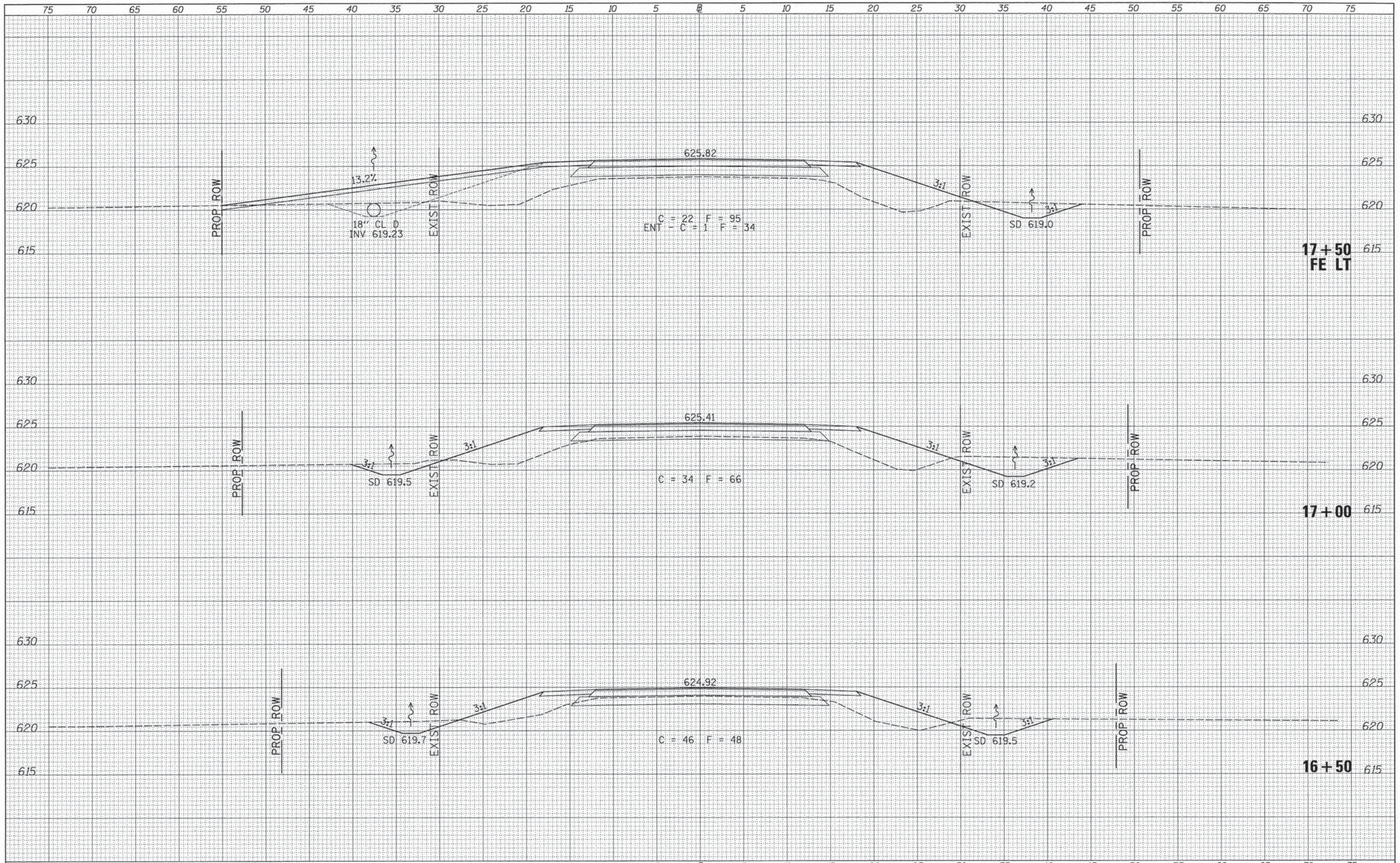
LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

CROSS SECTIONS

SCALE: 1"=5' | SHEET 2 OF 12 SHEETS | STA. 15+00 TO STA.16+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	34
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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



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

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		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

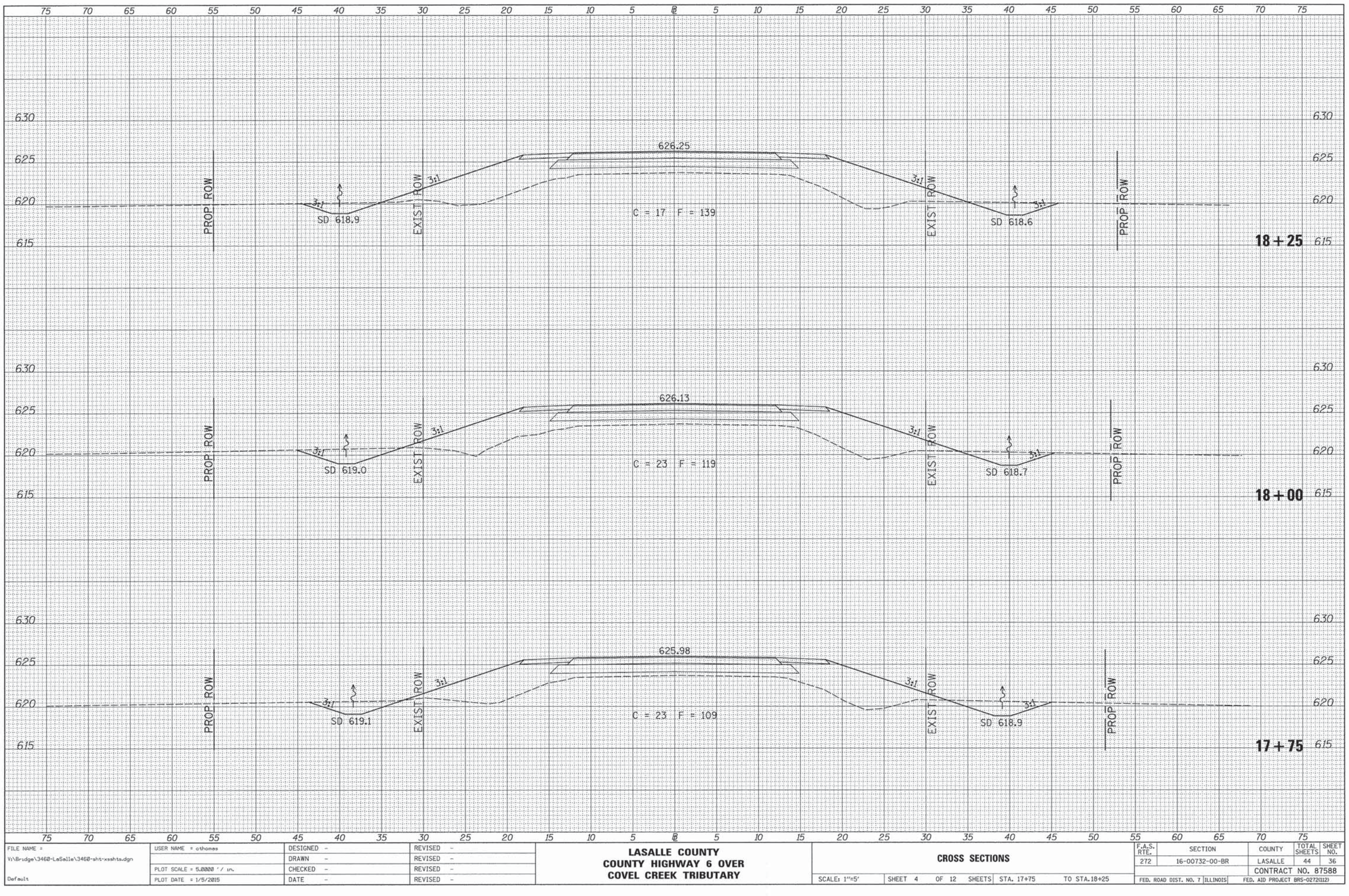
CROSS SECTIONS

SCALE: 1"=5' | SHEET 3 OF 12 SHEETS | STA. 16+50 | TO STA. 17+50

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	35
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

FINAL SURVEY	NOTE BOOK	NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

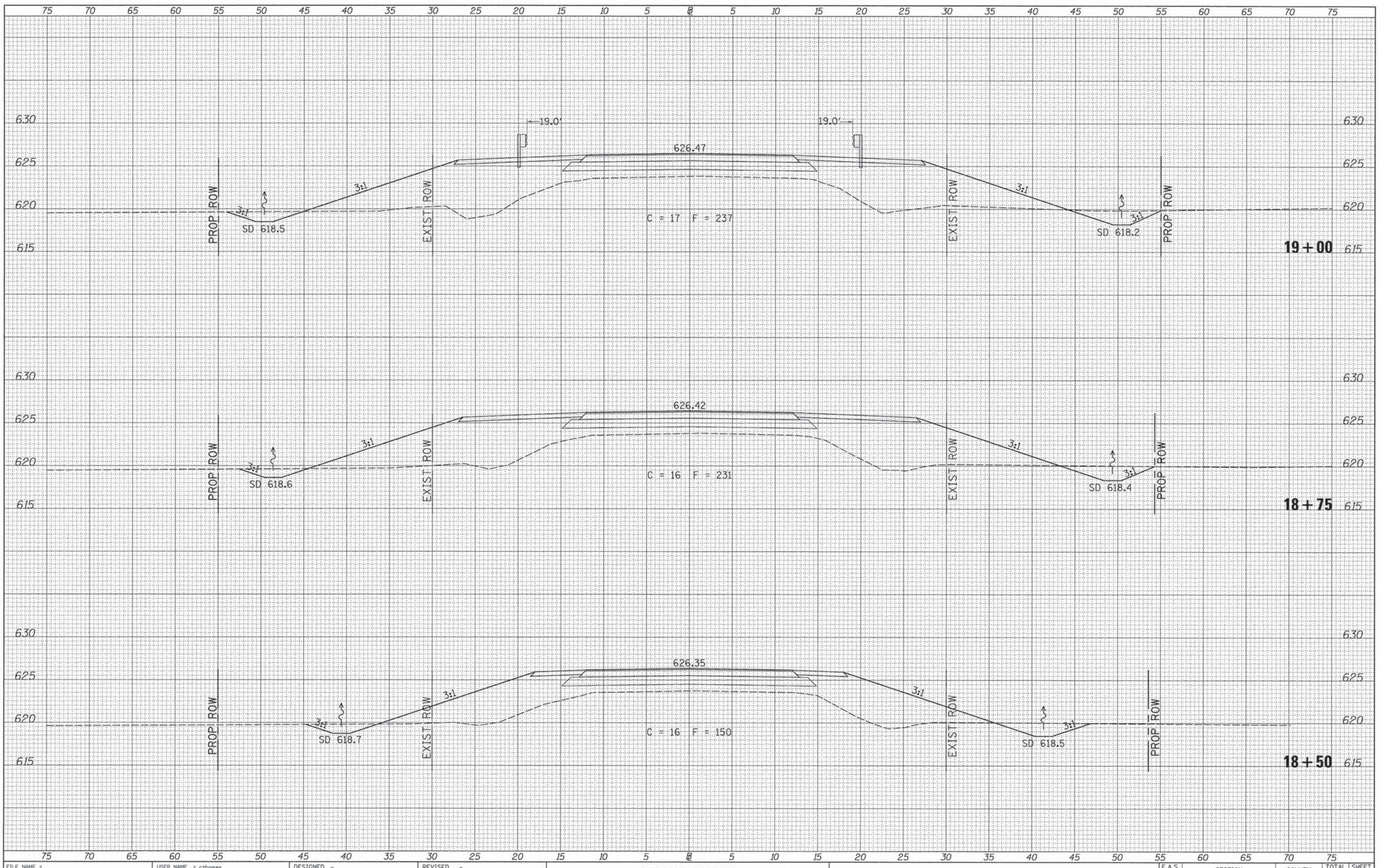
CROSS SECTIONS

SCALE: 1"=5' | SHEET 4 OF 12 SHEETS | STA. 17+75 | TO STA. 18+25

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	36
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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

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



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Default	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

CROSS SECTIONS

SCALE: 1"=5' | SHEET 5 OF 12 SHEETS | STA. 18+50 | TO STA. 19+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	37
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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

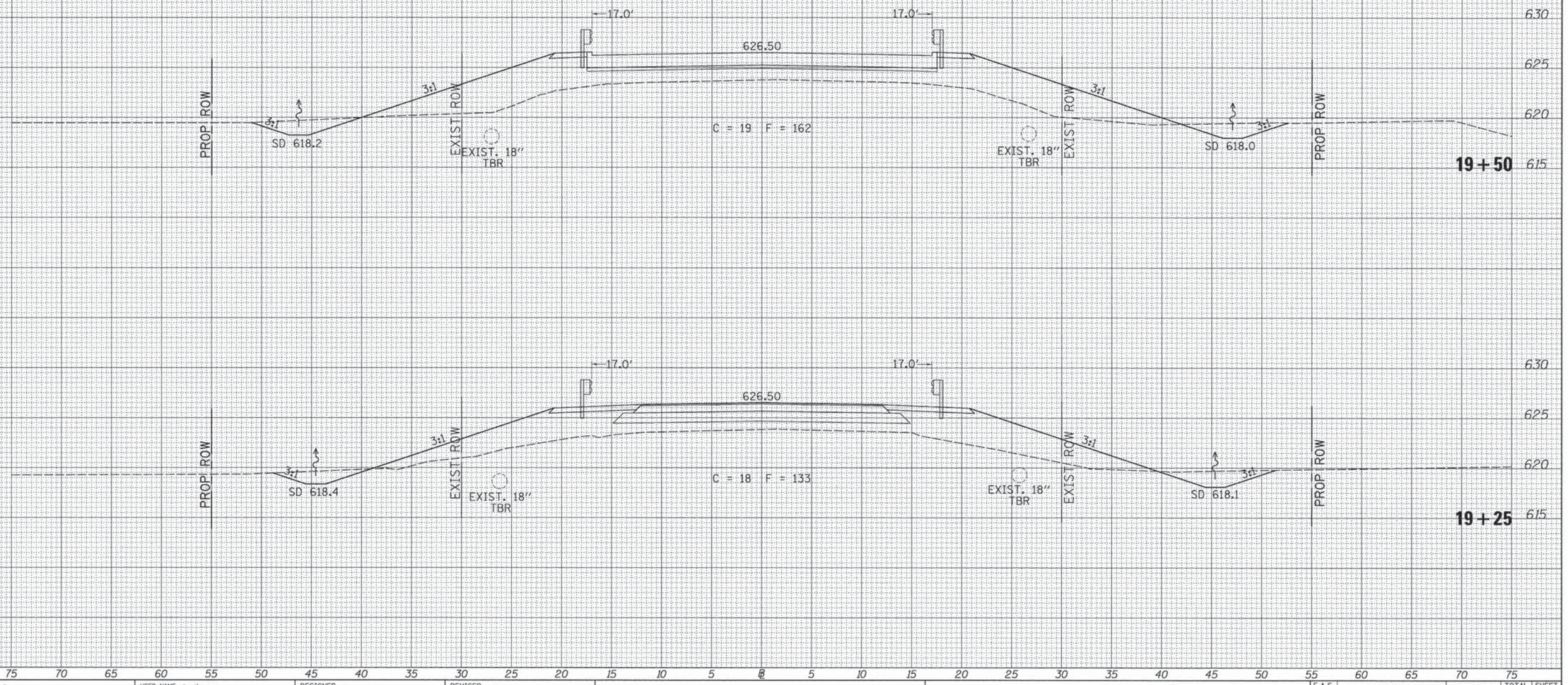
SP DT LT ENDS
STA 19+82.00
GRADE = -0.50%
ELEV. 618.07

STA 20+28.50
C = 35 F = 149 AH
C = 0 F = 0 BK

BRIDGE OMISSION

STA 19+71.50
C = 0 F = 0 AH
C = 21 F = 162 BK

SP DT RT ENDS
STA 19+82.00
GRADE = -0.50%
ELEV. 617.81



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

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	PLOT DATE = 1/5/2015	DATE -	REVISED -

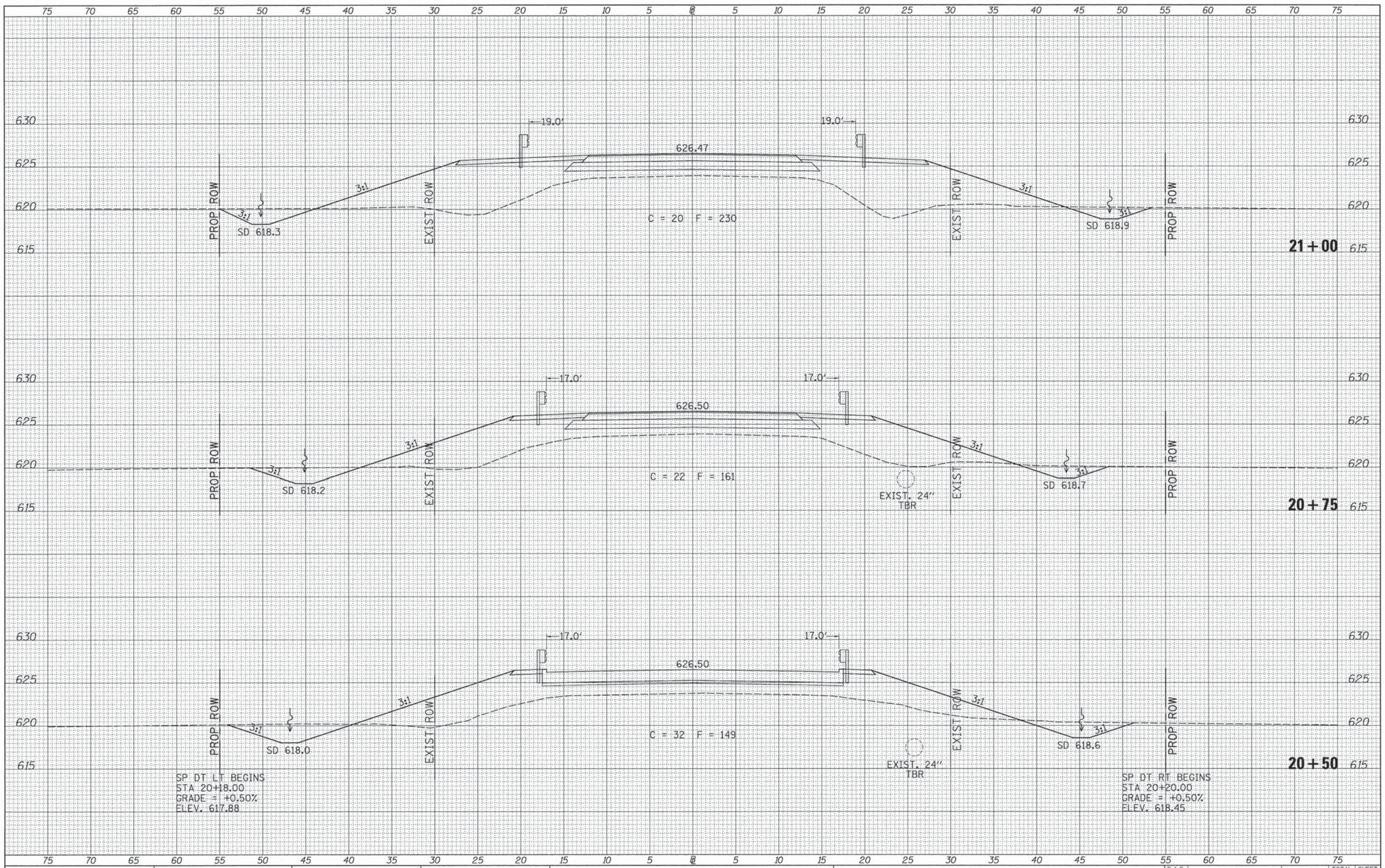
LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

CROSS SECTIONS

SCALE: 1"=5' | SHEET 6 OF 12 SHEETS | STA. 19+25 TO STA.19+50

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	38
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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



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

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Default	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

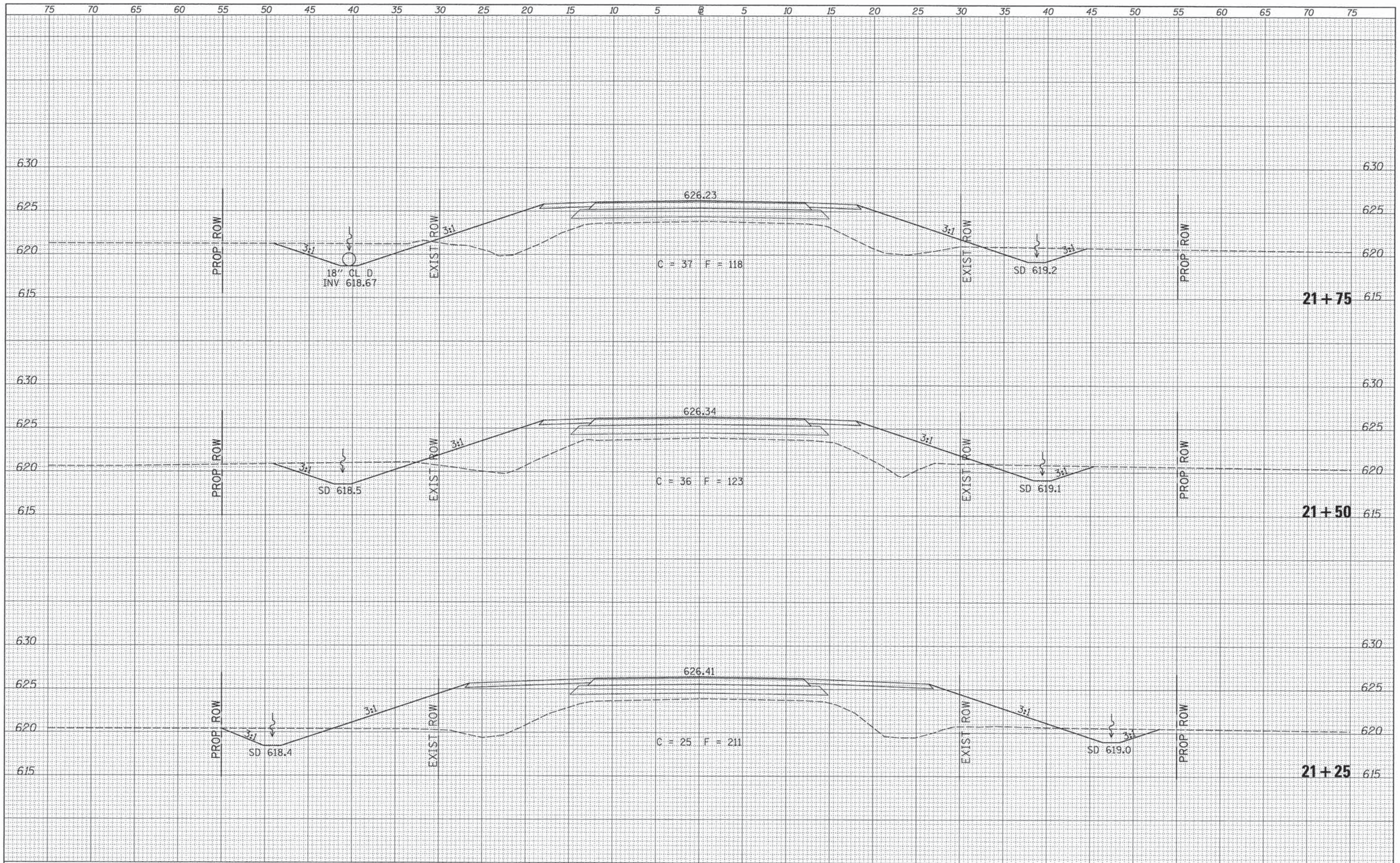
CROSS SECTIONS

SCALE: 1"=5' | SHEET 7 OF 12 SHEETS | STA. 20+50 TO STA. 21+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	39
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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

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



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Default	PLOT DATE = 1/5/2015	DATE -	REVISED -

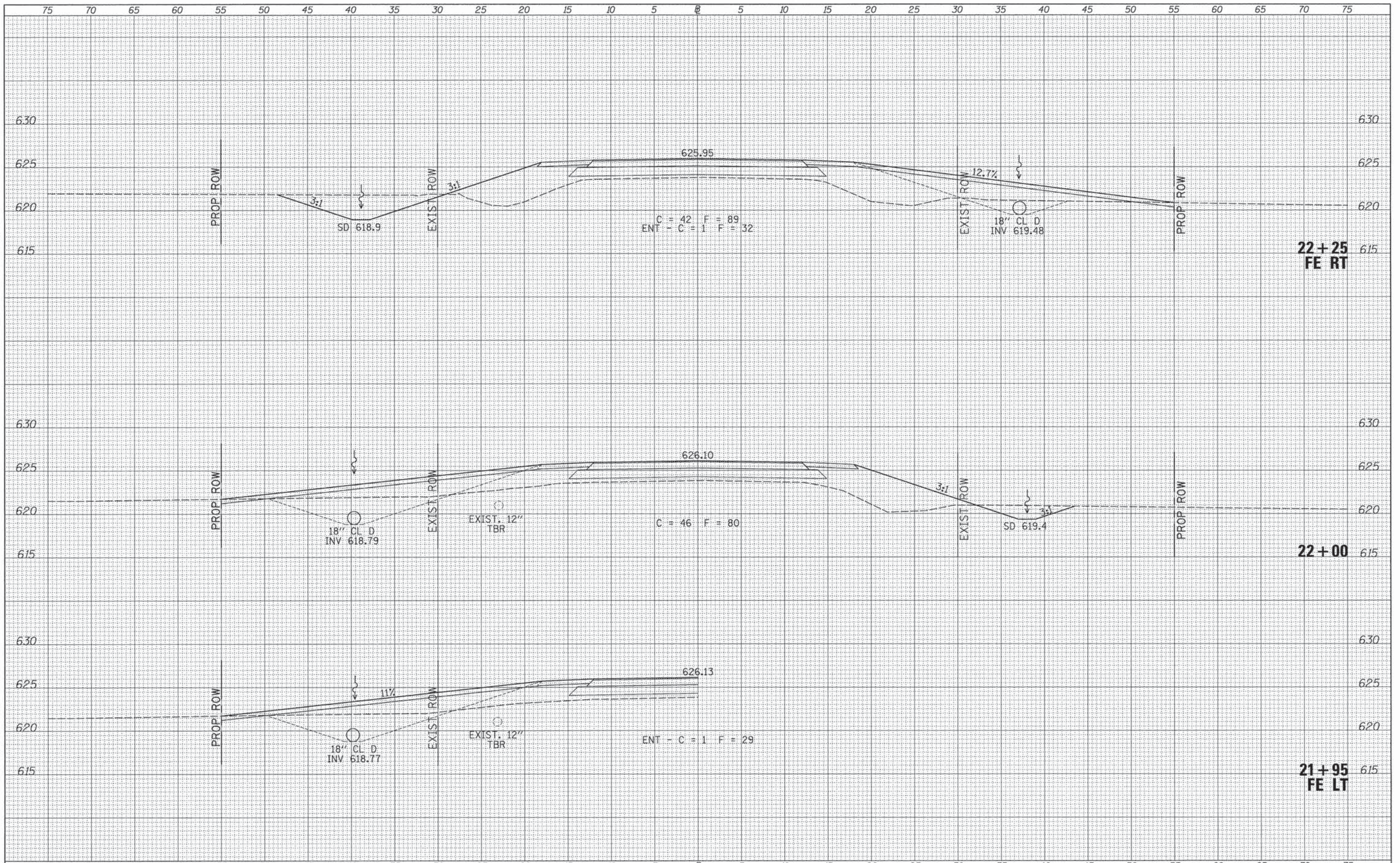
LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

CROSS SECTIONS

SCALE: 1"=5' | SHEET 8 OF 12 SHEETS | STA. 21+25 | TO STA. 21+75

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	40
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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



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

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	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

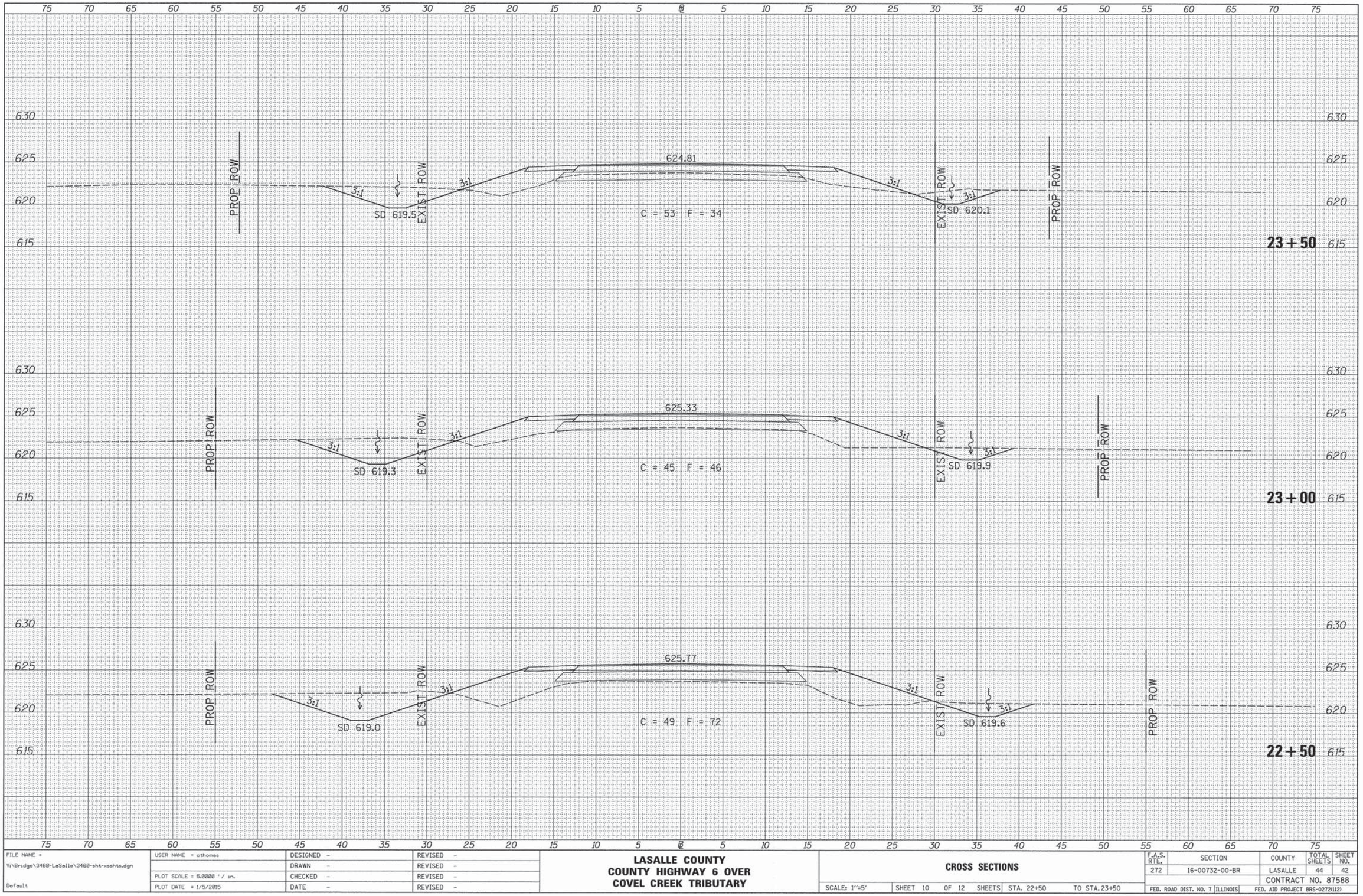
CROSS SECTIONS

SCALE: 1"=5' | SHEET 9 OF 12 SHEETS | STA. 21+95 | TO STA. 22+25

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	41
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

FINAL SURVEY	NOTE BOOK	NO.

SURVEYED	BY
PLOTTED	DATE
TEMPLATE	
AREAS	
AREAS	CHECKED



ORIGINAL SURVEY	NOTE BOOK	NO.

SURVEYED	BY
PLOTTED	DATE
TEMPLATE	
AREAS	
AREAS	CHECKED

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	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

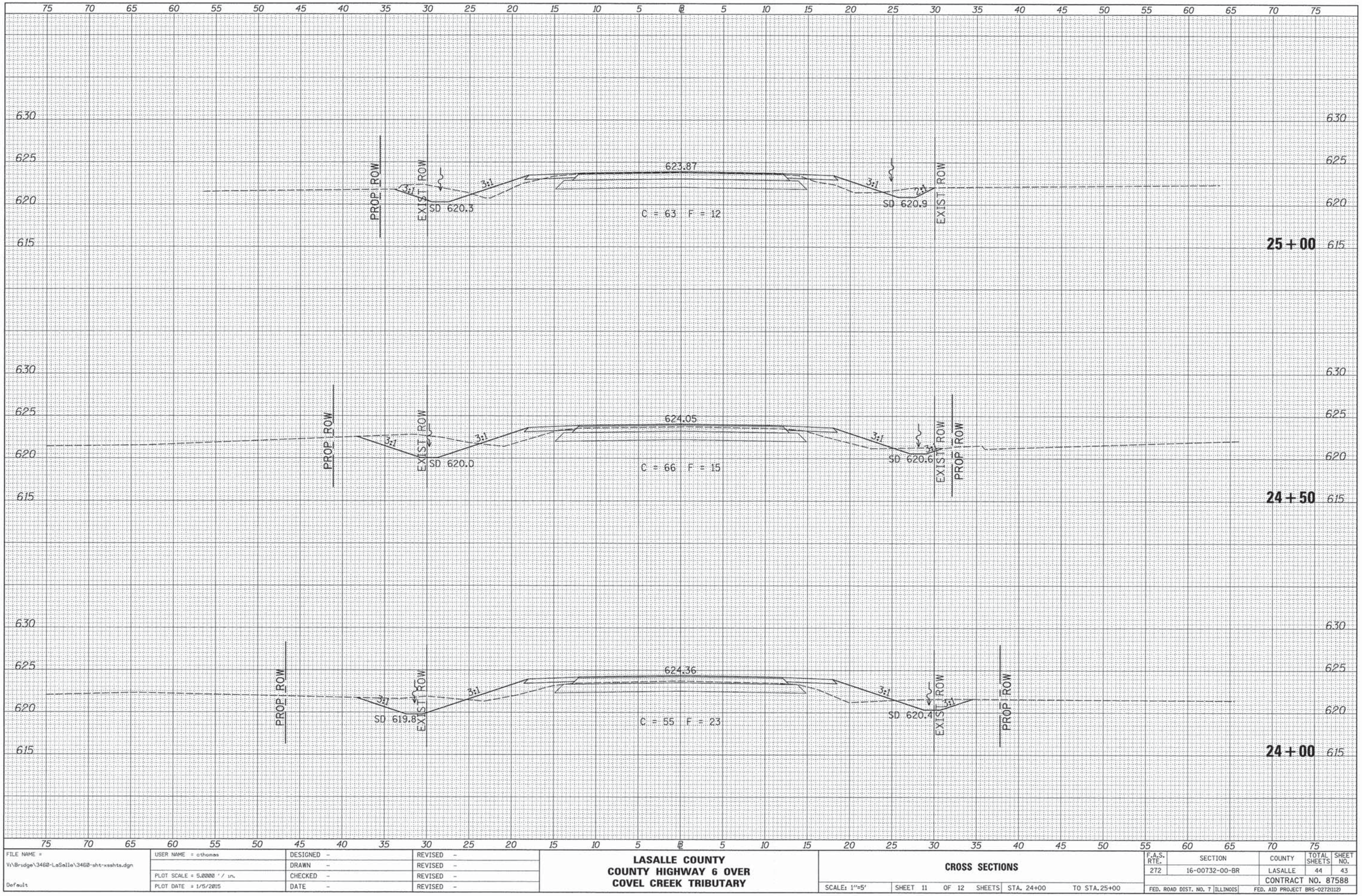
CROSS SECTIONS

SCALE: 1"=5' | SHEET 10 OF 12 SHEETS | STA. 22+50 TO STA. 23+50

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	42
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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

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



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	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

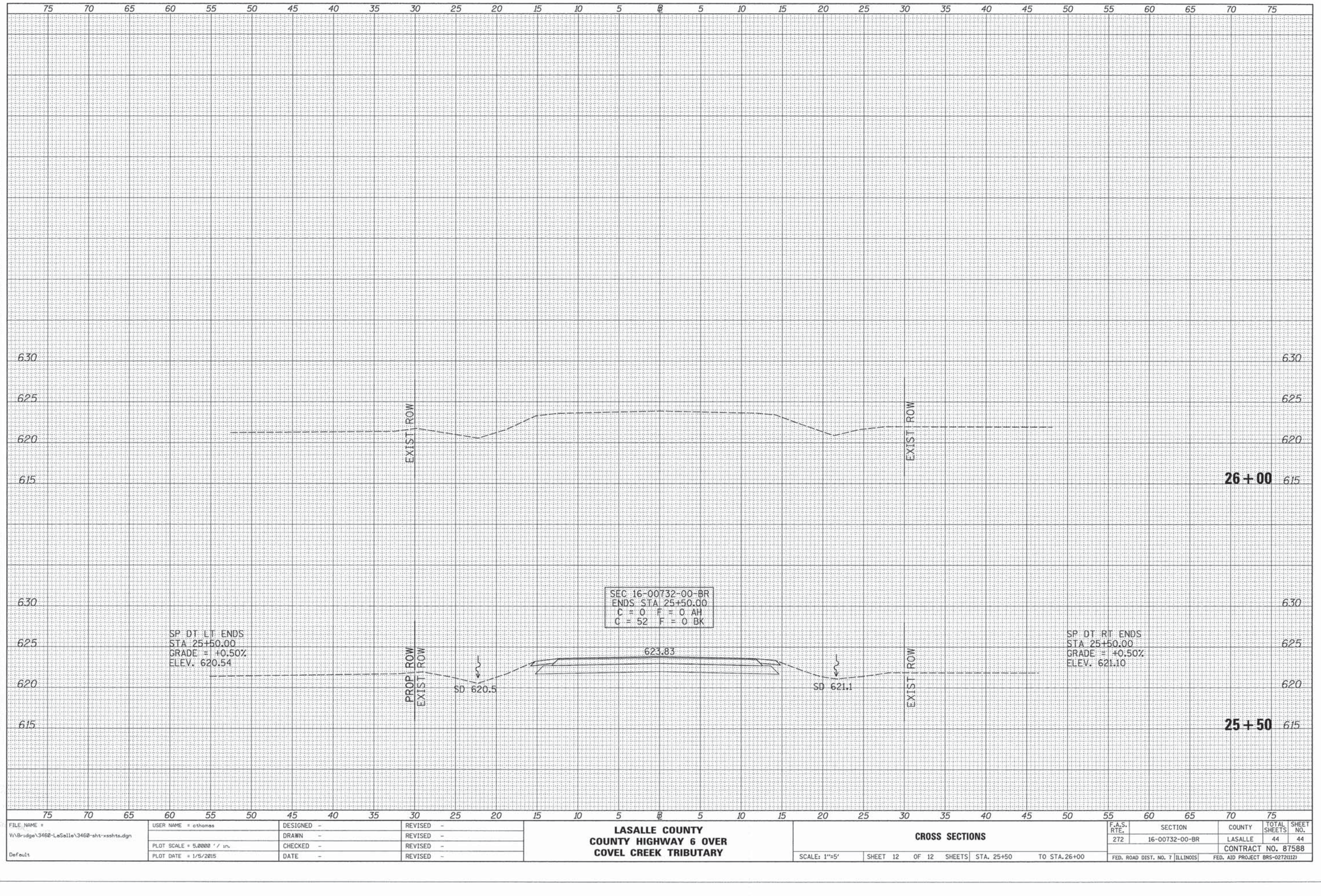
CROSS SECTIONS

SCALE: 1"=5' | SHEET 11 OF 12 SHEETS | STA. 24+00 | TO STA. 25+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	43
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		

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

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



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Default	PLOT DATE = 1/5/2015	DATE -	REVISED -

LASALLE COUNTY
COUNTY HIGHWAY 6 OVER
COVEL CREEK TRIBUTARY

CROSS SECTIONS

SCALE: 1"=5' | SHEET 12 OF 12 SHEETS | STA. 25+50 | TO STA. 26+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00732-00-BR	LASALLE	44	44
		CONTRACT NO. 87588		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0272(112)		