

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

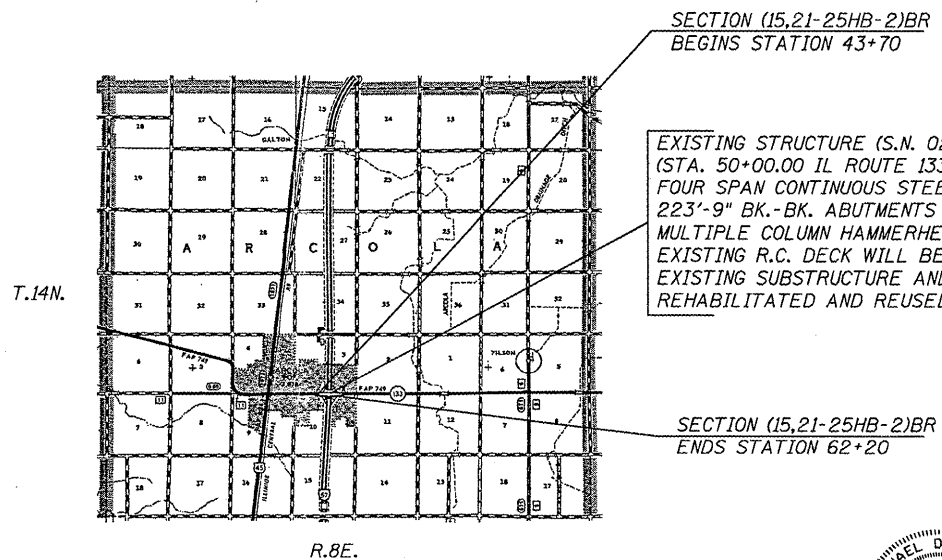
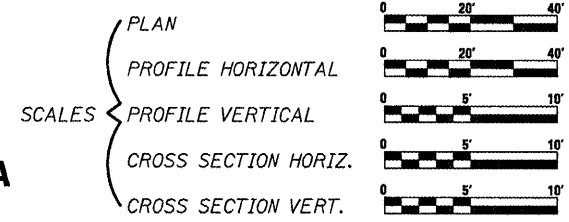
**PROPOSED
HIGHWAY PLANS**

F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DECK REPLACEMENT
DOUGLAS COUNTY

C-95-052-98
F.A.I. 57 UNDER IL 133 AT ARCOLA

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	1

CONTRACT NO. 90952
*65+5=70
D-95-045-98



EXISTING STRUCTURE (S.N. 021-0024) STA. 1492+76.53 F.A.I. 57 (STA. 50+00.00 IL ROUTE 133)
FOUR SPAN CONTINUOUS STEEL BEAM BRIDGE
223'-9" BK.-BK. ABUTMENTS WITH R.C. DECK 55'-8" WIDE ON MULTIPLE COLUMN HAMMERHEAD PIERS AND PILE BENT ABUTMENTS.
EXISTING R.C. DECK WILL BE REMOVED AND REPLACED.
EXISTING SUBSTRUCTURE AND STEEL BEAMS WILL BE REHABILITATED AND REUSED.

FOR UNDERGROUND UTILITY LOCATIONS CALL
TOLL FREE J.U.L.I.E. TELEPHONE NO.
1-800-892-0123
ARCOLA TOWNSHIP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 12/17 2009
Joseph E. Dougan
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER

January 09 2010
SCOTT E. STAPPELA
ACTING ENGINEER OF DESIGN AND ENVIRONMENT

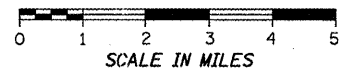
January 09 2010
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

CURRENT TRAFFIC DATA

	F.A.I. 57	IL 133
CURRENT ADT=	18000(2004)	5500(2004)
20 YR ADT =	22500(2024)	6000(2024)
PU & PC % =	67.7	88.5
SU % =	3.8	6.1
MU % =	28.5	5.4

DESIGN DESIGNATION
INTERSTATE (F.A.I. 57)
MINOR ARTERIAL (IL 133)

TOTAL LENGTH OF SECTION & PROJECT = 1,850.00 FEET = 0.350 MILES
NET LENGTH OF SECTION & PROJECT = 1,850.00 FEET = 0.350 MILES



CUMMINS ENGINEERING CORPORATION
SPRINGFIELD, ILLINOIS



Michael D. Cummins (12-11-09)
ILLINOIS PROFESSIONAL NO. 43244
(Expires 11/30/2011)

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

CONTRACT NO. 90952

PROJECT ENGINEER: JASON STULTS (217) 465-4181
CONSULTANT LIAISON: RUSTIN KEYS (217) 465-4181

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	2
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 115, 21-25HB-2/BR		CONTRACT NO. 90952		

GENERAL NOTES

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-105.07
EXISTING STATE-OWNED AND MAINTAINED UTILITY LINES ARE SHOWN ON THE PLANS TO INDICATE THEIR PRESENCE AND APPROXIMATE LOCATION. THE CONTRACTOR SHALL NOTIFY THE DISTRICT OPERATIONS ENGINEER TWO WEEKS PRIOR TO COMMENCING ANY EXCAVATION IN THE VICINITY OF THESE LINES. THE STATE WILL THEN LOCATE AND MARK THE HORIZONTAL LOCATIONS OF THE LINES AND PROVIDE ANY AVAILABLE INFORMATION AS TO THEIR DEPTH. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE STATE.

ALSO THERE MAY BE UTILITIES PRESENT WHICH WERE INSTALLED BY THE STATE BUT ARE MAINTAINED BY OTHERS (CITY, TOWN, ETC.) THE APPROXIMATE LOCATIONS OF THESE LINES ARE ALSO SHOWN ON THE PLANS ALONG WITH THE NAME OF THE MAINTAINING AGENCY. THE CONTRACTOR SHALL COORDINATE THE LOCATING OF THESE LINES WITH THE LOCAL AGENCY PRIOR TO COMMENCING ANY EXCAVATION OR BORING IN THEIR VICINITY. SHOULD THESE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF, AND AT NO COST TO, THE LOCAL AGENCY AND THE STATE.

G.N.-105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N. 107.31
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800) 892-0123.

G.N.-406
THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

G.N.-406.05b
ALL LEVELING BINDER OR BINDER SHALL BE GIVEN A FOG COAT OF PRIME BEFORE THE SURFACE COURSE IS PLACED WHEN DIRECTED BY THE ENGINEER.

THE FOG COAT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER GALLON FOR BITUMINOUS MATERIAL (PRIME COAT) AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N. -406H
MIXTURE REQUIREMENTS

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

Location(s):	IL 133	IL 133	IL 133	IL 133
Mixture Use(s):	LEVELING BINDER	SURFACE COURSE	FLEX. CONN.	HMA SHOULDER & SHOULDER R & R
AC/PG:	PG 64-22	PG 64-22	PG 64-22	PG 58-22
RAP %: (Max)**	25%	15%	25%	30%
Design Air Voids:	4.0% • Ndes=50	4.0% • Ndes=50	4.0% • Ndes=50	4.0% • Ndes=30
Mixture Composition: (Gradation Mixture)	IL 9.5	IL 9.5	IL 19.0	IL 9.5L
Friction Aggregate:	Mix C	Mix D	NA	Mix C

G.N.-440B
THE EXISTING TIE BARS BETWEEN THE EXISTING PAVEMENT AND EXISTING MEDIANS, GUTTERS AND/OR COMBINATION CURB AND GUTTERS THAT ARE FOUND SUITABLE FOR REUSE SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY EXISTING TIE BARS THAT ARE FOUND UNSUITABLE TO BE INCORPORATED INTO THE PROPOSED CONSTRUCTION DUE TO EXCESSIVE RUSTING OR DISTRESS SHALL BE REMOVED FLUSH WITH THE FACE OF THE EXISTING CONCRETE AND DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS REMOVAL PAY ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N.-631
IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

G.N.-703A
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N.-781
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

G.N.-1004.01
COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G.N.-2003B
AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

COMMITMENTS

THERE ARE NO COMMITMENTS ON THIS PROJECT.

INDEX OF SHEETS

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LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001-07	PAVEMENT JOINTS
420701-02	PAVEMENT FABRIC
421001-02	BAR REINFORCEMENT FOR CRC PAVEMENT
442001-04	CLASS A PATCHES
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERT
601001-03	SUBSURFACE DRAINS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
606301-04	PC CONCRETE ISLANDS AND MEDIANS
606306-03	CORRUGATED PC CONCRETE MEDIANS
610001-05	SHOULDER INLET WITH CURB
630001-08	STEEL PLATE BEAM GUARD RAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-08	TRAFFIC BARRIER TERMINAL TYPE 6
631046-04	TRAFFIC BARRIER TERMINAL TYPE 10
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAIL
667101-01	PERMANENT SURVEY MARKERS
701101-02	TC&P - OFF-ROAD OPERATIONS, MULTILANE, 4.5 M (15') TO 600 MM (24") FROM PAVEMENT EDGE
701201-03	TC&P - LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-03	TC&P - LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	TC&P - LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701400-04	TC&P - APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-05	TC&P - LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-06	TC&P - LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKINGS

GENERAL NOTES

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 2114GENNOTES
DATE: 10/09/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	15,21-25HB-2)BR	DOUGLAS	65	3
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 90952				

SUMMARY OF QUANTITIES			S.N. 021-0024 100% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X771-2A
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	282
25100630	EROSION CONTROL BLANKET	SQ YD	216
35300300	PORTLAND CEMENT CONCRETE BASE COURSE 8"	SQ YD	2,019
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	673
40600300	AGGREGATE (PRIME COAT)	TON	9
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	179
40600990	TEMPORARY RAMP	SQ YD	148
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	391
42001300	PROTECTIVE COAT	SQ YD	374
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	374
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	132
44000100	PAVEMENT REMOVAL	SQ YD	135
44000182	HOT-MIX ASPHALT SURFACE REMOVAL, 8"	SQ YD	1,315
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1,707
44000700	APPROACH SLAB REMOVAL	SQ YD	258
44000915	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	452
44002020	CONCRETE MEDIAN SURFACE REMOVAL	SQ FT	3,360
44003100	MEDIAN REMOVAL	SQ FT	716
44003700	MEDIAN REMOVAL (SPECIAL)	SQ FT	7,204
44004250	PAVED SHOULDER REMOVAL	SQ YD	94
44200553	CLASS A PATCHES, TYPE II, 10 INCH	SQ YD	27
44213000	PATCHING REINFORCEMENT	SQ YD	27
44213200	SAW CUTS	FOOT	303
48101200	AGGREGATE SHOULDERS, TYPE B	TON	36
48203100	HOT-MIX ASPHALT SHOULDERS	TON	183
48300300	PORTLAND CEMENT CONCRETE SHOULDERS 8"	SQ YD	26
50102400	CONCRETE REMOVAL	CU YD	46.9
50104650	SLOPE WALL REMOVAL	SQ YD	132
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
50157300	PROTECTIVE SHIELD	SQ YD	832

SUMMARY OF QUANTITIES			S.N. 021-0024 100% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X771-2A
50200100	STRUCTURE EXCAVATION	CU YD	311
50300100	FLOOR DRAINS	EACH	8
50300225	CONCRETE STRUCTURES	CU YD	11.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	487.9
50300260	BRIDGE DECK GROOVING	SQ YD	654
50300300	PROTECTIVE COAT	SQ YD	1,557
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3,530
50500505	STUD SHEAR CONNECTORS	EACH	4,995
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	18
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	105,095
50800515	BAR SPLICERS	EACH	788
51100100	SLOPE WALL 4 INCH	SQ YD	200
51205200	TEMPORARY SHEET PILING	SQ FT	519
51500100	NAME PLATES	EACH	2
52100110	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	18
52100520	ANCHOR BOLTS, 1"	EACH	36
54213447	END SECTIONS 12"	EACH	4
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	112
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	3
60100070	SHOULDER REMOVAL AND REPLACEMENT	FOOT	88
60100945	PIPE DRAINS 12"	FOOT	352
60107600	PIPE UNDERDRAINS 4"	FOOT	1,416
60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	111
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	190
60618300	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	3,360
60621900	CONCRETE MEDIAN, TYPE SM (SPECIAL)	SQ FT	5,219
60622354	CONCRETE MEDIAN, TYPE SM-6 (DOWELLED)	SQ FT	940
60624600	CORRUGATED MEDIAN	SQ FT	123
60624610	CORRUGATED MEDIAN (DOWELLED)	SQ FT	542
60625900	P.C.C. RAMPED MEDIAN TERMINAL	EACH	2

* SPECIALTY ITEM

SUMMARY OF QUANTITIES
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 21140TY.DGN
DATE: 2/27/07

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	15,21-25HB-2)BR	DOUGLAS	65	4
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 90952

SUMMARY OF QUANTITIES			S.N. 021-0024 100% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X771-2A
60900515	CONCRETE THRUST BLOCKS	EACH	4
61000115	TYPE E INLET BOX, STANDARD 610001	EACH	4
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	350
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	576
63301000	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL	FOOT	200
63302700	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1
66101150	HOT-MIX ASPHALT SHOULDER CURB	FOOT	85
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12
67100100	MOBILIZATION	L SUM	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	12
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	304
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	94
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	5,357
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	102
70400100	TEMPORARY CONCRETE BARRIER	FOOT	800
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	750
70500200	TEMPORARY STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	25
70500665	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1
70500685	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 10	EACH	1
* 78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	94
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	5,357
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	64
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	10
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	6

SUMMARY OF QUANTITIES			S.N. 021-0024 100% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X771-2A
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	6
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1,409
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	12
* 81021550	CONDUIT, AUGERED 2" DIA., PVC	FOOT	200
* 81603035	UNIT DUCT, 600V, 2-1C NO. 6, 1/C NO. 6 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	1,616
* 81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1,416
X0320887	POLYMER CONCRETE	CU FT	2.2
X0321475	PIPE ELBOW, 12"	EACH	8
X0323710	REMOVE CONDUIT ATTACHED TO STRUCTURE	FOOT	273
X0323830	DRAINAGE SCUPPERS, DS-11	EACH	2
X0324865	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	997
X6330103	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL, TANGENT	EACH	1
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	28
X7050167	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	2
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1
** Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
** Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0037300	PAVEMENT GROOVING	SQ YD	374
Z0038700	PERMANENT BENCH MARKS	EACH	1

* SPECIALTY ITEM
** SFTY - 3N

SUMMARY OF QUANTITIES
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY
S.N. 021-0024

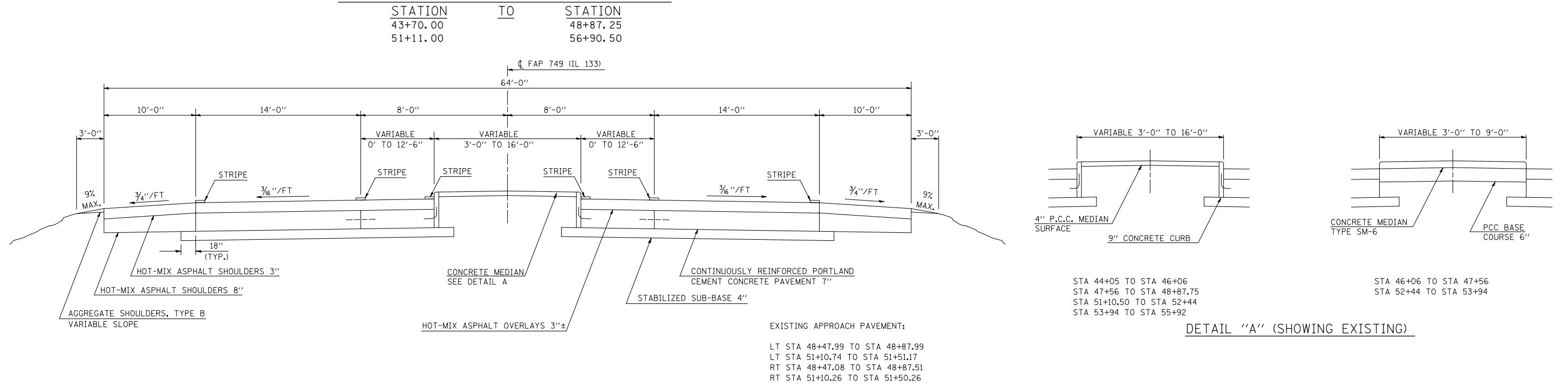
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
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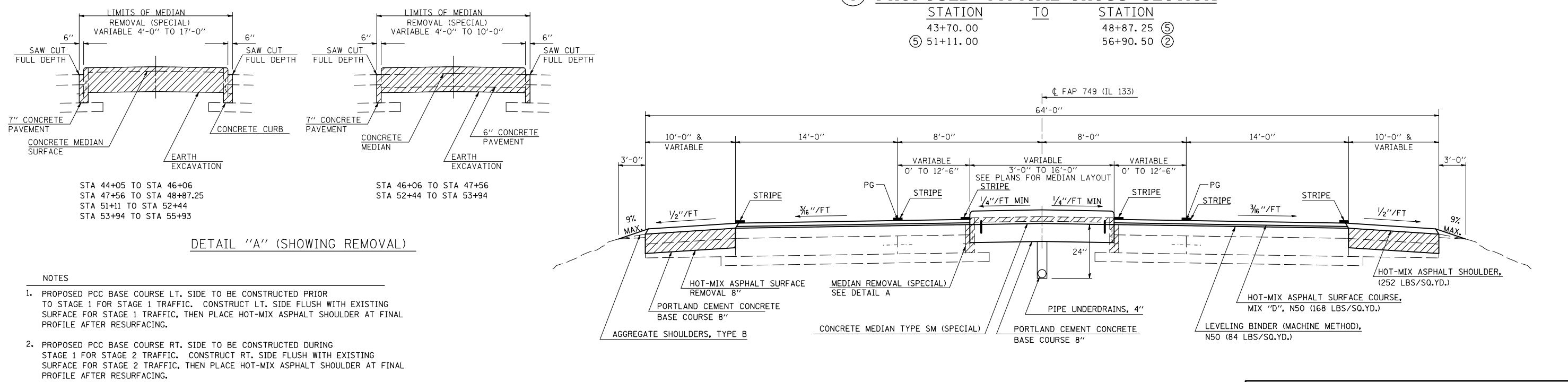
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	15,21-25HB-2)BR	DOUGLAS	65	5

CONTRACT NO. 90952

EXISTING TYPICAL CROSS SECTION



1 PROPOSED TYPICAL CROSS SECTION



- NOTES
- PROPOSED PCC BASE COURSE LT. SIDE TO BE CONSTRUCTED PRIOR TO STAGE 1 FOR STAGE 1 TRAFFIC. CONSTRUCT LT. SIDE FLUSH WITH EXISTING SURFACE FOR STAGE 1 TRAFFIC, THEN PLACE HOT-MIX ASPHALT SHOULDER AT FINAL PROFILE AFTER RESURFACING.
 - PROPOSED PCC BASE COURSE RT. SIDE TO BE CONSTRUCTED DURING STAGE 1 FOR STAGE 2 TRAFFIC. CONSTRUCT RT. SIDE FLUSH WITH EXISTING SURFACE FOR STAGE 2 TRAFFIC, THEN PLACE HOT-MIX ASPHALT SHOULDER AT FINAL PROFILE AFTER RESURFACING.
 - RESURFACING SHALL CONSIST OF HOT-MIX ASPHALT SURFACE COURSE, 168 LBS./SQ.YD., AND LEVELING BINDER (MACHINE METHOD) (MINIMUM 84 LBS./SQ.YD.)
 - SEE SHEET 30 FOR DETAIL OF BRIDGE APPROACH PAVEMENT AND CONNECTORS
 - SEE HOT-MIX ASPHALT SURFACE REMOVAL-VARIABLE DEPTH DETAILS ON SHEET 31.
 - PROPOSED CONCRETE MEDIAN AND P.C.C. BASE COURSE SHALL BE CONSTRUCTED ACCORDING TO THE PLAN ON SHEETS 26-28 AND THE DETAILS ON SHEETS 31-32.

* LIMITS OF HOT-MIX ASPHALT SURFACE REMOVAL 8" AND PCC BASE COURSE 8"
LT STA 44+60 TO STA 48+89.8
LT STA 51+10.1 TO STA 55+10
RT STA 44+91 TO STA 48+47.08
RT STA 51+50.26 TO STA 54+12

OMISSIONS:
BRIDGE APPROACH PAVEMENT
STA 48+58.08 TO STA 48+88.08
STA 51+10.17 TO STA 51+40.17

BRIDGE
STA 48+88.08 TO STA 51+10.17

TYPICAL CROSS SECTIONS
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

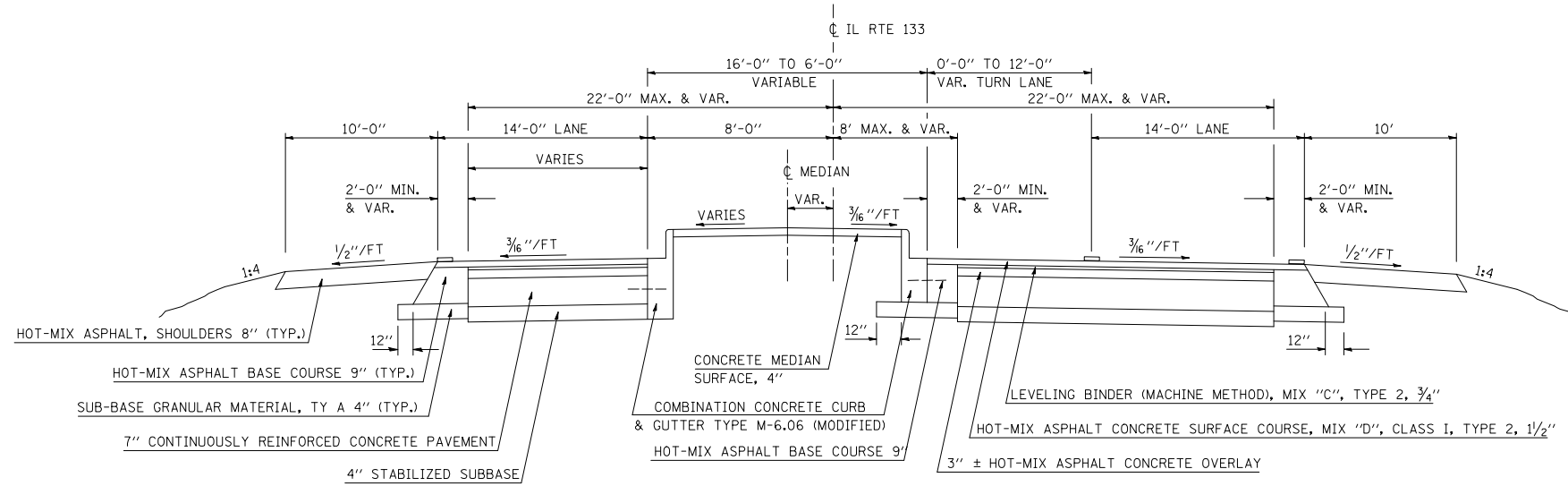
JOB #: 2114.1
FILE: 2114TYP
DATE: 10/10/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	15,21-25HB-2)BR	DOUGLAS	65	6

CONTRACT NO. 90952

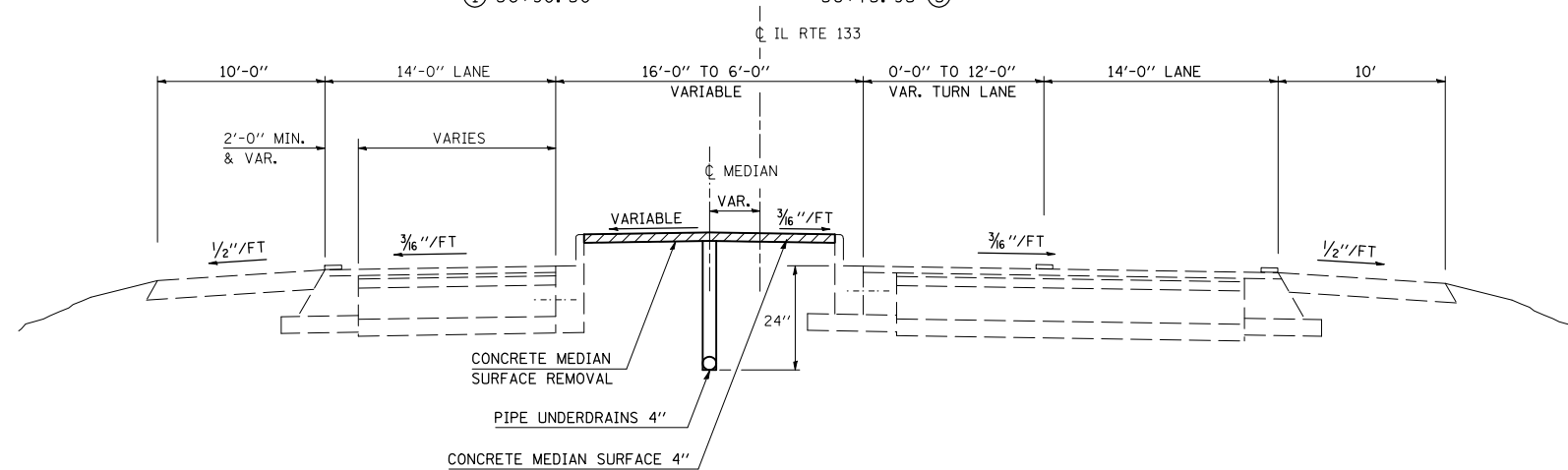
EXISTING TYPICAL CROSS SECTION

STATION 56+90.50 TO STATION 58+75.95



2 PROPOSED TYPICAL CROSS SECTION

STATION 56+90.50 TO STATION 58+75.95



TYPICAL CROSS SECTIONS

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

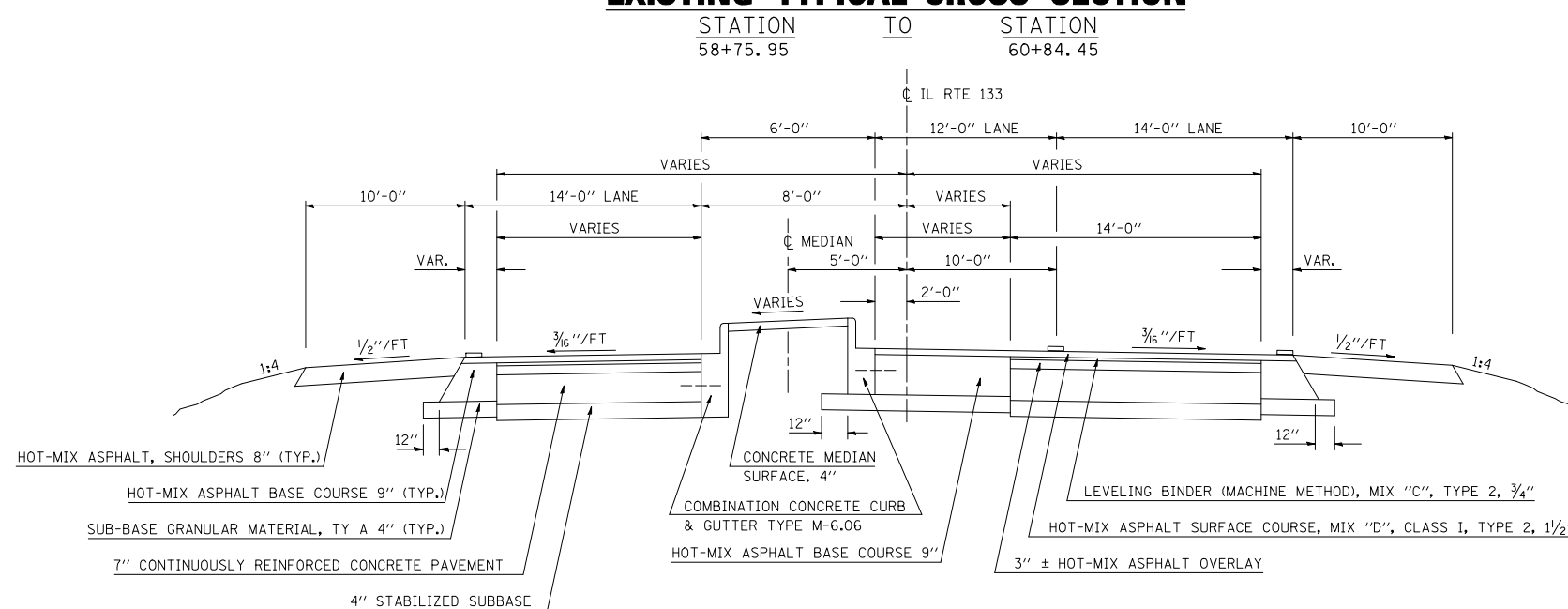
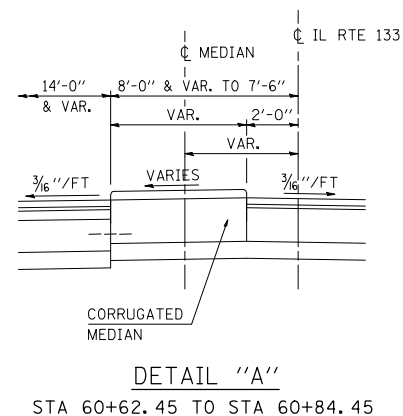
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 2114TYP
DATE: 2/27/07

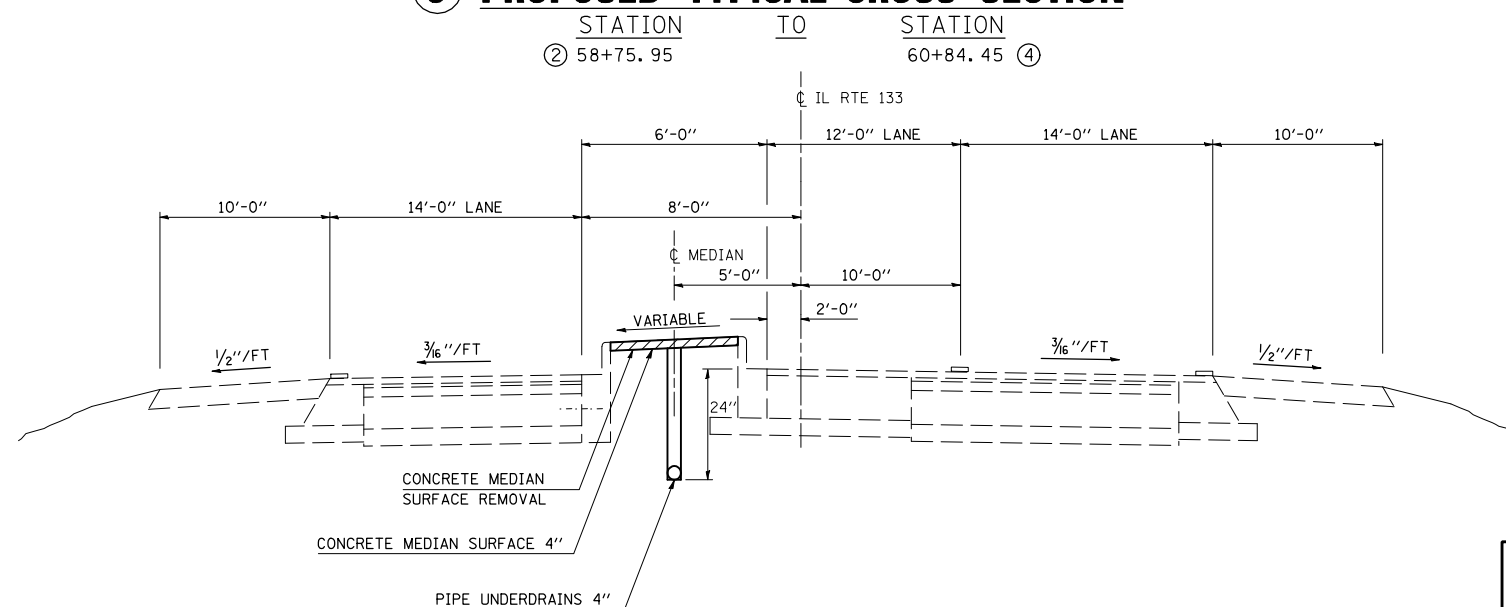
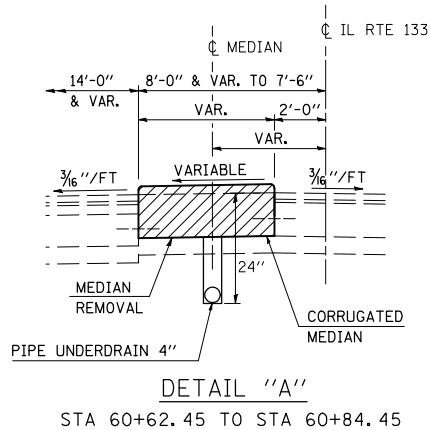
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	7

CONTRACT NO. 90952

EXISTING TYPICAL CROSS SECTION



3 PROPOSED TYPICAL CROSS SECTION



TYPICAL CROSS SECTIONS

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

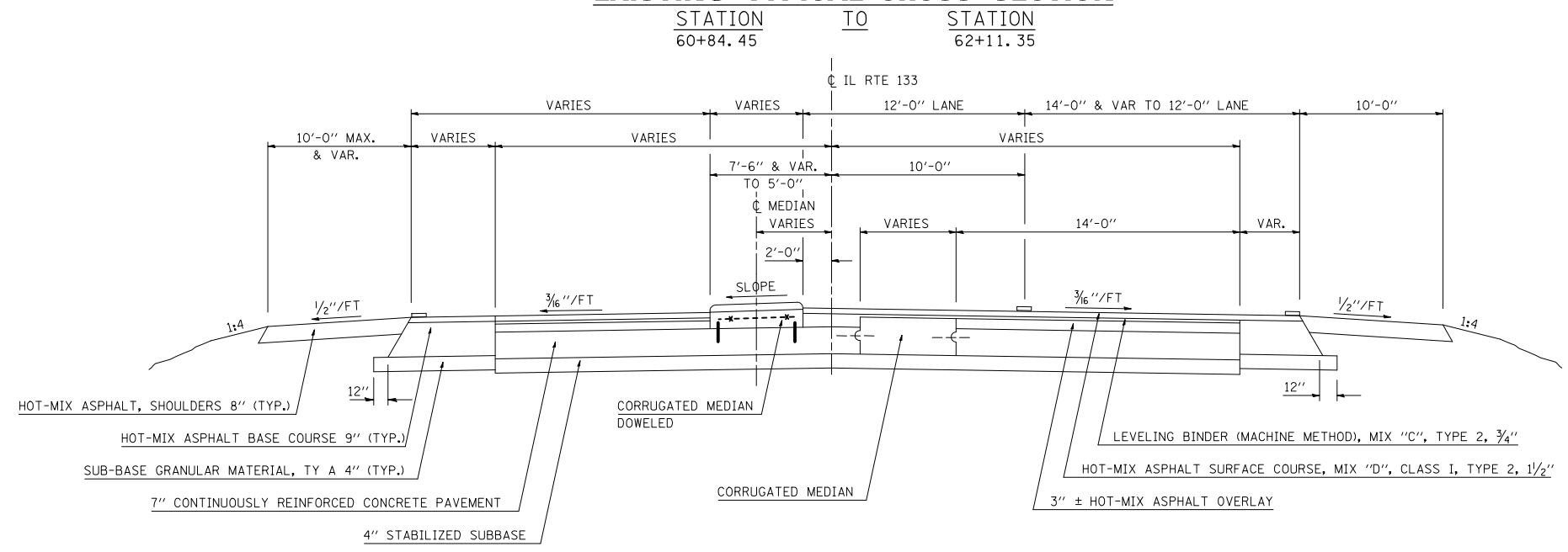
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 2114TYP
DATE: 2/27/07

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	15,21-25HB-2)BR	DOUGLAS	65	8

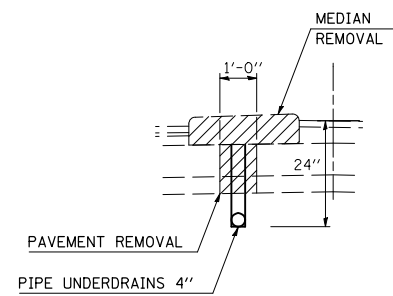
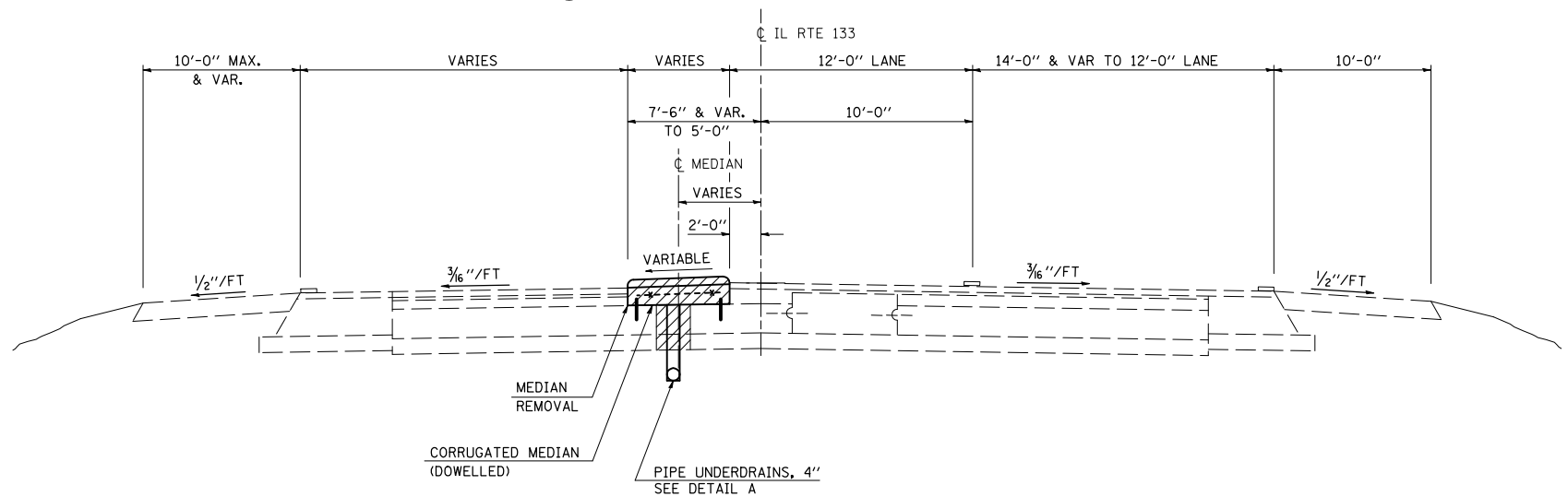
CONTRACT NO. 90952

EXISTING TYPICAL CROSS SECTION



4 PROPOSED TYPICAL CROSS SECTION

STATION 60+84.45 TO STATION 62+20.00



DETAIL "A"

TYPICAL CROSS SECTIONS
 FAI ROUTE 57
 SECTION (15, 21-25HB-2)BR
 DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
 FILE: 2114TYP
 DATE: 2/27/07

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	9

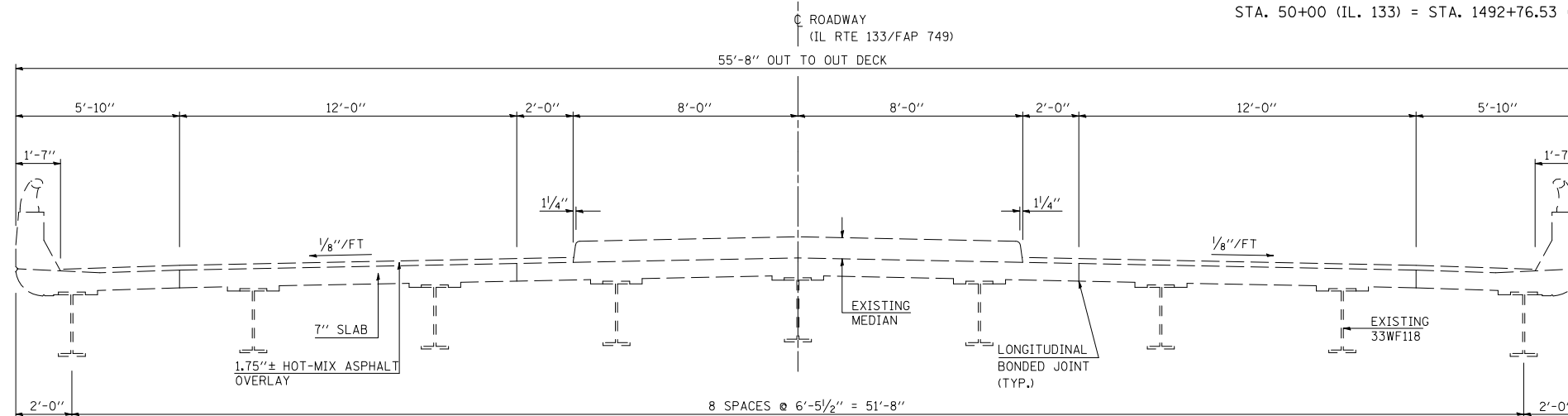
CONTRACT NO. 90952

EXISTING BRIDGE TYPICAL CROSS SECTION

S.N. #021-0024

STATION 48+87.25 TO STATION 51+11.00

STATION EQUATION:
STA. 50+00 (IL. 133) = STA. 1492+76.53 (I-57)

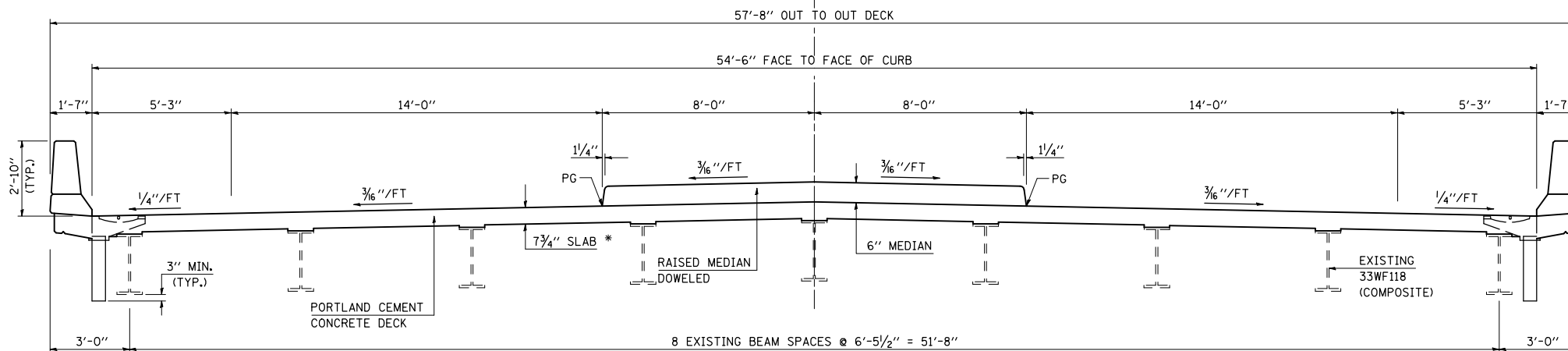


5 PROPOSED BRIDGE TYPICAL CROSS SECTION

S.N. #021-0024

STATION ① 48+87.25 TO STATION ① 51+11.00

STATION EQUATION:
STA. 50+00 (IL. 133) = STA. 1492+76.53 (I-57)



* PRIOR TO GRINDING

TYPICAL CROSS SECTIONS

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 2114TYP
DATE: 10/13/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	15,21-25HB-2)BR	DOUGLAS	65	10

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 90952

EROSION CONTROL BLANKET		
LOCATION	TYPE	SQ YD
LT STA 48+43	PIPE DRAIN/END SEC	50
LT STA 48+84	HEADWALL	4
LT STA 51+14	HEADWALL	4
LT STA 51+57	PIPE DRAIN/END SEC	46
LT STA 55+90	HEADWALL	4
RT STA 44+10	HEADWALL	4
RT STA 48+84	HEADWALL	4
RT STA 51+14	HEADWALL	4
RT STA 48+41	PIPE DRAIN/END SEC	46
RT STA 51+55	PIPE DRAIN/END SEC	46
RT STA 62+08	HEADWALL	4
TOTAL		216

HOT-MIX ASPHALT SURFACE REMOVAL 8"		
LOCATION		SQ YD
PRE-STAGING		
LT STA 44+60 TO STA 48+89.8		441
LT STA 51+10.1 TO STA 55+10		367
STAGE 1		
RT STA 45+90 TO STA 48+47.08		228
RT STA 51+50.26 TO STA 54+12		279
TOTAL		1,315

PORTLAND CEMENT CONCRETE BASE COURSE 8"		
LOCATION		SQ YD
PRE-STAGING - LT SHOULDER		
STA 44+60 TO STA 48+89.8		441
STA 51+10.1 TO STA 55+10		367

PRE-STAGING - MEDIAN		
LOCATION		SQ YD
STA 44+05 TO STA 48+87.25		354
STA 51+11 TO STA 55+93		350

STAGE 1 - RT SHOULDER		
LOCATION		SQ YD
RT STA 45+90 TO STA 48+47.08		228
RT STA 51+50.26 TO STA 54+12		279
TOTAL		2,019

PAVEMENT REMOVAL		
LOCATION	WIDTH	SQ YD
PRE-STAGING - MEDIAN		
* STA 60+84.45 TO STA 62+08	1.0	14

STAGE 2 - OUTSIDE SHOULDER		
LOCATION		SQ YD
LT STA 48+37.99 TO STA 48+88	5.67 TO 4.25	28
LT STA 51+11 TO STA 51+62.32	4.25 TO 5.67	29

STAGE 2 - MEDIAN		
LOCATION		SQ YD
LT STA 48+47.99 TO STA 48+87.99	5.75 TO 4.65	24
LT STA 51+10.74 TO STA 51+51.17	5.75	26

FINAL PHASE - OUTSIDE SHOULDER		
LOCATION		SQ YD
RT STA 48+35.93 TO STA 48+47.08	5.67	7
RT STA 51+50.26 TO STA 51+60.26	5.67	7
TOTAL		135

* PAVEMENT REMOVAL IN MEDIAN REQUIRED TO INSTALL PIPE UNDERDRAINS

CONCRETE MEDIAN SURFACE REMOVAL		
LOCATION		SQ FT
PRE-STAGING		
STA 56+76.6 TO STA 60+62.2		3,360
TOTAL		3,360

MEDIAN REMOVAL		
LOCATION		SQ FT
PRE-STAGING		
STA 56+70.6 TO STA 56+76.6		51
STA 60+59.6 TO STA 62+11.64		665
TOTAL		716

MEDIAN REMOVAL (SPECIAL)		
LOCATION		SQ FT
PRE-STAGING		
STA 44+05 TO STA 48+87.75		3,637
STA 51+11 TO STA 55+93		3,567
TOTAL		7,204

PAVED SHOULDER REMOVAL			
LOCATION		SQ YD	
PRE-STAGING			
LT STA 48+07 TO STA 48+89.8		27	
STAGE 1			
RT STA 48+47.08 TO STA 48+88		16	
RT STA 51+12.7 TO STA 51+91		51	
TOTAL		94	

PATCHING			
LOCATION	CLASS A PATCHES TYPE 2 10"	PATCHING REINFORCEMENT	SAW CUTS
	SQ YD	SQ YD	FOOT
PRE-STAGING			
RT STA 44+10	7	7	81
LT STA 55+90	7	7	81
RT STA 62+08	13	13	141
TOTAL	27	27	303

AGGREGATE SHOULDERS TYPE B		
LOCATION		TON
FINAL PHASE		
LT STA 43+70 TO STA 48+38		9
LT STA 51+62 TO STA 56+30		9
RT STA 43+70 TO STA 48+36		9
RT STA 51+60 TO STA 56+30		9
TOTAL		36

CONCRETE MEDIAN SURFACE 4"		
LOCATION		SQ FT
PRE-STAGING		
STA 56+76.6 TO STA 60+62.2		3,360
TOTAL		3,360

CONCRETE MEDIAN TYPE SM (SPECIAL)		
LOCATION		SQ FT
FINAL PHASE		
STA 44+05.35 TO STA 48+57.75		2,599
STA 51+40.5 TO STA 55+92.65		2,620
TOTAL		5,219

CONCRETE MEDIAN TYPE SM-6 (DOWELLED)		
LOCATION		SQ FT
FINAL PHASE		
STA 48+58.08 TO STA 48+88.08		470
STA 51+10.17 TO STA 51+40.17		470
TOTAL		940

CORRUGATED MEDIAN		
LOCATION		SQ FT
PRE-STAGING		
STA 60+59.6 TO STA 60+84.5		123
TOTAL		123

CORRUGATED MEDIAN (DOWELLED)		
LOCATION		SQ FT
PRE-STAGING		
STA 60+84.5 TO STA 62+11.35		542
TOTAL		542

PCC RAMPED MEDIAN TERMINAL		
LOCATION		EACH
PRE-STAGING		
STA 56+70.6 TO STA 56+76.6		1
STA 60+59.1 TO STA 60+65.1		1
TOTAL		2

TRAFFIC BARRIER TERMINAL TYPE 6		
LOCATION		EACH
STAGE 1		
RT STA 48+55.76 TO STA 48+88.91		1
STAGE 2		
LT STA 51+09.34 TO STA 51+42.49		1
TOTAL		2

STEEL PLATE BEAM GUARDRAIL TYPE A, 6 FOOT POSTS		
LOCATION		FOOT
STAGE 1		
RT STA 46+80.76 TO STA 48+55.76		175
STAGE 2		
LT STA 51+42.49 TO STA 53+17.49		175
TOTAL		350

TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)		
LOCATION		EACH
STAGE 1		
RT STA 46+30.76 TO STA 46+80.76		1
STAGE 2		
LT STA 53+17.49 TO STA 53+67.49		1
TOTAL		2

GUARDRAIL REMOVAL		
LOCATION		FOOT
STAGE 1		
RT STA 46+07 TO STA 48+94		288
STAGE 2		
LT STA 51+04 TO STA 53+90		288
TOTAL		576

RESURFACING SCHEDULE

LOCATION	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	HOT-MIX ASPHALT SHOULDERS	LEVELING BINDER (MACHINE METHOD) N50	HOT-MIX ASPHALT SURFACE COURSE MIX "D" N50
	GALLON	TON	TON	TON	TON
PRE-STAGING					
LT STA 48+87.25 TO STA 51+11.00	60	1			34
FINAL PHASE					
STA 43+70.00 TO STA 48+58.08	206	4		89	178
STA 51+40.17 TO STA 56+30.00	207	4		90	179
LT STA 43+70.00 TO STA 48+37.99	51		47		
LT STA 48+47.99 TO STA 48+58.93	1		1		
LT STA 51+41.00 TO STA 51+51.17	1		1		
LT STA 51+62.32 TO STA 56+30.00	47		43		
RT STA 43+70.00 TO STA 48+35.93	46		42		
RT STA 48+47.08 TO STA 48+57.24	1		1		
RT STA 51+39.32 TO STA 51+50.26	1		1		
RT STA 51+60.26 TO STA 56+30.00	52		47		
TOTAL	673	9	183	179	391

MEDIAN SUB-SURFACE DRAINS

LOCATION	PIPE UNDERDRAINS 4"	PIPE UNDERDRAINS 4" (SPECIAL)	SHOULDER REMOVAL AND REPLACEMENT	CONCRETE HEADWALL FOR PIPE DRAINS
	FOOT	FOOT	FOOT	EACH
PRE-STAGING				
STA 44+10 TO STA 48+50	440			
STA 51+50 TO STA 55+90	440			
STA 56+72 TO STA 62+08	536			
STA 44+10		34	26	1
STA 55+90		34	26	1
STA 62+08		43	36	1
TOTAL	1416	111	88	3

SCHEDULE OF QUANTITIES

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY
S.N. 021-0024

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	15,21-25HB-2)BR	DOUGLAS	65	11

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 90952

TEMPORARY CONCRETE BARRIER			
LOCATION			FOOT
STAGE 1			
STA 45+00 TO STA 48+49	12:1 TAPER		350
STA 48+49 TO STA 51+49	TANGENT		300
STA 51+49 TO STA 52+49	12:1 TAPER		100
STAGE 2			
STA 54+62.5 TO STA 55+11.5	12:1 TAPER		50
TOTAL			800

RELOCATE TEMPORARY CONCRETE BARRIER			
LOCATION			FOOT
STAGE 2			
STA 47+12.7 TO STA 48+37.5	12:1 TAPER		125
STA 48+37.5 TO STA 51+62.5	TANGENT		325
STA 51+62.5 TO STA 54+62.5	12:1 TAPER		300
TOTAL			750

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3			
LOCATION			EACH
RT STA 44+70			1
RT STA 52+80			1
TOTAL			2

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3			
LOCATION			EACH
LT STA 46+80			1
LT STA 55+40			1
TOTAL			2

* REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL			
LOCATION			FOOT
PRE-STAGING			
LT STA 51+40.5 TO STA 53+40.5			200
TOTAL			200

* REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL TYPE 6			
LOCATION			EACH
PRE-STAGING			
LT STA 51+04 TO STA 51+40.5			1
TOTAL			1

* REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL, TANGENT			
LOCATION			EACH
PRE-STAGING			
LT STA 53+40.5 TO STA 53+90.5			1
TOTAL			1

* EXISTING RAIL ELEMENTS AND BLOCKOUTS SHALL BE REMOVED AS NECESSARY TO ALLOW FOR HOT-MIX ASPHALT SURFACE REMOVAL AND CONSTRUCTION OF PORTLAND CEMENT CONCRETE BASE COURSE. RAIL ELEMENTS AND BLOCKOUTS SHALL BE REMOVED AND RE-ERECTED ON THE SAME DAY THAT THE PORTLAND CEMENT CONCRETE BASE COURSE IS CONSTRUCTED.

PAINT PAVEMENT MARKING - LINE 4"			
LOCATION			FOOT
SOLID WHITE			
EB OUTSIDE EDGE LINE STA 43+70 TO STA 56+30			1,260
EB LANE LINE STA 53+55 TO STA 55+90			235
WB LANE LINE STA 44+07 TO STA 46+43			236
WB OUTSIDE STA 43+70 TO STA 56+30			1,260
SOLID YELLOW			
EB MEDIAN EDGE LINE STA 44+07 TO STA 55+90			1,183
WB MEDIAN EDGE LINE STA 44+07 TO STA 55+91			1,183
TOTAL			5,357

PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS			
LOCATION			SQ FT
LEFT TURN ARROWS			
LT STA 44+24			15.6
LT STA 45+35			15.6
LT STA 46+43			15.6
RT STA 53+55			15.6
RT STA 54+64			15.6
RT STA 55+72			15.6
TOTAL			94

GUARDRAIL MARKERS TYPE A			
LOCATION			EACH
LT STA 51+11.84 TO STA 53+17.49			3
RT STA 46+81.26 TO STA 48+86.91			3
TOTAL			6

BARRIER WALL MARKERS TYPE C			
LOCATION			EACH
LT STA 48+88.59 TO STA 51+11.84			3
RT STA 48+86.91 TO STA 51+10.16			3
TOTAL			6

TERMINAL MARKERS DIRECT APPLIED			
LOCATION			EACH
RT STA 46+31.26			1
LT STA 53+67.49			1
TOTAL			2

PAVEMENT MARKING REMOVAL			
LOCATION		TYPE	SQ FT
WESTBOUND LANE			
LT STA 44+00 TO STA 48+90		OUTSIDE EDGE LINE	164
LT STA 51+10 TO STA 56+00		OUTSIDE EDGE LINE	164
LT STA 44+00 TO STA 46+00		LANE LINE	67
RT STA 44+00 TO LT STA 48+90		MEDIAN EDGE LINE	164
LT STA 51+10 TO STA 56+00		MEDIAN EDGE LINE	164
EASTBOUND LANE			
RT STA 44+00 TO STA 48+48		OUTSIDE EDGE LINE	150
RT STA 51+49 TO STA 56+00		OUTSIDE EDGE LINE	151
RT STA 53+50 TO STA 56+00		LANE LINE	84
RT STA 44+00 TO RT STA 48+48		MEDIAN EDGE LINE	150
RT STA 51+49 TO STA 56+00		MEDIAN EDGE LINE	151
TOTAL			1,409

RAISED REFLECTIVE PAVEMENT MARKERS				
LOCATION		CRYSTAL	AMBER	TOTAL
WB LANE LINE STA 43+07 TO STA 46+43		6		6
WB MEDIAN EDGE STA 43+07 TO STA 48+87.25			13	13
WB MEDIAN EDGE STA 51+11 TO STA 55+90			13	13
EB MEDIAN EDGE STA 43+07 TO STA 48+87.25			13	13
EB MEDIAN EDGE STA 51+11 TO STA 55.90			13	13
EB LANE LINE STA 53+55 TO STA 55+90		6		6
TOTAL				64

RAISED REFLECTIVE PAVEMENT MARKERS (BRIDGE)				
LOCATION		CRYSTAL	AMBER	TOTAL
WB MEDIAN EDGE STA 48+87.25 TO STA 51+11			5	5
EB MEDIAN EDGE STA 48+87.25 TO STA 51+11			5	5
TOTAL				10

SEE SHEET 30 FOR THE FOLLOWING SCHEDULES:
 PORTLAND CEMENT CONCRETE SHOULDERS 8"
 END SECTIONS 12"
 PIPE DRAINS 12"
 CONCRETE THRUST BLOCKS
 TYPE E INLET BOX, STANDARD 610001
 HOT-MIX ASPHALT SHOULDER CURB
 PIPE ELBOWS 12"
 BRIDGE APPROACH PAVEMENT
 BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
 APPROACH SLAB REMOVAL

SEE SHEET 31 FOR HOT-MIX ASPHALT SURFACE REMOVAL
 VARIABLE DEPTH AND TEMPORARY RAMP SCHEDULES

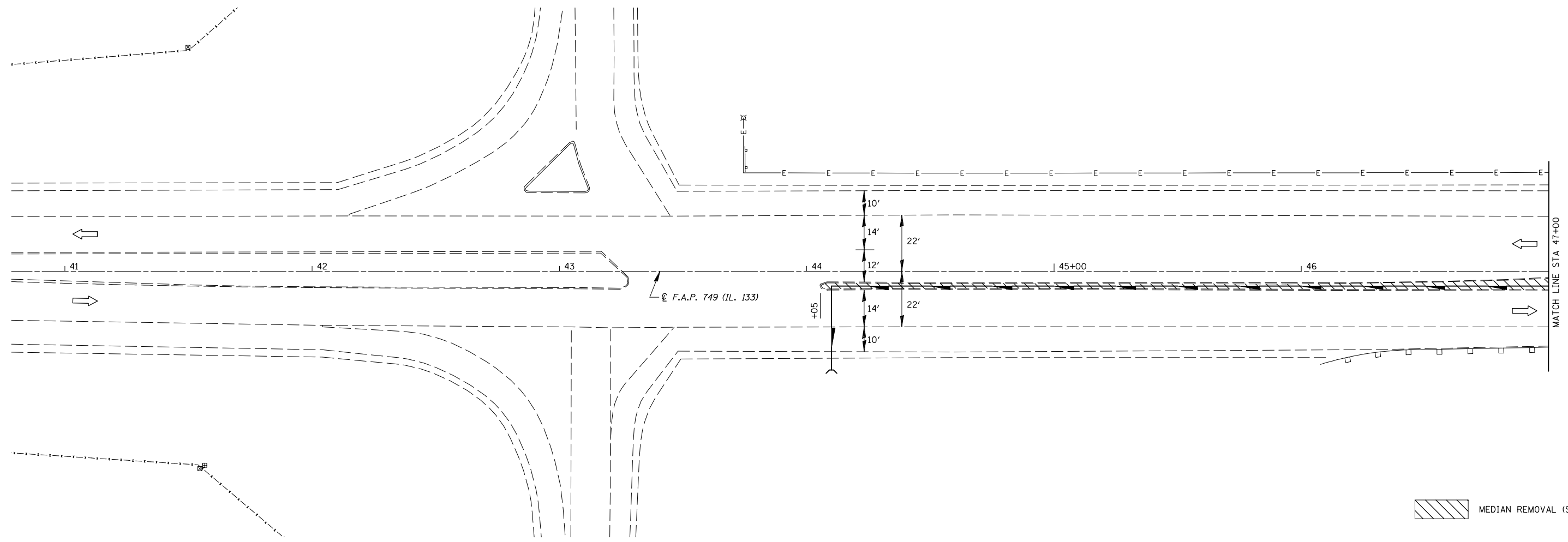
SCHEDULE OF QUANTITIES

**FAI ROUTE 57
 SECTION (15, 21-25HB-2)BR
 DOUGLAS COUNTY
 S.N. 021-0024**

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1 FILE: 2114SUM.DGN DATE: 10/20/06
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PRE-STAGING REMOVAL DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	12
STA. 41+00		TO STA. 47+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				



MEDIAN REMOVAL (SPECIAL)

- PRE-STAGING REMOVAL**
 PRE-STAGING REMOVAL CONSISTS OF THE FOLLOWING:
1. MEDIAN REMOVAL (SPECIAL) STA. 44+05 TO STA. 48+87.25 AND STA. 51+11 TO STA. 55+93
 2. CONCRETE MEDIAN SURFACE REMOVAL STA. 56+76.6 TO STA. 60+62.2
 3. MEDIAN REMOVAL STA. 56+70.6 TO STA. 56+76.6 AND STA. 60+59.6 TO STA. 62+11.64
 4. PARTIAL REMOVAL OF THE BRIDGE DECK RAISED MEDIAN STA. 48+87.25 TO STA. 51+11
 5. HOT-MIX ASPHALT SURFACE REMOVAL LT STA. 48+87.25 TO STA. 51+11

- GENERAL NOTES**
1. TRAFFIC CONTROL AND PROTECTION SHALL BE AS DETAILED ON STANDARD 701201. WHEN OPERATIONS REQUIRE CLOSING A LANE, THE CONTRACTOR SHALL MAINTAIN 2-WAY, 1-LANE TRAFFIC ON ONE SIDE OF THE MEDIAN DURING WORK PERIODS. ALL LANES SHALL BE OPEN TO TRAFFIC DURING NONWORKING HOURS. THE INTERCHANGE RAMPS SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES.
 2. THE CONTRACTOR SHALL SCHEDULE PRE-STAGING REMOVAL AND PRE-STAGING CONSTRUCTION OPERATIONS TO COMPLY WITH THE REQUIREMENTS OF ARTICLE 701.08 OF THE STANDARD SPECIFICATIONS.

SHEET 1 OF 4

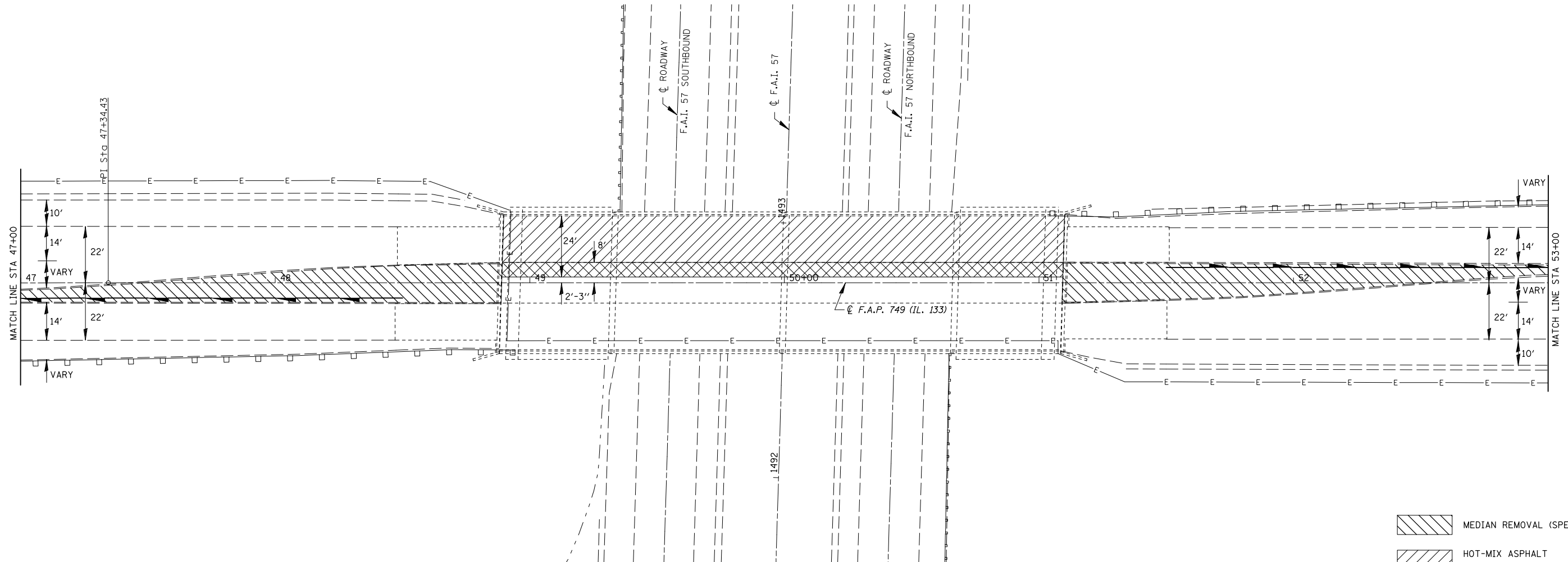
PRE-STAGING REMOVAL DETAIL

F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1
	FILE: PRESTAGE
	DATE: 2/21/07

PRE-STAGING REMOVAL DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	13
STA. 47+00		TO STA. 53+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				

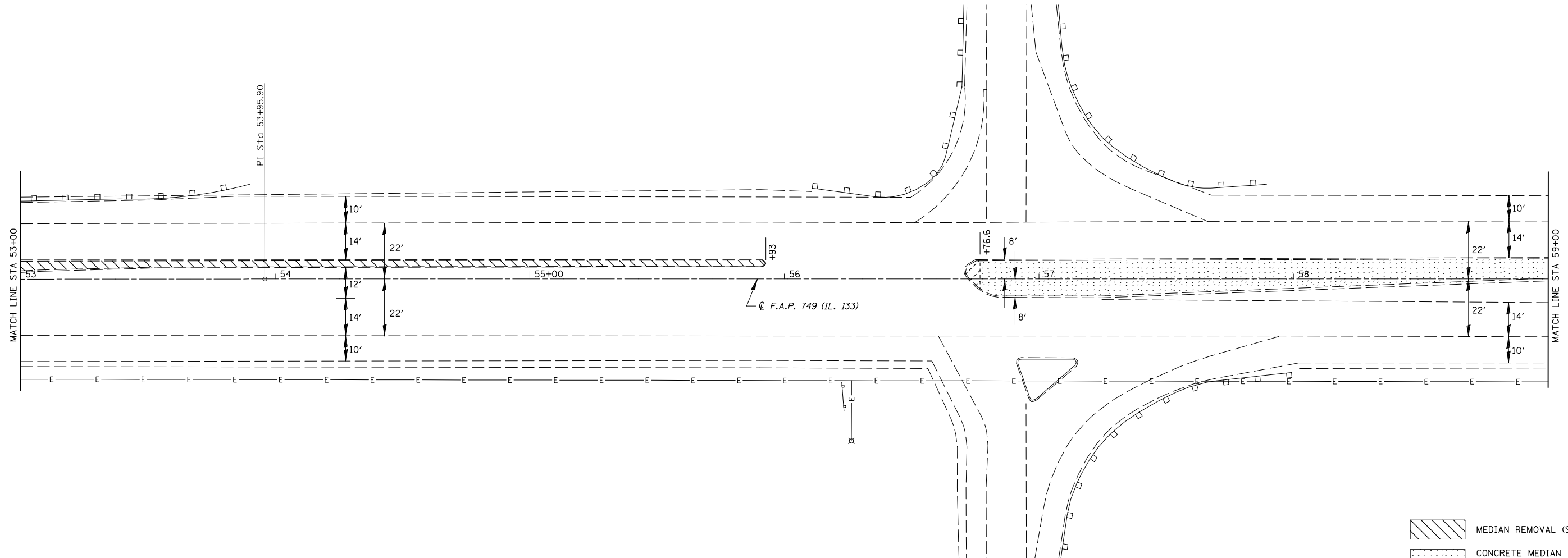


SHEET 2 OF 4

PRE-STAGING REMOVAL DETAIL
 F.A.I. ROUTE 57
 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY

PRE-STAGING REMOVAL DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	14
STA. 53+00		TO STA. 59+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				



- MEDIAN REMOVAL (SPECIAL)
- CONCRETE MEDIAN SURFACE REMOVAL
- MEDIAN REMOVAL

SHEET 3 OF 4

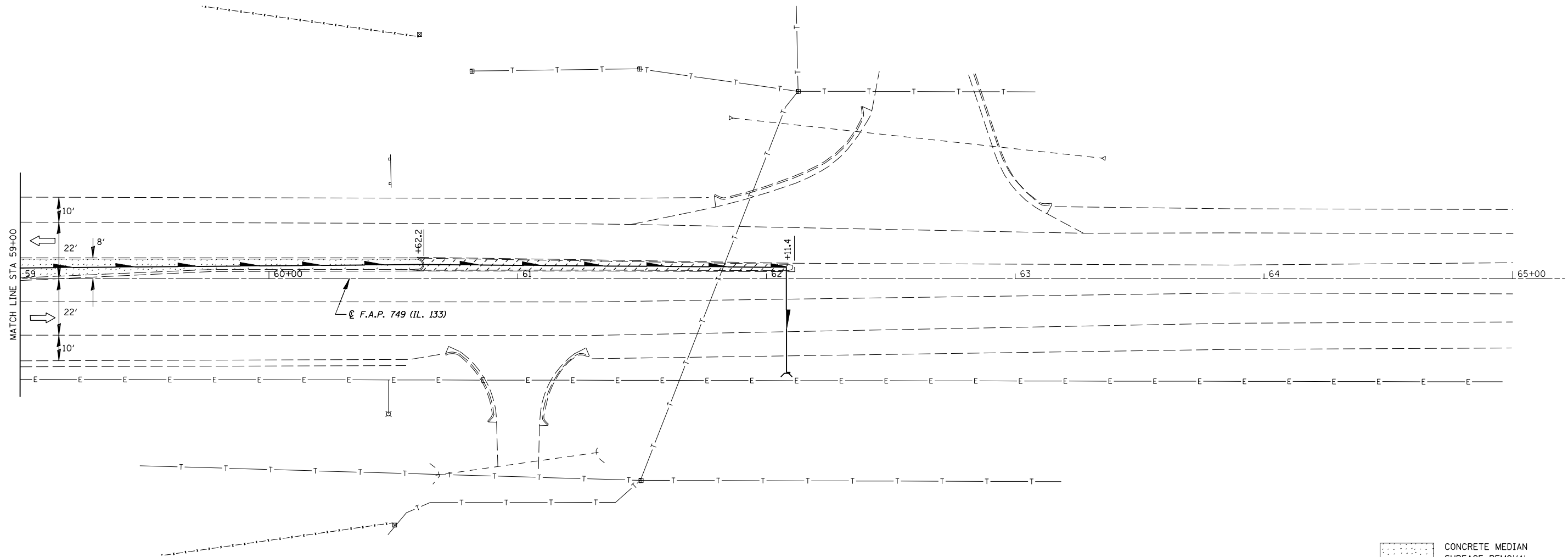
PRE-STAGING REMOVAL DETAIL

F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1
	FILE: PRESTAGE
	DATE: 4/13/06

PRE-STAGING REMOVAL DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	15
STA. 59+00		TO STA. 65+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				



- CONCRETE MEDIAN SURFACE REMOVAL
- MEDIAN REMOVAL

SHEET 4 OF 4

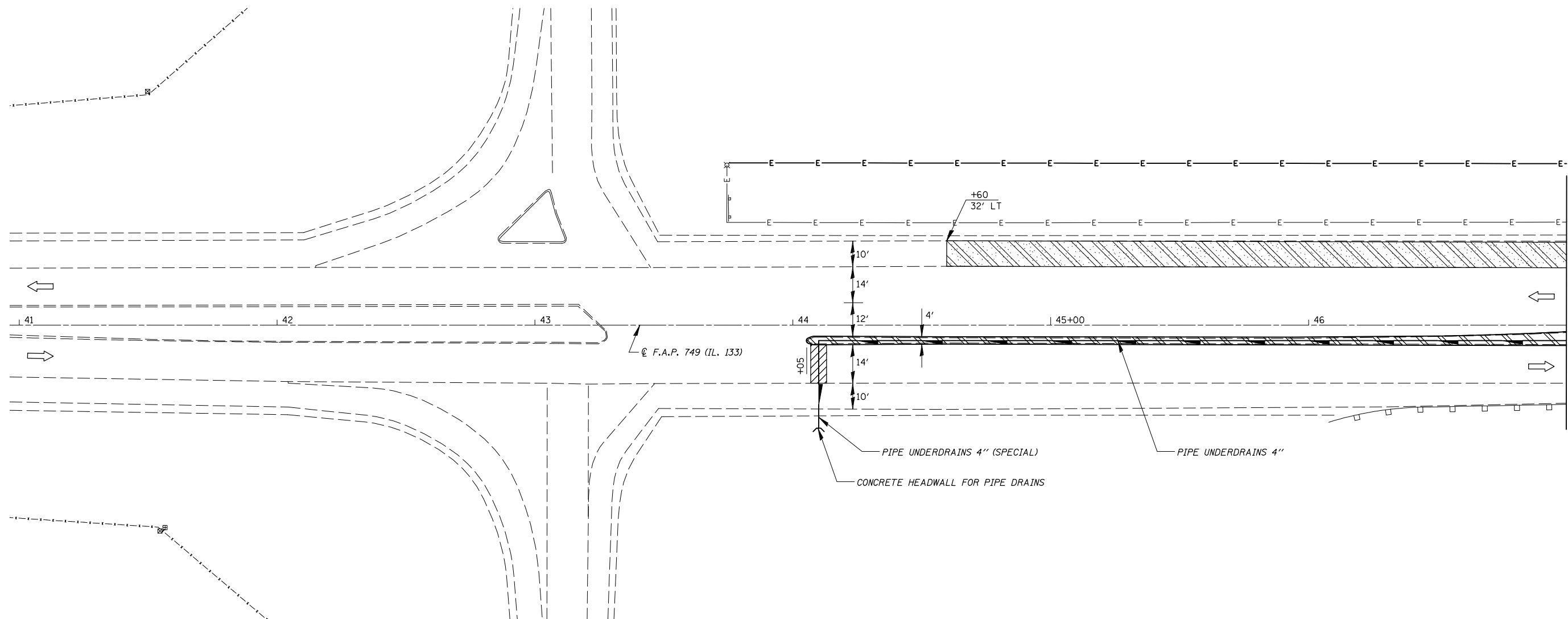
PRE-STAGING REMOVAL DETAIL

F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1
	FILE: PRESTAGE
	DATE: 4/13/06

PRE-STAGING CONSTRUCTION DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	16
STA. 41+00		TO STA. 47+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				



GENERAL NOTES

- TRAFFIC CONTROL AND PROTECTION SHALL BE AS DETAILED ON 701201 WHEN OPERATIONS REQUIRE CLOSING A LANE. THE CONTRACTOR SHALL MAINTAIN 2-WAY, 1-LANE TRAFFIC ON ONE SIDE OF THE MEDIAN DURING WORK PERIODS. ALL LANES SHALL BE OPEN TO TRAFFIC DURING NONWORKING HOURS. THE INTERCHANGE RAMP SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES.
- REMOVAL AND REPLACEMENT OF THE EXISTING STABILIZED SUB-BASE TO INSTALL PIPE UNDERDRAINS 4" AND OUTLETS WILL BE PAID FOR AS SHOULDER REMOVAL AND REPLACEMENT. BACKFILL OF THE TRENCH SHALL BE AS SPECIFIED IN ARTICLE 601.04 EXCEPT THE HOT MIX ASPHALT MIXTURE THICKNESS SHALL BE 4".

- HOT-MIX ASPHALT SURFACE REMOVAL 8" PORTLAND CEMENT CONCRETE BASE COURSE 8"
- PORTLAND CEMENT CONCRETE BASE COURSE, 8"
- CLASS A PATCHES, TYPE II, 10"

PRE-STAGING CONSTRUCTION

PRE-STAGING CONSTRUCTION CONSISTS OF THE FOLLOWING:

- PIPE UNDERDRAINS, UNDERDRAIN OUTLETS, CONCRETE HEADWALLS, CLASS A PATCHES, PAVEMENT REMOVAL, AND EROSION CONTROL BLANKET STA. 44+10 TO STA. 48+50, STA. 51+50 TO STA. 55+90, AND STA. 56+72 TO STA. 62+08
- P.C.C. BASE COURSE 8", MEDIAN STA. 44+05 TO STA. 48+87.25 AND STA. 51+11 TO STA. 55+93
- P.C.C. RAMPED MEDIAN TERMINALS STA. 56+70.6 TO STA. 56+76.6 AND STA. 60+59.1 TO STA. 60+65.1
- CONCRETE MEDIAN SURFACE STA. 56+76.6 TO STA. 60+59.1
- CORRUGATED MEDIAN AND CORRUGATED MEDIAN (DOWELLED) STA. 60+59.6 TO STA. 62+11.35
- HOT-MIX ASPHALT SURFACE REMOVAL 8" AND P.C.C. BASE COURSE 8" LT STA. 44+60 TO STA. 48+89.8 AND STA. 51+10.1 TO STA. 55+10 (OUTSIDE SHOULDER)
- HOT-MIX ASPHALT SURFACE COURSE LT STA. 48+87.25 TO STA 51+11
- TEMPORARY GUARDRAIL AND TERMINALS LT STA. 48+14.9 TO STA. 48+92.75
- AUGERED PVC CONDUIT AND UNIT DUCT STA. 43+74 TO STA. 56+26
- PAVEMENT MARKING REMOVAL AND RAISED REFLECTIVE PAVEMENT MARKER REMOVAL STA. 44+38 TO STA. 55+92

SHEET 1 OF 4

PRE-STAGING CONSTRUCTION DETAIL

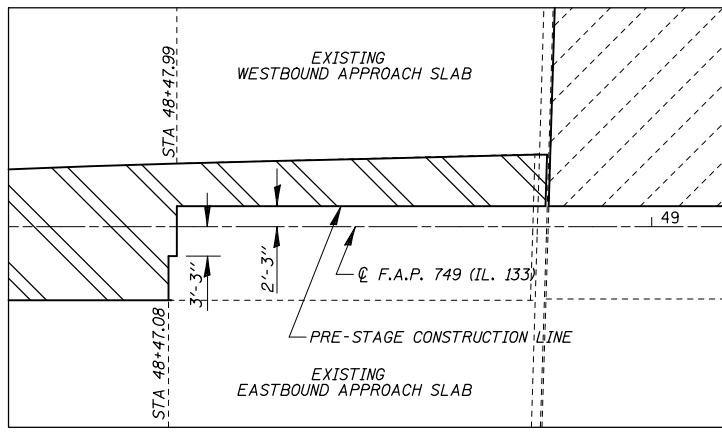
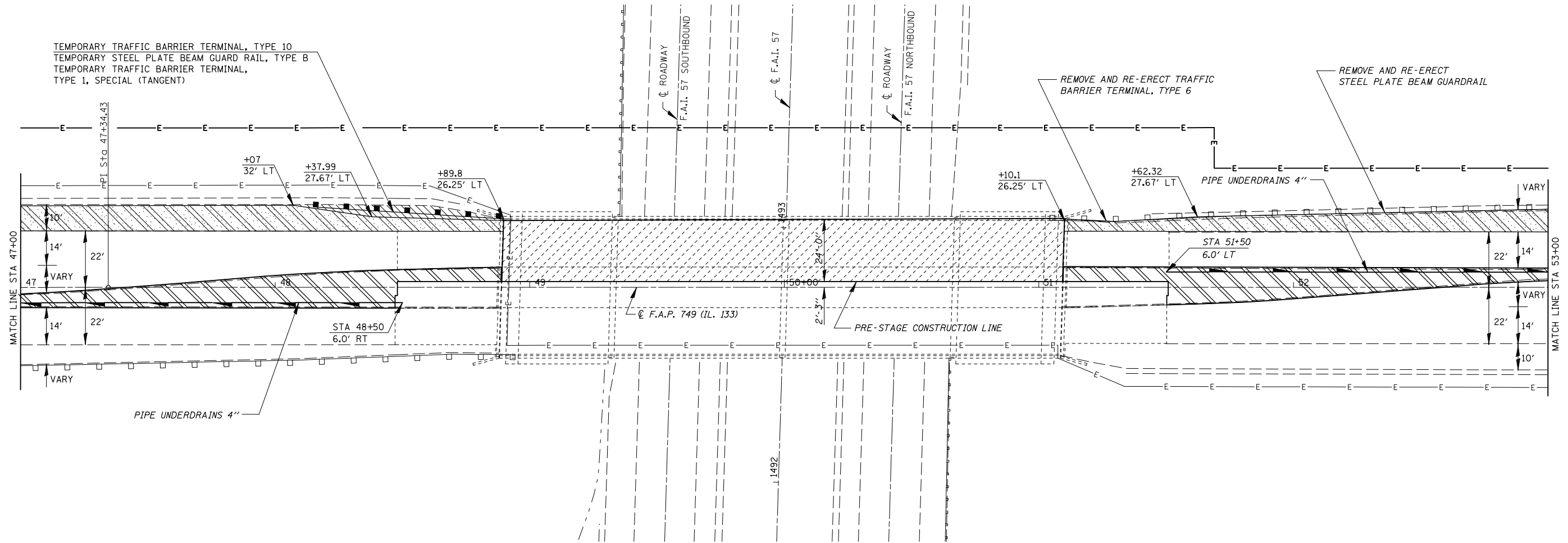
F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: PRESTAGE
DATE: 10/13/06

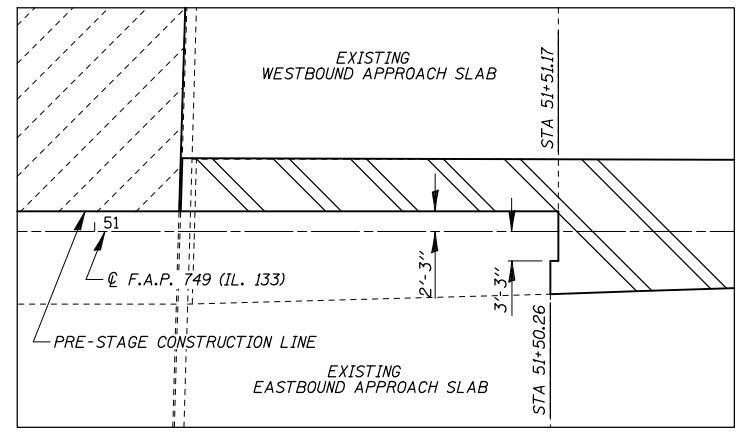
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	17
STA. 47+00		TO STA. 53+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				

PRE-STAGING CONSTRUCTION DETAIL



DETAIL - WEST APPROACH

- PAVED SHOULDER REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL 8\"/>



DETAIL - EAST APPROACH

SHEET 2 OF 4

PRE-STAGING CONSTRUCTION DETAIL

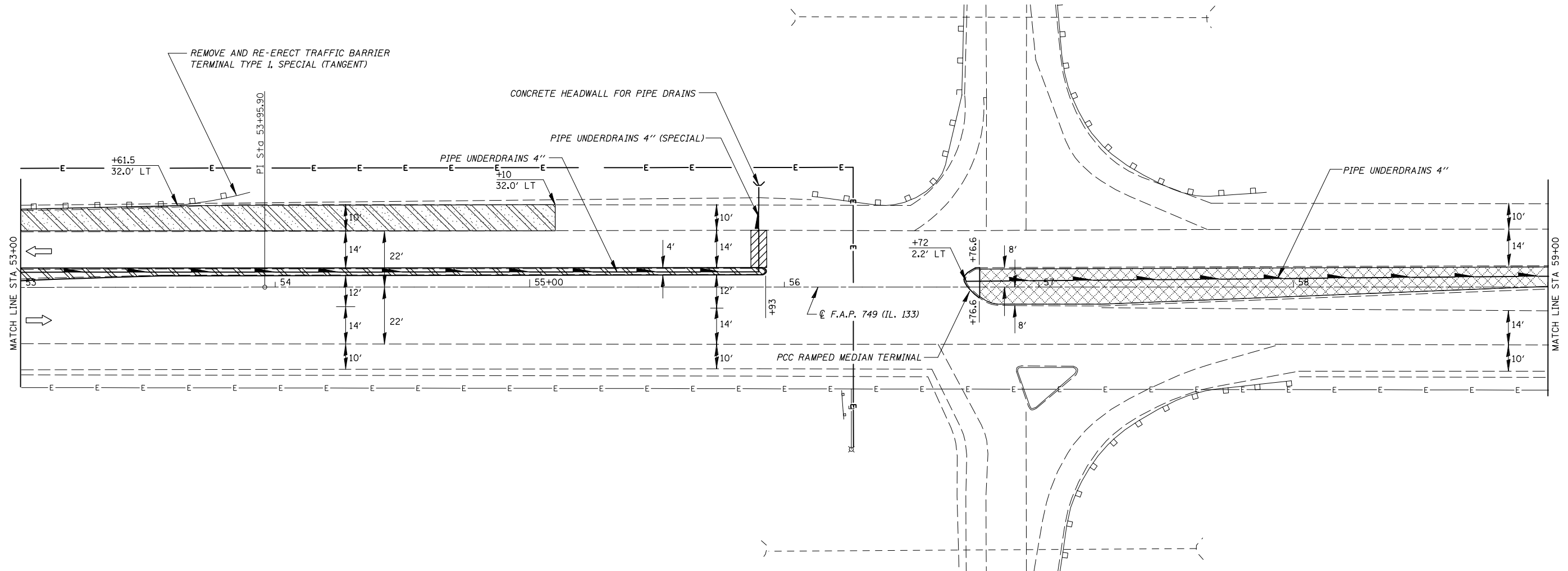
F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION





JOB #: 2114.1
FILE: PRESTAGE
DATE: 2/21/07

PRE-STAGING CONSTRUCTION DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	18
STA. 53+00		TO STA. 59+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				



SHEET 3 OF 4

-  HOT-MIX ASPHALT SURFACE REMOVAL 8"
PORTLAND CEMENT CONCRETE BASE COURSE 8"
-  PORTLAND CEMENT
CONCRETE BASE COURSE, 8"
-  CLASS A PATCHES, TYPE II, 10"
-  CONCRETE MEDIAN
SURFACE 4"

PRE-STAGING CONSTRUCTION DETAIL

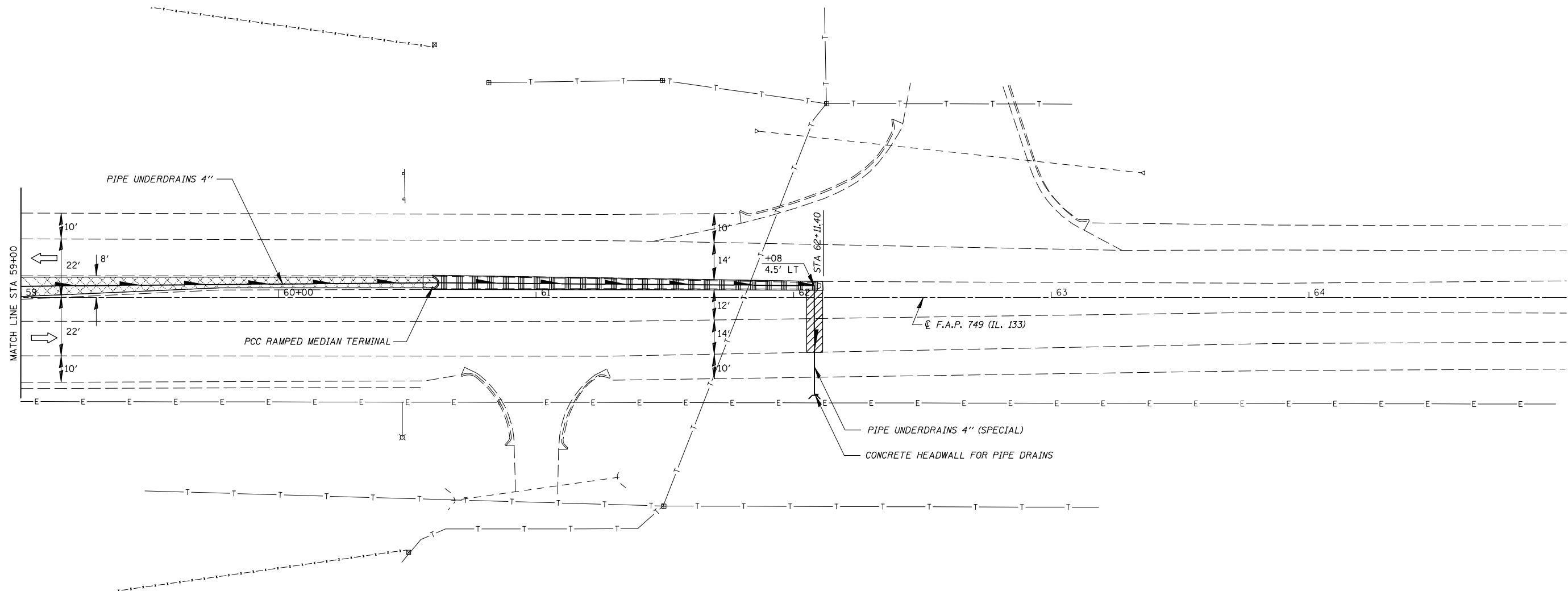
F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY




CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: PRESTAGE
DATE: 2/21/07

PRE-STAGING CONSTRUCTION DETAIL

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	19
STA. 59+00		TO STA. 65+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				



-  CORRUGATED MEDIAN
-  CONCRETE MEDIAN SURFACE, 4"
-  CLASS A PATCHES, TYPE II, 10"

PRE-STAGING CONSTRUCTION DETAIL

F.A.I. ROUTE 57
SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY

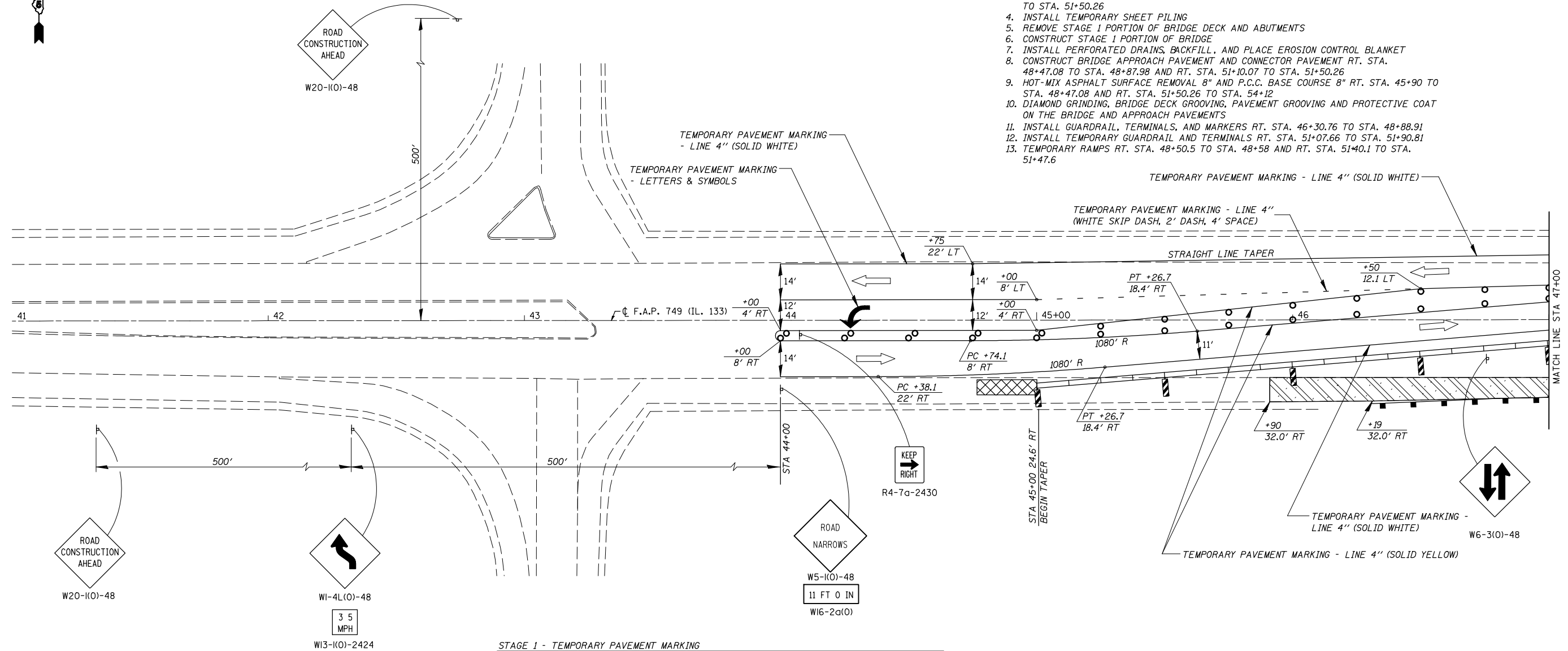
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: PRESTAGE
DATE: 4/13/06

TRAFFIC CONTROL & PROTECTION SPECIAL

STAGE I

- STAGE I**
STAGE I CONSTRUCTION CONSISTS OF THE FOLLOWING:
1. PLACE TRAFFIC IN THE STAGE I TEMPORARY LANES AND INSTALL TEMPORARY CONCRETE BARRIER, TEMPORARY IMPACT ATTENUATORS, TEMPORARY PAVEMENT MARKINGS, AND TRAFFIC CONTROL DEVICES AS SHOWN ON THE STAGE I TRAFFIC CONTROL & PROTECTION DETAIL
 2. GUARDRAIL REMOVAL RT. STA. 46+07 TO STA. 48+94
 3. APPROACH SLAB REMOVAL RT. STA. 48+47.08 TO STA. 48+87.51 AND RT. STA. 51+10.26 TO STA. 51+50.26
 4. INSTALL TEMPORARY SHEET PILING
 5. REMOVE STAGE I PORTION OF BRIDGE DECK AND ABUTMENTS
 6. CONSTRUCT STAGE I PORTION OF BRIDGE
 7. INSTALL PERFORATED DRAINS, BACKFILL, AND PLACE EROSION CONTROL BLANKET
 8. CONSTRUCT BRIDGE APPROACH PAVEMENT AND CONNECTOR PAVEMENT RT. STA. 48+47.08 TO STA. 48+87.98 AND RT. STA. 51+10.07 TO STA. 51+50.26
 9. HOT-MIX ASPHALT SURFACE REMOVAL 8" AND P.C.C. BASE COURSE 8" RT. STA. 45+90 TO STA. 48+47.08 AND RT. STA. 51+50.26 TO STA. 54+12
 10. DIAMOND GRINDING, BRIDGE DECK GROOVING, PAVEMENT GROOVING AND PROTECTIVE COAT ON THE BRIDGE AND APPROACH PAVEMENTS
 11. INSTALL GUARDRAIL, TERMINALS, AND MARKERS RT. STA. 46+30.76 TO STA. 48+88.91
 12. INSTALL TEMPORARY GUARDRAIL AND TERMINALS RT. STA. 51+07.66 TO STA. 51+90.81
 13. TEMPORARY RAMPS RT. STA. 48+50.5 TO STA. 48+58 AND RT. STA. 51+40.1 TO STA. 51+47.6



STAGE I - TEMPORARY PAVEMENT MARKING

TYPE	LOCATION	TEMPORARY PAVEMENT MARKING		WORK ZONE PAVEMENT MARKING REMOVAL SQ FT
		LINE 4" FOOT	LETTERS & SYMBOLS SQ FT	
SOLID WHITE				
EB OUTSIDE EDGE LINE	STA 44+00 TO STA 56+00	1,203		401.0
WB OUTSIDE EDGE LINE	STA 44+00 TO STA 56+00	1,200		400.0
WB TURN LANE	STA 44+00 TO STA 45+00	100		33.3
EB TURN LANE	STA 55+00 TO STA 56+00	100		33.3
WHITE SKIP DASH				
WB TURN LANE	STA 45+00 TO STA 46+50	122		40.7
EB TURN LANE	STA 53+50 TO STA 55+00	122		40.7
SOLID YELLOW				
EB MEDIAN EDGE LINE	STA 44+00 TO STA 56+00	1,208		402.7
WB MEDIAN EDGE LINE	STA 44+00 TO STA 56+00	1,208		402.7
WHITE LEFT TURN ARROWS				
WB TURN LANE	STA 44+18		15.6	
EB TURN LANE	STA 55+82		15.6	
TOTAL		5,263	31.2	1754.4

QUANTITIES FOR PLACEMENT AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS ARE INCLUDED FOR INFORMATION ONLY. PLACING, MAINTAINING, AND REMOVING THESE ITEMS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL)

SYMBOLS	
●	FLEXIBLE DELINEATORS @ 25' CTS.
○	LIGHTED VERTICAL BARRICADE, DOUBLE FACED @ 25' CTS.
◁	CRYSTAL MONODIRECTIONAL REFLECTOR @ 25' CTS.
▨	VERTICAL PANELS W/STEADY BURNING LIGHT ALONG TAPER @ 25' CTS.
▬	TEMPORARY CONCRETE BARRIER
—	TEMPORARY PAVEMENT MARKINGS
▨	IMPACT ATTENUATOR TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
▨	HOT-MIX ASPHALT SURFACE REMOVAL 8" / P.C.C. BASE COURSE 8"
▨	APPROACH SLAB REMOVAL
▨	REMOVAL OF EXISTING CONCRETE DECK

**TRAFFIC CONTROL & PROTECTION
STAGE I**

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

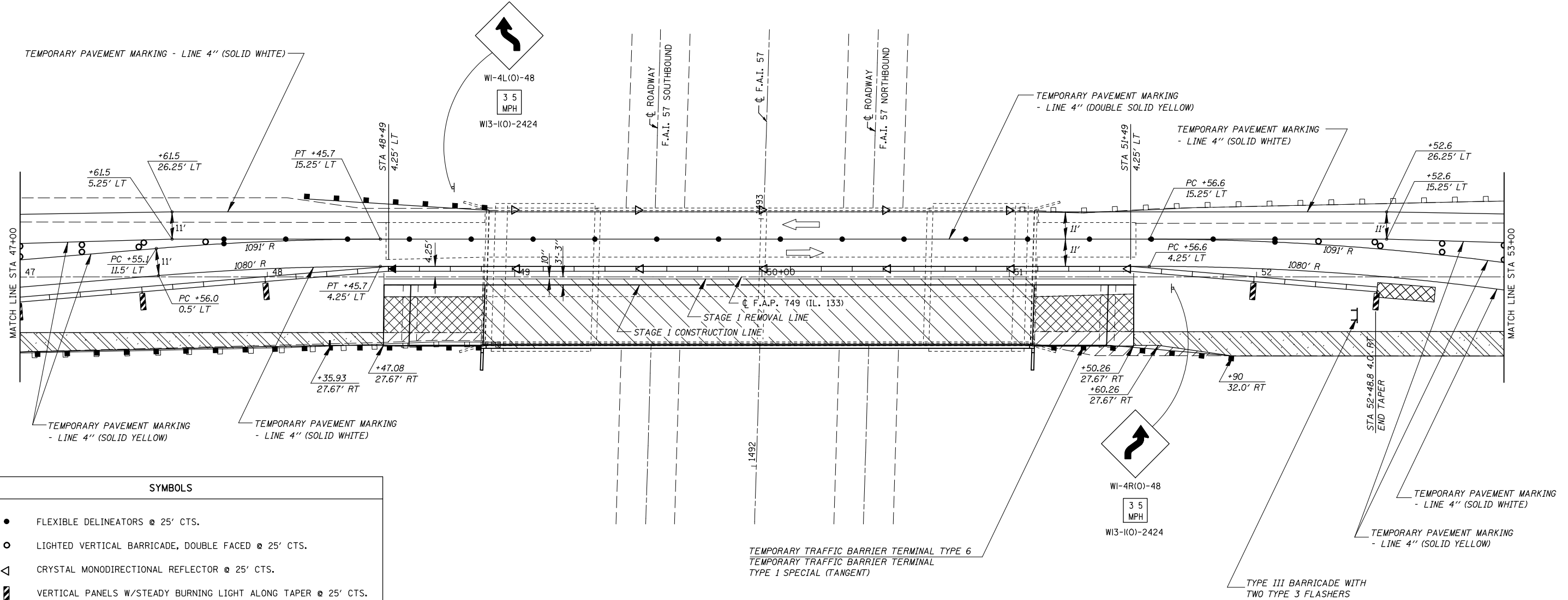
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: STAGE1
DATE: 2/27/07

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	21
STA. 47+00		TO STA. 53+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				

TRAFFIC CONTROL & PROTECTION SPECIAL

STAGE I



SYMBOLS	
●	FLEXIBLE DELINEATORS @ 25' CTS.
○	LIGHTED VERTICAL BARRICADE, DOUBLE FACED @ 25' CTS.
△	CRYSTAL MONODIRECTIONAL REFLECTOR @ 25' CTS.
▨	VERTICAL PANELS W/STEADY BURNING LIGHT ALONG TAPER @ 25' CTS.
▭	TEMPORARY CONCRETE BARRIER
—	TEMPORARY PAVEMENT MARKINGS
▧	IMPACT ATTENUATOR TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
▨	HOT-MIX ASPHALT SURFACE REMOVAL 8" / P.C.C. BASE COURSE 8"
▩	PAVED SHOULDER REMOVAL
▧	APPROACH SLAB REMOVAL
▨	REMOVAL OF EXISTING CONCRETE DECK

TEMPORARY TRAFFIC BARRIER TERMINAL TYPE 6
 TEMPORARY TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)

TYPE III BARRICADE WITH TWO TYPE 3 FLASHERS

SHEET 2 OF 3

TRAFFIC CONTROL & PROTECTION
STAGE I

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

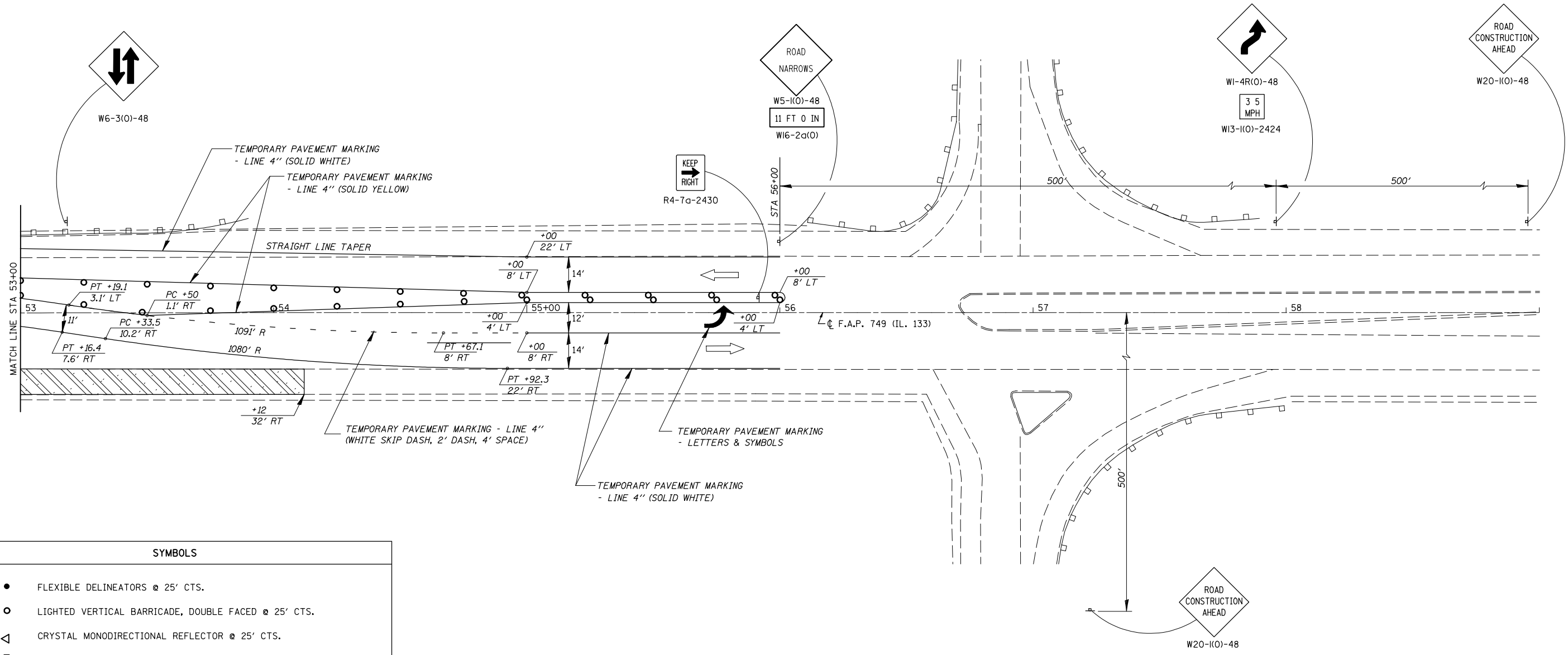
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1
	FILE: STAGE1
	DATE: 10/13/06

HOT-MIX ASPHALT SURFACE REMOVAL AND CONSTRUCTION OF PORTLAND CEMENT CONCRETE BASE COURSE FROM STA 52+50 TO STA 54+12 SHALL BE GOVERNED BY THE SPECIAL PROVISION "HOT-MIX ASPHALT SURFACE REMOVAL 8"."

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	22
STA. 53+00		TO STA. 59+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				

TRAFFIC CONTROL & PROTECTION SPECIAL

STAGE I



SYMBOLS	
●	FLEXIBLE DELINEATORS @ 25' CTS.
○	LIGHTED VERTICAL BARRICADE, DOUBLE FACED @ 25' CTS.
△	CRYSTAL MONODIRECTIONAL REFLECTOR @ 25' CTS.
▨	VERTICAL PANELS W/STEADY BURNING LIGHT ALONG TAPER @ 25' CTS.
▬	TEMPORARY CONCRETE BARRIER
—	TEMPORARY PAVEMENT MARKINGS
▧	IMPACT ATTENUATOR TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
▨	HOT-MIX ASPHALT SURFACE REMOVAL 8" / P.C.C. BASE COURSE 8"
▩	APPROACH SLAB REMOVAL
▪	REMOVAL OF EXISTING CONCRETE DECK

SHEET 3 OF 3

TRAFFIC CONTROL & PROTECTION
STAGE I

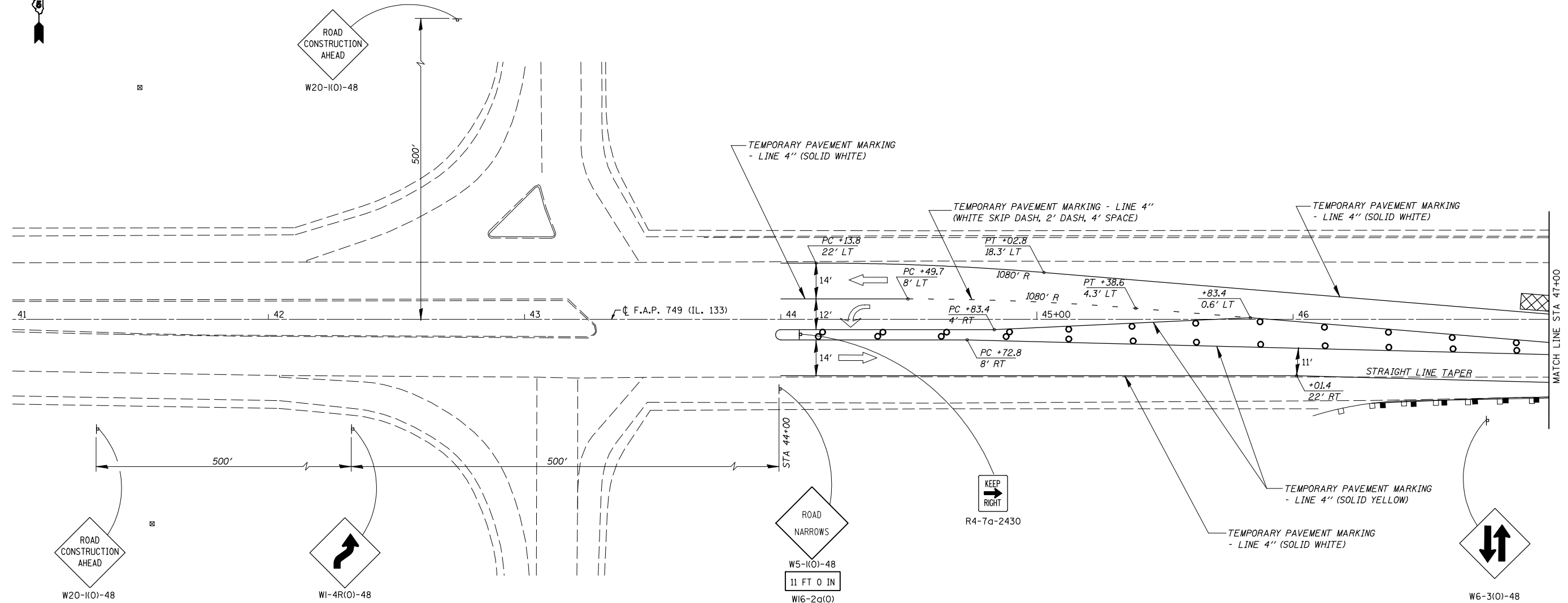
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1
	FILE: STAGE1
	DATE: 3/13/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	23
STA. 41+00		TO STA. 47+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				

TRAFFIC CONTROL & PROTECTION SPECIAL

STAGE II



SYMBOLS

- FLEXIBLE DELINEATORS @ 25' CTS.
- LIGHTED VERTICAL BARRICADE, DOUBLE FACED @ 25' CTS.
- ◁ CRYSTAL MONODIRECTIONAL REFLECTOR @ 25' CTS.
- ▨ VERTICAL PANELS W/STEADY BURNING LIGHT ALONG TAPER @ 25' CTS.
- ▭ TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT MARKINGS
- ▨ IMPACT ATTENUATOR TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
- ▨ PAVED SHOULDER REMOVAL
- ▨ APPROACH SLAB REMOVAL
- ▨ REMOVAL OF EXISTING CONCRETE DECK

STAGE 2

- STAGE 2 CONSTRUCTION CONSISTS OF THE FOLLOWING:
1. REMOVE TEMPORARY PAVEMENT MARKINGS
 2. RELOCATE TEMPORARY CONCRETE BARRIER, TEMPORARY IMPACT ATTENUATORS, AND TRAFFIC CONTROL DEVICES AS SHOWN ON THE STAGE 2 TRAFFIC CONTROL & PROTECTION DETAIL
 3. PLACE TRAFFIC IN THE STAGE 2 TEMPORARY LANES AND INSTALL TEMPORARY PAVEMENT MARKINGS
 4. REMOVE GUARDRAIL LT. STA. 51+04 TO STA. 53+90
 5. REMOVE TEMPORARY GUARDRAIL AND TERMINALS LT. STA. 48+07.44 TO STA. 48+90.59
 6. APPROACH SLAB REMOVAL LT. STA. 48+47.99 TO STA. 48+88 AND LT. STA. 51+10.75 TO STA. 51+51.17
 7. PAVEMENT REMOVAL (P.C.C. BASE COURSE CONSTRUCTED IN PRE-STAGING) LT. STA. 48+47.99 TO STA. 48+88 AND LT. STA. 51+10.75 TO STA. 51+62.32 (OUTSIDE SHOULDER) AND LT. STA. 48+47.99 TO STA. 48+87.99 AND LT. STA. 51+10.74 TO STA. 51+51.17 (MEDIAN)
 8. REMOVE STAGE 2 PORTION OF BRIDGE DECK AND ABUTMENTS
 9. CONSTRUCT STAGE 2 PORTION OF BRIDGE
 10. INSTALL PERFORATED DRAINS, BACKFILL, AND PLACE EROSION CONTROL BLANKET
 11. CONSTRUCT BRIDGE APPROACH PAVEMENT AND CONNECTOR PAVEMENT RT. STA. 48+47.99 TO STA. 48+88.12 AND RT. STA. 51+10.17 TO STA. 51+51.17
 12. CONSTRUCT SHOULDER DRAINS AND PLACE EROSION CONTROL BLANKET LT. STA. 48+42.99 AND LT. STA. 51+57.32
 13. DIAMOND GRINDING, BRIDGE DECK GROOVING, PAVEMENT GROOVING, PROTECTIVE COAT ON THE BRIDGE DECK AND APPROACH PAVEMENT.
 14. INSTALL GUARDRAIL, TERMINALS, AND MARKERS LT. STA. 51+09.34 TO STA. 53+67.49
 15. CONSTRUCT TEMPORARY RAMPS LT. STA. 48+50.6 TO STA. 48+58.1 AND LT. STA. 51+40. TO STA 51+476

FINAL PHASE

- FINAL PHASE CONSTRUCTION SHALL CONSIST OF THE FOLLOWING:
1. REMOVE TEMPORARY CONCRETE BARRIER, IMPACT ATTENUATORS, TRAFFIC CONTROL DEVICES, AND PAVEMENT MARKINGS.
 2. PLACE TRAFFIC IN THE PERMANENT LANES AND INSTALL SHORT TERM PAVEMENT MARKINGS
 3. REMOVE TEMPORARY GUARDRAIL AND TERMINALS RT. STA. 51+10 TO STA. 51+90.8
 4. CONSTRUCT SHOULDER INLETS AND PLACE EROSION CONTROL BLANKET RT. STA. 48+40.93 AND RT. STA. 51+55.26
 5. CONSTRUCT SUPERIMPOSED MEDIAN ON BRIDGE DECK STA. 48+88.08 TO STA. 51+10.17
 6. CONSTRUCT CONCRETE MEDIAN TYPE SM 6 (DOWELLED) STA. 48+88.08 TO STA. 48+88.08 AND STA. 51+10.17 TO STA. 51+40.17
 7. CONSTRUCT CONCRETE MEDIAN TYPE SM (SPECIAL) STA. 44+05.35 TO STA. 48+57.75 AND STA. 51+40.5 TO STA. 55+92.62
 8. MILL AND RESURFACE PAVEMENT AND SHOULDERS STA. 43+70 TO STA. 48+58.08 AND STA. 51+40.17 TO STA. 56+30
 9. PLACE AGGREGATE SHOULDERS LT. AND RT. STA. 44+30 TO STA. 48+58.08 AND STA. 51+40.17 TO STA. 56+30
 10. REMOVE SHORT TERM PAVEMENT MARKINGS AND INSTALL PAINT PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS STA. 43+70 TO STA. 56+30
- TRAFFIC CONTROL AND PROTECTION IN THE FINAL PHASE SHALL BE AS DETAILED ON STANDARD 701201. WHEN OPERATIONS REQUIRE CLOSING A LANE, THE CONTRACTOR SHALL MAINTAIN 2-WAY, 1-LANE TRAFFIC ON ONE SIDE OF THE MEDIAN DURING WORK PERIODS. ALL LANES SHALL BE KEPT OPEN TO TRAFFIC DURING NON-WORKING HOURS. THE INTERCHANGE RAMPS SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES.

SEE SHEET 2 OF 3 FOR TEMPORARY PAVEMENT MARKING

SHEET 1 OF 3

TRAFFIC CONTROL & PROTECTION
STAGE II

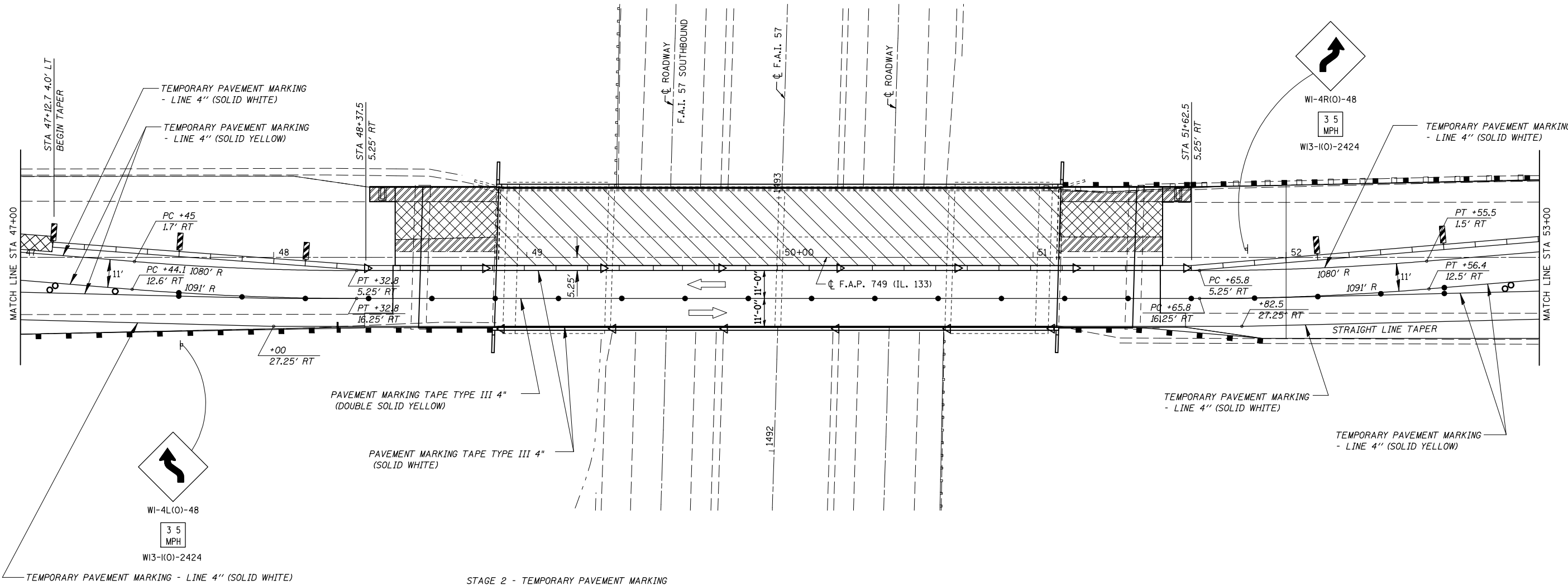
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: STAGE2
DATE: 2/27/07

TRAFFIC CONTROL & PROTECTION SPECIAL

STAGE II



SYMBOLS

- FLEXIBLE DELINEATORS @ 25' CTS.
- LIGHTED VERTICAL BARRICADE, DOUBLE FACED @ 25' CTS.
- △ CRYSTAL MONODIRECTIONAL REFLECTOR @ 25' CTS.
- ▩ VERTICAL PANELS W/STEADY BURNING LIGHT ALONG TAPER @ 25' CTS.
- ▬ TEMPORARY CONCRETE BARRIER
- ▬ TEMPORARY PAVEMENT MARKINGS
- ▨ IMPACT ATTENUATOR TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
- ▩ PAVEMENT REMOVAL
- ▩ APPROACH SLAB REMOVAL
- ▩ REMOVAL OF EXISTING CONCRETE DECK

STAGE 2 - TEMPORARY PAVEMENT MARKING

TYPE	LOCATION	TEMPORARY PAVEMENT MARKING LINE 4" FOOT	TYPE III TAPE 4" FOOT	WORK ZONE PAVEMENT MARKING SQ FT
SOLID WHITE				
EB OUTSIDE EDGE LINE	STA 44+00 TO STA 48+57	457		152.3
EB OUTSIDE EDGE LINE	STA 48+57 TO STA 51+39		282	94.0
EB OUTSIDE EDGE LINE	STA 41+39 TO STA 56+00	461		153.7
WB OUTSIDE EDGE LINE	STA 44+00 TO STA 48+57	459		153.0
WB OUTSIDE EDGE LINE	STA 48+58 TO STA 51+40		282	94.0
WB OUTSIDE EDGE LINE	STA 51+40 TO STA 56+00	461		153.7
WHITE SKIP DASH				
WB TURN LANE	STA 44+50 TO STA 45+83	108		36.0
EB TURN LANE	STA 53+41 TO STA 55+50	108		36.0
SOLID YELLOW				
EB MEDIAN EDGE LINE	STA 44+00 TO STA 48+58	461		153.7
EB MEDIAN EDGE LINE	STA 48+58 TO STA 51+40		282	94.0
EB MEDIAN EDGE LINE	STA 51+40 TO STA 56+00	465		155.0
WB MEDIAN EDGE LINE	STA 44+00 TO STA 48+58	462		154.0
WB MEDIAN EDGE LINE	STA 48+58 TO STA 51+40		282	94.0
WB MEDIAN EDGE LINE	STA 51+40 TO STA 56+00	465		155.0
TOTAL		3,907	1,128	1678.3

QUANTITIES FOR PLACEMENT AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS ARE INCLUDED FOR INFORMATION ONLY. PLACING, MAINTAINING, AND REMOVING THESE ITEMS WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL)

TRAFFIC CONTROL & PROTECTION
STAGE II

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

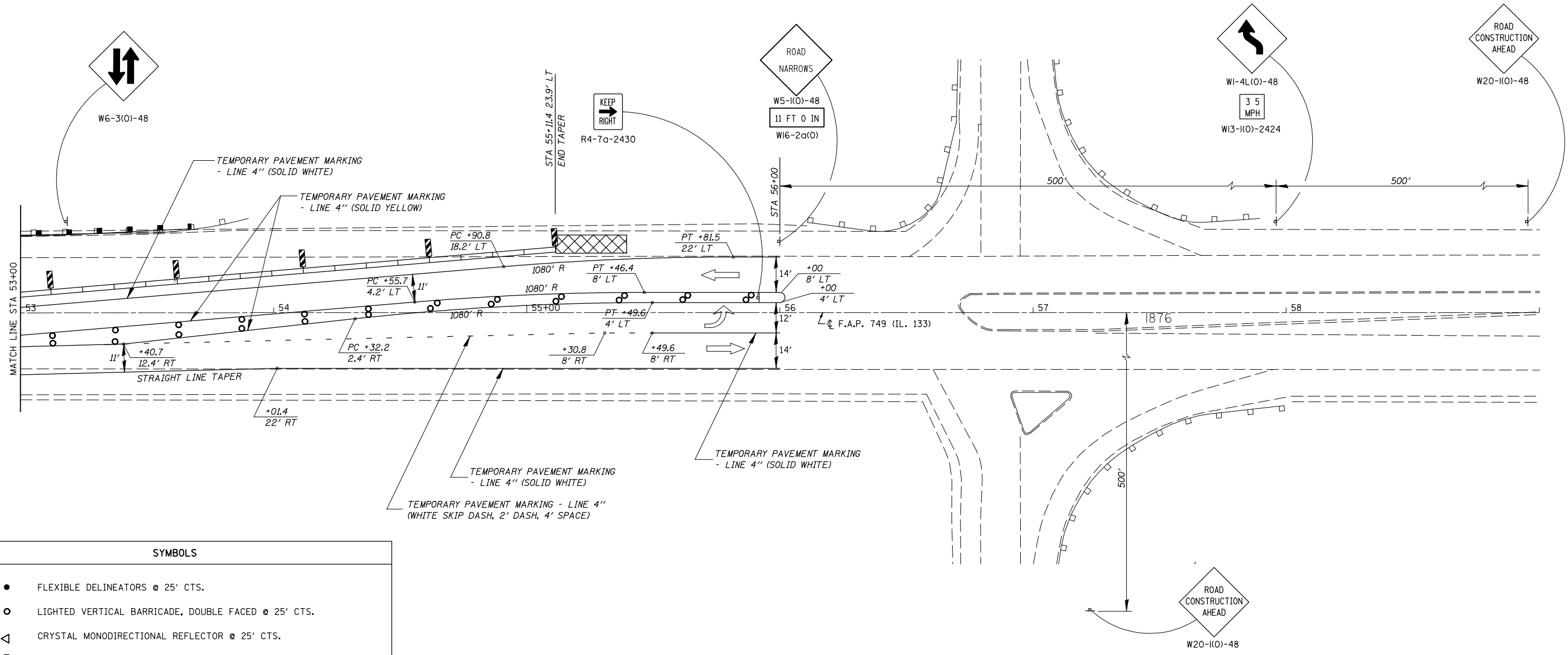
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: STAGE2
DATE: 10/13/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	25
STA. 53+00		TO STA. 59+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				

TRAFFIC CONTROL & PROTECTION SPECIAL

STAGE II



SYMBOLS	
●	FLEXIBLE DELINEATORS @ 25' CTS.
○	LIGHTED VERTICAL BARRICADE, DOUBLE FACED @ 25' CTS.
△	CRYSTAL MONODIRECTIONAL REFLECTOR @ 25' CTS.
▨	VERTICAL PANELS W/STEADY BURNING LIGHT ALONG TAPER @ 25' CTS.
▬	TEMPORARY CONCRETE BARRIER
—	TEMPORARY PAVEMENT MARKINGS
▩	IMPACT ATTENUATOR TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
▨	PAVED SHOULDER REMOVAL
▩	APPROACH SLAB REMOVAL
▨	REMOVAL OF EXISTING CONCRETE DECK

SHEET 3 OF 3

TRAFFIC CONTROL & PROTECTION
STAGE II

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1
	FILE: STAGE2
	DATE: 10/13/06



PLAN	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	NO. OF WAY CHECKED		
	CADD FILE NAME		
	NO.		

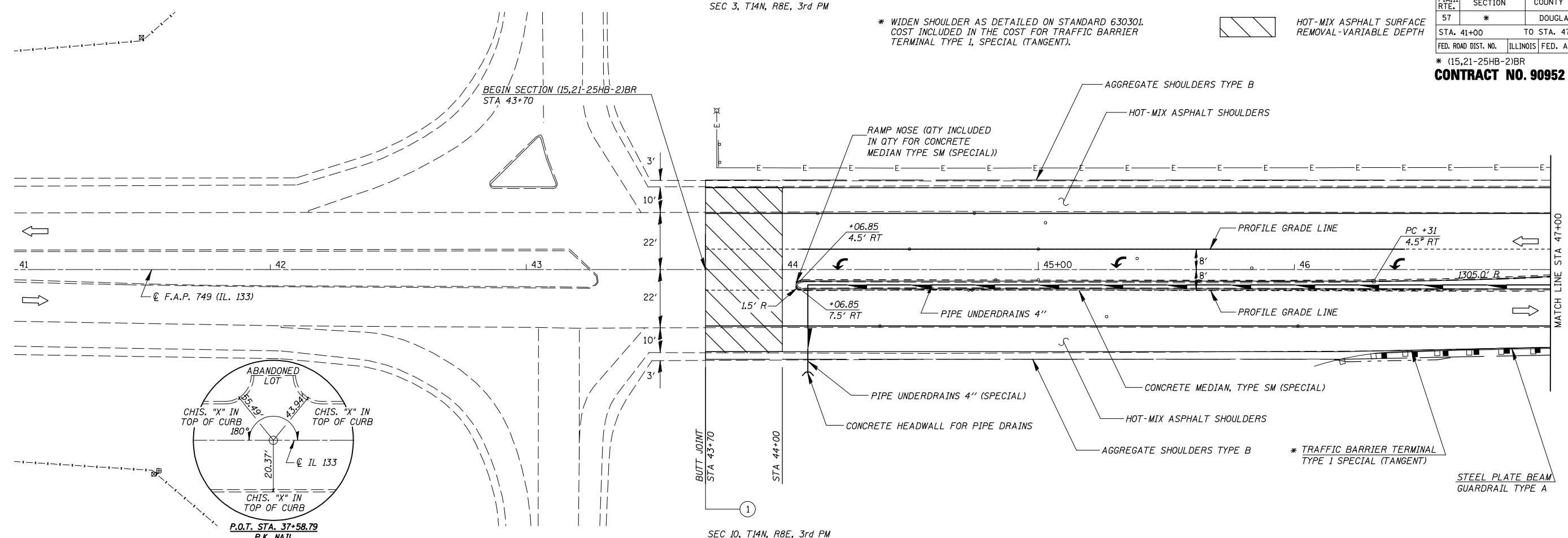
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	PLOTTED		
	CHECKED		
	NO. OF WAY CHECKED		
	STRUCTURE NOTATIONS CHRD		
	NO.		

SEC 3, T14N, R8E, 3rd PM

* WIDEN SHOULDER AS DETAILED ON STANDARD 630301. COST INCLUDED IN THE COST FOR TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT).

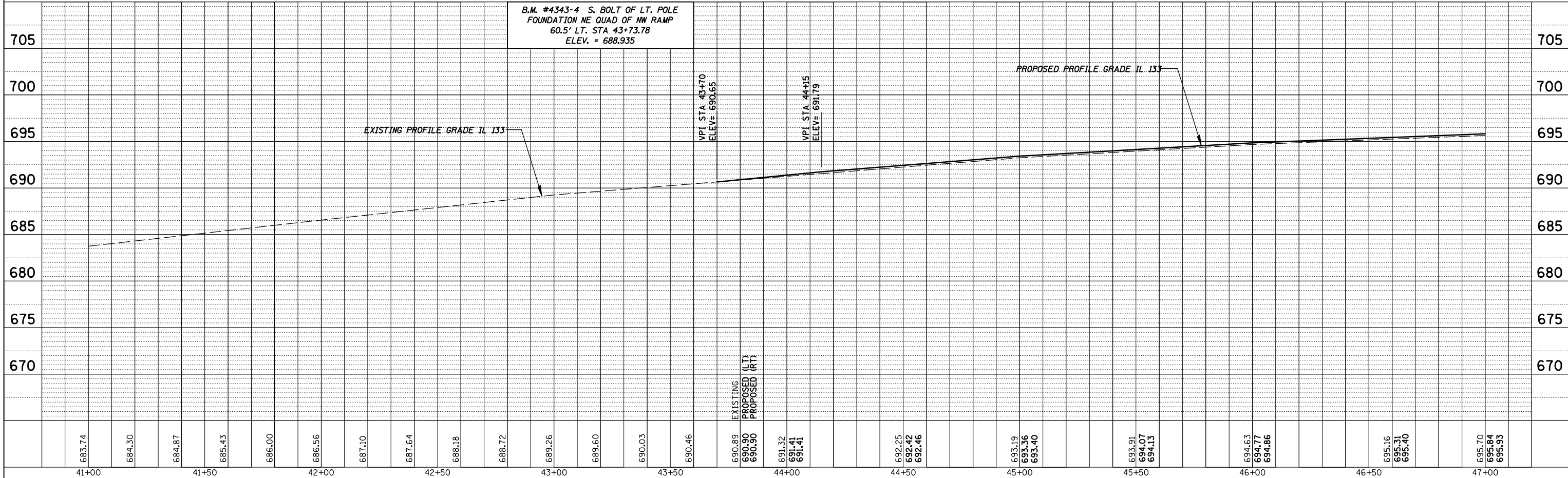
HOT-MIX ASPHALT SURFACE REMOVAL-VARIABLE DEPTH

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	26
STA. 41+00		TO STA. 47+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				



SEC 10, T14N, R8E, 3rd PM

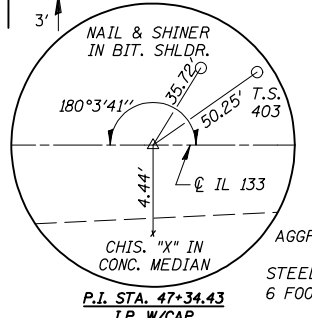
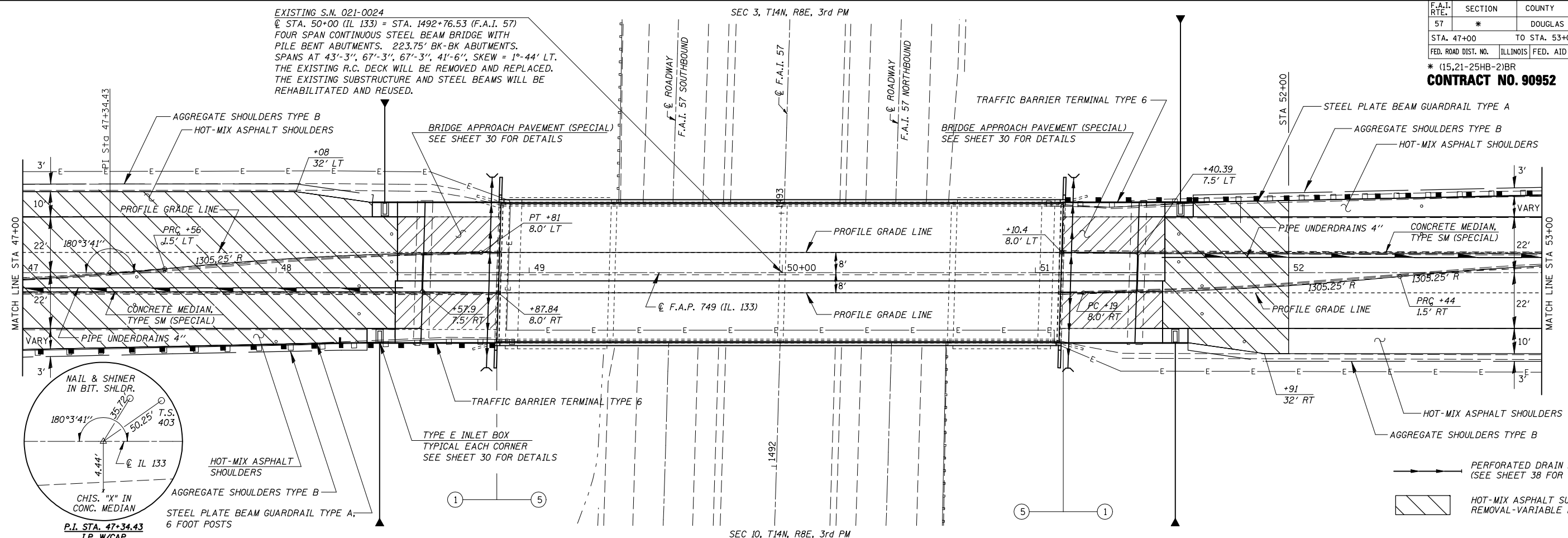
B.M. #4343-4 S. BOLT OF LT. POLE FOUNDATION NE QUAD OF NW RAMP 60.5' LT. STA 43+73.78 ELEV. = 688.935



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	27
STA. 47+00		TO STA. 53+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

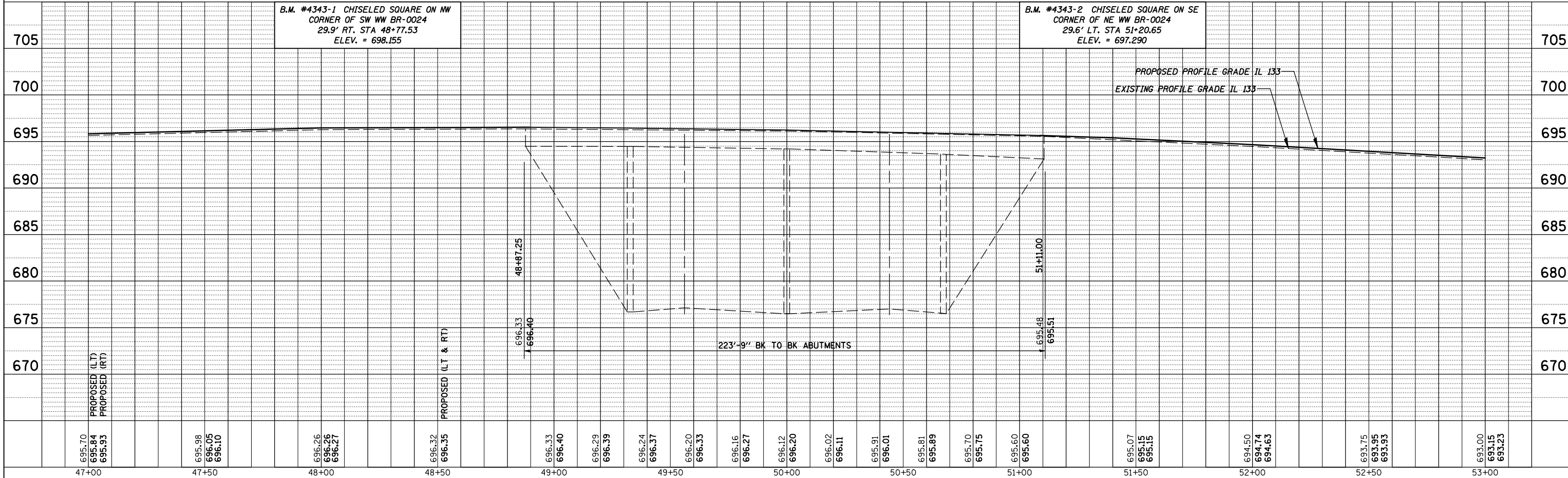
CONTRACT NO. 90952

EXISTING S.N. 021-0024
 @ STA. 50+00 (IL 133) = STA. 1492+76.53 (F.A.I. 57)
 FOUR SPAN CONTINUOUS STEEL BEAM BRIDGE WITH
 PILE BENT ABUTMENTS. 223.75' BK-BK ABUTMENTS.
 SPANS AT 43'-3", 67'-3", 67'-3", 41'-6", SKEW = 1°-44' LT.
 THE EXISTING R.C. DECK WILL BE REMOVED AND REPLACED.
 THE EXISTING SUBSTRUCTURE AND STEEL BEAMS WILL BE
 REHABILITATED AND REUSED.



PLAN	DATE
SURVEYED	
PLOTTED	
CHECKED	
BY	
NO.	

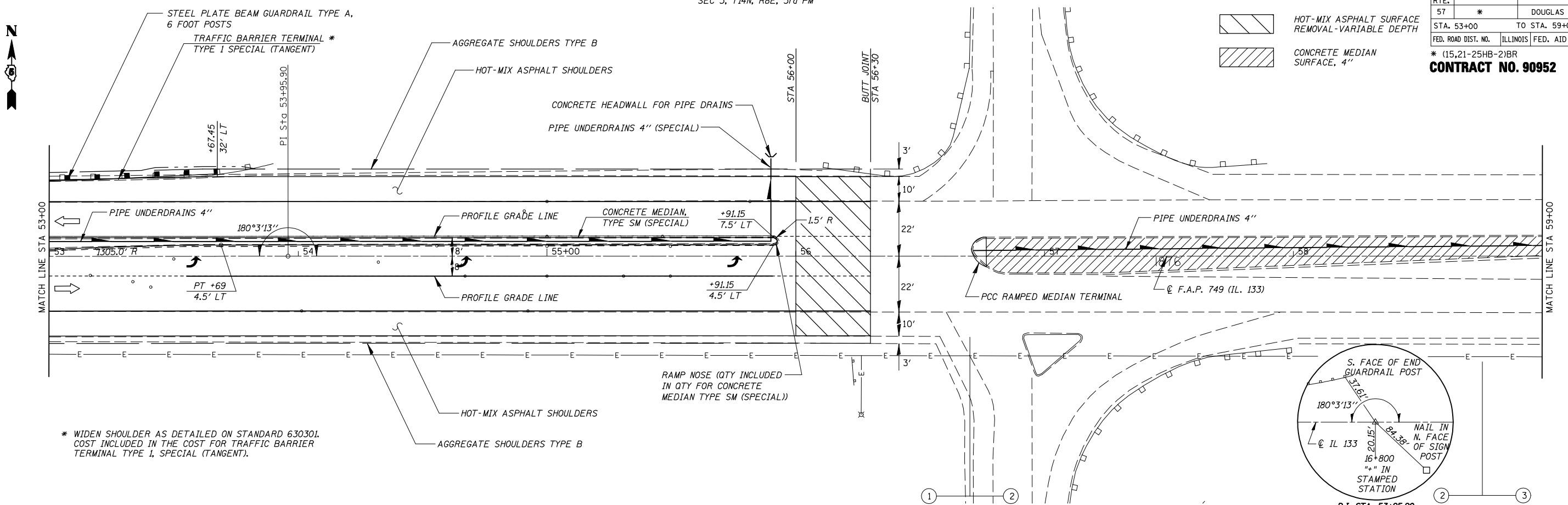
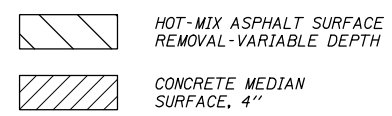
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SURVEYED	
PLOTTED	
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BY	
NO.	



SEC 3, T14N, R8E, 3rd PM

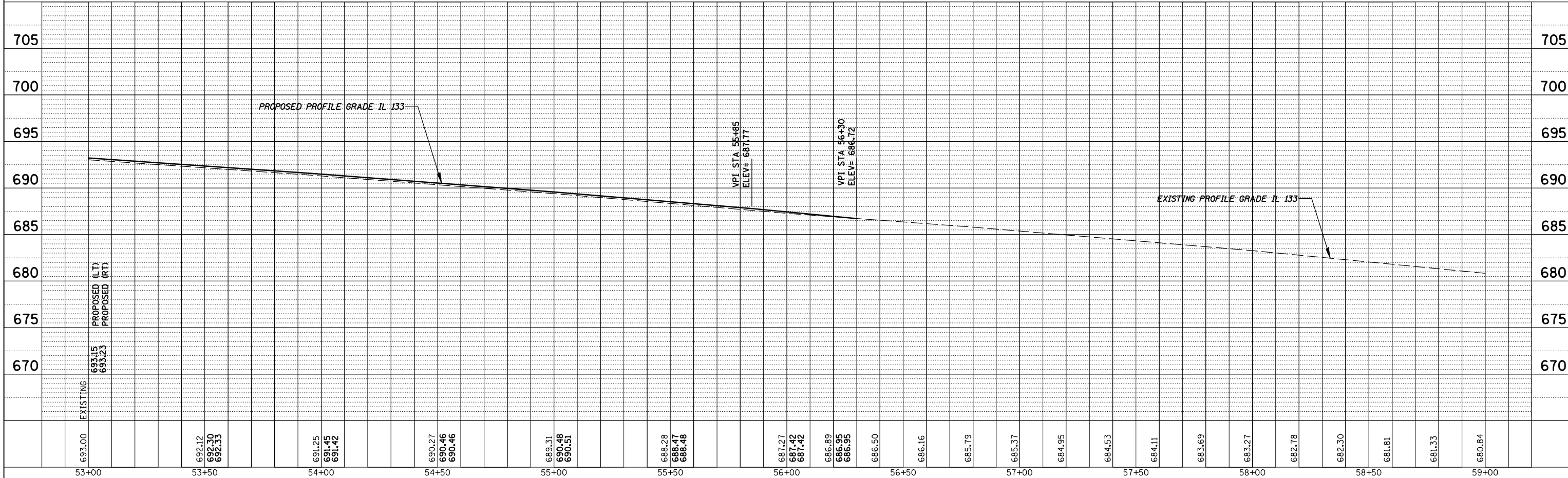
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	28
STA. 53+00		TO STA. 59+00		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT

* (15,21-25HB-2)BR
CONTRACT NO. 90952



* WIDEN SHOULDER AS DETAILED ON STANDARD 630301. COST INCLUDED IN THE COST FOR TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT).

SEC 10, T14N, R8E, 3rd PM



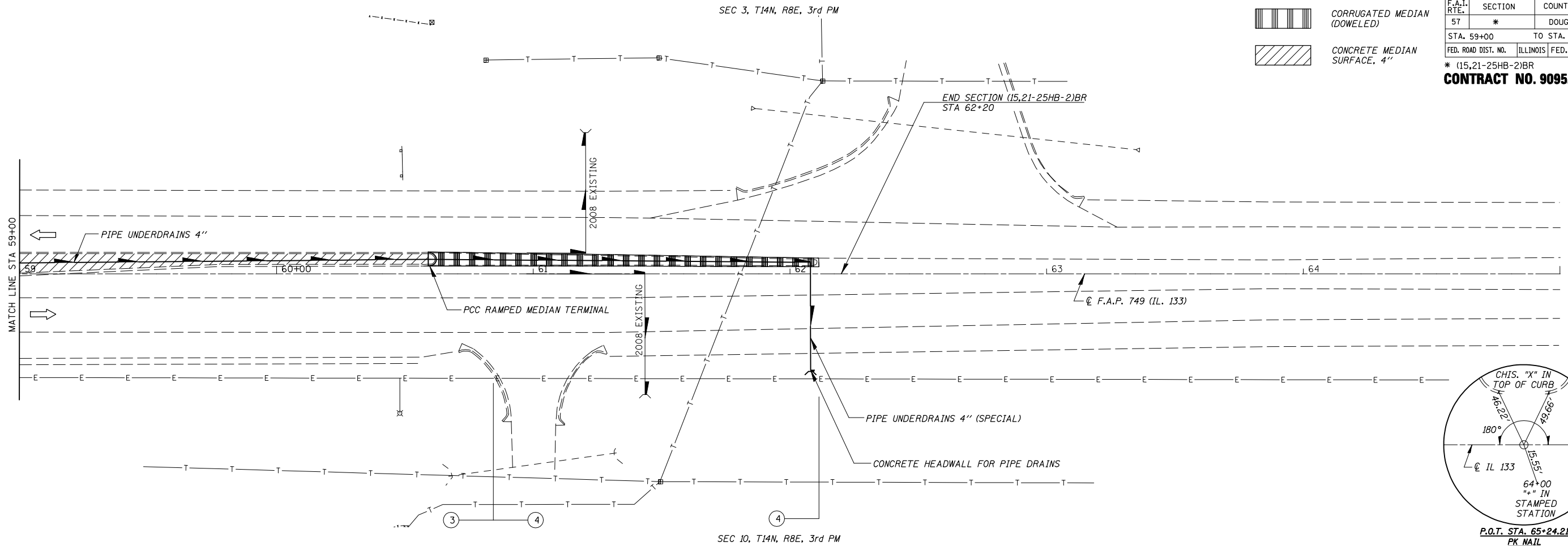
IL 133 STA 53+00 TO STA 59+00


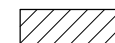
PLAN	SURVEYED	BY	DATE
	NOTED		
	PLOTTED		
	CHECKED		
	DATE		

PROFILE	SURVEYED	BY	DATE
	NOTED		
	PLOTTED		
	CHECKED		
	DATE		

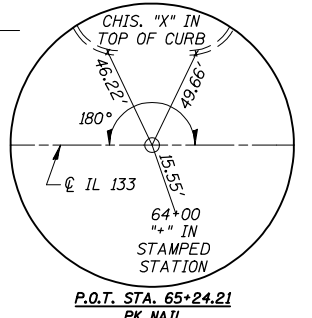
PLAN	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	NO. OF WAY CHECKED		
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PROFILE	SURVEYED	BY	DATE
	PLOTTED		
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	B.M. NOTED		
	STRUCTURE NOTATIONS CHKD		

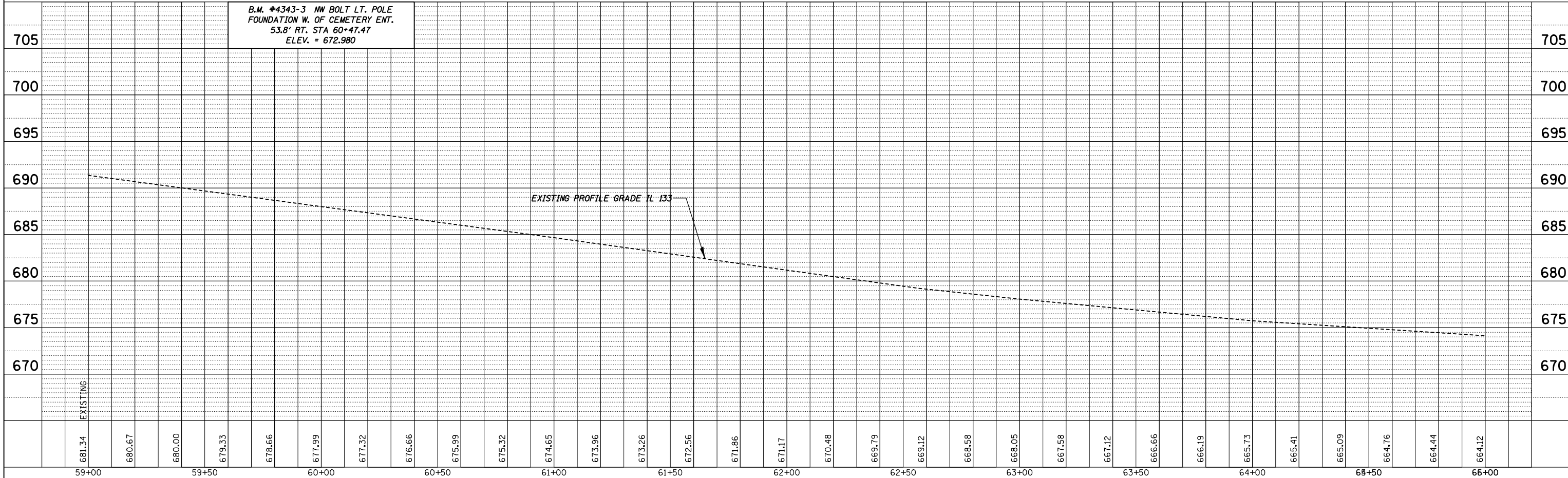


 CORRUGATED MEDIAN (DOWELED)
 CONCRETE MEDIAN SURFACE, 4"

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	29
STA. 59+00		TO STA. 65+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* (15,21-25HB-2)BR				
CONTRACT NO. 90952				

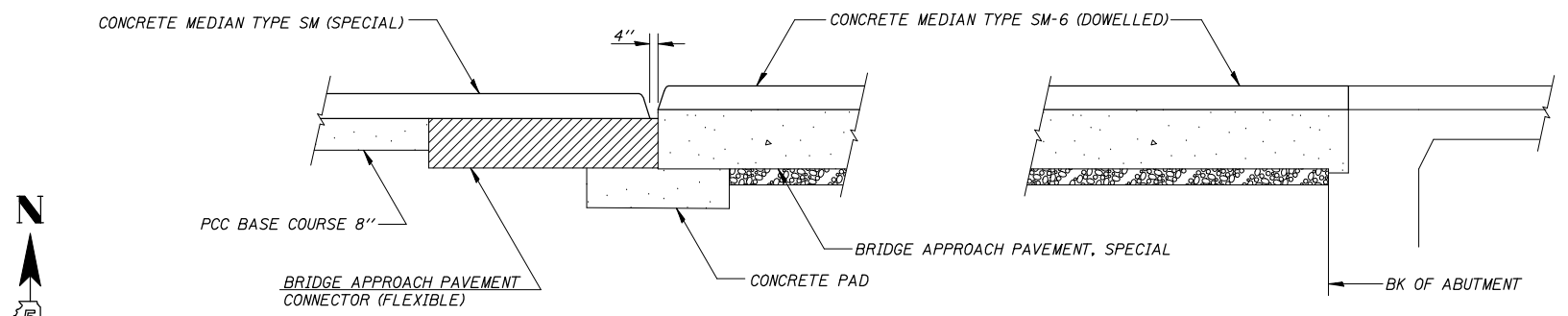


B.M. #4343-3 NW BOLT LT. POLE
 FOUNDATION W. OF CEMETERY ENT.
 53.8' RT. STA 60+47.47
 ELEV. = 672.980

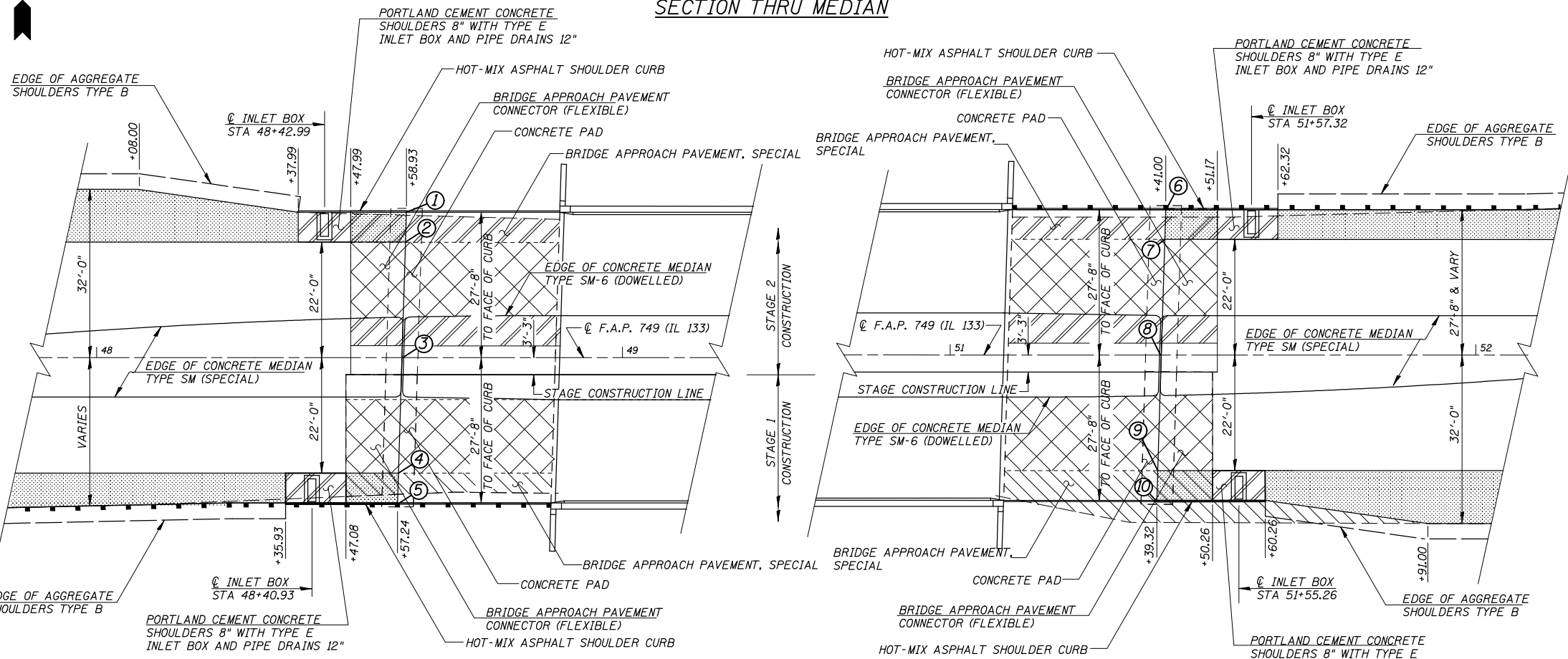


POINT	STA	OFFSET	ELEVATION
1	48+58.92	-27.67	695.95
2	48+58.75	-22.00	696.18
3	48+58.08	0.00	696.48
4	48+57.42	22.00	696.17
5	48+57.25	27.67	695.94

POINT	STA	OFFSET	ELEVATION
6	51+41.00	-27.67	694.82
7	51+40.83	-22.00	695.05
8	51+40.17	0.00	695.37
9	51+39.50	22.00	695.06
10	51+39.33	27.67	694.83



SECTION THRU MEDIAN



- INDICATES LIMITS OF PAVEMENT REMOVAL
- INDICATES LIMITS OF APPROACH SLAB REMOVAL
- INDICATES LIMITS OF PAVED SHOULDER REMOVAL
- INDICATES LIMITS OF HOT-MIX ASPHALT SHOULDERS

- GENERAL NOTES**
- THE CONTRACTOR SHALL VERIFY THAT THE LOCATIONS OF THE PROPOSED TYPE E INLET BOXES AND PIPE DRAINS WILL NOT CONFLICT WITH INSTALLATION OF GUARD RAIL POSTS PRIOR TO BEGINNING CONSTRUCTION OF THESE ITEMS
 - AREAS OF THE SUBBASE UNDER THE PCC SHOULDERS WHICH ARE BELOW THE PROPOSED SUBGRADE ELEVATION SHALL BE BUILT UP WITH GRANULAR MATERIAL. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR PORTLAND CEMENT CONCRETE SHOULDERS.
 - THE CONTRACTOR SHALL VERIFY THE LENGTH OF PIPE DRAINS AND THE DEGREE OF ELBOWS PRIOR TO ORDERING MATERIALS.
 - PREFORMED EXPANSION JOINT FILLER SHALL EXTEND THE ENTIRE DEPTH AND SHALL BE CUT TO THE EXACT CROSS SECTION OF THE CONCRETE MEDIAN TYPE SM (SPECIAL).
 - BEFORE ORDERING PIPE DRAINS THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER FOR THE EXACT LENGTHS.
 - SEE STANDARDS 420401 AND 610001 FOR DETAILS NOT SHOWN

SHOULDER INLETS	PORTLAND CEMENT CONCRETE SHOULDERS 8" SQ YD	TYPE E INLET BOX STD 610001 EACH	PIPE DRAINS 12" FOOT	PIPE ELBOW 12" EACH	END THRUST SECTIONS 12" EACH	CONCRETE BLOCK EACH
STAGE 2						
LT STA 48+42.99	6	1	94	2	1	1
LT STA 51+57.32	7	1	86	2	1	1
FINAL STAGE						
RT STA 48+40.93	7	1	86	2	1	1
RT STA 51+55.26	6	1	86	2	1	1
TOTAL	26	4	352	8	4	4

HOT-MIX ASPHALT SHOULDER CURB	LOCATION	FOOT
STAGE 2		
LT STA 48+37.99 TO STA 48+58.93		20.94
LT STA 51+41.00 TO STA 51+62.32		21.32
FINAL STAGE		
RT STA 48+35.93 TO STA 48+57.24		21.31
RT STA 51+39.32 TO STA 51+60.26		20.94
TOTAL		85

STAGE	LOCATION	WIDTH FOOT	QTY SQ YD
STAGE 1			
RT STA 48+57.98 TO STA 48+88.08		24'-8"	83
RT STA 51+10.07 TO STA 51+40.07		24'-8"	83
STAGE 2			
LT STA 48+57.98 TO STA 48+88.08		31'-2"	104
LT STA 51+10.07 TO STA 51+40.17		31'-2"	104
TOTAL			374

STAGE	LOCATION	WIDTH FOOT	QTY SQ YD
STAGE 1			
RT STA 48+47.08 TO STA 48+57.98		24'-11"	29
RT STA 51+40.27 TO STA 51+50.26		24'-11"	29
STAGE 2			
LT STA 48+47.99 TO STA 48+57.98		31'-5"	37
LT STA 51+40.27 TO STA 51+51.17		31'-5"	37
TOTAL			132

STAGE	LOCATION	WIDTH FOOT	QTY SQ YD
STAGE 1			
RT STA 48+47.08 TO STA 48+87.08		14	63
RT STA 51+10.26 TO STA 51+10.50		14 TO 15.1	66
STAGE 2			
LT STA 48+47.99 TO STA 48+87.75		14 TO 15.1	66
LT STA 51+11.17 TO STA 51+10.50		14	63
TOTAL			258

LOCATION	QTY SQ YD
STA 45+57.98 TO STA 48+87.98	187
STA 51+10.07 TO STA 51+40.7	187
TOTAL	374

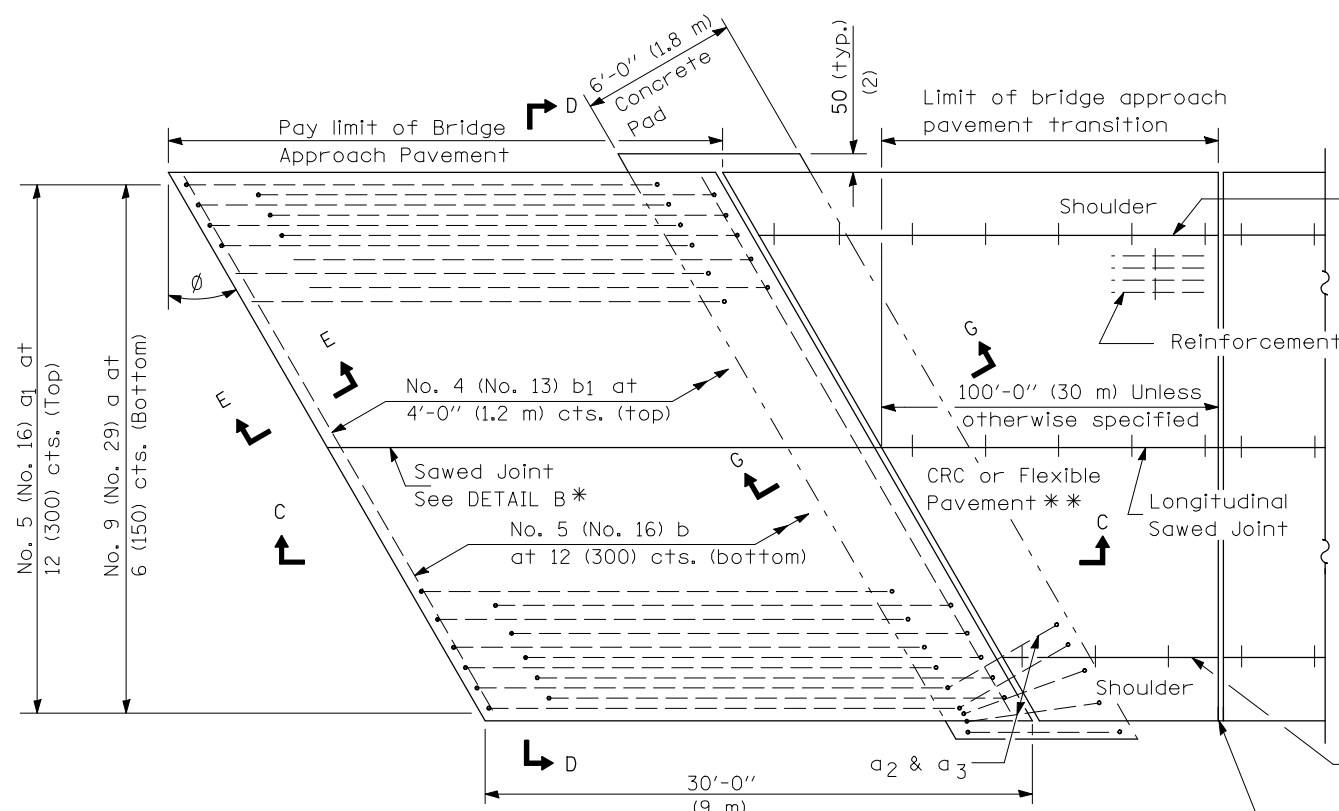
LOCATION	QTY SQ YD
STA 45+57.98 TO STA 48+87.98	187
STA 51+10.07 TO STA 51+40.7	187
TOTAL	374

BRIDGE APPROACH PAVEMENT & SHOULDER INLET DETAILS

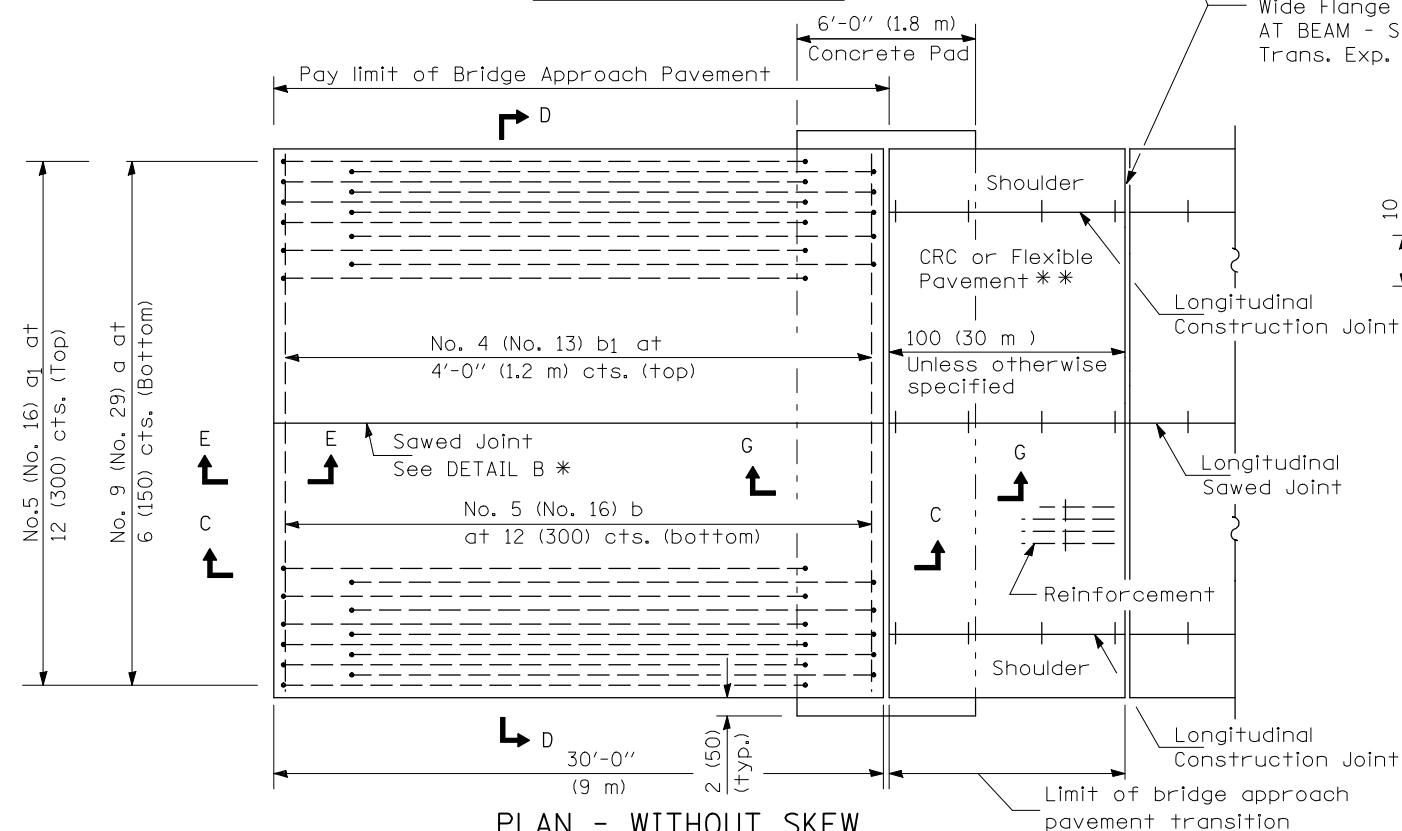
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1 FILE: 2114INLET DATE: 10/20/06
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	DOUGLAS	65	30A
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				



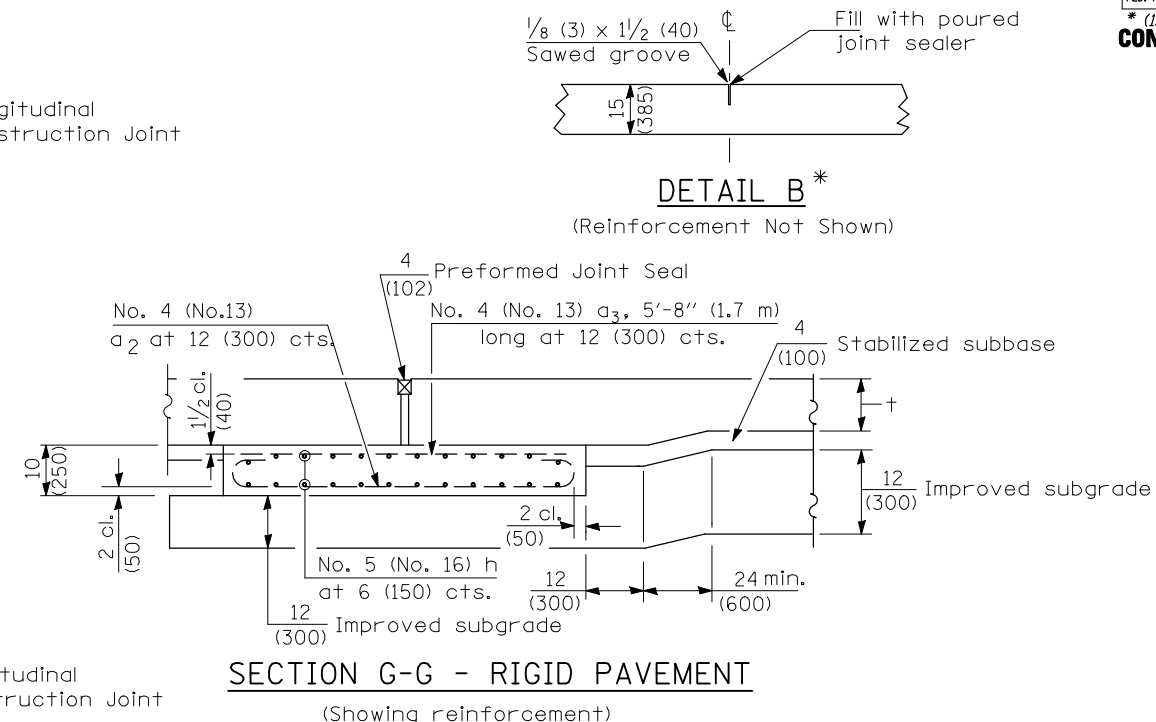
PLAN - WITH SKEW



PLAN - WITHOUT SKEW

- * Saw ϕ or lane edge if poured two or more lane widths at a time.
- ** Omit Reinforcement, tie bars and Long. sawed Jt. for Flexible Pavement.

NEW CONSTRUCTION



SECTION G-G - RIGID PAVEMENT (Showing reinforcement)

SECTION G-G - FLEXIBLE PAVEMENT (Showing reinforcement)

GENERAL NOTES

- THICKNESS-"+"=Thickness of Pavement.
- See Standard 421001 for reinforcement details not shown.
- See Standard 420001 for joint details not shown.
- All dimensions are in inches (millimeters) unless otherwise shown.

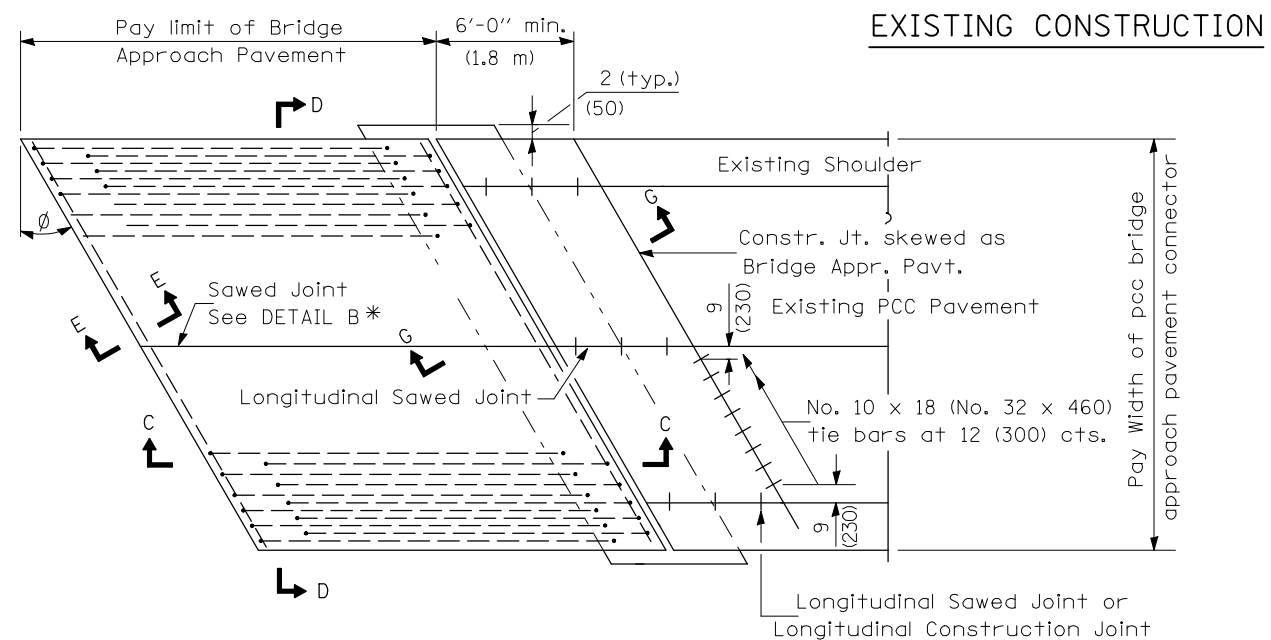
BRIDGE APPROACH PAVEMENT DETAILS (SHEET 1 OF 4)

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

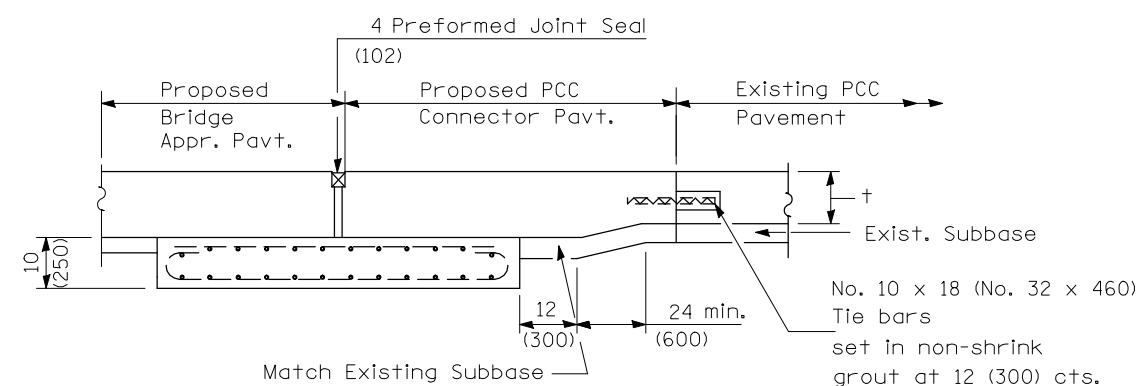
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 2114INLET
DATE: 10/20/06

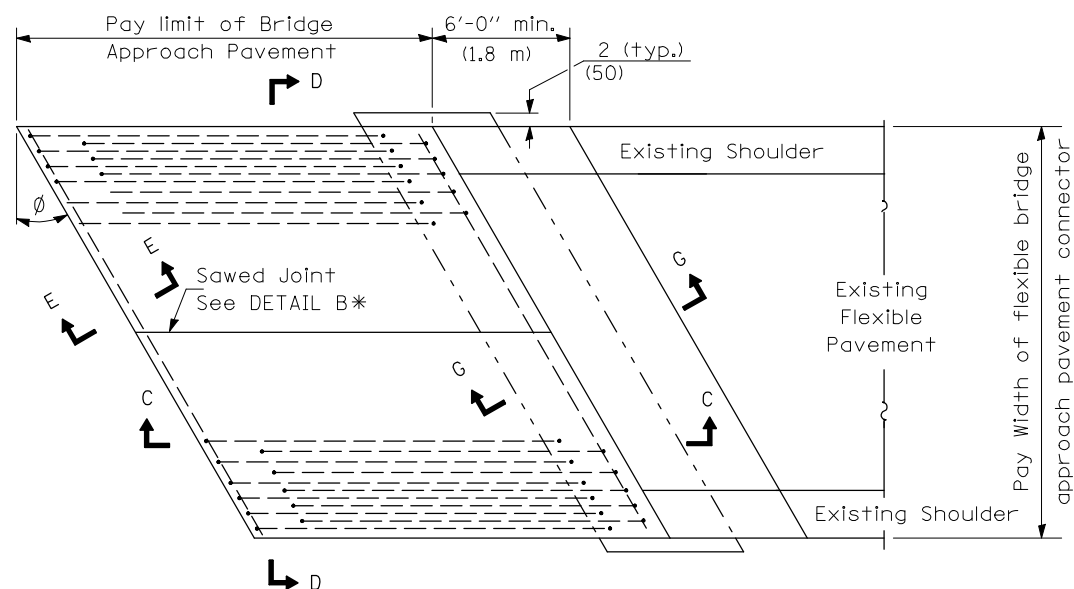
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	DOUGLAS	65	30B
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				



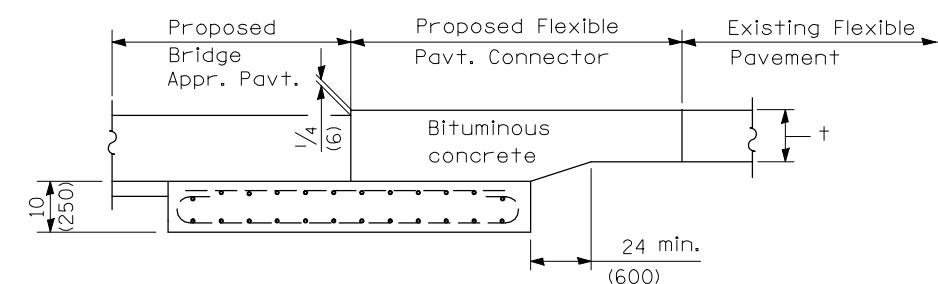
BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)



SECTION G-G - RIGID PAVEMENT



BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)



SECTION G-G - FLEXIBLE PAVEMENT

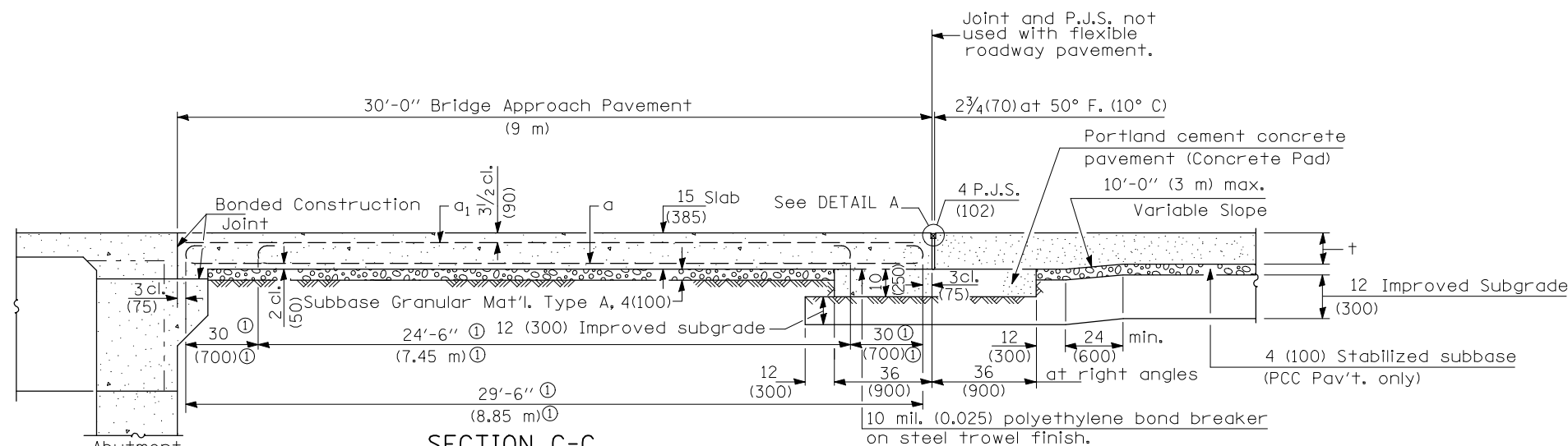
**BRIDGE APPROACH PAVEMENT
DETAILS (SHEET 2 OF 4)**

**FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY**

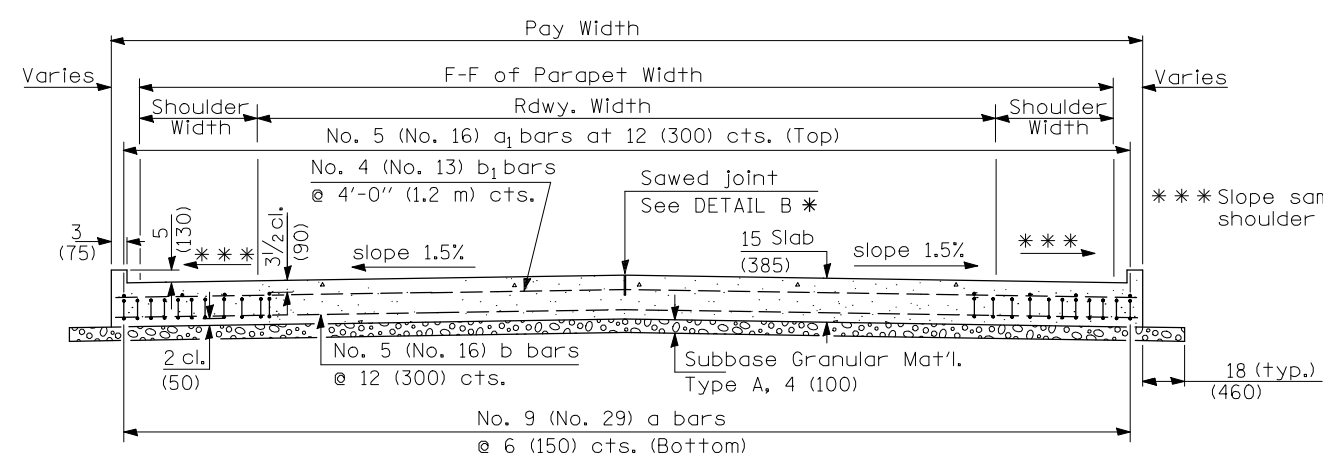
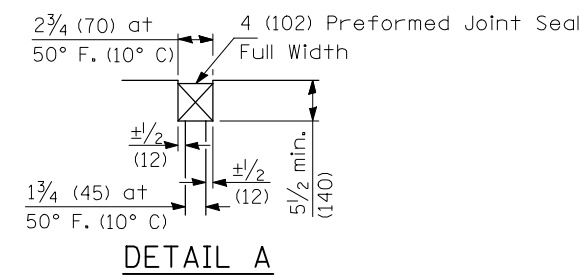
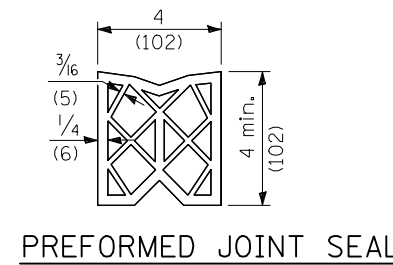
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 2114INLET
DATE: 10/20/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	DOUGLAS	65	30C
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				

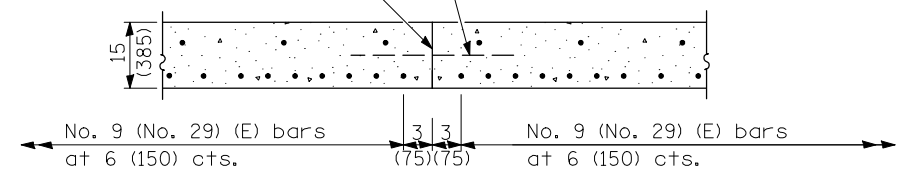


① Stagger No. 9 (No. 29) a bars as shown on plan - full width



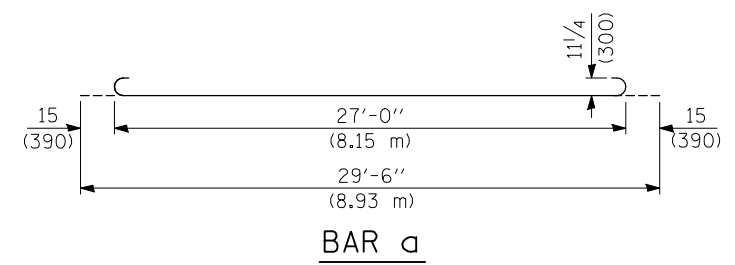
SECTION D-D
(See Plan for Dimensions not shown)

Longitudinal Construction Joint in accordance with details shown on Standard 420001.

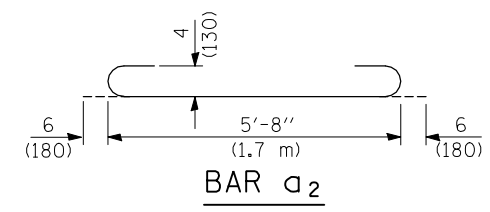


OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

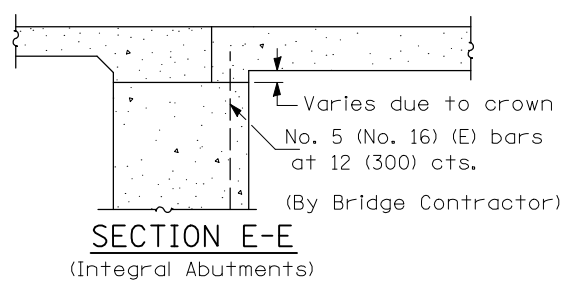
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



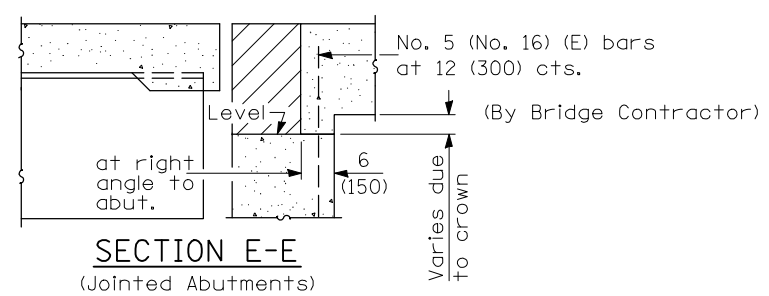
BAR a



BAR a2



SECTION E-E
(Integral Abutments)



SECTION E-E
(Jointed Abutments)

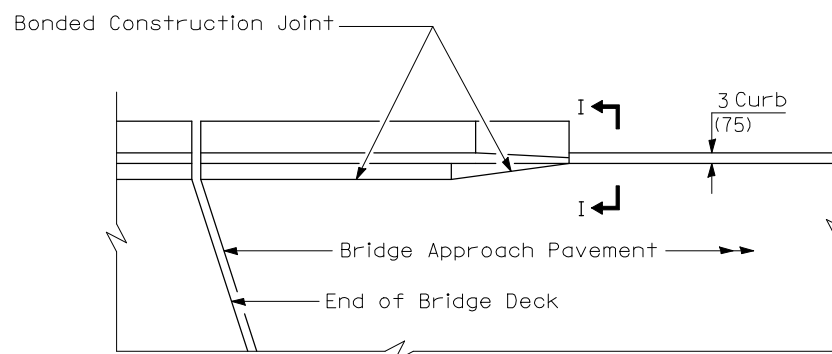
DESIGN STRESSES
 $f_y = 60,000$ p.s.i. (400 MPa)
 $f'_c = 3,500$ p.s.i. (24 MPa)
 $n = 8.5$

**BRIDGE APPROACH PAVEMENT
DETAILS (SHEET 3 OF 4)**

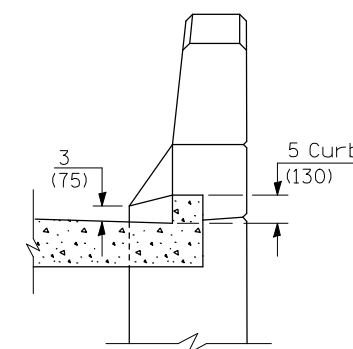
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1 FILE: 2114INLET DATE: 10/20/06
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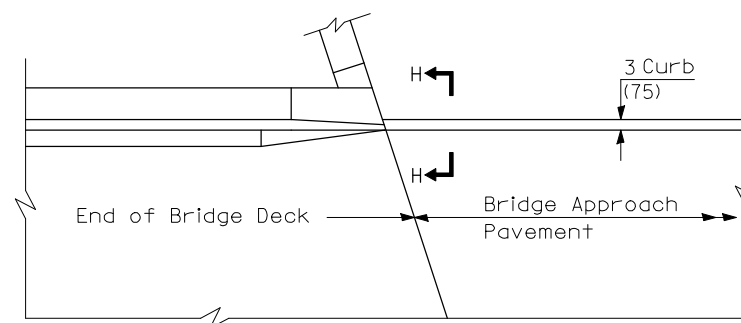
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	DOUGLAS	65	30D
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				



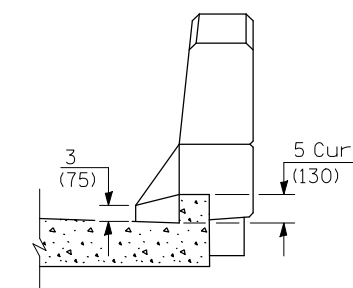
**PARAPET TO CURB TRANSITION
PILE BENT ABUTMENT**



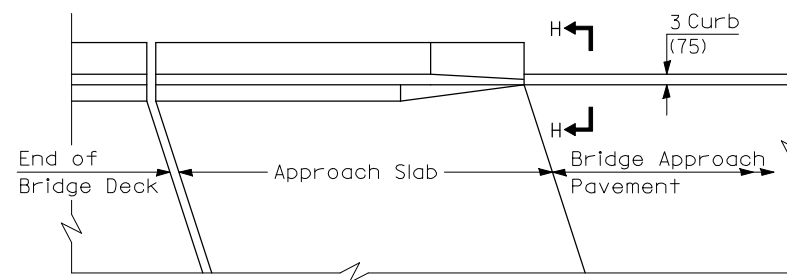
SECTION I - I



**PARAPET TO CURB TRANSITION
INTEGRAL ABUTMENT**



SECTION H - H



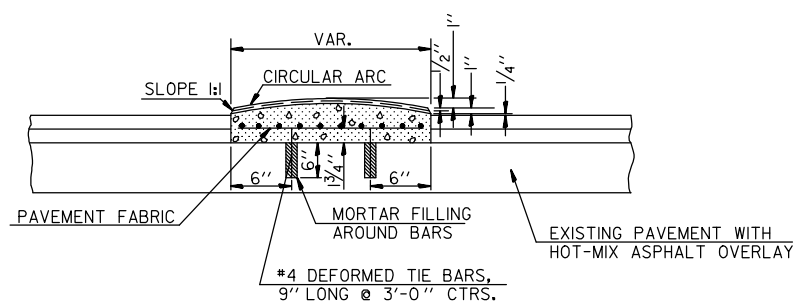
**PARAPET TO CURB TRANSITION
VAULTED ABUTMENT**

**BRIDGE APPROACH PAVEMENT
DETAILS (SHEET 4 OF 4)**

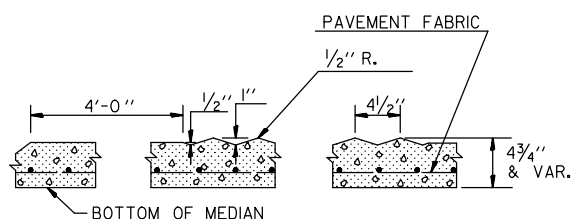
**FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY**

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.1
	FILE: 2114INLET
	DATE: 10/20/06

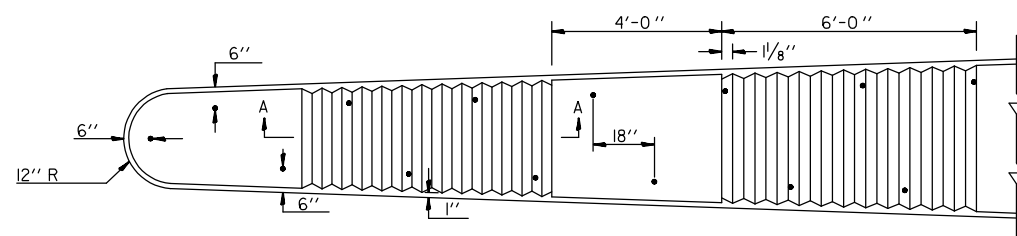
DETAIL OF CORRUGATED MEDIAN (DOWELLED)



TRANSVERSE SECTION



SECTION A-A

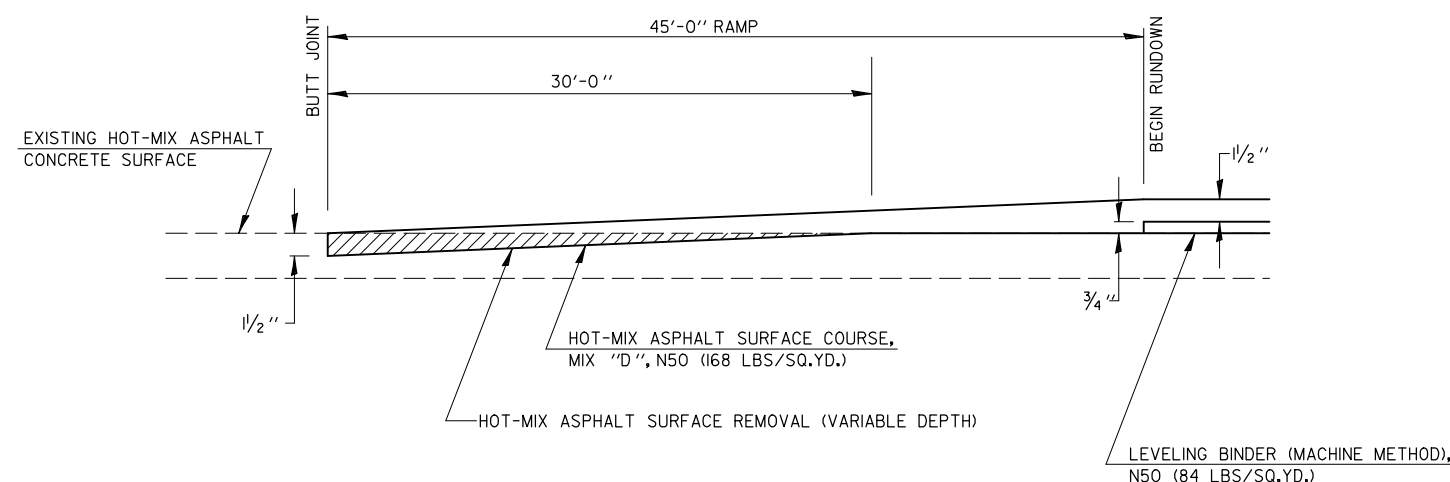


PLAN

NOTE: DOWELS AT 3'-0" INTERVALS OR AS DIRECTED BY THE ENGINEER.

NOTE: THE COST OF FURNISHING AND INSTALLING DOWEL BARS AND MORTAR FILLING SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQ. FT. FOR CORRUGATED MEDIAN (DOWELLED)

DETAIL OF BUTT JOINT



HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH) & TEMPORARY RAMPS

LOCATION	WIDTH FOOT	HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH) SQ YD	RAMP LENGTH FOOT	TEMPORARY RAMP SQ YD
STAGE 1				
RT STA 48+50.50 TO STA 48+58.00	24.42		7.5	21
RT STA 51+40.10 TO STA 51+47.60	24.42		7.5	21
STAGE 2				
* LT STA 48+50.60 TO STA 48+58.10	19.67		7.5	17
* LT STA 51+40.10 TO STA 51+47.60	19.67		7.5	17
FINAL PHASE				
BUTT JOINT AREAS				
STA 43+70 TO STA 43+75	64	214	5	36
STA 56+25 TO STA 56+30	64	214	5	36
VARIABLE DEPTH MILLING AREAS				
STA 47+00 TO STA 48+58.93	60.17 - 44	975		
STA 51+39.32 TO STA 52+00	44 - 58.73	304		
TOTAL		1707		148

* OMIT TEMPORARY RAMP IN MEDIAN

CONSTRUCTION OF BUTT JOINTS SHALL BE INCLUDED IN HOT-MIX ASPHALT SURFACE REMOVAL (VARIABLE DEPTH)

STATION	HOT-MIX ASPHALT SURFACE REMOVAL VARIABLE DEPTH REMOVAL THICKNESS					
	LT SHLDR	22' LT	8' LT	8' RT	22' RT	RT SHLDR
STA 43+70	0.12	0.12	0.12	0.12	0.12	0.12
STA 44+00	0	0	0	0	0	0
STA 47+00	0	0	0	0	0	0
STA 47+50	0.11	0.11	0.09	0.09	0.11	0.11
STA 48+00	0.22	0.22	0.18	0.18	0.22	0.22
STA 48+48	-	0.19	0.19	0.19	0.19	-
STA 51+51	-	0.13	0.13	0.10	0.13	-
STA 52+00	0	0	0	0	0	0
STA 56+00	0	0	0	0	0	0
STA 56+30	0.12	0.12	0.12	0.12	0.12	0.12

CORRUGATED MEDIAN & BUTT JOINT DETAILS

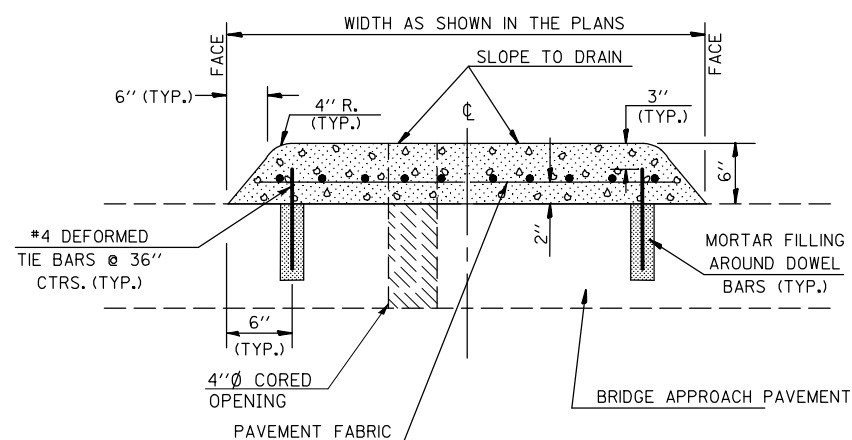
FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

CUMMINS ENGINEERING CORPORATION

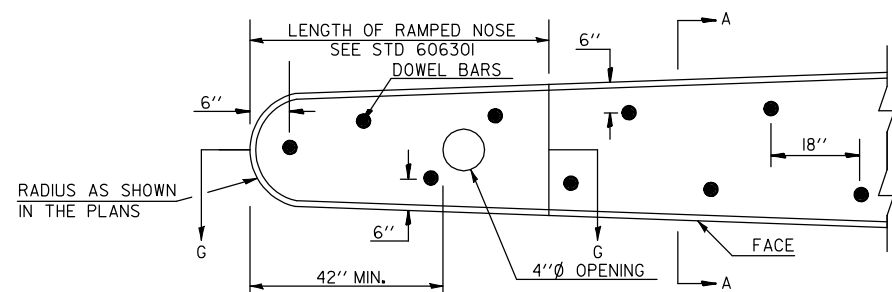
JOB #: 2114.1
FILE: 2114DETAILS
DATE: 2/27/07

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	DOUGLAS	65	32
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (15, 21-25HB-2)BR				
CONTRACT NO. 90952				

DETAIL OF CONCRETE MEDIAN, TYPE SM-6 (DOWELLED)

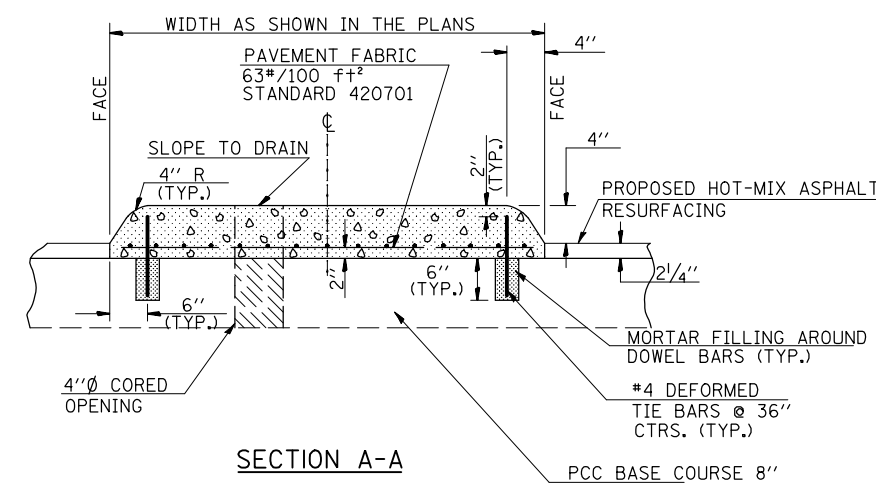


SECTION A-A

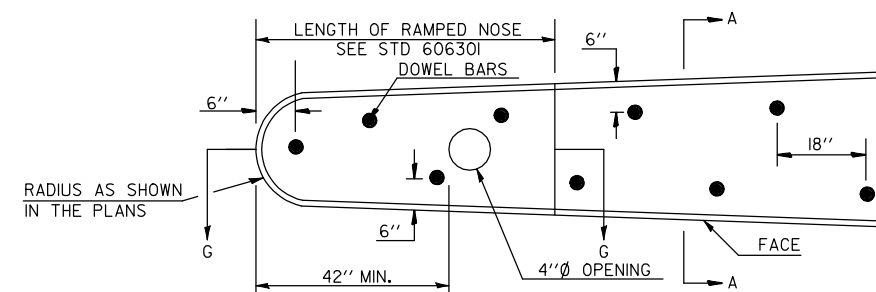


PLAN OF MEDIAN

DETAIL OF CONCRETE MEDIAN, TYPE SM (SPECIAL)



SECTION A-A



PLAN OF MEDIAN

STA	OFFSET TO FACE OF MEDIAN *	
	LT (WB)	RT (EB)
44+06.85	4.50	7.50
46+31 PC	4.50	7.50
+50	4.37	7.50
+75	3.77	7.50
47+00	2.69	7.50
+25	1.13	7.50
+50	-0.93	7.50
+56 PRC	-0.15	7.50
+75	-3.26	7.50
48+00	-5.16	7.50
+25	-6.57	7.50
+50	-7.51	7.50
+57.90		7.50
+58.37	-7.71	
+75	7.96	7.78
+81 PT	-8.00	
+88.33	-8.00	
+87.84		-8.00

STA	OFFSET TO FACE OF MEDIAN *	
	LT (WB)	RT (EB)
51+09.92		8.00
51+10.41	-8.00	
+19 PC		8.00
+25	-7.76	7.96
+39.93		7.75
+40.39	-7.50	
+50	-7.50	7.51
+75	-7.50	6.57
52+00	-7.50	5.16
+25	-7.50	3.26
+44 PRC	-7.50	1.50
+50	-7.50	0.94
+75	-7.50	-1.11
53+00	-7.50	-2.67
+25	-7.50	-3.67
+50	-7.50	-4.36
+69 PT	-7.50	-4.50
55+91.15	-7.50	-4.50

* NEGATIVE OFFSETS ARE MEASURED LEFT OF CENTERLINE
POSITIVE OFFSETS ARE MEASURED RIGHT OF CENTERLINE

GENERAL NOTES

1. THE GENERAL NOTES FOR STANDARD 606301 SHALL APPLY.
2. SECTION G-G SHALL BE THE SAME AS SHOWN ON STANDARD 606301.
3. DOWEL BARS @ 36" CTRS. OR AS DIRECTED BY THE ENGINEER.
4. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER 50 FT FOR CONCRETE MEDIAN, TYPE SM-6 (DOWELLED), AND FOR CONCRETE MEDIAN TYPE SM (SPECIAL) INCLUDING THE COST OF FURNISHING AND INSTALLING THE DOWEL BARS, MORTAR FILLING, PAVEMENT FABRIC AND CORE DRILLING THE SIGN OPENINGS, IF REQUIRED, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
5. OPENINGS FOR SIGNS IN MEDIAN SHALL BE FORMED BY CORE DRILLING A 4" DIAMETER HOLE THROUGH THE CONCRETE MEDIAN AND PCC BASE COURSE.

CONCRETE MEDIAN TYPE SM DETAILS

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

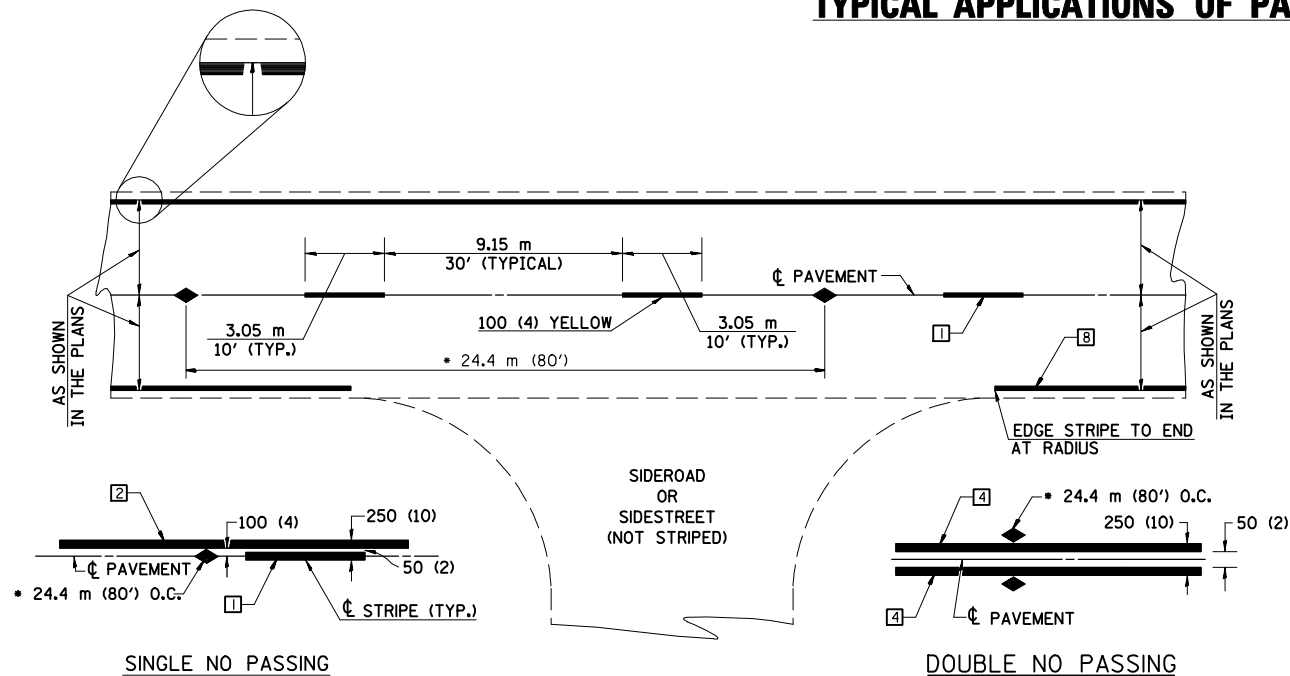
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 2114DETAILS
DATE: 10/13/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	33
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 90952

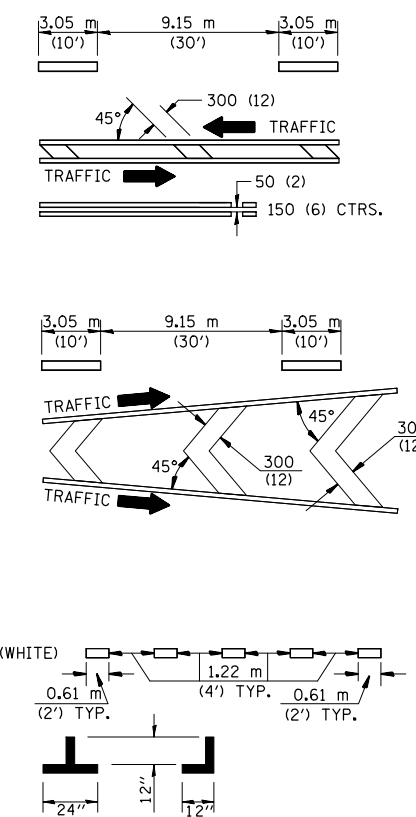
TYPICAL APPLICATIONS OF PAVEMENT MARKINGS AND MARKERS



• REDUCE TO 12.2 m (40') O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 70 km/h (45 mph) OR LESS.

TYPICAL PAVEMENT MARKING LEGEND

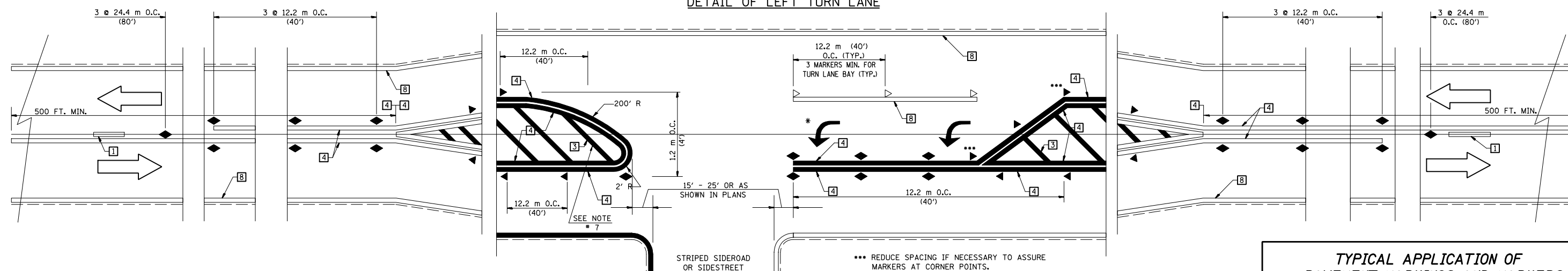
- 1 100 (4) SKIP-DASH (YELLOW)
- 2 100 (4) SOLID (YELLOW)
- 3 300 (12) DIAGONAL (YELLOW)
- 4 100 (4) YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 100 (4) SKIP-DASH (WHITE)
- 8 100 (4) SOLID (WHITE)
- 9 300 (12) DIAGONAL (WHITE)
- 10 150 (6) CROSS WALK (WHITE)
- 11 600 (24) STOP BAR (WHITE)
- 12 200 (8) SOLID (WHITE)
- 13 100 (4) LANE LINE EXTENSIONS (WHITE)
- 14 100 (4) PARKING (WHITE)



TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

DETAIL OF LEFT TURN LANE



ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED

*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

• TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

TYPICAL APPLICATION OF PAVEMENT MARKINGS AND MARKERS

F.A.I. ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY
S.N. 021-0024

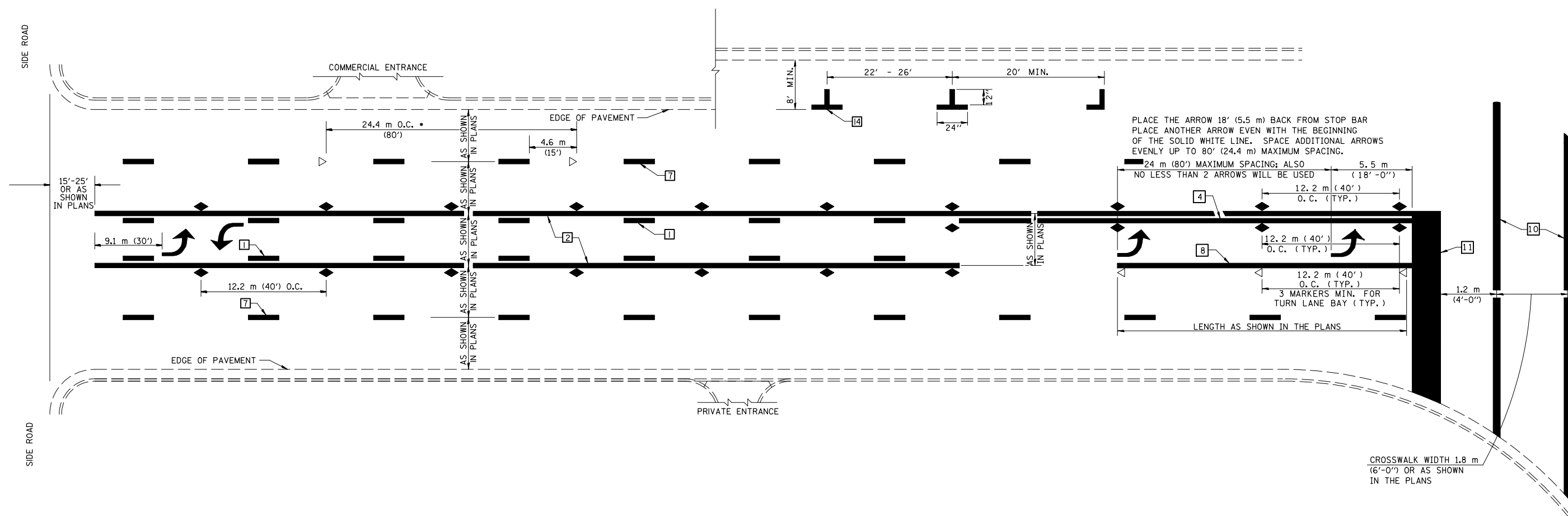
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.1
FILE: 21141PVMTM
DATE: 1/10/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	34
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 90952

TYPICAL APPLICATIONS OF PAVEMENT MARKINGS AND MARKERS



PLACE THE ARROW 18' (5.5 m) BACK FROM STOP BAR
PLACE ANOTHER ARROW EVEN WITH THE BEGINNING
OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS
EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING.

24 m (80') MAXIMUM SPACING; ALSO
NO LESS THAN 2 ARROWS WILL BE USED

5.5 m (18'-0")
12.2 m (40')
O.C. (TYP.)

12.2 m (40')
O.C. (TYP.)

12.2 m (40')
O.C. (TYP.)

3 MARKERS MIN. FOR
TURN LANE BAY (TYP.)

LENGTH AS SHOWN IN THE PLANS

1.2 m (4'-0")

CROSSWALK WIDTH 1.8 m (6'-0") OR AS SHOWN IN THE PLANS

SPECIAL NOTES:

TURN ARROW PAIRS SHALL BE PLACED AT 75 m (250') INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.

THE SOLID YELLOW PAVEMENT MARKINGS (2) SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.

THE SKIP-DASH PAVEMENT MARKINGS (1) OR (7) SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ABOVE.

• REDUCE TO 12.2 METERS (40 FEET) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 15 kph (10 MPH) LOWER THAN POSTED SPEEDS.

•• WHERE DOUBLE LANE LINE MARKERS ARE SPECIFIED, THEY SHALL BE SPACED AS SHOWN ABOVE.

All dimensions are in millimeters (inches) unless otherwise shown.

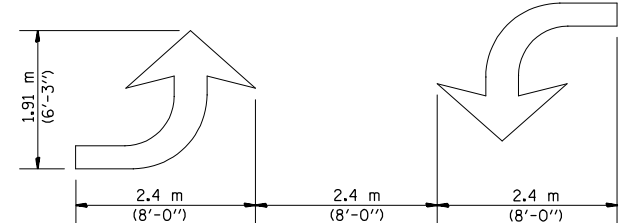
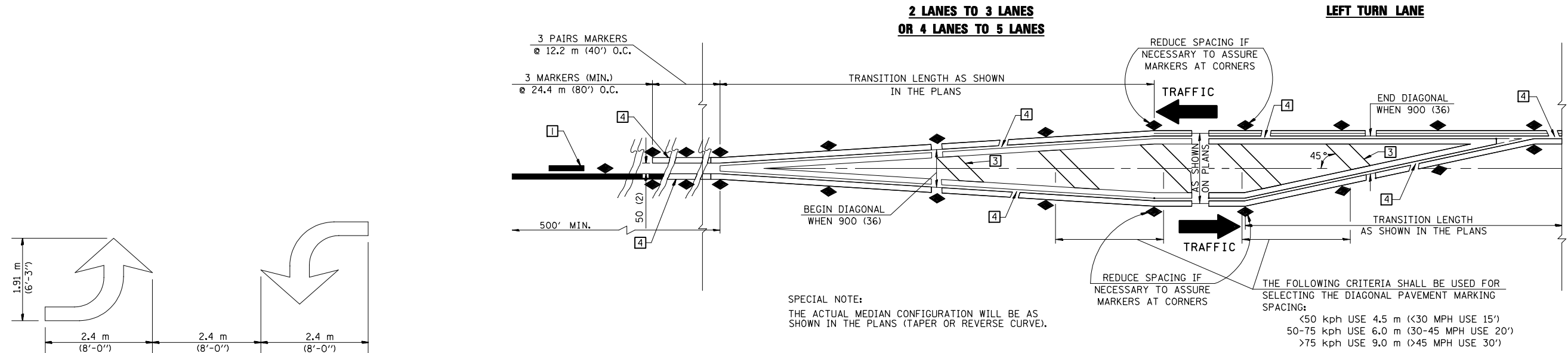
TYPICAL APPLICATION OF PAVEMENT MARKINGS AND MARKERS

F.A.I. ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

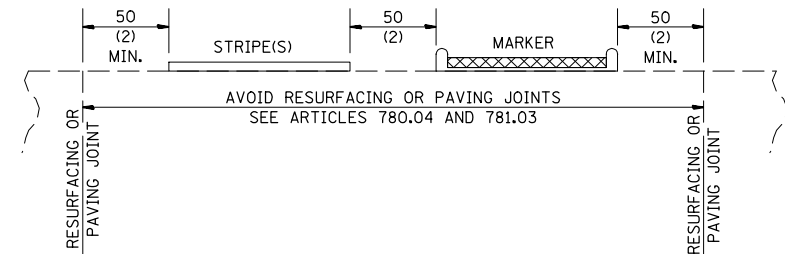
JOB #: 2114.1
FILE: 21141PVM TM
DATE: 1/10/06

TYPICAL APPLICATIONS OF PAVEMENT MARKINGS AND MARKERS

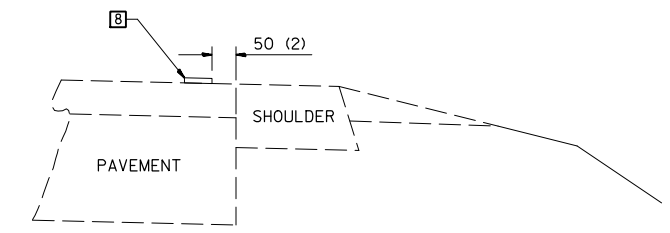


TYPICAL DOUBLE TURN ARROWS (WHITE)

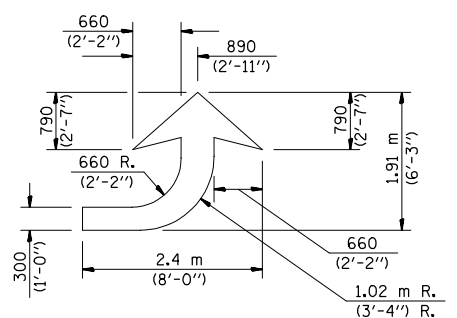
TYPICAL MEDIAN TRANSITIONS



RELATIONSHIP OF STRIPES, MARKERS AND JOINTS



RELATIONSHIP OF EDGE STRIPE TO SAFETY SHOULDER OR PAVED SURFACE



LEFT ARROW
REVERSE FOR RIGHT ARROW
AREA= 1.47 m² (15.6 SQ. FT.)
(WHITE)

GENERAL NOTES

- WHEN MEDIANS ARE PRESENT PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
- SCALE: NONE
- SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
- PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
- A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
- FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
- THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
< 50 kph USE 4.5 m (< 30 MPH USE 15')
50-75 kph USE 6.0 m (30-45 MPH USE 20')
> 75 kph USE 9.0 m (> 45 MPH USE 30')

All dimensions are in millimeters (inches) unless otherwise shown.

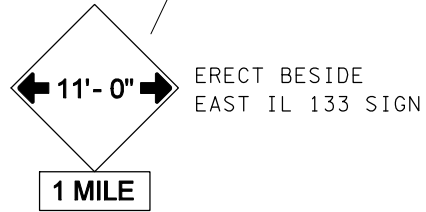
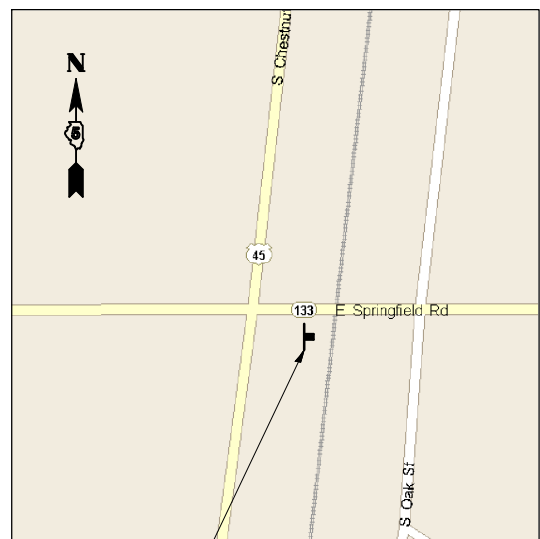
TYPICAL APPLICATION OF PAVEMENT MARKINGS AND MARKERS

F.A.I. ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY
S.N. 021-0024

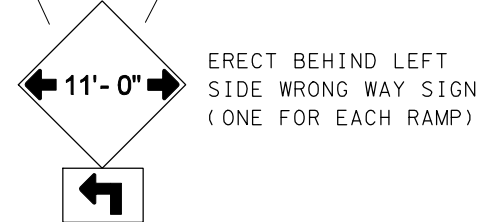
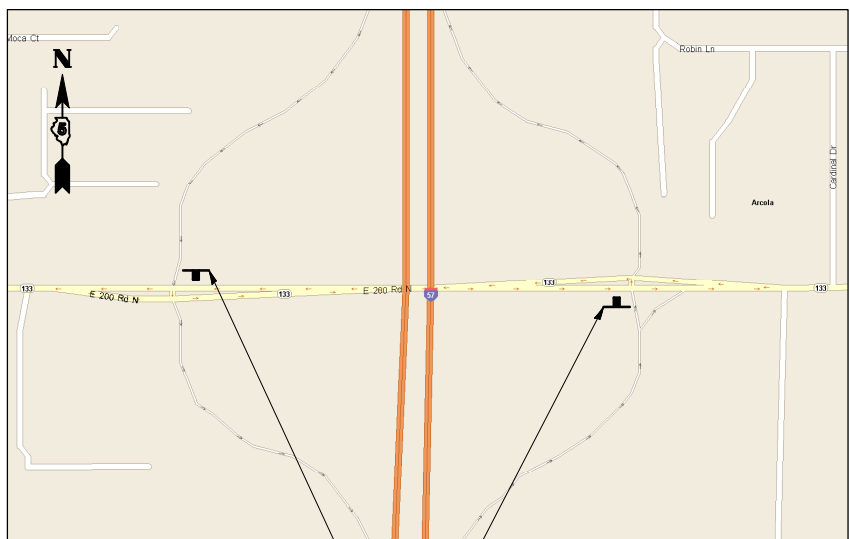
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	DOUGLAS	65	36A
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
•(15, 21-25HB-2)BR				
CONTRACT NO. 90952				



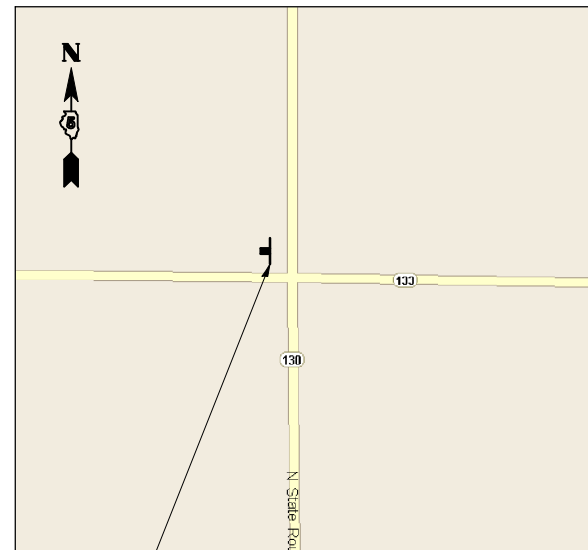
LOCATION A



LOCATION B

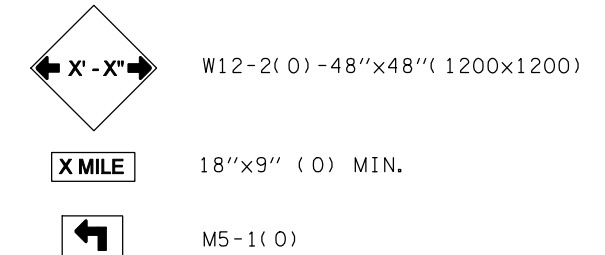


LOCATION C



GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
3. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
4. ALL SIGNS SHALL BE POST MOUNTED AT LEAST 5 FOOT ABOVE THE GROUND (MEASURED TO THE BOTTOM OF THE PANEL) UNLESS OTHERWISE DIRECTED.
5. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.



WIDTH RESTRICTION SIGNING DETAILS

FAI ROUTE 57
SECTION (15, 21-25HB-2)BR
DOUGLAS COUNTY

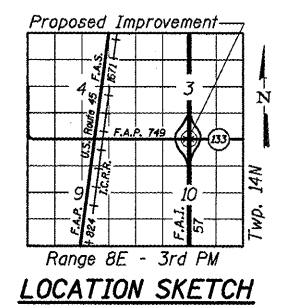
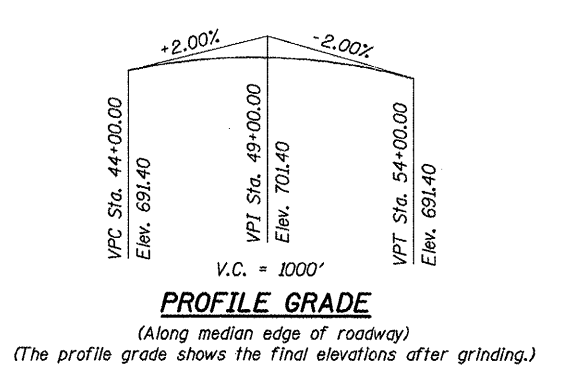
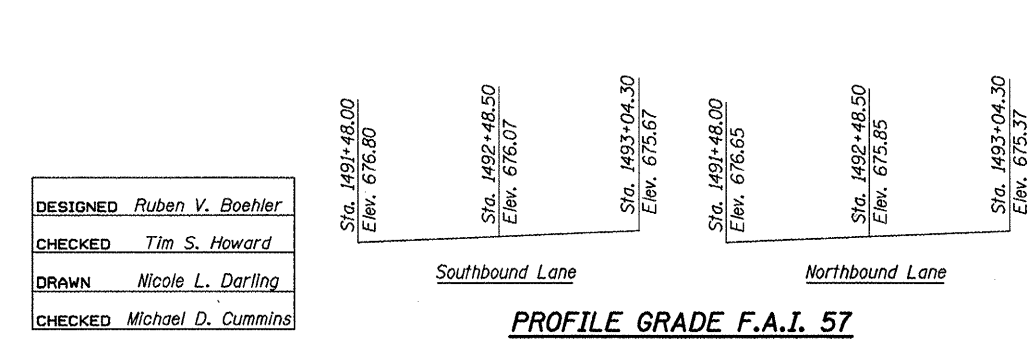
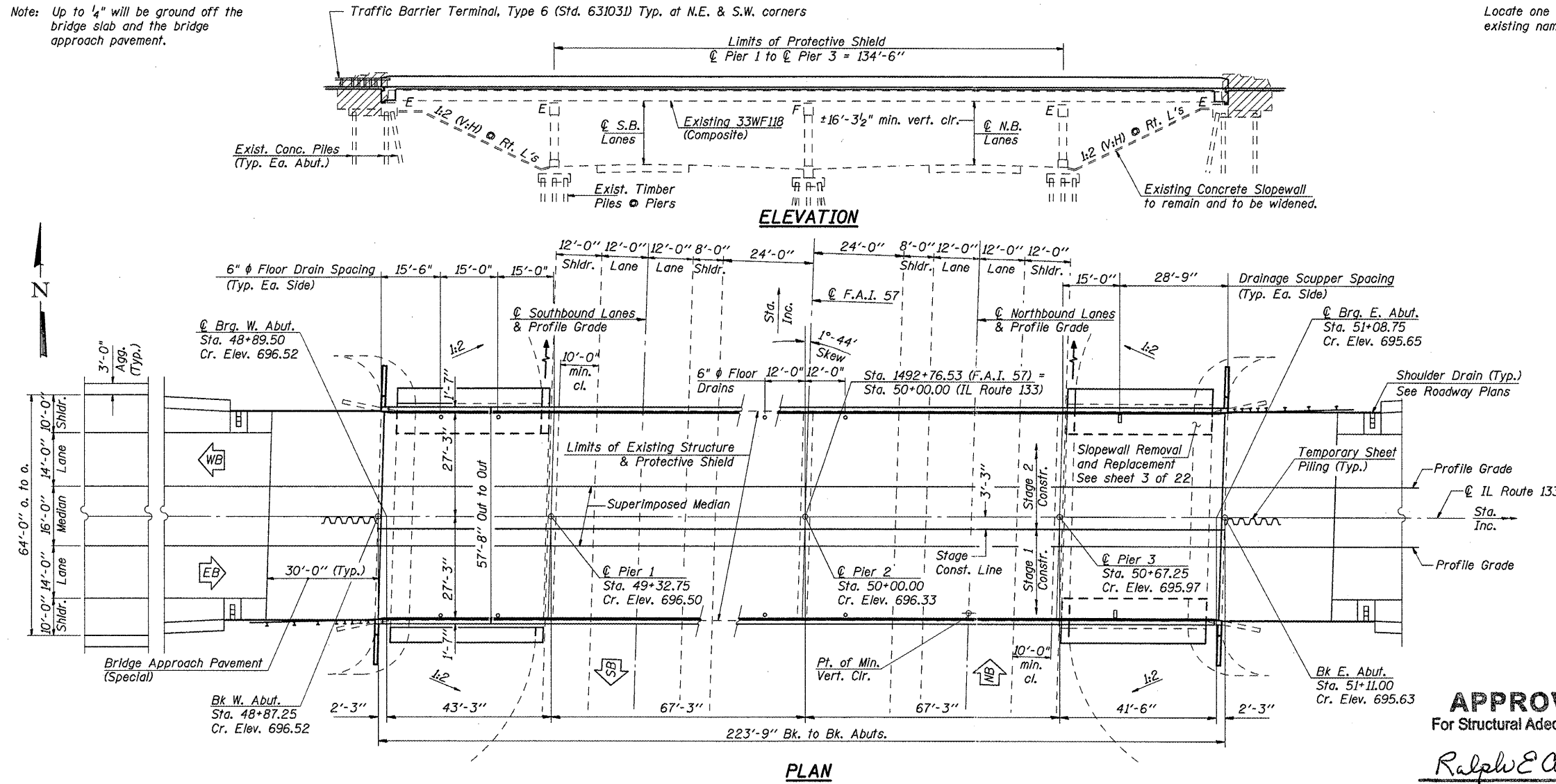
B.M. #4343-1 Chiseled Square on the Northwest Corner of the Southwest Wingwall of the bridge Elev. 698.155

Existing Structure: S.N. 021-0024, Built In 1968 as Section 21-25HB-2 at Station 1492+76.53 (1-57). The existing structure is a Four Span Continuous Wide Flange Beam Bridge supporting a R.C. Slab on multiple column hammerhead piers on timber piles and pile bent abutments on concrete piles. Overall length is 223'-9" back to back of abutments. Bridge width is 55'-8" out to out of deck with two 18'-3" traffic lanes and a 16'-0" median measured face to face. The existing deck has a 1 1/4" bituminous surface overlay with waterproofing membrane. The contractor will remove and replace the existing concrete deck and complete other work as shown in these plans.

Traffic shall be maintained at all times utilizing Stage Construction.

No Salvage.

Note: Up to 1/4" will be ground off the bridge slab and the bridge approach pavement.



APPROVED
For Structural Adequacy Only
Ralph E. Anderson (TSP)
Engineer of Bridges & Structures
Michael D. Cummins (2-11-09)
(Expires 11/30/2010)

STATION 1492+76.53
REBUILT 200 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (15,21-25HB-2)BR
LOADING HS20
STR. NO. 021-0024

LETTERING FOR NAME PLATES
See Std. 515001
Locate one new name plate adjacent to each existing name plate on Pier 1 and Pier 3.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	37
FED. ROAD DIST. NO. 5	ILLINOIS	PROJECT		
Sheet 1 of 22			CONTRACT #90952	

- INDEX OF SHEETS**
1. General Plan and Elevation
 2. General Notes and Total Bill of Material
 3. Slopewall Details
 4. Stage Construction Details
 - 5-7. Top of Slab Elevations
 8. Superstructure
 9. Superstructure Details
 10. Diaphragm Details
 11. Median Details
 12. Drainage Scupper, DS-11
 - 13-14. Structural Steel
 15. Bearing Details
 16. Abutment Concrete Removal Details
 17. West Abutment
 18. East Abutment
 19. Abutment Details
 20. Bar Splicer Assembly Details
 21. Anchor Bolt Details
 22. Temporary Concrete Barrier Details

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.050
Site Coefficient (S) = 1.5

DESIGN SPECIFICATIONS
2002 AASHTO
LOADING HS20-44
Allow 50#/Sq. Ft. for future wearing surface

DESIGN STRESSES
New Construction
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
Existing Structure
 $f'_c = 1,400$ psi
 $f_s = 20,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (Structural Steel A-36)

GENERAL PLAN & ELEVATION

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

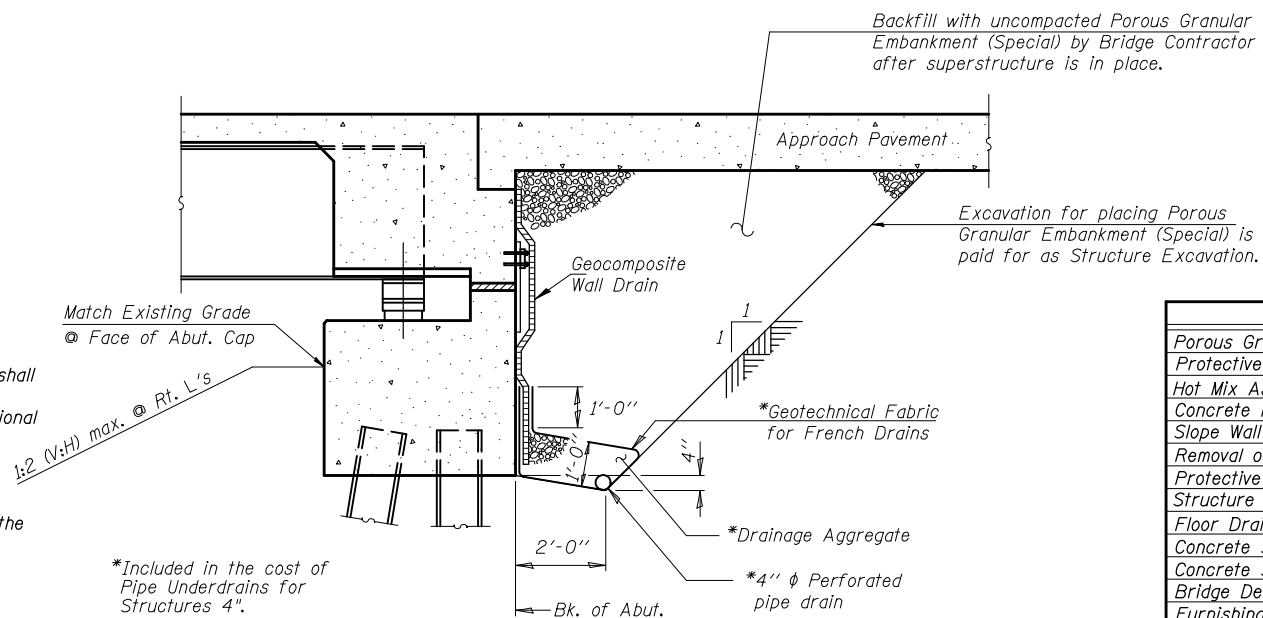
CUMMINS ENGINEERING CORPORATION
JOB #: 2114
FILE: 2114GPE
DATE: 10/24/06

GENERAL NOTES

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{7}{8}$ " ϕ , unless otherwise noted.
- No field welding is permitted except as specified in the contract documents.
- All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300, Type 1.
- Reinforcement bars designated (E) shall be epoxy coated.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions
- Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity actually furnished based on the unit price bid for the work.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearing.

Two $\frac{1}{8}$ " adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

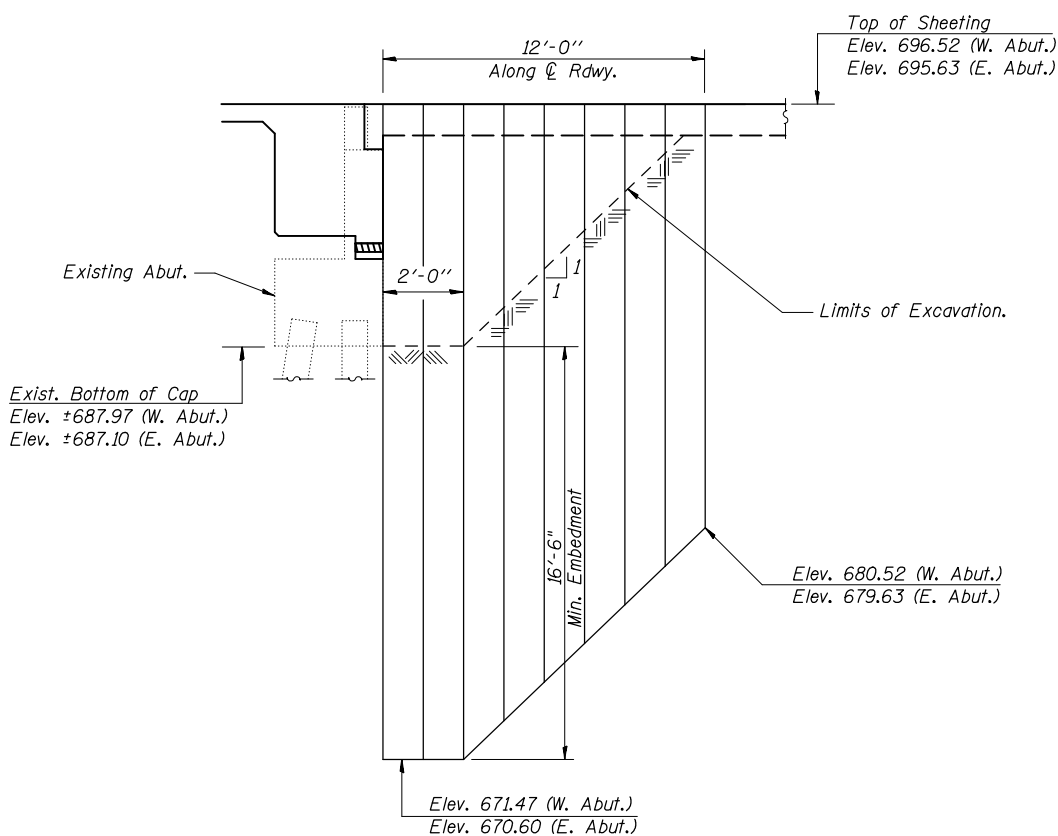
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by an individual acceptable to the Engineer. Any cracks that can not be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing weld accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Cleaning and field painting of structural steel shall be done under a separate painting contract.
- Existing structural steel shall only be cleaned and painted as required by the special provision Cleaning and Painting Contact Surface Areas of Existing Steel Structures.
- The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.
- Partial depth saw cutting of the existing concrete deck over the top of beam or girder flanges shall be permitted. See Special Provision for Removal of Existing Non-Composite Bridge Decks.
- Slipforming of the concrete parapets is not allowed.



SECTION THRU SEMI-INTEGRAL ABUTMENT

(Dimensions at Rt. L's)

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).



TEMPORARY SHEET PILING AT ABUTMENTS

Dimensions at Rt. L's unless noted otherwise

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		282	282
Protective Coat	Sq. Yd.	1557		1557
Hot Mix Asphalt Surface Removal (Deck)	Sq. Yd.	452		452
Concrete Removal	Cu. Yd.		46.9	46.9
Slope Wall Removal	Sq. Yd.		132	132
Removal of Existing Concrete Deck	Each	1		1
Protective Shield	Sq. Yd.	832		832
Structure Excavation	Cu. Yd.		311	311
Floor Drains	Each	8		8
Concrete Structures	Cu. Yd.		11.8	11.8
Concrete Superstructure	Cu. Yd.	487.9		487.9
Bridge Deck Grooving	Sq. Yd.	654		654
Furnishing and Erecting Structural Steel	Pound	3530		3530
Stud Shear Connectors	Each	4995		4995
Jack and Remove Existing Bearings	Each	18		18
Reinforcement Bars, Epoxy Coated	Pound	103,485	1,610	105,095
Bar Splicers	Each	784	4	788
Slope Wall 4"	Sq. Yd.		200	200
Temporary Sheet Piling	Sq. Ft.		519	519
Name Plates	Each		2	2
Elastomeric Bearing Assembly, Type I	Each	18		18
Geocomposite Wall Drain	Sq. Yd.		112	112
Pipe Underdrain for Structures 4"	Foot		190	190
Polymer Concrete	Cu. Ft.	2.2		2.2
Drainage Scuppers, DS-11	Each	2		2
** Diamond Grinding (Bridge Section)	Sq. Yd.	997		997
Anchor Bolts, 1"	Each	36		36

** Quantity includes bridge deck and approach pavements. See Special Provision.

TEMPORARY SHEET PILING DATA

Minimum Section Modulus = 13.5 in³/ft
Embedment Tip Elevation = Refer to Detail
Length Required = Refer to Detail

Note: If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

NOTE

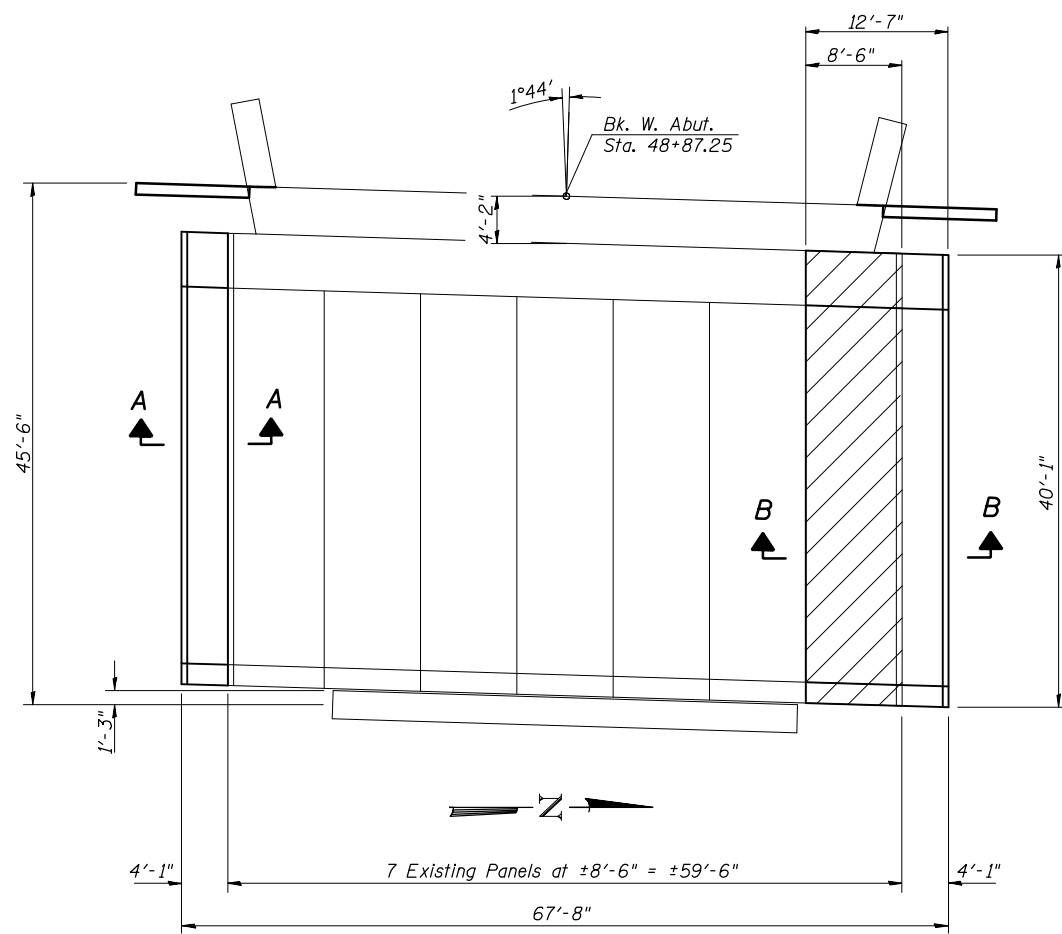
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.47 feet to match benchmark datum.

GENERAL NOTES, DETAILS & TOTAL BILL OF MATERIAL

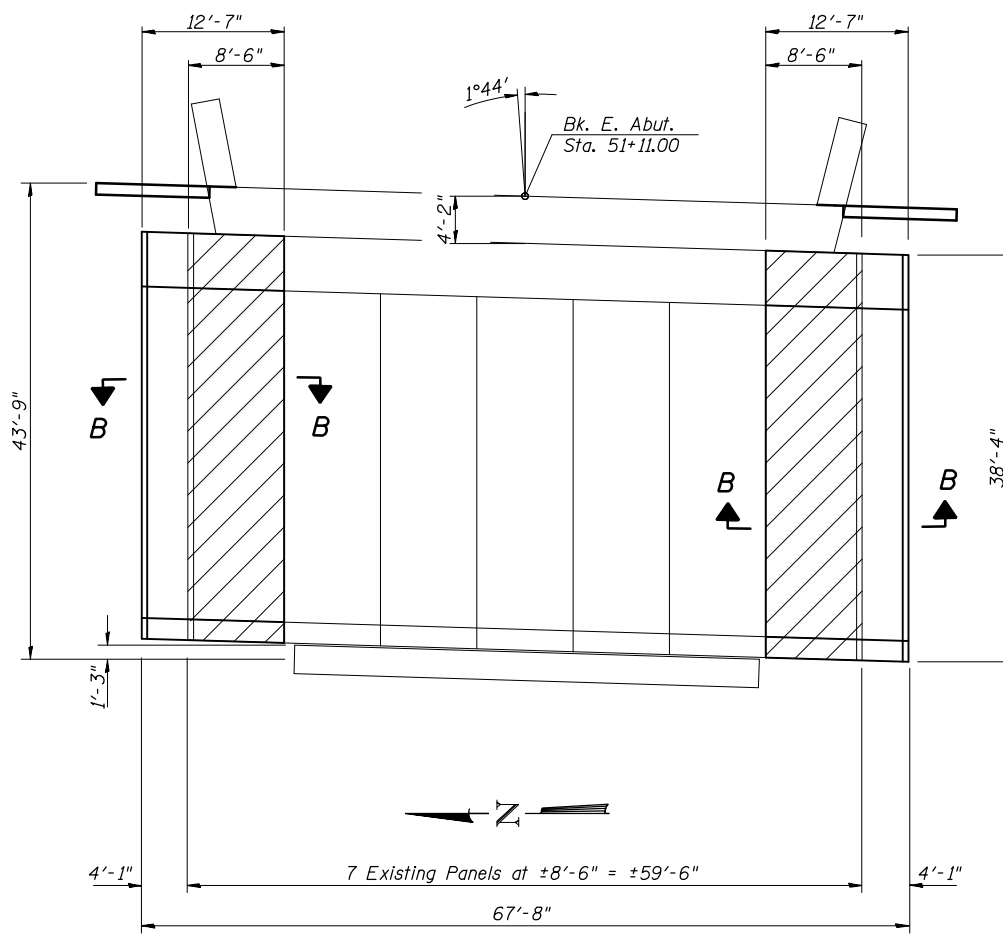
IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

JOB #: 2114
FILE: 2114BILLMAT
DATE: 10/24/06



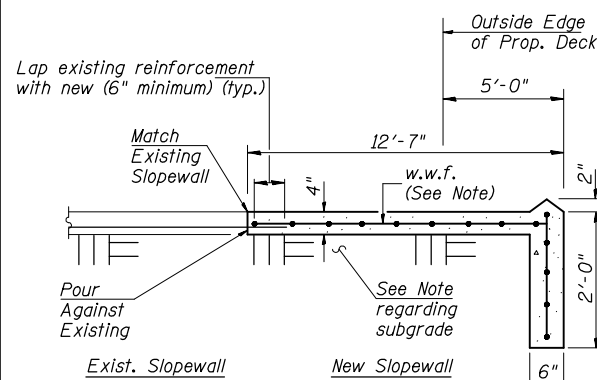
WEST SLOPE WALL PLAN



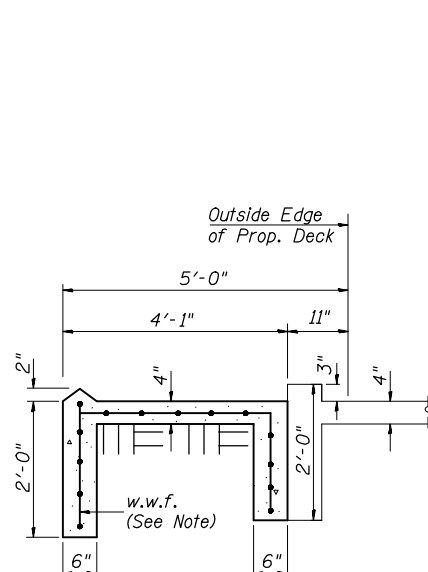
EAST SLOPE WALL PLAN

BILL OF MATERIAL

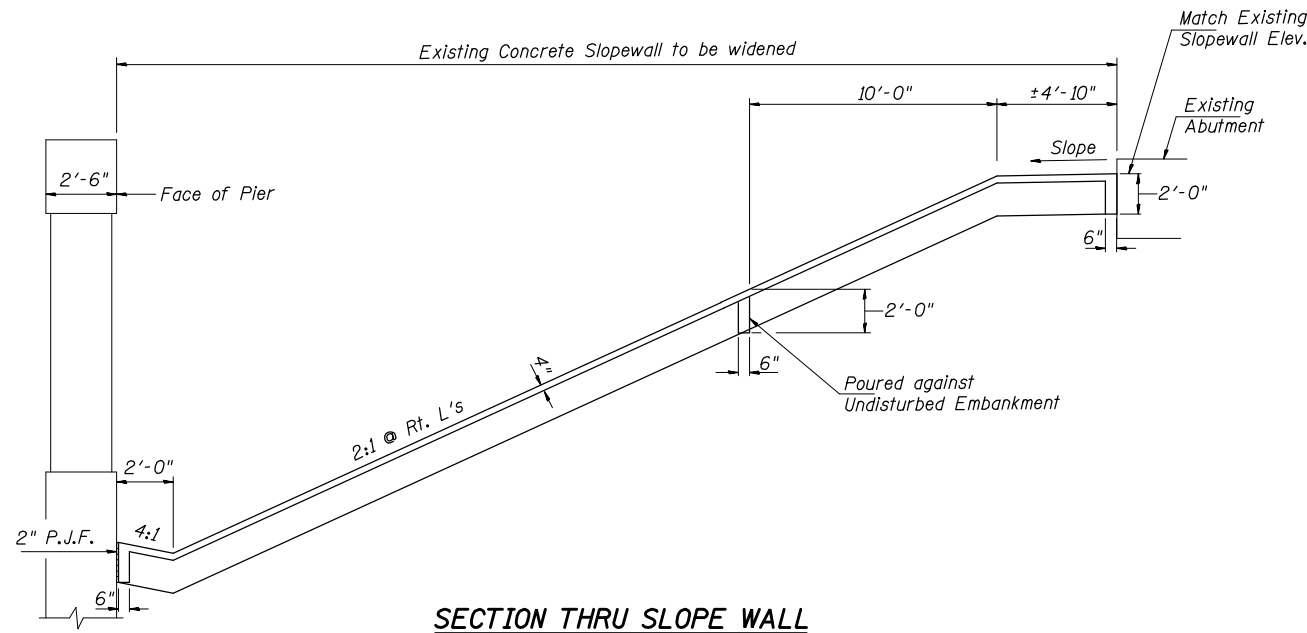
Item	Unit	Total
Slope Wall 4"	Sq. Yd.	200
Slope Wall Removal	Sq. Yd.	132



SECTION B-B



SECTION A-A



SECTION THRU SLOPE WALL

Dimensions @ Rt. L's

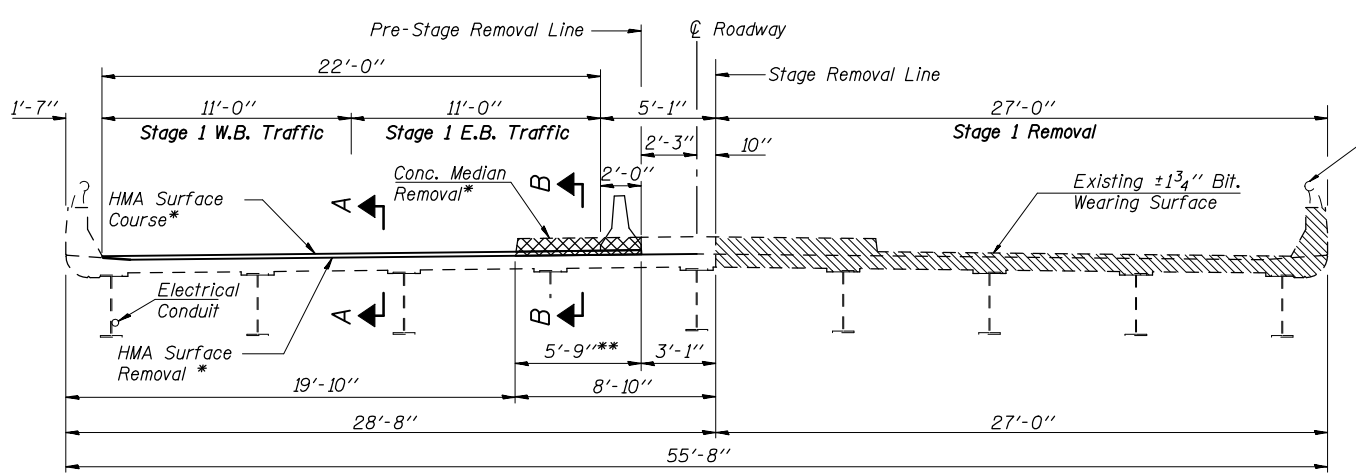
Notes: Hatched areas indicate areas of existing concrete slope wall to be removed.
Slope wall shall be reinforced with welded wire fabric.
6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
The cost of furnishing and placing any additional subgrade material necessary for grading beneath slope wall is included in the unit cost of Slope Wall 4".

DESIGNED Ruben V. Boehler
CHECKED Tim S. Howard
DRAWN Nicole L. Darling
CHECKED Michael D. Cummins

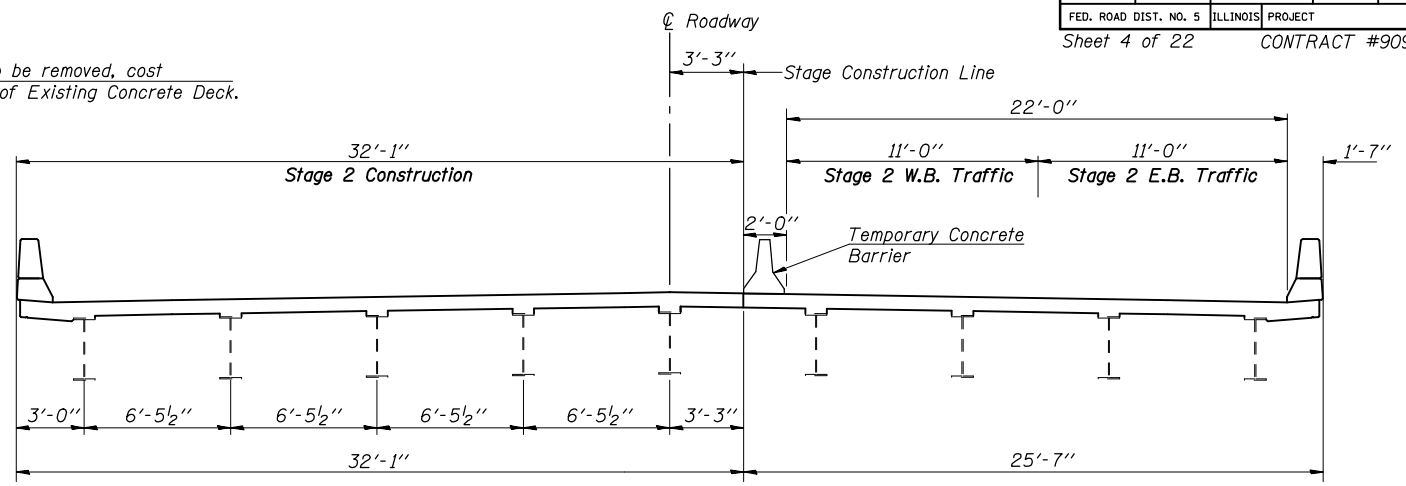
SLOPEWALL DETAILS

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
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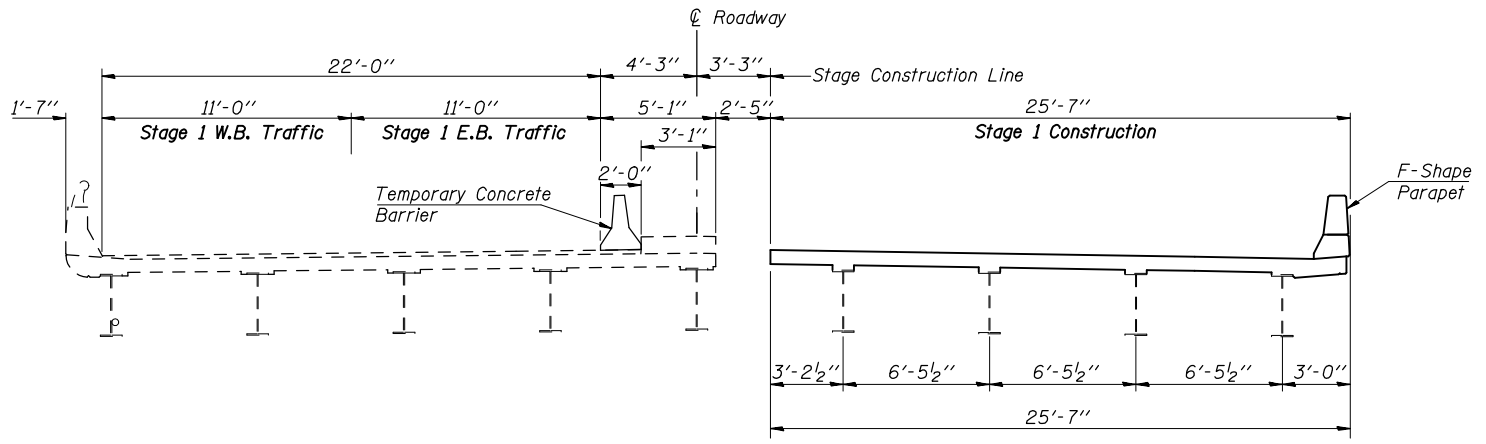
CUMMINS ENGINEERING CORPORATION
JOB #: 2114
FILE: 2114SLOPE
DATE: 10/24/06



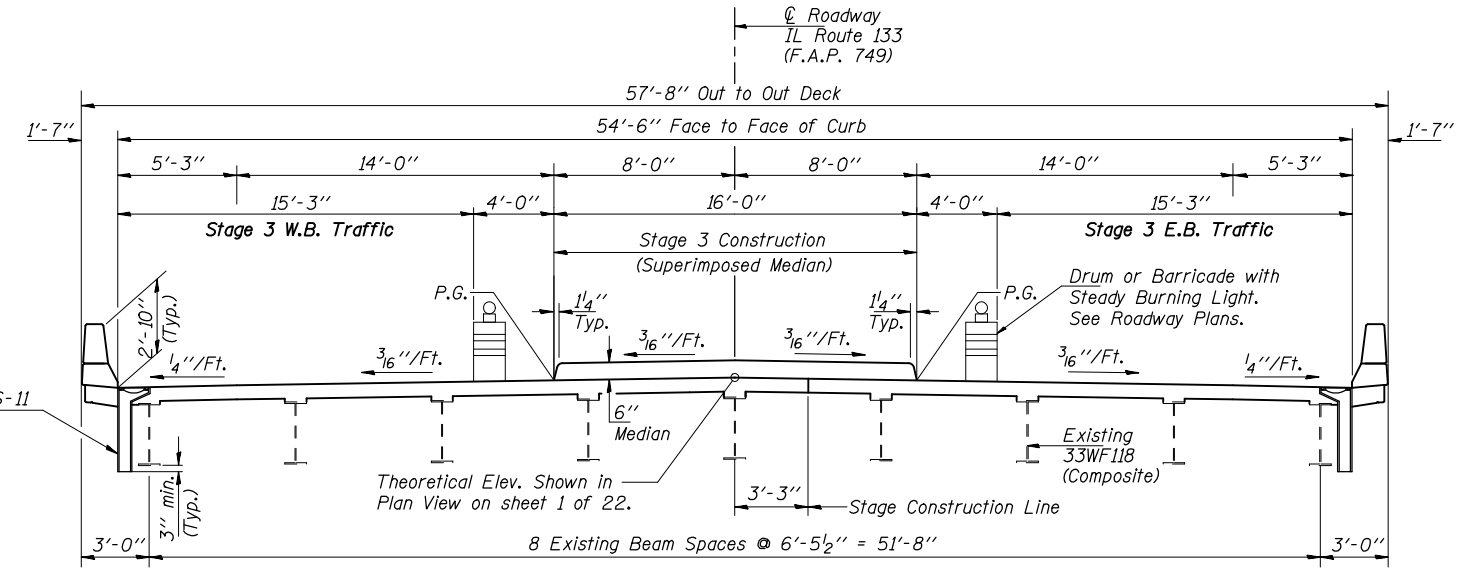
STAGE 1 REMOVAL
(Looking East)



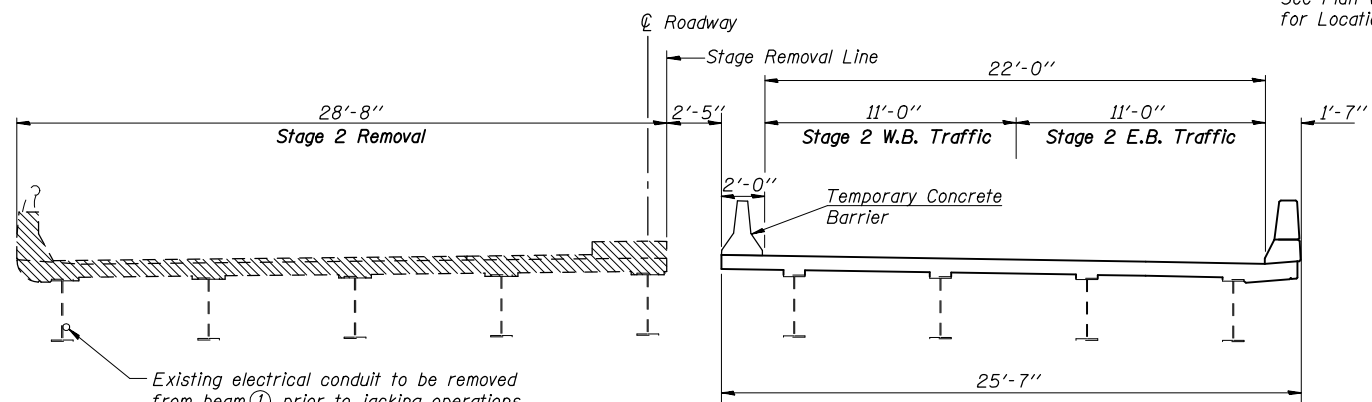
STAGE 2 CONSTRUCTION
(Looking East)



STAGE 1 CONSTRUCTION
(Looking East)



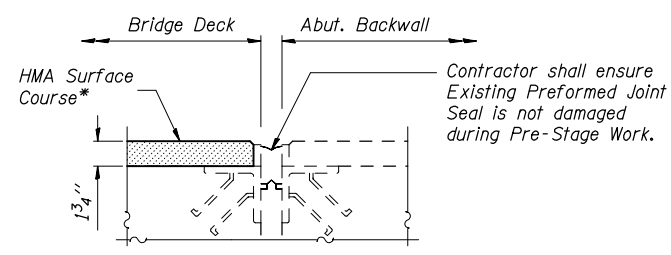
STAGE 3 CONSTRUCTION
(Looking East)



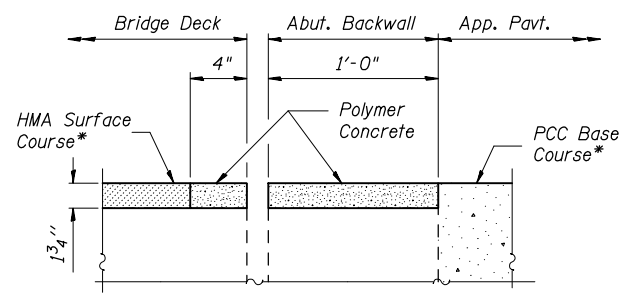
STAGE 2 REMOVAL
(Looking East)

Drainage Scupper DS-11 or 6" Ø Floor Drain See Plan View for Locations

Existing electrical conduit to be removed from beam ① prior to jacking operations. See Roadway Plans.



SECTION A-A
(East Abutment Shown, West Abutment Similar)



SECTION B-B
(After Concrete Median Has Been Removed, East Abutment Shown, West Abutment Similar)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
HMA Surface Removal (Deck)	Sq. Yd.	452
Polymer Concrete	Cu. Ft.	2.2

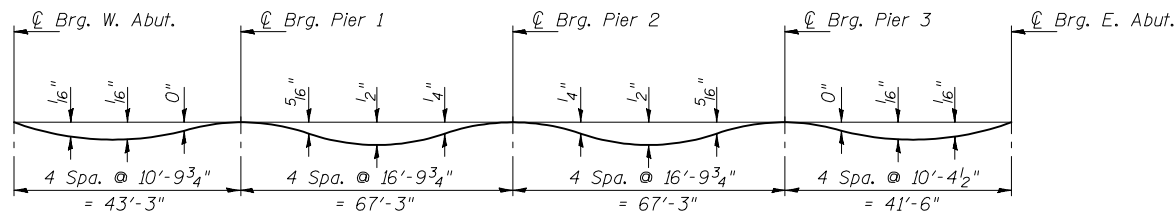
Notes: Hatched areas indicate Removal of Existing Concrete Deck. For details of Temporary Concrete Barrier, see sheet 22 of 22. See Roadway Plans for quantity of Temporary Concrete Barrier, HMA Surface Course and PCC Base Course.

STAGE CONSTRUCTION DETAILS

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
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DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
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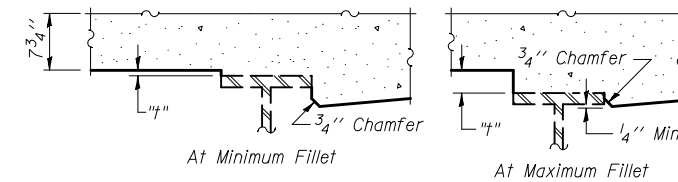
*Prior to Stage 1 Removal. Cost of Concrete Median Removal is included with Removal of Existing Concrete Deck.
**Limits of Conc. Median Removal and Polymer Concrete.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

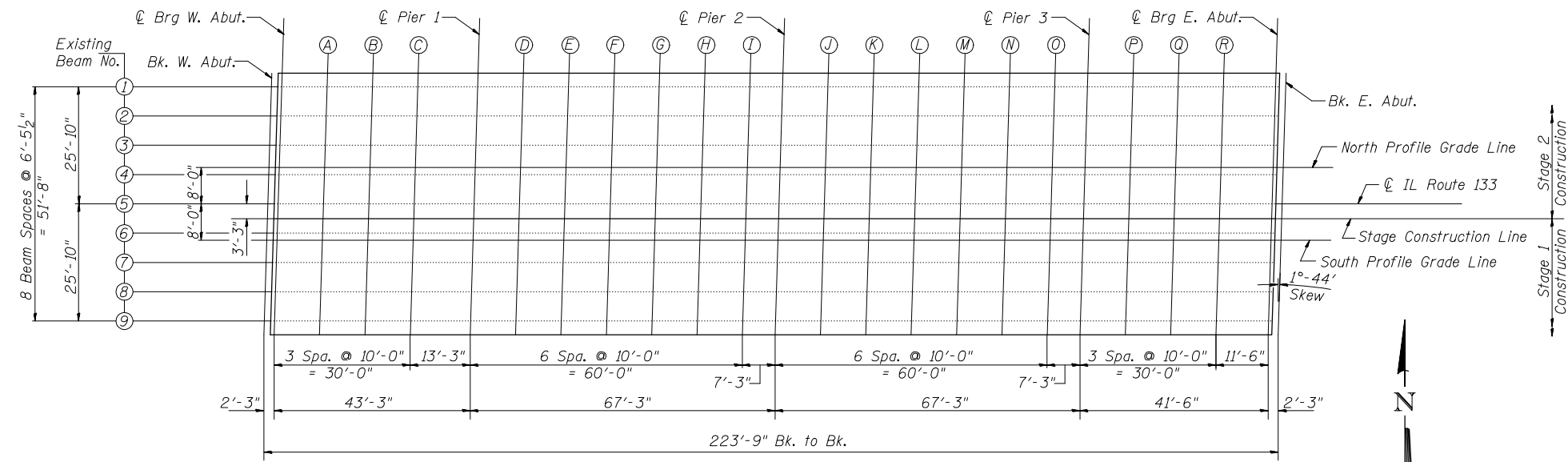
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown below and on sheet 6 of 22.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheets 5 and 6 of 22. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheets 5 and 6 of 22, minus the 7/8" slab thickness, equals the fillet heights "t" above top flange of beams. The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 5 and 6 of 22. For deck grinding, see Special Provisions.

FILLET HEIGHTS

BEAM 1					BEAM 2					BEAM 3					NORTH PROFILE GRADE LINE				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4888.032	-25.833	696.099	696.120	Bk. W. Abut.	4887.836	-19.375	696.219	696.240	Bk. W. Abut.	4887.641	-12.916	696.320	696.341	Bk. W. Abut.	4887.492	-8.000	696.397	696.418
⊕ Brg. W. Abut.	4890.282	-25.833	696.100	696.121	⊕ Brg. W. Abut.	4890.086	-19.375	696.220	696.241	⊕ Brg. W. Abut.	4889.891	-12.916	696.321	696.342	⊕ Brg. W. Abut.	4889.742	-8.000	696.398	696.419
A	4900.282	-25.833	696.101	696.127	A	4900.086	-19.375	696.222	696.248	A	4899.891	-12.916	696.323	696.349	A	4899.742	-8.000	696.400	696.426
B	4910.282	-25.833	696.099	696.126	B	4910.086	-19.375	696.220	696.246	B	4909.891	-12.916	696.321	696.347	B	4909.742	-8.000	696.398	696.424
C	4920.282	-25.833	696.093	696.115	C	4920.086	-19.375	696.214	696.236	C	4919.891	-12.916	696.315	696.337	C	4919.742	-8.000	696.392	696.414
⊕ Pier 1	4933.532	-25.833	696.079	696.100	⊕ Pier 1	4933.336	-19.375	696.200	696.221	⊕ Pier 1	4933.141	-12.916	696.301	696.322	⊕ Pier 1	4932.992	-8.000	696.378	696.399
D	4943.532	-25.833	696.064	696.100	D	4943.336	-19.375	696.185	696.221	D	4943.141	-12.916	696.286	696.322	D	4942.992	-8.000	696.363	696.400
E	4953.532	-25.833	696.044	696.094	E	4953.336	-19.375	696.165	696.215	E	4953.141	-12.916	696.267	696.317	E	4952.992	-8.000	696.344	696.394
F	4963.532	-25.833	696.021	696.080	F	4963.336	-19.375	696.142	696.201	F	4963.141	-12.916	696.243	696.303	F	4962.992	-8.000	696.321	696.380
G	4973.532	-25.833	695.993	696.048	G	4973.336	-19.375	696.115	696.169	G	4973.141	-12.916	696.216	696.271	G	4972.992	-8.000	696.293	696.348
H	4983.532	-25.833	695.962	696.004	H	4983.336	-19.375	696.083	696.126	H	4983.141	-12.916	696.185	696.227	H	4982.992	-8.000	696.262	696.305
I	4993.532	-25.833	695.927	695.956	I	4993.336	-19.375	696.048	696.078	I	4993.141	-12.916	696.150	696.180	I	4992.992	-8.000	696.227	696.257
⊕ Pier 2	5000.782	-25.833	695.898	695.919	⊕ Pier 2	5000.586	-19.375	696.020	696.041	⊕ Pier 2	5000.391	-12.916	696.122	696.143	⊕ Pier 2	5000.242	-8.000	696.199	696.220
J	5010.782	-25.833	695.856	695.889	J	5010.586	-19.375	695.978	696.011	J	5010.391	-12.916	696.079	696.113	J	5010.242	-8.000	696.157	696.190
K	5020.782	-25.833	695.810	695.855	K	5020.586	-19.375	695.931	695.977	K	5020.391	-12.916	696.033	696.079	K	5020.242	-8.000	696.111	696.157
L	5030.782	-25.833	695.759	695.818	L	5030.586	-19.375	695.881	695.939	L	5030.391	-12.916	695.983	696.041	L	5030.242	-8.000	696.061	696.119
M	5040.782	-25.833	695.705	695.762	M	5040.586	-19.375	695.827	695.884	M	5040.391	-12.916	695.929	695.986	M	5040.242	-8.000	696.007	696.063
N	5050.782	-25.833	695.647	695.694	N	5050.586	-19.375	695.769	695.816	N	5050.391	-12.916	695.871	695.918	N	5050.242	-8.000	695.949	695.996
O	5060.782	-25.833	695.584	695.617	O	5060.586	-19.375	695.706	695.739	O	5060.391	-12.916	695.809	695.841	O	5060.242	-8.000	695.886	695.919
⊕ Pier 3	5068.032	-25.833	695.537	695.558	⊕ Pier 3	5067.836	-19.375	695.659	695.680	⊕ Pier 3	5067.641	-12.916	695.761	695.782	⊕ Pier 3	5067.492	-8.000	695.839	695.860
P	5078.032	-25.833	695.468	695.489	P	5077.836	-19.375	695.590	695.611	P	5077.641	-12.916	695.692	695.713	P	5077.492	-8.000	695.770	695.791
Q	5088.032	-25.833	695.394	695.420	Q	5087.836	-19.375	695.517	695.542	Q	5087.641	-12.916	695.619	695.645	Q	5087.492	-8.000	695.697	695.723
R	5098.032	-25.833	695.317	695.343	R	5097.836	-19.375	695.439	695.466	R	5097.641	-12.916	695.542	695.568	R	5097.492	-8.000	695.620	695.646
⊕ Brg. E. Abut.	5109.532	-25.833	695.223	695.244	⊕ Brg. E. Abut.	5109.336	-19.375	695.346	695.367	⊕ Brg. E. Abut.	5109.141	-12.916	695.448	695.469	⊕ Brg. E. Abut.	5108.992	-8.000	695.526	695.547
Bk. E. Abut.	5111.782	-25.833	695.204	695.225	Bk. E. Abut.	5111.586	-19.375	695.327	695.348	Bk. E. Abut.	5111.391	-12.916	695.429	695.450	Bk. E. Abut.	5111.242	-8.000	695.508	695.529



PLAN

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

Work this sheet with sheet 6 of 22.

TOP OF SLAB ELEVATIONS

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION	JOB #: 2114
	FILE: 2114SLAB
	DATE: 10/24/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	42
FED. ROAD DIST. NO. 5		ILLINOIS PROJECT		

Sheet 6 of 22 CONTRACT #90952

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4887.445	-6.458	696.421	696.442
⊕ Brg. W. Abut.	4889.695	-6.458	696.422	696.443
A	4899.695	-6.458	696.424	696.450
B	4909.695	-6.458	696.422	696.448
C	4919.695	-6.458	696.416	696.439
⊕ Pier 1	4932.945	-6.458	696.402	696.423
D	4942.945	-6.458	696.387	696.424
E	4952.945	-6.458	696.368	696.418
F	4962.945	-6.458	696.345	696.404
G	4972.945	-6.458	696.318	696.372
H	4982.945	-6.458	696.286	696.329
I	4992.945	-6.458	696.251	696.281
⊕ Pier 2	5000.195	-6.458	696.223	696.244
J	5010.195	-6.458	696.181	696.215
K	5020.195	-6.458	696.135	696.181
L	5030.195	-6.458	696.085	696.143
M	5040.195	-6.458	696.031	696.088
N	5050.195	-6.458	695.973	696.020
O	5060.195	-6.458	695.911	695.943
⊕ Pier 3	5067.445	-6.458	695.863	695.884
P	5077.445	-6.458	695.794	695.815
Q	5087.445	-6.458	695.721	695.747
R	5097.445	-6.458	695.644	695.671
⊕ Brg. E. Abut.	5108.945	-6.458	695.551	695.572
Bk. E. Abut.	5111.195	-6.458	695.532	695.553

ROADWAY & BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4887.250	0.000	696.522	696.543
⊕ Brg. W. Abut.	4889.500	0.000	696.523	696.544
A	4899.500	0.000	696.525	696.551
B	4909.500	0.000	696.523	696.549
C	4919.500	0.000	696.517	696.540
⊕ Pier 1	4932.750	0.000	696.504	696.525
D	4942.750	0.000	696.488	696.525
E	4952.750	0.000	696.469	696.519
F	4962.750	0.000	696.446	696.506
G	4972.750	0.000	696.419	696.474
H	4982.750	0.000	696.388	696.430
I	4992.750	0.000	696.353	696.383
⊕ Pier 2	5000.000	0.000	696.325	696.346
J	5010.000	0.000	696.283	696.316
K	5020.000	0.000	696.237	696.283
L	5030.000	0.000	696.187	696.245
M	5040.000	0.000	696.133	696.190
N	5050.000	0.000	696.075	696.122
O	5060.000	0.000	696.013	696.045
⊕ Pier 3	5067.250	0.000	695.966	695.987
P	5077.250	0.000	695.897	695.918
Q	5087.250	0.000	695.824	695.850
R	5097.250	0.000	695.747	695.773
⊕ Brg. E. Abut.	5108.750	0.000	695.653	695.674
Bk. E. Abut.	5111.000	0.000	695.635	695.656

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4887.152	3.250	696.471	696.492
⊕ Brg. W. Abut.	4889.402	3.250	696.472	696.493
A	4899.402	3.250	696.474	696.500
B	4909.402	3.250	696.472	696.499
C	4919.402	3.250	696.467	696.489
⊕ Pier 1	4932.652	3.250	696.453	696.474
D	4942.652	3.250	696.438	696.474
E	4952.652	3.250	696.419	696.469
F	4962.652	3.250	696.396	696.455
G	4972.652	3.250	696.369	696.423
H	4982.652	3.250	696.338	696.380
I	4992.652	3.250	696.303	696.333
⊕ Pier 2	4999.902	3.250	696.275	696.296
J	5009.902	3.250	696.233	696.266
K	5019.902	3.250	696.187	696.232
L	5029.902	3.250	696.137	696.195
M	5039.902	3.250	696.083	696.140
N	5049.902	3.250	696.025	696.072
O	5059.902	3.250	695.963	695.995
⊕ Pier 3	5067.152	3.250	695.915	695.936
P	5077.152	3.250	695.847	695.868
Q	5087.152	3.250	695.774	695.800
R	5097.152	3.250	695.697	695.723
⊕ Brg. E. Abut.	5108.652	3.250	695.603	695.624
Bk. E. Abut.	5110.902	3.250	695.585	695.606

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4887.055	6.458	696.421	696.442
⊕ Brg. W. Abut.	4889.305	6.458	696.422	696.443
A	4899.305	6.458	696.424	696.450
B	4909.305	6.458	696.422	696.449
C	4919.305	6.458	696.417	696.439
⊕ Pier 1	4932.555	6.458	696.403	696.424
D	4942.555	6.458	696.388	696.424
E	4952.555	6.458	696.369	696.419
F	4962.555	6.458	696.346	696.405
G	4972.555	6.458	696.319	696.374
H	4982.555	6.458	696.288	696.330
I	4992.555	6.458	696.253	696.283
⊕ Pier 2	4999.805	6.458	696.225	696.246
J	5009.805	6.458	696.183	696.216
K	5019.805	6.458	696.137	696.183
L	5029.805	6.458	696.087	696.145
M	5039.805	6.458	696.033	696.090
N	5049.805	6.458	695.975	696.023
O	5059.805	6.458	695.913	695.946
⊕ Pier 3	5067.055	6.458	695.866	695.887
P	5077.055	6.458	695.797	695.818
Q	5087.055	6.458	695.724	695.750
R	5097.055	6.458	695.647	695.674
⊕ Brg. E. Abut.	5108.555	6.458	695.554	695.575
Bk. E. Abut.	5110.805	6.458	695.535	695.556

SOUTH PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4887.008	8.000	696.397	696.418
⊕ Brg. W. Abut.	4889.258	8.000	696.398	696.419
A	4899.258	8.000	696.400	696.426
B	4909.258	8.000	696.398	696.425
C	4919.258	8.000	696.393	696.415
⊕ Pier 1	4932.508	8.000	696.379	696.400
D	4942.508	8.000	696.364	696.400
E	4952.508	8.000	696.345	696.395
F	4962.508	8.000	696.322	696.381
G	4972.508	8.000	696.295	696.350
H	4982.508	8.000	696.264	696.306
I	4992.508	8.000	696.229	696.259
⊕ Pier 2	4999.758	8.000	696.201	696.222
J	5009.758	8.000	696.159	696.192
K	5019.758	8.000	696.113	696.159
L	5029.758	8.000	696.063	696.121
M	5039.758	8.000	696.009	696.066
N	5049.758	8.000	695.951	695.999
O	5059.758	8.000	695.890	695.922
⊕ Pier 3	5067.008	8.000	695.842	695.863
P	5077.008	8.000	695.773	695.794
Q	5087.008	8.000	695.701	695.726
R	5097.008	8.000	695.624	695.650
⊕ Brg. E. Abut.	5108.508	8.000	695.530	695.551
Bk. E. Abut.	5110.758	8.000	695.512	695.533

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4886.859	12.917	696.320	696.341
⊕ Brg. W. Abut.	4889.109	12.917	696.321	696.342
A	4899.109	12.917	696.323	696.349
B	4909.109	12.917	696.321	696.348
C	4919.109	12.917	696.316	696.338
⊕ Pier 1	4932.359	12.917	696.302	696.323
D	4942.359	12.917	696.287	696.324
E	4952.359	12.917	696.268	696.318
F	4962.359	12.917	696.245	696.305
G	4972.359	12.917	696.218	696.273
H	4982.359	12.917	696.187	696.230
I	4992.359	12.917	696.153	696.183
⊕ Pier 2	4999.609	12.917	696.125	696.146
J	5009.609	12.917	696.083	696.116
K	5019.609	12.917	696.037	696.083
L	5029.609	12.917	695.987	696.045
M	5039.609	12.917	695.933	695.990
N	5049.609	12.917	695.875	695.923
O	5059.609	12.917	695.814	695.846
⊕ Pier 3	5066.859	12.917	695.766	695.787
P	5076.859	12.917	695.698	695.719
Q	5086.859	12.917	695.651	695.625
R	5096.859	12.917	695.548	695.574
⊕ Brg. E. Abut.	5108.359	12.917	695.455	695.476
Bk. E. Abut.	5110.609	12.917	695.436	695.457

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	4886.664	19.375	696.219	696.240
⊕ Brg. W. Abut.	4888.914	19.375	696.220	696.241
A	4898.914	19.375	696.222	696.248
B	4908.914	19.375	696.221	696.247
C	4918.914	19.375	696.215	696.237
⊕ Pier 1	4932.164	19.375	696.202	696.223
D	4942.164	19.375	696.187	696.223
E	4952.164	19.375	696.168	696.218
F	4962.164	19.375	696.145	696.204
G	4972.164	19.375	696.118	696.173
H	4982.164	19.375	696.087	696.130
I	4992.164	19.375	696.052	696.082
⊕ Pier 2	4999.414	19.375	696.025	696.046
J	5009.414	19.375	695.983	696.016
K	5019.414	19.375	695.937	695.983
L	5029.414	19.375	695.887	695.945
M	5039.414	19.375</		

NORTH FACE OF CURB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4858.917	-27.667	696.030	696.051
A	4868.917	-27.667	696.044	696.065
B	4878.917	-27.667	696.054	696.075
End W. App. Pav't	4888.917	-27.667	696.061	696.082
Start E. App. Pav't	5110.997	-27.667	695.173	695.194
C	5120.997	-27.667	695.087	695.108
D	5130.997	-27.667	694.996	695.017
End E. App. Pav't	5140.997	-27.667	694.902	694.923

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4858.746	-22.000	696.147	696.168
A	4868.746	-22.000	696.162	696.183
B	4878.746	-22.000	696.172	696.193
End W. App. Pav't	4888.746	-22.000	696.179	696.200
Start E. App. Pav't	5110.826	-22.000	695.292	695.313
C	5120.826	-22.000	695.206	695.227
D	5130.826	-22.000	695.116	695.137
End E. App. Pav't	5140.826	-22.000	695.021	695.042

NORTH PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4858.322	-8.000	696.365	696.386
A	4868.322	-8.000	696.380	696.401
B	4878.322	-8.000	696.391	696.412
End W. App. Pav't	4888.322	-8.000	696.397	696.418
Start E. App. Pav't	5110.402	-8.000	695.515	695.536
C	5120.402	-8.000	695.428	695.449
D	5130.402	-8.000	695.338	695.359
End E. App. Pav't	5140.402	-8.000	695.244	695.265

CL ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4858.080	0.000	696.490	696.511
A	4868.080	0.000	696.505	696.526
B	4878.080	0.000	696.515	696.536
End W. App. Pav't	4888.080	0.000	696.522	696.543
Start E. App. Pav't	5110.160	0.000	695.642	695.663
C	5120.160	0.000	695.556	695.577
D	5130.160	0.000	695.466	695.487
End E. App. Pav't	5140.160	0.000	695.371	695.392

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4857.982	3.250	696.439	696.460
A	4867.982	3.250	696.454	696.475
B	4877.982	3.250	696.465	696.486
End W. App. Pav't	4887.982	3.250	696.471	696.492
Start E. App. Pav't	5110.062	3.250	695.592	695.613
C	5120.062	3.250	695.506	695.527
D	5130.062	3.250	695.416	695.437
End E. App. Pav't	5140.062	3.250	695.322	695.343

SOUTH PROFILE GRADE LINE

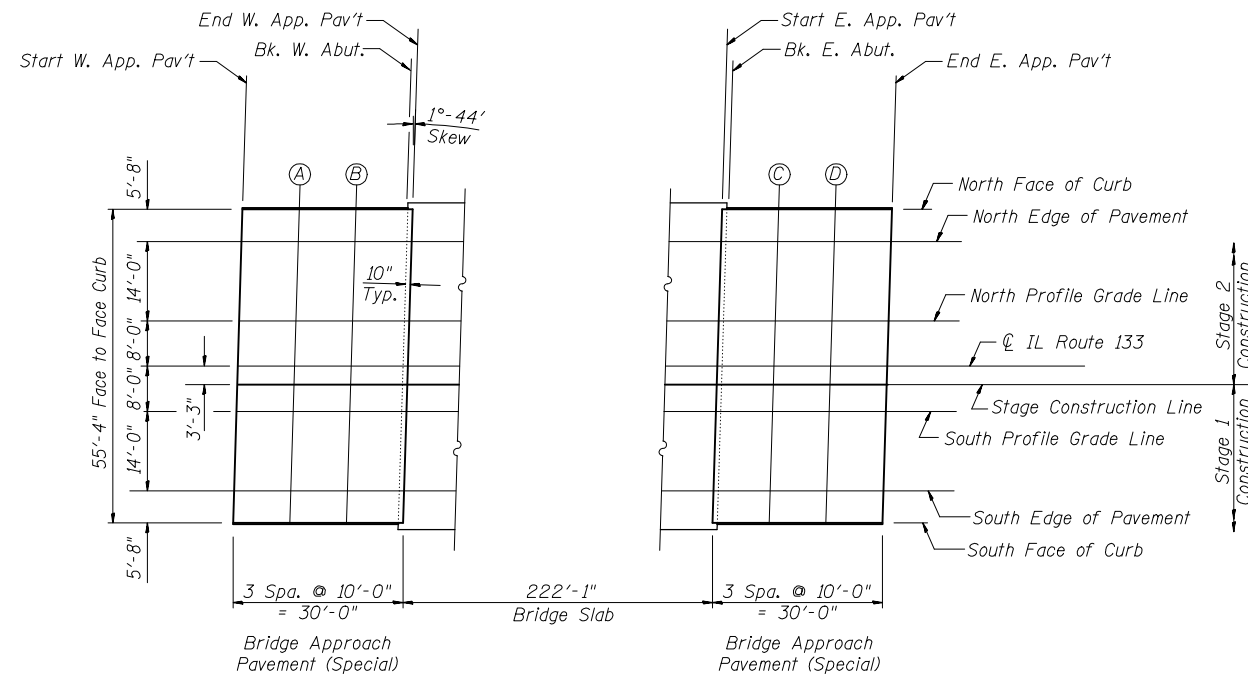
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4857.838	8.000	696.364	696.385
A	4867.838	8.000	696.379	696.400
B	4877.838	8.000	696.390	696.411
End W. App. Pav't	4887.838	8.000	696.397	696.418
Start E. App. Pav't	5109.918	8.000	695.519	695.540
C	5119.918	8.000	695.433	695.454
D	5129.918	8.000	695.343	695.364
End E. App. Pav't	5139.918	8.000	695.249	695.270

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4857.414	-22.000	696.145	696.166
A	4867.414	-22.000	696.160	696.181
B	4877.414	-22.000	696.171	696.192
End W. App. Pav't	4887.414	-22.000	696.178	696.199
Start E. App. Pav't	5109.494	22.000	695.303	695.324
C	5119.494	22.000	695.218	695.239
D	5129.494	22.000	695.128	695.149
End E. App. Pav't	5139.494	22.000	695.034	695.055

SOUTH FACE OF CURB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Start W. App. Pav't	4857.243	27.667	696.027	696.048
A	4867.243	27.667	696.042	696.063
B	4877.243	27.667	696.053	696.074
End W. App. Pav't	4887.243	27.667	696.060	696.081
Start E. App. Pav't	5109.323	27.667	695.187	695.208
C	5119.323	27.667	695.101	695.122
D	5129.323	27.667	695.012	695.033
End E. App. Pav't	5139.323	27.667	694.918	694.939



PLAN

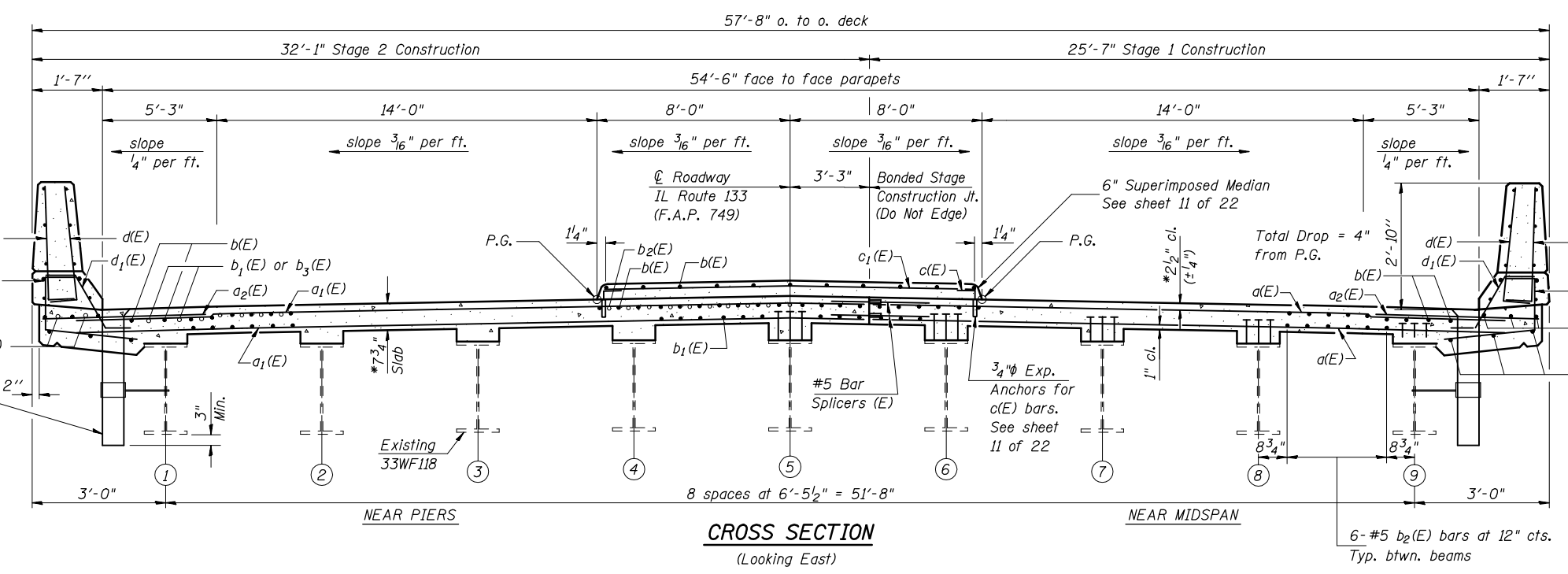
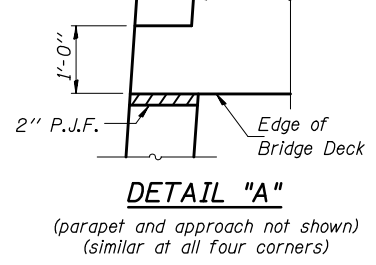
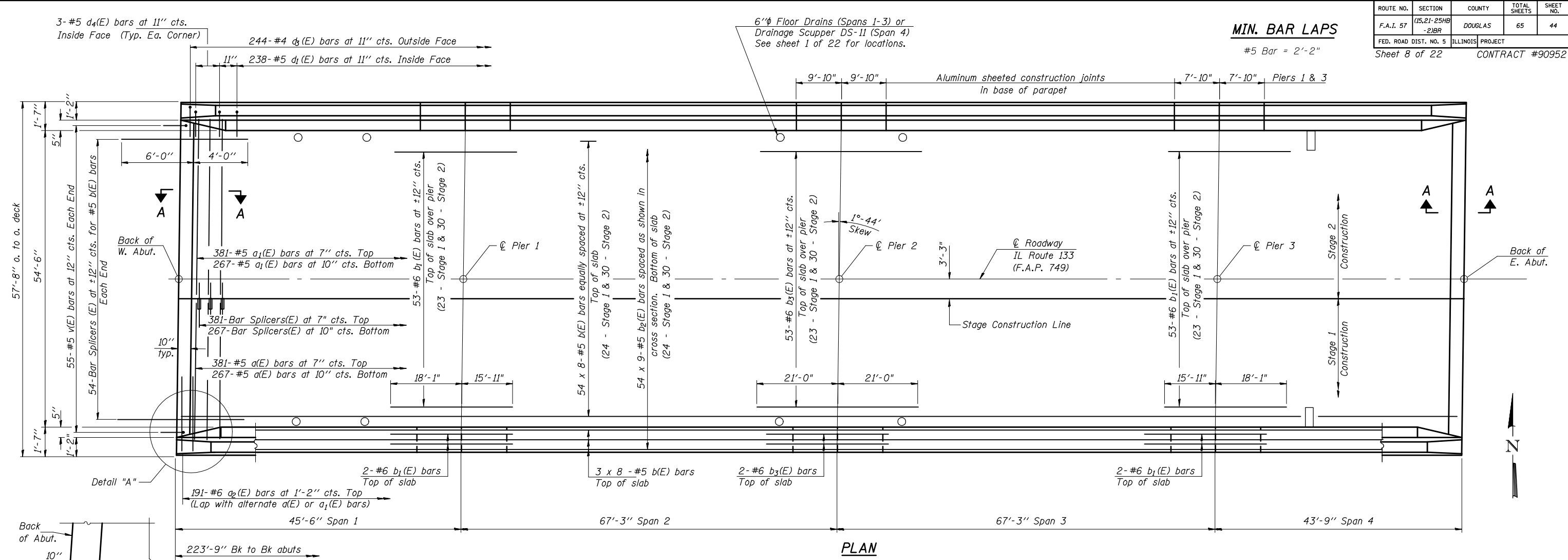


DESIGNED Ruben V. Boehler
 CHECKED Tim S. Howard
 DRAWN Nicole L. Darling
 CHECKED Michael D. Cummins

TOP OF APPROACH PAVEMENT ELEVATIONS
 IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION JOB #: 2114
 FILE: 2114SLAB DATE: 10/24/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	44
FED. ROAD DIST. NO. 5		ILLINOIS PROJECT	CONTRACT #90952	
Sheet 8 of 22				



Notes: Bars indicated thus 54 x 8-#5 etc. indicates 54 lines of bars with 8 lengths per line. See sheet 9 of 22 for superstructure details, parapet reinforcement, and Bill of Material. See sheet 10 of 22 for diaphragm details and Section A-A. See sheet 11 of 22 for median details. See sheet 20 of 22 for bar splicer details.

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

SUPERSTRUCTURE

IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

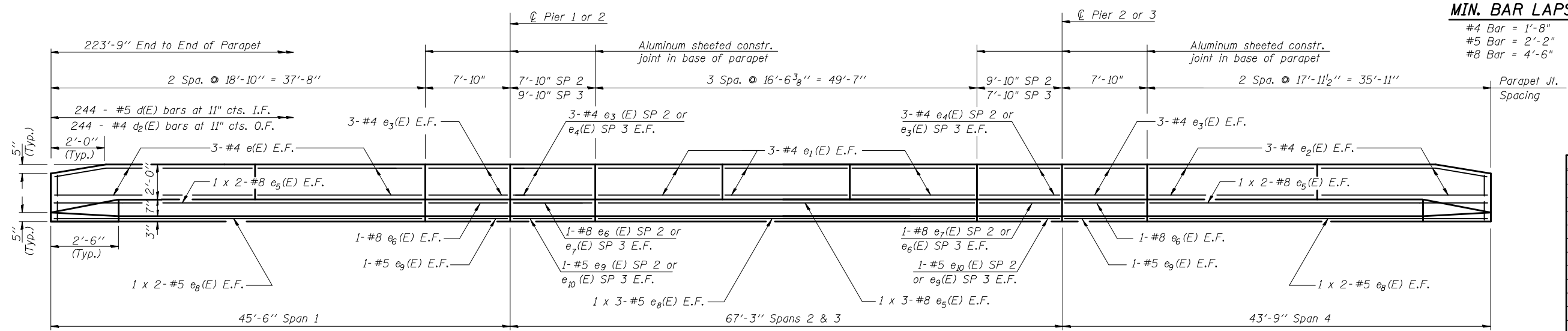
JOB #: 2114
 FILE: 2114SUPER
 DATE: 10/24/06

* Prior to Grinding

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	45
FED. ROAD DIST. NO. 5		ILLINOIS PROJECT		
Sheet 9 of 22		CONTRACT #90952		

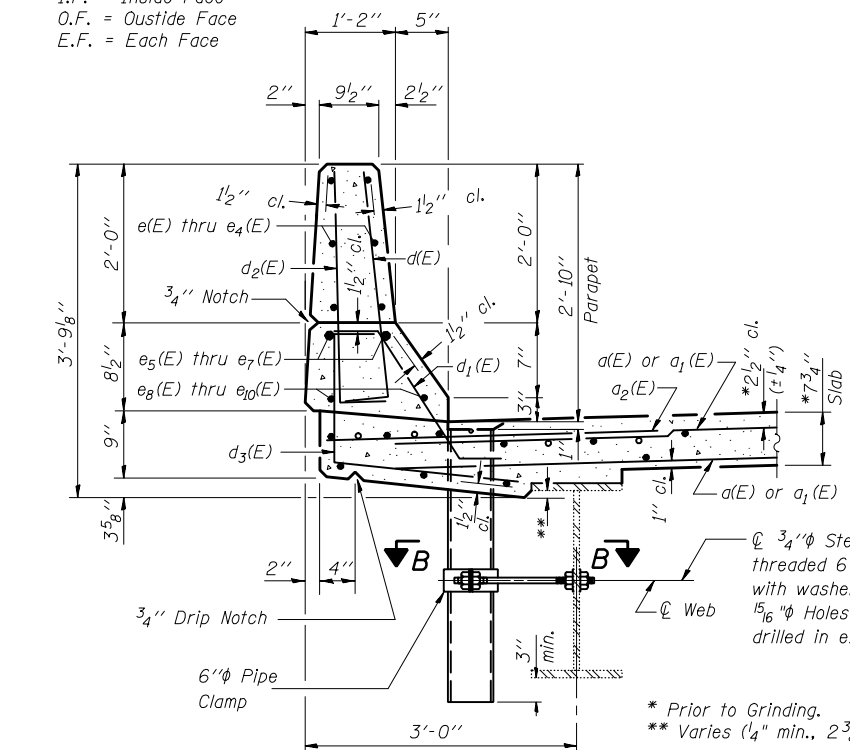
MIN. BAR LAPS

- #4 Bar = 1'-8"
- #5 Bar = 2'-2"
- #8 Bar = 4'-6"

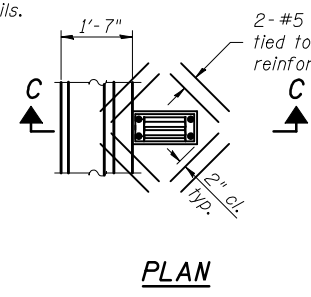
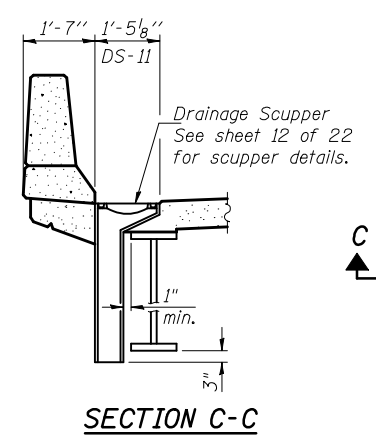


I.F. = Inside Face
O.F. = Outside Face
E.F. = Each Face

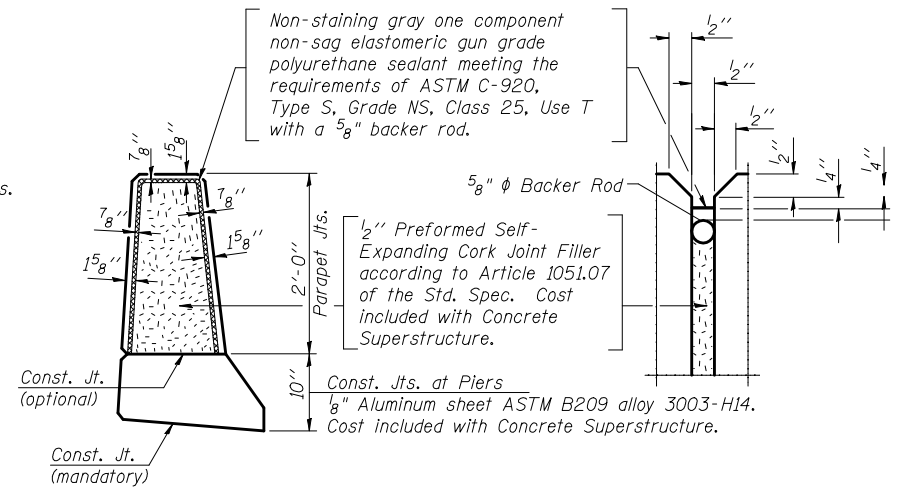
INSIDE ELEVATION OF PARAPET



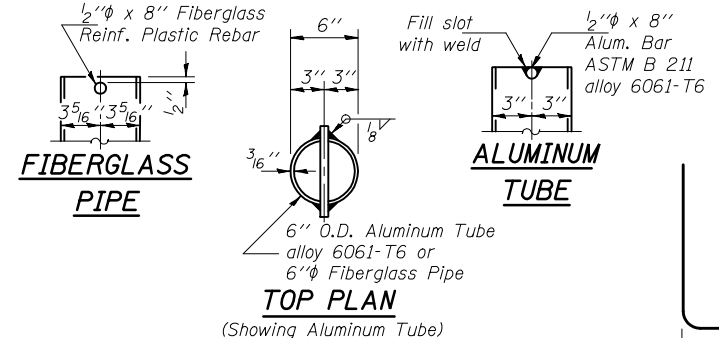
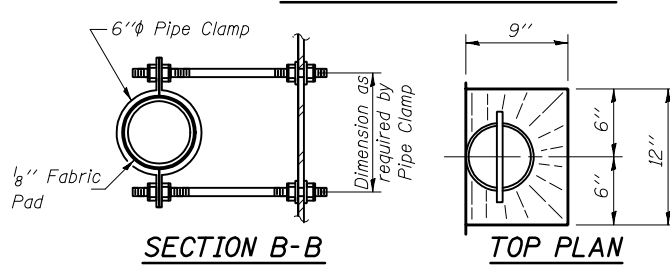
SECTION THRU PARAPET



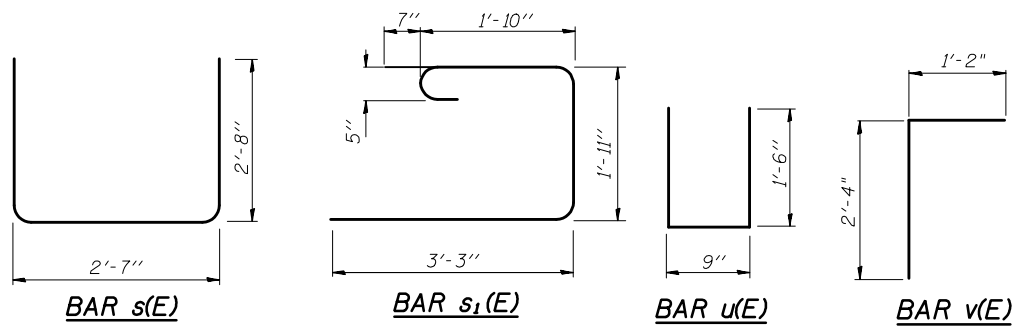
BAR c(E)



PARAPET JOINT DETAILS



BARS d(E) & d₂(E) BAR d₁(E) BAR d₃(E) BAR d₄(E)



SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	648	#5	25'-0"	—
a ₁ (E)	648	#5	31'-6"	—
a ₂ (E)	382	#6	4'-6"	—
a ₃ (E)	16	#5	1'-6"	—
b(E)	608	#5	29'-8"	—
b ₁ (E)	114	#6	34'-0"	—
b ₂ (E)	486	#5	26'-7"	—
b ₃ (E)	57	#6	42'-0"	—
c(E)	444	#5	1'-3"	—
c ₁ (E)	222	#5	15'-6"	—
d(E)	488	#5	3'-0"	—
d ₁ (E)	476	#5	2'-5"	—
d ₂ (E)	488	#4	3'-0"	—
d ₃ (E)	488	#4	3'-9"	—
d ₄ (E)	12	#5	2'-2"	—
e(E)	24	#4	18'-7"	—
e ₁ (E)	72	#4	16'-3"	—
e ₂ (E)	24	#4	17'-8"	—
e ₃ (E)	48	#4	7'-7"	—
e ₄ (E)	24	#4	9'-7"	—
e ₅ (E)	40	#8	21'-0"	—
e ₆ (E)	16	#8	7'-7"	—
e ₇ (E)	8	#8	9'-7"	—
e ₈ (E)	40	#5	19'-10"	—
e ₉ (E)	16	#5	7'-7"	—
e ₁₀ (E)	8	#5	9'-7"	—
m(E)	20	#6	25'-0"	—
m ₁ (E)	20	#6	31'-7"	—
m ₂ (E)	28	#6	6'-1"	—
m ₃ (E)	16	#6	2'-6"	—
m ₄ (E)	36	#6	9'-2"	—
s(E)	216	#5	7'-11"	—
s ₁ (E)	144	#5	7'-7"	—
u(E)	116	#5	3'-9"	—
v(E)	110	#5	3'-6"	—
Reinforcement Bars, Epoxy Coated		Pound	103,485	
Concrete Superstructure		Cu. Yd.	487.9	
Bar Splicers		Each	784	
Floor Drains		Each	8	

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.

SUPERSTRUCTURE DETAILS

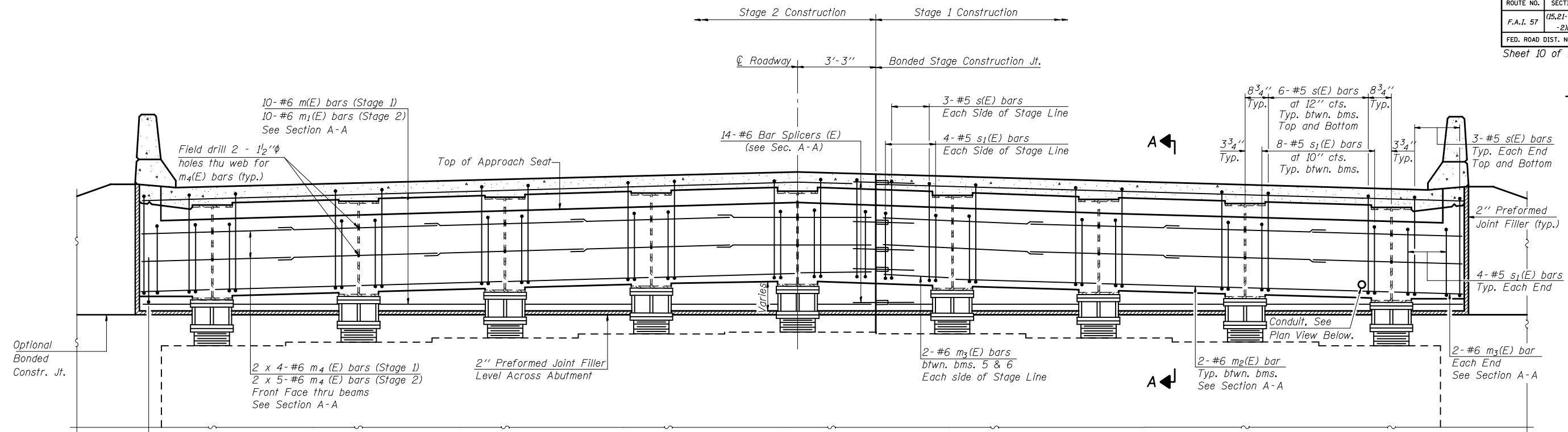
IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

Notes: The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	46
FED. ROAD DIST. NO. 5	ILLINOIS PROJECT			

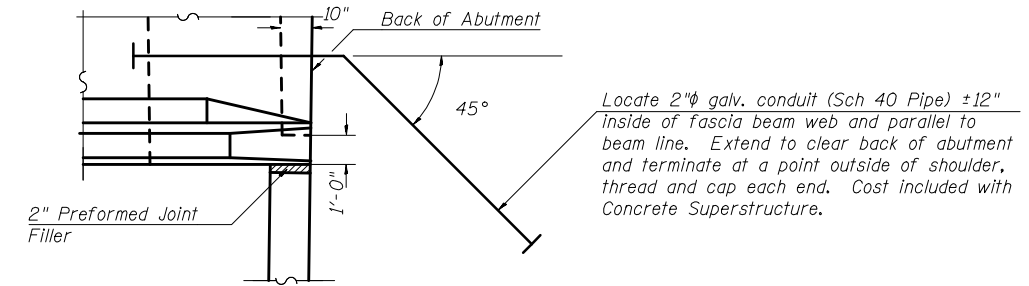
Sheet 10 of 22 CONTRACT #90952



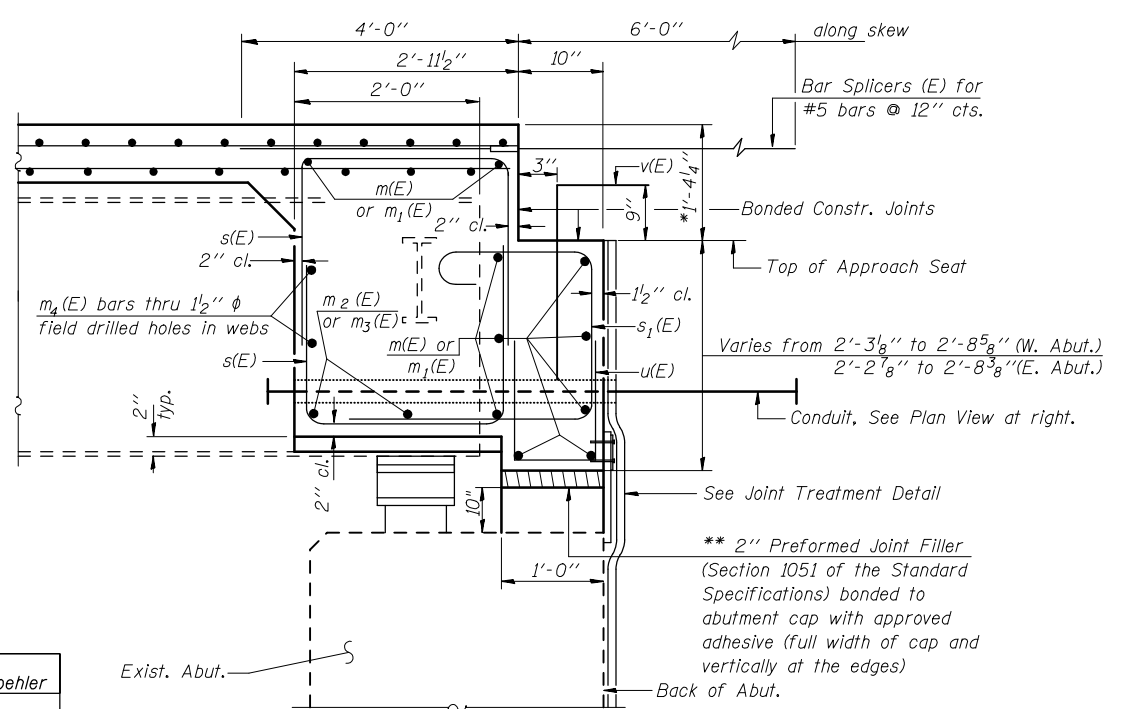
MIN. BAR LAP
#5 bar = 2'-2"
#6 bar = 2'-9"

DIAPHRAGM ELEVATION AT ABUTMENT

(East Abutment Shown - Looking East)
(West Abutment Similar by 180° Rotation Looking West)

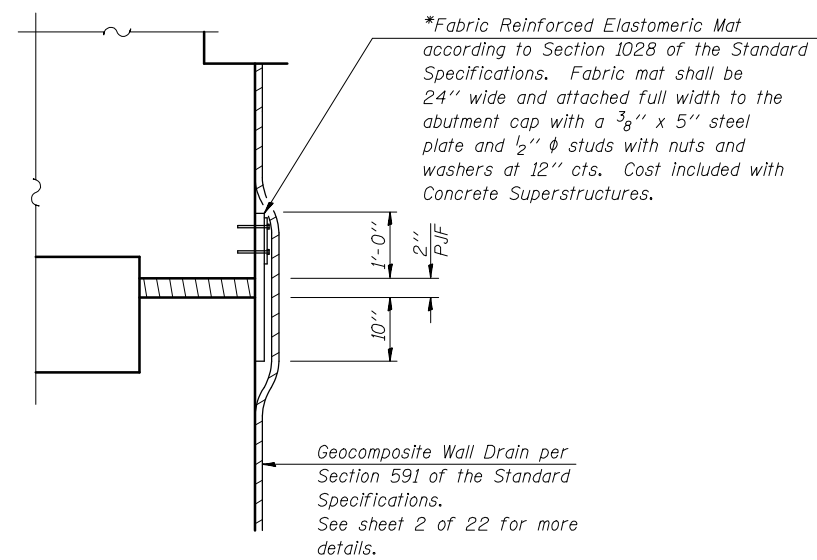


PLAN VIEW AT NW & SE CORNERS OF STRUCTURE



SECTION A-A

(Dimensions at right angles to abutment, except as shown.)



JOINT TREATMENT DETAIL

* Prior to grinding.
** Cost Included with Concrete Superstructure

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

Notes: Bars indicated thus 2 x 4-#6 etc. indicates 2 lines of bars with 4 lengths per line.
Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 22.
Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 22.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
For details of bars u(E), s(E), and s1(E) see sheet 9 of 22.
For location of drilled holes in beams see sheet 14 of 22.

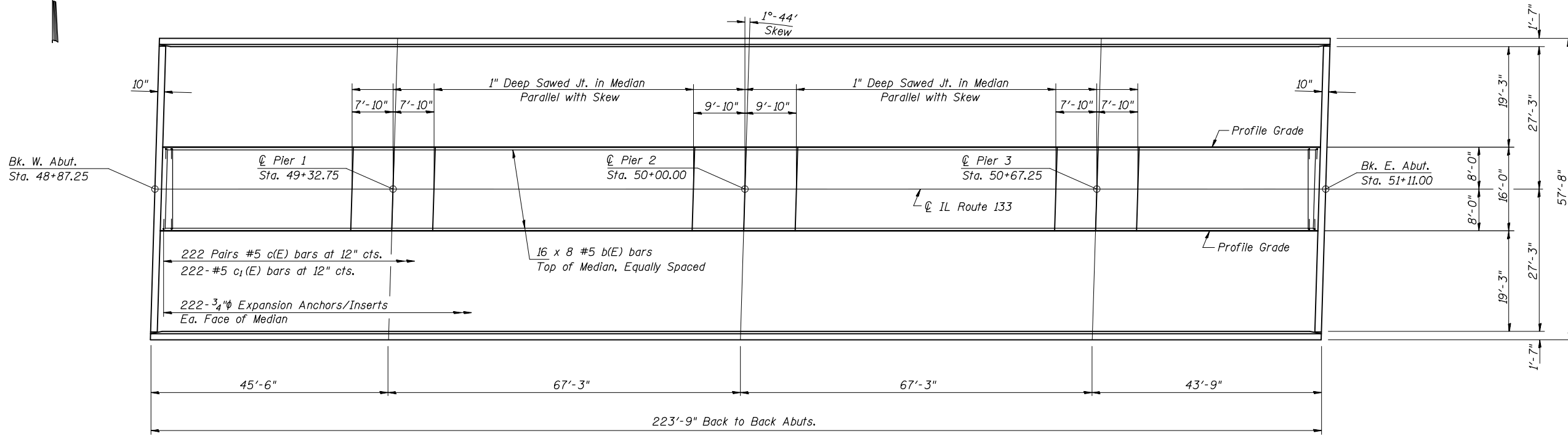
DIAPHRAGM DETAILS

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION	JOB #: 2114
	FILE: 2114DIAPH
	DATE: 10/24/06

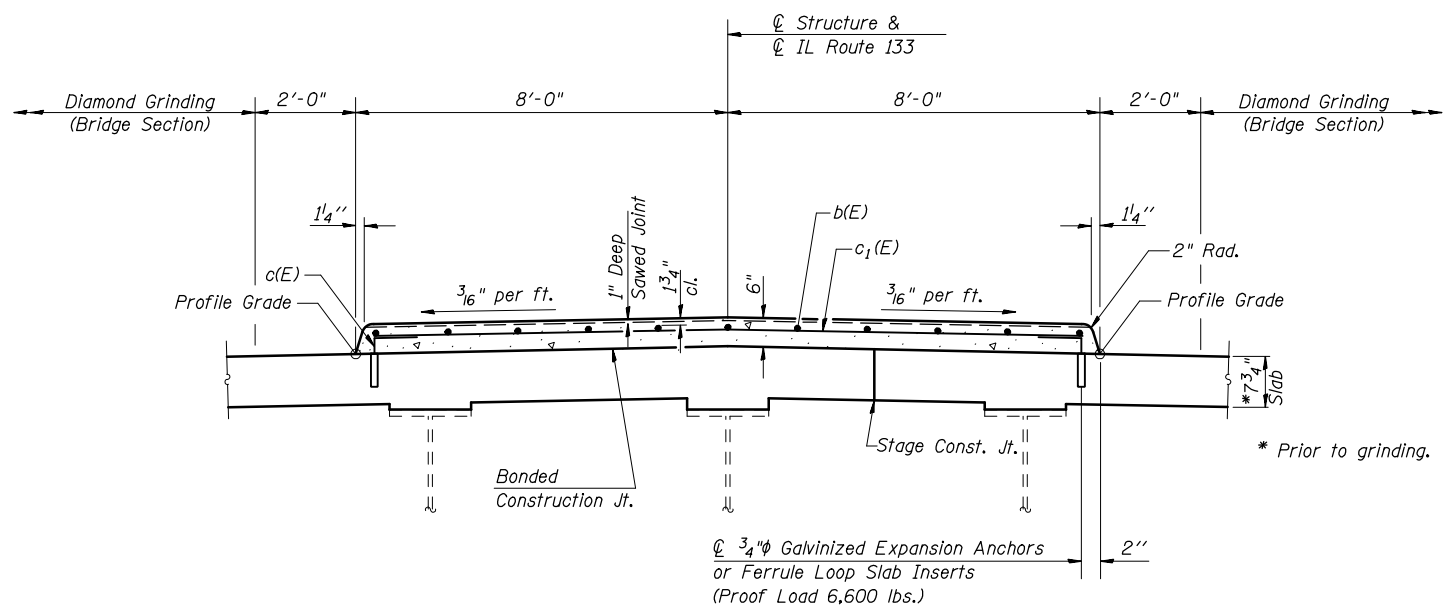
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	47
FED. ROAD DIST. NO. 5	ILLINOIS	PROJECT		

Sheet 11 of 22 CONTRACT #90952



MIN. BAR LAPS
#5 Bar = 2'-2"

PLAN



Notes: Bars indicated thus 16 x 8 - #5 etc. indicates 16 lines of bars with 8 lengths per line.
Reinforcement bars in median are billed with superstructure on sheet 9 of 22.
Concrete in median is included with Concrete Superstructure on sheet 9 of 22.
For details of bars c(E) see sheet 9 of 22.
Work this sheet with sheets 8 and 9 of 22.
Expansion Anchors required for the median shall be installed in the deck during Stage 1 and Stage 2 Construction.
Construction of the median shall be delayed until completion of Stage 2 Construction.
The cost of Expansion Anchors/Inserts is included with Reinforcement Bars, Epoxy Coated (444 required).

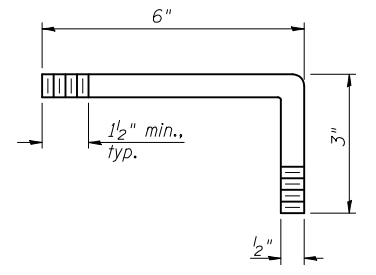
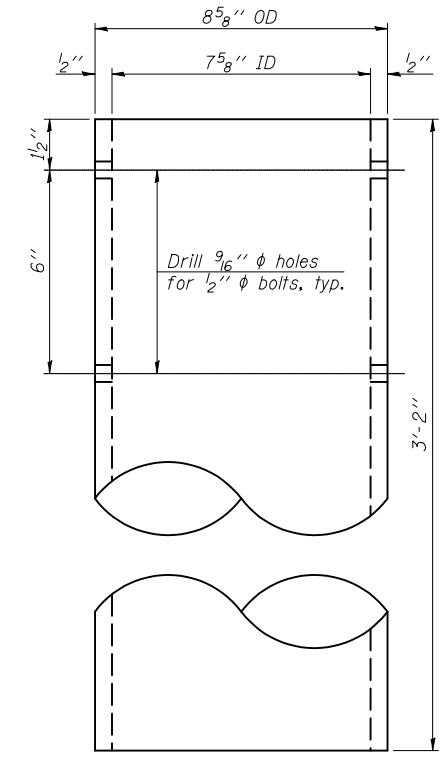
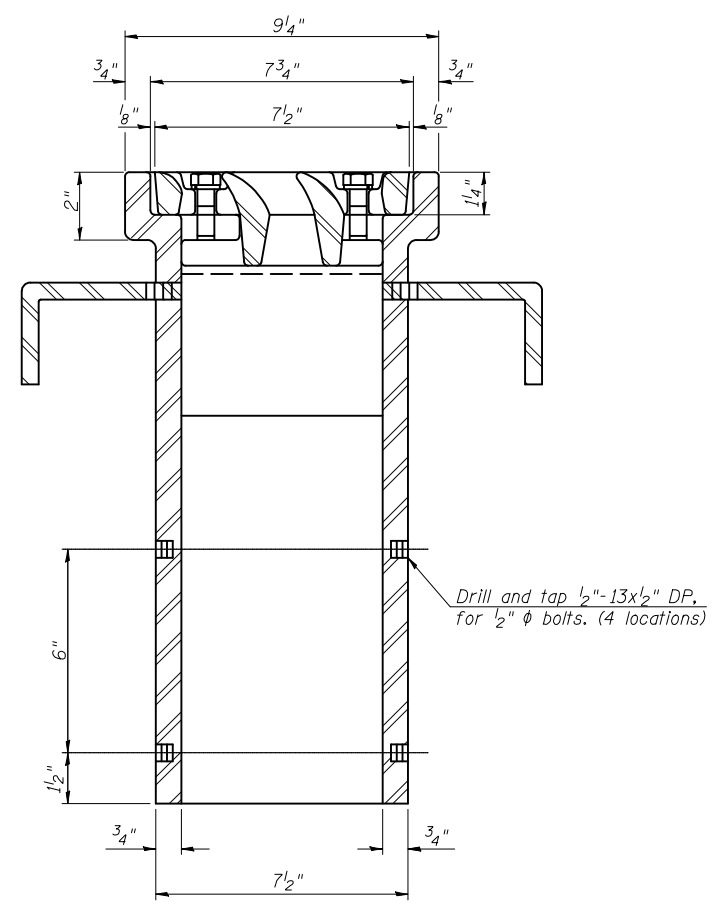
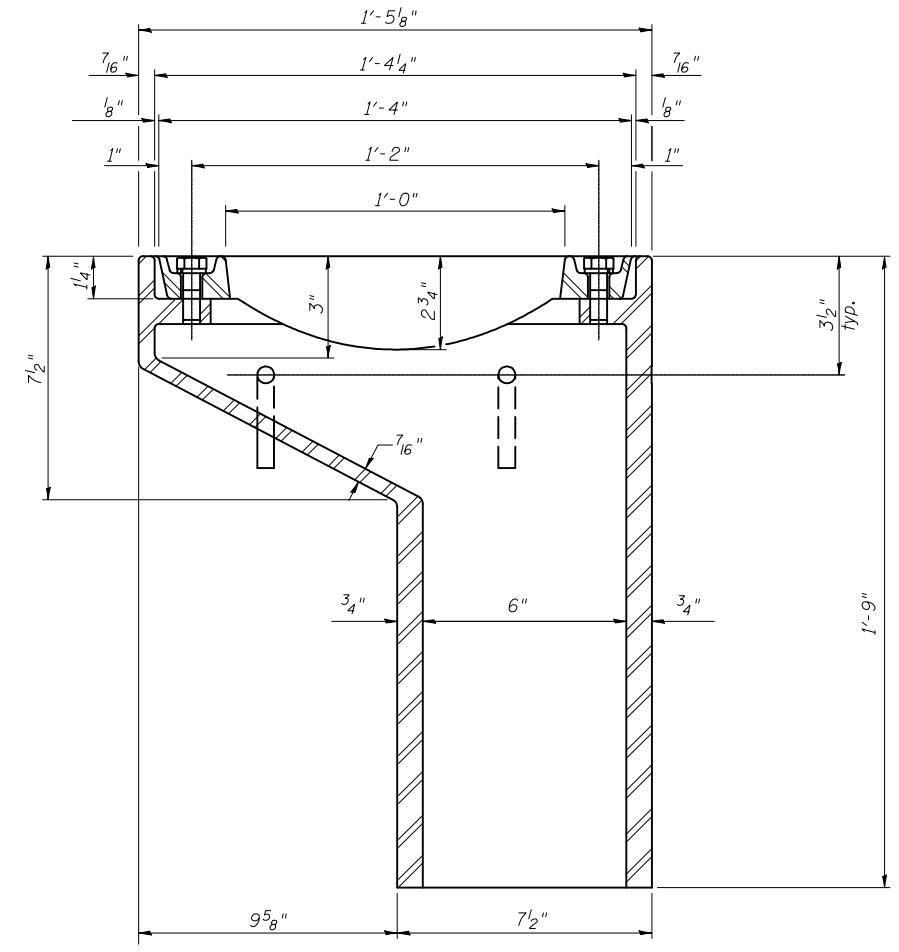
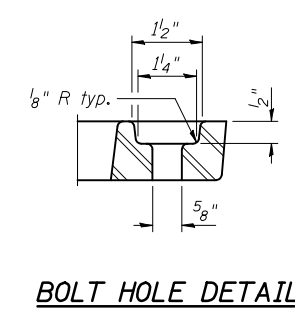
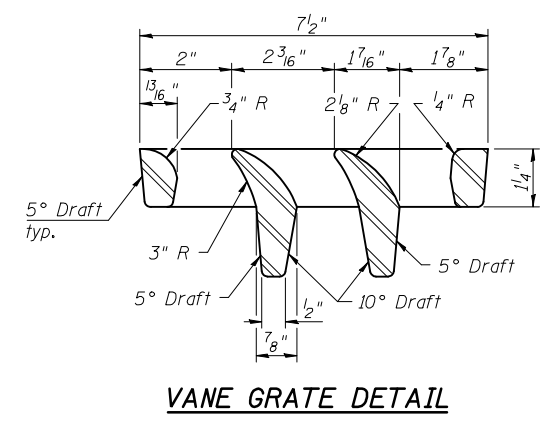
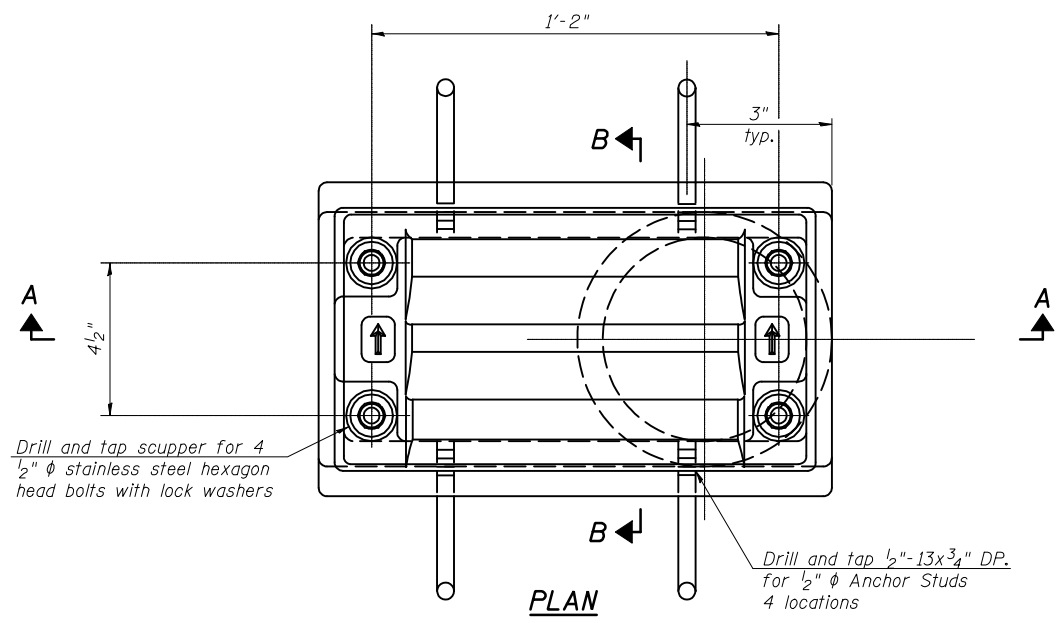
DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

SECTION THRU MEDIAN
(Looking East)

MEDIAN DETAILS

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION	JOB #: 2114 FILE: 2114MEDIAN DATE: 10/24/06
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SECTION A-A
See sheet 9 of 22 for scupper location relative to parapet.

DESIGNED Ruben V. Boehler
 CHECKED Tim S. Howard
 DRAWN Nicole L. Darling
 CHECKED Michael D. Cummins

DS-11

11-1-06

Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

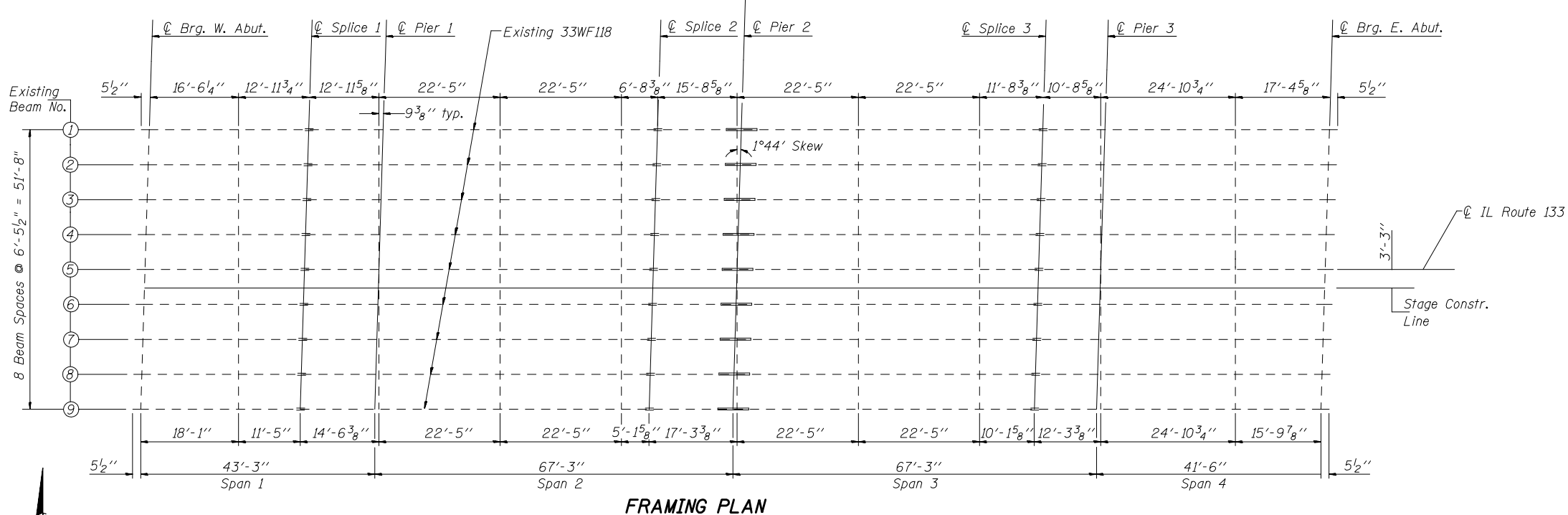
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

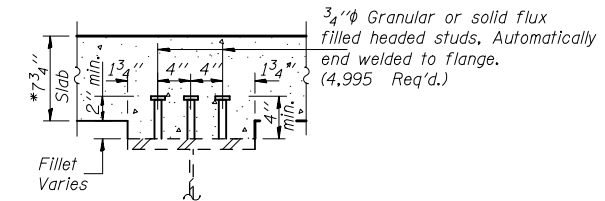
DRAINAGE SCUPPER, DS-11

IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION
 JOB #: 2114
 FILE: 2114DS11
 DATE: 10/24/06

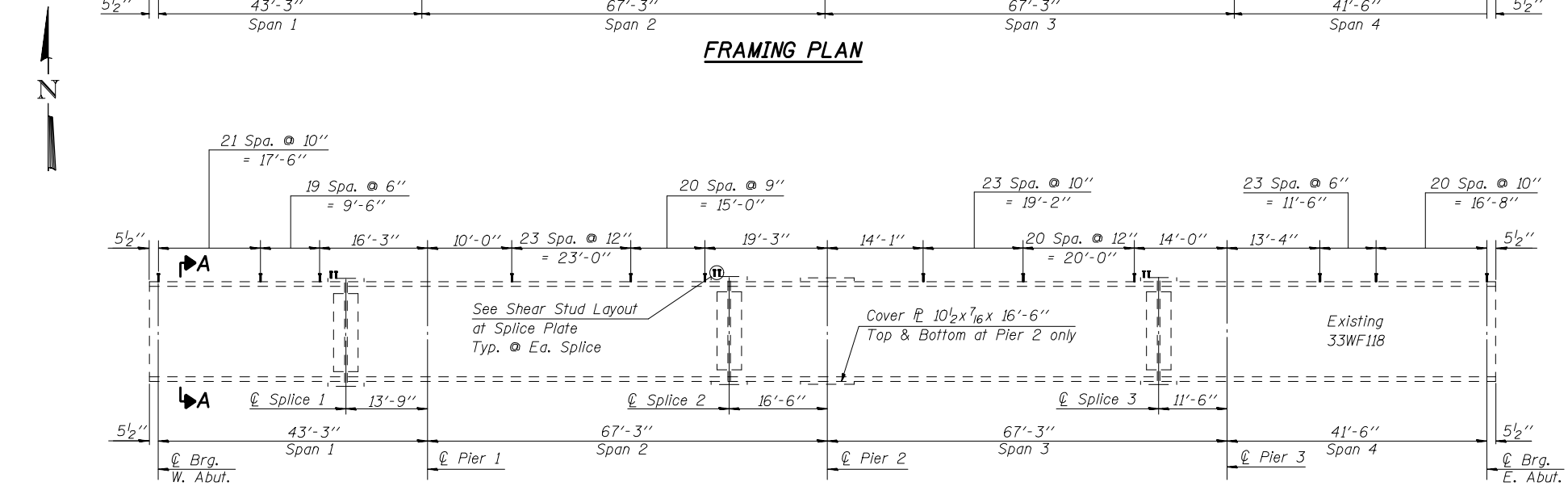


FRAMING PLAN



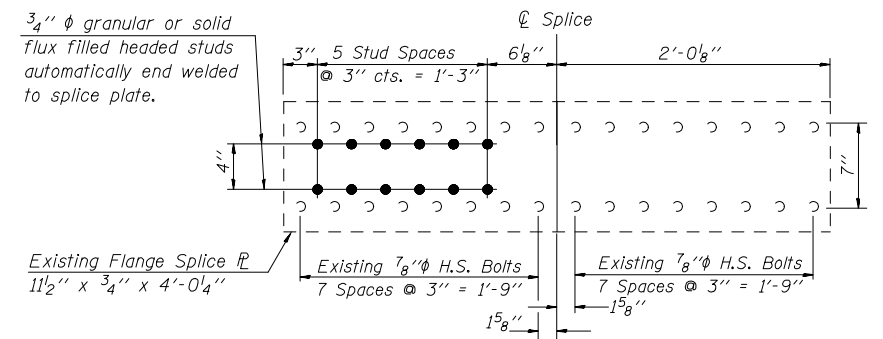
SECTION A-A

* Prior to grinding.



BEAM ELEVATION

(Looking North - Showing Shear Connectors to be Added)



SHEAR STUD LAYOUT AT SPLICE PLATE

Showing location of new 3/4 inch granular or solid flux filled headed studs automatically end welded to splice plate. Locate studs as shown at splices 1, 2 & 3.

TOP OF EXISTING BEAM ELEVATIONS

(For Information Only)

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9
⊕ Brg. W. Abut.	695.35	695.42	695.49	695.56	695.62	695.56	695.49	695.42	695.35
⊕ Pier 1	695.33	695.40	695.47	695.54	695.60	695.54	695.47	695.40	695.33
⊕ Pier 2	695.15	695.22	695.28	695.36	695.42	695.36	695.28	695.22	695.15
⊕ Pier 3	694.79	694.86	694.93	695.00	695.06	695.00	694.93	694.86	694.79
⊕ Brg. E. Abut.	694.48	694.55	694.62	694.69	694.75	694.69	694.62	694.55	694.48

Note: Elevations have been taken from the existing plans and reduced by 0.47' to match the new bench mark datum. Elevations at Pier 2 are to top of beam (not to top of cover plate).

DESIGNED Ruben V. Boehler
 CHECKED Tim S. Howard
 DRAWN Nicole L. Darling
 CHECKED Michael D. Cummins

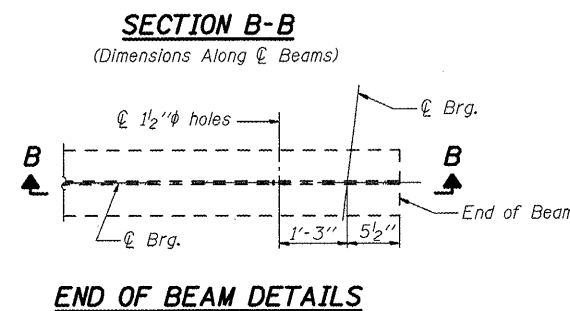
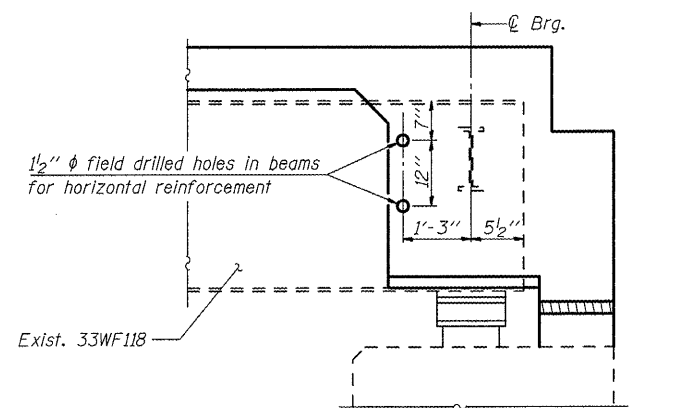
Work this sheet with sheet 14 of 22.

STRUCTURAL STEEL

IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

JOB #: 2114
FILE: 2114SS
DATE: 10/24/06



	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.6 Sp. 4
I_s (in^4)	5900	5900	5900	8518	5900	5900	5900
I_c (n) (in^4)	15856	---	15856	---	15856	---	15856
I_c (3n) (in^4)	11683	---	11683	---	11683	---	11683
S_s (in^3)	359	359	359	505	359	359	359
S_c (n) (in^3)	531	---	531	---	531	---	531
S_c (3n) (in^3)	480	---	480	---	480	---	480
ψ (k/ft.)	0.810	1.257	0.810	1.257	0.810	1.257	0.810
$M\phi$ (k)	85	351	156	523	158	344	72
$s\phi$ (k/ft.)	0.447	---	0.447	---	0.447	---	0.447
$Ms\phi$ (k)	58	---	119	---	120	---	51
$M\phi$ (k)	256	183	385	244	383	180	242
M (Imp) (k)	77	51	100	64	100	51	72
$5_s[M\phi + M(imp)]$ (k)	555	390	808	513	805	385	523
M_a (k)	907	963	1407	1347	1408	948	840
* M_u (k)	1528	---	1474	---	1474	---	1541
$f_s\phi$ non-comp (k.s.i.)	2.8	11.8	5.2	12.4	5.3	11.5	2.4
$f_s\phi$ (comp) (k.s.i.)	1.5	---	3.0	---	3.0	---	1.3
$f_s 5_s(\phi + Imp)$ (k.s.i.)	12.5	13.0	18.2	12.2	18.2	12.9	11.8
f_s (Overload) (k.s.i.)	16.8	24.8	26.4	24.6	26.5	24.4	15.5
** f_s (Total) (k.s.i.)	---	32.2	---	32.0	---	31.7	---
VR (k)	47.0	---	51.0	---	51.0	---	47.0

* Compact, braced section.
 ** Non-compact, partially braced section.

	W. Abut.	Pier 1	Pier 2	Pier 3	E. Abut.
$R\phi$ (k)	47.7	75.0	89.8	74.0	46.5
$R\phi$ (k)	32.0	40.0	43.2	40.0	32.0
Imp. (k)	9.6	11.2	11.2	11.2	9.6
R (Total) (k)	89.3	126.2	144.2	125.2	88.1

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).

$I_{c(n)}$ and $S_{c(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$I_{c(3n)}$ and $S_{c(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.

f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3[M\phi + Ms\phi + 5_s(M\phi + M(imp))]$.

f_s (Overload) is the sum of the stresses due to $M\phi + Ms\phi + 5_s(M\phi + M(imp))$.

$M\phi$ - Moment due to dead loads on non-composite section.
 $Ms\phi$ - Moment due to dead loads on composite section.

$M\phi$ - Moment due to live loads on non-composite or composite section.

$M(imp)$ - Moment due to live load impact on non-composite or composite section.

M_a (Applied Moment) = $1.3[M\phi + Ms\phi + 5_s(M\phi + M(imp))]$.

DESIGNED Ruben V. Boehler
 CHECKED Tim S. Howard
 DRAWN Nicole L. Darling
 CHECKED Michael D. Cummins

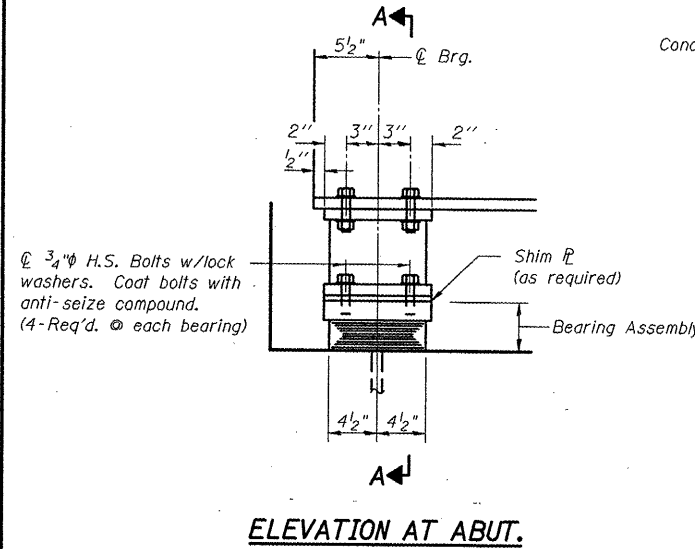
Work this sheet with sheet 13 of 22.

STRUCTURAL STEEL

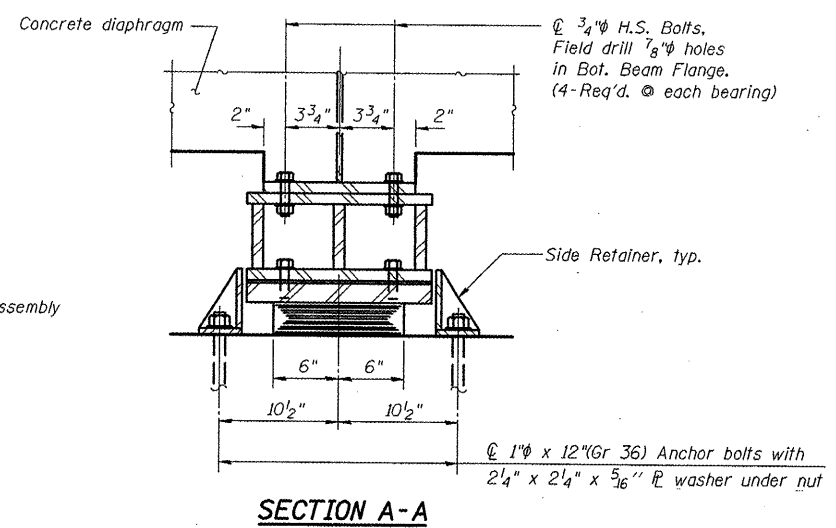
IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION
 JOB #: 2114
 FILE: 2114SS
 DATE: 10/24/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15.21-25HB-2)BR	DOUGLAS	65	51
FED. ROAD DIST. NO. 5		ILLINOIS	PROJECT	
Sheet 15 of 22		CONTRACT #90952		

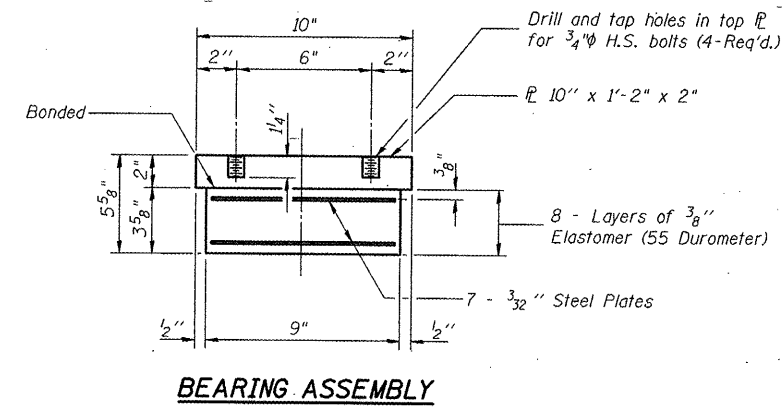


ELEVATION AT ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



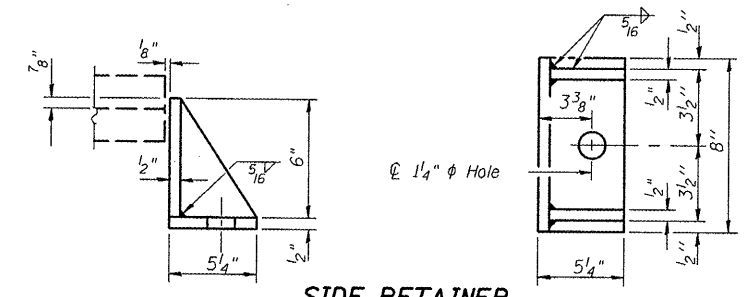
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

Notes: Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

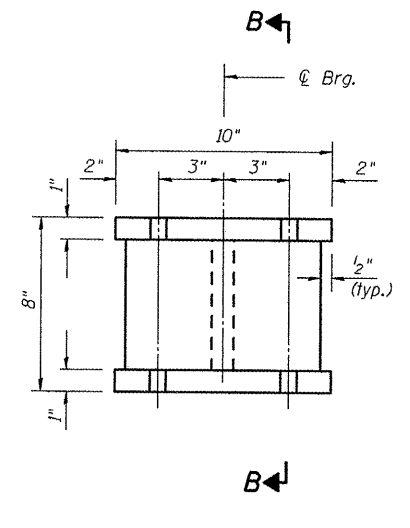
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



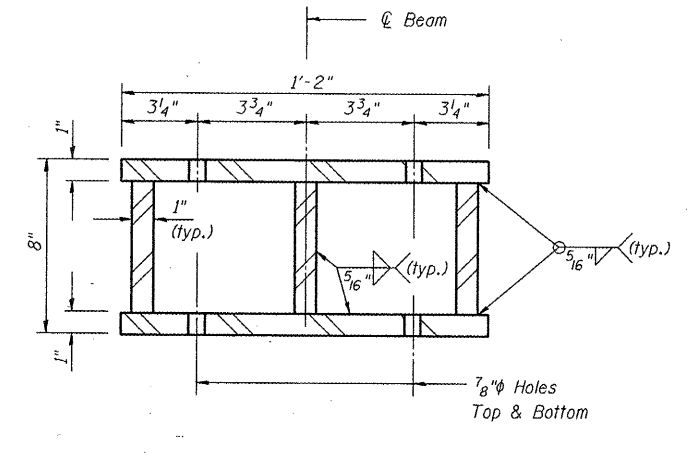
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

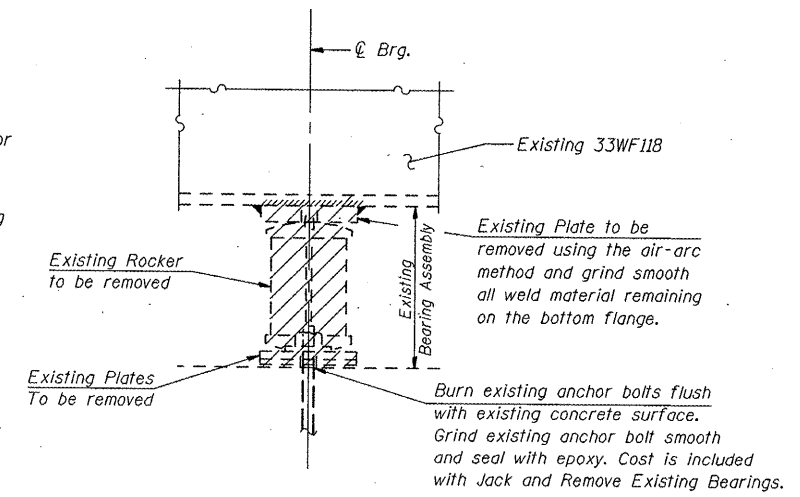
DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins



ELEVATION STEEL EXTENSION



SECTION B-B



EXISTING BEARING REMOVAL AT ABUTS

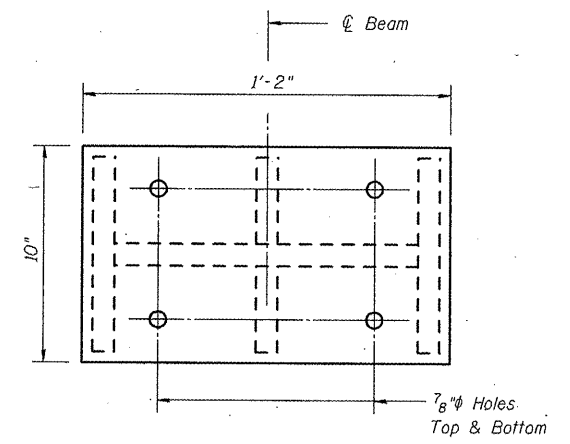
\varnothing Reaction @ Abuts. = 3 kips (Wt. of steel only)
 Min. Jack Capacity @ Abuts. = 5 tons

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with Furnishing and Erecting Structural Steel.

New side retainers, shim \varnothing 's, steel extensions, and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



PLAN STEEL EXTENSION

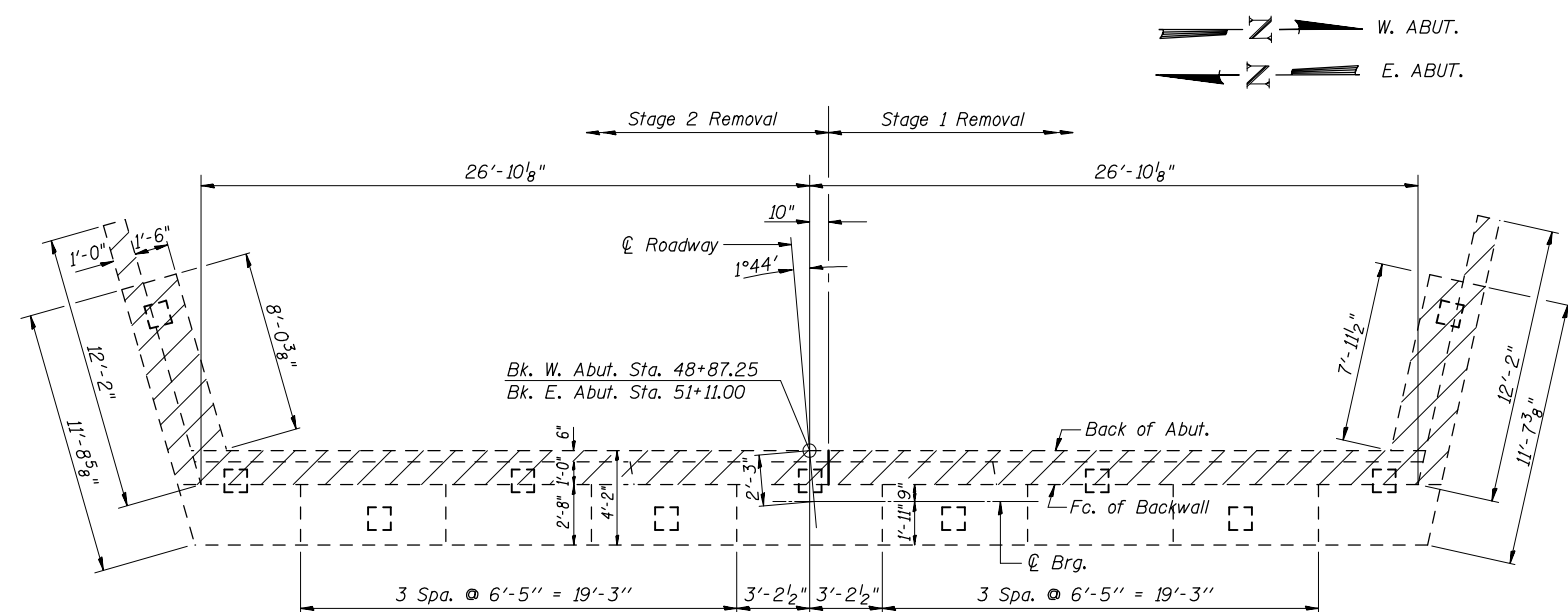
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	18
Jack and Remove Existing Bearings	Each	18
Anchor Bolts, 1"	Each	36

BEARING DETAILS

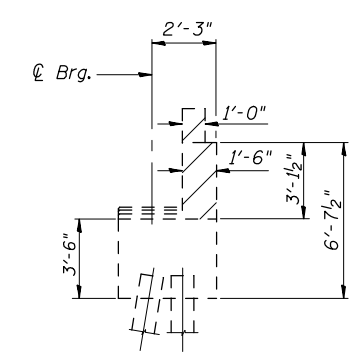
IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15.21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION	JOB #: 2114
	FILE: 2114BRG
	DATE: 10/24/06

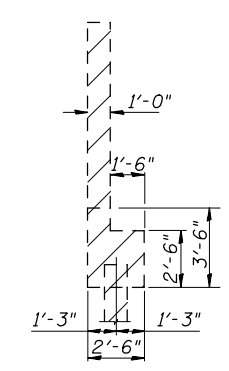


PLAN

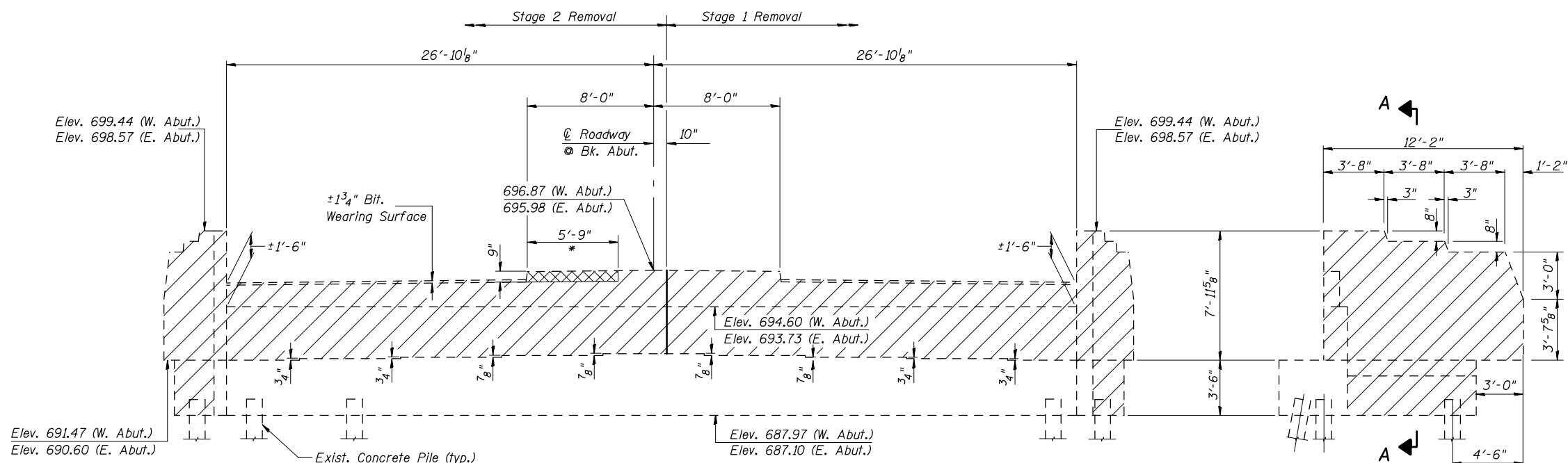
(Stage Removal Shown @ E. Abut.)
(Similar @ W. Abut. but Opposite Hand)



SEC. THRU ABUT.

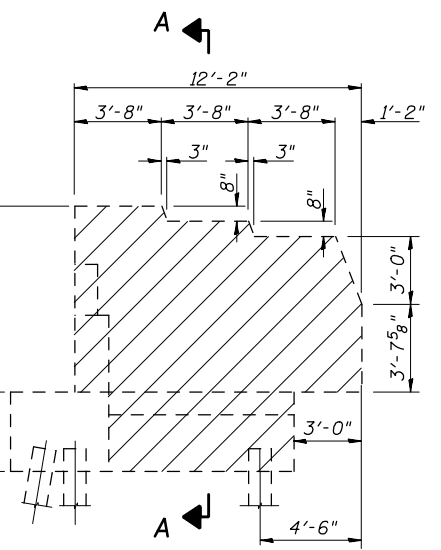


SEC. A-A



ELEVATION

(Looking East @ E. Abut.)
(W. Abut. Similar except Stage Removal Line is Opposite Hand)



WINGWALL ELEVATION

**TWO ABUTMENTS
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	46.9

Note: Hatched area indicates Concrete Removal.
Existing electrical conduit at abutments shall be removed prior to concrete removal. See Roadway Plans.

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

* Concrete Median Removal at abutments prior to Stage 1 Removal shall not be paid for separately but shall be included in the cost of Concrete Removal.

NOTE
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.47 feet to match benchmark datum.

ABUTMENT CONCRETE REMOVAL DETAILS

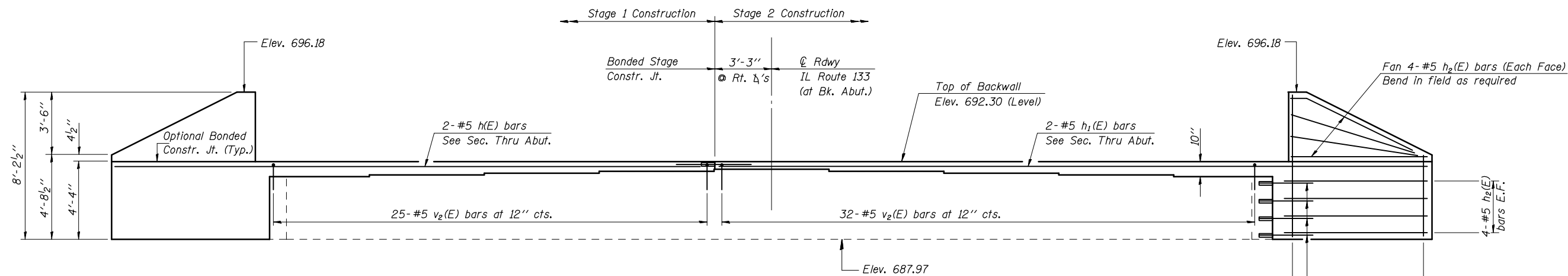
IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

JOB #:	2114
FILE:	2114ABUTOLD
DATE:	10/24/06

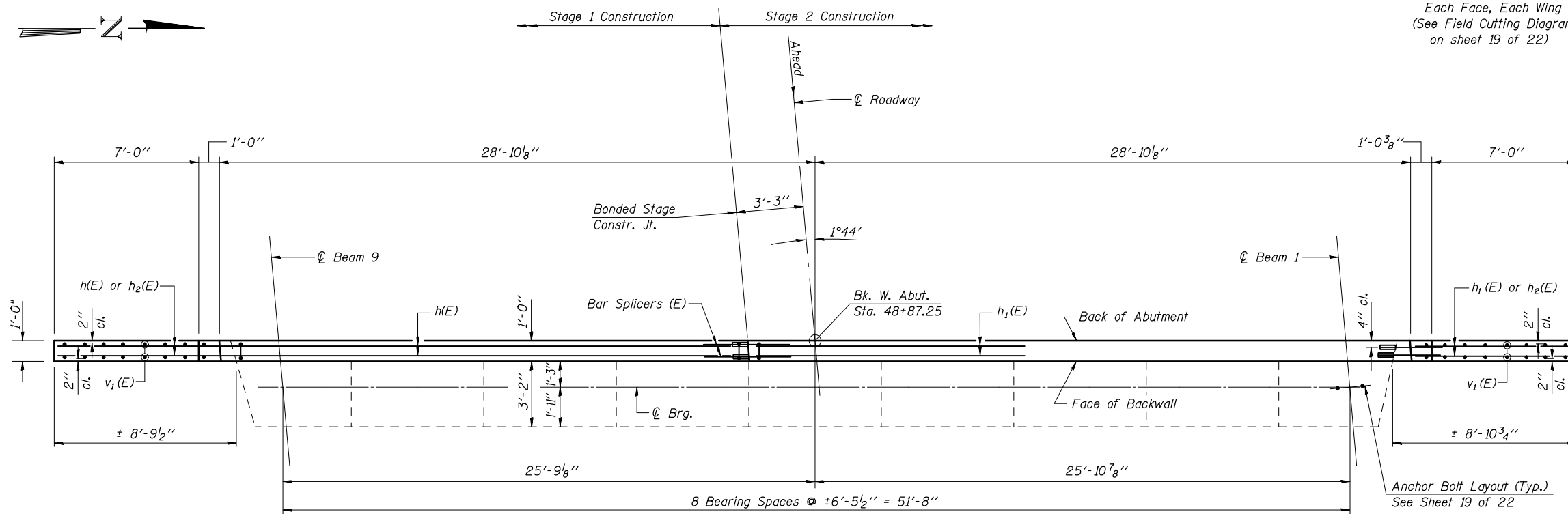
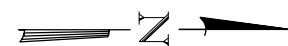
MIN. BAR LAP

#5 bar = 2'-2"



ELEVATION

(Looking West)



TOP VIEW

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.47 feet to match benchmark datum.

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

Notes: Space drilled holes in existing cap to miss existing reinforcement. Epoxy grout h₃(E) and v₂(E) bars in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". See sheet 20 of 22 for bar splicer details. See sheet 19 of 22 for abutment details and Bill of Material.

WEST ABUTMENT

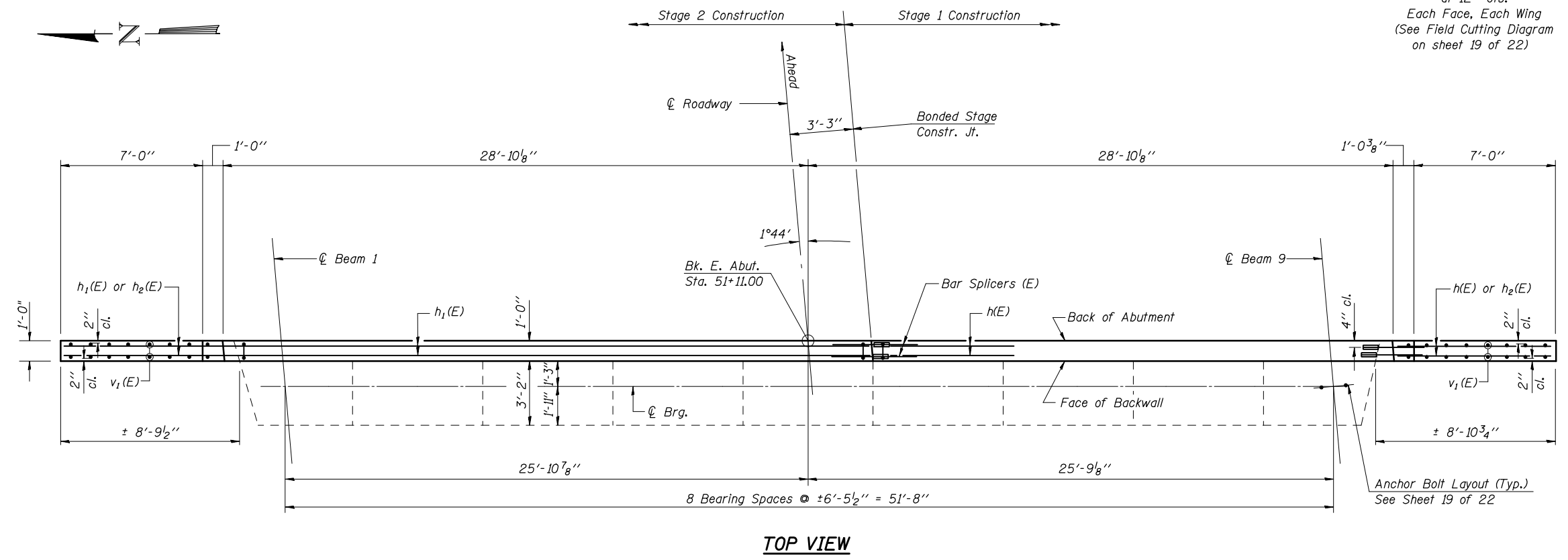
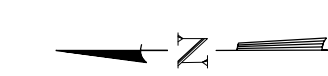
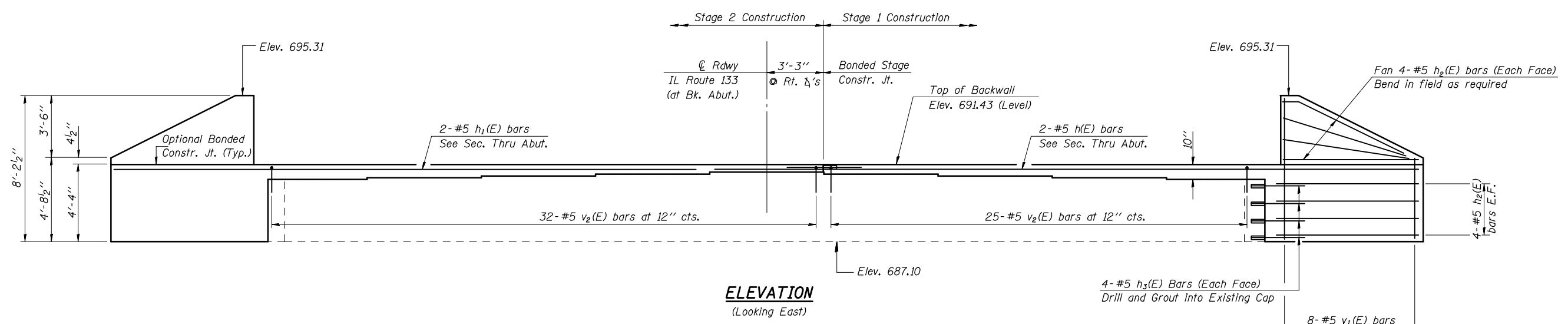
IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION	JOB #: 2114
	FILE: 2114ABUTS
	DATE: 10/24/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	54
FED. ROAD DIST. NO. 5	ILLINOIS PROJECT			

Sheet 18 of 22 CONTRACT #90952

MIN. BAR LAP
#5 bar = 2'-2"



NOTE
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.47 feet to match benchmark datum.

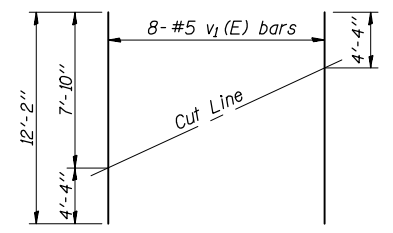
DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

Notes: Space drilled holes in existing cap to miss existing reinforcement. Epoxy grout h₃(E) and v₂(E) bars in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". See sheet 20 of 22 for bar splicer details. See sheet 19 of 22 for abutment details and Bill of Material.

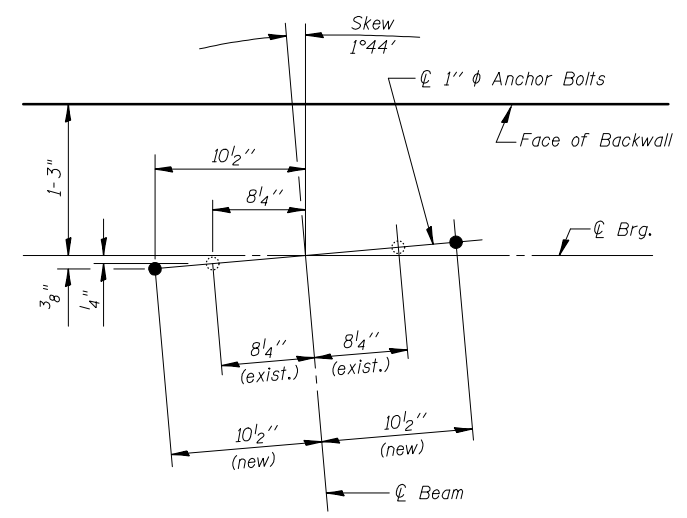
EAST ABUTMENT

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
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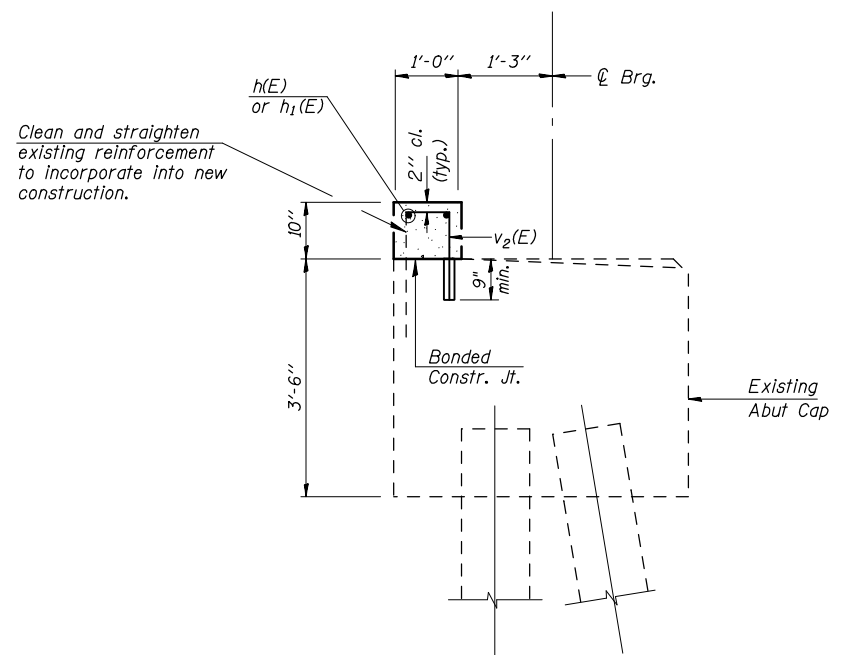
CUMMINS ENGINEERING CORPORATION	JOB #: 2114
	FILE: 2114ABUTS
	DATE: 10/24/06



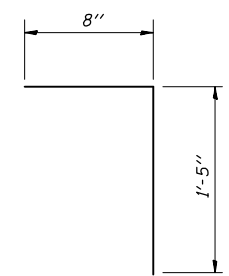
FIELD CUTTING DIAGRAM - V₁ BARS
 Order v₁(E) bars full length. Cut as shown and use remainder of bars in opposite face.



ANCHOR BOLT LAYOUT AT ABUTMENTS



SEC. THRU ABUT.
 (Dim. at Rt. L's unless noted)



BAR v₂(E)

**TWO ABUTMENTS
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	4	#5	33'-2"	—
h ₁ (E)	4	#5	39'-9"	—
h ₂ (E)	64	#5	7'-8"	—
h ₃ (E)	32	#5	4'-0"	—
v ₁ (E)	32	#5	12'-2"	—
v ₂ (E)	114	#5	2'-1"	⌒
Structure Excavation		Cu. Yd.		311
Concrete Structures		Cu. Yd.		11.8
Reinforcement Bars, Epoxy Coated		Pound		1,610
Bar Splicers		Each		4

DESIGNED *Ruben V. Boehler*
 CHECKED *Tim S. Howard*
 DRAWN *Nicole L. Darling*
 CHECKED *Michael D. Cummins*

Work this sheet with sheets 17 and 18 of 22.

ABUTMENT DETAILS

IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

JOB #:	2114
FILE:	2114ABUTS
DATE:	10/24/06

NOTES

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

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
 - ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

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

The diameter of this part is the same as the diameter of the bar spliced.

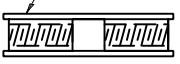
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

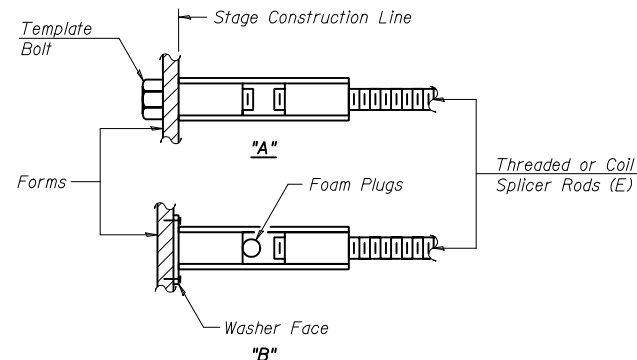
Wire Connector



WELDED SECTIONS

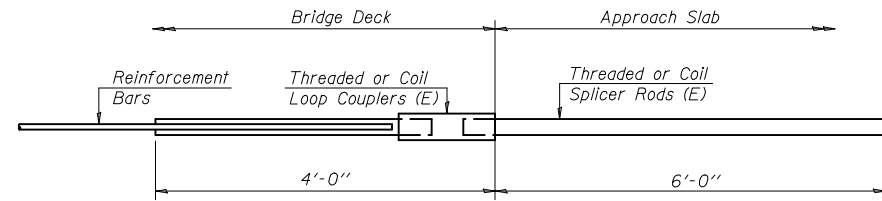
BAR SPLICER ASSEMBLY ALTERNATIVES

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



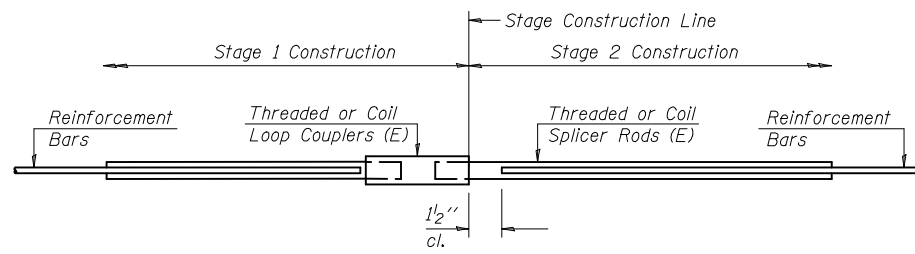
INSTALLATION AND SETTING METHODS

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



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 108



STANDARD

Bar Size	No. Assemblies Required	Location
#5	648	Deck
#6	28	Diaphragms
#5	4	Abutments

DESIGNED Ruben V. Boehler
 CHECKED Tim S. Howard
 DRAWN Nicole L. Darling
 CHECKED Michael D. Cummins

BAR SPLICER ASSEMBLY DETAILS

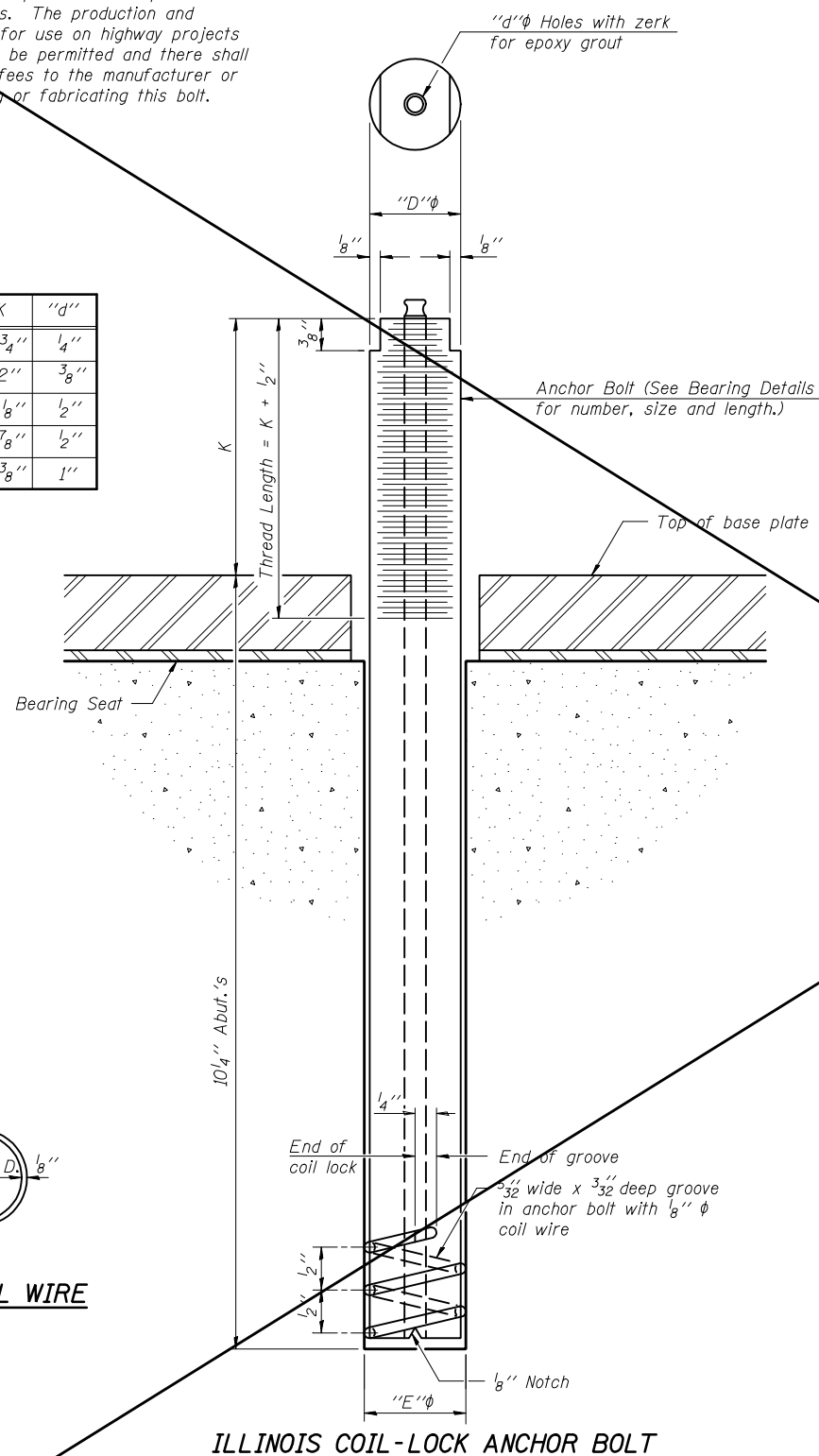
IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

JOB #: 2114
 FILE: 2114BARSP
 DATE: 10/24/06

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

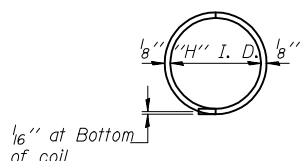
ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

- The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abuts	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.



PLAN-COIL WIRE

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Micole L. Darling
CHECKED	Michael D. Cummins

ABB-1 4-30-99

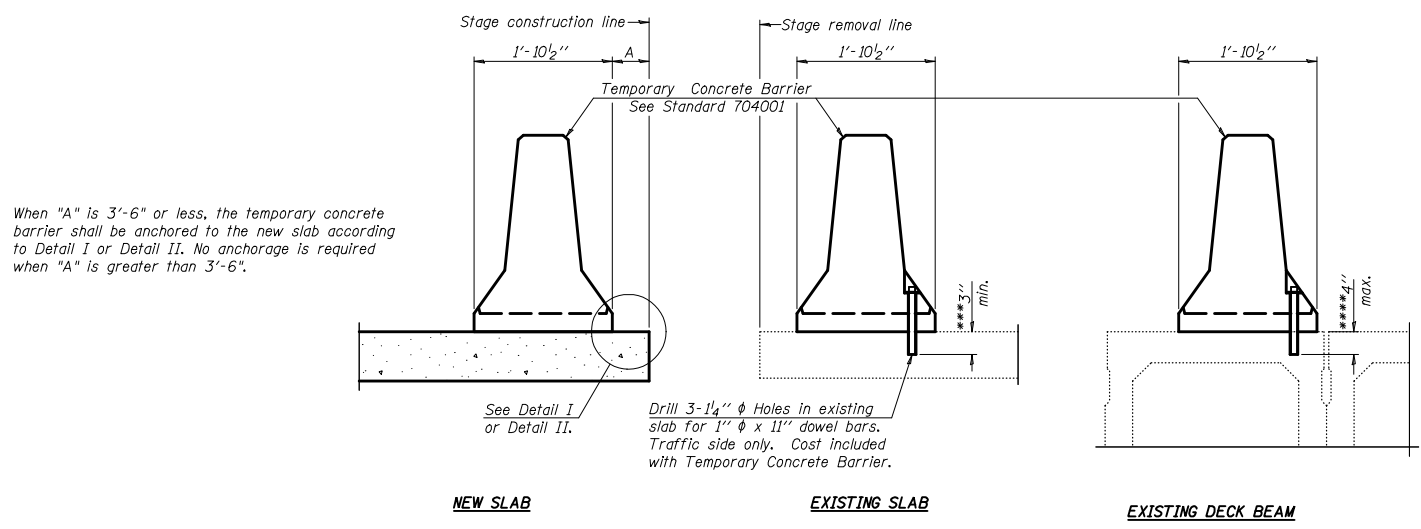
ANCHOR BOLT DETAILS

IL ROUTE 133 OVER I-57
 F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
 DOUGLAS COUNTY
 STA. 1492+76.53
 S.N. 021-0024

CUMMINS ENGINEERING CORPORATION
 JOB #: 2114
 FILE: 2114ANCHOR
 DATE: 10/24/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(15,21-25HB-2)BR	DOUGLAS	65	58
FED. ROAD DIST. NO. 5	ILLINOIS	PROJECT		

Sheet 22 of 22 CONTRACT #90952



NOTES

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

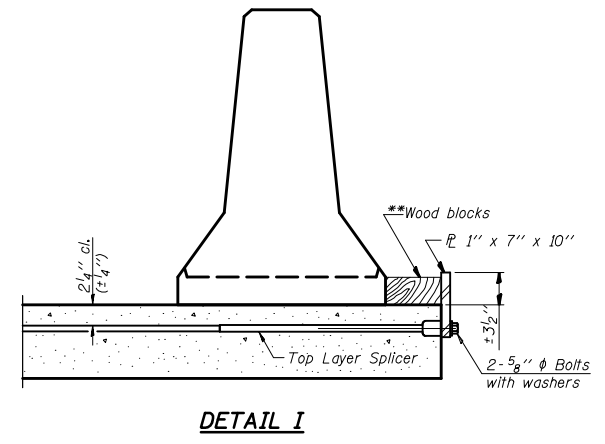
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{r} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{c} of each barrier panel.

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

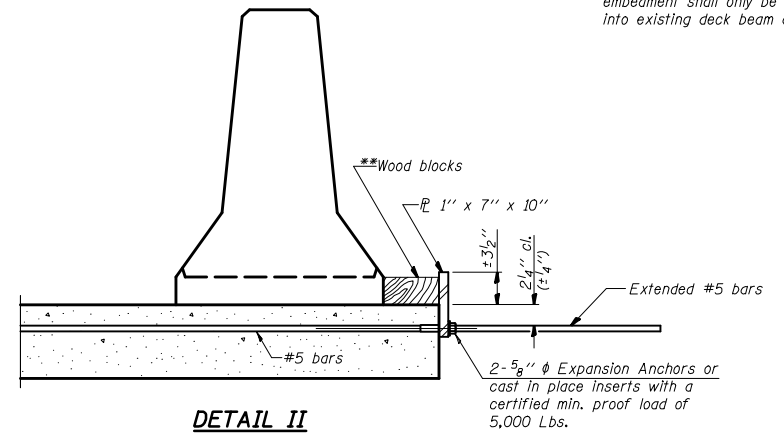
SECTIONS THRU SLAB OR DECK BEAM

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

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

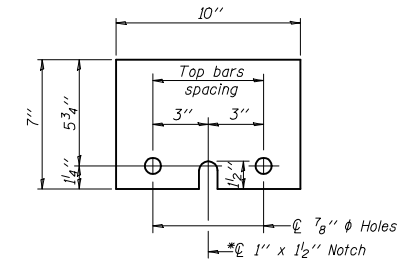


DETAIL I



DETAIL II

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



STEEL RETAINER \bar{r} 1" x 7" x 10"
* Required only with Detail II

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	Nicole L. Darling
CHECKED	Michael D. Cummins

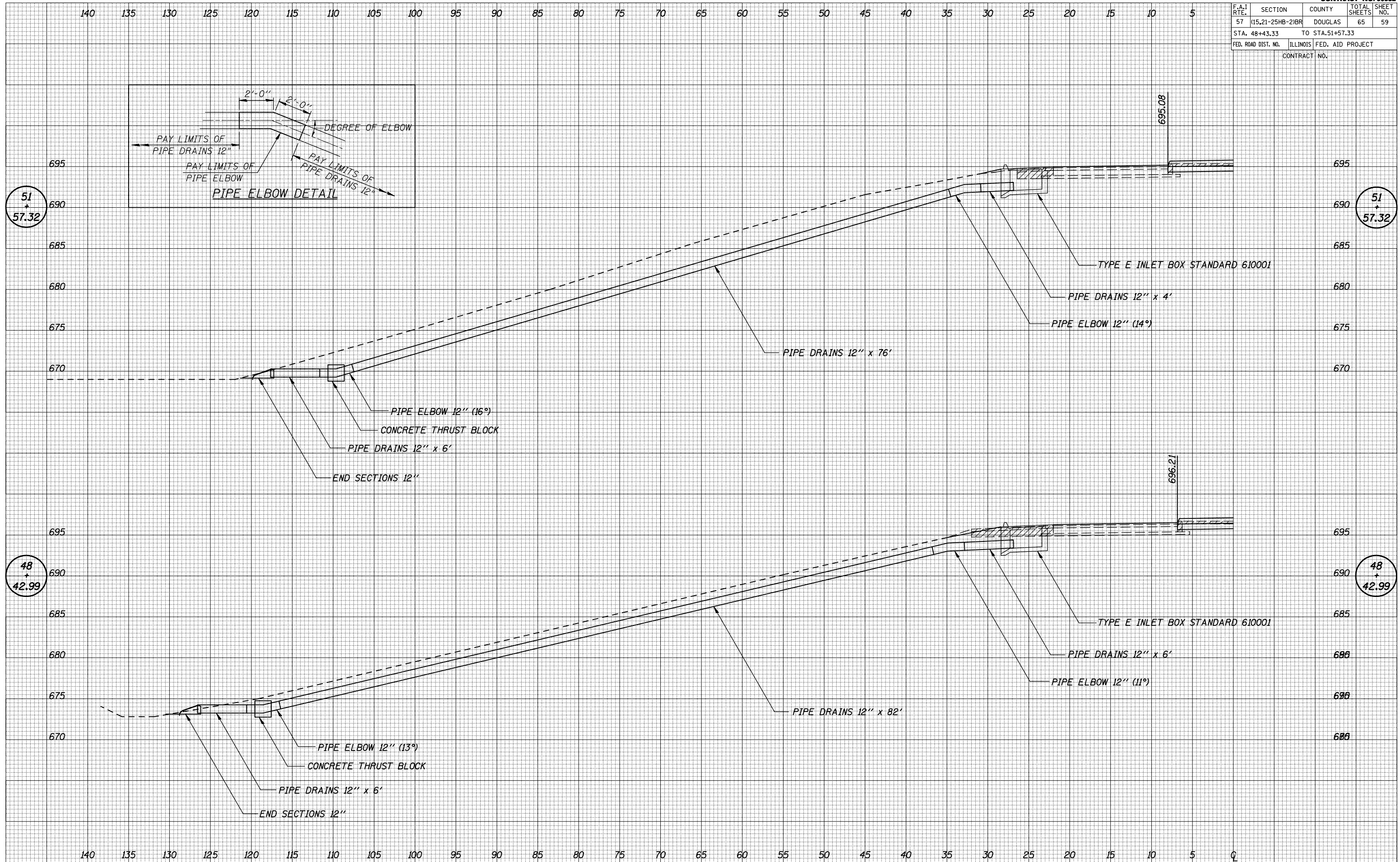
MODIFIED TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

IL ROUTE 133 OVER I-57
F.A.I. ROUTE 57 SECTION (15,21-25HB-2)BR
DOUGLAS COUNTY
STA. 1492+76.53
S.N. 021-0024

CUMMINS ENGINEERING CORPORATION

JOB #: 2114
FILE: 2114BARRIER
DATE: 10/24/06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	59
STA. 48+43.33		TO STA. 51+57.33		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



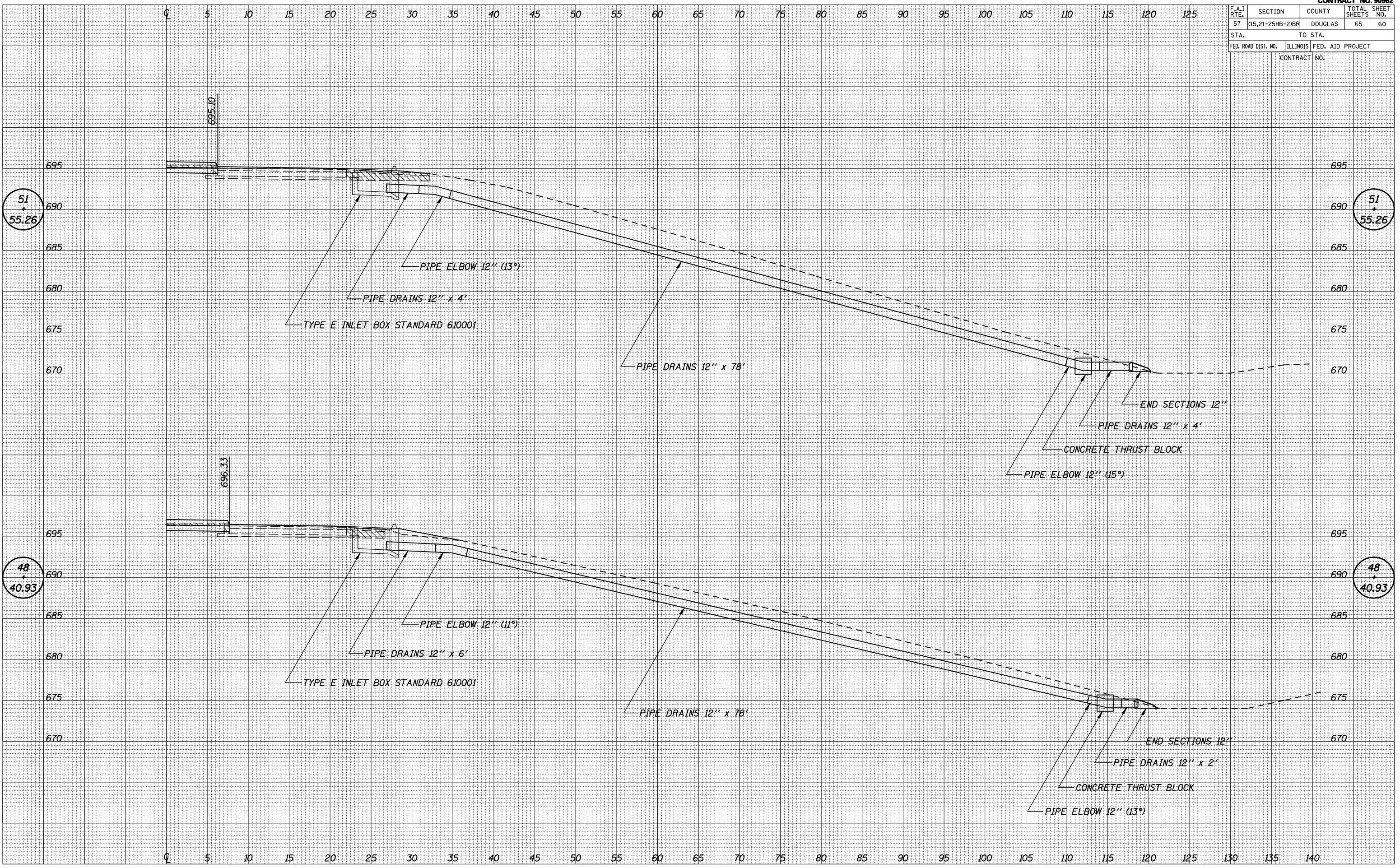
DATE
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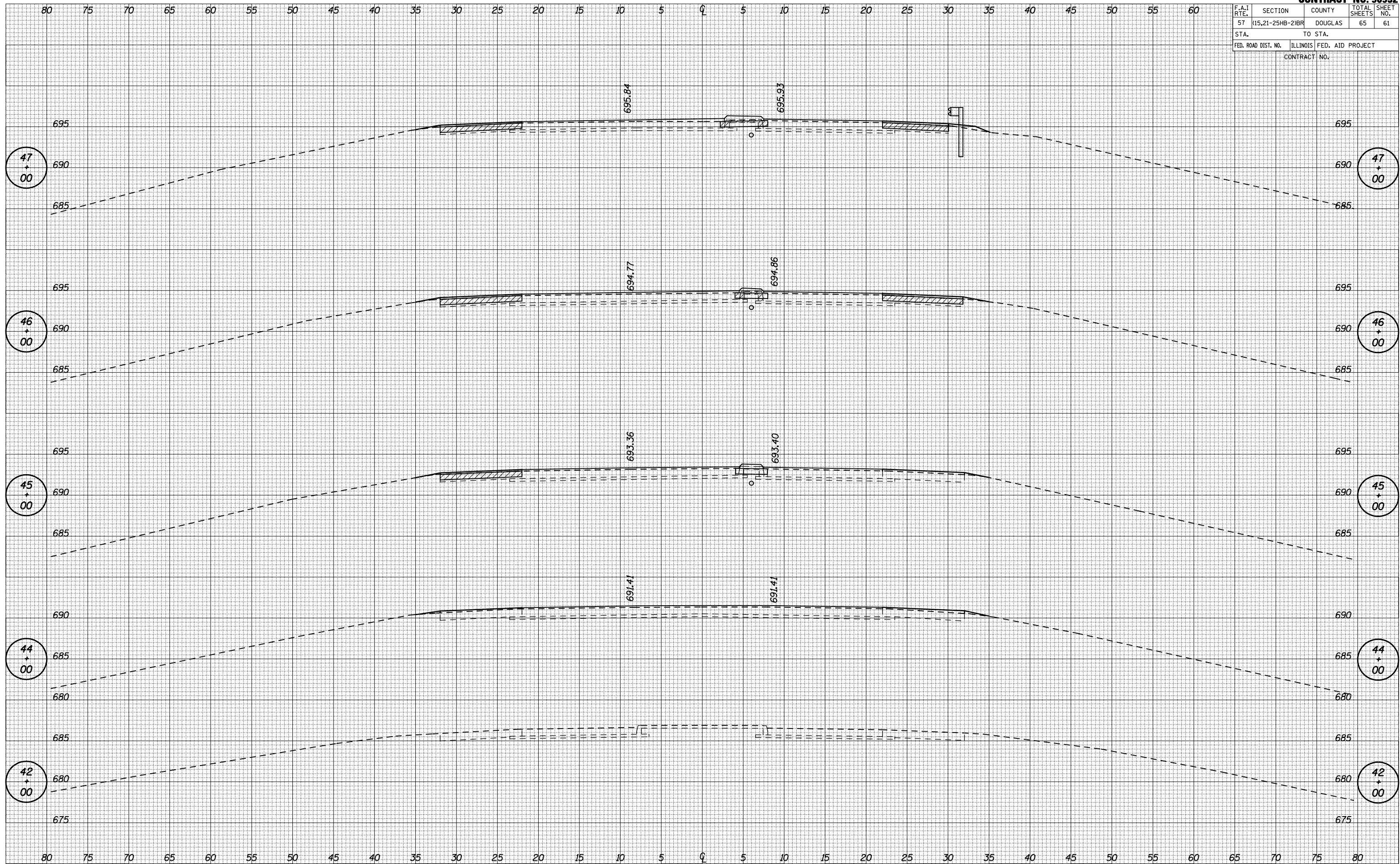
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57	(15,21-25HB-2)BR	DOUGLAS	65	60
STA. TO STA.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO.		

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

BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	AREAS CHECKED



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	61
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO.				



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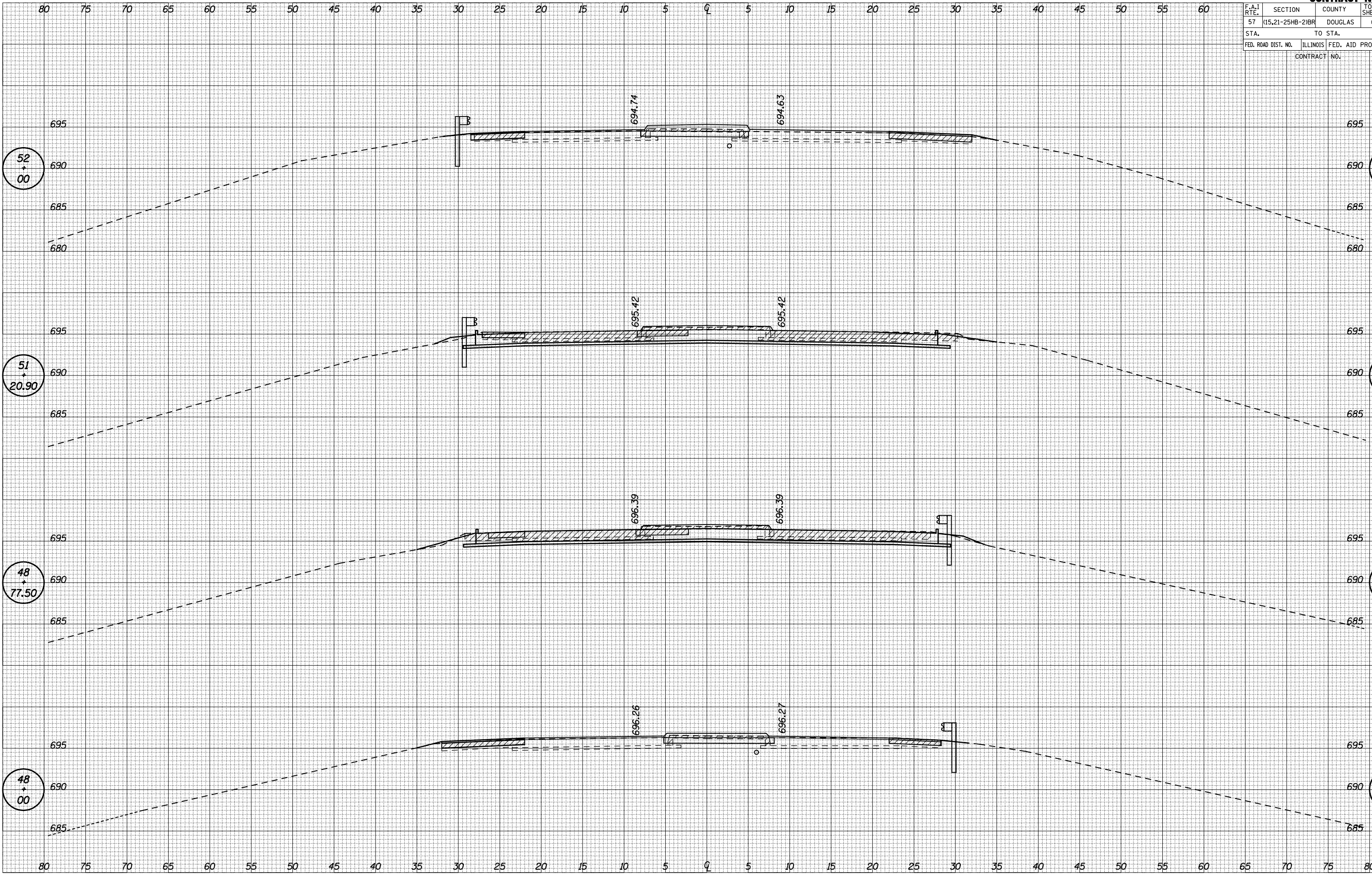
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NOTE BOOK PLOTTED _____

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AREAS CHECKED _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	62
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
CONTRACT NO.				



BY: _____ DATE: _____

ORIGINAL SURVEY PLOTTED _____

NOTE BOOK NO. _____

AREAS CHECKED _____

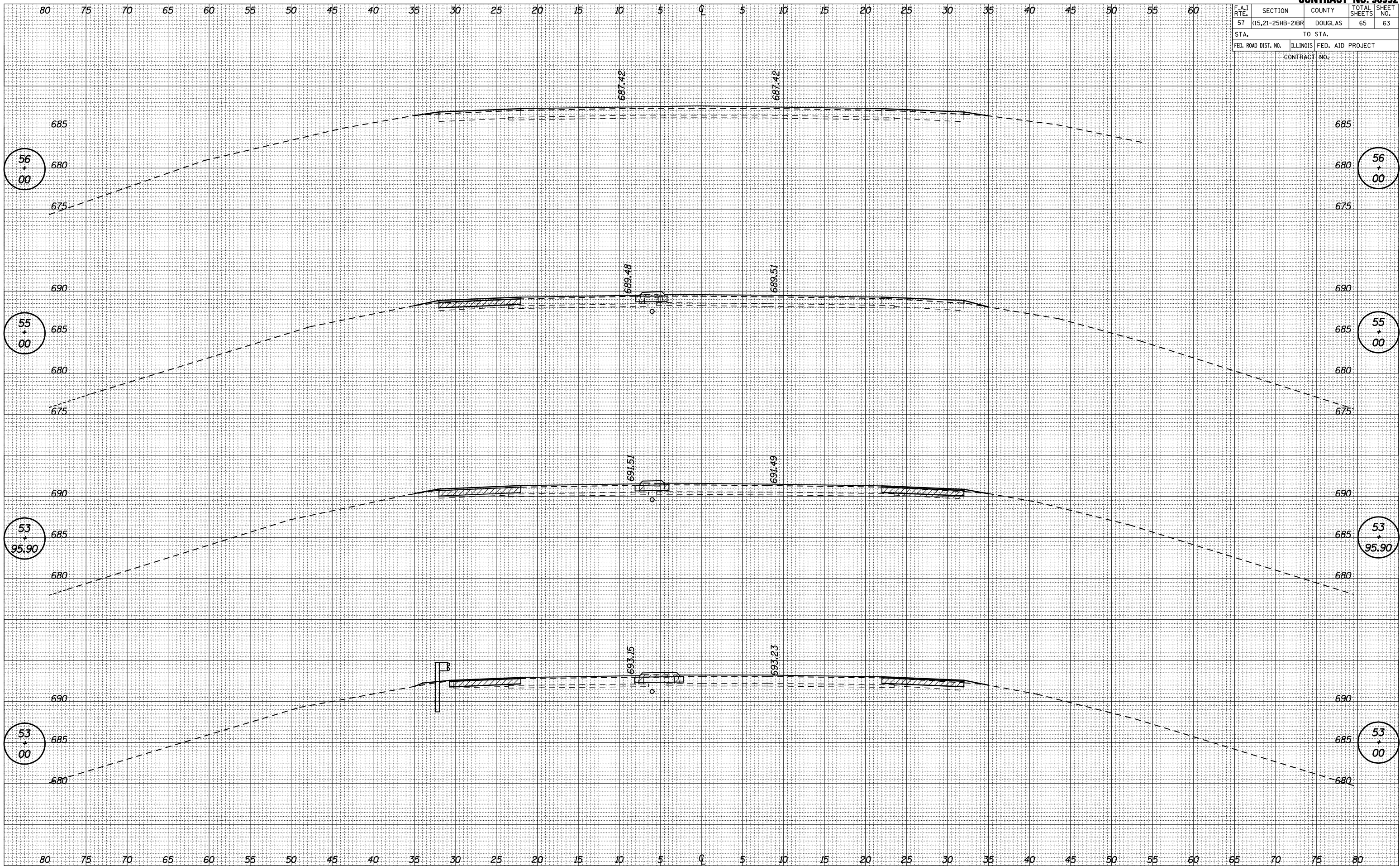
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ORIGINAL SURVEY PLOTTED _____

NOTE BOOK NO. _____

AREAS CHECKED _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	63
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO.				



BY	DATE
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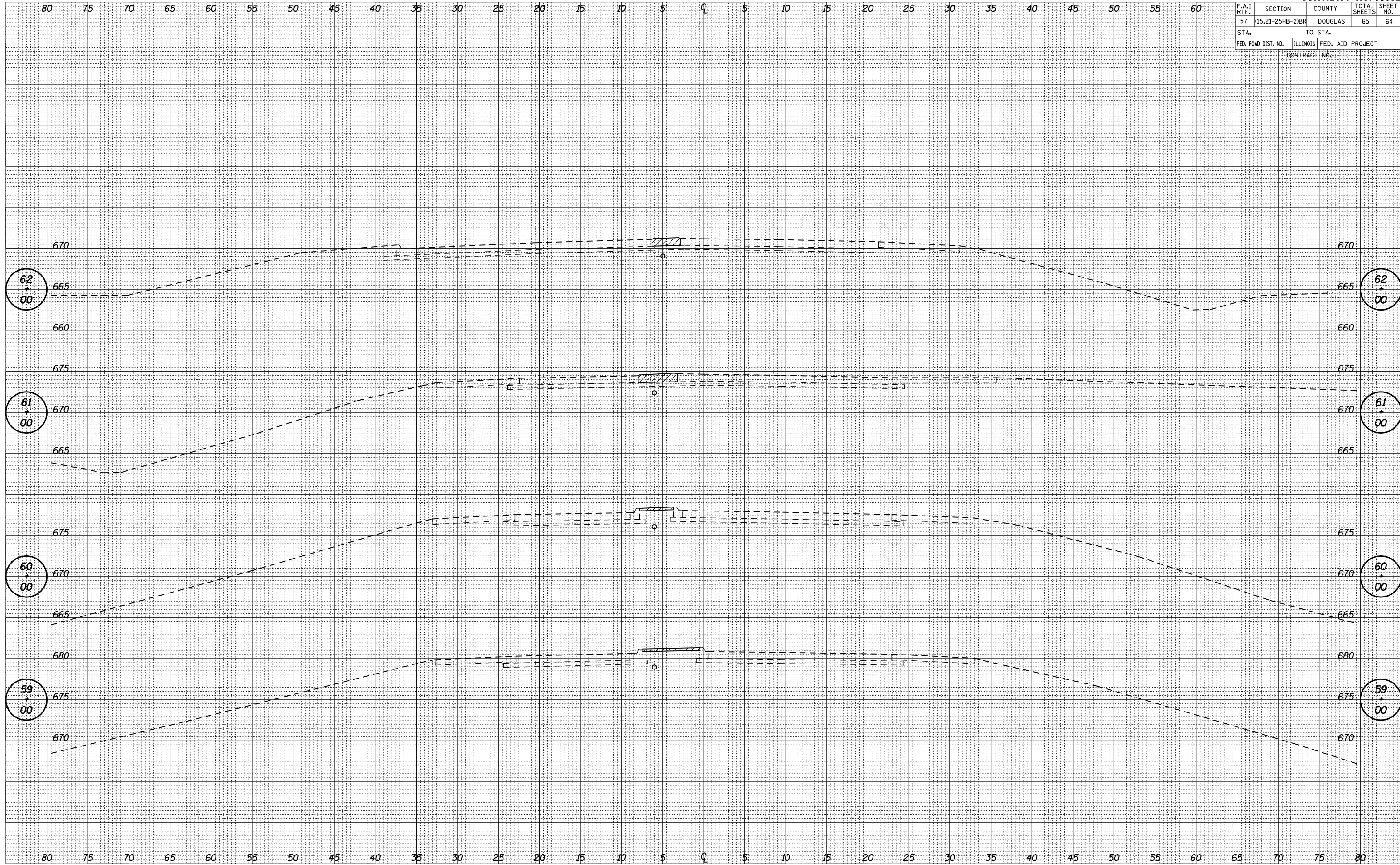
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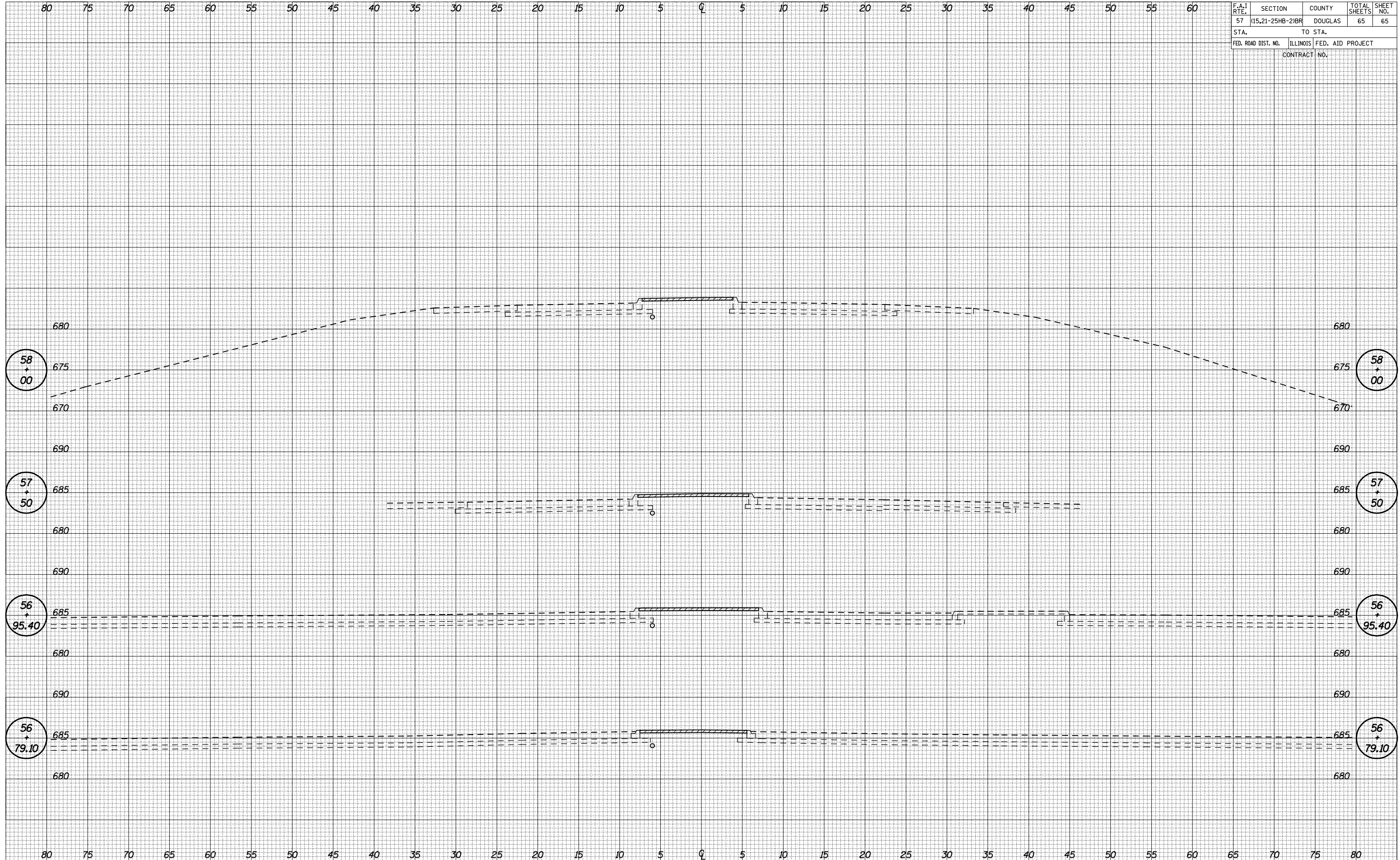
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	64
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO.	

BY	DATE

BY	DATE



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(15,21-25HB-2)BR	DOUGLAS	65	65
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO.				



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