048

03-08-2019 LETTING ITEM 048

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(103-1HB-1)BP	LEE	12	1
	ILLINOIS	CONTRACT NO. 64N11		

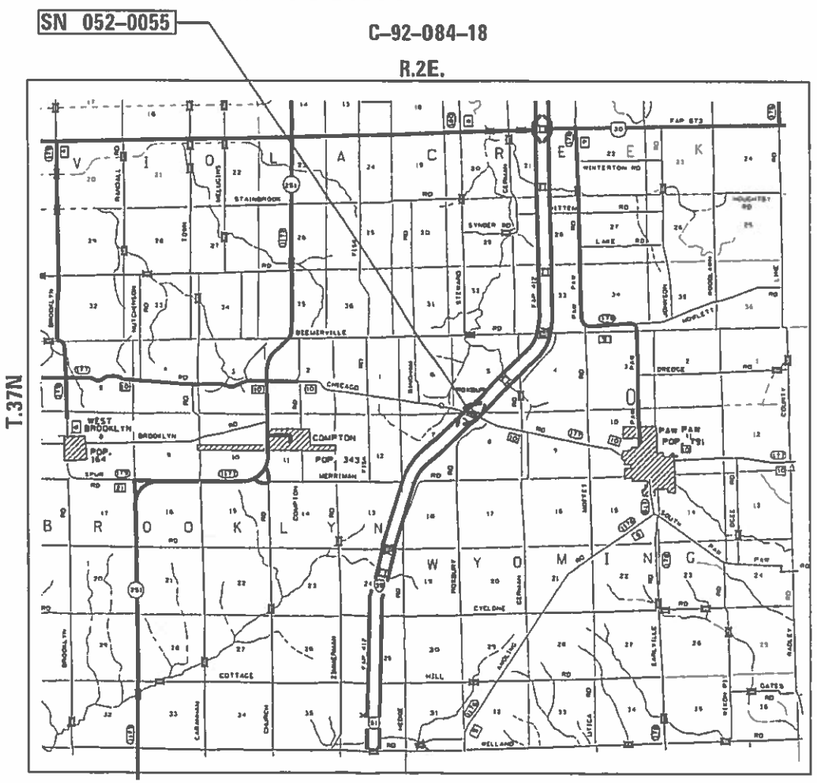
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

FAI ROUTE 39 (I–39)
SECTION: (103–1HB–1)BP
PROJECT: NHPP-EUEJ(629)
TYPE of IMPROVEMENT: BRIDGE PAINTING
LEE COUNTY

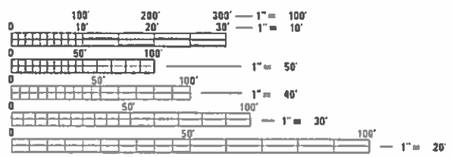
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR STATE STANDARDS, SEE SHEET NO. 2

LEE COUNTY
WYOMING TOWNSHIP – SECTIONS 5 & 8



D-92-056-18

LOCATION OF SECTION INDICATED THUS: –



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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 11-30 2018
REGIONAL ENGINEER
Feb 1 2019
ENGINEER OF DESIGN AND ENVIRONMENT
Feb 1 2019
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PROJECT ENGINEER: DAVID DOSS (815) 284–5416
PROJECT MANAGER: MAHMOUD ETEMADI (815) 284–5393

CONTRACT NO. 64N11

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

STATE STANDARDS

701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24'' (600mm) FROM PAVEMENT EDGE
701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701401-12 LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS $\geq$ 45 MPH
701426-09 LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS, FOR SPEEDS $\geq$ 45 MPH
701901-08 TRAFFIC CONTROL DEVICES
704001-08 TEMPORARY CONCRETE BARRIER
720011-01 METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
728001-01 TELESCOPING STEEL SIGN SUPPORT
729001-01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

GENERAL NOTES

NO AIR MONITORS ARE REQUIRED FOR THIS LOCATION.

THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 2A SHALL BE USED. THIS WORK WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LUMP SUM FOR CLEANING AND PAINTING STEEL BRIDGE NO. 1.

FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SEEDING OR PLACEMENT OF SOD AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF CLEANING AND PAINTING STEEL BRIDGE NO. 1.

MULCH METHOD II SHALL BE APPLIED OVER ALL SEEDED AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE CLEANING AND PAINTING STEEL BRIDGE NO. 1.

ALL BORROW/WASTE/USE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTHMOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.

TEMPORARY IMPACT ATTENUATORS WILL BE MEASURED AS EACH FOR EACH ATTENUATOR SUPPLIED ON THE JOB AS SPECIFIED IN THE PLANS, AND SHALL INCLUDE THE COST OF RENTING/OWNING THE ATTENUATOR FOR THE TIME REQUIRED ON THE JOB PLUS HAULING TO AND FROM THE PROJECT SITE, AS WELL AS ONE PLACEMENT AND REMOVAL FROM THE ROADWAY. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR IMPACT ATTENUATORS, TEMPORARY OF THE TYPE SPECIFIED.

RELOCATE TEMPORARY IMPACT ATTENUATOR WILL BE PAID FOR AS EACH AND WILL BE PAID FOR EACH TIME THE ATTENUATOR IS REQUIRED BY STAGING TO BE PICKED UP AND MOVED TO A DIFFERENT LOCATION ON THE PROJECT, WHETHER IT IS TO ANOTHER LOCATION ON THE ROADWAY OR TO A STORAGE/STAGING LOCATION FOR THE PROJECT. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR IMPACT ATTENUATORS, RELOCATE OF THE TYPE SPECIFIED.

THIS WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 704 OF THE STANDARD SPECIFICATIONS. TEMPORARY CONCRETE BARRIER WILL BE MEASURED IN FEET ALONG THE CENTERLINE OF THE BARRIER AND SHALL INCLUDE THE COST OF RENTING/OWNING THE BARRIER FOR THE TIME REQUIRED ON THE JOB PLUS HAULING TO AND FROM THE PROJECT SITE, AS WELL AS ONE PLACEMENT AND REMOVAL FROM THE ROADWAY IN ACCORDANCE WITH SECTION 704 OF THE STANDARD AND SPECIFICATION. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR TEMPORARY CONCRETE BARRIER.

RELOCATE TEMPORARY CONCRETE BARRIER WILL BE PAID FOR IN FEET ALONG THE CENTERLINE OF THE BARRIER, AND WILL BE PAID FOR EACH TIME THE BARRIER IS REQUIRED BY STAGING TO BE PICKED UP AND MOVED TO A DIFFERENT LOCATION ON THE PROJECT, WHETHER IT IS TO ANOTHER LOCATION ON THE ROADWAY OR TO A STORAGE/STAGING LOCATION FOR THE PROJECT. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR RELOCATE TEMPORARY CONCRETE BARRIER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.

THE SSPC QP1 & QP2 CONTRACT CERTIFICATIONS WILL BE REQUIRED FOR THIS CONTRACT.

MODEL: Default
FILE NAME: pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 2\Projects\Operations\Bridge Section\Lee\052-2005\64N11\CADD\02-sht-cover.dgn

USER NAME = dossdd	DESIGNED - _____	REVISED - _____	**STATE OF ILLINOIS**
	DRAWN - _____	REVISED - _____	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 40.0000 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = Nov-28-2018 11:08:51 AM	DATE - _____	REVISED - _____	

INDEX OF SHEETS,
STATE STANDARDS & GENERAL NOTES

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(103-1HB-1)BP	LEE	12	2
		CONTRACT NO. 64N11		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	0047 90% NHPP 10% STATE LEE COUNTY	TOTAL QUANTITY
67100100	MOBILIZATION	L SUM	1	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	2
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	15	15
70400100	TEMPORARY CONCRETE BARRIER	FOOT	775	775
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	275	275
70600250	IMPACT ATTENUATORS, TEMPORARY (NON–REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON–REDIRECTIVE), TEST LEVEL 3	EACH	2	2
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1	1
X7010208	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)	EACH	2	2
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1

MODEL: Default
FILE NAME: pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 2\Projects\Operations\BHdge Section\Lee\0952-2035\64N11\CADD\D2-sht-cover.dgn

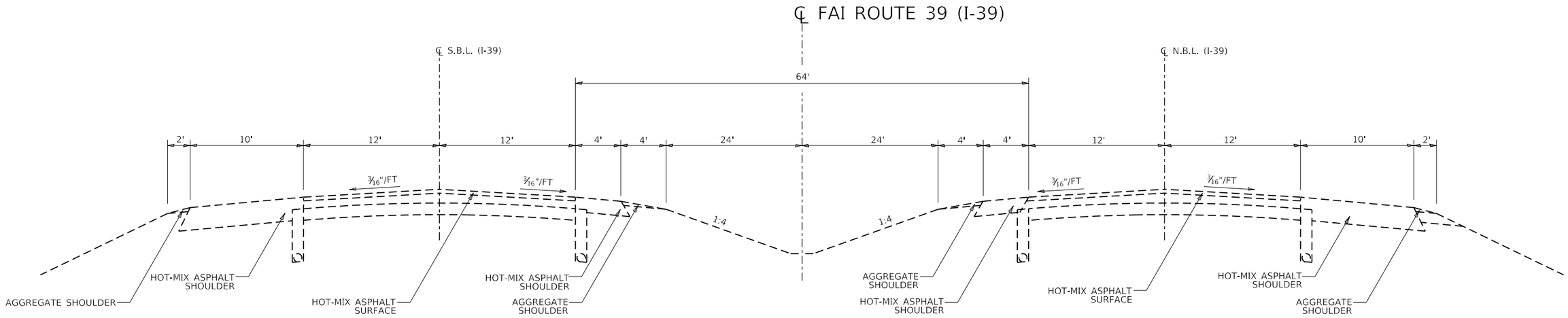
USER NAME = dossdd	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - _____	REVISED - _____	
PLOT SCALE = 40.0000 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = Dec-03-2018 10:51:46 AM	DATE - _____	REVISED - _____	

SUMMARY OF QUANTITIES

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(103-1HB-1)BP	LEE	12	3
		CONTRACT NO. 64N11		
	ILLINOIS	FED. AID PROJECT		

EXISTING TYPICAL



MODEL: Default
FILE NAME: pw:\\IL084EBIDINTEG.Illinois.gov:PWIDOT\Documents\IDOT Offices\District 2\Projects\Operations\Bridge Section\Lee\052-0053\64N11\CADD\02-sht-cover.dgn

USER NAME = dossdd	DESIGNED - _____	REVISED - _____	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN - _____	REVISED - _____	
PLOT SCALE = 40.0000 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = Nov-28-2018 01:47:14 PM	DATE - _____	REVISED - _____	

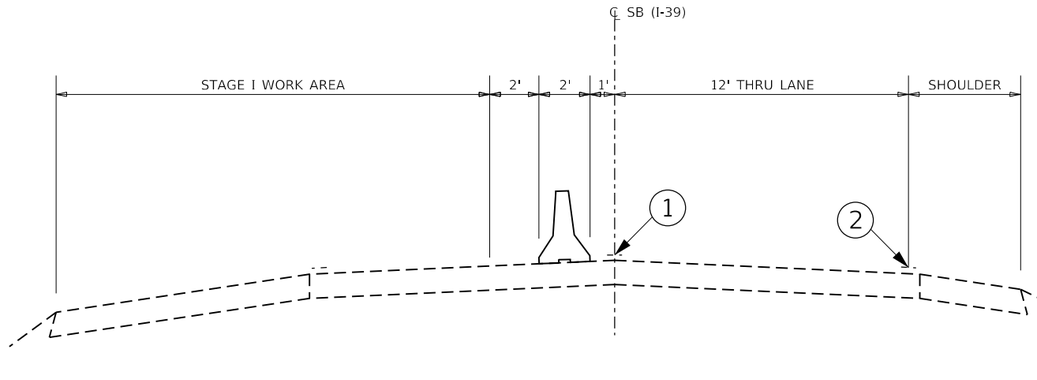
EXISTING TYPICAL

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

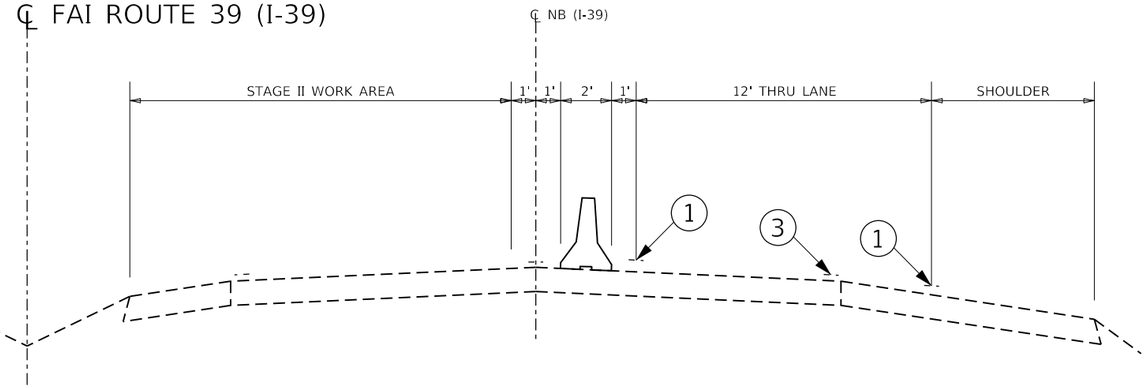
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(103-1HB-1)BP	LEE	12	4
		CONTRACT NO. 64N11		
	ILLINOIS FED. AID PROJECT			

STAGING TYPICALS

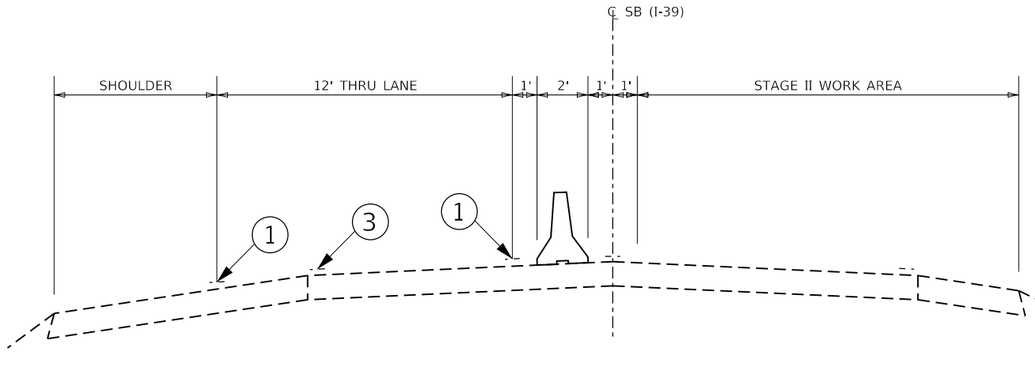
STAGE I



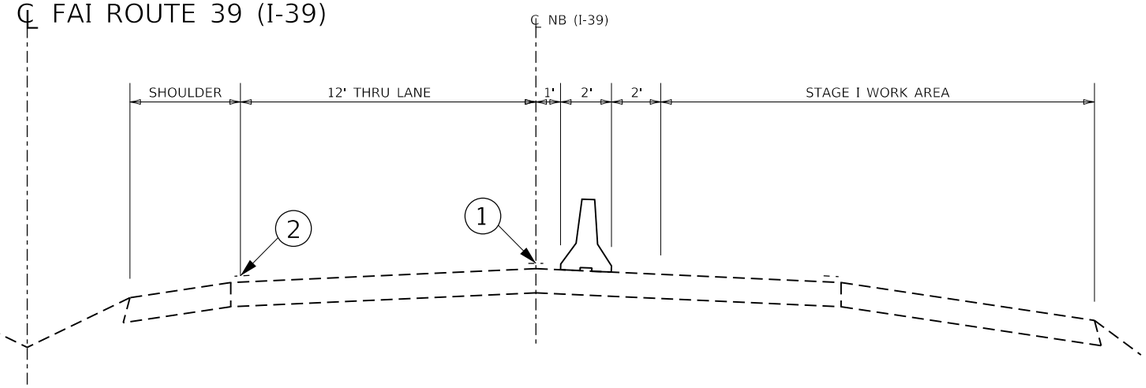
STAGE II



STAGE II



STAGE I

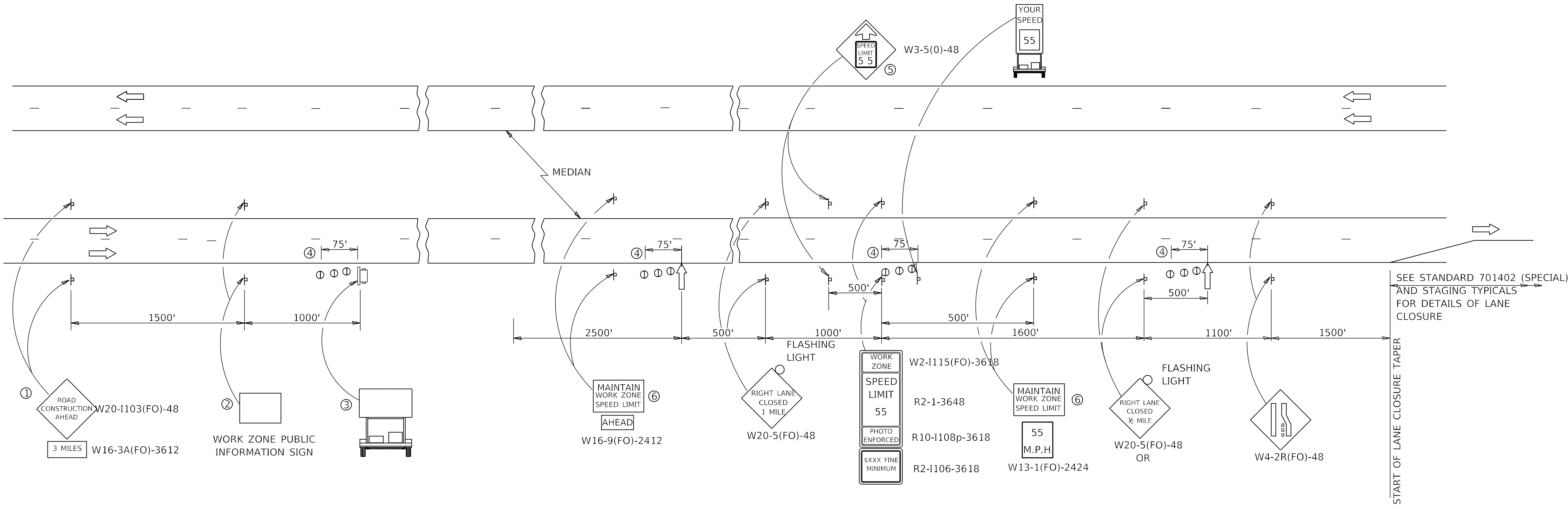


1. TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND ALONG-SIDE THE WORK AREA. THE RIGHT EDGE LINE SHALL BE WHITE AND THE LEFT EDGE LINE SHALL BE YELLOW.
2. EXISTING PAVEMENT MARKING LINE
3. BLACKOUT TAPE TO COVER CONFLICTING EXISTING PAVEMENT MARKING LINES

MODEL: Default
FILE NAME: pw:\\IL084EBIDNTEG.Illinois.gov:PWIDOT\Documents\IDOT Offices\District 2\Projects\Operations\B-Edge Section\Lee\0052-2035\64N11\CADD\D2-sht-cover.dgn

USER NAME = dossdd	DESIGNED - _____	REVISED - _____	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**	**STAGING TYPICALS**	
	DRAWN - _____	REVISED - _____			
PLOT SCALE = 40.0000 ' / in.	CHECKED - _____	REVISED - _____			
PLOT DATE = Dec-03-2018 10:52:05 AM	DATE - _____	REVISED - _____		SCALE: _____ SHEET __ OF __ SHEETS STA. _____ TO STA. _____	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(103-1HB-1)BP	LEE	12	5
		CONTRACT NO. 64N11		
	ILLINOIS	FED. AID PROJECT		



① THE ROAD CONSTRUCTION AHEAD SIGN SHALL BE LOCATED 3 MILES IN ADVANCE OF THE PROJECT LIMITS.

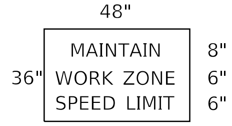
② THE MESSAGE AND SIZE OF THE WORK ZONE PUBLIC INFORMATION SIGN SHALL BE AS SPECIFIED BY THE DEPARTMENT.

③ TO BE PLACED IN THE MEDIAN WHEN FEASIBLE. THE MESSAGE BOARD SHALL BE USED TO DISPLAY STATUS OF LANES WITHIN THE PROJECT. THE PRIMARY MESSAGES SHALL BE:
"RIGHT LANE CLOSED" / " x MILES AHEAD"
"LEFT LANE CLOSED" / " x MILES AHEAD"
"ALL LANES OPEN"

④ THREE, TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 25' CENTERS.

⑤ THIS SIGN SHALL ONLY BE USED IF THE EXISTING SPEED LIMIT IS GREATER THAN 65 MPH.

⑥ 48"x36" FLUORESCENT ORANGE SIGN WITH BLACK LETTERS.



ARROW BOARD

PORTABLE CHANGEABLE MESSAGE SIGN

SIGN

TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT

TRAILER MOUNTED SPEED DISPLAY SIGN

GENERAL NOTE:

THIS STANDARD IS USED WHERE AT ANY TIME A LANE IS CLOSED ON A FREEWAY/EXPRESSWAY.

WHEN THE LEFT LANE IS CLOSED, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR THE RIGHT LANE CLOSED SIGNS.

THE FIRST TWO SIGNS AND THE MESSAGE BOARD ARE STATIONARY. THE OTHER SIGNS AND ARROWBOARDS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED DISTANCE FROM THE START OF THE LANE CLOSURE TAPER(S).

MODEL: Default
FILE NAME: pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 2\Projects\Operations\Bridge Section\Lee\052-0055\64N11\CADD\D2-sht-cover.dgn

USER NAME = dossdd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = Nov-28-2018 02:41:32 PM	DATE -	REVISED -	

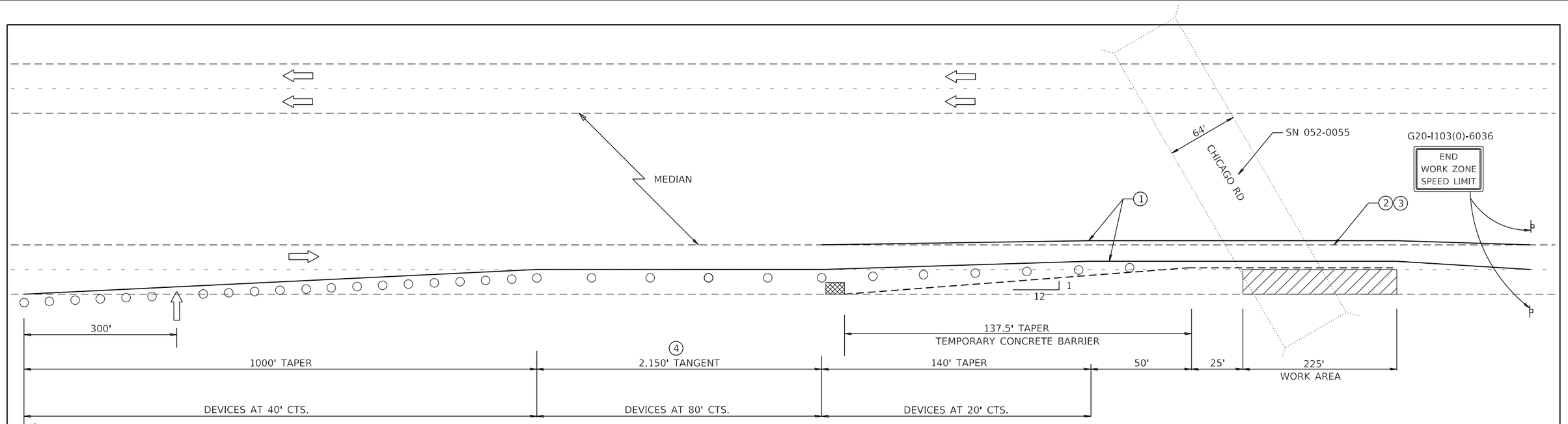
TRAFFIC CONTROL & PROTECTION, STANDARD 701400 (SPECIAL)

SCALE: ______ SHEET ___ OF ___ SHEETS STA. ______ TO STA. ______

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(103-1HB-1)BP	LEE	12	6

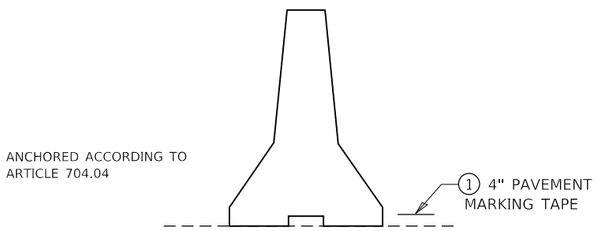
CONTRACT NO. 64N11

ILLINOIS FED. AID PROJECT



SEE STANDARD 701400 (SPECIAL) FOR
APPROACH START OF LANE CLOSURE TAPER

*NO EQUIPMENT OR MATERIALS SHALL ENCROACH WITHIN A DISTANCE OF 2'-0" AS MEASURED FROM THE BASE OF THE TEMPORARY CONCRETE BARRIER TO THE ℄ OF ROADWAY



TEMPORARY CONCRETE BARRIER

SYMBOLS

- ARROW BOARD
- WORK AREA
- SIGN
- TRAFFIC CONTROL DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

1. TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND ALONG-SIDE THE WORK AREA. THE RIGHT EDGE LINE SHALL BE WHITE AND THE LEFT EDGE LINE SHALL BE YELLOW.
2. EXISTING PAVEMENT MARKING LINE
3. BLACKOUT TAPE TO COVER CONFLICTING EXISTING PAVEMENT MARKING LINES
4. TANGENT HAS BEEN EXTENDED TO ACCOMODATE THE EXIT RAMPS FOR NB & SB, SEE STANDARD 701411

PAVEMENT MARKINGS

ALL TEMPORARY PAVEMENT MARKING SHALL BE, PAVEMENT MARKING TAPE, TYPE IV 4" AND THE MATERIALS SHALL BE ACCORDING TO ARTICLE 1095.06 OF THE STANDARD AND SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL, MAINTAIN AND REMOVE ALL TEMPORARY PAVEMENT MARKING TAPE. THIS WORK SHALL NOT BE PAID SEPERATELY AND SHALL BE INCLUDED IN THE COST OF THE "TRAFFIC CONTROL AND PROTECTION STANDARD 701402 (SPECIAL)".

ALL CONFLICTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PROTECTED PRIOR TO COVERING WITH PAVEMENT MARKING BLACKOUT TAPE, 4". PAVEMENT MARKING BLACKOUT TAPE, 4", SHALL EXTEND A MINIMUM OF 2 INCHES BEYOND THE EXISTING MARKINGS OR REFLECTORS IN ALL DIRECTIONS. THIS WORK SHALL INCLUDE PROTECTING EXISTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS, INSTALLING, MAINTAINING AND REMOVING BLACKOUT TAPE. THIS WORK SHALL NOT BE PAID SEPERATELY AND SHALL BE INCLUDED IN THE COST OF THE "TRAFFIC CONTROL AND PROTECTION STANDARD 701402 (SPECIAL)".

GENERAL NOTES

THIS STANDARD IS USED WHERE AT ANY TIME ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES WILL ENCROACH ON THE PAVEMENT OR ON THE SHOULDER WITHIN 24 (600) OF THE EDGE OF PAVEMENT FOR DAYLIGHT OPERATION EXCEEDING ONE DAY AND WHERE TEMPORARY CONCRETE BARRIER IS UTILIZED.

THIS STANDARD MUST ALWAYS BE USED IN COMBINATION WITH STANDARD 701400.

TEMPORARY CONCRETE BARRIER SHALL BE ACCORDING TO STANDARD 704001.

MODEL: Default
FILE NAME: pw:\\IL084-EBIDINTEG.bentleyconnect.bentley.com:IL084-EBIDINTEG-Documents\DOT Offices\District 2\Projects\Operations\Bridge Section\Lees\052-0055\64N11\CADD\D2-sht-cover.dgn

USER NAME = dossdd	DESIGNED - _____	REVISED - _____	**STATE OF ILLINOIS**	**TRAFFIC CONTROL & PROTECTION, STANDARD 701402 (SPECIAL)**	
	DRAWN - _____	REVISED - _____	**DEPARTMENT OF TRANSPORTATION**		
PLOT SCALE = 40.0000 ' / in.	CHECKED - _____	REVISED - _____		SCALE: _____ SHEET __ OF __ SHEETS STA. _____ TO STA. _____	
PLOT DATE = Dec-03-2018 10:52:19 AM	DATE - _____	REVISED - _____			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(103-1HB-1)BP	LEE	12	7
		CONTRACT NO. 64N11		
	ILLINOIS	FED. AID PROJECT		

052-0055

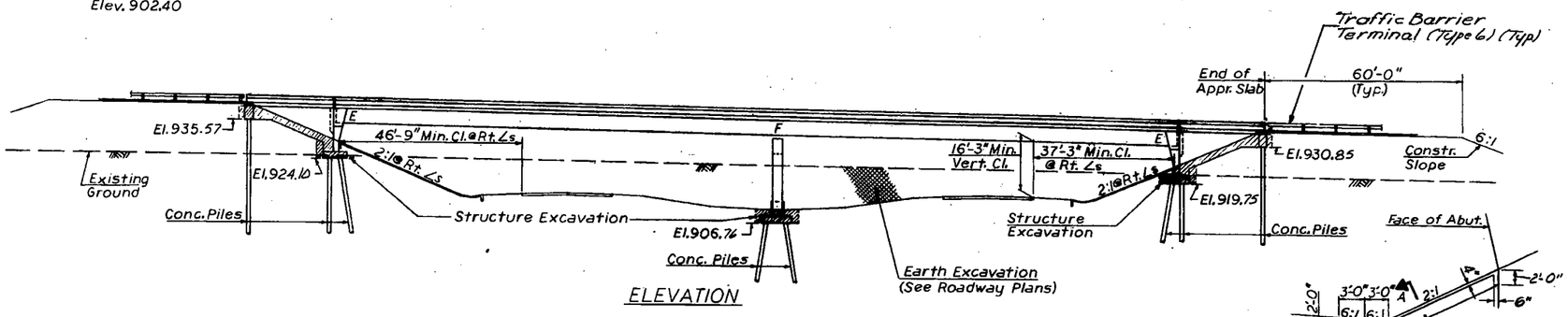
FOR INFORMATION ONLY

B.M.(R-1): a S. End E. Hdwl. Box Cul. under Roxbury Rd.
36' Lt, Sta. 139+54 ℄ C.H. 10
Elev. 902.40

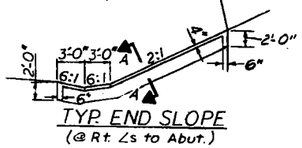
103-(1A,1HB-1,1HB-2,1B,1B-1)

Sht 1 of 17

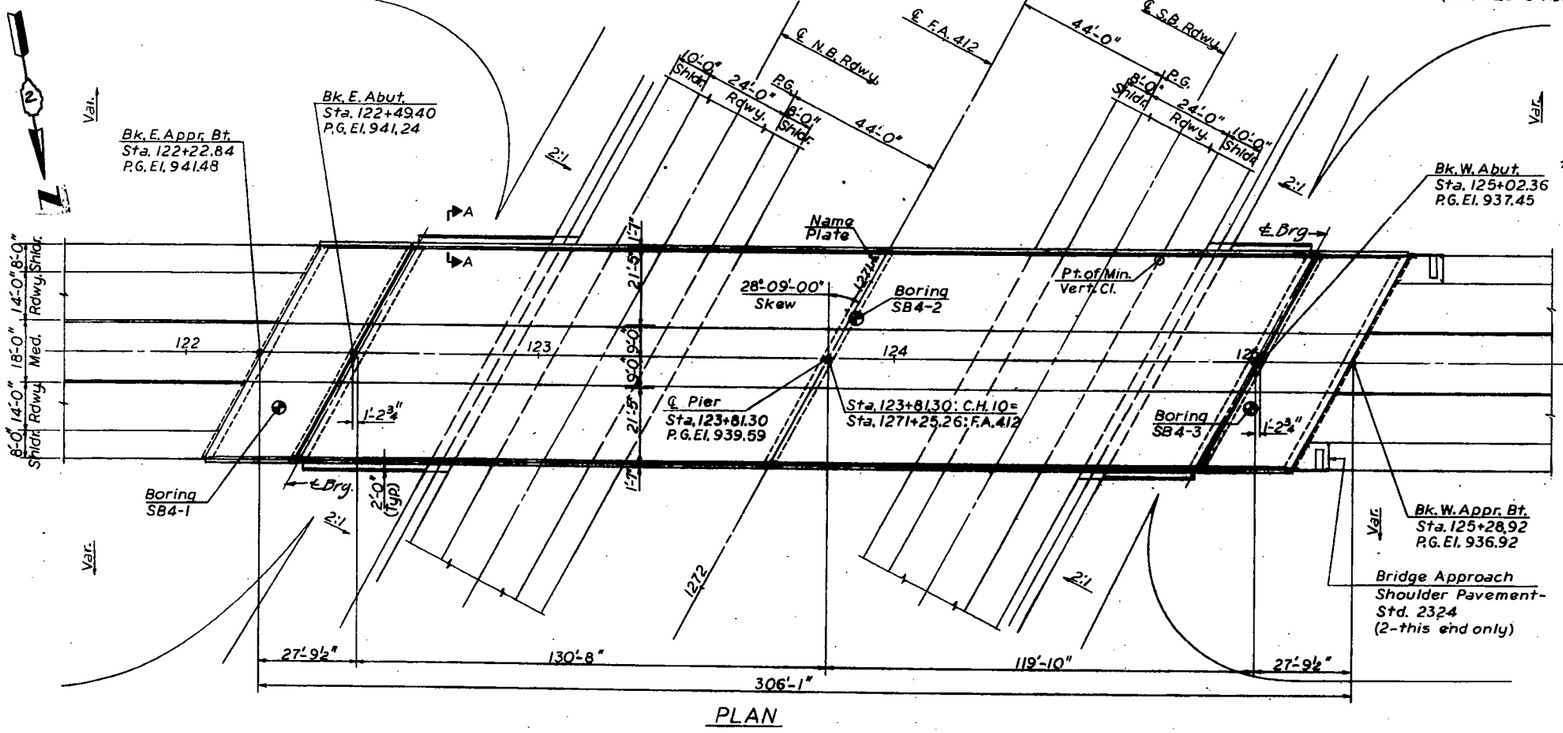
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	*	LEE	459	147
FED. ROAD DIST. NO. 7	ILLINOIS	PROJ.		



ELEVATION



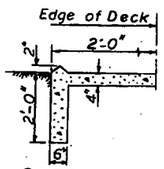
TYP. END SLOPE
(@ Rt. ℄s to Abut.)



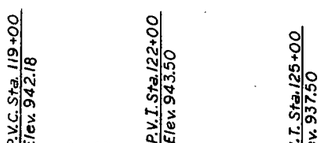
PLAN

STATION 1271+25.26
BUILT 198 BY
STATE OF ILLINOIS
F.A. RTE. 412 SEC. 103-1HB-1
F.A. PROJ. PD-412-4(24)
LOADING HS20
STR. NO. *

*Structure Number to be supplied by District.



SECTION A-A



PROFILE – C.H. 10

PROFILE – F.A. 412

DESIGN STRESSES

f'_c = 3500 p.s.i.

f_s = 20,000 p.s.i. (Reinf.)

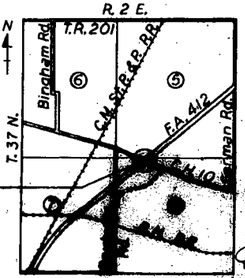
Hybrid Girder — f_y = 50,000 psi (AASHTO M-223, Grade 50) (Flanges & Splice Pls)
f_y = 36,000 psi (AASHTO M-183) (Web & Composite Flanges)

Allow 25#/Sq. Ft. for Fut. W. S.

Loading: HS20-44

Design Specifications: AASHTO 1973 and Interims (1978 thru 1982 Interim Specifications)

Proposed Structure



LOCATION PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Bridge & Traffic Structures

ILLINOIS DIVISION OF HIGHWAYS

SEE PROPOSAL FOR BORING DATA.

FASTENERS SHALL BE HIGH STRENGTH BOLTS . BOLTS 3/4" DIA., OPEN HOLES 13/16" DIA., UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 489,436 Lbs.
AASHTO M183= 294,805 Lbs
AASHTO M223= 193,805 Lbs.
AASHTO M222= 826 Lbs

THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED.

ALL CONTACT SURFACES OF JOINTS FOR THE CROSS FRAMES AND LATERAL BRACINGS SHALL BE FREE OF PAINT OR LACQUER.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSS FRAMES OVER SUPPORTS.

THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL OF THE STEEL GIRDERS.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 OR M 53 GRADE 60.

SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" X 6" - W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.

CONCRETE PILES AT THE APPROACH BENTS SHALL BE DRIVEN IN HOLES PREDRILLED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 512.03(c) OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE AT EACH ABUTMENT AND AT THE PIER, AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.

TOTAL BILL OF MATERIAL

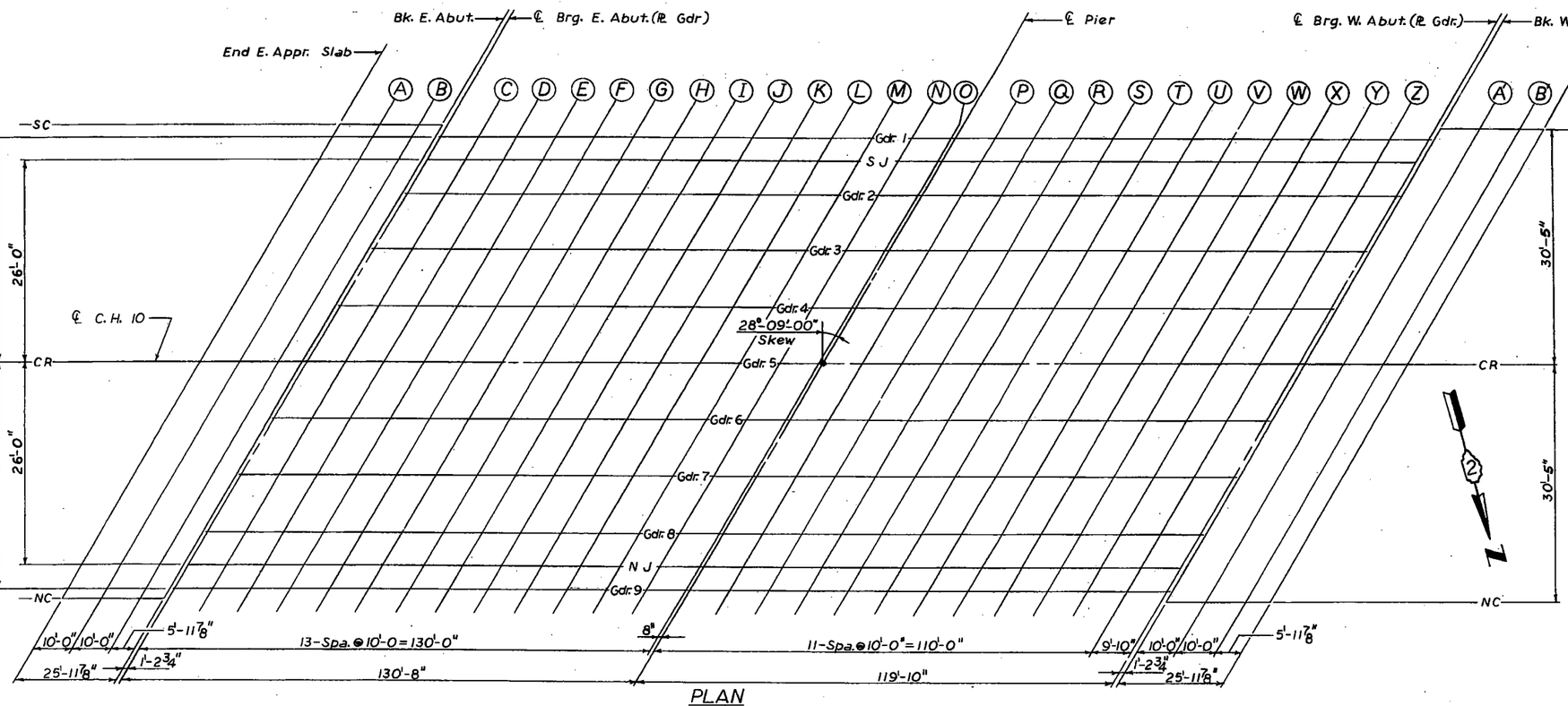
ITEM	UNIT	SUB-STRUCT.	SUPER-STRUCT.	TOTAL
Structure Excavation	Cu.Yds.	310	——	310
Structural Steel	L.S.	——	0.73	0.73
Reinforcement Bars (Epoxy Coated)	Lbs.	——	87,930	87,930
Class X Concrete	Cu.Yds.	441.8	783.3	1225.1
Reinforcement Bars	Lbs.	56,690	69,870	126,560
Protective Coat	Sq.Yds.	——	2350	2350
Concrete Piles	Lin.Ft.	5730	——	5730
Test Piles, Concrete	Ea.	3	——	3
Slopewall, 4"	Sq.Yds.	706	——	706
Sand Backfill	Cu.Yds.	400	——	400
Name Plates	Ea.	1	——	1
Stud Shear Connectors	Ea.	——	3591	3591
Neoprene Exp. Jt. (2")	Lin.Ft.	——	142	142
Drainage Scuppers	Ea.	——	4	4

052-0055

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.412	X	LEE	459	149
FED. ROAD DIST. NO. 7	ILLINOIS	PROJ.		

Sht. 3 of 17



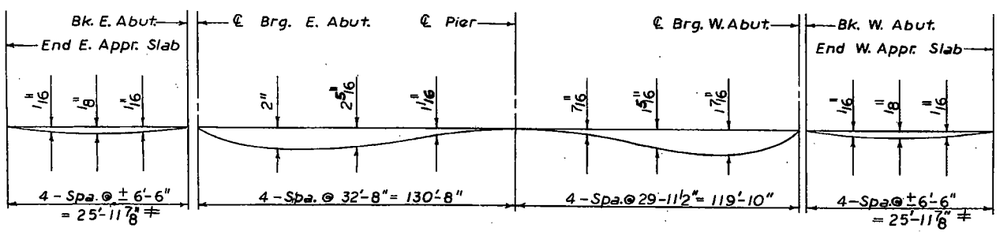
PLAN

SPAN 1

	GIRDER	STATION	NORMAL OFFSET	ELEVATION *	DEFL + ELEV **
END E. APPR. SLAB (TYP.) →	SC	12239.685	30.417	940.853	940.853
	SC A	12249.685	30.417	940.757	940.757
	SC B	12259.685	30.417	940.657	940.657
BK. E. ABUT. (TYP.) →	SC	12265.675	30.417	940.595	940.595
	CR	12229.4100	0.0000	941.476	941.476
	CR A	12239.4099	0.0000	941.387	941.387
	CR B	12245.4099	0.0000	941.293	941.293
	CR	12249.4000	0.0000	941.235	941.235
	NC	12207.135	-30.417	941.138	941.138
	NC A	12217.135	-30.417	941.045	941.045
	NC B	12227.135	-30.417	940.949	940.949
	NC	12233.124	-30.417	940.914	940.914

SPAN 4

	GIRDER	STATION	NORMAL OFFSET	ELEVATION *	DEFL + ELEV **
BK. W. ABUT. (TYP.) →	SC	12518.633	30.417	936.652	936.652
	SC A'	12528.633	30.417	936.452	936.452
	SC B'	12538.633	30.417	936.252	936.252
END W. APPR. SLAB (TYP.) →	SC	12544.625	30.417	936.132	936.132
	CR	12502.358	0.0000	937.453	937.453
	CR A'	12512.358	0.0000	937.253	937.253
	CR B'	12522.358	0.0000	937.053	937.053
	CR	12528.348	0.0000	936.933	936.933
	NC	12486.083	-30.417	937.299	937.299
	NC A'	12496.083	-30.417	937.103	937.103
	NC B'	12506.083	-30.417	936.903	936.903
	NC	12512.072	-30.417	936.783	936.783



DEAD LOAD DEFLECTION DIAGRAM

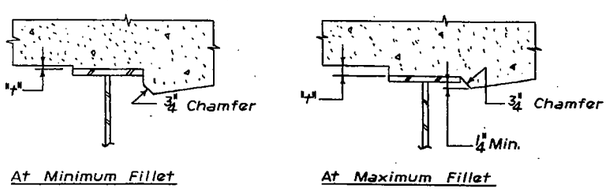
(Includes weight of concrete only)

≠ DEFLECTIONS SHOWN ARE FOR CR. DEFLECTIONS FOR NC and SC ARE ZERO.

NOTE

THIS DIAGRAM APPLIES TO ALL GIRDERS. THE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION.

NC = NORTH CURB
SC = SOUTH CURB
CR = C.L. ROADWAY
NJ = NORTH LONGITUDINAL BONDED CONSTRUCTION JOINT
SJ = SOUTH LONGITUDINAL BONDED CONSTRUCTION JOINT



FILLET HEIGHT

TO DETERMINE "t": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT INTERVALS AS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION, PLUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE FLANGE OF GIRDERS.

* ELEVATION = THEORETICAL GRADE ELEVATIONS ARE AT TOP OF CONCRETE SLAB, EXCEPT THAT ELEVATIONS ARE GIVEN ON THE CROWNED ROADWAY WHERE THE POINTS ARE AT THE CROWN.

** DEFL. + ELEV. = THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION.

Work this Sheet with Sht. 4

ILLINOIS DIVISION OF HIGHWAYS

F.A. ROUTE 412

PROJECT _____ SECTION 103-1HB-1

LEE COUNTY

DECK ELEVATIONS

Designed by: [illegible] Quantities by: D.Z.

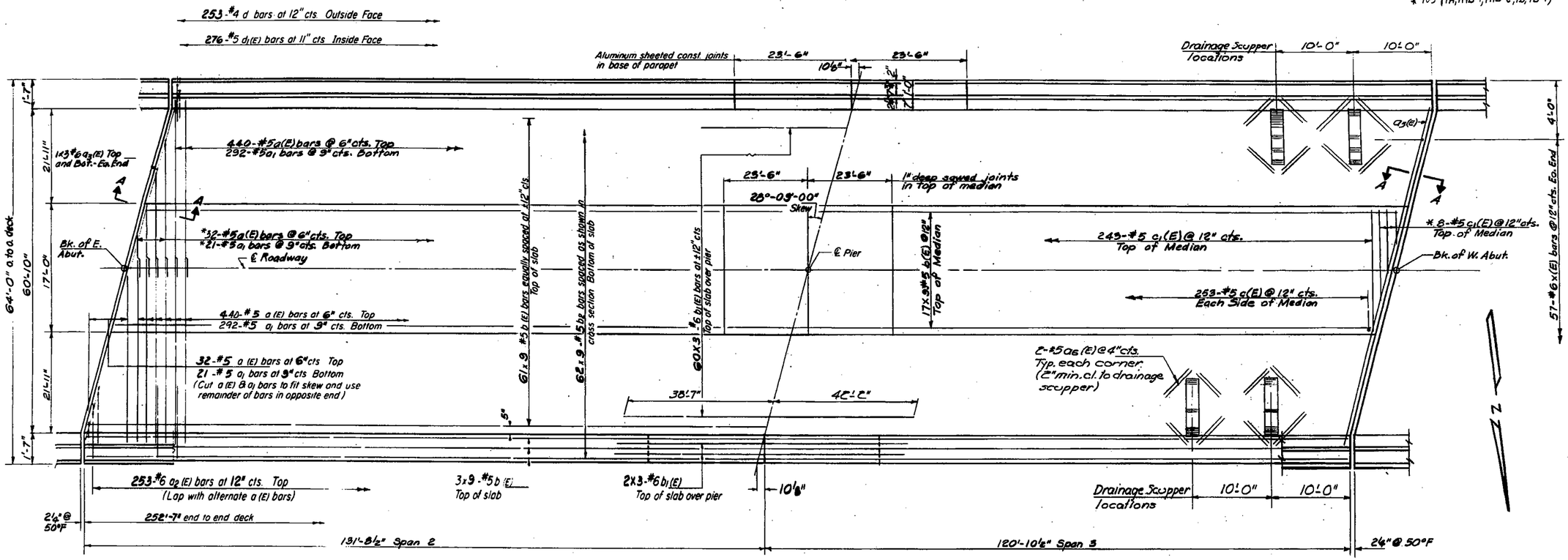
Checked by: [illegible] Traced by: [illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.Rte. 412	*	LEE	459	151
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
SHEETS 17

* 103-(1A, 1HB-1, 1HB-2, 1B, 1B-1)



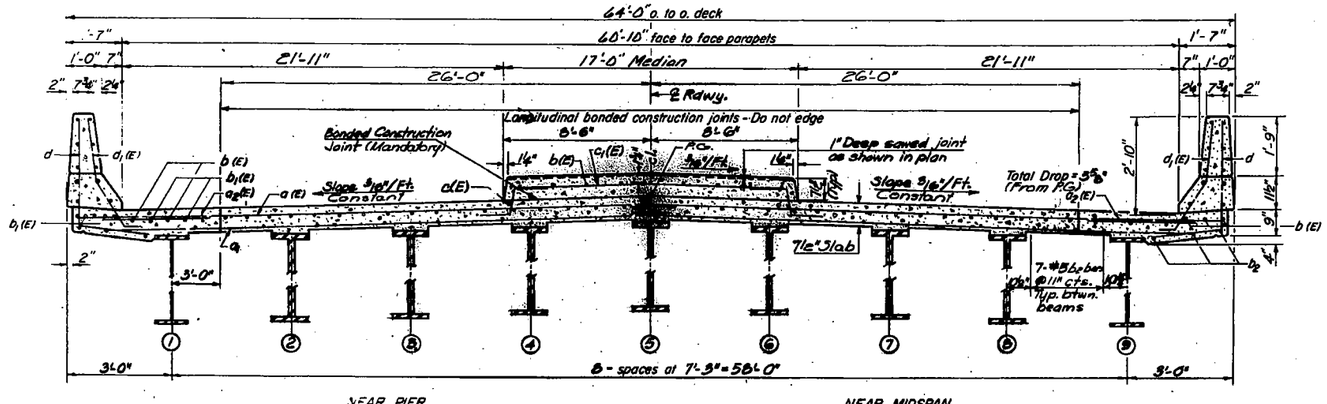
PLAN

* Order bars full length. Cut to fit skew and use remainder of bars in opposite end.

MIN. BAR LAPS

#5	1'-9"
#6	2'-3"

FOR INFORMATION ONLY



CROSS SECTION
(LOOKING EAST)

NOTES:
See sheet #6 for superstructure details and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

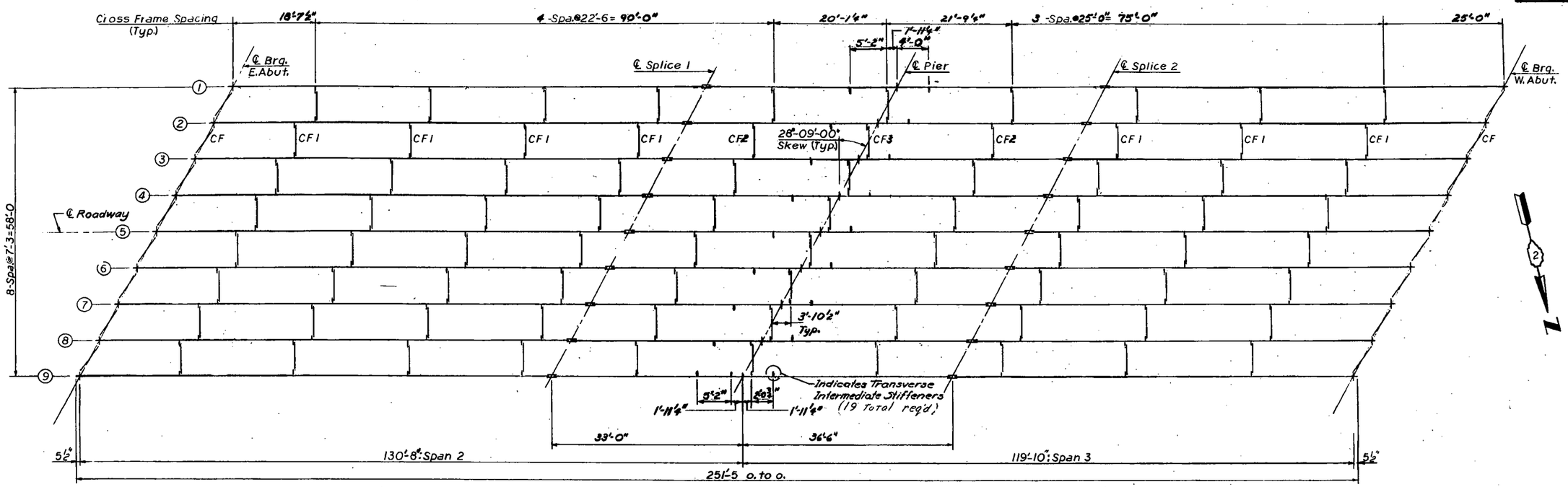
S-2-L (≤30°) 8-30-80

SUPERSTRUCTURE
F.A. RTE. 412 SEC. 103-1HB-1
LEE COUNTY
STA. 127+25.26

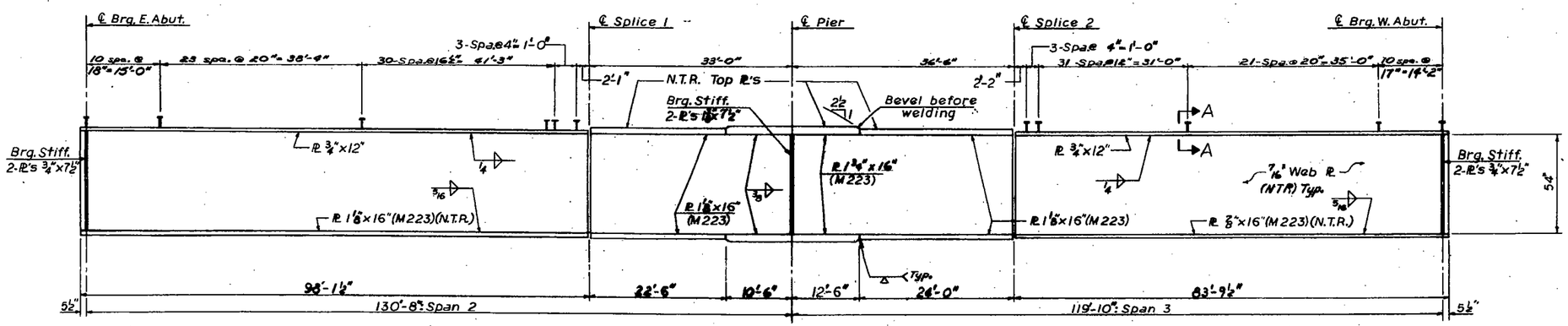
103-(IA,[illegible]HB-1,IHB-2,1B,1B-1)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 412	.*	LEE	459	152
FED. ROAD DIST. NO. 7	ILLINOIS	PROJ.		

Sht. 11 of 17

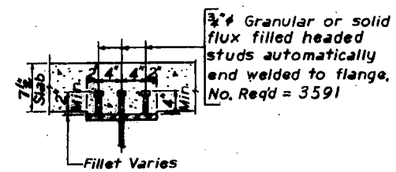


FRAMING PLAN



GIRDER ELEVATION

(All steel is AASHTO M183 except where noted)
(All steel noted M223 is AASHTO M283 Grade 50)



SECTION A-A

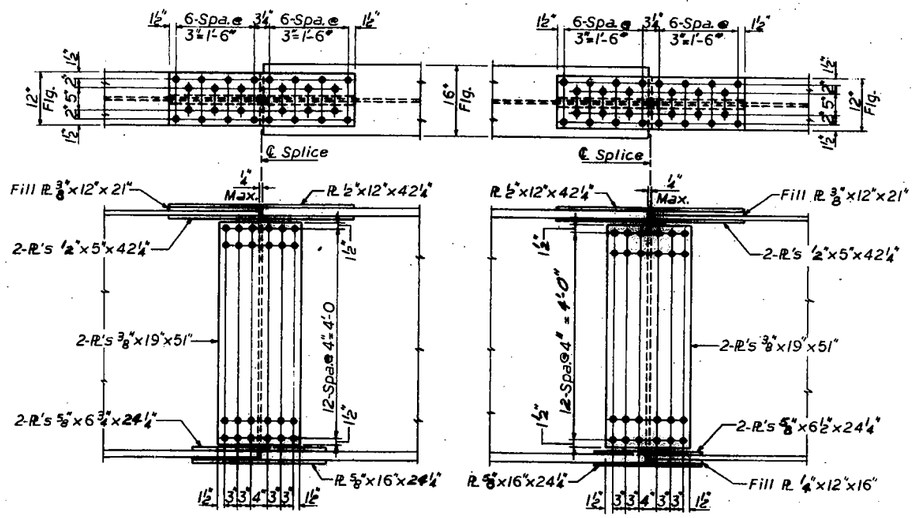
Work this sheet with Shts. 12 & 13

NOTE

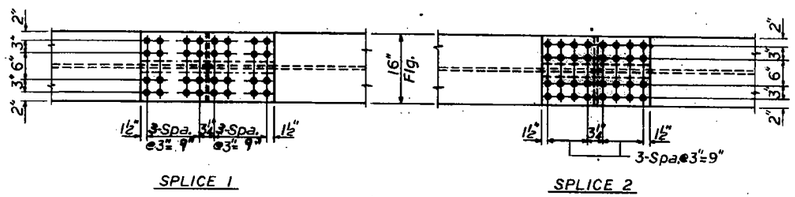
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, as designated in the Girder Elevation, along with the webs and splice plates of the steel girders.

N.T.R. = Notch Toughness Requirement

FOR INFORMATION ONLY



SPLICE 1



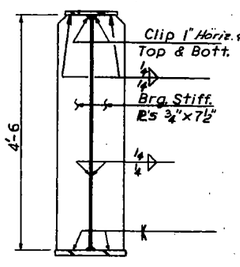
SPLICE 2

FIELD SPLICE DETAIL

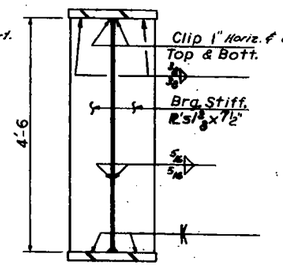
7/8" ϕ H.S. Bolts

15/16" ϕ Open Holes

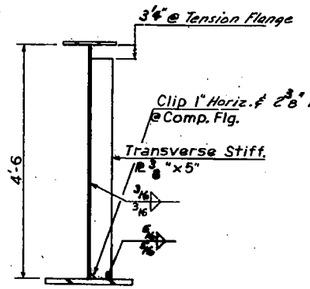
All splice plates are M223 GR50 & NTR (Notch Toughness Requirement) except fill plates.



At ABUTMENTS



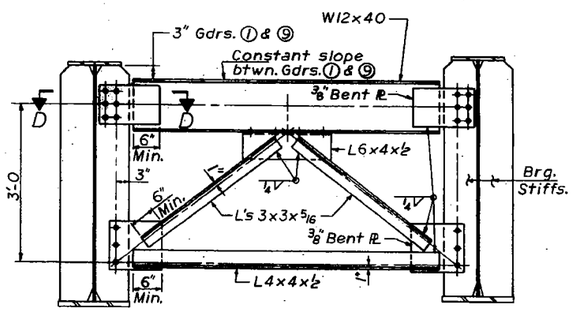
At PIER



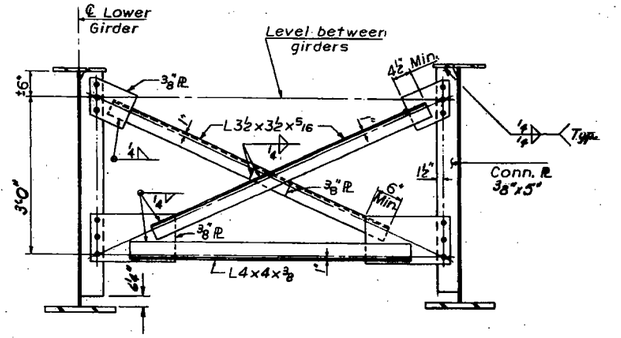
At TRANSVERSE STIFFENERS

GIRDER SECTIONS

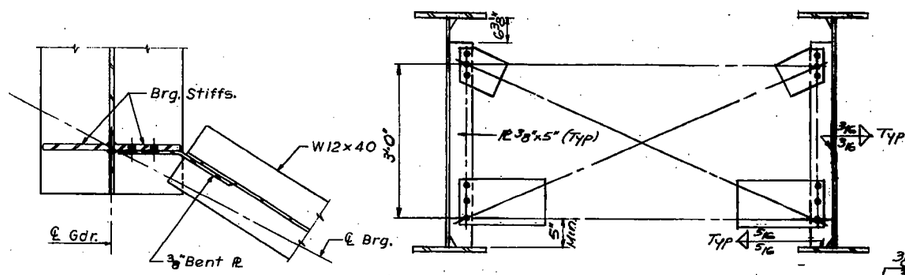
NOTE
Holes in cross frames shall be 15/16" ϕ. Use hardened washer over each hole.
All bolts for cross frames - 7/8" ϕ.



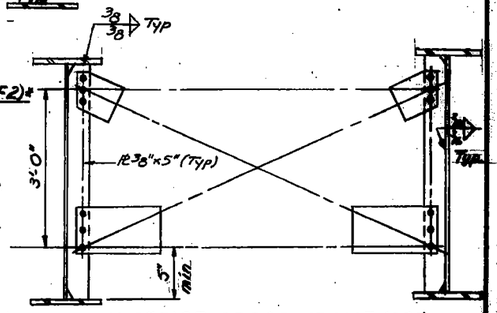
END CROSS FRAME (CF)



INTERIOR CROSS FRAME (CF1)



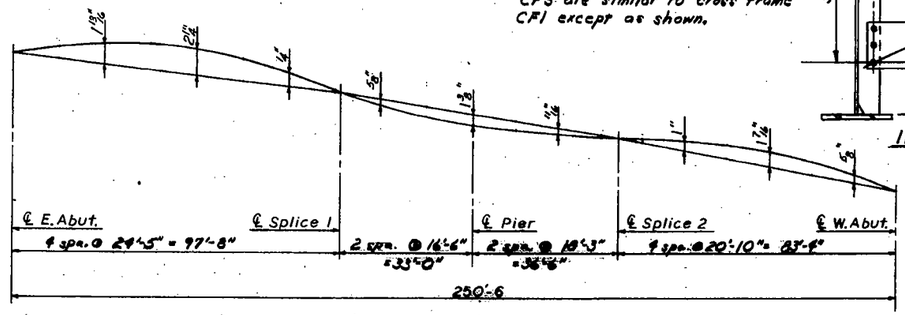
SECTION D-D



INTERIOR CROSS FRAME (CF2)*

*Interior cross frames CF2 & CF3 are similar to cross frame CF1 except as shown.

INTERIOR CROSS FRAME (CF3)*



CAMBER DIAGRAM

Work this sheet with Shts. 11 & 13.