04-27-2018 LETTING ITEM 067

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(141-3HB)BP-1	OGLE	7*	1
	ILLINOIS	CONTRACT NO. 64M49		

*7 + 4(A-D) = 11 TOTAL SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

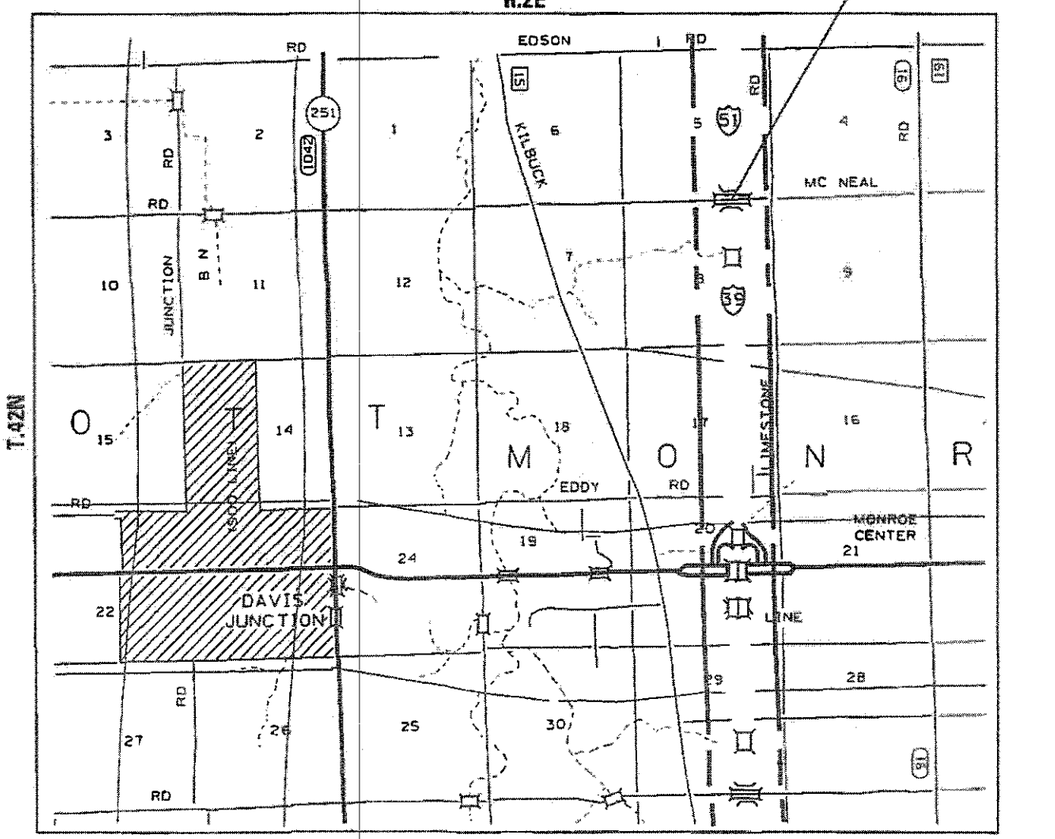
FAI ROUTE 39 (I–39)
SECTION (141–3HB–1)BP–1
PROJECT: NHPP–ZFZD(627)
TYPE of IMPROVEMENT: BRIDGE PAINTING
OGLE COUNTY

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

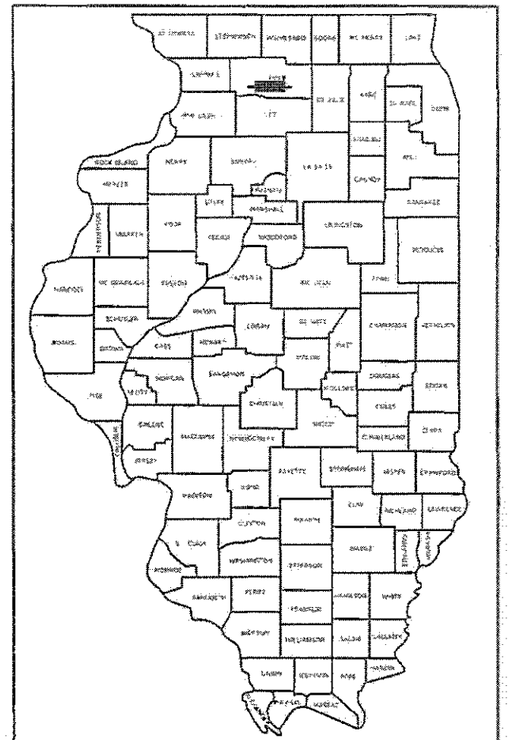
OGLE COUNTY
MONROE TOWNSHIP – SECTIONS 4, 5, 8 & 9

C–92–073–17
R.2E

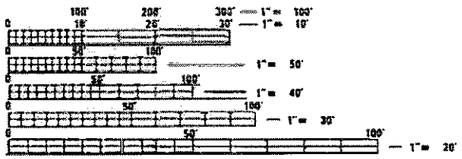
SN 071–0045



D-92-060-17



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 1-25 20 18
REGIONAL ENGINEER
Mar 23 20 18
ENGINEER OF DESIGN AND ENVIRONMENT
Mar 23 20 18
DIRECTOR OF PROGRAM DEVELOPMENT

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

CONTRACT NO. 64M49

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
701400-09 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-11 LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-12 LANE CLOSURE, FREEWAY/EXPRESSWAY WITH BARRIER
701426-09 LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS, FOR SPEEDS > 45 MPH
701901-07 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

A MINIMUM OF 2 AIR MONITORS WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS, SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".

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.

USER NAME = dossdd	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = Jan-29-2018 01:22:56 PM	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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	(141-3HB-1)BP-1	OGLE	7	2
		CONTRACT NO. 64M49		
	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

90% NHPP
10% STATE

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	OGLE COUNTY 0047
67100100	MOBILIZATION	L SUM	1	1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2	2
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1
70107004	PAVEMENT MARKING BLACKOUT TAPE, 4"	FOOT	4580	4580
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1528	1528
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	9120	9120
70400100	TEMPORARY CONCRETE BARRIER	FOOT	450	450
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	700	700
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1	1
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	3	3
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1	1
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	3042	3042
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

14

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USER NAME = dossdd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(141-3HB-1)BP-1	OGLE	7	3

CONTRACT NO. 64M49

ILLINOIS FED. AID PROJECT

SCHEDULE OF QUANTITIES

70107004 PAVEMENT MARKING BLACKOUT TAPE, 4"

LOCATION	COMMENTS	FOOT
STAGE I		
500'	EDGE LINE/RT	500
130'	SKIP DASH/DOUBLE WIDE (13 DASHES)	260
515'	EDGE LINE/LT	515
STAGE II		
500'	EDGE LINE/LT	500
515'	EDGE LINE/RT	515
STAGE III		
500'	EDGE LINE/LT	500
130'	SKIP DASH/DOUBLE WIDE (13 DASHES)	260
515'	EDGE LINE/RT	515
STAGE IV		
500'	EDGE LINE/RT	500
515'	EDGE LINE/LT	515
	TOTAL	4580

X7030005 TEMPORARY PAVEMENT MARKING REMOVAL

LOCATION	COMMENTS	SQ FT
STAGE I		
1275'	BLACKOUT TAPE, 4"	425
STAGE II		
1015'	BLACKOUT TAPE, 4"	339
STAGE III		
1275'	BLACKOUT TAPE, 4"	425
STAGE IV		
1015'	BLACKOUT TAPE, 4"	339
	TOTAL	1528

70300520 PAVEMENT MARKING TAPE, TYPE III 4"

LOCATION	COMMENTS	FOOT
STAGE I		
1000'	TAPER	1000
500'	CENTERLINE	500
70'	TAPER x2	140
375'	TANGENT x2	750
70'	TAPER x2	140
STAGE II		
1000'	TAPER	1000
70'	TAPER x2	140
375'	TANGENT x2	750
70'	TAPER x2	140
STAGE III		
1000'	TAPER	1000
500'	CENTERLINE	500
70'	TAPER x2	140
375'	TANGENT x2	750
70'	TAPER x2	140
STAGE IV		
1000'	TAPER	1000
70'	TAPER x2	140
375'	TANGENT x2	750
70'	TAPER x2	140
	TOTAL	9120

X7030005 TEMPORARY PAVEMENT MARKING REMOVAL

LOCATION	COMMENTS	SQ FT
STAGE I		
2530'	MARKING TAPE, TYPE III, 4"	844
STAGE II		
2030'	MARKING TAPE, TYPE III, 4"	677
STAGE III		
2530'	MARKING TAPE, TYPE III, 4"	844
STAGE IV		
2030'	MARKING TAPE, TYPE III, 4"	677
	TOTAL	3042

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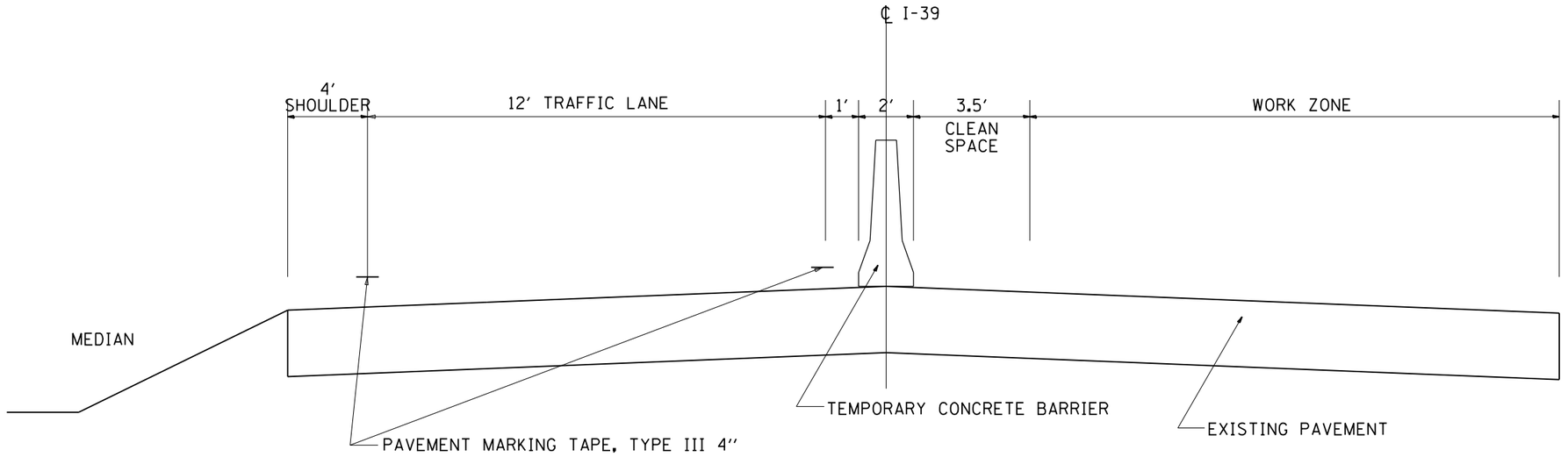
SCHEDULE OF QUANTITIES

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

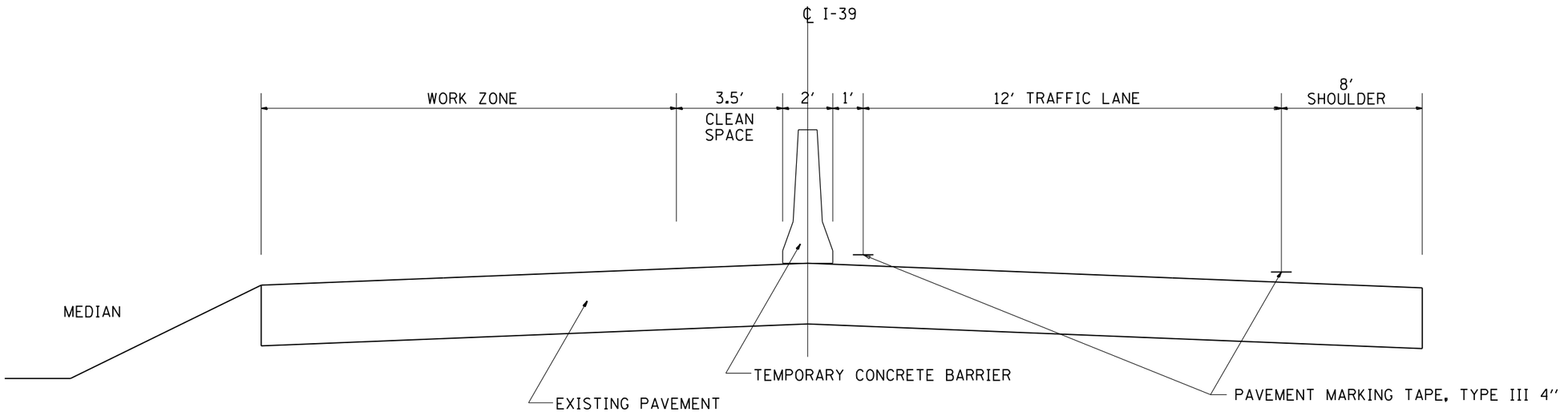
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(141-3HB-1)BP-1	OGLE	7	4
		CONTRACT NO. 64M49		
	ILLINOIS	FED. AID PROJECT		

STAGING TYPICALS

STAGES I & IV SN 071-0045 MCNEAL RD OVER I-39



STAGES II & III SN 071-0045 MCNEAL RD OVER I-39



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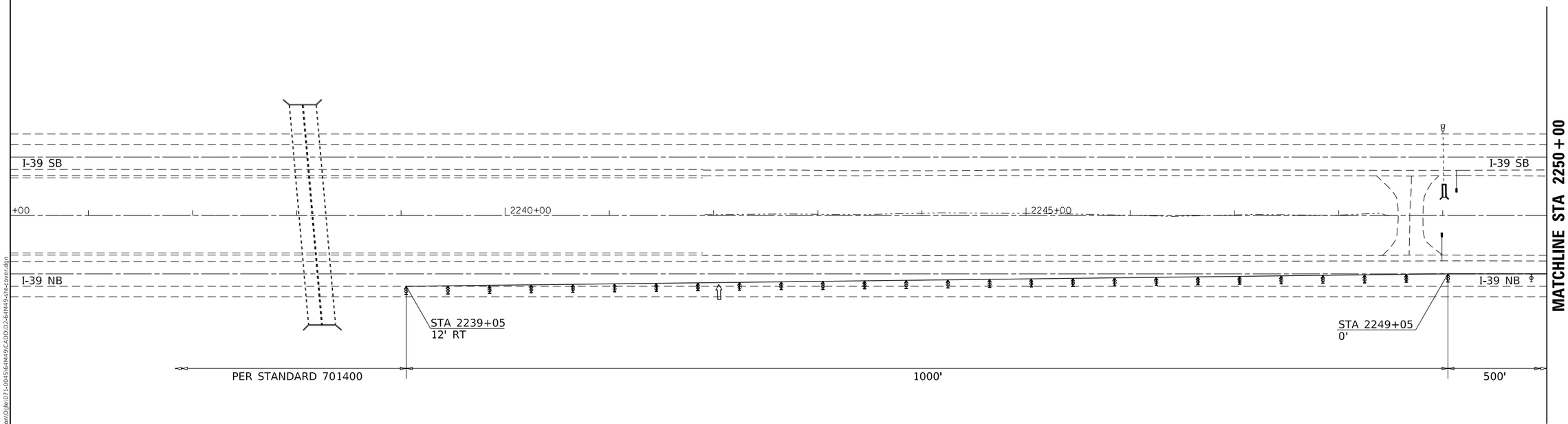
STAGING TYPICALS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(141-3HB-1)BP-1	OGLE	7	5
		CONTRACT NO. 64M49		
	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL PLAN
SN 071–0045



SYMBOLS

- Arrow board
- Work area
- Sign
- Direction indicator barricade with steady burn monodirectional light
- Type II barricade or drum with steady burn monodirectional light
- Temporary concrete barrier
- Monodirectional barrier wall/guardrail marker
- Impact attenuator
- Drums with steady burning monodirectional light

NOTES

1. Reflectorized temporary pavement marking shall be placed throughout the taper and along-side the work area. The edge line shall be white for right lane closure and yellow for left lane closures.
2. Vertical panels at 7.6 m (25') centers with steady burning monodirectional lights.

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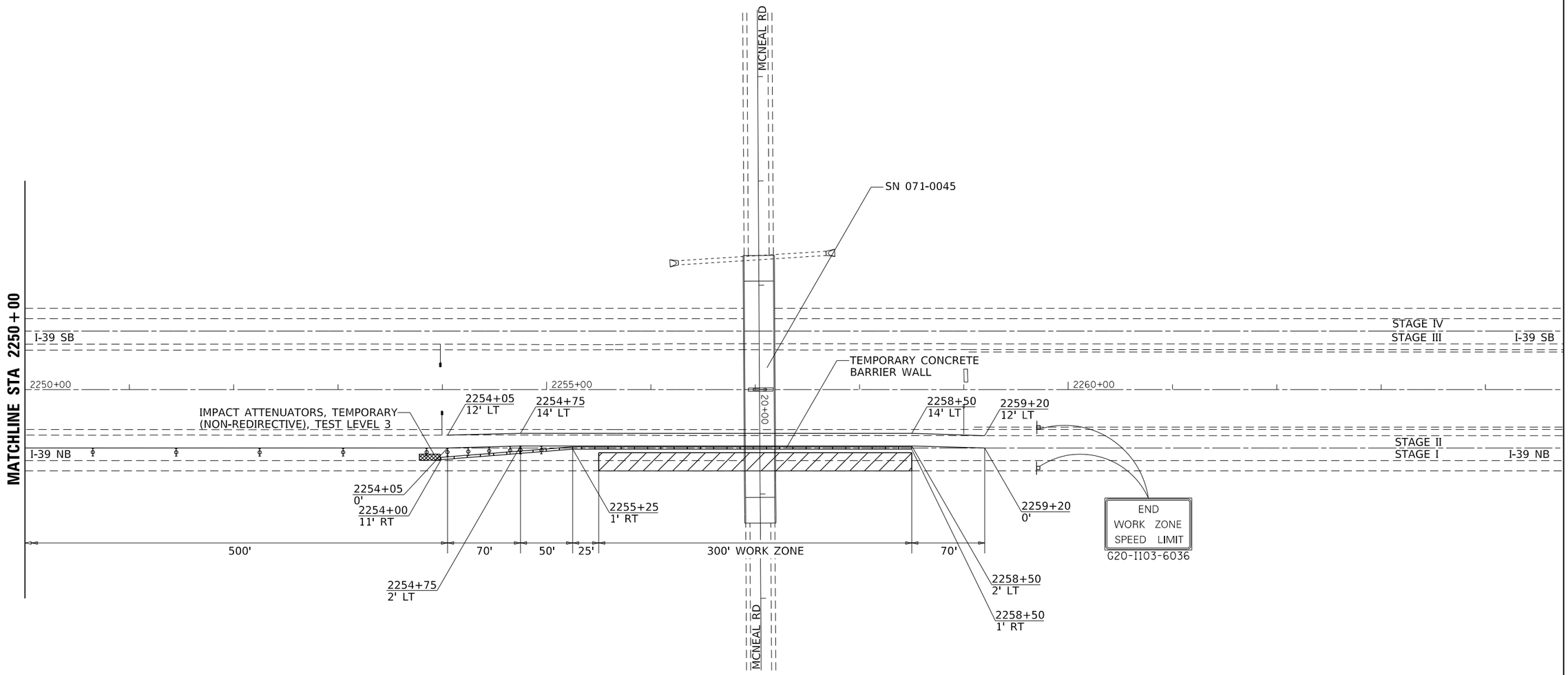
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
SN 071–0045

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(141-3HB-1)BP-1	OGLE	7	6
		CONTRACT NO. 64M49		
	ILLINOIS	FED. AID PROJECT		

TRAFFIC CONTROL PLAN
SN 071–0045



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
SN 071–0045

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(141-3HB-1)BP-1	OGLE	7	7
		CONTRACT NO. 64M49		
	ILLINOIS	FED. AID PROJECT		

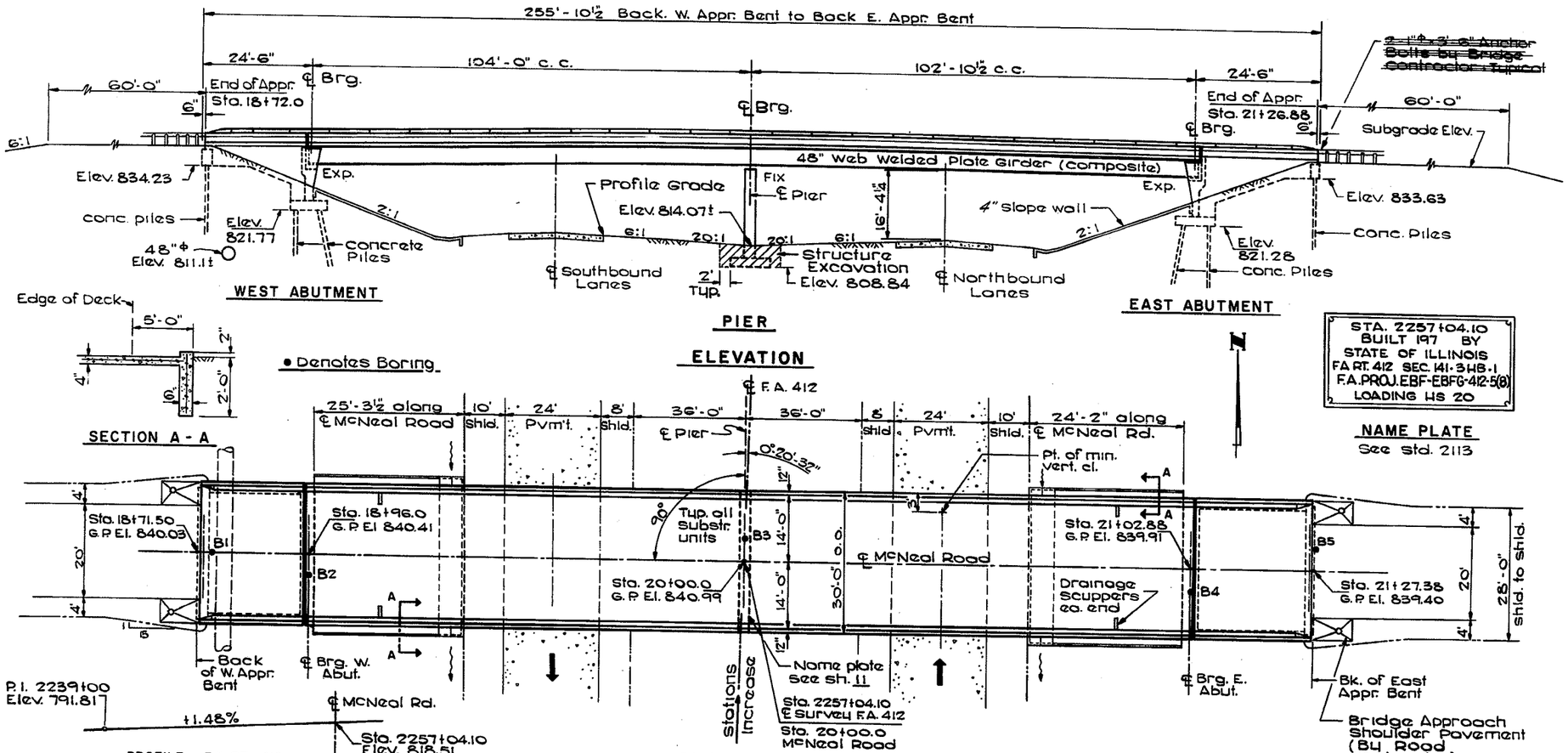
FOR INFORMATION ONLY

071-0045

BENCH MARK: R. R. Spk. in Power Pole 338' Rt.
Sta. 2256+71 (F.A. 412) Elev. 815.51

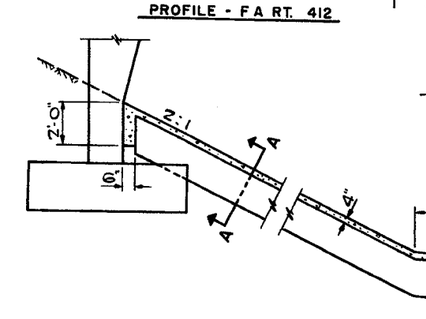
NOTE:
All Reinforcement Bars in deck slab shall conform to the requirements of AASHTO M 31 or AASHTO M 53 Grade 60.

F.A. RTE. NO.	SECTION 101-3 A, VB, HB, HB-1	TOTAL SHEETS	SHEET NO.
412	COUNTY OGLE	306	114
ILLINOIS PROJECT			



SECTION A - A

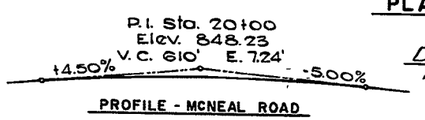
• Denotes Boring



PROFILE - F A RT. 412

PLAN VIEW

SLOPE WALL DETAIL



PROFILE - MCNEAL ROAD

DECK SLAB
Load Factor Design
f'_c = 3500 psi
f_y = 60,000 psi
n = 8.5

DESIGN LOADING

HS 20-44 Allowance for 25 p.s.f. future wearing surface

DESIGN STRESSES

fc = 1400 psi Except as follows

fc = 1000 psi Conc. in contact with earth
fs = 20,000 psi M183 Struct Steel
fs = 20,000 psi Reinforcement (Substructure)
v = 75 psi allowable shear in footings
v = 90 psi allowable shear in pier cap
n = 10

Allowable Live Load Deflection L/1200 (composite)

Structure designed in accordance with AASHTO specifications dated 1973.

BILL OF MATERIAL BRIDGE

Item	Unit	Sub.	Super.	Total
Structure Excavation	Cu.Yds.	81		81
Bituminous Conc. Surf. Course, Mixture D, Cl. I	Tons		62	62
Protective Coat	Sq.Yds.		191	191
Class X Concrete	Cu.Yds.	200.5	279.8	480.3
Structural Steel	L.Sum		1	1
Aluminum Railing	Lin.Ft.		506	506
Concrete Piles	Lin.Ft.	1093		1093
Test Piles - Concrete	Ea.	2		2
Reinforcement Bars	Lbs.	29280	64770	94050
Waterproofing Membrane System	Sq.Yds.		756	756
Preformed Joint Sealer 4"	Lin. Ft.		60	60
Name Plates	Ea.	1		1
Slope Wall 4"	Sq.Yds	285		285
Stud Shear Connectors	Ea.		1824	1824
Sand Backfill	Cu.Yds.	213		213
Drainage Scuppers	Ea.		4	4

GENERAL NOTES:

All reinforcement bars shall be lapped 24 dia. unless otherwise shown.

Fasteners shall be high strength bolts. Bolts ⅞"ϕ; open holes 15/16", unless otherwise noted.

Calculated weight of Structural Steel = 216,010 lbs.

The basic lead silico chromate paint system shall be used for shop and field painting of structural steel.

Field welding of construction accessories will not be permitted to the bottom flange of the girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier support. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58 lbs. per 100 sq. ft.

The Contractor shall drive one concrete test pile in a permanent location at the pier and each abutment as directed by the Engineer before ordering the remainder of piles.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abuts.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of class X concrete, except the aggregates shall conform to the requirements of Handrail Concrete

Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

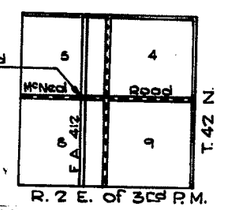
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛ adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The main load carrying member components subject to the Supplemental Require, *for Notch Toughness Zone 2* are the flanges as designated on the Girder Elevation along with the webs and splice plates of the Steel Girders.

For boring data see Special Provisions.

STA. 2257+04.10
BUILT 197 BY
STATE OF ILLINOIS
FA RT. 412 SEC. 141-3HB-1
F.A. PROJ. EBF-EBF6-412-5(8)
LOADING HS 20

NAME PLATE
See Std. 2113



LOCATION MAP

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
for Chief Bridge & Transportation Structures

GENERAL PLAN & ELEVATION
FA RTE. 412 SECTION 141-3HB-1
MCNEAL ROAD
OVER FA RTE. 412
OGLE COUNTY
STATION 2257+04.10

DESIGN BY B. THOMPSON DATE JULY 1975
DRAWN BY R. BRIGGS DATE AUG. 1975
CHECKED BY D.E. HUFFMAN DATE Sept. 1975
APPROVED BY: DATE 2-10-76

Revised 5-17-76
Revised 11-14-75

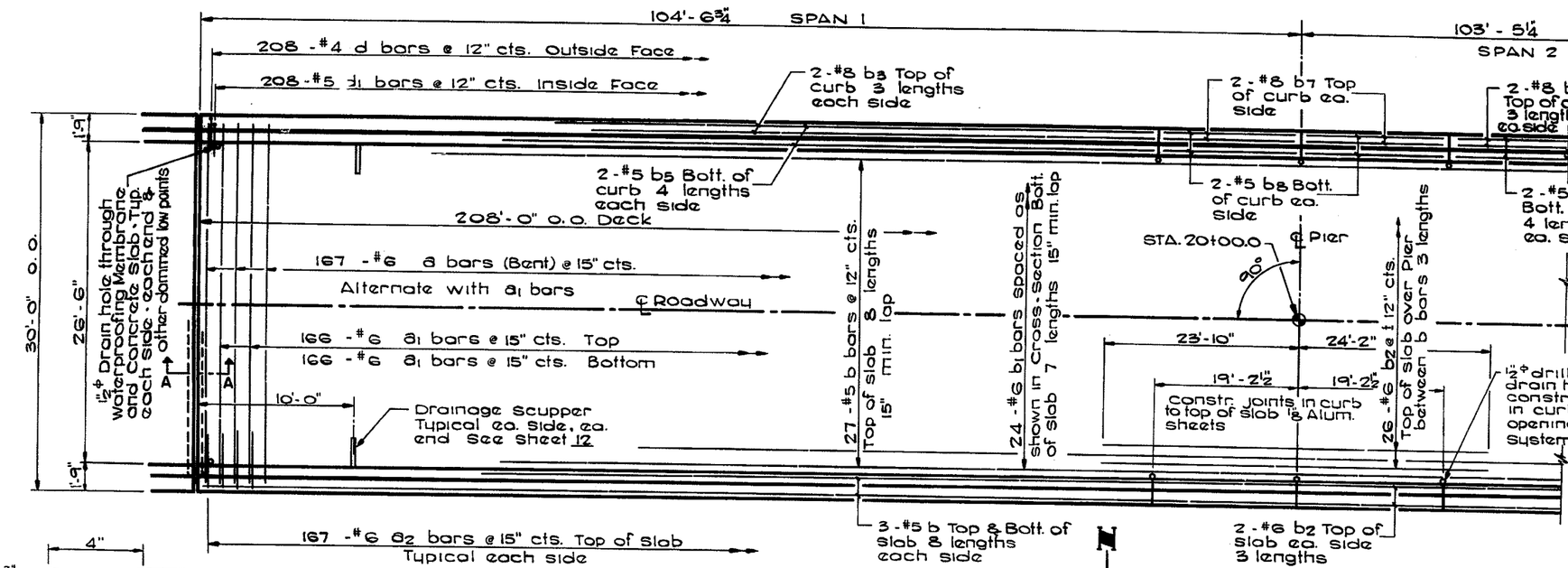
PREPARED BY
WILLETT, HOFMANN & ASSOCIATES INC.
CONSULTING ENGINEERS
DIXON, ILLINOIS

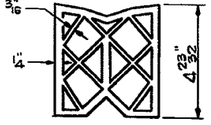
DONALD E. HUFFMAN 81-2432 REGISTERED STRUCTURAL ENGINEER OF ILLINOIS

FILE NO. DRAWING SHEET NO. 1 OF 15

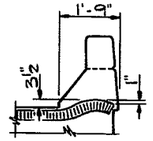
7A

F.A. RTE. NO.	SECTION 141-3A, VB, 11B, 11B-1	TOTAL SHEETS	SHEET NO.
412	COUNTY OGLE	306	117
ILLINOIS PROJECT			





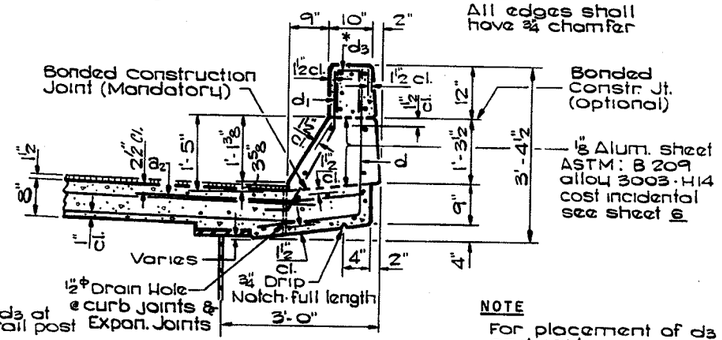
PREFORMED JOINT SEALER (4")



END TREATMENT

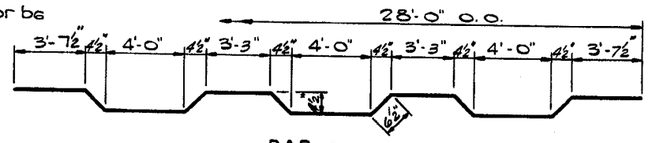
HALF PLAN

NOTE
All edges shall have ¾ chamfer

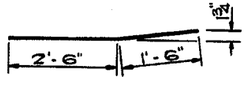


CURB DETAIL

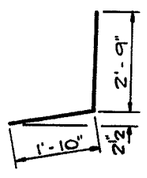
NOTE
For placement of d3 and "e" bars see sheet 6



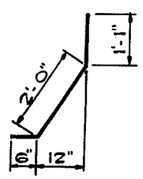
BAR a



BAR a2



BAR d

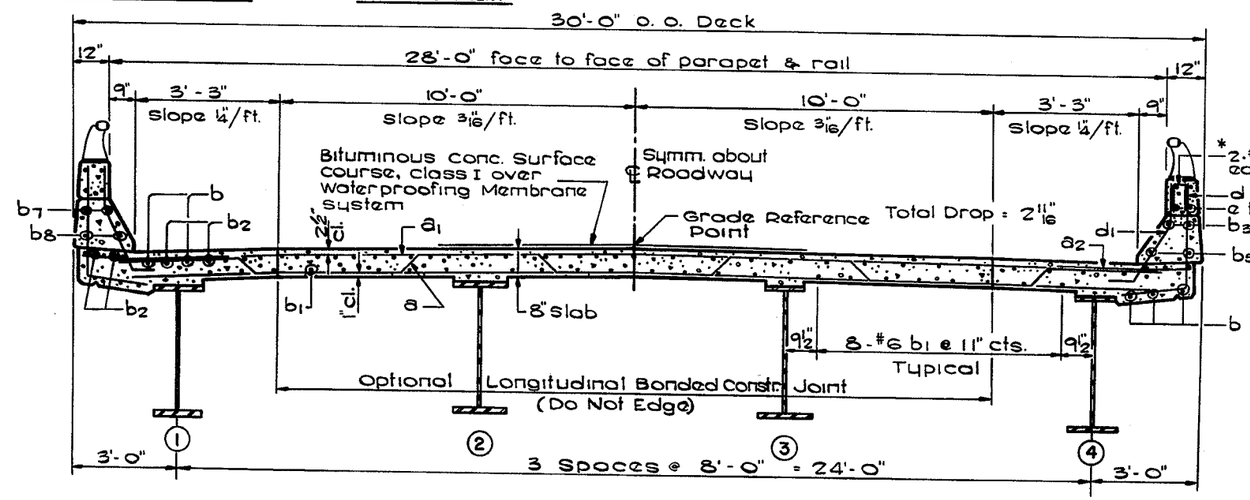


BAR d1

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a	167	#6	29'-0"	
a1	332	#6	28'-0"	
a2	334	#6	4'-0"	
b	312	#5	27'-3"	
b1	168	#6	31'-2"	
b2	90	#6	17'-0"	
b3	12	#8	29'-8"	
b4	12	#8	29'-4"	
b5	16	#5	22'-3"	
b6	16	#5	22'-0"	
b7	8	#8	18'-10"	
b8	8	#5	18'-10"	
d	416	#4	4'-7"	
d1	416	#5	3'-7"	
Class X concrete cu. Yds.				194.3
Reinforcement Bars Lbs.				48290

* Parapet reinforcement and class X concrete are billed on sheet 6



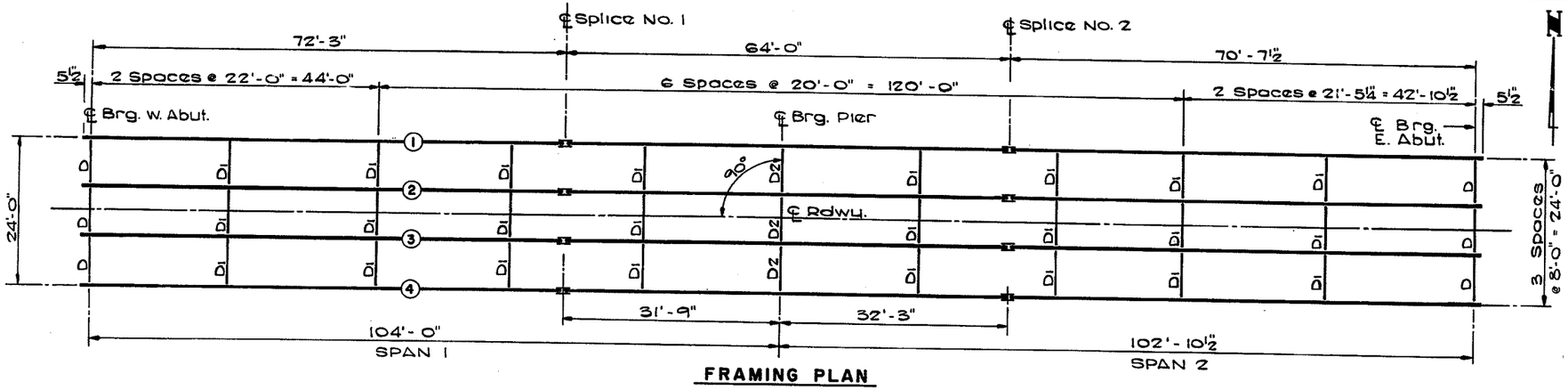
NEAR PIER MID SPAN

CROSS SECTION

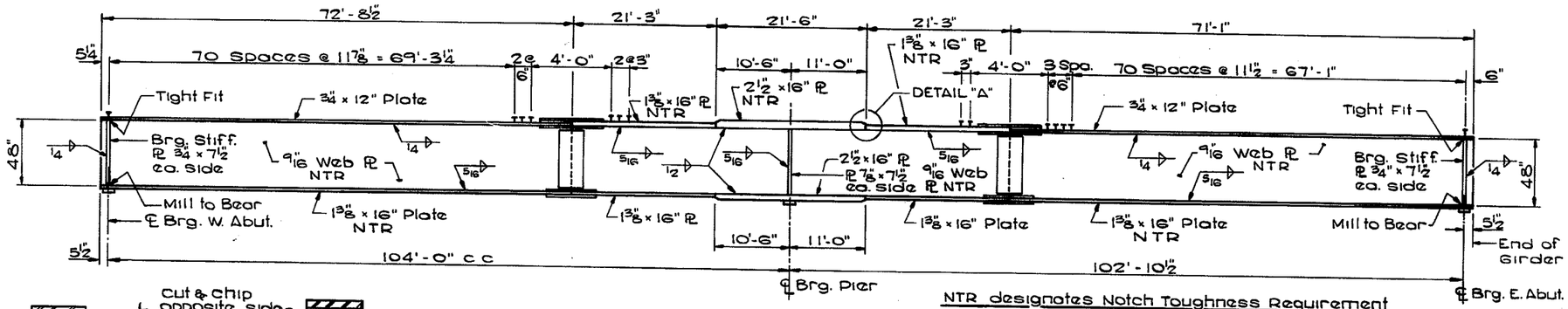
SUPERSTRUCTURE DETAILS
FA RTE. 412 SECTION 141-3HB-1
MCNEAL ROAD
OVER FA RTE. 412
OGLE COUNTY
STATION 2257+04.10

FOR INFORMATION ONLY

F.A. RTE. NO.	SECTION 141-3 A, VB, HB, HB-1	TOTAL SHEETS	SHEET NO.
412	COUNTY OGLE	306	120
ILLINOIS PROJECT			

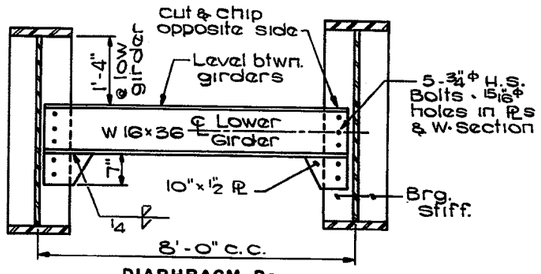


FRAMING PLAN

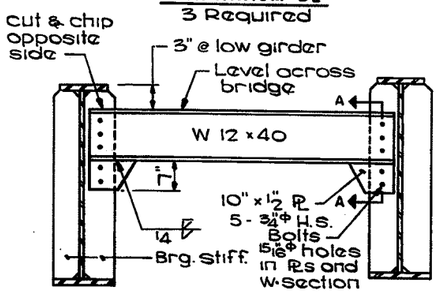


NTR designates Notch Toughness Requirement

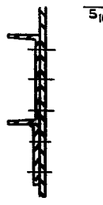
GIRDER ELEVATION



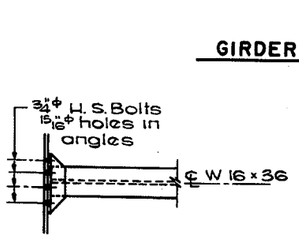
DIAPHRAGM D_2
3 Required

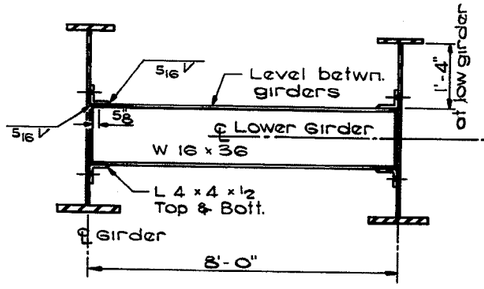


DIAPHRAGM D
6 Required

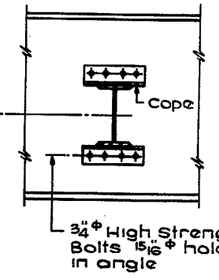


SECTION A-A

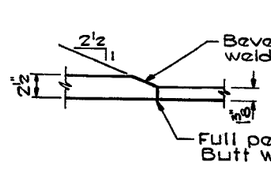




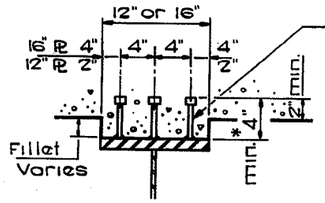
DIAPHRAGM D_1
24 Required



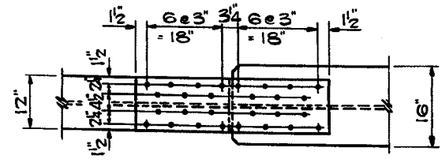
Hardened washers shall be required over 15/16"Φ holes in angles, connection plates and W-Sections



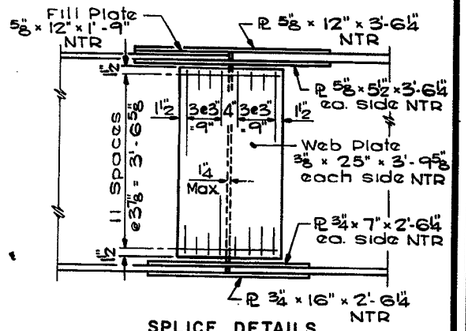
DETAIL A



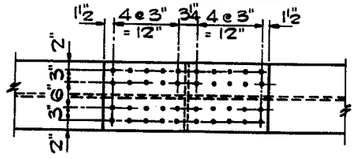
SHEAR CONNECTORS
456 studs per Girder
* Height of studs to be determined by field measurement to provide a min. 2" embedment above bottom face of slab.



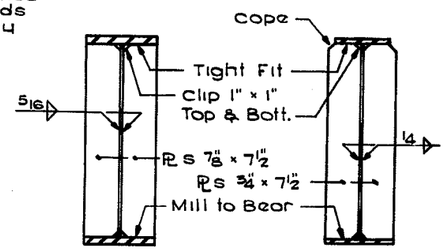
TOP PLATE



SPLICE DETAILS



BOTTOM PLATE
All bolts ⅞"Φ H. S.



DETAIL OF STIFFENERS

TOP OF WEB ELEVATIONS (For Fabricators Use Only)

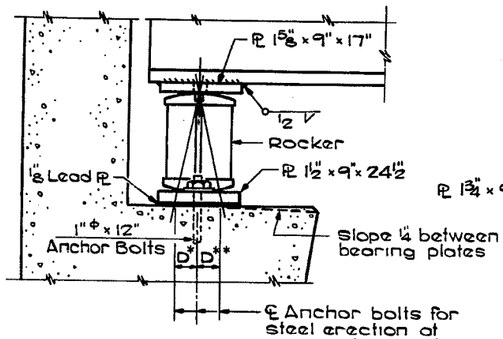
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4
℄ Brg. W. Abut.	839.166	839.302	839.302	839.166
℄ Splice 1	839.811	839.947	839.947	839.811
℄ Pier	839.729	839.865	839.865	839.729
℄ Splice 2	839.645	839.781	839.781	839.645
℄ Brg. E. Abut.	838.667	838.803	838.803	838.667

GIRDER DETAILS
FA RTE. 412 SECTION 141-3HB-1
MCNEAL ROAD
OVER FA RTE. 412
OGLE COUNTY
STATION 2257+04.10

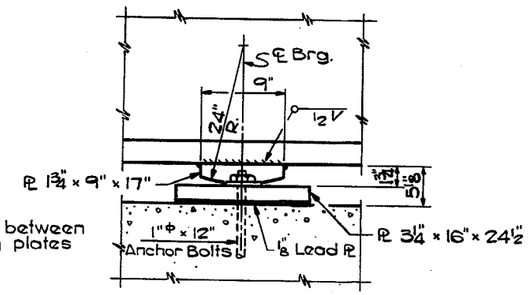
FOR INFORMATION ONLY

BRIDGE SHEET 7 OF 13

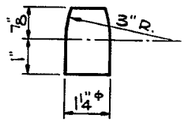
F.A. RTE. NO.	SECTION 141-3 A,VB, HB, HB-1	TOTAL SHEETS	SHEET NO.
412	COUNTY OGLE	306	121
ILLINOIS PROJECT			



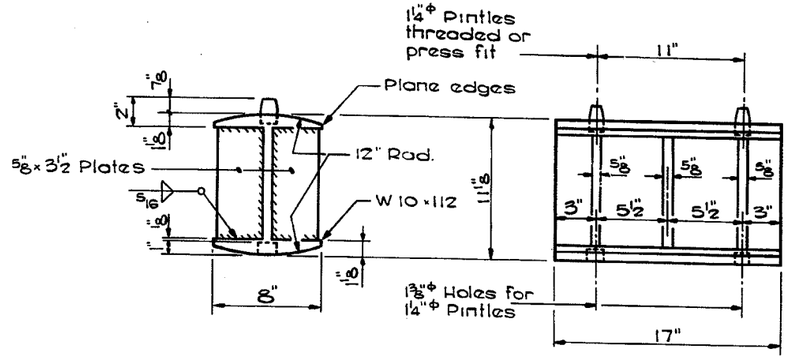
ELEVATION



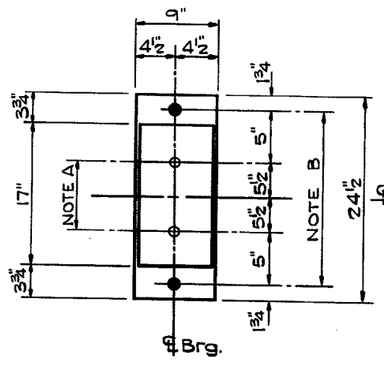
ELEVATION



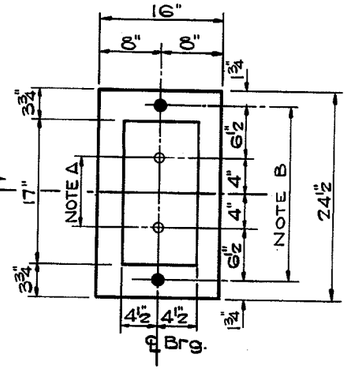
PINTLE



ROCKER



PLAN - ABUTMENTS



PLAN - PIER

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

a.) D* (Side of brg. away from fixed brg.) D* = ⅛" per each 100' of expansion for every 15° fall below the normal temp. of 50° F.

D** (Side of brg. toward fixed brg.) D** is ⅛" per each 100' of expansion for every 15° rise above the normal temp. of 50° F.

b.) After beams have been erected and dimensions D* & D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 1	Pier
Is (in.4)	22137	56189
Ic (in.4)	66764	
Ss (in.3)	1118.0	2120.3
Sc (in.3)	1642.8	
℄ (K/I)	1.077	1.077
M℄ ('K)	686.1	-1779.3
fs℄ (ksi)	7.36	10.07
s℄ (K/I)	.556	.556
Ms℄ ('K)	447.6	-685.1
M℄ ('K)	957.9	-811.7
Mimp ('K)	209.5	-177.8
Total ('K)	1615.0	-1674.6
fs℄ + s℄ (ksi)	11.8	9.48
fs Total (ksi)	19.16	19.55
VR (K)	60.1	

NOTE A

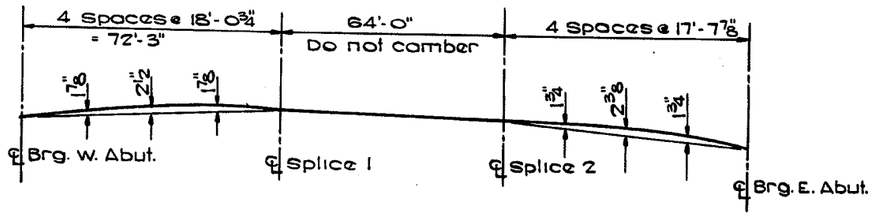
1⅜" ϕ Holes - 1" deep in top PL for 1¼" ϕ Pintles. Thread or press fit Pintles in bottom PL.

NOTE B

1½" ϕ Holes for 1" ϕ Anchor Bolts - 2½ x 2½ x 5/16 PL washers under nut.

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R℄ (K)	61.3	216.6
R℄ (K)	46.6	77.9
Imp. (K)	10.2	17.1
R Total (K)	118.1	311.6

Is and Ss are the moment of inertia and section modulus of the steel section. Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs VR is the maximum ℄ + Impact range in span.



CAMBER DETAIL

Includes allowable for Total Dead Load Deflection & Vertical curvature of the roadway.

BEARING DETAILS
FA RTE. 412 SECTION 141 - 3HB - 1
MCNEAL ROAD
OVER FA RTE. 412
OGLE COUNTY
STATION 2257+04.10

FOR INFORMATION ONLY