9-22-06 Letting, Item 036

CONTRACT NO. 91361

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
489	04-00044-08-WR	McLEAN	9	1

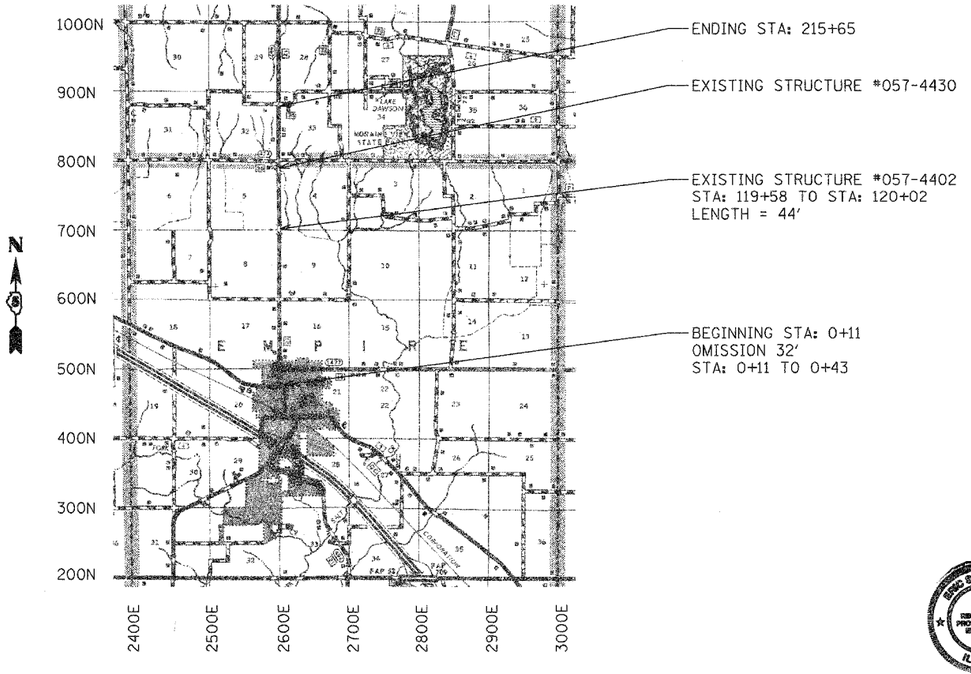
INDEX OF SHEETS

STATE STANDARD DETAILS

630001-06 STEEL PLATE BEAM GUARDRAIL
631026-02 TRAFFIC BARRIER TERMINAL TYPE 5 & 5A
635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
701001-01 OFF-RD OPERATIONS 2L, 2W, MORE THAN 4.5M (15') AWAY
701006-02 OFF-RD OPERATIONS 2L, 2W, 4.5M (15') TO 600mm (24") FROM PAVEMENT EDGE
701011-01 OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-02 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-02 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-01 LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701326-02 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701501-03 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
702001-06 TRAFFIC CONTROL DEVICES
781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
B.L.R. 23-1 TRAFFIC BARRIER TERMINAL TYPE 1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
McLEAN COUNTY FEDERAL AID SECONDARY (STP-SR)
LEXINGTON-LEROY RD (CH 21)
F.A.S. ROUTE 489 SECTION 04-00044-08-WR
PROJECT #SR-489(107)
JOB #C-95-309-06



LOCATION OF SECTION INDICATED THUS: –

THESE PLANS ARE NOT TO SCALE

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

CONTRACT NO. 91361

NOTE: THE TOTAL LENGTH OF THE PROPOSED PROJECT IS 21,554' FEET WITH A NET LENGTH OF 21,522 FEET (4.076 MILES)

NOTE: THESE PLANS MEET THE MINIMUM REQUIREMENTS FOR A 3-R IMPROVEMENT.

NOTE: CURRENT ADT: 1475
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR

ERIC E. SCHMITT
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Eric Schmitt
ILLINOIS PROFESSIONAL ENGINEER #55820
EXPIRES 11-30-07

APPROVED 7-11 20 06
COUNTY ENGINEER

PASSED 7/17 20 06
DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review JULY 18 20 06
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 91361

CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	2

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	UNIT	CONST. TYPE CODE I-000 QUANTITY
* 20200500	EARTH EXCAVATION (WIDENING)	CU YD	1096
* 40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	6,000
40600300	AGGREGATE (PRIME COAT)	TON	300
40600980	BITUMINOUS SURFACE REMOVAL-BUTT JOINT	SQ YD	742
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	40
40600990	TEMPORARY RAMP	SQ YD	100
* 40800010	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	800
* 40800040	INCIDENTAL BITUMINOUS SURFACING	TON	675
* 44300300	AREA REFLECTIVE CRACK CONTROL TREATMENT, SYSTEM A	SQ YD	57,275
* 48101200	AGGREGATE SHOULDERS, TYPE B	TON	4,200
* 56109210	WATER VALVES TO BE ADJUSTED	EACH	1
* 60255500	MANHOLES TO BE ADJUSTED	EACH	2
* 60260100	INLETS TO BE ADJUSTED	EACH	2
△63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	400
△63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
67100100	MOBILIZATION	L SUM	1
△78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
△78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	270
△LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	4
X3560100	BITUMINOUS CONCRETE BASE COURSE WIDENING, SUPERPAVE 6 INCH	SQ YD	6,577
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	5,300
X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50	TON	6,950
* X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	1,950
△* XX006199	STEEL BRIDGE RAIL, TYPE SM (SPECIAL)	FOOT	94

* SEE SPECIAL PROVISIONS
△ SPECIALTY ITEMS

GENERAL NOTES:

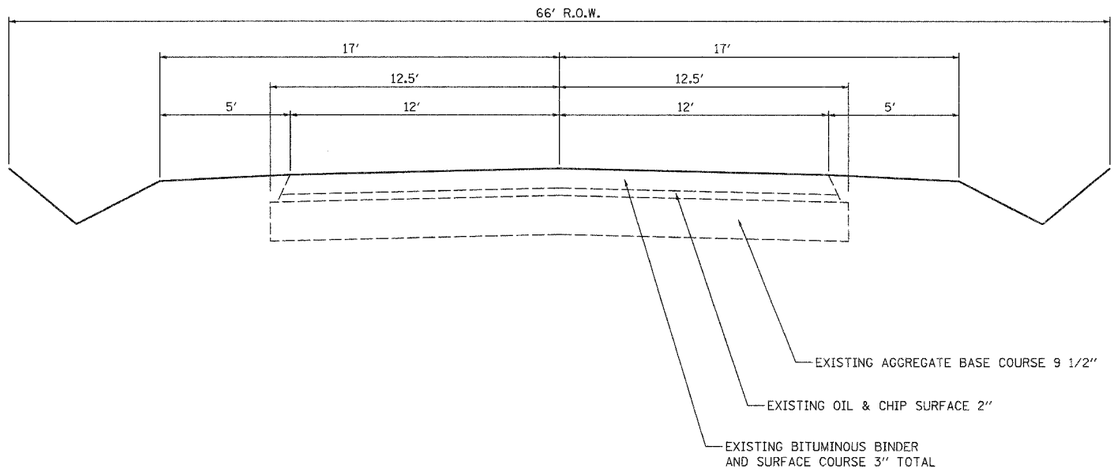
1. ALL TEMPORARY & PERMANENT PAVEMENT STRIPING WILL BE DONE BY OTHERS.
2. ALL FIELD ENTRANCES AND URBAN MAILBOX TURNOUTS SHALL BE CONSTRUCTED WITH THE EXTENDABLE SCREED WIDENERS AND PAID FROM BITUMINOUS BINDER AND SURFACE COURSES.
3. ALL SIDE ROAD RETURNS, SPECIAL SIDE ROAD RETURNS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES & RURAL MAILBOX TURNOUTS ARE TO BE CONSTRUCTED AND PAID FROM INCIDENTAL BITUMINOUS SURFACING.
4. AGGREGATE SHOULDERS SHALL BE PLACED ALONG ALL SIDE ROAD RETURN RADII AND PRIVATE ENTRANCE RADII AND SHALL BE PLACED ALONG AND BEHIND ALL FIELD ENTRANCES, GUARDRAIL AND GUARDRAIL RUNOUTS, PRIVATE ENTRANCES AND MAILBOX TURNOUTS UNLESS SPECIFIED BY THE RESIDENT ENGINEER.

CONTRACT NO. 91361

CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	3

EXISTING TYPICAL CROSS SECTION #1

SEC. 04-00044-08-WR
LEXINGTON-LEROY RD (CH 21)
STA: 0+43 TO STA: 17+90



STRUCTURAL DESIGN DATA 73,280#

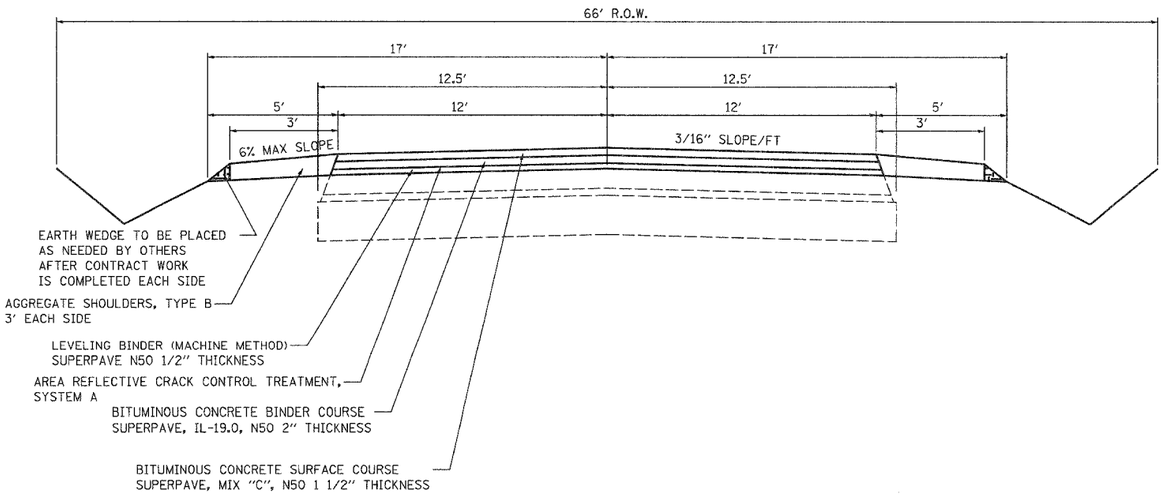
CLASS III ROAD DESIGN PERIOD 20 YEARS
STRUCTURAL DESIGN TRAFFIC: 1800 YEAR: 2016
PERCENT OF DESIGN TRAFFIC IN DESIGN LANE:
P.C. 88% S.U. 7% M.U. 5%
P.C. 1584 S.U. 126 M.U. 90
MINIMUM SOIL SUPPORT: IBR= 3.0
TRAFFIC FACTOR (T.F.)= 0.393
STRUCTURAL NUMBER (Dt): 3.7
PAVEMENT STRUCTURE MATERIALS:

SURFACE: PROPOSED BITUMINOUS SURFACE COURSE	4"	@ 0.40	a1= 1.60
BASE: EXISTING BITUMINOUS CONCRETE	3"	@ 0.30	a2= 0.90
BASE: EXISTING OIL & CHIP SURFACE	2"	@ 0.16	a2= 0.32
SUBBASE: EXISTING AGGREGATE BASE COURSE	9"	@ 0.10	a3= 0.90

PROPOSED (Dt) TOTAL= 3.72

PROPOSED TYPICAL CROSS SECTION #1

SEC. 04-00044-08-WR
LEXINGTON-LEROY RD (CH 21)
STA: 0+43 TO STA: 17+90

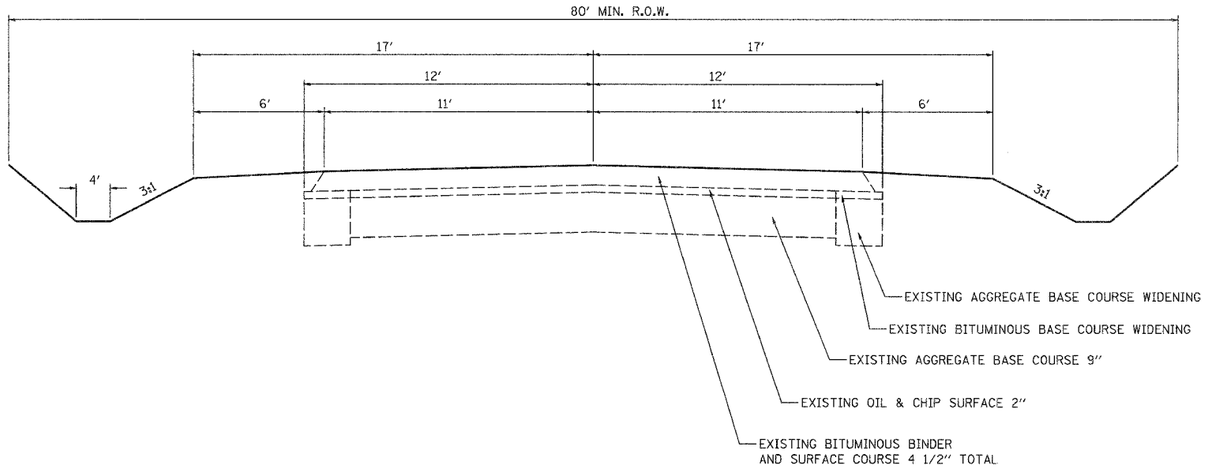


CONTRACT NO. 91361

CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	4

EXISTING TYPICAL CROSS SECTION #2

SEC. 04-00044-08-WR
LEXINGTON-LEROY RD (CH 21)
STA: 17+90 TO STA: 119+58
STA: 120+02 TO STA: 165+65



STRUCTURAL DESIGN DATA 73,280#

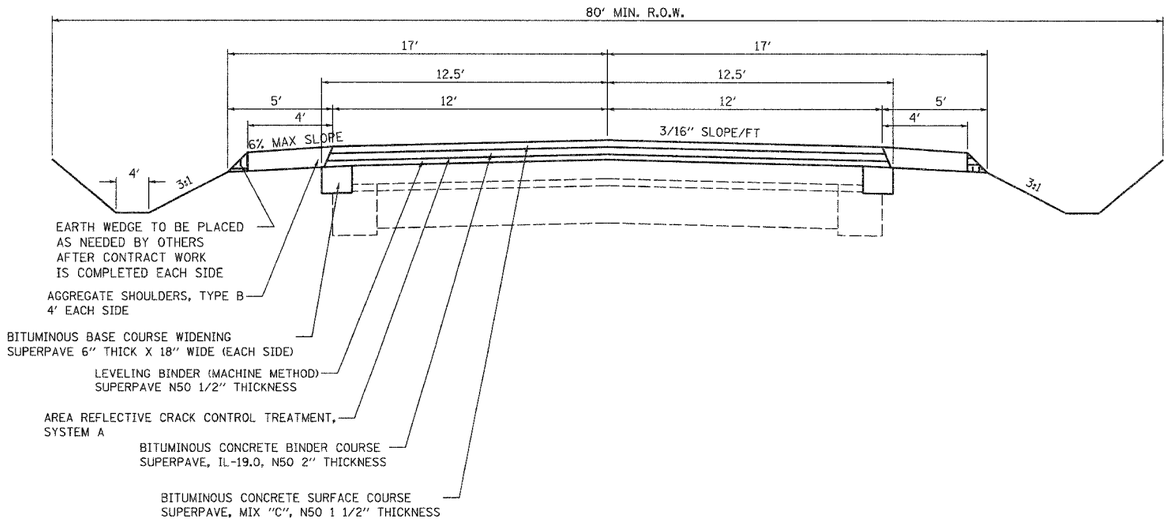
CLASS III ROAD DESIGN PERIOD 20 YEARS
STRUCTURAL DESIGN TRAFFIC: 1800 YEAR: 2016
PERCENT OF DESIGN TRAFFIC IN DESIGN LANE:
P.C. 88% S.U. 7% M.U. 5%
P.C. 1584 S.U. 126 M.U. 90
MINIMUM SOIL SUPPORT: IBR= 3.0
TRAFFIC FACTOR (T.F.)= 0.393
STRUCTURAL NUMBER (Dt): 3.7
PAVEMENT STRUCTURE MATERIALS:

SURFACE: PROPOSED BITUMINOUS SURFACE COURSE	4"	@ 0.40	a1= 1.60
BASE: EXISTING BITUMINOUS CONCRETE	4.5"	@ 0.30	a2= 1.35
BASE: EXISTING OIL & CHIP SURFACE	2"	@ 0.16	a2= 0.32
SUBBASE: EXISTING AGGREGATE BASE COURSE	9"	@ 0.10	a3= 0.90

PROPOSED (Dt) TOTAL= 4.17

PROPOSED TYPICAL CROSS SECTION #2

SEC. 04-00044-08-WR
LEXINGTON-LEROY RD (CH 21)
STA: 17+90 TO STA: 119+58
STA: 120+02 TO STA: 165+65

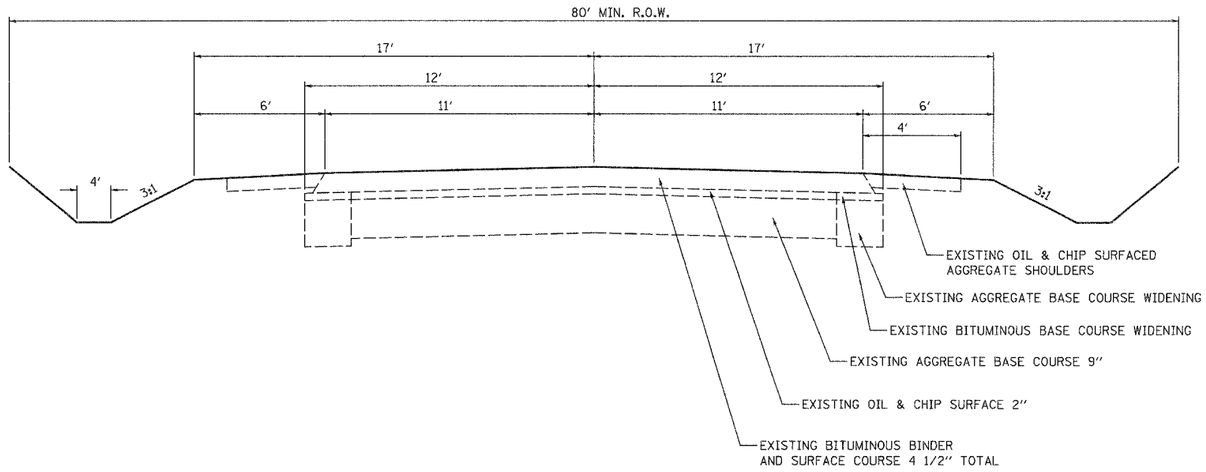


CONTRACT NO. 91361

CO. HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	5

EXISTING TYPICAL CROSS SECTION #3

SEC. 04-00044-08-WR
LEXINGTON-LEROY RD (CH 21)
STA: 165+65 TO STA: 215+65



STRUCTURAL DESIGN DATA 73,280#

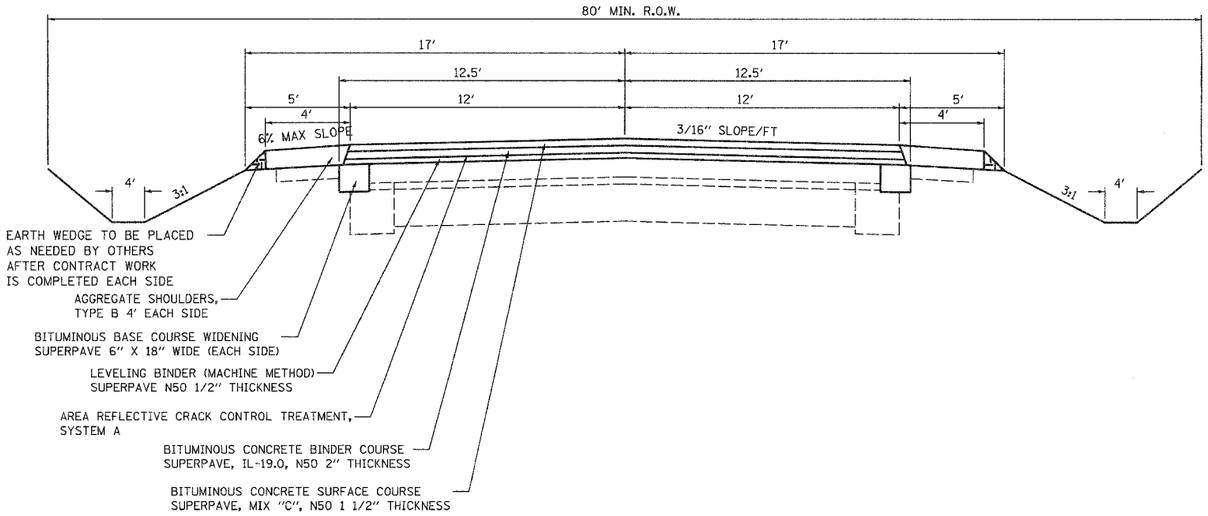
CLASS III ROAD DESIGN PERIOD 20 YEARS
STRUCTURAL DESIGN TRAFFIC: 1800 YEAR: 2016
PERCENT OF DESIGN TRAFFIC IN DESIGN LANE:
P.C. 88% S.U. 7% M.U. 5%
P.C. 1584 S.U. 126 M.U. 90
MINIMUM SOIL SUPPORT: IBR= 3.0
TRAFFIC FACTOR (T.F.)= 0.393
STRUCTURAL NUMBER (Dt): 3.7
PAVEMENT STRUCTURE MATERIALS:

SURFACE:	PROPOSED BITUMINOUS SURFACE COURSE	4"	@ 0.40	a1= 1.60
BASE:	EXISTING BITUMINOUS CONCRETE	4.5"	@ 0.30	a2= 1.35
BASE:	EXISTING OIL & CHIP SURFACE	2"	@ 0.16	a2= 0.32
SUBBASE:	EXISTING AGGREGATE BASE COURSE	9"	@ 0.10	a3= 0.90

PROPOSED (Dt) TOTAL= 4.17

PROPOSED TYPICAL CROSS SECTION #3

SEC. 04-00044-08-WR
LEXINGTON-LEROY RD (CH 21)
STA: 165+65 TO STA: 215+65

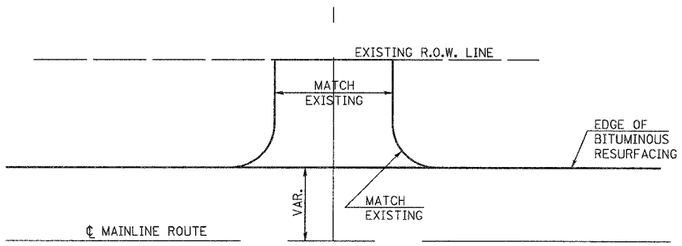


CONTRACT NO. 91361

CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	6

TYPICAL URBAN PRIVATE ENTRANCE

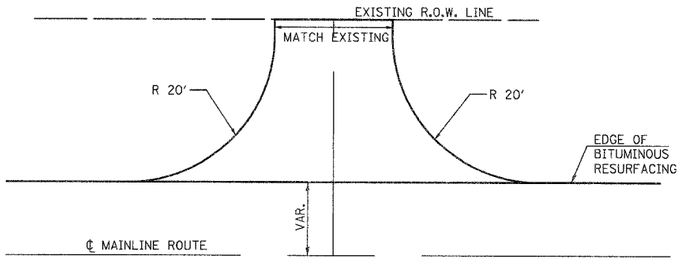
15 @ 65.8 SQ YDS EACH



PLAN A

TYPICAL URBAN SIDE ROAD RETURN

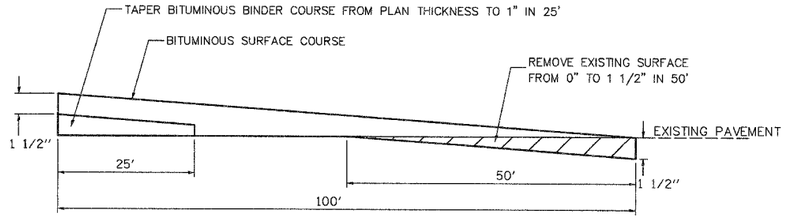
8 @ 65.8 SQ YDS EACH

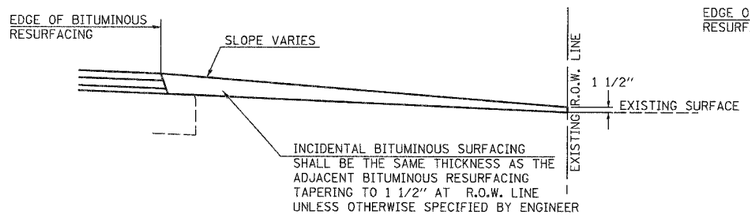


PLAN B

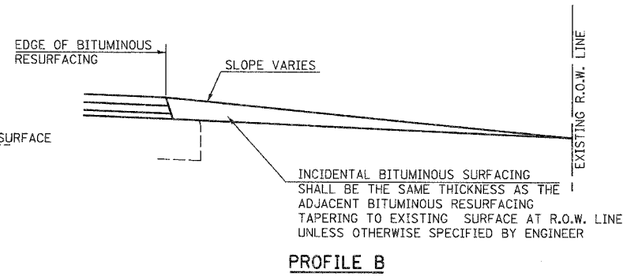
BITUMINOUS SURFACE REMOVAL–BUTT JOINT

1 @ 166.7 SQ YDS STA: 0+43 (BEGINNING STATION)





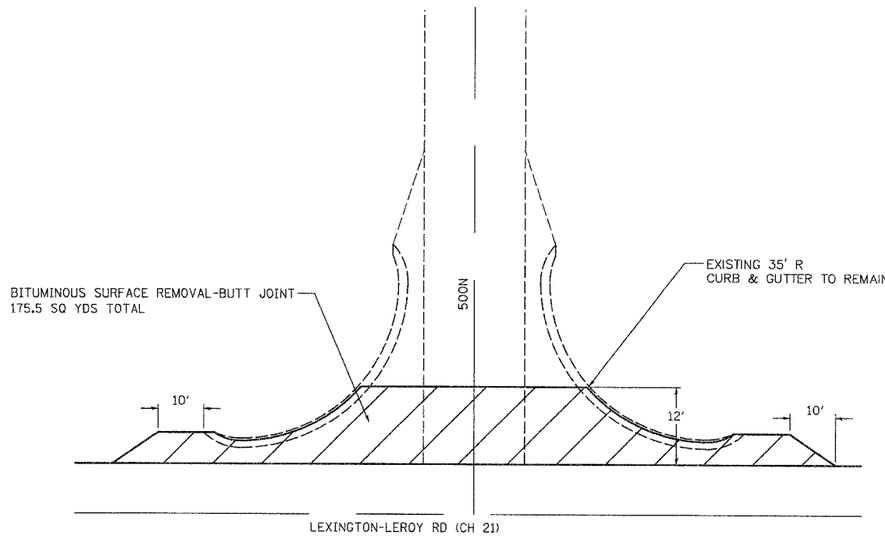
PROFILE A



PROFILE B

SPECIAL SDRD RETURN

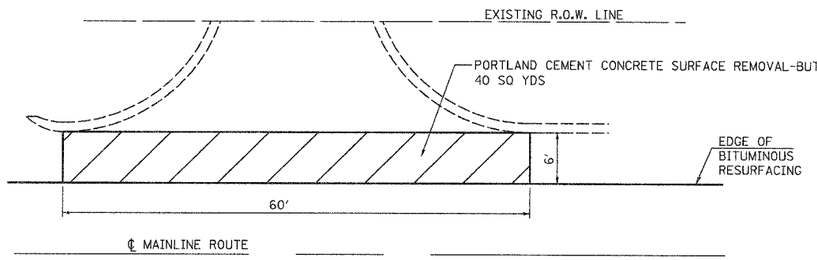
1 @ W SCHOOL ST. (CH 40)
175.5 SQ YDS TOTAL
INCIDENTAL BITUMINOUS SURFACING



PLAN E

COMMERCIAL ENTRANCE

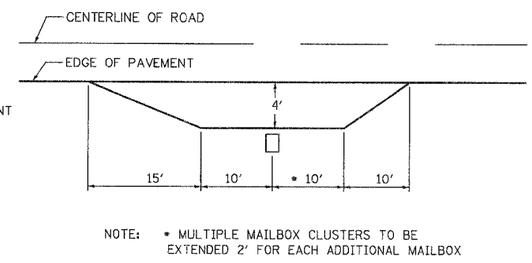
CASEYS GENERAL STORE
1 @ 40 SQ YDS



PLAN C

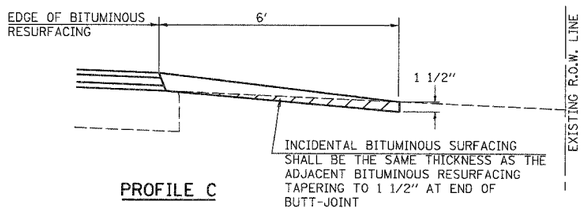
TYPICAL URBAN MAILBOX TURNOUT

5 @ 14.5 SQ YD EACH

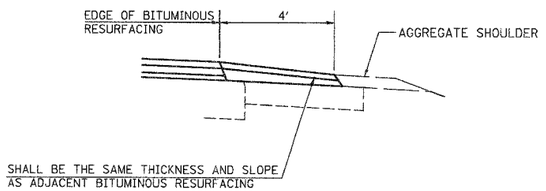


NOTE: * MULTIPLE MAILBOX CLUSTERS TO BE EXTENDED 2' FOR EACH ADDITIONAL MAILBOX

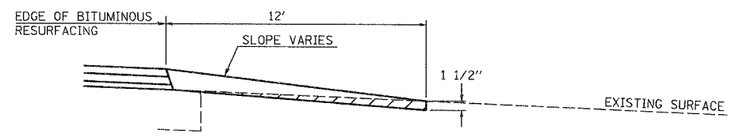
PLAN D



PROFILE C



PROFILE D



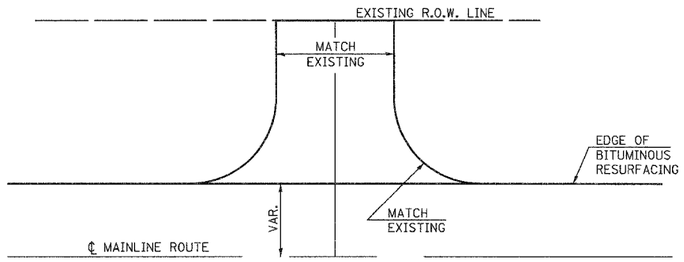
PROFILE E

CONTRACT NO. 91361

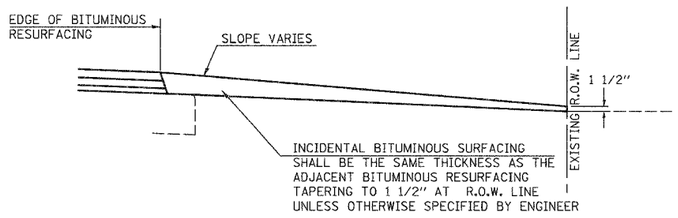
CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	7

TYPICAL RURAL PRIVATE ENTRANCE

17 @ 65.8 SQ YDS EACH



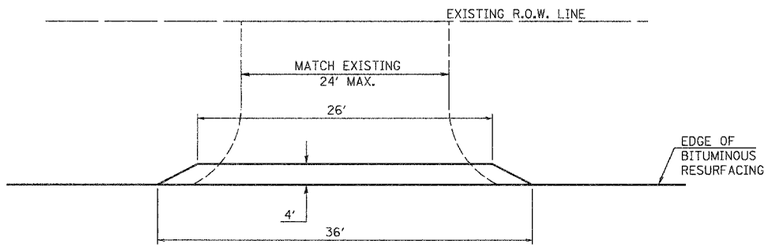
PLAN F



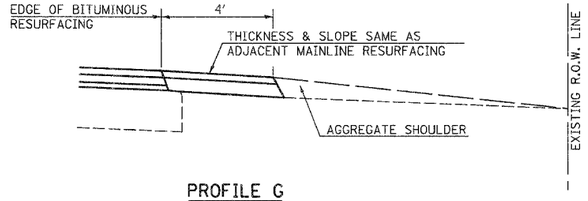
PROFILE F

TYPICAL FIELD ENTRANCE

16 @ 13.8 SQ YDS EACH



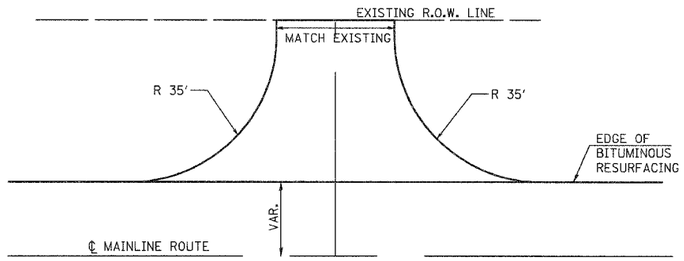
PLAN G



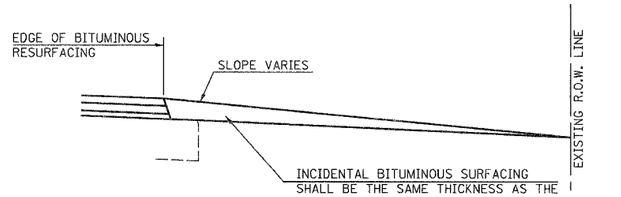
PROFILE G

TYPICAL RURAL SIDE ROAD RETURN

4 @ 122.8 SQ YDS EACH



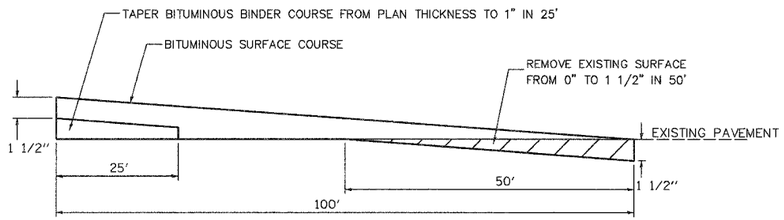
PLAN H



PROFILE H

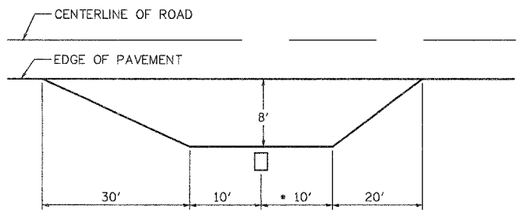
BITUMINOUS SURFACE REMOVAL–BUTT JOINT

1 @ 133.3 SQ YDS STA: 215+65 (ENDING STATION)
1 @ 133.3 SQ YDS STA: 119+58 (BRIDGE)
1 @ 133.3 SQ YDS STA: 120+02 (BRIDGE)



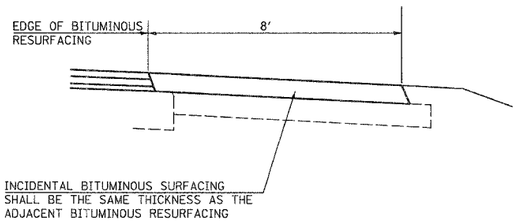
TYPICAL RURAL MAILBOX TURNOUT

14 @ 41 SQ YD EACH



NOTE: * MULTIPLE MAILBOX CLUSTERS TO BE EXTENDED 2' FOR EACH ADDITIONAL MAILBOX

PLAN I

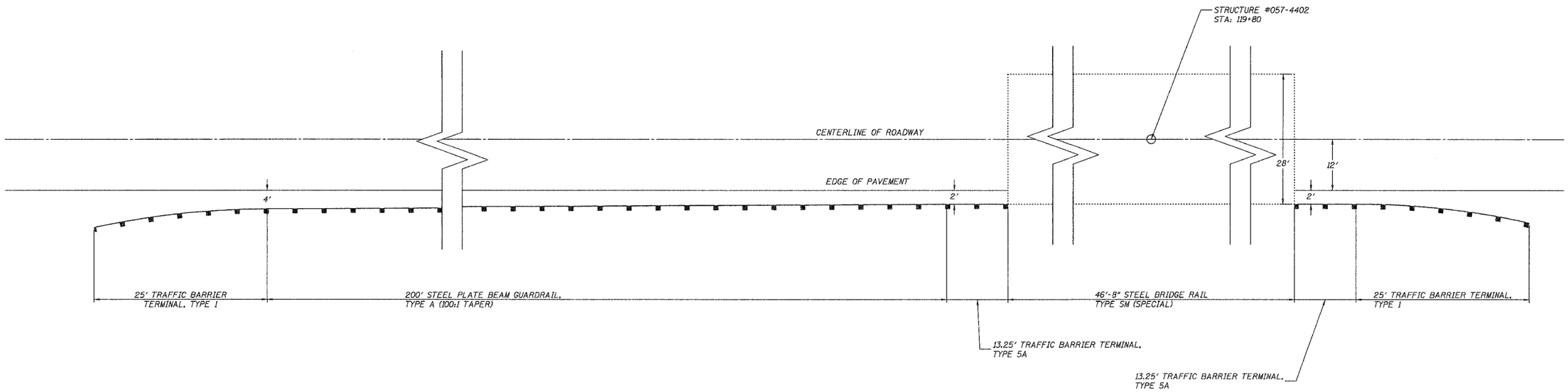


PROFILE I

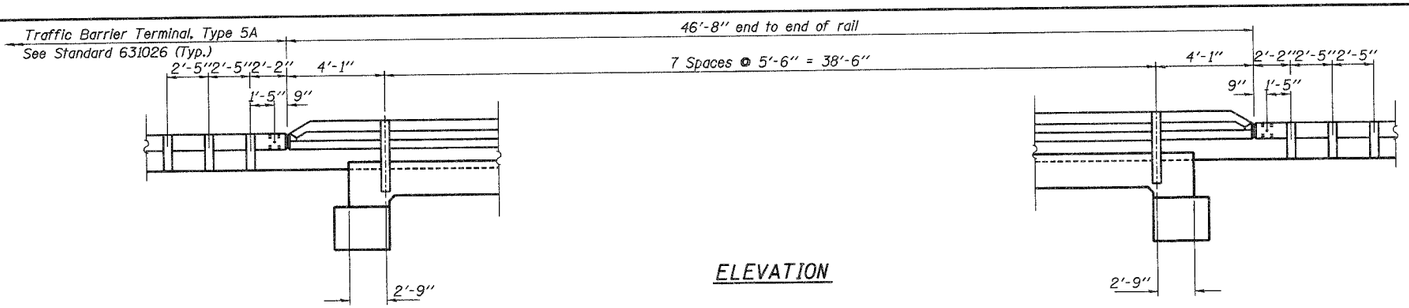
CONTRACT NO. 91361

CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	8

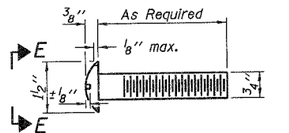
GUARDRAIL PLAN VIEW
(TYPICAL EACH SIDE OF BRIDGE)



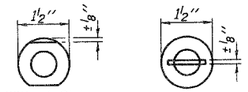
CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	9



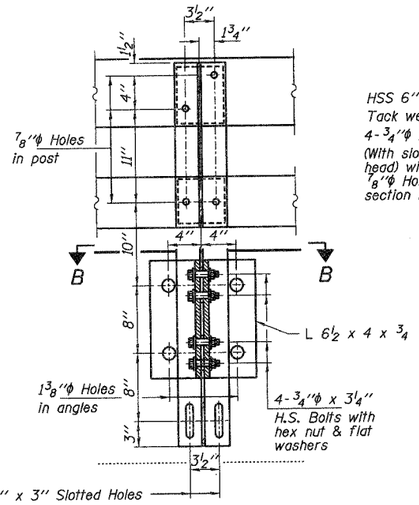
ELEVATION



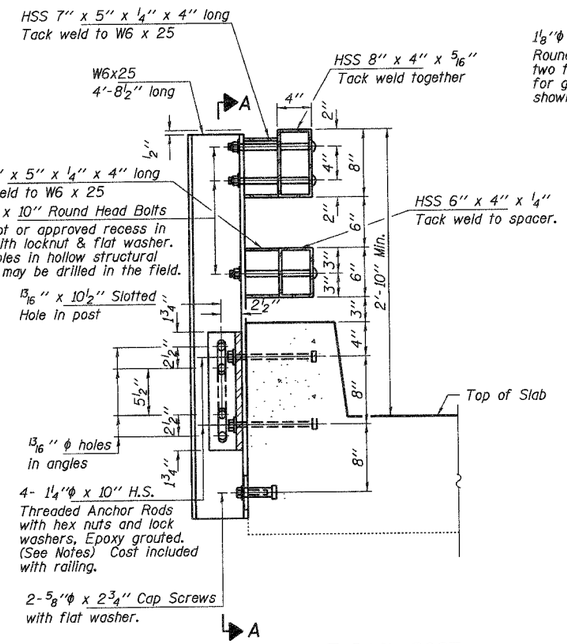
ROUND HEAD BOLT $\frac{3}{4}$"ϕ



VIEW E-E

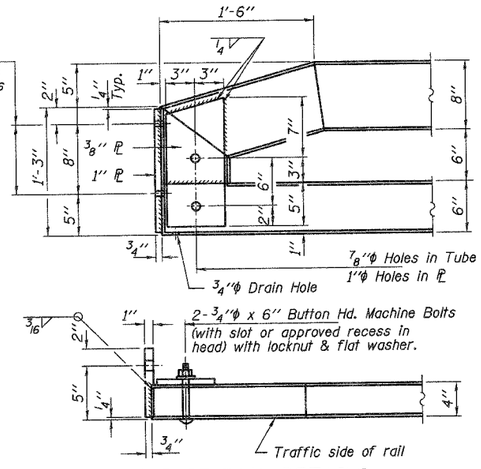


SECTION A-A



SECTION AT RAIL POST

1 1/8"ϕ Holes for 1"ϕ x 4" Round Head Bolts. Provide two flat washers & locknuts for guard rail connection shown on Std. 631026.



END OF RAIL DETAILS

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270, Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lockwashers shall be galvanized according to AASHTO M 232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

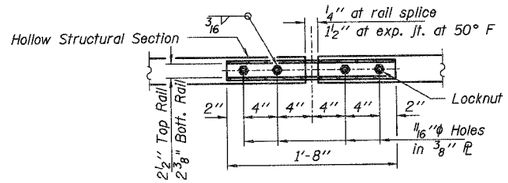
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL BRIDGE RAIL, TYPE SM (SPECIAL).

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

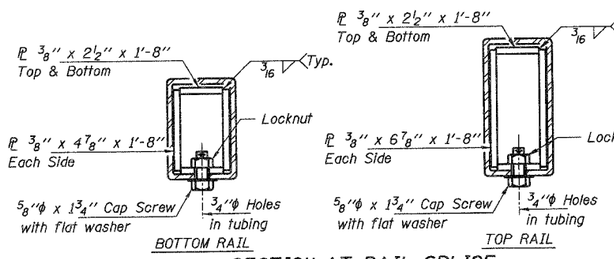
The lower portion of the post flange that comes in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place $\frac{1}{8}$" fabric bearing pads between the plates and concrete.

The $\frac{3}{4}$"ϕ high strength bolts used to connect the HHS Sections to the post shall be tightened according to Art. 505.04(f)(2) of the Standard Specifications. The $1\frac{1}{4}$"ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional $\frac{1}{8}$ turn. The $\frac{5}{8}$"ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

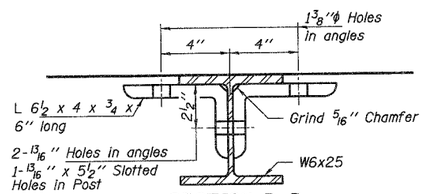
The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.



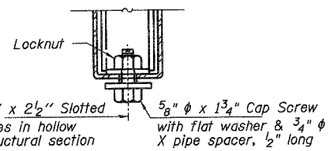
PLAN-BOTT. SPLICE PL TYPICAL



SECTION AT RAIL SPLICE



SECTION B-B



RAIL SPLICE CONNECTION AT EXPANSION JT.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM (Special)	Foot	94

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-59-0063-1	DATE: 05/24/06
DESIGNED: S.W.M.	CHECKED: M.G.B.	DRAWN: D.B.

STEEL RAILING RETROFIT

SECTION

C.H. 21 / F.A.S. 489

McLEAN COUNTY

STRUCTURE NO. 057-4402