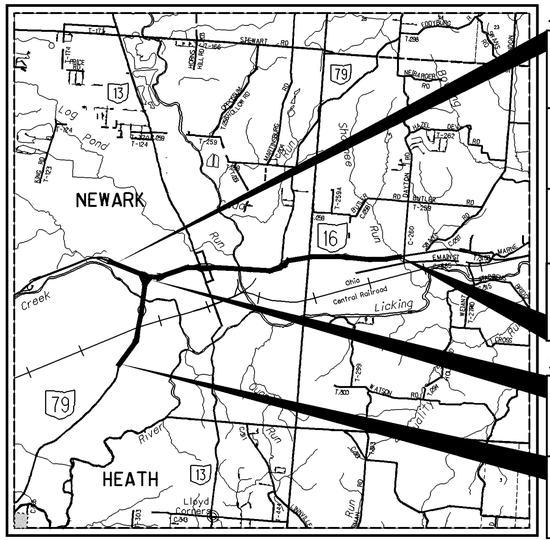


S.R. 16

BEGIN PROJECT EASTBOUND & WESTBOUND LANES S.R. 16 S.L.M. 19.72
SUSPEND PROJECT EASTBOUND LANES S.R. 16 S.L.M. 20.90
RESUME PROJECT EASTBOUND LANES S.R. 16 S.L.M. 21.36
END PROJECT EASTBOUND & WESTBOUND LANES S.R. 16 S.L.M. 23.66

S.R. 79

END PROJECT NORTHBOUND & SOUTHBOUND LANES S.R. 79 S.L.M. 13.66
BEGIN PROJECT NORTHBOUND & SOUTHBOUND LANES S.R. 79 S.L.M. 12.30

LOCATION MAP

LON/LAT: 40° 03′ 41″ / 82° 24′ 32″

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
STATE & FEDERAL ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION	S.R. 16	S.R. 79
Functional Classification	URBAN FREEWAY/ EXPRESSWAY	URBAN FREEWAY/ EXPRESSWAY
Opening Year ADT (2009)	48,350	26,810
Design Year ADT (2021)	54,260	30,087
Design Hourly Volume (2021)	4,831	2,680
Directional Distribution	50%	50%
Trucks (24 Hour B&C)	7%	7%
Design Speed	55 MPH	55 MPH
Legal Speed	55 MPH	55 MPH

DESIGN EXCEPTIONS: NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5 PRODUCTION OFFICE

L016_MTS_001.dgn 2/19/09

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LIC-16-19.72
LIC-79-12.30

CITY OF NEWARK
CITY OF HEATH

NEWARK TOWNSHIP

LICKING COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION:

4 LANE DIVIDED ASPHALT CONCRETE RESURFACING, AND RELATED BRIDGE WORK ON S.R. 16 AND S.R. 79 IN THE CITY OF NEWARK AND THE CITY OF HEATH.

Project Earth Disturbed Area = N/A (Maintenance Project)
Estimated Contractor Earth Disturbed Area = N/A (Maintenance Project)
Notice of Intent Earth Disturbed Area = N/A (Maintenance Project)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2008 SPECIFICATIONS

THE STANDARD 2008 SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND THE PROPOSAL SHALL GOVERN THESE IMPROVEMENTS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THESE IMPROVEMENTS WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS INDICATED IN THE PROPOSAL.

APPROVED William N. Gilchrist

DATE 03/06/2009 DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

ENGINEERS SEAL: ROADWAY

STATE OF OHIO Heather Ann Gilbert E-66643 REGISTERED PROFESSIONAL ENGINEER

SIGNED: Heather Ann Gilbert
DATE: 03/24/2009

ENGINEERS SEAL: STRUCTURE

STATE OF OHIO DAVID T. FLOOD E-61082 REGISTERED PROFESSIONAL ENGINEER

SIGNED: David T Flood
DATE: 03/26/2009

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	10/19/07	MT-105.10	1/16/09	800	4/17/09
GR-2.1	1/16/04	MT-101.90	1/16/09	832	5/5/09
GR-3.1	1/19/07	MT-101.60	4/17/09	848	4/15/05
GR-3.2	1/19/07	TC-65.10	1/21/05		
MT-35.10	4/20/01	TC-65.11	1/21/05		
MT-95.30	4/17/09	TC-71.10	1/16/09		
MT-95.40	4/17/09	TC-72.20	1/21/05		
MT-95.50	4/17/09	TC-73.10	1/19/01		
MT-98.10	10/19/07	RM-4.2	10/19/07		
MT-98.11	10/19/07	HL-10.13	4/17/09		
MT-98.20	10/19/07	HL-20.13	1/19/07		
MT-98.21	4/17/09	HL-30.11	4/17/09		
MT-98.22	10/19/07	HL-30.32	4/17/09		
MT-98.28	10/19/07	HL-30.33	4/17/09		
MT-98.29	10/19/07	HL-60.11	1/19/07		
MT-99.20	1/16/09	AS-1-81	7/19/02		
MT-101.70	1/16/09	PCB-91	7/19/02		
MT-102.10	4/17/09	SBR-1-99	7/19/02		

FEDERAL PROJECT NO. E036 (406)

PID NO. 76384

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

LIC-16-19.72
LIC-79-12.30

SCHEMATIC PLAN

HORIZONTAL SCALE IN FEET
0' 200' 400'

CALCULATED J.C.
CHECKED R.C.

CURVE DATA RAMP "F"

PI STA. 109+91.56	PI STA. 115+39.89
△ = 12°31'23" RT.	△ = 14°11'59" LT.
Dc = 04°00'00"	Dc = 04°00'00"
R = 1432.39'	R = 1432.39'
L = 313.08'	L = 354.99'
T = 157.17'	T = 178.41'
E = 8.60'	E = 11.07'
SUPERELEVATION = .041 FT./FT. MAX.	SUPERELEVATION = .054 FT./FT. MAX.

PEDESTRIAN BRIDGE
LIC-16-2006

EXISTING & PROPOSED VERTICAL CLEARANCE

15'-4" 15'-8" 15'-8" 15'-10"
EP ℄ EP
RAMP WESTBOUND LANES

15'-9" 15'-4" 15'-3" 15'-1" (NDC 15' 5")
EP ℄ EP
EASTBOUND LANES RAMP

CURVE DATA ROADWAY "A"

PI STA. 126+78.49
△ = 17°06'24" LT.
Dc = 04°00'00"
R = 1432.39'
L = 427.67'
T = 215.44'
E = 16.11'

℄ EXISTING 21 ST STREET

BEGIN WORK RAMP "F" @ 21st STREET STA. 106+32.37

℄ SURVEY & CONSTRUCTION RAMP "F"

END WORK RAMP "F" @ 21st STREET STA. 114+39.45

BRIDGE NO. LIC-16-1968

EXISTING UNDERGROUND POWER CABLE

P.C. STA. 108+34.40

P.T. STA. 111+47.47

P.C. STA. 113+61.48

P.T. STA. 117+16.47 ℄ RAMP "F"= 44.00' LT. P.O.T. STA. 117+16.47 ℄ SURVEY & CONST. S.R. 16

S66°09'04"E

S63°37'41"E

S 77°15'36" E

BRIDGE NO. LIC-16-1917PB

N 68°40'30" E

80+00 85+00 90+00 95+00 100+00 105+00 110+00 115+00 120+00 125+00

T.S. STA. 89+55.96

S.C. STA. 92+85.96

C.S. STA. 103+85.87

S.T. STA. 107+35.87

BEGIN WORK RAMP "H" @ 21st STREET STA. 107+59.60

℄ SURVEY & CONSTR. RAMP "H"

END WORK RAMP "H" @ 21st STREET STA. 114+54.22

P.C. STA. 114+20.91

P.T. STA. 116+20.91 ℄ RAMP "H" = 57.00' RT. P.O.T. STA. 116+21.26 ℄ SURVEY & CONST. S.R. 16

STATION EQUATION STA. 118+69.02 (BACK)= STA. 117+46.58 (AHEAD)

℄ SURVEY & CONSTRUCTION S.R. 16

P.C. STA. 124+63.05 ℄ ROADWAY "A"= 57.00' LT. P.O.T. STA. 124+62.70 ℄ SURVEY & CONST. S.R. 16

P.T. STA. 128+90.72

BEGIN WORK ROADWAY "A" STA. 126+26.31

℄ EXISTING ROADWAY "A"

BRIDGE NO. LIC-16-2006

MATCH LINE STA. 130+00 SEE SHEET 3

℄ EXISTING ROADWAY "C"

BEGIN WORK ROADWAY "C" STA. 129+40.61

EXISTING BIKEWAY

PROJECT (BY OTHERS)

BEGIN PROJECT STA. 107+93.04 S.L.M. 19.72

E036 (406)

BEGIN PAVEMENT PLANING & RESURFACING STA. 107+93.04 EASTBOUND & WESTBOUND LANES S.R. 16

CURVE DATA S.R. 16

PI STA. 98+73.88
△ = 43°29'50" RT.
Dc = 03°00'00"
R = 1909.86'
Lc = 1099.91'
Ls = 350.00'
Es = 149.24'
θs = 5°15'00"
LT = 233.44'
ST = 116.76'
SUPERELEVATION = .067 FT./FT. MAX.

CURVE DATA RAMP "H"

PI STA. 115+21.07
△ = 08°00'00" RT.
Dc = 04°00'00"
R = 1432.39'
L = 200.00'
T = 100.16'
E = 3.50'
SUPERELEVATION = .045 FT./FT. MAX.

P.C. STA. 126+63.60 ℄ ROADWAY "C"= 44.00' LT. P.O.T. STA. 126+63.60 ℄ SURVEY & CONST. S.R. 16

CURVE DATA ROADWAY "C"

PI STA. 128+83.16
△ = 17°25'46" RT.
Dc = 04°00'00"
R = 1432.39'
L = 435.74'
T = 219.56'
E = 16.73'

LIC-16-19.72
LIC-79-12.30

L01617A2.DGN

CURVE DATA
S.R. 16

PI STA. 141+22.54
△ = 43°50'10" LT.
Dc = 03°00'00"
R = 1909.86'
Lc = 1111.20'
Ls = 350.00'
Ts = 944.48'
Es = 151.68'
θs = 5°15'
LT = 233.44'
ST = 116.26'
SUPERELEVATION =
.070 FT./FT. MAX.

CURVE DATA
RAMP "BB"
11th STREET

PI STA. 147+76.90
△ = 19°50'16" LT.
Dc = 08°00'00"
R = 716.20'
L = 247.97'
T = 125.24'
E = 10.87'
SUPERELEVATION =
.064 FT./FT. MAX.

LIC-16-2099
WESTBOUND/EASTBOUND

EXISTING & PROPOSED
VERTICAL CLEARANCE
16'-6" 16'-1" 16'-0"
EP ℄ EP
WESTBOUND
15'-8" 15'-2" 15'-0" (NDC 15' 5")
EP ℄ EP
EASTBOUND

CURVE DATA
RAMP "A" @
MOUNT VERNON ROAD

PI STA. 170+09.01
△ = 05°30'00" LT.
Dc = 01°30'00"
R = 3819.72'
L = 366.67'
T = 183.47'
E = 4.40'
SUPERELEVATION =
.018 FT./FT. MAX.

CURVE DATA
S.R. 16

PI STA. 178+79.86
△ = 05°10'09" LT.
Dc = 01°00'00"
R = 5729.58'
L = 516.92'
T = 258.63'
E = 5.83'
SUPERELEVATION =
.025 FT./FT. MAX.

CURVE DATA
RAMP "B" @
HUDSON AVENUE

PI STA. 179+82.04
△ = 20°47'05" RT.
Dc = 17°41'02"
R = 324.00'
L = 117.54'
T = 59.42'
E = 5.40'
SUPERELEVATION =
.033 FT./FT. MAX.

CURVE DATA
RAMP "B" @
HUDSON AVENUE

PI STA. 184+46.09
△ = 10°00'00" LT.
Dc = 05°00'00"
R = 1145.92'
L = 200.00'
T = 100.26'
E = 4.38'
SUPERELEVATION =
.054 FT./FT. MAX.

CURVE DATA
RAMP "B" @
HUDSON AVENUE

PI STA. 187+81.35
△ = 11°44'04" LT.
Dc = 02°30'00"
R = 2291.83'
L = 469.38'
T = 235.51'
E = 12.07'
SUPERELEVATION =
.042 FT./FT. MAX.

LIC-79-1389 RT
EASTBOUND

EXISTING HORIZONTAL CLEARANCE
FACE/FACE CURB
EASTBOUND
8'-0" (OUTSIDE) & 5'-0" (INSIDE)

PROPOSED HORIZONTAL CLEARANCE
FACE/FACE CURB
EASTBOUND
8'-3" (OUTSIDE) (NDC 12') & 5'-3" (INSIDE)

LIC-16-2038
WESTBOUND/EASTBOUND

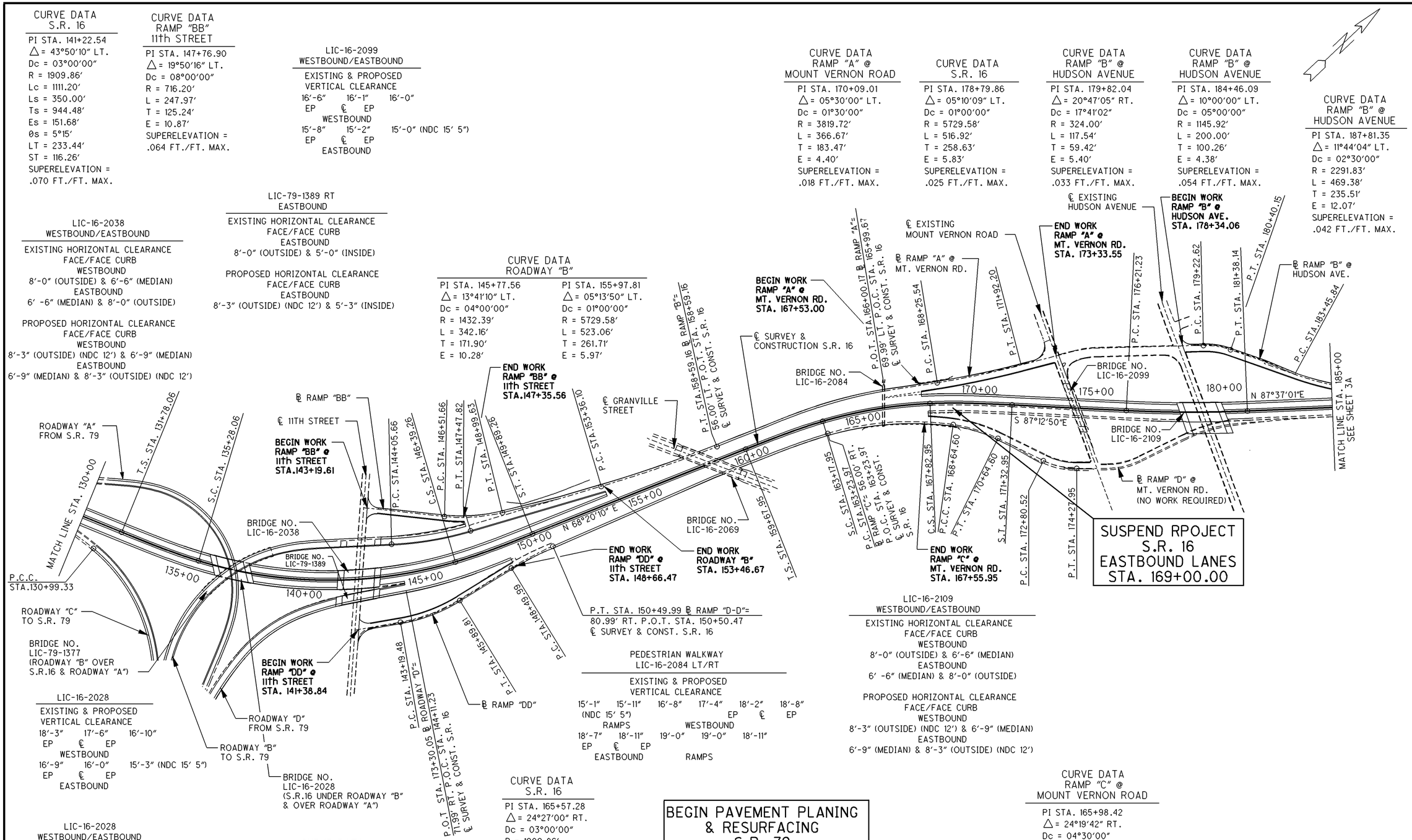
EXISTING HORIZONTAL CLEARANCE
FACE/FACE CURB
WESTBOUND
8'-0" (OUTSIDE) & 6'-6" (MEDIAN)
EASTBOUND
6' -6" (MEDIAN) & 8'-0" (OUTSIDE)

PROPOSED HORIZONTAL CLEARANCE
FACE/FACE CURB
WESTBOUND
8'-3" (OUTSIDE) (NDC 12') & 6'-9" (MEDIAN)
EASTBOUND
6'-9" (MEDIAN) & 8'-3" (OUTSIDE) (NDC 12')

CURVE DATA
ROADWAY "B"

PI STA. 145+77.56
△ = 13°41'10" LT.
Dc = 04°00'00"
R = 1432.39'
L = 342.16'
T = 171.90'
E = 10.28'

PI STA. 155+97.81
△ = 05°13'50" LT.
Dc = 01°00'00"
R = 5729.58'
L = 523.06'
T = 261.71'
E = 5.97'



PEDESTRIAN WALKWAY
LIC-16-2084 LT/RT

EXISTING & PROPOSED
VERTICAL CLEARANCE
15'-1" 15'-11" 16'-8" 17'-4" 18'-2" 18'-8"
(NDC 15' 5") EP ℄ EP
RAMPS WESTBOUND
18'-7" 18'-11" 19'-0" 19'-0" 18'-11"
EP ℄ EP
EASTBOUND RAMPS

LIC-16-2109
WESTBOUND/EASTBOUND

EXISTING HORIZONTAL CLEARANCE
FACE/FACE CURB
WESTBOUND
8'-0" (OUTSIDE) & 6'-6" (MEDIAN)
EASTBOUND
6' -6" (MEDIAN) & 8'-0" (OUTSIDE)

PROPOSED HORIZONTAL CLEARANCE
FACE/FACE CURB
WESTBOUND
8'-3" (OUTSIDE) (NDC 12') & 6'-9" (MEDIAN)
EASTBOUND
6'-9" (MEDIAN) & 8'-3" (OUTSIDE) (NDC 12')

LIC-16-2028
EXISTING & PROPOSED
VERTICAL CLEARANCE
18'-3" 17'-6" 16'-10"
EP ℄ EP
WESTBOUND
16'-9" 16'-0" 15'-3" (NDC 15' 5")
EP ℄ EP
EASTBOUND

LIC-16-2028
WESTBOUND/EASTBOUND

EXISTING HORIZONTAL CLEARANCE
FACE/FACE CURB
WESTBOUND
8'-0" (OUTSIDE) & 5'-3" (MEDIAN)
EASTBOUND
5' -3" (MEDIAN) & 8'-0" (OUTSIDE)

PROPOSED HORIZONTAL CLEARANCE
FACE/FACE CURB
WESTBOUND
8'-3" (OUTSIDE) (NDC 12') & 5'-0" (MEDIAN)
EASTBOUND
5'-0" (MEDIAN) & 8'-3" (OUTSIDE) (NDC 12')

CURVE DATA
RAMP "DD"
11th STREET

PI STA. 144+56.27
△ = 21°37'35" LT.
Dc = 08°00'00"
R = 716.20'
L = 270.33'
T = 136.79'
E = 12.95'
SUPERELEVATION =
.056 FT./FT. MAX.

PI STA. 149+50.15
△ = 08°00'00" RT.
Dc = 04°00'00"
R = 1432.39'
L = 200.00'
T = 100.16'
E = 3.50'
SUPERELEVATION =
.033 FT./FT. MAX.

CURVE DATA
S.R. 16

PI STA. 165+57.28
△ = 24°27'00" RT.
Dc = 03°00'00"
R = 1909.86'
Lc = 465.00'
Ls = 350.00'
Ts = 589.33'
Es = 47.05'
θs = 5°15'
LT = 233.44'
ST = 116.76'
SUPERELEVATION =
.070 FT./FT. MAX.

BEGIN PAVEMENT PLANING & RESURFACING S.R. 79 S.L.M. 12.30

END PAVEMENT PLANING & RESURFACING S.R. 79 S.L.M. 13.66

(SEE PLAN SHEETS)

CURVE DATA
RAMP "C" @
MOUNT VERNON ROAD

PI STA. 165+98.42
△ = 24°19'42" RT.
Dc = 04°30'00"
R = 1273.24'
L = 540.63'
T = 274.45'
E = 29.24'
SUPERELEVATION =
.073 FT./FT. MAX.

HORIZONTAL SCALE IN FEET
0 200 400

CALCULATED J.C.
CHECKED R.C.

SCHEMATIC PLAN

LIC-16-19.72
LIC-79-12.30

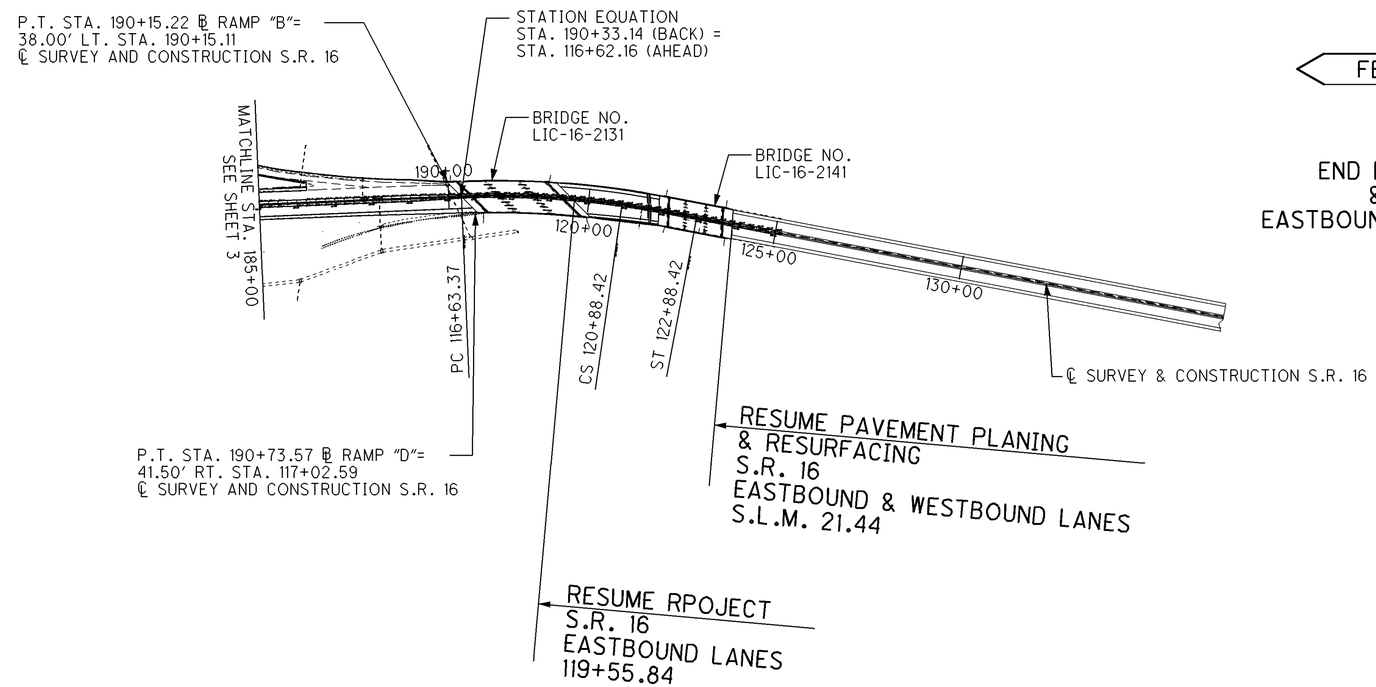
L01617B2.DGN

LIC-16-2131
EXISTING HORIZONTAL CLEARANCE
TOE/TOE OF CURB
WESTBOUND (36'-10")
9'-1" (OUTSIDE) AND 3'-9" (MEDIAN)
EASTBOUND (42'-10")
15'-1" (OUTSIDE) AND 3'-9" (MEDIAN)

PROPOSED HORIZONTAL CLEARANCE
TOTAL WIDTH 85'-8" (INC. 2'-6" MEDIAN BARRIER)
TOE/TOE OF CURB
WESTBOUND (37'-1")
9'-4" (OUTSIDE) AND 3'-9" (MEDIAN)
EASTBOUND (42-10")
15'-4" (OUTSIDE) AND 3'-9" (MEDIAN)

LIC-16-2141
EXISTING HORIZONTAL CLEARANCE
TOE/TOE OF CURB
WESTBOUND (36'-10")
9'-1" (OUTSIDE) AND 3'-9" (MEDIAN)
EASTBOUND (36'-10")
9'-1" (OUTSIDE) AND 3'-9" (MEDIAN)

PROPOSED HORIZONTAL CLEARANCE
TOTAL WIDTH 79'-8" (INC. 2'-6" MEDIAN BARRIER)
TOE/TOE OF CURB
WESTBOUND (37'-1")
9'-4" (OUTSIDE) AND 3'-9" (MEDIAN)
EASTBOUND (37-1")
9'-4" (OUTSIDE) AND 3'-9" (MEDIAN)



END PROJECT
S.R. 16
S.L.M. 23.66

FED NO. E036 (406)
(SEE PLAN SHEETS)

END PAVEMENT PLANING
& RESURFACING
EASTBOUND & WESTBOUND LANES
S.R. 16
S.L.M. 23.66

CURVE DATA S.R. 16

P.I. STA. 119+30.22
△= 13°07'39" RT.
Dc = 2°30'00"
R = 2,291.83'
Ls = 200.00'
Θs = 2°30'00"
LT = 133.35'
ST = 99.99'
Lc = 425.10'
Ts = 360.58'
Es = 9.89
emax. - 0.0417

HORIZONTAL SCALE IN FEET
0 200 400

CALCULATED J.C.
CHECKED R.G.

SCHEMATIC PLAN

LIC-16-19.72
LIC-79-12.30

L01617C2.DGN

TYPICAL SECTIONS

PROPOSED PAVEMENT

* NOTE: (WESTBOUND LANES)

VARIES FROM 51′ STA.114+38.08 TO 24′ STA.117+16.47.
24′ STA.117+16.47 TO STA.119+42.70.
VARIES FROM 24′ STA.119+42.70 TO 37′ STA.124+62.70.
VARIES FROM 59′ STA.153+44.64 TO 36′ STA.158+59.16.
36′ STA.158+59.16 TO STA.158+75.0.
VARIES FROM 51′ STA.186+26.14 TO 12′ STA.190+33.14.

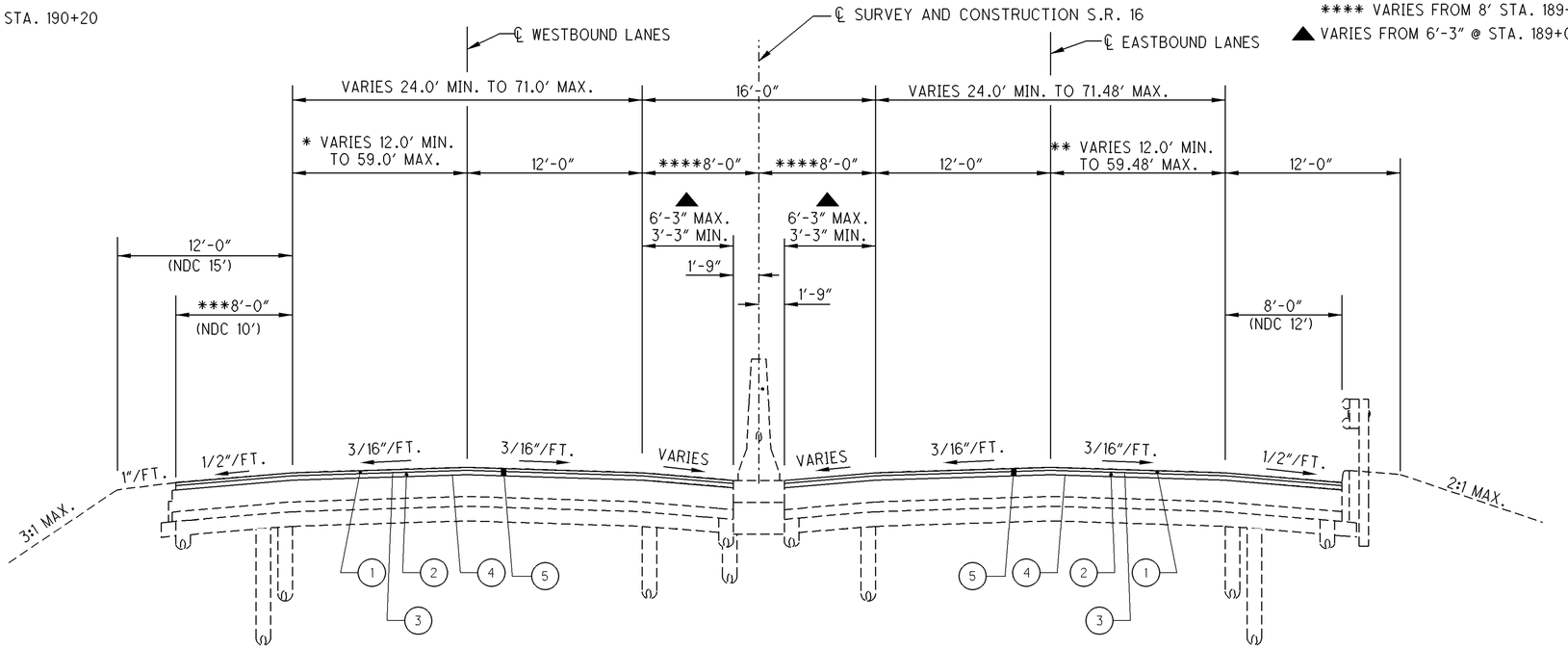
**** VARIES FROM 8′ STA. 189+00 TO 5′ STA. 190+20

*** NOTE:
8′ MIN. & 12′ MAX.
STA. 150+00 TO STA. 153+44.64.

** NOTE: (EASTBOUND LANES)

VARIES FROM 51′ STA.114+52.97 TO 24′ STA.120+18.82.
24′ STA.120+18.82 TO 24′ STA.126+63.60.
VARIES FROM 24′ STA.126+63.60 TO 51′ STA.129+41.96.
VARIES FROM 59.48′ STA.150+94.76 TO 36′ STA.158+00.47.
36′ STA.158+00.47 TO 36′ STA.158+62.45.
VARIES FROM 51′ STA.187+82.45 TO 25.06′ STA.190+33.14.

**** VARIES FROM 8′ STA. 189+00 TO 5′ STA. 190+20
▲ VARIES FROM 6′-3″ @ STA. 189+00 TO 3′-3″ @ STA. 190+20



NORMAL SECTION

STATION EQUATION: STA. 118+69.02 (BACK)= STA. 117+46.58 (AHEAD)

WESTBOUND LANES

SECTION APPLIES:

STA. 107+86.75 TO STA. 118+69.02(BACK) = 1082.27 FT.
STA. 117+46.58(AHEAD) TO STA. 130+72.55 = 1325.97 FT.
STA. 150+94.76 TO STA. 158+62.45 = 767.69 FT.
STA. 172+38.45 TO STA. 174+58.68 = 220.23 FT.
STA. 183+00.70 TO STA. 190+33.14 = 732.44 FT.
TOTAL 4,128.60 FT.

BRIDGE LIMITS (INCLUDING APPROACH SLABS)
STA. 105+53.25 TO STA. 107+86.75 = 233.50 FT.

EASTBOUND LANES

SECTION APPLIES:

STA. 107+99.33 TO STA. 118+69.02(BACK) = 1,069.69 FT.
STA. 117+46.58(AHEAD) TO STA. 130+72.55 = 1325.97 FT.
STA. 150+94.76 TO STA. 158+62.45 = 767.69 FT.
TOTAL 3,163.35 FT.

BRIDGE LIMITS (INCLUDING APPROACH SLABS)
STA. 105+65.83 TO STA. 107+99.33 = 233.50 FT.

SUSPEND PROJECT
EASTBOUND LANES
STA. 169+00.00

LEGEND

①	442	1 ½″ ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
②	442	1 ¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
③	407	TACK COAT FOR INTERMEDIATE COURSE
④	407	TACK COAT
⑤	254	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (3 1/4″)
⑥	257	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT

NDC = NORMAL DESIGN CRITERIA

CALCULATED J.C. | DRAWN R.G.

PROPOSED TYPICAL SECTION

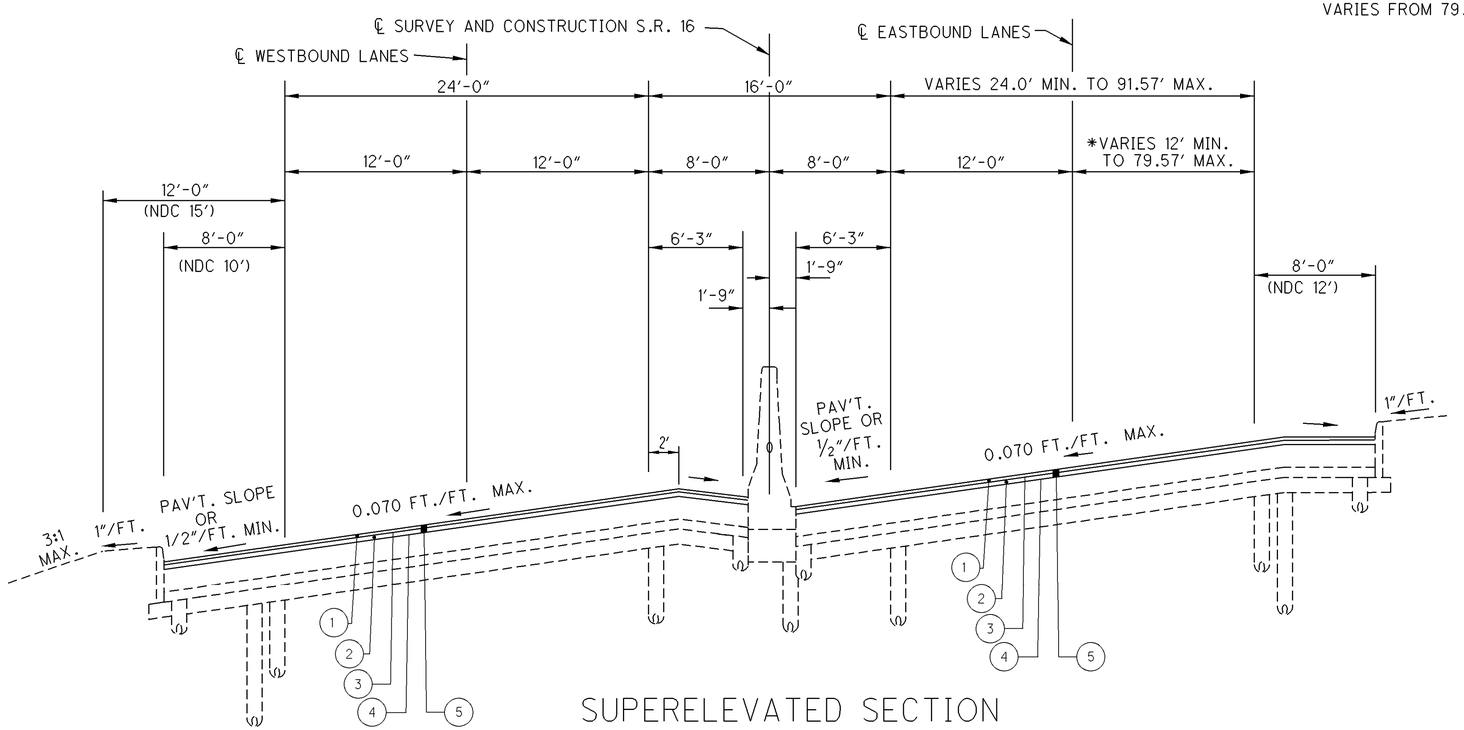
LIC-16-19.72
LIC-79-12.30

L01620F3.DGN

TYPICAL SECTIONS

PROPOSED PAVEMENT

* NOTE (EASTBOUND LANES)
VARIES FROM 51.99′ STA. 144+09.21 TO 52.57′ STA. 148+65.44.
VARIES FROM 79.57′ STA. 148+65.44 TO 59.48′ STA. 150+94.76.



SUPERELEVATED SECTION

WESTBOUND LANES

SECTION APPLIES:

STA. 130+72.55 TO STA. 135+81.22 = 508.67 FT.
STA. 137+51.69 TO STA. 141+32.98 = 381.29 FT.
STA. 143+14.53 TO STA. 150+94.76 = 780.23 FT.
TOTAL 1,670.19 FT.

BRIDGE LIMITS (Include Approach Slabs).

STA.135+81.22 TO STA.137+51.69 = 170.47 FT.
STA.141+32.98 TO STA.143+14.53 = 181.55 FT.
TOTAL 352.02 FT.

EASTBOUND LANES

SECTION APPLIES:

STA. 130+72.55 TO STA. 135+98.28 = 525.73 FT.
STA. 137+68.75 TO STA. 141+27.20 = 358.45 FT.
STA. 143+08.75 TO STA. 150+94.76 = 786.01 FT.
TOTAL 1,670.19 FT.

BRIDGE LIMITS (Include Approach Slabs).

STA.135+98.28 TO STA.137+68.75 = 170.47 FT.
STA.141+27.20 TO STA.143+08.75 = 181.55 FT.
TOTAL 352.02 FT.

LEGEND

(1)	442	1 ½″ ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
(2)	442	1 ¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
(3)	407	TACK COAT FOR INTERMEDIATE COURSE
(4)	407	TACK COAT
(5)	254	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (3 1/4″)
(6)	257	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT

NDC = NORMAL DESIGN CRITERIA

CALCULATED J.C. | CHECKED R.G.

PROPOSED TYPICAL SECTION

LIC-16-19.72
LIC-79-12.30

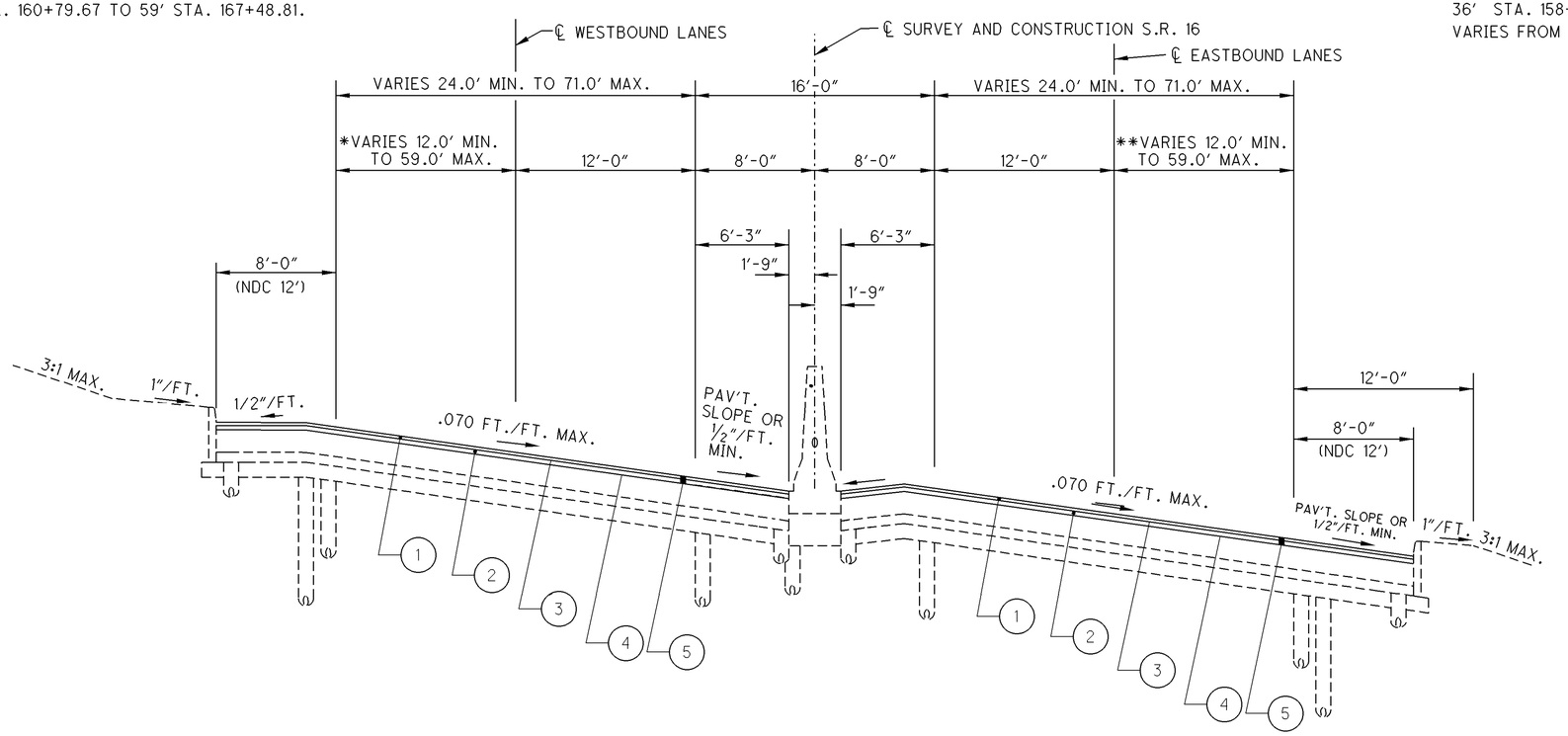
L0162023.DGN

TYPICAL SECTIONS

PROPOSED PAVEMENT

* NOTE (WESTBOUND LANES)
36′ STA. 158+75 TO STA. 160+79.67.
VARIES FROM 36′ STA. 160+79.67 TO 59′ STA. 167+48.81.

** NOTE (EASTBOUND LANES)
36′ STA. 158+62.45 TO STA. 163+23.97.
VARIES FROM 36′ STA. 163+23.97 TO 59′ STA. 167+72.61.



SUPERELEVATED SECTION

WESTBOUND LANES
SECTION APPLIES:
STA. 158+62.45 TO STA. 172+38.45 = 1376.00 FT.

EASTBOUND LANES
SECTION APPLIES:
STA. 158+62.45 TO STA. 169+00.00 = 1037.55 FT.

SUSPEND PROJECT
STA. 169+00.00
EASTBOUND LANES

LEGEND

①	442	1 ½″ ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
②	442	1 ¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
③	407	TACK COAT FOR INTERMEDIATE COURSE
④	407	TACK COAT
⑤	254	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (3 1/4″)
⑥	257	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT

NDC = NORMAL DESIGN CRITERIA

CALCULATED J.C. CHECKED R.G.

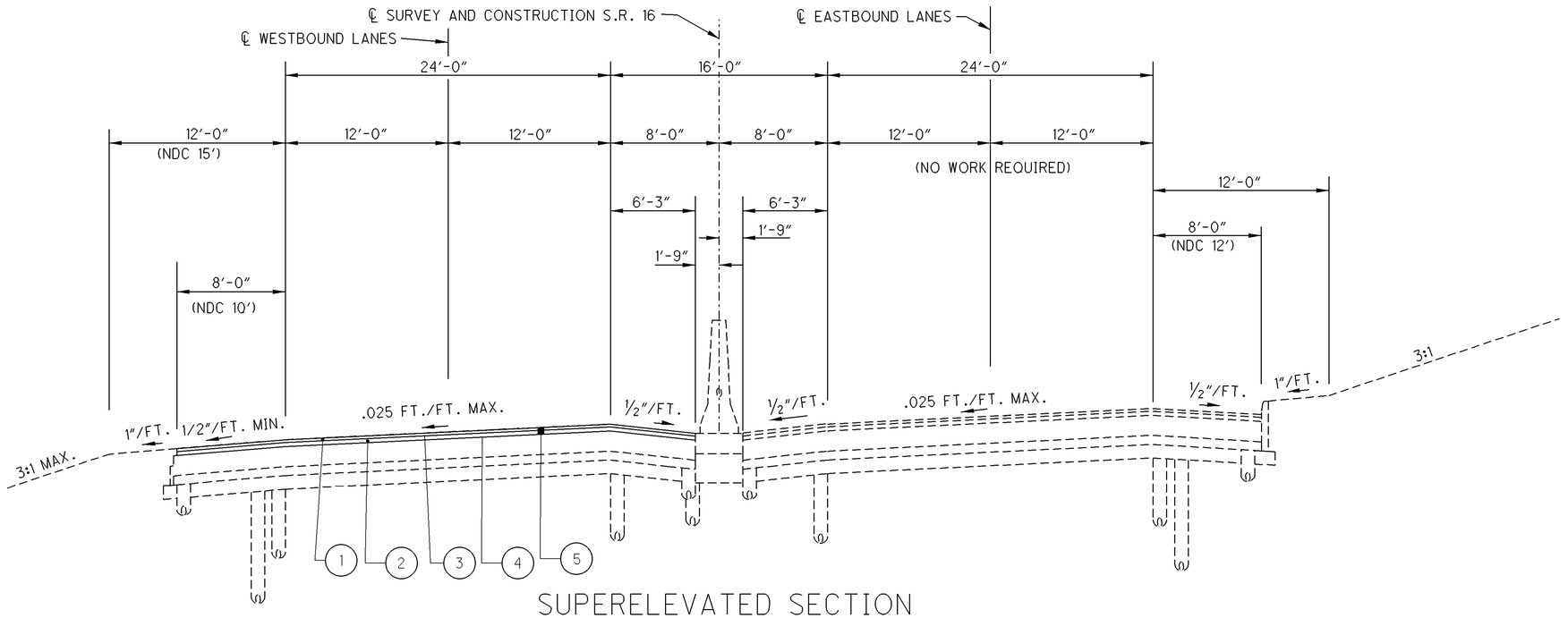
PROPOSED TYPICAL SECTION

LIC-16-19.72
LIC-79-12.30

L01620G3.DGN

TYPICAL SECTIONS

PROPOSED PAVEMENT



SUPERELEVATED SECTION

WESTBOUND LANES

SECTION APPLIES:

STA. 174+58.68 TO STA. 178+42.37 = 383.69 FT.
STA. 180+34.47 TO STA. 183+00.70 = 266.23 FT.
TOTAL 649.92 FT.

BRIDGE LIMITS (Include Approach Slabs).
STA.178+42.37 TO STA.180+34.47 = 192.10 FT.

(NO WORK REQUIRED)

EASTBOUND LANES

SECTION APPLIES:

STA. 174+58.68 TO STA. 178+56.59 = 397.91 FT.
STA. 180+48.69 TO STA. 183+00.70 = 252.01 FT.
TOTAL 649.92 FT. (NO WORK REQUIRED)

BRIDGE LIMITS (Include Approach Slabs).
STA.178+56.59 TO STA.180+48.69 = 192.10 FT.

LEGEND

1	442	1 ½″ ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
2	442	1 ¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
3	407	TACK COAT FOR INTERMEDIATE COURSE
4	407	TACK COAT
5	254	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (3 1/4″)
6	257	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT

NDC = NORMAL DESIGN CRITERIA

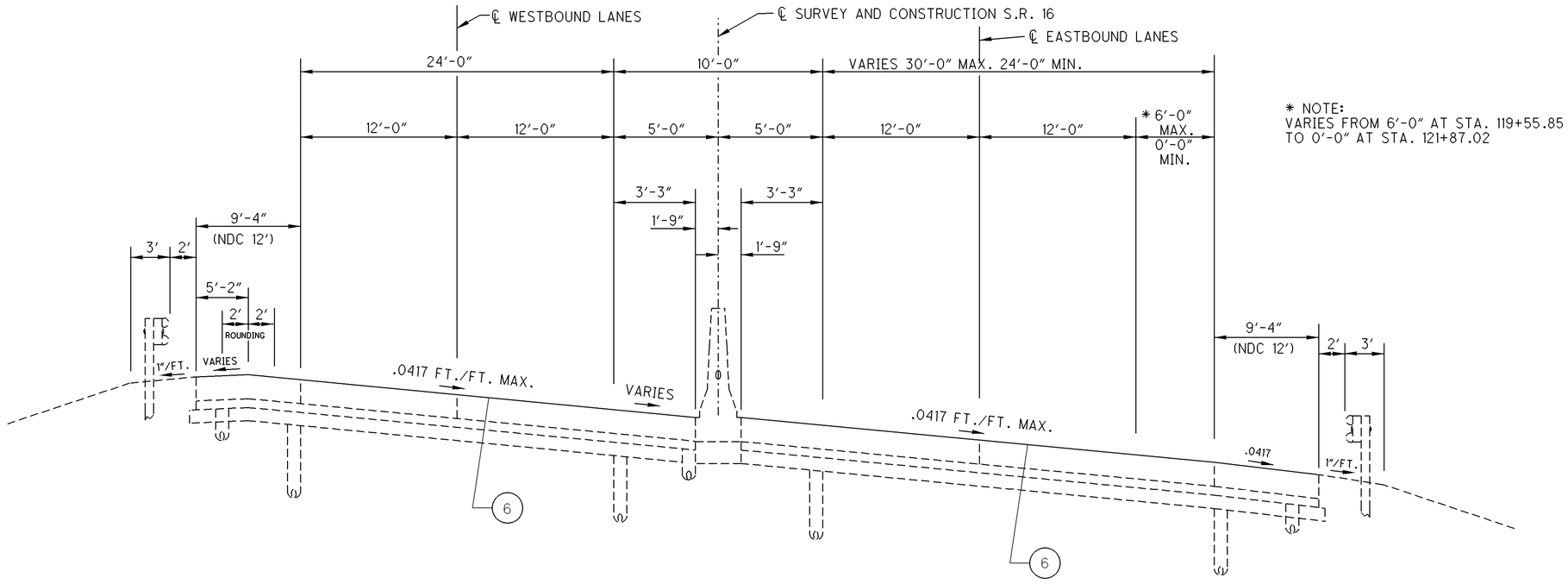
L01620M3.DGN

CALCULATED J.C.
CHECKED R.G.

PROPOSED TYPICAL SECTION

LIC-16-19.72
LIC-79-12.30

TYPICAL SECTIONS
PROPOSED PAVEMENT



* NOTE:
VARIES FROM 6′-0″ AT STA. 119+55.85
TO 0′-0″ AT STA. 121+87.02

SUPERELEVATED SECTION

SECTION APPLIES:

STA. 119+55.84 TO STA.121+87.02 = 231.18 FT.

TOTAL 231.18 FT.

BRIDGE LIMITS INCLUDING APPROACH SLABS

STA. 116+62.31 TO STA. 119+55.84 = 293.53 FT.
STA. 121+87.02 TO STA. 123+84.50 = 197.48 FT.

TOTAL 491.01 FT.

LEGEND

(1)	442	1 ½″ ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
(2)	442	1 ¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
(3)	407	TACK COAT FOR INTERMEDIATE COURSE
(4)	407	TACK COAT
(5)	254	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (3 1/4″)
(6)	257	DIAMOND GRINDING PORTLAND CEMENT PAVEMENT CONCRETE PAVEMENT

NDC = NORMAL DESIGN CRITERIA

CALCULATED J.C.
CHECKED R.G.

PROPOSED TYPICAL SECTION

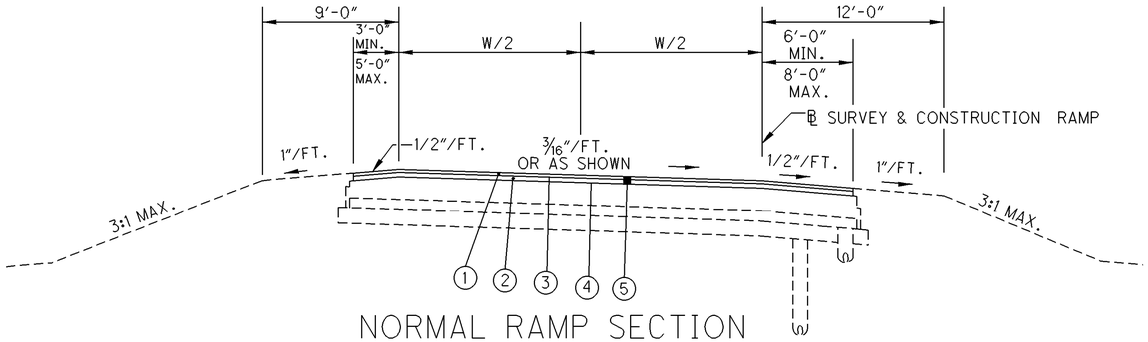
LIC-16-19.72
LIC-79-12.30

L016PROP.DGN

TYPICAL SECTIONS

PROPOSED RAMP PAVEMENT

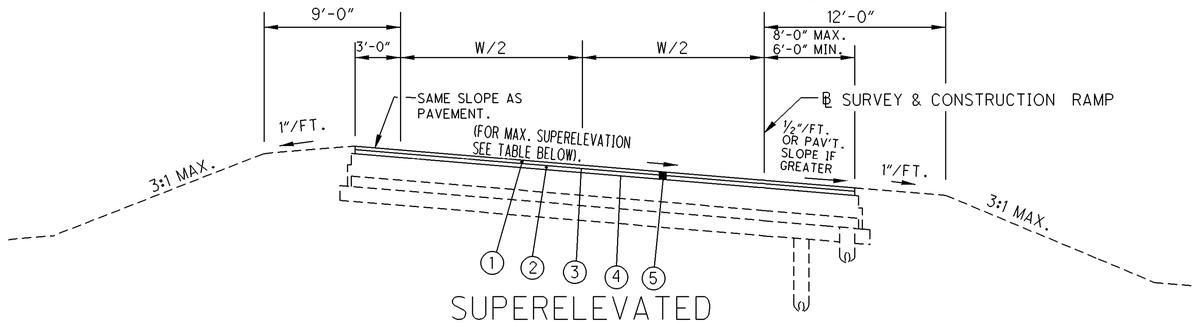
NOTE:
DETAILS SHOWN FOR THE EASTBOUND RAMPS.
DETAILS ARE REVERSE FOR THE WESTBOUND RAMPS.



NORMAL RAMP SECTION

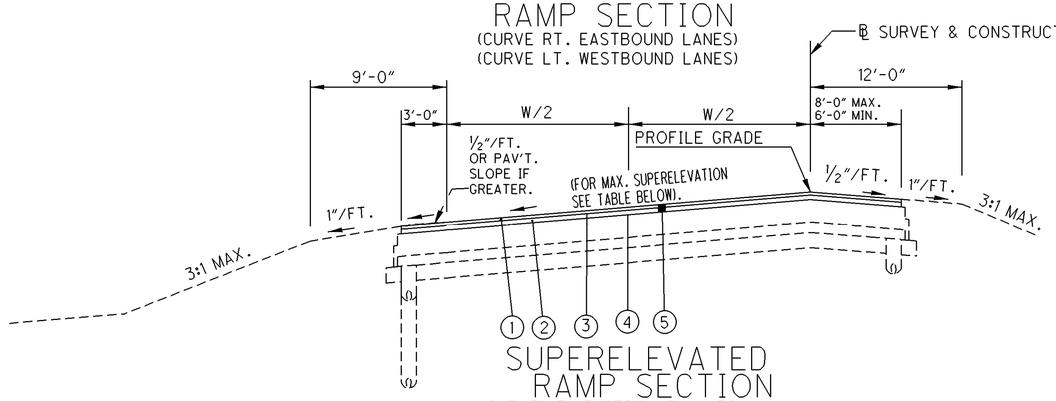
W = 16'-0" - RAMP "H" @ 21st. ST. STA. 108+19.43 TO STA. 113+25.00 = 505.57 FT.
W = 16'-0" - RAMP "BB" @ ROADWAY "B" STA. 143+67.55 TO STA. 145+75.00 = 207.45 FT.
W = VARIES 24' MAX. TO 16' MIN. RAMP "B" @ HUDSON AVE. STA. 181+95.83 TO STA. 183+45.84 = 150.01 FT.
W = 24'-0" - ROADWAY "D" FROM S.R. 79 STA. 172+11.82 TO STA. 173+30.05 = 118.23 FT.

TOTAL 981.26 FT.



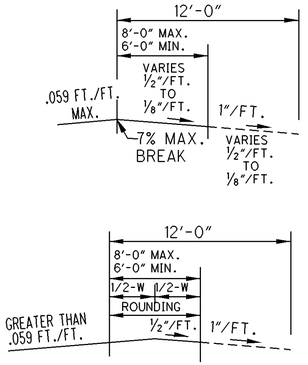
SUPERELEVATED RAMP SECTION

(CURVE RT. EASTBOUND LANES)
(CURVE LT. WESTBOUND LANES)



SUPERELEVATED RAMP SECTION

(CURVE LT. EASTBOUND LANES)
(CURVE RT. WESTBOUND LANES)



W = VARIES, SEE PLAN SHEET RAMP "F" @ 21st. ST. STA. 106+32.37 TO STA. 106+81.21 = 48.84 FT.
W = 20'-0" MAX. & 16'-0" MIN. - RAMP "F" @ 21st. ST. STA. 106+81.21 TO STA. 112+75.00 = 593.79 FT. SUPER @ .041 FT./FT. CURVE RT.
W = 16'-0" - RAMP "F" @ 21st. ST. STA. 112+75.00 TO STA. 114+39.45 = 164.45 FT. SUPER @ .054 FT./FT. CURVE LT.

W = VARIES, SEE PLAN SHEET RAMP "H" @ 21st. ST. STA. 107+59.60 TO STA. 108+19.43 = 59.83 FT.
W = 16'-0" - RAMP "H" @ 21st. ST. STA. 113+25.00 TO STA. 114+54.22 = 129.22 FT. SUPER @ .045 FT./FT. CURVE RT.

W = VARIES, SEE PLAN SHEET RAMP "D-D" STA. 141+38.84 TO STA. 141+95.98 = 57.14 FT.
W = 16'-0" - RAMP "D-D" STA. 141+95.98 TO STA. 147+50.00 = 554.02 FT. SUPER @ .056 FT./FT. CURVE LT.
W = 16'-0" - RAMP "D-D" STA. 147+50.00 TO STA. 148+66.47 = 116.47 FT. SUPER @ .033 FT./FT. CURVE RT.

W = VARIES, SEE PLAN SHEET RAMP "B-B" STA. 143+19.61 TO STA. 143+67.55 = 47.94 FT.
W = 16'-0" - RAMP "B-B" STA. 145+75.00 TO STA. 147+35.56 = 160.56 FT. SUPER @ .064 FT./FT. CURVE LT.

W = 24'-0" - RAMP "A" @ MT. VERNON RD. STA. 167+53.00 TO STA. 172+46.59 = 493.59 FT. SUPER @ .018 FT./FT. CURVE LT.
W = VARIES, SEE PLAN SHEET RAMP "A" @ MT. VERNON RD. STA. 172+46.59 TO STA. 173+33.55 = 86.96 FT.

W = VARIES, SEE PLAN SHEET RAMP "B" @ HUDSON AVE. STA. 178+34.06 TO STA. 178+73.14 = 39.08 FT.
W = 24'-0" - RAMP "B" @ HUDSON AVE. STA. 178+73.14 TO STA. 181+95.83 = 322.69 FT. SUPER @ .033 FT./FT. CURVE RT.
W = 16'-0" - RAMP "B" @ HUDSON AVE. STA. 183+45.84 TO STA. 186+26.92 = 281.08 FT. SUPER @ .054 FT./FT. CURVE LT.

TOTAL 3,155.66 FT.

LEGEND

1	442	1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
2	442	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
3	407	TACK COAT FOR INTERMEDIATE COURSE
4	407	TACK COAT
5	254	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (3 1/4")
6	257	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT

CALCULATED J.C.
CHECKED R.G.

PROPOSED TYPICAL SECTION

LIC-16-19.72
LIC-79-12.30

10
190

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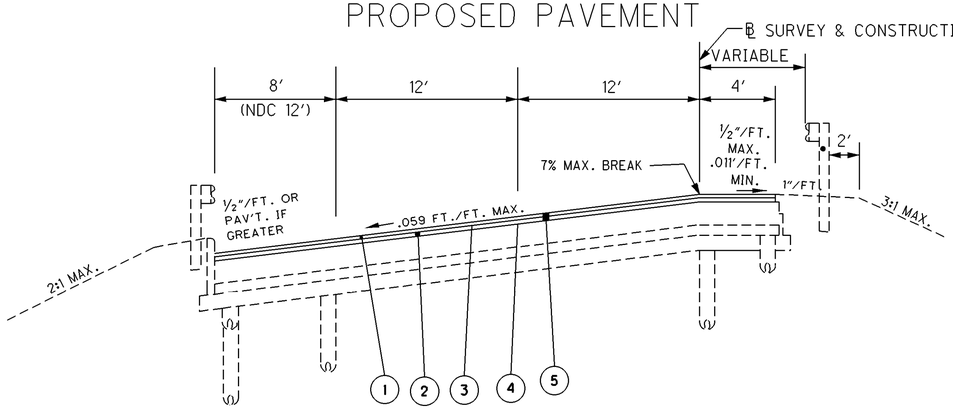
TYPICAL SECTIONS

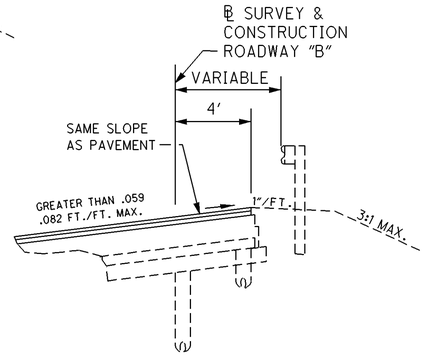
PROPOSED PAVEMENT

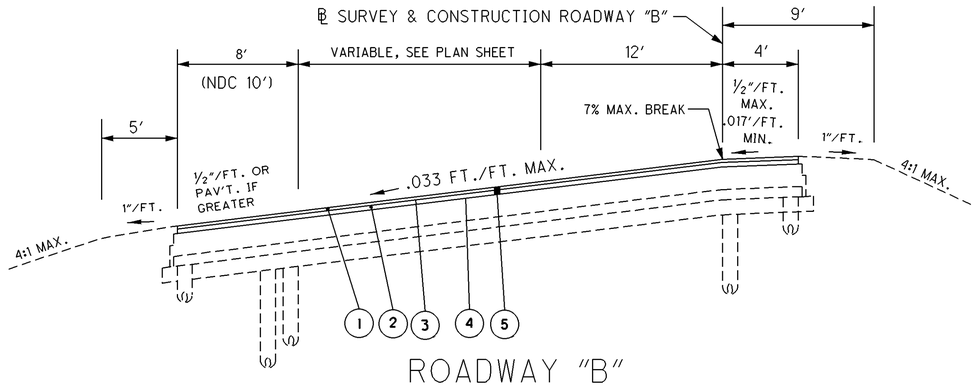


ROADWAY "B"

SECTION APPLIES:

STA. 143+58.29 TO STA. 147+33.75 = 375.46 FT.

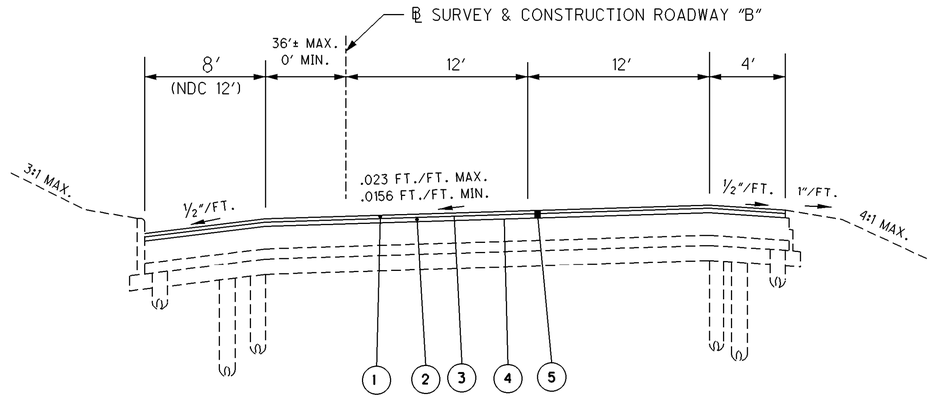




ROADWAY "B"

SECTION APPLIES:

STA. 147+33.75 TO STA. 147+47.82 = 14.07 FT.



ROADWAY "B"

SECTION APPLIES:

STA. 147+47.82 TO STA. 153+46.67 = 598.85 FT.

TOTAL ROADWAY "B" 988.38 FT.

LEGEND

1	442	1 ½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
2	442	1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
3	407	TACK COAT FOR INTERMEDIATE COURSE
4	407	TACK COAT
5	254	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (3 1/4")
6	257	DIAMOND GRINDING PORTLAND CEMENT CONCERTE PAVEMENT

NDC = NORMAL DESIGN CRITERIA

CALCULATED J.C. | CHECKED R.G.

PROPOSED TYPICAL SECTION

LIC-16-19.72
LIC-79-12.30

L01620Y3.DGN

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

NOTIFICATION OF ROAD CLOSURE OR RESTRICTION

IN ORDER FOR ODOT TO PROPERLY PERMIT OVERSIZE LOADS, PREPARE PROPER SIGNING WHEN REQUIRED AND FURTHER TO NOTIFY THE GENERAL MOTORING PUBLIC, THE CONTRACTOR SHALL NOTIFY (IN WRITING) THE DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR WITH COPIES FOR THE DISTRICT 5 ROADWAY SERVICES MANAGER AND PROJECT ENGINEER NOT LESS THAN 21 DAYS BEFORE SUCH CLOSURE OR LANE RESTRICTIONS.

SEND NOTIFICATION TO:

DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR
P.O. BOX 306
JACKSONSTOWN, OH 43030
PHONE: (740) 323-4400 EXT. 5241

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

FEATHERING

FEATHERING OF THE ASPHALT CONCRETE SHALL BE DONE IN ACCORDANCE WITH SCD DRAWING BP-3.1, 10-19-07.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

DEPTH OF PLANING SHALL BE 3.25" FULL WIDTH OF PAVEMENT AND PAVED SHOULDERS, UNLESS OTHERWISE SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. RAMPS SHALL BE PLANED 3.25" IN DEPTH. THE ROADWAY SHALL BE PLANED SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE LANE LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE PAVEMENT IS PLANED TO A DEPTH THAT DOES NOT LEAVE A "SLIVER" OF THIN ASPHALT (LESS THAN OR EQUAL TO ONE HALF INCH). IF SUCH "SLIVERS" ARE OBVIOUS AFTER THE PAVEMENT IS MILLED AND BROOMED, ADDITIONAL MILLING SHALL BE PERFORMED TO REMOVE SAID "SLIVERS" AT THE CONTRACTOR'S OWN EXPENSE. ALL REQUIREMENTS OF ITEM 254 SHALL APPLY.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT.

TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.05 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

PAVEMENT MARKING

STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC., SHOWN IN THE PLANS ARE TAKEN FROM EXISTING MARKINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DOCUMENT EXISTING MARKING LOCATIONS (i.e. BY USE OF VIDEO, PICTURES) AND PLACE NEW PAVEMENT MARKINGS AS NEAR AS POSSIBLE TO THE EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DOCUMENTATION OF PAVEMENT MARKING SHALL BE SUPPLIED TO THE ENGINEER BEFORE COMMENCEMENT OF ANY OPERATION WHICH WILL REMOVE/OBLITERATE MARKINGS. ALL NEW DIAGONAL/TRANSVERSE LINES SHALL FOLLOW THE CURRENT SPACING REQUIREMENTS AS DESCRIBED IN SECTION 301-14 OF ODOT'S TRAFFIC ENGINEERING MANUAL (INCLUDING THE MOST CURRENT REVISIONS).

COOPERATION BETWEEN CONTRACTORS

AT ANY TIME, THE DEPARTMENT MAY CONTRACT FOR OTHER WORK ON OR NEAR THIS PROJECT. SEPARATE CONTRACTORS WORKING WITHIN THE LIMITS OF THIS PROJECT SHALL CONDUCT THEIR WORK WITHOUT INTERFERING WITH OR HINDERING THE PROGRESS OR COMPLETION OF THE WORK BEING PERFORMED BY OTHER CONTRACTORS AND SHALL COOPERATE WITH EACH OTHER AS DIRECTED BY THE ENGINEER.

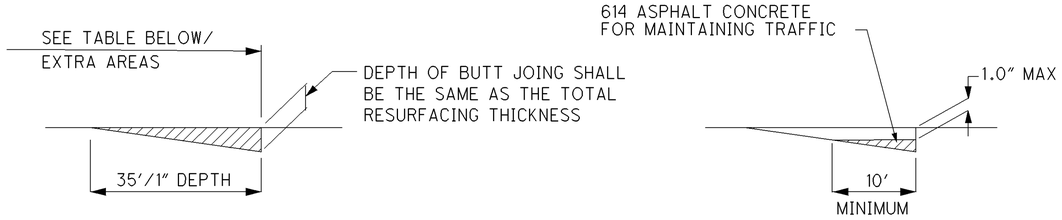
CALCULATED | CHECKED

GENERAL NOTES

LIC-16-19.72
LIC-79-12.30

BUTT JOINT

A BUTT JOINT WILL BE REQUIRED AT LOCATIONS SPECIFIED BELOW AND AT EXTRA AREAS WITH WEARING COURSE REMOVED. AFTER THE JOINT IS CONSTRUCTED, THE DROP OFF CREATED SHALL BE ELIMINATED BY IMMEDIATELY PLACING THE PROPOSED INTER-MEDIATE COURSE TO WITHIN 1.0" OF EXISTING PAVEMENT ELEVATION AFTER PLANING OPERATION OR BY PLACING AN ASPHALT CONCRETE WEDGE. BUTT JOINTS SHALL BE AS PER SCD BP-3.1, 10-19-07. GRINDING FOR BUTT JOINTS SHALL BE INCLUDED WITH PAVEMENT PLANING QUANTITIES.



COUNTY	ROUTE	DESCRIPTION		ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CU.YD.
LIC	S.R. 16	BEGIN WORK		3.0
		RAMPS @ 21st ST.		3.0
		RAMPS @ S.R. 79 & 11th ST.		8.0
		RAMPS @ MT. VERNON RD.		3.0
		RAMP @ HUDSON AVE.		1.5
		BRIDGE NO. LIC-16-2028		3.0
		BRIDGE NO. LIC-16-2038		3.0
		BRIDGE NO. LIC-79-1389		1.5
		BRIDGE NO. LIC-16-2009		3.0
		BRIDGE NO. LIC-16-2131		3.0
		BRIDGE NO. LIC-16-2141		3.0
		BRIDGE NO. LIC-16-2149		3.0
		RAMPS @ N. BUENA VISTA ST.		3.0
		BRIDGE NO. LIC-16-2166		3.0
		BRIDGE NO. LIC-16-2207		3.0
		RAMPS @ CEDAR ST.		6.0
		BRIDGE NO. LIC-16-2234		3.0
		BRIDGE NO. LIC-16-2296		3.0
		RAMPS @ O'BANNON AVE.		6.0
		END WORK		3.0
LIC	S.R. 79	BEGIN WORK		3.0
		RAMPS @ GRANT ST.		3.0
		RAMPS @ MAIN ST.		6.0
		BRIDGE NO. LIC-79-1346		3.0
		BRIDGE NO. LIC-79-1358		6.0
		END WORK		6.0
TOTAL				**95.0**

ITEM 621 RPM REMOVED

RPM REMOVAL SHALL NOT OCCUR SOONER THAN 10 DAYS PRIOR TO RESURFACING OF THE ROADWAY. ALL RPM'S REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CALCULATED | CHECKED

GENERAL NOTES

LIC-16-19.72
LIC-79-12.30

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ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CON- TRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ONBOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER- DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 90 SIGN-MONTH
(5 SIGNS x 18 MONTHS = 90 SIGN-MONTHS)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT GENERALLY BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED. IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

ROUTINE PATROLLING THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) AS SPECIFIED IN THE PLANS.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORISTS ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A LIST OF THE APPROPRIATE LAW ENFORCEMENT AGENCY(S), INCLUDING ADDRESS AND TELEPHONE NUMBER.

THE LEO SHOULD REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING THE SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF THE SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHOULD NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF THE SHIFT.

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 200 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR.

CALCULATED | CHECKED

GENERAL NOTES

LIC-16-19.72
LIC-79-12.30

ITEM 614, MAINTAINING TRAFFIC

ONE LANE OF TRAFFIC IN EACH DIRECTION WILL BE MAINTAINED ON S.R. 16 AT ALL TIMES DURING THE BRIDGE CONSTRUCTION, AFTER THE BRIDGE CONSTRUCTION IS COMPLETED THE RESURFACING WILL BE PERFORMED WITH TWO LANES OF TRAFFIC IN EACH DIRECTION MAINTAINED ON S.R. 16 AT ALL TIMES, EXCEPT AS NOTED BELOW:

LANE CLOSURES FOR THE PURPOSE OF PLACING DRUMS IN ORDER FOR THE CONTRACTOR TO COMPLETE THE WORK AS DESCRIBED IN THE PLANS WILL BE PERMIITED AS FOLLOWS:

LANE CLOSURES WILL ONLY BE IMPLEMENTED AT THE TIMES LISTED ON THE OHIO DEPARTMENT OF TRANSPORTATION'S WEB SITE, "PERMITTED LANE CLOSURE TIMES" SECTION, LOCATED AT THE ADDRESS SHOWN BELOW:

http://plcm.dot.state.oh.us//plcm/plcm_web.jsp

THE PERMITTED CLOSURE TIMES LISTED ON THE WEBSITE, 14 CALENDAR DAYS PRIOR TO THE BID LETTING DATE WILL BE IN EFFECT FOR THIS PROJECT.

NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES.

WHEN NECESSARY, LANE CLOSURES WILL BE ACCOMPLISHED IN ACCORDANCE WITH THE STANDARD DRAWINGS.

IT IS THE INTENT TO RESTRICT LANE CLOSURES TO THE MINIMUM AMOUNT OF TIME NECESSARY TO PERFORM THE WORK AS DESCRIBED IN THE PLANS. THE CONTRACTOR WILL NOT COMMENCE ANY LANE CLOSURE BEFORE THE HOURS AS SPECIFIED OR COMMENCE ANY CLOSURE AT A TIME WHICH WILL NOT ALLOW COMPLETION OF THE WORK PRIOR TO THE HOURS SPECIFIED.

SHOULD THE CONTRACTOR CLOSE THE LANES BEFORE THE ALLOWABLE TIME AND/OR FAIL TO RE-OPEN ALL LANES TO TRAFFIC, BY THE ALLOWABLE TIME A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE AND PROPOSAL NOTE 127 WILL BE ASSESSED.

LANE VALUE CONTRACT TABLE – S.R. 16/CEDAR STREET RAMP D

DESCRIPTION OF CRITICAL LANE TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE $ PER TIME UNIT
S.R. 16 / CEDAR STREET RAMP D	ODOT WEB SITE: PERMITTED LANE CLOSURE TIMES	HOUR	$ 5,000.00

THE CONTRACTOR WILL HAVE ON SITE AND IN WORKING AND OR SUITABLE CONDITION; ALL EQUIPMENT, TOOLS, LABORERS, LEO'S, TRAFFIC CONTROL DEVICES AND INCIDENTALS NECESSARY TO EFFICIENTLY PERFORM THE CLOSURE BEFORE INITIALIZING THE LANE CLOSURE.

THERE SHALL BE NO LANE CLOSURES ON HOLIDAYS OR HOLIDAY WEEKENDS. THE FOLLOWING ARE CONSIDERED HOLIDAYS. MEMORIAL DAY, FOURTH OF JULY, LABOR DAY, THANKSGIVING, CHRISTMAS , NEW YEARS, EASTER. NO LANE CLOSURES ARE ALLOWED AFTER 12 NOON ON THE DAY PRECEDING A HOLIDAY. FOR HOLIDAY WEEKENDS NO LANE CLOSURES ARE ALLOWED AFTER 12 NOON ON THE DAY PRECEDING THE HOLIDAY WEEKEND UNTIL 12 NOON THE DAY AFTER THE HOLIDAY WEEKEND. EX. HOLIDAY FALLS ON A MONDAY THEN NO LANE CLOSURES FROM 12 NOON ON FRIDAY UNTIL 12 NOON TUESDAY

AREAS THAT ARE PLANED SHALL NOT BE OPENED TO TRAFFIC. ALL PLANED AREAS MUST BE INLAID WITH PROPOSED COURSE OF ITEM 442 ASPHALT CONCRETE PRIOR TO BEING OPENED TO TRAFFIC. OVERNIGHT CLOSURES MUST MEET SPECIFICATIONS AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. ROADWAY SHALL NOT BE OPENED TO TRAFFIC WITHOUT EITHER THE PERMANENT OR WORK ZONE MARKINGS IN PLACE.

ITEM 614, MAINTAINING TRAFFIC (con't.)

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE. SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH CMS 108.07.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614, WORK ZONE MARKING SIGNS

A QUANTITY OF WORK ZONE MARKING SIGNS HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 614 WORK ZONE MARKING SIGNS

S.R. 16 – 24 EACH
S.R. 79 – 14 EACH

ITEM 614, WORK ZONE PAVEMENT MARKINGS

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED TO BE USED AS DIRECTED BY THE ENGINEER TO MAINTAIN TRAFFIC DURING CONSTRUCTION. (QUANTITIES ARE FOR TWO (2) APPLICATIONS).

ITEM 614 WORK ZONE STOP LINE, CLASS III, 642 PAINT

S.R. 16 - 578 FT.
S.R. 79 - 244 FT.

ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT

S.R. 16 – 13,616 FT.
S.R. 79 - 5,228 FT.

ITEM 614 WORK ZONE LANE LINE, CLASS III, 642 PAINT

S.R. 16 – 21.00 MILE
S.R. 79 - 7.24MILE

ITEM 614 WORK ZONE CENTER LINE, CLASS III, 642 PAINT

S.R. 79 - 0.62 MILE

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 20 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

DROPOFFS IN WORK ZONES

DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS ANDTHAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON STANDARD DRAWING MT-101.90. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SIGN, FREEWAY/EXPRESSWAY

THIS ITEM SHALL CONSIST OF THE FURNISHING, INSTALLING, MAINTAINING AND SUBSEQUENT REMOVAL, OF AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SIGNS ON YIELDING POST SUPPORTS.

ON THE FIRST DAY OF WORK, INSTALL ARRA SIGNS NEAR THE BEGINNING OF THE PROJECT IN EACH ROUTE DIRECTION IN A LOCATION AS APPROVED BY THE ENGINEER. THE ARRA SIGN CONSISTS OF ONE 120" X 84" WHITE ON GREEN EXTRUSHEET SIGN WITH PICTOGRAPHS, ONE 120" X 24" BLACK ON ORANGE EXTRUSHEET SIGN, AND ONE 24" X 24" DIAMOND FLAT SHEET SIGN. THE SIGN FABRICATION DETAILS ARE FOUND ON THE OFFICE OF TRAFFIC ENGINEERING WEB PAGE AT:
HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/HIGHWAYOPS/TRAFFIC/PAGES/OTEHOMEPAGE.ASPX
INSTALL THE SIGNS ON THREE NO. 3 YIELDING POSTS AS PER STANDARD DRAWING TC-41.20, WITH ONE POST ON SIGN CENTERLINE AND ONE POST 12" FROM EACH END. SIGNS IN PROTECTED LOCATIONS MAY BE INSTALLED ON OTHER SUPPORTS AS APPROVED BY THE ENGINEER. USED SIGNS ARE ALLOWED PROVIDED THEY ARE IN A CONDITION ACCEPTABLE TO THE ENGINEER. REMOVE THE ARRA SIGN AND SUPPORTS AT THE END OF THE PROJECT. REMOVED ARRA SIGN AND SUPPORTS ARE THE PROPERTY OF THE CONTRACTOR.

THE BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT BID PRICE PER EACH SIGN INSTALLED AND SUBSEQUENTLY REMOVED ARRA SIGN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND OTHER INCIDENTALS TO PROVIDE FOR A COMPLETE AND ACCEPTED ITEM OF WORK.

THE FOLLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY

ITEM 614 AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SIGN, FREEWAY/EXPRESSWAY 4 EACH

CALCULATED | CHECKED

GENERAL NOTES

LIC-16-19.72
LIC-79-12.30

SEQUENCE OF OPERATIONS:
(S.R. 16 & S.R. 79)

S.R. 16

PHASE 1: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE INSIDE LANE AND MAINTAIN TRAFFIC BY USE OF THE OUTSIDE LANE AND PAVED SHOULDER.
(2) CONSTRUCT BRIDGES AS DETAILED ON S.R. 16, SEE BRIDGE DETAIL SHEETS. DURING THE CONSTRUCTION OF THE BRIDGES LIC-16-2166 (OVER BUENA VISTA STREET), LIC-16-2234 (OVER OAKWOOD AVENUE) AND LIC-16-2296 (OVER O'BANNON AVENUE) A MINIMUM OF 13' VERTICAL CLEARANCE WILL BE MAINTAINED, DURING FALSE WORK CONSTRUCTION AND DECK EDGE REPAIR. ALL TRUCK TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 16A. DURING THIS CONSTRUCTION PHASE. CLOSURES WILL BE ON BUENA VISTA STREET, OAKWOOD AVENUE AND O'BANNON AVENUE UNDER THE BRIDGES BETWEEN THE HOURS OF 9 P.M. TO 6 A.M., AS DIRECTED BY THE PROJECT ENGINEER. TRAFFIC WILL BE DETOURED AS SHOWN ON 16A.
(3) PLANE INSIDE LANE AND SHOULDER, 3.25" DEEP AS DETAILED.
(4) IMMEDIATELY PLACE 1.75" OF ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE FOR INSIDE LANE AND SHOULDER. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
(5) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING INSIDE LANE.

PHASE 2: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE INSIDE LANE AND PAVED SHOULDER.
(2) CONSTRUCT BRIDGES AS DETAILED ON S.R. 16, SEE BRIDGE DETAIL SHEETS. DURING THE CONSTRUCTION OF THE BRIDGES LIC-16-2166 (OVER BUENA VISTA STREET), LIC-16-2234 (OVER OAKWOOD AVENUE) AND LIC-16-2296 (OVER O'BANNON AVENUE) A MINIMUM OF 13' VERTICAL CLEARANCE WILL BE MAINTAINED, DURING FALSE WORK CONSTRUCTION AND DECK EDGE REPAIR. ALL TRUCK TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 16A. DURING THIS CONSTRUCTION PHASE. CLOSURES WILL BE ON BUENA VISTA STREET, OAKWOOD AVENUE AND O'BANNON AVENUE UNDER THE BRIDGES BETWEEN THE HOURS OF 9 P.M. TO 6 A.M., AS DIRECTED BY THE PROJECT ENGINEER. TRAFFIC WILL BE DETOURED AS SHOWN ON 16A. THE CLOSURE OF THE ENTRANCE RAMP D TO S.R. 16 FROM CEDAR STREET WILL BE CLOSED TO TRAFFIC FOR A DURATION NOT TO EXCEED 30 CALENDAR DAYS SO THAT THE PHASE 2 REPAIRS OF THE OAKWOOD AVENUE CAN BE COMPLETED. AFTER THE REPAIR OF OAKWOOD AVENUE IS COMPLETE RAMP D CAN BE REOPENED TO TRAFFIC AS PER STD. DWG. MT-98.11. RAMP D TRAFFIC WILL BE DETOURED AS SHOWN ON 16B. SHOULD THE CONTRACTOR FAIL TO REOPEN RAMP D WITHIN THE ALLOWABLE TIME A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE ON SHEET 15 AND PROPOSAL NOTE 127 WILL BE ASSESSED.
(3) PLANE OUTSIDE LANES AND SHOULDER, RAMP AREAS WHERE APPLICABLE, 3.25" DEEP OR AS DETAILED.
(4) IMMEDIATELY PLACE 1.75" OF ITEM 442 INTERMEDIATE COURSE FOR OUTSIDE LANE AND SHOULDER, PLACE 1.5" OF ITEM 442 SURFACE COURSE FOR RAMP AREAS WHERE APPLICABLE, COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
(5) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING OUTSIDE LANE.

PHASE 3: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE INSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE OUTSIDE LANE AND PAVED SHOULDER.
(2) PLACE 1.5" OF ITEM 442 ASPHALT CONCRETE SURFACE COURSE ON INSIDE LANE AND SHOULDER AS PER TYPICAL SECTION.
(3) INSTALL TEMPORARY PAVEMENT MARKINGS
(4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING INSIDE LANE.

PHASE 4: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE INSIDE LANE AND PAVED SHOULDER.
(2) PLACE 1.5" OF ITEM 442 ASPHALT CONCRETE SURFACE COURSE ON OUTSIDE LANES AND PAVED SHOULDER, AS PER TYPICAL SECTION.
(3) INSTALL TEMPORARY PAVEMENT MARKINGS
(4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING OUTSIDE LANE.

PHASE 4: BEGIN PROJECT TO END PROJECT

(1) PLACE ALL PERMANENT PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS. OPEN ROADWAY TO UNRESTRICTED TRAFFIC.

GENERAL:

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC (SEE WORK RESTRICTIONS AND LANE CLOSURES SHEET 15).

IF THE CONTRACTOR SO ELECTS, HE/SHE MAY SUBMIT ALTERNATE METHOD FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE ENGINEER.

ALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC.

S.R. 79

PHASE 1: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE INSIDE LANE AND MAINTAIN TRAFFIC BY USE OF THE OUTSIDE LANE AND PAVED SHOULDER.
(2) PLANE INSIDE LANE AND SHOULDER, 3.25" DEEP AS DETAILED.
(3) IMMEDIATELY PLACE 1.75" OF ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE FOR INSIDE LANE AND SHOULDER. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
(4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING INSIDE LANE.

PHASE 2: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE INSIDE LANE AND PAVED SHOULDER.
(2) PLANE OUTSIDE LANES AND SHOULDER, RAMP AREAS WHERE APPLICABLE, 3.25" DEEP OR AS DETAILED.
(3) IMMEDIATELY PLACE 1.75" OF ITEM 442 INTERMEDIATE COURSE FOR OUTSIDE LANE AND SHOULDER, PLACE 1.5" OF ITEM 442 SURFACE COURSE FOR RAMP AREAS WHERE APPLICABLE, COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION.
(4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING OUTSIDE LANE.

PHASE 3: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE INSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE OUTSIDE LANE AND PAVED SHOULDER.
(2) PLACE 1.5" OF ITEM 442 ASPHALT CONCRETE SURFACE COURSE ON INSIDE LANE AND SHOULDER AS PER TYPICAL SECTION.
(3) INSTALL TEMPORARY PAVEMENT MARKINGS
(4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING INSIDE LANE.

PHASE 4: BEGIN PROJECT TO END PROJECT

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE OUTSIDE LANE, AND MAINTAIN TRAFFIC BY USE OF THE INSIDE LANE AND PAVED SHOULDER.
(2) PLACE 1.5" OF ITEM 442 ASPHALT CONCRETE SURFACE COURSE ON OUTSIDE LANES AND PAVED SHOULDER, AS PER TYPICAL SECTION.
(3) INSTALL TEMPORARY PAVEMENT MARKINGS
(4) REMOVE TRAFFIC CONTROL DEVICES FOR CLOSING OUTSIDE LANE.

PHASE 4: BEGIN PROJECT TO END PROJECT

(1) PLACE ALL PERMANENT PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS. OPEN ROADWAY TO UNRESTRICTED TRAFFIC.

GENERAL:

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC (SEE WORK RESTRICTIONS AND LANE CLOSURES SHEET 15).

IF THE CONTRACTOR SO ELECTS, HE/SHE MAY SUBMIT ALTERNATE METHOD FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE ENGINEER.

ALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC.

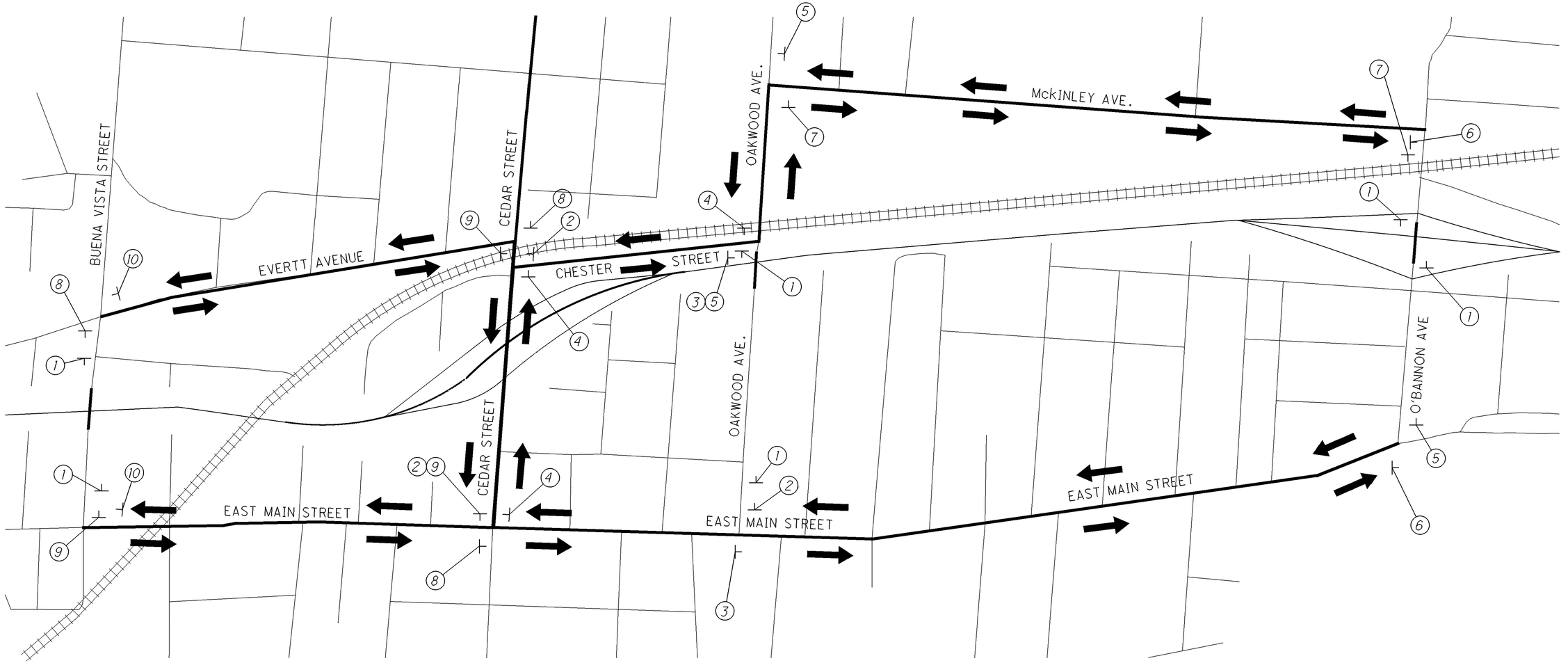
INTERMIN COMPLETION REQUIREMENTS

NOVEMBER 15, 2009 WILL CONSTITUTE INTERIM COMPLETION DATE. THE CONTRACTOR WILL HAVE TO COMPLETE ALL ITEMS OF WORK TO REOPEN TO TRAFFIC BOTH DIRECTIONS OF S.R. 16 RETURNED TO THE ORIGINAL TWO LANES SAME DIRECTION EACH SIDE DURING THE WINTER MONTHS.

CALCULATED | CHECKED

SEQUENCE OF OPERATIONS

LIC-16-19.72
LIC-79-12.30



① NO TRUCKS R5-2A-36
13'-0" W12-2-36

② O'BANNON AVE D3-H3-90
OAKWOOD AVENUE D3-H3-90
TRUCK M4-4-30
DETOUR M4-9L-30

③ OAKWOOD AVENUE D3-H3-90
TRUCK M4-4-30
END DETOUR M4-8A-24

④ O'BANNON AVE D3-H3-90
OAKWOOD AVENUE D3-H3-90
TRUCK M4-4-30
DETOUR M4-9R-30

⑤ O'BANNON AVE D3-H3-90
TRUCK M4-4-30
DETOUR M4-9L-30

⑥ O'BANNON AVE D3-H3-90
TRUCK M4-4-30
END DETOUR M4-8A-24

⑦ O'BANNON AVE D3-H3-90
TRUCK M4-4-30
DETOUR M4-9R-30

⑧ BUENA VISTA STREET D3-H3-90
TRUCK M4-4-30
DETOUR M4-9L-30

⑨ BUENA VISTA STREET D3-H3-90
TRUCK M4-4-30
DETOUR M4-9R-30

⑩ BUENA VISTA STREET D3-H3-90
TRUCK M4-4-30
END DETOUR M4-8A-24

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DRAWN TAG | REVISED
DESIGNED TAG | CHECKED JDR

BRIDGE TRUCK DETOUR

LIC-16-19.72/LIC-79-12.30
PID No. 76384

16A
190

L76384 BDR 001.DGN (1/2) 7-23-2009

BUENA VISTA STREET
EVERTT AVENUE
CEDAR STREET
OAKWOOD AVE.
McKINLEY AVE.
CHESTER STREET
OAKWOOD AVE.
O'BANNON AVE
CEDAR STREET
EAST MAIN STREET
EAST MAIN STREET
EAST MAIN STREET

(15) (11) (16) (12) (14) (14) (12) (14)

R11-2 ROAD CLOSED R11-2 ROAD CLOSED

SOLID ACROSS ROADWAY
10' TYPE III BARRICADE
AS PER STANDARD CONSTRUCTION
DRAWING MY-101.60
(11)

(12) 16 M1-5-24-2 / EAST D3-H3-36 / RAMP D3-H3-36 / DETOUR M4-9L-30

(13) 16 M1-5-24-2 / EAST D3-H3-36 / RAMP D3-H3-36 / DETOUR M4-9R-30

(14) 16 M1-5-24-2 / EAST D3-H3-36 / RAMP D3-H3-36 / DETOUR M4-8-30

(15) BEGIN M4-11-24 / 16 M1-5-24-2 / EAST D3-H3-36 / RAMP D3-H3-36 / DETOUR M4-8-30

(16) END M4-12-12 / 16 M1-5-24-2 / EAST D3-H3-36 / RAMP D3-H3-36 / DETOUR M4-9R-30

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DRAWN TAG | REVISED
DESIGNED TAG | CHECKED JDR

CEDAR STREET RAMP D DETOUR

LIC-16-18.72/LIC-79-12.30
PID No. 76384

16B
190

L76384 BDR 001.DGN (2/2) 7-23-2009

PAVEMENT CALCULATIONS

(1) AREA TAKEN FROM COMPUTER

STATION TO STATION	PAV'T. WIDTH (FEET)	FEET	PAVEMENT AREA SQ. YD.					257 DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.		442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTEREMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.	
EASTBOUND LANES																
105+65.83 - 107+99.33	BRIDGE	LIMITS														
107+99.33 - 114+52.97	24	653.64	1743.0						1743.0		84.7	72.6		87.2	130.7	
114+52.97 - 116+20.91	56 AVG.	167.94	(1) 1008.2						(1) 1008.2		49.0	42.0		50.4	75.6	
116+20.91 - 118+69.02 (BACK)	45.9 AVG.	248.11	1265.4						1265.4		61.5	52.7		63.3	94.9	
117+46.58 (AHEAD) - 120+18.82	39.4 AVG.	272.24	1191.8						1191.8		57.9	49.7		59.6	89.4	
120+18.82 - 126+63.60	36	644.78	2579.1						2579.1		125.4	107.5		129.0	193.4	
126+63.60 - 129+41.95	49.5 AVG.	278.35	(1) 1397.2						(1) 1397.2		67.9	57.5		69.9	104.8	
129+41.95 - 135+98.28	24	656.33	1750.2						1750.2		85.1	72.9		87.5	131.3	
135+98.28 - 137+68.75	BRIDGE	LIMITS														
137+68.75 - 141+27.20	24	358.45	955.9						955.9		46.5	39.8		47.8	71.7	
141+27.20 - 143+08.75	BRIDGE	LIMITS														
143+08.75 - 144+11.23	24	102.48	273.3						273.3		13.3	11.4		13.7	20.5	
144+11.23 - 148+65.44	58.25 AVG.	454.21	2939.7						2939.7		142.9	122.5		147.0	220.5	
148+65.44 - 150+50.47	82.25 AVG.	185.03	(1) 1657.5						(1) 1657.5		80.6	69.1		82.9	124.3	
150+50.47 - 158+00.47	60.5 AVG.	750.0	5041.7						5041.7		245.1	210.1		252.1	378.1	
158+00.47 - 163+23.97	48	523.5	2792.0						2792.0		135.7	116.3		139.6	209.4	
163+23.97 - 167+72.61	59.5 AVG.	448.64	(1) 2752.9						(1) 2752.9		133.8	114.7		137.6	206.5	
167+72.61 - 169+00.00	24	127.39	339.7						339.7		16.5	14.2		17.0	25.5	
116+62.31 - 119+55.84	BRIDGE	LIMITS														
119+55.84 - 121+87.02	27.0 AVG.	231.18	693.5					693.5								
TOTALS								693.5	27,687.6		1,345.9	1,153.0		1,384.6	2,076.6	

CALCULATED J.C.
CHECKED R.G.

PAVEMENT CALCULATIONS
S.R. 16 EASTBOUND LANES

LIC-16-19.72
LIC-79-12.30

PCALC406.DGN

PAVEMENT CALCULATIONS

(1) AREA TAKEN FROM COMPUTER

STATION TO STATION	WIDTH PAV'T. (FEET)	FEET	PAVEMENT AREA SQ. YD.						257 DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.		442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.		
WESTBOUND LANES																		
105+53.25 - 107+86.75	BRIDGE LIMITS																	
107+86.75 - 114+38.08	24	651.33	1736.9							1736.9		84.4	72.4		86.8	130.3		
114+38.08 - 117+16.47	49.5 AVG	278.39	(1) 1397.0							(1) 1397.0		67.9	58.2		69.9	104.8		
117+16.47 - 118+69.02 (BACK)	36	152.55	610.2							610.2		29.7	25.4		30.5	45.8		
117+46.58 (AHEAD) - 119+42.70	36	196.12	784.5							784.5		38.1	32.7		39.2	58.8		
119+42.70 - 124+62.70	42.5 AVG	520.0	2455.6							2455.6		119.4	102.3		122.8	184.2		
124+62.70 - 126+26.93	56 AVG	164.23	(1) 989.9							(1) 989.9		48.1	41.2		49.5	74.2		
126+26.93 - 135+81.22	24	954.29	2544.8							2544.8		123.7	106.0		127.2	190.9		
135+81.22 - 137+51.69	BRIDGE LIMITS																	
137+51.69 - 141+32.98	24	381.29	1016.8							1016.8		49.4	42.4		50.8	76.3		
141+32.98 - 143+14.53	BRIDGE LIMITS																	
143+14.53 - 153+44.64	24	1030.11	2747.0							2747.0		133.5	114.5		137.4	206.0		
153+44.64 - 158+58.59	59.5 AVG	513.95	(1) 3198.1							(1) 3198.1		155.5	133.3		160.0	239.9		
158+58.59 - 160+79.67	48	221.08	1179.1							1179.1		57.3	49.1		59.0	88.4		
160+79.67 - 165+99.67	55 AVG	520.0	3177.8							3177.8		154.5	132.4		158.9	238.3		
165+99.67 - 167+48.81	66.5 AVG	149.14	(1) 1107.9							(1) 1107.9		53.9	46.2		55.4	83.1		
167+48.81 - 178+42.37	24	1093.56	2916.2							2916.2		141.8	121.5		145.8	218.7		
178+42.37 - 180+34.47	BRIDGE LIMITS																	
180+34.47 - 186+26.14	24	591.67	1577.8							1577.8		76.7	65.7		78.9	118.3		
186+26.14 - 190+15.30	47.71 AVG	389.16	(1) 1784.1							(1) 1784.1		86.7	74.3		89.2	133.8		
116+62.31 - 119+55.84	BRIDGE LIMITS																	
119+55.84 - 121+87.02	24	231.18	616.5						616.5									
TOTALS									616.5	29,223.7		1420.6	1217.6		1461.3	2191.8		

CALCULATED J.C.
CHECKED R.G.

PAVEMENT CALCULATIONS
S.R. 16 WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

PCALCA07.DGN

PAVEMENT CALCULATIONS

① AREA TAKEN FROM COMPUTER

STATION TO STATION	WIDTH PAV'T. (FEET)	FEET	PAVEMENT AREA SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.	442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.
RAMP "F"								
106+32.37-106+81.21	VAR.	48.84	① 231.5	① 231.5	11.3	9.6	11.6	17.4
106+81.21-107+49.4	20	68.19.	151.5	151.5	7.4	6.3	7.6	11.4
107+49.4-108+34.4	18 AVG.	85.0	170.0	170.0	8.3	7.1	8.5	12.8
108+34.4-114+39.45	16	605.05	1075.6	1075.6	52.3	44.8	53.8	80.7
RAMP "BB"								
143+19.61-143+67.55	VAR.	47.94	① 225.4	① 225.4	11.0	9.4	11.3	16.9
143+67.55-147+35.56	16	368.01	654.2	654.2	31.8	27.3	32.7	49.1
ROADWAY "B"								
143+59.78-147+33.75	24	373.97	997.3	997.3	48.5	41.6	49.9	74.8
147+33.75-148+99.63	VAR.	165.88	① 853.2	① 853.2	41.5	35.5	42.7	64.0
148+99.63-151+50	30 AVG.	250.37	834.6	834.6	40.6	34.8	41.7	62.6
151+50-153+46.67	24	196.67	524.5	524.5	25.5	21.9	26.2	39.3
RAMP "A" @ MOUNT VERNON RD.								
167+53.0-172+46.59	24	493.59	1316.2	1316.2	64.0	54.8	65.8	98.7
172+46.59-173+33.55	VAR.	86.96	① 528.3	① 528.3	25.7	22.0	26.4	39.6
RAMP "B" @ HUDSON AVE.								
178+34.06-178+73.14	VAR.	39.08	① 160.2	① 160.2	7.8	6.7	8.0	12.0
178+73.14-181+95.83	24	322.69	860.5	860.5	41.8	35.9	43.0	64.5
181+95.83-183+45.84	20 AVG.	150.01	333.4	333.4	16.2	13.9	16.7	25.0
183+45.84-186+26.92	16	281.08	499.7	499.7	24.3	20.8	25.0	37.5
TOTALS				9,416.1	458.0	392.4	470.9	706.3

CALCULATED J.C.
CHECKED R.G.

PAVEMENT CALCULATIONS
RAMP F, RAMP BB, RAMP A & RAMP B

LIC-16-19.72
LIC-79-12.30

PCALC409.DGN

PAVEMENT CALCULATIONS

① AREA TAKEN FROM COMPUTER

STATION TO STATION	WIDTH PAV'T. (FEET)	LIN. FEET	PAVEMENT AREA SQ. YD.							254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.		442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.		407 TACK COAT @ 0.075 GAL./S.Y. GAL.					
RAMP "H"																				
20+89.43(21st. ST.)-21+05.60±		16.17																		
107+59.60-108+19.43	VAR.		① 246.4							①246.4		12.0	10.3	12.3		18.5				
108+19.43-114+54.22	16	634.79	1128.5							1128.5		54.9	47.0	56.4		84.6				
RAMP "DD"																				
141+38.84-141+95.98	VAR.		① 266.8							①266.8		13.0	11.1	13.3		20.0				
141+95.98-148+66.47	16	670.49	1192.0							1192.0		57.9	49.7	59.6		89.4				
ROADWAY "D" FROM S.R. 79																				
172+15.04-173+30.05	115.01	24	306.7							306.7		14.9	12.8	15.3		23.0				
TOTALS										3,140.4		152.7	130.9	156.9		235.5				

PCALCA08.DGN

CALCULATED J.C. CHECKED R.G.

PAVEMENT CALCULATIONS
RAMP DD & ROADWAY D FROM S.R. 79

RAMP H, RAMP DD & ROADWAY D FROM S.R. 79

LIC-16-19.72
LIC-79-12.30

20
190

SHOULDER CALCULATIONS

STATION TO STATION	LT. SIDE WIDTH BERM (FEET)	LT. SIDE FEET	RT. SIDE WIDTH BERM (FEET)	RT. SIDE FEET	SHOULDER AREA SQ. YD.			254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.		442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.							
EASTBOUND LANES																					
107+94.57 - 115+55.00	6.25	760.43			528.1			528.1		25.7	22.0		26.4	39.6							
115+55.00 - 115+95.00	5.75 AVG	40.0			25.6			25.6		1.2	1.1		1.3	1.9							
115+95.00 - 116+05.00	5.25	10.0			5.8			5.8		0.3	0.2		0.3	0.4							
116+05.00 - 116+45.00	5.75 AVG	40.0			25.6			25.6		1.2	1.1		1.3	1.9							
116+45.00 - 118+69.02 (BACK)	6.25	224.02			155.6			155.6		7.6	6.5		7.8	11.7							
117+46.58 (AHEAD) - 124+31.35	6.25	684.77			475.5			475.5		23.1	19.8		23.8	35.7							
124+31.35 - 124+71.35	5.5	40.0			24.4			24.4		1.2	1.0		1.2	1.8							
124+71.35 - 124+84.35	4.75	13.0			6.9			6.9		0.3	0.3		0.3	0.5							
124+84.35 - 125+24.35	5.5	40.0			24.4			24.4		1.2	1.0		1.2	1.8							
125+24.35 - 127+45.00	6.25	220.65			153.2			153.2		7.4	6.4		7.7	11.5							
127+45.00 - 127+85.00	5.75 AVG	40.0			25.6			25.6		1.2	1.1		1.3	1.9							
127+85.00 - 127+95.00	5.25	10.0			5.8			5.8		0.3	0.2		0.3	0.4							
127+95.00 - 128+35.00	5.75 AVG	40.0			25.6			25.6		1.2	1.1		1.3	1.9							
128+35.00 - 135+48.33	6.25	713.33			495.4			495.4		24.1	20.6		24.8	37.2							
135+48.33 - 135+88.33	5.25 AVG	40.0			23.3			23.3		1.1	1.0		1.2	1.7							
135+88.33 - 137+61.64	BRIDGE LIMITS																				
137+61.64 - 138+01.64	5.25 AVG	40.0			23.3			23.3		1.1	1.0		1.2	1.7							
138+01.64 - 141+30.09	6.25	328.45			228.1			228.1		11.1	9.5		11.4	17.1							
141+30.09 - 143+11.64	BRIDGE LIMITS																				
143+11.64 - 157+30.70	6.25	1419.06			985.5			985.5		47.9	41.1		49.3	73.9							
157+30.70 - 157+70.70	5.25 AVG	40.0			23.3			23.3		1.1	1.0		1.2	1.7							
157+70.70 - 158+47.20	4.25	76.5			36.1			36.1		1.8	1.5		1.8	2.7							
158+47.20 - 158+87.20	5.25 AVG	40.0			23.3			23.3		1.1	1.0		1.2	1.7							
158+87.20 - 164+55.00	6.25	567.8			394.3			394.3		19.2	16.4		19.7	29.6							
164+55.00 - 164+95.00	5.75 AVG	40.0			25.6			25.6		1.2	1.1		1.3	1.9							
TOTALS								3740.3		181.6	156.0		187.3	280.2							

CALCULATED J.C.
CHECKED R.G.

SHOULDER CALCULATIONS
S.R. 16 EASTBOUND LANES

LIC-16-19.72
LIC-79-12.30

BCALC106.DGN

SHOULDER CALCULATIONS

STATION TO STATION	LT. SIDE WIDTH BERM (FEET)	LT. SIDE FEET	RT. SIDE WIDTH BERM (FEET)	RT. SIDE FEET	SHOULDER AREA SQ. YD.		257 DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.		442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.								
EASTBOUND LANES																						
164+95.00 - 165+05.00	5.25	10.0			5.8			5.8		0.3	0.2		0.3	0.4								
165+05.00 - 165+77.14	5.0 AVG	72.14			40.1			40.1		1.9	1.7		2.0	3.0								
165+77.14 - 165+90.14	4.75	13.0			6.9			6.9		0.3	0.3		0.3	0.5								
165+90.14 - 166+30.14	5.5 AVG	40.0			24.4			24.4		1.2	1.0		1.2	1.8								
166+30.14 - 169+00.00	6.25	269.86			187.4			187.4		9.1	7.8		9.4	14.1								
116+62.31 - 119+55.84	BRIDGE	LIMITS																				
119+55.84 - 121+87.02	3.25	231.18			83.5		83.5															
TOTALS							83.5	264.6		12.8	11.0		13.2	19.8								

BCALC107.DGN

CALCULATED J.C.
CHECKED R.G.

SHOULDER CALCULATIONS
S.R. 16 EASTBOUND LANES

LIC-16-19.72
LIC-79-12.30

SHOULDER CALCULATIONS

(1) AREA TAKEN FROM COMPUTER.

STATION TO STATION	LT. SIDE WIDTH BERM (FEET)	LT. SIDE FEET	RT. SIDE WIDTH BERM (FEET)	RT. SIDE FEET	SHOULDER AREA SQ. YD.			257 DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.			442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.					
EASTBOUND LANES																				
108+04.36 - 114+52.97			8	648.61	576.5				576.5			28.0	24.0		28.8	43.2				
RAMP "H" 114+54.22-115+04.22			7 AVG	50.0	38.9				38.9			1.9	1.6		1.9	2.9				
RAMP "H" 115+04.22-116+20.91			8	116.69	103.7				103.7			5.0	4.3		5.2	7.8				
116+21.26 - 118+69.02 (BACK)			8	247.76	220.2				220.2			10.7	9.2		11.0	16.5				
17+46.58 (AHEAD) - 126+63.60			8	917.02	815.1				815.1			39.6	34.0		40.8	61.1				
RAMP "C" 126+63.60-129+40.61			8	277.01	246.2				246.2			12.0	10.3		12.3	18.5				
129+41.95 - 134+76.00			8	534.05	474.7				474.7			23.1	19.8		23.7	35.6				
134+76.00 - 136+05.10			8	129.10	114.8				114.8			5.6	4.8		5.7	8.6				
136+05.10 - 137+75.57			BRIDGE LIMITS																	
137+75.57 - 141+24.89			8	349.32	310.5				310.5			15.1	12.9		15.5	23.3				
141+24.89 - 143+06.44			BRIDGE LIMITS																	
143+06.44 - 144+11.23			8	104.79	93.1				93.1			4.5	3.9		4.7	7.0				
144+11.23 - 147+08.25			8	297.02	264.0				264.0			12.8	11.0		13.2	19.8				
147+08.25 - 148+65.44			8	157.19	139.7				139.7			6.8	5.8		7.0	10.5				
RAMP "DD" 148+66.47-149+16.47			7 AVG	50.0	38.9				38.9			1.9	1.6		1.9	2.9				
RAMP "DD" 149+16.47-150+49.99			8	133.52	118.7				118.7			5.8	4.9		5.9	8.9				
150+50.47 - 163+23.97			8	1273.50	1132.0				1132.0			55.0	47.2		56.6	84.9				
RAMP "C" 163+23.97-167+55.95			8	431.98	384.0				384.0			18.7	16.0		19.2	28.8				
167+72.61 - 169+00.00			8	127.39	113.2				113.2			5.5	4.7		5.7	8.5				
116+62.31 - 119+55.84			BRIDGE LIMITS																	
119+55.84 - 121+87.02			9.33'	231.18	239.7			239.7												
TOTALS								239.7	5184.2			252.0	216.0		259.1	388.8				

CALCULATED J.C. CHECKED R.G.

SHOULDER CALCULATIONS
S.R. 16 EASTBOUND LANES

LIC-16-19.72
LIC-79-12.30

BCALC105.DGN

SHOULDER CALCULATIONS

STATION TO STATION	LT. SIDE WIDTH BERM (FEET)	LT. SIDE FEET	RT. SIDE WIDTH BERM (FEET)	RT. SIDE FEET	SHOULDER AREA SQ. YD.					254 DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.		442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.				
WESTBOUND LANES																					
107+81.72 - 114+38.08	8	656.36			583.4						583.4		28.4	24.3		29.2	43.8				
RAMP "F" 114+39.45-117+16.47	8	277.02			246.2						246.2		12.0	10.3		12.3	18.5				
117+16.47 - 118+69.02 (BACK)	8	152.55			135.6						135.6		6.6	5.6		6.8	10.2				
117+46.58 (AHEAD) - 118+25.00	8	78.42			69.7						69.7		3.4	2.9		3.5	5.2				
118+25.00 - 124+62.70	8	637.7			566.8						566.8		27.6	23.6		28.3	42.5				
ROADWAY"A"124+63.05 126+26.31	8	163.26			145.1						145.1		7.1	6.0		7.3	10.9				
126+26.93 - 134+50.00	8	823.07			731.6						731.6		35.6	30.5		36.6	54.9				
134+50.00 135+74.40	8	124.4			110.6						110.6		5.4	4.6		5.5	8.3				
135+74.40 - 137+44.87	BRIDGE	LIMITS																			
137+44.87 - 141+35.29	8	390.42			347.0						347.0		16.9	14.5		17.4	26.0				
141+35.29 - 143+16.84	BRIDGE	LIMITS																			
143+16.84 - 144+75.00	8	158.16			140.6						140.6		6.8	5.9		7.0	10.5				
144+75.00 - 150+00.00	8	525.0			466.7						466.7		22.7	19.4		23.3	35.0				
150+00.00 - 151+00.00	10AVG	100.0			111.1						111.1		5.4	4.6		5.6	8.3				
151+00.00 - 153+44.64	12	244.64			326.2						326.2		15.9	13.6		16.3	24.5				
ROADWAY "B" 153+46.67 158+59.16	8	512.49			455.5						455.5		22.1	19.0		22.8	34.2				
158+58.59 - 165+99.67	8	741.08			658.7						658.7		32.0	27.4		32.9	49.4				
RAMP "A" 166+00.17 - 167+03.00	8	102.83			91.4						91.4		4.4	3.8		4.6	6.9				
RAMP "A" 167+03.00 - 167+53.00	7 AVG	50.0			38.9						38.9		1.9	1.6		1.9	2.9				
167+48.81 - 170+75.00	8	326.19			289.9						289.9		14.1	12.1		14.5	21.7				
170+75.00 - 178+38.10	8	763.1			678.3						678.3		33.0	28.3		33.9	50.9				
178+38.10 - 180+30.20	BRIDGE	LIMITS																			
180+30.20 - 185+00.00	8	469.8			417.6						417.6		20.3	17.4		20.9	31.3				
185+00.00 - 186+26.14	8	126.14			112.1						112.1		5.4	4.7		5.6	8.4				
RAMP "B" 186+26.92 - 189+00.00	8	273.08			242.7						242.7		11.8	10.1		12.1	18.2				
RAMP "B" 189+00.00 - 190+15.22	5.5 AVG	115.22			70.4						70.4		3.4	2.9		3.5	5.3				
190+15.11 - 190+33.14	3	18.03			6.0						6.0		0.3	0.2		0.3	0.5				
116+62.31 - 119+55.84	BRIDGE	LIMITS																			
119+55.84 - 121+87.02	9.33	231.18			239.7					239.7											
TOTALS										239.7	7042.1		342.5	293.3		352.1	528.3				

CALCULATED J.C.
CHECKED R.G.

SHOULDER CALCULATIONS
S.R. 16 WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

BCALC108.DGN

SHOULDER CALCULATIONS

STATION TO STATION	LT. SIDE WIDTH BERM (FEET)	LT. SIDE FEET	RT. SIDE WIDTH BERM (FEET)	RT. SIDE FEET	SHOULDER AREA SQ. YD.		257 DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.			442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.						
WESTBOUND LANES																				
164+95.00 - 165+05.00			5.25	10.0	5.8			5.8			0.3	0.2		0.3	0.4					
165+05.00 - 165+77.14			5.0 AVG	72.14	40.1			40.1			1.9	1.7		2.0	3.0					
165+77.14 - 165+90.14			4.75	13.0	6.9			6.9			0.3	0.3		0.3	0.5					
165+90.14 - 166+30.14			5.5 AVG	40.0	24.4			24.4			1.2	1.0		1.2	1.8					
166+30.14 - 173+41.00			6.25	710.86	493.7			493.7			24.0	20.6		24.7	37.0					
173+41.00 - 173+81.00			5.5 AVG	40.0	24.4			24.4			1.2	1.0		1.2	1.8					
173+81.00 - 174+30.00			4.75	49	25.9			25.9			1.3	1.1		1.3	1.9					
174+30.00 - 174+70.00			5.5 AVG	40.0	24.4			24.4			1.2	1.0		1.2	1.8					
174+70.00 - 178+49.48			6.25	379.48	263.5			263.5			12.8	11.0		13.2	19.8					
178+49.48 - 180+41.58			BRIDGE	LIMITS																
180+41.58 - 186+65.00			6.25	623.42	432.9			432.9			21.0	18.0		21.6	32.5					
186+65.00 - 187+05.00			5.75 AVG	40.0	25.6			25.6			1.2	1.1		1.3	1.9					
187+05.00 - 187+15.00			5.25	10.0	5.8			5.8			0.3	0.2		0.3	0.4					
187+15.00 - 187+55.00			5.75 AVG	40.0	25.6			25.6			1.2	1.1		1.3	1.9					
187+55.00 - 189+00.00			6.25	145.0	100.7			100.7			4.9	4.2		5.0	7.6					
189+00.00 - 190+33.14			4.75 AVG	133.14	70.3			70.3			3.4	2.9		3.5	5.3					
116+62.31 - 119+55.84			BRIDGE	LIMITS																
119+55.84 - 121+87.02			3.25	231.18	83.5		83.5													
TOTALS							83.5	1,570.0			76.2	65.4		78.4	117.6					

CALCULATED J.C.
CHECKED R.G.

SHOULDER CALCULATIONS
S.R. 16 WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

BCALC10.DGN

SHOULDER CALCULATIONS

STATION TO STATION	LT. SIDE WIDTH BERM (FEET)	LT. SIDE FEET	RT. SIDE WIDTH BERM (FEET)	RT. SIDE FEET	SHOULDER AREA SQ. YD.		254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.			442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.
WESTBOUND LANES														
107+81.72 - 115+55.00			6.25	773.28	537.0		537.0			26.1	22.4		26.9	40.2
115+55.00 - 115+95.00			5.75 AVG	40.0	25.6		25.6			1.2	1.1		1.3	1.9
115+95.00 - 116+05.00			5.25	10.0	5.8		5.8			0.3	0.2		0.3	0.4
116+05.00 - 116+45.00			5.75 AVG	40.0	25.6		25.6			1.2	1.1		1.3	1.9
116+45.00 - 118+69.02 (BACK)			6.25	224.02	155.6		155.6			7.6	6.5		7.8	11.7
117+46.58 (AHEAD) - 124+31.35			6.25	684.77	475.5		475.5			23.1	19.8		23.8	35.7
124+31.35 - 124+71.35			5.5	40.0	24.4		24.4			1.2	1.0		1.2	1.8
124+71.35 - 124+84.35			4.75	13.0	6.9		6.9			0.3	0.3		0.3	0.5
124+84.35 - 125+24.35			5.5	40.0	24.4		24.4			1.2	1.0		1.2	1.8
125+24.35 - 127+45.00			6.25	220.65	153.2		153.2			7.4	6.4		7.7	11.5
127+45.00 - 127+85.00			5.75 AVG	40.0	25.6		25.6			1.2	1.1		1.3	1.9
127+85.00 - 127+95.00			5.25	10.0	5.8		5.8			0.3	0.2		0.3	0.4
127+95.00 - 128+35.00			5.75 AVG	40.0	25.6		25.6			1.2	1.1		1.3	1.9
128+35.00 - 135+48.33			6.25	713.33	495.4		495.4			24.1	20.6		24.8	37.2
135+48.33 - 135+88.33			5.25 AVG	40.0	23.3		23.3			1.1	1.0		1.2	1.7
135+88.33 - 137+61.64			BRIDGE LIMITS											
137+61.64 - 138+01.64			5.25 AVG	40.0	23.3		23.3			1.1	1.0		1.2	1.7
138+01.64 - 141+30.09			6.25	328.45	228.1		228.1			11.1	9.5		11.4	17.1
141+30.09 - 143+11.64			BRIDGE LIMITS											
143+11.64 - 157+30.70			6.25	1419.06	985.5		985.5			47.9	41.1		49.3	73.9
157+30.70 - 157+70.70			5.25 AVG	40.0	23.3		23.3			1.1	1.0		1.2	1.7
157+70.70 - 158+47.20			4.25	76.5	36.1		36.1			1.8	1.5		1.8	2.7
158+47.20 - 158+87.20			5.25 AVG	40.0	23.3		23.3			1.1	1.0		1.2	1.7
158+87.20 - 164+55.00			6.25	567.8	394.3		394.3			19.2	16.4		19.7	29.6
164+55.00 - 164+95.00			5.75 AVG	40.0	25.6		25.6			1.2	1.1		1.3	1.9
TOTALS							3749.2			182.0	156.4		187.8	280.8

CALCULATED J.C.
CHECKED R.G.

SHOULDER CALCULATIONS
S.R. 16 WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

BCALC109.DGN

SHOULDER CALCULATIONS

STATION TO STATION	LT. SIDE		RT. SIDE		SHOULDER AREA					254		442	442		407	407					
	WIDTH BERM		WIDTH BERM							PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4")		1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)		TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y.	TACK COAT @ 0.075 GAL./S.Y.					
	(FEET)	FEET	(FEET)	FEET	SQ. YD.					SQ. YD.		CU. YD.	CU. YD.		GAL.	GAL.					
RAMP "F"																					
106+81.21 - 113+89.45	6	708.24			472.2					472.2		23.0	19.7		23.6	35.4					
113+89.45 - 114+39.45	7 AVG	50.0			38.9					38.9		1.9	1.6		1.9	2.9					
106+80.53 - 114+39.45			3	758.92	253.0					253.0		12.3	10.5		12.7	19.0					
RAMP "BB"																					
143+65.16 - 147+35.56			3	370.4	123.5					123.5		6.0	5.1		6.2	9.3					
143+67.55 - 146+85.56	6	318.01			212.0					212.0		10.3	8.8		10.6	15.9					
146+85.56 - 147+35.56	7 AVG	50.0			38.9					38.9		1.9	1.6		1.9	2.9					
ROADWAY "B"																					
143+58.29 - 143+80.00			4	21.71	9.6					9.6		0.5	0.4		0.5	0.7					
143+80.00 - 153+46.67			4	966.67	429.6					429.6		20.9	17.9		21.5	32.2					
143+62.17 - 144+50.00	8	87.83			78.1					78.1		3.8	3.3		3.9	5.9					
144+50.00 - 147+33.75	8	283.75			252.2					252.2		12.3	10.5		12.6	18.9					
147+35.56 - 153+46.67	8	611.11			543.2					543.2		26.4	22.6		27.2	40.7					
RAMP "A" @ MOUNT VERNON RD.																					
167+53.00 - 171+92.20			3	439.2	146.4					146.4		7.1	6.1		7.3	11.0					
167+59.53-168+74.19																					
171+92.20 - 173+29.56			3	137.36	45.8					45.8		2.2	1.9		2.3	3.4					
167+53.00 - 172+46.59	6	493.59			329.1					329.1		16.0	13.7		16.5	24.7					
RAMP "B" @ HUDSON AVE.																					
178+49.47 - 178+94.80			3	45.33	15.1					15.1		0.7	0.6		0.8	1.1					
178+94.80 - 186+26.92			3	732.12	244.0					244.0		11.9	10.2		12.2	18.3					
178+73.14 - 185+76.92	6	703.78			469.2					469.2		22.8	19.5		23.5	35.2					
185+76.92 - 186+26.92	7 AVG	50.0			38.9					38.9		1.9	1.6		1.9	2.9					
TOTALS										3739.7		181.9	155.6		187.1	280.4					

CALCULATED J.C.
CHECKED R.G.

SHOULDER CALCULATIONS
RAMP F, RAMP B, ROADWAY B, RAMP A & RAMP BB

LIC-16-19.72
LIC-79-12.30

BCALC112.DGN

SHOULDER CALCULATIONS

STATION TO STATION	LT. SIDE WIDTH BERM (FEET)	LT. SIDE FEET	RT. SIDE WIDTH BERM (FEET)	RT. SIDE FEET	SHOULDER AREA SQ. YD.					254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.			442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.				
RAMP "H"																					
108+19.43-114+54.22			6	634.79	423.2					423.2			20.6	17.6		21.2	31.7				
107+79.20-114+54.22	3	675.02			225.0					225.0			10.9	9.4		11.3	16.9				
ROADWAY "D" FROM S.R. 79																					
172+10.75-173+30.05			8	119.3	106.0					106.0			5.2	4.4		5.3	8.0				
172+18.26-173+30.05	5	111.79			62.1					62.1			3.0	2.6		3.1	4.7				
EXTRA AREA					88.7					88.7			4.3	3.7		4.4	6.7				
TOTALS										905.0			44.0	37.7		45.3	68.0				

CALCULATED J.C.
CHECKED R.G.

SHOULDER CALCULATIONS
RAMP H

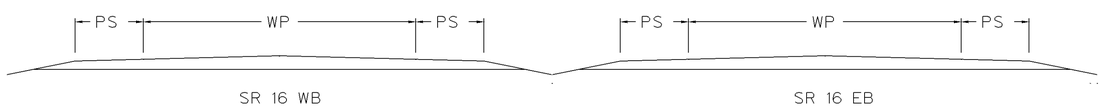
LIC-16-19.72
LIC-79-12.30

BCALC11.DGN

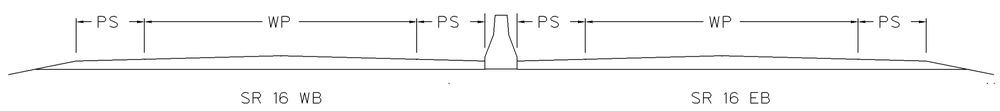
DEPARTMENT OF TRANSPORTATION
M&R707 REV. 9-1-83

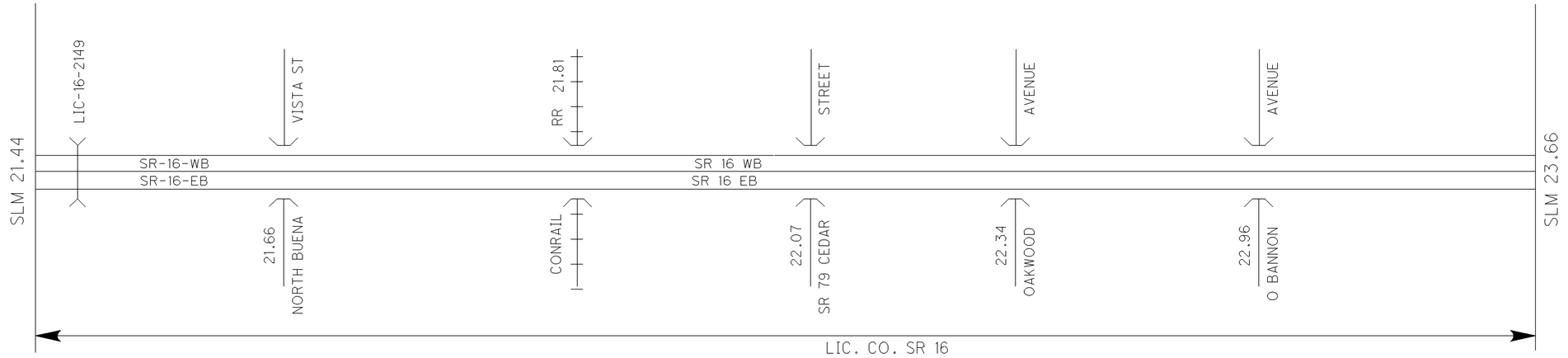
ASPHALT CONCRETE

TYPICAL 1



TYPICAL 2





BRIDGE DEDUCTIONS ( )

PAVEMENT DATA

	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH FEET	WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ.YD.	PROPOSED PAVEMENT 407 TACK COAT FOR INTERMEDIATE @ 0.05 GAL/S.Y. GALLON	407 TACK COAT @ 0.075 GAL/S.Y. GALLON	442 ASPHALT CONCRETE THICK AVG. INCHES	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	442 ASPHALT CONCRETE THICK AVG. INCHES	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.					
		EASTBOUND																		
	SR 16	21.44 - 23.45	2.01	10613	24	2	404	28301	1415	2122	1.75	1375.7	1.50	1179.2	28301					
		23.45 - 23.66	0.21	1109	24	1	404	2957	148	222	1.75	143.7	1.50	123.2	2957					
		WESTBOUND																		
	SR 16	21.44 - 23.45	2.01	10613	24	2	404	28301	1415	2122	1.75	1375.7	1.50	1179.2	28301					
		23.45 - 23.66	0.21	1109	24	1	404	2957	148	222	1.75	143.7	1.50	123.2	2957					
		BRIDGE DEDUCTIONS						(5894)	(295)	(442)		(286.5)		(245.6)	(5894)					
		TOTALS CARRIED TO SUB-SUMMARY						56622	2831	4246		2752.3		2359.2	56622					

CALCULATED | CHECKED

ASPHALT CONCRETE DATA
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66

LIC-16-19.72
LIC-79-12.30

29
190

L0160001.MAC

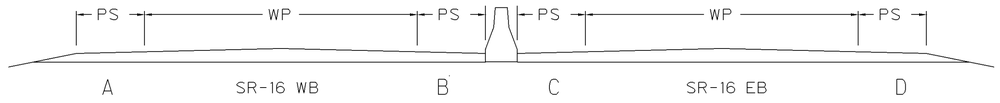
DOT 1920

DEPARTMENT OF TRANSPORTATION
M & R 684 REV.9-1-79

PAVED SHOULDERS

TYPICAL 1

TYPICAL 2



DEDUCTIONS ()

PAVED SHOULDER DATA

	ROUTE	LOG POINT TO LOG POINT	LENGTH MILE	LENGTH FEET	TYPICAL	PROPOSED WIDTH (FEET) A	B	C	D	SHOULDER AREA SQ.YD.	407 TACK COAT @ 0.075 GAL/S.Y. GALLON	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	442 ASPHALT CONCRETE THICK AVG. INCH	INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	THICK AVG. INCH	SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.					* NOTES
		EASTBOUND																				
	SR 16	21.44-21.57	.13	686	2			3.75	8	896	67	45	1.75	43.6	1.50	37.4	896					
		21.57-21.58	.01	53	2			3.75	7	63	5	3	1.75	3.1	1.50	2.6	63					
		21.58-21.60	.02	106	2			3.75	6	115	9	6	1.75	5.6	1.50	4.8	115					
		21.60-22.08	.48	2534	2			3.75	8	3308	248	165	1.75	160.8	1.50	137.8	3308					
		22.08-22.10	.02	106	2			3.75	15	221	16	11	1.75	10.7	1.50	9.2	221					
		22.10-23.00	.90	4752	2			3.75	8	6204	465	310	1.75	301.6	1.50	258.5	6204					
		23.00-23.03	.03	158	2			3.75	15	329	25	16	1.75	16.0	1.50	13.7	329					
		23.03-23.45	.42	2218	2			3.75	8	2896	217	145	1.75	140.8	1.50	120.7	2896					
		23.45-23.66	.21	1109	1			3.75	8	1448	109	72	1.75	70.4	1.50	60.3	1448					
	SR 16	WEST BOUND																				
		21.44-21.55	.11	581	2	8	3.75			758	57	38	1.75	36.8	1.50	31.6	758					
		21.55-21.56	.01	53	2	7	3.75			63	5	3	1.75	3.1	1.50	2.6	63					
		21.56-21.58	.02	106	2	5	3.75			103	8	5	1.75	5.0	1.50	4.3	103					
		21.58-22.32	.74	3907	2	8	3.75			5101	382	255	1.75	248.0	1.50	212.5	5101					
		22.32-22.35	.03	158	2	15	3.75			329	25	16	1.75	16.0	1.50	13.7	329					
		22.35-22.56	.21	1109	2	8	3.75			1448	109	72	1.75	70.4	1.50	60.3	1448					
		22.56-22.64	.08	422	2	5.5	3.75			434	32	22	1.75	21.1	1.50	18.1	434					
TOTAL CARRIED TO NEXT SHEET											1779	1184		1153.0		988.1	23716					

CALCULATED LME
CHECKED TJD

PAVED SHOULDERS
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66

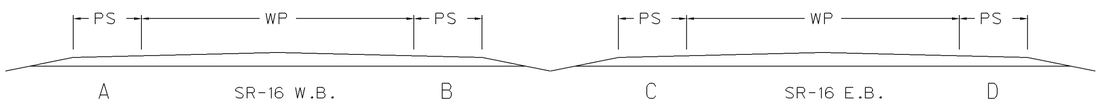
LIC-16-19.72
LIC-79-12.30

L0160001.MPS

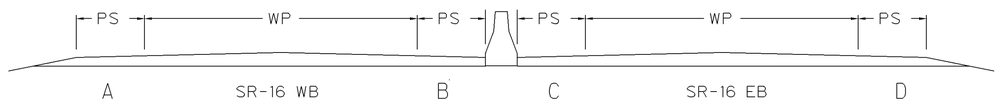
DEPARTMENT OF TRANSPORTATION
M & R 684 REV.9-1-79

PAVED SHOULDERS

TYPICAL 1



TYPICAL 2



DEDUCTIONS ()

PAVED SHOULDER DATA

	ROUTE	LOG POINT TO LOG POINT	LENGTH MILE	LENGTH FEET	TYPICAL	PROPOSED WIDTH (FEET) A	B	C	D	SHOULDER AREA SQ.YD.	407 TACK COAT @ 0.075 GAL/S.Y. GALLON	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	442 ASPHALT CONCRETE THICK AVG. INCH	442 INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	442 THICK AVG. INCH	442 SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.					* NOTES
		WEST BOUND																				
	SR 16	22.64-23.18	.54	2851	2	8	3.75			3722	279	186	1.75	180.9	1.50	155.1	3722					
		23.18-23.21	.03	158	2	15	3.75			329	25	16	1.75	16.0	1.50	13.7	329					
		23.21-23.42	.21	1109	2	8	3.75			1448	109	72	1.75	70.4	1.50	60.3	1448					
		23.42-23.45	.03	158	2	15	3.75			329	25	16	1.75	16.0	1.50	13.7	329					
		23.45-23.66	.21	1109	1	8	3.75			1448	109	72	1.75	70.4	1.50	60.3	1448					
	TOTAL THIS SHEET		1.02	5385						7276	547	362		353.7		303.1	7276					
TOTAL FROM PREVIOUS SHEET			3.42	18058						23716	1779	1184		1153.0		988.1	23716					
TOTALS CARRIED TO SUB-SUMMARY			4.44	23443						30992	2326	1546		1506.7		1291.2	30992					

CALCULATED LME
CHECKED TJD

PAVED SHOULDERS
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66

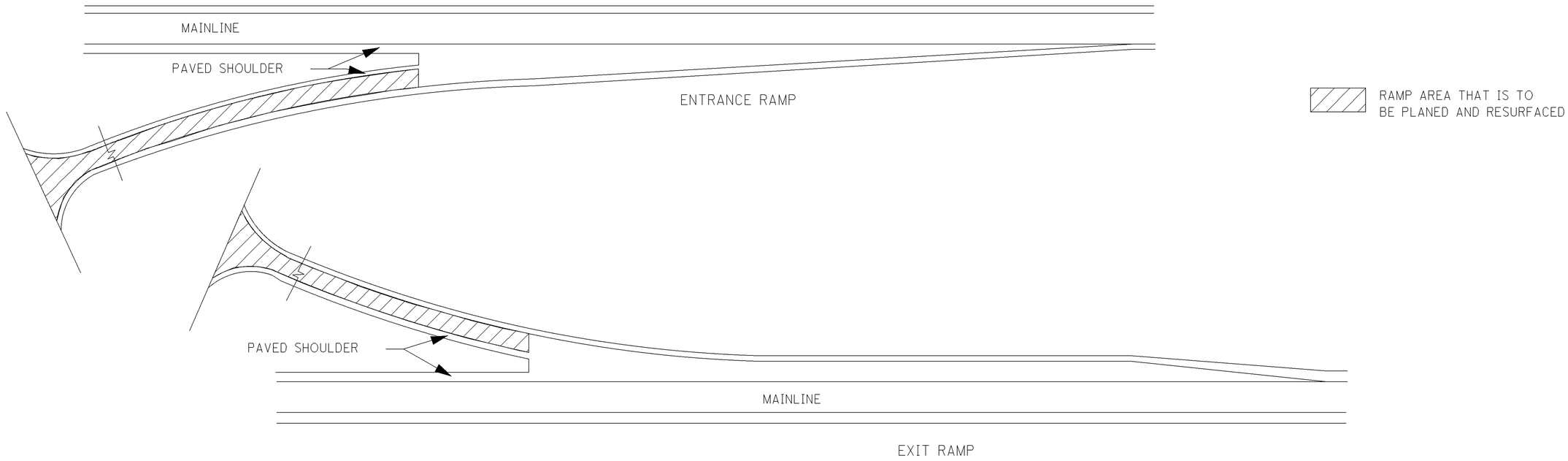
LIC-16-19.72
LIC-79-12.30

L0160004.MPS

TREATMENT ON RAMPS

ALL AREAS TAKEN FROM PREVIOUS CONSTRUCTION PLAN

	ROUTE	RAMP LENGTH	DESCRIPTION	AREA IN SQ.YDS.	PROPOSED ITEMS									
					407		442 ASPHALT CONCRETE				254			
					TACK COAT FOR INTERMEDIATE @ 0.050 GAL/S.Y. GALLON	TACK COAT @ 0.075 GAL/S.Y. GALLON	THICK INCH	INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	THICK INCH	SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.				
			EAST BOUND												
	SR 16	332	RAMP D (BUENA VISTA STREET)	638	32	48	1.75	31.0	1.50	26.6	638				
		545	RAMP C (CEDAR STREET)	1550	78	116	1.75	75.3	1.50	64.6	1550				
		817	RAMP D (CEDAR STREET)	1472	74	110	1.75	71.6	1.50	61.3	1472				
		65	SIDE RAMP (CEDAR STREET) D	185	9	14	1.75	9.0	1.50	7.7	185				
		704	RAMP C (O BANNON AVENUE)	1333	67	100	1.75	64.8	1.50	55.5	1333				
		873	RAMP D (O BANNON AVENUE)	1620	81	122	1.75	78.8	1.50	67.5	1620				
			WEST BOUND												
	SR 16	450	RAMP E (BUENA VISTA STREET)	880	44	66	1.75	42.8	1.50	36.7	880				
		558	RAMP B (CEDAR STREET)	1090	54	82	1.75	53.0	1.50	45.4	1090				
		752	RAMP A (CEDAR STREET)	1367	68	102	1.75	66.4	1.50	57.0	1367				
		68	SIDE RAMP A	180	9	14	1.75	8.8	1.50	7.5	180				
		587	RAMP B (O BANNON AVENUE)	1129	56	85	1.75	54.9	1.50	47.0	1129				
		677	RAMP A (O BANNON AVENUE)	1282	64	96	1.75	62.3	1.50	53.4	1282				
			TOTAL SUB-SUMMARY		636	955		618.7		530.2	12726				



L0160001.MEA

CALCULATED LME
CHECKED TJD

TREATMENT ON RAMPS
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66

LIC-16-19.72
LIC-79-12.30

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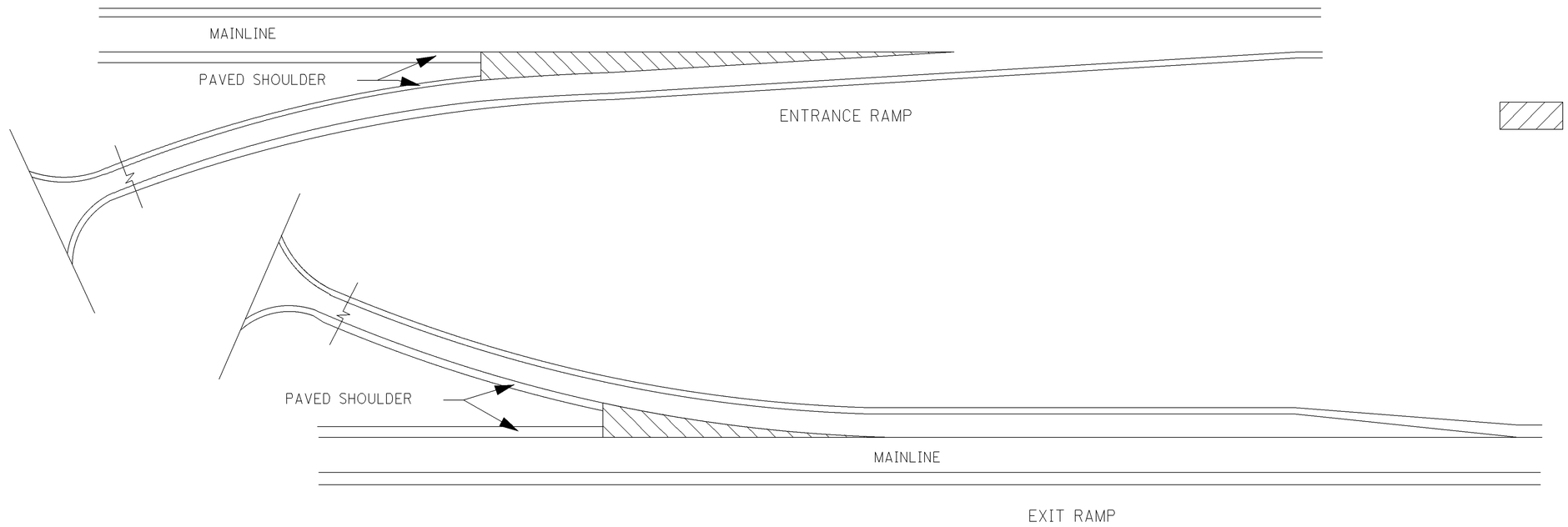
TREATMENT ON GORE AREAS

ALL AREAS TAKEN FROM PREVIOUS CONSTRUCTION PLAN

	ROUTE	LOG POINT TO LOG POINT	DESCRIPTION	AREA IN SQ.YDS.	PROPOSED ITEMS									
					407		442 ASPHALT CONCRETE				254			
					TACK COAT INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	TACK COAT @ 0.075 GAL/S.Y. GALLON	THICK INCH	INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	THICK INCH	SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.			
	SR 16	EASTBOUND	RAMP D (BUENA VISTA) DECELERATION LANE	284	14	21	1.75	13.8	1.50	11.8	284			
			RAMP CE (CEDAR STREET) DECELERATION LANE	588	29	44	1.75	28.6	1.50	24.5	588			
			RAMP D (CEDAR STREET) ACCELERATION LANE	1420	71	106	1.75	69.0	1.50	59.2	1420			
			RAMP C (O BANNON AVENUE) DECELERATION LANE	1342	67	101	1.75	65.2	1.50	55.9	1342			
			RAMP D (O BANNON AVENUE) ACCELERATION LANE	1297	65	97	1.75	63.0	1.50	54.0	1297			
	SR 16	WESTBOUND	RAMP E (BUENA VISTA STREET) ACCELERATION LANE	299	15	22	1.75	14.5	1.50	12.4	299			
			RAMP B (CEDAR STREET) DECELERATION LANE	1124	56	84	1.75	54.6	1.50	46.8	1124			
			RAMP A (CEDAR STREET) ACCELERATION LANE	902	45	68	1.75	43.8	1.50	37.6	902			
			RAMP B (O BANNON AVENUE) DECELERATION LANE	1370	68	103	1.75	66.6	1.50	57.1	1370			
			RAMP A (O BANNON AVENUE) ACCELERATION LANE	1556	78	117	1.75	75.6	1.50	64.8	1556			
			TOTALS CARRIED TO SUB-SUMMARY		508	742		494.7		424.1	10182			



CALCULATED LME
CHECKED TJD

TREATMENT ON GORE AREAS
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66

LIC-16-19.72
LIC-79-12.30

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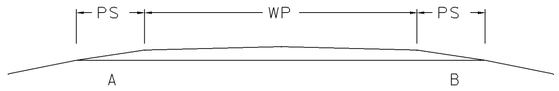
L0160002.MEA

DEPARTMENT OF TRANSPORTATION
M & R 684 REV.9-1-79

PAVED SHOULDERS ON RAMPS

TYPICAL 1



PAVED SHOULDER DATA

	ROUTE	DESCRIPTION	LENGTH (FEET) A	LENGTH (FEET) B	TYPICAL	PROPOSED WIDTH (FEET) A	PROPOSED WIDTH (FEET) B	SHOULDER AREA SQ.YD.	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	407 TACK COAT @ 0.075 GAL/S.Y. GALLON	442 ASPHALT CONCRETE THICK INCHES	442 INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	442 THICK INCHES	442 SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.					* NOTES
		EAST BOUND																		
	SR 16	RAMP D (BUENA VISTA STREET)	318	244	1	4	6	304	15	23	1.75	14.8	1.50	12.7	304					
				50	1		4.5	25	1	2	1.75	1.2	1.50	1.0	25					
		RAMP C (CEDAR STREET)	488	143	1	3	5.5	250	12	19	1.75	12.2	1.50	10.4	250					
				343	1		3	114	6	8	1.75	5.5	1.50	4.8	114					
		RAMP D (CEDAR STREET)	488	637	1	3	3	375	19	28	1.75	18.2	1.50	15.6	375					
			150	250	1	2.5	5.5	194	10	14	1.75	9.4	1.50	8.1	194					
		SIDE RAMP	65		1	3		22	1	2	1.75	1.1	1.50	0.9	22					
		RAMP C (O BANNON AVENUE)	654	154	1	3	5.5	312	16	23	1.75	15.2	1.50	13.0	312					
				500	1		3	167	8	12	1.75	8.1	1.50	6.9	167					
		RAMP D (O BANNON AVENUE)	582	582	1	3	3	388	19	29	1.75	18.9	1.50	16.2	388					
			150	150	1	2.5	5.5	133	7	10	1.75	6.5	1.50	5.5	133					
		WEST BOUND																		
	SR 16	RAMP E (BUENA VISTA STREET)	194	429	1	4	6	372	19	28	1.75	18.1	1.50	15.5	372					
		RAMP B (CEDAR STREET)	558	502	1	3	3	353	18	26	1.75	17.2	1.50	14.7	353					
		RAMP A (CEDAR STREET)	330	482	1	3	3	271	14	20	1.75	13.2	1.50	11.3	271					
			150	250	1	2.5	5.5	194	10	14	1.75	9.4	1.50	8.1	194					
		RAMP B (O BANNON AVENUE)	531	431	1	3	3	321	16	24	1.75	15.6	1.50	13.4	321					
				100	1		5.5	61	3	4	1.75	3.0	1.50	2.5	61					
		RAMP A (O BANNON AVENUE)	471	471	1	3	3	314	16	24	1.75	15.3	1.50	13.1	314					
			150	150	1	2.5	5.5	133	7	10	1.75	6.5	1.50	5.5	133					
		TOTALS							217	320		209.4		179.2	4303					

TOTALS CARRIED TO SUB-SUMMARY

L0160003.MPS

CALCULATED LME CHECKED TJD

PAVED SHOULDERS ON RAMPS
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66

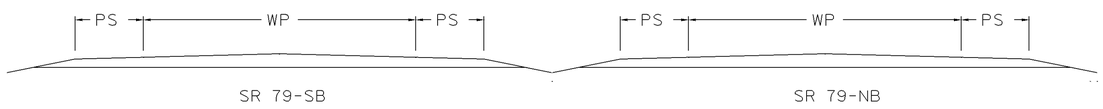
LIC-16-19.72
LIC-79-12.30

DEPARTMENT OF TRANSPORTATION
M&R707 REV. 9-1-83

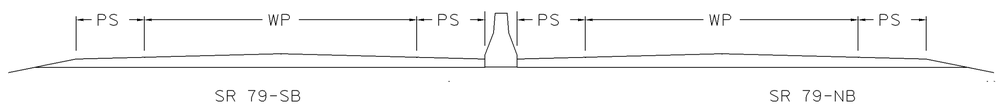
ASPHALT CONCRETE

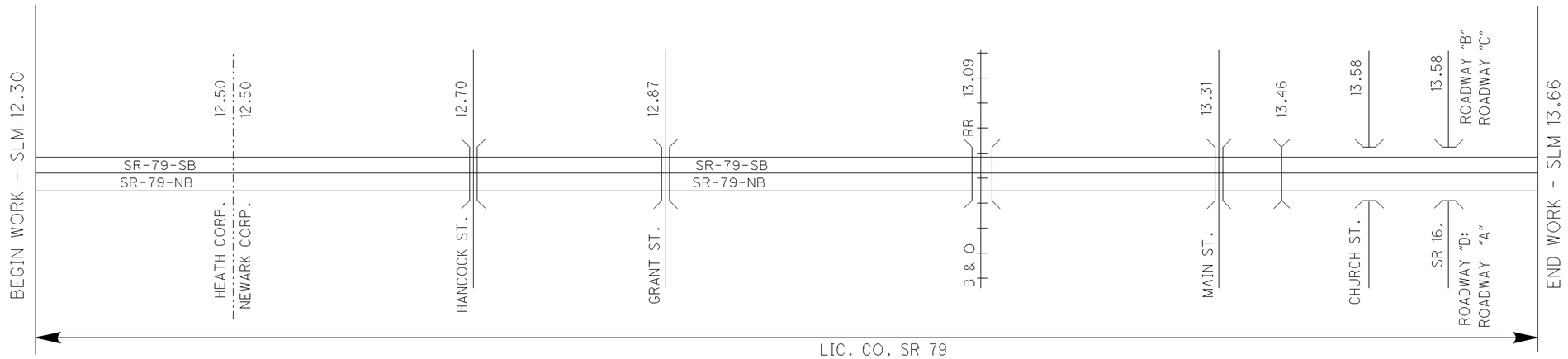
CALCULATED LME
CHECKED TJD

TYPICAL 1



TYPICAL 2





DEDUCTIONS ( )

PAVEMENT DATA

	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH FEET	WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ.YD.	PROPOSED PAVEMENT 407 TACK COAT INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	407 TACK COAT @ 0.075 GAL/S.Y. GALLON	442 ASPHALT CONCRETE THICK AVG. INCHES	442 INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	442 THICK AVG. INCHES	442 SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (DEPTH 3 1/4") SQ.YD.					
	SR 79	12.30-12.47	0.17	898	60 (AVG)	1	404	5987	300	449	1.75	291.0	1.50	250.0	5987					
		NORTH BOUND																		
	SR 79	12.47-13.06	0.59	3115	24	2	404	8307	415	623	1.75	403.8	1.50	346.1	8307					
		13.06-13.17	0.11	581	36	2	404	2324	116	174	1.75	113.0	1.50	96.8	2324					
		13.17-13.45	0.28	1478	24	2	404	3941	197	296	1.75	191.6	1.50	164.2	3941					
		13.50-13.57	0.07	370	38 (AVG)	2	404	1562	78	117	1.75	75.9	1.50	65.1	1562					
		13.61-13.66	0.05	264	54 (AVG)	2	404	1584	79	119	1.75	77.0	1.50	66.0	1564					
		ROADWAY A	0.31	1662		1	404	4801	240	360	1.75	233.4	1.50	200.0	4801					
		ROADWAY D	0.13	669		1	404	2793	140	209	1.75	135.8	1.50	116.4	2793					
		SOUTH BOUND																		
	SR 79	12.47-12.48	0.01	53	37 (AVG)	2	404	218	11	16	1.75	10.6	1.50	9.1	218					
		12.48-13.06	0.58	3115	24	2	404	8304	415	623	1.75	403.7	1.50	346.0	8304					
		13.06-13.13	0.07	370	36	2	404	1480	74	111	1.75	71.9	1.50	61.7	1480					
		13.13-13.45	0.32	1690	24	2	404	4507	225	338	1.75	219.1	1.50	187.8	4507					
		13.50-13.57	0.07	370	36 (AVG)	2	404	1480	74	111	1.75	71.9	1.50	61.7	1480					
		13.61-13.66	0.05	264	53 (AVG)	2	404	1525	76	114	1.75	74.1	1.50	63.5	1525					
		ROADWAY B	0.19	999		1	404	2725	136	204	1.75	132.5	1.50	113.5	2725					
		ROADWAY C	0.14	759		1	404	2194	110	164	1.75	106.6	1.50	91.4	2194					
		TOTALS CARRIED TO SUB-SUMMARY							2686	4028		2611.9		2239.3	53712					

ASPHALT CONCRETE DATA
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

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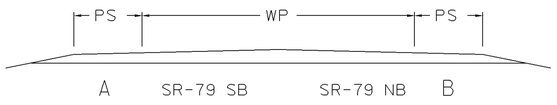
L0160002.MAC

DOT 1920

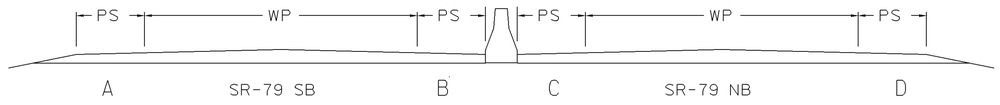
DEPARTMENT OF TRANSPORTATION
M & R 684 REV.9-1-79

PAVED SHOULDERS

TYPICAL 1



TYPICAL 2



* AREA INCLUDED WITH RAMP QUANTITIES

DEDUCTIONS ()

PAVED SHOULDER DATA

	ROUTE	LOG POINT TO LOG POINT	LENGTH MILE	LENGTH FEET	TYPICAL	PROPOSED WIDTH (FEET) A	B	C	D	SHOULDER AREA SQ.YD.	407 TACK COAT @ 0.075 GAL/S.Y. GALLON	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	442 ASPHALT CONCRETE THICK AVG. INCH	442 INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	442 THICK AVG. INCH	442 SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.					NOTES
	SR 79	12.30-12.47	0.17	898	1	8	8			1597	120	80	1.75	76.8	1.50	66.5	1597						
		NORTH BOUND																					
		12.47-12.97	0.50	2640	2			6.25	8	4180	314	209	1.75	203.2	1.50	174.2	4180						
		12.97-13.06	0.09	475	2			6.25	*	330	25	16	1.75	16.0	1.50	13.8	330						
		13.06-13.17	0.11	581	2			6.25	8	920	69	45	1.75	44.7	1.50	38.3	920						
		13.17-13.20	0.03	158	2			6.25	*	110	8	6	1.75	5.3	1.50	4.6	110						
		13.20-13.42	0.22	1162	2			6.25	8	1840	138	92	1.75	89.4	1.50	76.7	1840						
		13.42-13.45	0.03	158	2			6.25	*	110	8	6	1.75	5.3	1.50	4.6	110						
		13.50-13.57	0.07	370	2			6.25	8	585	44	29	1.75	28.4	1.50	24.4	585						
		13.61-13.66	0.05	2640	2			6.25	8	4180	314	209	1.75	203.2	1.50	174.2	4180						
		SOUTH BOUND																					
	SR 79	12.47-12.48	0.01	53	2	8	6.25			84	6	4	1.75	4.1	1.50	3.5	84						
		12.48-12.52	0.04	211	2	*	6.25			147	11	7	1.75	7.1	1.50	6.1	147						
		12.52-13.03	0.51	2693	2	8	6.25			4264	320	213	1.75	207.3	1.50	177.7	4264						
		13.03-13.06	0.03	158	2	*	6.25			110	8	6	1.75	5.3	1.50	4.6	110						
		13.06-13.13	0.07	370	2	8	6.25			585	44	29	1.75	28.4	1.50	24.4	585						
		13.13-13.20	0.07	370	2	*	6.25			257	19	13	1.75	12.5	1.50	10.7	257						
		13.20-13.42	0.22	1162	2	8	6.25			1840	138	77	1.75	89.4	1.50	76.7	1840						
	TOTALS CARRIED TO NEXT SHEET										1586	1041		1026.4		881.0	21139						

L0160002.MPS

CALCULATED LME | CHECKED TJD

PAVED SHOULDERS
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

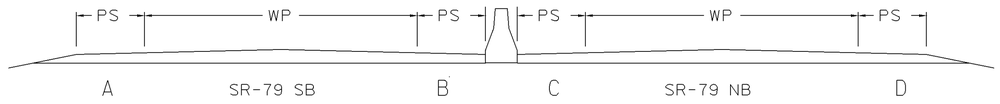
LIC-16-19.72
LIC-79-12.30

DEPARTMENT OF TRANSPORTATION
M & R 684 REV.9-1-79

PAVED SHOULDERS

TYPICAL 1

TYPICAL 2



* AREA INCLUDED WITH RAMP QUANTITIES

DEDUCTIONS ()

PAVED SHOULDER DATA

ROUTE	LOG POINT TO LOG POINT	LENGTH MILE	LENGTH FEET	TYPICAL	PROPOSED WIDTH (FEET) A	B	C	D	SHOULDER AREA SQ.YD.	407 TACK COAT @ 0.075 GAL/S.Y. GALLON	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	442 ASPHALT CONCRETE THICK AVG. INCH	442 INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	442 THICK AVG. INCH	442 SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.	NOTES
	SOUTH BOUND																
SR 79	13.42-13.45	0.03	158	*	6.25				110	8	6	1.75	5.3	1.50	4.6	110	
	13.50-13.57	0.07	370	8	6.25				585	44	29	1.75	28.4	1.50	24.4	585	
	13.61-13.66	0.05	264	8	6.25				418	31	21	1.75	20.3	1.50	17.4	418	
TOTALS THIS SHEET										83	56		54.0		46.4	1113	
TOTALS FROM PREVIOUS SHEET										1586	1041		1026.4		881.0	21139	
TOTALS CARRIED TO SUB-SUMMARY										1669	1097		1080.4		927.4	22252	

CALCULATED LME
CHECKED TJD

PAVED SHOULDERS
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

37
190

L0160005.MPS

TREATMENT ON RAMPS

ALL AREAS TAKEN FROM PREVIOUS CONSTRUCTION PLAN

INCLUDES SHOULDERS
LEFT AND RIGHT

	ROUTE		DESCRIPTION	AREA IN SQ.YDS.	PROPOSED ITEMS										
					407		442 ASPHALT CONCRETE				254				
					TACK COAT @ 0.075 GAL/S.Y. GALLON	TACK COAT, INTERMEDIATE COURSE @ 0.05 GAL/S.Y. GALLON	THICK INCH	INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU.YD.	THICK INCH	SURFACE COURSE, 12.5 MM, TYPE A (446) CU.YD.	PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ.YD.				
			NORTH BOUND												
	SR 79		UNION STREET OFF RAMP	613	46	31	1.75	29.8	1.50	25.5	613				
			RAMP B	2790	209	140	1.75	135.6	1.50	116.2	2790				
			RAMP E	2332	175	117	1.75	113.4	1.50	97.2	2332				
			RAMP F	1639	123	82	1.75	79.7	1.50	68.3	1639				
	SR 79		SOUTH BOUND												
			WILLIAMS ST. RAMP	940	71	47	1.75	45.7	1.50	39.2	940				
			RAMP A	3030	227	152	1.75	147.3	1.50	126.2	3030				
			RAMP C	2276	171	114	1.75	110.6	1.50	94.8	2276				
			RAMP D	2322	174	116	1.75	112.9	1.50	96.8	2322				
			TOTALS CARRIED TO SUB-SUMMARY		1196	799		775.0		664.2	15942				

CALCULATED LME CHECKED TJD

TREATMENT ON RAMPS
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

38
190

L0160003.MEA

PAVEMENT & SHOULDER QUANTITIES
SUB-SUMMARY

QUANTITIES CARRIED FROM SHEET						257 DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE A.P.P. (3 1/4") SQ. YD.		442 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CU. YD.	442 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) CU. YD.		407 TACK COAT FOR INTERMEDIATE COURSE @ 0.050 GAL./S.Y. GAL.	407 TACK COAT @ 0.075 GAL./S.Y. GAL.				
S.R. 16																	
SHEET 17						693.5	27,687.6		1,345.9	1,153.0		1,384.6	2,076.6				
SHEET 18						616.5	29,223.7		1,420.6	1,217.6		1,461.3	2,191.8				
SHEET 19							9,416.1		458.0	392.4		470.9	706.3				
SHEET 20							3,140.4		152.7	130.9		156.9	235.5				
SHEET 21							3,740.3		181.6	156.0		187.3	280.2				
SHEET 22						83.5	264.6		12.8	11.0		13.2	19.8				
SHEET 23						239.7	5,184.2		252.0	216.0		259.1	388.8				
SHEET 24						239.7	7,042.1		342.5	293.3		352.1	528.3				
SHEET 25						83.5	1,570.0		76.2	65.4		78.4	117.6				
SHEET 26							3,749.2		182.0	156.4		187.8	280.8				
SHEET 27							3,739.7		181.9	155.6		187.1	280.4				
SHEET 28							905.0		44.0	37.7		45.3	68.0				
SHEET 29							56,622.0		2,752.3	2,359.2		2,831.0	4,246.0				
SHEET 31							30,992.0		1,506.7	1,291.2		1,546.0	2,326.0				
SHEET 32							12,726.0		618.7	530.2		636.0	955.0				
SHEET 33							10,182.0		494.7	424.1		508.0	742.0				
SHEET 34							4,303.0		209.4	179.2		217.0	320.0				
S.R. 79																	
SHEET 35							53,712.0		2,611.9	2,239.3		2,686.0	4,028.0				
SHEET 37							22,252.0		1,080.4	927.4		1,097.0	1,669.0				
SHEET 38							15,942.0		775.0	664.2		799.0	1,196.0				
TOTALS CARRIED TO THE GENERAL SUMMARY						1,956.4	302,393.9		14,699.3	12,600.1		15,104.0	22,656.1				

CALCULATED J.C.
CHECKED R.G.

S.R. 16 & S.R. 79 - PAVEMENT & SHOULDER QUANTITIES SUB-SUMMARY

LIC-16-19.72
LIC-79-12.30

BCALC108.DGN

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
13	14	15	39	111			114					ROADWAY	BRIDGE						
																		ROADWAY	
							391					391		202	32800	391	SQ. YD.	CONCRETE SLOPE PROTECTION REMOVED	
							750					750		202	38000	750	FT.	GUARDRAIL REMOVED	
							640					640		203	10000	640	CU.YD.	EXCAVATION	
							430					430		203	20000	430	CU.YD.	EMBANKMENT	
							1,254					1,254		204	10000	1,254	SQ. YD.	SUBGRADE COMPACTION	
							391					391		601	21000	391	SQ. YD.	CONCRETE SLOPE PROTECTION	
							600					600		606	13000	600	FT.	GUARDRAIL, TYPE 5	
							6					6		606	35000	6	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							6					6		606	35100	6	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							6					6		622	10200	6	EACH	BARRIER TRANSITION	
																		DRAINAGE	
							12					12		604	36600	12	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
			302,394									302,394		254	01001	302,394	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	12
			1,957									1,957		257	10000	1,957	SQ. YD.	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT	
							210					210		304	20000	210	CU.YD.	AGGREGATE BASE	
			12,601									12,601		442	10000	12,601	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	
			14,700									14,700		442	10100	14,700	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	
			22,657									22,657		407	10000	22,657	GALLON	TACK COAT	
			15,104									15,104		407	14000	15,104	GALLON	TACK COAT FOR INTERMEDIATE COURSE	

CALCULATED J.C.
CHECKED R.G.

GENERAL SUMMARY

LIC-16-19.72
LIC-79-12.30

L016-GGS_001.DGN

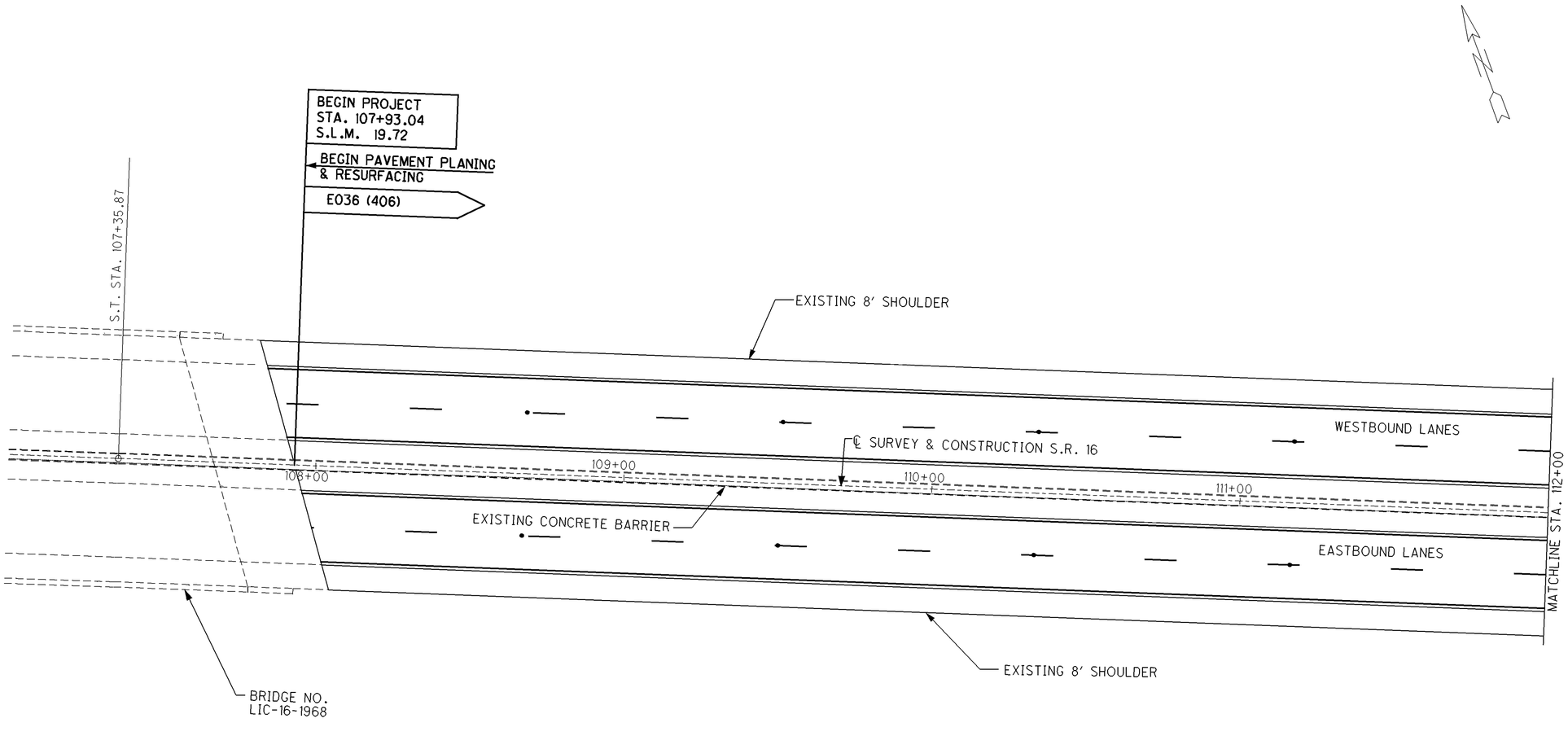
SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
13	14	15	39	111			114					ROADWAY	BRIDGE						
																		TRAFFIC CONTROL	
				1,439								1,439		621	00100	1,439	EACH	RPM	
				1,439								1,439		621	54000	1,439	EACH	RAISED PAVEMENT MARKER REMOVED	
							72					72		626	00100	72	EACH	BARRIER REFLECTOR	
				28.504								28.504		644	00100	28.504	MILE	EDGE LINE	
				14.117								14.117		644	00200	14.117	MILE	LANE LINE	
				0.310								0.310		644	00300	0.310	MILE	CENTER LINE	
				10,168								10,168		644	00400	10,168	FT.	CHANNELIZING LINE	
				411								411		644	00500	411	FT.	STOP LINE	
				1,859								1,859		644	00600	1,859	FT.	CROSSWALK LINE	
				3,957								3,957		644	00700	3,957	FT.	TRANSVERSE/DIAGONAL LINE	
				20								20		644	01300	20	EACH	LANE ARROW	
				4								4		644	01400	4	EACH	WORD ON PAVEMENT, 72"	
																		LIGHTING	
							6					6		625	00500	6	EACH	CONNECTOR KIT, TYPE II	
							6					6		625	00600	6	EACH	CONNECTOR KIT, TYPE III	
							18					18		625	01500	18	EACH	CABLE SPLICING KIT	
							1,345					1,345		625	23200	1,345	FT.	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	
							1,205					1,205		625	25400	1,205	FT.	CONDUIT, 2", 725.04	
							542					542		625	25600	542	FT.	CONDUIT, 4", 725.04	
							12					12		625	29920	12	EACH	STRUCTURE JUNCTION BOX	
							12					12		625	30700	12	EACH	PULL BOX, 725.08, 18"	
							3					3		625	35001	3	EACH	REERECT EXISTING LIGHT POLE, AS PER PLAN	112
							3					3		625	75403	3	EACH	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN	112
							6					6		625	75801	6	EACH	DISCONNECT CIRCUIT, AS PER PLAN	112
																		MAINTENANCE OF TRAFFIC	
	200											200		614	11110	200	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
							6					6		614	12336	6	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
		38										38		614	12460	38	EACH	WORK ZONE MARKING SIGN	
		20										20		614	12600	20	EACH	REPLACEMENT DRUM	
95												95		614	13000	95	CU.YD.	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
							254					254		614	13300	254	EACH	BARRIER REFLECTOR, TYPE B	
							254					254		614	13350	254	EACH	OBJECT MARKER, ONE WAY	
	90											90		614	18601	90	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	14
		28.24										28.24		614	20550	28.24	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
		0.62										0.62		614	21550	0.62	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		20,336										20,336		614	23680	20,336	FT.	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
		822										822		614	26610	822	FT.	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
		4										4		614	50000	4	EACH	AMERICAN RECOVERY AND REINVESTIMENT ACT (ARRA) SIGN, FREEWAY/EXPRESSWAY	
							5,700					5,700		622	40020	5,700	FT.	PORTABLE CONCRETE BARRIER, 32"	
							570					570		622	40040	570	FT.	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	
		LUMP										LUMP		614	11000	LUMP		MAINTAINING TRAFFIC	
												18		619	16000	18	MONTH	FIELD OFFICE, TYPE A	
												LUMP		623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
												LUMP		624	10000	LUMP		MOBILIZATION	

CALCULATED J.C.
CHECKED R.G.

GENERAL SUMMARY

LIC-16-19.72
LIC-79-12.30

L016_GCS_001.DGN



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

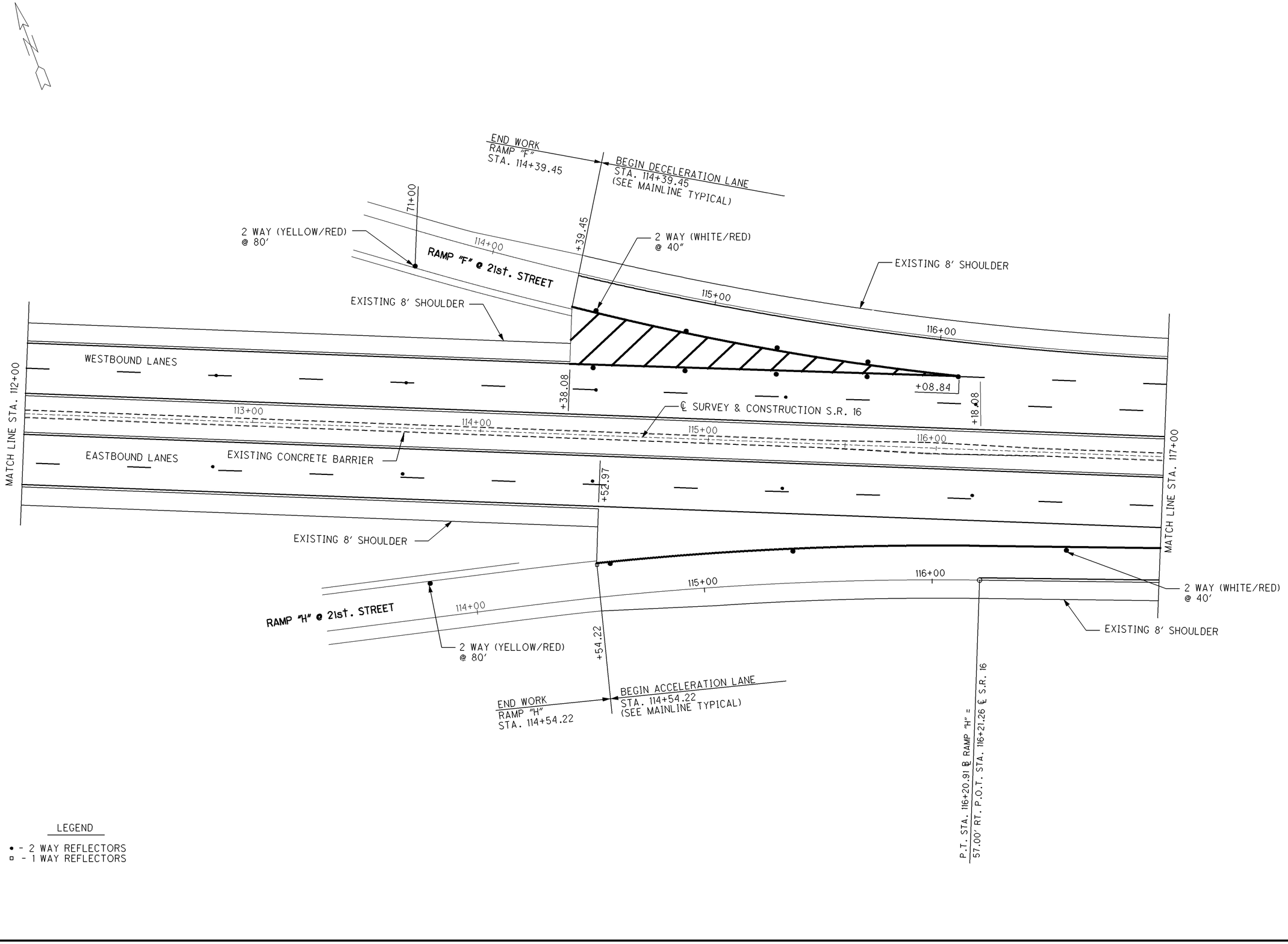
L6502159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 107+00 TO STA. 112+00

LIC-16-19.72
LIC-79-12.30



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6503159.DGN

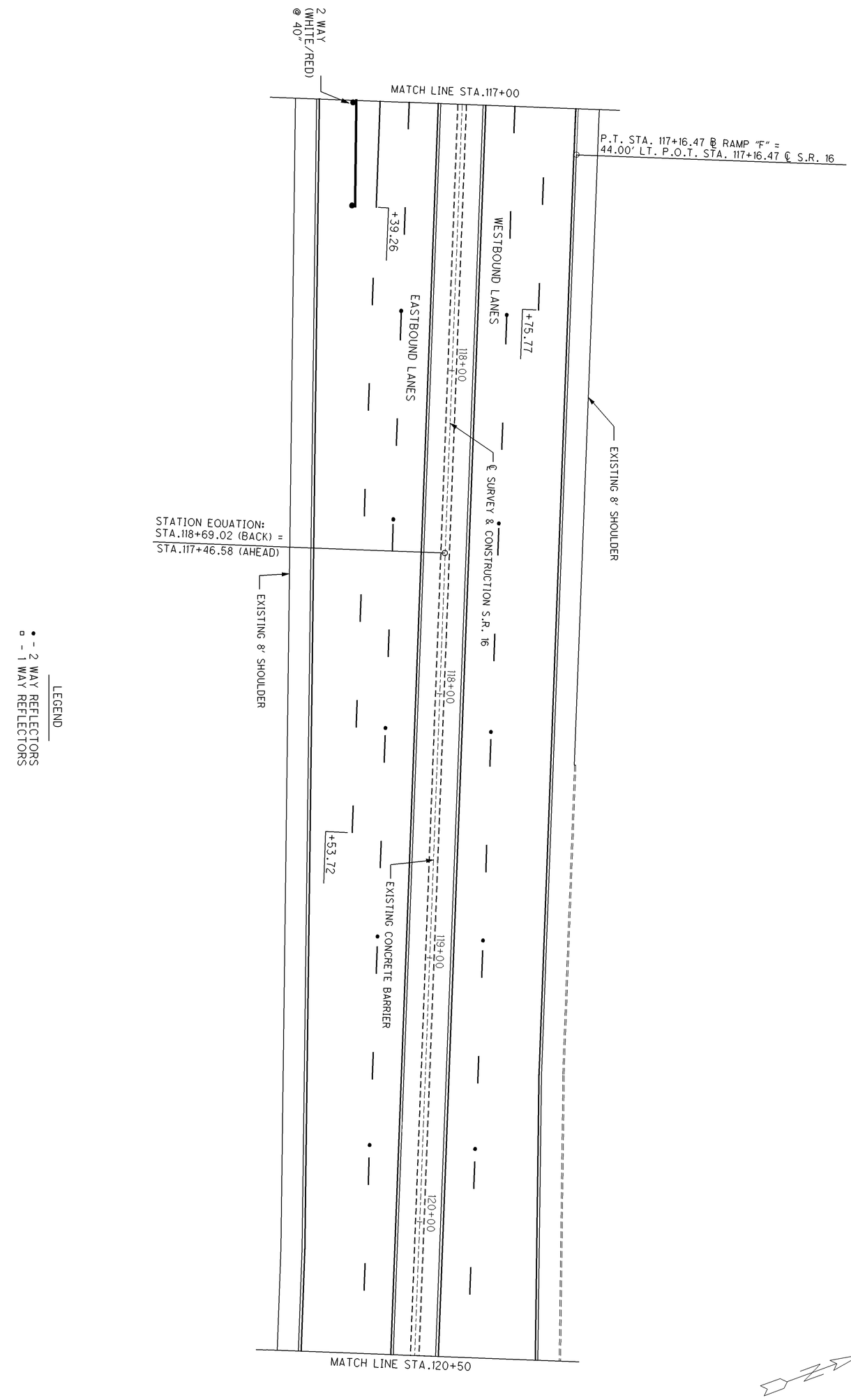
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.S.

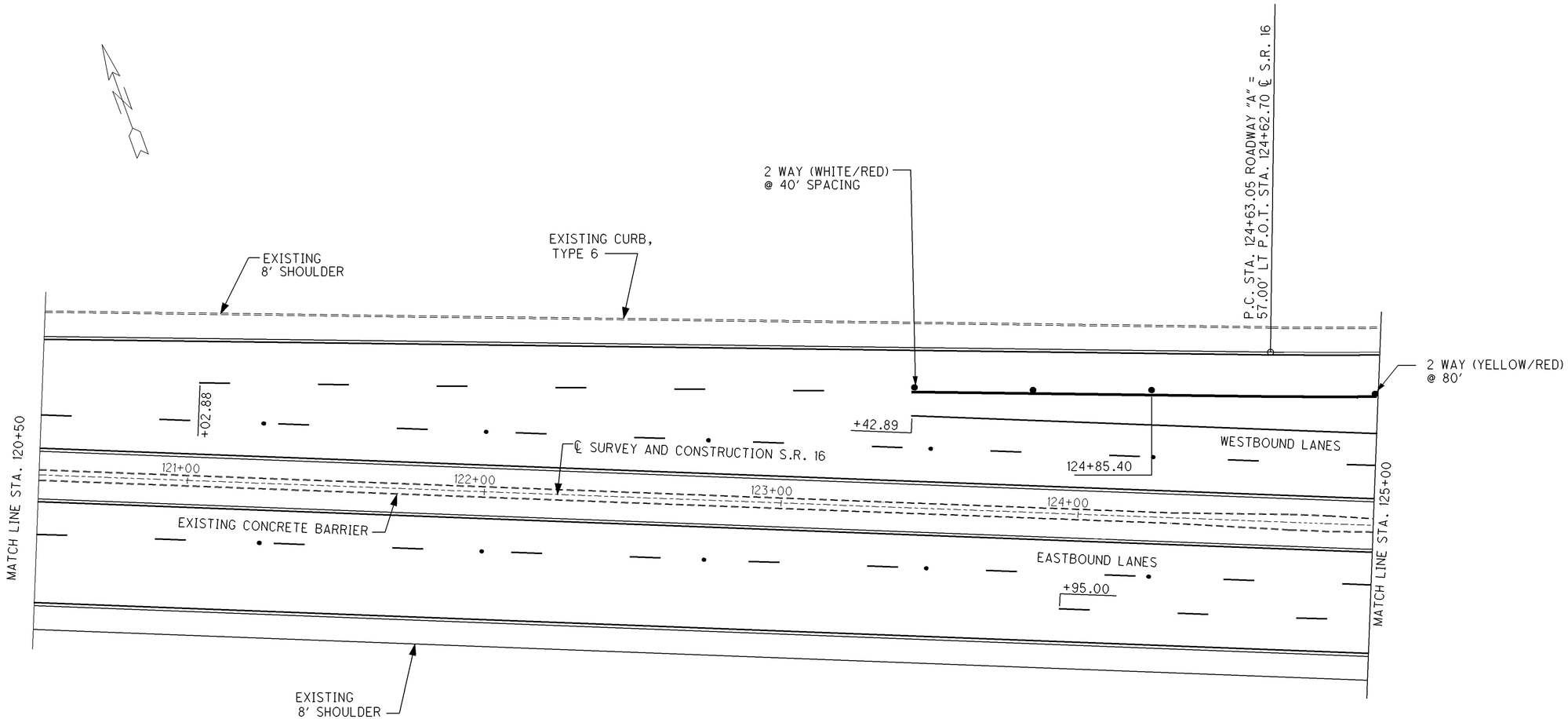
PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 112+00 TO STA. 117+00

LIC-16-19.72
LIC-79-12.30

L6504159.DGN



43 / 190	LIC-16-19.72 LIC-79-12.30	PLAN & PAVEMENT MARKING SHEET S.R. 16 STA. 117+00 TO STA. 120+50	CALCULATED J.C. CHECKED R.G.	10 40 0 20 HORIZONTAL SCALE IN FEET



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6505159.DGN

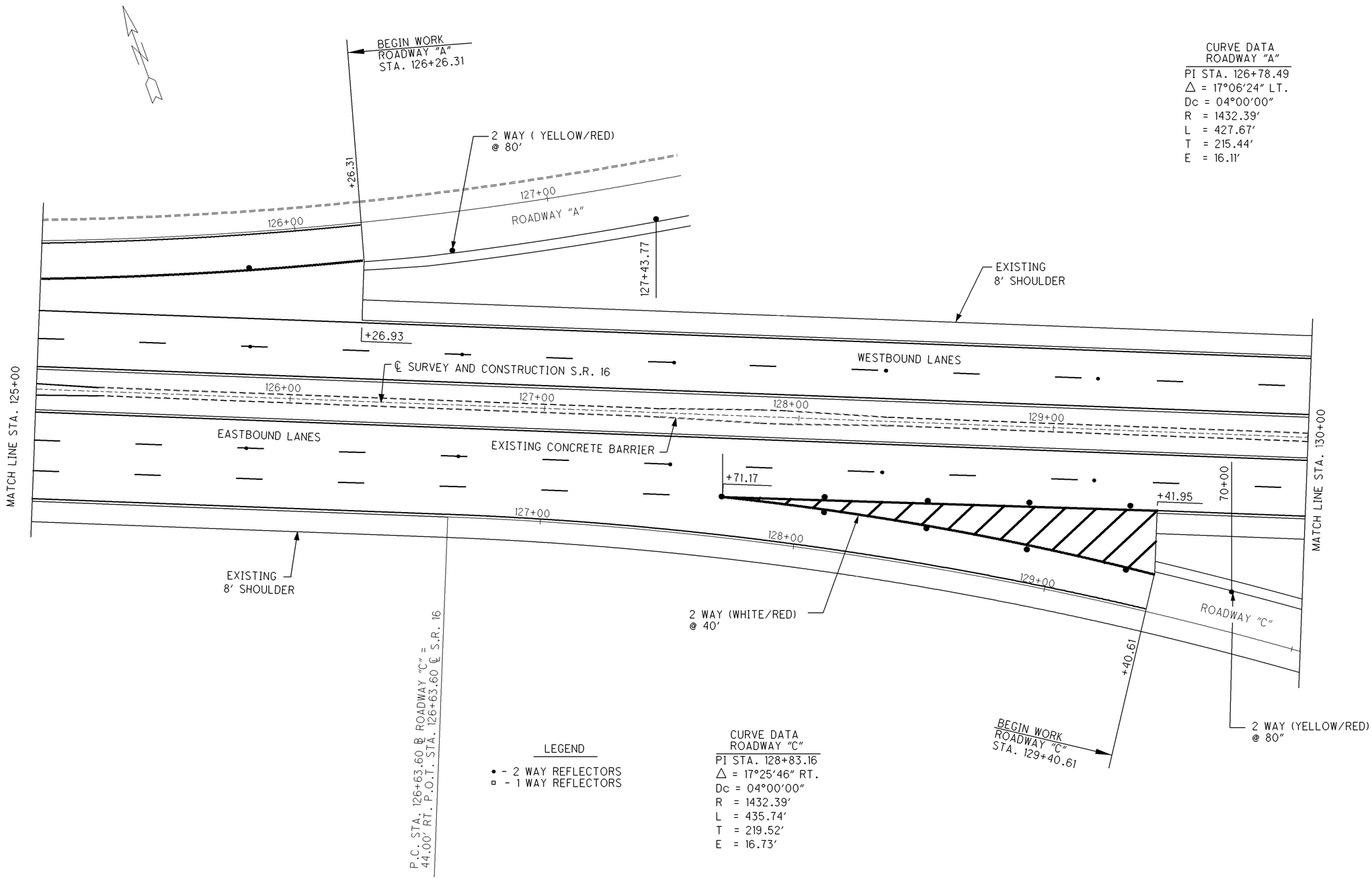
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

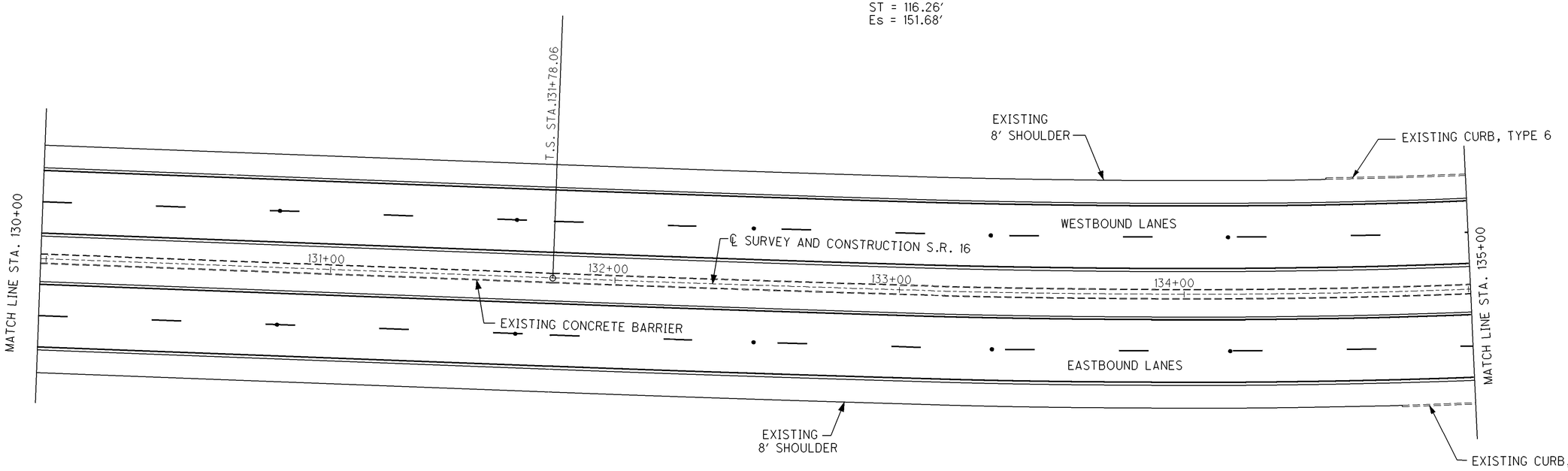
PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 120+50 TO STA. 125+00

LIC-16-19.72
LIC-79-12.30

44
190


BEGIN WORK
ROADWAY "A"
STA. 126+26.31
2 WAY (YELLOW/RED)
@ 80'
+26.31
126+00
127+00
ROADWAY "A"
127+43.77
EXISTING
8' SHOULDER
+26.93
℄ SURVEY AND CONSTRUCTION S.R. 16
WESTBOUND LANES
126+00
127+00
128+00
129+00
EASTBOUND LANES
EXISTING CONCRETE BARRIER
MATCH LINE STA. 125+00
+71.17
+41.95
70+00
MATCH LINE STA. 130+00
127+00
128+00
129+00
EXISTING
8' SHOULDER
2 WAY (WHITE/RED)
@ 40'
ROADWAY "C"
+40.61
BEGIN WORK
ROADWAY "C"
STA. 129+40.61
2 WAY (YELLOW/RED)
@ 80"
P.C. STA. 126+63.60 ℄ ROADWAY "C" =
44.00' RT. P.O.T. STA. 126+63.60 ℄ S.R. 16
LEGEND
• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS
CURVE DATA
ROADWAY "C"
PI STA. 128+83.16
△ = 17°25'46" RT.
Dc = 04°00'00"
R = 1432.39'
L = 435.74'
T = 219.52'
E = 16.73'
CURVE DATA
ROADWAY "A"
PI STA. 126+78.49
△ = 17°06'24" LT.
Dc = 04°00'00"
R = 1432.39'
L = 427.67'
T = 215.44'
E = 16.11'
HORIZONTAL
SCALE IN FEET
0
10
20
40
CALCULATED
J.C.
CHECKED
R.S.
PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 125+00 TO STA. 130+00
LIC-16-19.72
LIC-79-12.30
45
190
L6506159.DGN

CURVE DATA
S.R. 16
P.I. STA. 141+22.54
△= 43°50'10" LT
Dc = 03°00'00"
Rc = 1909.86'
Ls = 350.00'
Lc = 1111.20'
Ts = 944.48'
Ø = 05°15'00"
LT = 233.44'
ST = 116.26'
Es = 151.68'



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6507159.DGN 02/17/99

HORIZONTAL SCALE IN FEET
0 10 20 40

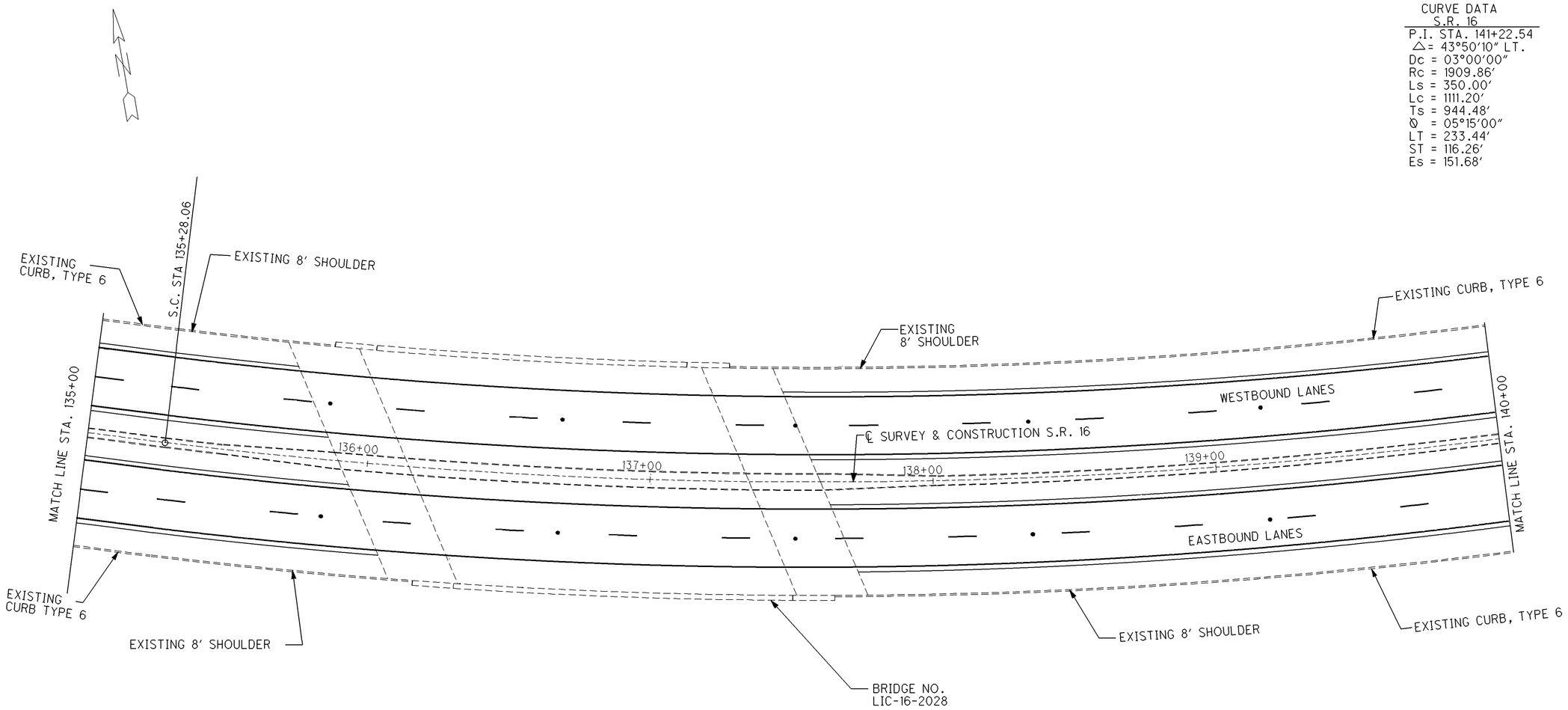
CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 130+00 TO STA. 135+00

LIC-16-19.72
LIC-79-12.30

CURVE DATA
S.R. 16

P.I. STA. 141+22.54
△ = 43°50'10" LT.
Dc = 03°00'00"
Rc = 1909.86'
Ls = 350.00'
Lc = 1111.20'
Ts = 944.48'
Ø = 05°15'00"
LT = 233.44'
ST = 116.26'
Es = 151.68'



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6508159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

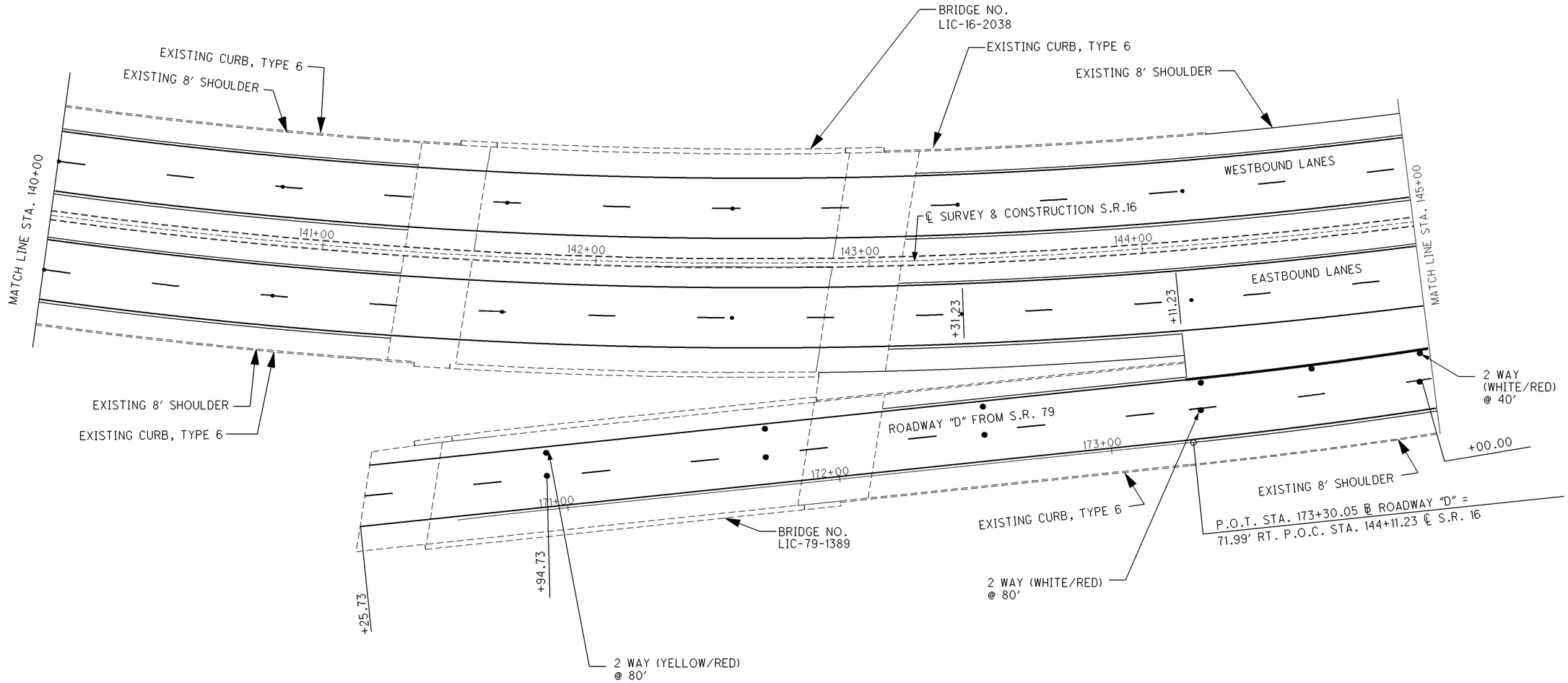
CALCULATED J.C.
CHECKED R.S.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 135+00 TO STA. 140+00

LIC-16-19.72
LIC-79-12.30

CURVE DATA
S.R. 16

P.I. STA. 141+22.54
Δ= 43°50'10" LT.
Dc = 03°00'00"
Rc = 1909.86'
Ls = 350.00'
Lc = 1111.20'
θ = 05°15'00"
LT = 233.44'
ST = 116.26'
Es = 151.68'
Ts = 944.48'



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6509159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

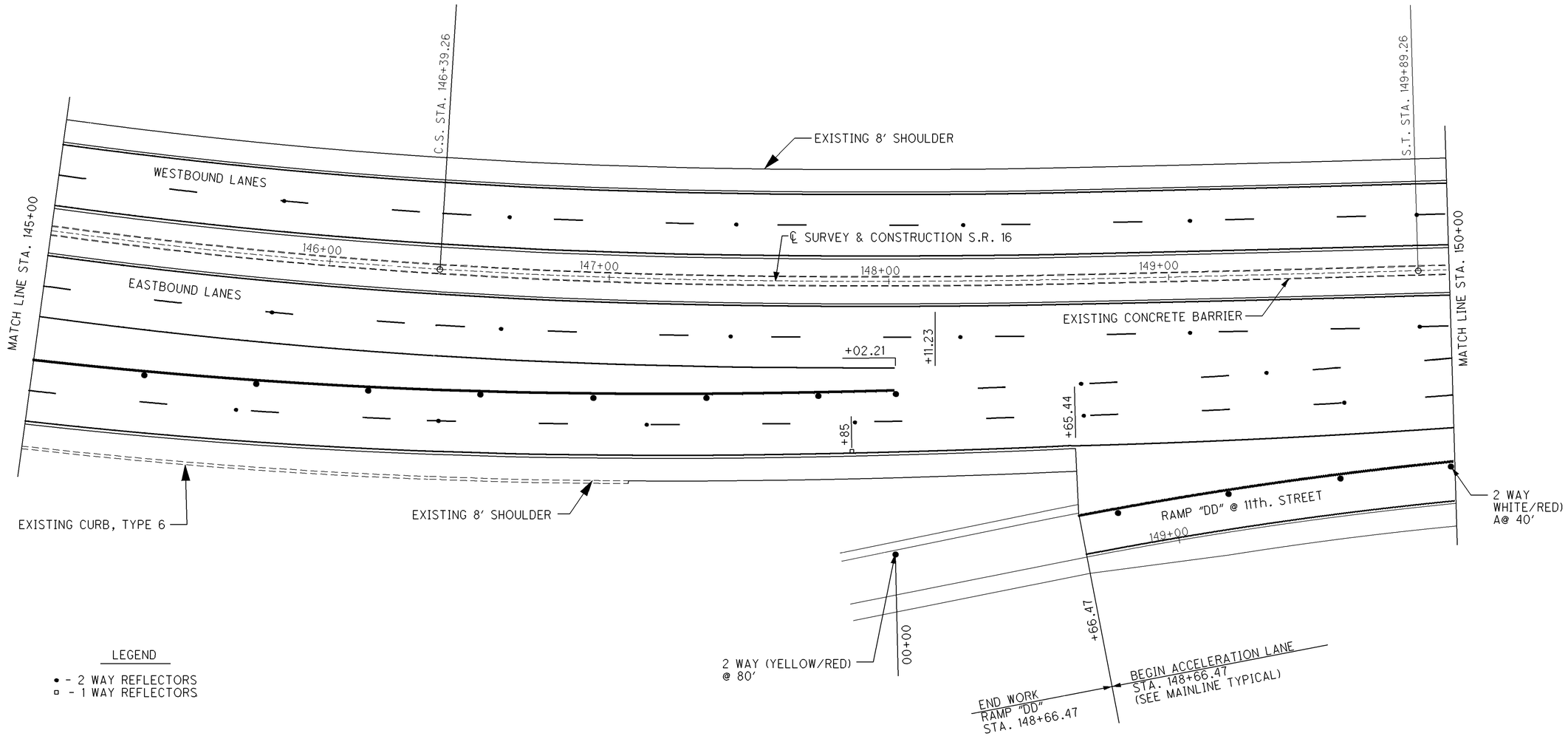
CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16 STA. 140+00 TO STA. 145+00

LIC-16-19.72
LIC-79-12.30

CURVE DATA
S.R. 16

P.I. STA. 141+22.54
Δ= 43°50'10" LT.
Dc = 03°00'00"
Rc = 1909.86'
Ls = 350.00'
Lc = 1111.20'
Ø = 05°15'00"
LT = 233.44'
ST = 116.26'
Es = 151.68'
Ts = 944.48'



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6510159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 145+00 TO STA. 150+00

LIC-16-19.72
LIC-79-12.30

END WORK
ROADWAY "B"
STA. 153+46.67

BEGIN DECELERATION LANE
STA. 153+46.67
(SEE MAINLINE TYPICAL)

2 WAY (WHITE/RED)
@ 80'

P.C. STA. 153+36.10

+46.67

EXISTING 8' SHOULDER

2 WAY (YELLOW/RED)
@ 80'

153+00

154+00

+64.60

ROADWAY "B"

EXISTING 12' SHOULDER

2 WAY
(WHITE/RED)
@ 40'

WESTBOUND LANES

+44.64

MATCH LINE STA. 150+00

151+00

152+00

153+00

154+00

EXISTING CONCRETE BARRIER

℄ SURVEY & CONSTRUCTION S.R. 16

MATCH LINE STA. 155+00

EASTBOUND LANES

81+80

+40

+49.80

EXISTING 8' SHOULDER

EXISTING CURB,
TYPE 6

2 WAY
(WHITE/RED)
@ 40'

P.T. STA. 150+49.99 ℄ RAMP "DD" =
80.99' RT. P.O.T. STA. 150+50.47 ℄ S.R. 16

LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

HORIZONTAL
SCALE IN FEET
0 10 20 40

CALCULATED
J.C.

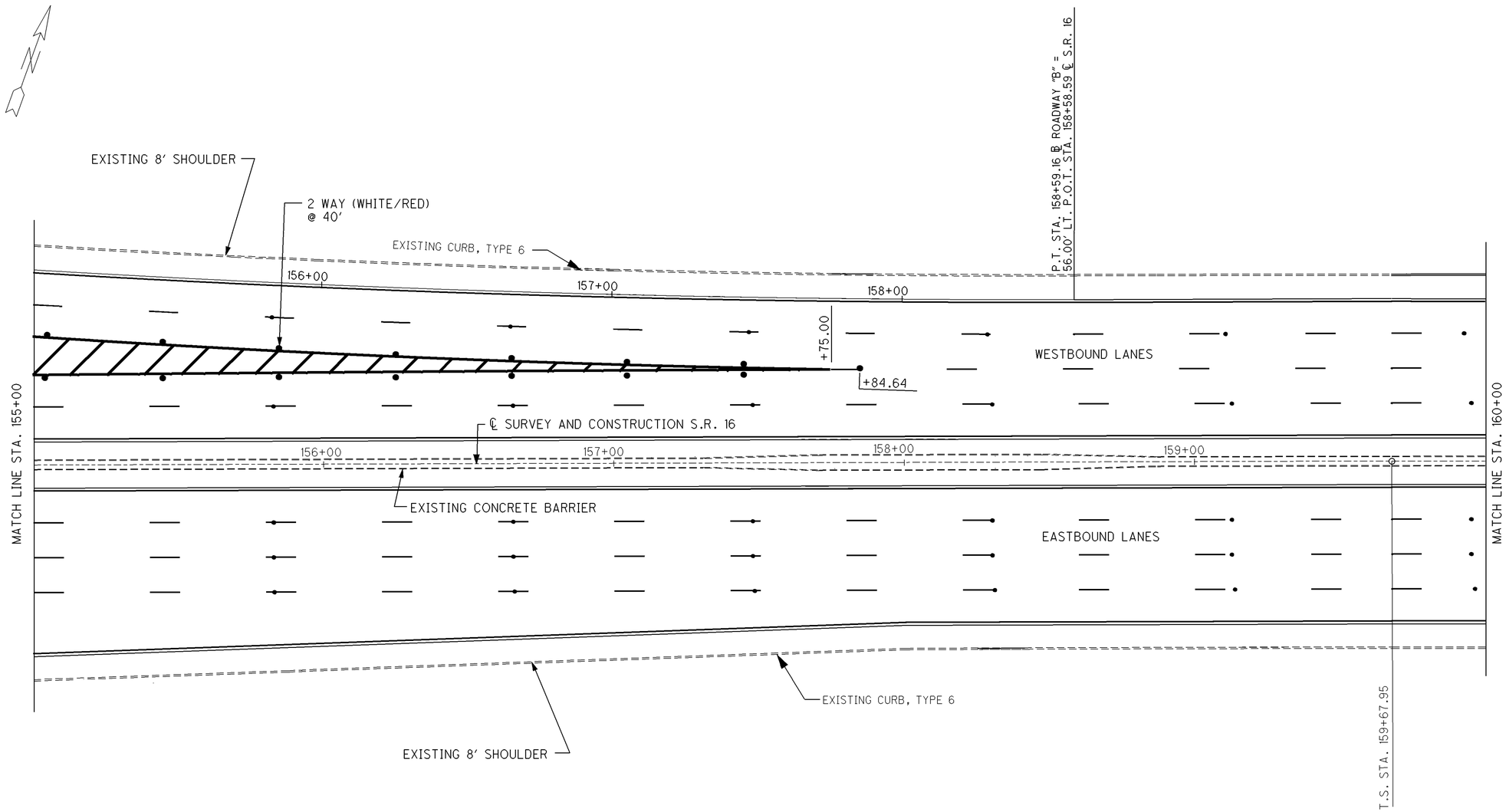
CHECKED
R.G.

PLAN & PAVEMENT MARKING SHEET
STA. 150+00 TO STA. 155+00

LIC-16-19.72
LIC-79-12.30

50
190

L6511159.DGN



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

CURVE DATA
S.R. 16

P.I. STA. 165+57.28
Δ= 24°27′00″ RT.
Dc = 03°00′00″
Rc = 1909.86′
Ls = 350.00′
Lc = 465.00′
Ø = 05°15′00″
LT = 233.44′
ST = 116.76′
TS = 589.33′
Es = 47.05′

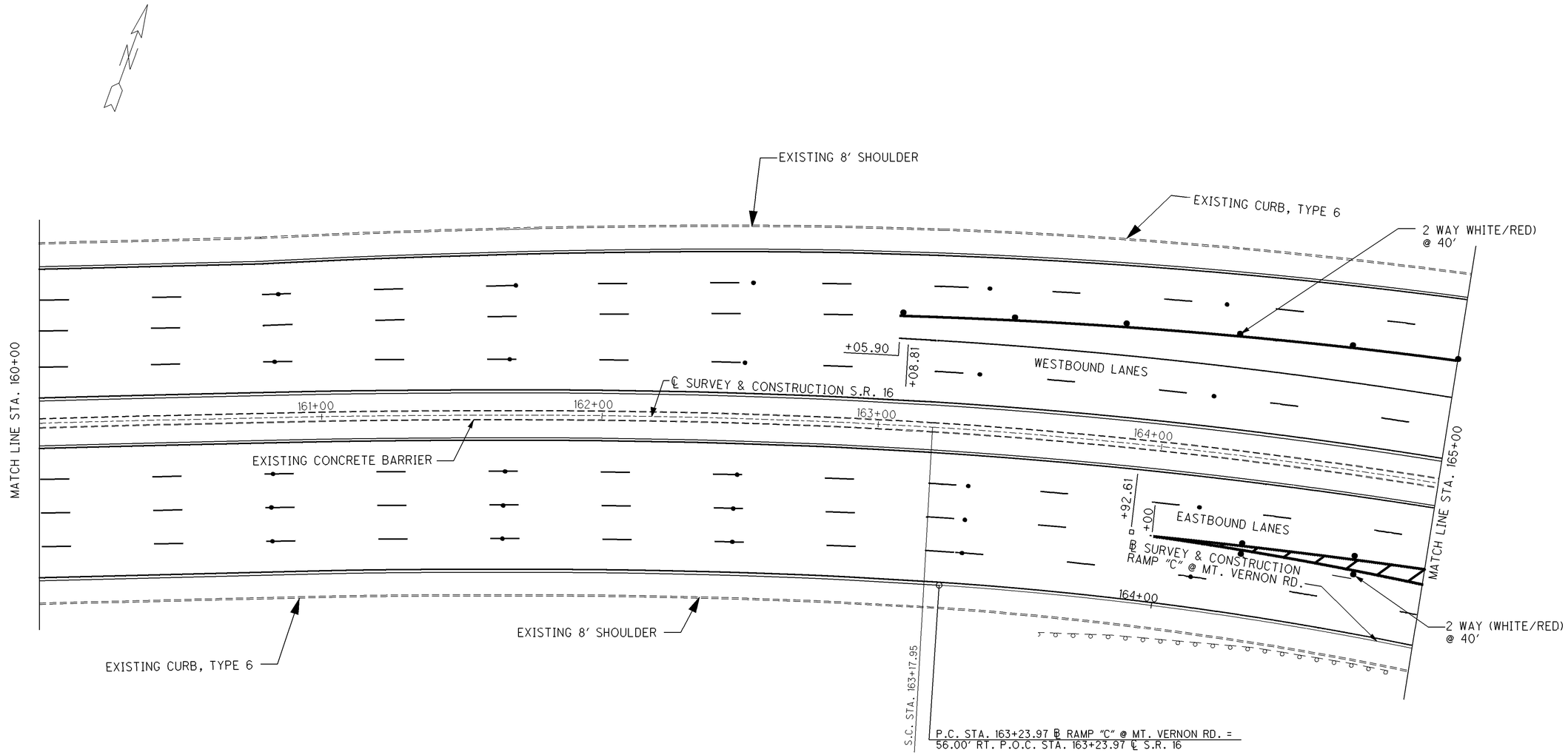
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 155+00 TO STA. 160+00

LIC-16-19.72
LIC-79-12.30

L6512159.DGN



CURVE DATA
S.R. 16

PI STA. 165+57.28
△ = 24°27′00″ RT.
Dc = 03°00′00″
Rc = 1909.86′
Ls = 350.00′
Lc = 465.00′
Ts = 589.33′
Es = 47.05′
Øs = 05°15′00″
LT = 233.44′
ST = 116.76′

LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

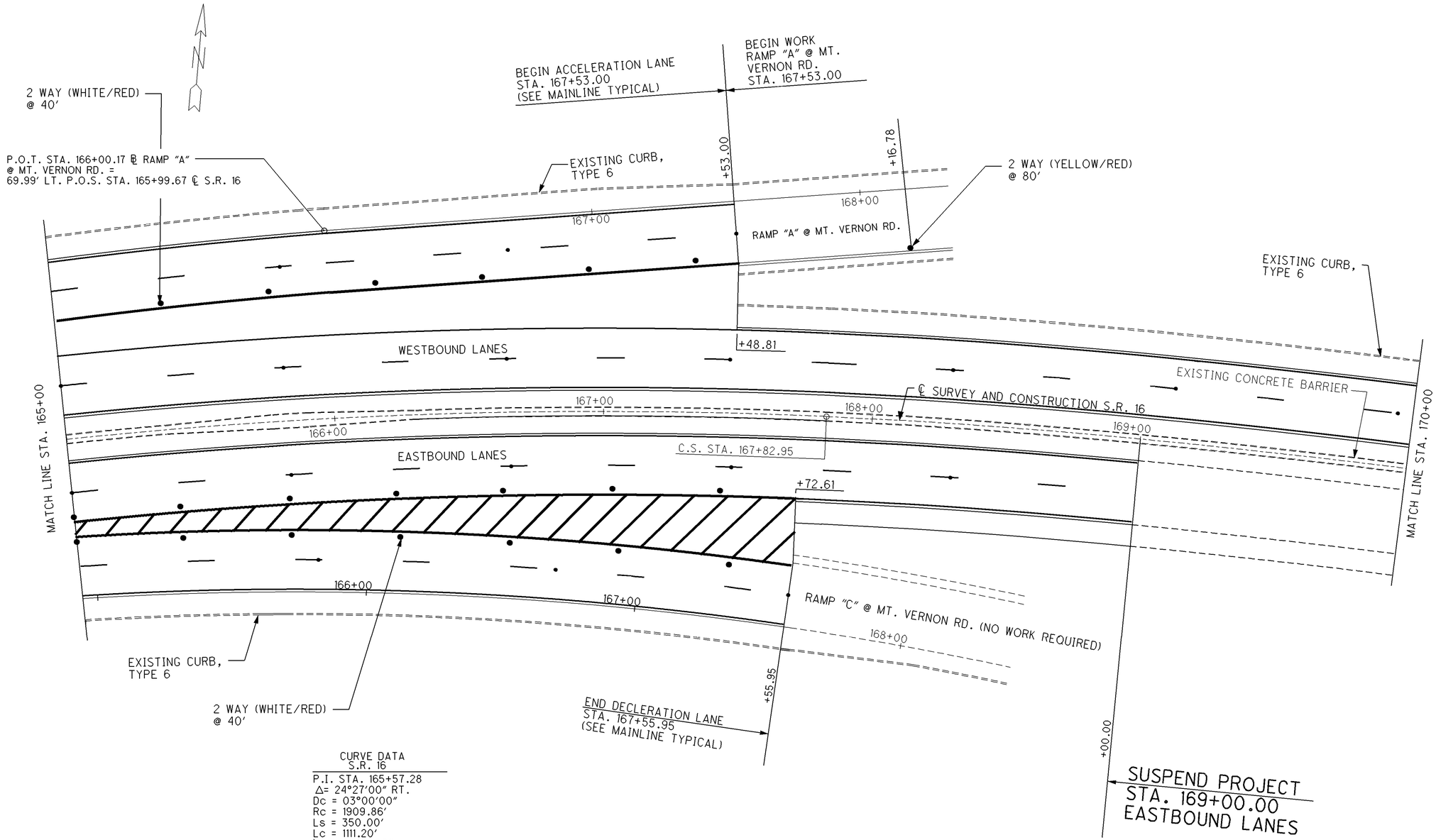
L6513159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 160+00 TO STA. 165+00

LIC-16-19.72
LIC-79-12.30



CURVE DATA
S.R. 16

P.I. STA. 165+57.28
Δ= 24°27'00" RT.
Dc = 03°00'00"
Rc = 1909.86'
Ls = 350.00'
Lc = 1111.20'
Ø = 05°15'00"
LT = 233.44'
ST = 116.76'
TS = 589.33'
Es = 47.05'

L6514159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 165+00 TO STA. 170+00

LIC-16-19.72
LIC-79-12.30

CURVE DATA
S.R. 16

P.I. STA. 165+57.28
△= 24°27'00" RT.
Dc = 03°00'00"
Rc = 1909.86'
Ls = 350.00'
Lc = 1111.20'
Ø = 05°15'00"
LT = 233.44'
ST = 116.76'
TS = 589.33'
Es = 47.05'

LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6515159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

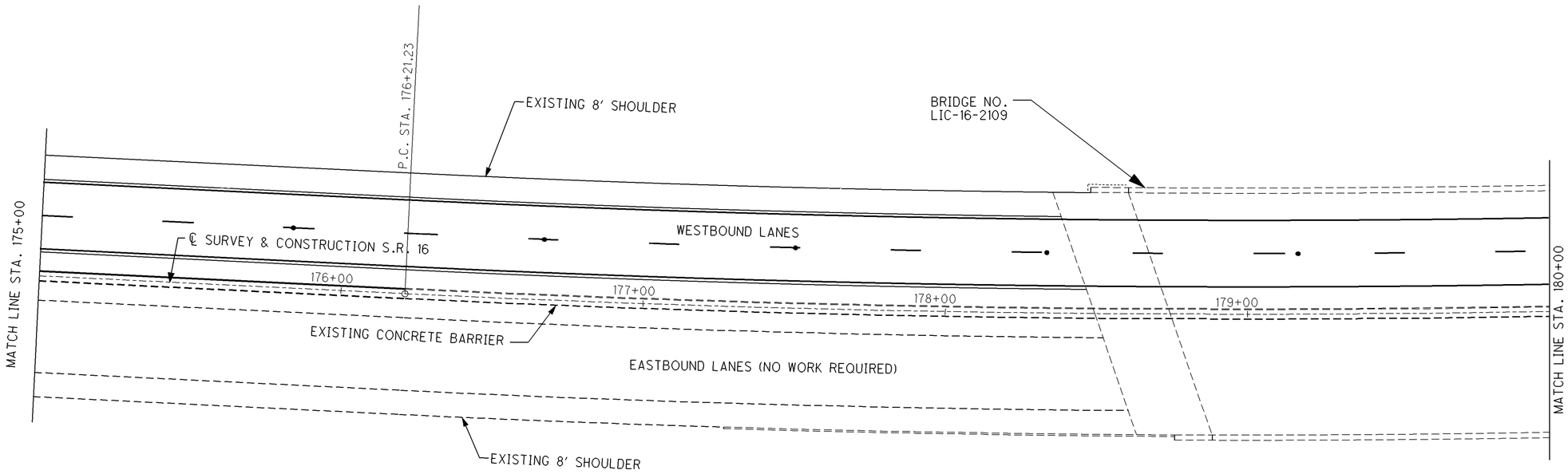
CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 170+00 TO STA. 175+00

LIC-16-19.72
LIC-79-12.30

CURVE DATA
S.R. 16

PI STA=178+79.86
△ = 05°10'09" LT.
Dc = 01°00'00"
T = 258.63
R = 5729.58
L = 516.92
E = 5.83



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6516159.DGN

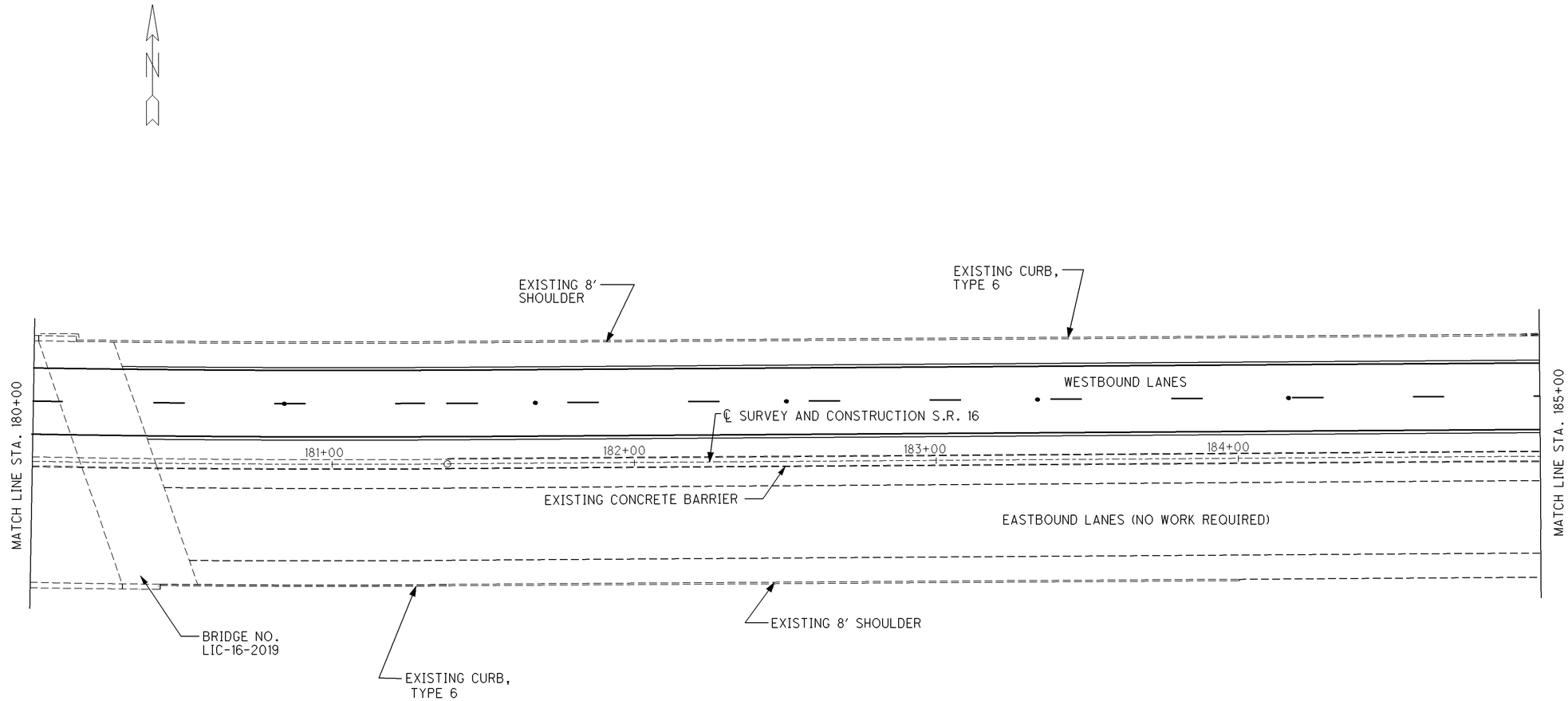
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 175+00 TO STA. 180+00

LIC-16-19.72
LIC-79-12.30

55
190



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

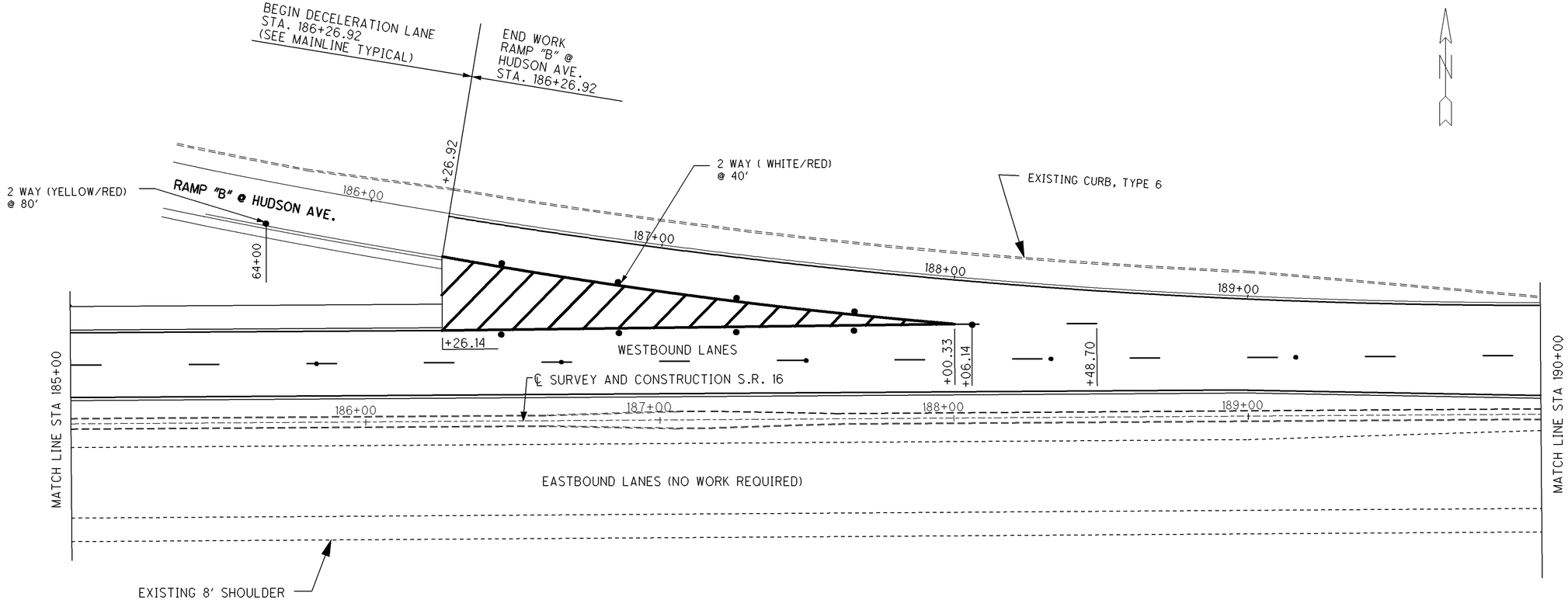
L6517159.DGN

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 180+00 TO STA. 185+00

LIC-16-19.72
LIC-79-12.30



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L6518159.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

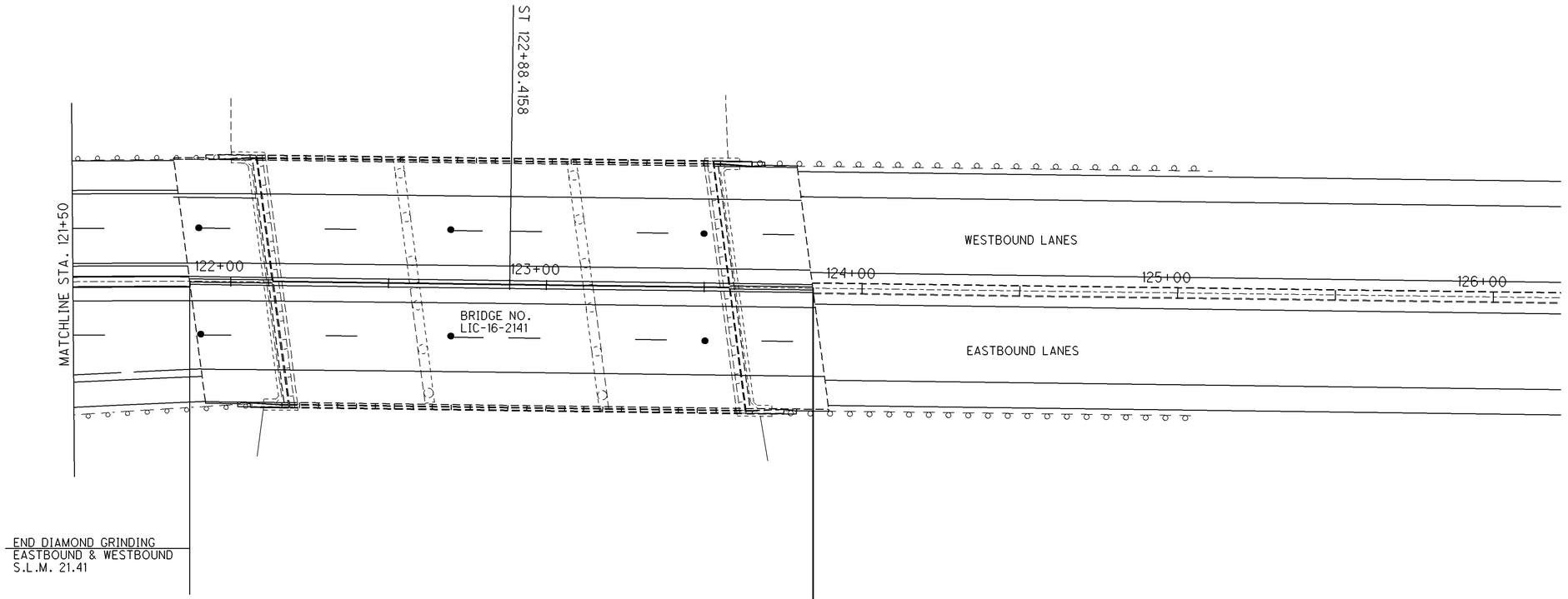
CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 185+00 TO STA. 190+00

LIC-16-19.72
LIC-79-12.30

57
190

P.T. STA. 190+15.22 BL RAMP "B" AT HUDSON AVE=
38.00' LT. P.O.T. STA. 190+15.11 CL S.R. 16
PC 116+62.3166
P.T. STA. 190+15.22 ℄ RAMP "B" @ HUDSON AVE. =
38.00' LT. P.O.T. STA. 190+15.11 ℄ S.R. 16
BEGIN DIAMOND GRINDING
WESTBOUND LANES
CS 120+88.4158
MATCH LINE STA. 190+00
℄ SURVEY &
CONSTRUCTION, S.R. 16
117+00
118+00
119+00
120+00
121+00
WESTBOUND LANES
EASTBOUND LANES
BRIDGE NO.
LIC-16-2131
MATCHLINE STA. 121+50
PI STA = 119+30.22
E = 26528.27
N = 12371.70
I = 13°07'39"R
CIRCULAR
Ic = 10°37'39"
Da = 2°30'00"
Dc = 2°30'01"
T = 213.16
R = 2291.83
L = 425.10
C = 424.49
E = 9.89
M = 9.85
SPIRAL OUT
Is = 2°30'00"
L = 200.00
X = 199.96
Y = 2.91
P = 0.73
K = 99.99
LT = 133.35
ST = 99.99
T = 360.58
+75.00
RESUME PROJECT
BEGIN DIAMOND GRINDING
STA. 119+75.00
EASTBOUND LANES
STATION EQUATION:
STA.190+33.14 (BACK) =
STA.116+62.16 (AHEAD)
LEGEND
* - 2 WAY REFLECTORS
□- 1 WAY REFECTORS
0
20
40
HORIZONTAL
SCALE IN FEET
CALCULATED
J.C.
CHECKED
R.G.
PLAN & PAVEMENT MARKING SHEET S.R. 16
STA. 190+00(BK.) TO STA. 121+50(AH.)
LIC-16-19.72
LIC-79-12.30
58
190
L6519159.DGN



LEGEND

* - 2 WAY REFLECTORS
□- 1 WAY REFECTORS

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING DETAIL SHEET S.R. 16
STA. 121+50 TO STA. 126+00

LIC-16-19.72
LIC-79-12.30

59
190

L6519160.DGN

L1665172.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET RAMP "H"
STA. 107+59.60 TO STA. 112+40

LIC-16-19.72
LIC-79-12.30

60
190

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

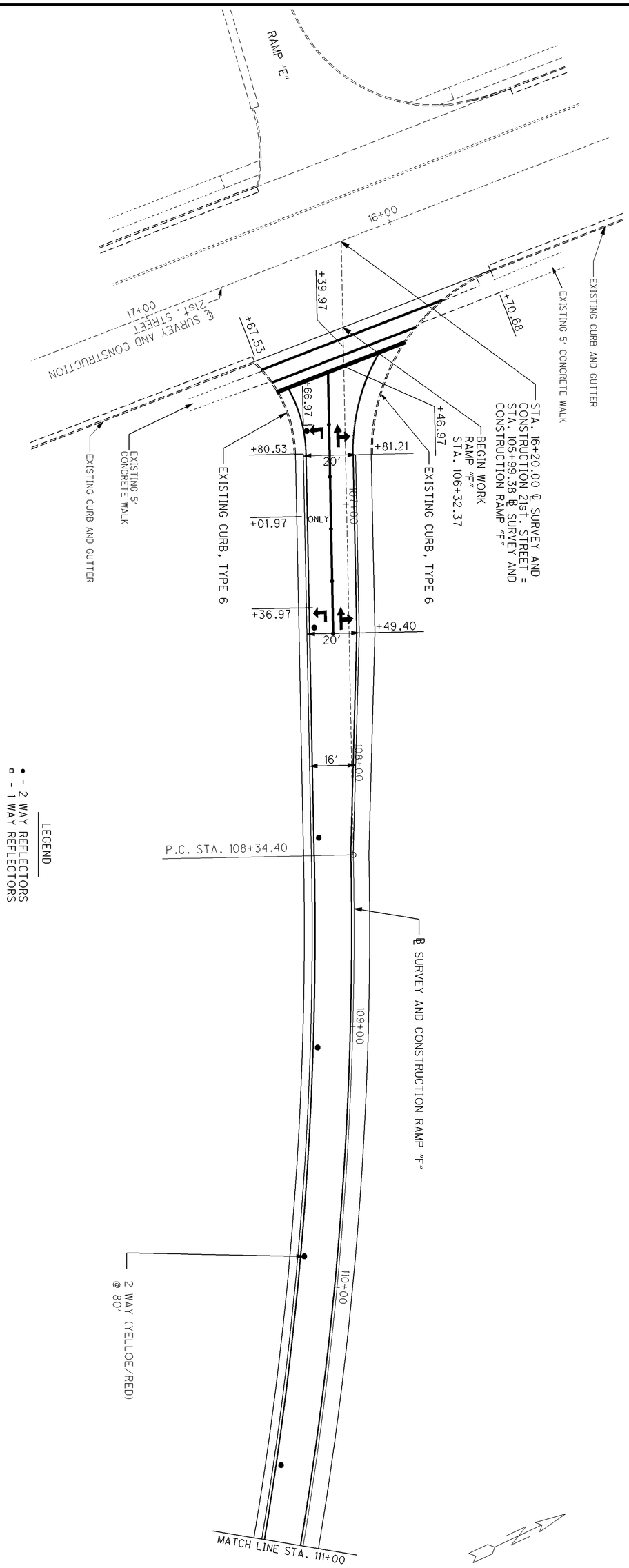
PLAN & PAVEMENT MARKING SHEET RAMP "H" STA. 112+40 TO STA. 116+21.24

LIC-16-19.72
LIC-79-12.30

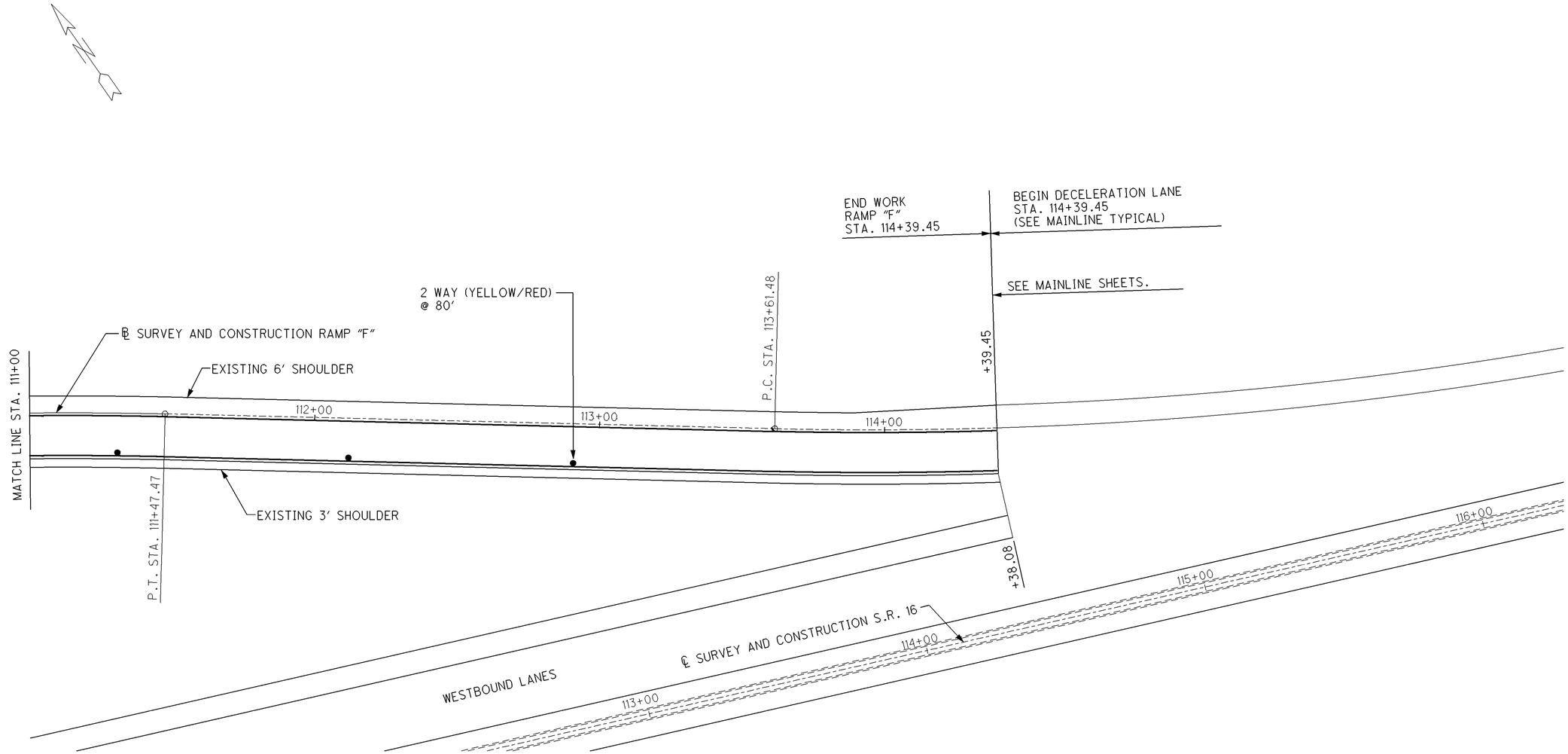
61
190

L1665272.DGN

L1665170.DGN



62 / 190	LIC-16-19.72 LIC-79-12.30	PLAN & PAVEMENT MARKING SHEET RAMP "F" STA. 106+32.37 TO STA. 111+00	CALCULATED J.C. CHECKED R.G.	0 20 10 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

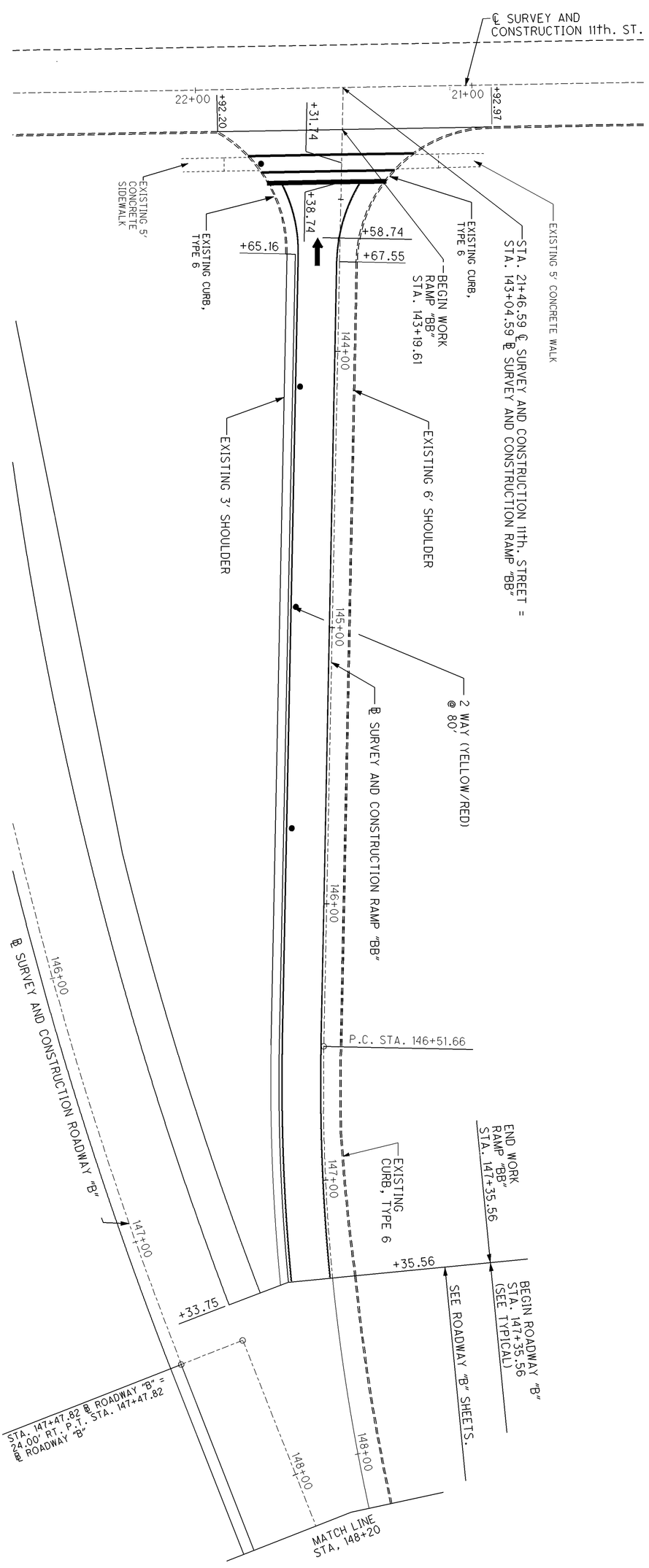
PLAN & PAVEMENT MARKING SHEET RAMP "F"
STA. 111+00 TO STA. 114+39.40

LIC-16-19.72
LIC-79-12.30

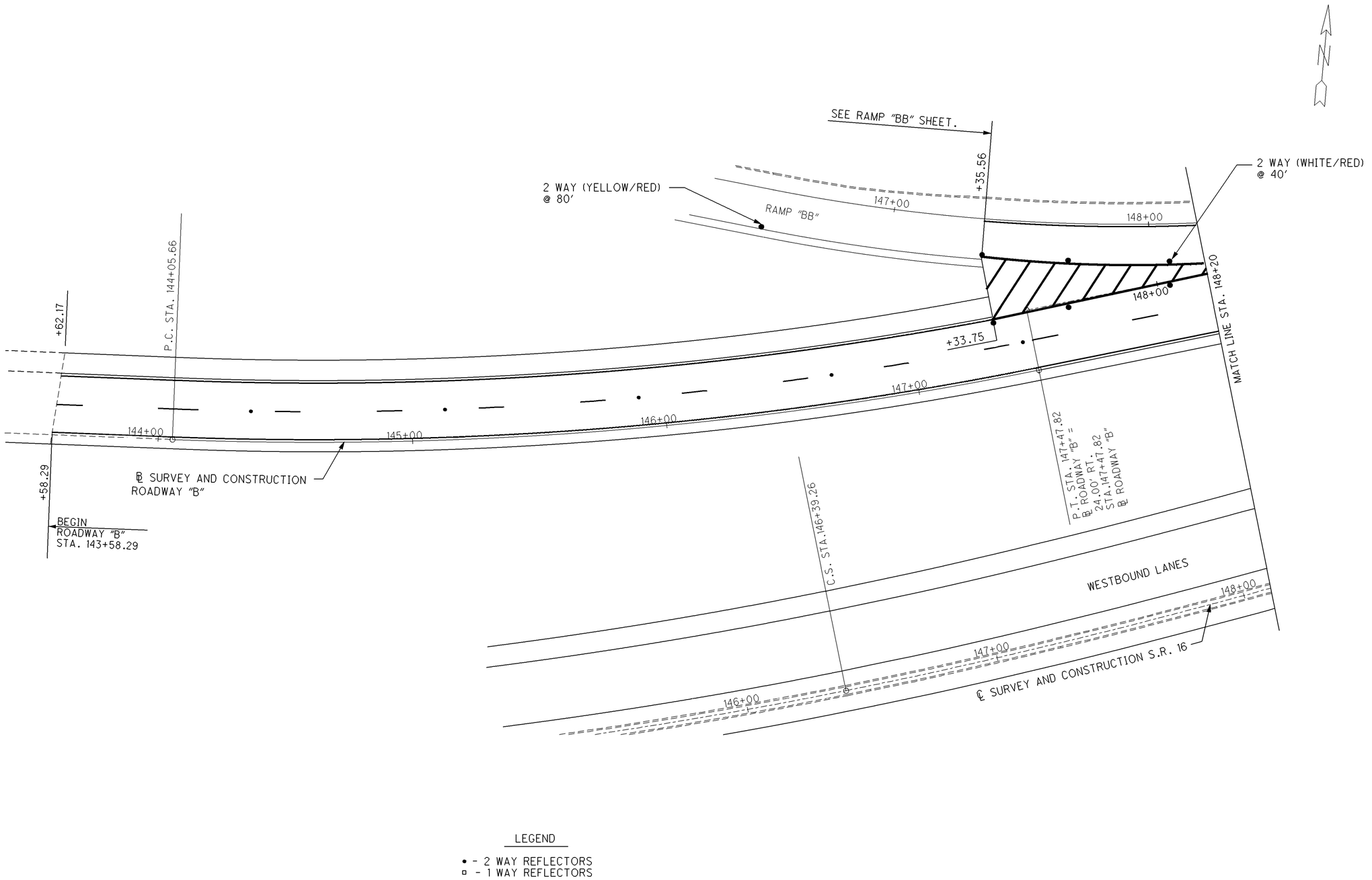
63
190

L1665270.DGN

L1665181.DGN



64 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN & PAVEMENT MARKING SHEET RAMP "BB"** **STA. 143+19.61 TO STA. 148+20**	CALCULATED J.C. CHECKED R.G.	0 20 10 40 HORIZONTAL SCALE IN FEET



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

HORIZONTAL SCALE IN FEET
0 10 20 40

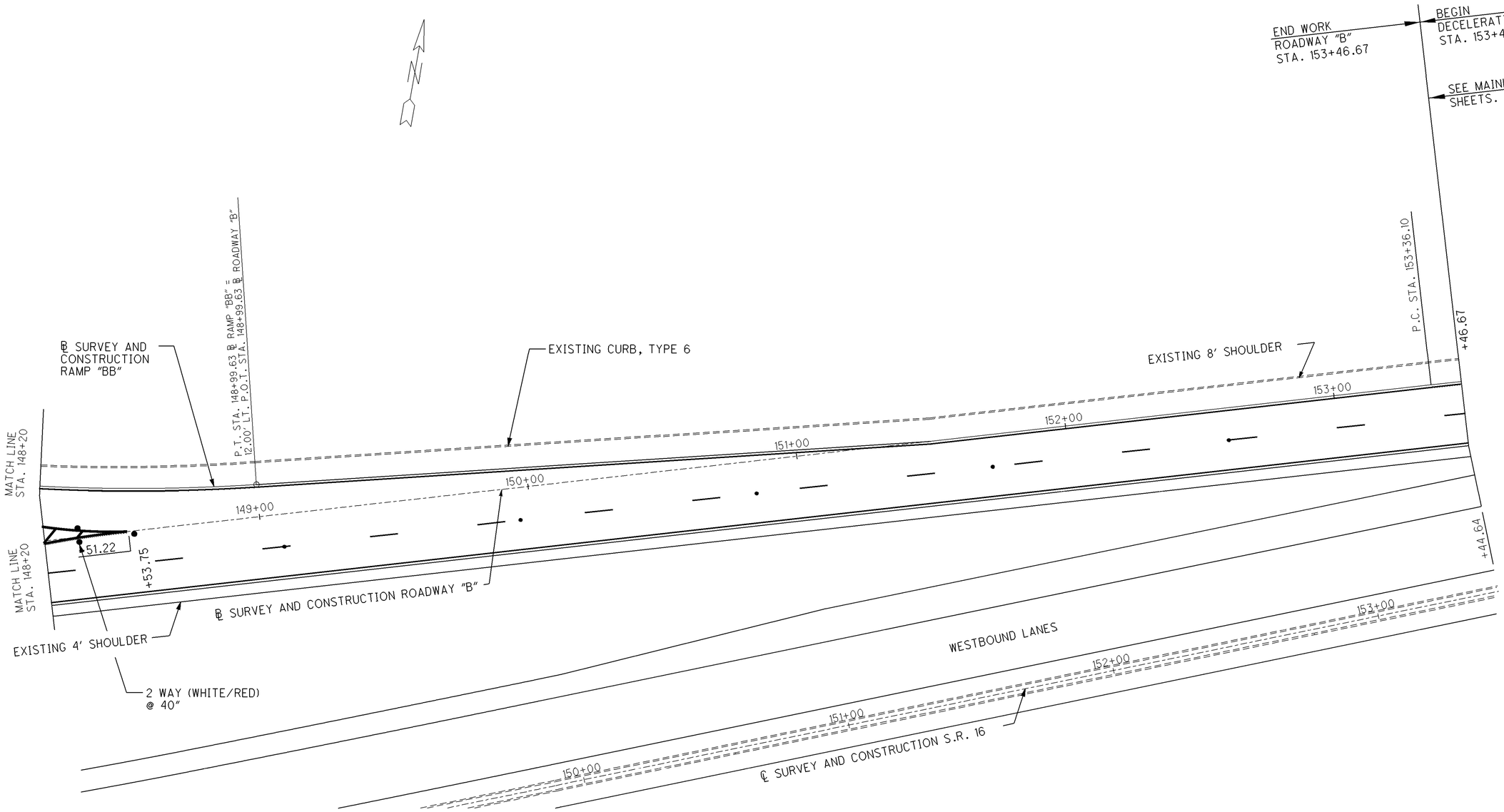
CALCULATED J.C.
CHECKED R.S.

PLAN & PAVEMENT MARKING SHEET ROADWAY "B" STA. 143+58.29 TO STA. 148+20

LIC-16-19.72
LIC-79-12.30

65
190

L1655178.DGN



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET ROADWAY "B" STA. 148+20 TO STA. 153+36.10

LIC-16-19.72
LIC-79-12.30

66
190

LI165281.DGN

L1665182.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

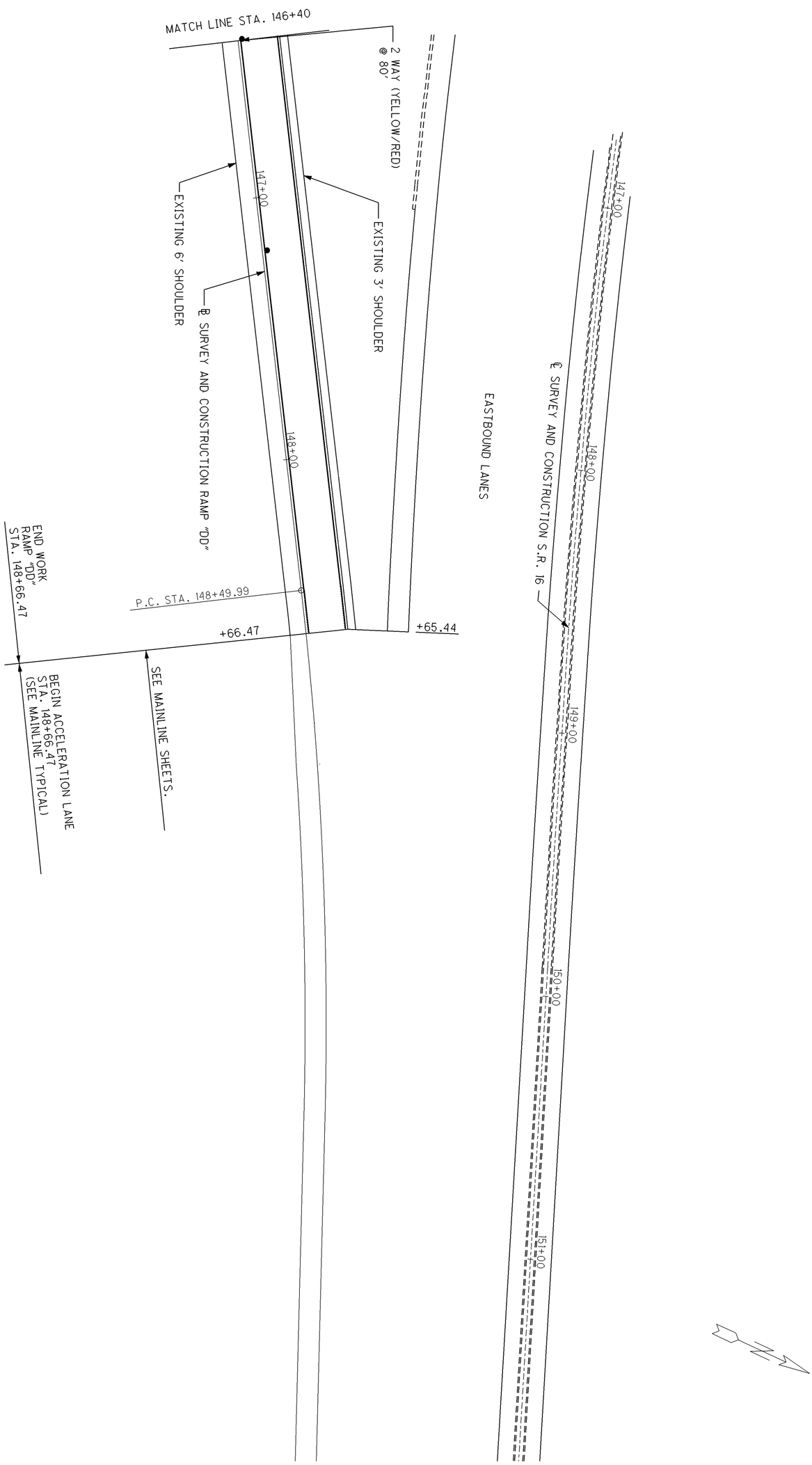
CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET "RAMP DD"
STA. 141+38.84 TO STA. 146+40

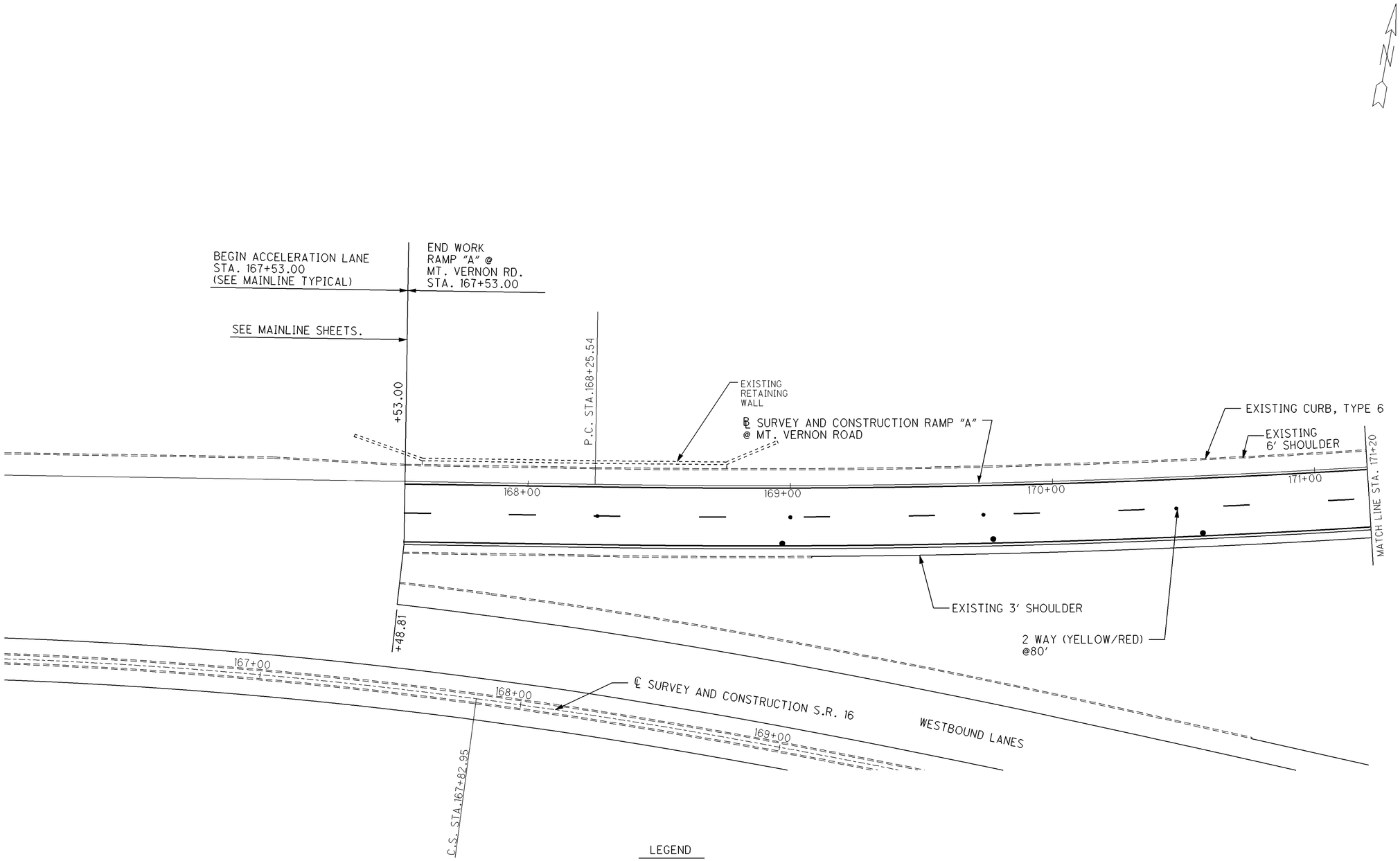
LIC-16-19.72
LIC-79-12.30

67
190

L1665282.DGN



68 / 190	LIC-16-19.72 LIC-79-12.30	PLAN & PAVEMENT MARKING SHEET RAMP "DD" STA. 146+40 TO STA. 151+50	CALCULATED J.C. CHECKED R.G.	0' 20' 40' 10' HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

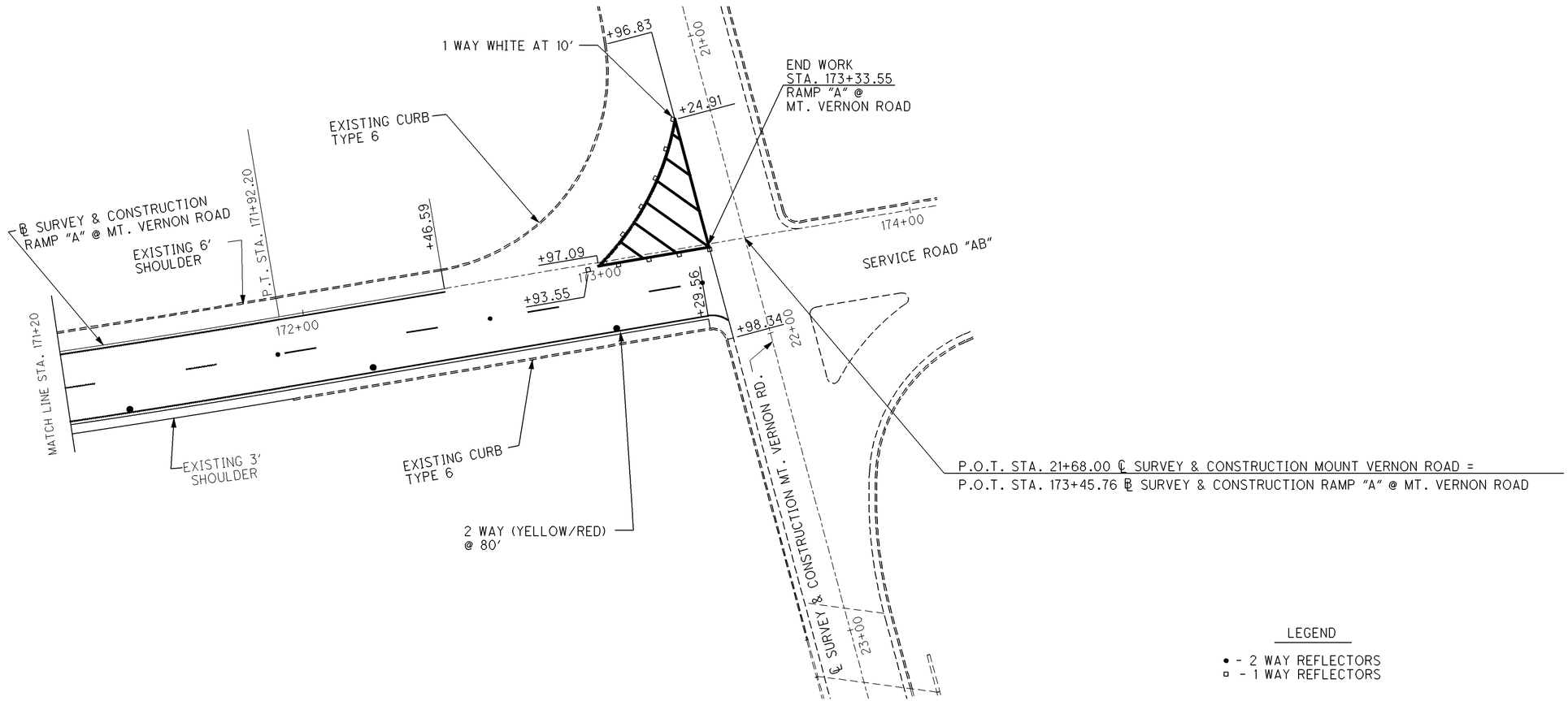
CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET RAMP "A" AT MT. VERNON ROAD
STA. 166+00 TO STA. 171+20

LIC-16-19.72
LIC-79-12.30

69
190

L1655183.DGN



LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET RAMP "A" AT MT. VERNON ROAD
STA. 171+20 TO STA. 173+33.55

LIC-16-19.72
LIC-79-12.30

70
190

L1665283.DGN

STA. 22+55.11 ℄ SURVEY & CONSTRUCTION HUDSON AVENUE =
STA. 178+15.04 ℄ SURVEY & CONSTRUCTION RAMP "B" @ HUDSON AVENUE

EXISTING 6' SIDEWALK

EXISTING CURB TYPE 6

℄ SURVEY & CONSTRUCTION RAMP "B" @ HUDSON AVENUE

EXISTING CURB, TYPE 6

P.O.T. STA. 181+95.83 ℄ RAMP "B"=
8.00' LT. P.O.T. STA. 181+95.83
℄ RAMP "B"

EXISTING 6' SHOULDER

22+00

+35.58

+73.14

+73.52

+08.52

+43.52

+58.52

179+00

180+00

181+00

182+00

183+00

24'

+46.52

+53.52

ONLY

+94.80

P.C. STA. 179+22.62

P.T. STA. 180+40.16

1 WAY WHITE
@ 20'

2 WAY (YELLOW/RED)
@80'

℄ SURVEY & CONSTRUCTION RAMP "B" @ HUDSON AVENUE

MATCH LINE STA. 183+20

EXISTING 3' SHOULDER

BEGIN WORK
STA. 178+34.06
RAMP "B" @
HUDSON AVENUE

+94.50

+49.47

23+00

EXISTING CURB, TYPE 6

EXISTING 6' SIDEWALK

℄ SURVEY & CONSTRUCTION HUDSON AVENUE

LEGEND

• - 2 WAY REFLECTORS
▫ - 1 WAY REFLECTORS

L1665B07.DGN

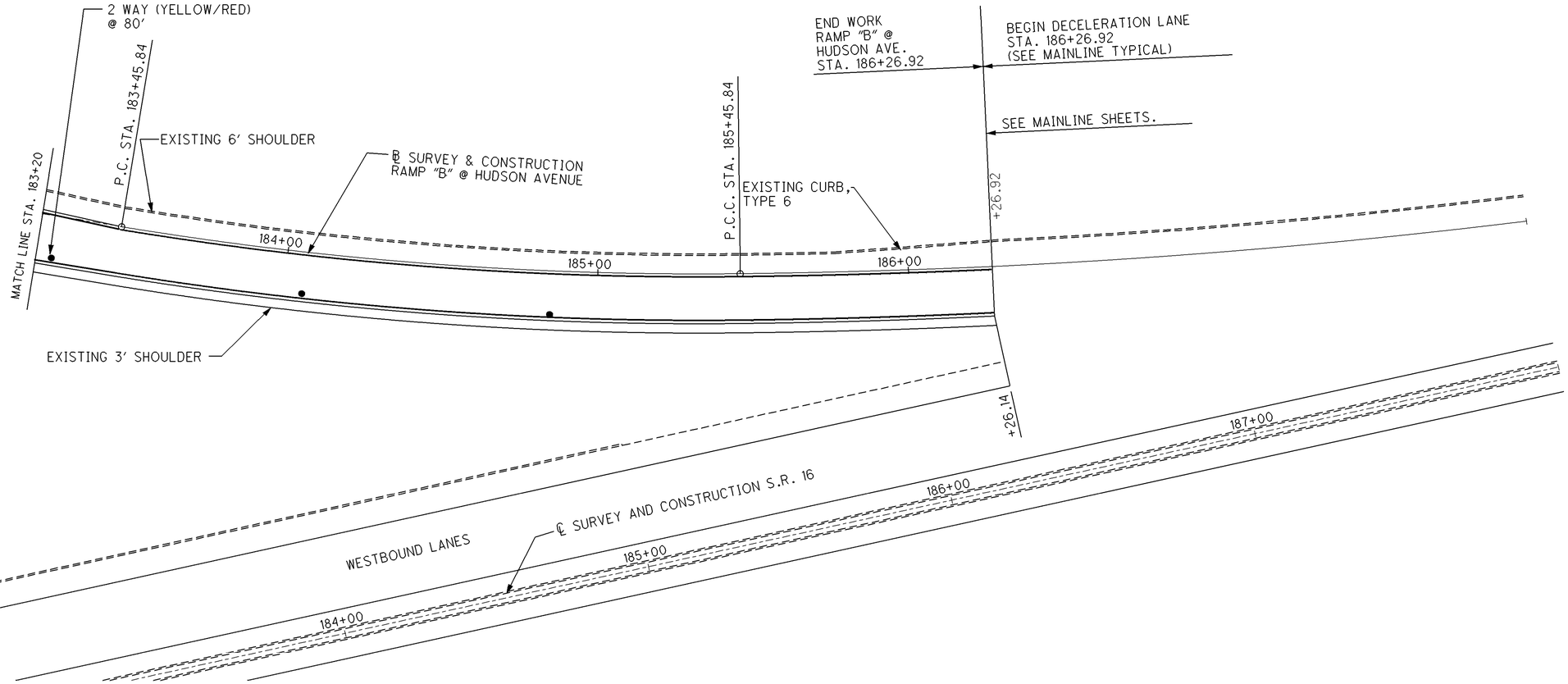
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

PLAN & PAVEMENT MARKING SHEET RAMP "B" AT HUDSON AVENUE STA. 178+00 TO STA. 183+20

LIC-16-19.72
LIC-79-12.30

71
190



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED J.C.
CHECKED R.G.

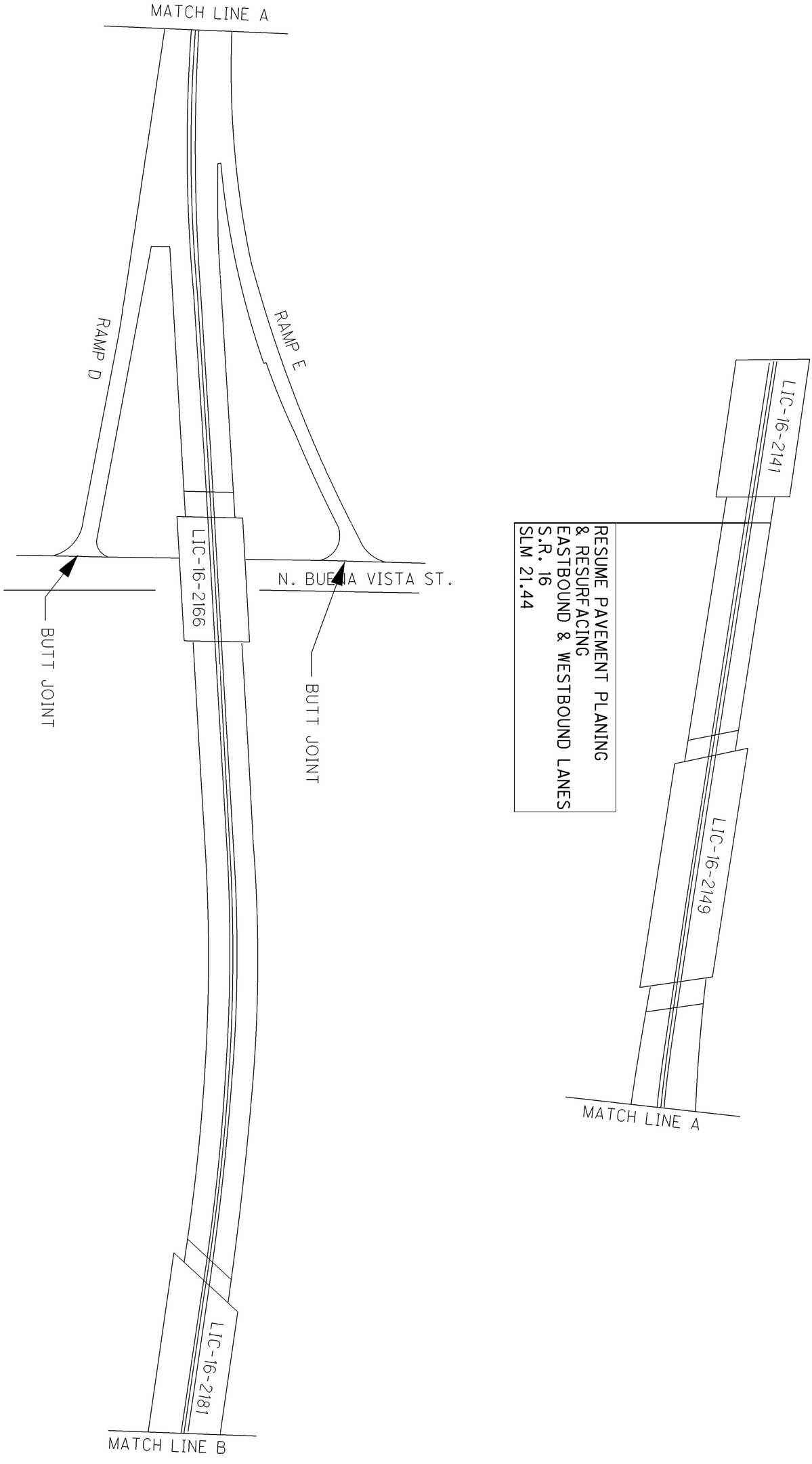
PLAN & PAVEMENT MARKING SHEET RAMP "B" AT HUDSON AVENUE
STA. 183+20 TO STA. 188+00

LIC-16-19.72
LIC-79-12.30

72
190

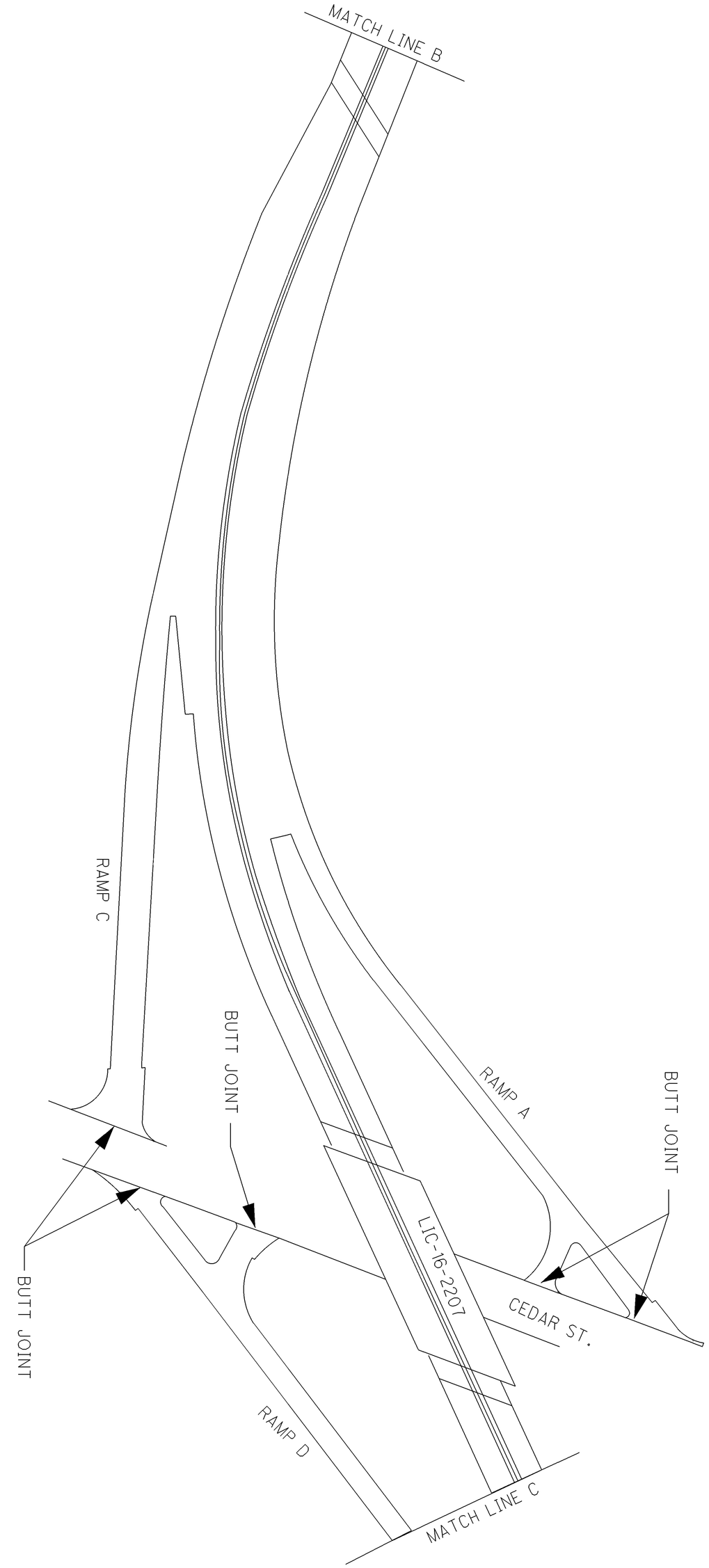
L1665BA7.DGN

P:\LIC\0F638\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_001.DGN 16-MAR-2009 3:43PM rgossett



NOT TO SCALE

73 / 190	**LIC-16-19.72** **LIC-79-12.30**	PLAN SHEET S.R. 16 S.L.M. 21.44 TO S.L.M. 23.66	CALCULATED LME CHECKED TJD	N



NOT TO SCALE

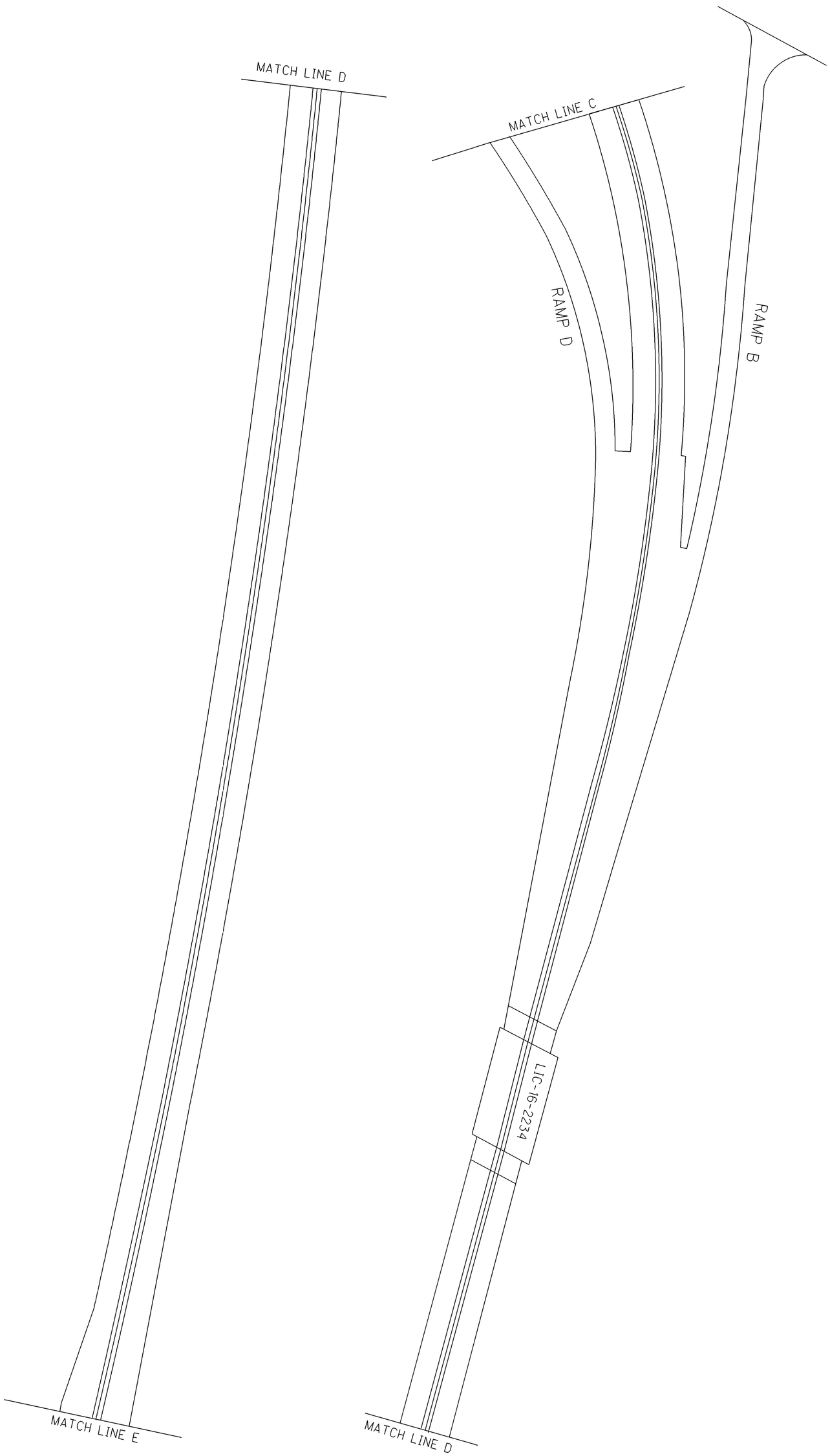
LIC-16-19.72
LIC-79-12.30

PLAN SHEET S.R. 16
S.L.M. 21.44 TO S.L.M. 23.66

CALCULATED LME
CHECKED TJD

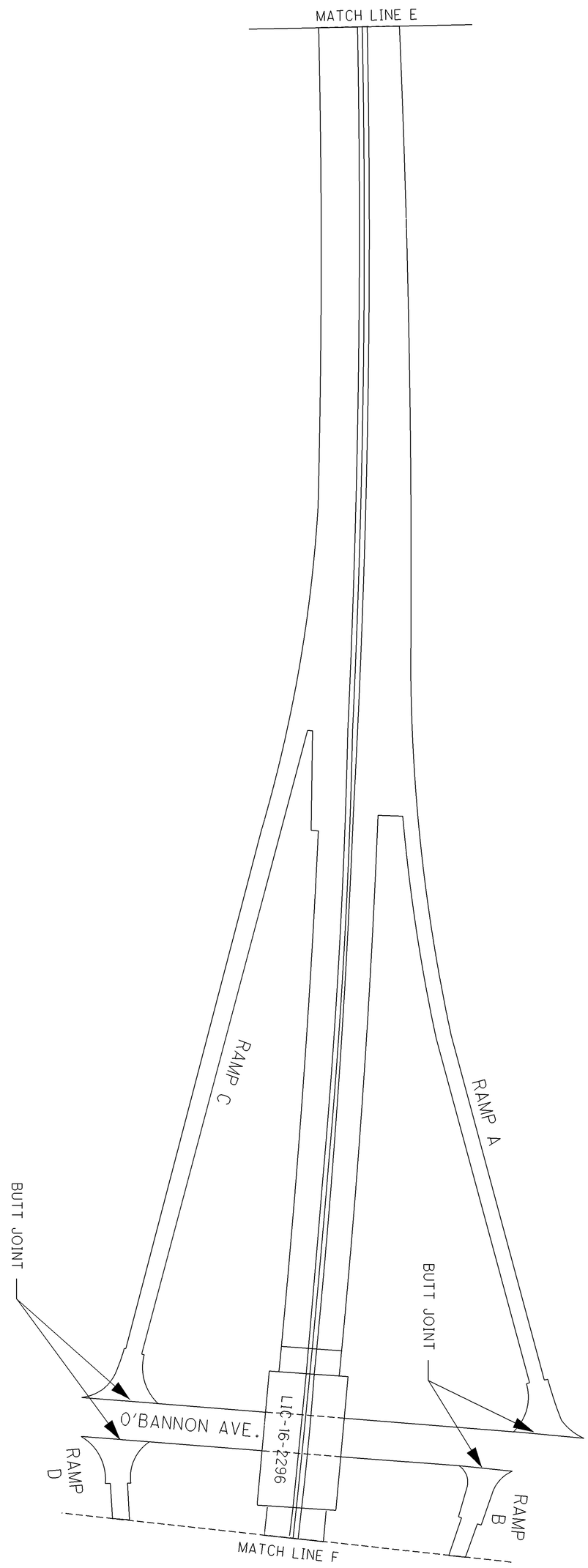
N

P:\LIC\F0384\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_003.DGN 16-MAR-2009 3:12PM rgossett



NOT TO SCALE

75 / 196	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 16** **S.L.M. 21.44 TO S.L.M. 23.66**	CALCULATED LME CHECKED TJD	N

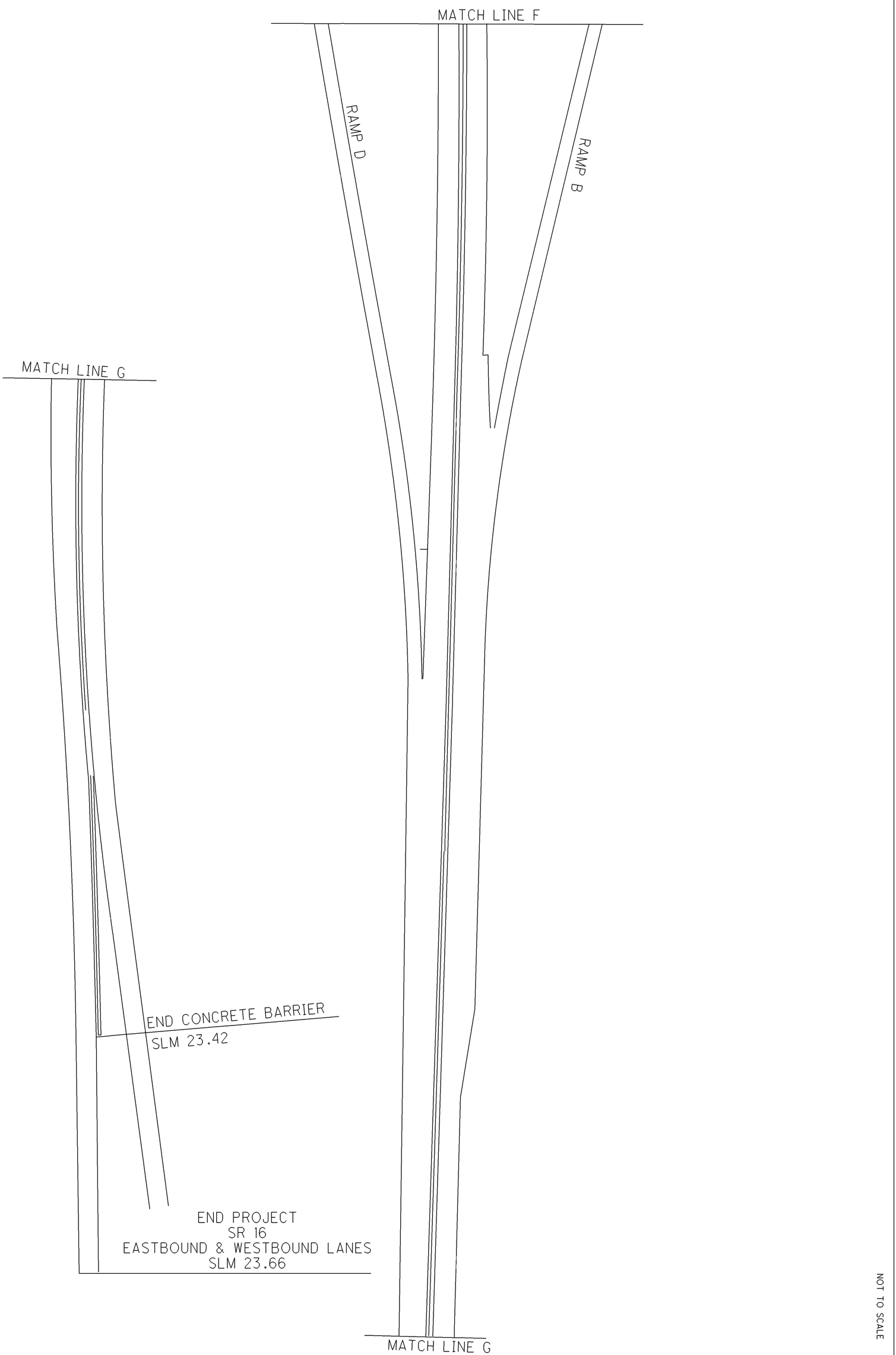


NOT TO SCALE

LIC-16-19.72
LIC-79-12.30

PLAN SHEET S.R. 16
S.L.M. 21.44 TO S.L.M. 23.66

CALCULATED LME
CHECKED TJD



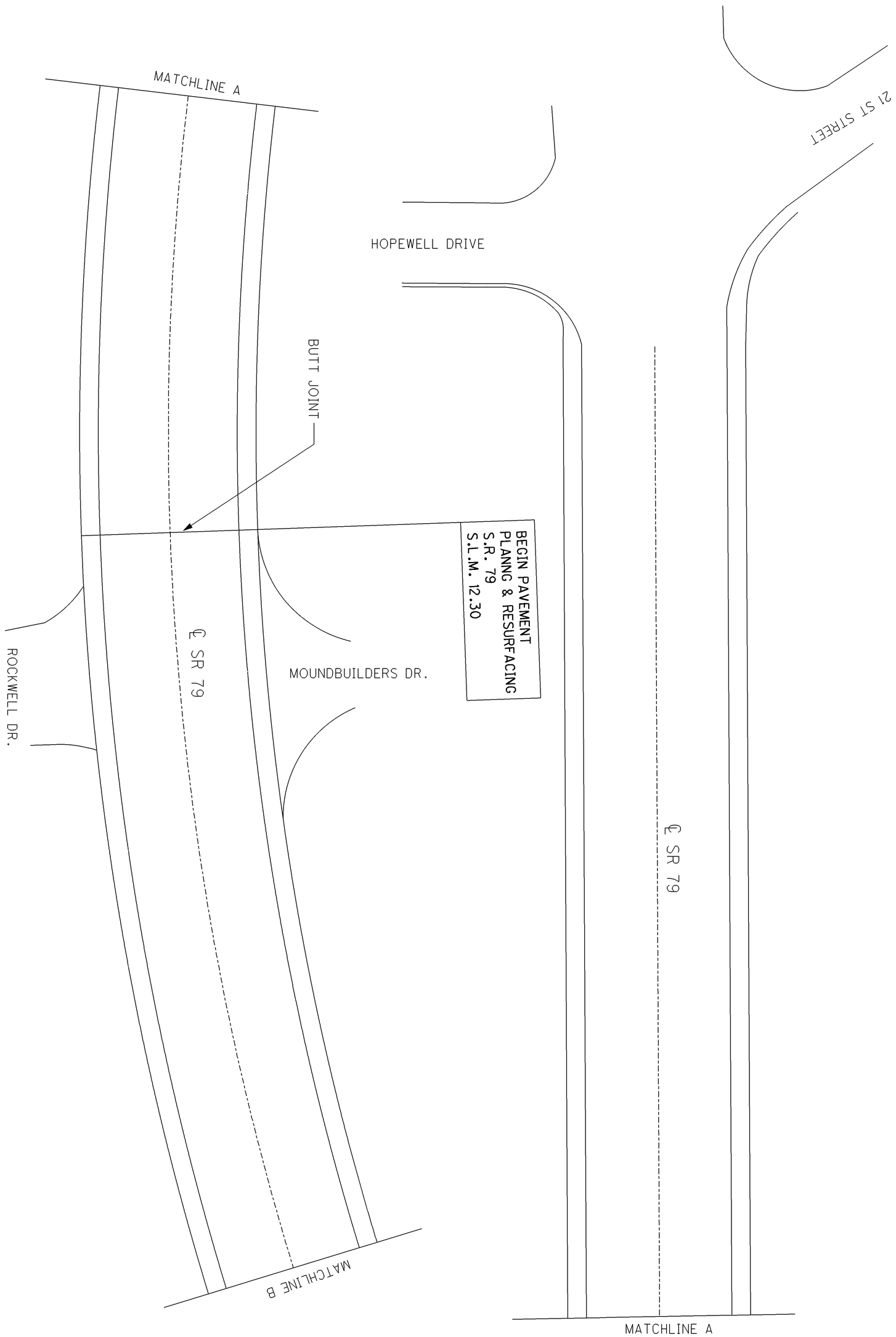
NOT TO SCALE

LIC-16-19.72
LIC-79-12.30

PLAN SHEET S.R. 16
S.L.M. 21.44 TO S.L.M. 23.66

CALCULATED LME
CHECKED TJD

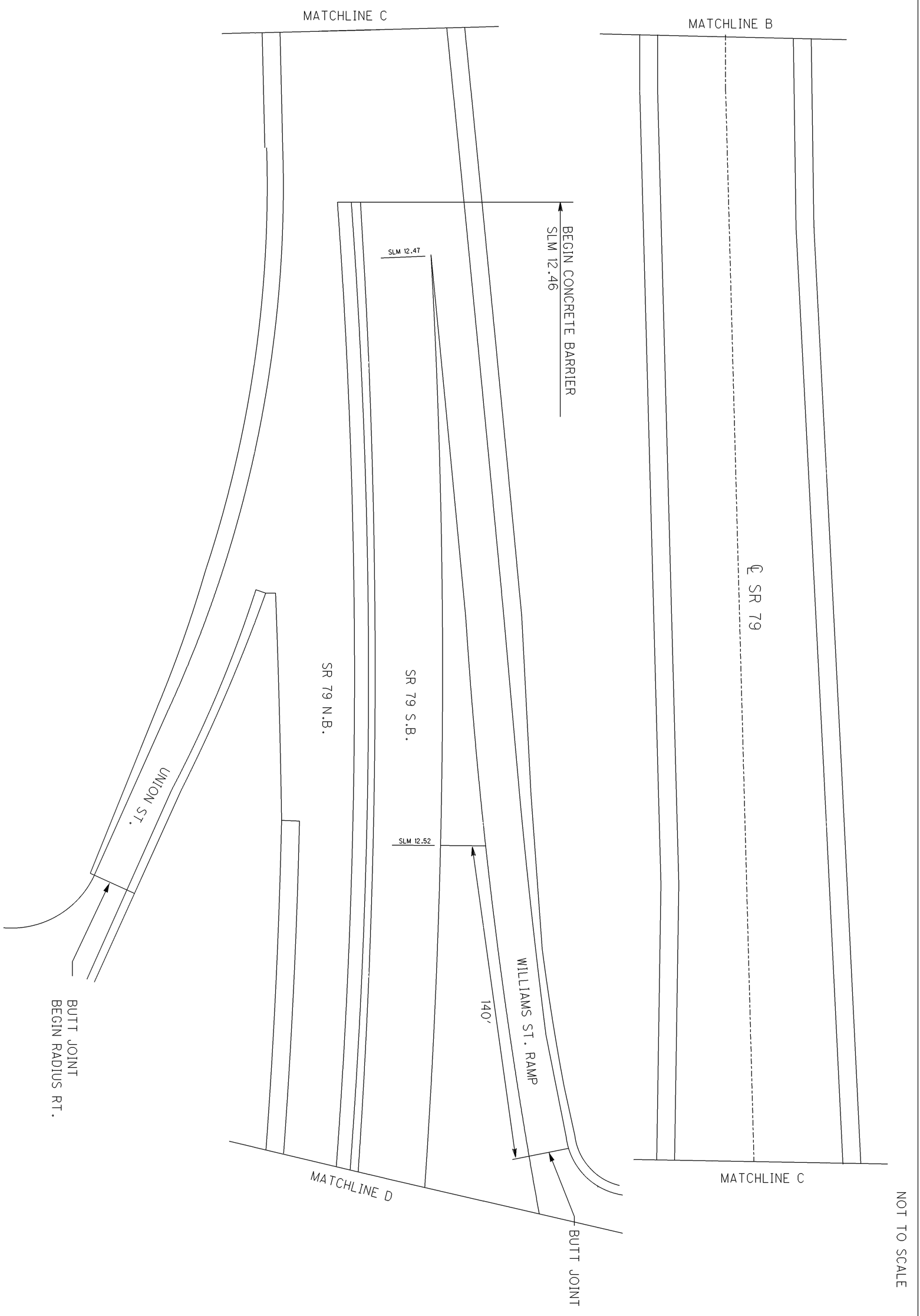
N



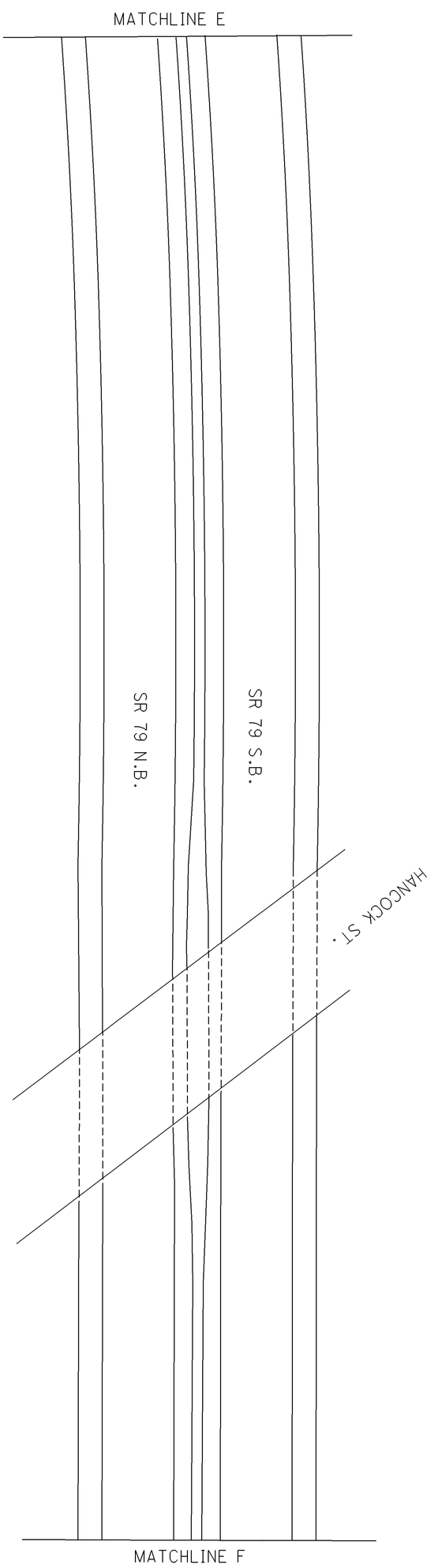
NOT TO SCALE

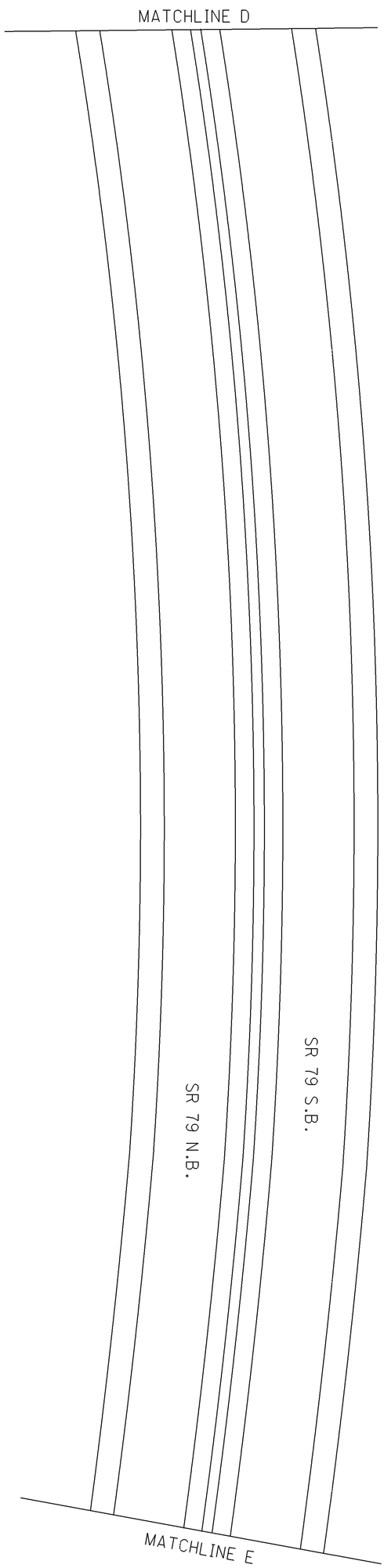
78 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N

P:\LIC\079\376\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_007.DGN 16-MAR-2009 3:46PM rgossett



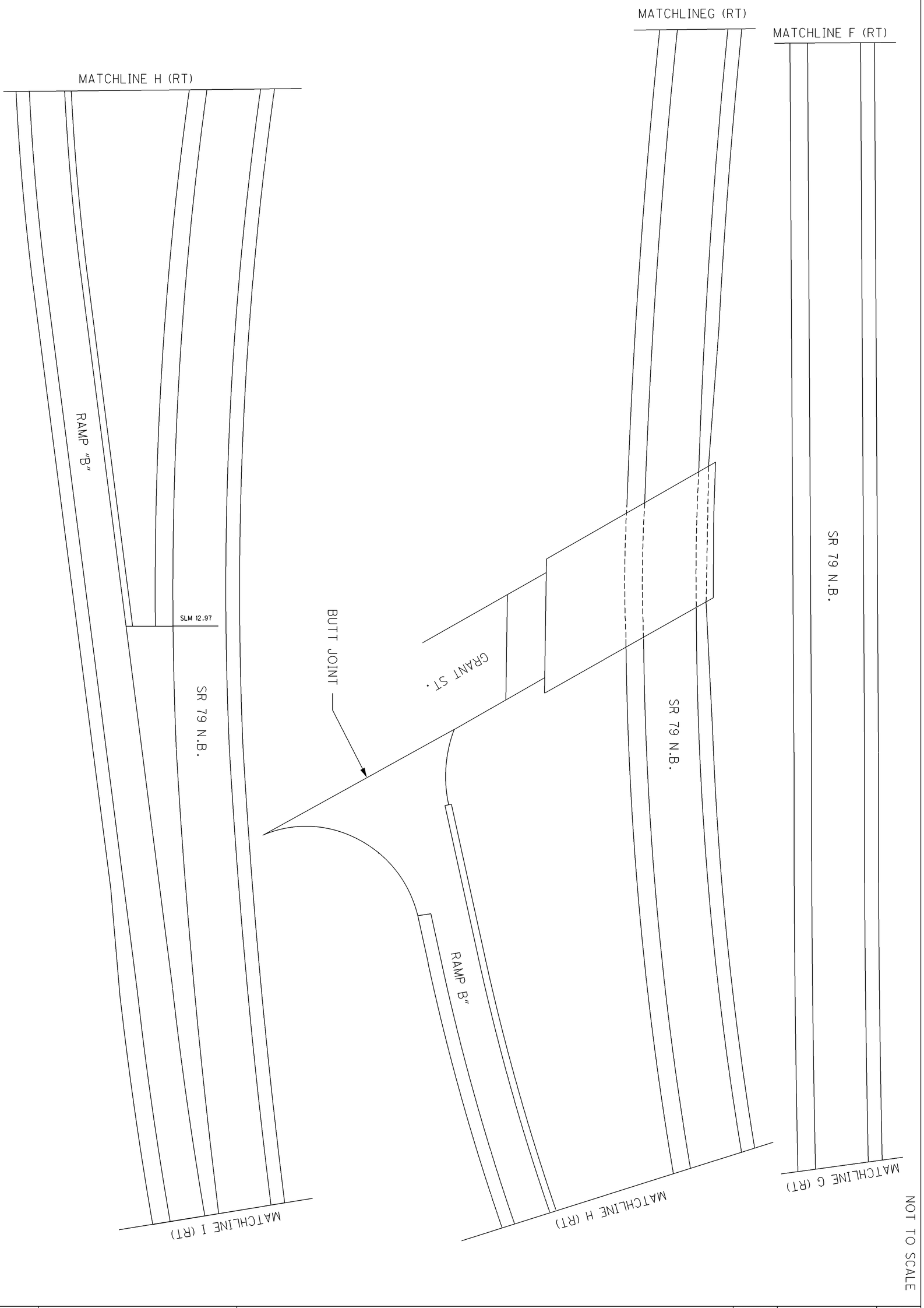
79 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N


MATCHLINE E
SR 79 N.B.
SR 79 S.B.
HANCOCK ST.
MATCHLINE F

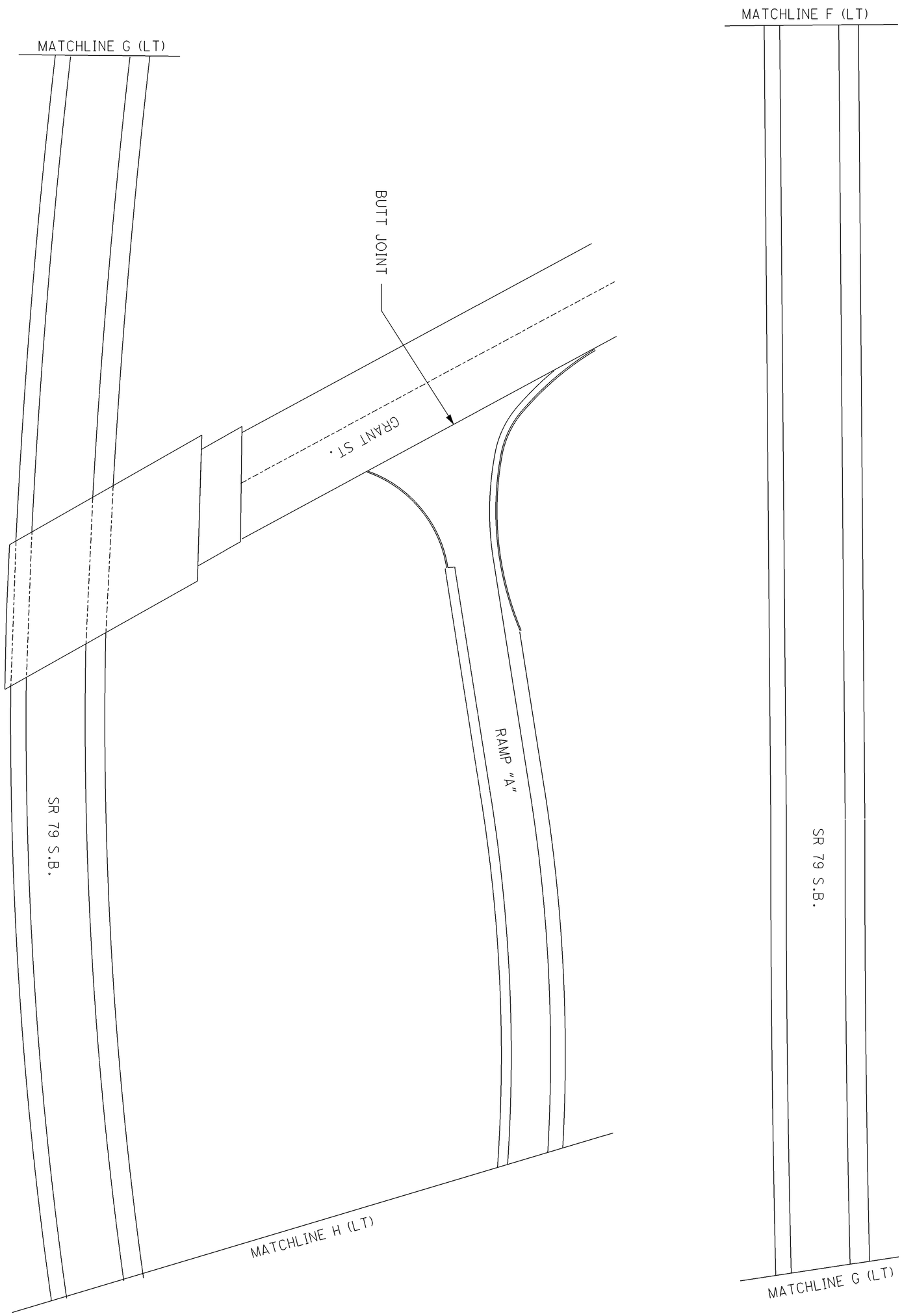

MATCHLINE D
SR 79 N.B.
SR 79 S.B.
MATCHLINE E

NOT TO SCALE

P:\LIC\16-7638\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_009.DGN 16-MAR-2009 3:19PM rgossett



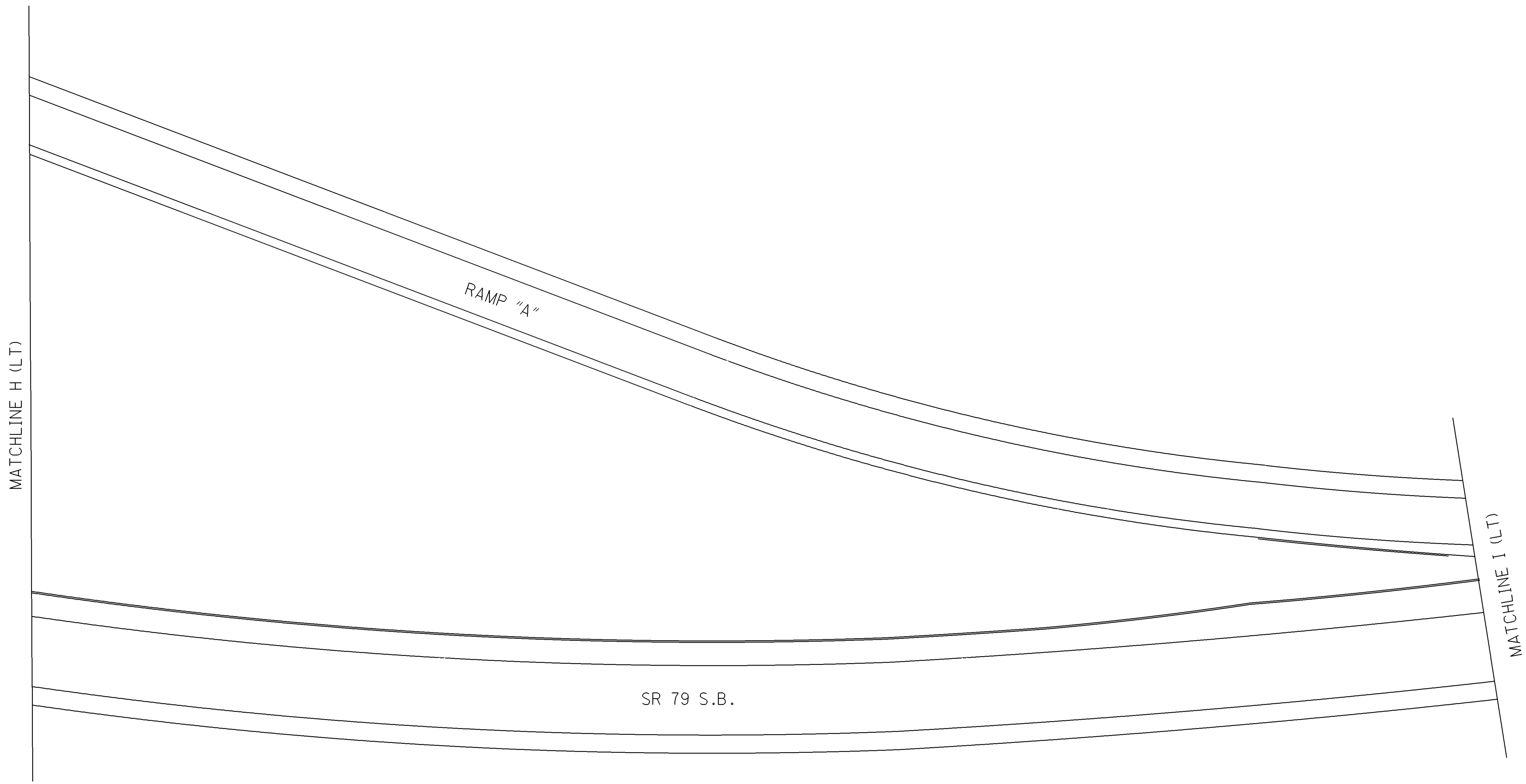
81 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N



NOT TO SCALE

82/190	LIC-16-19.72 LIC-79-12.30	PLAN SHEET S.R. 79 S.L.M. 12.30 TO S.L.M. 13.66	CALCULATED LME CHECKED TJD	N

NOT TO SCALE

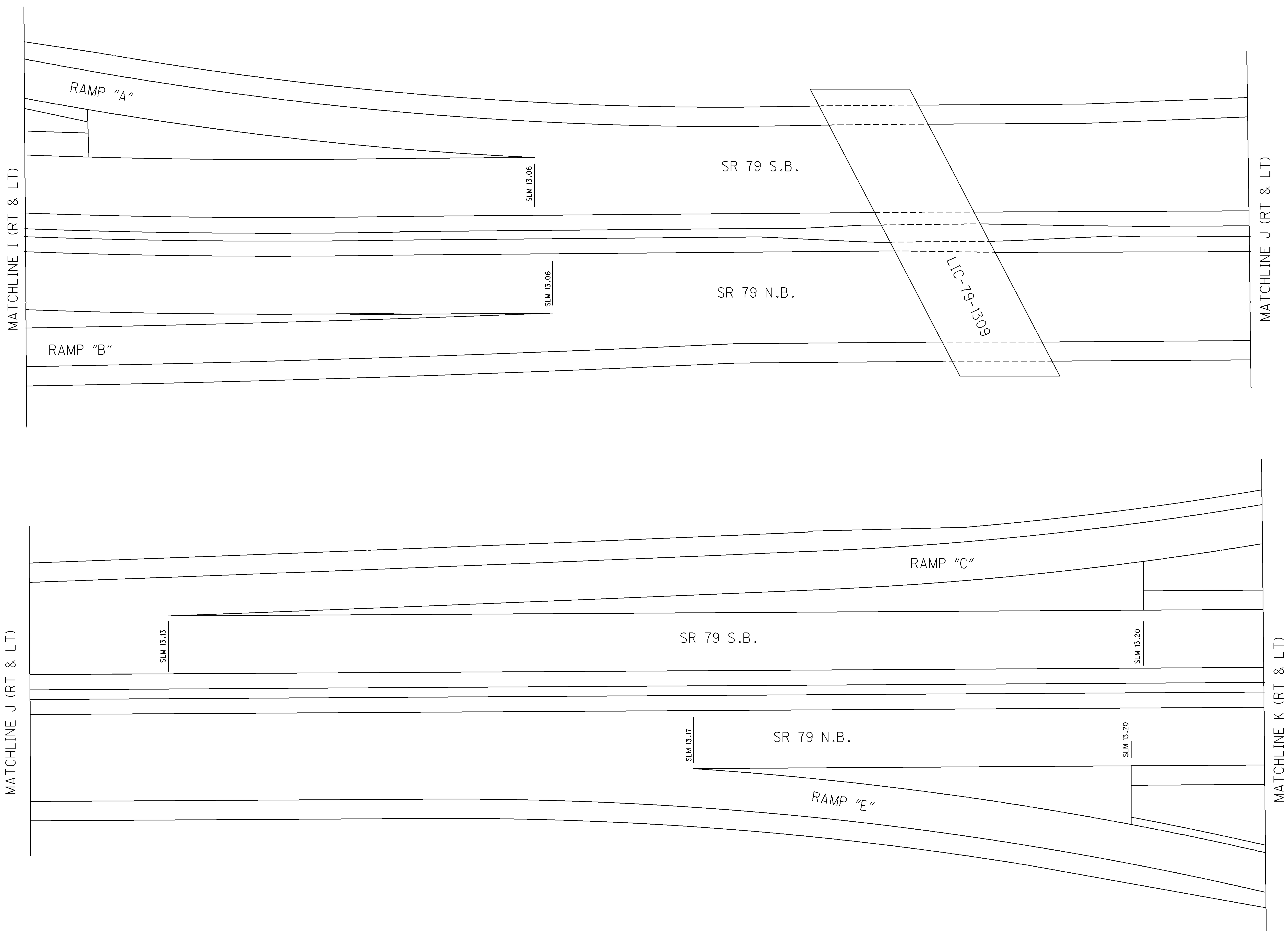


CALCULATED LME
CHECKED TJD

PLAN SHEET S.R. 79
S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

NOT TO SCALE



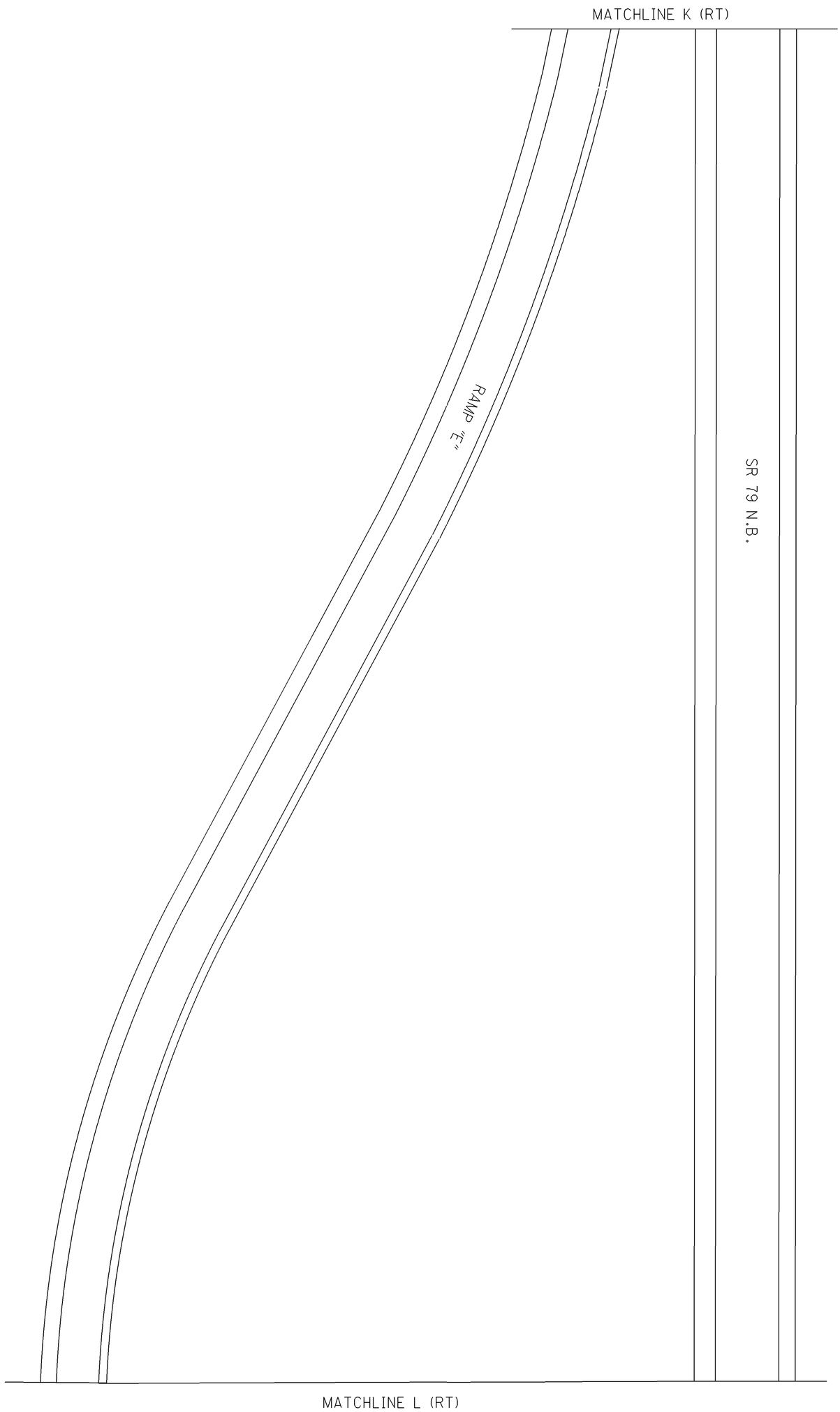
rgossett 16-MAR-2009 3:21PM SR16_76384_PPS_012.DGN

CALCULATED LME CHECKED TJD

PLAN SHEET S.R. 79
S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

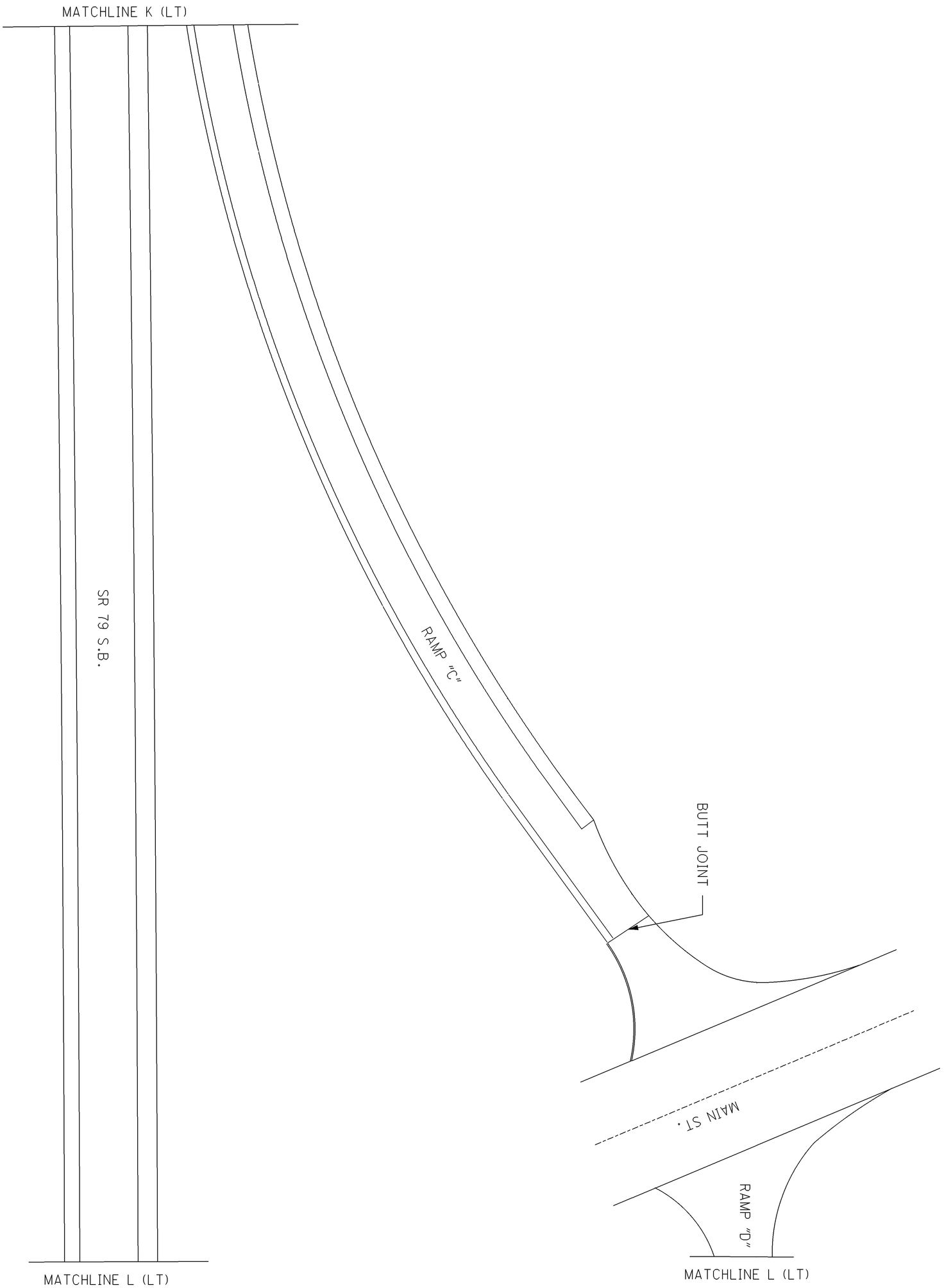
84
190



NOT TO SCALE

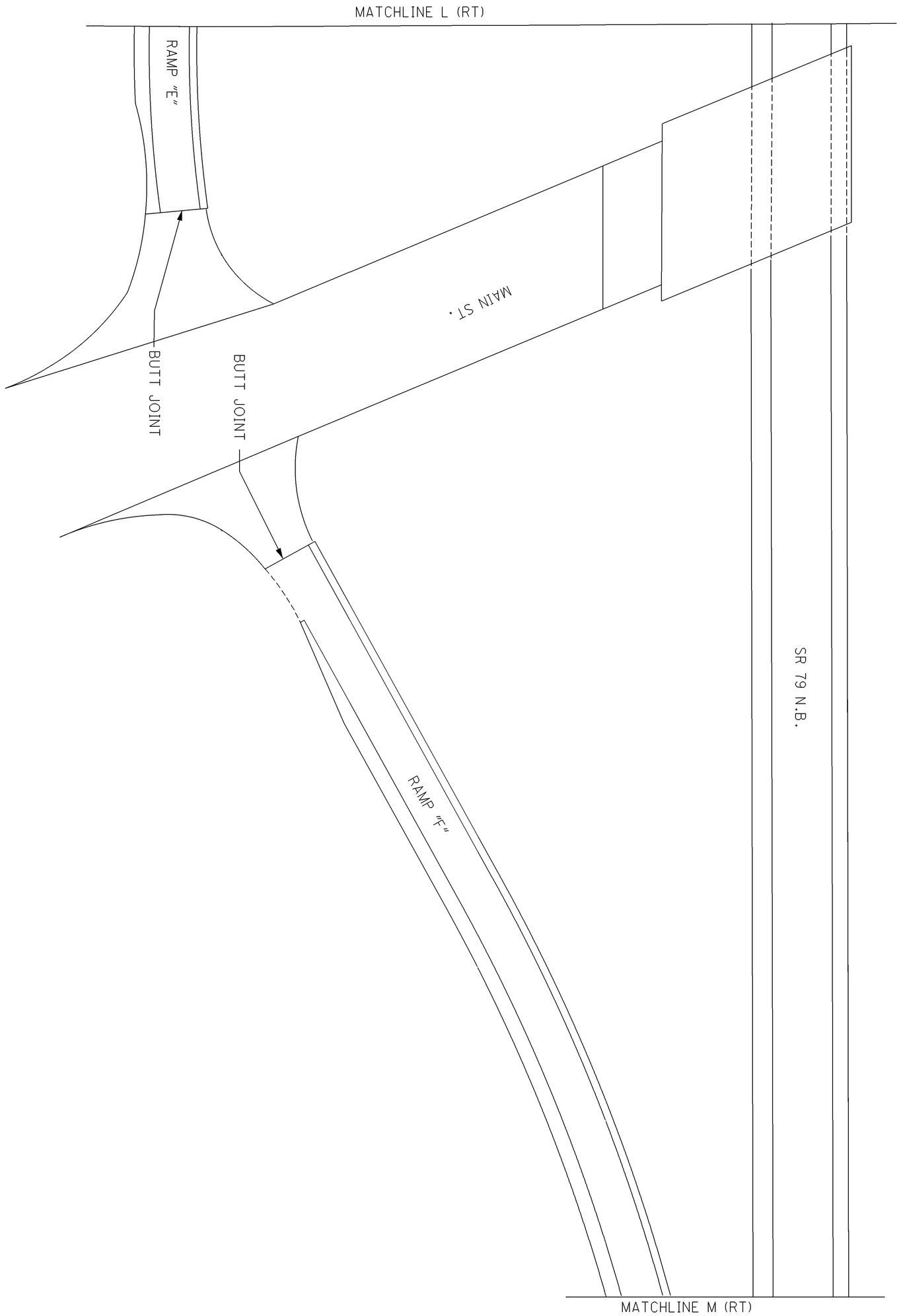
85 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N

P:\LIC\76384\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_015.DGN 16-MAR-2009 3:23PM rgossett



NOT TO SCALE

98 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N



NOT TO SCALE

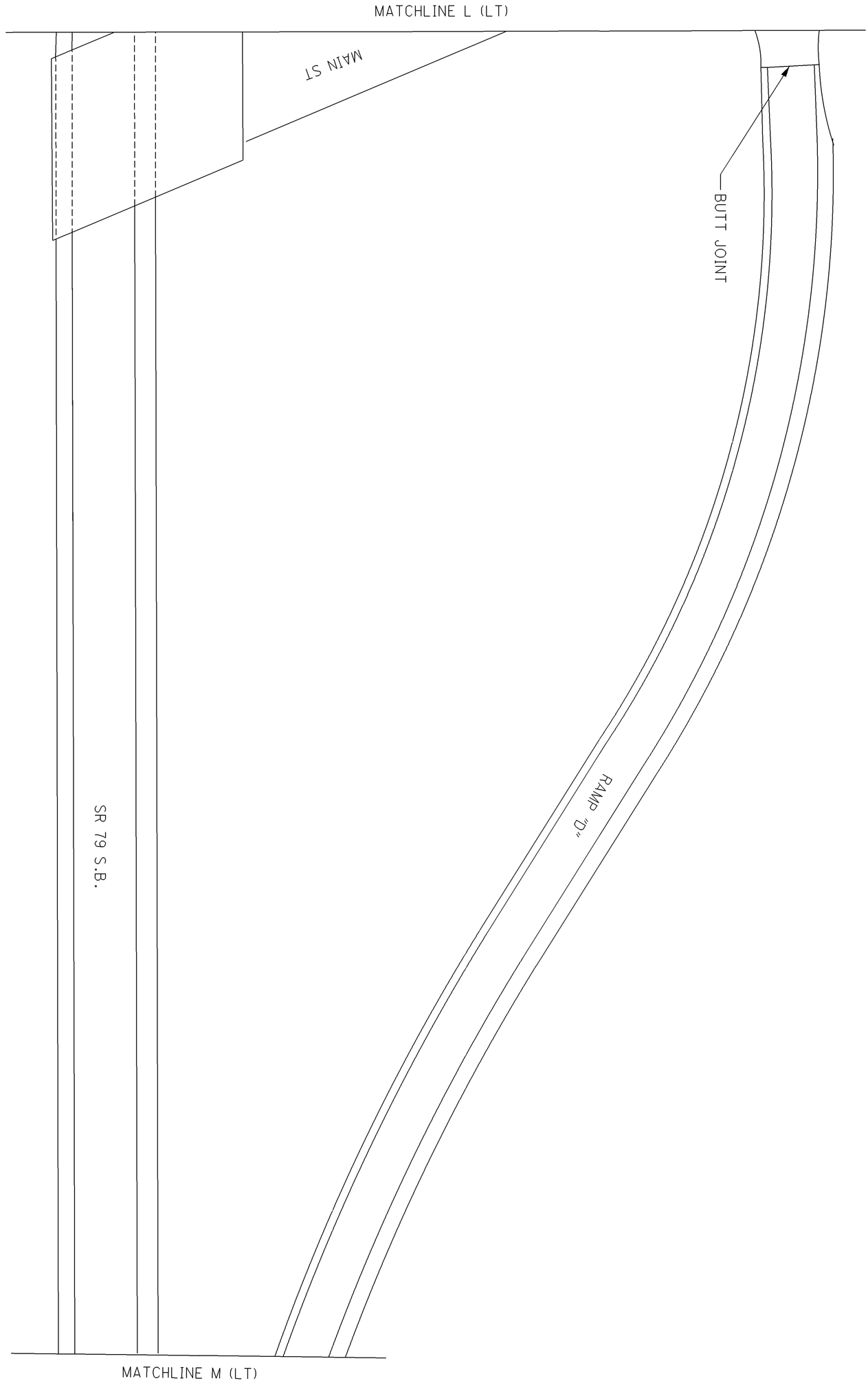
LIC-16-19.72
LIC-79-12.30

PLAN SHEET S.R. 79
S.L.M. 12.30 TO S.L.M. 13.66

CALCULATED LME
CHECKED TJD

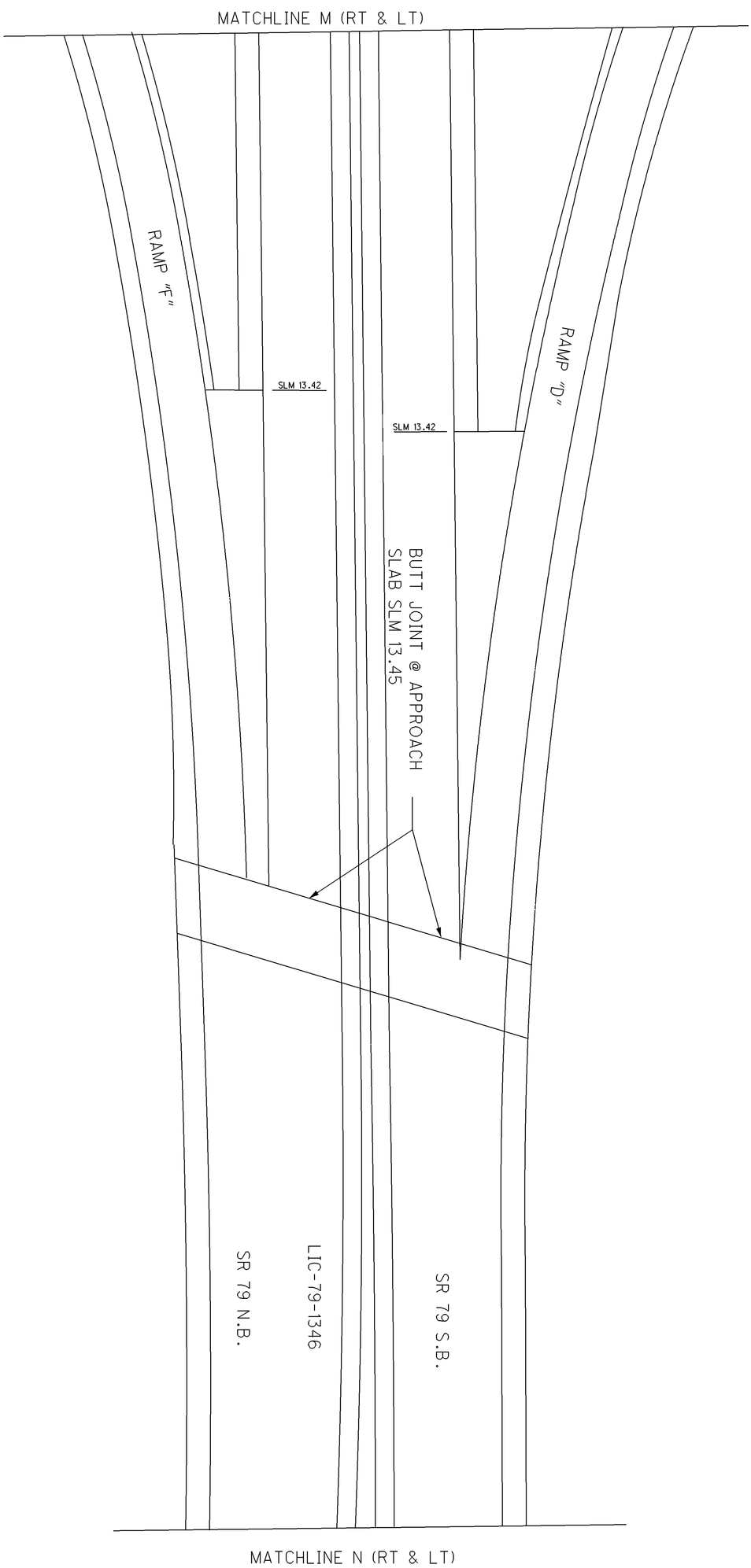
N

P:\LIC\76384\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_016.DGN 16-MAR-2009 3:24PM rgossett



NOT TO SCALE

88 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N



NOT TO SCALE

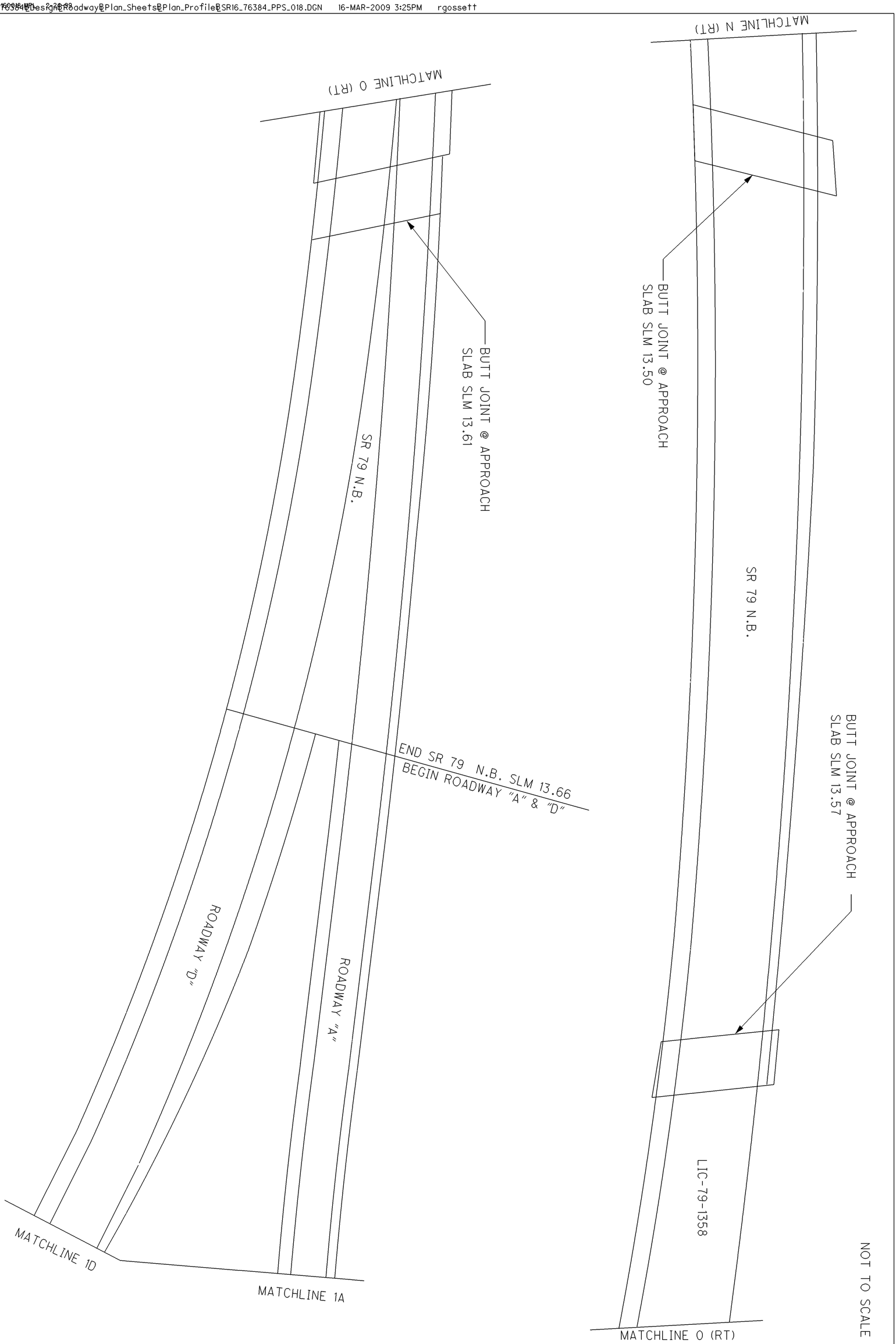
LIC-16-19.72
LIC-79-12.30

PLAN SHEET S.R. 79
S.L.M. 12.30 TO S.L.M. 13.66

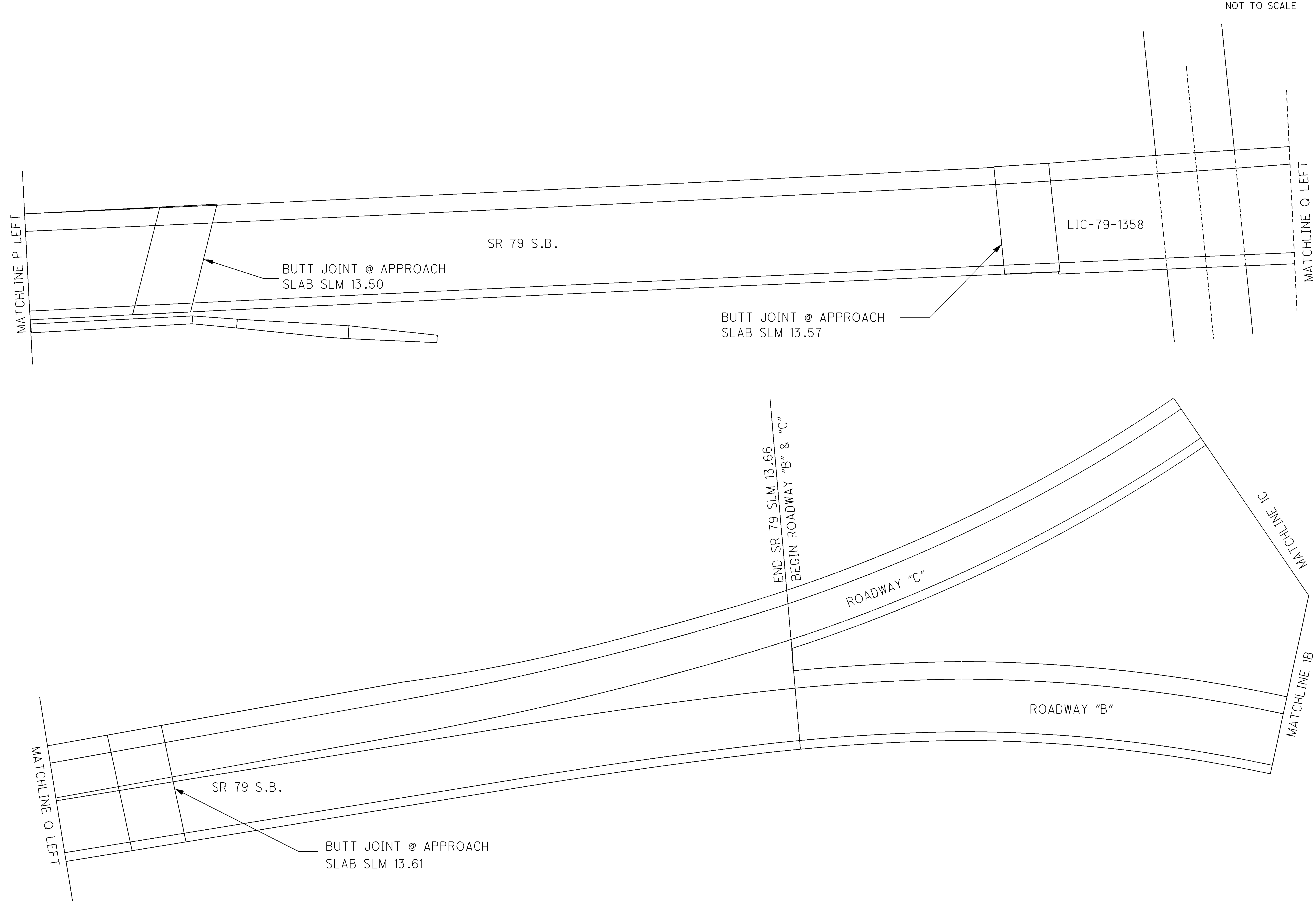
CALCULATED LME
CHECKED TJD

N

P:\LIC\FY08\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_018.DGN 16-MAR-2009 3:25PM rgossett



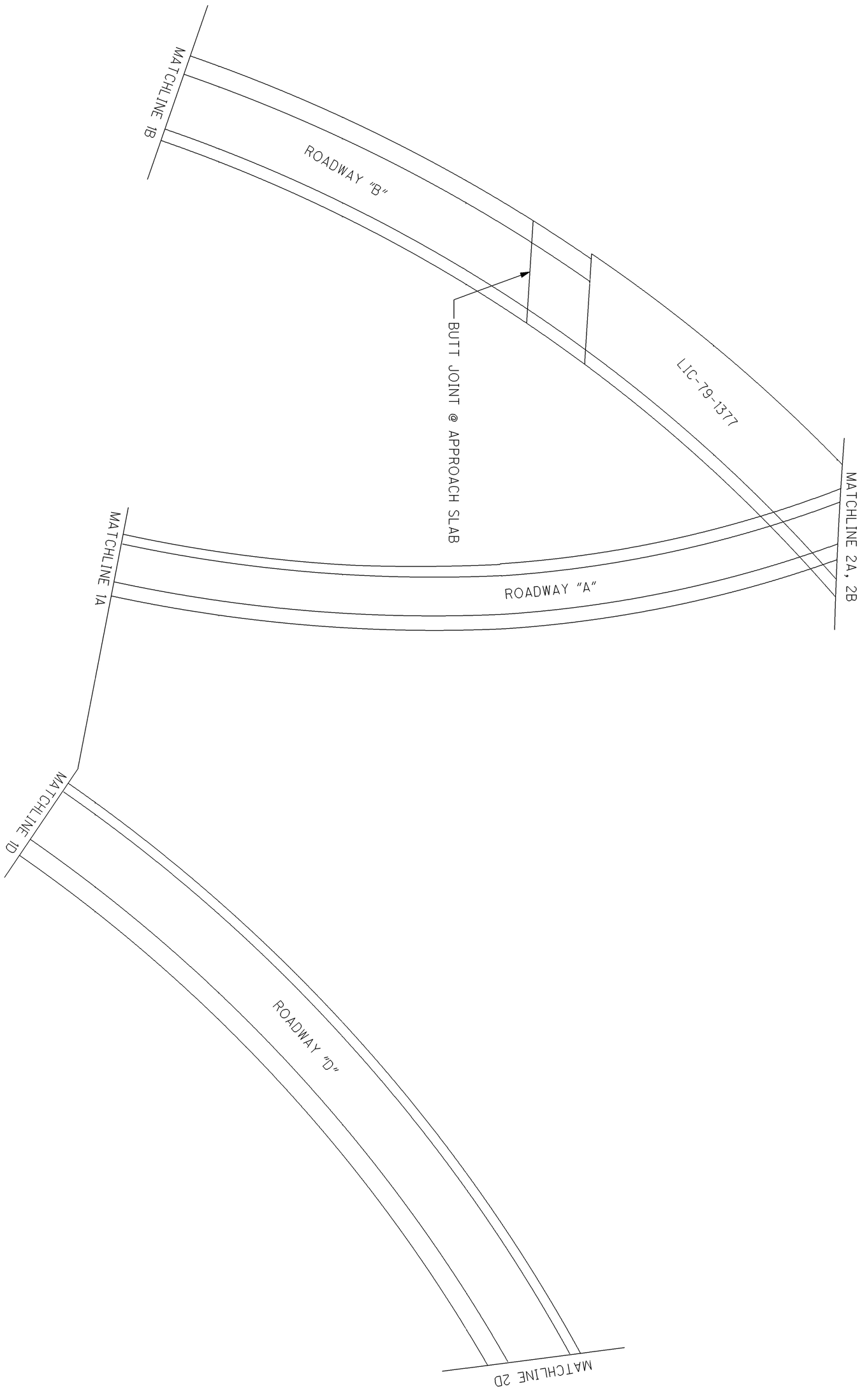
90 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N



CALCULATED LME CHECKED TJD

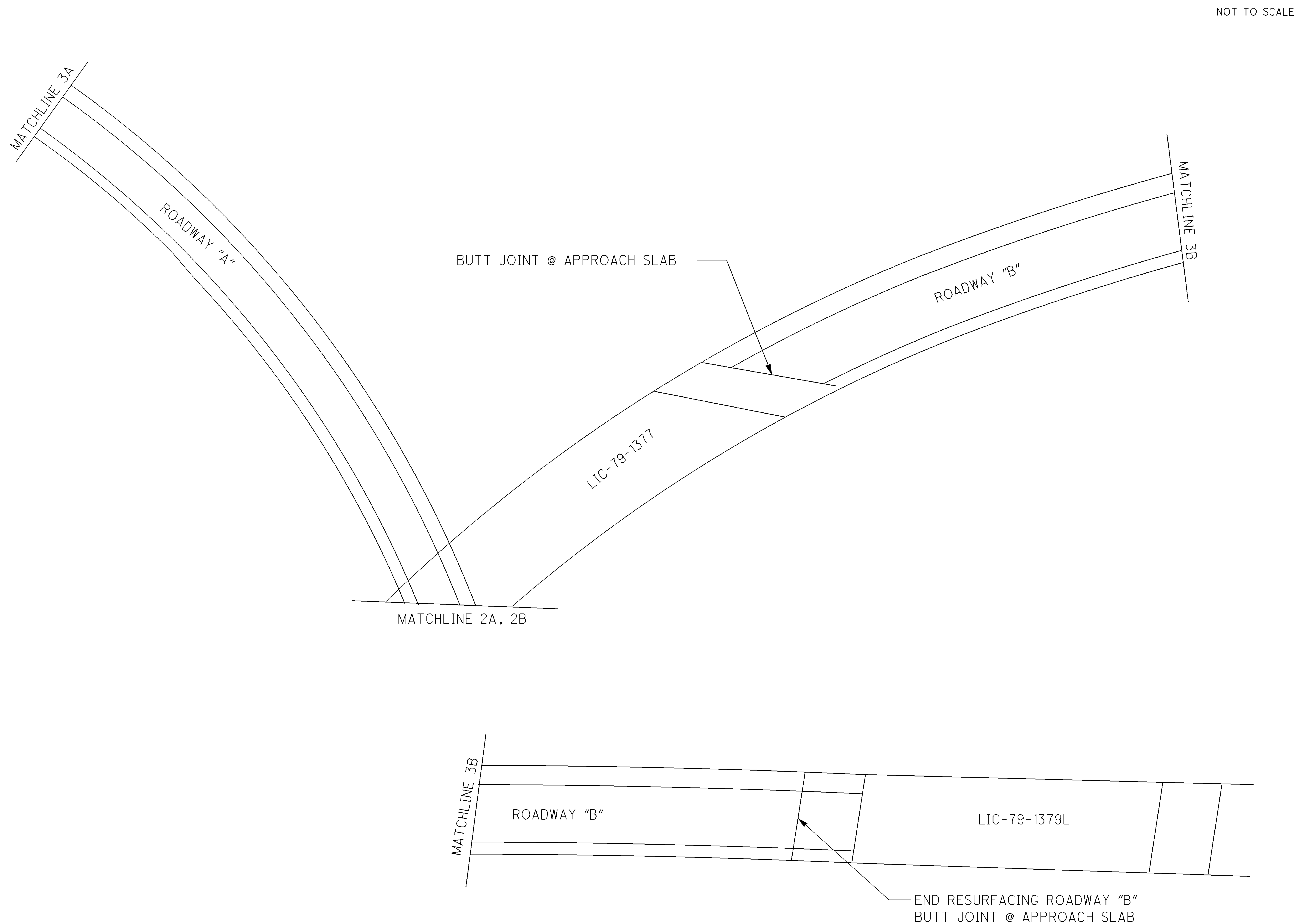
PLAN SHEET S.R. 79
S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30



NOT TO SCALE

92 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N

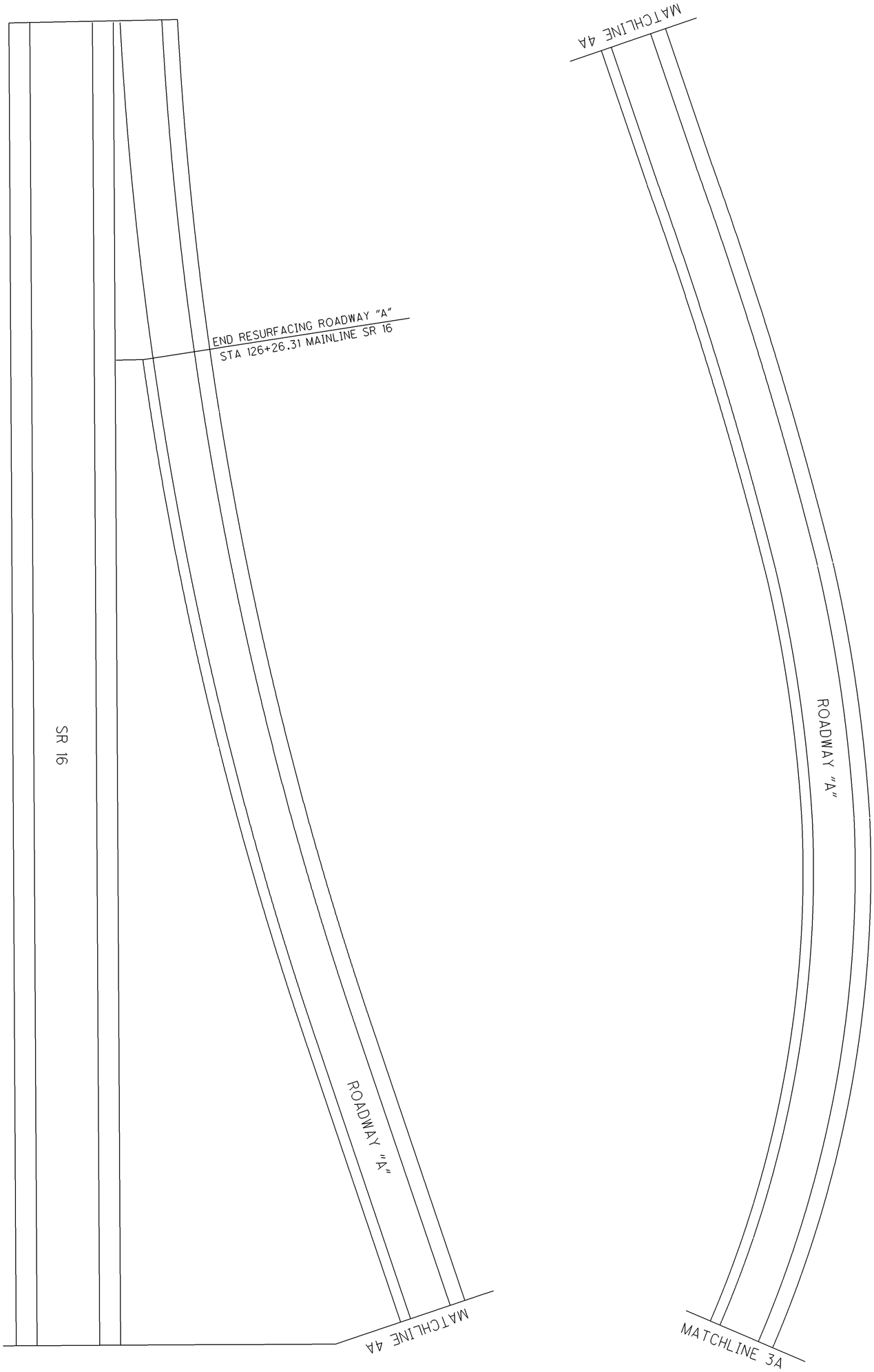


CALCULATED LME CHECKED TJD

PLAN SHEET S.R. 79
S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

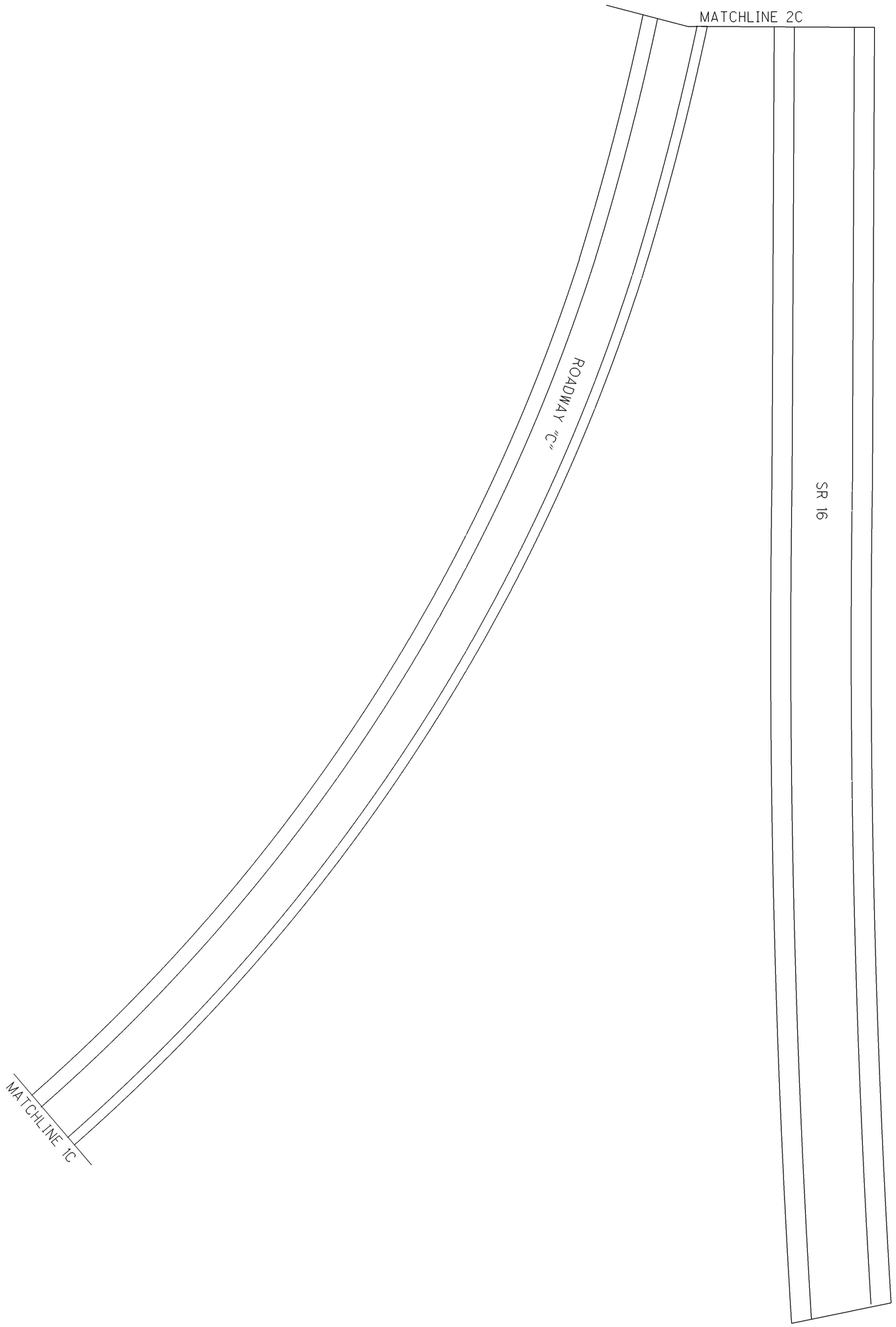
P:\LIC\76384\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_022.DGN 16-MAR-2009 3:29PM rgossett



NOT TO SCALE

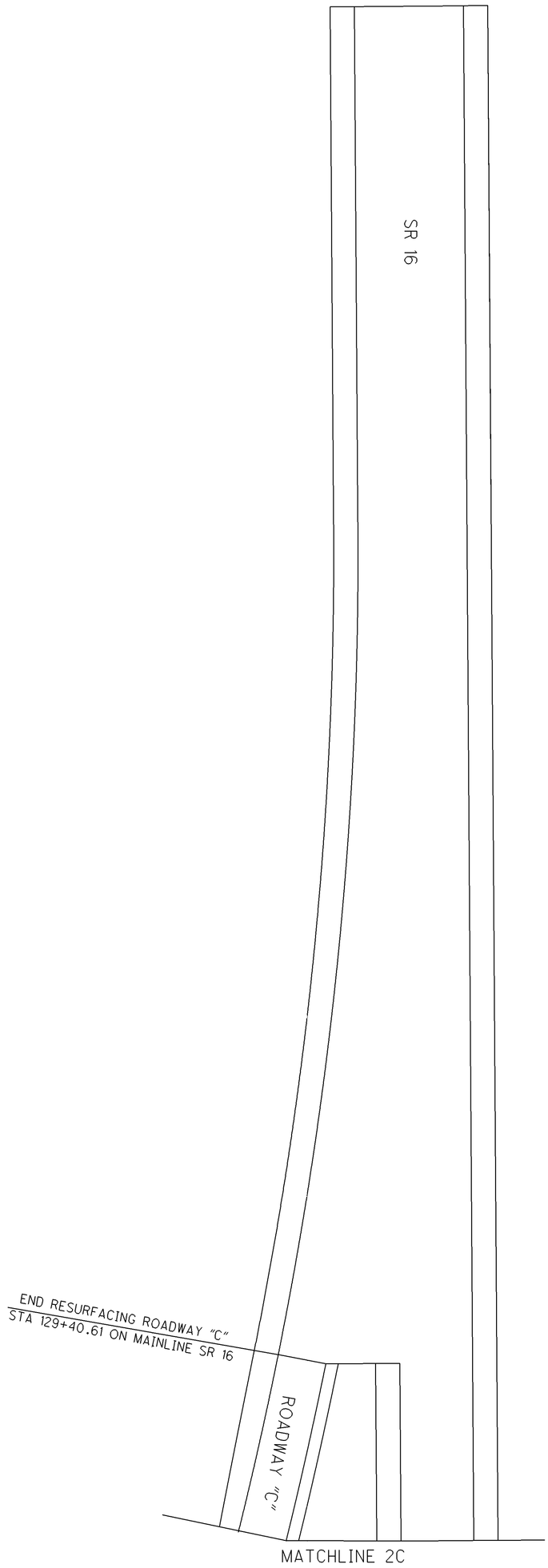
94 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N

P:\LIC\76384\Design\Roadway\Plan_Sheets\Plan_Profile\SR16_76384_PPS_023.DGN 16-MAR-2009 3:31PM rgossett



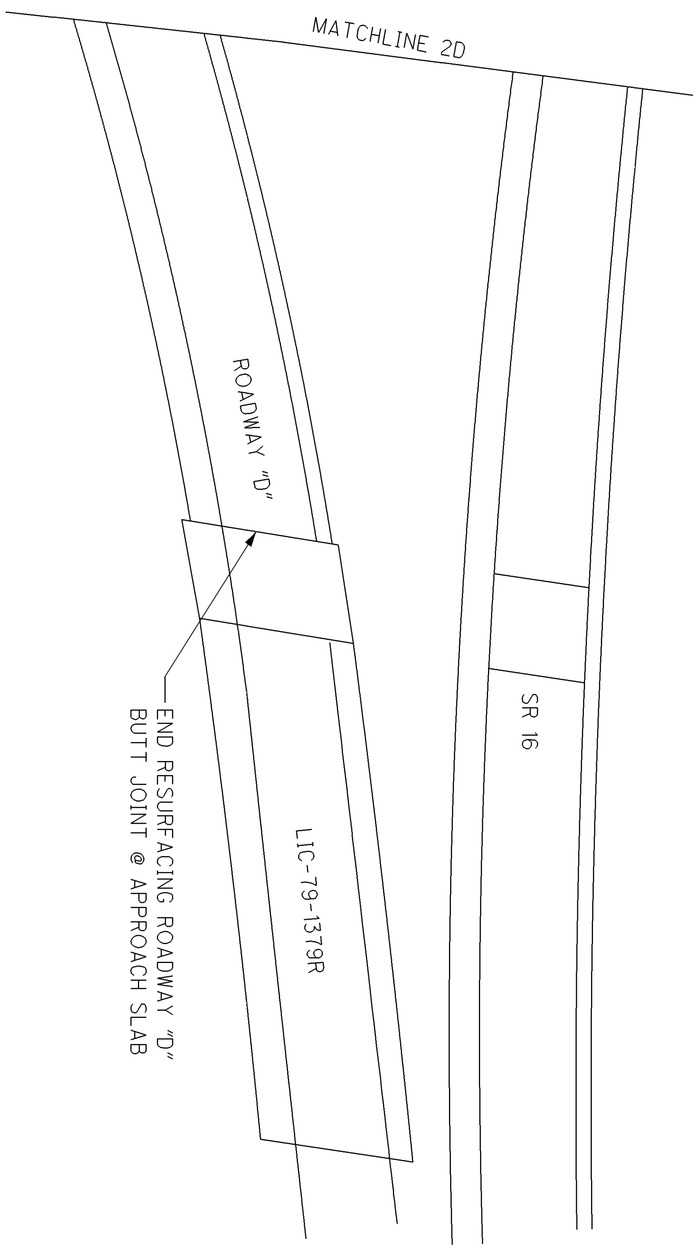
NOT TO SCALE

95 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N



NOT TO SCALE

96 / 190	**LIC-16-19.72** **LIC-79-12.30**	**PLAN SHEET S.R. 79** **S.L.M. 12.30 TO S.L.M. 13.66**	CALCULATED LME CHECKED TJD	N



NOT TO SCALE

			STATION TO STATION				ITEM 644											
							EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE (WHITE)	LANE ARROW (COMBINED)	LANE ARROW (THROUGH)	LANE ARROW (TURN)	WORD ON PAVEMENT 72 IN. "ONLY"
							MILE	MILE	MILE	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	EACH	EACH	EACH
			EASTBOUND LANES														
			107+93.04 - 118+69.02(BK.)					.204									
			117+46.58(AH.) - 169+00.00					0.976									
			116+62.16(AH.) - 126+00					.178									
			107+93.04 - 118+69.02(BK.)						.204								
			117+46.58(AH.) - 190+33.14(BK.)						1.380								
			116+62.16(AH.) - 119+30.69						.178								
			107+93.04 - 117+39.26				.179										
			117+39.26 - 118+69.02(BK.)						.025								
			117+46.58(AH.) - 118+53.72						.020								
			114+52.97 - 117+39.26							287							
			RAMP "H" @ 21st. STREET														
			107+66.53(RAD.) - 107+79.20					.002									
			107+79.20 - 114+54.22					.128									
			20+00.62(21st. ST.) - 107+79.20														
			107+66.57									124					
			20+89.43(21st. ST.) - 108+19.43														
			107+65.25(RAD.) - 108+19.43				.010										
			108+19.43 - 116+20.19				.152										
			EASTBOUND LANES														
			116+21.26 - 126+63.60				.197										
			ROADWAY "C"														
			126+63.60 - 129+40.61				.052										
			123+95.00 - 127+71.17						.071								
			127+71.17 - 129+41.95							342			210				
			EASTBOUND LANES														
			129+41.95 - 148+02.21				.352										
			144+11.23 - 148+02.21							391							
			148+02.21 - 164+00.00						.303								
			ROADWAY "D"														
			170+25.73 - 173+30.05					.058									
			170+25.73 - 173+30.05						.058								
			144+11.23(S.R.16) - 163+23.97(S.R.16)						.362								
			TOTALS				0.942	1.546	2.601	1020		124	210				

L1619A65.DGN

CALCULATED J.C.
DRAWN A.G.

PAVEMENT MARKING QUANTITIES
S.R. 16

LIC-16-19.72
LIC-79-12.30

			STATION TO STATION										ITEM 644										
													EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE (WHITE)	LANE ARROW (COMBINED)	LANE ARROW (THROUGH)	LANE ARROW (TURN)	WORD ON PAVEMENT 72 IN. "ONLY"
													MILE	MILE	MILE	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH
			EASTBOUND LANES																				
			164+00.00 - 167+72.61													746			455				
			167+72.61 - 169+00.00										.024										
			EASTBOUND LANES																				
			117+02.59 - 126+00										.170										
			ROADWAY "D" CONT.																				
			163+23.97(RAMP"C") - 173+75.49(RAMP"C")												.199								
			170+25.73 - 173+30.05										.058										
			EASTBOUND LANES																				
			144+11.23 - 151+40.00										.138										
			148+65.44 - 151+40.00													275							
			151+40.00 - 153+49.80												.040								
			RAMP "DD" @ 11th. STREET																				
			141+58.79(RAD.) - 141+91.82											.006									
			141+91.82 - 148+66.47											.128									
			141+51.54															118					
			141+49.12(RAD.) - 141+95.98										.009										
			141+95.98 - 150+49.99										.162										
			150+50.47(S.R.16) - 163+23.97(S.R.16)										.241										
			RAMP "C" @ MT. VERNON ROAD																				
			163+23.97 - 167+55.95										.082										
			TOTALS										0.884	0.134	0.239	1,021		118	455				

CALCULATED J.C.
DRAWN R.G.

PAVEMENT MARKING QUANTITIES
S.R. 16 EASTBOUND LANES

LIC-16-19.72
LIC-79-12.30

L1619B65.DGN

			STATION TO STATION										ITEM 644										
													EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE (WHITE)	LANE ARROW (COMBINED)	LANE ARROW (THROUGH)	LANE ARROW (TURN)	WORD ON PAVEMENT 72 IN. "ONLY"
													MILE	MILE	MILE	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH
			WESTBOUND LANES																				
			107+93.04 - 118+69.02(BK.)											.204									
			117+46.58(AH.) - 190+33.14(BK.)											1.380									
			116+62.16(AH.) - 126+00											.178									
			107+93.04 - 118+69.02(BK.)												.204								
			117+46.58(AH.) - 190+33.14(BK.)												1.380								
			116+62.16(AH.) - 126+00												.178								
			107+93.04 - 114+38.08										.122										
			114+38.08 - 116+08.84													342			178				
			116+08.84 - 117+75.77												.032								
			RAMP "F" @ 21st. STREET																				
			106+49.90(RAD.) - 106+80.53											.006									
			106+80.53 - 114+39.45											.144									
			106+39.97															132					
			106+66.97																	1		1	
			15+71.44(21st. ST.)															133					
			106+46.97														51						
			107+01.97																				1
			106+49.41 - 107+49.40													100							
			107+36.97																	1		1	
			106+34.65(RAD.) - 106+81.21										.009										
			106+81.21 - 117+16.47										.196										
			WESTBOUND LANES																				
			117+16.47 - 124+62.70										.141										
			ROADWAY "A"																				
			124+63.05 - 126+26.31										.031										
			WESTBOUND LANES																				
			121+02.88 - 123+42.89												.045								
			123+42.89 - 126+26.93													284							
			123+42.89 - 153+44.64										.569										
			153+44.64 - 157+75.00													861			508				
			157+75.00 - 163+05.90												.101								
			163+05.90 - 167+48.81													443							
			TOTALS										1.068	1.912	1.940	2030	51	265	686	2		2	1

CALCULATED J.C.

DRAWN R.G.

PAVEMENT MARKING QUANTITIES
S.R. 16 WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

100
190

L1691D65.DGN

			STATION TO STATION			ITEM 644											
						EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE (WHITE)	LANE ARROW (COMBINED)	LANE ARROW (THROUGH)	LANE ARROW (TURN)	WORD ON PAVEMENT 72 IN. "ONLY"
						MILE	MILE	MILE	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH
			ROADWAY "B"													
			143+58.29 - 153+46.67				.187									
			143+62.17 - 147+33.75			.070										
			147+33.75 - 148+51.22						235			146				
			143+60.23 - 158+59.16					.284								
			WESTBOUND LANES													
			158+58.59 - 165+99.67					.140								
			RAMP "A" @ MT. VERNON ROAD													
			166+00.17 - 173+33.55					.139								
			RAMP "BB" @ 11th STREET													
			143+38.46(RAD.) - 143+65.16				.005									
			143+65.16 - 147+35.56				.070									
			143+31.74								107					
			143+38.74							42						
			143+58.74											1		
			143+37.05(RAD.) - 143+67.55			.006										
			143+67.55 - 148+99.63			.101										
			ROADWAY "B"													
			148+99.63 - 158+59.16			.182										
			WESTBOUND LANES													
			158+58.59 - 165+99.67			.140										
			RAMP "A" @ MT. VERNON ROAD													
			166+00.17 - 172+46.59			.122										
			172+46.59 - 20+96.83(MT.VER.RD.)													
			(SEE SHEET 303)						134			81				
			167+53.00 - 173+36.73(RAD.)				.111									
			WESTBOUND LANES													
			163+05.90 - 186+26.14			.439										
			186+26.14 - 188+00.33						349			227				
			188+00.33 - 188+48.70					.009								
			RAMP "B" @ HUDSON AVENUE													
			178+61.81 - 178+94.80				.006									
			178+94.80 - 186+26.92				.139									
			TOTALS			1.060	0.518	0.572	718	42	107	454		1		

CALCULATED J.C.
DRAWN R.G.

PAVEMENT MARKING QUANTITIES
S.R. 16 WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

L1619E65.DGN

PAVEMENT MARKING QUANTITIES
S.R. 16 - WESTBOUND LANES & RAMP B

CALCULATED J.L.S. 3/13/95 | CHECKED SAB 2-17-99

STATION TO STATION	ITEM 644										
	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE (WHITE)	LANE ARROW (COMBINED)	LANE ARROW (THROUGH)	LANE ARROW (TURN)	WORD ON PAVEMENT 72 IN. "ONLY"
	MILE	MILE	MILE	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH
RAMP "B" @ HUDSON AVENUE CONT.											
178+46.52						99					
178+53.52					41						
178+73.52								1	1		
178+53.00(RAD.) - 178+73.14	.004										
178+73.14 - 190+15.22	.216										
WESTBOUND LANES											
190+15.11 - 190+33.14(BK.)	.003										
116+62.16(AH.) - 126+00	.177										
RAMP "B" @ HUDSON AVENUE											
179+58.52 - 181+95.83			.045								
178+57.64 - 179+58.52				101							
179+08.52											1
179+43.52								1	1		
TOTALS	0.400		0.045	101	41	99		2	2		1

LIC-16-19.72
LIC-79-12.30

L1619F65.DGN 2/17/99

			STATION TO STATION											ITEM 644										
														EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE (WHITE)	LANE ARROW (COMBINED)	LANE ARROW (THROUGH)	LANE ARROW (TURN)	WORD ON PAVEMENT 72 IN. "ONLY"
														MILE	MILE	MILE	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH
			WEST BOUND																					
			BRIDGE LIC-16-2028											(.03)	(.03)	(.03)								
			LIC-16-2038											(.03)	(.03)	(.03)								
			LIC-79-1379R											(.04)	(.04)	(.04)								
			LIC-13-0988											(.04)	(.04)	(.04)								
			LIC-16-2109											(.04)	(.04)	(.04)								
			(LIC-16-2131											(.14)	(.14)	(.14)								
			LIC-16-2141)																					
			TOTALS											0.32	0.32	0.32								

CALCULATED
J.S.
3/13/99

CHECKED
SAB
2/17/99

PAVEMENT MARKING QUANTITIES
S.R. 16 WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

L1619165.DGN

ITEM 644 EDGE LINE SUB-SUMMARY

CO.	ROUTE	S.L.M. FROM	S.L.M. TO	WHITE EDGE LINE QU. TOTAL MILES	WHITE EDGE LINE QU. HIGHWAY	WHITE EDGE LINE QU. RAMP	YELLOW EDGE LINE QU. TOTAL MILES	YELLOW EDGE LINE QU. HIGHWAY	YELLOW EDGE LINE QU. RAMP	EDGE LINE TOTAL MILES	REMARKS
	EAST BOUND										
LIC	SR 16	21.44	23.66	1.69	1.69		2.17	2.17		3.86	
	RAMP D			0.14		0.14	0.06		0.06	0.20	OFF RAMP TO N BUENA VISTA STREET
	RAMP C			0.13		0.13	0.09		0.09	0.22	OFF RAMP TO CEDAR STREET
	RAMP D			0.17		0.17	0.12		0.12	0.29	ON RAMP FROM CEDAR STREET
	RAMP C			0.55		0.55	0.12		0.12	0.67	OFF RAMP TO O BANNON AVENUE
	RAMP D			0.16		0.16	0.14		0.14	0.30	ON RAMP FROM O BANNON AVENUE
							0.01		0.01	0.01	SIDE RAMP CEDAR STREET
	WEST BOUND										
										3.81	
LIC	SR 16	21.44	23.66	1.64	1.64		2.17	2.17		0.17	ON RAMP FROM N BUENA VISTA STREET
	RAMP E			0.13		0.13	0.04		0.04	0.23	ON RAMP FROM CEDAR STREET
	RAMP A			0.14		0.14	0.09		0.09	0.01	SIDE RAMP CEDAR STREET
							0.01		0.01	0.25	OFF RAMP TO CEDAR STREET
	RAMP B			0.16		0.16	0.09		0.09	0.26	ON RAMP FROM O BANNON AVENUE
	RAMP A			0.14		0.14	0.12		0.12	0.26	OFF RAMP TO O BANNON AVENUE
	RAMP B			0.16		0.16	0.10		0.10		
	TOTALS			**5.21**	**3.33**	**1.88**	**5.33**	**4.34**	**0.99**	**10.54**	
	NORTH BOUND										
LIC	SR 79	12.30	13.66	1.36	1.36		1.20	1.20		2.67	
	UNION STREET RAMP			0.04		0.04	0.04		0.04	0.08	
	RAMP B			0.11		0.11	0.11		0.11	0.22	ON RAMP FROM GRANT STREET
	RAMP E			0.13		0.13	0.13		0.13	0.26	OFF RAMP TO MAIN STREET
	RAMP F			0.11		0.11	0.11		0.11	0.22	ON RAMP FROM MAIN STREET
	ROADWAY A			0.31		0.31	0.31		0.31	0.62	
	ROADWAY D			0.13		0.13	0.13		0.13	0.26	
	SOUTH BOUND										
LIC	SR 79	12.30	13.66	1.36	1.36		1.20	1.20		2.67	
	WILLIAMS STREET			0.05		0.05	0.05		0.05	0.10	
	RAMP A			0.15		0.15	0.15		0.15	0.30	OFF RAMP TO GRANT STREET
	RAMP C			0.11		0.11	0.11		0.11	0.22	ON RAMP FROM MAIN STREET
	RAMP D			0.13		0.13	0.13		0.13	0.26	OFF RAMP TO MAIN STREET
	ROADWAY B			0.19		0.19	0.19		0.19	0.38	
	ROADWAY C			0.14		0.14	0.14		0.14	0.28	
	TOTALS			**4.32**	**2.72**	**1.60**	**4.00**	**2.40**	**1.60**	**8.32**	

CALCULATED SAB
CHECKED TJD

EDGE LINE SUB-SUMMARY
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

L0160001.TEL

EDGE LINE SUB-SUMMARY

CO.	ROUTE	S.L.D. FROM	S.L.D. TO	WHITE EDGE LINE QU. TOTAL MILES	WHITE EDGE LINE QU. HIGHWAY	WHITE EDGE LINE QU. RAMP	YELLOW EDGE LINE QU. TOTAL MILES	YELLOW EDGE LINE QU. HIGHWAY	YELLOW EDGE LINE QU. RAMP					EDGE LINE TOTAL MILES	REMARKS
	NORTH BOUND														
LIC	SR 79														
	BRIDGE LIC-79-1346			0.05	0.05		0.05	0.05						0.10	
	BRIDGE LIC-79-1358L			0.04	0.04		0.04	0.04						0.08	
	BRIDGE LIC-79-1379L ROADWAY D			0.03	0.03		0.03	0.03						0.06	
	SOUTH BOUND														
LIC	SR 79														
	BRIDGE LIC-79-1346			0.05	0.05		0.05	0.05						0.10	
	BRUDGE LIC-79-1358R			0.04	0.04		0.04	0.04						0.08	
	BRIDGE LIC-79-1379L ROADWAY B			0.06	0.06		0.06	0.06						0.12	
	TOTAL CARRIED TO THE SUB SUMMARY			0.27	0.27		0.27	0.27						0.54	

LANE LINE SUB-SUMMARY

CO.	ROUTE	SLM FROM	SLM TO	QUANTITIES TOTAL MILES	QUANTITIES DASHED	
	NORTH BOUND					
LIC	SR 79					
	BRIDGE LIC-79-1346			0.05	0.05	
	BRIDGE LIC-79-1358L			0.04	0.04	
	SOUTH BOUND					
LIC	SR 79					
	BRIDGE LIC-79-1346			0.05	0.05	
	BRUDGE LIC-79-1358R			0.04	0.04	
	TOTAL CARRIED TO THE SUB SUMMARY			0.18	0.18	

CALCULATED SAB
CHECKED TJD

LANE LINE & EDGE LINE SUB-SUMMARY
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

105
190

L0160002.TEL

ITEM 644 CENTER LINE SUB-SUMMARY

QUANTITIES INCLUDE CL AROUND OUTSIDE OF PAINTED ISLAND

	CO.	ROUTE	S.L.M.		CENTER LINES QUANTITIES		PARTICIPATION TYPE				TOTAL CENTER LINE	REMARKS
			FROM	TO	TOTAL MILES	EQUIVALENT SOLID LINE	IRG	FG	RSG	NON FED STATE	MILES	
	NORTH BOUND											
	LIC	SR 79	12.30	12.46	0.31	0.690					0.31	
	TOTALS CARRIED TO GENERAL SUMMARY				0.31	0.690					0.31	

CALCULATED SAB | CHECKED LME

CENTER LINE SUB-SUMMARY
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

106
190

L0160001.TCL

ITEM 644 LANE LINE SUB-SUMMARY AND AUXILIARY MARKINGS

	CO.	ROUTE	S.L.M. FROM	S.L.M. TO	QUANTITIES TOTAL MILES	4" LANE LINES DASHED	4" LANE LINES SOLID	AUXILIARY MARKINGS: CHANNELIZING LINE FT.	TRANSVERSE LINE WHITE FT.	TRANSVERSE LINE YELLOW FT.	STOP LINE FT.	LANE ARROW THRU EACH	LANE ARROW LEFT EACH	ONLY 72" EACH	CROSS-WALK LINE FT.	REMARKS
	EAST	BOUND														
	LIC	SR 16	21.44	23.66	2.22	2.22										
		RAMP D			0.01	0.01		215	85		23	1			71	OFF RAMP TO N BUENA VISTA STREET
		RAMP C			0.01	0.01		215	80		40	1			96	OFF RAMP TO CEDAR STREET
		RAMP D			0.04	0.04		325							70	ON RAMP FROM CEDAR STREET
		RAMP D													52	SIDE RAMP
		RAMP C			0.06	0.06		243	90		30	1				OFF RAMP TO O BANNON AVENUE
		RAMP C			0.05	0.05		275							76	ON RAMP FROM O BANNON AVENUE
	WEST	BOUND														
	LIC	SR 16	21.44	23.66	2.22	2.22		223								
		RAMP E			0.02	0.02		250							72	ON RAMP FROM N BUENA VISTA STREET
		RAMP A			0.02	0.02									74	ON RAMP FROM CEDAR STREET
		RAMP A													44	SIDE RAMP
		RAMP B			0.03	0.03		358	130		34	1			86	OFF RAMP TO CEDAR STREET
		RAMP A			0.05	0.05		300								ON RAMP FROM O BANNON AVENUE
		RAMP B			0.05	0.05		260	95		28	1			80	OFF RAMP TO O BANNON AVENUE
	TOTALS				**4.78**	**4.78**		**2664**	**480**		**155**	**5**			**721**	
	NORTH	BOUND														
	LIC	SR 79	12.30	13.66	1.36	1.36										
		ROADWAY D			0.18	0.18										
		THIRD LANE			0.14	0.14										
		UNION STREET						126	36							
		RAMP B						150								ON RAMP FROM GRANT STREET
		RAMP E						330	218		44	1			123	OFF RAMP TO MAIN STREET
		RAMP F						200							101	ON RAMP FROM MAIN STREET
		ROADWAY D						552	376							
		C						50					1	1		
		TO PARK														
	SOUTH	BOUND														
	LIC	SR 79	12.30	13.66	1.36	1.36										
	ROADWAY B				0.31	0.31										
	THIRD LANE				0.09	0.09										
	WILLIAMS STREET							82								
	RAMP A							310	175		40	1				OFF RAMP TO GRANT STREET
	RAMP C							150							94	ON RAMP FROM MAIN STREET
	RAMP D							344	222		38	1			107	OFF RAMP TO MAIN STREET
	ROADWAY C							120								
	ENT. TO ROCKWELL							200		645			2	1		
	TOTALS				**3.44**	**3.44**		**2614**	**1027**	**645**	**122**	**3**	**3**	**2**	**425**	
									1672			**6**				

L0160001.TLL

CALCULATED SAB
CHECKED TJD

LANE LINE SUB-SUMMARY AND AUXILIARY MARKINGS
S.R. 16 - S.L.M. 23.66
S.R. 79 - S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

		STATION TO STATION	ITEM 621 RPM 1-WAY WHITE EACH	2-WAY WHITE/ RED EACH	2-WAY YELLOW/ RED EACH	SPACING C/C FEET
		EAST BOUND				
		107+93.04-118+69.02BK		15		80
		117+46.58AH-169+00.00		64		80
		116+62.16AH-126+00		12		80
		114+54.22-117+39.26	7		9	20/40/80
		RAMP H				
		127+71.17-130+00		9	1	40/80
		ROADWAY C				
		170+25.73-173+30.05		7	3	40/80
		145+00-148+02.21				
		ROADWAY D				
		148+11.23-163+92.61		20		80
		170+25.73-173+30.05		4		80
		ROADWAY D				
		144+11.23-169+00.00		31		80
		SR 16, RAMP C				
		141+38.84-151+40		2	10	40/80
		RAMP DD				
		164+00-168+27		19	1	40/80
		RAMP C				
		TOTALS (CARRIED TO OTHER TABLE)	7	183	24	

		STATION TO STATION	ITEM 621 RPM 1-WAY WHITE EACH	2-WAY WHITE/ RED EACH	2-WAY YELLOW/ RED EACH	SPACING C/C FEET
		WESTBOUND LANES				
		107+93.04-118+69.02BK		15		80
		117+46.58AH-190+33.14BK		92		80
		116+62.16AH-126+00		12		80
		106+32.37-116+08.64		9	11	40/80
		RAMP F				
		106+32.37-107+49.40	6			
		RAMP F				
		123+42.89-127+43.74		4	3	40/80
		ROADWAY A				
		143+19.61-148+53.75		9	6	40/80
		RAMP BB				
		153+46.67-167+53		18		80
		ROADWAY B				
		143+58-153+46.67		12		80
		152+64.60-157+84.64		23	1	40/80
		ROADWAY B				
		167+53-173+33.55		7		80
		RAMP A				
				11	9	40/80
		163+08.81-172+20				
		RAMP A				
			10			
		178+34.02-188+06.14		9	11	40/80
		RAMP B				
		178+34.02-182+00		5		80
		178+00-179+58.52	6			20
		SUB-TOTALS	22	226	41	
		TOTALS (OTHER TABLE)	7	183	24	
		TOTAL (CARRIED TO GENERAL SUMMARY)		503		

CALCULATED J.C.

CHECKED R.G.

ITEM 621 RAISED PAVEMENT MARKER
S.R. 16 EASTBOUND & WESTBOUND LANES

LIC-16-19.72
LIC-79-12.30

L1619665.DGN

RPM LOCATION SUB-SUMMARY

	LOCATION						QUANTITIES				PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
			S.L.M. MILES								ONE-WAY		TWO-WAY			
	COUNTY	ROUTE	FROM	TO			RPM				WHITE	YELLOW	YELLOW/ YELLOW	WHITE/ RED	YELLOW/ RED	
		EAST	BOUND													
	LIC	SR 16	21.44	23.66			146							146		
		RAMP D					9							5	4	OFF RAMP TO N BUENA VISTA ST.
		RAMP C					11							5	6	OFF RAMP TO CEDAR STREET
		RAMP D					17							8	9	ON RAMP FROM CEDAR STREET
		RAMP D					2								2	SIDE RAMP
		RAMP C					15							8	7	OFF RAMP TO O BRANNON AVE
		RAMP C					16							7	9	ON RAMP FROM O BRANNON AVE
		WEST	BOUND													
	LIC	SR 16	21.44	23.66			146							146		
		RAMP E					9							6	3	ON RAMP FROM BUENA VISTA ST.
		RAMP A					12							6	6	ON RAMP FROM CEDAR STREET
		RAMP A					2								2	SIDE RAMP
		RAMP B					15							9	6	OFF RAMP TO CEDAR STREET
		RAMP A					16							8	8	ON RAMP FROM O BRANNON AVENUE
		RAMP B					14							7	7	OFF RAMP TO O BRANNON AVENUE
		TOTAL					430							361	69	
TOTAL CARRIED TO SUB SUMMARY																

CALCULATED SAB
CHECKED LWE

RPM LOCATION SUB-SUMMARY
S.R. 16 - S.L.M. 21.44 TO S.L.M. 23.66

LIC-16-19.72
LIC-79-12.30

L0160001.TRM

RPM LOCATION SUB-SUMMARY

LOCATION				QUANTITIES			PRISMATIC RETRO-REFLECTOR COLORS					REMARKS
							ONE-WAY		TWO-WAY			
COUNTY	ROUTE	S.L.M. MILES FROM	S.L.M. MILES TO	RPM			WHITE	YELLOW	YELLOW/ YELLOW	WHITE/ RED	YELLOW/ RED	
		NORTH BOUND										
LIC	SR 79	12.30	13.66	90						90		
	ROADWAY D			12						12		
	THIRD LANE			9						9		
	UNION STREET			8						5	3	OFF RAP TO UNION STREET
	RAMP B			12						4	8	ON RAMP FROM GRANT STREET
	RAMP E			18						9	9	OFF RAMP TO MAIN STREET
	RAMP F			12						5	7	ON RAMP FROM MAIN STREET
	ROADWAY A			20							20	
	ROADWAY D			24						15	9	ON RAMP
		SOUTH BOUND										
LIC	SR 79	12.30	13.66	90						90		
	ROADWAY B			20						20		
	THIRD LANE			6						6		
	SR 79	12.30	12.46	106			36		49	21		CL & 40' (Y/Y) NORTH & SOUTH
												BOTH SIDES OF ISLAND. CHANNEL
												LINE & 40' (W/R) HOPEWELL,PARK,
												ROCKWELL EL & 40' NORTH & SO.
	WILLIAMS STREET			6						3	3	ON RAMP FROM WILLIAMS ST.
	RAMP A			19						9	10	OFF RAMP TO GRANT STREET
	RAMP C			11						4	7	ON RAMP FROM MAIN STREET
	RAMP D			18						9	9	OFF RAMP TO MAIN STREET
	ROADWAY B			13							13	
	ROADWAY C			12						3	9	
TOTAL				506			36		49	314	107	

CALCULATED SAB
CHECKED LWE

RPM LOCATION SUB-SUMMARY
S.R. 79 - S.L.M. 12.30 TO S.L.M. 13.66

LIC-16-19.72
LIC-79-12.30

110
190

L0160002.TRM

TRAFFIC CONTROL QUANTITIES
SUB-SUMMARY

						ITEM 621			ITEM 644										
QUANTITIES CARRIED FROM SHEET						RAISED PAVEMENT MARKER REMOVED	RPM		CENTER LINE	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE (WHITE)	LANE ARROW (COMBINED)	LANE ARROW (THROUGH)	LANE ARROW (TURN)	WORD ON PAVEMENT 72 IN. "ONLY"
						EACH	EACH		MILE	MILE	MILE	MILE	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH
S.R. 16 / S.R. 79																				
SHEET 98										0.942	1.546	2.601	1020		124	210				
SHEET 99										0.884	0.134	0.239	1021		118	455				
SHEET 100										1.068	1.912	1.940	2030	51	265	686	2		2	1
SHEET 101										1.060	0.518	0.572	718	42	107	454		1		
SHEET 102										0.400		0.045	101	41	99		2	2		1
SHEET 103										0.320	0.320	0.320								
SHEET 104										9.530	9.330									
SHEET 105										0.270	0.270	0.180								
SHEET 106									0.31											
SHEET 107												8.220	5278	277	1146	2152		8	3	2
SHEET 108						503	503													
SHEET 109						430	430													
SHEET 110						506	506													
SUB-TOTALS										14.474	14.030									
TOTALS CARRIED TO THE GENERAL SUMMARY						1,439	1,439		0.31	28.504		14.117	10,168	411	1,859	3,957	4	11	5	4

CALCULATED J.C.
CHECKED R.G.

S.R. 16 & S.R. 79 TRAFFIC CONTROL SUB-SUMMARY

S.R. 16

LIC-16-19.72
LIC-79-12.30

111
190

L1619865.DGN

ITEM 625, RE-ERECT EXISTING LIGHT POLE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF RE-ERECTING AN EXISTING LIGHT POLE INCLUDING THE LUMINAIRE, BRACKET ARM(S) AND TRANSFORMER BASE (IF ANY) REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT SITE. THE LIGHT POLE WILL BE INSTALLED ON A NEW FOUNDATION AS INDICATED IN THE PLANS.

WHERE THE POLE WILL BE INSTALLED ON A NEW FOUNDATION, ANCHOR BOLTS, JUNCTION BOX, POLE BASE PLATE AND ANY GROUNDING MATERIAL SHALL BE FURNISHED.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "RE-ERECT EXISTING LIGHT POLE, AS PER PLAN" FOR EACH POLE RE-ERECTED WHICH SHALL INCLUDE ANCHOR BOLTS, POLE BASE PLATE, JUNCTION BOX, GROUNDING ROD, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

FOR RE-ERECTED LIGHT POLE LOCATIONS SEE SHEET 116, 144 & 170/190 FOR DETAILS.

ITEM 625, LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE INCLUDING THE LUMINAIRE, THE BRACKET ARM(S), TRANSFORMER BASE (IF ANY) AND PROPERLY STORING THE ASSEMBLY ON THE PROJECT SITE UNTIL RE-ERECTED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN" FOR EACH POLE REMOVED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

FOR EXISTING LIGHT POLE LOCATIONS SEE SHEET 116, 144 & 170/190.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:
ITEM 625, LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN 3 EACH

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 625, DISCONNECT CIRCUIT, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR NEAREST JUNCTION BOX.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS.

THOSE WIRES THAT ARE TO REMAIN ON ACTIVE CIRCUITS SHALL HAVE A WATER-RESISTANT SEAL AT THE CUT END. THE WATER- RESISTANT SEAL SHALL BE ACCOMPLISHED BY PLUGGING THE DEACTIVATED PORT OF AN EXISTING CONNECTOR KIT OR BY INSTALLING A CABLE SPLICE KIT ON THE CUT END OF THE CABLE.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 625, "DISCONNECT CIRCUIT, AS PER PLAN" AT EACH LOCATION WHERE DISCONNECTION IS REQUIRED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:
ITEM 625, DISCONNECT CIRCUIT, AS PER PLAN 6 EACH

ITEM 614 MAINTAINING TRAFFIC (BRIDGE WORK)

THROUGH TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY THE USE OF PART WIDTH CONSTRUCTION AS PER STD. DWGS. MT-95.30, MT-95.40, MT-95.50, MT-98.10, MT-98.20 AND MT-98.21. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT MATERIALS AND TOOLS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DRAWN TAG | REVISED

DESIGNED TAG | CHECKED JDR

BRIDGE ROADWAY GENERAL NOTES

LIC-16-18.72/LIC-70-12.30
PID No. 76384

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING IMPACT ATTENUATORS:

1. THE QUADGUARD CZ, (24 INCHES WIDE SIX-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

   THE LENGTH OF THE SIX-BAY QUADGUARD CZ IS 20'-9". INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: QSCZCVR-T4
DRAWING NAME: QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES
REVISION DATE: 5/13/99 REV. J
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-10
DRAWING NAME: QUADGUARD SYSTEM CONCRETE PAD, CZ, QG
REVISION DATE: 11/19/97 REV. D
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-16
DRAWING NAME: QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG
REVISION DATE: 7/30/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 354051Z
DRAWING NAME: QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24, 30, 36
REVISION DATE: 5/17/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-18
DRAWING NAME: TRANSITION ASSEMBLY, 4 OFFSET, QG
REVISION DATE: 6/25/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35400260
DRAWING NAME: QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY
REVISION DATE: 11/19/97 REV. C
ODOT APPROVAL DATE: 8/27/99

2. THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

   THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE- APPROVED SHOP DRAWINGS:

DRAWING NUMBER: SS450
DRAWING NAME: CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS
REVISION DATE: 3/12/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS455
DRAWING NAME: TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 2/18/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS461
DRAWING NAME: TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS462
DRAWING NAME: TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99
ODOT APPROVAL DATE: 8/27/99

3. THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS INC., SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515, (TELEPHONE 330-799-9291)

   THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT (24' LONG AND 35" WIDE). INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: A040416
DRAWING NAME: UNIVERSAL TAU-II PARTS LIST
REVISION DATE: 4/22/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040420
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP
REVISION DATE: 4/28/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040105
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)
REVISION DATE: 1/07/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: BO40239
DRAWING NAME: APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)
REVISION DATE: 4/21/04
ODOT APPROVAL DATE: 10/16/04

4. THE GREAT CZ IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC.

   THIS ATTENUATOR MAY BE USED UNTIL JANUARY 1, 2007 IF THE ITEM WAS PURCHASED BEFORE OCTOBER 1, 1998 AND IS IN THE CONTRACTOR'S INVENTORY.

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT

ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY ONE TO SIX UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, FIVE INSTALLED UNITS REQUIRE ONE SPARE PARTS PACKAGE AND SEVEN INSTALLED UNITS REQUIRE TWO SPARE PARTS PACKAGES.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT, MAINTAIN, REPAIR, REPLACE OR RELOCATE A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

PAYMENT FOR THE WORK ZONE IMPACT ATTENUATORS SHALL BE INCLUDED IN THE CONCTRACT PRICE FOR EACH ATTENUATOR.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DRAWN TAG | REVISED
DESIGNED TAG | CHECKED JDR

MAINTENANCE OF TRAFFIC GENERAL NOTES

LIC-16-19.72/LIC-78-12.30
PID No. 76384

LIC-16 2166 L&R	LIC-16 2234 L&R	LIC-16 2296 L&R			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
									ROADWAY
128	139	124			202	32800	391	SQ YD	CONCRETE SLOPE PROTECTION REMOVED
250	250	250			202	38000	750	FT	GUARDRAIL REMOVED
207	226	207			203	10000	640	CU YD	EXCAVATION
139	152	139			203	20000	430	CU YD	EMBANKMENT
405	444	405			204	10000	1254	SQ YD	SUBGRADE COMPACTION
128	139	124			601	21000	391	SQ YD	CONCRETE SLOPE PROTECTION
200	200	200			606	13000	600	FT	GUARDRAIL, TYPE 5
2	2	2			606	35000	6	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1
2	2	2			606	35100	6	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2
2	2	2			622	10200	6	EACH	BARRIER TRANSITION
									TRAFFIC CONTROL
24	24	24			626	00100	72	EACH	BARRIER REFLECTOR
									DRAINAGE
4	4	4			604	36600	12	EACH	PRECAST REINFORCED CONCRETE OUTLET
									PAVEMENT
68	74	68			304	20000	210	CU YD	AGGREGATE BASE
									LIGHTING
2	2	2			625	00500	6	EACH	CONNECTOR KIT, TYPE II
2	2	2			625	00600	6	EACH	CONNECTOR KIT, TYPE III
6	6	6			625	01500	18	EACH	CABLE SPLICING KIT
435	455	455			625	23200	1345	FT	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE
404	397	404			625	25400	1205	FT	CONDUIT, 2", 725.04
182	178	182			625	25600	542	FT	CONDUIT, 4", 725.04
4	4	4			625	29920	12	EACH	STRUCTURE JUNCTION BOX
4	4	4			625	30700	12	EACH	PULL BOX, 725.08, 18"
1	1	1			625	35001	3	EACH	REERECT EXISTING LIGHT POLE, AS PER PLAN
1	1	1			625	75403	3	EACH	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN
2	2	2			625	75801	6	EACH	DISCONNECT CIRCUIT, AS PER PLAN
									MAINTENANCE OF TRAFFIC
2	2	2			614	12350	6	EACH	WORK ZONE IMPACT ATTENUATOR (UNDIRECTIONAL)
83	88	83			614	13300	254	EACH	BARRIER REFLECTORS, TYPE B
83	88	83			614	13350	254	EACH	OBJECT MARKERS, ONE WAY
1860	1980	1860			622	40020	5700	FT	PORTABLE CONCRETE BARRIER, 32"
190	190	190			622	40040	570	FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DRAWN DDH | REVISED

DESIGNED TAG | CHECKED JDR

ROADWAY SUB-SUMMARY

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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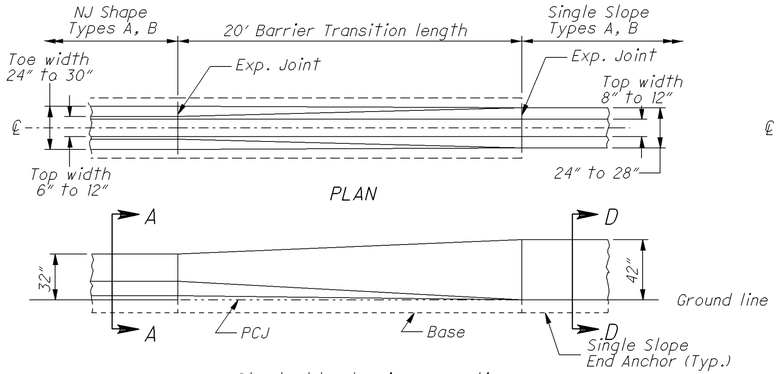
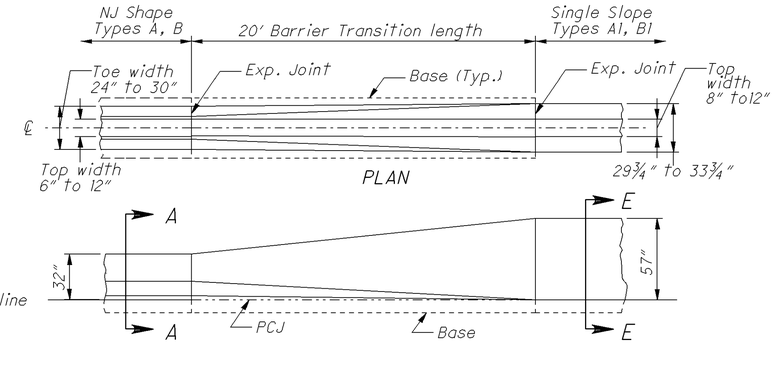
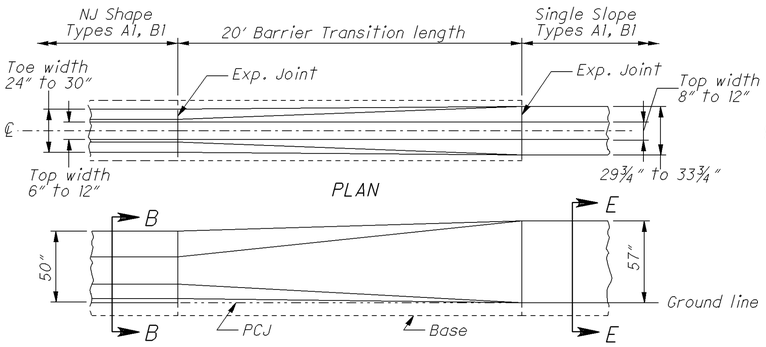
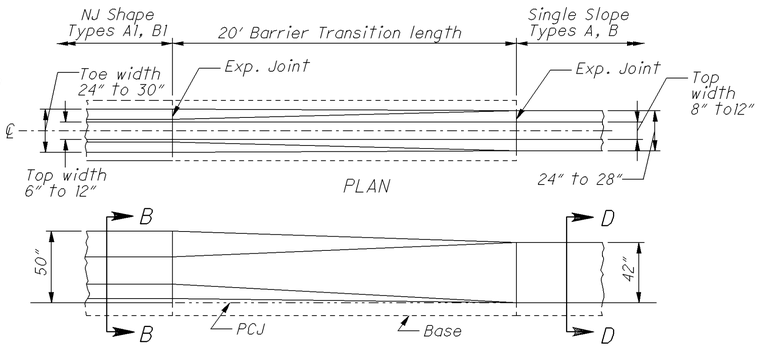
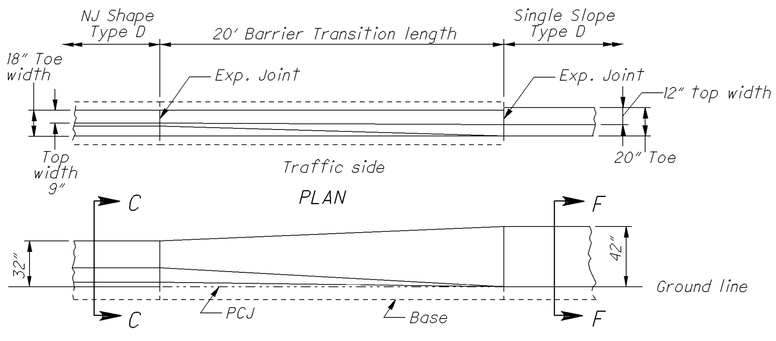
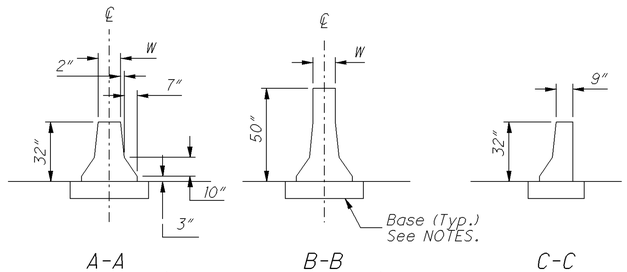






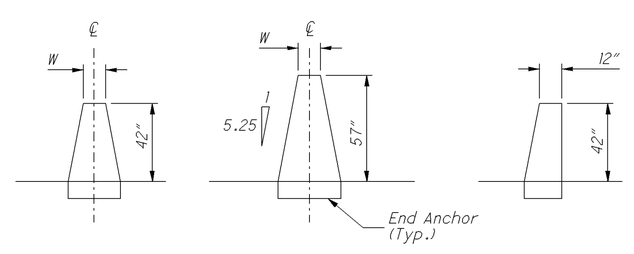






NJ SHAPE SECTIONS

See Plan Insert sheets for specific NJ Shape Concrete barrier details.



SINGLE SLOPE SECTIONS

See SCD RM-4.3 and RM-4.5 for specific Single Slope concrete barrier details.

NOTES

GENERAL: This insert details the Barrier Transition, to connect existing NJ Concrete Barrier (safety shape) to a new run of Single Slope Concrete Barrier at locations shown on the plans. For NJ barrier shape and other details see the respective plan insert sheets. For Single Slope barrier details, see SCD RM-4.3 (RM-4.5 for Type D).

ADJACENT CONCRETE BARRIER RUNS: Remove any tapered end sections, Impact attenuators, or other guardrail hardware from existing barrier end. The barrier to barrier transition is not intended to be used at transition sections (those shown on SCD RM-4.4), Inlets, or on Type C or C1 Barrier. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transiton should contain horizontal reinforcing steel similiar to that required in the respective single slope barrier. Reinforcement is not shown and should be detailed separately. The adjacent single slope end should be terminated with a reinforced End Anchor as detailed on the SCDs.

BARRIER FACE TRANSITION: To prevent vehicle snagging, a smooth transition from the safety shape face to the single slope face is made over a 20' length. The actual shape of the Transition is dependent on both the adjacent NJ barrier and the single slope barrier Types, as detailed on the plans. The contractor and Engineer will agree on a construction method to ensure a smooth barrier face.

MATERIALS: Materials are same for those shown on RM-4.3 and RM-4.5, except that cast-in-place is the only acceptable method. Edges may be chamfered or radiused as shown on those drawings.

CONCRETE BASE: Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

JOINTS: Construct joints as shown on respective barrier drawings.

RACEWAYS: When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

METRIC UNITS: Refer to respective barrier drawings or inserts for metric dimensions.

PAYMENT: This Barrier Transiton shall include all material and labor needed to construct this 20' section, including any raceways, reinforcing steel, dowels and other necessary incidentals. Payment shall be made at the unit price for Item 622 - Barrier Transition, Each.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

PLAN INSERT SHEET

NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

LIC-16-19.72/LIC-79-12.30

PID No. 76384

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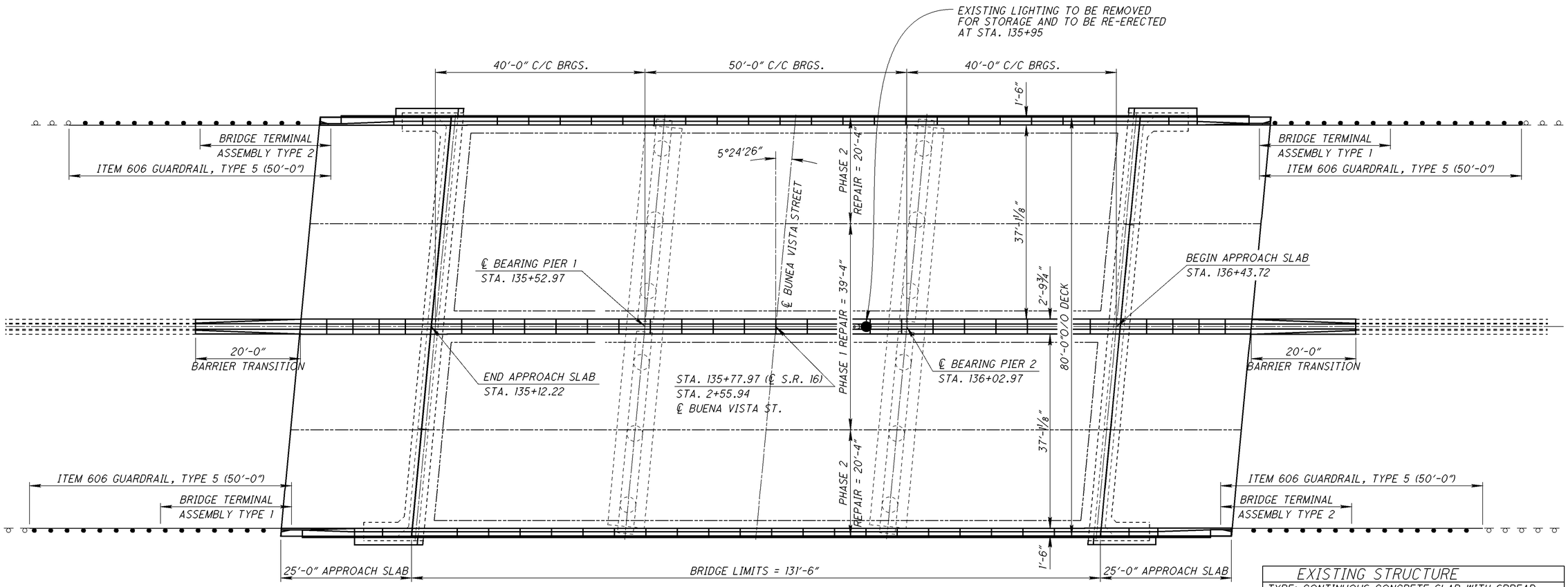
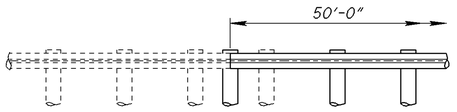
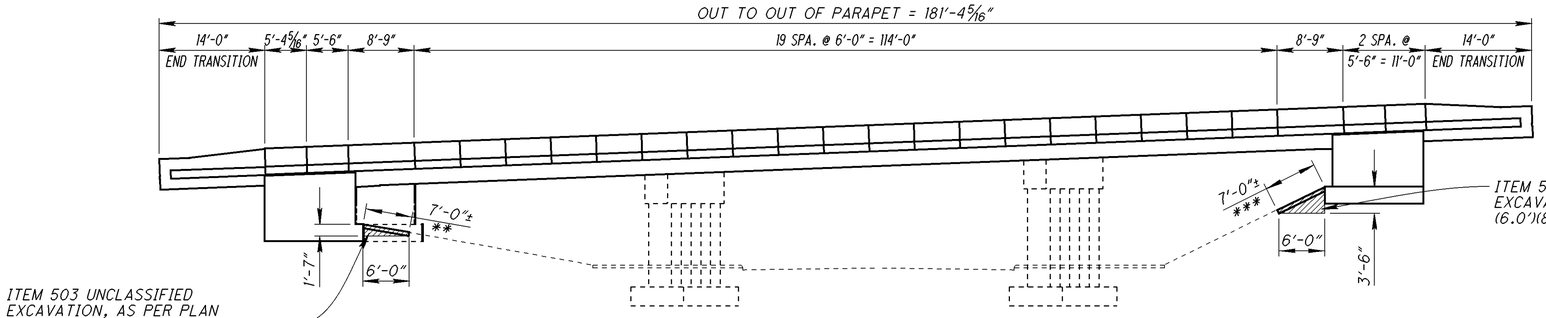


PLAN



NOTE:
WHERE PROPOSED RAIL IS TO BE CONNECTED WITH EXISTING RAIL, THE PROPOSED RAIL SHALL BE LAPPED AT THE EXISTING POST WITH THE LAP IN THE DIRECTION OF TRAFFIC.



** - ITEM 202 CONCRETE SLOPE PROTECTION REMOVED AND ITEM 601 CONCRETE SLOPE PROTECTION (7.0')(82.1'±)/9 = 64.0 SQ.YD.

*** - ITEM 202 CONCRETE SLOPE PROTECTION REMOVED AND ITEM 601 CONCRETE SLOPE PROTECTION (7.0')(82.1'±)/9 = 64.0 SQ.YD.

ELEVATION

EXISTING STRUCTURE

TYPE: CONTINUOUS CONCRETE SLAB WITH SPREAD FOOTING ABUTMENTS AND CONCRETE PIERS
SPANS: 40'-50'-40' C/C BEARINGS
ROADWAY: 78'-0" F/F PARAPETS WITH 4' MEDIAN
LOADING: CF-2000 (57)
WEARING SURFACE: 4" ASPHALT CONCRETE
SKEW: 5°24' 26" LT. FORWARD
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT
STRUCTURAL FILE NUMBER: 4501020
DATE BUILT: 1960

REHABILITATED STRUCTURE

TYPE: CONTINUOUS CONCRETE SLAB WITH SPREAD FOOTING ABUTMENTS AND CONCRETE PIERS
SPANS: 40'-50'-40' C/C BEARINGS
ROADWAY: 77'-0" F/F PARAPETS WITH 2'-9¾" MEDIAN
LOADING: CF-2000 (57)
WEARING SURFACE: 1¾" SDC OVERLAY
SKEW: 5°24' 26" LT. FORWARD
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT
STRUCTURAL FILE NUMBER: 4501020
DATE BUILT: 1960

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
TAG	DDH	DTF	3-27-09	4501020
CHECKED	REVISED			
JDR				

PLAN AND ELEVATION
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

REFERENCE
DETAILED DRAWINGS OF THE EXISTING STRUCTURE MAY BE INSPECTED IN THE DISTRICT 5 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, JACKSONTOWN, OHIO.

DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING
HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA
CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 A616 OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

EXISTING STRUCTURE VERIFICATION
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY , THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEND VERIFIED BY THE CONTRACTOR IN THE FIELD.

ABUTMENT CONCRETE
ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE DECK EDGES HAVE BEEN REPLACED.

REINFORCING STEEL
NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL INCLUDED IN 509.

DECK PROTECTION METHOD
SUPERPLASTICIZED DENSE CONCRETE OVERLAY

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE
REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MECHANICAL SPLICE CONNECTORS
THIS PLAN DETAILS A MECHANICAL SPLICE CONNECTOR THAT BOTH RE-BARS SCREW INTO. THE RE-BARS HAVE BEEN CALCULATED WITH A 2" CLEARANCE AT THE OUTER EDGE. IF A DIFFERENT TYPE OF MECHANICAL SPLICE CONNECTOR IS USED, THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN NO LESS THAN A 2" CLEARANCE. ANY WORK PERFORMED SHALL BE AT NO ADDITIONAL COST TO THE STATE. ALL MECHANICAL SPLICE CONNECTORS INCLUDING WORK, TOOLS, LABOR AND INCIDENTALS SHALL BE INCLUDED IN ITEM 509 EPOXY COATED REINFORCING STEEL FOR PAYMENT.

GENERAL PROVISIONS
THE CONTRACTOR'S ATTENTION IS CALLED TO ALL OF SECTION 100 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION.

FILL UNDER APPROACH SLABS
ITEM 304, AGGREGATE BASE SHALL BE USED TO BRING THE SUBBASE TO GRADE FOR THE NEW APPROACH SLABS AS DETAILED ON THE APPROACH SLAB DETAIL SHEETS AND SHALL EXTEND 1'-6" ON BOTH SIDES OF EACH APPROACH SLAB.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
THIS WORK CONSISTS OF TEMPORARILY SUPPORTING EXISTING STRUCTURES.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ENVIRONMENTAL COORDINATOR NOTIFICATION
THE CONTRACTOR SHALL CONTACT THE DISTRICT ENVIRONMENTAL COORDINATOR, AMY TOOHEY AT 740-323-5191 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION SO THE UNDERSIDE OF THE BRIDGE CAN BE INSPECTED FOR THE PRESENCE OF BATS.

DOWEL HOLES
PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. DRILL DOWEL HOLES WHERE SHOWN IN PLANS EXCEPT AS NOTED ABOVE. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NON SHRINK, NON METALLIC EPOXY GROUT, 705.20.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE
THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CONCRETE REMOVAL ON DECK EDGES SHALL BE DONE BY THE USE OF 63 - 85 LB. CLASS JACKHAMMERS ONLY. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 85-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN
CONCRETE FOR APPROACH SLABS SHALL BE CLASS S, CMS499.
THE HMWM RESIN SEALING (SEE CMW 705.15) ALONG THE LONGITUDINAL CONSTRUCTION JOINT AND MECHANICAL SPLICE CONNECTORS INCLUDING LABOR, TOOLS, MATERIALS AND INCIDENTALS SHALL BE INCLUDED IN ITEM 526, REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN FOR PAYMENT.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN
A 2" DEEP X 1" WIDE STRIP SHALL BE SAWCUT OUT OF ALL ROADWAY SURFACE ASPHALT ABUTTING ENDS OF APPROACH SLABS AFTER THE FINAL SURFACE COURSE HAS BEEN CONSTRUCTED. JOINT SEALER AS PER 705.04 SHALL BE USED TO SEAL THE JOINT CREATED.

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN DDH | REVIEWED DTF | DATE 3-27-09 | CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501020

BRIDGE NOTES
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIERS	GENERAL	SEE SHEET NUMBER
202	11301	209	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE	209				2/28
202	11301	81	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE		81			2/28
202	22900	323	SQ YD	APPROACH SLAB REMOVED				323	
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING					
503	21101	48	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN				48	1/28
503	21300	LUMP		UNCLASSIFIED EXCAVATION					
509	10000	44,624	POUND	EPOXY COATED REINFORCING STEEL	36,020	8,604			
510	10000	324	EACH	DOWELS HOLES WITH NONSHRINK, NONMETALLIC GROUT		324			
511	34400	148	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE	148				
511	34436	56	CU YD	CLASS S CONCRETE, BRIDGE DECK (PARAPET)	56				
511	34450	61	CU YD	CLASS S CONCRETE, MISC.: (MEDIAN BARRIER)	61				
511	45700	80	CU YD	CLASS C CONCRETE, ABUTMENT		80			
516	13600	18	SQ FT	1" PREFORMED EXPANSION JOINT FILLER		18			
516	13900	67	SQ FT	2" PREFORMED EXPANSION JOINT FILLER		67			
516	31011	161	FT	2" DEEP JOINT SEALER, AS PER PLAN				161	2/28
516	42000	4	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x20'-4") (50 DUROMETER)		4			
516	42000	4	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x19'-8") (50 DUROMETER)		4			
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					2/28
518	21200	73	CU YD	POROUS BACKFILL WITH FILTER FABRIC		73			
518	40000	192	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		192			
518	40010	64	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		64			
526	25001	444	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				444	2/28
848	10200	1084	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY, (1¾ THICK), USING HYDRODEMOLITION	1084				
848	20000	934	SQ YD	SURFACE PREPARATION USING HYDRODEMOLISHION	934				
848	30200	24	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	24				
848	50000	28	SQ YD	HAND CHIPPING	28				
848	50100	LUMP		TEST SLAB					
848	50300	1077	SQ YD	WEARING COURSE REMOVED, ASPHALT	1077				

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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DESIGNED TAG | CHECKED JDR

BRIDGE SUMMARY
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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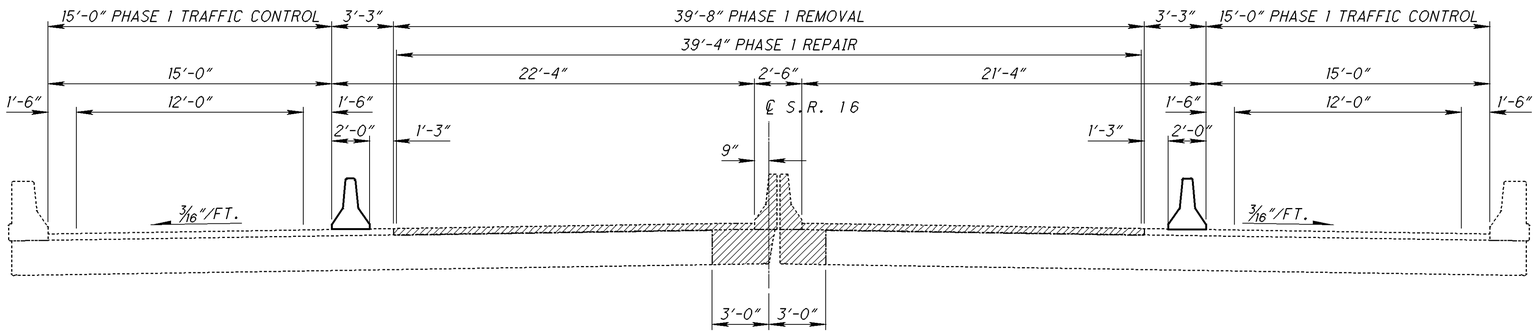
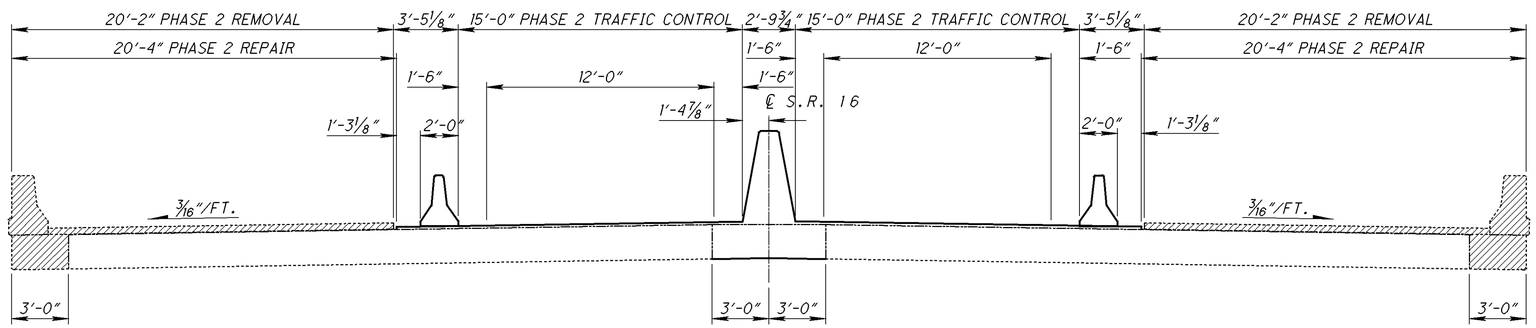


PHASE 1 TRAFFIC CONTROL, REMOVALS AND REPAIRS

REMOVALS



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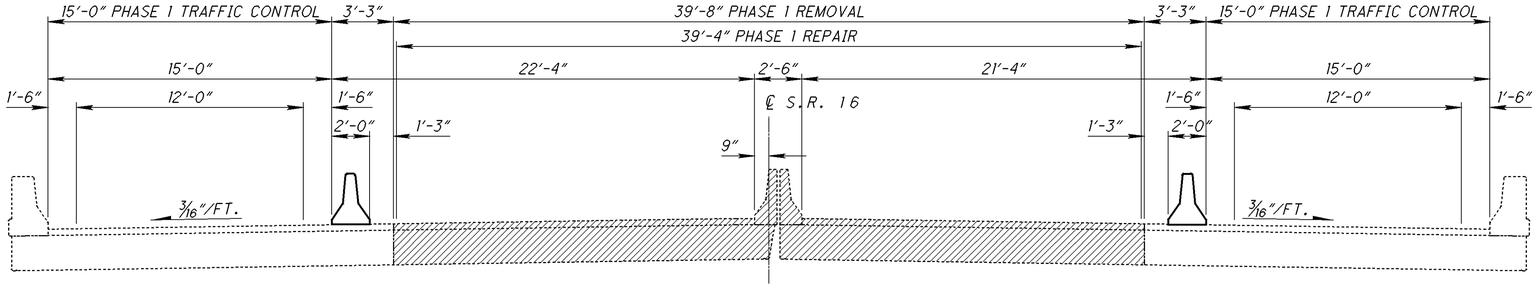
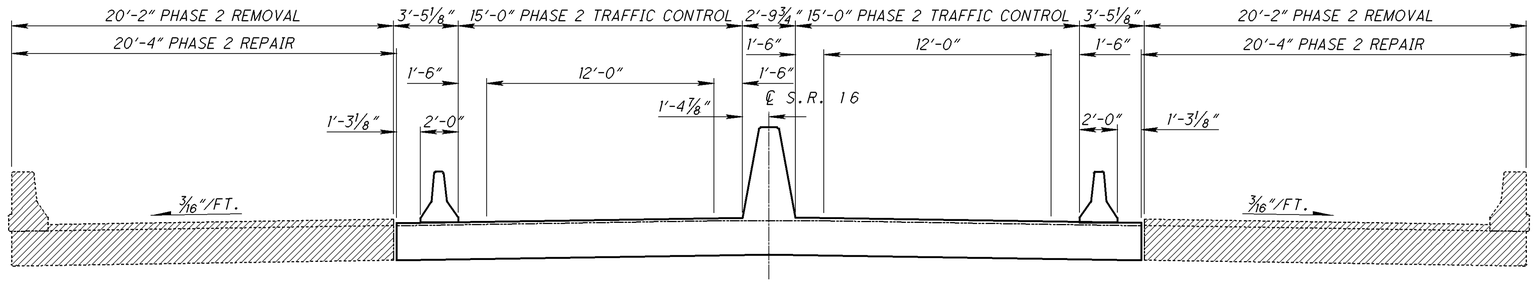


PHASE 1 TRAFFIC CONTROL, REMOVALS AND REPAIRS (AT DECK ENDS)



PHASE 2 TRAFFIC CONTROL, REMOVALS AND REPAIRS (AT DECK ENDS)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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MAINTENANCE OF TRAFFIC PHASE DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
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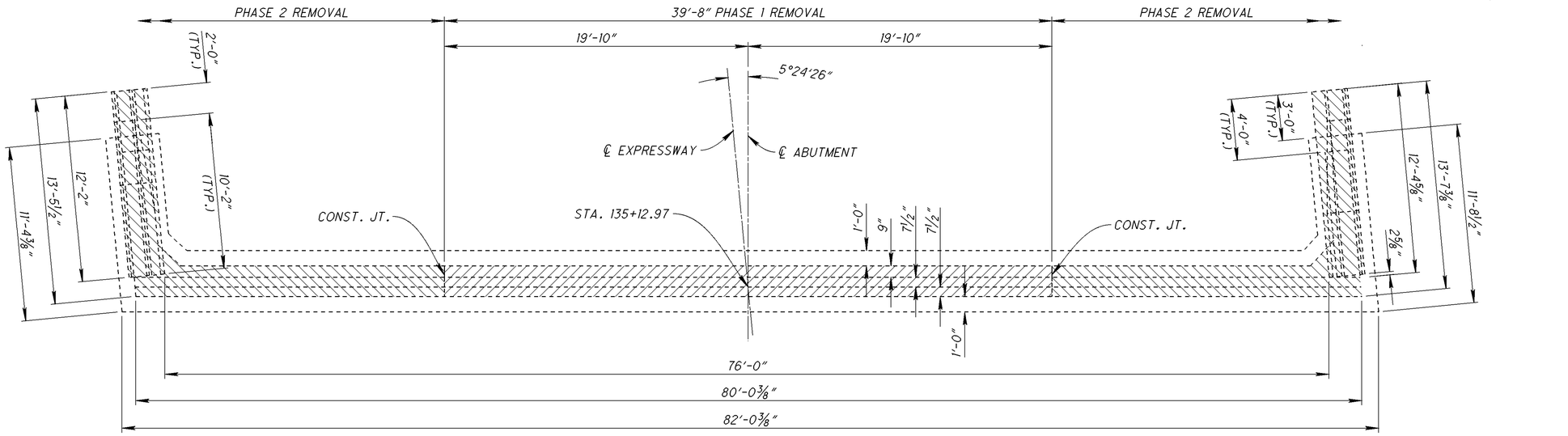
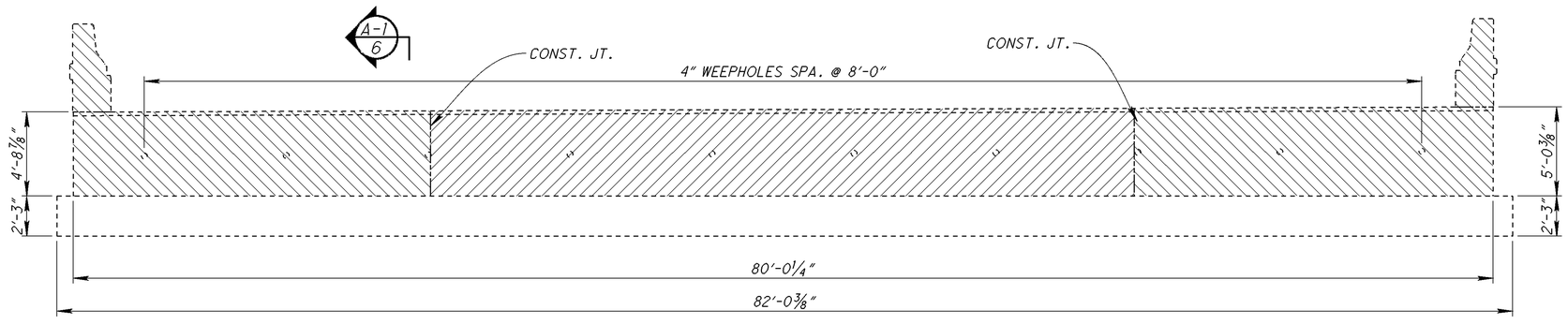


PLAN

PHASE 1 REMOVALS

PHASE 2 REMOVALS



ELEVATION

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OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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REAR ABUTMENT REMOVAL DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

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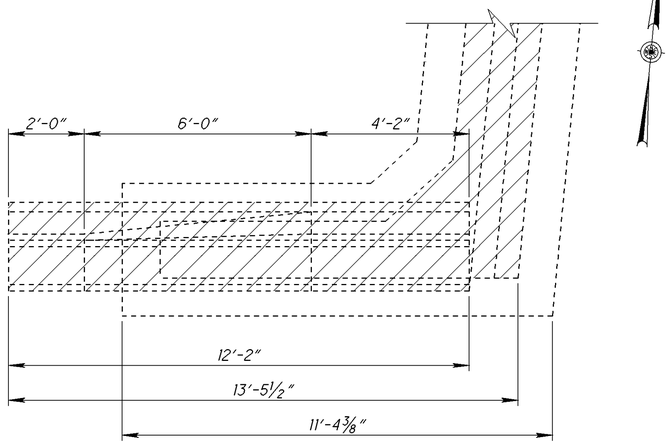

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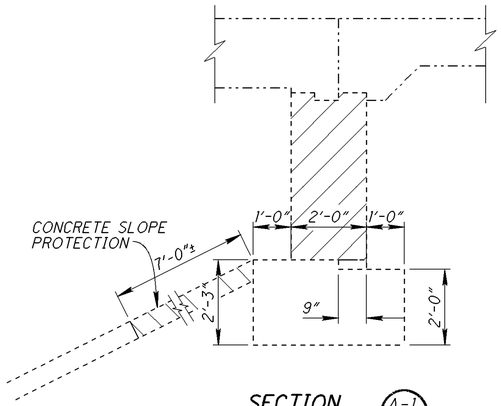
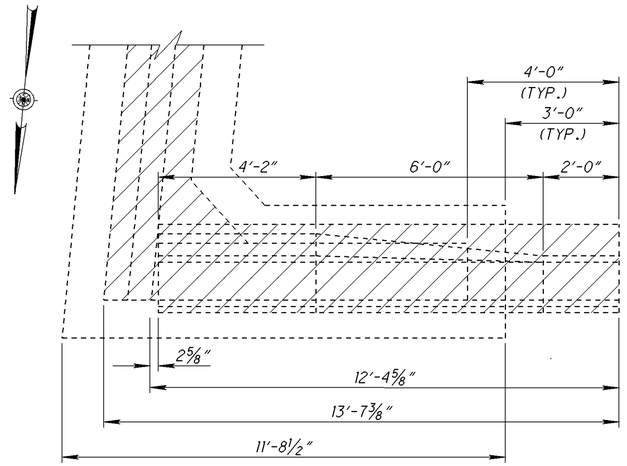
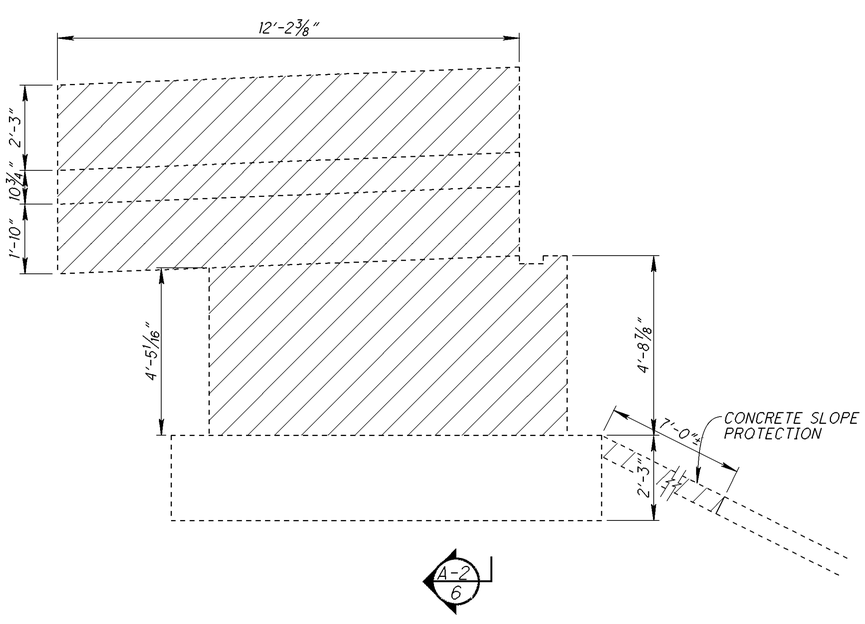


SECTION A-1 / 5



PLAN

REMOVALS



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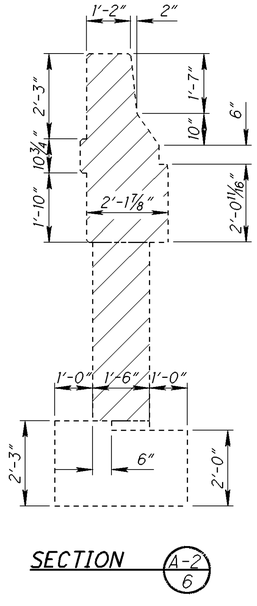

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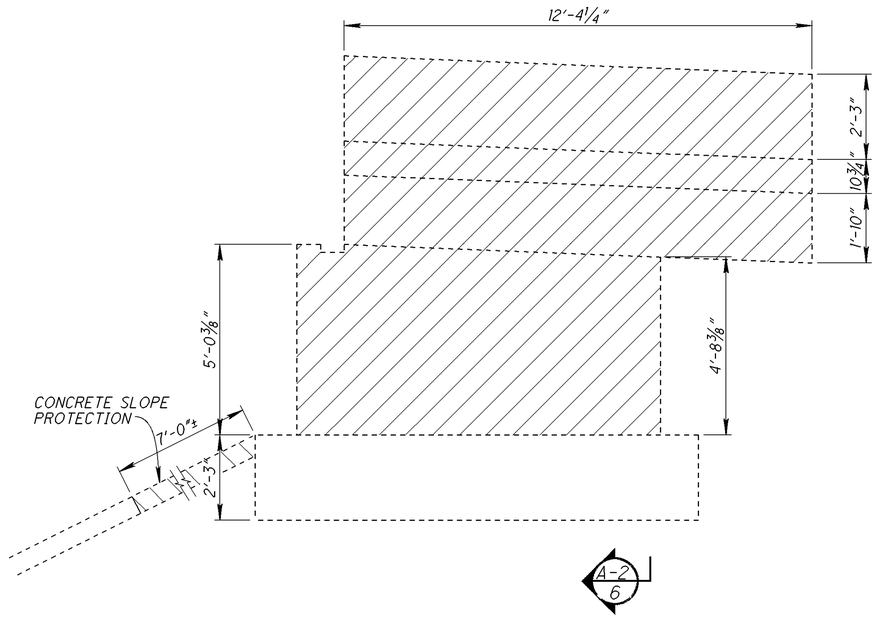

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REAR ABUTMENT REMOVAL DETAILS
BRIDGE NO. LIC-16-2166
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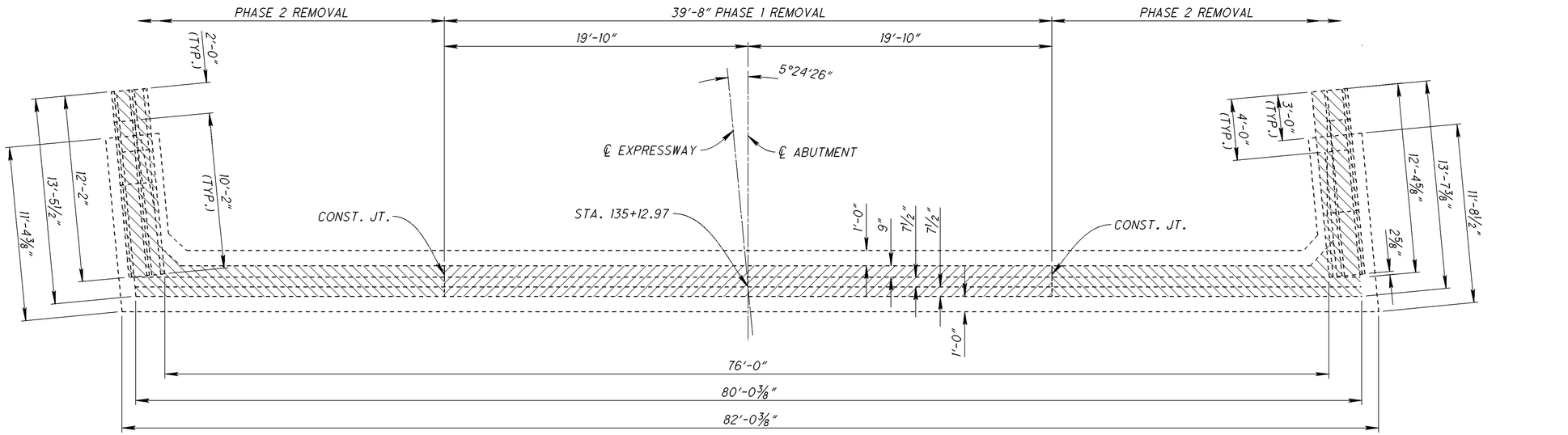
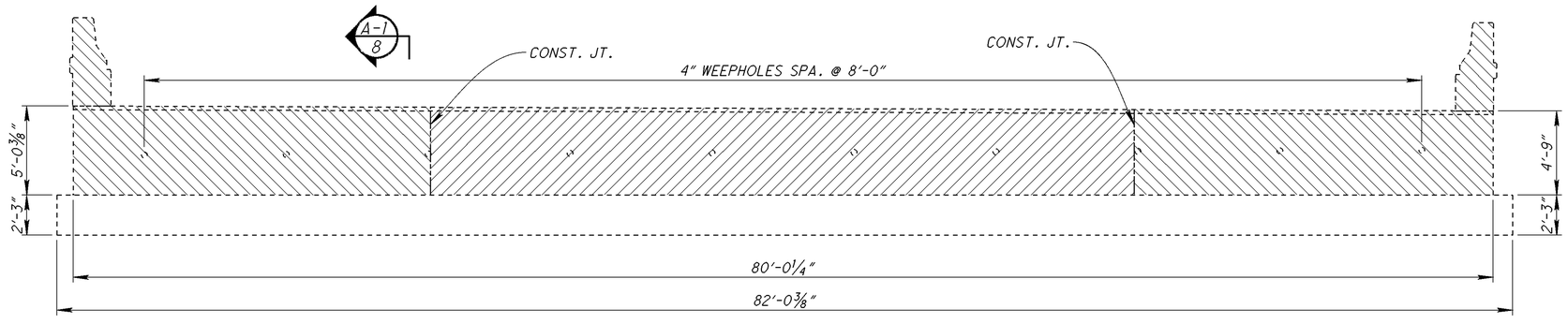


PLAN

PHASE 1 REMOVALS

PHASE 2 REMOVALS



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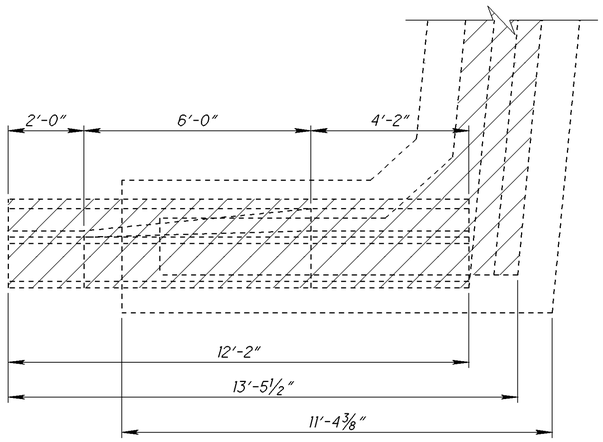
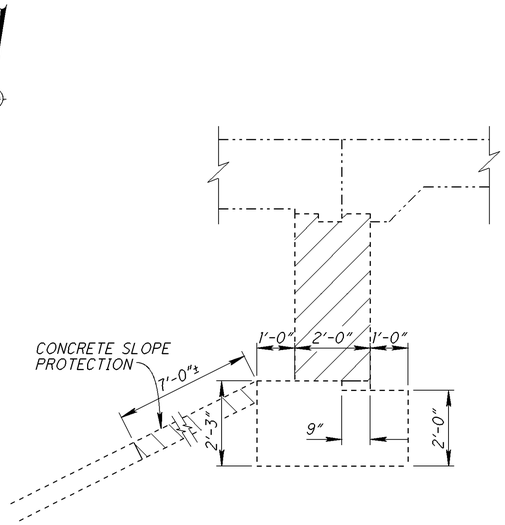


PLAN



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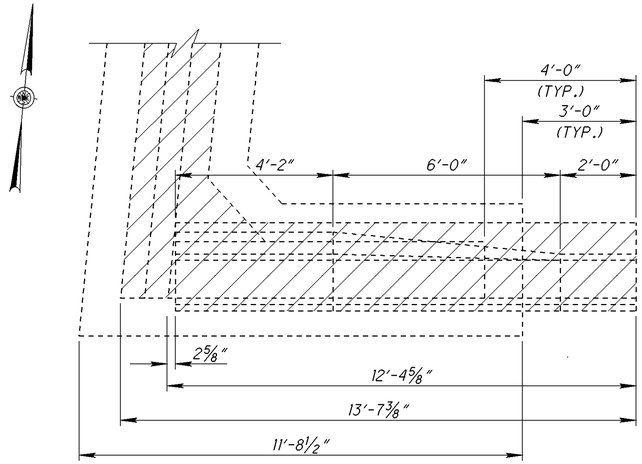
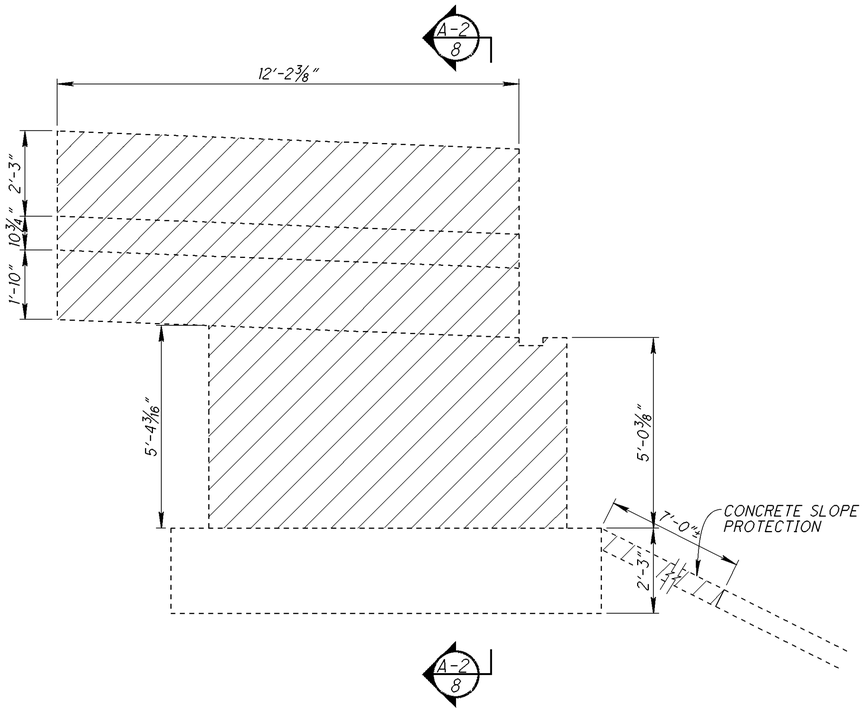


PLAN

REMOVALS



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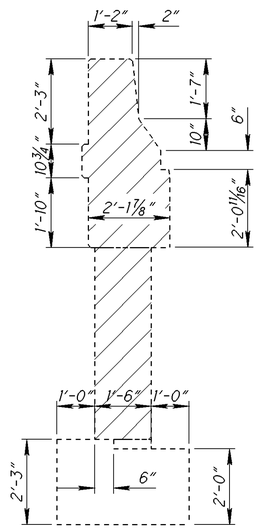

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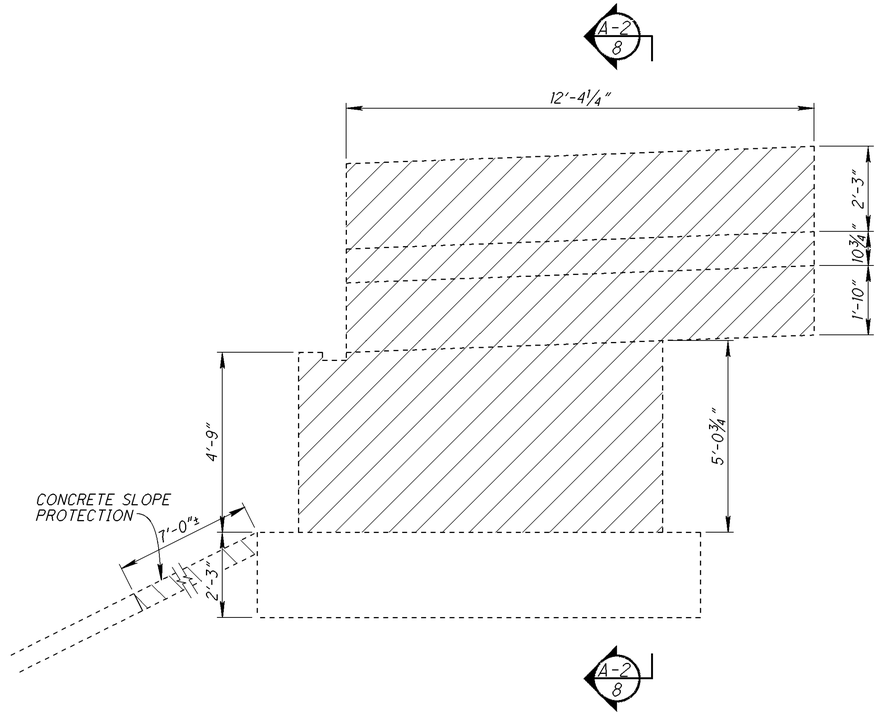

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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FORWARD ABUTMENT REMOVAL DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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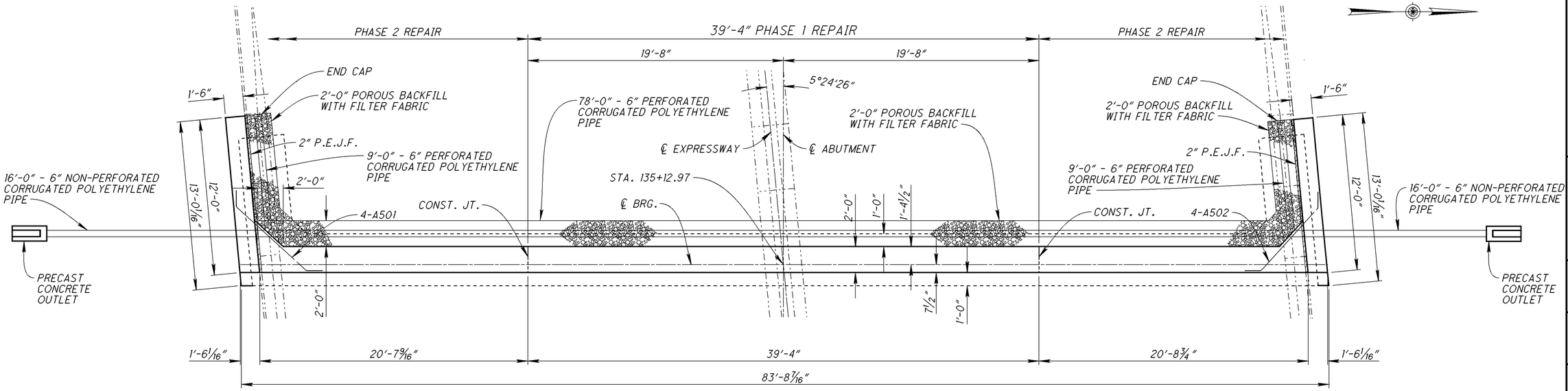
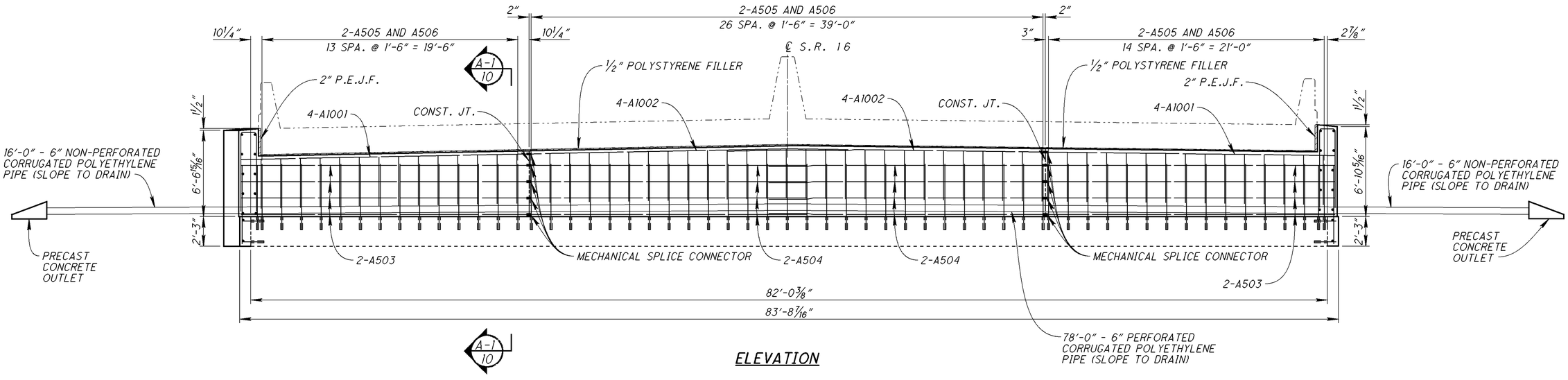


PLAN

NOTE:
ALL DOWEL HOLES TO BE 1'-0" DEEP.



ELEVATION

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OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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PROPOSED REAR ABUTMENT DETAILS
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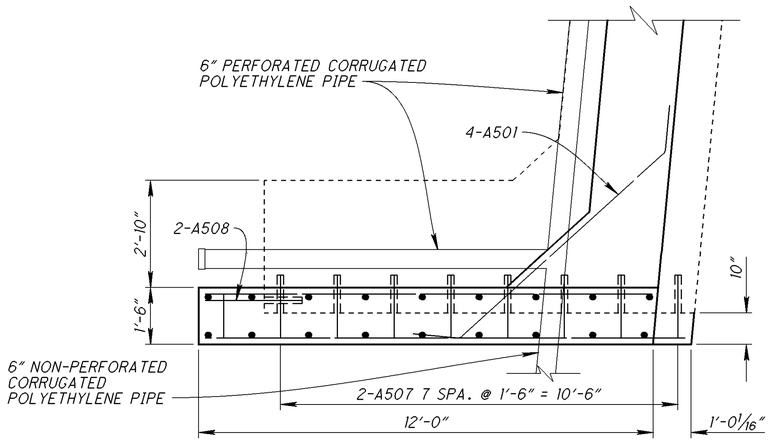

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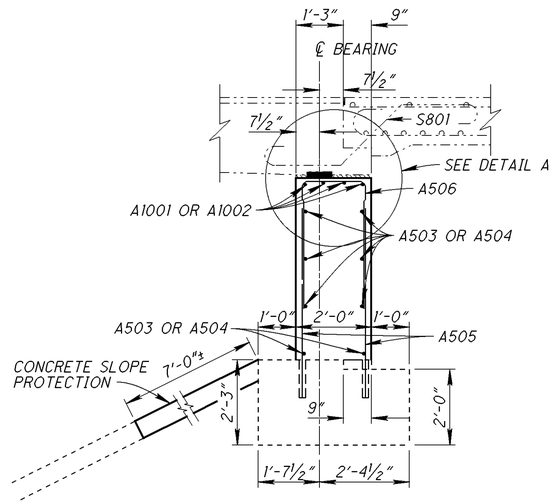

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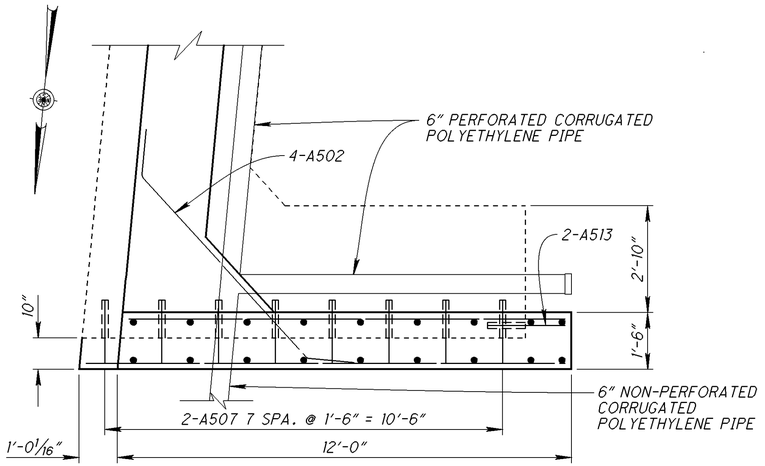
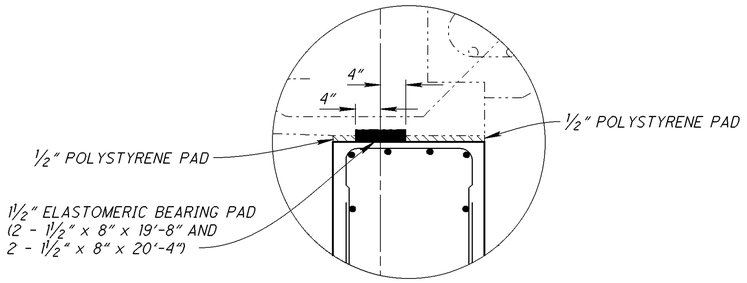


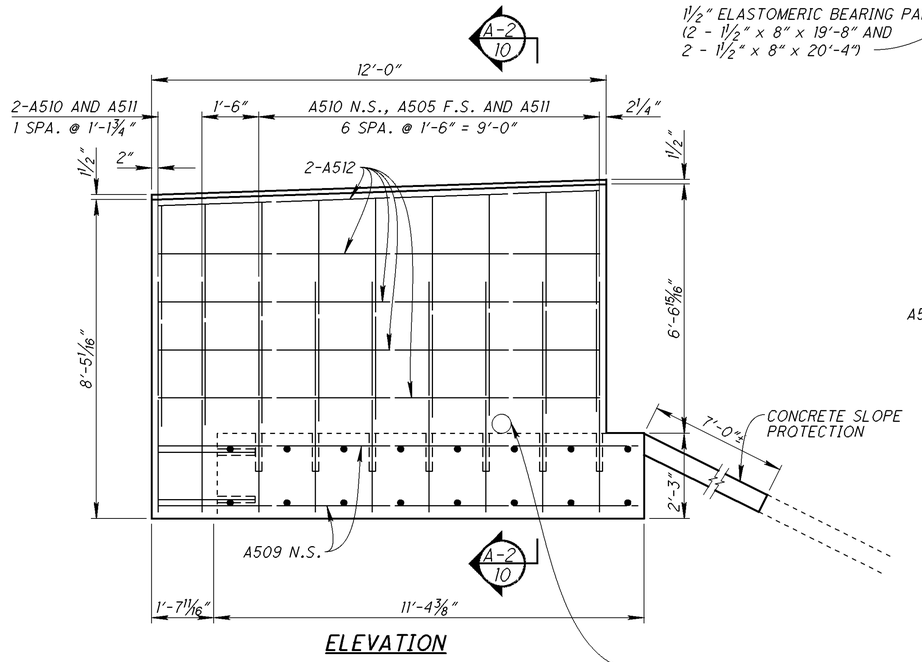
PLAN

NOTE:
ALL DOWEL HOLES TO BE 1'-0" DEEP.

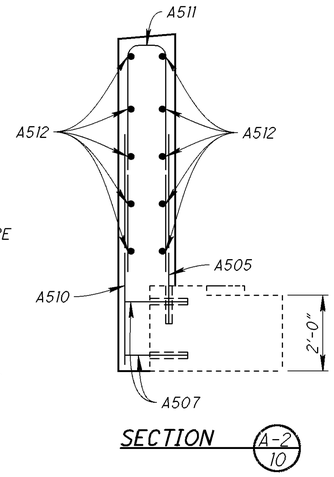
LEGEND
N.S. - NEAR SIDE
F.S. - FAR SIDE



DETAIL A



ELEVATION



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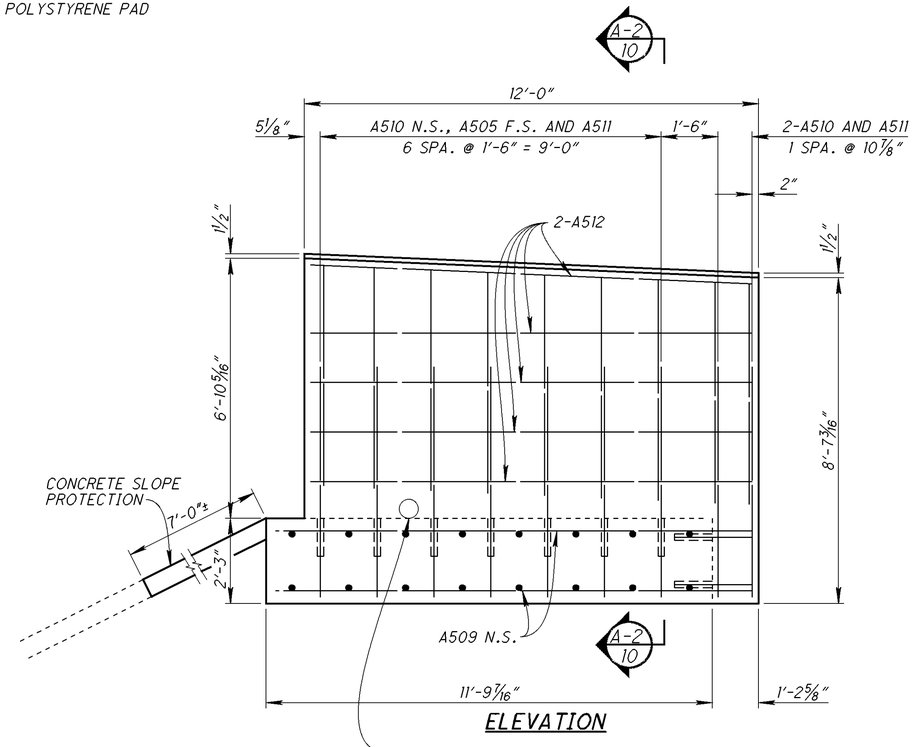

ELEVATION

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PROPOSED REAR ABUTMENT DETAILS
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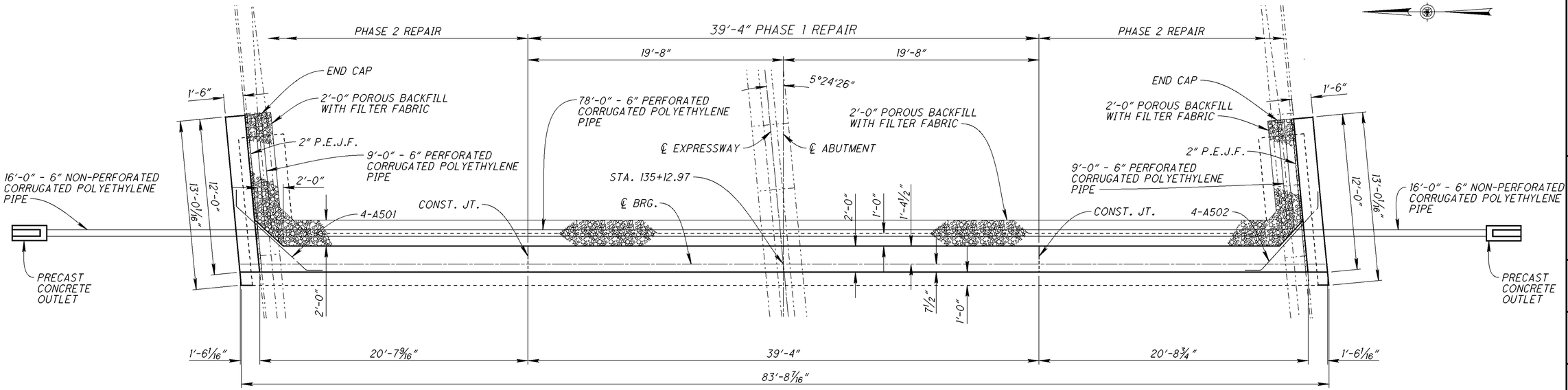
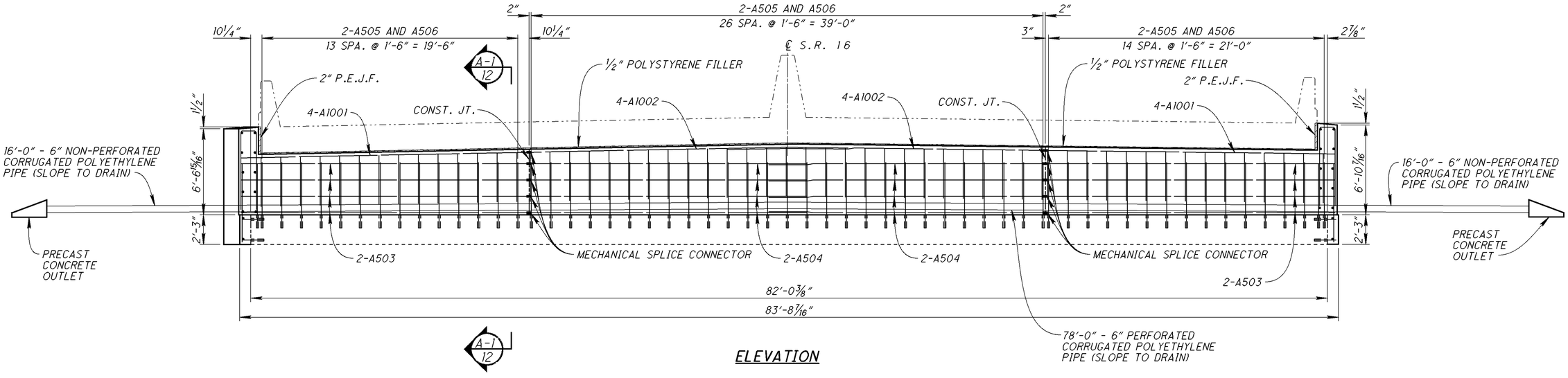


PLAN

NOTE:
ALL DOWEL HOLES TO BE 1'-0" DEEP.



ELEVATION

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PROPOSED FORWARD ABUTMENT DETAILS
BRIDGE NO. LIC-16-2166
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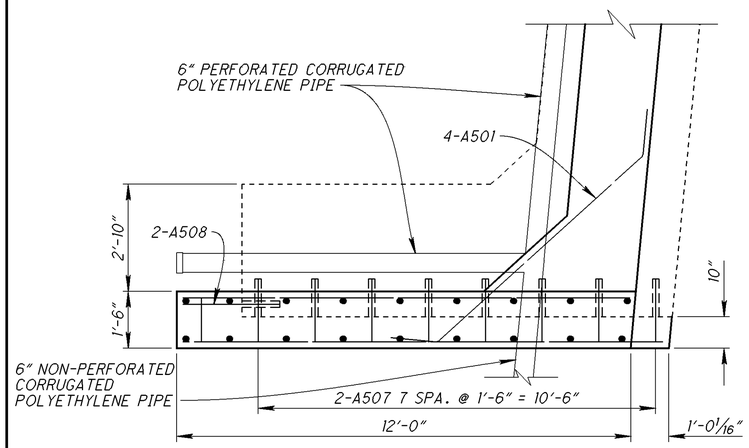
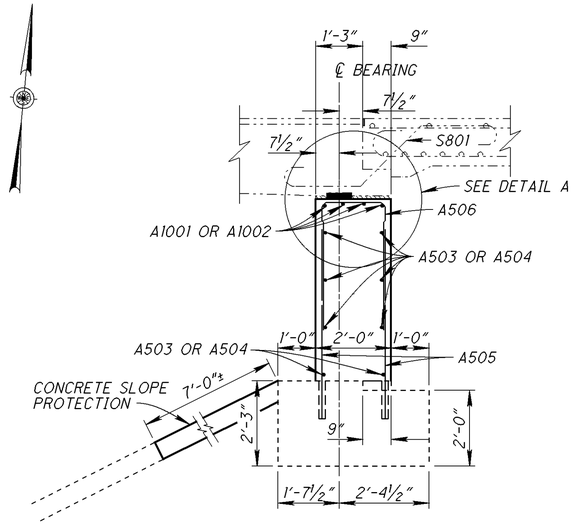


PLAN



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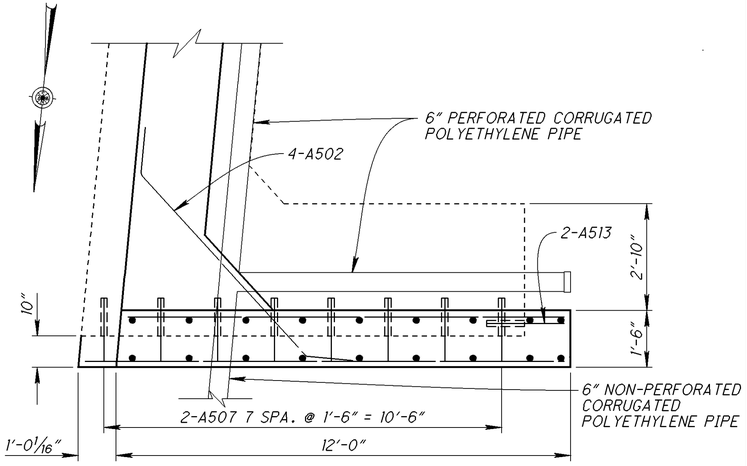
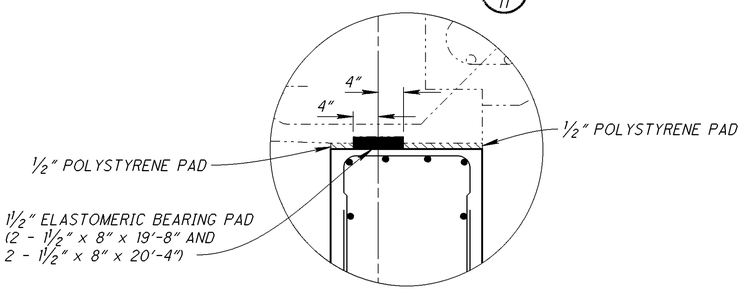


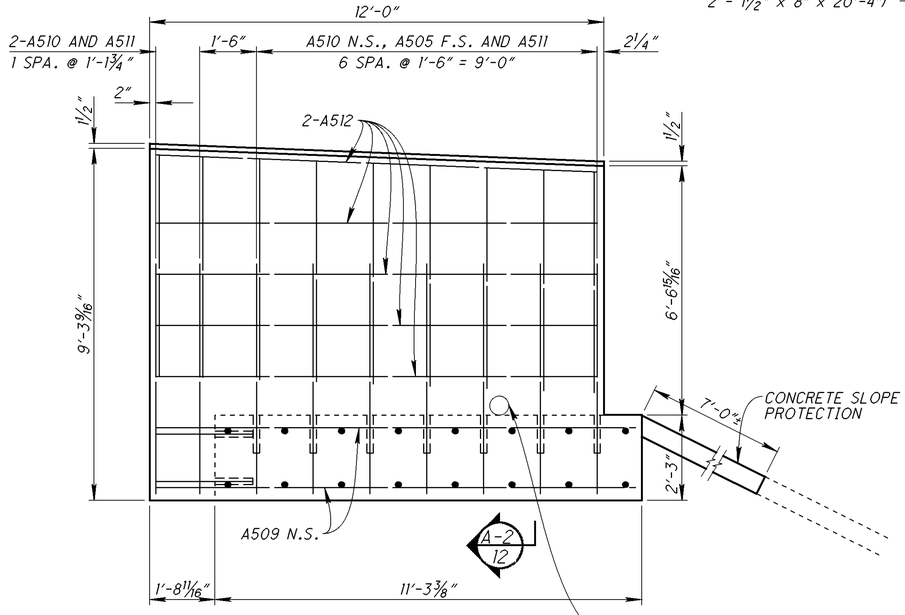
PLAN

NOTE:
ALL DOWEL HOLES TO BE 1'-0" DEEP.

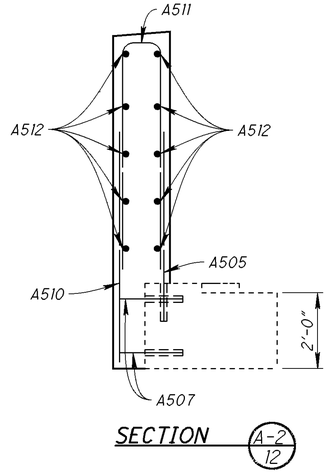
LEGEND
N.S. - NEAR SIDE
F.S. - FAR SIDE



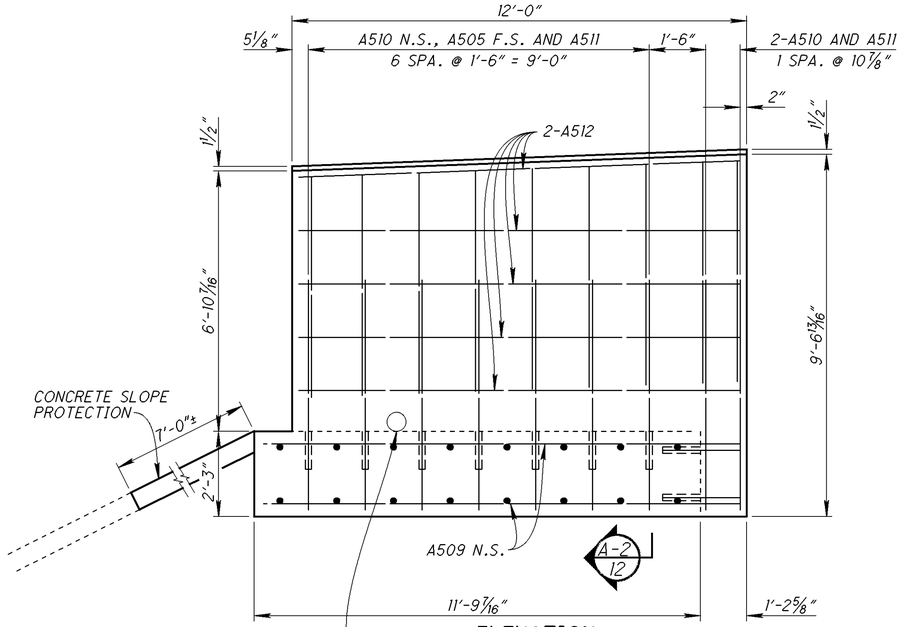
DETAIL A



ELEVATION



SECTION A-2 / 12



ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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PROPOSED FORWARD ABUTMENT DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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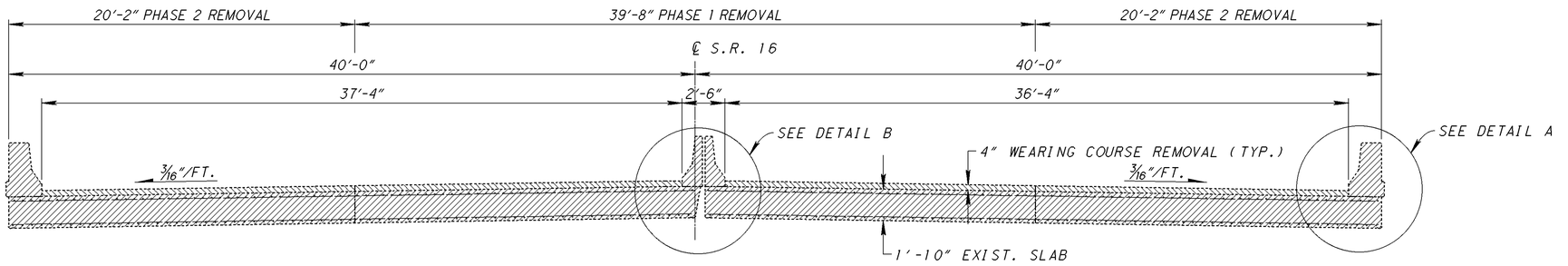
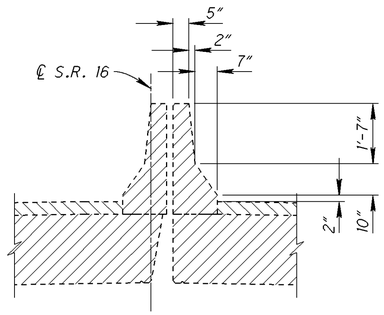
P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BPA_004.DGN



EXISTING TRANSVERSE SECTION @ DECK ENDS

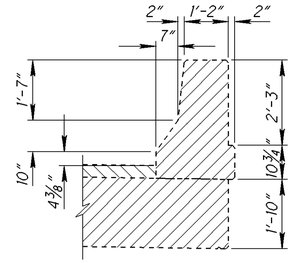


DETAIL B

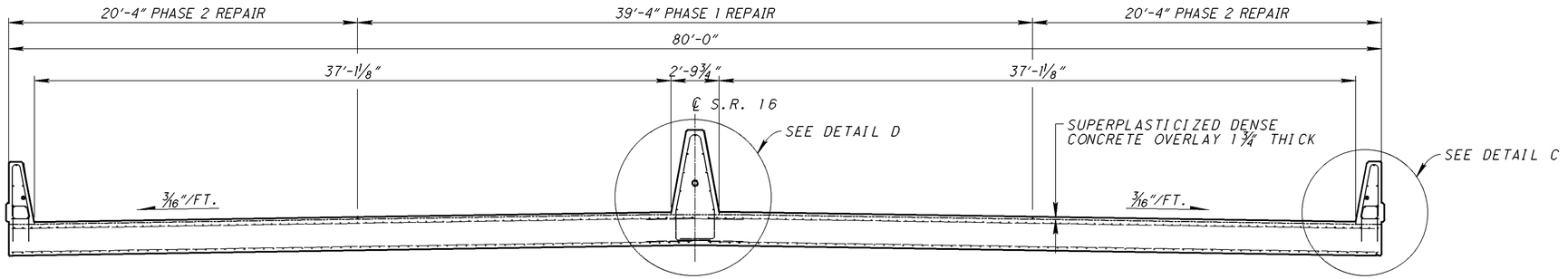
CONCRETE REMOVALS

ASPHALT CONCRETE WEARING COURSE REMOVED

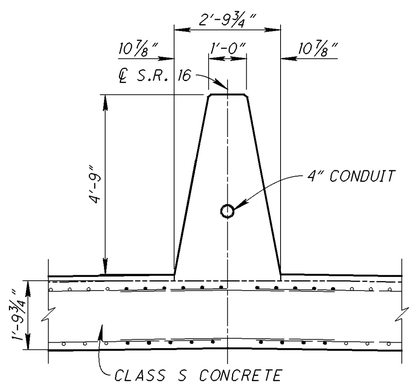
NOTE:
ALL TRANSVERSE RE-STEEL IN DECK EDGES AND LONGITUDINAL RE-STEEL IN DECK ENDS SHALL BE PRESERVED IN PLACE. ALL LOOSE RUST ON RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER.



DETAIL A



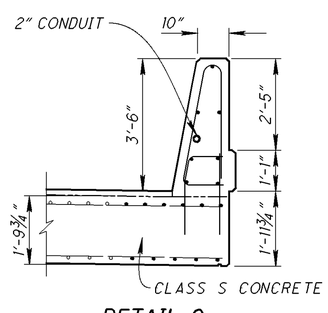
PROPOSED TRANSVERSE SECTION @ DECK ENDS



DETAIL D

NOTE:
FOR DECK EDGE RE-STEEL SEE SHEETS 16-19
FOR PARAPET RE-STEEL AND DETAILS SEE SHEETS 22 AND 23
FOR MEDIAN BARRIER RE-STEEL SEE SHEET 21

NOTE:
NEW DECK EDGE AND CENTER REPAIR TO BE ROUGH FINISHED ¼" LOWER THAN ORIGINAL DECK SURFACE.



DETAIL C

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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TRANSVERSE SECTION @ DECK ENDS
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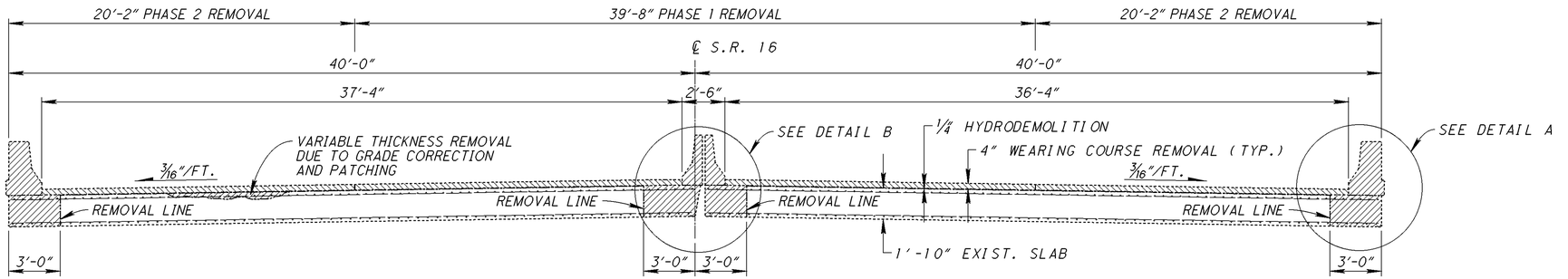
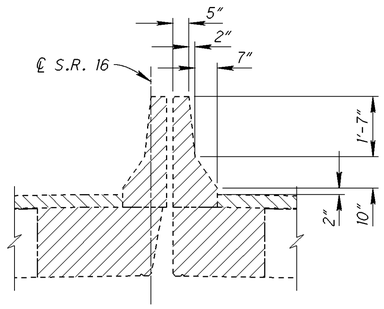


EXISTING TRANSVERSE SECTION

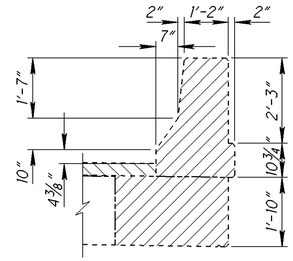


DETAIL B

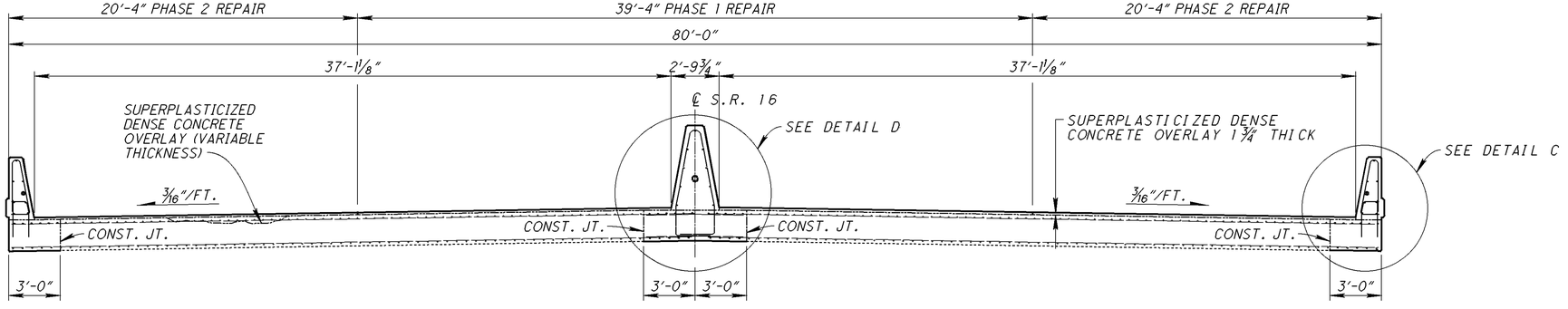
CONCRETE REMOVALS

ASPHALT CONCRETE WEARING COURSE REMOVED

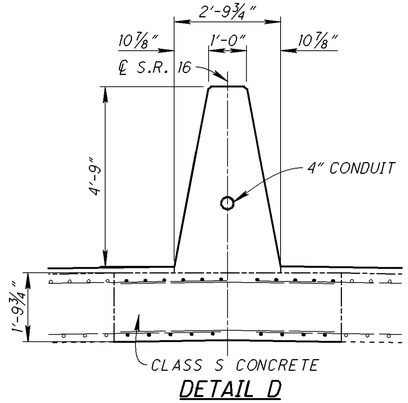
NOTE:
ALL TRANSVERSE RE-STEEL IN DECK EDGES AND LONGITUDINAL RE-STEEL IN DECK ENDS SHALL BE PRESERVED IN PLACE. ALL LOOSE RUST ON RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER.



DETAIL A



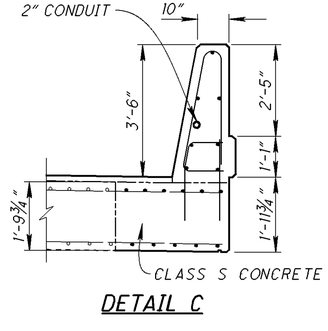
PROPOSED TRANSVERSE SECTION



DETAIL D

NOTE:
FOR DECK EDGE RE-STEEL SEE SHEETS 16-19
FOR PARAPET RE-STEEL AND DETAILS SEE SHEETS 22 AND 23
FOR MEDIAN BARRIER RE-STEEL SEE SHEET 21

NOTE:
NEW DECK EDGE AND CENTER REPAIR TO BE ROUGH FINISHED 1/4" LOWER THAN ORIGINAL DECK SURFACE.



DETAIL C

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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TRANSVERSE SECTION
BRIDGE NO. LIC-16-2166
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LIC-16-19.72/LIC-79-12.30
PID No. 76384

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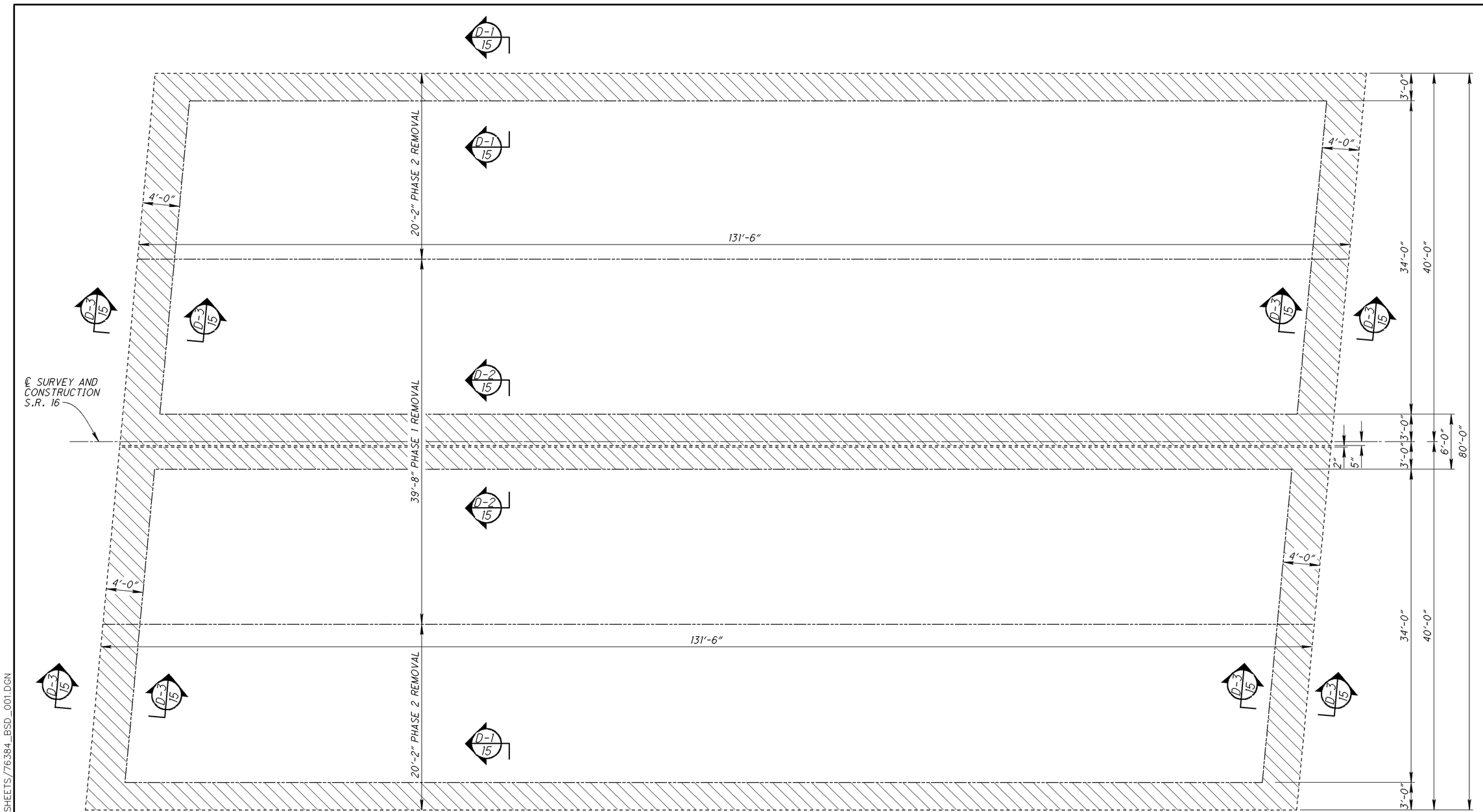
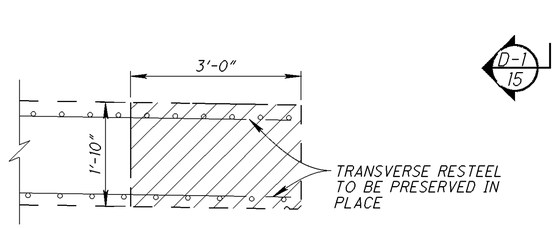
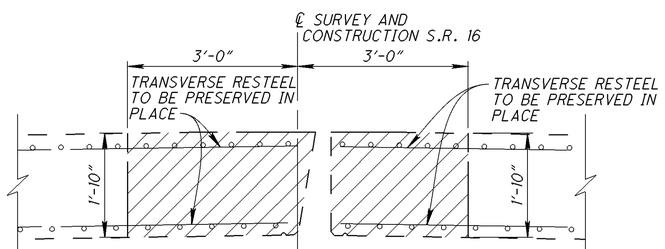
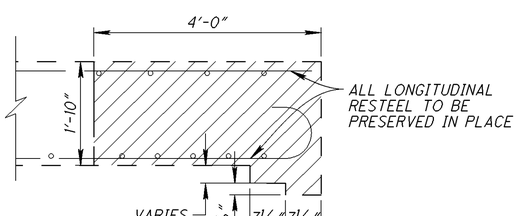




SECTION D-1 15



SECTION D-2 15



SECTION D-3 15

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
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DECK EDGE AND END REMOVAL DETAILS

BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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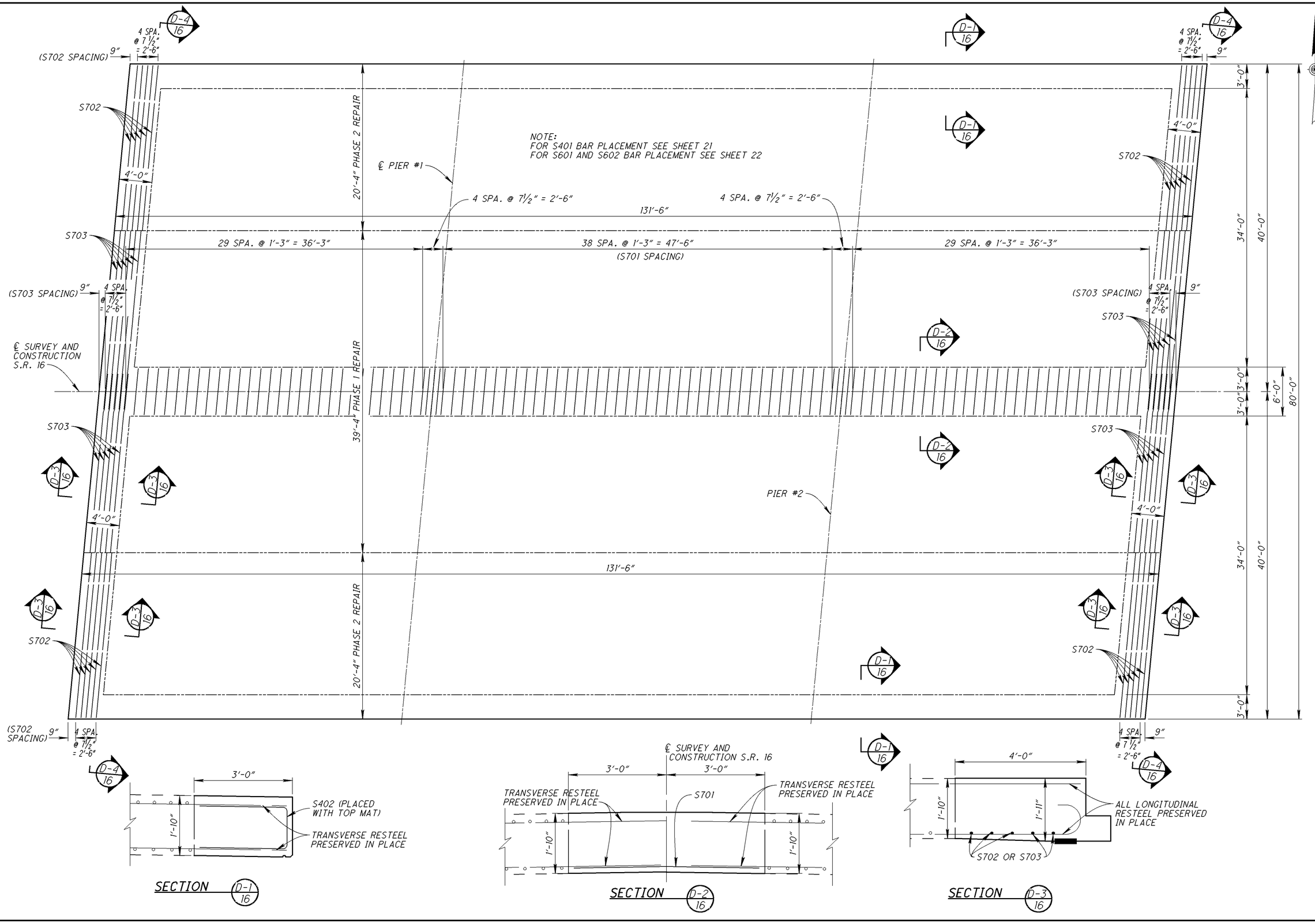

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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PROPOSED TRANSVERSE RESTEEL BOTTOM MAT DETAILS

BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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S402 2 SPA. @ 1'-0" = 2'-0"
16 SPA. @ 2'-0" = 32'-0"
12 SPA. @ 1'-0" = 12'-0"
19 SPA. @ 2'-0" = 38'-0" (S402 SPACING)
12 SPA. @ 1'-0" = 12'-0"
16 SPA. @ 2'-0" = 32'-0"
S402 2 SPA. @ 1'-0" = 2'-0"

S605
S604
S604 AND S605 2 SPA. @ 1'-0" = 2'-0"
4'-0"
9"
℄ SURVEY AND CONSTRUCTION S.R. 16
20'-4" PHASE 2 REPAIR
39'-4" PHASE 1 REPAIR
PIER #1
PIER #2
131'-6"

NOTE:
FOR S401 BAR PLACEMENT SEE SHEET 21
FOR S601 AND S602 BAR PLACEMENT SEE SHEET 22

3'-0"
34'-0"
40'-0"
6'-0"
80'-0"

16 SPA. @ 2'-0" = 32'-0"
12 SPA. @ 1'-0" = 12'-0"
19 SPA. @ 2'-0" = 38'-0" (S603 SPACING)
12 SPA. @ 1'-0" = 12'-0"
16 SPA. @ 2'-0" = 32'-0"

S402 2 SPA. @ 1'-0" = 2'-0"
16 SPA. @ 2'-0" = 32'-0"
12 SPA. @ 1'-0" = 12'-0"
19 SPA. @ 2'-0" = 38'-0"
12 SPA. @ 1'-0" = 12'-0" (S402 SPACING)
16 SPA. @ 2'-0" = 32'-0"
A402 2 SPA. @ 1'-0" = 2'-0"

SECTION D-1 17

3'-0"
S402
1'-10"
TRANSVERSE RESTEEL PRESERVED IN PLACE

SECTION D-2 17

℄ SURVEY AND CONSTRUCTION S.R. 16
3'-0"
3'-0"
TRANSVERSE RESTEEL PRESERVED IN PLACE
S603
TRANSVERSE RESTEEL PRESERVED IN PLACE
1'-10"
1'-10"

SECTION D-3 17

4'-0"
S604 OR S605
1'-10"
1'-11"
ALL LONGITUDINAL RESTEEL PRESERVED IN PLACE

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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PROPOSED TRANSVERSE RESTEEL TOP MAT DETAILS

BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

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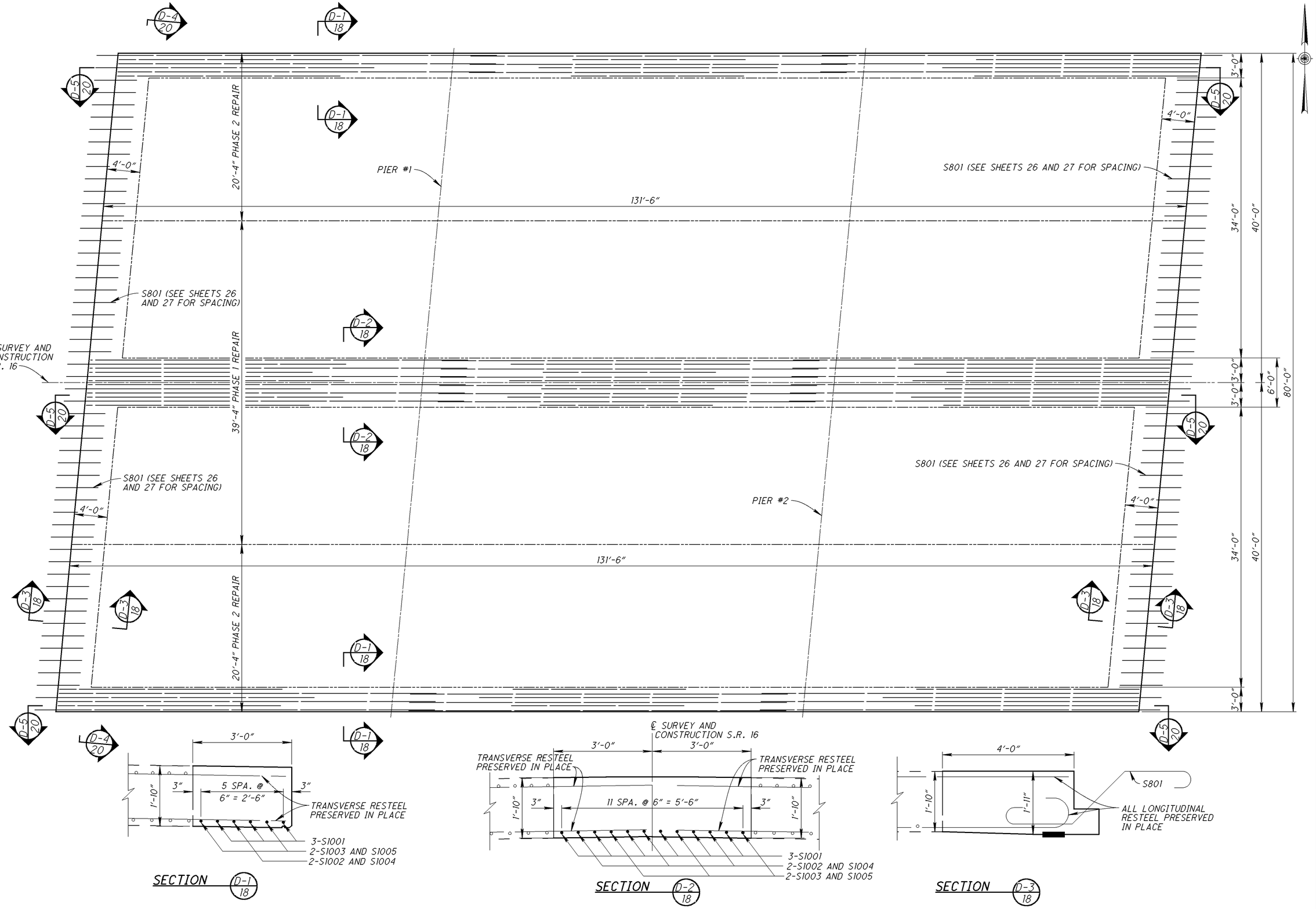

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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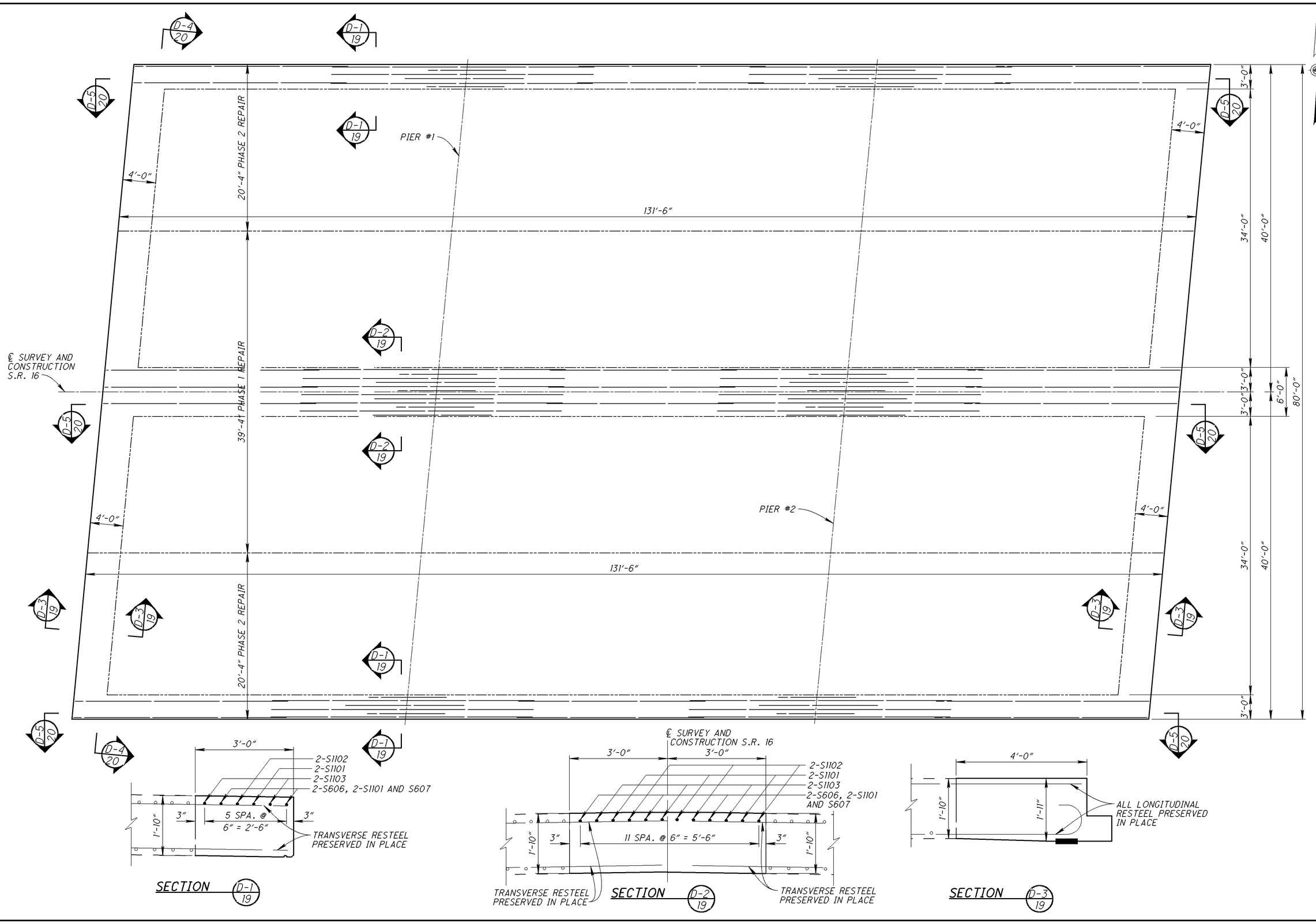
PROPOSED LONGITUDINAL RESTEEL BOTTOM MAT DETAILS

BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384



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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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PROPOSED LONGITUDINAL RESTEEL TOP MAT DETAILS

BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
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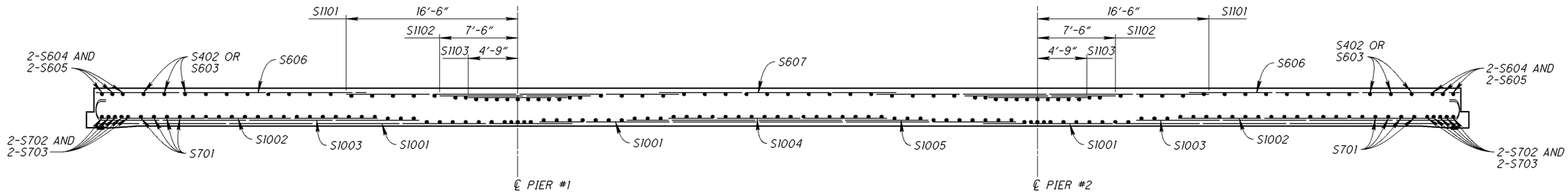
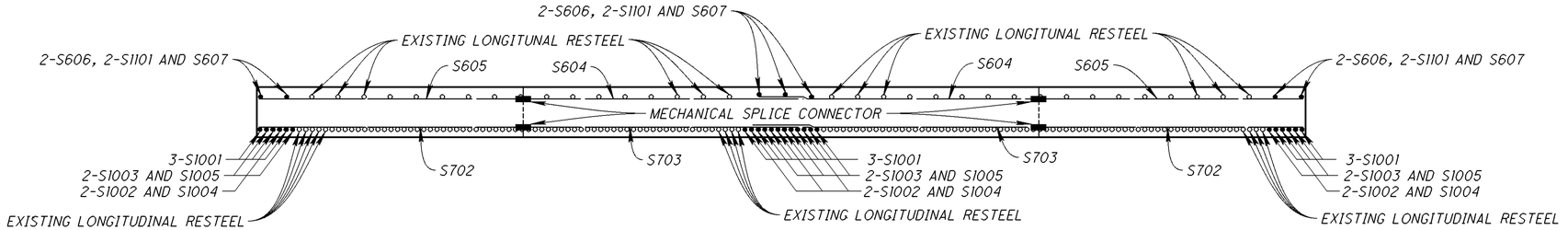


SECTION D-5 18 / D-5 19



SECTION D-4 18 / D-4 19

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
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PROPOSED RESTEEL DETAILS
BRIDGE NO. LIC-16-2166
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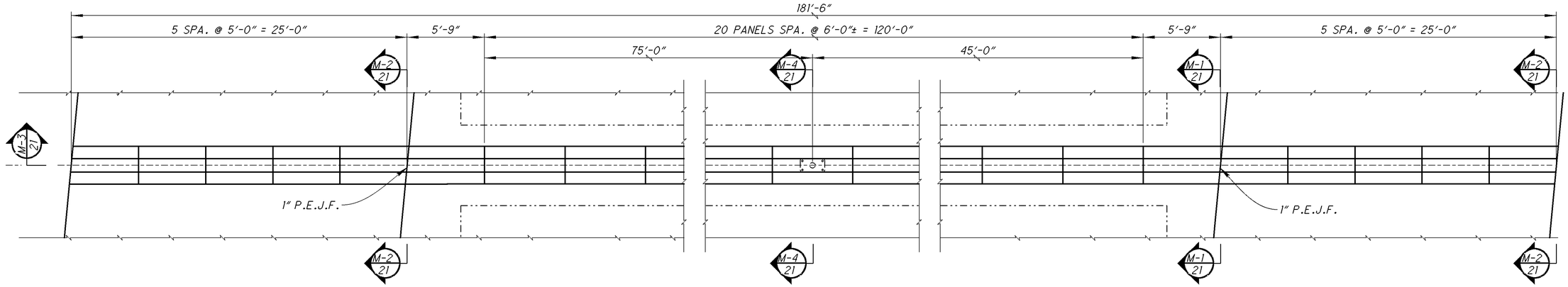
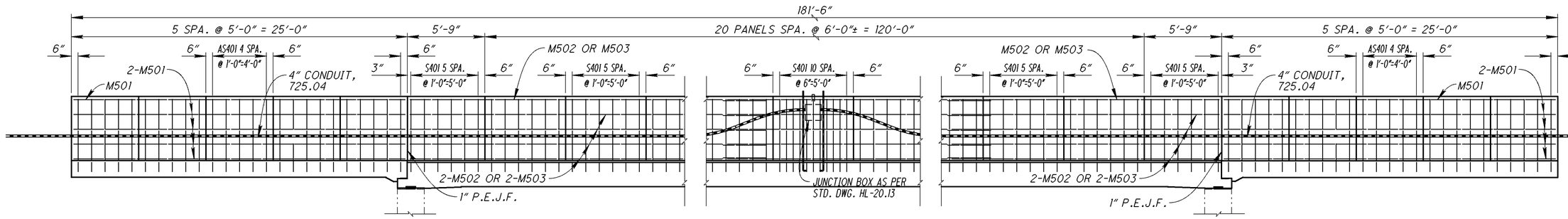
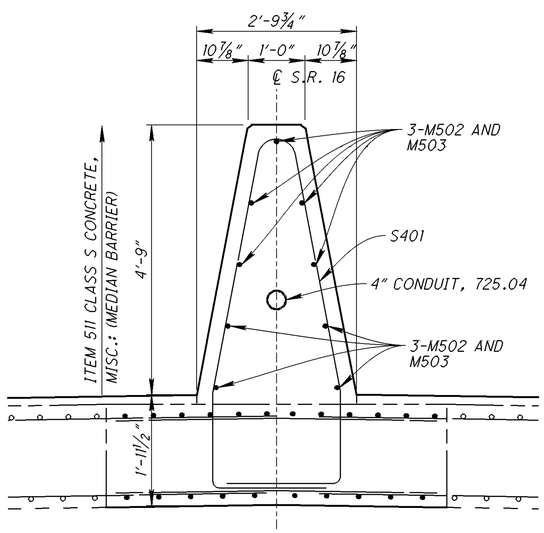


PART PLAN AT ABUTMENT

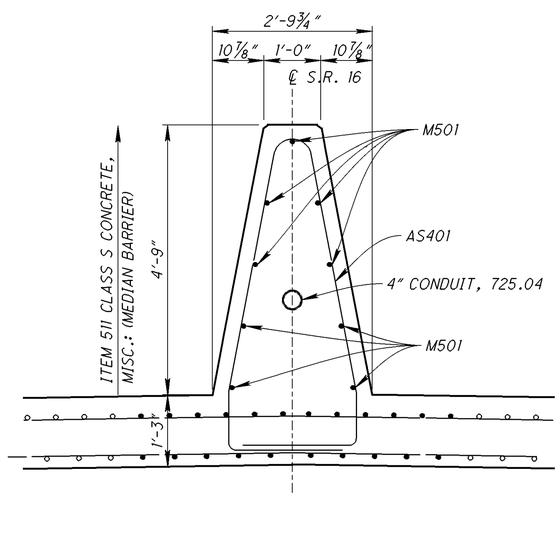
PART PLAN AT ABUTMENT



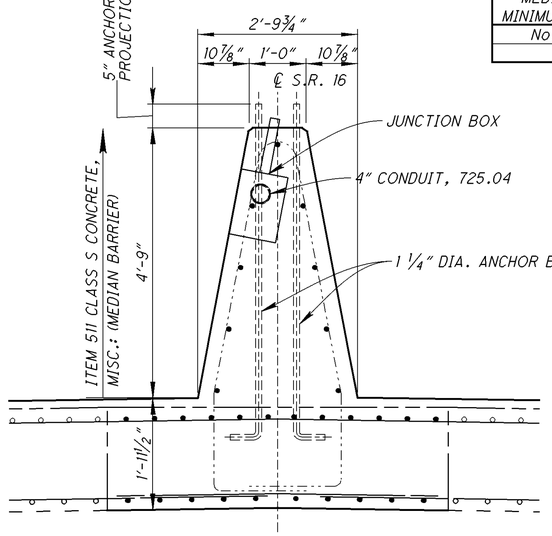
SECTION M-3 21



SECTION M-1 21



SECTION M-2 21

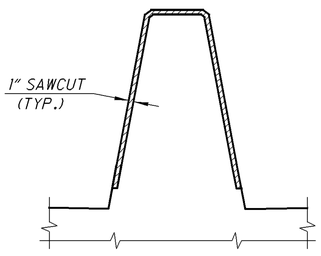


SECTION M-4 21

MEDIAN BARRIER MINIMUM LAP LENGTH
No. 5 = 2'-11"

NOTE:
-ALL REINFORCING STEEL TO BE EPOXY COATED.

-FIELD BEND BARS WHERE NECESSARY



DETAIL A

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
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MEDIAN BARRIER DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
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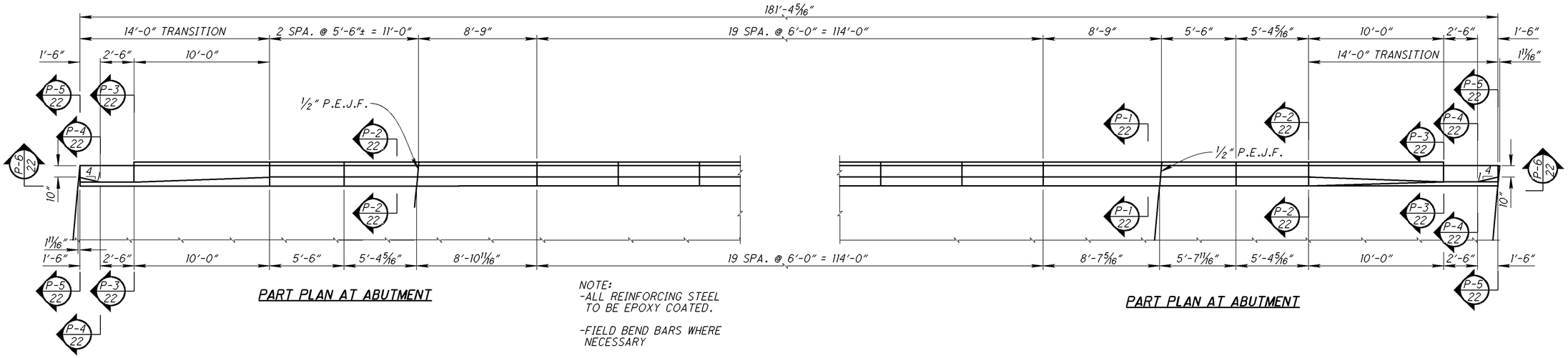


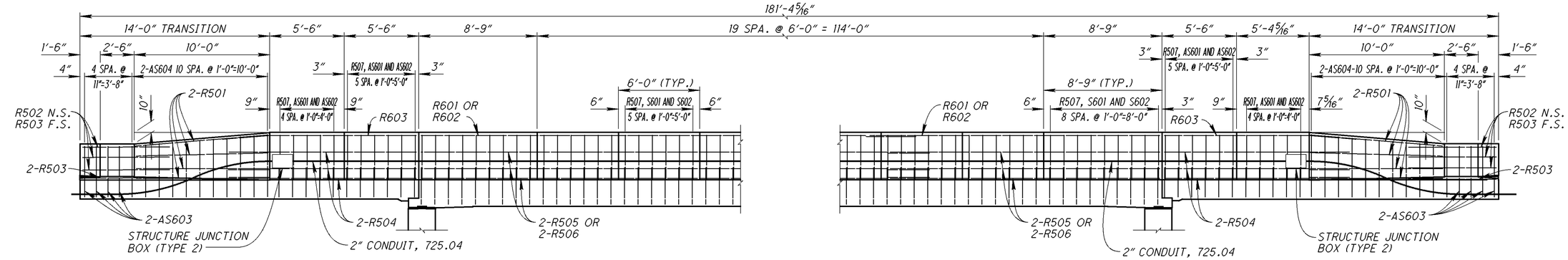
PART PLAN AT ABUTMENT

NOTE:
-ALL REINFORCING STEEL TO BE EPOXY COATED.

-FIELD BEND BARS WHERE NECESSARY

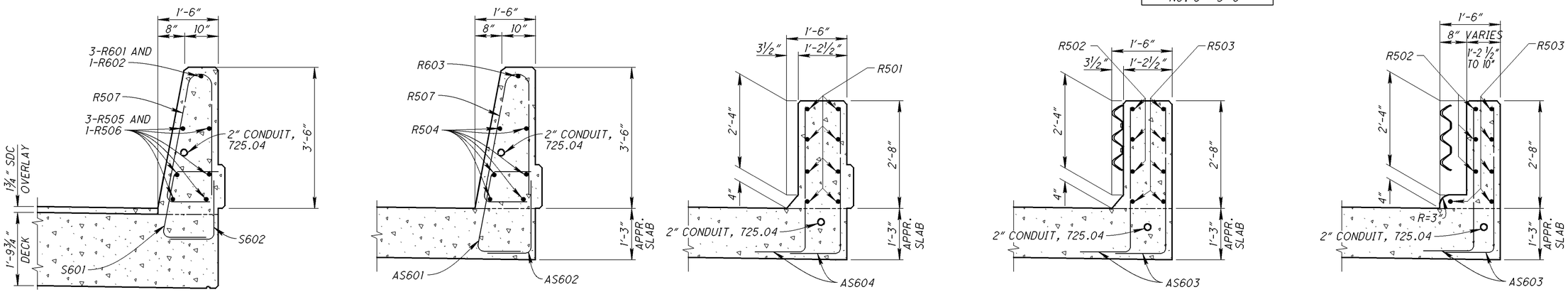
-FOR ADDITIONAL DETAILS SEE STD. DWG. SBR-1-99

PART PLAN AT ABUTMENT



SECTION P-6 22

PARAPET MINIMUM LAP LENGTH
No. 5 = 2'-11"
No. 6 = 3'-5"



SECTION P-1 22

SECTION P-2 22

SECTION P-3 22

SECTION P-4 22

SECTION P-5 22

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

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PARAPET DETAILS
BRIDGE NO. LIC-16-2166
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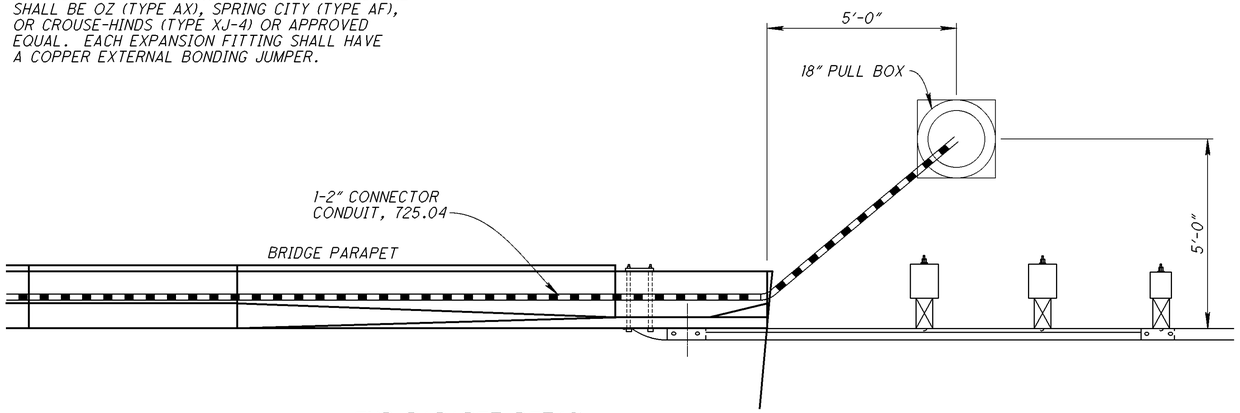
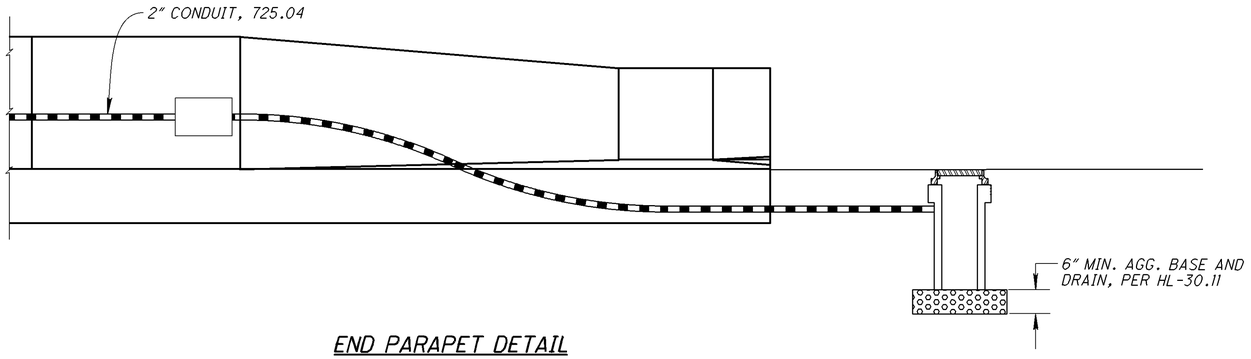
CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURE SHALL BE OZ (TYPE AX), SPRING CITY (TYPE AF), OR CROUSE-HINDS (TYPE XJ-4) OR APPROVED EQUAL. EACH EXPANSION FITTING SHALL HAVE A COPPER EXTERNAL BONDING JUMPER.

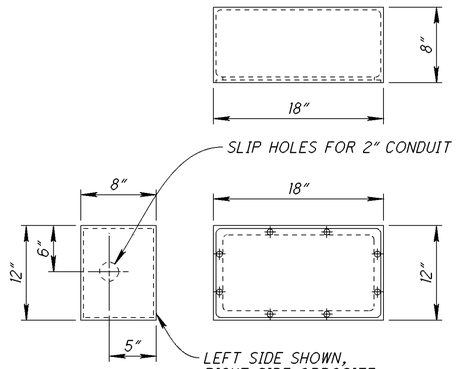


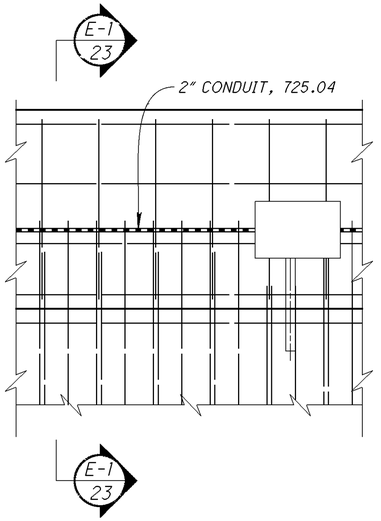
END PARAPET DETAIL
PLAN VIEW



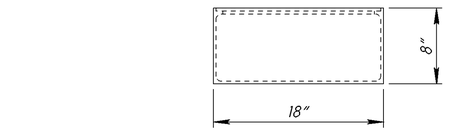
END PARAPET DETAIL
ELEVATION VIEW

TYPICAL CONDUIT TREATMENT
AT END OF BRIDGE PARAPET

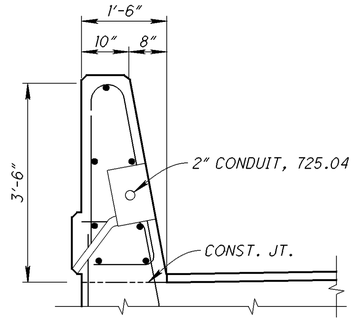




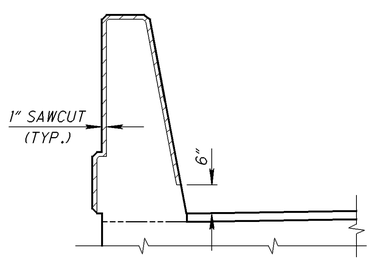
JUNCTION BOX DETAILS



STRUCTURE JUNCTION
BOX DETAILS



SECTION (E-1 / 23)
(TYPICAL)



DETAIL A
(SECTION THROUGH SAWCUT)
SAWCUT PERIMETER = 7'-6"

ITEM 625 CONDUIT, 2" 725.04

AS PER CMS 625.12 AFTER INSTALLATION OF THE CONDUIT AND PRIOR TO INSTALLION OF THE CABLES, CHECK EACH CONDUIT RUN BY RODDING OR BY PUSHING A MANDREL THROUGH THE CONDUIT RUN AND REMOVING ANY OBSTRUCTION FOUND.

IF A CONDUIT IS TO REMAIN EMPTY UPON COMPLETION OF THE PROJECT, LEAVE A NO. 10 AWG COPPER CLAD, ALUMINUM CLAD OR GALVANIZED PULL WIRE IN THE CONDUIT AND CAP THE ENDS IN AN APPROVED MANNER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
TAG	DDH	DTF	3-27-09	4501020
CHECKED	REVISED			
JDR				

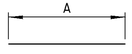
PARAPET DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

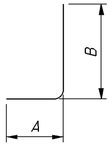
P:/LIC/76384/DESIGN/BRIDGE/4501020-BUENA VISTA ST/PLAN SHEETS/76384_BPD_001.DGN

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
ABUTMENTS													
A501	8	9'-9"	81	20	10"	11"	7'-4"	10"	11"				
A502	8	8'-11"	74	20	10"	11"	6'-6"	10"	11"				
A503	32	21'-11"	731	STR.	21'-11"								
A504	32	21'-2"	706	STR.	21'-2"								
A505	252	5'-0"	1314	STR.	5'-0"								
A506	112	8'-11"	1042	2	3'-9"	1'-8"	3'-9"						
A507	64	1'-8"	111	STR.	1'-8"								
A508	4	2'-6"	10	STR.	2'-6"								
A509	8	12'-7"	105	STR.	12'-7"								
A510	44	6'-1"	279	STR.	6'-1"								
A511	36	12'-7"	472	2	5'-10"	1'-2"	5'-10"						
A512	40	11'-8"	487	STR.	11'-8"								
A513	4	2'-0"	8	STR.	2'-0"								
A1001	16	21'-11"	1509	STR.	21'-11"								
A1002	16	24'-4"	1675	STR.	24'-4"								
SUBTOTAL ABUTMENTS			8604										

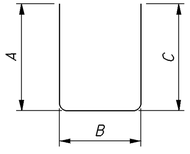
MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.



TYPE-STR.



TYPE-1



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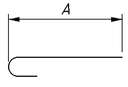
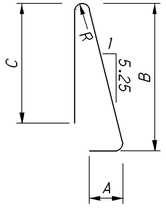
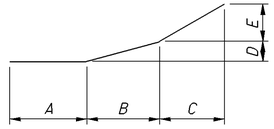


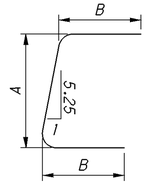
TYPE-16



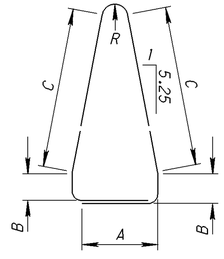
TYPE-23



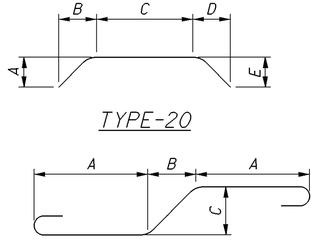
TYPE-25



TYPE 28



TYPE-34



TYPE-20
TYPE-35

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN DDH | REVIEWED DTF | DATE 3-27-09 | CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501020

REINFORCING STEEL SCHEDULE
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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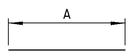
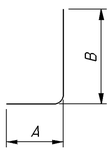
P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BRL_001.DGN

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
PARAPET													
R501	32	10'-0"	334	STR.	10'-0"								
R502	12	5'-6"	69	25	1'-8"	2'-4 15/16"	1'-4 1/4"	1 1/2"	5"				
R503	20	5'-6"	115	STR.	5'-6"								
R504	24	13'-9"	344	STR.	13'-9"								
R505	36	40'-0"	1502	STR.	40'-0"								
R506	12	19'-11"	249	STR.	19'-11"								
R507	308	7'-5"	2383	23	1'-1"	3'-2"	3'-0"					2 3/4"	
R601	6	40'-0"	360	STR.	40'-0"								
R602	2	21'-5"	64	STR.	21'-5"								
R603	4	14'-3"	86	STR.	14'-3"								
SUBTOTAL PARAPET			5506										
MEDIAN BARRIER													
M501	18	24'-8"	463	STR.	24'-8"								
M502	27	40'-0"	1126	STR.	40'-0"								
M503	9	19'-11"	187	STR.	19'-11"								
SUBTOTAL MEDIAN BARRIER			1776										

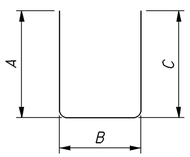
MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
DECK													
S401	129	15'-8"	1350	34	1'-8"	1'-10"	4'-3"						
S402	160	6'-6"	695	2	2'-8"	1'-4"	2'-8"						
S601	264	4'-4"	1718	28	2'-6"	1'-1"							
S602	264	3'-5"	1355	1	1'-1"	2'-6"							
S603	74	5'-8"	630	STR.	5'-8"								
S604	12	21'-6"	388	STR.	21'-6"								
S605	12	20'-3"	365	STR.	20'-3"								
S606	14	26'-0"	547	STR.	26'-0"								
S607	7	22'-10"	240	STR.	22'-10"								
S701	103	5'-8"	1193	28	5'-8"								
S702	20	20'-3"	828	1	20'-3"								
S703	20	22'-0"	899	STR.	22'-0"								
S801	108	8'-0"	2307	35	2'-0"	1'-7"	1'-7"						
S1001	36	45'-10"	7100	STR.	45'-10"								
S1002	10	32'-4"	1391	16	31'-1"								
S1003	14	28'-4"	1707	16	27'-1"								
S1004	5	29'-0"	624	STR.	29'-0"								
S1005	7	21'-0"	633	STR.	21'-0"								
S1101	24	32'-0"	4080	STR.	32'-0"								
S1102	5	14'-6"	385	STR.	14'-6"								
S1103	6	9'-6"	303	STR.	9'-6"								
SUBTOTAL DECK			28738										
SUBTOTAL ABUTMENTS			8604										
SUBTOTAL DECK			28738										
SUBTOTAL MEDIAN BARRIER			1776										
SUBTOTAL PARAPET			5506										
GRAND TOTAL			44624										



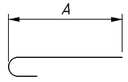
TYPE-STR.



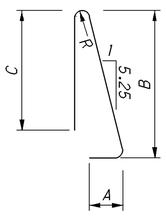
TYPE-1



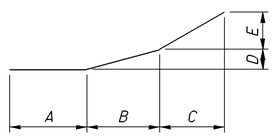
TYPE-2



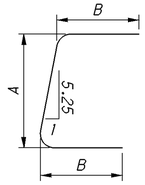
TYPE-16



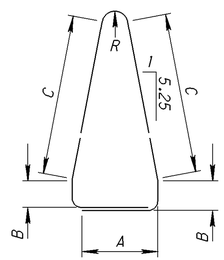
TYPE-23



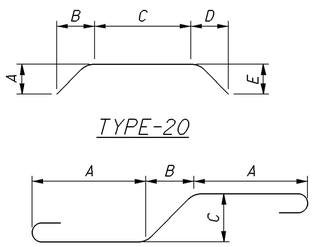
TYPE-25



TYPE 28



TYPE-34



TYPE-20

TYPE-35

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN DDH | CHECKED JDR | REVIEWED DTF | DATE 3-27-09 | REVISED | STRUCTURE FILE NUMBER 4501020

REINFORCING STEEL SCHEDULE

BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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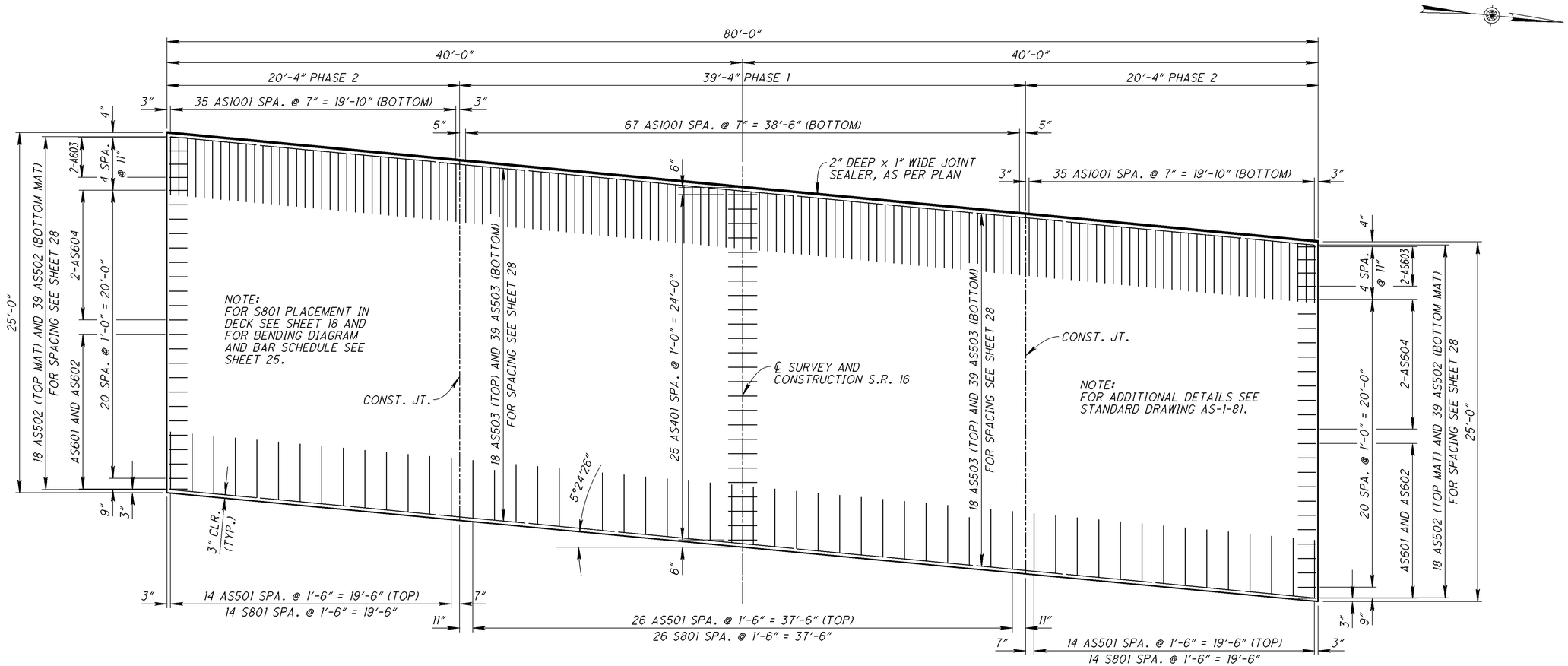
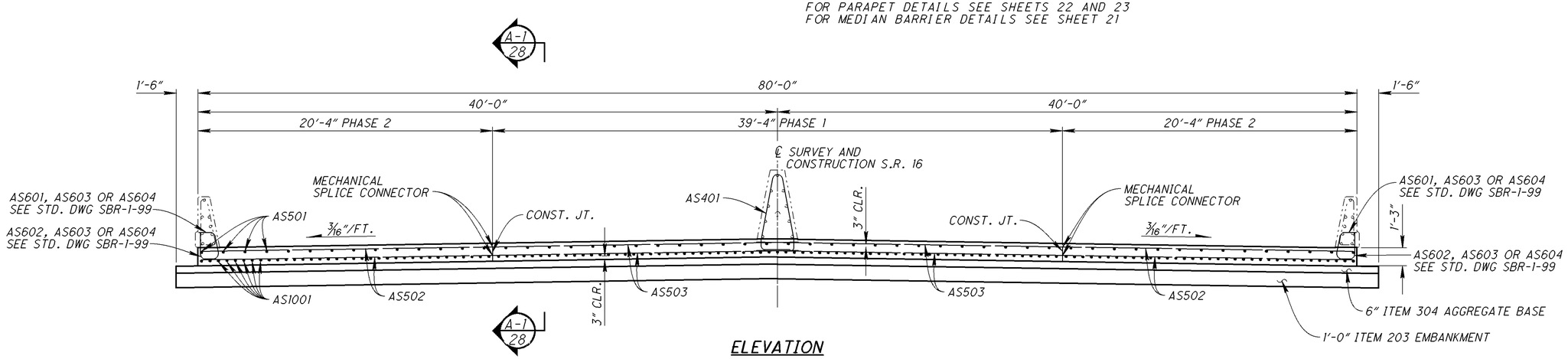
P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BRL_001.DGN



PLAN

NOTE:
FOR PARAPET DETAILS SEE SHEETS 22 AND 23
FOR MEDIAN BARRIER DETAILS SEE SHEET 21



ELEVATION

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN DDH | REVIEWED DTF | DATE 3-27-09
CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501020

REAR APPROACH SLAB DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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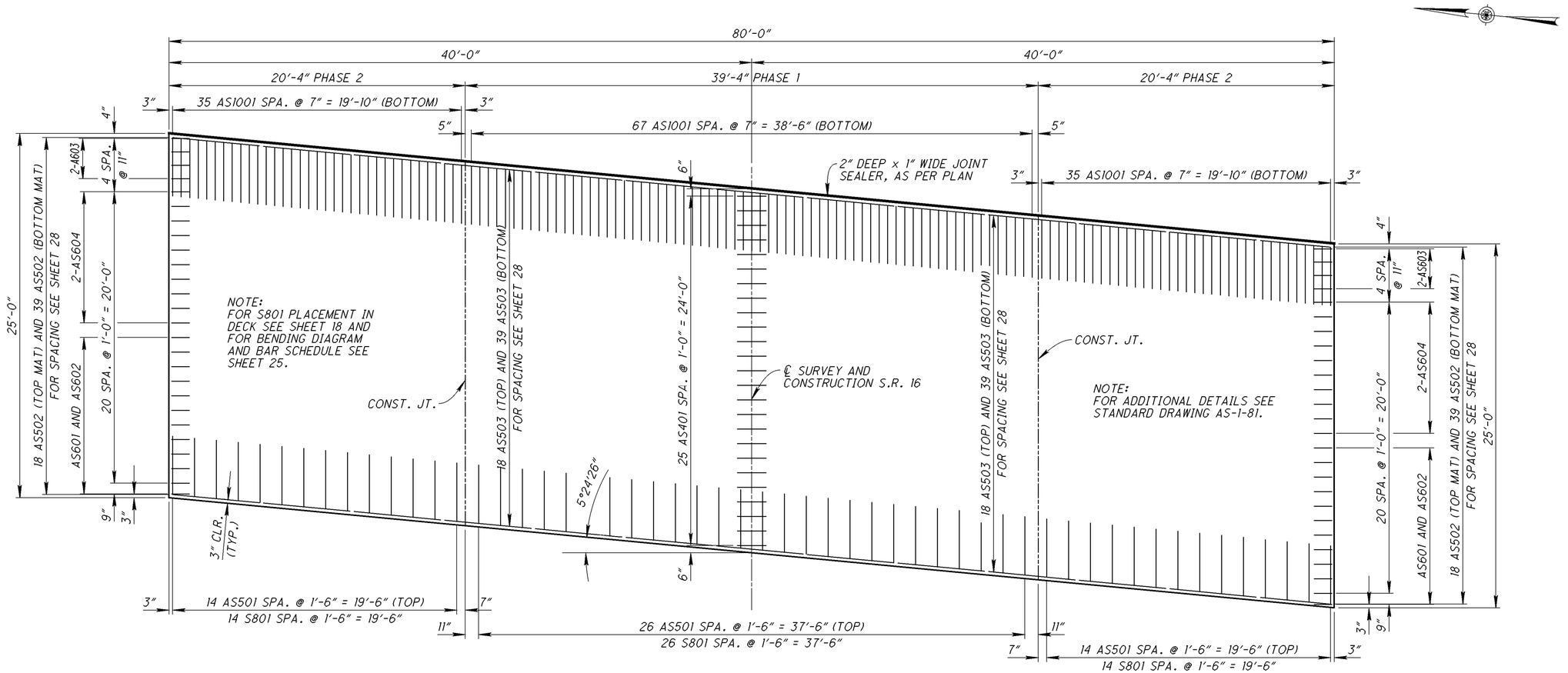
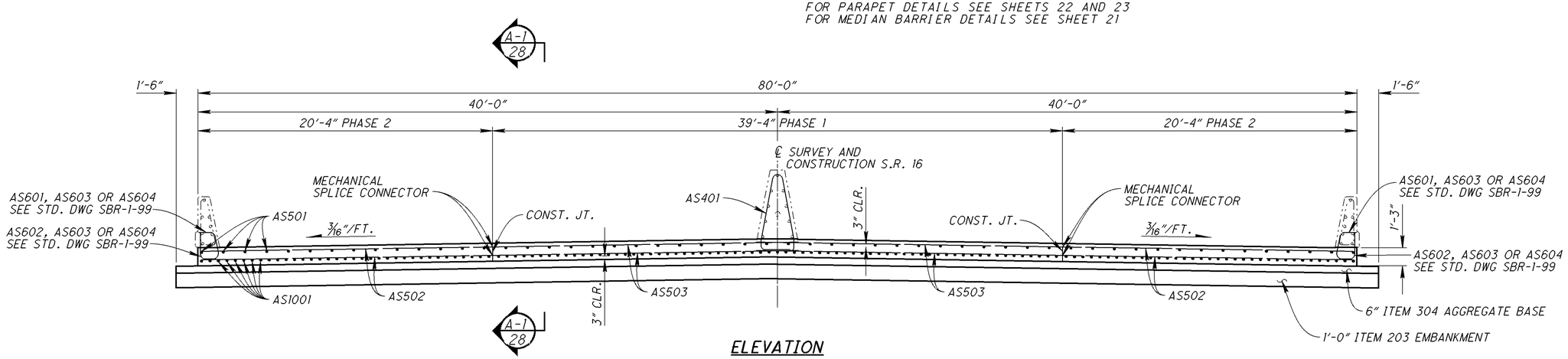


PLAN

NOTE:
FOR PARAPET DETAILS SEE SHEETS 22 AND 23
FOR MEDIAN BARRIER DETAILS SEE SHEET 21



ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501020	

FORWARD APPROACH SLAB DETAILS

BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

27/28

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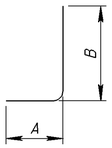
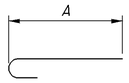
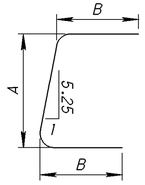
P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BAS_002.DGN



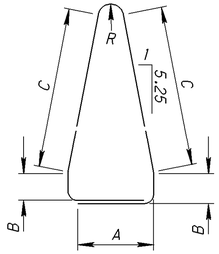
TYPE-1



TYPE-16



TYPE 28

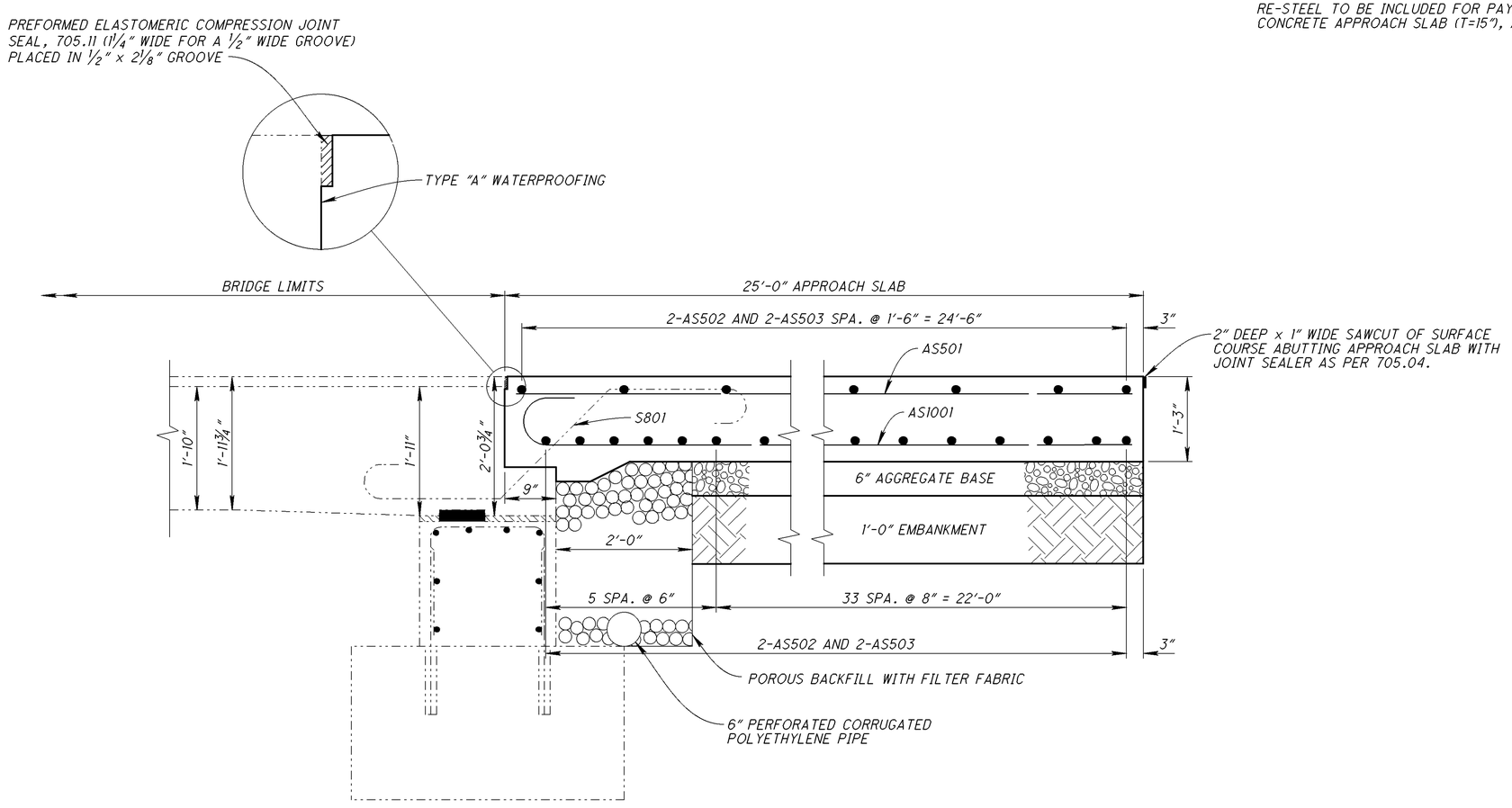


TYPE-34

BENDING DIAGRAMS

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
APPROACH SLABS													
AS401	50	14'-9"	493	34	2'-0"	10"	4'-3"					4"	
AS501	108	24'-6"	2760	STR.	24'-6"								
AS502	228	20'-2"	4796	STR.	20'-2"								
AS503	228	21'-2"	5034	STR.	21'-2"								
AS601	56	3'-8"	308	28	1'-10"	1'-1"							
AS602	56	2'-9"	231	1	1'-1"	1'-10"							
AS603	32	4'-3"	204	1	1'-1"	3'-4"							
AS604	4 SERIES OF 11	4'-3" TO 5'-1"	308	1	1'-1"	3'-4" TO 4'-2"							1"
AS1001	274	25'-11"	30556	16	24'-6"								

RE-STEEL TO BE INCLUDED FOR PAYMENT IN ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN



SECTION A-1 26 / A-1 27

NOTE:
FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.

NOTE:
ALL LONGITUDINAL CONSTRUCTION JOINTS SHALL BE SEALED 2'-0" IN WIDTH WITH HMWM RESIN (SEE PROPOSAL NOTE) APPROACH SLAB SEALING TO BE INCLUDED IN ITEM 526 REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN

ITEM	DESCRIPTION	QUANTITY	UNIT
203	EXCAVATION	207	CU YD
203	EMBANKMENT	139	CU YD
204	SUBGRADE COMPACTION	405	SQ YD
304	AGGREGATE BASE	68	CU YD
518	POROUS BACKFILL WITH FILTER FABRIC	73	CU YD
526	REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN (T-15")	444	SQ YD
QUANTITIES CARRIED TO SHEET 3/28 & 114/190.			

(2 APPROACH SLABS)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN DDH | REVIEWED DTF | DATE 3-27-09
CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501020

APPROACH SLAB DETAILS
BRIDGE NO. LIC-16-2166
OVER BUENA VISTA STREET

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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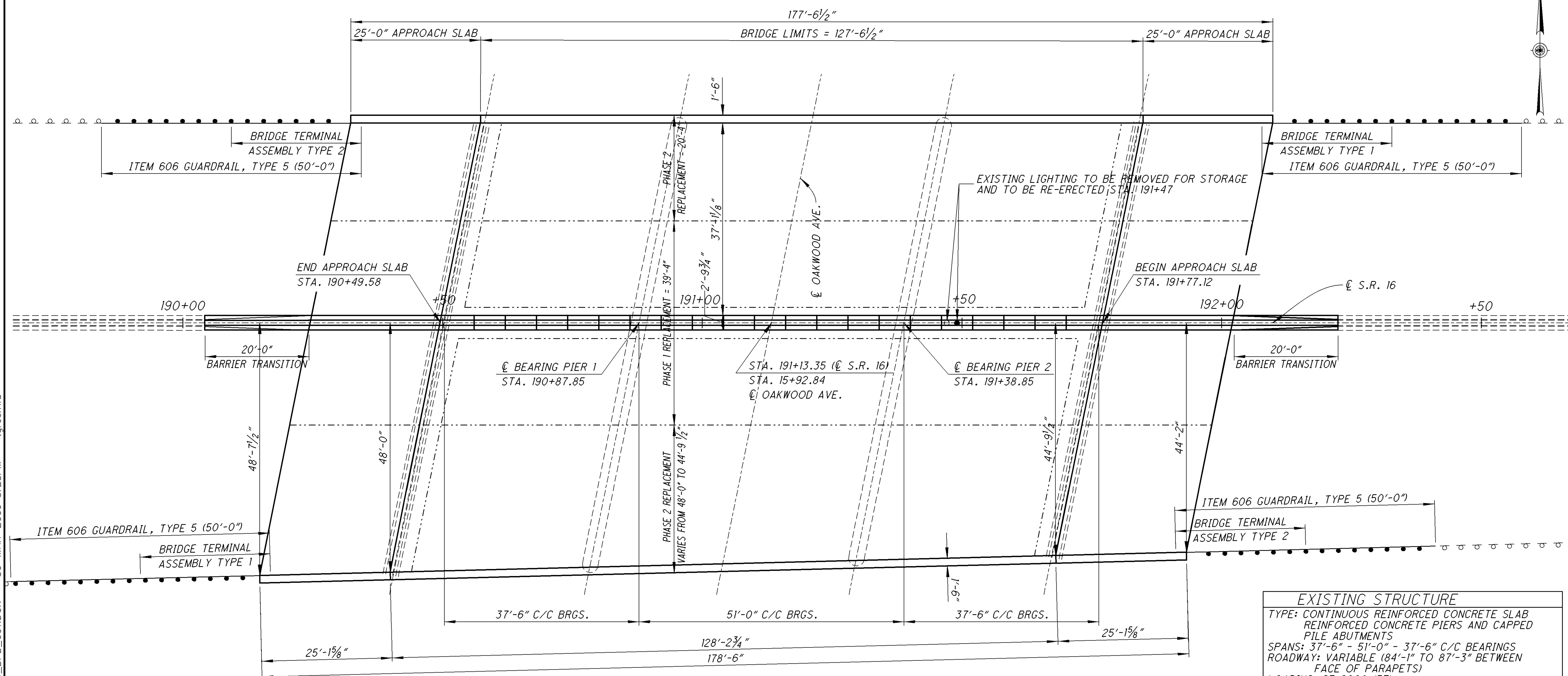

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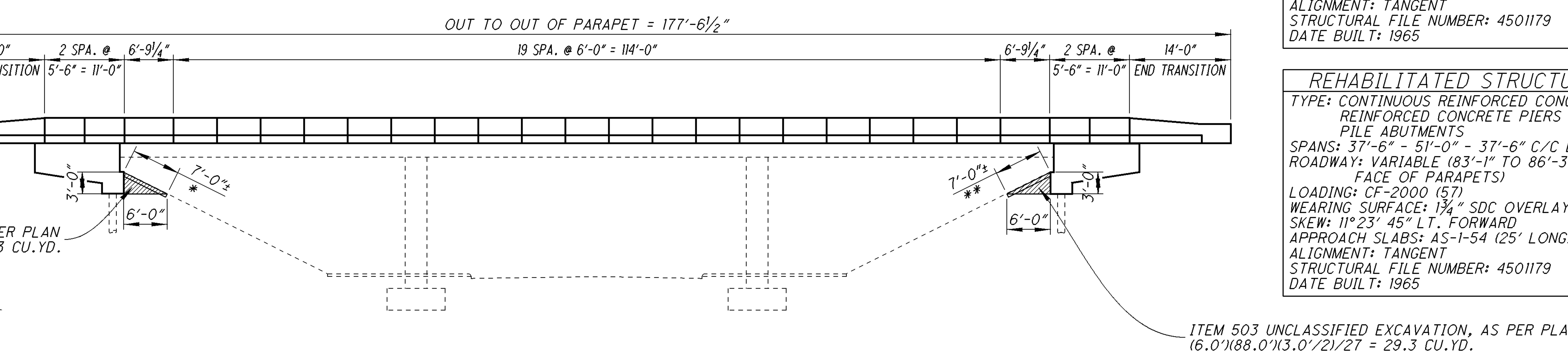

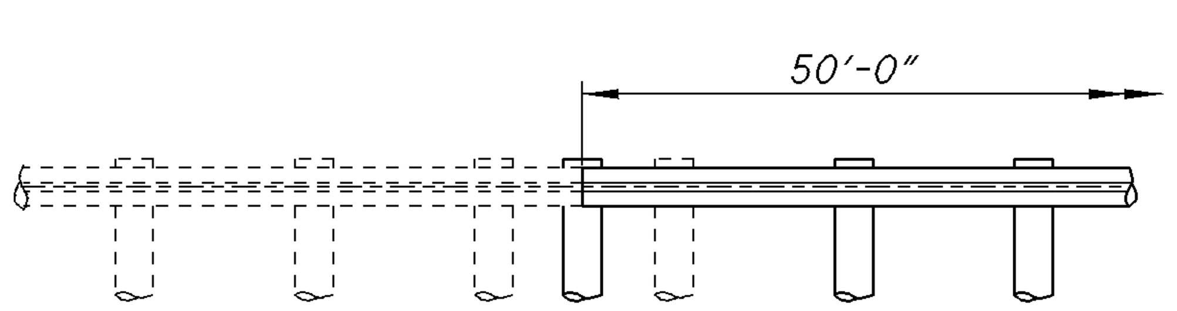

NOTE:
WHERE PROPOSED RAIL IS TO BE CONNECTED WITH EXISTING RAIL, THE PROPOSED RAIL SHALL BE LAPPED AT THE EXISTING POST WITH THE LAP IN THE DIRECTION OF TRAFFIC.

* - ITEM 202 CONCRETE SLOPE PROTECTION REMOVED
* - ITEM 601 CONCRETE SLOPE PROTECTION
(7.0')(91.0'±)/9 = 71.0 SQ.YD.

ELEVATION

** - ITEM 202 CONCRETE SLOPE PROTECTION REMOVED
** - ITEM 601 CONCRETE SLOPE PROTECTION
(7.0')(87.8'±)/9 = 68.0 SQ.YD.

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB REINFORCED CONCRETE PIERS AND CAPPED PILE ABUTMENTS
SPANS: 37'-6" - 51'-0" - 37'-6" C/C BEARINGS
ROADWAY: VARIABLE (84'-1" TO 87'-3" BETWEEN FACE OF PARAPETS)
LOADING: CF-2000 (57)
WEARING SURFACE: 3¼" ASPHALT CONCRETE
SKEW: 11°23' 45" LT. FORWARD
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT
STRUCTURAL FILE NUMBER: 4501179
DATE BUILT: 1965

REHABILITATED STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB REINFORCED CONCRETE PIERS AND CAPPED PILE ABUTMENTS
SPANS: 37'-6" - 51'-0" - 37'-6" C/C BEARINGS
ROADWAY: VARIABLE (83'-1" TO 86'-3" BETWEEN FACE OF PARAPETS)
LOADING: CF-2000 (57)
WEARING SURFACE: 1¾" SDC OVERLAY
SKEW: 11°23' 45" LT. FORWARD
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT
STRUCTURAL FILE NUMBER: 4501179
DATE BUILT: 1965

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

REVIEWED DTF | DATE 3-27-09 | STRUCTURE FILE NUMBER 4501179
DRAWN TAG | REVISED
DESIGNED TAG | CHECKED JDR

GENERAL PLAN & ELEVATION
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76284

REFERENCE
DETAILED DRAWINGS OF THE EXISTING STRUCTURE MAY BE INSPECTED IN THE DISTRICT 5 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, JACKSONTOWN, OHIO.

DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING
HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA
CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 A616 OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

EXISTING STRUCTURE VERIFICATION
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY , THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEND VERIFIED BY THE CONTRACTOR IN THE FIELD.

ABUTMENT CONCRETE
ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE DECK EDGES HAVE BEEN REPLACED.

REINFORCING STEEL
NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL INCLUDED IN 509.

DECK PROTECTION METHOD
SUPERPLASTICIZED DENSE CONCRETE OVERLAY

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE
REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MECHANICAL SPLICE CONNECTORS
THIS PLAN DETAILS A MECHANICAL SPLICE CONNECTOR THAT BOTH RE-BARS SCREW INTO. THE RE-BARS HAVE BEEN CALCULATED WITH A 2" CLEARANCE AT THE OUTER EDGE. IF A DIFFERENT TYPE OF MECHANICAL SPLICE CONNECTOR IS USED, THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN NO LESS THAN A 2" CLEARANCE. ANY WORK PERFORMED SHALL BE AT NO ADDITIONAL COST TO THE STATE. ALL MECHANICAL SPLICE CONNECTORS INCLUDING WORK, TOOLS, LABOR AND INCIDENTALS SHALL BE INCLUDED IN ITEM 509 EPOXY COATED REINFORCING STEEL FOR PAYMENT.

GENERAL PROVISIONS
THE CONTRACTOR'S ATTENTION IS CALLED TO ALL OF SECTION 100 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION.

FILL UNDER APPROACH SLABS
ITEM 304, AGGREGATE BASE SHALL BE USED TO BRING THE SUBBASE TO GRADE FOR THE NEW APPROACH SLABS AS DETAILED ON THE APPROACH SLAB DETAIL SHEETS AND SHALL EXTEND 1'-6" ON BOTH SIDES OF EACH APPROACH SLAB.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
THIS WORK CONSISTS OF TEMPORARILY SUPPORTING EXISTING STRUCTURES.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ENVIRONMENTAL COORDINATOR NOTIFICATION
THE CONTRACTOR SHALL CONTACT THE DISTRICT ENVIRONMENTAL COORDINATOR, AMY TOOHEY AT 740-323-5191 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION SO THE UNDERSIDE OF THE BRIDGE CAN BE INSPECTED FOR THE PRESENCE OF BATS.

DOWEL HOLES
PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. DRILL DOWEL HOLES WHERE SHOWN IN PLANS EXCEPT AS NOTED ABOVE. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NON SHRINK, NON METALLIC EPOXY GROUT, 705.20.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE
THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CONCRETE REMOVAL ON DECK EDGES SHALL BE DONE BY THE USE OF 63 - 85 LB. CLASS JACKHAMMERS ONLY. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 85-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN
CONCRETE FOR APPROACH SLABS SHALL BE CLASS S, CMS499.
THE HMWM RESIN SEALING (SEE CMW 705.15) ALONG THE LONGITUDINAL CONSTRUCTION JOINT AND MECHANICAL SPLICE CONNECTORS INCLUDING LABOR, TOOLS, MATERIALS AND INCIDENTALS SHALL BE INCLUDED IN ITEM 526, REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN FOR PAYMENT.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN
A 2" DEEP X 1" WIDE STRIP SHALL BE SAWCUT OUT OF ALL ROADWAY SURFACE ASPHALT ABUTTING ENDS OF APPROACH SLABS AFTER THE FINAL SURFACE COURSE HAS BEEN CONSTRUCTED. JOINT SEALER AS PER 705.04 SHALL BE USED TO SEAL THE JOINT CREATED.

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501020	

BRIDGE NOTES
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIERS	GENERAL	SEE SHEET NUMBER
202	11301	164	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE					2/26
202	11301	58	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE		58			2/26
202	22900	322	SQ YD	APPROACH SLAB REMOVED				322	
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING					
503	21101	60	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN				60	1/26
503	21300	LUMP		UNCLASSIFIED EXCAVATION					
509	10000	35517	POUND	EPOXY COATED REINFORCING STEEL	27637	7880			
510	10000	778	EACH	DOWELS HOLES WITH NONSHRINK, NONMETALLIC GROUT	512	266			
511	34400	107	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE	107				
511	34436	55	CU YD	CLASS S CONCRETE, BRIDGE DECK (PARAPET)	55				
511	34450	60	CU YD	CLASS S CONCRETE, MISC.: (MEDIAN BARRIER)	60				
511	45700	46	CU YD	CLASS C CONCRETE, ABUTMENT		46			
516	13600	18	SQ FT	1" PREFORMED EXPANSION JOINT FILLER		18			
516	13900	67	SQ FT	2" PREFORMED EXPANSION JOINT FILLER		67			
516	31011	173	FT	2" DEEP JOINT SEALER, AS PER PLAN				173	2/26
516	42000	2	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x20'-0") (50 DUROMETER)		2			
516	42000	2	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x20'-4") (50 DUROMETER)		2			
516	42000	1	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x20'-9") (50 DUROMETER)		1			
516	42000	1	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x21'-0") (50 DUROMETER)		1			
516	42000	1	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x27'-2") (50 DUROMETER)		1			
516	42000	1	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x30'-8") (50 DUROMETER)		1			
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					2/26
518	21200	36	CU YD	POROUS BACKFILL WITH FILTER FABRIC		36			
518	40000	176	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		176			
518	40010	64	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		64			
526	25001	489	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				489	2/26
848	10200	1142	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY, (1¾" THICK), USING HYDRODEMOLITION	1142				
848	20000	1017	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	1017				
848	30200	27	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	27				
848	50000	32	SQ YD	HAND CHIPPING	32				
848	50100	LUMP		TEST SLAB					
848	50300	1135	SQ YD	WEARING COURSE REMOVED, ASPHALT	1135				

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN DDH | REVIEWED DTF | DATE 3-27-09
CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501179

BRIDGE SUMMARY
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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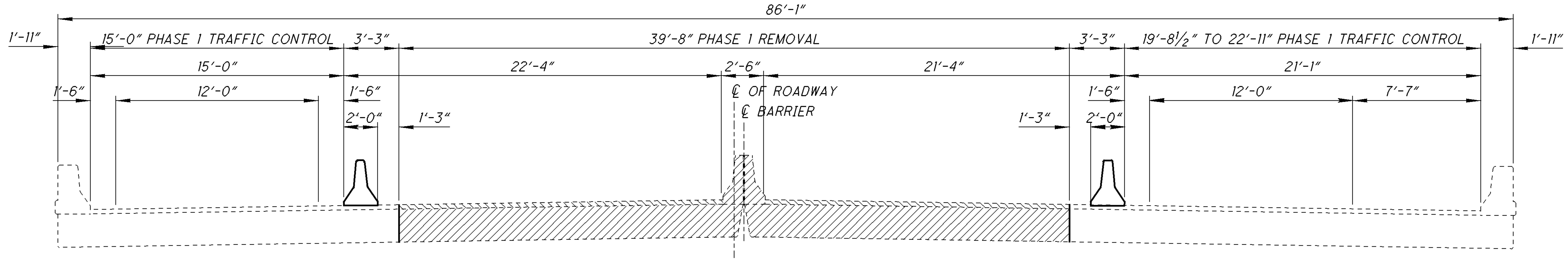
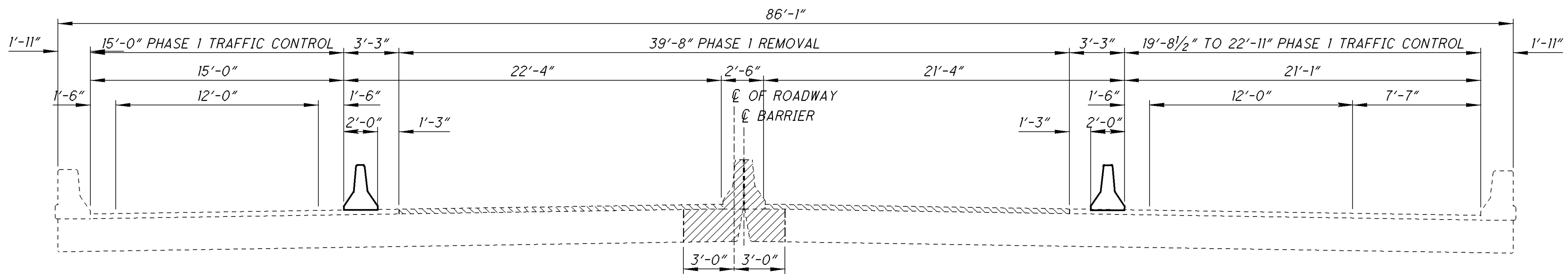
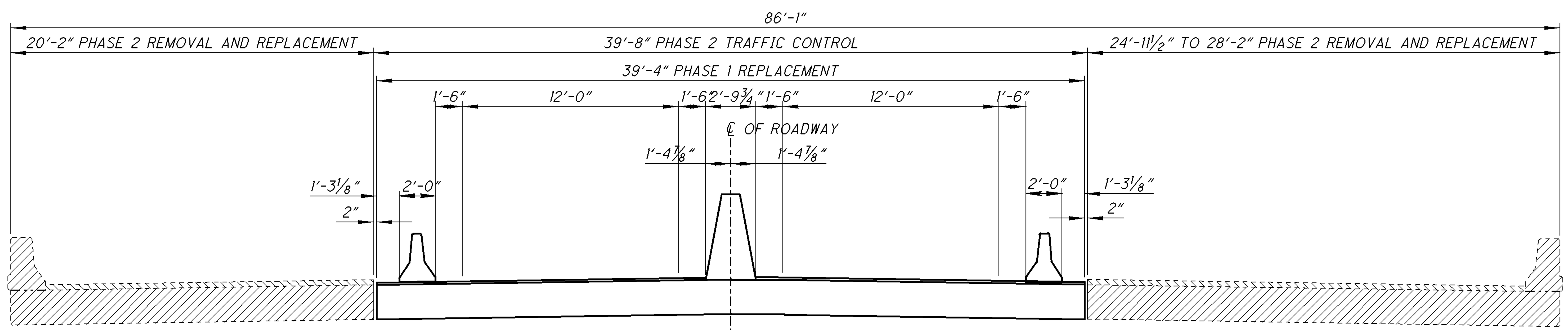


PHASE 1 TRAFFIC CONTROL, REMOVALS AND REPAIRS (AT DECK ENDS)



PHASE 1 TRAFFIC CONTROL, REMOVALS AND REPAIRS



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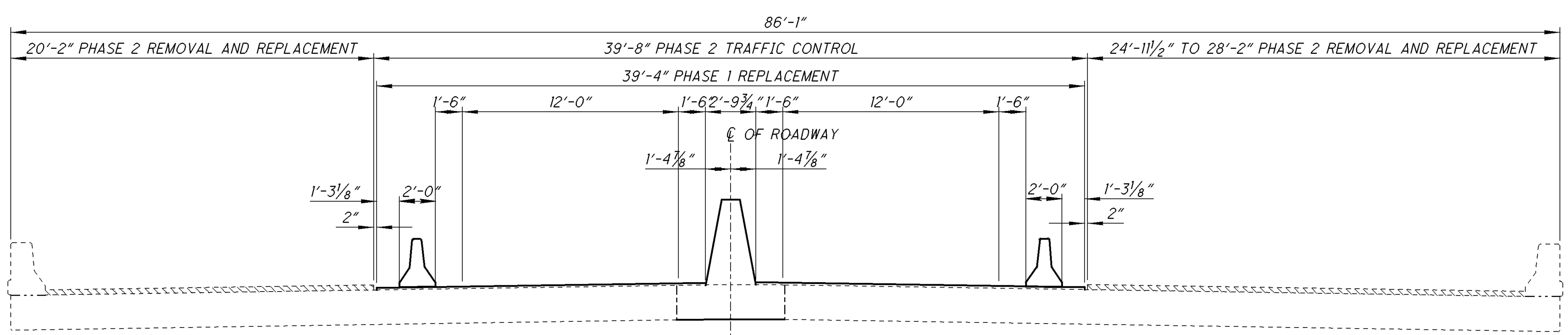

PHASE 2 TRAFFIC CONTROL, REMOVALS AND REPAIRS

CONCRETE REMOVALS

ASPHALT CONCRETE WEARING COURSE REMOVED

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

REVIEWED DTF | DATE 3-27-09 | STRUCTURE FILE NUMBER 4501179

DRAWN TAG | REVISED

DESIGNED TAG | CHECKED JDR

MAINTENANCE OF TRAFFIC PHASE DETAILS

BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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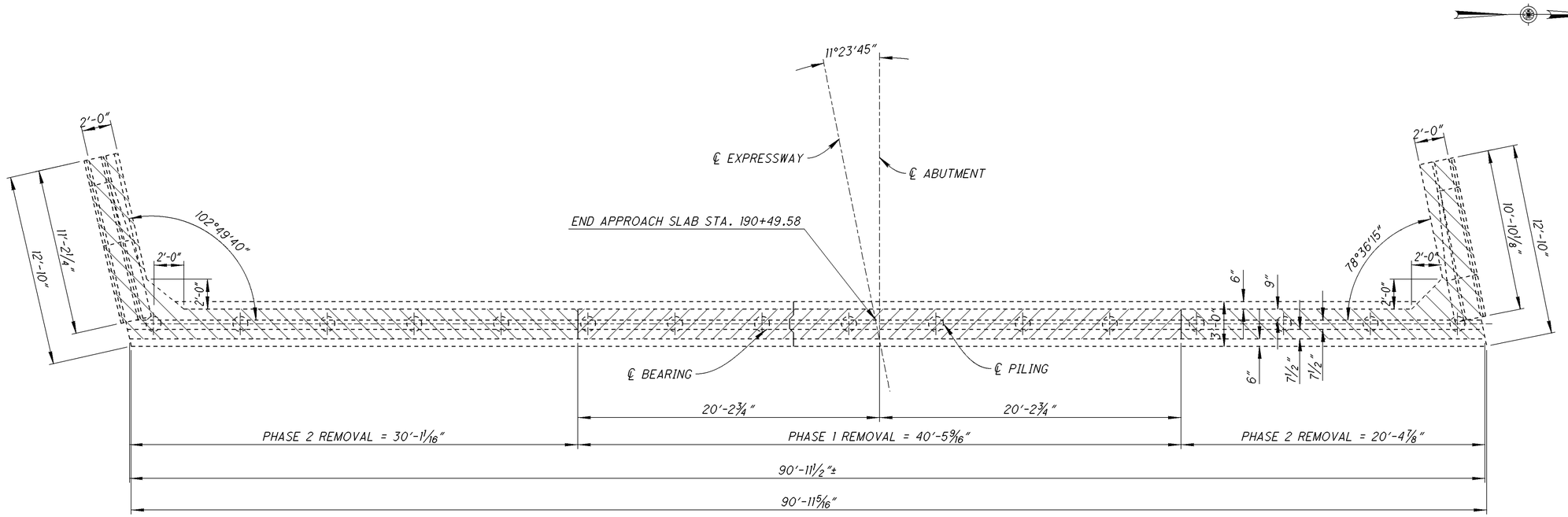
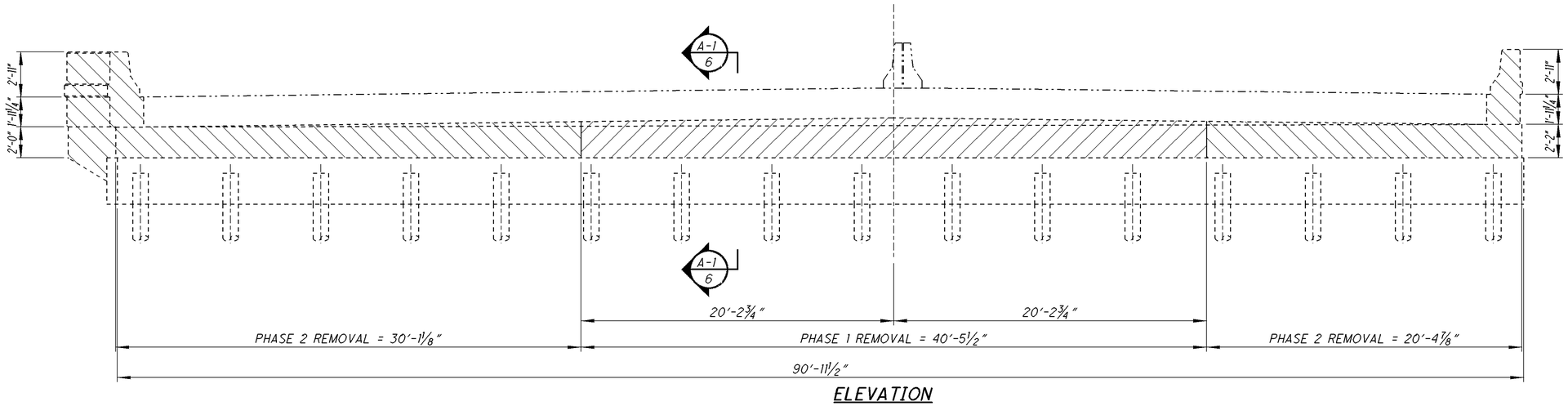


PLAN

PHASE 1 REMOVAL

PHASE 2 REMOVAL



ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
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REAR ABUTMENT REMOVAL DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

5/26

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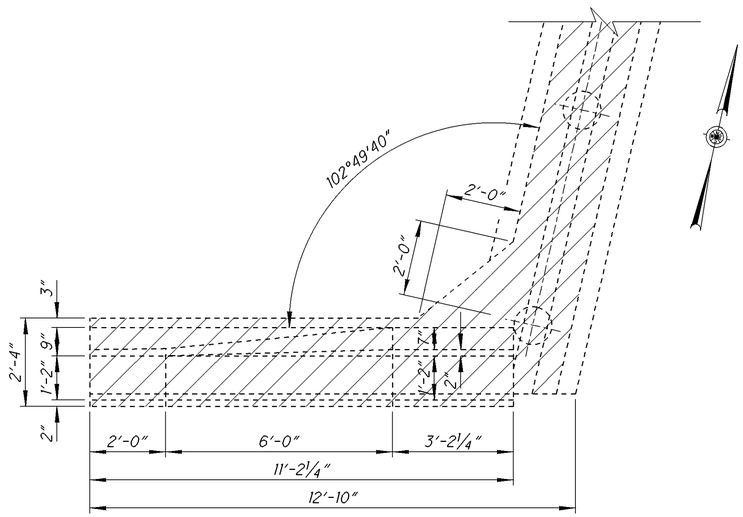
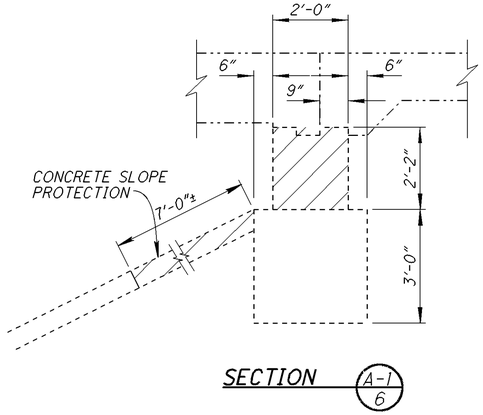
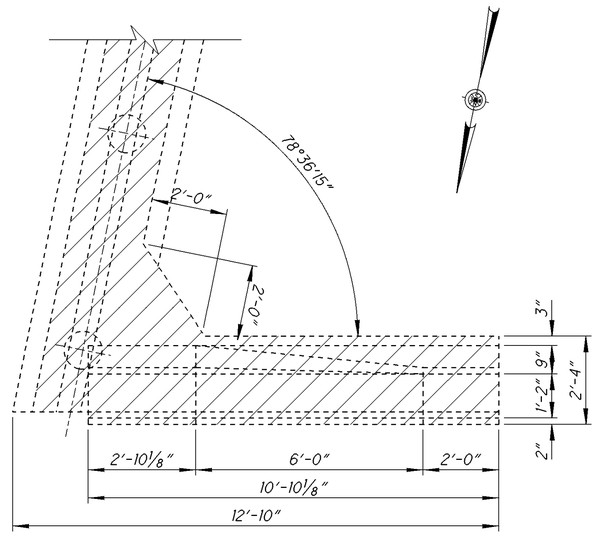


PLAN

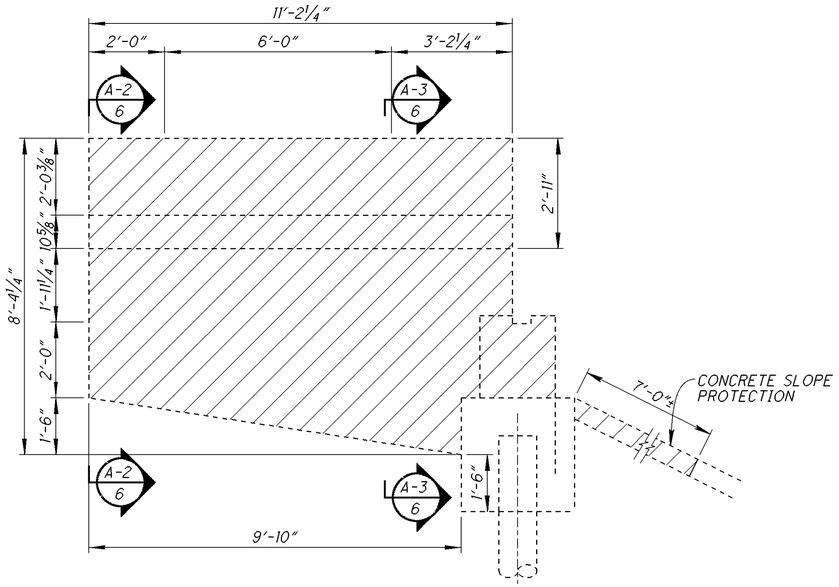


SECTION A-1 / 6



PLAN

REMOVALS



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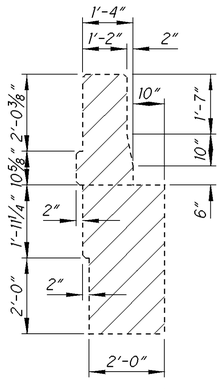

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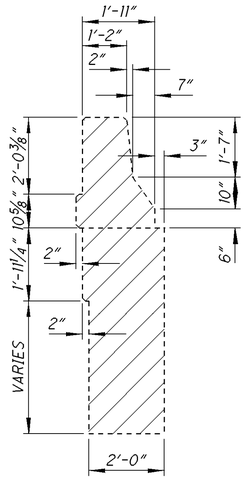

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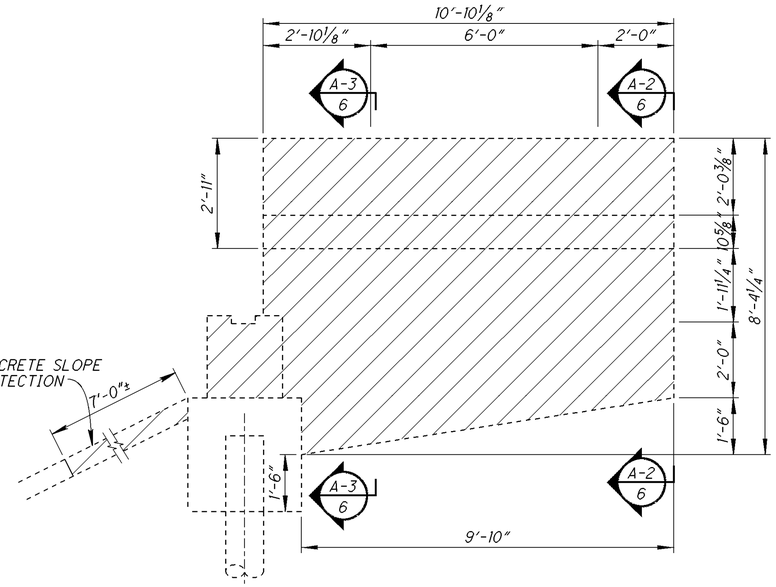

ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
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REAR ABUTMENT REMOVAL DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

6/26

149/190

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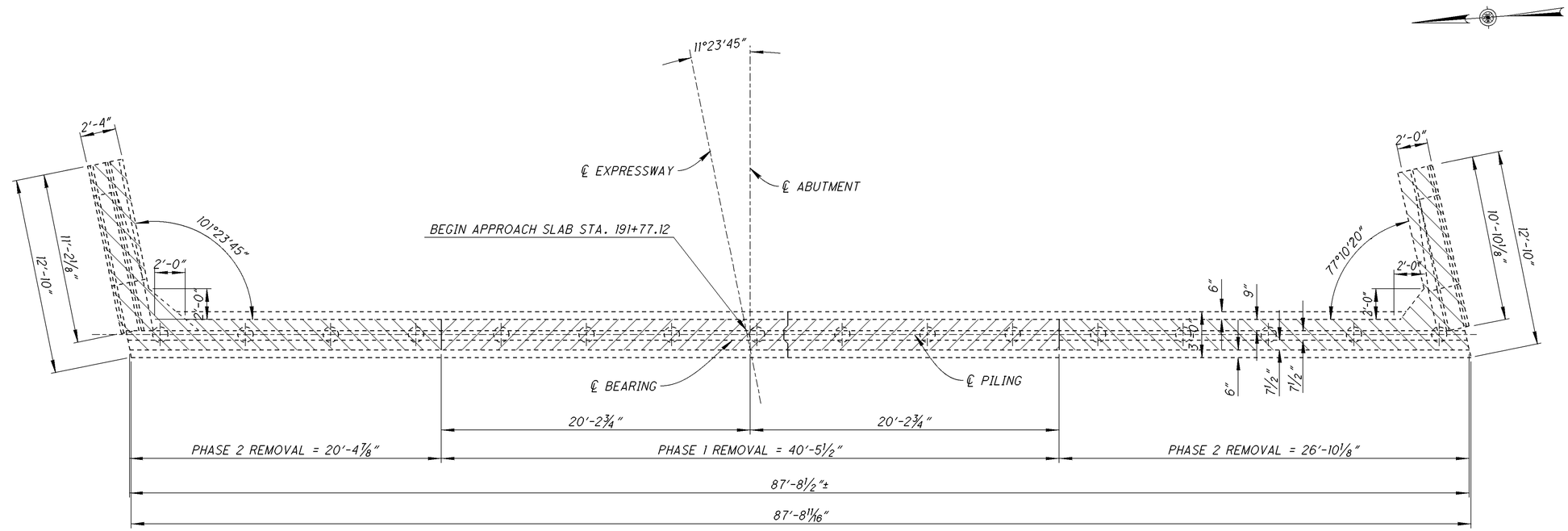
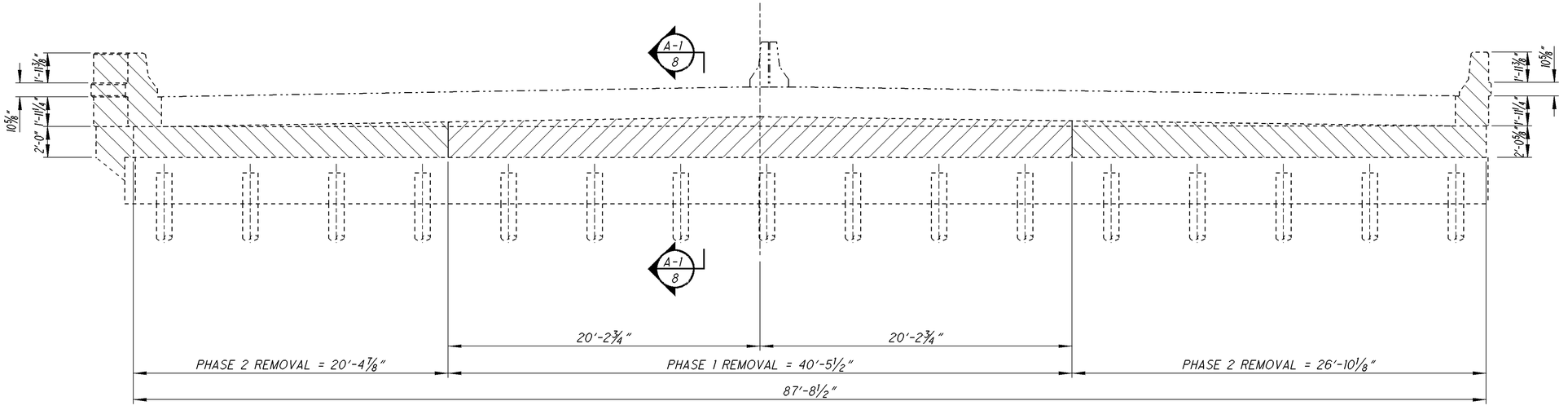


PLAN

PHASE 1 REMOVAL

PHASE 2 REMOVAL



ELEVATION

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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
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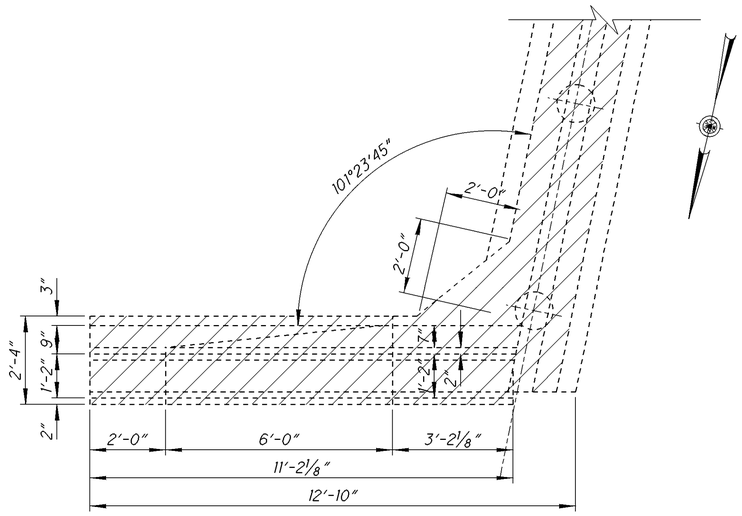
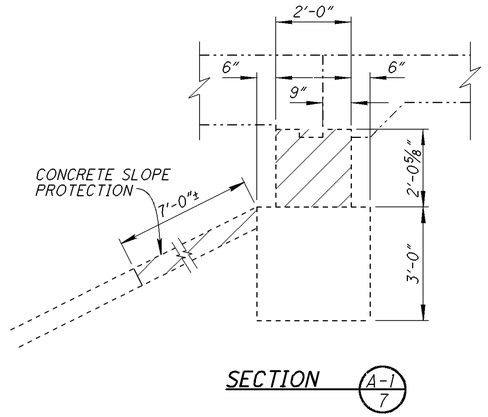
FORWARD ABUTMENT REMOVAL DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

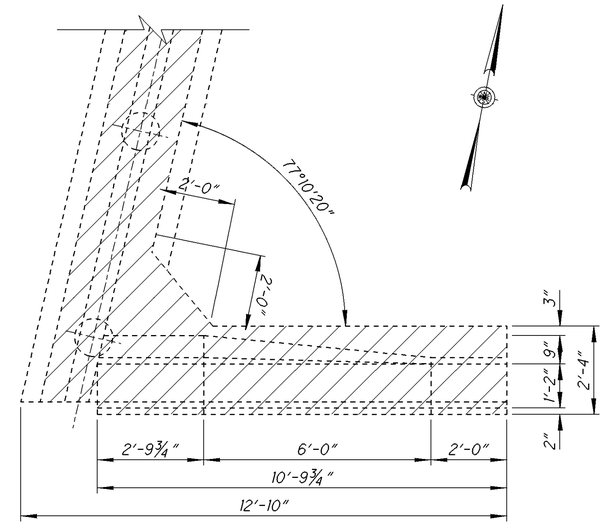
LIC-16-19.72/LIC-79-12.30
PID No. 76384



PLAN

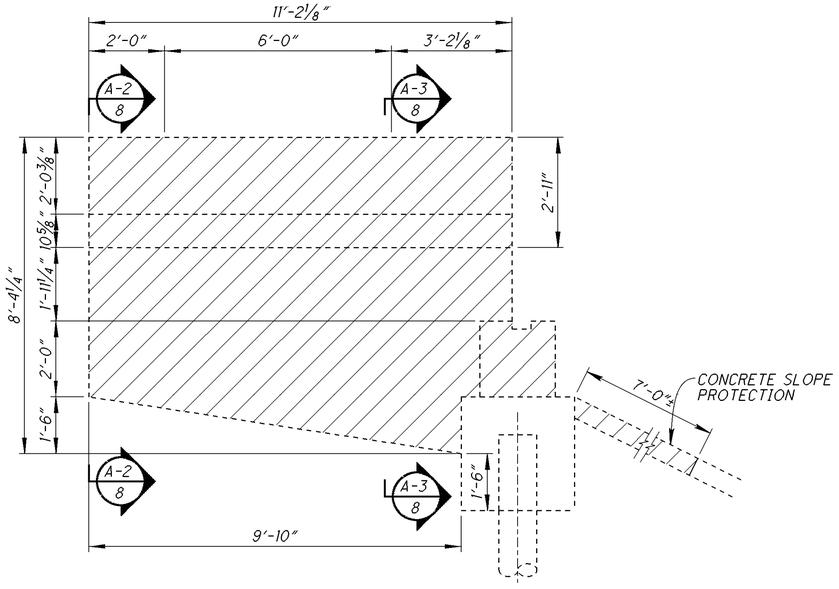


SECTION A-1 / 7



PLAN

REMOVALS



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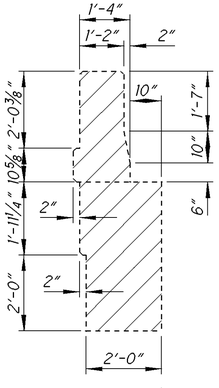
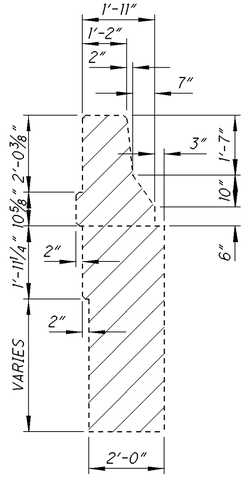
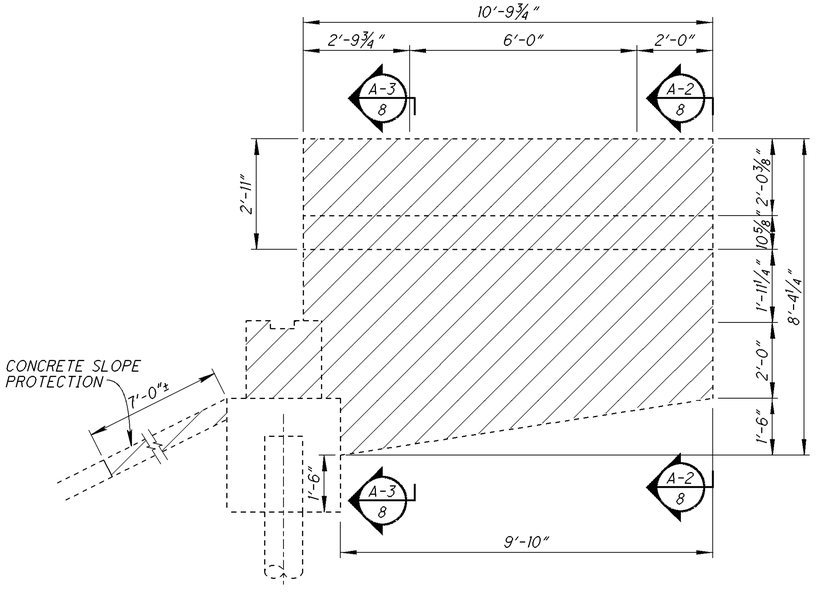


SECTION A-2 / 8



SECTION A-3 / 8



ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

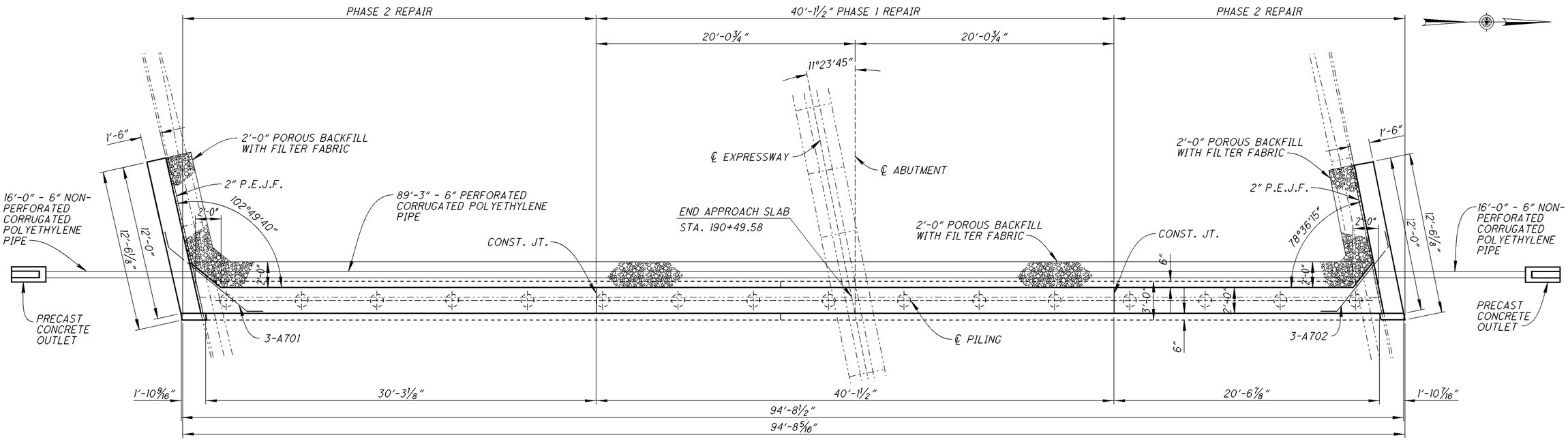
FORWARD ABUTMENT REMOVAL DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

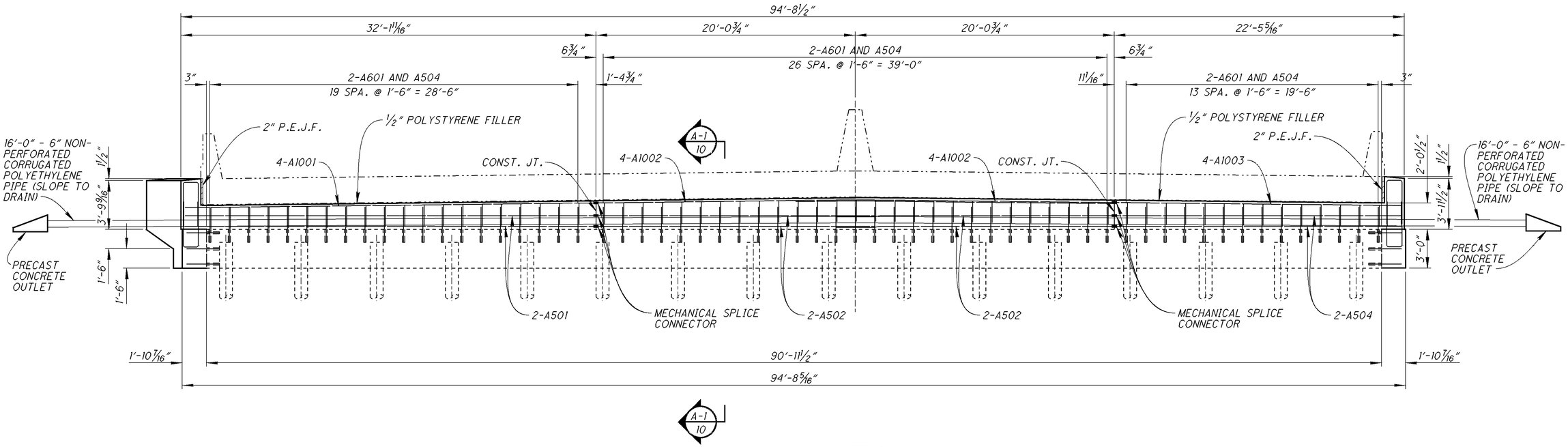
8 / 26

151
190

P:/LIC/76384/DESIGN/BRIDGE/4501179 - OAKWOOD AVE/PLAN_SHEETS/L76384_BEA_004.DGN



PLAN



ELEVATION

P:/LIC/76384/DESIGN/BRIDGE/4501179 – OAKWOOD AVE/PLAN_SHEETS/L76384_BPA_001.DGN

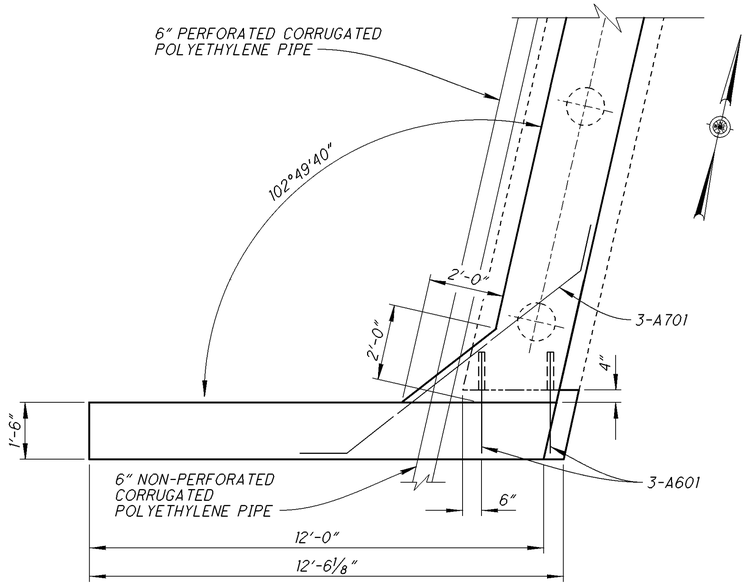
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

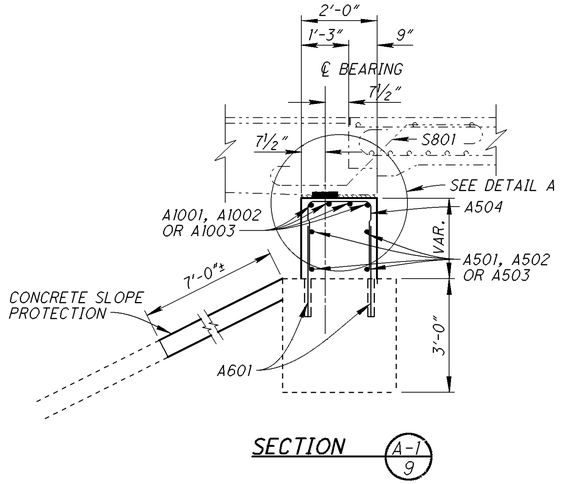
PROPOSED REAR ABUTMENT DETAILS

BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

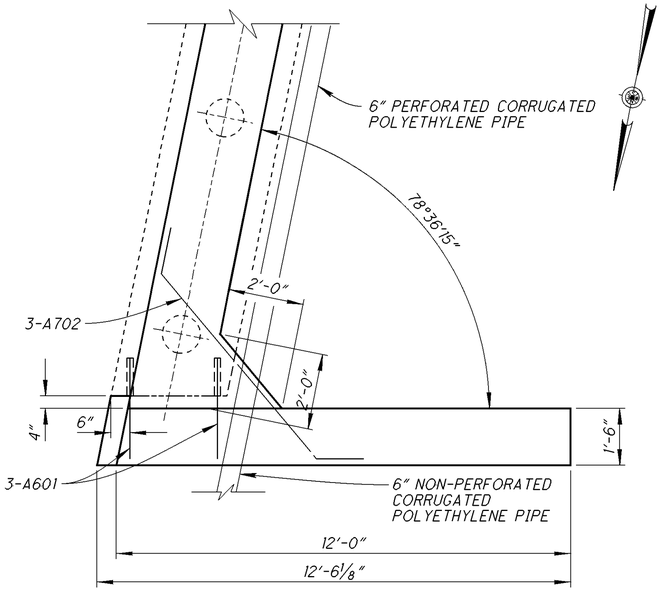
LIC-16-19.72/LIC-79-12.30
PID No. 76384



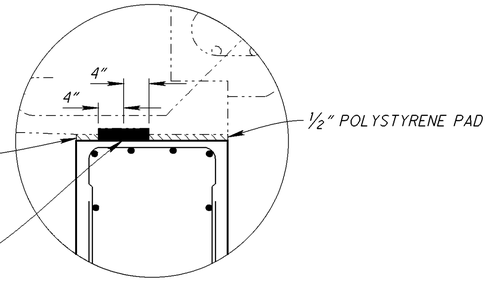
PLAN



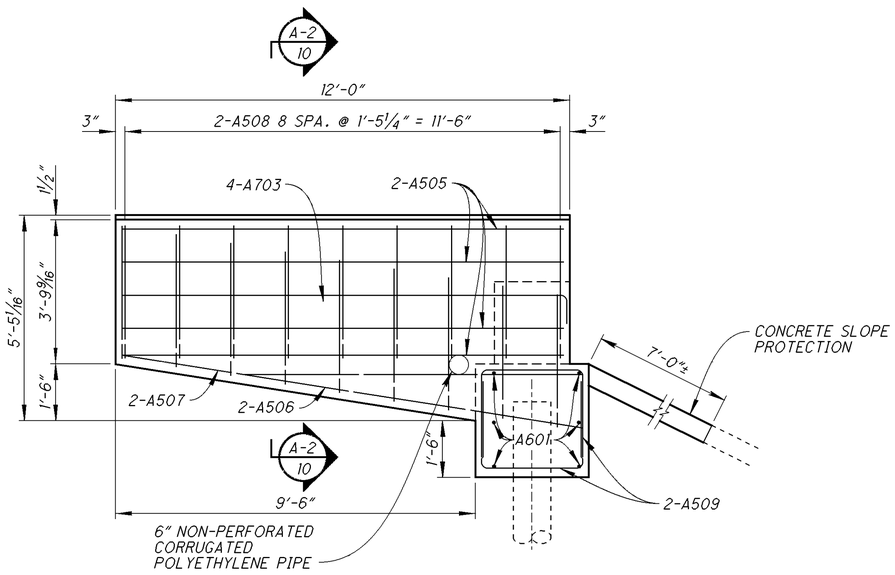
SECTION A-1 / 9



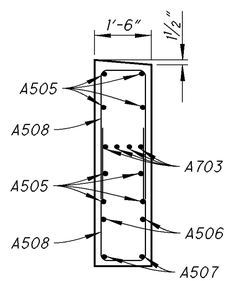
PLAN



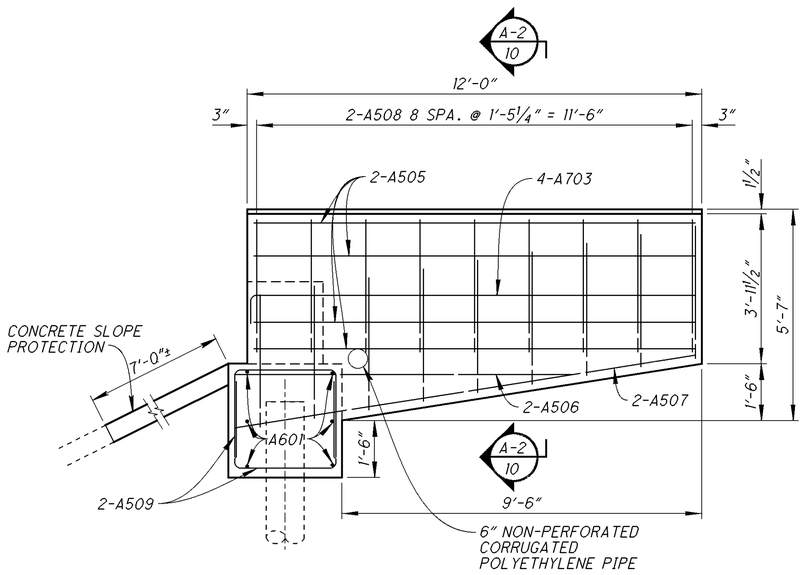
DETAIL A



ELEVATION



SECTION A-2 / 10



ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

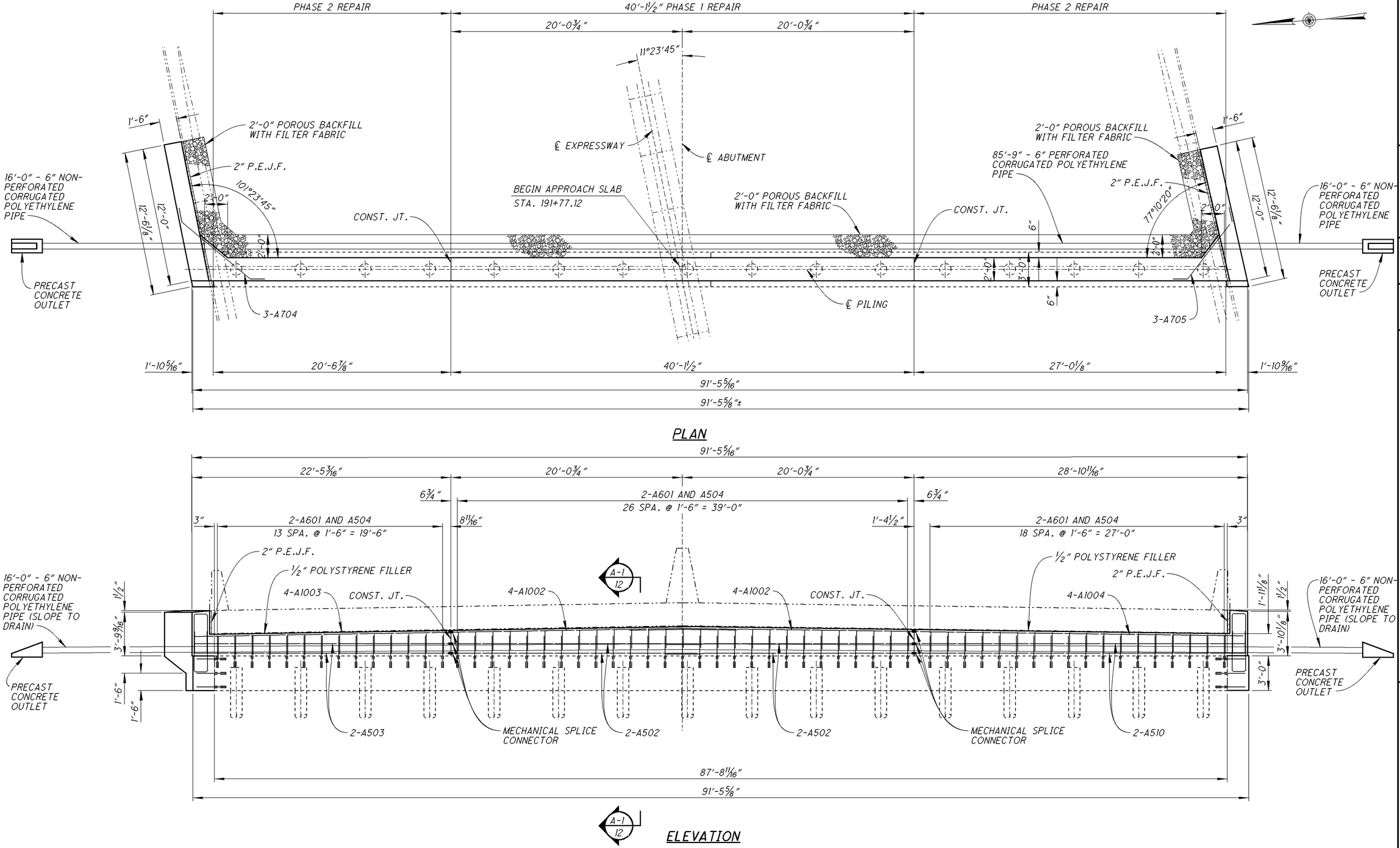
PROPOSED REAR ABUTMENT DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

10 / 26

153 / 190

P:/LIC/76384/DESIGN/BRIDGE/4501179 - OAKWOOD AVE/PLAN_SHEETS/L76384_BPA_002.DGN



PLAN

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ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

PROPOSED FORWARD ABUTMENT DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-18.72/LIC-79-12.30
PID No. 76384

11 / 26

154
190

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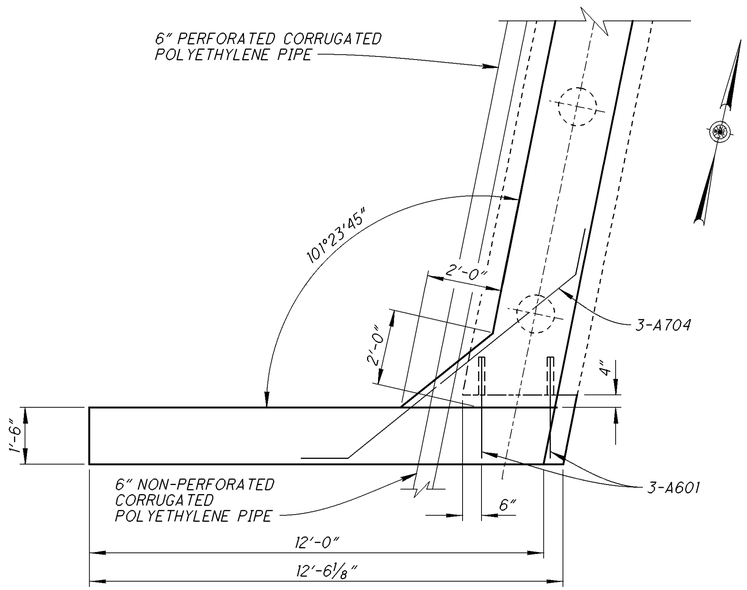
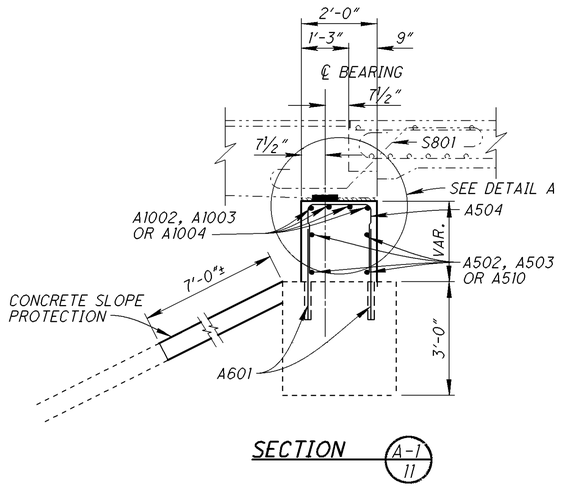
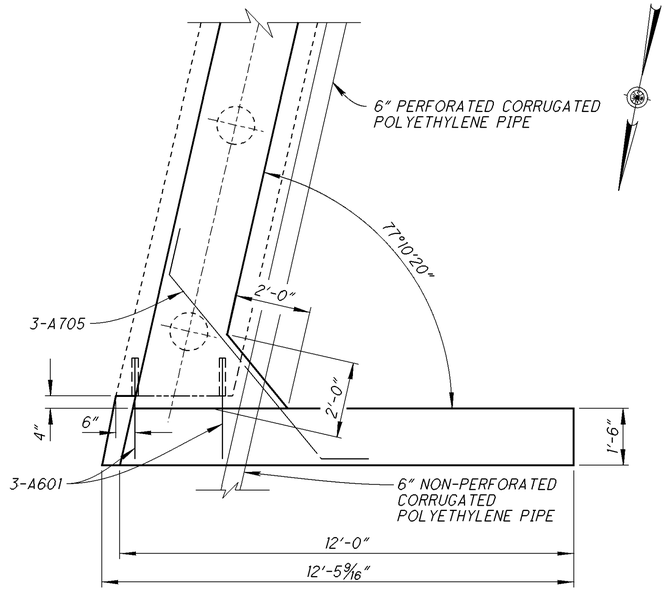


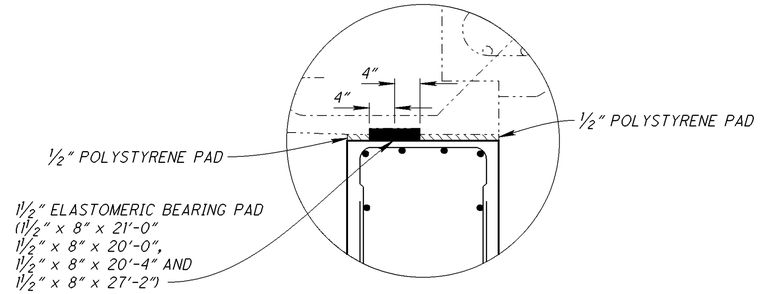
PLAN



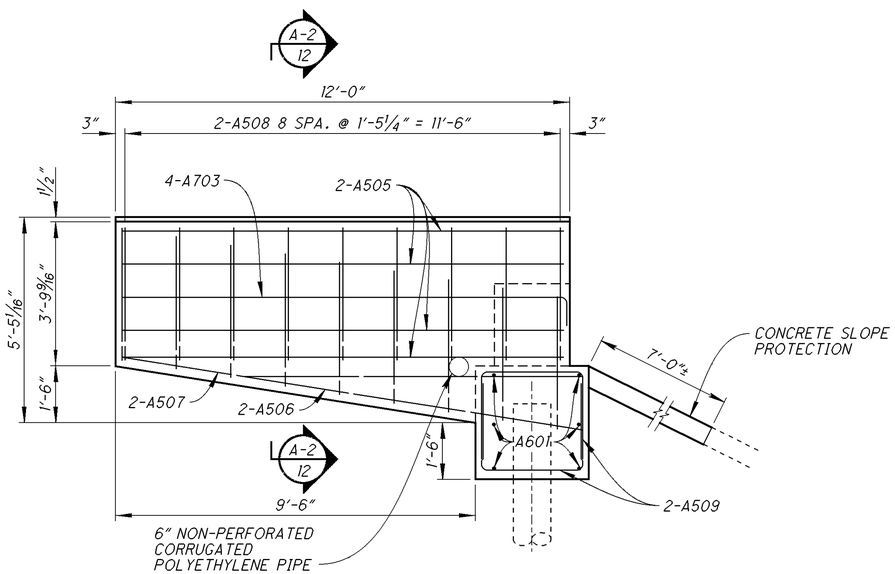
SECTION A-1 / 11



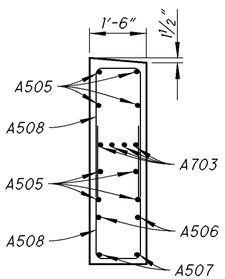
PLAN



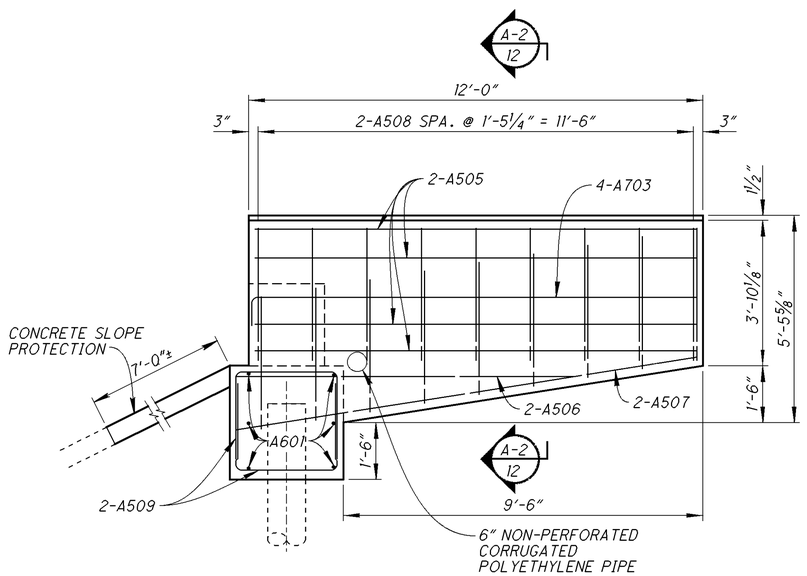
DETAIL A



ELEVATION



SECTION A-2 / 12



ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

PROPOSED FORWARD ABUTMENT DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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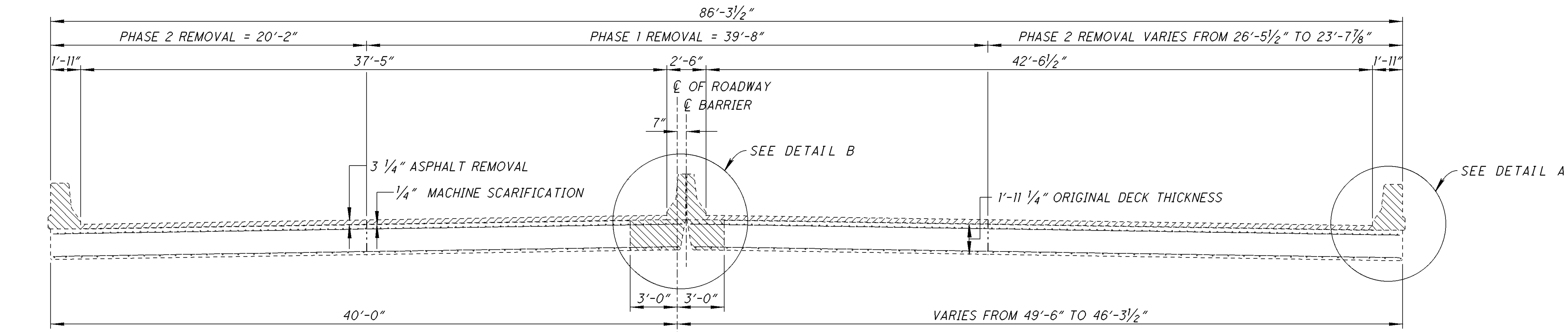
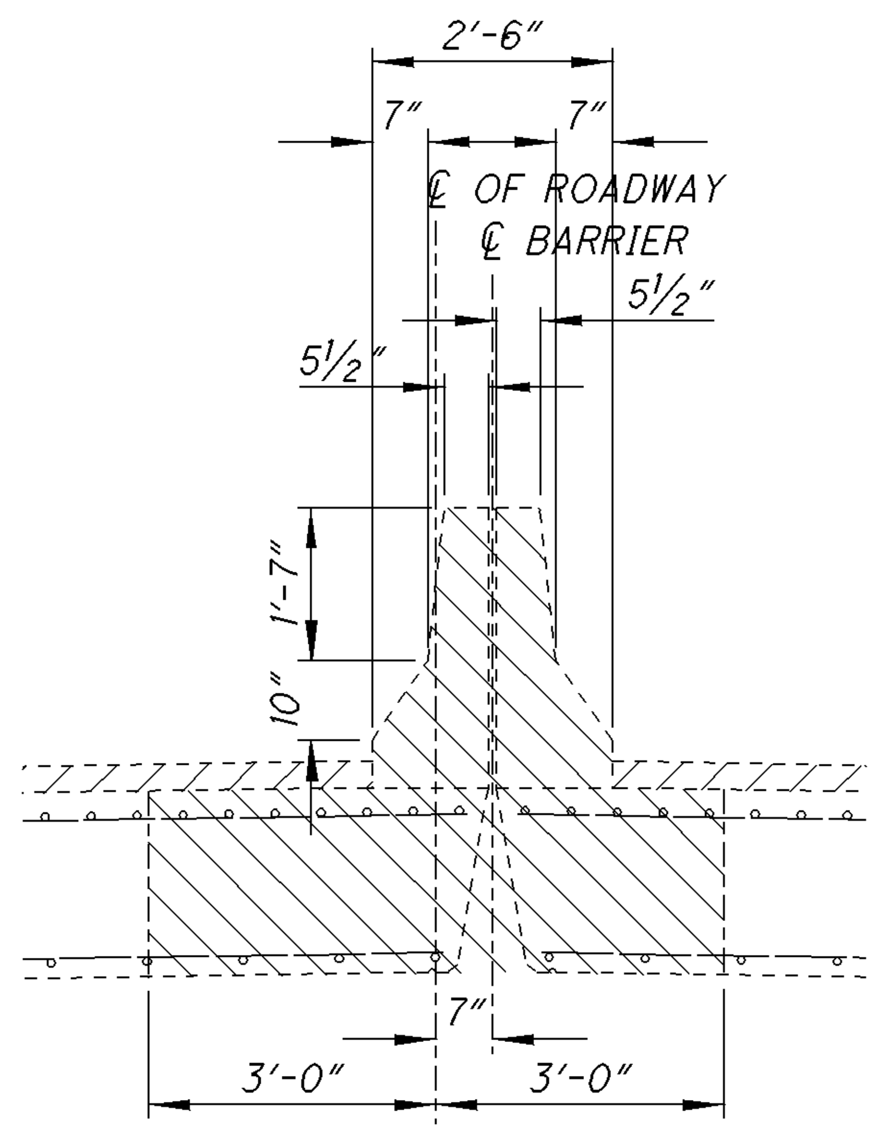
P:/LIC/76384/DESIGN/BRIDGE/4501179 – OAKWOOD AVE/PLAN_SHEETS/L76384_BPA_004.DGN

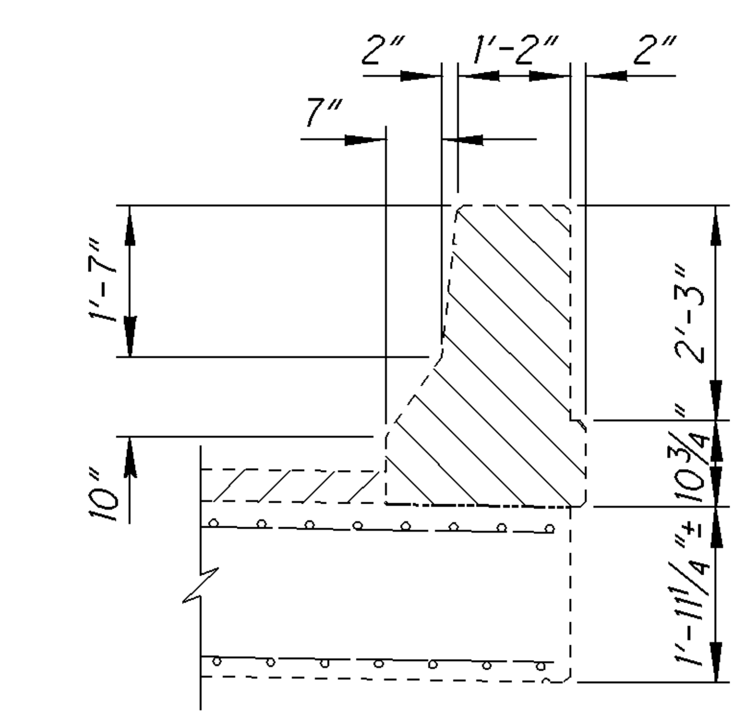


EXISTING TRANSVERSE SECTION

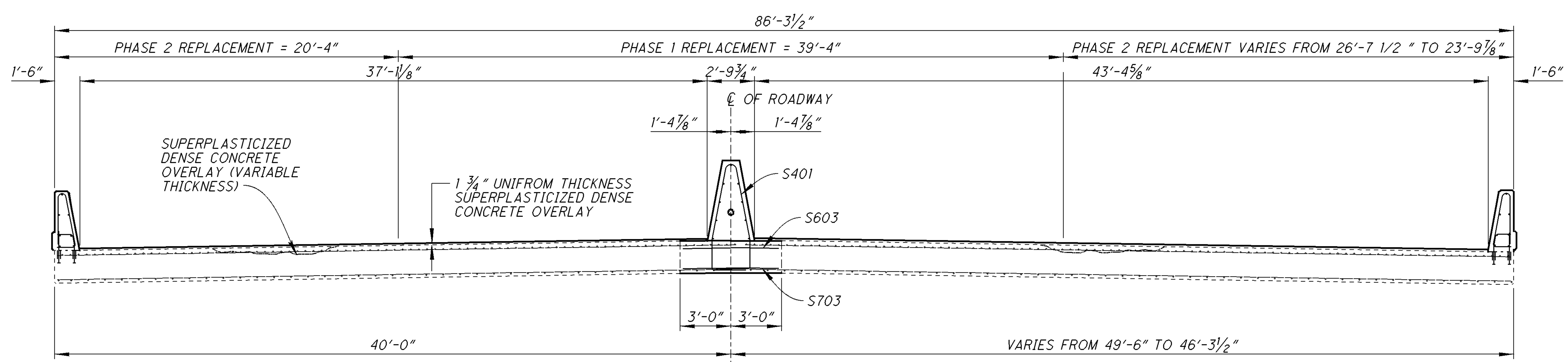
(OVERLAY)



DETAIL B



DETAIL A



PROPOSED TRANSVERSE SECTION

(OVERLAY)

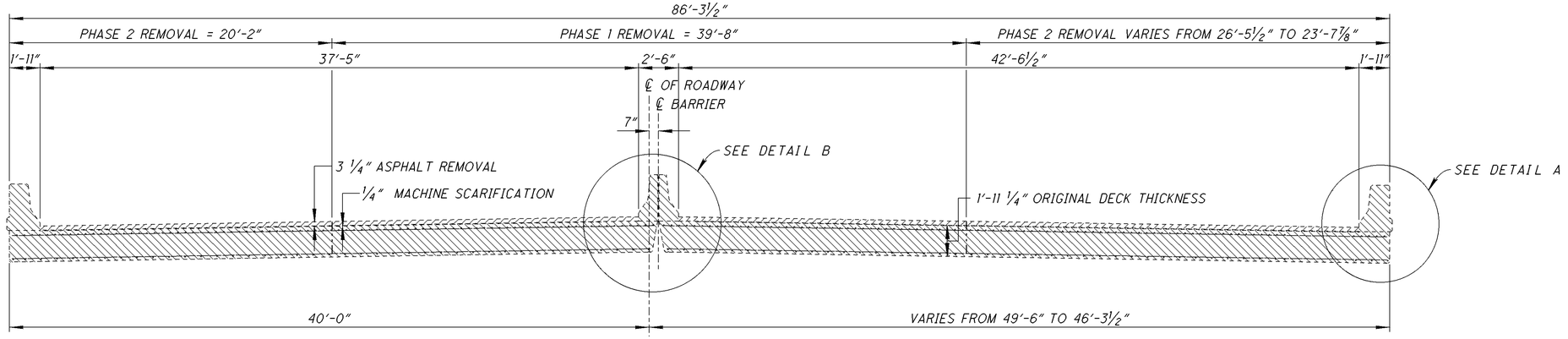
NOTE:
ALL TRANSVERSE RE-STEEL IN DECK EDGES AND LONGITUDINAL RE-STEEL IN DECK ENDS SHALL BE PRESERVED IN PLACE. ALL LOOSE RUST ON RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

REVIEWED DTF | DATE 3-27-09 | STRUCTURE FILE NUMBER 4501179
DRAWN TAG | REVISED
DESIGNED TAG | CHECKED JDR

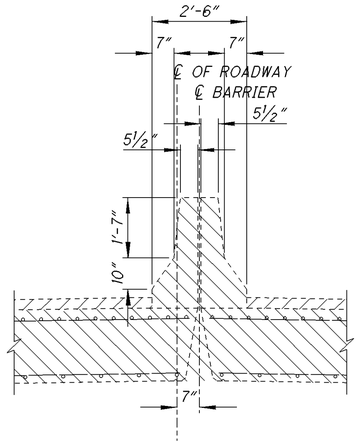
TRANSVERSE SECTION
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVEUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

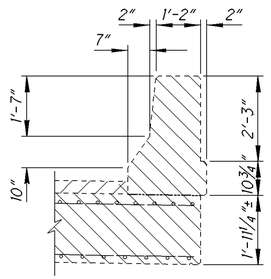


EXISTING TRANSVERSE SECTION

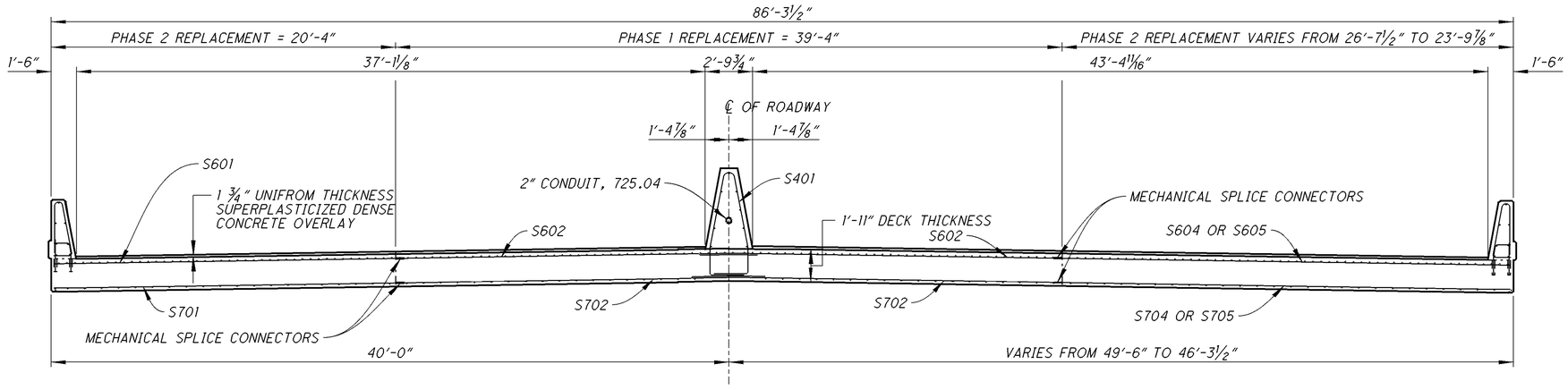
(DECK END REPLACEMENT)



DETAIL B



DETAIL A



PROPOSED TRANSVERSE SECTION

(DECK END REPLACEMENT)

NOTE:
ALL TRANSVERSE RE-STEEL IN DECK EDGES AND LONGITUDINAL RE-STEEL IN DECK ENDS SHALL BE PRESERVED IN PLACE. ALL LOOSE RUST ON RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

TRANSVERSE SECTION
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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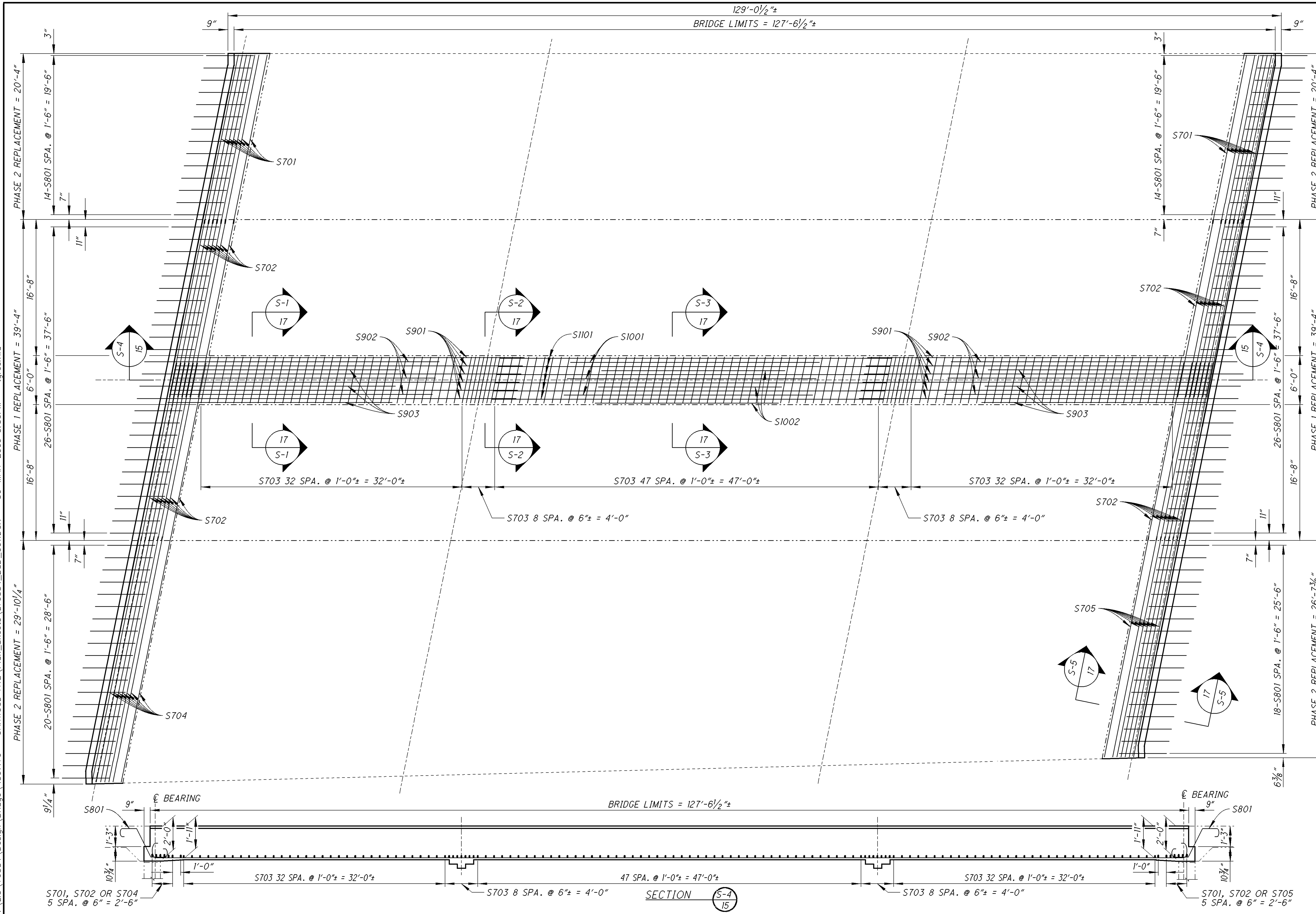

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

BOTTOM MAT REINFORCING

BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30

PID No. 76384

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L76384_BSD_001.DGN (SCALE = 5.33) 2-23-2009 (1 of 2)
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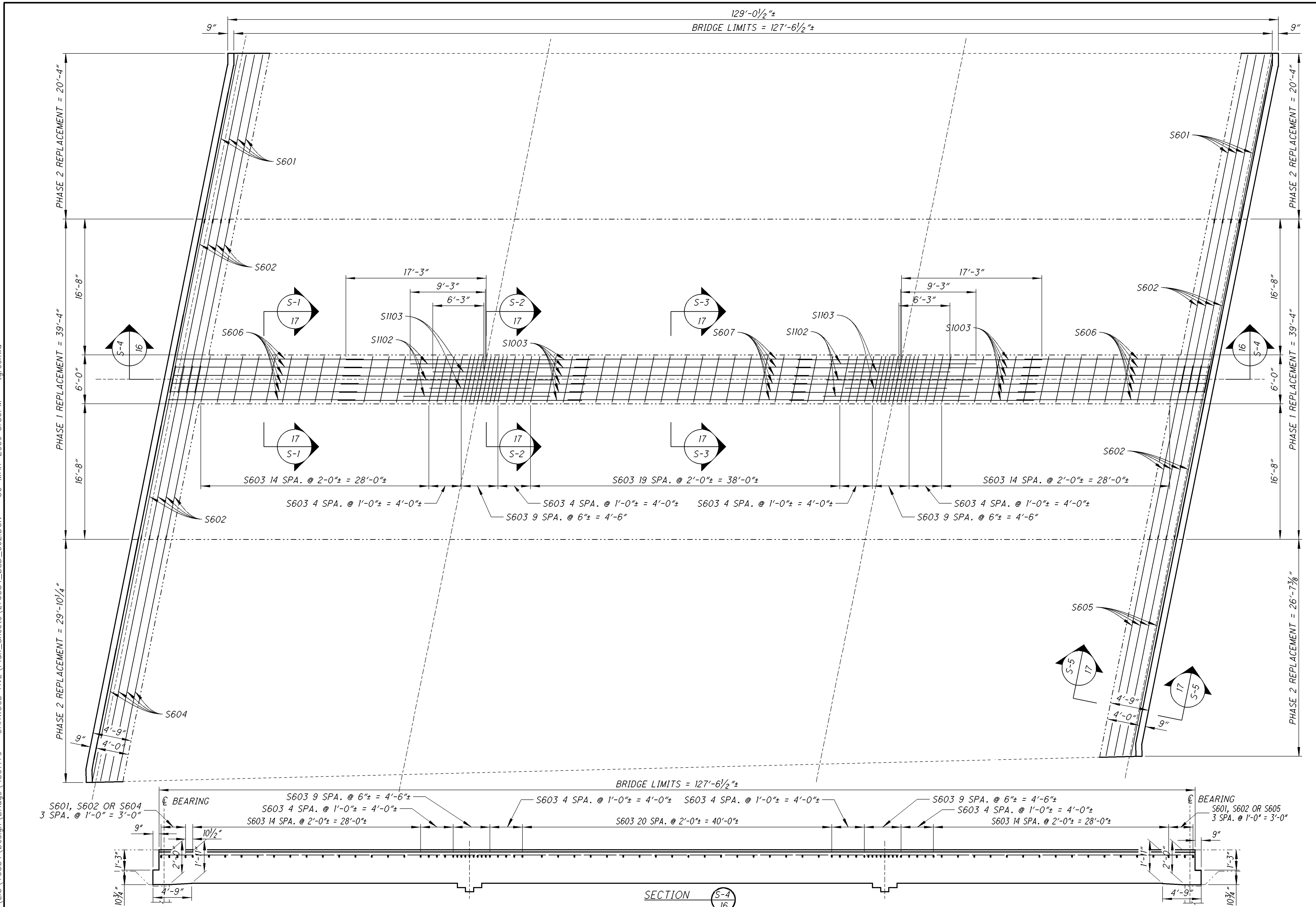

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	CHECKED	DRAWN	REVISED	REVIEWED	DATE	STRUCTURE FILE NUMBER
TAG	JDR	TAG		DTF	3-27-09	4501209

TOP MAT REINFORCING
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30

PID No. 76384

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L76384_BSD_002.DGN (SCALE = 5.33) 2-23-2009
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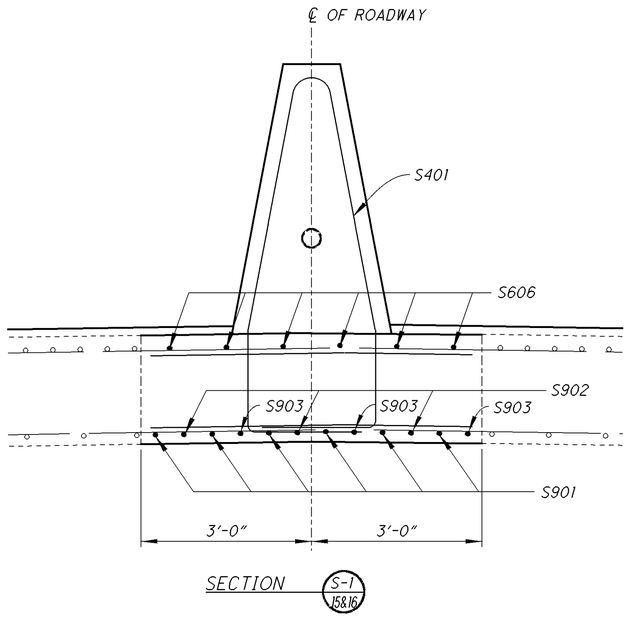
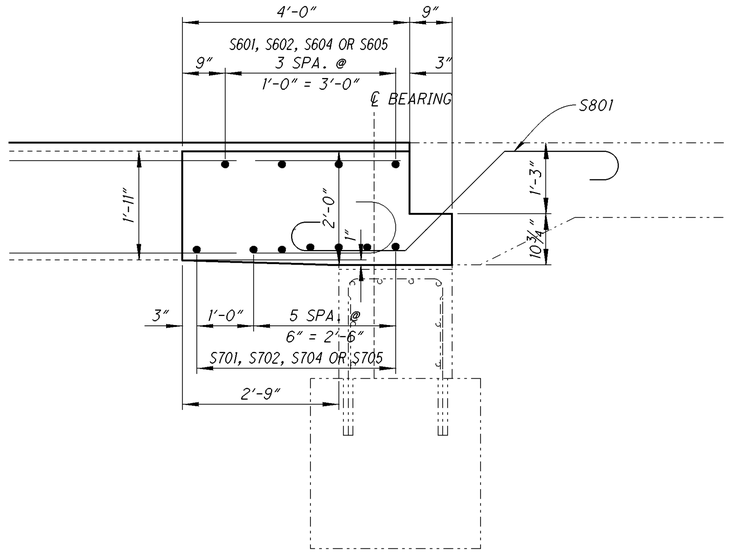
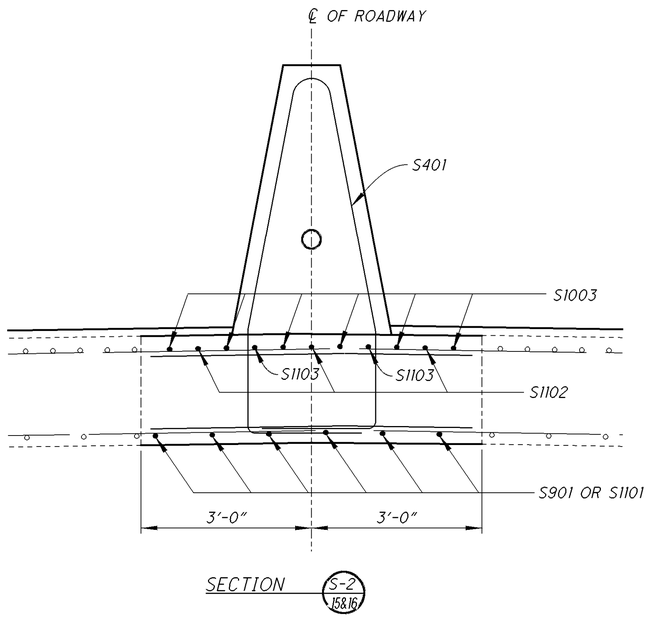


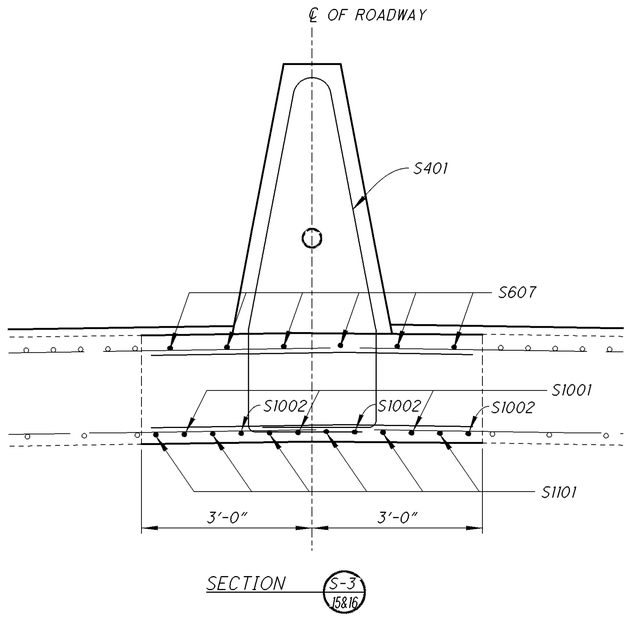
SECTION S-1 15&16



SECTION S-5 15&16



SECTION S-2 15&16



SECTION S-3 15&16

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED TAG | DRAWN TAG | REVIEWED DTF | DATE 3-27-09
CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501209

SUPERSTRUCTURE DECK DETAILS

BRIDGE NO. LIC-16-2234
OVER O'BANNON AVENUE

LIC-16-18.72/LIC-79-12.30
PID No. 76384

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L 76384 BSD 001.DGN (SCALE = 5.33) 2-23-2009 (2 of 2)
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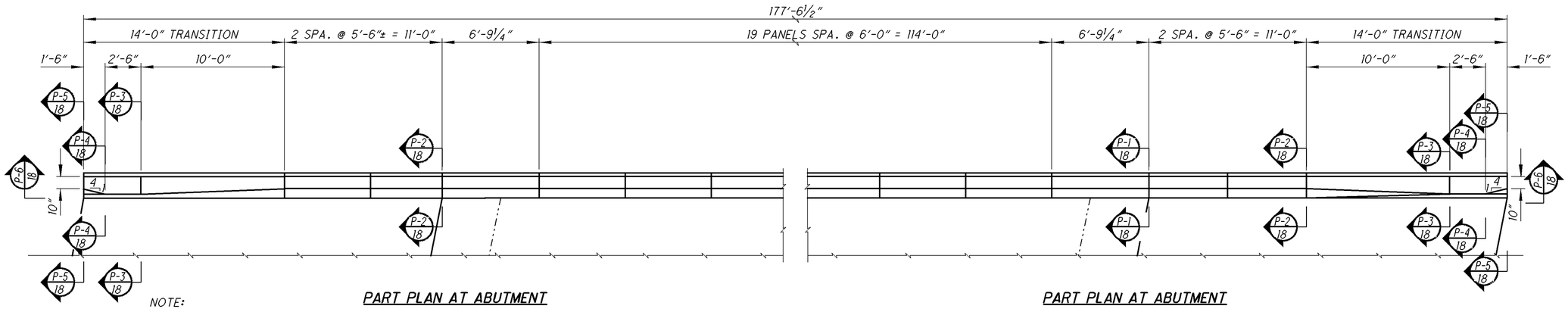


PART PLAN AT ABUTMENT

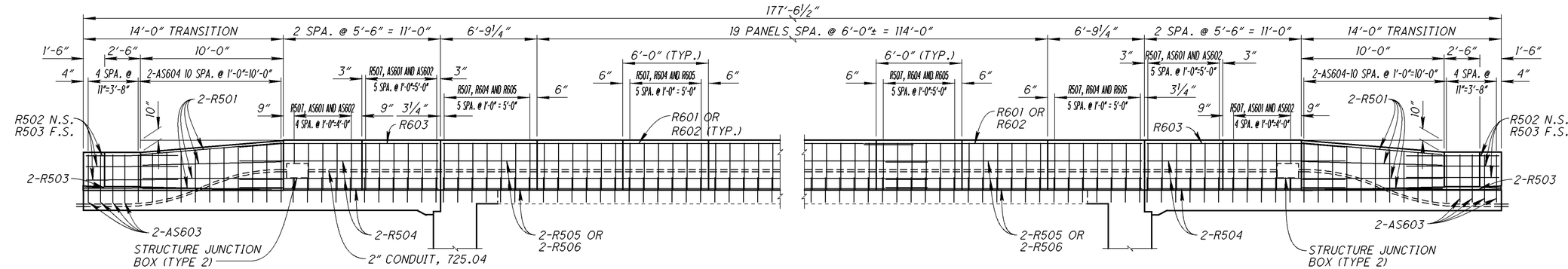
PART PLAN AT ABUTMENT

NOTE:
-ALL REINFORCING STEEL TO BE EPOXY COATED.

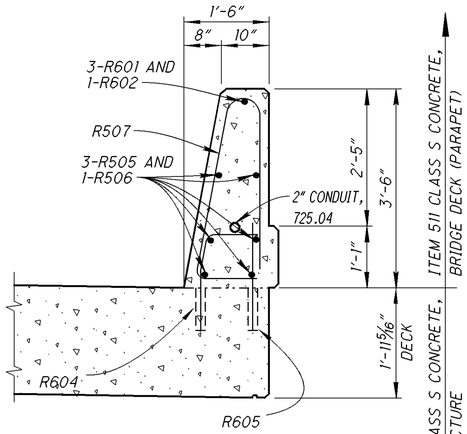
-FIELD BEND BARS WHERE NECESSARY

-FOR ADDITIONAL DETAILS SEE STD. DWG. SBR-1-99

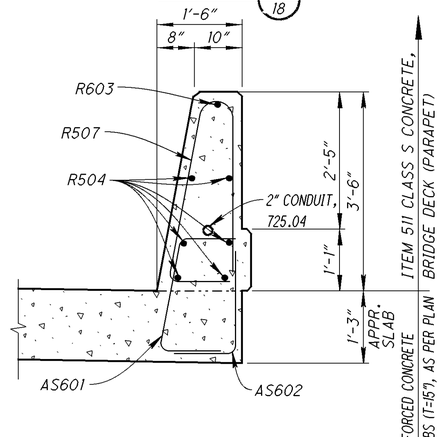
PARAPET MINIMUM LAP LENGTH
No. 5 = 2'-11"
No. 6 = 3'-5"



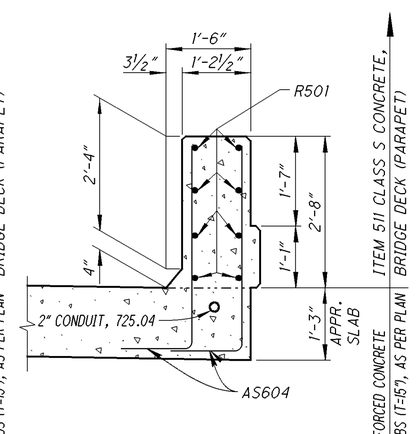
SECTION P-6 18



SECTION P-1 18

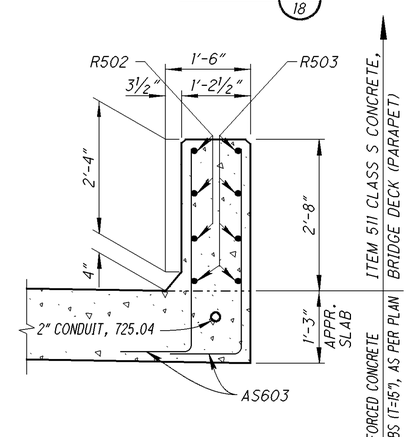


SECTION P-2 18

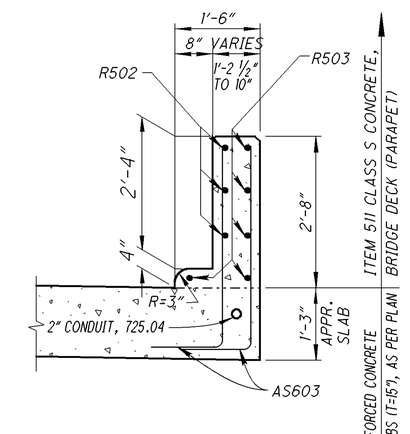


SECTION P-3 18

SECTION P-6 18



SECTION P-4 18



SECTION P-5 18

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

PARAPET DETAILS LEFT
BRIDGE NO. LIC-16-2234
OVAER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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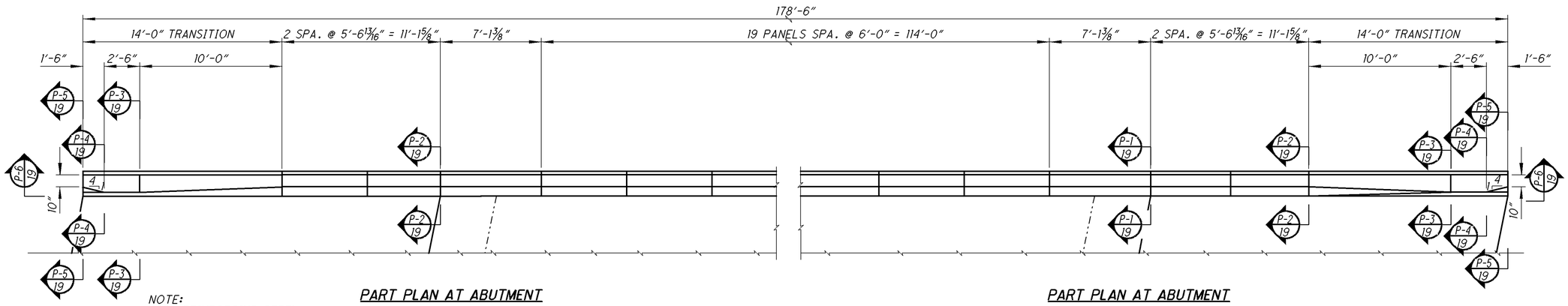
L 76384_BPD_001.DGN (2 OF 3) (SCALE =4.0) (PID# 76384) (02/10/09)



PART PLAN AT ABUTMENT

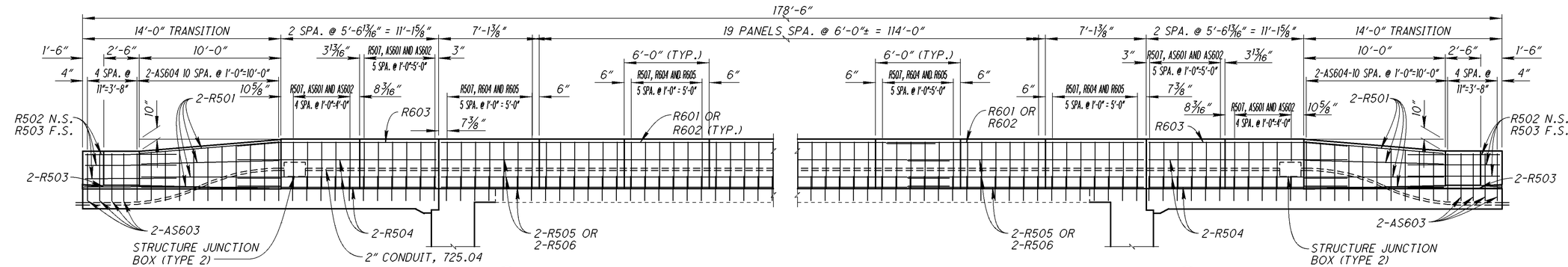
PART PLAN AT ABUTMENT

NOTE:
-ALL REINFORCING STEEL TO BE EPOXY COATED.

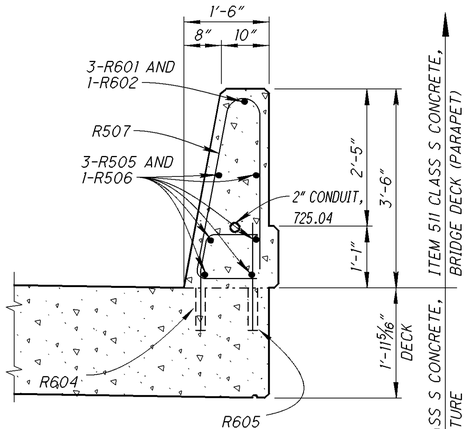
-FIELD BEND BARS WHERE NECESSARY

-FOR ADDITIONAL DETAILS SEE STD. DWG. SBR-1-99

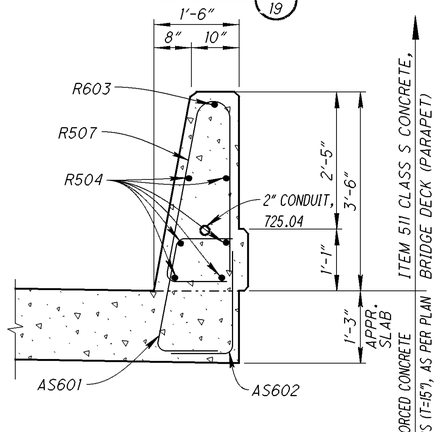
PARAPET MINIMUM LAP LENGTH
No. 5 = 2'-11"
No. 6 = 3'-5"



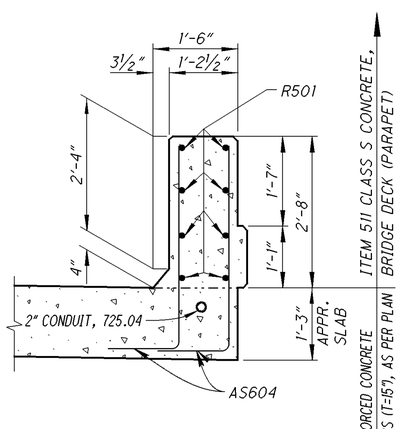
SECTION P-6 19



SECTION P-1 19

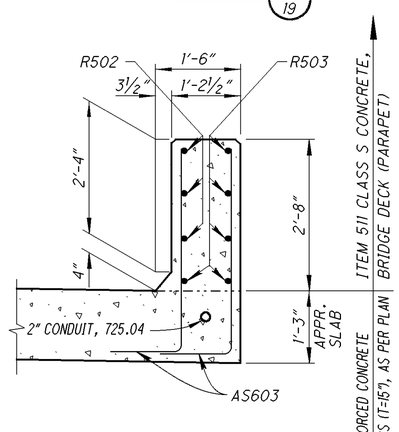


SECTION P-2 19

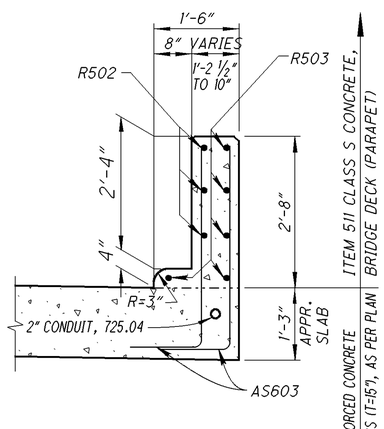


SECTION P-3 19

SECTION P-6 19



SECTION P-4 19



SECTION P-5 19

L76384_BPD_003.DGN (SCALE =4.0) (PID# 76384) (02/10/09)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

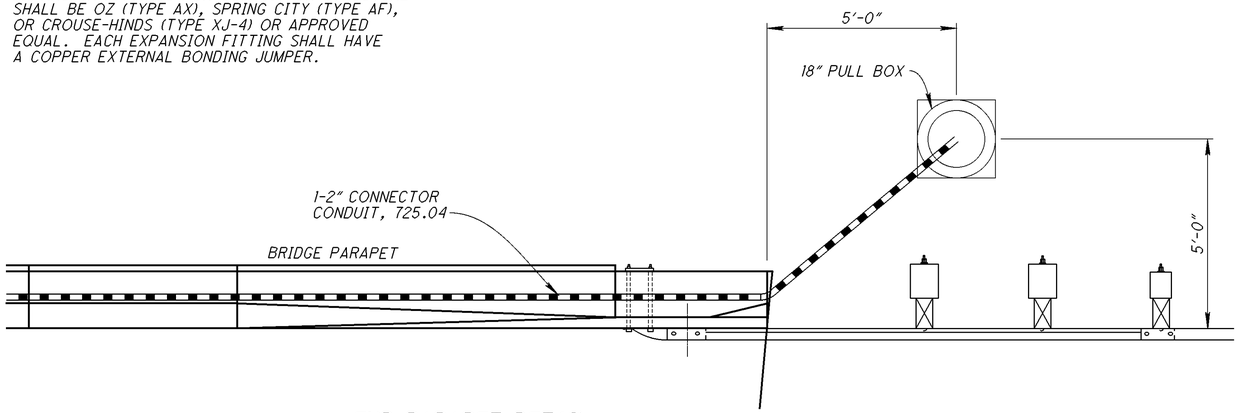
DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

PARAPET DETAILS RIGHT
BRIDGE NO. LIC-16-2234
OVAER OAKWOOD AVENUE

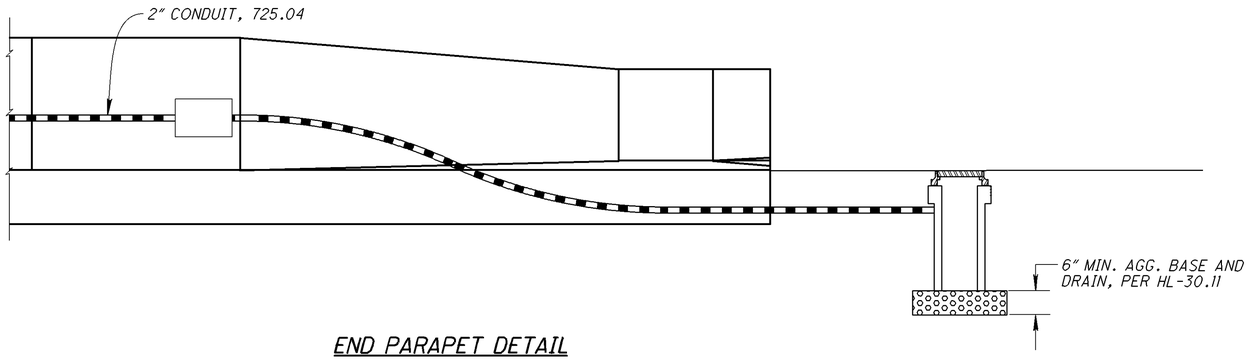
LIC-16-19.72/LIC-79-12.30
PID No. 76384

CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURE SHALL BE OZ (TYPE AX), SPRING CITY (TYPE AF), OR CROUSE-HINDS (TYPE XJ-4) OR APPROVED EQUAL. EACH EXPANSION FITTING SHALL HAVE A COPPER EXTERNAL BONDING JUMPER.

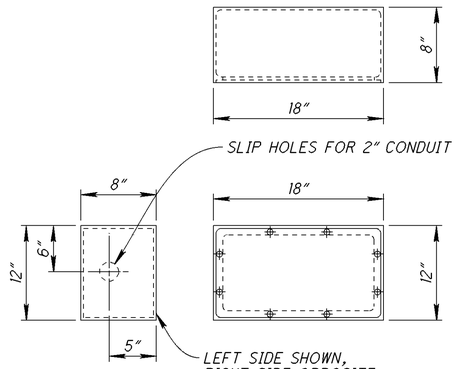


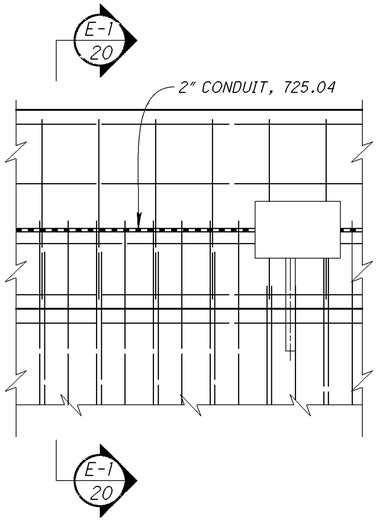
END PARAPET DETAIL
PLAN VIEW



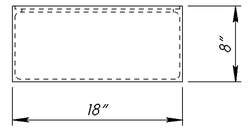
END PARAPET DETAIL
ELEVATION VIEW

TYPICAL CONDUIT TREATMENT
AT END OF BRIDGE PARAPET

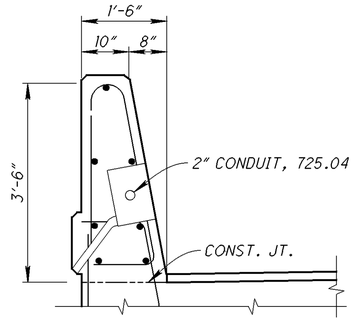




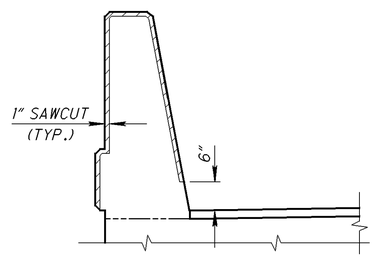
JUNCTION BOX DETAILS



STRUCTURE JUNCTION
BOX DETAILS



SECTION E-1 20
(TYPICAL)



DETAIL A
(SECTION THROUGH SAWCUT)
SAWCUT PERIMETER = 7'-6"

ITEM 625 CONDUIT, 2" 725.04

AS PER CMS 625.12 AFTER INSTALLATION OF THE CONDUIT AND PRIOR TO INSTALLION OF THE CABLES, CHECK EACH CONDUIT RUN BY RODDING OR BY PUSHING A MANDREL THROUGH THE CONDUIT RUN AND REMOVING ANY OBSTRUCTION FOUND.

IF A CONDUIT IS TO REMAIN EMPTY UPON COMPLETION OF THE PROJECT, LEAVE A NO. 10 AWG COPPER CLAD, ALUMINUM CLAD OR GALVANIZED PULL WIRE IN THE CONDUIT AND CAP THE ENDS IN AN APPROVED MANNER.

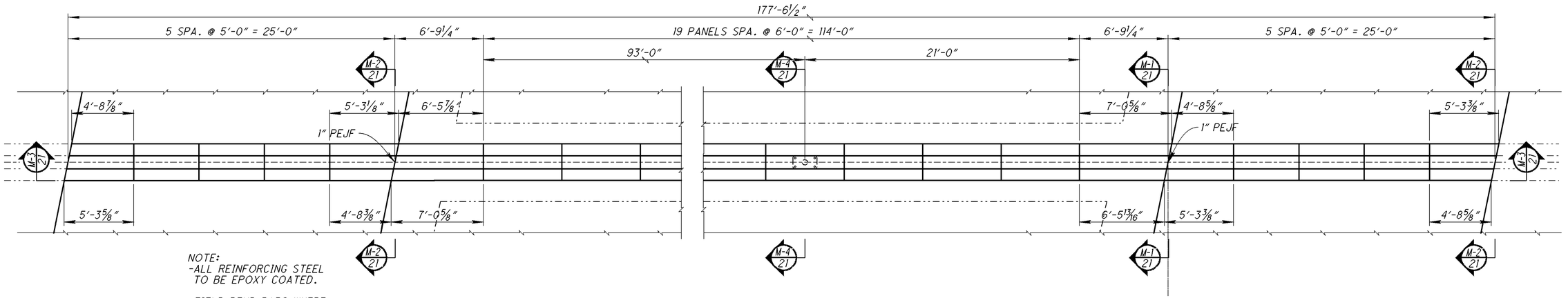
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
TAG	DDH	DTF	3-27-09	4501179
CHECKED	REVISED			
JDR				

PARAPET DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

L76384_BPD_004.DGN



NOTE:
-ALL REINFORCING STEEL TO BE EPOXY COATED.

-FIELD BEND BARS WHERE NECESSARY.

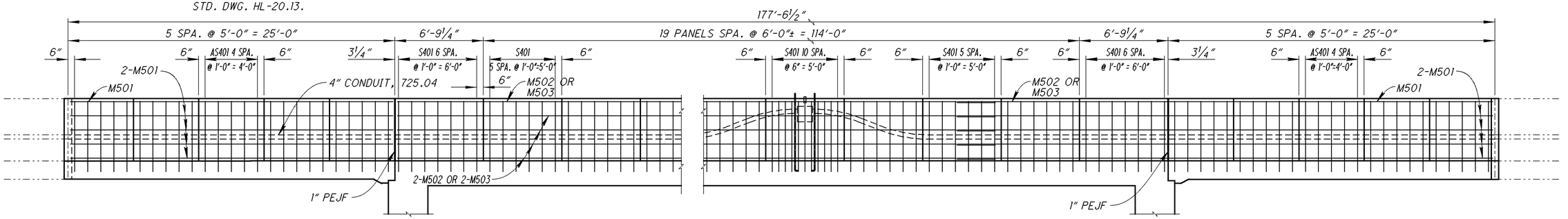
-FIELD CUT BARS AS NECESSARY.

-FOR ADDITIONAL JUNCTION BOX AND CONDUIT DETAILS SEE STD. DWG. HL-20.13.

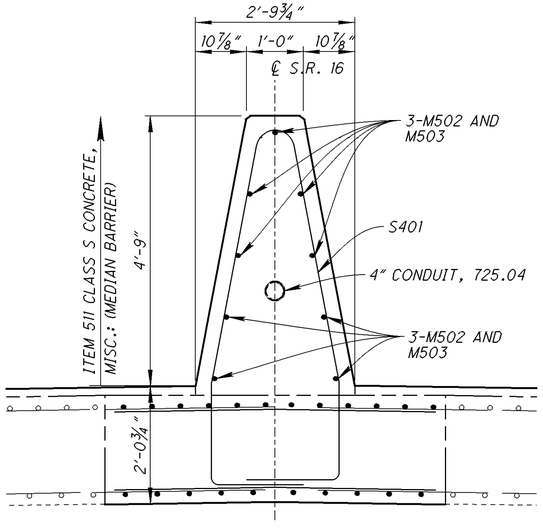
PART PLAN AT ABUTMENT

PART PLAN AT ABUTMENT

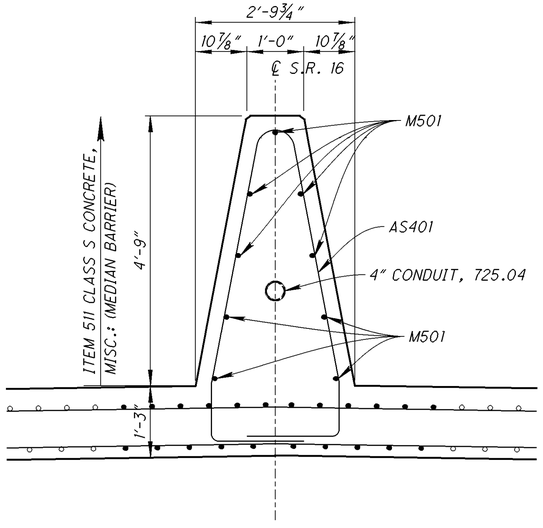
PARAPET MINIMUM LAP LENGTH
No. 5 = 2'-11"
No. 6 = 3'-5"



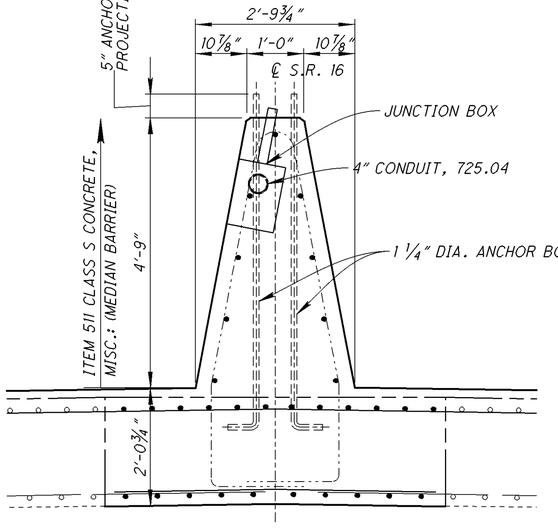
SECTION M-3 21



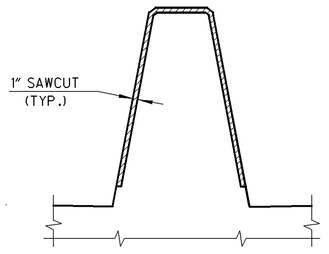
SECTION M-1 21



SECTION M-2 21



SECTION M-4 21



DETAIL A

L76384_BPD_002.DGN (SCALE =4.0) (PID# 76384) (03/17/09)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

MEDIAN BARRIER DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

21 / 26

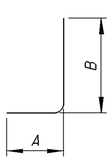
164
190

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
PARAPET													
R501	32	10'-0"	334	STR.	10'-0"								
R502	12	5'-6"	69	25	1'-8"	2'-4 15/16"	1'-4 1/4"	1 1/2"	5"				
R503	20	5'-6"	115	STR.	5'-6"								
R504	24	13'-9"	344	STR.	13'-9"								
R505	36	40'-0"	1502	STR.	40'-0"								
R506	12	16'-8"	209	STR.	16'-8"								
R507	300	7'-5"	2321	23	1'-1"	3'-2"	3'-0"					2 3/4"	
R601	6	40'-0"	360	STR.	40'-0"								
R602	2	18'-2"	55	STR.	18'-2"								
R603	4	14'-3"	86	STR.	14'-3"								
R604	256	2'-8"	1025	28	1'-11"	8"	2"	11"					
R605	256	1'-11"	737	STR.	1'-11"								
SUBTOTAL PARAPET			7157										

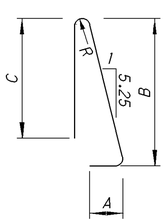
MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
MEDIAN BARRIER													
M501	18	24'-8"	463	STR.	24'-8"								
M502	27	40'-0"	1126	STR.	40'-0"								
M503	9	19'-11"	187	STR.	19'-11"								
SUBTOTAL MEDIAN BARRIER			1776										

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
DECK													
S401	133	15'-8"	1379	34	1'-8"	1'-10"	4'-3"					8"	
S601	8	20'-6"	246	STR.	20'-6"								
S602	16	21'-9"	523	STR.	21'-9"								
S603	82	5'-9"	708	STR.	5'-9"								
S604	4	30'-2"	181	STR.	30'-2"								
S605	4	27'-0"	162	STR.	27'-0"								
S606	12	23'-0"	415	STR.	23'-0"								
S607	6	29'-0"	261	STR.	29'-0"								
S701	14	20'-7"	589	STR.	20'-7"								
S702	28	22'-3"	1273	STR.	22'-3"								
S703	128	5'-9"	1504	STR.	5'-9"								
S704	7	30'-2"	432	STR.	30'-2"								
S705	7	27'-0"	386	STR.	27'-0"								
S801	118	8'-0"	2520	35	2'-0"	1'-7"	1'-7"						
S901	12	42'-7"	1737	STR.	42'-7"								
S902	6	33'-6"	683	16	32'-3"								
S903	6	28'-9"	587	16	27'-6"								
S1001	3	30'-6"	394	STR.	30'-6"								
S1002	3	22'-6"	290	STR.	22'-6"								
S1003	12	30'-0"	1549	STR.	30'-0"								
S1101	6	48'-0"	1530	STR.	48'-0"								
S1102	6	22'-6"	717	STR.	22'-6"								
S1103	4	30'-0"	638	STR.	30'-0"								
SUBTOTAL DECK			18704										

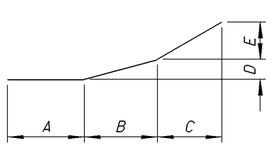
TYPE-STR.



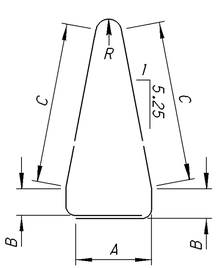
TYPE-1



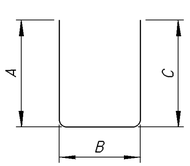
TYPE-23



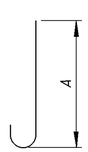
TYPE-25



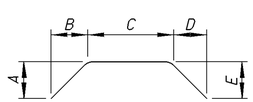
TYPE-34



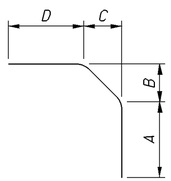
TYPE-2



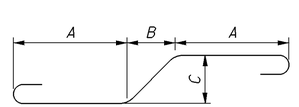
TYPE 16



TYPE 20



TYPE-13



TYPE-35

P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BRL_001.DGN

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

REINFORCING STEEL SCHEDULE
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

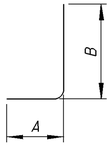
LIC-16-19.72/LIC-79-12.30
PID No. 76384

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
ABUTMENTS													
A501	4	31'-9"	133	STR.	31'-9"								
A502	16	21'-7"	360	STR.	21'-7"								
A503	8	22'-3"	186	STR.	22'-3"								
A504	121	4'-9"	600	2	1'-8"	1'-8"	1'-8"						
A505	32	11'-8"	389	STR.	11'-8"								
A506	8	8'-11"	74	STR.	8'-11"								
A507	8	12'-4"	103	STR.	12'-4"								
A508	72	7'-11"	595	2	3'-6"	1'-2"	3'-6"						
A509	16	6'-11"	115	2	2'-3"	2'-8"	2'-3"						
A510	4	28'-8"	120	STR.	28'-8"								
A601	266	2'-8"	1065	STR.	2'-8"								
A701	3	10'-0"	61	20	10"	1'-0"	7'-10"	1'-0"	10"				
A702	3	8'-7"	53	20	1'-0"	9"	6'-5"	9"	1'-0"				
A703	16	12'-3"	401	1	9"	11'-8"							
A704	3	10'-1"	62	20	10"	1'-0"	7'-9"	1'-0"	10"				
A705	3	8'-8"	53	20	1'-0"	10"	6'-4"	10"	1'-0"				
A1001	4	31'-9"	547	STR.	31'-9"								
A1002	16	24'-9"	1704	STR.	24'-9"								
A1003	8	22'-3"	766	STR.	22'-3"								
A1004	4	28'-8"	493	STR.	28'-8"								

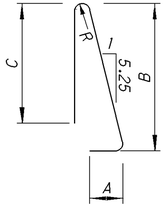
MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.

SUBTOTAL PARAPET	7157
SUBTOTAL MEDIAN BARRIER	1776
SUBTOTAL ABUTMENT	7880
SUBTOTAL DECK	18704
GRAND TOTAL	35517

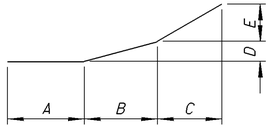
TYPE-STR.



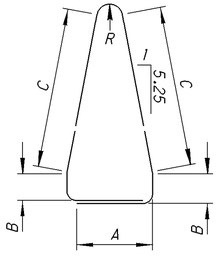
TYPE-1



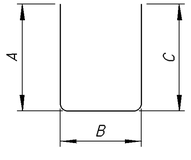
TYPE-23



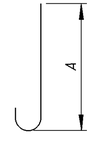
TYPE-25



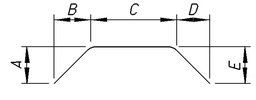
TYPE-34



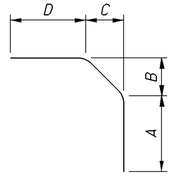
TYPE-2



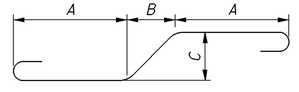
TYPE 16



TYPE 20



TYPE-13



TYPE-35

P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BRL_001.DGN

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DATE 3-27-09
REVIEWED DTF
STRUCTURE FILE NUMBER 4501179

DRAWN TAG
REVISED

DESIGNED TAG
CHECKED JDR

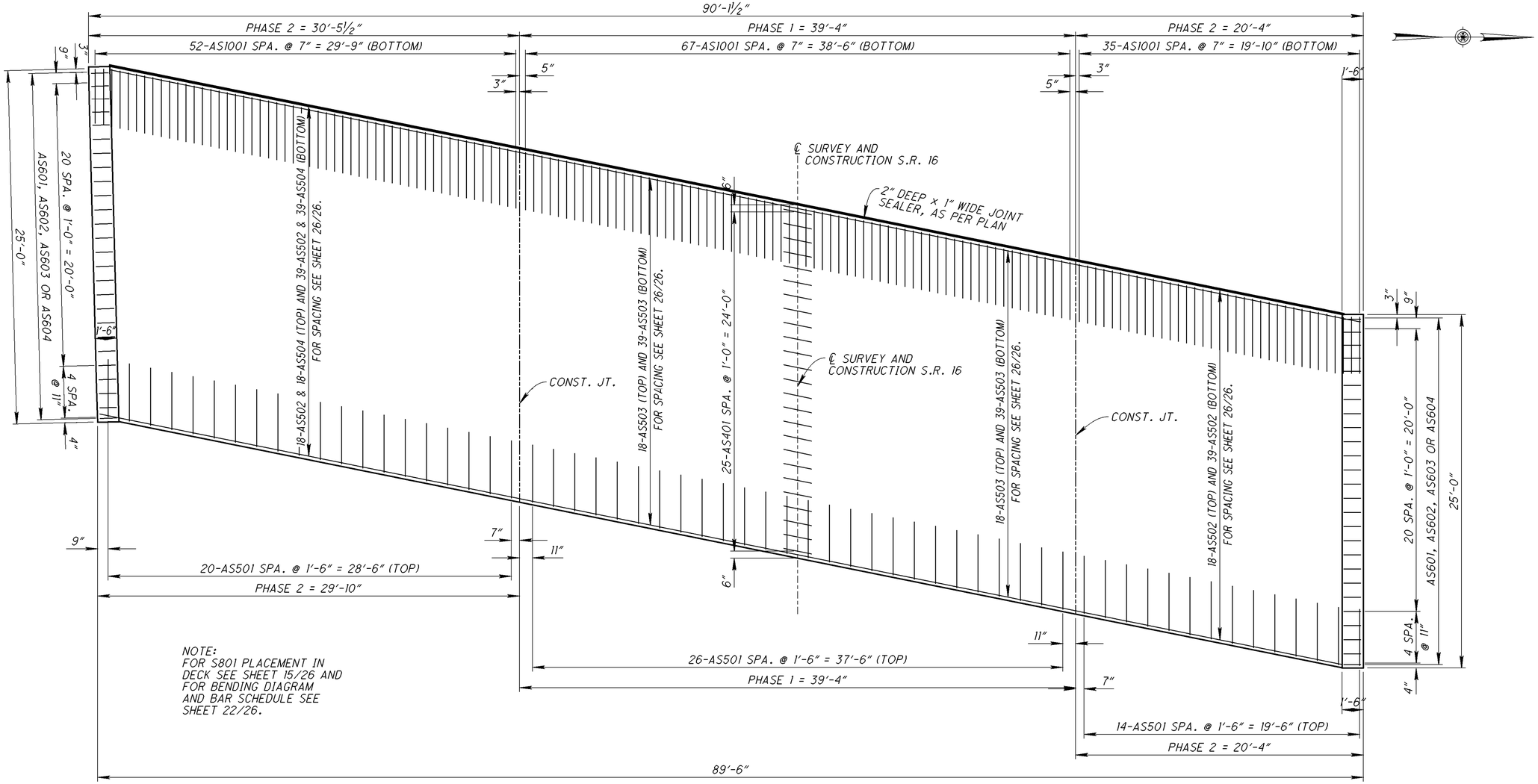
REINFORCING STEEL SCHEDULE

BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

23 / 26

166
190



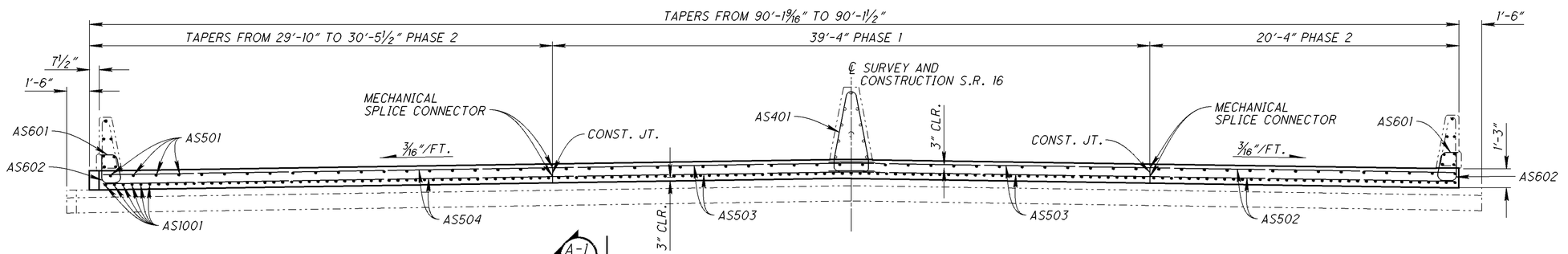
NOTE:
FOR S801 PLACEMENT IN DECK SEE SHEET 15/26 AND FOR BENDING DIAGRAM AND BAR SCHEDULE SEE SHEET 22/26.

A-1 26

PLAN

NOTE:
FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.

NOTE:
FOR PARAPET DETAILS SEE SHEET 18-20/26.
FOR MEDIAN BARRIER DETAILS SEE SHEET 21/26.



A-1 26

ELEVATION

L76384_BAS_001.DGN

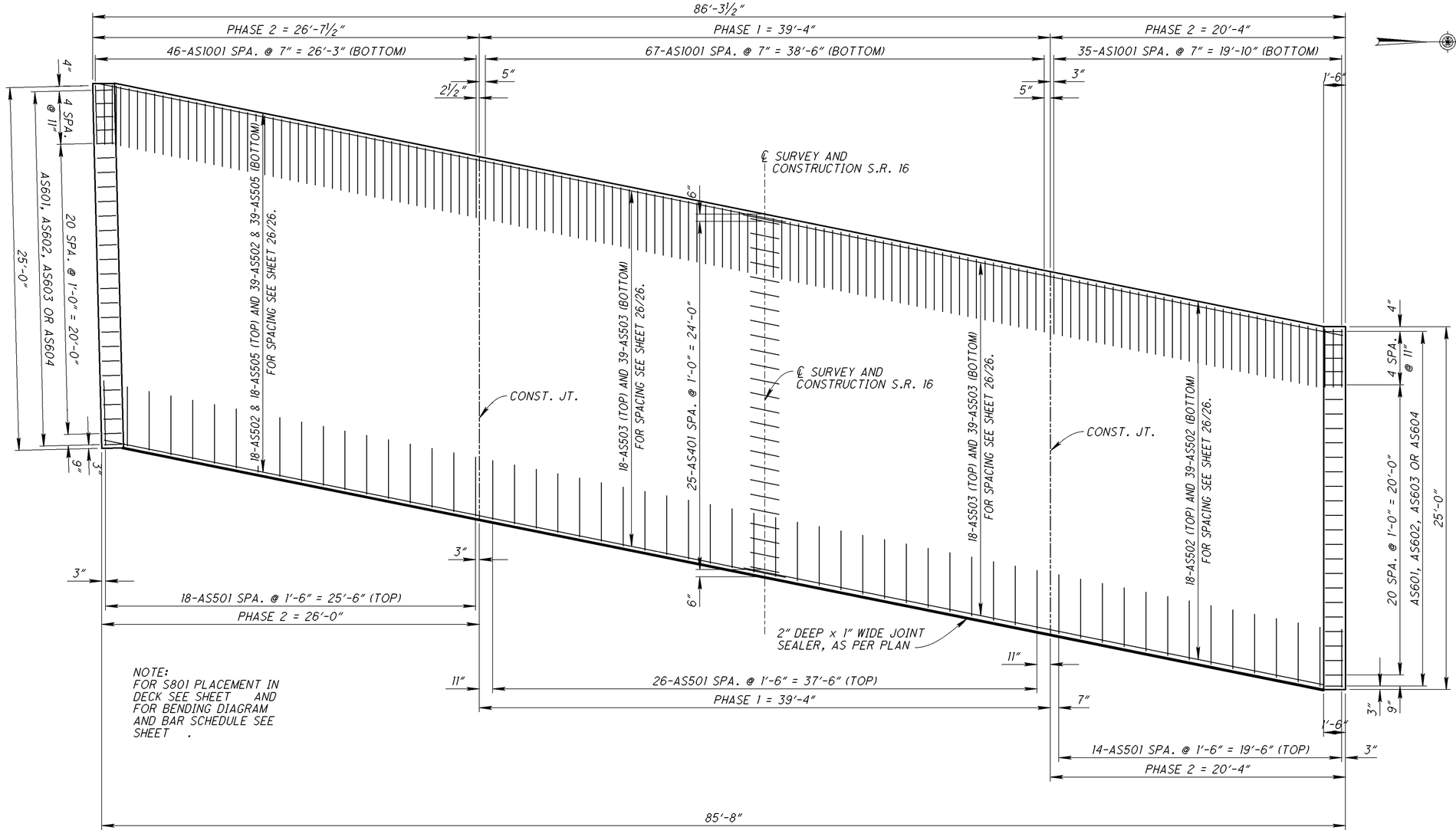
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

REAR APPROACH SLAB DETAILS

BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384



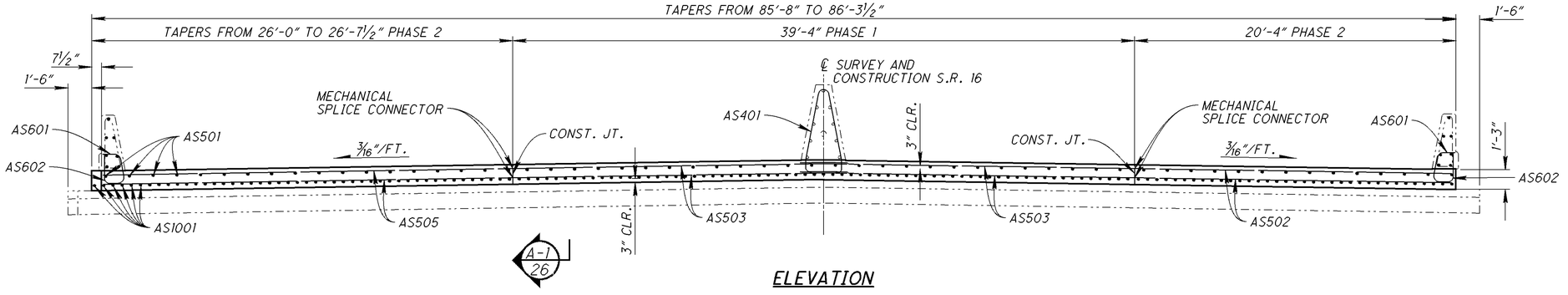
NOTE:
FOR S801 PLACEMENT IN DECK SEE SHEET AND FOR BENDING DIAGRAM AND BAR SCHEDULE SEE SHEET .

A-1 / 26

PLAN

NOTE:
FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.

NOTE:
FOR PARAPET DETAILS SEE SHEET 18-20/26.
FOR MEDIAN BARRIER DETAILS SEE SHEET 21/26.



A-1 / 26

ELEVATION

L76384_BAS_001.DGN

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

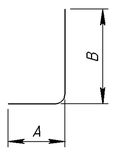
DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501179	

FORWARD APPROACH SLAB DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

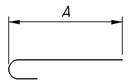
LIC-16-19.72/LIC-79-12.30
PID No. 76384

25/26

168/190



TYPE-1



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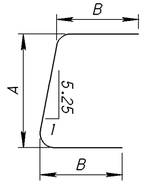
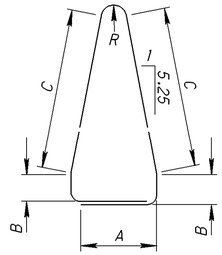


TYPE 28

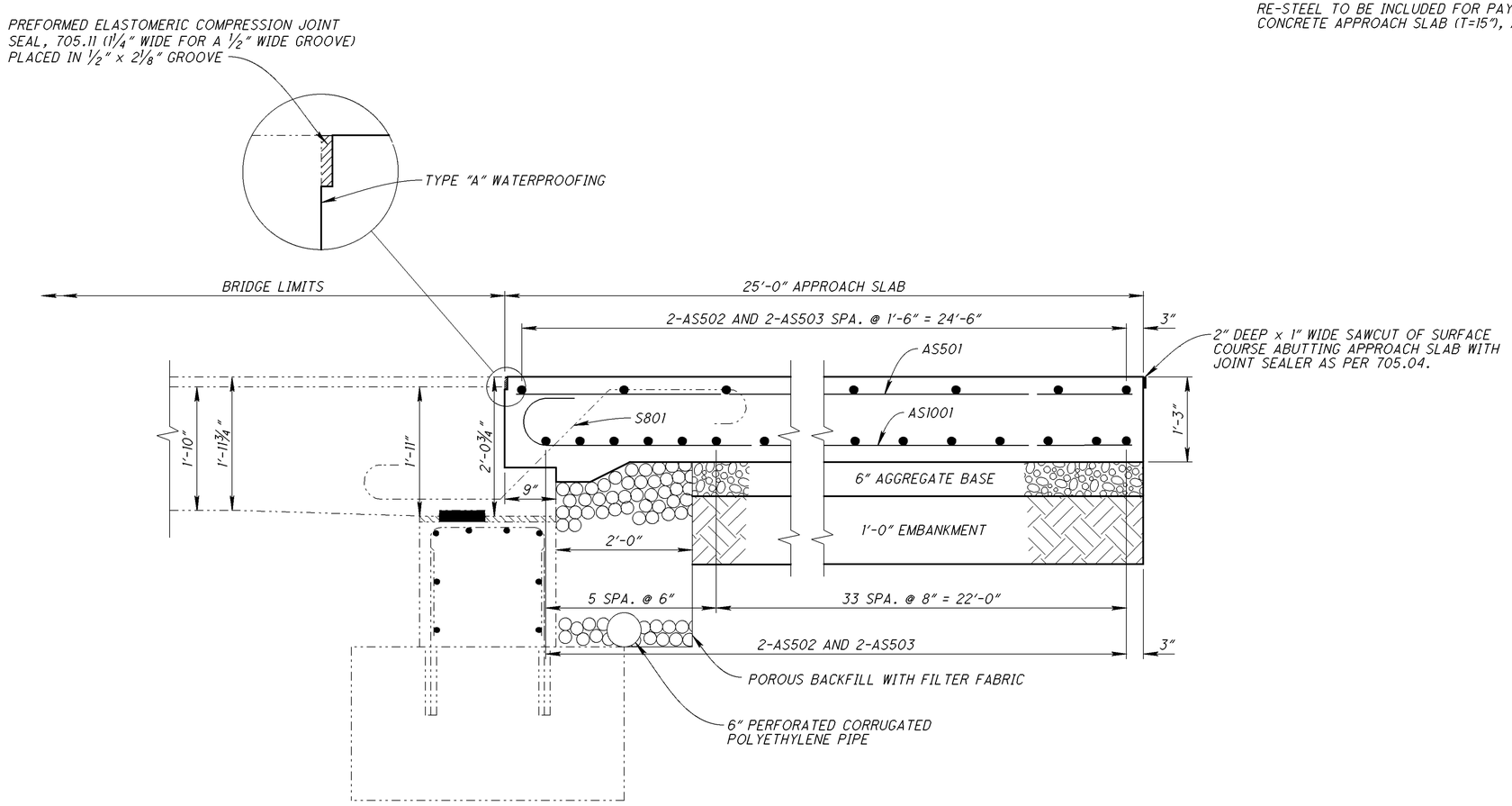


TYPE-34

BENDING DIAGRAMS

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
APPROACH SLABS													
AS401	50	14'-2"	473	34	1'-10"	1'-0"	4'-3"					4"	
AS501	118	24'-6"	3015	STR.	24'-6"								
AS502	228	20'-2"	2398	STR.	20'-2"								
AS503	228	21'-6"	5113	STR.	21'-6"								
AS504	57	33'-9"	2006	STR.	33'-9"								
AS505	57	29'-11"	1779	STR.	29'-11"								
AS601	56	3'-8"	308	28	1'-10"	1'-1"							
AS602	56	2'-9"	231	1	1'-1"	1'-10"							
AS603	32	4'-3"	204	1	1'-1"	3'-4"							
AS604	4 SERIES OF 11	4'-3" TO 5'-1"	308	1	1'-1"	3'-4" TO 4'-2"							1"
AS1001	302	25'-11"	33679	16	24'-6"								

RE-STEEL TO BE INCLUDED FOR PAYMENT IN ITEM 526-REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN



SECTION A-1 26 / A-1 27

NOTE:
FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.

NOTE:
ALL LONGITUDINAL CONSTRUCTION JOINTS SHALL BE SEALED 2'-0" IN WIDTH WITH HMWM RESIN (SEE PROPOSAL NOTE) APPROACH SLAB SEALING TO BE INCLUDED IN ITEM 526 REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN

ITEM	DESCRIPTION	QUANTITY	UNIT
203	EXCAVATION	226	CU YD
203	EMBANKMENT	152	CU YD
204	SUBGRADE COMPACTION	444	SQ YD
304	AGGREGATE BASE	74	CU YD
518	POROUS BACKFILL WITH FILTER FABRIC	36	CU YD
526	REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN (T-15")	489	SQ YD
QUANTITIES CARRIED TO SHEET 114/190 & 3/26.			

(2 APPROACH SLABS)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN DDH | REVIEWED DTF | DATE 3-27-09
CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501179

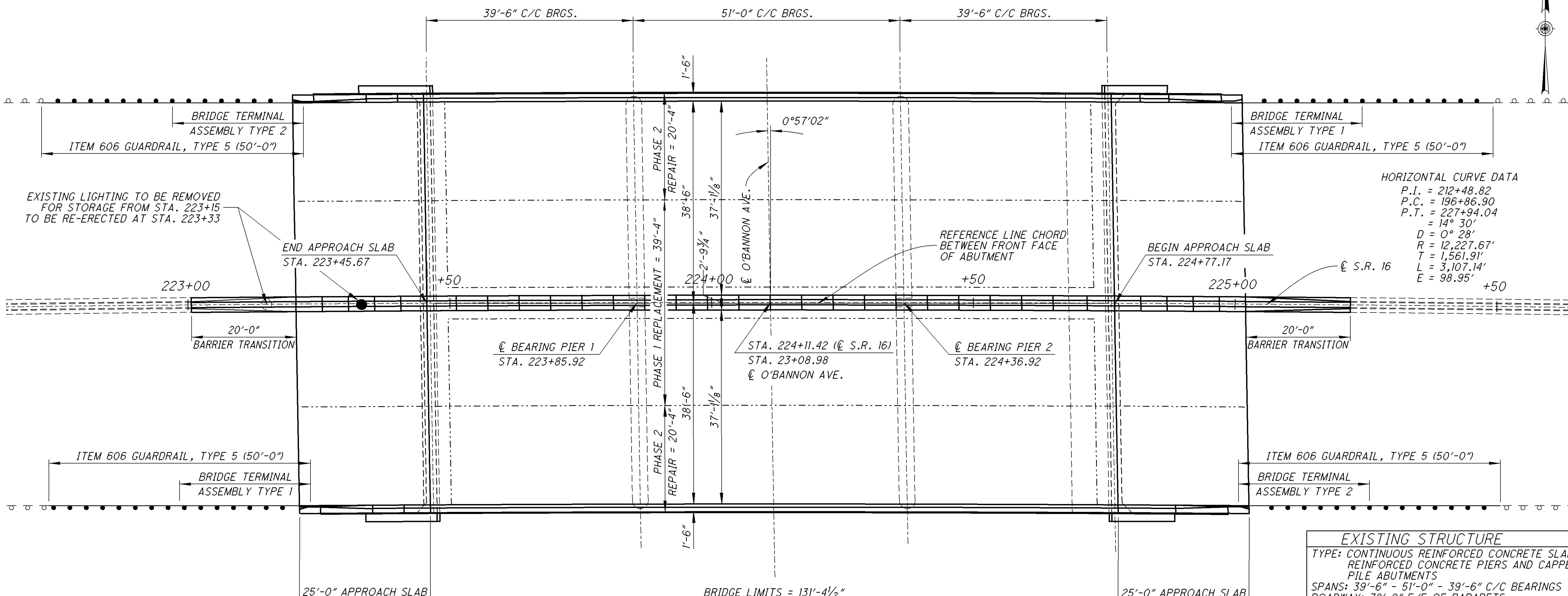
APPROACH SLAB DETAILS
BRIDGE NO. LIC-16-2234
OVER OAKWOOD AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

26/26

169/190

L76384_BAS_003.DGN



PLAN

HORIZONTAL CURVE DATA

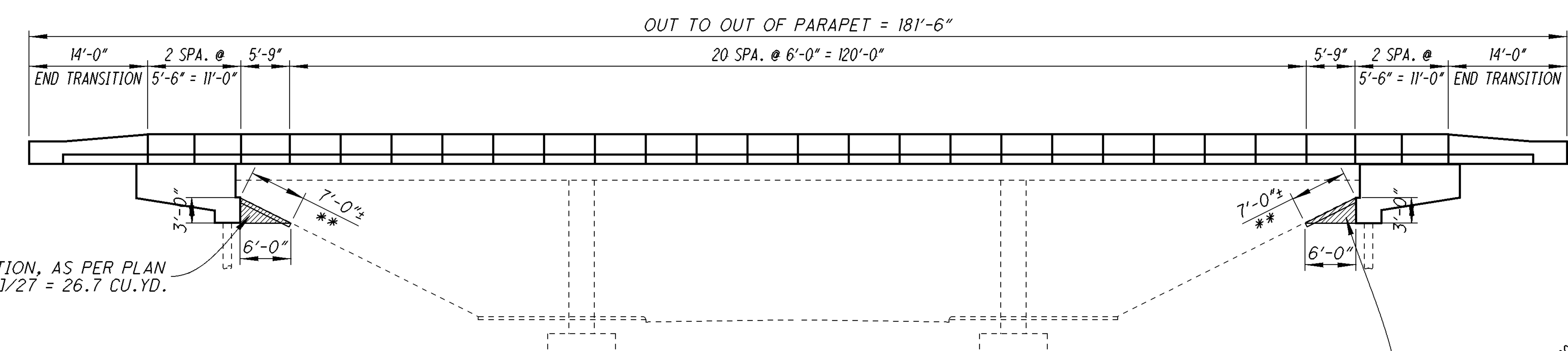
P.I. = 212+48.82
P.C. = 196+86.90
P.T. = 227+94.04
= 14° 30'
D = 0° 28'
R = 12,227.67'
T = 1,561.91'
L = 3,107.14'
E = 98.95'

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB
REINFORCED CONCRETE PIERS AND CAPPED
PILE ABUTMENTS
SPANS: 39'-6" - 51'-0" - 39'-6" C/C BEARINGS
ROADWAY: 78'-0" F/F OF PARAPETS
LOADING: CF-2000 (57)
WEARING SURFACE: 3 1/4" ASPHALT CONCRETE
SKEW: 0°57' 02" RT. FORWARD
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: 0° 28' CURVE
STRUCTURAL FILE NUMBER: 4501209
DATE BUILT: 1965

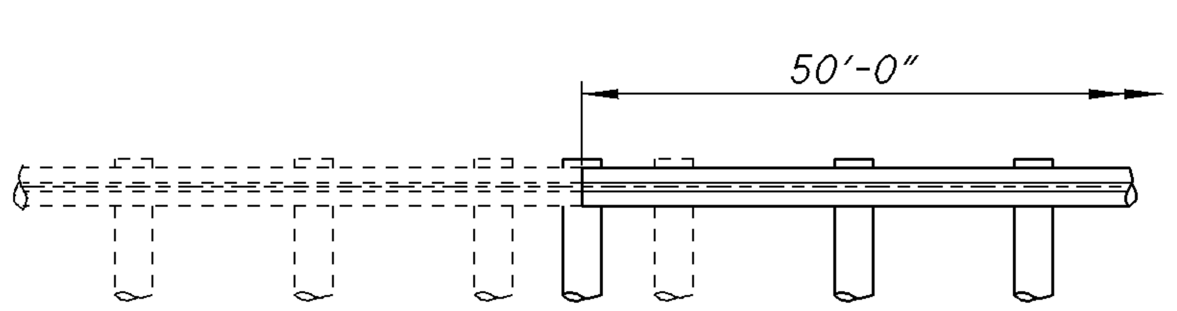
REHABILITATED STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB
REINFORCED CONCRETE PIERS AND CAPPED
PILE ABUTMENTS
SPANS: 39'-6" - 51'-0" - 39'-6" C/C BEARINGS
ROADWAY: 77'-0" F/F OF PARAPETS
LOADING: CF-2000 (57)
WEARING SURFACE: 1 3/4" SDC OVERLAY
SKEW: 0°57' 02" RT. FORWARD
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: 0° 28' CURVE
STRUCTURAL FILE NUMBER: 4501209
DATE BUILT: 1965



ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN
[(6.0')(80.0')(3.0')/2]/27 = 26.7 CU.YD.

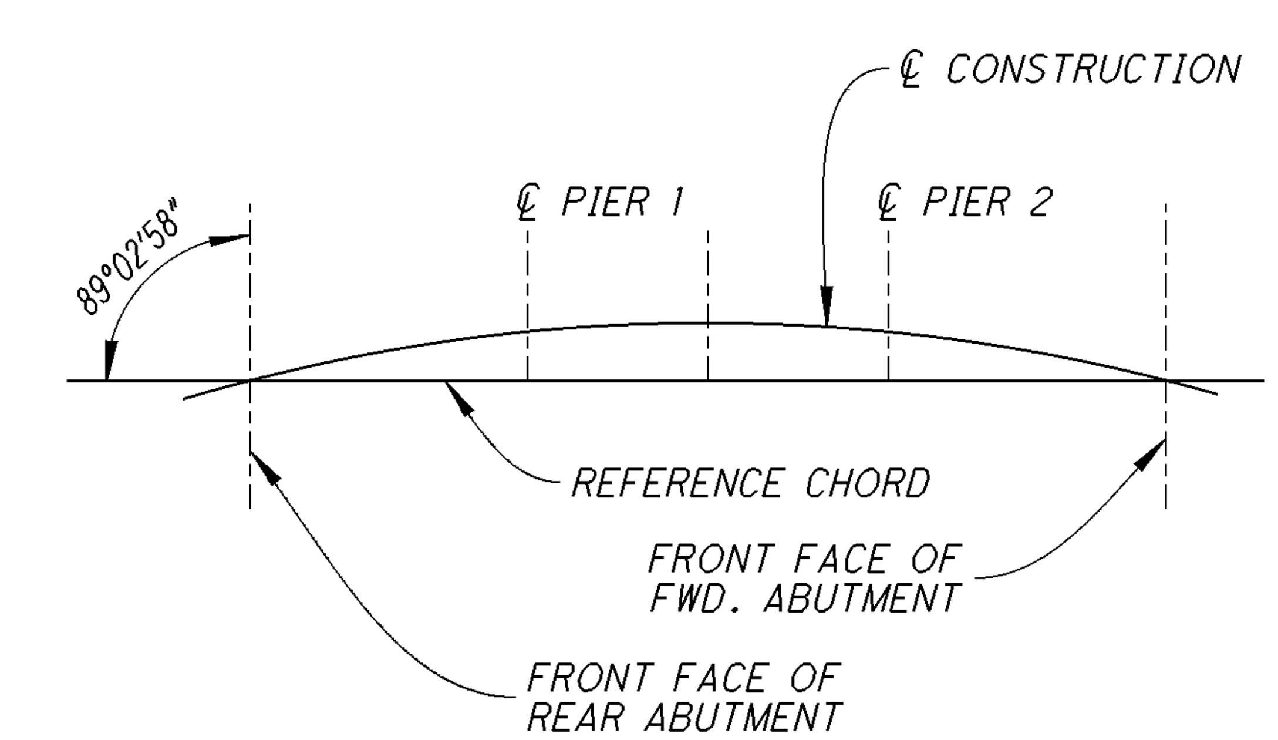
ITEM 503 UNCLASSIFIED
EXCAVATION, AS PER
PLAN (6.0')(80.0')(3.0')
/2]/27 = 26.7 CU.YD.



NOTE:
WHERE PROPOSED RAIL IS TO BE CONNECTED WITH
EXISTING RAIL, THE PROPOSED RAIL SHALL BE LAPPED
AT THE EXISTING POST WITH THE LAP IN THE DIRECTION
OF TRAFFIC.

ELEVATION

** - ITEM 202 CONCRETE SLOPE
PROTECTION REMOVED
** - ITEM 601 CONCRETE SLOPE
PROTECTION
2(7.0')(79.7')/9 = 124.0 SQ.YD.



DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

GENERAL PLAN & ELEVATION
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

1/21

170/190

P:\LIC\76384\Design\Bridge\4501209_OBANNON AVE\Plan_Sheets\L76384_BPE_001.DGN 30-MAR-2009 3:42PM tgreenwa
L76384_001_BPE.DGN (SCALE = 10.0) 2-12-2009

REFERENCE
DETAILED DRAWINGS OF THE EXISTING STRUCTURE MAY BE INSPECTED IN THE DISTRICT 5 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, JACKSONTOWN, OHIO.

DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING
HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA
CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 A616 OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

EXISTING STRUCTURE VERIFICATION
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY , THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEND VERIFIED BY THE CONTRACTOR IN THE FIELD.

ABUTMENT CONCRETE
ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE DECK EDGES HAVE BEEN REPLACED.

REINFORCING STEEL
NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL INCLUDED IN 509.

DECK PROTECTION METHOD
SUPERPLASTICIZED DENSE CONCRETE OVERLAY

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE
REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MECHANICAL SPLICE CONNECTORS
THIS PLAN DETAILS A MECHANICAL SPLICE CONNECTOR THAT BOTH RE-BARS SCREW INTO. THE RE-BARS HAVE BEEN CALCULATED WITH A 2" CLEARANCE AT THE OUTER EDGE. IF A DIFFERENT TYPE OF MECHANICAL SPLICE CONNECTOR IS USED, THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN NO LESS THAN A 2" CLEARANCE. ANY WORK PERFORMED SHALL BE AT NO ADDITIONAL COST TO THE STATE. ALL MECHANICAL SPLICE CONNECTORS INCLUDING WORK, TOOLS, LABOR AND INCIDENTALS SHALL BE INCLUDED IN ITEM 509 EPOXY COATED REINFORCING STEEL FOR PAYMENT.

GENERAL PROVISIONS
THE CONTRACTOR'S ATTENTION IS CALLED TO ALL OF SECTION 100 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION.

FILL UNDER APPROACH SLABS
ITEM 304, AGGREGATE BASE SHALL BE USED TO BRING THE SUBBASE TO GRADE FOR THE NEW APPROACH SLABS AS DETAILED ON THE APPROACH SLAB DETAIL SHEETS AND SHALL EXTEND 1'-6" ON BOTH SIDES OF EACH APPROACH SLAB.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
THIS WORK CONSISTS OF TEMPORARILY SUPPORTING EXISTING STRUCTURES.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ENVIRONMENTAL COORDINATOR NOTIFICATION
THE CONTRACTOR SHALL CONTACT THE DISTRICT ENVIRONMENTAL COORDINATOR, AMY TOOHEY AT 740-323-5191 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION SO THE UNDERSIDE OF THE BRIDGE CAN BE INSPECTED FOR THE PRESENCE OF BATS.

DOWEL HOLES
PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. DRILL DOWEL HOLES WHERE SHOWN IN PLANS EXCEPT AS NOTED ABOVE. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NON SHRINK, NON METALLIC EPOXY GROUT, 705.20.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE
THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CONCRETE REMOVAL ON DECK EDGES SHALL BE DONE BY THE USE OF 63 - 85 LB. CLASS JACKHAMMERS ONLY. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 85-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN
CONCRETE FOR APPROACH SLABS SHALL BE CLASS S, CMS499.
THE HMWM RESIN SEALING (SEE CMW 705.15) ALONG THE LONGITUDINAL CONSTRUCTION JOINT AND MECHANICAL SPLICE CONNECTORS INCLUDING LABOR, TOOLS, MATERIALS AND INCIDENTALS SHALL BE INCLUDED IN ITEM 526, REINFORCED CONCRETE APPROACH SLABS, (T=15"), AS PER PLAN FOR PAYMENT.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN
A 2" DEEP X 1" WIDE STRIP SHALL BE SAWCUT OUT OF ALL ROADWAY SURFACE ASPHALT ABUTTING ENDS OF APPROACH SLABS AFTER THE FINAL SURFACE COURSE HAS BEEN CONSTRUCTED. JOINT SEALER AS PER 705.04 SHALL BE USED TO SEAL THE JOINT CREATED.

L76384_BGN_001.DGN (SCALE = 1.0) (02-25-2009)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

BRIDGE NOTES
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIERS	GENERAL	SEE SHEET NUMBER
202	11301	162	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE	162				2/21
202	11301	49	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE		49			2/21
202	22900	322	SQ YD	APPROACH SLAB REMOVED				322	
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING					
503	21101	54	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN				54	1/21
503	21300	LUMP		UNCLASSIFIED EXCAVATION					
509	10000	34,440	POUND	EPOXY COATED REINFORCING STEEL	27,528	6912			
510	10000	764	EACH	DOWELS HOLES WITH NONSHRINK, NONMETALLIC GROUT	528	236			
511	34400	102	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE	102				
511	34436	56	CU YD	CLASS S CONCRETE, BRIDGE DECK (PARAPET)	56				
511	34450	61	CU YD	CLASS S CONCRETE, MISC.: (MEDIAN BARRIER)	61				
511	45700	44	CU YD	CLASS C CONCRETE, ABUTMENT		44			
516	13600	18	SQ FT	1" PREFORMED EXPANSION JOINT FILLER		18			
516	13900	67	SQ FT	2" PREFORMED EXPANSION JOINT FILLER		67			
516	31011	160	FT	2" DEEP JOINT SEALER, AS PER PLAN				160	2/21
516	42000	4	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x20'-4") (50 DUROMETER)		4			
516	42000	4	EACH	ELASTOMERIC BEARING PAD, MISC.: (1½"x8"x19'-8") (50 DUROMETER)		4			
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					2/21
518	21200	40	CU YD	POROUS BACKFILL WITH FILTER FABRIC		40			
518	40000	161	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		161			
518	40010	46	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		46			
526	25001	444	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				444	2/21
848	10200	1083	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY, (1¾" THICK), USING HYDRODEMOLITION	1083				
848	20000	962	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION	962				
848	30200	26	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	26				
848	50000	31	SQ YD	HAND CHIPPING	31				
848	50100	LUMP		TEST SLAB					
848	50300	1076	SQ YD	WEARING COURSE REMOVED, ASPHALT	1076				

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

REVIEWED DTF DATE 3-27-09
STRUCTURE FILE NUMBER 4501209

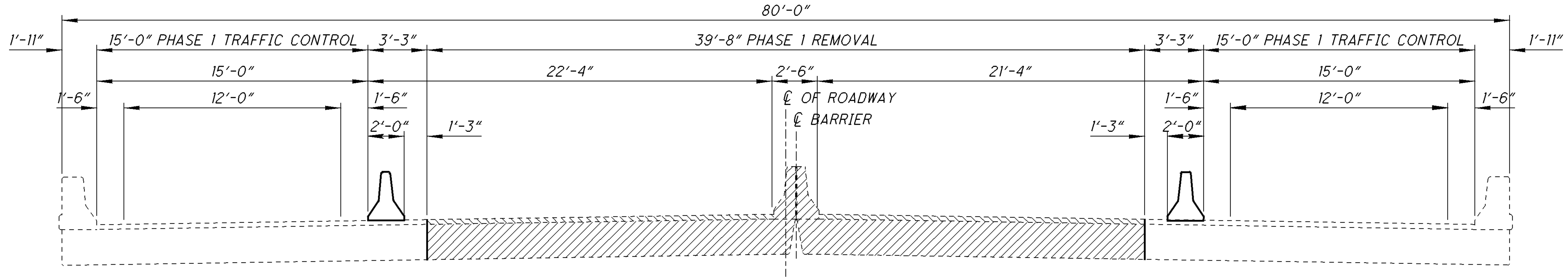
DRAWN DDH
REVISED

DESIGNED TAG
CHECKED JDR

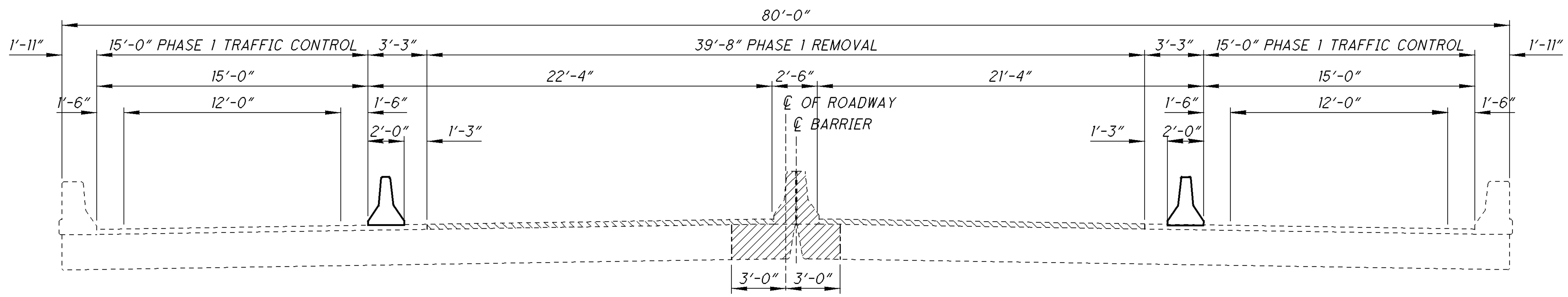
BRIDGE SUMMARY
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVEUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

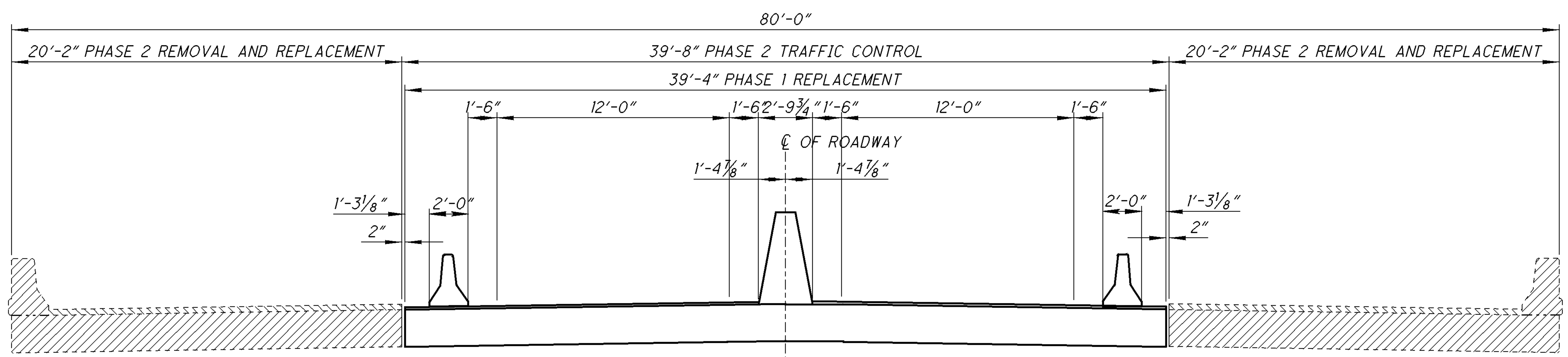
P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BGS_001.DGN



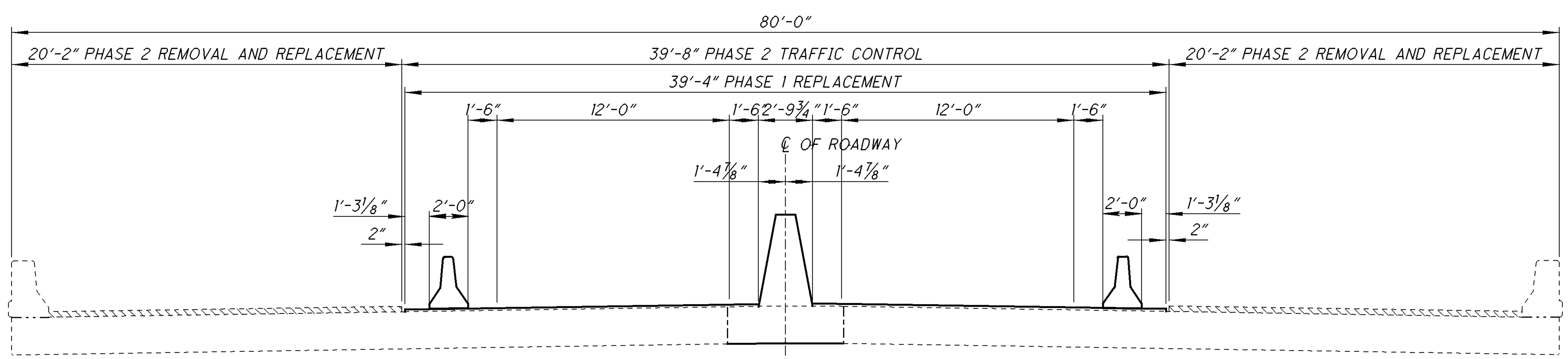
PHASE 1 TRAFFIC CONTROL, REMOVALS AND REPAIRS (AT DECK ENDS)



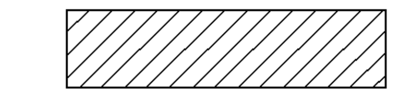
PHASE 1 TRAFFIC CONTROL, REMOVALS AND REPAIRS

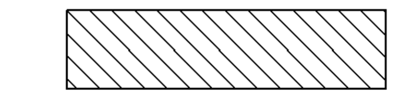


PHASE 2 TRAFFIC CONTROL, REMOVALS AND REPAIRS (AT DECK ENDS)



PHASE 2 TRAFFIC CONTROL, REMOVALS AND REPAIRS


CONCRETE REMOVALS


ASPHALT CONCRETE WEARING COURSE REMOVED

NOTE:
ALL TRANSVERSE RE-STEEL IN DECK EDGES AND LONGITUDINAL RE-STEEL IN DECK ENDS SHALL BE PRESERVED IN PLACE. ALL LOOSE RUST ON RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

REVIEWED DTF	DATE 3-27-09	STRUCTURE FILE NUMBER 4501209
DRAWN TAG	REVISED	
DESIGNED TAG	CHECKED JDR	

MAINTENANCE OF TRAFFIC PHASE DETAILS
BRIDGE NO. LIC-16-2296
OVER O'BANNON STREET

LIC-16-18.72/LIC-79-12.30
PID No. 76384

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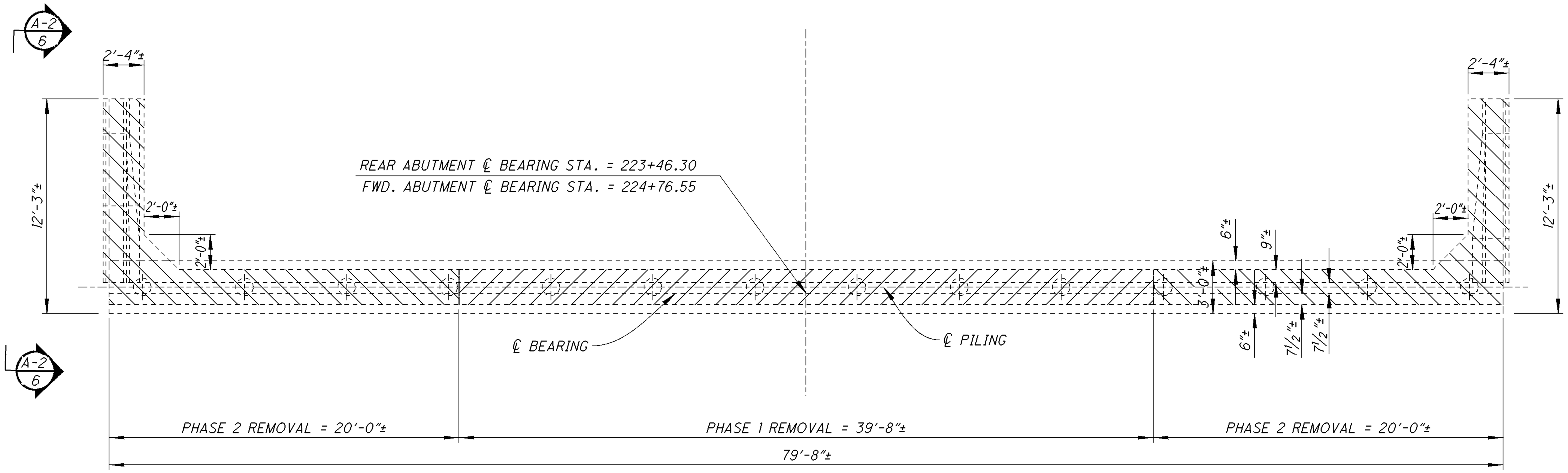
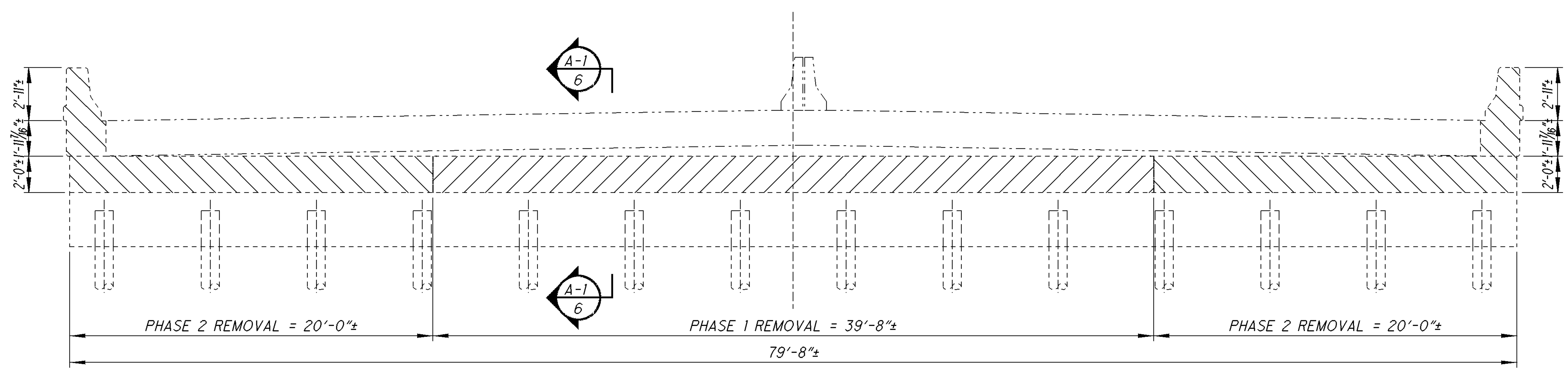
173/190



PLAN

PHASE 1 REMOVAL

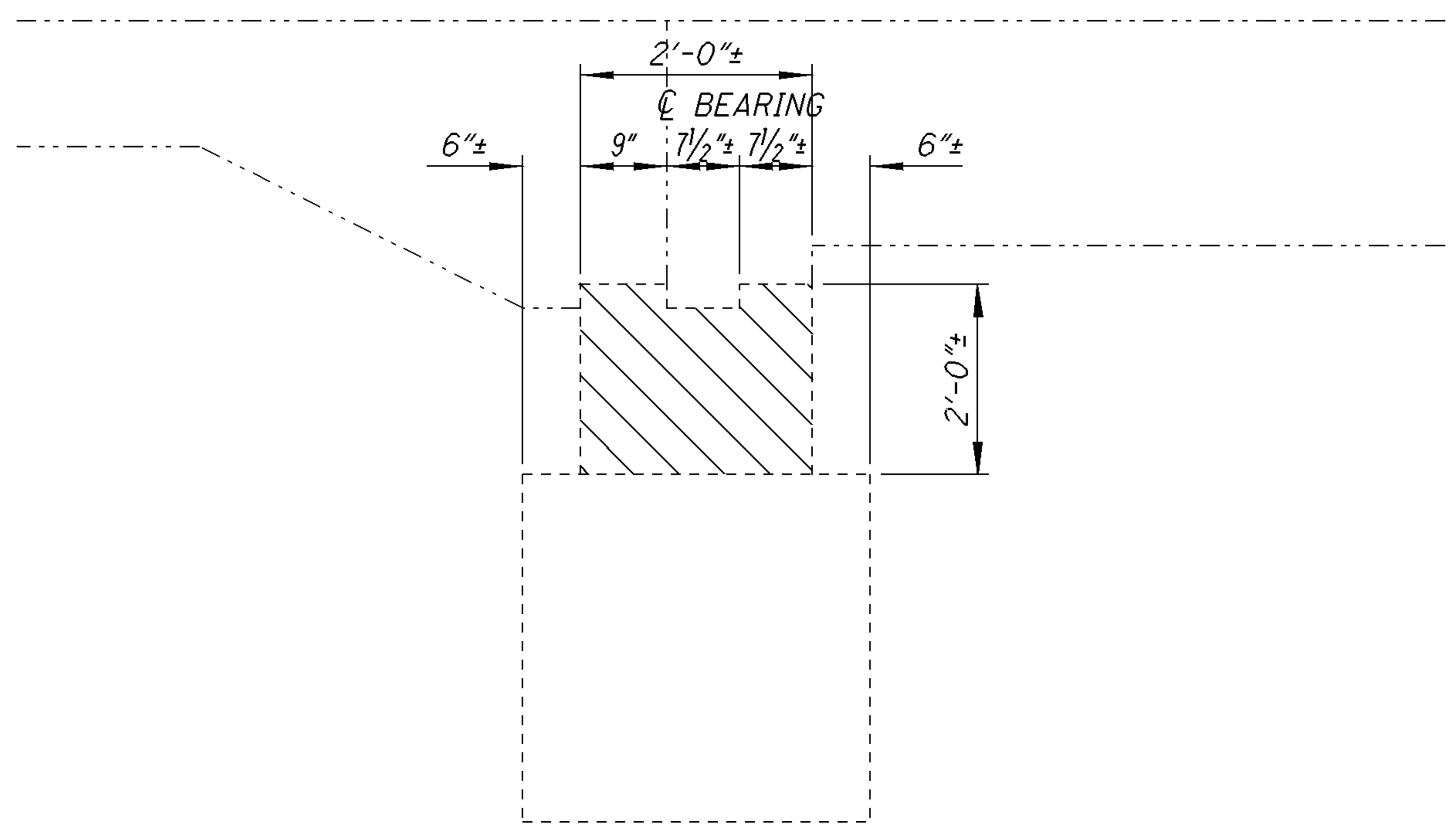
PHASE 2 REMOVAL



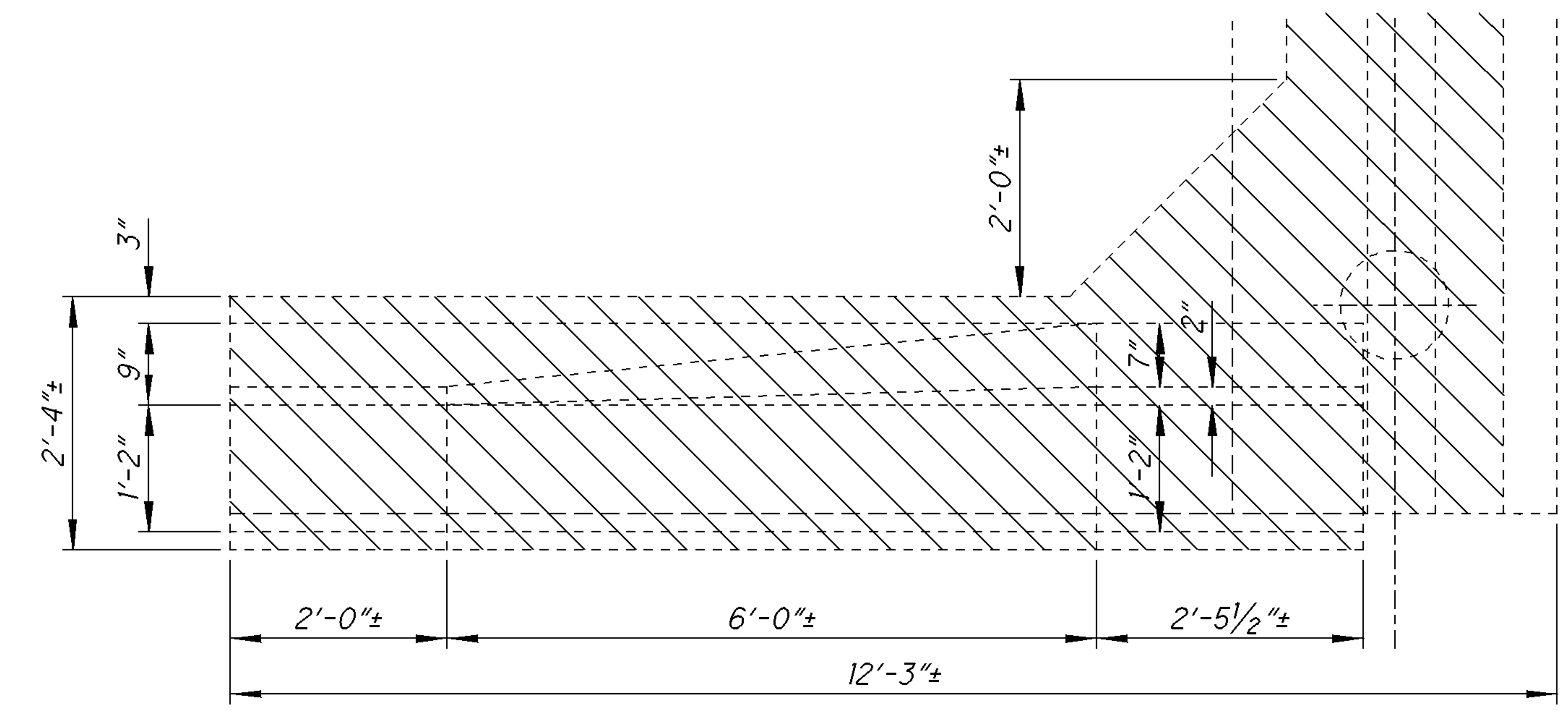
ELEVATION

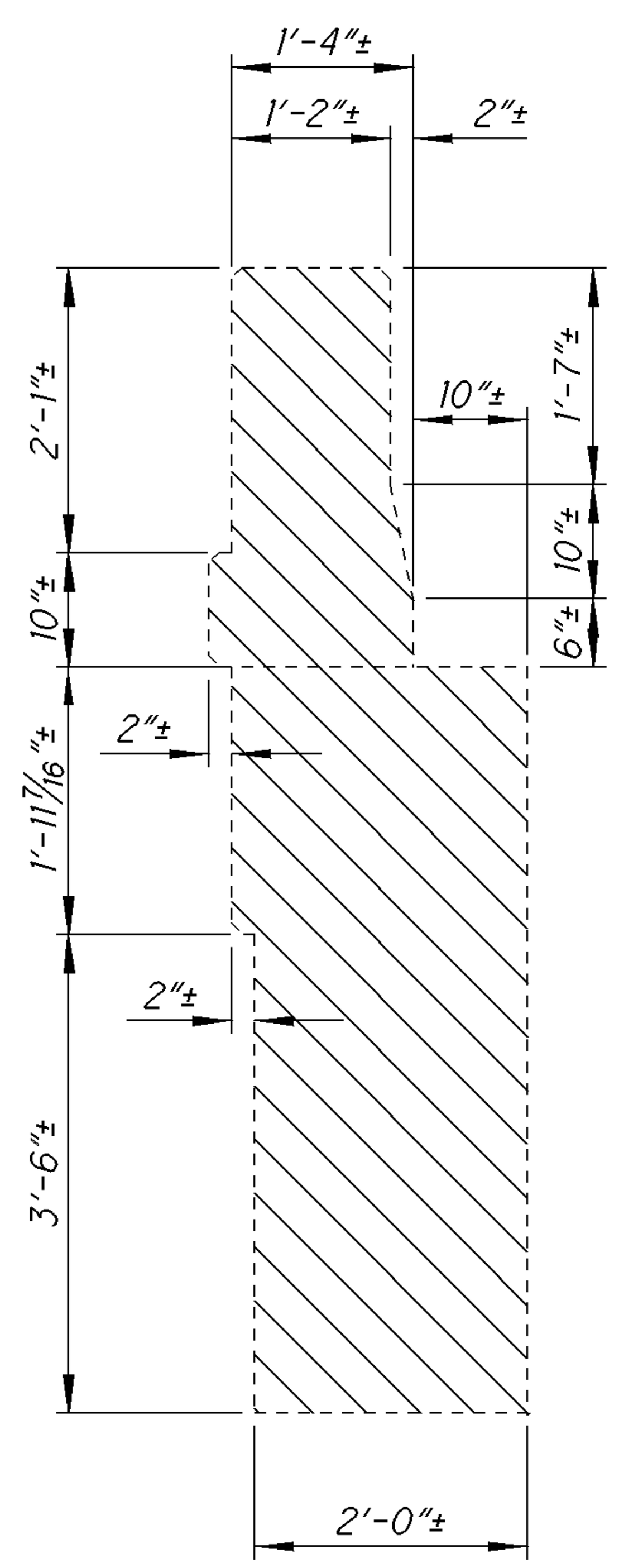
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5
REVIEWED DTF DATE 3-27-09
STRUCTURE FILE NUMBER 4501209
DRAWN TAG REVISED
DESIGNED TAG CHECKED JDR

EXISTING ABUTMENT REMOVALS
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

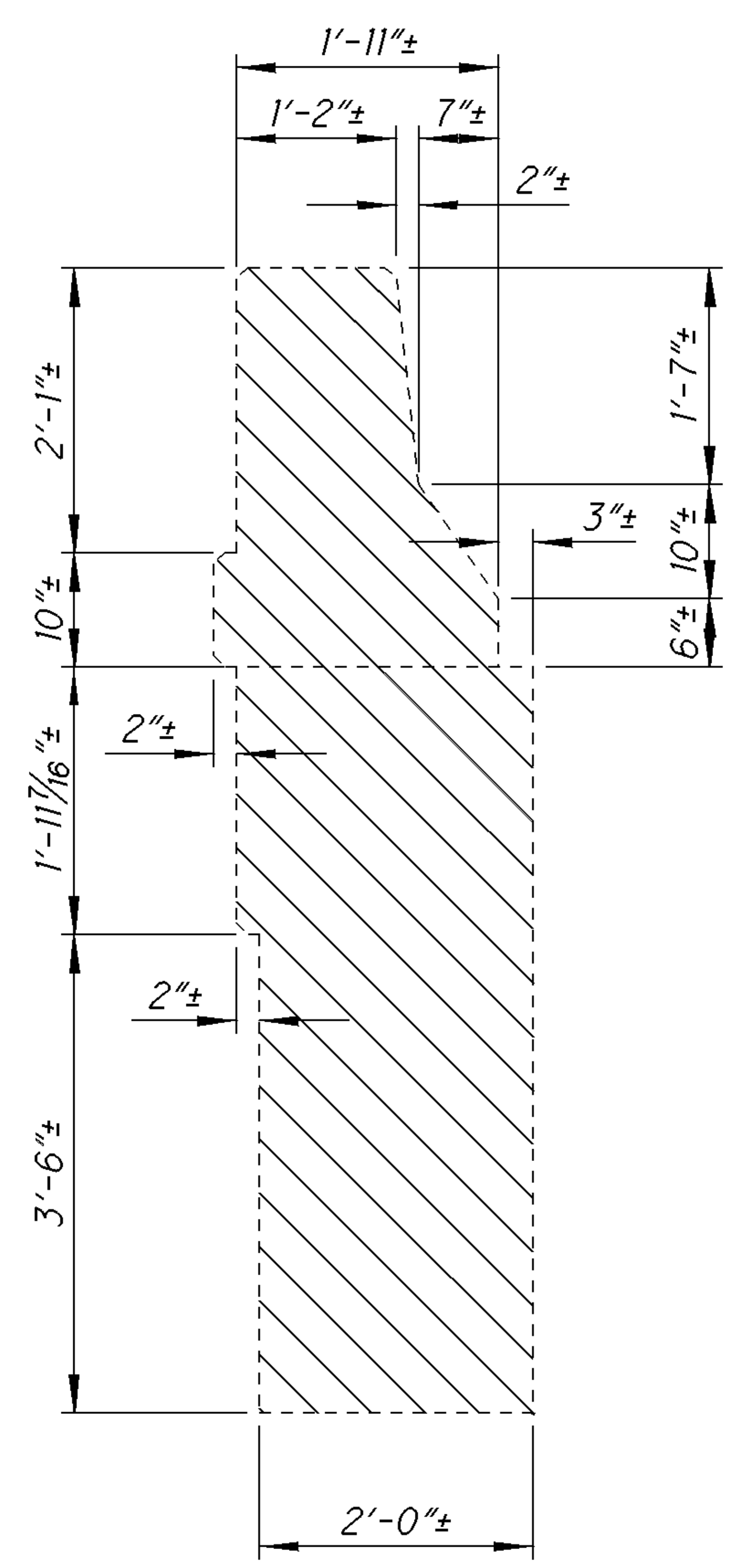


SECTION A-1 / 5

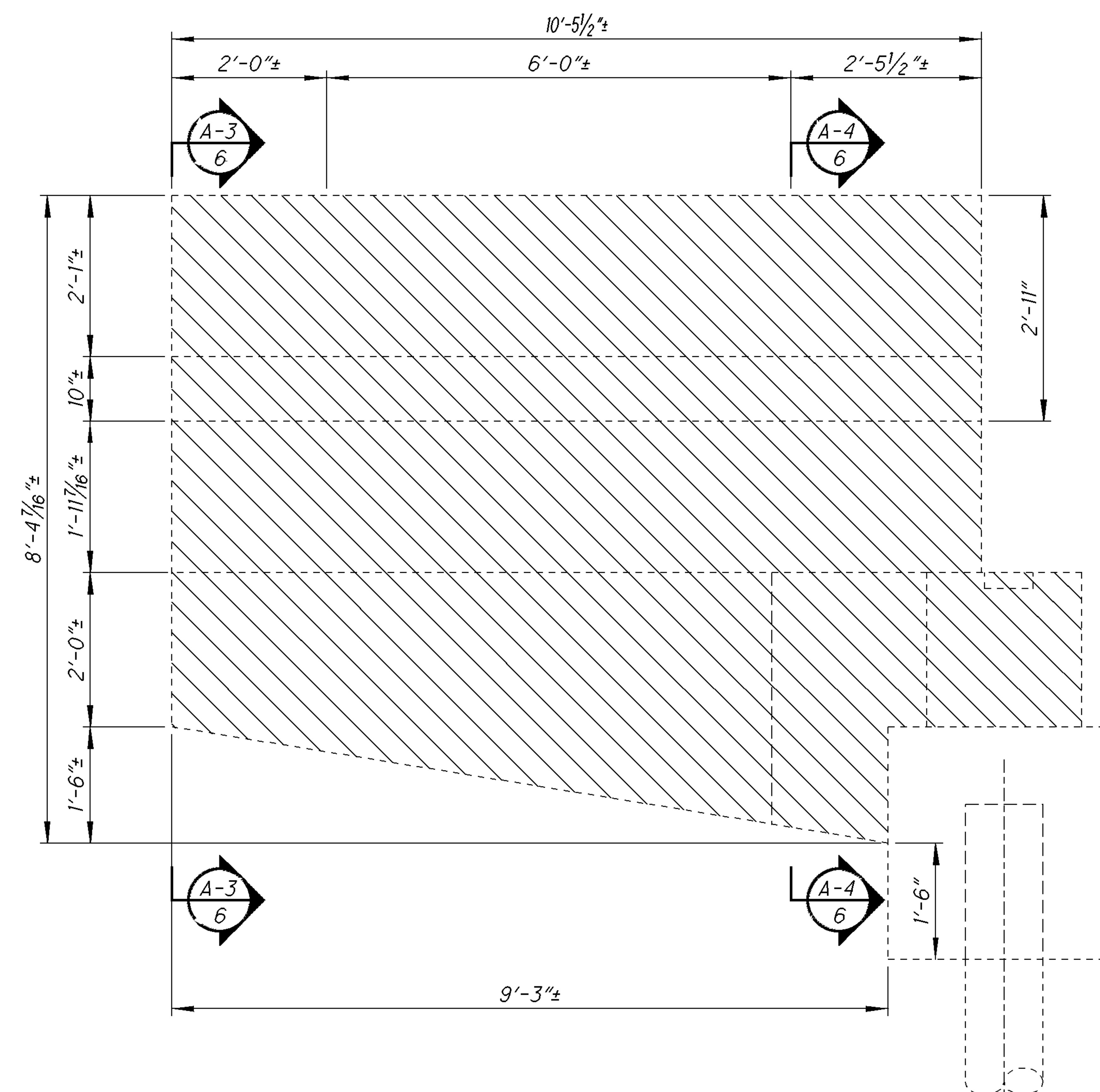




SECTION A-3 / 6



SECTION A-4 / 6



SECTION A-2 / 5

PHASE 2 REMOVAL

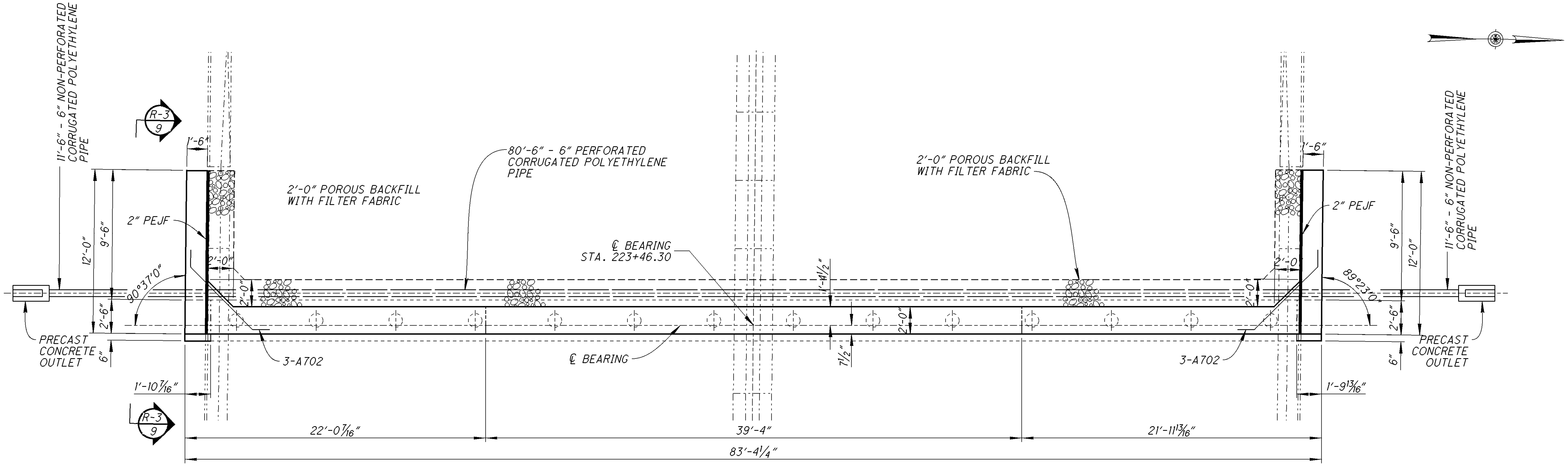
DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED JDR	REVISED	STRUCTURE FILE NUMBER 4501209	

EXISTING ABUTMENT REMOVALS

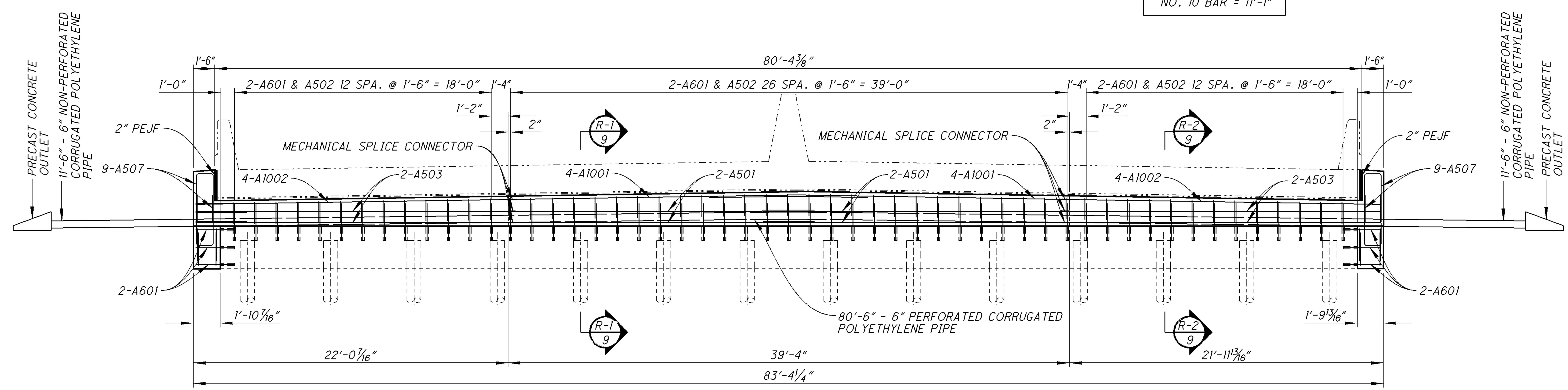
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384



PLAN

MINIMUM LAP LENGTH
NO. 5 BAR = 3'-7"
NO. 10 BAR = 11'-1"



ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

PROPOSED REAR ABUTMENT DETAIL

BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30

PID No. 76834

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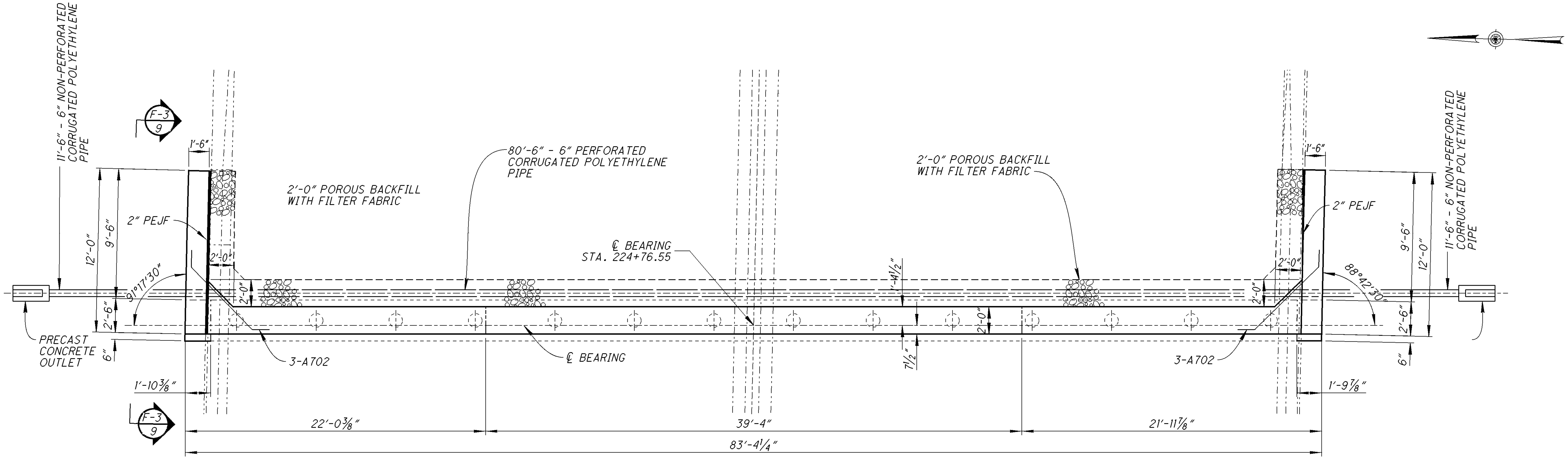
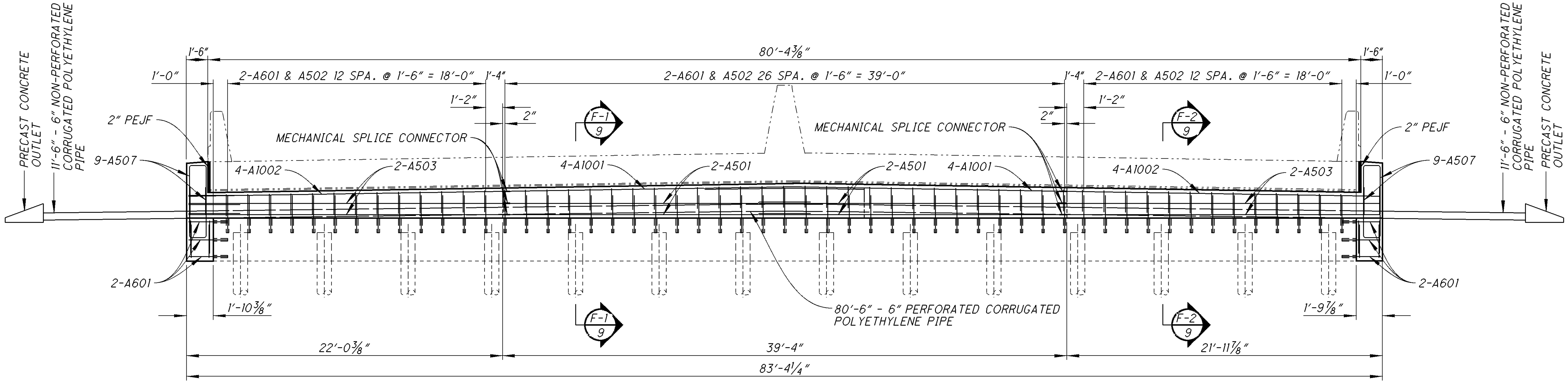


PLAN



ELEVATION

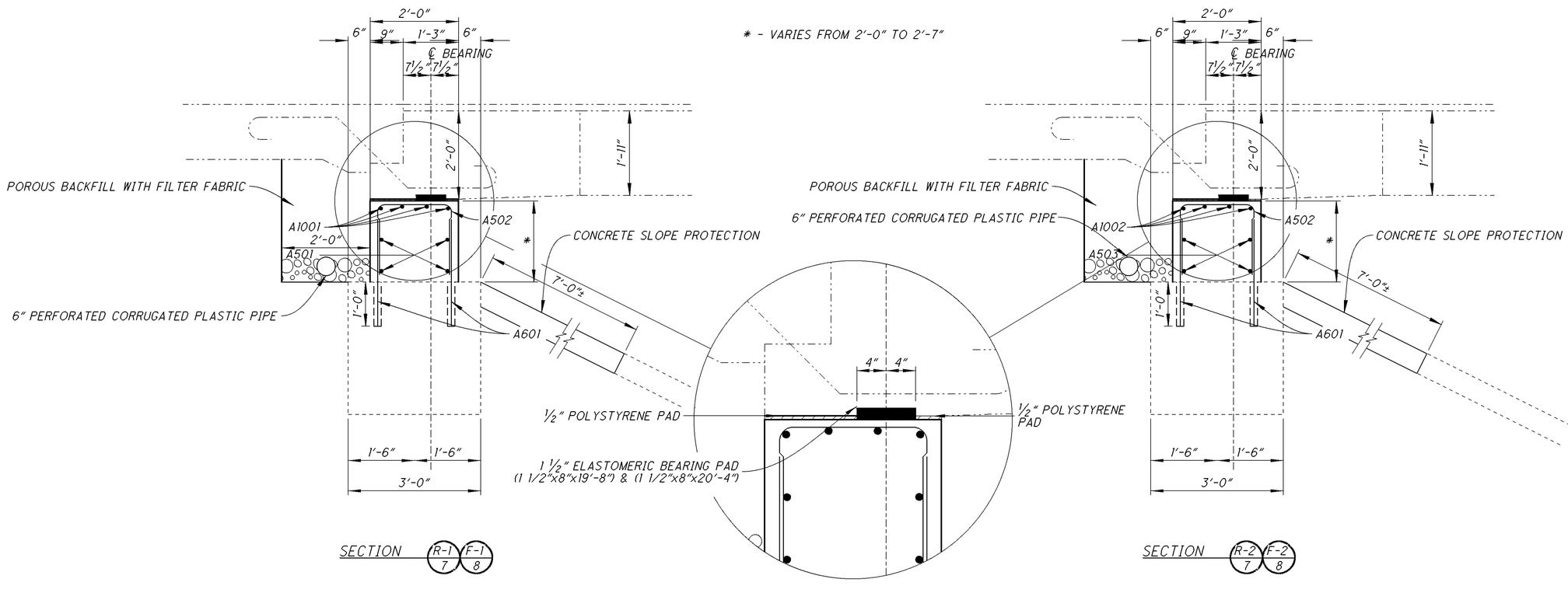
DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION DISTRICT 5

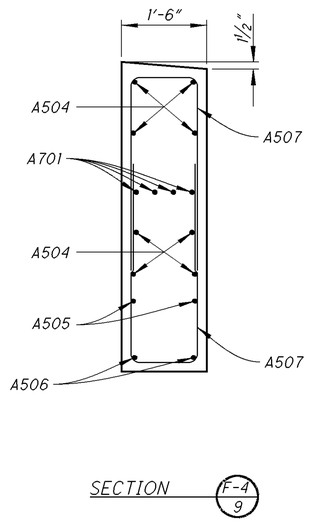
DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

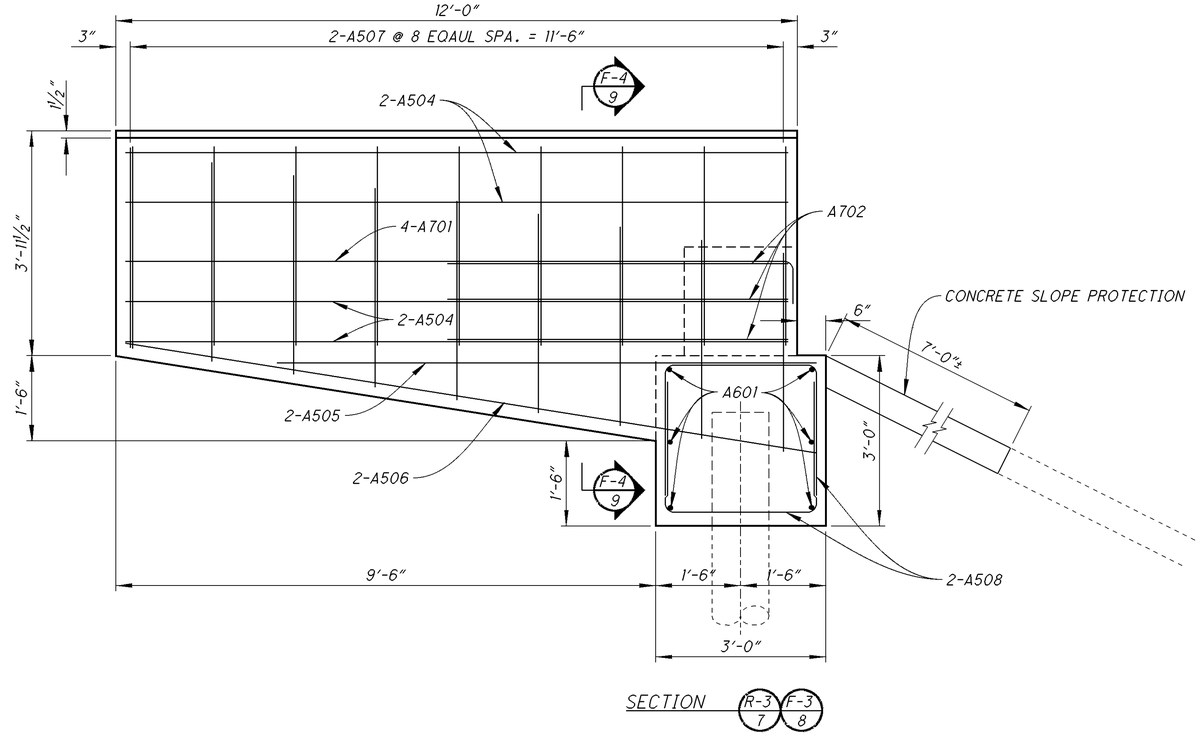
PROPOSED FORWARD ABUTMENT
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

P:\LIC\76384\Design\Bridge\4501209 - OBANNON AVE\Plan_Sheets\L76384_BPA_002.DGN 30-MAR-2009 3:46PM tgreenwa
L76384_002_BPA4.DGN (SCALE = 4.01) 2-17-2009







L76384 002 BPA.DGN (SCALE = 4.0) 2-17-2009
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DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

ABUTMENT DETAILS
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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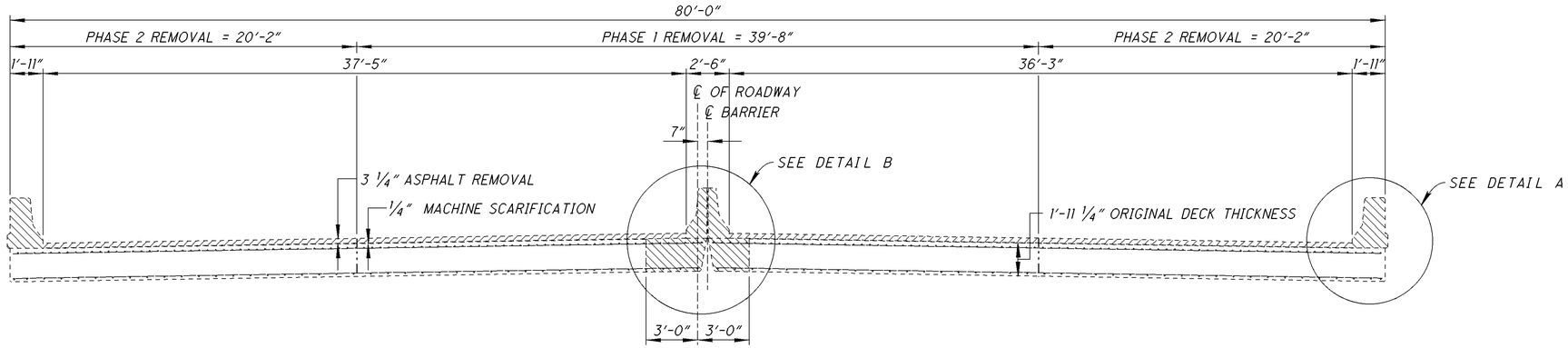
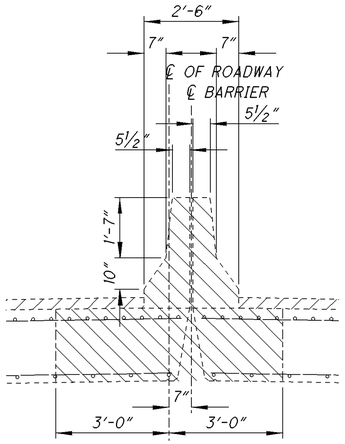
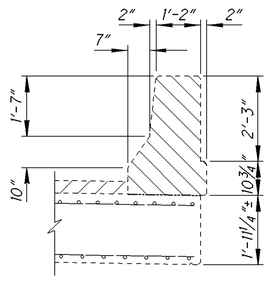


EXISTING TRANSVERSE SECTION

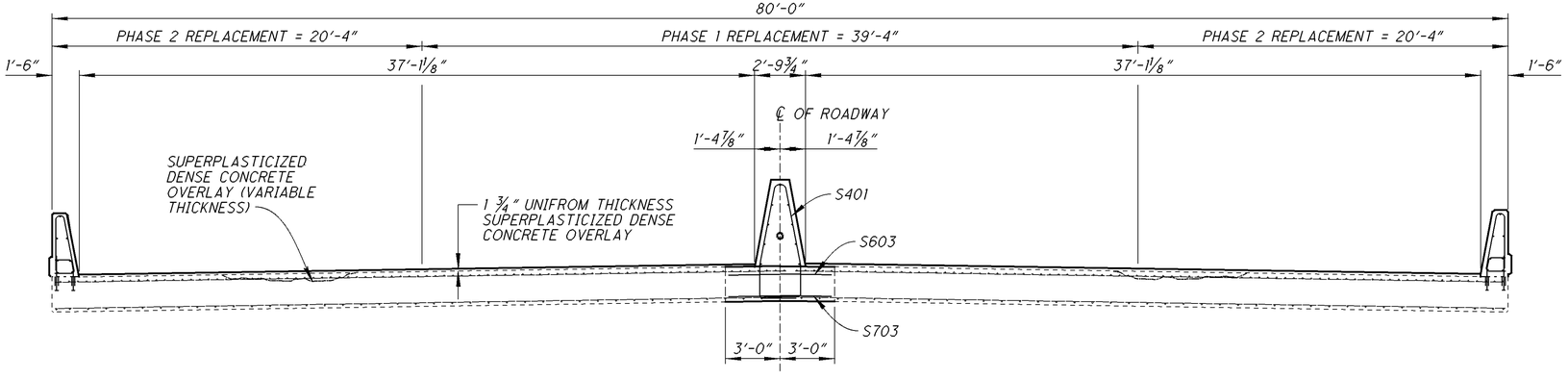
(OVERLAY)



DETAIL B



DETAIL A



PROPOSED TRANSVERSE SECTION

(OVERLAY)

NOTE:
ALL TRANSVERSE RE-STEEL IN DECK EDGES AND LONGITUDINAL RE-STEEL IN DECK ENDS SHALL BE PRESERVED IN PLACE. ALL LOOSE RUST ON RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

TRANSVERSE SECTION
BRIDGE NO. LIC-16-2296
OVER O'BANNON STREET

LIC-18-19.72/LIC-79-12.30
PID No. 76384

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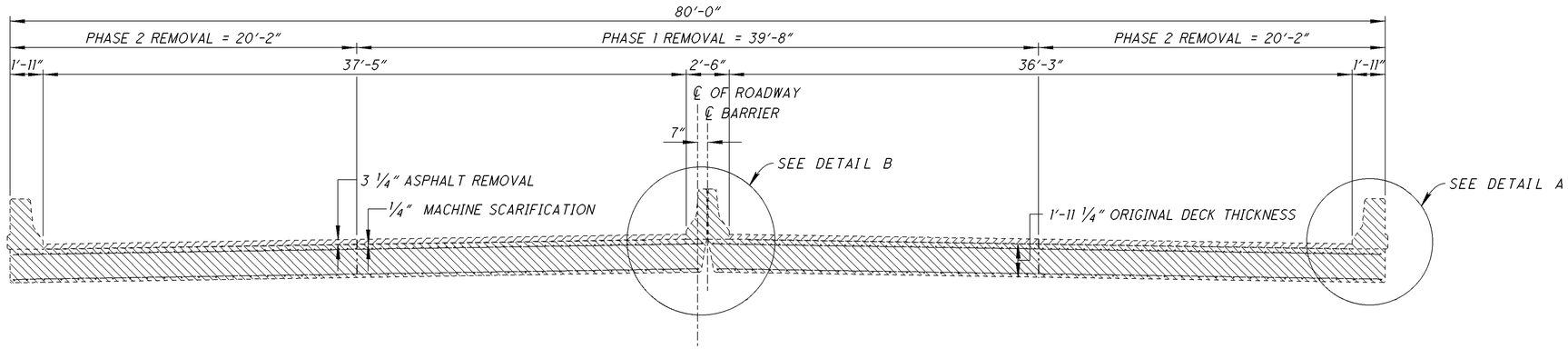
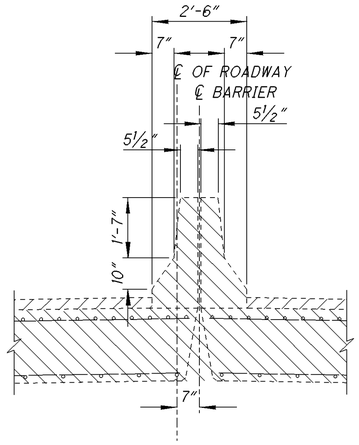


EXISTING TRANSVERSE SECTION

(DECK END REPLACEMENT)



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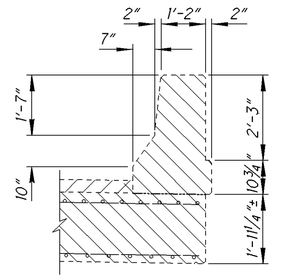
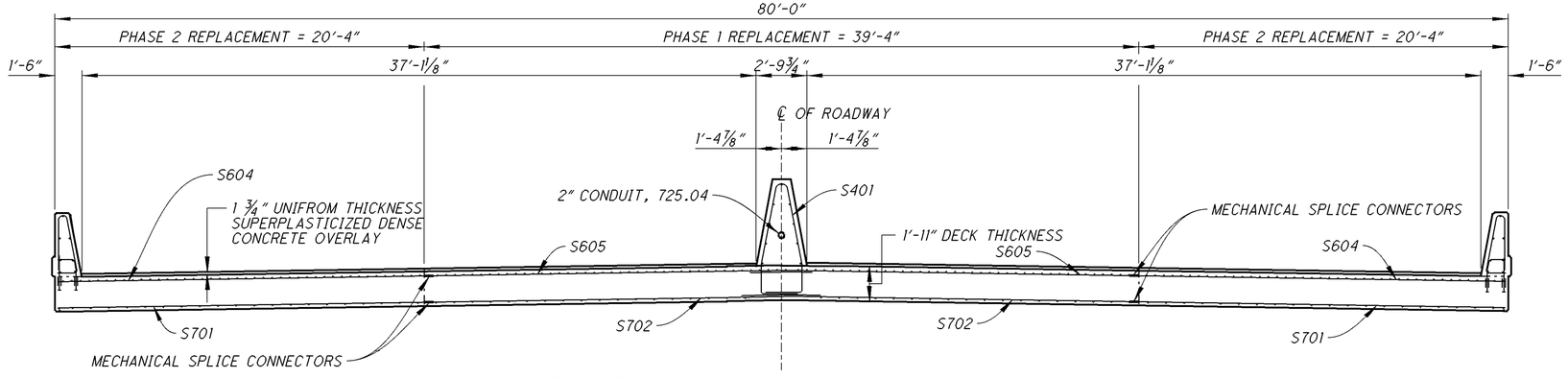


DETAIL A



PROPOSED TRANSVERSE SECTION

(DECK END REPLACEMENT)

NOTE:
ALL TRANSVERSE RE-STEEL IN DECK EDGES AND LONGITUDINAL RE-STEEL IN DECK ENDS SHALL BE PRESERVED IN PLACE. ALL LOOSE RUST ON RE-STEEL SHALL BE REMOVED BY WIRE BRUSH OR OTHER APPROVED METHOD AS DIRECTED BY THE ENGINEER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

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TAG	TAG	DTF	3-27-09
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JDR		4501209	

TRANSVERSE SECTION
BRIDGE NO. LIC-16-2296
OVER O'BANNON STREET

LIC-18-19.72/LIC-79-12.30
PID No. 76384

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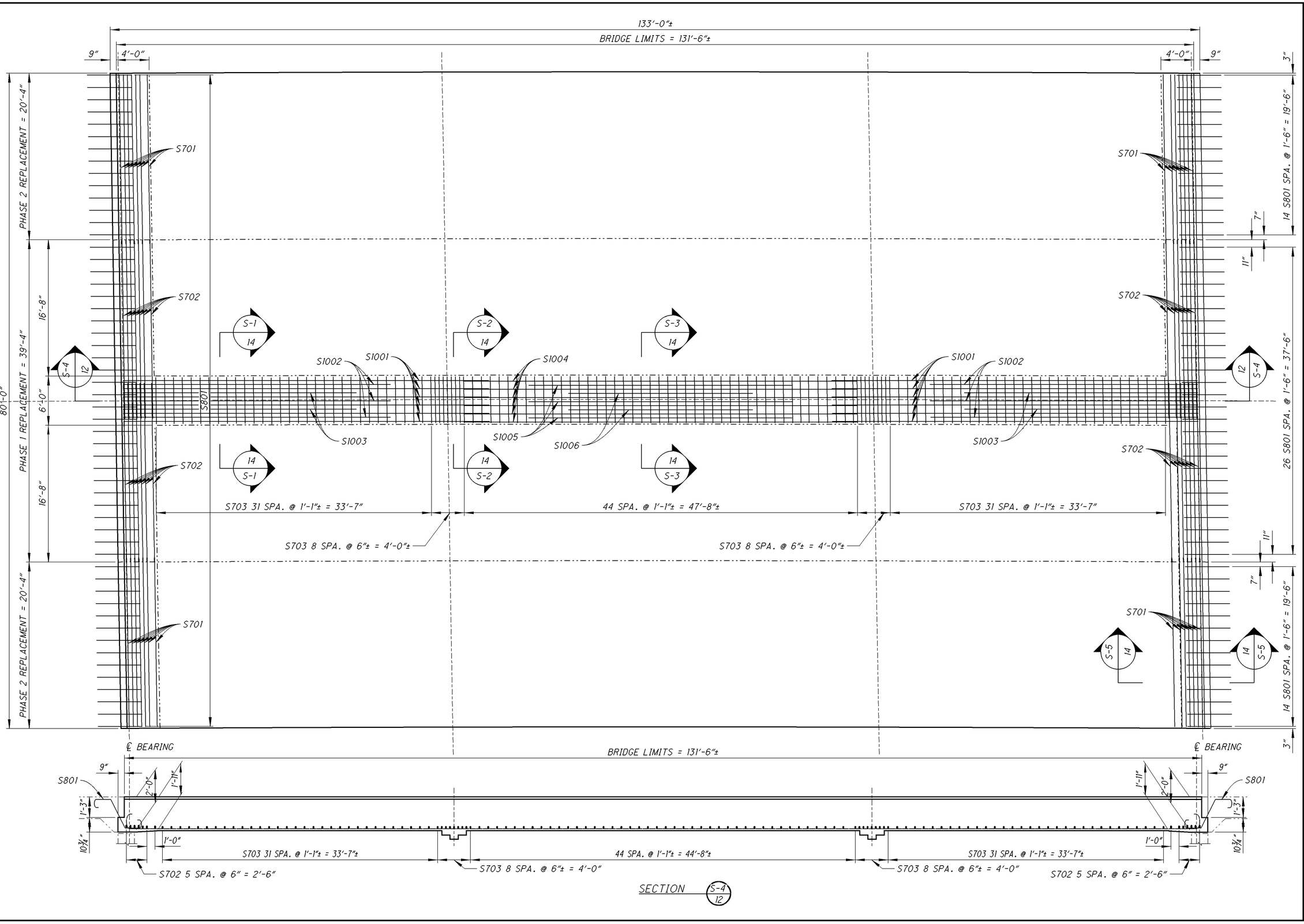

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L76384_BSD_002.DGN (SCALE = 5.33) 2-23-2009 (1 of 2)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

BOTTOM MAT REINFORCING

BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-18.72/LIC-79-12.30
PID No. 76384

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133'-0"±
BRIDGE LIMITS = 131'-6"±
9" 4'-0" 4'-0" 9"
80'-0"
PHASE 2 REPLACEMENT = 20'-4"
PHASE 1 REPLACEMENT = 39'-4"
16'-8"
6'-0"
16'-8"
PHASE 2 REPLACEMENT = 20'-4"
S604
S605
S601
S602
S1101
S1102
S1103
S-1 14
S-2 14
S-3 14
S-4 13
S-5 14
16'-0"
8'-6"
6'-7"
S603 14 SPA. @ 2'-0"± = 28'-0"±
S603 20 SPA. @ 2'-0"± = 40'-0"±
S603 5 SPA. @ 1'-0"± = 5'-0"±
S603 8 SPA. @ 6"± = 4'-0"±
S603 4 SPA. @ 1'-0"± = 4'-0"±

BRIDGE LIMITS = 131'-6"±
S602 3 SPA. @ 1'-0" = 3'-0"
℄ BEARING
2'-0"
1'-11"
1'-3"
10¾"

SECTION S-4 13

DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5
DESIGNED TAG	DRAWN TAG
CHECKED JDR	REVIEWED DTF
REVISED	DATE 3-27-09
	STRUCTURE FILE NUMBER 4501209

TOP MAT DECK REINFORCING
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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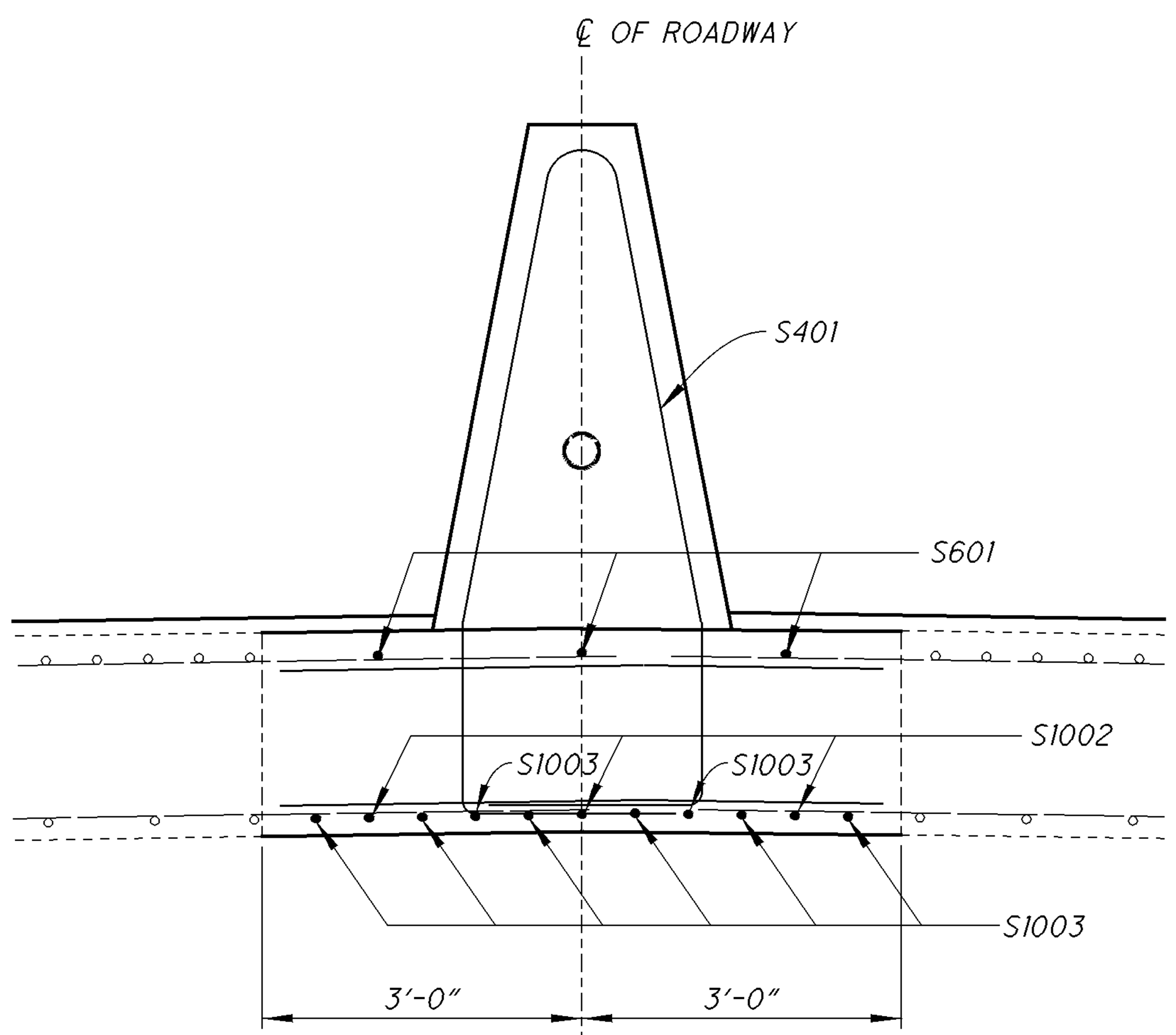
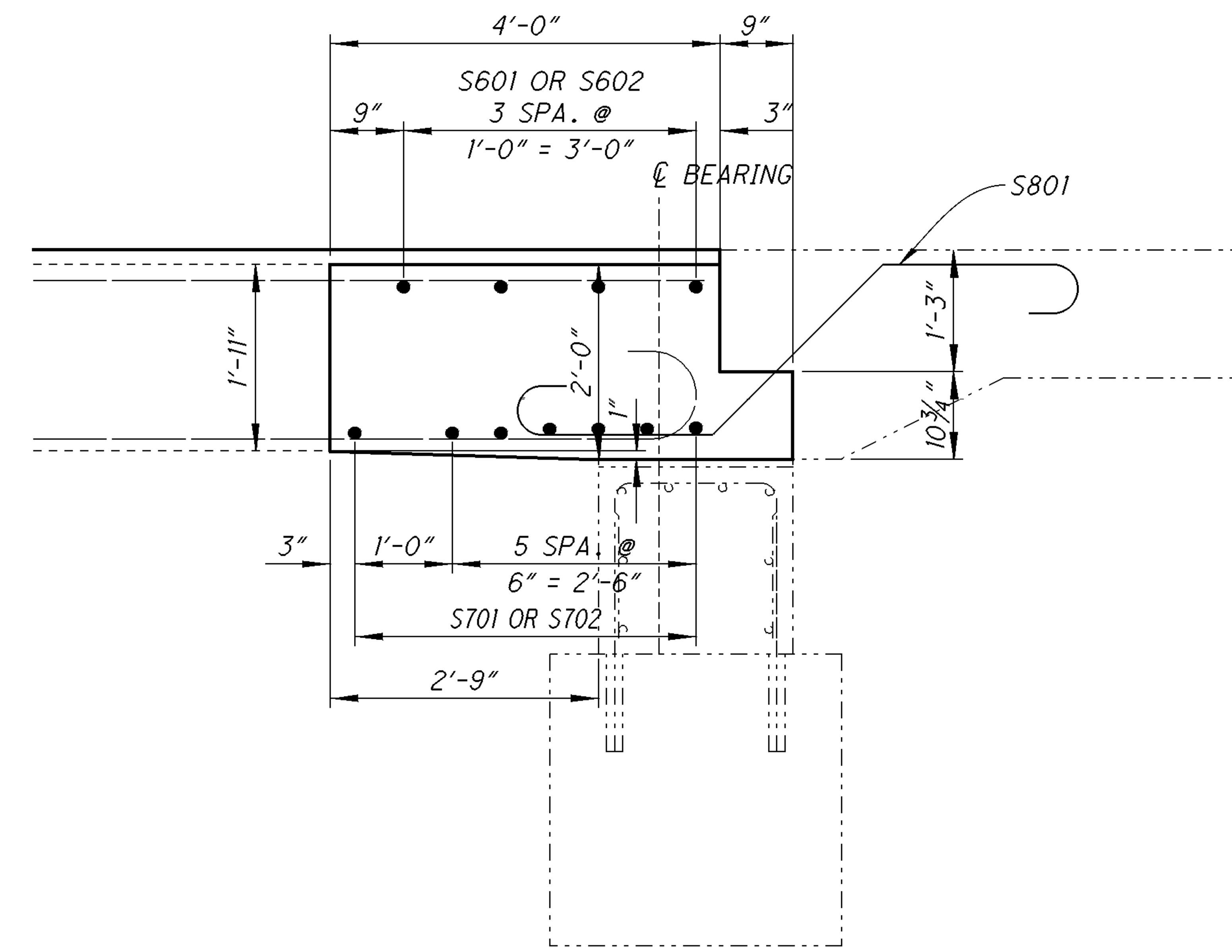
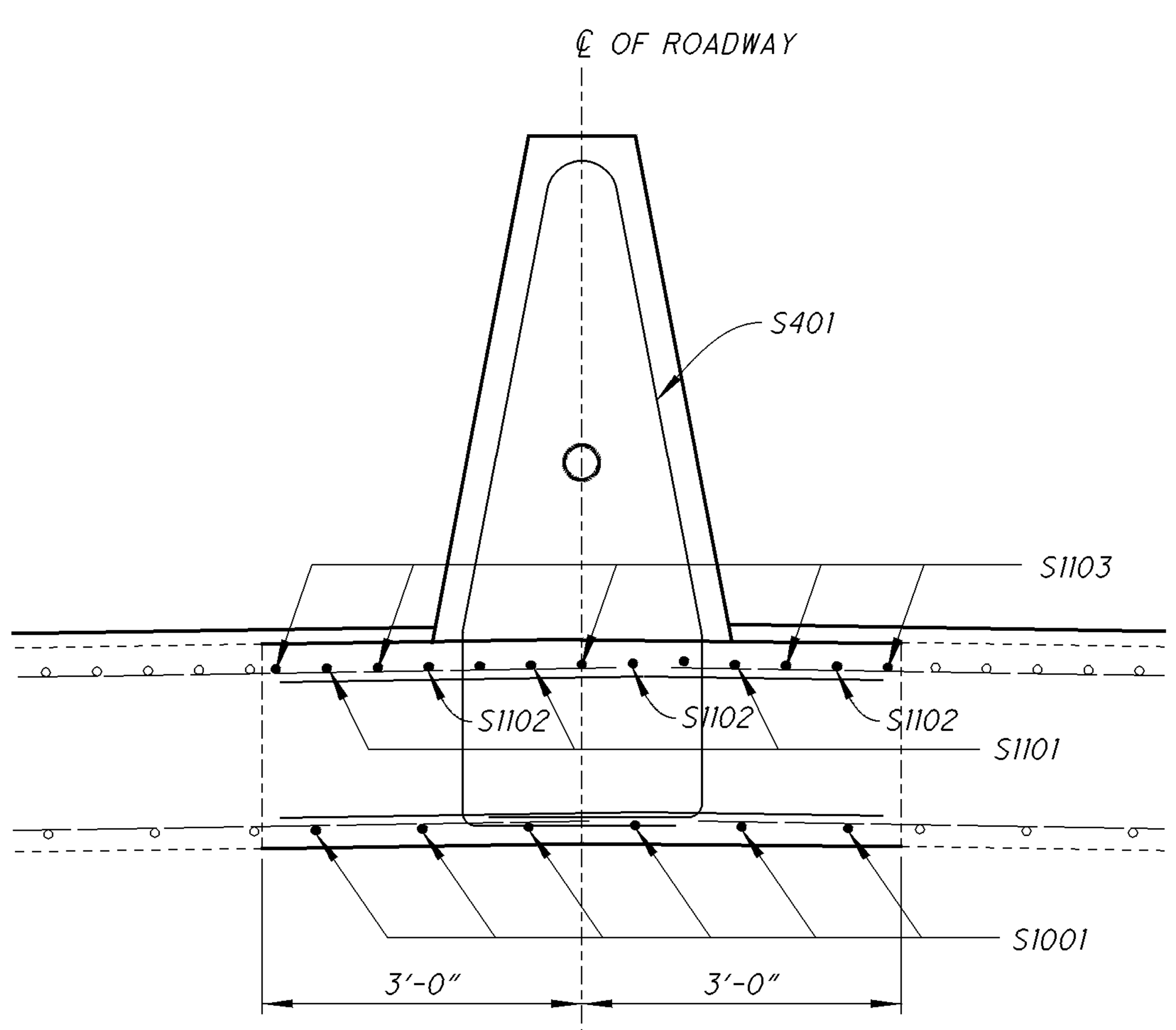


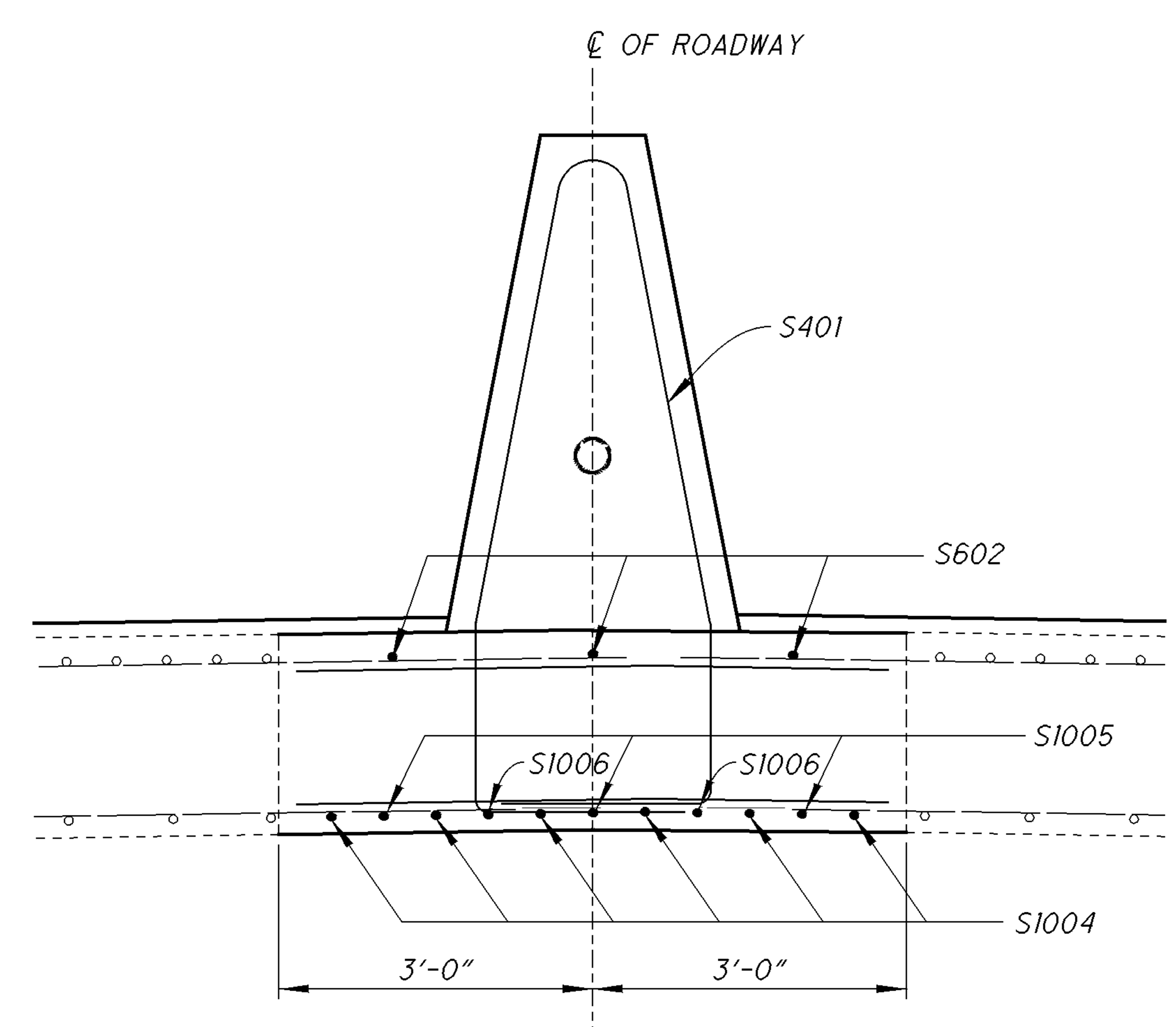
SECTION S-1 12&13



SECTION S-5 12&13



SECTION S-2 12&13



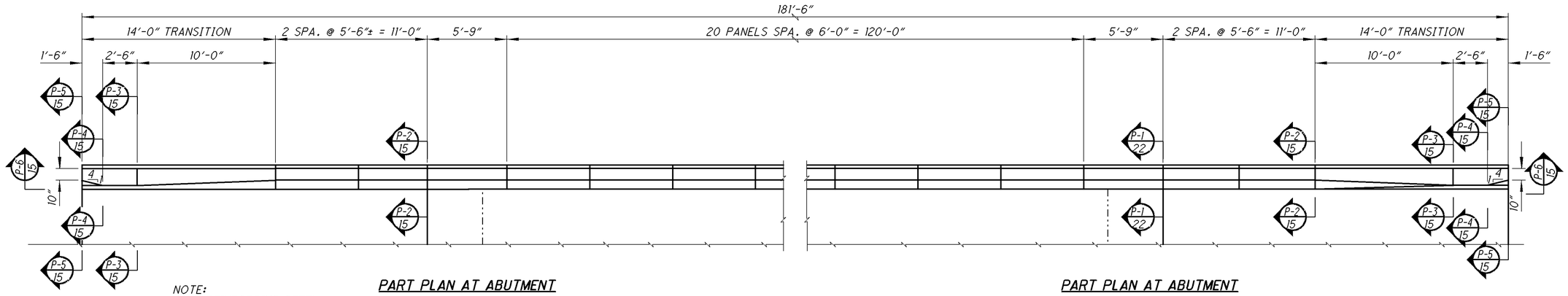
SECTION S-3 12&13

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	TAG	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

SUPERSTRUCTURE DECK DETAILS
BRIDGE NO. LIC-16-2296 L&R
OVER O'BANNON AVENUE

LIC-16-18.72/LIC-79-12.30
PID No. 76384



PART PLAN AT ABUTMENT

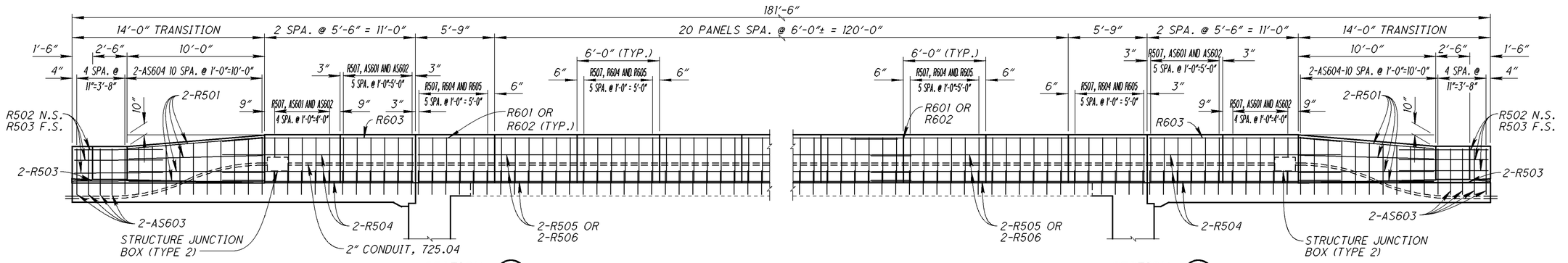
PART PLAN AT ABUTMENT

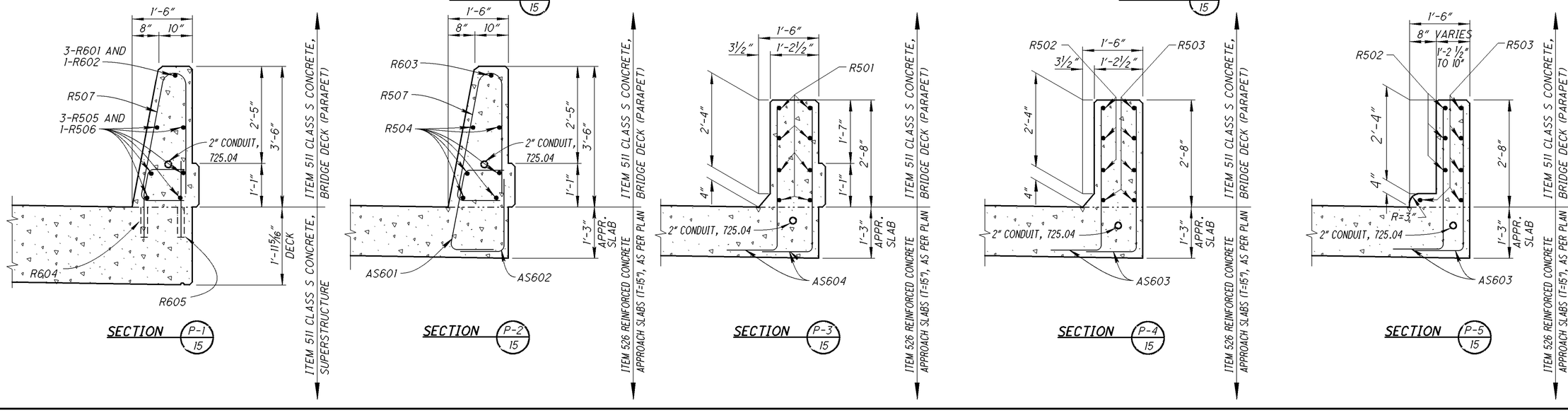
NOTE:
-ALL REINFORCING STEEL TO BE EPOXY COATED.

-FIELD BEND BARS WHERE NECESSARY

-FOR ADDITIONAL DETAILS SEE STD. DWG. SBR-1-99

PARAPET MINIMUM LAP LENGTH
No. 5 = 2'-11"
No. 6 = 3'-5"





DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

PARAPET DETAILS
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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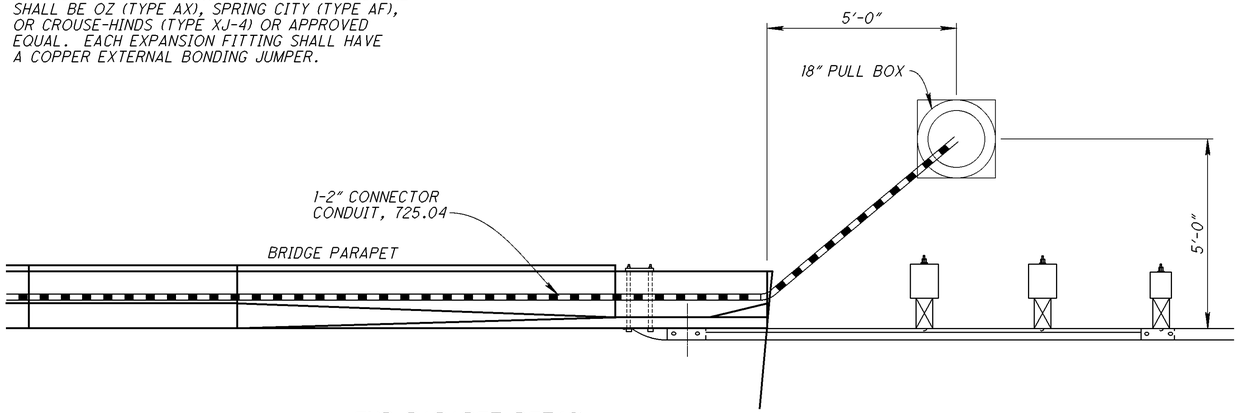
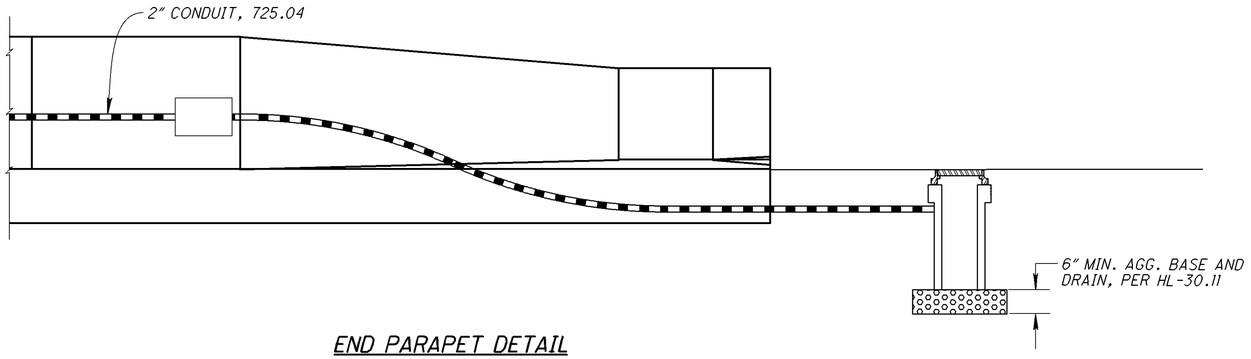
CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURE SHALL BE OZ (TYPE AX), SPRING CITY (TYPE AF), OR CROUSE-HINDS (TYPE XJ-4) OR APPROVED EQUAL. EACH EXPANSION FITTING SHALL HAVE A COPPER EXTERNAL BONDING JUMPER.

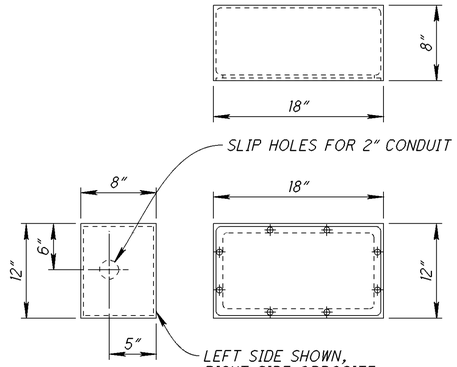


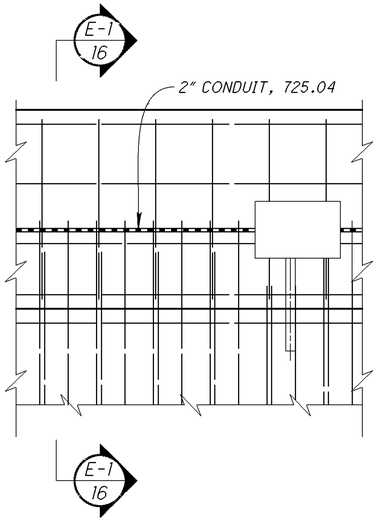
END PARAPET DETAIL
PLAN VIEW



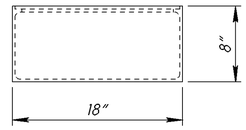
END PARAPET DETAIL
ELEVATION VIEW

TYPICAL CONDUIT TREATMENT
AT END OF BRIDGE PARAPET

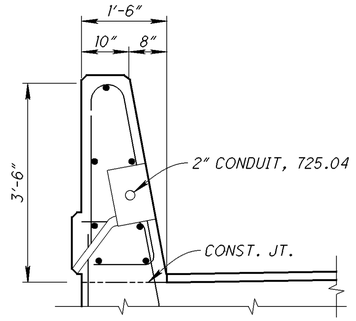




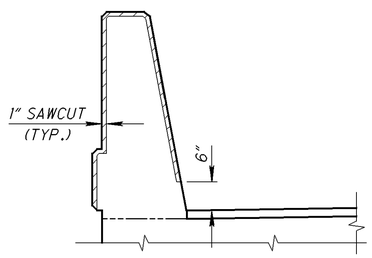
JUNCTION BOX DETAILS



STRUCTURE JUNCTION
BOX DETAILS



SECTION (E-1, 16)
(TYPICAL)



DETAIL A
(SECTION THROUGH SAWCUT)
SAWCUT PERIMETER = 7'-6"

ITEM 625 CONDUIT, 2" 725.04

AS PER CMS 625.12 AFTER INSTALLATION OF THE CONDUIT AND PRIOR TO INSTALLION OF THE CABLES, CHECK EACH CONDUIT RUN BY RODDING OR BY PUSHING A MANDREL THROUGH THE CONDUIT RUN AND REMOVING ANY OBSTRUCTION FOUND.

IF A CONDUIT IS TO REMAIN EMPTY UPON COMPLETION OF THE PROJECT, LEAVE A NO. 10 AWG COPPER CLAD, ALUMINUM CLAD OR GALVANIZED PULL WIRE IN THE CONDUIT AND CAP THE ENDS IN AN APPROVED MANNER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
TAG	DDH	DTF	3-27-09	4501209
CHECKED	REVISED			
JDR				

PARAPET DETAILS
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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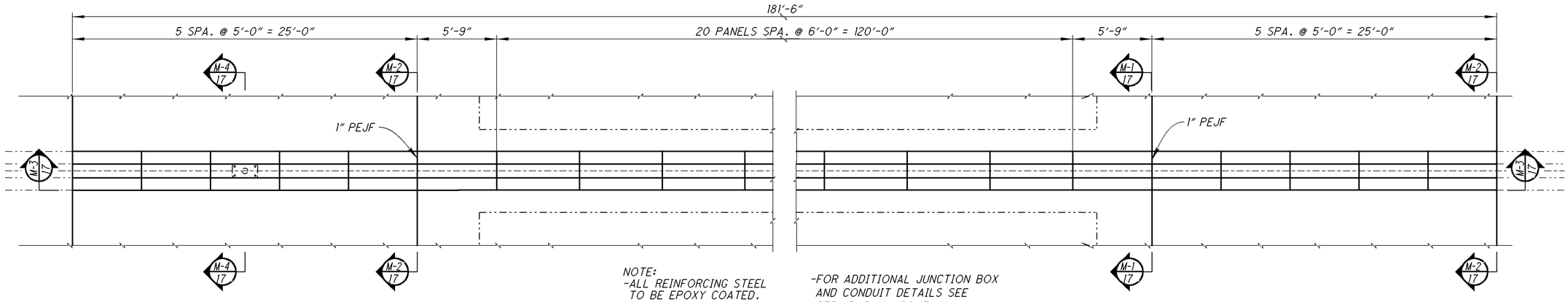
L76384_BPD_003.DGN



NOTE:
-ALL REINFORCING STEEL TO BE EPOXY COATED.

-FIELD BEND BARS WHERE NECESSARY.

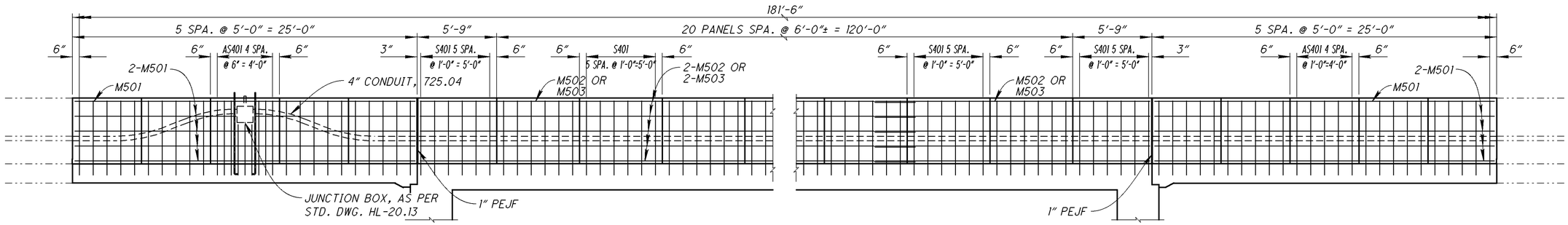
-FIELD CUT BARS AS NECESSARY.

-FOR ADDITIONAL JUNCTION BOX AND CONDUIT DETAILS SEE STD. DWG. HL-20.13.

PART PLAN AT ABUTMENT

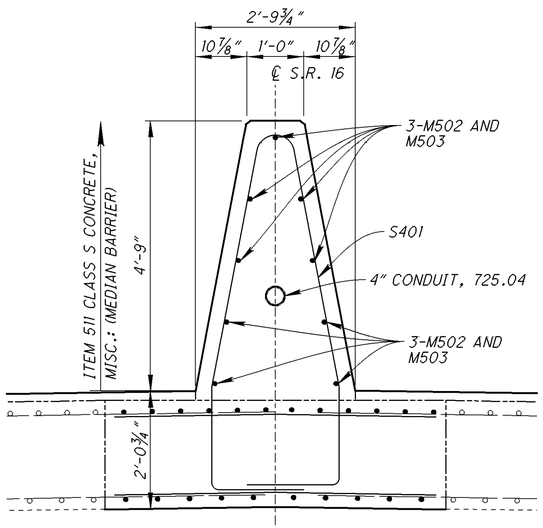
PART PLAN AT ABUTMENT

PARAPET MINIMUM LAP LENGTH
No. 5 = 2'-11"
No. 6 = 3'-5"

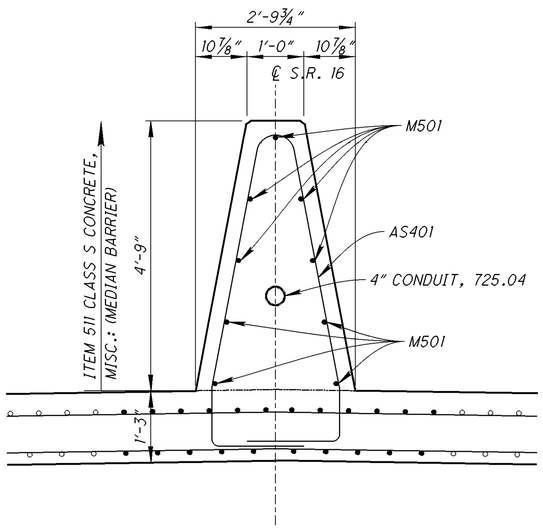


SECTION M-3 17

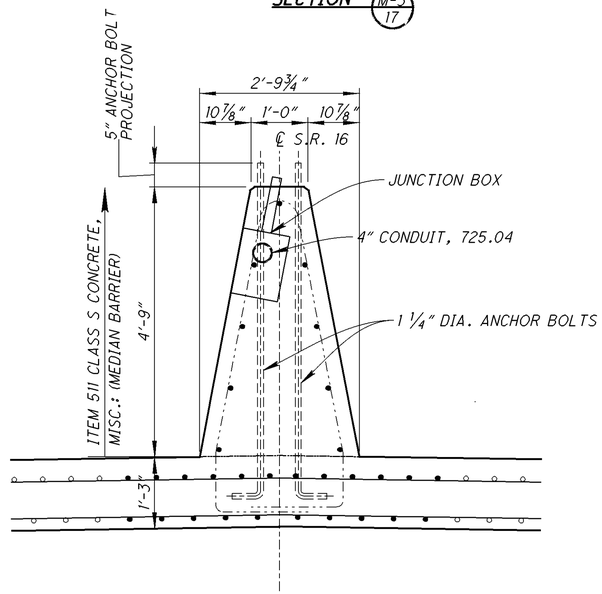
SECTION M-3 17



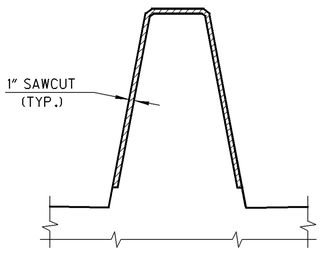
SECTION M-1 17



SECTION M-2 17



SECTION M-4 17



DETAIL A

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501209	

MEDIAN BARRIER DETAILS

BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

17 / 21

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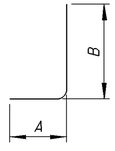
L76384_BPD_002.DGN (SCALE =4.0) (PID# 76384) (02/10/09)

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
PARAPET													
R501	32	10'-0"	334	STR.	10'-0"								
R502	12	5'-6"	69	25	1'-8"	2'-4 15/16"	1'-4 1/4"	1 1/2"	5"				
R503	20	5'-6"	115	STR.	5'-6"								
R504	24	13'-9"	344	STR.	13'-9"								
R505	36	40'-0"	1502	STR.	40'-0"								
R506	12	19'-11"	249	STR.	19'-11"								
R507	308	7'-5"	2383	23	1'-1"	3'-2"	3'-0"					2 3/4"	
R601	6	40'-0"	360	STR.	40'-0"								
R602	2	21'-5"	64	STR.	21'-5"								
R603	4	14'-3"	86	STR.	14'-3"								
R604	264	2'-8"	1057	28	1'-11"	8"	2"	11"					
R605	264	1'-11"	760	STR.	1'-11"								
SUBTOTAL PARAPET			7323										
MEDIAN BARRIER													
M501	18	24'-8"	463	STR.	24'-8"								
M502	27	40'-0"	1126	STR.	40'-0"								
M503	9	19'-11"	187	STR.	19'-11"								
SUBTOTAL MEDIAN BARRIER			1776										
ABUTMENT													
A501	8	39'-4"	328	STR.									
A502	106	4'-5"	488	2	1'-6"	1'-8"	1'-6"						
A503	16	21'-10"	364	STR.									
A504	32	11'-8"	24	STR.									
A505	8	9'-6"	79	STR.									
A506	8	12'-4"	103	STR.									
A507	72	7'-11"	595	2	3'-6"	1'-2"	3'-6"						
A508	16	7'-4"	122	2	2'-3"	2'-8"	2'-3"						
A601	236	2'-8"	945	STR.									
A701	16	12'-3"	401	1	11'-8"	9"							
A702	12	9'-3"	227	20	1'-0"	1'-0"	6'-6"	1'-0"	1'-0"				
A1001	16	25'-2"	1733	STR.									
A1002	16	21'-10"	1503	STR.									
SUBTOTAL ABUTMENT			6912										

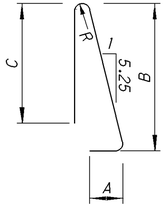
MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
DECK													
S401	132	15'-8"	1381	34	1'-8"	1'-10"	4'-3"					8"	
S601	6	26'-2"	236	1									
S602	3	22'-10"	103	1									
S603	83	5'-8"	706	1									
S604	16	20'-2"	485	1									
S605	16	21'-5"	515	1									
S701	28	20'-2"	1154	1									
S702	28	21'-10"	1250	1									
S703	123	5'-8"	1425	1									
S801	108	8'-0"	2307	35	2'-0"	1'-7"	1'-7"						
S1001	12	44'-8"	2306	1									
S1002	6	32'-8"	843	16	31'-3"								
S1003	4	28'-6"	491	16	27'-1"								
S1004	6	48'-0"	1239	1									
S1005	3	32'-2"	415	1									
S1006	2	22'-6"	194	1									
S1101	6	13'-8"	436	1									
S1102	6	17'-8"	563	1									
S1103	14	32'-0"	2380	1									
SUBTOTAL DECK			18429										

SUBTOTAL PARAPET	7323		
SUBTOTAL MEDIAN BARRIER	1776		
SUBTOTAL ABUTMENT	6912		
SUBTOTAL DECK	18429		
GRAND TOTAL	34440		

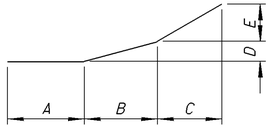
TYPE-STR.



TYPE-1



TYPE-23



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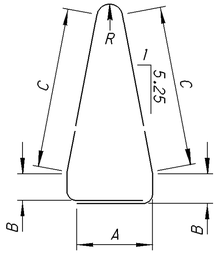
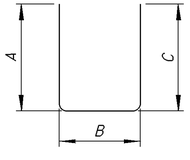
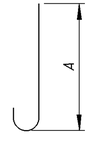


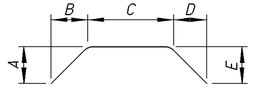
TYPE-34



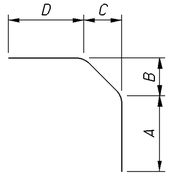
TYPE-2



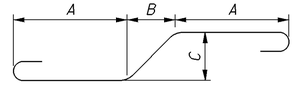
TYPE 16



TYPE 20



TYPE-13



TYPE-35

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DATE
REVIEWED DTF 3-27-09
STRUCTURE FILE NUMBER 4501209

DRAWN TAG REVISED
DESIGNED TAG CHECKED JDR

REINFORCING STEEL SCHEDULE

BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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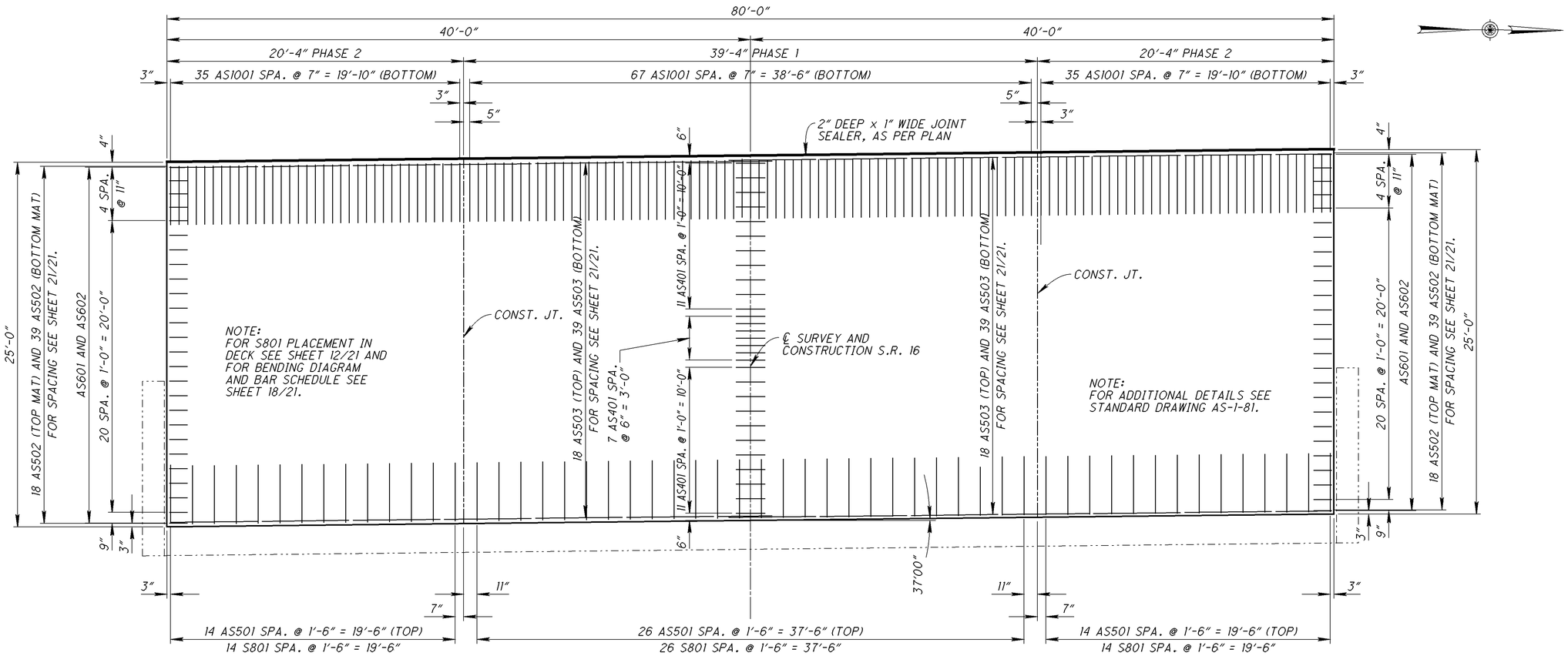
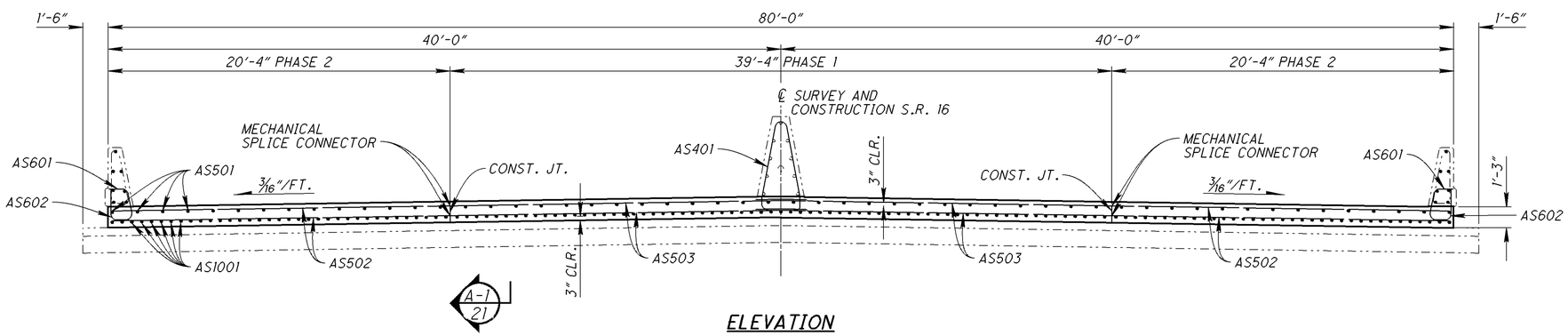
P:/LIC/76384/DESIGN/BRIDGE/4501020/PLAN SHEETS/76384_BRS_001.DGN



PLAN

NOTE:
FOR PARAPET DETAILS SEE SHEET 15&16/21.
FOR MEDIAN BARRIER DETAILS SEE SHEET 7/21.



ELEVATION

DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5
DESIGNED TAG	DRAWN DDH
CHECKED JDR	REVIEWED DTF
REVISED	DATE 3-27-09
	STRUCTURE FILE NUMBER 4501020

REAR APPROACH SLAB DETAILS
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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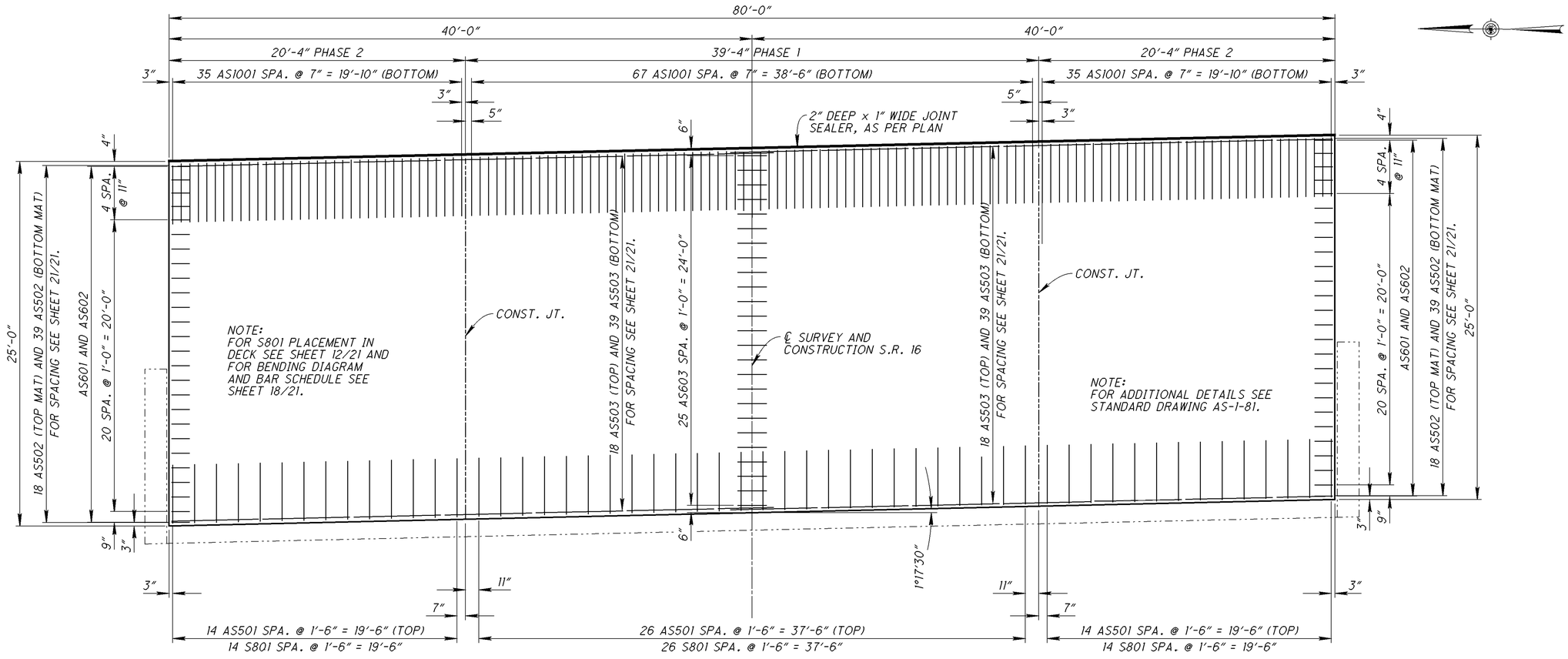
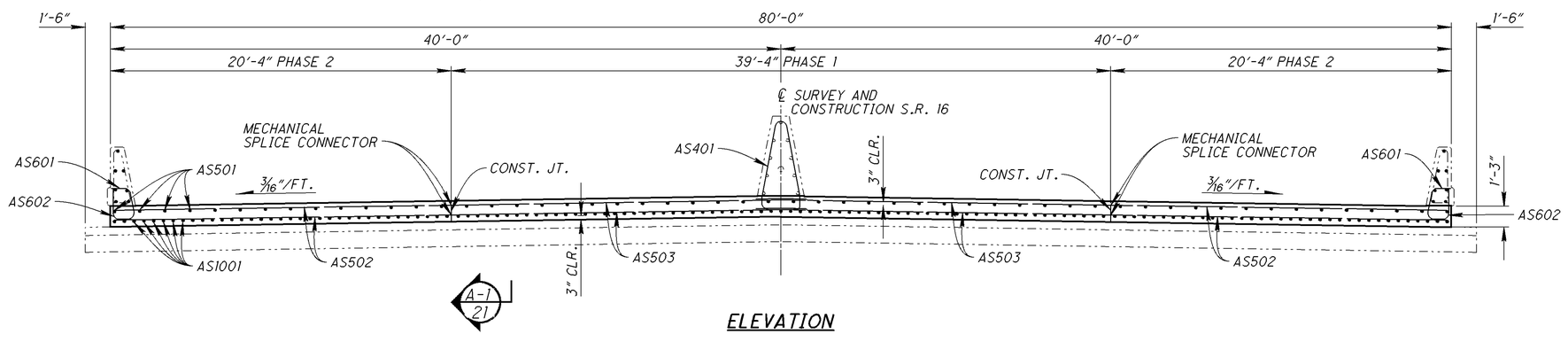
L76384_BAS_001.DGN



PLAN

NOTE:
FOR PARAPET DETAILS SEE SHEET 15&16/21.
FOR MEDIAN BARRIER DETAILS SEE SHEET 17/21.



ELEVATION

L76384_BAS_001.DGN

DESIGNED	DRAWN	REVIEWED	DATE
TAG	DDH	DTF	3-27-09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDR		4501020	

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

FORWARD APPROACH SLAB DETAILS

BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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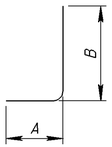
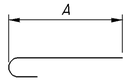
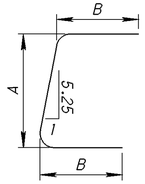


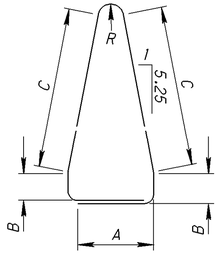
TYPE-1



TYPE-16



TYPE 28

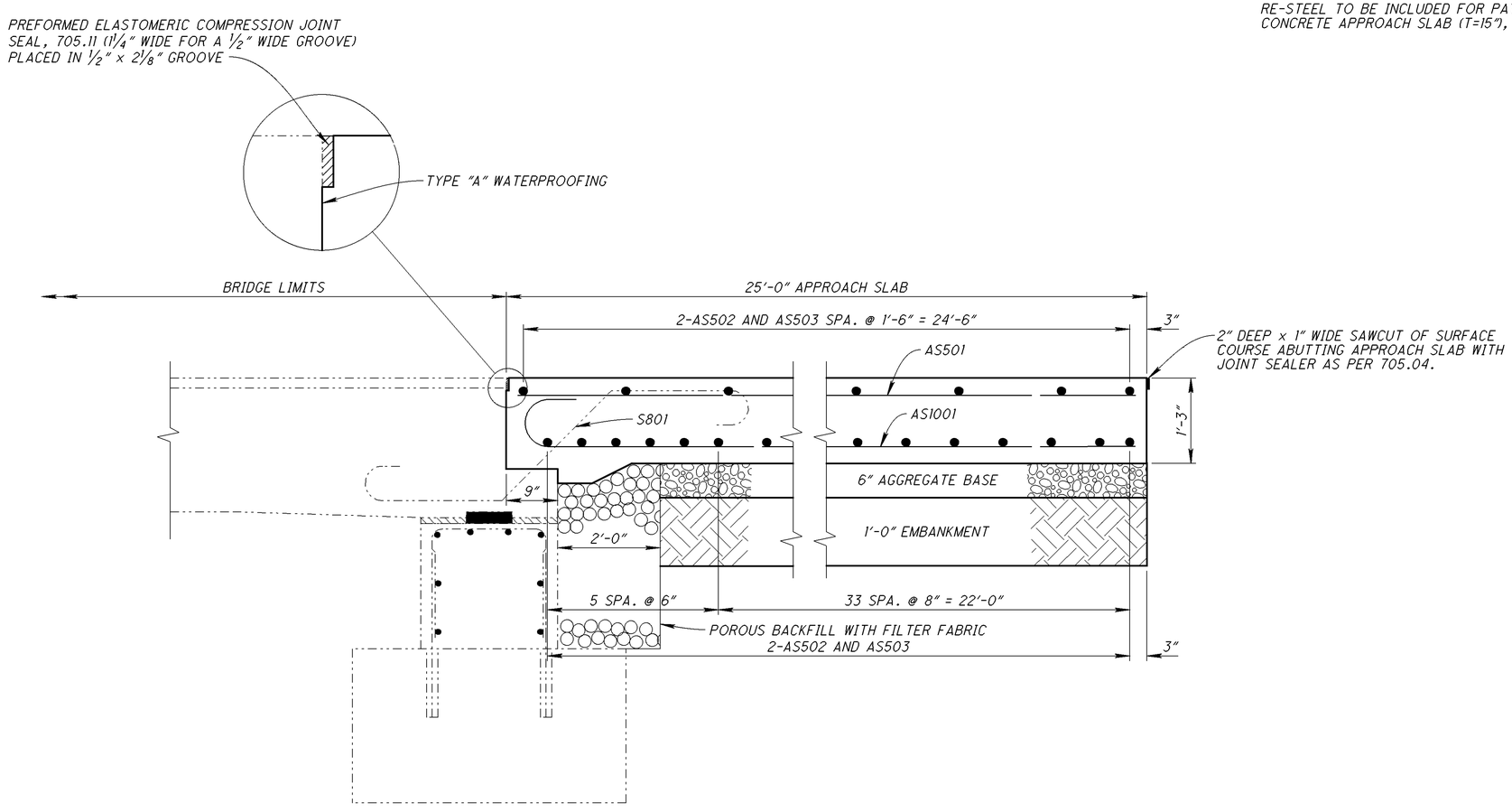


TYPE-34

BENDING DIAGRAMS

MARK	NUMBER REQ'D.	LENGTH	WEIGHT	TYPE	DIMENSIONS								
					A	B	C	D	E	F	G	R	INC.
APPROACH SLABS													
AS401	54	14'-2"	511	34	1'-10"	1'-0"	4'-3"					4"	
AS501	108	24'-6"	2760	STR.	24'-6"								
AS502	228	20'-2"	4796	STR.	20'-2"								
AS503	228	21'-2"	5034	STR.	21'-2"								
AS601	56	3'-8"	308	28	1'-10"	1'-1"							
AS602	56	2'-9"	231	1	1'-1"	1'-10"							
AS603	32	4'-3"	204	1	1'-1"	3'-4"							
AS604	4 SERIES OF 11	4'-3" TO 5'-1"	308	1	1'-1"	3'-4" TO 4'-2"							1"
AS1001	274	25'-11"	30556	16	24'-6"								

RE-STEEL TO BE INCLUDED FOR PAYMENT IN ITEM 526-REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN



SECTION A-1 19 / A-1 20

NOTE:
FOR ADDITIONAL DETAILS SEE STANDARD DRAWING AS-1-81.

NOTE:
ALL LONGITUDINAL CONSTRUCTION JOINTS SHALL BE SEALED 2'-0" IN WIDTH WITH HMWM RESIN (SEE PROPOSAL NOTE) APPROACH SLAB SEALING TO BE INCLUDED IN ITEM 526 REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN

ITEM	DESCRIPTION	QUANTITY	UNIT
203	EXCAVATION	207	CU YD
203	EMBANKMENT	139	CU YD
204	SUBGRADE COMPACTION	405	SQ YD
304	AGGREGATE BASE	68	CU YD
518	POROUS BACKFILL WITH FILTER FABRIC	40	CU YD
526	REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN (T-15")	444	SQ YD
QUANTITIES CARRIED TO SHEET 114/190 & 3/21.			

(2 APPROACH SLABS)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

DESIGNED TAG | DRAWN TAG | REVIEWED DTF | DATE 3-27-09 | CHECKED JDR | REVISED | STRUCTURE FILE NUMBER 4501209

APPROACH SLAB DETAILS
BRIDGE NO. LIC-16-2296
OVER O'BANNON AVENUE

LIC-16-19.72/LIC-79-12.30
PID No. 76384

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L76384_BAS_003.DGN